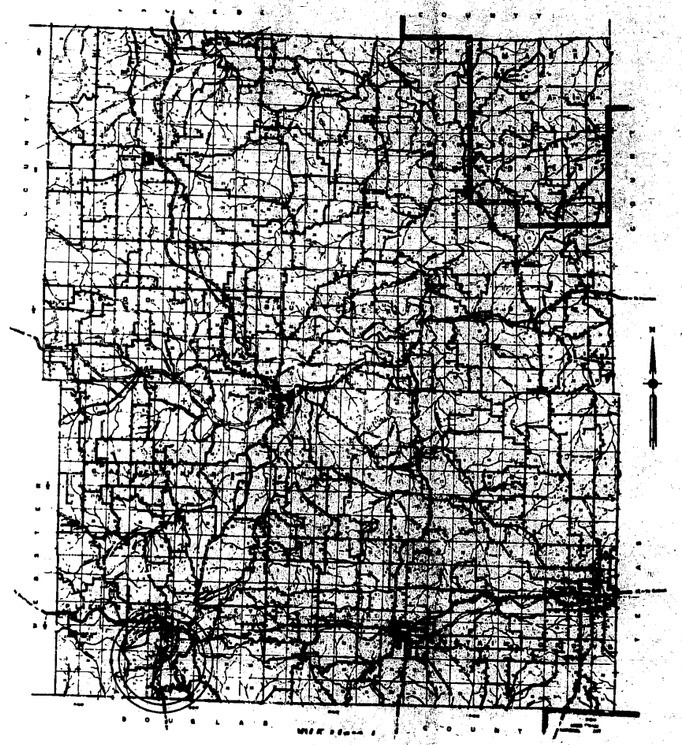
F-B-4

COUNTY
WRIGHT
STATE ROUTE NO.
5
PROJECT NO.
[redacted]
FG 360 (G)

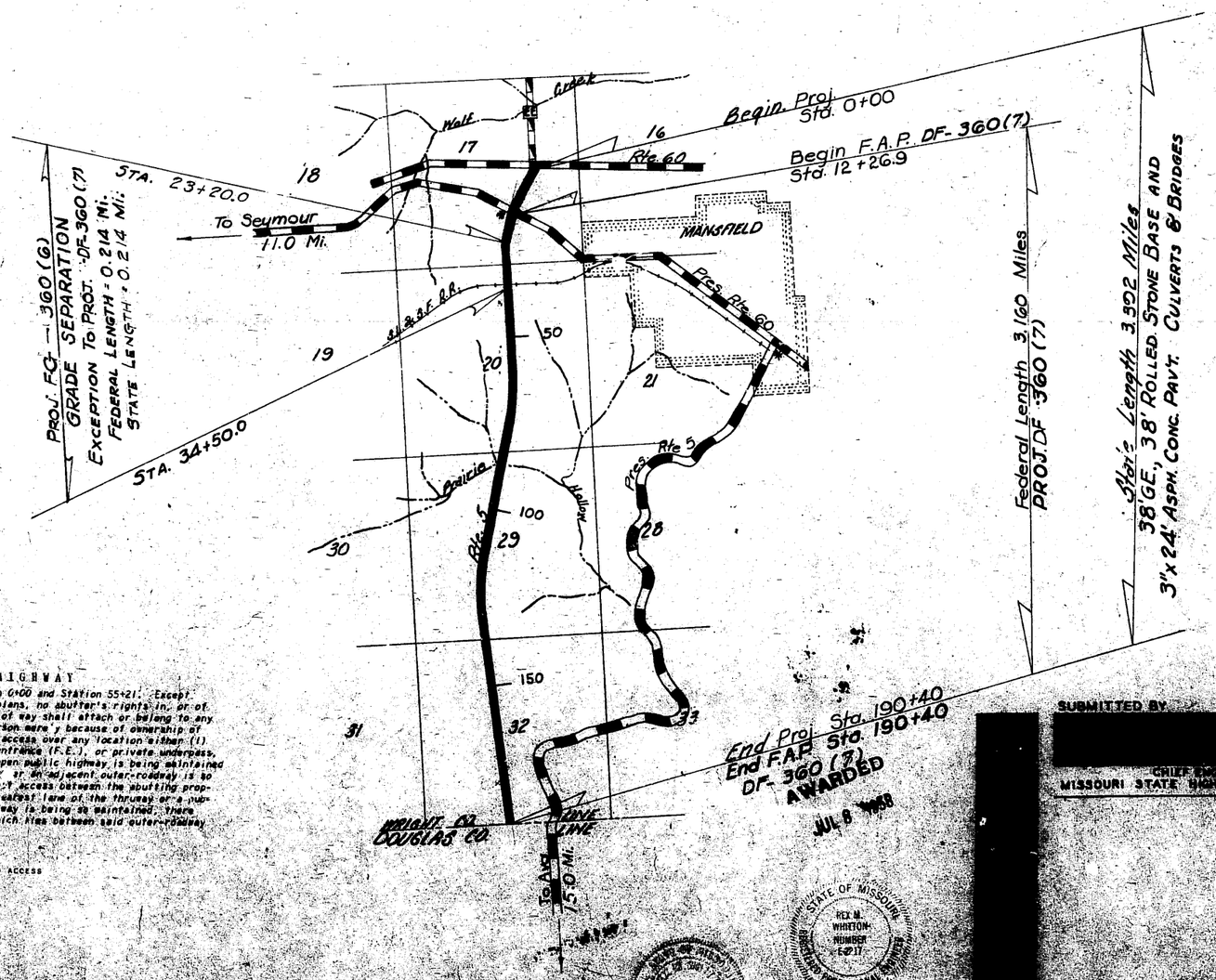
LOCATION MAP



MISSOURI
STATE HIGHWAY COMMISSION
PLAN AND PROFILE
OF PROPOSED
STATE ROAD

FEDERAL AID PROJECT

WRIGHT COUNTY



LIMITED ACCESS HIGHWAY

This shall be a limited-access highway between Station 0+00 and Station 55+21. Except at locations and as otherwise specifically shown on these plans, no abutter's rights in, or of direct access to, from, or across the highway or its right of way shall attach or belong to any property abutting on said section of highway, or to any person ever because of ownership of such abutting property. There shall be the usual right of access over any location either (1) shown on these plans as a property entrance (P.E.), field entrance (F.E.), or private underpass, or (2) where and when any such entrance, underpass, or an open public highway is being maintained by the governmental agency having authority thereto. When or an adjacent outer-roadway is so shown or maintained, there shall be the usual right of direct access between the abutting property and such outer-roadway, and along it to and from the nearest lane of the thruway or a public highway. However, during all times while an outer-roadway is being so maintained, there shall be no right of access over any part of an entrance which lies between said outer-roadway and the thruway.

----------LEGEND----------

BEGINNING AND ENDING OF LIMITED ACCESS

LIMITED ACCESS

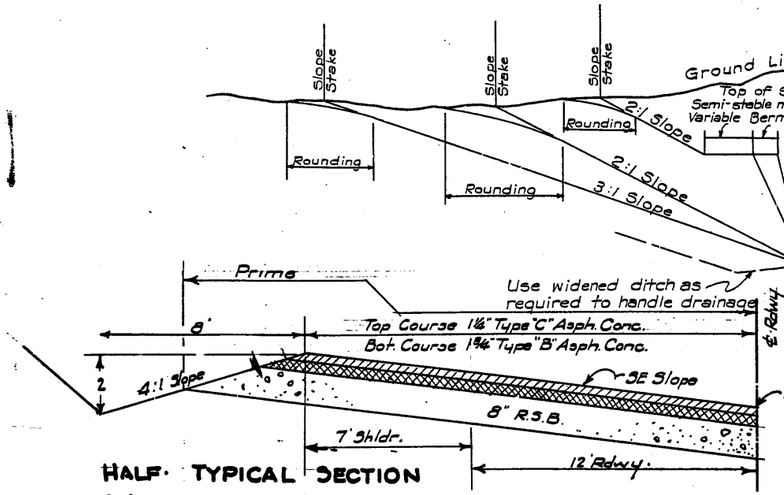
CONVENTIONAL SIGNS

STATE AND NATIONAL LINE	LEVEE
COUNTY LINE	CULVERTS
CITY, VILLAGE OR BOROUGH	DROP INLET
TOWNSHIP LINE	TROLLEY POLE
SECTION LINE	POWER POLE
GRANT LINE	TELEPHONE OR TELEGRAPH POLE
FENCE LINE	MANHOLE
GUARD RAIL	MISC.
UNFENCED PROPERTY	
RIGHT OF WAY LINE	GROUND ELEVATIONS
TRAVELED WAY	
RAILROAD	
RETAINING WALL	
BASE OR SURVEY LINE	

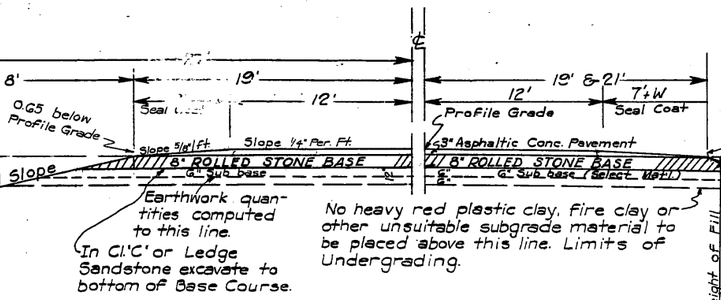
SUBMITTED BY [redacted] DATE [redacted]

CHIEF ENGINEER
MISSOURI STATE HIGHWAY COMMISSION

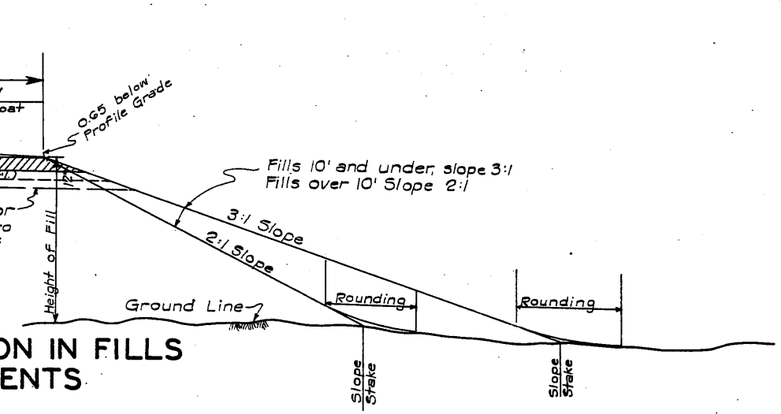
STATE OF MISSOURI
REX M. WHITTON
NUMBER E-2217
REGISTERED PROFESSIONAL ENGINEER



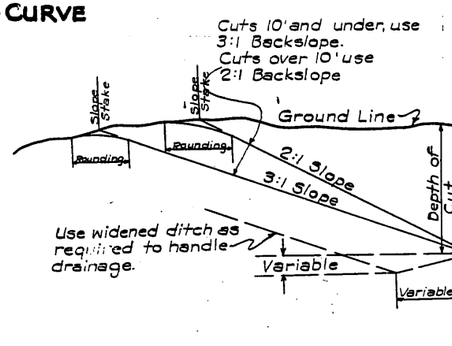
HALF · TYPICAL SECTION
24' ASPH · CONC · ON · CURVE

