

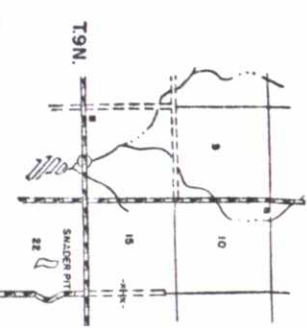
See Standard M-100-A for STANDARD SYMBOLS

AS CONSTRUCTED PLANS
RETURN TO DIST. 4 DESIGN

STATE DEPARTMENT OF HIGHWAYS DIVISION OF HIGHWAYS—STATE OF COLORADO

PLAN AND PROFILE OF PROPOSED
FEDERAL AID PROJECT NO. HES 0004 (17)

STATE HIGHWAY NO. 14
WELD COUNTY



ON PLAN, 1 IN. = 100 FT.
ON PROFILE, 1 IN. = 10 FT. VERTICAL
GRADE LINE ON PROFILE IS SHOWN AS GRADE OF FINISHED ROAD



INDEX OF SHEETS

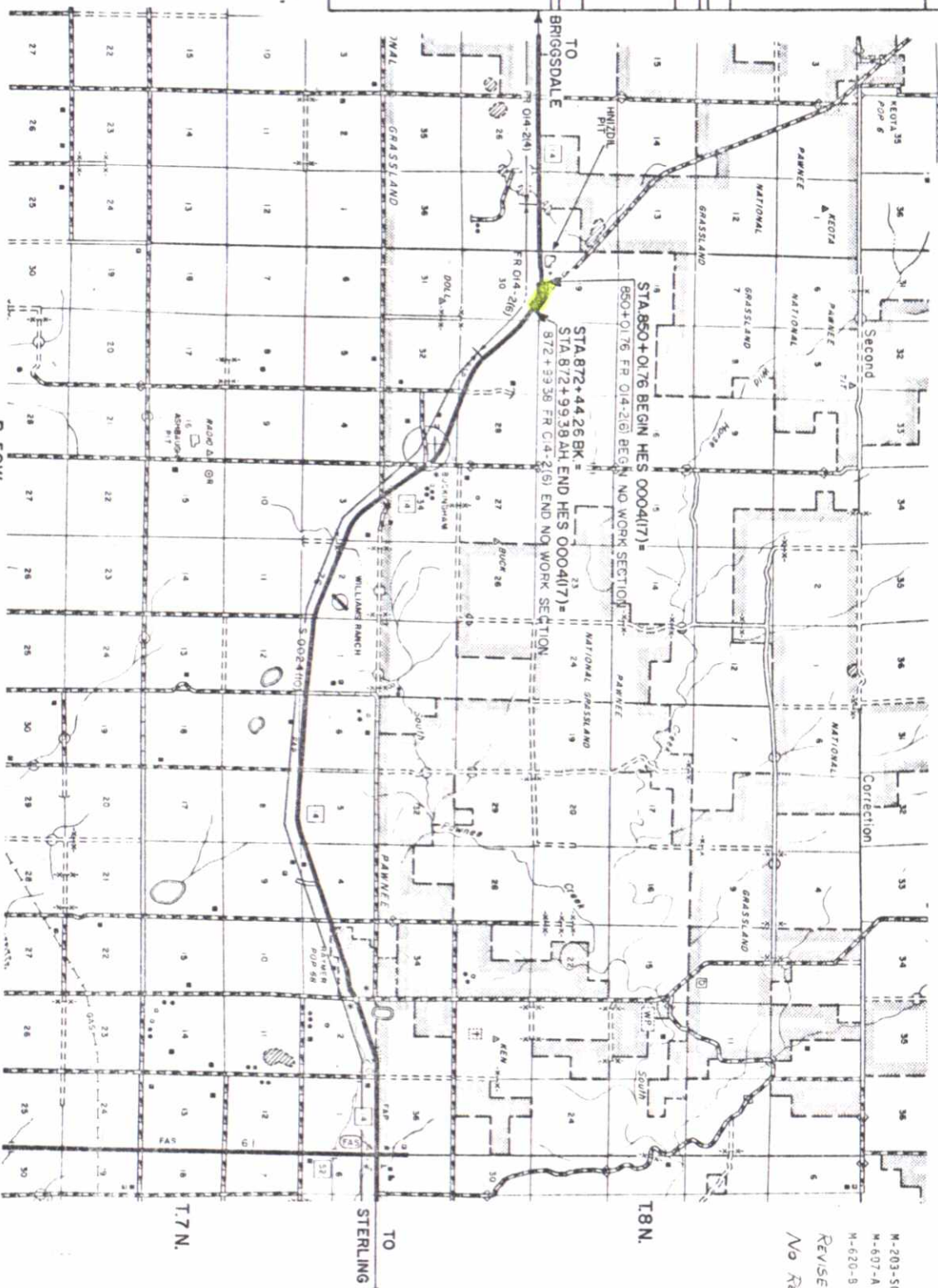
1. SKETCH MAP AND TITLE SHEET, TABULATION OF LENGTH AND DESIGN DATA
2. STANDARD PLANS LIST - M & S STANDARDS
3. TYPICAL SECTION AND GENERAL NOTES
- 4-5. SUMMARY OF APPROXIMATE QUANTITIES
6. STRUCTURE QUANTITIES
7. BITUMINOUS BASE COURSE AND SURFACE PLAN, TABULATION OF DELINEATORS, SUMMARY OF EARTHWORK QUANTITIES OF CONSTRUCTION TRAFFIC SIGNS
8. SANDER PIT
9. ASHBAUGH PIT
10. PLAN AND PROFILE SHEETS

NEW AND REVISED STANDARDS
M-203-SC SUPERELEVATION OF CURVES CROWNED HIGHWAYS (3-02-81)
M-607-A WIRE FENCES AND GATES (2-29-80)
M-620-8 FIELD LABORATORY CLASS 1 (5-30-80)
REVISED SHEETS 1, 3-10
NO REVISION SHEETS 2

DIST. IV	FILE	COPY
DIST. ENCR.		
ASST. ENCR.		
CONSTR.		
PRE-CONSTR.		
ERA		
UTIL.		
DESIGN		
ROW		
MAT'L'S		
EEO		
RE-PS		
MAINT.		
TRAFFIC		

TABULATION OF LENGTH AND DESIGN DATA	
STATION	ROADWAY LIN. FT.
850+01.76 BEG. HES 0004 (17) = 850+01.76 FR 014-21(6) BEGIN NO WORK SECTION	2242.50
872+44.26 BK = 872+99.38 ALH 872+99.38 FR 014-21(6) END NO WORK SECTION	2242.50
TOTAL	2242.50
SUMMARY	LIN. FT. MILES
ROADWAY	2242.50 0.425
TOTAL (NET & GROSS LENGTH)	2242.50 0.425
DESIGN DATA	
MAXIMUM DEGREE OF CURVE	2°00'
MAXIMUM GRADE	3.85%
MINIMUM SSD HORIZONTAL	850'
MINIMUM SSD VERTICAL	1300'
MAXIMUM DESIGN SPEED	70 MPH
2000 DESIGN VOLUME	ADT 1250 D.V. 150

This job consists of the No Work Section of Project No. FR 014-21(6), which is to be combined with this project for construction.



