2	
FINAL 828 2	
FEB 11 1963	
04 x 11	
11 x 16	
3	

IPE NO. 81-768

FED. R.D. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.
6	TEXAS	F 231(10)	
STATE DIST. NO.	COUNTY	STATE CONTROL NO.	HIGHWAY NO.
11	ANGELINA	178 8	1178

153A

FINAL PLANS

STATE OF TEXAS
STATE HIGHWAY DEPARTMENT

PLANS OF PROPOSED
STATE HIGHWAY IMPROVEMENT

FEDERAL AID PROJECT.

ANGELINA CO. F 231(10)

SCALES: PLAN: 1 IN. = 100 FT. 50
PROFILE: 1 IN. HOR. = 100 FT., 1 IN. VERT. = 20 FT. 5
CROSS-SECTIONS: 1 IN. HOR. AND VERT. = 5 FT.
OTHERS AS NOTED.

NET LENGTH OF PROJECT= 27,847.08 FT.= 5.275 MI.

ROADWAY =	27,694.75	FEET = 5.269	MILES
BRIDGES =	352.33	FEET = 0.066	MILES
TOTALS =	27,847.08	FEET = 5.275	MILES

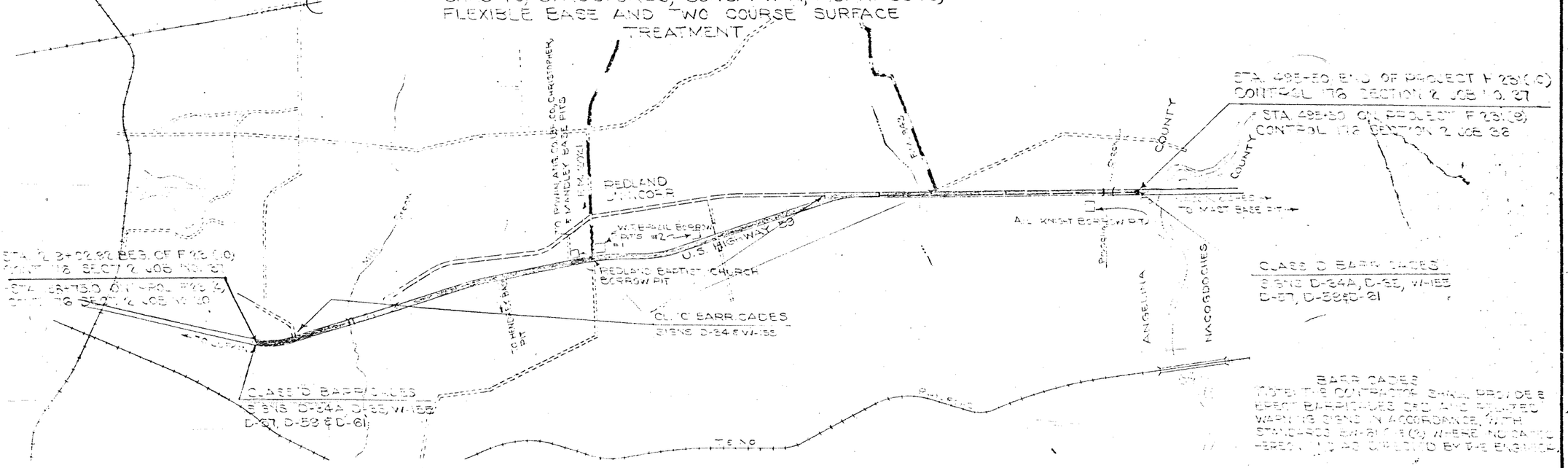
FROM 1.4 MILE NORTH OF LUFKIN TO 0.133 MI. SOUTH OF ANGELINA RIVER

GRADING, STRUCTURES, CONC. PVMT, ASPH. CONC, FLEXIBLE BASE AND TWO COURSE SURFACE TREATMENT

INDEX OF SHEETS

SHEET No.	DESCRIPTION	
1	TITLE SHEET	
	DETOUR LAYOUT	STRUCT. SUMMARY
2-4	TYPICAL CROSS SECTIONS	SPEC. DATA
5-11	ESTIMATE AND QUANTITY	FLEX. BASE SUM.
12-34	PLAN PROFILE	EST. MATE & SUM
35-36	HAUL DIAGRAM	
37	ROADWAY DETAILS	
38	BORROW PIT DETAILS	
39-42	CULVERT LAYOUTS	
43	TRD' SURFACE DRAIN	
44-45	DRAINAGE LAYOUTS	
46-47	FENCE LAYOUTS	
48-49	W.I.D. DETAIL FOR MILL CREEK	
50-51	JOINT DETAILS	
52-53	STRUCTURAL DETAILS & STANDARDS	
54	CRCD-61	
55-56	BW 2:(1) E (2)	
57	SWC-61	
58	W-61	
59	CRS-61	
60	TA (CPT) 61	

61	SHT
62	SHT. B-66
63	SHT. B-68
64	SCD-1
65	SCD-2
66	SC-61A
67	SC-61
68	MCW-61
69	Omitted
70	MCTB MOD.
71	MCB-6-HE MOD.
72	MCW-61E
73	CRCB-36-SECT TYPE
74	CRP
75	BAC. CW-58
76	BA LING (TY. 6)
77	RR-8



BARRICADES
(NOTE: THE CONTRACTOR SHALL PROVIDE & ERECT BARRICADES AND ADEQUATE WARNING SIGNS IN ACCORDANCE WITH STANDARDS SHOWN OR WHERE NO RATIO HEREIN IS GIVEN AS DIRECTED BY THE ENGINEER.

