AS CONSTRUCTED				
NO REVISIONS		REVISED	11-27-81	VOID

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

PLAN

PROFILE

S.E. 1/4 Sec. 19 T.8N. R.59 W.

(R-1) Rev. Note, Added 2-36" Cross Culverts and Hydraulic Info., Added Details 7-30-81 PDL

STA. 850+01.76 BEGIN HES 0004(17)=
STA. 850+01.76 FR 014-2(6) BEGIN NO WORK SECTION

STA. 878+93.70 END R.O.W. FR 014-2(4)
STA. 878+93.70 BEGIN R.O.W. FR 014-2(5)

STA. 872+44.26 Bk.=
872+99.38 Ah. END HES 0004(17)=
STA. 872+99.38 Ah. FR 014-2(6) END NO WORK SECTION

N.W. 1/4 Sec. 29 T.8N. R.59W.

PI 861+68.8 (SURVEY & PROJ)

24" x 26' CSP

36" x 54" CSP

Survey Line

Projected Line To Be Constructed

3° SURVEY
Δ = 40° 51' RT.
D = 5° 00'
T = 426.73
L = 817.00
R = 1145.92

PROJ
Δ = 40° 51' RT.
T_s = 1167.04'
L_s = 192.81'

PROJ
L_s = 200'
θ_s = 2° 00'
LT = 133.34'
ST = 66.67'

PROJ
Δ_c = 36° 51'
D_c = 2° 00'
T_c = 954.38'
L_c = 1842.50'
R_c = 2864.79
e = 0.066 ft.
Tran = 200'
MDS = 70 mph
SSD = 550'

N 89° 33' 45" E

S 0° 26' 17" W

S 89° 33' 45" E

PC 857+42.07 (SURVEY)

P.T. 865+59.07 (SURVEY)

P.I. 865+40 ± Reqd ± 36" x 300' CSP Cross Culverts with End Sections, Gutter Ditch (W = 20')

D.A. = 0.86 Sq. Mi.
Q100 = 490 cfs
HW = Overtops
Q25 = 150 cfs
AHW = 4880.5
DHW = 4880.5

853+00 to 870+00 Remove Old Road

C.S. 870+44.26 (PROJ)

S.T. 872+44.26 (Proj) Bk. = 872+99.38 (Surv.) Ah.

850+-872+ Reqd Curb Tg. & R.P. CMO # 8904

869+00 Remove 36" x 54" C.S.P.

18" x 20' CSP

15" x 5 MM CSP

18" x 26' CSP

To Ault

To Romer

B.M. Elev. 4897.86' H/G 50' Rt. Sta. 850+80

B.M. Elev. 4887.06' H/G 50' Rt. Sta. 855+00

B.M. Elev. 4880.61 H/G 50' Rt. Sta. 860+00

B.M. Elev. 4874.85' H/G 50' Rt. Sta. 865+00

B.M. Elev. 4873.95' H/G 50' Rt. Sta. 870+00

B.M. Elev. 4886.51' H/G 50' Rt. Sta. 875+00

TEST No. 32
A-6 (5)
L.L. = 35
P.I. = 16
%-200 = 53
R = 18

Soil Survey Sample No. 2054
From Proj. FC 014-1(8)
Date: Nov. 30, 1976

TEST No. 33
A-6 (10)
L.L. = 27
P.I. = 8
%200 = 39
R = 22

TEST No. 34
A-6 (10)
L.L. = 28
P.I. = 9
%200 = 40
R = 22

TEST No. 35
A-6 (6)
L.L. = 39
P.I. = 19
%200 = 52
R = 8

400' V.C.
1000' V.C.
400' V.C.
SSD > 1300'
MDS = 80 mph

-3.85 %
-1.342 %
+0.9176 %
+0.50 %

P.I. 4891.88
P.I. 4878.46
P.I. 4887.13

No. 33 11 RT
No. 34 1' RT
No. 35 71' RT

PROFILE UNDER PROJECTED LINE

85.30 @ 44.88

872+44.26 Bk.
872+99.38 Ah.

12,355
8,826
12,355
11,772
BALANCE

*Includes 11,812 cu yds. Excess Excavation from Project No. FR.C14-2(6).

+Includes material obtained from widened cuts on right side and embankment on left side of road. See Earthwork Summary (Sheet No. 9) for locations.

EMB. FACTOR
UNCL. EXCAV.
EMBANKMENT
EMB. X FACTOR
HAUL Yo-MI.

