

STATE OF COLORADO  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
PLAN AND PROFILE OF ~~PROPOSED~~  
FEDERAL AID PROJECT NO. STR 1192-004  
STATE HIGHWAY NO. 119  
GILPIN COUNTY

P.E. UNDER PROJECT NO.  
SR(CX) 0119(32)

FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	SHEET TOTALS
VIII	COLL.	STR 1192-004	1	35

CONSTRUCTION SUBACCOUNT : 10230

AS CONSTRUCTED

NO REVISIONS  REVISED  11-2-94 VOID

REVISIONS	

FINAL OVERSIGHT NO  YES  NOT APPLICABLE

INDEX OF SHEETS

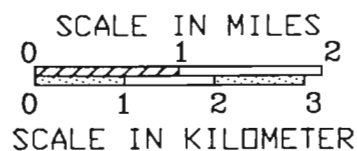
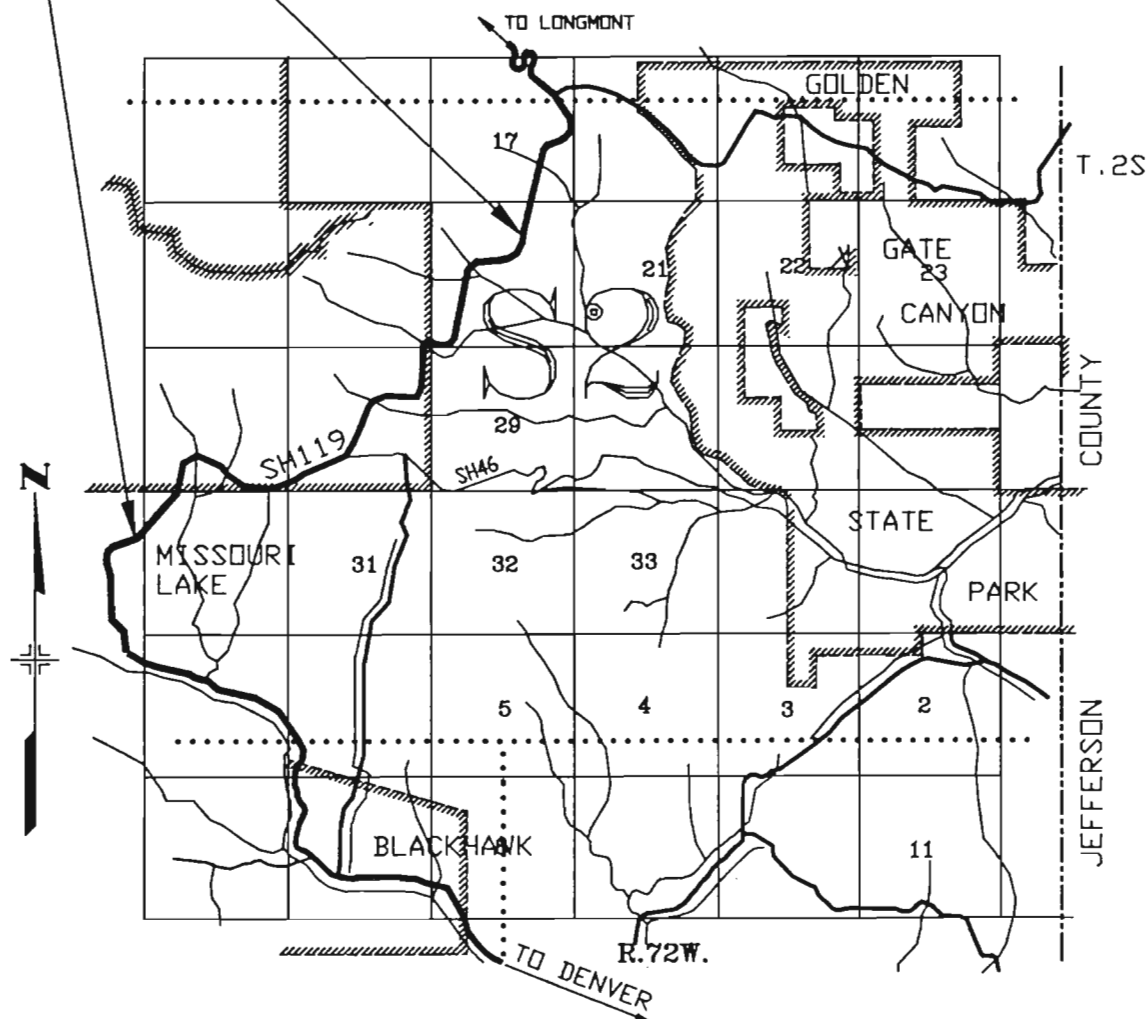
- TITLE SHEET
  - STANDARD PLANS LIST
  - TYPICAL SECTIONS
  - GENERAL NOTES, SUMMARY OF EARTHWORK QUANTITIES
  - SUMMARY OF ~~APPROXIMATE~~ <sup>FINAL</sup> QUANTITIES
  - STRUCTURE QUANTITIES
  - TABULATIONS OF SURFACING PLAN, FENCING, DELINEATORS, MAILBOX AND PIPE UNDERDRAIN
  - CONSTRUCTION TRAFFIC CONTROL DEVICES AND TABULATIONS OF ROADWAY WIDENING, GUARDRAIL, AND SIGNS
  - STORMWATER MANAGEMENT PLAN, SEEDING PLAN AND WETLAND PROTECTION PLAN
  - SELECTIVE CLEARING/THINNING
  - C.B.C. EXTENSION DETAILS
  - TYPE C INLET DETAILS
  - GILPIN COUNTY SCHOOL ENTRANCE
  - JCT. SH 119 & SH 46
  - SURVEY CONTROL DATA
  - PLAN AND PROFILE SHEETS
  - R.O.W., CUT AND FILL SHEETS
- 2, 11, 13, 14, 16, 18, 27, 28, 31, 32, 33 - No REVISIONS
- 15, 17 Void By Construction

LENGTH AND DESIGN DATA

STATION (R)	LINEAR FEET	
	ROADWAY	
1190+00 BEG. STR 1192-004= 190+00 ON F.P. 29E = M.P. 10.43	59.79	
1190+59.79 BK = EQUATION 2198+18.18 AH	<del>23,333.82</del> 23,423.82	
2431+52 END STR 1192-004= 435+00 BEG. SR 0119(30)= 435+00 ON F.P. 29C = M.P. 14.87	<del>23,393.61</del> 23,483.61	
TOTALS	<del>23,393.61</del> 23,483.61	
SUMMARY	LIN.FT.	MILES
ROADWAY GROSS AND NET LENGTH	23,393.61 23,483.61	4.44
DESIGN DATA		
MAXIMUM DEGREE OF CURVE	16' 30'	
MAXIMUM GRADE	7%	
MINIMUM S.S.D. HORIZONTAL	235'	
MINIMUM S.S.D. VERTICAL	335'	
MAXIMUM DESIGN SPEED	40 MPH	
DESIGN TRAFFIC VOLUME	1992	2013
DHV	430	570
ADT	2900	6200
TRUCK	3 %	3 %

STA. 1190+00 BEG. STR 1192-004 =  
STA. 190+00 ON F.P.29E = MP. 10.43

EQ. STA. 1190+59.79 BK=  
STA. 2198+18.18 AH  
STA. <sup>2432+42</sup>~~2431+52~~ END STR 1192-004 =  
STA. 435+00 BEG. SR 0119(30) =  
STA. 435+00 ON F.P.29C = MP. 14.87



AS CONSTRUCTED INFORMATION

CONTRACTOR ASPHALT PAVING CO.  
RESIDENT ENGINEER R. HIRSCHFELD  
(Project or Resident)  
PROJECT STARTED 4-1-94  
PROJECT COMPLETED 11-2-94  
AS CONSTRUCTED PLANS  
APPROVED [Signature]  
Const. Eng. TITLE 4/25/95 DATE

AS CONSTRUCTED			FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	SHEET TOTALS	
NO REVISIONS	11-2-94	REVISED		VIII	COLD.	STR 1192-004	2	35

PLAN NO.	TITLE	PAGE	PLAN NO.	TITLE	PAGE	PLAN NO.	TITLE	PAGE
<input checked="" type="checkbox"/> M-100-1	STANDARD SYMBOLS.....	1	<input checked="" type="checkbox"/> M-607-1	WIRE FENCES AND GATES.....(2 SHEETS)	64	<input checked="" type="checkbox"/> S-612-1	TYPICAL DELINEATOR INSTALLATIONS....(5 SHEETS)	93
<input checked="" type="checkbox"/> M-107-1	TEMPORARY EROSION CONTROL.....	2	<input type="checkbox"/> M-607-2	CHAIN LINK FENCE.....(3 SHEETS)	66	<input checked="" type="checkbox"/> S-614-1	TYPICAL GROUND SIGN PLACEMENT.....	98
<input checked="" type="checkbox"/> M-203-1	APPROACH ROADS.....	3	<input type="checkbox"/> M-607-3	BARRIER FENCE.....	69	<input checked="" type="checkbox"/> S-614-2	CLASS I GROUND SIGN INSTALLATIONS.....	99
<input checked="" type="checkbox"/> M-203-2	DITCH TYPES.....	4	<input type="checkbox"/> M-607-4	DEER FENCE AND GATE.....(2 SHEETS)	70	<input checked="" type="checkbox"/> S-614-3	CLASS II GROUND SIGN INSTALLATIONS.....	100
<input checked="" type="checkbox"/> M-203-10	SUPERELEVATION CROWNED HIGHWAYS.....	5	<input type="checkbox"/> M-627-10	PICKET SNOW FENCE.....	72	<input type="checkbox"/> S-614-4	CLASS III SIGNS SHEET ALUMINUM PANELS.....(3 SHEETS)	101
<input type="checkbox"/> M-203-11	SUPERELEVATION DIVIDED HIGHWAYS- SHOULDER PIVOT.....	6	<input type="checkbox"/> M-608-1	CURB RAMPS.....	73	<input checked="" type="checkbox"/> S-614-5	BREAK-AWAY SIGN SUPPORT DETAILS FOR GROUND SIGNS.....(2 SHEETS)	104
<input type="checkbox"/> M-203-12	SUPERELEVATION STREETS.....	7	<input type="checkbox"/> M-609-1	CURBS AND GUTTERS.....	74	<input type="checkbox"/> S-614-6	CONCRETE FOOTINGS AND SIGN ISLANDS FOR CLASS III SIGNS.....(2 SHEETS)	106
<input type="checkbox"/> M-203-13	SUPERELEVATION DIVIDED HIGHWAYS CENTER PIVOT.....	8	<input type="checkbox"/> M-611-1	CATTLE GUARD.....(2 SHEETS)	75	<input checked="" type="checkbox"/> S-614-10	TYPICAL MARKER ASSEMBLY INSTALLATIONS.....	108
<input checked="" type="checkbox"/> M-206-1	EXCAVATION AND BACKFILL FOR STRUCTURES.....(3 SHEETS)	9	<input type="checkbox"/> M-613-1	CONVENTIONAL HIGHWAY LIGHTING.(3 SHEETS)	77	<input checked="" type="checkbox"/> S-614-11	MILEPOST SIGN AND INSTALLATION.....	109
<input type="checkbox"/> M-206-2	EXCAVATION AND BACKFILL FOR BRIDGES.....	12	<input type="checkbox"/> M-613-2	HIGH MAST LIGHTING.....(2 SHEETS)	80	<input type="checkbox"/> S-614-12	STRUCTURE NUMBER INSTALLATION (BRIDGE INFORMATION SHEET).....	110
<input checked="" type="checkbox"/> M-210-1	MAILBOX SUPPORTS.....(2 SHEETS)	13	<input type="checkbox"/> M-614-1	RUMBLE STRIPS.....	82	<input type="checkbox"/> S-614-14	FLASHING BEACON AND SIGN INSTALLATION.....(2 SHEETS)	111
<input type="checkbox"/> M-214-1	PLANTING DETAILS.....	15	<input type="checkbox"/> M-615-1	EMBANKMENT PROTECTOR, TYPE 3.....	83	<input type="checkbox"/> S-614-20	TYPICAL POLE MOUNT SIGN INSTALLATION.....	113
<input type="checkbox"/> M-412-1	CONCRETE PAVEMENT JOINTS.....	16	<input type="checkbox"/> M-615-2	EMBANKMENT PROTECTOR, TYPE 5.....	84	<input type="checkbox"/> S-614-21	CONCRETE BARRIER SIGN POST INSTALLATIONS.....	114
<input type="checkbox"/> M-412-2	CURBED CONCRETE PAVEMENT JOINTS.....	17	<input type="checkbox"/> M-616-1	INVERTED SIPHON.....(ALSO USE APPLICABLE M-603)	85	<input type="checkbox"/> S-614-22	TYPICAL MULTI-SIGN INSTALLATIONS.....	115
<input type="checkbox"/> M-504-1	STEEL CRIBBING.....	18	<input type="checkbox"/> M-620-1	FIELD LABORATORY, CLASS 1.....	86	<input type="checkbox"/> S-614-40	TYPICAL TRAFFIC SIGNAL INSTALLATION DETAILS.....(3 SHEETS)	116
<input type="checkbox"/> M-506-1	GABIONS AND SLOPE MATTRESS.....	19	<input checked="" type="checkbox"/> M-620-2	FIELD LABORATORY, CLASS 2.....	87	<input checked="" type="checkbox"/> S-627-1	TYPICAL PAVEMENT MARKINGS.....(4 SHEETS)	119
<input type="checkbox"/> M-510-1	STRUCTURAL PLATE CULVERT PIPE H-20 LOADING.....	20	<input type="checkbox"/> M-620-11	FIELD OFFICE, CLASS 1.....	88	<input checked="" type="checkbox"/> S-630-1	TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION.....(9 SHEETS)	123
<input checked="" type="checkbox"/> M-601-1	SINGLE CONCRETE BOX CULVERT.....(2 SHEETS)	21	<input checked="" type="checkbox"/> M-620-12	FIELD OFFICE, CLASS 2.....	89	<input checked="" type="checkbox"/> S-630-2	BARRICADES, DRUMS, CONCRETE BARRIERS (TEMP) & VERTICAL PANELS.....	132
<input type="checkbox"/> M-601-2	DOUBLE CONCRETE BOX CULVERT.....(2 SHEETS)	23	<input type="checkbox"/> M-629-1	SURVEY MONUMENTS.....(2 SHEETS)	90	<input type="checkbox"/> S-630-3	FLASHING BEACON (PORTABLE) DETAILS.....	133
<input type="checkbox"/> M-601-3	TRIPLE CONCRETE BOX CULVERT.....(2 SHEETS)	25						
<input type="checkbox"/> M-601-10	HEADWALL FOR PIPE CULVERTS.....	27						
<input type="checkbox"/> M-601-11	TYPE 'S' SADDLE HEADWALL FOR PIPE CULVERTS.....	28						
<input type="checkbox"/> M-601-12	HEADWALLS AND CULVERT OUTLET PAVING.....	29						
<input checked="" type="checkbox"/> M-601-20	WINGWALLS FOR PIPE OR BOX CULVERTS.....	30						
<input checked="" type="checkbox"/> M-603-1	METAL AND PLASTIC CULVERT PIPE.....(2 SHEETS)	31						
<input type="checkbox"/> M-603-2	REINFORCED CONCRETE PIPE.....	33						
<input type="checkbox"/> M-603-3	PRECAST CONCRETE BOX CULVERT.....	34						
<input checked="" type="checkbox"/> M-603-10	CONCRETE AND METAL END SECTIONS.....(2 SHEETS)	35						
<input checked="" type="checkbox"/> M-604-10	INLET, TYPE C.....	37						
<input type="checkbox"/> M-604-11	INLET, TYPE D.....	38						
<input type="checkbox"/> M-604-12	CURB INLET, TYPE R.....(2 SHEETS)	39						
<input type="checkbox"/> M-604-13	CONCRETE INLET, TYPE 13.....	41						
<input type="checkbox"/> M-604-20	MANHOLES.....(3 SHEETS)	42						
<input checked="" type="checkbox"/> M-605-1	SUBSURFACE DRAINS.....	45						
<input checked="" type="checkbox"/> M-606-1	GUARDRAIL TYPE 3, W-BEAM.....(12 SHEETS)	46						
<input type="checkbox"/> M-606-12	GUARDRAIL, TYPE 4, CONCRETE BARRIER.....(6 SHEETS)	58						

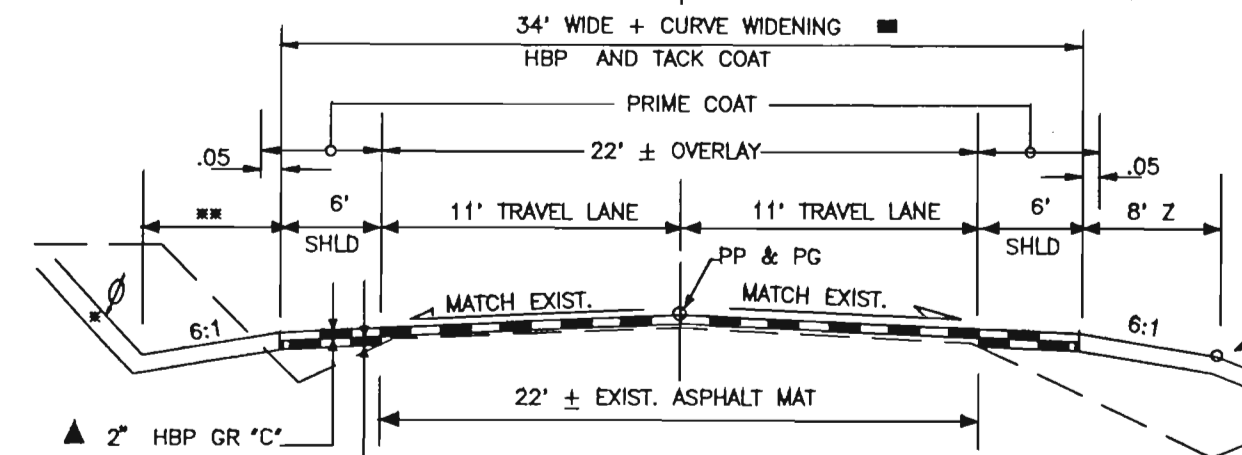
THE STANDARD PLAN SHEETS INDICATED HEREON BY A MARKED BOX ARE TO BE USED TO CONSTRUCT THIS PROJECT.

STATE OF COLORADO  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS

M & S STANDARDS - NOVEMBER, 1992

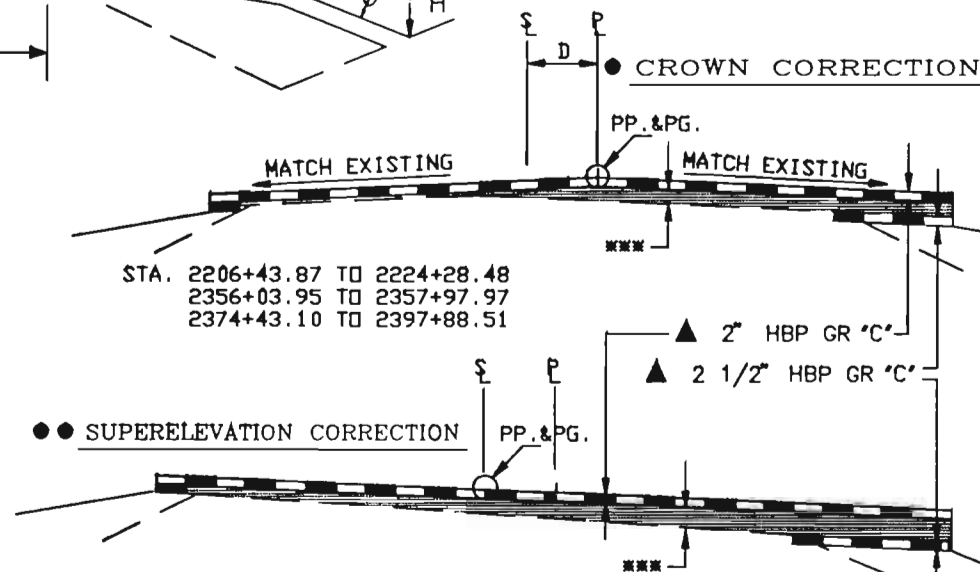
# TYPICAL SECTIONS

AS CONSTRUCTED		FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	SHEET TOTALS
NO REVISIONS	REVISED 11-2-94	VIII	COLD.	STR 1192-004	3	35



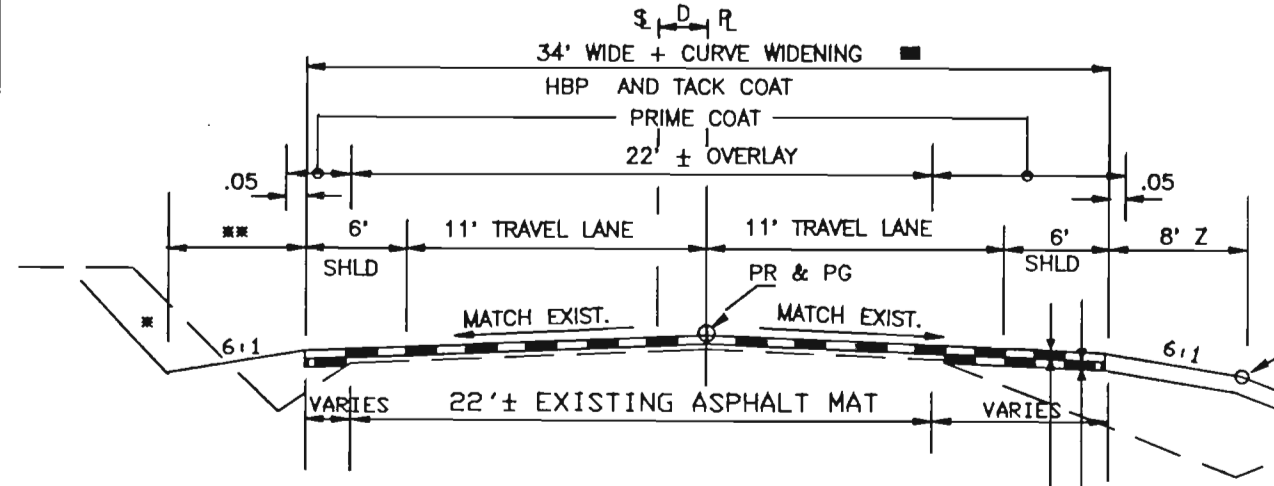
- ▲ 2" HBP GR 'C'
  - ▲ 2 1/2" HBP GR 'C'
- |               |               |
|---------------|---------------|
| STA. 1190+00  | TO 2200+25    |
| ●● 2251+02.40 | TO 2279+84.50 |
| ●● 2288+84.22 | TO 2302+85.00 |
| ●● 2315+10.00 | TO 2343+84.26 |
| ●● 2365+32.63 | TO 2367+79.74 |
| ●● 2406+05.55 | TO 2416+48.12 |

- ▲ APPROXIMATE THICKNESS
- \* SLOPE VARIES (SEE CROSS-SECTIONS)
- ∅ THE CONTRACTOR WILL BE REQUIRED TO PLACE (TOPSOIL-SUITABLE MATERIAL) TO THIS LINE AFTER COMPLETION OF PAVING OPERATION.
- CURVE WIDENING (SEE ROADWAY WIDENING TAB.)
- D OFFSET DISTANCE (VARIES RT. OR LT.)
- \*\*\* [HBP GR. 'CX'] THICKNESS AS REQUIRED TO FIT FIELD CONDITION EXISTING SUPERELEVATION WILL BE FLATTEN TO 0.080 FT/FT MAX. MAX. LIFT THICKNESS SHALL BE 3".



- SUPERELEVATION CORRECTION
- |                 |               |
|-----------------|---------------|
| STA. 2206+43.87 | TO 2224+28.48 |
| 2356+03.95      | TO 2357+97.97 |
| 2374+43.10      | TO 2397+88.51 |

- |                 |               |
|-----------------|---------------|
| STA. 2236+20.01 | TO 2251+02.40 |
| 2276+68.74      | TO 2284+65.66 |
| 2322+63.35      | TO 2337+33.57 |
| 2357+97.97      | TO 2365+57.63 |
| 2367+79.74      | TO 2374+43.10 |
| 2397+88.51      | TO 2406+05.55 |



- 2209+05.00 TO 2251+02.40
- 2279+84.50 TO 2288+84.22
- 2343+84.26 TO 2365+32.63
- 2367+79.74 TO 2406+05.55
- 2416+48.12 TO 2431+52.00

- ▲ 2" HBP GR 'C'
- ▲ 2 1/2" HBP GR 'C'

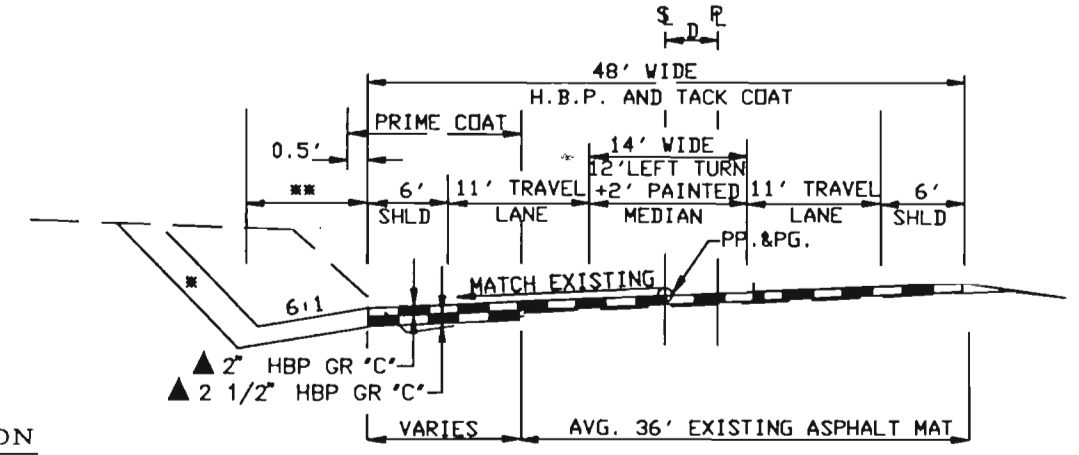
**FILL SLOPES**  
 SLOPE 4:1 WHERE 'H' IS LESS THAN 10'  
 SLOPE 3:1 WHERE 'H' IS 10' TO 15'  
 SLOPE 2:1 WHERE 'H' IS OVER 15'  
 IN SPECIAL CASES SLOPES MAY VARY TO FIT FIELD CONDITIONS WITHIN R.O.W. LIMITS.

