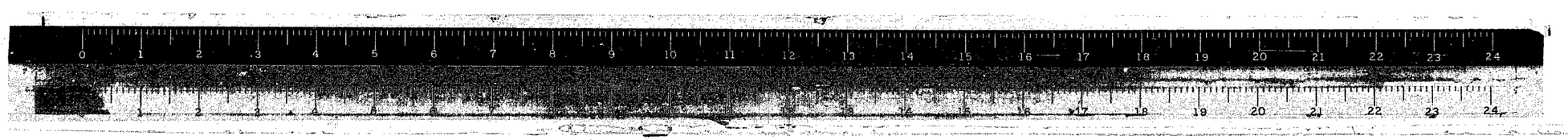
RT. FA·8 (SBI·7)

SEC. G·VB



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED
STATE BOND ISSUE HIGHWAY

SCALES

PLAN	1 INCH	100 FT.
PROFILE HOR.	1 INCH	100 FT
PROFILE VERT.	1 INCH	10 FT
CROSS-SECTIONS	1 INCH	5 FT

F.A. ROUTE 8 (SBI RT. 7) SECTION G-VB
PROJECT NO. FG-10-(12)
GRUNDY COUNTY

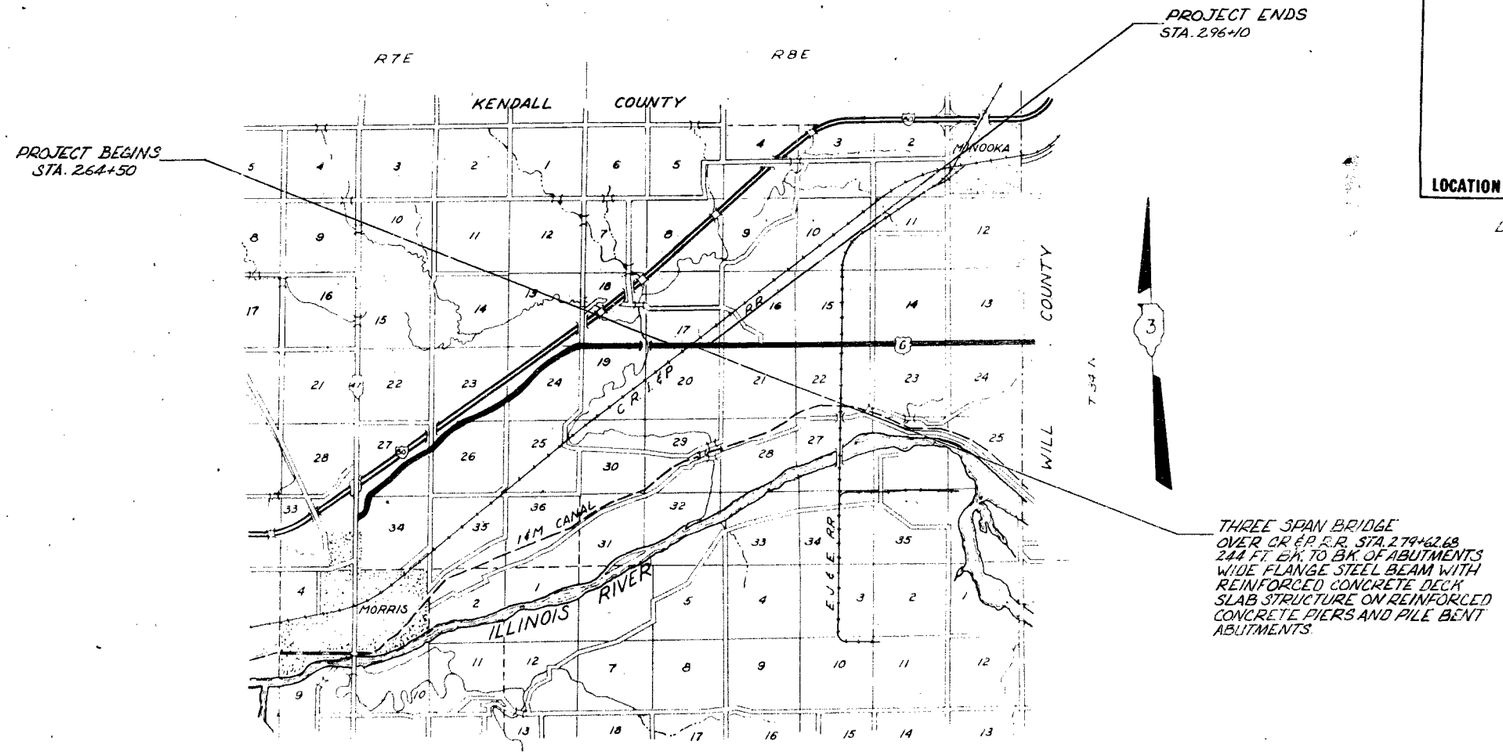
C — 93 — 051 — 65

INDEX OF SHEETS

Sheet No.	Description
1	Title Sheet and Index of Sheets
2-3	Typical Sections - Details - Culvert & S.S. Schedule
3A	Shoulder Details-Alternate B
4	Summary of Quantities
5	Schedule of Quantities
6	Drainage Plan for Grade Separation
7-8	Plan and Profile S. B. I. Route 7
9-23	Bridge Plans
24	Box Culvert and Sign Information
	Cross Sections
25-35	S. B. I. Route 7 Sta 264+50 to Sta 296+10

STANDARDS

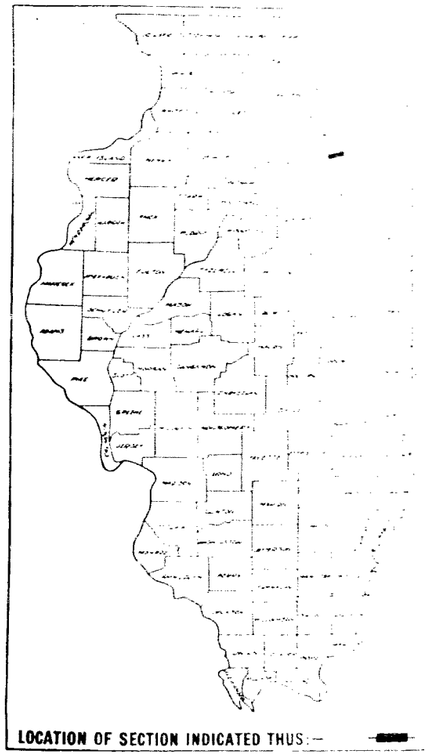
1686-3	Symbols and Abbreviations
1744-2	R. O. W. Markers
1909-10	Detail of Bridge Approaches
1976	Reinforced Conc. Hdwls
2113-1	Name Plate Detail
2135	Permanent Survey Markers
2143-3	Width Transition
2158-6	Sign
2205	Plant Hardiness Map
2230-7	SPBGR
2231-3	SPBGR Applications
2237-6	Shoulder Details
2228-1	Metal End sections for Pipe Culverts
2258-1	Paved Ditch
2298-3	Traffic Control Devices
2299-3	Traffic Control Devices
2323	Pavement Joints
2327	Sub Surface Drains



LAYOUT: 1 INCH = 1 MILE
GROSS LENGTH OF PROJECT = 3160 FEET = 0.598 MILES
NET LENGTH OF PROJECT = 3160 FEET = 0.598 MILES

FAP (SBI 7) G-VB GRUNDY 35 1
F-10(12)

P-93-008-64



LOCATION OF SECTION INDICATED THUS:—

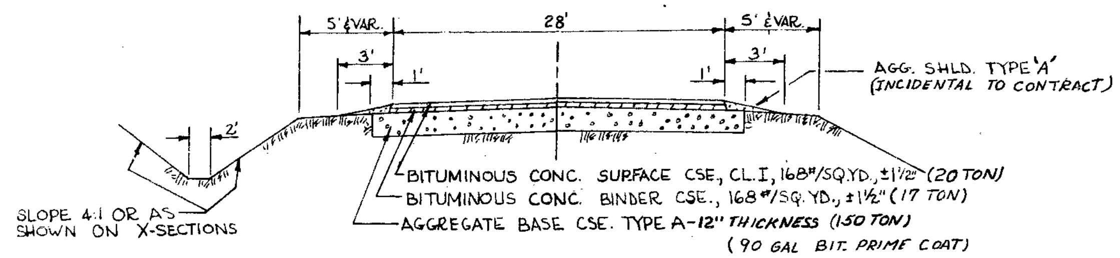
DESIGN DESIGNATION: COLLECTOR
400(91) C 3.72(BIT.20)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
6/3 71
11-29 71
11-29 71
11-29 71
UNDER SECRETARY, CHIEF TRANSPORTATION ENGINEER
11-29 71
SECRETARY

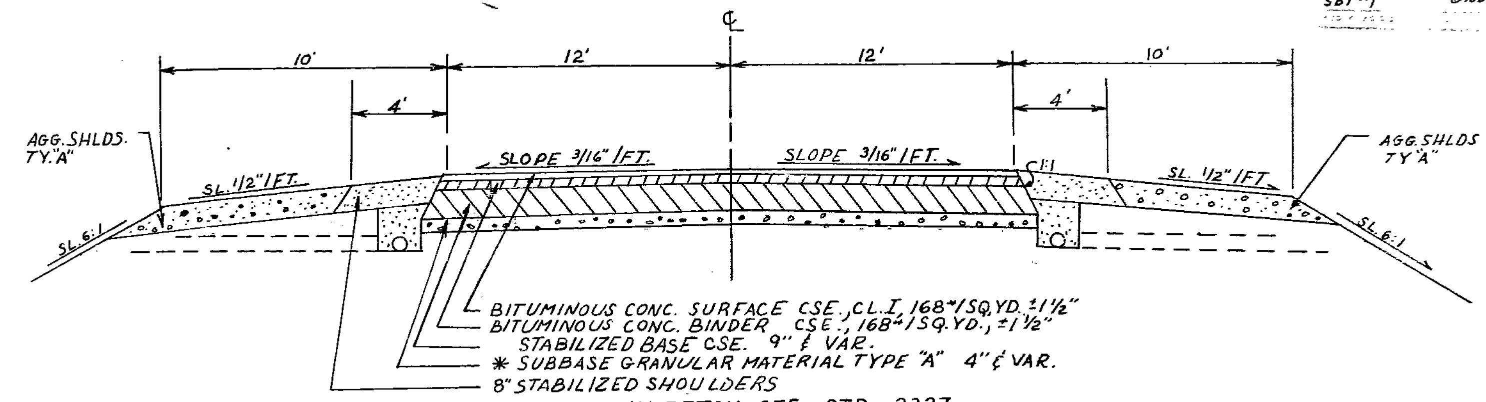
DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
DIVISION ENGINEER DATE

CONTRACT NO. 63881

GRUNDY COUNTY SECTION G-VB F.A. ROUTE 8 (SBI ROUTE 7)



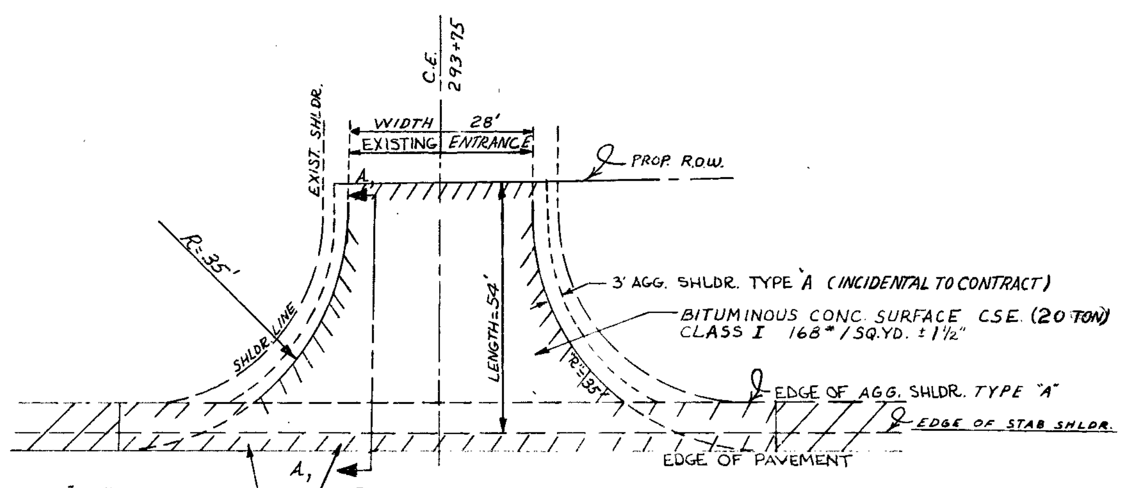
SECTION VIEW OF COMMERCIAL ENTRANCE RT. STA. 293+75



TYPICAL SECTION

NOTE: THE SHOULDER DESIGN SHOWN ON THIS TYPICAL SECTION SHEET REFLECTS ALTERNATE A. FOR ALTERNATE B, SEE SHEET NO. 3A

* SEE DETAIL BELOW: TRANSITION TAPER TO GRADE CHANGES.



PLAN OF COMMERCIAL ENTRANCE RT. STA. 293+75

STAB. SHOULDER (8") INCLUDED IN (8") STAB. SHOULDER QUANT.

Structural Design Traffic:	Year 1981 ; P.C. = 2032
	U.S. = 448 ; M.U. = 90
Class II Roads and Streets	
Minimum Soil Support:	CBR = 2.9
Per Cent of S.D.T. in Design Lane:	U_P = 50% ; U_S = 50%
	U_M = 50%
T.F. = 0.485 ;	D_t = 3.72
Pavement Structure Materials:	
Surface Course Type: Bituminous Concrete ;	a_1 = 0.4
Base Course Type: Stabilized Base Cse. ;	a_2 = 0.3

State of Illinois

Division of Highways
District Three

Prepared By: F. M. — District Engineer of Design

Date: 3-26-71

Examined By: — District Engineer of Construction

District Engineer of Maintenance

District Engineer of Materials

District Engineer of Traffic

GENERAL NOTES

Where section or sub-section monuments are encountered, the Engineer shall be notified before such monuments are removed. The Contractor shall protect and carefully preserve all monuments until an authorized surveyor or agent has witnessed or otherwise referenced their location.

The thickness of bituminous mixture shown on the plans is the nominal thickness. Deviations from the nominal thickness will be permitted when such deviations occur due to irregularities in the existing surface or base on which the bituminous mixture is placed.

The nominal thickness for subbase granular material; base and surface courses are shown on typical sections, standards, schedules or special details. The constructed thickness of the above items shall not be less than 90 per cent of the nominal thickness at any location.

Trees along the edge of the right of way shall be saved, if in the opinion of the Engineer they do not interfere with construction operations. Payment shall be made on the quantity of inch diameter removed.

It shall be the Contractor's responsibility to determine the actual location of all underground utility facilities. He shall also obtain from the respective utility companies detailed information relative to the location of their facilities and the working schedules of the utility companies for their marking of the exact location.

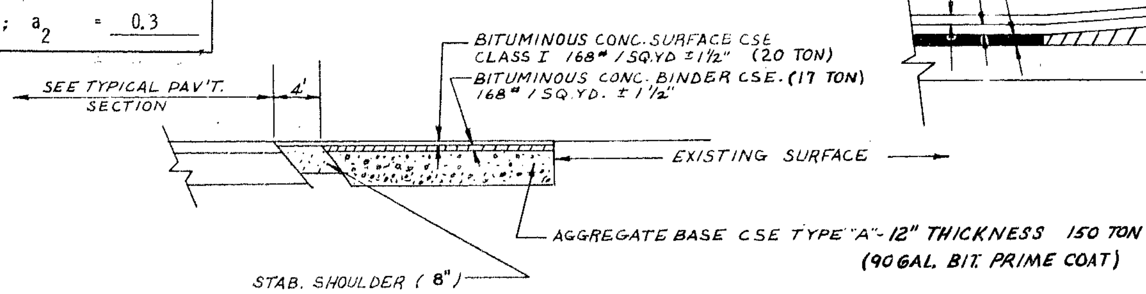
For the purpose of this contract, spring seeding is defined as that performed between December 31st to July 1st. Fall seeding is defined as that performed between July 1st and December 31st. Seeding will not be permitted at any time when the ground is frozen, wet, or in untillable condition.

Sign Panels are identified by Illinois standard numbers and are to conform to Illinois Standard Design. Details of these Standards are available at the office of the District Engineer, Ottawa, Illinois.

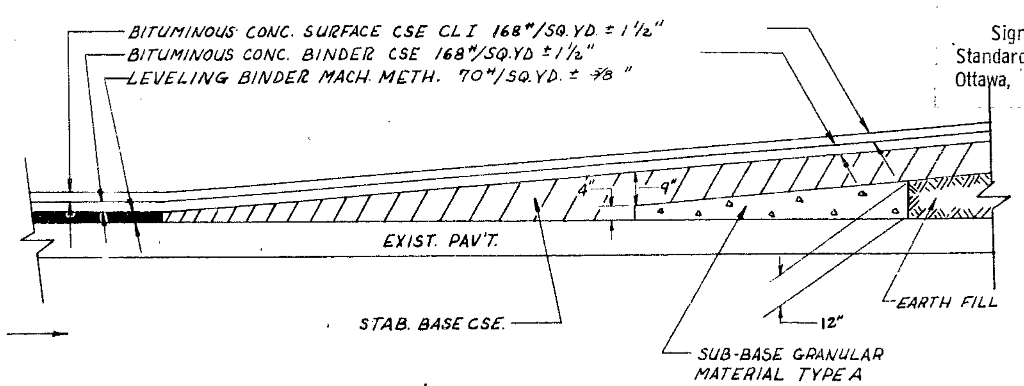
EARTH WORK

THE END AREAS SHOWN ON THE CROSS SECTIONS AND EARTH WORK QUANTITIES SHOWN ON THE SCHEDULES AND OR PLAN AND PROFILE SHEETS ARE FOR ALTERNATE "A" ONLY.

THE EARTH WORK FOR ALTERNATE "B" IS SHOWN ON THE SUMMARY OF QUANTITIES ONLY.



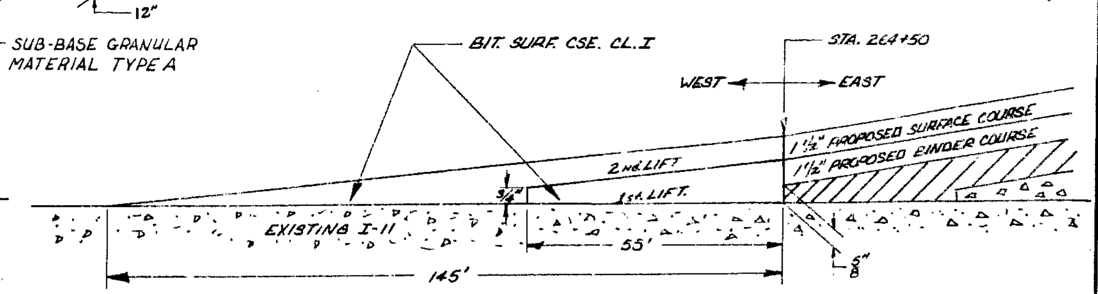
SECTION A-A



TRANSITION TAPER TO GRADE CHANGES

TEMPORARY BITUMINOUS TAPERS 145' WEST OF STATION 264+50

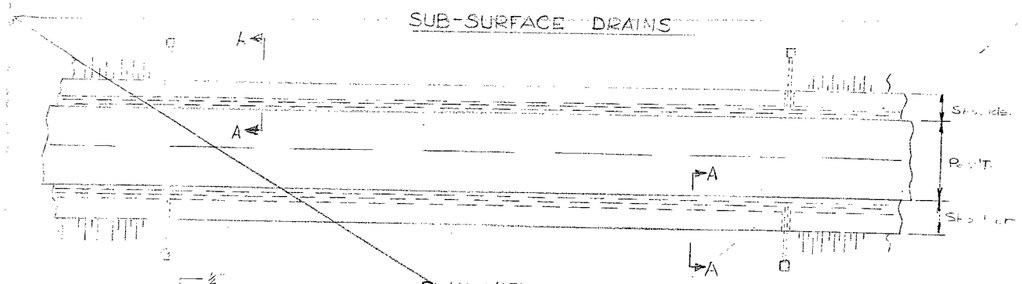
(SEE STD. 2143 FOR WIDTH TRANSITION TAPER)



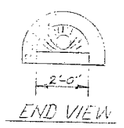
FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. SBI-7	BVB	ARUNDY	35	3

THE ROAD SYSTEM SHOWN ON THIS ILLUSTRATION IS PROPOSED: F-10 (12)

SUB-SURFACE DRAINS



TYPICAL SECTION A-A
FOR RECONSTRUCTION



QUANTITY TABLE
CLASS "X" CONC. CULVERT BOLTS = ± 2 SQ. YDS.
BOLTS 2 EACH
TOTAL SAND = ± 0.25 YDS
20 YDS / LIN. FT. TRENCH

NOTES:
All work to be in accordance with the applicable portions of the Standard Specifications except as modified hereon.

* This work will be paid for as the underdrains 6" pipe drains 6" which price shall also include the cost of furnishing & placing torpedo sand, class x conc., bolts, & sod.

Pipe underdrain shall be outletted approx. every 500 feet.

* See table above if pay items are applicable.

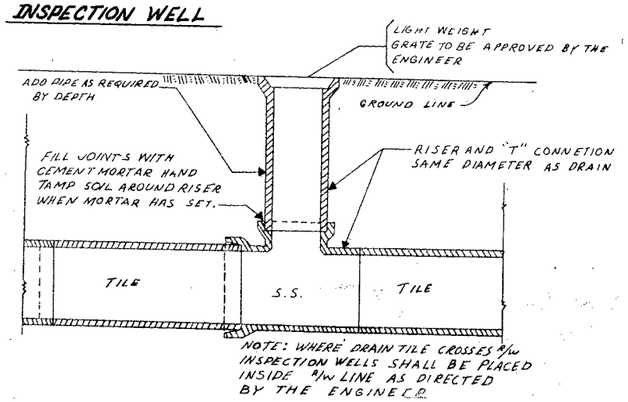
CULVERT AND STORM SEWER SCHEDULE

Station	Type	Standard And Design Number	Class "X" Concrete Cu. Yds.	Reinforcement Bars Lbs.	Pipe Culverts Type P-1 15" Lin. Ft.	Pipe Culverts RCCP Ty-6 36" Lin. Ft.	End Sections 15" Each	Storm Sewer Lin. Ft. 6"	8"	10"	12"
LT. 271+00 F.E.	15"x26" P-1	2228			26		2				
℄ 276+60	36"x156" Ty6	RCCP; D36-2, 1976	*3.5	100		156'					
℄ 281+45.5	Box Culvert	8'x6'x235' - 4 5/8"	279.8	59,833							
Rt. 293+75	15"x46" P-1	2228-1			46		2				
291+40 Across ROW									180'		
									**200		
Total			283.3	59,933	72	156'	4	**200	380	**200	**200

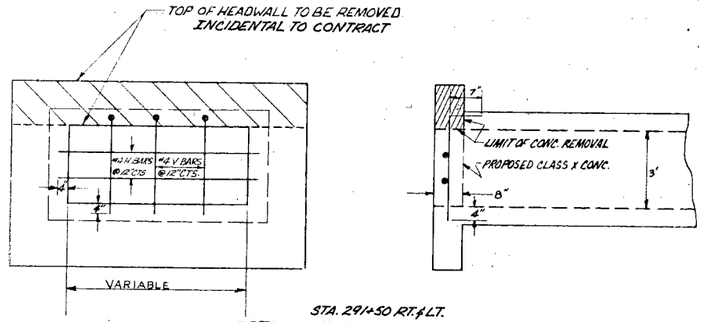
* 3.5 Cu. Yd. Class "X" Conc. Hdwl

** Added to establish a unit bid price

INSPECTION WELL

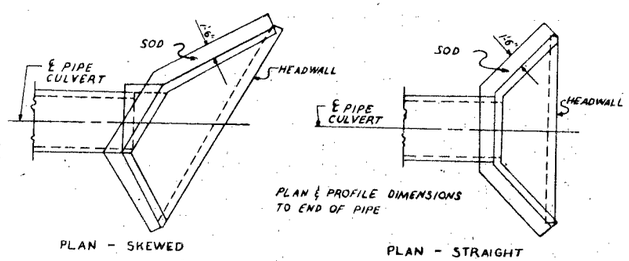


NOTE: WHERE DRAIN TILE CROSSES R/W INSPECTION WELLS SHALL BE PLACED INSIDE R/W LINE AS DIRECTED BY THE ENGINEER.

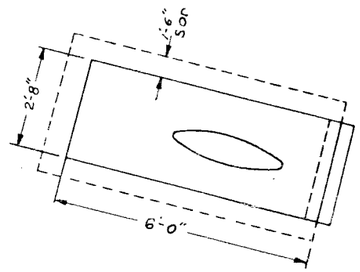


STA. 291+50 RT. & LT.

DETAIL AT BOX CULVERTS TO BE PLUGGED AND ABANDONED

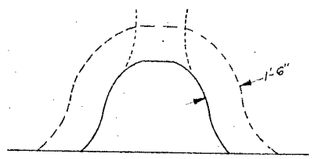


SOD-HEAD WALL INSTALLATION



NOTE: COST OF FURNISHING & INSTALLING WIRE MESH SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER CUBIC YARD FOR CLASS "X" CONCRETE (HEADWALLS) WIRE MESH TO WEIGH NOT LESS THAN 58 LBS. PER 100 SQ. FT.