DESCRIPTION POINT	STA. NEAREST DESCRIPTION POINT	NAME OF RAILROAD
LUFKIN	0+00.00	T&NO
LUFKIN	0+00.00	A&NR
NACOGDOCHES	488+50	T&NO

THE CONTRACTOR SHALL MAKE HIS OWN INVESTIGATIONS AND ARRANGEMENTS FOR TRAVERSABLE FACILITIES.

~~SPECIFICATIONS ADOPTED BY THE STATE HIGHWAY DEPARTMENT OF TEXAS JANUARY 2, 1962 AND APPROVED BY THE U. S. BUREAU OF PUBLIC ROADS JULY 30, 1962 AND SPECIFICATION ITEMS LISTED AND DATED AS FOLLOWS SHALL GOVERN ON THIS PROJECT.~~

NO EXCEPTIONS
NO RAILROAD CROSSINGS
NO EQUATIONS

SPECIFICATIONS ADOPTED BY THE STATE HIGHWAY DEPARTMENT OF TEXAS JAN 2, 1962 AND SPECIFICATION ITEMS LISTED AND DATED AS FOLLOWS, SHALL GOVERN ON THIS PROJECT.
REQUIRED CONTRACT PROVISIONS FOR FEDERAL AID CONTRACTS PRIMARY HIGHWAYS APPROVED OCTOBER 25, 1960.

LAYOUT SCALE: 1 IN. = 1320 FT. APPROX.

CONVENTIONAL SIGNS
STATE OR NATIONAL LINE
CITY, R.V. LAGE LINE
COUNTY LINE
BASE & SURVEY LINE
RIGHT OF WAY LINE
RIGHT OF WAY MONUMENTS
FENCE LINE
RAILROAD
ENGINEERED WAY
CULVERT OR BRIDGE
POWER LINE
TELEGRAPH OR TELEPHONE

COUNTY ANGELINA PROJ. NO. F 231(10)
HWY. NO. 178 SEC. 2 LETTING DATE
DATE ACCEPTED

STATE HIGHWAY DEPARTMENT

CORRECT 2-8 19 62
APPROVED
ENGINEER OF DESIGN
RECOMMENDED FOR APPROVAL 2-9 19 62
APPROVED
CHIEF ENGINEER
DISTRICT ENGINEER

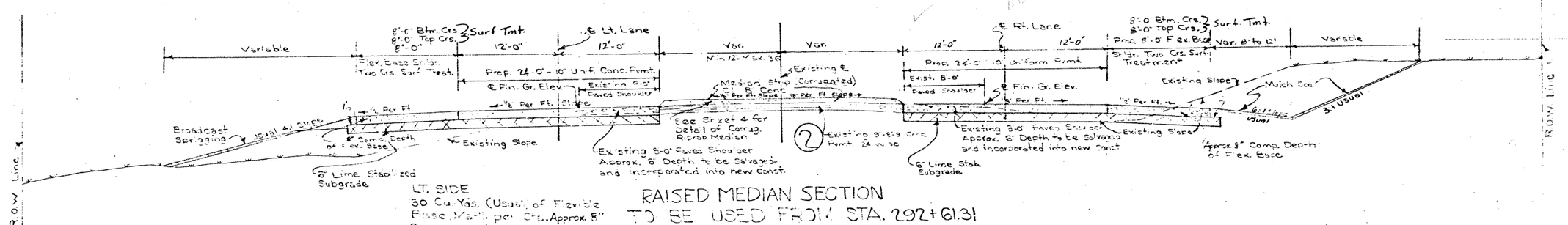
DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS
APPROVED
DATE

Field Change Req. No. 1- Change the grading req. for Coarse Aggr. used in Conc. Pvmt. (Item 360.2)

Field Change Req. No. 2- Construct 18'0" Two Crs. Surf. Treat. drive through S.H.D Roadside Park on Rt. side of highway.

Field Change Req. No. 3- Construct Dr. (Est. 8" Comp Depth Flex. Base), Install 30"x48'0" R.C. Pipe (Cl. III) for drainage in median channel.

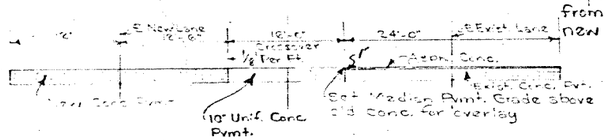
MINIMUM 150' FOOT, MAXIMUM 460' FOOT RIGHT-OF-WAY



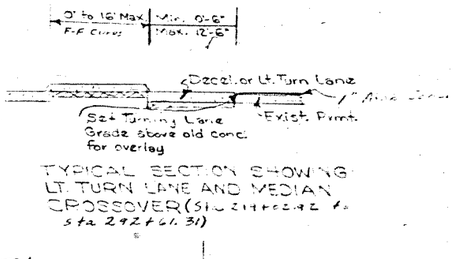
RAISED MEDIAN SECTION
TO BE USED FROM STA. 292+61.31
TO STA. 336+50

LT. SIDE
30 Cu. Yds. (Usual) of Flexible Base Matl. per Sta. Approx. 8" Comp. Depth. 10 C.Y. to be Salvaged from exist. Shldr. & 20 C.Y. from new Base.