\*\*\* Z DISTANCE TABULATION (CUT SEC. ONLY)

STATION TO	STATION	SIDE	Z	STATION TO	STATION	SIDE	Z
1190+00	TO 2338+41.63	BOTH	8'	2263+84.74	TO 2276+52.7	BOTH	8'
2238+94.39	TO 2242+90.73	LT.	12'	2277+34.46	TO 2281+84.26	LT.	10'
2243+40.17	TO 2246+86.50	BOTH	8'	2282+57.63	TO 2390+52.82	BOTH	8'
2247+36.09	TO 2248+85.17	LT.	12'	2391+52.82	TO 2394+52.82	LT.	12'
2249+84.93	TO 2259+84.91	BOTH	8'	2395+52.82	TO 2431+52.00	BOTH	8'
2260+84.87	TO 2262+84.78	RT.	10'				

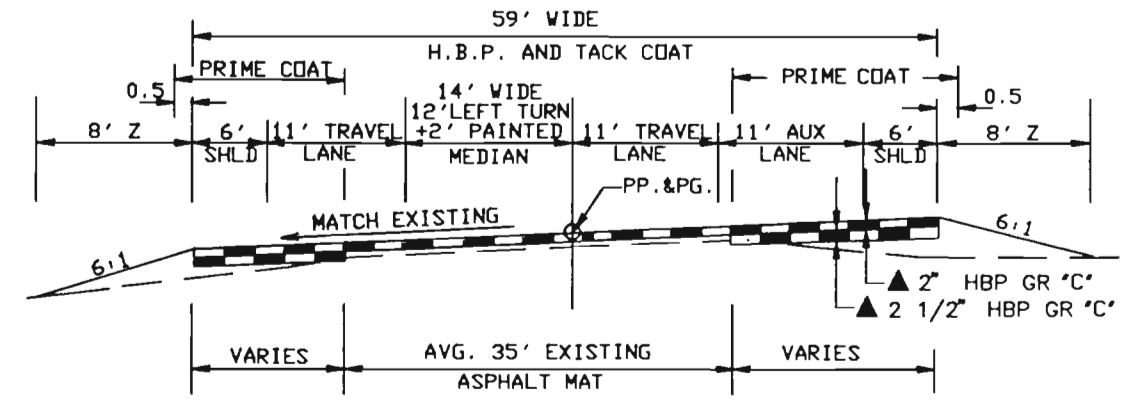
**STABILIZATION DATA:**

18K ESAL (10 YR.)	= 80,000
18K ESAL (20 YR.)	= 170,000
MINIMUM R-VALUE	= 55
S.I.	= 2.5
OVERLAY SN	= 0.74
WIDENING SN	= 1.93



- ▲ 2" HBP GR 'C'
  - ▲ 2 1/2" HBP GR 'C'
- VARIES AVG. 36' EXISTING ASPHALT MAT
- GILPIN COUNTY SCHOOL INTERSECTION
- |              |                   |
|--------------|-------------------|
| STA. 2200+25 | TO 2203+25 TRANS. |
| 2203+25      | TO 2206+25        |
| ● 2206+25    | TO 2209+05 TRANS. |

- NOTES:**
- BREAK POINTS ON SLOPES AND IN BOTTOMS OF DITCHES SHALL BE ROUNDED FOR A PLEASING APPEARANCE.
  - THE DEPTH AND WIDTH OF SIDE DITCHES SHALL BE VARIED WHERE NECESSARY IN ORDER TO PROVIDE PROPER DRAINAGE.
  - EXISTING EDGE OF OIL WILL BE SAW CUT 0.5' EACH SIDE TO A NEAT LINE AND WILL BE CONSIDERED AS SUBSIDIARY TO BITUMINOUS PAVEMENT, AND WILL NOT BE PAID FOR SEPARATELY.
  - THE RATES SHOWN HAVE BEEN DETERMINED FROM INFORMATION AVAILABLE AT THE TIME OF DESIGN. RATES SHOULD BE ADJUSTED DURING CONSTRUCTION TO OBTAIN THE REQUIRED APPROXIMATE THICKNESS.



- JCT. SH. 46
- |              |                   |
|--------------|-------------------|
| STA. 2302+85 | TO 2307+85 TRANS. |
| 2307+85      | TO 2310+10        |
| 2310+10      | TO 2315+10 TRANS. |

MATERIAL SHALL BE PLACED AT THE FOLLOWING RATES PER 100 LINEAR FEET OF ROADWAY:

BITUMINOUS PAVEMENT (2" TOP LAYER 34' WIDTH) ..... 41.56 TON

(2 1/2" BOTTOM LAYER 12' WIDTH) ..... 18.24 TON

AS CONSTRUCTED		FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	SHEET TOTALS
NO REVISIONS	REVISED 11-2-94	VIII	COLD.	STR 1192-004	4	35

### GENERAL NOTES

FOR PRELIMINARY PLAN QUANTITIES OF PAVEMENT MATERIALS, THE FOLLOWING RATES OF APPLICATION WERE USED:

- HOT BITUMINOUS PAVEMENT (GRADING C) @110 LBS./SQ.YD./INCH
- HOT BITUMINOUS PAVEMENT (GRADING CX) @110 LBS./SQ.YD./INCH
- TACK & PRIME COAT EMUL. ASPH. (SLOW-SETTING) @0.10 GALS./SQ.YD.(DILUTED)

DILUTED EMULSIFIED ASPHALT FOR TACK COAT AND PRIME COAT SHALL CONSIST OF 1 PART EMULSIFIED ASPHALT (SLOW-SETTING) AND 1 PART WATER. IT IS ESTIMATED THAT ~~5761~~<sup>65/4</sup> GALLONS (NET) ~~WILL~~<sup>WAS</sup> BE REQUIRED FOR THIS PROJECT.

RATES OF APPLICATION SHALL BE AS DETERMINED BY THE ENGINEER AT THE TIME OF APPLICATION.

- THE FOLLOWING SHALL BE FURNISHED WITH EACH BITUMINOUS PAVER.
1. A SKI TYPE DEVICE AT LEAST 40 FEET IN LENGTH.
  2. SHORT SKI OR SHOE.
  3. SIX INCH (6") TAPERED SHOE.

ANY LAYER OF BITUMINOUS PAVEMENT THAT IS TO HAVE A SUCCEEDING LAYER PLACED THEREON SHALL BE COMPLETED FULL WIDTH BEFORE SUCCEEDING LAYER IS PLACED.

ROAD APPROACHES WHICH REQUIRE BITUMINOUS PAVEMENT SHALL BE PRIMED AND A 4" THICKNESS OF PAVEMENT SHALL BE PLACED AS FOLLOWS:  
PUBLIC APPROACHES SHALL BE PAVED 50' OUT FROM EDGE OF SHOULDER OR TO THE RIGHT OF WAY LINE, WHICHEVER IS LESS, OR AS DIRECTED BY THE ENGINEER. FIELD ENTRANCES SHALL BE PAVED 4 FEET OUT FROM EDGE OF SHOULDER.

DEPTH OF MOISTURE-DENSITY CONTROL FOR THIS PROJECT SHALL BE AS FOLLOWS:  
FULL DEPTH OF ALL EMBANKMENTS.  
BASES OF CUTS AND FILLS 0.5' FOOT.  
FULL DEPTH OF EMBANKMENT SECTIONS USED FOR DITCHES

EXCAVATION REQUIRED FOR COMPACTION OF BASES OF CUTS AND FILLS WILL BE CONSIDERED AS SUBSIDIARY TO THAT OPERATION AND WILL NOT BE PAID FOR SEPARATELY.

TYPE OF COMPACTION FOR THIS PROJECT WILL BE AASHTO T-99.

THE MINIMUM THICKNESS OF TOPSOIL SHALL BE 4 INCHES. IT IS ~~ESTIMATED THAT 7,538~~<sup>1550</sup> CU. YDS. ~~WILL~~<sup>WAS</sup> BE REQUIRED AND WILL BE OBTAINED FROM AN UNDESIGNATED SOURCE.

PRIOR TO APPLYING BITUMINOUS MATERIAL, THE ROAD SURFACE SHALL BE CLEANED AND TACK COAT APPLIED.

IT IS ESTIMATED THAT ~~332~~<sup>302</sup> GALS. OF EPOXY PAVEMENT MARKING WILL BE REQUIRED FOR PERMANENT STRIPING AS FOLLOWS:  
WHITE ~~162.164~~ GAL.  
YELLOW ~~170.158~~ GAL.

BLADING REQUIRED FOR SHAPING ROADWAY SHOULDERS WILL BE CONSIDERED AS SUBSIDIARY TO EXCAVATION OPERATION AND WILL NOT BE PAID FOR SEPARATELY.

IT IS ESTIMATED THAT ~~69~~<sup>61</sup> GROUND SIGNS AND MILE POST MARKERS WILL BE ADJUSTED OR RESET BY THE CONTRACTOR AND PAID FOR AS 'RESET GROUND SIGN'.

IT IS ESTIMATED THAT ~~170~~<sup>430</sup> GALS. OF PAVEMENT MARKING PAINT ~~WILL~~<sup>WAS</sup> BE REQUIRED FOR TEMPORARY STRIPING AS FOLLOWS:  
YELLOW ~~170.438~~ GAL.

FULL COMPLIANCE CENTERLINE STRIPING WILL BE REQUIRED AT THE COMPLETION OF EACH WORK DAY.

IT IS ESTIMATED THAT APPROXIMATELY 2500 TONS OF BITUMINOUS PAVEMENT GRADING 'CX' WILL BE REQUIRED FOR SUPERELEVATION AND CROWN CORRECTIONS.

IT IS ESTIMATED THAT ~~24~~<sup>2</sup> HOURS OF BLADING WITH MOTOR GRADER IN THE 125 TO 150 FLYWHEEL HORSEPOWER RANGE ~~WILL~~<sup>WAS</sup> BE REQUIRED FOR ROAD APPROACH GRADING.

IT IS ESTIMATED THAT ~~1921~~<sup>1550</sup> CU.YD. OF MAX. 2' OF AGGREGATE BASE COURSE (SPECIAL) ~~WILL~~<sup>WAS</sup> BE USED AS LEVELING COURSE ON WIDENING AREAS AS DIRECTED BY THE ENGINEER.

IT IS ESTIMATED THAT ~~250~~<sup>160</sup> LIN.FT. OF CONCRETE BARRIER (TEMPORARY) ~~WILL~~<sup>WAS</sup> BE REQUIRED FOR THIS PROJECT.

### SUMMARY OF EARTHWORK QUANTITIES

INDEX		PROJECT TOTALS
BOOK	PAGE	SHEET
		CU. YD.
<b>EMBANKMENT MATERIAL (CIP)</b>		
EMBANKMENT (ROADWAY)		47,100
STRUCTURE QUANTITIES AS EMBANKMENT		<del>283</del> <sup>188</sup>
# EMBANKMENT FOR ROAD APPROACH		50
# 2' OF EMBANKMENT FOR WIDENING		6,156
<b>TOTAL</b>		<b>53,414</b>
DESIGN WIDENING		<sup>166</sup>
EMB FOR ROAD APPR ADDITIONAL		<sup>426.5</sup>
<b>UNCLASSIFIED EXCAVATION</b>		<b>54751.3</b>
(FOR INFORMATION ONLY)		
ROADWAY (FROM COMPUTER)		47,031
STRUCTURE QUANTITIES AS EXCAVATION (DITCH)		184
ESTIMATE FOR CUT SLOPE TREATMENT		239
# 2' OF EXCAVATION FOR WIDENING		6,156
<b>TOTAL</b>		<b>53,610</b>
<b>COMPACTION (AASHTO T-99)</b>		
(FOR INFORMATION ONLY)		
(MOISTURE AND DENSITY CONTROL)		
EMBANKMENT (ROADWAY)		47,100
BASE CUTS AND FILLS		14,798
STRUCTURE QUANTITIES AS EMBANKMENT		108
# EMBANKMENT FOR ROAD APPROACH		50
# 2' OF EMBANKMENT FOR WIDENING		6,156
<b>TOTAL</b>		<b>68,212</b>
		<sup>56891</sup>
		<sup>53610</sup> = 1.06
<b>ROADWAY QUANTITIES BALANCE</b>		
(FOR INFORMATION ONLY)		
EMBANKMENT X FACTOR (1.05)		<del>56891</del> <sup>56,005</sup>
EXCAVATION (UNCLASSIFIED)		53,610
BORROW (FROM CONTRACTOR SOURCE)		2,475

\* ESTIMATED QUANTITY OF EMBANKMENT MATERIAL FOR RELOCATION OF DRIVEWAY AT STA 2303+.

# IN LOCATIONS AS DESIGNATED BY THE ENGINEER, THE EXISTING SUBGRADE SHALL REQUIRE SUBEXCAVATION TO ENSURE A MINIMUM R-VALUE OF 55 IN THE TOP 2' OF WIDENING AREAS.

# FINAL SUMMARY OF APPROXIMATE QUANTITIES

AS CONSTRUCTED			C D O H	FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.
NO REVISIONS	REVISED 11-2-94	VOID	VIII	COLO.	STR 1192-004	5	

INDEX	CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	ROADWAY																		PROJECT TOTALS	
				PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.
	201	CLEARING AND GRUBBING	LS	1	1																	1	1
	202	REMOVAL OF STRUCTURE	EACH	1	1																	1	1
	202	REMOVAL OF HEADWALL	EACH	18	20																	18	20
	202	REMOVAL OF PIPE	LF	1145	924																	1145	924
	202	REMOVAL OF DELINEATOR	EACH	108	108																	108	108
	202	REMOVAL OF ASPHALT MAT	SY	385	602																	385	602
	202	REMOVAL OF PORTIONS OF PRESENT STRUCTURE	LS	1	1																	1	1
	202	REMOVAL OF GROUND SIGN	EACH	13	13																	13	13
	202	REMOVAL OF FENCE	LF	15,171	22412																	15,171	22412
	202	REMOVAL OF GUARDRAIL TYPE 1	LF	1118	1118																	1118	1118
	202	PLUG CULVERT	EACH	1	5																	1	5
	203	EMBANKMENT MATERIAL (COMPLETE IN PLACE) (CNO #2)	CY	53,414	54181.5																	53,414	54181.5
	203	BLADING	HOURL	24	2																	24	2
	206	STRUCTURE EXCAVATION	CY	723	1341																	723	1341
	206	STRUCTURE BACKFILL (CLASS 2)	CY	697	889.11																	697	889.11
	207	TOPSOIL	CY	7,530	7548																	7,530	7548
	208	SILT FENCE	LF	3,341	794																	3,341	794
	208	SEDIMENT BASIN	EACH	2	2																	2	2
	208	CHECK DAM	EACH	16	15																	16	15
	210	RESET MANTLE STRUCTURE	EACH	26	13																	26	13
	210	RESET GROUND SIGN	EACH	69	61																	69	61
	212	SEEDING (NATIVE)	ACRE	14	14																	14	14
	213	MULCHING	ACRE	11	11																	11	11
	213	MULCHING (HYDRAULIC)	ACRE	3	3																	3	3
	213	MULCH TACKIFIER	LB	1100	1100																	1100	1100
	-214	BRUSH-LAYER GUFFING (DELETED) (FH 105)	EACH	300	0																	300	0
	-304	AGGREGATE BASE COURSE (CLASS 6) (DELETED) (FH 105)	TON	30	0																	30	0
	304	AGGREGATE BASE COURSE (SPECIAL)	CY	1,921	1558																	1,921	1558
	483	HOT BITUMINOUS PAVEMENT (PATCHING) (ASPHALT)	TON	200	288.14																	200	288.14
	483	HOT BITUMINOUS PAVEMENT (GRABING C) (ASPHALT) (CNO #2)	TON	17,997	18823.74																	17,997	18823.74
	483	HOT BITUMINOUS PAVEMENT (GRABING CO) (ASPHALT)	TON	2,500	1349.58																	2,500	1349.58
	411	EMULSIFIED ASPHALT (SLOW SETTING)	GAL	5,761	6514																	5,761	6514
	-507	CONCRETE SLOPE AND BITCH PAVING (DELETED) (FH 105)	EY	13	0																	13	0
	601	CONCRETE CLASS B (BOX CULVERT)	CY	27	27																	27	27
	602	REINFORCING STEEL	LB	3,427	3545																	3,427	3545
	603	18 INCH CORRUGATED STEEL PIPE	LF	494	654																	494	645
	603	24 INCH CORRUGATED STEEL PIPE	LF	1222	1400																	1222	1400
	603	30 INCH CORRUGATED STEEL PIPE	LF	218	314																	218	314
	603	36 INCH CORRUGATED STEEL PIPE	LF	10	10																	10	10
	603	24 INCH STEEL END SECTION	EACH	37	41																	37	41
	603	30 INCH STEEL END SECTION	EACH	7	7																	7	7
	603	36 INCH STEEL END SECTION	EACH	1	1																	1	1

# FINAL SUMMARY OF APPROXIMATE QUANTITIES

AS CONSTRUCTED		C D O H	FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.
NO REVISIONS	REVISED 11-2-94		VIII	COLO.	STR 1192-004	6

INDEX FORM NO.	CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	ROADWAY																				PROJECT TOTALS				
				PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	
604		INLET TYPE C (5 FOOT)	EACH	2	2																					2	2	
605		6 INCH PERFORATED PIPE UNDERDRAIN	LF	150	220																					150	220	
606		GLIMBRAIL TYPE 3 (6-3 POST SPACING)	LF	7,525	7838																					7,525	7838	
606		END ANCHORAGE TYPE 3E	EACH	38	38																					38	38	
607		END POST	EACH	21	22																					21	22	
607		CORNER AND LINE BRACE POST	EACH	22	33																					22	33	
607		FENCE BARBED WIRE WITH METAL POSTS	LF	14,703	29,137																					14,703	29,137	
612		DELINEATOR (TYPE I)	EACH	257	204																					257	204	
612		DELINEATOR (TYPE II)	EACH	115	122																					115	122	
614		SIGN PANEL (CLASS I) (CMO #2)	SF	75	19																					75	19	
614		TIMBER SIGN POST 4X4 INCH (CMO #2)	LF	191	191																					191	191	
620		FIELD OFFICE (CLASS 2)	EACH	1	1																					1	1	
620		FIELD LABORATORY (CLASS 2)	EACH	1	1																					1	1	
620		SANITARY FACILITY	EACH	1	1																					1	1	
625		CONSTRUCTION SURVEY	L S	1	1																					1	1	
626		MOBILIZATION	L S	1	1																					1	1	
627		PAVEMENT MARKING PAINT	GAL	170	438																					170	438	
627		EPIDY PAVEMENT MARKING	GAL	332	302																					332	302	
630		FLAGGING	HR	6,300	5,011																					6,300	5,011	
630		TRAFFIC CONTROL SUPERVISOR	DAY	180	204																					180	204	
630		CONSTRUCTION TRAFFIC SIGN (PANEL SIZE B)	EACH	42	36																					42	36	
630		DRUM CHANNELIZING DEVICE	EACH	100	87																					100	87	
630		DRUM CHANNELIZING DEVICE (WITH LIGHT) (FLASHING)	EACH	12	22																					12	22	
630		CONCRETE BARRIER (TEMPORARY)	LF	250	110																					250	110	
630		TRAFFIC CONE	EACH	200	200																					200	200	
		<u>FORCE ACCOUNT</u>																										
700		F/A MINOR CONTRACT REVISIONS (MCR #1)	F A	1	1																					1	1	
700		F/A ON-THE-JOB TRAINEE (DELETED) (FN 105)	EACH	1	0																					1	0	
700		F/A OJT PILOT (DELETED) (FN 105)	F A	1	0																					1	0	
700		F/A QUALITY INCENTIVE PAYMENT \$9559.51	F A	1	1																					1	1	
208		ERROSION BALES, LINE ITEM NO.1	EACH	600	490																					600	490	
210		RESET GATE, LINE ITEM NO.2	EACH	1	1																					1	1	
607		GATE (12 FOOT), LINE ITEM NO.3	EACH	1	1																					1	1	
607		FENCE (PLASTIC), LINE ITEM NO.4	LF	500	500																					500	500	
603		10 IN STEEL END BR., LINE ITEM NO.5	EACH	1	1																					1	1	
900		18 IN CSP (SPECIAL), LINE ITEM NO.6	LF	4	4																					4	4	
202		REMOVE PAVEMENT MARKING, LINE ITEM NO.7	SF	500	288																					500	288	
900		ROW/PROPERTY DELAY, LINE ITEM NO.8	LS	1	1																					1	1	
210		ROW CONFLICT AREA RESET FENCE, LINE ITEM NO.9	LF	315	315																					315	315	
900		UNIFORM TRAFFIC CONTROL, LINE ITEM NO.10	FA																									
900		SURVEY CONSULTANT, LINE ITEM NO.11	HR	10	10																					10	10	
609		CURB TY-6M, LINE ITEM NO.12	LF	350	333																					350	333	
612		DELINEATOR (TY-III), LINE ITEM NO.13	EACH	35	28																					35	28	
210		ADJUST. GUARD RAIL, LINE ITEM NO.14	LF	475	475																					475	475	
900		PRKE FOR UNUSED SIGNS, LINE ITEM NO.15	LS	1	1																					1	1	
		CMO NO.2, ADD. ACCEL. LANE AT SH 46 \$4048.90	LS	1	1																					1	1	

29-Jan-1993 PROJ\_ROOT\F91022.DIPRE.DU2\11388.DXF

# STRUCTURE QUANTITIES

AS CONSTRUCTED			FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	SHEET TOTALS
NO REVISIONS <input type="checkbox"/> REVISED <input checked="" type="checkbox"/> 11-2-94 VOID <input type="checkbox"/>			VIII	COLL.	STR 1192-004	7	

INDEX	LOCATION (STATION)	REMOVAL OF HEADWALL	UNCLASSIFIED EXCAVATION			REMOVAL OF PIPE	STRUCT. EXC.	STRUCT. BACKFILL (CL. 2)	PLUG CULVERT	REMOVAL OF STRUCTURE	INLET TYPE 'C'	CONCRETE SLOPE AND DITCH PAVING	CONCRETE CLASS D (BOX CULVERT)	REINFORCING STEEL	H.B.P. (PATCHING)	CORRUGATED STEEL PIPE					REMOVAL OF PORTIONS OF PRESENT STRUCTURE	STEEL END SECTION			MISCELLANEOUS										
			CU. YD.													LIN. FT.	CU. YD.	CU. YD.	EACH	EACH		EACH	CU. YD.	CUBIC YARD		LB.	TON	LIN. FT.					EACH		
			EA.	DITCH	EMB.																							18'	24'	30'	36'	L.S.	24'	30'	36'
	2198+61.4 2203+61.01 2213+58.16 (C.B.C.)	1	18.0	3.5	5.9	50 70	4.0 6.5 77.0 93.1 18 27	9.0 10.8 60.0 36.5 47 49					27	3545 3427	8	50 60 110	40 83					1	1.2		SIDE DRAIN RT.										
	2215+88.16 2216+36.16 <del>2219+97.16 DELETE</del>					56	6.6 5.8	12.9 10.5								58	58	56	60								SIDE DRAIN LT. SIDE DRAIN RT.								
	2222+01.16 <del>2226+04.06 DELETE</del> 2228+15.57	1				45 <del>22</del> 29	1.7 3.8 <del>2.0</del> 2.0	2.8 29.9 <del>4.0</del> 4.7								22 30	—	12	68				1			SIDE DRAIN LT. SIDE DRAIN LT.									
	2228+91.33 2232+87.13 2237+12.93	1 1 1	4.3			6	3.5	1 2.1 6.0										4	4	9	76 174	6 14		1 1	2		NO WORK								
	2237+77.87 2245+27.06 (CBC) 2258+11.91					75	5.9	13.5								76	76										SIDE DRAIN LT. NO WORK NO WORK								
	2266+10.65 2272+49.46 2276+17.46	1 1	2.5 13.9	8.9		60 44	36.0 36.0	29.6 29.3							8		74 78 70	74 78 74					2 2 2												
	2277+89.47 2279+52.51 <del>2283+70.77 DELETE</del>					20	2.9 3.4 <del>2.2</del> 3.1	6.2 7.3 4.4 5.8 7.3								34 26 40	40 34										SIDE DRAIN RT. SIDE DRAIN RT. SIDE DRAIN LT.								
	2285+16.62 2288+20.13 2289+84.28	1	1.2			25	2.7 3.6 2.1	4.1 8.4 4.5								46 26	46	18	18				1				SIDE DRAIN RT. SIDE DRAIN RT.								
	2293+63.28 2296+64.28 2301+16.30	1 1	10.6 1.4			40 10	31.8 4.3 2.0 5.33	24.8 6.0 8.8 2.8 7.5										64 30 116 12	64 38 32				2 2 1												
	2313+59.37 2317+68.37 2318+64.37	1	8.5 2.1			45 8	36.0 2.3 3.4	28.6 3.2 10.5										76 14	76 24				2 1.2				SIDE DRAIN NO WORK								
	2323+60.36 2329+37.31 2332+11.28	1	7.7	14.5		60 65	40.0 46.1	30.5 31.9										74	78				2				SIDE DRAIN NO WORK								
	2336+05.24 2346+53.87 2352+03.64	1	10.7 14.6 11.4			47 44 49	28.7 28.2 30.7 30.7 32.6	23.7 24.9 27.1 26.4 27.9											60 68 70	60 74 74				2 2 2											
	<del>2362+33.34</del> 2342+12.34 2372+20.12 2372+15.12 2378+87.82 2378+97.82	1 1 1	0.4 28.7	29.2 124.0 41 55.4		92 62	68.9 182 97.2 82	51.8 91.9 33		1	1	2.8							82	68	102	102		2 2	2.1										
	2389+22.82 2389+32.82	1	1.3				2.7 17.8	3.6 5.9				2.0									12	96			1.2										
SHEET TOTALS		16 14	156.2	249.2 108.0	834 1010	1074 610.5	6744 590.8	4 1	1	2	0.5	27	3545 3427	26	408	370	1074	1162	194	210		1	33 31	5											



### FENCING

STATION TO STATION	SIDE	REMOVAL OF FENCE		BARBED WIRE W/METAL POSTS	CORNER & LINE POST BRACE	END POSTS			
		LF	LF						
1189+79 TO 1190+45	RT	66	66	14,097	1	2			
2270+44 TO 2270+13		769	769			1			
2284+99 TO 2288+76		377	377			1			
2347+24 TO 2353+98		674	674			1			
2355+02 TO 2365+57		1072	1072			2			
** 2365+66 TO 2403+27	3775	3775	5	2					
2426+45 TO 2431+15	468								
1189+42 TO 2205+83	LT	886	886	6040	1	1			
2234+20 TO 2236+95		275	275			2			
2238+72 TO 2239+45		73	73			2			
2250+05 TO 2276+07		2522	2522			3			
2320+04 TO 2320+38		34	34			1			
2321+24 TO 2327+16		592	592			1			
2330+01 TO 2347+84		1703	1703			3			
2365+63 TO 2384+38		1885	1885			3			
PROJECT TOTALS		15174	14703			20137	22	33	21

\*\* 4-WIRE FENCE

### SURFACING PLAN

STATION TO STATION	QUANTITY-TONS		COMBINED
	HOT BITUMINOUS PAVEMENT (ASPHALT)		
	2 1/2" BOTTOM LAYER	2" TOP LAYER	
1190+00 TO 2200+00	44	100	
2200+00 TO 2212+00	209	602	
2212+00 TO 2247+50	721	1532	
2247+50 TO 2302+85	1052	2330	
2302+85 TO 2315+10	415	737	
2315+10 TO 2345+84	564	1277	
* 2345+84 TO 2410+00	1354	2766	
2410+00 TO 2431+52	395	895	
TOTAL	4754	10239	11,303.05
EST. FOR IRREGULARITIES	570	1229	
EST. FOR ROAD APPROACHES	216	216	
#EST. FOR GUARDRAILS		356	
@EST. FOR MAILBOXS		17	
TOTALS	5540	12057	1326.96
PROJECT TOTAL	17597	18823.74	

NOTE: PRIOR TO RESURFACING, THE EXISTING ROADWAY SHALL BE PATCHED IN LOCATIONS DESIGNATED BY THE ENGINEER.

