

AS CONSTRUCTED

NO. REVISIONS 9-170

REVISED

VOID

FEDERAL ROAD REGION NO.	DIVISION	PROJECT NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	FR 014-2 (19)	2	22

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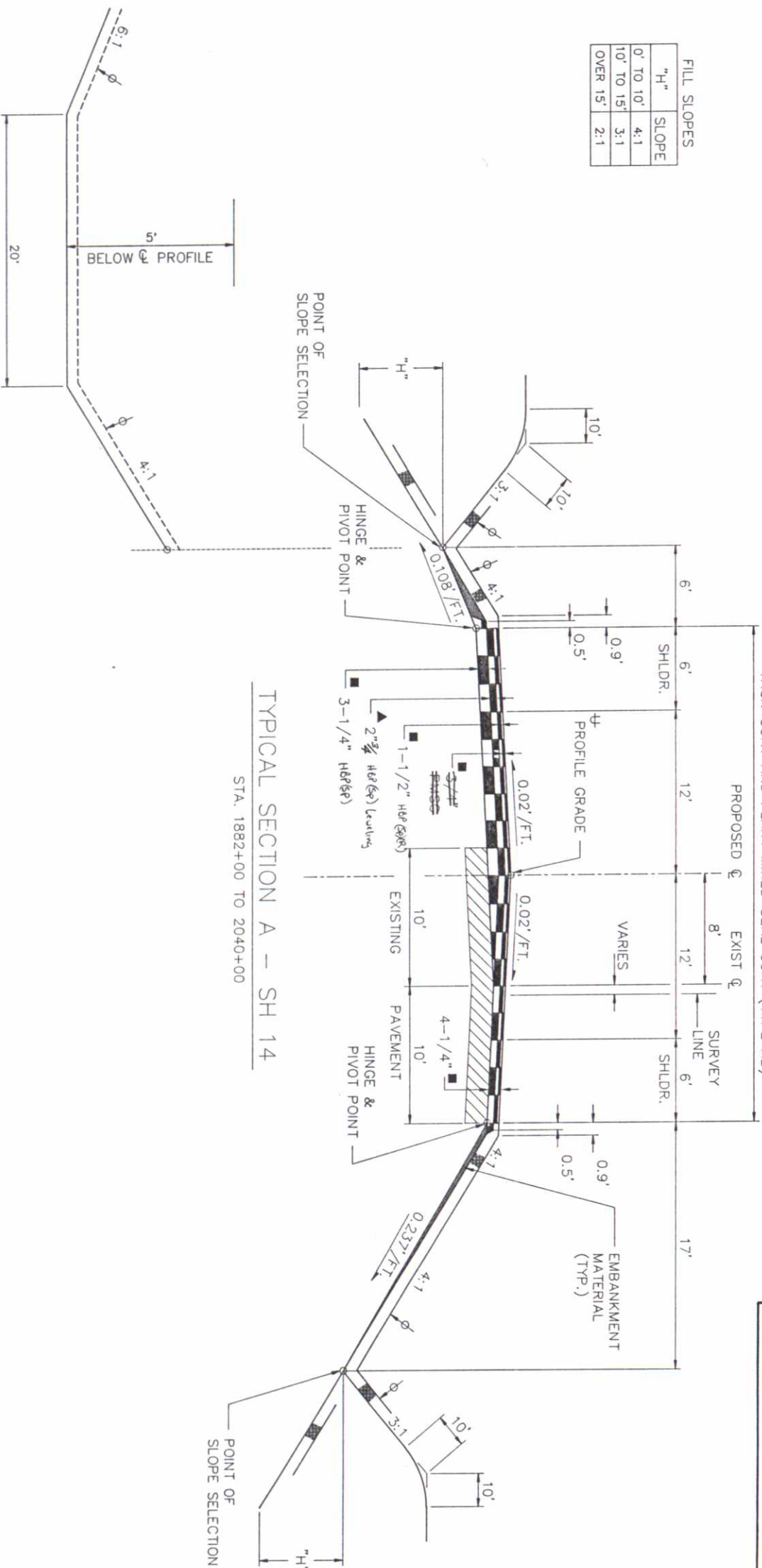
THE STANDARD PLAN SHEETS INDICATED HEREON BY A MARKED BOX ARE TO BE USED TO CONSTRUCT THIS PROJECT.

DEPARTMENT OF HIGHWAYS
STATE OF COLORADO
DIVISION OF HIGHWAYS

STANDARD PLANS LIST

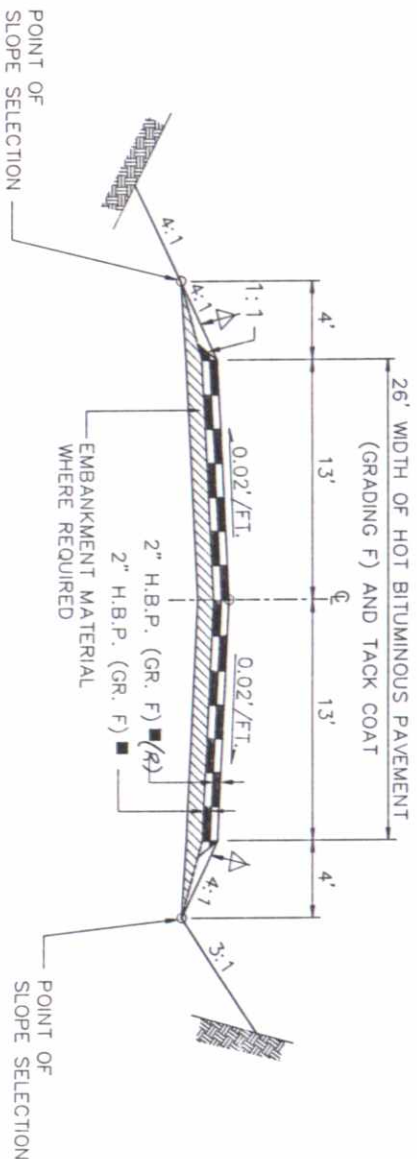
M & S STANDARDS - JANUARY, 1982

FILL SLOPES	
"H"	SLOPE
0' TO 10'	4:1
10' TO 15'	3:1
OVER 15'	2:1



TYPICAL SECTION A - SH 14
STA. 1882+00 TO 2040+00

TYPICAL SECTION - COUNTY ROADS



AS CONSTRUCTED			
NO REVISIONS	REVISED	9-7-90	VOID

FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
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SURFACING RATES FOR MINIMUM ROADWAY WIDTHS
MATERIAL SHALL BE PLACED IN SEPARATE COURSES AT THE FOLLOWING APPROXIMATE RATES PER 100 LINEAR FEET OF ROADWAY:

SH 14 - SECTION A	
COUNTY ROADS	
BITUMINOUS PAVEMENT	
TOP LAYER	33 TONS
MIDDLE LAYER	42 TONS
BOTTOM LAYER	47 TONS *
COUNTY ROADS	
BITUMINOUS PAVEMENT	
TOP LAYER	32 TONS
BOTTOM LAYER	33 TONS
* INCLUDES WEDGE SECTION OVER EXISTING PAVEMENT.	

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.

NOTES:

1. THE DEPTH AND WIDTH OF THE SIDE DITCH SHALL BE VARIED WHERE NECESSARY IN ORDER TO PROVIDE PROPER DRAINAGE.
2. BREAK POINTS ON SLOPES AND IN BOTTOMS OF DITCHES SHALL BE ROUNDED ON CONSTRUCTION FOR A PLEASING APPEARANCE; SEE STANDARDS FOR DETAILS OF CUT SLOPE TREATMENT, FLARING AND WIDENING.
3. BETWEEN STA. 1973+40 TO STA. 1983+40 AND STA. 1993+60 TO STA. 1997+80 ON THE RIGHT SIDE, SLOPES SHALL BE VARIED, AS DIRECTED BY THE ENGINEER, TO PROTECT EXISTING DITCH CHECKS THAT ARE TO REMAIN IN PLACE. SEE PLAN AND PROFILE SHEETS FOR LOCATIONS.
4. THE CONTRACTOR WILL BE REQUIRED TO PLACE A SUITABLE MATERIAL TO THIS LINE AFTER COMPLETION OF PAVING OPERATION (4 INCHES MIN.).
5. THE CONTRACTOR WILL BE REQUIRED TO PLACE A SUITABLE MATERIAL TO THIS LINE AFTER COMPLETION OF PAVING OPERATION.
6. PROFILE GRADE SHALL BE THE REQUIRED OVERLAY THICKNESS ABOVE THE EXISTING PAVEMENT.
7. APPROXIMATE THICKNESS
8. VARIABLE THICKNESS LEVELING COURSE

STATE HIGHWAY 14			
TYPICAL SECTIONS			
DATE	PROJECT NO.	DESIGNED BY	DRAWING NO.
MAY 5, 1989	URS 8024	SH, JLM	TS-1
	CHECKED BY	OF	SHEETS
	SE	1	TS-1

GENERAL NOTES

1. FOR PRELIMINARY PLAN QUANTITIES OF BITUMINOUS MATERIALS THE FOLLOWING RATES OF APPLICATION WERE USED:
- TACK COAT EMUL. ASPH. 0.10 GALS./SQ.YD. (DILUTED)
(SLOW-SETTING) & DUST PALMATIVE 110 LBS. PER SQ.YD./INCH
BITUMINOUS PAVEMENT (GRADING F) 110 LBS. PER SQ.YD./INCH
PAVEMENT MAINT. SEAL COAT (TYPE AB) 110 LBS. PER SQ.YD./INCH
EMULSIFIED ASPHALT USED FOR DUST PALMATIVE SHALL CONSIST OF 1 PART EMULSIFIED ASPHALT AND 9 PARTS WATER.
DILUTED EMULSIFIED ASPHALT FOR TACK COAT SHALL CONSIST OF 1 PART EMULSIFIED ASPHALT AND 1 PART WATER.
- WATER FOR EMULSIFIED ASPHALT WILL NOT BE MEASURED AND PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE WORK.
RATE OF APPLICATION SHALL BE DETERMINED BY THE ENGINEER AT THE TIME OF APPLICATION.
2. THE FOLLOWING SHALL BE FURNISHED WITH EACH PAYER:
1. A SKI TYPE DEVICE AT LEAST 30 FEET IN LENGTH.
2. SHORT SKIOR SHOE
3. ANY LAYER OF BITUMINOUS PAVEMENT THAT IS TO HAVE A SUCCEEDING LAYER PLACED THEREON SHALL BE COMPLETED FULL WIDTH BEFORE SUCCEEDING LAYER IS PLACED.
4. ROAD APPROACHES, OTHER THAN COUNTY ROADS, WHICH REQUIRE BITUMINOUS PAVEMENT SHALL HAVE A 2" THICKNESS OF PAVEMENT PLACED AS FOLLOWS:
- PUBLIC APPROACHES AND ENTRANCES TO BUILDINGS OR RESIDENCES SHALL BE PAVED 50 FEET OUT FROM EDGE OF SHOULDER OR TO THE RIGHT-OF-WAY LINE, WHICHEVER IS LESS. FIELD ENTRANCES SHALL BE PAVED 4 FEET OUT FROM EDGE OF SHOULDER.
5. DEPTH OF MOISTURE-DENSITY CONTROL FOR THIS PROJECT SHALL BE AS FOLLOWS:
- FULL DEPTH OF ALL EMBANKMENTS
BASES OF CUT AND FILL - 6 INCHES
6. EXCAVATION REQUIRED FOR COMPACTION OF BASES OF CUTS AND FILLS WILL BE CONSIDERED AS SUBSIDIARY TO THE WORK AND WILL NOT BE PAID FOR SEPARATELY.
7. THE TYPE OF COMPACTION FOR THIS PROJECT WILL BE AASHTO T-99.
8. MILE POSTS WILL BE ADJUSTED OR RESET BY STATE FORCES AT NO COST TO THE PROJECT.
9. IT IS ESTIMATED THAT 100 HOURS OF BLADING WITH A MOTOR GRADER IN THE 125 TO 150 FLYWHEEL HORSEPOWER RANGE WILL BE REQUIRED FOR DRAINAGE IMPROVEMENTS OR AS DIRECTED BY THE ENGINEER.
10. FOR INFORMATION ONLY IT IS ESTIMATED THAT 2000 LIFT-OF-4-INCH PAVEMENT MARKING TAPE WILL BE REQUIRED FOR TEMPORARY STRIPING.
11. SALVAGE OF REMOVED FENCE POSTS AND CULVERTS SHALL REMAIN THE PROPERTY OF THE COLORADO DEPARTMENT OF HIGHWAYS.
12. IT IS ESTIMATED THAT 100 TONS HBP (PATCHING/HAUL & ASPHALT) WILL BE REQUIRED AT LOCATIONS TO BE DIRECTED BY THE ENGINEER.
13. A CUTTING WHEEL WILL BE REQUIRED TO OBTAIN A VERTICAL CUT APPROXIMATELY 6-INCHES FROM THE EDGE OF EXISTING PAVEMENT OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR WILL BE REQUIRED TO PAINT THE EDGE OF CUT PAVEMENT WITH DILUTED EMULSIFIED ASPHALT (SLOW-SETTING) PRIOR TO PAVING. OPERATION VERTICAL EDGES WILL NOT BE LEFT OVERNIGHT. COST OF PAVEMENT REMOVAL WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN ITEM 203 EMBANKMENT MATERIAL (COMPLETE IN PLACE).
14. IT IS ESTIMATED THAT 226 GALLONS OF PAVEMENT MARKING PAINT WILL BE REQUIRED FOR THIS PROJECT USING 2 APPLICATIONS AS FOLLOWS:
- WHITE LANE LINES: 212 GALLONS
YELLOW LANE LINES: 104 GALLONS
- APPLICATIONS SHALL BE SEPARATED BY A MINIMUM OF 7 CALENDAR DAYS AND A MAXIMUM OF 21 CALENDAR DAYS.
15. REINFORCED CONCRETE PIPE ELLIPTICAL SHALL BE CR 4 RATED.
16. CONCRETE PIPE JOINT FASTENERS, AS SHOWN ON STANDARD M-603-10, ARE REQUIRED ON:
ALL CONCRETE CULVERT INSTALLATIONS EXCLUDING SIDE DRAINS.
17. THE CONTRACTOR WILL BE REQUIRED TO PROTECT THE EXISTING U.S.G.S. MARKER AT STA. 1919+95.941-1. ANY DAMAGE RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT HIS EXPENSE.
- To be removed by Contractor and markers given to State