POL

CONTRACTOR: STEERING PLANS, CO.
ENGINEER: DON ATKINS
PROJECT STARTED: AUG. 12, 1981
PROJECT COMPLETED: Nov. 27, 1981
AS CONSTRUCTED PLANS
APPROVED: [Signature]
DATE: 2/17/82

APPROVED: [Signature]
ASST. CHIEF ENGINEER
DATE: 6-30-81

ATKINS
DIVISION OF HIGHWAYS

REGION NO.	PROJECT NO.	SHEET NO.
III	HES 0004(17)	1

NO REVISIONS ☐ REVISED ☐ 11/27/81 VOID ☐

AS CONSTRUCTED

AS CONSTRUCTED

NO REVISIONS 1127B

REVISED

VOID

FEDERAL ROAD REGION NO VIII

DIVISION COLORADO

PROJ NO HES 0004(17)

SHEET NO 2

TOTAL SHEETS 10

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

PLAN NUMBER	TITLE	PAGE	PLAN NUMBER	TITLE	PAGE
☒ M-100-A	STANDARD SYMBOLS	1	☐ M-607-C	PICKET SNOW FENCE	57
☐ M-107-A	TEMPORARY EROSION CONTROL	2	☐ M-607-D	BARRIER FENCE	58
☒ M-203-B	APPROACH ROADS, FLARING, CUT SLOPE TREATMENT, BRIDGE & CREST WIDENING	3	☐ M-607-E	DEER FENCE AND GATE (2 SHEETS)	59
☒ M-203-C	DITCH TYPES	4	☐ M-608-A	CURB RAMPS FOR THE HANDICAPPED	61
☐ M-203-SC	SUPERELEVATION OF CURVES - CROWNED HIGHWAYS	5	☐ M-609-A	CURBS AND GUTTERS	62
☐ M-203-SD	SUPERELEVATION OF CURVES - DIVIDED HIGHWAYS	6	☐ M-611-D	CATTLE GUARD - WELDED GRILL UNITS - 10' THRU 42' ROADWAYS (2 SHEETS)	63
☐ M-203-SS	SUPERELEVATION OF CURVES - STREETS	7	☐ M-612-A	MARKER POSTS AND BENCH MARKS	65
☒ M-206-AB	EXCAVATION AND BACKFILL FOR STRUCTURES (3 SHEETS)	8	☐ M-613-AA	HIGHWAY LIGHTING	66
☐ M-214-A	PLANTING DETAILS	11	☐ M-615-A	EMBANKMENT PROTECTOR, TYPES 3 & 4 (SHEET 1)	67
☐ M-412-AB	CONCRETE PAVEMENT JOINTS	12	☐ M-615-A	EMBANKMENT PROTECTOR, TYPE 5 (SHEET 2)	68
☐ M-504-B	STEEL CRIBBING	13	☐ M-616-S	INVERTED SIPHON (ALSO USE M-603 OR M-604 AS REQUIRED)	69
☐ M-506-A	GABIONS AND SLOPE MATTRESS	14	☐ M-620-A	FIELD LABORATORY - CLASS 2	70
☐ M-510-AB	STRUCTURAL PLATE CULVERT PIPE - H-20 LOADING (2 SHEETS)	15	☒ M-707-CB	TYPICAL ALTERNATE COUPLING BANDS FOR CORRUGATED CULVERT PIPE	71
☐ M-601-BC1	SINGLE CONCRETE BOX CULVERT	17			
☐ M-601-BC2	DOUBLE CONCRETE BOX CULVERT	18	☒ S-612-1	TYPICAL DELINEATOR INSTALLATIONS (4 SHEETS)	72
☐ M-601-BC3	TRIPLE CONCRETE BOX CULVERT	19	☐ S-614-1	TYPICAL GROUND SIGN PLACEMENT	76
☐ M-601-CH	HEADWALL FOR PIPE CULVERTS	20	☐ S-614-2	CLASS I GROUND SIGN INSTALLATIONS	77
☐ M-601-KA	TYPE "S" SADDLE HEADWALL FOR PIPE CULVERTS (2 SHEETS)	21	☐ S-614-3	CLASS II GROUND SIGN INSTALLATIONS	78
☐ M-601-L	HEADWALL, INTERCEPTING HEADWALL AND CULVERT OUTLET PAVING	23	☐ S-614-4	CLASS III SIGNS, LAMINATED ALUMINUM PANELS AND POST SPACING TABLE (2 SHEETS)	79
☐ M-601-WW	WINGWALLS FOR PIPE OR BOX CULVERTS	24	☐ S-614-5	BREAK-AWAY SIGN SUPPORT DETAILS FOR GROUND SIGNS (2 SHEETS)	81
☒ M-603-CA	CONCRETE AND METAL END SECTIONS	25	☐ S-614-6	CONCRETE FOOTINGS AND SIGN ISLANDS FOR CLASS III SIGNS (2 SHEETS)	83
☒ M-603-MA	METAL CULVERT PIPE - H-20 LOADING	26	☐ S-614-10	TYPICAL MARKER ASSEMBLY INSTALLATIONS	85
☐ M-603-RC	REINFORCED CONCRETE PIPE	27	☐ S-614-11	MILEPOST SIGN AND INSTALLATION	86
☐ M-604-AB	CONCRETE INLET, TYPE I3	28	☐ S-614-12	STRUCTURE NUMBER INSTALLATION (BRIDGE INFORMATION SHEET)	87
☐ M-604-BA	INLET, TYPE C	29	☐ S-614-20	TYPICAL POLE MOUNT SIGN INSTALLATION	88
☐ M-604-DA	STEPS FOR MANHOLES & INLETS	30	☐ S-614-22	TYPICAL MULTI-SIGN INSTALLATIONS	89
☐ M-604-E	MANHOLES	31	☐ S-614-30	INTERSTATE ROUTE MARKERS	90
☐ M-604-H	INLET, TYPE D	32	☐ S-614-31	U.S. & COLORADO ROUTE MARKERS	91
☐ M-604-R	CURB INLET, TYPE R (2 SHEETS)	33	☐ S-614-32	AUXILIARY MARKERS	92
☐ M-604-S	PIPE SEWER IN TRENCH	35	☐ S-614-40	TRAFFIC SIGNAL INSTALLATION DETAILS (3 SHEETS)	93
☐ M-606-AC	GUARD RAIL, TYPE 3, W-BEAM (8 SHEETS)	36	☒ S-614-50	TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION (4 SHEETS)	96
☐ M-606-B	GUARD RAIL, TYPE 5, STEEL BARRIER, BOX BEAM (3 SHEETS)	44	☒ S-614-51	BARRICADES, DRUMS, CONCRETE BARRIER (TEMP) & VERTICAL PANELS	100
☐ M-606-D	GUARD RAIL, TYPE 4, CONCRETE BARRIER, CAST-IN-PLACE	47	☒ S-627-1	TYPICAL PAVEMENT MARKINGS (3 SHEETS)	101
☐ M-606-EA	GUARD RAIL, TYPE 4, CONCRETE BARRIER, PRECAST-PORTABLE	48			
☐ M-606-G	GUARD RAIL, TYPE 3, W-BEAM FOR LOCAL ROADS & STREETS (3 SHEETS)	49			
☐ M-607-A	WIRE FENCES AND GATES (2 SHEETS)	52			
☐ M-607-BA	CHAIN LINK FENCE (3 SHEETS)	54			