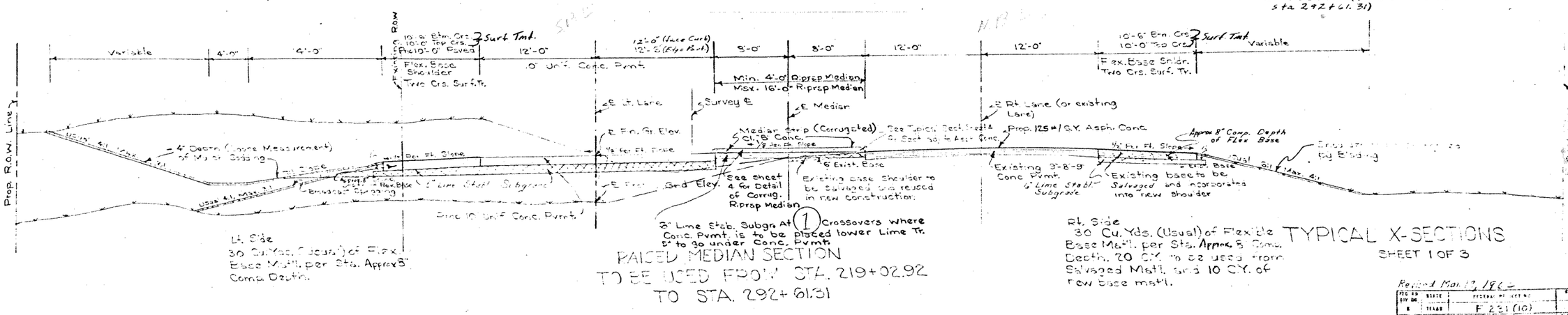
Rt. Side
30 C.Y. (Usual) of Flex. Base Matl. per Sta. Approx. 8" Comp. Depth. 10 C.Y. to be salvaged from exist. shldr. & 20 C.Y. from new base.



SECTION AT CROSSOVERS



TYPICAL SECTION SHOWING LT. TURN LANE AND MEDIAN CROSSOVER (Sta. 219+02.92 to Sta. 292+61.31)



Lt. Side
30 Cu. Yds. (Usual) of Flex Base Matl. per Sta. Approx 8" Comp. Depth.

2" Lime Stab. Subgr. At (1) Crossovers where Conc. Pvmt. is to be placed lower Lime Tr. 5" to go under Conc. Pvmt.

RAISED MEDIAN SECTION
TO BE USED FROM STA. 219+02.92
TO STA. 292+61.31

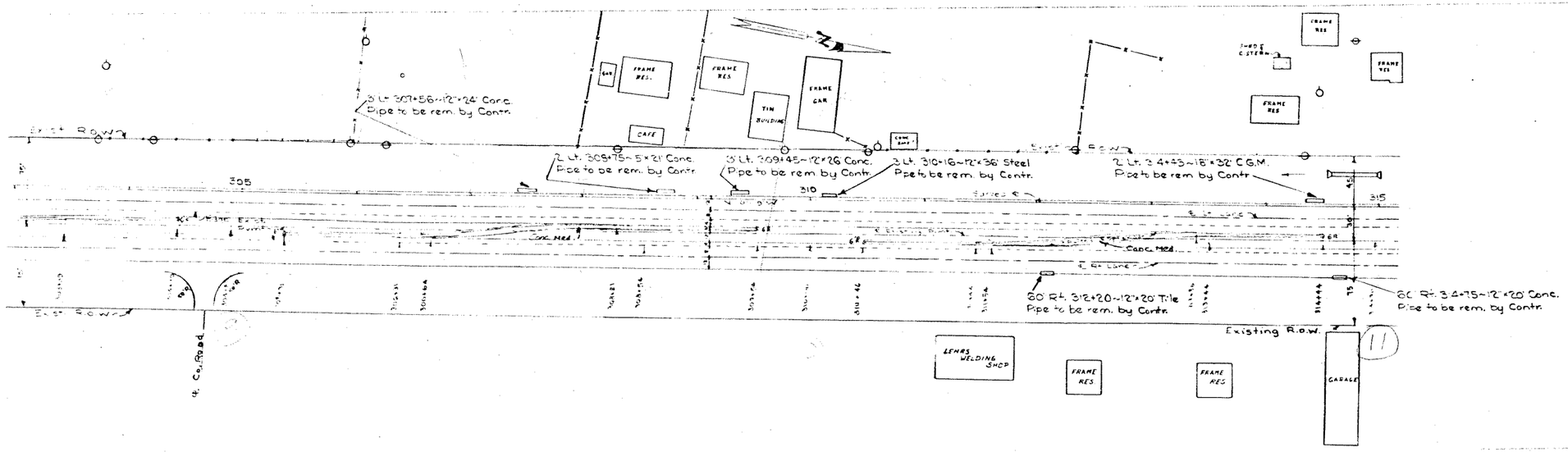
Rt. Side
30 Cu. Yds. (Usual) of Flexible Base Matl. per Sta. Approx. 8" Comp. Depth. 20 C.Y. to be used from Salvaged Matl. and 10 C.Y. of new base matl.