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NO REVISIONS		REVISED 9-7-90	VOID		VIII	COLO.	FR 014-2(19)	4	22

SEEDING REQUIREMENTS

SOIL PREPARATION, FERTILIZING, SEEDING, AND MULCHING FOR AN ESTIMATED 29.1 ACRES WILL BE REQUIRED WITHIN THE RIGHT-OF-WAY LIMITS ON ALL DISTURBED AREAS NOT SURFACED. THE FOLLOWING TYPES AND RATES SHALL BE USED:

COMMON NAME	BOTANICAL NAME	RATE LBS. PLS/ACRE
WESTERN WHEATGRASS	AGROPYRON SMITHII	4
SMOOTH BROME V. LINCOLN	BROMUS INERMIS	5
PUBESCENT WHEATGRASS	AGROPYRON TRICHOPOHORUM	6
SAND DROPSIED	SPOROBOLUS CRYPTANDRUS	0.25
SIDEOATS GRAMA	BOUTELOUA CURTIPENDULA	3
CRESTED WHEATGRASS	AGROPYRON DESERTORUM	1
ALFALFA V. LADAK	MEDICAGO SATIVA	0.5
BLUEFLAX	LINUM LEWISII	0.5
SCARLET GLOBEWALLOW	SPHAERALCEA COCINEA	0.25
TOTAL POUNDS OF PLS/ACRE		20.5

COMMERCIAL FERTILIZER: RATE LBS./ACRE

AVAILABLE N 27

AVAILABLE P 69

THE FOLLOWING ESTIMATED QUANTITIES WILL BE REQUIRED:

SEEDING (NATIVE)	24.1 30 ACRES
MULCHING	24.1 30 ACRES
** FERTILIZER (AVAILABLE N)	706 070 LBS.
** FERTILIZER (AVAILABLE P)	2000 270 LBS.
** SOIL PREPARATION	24.1 30 ACRES

** FOR INFORMATION ONLY. QUANTITY INCLUDED IN COST OF SEEDING (NATIVE).

1.5 TONS PER ACRE OF NATIVE HAY SHALL BE MECHANICALLY CRIMPED INTO SOIL.

STATE HIGHWAY 14					
GENERAL NOTES & SEEDING REQUIREMENTS					
DATE	PROJECT NO.	DESIGNED BY	CHECKED BY	SHEET NO.	DRAWING NO.
MAY 5, 1989	URS 8024	R.D.W.	R.E.	1	GN-1

SUMMARY OF APPROXIMATE QUANTITIES

AS CONSTRUCTED		FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.
NO REVISIONS	REVISED 9-7-92	XIII	COLO.	FR 014-2(19)	5
VOID					

(R-1) REVISED QUANTITY - GRR-9-6-89

INDEX	CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	ROADWAY												PROJECT TOTAL		DIFF. +/- PLAN.
				PLAN	AS CONST.											PLAN	AS CONST.	
BOOK PAGE SHEET 305	202	REMOVAL OF PIPE	EACH	13	13											13	13	
	202	REMOVAL OF DELINEATOR	EACH	32	58											32	58	
	202	REMOVAL OF FENCE	LF	14,780	14,975											14,780	14,975	
	202	PLUG CULVERT	EACH	1	1											1	1	
	203	EMBANKMENT MATERIAL (COMPLETE IN PLACE)	CY	36,392	37,812											36,392	37,812	
	203	BLDGNG	HOUR	100	106.5											100	106.5	
	203	Borrow Right (misc) mcr3	LS	0	1											0	1	
	210	RESET MAILBOX STRUCTURE	EACH	2	2											2	2	
	210	RESET GROUND SIGN	EACH	13	12											13	12	
	210	RESET FENCE	LF	5,780	193											5,780	193	
	212	SEEDING (NATIVE)	ACRE	30	30											30	30	
	213	MULCHING	ACRE	30	30											30	30	
	403	HOT BITUMINOUS PAVEMENT (PATCHING) (HAUL AND ASPHALT)	TON	100	90.22											100	90.22	
	403	Hot Bituminous Pavement Special cmc#2	TON	0	16,156.80											0	16,156.80	
	403	HOT BITUMINOUS PAVEMENT (GRADING F) (HAUL AND ASPHALT)	TON	16,099	0											16,099	0	
	403	HOT BITUMINOUS PAVEMENT (GRADING F) (HAUL ASPHALT)	TON	5,541	0											5,541	0	
	403	(RUBBERIZED) Deleted by cmc#2	TON	0	5115.45											0	5115.45	
	410	Hot Bituminous Pavement Special Rubberized cmc#2	TON	2,640	0											2,640	0	
	410	PLANT MIXED SEAL COAT (TYPE AB) (HAUL AND ASPHALT)	TON	2,640	0											2,640	0	
	410	(RUBBERIZED) Deleted by cmc#2	TON	2,640	0											2,640	0	
	411	EMULSIFIED ASPHALT (SLOW-SETTING)	QAL	11,372	5432											11,372	5432	
	506	REPRAP	CY	54	57											54	57	
	601	CONCRETE CLASS A (WALL)	CY	61.2	61.2											61.2	61.2	
	602	REINFORCING STEEL	LB	3,762	3992											3,762	3992	
	603	38X24 INCH REINFORCED CONCRETE PIPE ELLIPTICAL	LF	56	72											56	72	
	603	45X29 INCH REINFORCED CONCRETE PIPE ELLIPTICAL	LF	140	140											140	140	
	603	53X34 INCH REINFORCED CONCRETE PIPE ELLIPTICAL	LF	192	192											192	192	
	603	60X38 INCH REINFORCED CONCRETE PIPE ELLIPTICAL	LF	192	192											192	192	
	603	68X43 INCH REINFORCED CONCRETE PIPE ELLIPTICAL	LF	192	192											192	192	
	603	38X24 INCH REINFORCED CONCRETE END SECTION ELLIPTICAL	EACH	2	2											2	2	
	603	45X29 INCH REINFORCED CONCRETE END SECTION ELLIPTICAL	EACH	4	4											4	4	
	603	53X34 INCH REINFORCED CONCRETE END SECTION ELLIPTICAL	EACH	4	4											4	4	
	603	60X38 INCH REINFORCED CONCRETE END SECTION ELLIPTICAL	EACH	4	4											4	4	
	603	68X43 INCH REINFORCED CONCRETE END SECTION ELLIPTICAL	EACH	4	4											4	4	
	607	END POST	EACH	6	21											6	21	
	607	CORNER AND LINE BRACE POST	EACH	17	33											17	33	
305	607	FENCE BARBED WIRE WITH METAL POSTS	LF	12,856	19,350											12,856	19,350	

(R-1)

SUMMARY OF APPROXIMATE QUANTITIES

AS CONSTRUCTED		FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.
NO REVISIONS	REVISED	XIII	COLO.	FR 014-2(19)	

INDEX	CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	ROADWAY		PROJECT TOTAL										DIFF. +/-	% PLAN.			
				PLAN	AS CONST.													PLAN	AS CONST.	
BOOK PAGE SHEET 305	607	16 FOOT GATE	EACH	2	2															
	609	CURB TYPE 6 (SECTION M)	LF	233	164															
	612	DELINEATOR (TYPE I)	EACH	116	117															
	612	DELINEATOR (TYPE II)	EACH	12	10															
	612	DELINEATOR (TYPE III)	EACH	6	2															
	612	SURVEY MONUMENT (TYPE 1)	EACH	35	37															
	612	SURVEY MONUMENT (TYPE 2)	EACH	14	7															
	305 612	SURVEY MONUMENT (TYPE 3)	EACH	22	22															
	7 614	FLAGGING	HOUR	1,500	2,270															
	7 614	TRAFFIC CONTROL SUPERVISOR	DAY	60	74															
	614	CONSTRUCTION TRAFFIC SIGN (PANEL SIZE A) MCR3	EACH	12	4															
	614	CONSTRUCTION TRAFFIC SIGN (PANEL SIZE B) MCR3 CMO1	EACH	24	54															
	614	VERTICAL PANEL MCR3	EACH	100	81															
	614	VERTICAL PANEL (WITH LIGHT) (FLASHING) MCR3	EACH	100	4															
	614	TRAFFIC CONE MCR3	EACH	100	51															
	620	FIELD OFFICE (CLASS 2)	EACH	1	1															
	620	FIELD LABORATORY (CLASS 2)	EACH	1	1															
	620	SANITARY FACILITY	EACH	1	1															
	624	18 INCH CULVERT PIPE (CR 4)	LF	252	252															
	624	24 INCH CULVERT PIPE (CR 4)	LF	216	219															
	624	84 INCH CULVERT PIPE (CR 4)	LF	26	26															
	625	CONSTRUCTION SURVEYING MCR3	LS	1	1															
	626	MOBILIZATION	LS	1	1															
305 627	—	PAVEMENT MARKING PAINT Installation of Utility Crossing MCR3 FORCE ACCOUNT	QAL LS	276 0	321 1															
	700	F/A MINOR CONTRACT REVISIONS	F A	1	1															
305 700	—	F/A ON-THE-JOB TRAINEE	EACH	1	1															
305	—	Process Aggregate Cmo 2	LS	0	1															
305	—	Rock Special Cmo 1	LS	0	1															
	—	Liquidated Damages (Cmo#4)	DAY	0	7															

Final

STRUCTURE QUANTITIES

AS CONSTRUCTED		FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
NO REVISIONS	REVISED 9-7-92	VIII	COLD.	FR 014-2(19)	7	22
		VOID				

INDEX	BOOK	PAGE	SHEET	LOCATION	REMOVAL OF PIPE	UNCLASSIFIED				STRUCTURE				STRUCTURE				CONCRETE CL. A (WALL)	REINFORCING STEEL	PLUG CULVERT	CULVERT PIPE (CR4)										MISCELLANEOUS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
						EXCAV	DITCH	EMB	CUBIC YARD	CUBIC YARD	CUBIC YARD	CL. 2	CL. 2	CL. 2	CL. 2	ROUND					EACH																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
																18"	24"				36"	42"	60"	84"	36"x24"x45"	42"x34"x60"	36"x38"x43"	FT.	9"	12"		24"	18"	24"	36"	42"	60"	36"x24"x45"	42"x34"x60"	36"x38"x43"																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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* INCLUDES END SECTIONS

FOR INFORMATION ONLY

CARRIED TO SUMMARY OF EARTHWORK

SUMMARY OF EARTHWORK (R-1)

INDEX	ITEM	CUBIC YARDS	
		PLAN	FINAL
	PAY QUANTITIES		
	EMBANKMENT MATERIAL C.I.P. *FROM ROADWAY CROSS SECTIONS STRUCTURE QUANTITIES AS EMBANKMENT	36,138 254	37,558 254
	TOTAL FOR PAY QUANTITY	36,392	37,812
	FOR INFORMATION ONLY		
	UNCLASSIFIED EXCAVATION FROM ROADWAY CROSS SECTIONS ESTIMATED FOR CUT SLOPE TREATMENT	44,201 221	
	EMBANKMENT MATERIAL (NET)	44,422	
	EMBANKMENT x FACTOR (1.40)	36,392	
	EMBANKMENT x FACTOR (1.40)	50,948	
	BORROW (CONTRACTOR'S SOURCE)	6,392	
	COMPACTION (AASHTO T99)		
	EMBANKMENT (NET) BASES OF CUTS AND FILLS	36,392 11,059	
	TOTAL	47,451	
	WETTING (M-GAL)	1,908	

* INCLUDES SUITABLE MATERIAL FOR SLOPES.