DEPARTMENT OF HIGHWAYS
STATE OF COLORADO
DIVISION OF HIGHWAYS

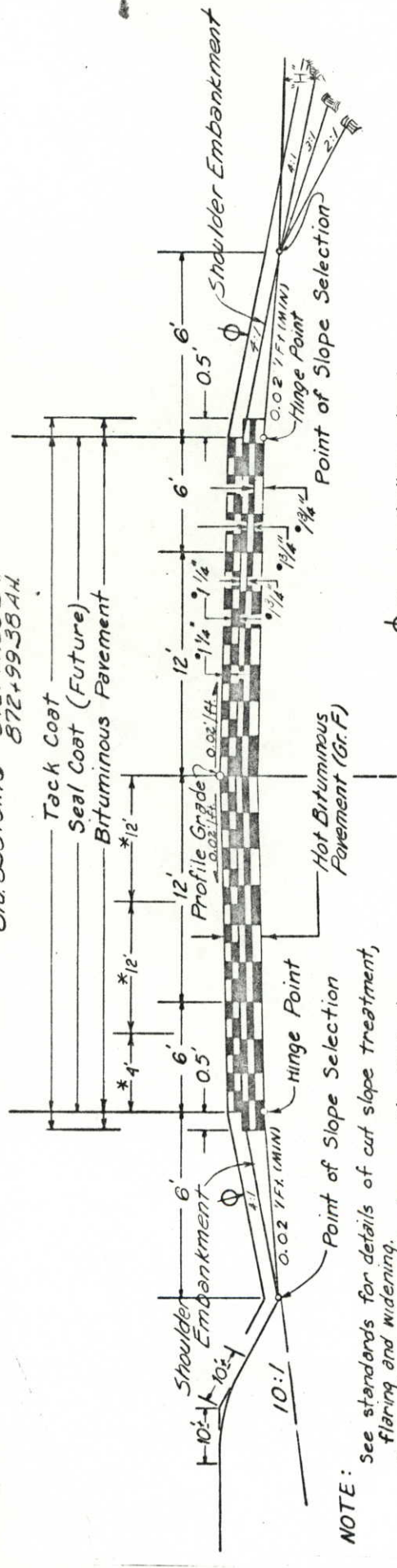
STANDARD PLANS LIST
M & S STANDARDS — JANUARY, 1980

FILL SLOPES:
SLOPE 4:1 WHERE "H" IS 10' OR LESS
SLOPE 3:1 WHERE "H" IS 10' TO 15'
SLOPE 2:1 WHERE "H" IS OVER 15'

BREAK POINTS ON SLOPES AND IN BOTTOMS OF DITCHES SHALL BE ROUNDED ON CONSTRUCTION FOR A PLEASING APPEARANCE.

TYPICAL SECTIONS

SECTION A~
Sta. 850+01.76 ~ 872+44.26 BX =
87E+99.38 AX



NOTE: See standards for details of cut slope treatment, flaring and widening. Excavation below 4:1 slope and/or 10:1 slope will not be permitted. The depth and width of the side ditch shall be varied where necessary in order to provide proper drainage.

• Approximate Thickness

*These dimensions apply to the widened Section from Sta. 856+10 to 863+25, with 300' Tapers from Sta. 853+10 to 856+10 and from Sta. 863+25 to 866+25.

Topsoil shall be placed to this line.

TYPICAL SECTION NOTES

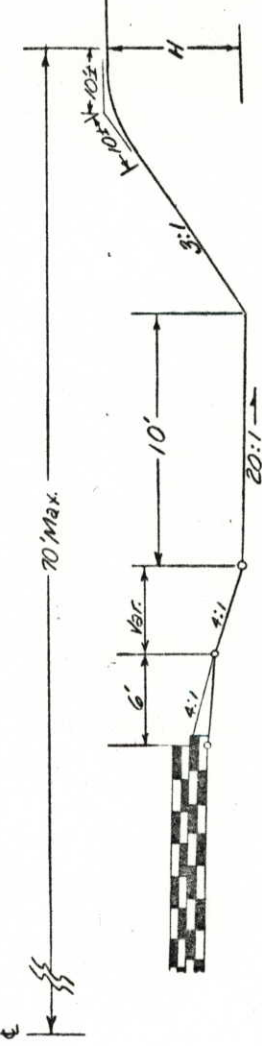
MATERIAL SHALL BE PLACED IN SEPARATE COURSES AT THE FOLLOWING APPROXIMATE RATES PER 100 LIN. FT. OF ROADWAY:

TOP 2 LAYERS 28 TONS EACH
BOTTOM 3 LAYERS 40 TONS EACH

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.

BREAK POINTS ON SLOPES AND IN BOTTOMS OF DITCHES SHALL BE ROUNDED ON CONSTRUCTION FOR A PLEASING APPEARANCE.

WIDENED CUT SECTION
Right Side Only



4 To be used as needed to obtain additional excavation.

AS CONSTRUCTED
NO REVISIONS
REVISED 11/27/81
VOID

FEDERAL ROAD DISTRICT NO. VIII
DIVISION COLORADO
PROJECT NO. HES 0004 (17)
TOTAL SHEETS 3

GENERAL NOTES

For preliminary plan quantities of Bituminous Materials the following rates of application were used:

Tack Coat Diluted Emulsified Asphalt (CSS-1) @ 0.10 Gals./Sq. Yd (Diluted) Bituminous Pavement (Grading F) @ 110 Lbs. per Sq. Yd./Inch Diluted Emulsified Asphalt for Tack Coat shall consist of 1 part Emulsified Asphalt and 1 part water.