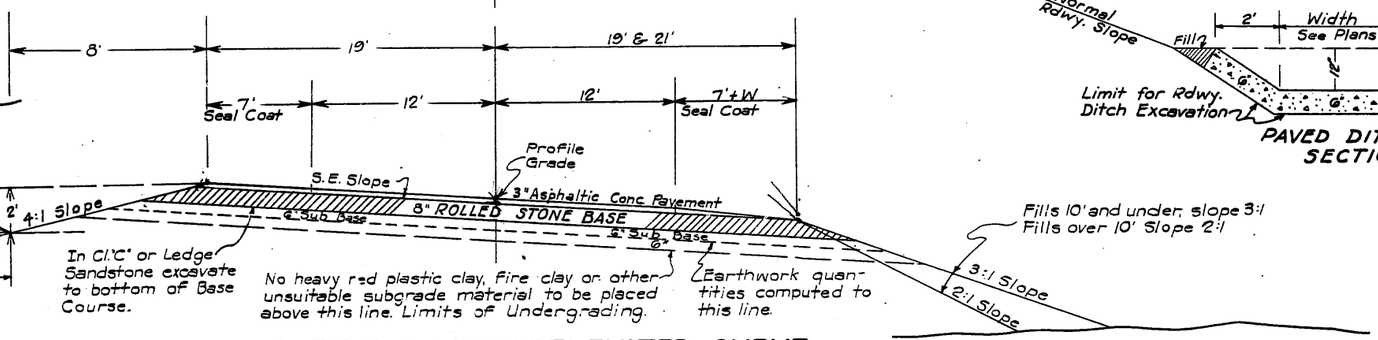


HALF SECTION IN CUTS ON TANGENTS



HALF SECTION IN FILLS ON TANGENTS

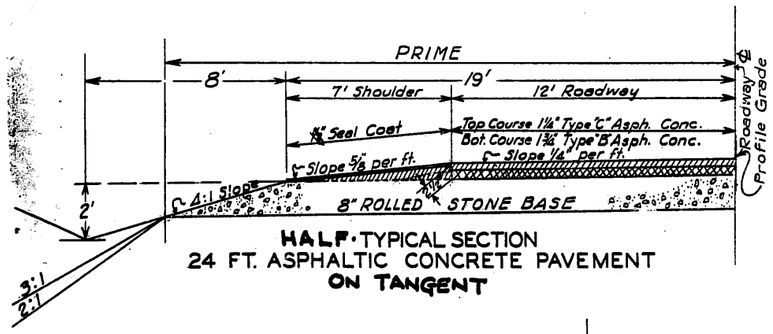




SECTION ON SUPERELEVATED CURVE

LATERAL JOINTS
Tar Paper @ 10' Intervals.
½" Premoulded Bituminous @ 50' Intervals.

PAVED DITCH SECTION

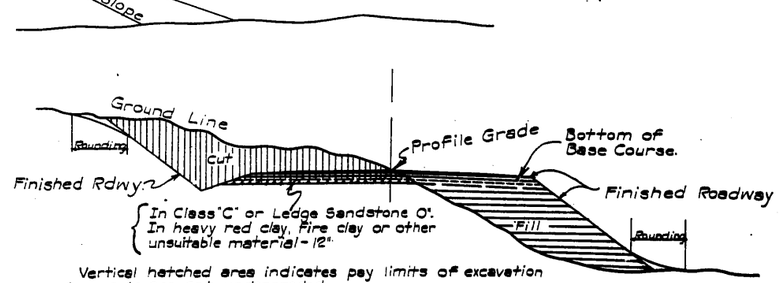


HALF · TYPICAL SECTION
24 FT. ASPHALTIC CONCRETE PAVEMENT
ON TANGENT

Note: On superelevated curves, undergrading to parallel the superelevation and other details from ditch line to ditch line shall be identical to those shown for "Cut Section on Superelevated Curves."

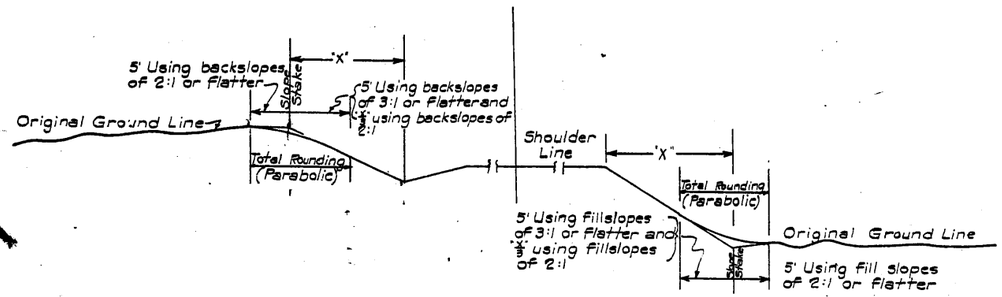
For pay limits of overbreak and backfill, see Spec's.

Fill sections on superelevated curve to be identical to this section from shoulder to shoulder. Beyond shoulder use same as shown for "Section on Tangent."



Vertical hatched area indicates pay limits of excavation where cuts are not undergraded.
Cross-hatched area indicates additional area to be added to vertical hatched area included in pay limits of excavation where cuts are undergraded.
For pay limits of overbreak and backfill, see Specifications.
Horizontal hatched area indicates limits to which embankment can be constructed.

SKETCH SECTION SHOWING EXCAVATION PAY LIMITS



PARABOLIC ROUNDING REQUIRED AT TOP OF ROADWAY BACKSLOPES AND AT TOE OF ROADWAY FILL SLOPES

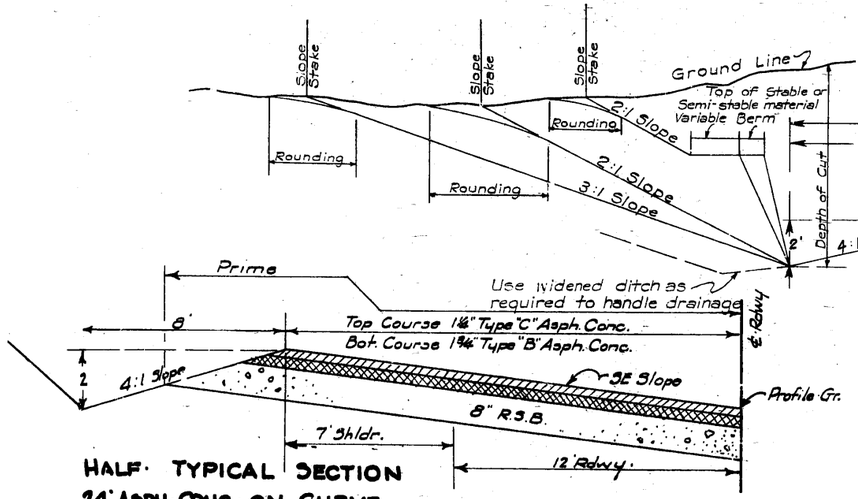
GENERAL NOTES:

For details of superelevation & widening of horizontal curves drainage items, etc, see other drawings. In transitioning from one cut or fill slope to another use a 25' transition, beginning at a point 25' back along that which would normally be the flatter slope and ending the transition at the actual point where the steeper slope is required. If the actual limits requiring a steeper slope is less than 25' in length, do not change the steeper slope.

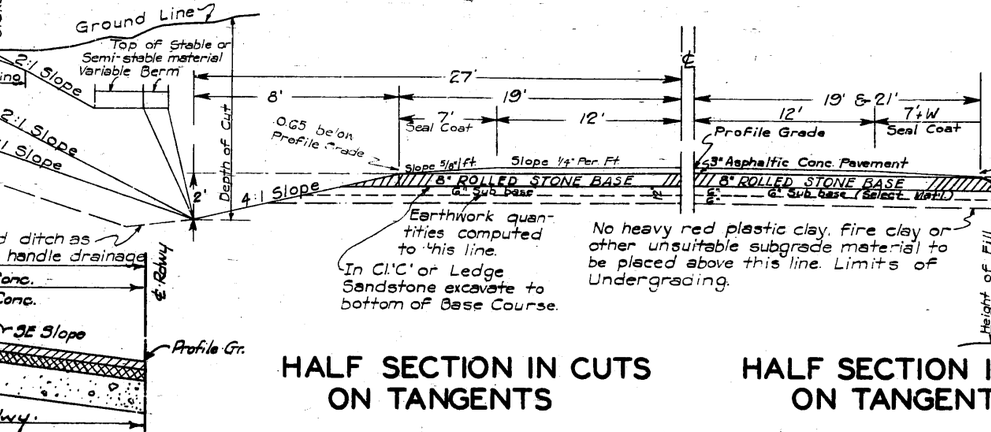
All information shown on these TYPICAL SECTIONS is for the purpose of indicating general design & construction details. Actual construction of roadway widths, slopes, depths and type of ditches, undergrading cuts, and other features shall conform to the details shown on Cross-Sections and Plan-Profile sheets or as directed by the Engineer.

MISSOURI STATE HIGHWAY COMMISSION
TYPICAL SECTIONS
FOR
GRADED EARTH
AND
ASPHALTIC CONCRETE PAVEMENT ON
ROLLED STONE BASE
DESIGN SPEED 60 MPH
ROUTE 5 WRIGHT & DOUGLAS CO.
PROJ. DF-360(7), FG-360(6) DF-384(4)

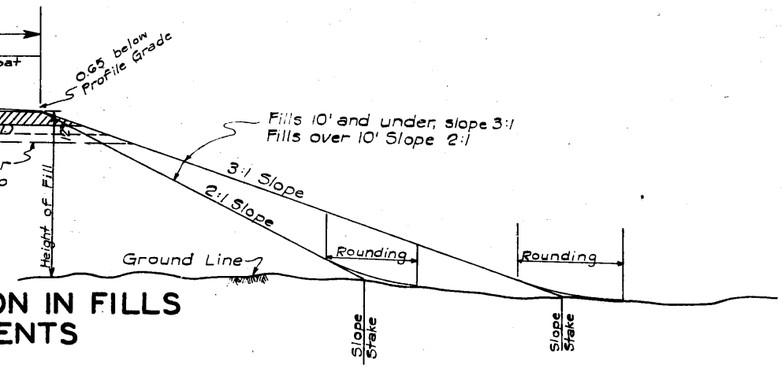
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APR 21 1950
STATE HIGHWAY DEPT.