AS CONSTRUCTED				FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
NO REVISIONS	REVISED	9-7-90	VOID	VIII	COLD.	FR 014-2(19)	8	22

(R-1) REVISED EARTHWORK - GRR-9-6-89

FINAL TABULATION OF FENCING REQUIREMENTS

STATION	SIDE	REMOVAL OF FENCE		FENCE BARBED WIRE W/METAL POSTS		FENCE COMBINATION WIRE W/METAL POSTS		RESET FENCE		16" DRIVEWAY GATE		7.5" BARBED WIRE GATE	
		PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL
1919+00 TO 1970+00	LT.	5,100	5,100										
1970+50 TO 2004+60	LT.	3,410	3,410										
2007+30 TO 2040+00	LT.	3,300	3,300										
2022+95	LT.												
1898+30 TO 1910+00	RT.	1,170	1,170	1,170	1,164								
2012+98	RT				46								
2000+58	RT							97					
1904+58	RT							96					
2012+75 TO 2018+25	LT				603								
1910+00 TO 1917+00	RT.	700	700	700	701								
1917+40 TO 1967+80	LT.			5,540	5,541								
1949+75 TO 1958+55	LT.				1035								
1976+54 TO 2043+50	LT.			4,346	4,678								
1917+00 TO 1917+40	RT				41								
1984+75 TO 1994+25	LT.				703								
2010+80 TO 2017+80	RT.	700	700	700	800								
2060+70 TO 2034+20	LT.				1431								
2032+00 TO 2036+00	RT.	400	400	400	400								
2035+50 TO 2043+50	LT.				918								
1931+51	RT.				31								
1970+11	LT.												
1970+20	LT.												
1990+20	RT												
2006+14	LT.									2	2		
1970+11 TO 1972+06	RT		195										
1947+00	LT												
PROJECT TOTALS		14,780	14,975	12,856	19,350			5,780	193	2	2	5	4

* FOR INFORMATION ONLY
NOTE: 1/19 ESTIMATED THAT 21 END POSTS AND 33 CORNER AND LINE BRACE POSTS WILL BE REQUIRED FOR THIS PROJECT.

STATE HIGHWAY 14			
EARTHWORK AND FENCE QUANTITIES			
DATE MAY 5, 1989	PROJECT NO. URS 8024	DESIGNED BY R.E. BLOOM	SHEET NO. 1 OF 1 SHEETS
CHECKED BY G.H.		DRAWING NO. SE-1	

AS CONSTRUCTED		FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS	
NO REVISIONS	REVISED <u>4-7-90</u>	VOID	VIII	COLD	FR 014-2(19)	10	22

[illegible]

18 K ESAL	2,184,000	2,184,000	STRENGTH COEFFICIENT
SERVICEABILITY INDEX	2.5	2.5	H.B.P. (GRADING F)
REGIONAL FACTOR	0.5	0.5	P.M.S.C. (TYPE AB)
SUBGRADE "R" VALUE	—	25	
W S N	1.70	3.12	

Final TABULATION OF DELINEATORS

LOCATION	SIDE	SPACING	DELINEATOR - EACH		
			TYPE I		TYPE III
			CRYSTAL	YELLOW	CRYSTAL YELLOW
1882+78 TO 1891+00	RT.	TAN.	2		
1891+00 TO 1891+40	RT.	R=50'	5		
1891+80 TO 1892+20	RT.	R=50'	5		
1892+20 TO 1894+70	RT.	TAN.	1		
1894+70 TO 1895+20	RT.	R=50'	5		
1895+50 TO 1896+00	RT.	R=50'	5		
1896+00 TO 1896+50	RT.	TAN.	4 3/4		
1896+50 TO 1970+00	RT.	R=50'	5		
1970+20 TO 1977+70	RT.	R=50'	5		
1977+70 TO 2022+50	RT.	TAN.	8 9		
2022+50 TO 2023+00	RT.	R=50'	5		
2023+30 TO 2023+80	RT.	R=50'	5		
2023+80 TO 2040+00	RT.	TAN.	3		
2040+00 TO 2044+00	RT.	TAPER		8 5	
1889+02.5 TO 1890+99.5	LT.	(2)R=16'	7		8 2
1883+30 TO 1917+40	LT.	TAN.	6		
1917+40 TO 1917+90	LT.	R=50'	8 0		
1918+30 TO 1918+80	LT.	R=50'	8 0		
1918+80 TO 1969+50	LT.	TAN.	4 8 1/2		
1969+50 TO 1970+00	LT.	R=50'	5		
1970+20 TO 1970+70	LT.	R=50'	5		
1970+70 TO 2040+00	LT.	TAN.	4 3 1/4		
2040+00 TO 2044+00	LT.	TAPER		8 5	
PROJECT TOTALS			146 1/7	12 10	8 2

ESTIMATED THAT 38 DELINEATORS WILL BE REMOVED ON THIS PROJECT.

Final TABULATION OF RESET ITEMS

STATION	SIDE	RESET MAILBOX		REMARKS
		EACH		
		PLAN	FINAL	
2006+28	LT.	2	2	
PROJECT TOTALS		2	2	

Final RESET GROUND SIGNS

STATION	SIDE	EACH	
		PLAN	FINAL
1885+26	LT.	1	0
1890+22	RT.	1	0
1895+34	LT.	1	0
1895+66	RT.	1	1
1895+68	RT.	1	1
1896+25	LT.	1	1
1897+44	RT.	1	1
1900+38 36	RT.	1	1
1918+02	LT.	1	2
1970+31	RT.	2	2
2023+30	RT.	1	1
2023+32	RT.	1	1
1892+00	RT.	1	1
PROJECT TOTALS		13	12

Final SCHEDULE OF CONSTRUCTION TRAFFIC SIGNS

SIGNS					OTHER DEVICES				
SIGN CODE	LEGEND	DIMENSIONS	PANEL SIZE			ITEM	UNIT	PROD. TOTALS	
			A	B	C				
36R2-1(55)	SPEED/LIMIT/55	36" x 48" 24" x 36"	2	2		FLAGGING	HOUR	1500 22	
36R2-1(40)	SPEED/LIMIT/40	36" x 48"		24		TRAFFIC CONTROL SUPERVISOR	DAY	60 74	
36R2-1(30)	SPEED/LIMIT/30	36" x 48"		24		VERTICAL PANEL	EACH	100 51	
48W8-3a	PAVEMENT ENDS SYMBOL	48" x 48"		2		VERTICAL PANEL (WITH LIGHT)(FLASHING)	EACH	100 51	
48W20-1	ROAD/CONSTRUCTION/(DISTANCE)	48" x 48"		40		TRAFFIC CONE	EACH	100 51	
48W20-4	ONE LANE/ROAD/(DISTANCE)	48" x 48"		2					
48W20-7a	FLAGGER SYMBOL	48" x 48"		24					
60G20-1	ROAD/CONSTRUCTION/NEXT (X) MILES	60" x 36"		2					
60G20-2	END/CONSTRUCTION TURN OFF TO THE RIGHT	60" x 24" 80" x 36"		2					
36W21-14L	UNEVEN LANES SYMBOL - LEFT	36" x 36"		1					
36W21-14R	UNEVEN LANES SYMBOL - RIGHT	36" x 36"		1					
24W21-14a	UNEVEN/LANES	24" x 18"		2					
36R4-1	DO/NOT/PASS	36" x 48" 24" x 30"		4					
36R4-2	PASS/WITH/CARE	36" x 48" 24" x 30"		7					
Special	Truck Turning	36" x 36"		2					
447a	Keep Right	24" x 30"		2					
SIGN TOTALS			12	24	4				

NOTES:

1. ALL CONSTRUCTION WARNING SIGNS PROVIDED ON THIS PROJECT SHALL BE EQUIPPED WITH HIGH BRIGHTNESS ENCAPSULATED TYPE REFLECTIVE SHEETING. SEE SECTION 713.10 OF THE STANDARD SPECIFICATIONS.
2. FOR INFORMATION ONLY - IT IS ESTIMATED THAT 2008 LIN. FT. OF PAVEMENT MARKING TAPE AND 15 GALLONS OF YELLOW PAINT WILL BE REQUIRED FOR TEMPORARY STRIPING DURING CONSTRUCTION.

SEE CASE IV AND CASE VI OF STANDARD S-614-50 OF THE "COLORADO STANDARD PLANS" FOR BASIC PLACEMENT DETAILS OF THE CONSTRUCTION TRAFFIC CONTROL DEVICES.

36R2-1(55) THIS SIGN IS INTENDED FOR USE 500' PAST THE "END OF CONSTRUCTION" SIGN.

60G20-1 THIS SIGN SHALL BE ERRECTED AT THE LIMITS OF ANY ROAD CONSTRUCTION JOB OF MORE THAN (2) MILES IN EXTENT, WHERE TRAFFIC IS MAINTAINED THROUGH THE JOB.

48W8-3a THE "PAVEMENT ENDS" SIGN IS INTENDED FOR USE TO WARN WHERE PAVEMENT SURFACE CHANGES FROM A HARD SURFACED PAVEMENT TO A LOW-TYPE SURFACE OR EARTH ROAD.

48R2-1(XX) THESE "SPEED LIMIT" SIGNS ARE INTENDED TO REDUCE TRAFFIC SPEED IN ADVANCE OF THE DAILY WORK AREA WITHIN THE OVERALL PROJECT LIMITS.

24R4-1/24R4-2 THESE REGULATORY SIGNS (DO/NOT/PASS, PASS/WITH/CARE) ARE USED IN CONJUNCTION TO PROHIBIT PASSING THROUGH THE CONSTRUCTION ZONE WHERE CONDITIONS DO NOT ALLOW AND ALLOWS PASSING PAST THE CONSTRUCTION ZONE LIMITS.

36W21-14() THE "UNEVEN LANE" SYMBOL SIGN IS INTENDED FOR USE 500' IN ADVANCE OF AN UNEVEN LANE SITUATION THAT EXCEEDS ONE INCH IN HEIGHT.

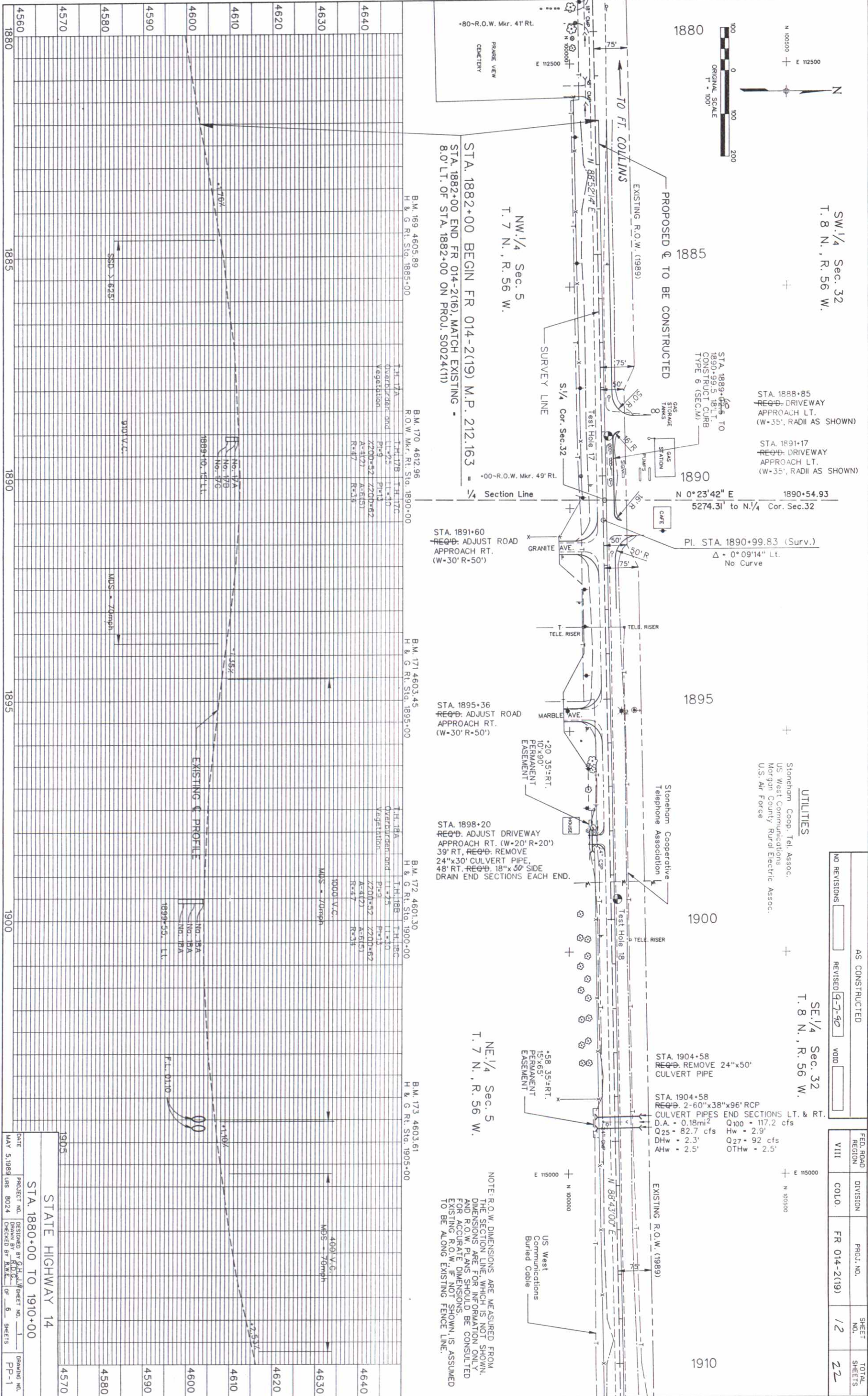
THE CONTRACTOR WILL BE REQUIRED TO UTILIZE THIS SCHEDULE OF CONSTRUCTION TRAFFIC SIGNS AND RELATED NOTES IN ORDER TO MAINTAIN TRAFFIC DURING CONSTRUCTION.

BASED UPON SIGHT DISTANCE AND OTHER CONSIDERATIONS THE FINAL LOCATION OF THESE SIGNS IS SUBJECT TO THE APPROVAL OF THE PROJECT ENGINEER.