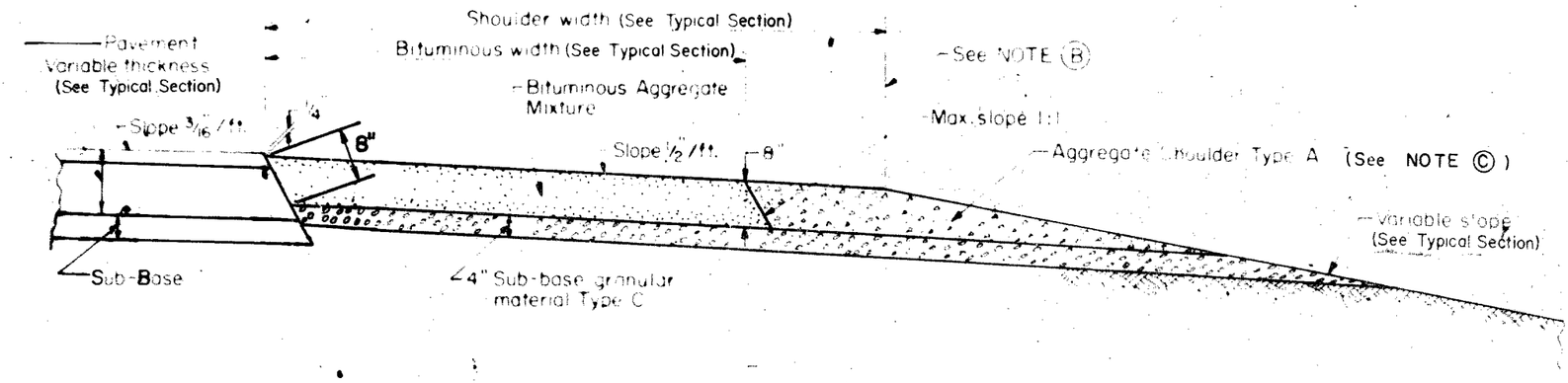
DETAIL SPECIAL FIELD TILE HEADWALL



SOD AT END SECTION

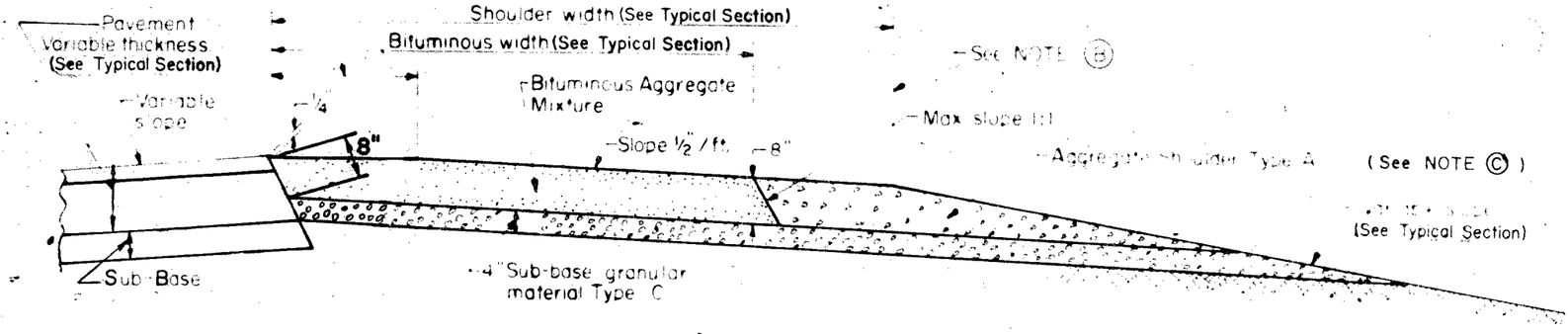
F.A. 8 SBI. 7 G-VB Grundy 35 3A

SHOULDER DETAILS
ALTERNATE "B"

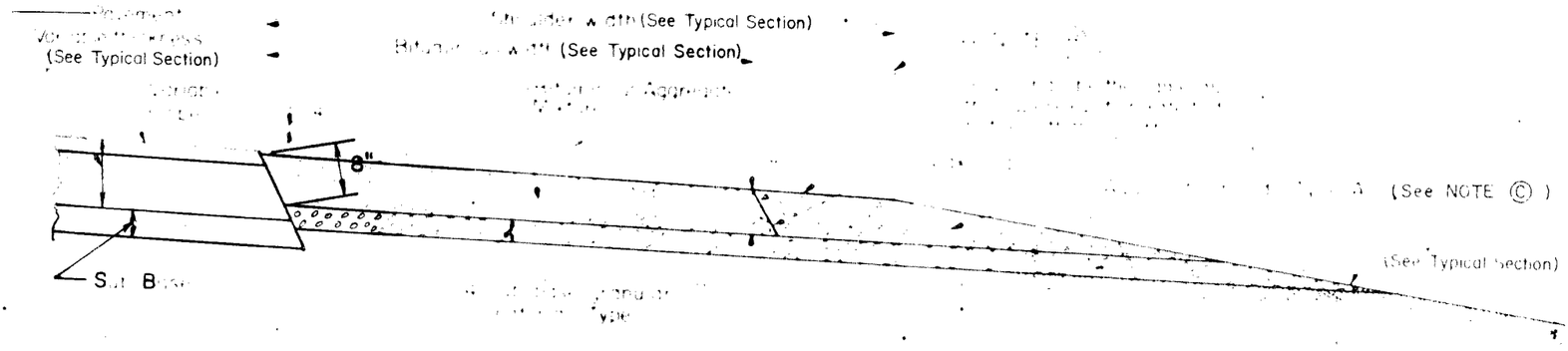


SHOULDER FOR TANGENT PAVEMENT

When the superelevation of pavement exceeds 0.04 ft./ft. a 2 foot portion of the shoulder that is adjacent to pavement shall be sloped so that the algebraic difference between pavement and shoulder will not be greater than 0.08 ft./ft.



SHOULDER FOR SUPERELEVATED PAVEMENT
(OUTSIDE OF CURVE)



SHOULDER FOR SUPERELEVATED PAVEMENT

NOTE (C)

The wedge portion of the Aggregate Shoulder Type A may be compacted in accordance with Type B shoulder requirements.

Added 1-1-71

SUMMARY OF QUANTITIES

Code No.	Item Construction Type Code:	Unit	Total Quantity	Roadway Section 6203	Bridge Section X171
210001 *	TRENCH BACKFILL	CU YD	100	100	
213001	SUB-BASE---GRANULAR MATERIAL, TYPE A	TON	266	266	
215001	AGGREGATE SHOULDERS, TYPE A	TON	2461	2461	
X21601	TOPSOIL EXCAVATION	CU YD	3704	3704	
301001	AGGREGATE BASE COURSE, TYPE A	TON	150	150	
301046 *	STABILIZED BASE COURSE	TON	3880	3880	
402001	AGGREGATE SURFACE COURSE, TYPE A	TON	628	628	
406001	BITUMINOUS MATERIALS PRIME COAT	GALLON	184	184	
406007	BITUMINOUS CONCRETE BINDER COURSE	TON	668	668	
406008	BITUMINOUS CONCRETE SURFACE COURSE, CLASS I	TON	673	673	
408006	PORTLAND CEMENT CONCRETE PAVEMENT 16 1/2 - 10 - 16 1/2	SQ YD	290	290	
X50201 *	STRUCTURE EXCAVATION	CU YD	680		680
503002	CLASS X CONCRETE HEADWALL	CU YD	3.5	3.5	
503004	PROTECTIVE COAT	SQ YD	1620	290	1330
504003	CLASS X CONCRETE	CU YD	1141.4	285.1	856.3
507025	STUD SHEAR CONNECTORS	EACH	2934		2934
507030 *	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1		1
508005	ALUMINUM RAILING	LIN FT	478		478
511025	PIPE CULVERTS, TYPE I, 15"	LIN FT	72	72	
511451	PIPE CULVERTS, TYPE 6 RCCP 36"	LIN FT	156	156	
511829	CULVERT END SECTIONS 15"	EACH	4	4	
512001 *	REINFORCEMENT BARS	POUND	223,115	75,695	147420
513005 *	FURNISHING CREOSOTED PILES 20.1 TO 38 FEET	LIN FT	594		594
513012	FURNISHING STEEL PILES 8 BP 36	LIN FT	3200		3200
513022 *	DRIVING TIMBER PILES	LIN FT	594		594
513026	DRIVING STEEL PILES	LIN FT	3200		3200
513032	TEST PILE STEEL 8 BP 36	EACH	2		2
514001	NAME PLATES	EACH	1		1
603002 *	STORM SEWERS, TYPE I 6"	LIN FT	200	200	
603003 *	STORM SEWERS, TYPE I 8"	LIN FT	380	380	
603004 *	STORM SEWERS, TYPE I 10"	LIN FT	200	200	
603005 *	STORM SEWERS, TYPE I 12"	LIN FT	200	200	
616119	PAVED DITCH 8 FEET	LIN FT	122	122	
617001	PAVEMENT REMOVAL	SQ YD	682	682	
618001	SLOPE WALLS 4"	SQ YD	905		905
628001	STEEL PLATE BEAM GUARD RAIL, SINGLE RAIL	LIN FT	3700	3700	
X62801 *	TERMINAL SECTION, SINGLE RAIL	EACH	4	4	
639001 *	FURNISHING AND ERECTING RIGHT OF WAY MARKERS	EACH	15	15	
642001	SEEDING, CLASS I	ACRE	6.6	6.6	
642003	SEEDING, CLASS III	ACRE	3.9	3.9	
642004 *	NITROGEN FERTILIZER NUTRIENTS	POUND	948	948	
642005	PHOSPHORUS FERTILIZER NUTRIENTS	POUND	787	787	
642006	POTASSIUM FERTILIZER NUTRIENTS	POUND	629	629	
642007	AGRICULTURAL GROUND LIMESTONE	TON	33	33	
643002	ASPHALT COATED MULCH	TON	21	21	
643005 *	EMULSIFIED ASPHALT	GALLON	2100	2100	
644001 *	SODDING	SQ YD	277	277	
644002	SUPPLEMENTAL WATERING	UNIT	1	1	
646001 *	** ENGINEER'S FIELD OFFICE, TYPE A	EACH	1 **		
646003 *	** ENGINEER'S FIELD LABORATORY	EACH	1 **		
X21602 *	TOPSOIL PLACEMENT	SQ YD	33336	33336	
Z10227 *	EXPLORATION TRENCH (62 IN DEPTH)	LIN FT	3000	3000	
Z10281 *	PERMANENT SURVEY MARKERS, TYPE I	EACH	3	3	
Z10561 *	INSPECTION WELLS	EACH	8	8	
Z10565 *	NEOPRENE EXPANSION JOINT	LIN FT	143		143
Z21219 *	* REMOVAL OF STANDARD SIGN ASSEMBLY	EACH	2	2	
XZ1100	‡ TRAINEES	HRS	1000 ‡		
215010 *	STABILIZED SHOULDERS (8")	SQ YD	2592	2592	
	ALTERNATE A				
202001 *	EARTH EXCAVATION	CU YD	3,927	3,927	
204001 *	BORROW EXCAVATION	CU YD	210,332	210,332	
607002 *	PIPE DRAINS 6"	LIN FT	571	571	
607152 *	PIPE UNDERDRAINS 6"	LIN FT	5,870	5,870	
	ALTERNATE B				
202001 *	EARTH EXCAVATION	CU YD	3,968	3,968	
204001 *	BORROW EXCAVATION	CU YD	210,242	210,242	
607002	PIPE DRAINS 6"	LIN FT	485	485	
213007 *	SUB-BASE GRANULAR MATERIAL, TYPE C	TON	2,055	2,055	

* SPECIALTY ITEM

** CONSTRUCTION TYPE CODE: CE58

‡ CONSTRUCTION TYPE CODE: Y080

SUMMARY OF QUANTITIES

Rev. 2-2-72

SBI-T	GVB	GRUNDY	35	5		
						F-10(12)

BITUMINOUS MATERIAL QUANTITIES

Station	To Station	Length Feet	Area Sq.Yds	112#Sq Yd/In. Bit. Conc. Bind. Cse Tons	112#Sq Yd/In. Bit. Conc. Surf. Cse. Tons	0.10Gal/Sq Yd. Bit. Matl's Prime Coat Gallons
264+50	277+86.49	1336.49	3564	304	301	21
277+86.49	281+38.87 - Bridge and approach omission					
281+38.87	296+10	1471.13	3923	335	331	33
* Temporary Taper				12	21	40
Commercial Ent. Rt. Sta. 293+75		-	-	17	20	90
	Totals	2807.62	7487	668	673	184

* See Detail

STABILIZED SHOULDERS 8" & AGGREGATE SHOULDERS TYPE A

Station	To Station	Length	Stabilized Shoulders 8" Lt & Rt Sq. Yds.	Aggregate Shldrs Type A Lt. & Rt Tons
264+50	278+41.48	1391.48	1236	1174
278+41.48	280+83.88	Bridge Omission		
280+83.88	296+10	1526.12	1356	1287
	Totals	2917.6	2592	2461

(1) STABILIZED BASE COURSE & SUB-BASE GRANULAR MATERIAL TYPE A

Station	To Station	Length	Stabilized Depth	Stabilized Base Course (9"& Var) Ton	(2) Sub-Base Granular Material Type A Ton
264+50	265+50	100'	Var.	107	-
265+50	266+15	65'	-	-	90 (Var)
265+50	277+86.49	1236.49'	9"	174B	-
277+86.49	278+41.48	°54.99'	-	-	43 (6")
278+41.48	280+83.88	Bridge Omission			
280+83.88	281+38.87	°54.99'	-	-	43 (6")
281+38.87	294+50	1311.13'	9"	1854	-
293+85	294+50	65'	-	-	90 (Var)
294+50	296+10	160'	Var.	171	-
			Totals	3880	266

(1) Station to Station Limits Should be Considered Approximate
(2) See Transition Taper to Grade Change
° Approach Slabs: SEE STD 1909 - Method II

PAVED DITCH 8 FEET

Station	Side	Lin. Ft.
276+60	Rt	42
283+30	Lt	80
	Total	122 Lin. Ft.

Refer to drainage Plan sheet No.

SCHEDULE OF SODDING

	Station	Side	Sq. Yds.
Standard Hdwls	276+60	Rt & Lt	6
	281+45.5	Rt & Lt	13
End Sections	293+75	Rt	3
*Paved Ditches	276+60	Rt	34
	283+30	Lt	59
**Bridge Cone Slopewall & GUTTERS			162
		Total	277 Sq. Yds.

* SOD AT PAVED DITCHES IS 3 FT. WIDTH EACH SIDE & END
** SOD AT SLOPEWALL & GUTTERS IS 3 FT. WIDTH

STEEL PLATE BEAM GUARD RAILS (SINGLE RAIL) & TERMINAL SECTIONS

Bridge Quadrant	S. P. B. G. R. Single Rail Lin. Ft.	Terminal Section Each
N. W.	912.5	1
S. W.	862.5	1
N. E.	937.5	1
S. E.	987.5	1
Totals	3700	4

PIPE UNDERDRAINS 6" & PIPE DRAINS 6"

Station To	Station	Side	Lin. Ft.
264+50	278+17	Rt	1367
264+50	278+47	Lt	1397
280+79	296+10	Rt	1531
281+09	296+10	Lt	1501
Total Longitudinal Pipe Underdrains			5796 Lin. Ft.
8 Laterals @ 9.25 Ft.			74
Total Pipe Underdrains 6"			5870 Lin. Ft.
Total Pipe Drains 6"			
8 Laterals @ 10.75 Ft.			86 Lin. Ft.
STA. 291+25 TO 296+10 LT. ALONG ROW			485 LIN. FT.
TOTAL PIPE DRAINS 6"			571 LIN. FT.

T-Joints

Station	Side
265+00	Rt & Lt
272+00	Rt & Lt
286+00	Rt & Lt
291+00	Rt & Lt

SEEDING QUANTITIES AND FERTILIZER NUTRIENTS

Type Of Seeding	Area (Acre)	Fertilizer Nutrients Nit. (LBS)	Phos. (LBS)	Pot. (LBS)	Agricultural Limestone (Ton)	Asphalt Coated Mulch (Ton)	Emulsified Asphalt (Gal)
Class I:							
Sta 264+50 - Sta 272+00	2.5	300	180	120	8	5	500
Sta 272+00 - Sta 288+00	1.9	228	137	91	6	4	400
Sta 288+00 - Sta 296+10	2.2	264	158	106	7	4	400
Class I Totals	6.6	792	475	317	21	13	1300
Class III:							
*Sta 272+00 - Sta 288+00	3.9	156	312	312	12	8	800
Class III Totals	3.9	156	312	312	12	8	800
Grand Totals		948	787	629	33	21	2100

* Type III Seeding shall be placed within the above station limits from the top of the side slope to the toe of the side slope.

RATES OF APPLICATION

	Type I	Type III
Nitrogen Fertilizer Nutrients	120 Lbs/Acre	40 Lbs/Acre
Phosphorus Fertilizer Nutrients	72 Lbs/Acre	80 Lbs/Acre
Potassium Fertilizer Nutrients	48 Lbs/Acre	80 Lbs/Acre
Agricultural Limestone	3 Tons/Acre	3 Tons/Acre
Asphalt Coated Mulch	2 Tons/Acre	2 Tons/Acre
Emulsified Asphalt	100Gal/Ton	100Gal/Ton

R. O. W. MARKERS

Station	Side	Distance
268+00	Lt	105'
268+00	Rt	85'
272+00	Lt	120'
272+00	Rt	100'
276+24.93	Lt	120'
276+24.93	Rt	100'
277+48.42	Rt	115'
280+35.68	Lt	115'
281+95.68	Lt	115'
283+00	Rt	115'
285+00	Rt	95'
291+00	Rt	95'
292+00	Lt	90'
295+00	Lt & Rt	60'
Total	15	

PERMANENT SURVEY MARKERS, TYPE I

275+00	P. I. on ℄	1
276+24.93	1/4 Sec. Corner 1' Rt	1
291+00	P. C. T.	1
Total		3

PAVEMENT REMOVAL

Station	To Station	Lin. Ft.	Sq. Yds.
276+56	276+64	8	16
277+95	279+45± Skew	150	300
279+80± Skew	281+63	183	366
			682

EARTHWORK QUANTITIES

Roadway	Station	To Station	Cut Cu. Yds.	Fill Cu. Yds.	Borrow Cu. Yds.
S. B. I. 7	264+50	278+41	1271	87,353	103,535
	BRIDGE OMISSION				
S. B. I. 7	280+85	296+10	2656	91,227	106,797
	Totals		3927	178,580	210,332

TOPSOIL QUANTITIES

STA.	to STA.	Nceded Cu Yds	Placement Sq Yds
264+50	278+41	1758	15822
280+85	296+10	1946	17484
	TOTAL	3704	33306

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 6	S.B.I. 7 G-VB	GRUNDY	35	6

FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT F-101(12)

3

PIPE CULVERT (36"X156') TY-6A RCCP
℄ STA. 276+60
2 HDWLS. STD. 1976.036-2
LT. ℄ RT. STA. 276+60
3.5 CU. YDS. CL. X CONC.
100 LBS. REINF. BARS

ABANDONED DITCHES & LOW AREAS WITHIN THE CONSTRUCTION AGREEMENT SHALL BE FILLED IN & GRADED AS DIRECTED BY THE ENGINEER. (SEE SPECIAL PROVISIONS)

EXISTING CULVERTS TO BE REMOVED INCIDENTAL TO CONTRACT

EXISTING W. R.R. DITCH

EXISTING E. R.R. DITCH

PAVED DITCH 80 LIN.FT.

EXISTING DRAINAGE DITCH

℄ P.L. C.E.CO.

272+00 Row=120'

276+24.93 Row=110'

276+72.93 Row=105'

PROPOSED ROW

℄ FIELD ROAD

℄-530.60'

EXISTING R.O.W.

77.5'

78.5'

℄-530.30'

272+00 Row=100'

276+24.93 Row=100'

PROPOSED R.O.W.

ABANDONED DITCHES & LOW AREAS WITHIN THE CONSTRUCTION AGREEMENT SHALL BE FILLED & GRADED AS DIRECTED BY THE ENGINEER (SEE SPECIAL PROVISIONS)

PAVED DITCH 42 LIN.FT.

EXISTING C.R.I.&P.R.R. ROW

℄-530.2 CONST. AGREE.

EXISTING C.R.I.&P.R.R.

280+55.68 Row=115'

EXISTING C.R.I.&P.R.R. ROW

EXISTING (24"X103') PIPE

EXISTING C.R.I.&P.R.R. CONSTRUCTION AGREEMENT

280+96.68 Row=115'

℄-527.3

℄-527.4'

48° 121'-4"

EXISTING (24"X77') PIPE

114'

℄-526.3'

STA 281+73

TO BE REMOVED BY OTHERS

GAS VALVE

283+00 Row=115'

285+00 Row=95'

PROPOSED ROW

EXISTING R.O.W.

PROPOSED ELECTRIC CONDUIT BY COMMONWEALTH EDISON

50' NORTHERN PETROCHEMICAL Co. RL-7

40' COMMONWEALTH EDISON Co. RL-7

2 3 4 275 6 7 8 9 280 1 2 3 4 285 6 7

STA 281+45.50
BOX CULVERT 48° SKEW (8'x6'x235'-4⅝")
279.8 CU. YDS. CLASS "X" CONC.
59,833 LBS. REINF. BARS
SEE DETAIL SHEET NO.
EXISTING CULVERT TO BE REMOVED INCIDENTAL TO CONTRACT

THREE-SPAN BRIDGE
OVER C.R.I.&P.R.R. STA. 279+62.68
244 FT BK. TO BK. OF ABUTMENTS
WIDE FLANGE STEEL BEAM WITH REINFORCED CONCRETE DECK SLAB STRUCTURE ON REINFORCED CONCRETE PIERS AND PILE BENT ABUTMENTS

CONCRETE PAVED DITCH

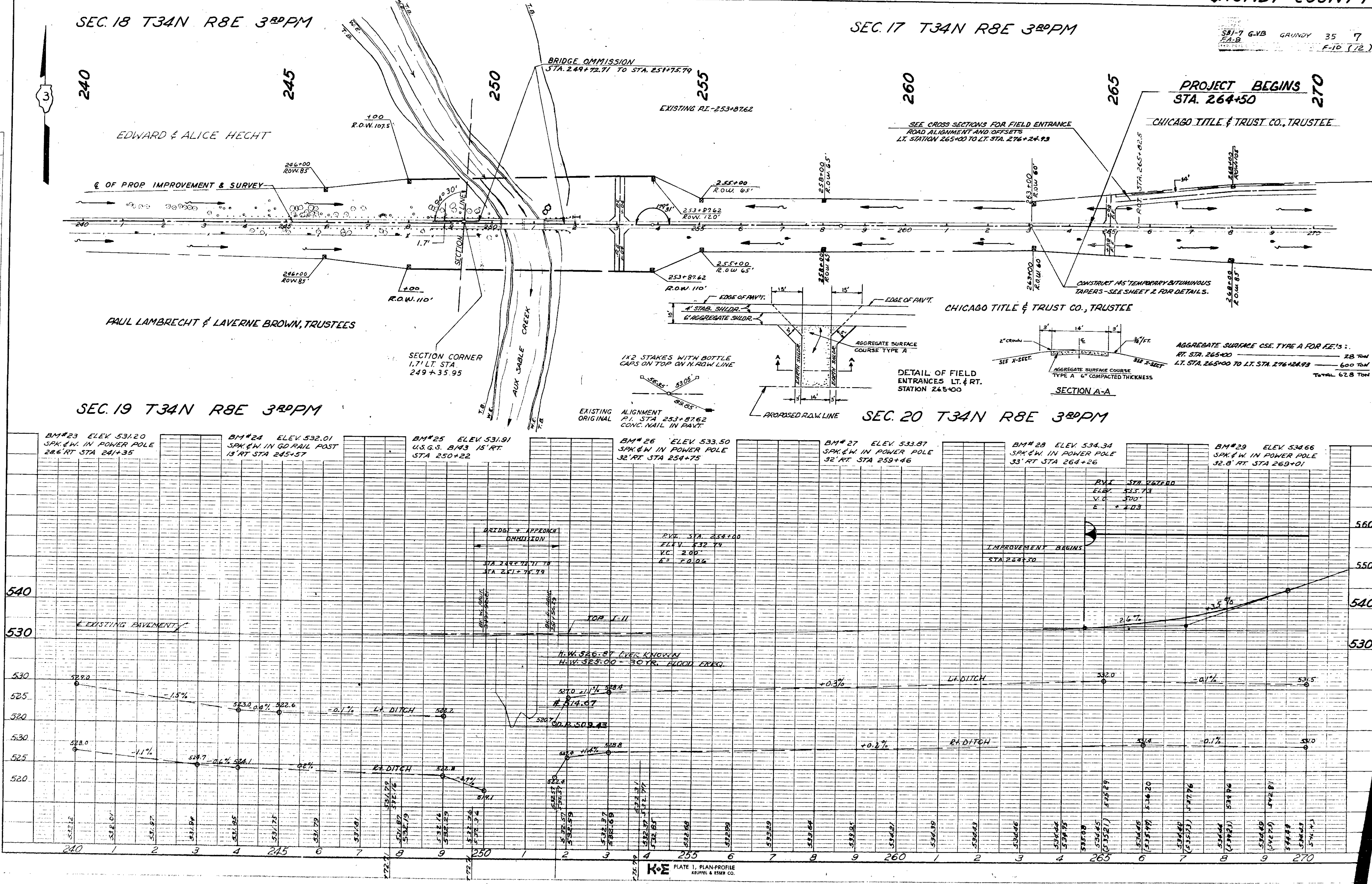
SECTION A-A

DRAINAGE PLAN
GRADE SEPARATION
S.B.I. RTE. 7 & C.R.I.&P. R.R.
S.B.I. RTE. 7 SECTION G-VB
GRUNDY COUNTY

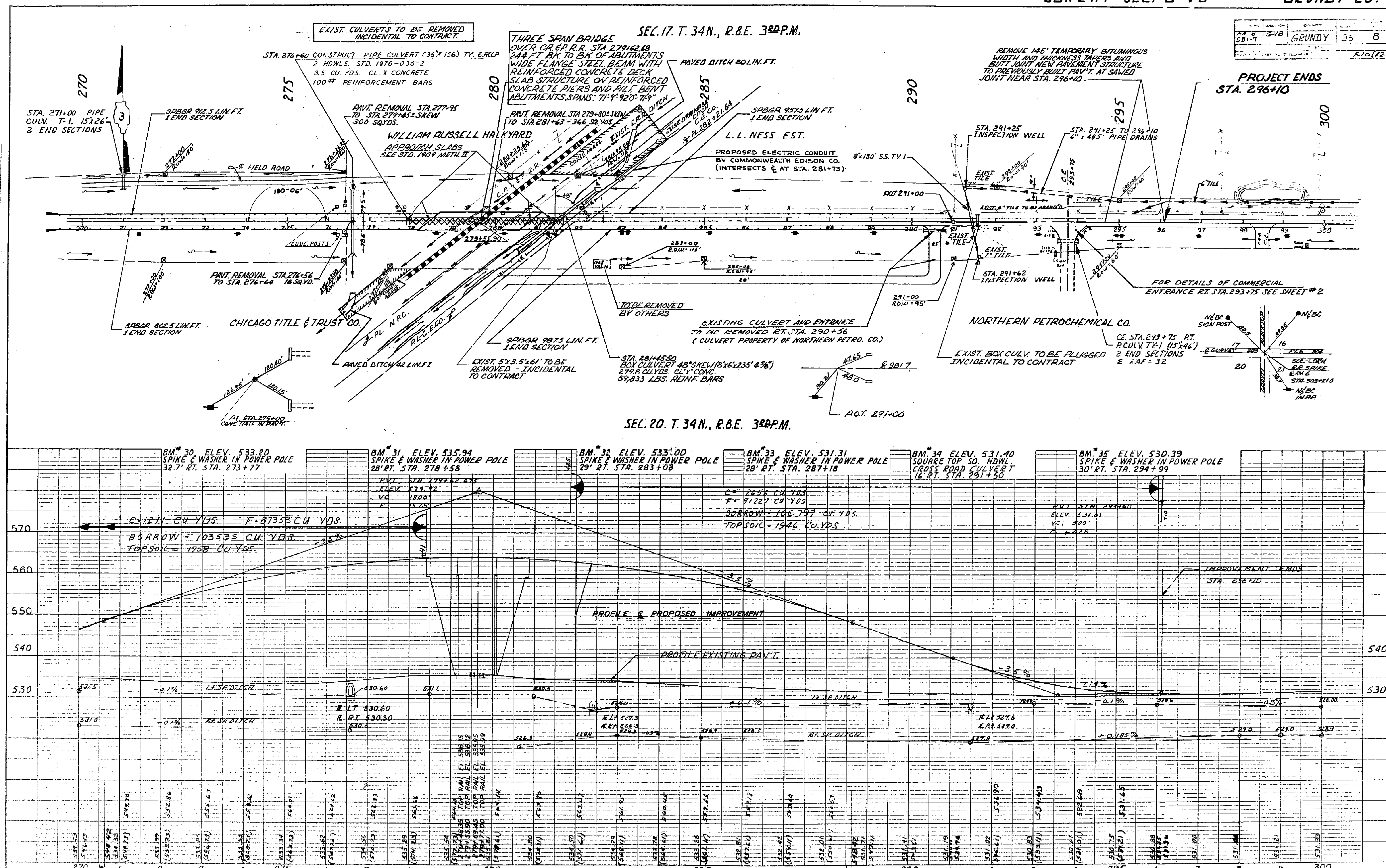
SCALE 1" = 50'

J.V.Z.