850 855 860 865 870 875 880

4910 4900 4890 4880 4870

TITLE SHEET

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

P.E. R.O.W. AND UTILITIES UNDER PROJECT NO. FR 014-2(4)

FEDERAL ROAD REGION NO	DIVISION	PROJECT NO	SHEET NO
VIII	COLORADO	HES 0004(17)	1

AS CONSTRUCTED
NO REVISIONS [ ] REVISED [11-27-81] VOID [ ]

PLAN AND PROFILE OF ~~PROPOSED~~

FEDERAL AID PROJECT NO. HES 0004(17)

STATE HIGHWAY NO. 14

WELD COUNTY

MAR 1982
CONSTR. SEC.
DIST.

SCALES OF ORIGINAL DRAWINGS
ON PLAN, 1 IN. = 100 FT.
ON PROFILE { 1 IN. = 100 FT. HORIZONTAL; 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, AND SCHEDULE, OF CONSTRUCTION TRAFFIC SIGNS
8. SNADER 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 SHEETS)	(2-29-80)
M-620-9	FIELD LABORATORY CLASS 1		5-30-80

REVISED SHEETS 1, 3-10
NO REVISION SHEETS 2

TABULATION OF LENGTH AND DESIGN DATA

STATION	ROADWAY LIN. FT.	
850+01.76 BEG. HES 0004(17) = 850+01.76 FR 014-2(6) BEGIN NO WORK SECTION	2242.50	
872+44.26 Bk. = 872+99.38 Ah. END HES 0004(17) = 872+99.38 FR 014-2(6) END NO WORK SECTION		
TOTAL	2242.50	

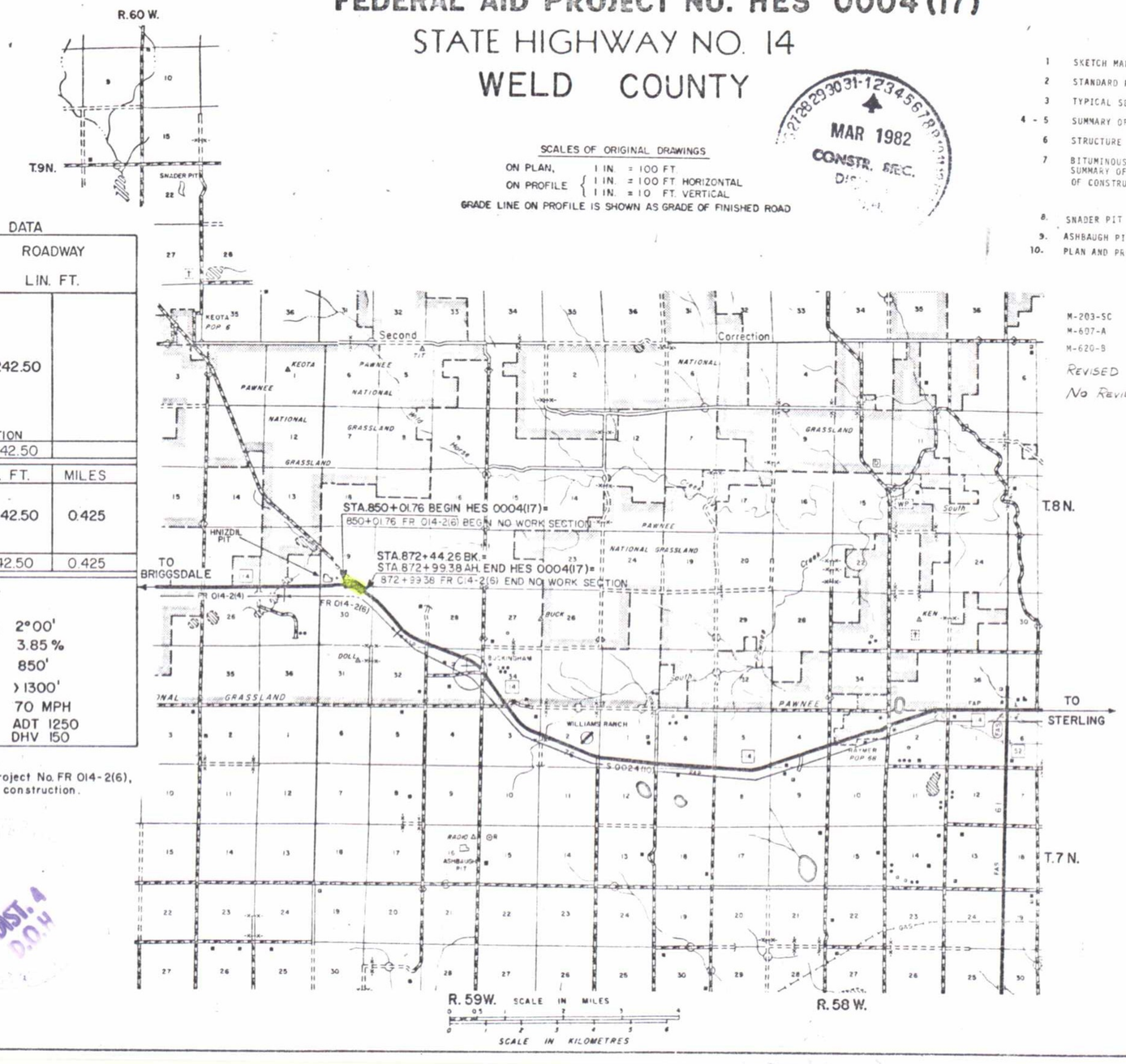
SUMMARY	LIN. FT.	MILES
ROADWAY	2242.50	0.425
TOTAL (NET & GROSS LENGTH)	2242.50	0.425