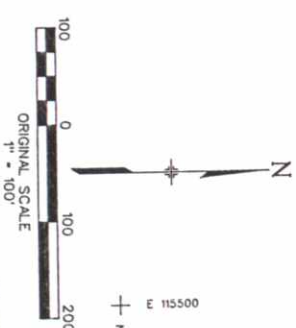
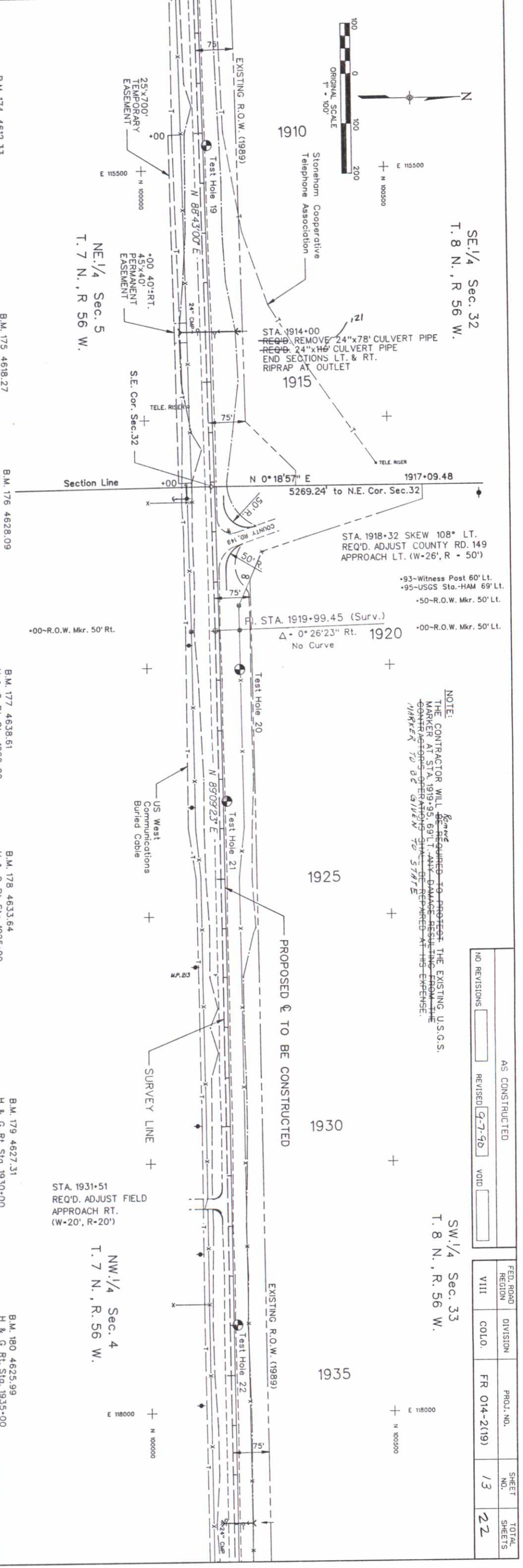
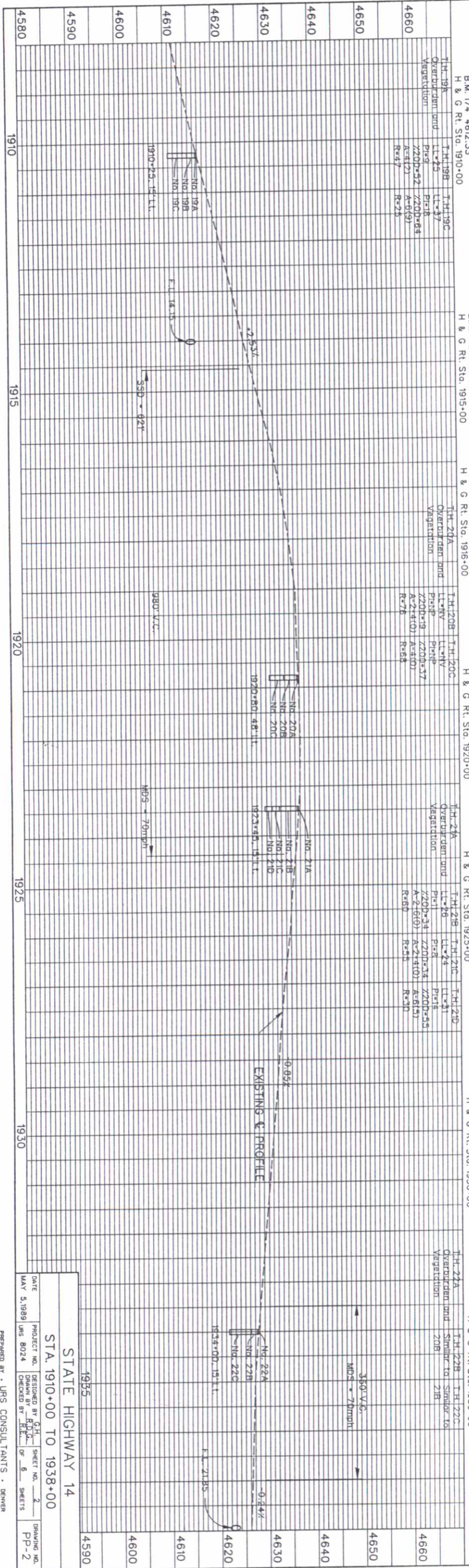
GROUND SIGN NOTES:

1. DURING CONSTRUCTION, THE CONTRACTOR WILL BE RESPONSIBLE FOR MAINTAINING THE REQUIRED EXISTING SIGNING. THIS SHALL NOT BE PAID FOR SEPARATELY, BUT WILL BE INCLUDED IN ITEM 210 "RESET GROUND SIGNS".
2. UPON COMPLETION OF THIS PROJECT THE CONTRACTOR WILL BE REQUIRED TO UTILIZE TABULATION OF RESET GROUND SIGNS AND STANDARD S-614-1 FOR PERMANENT SIGNING LOCATIONS.

STATE HIGHWAY 14			
MISCELLANEOUS TABULATION			
DATE	PROJECT NO.	DESIGNED BY	DRAWING NO.
MAY 5, 1989	URS 8024	URS	TM-1



AS CONSTRUCTED		FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
NO REVISIONS	REVISED <u>9-7-90</u>	VIII	COLO.	FR 014-2(19)	12	22



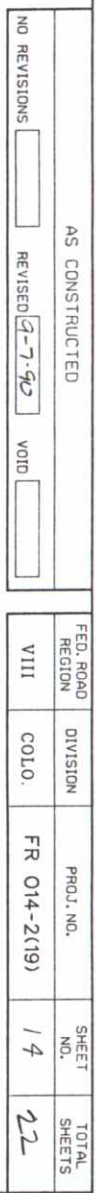
SE 1/4 Sec. 32
T. 8 N., R. 56 W.

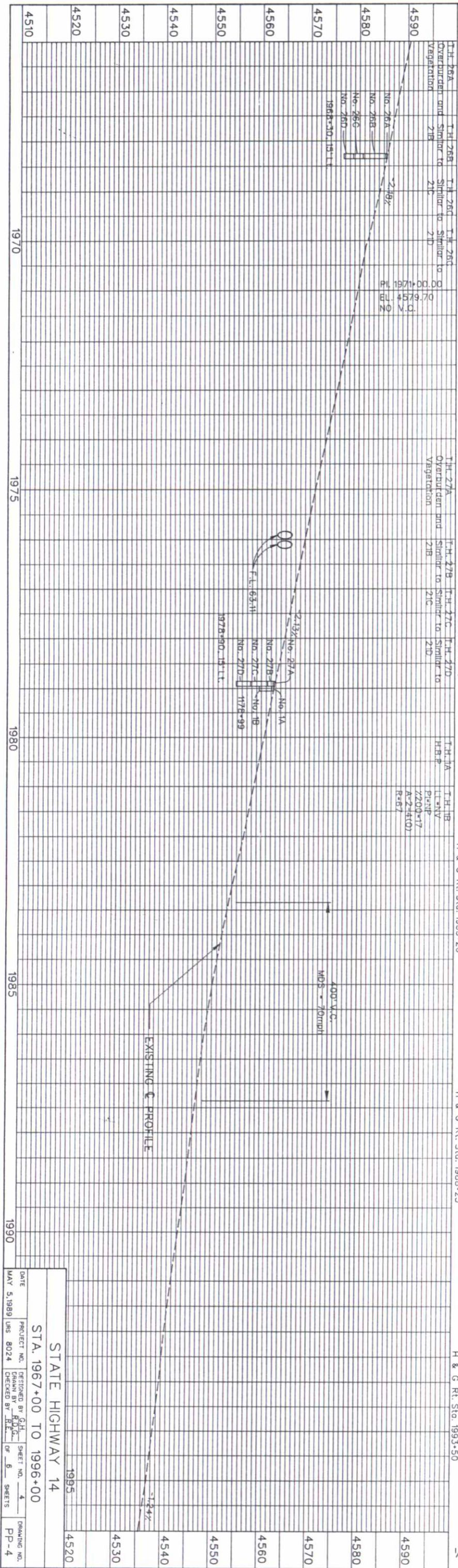
NOTE:
THE CONTRACTOR WILL BE REQUIRED TO PROTECT THE EXISTING U.S.G.S. MARKER AT STA. 1919+95.69 LT. ALL DAMAGE RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT HIS EXPENSE. MARKER TO BE GIVEN TO STATE

SW 1/4 Sec. 33
T. 8 N., R. 56 W.

AS CONSTRUCTED		FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
NO REVISIONS	REVISED	VIII	COLO.	FR 014-2(19)	13	22

STATE HIGHWAY 14
STA. 1910+00 TO 1938+00
DATE MAY 5, 1989
PROJECT NO. 8024
DESIGNED BY R.E. G. H.
CHECKED BY R.E. G. H.
SHEET NO. 2
TOTAL SHEETS 22
DRAWING NO. PP-2
PREPARED BY URS CONSULTANTS - DENVER





NE 1/4 Sec. 4
T. 7 N., R. 56 W.

STA 1970+15
REQ'D. ADJUST COUNTY
RD. 151 APPROACH RT.
(W=26', R=50')

S 0°19'48" E
Section Line 5325.70'

B.M. 187 4584.87
H & G Rt. Sta. 1970+00

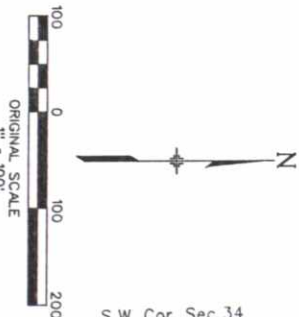
B.M. 188 4572.65
H & G Rt. Sta. 1972+75

B.M. 189 4564.63
H & G Rt. Sta. 1977+70

B.M. 190 4551.86
H & G Rt. Sta. 1983+20

B.M. 191 4543.98
H & G Rt. Sta. 1988+25

B.M. 192 4541.25
H & G Rt. Sta. 1993+50



SE 1/4 Sec. 33
T. 8 N., R. 56 W.

S.W. Cor. Sec. 34
Pl. STA. 1970+10.03 BK. (Proj.)
Pl. STA. 1970+11.25 AH. (Proj.)
Δ = 0°06'40" Lt.
No Curve

N 0°08'54" E
1970+11.39
2628.32' to W 1/4 Cor. Sec. 34

STA. 1970+11
REQ'D. ADJUST ROAD
END SECTIONS EACH END
(W=20', R=20')

STA. 1970+10.48 LT.
REQ'D. 18\"/>

STA. 1970+10.23 LT.
REQ'D. REMOVE 18\"/>

1975

STA. 1976+00
REQ'D. REMOVE 24\"/>

1980

STA 1983+40 LT.
REQ'D. FIELD APPROACH

Sta 1983+40 Lt
Req'd 18\"/>

Sta 1983+40 Rt
Req'd 18\"/>

1985

SW 1/4 Sec. 34
T. 8 N., R. 56 W.

STA. 1990+20
REQ'D. FIELD APPROACH LT.
(W=20', R=20')

1990

E 123500
+00~R.O.W. Mkr. 50.5' Lt.

N 0°05'00"

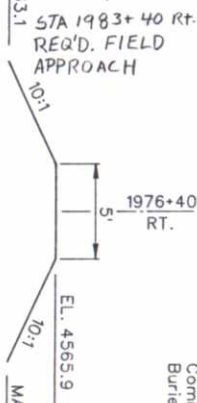
30'x950'
TEMPORARY EASEMENT

1995

S 1/4 Cor. Sec. 34
Pl. STA. 1996+54.35 (Surv.)
Δ = 0°06'20" Rt.
No Curve

N 0°11'39" E
1996+54.50
2629.49' to Center Sec. 34

BERM DETAIL



NW 1/4 Sec. 3
T. 7 N., R. 56 W.

