

THE STATE ROAD COMMISSION
OF WEST VIRGINIA

PLAN AND PROFILE FOR CONSTRUCTION
OF

STATE ROAD

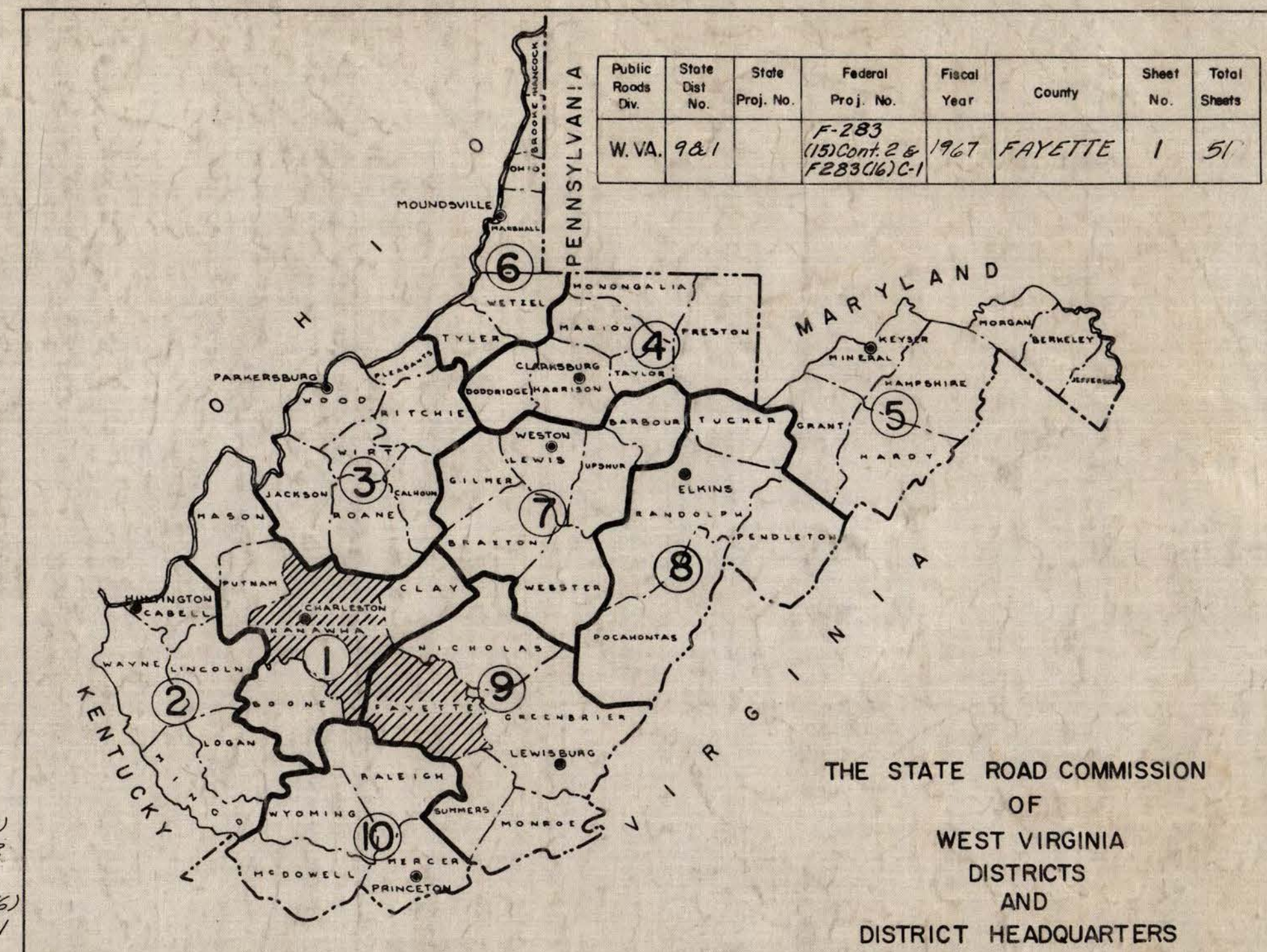
PROJECT NO. F-283 (15) C-2 & F-283 (16) C-1
ROUTE NO. W.VA. 6 & W.VA. 61

KANAWHA DISTRICT FAYETTE COUNTY
CABIN CREEK

MONTGOMERY-MORRIS CK. RELOCATION

PLAN 1 IN. = 40'
PROFILE HOR. 1 IN. = 40'
VERT. 1 IN. = 10'

Roadway Sta. 4+61.72 to Sta. 9+97.00 = 535.28 Ft. = 0.101 Mi. } F-283 (15) Contract 2
Roadway Sta. 0-5166.77 to Sta. 0-0159 = 507.77 Ft. = 0.096 Mi. } F-283 (16) Contract 1
Total = 1043.05 Ft. = 0.197 Mi.

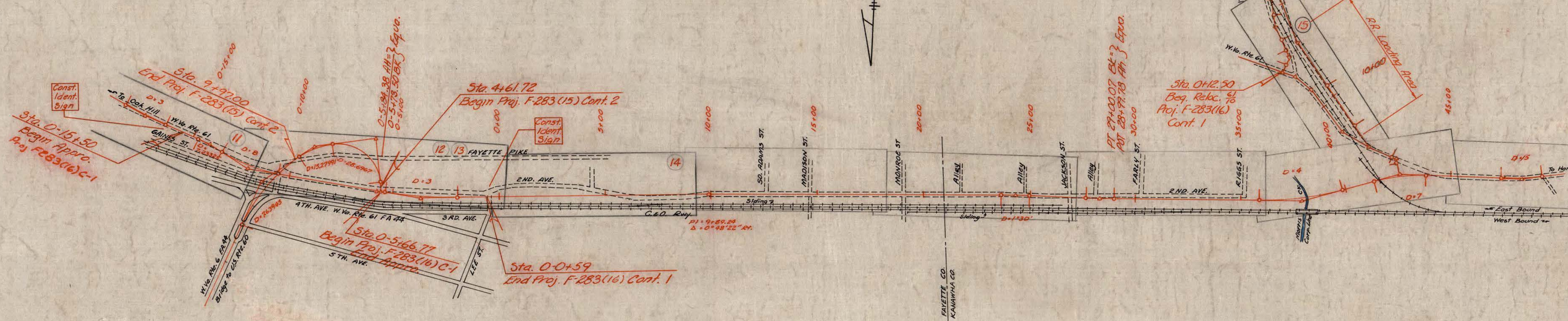


SCALE 1 INCH = 1 MILE - TRACED FROM COUNTY MAP

The following utilities are encountered on this project:
Appalachian Power Co.
C. & O. Railway
C. & P. Telephone Co.
City of Montgomery, Sewers
Southern Public Service Co.
West Virginia Water Co.

TYPE OF CONSTRUCTION
GRADING, DRAINING, BASE,
ASPHALTIC CONCRETE PAVEMENT

1323



SCALE: 1" = 300'

Std. No.	Title	Date
C.W. 2-C	Pipe Culvert Headwalls and Wingwalls (Class B)	Mar. 16, 1965
M.P. 1-A	Curbs - Curbs and Gutters (1 of 2)	Dec. 9, 1965
M.P. 5-A	Steel Beam Type Guard Rail (Weep) 2 Lane (1 of 2)	Nov. 16, 1963
M.P. 6-D	Steel Guard Rail Posts	Nov. 16, 1963
M.P. 6-B	Concrete Guard Rail Posts (Round)	Nov. 16, 1963
M.P. 6-A	Concrete Guard Rail Posts (Triangular)	Nov. 16, 1963
M.P. 6-C	Wood Guard Rail Posts	Jan. 6, 1966
M.P. 8-A	R/W Marker Post - Proj. Marker Post	Feb. 3, 1961
M.P. 10-A	Slope Development (Landscape Treatment)	Jan. 12, 1966
M.S. 1-C	Standard Drop Inlet	Dec. 14, 1965
M.S. 2-A	Hillside Drop Inlet	Apr. 4, 1966
M.S. 3-A	Manhole - Frame and Cover	Nov. 16, 1963
M.S. 3-B	Manhole - Frame and Cover (Precast Type)	Jul. 21, 1966
M.S. 5-D	Curb Drop Inlet (Twin Grating)	Nov. 16, 1963
M.S. 5-E	Ditch Drop Inlet	Oct. 5, 1961
M.S. 7-A	Miscellaneous Drainage (1 of 2)	Aug. 22, 1963
R.S. 1-A	Superelevation and Widening (2 Lane)	Jan. 26, 1961

DESIGN DESIGNATION	F-283(16) C-1	F-283(15) C-2
A. D. T.	(1964) 2,550	(1963) 2,000
A. D. T.	(1965) 3,160	(1963) 3,000
D. H. V.	280	260
D.	60%	60-40
T.	D.H.V. 6%	A.D.T. 2%
V.	40 M.P.H.	30 M.P.H.

CONVENTIONAL SIGNS	
State Line	Wall
County Line	Marsh
Corporation Line	He dge
District Line	Drop Inlet
Right of Way Line	Bridge
Property Line	Present Culvert
Fence Line	Proposed Culvert
Guard Rail	Telegraph Pole
Proposed Road	Trolley Pole
Traveled Road	Power Pole
Railroad	Tree
Pipe Line Gas or Water	Dwelling

NO.	DESCRIPTION
1	Title Sheet
2	Typical Sections
3	Notes & Estimate of Quantities
4	Tables
5-7	Details
8	Maintenance of Traffic
9-10	Drainage Layout
11-14	Plan and Profile
15-17	Summary of Drill Logs and Soil Tests
18-51	Cross Sections
	Standards

REVISION NUMBER	SHEET NUMBER	REVISIONS	DATE	BY

I HEREBY CERTIFY THAT THIS IS A CORRECT COPY OF THE PLANS OF PROJECT F-283 (15) cont. 2 and F-283 (16) cont. 1
AUGUST 30, 1965
James L. Wilson
EXECUTIVE SECRETARY

APPROVED BY OFFICIAL ORDER OF THE STATE ROAD COMMISSION OF WEST VIRGINIA, ENTERED 30 DAY OF August, 1965
James L. Wilson
EXECUTIVE SECRETARY

RECOMMENDED: Wilbur A. Hartig
DIRECTOR DESIGN DIVISION

REVIEWED: Joseph S. Lane
ASSISTANT CHIEF ENGINEER (OPERATIONS)

RECOMMENDED FOR APPROVAL: Ernest Chukochi
CHIEF ENGINEER (OPERATIONS)

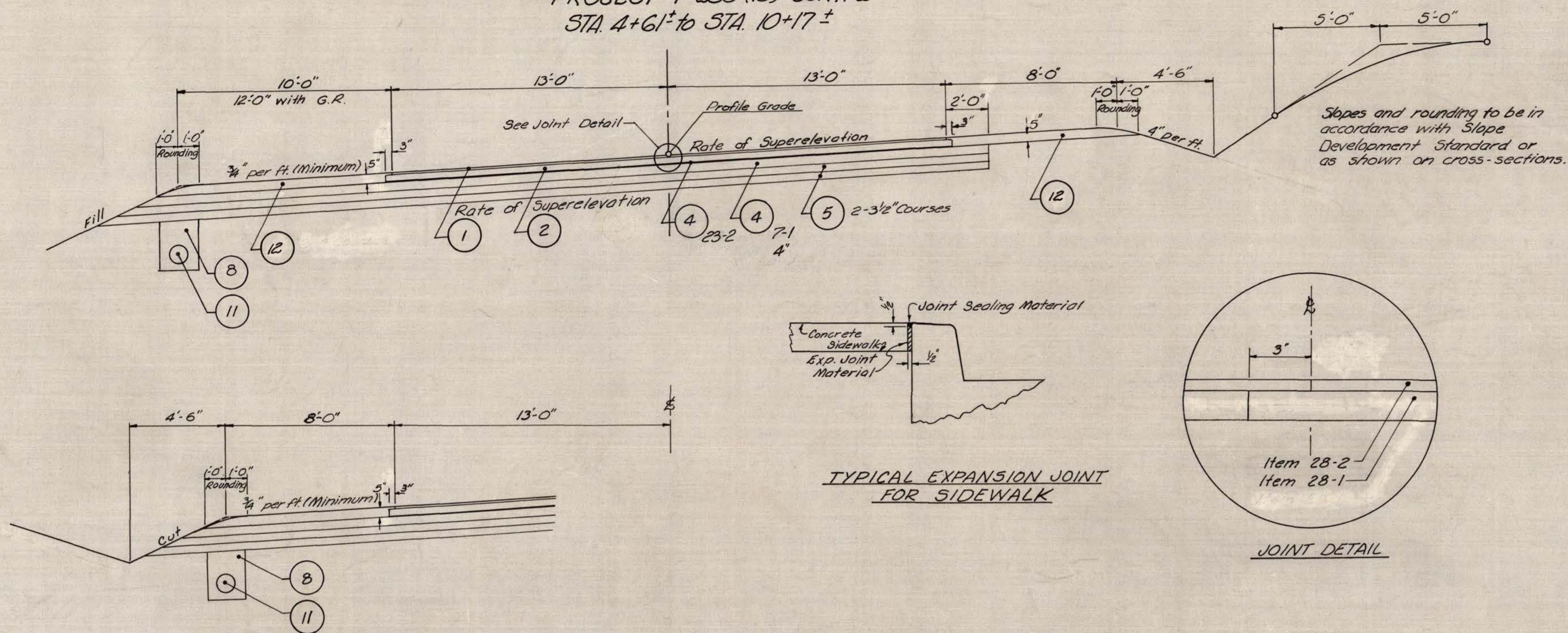
APPROVED: Paul A. Frazier
STATE ROAD COMMISSIONER

APPROVED: _____
DIVISION ENGINEER DATE _____
DEPARTMENT OF COMMERCE BUREAU OF PUBLIC ROADS

TYPICAL SECTIONS

PUBLIC ROADS DIV.	STATE DIST. NO.	STATE PROJ. NO.	FEDERAL PROJ. NO.	FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
W.VA.	9		F-283 (15) F-283 (16)	1967	FRYETTE	2	51

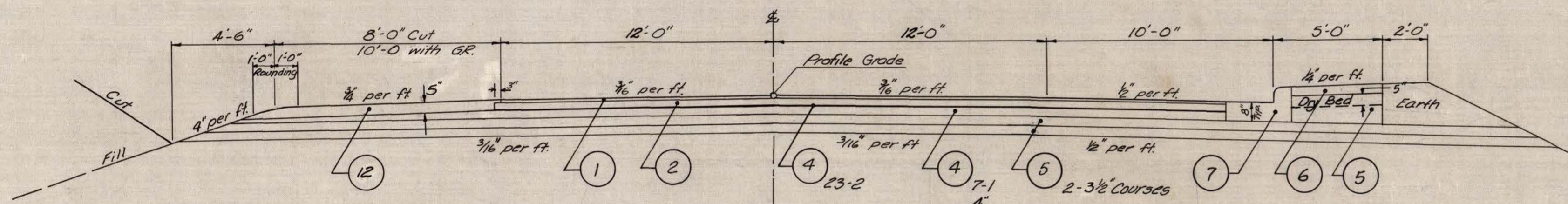
TYPICAL SECTIONS
PROJECT F-283 (15) CONT. 2
STA. 4+61[±] to STA. 10+17[±]



LEGEND

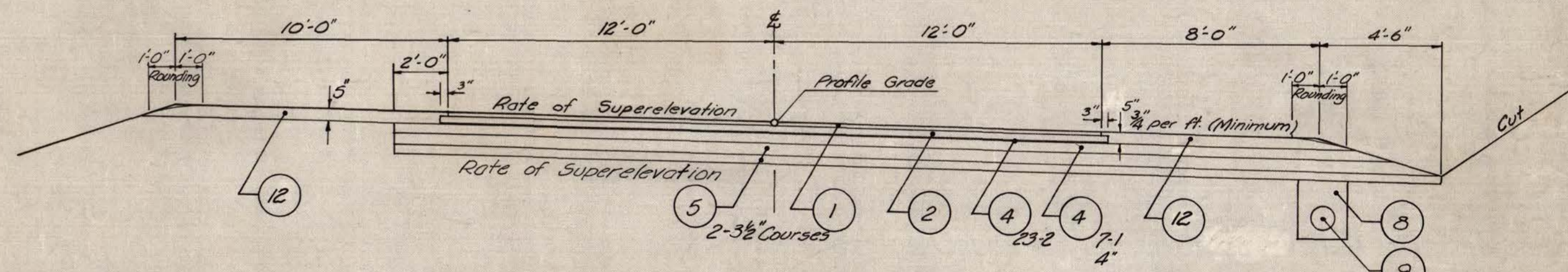
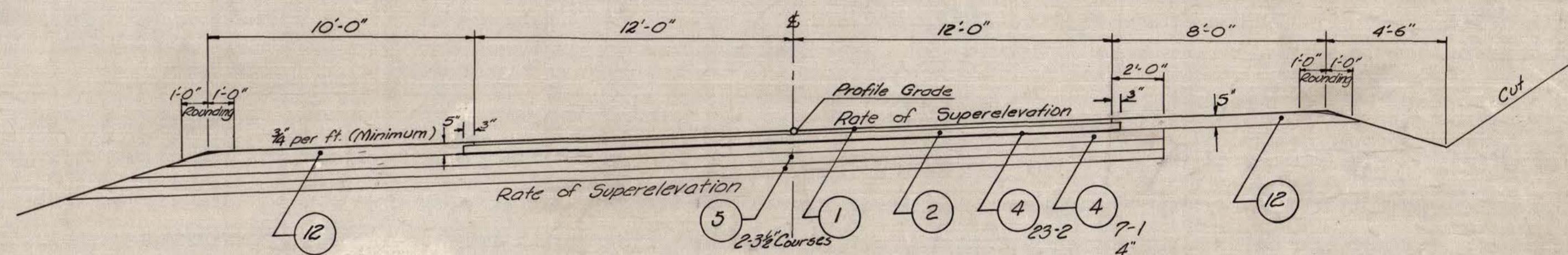
- ① Item 28-2
Hot-Laid Asphaltic Concrete Wearing Course, Stone or Gravel @ 165# per SY or Slag @ 147# per SY. Aggregate to be type 1.
- ② Item 28-1
Hot-Laid Asphaltic Concrete Bottom Course, Stone or Gravel @ 275# per SY or Slag @ 245# per SY.
- ③ Item 23-1 and Item 23-2
Prime or Tack Coat Aggregate, Stone or Gravel @ 20# per SY or Slag @ 18# per SY, and Bituminous Material Tar R.T. 1, 2, 3, or 4 @ 0.30 to 0.60 Gal. Per SY.
- ④ Item 7-1 and Item 23-2
Type I Base Course and Bituminous Material Tar R.T. 1, 2, 3, or 4 @ 0.30 to 0.60 Gal. Per SY, or Item 9-1 and Item 9-2, or Item 22-1, 22-2 and 22-3. Bituminous Material, Item 23-2 or Item 22-3, shall be placed only on the base course within the limits of asphaltic concrete pavement.
- ⑤ Item 15
Traffic Bound Base Course Material (Compacted).
- ⑥ Item 112
Concrete Sidewalk
- ⑦ Item 110-5
Combination Concrete Curb and Gutters
- ⑧ Item 107
Crushed Stone, Crushed Gravel or Silica Sand for Underdrain
- ⑨ Item 102-2 (6)
6" Pipe for Underdrain
- ⑩ Item 110-1
Plain Concrete Curb
- ⑪ Item 102-2 (12)
12" Corrugated Metal Pipe for Underdrain, Tie to Horizontal Drains, Place Holes Up.
- ⑫ Item 7-1, Type I Base Course, for Shoulders.

TYPICAL SECTIONS
PROJECT F-283 (16) CONT. 1
STA. 0+59 to STA. -10+00

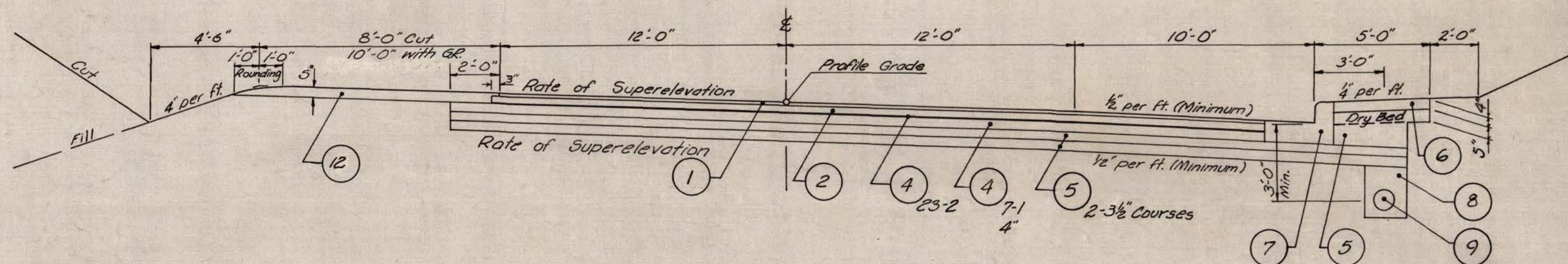
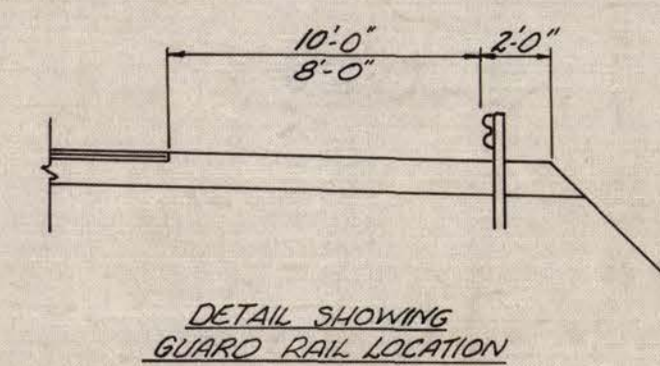
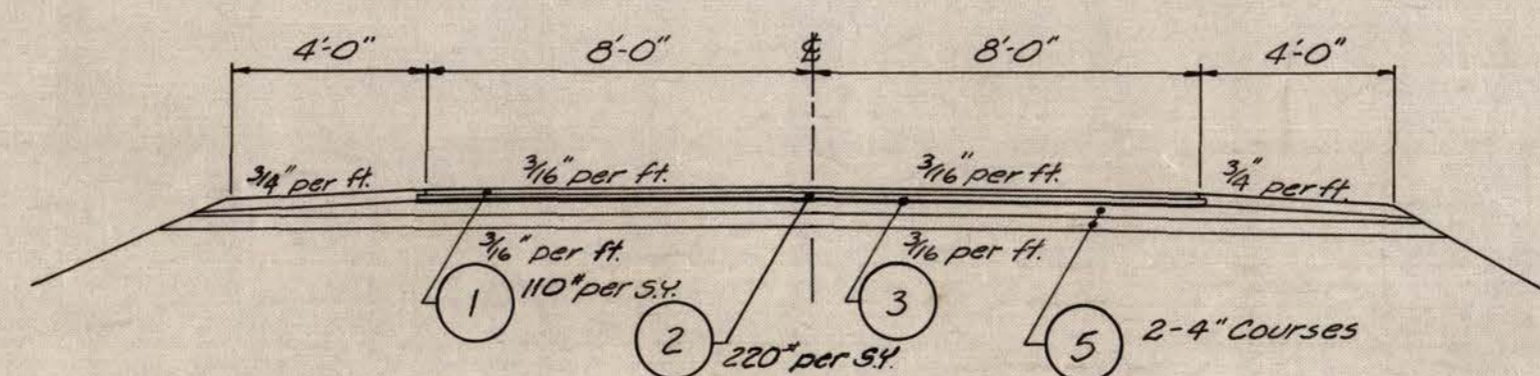


Note: Item 15, Traffic Bound Base Course Material may be substituted for the required dry bed beneath the sidewalk with no additional compensation and with the approval of the Engineer.

APPROACH PROJECT F-283 (16) CONT. 1
STA. -10+00[±] to STA. -15+50



GAINES ST.



REVISION SHEET NUMBER	REVISIONS	DATE	BY

KANAWHA COUNTY (RELOCATION OF 6 1/10 & R.R. LOADING AREA)

PUBLIC ROAD DIST. NO.	STATE PROJ. NO.	FEDERAL PROJ. NO.	FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
W. Va. 1		F-283 (16) C-1	1967	Kanawha	2-A	51

SEE REVISED SHEET

- ① Item 28-2 Hot-Laid Asphaltic Concrete Wearing Course, Stone or Gravel @ 110 # per SY or Slag @ 98 # per SY. Aggregate to be type 1.
- ② Item 28-1 Hot-Laid Asphaltic Concrete Bottom Course, Stone or Gravel @ 220 # per SY or Slag @ 196 # per SY.
- ③ Item 23-1 and 23-2 Prime or Tack Coat Aggregate, Stone or Gravel @ 20 # per SY or Slag @ 18 # per SY and Bituminous Material for RT 1, 2, 3 or 4 @ 0.30 to 0.60 Gal. per SY.
- ④ Item 7-1 Type I Aggregate Base Course (Compacted 4").
- ⑤ Item 15 Traffic Bound Base Course Material (Compacted 4").

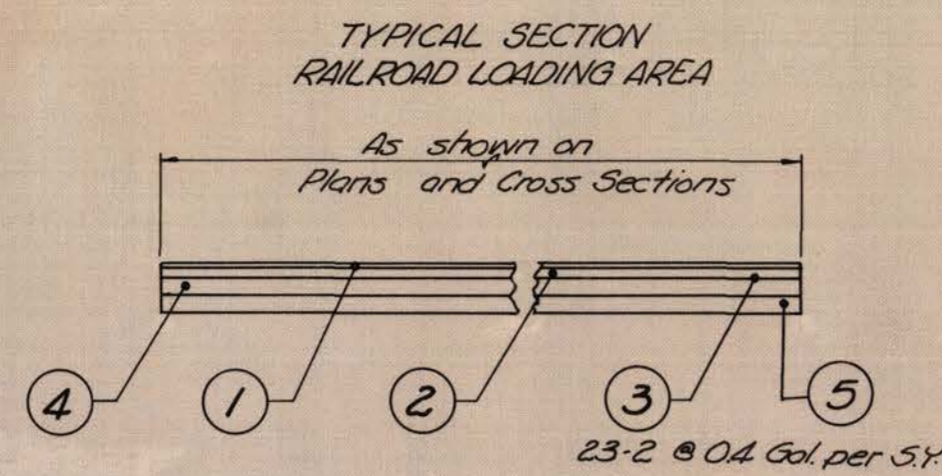
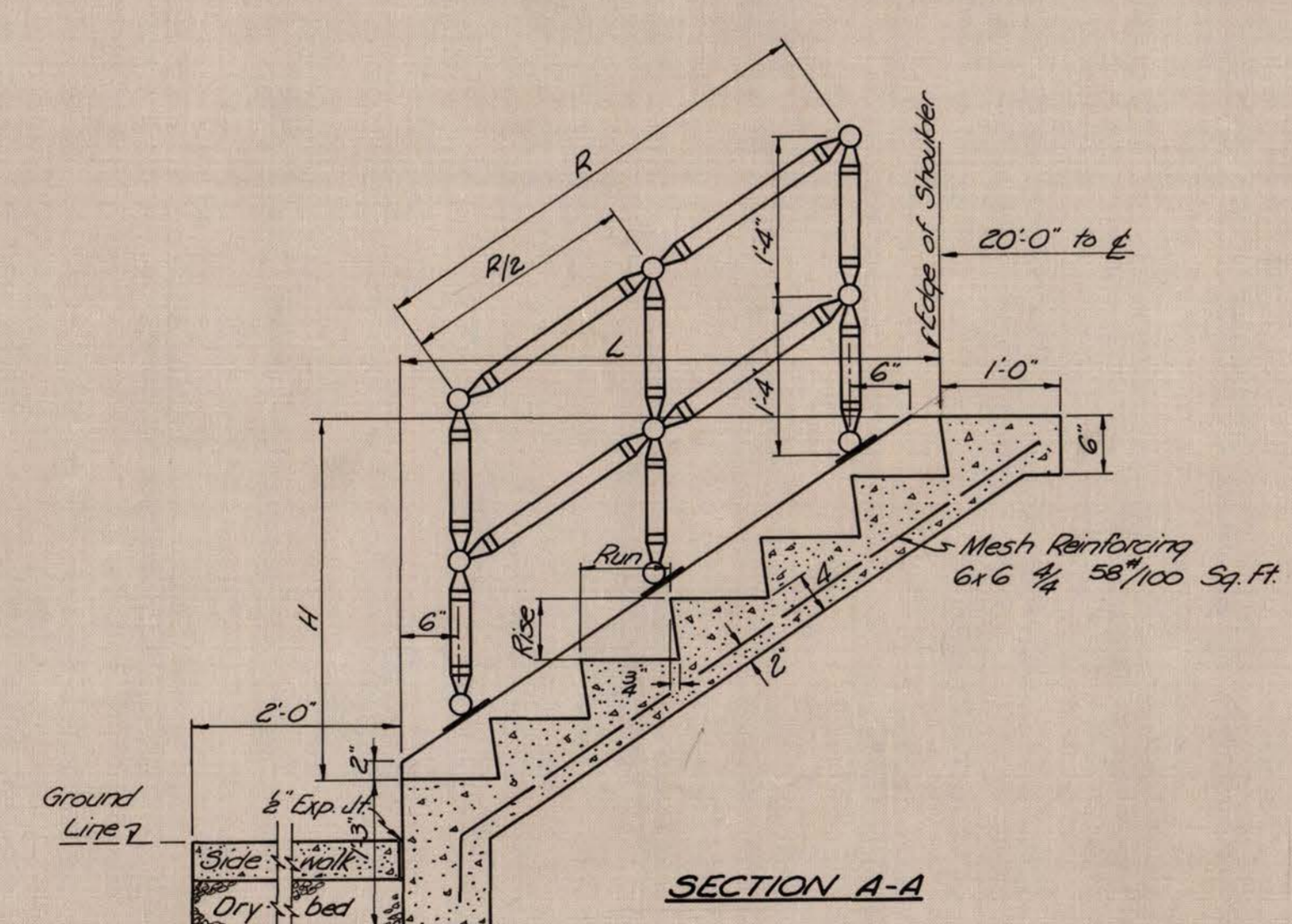
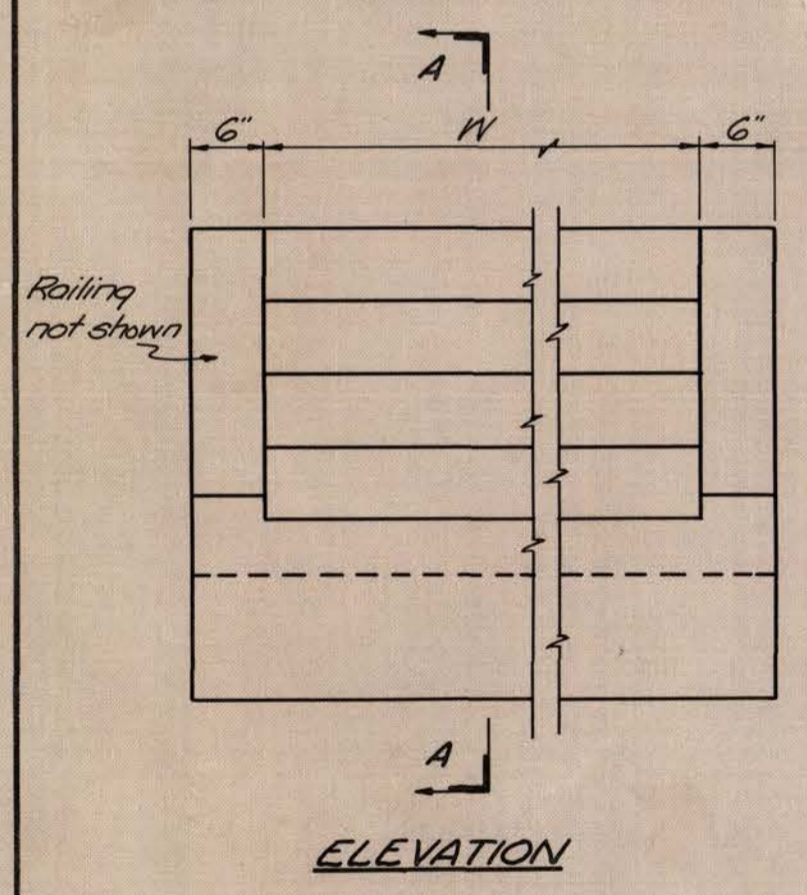
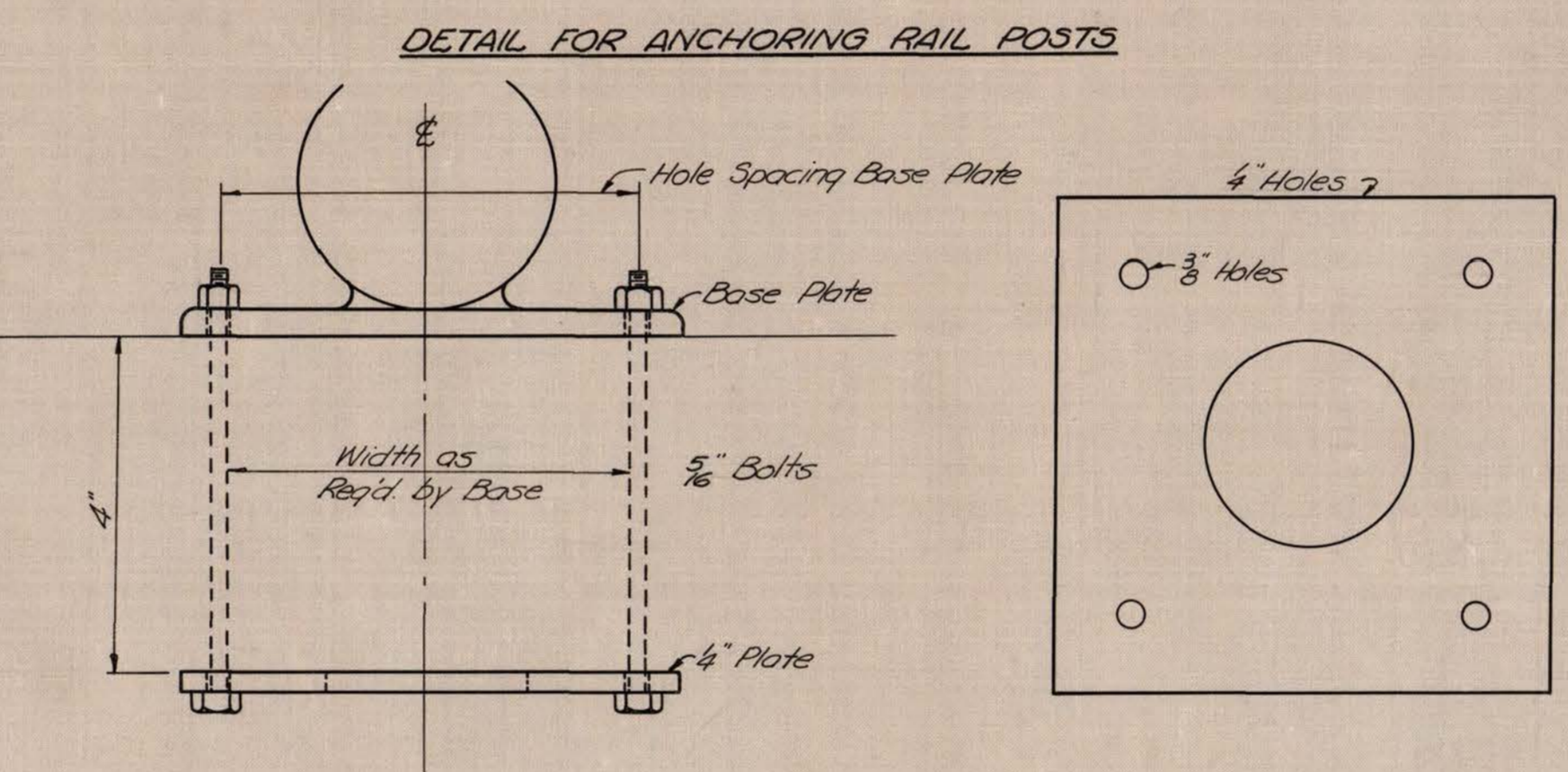
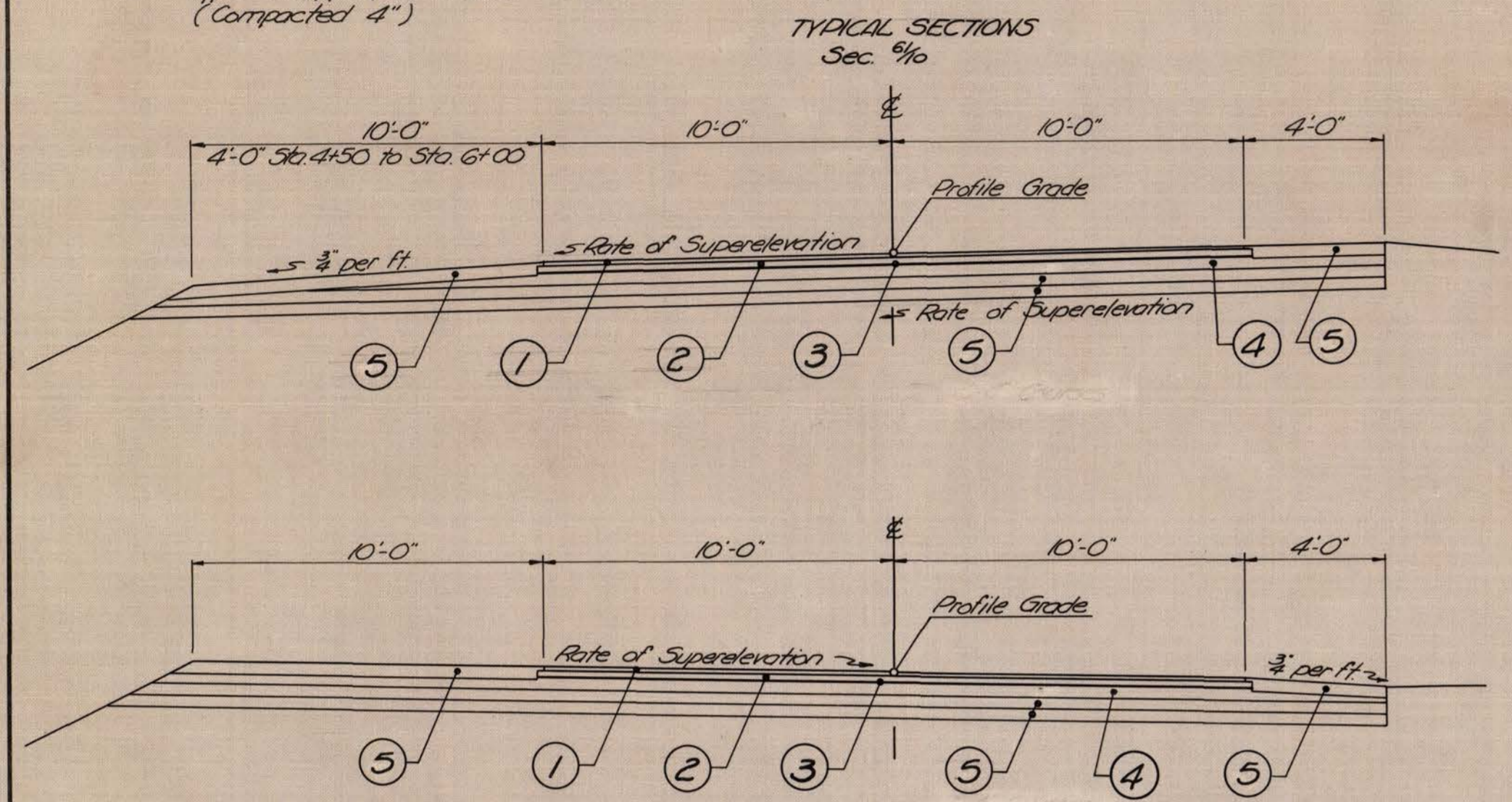


TABLE OF BALANCES

Station	Station	Dist. Ft.	Excav. C.Y.	Bal.	Adj. Excav. C.Y.	Emb. C.Y.	Excess C.Y.	Needed C.Y.	Borrow C.Y.	Waste C.Y.	Remarks
Morris Creek Rd. Sec. 6/10	0+12.50	6+00	823	85	700	2,208		1,908		400	Waste unsuitable topsoil
Railroad Loading Area	7+50	13+50	2,934	85	2,494	0	2,494			586	
Total			3,757		3,194	2,208		2,494	1,908	986	

The above table of balances for preliminary engineering only.



PIPE CULVERTS

Mark	Station	Drop Inlet	Drop Inlet	Concrete Casting	A	B	Remarks
D-27	12+21	1	1				Build D.I. on pres. 18" RCP
D-28	12+34			0.25			Cap pres. D.I.
D-29	12+38	1	1				Build D.I. on pres. 18" RCP
Total		2	2	0.25			

All concrete to be class A.
 Cost of reinforcing and expansion joints to be included in the cost of Item 7, Class A Concrete.
 Handrail shall be paid for at the unit price bid for Item 75-2, Pipe Railing (2'), per L.F.
 All railing fittings and flanges to be malleable iron.
 All rails, posts and base plates, are to be galvanized with hot-dipped zinc coating in accordance with AASHTO designation M 111 60 (A.S.T.M. 123).
 All bolts, nuts, washers and miscellaneous hardware to be galvanized in accordance with A.S.T.M. A-153.

DETAIL FOR CONCRETE STEPS

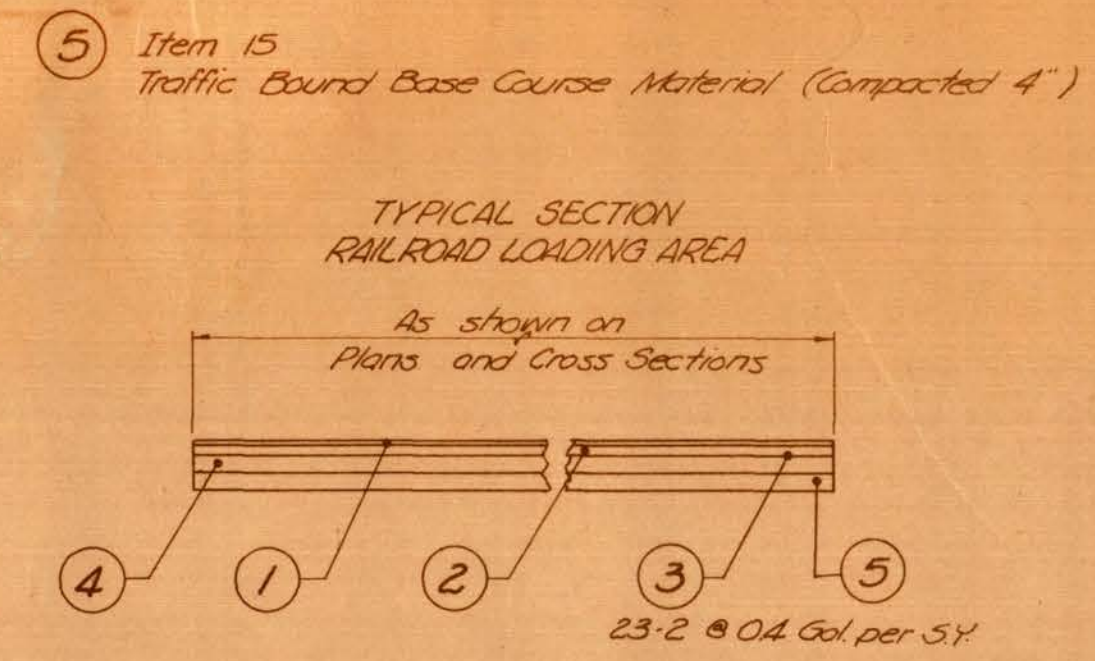
Station	W	L	H	Rise	Run	Sidewalk Reinforcing		Concrete C.Y.	Railing L.F.	R.
						S.F.	Lb.			
1+40	3'-0"	10'-6"	7'-0"	6"	9"	6	27.40	1.34	11.12	
1+80	3'-0"	10'-6"	7'-0"	6"	9"	6	27.40	1.34	11.12	
2+42	3'-0"	14'-0"	7'-0"	6"	12"	6	33.43	1.71	14.16	
2+80	3'-0"	12'-0"	6'-0"	6"	12"	6	28.91	1.49	11.92	
3+28	3'-0"	8'-0"	4'-0"	6"	12"	6	19.79	1.06	7.45	
Total						30	136.93	6.94	55.77	

PAVING QUANTITIES

Station	Station	Length	Item 15 C.Y.	Item 23-1 Ton	Item 23-2 Ton	Item 23-1 Gal.	Item 23-2 Gal.	Item 7-1 C.Y.	Remarks
0+12.50	6+00	587.5	586	148	73	13	808	230	Sec. 6/10
Railroad loading area		620±	400	396	198		1439	400	Team track area 6/10
Total			986	544	271	13	2,247	630	

REVISION NUMBER	REVISIONS	DATE	BY

- ① Item 28-2
Hot-Laid Asphaltic Concrete Wearing Course,
Stone or Gravel @ 110 # per SY or Slag @
78 # per SY. Aggregate to be Type 1.
- ② Item 28-1
Hot-Laid Asphaltic Concrete Bottom Course,
Stone or Gravel @ 220 # per SY or Slag @
176 # per SY.
- ③ Item 23-1 and 23-2
Prime or Tack Coat Aggregate, Stone or Gravel
@ 20 # per SY or Slag @ 18 # per SY and
Bituminous Material for R.T. 1, 2, 3 or 4 @
0.30 to 0.60 Gal. per SY.
- ④ Item 7-1
Type 1 Aggregate Base Course
(Compacted 4")



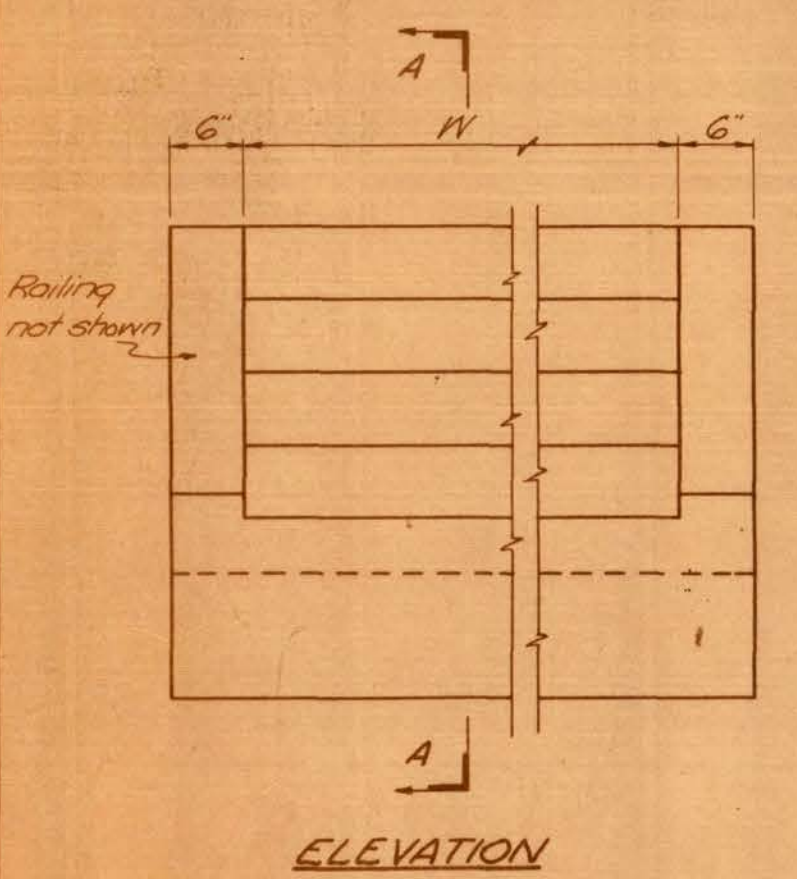
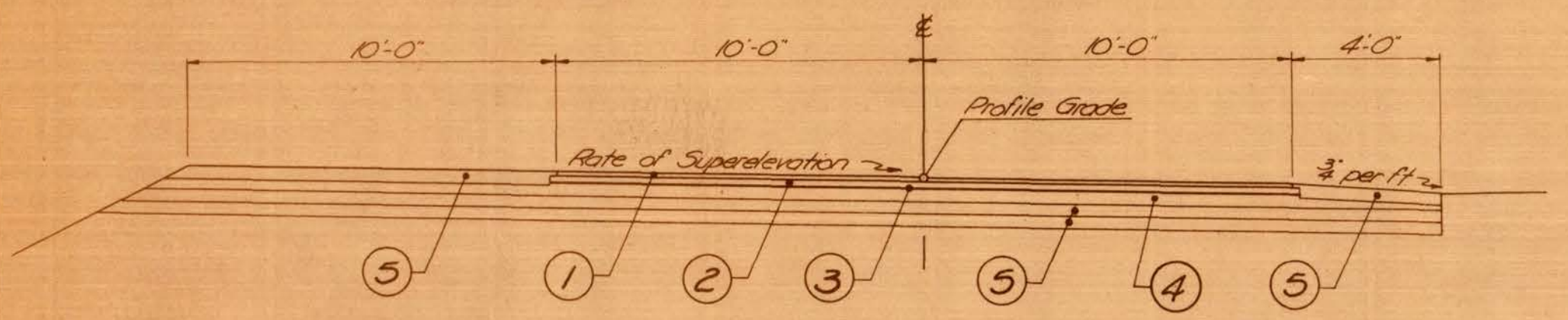
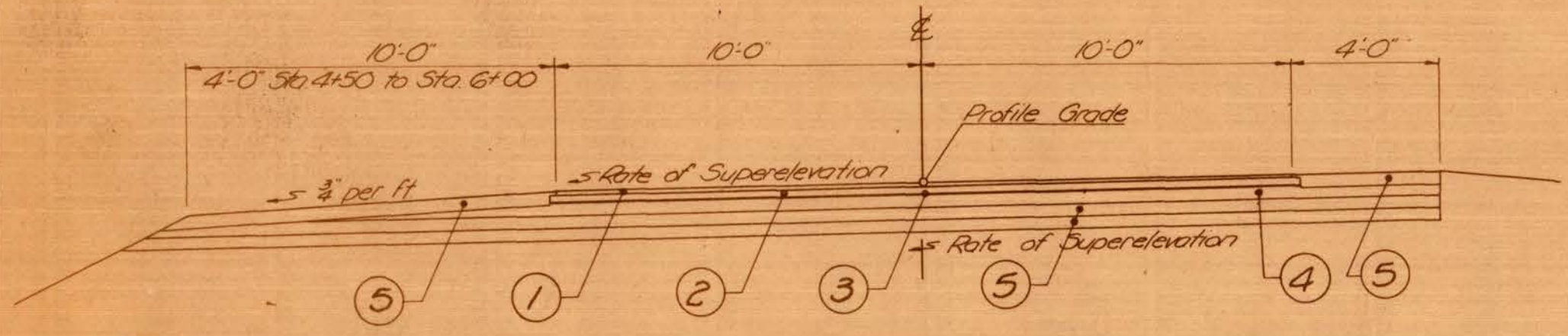
KANAWHA COUNTY (RELOCATION OF 6 1/10 & R.R. LOADING AREA)

PUBLIC ROAD DIST. NO.	STATE DIST. NO.	STATE PROJ. NO.	FEDERAL PROJ. NO.	FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
W. No. 1			F-253 (16) C-1	1967	Kanawha	2-A	

TABLE OF BALANCES

Station	Station	Dist. Ft.	Excav. CY	Bal.	Adj. Excav. CY	Emb. CY	Excess CY	Needed CY	Borrow CY	Waste CY	Remarks
0+12.50	6+00		953	85	810	1542		1225		493	Waste unsuitable topsoil
Railroad Loading Area			2934	85	2494	0	2494			1269	
Total			3887		3304	1542	2494	1225		1762	

The above table of balances for preliminary engineering only.



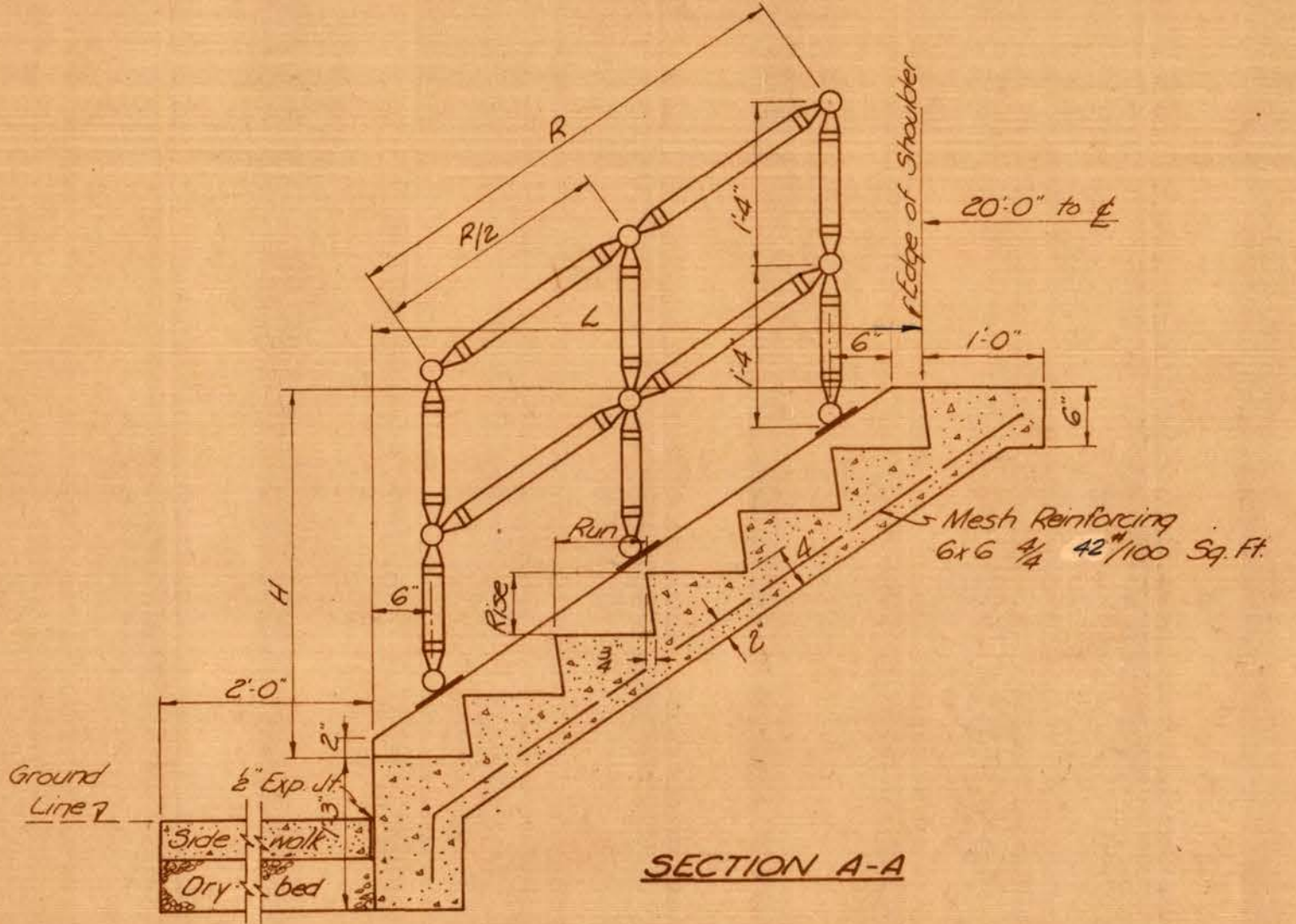
All concrete to be class A.
Cost of reinforcing and expansion joints to be included in the cost of Item 71, Class A Concrete.

Handrail shall be paid for at the unit price bid for Item 75-2, Pipe Railing (2"), per L.F.

All railing fittings and flanges to be malleable iron.

All rails, posts and base plates are to be galvanized with hot-dipped zinc coating in accordance with AASHTO designation M 111 60 (A.S.T.M. 123).

All bolts, nuts, washers and miscellaneous hardware to be galvanized in accordance with A.S.T.M. A-153.

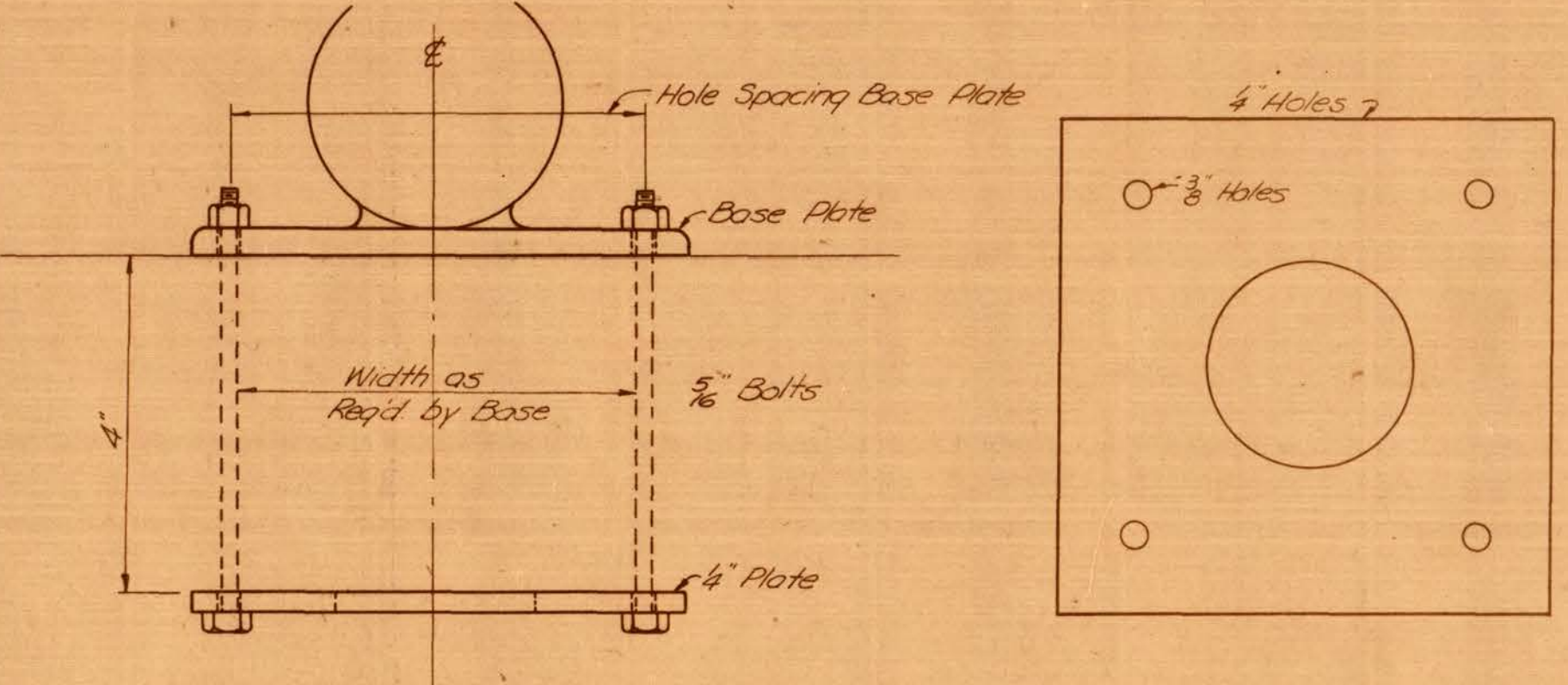


DETAIL FOR CONCRETE STEPS

CONCRETE STEPS

Station	W	L	H	Rise	Run	Sidewalk S.F.	Reinforcing Lb.	Concrete C.Y.	Railing L.F. R.
1+40	3'-0"	9'-0"	4'-6"	6"	12"	6	16.69	1.16	3.57
1+80	3'-0"	12'-0"	6'-0"	6"	12"	6	20.81	1.44	11.92
2+42	3'-0"	13'-0"	6'-6"	6"	12"	6	23.63	1.59	13.04
2+80	3'-0"	12'-0"	6'-0"	6"	12"	6	20.81	1.44	11.92
3+28	3'-0"	8'-0"	4'-0"	6"	12"	6	15.03	1.05	7.45
Total						30	96.97	6.68	52.90

DETAIL FOR ANCHORING RAIL POSTS



PIPE CULVERTS

Mark	Station	Drop Inlet	Drop Inlet Casting	Concrete A	Concrete B	Remarks
D-27	12+21		1	1		Build D.I. on pres. 18" RCP
D-28	12+34			0.25		Cap pres. D.I.
D-29	12+88		1	1		Build D.I. on pres. 18" RCP
Total			2	2	0.25	

PAVING QUANTITIES

Station	Station	Length	Item 15 C.Y.	Item 23-1 Ton	Item 23-2 Ton	Item 23-1 Gal.	Item 23-2 Gal.	Item 7-1 C.Y.	Remarks
0+12.50	6+00	587.5	586	148	73	13	808	230	Sec. 6/10
Railroad loading area		620±	400	376	198	13	1439	400	Team track area 6/10
Total			986	544	271	13	2247	630	

1	3, 14-B	Rev. Grade & Steps, Sec 6/10	2-27-67	RMB
REVISION NUMBER	SHEET NUMBER	REVISIONS	DATE	BY

See Revised sheet

GOVERNING SPECIFICATIONS

The State Road Commission of West Virginia Standard Specification, Roads and Bridges, Adopted 1960, as amended by the Special Provisions of The State Road Commission of West Virginia, Adopted October 19, 1965, the Contract Documents, and the Contract Plans.

GRADING

A correction for curvature has been applied to the Unclassified Excavation between ramp stations 5+50 and 10+00.

The unit price bid for unclassified excavation shall include the cost of removing the gas storage tank sta. 0+10+25 and any other tanks that may be encountered.

Borrow pits and waste sites within sight of any highway shall be suitable graded, fertilized, seeded and mulched, in accordance with Section 2.133 of the Specifications, by the Contractor at his expense. The Contractor's site grading plans for borrow and waste areas within sight of any highway shall be approved by the Engineer.

A rubber-tired roller may be used for the compaction of shoulders and base courses and shall meet the requirements of section 2.18, paragraph F, of the standard specifications of 1960.

DRAINAGE

Underdrain to be placed as shown on plans at wet spots, springs or as directed by the engineer.

All corrugated metal pipe other than SRC minimum gage shall be marked in accordance with AASHTO designation M-36-60 with the exception that the marking shall also be duplicated on a metal tag attached to each joint of pipe and each connecting band and special. The tag will be wired to the end of the joint of pipe in such manner that it may be left visible inside the pipe after laying.

The Contractor shall plug inlets to sanitary sewers where he removes abandoned lines or where old lines are uncovered in normal excavation. The pipes shall be plugged with a vitrified clay stopper, jugged in place, and Class A Concrete as directed by the Engineer. For pipe larger than twelve inches, the line to be plugged will be bricked up and plugged with Class A Concrete. Cost of clay stoppers, bricks and installation shall be incidental to the amount bid for Item 71, Class A Concrete.

The known and approximate locations of the sanitary sewers are shown on the plans. The locations are based on the best available information from existing maps and field surveys. It is the contractors responsibility to ascertain the status and location of each sewer when performing work which may affect same. Field adjustment of the drainage system may be required when the sewers have been located.

No item for structure excavation will be paid for removing pipes and drainage appurtenances which are located within the limits of the unclassified excavation or of the structure excavation for any other purpose.

No extra compensation will be allowed for bends, reducers or other specials required to complete the drainage as shown on the plans. Bay lengths will be determined by actual measurement along the centerline of the pipe.

The Unit Price Bid for Item 114-3, Manholes Complete, except Casting and Item 114-10, Junction Box Complete, except Casting shall include the cost of Structure Excavation necessary for the completion of this item.

AGGREGATE

Item 23-1, Prime or Tack Coat Aggregate shall be spread only on bituminous prime or tack coats that have been applied to base courses on which the traveling public is being routed.

CONCRETE

Class A concrete mix may be substituted for Class B concrete mix in all applications. The mix substituted will meet all the requirements of Class A concrete and shall be furnished at no extra increase in cost to the contract.

Reinforcing steel shall be new billet steel of intermediate grade.

Concrete in inlets, headwalls and wingwalls may be cured by white Membrane Curing Materials in accordance with Section 2.36.3 (P) 2(d).

GUARD RAIL

If galvanized posts are used, any posts which, in the opinion of the engineer, shows damage prior to acceptance, shall be removed from the project and replaced.

MISCELLANEOUS

Item 48-1(IX)(36) will be an alternate for Item 42-3(36). This pipe is to be jacked under the railroad, if the alternate of Concrete Pipe is bid, Class B concrete collars having a minimum thickness of 4 inches shall be poured to make the connections with the C.M. Pipe on both ends. Cost of the collars to be included in the unit price bid for Item 48-1(IX)(36).

Sheet piling or a comparable type of shoring will be required for the installation of the 30 inch storm sewer. Any damage to the house right of bridge station 13+50± will be the contractors responsibility.

Prior to the placing of Item 15 for the subbase the aggregate for maintaining traffic (Item 127-2) shall be tested and if it meets the requirements of Section 2.15 of the specifications and the applicable special provisions this material may be substituted for the bottom 3½" course of the subbase (Item 15). In order to do so the subgrade shall meet the requirements of Section 2.2.3 of the Specifications and the applicable Special Provisions prior to the acceptance of the material for use in the base. Any irregularities in the subgrade shall be corrected by the use of excavated material to bring the subgrade to plan elevation.

The unit price bid for Item 127-2, Aggregate for Maintaining Traffic, shall be full compensation for placing the aggregate as described above and this aggregate will not be measured or paid for as Item 15.

The sequence of operations for this project will have to be arranged in such a manner that the railroad loading area and relocation of route 61 will be in operation before the services of railroad siding #376 are interrupted by the construction on route 61.

Extra strength clay pipe meeting ASTM C-200 and full diameter extra strength clay pipe meeting ASTM C-200 standards for physical and chemical properties may be used in lieu of standard strength clay pipe at the price bid for standard strength clay pipe.

The City of Montgomery has a riverfront improvement project located within 500 feet of the highway project which may be available as a waste site for this project.

The cost of removing the building foundation left of station -7+50 and all similar structures is to be included in the price bid for Item 2, Unclassified Excavation.