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 DHV 150

This job consists of the No Work Section of Project No. FR 014-2(6), which is to be combined with this project for construction.

DIST. 4 DOH



DIST. IV	FILE	COPY
DIST. ENGR.		
ASST. ENGR.		
CONSTR.		
PRE-CONST.		
ERA		
UTIL		
DESIGN		
ROW		
MATL'S		
EEO		
RE-PE'S		
MAINT.		
TRAFFIC		

Atkins

DIVISION OF HIGHWAYS

APPROVED: R L Clutinger
Asst. CHIEF ENGINEER (T) — 6-30-81 DATE

AS CONSTRUCTED INFORMATION

CONTRACTOR Sterling Paving Co.
RESIDENT ENGINEER (Project or Resident) Don Atkins
PROJECT STARTED Aug 12 1981
PROJECT COMPLETED Nov 27 1981
AS CONSTRUCTED PLANS APPROVED Ole Peterson
DCE — TITLE — 12/17/82 DATE

PDL

AS CONSTRUCTED					
NO REVISIONS	11-27-81	REVISED		VOID	

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	HES 0004(17)	2	10

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

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

DEPARTMENT OF HIGHWAYS
STATE OF COLORADO
DIVISION OF HIGHWAYS

STANDARD PLANS LIST

M & S STANDARDS — JANUARY, 1980

DIVISION OF HIGHWAYS, STATE OF COLORADO
FORM 126
SEPTEMBER 1972

TYPICAL SECTIONS

AS CONSTRUCTED			
NO REVISIONS	REVISED 11-27-81	VOID	

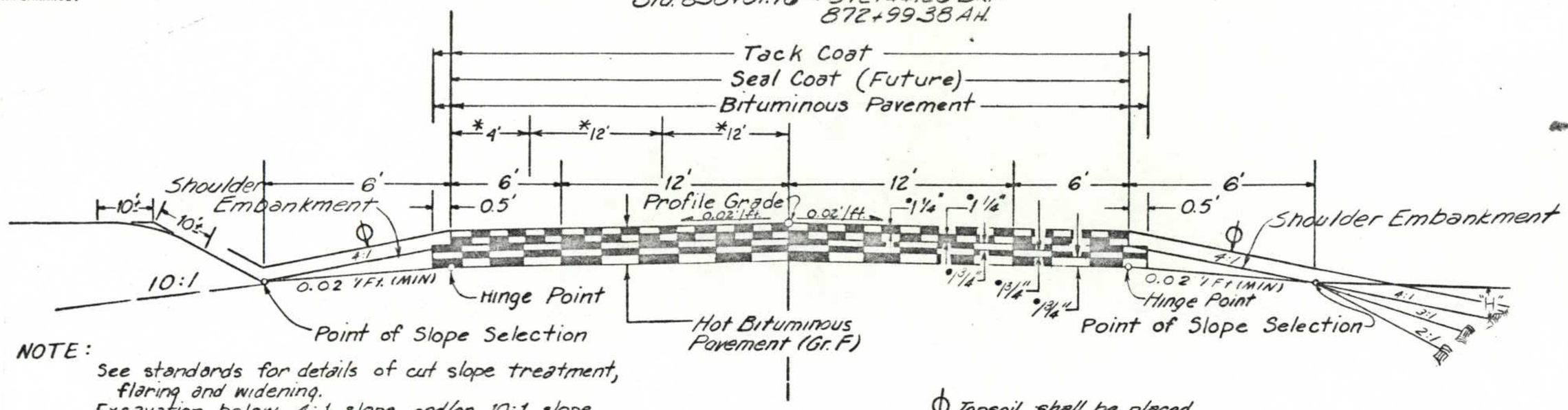
FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	HES 0004(17)	3	10

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.