THE SOURCES OF MATERIALS WILL BE PROVIDED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.

\* IT IS ESTIMATED THAT 305 SQ YDS OF EXISTING ASPHALT MAT SHALL BE WAS REMOVED.

IT IS ESTIMATED THAT 200 TONS OF PATCHING WILL BE REQUIRED FOR THIS PROJECT AT LOCATIONS AS DIRECTED BY THE ENGINEER.

# 2" MIN. H.B.P. BEHIND GUARDRAIL

@ 2" MIN. H.B.P. FOR TURNOUT, IT IS ESTIMATED THAT 30 TONS OF A.B.C.

(CLASS 6) SHALL BE USED AS SUBBASE OF MIN. 4" FOR TURNOUT. (SEE M-STANDARD M-210-1)

STABILIZATION DATA:

18K ESAL (10 YR.)	= 80,000
18K ESAL (20 YR.)	= 170,000
MINIMUM R-VALUE	= 55
S.I.	= 2.5
OVERLAY SN	= 0.74
WIDENING SN	= 1.93

AS CONSTRUCTED

NO REVISIONS  REVISED  // - 2-94 VOID

FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	SHEET TOTALS
VIII	COLD.	STR 1192-004	9	35

### MAILBOX TABULATION

STATION	SIDE	RESET MAILBOX STRUCTURE
2205+01	RT	1
2221+35	RT	1
2227+69	RT	1
2269+15	RT	3
2288+94	RT	5
2302+40	RT	1
2318+76	RT	1
2329+58	RT	1
2337+50	LT	1
2403+68	RT	2
TOTAL		26

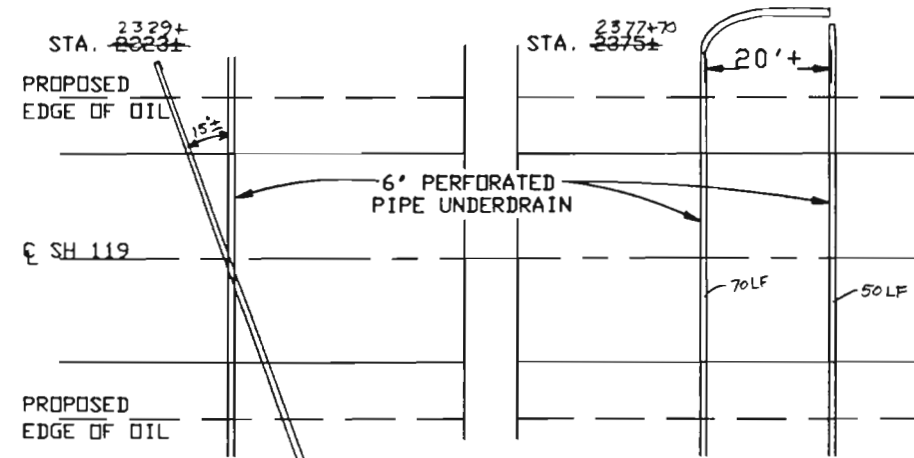
HOT BITUMINOUS PAVEMENT AND AGGREGATE BASE COURSE THAT ARE REQUIRED FOR RESET MAILBOXS ARE SHOWN IN SURFACING PLAN TABULATION.

### DELINEATORS

STATION TO STATION	SIDE	SPACING	REMOVAL OF DELINEATORS	DELINEATORS			
				TYPE I EA.	TYPE II EA.	TOTAL EA.	
1190+00 TO 2200+18.18	BOTH	TANGENT		2			
2200+18.18 TO 2204+43.87	BOTH	4"/112'	3	7		3	
2204+43.87 TO 2225+28.48	BOTH	TANGENT	6	15			
2225+28.48 TO 2236+10.72	BOTH	4*50/101'	6	13		9	
2235+10.72 TO 2238+50.01	BOTH	TANGENT	3	2			
2238+50.01 TO 2248+72.40	BOTH	11*/65'	5	19		15	
2248+72.40 TO 2260+37.69	BOTH	TANGENT	2	8			
2260+37.69 TO 2270+15.35	BOTH	4*/112'	2	12		8	
2270+15.35 TO 2278+68.74	BOTH	TANGENT	4	6			
2278+68.74 TO 2282+65.66	BOTH	6*/90'	8	8		4	
2282+65.66 TO 2286+49.09	BOTH	TANGENT	3	2			
2286+49.09 TO 2290+24.06	BOTH	4*/112'	4	7		3	
2290+24.06 TO 2297+32.84	BOTH	TANGENT	4	4			
2297+32.84 TO 2313+30.47	BOTH	2*55/131'	7	16		12	
2313+30.47 TO 2324+63.35	BOTH	TANGENT	6	8			
2324+63.35 TO 2335+33.57	BOTH	4*55/100'	4	14		10	
2335+33.57 TO 2341+79.76	BOTH	TANGENT	4	4			
2341+79.76 TO 2354+03.95	BOTH	6*/90'	6	17		13	
2354+03.95 TO 2358+97.97	BOTH	TANGENT	1	4			
2358+97.97 TO 2364+57.63	BOTH	16*30/52'	6	14		9	
2364+57.63 TO 2368+79.74	BOTH	TANGENT	2	6			
2368+79.74 TO 2373+43.10	BOTH	16*30/52'	6	12		8	
2373+43.10 TO 2399+88.51	BOTH	TANGENT	15	18			
2399+88.51 TO 2404+05.55	BOTH	12*15/61'	2	10		6	
2404+05.55 TO 2414+08.95	BOTH	TANGENT	3	8			
2414+08.95 TO 2429+11.38	BOTH	5*/99'	4	19		15	
2429+11.38 TO 2431+52.00	BOTH	TANGENT		2			
TOTALS			108	267	204	115	22

TOTAL DELINEATORS REQUIRED ARE 972 354 257 O CRYSTAL 115 O CRYSTAL LI-13

### PIPE UNDERDRAIN



### PIPE UNDERDRAIN TABULATION

e STATION (R)	6' PERFORATED PIPE UNDERDRAIN LIN. FT.
2329+ 2329+00	100.50
2375+ 2377+00	70.50+50
TOTAL	150.220

Δ APPROXIMATE LENGTH TO BE ADJUSTED IN THE FIELD. PLACEMENT AND CONSTRUCTION SHALL BE IN ACCORDANCE TO M STANDARD M-605-1 (PIPE UNDERDRAIN). ALL UNDERDRAIN SHALL RUN PERPENDICULAR TO THE ROADWAY. e EXACT LOCATION TO BE DETERMINED BY THE ENGINEER.

AS CONSTRUCTED		FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	SHEET TOTALS
NO REVISIONS	REVISED 11-2-94	VOID	VIII	COLO.	STR 1192-004	10 35

### ROADWAY WIDENING

STATION TO STATION	SIDE	WIDENING	TRANSITION LENGTH		COMMENT
			BACK	AHEAD	
2200+50 TO 2203+50	RT.	2	50	50	GUARDRAIL
2203+25 TO 2206+23	RT,LT	7	300	280	TURNING LANE
2212+50 TO 2215+50	LT	2	50	50	GUARDRAIL
2212+50 TO 2216+50	RT	2	50	50	GUARDRAIL
2227+50 TO 2235+00	RT	2	50	50	GUARDRAIL
2243+50 TO 2246+75	RT	2	50	50	GUARDRAIL
2244+00 TO 2246+75	LT	2	50	50	GUARDRAIL
2257+50 TO 2260+25	RT	2	50	50	GUARDRAIL
2257+50 TO 2260+00	LT	2	50	50	GUARDRAIL
2265+00 TO 2268+00	RT	2	50	50	GUARDRAIL
2284+50 TO 2286+50	RT	2	50	50	GUARDRAIL
2304+80 TO 2307+50	RT	11	130	0	DECEL-LANE
2307+85 TO 2310+10	LT	14	500	500	TURNING LANE
2308+50 TO 2311+15	RT	11	0	165	ACCEL-LANE
2310+50 TO 2314+00	RT	2	200	50	GUARDRAIL
2358+97.97 TO 2364+57.63	RT	2	100	100	CURVE
2361+50 TO 2364+00	RT	2	50	50	GUARDRAIL
2368+79.74 TO 2373+43.10	LT	2	100	100	CURVE
2369+50 TO 2380+50	RT	2	50	50	GUARDRAIL
2387+00 TO 2391+00	LT,RT	2	50	50	GUARDRAIL
2395+00 TO 2399+50	RT	2	50	50	GUARDRAIL
2396+50 TO 2399+50	LT	2	50	50	GUARDRAIL
2399+88.51 TO 2404+05.55	RT	2	200	200	CURVE
2403+00 TO 2406+00	LT	2	50	50	GUARDRAIL
2404+00 TO 2410+00	RT	2	50	50	GUARDRAIL

### GUARDRAIL TABULATION

STATION TO STATION	SIDE	GUARDRAIL TYPE 3	END ANCHOR TYPE 3E	REMOVAL OF GUARDRAIL TYPE I
		6-3 SPACING LIN. FT.	EACH	LIN. FT.
2200+50 TO 2203+50	RT	300	2	
2212+50 TO 2215+50	LT	300 325	2	
2212+50 TO 2216+50	RT	400	2	
2227+50 TO 2235+00	RT	750	2	
2243+50 TO 2246+75	RT	325 350	2	
2244+00 TO 2246+75	LT	375 300	2	290
2257+50 TO 2260+25	RT	375 350	2	
2257+50 TO 2260+00	LT	250	2	
2265+00 TO 2268+00	RT	300	2	
2284+50 TO 2286+50	RT	200	2	
2310+50 TO 2314+00	RT	350	2	
2361+50 TO 2364+00	RT	350 300	2	
2368+25 TO 2380+00	RT	1100 1175	2	828
2387+00 TO 2391+00	LT,RT	800	4	
2395+00 TO 2399+50	RT	450	2	
2396+50 TO 2399+50	LT	300	2	
2403+00 TO 2406+00	LT	300	2	
2404+00 TO 2410+00	RT	600 638	2	
TOTALS		7325 7830	38	* 1118

\*EXISTING GUARDRAIL TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

NOTE: NEW GUARDRAIL SHALL BE GALVANIZED AND HAVE WOOD POSTS. WHEN STEEP SLOPES EXIST, POSTS LONGER THAN 6' SHALL BE USED TO PROVIDE POST EMBEDMENT OF 44' MIN. AT NO ADDITIONAL COST TO THE PROJECT.

### CONSTRUCTION TRAFFIC CONTROL DEVICES

SIGN CODE	LEGEND	DIMENSIONS	PANEL SIZE-QUANTITY			
			EACH			
			B	OTHER		
48W20-2	ROAD/CONSTRUCTION/(DIST.)	48"X48"	2	2		
48W20-7	FLAGMAN SYMBOL	48"X48"	2	2		
60G20-2	END/CONSTRUCTION	60"X24"	2	2		
48W8-9a	LOW SHOULDER SYMBOL	48"X48"	2	2		
48W21-14R	UNEVEN LANE SYMBOL	48"X48"	2	2		
48W21-14L	UNEVEN LANE SYMBOL	48"X48"	2	2		
48W20-4	ONE LANE/ROAD/(DIST)	48"X48"	2	2		
48W22-1	BLASTING/ZONE/(DIST)	48"X48"	2	2		
48W22-2	TURN OFF/2-WAY/RADIO	42"X36"	2	2		
42W22-3	END/BLASTING/ZONE	42"X36"	2	2		
36R2-1(30)	SPEED/LIMIT/30	36"X36"	2	2		
24R2-1(45)	SPEED/LIMIT/45	24"X36"	2	2		
G 20-1	ROAD/CONST. NEXT 4.5 MILES	60"X36"	2	2		
NOTES						
THE CONTRACTOR WILL BE REQUIRED TO COVER EXISTING SIGNS WHICH CONFLICT WITH CONSTRUCTION SIGNS AT NO COST TO THE PROJECT.						
DRUM CHANNELIZING DEVICE						10007
DRUM DEVICE (WITH LIGHT)(FLASHING)						12-22
TRAFFIC CONE						200
TOTAL						72 36

BASED ON SIGHT DISTANCE AND OTHER CONSIDERATION, THE FINAL LOCATION OF SIGNS IS SUBJECT TO THE APPROVAL OF THE ENGINEER.

ALL CONSTRUCTION WARNING SIGNS SHALL BE POST MOUNTED AND PLACED IN ACCORDANCE WITH THE STANDARD 'TYPICAL GROUND SIGN PLACEMENT' UNLESS OTHERWISE DIRECTED OR APPROVED BY THE ENGINEER.

### TABULATION OF SIGNS

SIGN NO.	SIGN CODE	STATION	SIGN PANEL SIZE	BACK-GROUND COLOR	REMOVE GROUND SIGN (EACH)	NO. OF POSTS	LENGTH OF POST	POST TYPE		SIGN PANEL CLASS I (SQ.FT.)	
								4X4 TIMBER (LIN.FT.)			
1	30W1-2R	2232 + 86 NB	30' X 30'	YELLOW	1	1	15' - 6'	15.5		6.25	
* 2	24R2-1(40)	2271 + 35 NB	24' X 30'	WHITE	1	1	14' - 0'	14.0		5.00	
* 3	24R2-1(40)	2310 + 10 NB	24' X 30'	WHITE	1	1	14' - 0'	14.0		5.00	
4a	30W1-5R	2356 + 36 NB	30' X 30'	YELLOW	1	1	15' - 6'	15.5		6.25	
4b	18W13-1	2356 + 36 NB	18' X 18'	YELLOW						2.25	
5	30W1-2R	2395 + 37 NB	30' X 30'	YELLOW	1	1	15' - 6'	15.5		6.25	
* 6	24R2-1(40)	2432 + 60 NB	24' X 30'	WHITE	1	1	14' - 0'	14.0		5.00	
* 7	24R2-1(40)	2433 + 56 SB	24' X 30'	WHITE	1	1	14' - 0'	14.0		5.00	
8	30W1-2R	2412 + 43 SB	30' X 30'	YELLOW	1	1	15' - 6'	15.5		6.25	
* 9	24R2-1(40)	2396 + 76 SB	24' X 30'	WHITE	1	1	14' - 0'	14.0		5.00	
10	30W1-3R	2380 + 80 SB	30' X 30'	YELLOW	1	1	15' - 6'	15.5		6.25	
* 11	24R2-1(40)	2305 + 20 SB	24' X 30'	WHITE	1	1	14' - 0'	14.0		5.00	
* 12	24R2-1(40)	2275 + 48 SB	24' X 30'	WHITE	1	1	14' - 0'	14.0		5.00	
13	30W1-1R	2253 + 09 SB	30' X 30'	YELLOW	1	1	15' - 6'	15.5		6.25	
PROJECT TOTALS									13	191.0	74.75

NOTES:

1. POST LENGTHS ARE APPROXIMATE ONLY. EXACT LENGTHS TO BE DETERMINED BY THE ENGINEER.
  2. POST LENGTHS HAVE BEEN DESIGNED WITH FUTURE SIGNING CONSIDERATIONS.
- \* PRIOR TO ORDERING THESE SIGNS, CONTACT CDOT STAFF TRAFFIC BRANCH SPEED ZONE UNIT TO CONFIRM REQUIRED SPEEDS (757-9348).

**STORMWATER MANAGEMENT PLAN - ADDITIONAL INFORMATION**

**Estimated runoff coefficient**

Pre-construction: .49                      Post-construction: .54

**Existing data describing soil**

or quality of discharge: The soil is a SCS type B with rock outcroppings. Slopes are steep with variable permeability. The erodibility is moderate.

**Existing vegetation:** Woodlands with stands of fir, lodgepole pine and ponderosa pine mixed with grasses, shrubs and forbs.

Proposed sequence for major activities, location of any other potential pollution source, areas used for storage of building materials, soils or wastes, and location of any dedicated asphalt or concrete batch plants: see water quality and erosion control specifications, and documents submitted by the contractor at the preconstruction conference.

100-year Flood plain boundaries: see bridge hydraulic information sheet (if existent).

Description of the construction activity, estimate of the total site area and of the area expected to undergo excavation, and name of the receiving water: see CDPS stormwater permit application.

Contract Document location of erosion control and stormwater quality management measures not referenced above nor included on the Stormwater Management Plan Sheet(s):

Site map and construction site boundaries: see title sheet

Areas of cuts and fills and areas of soil disturbance: see plan and profile sheets and roadway cross sections.

Surface waters: see title sheet and bridge hydraulic information sheet (if existent)

Materials handling and spill prevention: see water quality specification (107.25).

Inspection and maintenance: see erosion control specifications (107.25 or 208).

CONTRACTOR SHALL NOT STAGE IN A WETLAND OR RIPARIAN AREA. THE ENGINEER SHALL APPROVE LOCATION OF ALL STAGING OPERATIONS, AND SHALL CONTACT A CDOT WETLAND BIOLOGISTS IF NECESSARY TO DETERMINE IF A PROPOSED STAGING AREA IS LOCATED IN A WETLAND OR RIPARIAN AREA.

SILT FENCE WILL BE USED TO PROTECT EXISTING WETLANDS AND CONTROL SEDIMENTATION IN ACCORDANCE WITH STANDARD SPECIFICATION 208 AND SPECIAL PROVISION 107- PROTECTION OF EXISTING VEGETATION.

DO NOT CLEAR AND GRUB WETLANDS WHEN DEPTH OF FILL OVER WETLAND IS LESS THAN 12 INCHES. IN THESE AREAS CLEAR VEGETATION TO WITHIN 1 TO 3 INCHES ABOVE GROUNDLINE WITHOUT REMOVING ROOT SYSTEMS.

IT IS ESTIMATED THAT 300 EACH - BRUSH LAYER CUTTING WILL BE REQUIRED FOR THIS PROJECT.

AS CONSTRUCTED		FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.
NO REVISIONS	11-2-94	REVISED	VOID	YIII	COLL.
				STR 1192-004	11

**SEEDING PLAN**

**NATIVE SEEDING**

Soil preparation, fertilizer, seeding and mulching will be required for an estimated 14 acres of disturbed area within the right-of-way limits which are not surfaced. The following types and rates shall be used:

COMMON NAME	BOTANICAL NAME	POUNDS PLS/ACRE
Western Wheatgrass	Pascopyrum smithii var. arribla	4.0
Slender Wheatgrass	Elymus trachycaulis var. primar	6.0
Streambank Wheatgrass	Elymus lanceolatus var. sodar	5.0
Hard Fescue	Festuca ovina var. durifolia	2.0
Sandberg Bluegrass	Poa sandbergii	1.0
Alsike Clover	Trifolium hybridum	1.0
Yarrow	Achillea millefolium	0.5
Rocky Mountain Penstemon	Penstemon strictus var. bandera	0.5
<b>TOTAL</b>		<b>20.0 LBS/ACRE</b>

**SEEDING APPLICATION:** Approximately 11.0 acres of slope 2:1 and flatter shall be drill seeded to a depth of .25" to .5" inches into soil. Approximately 3.0 acres of slopes steeper than 2:1 shall be hydraulically seeded. Hydrofertilization shall take place immediately after hydroseeding.

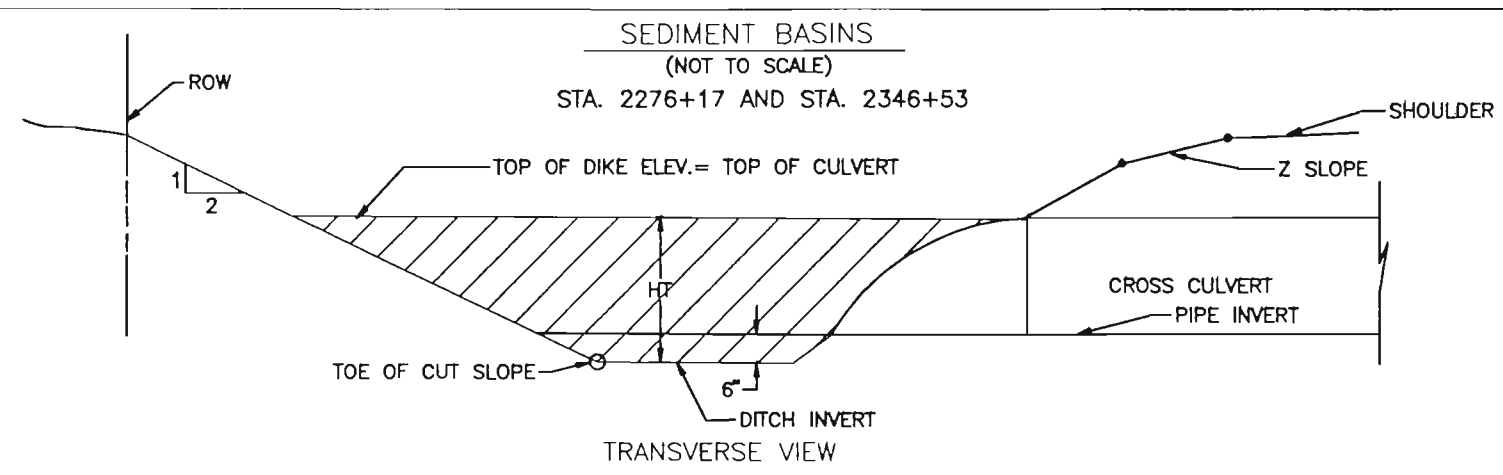
**MULCHING APPLICATION:** On slopes flatter than 2:1 apply 1.5 tons per acre native hay and mechanically crimp into soil in combination with mulch tackifier per special provision 213. On slopes steeper than 2:1 apply hydromulch per special provision 213-Wood cellulose fiber mulch and tackifier.

FERTILIZER	ANALYSIS %	LBS/ACRE AVAILABLE
NITROGEN	18	27
PHOSPHORUS	46	69
POTASSIUM	60	120
<b>PROJECT TOTALS:</b>		
SEEDING (NATIVE)	14.0 ACRES	
MULCHING	11.0 ACRES	
MULCHING (HYDRAULIC)	3.0 ACRES	
MULCH TACKIFIER	1100 LBS.	

**SPECIAL PROJECT NOTES:** Soil surface shall be left in a roughened condition (1-3 inches in variation) throughout construction.