Rates of application shall be as determined by the Engineer at the time of application. Diluted Emulsified Asphalt shall be used as a dust palliative where required and shall consist of a dilution of emulsified Asphalt and water, the portions of which shall be 9 parts water and 1 part Emulsified Asphalt, based on volume measurement. Location shall be as ordered. The following shall be furnished with each bituminous paver.

1. A ski type device at least 30 feet in length.
2. Short ski or 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 have a 3" thickness of pavement placed as follows:

Public approaches and entrances to buildings or residences shall be paved 50 ft. out from edge of shoulder or to the right of way line whichever is less. Field entrances shall be paved 4 ft. 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'.
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.

It is estimated that 300 Hours of Flagging for controlling traffic will be required for this project.

It is estimated that 600 Lin. Ft. of 4 Inch Pavement Marking Tape will be required for temporary striping for this project. Guard posts, Delineators, Mileposts and Signs will be removed by State Forces. For this project the Type 5 Annular Coupling Band shown on Standard M-707-CB, shall not be used on a pipe diameter greater than 30 Inches.

ROADWAY SEEDING

SOIL PREPARATION, FERTILIZING, SEEDING, AND MULCHING FOR AN ESTIMATED 7 ACRES WILL BE REQUIRED WITHIN THE RIGHT OF WAY LIMITS ON ALL AREAS NOT SURFACED. THE FOLLOWING TYPES AND RATES SHALL BE USED:

COMMON NAME	BOTANICAL NAME	PERCENT PURITY	PERCENT GERMINATION	RATE: LBS PLS/ACRE
WESTERN WHEATGRASS V. BARTON	AGROPYRON SMITHII	83	70	5
STEE-OATS GRAMA	BOUTELOUA CURTIPENDULA	65	50	3
SAND DROP SEED	SPOROBOLUS CRYPTANCUS	95	85	.25
ALPHALFA V. RHIZOMA	MEDICAGO SATIVA	95	90	1
PROSO MILLET	PANICUM MILLIACEUM	98	70	10

TOTAL POUNDS PURE LIVE SEED (PLS) PER ACRE 19.25

*WINTER WHEAT WILL BE SUBSTITUTED FOR PROSO MILLET WHEN SEEDING IN THE FALL.

MULCHING MATERIAL: PRAIRIE HAY ONE AND ONE-HALF (1-1/2) TONS PER ACRE MECHANICALLY CRIMPED INTO TOPSOIL

SEEDING APPLICATION: Seed shall be mechanically drilled into top .25-.50 inch of topsoil.

FERTILIZING REQUIREMENT:	Available N	Available P	Available K	Total lbs/acre
Commercial Fertilizer	18	46	20	84
Ammonium nitrate (18-0-0)	18	0	0	18
Triple super phosphate (0-46-0)	0	46	0	46
Muriate of Potash (0-0-60)	0	0	60	60
				Total = 238

RD Rev Quantities 7-30-81 PUL

SUMMARY OF APPROXIMATE QUANTITIES

AS CONSTRUCTED
NO REVISIONS
REVISED
VOID

FEDERAL ROAD DISTRICT NO. VIII
DIVISION COLORADO
PROJ. NO. HES 0004(17)
SHEET NO. 4
TOTAL SHEETS 10

INDEX		CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	W. O. #												PROJECT TOTALS	AS CONST TOTALS	DIFF +/-	% PLAN	
10	6	202	Removal of Structure	Each													1	1	+0	100%	
9	6	202	Removal of Asphalt Mat	Sq. Yd.													5000	5980	+980	120%	
	7	203	Unclassified Excavation	Cu. Yd.													21465	16,933	-4,532	79%	
	7	203	Stripping	Cu. Yd.													6600	6,230	-370	94%	
	7	204	Compaction (AASHTO T-99)	Cu. Yd.													21,739	31,896	+10,157	147%	
	7	204	Haul	Yd. Mi.													13,529	6,651	-6,878	49%	
RD 12B	6	206	Structure Excavation	Cu. Yd.													71	80	+9	113%	
RD 12B	6	206	Structure Backfill (Class 2)	Cu. Yd.													111	123	+12	111%	
19		207	Topsoil	Cu. Yd.													3765	4,218	+453	112%	
23,6		207	Stockpile Topsoil	Cu. Yd.													3,765	4,218	+453	112%	
(FORM 7)	7	209	Wetting	MGal.													912	552.6	-359.4	61%	
24,27	3,8	212	Seeding (Native)	Lb.													145	111	-34	77%	
25,26	3,8	212	Fertilizer (Available N)	Lb.													340	259	-81	76%	
25,26	3,8	212	Fertilizer (Available P)	Lb.													190	155	-35	82%	
25	3	212	Fertilizer (Available K)	Lb.													150	103	-47	69%	
24,27	3,8	212	Soil Preparation (Native)	Acres													8.5	6.47	-2.03	76%	
24,27	3,8	213	Mulching	Ton						DELETED BY 105 #13B, WO #4646							13.5	10.46	-3.04	77%	
(FORM 105)	13B	307	Mineral Filler	Ton													73	0	-73	0%	
(FORM 87)	403		Hot Bituminous Pavement (Grading F)	Ton													1460	3200.75	+1740.75	219%	
20		411	Hot Bituminous Pavement (Grading F)	Ton						DELETED BY 105 #13C							3093	0	-3,093	0%	
			Haul, Asphalt and Hydrated Lime	Gal.													2010	1,887	-123	94%	
			Emulsified Asphalt (CSS-1)	Lin. Ft.						DELETED BY 105 #13B							52	0	-52	0%	
RD 12B	6	603	18 Inch Corrugated Steel Pipe	Lin. Ft.													252	300	+48	119%	
RD 12B	6	603	36 Inch Corrugated Steel Pipe	Each													6	6	+0	100%	
			36 Inch Steel End Section	Each																	
(FORM 187)	403		Hot Bituminous Pavement (Grading E) (Haul and Asphalt)	Ton						4646							-	1668.40	+1668.40	-	
23		609	Curb Type 6 (Section M)	Lin. Ft.						8904							-	2,142	+2,142	-	
22	7	612	Delineator (Type I)	Each													18	15	-3	83%	
22	7	612	Delineator (Type II)	Each													8	14	+6	175%	
(FORM 7)	7	614	Flagging	Hour													300	380	+80	127%	
(FORM 105)	13A	614	Barricade (Type 3M-B) (Temporary)	Each						DELETED BY 105 #13A							2	0	-2	0%	
(FORM 105)	13D	614	Construction Traffic Sign (Panel Size A)	Each						DELETED BY 105 #13D							15	0	-15	0%	
(FORM 105)	13D	614	Construction Traffic Sign (Panel Size B)	Each						DELETED BY 105 #13D							2	0	-2	0%	