~SECTION A~
Sta. 850+01.76 ~ 872+44.26 BK. = 872+99.38 AH.



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

Φ Topsoil shall be placed to this line.

*These dimensions apply to the widened Section from Sta. 856+10 to 863+75, with 300' tapers from Sta. 853+10 to 856+10 and from Sta 863+75 to 866+75.

TYPICAL SECTION NOTES

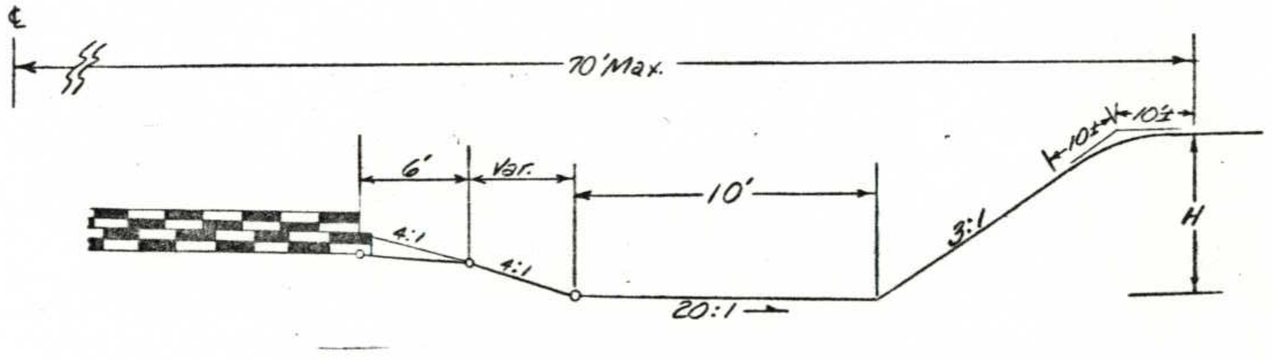
MATERIAL SHALL BE PLACED IN SEPARATE COURSES AT THE FOLLOWING APPROXIMATE RATES PER 100 LIN. FT. OF ROADWAY:

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.

Δ WIDENED CUT SECTION
Right Side Only



Δ To be used as needed to obtain additional excavation.

— 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 ~~330~~ 390 Hours of Flagging for controlling traffic will be required for this project.

It is estimated that ~~200~~ 150 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
SIDE-OATS GRAMA	BOUTELOUA CURTIPENDULA	65	50	3
SAND DROP SEED	SPOROBOLUS CRYPTANDRUS	95	85	.25
ALPHALFA V. RHIZOMA	MEDICAGO SATIVA	95	90	1
*PROSO MILLET	PANICUM MILIACEUM	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:

Commercial Fertilizer	Available N %	Available N lbs	Available P %	Available P lbs	Available K %	Available K lbs	Total lbs/acre
Ammonium nitrate (18-0-0)	18	40					= 222.0
Triple super phosphate (0-46-0)			46	20			43.0
Muriate of Potash (0-0-60)					60	20	33
						Total =	298

ROADWAY SEEDING QUANTITIES

THE MINIMUM THICKNESS OF TOPSOIL SHALL BE 4 INCHES. IT IS ESTIMATED THAT 3,765 CU. YDS. WILL BE REQUIRED AND WILL BE OBTAINED FROM WITHIN RIGHT OF WAY AND CONSTRUCTION LIMITS.