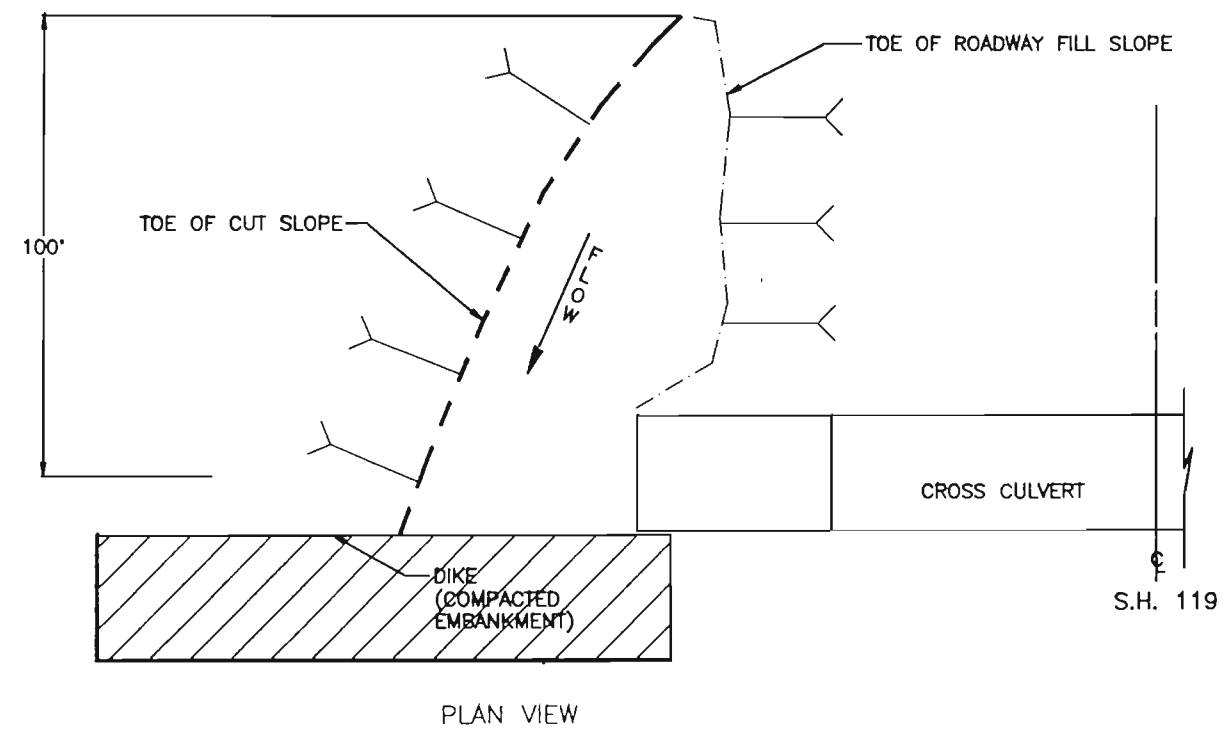
08/26/93 GINFO1B.DWG 09000

AS CONSTRUCTED		FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.
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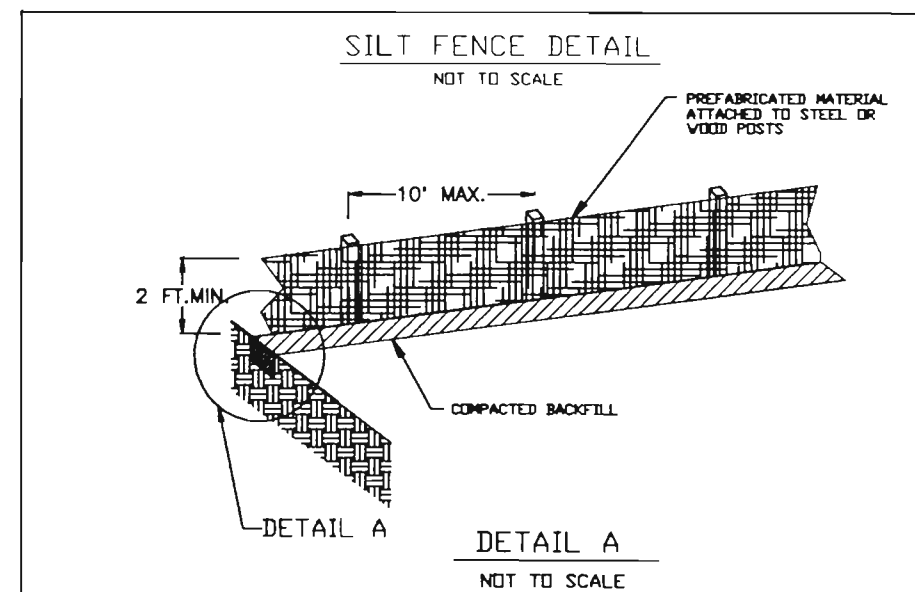


SILT FENCE TABULATION

STATION TO STATION	SIDE	REMARKS	LF
2213+00 66'LT TO 2213+00 50'LT	LT		16
2213+58 TO 2215+00	LT	TOE OF SLOPE	142
2257+00 TO 2259+00	LT	TOE OF SLOPE	200
2301+00 TO 2302+00	RT	TOE OF SLOPE	100
2330+00 TO 2332+11	LT	TOE OF SLOPE	211
2331+00 TO 2339+50	RT	TOE OF SLOPE	850
2361+40 66'LT TO 2361+60 40'LT	LT		30
2361+60 TO 2362+30	LT	TOE OF SLOPE	70
2360+50 TO 2365+00	RT	TOE OF SLOPE	450
2386+50 66'LT TO 2386+50 35'LT	LT		31
2386+50 TO 2390+00	LT	TOE OF SLOPE	350
2397+00 66'LT TO 2398+55 30'LT	LT		191
2398+00 TO 2400+00	RT	TOE OF SLOPE	200
2403+50 TO 2405+00	LT	TOE OF SLOPE	150
2404+50 TO 2408+00	RT	TOE OF SLOPE	350
PROJECT TOTAL			3341.75



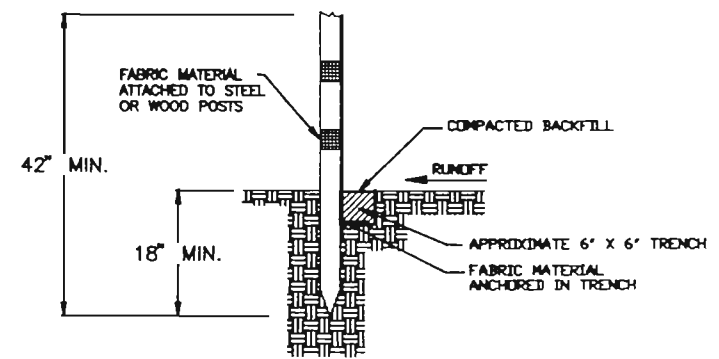
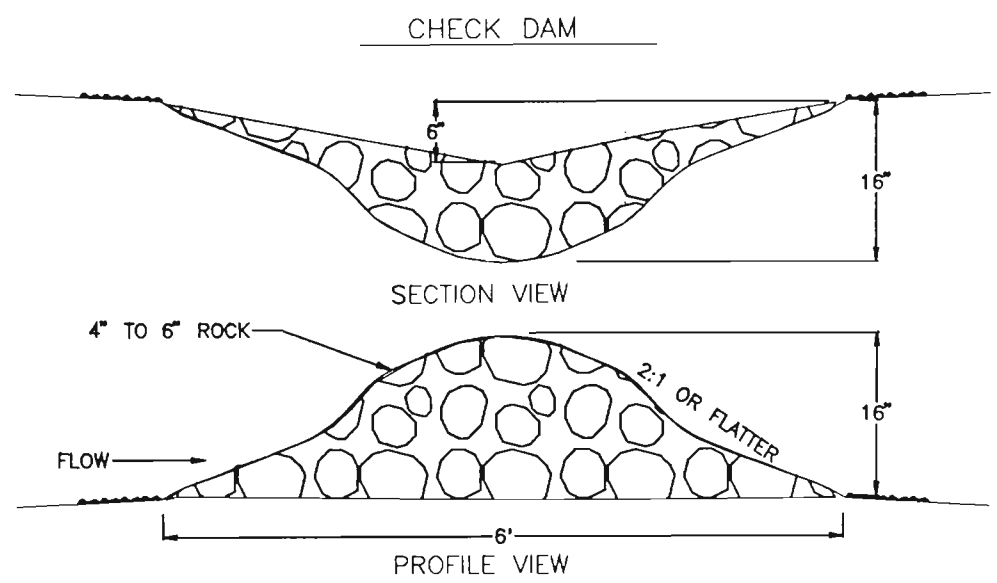
**NOTES**  
 DITCH INVERT IS 6" BELOW PIPE INVERT.  
 TAPER TOE OF CUT SLOPE TO ORIGINAL DITCH SECTION IN 100'.  
 EARTHWORK ASSOCIATED WITH DIKE INCLUDED IN THE COST OF SEDIMENT BASIN.  
 IT IS ESTIMATED THAT 2 EACH - SEDIMENT BASIN WILL BE REQUIRED FOR THIS PROJECT.



CHECK DAM TABULATION

LOCATION	QUANTITY
2239+00 TO 2241+00	2
2248+00 TO 2252+00	5
2261+00	1
2329+00	1
2355+00 TO 2358+00	4
2383+00 TO 2384+00	2
PROJECT TOTAL	16/15

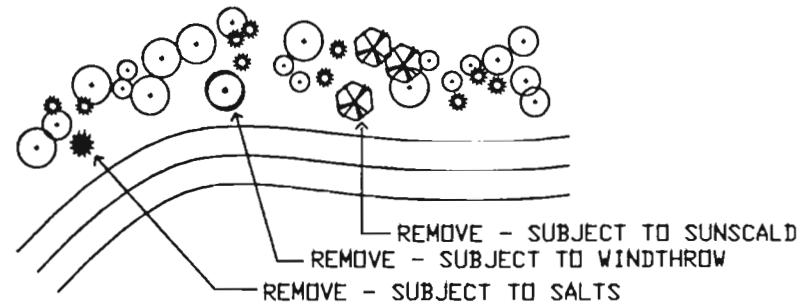
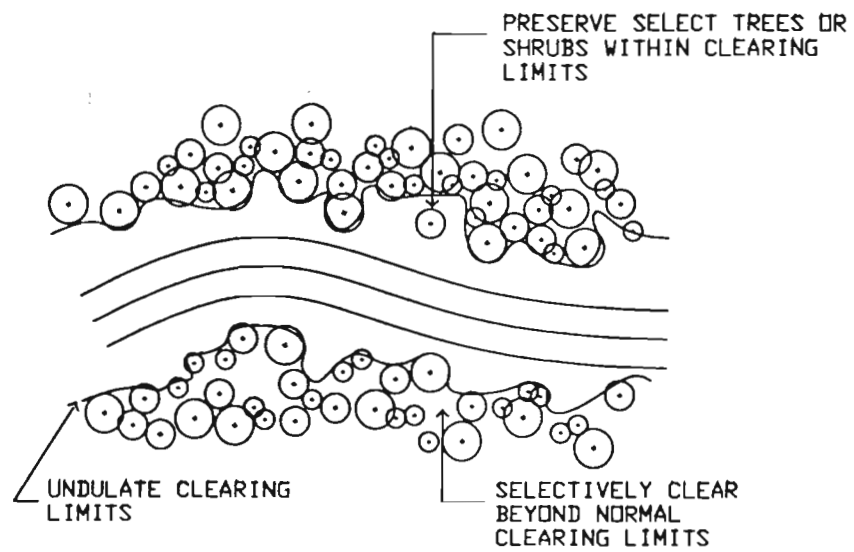
NOTE: PLACE CHECK DAMS EVERY 100 ft.



STORMWATER MANAGEMENT AND WETLAND PROTECTION PLAN DETAILS

09/23/93 CHECK.DWG 10230

### SELECTIVE TREE CLEARING



#### FOR INFORMATION ONLY

SUCCESSFUL FEATHERING INVOLVES A REDUCTION OF VEGETATION DENSITY AS WELL AS GRADATION OF TALL VEGETATION DOWN TO LOW VEGETATION AT THE CLEARING EDGE.

WHEN SELECTIVELY THINNING TREES OR SHRUBS TO ATTAIN FEATHERED EDGES, TAKE PLANTS WHICH WILL BE LESS LIKELY TO SURVIVE THE NEW CONDITIONS PRODUCED. THOSE WHICH:

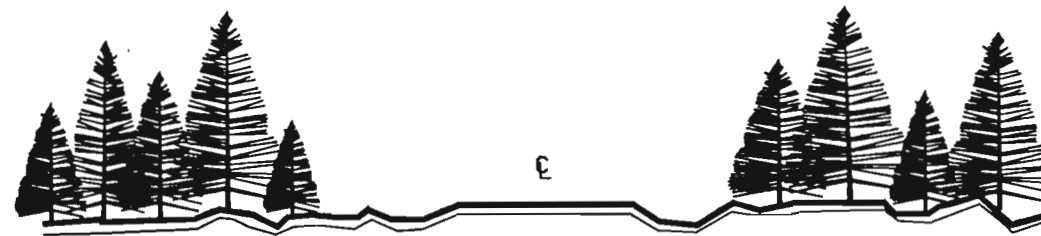
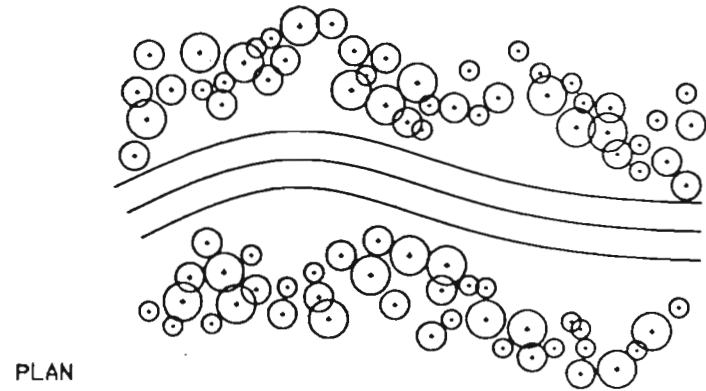
- REQUIRE SHADE TO EXIST
- ARE SUBJECT TO WINDTHROW
- ARE SUBJECT TO SUNSCALD
- ARE DYING OR DISEASED
- ARE INTOLERANT OF ROADWAY DE-ICING CHEMICALS

WHEN A CHOICE NEEDS TO BE MADE BETWEEN THINNING AN OLDER TREE VS A YOUNGER HEALTHY TREE, THE YOUNGER TREE SHALL BE SAVED.

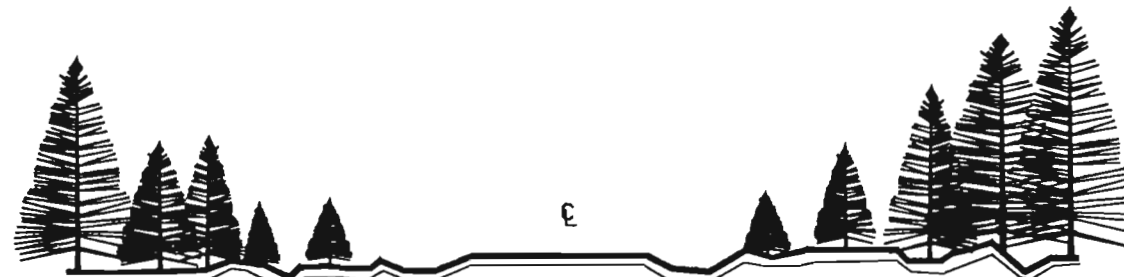
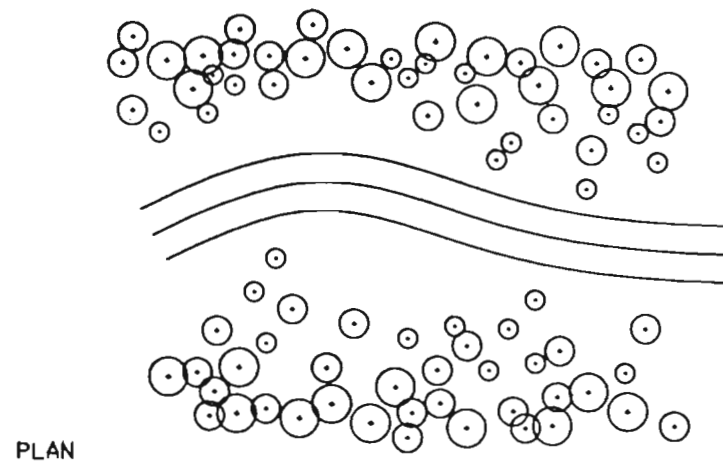
SELECTIVE CLEARING WILL NOT BE PAID FOR SEPARATELY, BUT WILL BE INCLUDED IN THE PRICE OF CLEARING AND GRUBBING.

ENGINEER AND LANDSCAPE ARCHITECT SHALL FLAG ALL TREES TO BE REMOVED AS PART OF SELECTIVE CLEARING. ANY ADDITIONAL CONSTRUCTION SURVEYING REQUIRED TO SAVE SPECIMEN TREES SHALL BE INCLUDED IN THE PRICE OF THE WORK.

### IRREGULAR CLEARING



### IRREGULAR CLEARING AND FEATHERING



COLORADO DEPARTMENT OF TRANSPORTATION		
SELECTIVE CLEARING/ THINNING		
DESIGNER NAME		
DETAILER NAME		

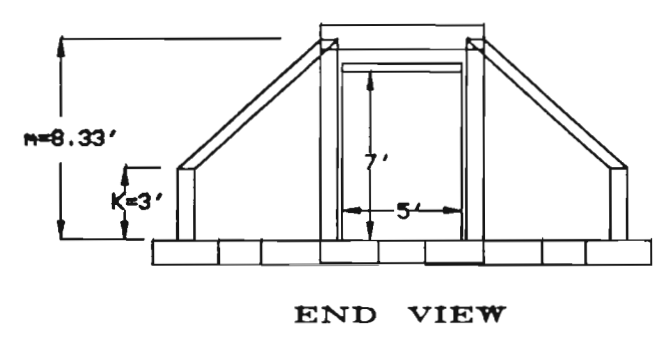
C.B.C. EXTENSION DETAILS

STA. 2213+58.16

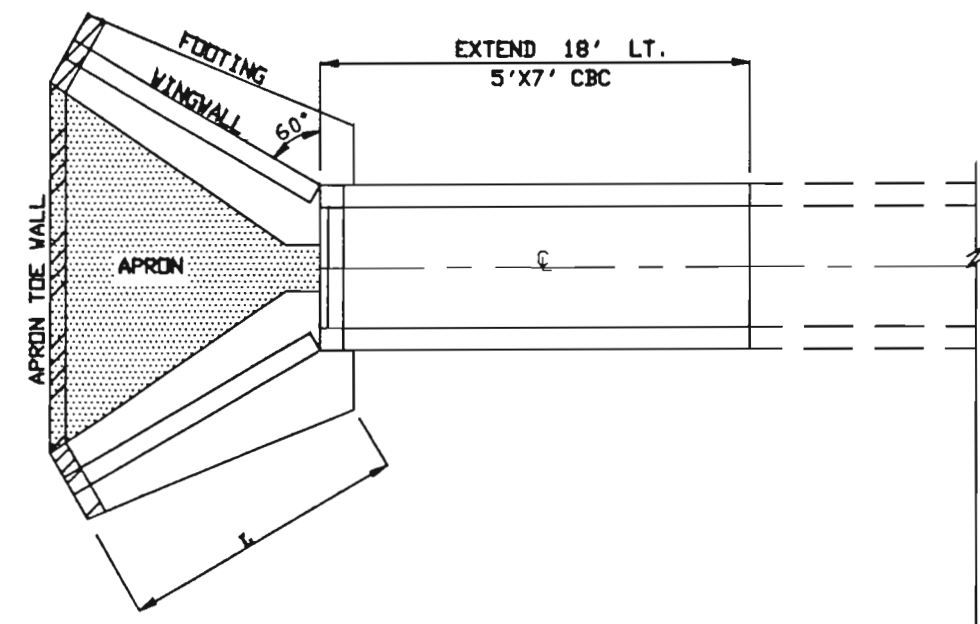
AS CONSTRUCTED		
NO REVISIONS	11-2-94	REVISED
		VOID

FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	SHEET TOTALS
VIII	COLD.	STR 1192-004	14	35

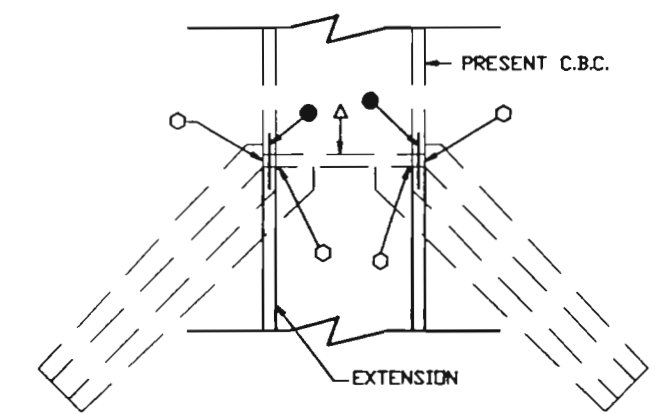
ORIGINAL SCALE 1' = 4'



PLAN VIEW



DETAIL FOR HEADWALL REMOVAL



- REMOVE ALONG THESE LINES INCLUDING WINGWALLS
  - △ THIS HEADWALL IS TO BE REMOVED WHEN FILL OVER HEADWALL IS LESS THAN 1 FT.
  - 2' FT. REINFORCING BARS TO BE PLACED AT EVERY LONGITUDINAL BAR SHOWN ON THE STANDARD SIZE TO BE THE SAME AS LONGITUDINAL BARS.
- THE COST OF DRILLING HOLES AND PLACING AND GROUTING TIE BARS IS TO BE INCLUDED IN PAYMENT FOR 'REMOVAL OF PORTIONS OF PRESENT STRUCTURE'.

HYDRAULIC DATA

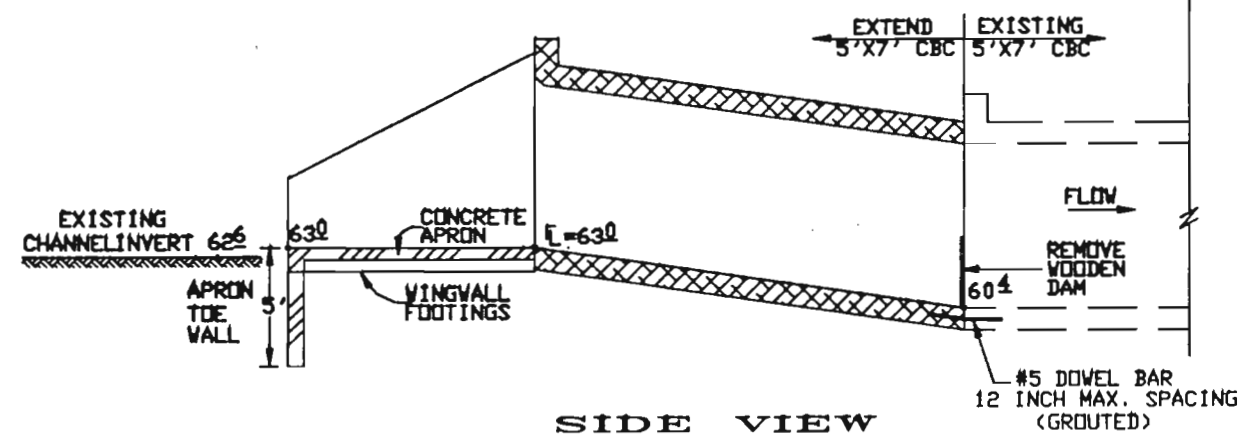
D.A. = 2 SQ.MI.  
 Q25 = 50 CTS  
 DHW = 8865.1  
 AHW = 8880.0 (EDGE OIL)  
 Q100 = 70 CTS  
 HW = 8865.8

WINGWALL GEOM

B = 60°  
 K = 3'  
 h = 8.33'  
 L = 12'

FOR INFORMATION ONLY

EXISTING CBC  $\bar{E}$  INLET = 8860.40  
 TOP OF WOODEN DAM = 8863.40  
 CHANNEL  $\bar{E}$  AT CBC INLET = 8862.60



GENERAL NOTES

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS OF THE DIVISION OF HIGHWAYS, STATE OF COLORADO, APPLICABLE TO THE PROJECT.
- STRUCTURE EXCAVATION AND BACKFILL SHALL BE IN ACCORDANCE WITH STANDARD M-206-1.
- WINGWALLS AND APRON SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD M-601-20 AS MODIFIED BY THESE NOTES.
- ALL REINFORCING SHALL BE EPOXY COATED.

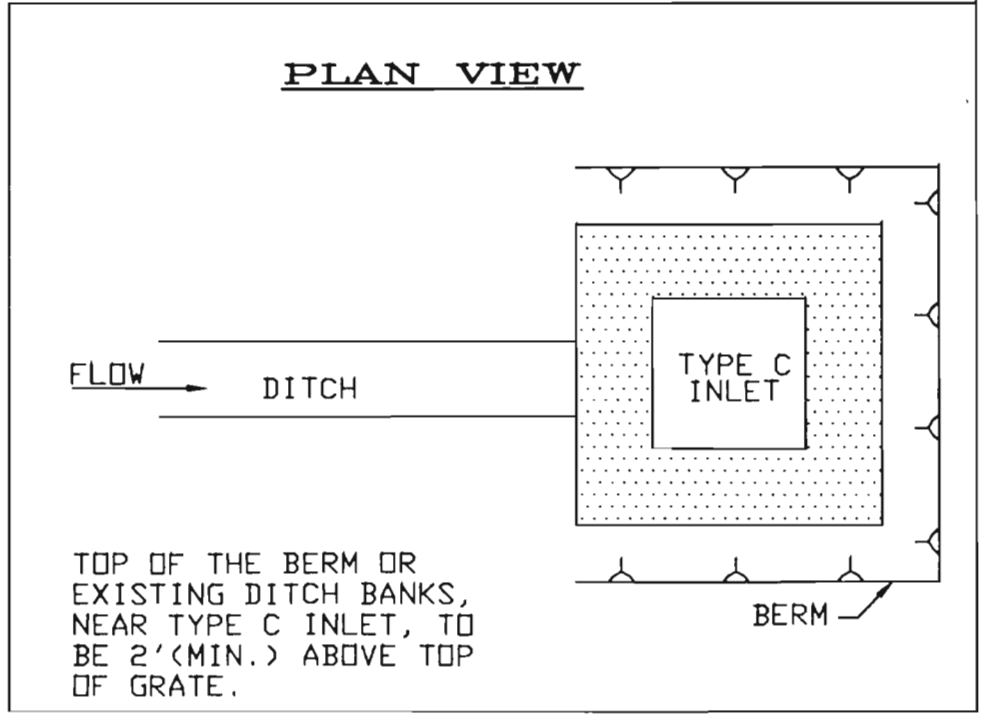
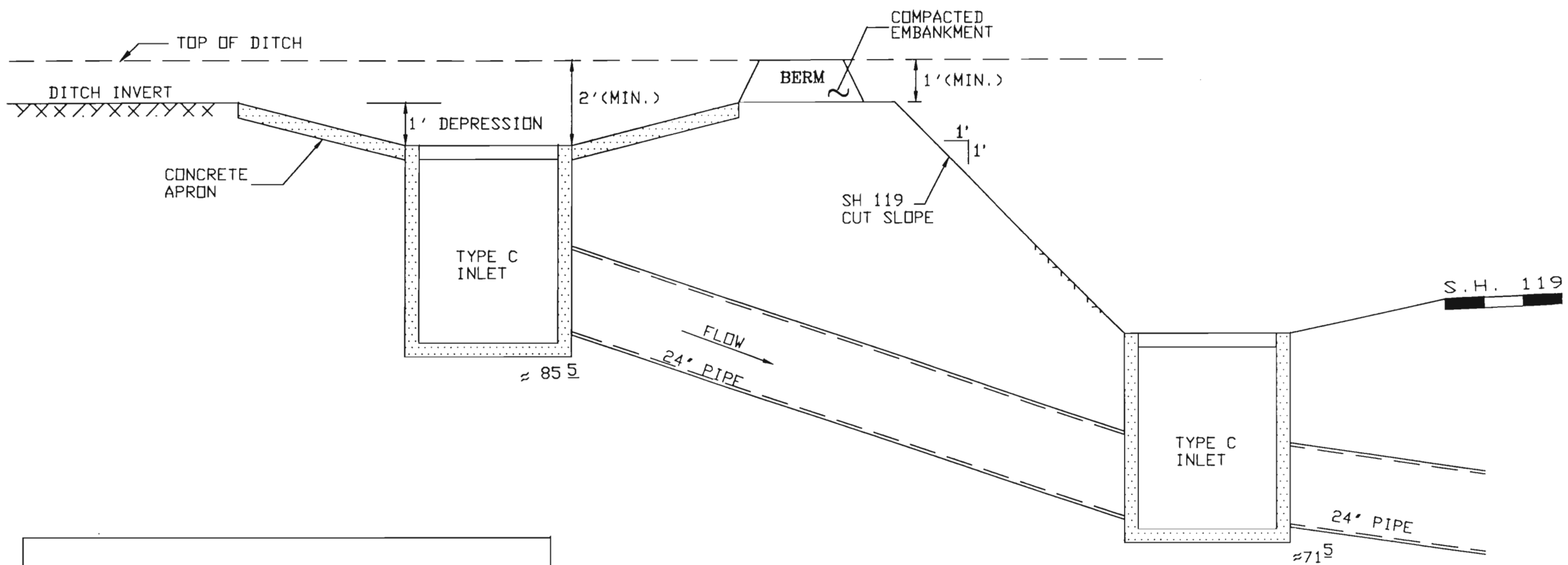
AS CONSTRUCTED		
NO REVISIONS	REVISED	VOID 11-2-94

FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	SHEET TOTALS
VIII	COLD.	STR 1192-004	15	35

## TYPE C INLET DETAILS

### STA. 2203+61

NOT TO SCALE



NOTES: IF THE 1:1 CUT SLOPE IS IN "NON-ERODIBLE" ROCK THEN CONSIDER CUTTING DITCH IN 1:1 SLOPE THEREBY ELIMINATING NEED FOR TYPE C INLETS & PIPE.