SUMMARY OF APPROXIMATE QUANTITIES

AS CONSTRUCTED		NO REVISIONS		REVISED	DATE	VOID
FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.		TOTAL SHEETS	
VIII	COLORADO	HES 0004 (17)	5		10	

[illegible]

CAD Rev Quantities and Totals 7-30-81/PDL

STRUCTURE QUANTITIES

NO REVISIONS ☐ AS CONSTRUCTED ☐ REVISED ☐ VOID ☐

INDEX	LOCATION	UNCLASSIFIED EXCAVATION		DITCH	STRUCTURE EXCAVATION		STRUCTURE BACKFILL	REMOVAL OF STRUCTURE	HOT BITUMINOUS PAVEMENT (GRADING F.)	CORRUGATED STEEL PIPE		STEEL END SECTION	MISCELLANEOUS
		EXCAV.	EMB. NET		CUBIC YARD	CUBIC YARD				18"	36"		
10	853+00 ~ 869+00	Δ	7042										
	861+00		593 565	94	8				0 52	3			DELETED PIPE BY DOH FORM 105, #13B
	863+00												
	865+40		Δ 302	80 67	123 103			300 252	8		6		5980 5000 Sq. Yd. - Removal of Asphalt Mat
28	Entire Project												
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RED Removed Note Rev Quantity
7-30-81 PDL

FEDERAL ROAD DISTRICT NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	HES 0004(17)	7	10

NO REVISIONS ☐ REVISED ☐ VOID ☐

AS CONSTRUCTED

BITUMINOUS BASE COURSE AND SURFACING PLAN

FORM 87

STATION TO STATION	QUANTITY - TONS				HAUL - TON MILE (FOR INFORMATION ONLY)			
	SURFACE COURSE		BASE COURSE		SOURCE COURSE		BASE COURSE	
	TOP LAYER	BOTTOM LAYER	TOP LAYER	BOTTOM LAYER	TOP LAYER	BOTTOM LAYER	TOP LAYER	BOTTOM LAYER
850+01.76 - 872+44.26	784.65 628	191.90 628	105.70 897	105.80 897	127.40 897	5.024	5.382	5.382
WIDENING -								
853+10 - 866+75 LT.	84	84	117	117	685	685	704	704
ESTIMATED FOR IRREGULARITIES					51			306
FROM STRUCTURE QUANTITIES	36				288			
FINAL	91.85		2364					
TOTALS	748	712	1,014	1,085	5,709	6,086	6,086	6,382
FINAL	876.50	791.90	1,014	1,085	5,709	6,086	6,086	6,382
TOTAL FROM SNADER PIT	PLAN 1460 TONS HBP (737 CU. YDS.)	FINAL	PLAN 1460 TONS HBP (737 CU. YDS.)	FINAL	PLAN 1460 TONS HBP (737 CU. YDS.)	FINAL	PLAN 1460 TONS HBP (737 CU. YDS.)	FINAL
TOTAL FROM ASHBAUGH PIT	PLAN 3,093 TONS HBP (1,562 CU. YDS.)	FINAL	PLAN 3,093 TONS HBP (1,562 CU. YDS.)	FINAL	PLAN 3,093 TONS HBP (1,562 CU. YDS.)	FINAL	PLAN 3,093 TONS HBP (1,562 CU. YDS.)	FINAL
TOTAL	4,370 TONS HBP (2,222 CU. YDS.)	FINAL	4,370 TONS HBP (2,222 CU. YDS.)	FINAL	4,370 TONS HBP (2,222 CU. YDS.)	FINAL	4,370 TONS HBP (2,222 CU. YDS.)	FINAL

STABILIZATION BASED ON: 18 EDL REGIONAL FACTOR 0.75
SERVICEABILITY INDEX 2.5
SUBGRADE "R" VALUE 8-22

(R-1)

X W.O. # 4646

SCHEDULE OF CONSTRUCTION TRAFFIC SIGNS				DELINTEATORS			
SIGN CODE	LEGEND	PANEL SIZE	DIMENSIONS	QUANTITY	PLAN	STATION	SIDE
SR11-2	ROAD/CLOSED	48" X 30"	X	2	1	100'	LT
BARRICADE (3M-B)(TEMP)				4	6	INTERSECT	LT
TYPE 2 BARRICADE				15	2	2*	LT
TOTALS PLAN				15	8	2*	RT
FINAL				15	18	15	8

SIGN CODE	LEGEND	PANEL SIZE	DIMENSIONS	QUANTITY	PLAN	STATION	SIDE	SPACING	TYPE I (CRYSTAL)	TYPE II (CRYSTAL)
SR11-2	ROAD/CLOSED	48" X 30"	X	2	1	100'	LT	100'	1	2
BARRICADE (3M-B)(TEMP)				4	6	INTERSECT	LT	INTERSECT	1	6
TYPE 2 BARRICADE				15	2	2*	LT	2*	2	2
TOTALS PLAN				15	8	2*	RT	2*	8	3
FINAL				15	18	15	8	15	18	15