THE FOLLOWING ESTIMATED QUANTITIES FOR SEEDING WILL BE REQUIRED FOR THIS PROJECT:	PLAN	FINAL	REF #
SEEDING (NATIVE)	135 LBS.	100	24
FERTILIZER (AVAILABLE N)	280 LBS.	207	25
FERTILIZER (AVAILABLE P)	140 LBS.	103	25
FERTILIZER (AVAILABLE K)	140 LBS.	103	25
SOIL PREPARATION (NATIVE	7 ACRES	5.17	24
MULCHING	10.5 TONS	7.76	24

DOH Form No. 113 (Mylar)
REV. MAY 1978

(R-1) Rev Quantities 7-30-81 PDL

SUMMARY OF APPROXIMATE QUANTITIES

AS CONSTRUCTED			
NO REVISIONS	REVISED	VOID	

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

	INDEX 1982 BOOK	PAGE	SHEET	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 Aspholt Mat	Sq.Yd.												5,000	5980	+980	120%
(R-1)			7	203	Unclassified Excavation	Cu.Yd.												21,465	16,933	-4,532	79%
			7	203	Stripping	Cu.Yd.												6,600	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%
(R-1)	128		6	206	Structure Excavation	Cu.Yd.												71	80	+9	113%
(R-1)	128		6	206	Structure Backfill (Class 2)	Cu.Yd.												111	123	+12	111%
	19			207	Topsoil	Cu.Yd.												3,765	4,218	+453	112%
	2,3,6			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 Preporation (Native)	Acre												8.5	6.47	-2.03	76%
	24,27		3,8	213	Mulching	Ton												13.5	10.46	-3.04	77%
	(FORM 105 *13B)			307	Mineral Filler	Ton	DELETED BY 105 *13B. WO *4646											73	0	-73	0%
	(FORM 87)			403	Hot Bituminous Pavement (Grading F) (Haul and Asphalt)	Ton	DELETED BY 105 *13C											1,460	32.00.75	+1,740.75	219%
	(FORM 105 *13C)			403	Hot Bituminous Pavement (Grading F) (Haul, Asphalt and Hydrated Lime)	Ton												3,093	0	-3,093	0%
	20			411	Emulsified Asphalt (CSS-1)	Gal.												2,010	1,887	-123	94%
	FORM 105	13B		603	18 Inch Corrugated Steel Pipe	Lin.Ft.	DELETED BY 105 *13B											52	0	-52	0%
(R-1)	128		6	603	36 Inch Corrugated Steel Pipe	Lin.Ft.												252	300	+48	119%
(R-1)	128		6	603	36 Inch Steel End Section	Each												6	6	+0	100%
	(FORM 87)			403	Hot Bituminous Pavement (Grading E) (Haul and Asphalt)	Ton	4646											-	1668.40	+1,668.40	-
	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%

DIVISION OF HIGHWAYS - STATE OF COLORADO
DOH Form No. 113 (Mylar)
REV. MAY 1978

SUMMARY OF APPROXIMATE QUANTITIES

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

INDEX Col. Book	PAGE	SHEET	CONTRACT ITEM NO.	CONTRACT ITEM	UNIT												PROJECT TOTALS	AS CONST TOTALS	DIFF +/-	% PLAN
1			620	Field Laboratory (Class 1)	Each												0.25	0.25	+0	100%
1			620	Sonitory Facility	Each												0.25	0.25	+0	100%
(Estimates)			626	Mobilization	L.S.												0.25	0.25	-0	100%
18			627	4 Inch Pavement Marking Tape	Lin.Ft.												200	150	-50	75%
28			699	Liquidated Damages	L.S.												-	-$229.76	-$229.76	-
				FORCE ACCOUNT																
22B			FA01	Minor Contract Revisions	F.A.	DELETED BY FORM 105, #22B											1 $2,000.00	$0.00	-$2,000	0%
23			FA03	Rejuvenoting Agent (State Forces)	F.A.												1	1	+0	100%
23			FA04	Final Signing and Striping (State Forces)	F.A.												1	1	+0	100%