SBI RT. 7 SEC. G-VB GRUNDY COUNTY



SBI. RT. 7 SEC. G-VB GRUNDY CO.



K+E PLATE 1, PLAN-PROFILE KEUFFEL & ESSER CO.

B.M.: No. 31 Spike & Washer in Power Pole 28' Rt. Sta. 278+38 Elev. 555.94

STATE OF ILLINOIS

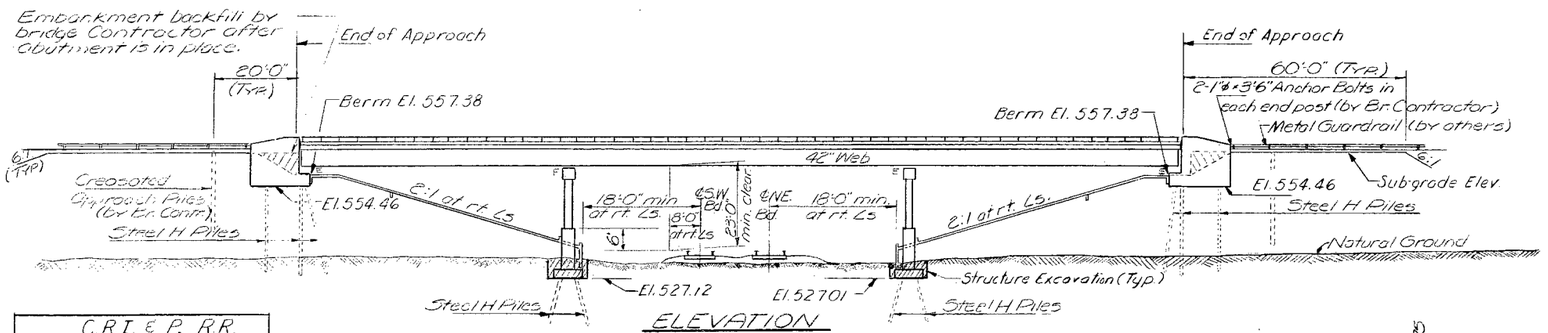
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. Rt. 8	G-VB	GRUNDY	35	9
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT.		

SHEET NO. 1

15 SHEETS

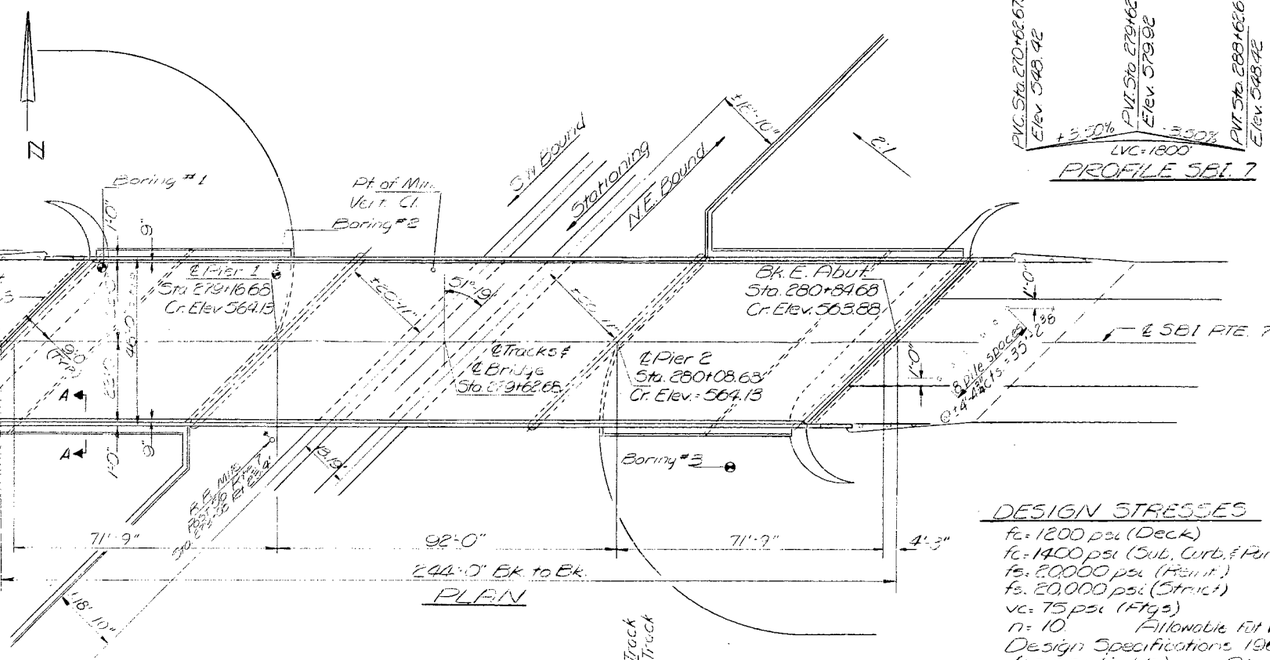
Note:
The Engineer shall determine in the field the location of the deck drains in the spans where R.R. signal and communication pole lines are involved. No deck drains shall be permitted in spans over tracks.



ELEVATION

C.R.I. & P. R.R.
BUILT 19 BY
STATE OF ILLINOIS
SBI RT. 7 SEC. G-VB
PROJ. FG-10 (12)
STATION 279+62.68
LOADING HS 20

NAME PLATE
Std. 2113-1

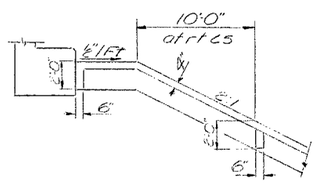


PLAN

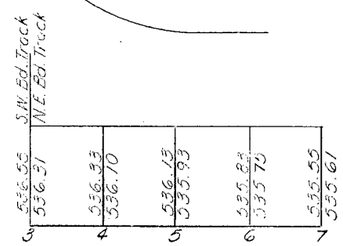
PROFILE SBI. 7

APPROACH PILE DATA
Type Creosoted
Pens Length = 35'
Req'd. No. = 18

Note
For Sec. A-A & details of slope wall see Sht. # 2 & 3.

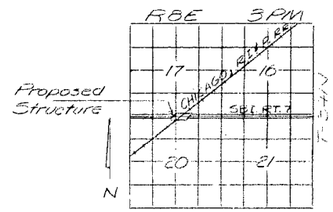


SLOPEWALL DETAILS



TRACKS - PROFILE

DESIGN STRESSES
fc = 1200 psi (Deck)
fc = 1400 psi (Sub, Curb, & Parapet)
fs = 20000 psi (Reinf.)
fs = 20,000 psi (Struct.)
vc = 75 psi (Ftgs)
n = 10 Allowable fbt WS. 20#/SqFt
Design Specifications 1969 AASHO (as applicable) Allowable ∆ Deflection-
LOADING HS 20-44 Composite 1/200



LOCATION SKETCH

TOTAL BILL OF MATERIALS

ITEM	UNIT	SUPER	SUB	TOTAL
Structure Excavation	Cu. Yds.		680	680
Protective Coat	Sq. Yds.			1330
Class X Concrete	Cu. Yds.	330.7	525.6	856.3
Structural Steel	L.S.	1		1
Stud Shear Connectors	Ea.	2934		2934
Aluminum Railing	Lin. Ft	478		478
Reinforcement Bars	Lbs.	94540	52880	147420
Steel Piles BBP36	Lin. Ft		3200	3200
Creosoted Piles 20' to 35'	Lin. Ft.		594	594
Test Piles Steel BBP36	Ea.		2	2
Name Plates	Ea			1
Slope Walls 4"	Sq. Yds.		905	905
Neoprene Expansion Joint 2½"	Lin. Ft	145		145

DESIGNED	J. M. Patel
CHECKED	[illegible]
DRAWN	B.K.K.
CHECKED	[illegible]

EXAMINED February 3 1971
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES

PASSED
ENGINEER OF DESIGN

APPROVED
CHIEF HIGHWAY ENGINEER

PROJ FG-10 (12)
GENERAL PLAN AND ELEVATION
BRIDGE OVER CHICAGO-ROCK ISLAND AND PACIFIC RAILROAD
SBI. RTE. 7 SEC. G-VB
GRUNDY COUNTY
STA. 279+62.68

GENERAL NOTES

All reinforcement bars shall be lapped 24 diameters unless otherwise shown.

Fasteners shall be high strength bolts. Bolts 3/4" ø; open holes 13/16" ø, unless otherwise noted.

Calculated weight of Structural Steel. = 274,260 Lbs.

The basic lead silico chromate paint system shall be used for shop and field painting of Structural Steel.

Field welding of construction accessories will not be permitted to the bottom flange of beams or girders nor to the top flange for a distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the Engineer.

Anchor bolts shall be set before bolting diaphragms over supports.

Slope wall shall be reinforced with welded wire fabric 6" x 6" mesh, weighing 58# per 100 sq. ft.

The Contractor shall drive 2 steel (8 BP 36) test piles in permanent locations, one at the East Abutment and one at Pier 1, as directed by the Engineer before ordering the remainder of piles.

The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.

The concrete rail section above the mandatory construction joint at the top of the slab shall be constructed of Class X Concrete, except the aggregates shall conform to the requirements of Handrail Concrete.

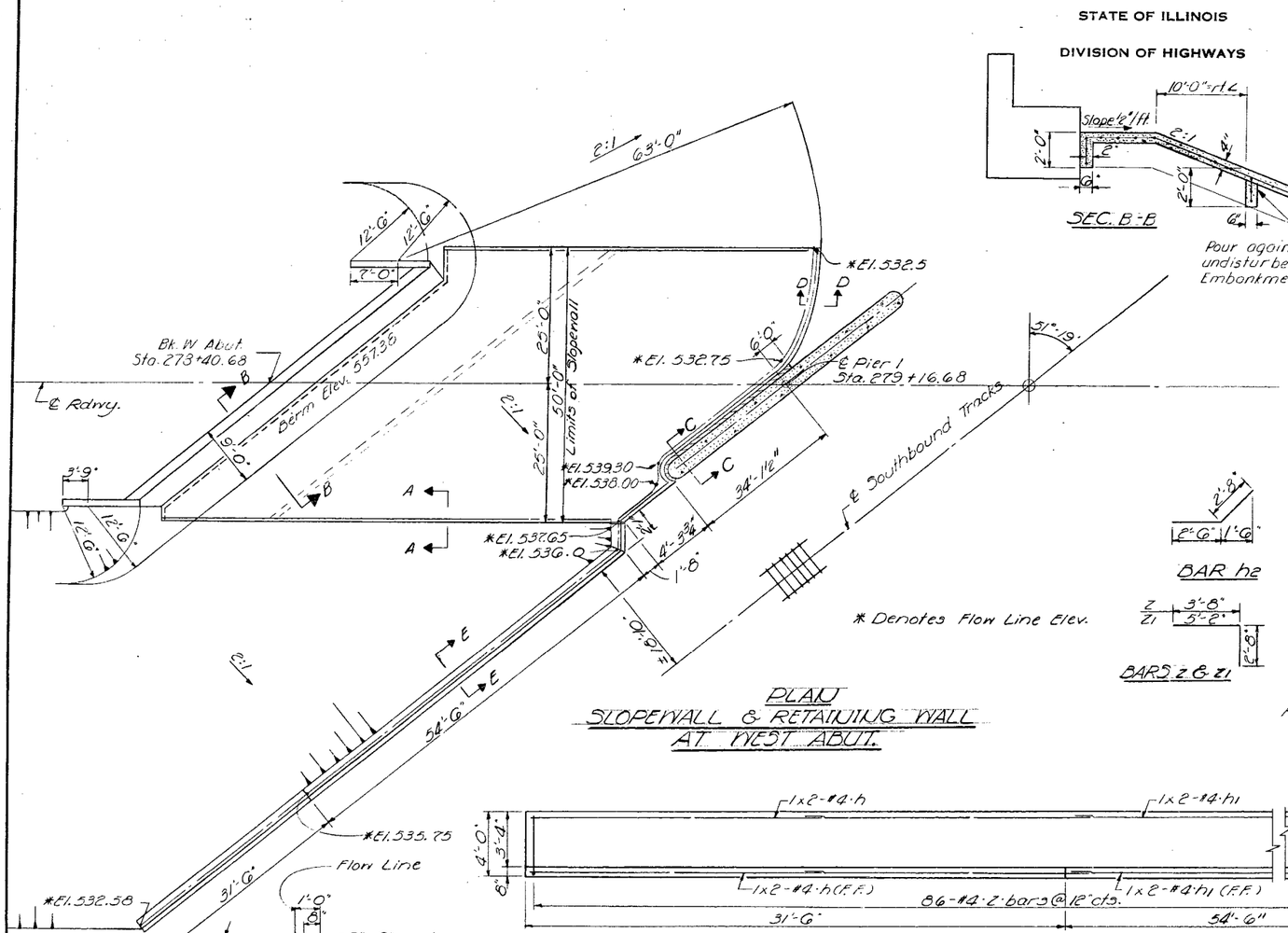
STATE OF ILLINOIS

DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. R.T. 8	Q-VB	GRUNDY	35	10
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 2

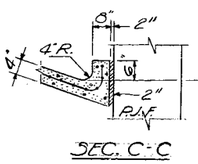
12 SHEETS

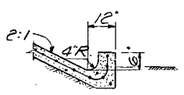


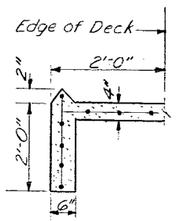
* Denotes Flow Line Elev.

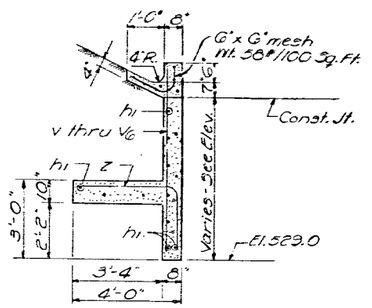
PLAN

SLOPEWALL & RETAINING WALL AT WEST ABUT.







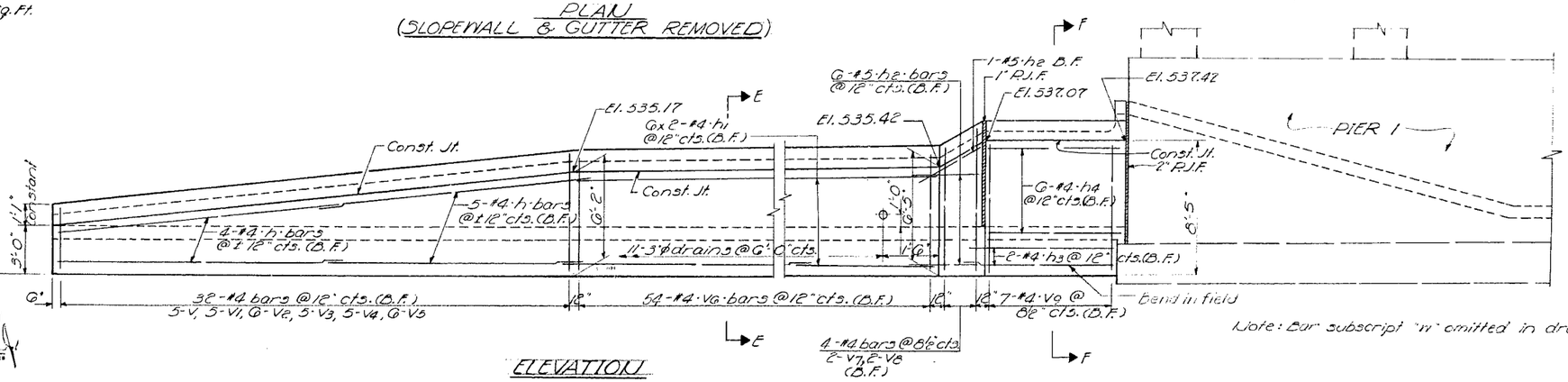


BILL OF MATERIAL

Bar	No.	Size	Length	Shape
hm	13	#4	16'-9"	
hm1	16	#4	27'-3"	
hm2	7	#5	5'-2"	
hm3	4	#4	5'-6"	
hm4	6	#4	4'-0"	
hm5	1	#4	6'-3"	
Vm	5	#4	3'-10"	
Vm1	5	#4	4'-4"	
Vm2	6	#4	4'-10"	
Vm3	5	#4	5'-5"	
Vm4	5	#4	5'-11"	
Vm5	6	#4	6'-6"	
Vm6	54	#4	7'-1"	
Vm7	2	#4	7'-6"	
Vm8	2	#4	8'-0"	
Vm9	7	#4	7'-11"	
z	93	#4	6'-4"	
z1	6	#5	7'-10"	
Class X Concrete			Cu.Yds.	26.7
Reinforcement Bars			Lbs.	1350

PLAN

(SLOPEWALL & GUTTER REMOVED)



ELEVATION

Note: Bar subscript 'm' omitted in drawings.

DESIGNED	J. M. Rebel
CHECKED	A. V. Wheyrich
DRAWN	jacobs
CHECKED	S. J. K.

Feb 3 19[illegible]

EXAMINED

PASSED

APPROVED

ENGINEER OF DESIGN

CHIEF HIGHWAY ENGINEER

WEST SLOPE WALL

S.B.I. RT. 7 SEC. G-VB

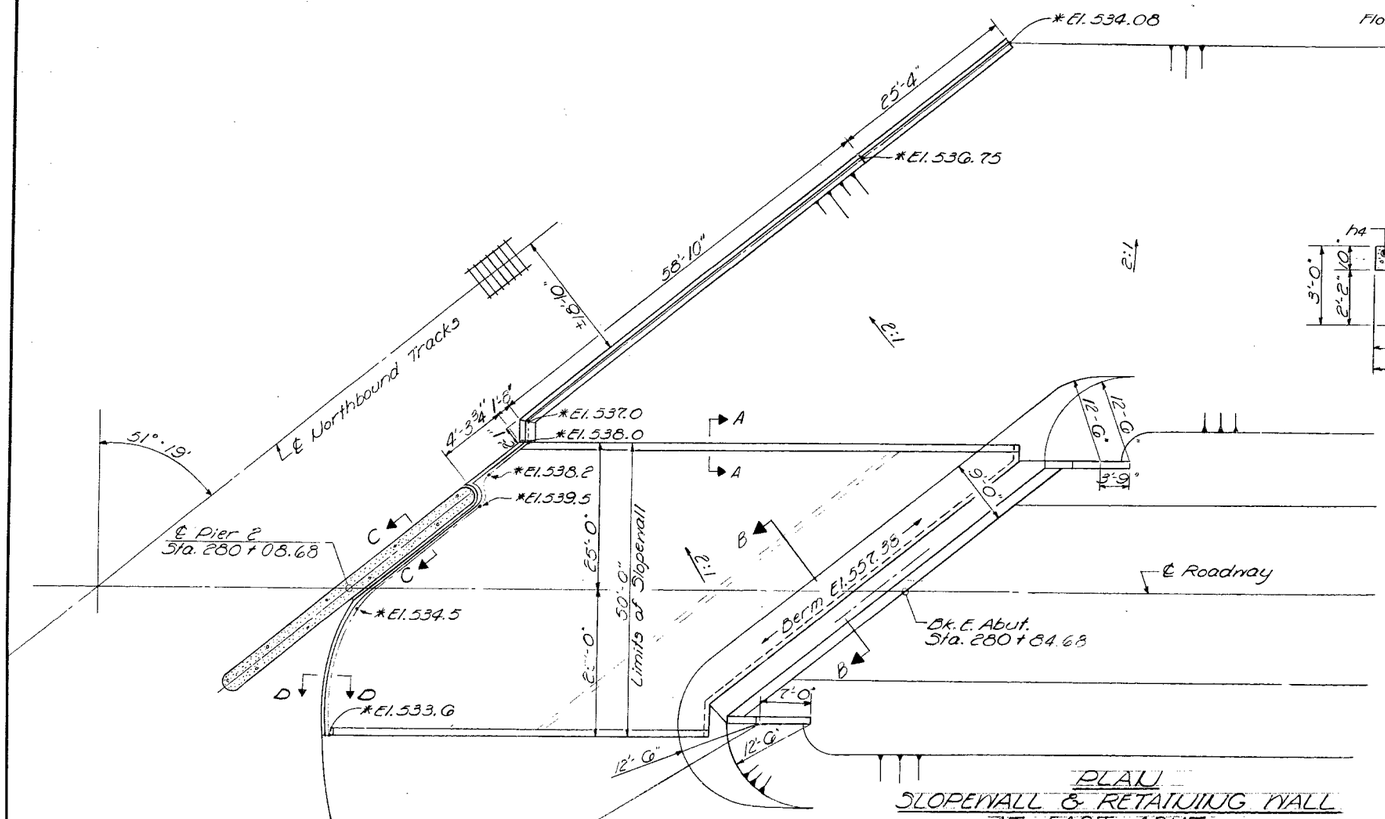
GRUNDY COUNTY

STA. 279+62.68

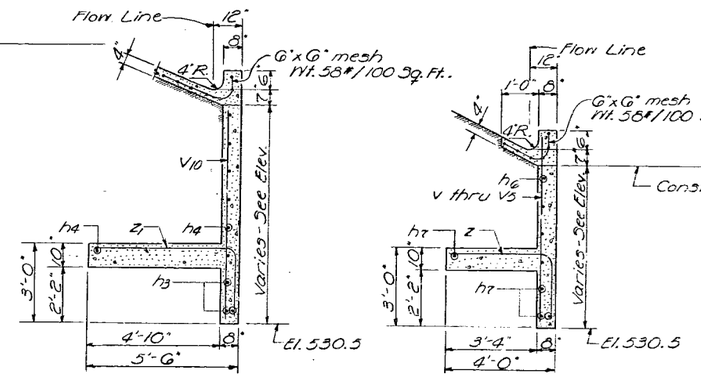
STATE OF ILLINOIS
DIVISION OF HIGHWAYS

RTE. SEC.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. R.A. 8	G-V8	GRUNDY	35	11
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT:		

SHEET NO. 3
15 SHEETS

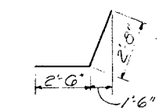


PLAN
SLOPEWALL & RETAINING WALL AT EAST ABUT.