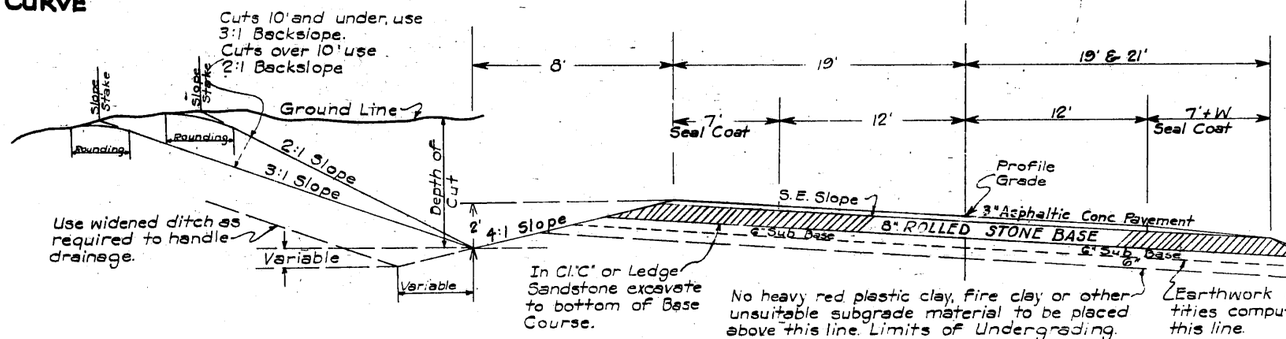
HALF · TYPICAL SECTION
24' ASPH · CONC · ON · CURVE

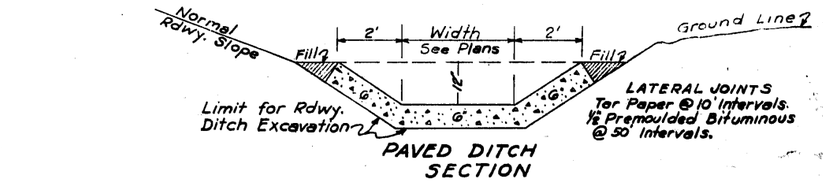


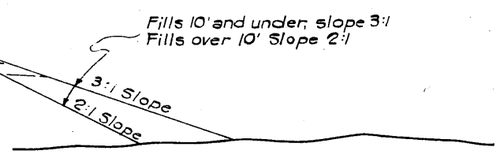
HALF SECTION IN CUTS ON TANGENTS



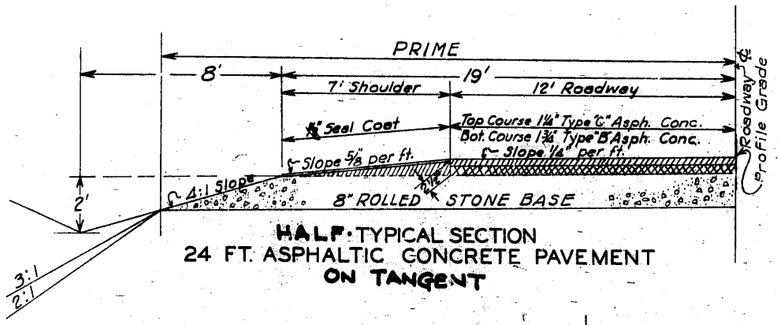
HALF SECTION IN FILLS ON TANGENTS







SECTION ON SUPERELEVATED CURVE



HALF · TYPICAL SECTION
24 FT. ASPHALTIC CONCRETE PAVEMENT
ON TANGENT

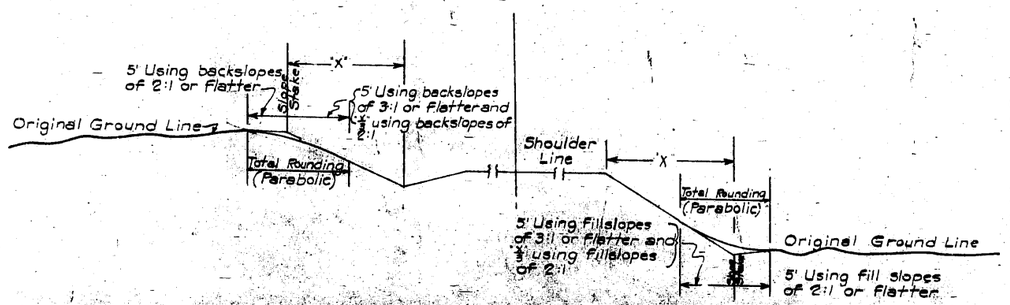
Note: On superelevated curves, undergrading to parallel the superelevation and other details from ditch line to ditch line shall be identical to those shown for "Cut Section on Superelevated Curves."

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Fill sections on superelevated curve to be identical to this section from shoulder to shoulder. Beyond shoulder use same as shown For Section on Tangent."

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SKETCH SECTION SHOWING EXCAVATION PAY LIMITS



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MISSOURI STATE HIGHWAY COMMISSION
TYPICAL SECTIONS
FOR
GRADED EARTH
AND
ASPHALTIC CONCRETE PAVEMENT ON
ROLLED STONE BASE
DESIGN SPEED 60 MPH
ROUTE 5 WRIGHT & DOUGLAS CO.
PROJ. DF-360(7), FG-360(6), DF-384(4)

LOCATION FROM ABOUT 0.4 MILE SO OF RTE 60 AT RTE 66E, SOUTH

TYPE G.E., Culverts, Bridge & 24' Asphaltic Concrete Pavement

MISSOURI STATE HIGHWAY COMMISSION

FINAL SUMMARY OF QUANTITIES

DIST.	STATE	COUNTY	FED. AID PROJ. NO.	SHEET NO.	NO. SHEETS
9	MO.	WRIGHT		5	

EXCAVATION

Station	Cl A Exc	SP Borrow	Comp Emb	M.G.Cl.1
8 3+20				
34+50	87	1065	48907	
Sub-Total		1065	48907	
Appr's				1.0
TOTAL	875	1065	48907	1.0

CROSS ROAD PIPE CULVERTS

Station	18" RCP	Cl.3 Exc.	C-250 Hdwls	Cl. B Conc.	Steel	Remarks
23+50	71'	50.5	2 - P.C	1.66	126	
TOTAL	71'	50.5		1.66	126	

ENTRANCES, SIDE ROADS & APPROACHES

Station	Type & Side	15" RCP	M.G.Cl.1	Remarks
29+50	PE Lt	42'		Incl In Bal.
29+50	SR Rt		1.0	Crown
TOTAL		42'	1.0	

GUARD RAIL

Station To Station		Location	Lin. Ft.
24+75	29+25	Lt	450
24+75	29+12	Rt	438
29+75	33+75	Lt	400
29+88	33+75	Rt	387
TOTAL			1675

MISCELLANEOUS ITEMS - TABULATED ON P.C.P. SHEETS

Sheet No.	Clearing	Grubbing	Cl A U.D.	R/W Mark.	Dr. Mark.	Fert & Mulch
5	94	5	150	6	1	78266
Total Units	94	5	150	6	1	78266
PAY	1.1 Ac.	0.1 Ac.	150 L.F.	6 Ea.	1 Ea.	1.8 Ac.

LENGTH OF PROJECT

End of Project	Station	34+50	
Beginning of Project	Station	23+20	
Apparent Length		1130	Feet
Equations and Exceptions:	None		
Total Corrections		0	Feet
Net Length of Project		1130	Feet
State Length =		0.214	Miles
Federal Length =		0.214	Miles

GENERAL SUMMARY

ITEM NO.	DESCRIPTION	UNIT	TOTAL UNITS	NO. UNITS THIS SHEET
1-A	Clearing	Acre	1.1	
1-B	Grubbing	Acre	0.1	
1-D	Class A Excavation	Cu Yd.	875	
1-DD	Stock Pile Borrow	Cu Yd.	1065	
1-J	Class 3 Excavation For Structures	Cu Yd.	50.5	
1-K	Compacting Embankments	Cu Yd.	48907	
1A-D	Machine Grading (Class 1)	Sta.	1.0	
15-D	Crushed Stone (B) Surface	Cu Yd.	63	
16-B	Class B Concrete (Other Than Box Culverts)	Cu Yd.	1.7	
16-C	15" Reinf. Concrete Pipe	Lin Ft.	42	
16-C	18" Reinf. Concrete Pipe	Lin F.	71	
19-A	Reinforcing Steel	Lb.	130	
27-A	Guard Rail (Type A)	Lin Ft.	1675	
29-C	Right of Way Markers	Each	6	
37-A	Fertilizing and Mulching	Acre	1.8	
	8" ROLLED STONE BASE			
1-BA	Water	100 Gal.	25	
2-A	Aggregate	Ton	2198	
2-B	Spreading, Shaping and Compacting	Mile	0.20	
	ASPHALTIC CONCRETE PAVEMENT			
AC-1	Primer (RC-0)	Gal.	1510	
7-B	Type B Asphaltic Concrete	Ton	335	
7-C	Type C Asphaltic Concrete	Ton	361	
	SEAL COAT			
10A-A	Bituminous Material (200-250 Pen Asph.)	Gal.	730	
10A-B	Cover Material (51-110, No. 6)	Ton	38	
	CONTINGENT ITEMS			
	Class A Underdrain (Type I)	Lin Ft.	150	
	Drain Markers	Each	1	
	BRIDGE AT STATION 33+82.7 (DWG. No. A-327)			
1-G	Class 1 Excavation For Structures	Cu Yd.	154.0	
16-B-1	Class B-1 Concrete (Superstructure)	Cu Yd.	47.4	
16-B	Class B Concrete (Substructure)	Cu Yd.	33.3	
17-B	Fabricated Structural Steel (I-Beam Spans)	Lb.	58180	
17-E	Gray Iron Alloy Castings	Lb.	1040	
19-A	Reinforcing Steel	Lb.	14660	

RECEIVED
NOV 25 1959
BUREAU OF PUBLIC ROADS
U.S. DEPT. OF COMMERCE

Prepared by CL [illegible] 10-26 1959 Checked by [illegible] Jan 1960 Quantities & Estimate 12-10 1959

Fed. Aid Proj. No.	State	Federal Project No. & Sec.	Fiscal Year	Sheet No.
5	MO.	FG-360 (6)		3
Dist. No.	County		Route	Sec.
9	WRIGHT		5	

NW¼ NE¼ Sec. 20
T28N-R15W
THOMAS C. RUSH

Sta. 23+50
18"x 71' RCP
2(G230) RC Hdwls.
D.A.~5 Ac.~0.5

Sta. 16+50
18" R.C.P.
Sk. 30° R.A.
D.A. 4 Ac.~0.6

Sta 39+16
18" R.C.P.
Sk. 30° L.A.
D.A. 4 Ac.~0.6

Pl. 22+39.4
Δ 20°18' Lt.
D 2°
T 512.9
L 1015.0
R 2864.9
S.E. 0.05'/ ft.

OSCAR D. RUSH
New R/W 4.92 Ac.

L.K. BEAUSHAUSEN
New R/W 0.87 Ac.

SW¼ SE¼ Sec. 17
EZRA DENNIS
New R/W 2.03 Ac.

Sec. Line (17) (20)

House

Barn

Const. Esmt.

+50 P.E. 15"x42" RCP

+50 F.E. 15" Pipe

20' Wide

S 20° 39' W

S 0°21' W

parallel Drive Rt
Sta 14+40 to 18+00

450' Guard Rail

437.5' Guard Rail

400' Guard Rail

387.5' Guard Rail

Sp. 10' Bot. Ditch

S+75-150' Cl. A Drain

+50 S.R. 24' Wide

S.R.
Pl. 0+90
Δ 80° Lt.
T 52.0
L 86.6
R 62.0

S.R.
Pl. 3+83.1
Δ 52° Rt.
T 30.2
L 56.3
R 62.0

R/W 80'

R/W 70'

R/W 100'

R/W 90'

R/W 150'

R/W 25' Inc. Line

20' Inc. Line

Pt. 27+41.5

Pt. 32+50

Pt. 34+50

Sta. 34+14
61' I Beam
Overhead ~ 28' Rdwy.
Br. Drwg. # A-327

36' Clearance

Power Line

Fence E.L.

R/W Marker
Drain Marker
Underdrain

BEG. PROJ. FG-360(6) GRADE SEPARATION
EXCEPTION TO PROJ. F-360(7)
A point 544' N & 457' E of SW Cor.
SW¼ SE¼ Sec. 17 T28N R15W

END PROJ. FG-360 (6)
A point 582' S. & 435' E of NW Cor.
NW¼ NE¼ Sec. 20 T28N R15W

R/W ¼ Elev. 1563.24
NIRA PO. 65' Lt.
Sta. 32+50

1900' V.C.
M=26.50
480' NP3D

PLATE 1—PLAN-PROFILE O. P. R. & R. E. STANDARD
U. S. BLUE PRINT PAPER CO.—CHICAGO

MISSOURI

STATE HIGHWAY DEPARTMENT.