THE STATE DEPARTMENT OF HIGHWAYS
DIVISION OF HIGHWAYS—STATE OF COLORADO
DOH FORM NO. 125 (MYLAR)
REV. MARCH, 1977

(R-1) Rev Quantities and Totals 7-30-81 PDL

STRUCTURE QUANTITIES

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

FEDERAL ROAD REGION NO.	DIVISION	PROJECT NO.	SHEET NO.
VIII	COLORADO	HES 0004(17)	6

INDEX BOOK	INDEX PAGE	INDEX SHEET	LOCATION	UNCLASSIFIED EXCAVATION CUBIC YARD EXCAV.	UNCLASSIFIED EXCAVATION CUBIC YARD EMB. NET	UNCLASSIFIED EXCAVATION CUBIC YARD DITCH	STRUCTURE EXCAVATION CUBIC YARD	STRUCTURE BACKFILL CUBIC YARD CL 2	REMOVAL OF STRUCTURE EACH	HOT BITUMINOUS PAVEMENT (GRADING F) TON	CORRUGATED STEEL PIPE LINEAR FEET 18"	CORRUGATED STEEL PIPE LINEAR FEET 36"	"H" OVER CULV. FT.	STEEL END SECTION EACH 36"	MISCELLANEOUS
			853+00 - 869+00	Δ 7,042											
			861+00		593 ~~565~~		0 ~~1~~	~~8~~		~~36~~ 0	0 ~~52~~		~~3~~		Deleted Pipe by DOH Form 105, #13B
10			863+00						1						
(R-1) 128			865+40			Δ 302	80 ~~67~~	123 ~~103~~				300 ~~252~~	~~6~~	6	
9			Entire Project												5980 ~~5,000~~ Sq. Yd. - Removal of Asphalt Mat
(R-1)			FINAL TOTALS	Δ 7,042	593 ~~565~~ Δ	302	80 ~~71~~	123 ~~111~~	1 ~~1~~	0 ~~36~~	0 ~~52~~	300 ~~252~~	~~6~~	6	

Δ On Computer Run

DIVISION OF HIGHWAYS, STATE OF COLORADO
D.O.H. FORM NO. 126
REV. FEB., 1977

(R-1) Removed Note Rev Quantity
7-30-81 PDL

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

AS CONSTRUCTED
NO REVISIONS [ ] REVISED [11-27-81] VOID [ ]

BITUMINOUS BASE COURSE AND SURFACING PLAN

FORM 87

STATION TO STATION	SOURCE	QUANTITY - TONS SURFACE COURSE TOP LAYER	SURFACE COURSE BOTTOM LAYER	BASE COURSE TOP LAYER	BASE COURSE MIDDLE LAYER	BASE COURSE BOTTOM LAYER	HAUL - TON MILE [FOR INFORMATION ONLY] SURFACE COURSE TOP LAYER	SURFACE COURSE BOTTOM LAYER	BASE COURSE TOP LAYER	BASE COURSE MIDDLE LAYER	BASE COURSE BOTTOM LAYER
FINAL 850+01.76 - 872+44.26	SNADER PIT (Conv.)	784.65 628	791.90 628	385.70 897	1058.03 897	1274.0 897	5,024	5,024	5,382	5,382	5,382
WIDENING - 853+10 - 866+75 LT.		84	84	117	117	117	685	685	704	704	704
ESTIMATED FOR IRREGULARITIES						51					306
FROM STRUCTURE QUANTITIES FINAL		36 41.85		296.0			288				
TOTALS FINAL		748 876.50	712 791.90	1,014 1015.30	1,014 1058.03	1,065 1127.40	5,997	5,709	6,086	6,086	6,382

SOURCE - ASHBAUGH PIT (Conv.)

TOTAL FROM SNADER PIT BOTTOM SURFACE PLAN 1460 TONS HBP (737 CU. YDS.) FINAL 1,200.75
TOTAL FROM ASHBAUGH PIT TOP GRADING E PLAN 3,093 TONS HBP (1,562 CU. YDS.) FINAL 1668.40
TOTAL HAUL 30,270 TON MI.

STABILIZATION BASED ON: 18 EDLA 134
REGIONAL FACTOR 0.75
SERVICEABILITY INDEX 2.5
SUBGRADE "R" VALUE 8-22

STRENGTH COEFFICIENTS
HOT BITUMINOUS PAVEMENT 0.44
EXISTING BITUM. PAVEMENT 0.15

(R-1)

‡ W.O. #4646

SCHEDULE OF CONSTRUCTION TRAFFIC SIGNS PLAN

SIGN CODE	LEGEND	PANEL SIZE DIMENSIONS	A	B	QUANTITY REQUIRED	FINAL	
SR11-2	ROAD/CLOSED	48" X 30"		X	2	0	105 #13D
BARRICADE (3M-B)(TEMP)					4	0	105 #13A
TYPE 2 BARRICADE			X		15	0	105 #13D
TOTALS PLAN FINAL			15 0	2 0			

DELINEATORS 266 #22

STATION	SIDE	SPACING	TYPE I (CRYSTAL) PLAN	TYPE I (CRYSTAL) EACH	TYPE I (CRYSTAL) FINAL	TYPE II (CRYSTAL) PLAN	TYPE II (CRYSTAL) EACH	TYPE II (CRYSTAL) FINAL
S.C. ~~852+01.76~~ 02	LT		1		2			
853+10 - 856+10	RT LT	100'				4		4
~~858+16~~ 859+10	RT LT		1		1			
861+20	LT	INTERSECT	6		6			
~~863+75~~ 867 - 866+75	LT	100'				4		10
869+75 - C.S. 870+44.26	LT	2°	2		2			
S.C. 852+0176 - C.S. 870+44.26	RT	2°	8		3			
TOTALS			18		15	8		14