STA 1990+20
REQ'D. ADJUST FIELD
APPROACH RT.
(W=20', R=20')

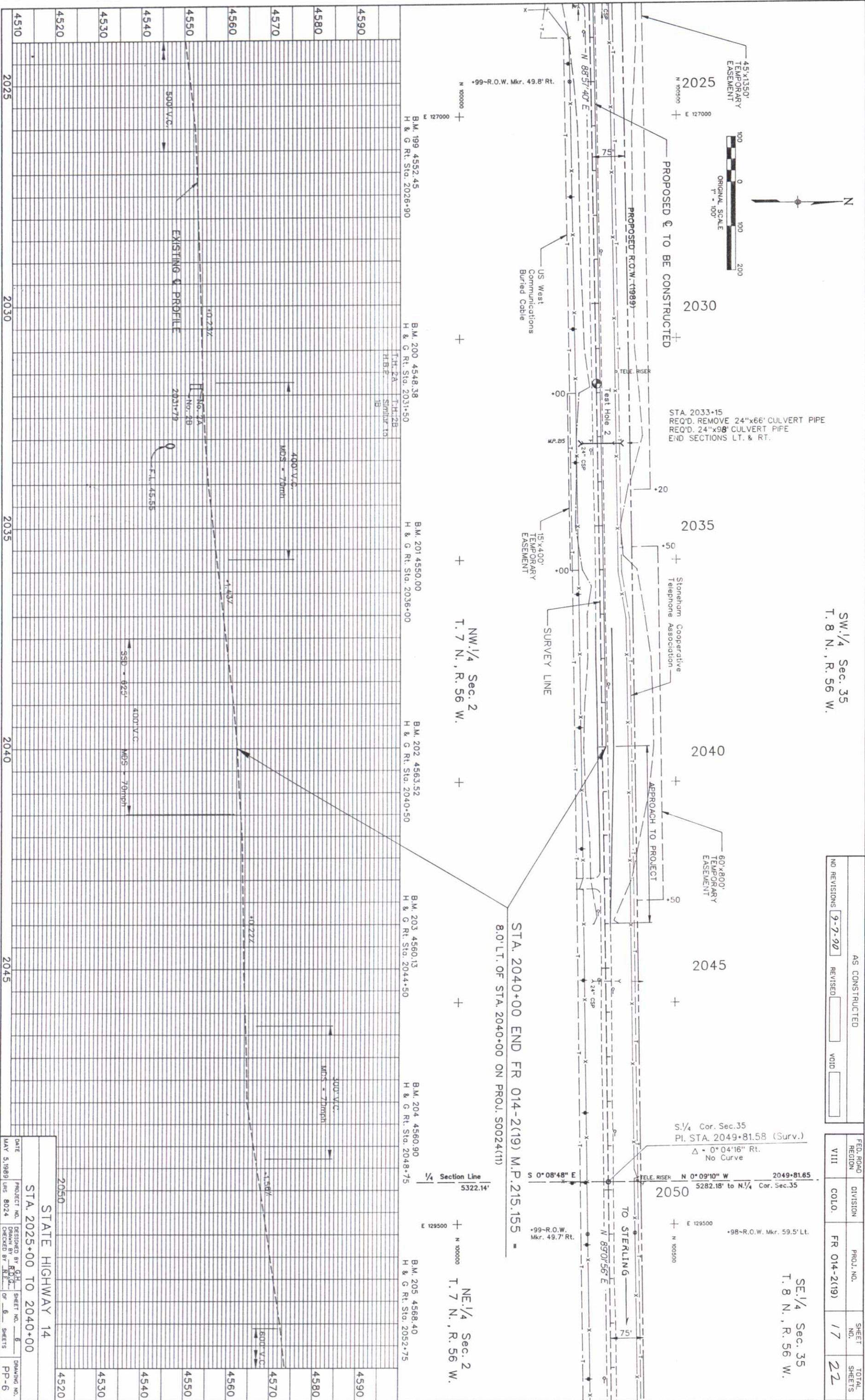
E 123500
+ N 000000

STA. 1993+60 TO 1997+80
4 EXISTING DITCH CHECKS
TO REMAIN IN PLACE

1/4 Section Line S 0°23'49" E 5323.81'

AS CONSTRUCTED				FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
NO REVISIONS	REVISED 9-7-90	VOID		VIII	COLO.	FR 014+2(19)	15	22

STATE HIGHWAY 14			
STA. 1967+00 TO 1996+00			
DATE	PROJECT NO.	DESIGNED BY	SHEET NO.
MAY 5, 1989	URS 8024	URS	4
CHECKED BY	PP-4		



AS CONSTRUCTED		FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
NO REVISIONS 9-7-90		VIII	COLO.	FR 014-2(19)	17	22
REVISED	VOID					

AL MILLER PIT -- AVAILABLE SOURCE

DESIGNATED MATERIALS PIT INFORMATION

PIT NAME Al Miller Pit
OWNERS NAME Albert and Ethel Mae Miller
OWNERS ADDRESS Rt. 3, Section 3, T. 31 N., R. 107 W.
PIT LOCATION (LEGAL) A portion of the Northeast 1/4, Section 3,
Township 8 North, Range 58 West of the 6th P.M., Weld County, Colorado
TYPE OF PIT Sand and Gravel
ROYALTY FEE Forty Cents (40c) per Ton
ROYALTY CHECKS PAYABLE TO Albert and Ethel Mae Miller
OPTION EXPIRATION DATE October 30, 1991
OPTION DATE August 3, 1988
PIT CONSTRUCTION REQUIREMENTS

- The Department has obtained the necessary county zoning clearance and the required permit from Colorado Mine Land Reclamation.
- At the preconstruction conference the Contractor will submit an excavation plan to the Engineer for his approval. The plan will include stockpile locations, the Contractor's plan for excavated areas, gravel, and the Contractor's plan to prevent widespread contamination should there be any leaks of fuel or other hazardous materials.
- This available source is not to be used as a plant site for producing hot bituminous pavement. The Contractor will be responsible for obtaining his own plant site.
- The area to be utilized by the Contractor for the gravel operation will be shown as the affected area. The boundaries of the affected area will be marked by the Engineer and all of the Contractor's activities on the owner's property that pertain to the gravel operation will be confined within these boundaries. If the Contractor's operation strays beyond these boundaries and disturbs previously disturbed areas, the gravel operation will stop until a 1-wire fence has been built on all unfenced boundaries of the affected area.
- Variations were noted in the gradations of test hole samples from this deposit. Care should be exercised by the Contractor during aggregate production to assure that the material is stockpiled and blended in a manner that will produce a uniform material in the stockpile.
- A screening plant will be required to produce specification material.
- The Contractor will use equipment capable of working a vertical face when excavating the gravel. All materials designated by the Engineer as usable will be removed full depth as the Contractor proceeds with his excavation.
- The Contractor will be required to stockpile the screened material prior to mixing it with asphalt cement.
- The Contractor will strip the top six inches of any stockpile sites, areas to be excavated, haul roads, or any other areas that will be disturbed by his operation. This material will be stockpiled in a separate stockpile.
- Any additional overburden in areas that are excavated will be removed and stockpiled separately from the stockpiled top six inches.
- The Contractor will begin his excavation at the east face of the existing pit and continue back into the deposit.
- The bottom of the pit excavation will be left relatively smooth with no large mounds or depressions.
- All backfills created by this excavation will be left no steeper than 4:1. Any backfills with a vertical distance that is greater than ten feet from top to toe of slope must be benched at the approximate midpoint of the slope to aid in preventing water erosion.
- All rock obtained as oversize from the screening operation will be placed on the existing oversize stockpile in the affected area.
- No trash will be buried on this site. It will be hauled from the affected area.
- At the completion of the operation all locations in the affected area that had overburden removed or vegetation disturbed will be ripped a minimum depth of six inches (6") using an approved ripper. Methods such as backfilling with loader bucket teeth are not acceptable.
- The stockpiled excess overburden will then be placed uniformly over the bottom of the area where gravel was removed during this operation.
- The top six inches will then be placed uniformly over the areas from which it was removed.

AS CONSTRUCTED				FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	SHEET TOTALS
NO REVISIONS	7-7-90	REVISED	VOID	VIII	COLO.	FR 014 - 2(19)	18	22

PIT CONSTRUCTION AND RECLAMATION REQUIREMENTS-CONTINUED

19. All areas that were ripped and/or covered with the stockpiled top six inches (6") will then be fertilized, seeded, and mulched using the materials and quantities listed below:

SEEDING PLAN		RATE - PLS/ACRE	
COMMON NAME	SCIENTIFIC NAME		
Western Wheatgrass (Baron)	Agropyron Salicif.	9.6	
Yellow Sweetclover	Medicago Officinalis	1.6	
Sand Dropseed	Spodiopogon Cryphtandus	3.2	
Crested Wheatgrass (Jordan)	Agropyron Desestorum	1.6	
TOTAL PLS/ACRE - SEEDING		16.0	
MULCH			
Mulching Material - 2 tons per acre Native Hay.			
FERTILIZER		LBS/ACRE	
COMMERCIAL FERTILIZER		40	
Available Nitrogen		40	
Available Phosphate		40	

ALL WORK REQUIRED TO PERFORM THE PIT CONSTRUCTION AND RECLAMATION REQUIREMENTS AND OTHER ITEMS NECESSARY FOR THE COMPLETION OF THE PIT OPERATION WILL BE CONSIDERED SUBSIDIARY TO THE GRAVEL PIT OPERATION.

MILLER PIT
AGGREGATE TEST REPORT

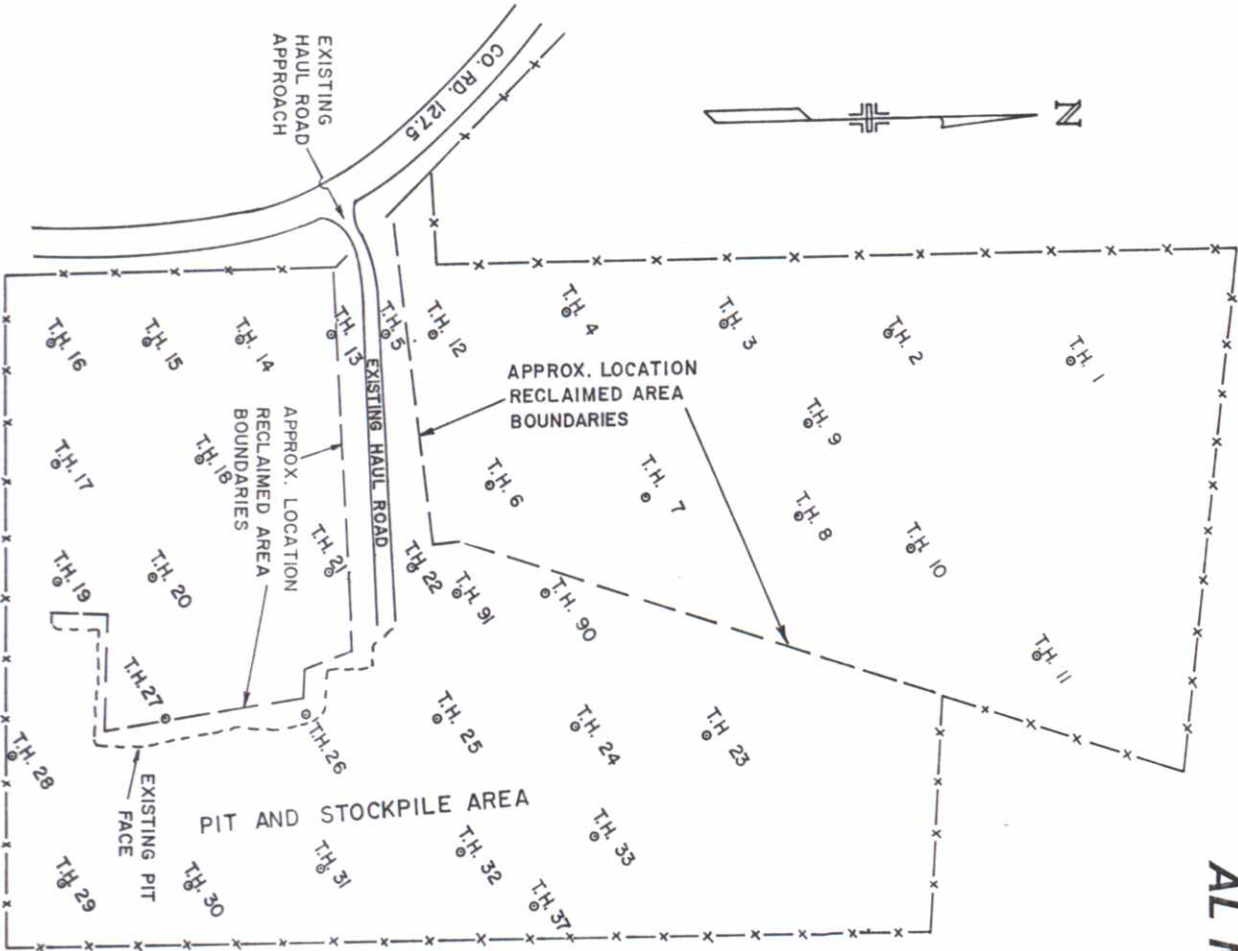
TEST NO.	4C	6C	7C	9C	10C	08	90C	91C
2-1/2"								
100	100	100	100	100	100	100	100	100
2"								
100	100	100	99	100	100	100	99	99
1-1/2"								
100	100	100	98	100	100	100	99	99
1"								
99	99	97	99	97	100	98	98	98
3/4"								
97	98	95	99	96	100	97	96	96
1/2"								
94	97	91	96	90	100	94	92	92
3/8"								
91	95	87	93	84	100	90	88	88
#4								
76	86	73	77	62	100	79	74	74
#8								
60	73	55	62	45	96	66	56	56
#16								
46	55	36	46	27	93	49	39	39
#50								
19	22	12	18	10	69	17	17	17
#100								
12	13	7	10	7	47	8	13	13
#200								
8.1	8.7	4.6	6.7	5.4	25.7	5.0	9.3	9.3
LL								
17	WV	WV	WV	27	WV	WV	23	23
PL								
15				18			20	20
PT								
2	NP	NP	NP	9	NP	NP	3	3
SAND								
36	39	59	44	34				
EQUITY								

FOR INFORMATION:

STRIPPING IS 2,100 CU. YDS. REMOVE AND REPLACE.
OVERBURDEN IS 33,000 CU. YDS. REMOVE AND REPLACE.