SUMMARY OF EARTHWORK QUANTITIES

INDEX	ITEM	FINAL	PLAN	PROJECT TOTALS
16	UNCLASSIFIED EXCAVATION ROADWAY (FROM CROSS SECTIONS AND COMPUTER QUANTITIES AS EMB. STRUCTURE QUANTITIES AS EMB. EST. FOR CUT SLOPE TREATMENT TO REPLAC TOPSOIL EXCAVATION (FROM ROADWAY PRISM) **REMOVAL OF OLD ROAD SHOULDER EMBANKMENT SUB EXC. STA 850+40 852+ TOTAL	16,599 11,271 791 302 56 1,702 7,042 301 334 16,933 21,465	11,271 791 302 56 1,702 7,042 301 334 16,933 21,465	CU. YD. 11,271 791 302 56 1,702 7,042 301 334 16,933 21,465
91	EMBANKMENT (NET) FROM COMPUTER BASE OF CUTS AND FILLS STRUCTURE QUANTITIES AS EMB. (NET) TO REPLAC TOPSOIL EXCAV. (NET) SHOULDER EMBANKMENT (NET) TOTAL	28,641 3,255 565 1,216 31,677 31,696	28,641 3,255 565 1,216 31,677 31,696	CU. YD. 28,641 3,255 565 1,216 31,677 31,696
23	STRIPPING REMOVE OVERBURDEN SNADER REPLACE OVERBURDEN SNADER TOTAL	5449 2,781 6,230 6,230	5449 2,781 6,230 6,230	CU. YD. 5,449 2,781 6,230 6,230
	TOPSOIL ROADWAY PRISM AREC DISTURBED BY ADDITIONAL EXCAV. FROM 014-2(6) 266+63 TOTAL	2,924 1,254 4,218 4,218	2,924 1,254 4,218 4,218	CU. YD. 2,924 1,254 4,218 4,218
3,6 2	STOCKPILE TOPSOIL ROADWAY PRISM AREA DISTURBED BY ADDITIONAL EXCAV. TOTAL	2,924 1,254 4,218 4,218	2,924 1,254 4,218 4,218	CU. YD. 2,924 1,254 4,218 4,218
16	HAUL SUB EXC. STA 850+40 TO 852+ FROM MASS DIAGRAM COMPUTER EST. FOR REPLACING TOPSOIL EXCAV. STRUCTURE QUANTITIES AS EMB. EST. FOR SHOULDER EMB. XHAUL 300+ TO 867+50 TOTAL	51 4391 44 240 108 2,209 6,651 6,651	51 4391 44 240 108 2,209 6,651 6,651	YD. MI. 12.331 850 240 108 13,529 M GAL. 870 42 912
32	WETTING COMPACTION LIME SLURRY DUST ABATEMENT TOTAL	513 116 28 552.6 552.6	513 116 28 552.6 552.6	CU. YD. 543 10,728 11,812 23,083 23,083
	ROADWAY QUANTITIES BALANCE (FOR INFORMATION ONLY) EXCAVATION UNCLASSIFIED (ROADWAY) *ADDITIONAL EXCAVATION EXCESS EXCAV. FROM ER 014-2(6) TOTAL	543 10,728 11,812 23,083 23,083	543 10,728 11,812 23,083 23,083	CU. YD. 543 10,728 11,812 23,083 23,083
	EMBANKMENT NET ROADWAY (FROM CROSS SECTIONS AND COMPUTER) TOTAL	16,488 16,488 16,488	16,488 16,488 16,488	CU. YD. 16,488 16,488 16,488
	EMBANKMENT X FACTOR ROADWAY (FROM CROSS SECTIONS AND COMPUTER) TOTAL	23,083 23,083 23,083	23,083 23,083 23,083	CU. YD. 23,083 23,083 23,083

* INCLUDED IN COMPUTER PLAN

** 7,042 CU. YDS. FROM REMOVAL OF OLD ROAD WILL BE USED AS UNCLASSIFIED EXCAVATION ON PROJECT NO. 014-2(6). OLD ROAD IS TO REMAIN IN PLACE UNTIL DEMOLITION OF HES 0004(17) HAS BEEN COMPLETED.

* ADDITIONAL EXCAVATION MAY BE OBTAINED BY WIDENING CUTS AT VARIOUS LOCATIONS ON THE RIGHT SIDE AND FROM EMBANKMENT ON LEFT SIDE FROM STATION 863+ TO 940+. QUANTITIES SHOWN ON PLANS WERE OBTAINED AS FOLLOWS:

* WIDENED CUTS - STA. 867+ TO 876+
EMBANKMENT ON LEFT - STA. 863+ TO 875+

(R-1) Rev. Note and Pit
Sketch, Added Note
7-30-81 PDL

AS CONSTRUCTED
NO REVISIONS
REVISED: 11-27-81
VOID

FEDERAL ROAD
REGION NO. VIII
DIVISION COLORADO
PROJ. NO. HES 0004(17)
SHEET NO. 8
TOTAL SHEETS 10

SNADER PIT

Location: A Portion of the S.W. 1/4 NE 1/4, NW 1/4 SE 1/4,
and NE 1/4 SE 1/4 Sec. 22, T.9N., R.60W.

Owner: Edward R. Snader III

Quantity Available: 17,000 Cu. Yds.

Haul Distance: 7.9 Miles to Sta. 861+00

(R-1) Proposed Use: Hot Bituminous Pavement (Grading Fill/Haul
and Hsp. holt) - Top Two Layers

Stripping: Remove Overburden
Replace Overburden

3,449
1,500
1,500
2,781

Fence to be Constructed
Engineer to Establish
Location.

Minimum width
of haul road not
to exceed 30'

The contractor will confine
his operations to the fenced
area designated by the engineer.

Co. Rd. 105

Existing Fence

FLANT
AND
STOCKPILE
AREA

TH.9

TH.1

TH.2

TH.3

TH.4

TH.5

TH.6

TH.7

Fence to be
Constructed Engineer
to Establish Location.

Co. Rd. 105

Existing Fence

FLANT
AND
STOCKPILE
AREA

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TH.7

Fence to be
Constructed Engineer
to Establish Location.

Co. Rd. 105

Existing Fence

FLANT
AND
STOCKPILE
AREA

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Fence to be
Constructed Engineer
to Establish Location.

Co. Rd. 105

Existing Fence

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STOCKPILE
AREA

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Fence to be
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Existing Fence

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STOCKPILE
AREA

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Fence to be
Constructed Engineer
to Establish Location.

Co. Rd. 105

Existing Fence

FLANT
AND
STOCKPILE
AREA

TH.9

☆ ASHBAUGH PIT

Location: NE 1/4 of NE 1/4 of Sec. 16, T. 7N., R. 59W.
Owner: State of Colorado - State Board of Land Commissioners
Quantity Available: 27,000 Cu. Yds.
Haul Distance: 4.4 Mi. to Station 945+50
Proposed Use: Hot Bituminous Pavement (Grading F) (Haul Asphalt and Hydrated Lime) - Except Top Two Layers
Stripping: Removing Overburden 1800 Cu Yds.
Replacing Overburden 1800 Cu Yds.