TYPICAL X-SECTIONS
SHEET 1 OF 3

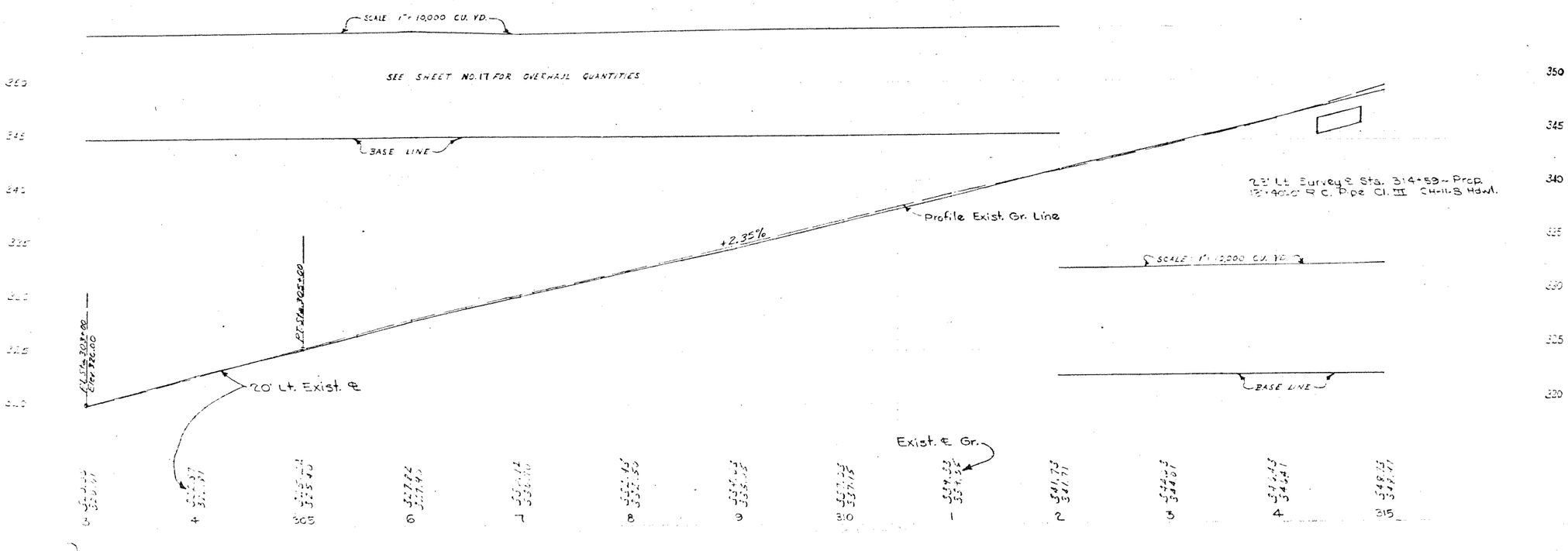
Revised March 19 19 82

FED. RD. DIV. NO.	STATE	FEDERAL AID PROJ. NO.	SHEET NO.
6	TEXAS	F 221 (10)	2
STATE DIST. NO.	COUNTY	CONT.	SECT.	JOB	H.C.R. SHEET NO.
1	ANGELINA	05	2	37	105

3-1111-M 10
C.S.
30691

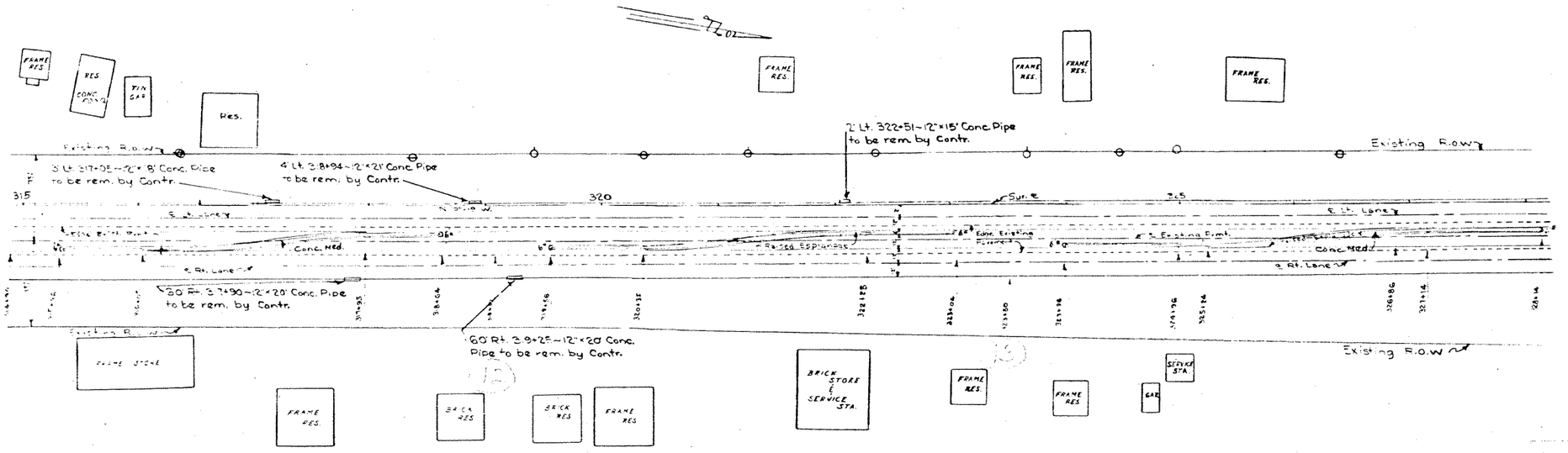


												13	STA. CLEARING AND GRUBBING
												0	EACH RIGHT-OF-WAY MARKERS
												0	STA. PREP. R.O.W
85	135	117	57	120	206	161	211	257	150	144	259	1,304	CU.YD. COM. ROAD EXCAVATION
92	24	63	111	108	104	113	144	236	231	104	113	1,447	CU.YD. EMB +SHR
												0	CU.YD. SELECT MATERIAL
												(See Sheet 21)	CU.YD. SELECT MATERIAL RESERVE
												0	CU.YD. OVER-HAUL
0	0	0	10	10	13	20	12	8	0	0	0	74	CU.YD. BROADCAST SPRIGGING
29	42	26	0	0	37	38	54	44	40	58	64	435	CU.YD. MULCH SODDING
40	61	40	40	50	60	60	60	50	50	50	50	421	CU.YD. FLEXIBLE BASE (ORD COMP.)
												0	CU.YD. COM CHANNEL EXCAVATION