NOTE:

SKETCH NOT DRAWN TO SCALE.
TEST HOLE NUMBERS 1 THROUGH 22 AND NUMBERS 26 & 27 WERE LOCATED IN AN AREA THAT HAS SINCE BEEN EXCAVATED, AND WHERE THE GRAVEL IS NOW DEPLETED.
TEST LOCATIONS 12 THROUGH 37 WERE INVESTIGATED ONLY TO PROVIDE INFORMATION AS TO THE APPROXIMATE LOCATION AND DEPTHS OF GRAVEL. NO SAMPLES WERE TAKEN FROM THESE TEST HOLES.
TEST LOCATIONS 90 & 91 WERE TAKEN IN AN AREA ADJACENT TO THE PREVIOUSLY EXCAVATED AREA. A PORTION OF THE OVERBURDEN IN THIS AREA WAS PREVIOUSLY REMOVED.



MILLER PIT - AVAILABLE SOURCE, CONT'D

COMPLETE LOG OF EACH TEST HOLE

TEST NO.	MATERIAL CHANGES	SAMPLE SHIPPED	DEPTH TO WATER	DESCRIPTION OF MATERIAL (Win or Winout Sample)
From	To	Yes/No	Feet	
1A	0.0' - 0.5'	No	10'	Sod
1B	0.0' - 0.5'	No	10'	Sod
1C	0.0' - 0.5'	No	10'	Sod
2A	0.0' - 0.5'	No	10'	Sod
2B	0.0' - 0.5'	No	10'	Sod
2C	0.0' - 0.5'	No	10'	Sod
2D	0.0' - 0.5'	No	10'	Sod
3A	0.0' - 0.5'	No	10'	Sod
3B	0.0' - 0.5'	No	10'	Sod
3C	0.0' - 0.5'	No	10'	Sod
3D	0.0' - 0.5'	No	10'	Sod
4A	0.0' - 0.5'	No	10'	Sod
4B	0.0' - 0.5'	No	10'	Sod
4C	0.0' - 0.5'	No	10'	Sod
5A	0.0' - 0.5'	No	10'	Sod
5B	0.0' - 0.5'	No	10'	Sod
6A	0.0' - 0.5'	No	10'	Sod
6B	0.0' - 0.5'	No	10'	Sod
6C	0.0' - 0.5'	No	10'	Sod
6D	0.0' - 0.5'	No	10'	Sod
7A	0.0' - 0.5'	No	10'	Sod
7B	0.0' - 0.5'	No	10'	Sod
7C	0.0' - 0.5'	No	10'	Sod
7D	0.0' - 0.5'	No	10'	Sod
8A	0.0' - 0.5'	No	10'	Sod
8B	0.0' - 0.5'	No	10'	Sod
8C	0.0' - 0.5'	No	10'	Sod
8D	0.0' - 0.5'	No	10'	Sod
9A	0.0' - 0.5'	No	10'	Sod
9B	0.0' - 0.5'	No	10'	Sod
9C	0.0' - 0.5'	No	10'	Sod
9D	0.0' - 0.5'	No	10'	Sod
10A	0.0' - 0.5'	No	10'	Sod
10B	0.0' - 0.5'	No	10'	Sod
10C	0.0' - 0.5'	No	10'	Sod
10D	0.0' - 0.5'	No	10'	Sod
11A	0.0' - 0.5'	No	10'	Sod
11B	0.0' - 0.5'	No	10'	Sod
11C	0.0' - 0.5'	No	10'	Sod
11D	0.0' - 0.5'	No	10'	Sod
12A	0.0' - 0.5'	No	10'	Sod
12B	0.0' - 0.5'	No	10'	Sod
13A	0.0' - 0.5'	No	10'	Sod
13B	0.0' - 0.5'	No	10'	Sod
13C	0.0' - 0.5'	No	10'	Sod
13D	0.0' - 0.5'	No	10'	Sod
14A	0.0' - 0.5'	No	10'	Sod
14B	0.0' - 0.5'	No	10'	Sod
14C	0.0' - 0.5'	No	10'	Sod
14D	0.0' - 0.5'	No	10'	Sod
15A	0.0' - 0.5'	No	10'	Sod
15B	0.0' - 0.5'	No	10'	Sod
15C	0.0' - 0.5'	No	10'	Sod
15D	0.0' - 0.5'	No	10'	Sod
16A	0.0' - 0.5'	No	10'	Sod
16B	0.0' - 0.5'	No	10'	Sod
16C	0.0' - 0.5'	No	10'	Sod
16D	0.0' - 0.5'	No	10'	Sod
17A	0.0' - 0.5'	No	10'	Sod
17B	0.0' - 0.5'	No	10'	Sod
17C	0.0' - 0.5'	No	10'	Sod
17D	0.0' - 0.5'	No	10'	Sod

TEST NO.	MATERIAL CHANGES	SAMPLE SHIPPED	DEPTH TO WATER	DESCRIPTION OF MATERIAL (Win or Winout Sample)
From	To	Yes/No	Feet	
18A	0.0' - 0.5'	No	10'	Sod
18B	0.0' - 0.5'	No	10'	Sod
18C	0.0' - 0.5'	No	10'	Sod
18D	0.0' - 0.5'	No	10'	Sod
19A	0.0' - 0.5'	No	10'	Sod
19B	0.0' - 0.5'	No	10'	Sod
19C	0.0' - 0.5'	No	10'	Sod
19D	0.0' - 0.5'	No	10'	Sod
20A	0.0' - 0.5'	No	10'	Sod
20B	0.0' - 0.5'	No	10'	Sod
20C	0.0' - 0.5'	No	10'	Sod
20D	0.0' - 0.5'	No	10'	Sod
21A	0.0' - 0.5'	No	10'	Sod
21B	0.0' - 0.5'	No	10'	Sod
21C	0.0' - 0.5'	No	10'	Sod
21E	0.0' - 0.5'	No	10'	Sod
22A	0.0' - 0.5'	No	10'	Sod
22B	0.0' - 0.5'	No	10'	Sod
22C	0.0' - 0.5'	No	10'	Sod
22E	0.0' - 0.5'	No	10'	Sod
23A	0.0' - 0.5'	No	10'	Sod
23B	0.0' - 0.5'	No	10'	Sod
23C	0.0' - 0.5'	No	10'	Sod
23D	0.0' - 0.5'	No	10'	Sod
23E	0.0' - 0.5'	No	10'	Sod
24A	0.0' - 0.5'	No	10'	Sod
24B	0.0' - 0.5'	No	10'	Sod
24C	0.0' - 0.5'	No	10'	Sod
24D	0.0' - 0.5'	No	10'	Sod
25A	0.0' - 0.5'	No	10'	Sod
25B	0.0' - 0.5'	No	10'	Sod
25C	0.0' - 0.5'	No	10'	Sod
25E	0.0' - 0.5'	No	10'	Sod
26A	0.0' - 0.5'	No	10'	Sod
26B	0.0' - 0.5'	No	10'	Sod
26C	0.0' - 0.5'	No	10'	Sod
26E	0.0' - 0.5'	No	10'	Sod
27A	0.0' - 0.5'	No	10'	Sod
27B	0.0' - 0.5'	No	10'	Sod
27C	0.0' - 0.5'	No	10'	Sod
27E	0.0' - 0.5'	No	10'	Sod
28A	0.0' - 0.5'	No	10'	Sod
28B	0.0' - 0.5'	No	10'	Sod
28C	0.0' - 0.5'	No	10'	Sod
28E	0.0' - 0.5'	No	10'	Sod
29A	0.0' - 0.5'	No	10'	Sod
29B	0.0' - 0.5'	No	10'	Sod
29C	0.0' - 0.5'	No	10'	Sod
29E	0.0' - 0.5'	No	10'	Sod
30A	0.0' - 0.5'	No	10'	Sod
30B	0.0' - 0.5'	No	10'	Sod
30C	0.0' - 0.5'	No	10'	Sod
31A	0.0' - 0.5'	No	10'	Sod
31B	0.0' - 0.5'	No	10'	Sod
31C	0.0' - 0.5'	No	10'	Sod
31E	0.0' - 0.5'	No	10'	Sod

TEST NO.	MATERIAL CHANGES	SAMPLE SHIPPED	DEPTH TO WATER	DESCRIPTION OF MATERIAL (Win or Winout Sample)
From	To	Yes/No	Feet	
32A	0.0' - 0.5'	No	10'	Sod
32B	0.0' - 0.5'	No	10'	Sod
32C	0.0' - 0.5'	No	10'	Sod
32D	0.0' - 0.5'	No	10'	Sod
33A	0.0' - 0.5'	No	10'	Sod
33B	0.0' - 0.5'	No	10'	Sod
33C	0.0' - 0.5'	No	10'	Sod
33E	0.0' - 0.5'	No	10'	Sod
34A	0.0' - 0.5'	No	10'	Sod
34B	0.0' - 0.5'	No	10'	Sod
34C	0.0' - 0.5'	No	10'	Sod
34E	0.0' - 0.5'	No	10'	Sod
35A	0.0' - 0.5'	No	10'	Sod
35B	0.0' - 0.5'	No	10'	Sod
35C	0.0' - 0.5'	No	10'	Sod
36A	0.0' - 0.5'	No	10'	Sod
36B	0.0' - 0.5'	No	10'	Sod
36C	0.0' - 0.5'	No	10'	Sod
36E	0.0' - 0.5'	No	10'	Sod
37A	0.0' - 0.5'	No	10'	Sod
37B	0.0' - 0.5'	No	10'	Sod
37C	0.0' - 0.5'	No	10'	Sod
37E	0.0' - 0.5'	No	10'	Sod
38A	0.0' - 0.5'	No	10'	Sod
38B	0.0' - 0.5'	No	10'	Sod
38C	0.0' - 0.5'	No	10'	Sod
38E	0.0' - 0.5'	No	10'	Sod
39A	0.0' - 0.5'	No	10'	Sod
39B	0.0' - 0.5'	No	10'	Sod
39C	0.0' - 0.5'	No	10'	Sod
39E	0.0' - 0.5'	No	10'	Sod
40A	0.0' - 0.5'	No	10'	Sod
40B	0.0' - 0.5'	No	10'	Sod
40C	0.0' - 0.5'	No	10'	Sod
40E	0.0' - 0.5'	No	10'	Sod

Test locations 12 through 37 were investigated only to provide information as to the approximate location and depth of gravel. No samples were taken from these test holes.

Test locations 38 and 39 were taken in an area adjacent to the existing excavated area. A portion of the overburden in this area was previously removed.

AS CONSTRUCTED

NO REVISIONS 9-7-90 REVISED VOID

FED ROAD REGION VII DIVISION COLO PROJ NO FR 014-2(19) SHEET NO 19 SHEET TOTALS 22

TABULATION OF R.O.W. MARKERS
TO BE SET

CONTROL AND MONUMENTATION SHEET
TABULATION OF R.O.W. MARKERS
TO BE SET

SURVEY CONTROL POINT TABULATION

REVISIONS	

FED. ROAD REGION	DIVISION	PROJECT NUMBER	SHEET NUMBER
XIII	COLORADO	FR 014 - 2 (19)	20

NO REVISIONS ☐ REVISED ☐ 5-7-92 VOID ☐

GENERAL NOTES

1. This Right of Way plan is not a complete boundary survey of all adjoining owners and is prepared for Highway Department purposes only.
2. Survey Control Points set with a higher degree of accuracy than ROW Markers.
3. NOTICE: According to Colorado law you must commence any legal action based upon any defect in this survey within three years after you first discover such defect in no event, may any action based upon any defect in this survey be commenced more than ten years from the date of the certification shown hereon.
4. All R.O.W. Markers set from survey control points.
5. All centerline and offset stationing is theodolitical only and may not represent the centerline as constructed in the field. All stationing is approximate.
6. All coordinates listed are project coordinates only.
7. Field survey control precision computed to exceed 1/20,000.
8. Memorandum of Ownerships supplied by the Transamerica Title Company.
9. Control points No. 31, 32, 33, 34, 35, 36, 37 are to be reset with a type 2A monument. Aliquot corners No. 133, 153, 154 are to be reset with a type 3 monument, corners No. 11, 12, 13, 100, 101, 102, 103, 119, 120, 131, 134, 149, 152, 161, 162, 164, 166, 181, 182 are to be reset with a type 3A monument.