THE ABOVE DETAILS WERE BASED ON THE SURVEY DATA AVAILABLE AT THE TIME OF DESIGN, DISTANCES AND ELEVATIONS MAY REQUIRE ADJUSTMENT TO FIT FIELD CONDITION.

AS CONSTRUCTED

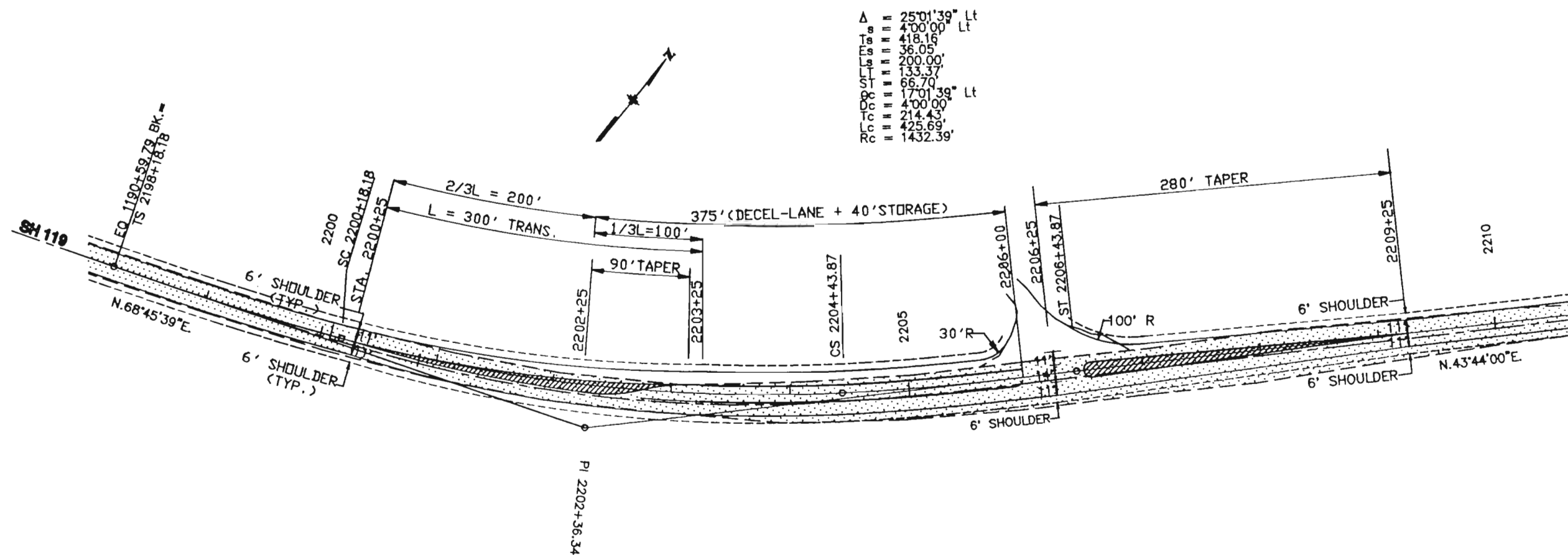
NO REVISIONS  11-2-94 REVISED  VOID

FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	SHEET TOTALS
VIII	COLO.	STR 1192-004	16	35

# GILPIN COUNTY SCHOOL ENTRANCE

DESIGN SPEED 40 M.P.H.

ORIGINAL SCALE 1" = 50'



### LEGEND

- EXISTING E.O. - - - - -
- NEW LANE LINE ————
- NEW SHLDR LINE - - - - -
- EXIST. PAVEMENT LIMITS
- PAINTED MEDIAN

# JCT. SH 119 & SH 46

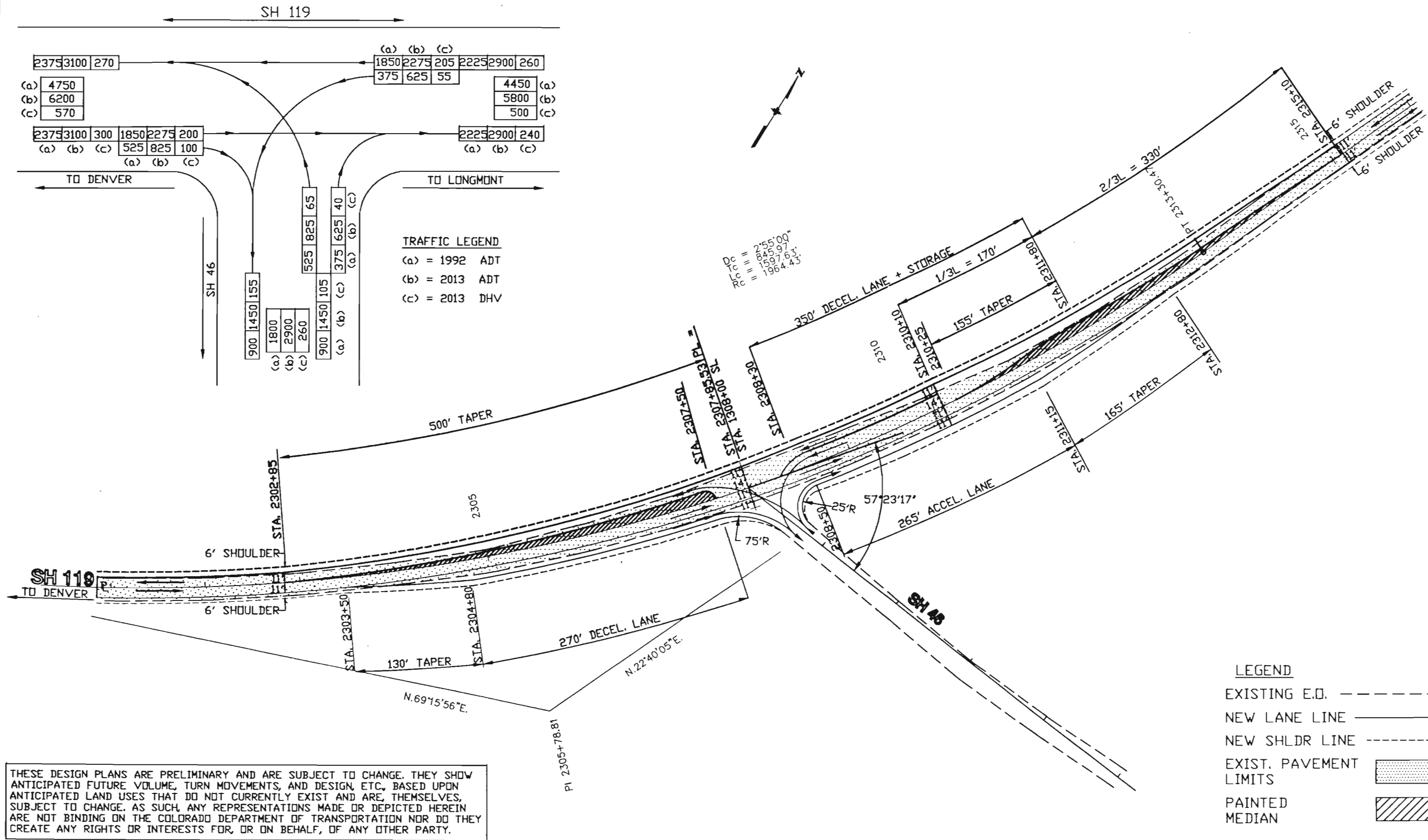
DESIGN SPEED 40 M.P.H.

AS CONSTRUCTED

NO REVISIONS  REVISED  VOID  11-2-94

FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	SHEET TOTALS
VIII	COLO.	STR 1192-004	17	35

ORIGINAL SCALE 1" = 50'



2375	3100	270	(a) 4750	1850	2275	205	2225	2900	260	4450	(a)
(a)	(b)	(c)	375	625	55				5800	(b)	
(b)									500	(c)	
(c)											

2375	3100	300	1850	2275	200	2225	2900	240
(a)	(b)	(c)	525	825	100	(a)	(b)	(c)

$2'55'00''$   
 $845.97'$   
 $1597.63'$   
 $1964.43'$

SH 119  
TO DENVER

SH 46

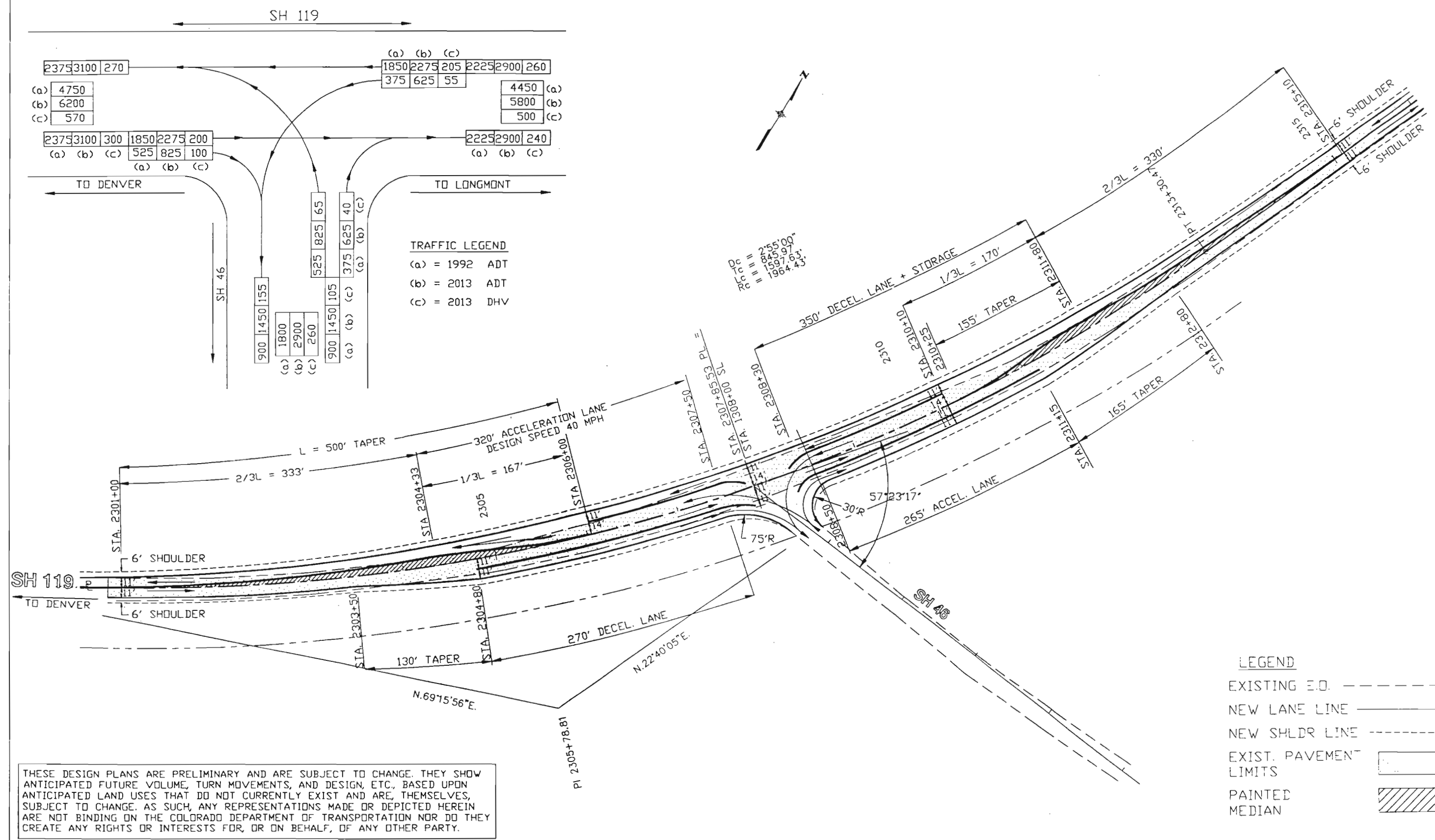
# JCT. SH 119 & SH 46

DESIGN SPEED 40 M.P.H.

AS CONSTRUCTED  
 NO REVISIONS  REVISED  11-2-94 VOID   
 CMO NO.2 ADDITION OF ACCEL. LANE AT SH-46

FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	SHEET TOTALS
VIII	COLO.	STR 1192-004	17X	35

ORIGINAL SCALE 1" = 50'



TRAFFIC LEGEND

(a)	= 1992 ADT
(b)	= 2013 ADT
(c)	= 2013 DHV

LEGEND

EXISTING E.O.	---
NEW LANE LINE	—
NEW SHLDR LINE	- - -
EXIST. PAVEMENT LIMITS	▭
PAINTED MEDIAN	▨

THESE DESIGN PLANS ARE PRELIMINARY AND ARE SUBJECT TO CHANGE. THEY SHOW ANTICIPATED FUTURE VOLUME, TURN MOVEMENTS, AND DESIGN, ETC., BASED UPON ANTICIPATED LAND USES THAT DO NOT CURRENTLY EXIST AND ARE, THEMSELVES, SUBJECT TO CHANGE. AS SUCH, ANY REPRESENTATIONS MADE OR DEPICTED HEREIN ARE NOT BINDING ON THE COLORADO DEPARTMENT OF TRANSPORTATION NOR DO THEY CREATE ANY RIGHTS OR INTERESTS FOR, OR ON BEHALF, OF ANY OTHER PARTY.

# SURVEY CONTROL DATA

AS CONSTRUCTED		FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	SHEET TOTALS
NO REVISIONS	11-2-94	REVISED	VOID	VIII	COLD.	STR 1192-004
				18	35	

## PROPOSED ALIGNMENT DATA

POINTS	NORTH	EAST	STATION
PNT 100	181329.880	1993804.917	0 1186+00.00
PNT 200	181496.442	1994233.473	0 1190+59.79
EQUATION	*****		0 2198+18.18
PNT TS 101	181496.442	1994233.473	0 2198+18.18
PNT SC 101	181573.195	1994418.112	0 2200+18.18
PNT CS 101	181808.844	1994770.748	0 2204+43.87
PNT ST 101	181950.071	1994912.303	0 2206+43.87
PNT TS 102	183239.567	1996146.008	0 2224+28.48
PNT SC 102	183312.783	1996214.111	0 2225+28.48
PNT CS 102	184222.593	1996502.357	0 2235+10.72
PNT ST 102	184321.667	1996488.839	0 2236+10.72
PNT TS 103	184330.849	1996487.455	0 2236+20.01
PNT SC 103	184559.687	1996470.008	0 2238+50.01
PNT CS 103	184988.661	1997222.285	0 2248+72.40
PNT ST 103	184857.111	1997410.343	0 2251+02.40
PNT TS 104	184360.906	1998019.002	0 2258+87.69
PNT SC 104	184268.179	1998136.885	0 2260+37.69
PNT CS 104	183993.699	1999055.547	0 2270+15.35
PNT ST 104	184006.556	1999204.976	0 2271+65.35
PNT TS 105	184058.457	1999705.686	0 2276+68.74
PNT SC 105	184085.994	1999903.683	0 2278+68.74
PNT CS 105	184245.179	2000264.170	0 2282+65.66
PNT ST 105	184372.960	2000417.901	0 2284+65.66
PNT TS 106	184395.211	2000442.846	0 2284+99.09
PNT SC 106	184493.080	2000556.496	0 2286+49.09
PNT CS 106	184686.956	2000876.198	0 2290+24.06
PNT ST 106	184742.495	2001015.518	0 2291+74.06
PNT PC 107	184940.327	2001538.112	0 2297+32.84
PNT PI 107	185239.830	2002329.284	0 2305+78.81
PNT CC 107	186777.520	2000842.630	
PNT PT 107	186020.446	2002655.311	0 2313+30.47
PNT TS 108	186881.262	2003014.835	0 2322+63.35
PNT SC 108	187063.474	2003097.132	0 2324+63.35
PNT CS 108	187672.200	2003931.735	0 2335+33.57
PNT ST 108	187694.896	2004130.377	0 2337+33.57
PNT TS 109	187715.835	2004375.675	0 2339+79.76
PNT SC 109	187739.778	2004574.139	0 2341+79.76
PNT CS 109	188583.209	2005344.166	0 2354+03.95
PNT ST 109	188783.026	2005349.989	0 2356+03.95
PNT TS 110	188977.041	2005348.869	0 2357+97.97
PNT SC 110	189076.860	2005353.086	0 2358+97.97
PNT CS 110	189370.707	2005758.889	0 2364+57.63
PNT ST 110	189343.566	2005855.039	0 2365+57.63
PNT TS 111	189273.042	2006065.654	0 2367+79.74
PNT SC 111	189245.901	2006161.804	0 2368+79.74
PNT CS 111	189447.416	2006541.369	0 2373+43.10
PNT ST 111	189542.267	2006572.752	0 2374+43.10
PNT TS 112	191801.737	2007201.836	0 2397+88.51
PNT SC 112	191989.719	2007268.922	0 2399+88.51
PNT CS 112	192230.484	2007592.546	0 2404+05.55
PNT ST 112	192240.708	2007791.878	0 2406+05.55
PNT TS 113	192228.644	2008395.159	0 2412+08.95
PNT SC 113	192230.462	2008595.083	0 2414+08.95
PNT CS 113	193154.657	2009642.823	0 2429+11.38
PNT ST 113	193352.791	2009669.579	0 2431+11.38
PNT 600	193398.952	2009674.451	0 2431+57.79

## SURVEY ALIGNMENT DATA

POINTS	NORTH	EAST	STATION
PNT 451	181329.880	1993804.917	0 1186+00.00
PNT 14	181520.827	1994296.215	0 1191+27.10
EQUATION	*****		0 1198+85.50
PNT TS 1	181520.827	1994296.215	0 1198+85.50
PNT SC 1	181598.467	1994480.462	0 1200+85.50
PNT CS 1	181776.148	1994745.756	0 1204+05.77
PNT ST 1	181916.968	1994887.688	0 1206+05.77
PNT TS 2	183217.113	1996126.426	0 1224+01.55
PNT SC 2	183365.813	1996260.071	0 1226+01.55
PNT CS 2	184152.403	1996508.381	0 1234+45.34
PNT ST 2	184350.883	1996484.333	0 1236+45.34
PNT TS 3	184352.499	1996484.090	0 1236+46.97
PNT SC 3	184551.440	1996467.041	0 1238+46.97
PNT CS 3	184987.015	1997230.895	0 1248+95.58
PNT ST 3	184871.032	1997393.426	0 1250+95.58
PNT PC 4	184313.452	1998077.369	0 1259+78.01
PNT PI 4	183937.567	1998538.440	0 1265+72.88
PNT CC 4	185423.661	1998982.460	
PNT PT 4	183998.901	1999130.144	0 1271+05.67
PNT TS 5	184056.903	1999689.715	0 1276+68.24
PNT SC 5	184091.459	1999927.049	0 1279+08.24
PNT CS 5	184238.161	2000259.265	0 1282+73.56
PNT ST 5	184390.284	2000444.683	0 1285+13.56
PNT PC 6	184450.240	2000511.897	0 1286+03.63
PNT PI 6	184626.946	2000709.998	0 1288+69.09
PNT CC 6	183381.310	2001465.387	
PNT PT 6	184720.929	2000958.265	0 1291+28.60
PNT PC 7	184940.406	2001538.036	0 1297+48.52
PNT PI 7	185239.909	2002329.207	0 1305+94.48
PNT CC 7	186777.598	2000842.554	
PNT PT 7	186020.525	2002655.235	0 1313+46.15
PNT TS 8	186881.358	2003014.765	0 1322+79.04
PNT SC 8	187063.569	2003097.063	0 1324+79.04
PNT CS 8	187672.296	2003931.665	0 1335+49.27
PNT ST 8	187694.991	2004130.308	0 1337+49.27
PNT TS 9	187714.591	2004359.909	0 1339+79.70
PNT SC 9	187744.942	2004597.813	0 1342+19.70
PNT CS 9	188567.871	2005349.122	0 1354+08.86
PNT ST 9	188807.549	2005357.746	0 1356+48.86
PNT TS 10	188982.836	2005356.735	0 1358+24.15
PNT SC 10	189171.117	2005375.203	0 1360+14.15
PNT CS 10	189384.875	2005670.402	0 1364+04.64
PNT ST 10	189343.669	2005855.045	0 1365+94.64
PNT TS 11	189276.238	2006056.424	0 1368+07.01
PNT SC 11	189234.773	2006241.031	0 1369+97.01
PNT CS 11	189375.638	2006505.763	0 1373+10.05
PNT ST 11	189551.914	2006574.510	0 1375+00.05
PNT TS 12	191784.063	2007191.523	0 1398+15.90
PNT SC 12	192025.936	2007284.238	0 1400+75.90
PNT CS 12	192220.805	2007545.664	0 1404+09.58
PNT ST 12	192240.567	2007803.943	0 1406+69.58
PNT TS 13	192228.770	2008393.866	0 1412+59.62
PNT SC 13	192230.588	2008593.790	0 1414+59.62
PNT CS 13	193154.773	2009641.528	0 1429+62.04
PNT ST 13	193352.906	2009668.287	0 1431+62.04
ST EQUATION	*****		0 1434+57.70**
PNT 500	193394.974	2009672.726	0 1435+00.00

## CONSTRUCTION SURVEYING AND MONUMENTATION REQUIREMENTS:

1. BUREAU OF PUBLIC ROADS REFERENCE POINTS (BRASS CAP) SHOWN ON PLANS REPRESENTS THE DIVISION ESTABLISHED HORIZONTAL CONTROL FOR THE PROJECT. IT IS POSSIBLE THAT SOME OF THE SURVEY CONTROL MONUMENTS LISTED HAVE BEEN DISTURBED OR OBLITERATED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE EXISTENCE AND STABILITY OF THE CONTROL MONUMENTS BEFORE SUBMITTING A BID PRICE.
2. IF CONSTRUCTION ACTIVITY DISTURBS ANY REFERENCE POINT, PROPERTY PIN, OR OTHER SURVEY MONUMENT, IT IS THE CONTRACTOR'S RESPONSIBILITY TO REPLACE, RESTORE, OR REHABILITATE THE MONUMENT ACCORDING TO STATE STATUTES AND THE RULES AND REGULATIONS SET FORTH BY THE STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND PROFESSIONAL LAND SURVEYORS. THERE ARE APPROXIMATELY 36 OF BUREAU OF PUBLIC ROADS REFERENCE POINTS ARE TO BE REFERENCED PRIOR TO CONSTRUCTION.
3. A PRESURVEY CONFERENCE IS REQUIRED BEFORE ALL CONSTRUCTION PROJECTS BEGIN.
4. ALL TYPE 1 AND TYPE 2 MONUMENTS SHALL BE SET FLUSH WITH THE GROUND. WITNESS POSTS SHALL BE INSTALLED 1 FOOT FROM AND FACING ALL TYPE 1 AND TYPE 2 MONUMENTS, OR AS DIRECTED BY THE PROJECT ENGINEER.
5. CONTROL SURVEY PROCEDURES, STATISTICAL ANALYSIS, AND ACCURACY OBTAINED FOR HORIZONTAL AND VERTICAL CONTROL SHALL BE DOCUMENTED IN THE FIELD BOOK.
6. FIELD NOTES SHALL BE KEPT IN A CONTROL SURVEY BOOK, ALIGNMENT BOOK, BENCH BOOK, CROSS-SECTION BOOK, MAJOR OR MINOR STRUCTURE BOOK, AS NEEDED FOR THE PROJECT CONSTRUCTION STAKING AND LAYOUT.
7. LEGIBLE COPIES OF THE FIELD BOOKS SHALL BE SUBMITTED TO THE PROJECT ENGINEER FOR REVIEW ON A MONTHLY BASIS.
8. ALL CHANGES MADE TO PLAN DESIGN ELEMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT ENGINEER IN WRITING.
9. IT IS ULTIMATELY THE PRIME CONTRACTORS RESPONSIBILITY TO INSURE THAT THESE REQUIREMENTS, AS WELL AS ANY CONTAINED IN THE CDOT SPECIFICATIONS, PROJECT SPECIAL PROVISIONS, AND CDOT SURVEY MANUAL ARE FULFILLED UNDER THIS CONTRACT.