SEC. H-H

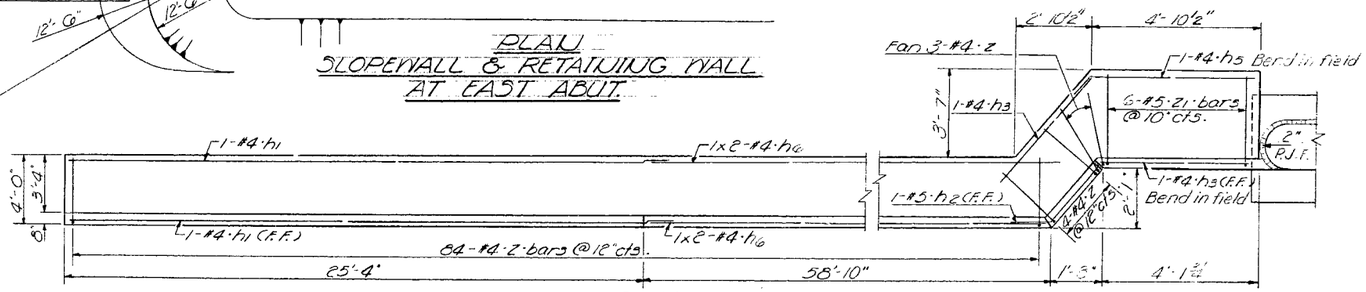
SEC. G-G



BAR h2

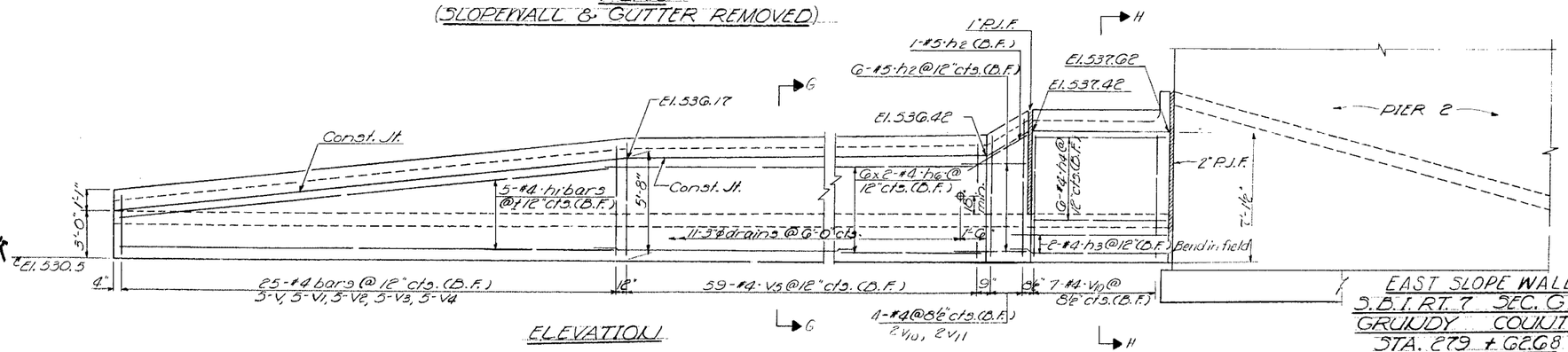
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h11	7	#4	27'-9"	
h13	4	#4	5'-6"	
h14	6	#4	4'-0"	
h15	1	#4	6'-3"	
h16	16	#4	29'-3"	
h12	7	#5	5'-2"	
V11	5	#4	3'-10"	
V11	3	#4	4'-4"	
V12	3	#4	4'-10"	
V13	3	#4	5'-5"	
V14	3	#4	5'-11"	
V15	59	#4	6'-6"	
V110	9	#4	6'-10"	
V111	2	#4	7'-4"	
Z	31	#4	6'-4"	
Z1	6	#5	7'-10"	
Class X Concrete			Cu.Yds.	25.1
Reinforcement Bars			Lbs.	1340



PLAN
(SLOPEWALL & GUTTER REMOVED)

Note: For Sections A-A, B-B, C-C & D-D See Sheet No. 2
Bar subscript "n" omitted in drawings.

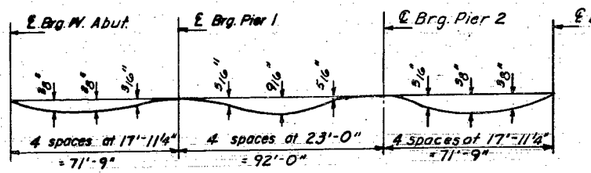


ELEVATION

EAST SLOPE WALL
S.B.I. RT. 7 SEC. G-V8
GRUNDY COUNTY
STA. 279 + 62.68

DESIGNED	J. M. Patel
CHECKED	
DRAWN	Jacobs
CHECKED	

EXAMINED FEB 9 1971
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER



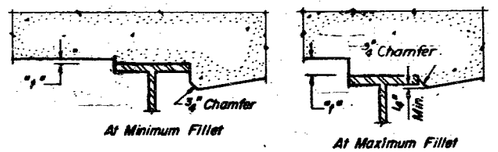
DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only)

Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown below.

STATE OF ILLINOIS

DIVISION OF HIGHWAYS



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown below, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 8	G-VB	GRUNDY	35	12
SEC. KIND DIST. NO.	ILL. NO.	FED. AID PROJECT		

SHEET NO. 4

15 SHEETS

Girder 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	27865.659	-20.000	563.638	563.633
℄ Brg. W. Abut	27869.909	-20.000	563.649	563.649
A	27879.909	-20.000	563.683	563.700
B	27889.909	-20.000	563.713	563.744
C	27899.909	-20.000	563.739	563.772
D	27909.909	-20.000	563.762	563.791
E	27919.909	-20.000	563.781	563.799
F	27929.909	-20.000	563.795	563.804
G	27939.909	-20.000	563.806	563.807
℄ Brg. Pier 1	27941.659	-20.000	563.808	563.808
H	27951.659	-20.000	563.814	563.824
I	27961.659	-20.000	563.816	563.837
J	27971.659	-20.000	563.815	563.845
K	27981.659	-20.000	563.809	563.849
L	27991.659	-20.000	563.800	563.841
M	28001.659	-20.000	563.787	563.819
N	28011.659	-20.000	563.769	563.793
O	28021.659	-20.000	563.748	563.761
P	28031.659	-20.000	563.724	563.726
℄ Brg. Pier 2	28033.659	-20.000	563.718	563.718
Q	28043.659	-20.000	563.689	563.696
R	28053.659	-20.000	563.655	563.671
S	28063.659	-20.000	563.618	563.645
T	28073.659	-20.000	563.577	563.610
U	28083.659	-20.000	563.531	563.563
V	28093.659	-20.000	563.482	563.502
W	28103.659	-20.000	563.430	563.433
℄ Brg. E. Abut.	28105.409	-20.000	563.420	563.420
Bk. E. Abut.	28109.659	-20.000	563.396	563.396

Girder 2

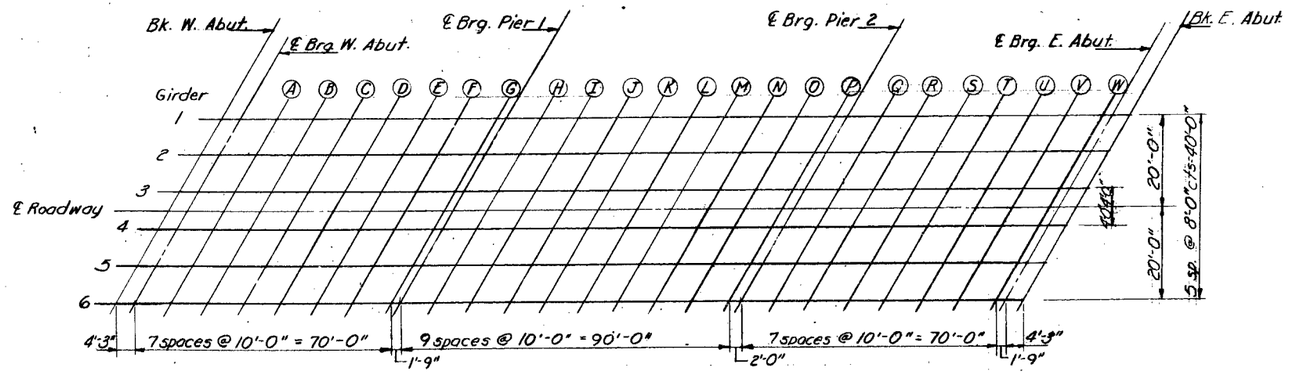
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	27855.667	-12.000	563.760	563.760
℄ Brg. W. Abut.	27859.917	-12.000	563.777	563.777
A	27869.917	-12.000	563.815	563.832
B	27879.917	-12.000	563.849	563.880
C	27889.917	-12.000	563.880	563.913
D	27899.917	-12.000	563.906	563.935
E	27909.917	-12.000	563.928	563.946
F	27919.917	-12.000	563.947	563.956
G	27929.917	-12.000	563.962	563.963
℄ Brg. Pier 1	27931.667	-12.000	563.964	563.964
H	27941.667	-12.000	563.974	563.984
I	27951.667	-12.000	563.980	564.001
J	27961.667	-12.000	563.982	564.013
K	27971.667	-12.000	563.981	564.020
L	27981.667	-12.000	563.975	564.017
M	27991.667	-12.000	563.966	563.998
N	28001.667	-12.000	563.953	563.976
O	28011.667	-12.000	563.936	563.948
P	28021.667	-12.000	563.915	563.917
℄ Brg. Pier 2	28023.667	-12.000	563.910	563.910
Q	28033.667	-12.000	563.885	563.892
R	28043.667	-12.000	563.855	563.871
S	28053.667	-12.000	563.822	563.849
T	28063.667	-12.000	563.786	563.817
U	28073.667	-12.000	563.743	563.774
V	28083.667	-12.000	563.698	563.718
W	28093.667	-12.000	563.649	563.652
℄ Brg. E. Abut.	28095.417	-12.000	563.640	563.640
Bk. E. Abut	28099.667	-12.000	563.618	563.618

Girder 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	27845.676	-4.000	563.841	563.841
℄ Brg. W. Abut.	27849.926	-4.000	563.860	563.860
A	27859.926	-4.000	563.902	563.919
B	27869.926	-4.000	563.940	563.971
C	27879.926	-4.000	563.974	564.007
D	27889.926	-4.000	564.005	564.034
E	27899.926	-4.000	564.031	564.049
F	27909.926	-4.000	564.053	564.062
G	27919.926	-4.000	564.072	564.073
℄ Brg. Pier 1	27921.676	-4.000	564.075	564.075
H	27931.676	-4.000	564.089	564.099
I	27941.676	-4.000	564.099	564.120
J	27951.676	-4.000	564.105	564.136
K	27961.676	-4.000	564.107	564.147
L	27971.676	-4.000	564.106	564.147
M	27981.676	-4.000	564.100	564.133
N	27991.676	-4.000	564.091	564.114
O	28001.676	-4.000	564.078	564.091
P	28011.676	-4.000	564.061	564.063
℄ Brg. Pier 2	28013.676	-4.000	564.057	564.057
Q	28023.676	-4.000	564.035	564.043
R	28033.676	-4.000	564.009	564.026
S	28043.676	-4.000	563.980	564.007
T	28053.676	-4.000	563.946	563.980
U	28063.676	-4.000	563.909	563.940
V	28073.676	-4.000	563.868	563.888
W	28083.676	-4.000	563.823	563.826
℄ Brg. E. Abut.	28085.426	-4.000	563.815	563.815
Bk. E. Abut.	28089.676	-4.000	563.794	563.794

℄ Roadway

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	27840.680	0.0	563.881	563.881
℄ Brg. W. Abut	27844.930	0.0	563.900	563.900
A	27854.930	0.0	563.944	563.961
B	27864.930	0.0	563.984	564.015
C	27874.930	0.0	564.020	564.053
D	27884.930	0.0	564.052	564.082
E	27894.930	0.0	564.081	564.099
F	27904.930	0.0	564.105	564.114
G	27914.930	0.0	564.126	564.127
℄ Brg. Pier 1	27916.680	0.0	564.129	564.129
H	27926.680	0.0	564.145	564.155
I	27936.680	0.0	564.157	564.178
J	27946.680	0.0	564.165	564.196
K	27956.680	0.0	564.169	564.209
L	27966.680	0.0	564.170	564.211
M	27976.680	0.0	564.166	564.199
N	27986.680	0.0	564.159	564.182
O	27996.680	0.0	564.148	564.160
P	28006.680	0.0	564.132	564.134
℄ Brg. Pier 2	28008.680	0.0	564.129	564.129
Q	28018.680	0.0	564.109	564.117
R	28028.680	0.0	564.085	564.101
S	28038.680	0.0	564.058	564.085
T	28048.680	0.0	564.026	564.059
U	28058.680	0.0	563.991	564.022
V	28068.680	0.0	563.952	563.971
W	28078.680	0.0	563.908	563.911
℄ Brg. E. Abut.	28080.430	0.0	563.900	563.900
Bk. E. Abut.	28084.680	0.0	563.881	563.881



PLAN

DESIGNED	J. M. Patel
CHECKED	A. T. Sheppard BKR
DRAWN	P. G. Barnett
CHECKED	S. T. K.

E-S 8-1-65

FEB 9 1971

EXAMINED

ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES

PASSED

ENGINEER OF DESIGN

APPROVED

CHIEF HIGHWAY ENGINEER

DECK ELEVATIONS
S.B.I. RT. 7 SEC. G-VB
GRUNDY COUNTY
STA. 279+62.68

STATE OF ILLINOIS

DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A. 8	G-VB	GRUNDY	35	13
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 5

15 SHEETS

Girder 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	27835.684	4.000	563.794	563.794
℄ Brg. W. Abut.	27839.934	4.000	563.815	563.815
A	27849.934	4.000	563.860	563.877
B	27859.934	4.000	563.902	563.933
C	27869.934	4.000	563.940	563.973
D	27879.934	4.000	563.974	564.004
E	27889.934	4.000	564.005	564.023
F	27899.934	4.000	564.031	564.040
G	27909.934	4.000	564.053	564.055
℄ Brg. Pier 1	27911.684	4.000	564.057	564.057
H	27921.684	4.000	564.075	564.085
I	27931.684	4.000	564.089	564.110
J	27941.684	4.000	564.099	564.129
K	27951.684	4.000	564.105	564.145
L	27961.684	4.000	564.107	564.149
M	27971.684	4.000	564.106	564.138
N	27981.684	4.000	564.100	564.124
O	27991.684	4.000	564.091	564.104
P	28001.684	4.000	564.078	564.080
℄ Brg. Pier 2	28003.684	4.000	564.075	564.075
Q	28013.684	4.000	564.057	564.065
R	28023.684	4.000	564.035	564.051
S	28033.684	4.000	564.009	564.037
T	28043.684	4.000	563.980	564.013
U	28053.684	4.000	563.946	563.978
V	28063.684	4.000	563.909	563.929
W	28073.684	4.000	563.868	563.871
℄ Brg. E. Abut.	28075.434	4.000	563.860	563.860
Bk. E. Abut.	28079.684	4.000	563.841	563.841

Girder 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	27825.693	12.000	563.618	563.618
℄ Brg. W. Abut.	27829.943	12.000	563.640	563.640
A	27839.943	12.000	563.690	563.707
B	27849.943	12.000	563.735	563.766
C	27859.943	12.000	563.777	563.810
D	27869.943	12.000	563.815	563.845
E	27879.943	12.000	563.849	563.867
F	27889.943	12.000	563.880	563.889
G	27899.943	12.000	563.906	563.907
℄ Brg. Pier 1	27901.693	12.000	563.910	563.910
H	27911.693	12.000	563.932	563.942
I	27921.693	12.000	563.950	563.971
J	27931.693	12.000	563.964	563.994
K	27941.693	12.000	563.974	564.014
L	27951.693	12.000	563.980	564.022
M	27961.693	12.000	563.982	564.015
N	27971.693	12.000	563.981	564.004
O	27981.693	12.000	563.975	563.988
P	27991.693	12.000	563.966	563.968
℄ Brg. Pier 2	27993.693	12.000	563.964	563.964
Q	28003.693	12.000	563.950	563.957
R	28013.693	12.000	563.932	563.948
S	28023.693	12.000	563.910	563.938
T	28033.693	12.000	563.884	563.918
U	28043.693	12.000	563.855	563.886
V	28053.693	12.000	563.821	563.841
W	28063.693	12.000	563.784	563.787
℄ Brg. E. Abut.	28065.443	12.000	563.777	563.777
Bk. E. Abut.	28069.693	12.000	563.760	563.760

Girder 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut	27815.701	20.000	563.396	563.396
℄ Brg. W. Abut	27819.951	20.000	563.420	563.420
A	27829.951	20.000	563.474	563.491
B	27839.951	20.000	563.523	563.554
C	27849.951	20.000	563.569	563.602
D	27859.951	20.000	563.611	563.640
E	27869.951	20.000	563.649	563.667
F	27879.951	20.000	563.683	563.692
G	27889.951	20.000	563.713	563.715
℄ Brg. Pier 1	27891.701	20.000	563.718	563.718
H	27901.701	20.000	563.744	563.754
I	27911.701	20.000	563.766	563.787
J	27921.701	20.000	563.783	563.814
K	27931.701	20.000	563.797	563.837
L	27941.701	20.000	563.808	563.849
M	27951.701	20.000	563.814	563.846
N	27961.701	20.000	563.816	563.839
O	27971.701	20.000	563.815	563.827
P	27981.701	20.000	563.809	563.811
℄ Brg. Pier 2	27983.701	20.000	563.808	563.808
Q	27993.701	20.000	563.797	563.805
R	28003.701	20.000	563.783	563.799
S	28013.701	20.000	563.765	563.793
T	28023.701	20.000	563.744	563.777
U	28033.701	20.000	563.718	563.749
V	28043.701	20.000	563.688	563.708
W	28053.701	20.000	563.655	563.658
℄ Brg. E. Abut.	28055.451	20.000	563.649	563.649
℄ Brg. E. Abut.	28059.701	20.000	563.633	563.633

DESIGNED J. W. Patel

CHECKED A. Vichayapat

DRAWN Bev Robinson

CHECKED [illegible]

EXAMINED FEB 9 1971

ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES

PASSED

ENGINEER OF DESIGN

APPROVED

CHIEF HIGHWAY ENGINEER

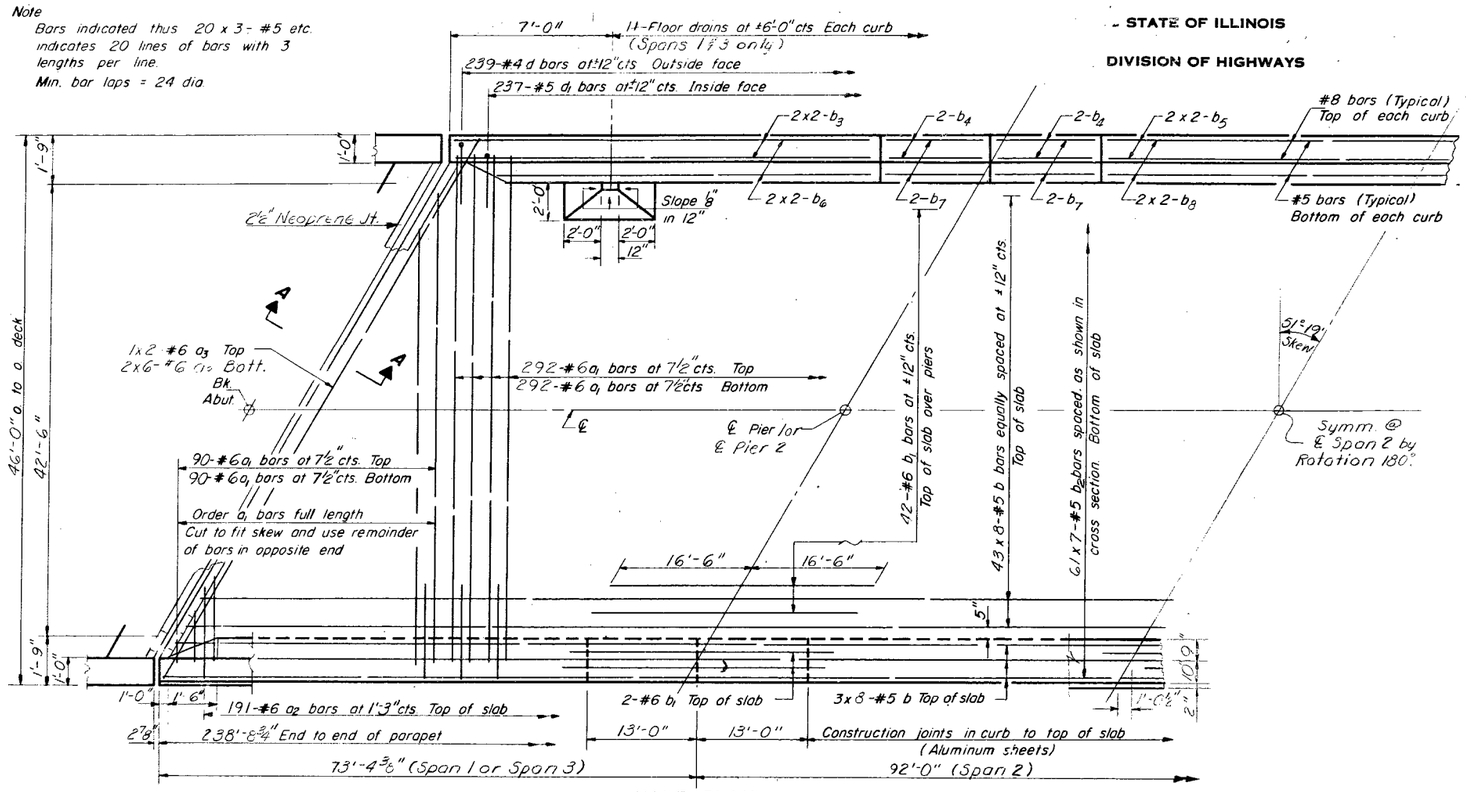
DECK ELEVATIONS
S.B.I. RT. 7 SEC. G-VB
GRUNDY COUNTY
STA. 279+62.68

Note
Bars indicated thus 20 x 3 - #5 etc. indicates 20 lines of bars with 3 lengths per line.
Min. bar laps = 24 dia.

STATE OF ILLINOIS
DIVISION OF HIGHWAYS

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I. 80	G-VB	GRUNDY	35	14
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT:		

SHEET NO. 6
15 SHEETS



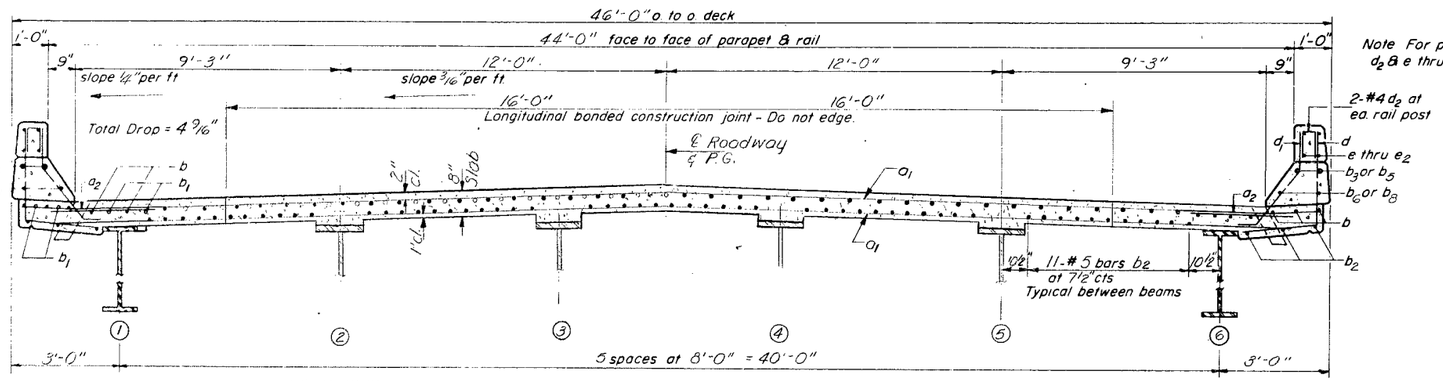
HALF PLAN

For Section A-A & Neoprene Joint detail see Sheet #7.