224	100391.10	121+65.06	LT. OF STA 1970+ PROJ.
225	100292.86	121570.07	LT. OF STA 1971+ PROJ.
226	100335.25	124077.58	LT. OF STA 1996+ PROJ.
247	100380.71	126735.44	LT. OF STA 2023+ PROJ.
248	100095.81	116134.40	RT. OF STA 1917+ PROJ.
249	100066.10	114734.71	RT. OF STA 1903+ PROJ.
254	100085.82	116134.37	RT. OF STA 1917+ PROJ.
255	100090.09	116327.92	RT. OF STA 1919+ PROJ.
256	100097.31	116827.67	RT. OF STA 1924+ PROJ.
257	100104.76	116927.59	RT. OF STA 1925+ PROJ.
262	100123.04	118176.18	RT. OF STA 1937+ PROJ.
263	100141.31	119424.76	RT. OF STA 1950+ PROJ.
264	100126.81	119525.02	RT. OF STA 1951+ PROJ.
265	100140.35	120424.92	RT. OF STA 1960+ PROJ.
266	100153.89	121324.82	RT. OF STA 1969+ PROJ.
267	100115.61	121413.18	RT. OF STA 1969+ PROJ.
278	100115.48	121457.18	RT. OF STA 1970+ PROJ.
279	100157.08	121525.05	RT. OF STA 1971+ PROJ.
280	100178.77	121624.72	RT. OF STA 1972+ PROJ.
281	100202.43	123024.52	RT. OF STA 1986+ PROJ.
282	100220.24	124077.61	RT. OF STA 1996+ PROJ.
291	100314.06	122823.83	LT. OF STA 1984+ PROJ.
293	100359.19	125477.38	LT. OF STA 2010+ PROJ.
295	100231.17	124720.38	RT. OF STA 2003+ PROJ.
296	100222.89	124820.54	RT. OF STA 2004+ PROJ.
297	100231.44	125320.47	RT. OF STA 2009+ PROJ.
298	100244.14	125420.26	RT. OF STA 2010+ PROJ.
299	100265.73	126621.00	RT. OF STA 2022+ PROJ.
300	100205.32	126714.01	RT. OF STA 2022+ PROJ.
324	100429.09	129403.53	LT. OF STA 2049+ PROJ.
325	100405.83	128121.00	LT. OF STA 2037+ PROJ.
326	100206.10	126758.00	RT. OF STA 2023+ PROJ.
327	100257.22	126821.09	RT. OF STA 2023+ PROJ.
329	100280.86	128123.27	RT. OF STA 2037+ PROJ.
330	100304.06	129403.86	RT. OF STA 2049+ PROJ.

347 1970+ Added per additional Row purchased by Row Section
348 1972+ }

6	100023.17	110826.78	SW COR SEC 32, T.8 N., R.56 W. = PI 1864+00.36 SURVEY
-7	100076.38	113525.72	PI 1890+99.83 SURVEY
8	100141.32	116424.62	PI 1919+99.45 SURVEY
-9	100186.77	119511.21	PI 1950+86.38 SURVEY
11	100260.24	124077.33	S 1/4 COR SEC 34, T.8 N., R.56 W. = PI 1996+54.35 SURV
12	100305.70	126735.42	SW COR SEC 35, T.8 N., R.56 W. = PI 2023+12.83 SURVEY
13	100354.08	129403.73	S 1/4 COR SEC 35, T.8 N., R.56 W. = PI 2049+81.58 SURV
-14	100366.49	130138.38	PI 2057+16.33 SURVEY
-15	100398.50	132036.51	SE CORNER SECTION 35, T.8 N., R.56 W.
31	100084.38	113525.56	PI 1864+00.36 PROJECTED
32	100149.32	116424.47	PI 1919+99.82 PROJECTED
33	100194.77	119511.10	PI 1950+86.42 PROJECTED
34	100223.56	121434.49	PI 1970+10.03 BK = 1970+11.25 AH PROJECTED EQ.
35	100268.24	124077.19	PI 1996+54.33 PROJECTED
36	100313.69	126735.28	PI 2023+12.81 PROJECTED
37	100362.08	129403.59	PI 2049+81.55 PROJECTED
100	100215.56	121434.61	SE COR SEC 33, T.8 N., R.56 W. = PI 1970+09.99 BK SURV
101	102851.87	121441.43	E 1/4 CORNER SECTION 33, T.8 N., R.56 W.
102	105444.83	118809.28	N 1/4 CORNER SECTION 33, T.8 N., R.56 W.
103	105411.98	116163.60	NW CORNER SECTION 33, T.8 N., R.56 W.
119	100079.50	113480.65	S 1/4 CORNER SECTION 32, T.8 N., R.56 W.
120	100135.82	116134.52	SE CORNER SECTION 32, T.8 N., R.56 W.
-125	105357.67	113517.03	N 1/4 CORNER SECTION 32 T.8 N., R.56 W., 6TH P.M.
131	100175.69	118784.56	S 1/4 CORNER SECTION 33, T.8 N., R.56 W.
133	102793.41	117473.00	CENTER WEST 1/16 CORNER SECTION 33, T.8 N., R.56 W.
134	100155.76	117459.54	SE CORNER SW 1/4 SW 1/4 SECTION 33, T.8 N., R.56 W.
149	105680.91	132038.84	NW CORNER SECTION 36, T.8 N., R.56 W.
152	105607.58	126740.42	NW CORNER SECTION 35, T.8 N., R.56 W.
153	102945.92	126736.06	W 1/4 CORNER SECTION 35, T.8 N., R.56 W.
154	102897.72	124086.26	CENTER 1/16 CORNER SECTION 34, T.8 N., R.56 W.
161	94888.95	121465.29	SW CORNER SECTION 3, T.7 N., R.56 W.
162	94935.56	124114.21	S 1/4 CORNER SECTION 3, T.7 N., R.56 W.
164	97637.90	126751.05	E 1/4 CORNER SECTION 3, T.7 N., R.56 W.
166	95030.96	129417.34	S 1/4 CORNER SECTION 2, T.7 N., R.56 W.
181	105644.24	129389.63	N 1/4 CORNER SECTION 35, T.8 N., R.56 W.
182	103039.70	132037.67	E 1/4 CORNER SECTION 35, T.8 N., R.56 W.

QUANTITY OF MONUMENTS TO BE SET

CAP TYPE	MONUMENT TYPE							
	1	1A	2	2A	3	3A	4	5
REFERENCE								
RIGHT OF WAY	57 35							
CONTROL				7				
ALIQUOT CORNER					3	19		
WITNESS POST				7				

SURVEYOR CERTIFICATE (FIELD)

Control survey and monumentation was done under my supervision and checking.

NAME William J. Williams DATE 10-10-90

NAME William J. Williams DATE 10-10-90

SURVEYOR CERTIFICATE (OFFICE)

R.O.W. Plans and Legal Descriptions were prepared under my supervision and checking.

NAME William J. Williams P.L.S. NO. 25381

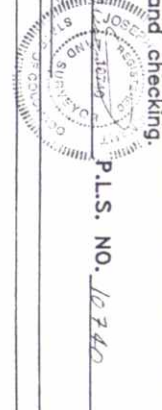
DATE 10-10-90

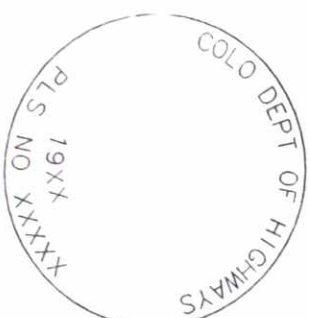
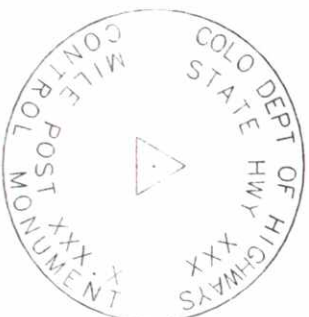
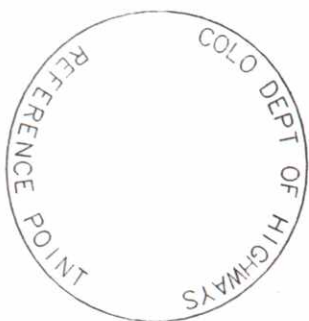
SURVEYOR CERTIFICATE (FIELD)

Control Survey and Monumentation was done under my supervision and checking.

NAME William J. Williams P.L.S. NO. 10740

DATE 10-31-90





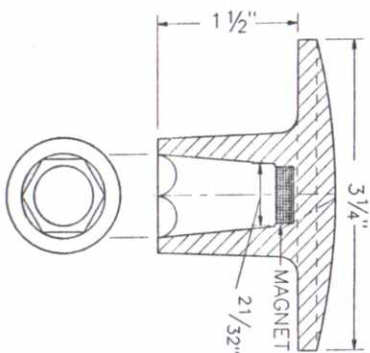
REFERENCE MONUMENT CAP

ROW MONUMENT CAP

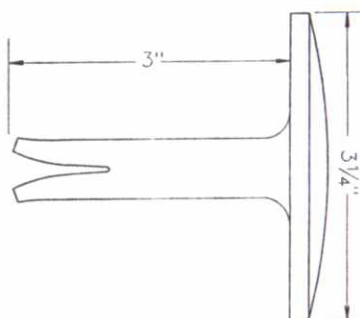
CONTROL MONUMENT CAP

ALIQUOT CORNER CAP

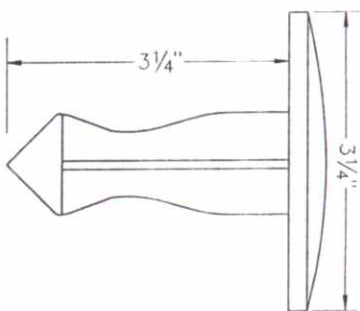
NOTE: (A BLANK CAP MAY BE SUBSTITUTED IF ANY ABOVE CAPS ARE NOT AVAILABLE.)



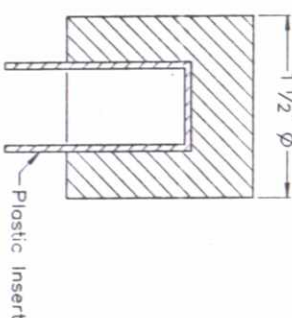
BRASS AND ALUMINUM CAPS
BRASS CAP USED WITH STAINLESS STEEL
ROD ALUMINUM CAP USED WITH ALUMINUM ROD
(Threaded Cap is also available)



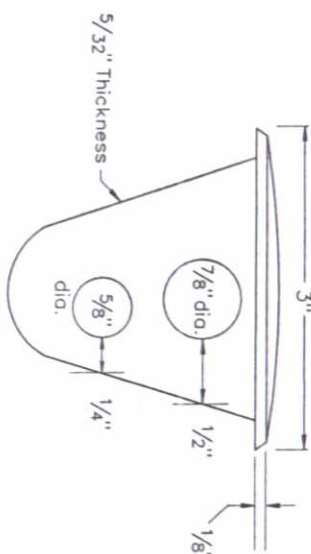
BRASS CAP
FOR PLACING IN EXISTING
CONCRETE OR ROCK



BRASS CAP
FOR PLACING IN EXISTING
CONCRETE OR ROCK



TEMPORARY
ALUMINUM CAP



BRASS CAP
INSTALL DURING PLACEMENT OF CONCRETE.
PLACE A REINFORCING BAR THRU ONE HOLE.

CAP TYPE	MONUMENT TYPE				
	1	1A	2	2A	3
REFERENCE	X	X	X	X	X
ROW	X	X	X	X	X
CONTROL	X	X	X	X	X
ALIQUOT CORNER	X	X	X	X	X
WITNESS POST (WHEN REQUIRED)	X	X	X	X	X

AS CONSTRUCTED	FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.
NO REVISIONS 9-7-82	REVISED	VOID	FR 014-2 (19)	21

TYPE 1 AND TYPE 1A ALUMINUM AND STAINLESS STEEL DRIVEN MONUMENTS

Monuments are assembled by attaching the proper size tip to one end of a section of rod and the 3 1/4" long x 3/4" dia. stainless steel driver to the other end. A steel driver is then placed over the stainless steel driver for the hammer to contact. When additional sections of rod are needed, they are to be attached using a set of self-locking washers. Rods are stocked in two foot and three foot sections. One foot sections may be obtained by cutting a two foot section in half. The rod section is driven by using the proper hammer with a soft face. A power adapter is available for use with a gasoline powered driver.

Type 1 monuments typically use a three foot section of rod. When subsurface rock or concrete is encountered less than 3 feet below the ground surface, the rod shall be embedded in the rock or concrete at least 6" with a grout material. The rod may be shortened to accommodate the conditions.

Type 1A monuments may be driven to refusal by threading additional sections onto the first section. Added sections require a set of lock washers. Refusal is defined as one inch of movement with four blows of a 12 lb. hammer. A driven cap is necessary (vs. a threaded cap) when a cut rod is used. The soft faced hammer is also required to seat the driven caps onto the rod.

TYPE 2 AND TYPE 2A ALUMINUM FINNED ROD MONUMENTS

A Type 2 monument is used for horizontal control monuments where loose material is encountered. The larger size tip is to be used on one end of the three foot rod and the fins on the opposite end of the three foot rod are to be bent over to accommodate the cap. If more vertical stability is required for use as a vertical control monument, the added sections which are not finned, should be driven first. The number of sections to be added will vary with needs and type of soil.

Type 1A monument note above also applies to Type 2A monument.

TYPE 3 AND TYPE 3A ALUMINUM PIPE MONUMENTS

This monument is used to monument an aliquot corner. The installation of this monument and record filing shall be done in accordance with the Colorado Revised Statutes, Title 38, Articles 50 and 51. Also refer to the CDOH Survey Manual. The Land Surveyor's license number and the year shall be stamped on the cap.

TYPE 4 BRASS CAP MONUMENT

This monument is placed in concrete, such as bridge super structure concrete. It is placed above a footing support over the abutment or over a pier. An alternate placement is vertically in the abutment wall or pier if only an elevation reference is desired and it is possible to leave access for an elevation rod.

TYPE 5 BRASS CAP MONUMENT

This monument is placed in locations where a Type 1 or Type 1A monument cannot be placed. A common application is in a large boulder where a property corner has been placed. This monument could also be placed in a sidewalk.