AGGREGATE TEST REPORT

Test No.	Depth	Percent Passing										Sieve				PL	PI	Sieve Count				
		6"	4"	3"	2 1/2"	2"	1 1/2"	1"	3/4"	1/2"	3/8"	#4	#6	#10	#20				LL			
1B	3'-13"	100	92	89	89	86	84	82	80	76	69	54	14	10	82	34	19	15	32			
2B 2C	2'-7" 7'-14"			100	98	96	93	91	89	87	85	82	79	40	8	52	33	20	13	53		
4B	3'-11"		100	95	88	84	79	72	66	60	56	49	41	30	15	13	105	58	23	35	21	
5B	4'-12"		100	94	85	81	75	71	67	64	61	56	48	33	13	11	89	51	20	31	25	
6B	2'-12"	100	82	75	75	74	70	65	61	56	52	46	39	31	13	11	92	59	22	37	20	
7B	6'-13"		100	93	84	79	76	70	67	62	59	52	44	34	20	17	144	44	19	25	17	
8B	5'-11"		100	91	87	79	72	64	61	57	53	48	41	33	18	16	136	57	21	36	15	
10B	5'-11"		100	93	85	77	73	67	62	58	53	50	46	40	32	19	16	133	45	20	25	16

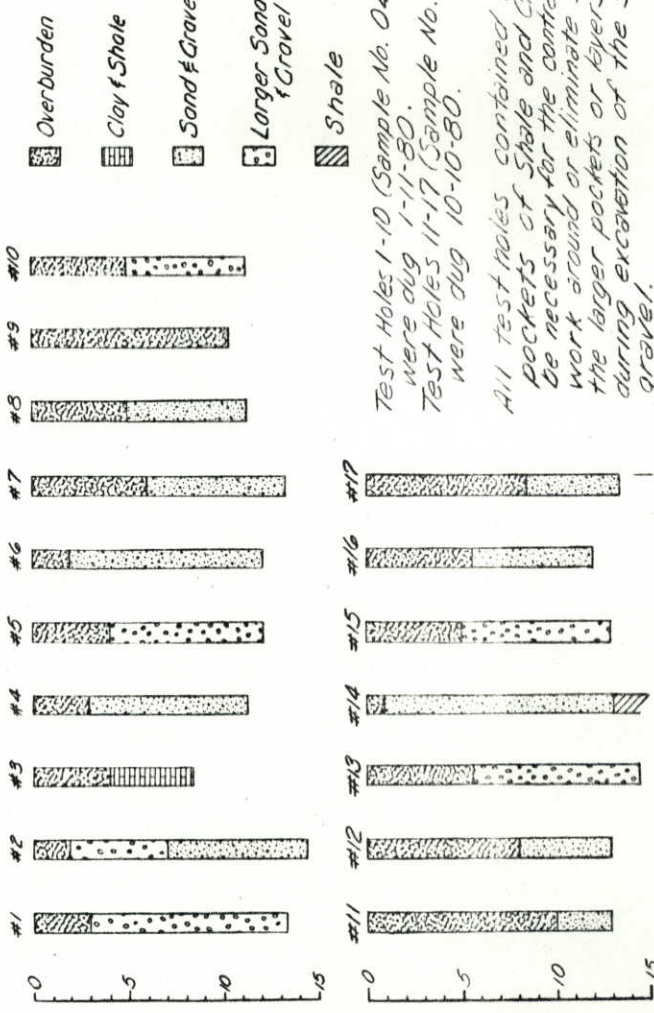
Test Nos. 11B and 14B were similar to 7B,
Test No. 12B was similar to 6B,
Test No. 13B was similar to 5B,
Test No. 15B was similar to 10B,
Test Nos. 16B and 17B were similar to 8B.
For depths of the above tests refer to Log of Pit (this sheet).

SUMMARY OF APPROXIMATE QUANTITIES

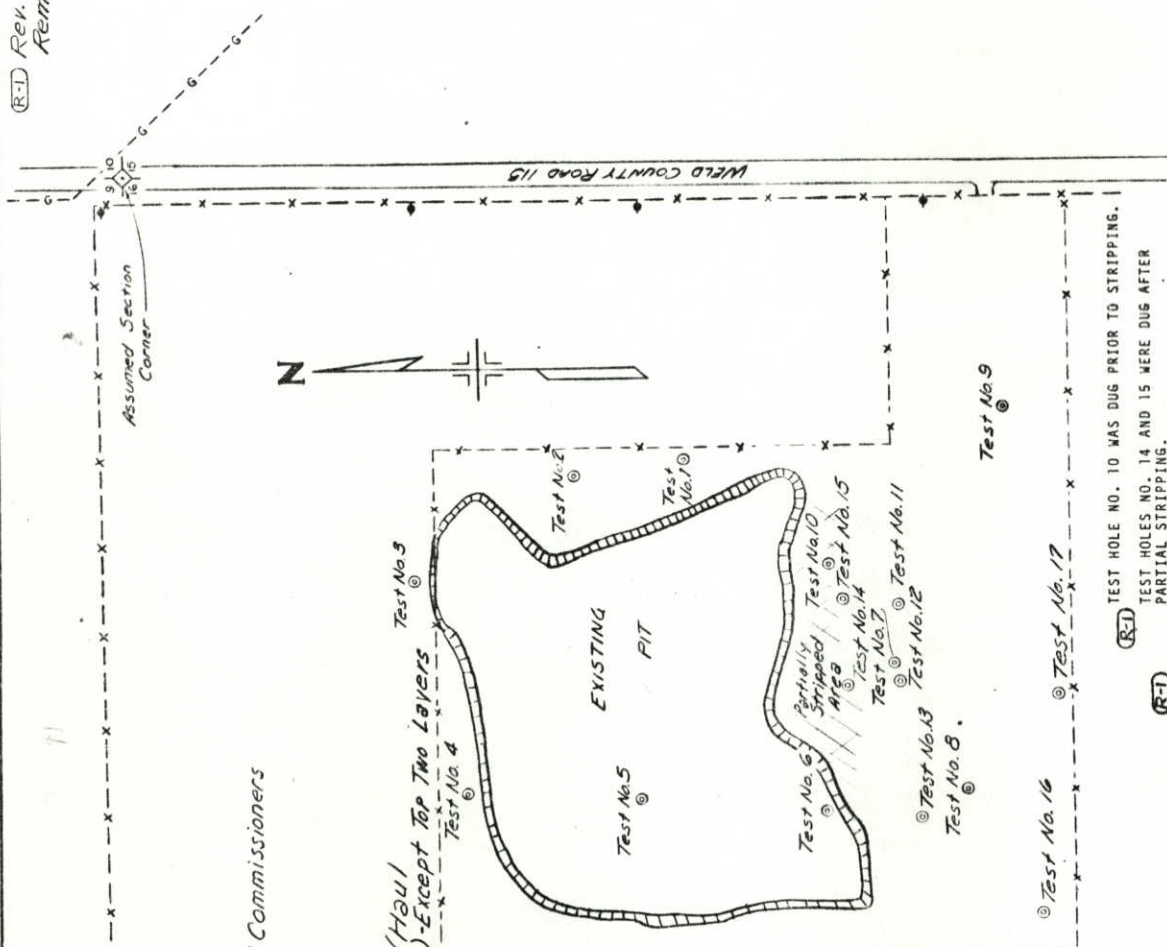
No.	Item	Unit	Quantity	FINAL	266#
203	Stripping	Cu. Yd.	3,600	0	Δ
212	Seeding (Native)	Lbs.	4	0	Δ
212	Fertilizer (Available N)	Lbs.	20	0	Δ
212	Fertilizer (Available P)	Lbs.	10	0	Δ
212	Fertilizer (Available K)	Lbs.	10	0	Δ
212	Soil Preparation (Native)	Acres	0.5	0	Δ
212	Mulching	Ton	1	0	Δ

Δ Determined by 105 #13B

LOG OF PIT



(R-1) Rev. & Added Notes
Removed Scale 7:30-81 P.D.