ESTIMATE OF QUANTITIES

Item No.	Alter- notes	Item	Unit	Fayette F-223(15) Cont. 2	Fayette F-223(16) Cont. 1	Kanawha F-223(16) Cont. 1	Total
1		Clearing and Grubbing	Acre	8	3	1	12
2		Unclassified Excavation	CY	178,500	9,500	3,757	191,757
6-1		Structure Excavation	CY	119	269		388
6-5		Select Material for Backfilling	CY	0	29		29
7-1	Princ.	Type I Aggregate Base Course	CY	259	629		888
23-2	Princ.	Bituminous Material	Gal.	1,150	2,972		4,122
9-1	Alt. 1	Bituminous Treated Aggregate Base Course	CY	259	629		888
9-2	Alt. 1	Bituminous Material	Gal.	5,180	12,580		17,760
22-1	Alt. 2	Cement Treated Aggregate Base Course	CY	259	629		888
22-2	Alt. 2	Portland Cement	Bbl.	130	316		446
22-3	Alt. 2	Bituminous Material	Gal.	463	1,133		1,596
15		Traffic Bound Base Course Material	CY	557	1,769	986	3,312
7-1		Type I Aggregate Base Course	CY	118	291	630	1,039
23-1	Princ.	Prime or Tack Coat Aggregate, Stone or Gravel	Ton	0	35	13	48
23-1	Alt. 1	Prime or Tack Coat Aggregate, Slag	Ton	0	31	12	43
23-2		Bituminous Material	Gal.	0	963	2,247	3,210
28-1	Princ.	Hot-Laid Asphaltic Concrete Bottom Course, Stone or Gravel	Ton	273	738	544	1,555
28-1	Alt. 1	Hot-Laid Asphaltic Concrete Bottom Course, Slag	Ton	243	657	484	1,384
28-2	Princ.	Hot-Laid Asphaltic Concrete Wearing Course, Stone or Gravel	Ton	164	573	271	1,008
28-2	Alt. 1	Hot-Laid Asphaltic Concrete Wearing Course, Slag	Ton	146	510	241	897
28-5		Laboratory	LS		LS		LS
42-2(18)		Full Bituminous Coated Corrugated Metal Pipe, Type 1	LF	136	0		136
*1 42-3(18)	Princ.	Full Bituminous Coated and Paved Invert Corrugated Metal Pipe, Type 2	LF	0	132		132
*2 42-3(30)	Princ.	Full Bituminous Coated and Paved Invert Corrugated Metal Pipe, Type 2	LF	0	600		600
*3 42-3(36)	Princ.	Full Bituminous Coated and Paved Invert Corrugated Metal Pipe, Type 2	LF	0	128		128
42-3(36)	Princ.	Full Bituminous Coated and Paved Invert Corrugated Metal Pipe, Type 2	LF	0	60		60
48-1(IX)(36)	Alt. 1	Reinforced Concrete Culvert, Storm Drain and Sewer Pipe	LF	0	60		60
*4 48-1(IX)(24)	Princ.	Reinforced Concrete Culvert, Storm Drain and Sewer Pipe	LF	0	584		584
50-1(12)		Clay Pipe, Standard Strength	LF	0	216		216
71		Class A Concrete	CY	0	85	7	92
71-3		Laboratory	LS		LS		LS
78		Reinforcing Steel Bars	Lb.	0	3,969		3,969
102-2(6)	Princ.	Corrugated Metal Pipe for Underdrain, Perforated and Fully Coated	LF	70	1,271		1,341
103-1(6)	Alt. 1	Corrugated Aluminum Alloy Pipe for Underdrain, Perforated	LF	70	1,271		1,341
104-1(6)	Alt. 2	Standard Strength Non-Reinforced Perforated Concrete Underdrainage Pipe	LF	70	1,271		1,341
102-2(12)		Corrugated Metal Pipe for Underdrain, Perforated and Fully Coated	LF	370	0		370
107		Crushed Stone, Crushed Gravel, or Silica Sand for Underdrain	CY	51	139		190
108		Horizontal Drains	LF	4610	0		4,610
110-1		Plain Concrete Curb - Standard	LF	0	70		70
110-5		Combination Concrete Curb and Gutters	LF	439	706		1,145
111-4		Dumped Rock Gutter	CY	600	0		600
112		Concrete Sidewalk	SF	1,107	3,569	30	4,706
113-2		Drop Inlet Castings	Ea.	2	11	2	15
113-3		Manhole Frame and Cover Castings	Ea.	0	5		5
113-4		Manhole Frame and Cover Castings (Ring Type)	Ea.	1	2		3
114-2		Drop Inlets Complete, except Casting	Ea.	0	9	2	11
114-2(1)		Ditch Drop Inlets including Gratings	Ea.	1	0		1
114-3	Princ.	Manholes Complete, except Casting	Ea.	0	5		5
114-3(1)	Alt. 1	Manholes Complete, Precast Type, except Casting	Ea.	0	5		5
114-6		Hillside Drop Inlet, with Grating	Ea.	2	3		5
114-9		Curb Drop Inlet Complete, except Casting	Ea.	1	1		2
114-10		Junction Box Complete, except Casting	Ea.	0	1		1
118	Princ.	Steel Beam Type Guard Rail (Deep) Galvanized	LF	152	363		515
119	Alt. 1	Steel Beam Type Guard Rail (Deep)	LF	152	363		515
126		Water for Dust Palliative	M.Gal.	8	12		20
127-1		Maintaining Traffic	LS		LS		LS
129-1		Project Markers	Ea.	2	0		2
133-2		Fertilizer	Ton	2.5	0.5	0.5	3.5
133-3		Seeding	Acre	7	1	1	9
133-4		Mulching	Acre	7	1	1	9
136-1		Standard Field Office and Storage Building	LS	LS			LS
136-3		Building Equipment	LS	LS			LS
127-2		Aggregate for Maintaining Traffic	Ton	0	500		500
1A (1751)		Building Demolition	LS		LS		LS
6-1(A)		Structure Excavation for Horizontal Drains	CY	777	0		777
75-2		Pipe Rolling (2')	LF	0	0	56	56

PIPE ALTERNATES

*1 48-1(IX)(18)	Alt. 1	Reinforced Concrete Culvert, Storm Drain and Sewer Pipe	LF	0	132		132
*1 50-2(18)	Alt. 2	Clay Pipe, Extra Strength	LF	0	132		132
*2 48-1(IX)(30)	Alt. 1	Reinforced Concrete Culvert, Storm Drain and Sewer Pipe	LF	0	600		600
*2 50-2(30)	Alt. 2	Clay Pipe, Extra Strength	LF	0	600		600
*3 48-1(IX)(36)	Alt. 1	Reinforced Concrete Culvert, Storm Drain and Sewer Pipe	LF	0	128		128
*3 50-2(36)	Alt. 2	Clay Pipe, Extra Strength	LF	0	128		128
*4 42-3(24)	Alt. 1	Full Bituminous Coated and Paved Invert Corrugated Metal Pipe, Type 2	LF	0	584		584
*4 50-2(24)	Alt. 2	Clay Pipe, Extra Strength	LF	0	584		584

REVISION NUMBER	REVISIONS	DATE	BY

GOVERNING SPECIFICATIONS

The State Road Commission of West Virginia Standard Specification, Roads and Bridges, Adopted 1960, as amended by the Special Provisions of The State Road Commission of West Virginia, Adopted October 19, 1965, the Contract Documents, and the Contract Plans.

GRADING

A correction for curvature has been applied to the Unclassified Excavation between ramp stations 5+50 and 10+00.

The unit price bid for unclassified excavation shall include the cost of removing the gas storage tank sta. 0-10+25 and any other tanks that may be encountered.

Borrow pits and waste sites within sight of any highway shall be suitable graded, fertilized, seeded and mulched, in accordance with Section 2.133 of the Specifications, by the Contractor at his expense. The Contractor's site grading plans for borrow and waste areas within sight of any highway shall be approved by the Engineer.

A rubber-tired roller may be used for the compaction of shoulders and base courses and shall meet the requirements of section 2.18, paragraph F, of the standard specifications of 1960.

DRAINAGE

Underdrain to be placed as shown on plans at wet spots, springs or as directed by the engineer.

All corrugated metal pipe other than SRC minimum gage shall be marked in accordance with AASHTO designation M-36-60 with the exception that the marking shall also be duplicated on a metal tag attached to each joint of pipe and each connecting band and special. The tag will be wired to the end of the joint of pipe in such manner that it may be left visible inside the pipe after laying.

The Contractor shall plug inlets to sanitary sewers where he removes abandoned lines or where old lines are uncovered in normal excavation. The pipes shall be plugged with a vitrified clay stopper, jugged in place, and Class A Concrete as directed by the Engineer. For pipe larger than twelve inches, the line to be plugged will be bricked up and plugged with Class A Concrete. Cost of clay stoppers, bricks and installation shall be incidental to the amount bid for Item 71, Class A Concrete.

The known and approximate locations of the sanitary sewers are shown on the plans. The locations are based on the best available information from existing maps and field surveys. It is the contractor's responsibility to ascertain the status and location of each sewer when performing work which may affect same. Field adjustment of the drainage system may be required when the sewers have been located.

No item for structure excavation will be paid for removing pipes and drainage appurtenances which are located within the limits of the unclassified excavation or of the structure excavation for any other purpose.

No extra compensation will be allowed for bends, reducers or other specials required to complete the drainage as shown on the plans. Key lengths will be determined by actual measurement along the centerline of the pipe.

The Unit Price Bid for Item 114-3, Manholes Complete, except Casting and Item 114-10, Junction Box Complete, except Casting shall include the cost of Structure Excavation necessary for the completion of this Item.

AGGREGATE

Item 23-1, Prime or Tack Coat Aggregate shall be spread only on bituminous prime or tack coats that have been applied to base courses on which the traveling public is being routed.

CONCRETE

Class A concrete mix may be substituted for Class B concrete mix in all applications. The mix substituted will meet all the requirements of Class A concrete and shall be furnished at no extra increase in cost to the contract.

Reinforcing steel shall be new billet steel of intermediate grade.

Concrete in inlets, headwalls and wingwalls may be cured by White Membrane Curing Materials in accordance with Section 2.36.3 (P) 2 (d).

GUARD RAIL

If galvanized posts are used, any posts which, in the opinion of the engineer, shows damage prior to acceptance, shall be removed from the project and replaced.

MISCELLANEOUS

Item 48-1 (IX)(36) will be an alternate for Item 42-3 (36). This pipe is to be jacked under the railroad. If the alternate of Concrete Pipe is bid, Class B concrete collars having a minimum thickness of 4 inches shall be poured to make the connections with the C.M. Pipe on both ends. Cost of the collars to be included in the unit price bid for Item 48-1 (IX)(36).

Sheet piling or a comparable type of shoring will be required for the installation of the 30 inch storm sewer. Any damage to the house right of bridge station 13+50± will be the contractor's responsibility.

Prior to the placing of Item 15 for the subbase the aggregate for maintaining traffic (Item 127-2) shall be tested and if it meets the requirements of Section 2.15 of the specifications and the applicable special provisions this material may be substituted for the bottom 3/4" course of the subbase (Item 15). In order to do so the subgrade shall meet the requirements of Section 2.2.3 of the Specifications and the applicable Special Provisions prior to the acceptance of the material for use in the base. Any irregularities in the subgrade shall be corrected by the use of excavated material to bring the subgrade to plan elevation.

The unit price bid for Item 127-2, Aggregate for Maintaining Traffic, shall be full compensation for placing the aggregate as described above and this aggregate will not be measured or paid for as Item 15.

The sequence of operations for this project will have to be arranged in such a manner that the railroad loading area and relocation of route 91a will be in operation before the services of railroad siding #376 are interrupted by the construction on route 61.

Extra strength clay pipe meeting ASTM C-200 and full diameter extra strength clay pipe meeting ASTM C-200 standards for physical and chemical properties may be used in lieu of standard strength clay pipe at the price bid for standard strength clay pipe.

The City of Montgomery has a riverfront improvement project located within 500 feet of the highway project which may be available as a waste site for this project.

The cost of removing the building foundation left of station 7+50 and all similar structures is to be included in the price bid for Item 2, Unclassified Excavation.

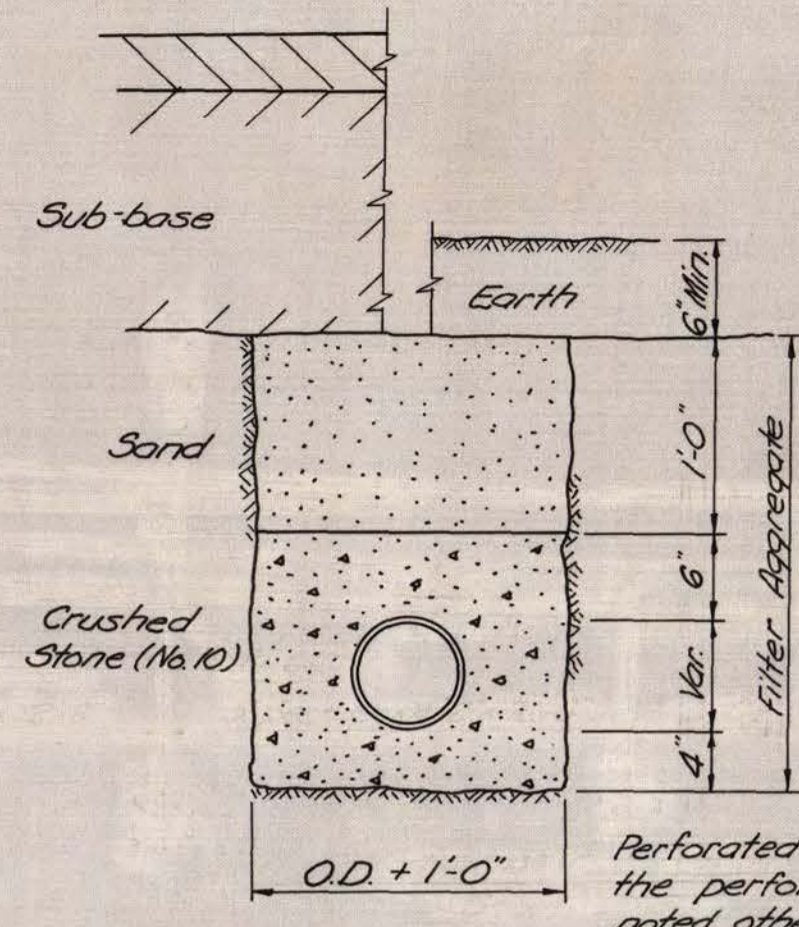
2	4.12	Revised Plain & Drop Curbs	3-6-67	EMB
1	2.1.4.2	Rev. Grade & Steps, Sec 10	2-27-67	RMB
REVISION SHEET NUMBER		REVISIONS	DATE	BY

ESTIMATE OF QUANTITIES

Item No.	Alter-ates	Item	Unit	Fayette F-283(15) Cont. 2	Fayette F-283(16) Cont. 1	Kanawha F-283(16) Cont. 1	Total
1		Cleaning and Grubbing	Acres	8	3	1	12
2		Unclassified Excavation	CY	178,500	9,500	3,887	191,887
6-1		Structure Excavation	CY	119	269		388
6-5		Select Material for Backfilling	CY	0	29		29
7-1	Princ.	Type I Aggregate Base Course	CY	259	629		888
23-2	Princ.	Bituminous Material	Gal	1,150	2,972		4,122
9-1	Alt. 1	Bituminous Treated Aggregate Base Course	CY	259	629		888
9-2	Alt. 1	Bituminous Material	Gal	5,180	12,580		17,760
22-1	Alt. 2	Cement Treated Aggregate Base Course	CY	259	629		888
22-2	Alt. 2	Portland Cement	Bbl	130	316		446
22-3	Alt. 2	Bituminous Material	Gal	463	1,133		1,596
15		Traffic Bound Base Course Material	CY	557	1,769	986	3,312
7-1		Type I Aggregate Base Course	CY	118	291	630	1,039
23-1	Princ.	Prime or Tack Coat Aggregate, Stone or Gravel	Ton	0	35	13	48
23-1	Alt. 1	Prime or Tack Coat Aggregate, Slog	Ton	0	31	12	43
23-2		Bituminous Material	Gal	0	963	2,247	3,210
28-1	Princ.	Hot-Laid Asphaltic Concrete Bottom Course, Stone or Gravel	Ton	273	738	544	1,555
28-1	Alt. 1	Hot-Laid Asphaltic Concrete Bottom Course, Slog	Ton	243	657	484	1,384
28-2	Princ.	Hot-Laid Asphaltic Concrete Wearing Course, Stone or Gravel	Ton	164	573	271	1,008
28-2	Alt. 1	Hot-Laid Asphaltic Concrete Wearing Course, Slog	Ton	146	510	241	897
28-5		Laboratory	LS		LS		LS
42-2 (10)		Full Bituminous Coated Corrugated Metal Pipe, Type 1	LF	136	0		136
42-3 (18)	Princ.	Full Bituminous Coated and Paved Invert Corrugated Metal Pipe, Type 2	LF	0	132		132
42-3 (30)	Princ.	Full Bituminous Coated and Paved Invert Corrugated Metal Pipe, Type 2	LF	0	600		600
42-3 (36)	Princ.	Full Bituminous Coated and Paved Invert Corrugated Metal Pipe, Type 2	LF	0	128		128
42-3 (36)	Princ.	Full Bituminous Coated and Paved Invert Corrugated Metal Pipe, Type 2	LF	0	60		60
48-1 (10)(36)	Alt. 1	Reinforced Concrete Culvert, Storm Drain and Sewer Pipe	LF	0	60		60
48-1 (10)(24)	Princ.	Reinforced Concrete Culvert, Storm Drain and Sewer Pipe	LF	0	584		584
50-1 (12)		Clay Pipe, Standard Strength	LF	0	216		216
71		Class A Concrete	CY	0	85	7	92
71-3		Laboratory	LS		LS		LS
78		Reinforcing Steel Bars	Lb	0	3,969		3,969
102-2 (6)	Princ.	Corrugated Metal Pipe for Underdrain, Perforated and Fully Coated	LF	70	1,271		1,341
103-1 (6)	Alt. 1	Corrugated Aluminum Alloy Pipe for Underdrain, Perforated	LF	70	1,271		1,341
104-1 (6)	Alt. 2	Standard Strength Non-Reinforced Perforated Concrete Underdrainage Pipe	LF	70	1,271		1,341
102-2 (12)		Corrugated Metal Pipe for Underdrain, Perforated and Fully Coated	LF	370	0		370
107		Crushed Stone, Crushed Gravel, or Silica Sand for Underdrain	CY	51	439		490
108		Horizontal Drains	LF	4,610	0		4,610
110-1		Plain Concrete Curb - Standard	LF	0	40		40
110-5		Combination Concrete Curb and Gutters	LF	439	706		1,145
111-4		Dumped Rock Gutter	CY	600	0		600
112		Concrete Sidewalk	SF	1,107	3,567	30	4,706
113-2		Drop Inlet Castings	Ea	2	11	2	15
113-3		Manhole Frame and Cover Castings	Ea	0	5		5
113-4		Manhole Frame and Cover Castings (Ring Type)	Ea	1	2		3
114-2		Drop Inlets Complete, except Castings	Ea	0	9	2	11
114-2 (1)		Ditch Drop Inlets including Gratings	Ea	1	0		1
114-3	Princ.	Manholes Complete, except Castings	Ea	0	5		5
114-3 (1)	Alt. 1	Manholes Complete, Precast Type, except Casting	Ea	0	5		5
114-6		Hillside Drop Inlet, with Grating	Ea	2	3		5
114-9		Curb Drop Inlet Complete, except Casting	Ea	1	1		2
114-10		Junction Box Complete, except Casting	Ea	0	1		1
118	Princ.	Steel Beam Type Guard Rail (Deep) Galvanized	LF	152	363		515
119	Alt. 1	Steel Beam Type Guard Rail (Deep)	LF	152	363		515
126		Water for Dust Palliative	MGal	8	12		20
127-1		Maintaining Traffic	LS		LS		LS
129-1		Project Markers	Ea	2	0		2
133-2		Fertilizer	Ton	2.5	0.5	0.5	3.5
133-3		Seeding	Acres	7	1	1	9
133-4		Mulching	Acres	7	1	1	9
136-1		Standard Field Office and Storage Building	LS	LS			LS
136-3		Building Equipment	LS	LS			LS
127-2		Aggregate for Maintaining Traffic	Ton	0	500		500
1A (1751)		Building Demolition	LS		LS		LS
6-1(A)		Structure Excavation for Horizontal Drains	CY	777	0		777
75-2		Pipe Rolling (E)	LF	0	0	53	53
PIPE ALTERNATES							
* 1	48-1 (10)(18)	Alt. 1 Reinforced Concrete Culvert, Storm Drain and Sewer Pipe	LF	0	132		132
* 1	50-2 (10)	Alt. 2 Clay Pipe, Extra Strength	LF	0	132		132
* 2	48-1 (10)(30)	Alt. 1 Reinforced Concrete Culvert, Storm Drain and Sewer Pipe	LF	0	600		600
* 2	50-2 (30)	Alt. 2 Clay Pipe, Extra Strength	LF	0	600		600
* 3	48-1 (10)(36)	Alt. 1 Reinforced Concrete Culvert, Storm Drain and Sewer Pipe	LF	0	128		128
* 3	50-2 (36)	Alt. 2 Clay Pipe, Extra Strength	LF	0	128		128
* 4	42-3 (24)	Alt. 1 Full Bituminous Coated and Paved Invert Corrugated Metal Pipe, Type 2	LF	0	584		584
* 4	50-2 (24)	Alt. 2 Clay Pipe, Extra Strength	LF	0	584		584

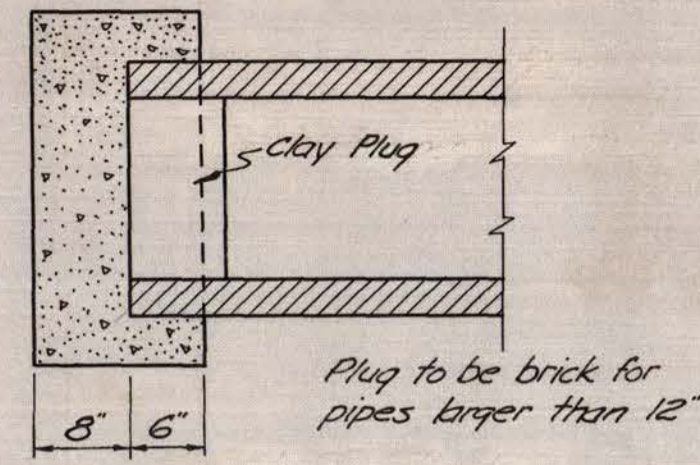
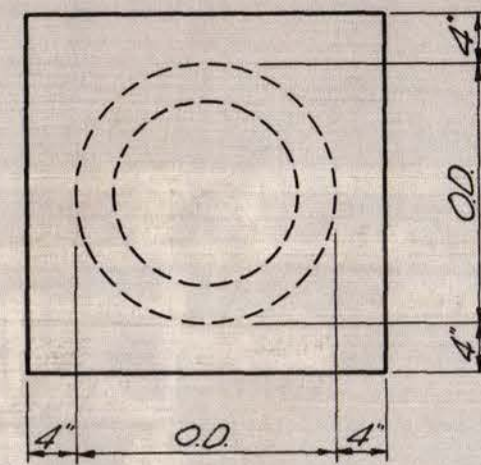
THE STATE ROAD COMMISSION OF WEST VIRGINIA SPECIFICATIONS OF 1960
WILL GOVERN ALL WORK AND MATERIALS UNLESS OTHERWISE NOTED

PUBLIC ROAD DIST.	STATE NO.	STATE PROJ. NO.	FEDERAL PROJ. NO.	FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
W. Va.	9		F-283(15)	1967	FAYETTE	5	51

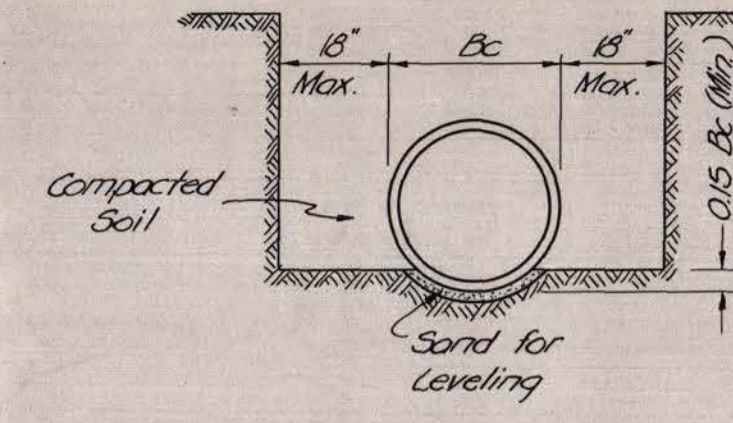


Perforated pipe shall be laid with the perforations down unless noted otherwise.

TYPICAL METHOD FOR PLACING UNDERDRAIN

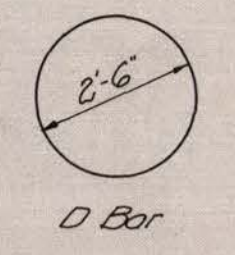


SKETCH SHOWING METHOD FOR PLUGGING PIPES



CLASS B
TYPICAL PIPE BEDDING

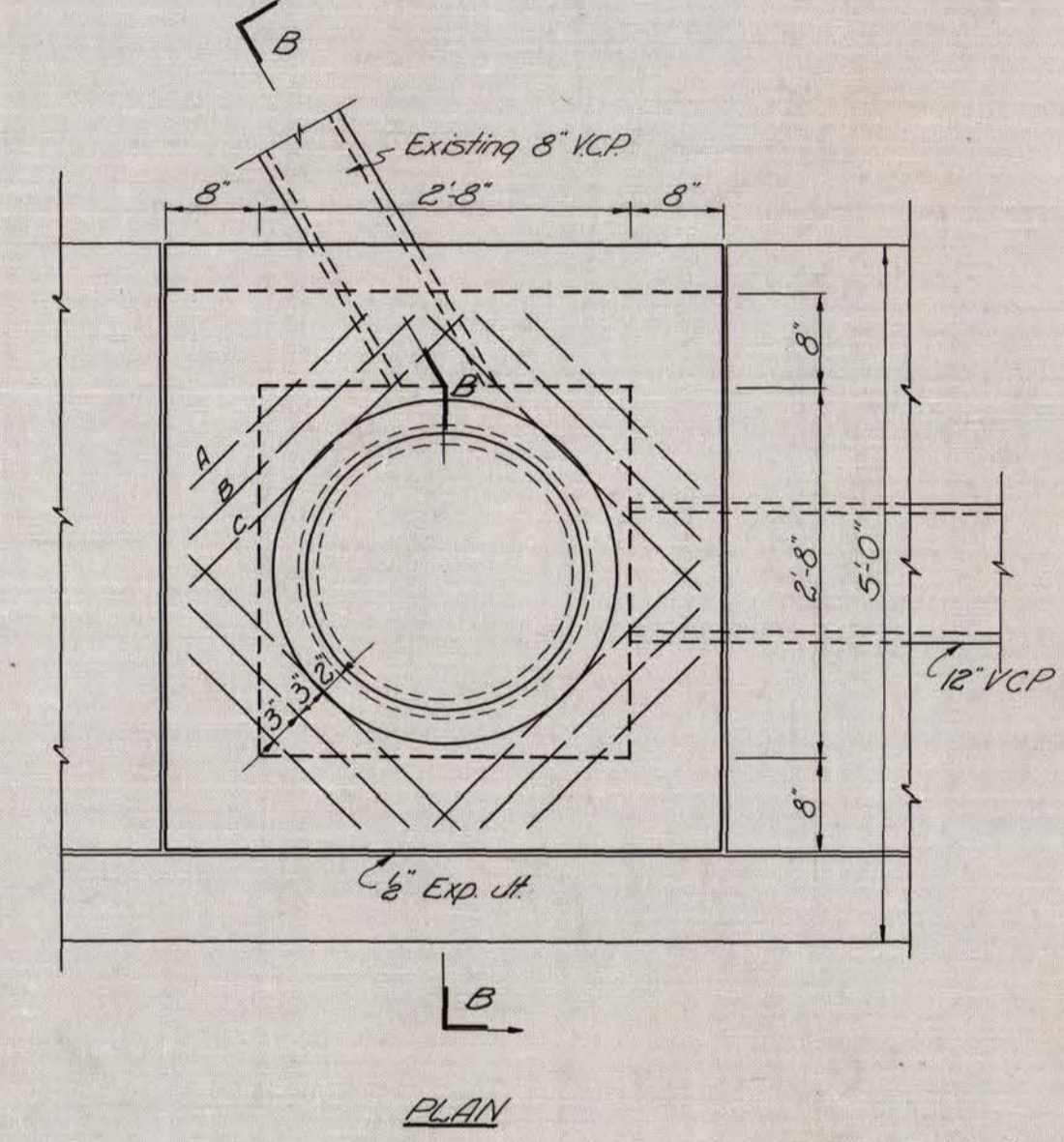
Note:
Sand for leveling shall meet the requirements of Subsection 3.2.1(E) 1 or 2 of Standard Specifications of 1960.
Cost of sand for leveling to be included in cost of pipe.



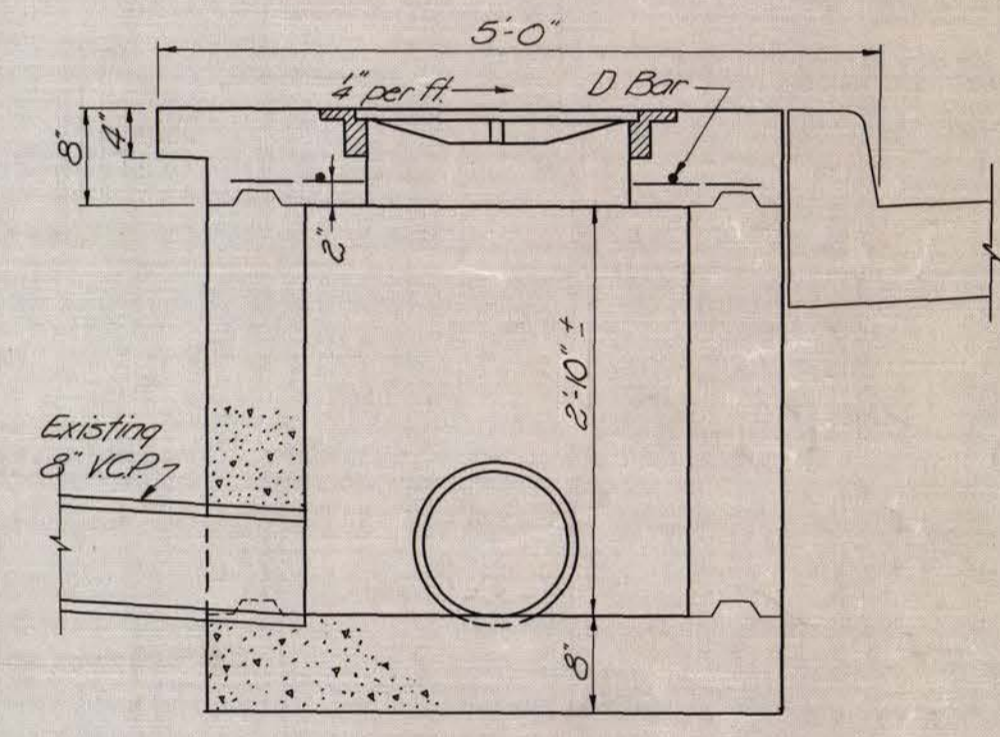
BILL OF STEEL

Mark	Size	No.	Length	Type	Weight Lb.
A	#5	4	1'-9"	Str.	7.3
B	#5	4	2'-3"	Str.	9.4
C	#5	4	2'-9"	Str.	11.5
D	#5	1	8'-0"	Bar	8.3
Total					36.5

All concrete to be Class B
Cost of reinforcing steel to be included in the unit price bid for item 114-10, Junction Box.
Bid item for Junction Box will be 113-4 Manhole Frame and Cover Casting (Ring Type) per each 114-10 Junction Box per each

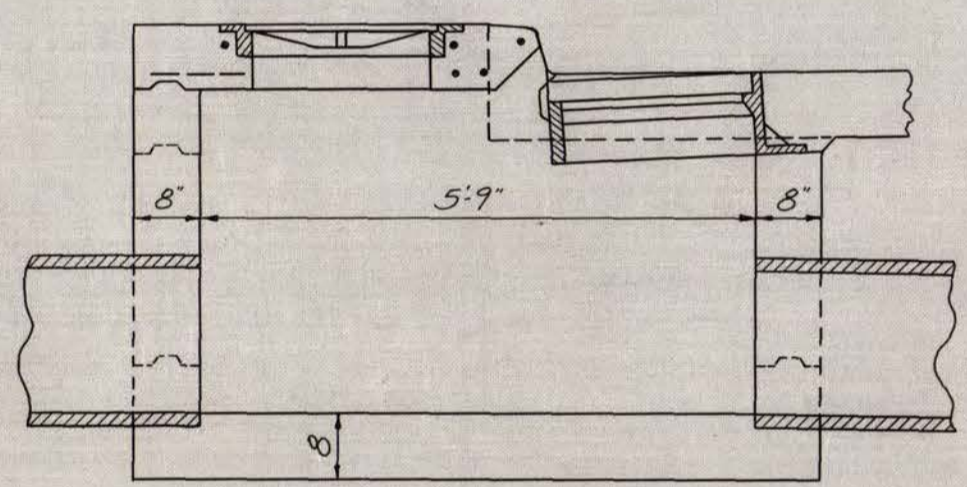


PLAN



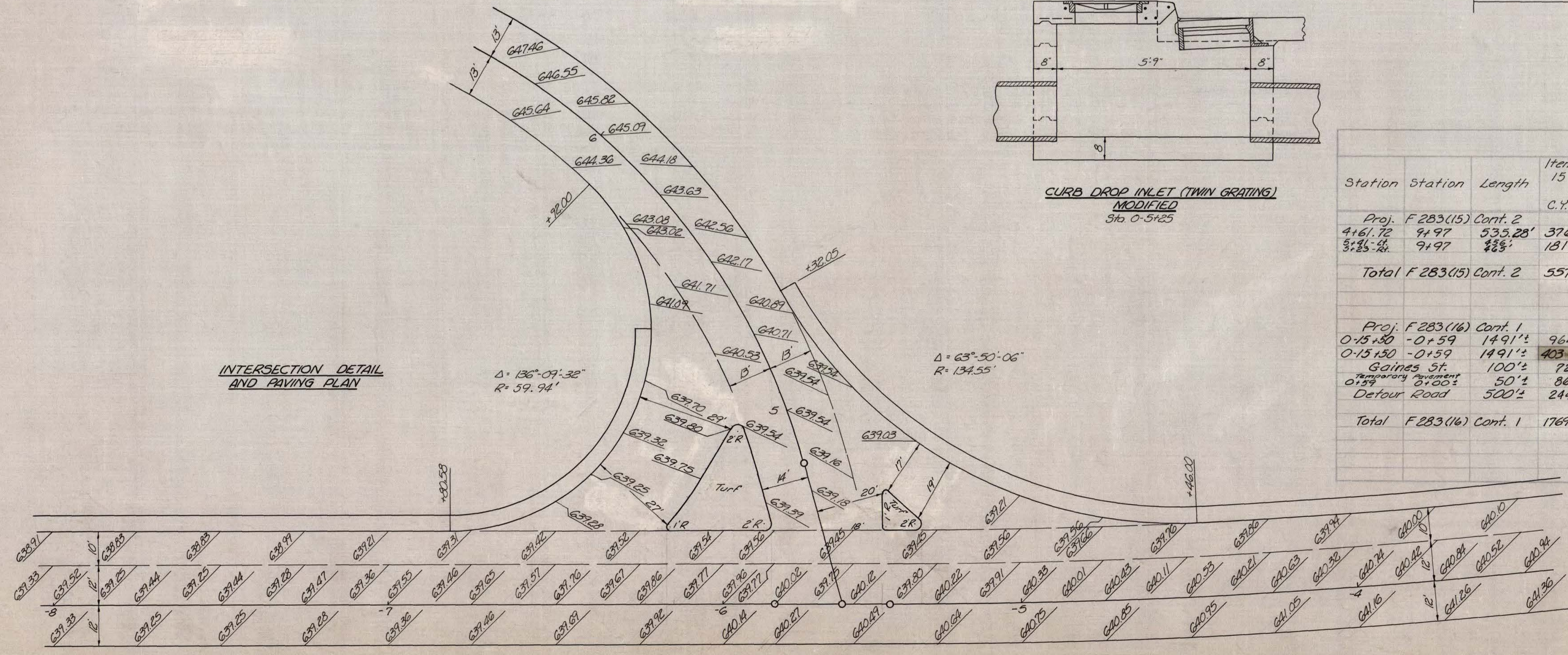
SECTION B-B-B

The front chamber of the inlet shall be as shown on detail, otherwise, the inlet will be as shown on standard M.S. 5-D. No extra compensation will be allowed for this modification.



CURB DROP INLET (TWIN GRATING)
MODIFIED
Sta 0-5+25

INTERSECTION DETAIL AND PAVING PLAN

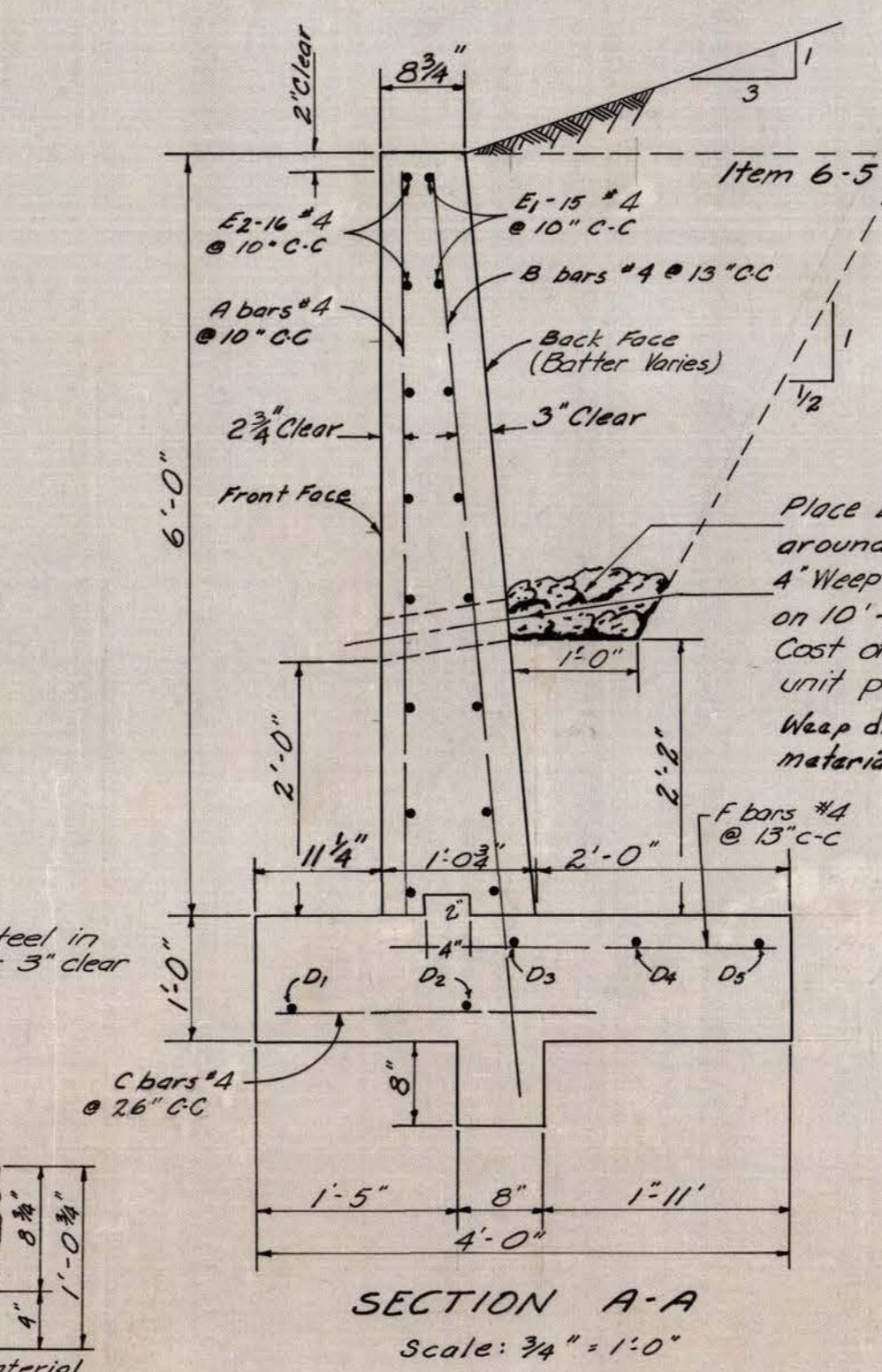
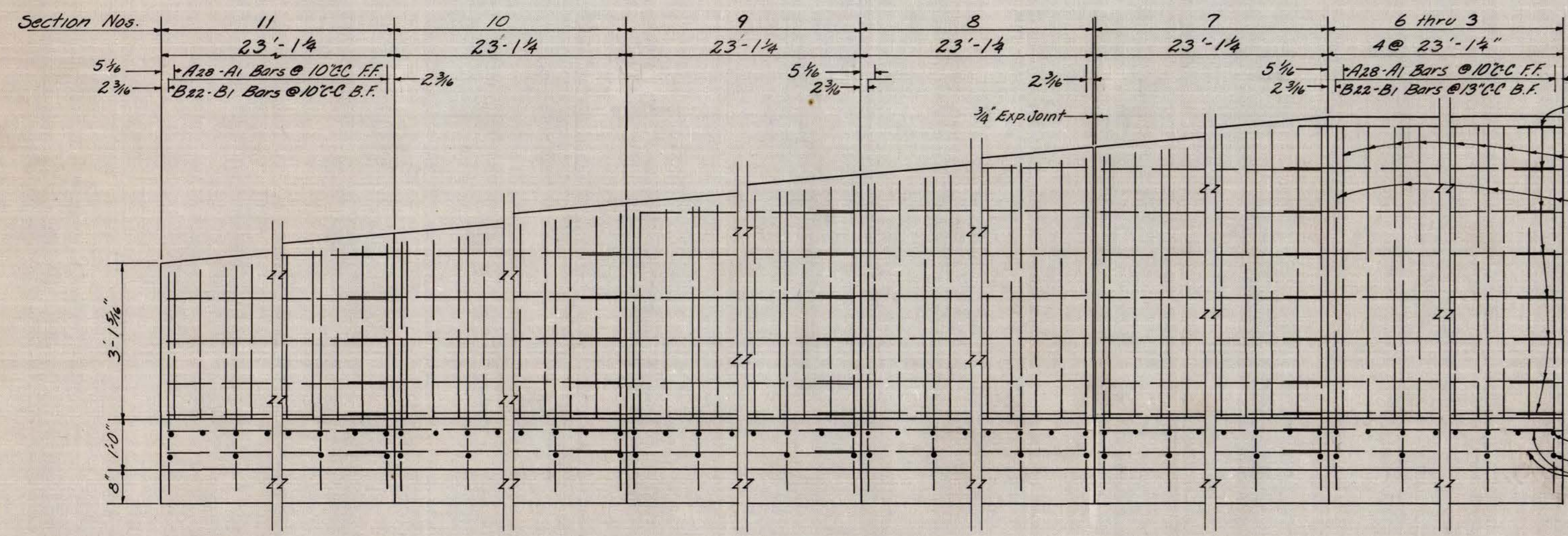
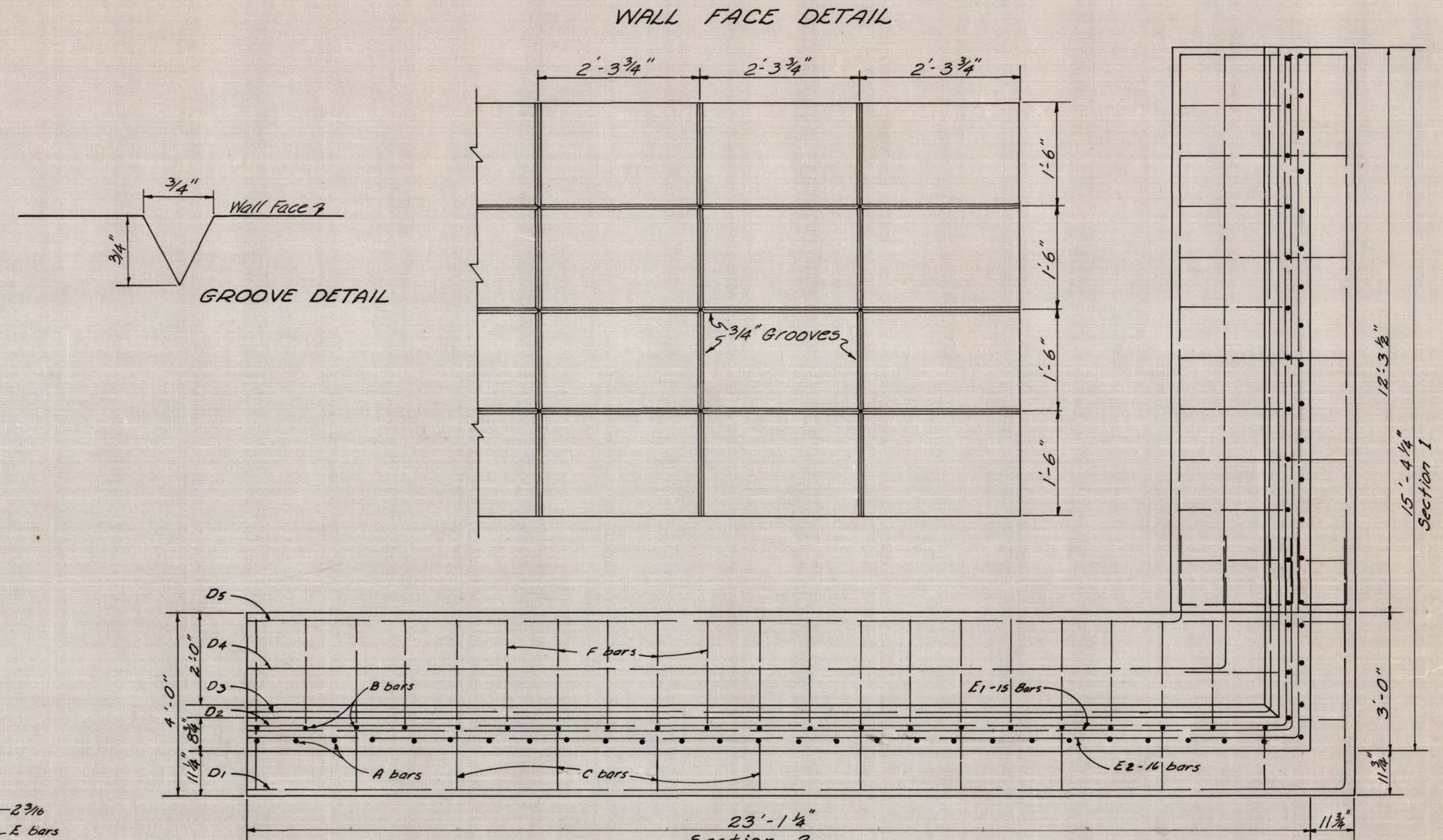
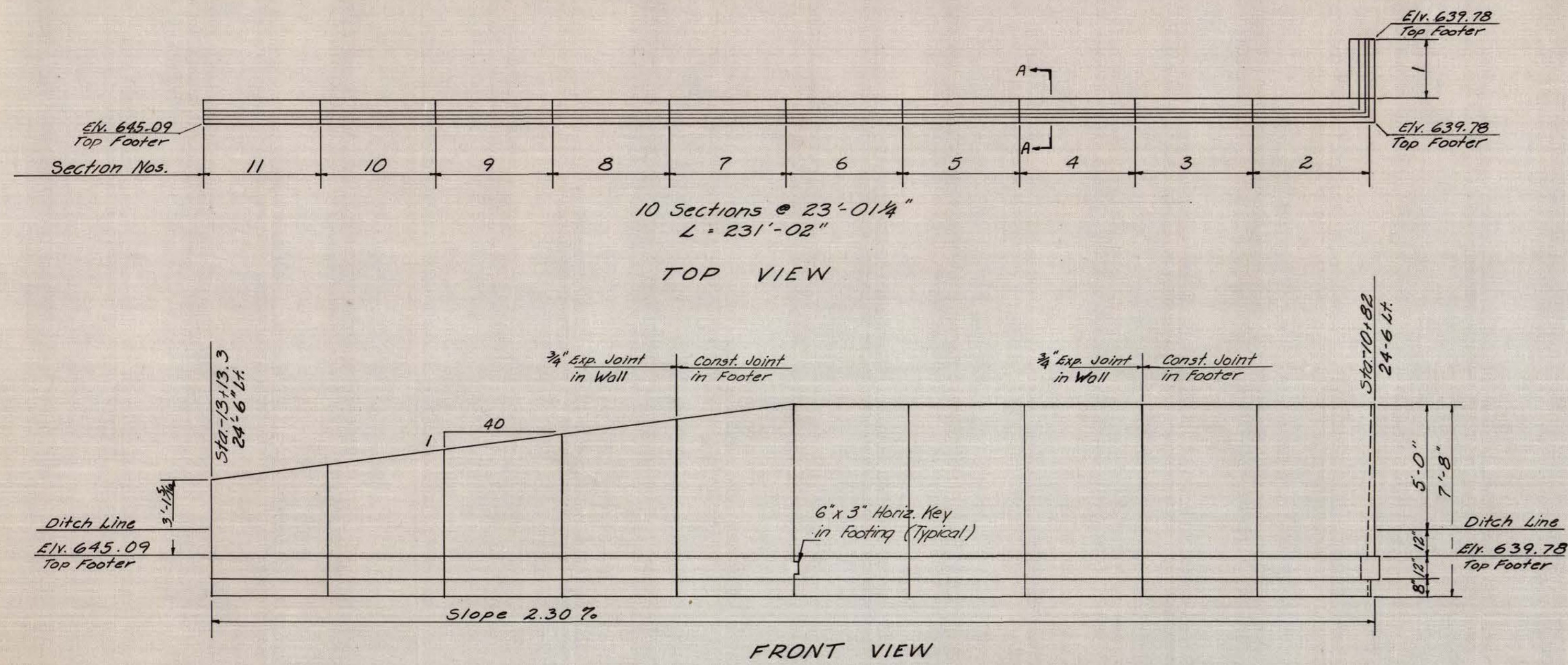


PAVING QUANTITIES

Station	Station	Length	Item 15	Item 7-1 (Prim)	Item 23-2 (PPrim)	Item 9-1 (A11-1)	Item 9-2 (A11-1)	Item 22-1 (A11-2)	Item 22-2 (A11-2)	Item 23-1	Item 23-2	Item 28-1	Item 28-2	Item 7-1	Remarks	
			C.Y.	C.Y.	Gal.	C.Y.	Gal.	C.Y.	Bbl.	Gal.	Ton	Gal.	Ton	Ton	C.Y.	
Proj. F 283(15) Cont. 2																
4+61.72	9+97	535.28'	376	211	1139	211	4220	211	106	379		265	159	0	Paved Rdwy.	
3+25.24	9+97	435'	181	48	11	48	960	48	24	84		8	5	118	Shoulders, curbs & SW.	
Total F 283(15) Cont. 2			557	259	1150	257	5180	259	130	463		273	164	118		
Proj. F 283(16) Cont. 1																
0+15+50	-0+59	1491'±	964	550	2972	550	11,000	550	276	990	17	0	688	408	0	Paved roadway & all shoulders & sidewalk
0+15+50	-0+59	1491'±	403	79		79	1,580	79	40	143	0	0	0	291	includes shoulders	
Gaines St. Temporary Pavement			100'±	72	0	0	0	0	0	0	2	121	22	11	0	
Detour Road			500'±	86	0	0	0	0	0	0	3	155	28	14	0	
Total F 283(16) Cont. 1			1769	629	2972	629	12,580	629	316	1133	35	963	738	573	291	

MICROFILMED

REVISION NUMBER REVISIONS DATE BY



Item No.	Item	Unit	Amount
6-1	Structure Excavation	CY	181
6-5	Select Material for Backfilling	CY	29
71	Class A Concrete	CY	82.8
78	Reinforcing Steel Bars	Lb	3969

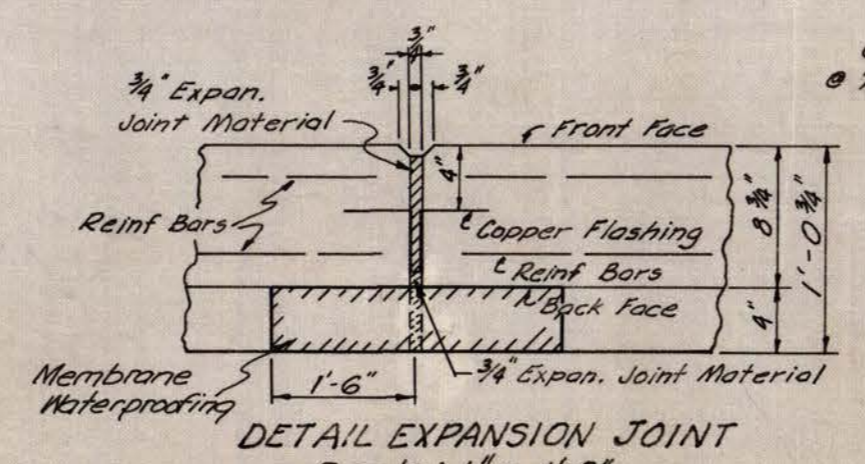
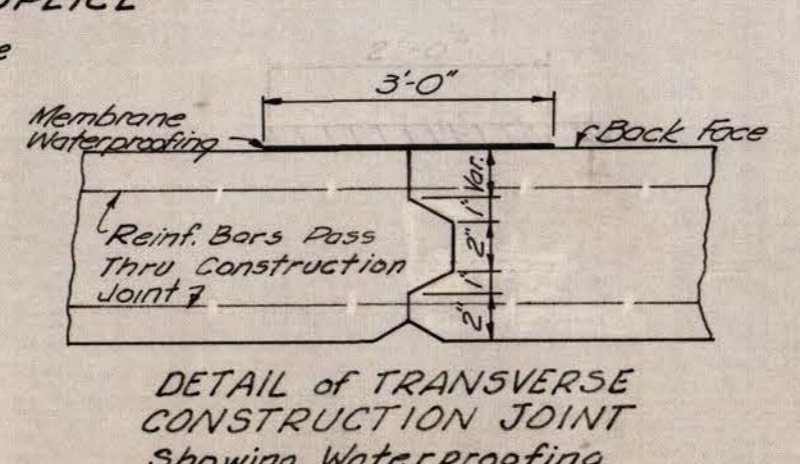
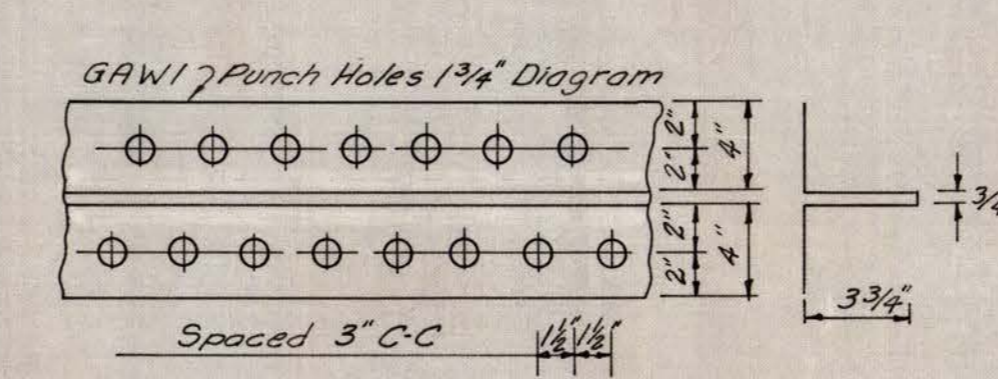
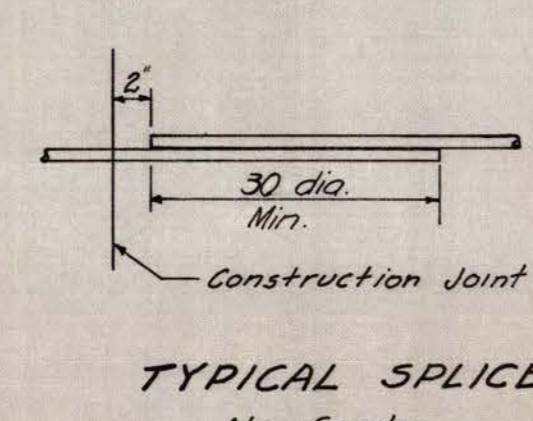
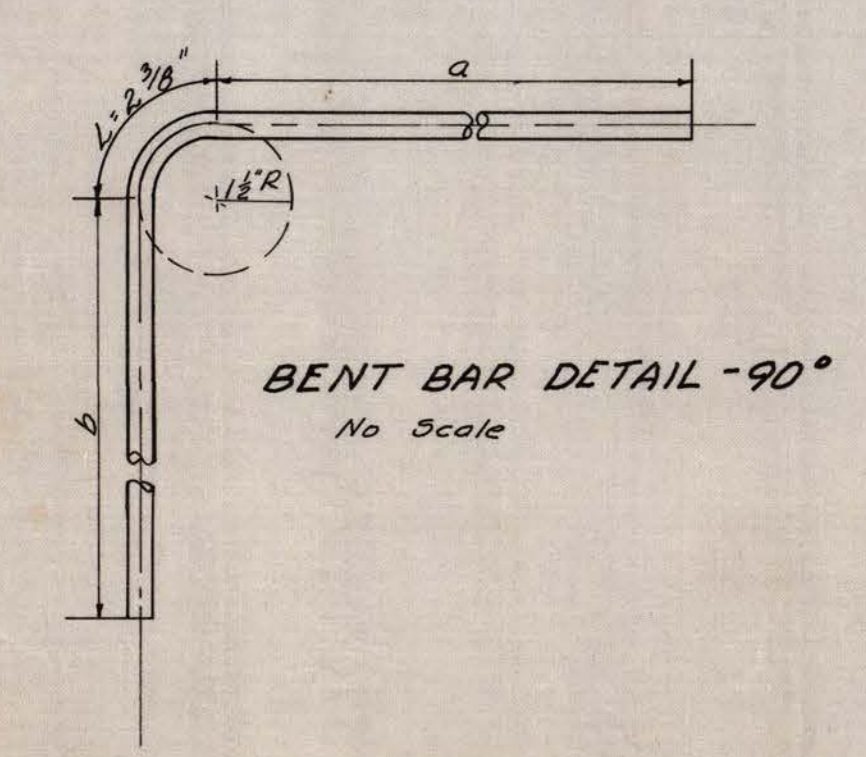
Notes:
All concrete to be Class "A" Air Entrained.
All exposed edges to be beveled 3/4 inch.
The cost of 3/4" Expansion Joint Material and Flashing to be included in unit price bid for Class "A" Concrete.

Place Large Stones around Weep drains. A Weep drains Locate on 10'-0" Centers. Cost of drains to be included in the unit price bid for class A concrete. Weep drains shall be of non-rusting material.

Waterproof construction and expansion joints with a 3'-0" wide membrane with 1/2" thick plywood protective covering conforming to Article 2.06-88(C) of the Specifications. Cast to be included in Item 71. Membrane to extend from top of footing to top of wall.

Preformed joint material shall be Type III in accordance with Article 3.8.2.

The alternate waterstop may be used in lieu of the copper flashing. The 6" rubber waterstop shall be 6" x 3/8" as manufactured by Serviced Products Co., Durajoint by W.R. Meadows, Inc., or approved equal.



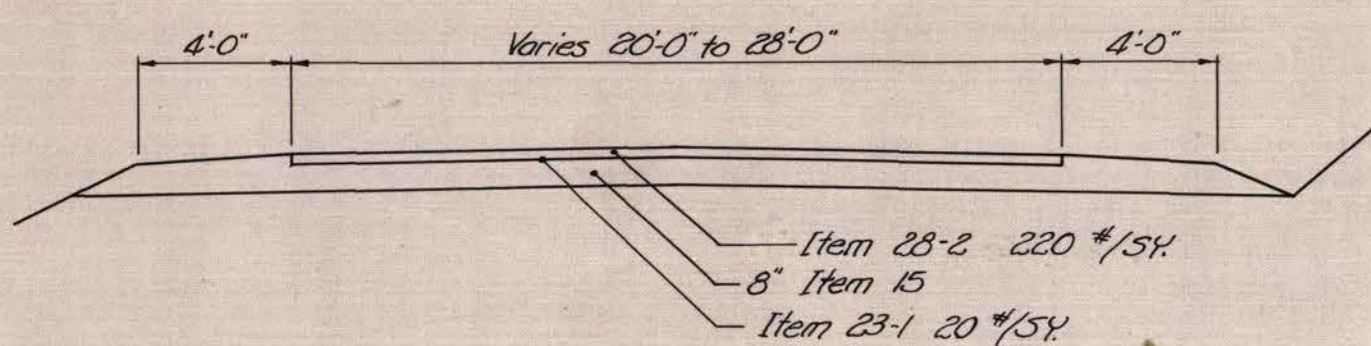
THE STATE ROAD COMMISSION OF WEST VIRGINIA
CANTILEVER RETAINING WALL
STA. -13+13.3 to STA. -10+82
Project F-283 (16) C-1 Scale as Shown
OFFICE OF DIRECTOR DESIGN DIVISION

THE STATE ROAD COMMISSION OF WEST VIRGINIA SPECIFICATIONS OF 1960
WILL GOVERN ALL WORK AND MATERIALS UNLESS OTHERWISE NOTED

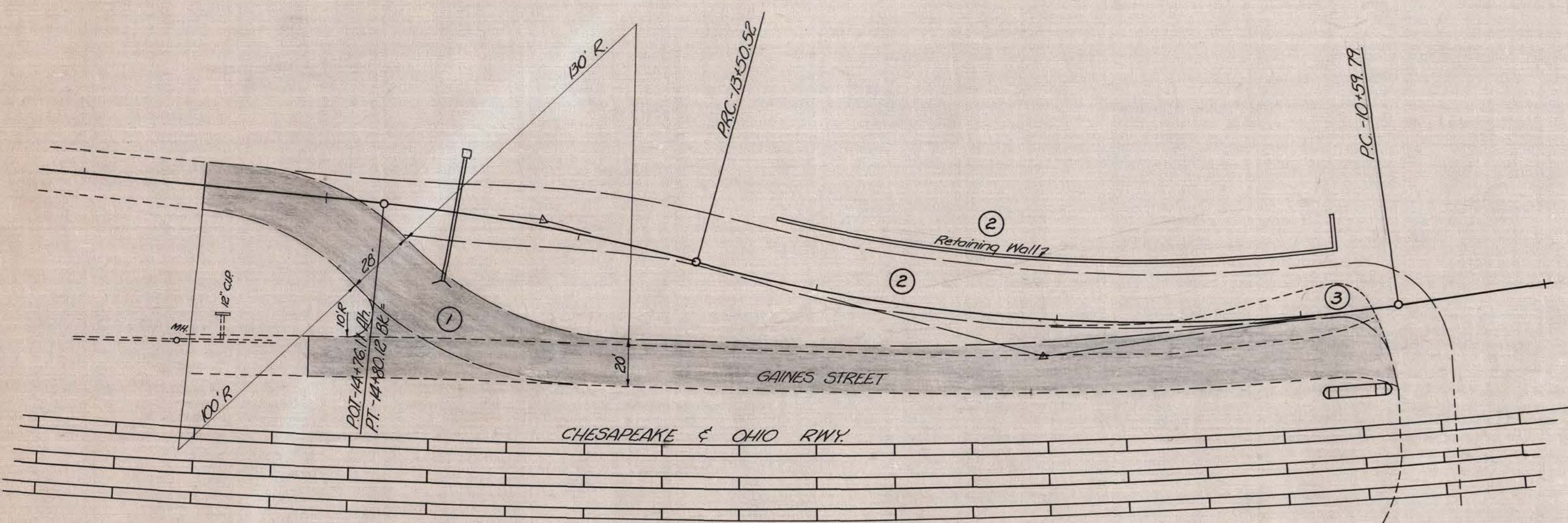
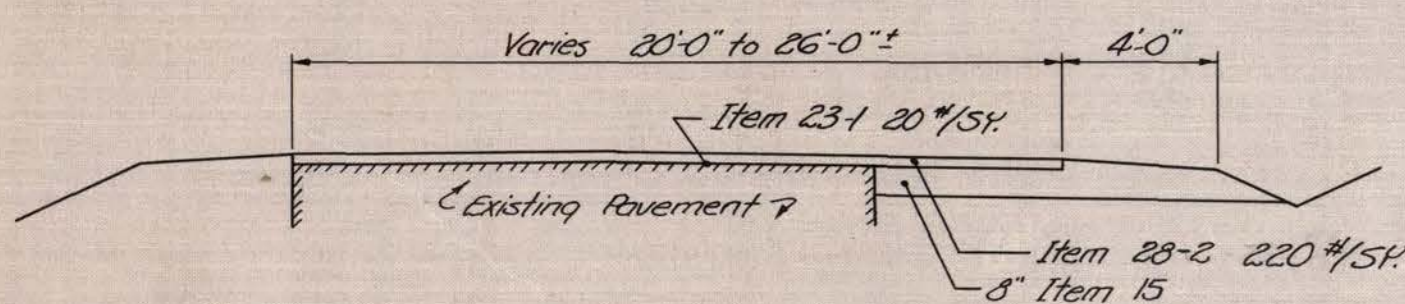
PUBLIC ROAD DIV.	STATE DIST. NO.	STATE PROJ. NO.	FEDERAL PROJ. NO.	FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
W.Va.	9		F-283 (16)	1967	FAYETTE	8	51

CONTRACT 1

TYPICAL SECTIONS ON DETOUR ROAD

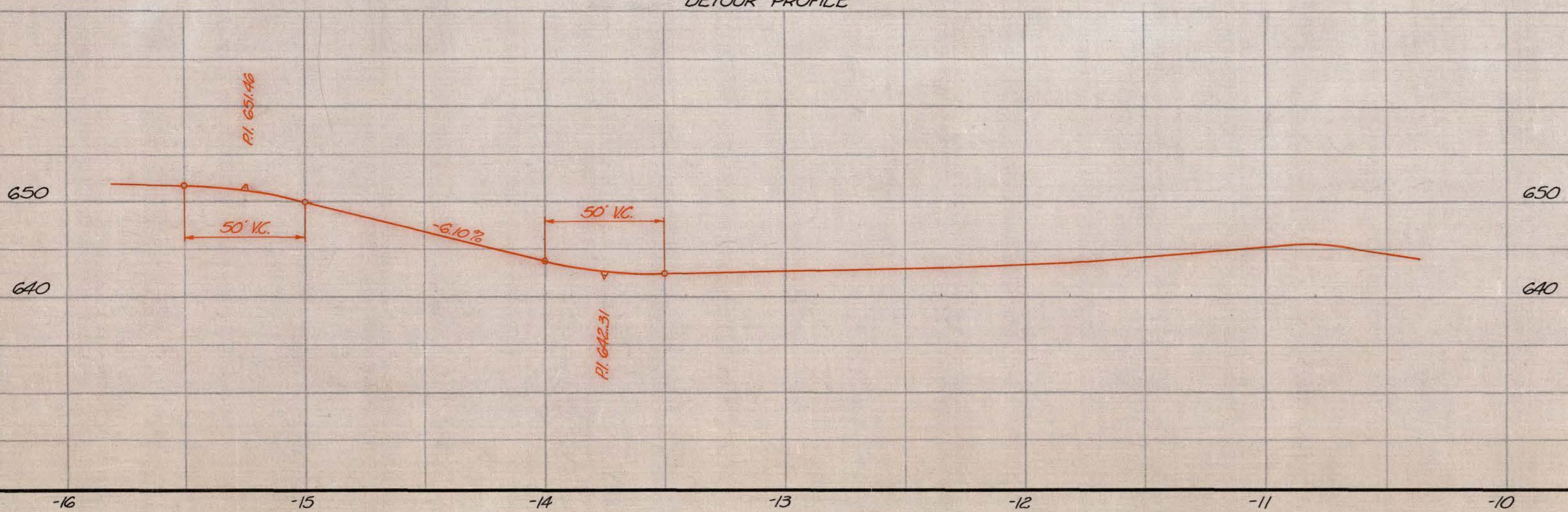


Paving Quantities for Detour Road
Item 15 - 244 CY
Item 23-1 - 13 Ton
Item 23-2 - 440 Ton
Bituminous Mat'l. - 687 Gal. Item 23-2



Scale: 1" = 40'

DETOUR PROFILE



MAINTENANCE OF TRAFFIC

The provisions of Section 1.4.6 and Section 2.12.7 of the Specifications shall govern. The following notes on traffic maintenance and construction sequence are supplementary and in no way supersede the specifications.

- Phase 1
Construct detour road
Build temporary approach to Gaines St. 16" - 6" stone (Item 127-2)
Traffic on present road.
- Phase 2
Excavate along ϵ to limits shown on cross-sections and
Build retaining wall.
- Phase 3
Prepare phase 2 for traffic. Use width of 24 feet with
a minimum of 6 inches Item 127-2. Surface clearance from
the wall shall be 4 feet.
Traffic shall be split initially on detour road westward
and phase 2 eastward until the area from station
-10+25± to station -12+00± can be widened to the
required width for two-way traffic.
- Phase 4
Remove detour road and finish grading on centerline.

Placement of fill material and extension of cuts have not necessarily been shown. The contractor may do this work before phase 4 if it will not cause a hazard to traffic. The contractor may also pave as much of the road as possible before diverting traffic from the detour. If this is done paint striping will be required to distinguish the traffic lanes.