## REFERENCE POINTS TABULATION

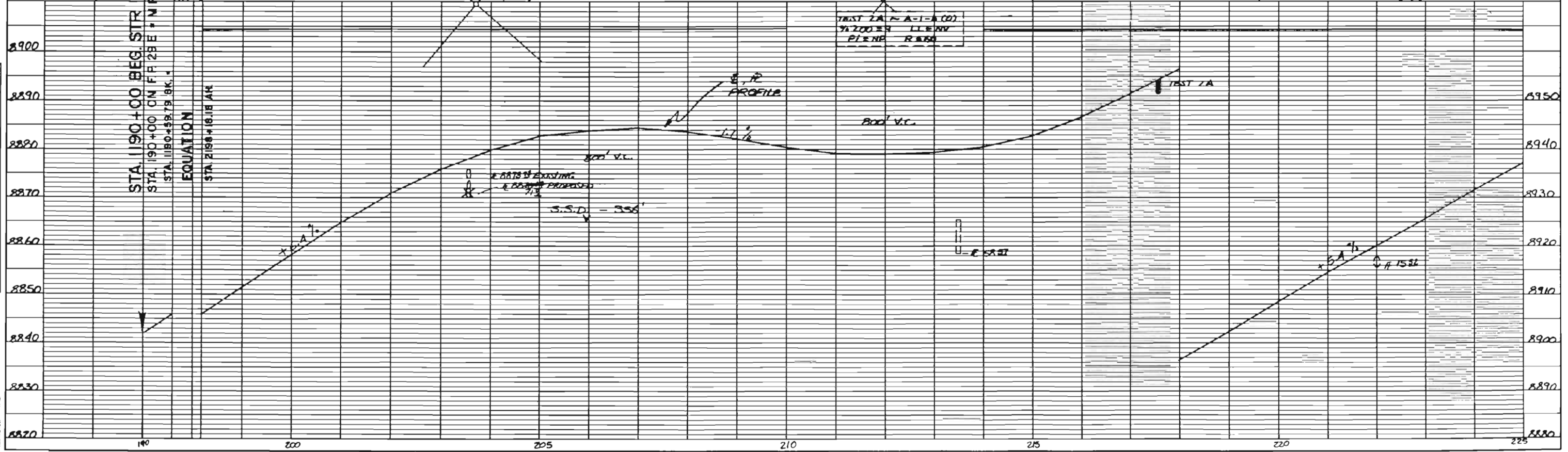
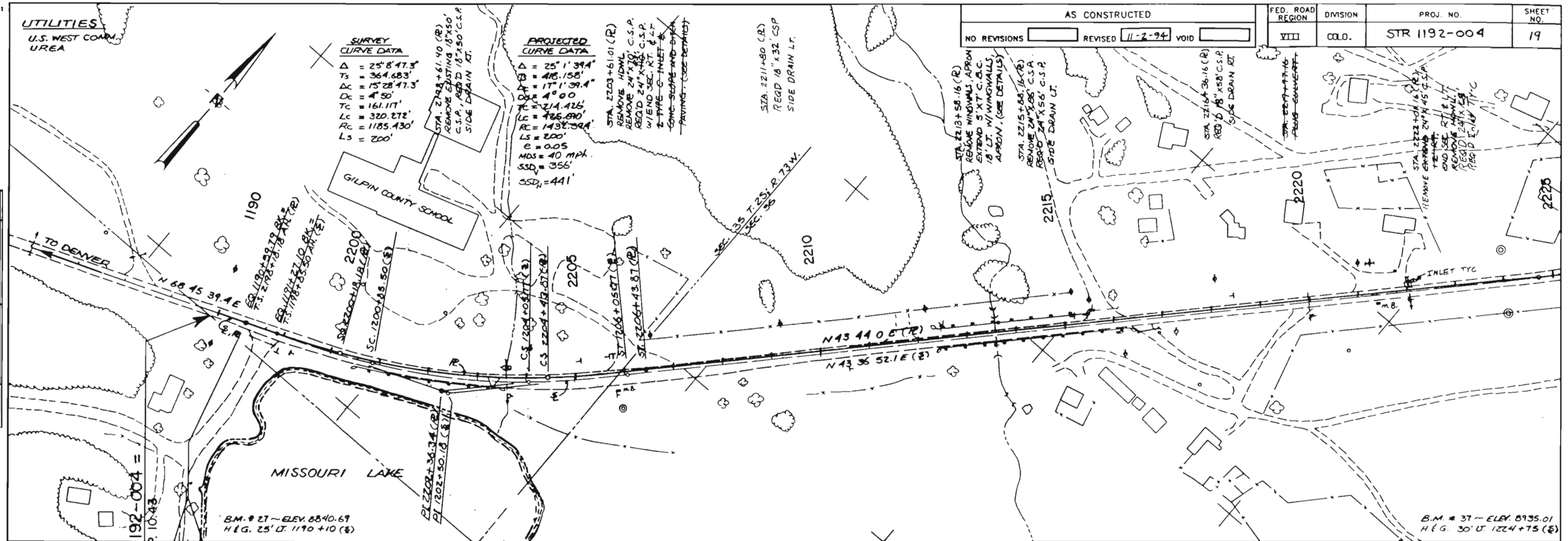
PNT NO.	STATION	NORTH	EAST	SIDE	PNT NO.	STATION	NORTH	EAST	SIDE
1	1236+43	184358.004	1996551.443	RT	20	1337+37	187628.307	2004123.171	RT
2		184338.678	1996420.815	LT	21		187759.860	2004112.079	LT
3	1205+92	181868.287	1994933.033	RT	22	1339+83	187649.165	2004369.042	RT
					23		187780.709	2004358.083	LT
4	1224+04	183173.602	1996176.115	RT	24	1356+45	188803.988	2005423.772	RT
5		183264.622	1996080.585	LT	25		188803.230	2005291.784	LT
6	1259+81	184362.627	1998120.884	LT	26	1358+31	188990.560	2005422.566	RT
7		184260.279	1998037.808	RT	27		188989.690	2005290.608	LT
8	1271+04	183933.155	1999135.062	RT	28	1365+89	189283.790	2005828.608	RT
9		184064.182	1999121.667	LT	29		189408.920	2005870.794	LT
10	1276+71	184122.117	1999685.461	LT	30	1368+15	189211.144	2006043.328	RT
11		183990.768	1999698.760	RT	31		189336.515	2006085.643	LT
12	1286+07	184403.349	2000558.144	RT	32	1374+91	189525.610	2006636.083	RT
13		184502.238	2000470.217	LT	33		189560.878	2006508.903	LT
14	1291+36	184663.519	2000987.700	RT	34	1406+66	192307.406	2007801.469	LT
15		184787.105	2000941.357	LT					
16	1297+70	185010.408	2001535.136	LT	35	1412+57	192162.373	2008390.171	RT
17		184886.823	2001581.567	RT	36		192294.361	2008393.092	LT
18	1313+25	185975.092	2002709.675	RT	37	1431+60	193343.738	2009733.502	RT
19		186026.119	2002587.416	LT	38		193357.624	2009602.274	LT

ALL BUREAU OF PUBLIC ROADS REFERENCE POINTS (BRASS CAP IN CONCRETE) LISTED ABOVE ARE LOCATED AT A DISTANCE OF AVERAGE 66' FROM SURVEY CENTER LINE.

AS CONSTRUCTED		FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.
NO REVISIONS	REVISED 11-2-94	VIII	COLO.	STR 1192-004	19

PLAN	DATE
SURVEYED	
ALIGNED	
CHECKED	
NOTE BOOK	
NO. OF	
DATE	

PROFILE	DATE
SURVEYED	
ALIGNED	
CHECKED	
NOTE BOOK	
B.M.'S NOTED	
DATE	





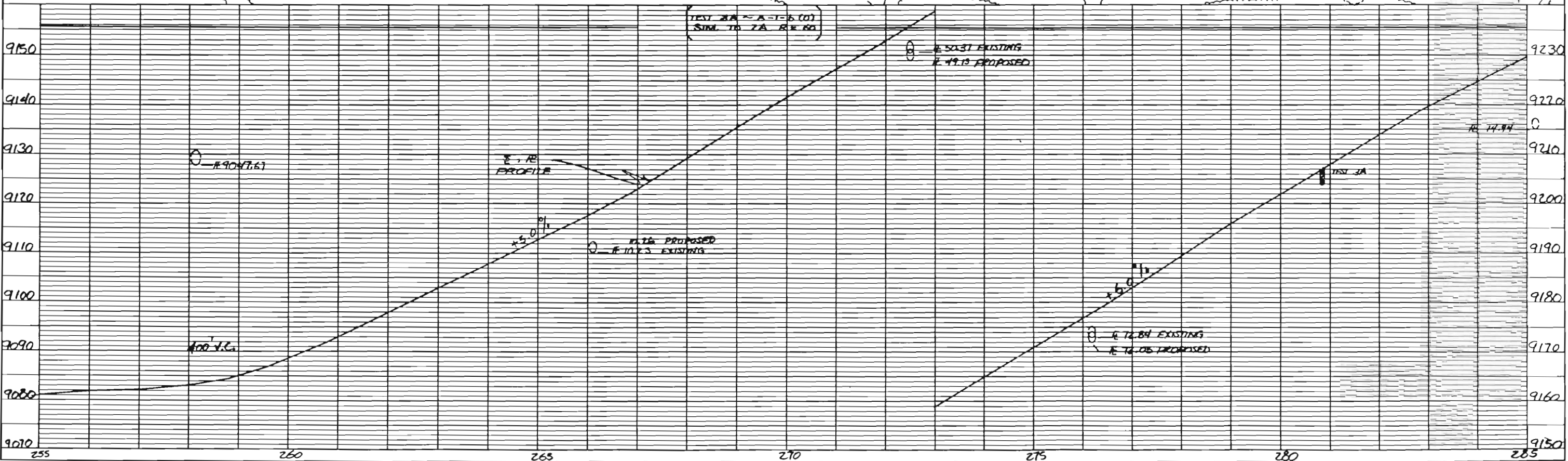
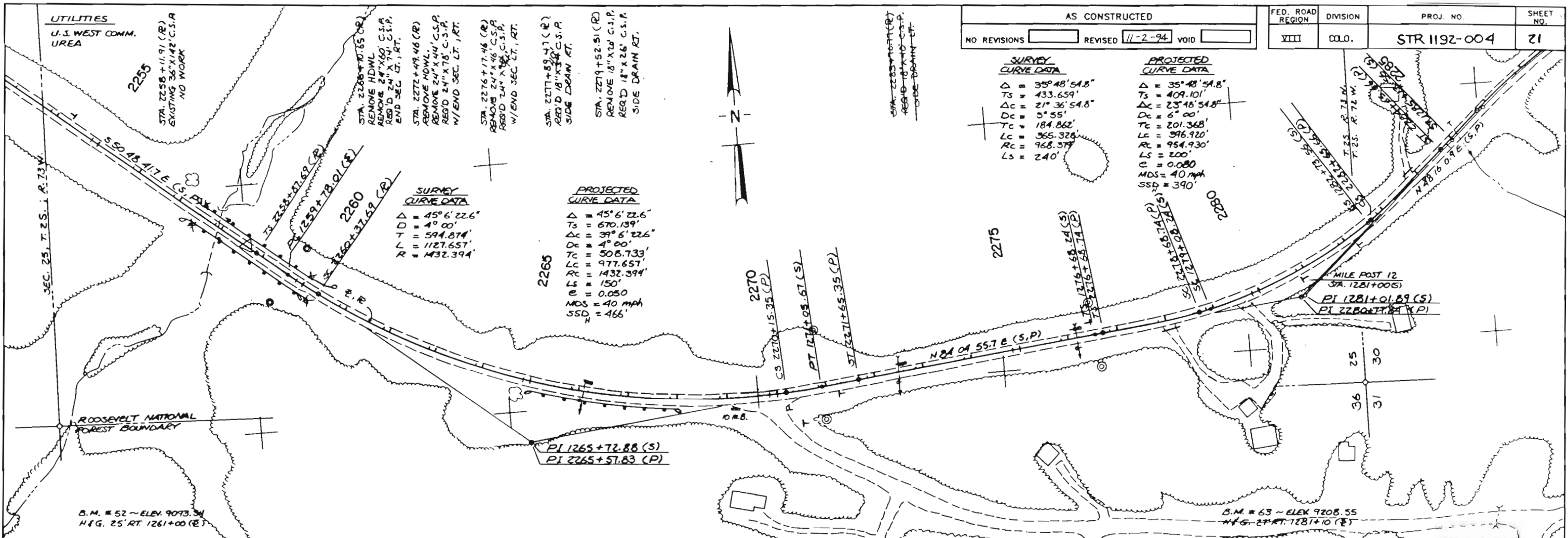
FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.
VIII	000.	STR 1192-004	21

AS CONSTRUCTED	
NO REVISIONS	REVISED 11-2-94
VOID	

SURVEY CURVE DATA	PROJECTED CURVE DATA
$\Delta = 35^{\circ}48'54.8''$	$\Delta = 35^{\circ}48'54.8''$
$TS = 433.659'$	$TS = 409.101'$
$\Delta C = 21^{\circ}36'54.8''$	$\Delta C = 23^{\circ}46'54.8''$
$DC = 5^{\circ}55'$	$DC = 6^{\circ}00'$
$TC = 184.862'$	$TC = 201.368'$
$LC = 365.328'$	$LC = 396.920'$
$RC = 968.379'$	$RC = 954.930'$
$LS = 240'$	$LS = 200'$
	$e = 0.080$
	$MDS = 40 \text{ mph}$
	$SSD = 390'$

PLAN	BY	DATE
SURVEYED		
PLOTTED		
ALIGNED		
CHECKED		
RT. OF ART. CHECKED		
NO.		

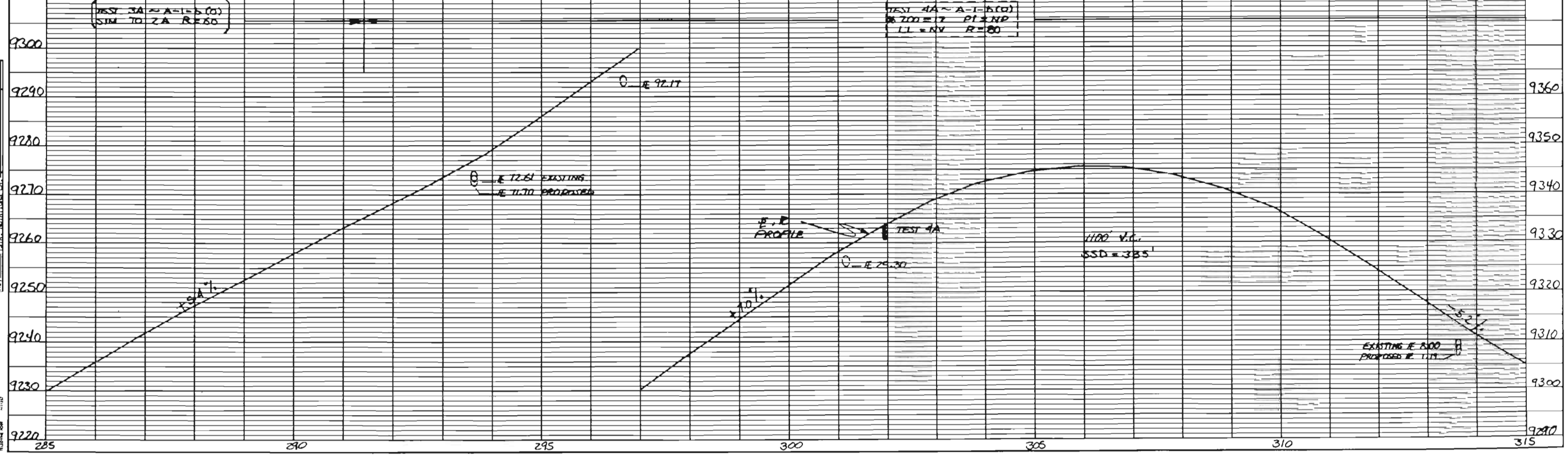
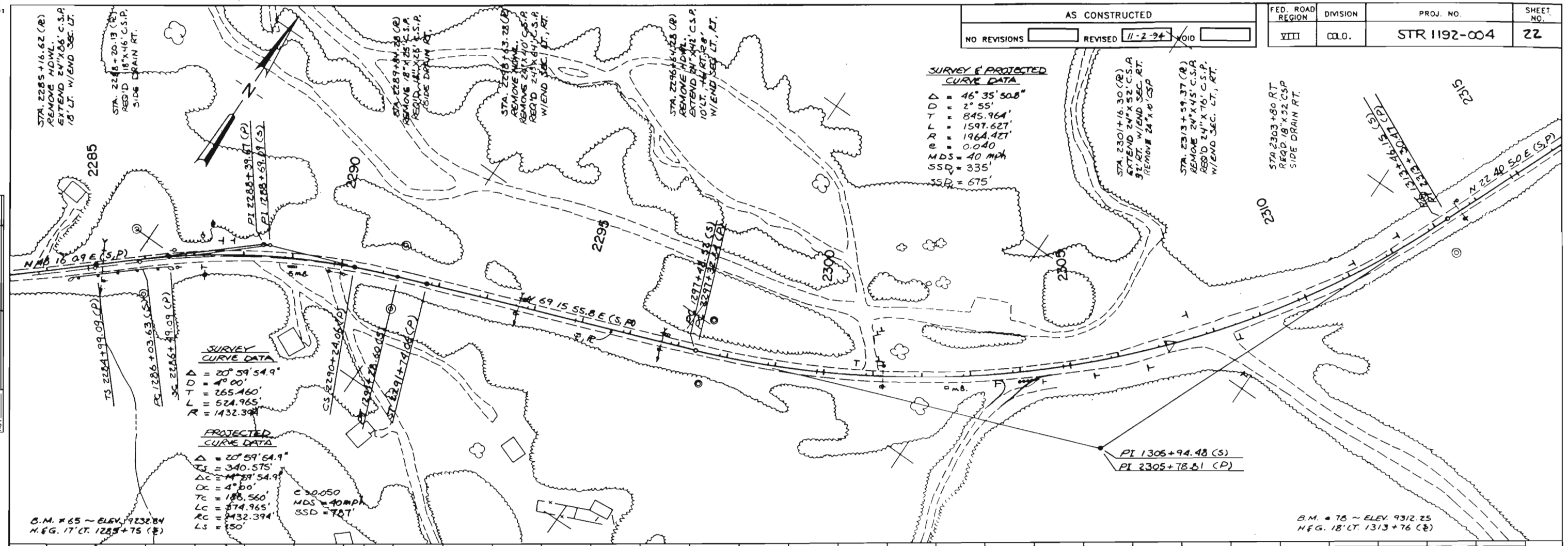
PROFILE	BY	DATE
SURVEYED		
PLOTTED		
ALIGNED		
CHECKED		
STR. NOTATION CH.		
NO.		



AS CONSTRUCTED		FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.
NO REVISIONS	REVISED 11-2-94	VIII	COLO.	STR 1192-004	22

PLAN	DATE	BY
SURVEYED		
PLOTTED		
CHECKED		
NOTE BOOK		

PROFILE	DATE	BY
SURVEYED		
PLOTTED		
CHECKED		
NOTE BOOK		

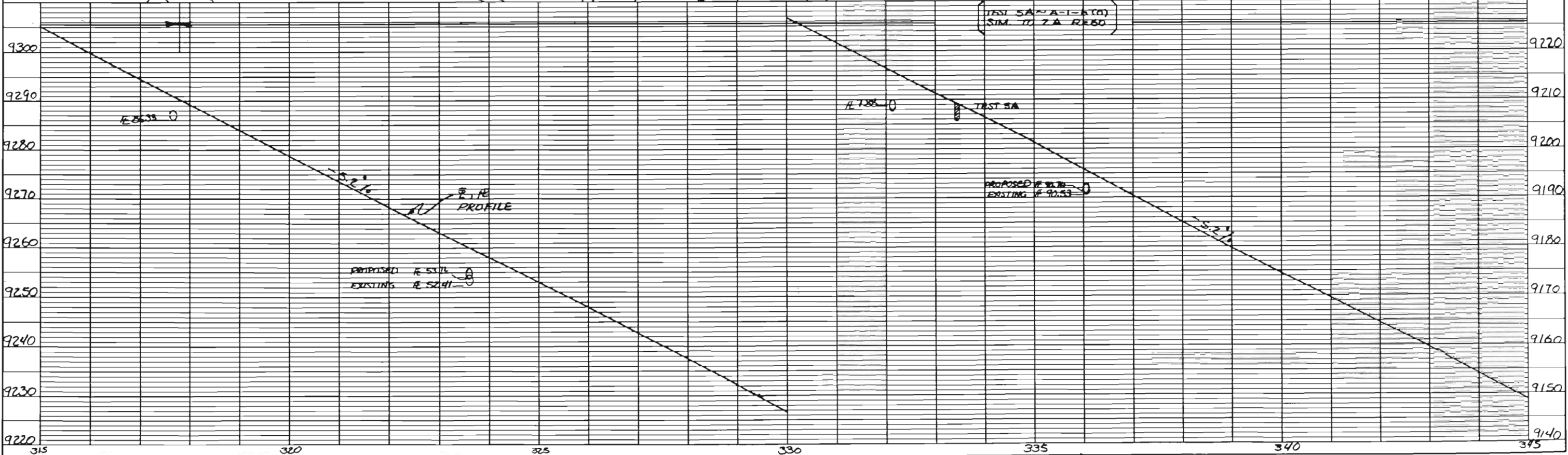
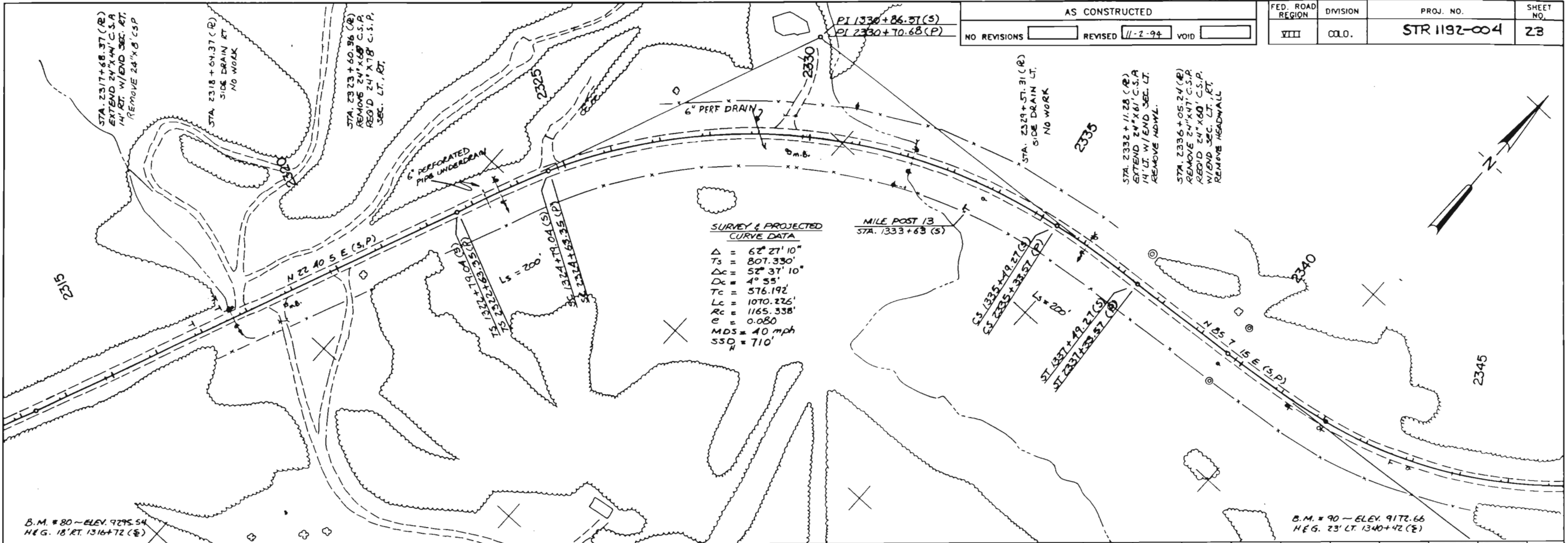


AS CONSTRUCTED		
NO REVISIONS	REVISED 11-2-94	VOID

FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.
VIII	COLO.	STR 1192-004	23

PLAN	BY	DATE
SAVED		
PLOTTED		
ALIGNED		
CHECKED		
RT. OF WAY		
CHECKED		
NO.		

PROFILE	BY	DATE
SAVED		
PLOTTED		
ALIGNED		
CHECKED		
VERTICAL		
CHECKED		
NO.		



AS CONSTRUCTED

FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.
VIII	COLO.	STR 1192-004	24

NO REVISIONS  REVISED 11-2-94  VOID

STA. 2346+53.87 (R)  
 REMOVE 24" X 44" C.S.P.  
 RECD 24" X 44" C.S.P.  
 W/END SEC. LT., RT.

STA. 2352+03.64 (R)  
 REMOVE 24" X 44" C.S.P.  
 RECD 24" X 44" C.S.P.  
 W/END SEC. LT., RT.