BILL OF MATERIAL

Bar	No	Size	Length	Shape
a_1	764	#6	44'-0"	
a_2	382	#6	4'-0"	
a_3	12	#6	37'-0"	
b	392	#5	31'-0"	
b_1	92	#6	33'-0"	
b_2	427	#5	35'-5"	
b_3	16	#8	31'-0"	
b_4	16	#8	12'-9"	
b_5	8	#8	34'-0"	
b_6	16	#5	30'-9"	
b_7	16	#5	12'-9"	
b_8	8	#5	33'-9"	
d	478	#4	4'-6"	
d_1	474	#5	3'-5"	
Reinforcement Bars		Lbs.	9320	
Class X Concrete		Cu Yds	35.3	

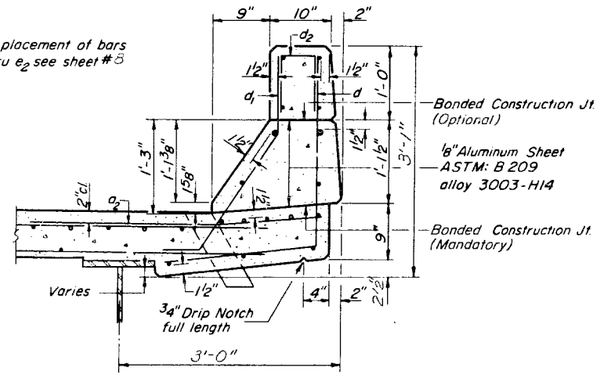
Parapet reinforcement and Class X Concrete are billed on Sh. #5



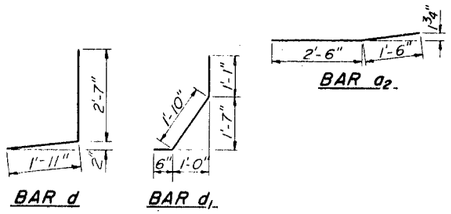
NEAR PIER — NEAR MIDSPAN

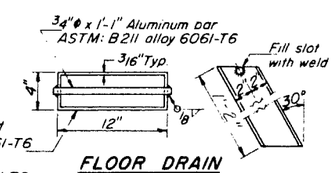
CROSS SECTION
LOOKING EAST

Note For placement of bars d_2 & e thru e_2 see sheet #8



CURB SECTION
Cost of Aluminum Drains and Sheets shall be incidental to Class X Concrete





FLOOR DRAIN

DESIGNED	J. H. Patel
CHECKED	A. Y. Chaudhary
DRAWN	Ray Robinson
CHECKED	[illegible]

EXAMINED Feb. 3 1971
ENGINEER OF BRIDGES AND TRAFFIC STRUCTURES
PASSED
APPROVED ENGINEER OF DESIGN
CHIEF HIGHWAY ENGINEER

I-4 to 6-L (>30°) 3-1-68

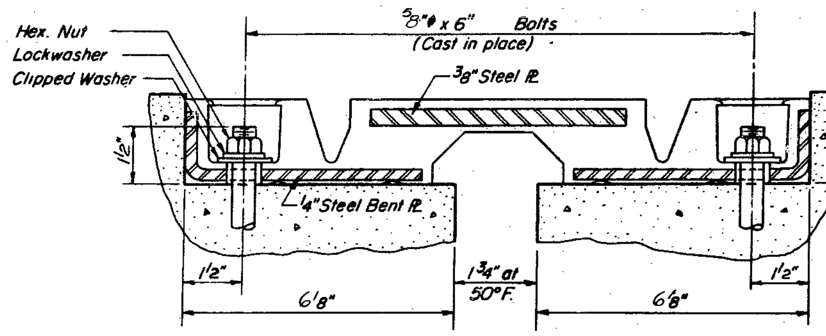
SUPERSTRUCTURE
S.B.I. RT. 7 SEC. G-1E
GRUNDY COUNTY
STA. 279+62.68

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A. 8	G-VB	GRUNDY	35	15
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

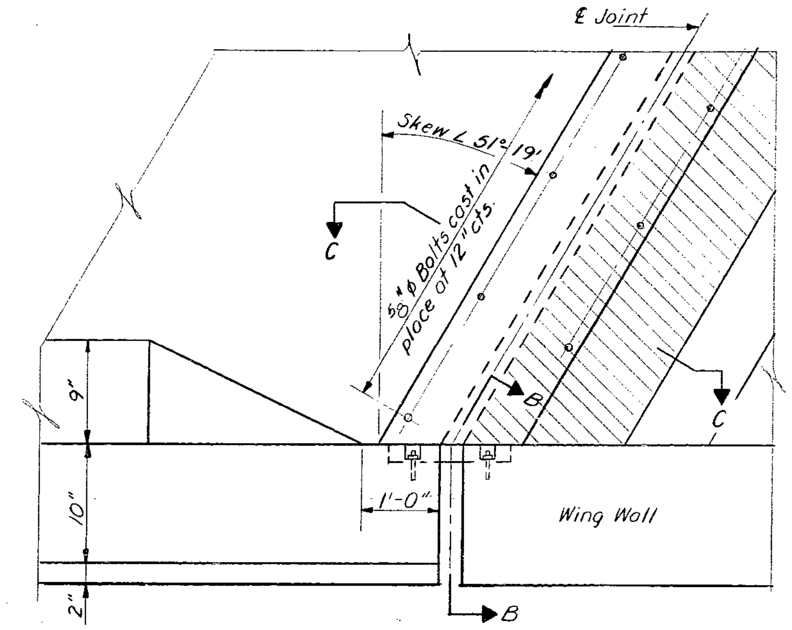
SHEET NO. 7
15 SHEETS

STATE OF ILLINOIS

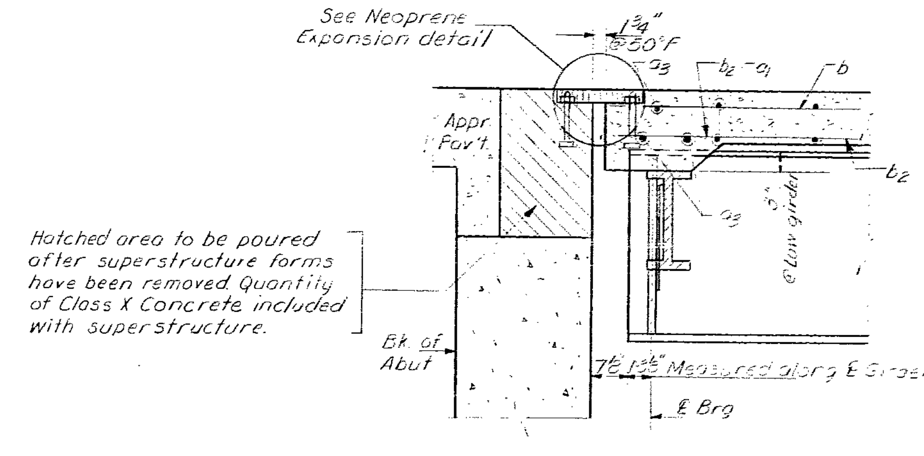
DIVISION OF HIGHWAYS



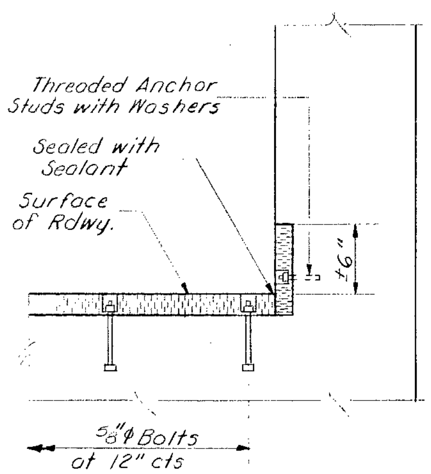
NEOPRENE EXPANSION JOINT (2 1/2")
See Special Provisions



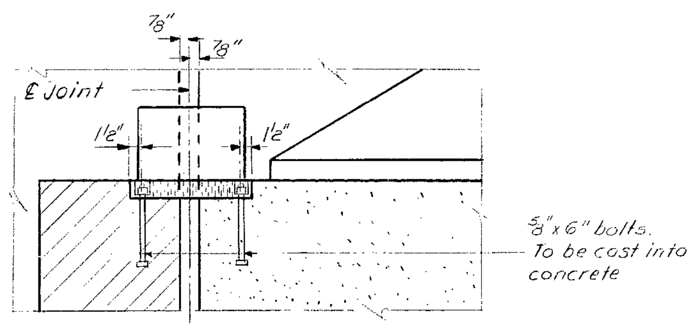
PLAN



SECTION A-A



SEC. B-B



SEC. C-C

INTERIOR GIRDER REACTION TABLE

	ABUT. E & W	PIER 1 & 2
R DL (k)	33.08	120.02
R LL (k)	44.22	63.36
Imp (k)	11.22	15.33
R Total (k)	88.53	198.71

INTERIOR GIRDER MOMENT TABLE

	0.4 Sp. 1 or 3	Pier 1 or 2	0.5 Sp 2
Is (in4)	12584.8	21797.8	12584.8
Ic (in4)	31812.7		31812.7
Ss (in3)	622.3	979.7	622.3
Sc (in3)	862.5		862.5
DL (k/l)	0.988	1.310	0.988
M DL (lk)	304.52	957.55	297.06
fs DL (ksi)	5.87	11.73	5.73
S DL (k/l)	0.306		0.306
MS DL (lk)	111.96		131.04
M LL (lk)	609.75	498.98	678.02
M Imp (lk)	154.88	120.75	155.94
Total (lk)	876.59	619.73	965.00
fs(LL+S DL)(ksi)	12.20	7.59	13.43
fs total (ksi)	18.07	19.32	19.16
VR (k)	61.57		61.57

Note : Composite in positive moment areas only.

DESIGNED	J. M. Patel
CHECKED	A. J. Khaygat
DRAWN	BKR
CHECKED	S.J.K.

FEB. 9 1971
EXAMINED ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED ENGINEER OF DESIGN
APPROVED CHIEF HIGHWAY ENGINEER

SUPERSTRUCTURE DETAILS
S.B.I. RT. 7 SEC. G-VB
GRUNDY COUNTY
STA. 279+62.68

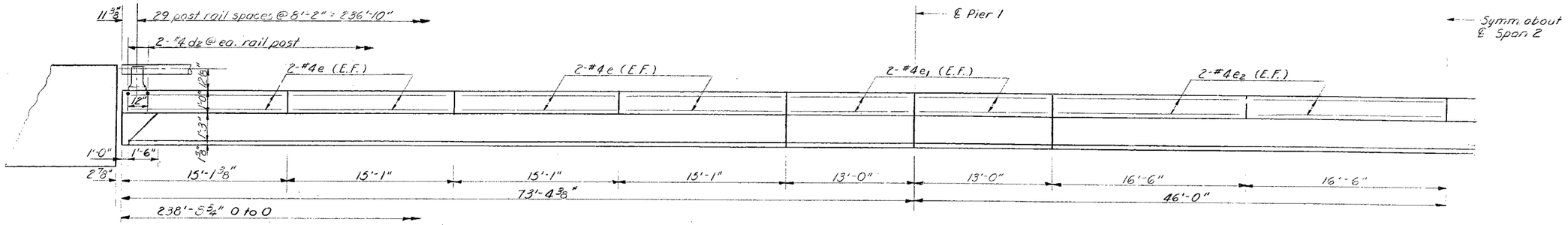
STATE OF ILLINOIS

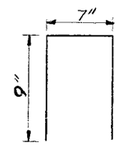
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. RT. 8	G-VB	GRUNDY	35	16
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT.		

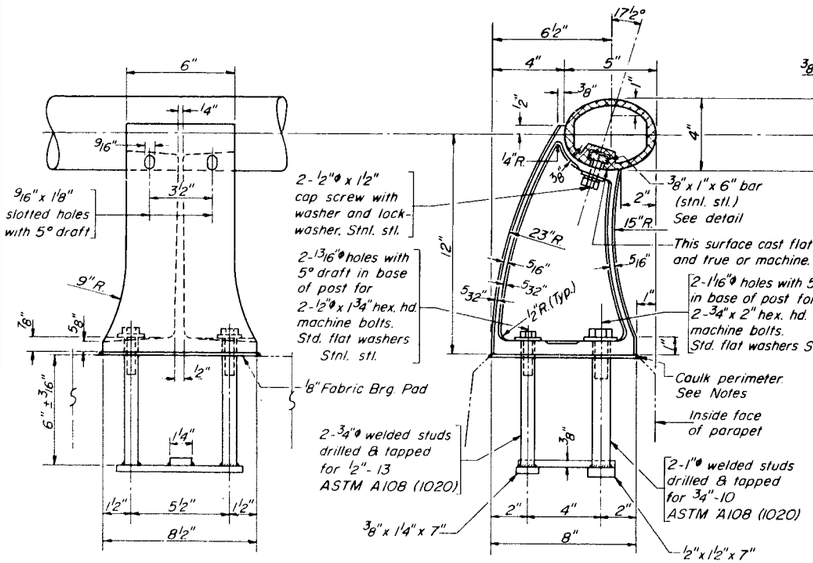
SHEET NO. 6

15 SHEETS

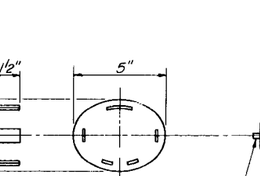




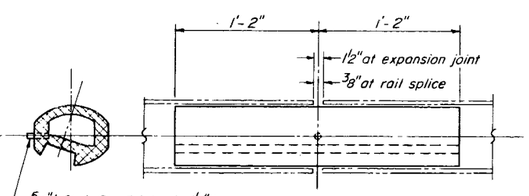
BAR d_2



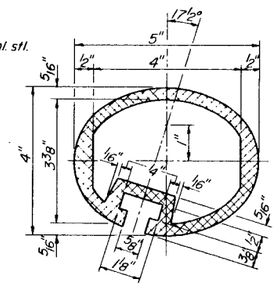
RAIL POST DETAILS



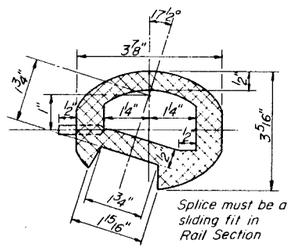
CAST END CAP
DRIVE FIT TYPE
4 Required



RAIL SPLICE



SEC. THRU ELLIPTICAL RAIL SECTION



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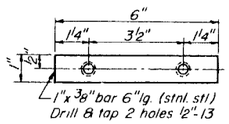
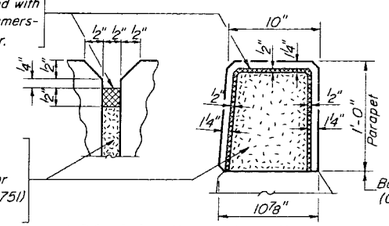


CLAMP BAR

Two component non-staining gray sealing compound with polysulfide liquid polymers-gun grade with primer.

½" Preformed Cork Asphalt Joint Filler. (meets qualifications for ASTM: Designation D 1751) Cost incidental.



PARAPET JOINT DETAIL

NOTES:

All Aluminum Alloy Extruded Rail shall be supplied in modular lengths of 30 feet, except at the end of bridge or over open joints in bridge deck where the rail shall be attached to a minimum of 2 posts. If the rail is on a horizontal curve of 2300 foot radius or less, the modular lengths may be reduced but shall be attached to a minimum of 2 posts.

All joints in rail shall be spliced per detail.

Provide 1 - 1/8" and 2 - 1/16" Aluminum Shims for 25% of the Posts. Rail element shall be parallel to Grade - high spots shall be ground and low spots shimmed.

Seal perimeter of base of post to parapet with two component non-staining gray sealing compound with polysulfide liquid polymers, gun grade with primer. Fabric Bearing Pad shall have same dimensions as base of post.

Aluminum alloy rail shall conform to ASTM B 221 alloy 6061-T6 or 6351-T5 with min. yield 35 ksi, min. tensile 38 ksi, and elongation of 10% in 2 inches.

PARAPETS & RAILS
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d_2	120	#4	2'-1"	
e	64	#4	14'-10"	
e_1	32	#4	12'-9"	
e_2	32	#4	16'-3"	
Reinforcement Bars			Lbs.	1420
Class X Concrete			Cu. Yds.	15.4
Aluminum Railing			Lin. Ft.	478

ALUMINUM RAILING
S.B.I. RT 7 SEC. G-VB
GRUNDY COUNTY
STA. 279+62.68

DESIGNED	J. M. Patel
CHECKED	A. Y. Khayyat
DRAWN	Bev Robinson
CHECKED	S. Y. K.

EXAMINED FEB 9 19[illegible]

PASSED

APPROVED

ENGINEER OF DESIGN

CHIEF HIGHWAY ENGINEER

R-17 4-22-68 9-18-69

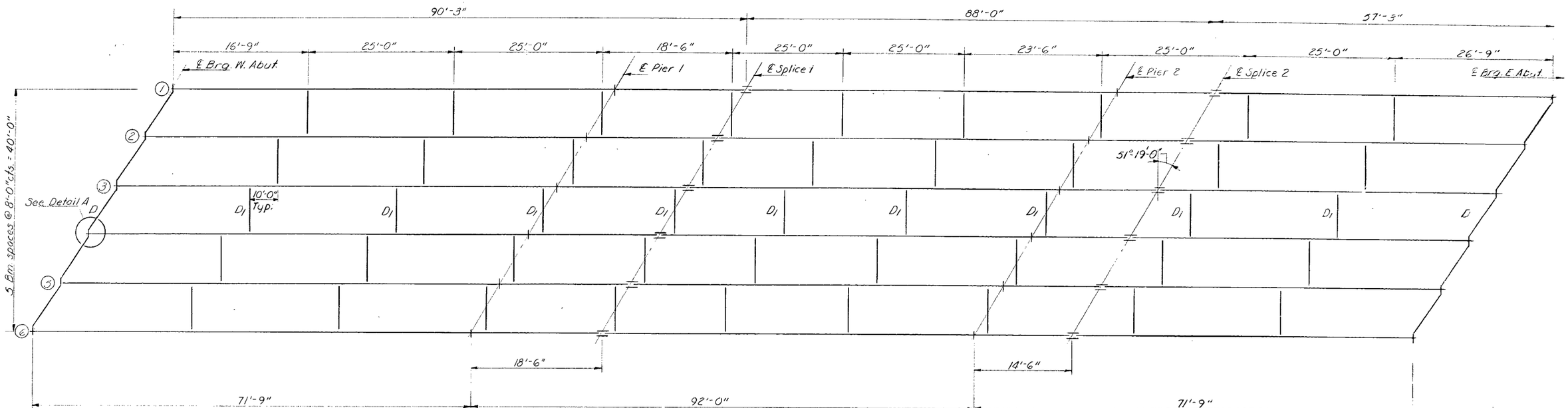
STATE OF ILLINOIS

DIVISION OF HIGHWAYS

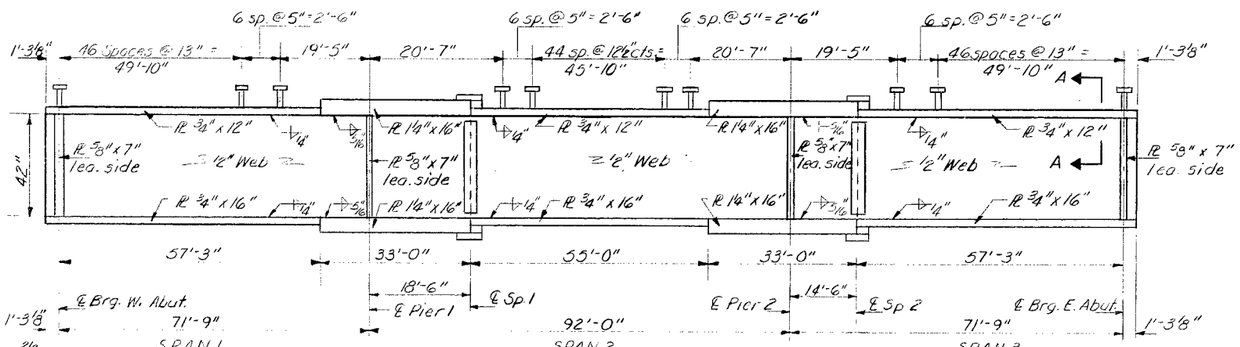
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. R.A. 8	G-VB	GRUNDY	35	17
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 9

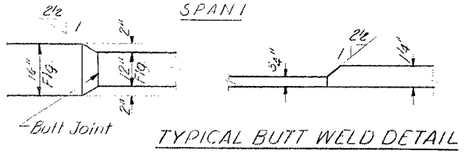
15 SHEETS



PLAN

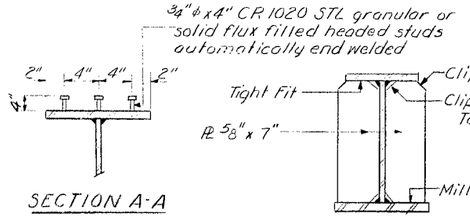


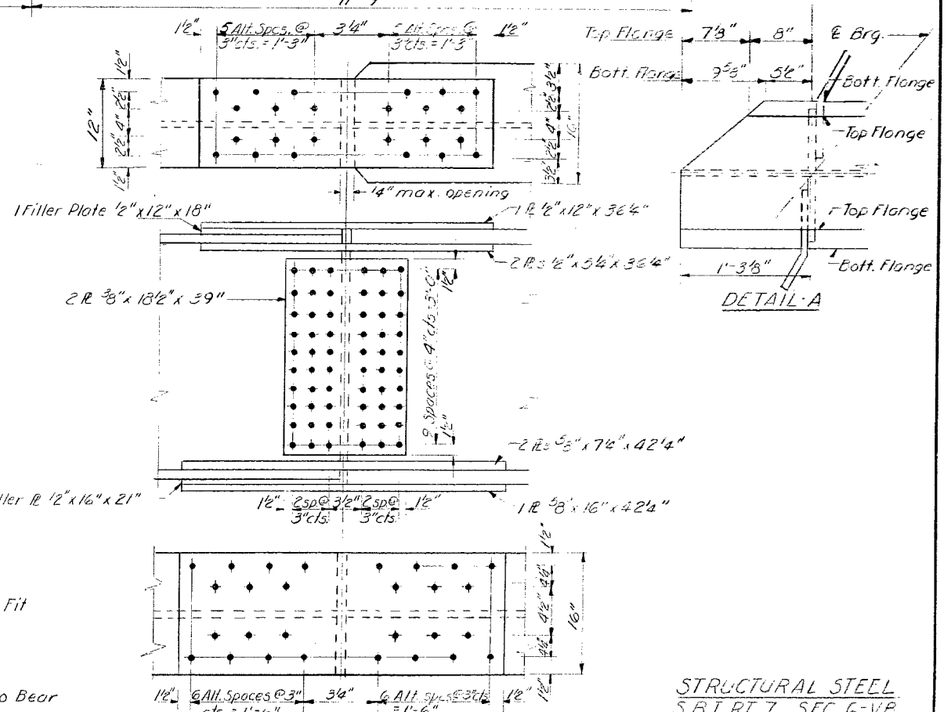
GIRDER ELEVATION



Butt Joint

TYPICAL BUTT WELD DETAIL





DETAIL A

DESIGNED	J. M Patrl
CHECKED	A. L. Maupin
DRAWN	Bev Robinson
CHECKED	[illegible] K.

EXAMINED FEB. 9 1971

PASSED

APPROVED

ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES

ENGINEER OF DESIGN

CHIEF HIGHWAY ENGINEER

STRUCTURAL STEEL
S.B.I. RT. 7 SEC. G-VB
GRUNDY COUNTY
STA. 279+62.66

FIELD SPLICE
(All fasteners shall be ⅞" ϕ H.S. Bolts)

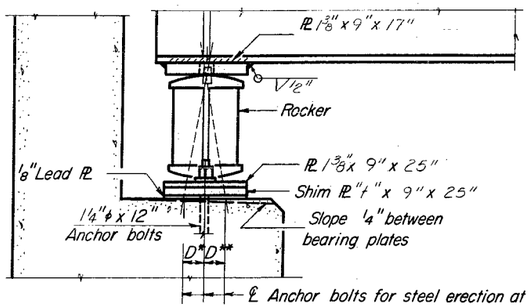
R.B.I. CO. 10-1263

STATE OF ILLINOIS

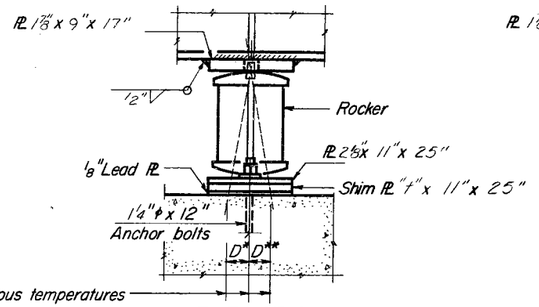
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 8	G-VB	GRUNDY	35	18
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

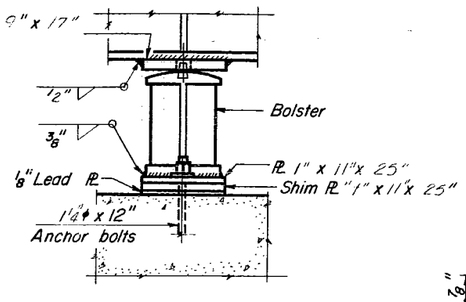
SHEET NO. 18 OF 35 SHEETS



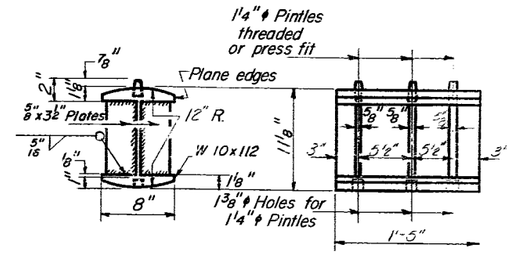
SECTION



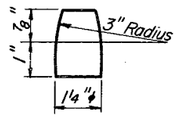
ELEVATION



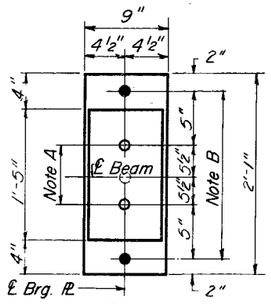
ELEVATION



ROCKER



PINTLE

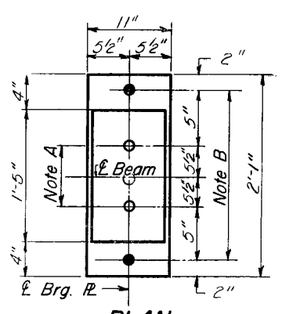


PLAN

AT ABUTMENT

NOTE A

1⅜"ϕ Holes – 1" deep in top PL for pintles. Thread or press fit pintles into bottom PL.

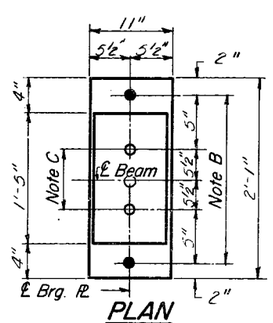


PLAN

AT PIER 2

NOTE B

1¾"ϕ Holes for ¼"ϕ anchor bolts. 5/16" x 2½" x 2½" PL Washers under nut.

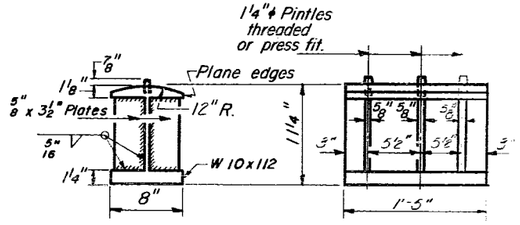


PLAN

AT PIER 1

NOTE C

1⅜"ϕ Holes 1" deep in top PL only for 1¼"ϕ pintles.



BOLSTER

NOTES ON SETTING OF ANCHOR BOLTS AT EXP. BRGS.

a) D* (Side of brg. away from fixed brg.)
D* = ⅛" per each 100' of expansion for every 15° fall below the normal temp. of 50°F.
D** (Side of brg. toward fixed brg.)
D** = ⅛" per each 100' of expansion for every 15° rise above the normal temp. of 50°F.

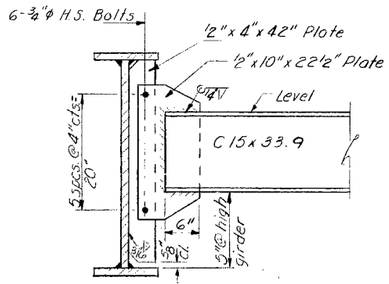
b) After beams have been erected and dimensions D* or D** determined, holes shall be drilled and anchor bolts shall be grouted in place. All fixed anchor bolts may be built into the masonry.