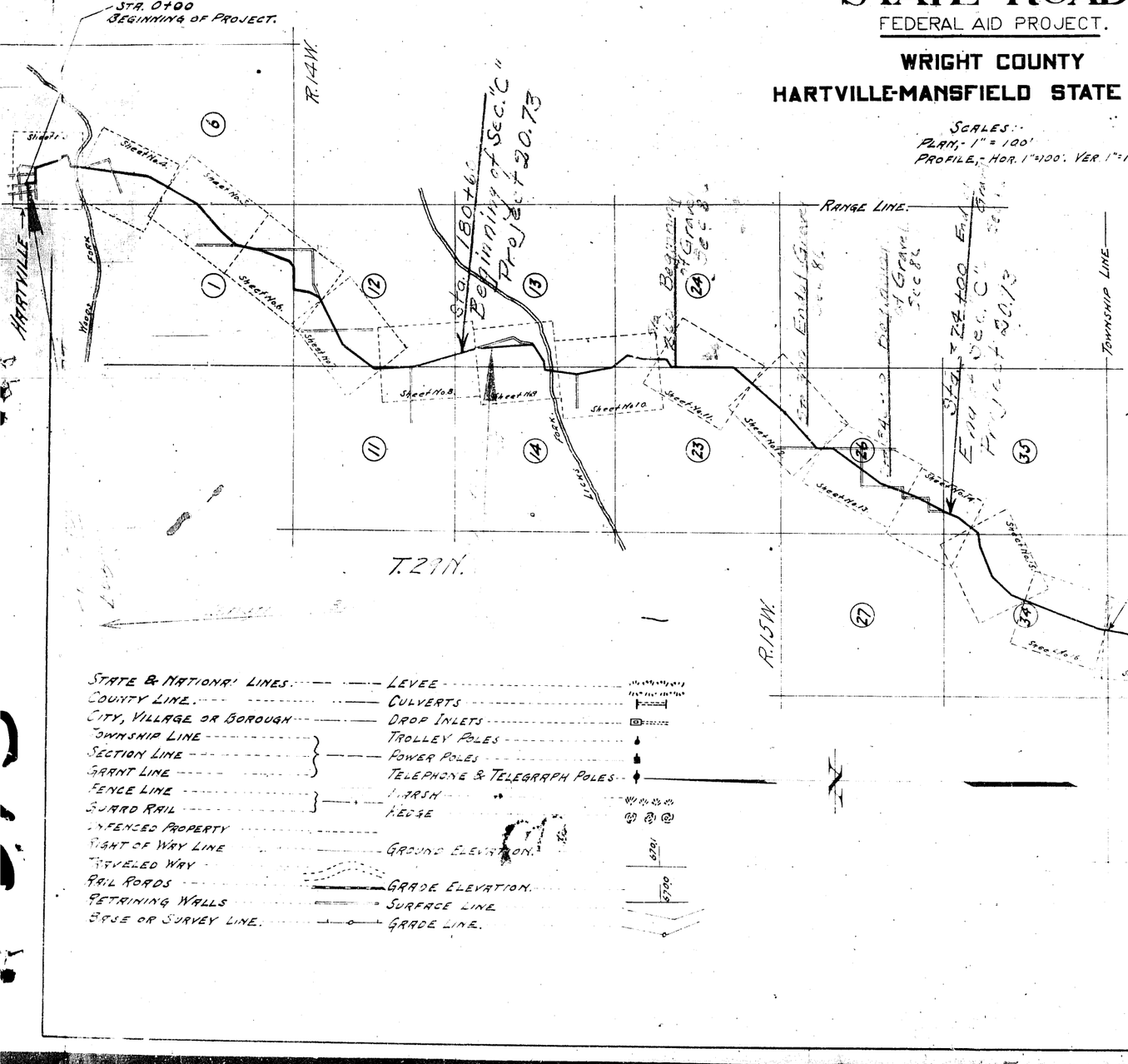
PLAN AND PROFILE OF PROPOSED STATE ROAD

FEDERAL AID PROJECT.

WRIGHT COUNTY

HARTVILLE-MANSFIELD STATE ROAD.

SCALES:-
PLAN,- 1" = 100'
PROFILE,- HOR. 1"=100'. VER. 1"=10'



LAYOUT

SCALE 1"=2000'

NET LENGTH OF PROJECT 826+79.6 = 15.64 MI.
(COUNTY, 8+8 MI. - MANSFIELD S.R.D. = 7/0 MI.)

STATE & NATIONAL LINES
COUNTY LINE
CITY, VILLAGE OR BOROUGH
TOWNSHIP LINE
SECTION LINE
GRANT LINE
FENCE LINE
BARB WIRE
FENCED PROPERTY
RIGHT OF WAY LINE
TRAVELED WAY
RAILROADS
RETAINING WALLS
BASE OR SURVEY LINE.

LEVEE
CULVERTS
DROP INLETS
TROLLEY POLES
POWER POLES
TELEPHONE & TELEGRAPH POLES
MARSH
HEDGE
GROUND ELEVATION.
GRADE ELEVATION.
SURFACE LINE
GRADE LINE.

INDEX OF SHEETS.

SHEET NO. 1	TITLE PAGE	
" 2	TYPICAL CROSS-SECTIONS OF IMPROVEMENT.	
" 3	PLAN AND PROFILE - STA. 0+00	to STA. 29+00
4	" 29+00	" 61+00
" 5	" 61+00	" 93+00
" 6	" 93+00	" 125+00
" 7	" 125+00	" 157+00
" 8	" 157+00	" 189+00
" 9	" 189+00	" 221+00
" 10	" 221+00	" 253+00
" 11	" 253+00	" 258+00
" 12	" 258+00	" 317+00
" 13	" 317+00	" 349+00
" 14	" 349+00	" 381+00
" 15	" 381+00	" 413+00
" 16	" 413+00	" 444+00
" 17	" 464+00	" 476+00
" 18	" 476+00	" 508+00
" 19	" 508+00	" 540+00
" 20	" 540+00	" 570+00
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" 24	" 660+00	" 690+00
" 25	" 690+00	" 720+00
" 26	" 720+00	" 750+00
" 27	" 750+00	" 780+00
" 28	" 780+00	" 810+00
" 29	" 426+00	" 426+79.6
30 to 68	CROSS-SECTIONS.	

SUBMITTED.

[redacted]
STATE HIGHWAY ENGINEER.

RECOMMENDED FOR APPROVAL.

[redacted]
DISTRICT ENGINEER, DIST. NO. 8.

RECOMMENDED FOR APPROVAL.

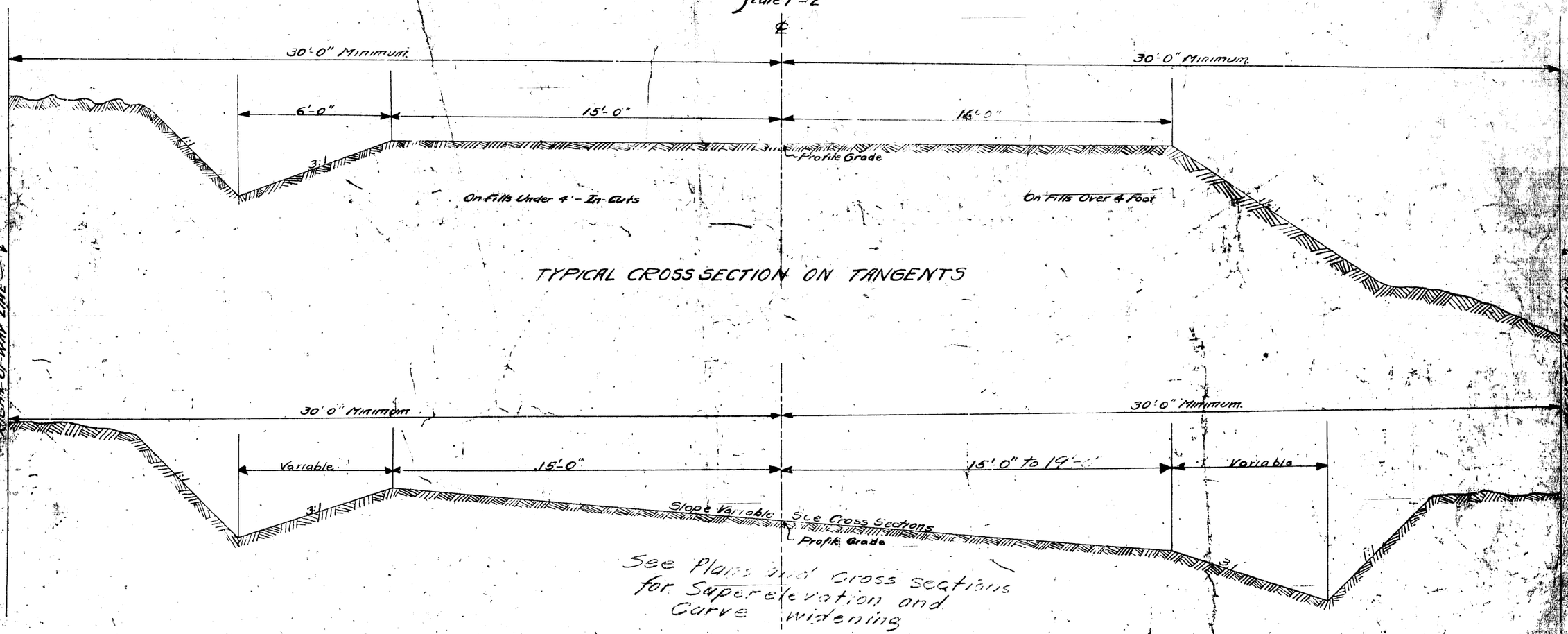
[redacted]
CHIEF ENGINEER, BUREAU OF PUBLIC ROADS.

APPROVED.

[redacted]
DIRECTOR [illegible] OF PUBLIC ROADS.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
5	MO			
DIV. NO.		COUNTY		
9				

TYPICAL CROSS SECTION
OF
30 FT GRADED EARTH ROADWAY
Scale 1"=2'



TYPICAL CROSS SECTION ON TANGENTS

See Plans and Cross sections
for Superelevation and
Curve widening

TYPICAL CROSS SECTION ON CURVES

MISSOURI STATE HIGHWAY COMMISSION

ESTIMATE SHEET

County of Wright

Length 3.636 Miles

FED. ROAD DIST. NO.	STATE	FED. AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
5	MO.	1926 2A		
DIV. NO.	COUNTY		ROUTE NO.	SEC. NO.
9	Wright		5	84

Description of paving 30 Ft. Graded Earth

Prepared by A.S. Korsner & A.C. Meglitsch Date September 8 1926 Name of road Hartville South

Excavation

Station	Earth	L. Rock	Solid R.	Bor.	O.H.
C.O. & D.					
4+95			363		
14+00	1211	300	856		1447
21+00	797	630	328		102
25+00	Bridge in place				
32+50	844			608	155
36+00	259		35		
42+15	589		282		13
50+00	856	100	797		924
61+80	814	110	218		1348
65+50	1338				
72+00	1106	200	70		
74+00	567		66		
82+00	529		68		
89+50	550				28
91+50	751		118		
101+00	969				850
111+50	351				
118+00	1167	110	156		158
123+50	493	150	24		
133+50	631				343
136+50	387				
146+50	366				119
153+50	371				17
158+00	176				
161+50	362				
166+50	450			359	6103
171+50	665	240	305		869
180+50	241	270	125		
192+00	538		1785		1912
Totals	17176	2110	6596	967	14388
		✓	✓	✓	✓

Standard Concrete Culverts.