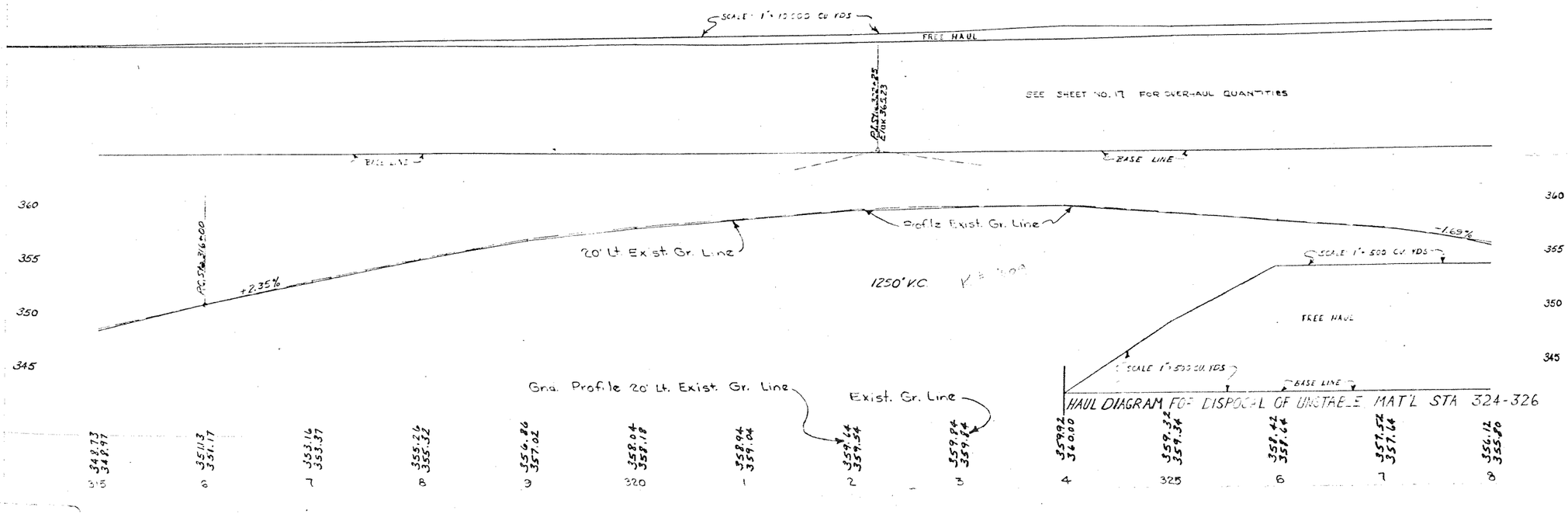
Revised March 19, 1962

F 231(10) 19



341 140	356 77	296 51	219 39	194 34	252 43	380 36	602 19	741 12	665 10	500 12	317 22	154 94	5017 589 0 (See Sheet 21) 0	CU YD CU YD CU YD CU YD CU YD	COM ROAD EXCAVATION EMB + SHR. SELECT MATERIAL SELECT MATERIAL RESERVE OVERHAUL
0 57 40	0 66 60	0 61 70	0 50 40	0 47 50	0 56 50	0 53 50	0 80 50	0 87 40	0 76 50	0 67 40	0 64 50	0 51 40	0 225 630 0	CU YD CU YD. CU YD CU YD	BROADCAST SPRIGGING MULCH SODDING FLEXIBLE BASE (ORD COMP) COM CHANNEL EXCAVATION

3 STA. CLEARING AND GRUBBING
6 EACH RIGHT-OF-WAY MARKERS
0 STA. PREP. R.O.W.



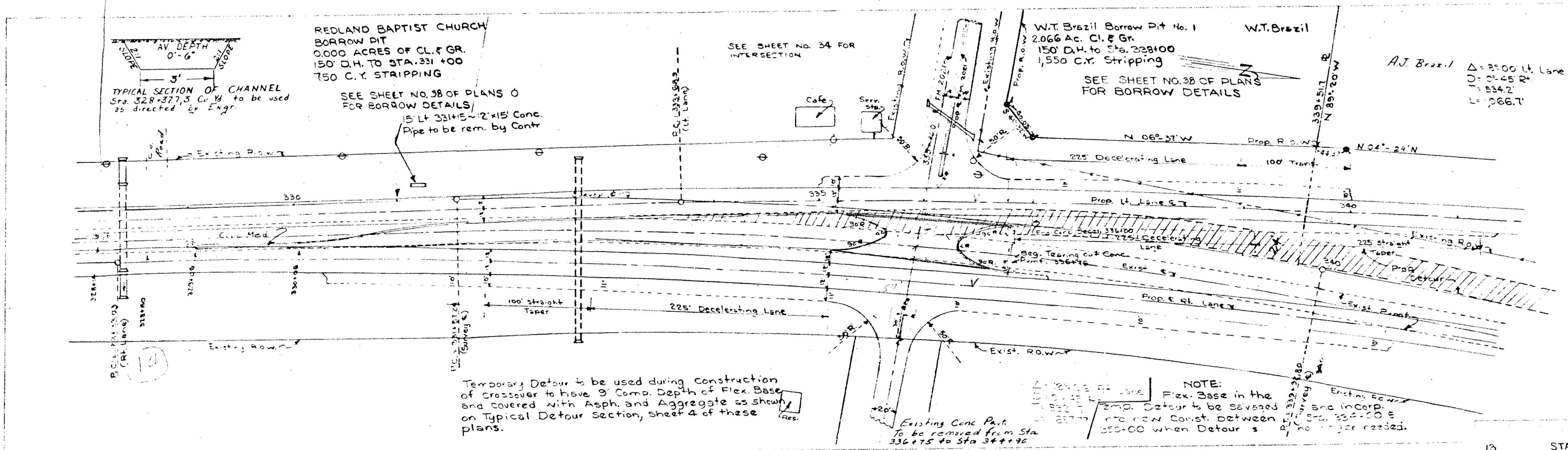
HAUL DIAGRAM FOR DISPOSAL OF UNSTABLE MAT'L STA 324-326