No direct measurement or payment will be made for the excavation and embankment required for the construction or removal of the detour road. Cost of this work shall be included in Item 127-1, Maintaining Traffic. Excavation will be measured between original ground line and the final grade lines required for the main roadway and for Gaines St. regardless of any interim work done.

Any scheme for sequence of construction or maintenance of traffic may be substituted for those outlined above upon written approval of the engineer.

REVISION NUMBER	REVISIONS	DATE	BY

MICROFILMED

Ramp 4
 PI-12+07.45
 Δ-23°15'30"
 D-5'
 T-147.39'
 L-270.73'
 R-716.20'

Ramp 4
 PI-6+91.20
 Δ-92°17'
 D-23.6767'
 T-207.78'
 L-321.58'
 R-199.66'

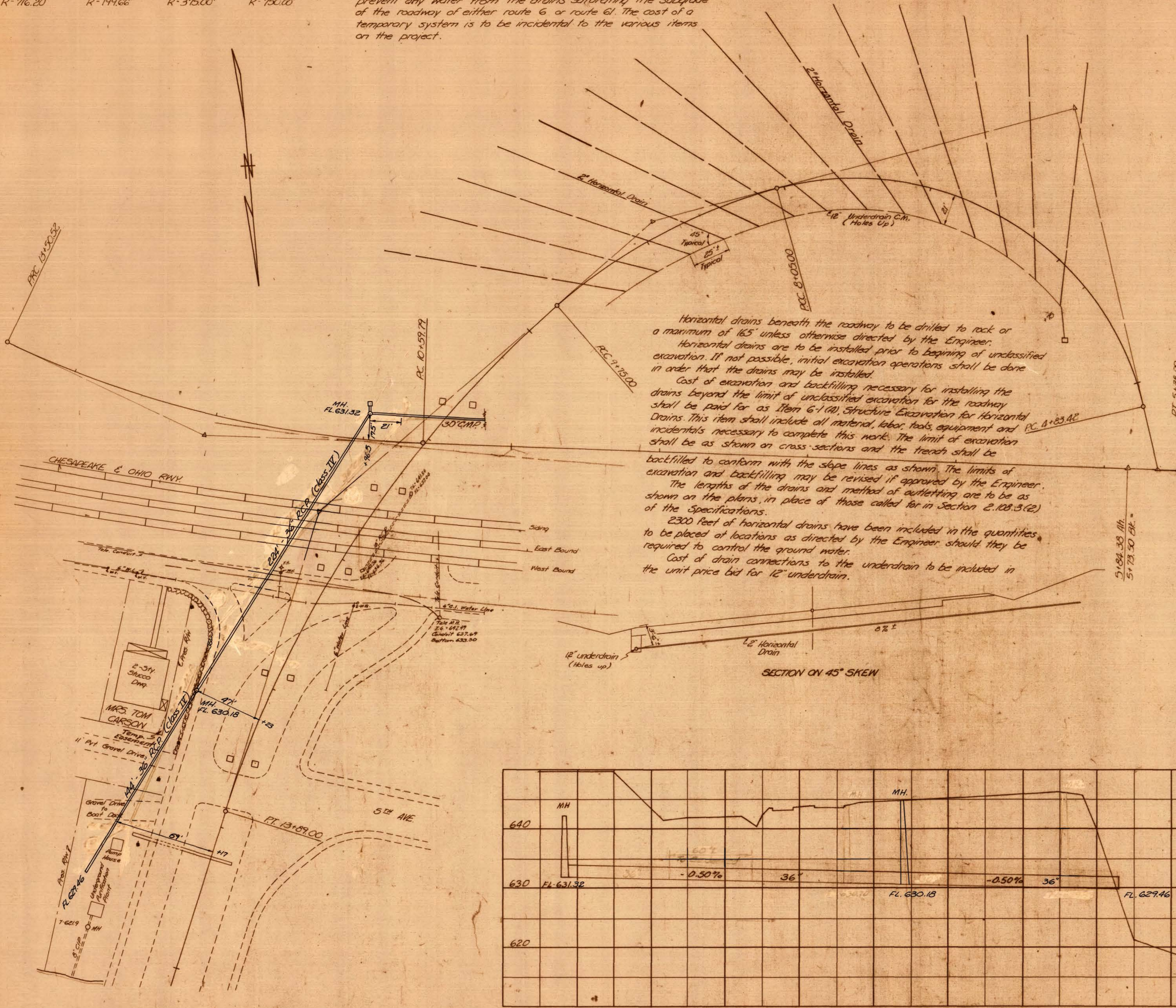
Ramp 4
 PI-8+91.49
 Δ-25°58'30"
 D-15.2799'
 T-86.49'
 L-170.00'
 R-375.00'

Ramp 4
 PI-11+87.44
 Δ-31°37'46"
 D-7.63945'
 T-212.44'
 L-414.00'
 R-750.00'

Prior to beginning the installation of the horizontal drains a temporary connection to the present drainage or the planned drainage system will be required for containing the water from the drains. If a temporary system is used it shall be built to prevent any water from the drains saturating the subgrade of the roadway of either route 6 or route 61. The cost of a temporary system is to be incidental to the various items on the project.

THE STATE ROAD COMMISSION OF WEST VIRGINIA SPECIFICATIONS OF 1960 WILL GOVERN ALL WORK AND MATERIALS UNLESS OTHERWISE NOTED

PUBLIC ROAD DIST. NO.	STATE PROJ. NO.	FEDERAL PROJ. NO.	FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
W.Va. 9		F-283 (15) F-283 (16)	1967	Fayette	9	51



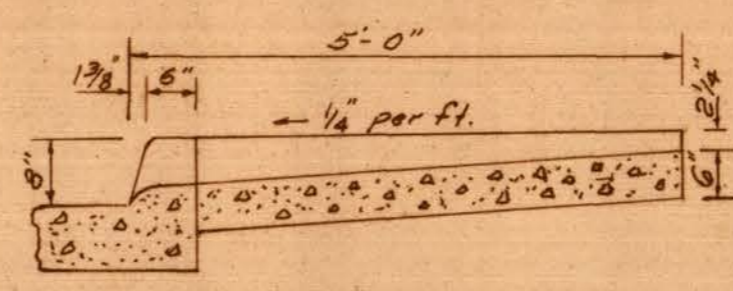
Horizontal drains beneath the roadway to be drilled to rock or a maximum of 165' unless otherwise directed by the Engineer. Horizontal drains are to be installed prior to beginning of unclassified excavation. If not possible, initial excavation operations shall be done in order that the drains may be installed.

Cost of excavation and backfilling necessary for installing the drains beyond the limit of unclassified excavation for the roadway shall be paid for as Item 6-1 (A), Structure Excavation for Horizontal Drains. This item shall include all material, labor, tools, equipment and incidentals necessary to complete this work. The limit of excavation shall be as shown on cross-sections and the trench shall be backfilled to conform with the slope lines as shown. The limits of excavation and backfilling may be revised if approved by the Engineer.

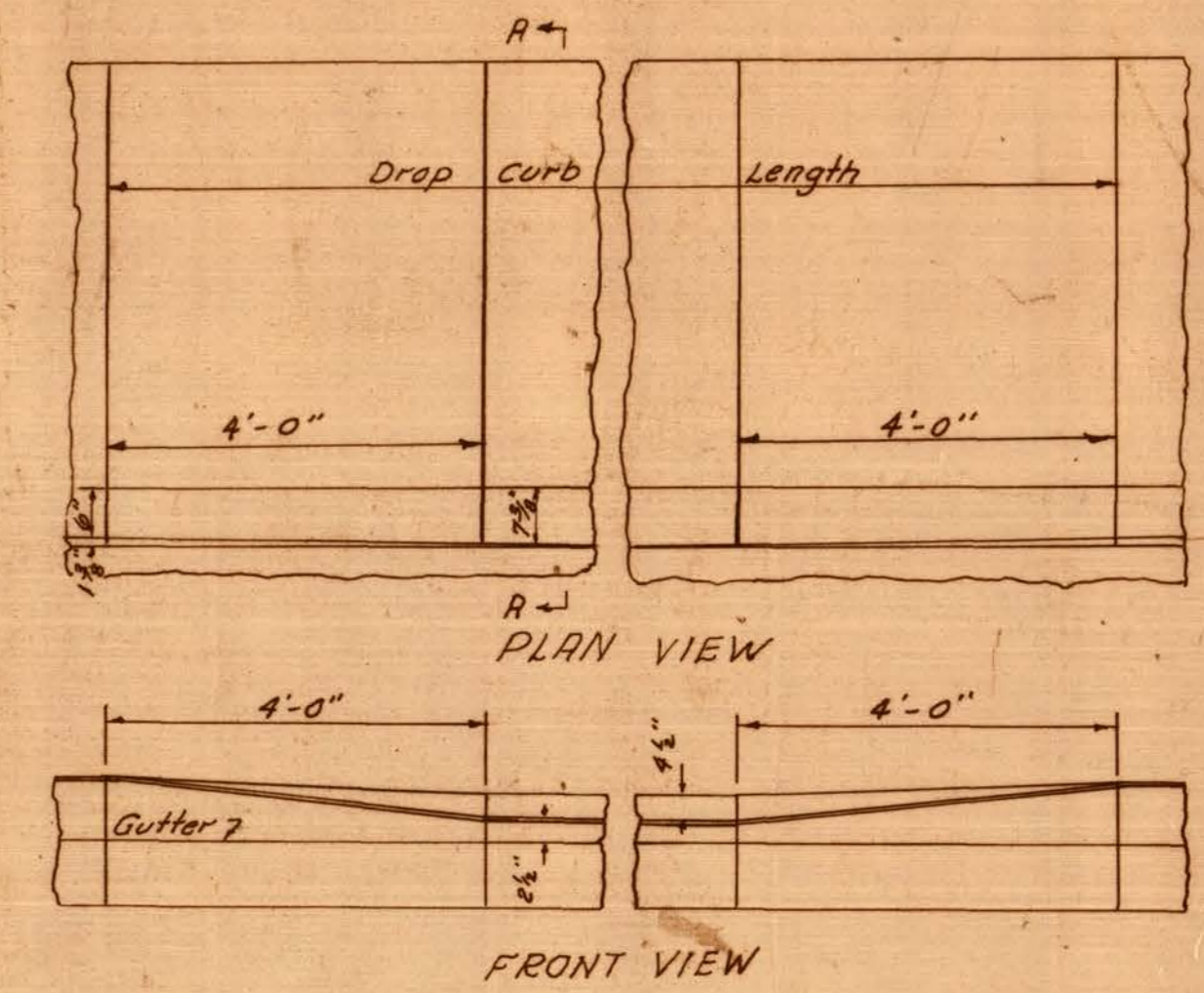
The lengths of the drains and method of outletting are to be as shown on the plans, in place of those called for in Section 2.108.3(2) of the Specifications.

2300 feet of horizontal drains have been included in the quantities to be placed at locations as directed by the Engineer should they be required to control the ground water.

Cost of drain connections to the underdrain to be included in the unit price bid for 12\" underdrain.

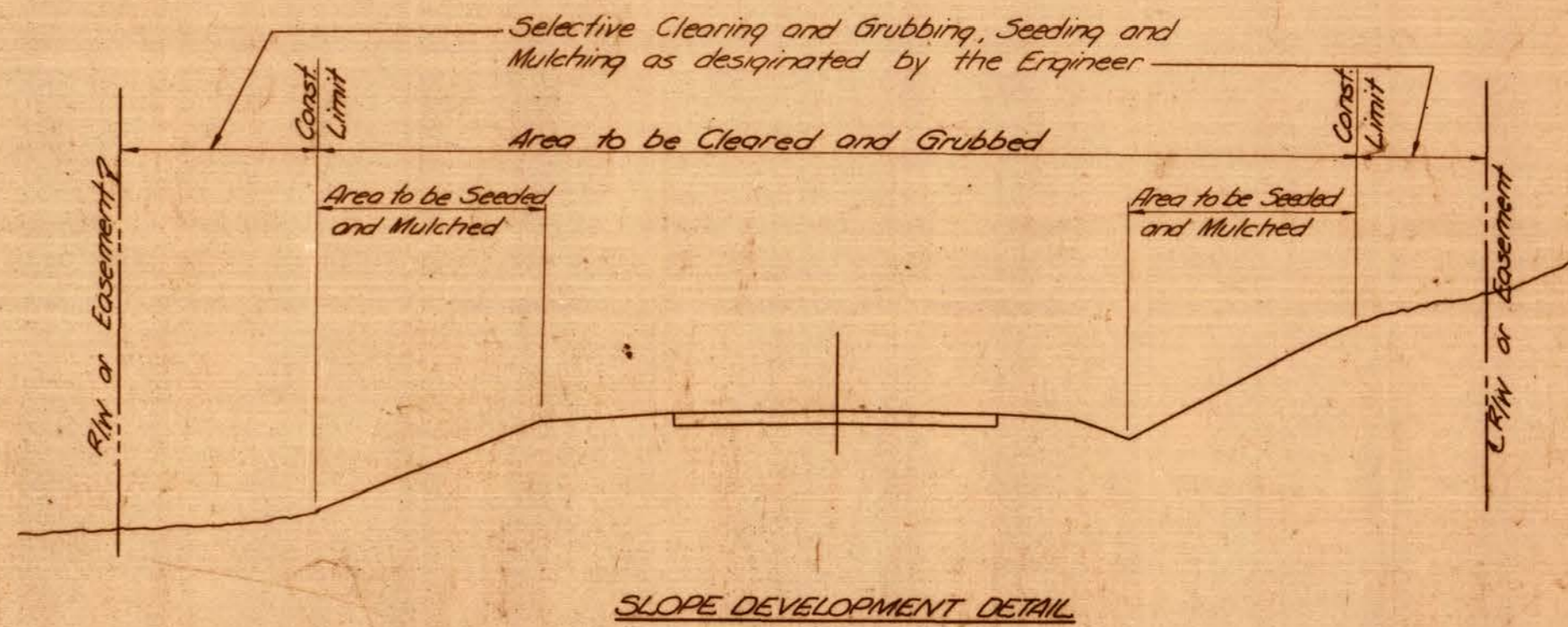


SECTION A-A
 For detail of curbs see Standard M.P. 1-A.

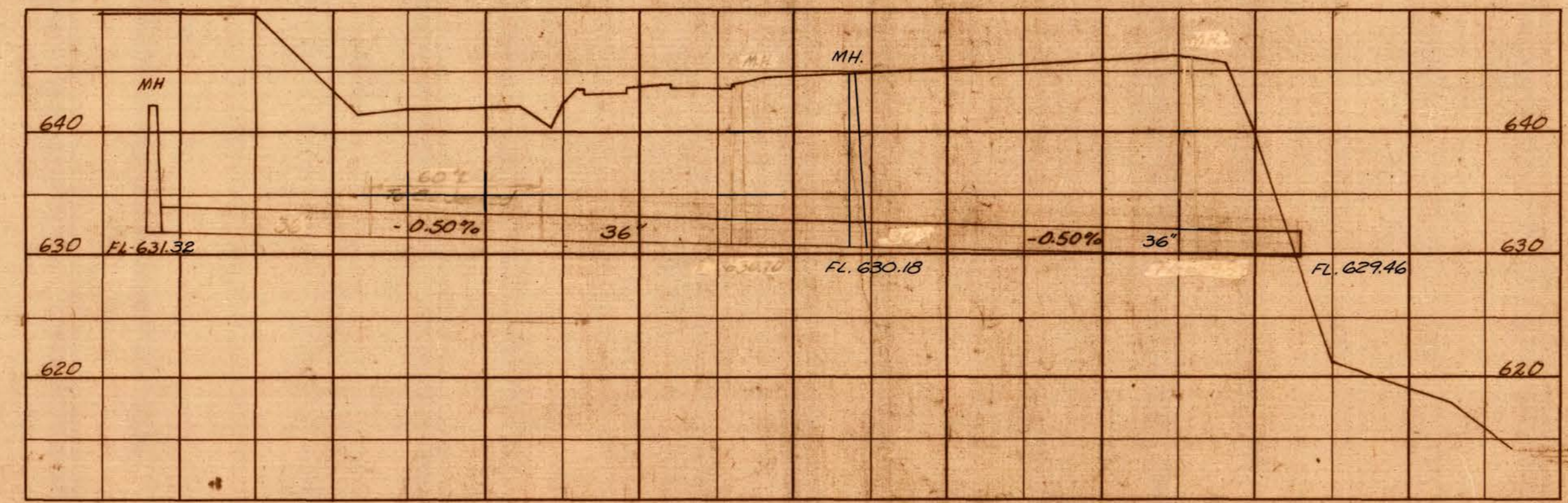


DETAIL SHOWING DEPRESSION OF SIDEWALKS AT DRIVEWAY ENTRANCES
 Scale 1/2" = 1'-0"

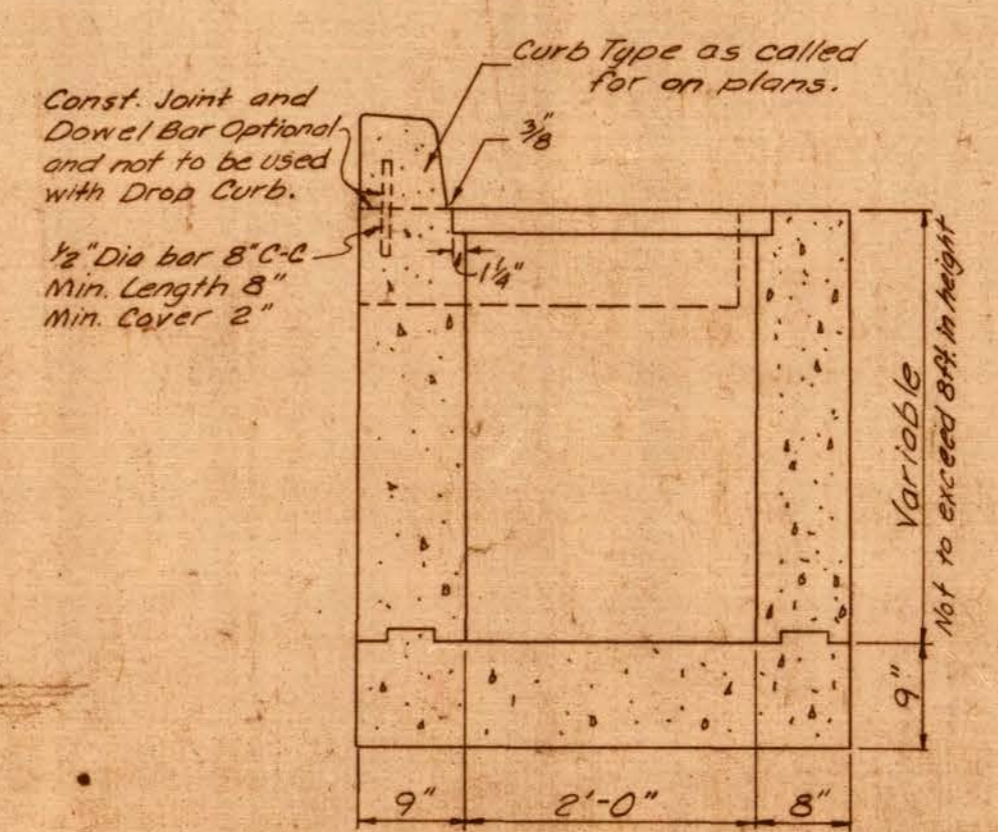
SECTION ON 45° SKEW



SLOPE DEVELOPMENT DETAIL



PROFILE OF PIPE TO RIVER



DETAIL of STANDARD DROP INLET
 Located Along Curb Line
 Scale: 3/4" = 1'-0"

Replace curbs, pavement and sidewalk removed for installation of the 30\" pipe. Cost will be incidental to the various items of the contract.

The Wall of the Drop Inlet shall be Modified as shown on detail, otherwise; the inlet shall be as shown on Standard M.S. 1-C. Additional cost of curb and dowel bars (if used) shall be included in the unit price bid for the Inlet.

The Quantities of Combination Curb and Gutter and pavement within the limits of the inlet shall be deducted from the project quantities.

Place 1/2\" Expansion Joint between Inlet and adjoining Curb and Gutter.

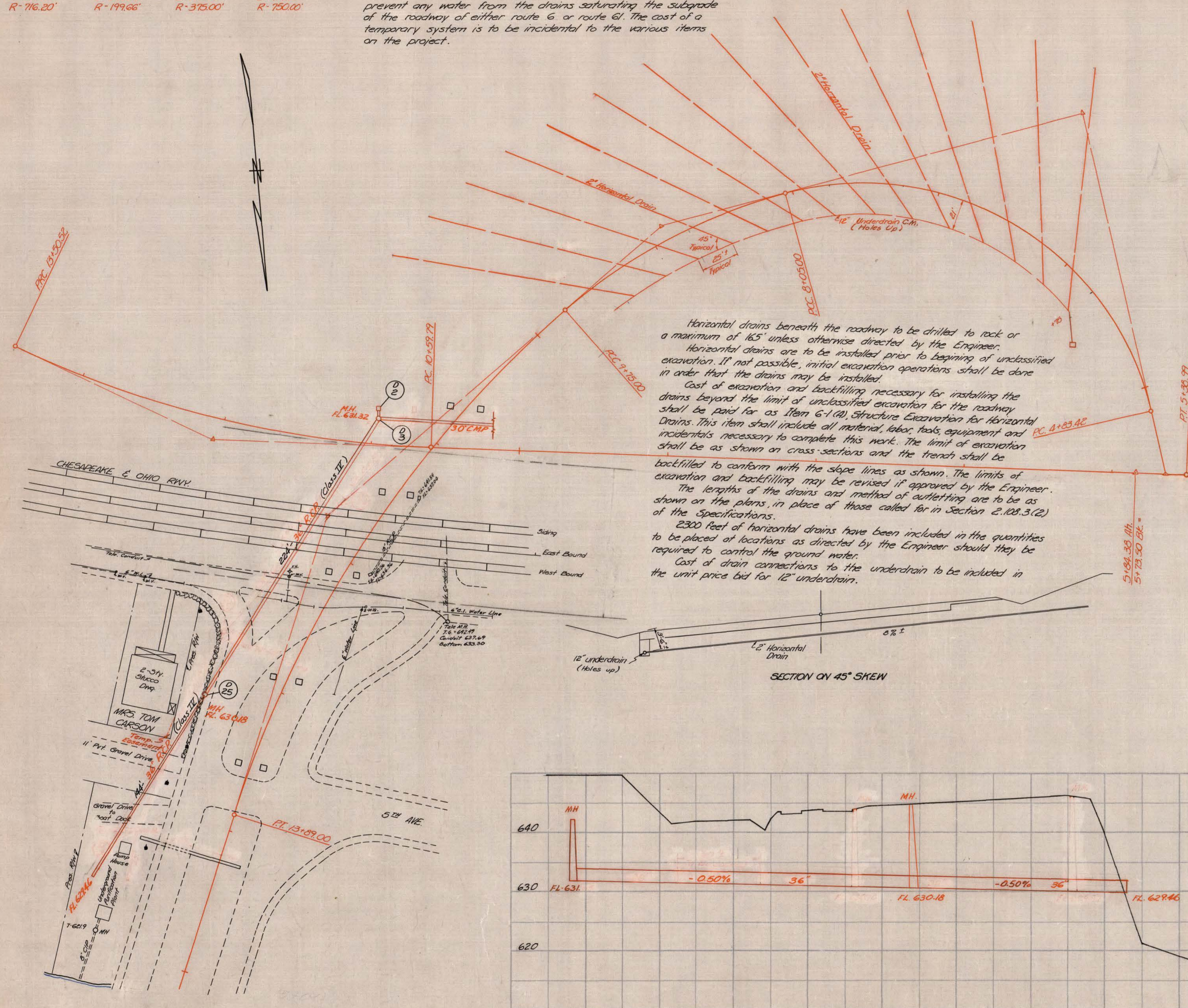
REVISION NUMBER	REVISIONS	DATE	BY

E
 PI-12+07.13
 Δ-23°15'30"
 D-8'
 T-147.39'
 L-270.73'
 R-716.20'
 Ramp 4
 PI-6+91.20
 Δ-92°17'
 D-22.6767'
 T-207.78'
 L-321.58'
 R-199.66'
 Ramp 4
 PI-8+91.49
 Δ-25°53'30"
 D-15.2799'
 T-86.49'
 L-170.00'
 R-375.00'
 Ramp 4
 PI-11+87.44
 Δ-31°37'46"
 D-7.63945'
 T-212.44'
 L-414.00'
 R-750.00'

Prior to beginning the installation of the horizontal drains a temporary connection to the present drainage or the planned drainage system will be required for containing the water from the drains. If a temporary system is used it shall be built to prevent any water from the drains saturating the subgrade of the roadway of either route 6 or route 61. The cost of a temporary system is to be incidental to the various items on the project.

**THE STATE ROAD COMMISSION OF WEST VIRGINIA SPECIFICATIONS OF 1960
 WILL GOVERN ALL WORK AND MATERIALS UNLESS OTHERWISE NOTED**

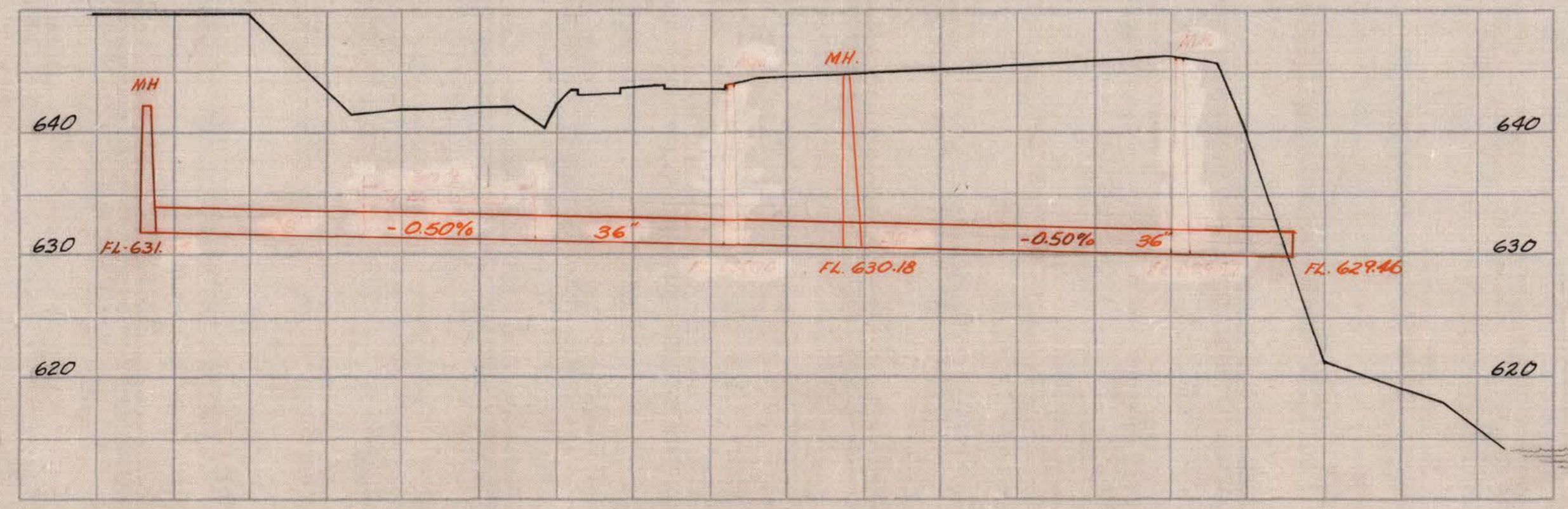
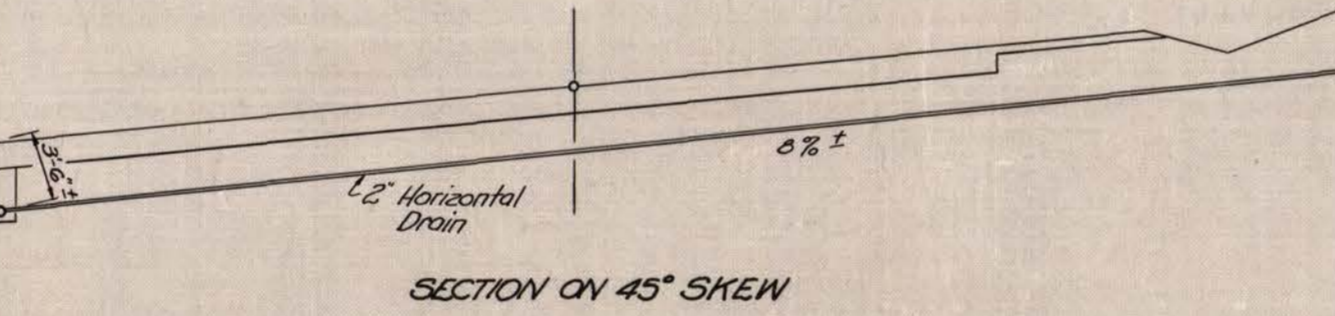
PUBLIC ROAD DIST. NO.	STATE DIST. NO.	STATE PROJ. NO.	FEDERAL PROJ. NO.	FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
W.Va.	9		F-283 (15) F-283 (16)	1967	Fayette	9	51



Horizontal drains beneath the roadway to be drilled to rock or a maximum of 165' unless otherwise directed by the Engineer. Horizontal drains are to be installed prior to beginning of unclassified excavation. If not possible, initial excavation operations shall be done in order that the drains may be installed. Cost of excavation and backfilling necessary for installing the drains beyond the limit of unclassified excavation for the roadway shall be paid for as Item 6-1 (A), Structure Excavation for Horizontal Drains. This item shall include all material, labor, tools, equipment and incidentals necessary to complete this work. The limit of excavation shall be as shown on cross-sections and the trenches shall be

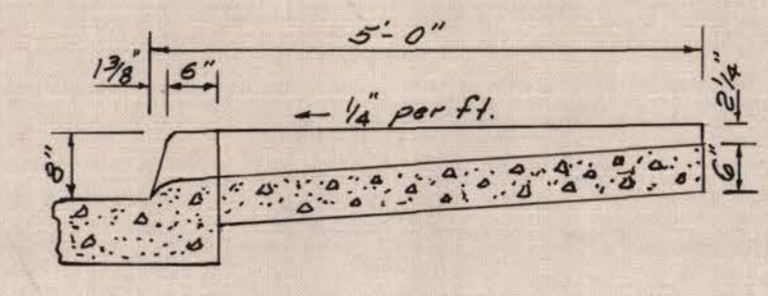
backfilled to conform with the slope lines as shown. The limits of excavation and backfilling may be revised if approved by the Engineer. The lengths of the drains and method of outletting are to be as shown on the plans, in place of those called for in Section 2.108.3(2) of the Specifications.

2300 feet of horizontal drains have been included in the quantities to be placed at locations as directed by the Engineer should they be required to control the ground water. Cost of drain connections to the underdrain to be included in the unit price bid for 12" underdrain.



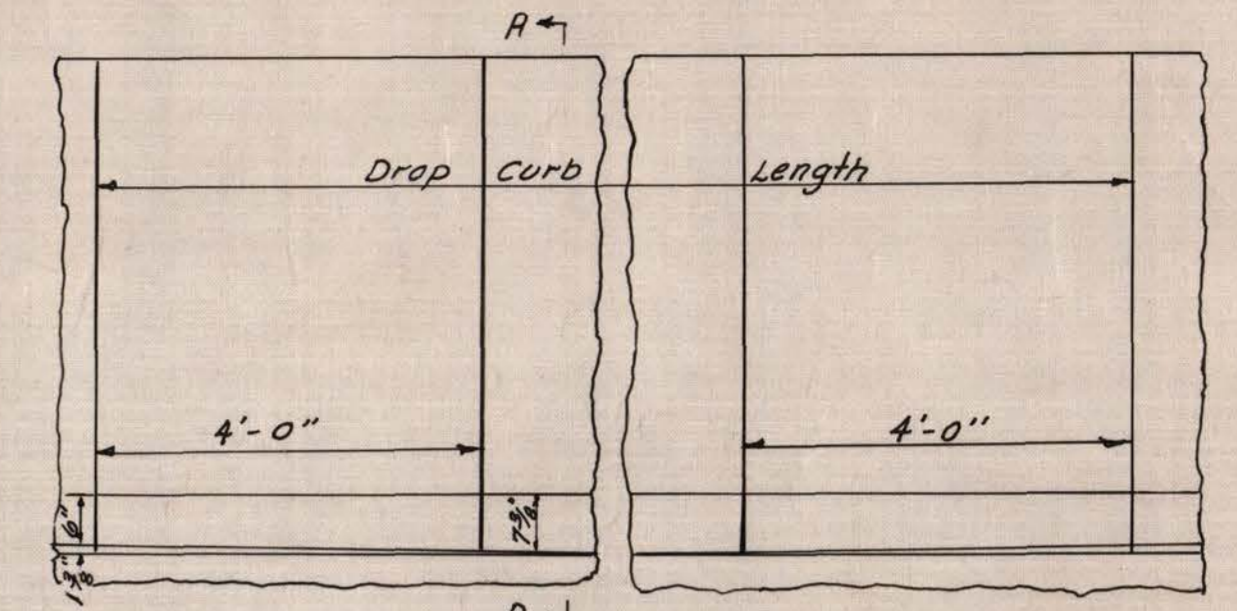
PROFILE OF PIPE TO RIVER

Replace curbs, pavement and sidewalk removed for installation of the 36" pipe. Cost will be incidental to the various items of the contract.

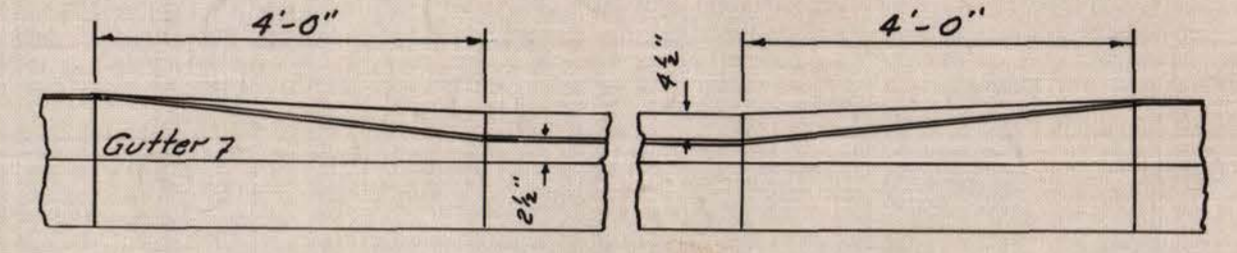


SECTION A-A

For detail of curbs see Standard M.R. 1-A.



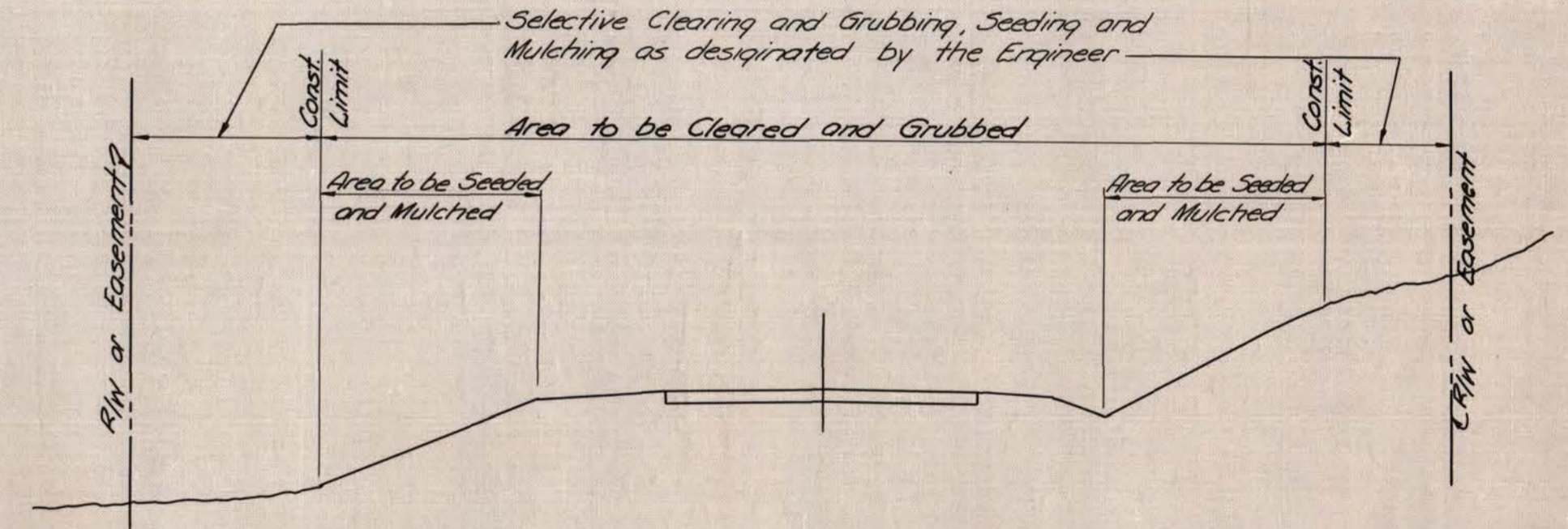
PLAN VIEW



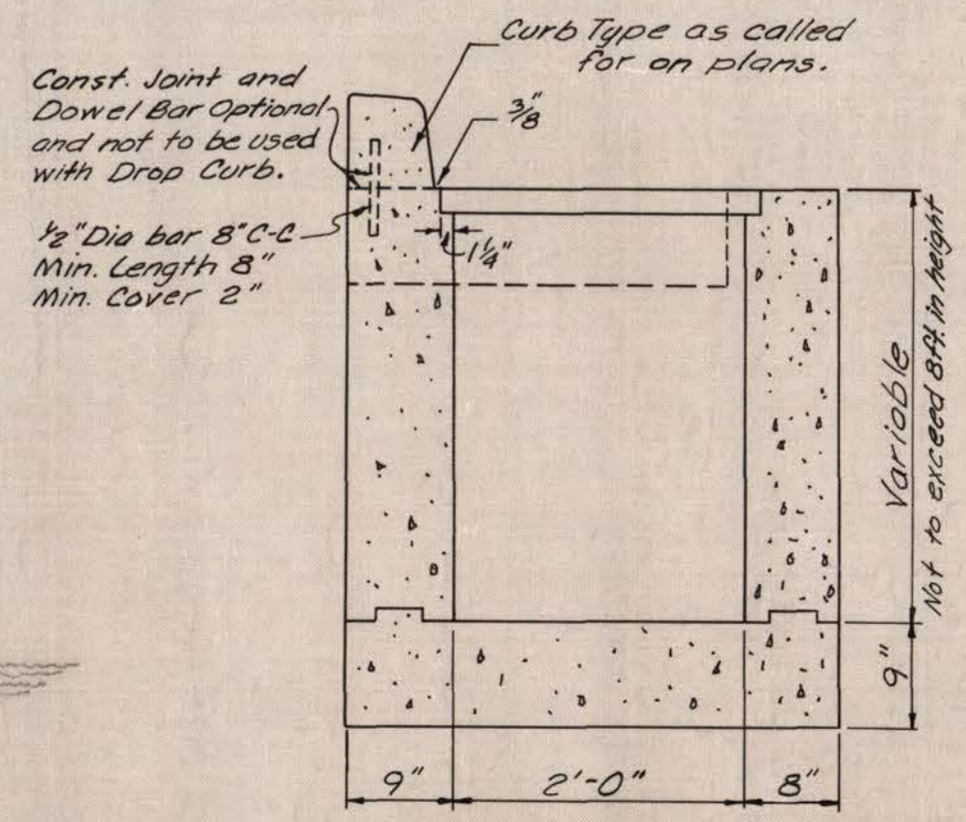
FRONT VIEW

DETAIL SHOWING DEPRESSION OF SIDEWALKS AT DRIVEWAY ENTRANCES

Scale 1/2" = 1'-0"



SLOPE DEVELOPMENT DETAIL



DETAIL OF STANDARD DROP INLET Located Along Curb Line Scale: 3/4" = 1'-0"

The Wall of the Drop Inlet shall be Modified as shown on detail, otherwise; the inlet shall be as shown on Standard M.S. 1-C. Additional cost of curb and dowel bars (if used) shall be included in the unit price bid for the Inlet.

The Quantities of Combination Curb and Gutter and pavement within the limits of the Inlet shall be deducted from the project quantities.

Place 1/2" Expansion Joint between Inlet and adjoining Curb and Gutter.

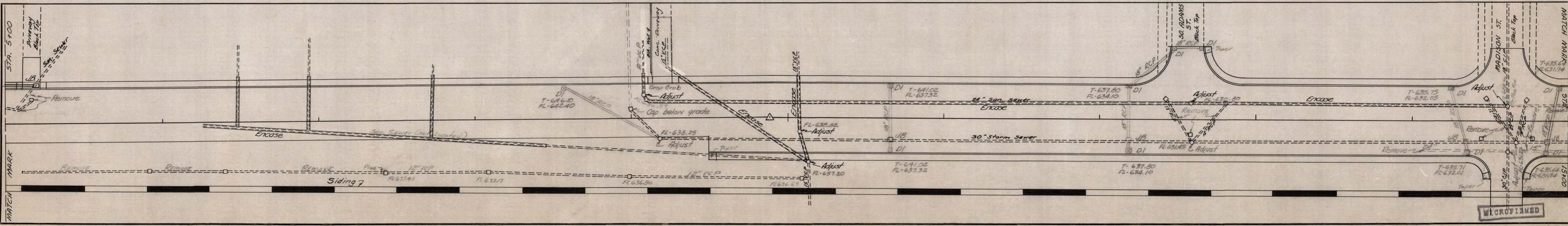
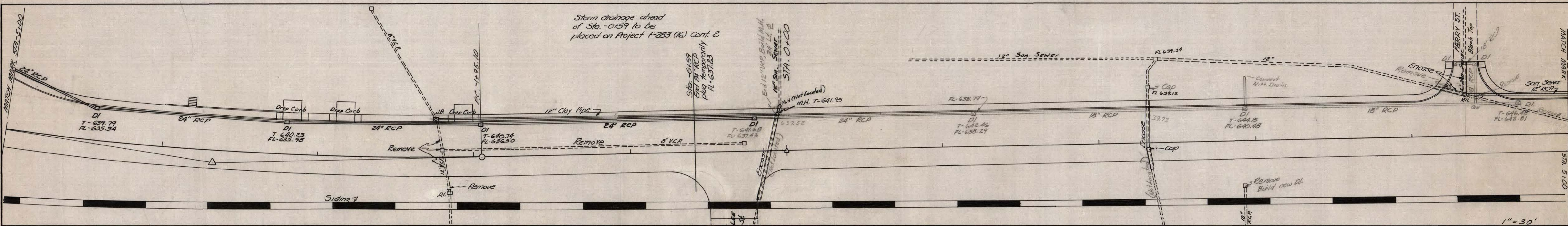
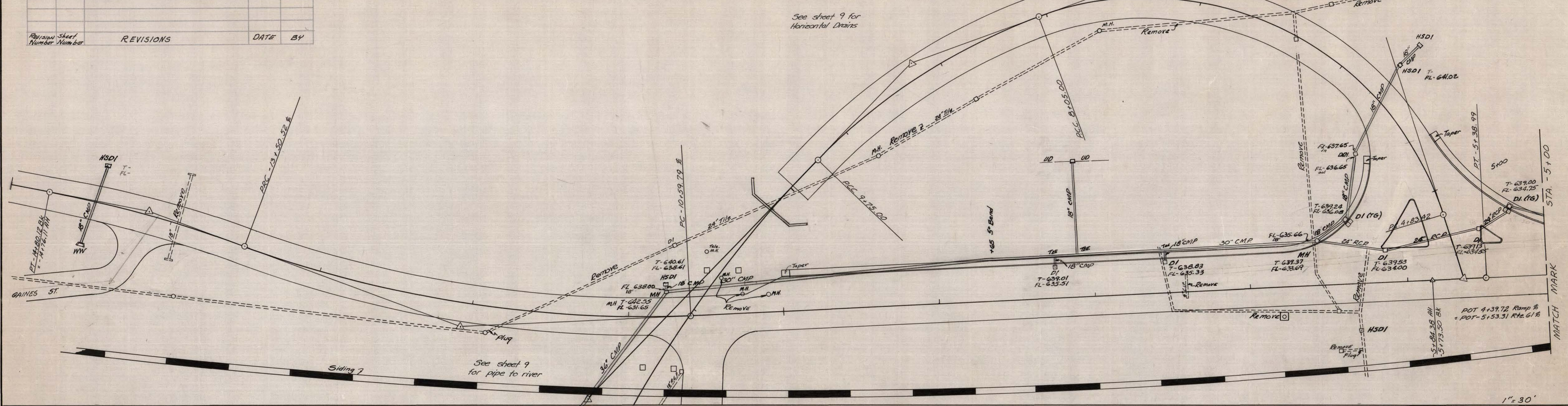
REVISION NUMBER	REVISIONS	DATE	BY
1	Revised Drainage	4-25-67	RMB

MICROFILMED

THE STATE ROAD COMMISSION OF WEST VIRGINIA SPECIFICATIONS OF 1960
WILL GOVERN ALL WORK AND MATERIALS UNLESS OTHERWISE NOTED

PUBLIC ROADS DIV.	STATE DIST. NO.	STATE PROJ. NO.	FEDERAL PROJ. NO.	FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
W. Va.	9		F2B30(5) F2B30(6)	1967	Fayette	10	51

Revision Sheet Number	Number	REVISIONS	DATE	BY



Public Road	Sheet No.	State	Federal Post. No.	Local Post. No.	County	Sheet No.	Total Sheets
W. Va.	9	F.	283	1967	FAYETTE	11	51
							(16)

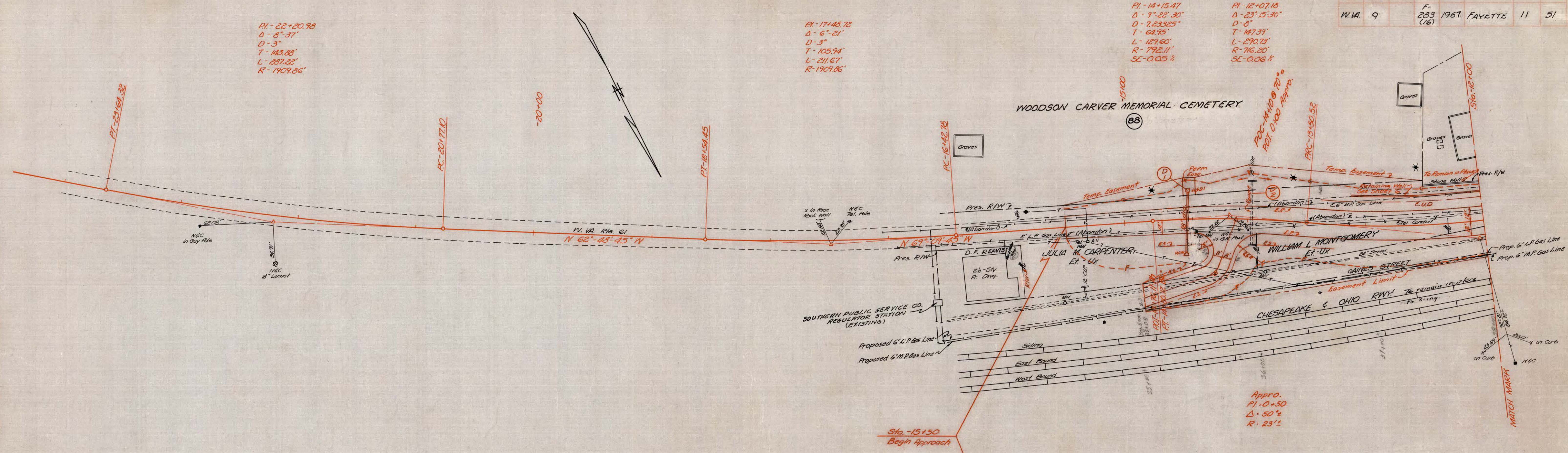
PLAN
 R. Howard, Esq., D. Fowler
 CIVIL ENGINEER
 10-62
 1-58
 PROJECT NO. 17799
 DATE 10-62
 SCALE 1" = 40'
 SHEET NO. 11
 TOTAL SHEETS 51

PI-22+20.98
 Δ - 8° 37'
 D - 3'
 T - 143.88'
 L - 237.22'
 R - 1909.86'

PI-17+42.72
 Δ - 6° 21'
 D - 3'
 T - 105.94'
 L - 211.67'
 R - 1909.86'

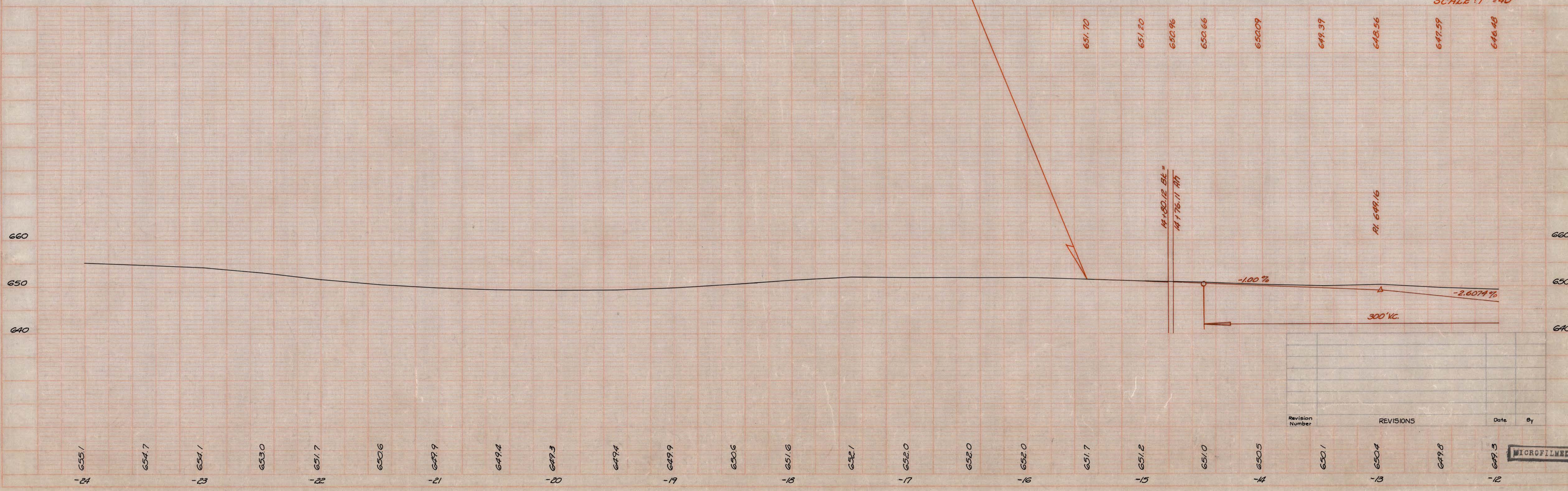
PI-14+15.47
 Δ - 9° 22' 30"
 D - 7.23325'
 T - 64.95'
 L - 129.60'
 R - 792.11'
 SE - 0.05%

PI-12+07.18
 Δ - 23° 15' 30"
 D - 8'
 T - 147.39'
 L - 290.79'
 R - 716.20'
 SE - 0.06%



Appro.
 PI-0+50
 Δ - 50° 1/2
 R - 23' 1/2

SCALE: 1" = 40'



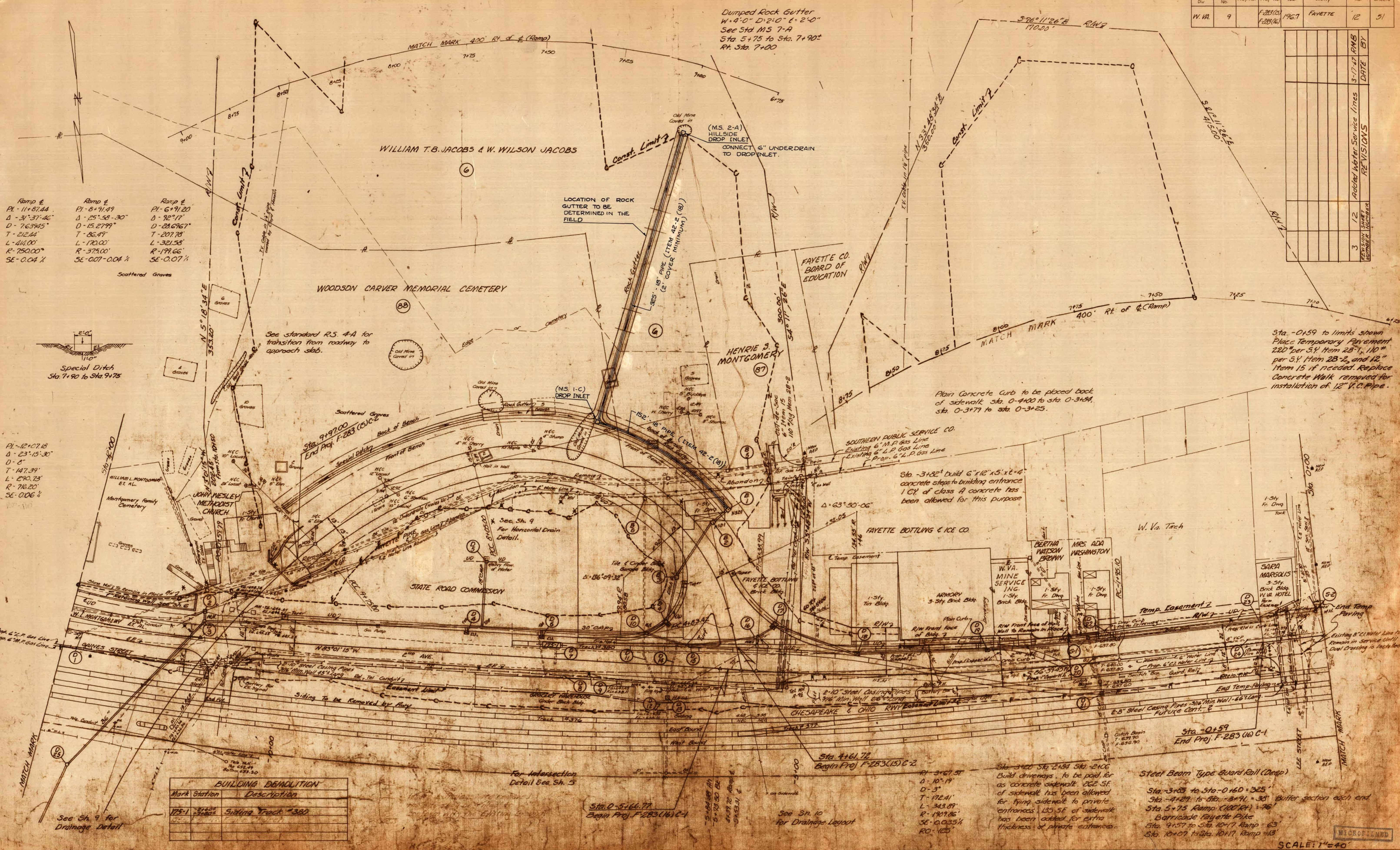
Revision Number	REVISIONS	Date	By
6501			
6504			
6498			
6493			

MICROFILMED

Public Roads Div.	State Dist. No.	State Proj. No.	Federal Proj. No.	Fiscal Year	County	Sheet No.	Total Sheets
W. Va.	9	F-283(12)	F-283(16)	1967	FAYETTE	12	51

REVISIONS	DATE	BY
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		

DATE	BY	REVISION



Ramp E	Ramp E	Ramp E
PI - 11+87.44	PI - 8+91.49	PI - 6+91.20
Δ - 31°37'46"	Δ - 25°58'30"	Δ - 92°17'
D - 76.3745'	D - 15.2799'	D - 28.6767'
T - 212.44'	T - 86.49'	T - 207.78'
L - 414.00'	L - 170.00'	L - 321.58'
R - 750.00'	R - 375.00'	R - 199.66'
SE - 0.04%	SE - 0.07 - 0.04%	SE - 0.07%

PI - 12+07.18
Δ - 23°15'30"
D - 8'
T - 147.39'
L - 290.73'
R - 76.20'
SE - 0.06%

Mark Station	Description
175-1	Siding Track #380

Sta. 3+03 to Sta. 0+60 = 325'
 Sta. 4+29 to Sta. 3+91 = 38' Buffer section each end
 Sta. 5+75 Ramp (100' RA) = 76'
 Barricade Fayette Pike
 Sta. 9+57 to Sta. 10+17 Ramp = 63'
 Sta. 10+07 to Sta. 10+17 Ramp = 10'

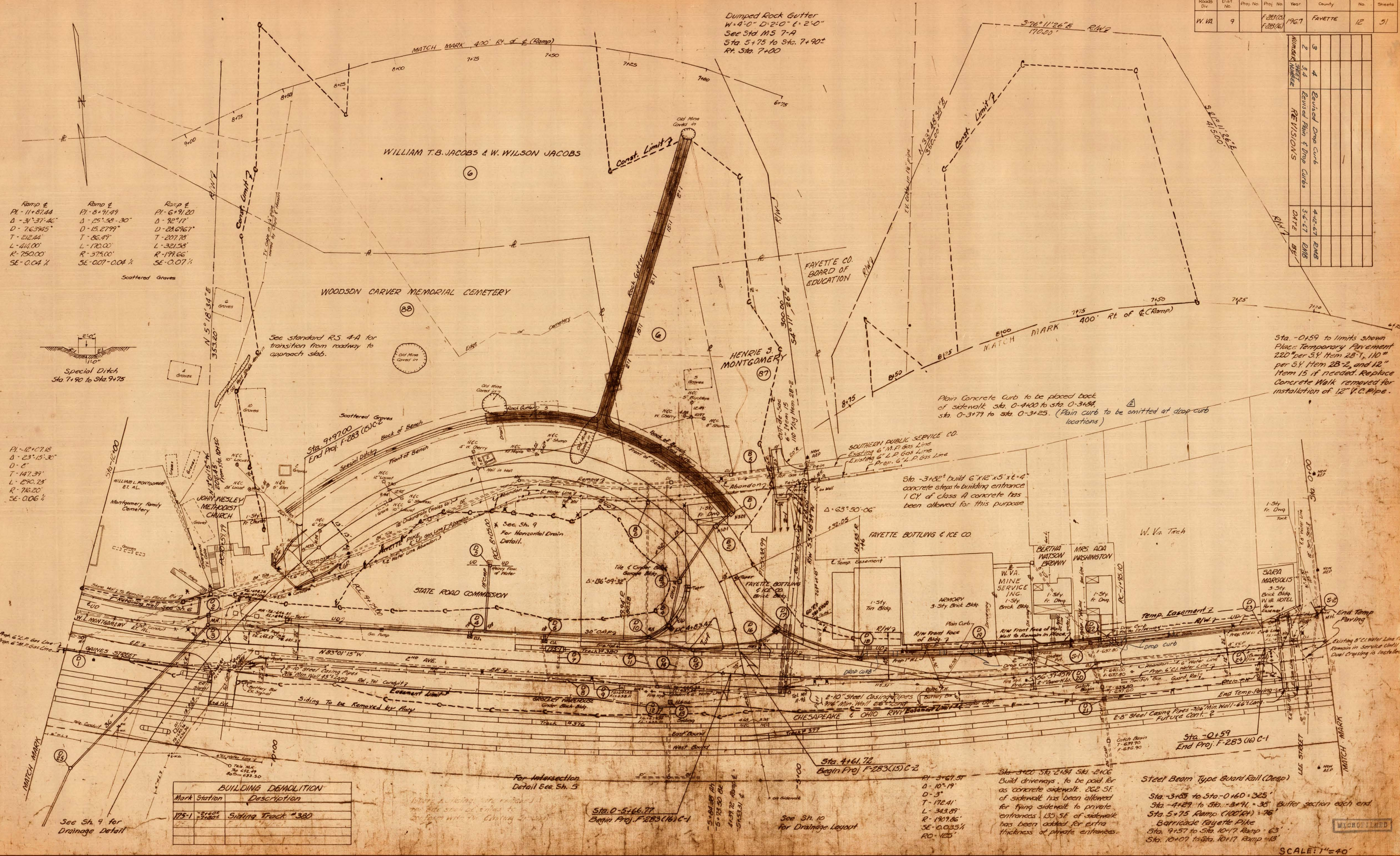
SCALE: 1"=40'

Public Roads Div.	State Dist. No.	State Proj. No.	Federal Proj. No.	Fiscal Year	County	Sheet No.	Total Sheets
W. VA.	9	F-283(10)	F-283(16)	1967	FAYETTE	12	51

Number	Sheet	Revision	Date	By
2	3			
3	4	Revised Drop Curb		
4	4	Revised Right of Way Curbs		
5	4	Revised Right of Way Curbs		
6	4	Revised Right of Way Curbs		
7	4	Revised Right of Way Curbs		
8	4	Revised Right of Way Curbs		
9	4	Revised Right of Way Curbs		
10	4	Revised Right of Way Curbs		
11	4	Revised Right of Way Curbs		
12	4	Revised Right of Way Curbs		

DATE	BY	REVISION
1-15-68	R. H. HARRIS	1-15-68
1-15-68	R. H. HARRIS	1-15-68
1-15-68	R. H. HARRIS	1-15-68

DATE	BY	REVISION
1-15-68	R. H. HARRIS	1-15-68
1-15-68	R. H. HARRIS	1-15-68
1-15-68	R. H. HARRIS	1-15-68



Ramp E
 PI - 11+87.44
 Δ - 31°37'46"
 D - 763.945'
 T - 242.44'
 L - 444.00'
 R - 750.00'
 SE - 0.04%

Ramp E
 PI - 8+91.89
 Δ - 25°58'30"
 D - 15,279.9'
 T - 86.49'
 L - 170.00'
 R - 375.00'
 SE - 0.07%

Ramp E
 PI - 6+91.20
 Δ - 92°17'
 D - 28,676.7'
 T - 207.78'
 L - 321.58'
 R - 199.66'
 SE - 0.07%

Special Ditch
 Sta. 7+90 to Sta. 9+75

PI - 12+07.18
 Δ - 23°15'30"
 D - 6'
 T - 147.39'
 L - 290.23'
 R - 76.20'
 SE - 0.06%

Mark	Station	Description
175-1	5+100	Siding Track #380

See Sh. 9 for Drainage Detail

For Intersection Detail See Sh. 5

Sta. 0+56.77
 Begin Proj. F-283(16) C-1

See Sh. 10 for Drainage Layout

PI - 3+07.51
 Δ - 10°19'
 D - 3'
 T - 172.41'
 L - 343.89'
 R - 197.86'
 SE - 0.035%
 RO - 125'

Sta. 3+00 to Sta. 2+84 Sta. 2+80
 Build driveways, to be paid for as concrete sidewalk. 662 SF of sidewalk has been allowed for tying sidewalk to private entrances. 135 SF of sidewalk has been added for extra thickness of private entrances.