Station	Stand.	Size	Length	Conc. C.Y.	Steel
6+00	C338	8x6	36.4	16.85	1310
18+50	C235	5x3	42.7	22.34	2211
42+50	C235	5x3	47.9	24.55	2419
187+10	C232	2x1½	18'	4.31	575 Old culv. extended 15'
Total				98.05	8515

Clearing and Grubbing

Station	to	Station	Acres
60+00		63+50	.48
68+00		72+00	.55
84+00		85+00	.14
91+00		92+00	.14
120+50		133+00	1.72
166+00		185+00	2.61
Total			5.64

Lt. Clearing and Lt. Grubbing

Station	to	Station	Stations
43+00		44+00	1.00
63+50		68+00	4.50
Total			5.5

Plain Rip Rap

Sta	Sta	Sq. Yds.
42+50	44+00	55

Surface Gravel for Soft Spots

Sta	Sta	Cu. Yds.
4+95	17+50	158
178+00	192+00	230
25+00	33+00	112
Total		500

Stand. Pipe Culverts

Station	18"
62+00	80'
68+20	54'
72+50	38'
107+25	50'
109+83	48'
117+35	44'
138+50	38'
179+00	38
Total	390

Side Road Pipes

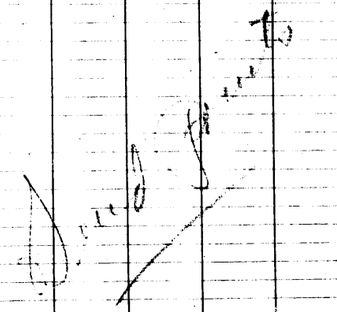
Station	18"	15"	Side
3+50	36'		Rt.
33+00		18'	Rt.
33+00		18'	Lt.
161+50	18'		Lt.
Total	54'	36'	

Farm Entrance Pipes

Station	18"	15"	Side
21+00	20'		Rt.
31+50		18'	Lt.
44+00	20'		Rt.
49+50		18'	Lt.
75+00		18'	Lt.
92+50		18'	Lt.
94+00		18'	Rt.
96+50		18'	Rt.
96+50		18'	Lt.
108+50		18'	Lt.
132+05		18'	Rt.
133+00	8'		Rt.
136+50	18'		Rt.
154+00		18'	Lt.
165+00		18'	Rt.
166+50	18'		Lt.
192+00		18'	Lt.
Total	84	216	

Summary

Item	Description	Unit.	No. Units
5a	Clearing	Acre.	5.64
5b	Lt. Clearing	Station	5.5
6a	Grubbing	Acre.	5.64
6b	Lt. Grubbing	Station	5.5
7a	Earth Roadway Excav.	Cu. Yds.	17176
7b	Loose Rock Excav.	Cu. Yds.	2110
7c	Solid Rock Excav.	Cu. Yds.	6596
7d	Borrow Excav.	Cu. Yds	967
7e	Overhaul	Cu. Yds	14388
50d	18" Standard Pipe Culvert	Lin. Ft.	390
50d	18" Side Road Pipe	Lin. Ft.	54
50d	18" Farm Entrance Pipe	Lin. Ft.	84
50d	15" Side Road & Farm Ent. Pipe	Lin. Ft.	252
59b	Class "B" Conc. Mas.	Cu. Yds	98.05
60	Reinf. for Conc. Mas.	Lbs.	9500
	Plain Rip Rap		55
	Gravel		500



HARTVILLE MO.

Station 13+00
15° F.E.
Culv. right
18' Long

Present Road

Station 6+50
Construct
C.S.P. 8'6"
Long
Drains 1.0 Ac.

Station 18+50
Construct
C.S.P. - 5'x8'
44' Long
Drains 50 Ac.

Station 5+80 Construct
15 Culv. Pipe F.E.
on right - 48' Long.

E½ Lot 5 NW¼ Sec 6-29-14

E½ Lot 4 NW¼ Sec 6-29-14

Gascozade River

Moon's Ford

Present Road

Court House Yard
B.M. x On Wall North
Side of Steps
Court House Yard
Assumed Elev. 300.0

B.M. Top of "O" in Mark
of 1928 On West Wall
of Culvert 100' Right
Sta. 6+00 Elev. 285.27

B.M. Nail in Side of 14" Elm
130' Left Sta. 15+00
Elev. 280.31

B.M. Top of Bolt on North
East Cor. of Bridge Seat
Elev. 261.45

ALL CURVES TO BE
SUPERELEVATED
SEE X SECTIONS

Station 0+00

Bridge

Court House Yard

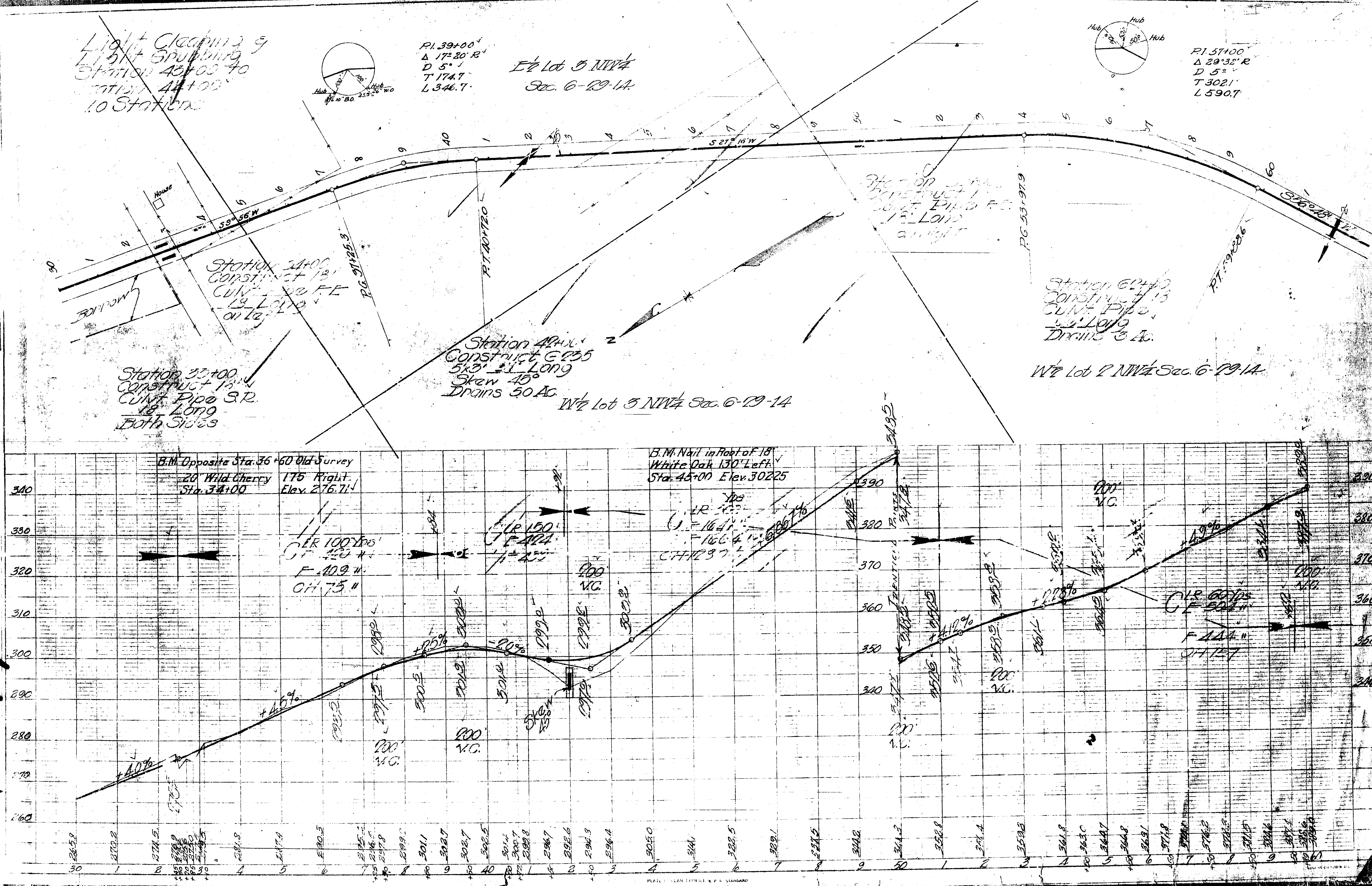
Vacant Lot

Cemetery

Barn

Garage

Hotel


Light Clearing & Light Grubbing Station 43+00 to Station 44+00 1.0 Stations
P.I. 39+00
Δ 17°20' R
D 5°
T 174.7
L 346.7
E½ Lot 3 NW¼ Sec. 6-29-14
Hub
Hub
House
S 59°56' W
S 27° 15' W
P.C. 37+25.3
P.T. 40+72.0
P.C. 53+97.9
P.T. 59+88.6
Borrow
Station 34+00 Construct 18" Culv. Pipe F.E. 18' Long
Station 33+00 Construct 18" Culv. Pipe S.R. 18' Long Both Sides
Station 42+00 Construct C.235 5'x3' Long Skew 45° Drains 50 Ac.
W½ Lot 3 NW¼ Sec. 6-29-14
P.I. 57+00
Δ 29°32' R
D 5°
T 302.1
L 590.7
Station 62+00 Construct 18" Culv. Pipe Drains 3 Ac.
W½ Lot 2 NW¼ Sec. 6-29-14
B.M. Opposite Sta. 36+60 Old Survey 20" Wild Cherry 175 Right Sta. 34+00 Elev. 276.71
B.M. Nail in Root of 18" White Oak 130' Left Sta. 45+00 Elev. 302.25
+4.0%
+4.6%
+1.25%
-2.0%
+6.867%
+4.12%
+1.78%
+4.9%
200' V.C.
F 409
CH 75
F 444
CH 157
Skew 45°
PLATE — PLAN & PROFILE N.P.R. STANDARD

Clearing & Grubbing
Station 60+00 to
Station 63+50
0.48 Acres

P.I. 64+50
Δ 14°45'4"
D 5°
T 148.4'
L 895'

W½ Lot 1 NE¼ Sec. 6-29-14

P.O.T. 71+00

Clearing & Grubbing
Station 63+50 to
Station 68+00
0.55 Acres

P.I. 84+32.12
Δ 26°10'44"
D 5°
T 266.4'
L 523.3'