BEARING ASSEMBLY DETAILS

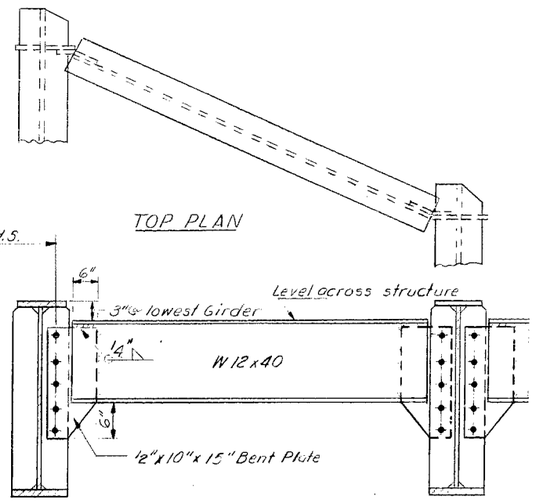
* TOP OF WEB ELEVATIONS

	G-1	G-2	G-3	G-4	G-5	G-6
℄ Brg W. Abut.	562.92	563.05	563.13	563.09	562.91	562.69
℄ Brg. Pier 1	563.00	563.16	563.27	563.26	563.11	562.91
℄ Splice 1	563.02	563.19	563.31	563.30	563.16	562.97
℄ Brg. Pier 2	562.89	563.09	563.24	563.26	563.14	562.99
℄ Splice 2	562.87	563.07	563.22	563.25	563.14	562.99
℄ Brg E. Abut.	562.69	562.91	563.09	563.13	563.03	562.92

* for fabrication only



DIAPHRAGM D1
(45 Req'd)



DIAPHRAGM D
(10 Req'd)

"t" thickness in inches

	G-1	G-2	G-3	G-4	G-5	G-6
West Abut	—	—	—	½	—	—
Pier 1	—	—	⅛	—	—	—
Pier 2	—	—	—	¼	—	—
East Abut	—	—	½	—	—	—

DESIGNED	J. M. Patel	
CHECKED	A. Y. Ishaq	
DRAWN	P.G. Barnett	B.K.R.
CHECKED	S. Y. K.	

EXAMINED Feb. 9 1971
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES

PASSED

ENGINEER OF DESIGN

APPROVED

CHIEF HIGHWAY ENGINEER

I-2-B 9-1-65, 8-1-70

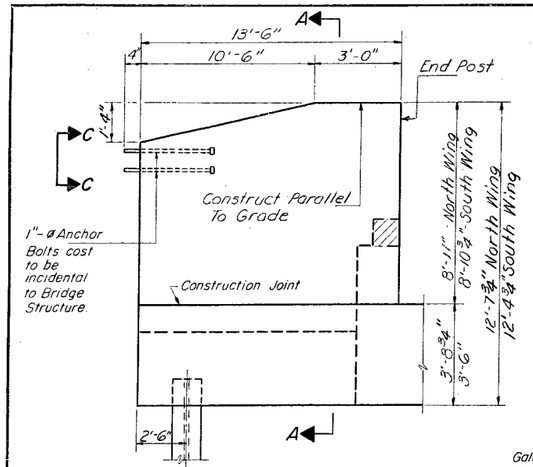
BEARING & DIAPHRAGM DETAILS
S.B.I. RT 7 SEC. G-VB
GRUNDY COUNTY
STA. 279+62.68

Hatched are to be poured after forms of superstructure have been removed.

STATE OF ILLINOIS
DIVISION OF HIGHWAYS

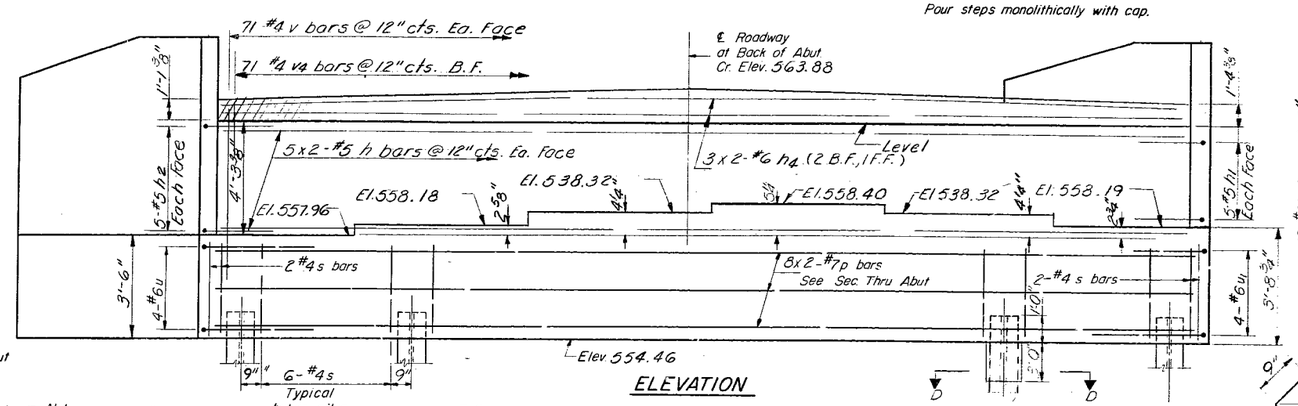
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 8	G-VB	GRUNDY	35	19
FED. ROAD DIST. NO. 9	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 1 OF 15 SHEETS



WING WALL ELEVATION

SOUTH WING

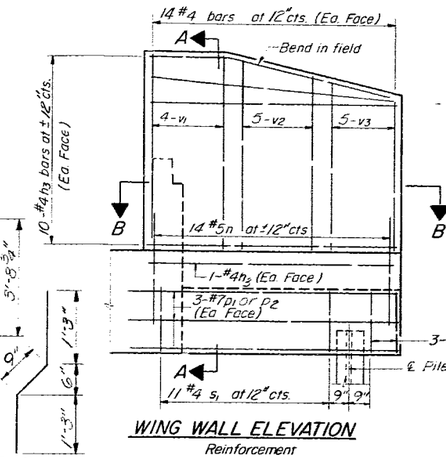


ELEVATION

NORTH WING

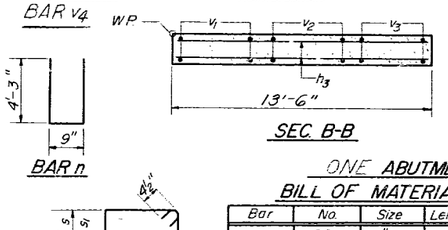
Space reinforcement in cap to miss anchor bolts.

Pour steps monolithically with cap.



WING WALL ELEVATION

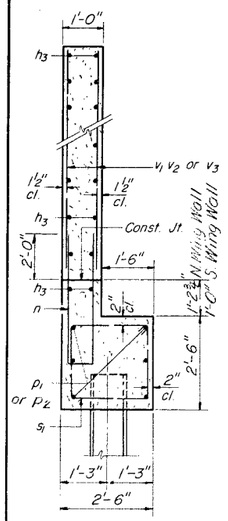
Reinforcement



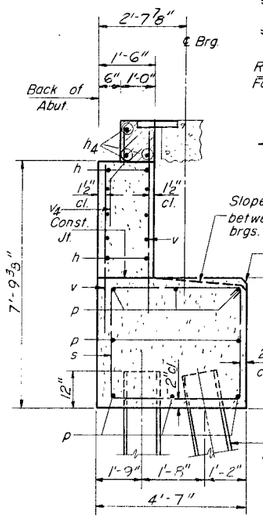
SEC. B-B

BAR v4

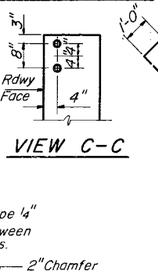
BAR n



SEC. A-A



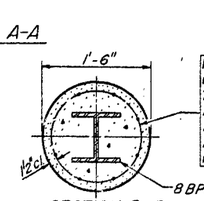
SEC. THRU ABUT.



1" ø ANCHOR BOLT

VIEW C-C

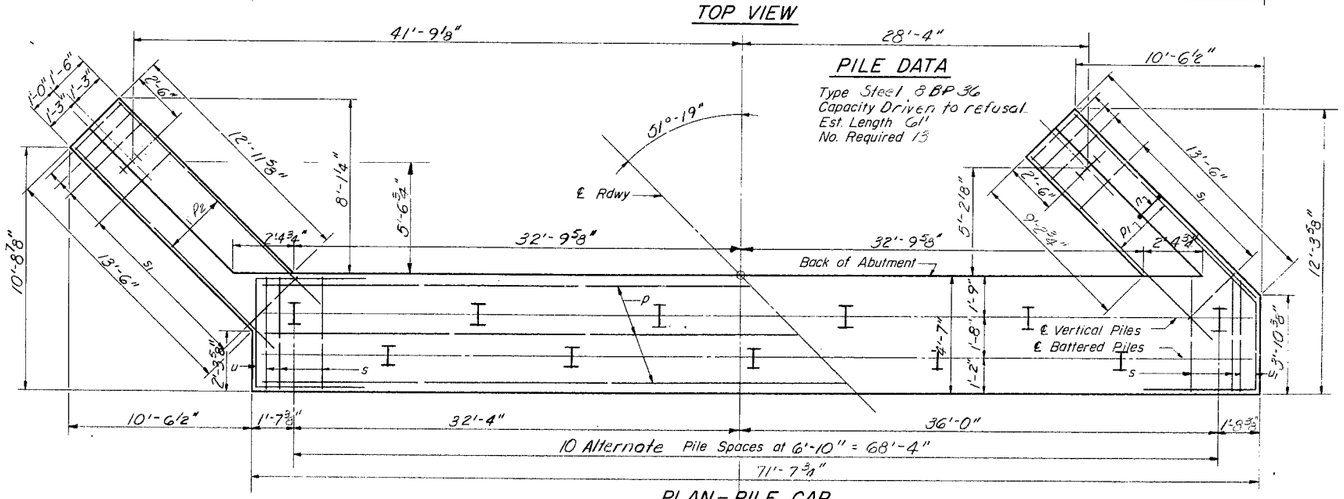
SEC. A-A



SECTION D-D
3'-0" Concrete Encasement

Welded wire fabric 6"x6 mesh #4 wire-weighing 58#/100 sq.ft. The cost of Class X Concrete Encasement and Reinforcement is incidental to the cost of furnishing piles. Forms for encasement may be omitted when soil conditions will permit.

TOP VIEW



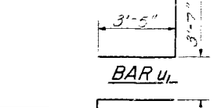
PLAN-PILE CAP

PILE DATA

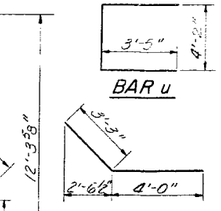
Type Steel 8 BP 36
Capacity Driven to refusal
Est. Length 60'
No. Required 13

BARS & s1

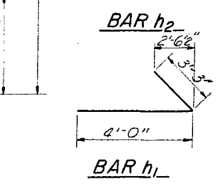
BAR u1



BAR u



BAR h2



BAR h1

ONE ABUTMENT
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h	20	#5	35'-9"	
h1	10	#5	7'-3"	
h2	10	#5	7'-3"	
h3	44	#4	13'-3"	
h4	6	#6	36'-0"	
n	28	#5	9'-3"	
p	16	#7	36'-6"	
p1	6	#7	13'-3"	
p2	6	#7	14'-6"	
s	64	#4	15'-7"	
s1	28	#4	9'-5"	
u	4	#6	11'-0"	
u1	4	#6	10'-0"	
v	142	#4	7'-0"	
v1	16	#4	8'-9"	
v2	20	#4	8'-0"	
v3	20	#4	7'-3"	
v4	71	#4	3'-3"	
Class X Concrete			Cu. Yds.	76.4
Reinforcement Bars			Lbs.	5500
Steel Piles 8 BP 36			Lin. Ft.	793

DESIGNED	J. M. Patel
CHECKED	A. J. Wiegand
DRAWN	Bev Robinson
CHECKED	S. A. K.

EXAMINED Feb 2 1971
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

A-9-L (35°-60°) 2-1-66, 8-1-70

WEST ABUTMENT
S.B.I. RT. 7 SEC. G-VB
GRUNDY COUNTY
STA. 279+62.6℄

STATE OF ILLINOIS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. RT. 8	G-VB	GRUNDY	35	20
FED. ROAD DIST. NO. 9	ILLINOIS	FED. AID PROJECT:		

SHEET NO. 12
15 SHEETS

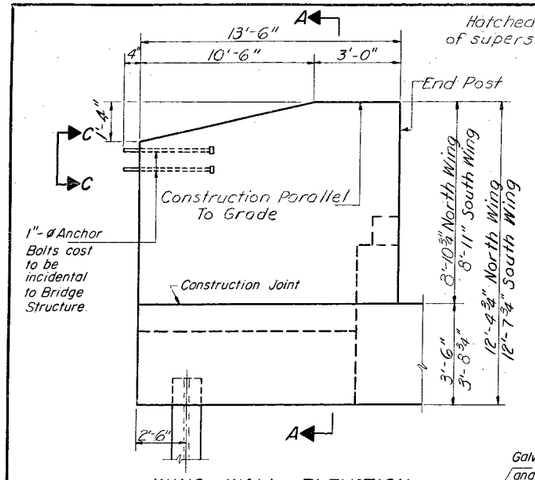
Hatched area to be poured after forms of superstructure have been removed.

Space reinforcement in cap to miss anchor bolts.

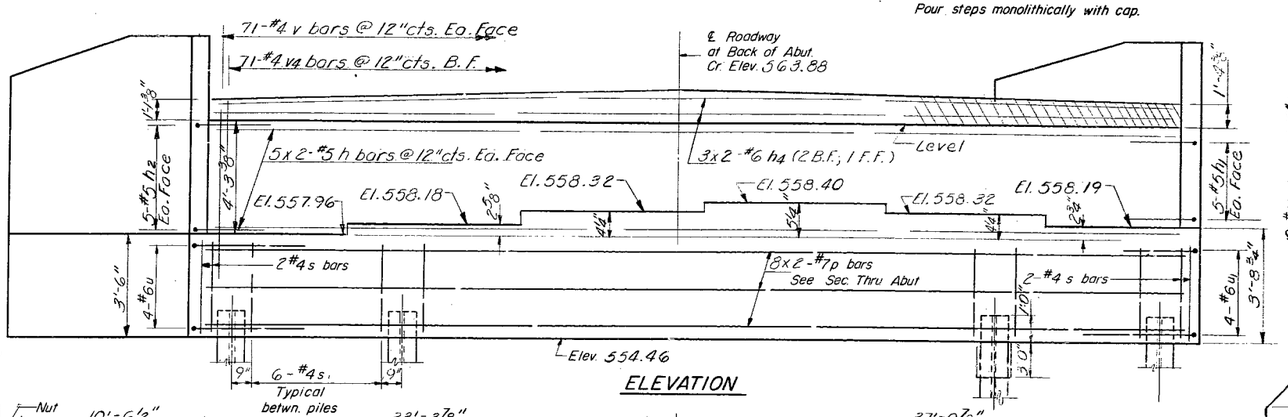
Pour steps monolithically with cap.

NORTH WING

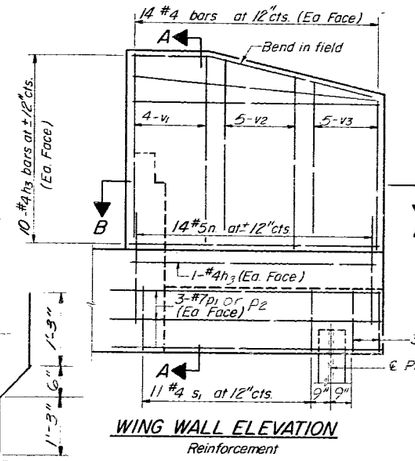
SOUTH WING



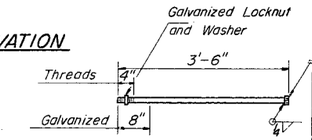
WING WALL ELEVATION



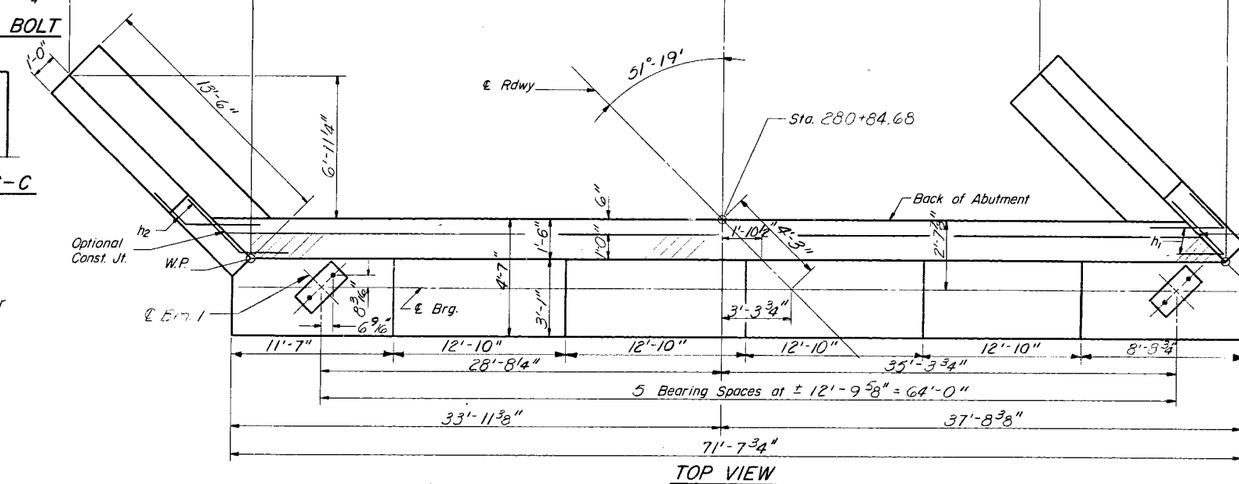
ELEVATION



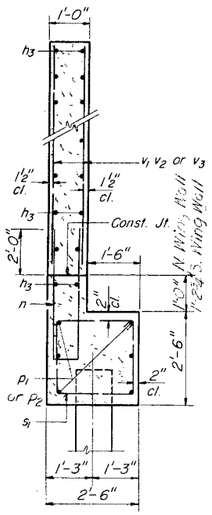
WING WALL ELEVATION
Reinforcement



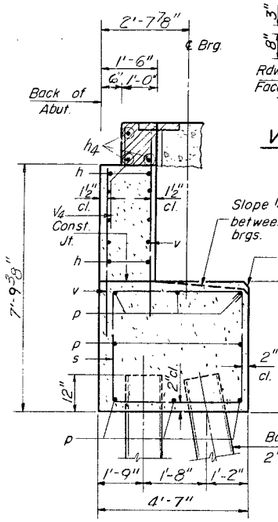
1" ø ANCHOR BOLT



TOP VIEW

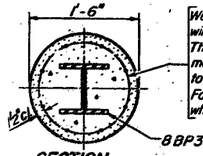


SEC. A-A



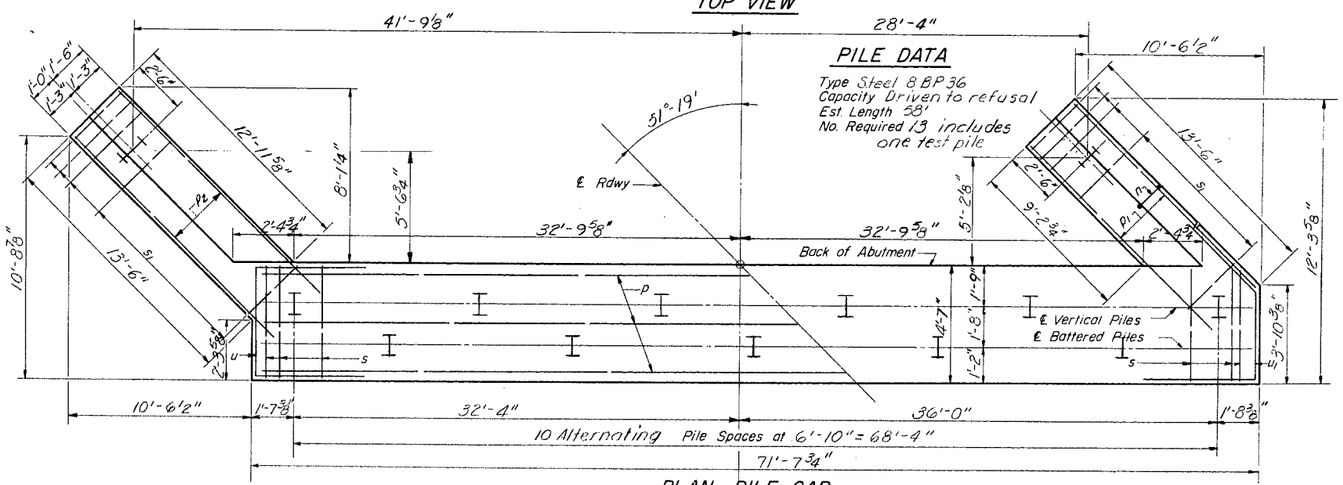
VIEW C-C

SEC. THRU ABUT.



SECTION
3'-0" Concrete Encasement

Welded wire fabric 6"x6 mesh #4 wire-weighing 58#/100 sq.ft. The cost of Class X Concrete Encasement and Reinforcement is incidental to the cost of furnishing piles. Forms for encasement may be omitted when soil conditions will permit.

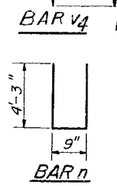


PLAN - PILE CAP

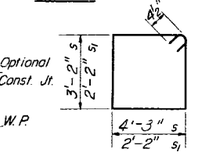
PILE DATA

Type Steel 8 BP 36
Capacity Driven to refusal
Est. Length 58'
No. Required 13 includes one test pile

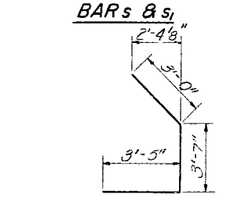
BAR v4



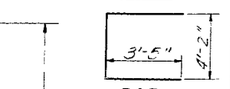
BAR n



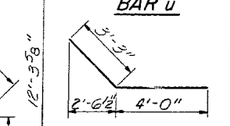
BARS & s1



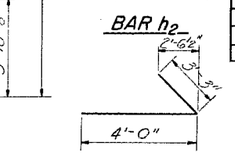
BAR u1



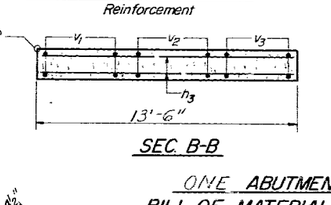
BAR u



BAR h2



BAR h1



SEC. B-B

ONE ABUTMENT
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h	20	#5	35'-9"	
h1	10	#5	7'-3"	
h2	10	#5	7'-3"	
h3	44	#4	13'-3"	
h4	6	#6	36'-0"	
n	28	#5	5'-3"	
p	16	#7	36'-6"	
p1	6	#7	13'-3"	
p2	6	#7	14'-6"	
s	64	#4	15'-7"	
s1	28	#4	9'-5"	
u	4	#6	11'-0"	
u1	4	#6	10'-0"	
v	142	#4	7'-0"	
v1	16	#4	8'-9"	
v2	20	#4	8'-0"	
v3	20	#4	7'-3"	
v4	71	#4	3'-3"	
Class X Concrete			Cu. Yds	76.4
Reinforcement Bars			Lbs.	5500
Steel Piles 8BP36			Lin. Ft.	696
Test Piles Steel 8BP36			Ea.	1

EAST ABUTMENT
S.B.I. RT 7 SEC. G-VB
GRUNDY COUNTY
STA. 279+62.68

DESIGNED	J. M. Patel
CHECKED	A. I. Hennyey
DRAWN	BKR
CHECKED	S. Y. H.

EXAMINED Feb. 3 19 71
PASSED
APPROVED
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
ENGINEER OF DESIGN
CHIEF HIGHWAY ENGINEER

A-9-L (35°-60°) 2-1-66, 8-1-70

NOTES:

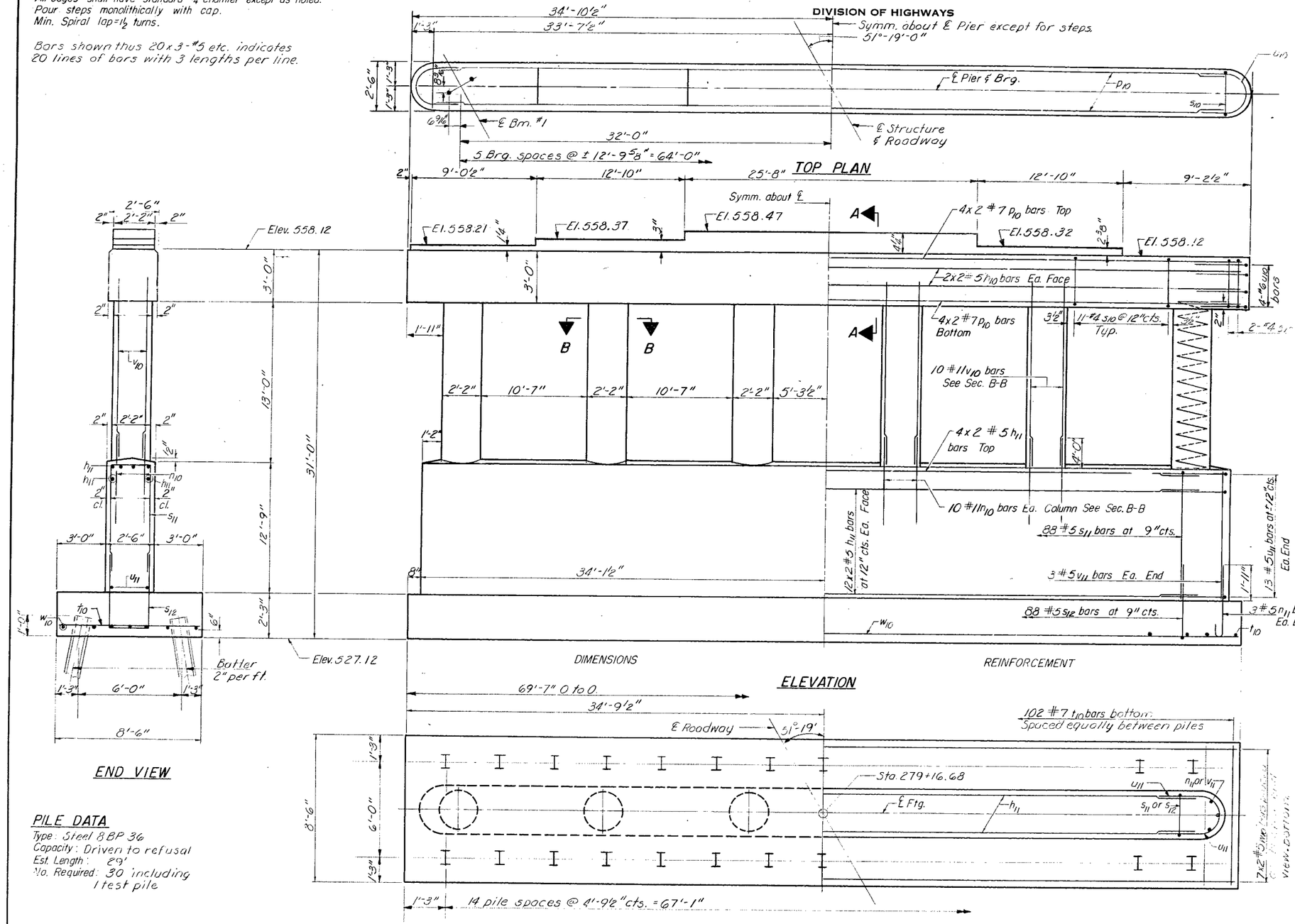
Space Reinforcement in cap to miss anchor bolts.
All edges shall have standard ¾" chamfer except as noted.
Pour steps monolithically with cap.
Min. Spiral lap = 1½ turns.