B.M. -NW- Power Pole 20.84
Sta 3.9+15 Elev = 355.55

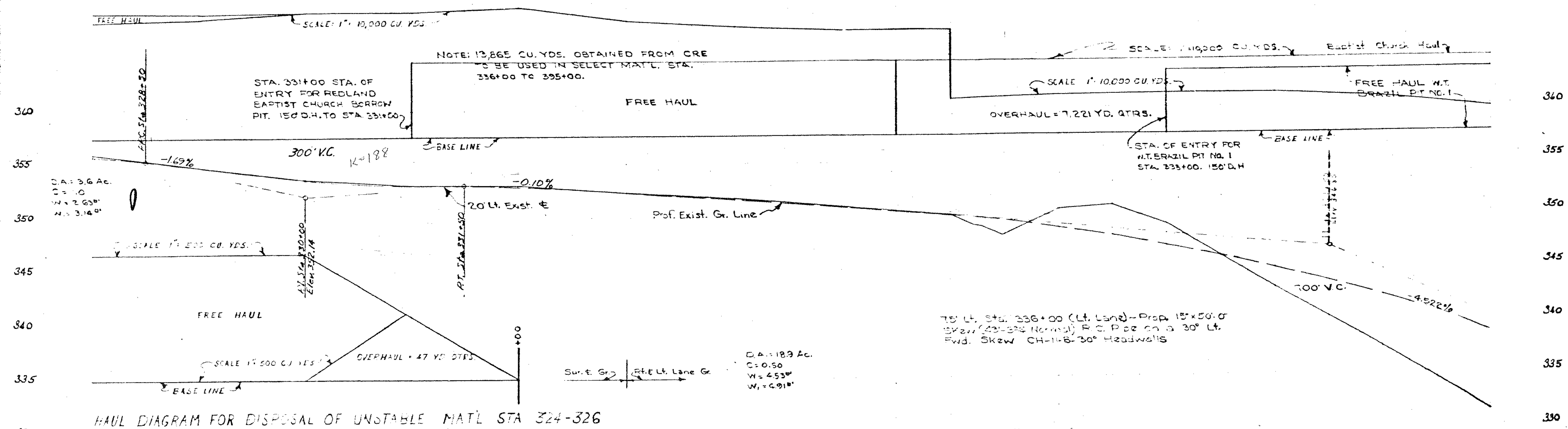
Revised March 19, 1962

F 231 (10) 20

11 ANGELINA 176 2 237 US 59



													13	STA.	CLEARING AND GRUBBING
													3	EACH	RIGHT-OF-WAY MARKERS
													0	STA.	PREP. R.O.W.
132	209	126	30	24	54	104	396	877	1013	533	70	30	3598	CU.YD.	COM. ROAD EXCAVATION
198	132	580	1177	1575	1268	592	274	177	318	397	1045	2063	9796	CU.YD.	EMB + SHR
								235	235	235	235	235	1175	CU.YD.	SELECT MATERIAL
							13,865	0	0	0	0	0	13,865	CU.YD.	SELECT MATERIAL RESERVE
													7,268	YD.QTR.	OVERHAUL
15	12	28	60	85	76	39	16	0	0	0	0	75	406	CU.YD.	BROADCAST SPRIGGING
20	29	0	0	0	0	0	0	0	75	66	0	0	190	CU.YD.	MULCH SODDING
50	40	40	50	42	44	44	99	85	111	111	106	92	914	CU.YD.	FLEXIBLE BASE (OLD COMP)
3													3	CU.YD.	COM. CHANNEL EXCAVATION



HAUL DIAGRAM FOR DISPOSAL OF UNSTABLE MAT'L STA 324-326

STA. 328+37.7 ~ 24"x 50'-0" RC. PIPE CULVERT TO BE EXTENDED 24'-0" ON UPSTREAM END AND 26'-0" ON DOWNSTREAM END WITH 24" R.C. PIPE CLASS III CH-11-B HEADWALLS

STA. 332+61.4 ~ NO CHANGE IN EXISTING 30"x 170'-0" CLEAR ROADWAY EXTRA LENGTH R.C. PIPE CULVERT WITH CH-7-B HEADWALLS

Exist. Gr. Line — Gnd. Prof. 20' Lt. Exist. Gr. Line

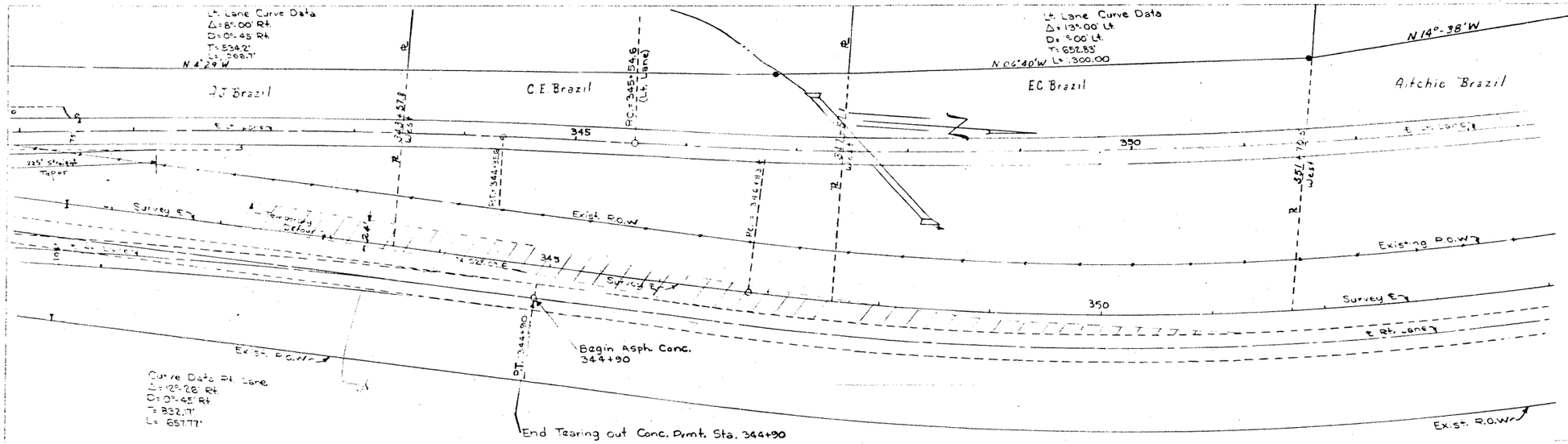
8	9	330	1	2	3	4	335	6	7	8	9	340	1
356.12	354.82	353.76	353.16	353.06	352.36	351.82	350.92	350.02	350.62	349.22	343.17	337.31	331.40
355.80	354.82	353.76	353.16	353.06	352.36	351.80	350.90	350.00	348.84	347.17	344.97	342.26	339.04