Steel Beam Type Guard Rail (Drop)
 Sta. 3+00 to Sta. 0+160 = 325'
 Sta. 4+89 to Sta. 3+91 = 98' Buffer section each end
 Sta. 5+75 Ramp (100' LH) = 76'
 Barricade Fayette Pike
 Sta. 9+57 to Sta. 10+17 Ramp = 63'
 Sta. 10+07 to Sta. 10+17 Ramp = 10'

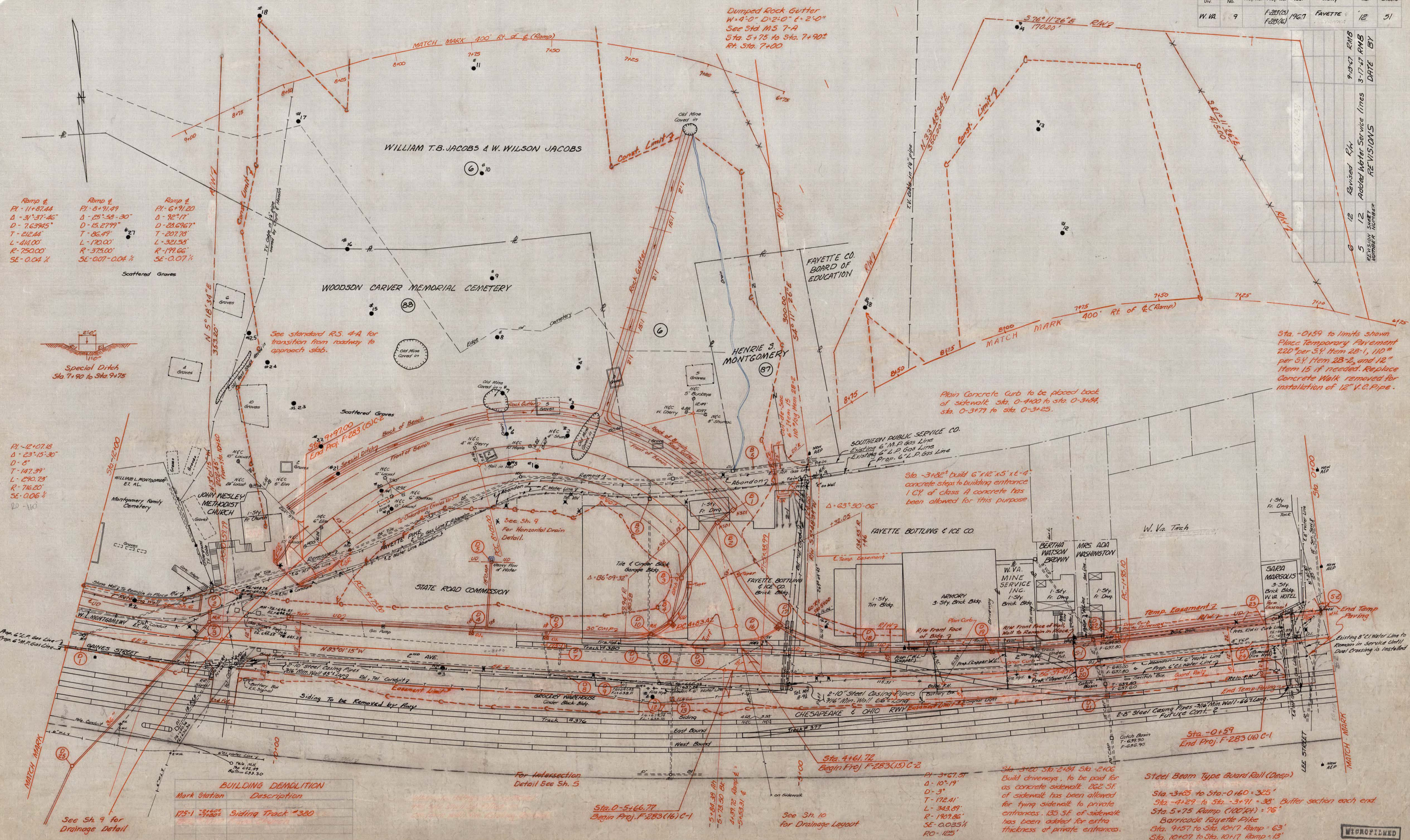
SCALE: 1" = 40'

See Revised Sheet

Public Roads Div.	State Dist. No.	State Proj. No.	Federal Proj. No.	Fiscal Year	County	Sheet No.	Total Sheets
W. VA.	9	F-283(15)	F-283(16)	1967	FAYETTE	12	51

DATE 1-6-68
BY R. Howard, C. O. Fowler, RMB
PLAN Surveyed, Plotted
NOTE BOOK No. 17299

DATE
BY
PROFILE Surveyed, Plotted
NOTE BOOK No. 17299



REVISIONS	DATE	BY
1		
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12		

Mark Station	Description
175-1	Siding Track #380

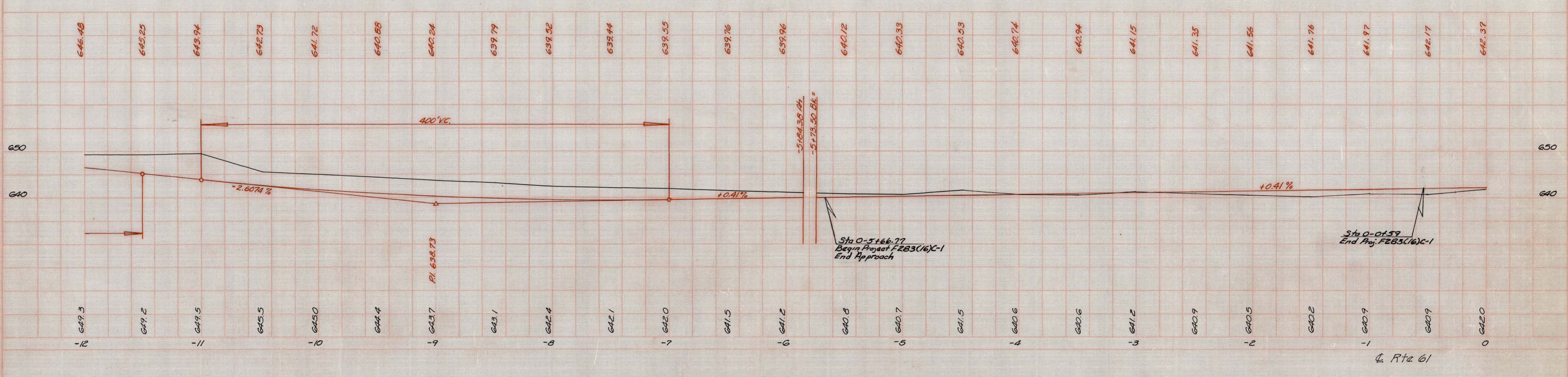
Steel Beam Type Guard Rail (Deep)
Sta. 3+85 to Sta. 0+160 + 325'
Sta. 4+29 to Sta. 3+91 = 38' Buffer section each end
Sta. 5+75 Ramp (100'±) = 76'
Barricade Fayette Pike
Sta. 9+57 to Sta. 10+17 Ramp = 63'
Sta. 10+07 to Sta. 10+17 Ramp = 13'

SCALE: 1"=40'

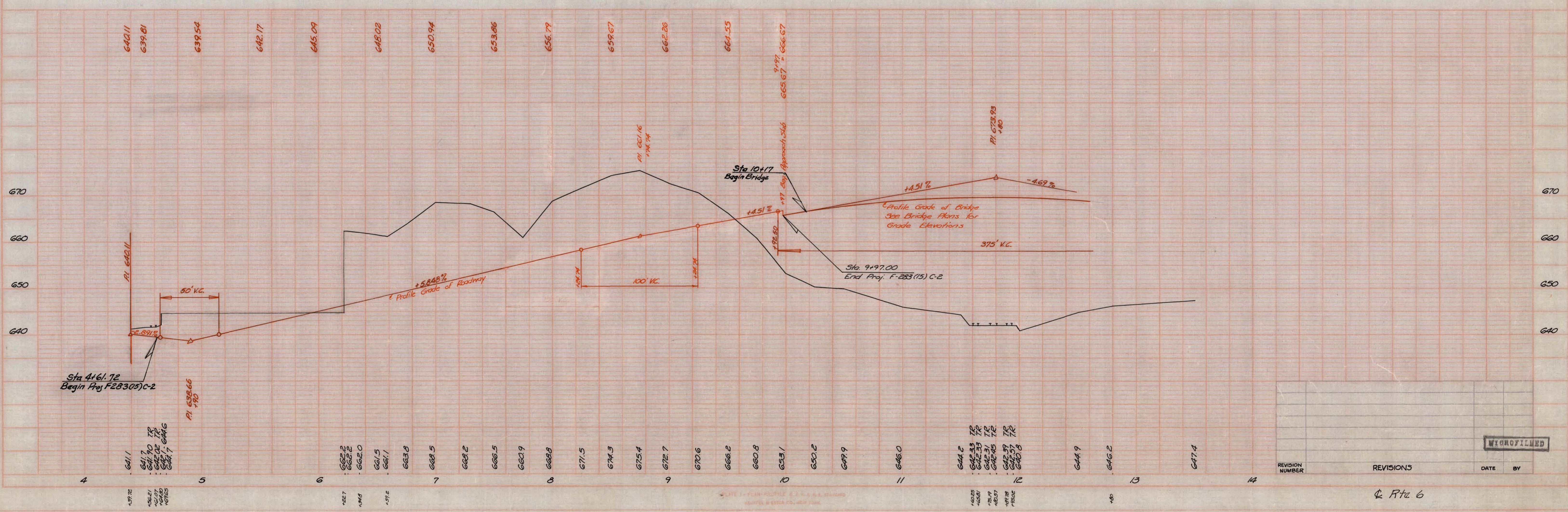
MICROFILMED

Project No.	Sheet No.	Stationing	Project Name	Scale	Sheet No.	Total Sheets
W. Va. 9	F283(15) F283(16)	1967	Fayette		13	51

PLAN
 DATE: 10/1/67
 DRAWN BY: J. W. HAYES
 CHECKED BY: J. W. HAYES
 PROJECT NO. 2880



PROFILE
 DATE: 10/1/67
 DRAWN BY: J. W. HAYES
 CHECKED BY: J. W. HAYES
 PROJECT NO. 2880



REVISION NUMBER	REVISIONS	DATE	BY

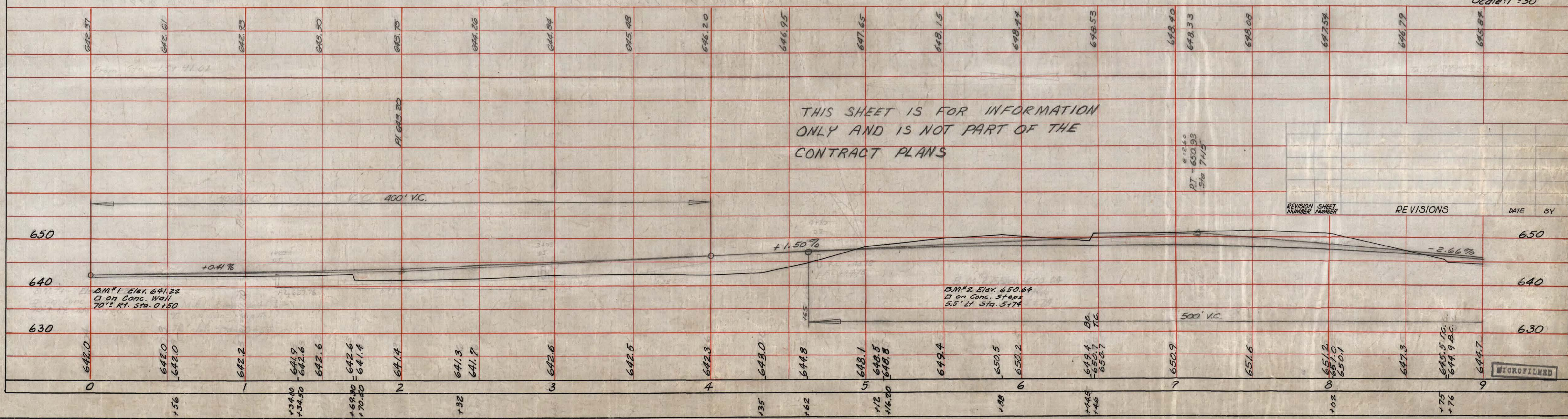
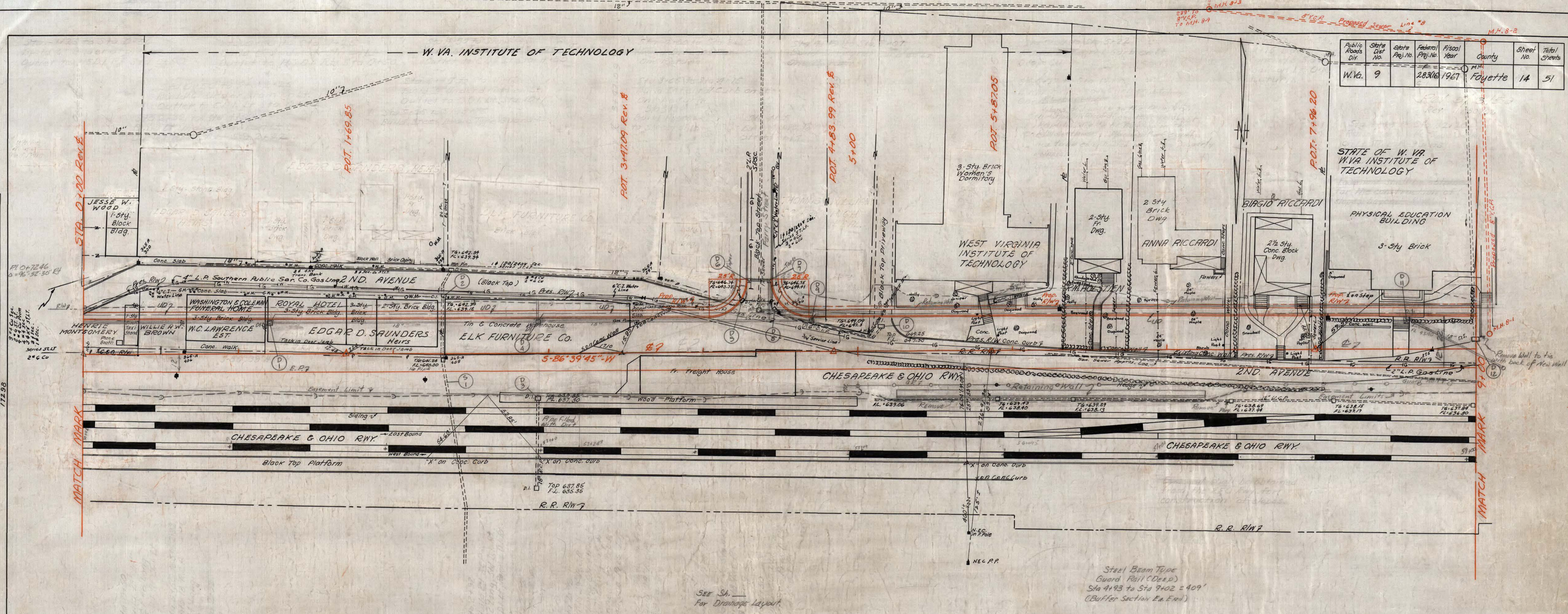
MICROFILMED

← Rtg 6

PLAN	Designed by	Checked by
	Approved by	Approved by
	Drawn by	Drawn by
	Scale	Scale
	Notes	Notes
	12/28/67	12/28/67
	12/28/67	12/28/67
	12/28/67	12/28/67
	12/28/67	12/28/67

PROFILE	Designed by	Checked by
	Approved by	Approved by
	Drawn by	Drawn by
	Scale	Scale
	Notes	Notes
	12/28/67	12/28/67
	12/28/67	12/28/67
	12/28/67	12/28/67
	12/28/67	12/28/67

Public Roads Dist.	State Dist. No.	State Proj. No.	Federal Proj. No.	Fiscal Year	County	Sheet No.	Total Sheets
W.Va.	9		28306	1967	Fayette	14	51



THIS SHEET IS FOR INFORMATION ONLY AND IS NOT PART OF THE CONTRACT PLANS

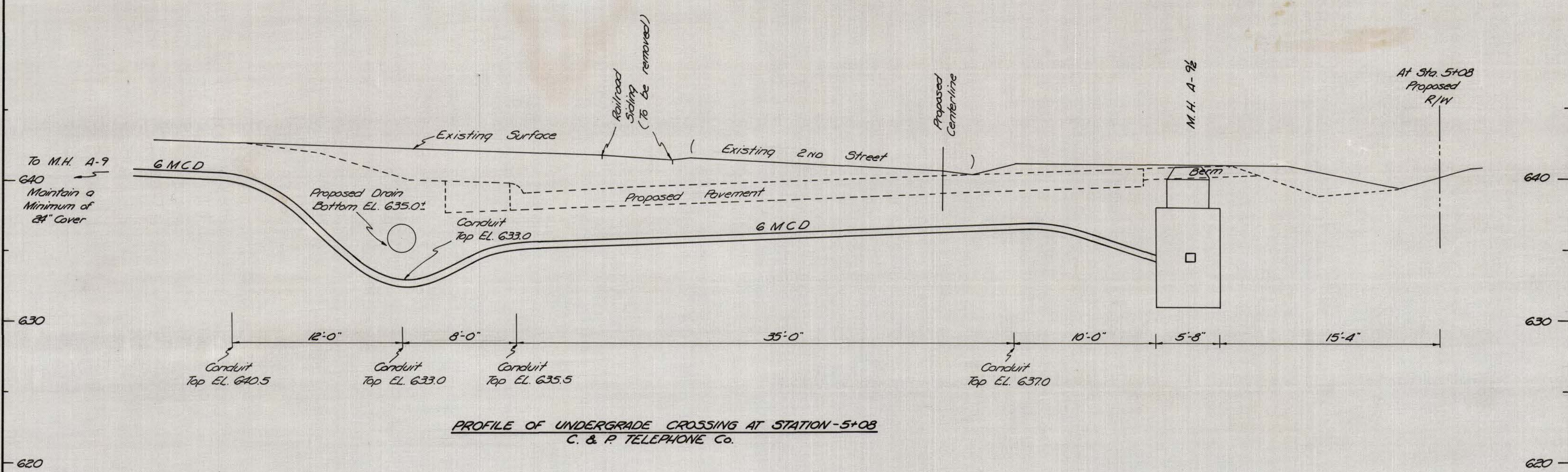
REVISIONS	NUMBER	DATE	BY

MICROFILMED

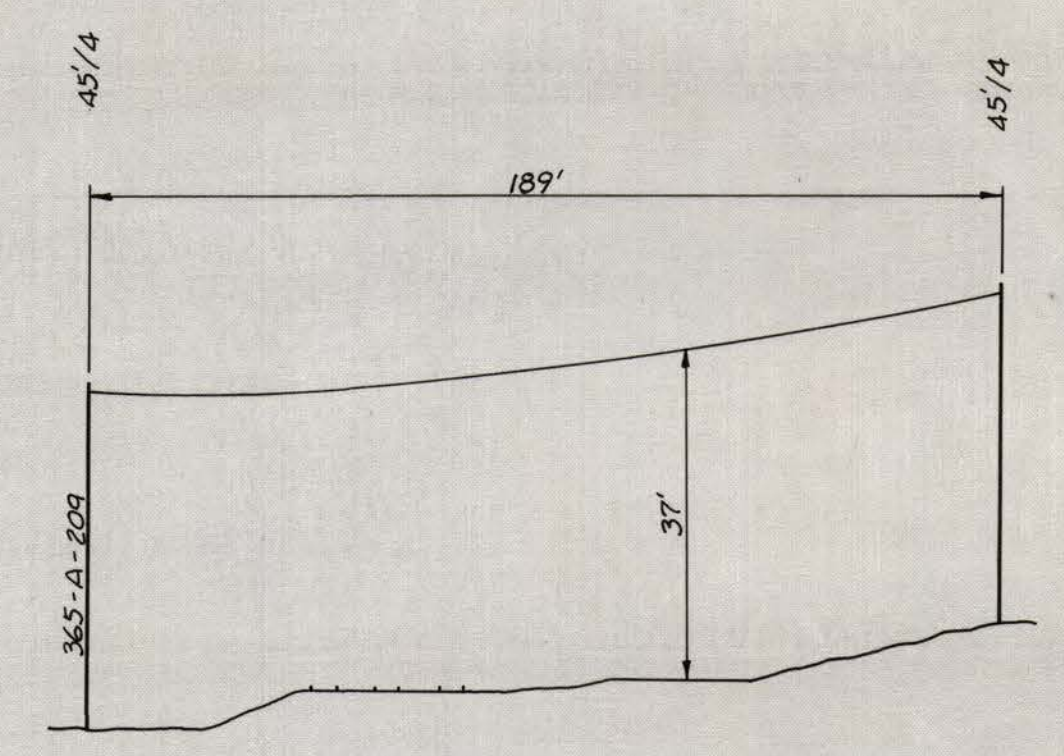
PUBLIC ROAD DIST.	STATE DIST. NO.	STATE PROJ. NO.	FEDERAL PROJ. NO.	FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
W.VA.	9		F-223(15) F-223(16)	1967	FAYETTE	A-A	51

CHESAPEAKE AND POTOMAC TELEPHONE CO. OF WEST VIRGINIA

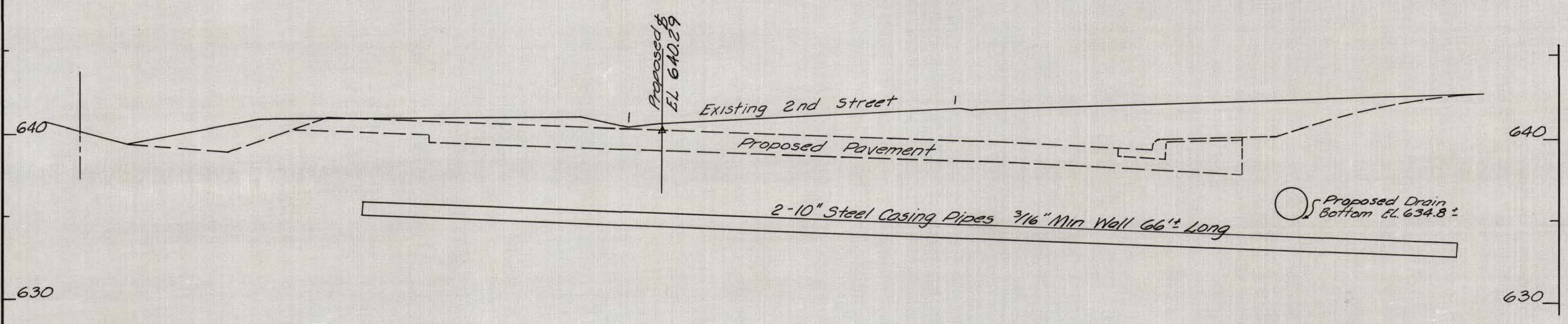
Station	Elevation Top of Conduit
5+08	M.H. A-9 1/2
5+50	637.0
6+00	636.0
6+50	635.5
7+00	635.0
7+50	636.5
8+00	637.0
8+50	637.0
9+00	637.5
9+50	637.0
10+00	637.5
	M.H. A-10
11+00	642.5
11+50	642.5
12+00	642.0
	Maintain a Minimum of 24" Cover
	M.H. A-11



PROFILE OF UNDERGRADE CROSSING AT STATION -5+08
C. & P. TELEPHONE Co.



PROFILE OVER
W.VA. PRI. RT. 61
STA. 0-0+10
APPALACHIAN POWER COMPANY



PROFILE OF UNDERGRADE CROSSING AT STATION -5+15
PROPOSED 6" L.P. GAS LINE AND 6" M.P. GAS LINE
THE SOUTHERN PUBLIC SERVICE COMPANY

THE SOUTHERN PUBLIC SERVICE COMPANY

CENTER-LINE STATION	DEPTH TO TOP 6" GAS LINE BELOW EXISTING GROUND (APPROXIMATE)
-5+15	5'-0"
-5+50	4'-6"
-6+00	4'-9"
-6+50	5'-9"
-7+00	7'-2"
-7+50	7'-9"
-8+00	8'-4"
-8+50	8'-9"
-9+00	8'-8"
-9+50	8'-5"
-10+00	7'-5"
-10+50	4'-8"

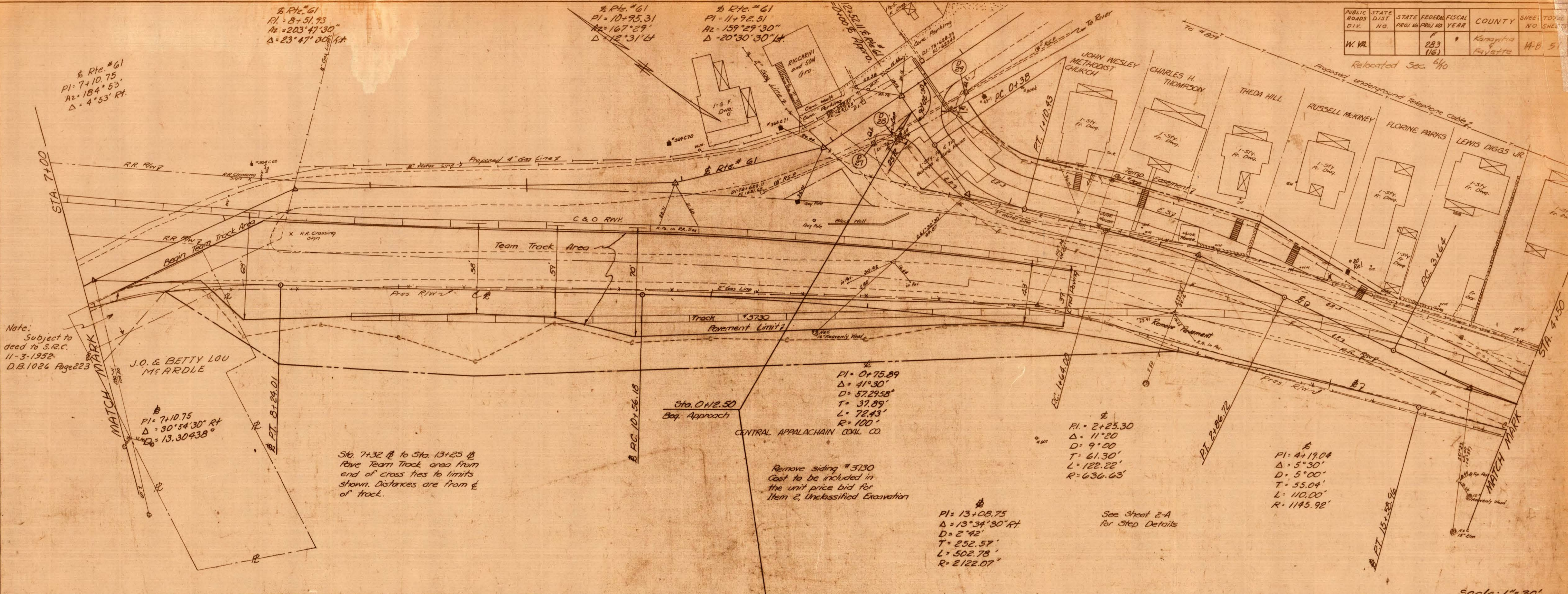
Top of Casing Pipes to be a Minimum of 30" Below Finished Grade.

PUBLIC ROADS DIV.	STATE DIST. NO.	STATE PROJ. NO.	FEDERAL PROJ. NO.	FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
W. VA.		283		(196)	Kanawha & Fayette	4-B	51

Relocated Sec. 640

PLAN	DATE	BY
Survived		
NOTE: Book of Plans must be checked. NO. 22267		

PROFILE	DATE	BY
Survived		
NOTE: Book of Plans must be checked. NO. 22267		



Note: Subject to deed to S.R.C. 11-3-1952. D.B. 1026 Page 223

J.O. & BETTY LOU MEARDLE
 PI = 7+10.75
 Δ = 30°54'30" RT
 D = 13.30438'

Sta. 7+32 to Sta. 13+25
 Rave Team Track area from end of cross ties to limits shown. Distances are from center of track.

Sta. 0+12.50
 Beg. Approach

CENTRAL APPALACHIAN COAL CO.

Remove siding # 5730
 Cost to be included in the unit price bid for Item 2, Unclassified Excavation

PI = 13+08.75
 Δ = 13°34'30" RT
 D = 2'42"
 T = 252.57'
 L = 502.78'
 R = 2122.07'

PI = 2+25.30
 Δ = 11°20'
 D = 9'00"
 T = 61.30'
 L = 122.22'
 R = 636.63'

See sheet 2-A for Step Details

PI = 4+19.04
 Δ = 5°30'
 D = 5'00"
 T = 55.04'
 L = 110.00'
 R = 1145.92'

Scale: 1" = 30'



REVISION NUMBER	REVISION SHEET NUMBER	REVISIONS	DATE	BY
1	3, 2-A	Rev. Grade & Steps	2-27-67	RMB

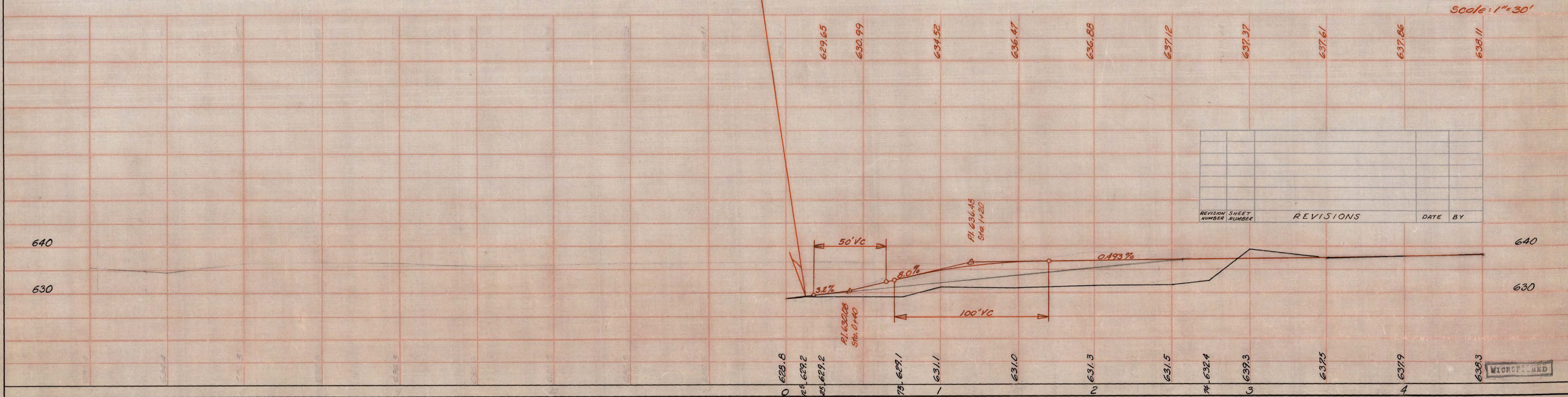
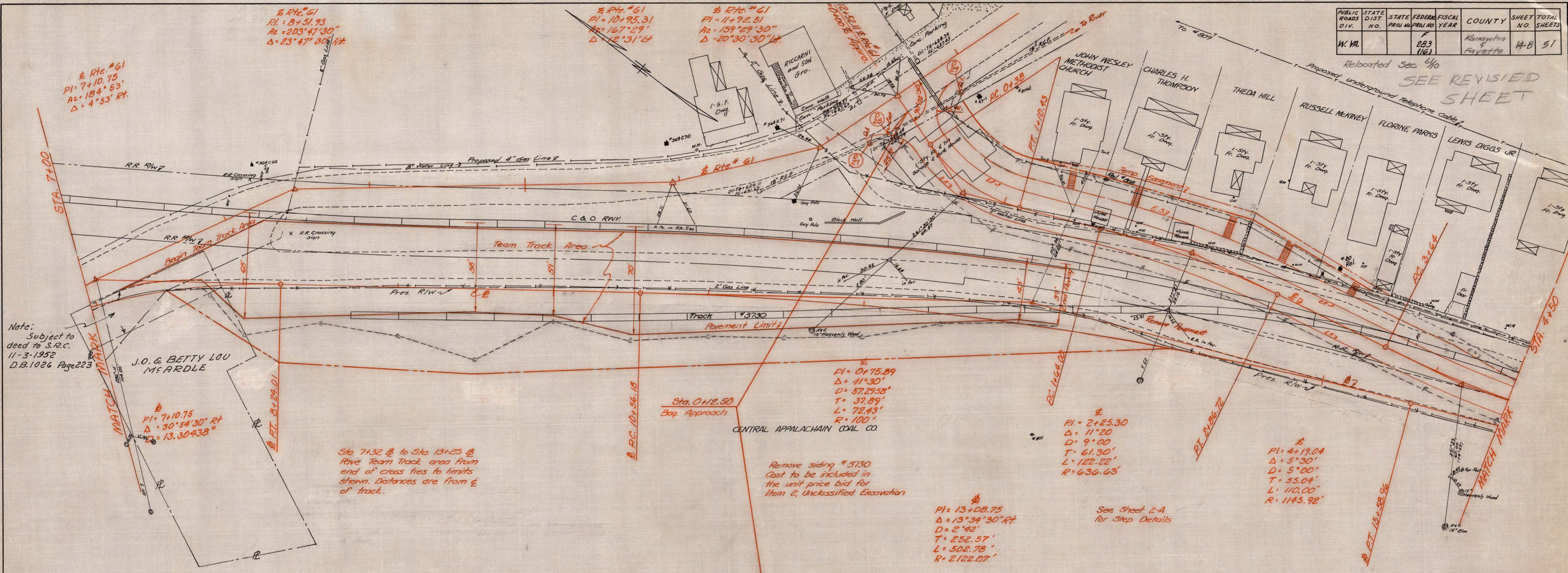
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PUBLIC ROADS DIST. DIV.	STATE NO.	STATE PROJ. NO.	FEDERAL PROJ. NO.	FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
W. VA.			283 (16)		Kanawha & Fayette	14-B	51

Relocated Sec. 6/0
 SEE REVISIED SHEET

PLAN	DATE	BY
SURVEYED		
PLOTTED		
NOTE BOOK NO. 2267		
NO. 2267		

PROFILE	DATE	BY
SURVEYED		
PLOTTED		
NOTE BOOK NO. 2267		
NO. 2267		



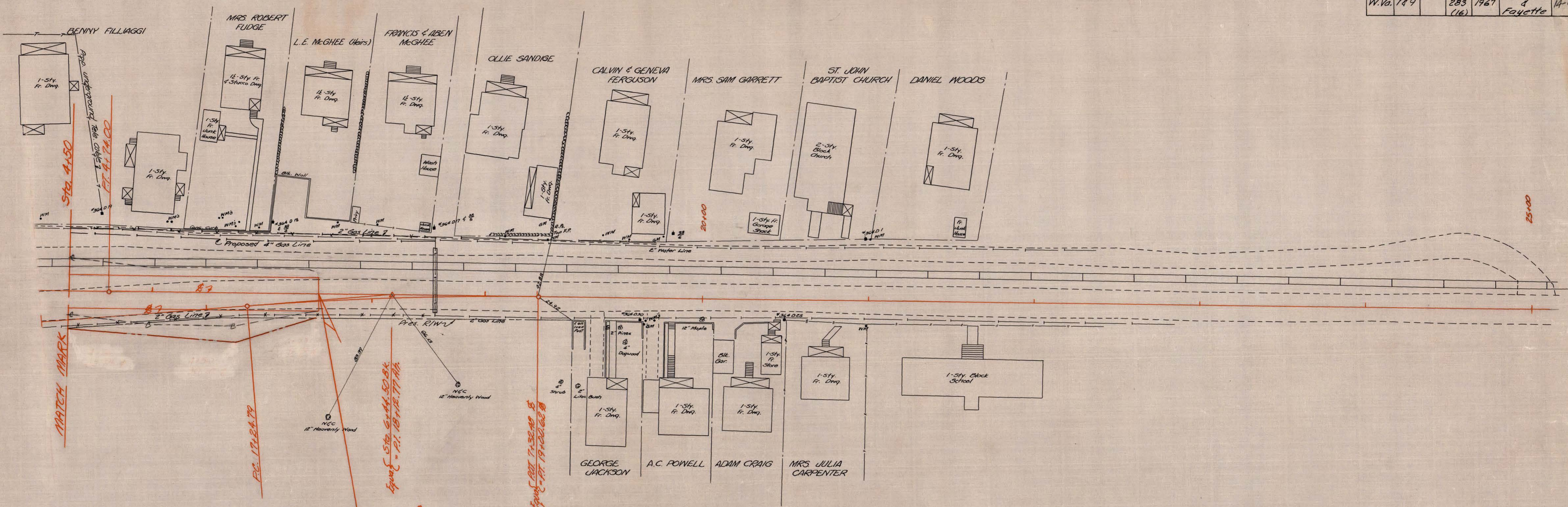
Scale: 1" = 30'

MICROFILMED

Public Roads Div.	State Dist. No.	State Proj. No.	Federal Proj. No.	Fiscal Year	County	Sheet No.	Total Sheets
W. Va.	149		F 283 (16)	1967	Kanawha & Fayette	14-C	51

Plan	Surveyed	Date
	Plotted	
	Checked	
	By	

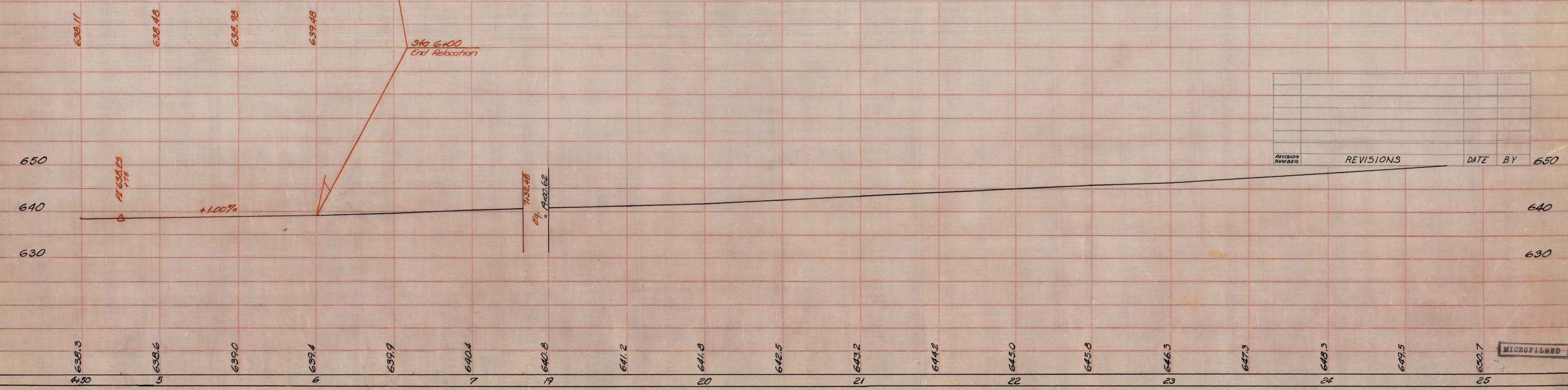
Profile	Surveyed	Date
	Plotted	
	Checked	
	By	



CENTRAL APPALACHIAN COAL CO.

$P1 = 18+12.77$
 $\Delta = 5^{\circ}16'30'' \text{ Rt.}$
 $D = 3'$
 $T = 87.98'$
 $L = 175.83'$
 $R = 1909.86'$

Sta. 6+00
End Relocation



Scale: 1"=30'

REVISION NUMBER	REVISIONS	DATE	BY

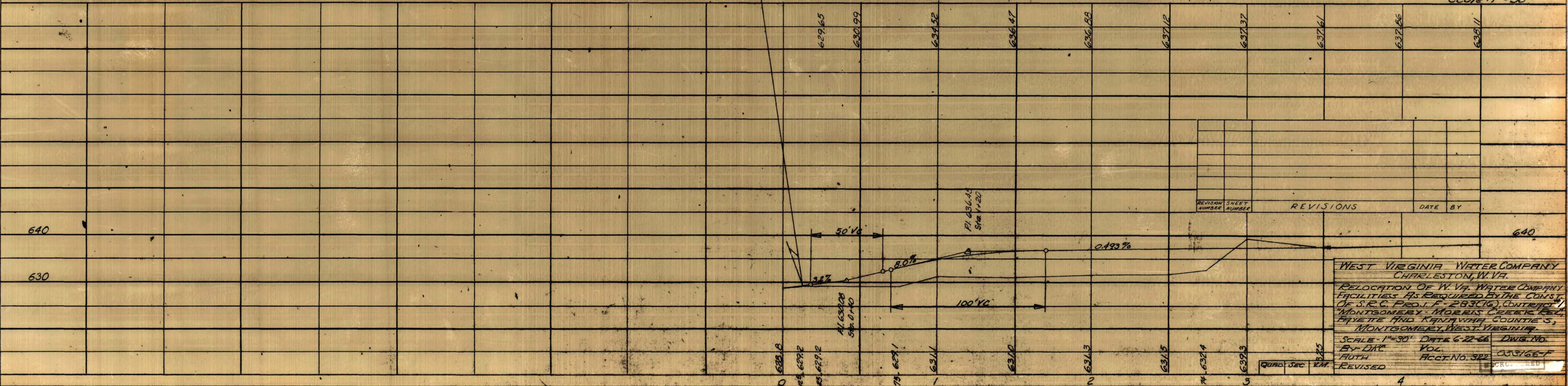
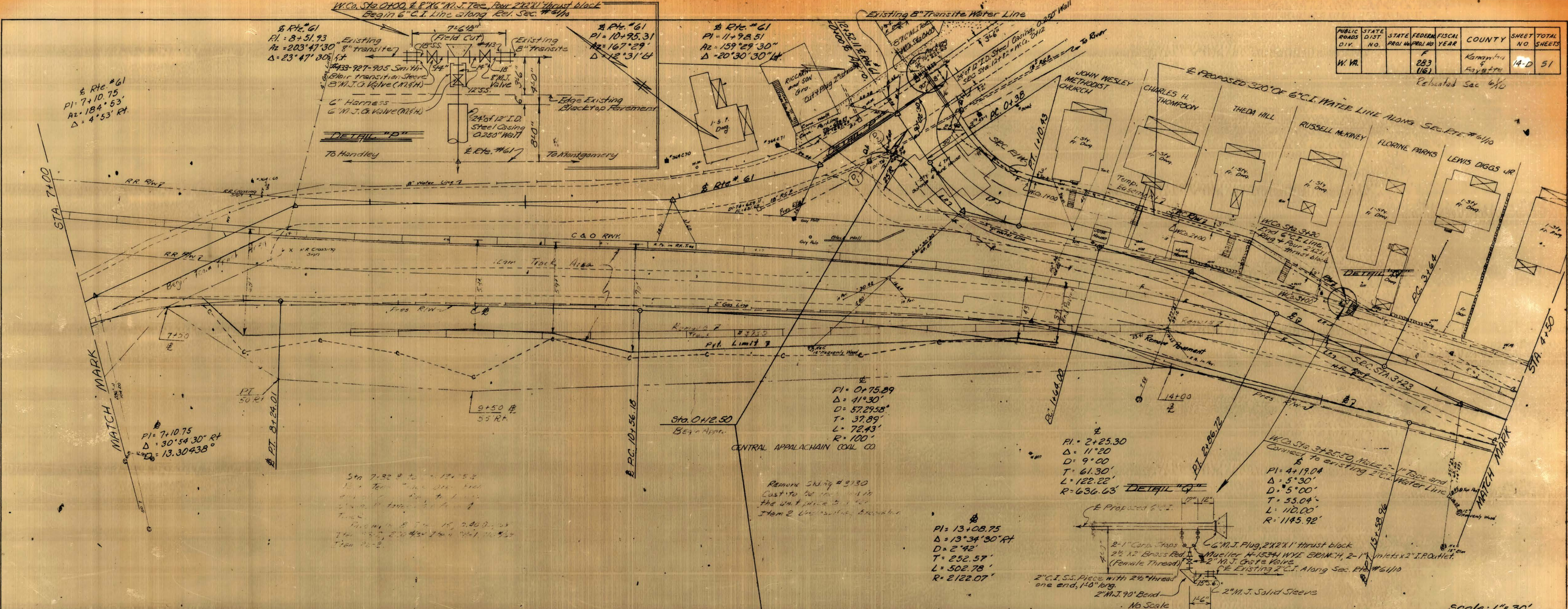
MICROFILMED

PUBLIC ROADS DIV.	STATE DIST. NO.	STATE PROJ. NO.	FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
W. Va.		283 (16)		Kanawha	14-D	51

Relocated Sec 6/10

PLAN	DATE

PROFILE	DATE



WEST VIRGINIA WATER COMPANY
 CHARLESTON, W. VA.
 RELOCATION OF W. VA. WATER COMPANY FACILITIES AS REQUIRED BY THE CONST. OF S.C.C. PROJ. F-283(16), CONTRACT MONTGOMERY MORRIS CREEK REL. HAYETTE AND KANAWHA COUNTIES, MONTGOMERY, WEST VIRGINIA.
 SCALE: 1"=30' DATE: 6-22-66 DWG. NO. 033166-F
 BY: DRK VOL. ACCT. NO. 322
 AUTH. REVISED

SUMMARY OF DRILL LOGS AND SOIL TESTS

PROJECT F-283(16)
PAGE 1 OF 3
FAYETTE COUNTY
DISTRICT #9
SEPTEMBER, 1964

HOLE NO.	STATION NO.	REF. TO ☒	SURFACE ELEV.	DEPTH	GROUND WATER DEPTH	A.A.S.H.O. CLASSIFICATION OF SOIL AND STRATIGRAPHY OF ROCK	UN-DISTURBED FIELD MOISTURE	UN-DISTURBED FIELD DENSITY	LAB. REQ. OPTIMUM MOISTURE BY A.A.S.H.O. T-99-57D	LAB. MAX. REQ. DENSITY BY A.A.S.H.O. T-99-57D	SHRINK-AGE FACTOR	SPECIFIC GRAVITY	PERCENT PASSING				ATTERBURG LIMITS			L.A. ABRASION % WEAR Grading	SOUNDNESS BY		STABILITY			SAND EQUIV.	SHEAR RESISTANCE		K in cm/sec COEFF. OF PERMEABILITY	VOID RATIO		CONSOLIDATION STUDIES								
													40	200	270		LL	PL	PI		NA,SO, % LOSS	Weathering Loss	G.E.	R Value	S Value		Angle of Int. Fric. ϕ	Cohesion		e_0	e_1	s	t_{90}							
													.42mm	.074mm	.053mm	.02mm																								
1	0-12+03	26*RT.	649.7	0.0- 0.5 0.5- 2.0 2.0- 8.5 8.5-26.0		BLACK TOP ROAD BASE A-4 A-4																																		
2	0-11+52	27*RT.	649.6	0.0- 0.5 0.5- 2.0 2.0-20.0 20.0-56.5		BLACK TOP ROCK ROAD BASE A-4 A-4																																		
3	0- 8+50	15*LT.	643.2	0.0- 4.0 4.0- 9.0 9.0-10.0	3.0	COAL AND CINDERS A-4(2) A-4(2)			15.8	99.3		2.34	80.1	47.0	43.3	27.1	25.5	1.6																						
4	0- 6+50	30*LT.	640.6	0.0- 2.0 2.0- 4.0 4.0- 6.0 6.0- 9.0 9.0-10.0	2.5	COAL AND CINDERS A-4 A-4 A-4(2) A-4(4)								87.4	45.3	39.0	22.5	19.6	2.9																					
									26.0				96.8	53.7	46.0	23.1	19.1	4.0																						
5	0- 2+50	7*LT.	640.9	0.0- 2.5 2.5- 4.0 4.0- 6.5 6.5- 7.5 7.5-10.0	3.0	CINDERS A-4(4) COAL - FRAG. BOULDER A-4(1)		33.1						83.6	56.8	51.7	30.7	24.0	6.7																					
									94.2	15.0		2.13	67.7	37.7	34.5	25.8	N/P	N/P																						
6	5+50	28*LT.	647.1	0.0- 1.5 1.5- 5.0 5.0- 6.5 6.5-10.0 10.0-11.5 11.5-15.0 15.0-16.5 16.5-20.0 20.0		CINDERS AND ROCK A-4 A-4 A-4 A-4 A-4 A-4 A-4 A-4																																		
					17.5																																			
7	5+50	22*RT.	653.5	0.0- 1.5 1.5- 5.0 5.0- 6.5 6.5-10.0 10.0-11.5 11.5-16.5 16.5-20.0		COAL AND CINDERS A-4 A-4 A-4 A-4 A-4 A-4																																		
					18.0																																			
8	7+00	28*LT.	653.5	0.0- 1.5 1.5- 5.0 5.0- 6.5 6.5-11.0 11.0-12.5 12.5-16.0 16.0-17.5 17.5-21.0 21.0-22.5		A-4 A-4 A-4 A-4 A-4 A-4 A-4 A-4 A-4																																		
					12.0																																			
9	7+00	16*RT.	648.1	0.0- 1.5 1.5- 3.0 3.0- 5.0 5.0- 6.5 6.5-10.0 10.0-11.5 11.5-15.0 15.0-16.5 16.5-20.0		A-4 A-4 A-4 A-4 A-4 A-4 A-4 A-4 A-4																																		
					14.0																																			
10	8+00	40*LT.	651.9	0.0- 5.0 5.0- 7.0 7.0- 9.0 9.0-16.0 16.0-17.5 17.5-24.0 24.0-24.5		A-4 A-4 A-4 A-4 BOULDER A-4 A-4																																		
					12.0																																			

THE STATE ROAD COMMISSION OF WEST VIRGINIA

PROJ. NO.	DIST.	COUNTY	DATE	SHEET NO.	TOTAL SHEETS
F-283(5)	9	FAYETTE	7-12-65	1	2

SUMMARY OF DRILL LOGS AND SOIL TEST

MATERIALS CONTROL, SOIL AND TESTING DIVISION

FIELD DATA

LABORATORY DATA

HOLE NO.	STATION NO.	REF- TO	SURFACE ELEV.	DEPTH	GROUND WATER DEPTH	HARDNESS OR RESIST	DESCRIPTION OF MATERIAL		CORE RUN	% RECOV.	PENETRATION			VANE SHEAR TEST	ENGINEERING CLASS	SHRINK FACTOR	UN-DISTURBED FIELD MOISTURE	UN-DISTURBED FIELD DENSITY	LAB. REQ OPTIMUM MOISTURE	LAB. MAX REQ DENSITY	PERCENT PASSING				ATTEBURG LIMITS	STABILITY DESIGN VALUE	SHEAR RESISTANCE		K IN CM/SEC	VOID RATIO							
							PRIMARY	SECONDARY			" HAMMER "	" HAMMER "	" DROP "								" DROP "	" SPOON "	" CASING "	40			200	270			LL	PL	PI	ANGLE INT	COHESION # S PER SQ. FT.	COEFF OF PERMEABILITY	CONSOLIDATION
1	7+50	7'LT.	662.0	0 - 16.6 16.6 - 20.8 20.8 - 43.2 43.2 - 44.3 44.3 - 50.6			BR. SILT & BOULDERS V. SANDY DAMP BR. CLAY SILTY W/SM.S.S. BOULDERS DAMP BR. CLAY SANDY W/SS BOULDERS WET																														
2	7+25	25'RT.	671.0	0 - 13.0 13.0 - 14.0 14.0 - 27.0 27.0 - 28.0 50.0 - 51.0 51.0 - 56.0			BR. SAND W/SMALL BOULDERS " " " " " " " " " " " " " " " " " " BL. COAL MH SILTSTONE																														
3	7+25	52'RT.	682.0	0 - 27.0 27.0 - 44.0			BR. SAND W/SMALL BOULDERS BR.																														
4	7+25	90'RT.	704.0	0 - 1.5 1.5 - 40.0 40.0 - 46.0			BR. TOP SOIL SAND W/SM. BOULDERS SILTSTONE MH																														
5	7+75	4'LT.	659.0	0 - 7.0 7.0 - 15.6			BR. SILT V. SANDY W/SM. SS BOULD. DAMP BR. SILT SANDY W/SM. SS BOULDERS WET																														
6	7+75	25'RT.	670.0	0 - 15.0 15.0 - 45.0			BR. TOP SOIL SAND W/SM. BOULDERS & COAL FRAG.																														
7	7+75	64'RT.	688.0	0 - 1.0 1.0 - 35.0			BR. TOP SOIL SAND W/SM. BOULDERS & COAL FRAGS.																														
8	7+75	117'RT.	717.0	0 - 1.0 1.0 - 45.0			BR. TOP SOIL SAND W/SM. BOULD. & COAL FRAG.																														
9	7+75	174'RT.	747.5	0 - 17.9 17.9 - 19.9 19.9 - 25.0 25.0 - 65.2 65.2 - 66.0 66.0 - 76.0	CAVED IN 3.0'	LOOSE	BR. V. SANDY SOIL W/SS BOULDERS BR. GR. SAND W/SS BOULDERS BR. V. SANDY SOIL W/SS BOULDERS BR. SAND W/SS BOULDERS GR. SHALE MH GR. SHALE SANDY																														
10	7+75	275'RT.	800.0	0 - 11.5 11.5 - 22.0 22.0 - 60.0 60.0 - 69.0 69.0 - 75.0	CAVED IN 9.0'	LOOSE	BR. V. SANDY SOIL SAND W/SS BOULD. & COAL FRAGS. GR. BR. SAND W/SS BOULD. & COAL FRAG GR. SHALE MH GR. SHALE SANDY																														
11	7+75	375'RT.	852.7	0 - 2.0 2.0 - 10.0 10.0 - 52.5	FELL IN 8.0'		BR. TOP SOIL & SS BOULDERS V. SANDY SOIL W/SS BOULDERS & COAL FRAGS. NO RECOVERY																														
12	7+75	479'RT.	898.9	0 - 2.0 2.0 - 22.0 22.0 - 55.0 55.0 - 70.0 70.0 - 76.0		LOOSE	BR. TOP SOIL & SS BOULDERS SAND & SS BOULDERS & COAL FRAGS. GR. BR. SAND W/SS BOULDERS & COAL FRAGS. BR. SAND W/SS BOULDERS & COAL FRAGS. NO RECOVERY																														
13	7+75	580'RT.	933.1	0 - 8.5 8.5 - 10.5 10.5 - 16.5 16.5 - 48.0 48.0 - 53.0		LOOSE HARD LOOSE LOOSE HARD	BR. SAND W/SS BOULDERS & COAL FRAGS. BR. SANDSTONE BOULDERS BR. SAND W/SS BOULDER & COAL FRAGS. " " " " " " BR. SANDSTONE																														
14	7+75	680'RT.	974.9	0 - 33.6 33.6 - 34.6 34.6 - 36.6 36.6 - 39.6		LOOSE MH MH SOFT	BR. SAND W/SS BOULDERS GR. SHALESTONE GR. SHALESTONE GR. SHALESTONE																														
15	8+50	168'RT.	751.0	0 - 60.0		LOOSE	BR. SAND W/SS BOULDERS & COAL FRAGS.																														
16	8+50	233'RT.	785.0	0 - 62.8 62.8 - 69.0		LOOSE HARD	BR. SAND W/SS BOULDERS & COAL FRAGS. BR. SANDSTONE																														
17	8+50	364'RT.	828.0	0 - 40.5 40.5 - 49.0		LOOSE MH	BR. SAND W/SS BOULDERS & COAL FRAGS. SHALE																														
18	8+50	472'RT.	874.5	0 - 21.6 21.6 - 31.6 31.6 - 36.5		LOOSE LOOSE MH	BR. SAND W/SM. SS. BOULDERS BR. SAND W/SM. BOULDERS GR. SHALE SANDY																														
18A	8+50	585'RT.	928.5	0 - 13.5 13.5 - 21.1		LOOSE MH	BR. SAND W/SM. SS BOULDERS GR. SHALESTONE W/STREAKS OF SS.																														
18B	8+50	561'RT.	969.5	0 - 9.2 9.2 - 11.2 11.2 - 12.2 12.2 - 17.2		DENSE S MH MH	BR. SANDY SOIL W/SS BOULDERS BR. SHALESTONE BR. SHALESTONE GR. SHALE W/STREAKS OF SS.																														
19	9+00	9'LT.	668.0	0 - 61.5 61.5 - 66.5		LOOSE HARD	BR. SAND W/SM. BOULDERS & COAL FRAGS. SANDSTONE																														
20	9+00	10'RT.	675.0	0 - 62.0 62.0 -		LOOSE	BR. SAND W/SM. BOULDERS & COAL FRAGS. NO RECOVERY																														
21	9+25	45'RT.	687.0	0 - 22.0 22.0 - 34.0 34.0 - 36.0 36.0 - 53.0 53.0		LOOSE S S	BR. SAND W/SM. BOULDERS & COAL FRAGS. BR. SAND BR. COAL BR. SAND W/BOULDERS NO RECOVERY																														
22	9+25	76'RT.	698.0	0 - 85.0		LOOSE	BR. SAND W/SM. BOULDERS & COAL FRAGS.																														
23	9+25	125'RT.	715.0	0 - 70.0		LOOSE	BR. GR. SAND W/SM. BOULDERS & COAL FRAGS.																														

THE STATE ROAD COMMISSION OF WEST VIRGINIA

PROJ. NO.	DIST.	COUNTY	DATE	SHEET NO.	TOTAL SHEETS
F-283(5)	9	FAYETTE	7.11.21.65	2	2

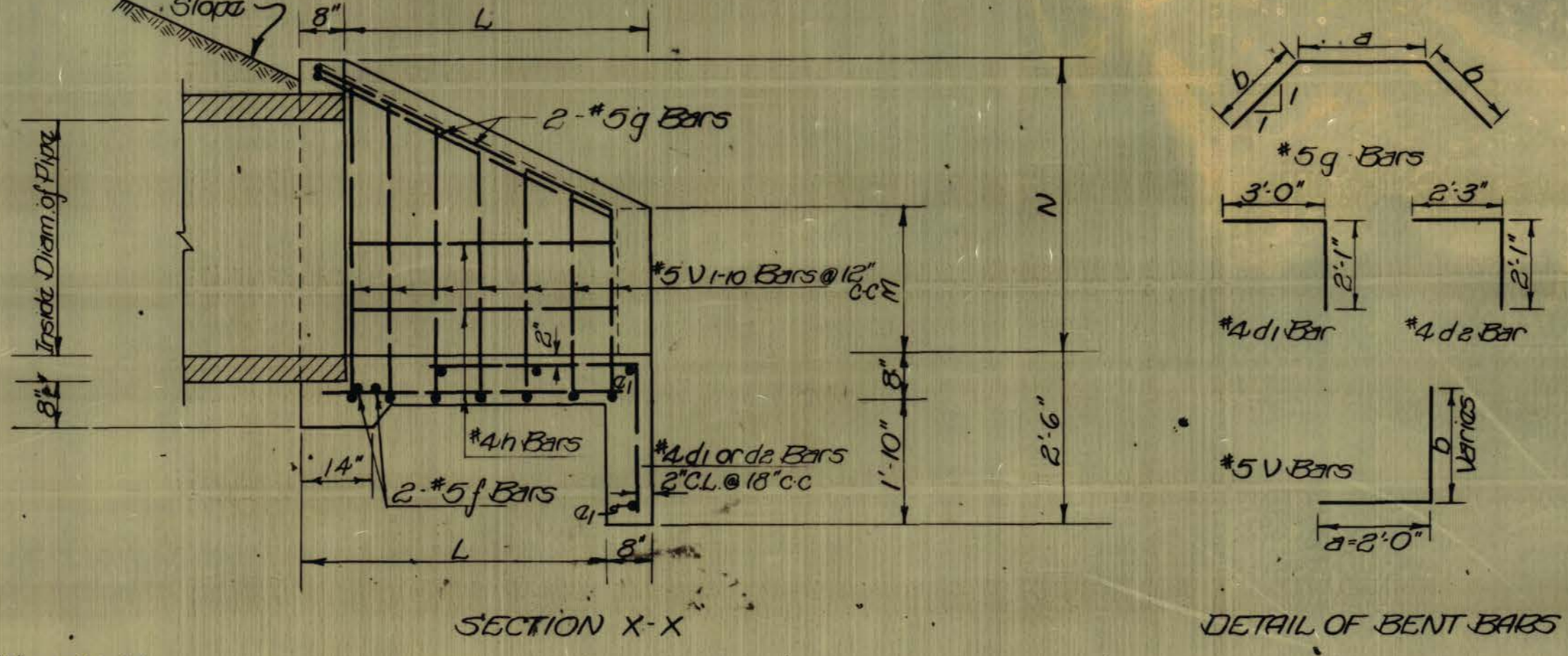
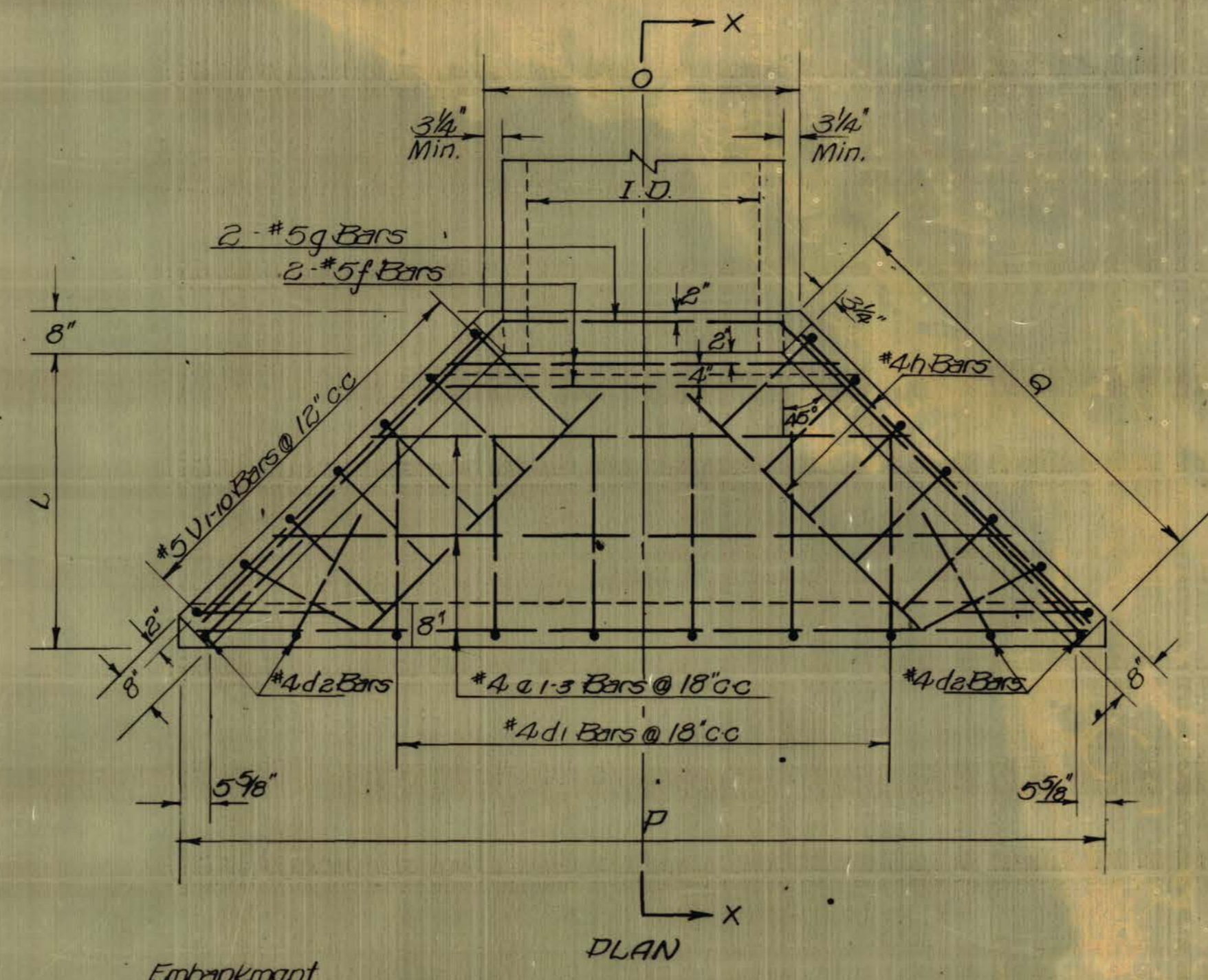
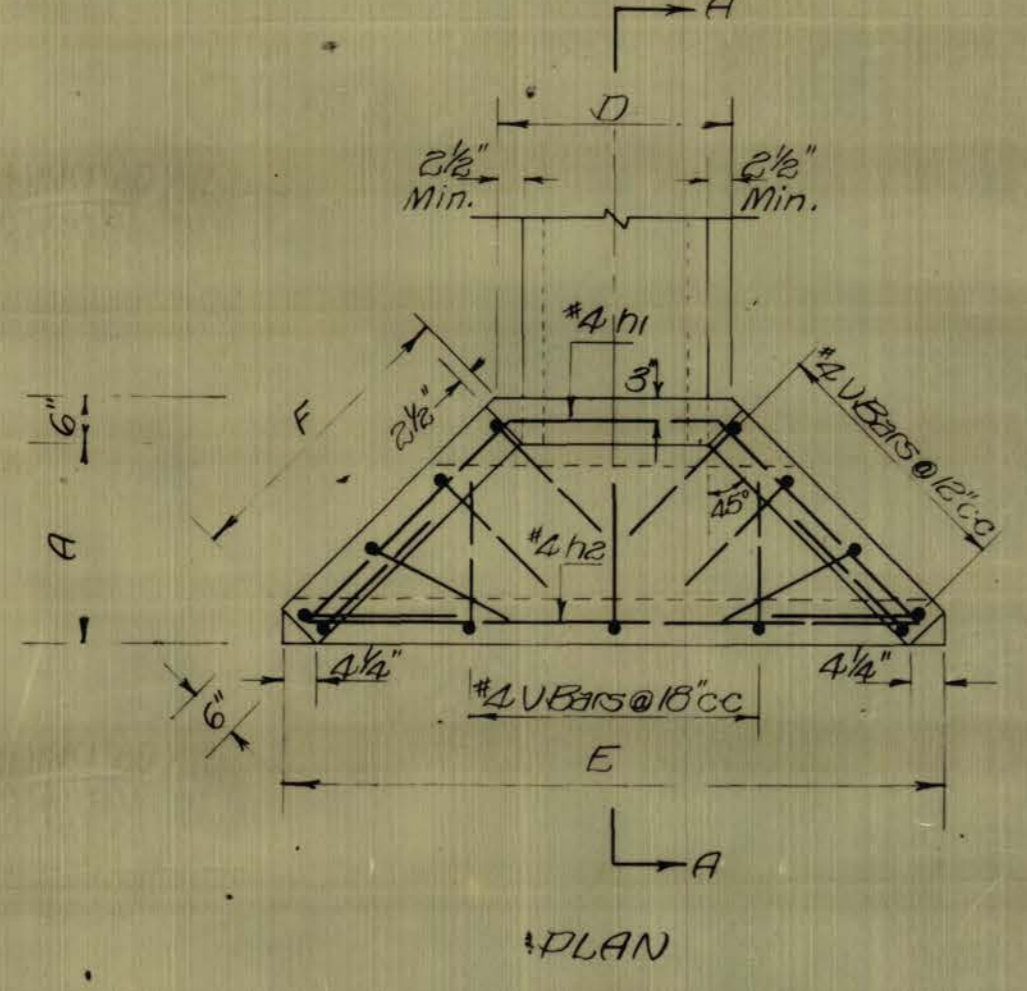
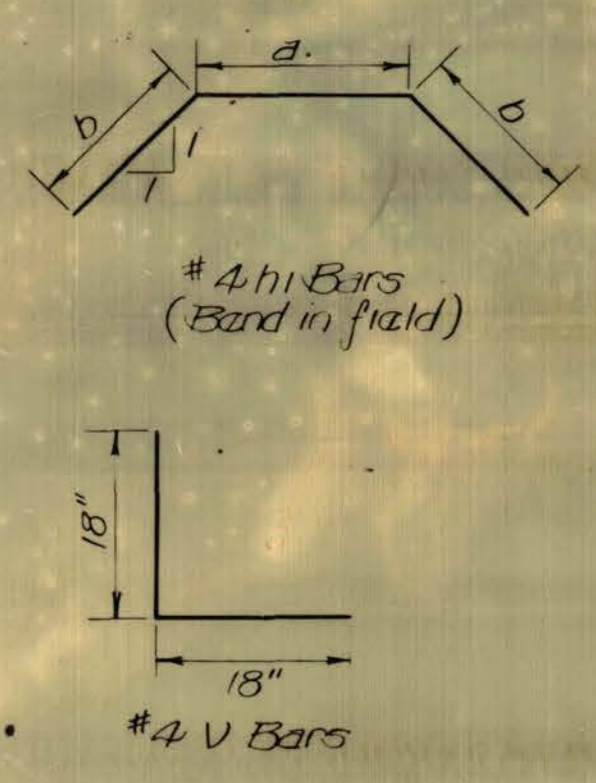
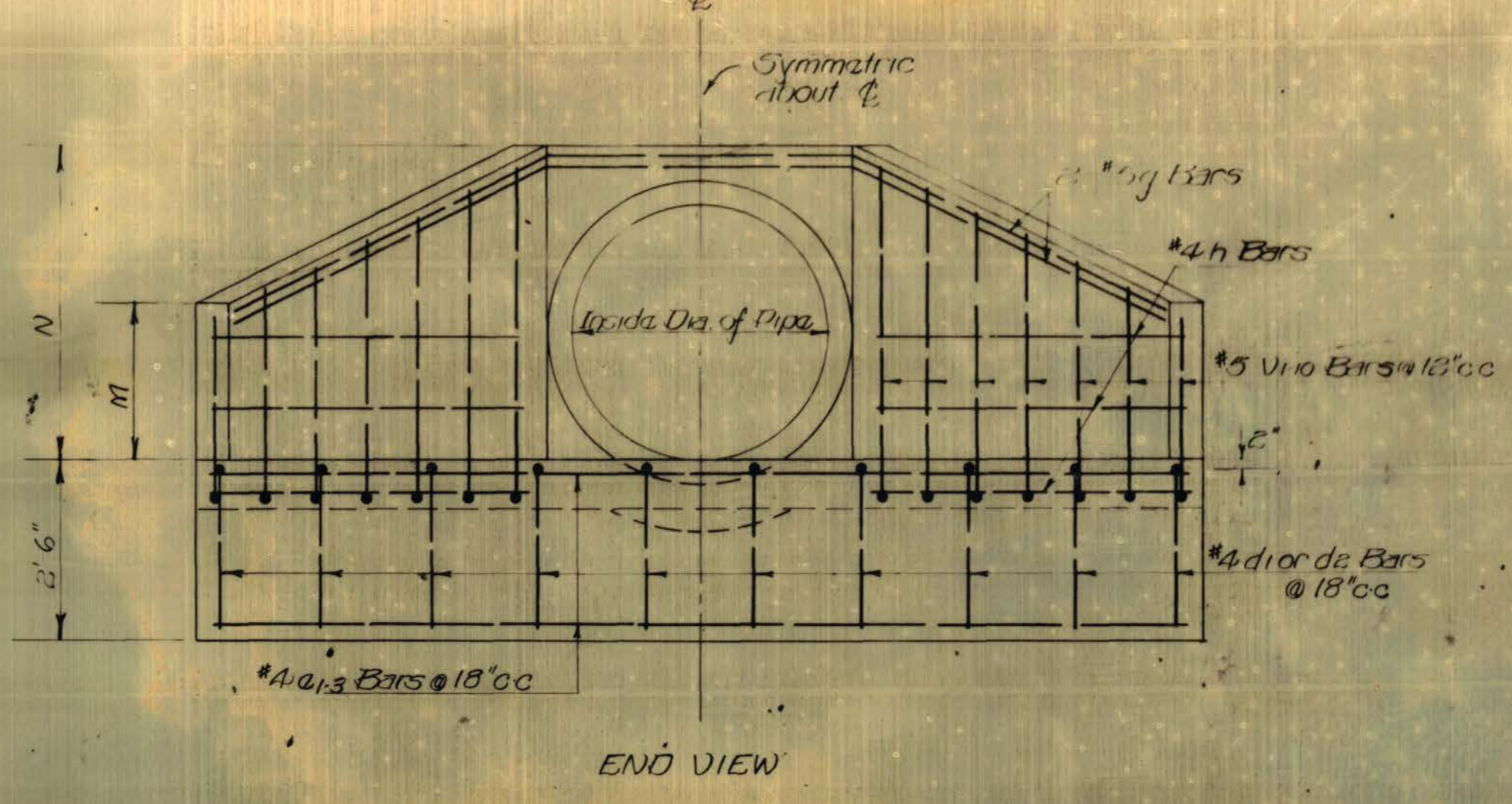
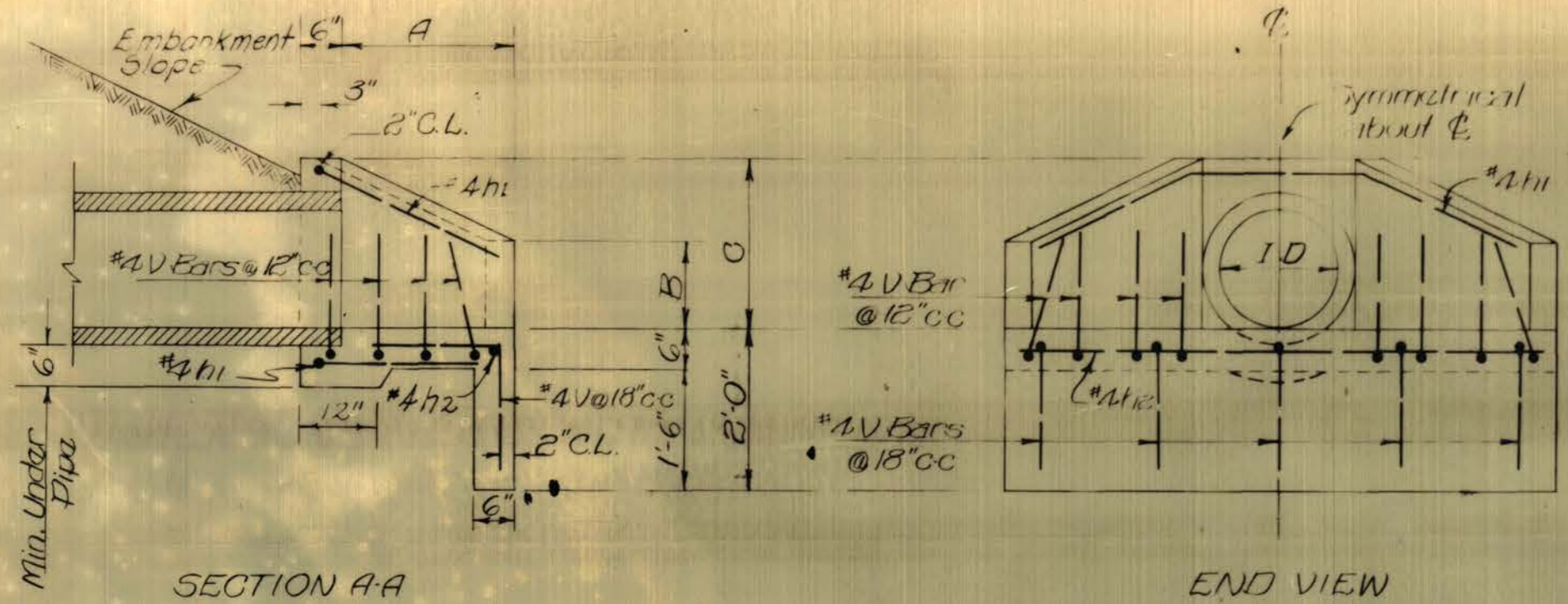
SUMMARY OF DRILL LOGS AND SOIL TEST