SUMMARY OF EARTHWORK QUANTITIES

INDEX BK.	PG.	SH.	ITEM	FINAL	PLAN CU. YD.	PROJECT TOTALS CU. YDS.
266*						
			UNCLASSIFIED EXCAVATION			
			ROADWAY (FROM CROSS SECTIONS AND COMPUTER	16,599	11,271	
			ROADWAY QUANTITIES AS EMB.	*	791	
			STRUCTURE QUANTITIES AS DITCH	*	302	(R-1)
			EST. FOR CUT SLOPE TREATMENT	*	56	
			TO REPLACE TOPSOIL EXCAVATION (FROM ROADWAY PRISM)	*	1,702	
			**REMOVAL OF OLD ROAD	*	7,042	
			SHOULDER EMBANKMENT	*	301	
16			SUB EXC. STA 850+ to 852+	334		
			TOTAL	16,933	21,465	(R-1)
			COMPACTION (AASHTO T 99)			
			EMBANKMENT (NET) FROM COMPUTOR	28,641	16,488	
91			BASE OF CUTS AND FILLS	3,255	3,255	
			STRUCTURE QUANTITIES AS EMB. (NET)	*	565	
			TO REPLACE TOPSOIL EXCAV. (NET)	*	1,216	
			SHOULDER EMBANKMENT (NET)	*	215	
			TOTAL	31,896	21,739	
			STRIPPING		CU. YD.	
			REMOVE OVERBURDEN SNADER	3449	3,300	
23			REPLACE OVERBURDEN SNADER	2,781	3,300	
			TOTAL	6,230	6,600	
			TOPSOIL			
			ROADWAY PRISM	2,924	1,216	
			AREA DISTURBED BY ADDITIONAL EXCAV. FR 014-2(6) 266 #8B	1,294	2,549	
			TOTAL	4,218	3,765	
			STOCKPILE TOPSOIL			
3,6 2			ROADWAY PRISM	2,924	1,216	
			AREA DISTURBED BY ADDITIONAL EXCAV.	1,294	2,549	
			TOTAL	4,218	3,765	
			HAUL	51	YD. MI.	
16			SUB EXC. STA 850+ TO 852+ FROM MASS DIAGRAM COMPUTER	4391	12,331	
			~~EST. FOR REPLACING TOPSOIL EXCAV.~~		850	
			STRUCTURE QUANTITIES AS EMB.	* *	240	
			EST. FOR SHOULDER EMB.	* *	108	
32			X HAUL 300+ TO 867+50	2209		
			TOTAL	6,651	13,529	
			WETTING		M GAL.	
			COMPACTION	513	870	
			LIME SLURRY	11.6	42	
			DUST ABATEMENT	28		
			TOTAL	552.6	912	
			ROADWAY QUANTITIES BALANCE (FOR INFORMATION ONLY)		CU. YD.	
			EXCAVATION			
			UNCLASSIFIED (ROADWAY)		543	
			*ADDITIONAL EXCAVATION		10,728	
			EXCESS EXCAV. FROM FR 014-2(6)		11,812	
			TOTAL		23,083	
			EMBANKMENT NET			
			ROADWAY (FROM CROSS SECTIONS AND COMPUTER)		16,488	
			TOTAL		16.488	
			EMBANKMENT X FACTOR			
			ROADWAY (FROM CROSS SECTIONS AND COMPUTER)		23,083	
			TOTAL		23,083	

* INCLUDED IN COMPUTER BIN

** 7,042 CU. YDS. FROM REMOVAL OF OLD ROAD WILL BE USED AS UNCLASSIFIED EXCAVATION ON PROJECT NO. FR 014-2(6). OLD ROAD IS TO REMAIN IN PLACE UNTIL CONSTRUCTION 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+

DIVISION OF HIGHWAYS, STATE OF COLORADO
D. O. H. FORM NO. 126
REV. FEB., 1977

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

AS CONSTRUCTED			
NO REVISIONS		REVISED 11-27-81	VOID

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

SNADER PIT

Location: A Portion of the S.W.¼N.E.¼, NW¼S.E.¼, and NE¼S.E.¼ Sec.22, T.9N., R.60W.