Clearing & Grubbing
Station 84+00 to
Station 85+50
0.14 Acres

NE¼ SE¼ Sec. 1-29-15

N 15°06'W

S 56°45'W

S 42°-53'W

Present Road

House

N.E. Cor. S.E. ¼ SE ¼ Sec. 1 T 29 N. R 15 W

N.W. Cor. N.E. ¼ N.E. ¼ Sec. 12 T 29 N. R. 15 W

E½ Lot 2 NE¼ Sec. 1-29-15

Light Clearing & Light Grubbing
Sta 63+50 to Sta 68+00
4.5 Stations

E½ Lot 1 NE¼ Sec 1-29-15

NW¼ SE¼ Sec 1

B.M. Nail in Root of 20" Red Oak
105 Right of Sta. 62+50
Elev. 396.26

B.M. Nail in Root of 22"
Black Oak 40' Left
Sta. 68+00 Elev. 413.62

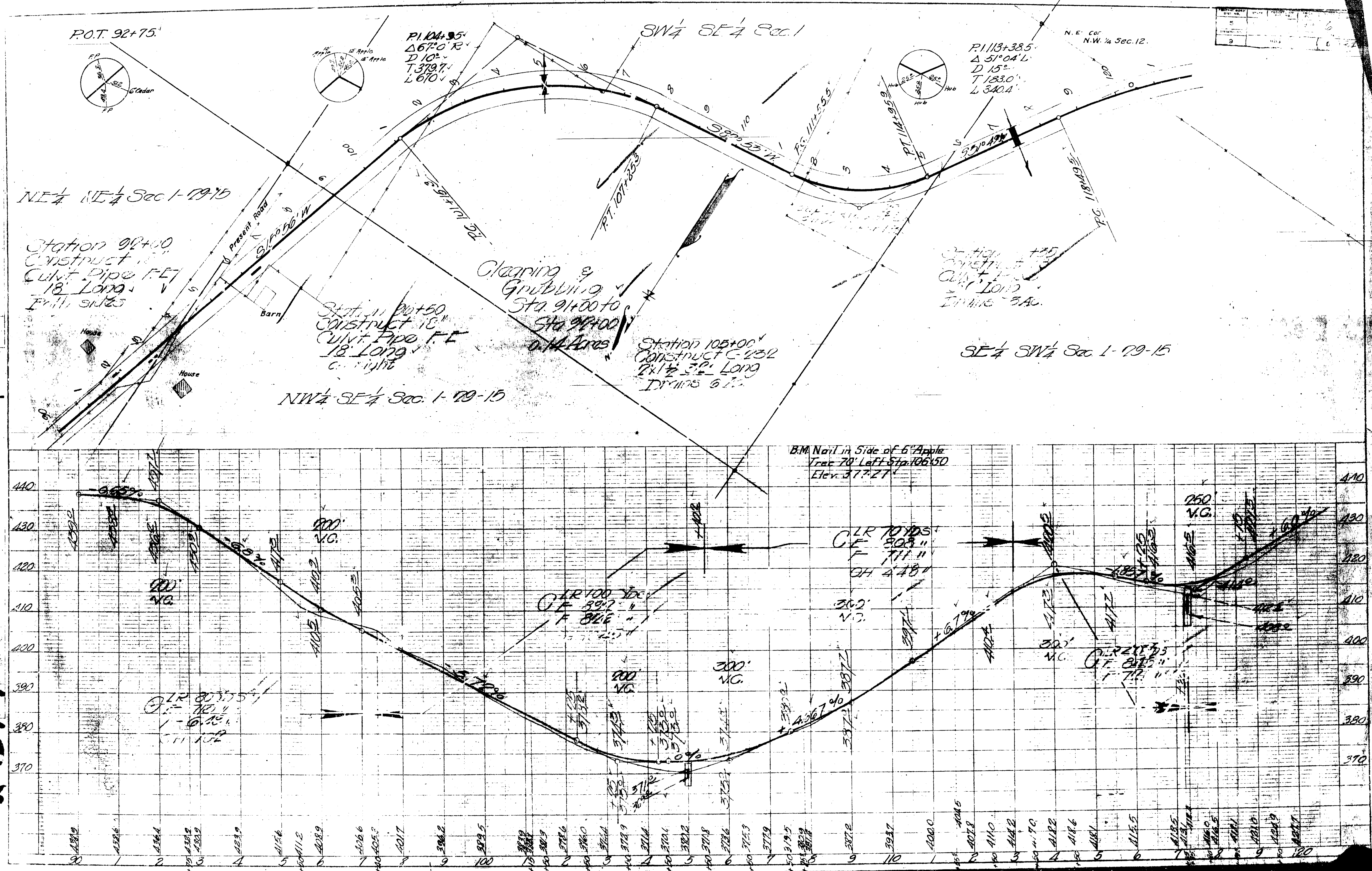
300' V.C.

100' V.C.

200' V.C.

Construct Curb Ditch

Elevations: 380 390 400 410 420 430 440



P.O.T. 92+75.
P.I. 104+95
Δ 67°0' R
D 10°
T 379.7
L 670
SW¼ SE¼ Sec. 1
N.E. Cor. N.W. ¼ Sec. 12.
P.I. 113+38.5
Δ 51°04' L
D 15°
T 183.0
L 340.4
6" Cedar
12" Apple
18" Apple
Hub
NE¼ NE¼ Sec 1-79-15
Present Road
S 51°56' W
S 89°53' W
S 51°49' W
P.C. 101+16.3
P.T. 107+85.3
P.C. 111+55.5
P.T. 114+95.9
P.C. 118+49.5
Station 92+00
Construct
Culvt. Pipe F.E.
18' Long
Barn
House
Station 96+50
Construct 18"
Culvt. Pipe F.E.
18' Long
Clearing & Grubbing
Sta. 91+00 to
Sta. 96+00
0.14 Acres
Station 105+00
Construct C-232
2'x1½' 32' Long
SE¼ SW¼ Sec. 1-79-15
NW¼ SE¼ Sec. 1-79-15
B.M. Nail in Side of 6" Apple
Tree 70' Left Sta. 106+50
Elev. 377.27
200' V.C.
300' V.C.
250' V.C.
+6.7%
+4.67%
0%
+6.0%
440
430
420
410
400
390
380
370
90
1
2
3
4
5
6
7
8
9
100
110
120

N.E.Cor
N.W.¼ Sec.12

P.T. 122+80.9
Δ 33°56R
D 4°
T 437.1
L 848.3

P.I. 139+00
Δ 19°20'L
D 5°
T 195.2
L 386.2

NE¼ NW¼ Sec. 12

SW¼ SW¼ Sec. 1

Present Road

Station 123+00
Construct 18" CMP
S.R.L. Long
on Lt

P.C. 118+49.3

P.T. 126+97.8

P.C. 137+04.8

P.T. 140+91.2

365° 45' W

S 46° 15' W

Station 132+30
Construct 18" CMP F.E.
18' Long
with sides

NW¼ NW¼ Sec. 12

N. & S. Sec. Line

N.W. Cor.
S.W.¼ N.W.¼
Sec. 12

Clearing & Grubbing
Station 120+50 to
Station 133+00
1.72 Acres

B.M. Nail in Root of 20" Black Oak 40' Right Sta 122+40 Elev. 441.76

B.M. Nail in root of 10" Pine 60' right Sta 140+00 Elev. 448.46

CLR 50 Lts
CE 1.8° 11'
T 90.1'
311.30 ℄

CLR 100 Lts
CF 1.9° 11'
T 99.9'
F 313 ℄

CLR 50 Lts
E 1.4° 11'
F 1.1° 1'

CLR 50 Lts
F 106.1'

CLR 150 Lts
E 3.2° 11'
T 345 ℄
311.30 ℄

+1.4%
+0.4%
-0.5%
-0.509%
+0.841%
+1.8%
+0.2%

430' N.S.

Coupling Chute 5 Elev. 446.2

460
450
440
430
420
410

PLAN
NOTE BOOK
No.

PLATE I - PLAN-PROFILE B. F. P. R. STANDARD

Sta. 11+00 New P.C.
Sta. 11+21.1 = 105+33
2.61 Acres ✓

P.I. 1+51.41 ✓
Δ 72° 04' Lt. ✓
D 10° ✓
T 417.8 ✓
L 720.7 ✓

Station 161+00
Construct 18"
Culv't Pipe P.R.
18' Long
Left ✓

SW¼ NW¼ Sec. 11

NW¼ SW¼ Sec. 12

S 46° 25' W.

N.W. Cor. S.W. ¼ N.W. ¼ Sec. 12

P.C. 161+44.4

N-S. Sec. Line

E.T. 152+45.5

E.T. Line

N.W. Cor. S.W. ¼ Sec. 12

S 25° 39' E

Station 178+
Construct 14"
Culv't Pipe
42' Long
Drains 3 Ac. ✓

Station 161+42
Construct 18
Culv't Pipe S.R.
18' Long
R.H. Sides ✓

NE¼ SE¼ Sec. 11

P.I. 177+17.5
Δ 13° 04' Rt.
D 5°
T 120.4'
L 238.3'

S 56° 34' E

P.C. 177+94

E.T. 180+32.72

S.W¼ SW¼ Sec. 12.

B.M. Nail in Root of 10" Black Oak
16 ft. left of Sta. 163+75
Elev. 465.31 ✓

+ 1.65%
+ 0.80%
- 4.00%
- 5.50%
- 4.00%
+ 1.50%

CLR 150 Yds
CE 300'
F 3.3 ft.

CLR 150 Yds
CE 300'
F 2.5 ft.

CLR 150 Yds
CE 300'
F 3.0 ft.

CLR 150 Yds
CE 300'
F 0.81 ft.

CLR 394 Yds
CE 1000'
F 10.65 ft.
C.V.H. 6.75 ft.

300' V.C.
200' V.C.
200' V.C.
200' V.C.
1200' V.C.
300' V.C.

PLATE I - PLAN-PROFILE B. P.R. STANDARD

P.O.T. 121+00

12" P.O.

14" I.D.

P.O.T. 187+16.6

S Cor. Headwall

12"

S Cor. Headwall

Station 188+00
Construct 18"
Culvert 1100 F.E.
18" Long
Both sides

E & W Line

Present Road

36° 35' E

P.I. 180+32.2

Station 187+0
Construct C-836
6'-12" Conc. Culvert
1,100
Drains 8 Ac.

N

SW¼ SW¼ Sec. 12.

788.5'

STATION 192+00
END OF PROJECT Sec-84

B.M. Nail in Root of 18" Black Jack
70' Right Sta. 179+50
Elev. 412.92

B.M. Outside Cor.
of North End
of West H.W.
Culvert Sta 187+00
Elev. 364.18

CL RECORDS
CE 1483.11
F 2407.11
OH 1530.11

CL RECORDS
CE 1000.11
F 1817.11
OH 1179.11

300' V.C.

200' V.C.