WITNESS POSTS

The witness post, when required, will be supplied by the Division and installation shall be included in the work. It shall be driven within 10 feet of the monument, when possible. A delineator post with a 6" x 10" metal sign panel may be used in lieu of the plastic post. This post is to conform to Standard S-612-1.

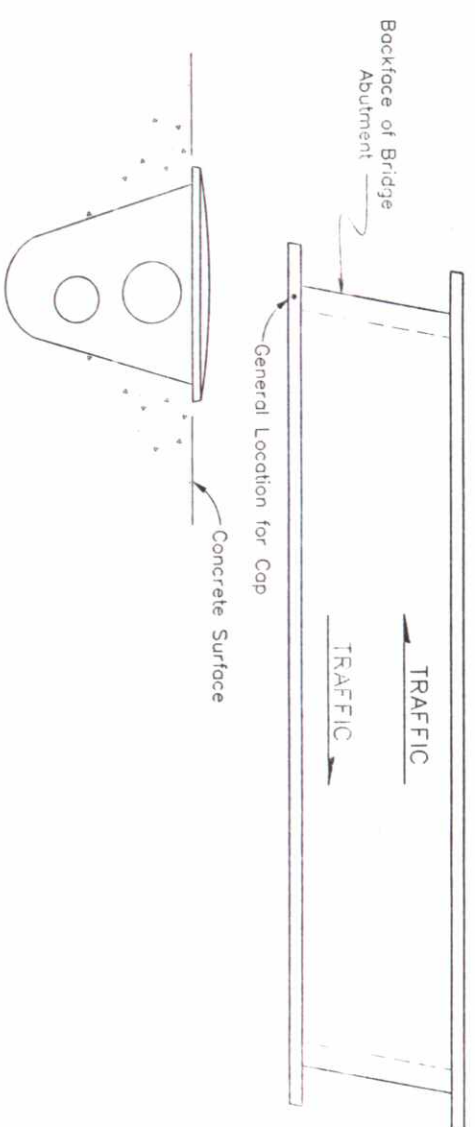
SELF-LOCKING WASHERS

A set of two washers shall be used at rod joints and threaded cap joints, but not at tip joints.

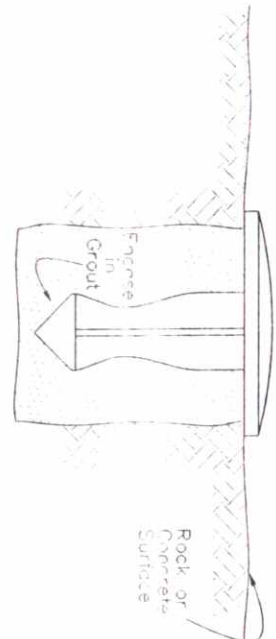
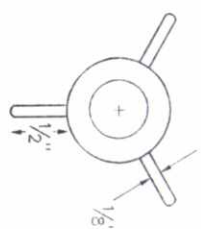
TEMPORARY MONUMENTS

This cap is used on a #5 rebar.

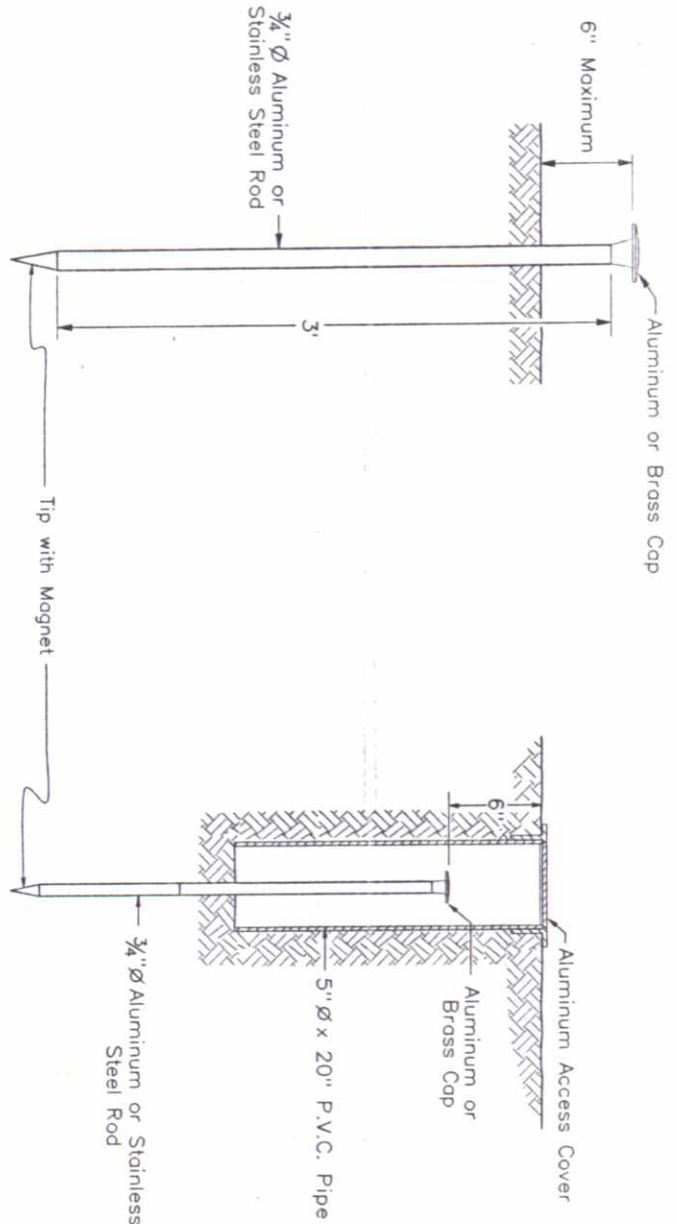
SURVEY
MONUMENTS



TYPE 4 MONUMENT



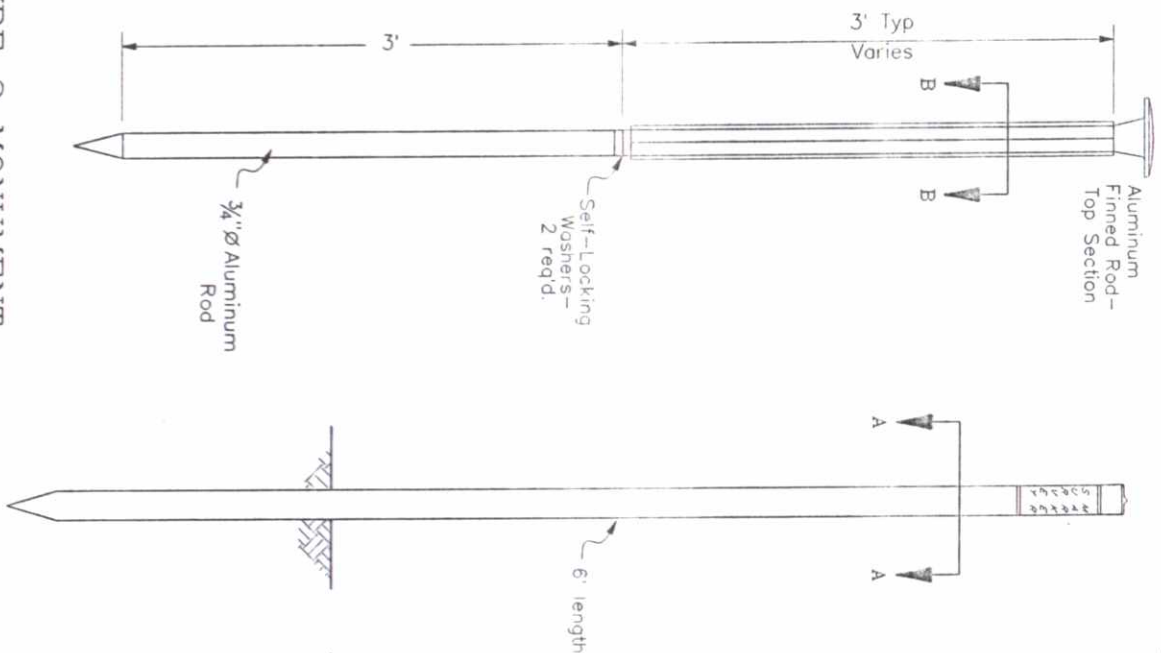
TYPE 5 MONUMENT



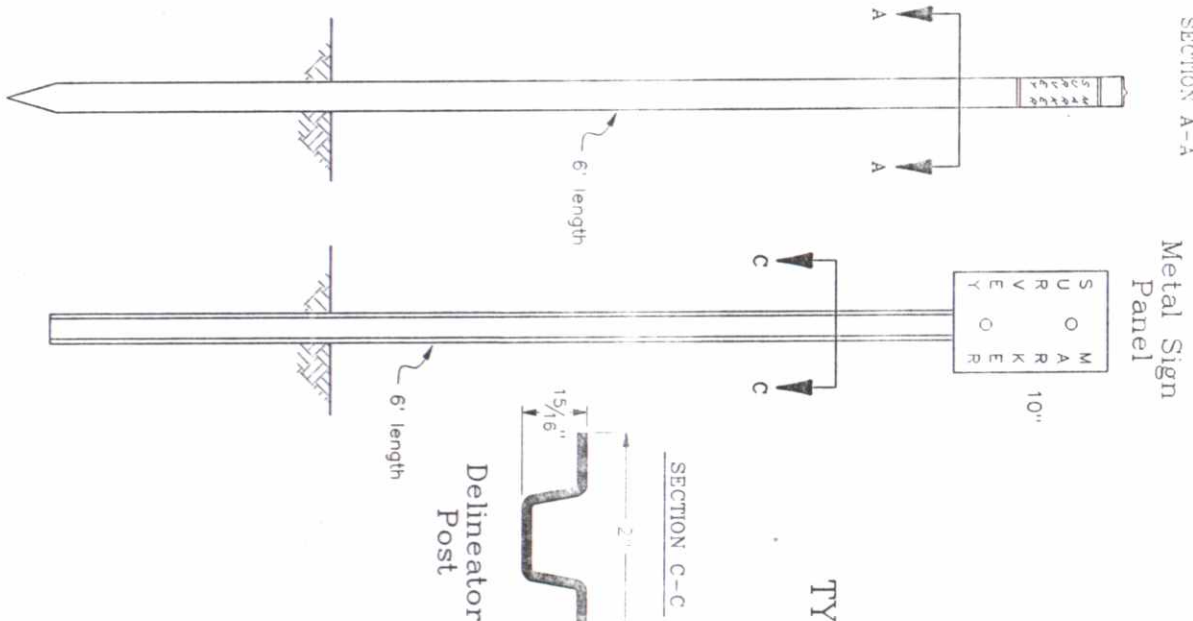
TYPE 1 MONUMENT

TYPE 1A MONUMENT & TYPE 2A MONUMENT

Includes Monument Box

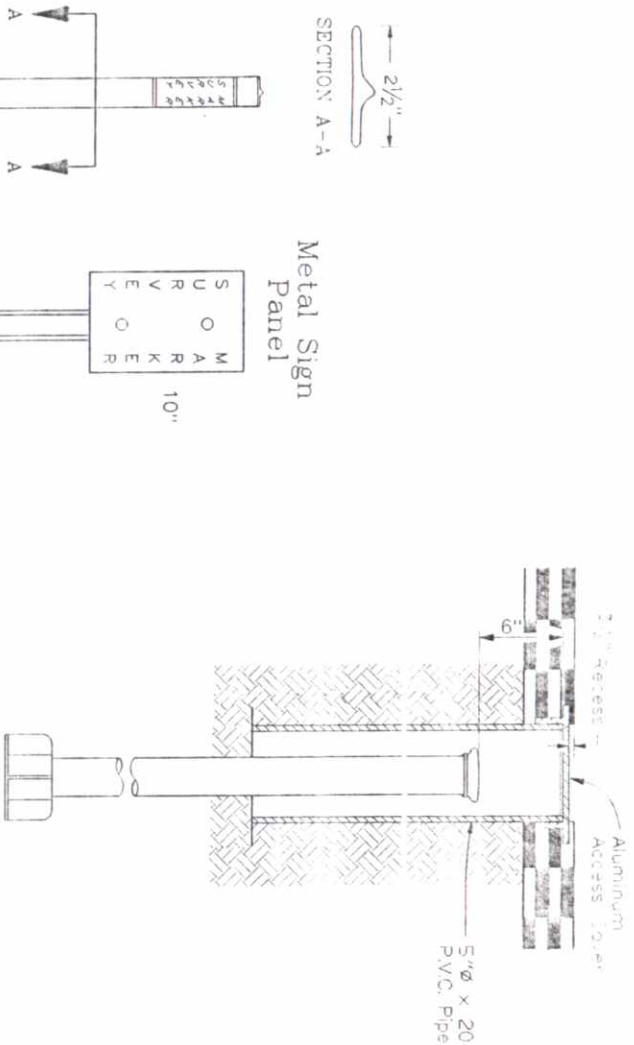


TYPE 2 MONUMENT



TYPE 3 MONUMENT

TYPE 3A MONUMENT, Roadway Installation



AS CONSTRUCTED					FED ROAD REGION	DIVISION	PROJ. NO	SHEET NO
NO REVISIONS	9-7-90	REVISED		VOID	VIII	COLO.	FR 014 - 2 (19)	22

SURVEY MONUMENTS

WITNESS POSTS