B.M. ~ Nail in 0' Sweet Gum 75 Rt. Sta. 329+10 Elev. 350.39

Revised March 19, 1962

F 231(10) 21

11 ANGELINA 176 2 37 US.59



CROSS SECTION DATA

31	30	109	846	1709	2132	1583	644	483	185	4	0	0	7758	CU YD	COM ROAD EXCAVATION
2476	3194	3086	604	0	0	554	2770	4088	3476	3276	3298	3654	30946	CU YD.	EMB. + SHR.
235	235	235	235	235	235	235	235	235	235	235	235	235	3055	CU.YD.	SELECT MATERIAL
0	0	0	0	0	0	0	0	0	0	0	0	0	0	CU.YD.	SELECT MATERIAL RESERVE
90	109	82	0	0	0	0	48	24	7	43	122	121	646	CU.YD.	BROADCAST SPRIGGING
0	0	52	68	74	75	78	74	78	80	0	0	0	581	CU.YD.	MULCH SODDING
86	85	85	85	85	85	85	85	85	85	85	85	85	1106	CU.YD.	FLEXIBLE BASE (CR CMP)
													3,974	TO&TE.	OVERHAUL
													0	CU.YD.	COM CHANNEL EXCAVATION

13	STA.	CLEARING AND GRUBBING
2	EACH	RIGHT-OF-WAY MARKERS
0	STA.	PRER R.O.W.

FREE HAUL

BASE LINE

OVERHAUL = 3,374 YD.QTR. N.T. BRAZIL PIT NO. 1

NO OVERHAUL

SCALE 1" = 10,000 CU. YDS.

CRE=1234 C.Y. 202 | 441
E&S=1234 C.Y. 873 | 1897
O.H. 0 Y.Q.

BASE LINE

COMMON ROAD EXCAVA. 5362 CU.YDS.
EMB.+ SHR. 5362 CU YDS.
OVERHAUL 0 YD. QTRS.

COMMON ROAD EXCAVA. 138 CU.YD.
EMB.+ SHR. 24 340 CU.YD.
COMMON BORROW 23 702 CU.YD.
OVERHAUL 44 227 YD.QTR.

16 | 14
1715 | 1479

552 | 1031
93 | 361

+33.7
+35.7
-4.3%
+34.2
-34.9
-2.5 2.5%
500' VC
Profile New Grade
Gr. Line New Lane
End. Line New Lane
0

D.A. 13 ACRES
C = .26
T = 15 MIN.
I_5 = 5.0"/HR.
Q = 16 C.F.S.
V = 5.1'/SEC.

STA. 343+30.0 ~ PROP. 24"ø 110'-3⅜" NORMAL (156'-0" SKEW) RC. PIPE CLASS III ON A 45° RT. FWD. SKEW, CH-11-B-45° HEADWALLS

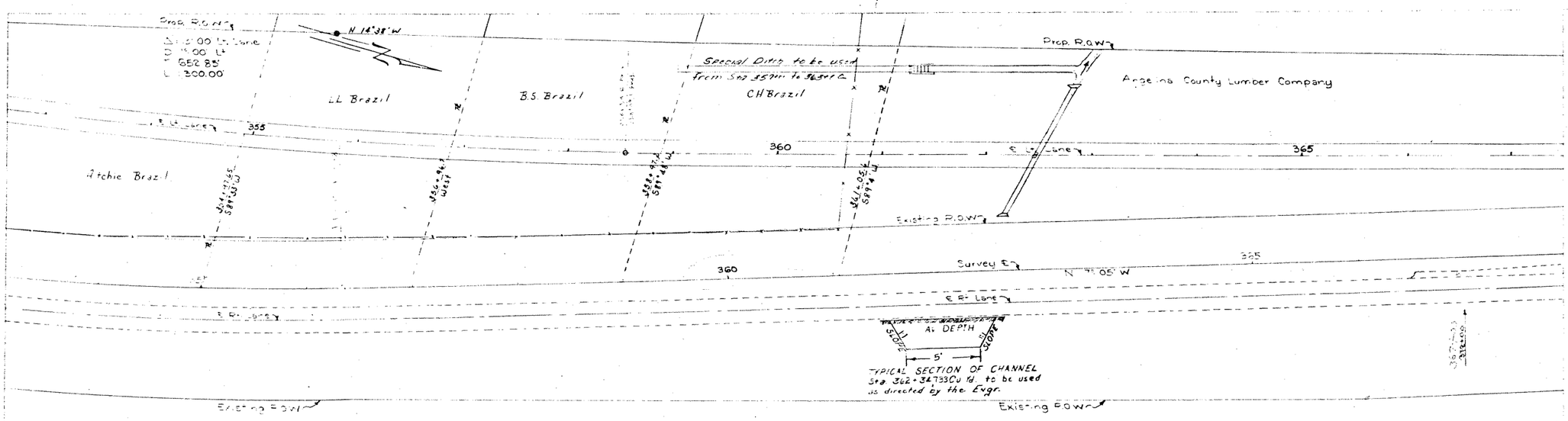
331.40	325.90 335.18	330.81 331.02	330.81 326.70	322.21 322.78	321.71 319.26	319.31 316.13	309.19 313.40	296.61 310.87	295.81 308.34	294.31 305.81	294.94 303.28	292.04 300.75	289.24 298.22		
	2	3	4	345	6	7	8	9	350	1	2	3	4		
340	335	330	325	320	315	310	340	335	330	325	320	315	310	305	300	295	290	285			
							315	310	305	300	295	290	285	315	310	305	300	295	290	285	