STA. 2342+36.34 (R)  
 REMOVE 30" X 92" C.S.P., HDWL  
 RECD 30" X 102" C.S.P.  
 W/END SEC. LT., RT.  
 D.A. = 35 ACRES  
 G.S. = 4 CFS  
 DMW = 9051.8  
 ANW = 9068.9  
 Q100 = 5 CFS  
 HW = 9052.0

**SURVEY CURVE DATA**  
 $\Delta = 108^{\circ} 50' 36.5''$   
 $Ts = 528.720'$   
 $Dc = 73^{\circ} 13' 6.5''$   
 $Dx = 18' 45''$   
 $Tc = 227.018'$   
 $Lc = 390.499'$   
 $Rc = 305.571'$   
 $Ls = 190'$

**SURVEY CURVE DATA**  
 $\Delta = 93^{\circ} 3' 39.6''$   
 $Ts = 426.520'$   
 $Dc = 57^{\circ} 54' 39.8''$   
 $Dx = 18' 30''$   
 $Tc = 171.359'$   
 $Lc = 313.032'$   
 $Rc = 309.701'$   
 $Ls = 190'$

**PROJECTED CURVE DATA**  
 $\Delta = 92^{\circ} 57' 16.5''$   
 $Ts = 416.860'$   
 $Dc = 76^{\circ} 27' 16.5''$   
 $Dx = 16' 30''$   
 $Tc = 273.525'$   
 $Lc = 463.361'$   
 $Rc = 347.247'$   
 $Ls = 100'$   
 $e = 0.080$   
 $NDS = 35 \text{ mph}$   
 $SSD = 230'$

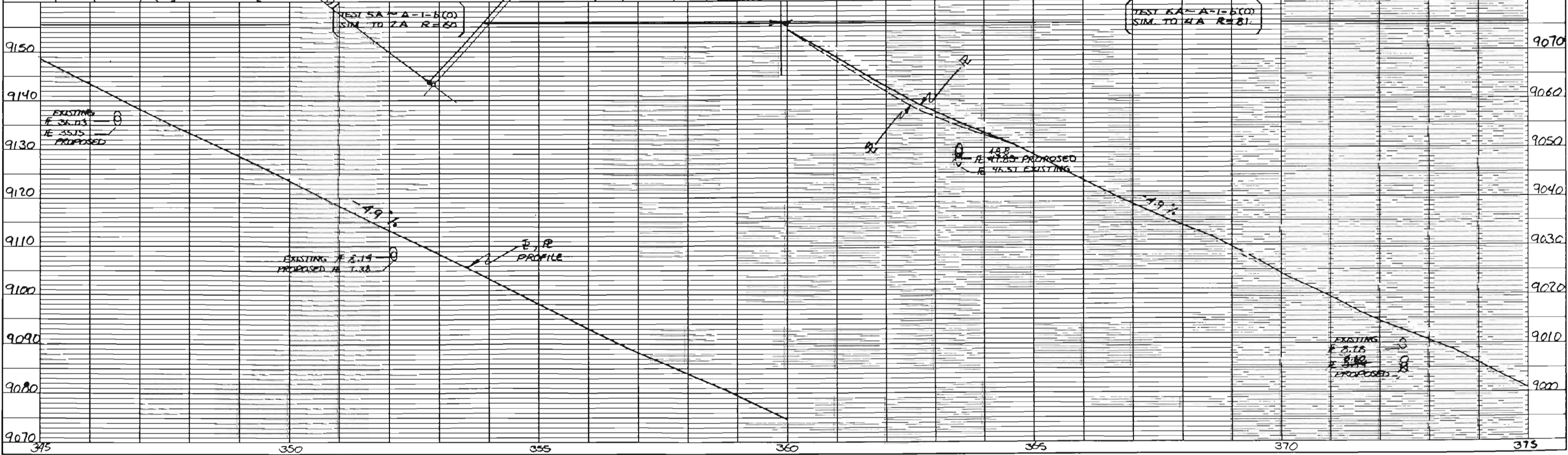
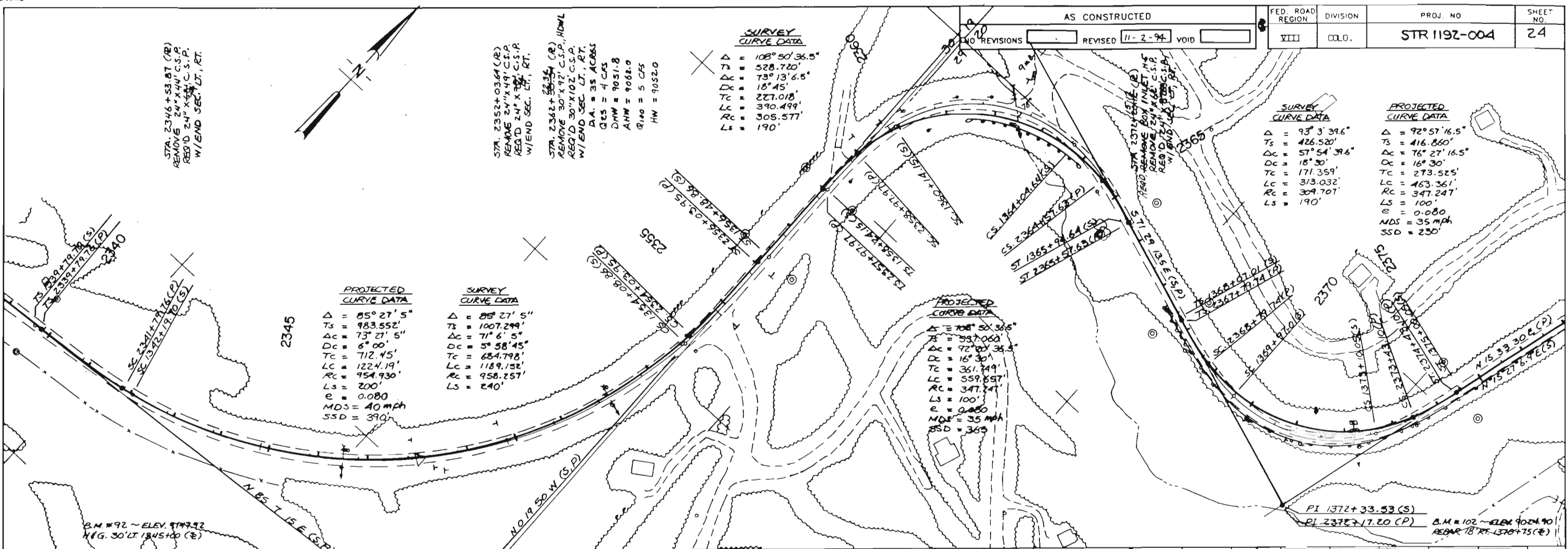
**PROJECTED CURVE DATA**  
 $\Delta = 85^{\circ} 27' 5''$   
 $Ts = 983.552'$   
 $Dc = 73^{\circ} 21' 5''$   
 $Dx = 6' 00''$   
 $Tc = 712.45'$   
 $Lc = 1224.19'$   
 $Rc = 954.930'$   
 $Ls = 200'$   
 $e = 0.080$   
 $NDS = 40 \text{ mph}$   
 $SSD = 390'$

**SURVEY CURVE DATA**  
 $\Delta = 85^{\circ} 27' 5''$   
 $Ts = 1007.299'$   
 $Dc = 71^{\circ} 6' 5''$   
 $Dx = 5' 58' 45''$   
 $Tc = 684.798'$   
 $Lc = 1189.158'$   
 $Rc = 958.257'$   
 $Ls = 240'$

**PROJECTED CURVE DATA**  
 $\Delta = 108^{\circ} 50' 36.5''$   
 $Ts = 537.060'$   
 $Dc = 92^{\circ} 00' 35.4''$   
 $Dx = 16' 30''$   
 $Tc = 361.749'$   
 $Lc = 559.897'$   
 $Rc = 347.247'$   
 $Ls = 100'$   
 $e = 0.080$   
 $NDS = 35 \text{ mph}$   
 $SSD = 365'$

PLAN	SURVEYED	BY	DATE
	PLOTTED		
	ALIGNED		
	CHECKED		
	RT. OF WAY		
	CHECKED		
	NO.		

PROFILE	SURVEYED	BY	DATE
	PLOTTED		
	ALIGNED		
	CHECKED		
	VERT. CURVING		
	CHECKED		
	NO.		

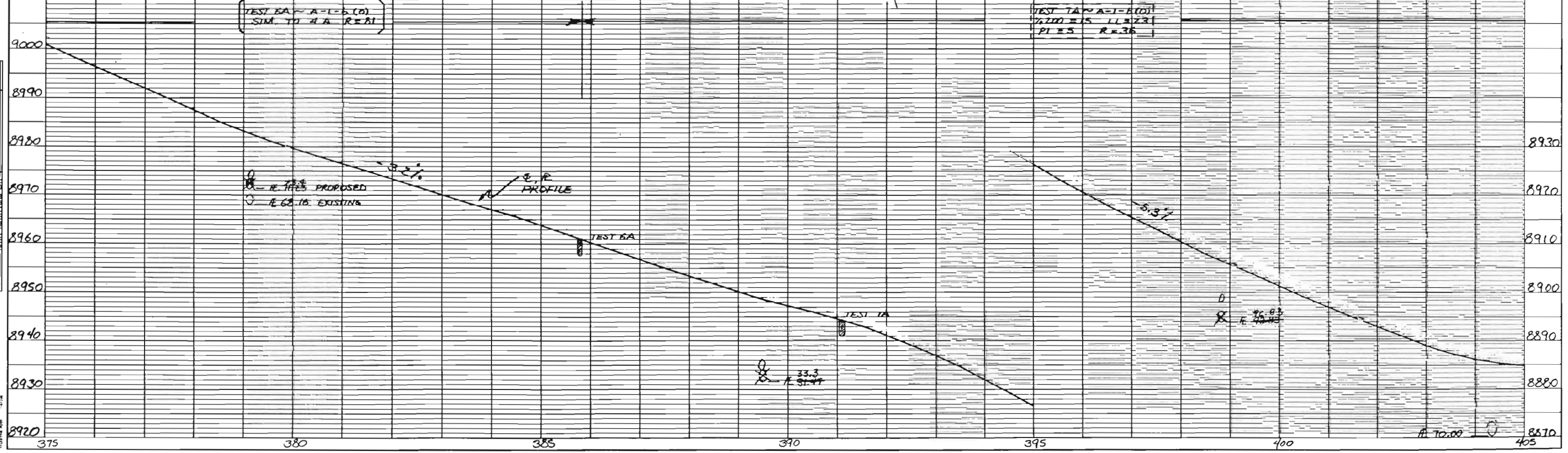
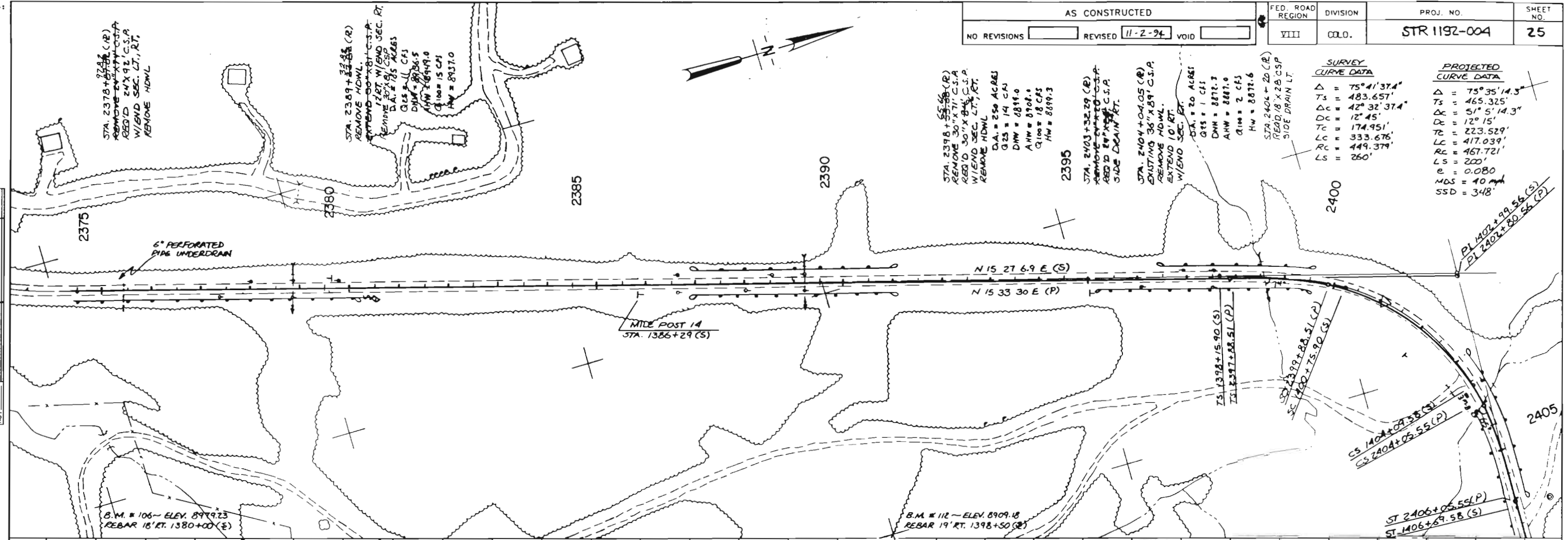


AS CONSTRUCTED		FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.
NO REVISIONS	REVISED 11-2-94	VIII	COLO.	STR 1192-004	25

SURVEY CURVE DATA		PROJECTED CURVE DATA	
$\Delta = 75^{\circ}41'37.4''$	$Ts = 483.657'$	$\Delta = 75^{\circ}35'14.3''$	$Ts = 465.325'$
$\Delta c = 42^{\circ}32'37.4''$	$Dc = 12^{\circ}45'$	$\Delta c = 51^{\circ}5'14.3''$	$Dc = 12^{\circ}15'$
$Tc = 174.951'$	$Lc = 333.676'$	$Tc = 223.529'$	$Lc = 417.039'$
$Rc = 449.379'$	$LS = 260'$	$Rc = 467.721'$	$LS = 200'$
	$e = 0.080$		$MOS = 40 \text{ mph}$
	$SSD = 348'$		

PLAN	SURVEYED	BY	DATE
NOTE BOOK NO.	PLOTTED AT CHECKED		
	RT. OF WAY CHECKED		

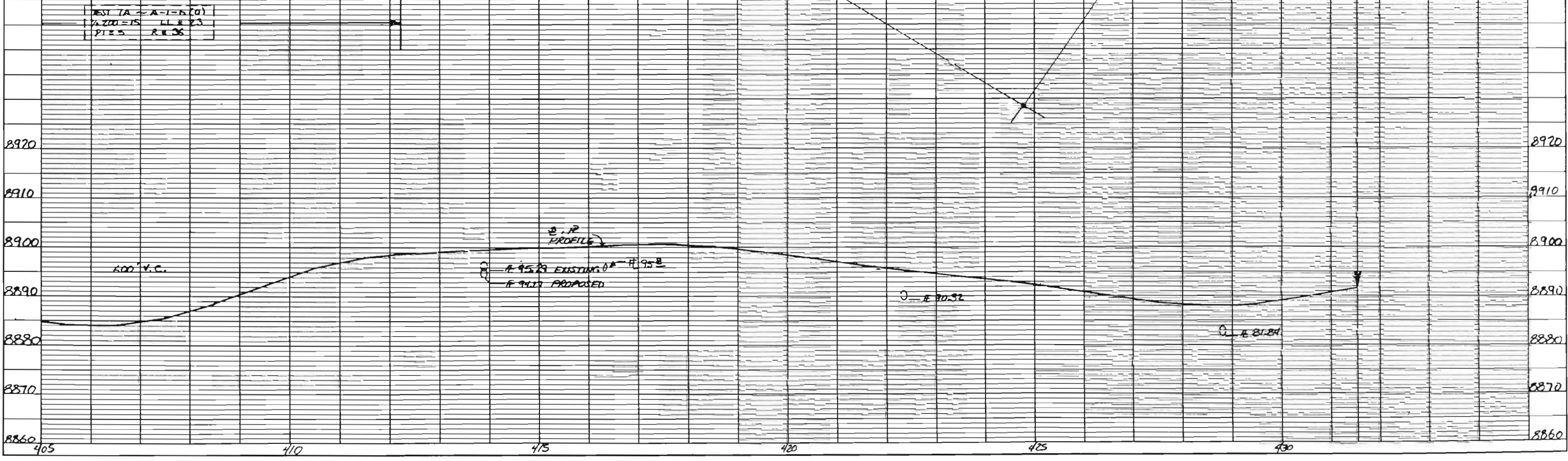
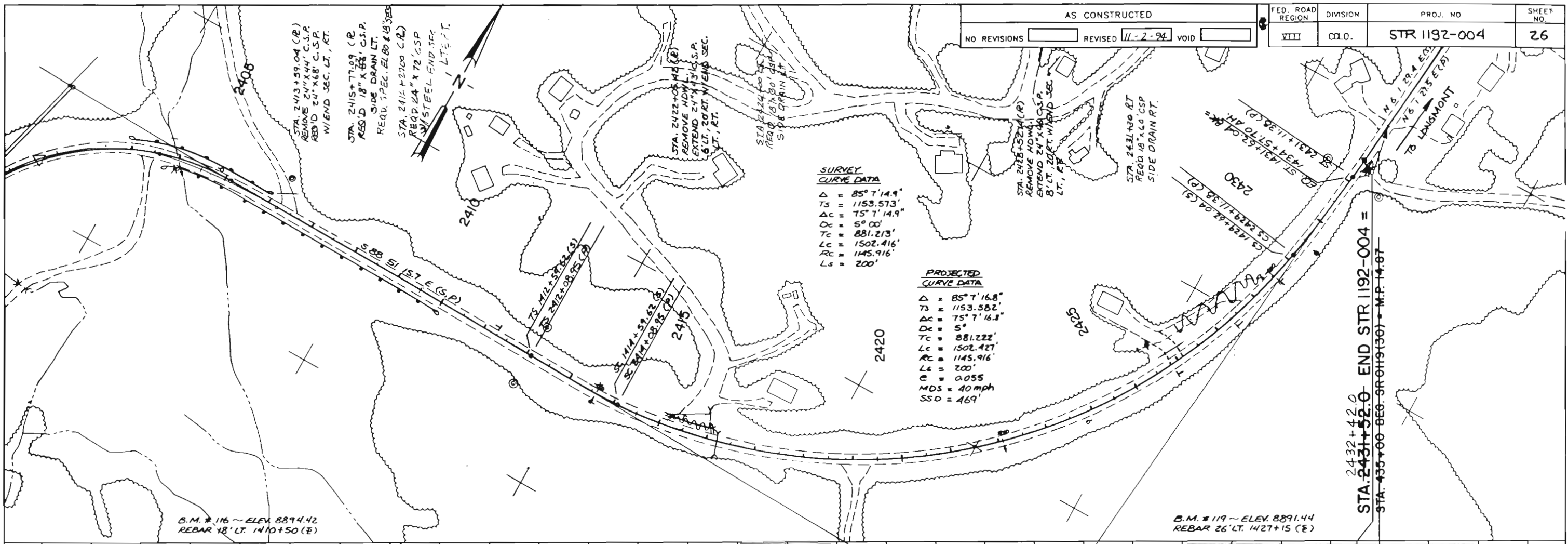
PROFILE	SURVEYED	BY	DATE
NOTE BOOK NO.	PLOTTED AT CHECKED		
	B.M.'S NOTED		
	SUR. NOTATIONS CH.		



AS CONSTRUCTED		FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.
NO REVISIONS	REVISED 11-2-94	VIII	COLO.	STR 1192-004	26




PLAN	DATE
SURVEYED	
PLOTTED	
ALIGNED	
CHECKED	
RT. OF WAY	
CHECKED	
NO.	

PROFILE	DATE
SURVEYED	
PLOTTED	
ALIGNED	
CHECKED	
B.M.'S NOTED	
VERT. CURVES	
CHECKED	
NO.	



STATE OF COLORADO  
 DIVISION OF HIGHWAYS  
 C. P. FORM NO. 1341  
 7, NOV. 1983

**LEGEND**

WETLAND   
 TOE OF FILLS   
 TOE OF CUTS 

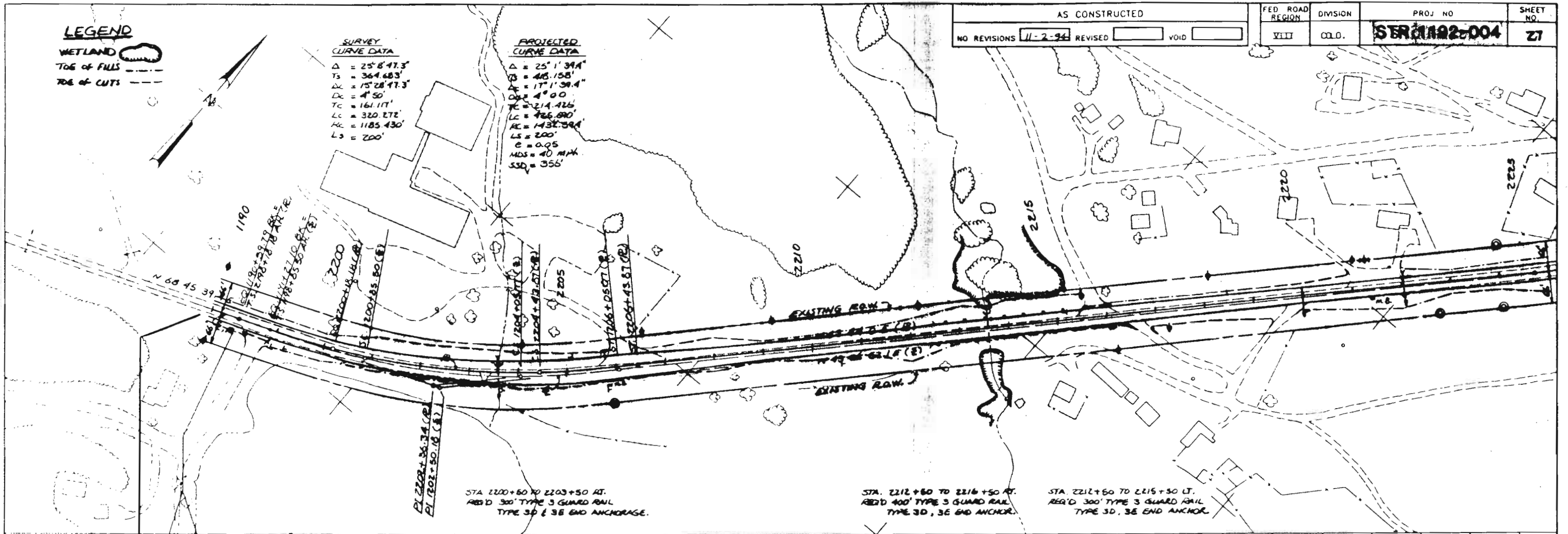
**SURVEY CURVE DATA**  
 $\Delta = 25^{\circ} 8' 47.3''$   
 $Ts = 364.683'$   
 $DX = 15^{\circ} 28' 47.3''$   
 $DC = 4^{\circ} 50'$   
 $TC = 161.171'$   
 $LC = 320.272'$   
 $RC = 1185.430'$   
 $LS = 200'$

**PROJECTED CURVE DATA**  
 $\Delta = 25^{\circ} 1' 39.1''$   
 $Ts = 448.158'$   
 $DX = 17^{\circ} 1' 39.1''$   
 $DC = 4^{\circ} 00'$   
 $TC = 214.426'$   
 $LC = 426.890'$   
 $RC = 1432.594'$   
 $LS = 200'$   
 $e = 0.05$   
 $MDS = 40$  MPH  
 $SSD = 355'$

AS CONSTRUCTED		FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.
NO REVISIONS	11-2-94	REVISED	VOID	STR 1192-004	27
		VIII	COLO.		

DATE	BY

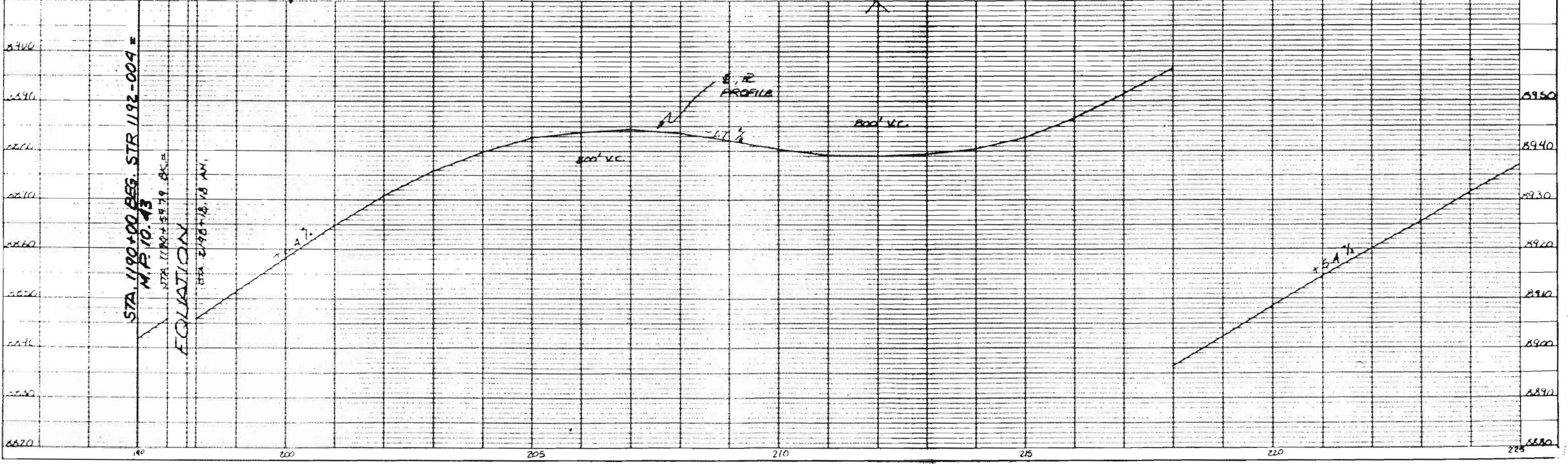
DATE	BY



STA. 2200+60 TO 2203+50 RT.  
 REQ'D 300' TYPE 3 GUARD RAIL  
 TYPE 3D & 3E END ANCHOR.

STA. 2212+60 TO 2216+50 RT.  
 REQ'D 400' TYPE 3 GUARD RAIL  
 TYPE 3D, 3E END ANCHOR.

STA. 2217+60 TO 2215+50 LT.  
 REQ'D 300' TYPE 3 GUARD RAIL  
 TYPE 3D, 3E END ANCHOR.



STA. 1190+00 BEG. STR 1192-004  
 M.P. 10.43

ELEVATION

STA. 1190+59.79, R.S. =  
 STA. 2198+18.18 A.M.