410
400
390
380
370
360
350
340

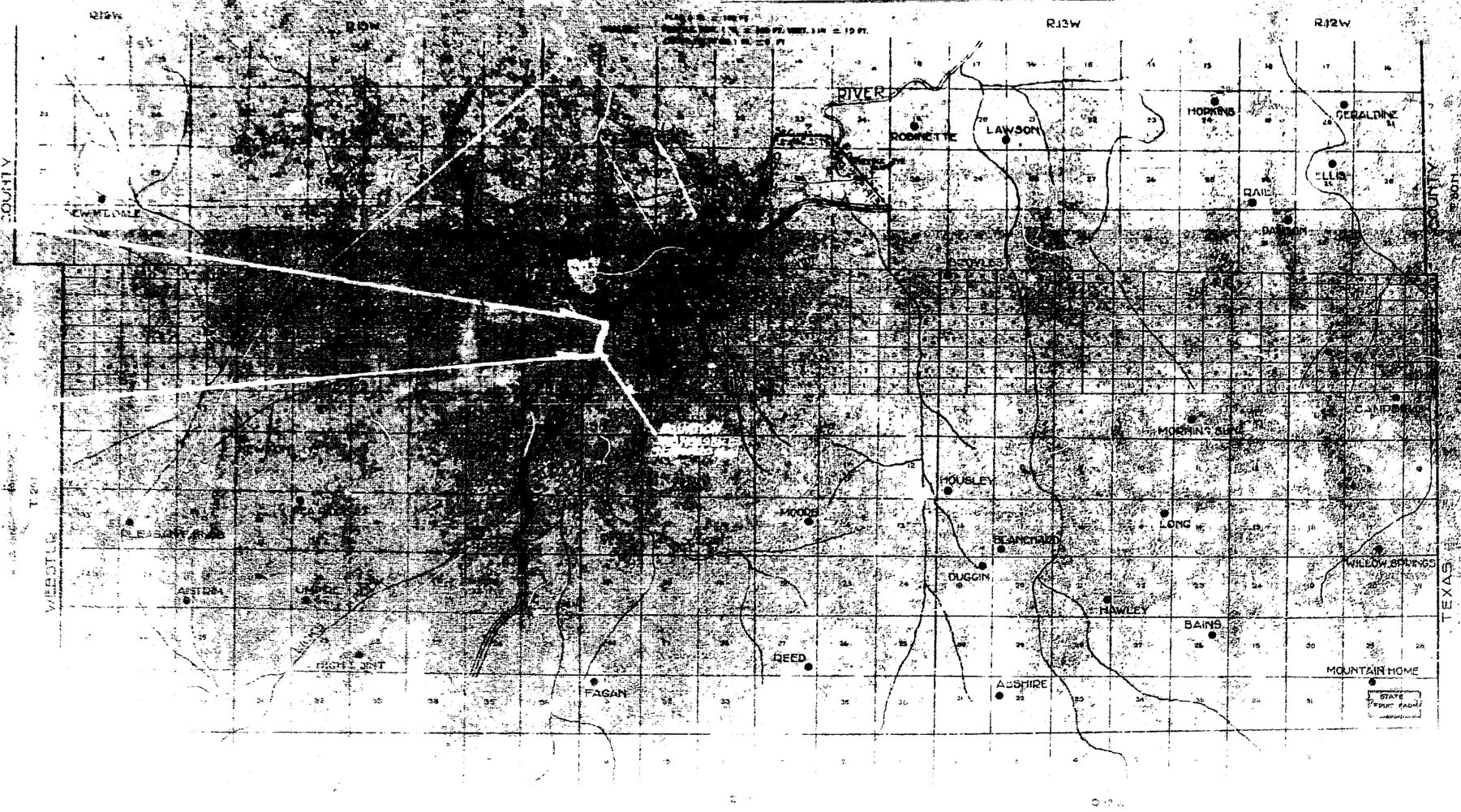
180 1 2 3 4 5 6 7 8 9 190 1 2

	STATE			
1	MO.	99		
DIV. NO.	COUNTY			
9	WRIGHT		5	54D

MISSOURI
STATE HIGHWAY COMMISSION
PLAN AND PROFILE
OF PROPOSED
STATE ROAD

FEDERAL AID PROJECT

WRIGHT COUNTY



NOTE

ON TANGENT

ON CURVE

PRAIRIE SECTION

Name of Road HARTVILLE - MANSFIELD

Type of Improvement 30' G.E. with GRAVEL SURF.

MISSOURI STATE HIGHWAY COMMISSION

ESTIMATE SHEET

County of WRIGHT

Length 0.521 Miles

5 MO. 2

9 WRIGHT

EXCAVATION

Station	Cl. A	C	S.G.	O.H.
11+00	1470	871	89	
30+70	330	825	232	25800
36+20	48	126	122	
42+22	90			
Total	5908	3040	354	25800

CLEARING & GRUBBING

Sheet No.	Cl. Units	Gr. units
3	10	10
Acres	0.2	0.2

12" COBBLESTONE GUTTER

Sta.	Lin. Ft.
24+625	77.0

SUBGRADE SCARIFYING

Sta. to Sta.	No. Sta.
[illegible]	50
[illegible]	5.5
	7.0

REINFORCED CONCRETE BOX CULVERTS

STATION	STANDARD	SIZE	LENGTH	CONCRETE	REINF.	EXCAV.	REMARKS

F.E. PIPE CULVERTS

Sta.	Side	15"	18"
11+50	Rt	20	
34+65	Lt		20
	Total	20	20

S.R. PIPE CULVERTS

Sta	Side	18"
29+85	Lt	36'
30+25	Rt	36'
	Total	72'

HEAVY STONE REVETMENT

Sta. to Sta.	Sq. Yds.
22+625 24+00	485
Total	485

LENGTH OF PROJECT

End of Project		Station	42+22	
Beginning of Project		Station	11+91.3	
Apparent Length			3030.7	Feet
Equations and Exceptions				
37+92.9 = 40+72.0	—	279.1		"
Total Corrections			279.1	Feet
Net Length of Project				Feet
	2751.6	Feet ÷ 5280	0.521	Miles

SURFACE GRAVEL BOOKS

Book No.	Sta. to Sta.	Cu. Yds.
1	11+50 24+65	1990
2	24+65 33+95	2000
3	33+95 42+22	1080
	Total	5070

STOCKPILE GRAVEL BOOKS

Book No.	Station	Cu. Yds.
1	25+00	91
	Total	91

SUMMARY

ITEM NO	DESCRIPTION	UNIT	TOTAL UNITS	NO. UNITS PER MILE
1A	Clearing	Acre	0.2	
1B	Grubbing	Acre	0.2	
1D	Class A Excavation	Cu.Yd	5908	
1F	Class C Excavation	Cu Yd	3394	
1M	Overhaul	Sta Yd	25800	
14A	Gravel Surface	Cu. Yd.	307	
14B	Gravel in Stockpile	Cu.Yd	91	
18	15" Pipe Culverts	Lin. Ft	20	
18	18" " "	Lin. Ft	92	
27A	Heavy Stone Revetment	Sq yds	485	
30E	12" Cobblestone Gutter	Lin Ft	77	
	Subgrade Scarifying	Sta.	17	

BRIDGE Sta. 19+00 1-45' & 6-50' D.G. ON BENTS 22' Roadway, Drawing No. J 754

1G	Class I Bridge Excavation	Cu.Yd	68
1H	Class 2 Bridge Excavation	Cu Yd	474
16A	Class A Concrete Masonry	Cu Yd	34.9
16B	Class B Concrete Masonry	Cu.Yd	203.6
16D	Class X Concrete Masonry	Cu.Yd	532.9
17L	Phosphor Bronze Plates 8"X20"	Set	4
17L	Phosphor Bronze Plates 10"X20	Set	24
19A	Reinforcement for Conc. Structures	Pound	164.100
37A	Removal of Old Bridge	Lump Sum	1

WRIGHT

LAKE

remains to be obtained from
Missouri Old Survey Line 2
[illegible] in that
brook [illegible] into Stream [illegible]

20 25 30 35

S. 7°25' W.

E½, Lot 3 NW¼ Sec. 6

Cultivated

Old Wood Fence

To Mansfield
PI 5+Sec 84 Constructed

E½, Lot 4 NW¼, Sec 6
T. 29 N., R. 14 W.

23.9' POT

PC 93+70.7

PT 97+90.7

Woods Fork of Gasconade

HEAVY STONE REVETMENT

Station	To Station	Sq. Yds	Remarks
22+	24+0		See Plans

230 Sq. Yds.

Station	Kind	Size	Length	Remarks
5+50	F	18"		
5+50	F	24"		
5+50	F	30"		
5+50	F	36"		

Superelevation Curve Data

P.I. 35+83.2
Δ 21°40' Rt.
D 5°00'
T 212.5
L 420.0
R 1146.3

CLEARING & GRUBBING

Station To Station		Clear Units	Grub Units
25+50	29+00	10	12

B.M. #2 - Elev. 265.97
Top bolt on N.E. Corner bridge seat
135' Rt. Sta. 19+54

B.M. #1 - Elev. 281.29
Nail in side 20" White Cherry
16.5' Rt. Sta. 31+45

Cl. A 100%
Cl. C 0%

Cl. A 50%
Cl. C 50%

Cl. A 50%
Cl. C 50%

Cl. A 100%
Cl. C 0%

B.M.
Nail
1329.4

Sta. 19+66 Burlo 1-45 &
6-50' D.G. on Bents 2&3
Roadway
Drawing No. J 754
Fill Elev. 362.5'
Dout Elev. 341.5'

2" Hollstone Gutter - CE Line of Sod into below Air Restrainer

LAKE

*Note Part of material for revetment to be obtained from masonry in old guard pillars which can be used without breaking into smaller pieces.

Present Bridge
To be removed

(Fills to be removed when old bridge is removed (1085 C.Y.)

Culvert

Sta. 17+58

Point of Curve
Sta. 15+60.0
Δ 41°44'28"
D 10°
T 218.7
L 417.3
R 573.7

Highway Station 2,058.5 ft

Roads from Gasconade

HEAVY STONE REVETMENT

Station	To Station	Sq. Yds.	Remarks
22+	24+00		

*This quantity includes 230 Sq. Yds. of heavy Stone Revetment Shown on Section

Fill Mat'l - Elev. 264.97
Top Width at Elev. from abutment 135' Elev. Sta. 19+04

Old road fill Cl. A 56%
Cl. B 50%

Cl. A 50%
Cl. B 50%

Cl. A 100%
Cl. B 100%

300 V.C.
M. 0.62

300 V.C.
M. 3.33

3.25 Diff. angle

10%

CLEARING

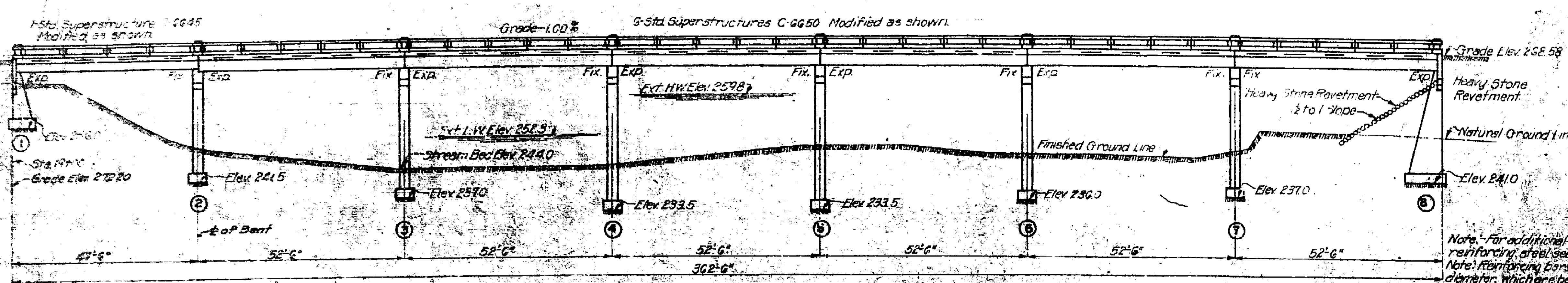
Station	To Station	Remarks
23+50	24+00	

NO. 1931 3
WEIGHT

MISSOURI STATE HIGHWAY DEPARTMENT

Fed. Road Dist. No.	State	Fed. Aid Proj. No.	[illegible]	[illegible]
9	Mo.	R5:58 [illegible]	[illegible]	[illegible]

Note:- For detail of handrail and curb see Std. C-GG [illegible]. For span (1-2) see 45 "A", for Span (7-8) see [illegible] and for int. spans see 50 "B".



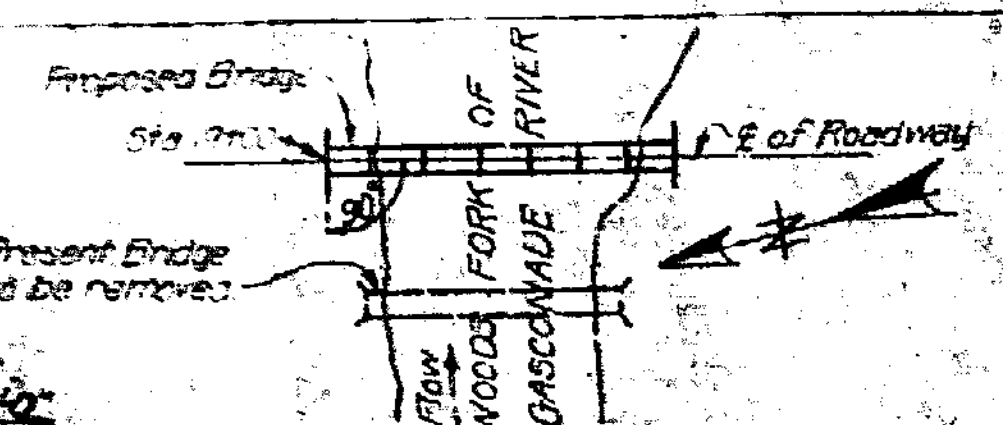
GENERAL ELEVATION

Note:- For additional bill of reinforcing steel see Sheet No. 2.