MATERIALS CONTROL, SOIL AND TESTING DIVISION

FIELD DATA

LABORATORY DATA

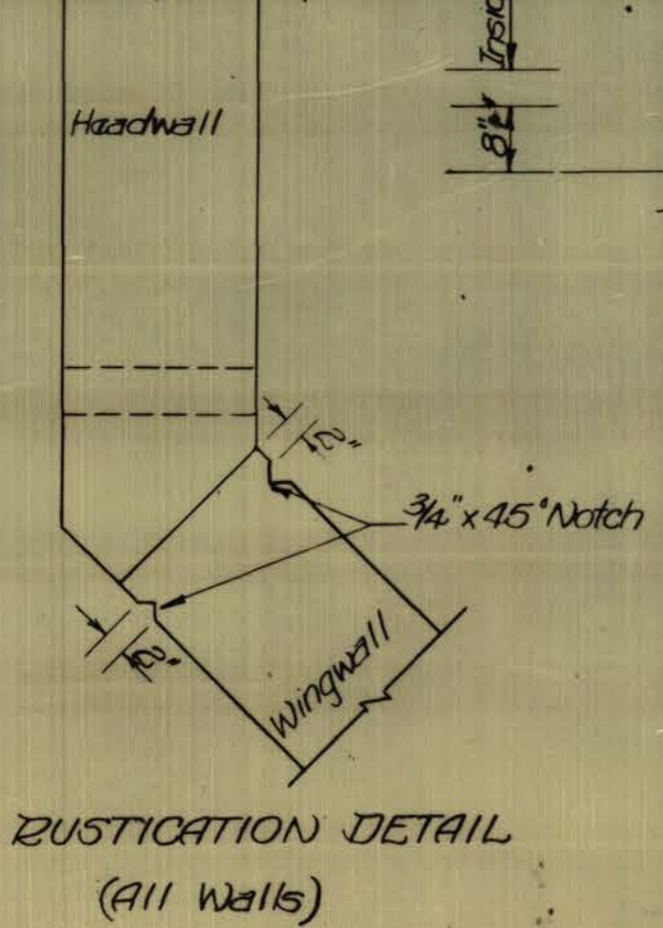
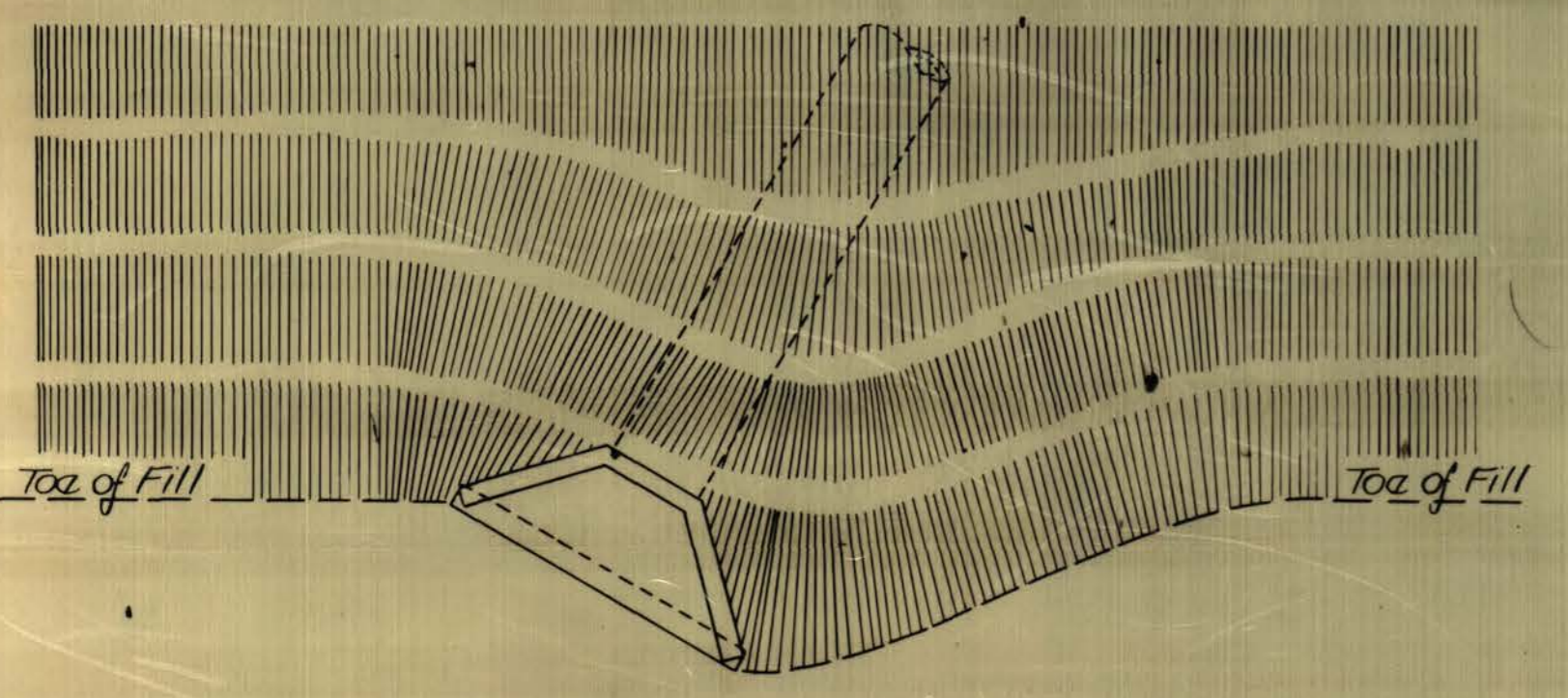
HOLE NO.	STATION NO.	REF. TO ELEV	SURFACE ELEV	DEPTH	FIELD DATA					CORE RUN	% RECOV.	LABORATORY DATA																																						
					GROUND WATER DEPTH	HARDNESS OR RESIST	DESCRIPTION OF MATERIAL		CONDITION			PENETRATION			A.A.S.H.O. CLASS	ENGINEERING CLASS	SHRINK FACTOR	UN-DISTURBED		LAB. REQ OPTIMUM MOISTURE A.A.S.H.O.	LAB. MAX REQ DENSITY A.A.S.H.O.	SPECIFIC GRAVITY	PERCENT PASSING				ATTERBURG LIMITS			STABILITY DESIGN VALUE	SHEAR RESISTANCE		K IN CM/SEC	VOID RATIO																
							PRIMARY	SECONDARY				"HAMMER"	"HAMMER"	VANE TEST				FIELD MOISTURE	FIELD DENSITY				LL	PL	RI	R	ANGLE INT	COHESION # S PER SQ. FT.	COEFF OF PERMEABILITY		S	e _s																		
												"DROP"	"DROP"																					40	200	270	2	3	4	5	6									
													40	200	270	0.075	0.425	0.850	2.0	4.75	9.5	19.0	37.5	75	150	300	600	1200																						
24	9+25	170 RT.	730.0	0 - 73.5 73.5 m		LOOSE BR. GR.	SAND W/SM. BOULDERS & COAL FRAGS.																																											
25	9+25	203 RT.	745.0	0 - 1.5 1.5 - 6.0 6.0 - 53.8 53.8 - 60.5		LOOSE BR. GR.	TOP SOIL SANDSTONE BOULDERS																																											
							SOIL W/SANDSTONE BOULDERS & COAL FRAGS.																																											
26	9+50	788 RT.	769.8	0 - 8.0 8.0 - 32.5 32.5 - 42.5 42.5 - 47.5		LOOSE BR. GR.	SOIL SANDY W/SM. BOULDERS																																											
							SOIL SANDY W/SM. BOULDERS & COAL FRAGS.																																											
						SOFT MH	SHALESTONE SANDY																																											
27	9+50	345 RT.	788.4	0 - 1.0 1.0 - 32.0 32.0 - 39.0 39.0 - 42.0		LOOSE BR. GR.	TOP SOIL SANDSTONE BOULDERS																																											
							SOIL SANDY W/SM. SS. BOULDERS																																											
						SOFT MH	SHALE SANDY																																											
						GR.	SHALESTONE SANDY																																											



Inside Diam. of Pipe	Slope of Fill	DIMENSIONS						REINFORCEMENT				QUANTITIES FOR EACH WING WALL	
		A	B	C	D	E	F	Mark	Size	No. of Bars	LENGTH (ft.)	Concrete (cu. yd.)	Steel (lbs.)
48"	2:1	4'5"	2'2"	4'4"	4'10"	4'10"	7'6"	d1	#4	6	5'1"	317	2350
48"	2:1	5'0"	2'5"	4'11"	5'5"	5'9 1/2"	7'4 1/4"	d1	#4	7	5'1"	389	3220
54"	2:1	5'7"	2'8"	5'5 1/2"	6'0"	17'6 1/2"	8'2"	d1	#4	8	5'1"	464	3000
60"	2:1	6'2"	2'11"	6'0"	6'7"	19'3 1/2"	9'0"	d1	#4	9	5'1"	554	3410

Inside Diam. of Pipe	Slope of Fill	DIMENSIONS						REINFORCEMENT				QUANTITIES FOR EACH W.W.				
		A	B	C	D	E	F	Mark	Size	No. of Bars	LENGTH (ft.)	Concrete (cu. yd.)	Steel (lbs.)			
15"	2:1	2'2"	0'10"	1'11"	2'0"	6'7 1/2"	3'3 3/4"	h1	#4	2	1'10"	3'2 1/2"	8'3"	Bent	0.61	41.2
18"	2:1	2'2"	1'1"	2'2"	2'3"	6'10 1/2"	3'3 3/4"	h2	#4	1	6'6"	3'0"	8'6"	Bent	0.67	41.8
24"	2:1	2'10"	1'4"	2'9"	2'11"	8'10 1/2"	4'2 1/2"	v	#4	13	3'0"	3'0"	8'6"	Bent	1.01	52.4
30"	2:1	3'4"	1'7"	3'3"	3'5"	10'4 1/2"	4'11"	h1	#4	2	3'3"	4'10 1/2"	13'0"	Bent	1.32	58.1
36"	2:1	4'0"	1'10"	3'10"	4'1"	12'4 1/2"	5'10 1/2"	h2	#4	1	10'0"	3'0"	15'6"	Bent	1.79	70.8
								v	#4	21	3'0"	3'0"	15'6"	Bent		

Note: Wingwalls are to be redesigned wherever soils encountered have bearing capacities less than 3,000 psf.



NOTE:
 All concrete to be Class A' Air-entrained.
 Reinforcing steel shall be raw billet steel of intermediate grade.
 All exposed edges shall have a 3/4" x 45° chamfer. Chamfer on vertical edges shall be continued a minimum of one foot below finished ground line.
 If embankment slope above headwall is flatter than 2:1, provide wings for 2:1 slope and wrap embankment to 2:1 slope at headwall.
 The covering for Reinforcing Steel shall be 2" measured from the surface of the concrete to the face of the bar, unless otherwise noted on the plan.
 Reinforcement in members where concrete is deposited on the ground shall have 3 (three) inches of concrete between it and the ground contact surface.

NOTE (Cont.)
 Cost of all reinforcing steel shall be included in the unit price bid for Item 74, Class A' Concrete.

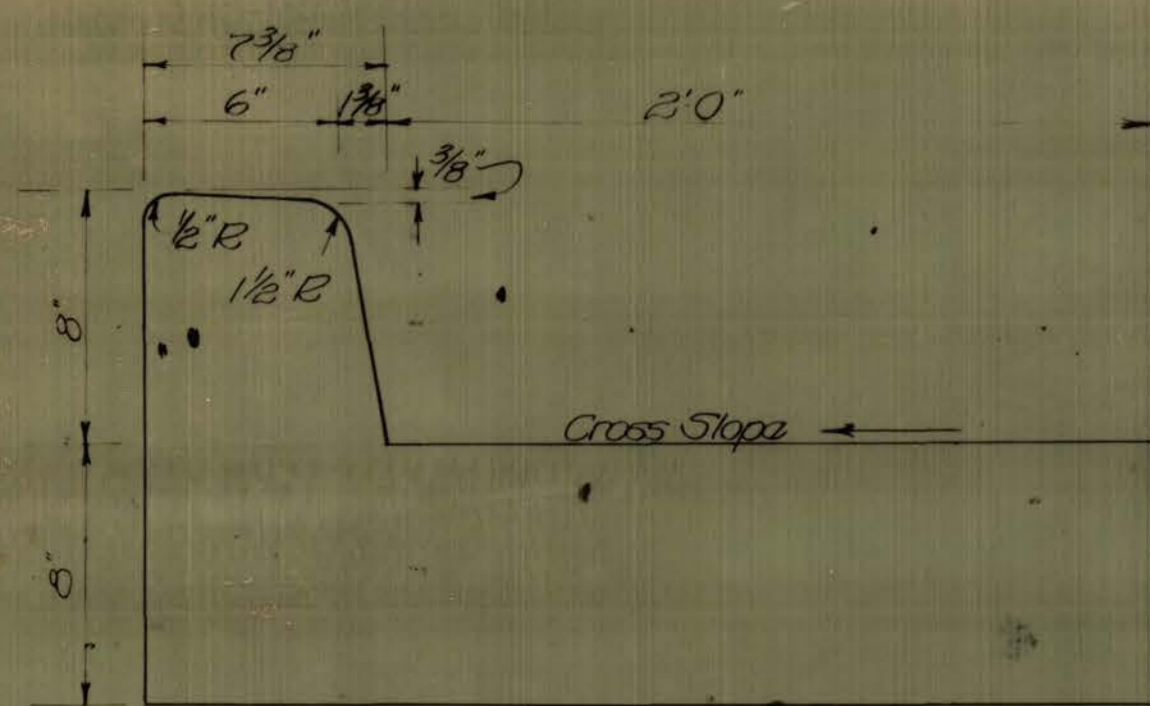
THE STATE ROAD COMMISSION OF WEST VIRGINIA
 STANDARD DETAIL
 PIPE CULVERT WINGWALL
 CLASS B

PREPARED 4/25/62
 REVISIONS
 May 25, 1962
 OCTOBER 10, 1962
 November 16, 1963
 March 16, 1965

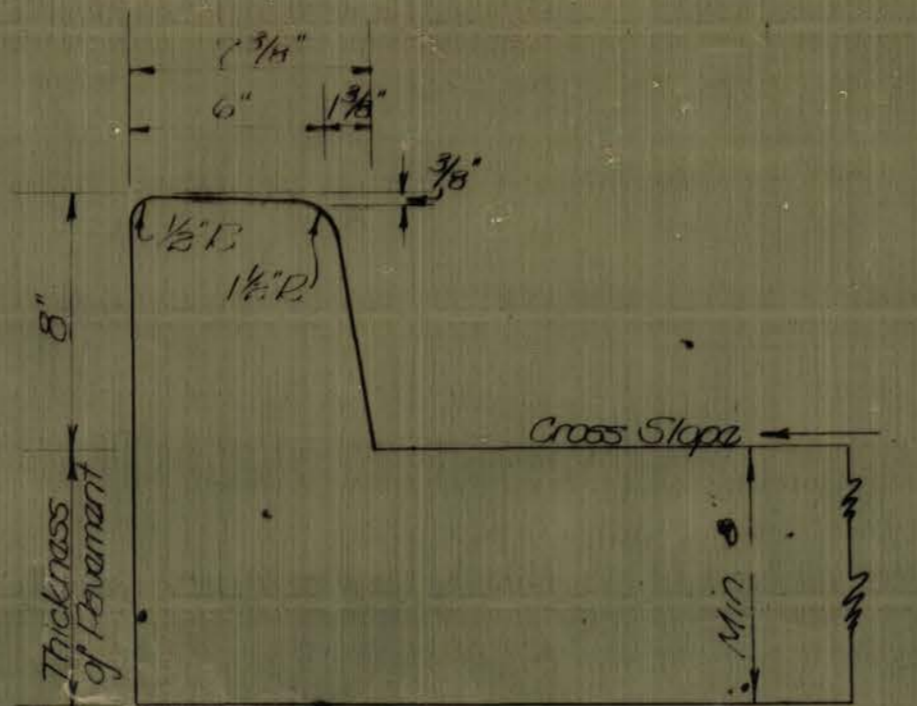
William A. White
 DIRECTOR OF ENGINEERING

Ray E. White, Jr.
 CHIEF ENGINEER

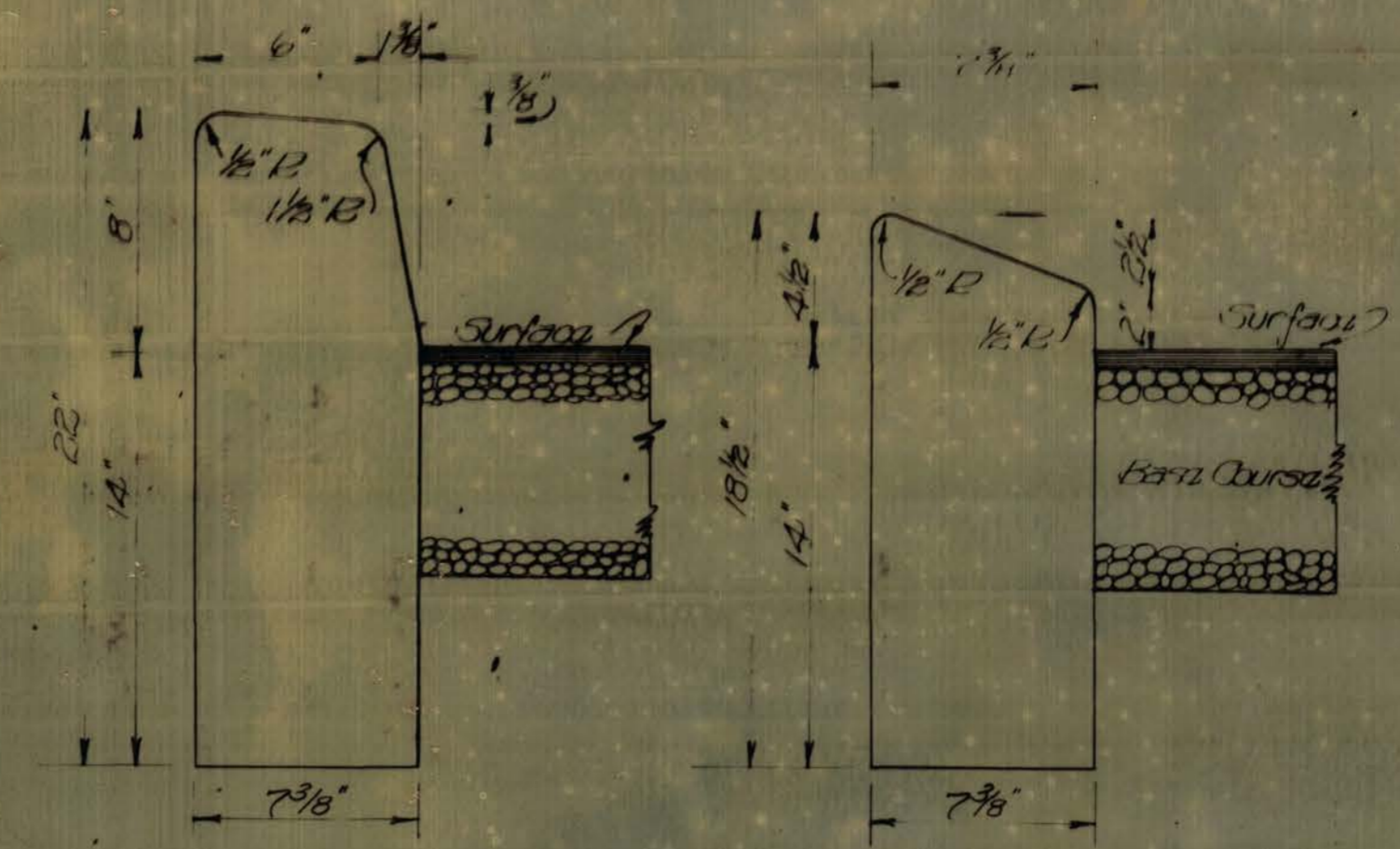
Bull L. Sawyer
 COMMISSIONER



BARRIER TYPE
COMBINATION CURB & GUTTER
TYPE A

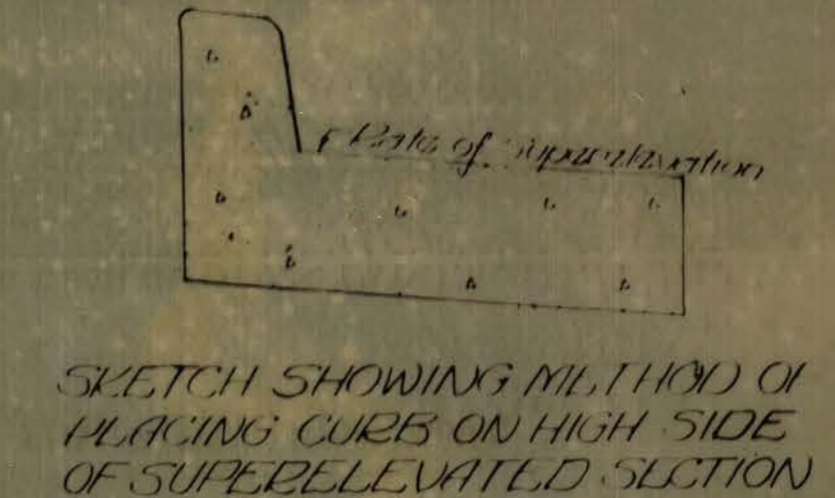


BARRIER TYPE
8" INTEGRAL CONCRETE CURB
TYPE A

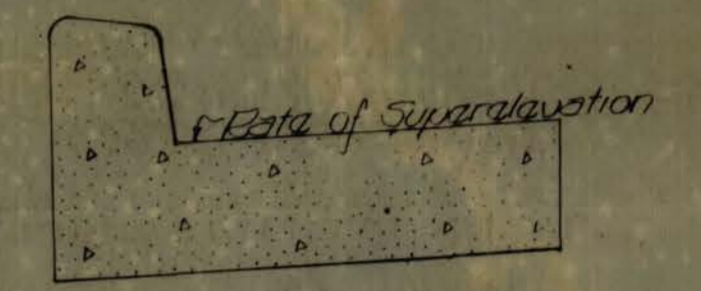


BARRIER TYPE
PLAIN CURB

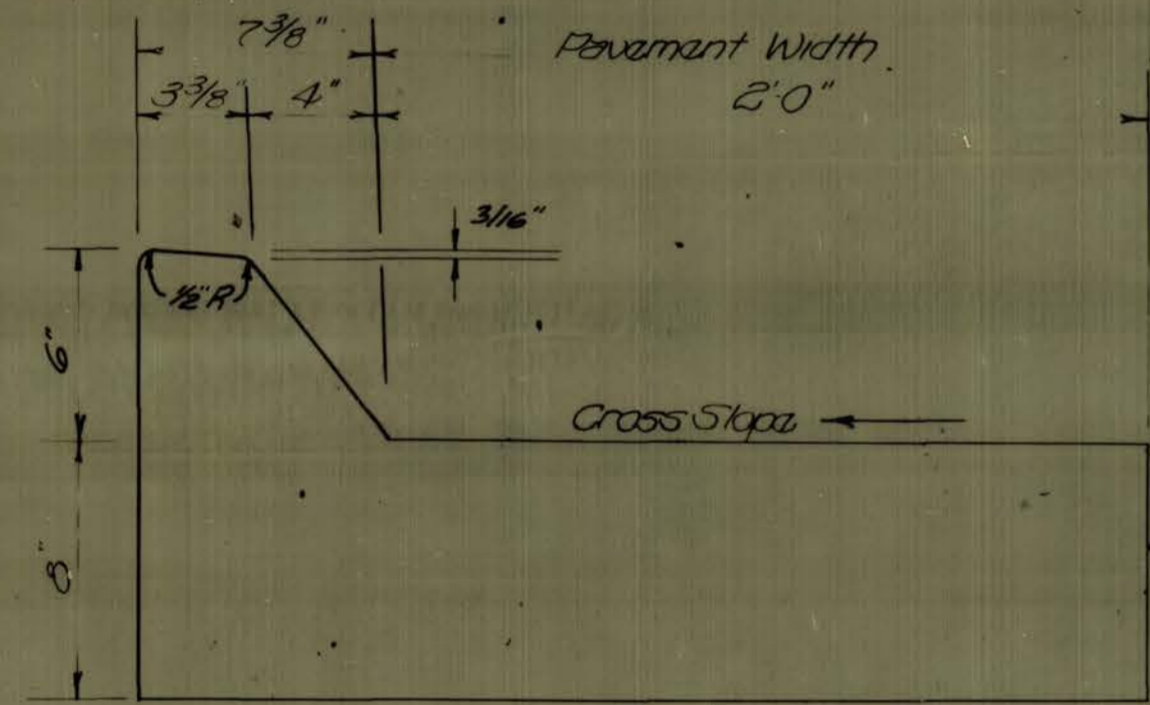
MOUNTABLE TYPE
PLAIN CURB



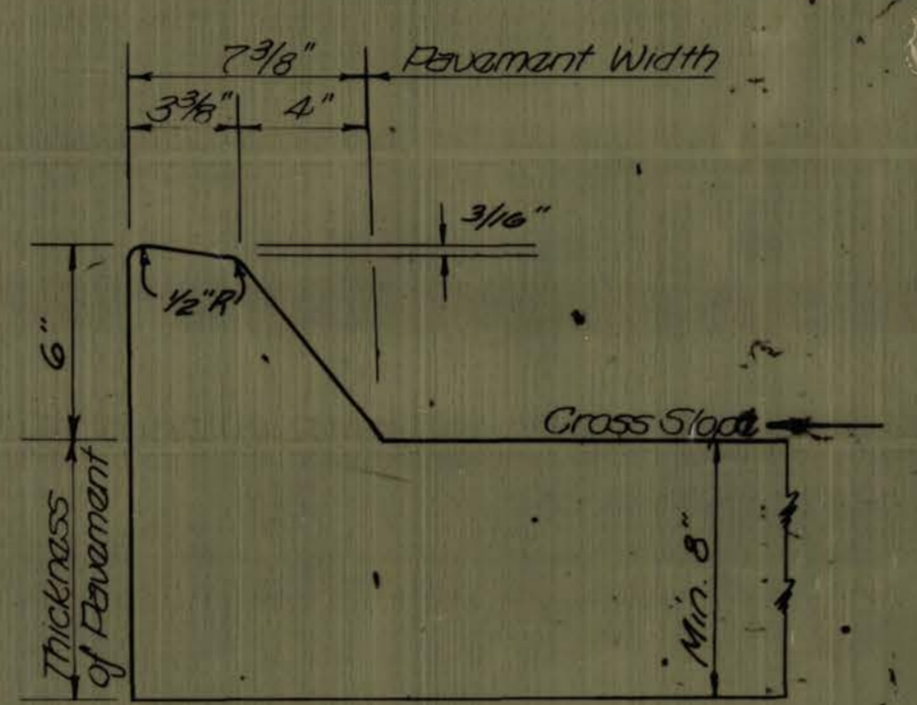
SKETCH SHOWING METHOD OF
PLACING CURBS ON HIGH SIDE
OF SUPERELEVATED SECTION



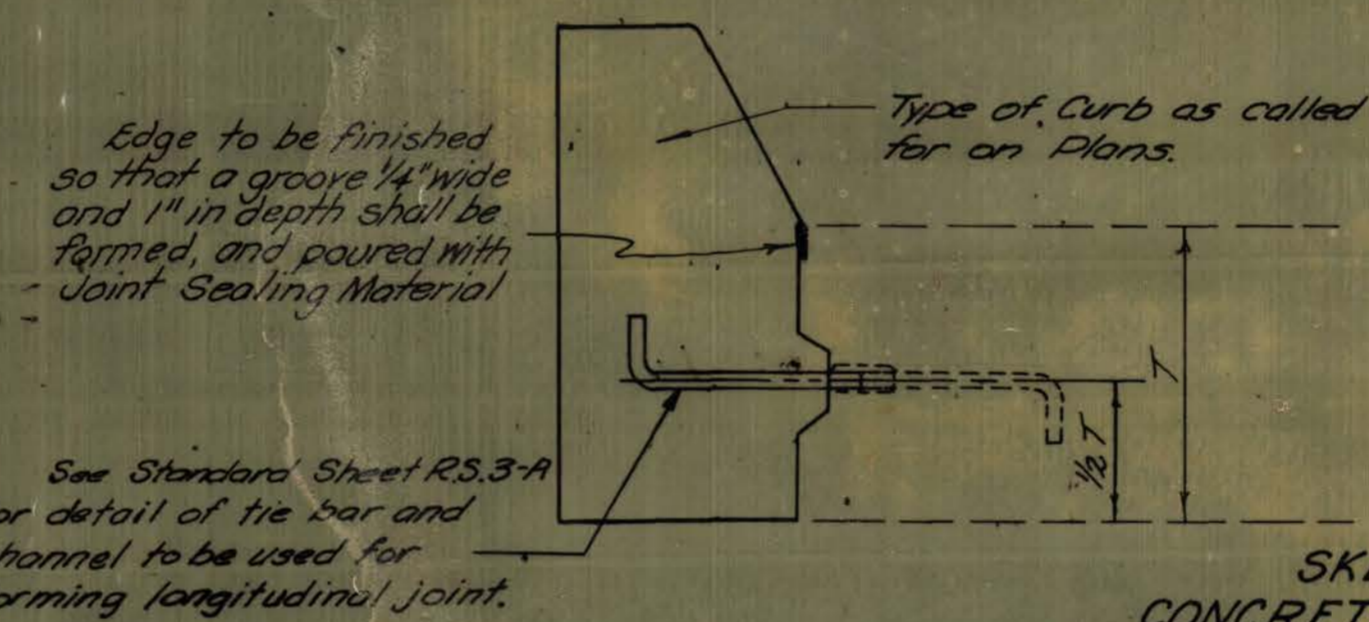
SKETCH SHOWING METHOD OF
PLACING CURBS ON LOW SIDE
OF SUPERELEVATED SECTION



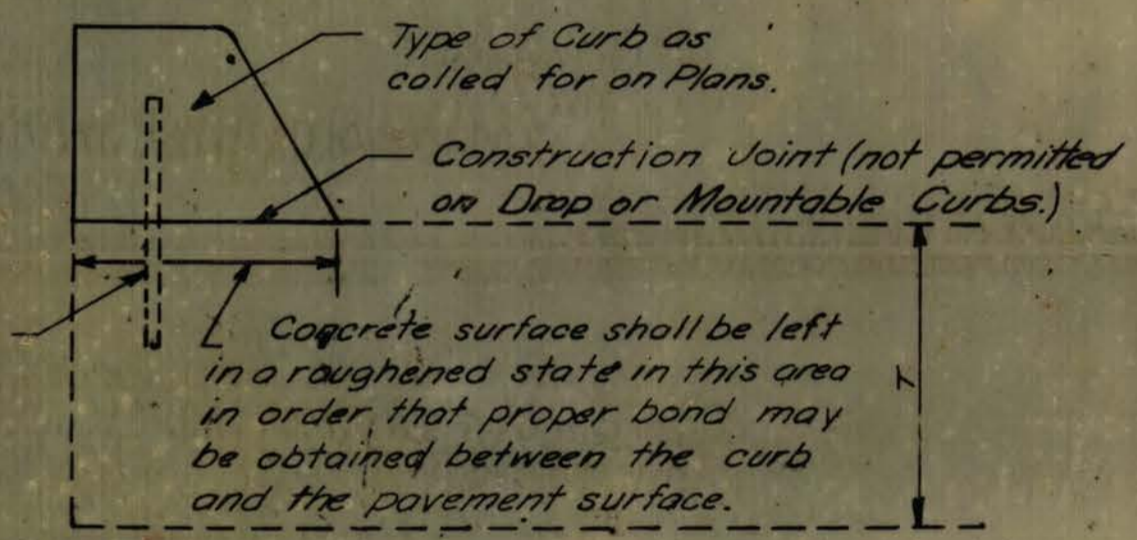
SEMI-MOUNTABLE TYPE
COMBINATION CURB & GUTTER
TYPE B



SEMI-MOUNTABLE TYPE
6" INTEGRAL CONCRETE CURB
TYPE B

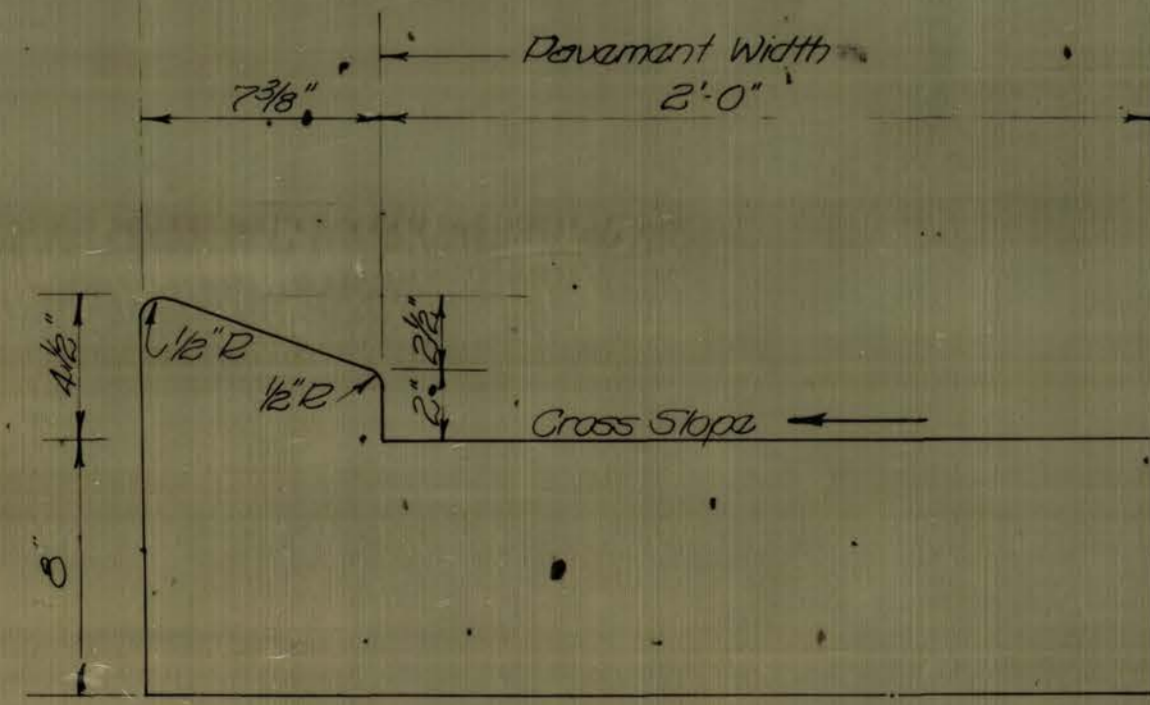


SKETCH SHOWING PLACING OF
CONCRETE CURB BY SEPARATE METHODS

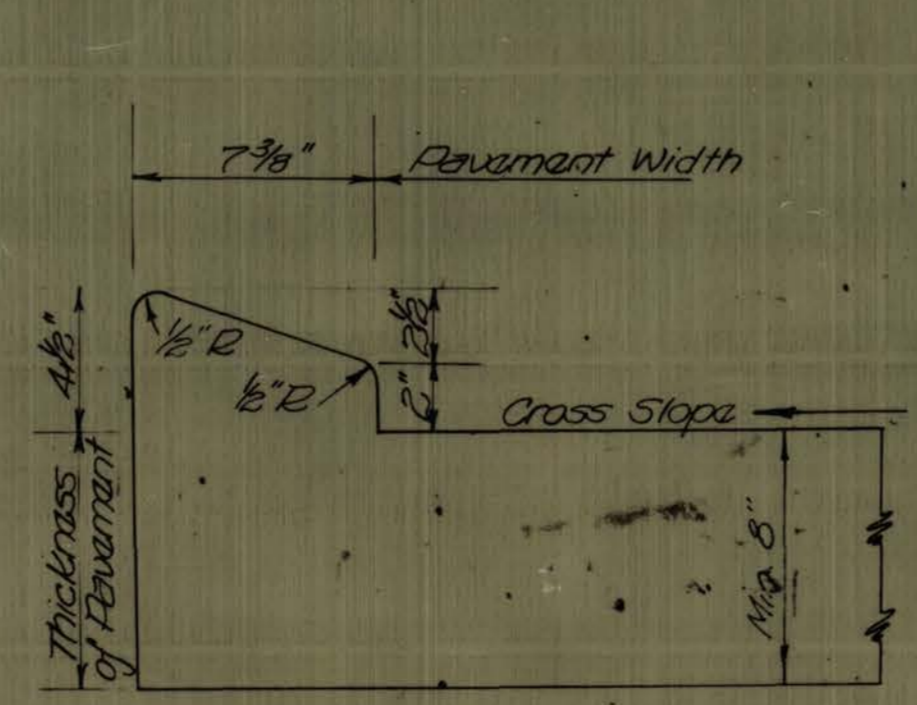


NOTES

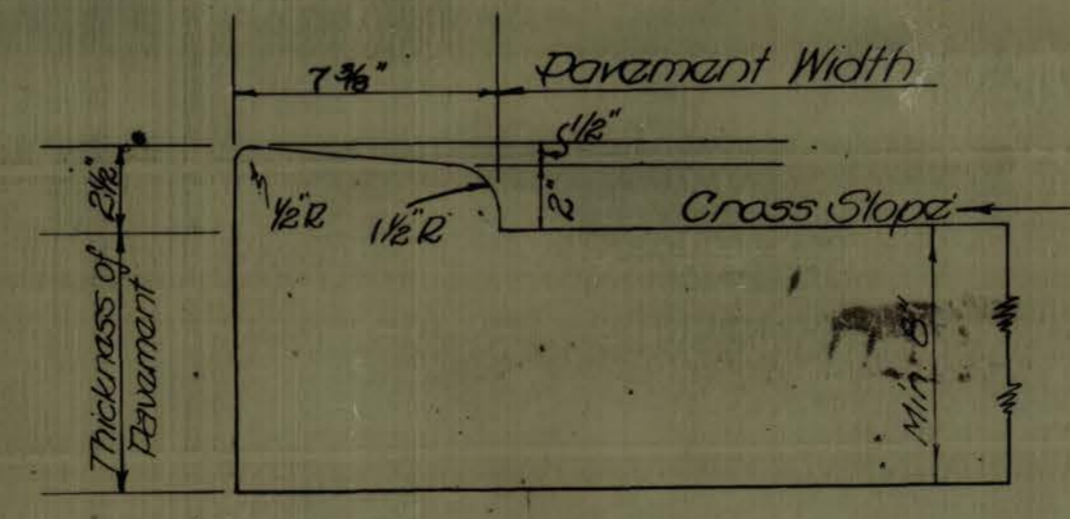
All concrete in Curbs and Curbs and Gutters shall be Air-Entrained Concrete.
All concrete in Curbs and Curbs and Gutters shall be Class A Concrete with the exception of Integral Concrete Curb which shall be Pavement Concrete.
In all Barrier Type Curbs and Curbs and Gutters, the face of the curb shall be offset a minimum of two feet from the edge of traffic lane.
Construction of Concrete Curbs shall be by the "Separate Method" when sawed joints are constructed in the pavement.



MOUNTABLE TYPE
COMBINATION CURB & GUTTER
TYPE C



MOUNTABLE TYPE
INTEGRAL CONCRETE CURB
TYPE C



DROP CURB

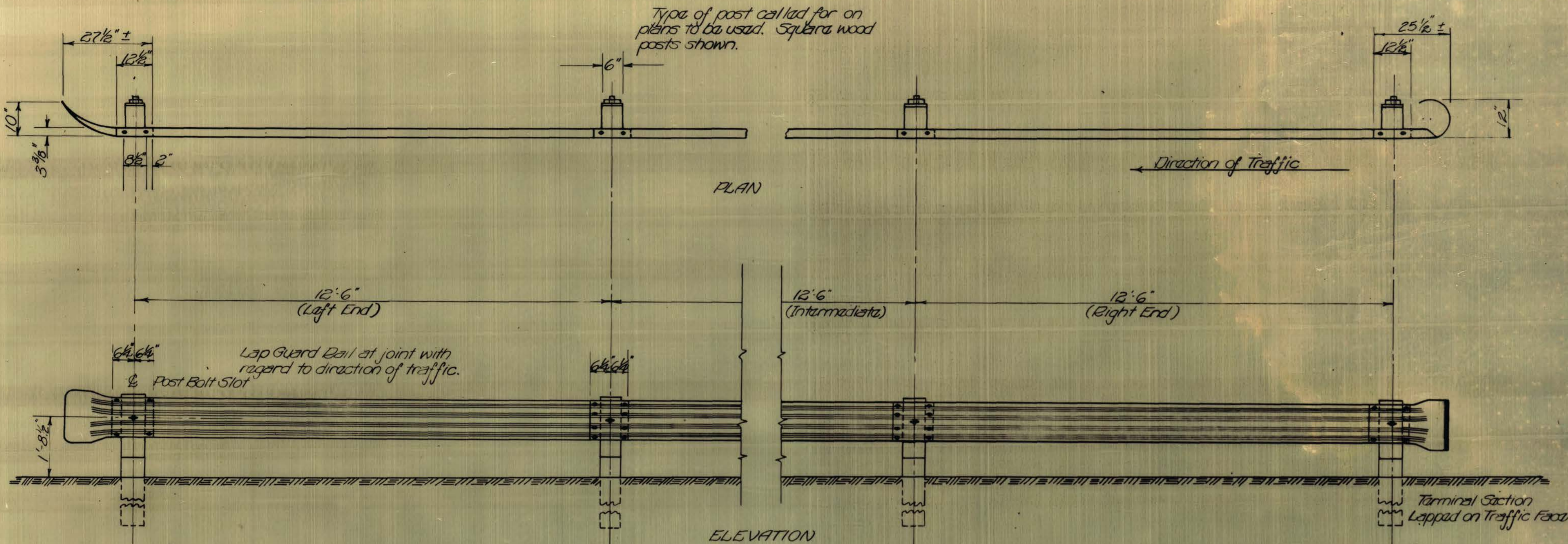
THE STATE ROAD COMMISSION OF WEST VIRGINIA
STANDARD DETAIL
CURBS & CURBS & GUTTERS

PREPARED - 1/10/58

REVISIONS
May 14, 1959
Dec. 10, 1959
Nov. 28, 1960
Oct. 10, 1962
Nov. 16, 1963
Feb. 24, 1965
Oct. 13, 1965
Oct. 9, 1965

ENGINEER OF PLANS & SURVEYS
APPROVED B.P.R.
CHIEF ENGINEER
COMMISSIONER

STANDARD SHEET M.P.I-A (SHEET 1 of 2)



Guardrail elements shall be of either open hearth or electric furnace steel and of 12 gage thickness.

Guardrail to be secured to post and to each other elements by 9/8" φ bolts and nuts conforming to drawing and galvanized to conform to ASTM Specifications A-153.

All metal parts which are not galvanized shall be thoroughly cleaned and shop painted with one coat of a fast drying rust inhibitive primer. The primer shall be thoroughly dry with a rough and durable surface before the parts are handled or packed for shipment. Formulas used for primers shall have been demonstrated as capable of withstanding at least 200 hours exposure in a weatherometer test conducted in accordance with "Recommended Practices for Light and Water Exposure Apparatus (Carbon Arc Type) for Testing Paint, Varnish, Lacquer, and Related Products" ASTM D 822-46T with no evidence of cracking, blistering, rusting, chalking, peeling, scaling or loss of adhesion.

Guardrail posts may be steel, concrete or wood. Only one type shall be used throughout any project.

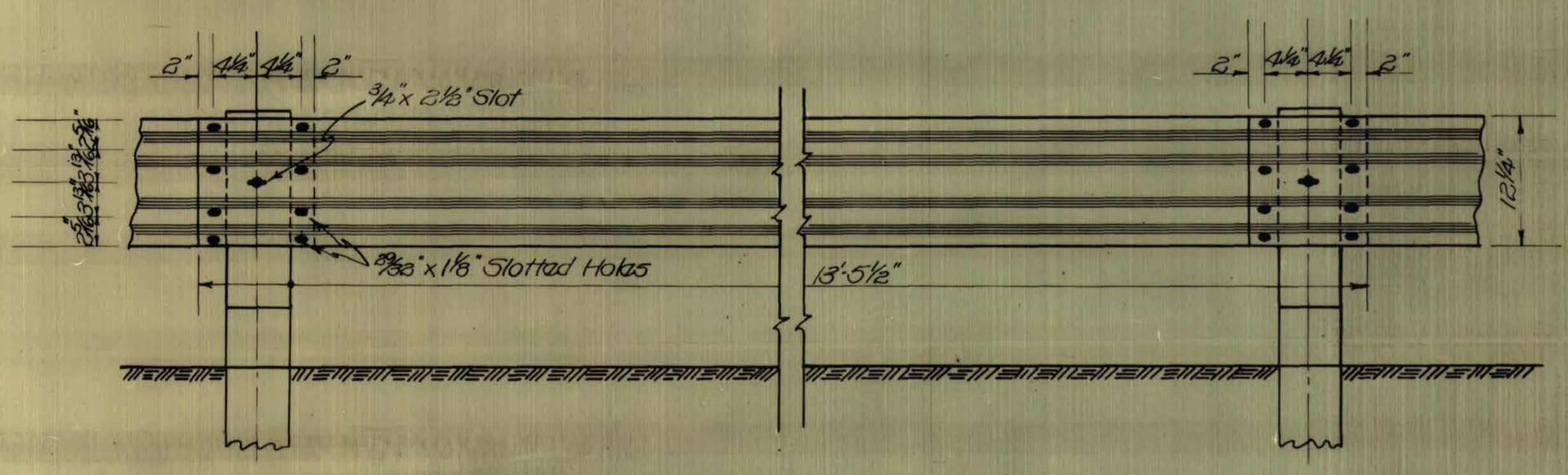
End posts for Beam Type Guardrail will be similar to intermediate posts.

When the radius of curvature designated on the plans is less than 150 feet, the rail elements shall be curved before erection.

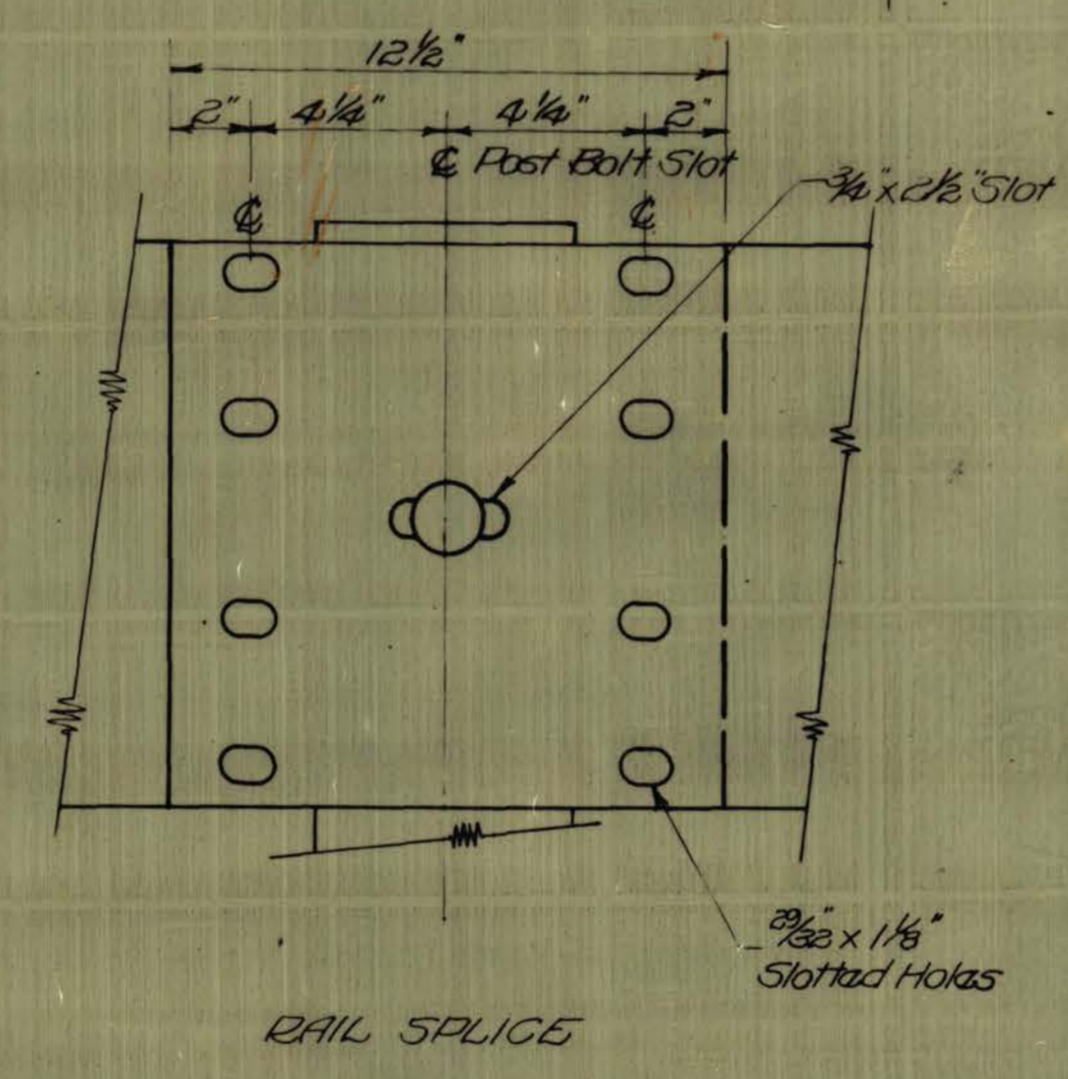
Upon completion of erection all non-galvanized guardrails shall be given two (2) coats of white paint as specified in Section 2116-122.2 in addition to post protection in accordance with Section 2116-122.3A (1) of the Standard Specifications.

Galvanized guardrails are not to be painted.

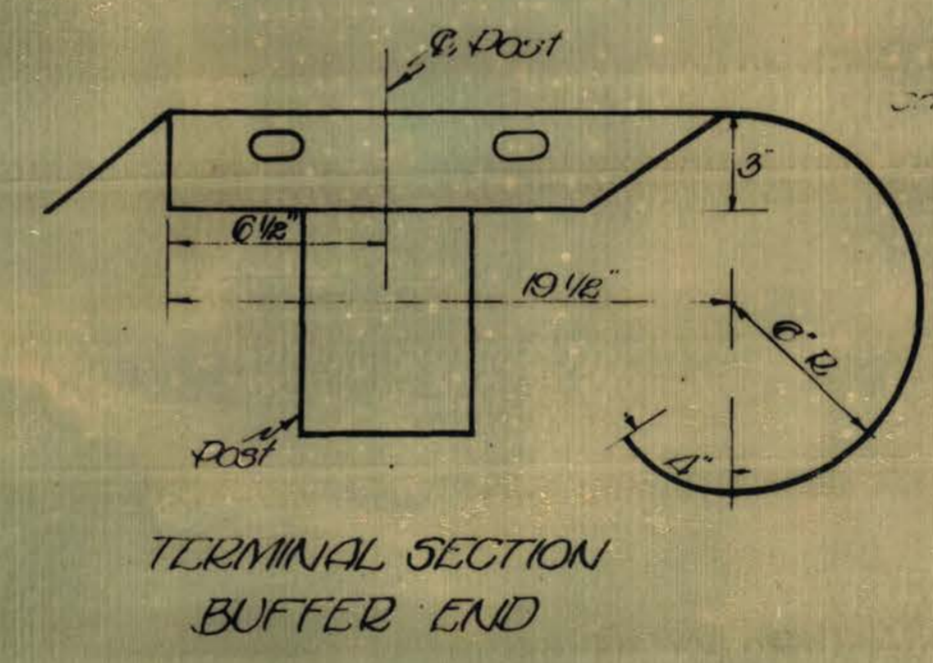
Buffer Ends shall be placed at the end of guardrail facing approaching traffic and Field Ends shall be placed on the end away from approaching traffic.



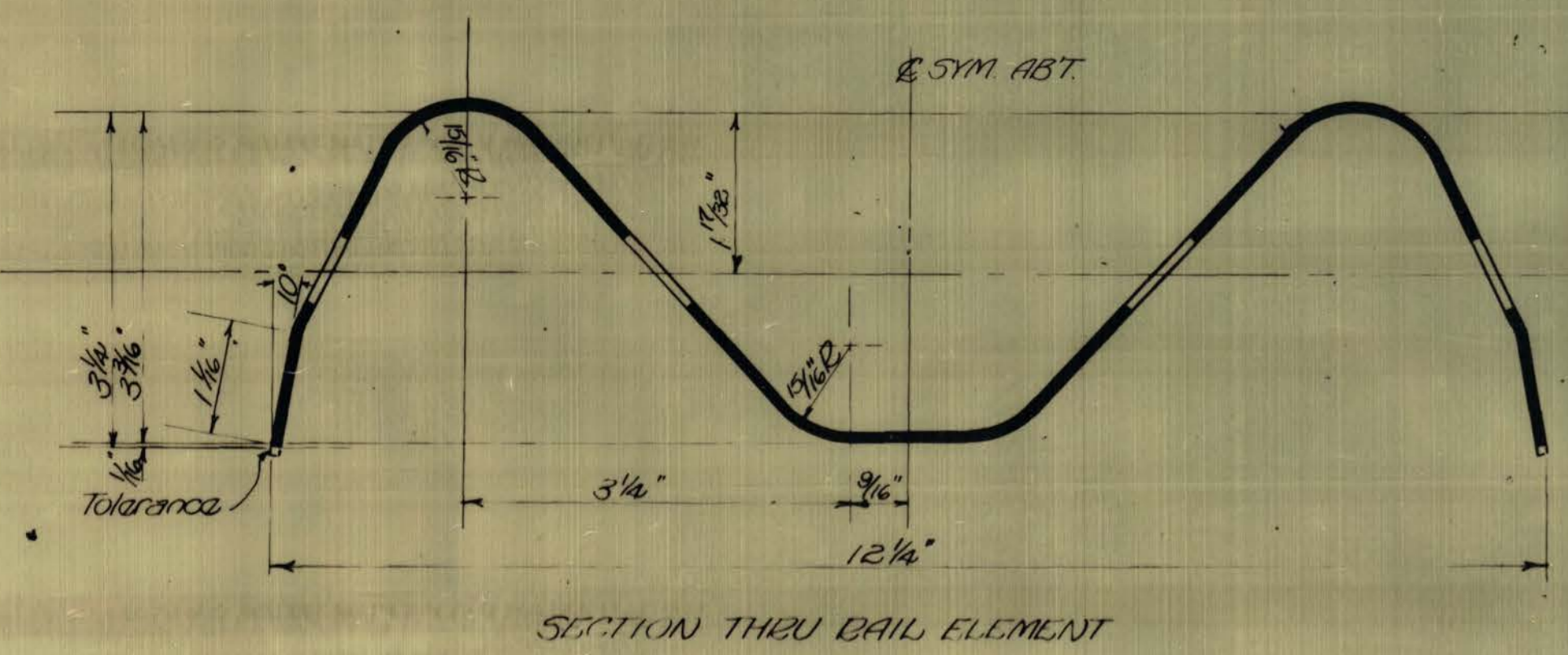
DETAIL SHOWING OVERLAP OF PLATES AT POSTS



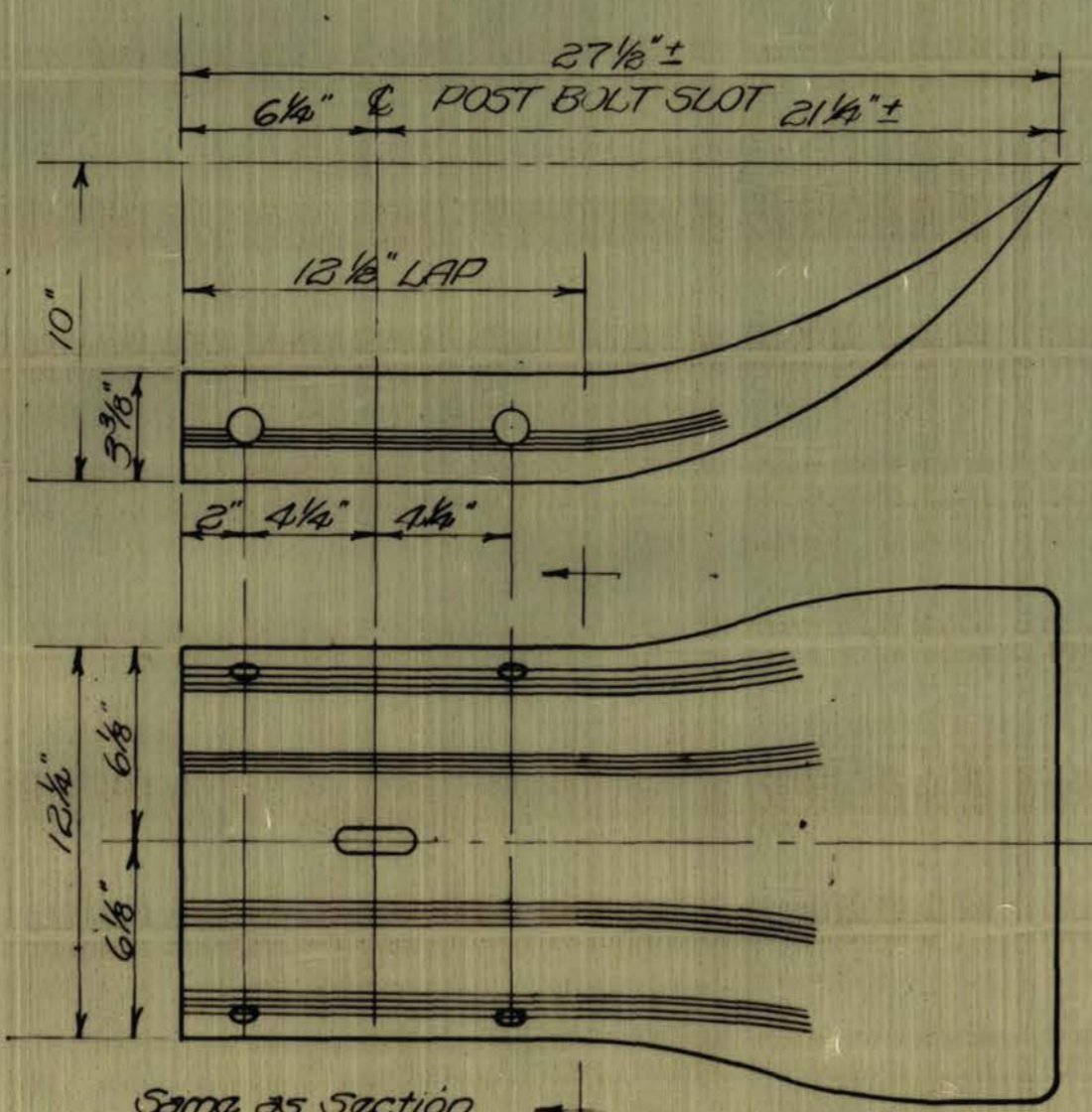
RAIL SPLICE



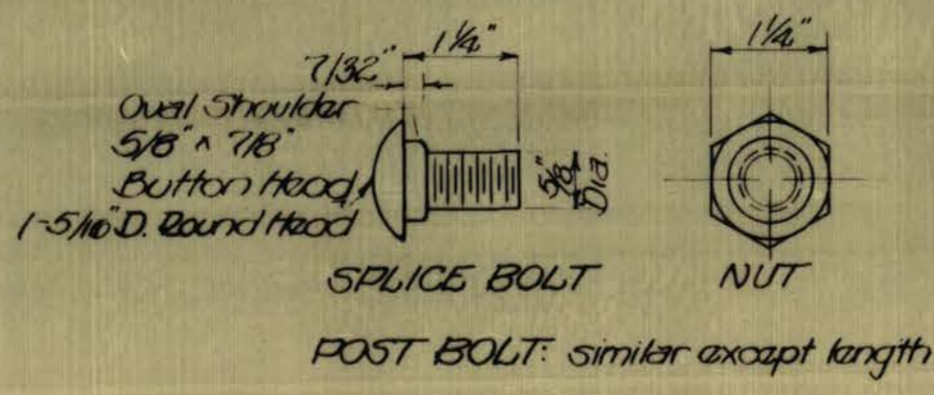
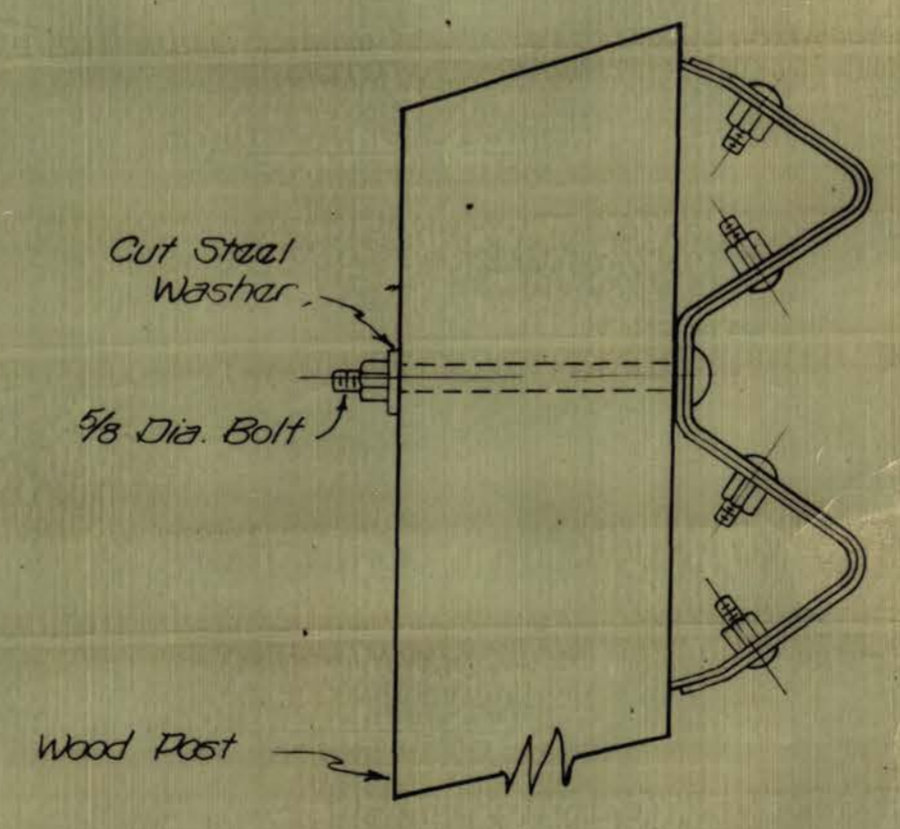
TERMINAL SECTION BUFFER END



SECTION THRU BAIL ELEMENT



ARRANGEMENT AT POSTS



Same as Section Thru Rail Element
TERMINAL SECTION FIELD END

THE STATE ROAD COMMISSION OF WEST VIRGINIA
STANDARD DETAIL
STEEL BEAM TYPE GUARDRAIL
(DEEP) TWO LANE HIGHWAY

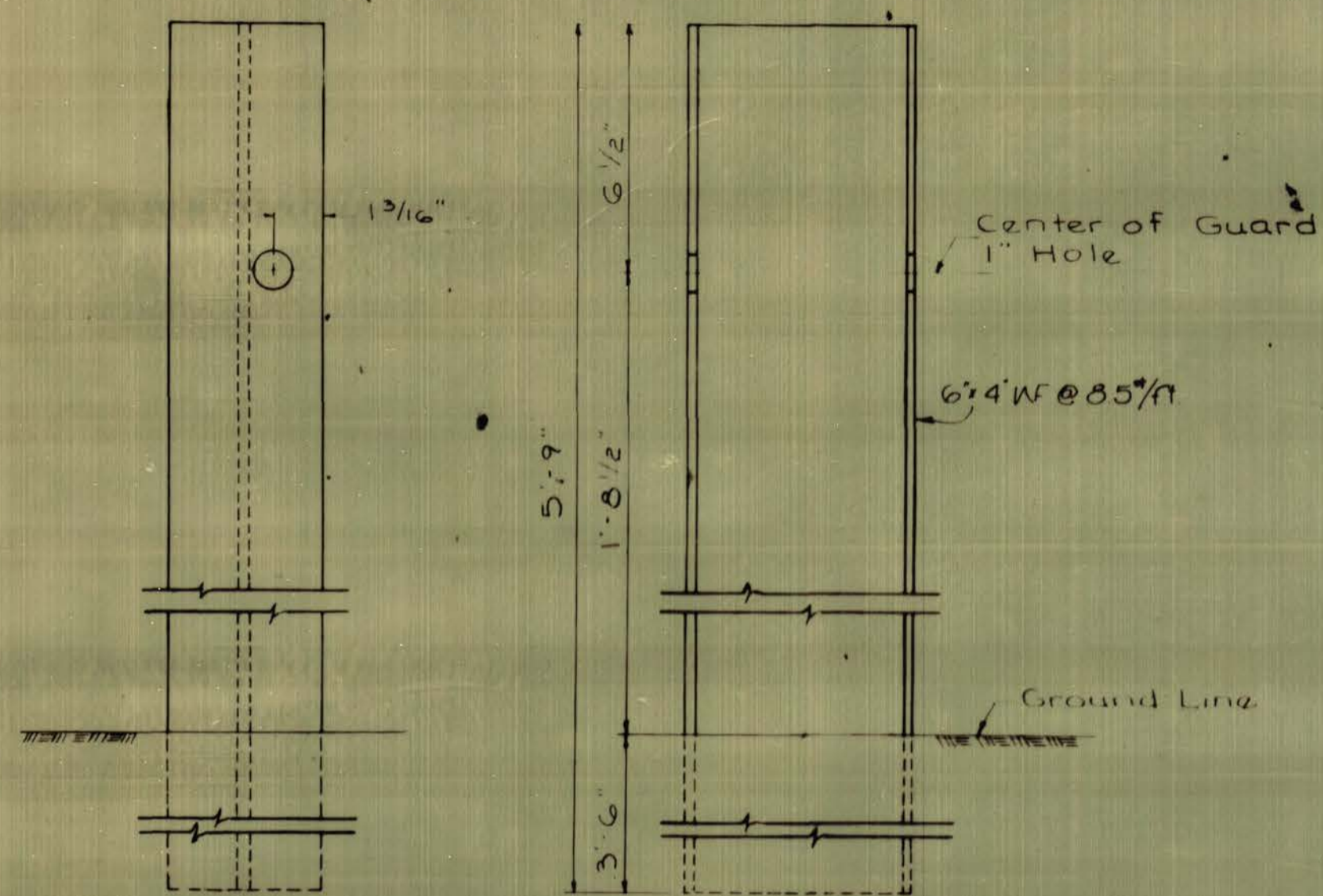
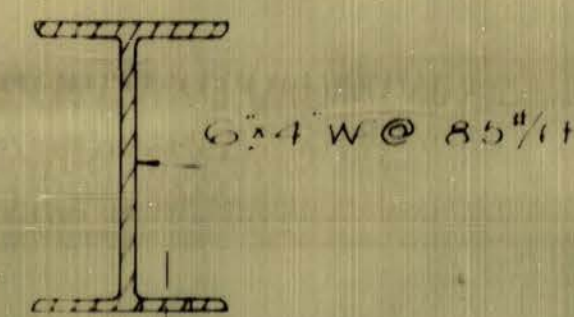
PREPARED-3/24/58
REVISIONS
MAY 14, 1959
DEC 4, 1959
FEB. 3, 1961
NOV. 16, 1963

B. D. Walden
DIRECTOR OF ENGINEERING

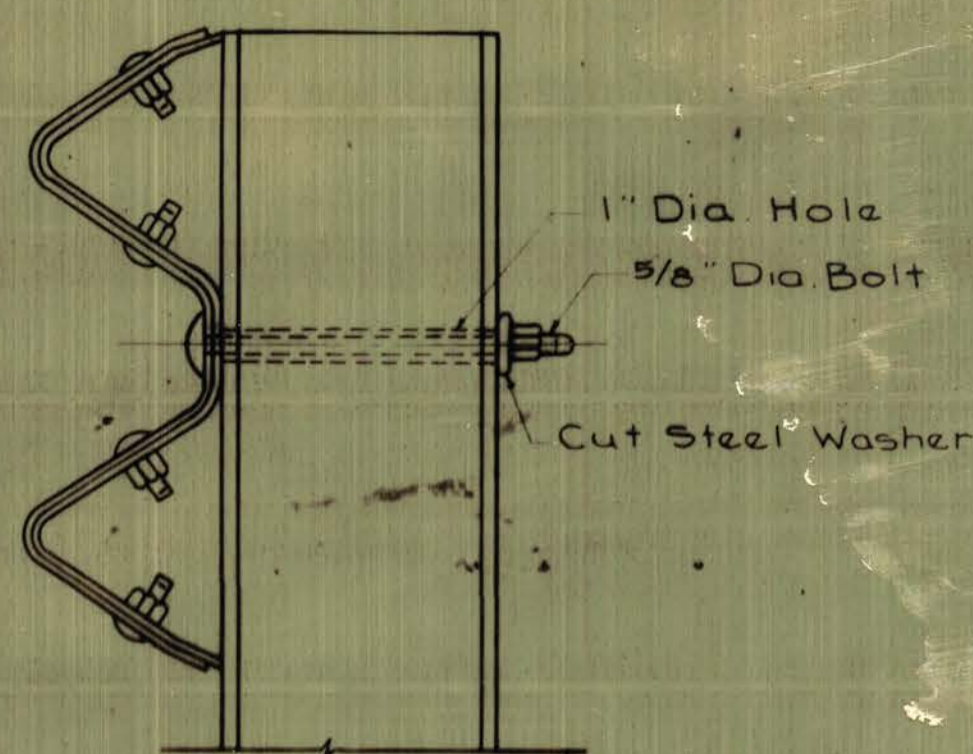
M. J. O'Connell
CHIEF ENGINEER

APPROVED B.P.R.
P. B. Ramsey
COMMISSIONER

STANDARD SHEET M.P. 5-A



STEEL POST DETAIL



ARRANGEMENT FOR POSTS

Note

Steel Posts shall conform to the requirements of Section 2116-122.2 in addition to post protection specified in Section 2116-122.3A(1)c of the Standard Specifications.