AS CONSTRUCTED

0 REVISIONS **11-2-74** REVISED

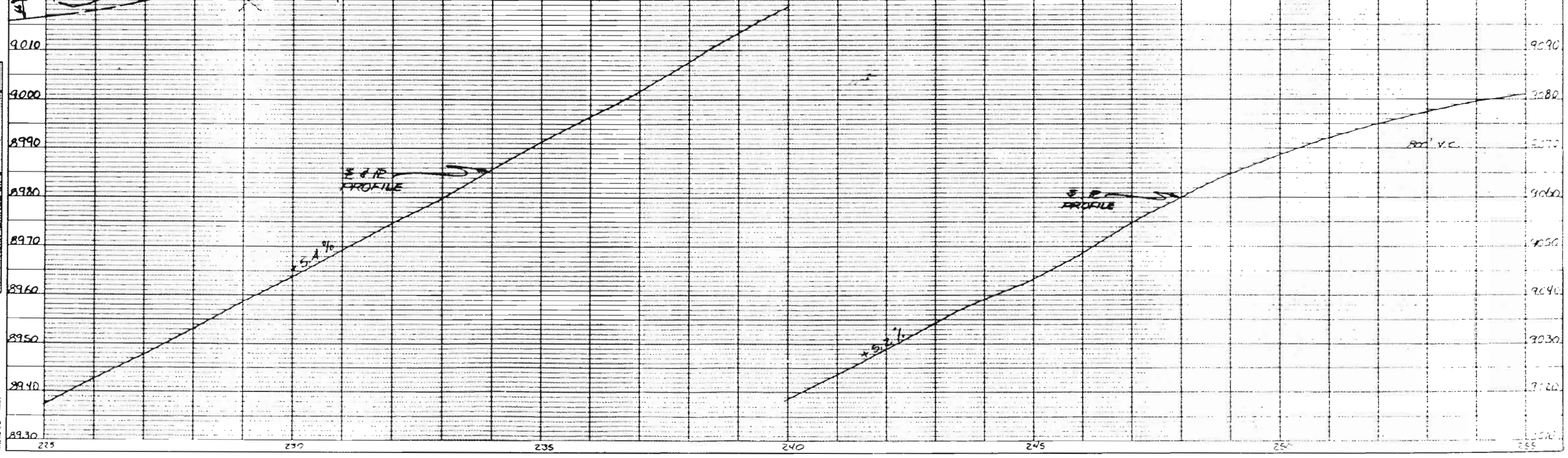
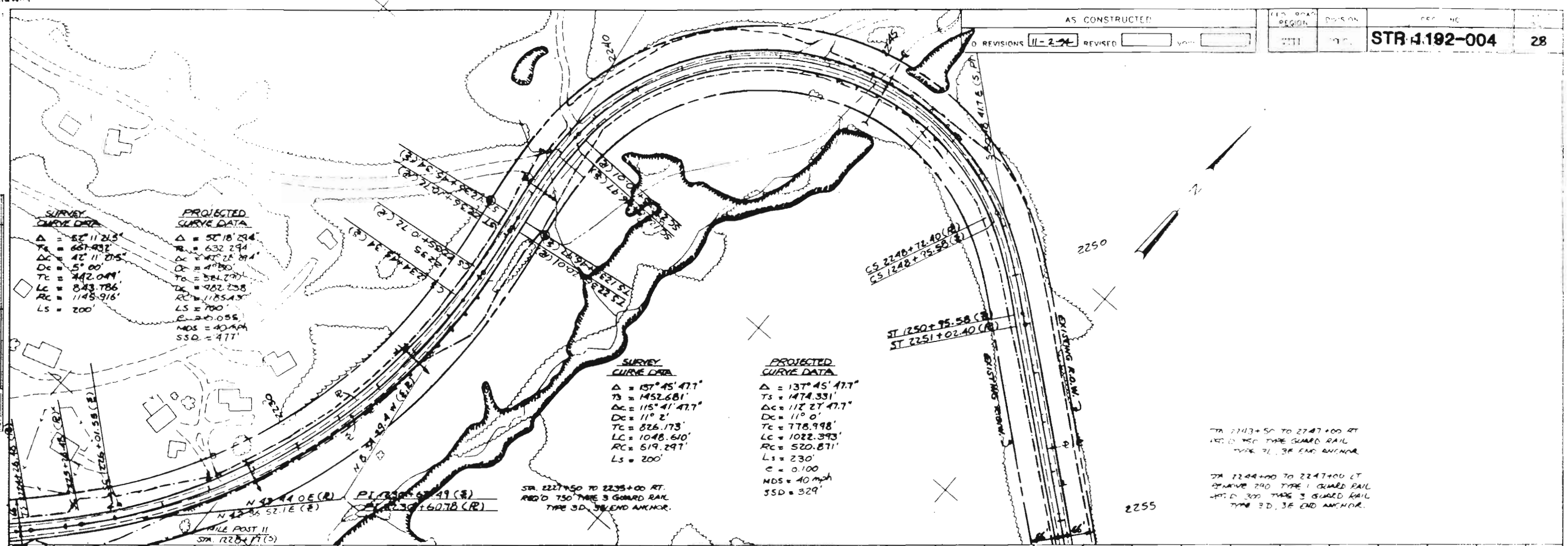
ED. ROAD REGION	DIVISION	PROJECT NO.	SHEET NO.
		<b>STR-1192-004</b>	<b>28</b>

DATE	BY

DATE	BY

SURVEY CURVE DATA	PROJECTED CURVE DATA
$\Delta = 52^{\circ}11'21.5"$	$\Delta = 52^{\circ}18'23.4"$
$TR = 667.932'$	$TR = 632.294'$
$DC = 42^{\circ}11'21.5"$	$DC = 47^{\circ}28'39.4"$
$TC = 5^{\circ}00'$	$TC = 4^{\circ}30'$
$LC = 442.049'$	$LC = 584.277'$
$RC = 843.786'$	$RC = 482.258'$
$LS = 1145.916'$	$LS = 1185.238'$
	$LS = 700'$
	$E = 0.056$
	$MDS = 40 MPH$
	$SSD = 477'$

SURVEY CURVE DATA	PROJECTED CURVE DATA
$\Delta = 137^{\circ}45'47.7"$	$\Delta = 137^{\circ}45'47.7"$
$TR = 1452.681'$	$TR = 1474.331'$
$DC = 115^{\circ}41'47.7"$	$DC = 112^{\circ}27'47.7"$
$TC = 11^{\circ}2'$	$TC = 11^{\circ}0'$
$LC = 826.173'$	$LC = 778.998'$
$RC = 1048.610'$	$RC = 1022.393'$
$LS = 619.297'$	$LS = 520.811'$
	$LS = 230'$
	$E = 0.100$
	$MDS = 40 MPH$
	$SSD = 329'$

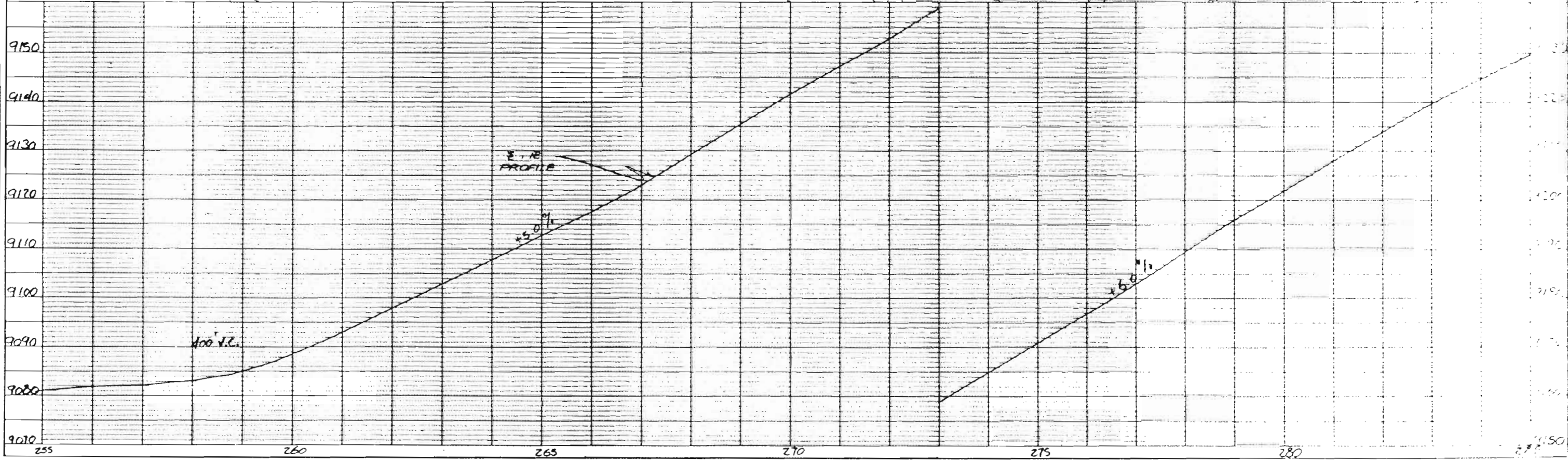
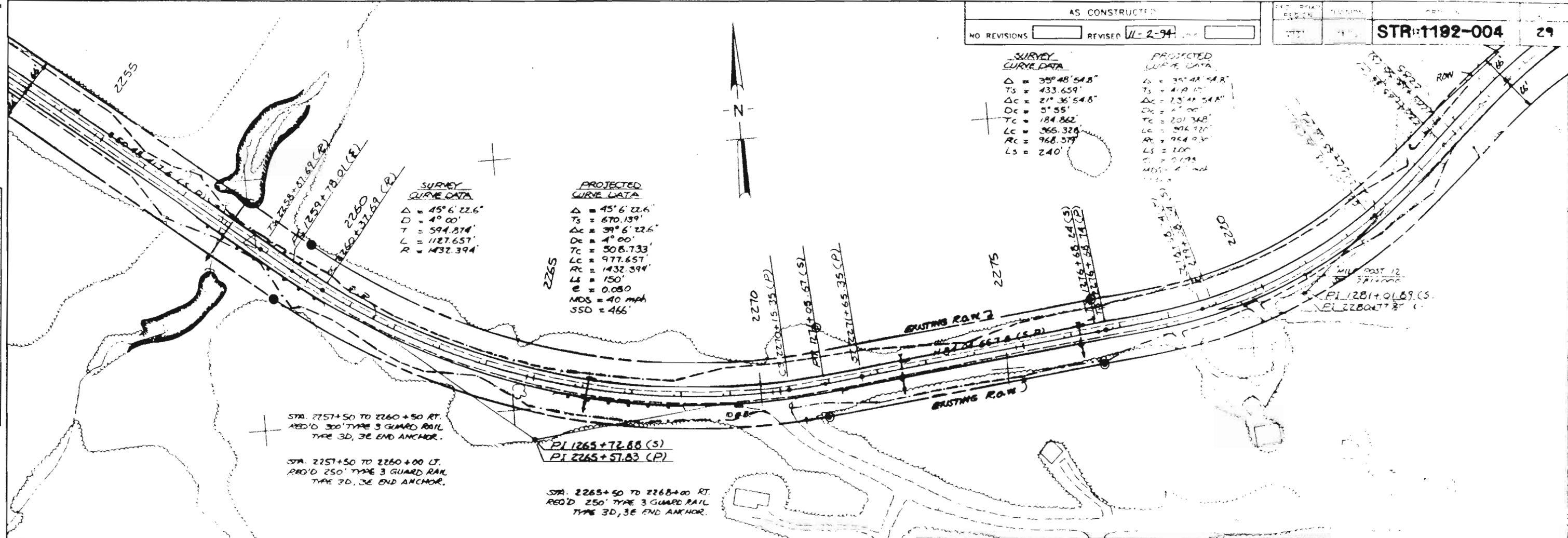


TA 2243+50 TO 2247+00 RT  
 REQ'D 750 TYPE 3 GUARD RAIL  
 TYPE 3D, 3E END ANCHOR

TA 2244+00 TO 2247+00 LT  
 REQ'D 750 TYPE 1 GUARD RAIL  
 REQ'D 300 TYPE 3 GUARD RAIL  
 TYPE 3D, 3E END ANCHOR

PLAN	DATE
BY	
REVISIONS	
NO. 1	
NO. 2	
NO. 3	
NO. 4	
NO. 5	
NO. 6	
NO. 7	
NO. 8	
NO. 9	
NO. 10	

PROFILE	DATE
BY	
REVISIONS	
NO. 1	
NO. 2	
NO. 3	
NO. 4	
NO. 5	
NO. 6	
NO. 7	
NO. 8	
NO. 9	
NO. 10	

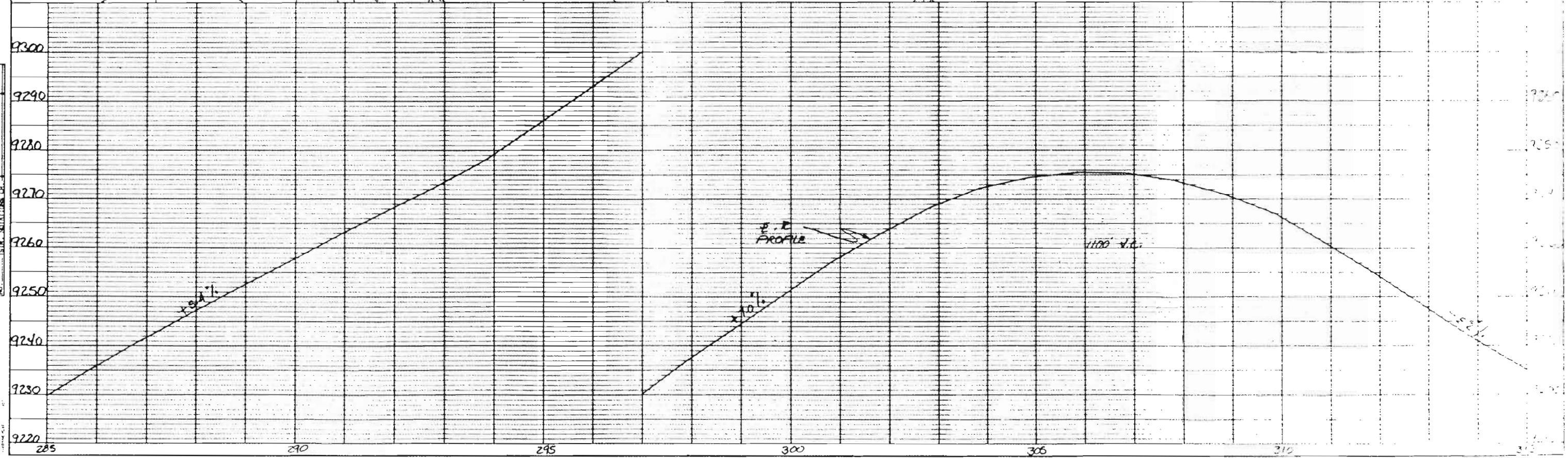
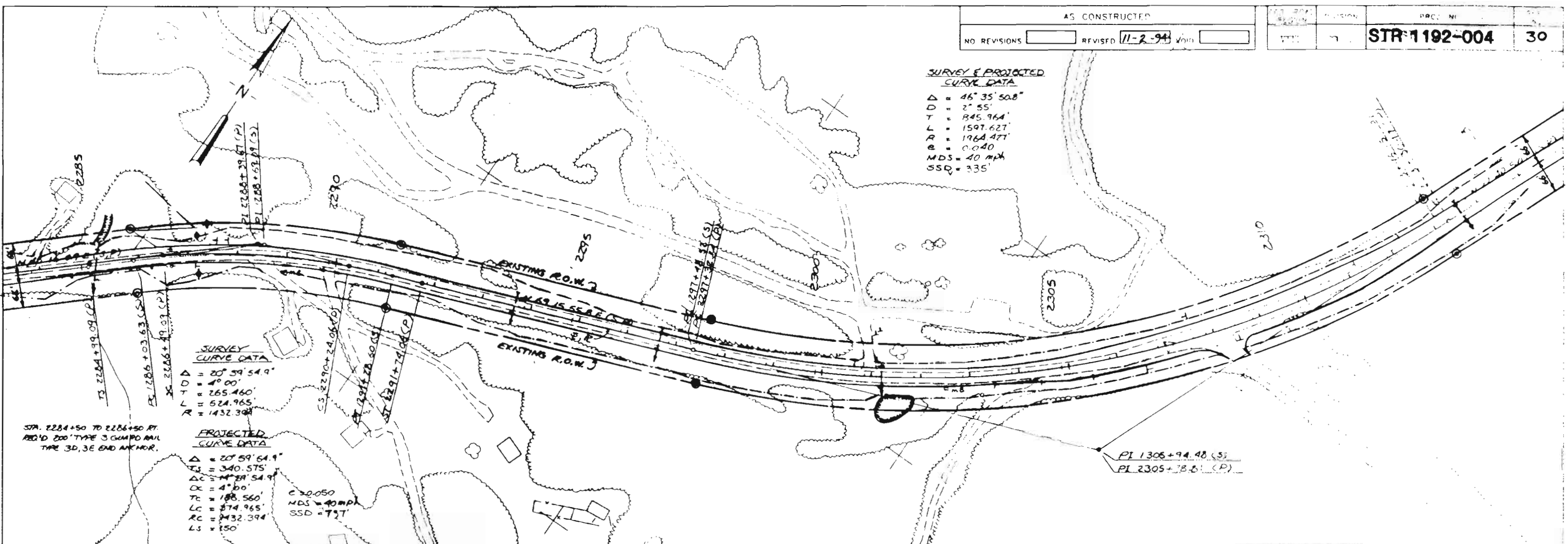


**SURVEY & PROJECTED  
 CURVE DATA**  
 $\Delta = 46^{\circ} 35' 50.8''$   
 $D = 2^{\circ} 55'$   
 $T = 845.964'$   
 $L = 1597.627'$   
 $R = 1966.471'$   
 $e = 0.040$   
 $MDS = 40 \text{ mph}$   
 $SSD = 335'$

**SURVEY  
 CURVE DATA**  
 $\Delta = 20^{\circ} 59' 54.9''$   
 $T = 4^{\circ} 00'$   
 $L = 265.460'$   
 $R = 524.965'$   
 $R = 1432.398'$

**PROJECTED  
 CURVE DATA**  
 $\Delta = 20^{\circ} 59' 54.9''$   
 $T = 340.575'$   
 $L = 574.965'$   
 $R = 1432.394'$   
 $LS = 150'$   
 $C = 0.050$   
 $MDS = 40 \text{ mph}$   
 $SSD = 757'$

STA. 2284+50 TO 2286+50 FT.  
 REQ'D 200' TYPE 3 GUANO RAIL  
 TYPE 3D, 3E END ANCHOR.



PLAN	DATE
SURVEYED	
ADJUSTED	
CHECKED	
NO. OF SHEETS	
NO. OF SHEETS CHECKED	

PROFILE	DATE
SURVEYED	
ADJUSTED	
CHECKED	
NO. OF SHEETS	
NO. OF SHEETS CHECKED	



AS CONSTRUCTED

SECTION	REVISIONS	DATE	BY
VIII	11-2-94		

STR 1192-004 32

PLAN	DATE	BY
SURVEYED		
PLOTTED		
CHECKED		
NOTE BOOK		

PROFILE	DATE	BY
SURVEYED		
PLOTTED		
CHECKED		
NOTE BOOK		

STA. 2346+53.87 (R)  
 RELAY 24"x44" C.S.P.  
 EXTEND 8' LT. 4' RT.  
 W/END SEC. LT., RT.

STA. 2352+03.64 (R)  
 EXTEND 24"x44" C.S.P.  
 8' LT. 10' RT. W/END SEC.  
 LT., RT.

STA. 2362+33.34 (R)  
 REMOVE 30"x72" C.S.P.  
 REG'D 30"x106" C.S.P.  
 W/END SEC. LT., RT.

STA. 2372+20.12 (R)  
 REMOVE 30"x72" C.S.P.  
 RELAY 24"x44" C.S.P.  
 EXTEND 20' LT. W/END SEC. LT.

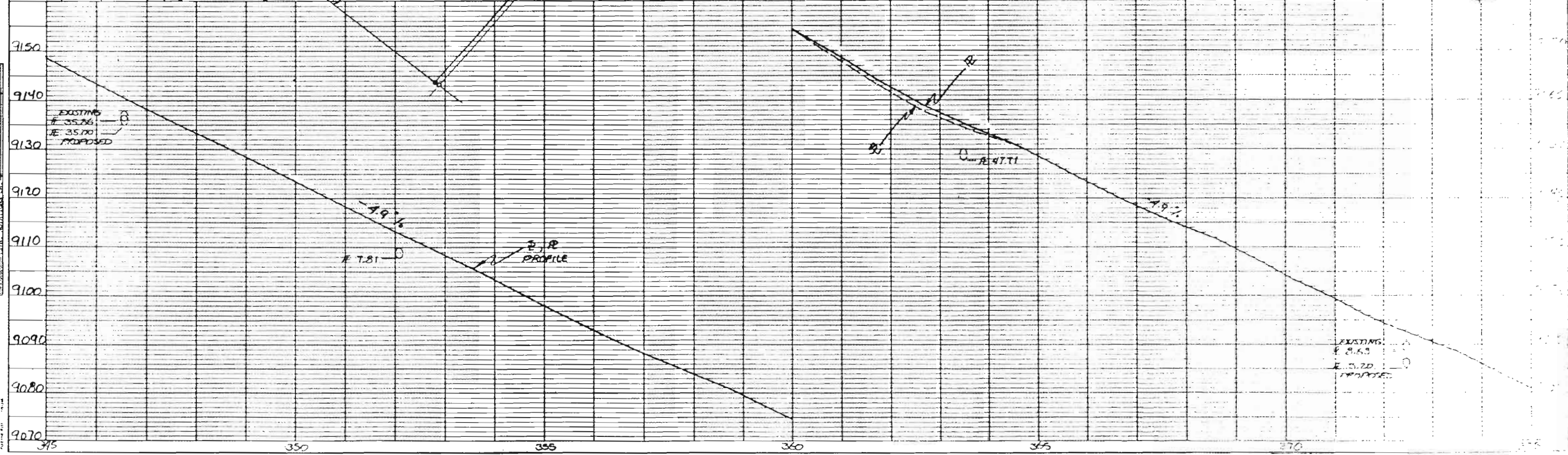
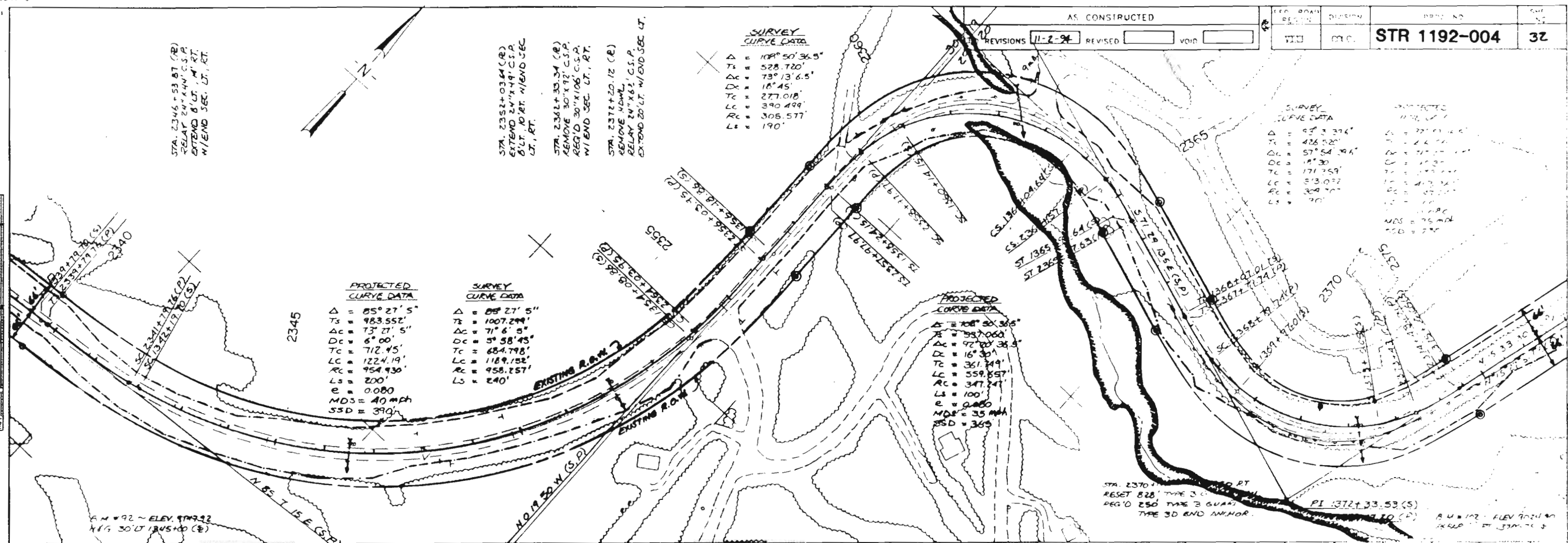
**SURVEY CURVE DATA**  
 $\Delta = 109^\circ 50' 36.5''$   
 $T_s = 528.720'$   
 $D_c = 73^\circ 13' 6.5''$   
 $D_x = 18^\circ 45'$   
 $T_c = 277.018'$   
 $L_c = 890.499'$   
 $R_c = 306.577'$   
 $L_s = 190'$

**SURVEY CURVE DATA**  
 $\Delta = 95^\circ 3' 37.6''$   
 $T_s = 426.520'$   
 $D_c = 57^\circ 54' 24.6''$   
 $D_x = 17^\circ 30'$   
 $T_c = 171.259'$   
 $L_c = 513.072'$   
 $R_c = 304.707'$   
 $L_s = 20'$

**PROJECTED CURVE DATA**  
 $\Delta = 85^\circ 27' 5''$   
 $T_s = 983.552'$   
 $D_c = 73^\circ 27' 5''$   
 $D_x = 6^\circ 00'$   
 $T_c = 712.45'$   
 $L_c = 1224.19'$   
 $R_c = 954.930'$   
 $L_s = 200'$   
 $e = 0.080$   
 $MDS = 40 \text{ mph}$   
 $SSD = 390'$

**SURVEY CURVE DATA**  
 $\Delta = 85^\circ 27' 5''$   
 $T_s = 1007.299'$   
 $D_c = 71^\circ 6' 5''$   
 $D_x = 5^\circ 58' 45''$   
 $T_c = 684.798'$   
 $L_c = 1189.152'$   
 $R_c = 958.257'$   
 $L_s = 240'$

**PROJECTED CURVE DATA**  
 $\Delta = 70^\circ 20' 36.5''$   
 $T_s = 597.060'$   
 $D_c = 92^\circ 00' 38.5''$   
 $D_x = 16^\circ 30'$   
 $T_c = 361.749'$   
 $L_c = 559.857'$   
 $R_c = 347.241'$   
 $L_s = 100'$   
 $e = 0.080$   
 $MDS = 35 \text{ mph}$   
 $SSD = 369'$





PLAN	SURVEYED	BY	DATE
NOTE BOOK	ALIGNED		
NO.	CHECKED		
	BY		

PROFILE	SURVEYED	BY	DATE
NOTE BOOK	ALIGNED		
NO.	CHECKED		
	BY		