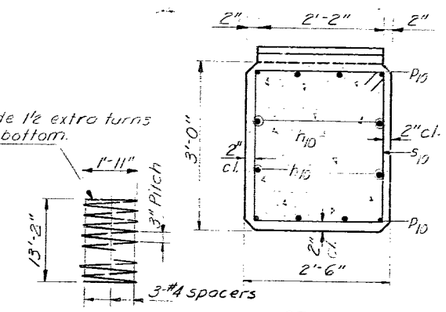
Bars shown thus 20 x 3 - #5 etc. indicates 20 lines of bars with 3 lengths per line.

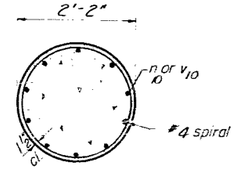
STATE OF ILLINOIS
DIVISION OF HIGHWAYS

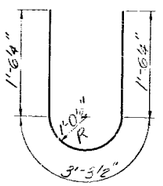
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 8	G-VB	GRUNDY	35	21
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

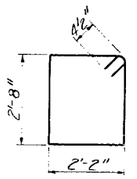
SHEET NO. 13
15 SHEETS

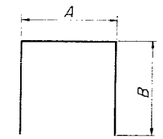












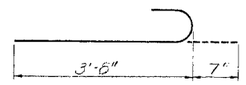
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h_{10}	6	#5	34'-3"	—
h_{11}	56	#5	33'-6"	—
n_{10}	60	#11	10'-6"	—
n_{11}	6	#5	4'-3"	⊃
p_{10}	16	#7	34'-9"	—
s_{10}	59	#4	10'-5"	□
s_{11}	88	#5	27'-2"	⊔
s_{12}	88	#5	10'-0"	⊔
sp	6	#4		WWWW
t_{10}	102	#7	8'-3"	—
u_{10}	8	#6	6'-4"	⊃
u_{11}	26	#5	6'-4"	⊃
v_{10}	60	#11	15'-6"	—
v_{11}	6	#5	12'-6"	—
w_{10}	14	#5	35'-6"	—

Class X Concrete	Cu. Yds.	150.5
Reinforcement Bars	Lbs.	19580
Steel Piles 8BP36	Lin. Ft.	841
Test Piles Steel 8BP36	Ea.	1

A&B DIMENSIONS

Bar	A	B
s_{11}	2'-2"	12'-6"
s_{12}	2'-2"	3'-11"



PILE DATA

Type: Steel 8BP 36
Capacity: Driven to refusal
Est. Length: 89'
No. Required: 30 including 1 test pile

DESIGNED	J. M. Patel
CHECKED	J. Y. Whipple
DRAWN	Bev Robinson
CHECKED	J. Y. K.

EXAMINED: F.3. 19
PASSED
APPROVED
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
ENGINEER OF DESIGN
CHIEF HIGHWAY ENGINEER

P-26 10-5-10

PIER 1
S.B.I. RT. 7 SEC. G-VB
GRUNDY COUNTY
STA. 279+62.68

NOTES:

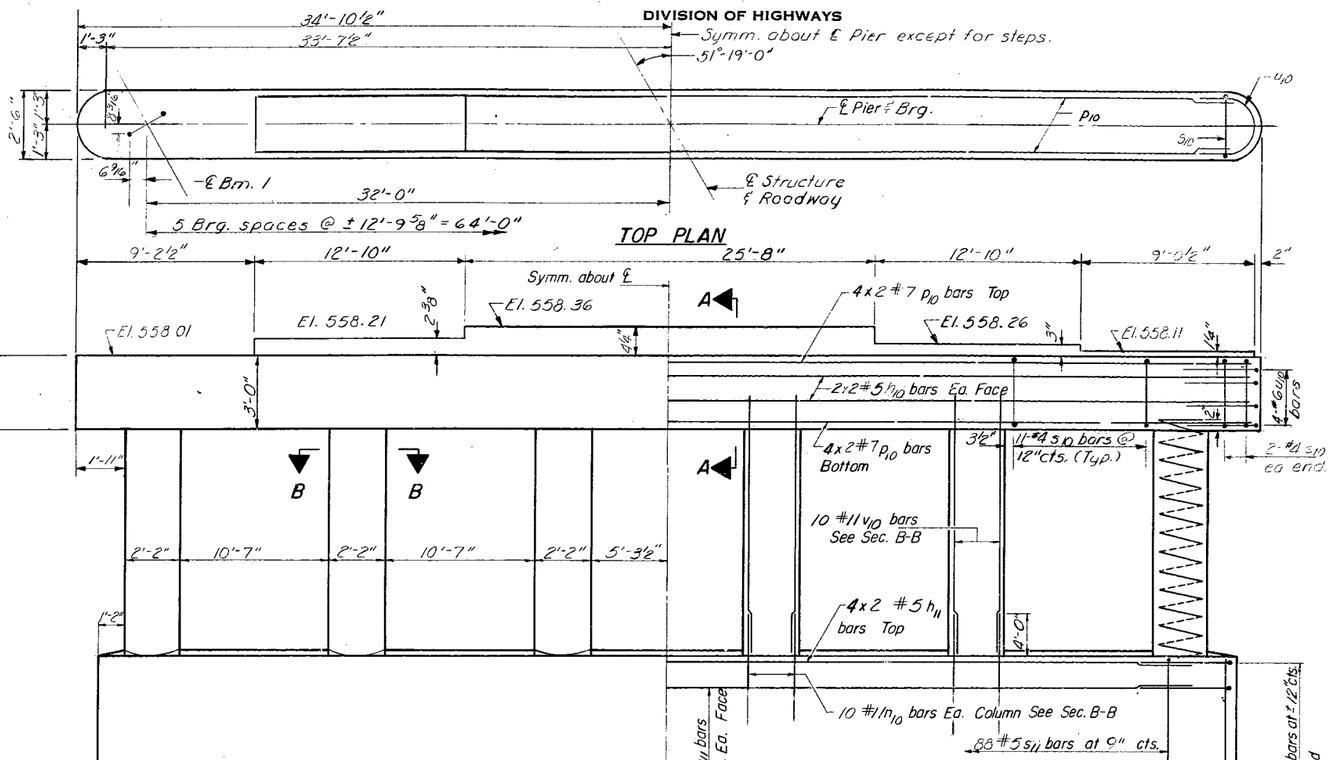
Space Reinforcement in cap to miss anchor bolts.
All edges shall have standard ¾" chamfer except as noted.
Pour steps monolithically with cap.
Min. Spiral lap = 1½ turns.

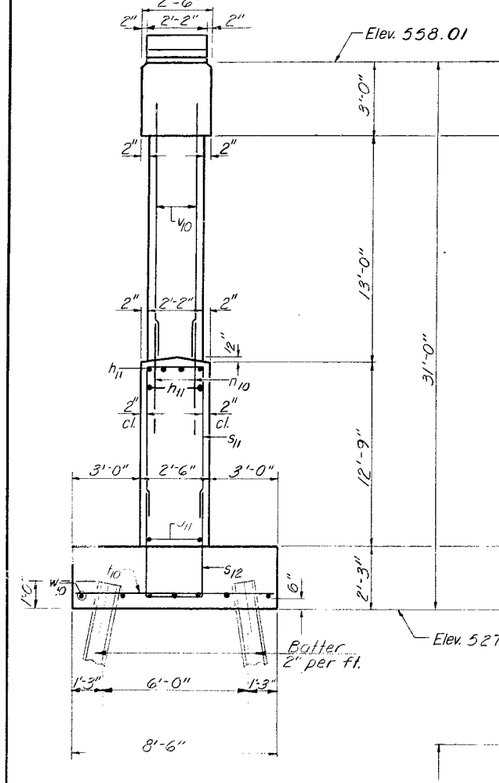
Bars shown thus 20 x 3 etc. indicates 20 lines of bars with 3 lengths per line.

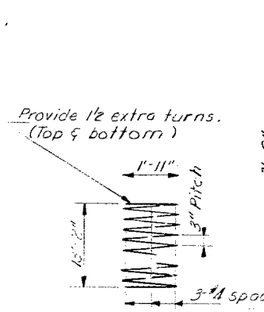
STATE OF ILLINOIS
DIVISION OF HIGHWAYS

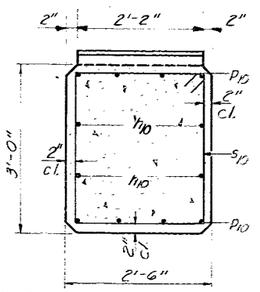
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 8	G-VB	GRUNDY	35	22
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

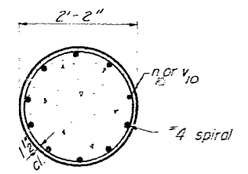
SHEET NO. 14
15 SHEETS

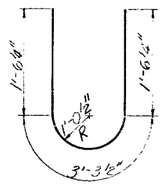




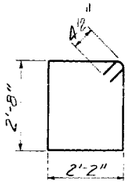




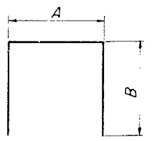




BAR u_{10} & U_{11}



BAR s_{10}



BARS

A&B DIMENSIONS

Bar	A	B
S11	2'-2"	12'-6"
S12	2'-2"	3'-11"

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h_{10}	8	#5	34'-3"	—
h_{11}	56	#5	33'-6"	—
n_{10}	60	#11	10'-6"	—
n_{11}	6	#5	4'-3"	U
P_{10}	16	#7	34'-9"	—
S_{10}	59	#4	10'-5"	□
S_{11}	53	#5	27'-2"	□
S_{12}	88	#5	10'-0"	□
sp	6	#4		WWW
t_{10}	102	#7	7'-3"	—
U_{10}	8	#6	6'-4"	U
U_{11}	26	#5	6'-4"	U
V_{10}	60	#11	15'-6"	—
V_{11}	6	#5	12'-6"	—
W_{10}	14	#5	35'-6"	—
Class X Concrete			Cu. Yds.	160.5
Reinforcement Bars			Lbs.	19580
Steel Piles 8 BP 36			Ln. Ft.	870

PILE DATA
Type: Steel 8 BP 36
Capacity: Drive to refusal
Est. Length: 29'
No. Required: 30

DESIGNED	J. M. Patel
CHECKED	A. I. Khayat
DRAWN	Bey Robinson
CHECKED	S. Y. H.

EXAMINED Feb 13 19 71
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

PIER 2
S.B.I. RT. 7 SEC. G-VB
GRUNDY COUNTY
STA. 279+62.68

P-26 10-5-70

STATE OF ILLINOIS

DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A. 8	G-VB	GRUNDY	35	23
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 15
15 SHEETS

W. ABUT.
Boring No. 1
Station 278+68
Offset 20' LT.
Ground Surface 535.34

Surface Water El. NONE
Groundwater El. at Completion NONE
After 24 **Hours** 523.34

Description	Elevation	Depth	N	Qu t/s.f.	w (%)
Ground Surface	535.34	0			
MEDIUM TO LOOSE BLACK AND BROWN LOAM TO SILTY LOAM (BACKFILL) (INCLUDING COAL, CLINKER, ETC)			15	---	11
	529.84	-5	10	---	18
LOOSE YELLOWISH BROWN SILTY LOAM	527.34		7	0.6 S	16
MEDIUM YELLOWISH BROWN CLEAN, SUB ROUNDED FINE SAND (LAST 3" IN SAMPLE- COARSE SAND)	524.34	-10	25	---	--
VERY DENSE GRAY SILTY CLAY LOAM TO SILTY LOAM TO SILTY CLAY WITH PORTIONS EXHIBITING A LACUSTRINE NATURE (LIMESTONE FRAGMENTS)			95	1.4 S	14
	519.34	-15	65	1.5 S	12
DENSE GRAY SILTY CLAY TO SILTY LOAM (SHALEY)	516.34		32	3.5 S	19
VERY DENSE GRAY SILTY CLAY TO SILTY CLAY LOAM (SHALEY)	514.34	-20	140/10"	2.0 S	19
HARD GRAY CLAY LOAM (TILL)					
HARD GRAY CLAY LOAM (TILL) (SOME LIMESTONE FRAGMENTS)			118/6"	8.1 S	7
		-25	150/1"	6.0 E	6
	506.84		113/6"	---	9
VERY DENSE GRAY TO LIGHT GRAY CLAY SHALE		-30	45	1.3 S	11
			55	--	11
		-35	100	--	10
			75	---	15
	494.84	-40	262	1.3 S	12
		-45			

Boring No. 2
Station 279+16
Offset 18' LT.
Ground Surface 535.44

Surface Water El. NONE
Groundwater El. at Completion NONE
After 24 **Hours** PLUGGED @520.44

Description	Elevation	Depth	N	Qu t/s.f.	w (%)
Ground Surface	535.44	0			
LOOSE BROWN AND BLACK SI C AND LOAM (BACKFILL) (INCLUDING COAL, CINDERS, ETC.)			5	--	11
	529.94	-5	*	---	18
LOOSE YELLOWISH BROWN SANDY LOAM	527.44		8	---	--
MEDIUM YELLOWISH BROWN CLEAN, SUB ROUNDED FINE SAND (LAST 3" in SAMPLE - COARSE SAND)	524.44	-10	30	---	--
VERY DENSE GRAY SILTY CLAY LOAM TO SILTY LOAM TO SILTY CLAY WITH PORTIONS EXHIBITING A LACUSTRINE NATURE. (LIMESTONE FRAGMENTS)			140	1.2 S	7
		-15	70	0.2 S	10
	516.94		140	0.6 S	10
VERY DENSE GRAY CLAY LOAM (TILL)		-20	175	--	7
VERY DENSE GRAY CLAY LOAM(TILL)			300	2.6 S	8
	509.44	-25	205	---	8
VERY DENSE GRAY TO LIGHT GRAY CLAY SHALE			56	1.2 S	14
		-30	61	--	11
			50	--	9
		-35	65	--	9
	497.44		265	---	13
		-40			
		-45			

*HIT STONE @ 530.24 MAKING BLOW COUNT MISLEADING

Boring No. 3
Station 280+38
Offset 34' RT.
Ground Surface 533.23

Surface Water El. NONE
Groundwater El. at Completion 501.23
After -- **Hours** ----

Description	Elevation	Depth	N	Qu t/s.f.	w (%)
Ground Surface	533.23	0			
MEDIUM BROWNISH BLACK TO YELLOWISH BROWN SILTY CLAY TO SILT & SILTY LOAM			12	1.5 E	17
	527.23	-5	10	--	17
MEDIUM YELLOWISH BROWN CLEAN, SUB ROUNDED FINE SAND	524.73		19	---	10
VERY DENSE YELLOWISH BROWN FINE SAND TO SILT AND SILTY LOAM	522.23	-10	56	---	19
DENSE GRAY SITY LOAM (TILL) (LIMESTONE FRAGMENTS)	519.73		41	---	3
VERY DENSE GRAY SILTY CLAY SHALE		-15	85	---	16
	514.73		120	---	16
VERY DENSE GRAY SUB_ROUNDED FINE SAND	513.23	-20	124	---	--
VERY DENSE GRAY CLAY LOAM (TILL) (LIMESTONE FRAGMENTS)				----	8
VERY DENSE GRAY CLAY LOAM (TILL) (LIMESTONE FRAGMENTS)			252	---	8
		-25	120	2.4 S	8
			96	2.5 S	9
	502.23	-30	131	7.2 S	9
DENSE GRAY CLAY SHALE	500.23		32	2.3 S	13
		-35			
		-40			
		-45			

N- Standard Penetration Test- Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140# hammer falling 30"

Qu-Unconfined Compressive Strength-t/sf
w- Water Content- percentage of oven dry weight-%

Type failure
B-Bulge Failure
S-Shear Failure
E-Estimated Value
P-Penetromator

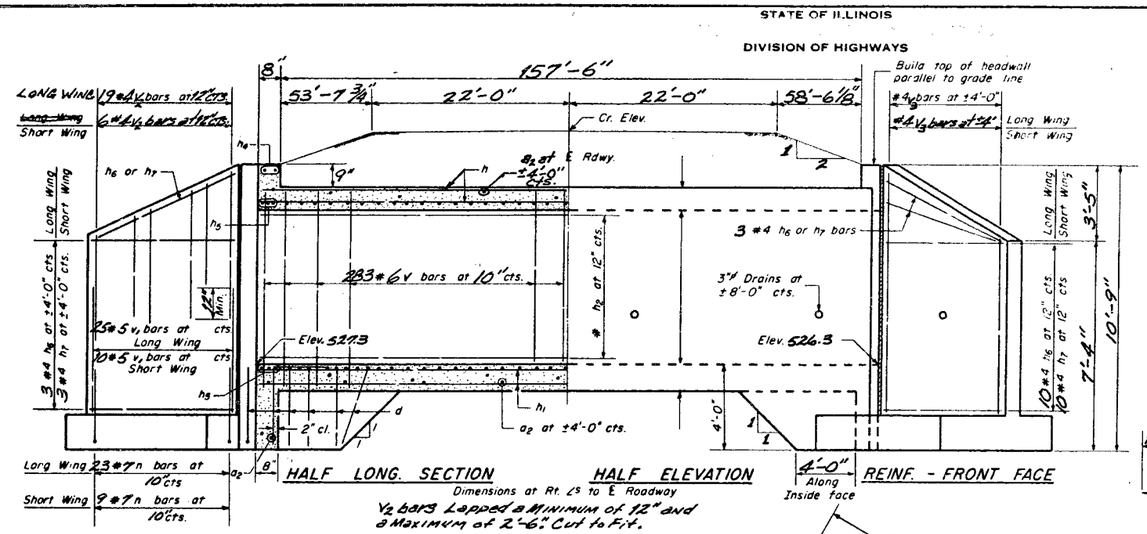
DESIGNED	J. M. Pettit
CHECKED	A. J. Khappel
DRAWN	jacobs BR
CHECKED	S. I. K.

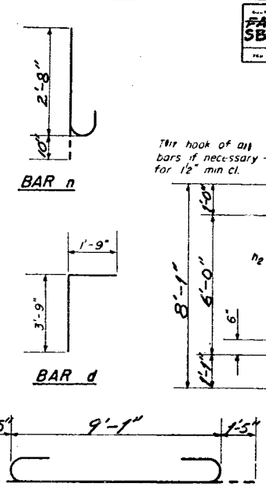
EXAMINED 1971
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

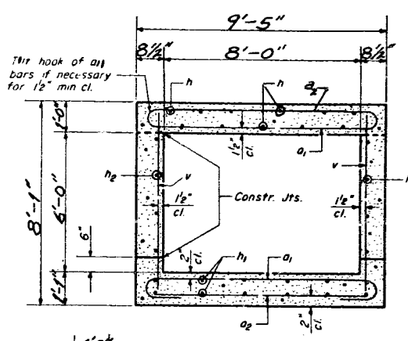
BORINGS
S.B.I. RT. 7 SEC. G-VB
GRUNDY COUNTY
STA. 279+62.68

STATE OF ILLINOIS
DIVISION OF HIGHWAYS

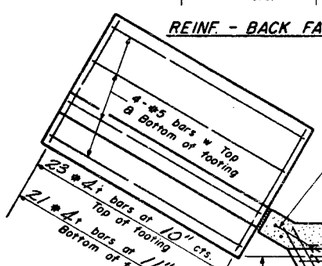
F.A.S. No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SBI-7	(G-VB)	GRUNDY	35	24
FED. ROAD DIST. NO. 2	ILLINOIS	FED. AID PROJECT		SHEETS



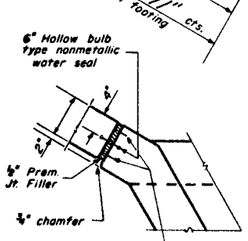




SECTION THRU BARREL

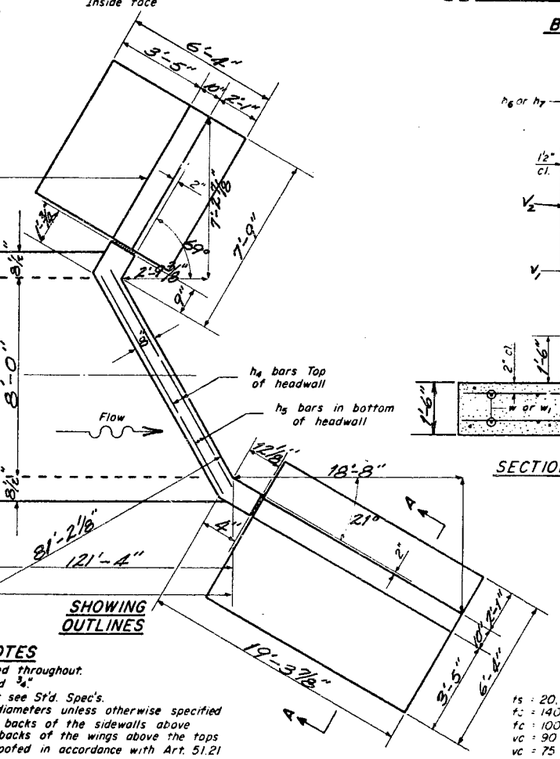


REINF. - BACK FACE



CORNER DETAIL

Note:
a bars in skew portion of slab shall be ordered full length & cut to fit. Balance of bar to be used in opposite end of culvert



SHOWING REINFORCEMENT — PLAN — SHOWING OUTLINES

SECTION A-A

BILL OF MATERIAL

Bar	No.	Size	Length
a1	622	#10	11'-11"
a2	122	#4	8'-3"
d	54	#4	5'-6"
h	126	#6	35'-0"
h1	126	#6	35'-0"
h2	84	#6	35'-0"
h4	4	#6	13'-9"
h5	12	#6	13'-9"
h6	34	#4	18'-8"
h7	34	#4	6'-9"
n	64	#7	3'-6"
r	122	#4	6'-1"
v	566	#6	7'-9"
v1	70	#5	3'-0"
v2	50	#4	6'-10"
v3	14	#4	9'-0"
v4			
v5			
w	16	#5	18'-8"
w1	16	#5	6'-9"
Class X Concrete		Cu. Yds.	279.8
Reinforcement Bars		Lbs.	58,833

DESIGNED	A.G. KLEIN 1-19-71
CHECKED	R.J.M 1-19-71
DRAWN	
CHECKED	

19
EXAMINED
ENGINEER OF BRIDGES AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

GENERAL NOTES

Class X Concrete shall be used throughout.
Exposed edges shall be beveled ¾".
For backfilling and embankment see Std. Spec's.
All bars shall be lapped 20 diameters unless otherwise specified
The top of the culvert, the backs of the sidewalls above the lower construction joint and backs of the wings above the tops of the footings shall be waterproofed in accordance with Art. 51.21 of the Std. Spec's.
Nonmetallic water seal used in the wingwall joints shall extend from the top of the footing to within 6" of the top of the headwall.

fs = 20,000 psi
fc = 1400 psi. Barrel
fc = 1000 psi. Wings
vc = 90 psi. Barrel
vc = 75 psi. Footing
n = 10