THE STATE ROAD COMMISSION OF WEST VIRGINIA
 STANDARD DETAIL
 STEEL GUARD RAIL POSTS

PREPARED 11/16/63

REVISIONS

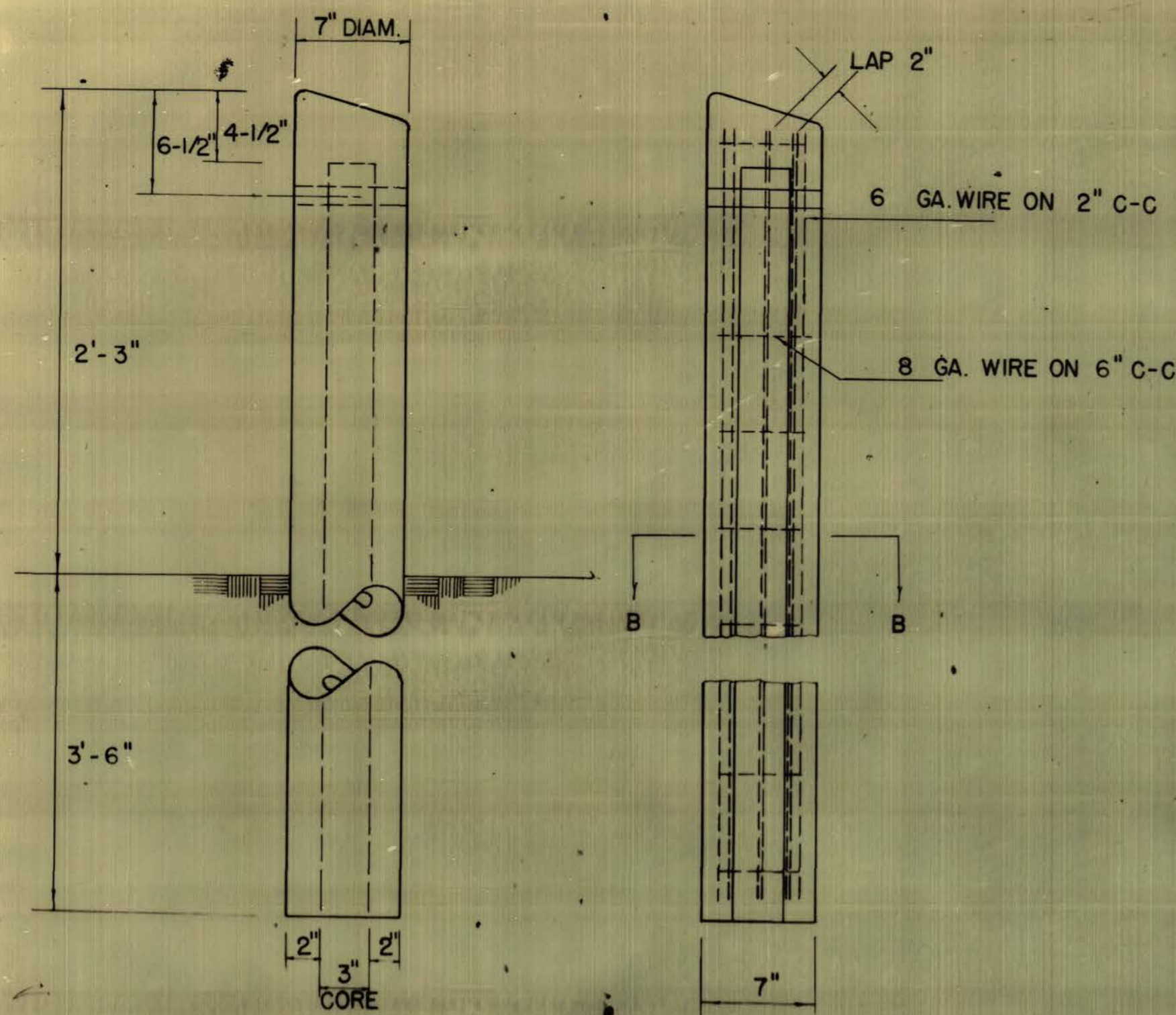
William A. Hartig
 DIRECTOR OF DESIGN DIVISION

Ernest J. Tubocki
 CHIEF ENGINEER, OPERATIONS

Burl A. Sawyer
 COMMISSIONER

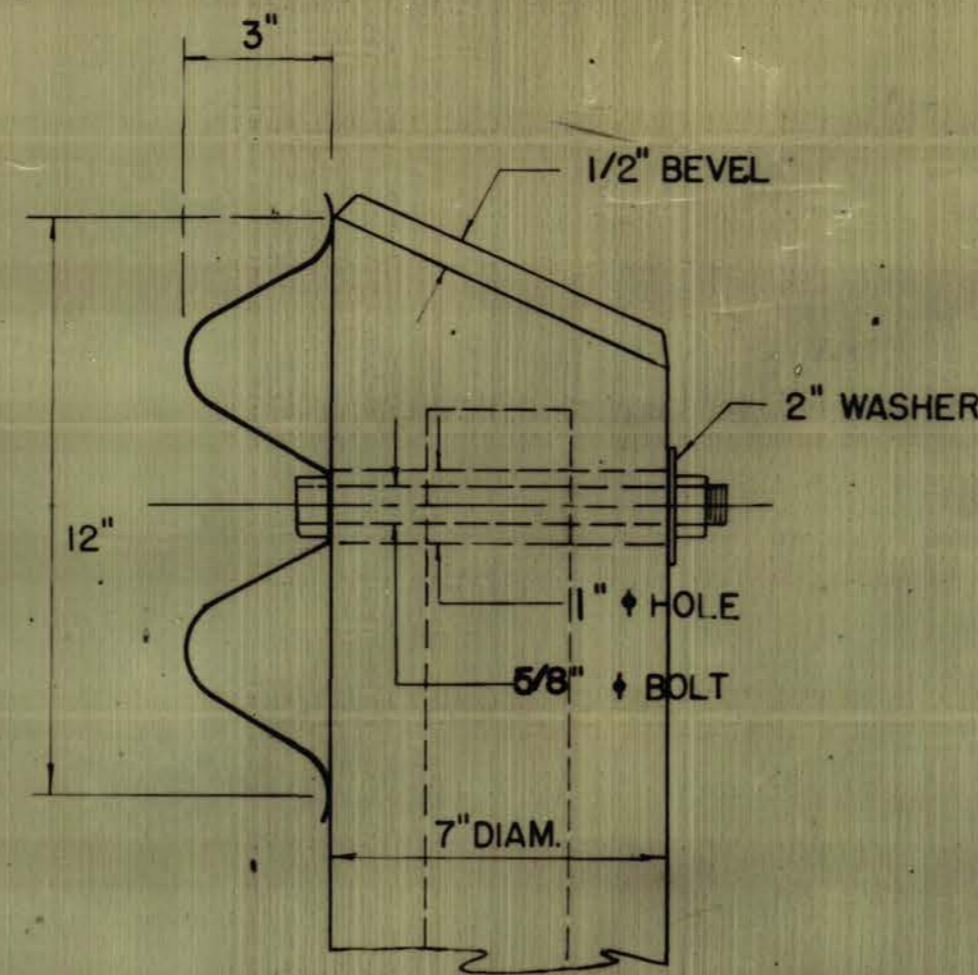
MICROFILMED

STANDARD SHEET M.P. 6-D



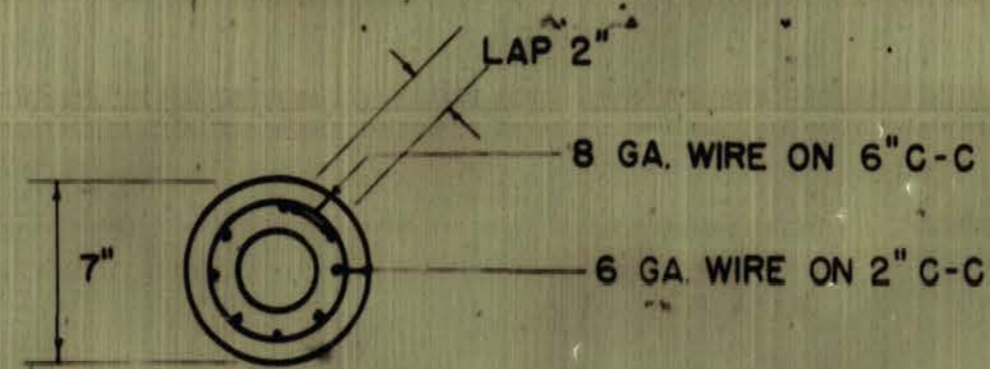
ELEVATION

SECTION

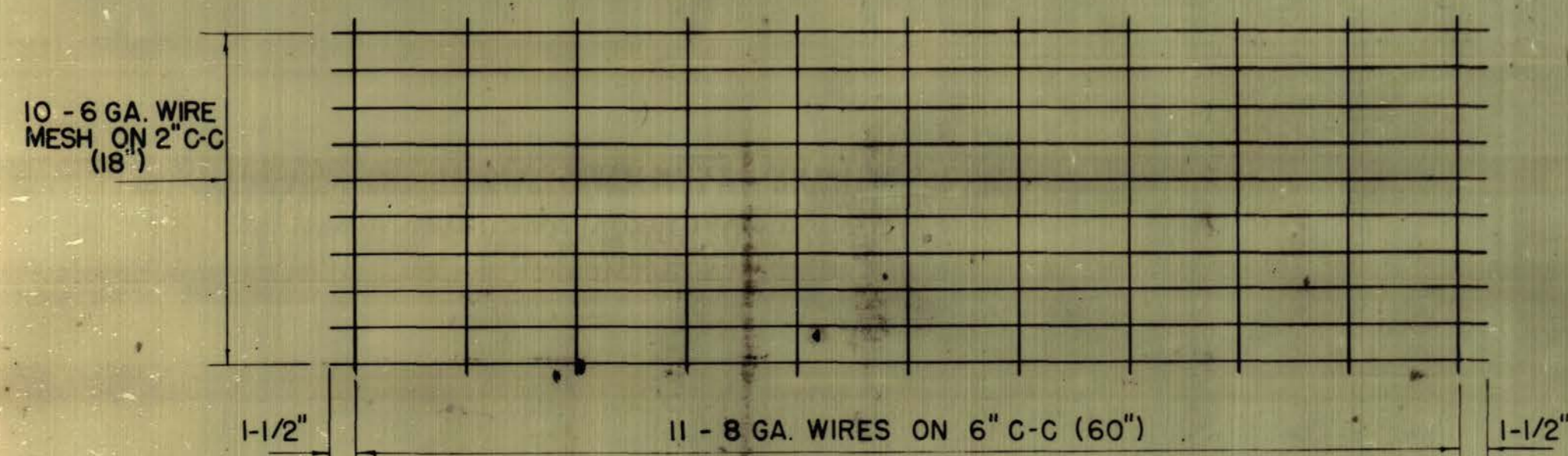


GUARD RAIL DETAIL

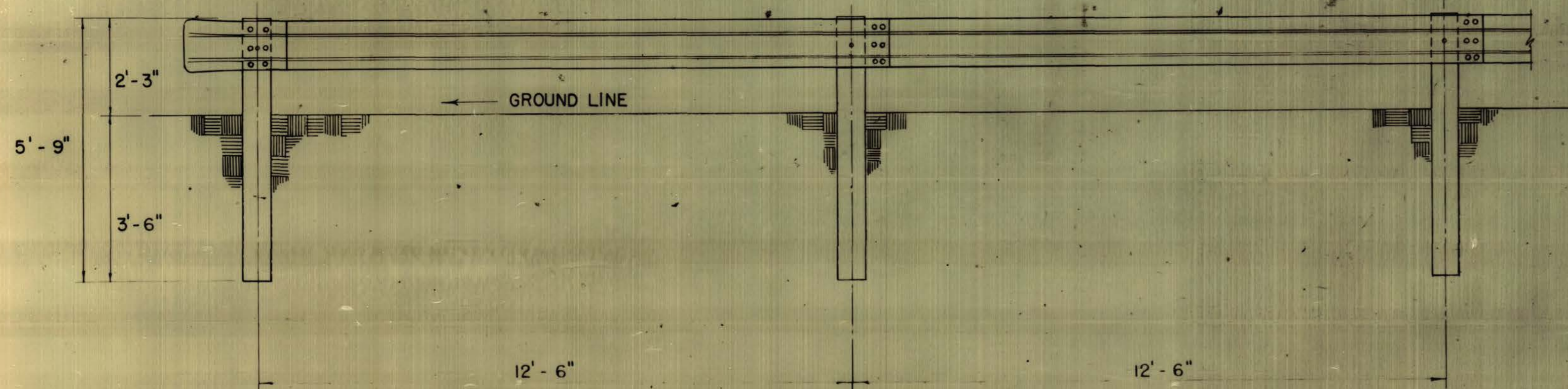
NOTE: WEIGHT OF EACH POST = 170^{##}



B-B



PLAN WIRE MESH SHEET



TYPICAL ELEVATION

LOCATION OF GUARD RAIL

The guard rail shall be placed a minimum distance from the edge of pavement equal to the theoretical width of the shoulder, however, where it is feasible to do so, and when directed by the Engineer, the guard rail may be located a distance from the pavement greater than the minimum shoulder width. When so located at a greater width the guard rail shall be placed so as to present a flowing alignment, pleasing in appearance and creating a minimum hazard to traffic. On all locations the center of the guard rail posts shall not be closer than one and one-half (1-1/2) feet to the theoretical intersection between shoulder slope with the side slope, unless otherwise called for on the Plans.

THE STATE ROAD COMMISSION OF WEST VIRGINIA
 STANDARD DETAIL
 CONCRETE GUARD RAIL POSTS
 (ROUND)

PREPARED 10/14/59
 REVISIONS
 November 16, 1963

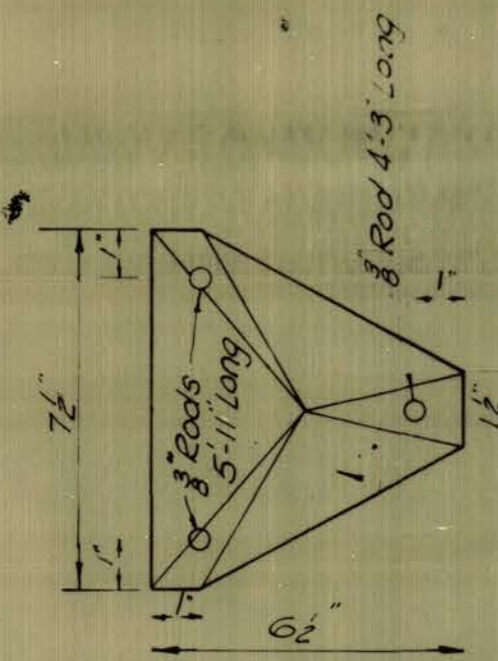
B. C. Madison
 DIRECTOR OF ENGINEERING

MICROFILMED
 APPROVED BPR

W. S. Holtz
 DEPUTY COMMISSIONER AND
 STATE HIGHWAY ENGINEER

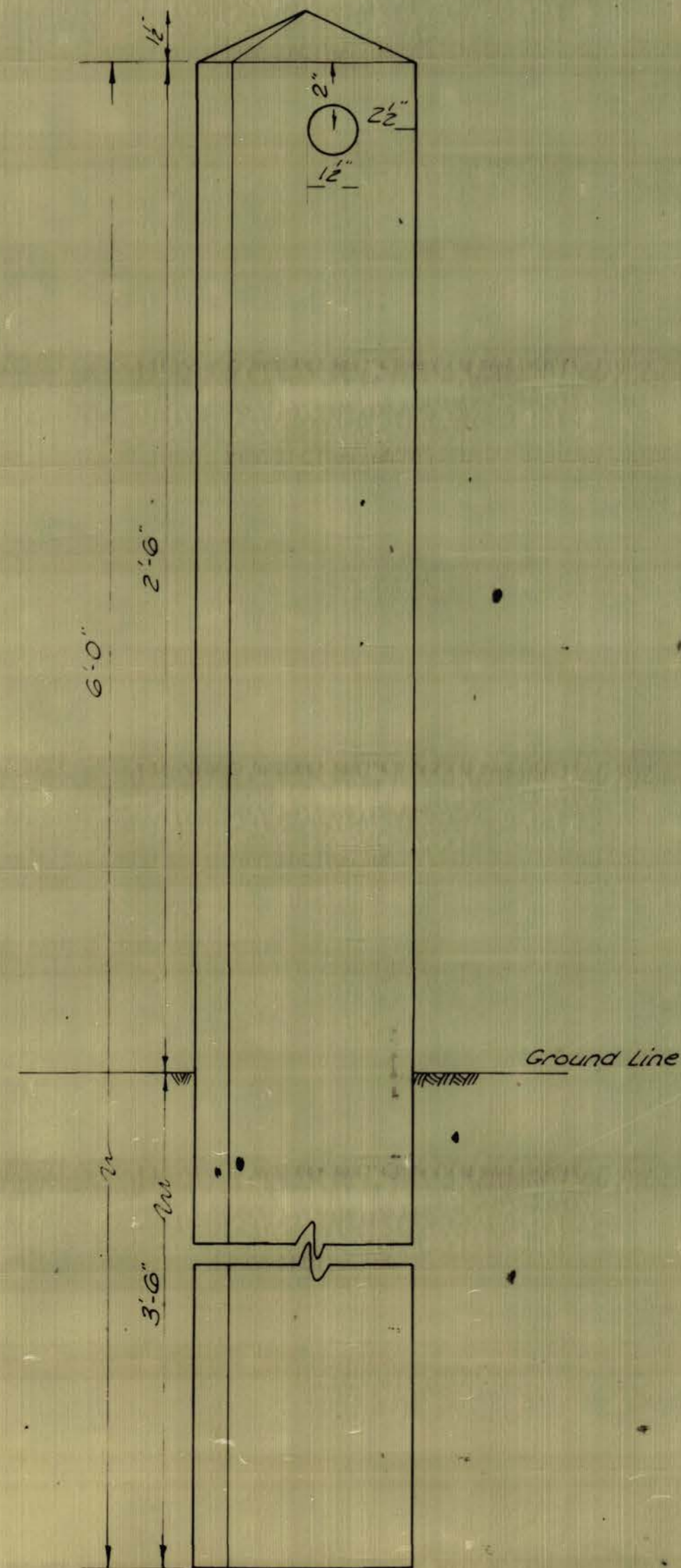
C. S. Hanes
 COMMISSIONER

STANDARD SHEET M.P. 6-B

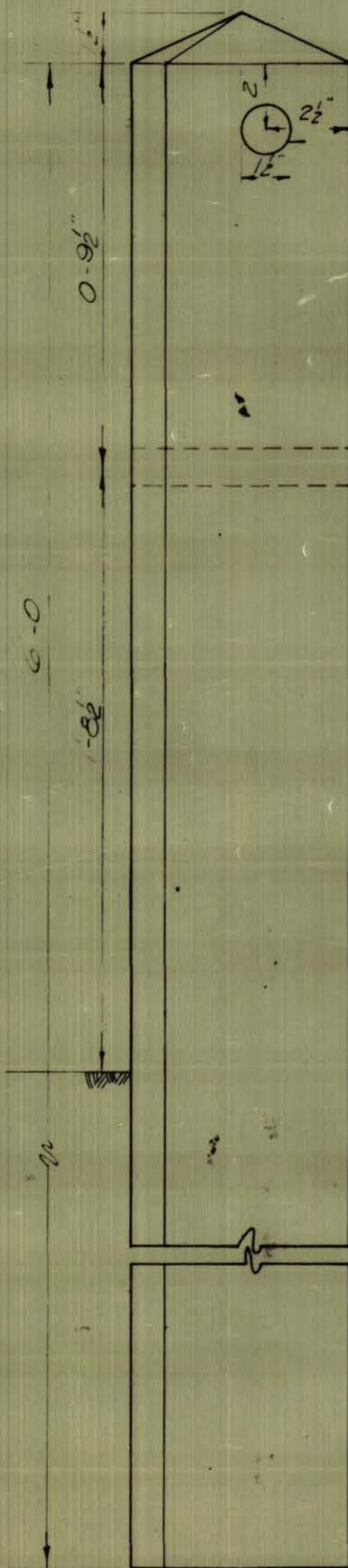


1/2" Hole for inserting wooden Plug to mount reflector units.

Center of Roadway



ELEVATION



DETAIL SHOWING HOLE SIZE AND SPACING

1/2" Hole for inserting wooden Plug to mount reflector units.

Center of Guard 1/8" Hole

Notes

Steel to extend from 2 inch of the bottom of post and be held in place by cradles.

All posts to be Class "D" Concrete.

Deformed Bars of intermediate grade shall be used and conform to AASHTO M-31.

Concrete Guard Rail Posts may be reinforced with mesh reinforcing having the same area as Bar reinforcing, and the steel shall conform to AASHTO M-32.

In a line of Guard Rail for concrete posts, the following posts shall be provided with reflectorized buttons. The first three on the end of a line of Guard Rail toward approaching traffic, then on alternate posts and the last post in the line of Guard Rail. The reflectorized buttons will be installed by State forces prior to the acceptance of the Project by the Bureau of Public Roads.

THE STATE ROAD COMMISSION OF WEST VIRGINIA
 STANDARD DETAIL
 CONCRETE GUARD RAIL POSTS
 (TRIANGULAR)

PREPARED 11-16-63

REVISIONS

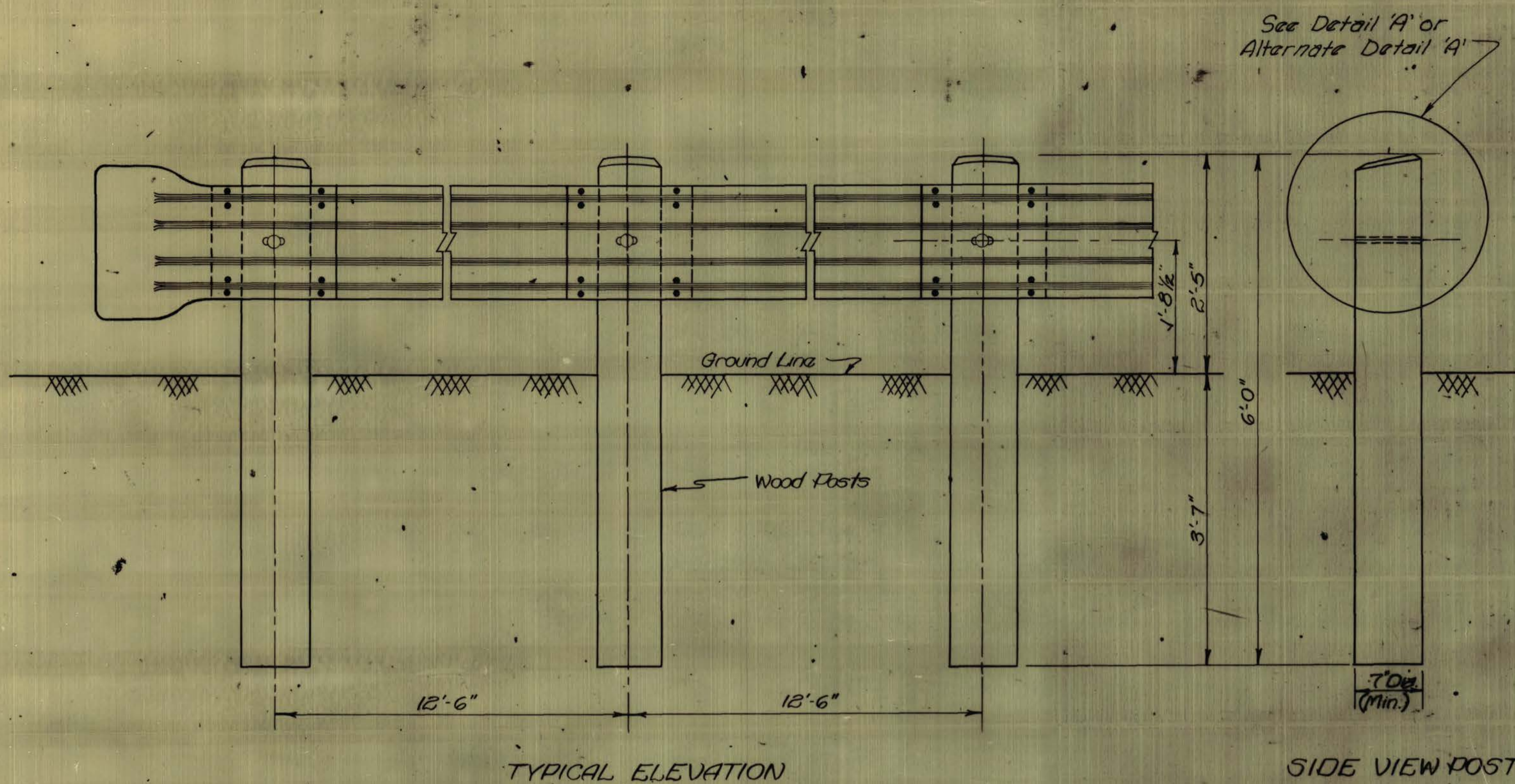
William A. Hartig
 DIRECTOR OF DESIGN DIVISION

Edward J. Chubowski
 CHIEF ENGINEER, OPERATIONS

Burl A. Langston
 COMMISSIONER

MICROFILMED

STANDARD SHEET M.P. 6-A



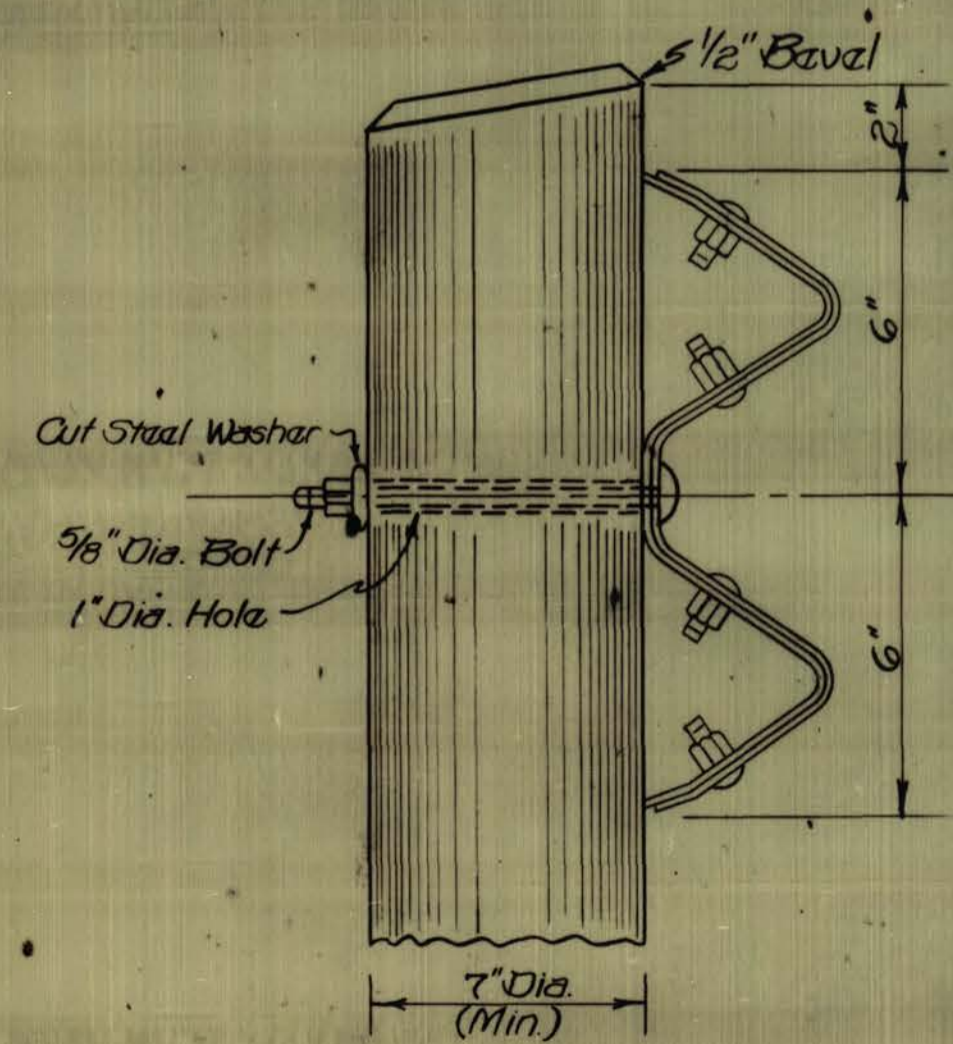
NOTES
 Standard Detail of Steel Beam Type Guard Rail M.P. 5-A shall be used in conjunction with this drawing.

The posts shall be round with a minimum diameter of 7 (seven) inches or rectangular with minimum dimensions of eight by six (8x6) inches and shall be spaced twelve and one half (12 1/2) feet measured along the center line of the rail. The top of round posts shall be trimmed as shown in this drawing.

Holes drilled through the pressure treated posts shall be pressure treated with appropriate preservative by a device capable of exerting at least 30 p.s.i. pressure.

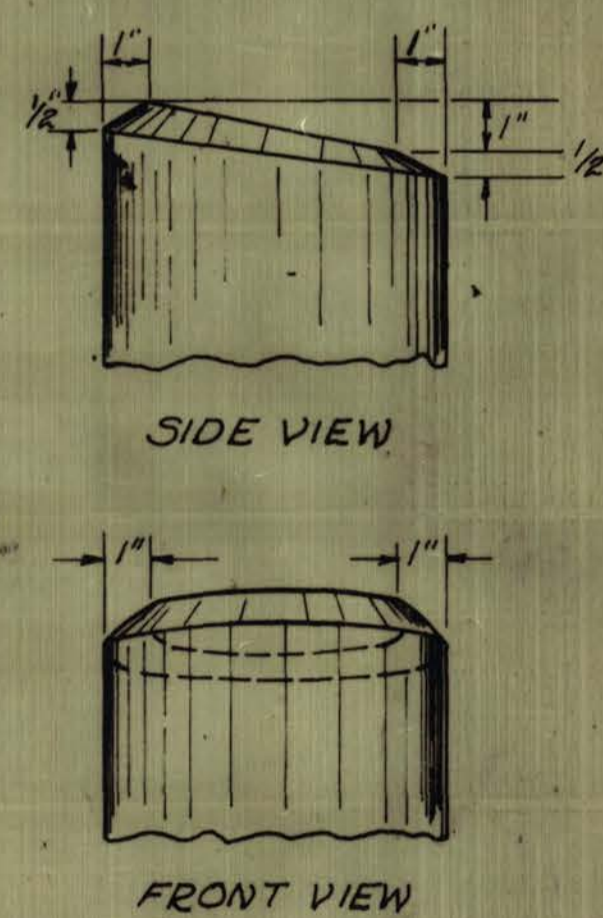
All wood posts shall be pressure treated to comply with the requirements of Section 3.10.5 of the Standard Specifications.

Posts need not be painted when pressure treated with Creosote oil or Pentachlorophenol. Posts, when pressure treated with Chromated Zinc Chloride or Osmosalt, shall be painted with two (2) coats of white paint conforming to Section 3.11.10 of the Standard Specifications.

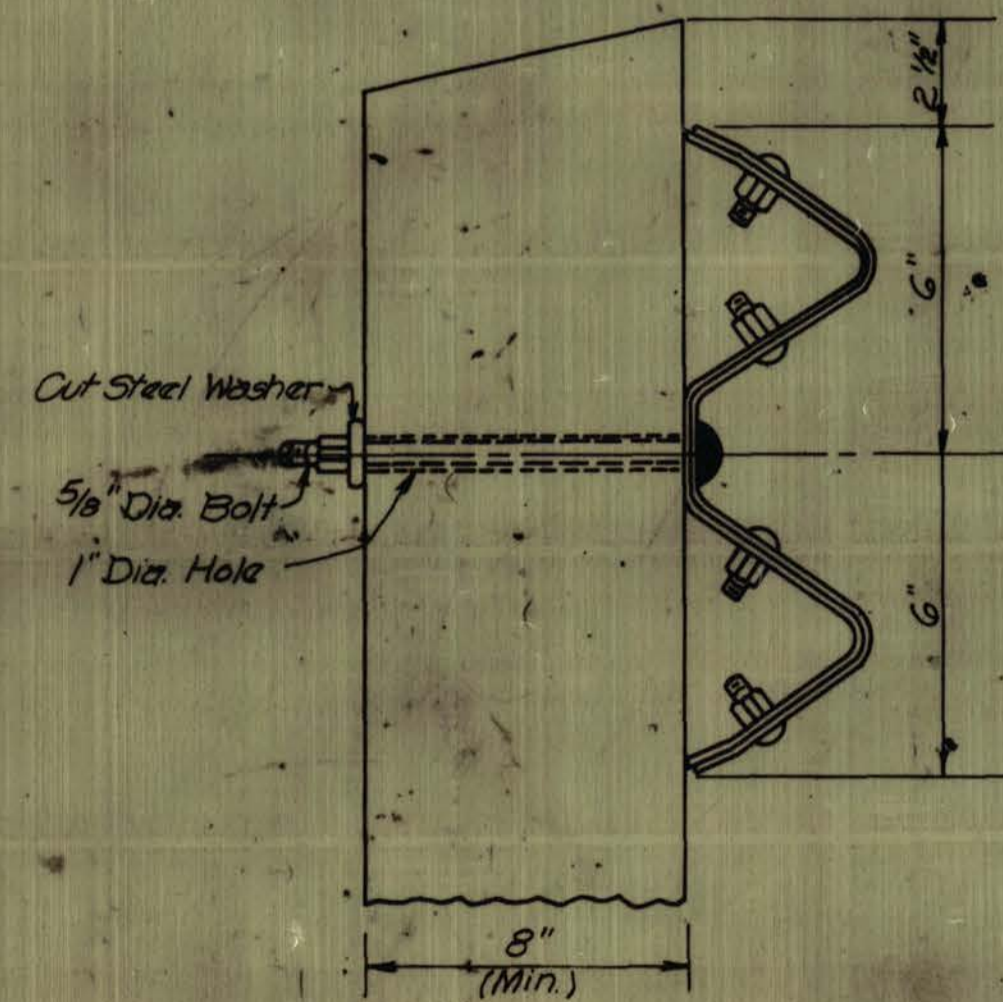


DETAIL 'A'

ROUND POST DETAIL



TOP OF POSTS



ALTERNATE DETAIL 'A'

RECTANGULAR POST DETAIL



TOP OF POSTS

THE STATE ROAD COMMISSION OF WEST VIRGINIA
 STANDARD DETAIL
 WOOD GUARD RAIL POSTS

PREPARED 6/10/63

REVISIONS
12-4-63
1-2-64
9-24-65
1-6-66

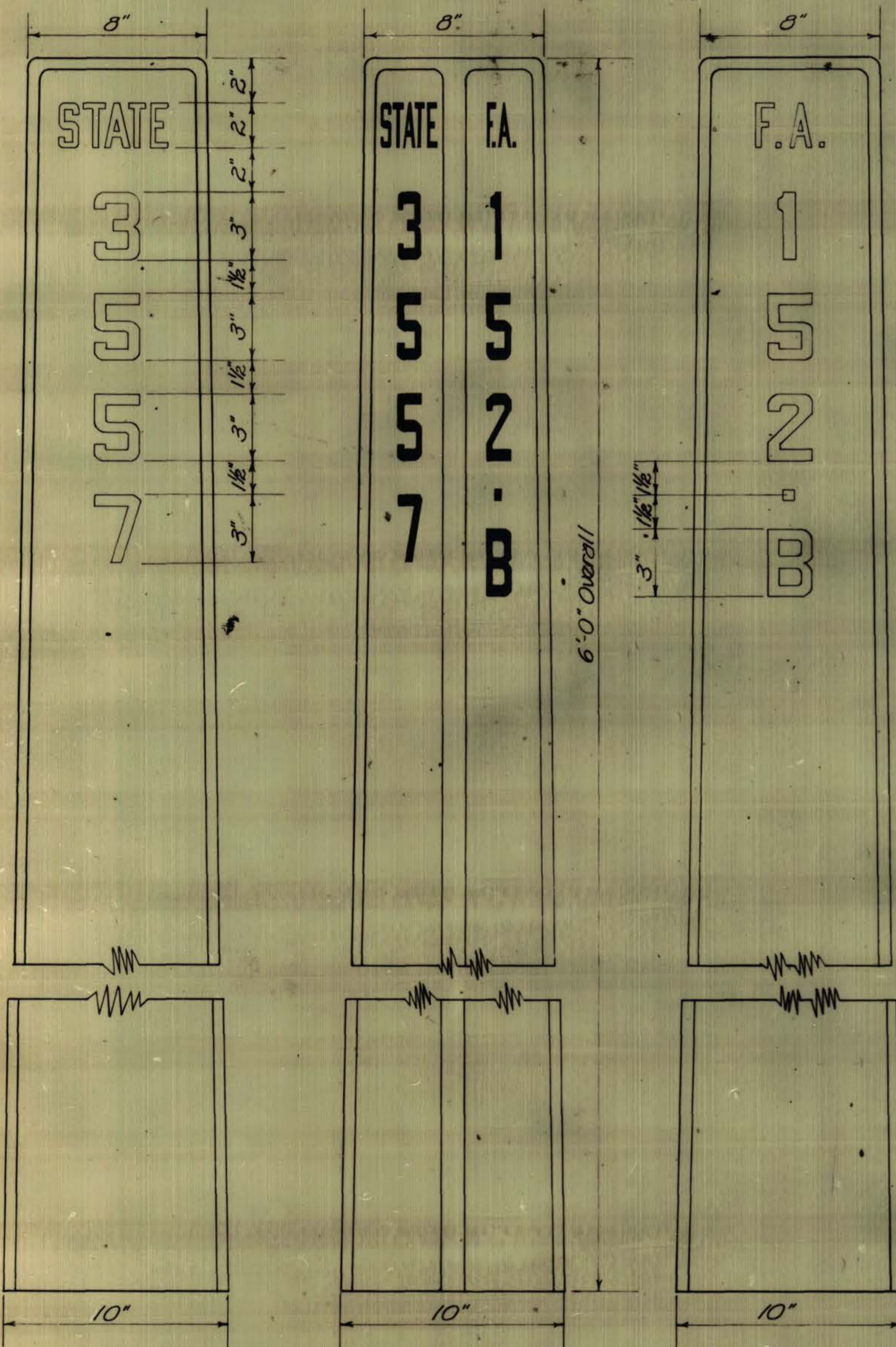
William A. Hartig
 DIRECTOR, DESIGN DIVISION

Bruce L. Khokki
 CHIEF ENGINEER, OPERATIONS

Bruce L. Danner
 COMMISSIONER

STANDARD SHEET M.P. 6-C

PROJECT MARKER POST



Steel to extend from 2" of the bottom of post and be held in place by cradles.
All posts to be Class D Concrete.

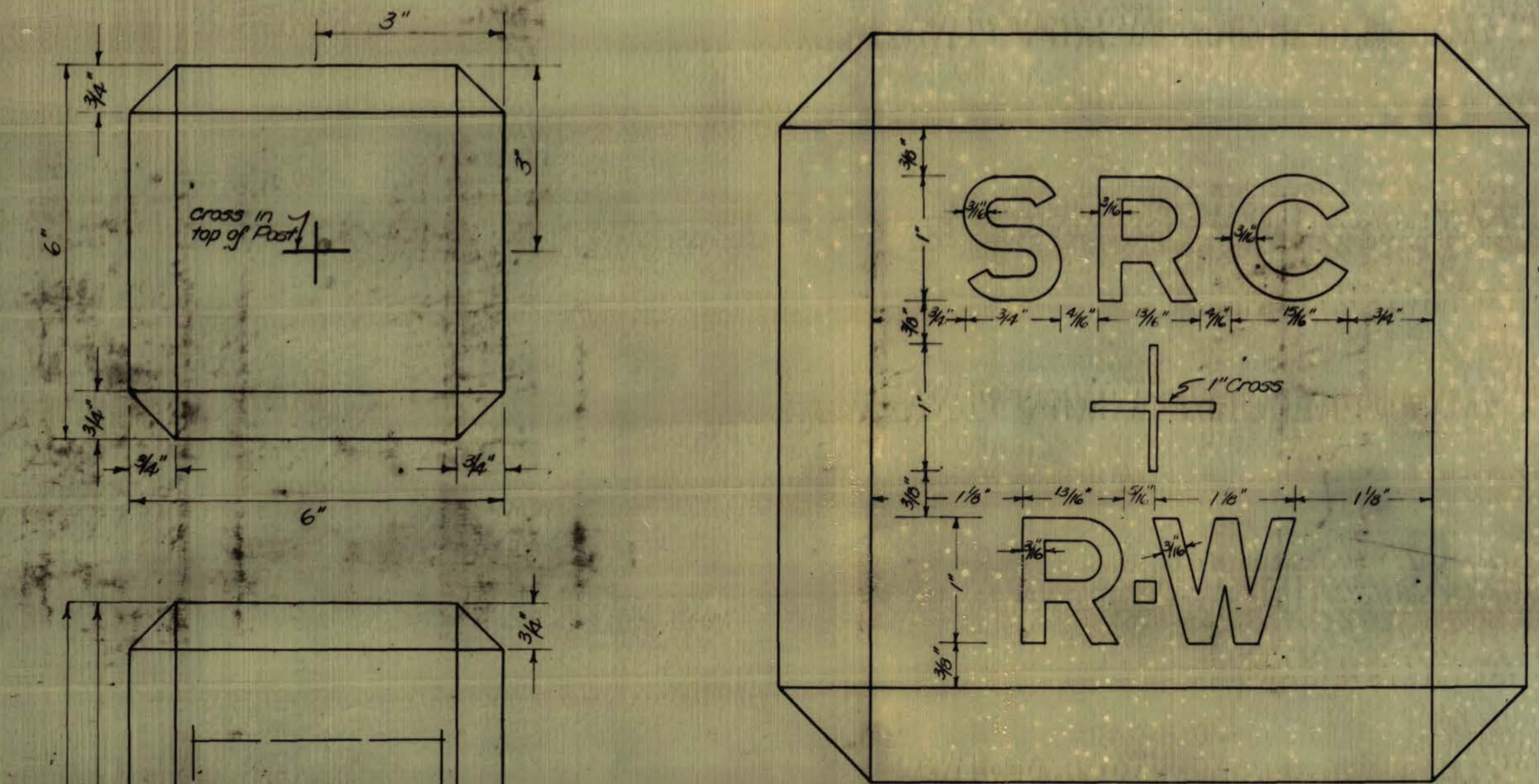
STATE
F.A.
F.A.S.
P.W.S.
N.R.S.
W.P.G.H.

Posts to be 8" wide at top and 10" wide at bottom, all sides.
Posts shall be 6 ft. in length and set so that top of post will be 3'-0" above center line grade at station where placed.

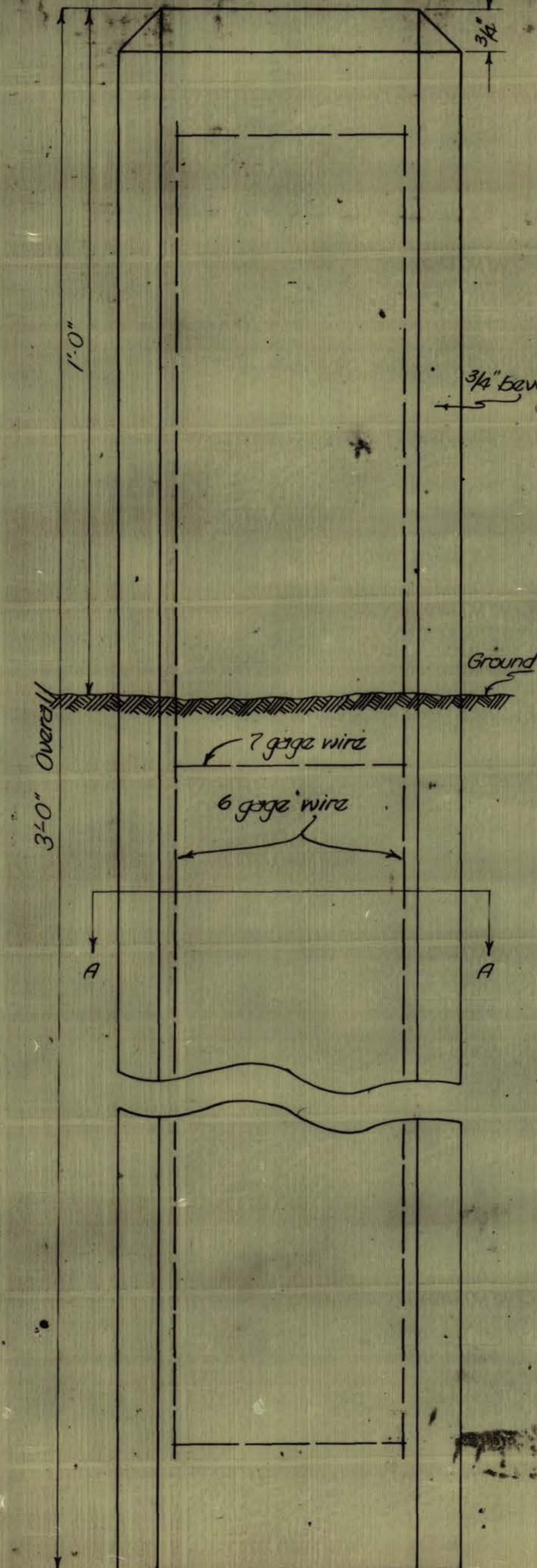
The Project Marker Post shall be set at the beginning and end of the project, on the right hand side of highway when facing in direction leading away from County Seat.

The letters and numerals are to be of the size and style shown, and are to be painted black.

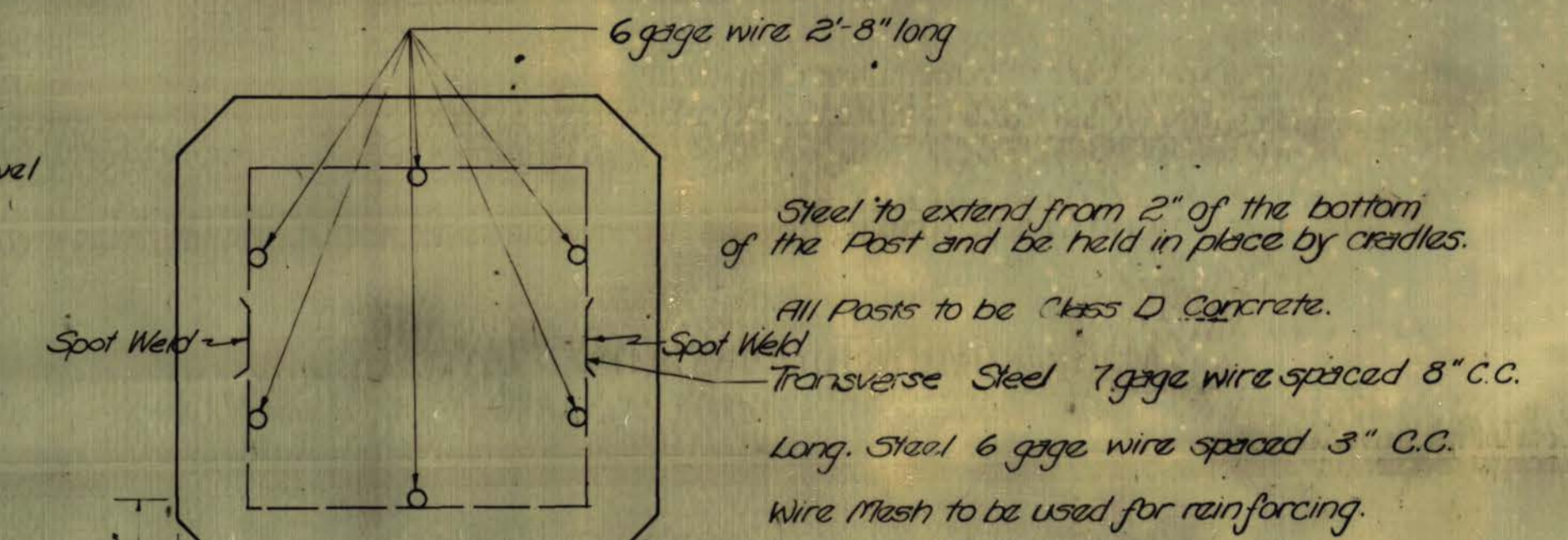
RIGHT OF WAY MARKER POST



Detail of Top of Post Full Size



CONCRETE POST 1/2 Size



Right of Way Markers shall be placed at each break in the Right of Way Line as shown on plans or as directed by the Engineer.

When grading has been completed and slopes dressed, points for setting Right of Way Markers will be furnished by Engineer in charge of Project.

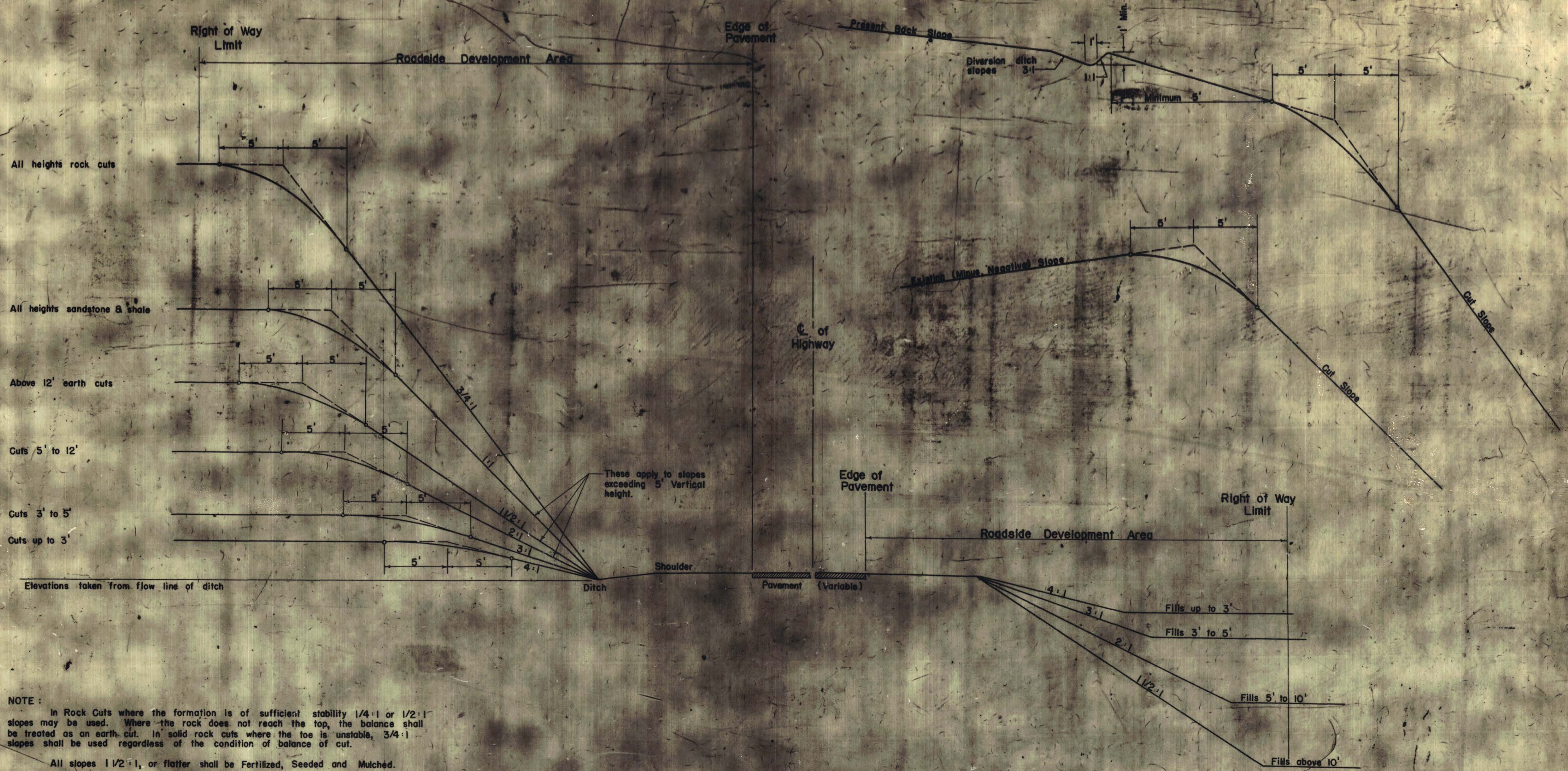
Posts will be set to depth shown and back-fill around them securely tamped.
Posts shall be set with top projecting 12" above ground.
Letters and Cross to be countersunk in top of post 1/4 inch.

THE STATE ROAD COMMISSION OF WEST VIRGINIA
STANDARD DETAIL
RIGHT OF WAY MARKER POST
PROJECT MARKER POST

PREPARED 8/5/54
REVISIONS
FEBRUARY 3, 1961

S. O. Madden
ENGINEER OF PLANS & SURVEYS
APPROVED B.P.R.
George W. Albain
CONSTRUCTION ENGINEER
H. F. Griffith
COMMISSIONER

STANDARD SHEET M.P. 8-A



NOTE :
 In Rock Cuts where the formation is of sufficient stability 1/4:1 or 1/2:1 slopes may be used. Where the rock does not reach the top, the balance shall be treated as an earth cut. In solid rock cuts where the toe is unstable, 3/4:1 slopes shall be used regardless of the condition of balance of cut.
 All slopes 1 1/2:1, or flatter shall be Fertilized, Seeded and Mulched.

THE STATE ROAD COMMISSION OF WEST VIRGINIA
 STANDARD DETAIL
 FOR SLOPE DEVELOPMENT
 (FOR MOUNTAINOUS TERRAIN ONLY)

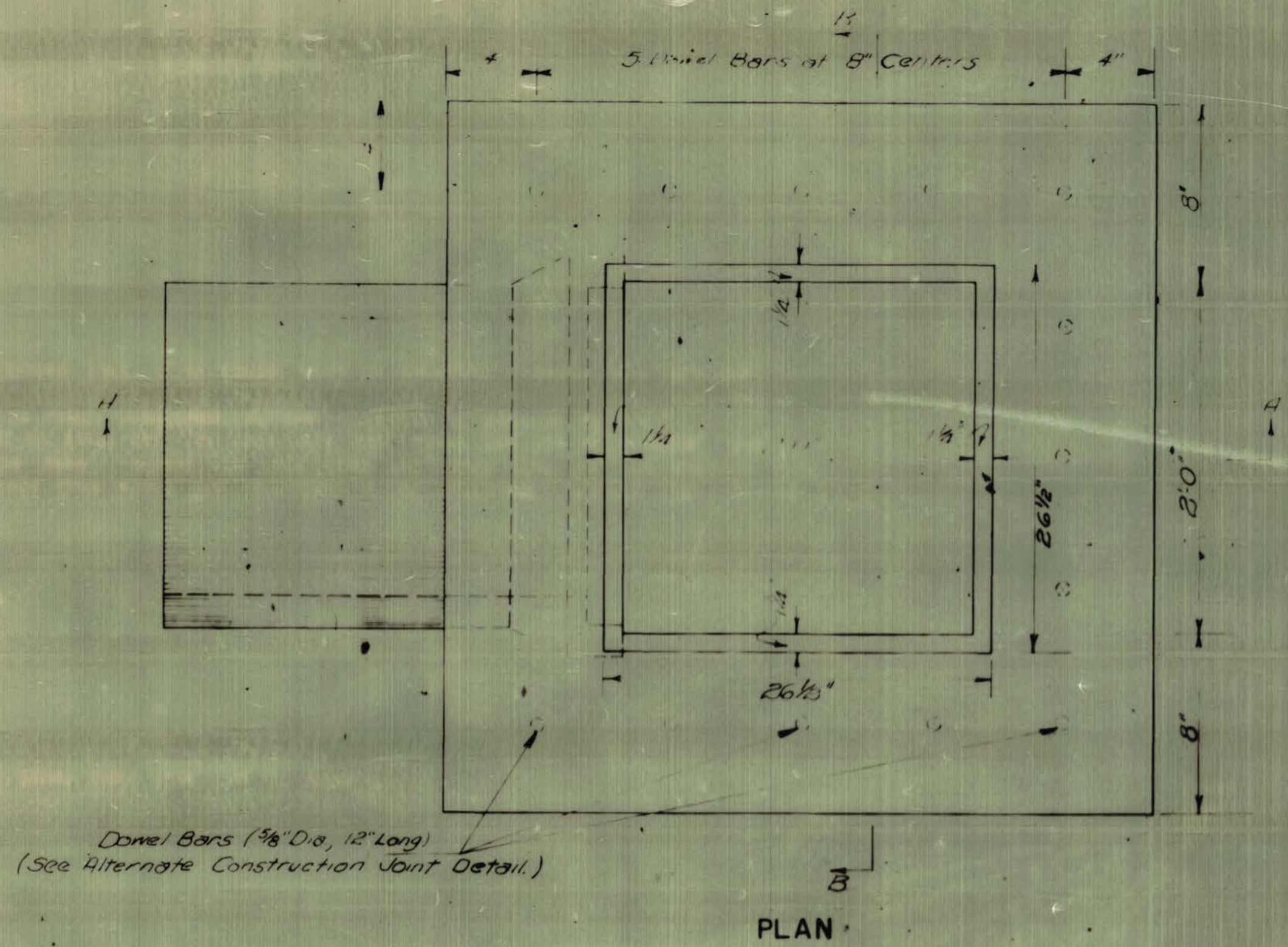
PREPARED - 1/17/62

REVISIONS
JULY 27, 1963
JAN 10, 1966

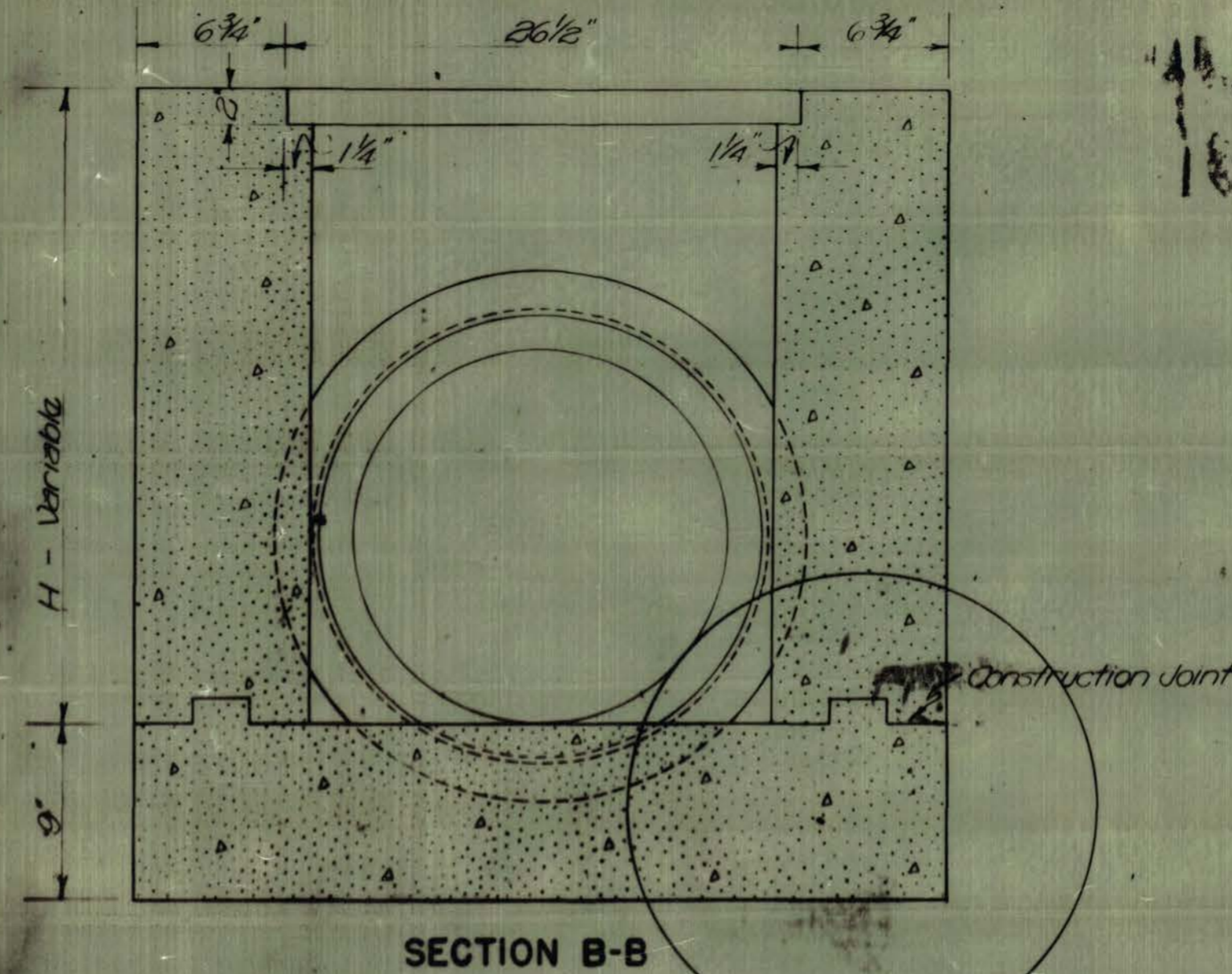
DIRECTOR OF ENGINEERING _____ APPROVED B.P.R. _____

CHIEF ENGINEER _____ COMMISSIONER _____

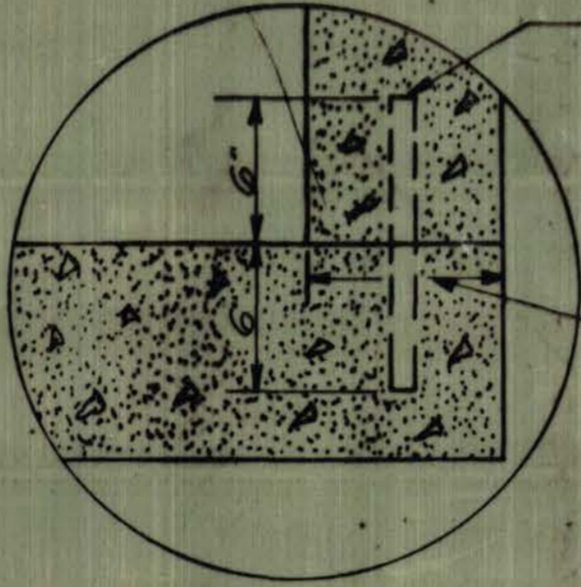
STANDARD SHEET M.P. 10-A



PLAN



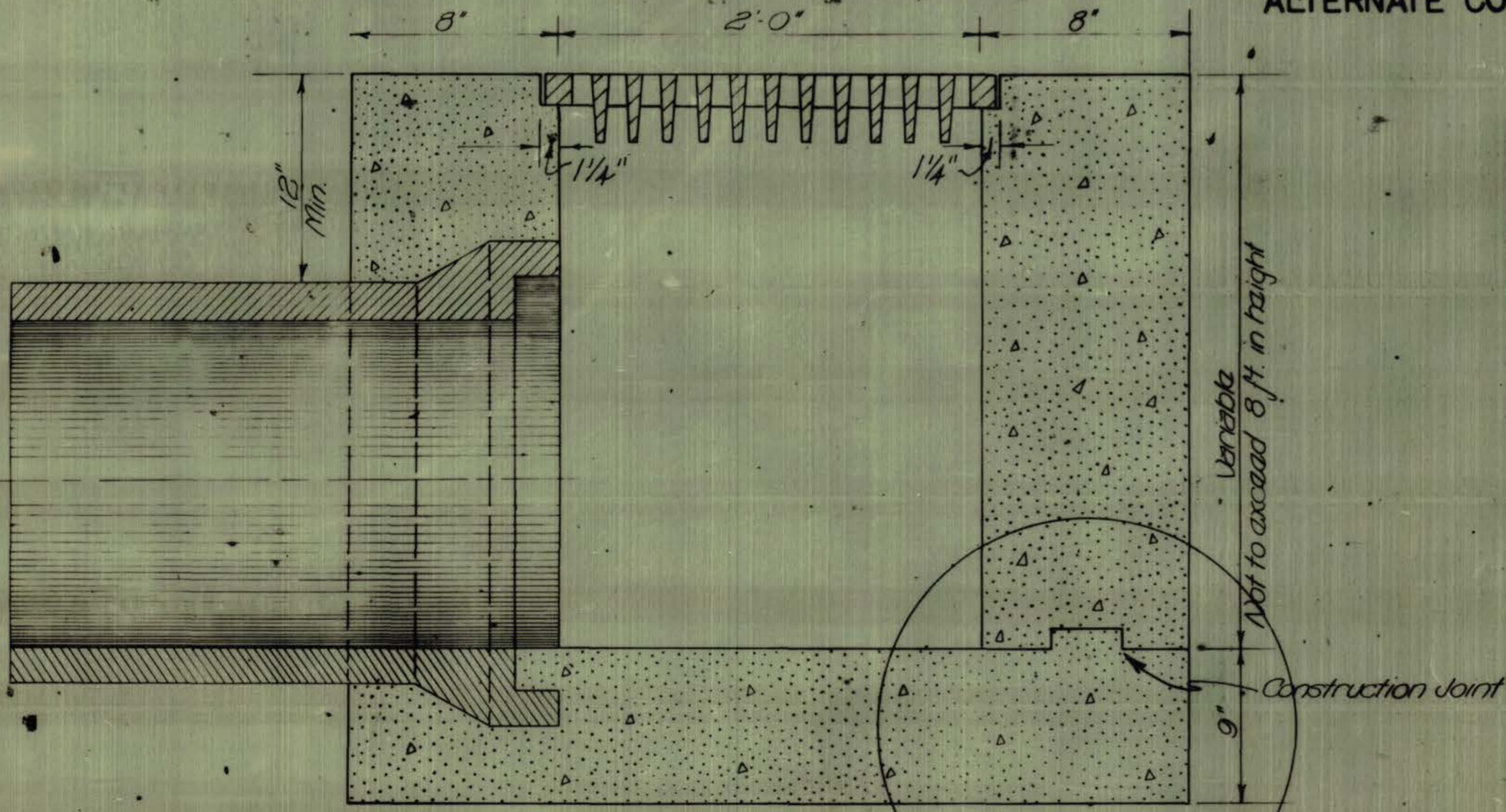
SECTION B-B



5/8" Dia Dowel Bar
9" c.c.
Concrete surface shall be left in a roughened state in this area in order that proper bond may be obtained between the base and the sides of the structure.