Note: Reinforcing bars ¾" or over in diameter, which are bent to an angle greater than 90°, shall be of structural grade.

Note. Carry all footings at least 18" into shale or other soft rock or 6" into solid hard rock.

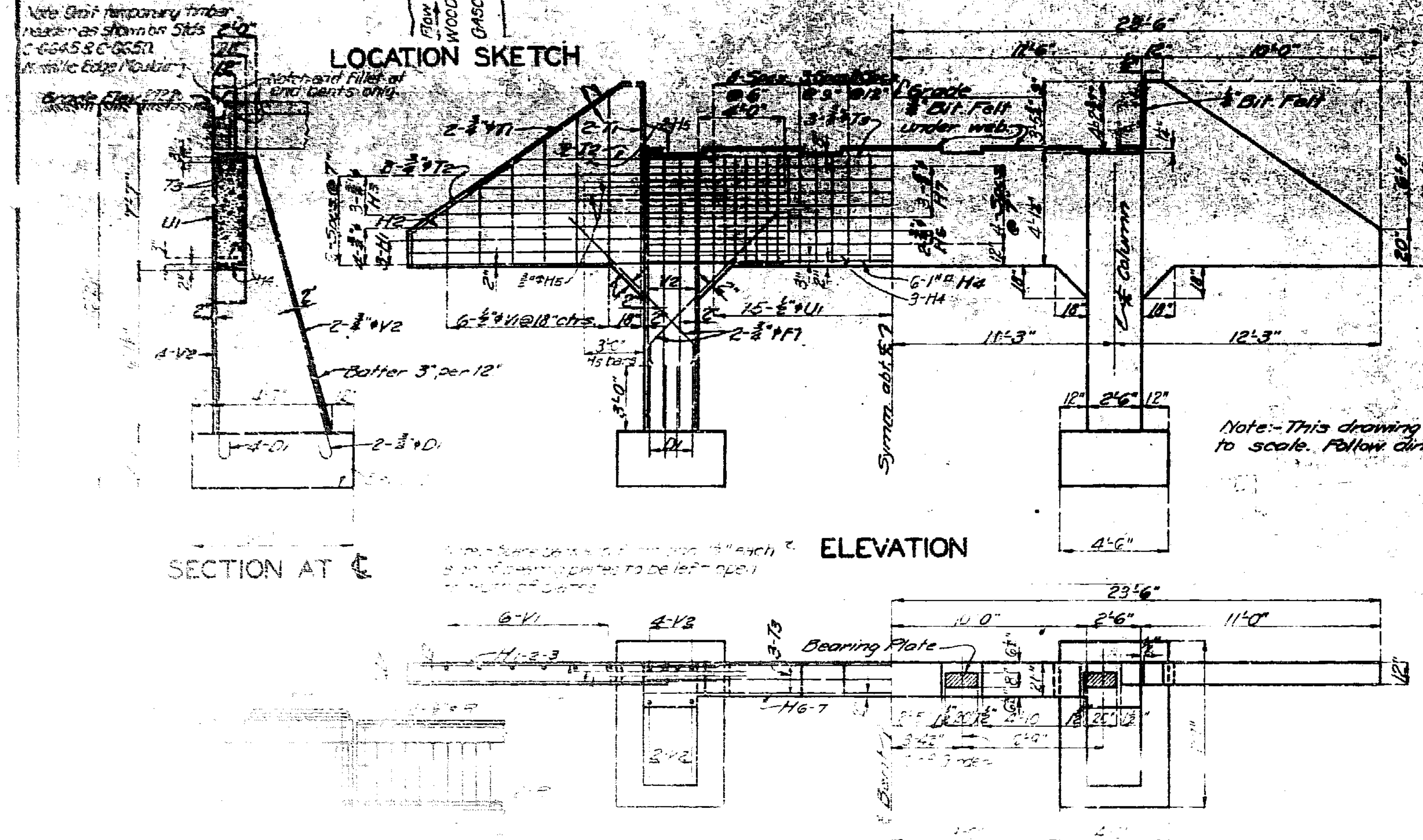
Note: Banks to be maintained during construction, or restored to natural position.



LOCATION SKETCH

Note: Excavation required to place superstructure allowing 4'-0" below bottom of girders and 4'-0" outside of curb lines will be paid for at unit price bid for roadway excavation.

Note:- Space back and front of bearing plates and space between top of bent and bottom of girder webs to be left open to depth of plates.



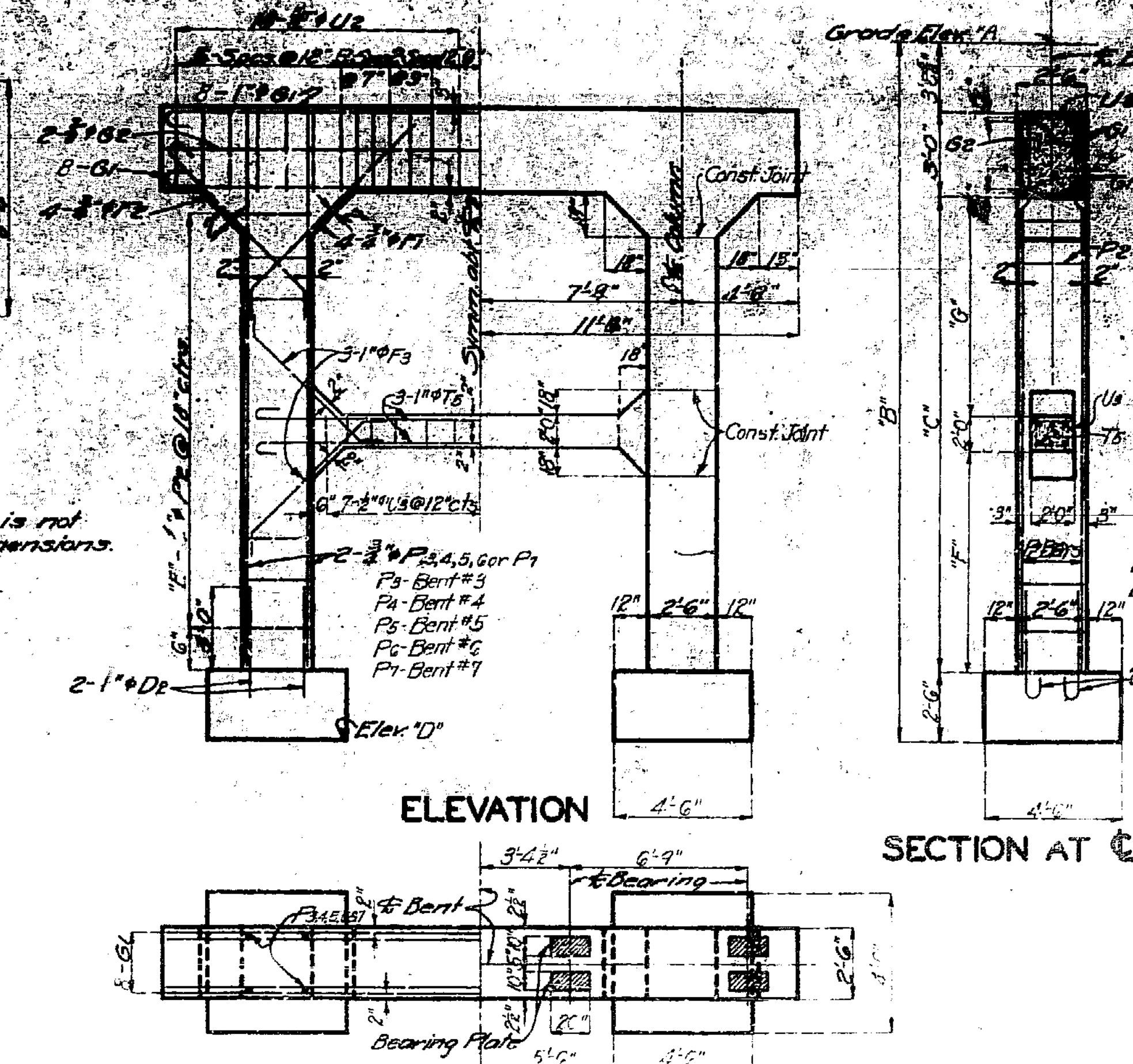
SECTION AT ℄

ELEVATION

Note:- This drawing is not to scale. Follow dimensions.

PLAN

DETAILS OF END BENT NO



ELEVATION

SECTION AT ℄

PLAN

DETAILS OF INTERMEDIATE BENTS NO 3, 4, 5, 6 & 7

BENT DIMENSIONS

BILL OF REINFORCING STEEL

No.	Size	Length	Mark	Location	Bending Diagrams and Cutting Dimensions
24	1"φ	6'-3"	D1	Footing	[illegible]
48	1"φ	7'-5"	D2	"	[illegible]
64	[illegible]	[illegible]	T1	Handrail	[illegible]
48	[illegible]	[illegible]	T2	"	[illegible]
60	1"φ	[illegible]	T3	"	[illegible]
96	1"φ	[illegible]	[illegible]	Beam	[illegible]
12	[illegible]	[illegible]	[illegible]	"	[illegible]

ESTIMATED QUANTITIES

Item	Unit	Superstr.	Substr.	Total
Excavation Class 1	Cu. Yds.			
Excavation Class 2	Cu. Yds.			
1:2:3 mix Concrete	Cu. Yds.	349		34[illegible]
1:2:3½ mix Concrete	Cu. Yds.	532.2		532.[illegible]
1:2:4 mix Concrete	Cu. Yds.		203.6	203.[illegible]
Reinforcing Steel	Lbs.	140,280	23,880	164,[illegible]
Phosphor Bronze Brg. Pls.	[illegible] Sets (8" x 20") 5 Plates each			
Phosphor Bronze Brg. Pls.	24 Sets (10" x 20") 5 Plates [illegible]			

Bridge excavation above Elev. 252.5 will be paid for as Class 1, Bridge Excavation [illegible]

Bridge excavation below Elev. 252.5 will be paid for as Class 2, Bridge [illegible]

GENERAL NOTES:-

Concrete in handrail to be 1:2:3 mix Class [illegible] slab, curbs and girders to be 1:2:3½ mix [illegible] to be 1:2:4 mix Class "B".

Exposed edges to be beveled ¾" [illegible] noted.

Where bituminous felt is used [illegible] joints in concrete [illegible] face of concrete [illegible]

[illegible]

MISSOURI STATE HIGHWAY DEPARTMENT

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ADDITIONAL BILL OF REINFORCING STEEL

Mk.	No.	Size	Length	Type	Location
30	2	#8	19'-8"	20	Wing
31	1	#8	19'-8"	20	Wing
32	2	#8	23'-3"	W1	Web

Note: Dimensions are given along ℄ of bars and are for computing weights.
Reinforcing bars shown in diameter which are equal to or greater than 40% shall be of structural grade.
Above Bill of Reinforcing Steel is not complete. See Sheet No. [illegible] for Bill of Reinforcing Steel in superstructure.

SECTION AT ℄

ELEVATION

ELEVATION

PLAN

DETAILS OF INTERIOR

Standards

TYP Sect + Earthwork

Route 34B
Sect
County Wright
Sheet # 6

Surf. Curb + Gutter + App

Drainage

Bridges
C-6502
C6645
C6647

Misc