B.M. ~1611' ± Rt. Sweet Gum 50 Lt. (Lt. Line) Sta. 344+0 Elev 327.89

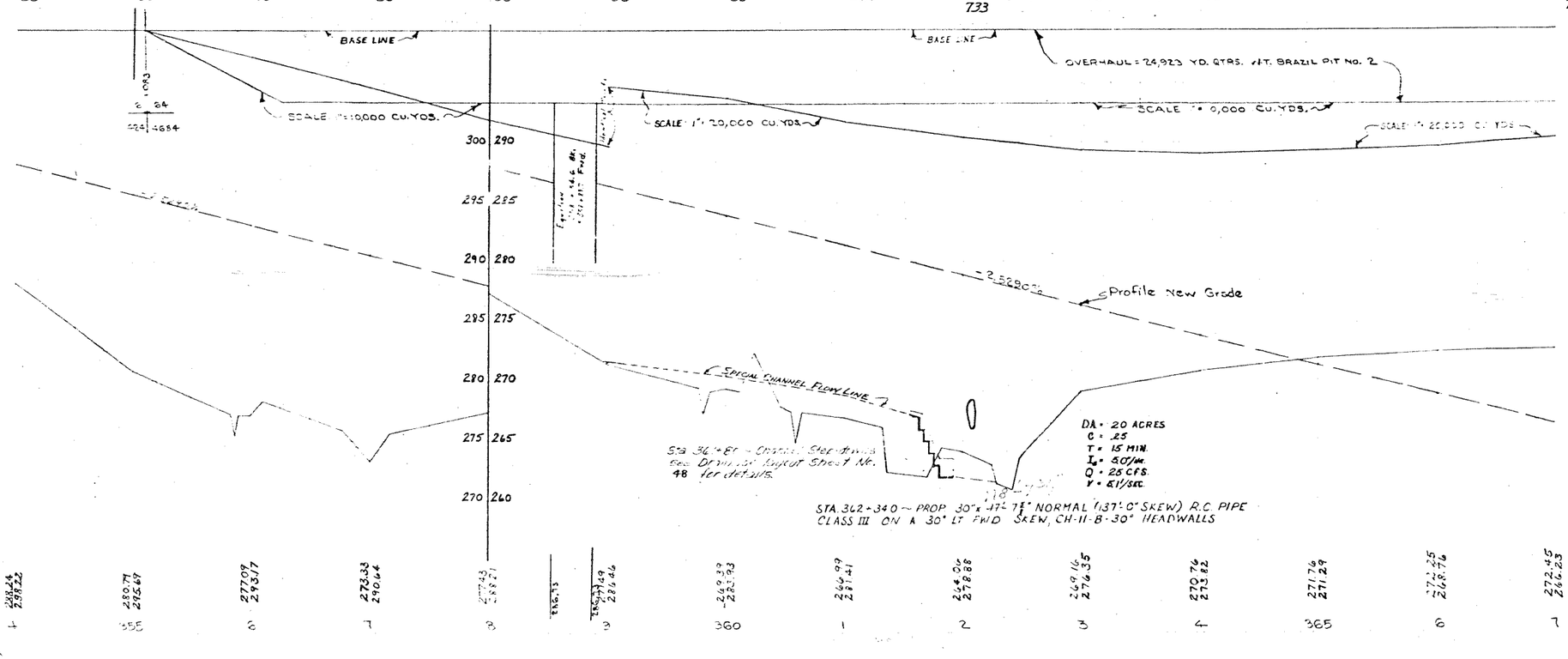
B.M. ~1611' ± Rt. Sweet Gum 50 Rt. Sta. 343+34 Elev 328.29

F 231(6) 22

11 ANGELINA 176 2,437 US 59



													13	STA. CLEARING AND GRUBBING
													1	EACH RIGHT-OF-WAY MARKERS
													0	STA. PREP. R.O.W
17	70	83	370	274	8	0	2	3	63	602	1587	2865	5944	CU. YD. COM. ROAD EXCAVATION
4227	5102	5275	5444	4573	5861	5394	5597	4214	1065	72	12	0	47041	CU. YD. EMB. +SHR.
235	235	235	235	235	235	235	235	235	235	235	235	235	3055	CU. YD. SELECT MATERIAL
0	0	0	0	0	0	0	0	0	0	0	0	0	0	CU. YD. SELECT MATERIAL RESERVE
													24923	STA. YD. OVERHAUL
70	42	51	56	59	87	120	121	95	48	26	0	0	775	CU. YD. BROADCAST SPRIGGING
0	28	28	70	70	0	0	0	0	0	50	74	115	517	CU YD MULCH SODDING
65	65	65	65	65	65	65	85	65	85	85	85	65	1165	CU YD. FLEXIBLE BASE (ORD COMP)
								733					733	CU YD. COM CHANNEL EXCAVATION



F 231(10) 23

11 ANGELINA 176 2 87 US.59