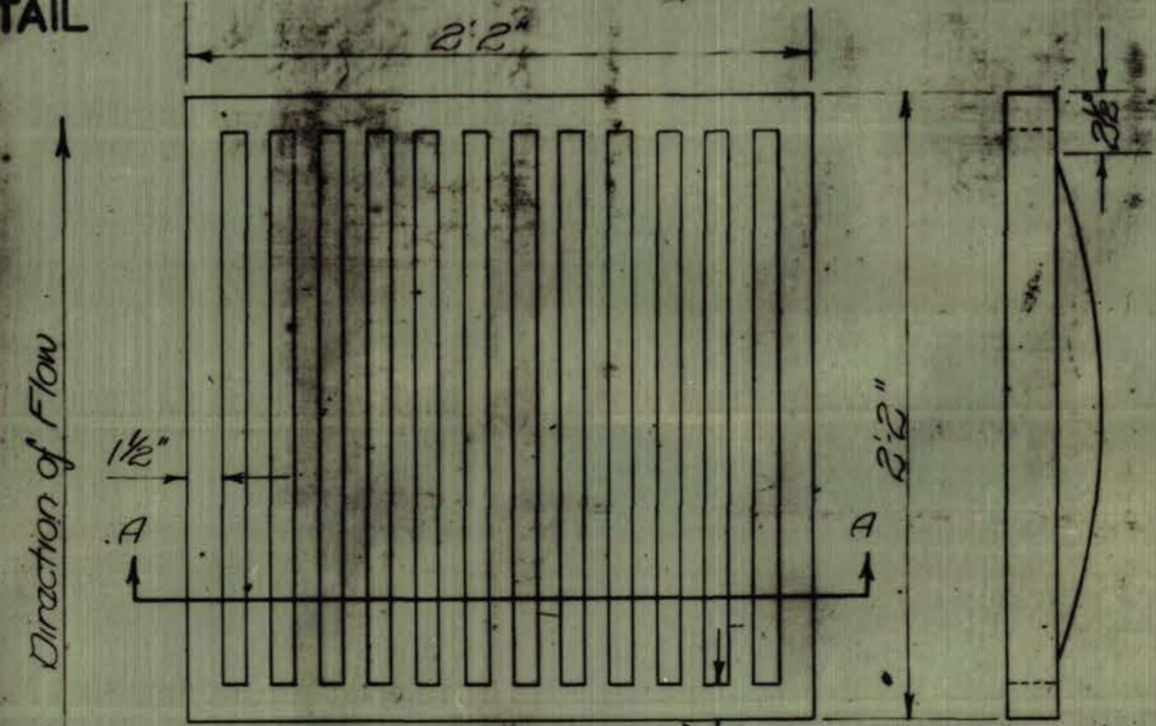
See Alternate Construction Joint Detail.

ALTERNATE CONSTRUCTION JOINT DETAIL



SECTION A-A

See Alternate Construction Joint Detail.



SECTION A-A
GRATE
Cast Iron - 266 Lbs.

- NOTES**
- All concrete to be Class B Concrete Air Entrained.
 - The type and size of Pipe to be used for Inlets or Outlets for the Drop Inlets is to be the type and size as called for on the plans.
 - Drawing shows Pipe entering one side of Drop Inlet, however Pipes may enter any or all sides as called for on the plans.
 - When the Bell of Concrete Pipe is placed in a Drop Inlet as shown on Drawing, the inside of Bell shall be filled with Concrete up to the Flow Line.
 - Footer up to Construction Joint is to be of Class B Concrete.
 - Sidewalls may be either brick or concrete above footer.
 - If brick is used they are to be laid in "1-2 Cement Mortar" or equal.
 - Castings are to be of the design shown and are to be of Gray-Iron meeting the requirements of Sect. 3.9.6 of the West Virginia State Road Commission Specifications of 1960 for Gray-Iron Castings.
 - All exposed edges at construction joints to be beveled three-fourths (3/4) inch.
 - Unit price bid for Item 114-2 Drop Inlet Complete Except Casting will be for all depths up to and including an H of 5 ft. Inlets of a depth greater than a H of 5 ft. will be paid for at the rate of 0.40 Cu.Yd. of Class B Concrete for each additional foot of depth.
 - If brick is used for the sidewalls the top course must be of solid type brick. However cored type brick may be used up to the top course.

Bid Items for Standard Drop Inlet will be:	
Item 113-2 Drop Inlet Casting	per each.
Item 114-2 Drop Inlet Complete Except Casting	per each.

THE STATE ROAD COMMISSION OF WEST VIRGINIA
STANDARD DETAIL
STANDARD DROP INLET

PREPARED - 8/20/58

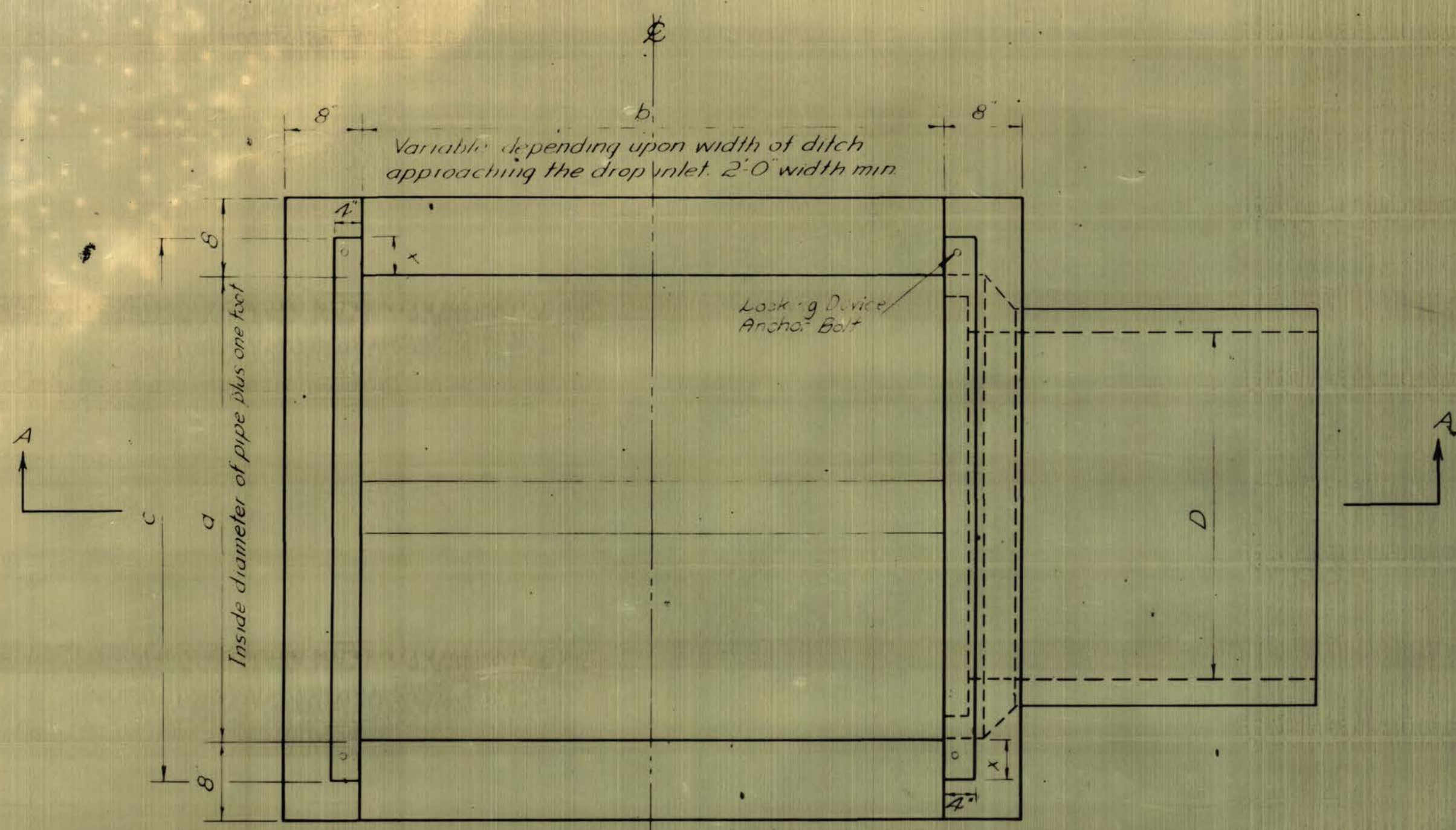
REVISIONS
MAY 14, 1959
NOV. 21, 1960
JANUARY 23, 1961
DEC. 14, 1965

W.D. Madden
DIRECTOR OF ENGINEERING

APPROVED B.P.R.

James S. White
DEPUTY COMMISSIONER AND
STATE HIGHWAY ENGINEER

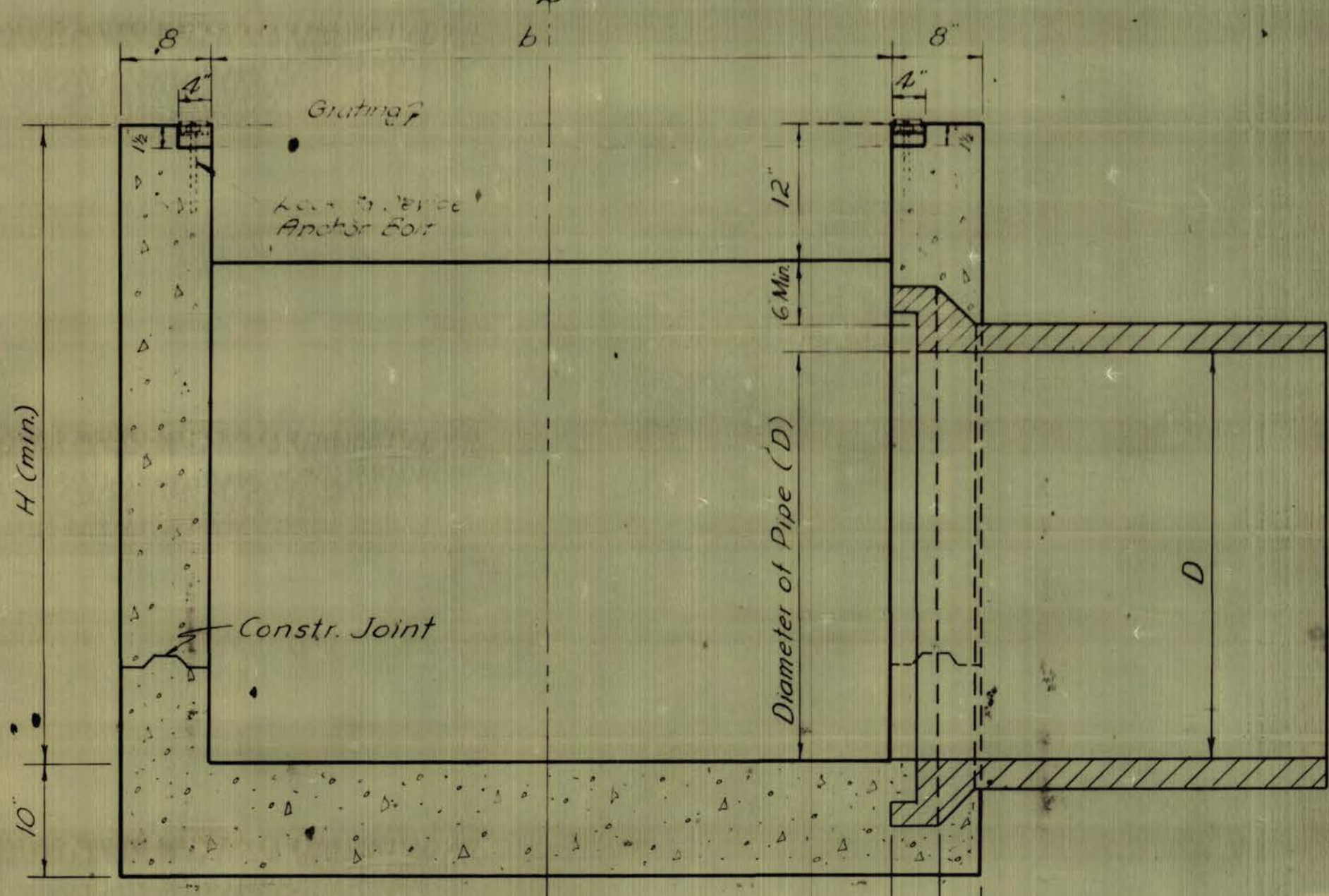
P.B. Roney
COMMISSIONER



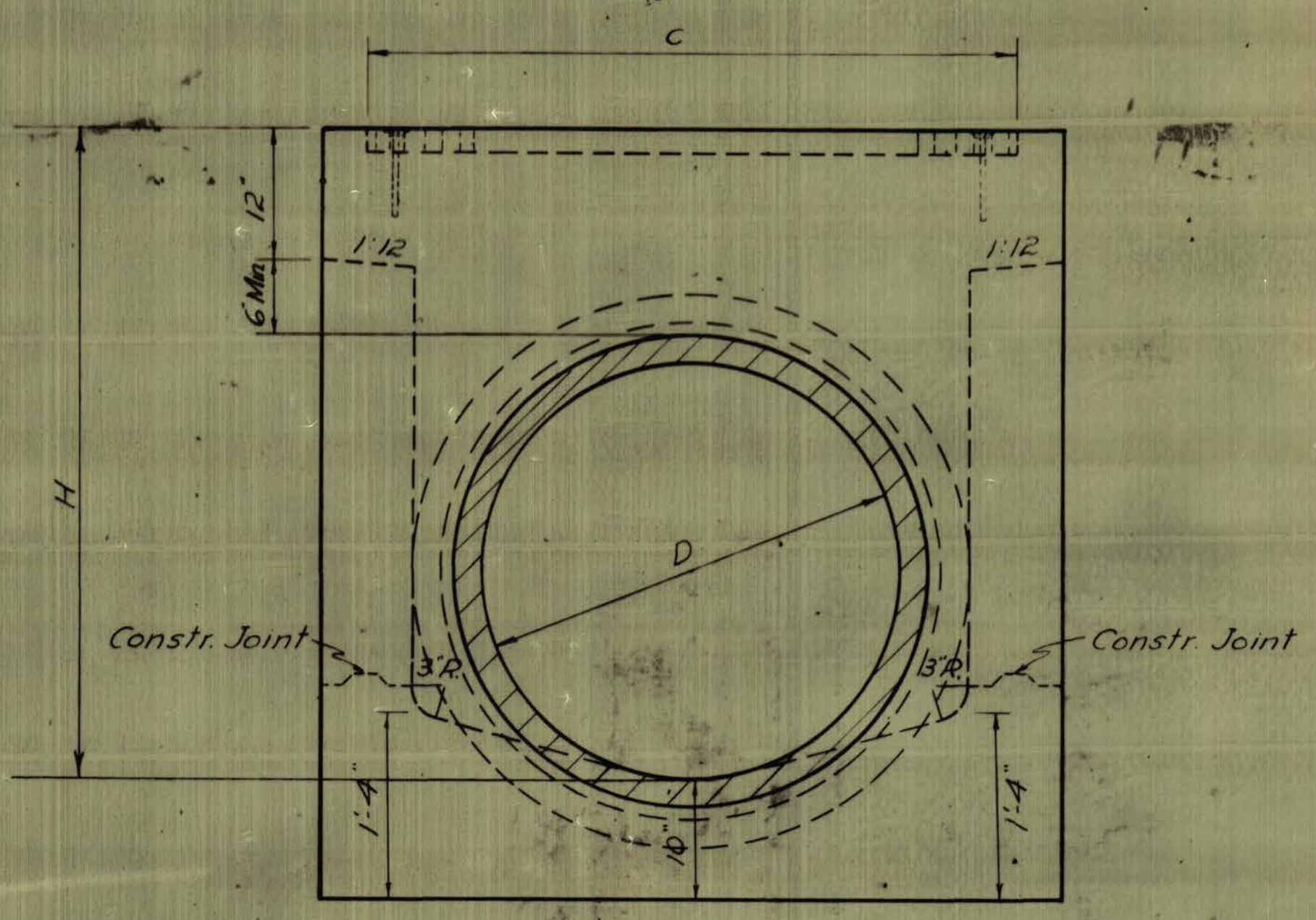
PLAN
Distance from ϕ as shown on Plan and Profile sheets is in reference to this ϕ of Inlet.

TABLE FOR HILLSIDE TYPE DROP INLETS						
Dimensions and Quantities						
Size of Pipe (D)	a	b	x	c	H (min)	B Conc. CY
18"	2'-6"		3 1/2"	3'-1"	3'-2 1/2"	1.13
24"	3'-0"	From min. of 2'-0"	4"	3'-8"	3'-9"	1.31
30"	3'-6"	up to 5'-0" or width of approaching ditch.	3 1/2"	4'-1"	4'-3 1/2"	1.62
36"	4'-0"		4"	4'-8"	4'-10"	1.88
42"	4'-6"		3 1/2"	5'-1"	5'-4 1/2"	2.20
48"	5'-0"		4"	5'-8"	5'-11"	2.44

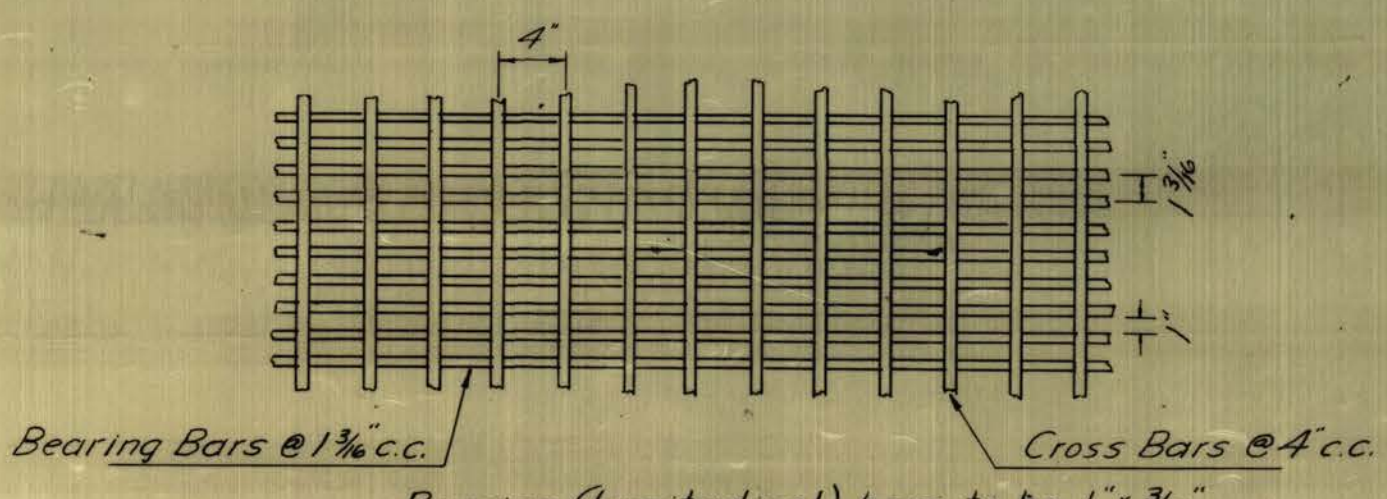
Class B Concrete in above table is for estimating work only.
Note: Amount of Class B Concrete in drop inlets as shown in table is computed for a minimum ditch width of 2'-0".



SECTION A-A



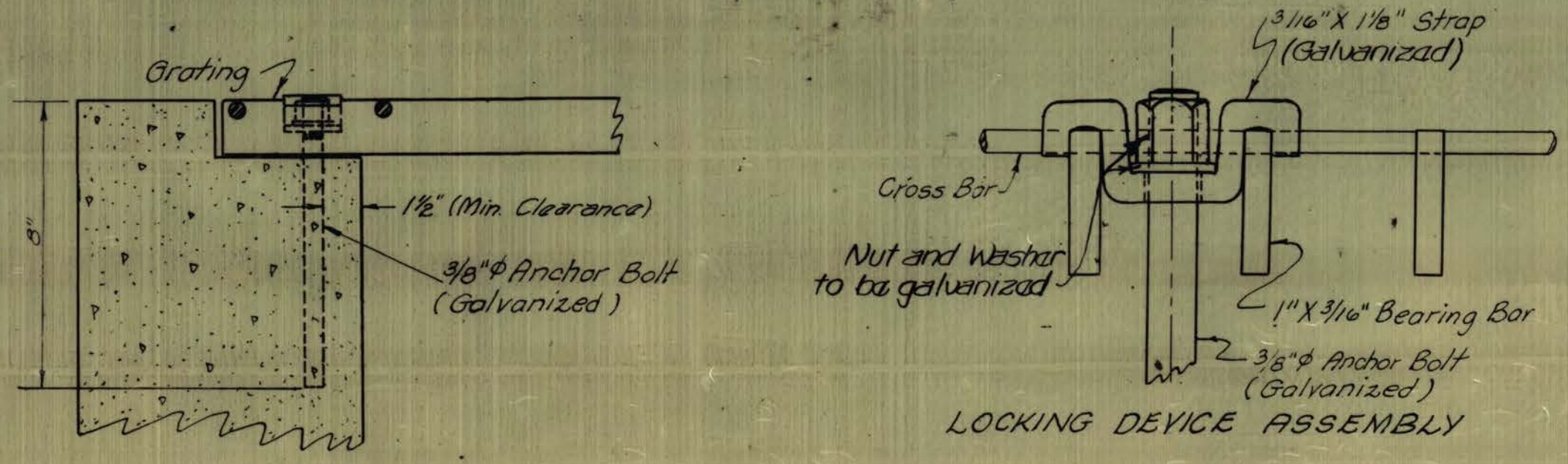
FRONT ELEVATION



DETAIL OF GRATING

GRATING WIDTHS	
D	No. of sections & width
18"	1 @ 2'-11 1/4"
24"	2 @ 1'-9 3/4"
30"	2 @ 1'-11 1/4"
36"	2 @ 2'-3 1/2"
42"	2 @ 2'-5 1/2"
48"	2 @ 2'-9 1/4"

Length of Grating equals $b + 6"$



DETAIL OF LOCKING DEVICE

NOTES

- All concrete to be Class B Concrete, Air Entrained.
- The type and size of pipe to be used for inlets or outlets for the drop inlet is to be of the type and size as called for on the plans.
- Drawing shows pipe entering one side of drop inlet, however, pipes may enter any or all sides as called for on the plans.
- When the bell of the concrete pipe is placed in the drop inlet as shown on drawing, the inside of the bell shall be filled with concrete up to the flow line.
- Grating is to be used only when called for on plans.
- Grating to be of Type 1R4 Electro Pressure Welded Grating as manufactured by the Reliance Steel Products Co. of McKeesport Pa. or Type AA Grating as manufactured by the Irving Subway Grating Co. of Long Island City, N.Y. or equal.
- Grating to be in one piece pressure resistance welded construction. All galvanizing shall be done in accordance with ASTM Specification A-153.
- All exposed edges at construction joints to be beveled three-fourths (3/4) inch.
- The cost of furnishing the grating locking devices, etc., shall be included in the unit price bid for Item 114-6 Hillside Drop Inlet.
- The unit price bid for Item 114-6 Hillside Drop Inlets will be for all depths up to and including an 1/4 of 5 ft. Inlets of a depth greater than an 1/4 of 5 ft. will be paid additionally for the extra amount of Class B Concrete in the sidewalls.
- Bid Items for Hillside Drop Inlet will be:
Item 114-6 Hillside Drop Inlet with Grating per each
Item 114-6(1) Hillside Drop Inlet without Grating per each

THE STATE ROAD COMMISSION OF WEST VIRGINIA
STANDARD DETAIL
HILLSIDE DROP INLET

PREPARED 11/25/55

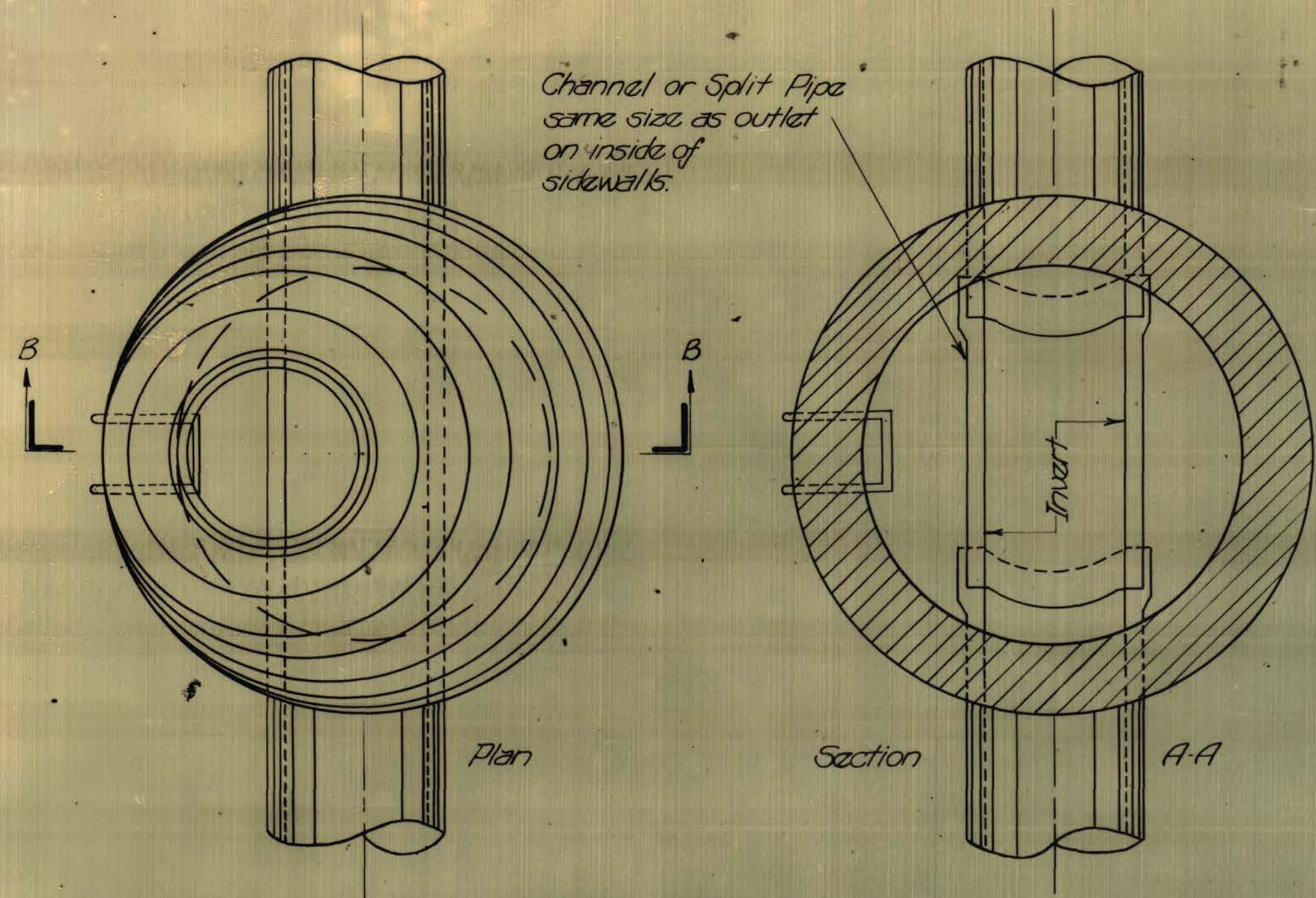
REVISIONS
MAY 12, 1959
JAN. 20, 1961
JAN. 24, 1961
FEB. 3, 1961
OCT. 10, 1962
April 4, 1966

[Signature]
DIRECTOR OF ENGINEERING

[Signature]
CHIEF ENGINEER

MICROFILMED
APPROVED B.P.R.

[Signature]
COMMISSIONER



NOTES

All concrete to be Class A Concrete, Air Entrained.

The type and size of pipe to be used for the Manhole is to be the type and size called for on the plans.

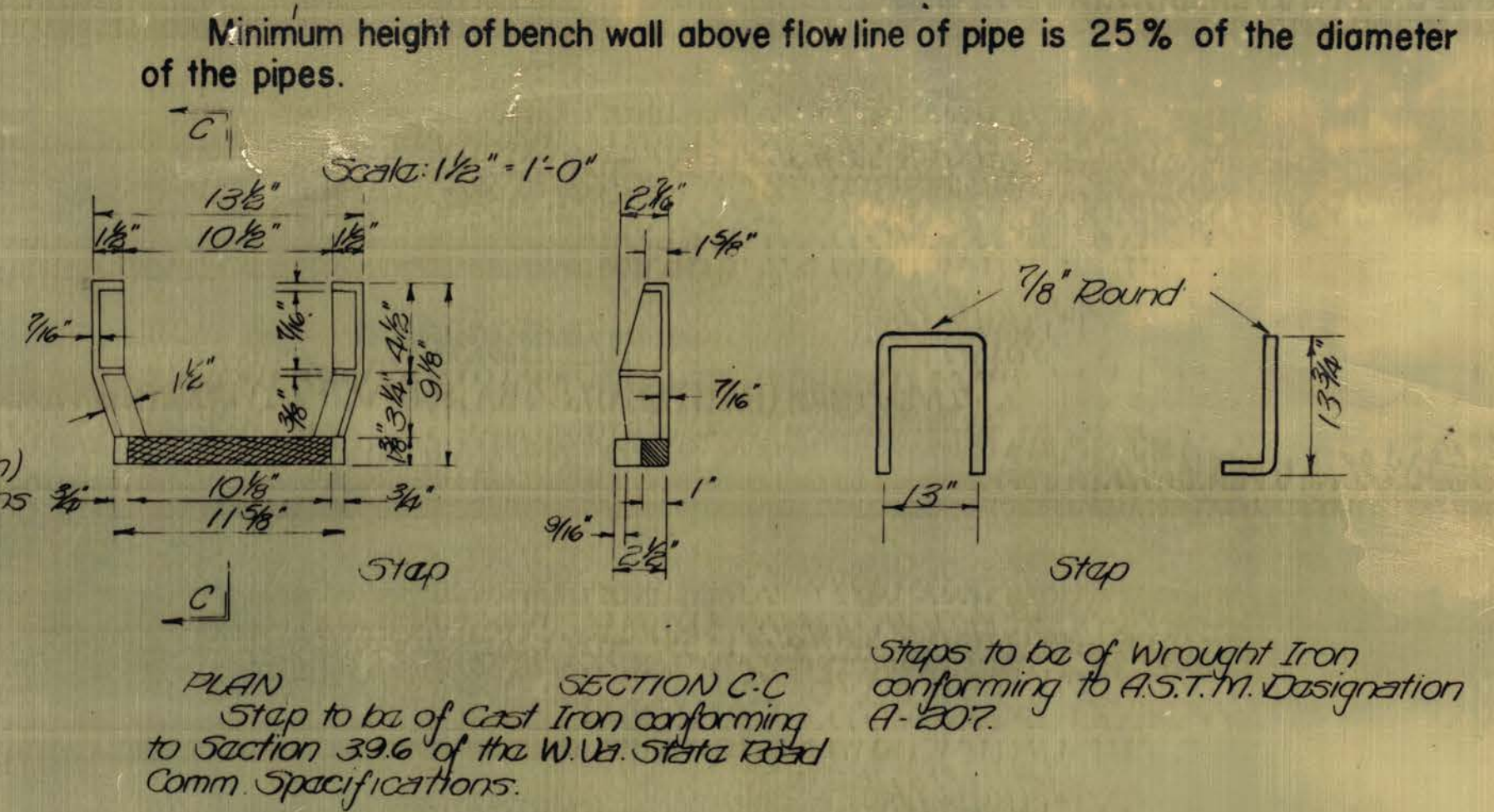
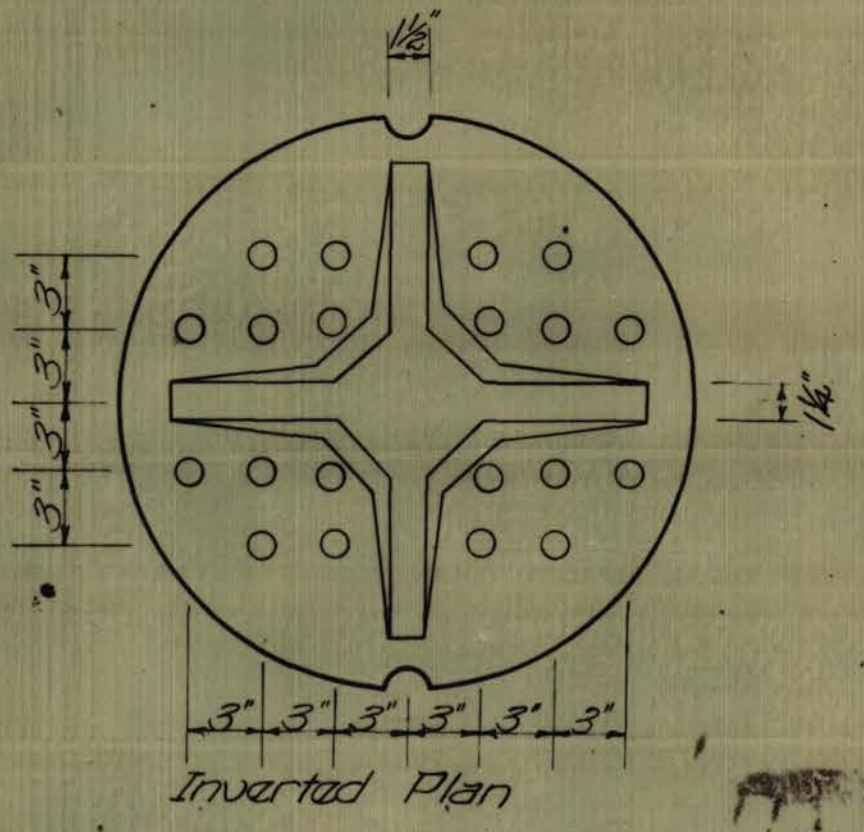
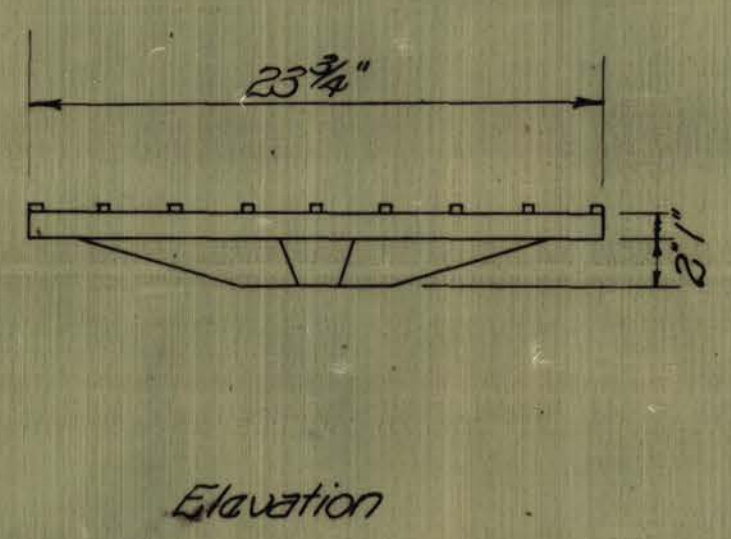
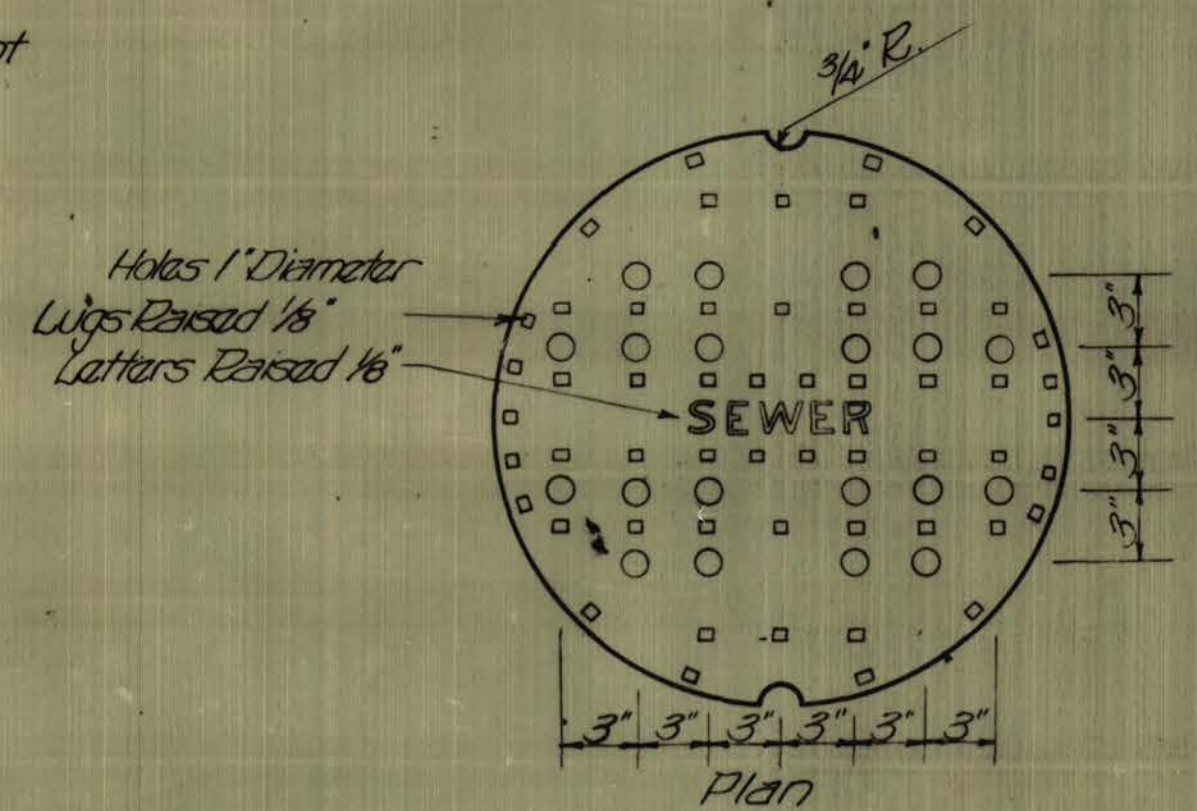
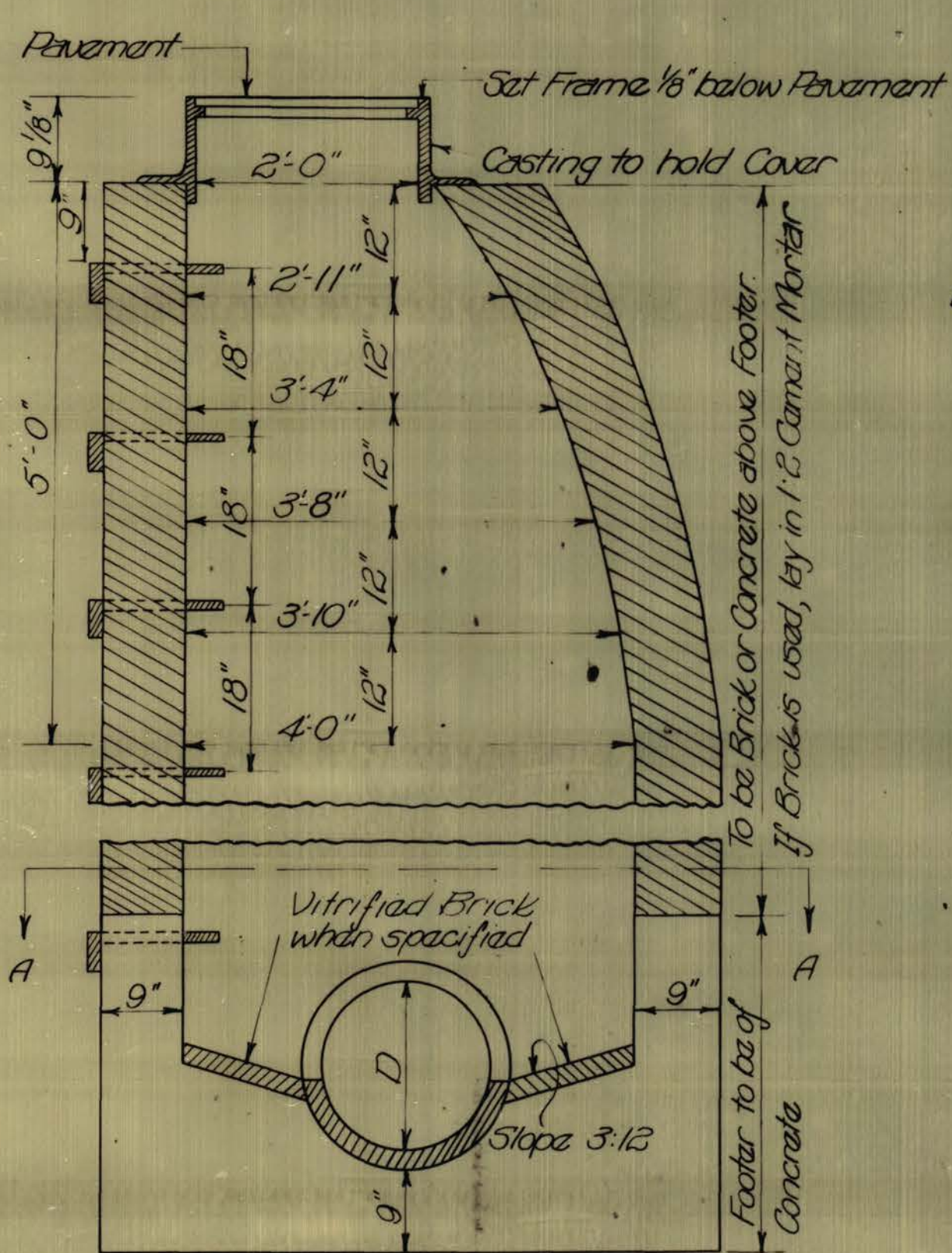
Drawing shows pipe entering and leaving Manhole in a straight line. However, the pipes may enter or leave at any angle or place as called for or shown on the plans.

The footer up to the joint shown shall be of Concrete.

The remainder of the Manhole above the joint shown may be either brick or concrete.

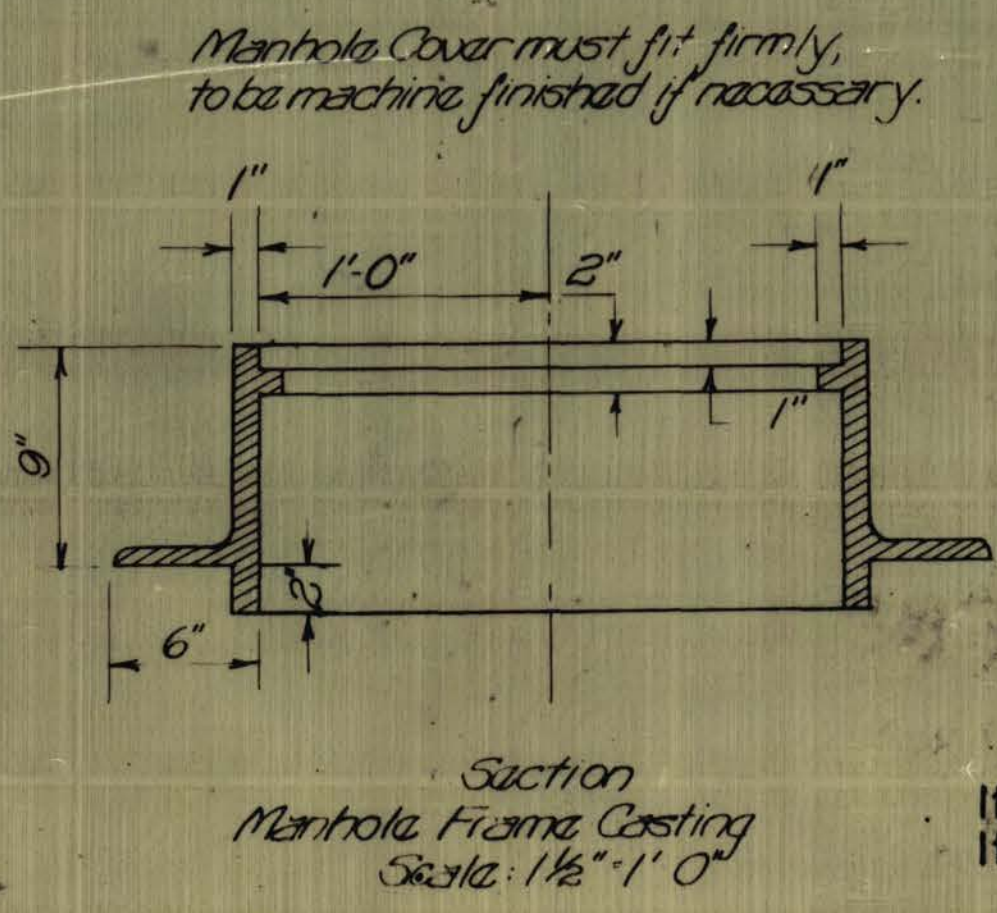
If brick is used they are to be laid in 1:2 Cement Mortar, or equal.

Castings are to be of the design shown and are to be of Gray-Iron meeting the requirements of Sect. 3.9.6, of the West Virginia State Road Commission Specifications of 1960 for Gray-Iron Castings.



Section B-B

If manhole is over twelve feet (12') in depth, the sidewalls below that line will be double thickness.



The bearing area of the frame and cover shall be so fitted and finished as to provide a firm and even seat for the entire cover in the frame. No projections shall exist on bearing areas of either casting, and the cover shall seat in its frame without rocking.

Bid Items for Manhole Frame and Cover (Standard Type) will be:

Item 114-3 Manholes Complete, except Casting per each

Item 113-3 Manhole Frame and Cover Casting per each

THE STATE ROAD COMMISSION OF WEST VIRGINIA

STANDARD DETAIL

MANHOLE — FRAME & COVER

PREPARED — 3/24/58

REVISIONS

FEBRUARY 10, 1959
MAY 14, 1959
DECEMBER 7, 1959
JULY 14, 1960
JANUARY 23, 1961
OCTOBER 10, 1962
November 16, 1963

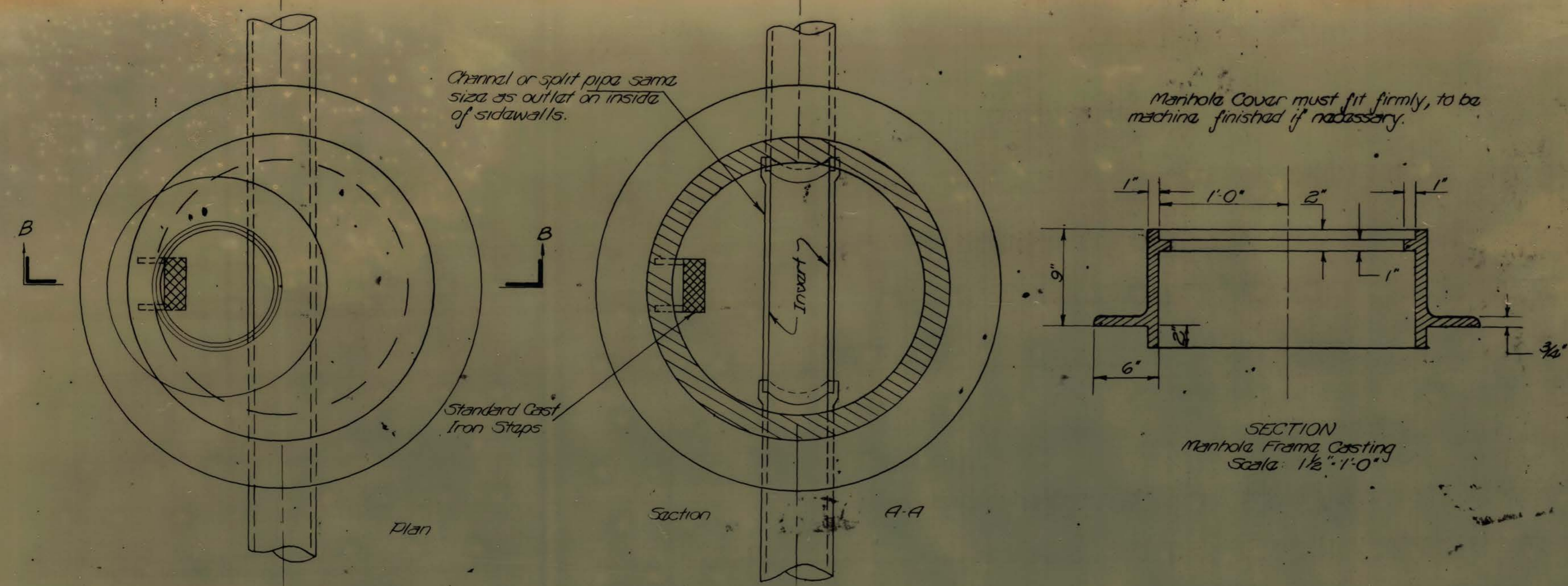
DIRECTOR OF ENGINEERING: *[Signature]*

CHIEF ENGINEER: *[Signature]*

APPROVED B.P.R.: *[Signature]*

COMMISSIONER: *[Signature]*

STANDARD SHEET M.S. 3-A



NOTES

All concrete pipe shall meet the requirements of A.S.T.M. Specifications, designation C76-57T, Class III.

The section shown may be used in any combination to produce a manhole of desired depth.

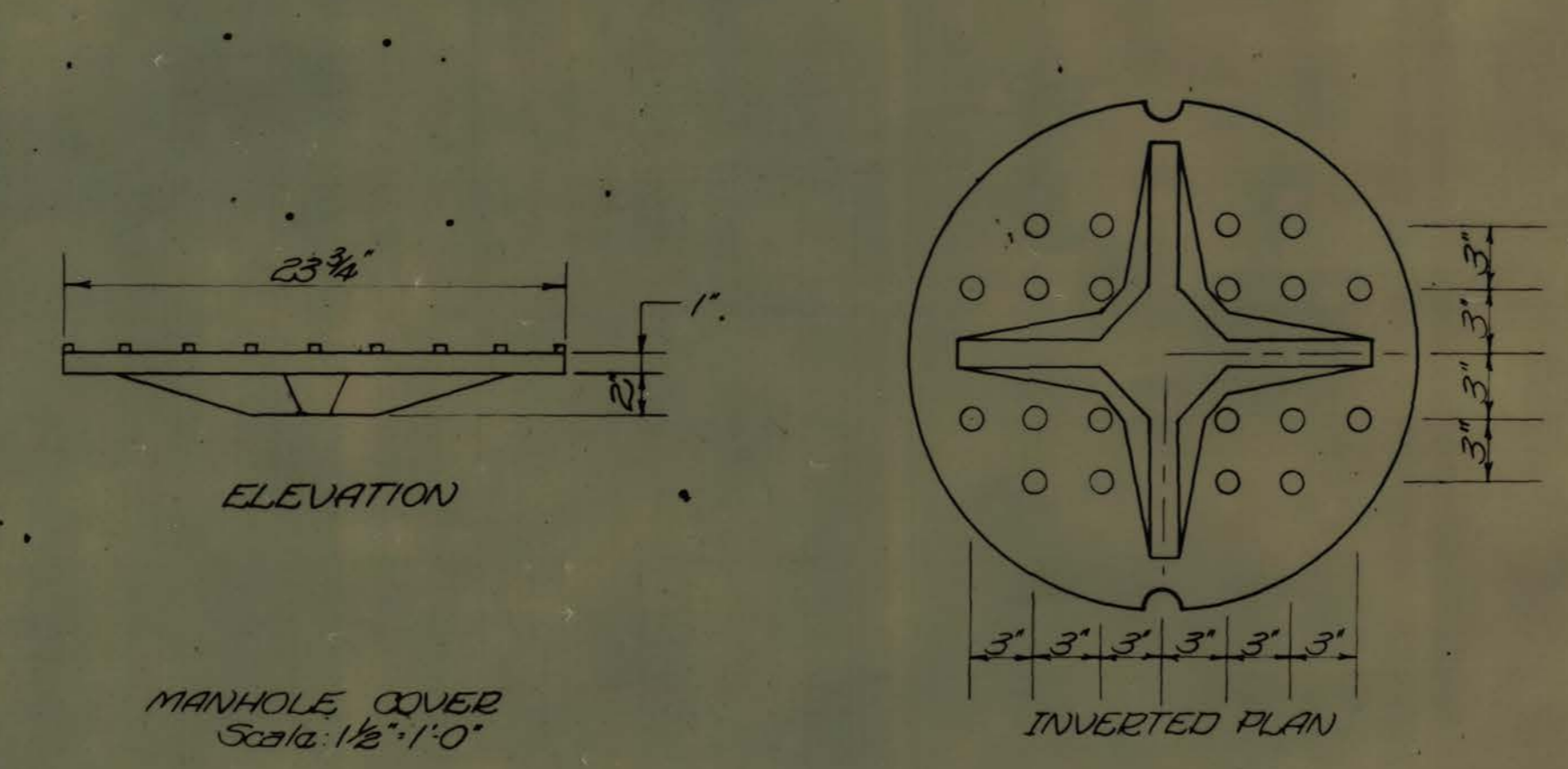
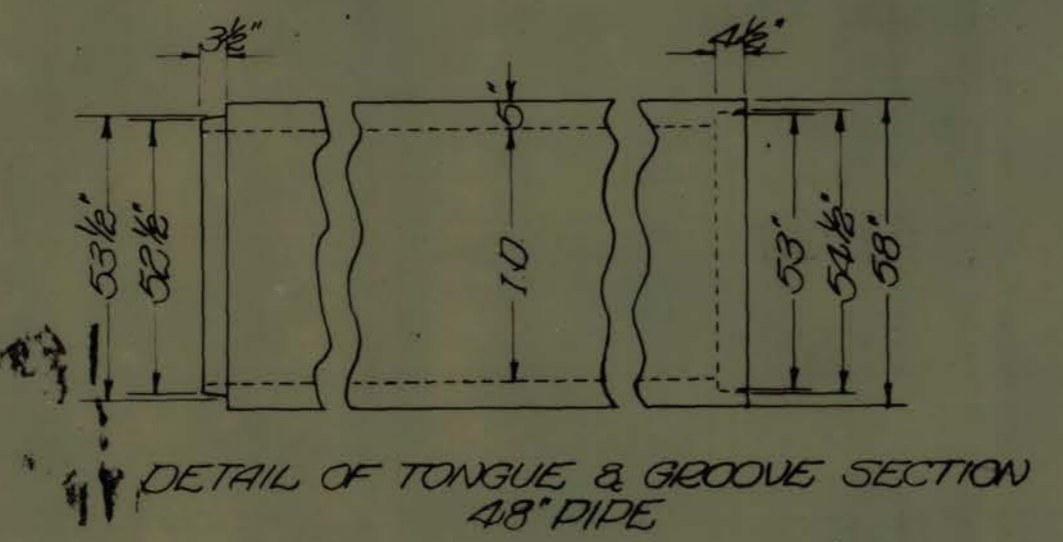
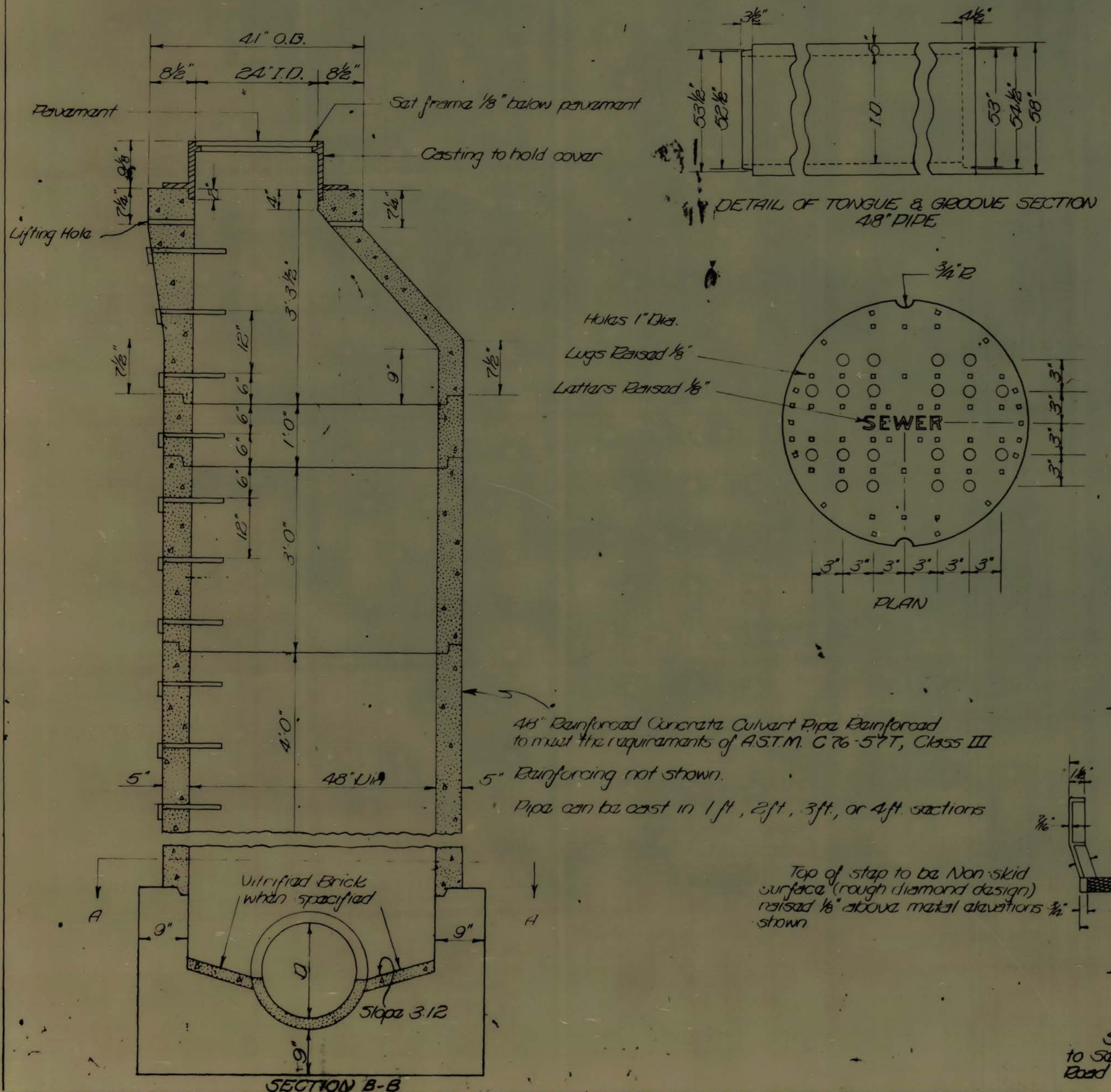
The tapered top section shall be manufactured and meet the same requirements as the concrete pipe.

Lifting holes and the circumferential notch as shown is for handling of top section.

Drawing shows pipe entering and leaving Manhole in a straight line. However, the pipes may enter or leave at any angle or place as called for or shown on the plans.

The footer up to the joint shown shall be Class A Concrete, Air Entrained.

Castings are to be of the design shown and are to be of Gray-Iron meeting the requirements of Sect. 3.9.6 of the West Virginia State Road Commission Specifications of 1960 for Gray-Iron Castings.



Steps may be either the Cast Iron Step or the Wrought Iron Step as shown.

The precast sections of pipe and the manhole casting shall be set in a cement mortar composed of one part of cement and two parts mortar sand.

The forming of the seat in the footing may be by the use of a section of the precast pipe or by means of a jig.

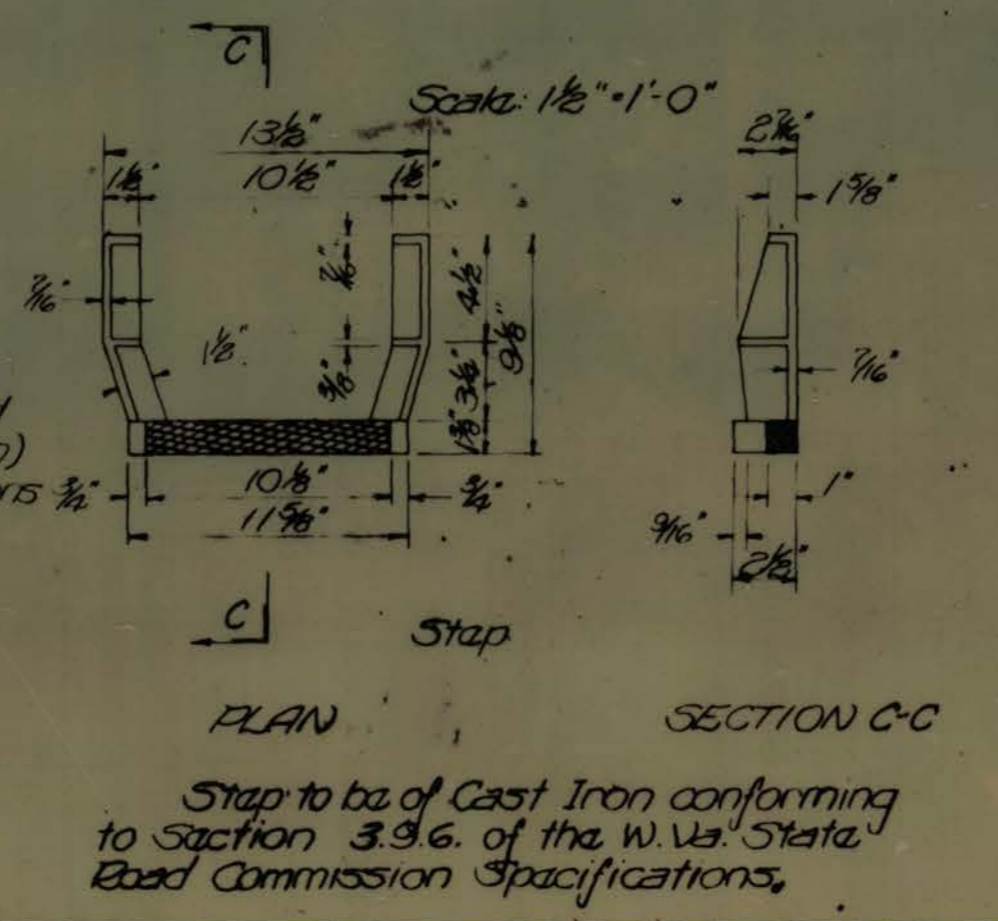
Pipe at elevations other than shown may be joined to the manhole by cutting a hole the size of the connecting pipe in the manhole, inserting the pipe the thickness of the manhole shell and closing all openings around the connecting pipe with a cement mortar composed of one part cement and two parts of mortar sand.

Minimum height of bench wall above flow line of pipe is 25% of the diameter of the pipes.

The bearing area of the frame and cover shall be so fitted and finished as to provide a firm and even seat for the entire cover in the frame. No projections shall exist on bearing areas of either casting, and the cover shall seat in its frame without rocking.

Bid Items for Manhole Frame and Cover (Precast Type) will be:

Item 114-3	Manholes Complete, except Casting	per each.
Item 113-3	Manhole Frame and Cover Casting	per each.