LOADING H20-S16

STA. 281+45.50
BOX CULVERT 48° SKEW
SBI-7
SEC. (G-VB) R. WERS.
GRUNDY COUNTY

STANDARD 2196

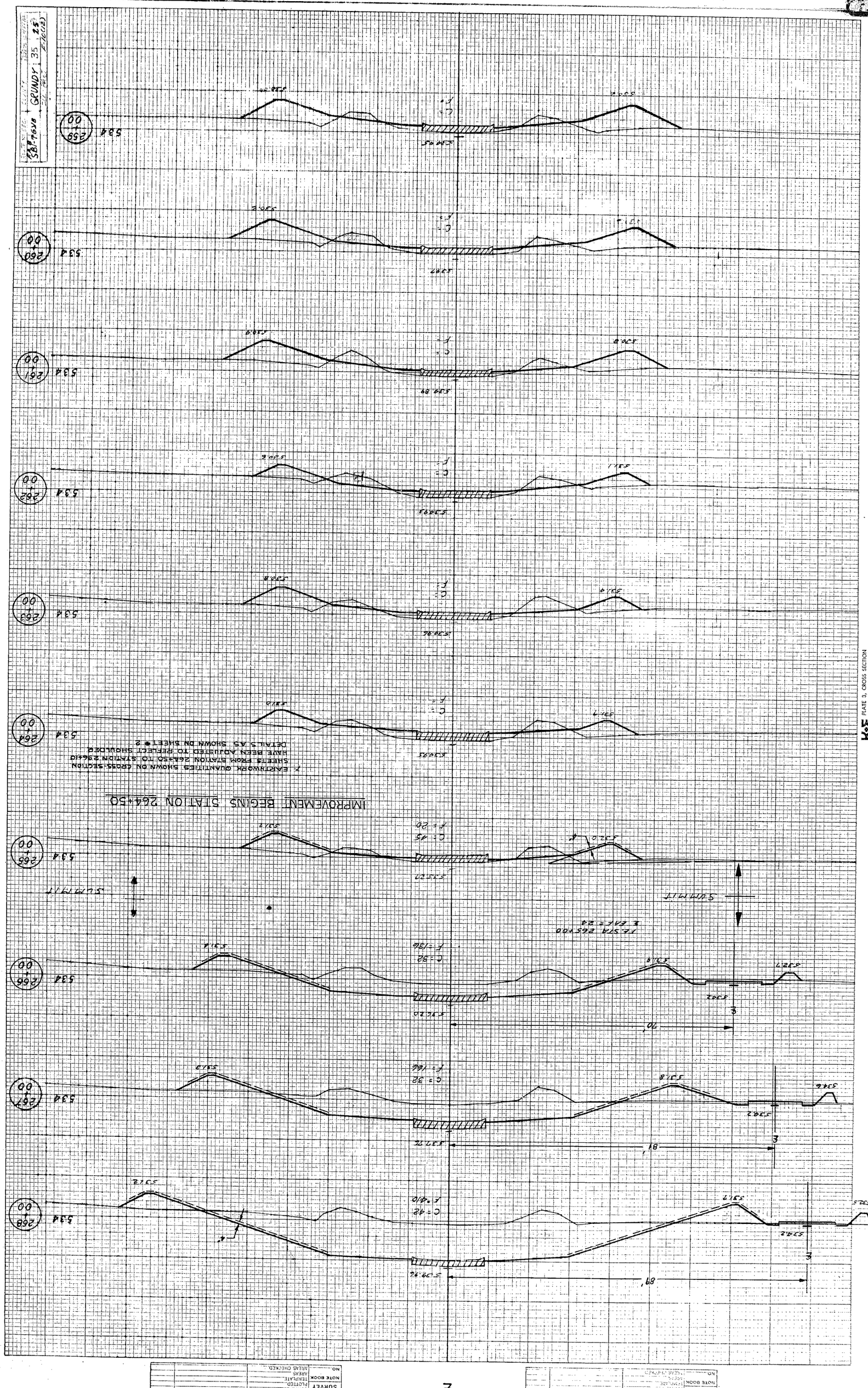
U.S. 6 From Sta. 264+50 to Sta. 296+10

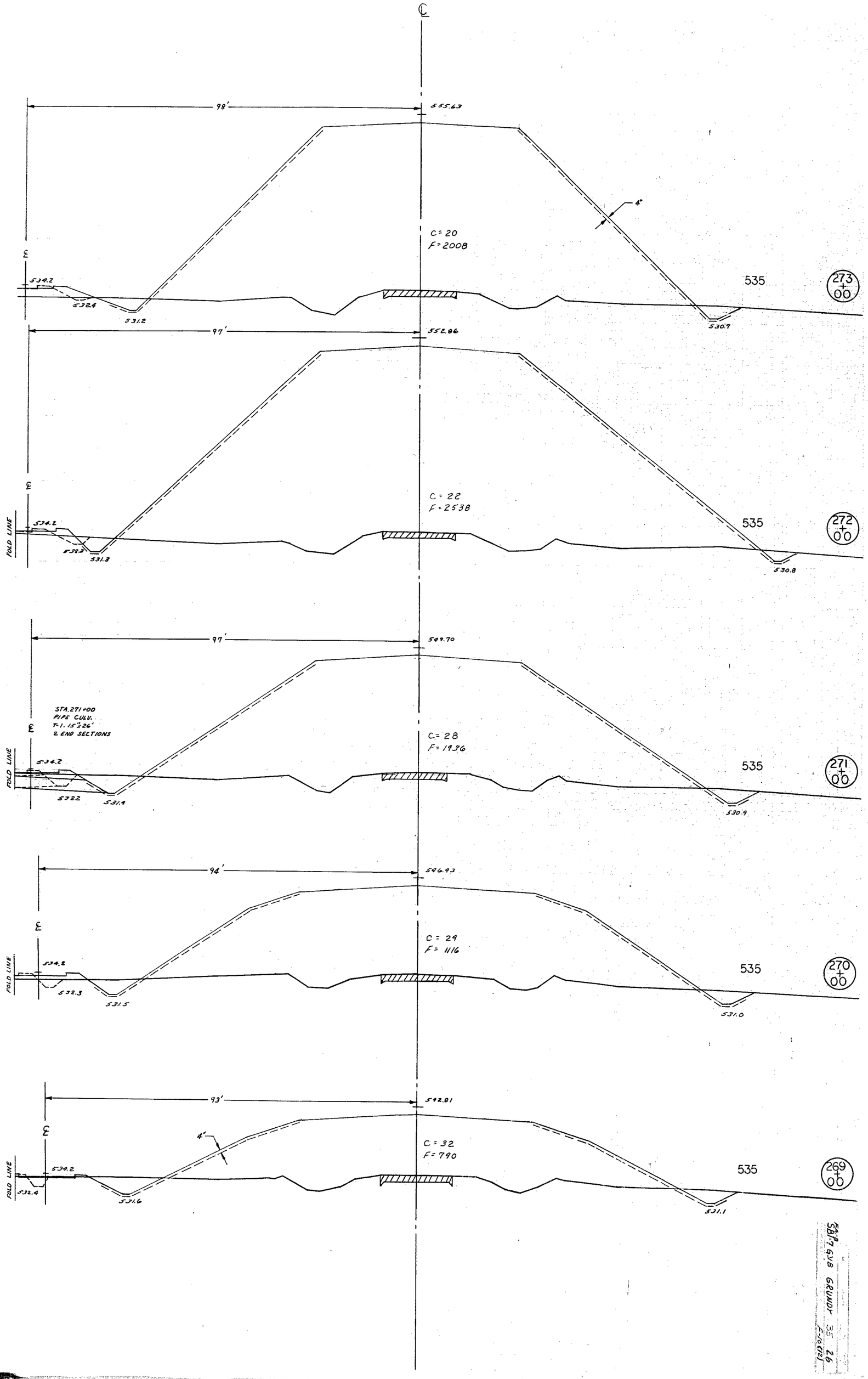
LOCATION DIRECTION EB & WB	SIGN STANDARD	SKETCH OR DESCRIPTION	NEW PANEL AREA (SQ. FT) ≤ 9	NEW PANEL AREA (SQ. FT) > 9	REMOVE	RELOCATE TYPE	RELOCATE TYPE	RELOCATE TYPE	WOOD AND TELESCOPING METAL POST LENGTHS FT	OFFSET (FT)	REMARKS
EB. Station 264+50											Begin Const. 264+50
274+10		R/R *			✓						Remove & don't Replace
296+10											End Const. Sta. 296+10
WB Station 296+10											Begin Const. Sta. 296+10
288+75		R/R *			✓						Remove & don't Replace
264+50											End Const. Sta. 264+50

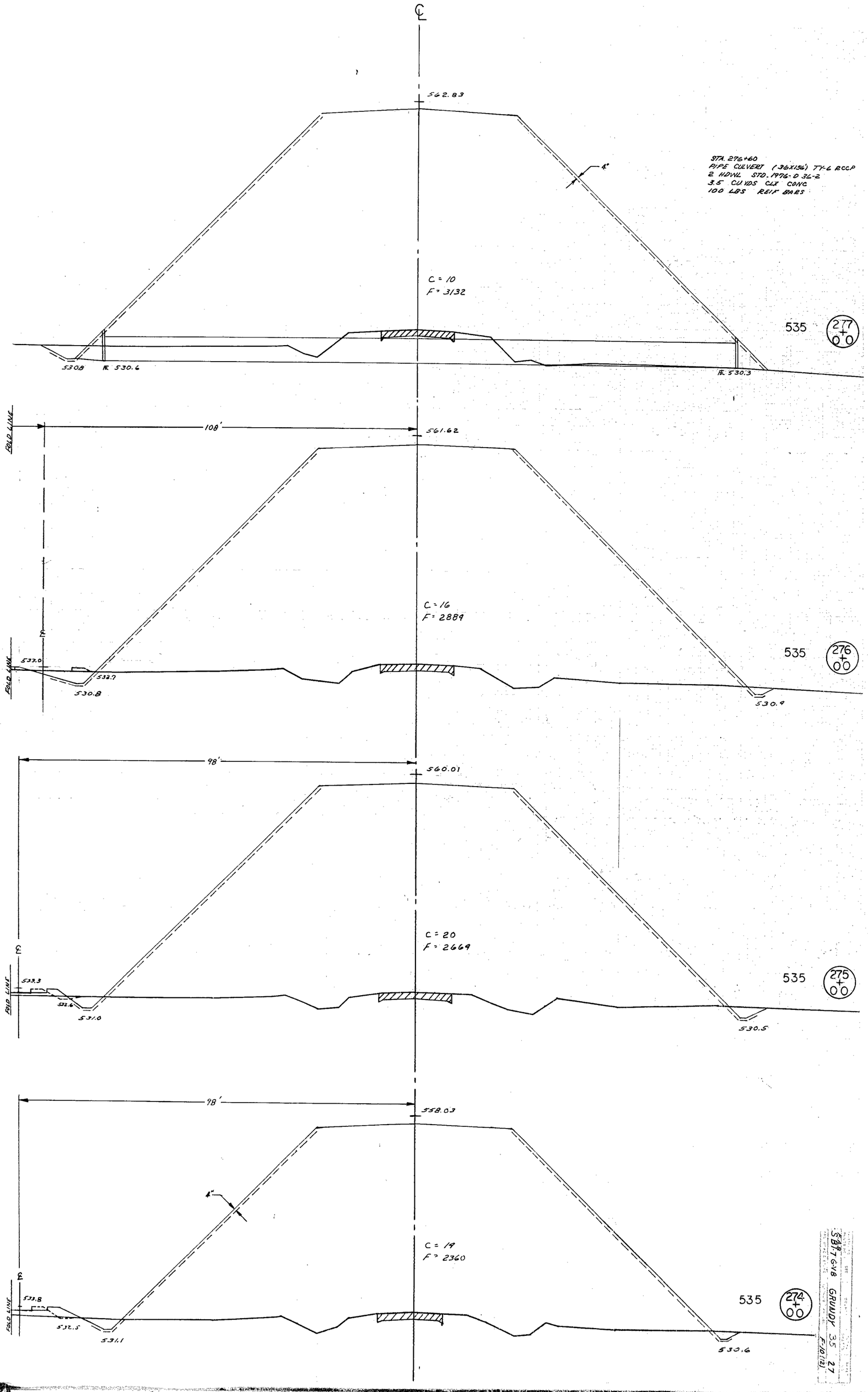
* SHOWN FOR IDENTIFICATION ONLY - NOT TO BE REPLACED
** REPLACE WITH STATE FURNISHED PANEL

SIGN TABULATION SHEET
____ OF ____

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 8 SBI-7	G-VB	GRUNDY	35	24
ADD'L RIGHT-OF-WAY REQUIRED	ILLINOIS	PROJECT NO.	F-110 ( )	


SUBGRADE + GRUNDY : 35 25
2 FEET
IMPROVEMENT BEGINS STATION 264+50
* EARTHWORK QUANTITIES SHOWN ON CROSS-SECTION SHEETS FROM STATION 264+50 TO STATION 296+10 HAVE BEEN ADJUSTED TO REFLECT SHOULDER DETAILS AS SHOWN ON SHEET # 2
SLOPE 1:1
SLOPE 1.5:1
70'
81'
89'
3
FINAL SURVEY
NOTE BOOK
SURVEYED
PLOTTED
TRIANGLE
AREAS
AREAS CHECKED
DATE
BY
ORIGINAL SURVEY
NOTE BOOK
AREAS CHECKED
DATE
BY
K&E
PLATE 5, CROSS SECTION
KEUFFEL & ESSER CO.
MADE IN U.S.A.


℄
98'
555.63
4"
C = 20
F = 2008
℄
534.2
532.4
531.2
535
530.7
273 + 00
97'
552.86
C = 22
F = 2538
FOLD LINE
534.2
532.3
531.3
535
530.8
272 + 00
97'
549.70
STA. 271+00
PIPE CULV.
T-1. 15'-2.6'
2 END SECTIONS
C = 28
F = 1936
FOLD LINE
534.2
532.2
531.9
535
530.9
271 + 00
94'
546.93
C = 29
F = 1116
FOLD LINE
534.2
532.3
531.5
535
531.0
270 + 00
93'
542.81
4"
C = 32
F = 790
FOLD LINE
534.2
532.4
531.6
535
531.1
269 + 00



SBT-7-YB GRUNDY 3.5 27
F.A.I. (121)

SBI-7 GVB GRUNDY 35 28
F-101(2)

278+93

535

SG9.07

SG9.06

278+87

535

SG8.93

278+51

535

C=10
F=3097

SG3.11

SG3.66

278+00

535

C=10
F=3088

SG3.10

FAP SBI-7 GVB	GRUNDY	35	29	F-10(12)

279+64

279+00

535

535

569.10

569.17

℄

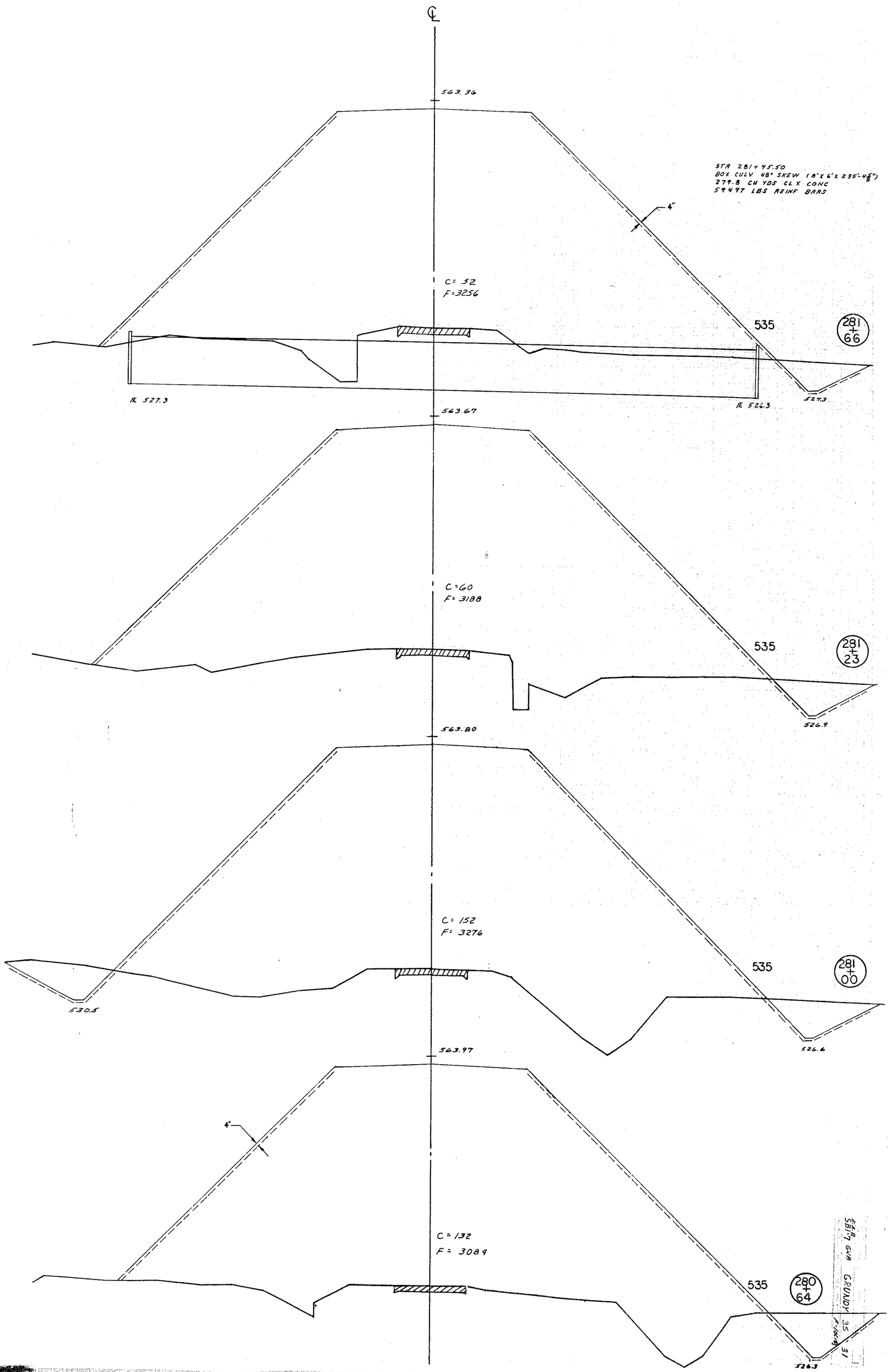
SBI-7 G-V-B GRUNDY 35 30
F-10(12)

280+55
535
569.01

280+30
FOLD LINE
535
569.98

280+08
535
569.08

280+00
535
569.19


℄
563.36
STA 281+45.50
BOX CULV 48° SKEW (8'X 6'X 235'-4⅝")
279.8 CU YDS CL X CONC
59497 LBS REINF BARS
4"
C= 52
F=3256
535
281+66
IE 527.3
IE 526.3
527.3
563.67
C=60
F= 3188
535
281+23
526.9
563.80
C= 152
F= 3276
535
281+00
530.5
526.6
563.97
4"
C= 132
F= 3089
535
280+64
526.3
581.8 GVB
GRUNDY 35
F.carrig 31

FAP SBI-7 GVB GRUNDY 35 37
F-1(21)3

285+00
535
528.7
558.55
C: 54
F: 2496
528.2

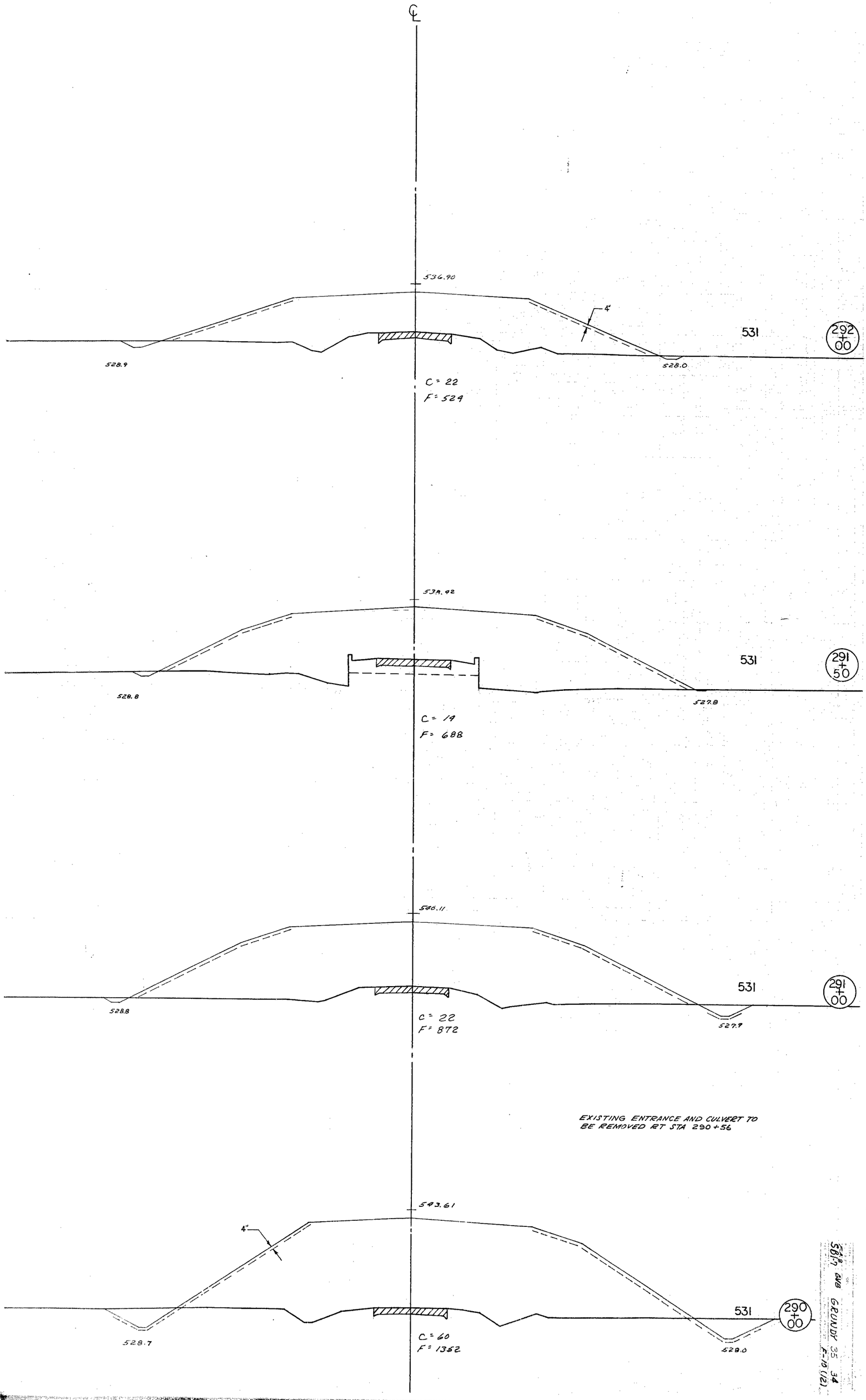
284+00
535
529.0
560.45
C: 48
F: 2692
528.1

SUMMIT
283+00
535
529.3
561.95
C: 68
F: 2928
528.0

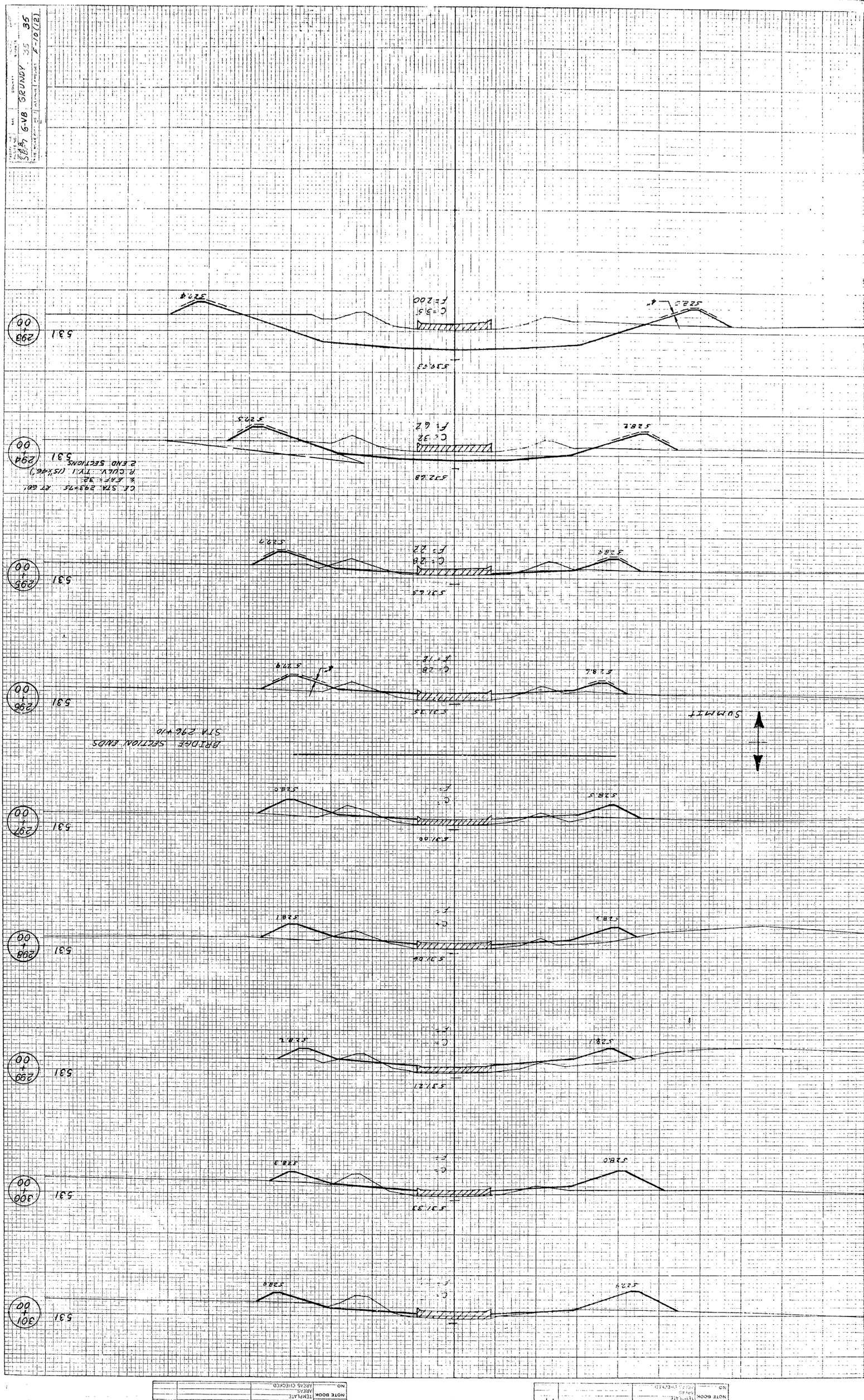
282+00
535
529.9
563.07
C: 102
F: 3012
527.2
4"

SBI-7 GVB GRUNDY 35 33
F-16(12)

289+00
288+00
287+00
286+00
532
532
532
532
528.1
528.2
528.3
528.5
4"
4"
C = 44
F = 1382
C = 44
F = 1721
C = 36
F = 1844
C = 42
F = 2220
549.11
550.53
553.60
557.17
528.6
528.6
528.4
528.3
℄



588.9 GRUNDY 35 34 F-10 (12)



K&E PLATE 3, CROSS SECTION
KEUFFEL & ESSER CO.
NO. 7000 IMPERIAL

ORIGINAL SURVEY NOTE BOOK	SURVEYED / PLOTTED / REMARKS / AREAS CHECKED	AE	10/3/60
FINAL SURVEY NOTE BOOK	SURVEYED / PLOTTED / REMARKS / AREAS CHECKED	BY	DATE