PIT NOT RECLAIMED BECAUSE OF SMALL QUANTITY USED.
A JOB IS COMING UP IN THE SPRING, AT WHICH TIME THE PIT WILL BE RECLAIMED.

DESIGNATED MATERIALS PIT INFORMATION

PIT NAME STATE LAND - ASHBAUGH PIT
OWNER'S NAME STATE OF COLORADO (STATE BOARD OF LAND COMMISSIONERS)
OWNER'S ADDRESS 620 CENTENNIAL BUILDING
1313 SHERMAN STREET
DENVER, COLORADO 80203
PIT LOCATION (LEGAL) A PORTION OF THE N.E. 1/4, SECTION 16, T. 7 N., R. 59 W.
TYPE OF PIT SAND AND GRAVEL
ROYALTY FEE \$0.30 PER TON
ROYALTY CHECKS PAYABLE TO STATE OF COLORADO - STATE BOARD OF LAND COMMISSIONERS
OPTION EXPIRATION DATE APRIL 7, 1985

PIT CONSTRUCTION AND RECLAMATION REQUIREMENTS

- ALL OF THE CONTRACTOR'S ACTIVITIES RELATING TO THE GRAVEL OPERATION INCLUDING, BUT NOT LIMITED TO, SUCH ITEMS AS STOCKPILING, GRADING, PAVING, AND RECLAMATION SHALL BE CONFINED WITHIN THE FENCED AREA ENCLOSED BY THIS FENCE WILL BE REFERRED TO AS THE AFFECTED AREA.
- THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE FACT THAT VARIATIONS IN THE GRADATION OF THIS DEPOSIT WERE ENCOUNTERED DURING SAMPLING. THEREFORE, CARE SHOULD BE EXERCISED BY THE CONTRACTOR DURING AGGREGATE PRODUCTION TO ASSURE THAT THE MATERIAL IS REMOVED AND BLENDED IN SUCH A MANNER AS TO PRODUCE A UNIFORM AGGREGATE IN THE STOCKPILE.
- A CRUSHING PLANT WILL BE REQUIRED TO PRODUCE SPECIFICATION MATERIAL. ALL ROCK PASSING A 10" GRIZZLY WILL BE CRUSHED.
- THE CONTRACTOR WILL BE REQUIRED TO STOCKPILE THE CRUSHED MATERIAL PRIOR TO MIXING IT WITH ASPHALT CEMENT TO AID IN ASSURING THAT A UNIFORM PRODUCT IS BEING PRODUCED.
- EXCAVATION IS TO START AT THE SOUTH FACE OF THE EXISTING PIT AND PROCEED BACK INTO THE DEPOSIT.
- WHEN ELICITATING THE GRAVEL, THE CONTRACTOR SHALL SUPPLY AND USE EQUIPMENT CAPABLE OF WORKING A VERTICAL FACE WITH ALL MATERIAL DESIGNATED AS USEABLE BY THE ENGINEER BEING REMOVED TO THE FULL DEPTH OF THE DEPOSIT. IF, IN THE OPINION OF THE ENGINEER, THE MATERIAL IN THE PIT IS SUCH THAT IT CAN BE WORKED BY REMOVING MATERIAL IN HORIZONTAL LAYERS, HE MAY GRANT WRITTEN PERMISSION TO DO SO.
- THE TOP 0.5' OF OVERBURDEN IN THE PIT, PLANT, AND STOCKPILE AREA WILL BE STRIPPED AND STOCKPILED.
- ANY EXCESS OVERBURDEN THAT IS EXCAVATED WILL ALSO BE STOCKPILED.
- ALL BACKSLOPES CREATED BY THE CONTRACTOR'S EXCAVATION WILL BE LEFT NO STEEPER THAN 3:1.
- ALL ASPHALT AND ASPHALT MIX IS TO BE REMOVED FROM THE OWNER'S PROPERTY.
- AT THE COMPLETION OF THE GRAVEL OPERATION THE PIT, PLANT, STOCKPILE, AND HAUL ROAD AREAS WILL BE RIPPED TO A DEPTH OF SIX INCHES. ANY OTHER PORTIONS OF THE AFFECTED AREA WHICH HAD VEGETATION DESTROYED DUE TO THE CONTRACTOR'S OPERATIONS WILL ALSO BE RIPPED SIX INCHES.
- ANY STOCKPILED EXCESS OVERBURDEN WILL BE PLACED UNIFORMLY IN THE BOTTOM OF THE CONTRACTOR'S EXCAVATION.
- THE STOCKPILED TOP 0.5' OF OVERBURDEN WILL THEN BE SPREAD UNIFORMLY BACK OVER THE AREAS FROM WHICH IT WAS STRIPPED.
- ALL AREAS THAT WERE RIPPED, AS DESIGNATED IN ITEM NO. 11 ABOVE, WILL THEN BE FERTILIZED, SEEDED AND MULCHED AS INDICATED BELOW:

COMMON NAME	SPECIES	RATE - PLS/ACRE
BLUE GRAMA (LOVINGTON)	BOUTELOUA GRACILIS	1.2
WESTERN WHEATGRASS (BARTON)	AGROPYRON SMITHII	4.0
SIDEWATER GRAMA (VAUGHN)	BOUTELOUA CURTIPENDULA	2.25
YELLOW SWEETCLOVER	MELILOTUS OFFICINALIS	0.7
TOTAL PLS/ACRE - SEEDING		8.15

MULCHING MATERIAL

2 TONS PER ACRE NATIVE HAY	RATE
COMMERCIAL FERTILIZER	
AVAILABLE NITROGEN	40 LBS./ACRE
AVAILABLE PHOSPHATE	20 LBS./ACRE
AVAILABLE POTASH	20 LBS./ACRE

A NUISANCE PAYMENT OF \$500.00 WILL BE MADE TO THE PIT OWNER IF HIS PIT IS NOT USED.