THE STATE ROAD COMMISSION OF WEST VIRGINIA

STANDARD DETAIL

MANHOLE—FRAME & COVER

(PRECAST TYPE)

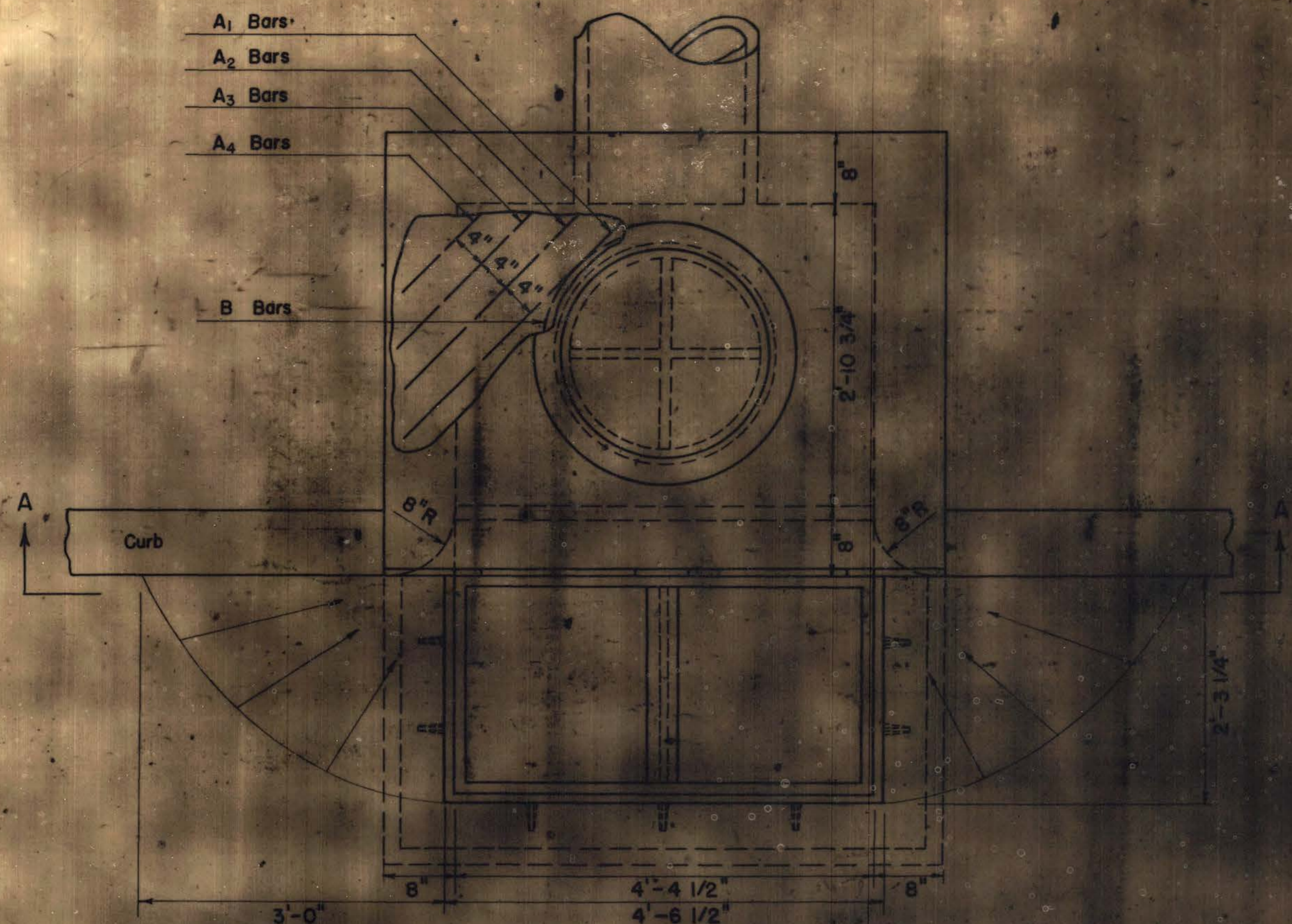
PREPARED—11/20/58

REVISIONS

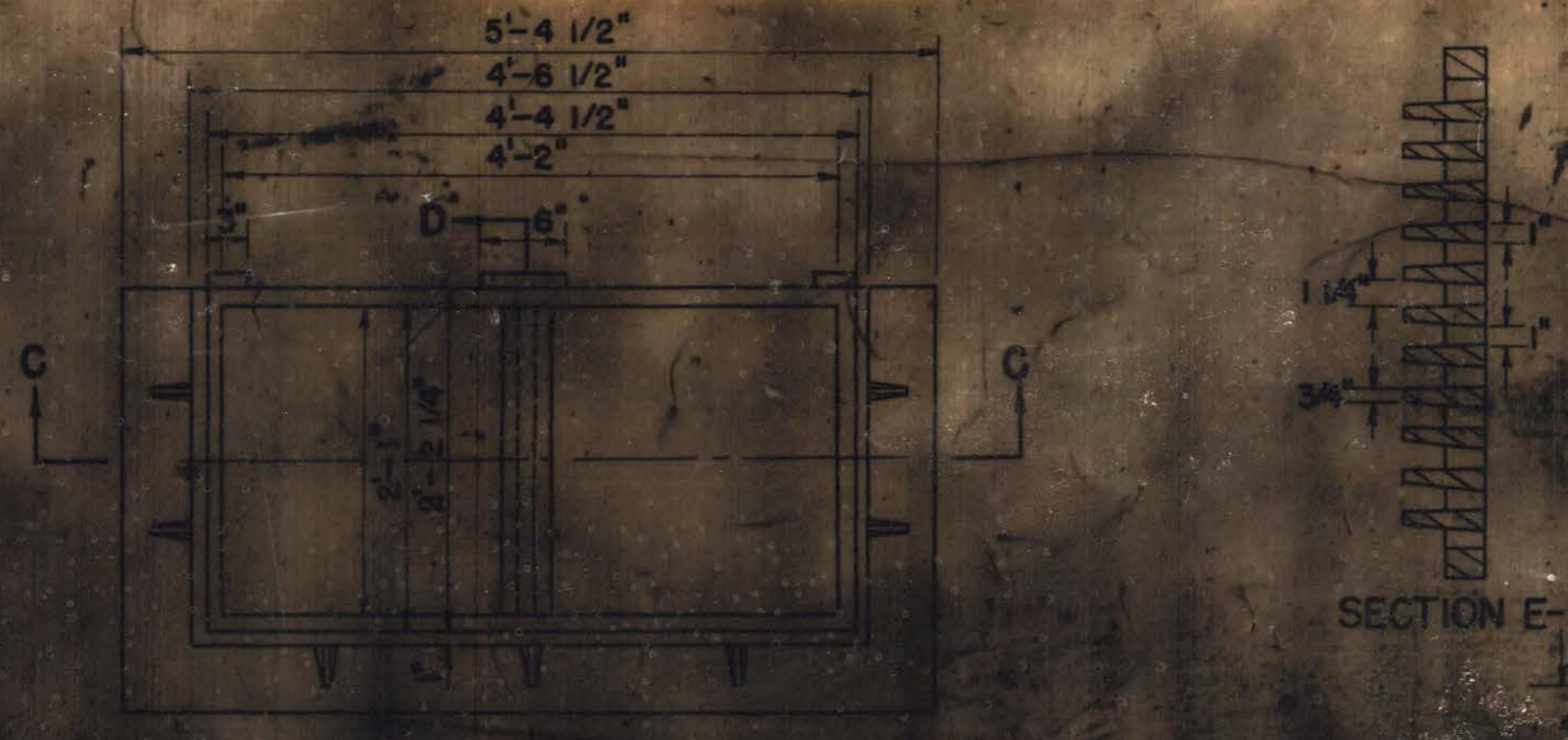
MAY 14, 1959	
DECEMBER 7, 1959	
JANUARY 23, 1961	
OCTOBER 10, 1962	
NOVEMBER 16, 1963	
JULY 21, 1965	

APPROVED B.P.R.

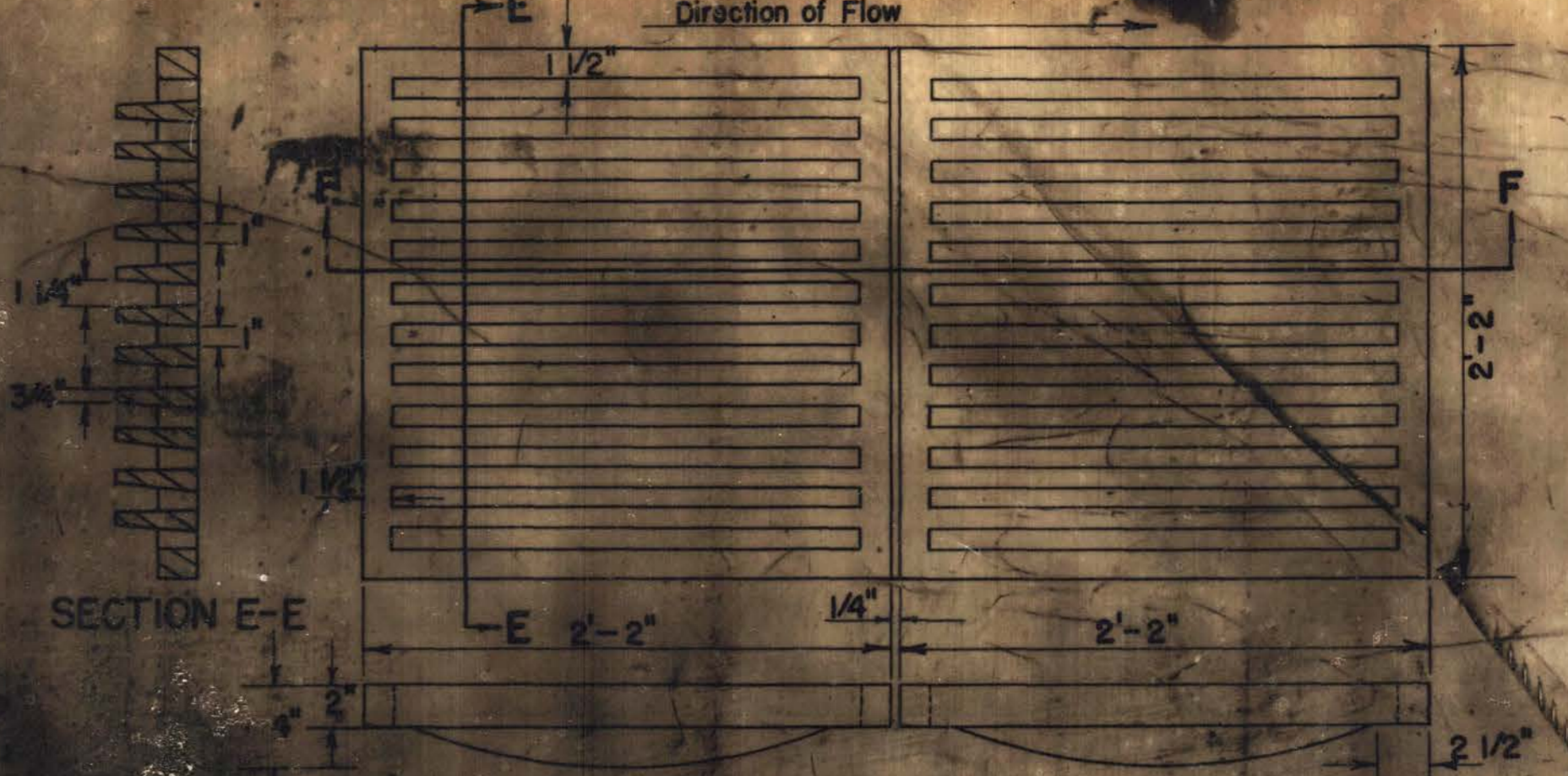
STANDARD SHEET M.S.3-B



PLAN
Scale: 1"=1'-0"



SECTION C-C
Scale: 1"=1'-0"



SECTION E-E
SECTION F-F
TWIN GRATING

NOTES

The cost of furnishing and placing all Concrete, Reinforcing Steel Bars, etc. shall be included in the unit price bid for Item 114-9, Curb Drop Inlet Complete, Except Casting.

Unit price bid for Item 114-9, Curb Drop Inlet Complete, except Casting, will be for all depths up to and including an H of .5ft. Inlets of a depth greater than an H of .5ft. will be paid for at the rate of 0.61 C.Y. of Class A Concrete for each additional foot of depth.

All concrete to be Class A Concrete, air entrained.

The type and size of pipe to be used for inlets and outlets for the curb inlet is to be of the type and size as called for on the plans.

Drawing shows pipe entering one side of curb inlet, however, pipes may enter any or all sides as called for on the plans.

When the bell of concrete pipe is placed in the curb inlet, the inside of the bell shall be filled with concrete up to the flow line.

The center of reinforcing steel is to be placed 2 inches from edge of concrete unless otherwise shown.

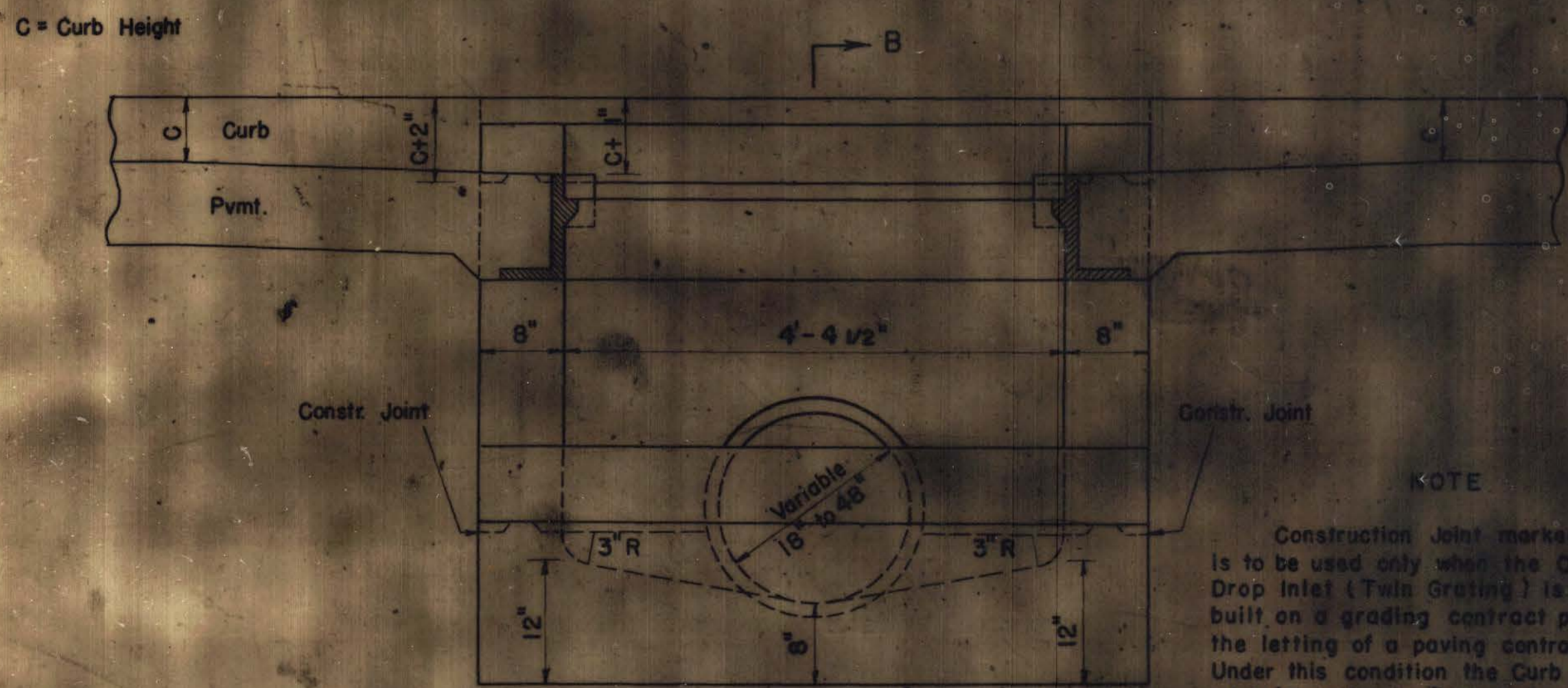
Reinforcing steel shall be new billet steel of intermediate grade of the size and shape as shown.

Castings are to be of the design shown and are to be of Grey Iron meeting the requirements of Sect. 3.9.6, of the West Virginia State Road Commission Specifications of 1960 for Grey Iron Castings.

All exposed edges at construction joints to be beveled three-fourths (3/4) inch.

The face of the Curb Drop Inlet next to the pavement shall be of the same cross section as the adjoining curbs and shall be built in line and grade with the same.

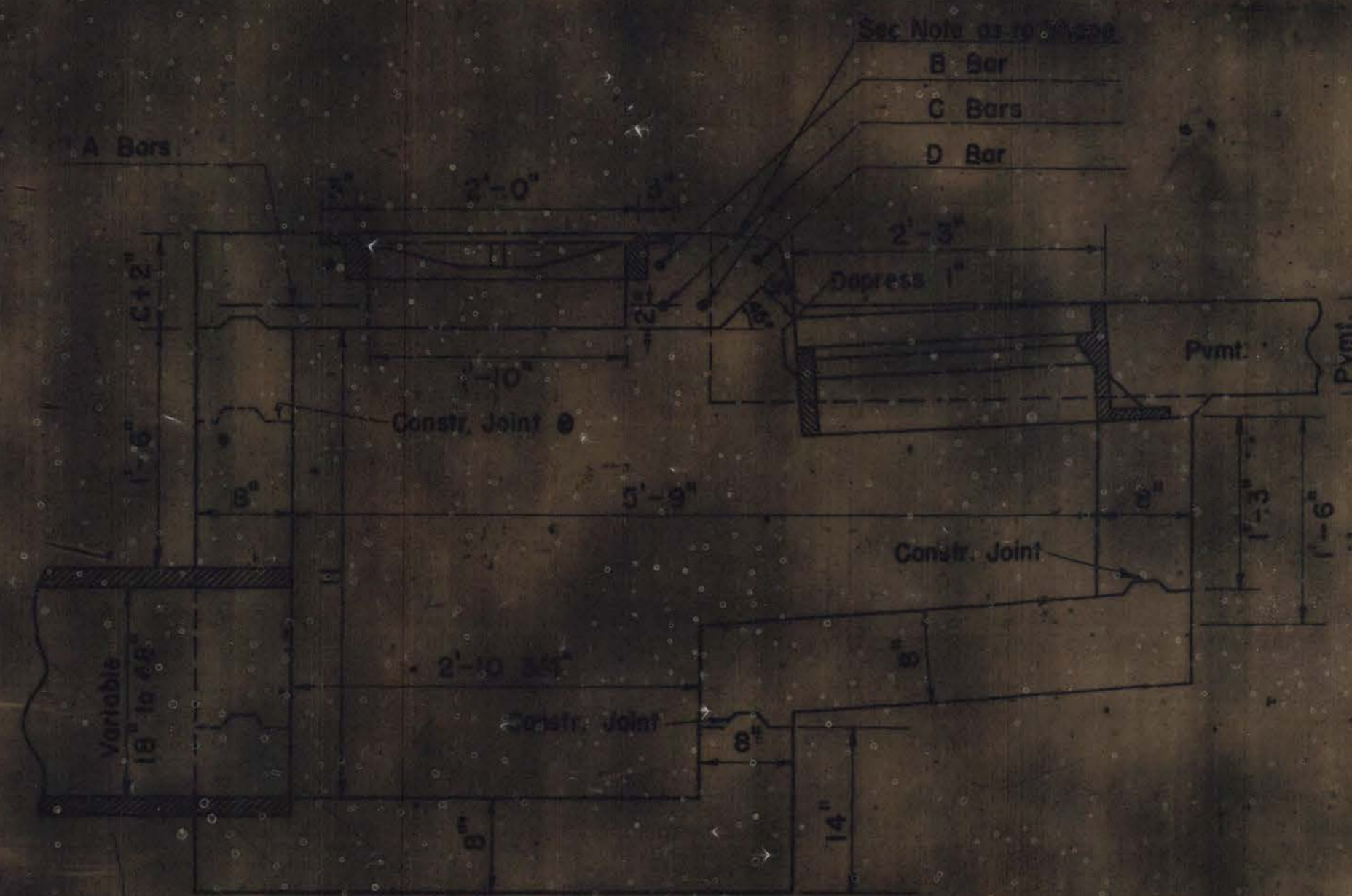
Bid Items for Curb Drop Inlet (Twin Grating) will be:
 Item 113-4 Manhole Frame and Cover Casting (Ring Type), per each.
 Item 113-2 Drop Inlet Castings, per each.
 Item 114-9 Curb Drop Inlet Complete, Except Casting, per each.



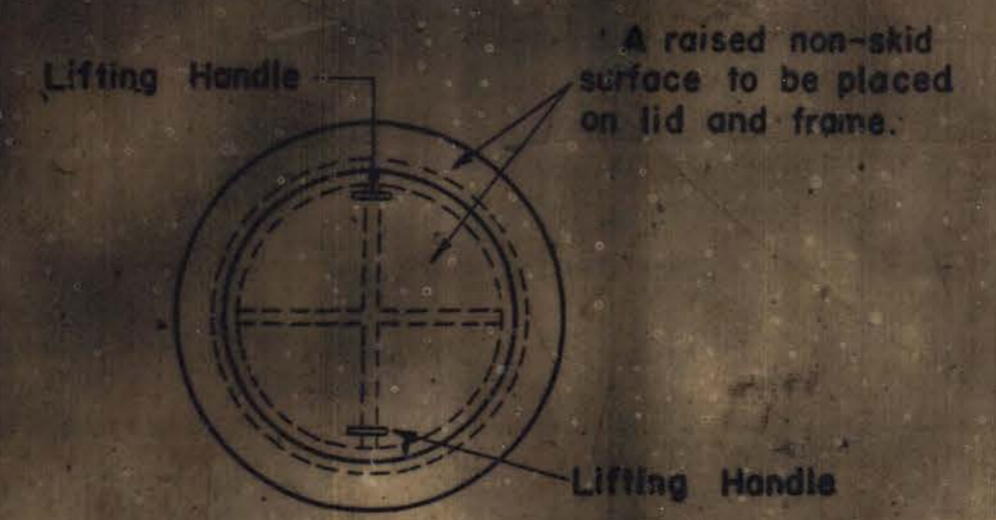
SECTION A-A
Scale: 1"=1'-0"

NOTE

Construction Joint marked "C" is to be used only when the Curb Drop Inlet (Twin Grating) is to be built on a grading contract prior to the letting of a paving contract. Under this condition the Curb Drop Inlet (Twin Grating) shall be built up to the construction joints just under the pavement elevation and capped with a cover made of 2" timbers. The cost of the cover to be included in the unit price bid for Item 114-9, Curb Drop Inlet Complete, Except Casting.



SECTION B-B
Scale: 1"=1'-0"



DETAIL OF RING AND COVER CASTING
Scale: 3/4"=1'-0"

BILL OF STEEL						
Mark	Size	Bar No.	Length	Weight	Type	
A 1	5/8"	5	2	3'-11"	8	Straight
A 2	5/8"	5	2	3'-3"	7	Straight
A 3	5/8"	5	2	2'-7"	5	Straight
A 4	5/8"	5	2	1'-11"	6	Straight
B	5/8"	5	1	8'-0"	8	Bent
C	1"	8	2	5'-0"	27	Straight
D	5/8"	5	1	5'-0"	5	Straight
				Total	66	

ESTIMATE OF QUANTITIES			
Item	Unit	Amount	
Class A Concrete	C.Y.	4	
Reinforcing Steel Bars	Lb.	66	
Curb Inlet Complete, except Castings	Each	1	
Ring and Cover Casting	Each	1	
Twin Grating and Frame Casting	Each	1	

Above tables are to be used for estimating purposes only.

THE STATE ROAD COMMISSION OF WEST VIRGINIA
 STANDARD DETAIL
 CURB DROP INLET
 (TWIN GRATING)

PREPARED 9/11/59
 REVISIONS
 JANUARY 23, 1961
 OCTOBER 10, 1962
 NOVEMBER 16, 1963

[Signature]
 DIRECTOR OF ENGINEERING

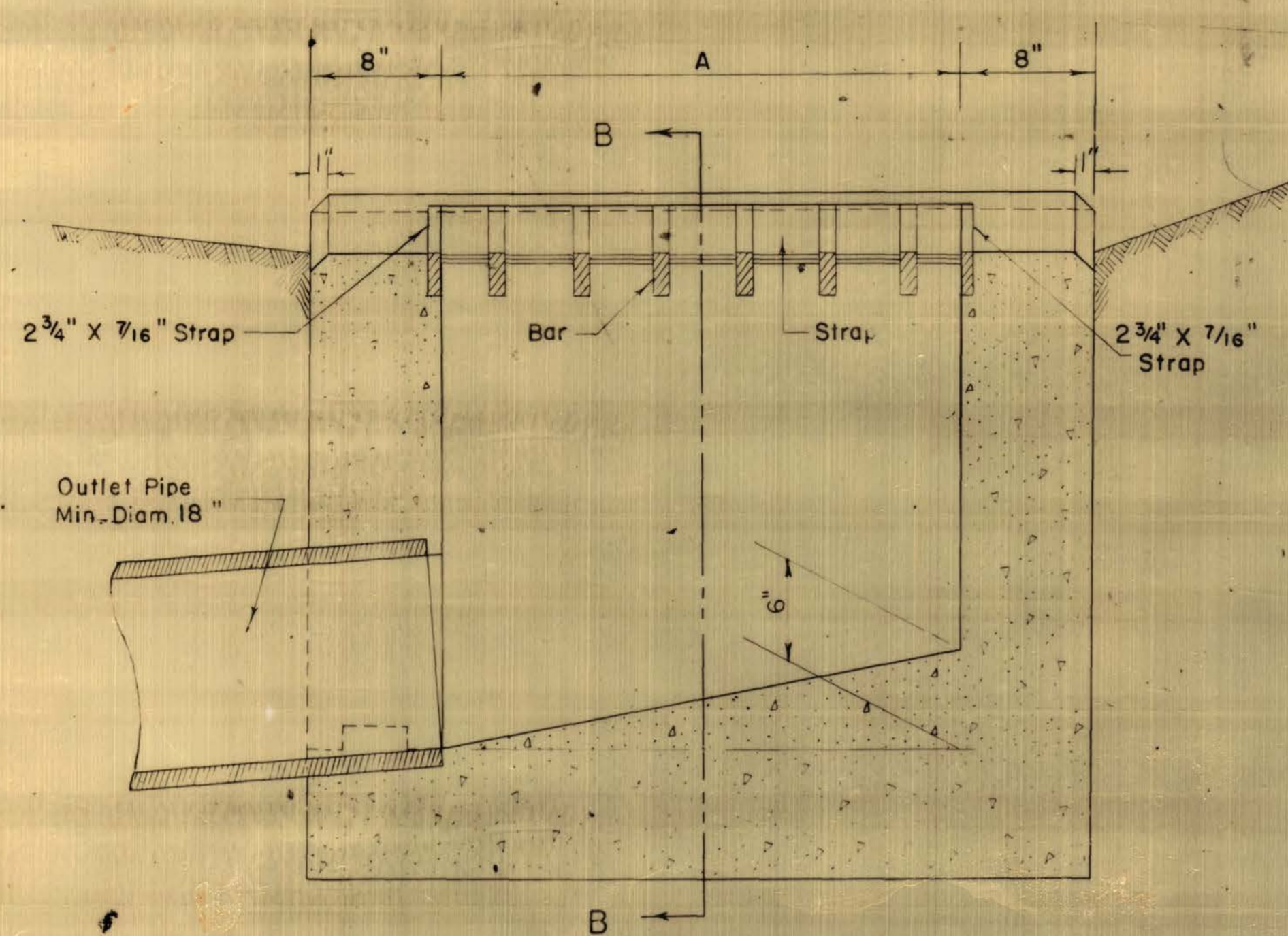
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[Signature]
 DEPUTY COMMISSIONER AND
 STATE HIGHWAY ENGINEER

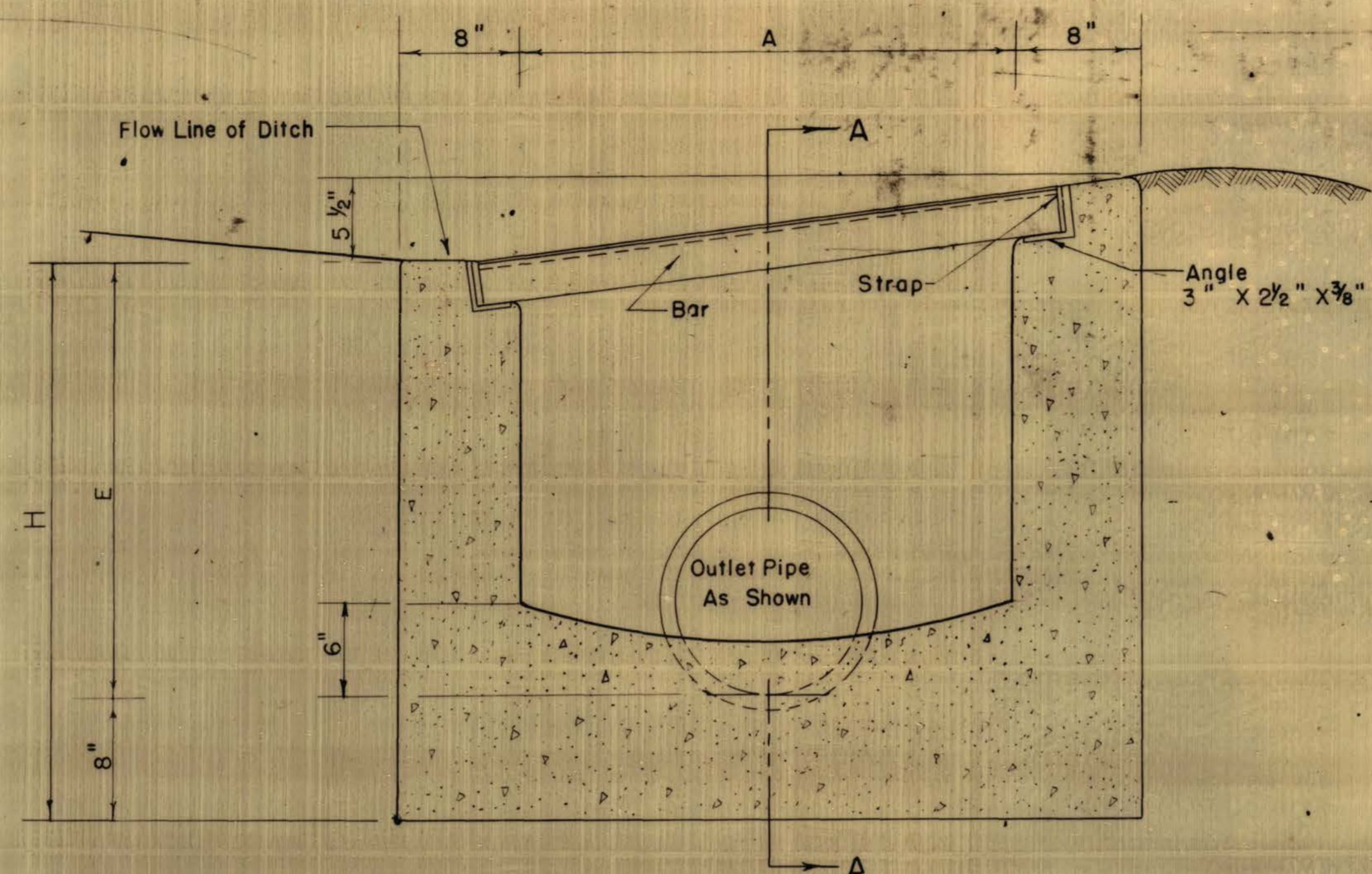
[Signature]
 COMMISSIONER

STANDARD SHEET M.S. 5-D

Pipe Size	A	B	C	D	E (Min)	F	No. X	Wt. Grate	Wt. Frame
18"	2'-8"	3'-2"	2'-7 1/2"	3'-1 1/2"	2'-0"	3'-3 1/2"	7	223	62
21"	2'-8"	3'-2"	2'-7 1/2"	3'-1 1/2"	2'-3"	3'-3 1/2"	7	223	62
24"	2'-8"	3'-2"	2'-7 1/2"	3'-1 1/2"	2'-6"	3'-3 1/2"	7	223	62
27"	3'-0"	3'-6"	2'-11 1/2"	3'-5 1/2"	2'-9"	3'-3 1/2"	8	279	69
30"	3'-6"	4'-0"	3'-5 1/2"	3'-11 1/2"	3'-0"	4'-3 1/2"	9	357	80
33"	3'-9"	4'-3"	3'-8 1/2"	4'-2 1/2"	3'-3"	3'-3 1/2"	10	419	85
36"	4'-0"	4'-6"	3'-11 1/2"	4'-5 1/2"	3'-6"	3'-3 1/2"	11	486	90
42"	4'-6"	5'-0"	4'-5 1/2"	4'-11 1/2"	4'-0"	4'-3 1/2"	12	587	101
48"	5'-0"	5'-6"	4'-11 1/2"	5'-5 1/2"	4'-6"	3'-3 1/2"	14	748	112



SECTION A-A



SECTION B-B

Wall and footer thickness eight (8) inches. Construction between the footer and the top of the pipe may be of brick or precast concrete block. All other construction shall be of Class "B" Concrete. Inlet may be precast with lifting hooks out of sight after placing.

Inverts shall be shaped for self-cleaning, and shall be monolithic with footer. A Construction Joint, approx. 2"x4", will be used at the top of self-cleaning invert. When precast construction is used, this construction joint will be omitted. When the inlet is used for more than one pipe, the invert shall be shaped to provide smooth transitions for the flow line.

Grate is to be depressed 3" below flow line of ditch at the up stream edge where paved gutter called for.

Omit longitudinal slope and dyke, when placed at the low point in sag vertical curve.

All concrete is to be Class B Concrete air entrained.

The type and size of pipe to be used for inlets or outlets for the ditch drop inlet is to be the type and size as called for on the plans.

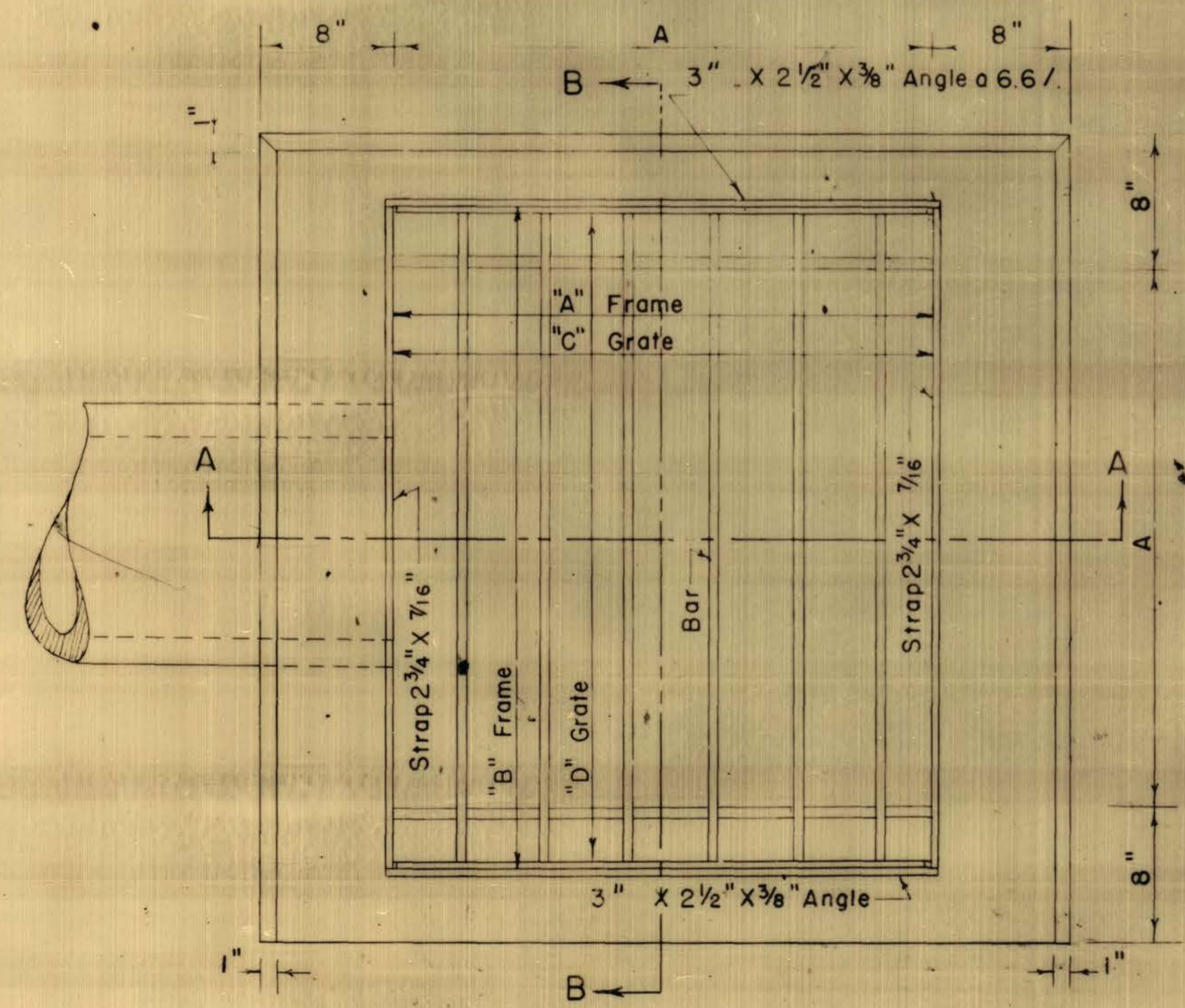
Drawing shows pipe entering one side of drop inlet, however pipes may enter any or all sides as called for on the plans.

When the bell end of concrete pipe is placed in the drop inlet, the inside of the bell shall be filled with concrete up to the flow line.

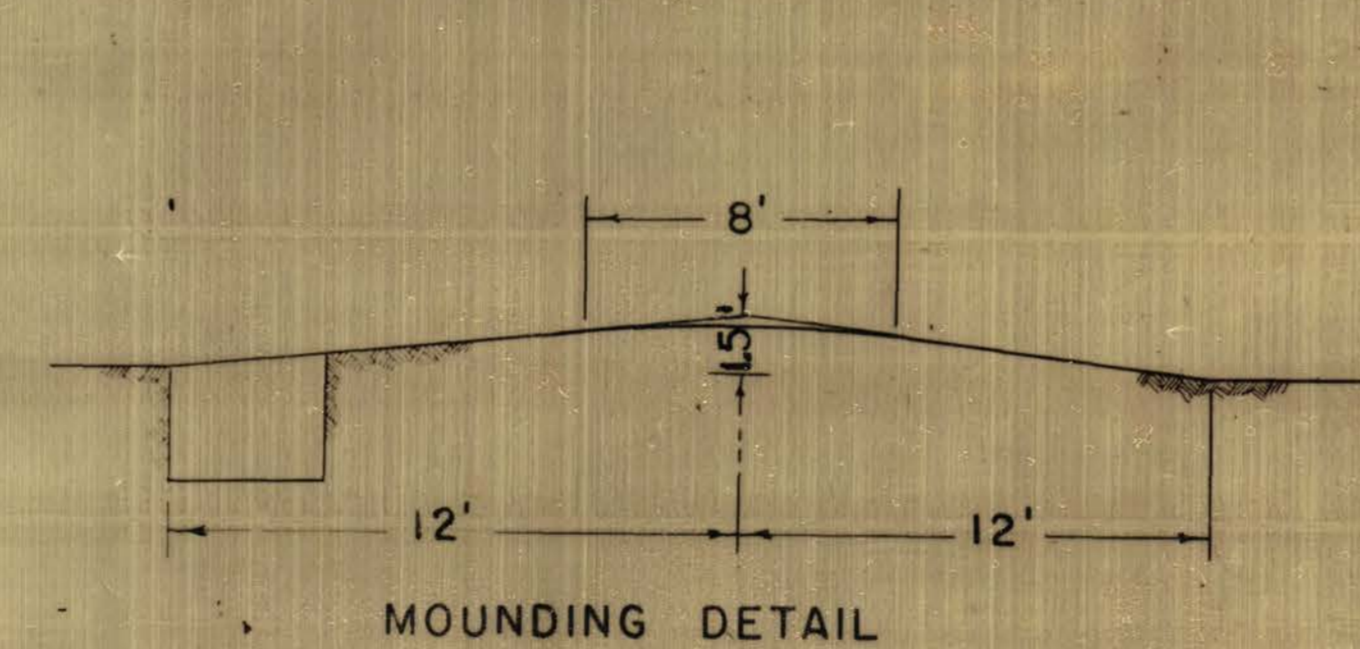
Unit price bid for Item 114-2(1) Ditch Drop Inlet complete including Grating will be for all depths up to and including an H of 6 ft. Inlets of a greater depth than an H of 6 ft. will be paid for at a rate of 0.33 C.Y. of Class B Concrete for each additional foot of depth.

All grate and frame members shall meet the requirements of ASTM Specification A-373. X members shall be joined to the end straps with 3/8" welds on both sides of each end. Frame members shall be joined with 3/8" welds at the outsides of the corners. The upper portion of the inlet shall be cast with the frame in place or placed in the fresh concrete immediately after casting. The grate and the inside of the frame shall be painted with Type A Asphalt-Base Emulsion meeting the requirements of ASTM Specification D 1187-51T. Members and welds shall be cleaned before painting.

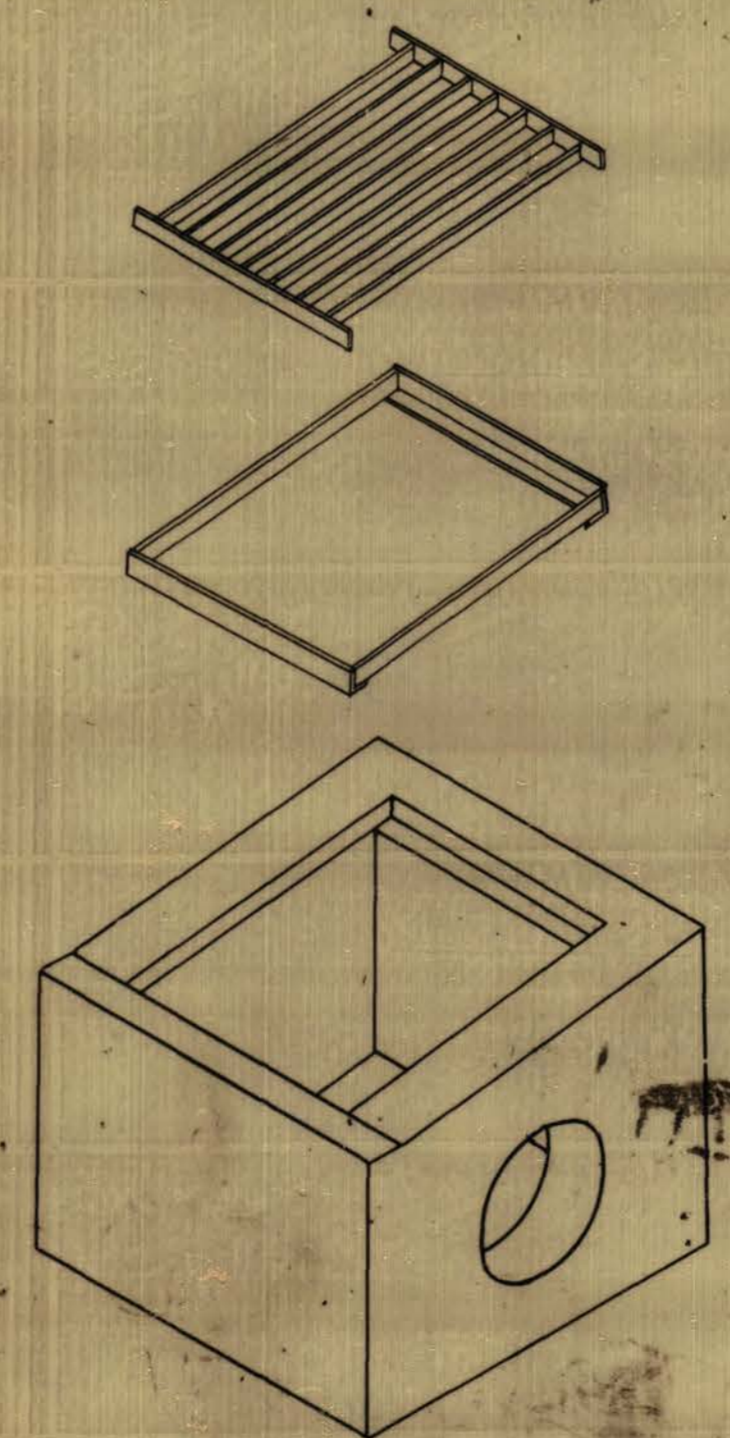
Bid Item for Ditch Drop Inlet including Grating will be Item 114-2(1), Ditch Drop Inlets including Gratings, per Each.



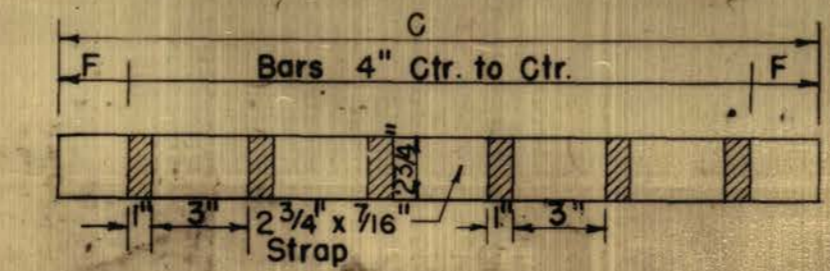
PLAN



MOUNDING DETAIL



EXPLODED DETAIL



SECTION THROUGH GRATE

THE STATE ROAD COMMISSION OF WEST VIRGINIA
STANDARD DETAIL
DITCH DROP INLET

PREPARED JAN. 12, 1960

REVISIONS
 JANUARY 26, 1961
 February 2, 1961
 October 5, 1961

S. O. Madrox
 DIRECTOR OF ENGINEERING

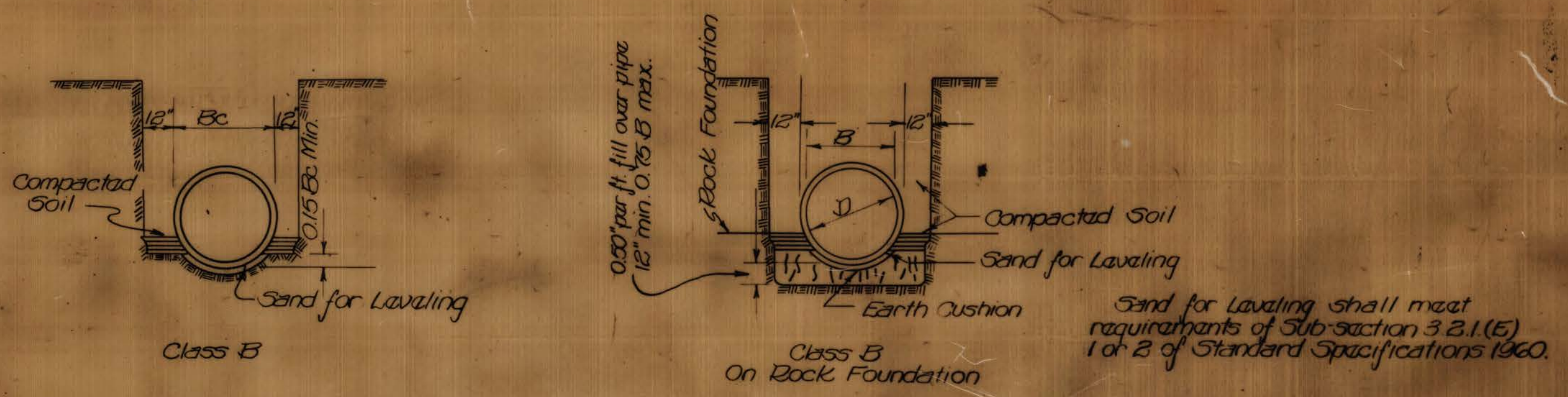
P. B. Hanes
 COMMISSIONER

APPROVED B.P.R. _____

DEPUTY COMMISSIONER AND STATE HIGHWAY ENGINEER

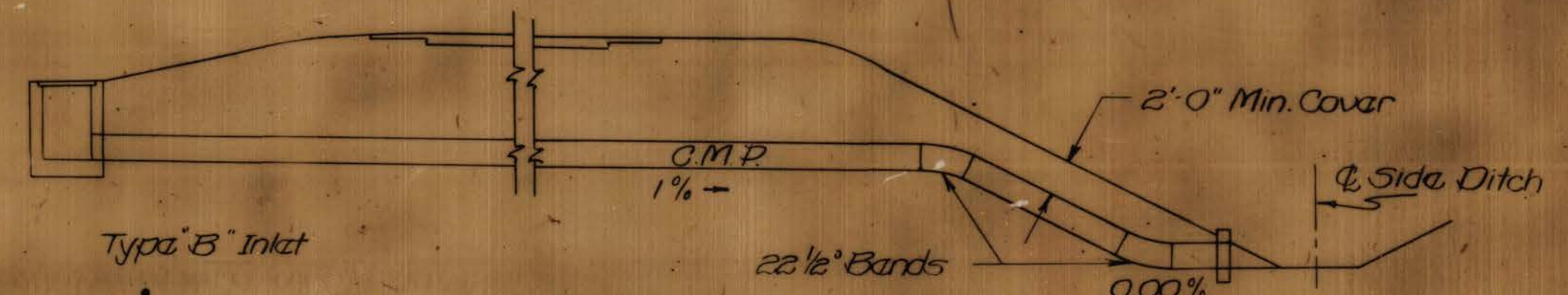
STANDARD SHEET M.S. 5-E

MICROFILMED



TYPICAL PIPE BEDDING

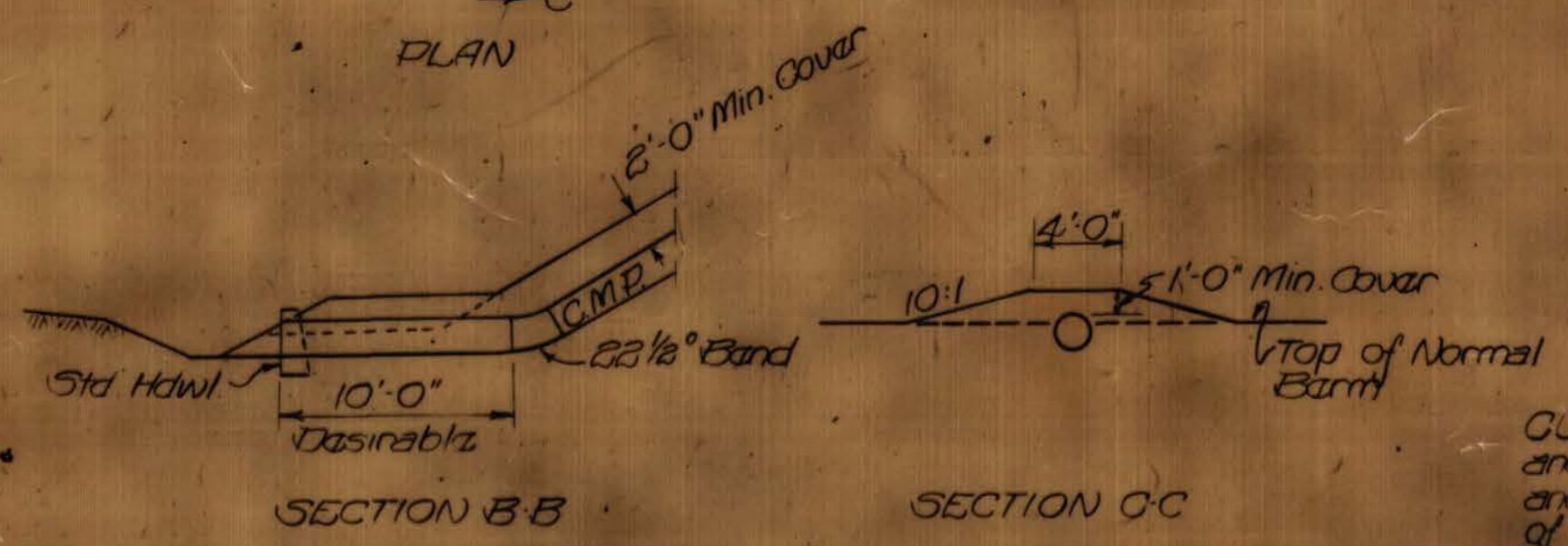
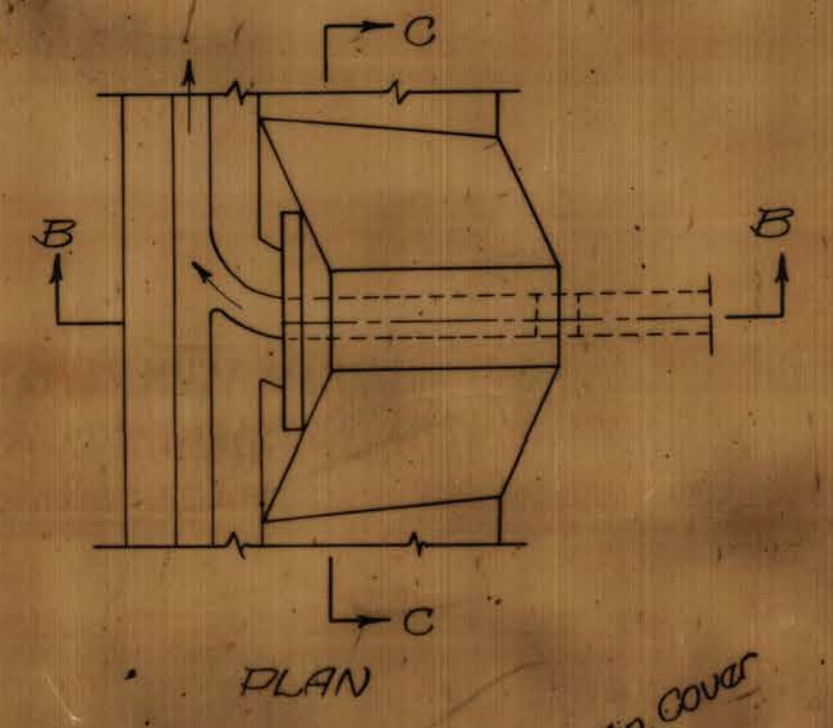
Note: Cost of sand to be included in cost of structure excavation



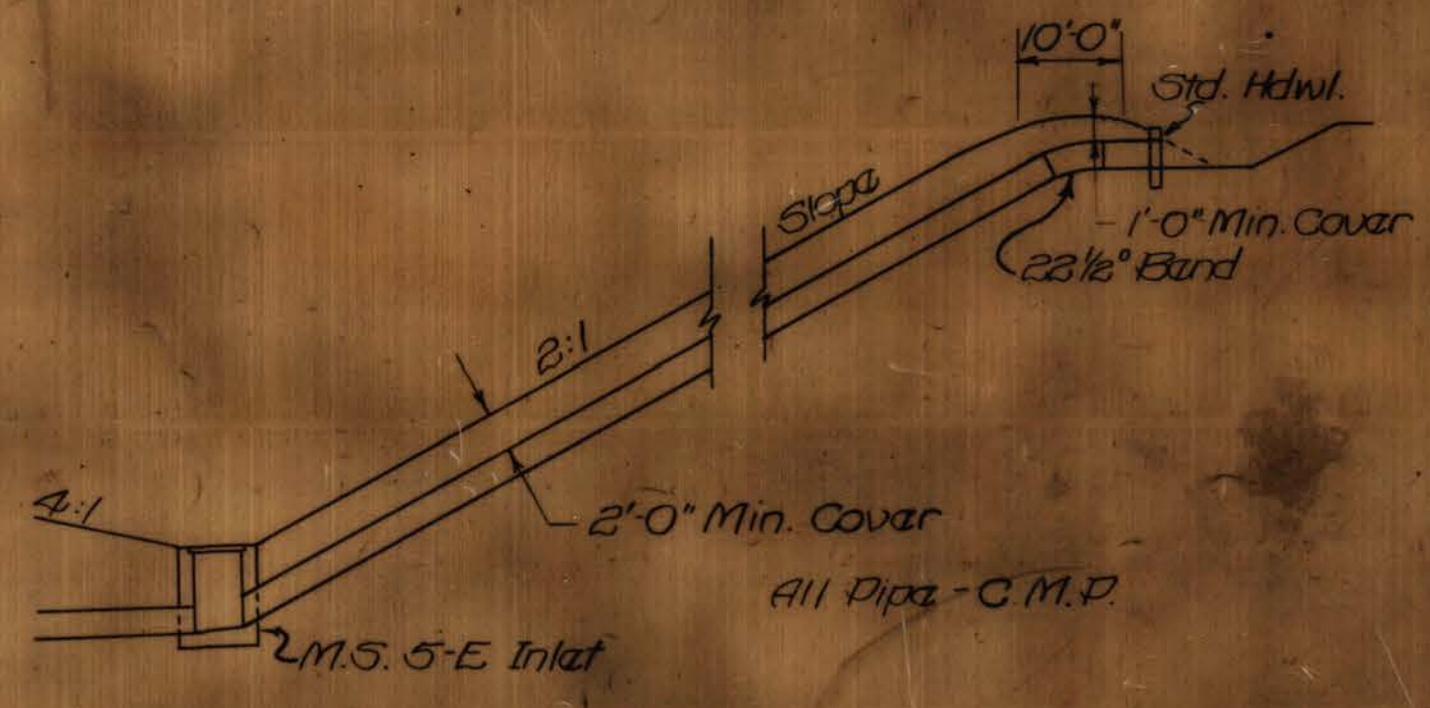
Typical Inlet

MEDIAN OUTLET IN HIGH FILL

To be used where called for on the plans or as shown on the cross-sections.



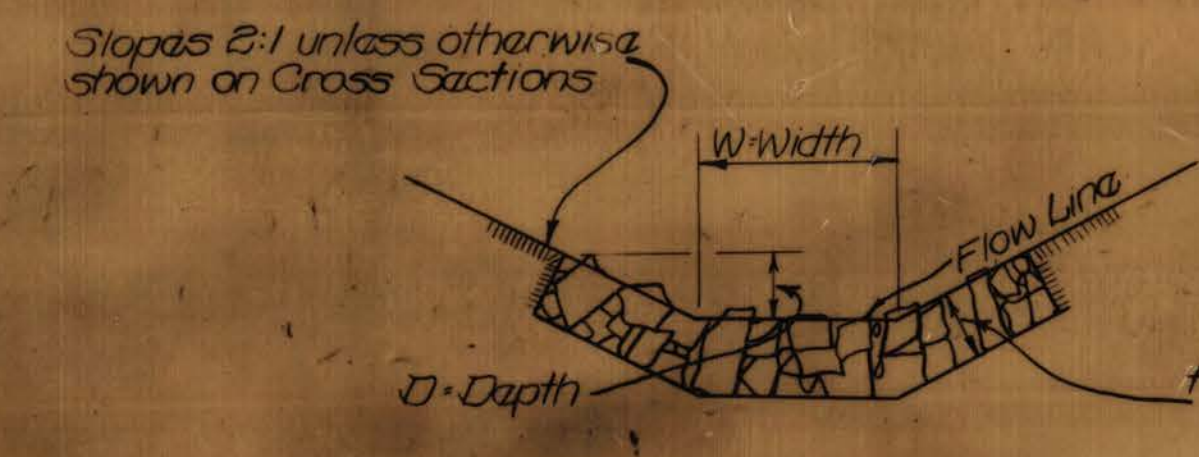
OUTLET THROUGH BERM



PIPE FLUME

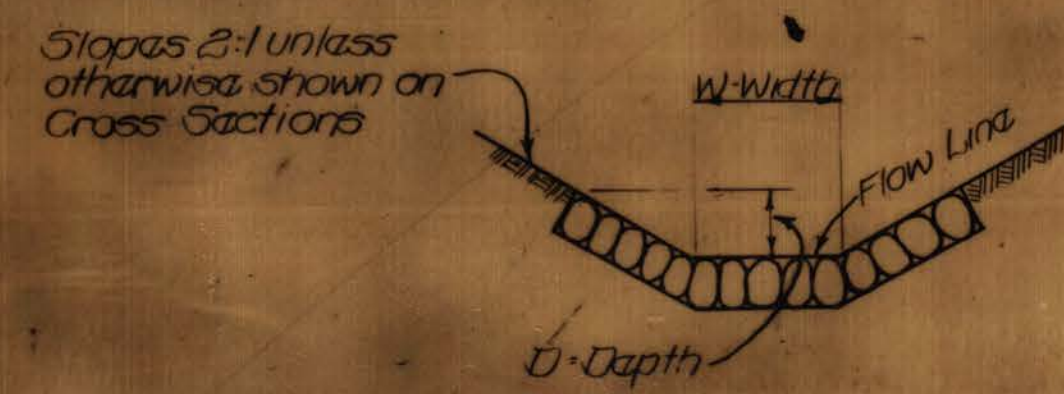
Earth Cut or Shallow Rock Cuts

CULVERTS & STORM SEWERS: Bands, Teas, Wyes, Reducers, Increases and Connections listed on the plans are for the convenience of the contractor and are not pay items. Payment will be the total length of pipe installed from face of inlet or headwall to face of inlet or headwall. This payment will be full compensation for all pipe spackets included. Contractor will be responsible for providing proper Earth embankment and backfill in the placement of all pipe culverts and storm sewers.



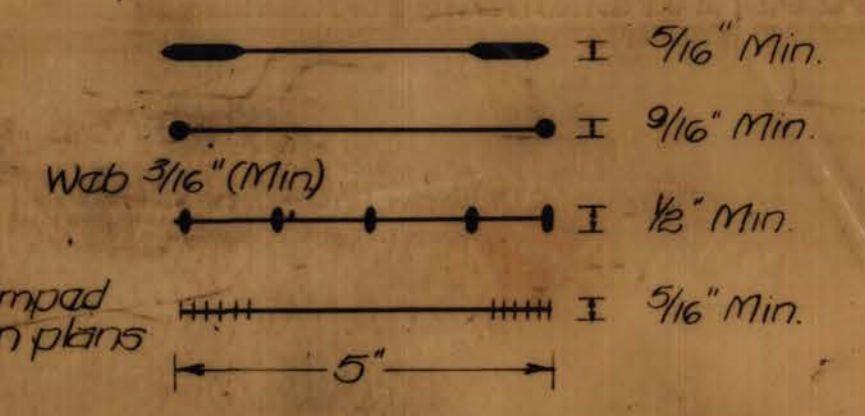
DUMPED ROCK GUTTER

Scale: 1/4" = 1'-0"
 Pay Item III-4-Dumped Rock Gutter per C.Y.



STONE GUTTER

Scale: 1/2" = 1'-0"
 Pay Item III-2 Stone Gutter per S.Y.

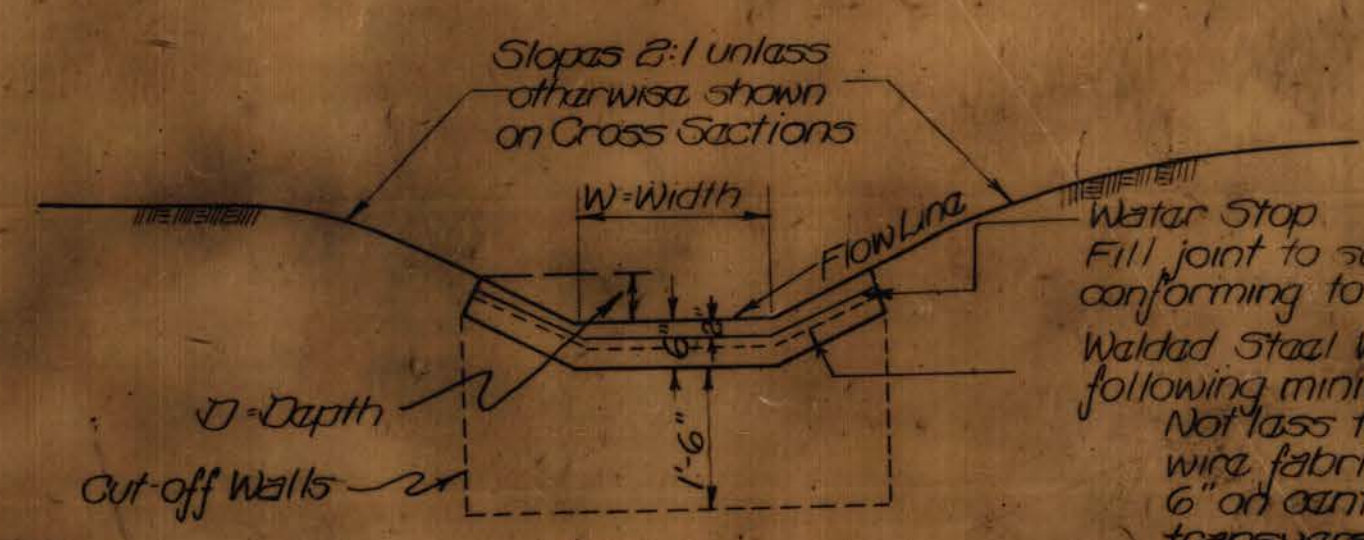


Waterstop shall meet ASTM Specifications as follows:

- Tensile Strength - ASTM D412-51T
- Elongation - ASTM D412-51T
- Hardness (60-85) - ASTM D676-59T
- Tear Resistance - ASTM D624-54
- Water Absorption - ASTM D570-54T
- Flexibility - No cracking at 20°F (Band 180° - 1/2" Mandrel)
- Weight - Not less than 0.67# per L.F.

When a paved gutter ties into structures provisions shall be made to place water stop in proper position and left in structure. In cases of existing structures groove 3/4" x 2" shall be left and filled with joint filler.

Water stops to be used only when called for on plans.

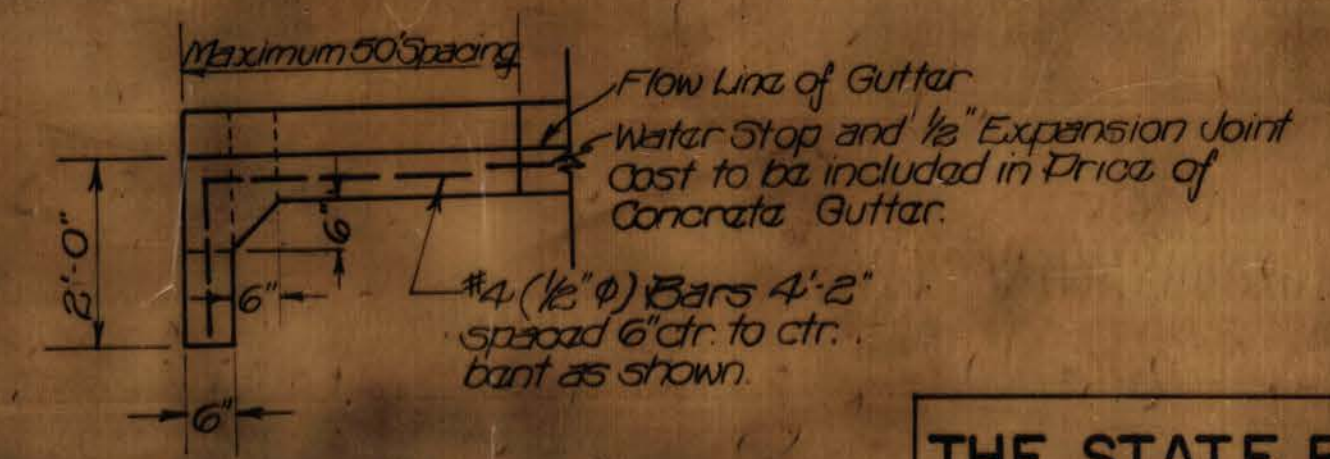


CONCRETE GUTTER

Scale: 1/2" = 1'-0"
 Pay Item III-1-Concrete Gutter Per S.Y.

Water Stop
 Fill joint to surface with joint filler conforming to S.B.C. Specification 3.5.9 (1960)
 Welded Steel Wire Fabric conforming to the following minimum requirements:
 Not less than 41 pound uniform wire fabric composed of 6 wires 6" on centers longitudinally and transversely.
 Reinforcement to be included in price of Concrete Gutter.

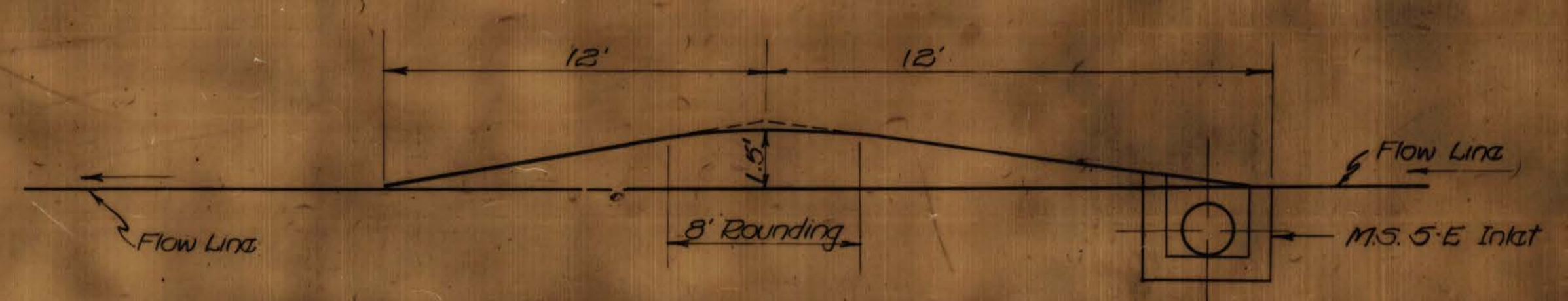
Water Stop shall be 5" wide, minimum web thickness 3/16". End section and for ribs no less than 1.67 web thickness.



Note: A Cut-off wall shall be constructed at the beginning and end of each paved gutter.

CUT-OFF WALL

Scale: 1/2" = 1'-0"
 (Included in cost of Concrete Gutter.)



MOUNDING DETAIL

Median and Side Ditches

THE STATE ROAD COMMISSION OF WEST VIRGINIA
STANDARD DETAIL
MISCELLANEOUS DRAINAGE
 (SHEET 1 OF 2)

PREPARED - 10-30-61

REVISIONS
Jan. 2 - 1962
OCTOBER 10, 1962
June 19, 1963
AUGUST 22, 1963

MICROFILMED

APPROVED B.P.R.

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 CHIEF ENGINEER

Burl A. Dargatzis
 COMMISSIONER

STANDARD SHEET M.S. 7-A