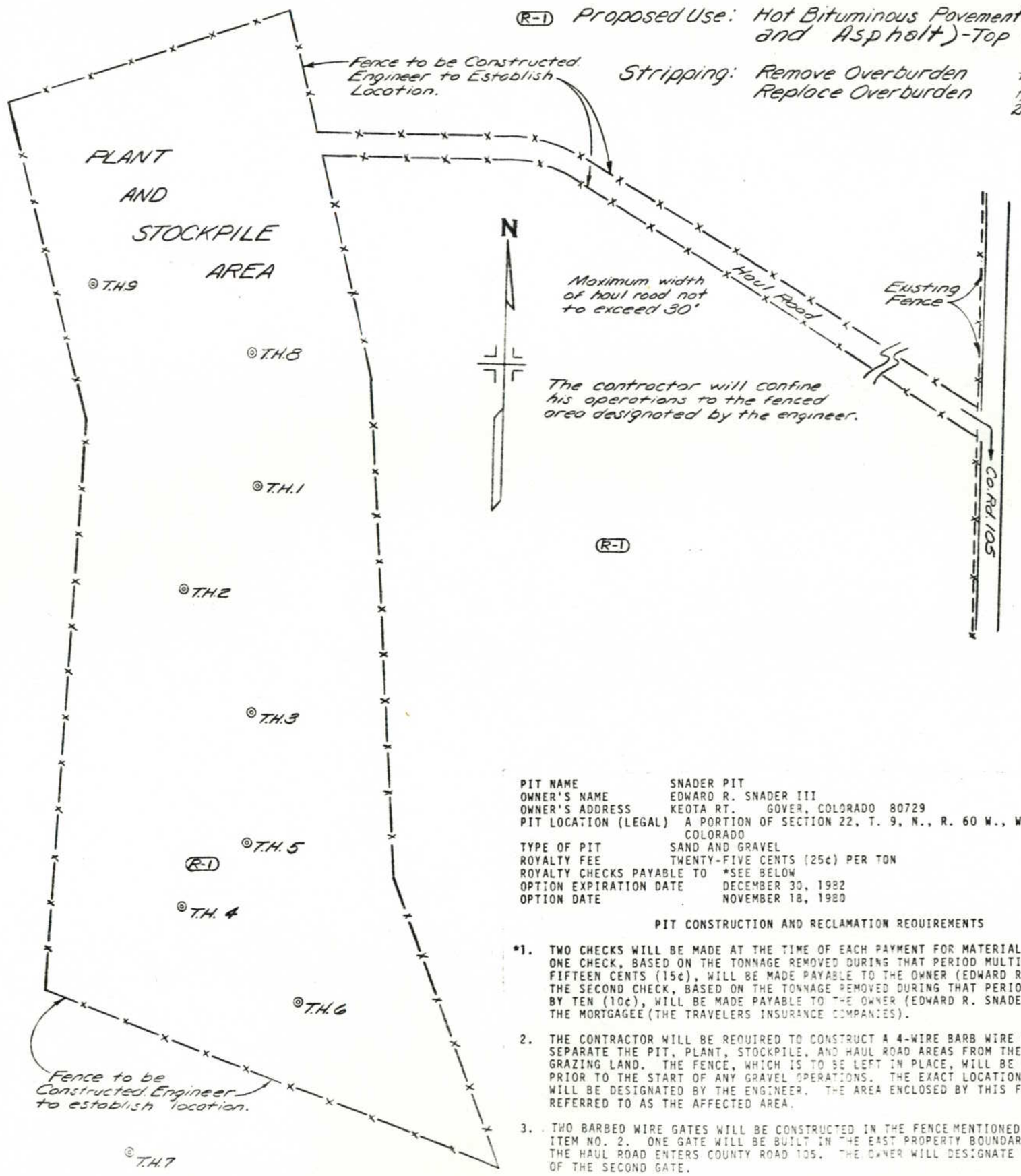
Owner: Edward R. Snader III

Quantity Available: 17,000 Cu. Yds.

Haul Distance: 7.9 Miles to Sta. 861+00

(R-1) Proposed Use: Hot Bituminous Pavement (Grading F)(Haul and Asphalt)-Top Two Layers

Stripping: Remove Overburden 3,449 ~~1,500~~
Replace Overburden ~~1,500~~ 2,781



AGGREGATE TEST REPORT

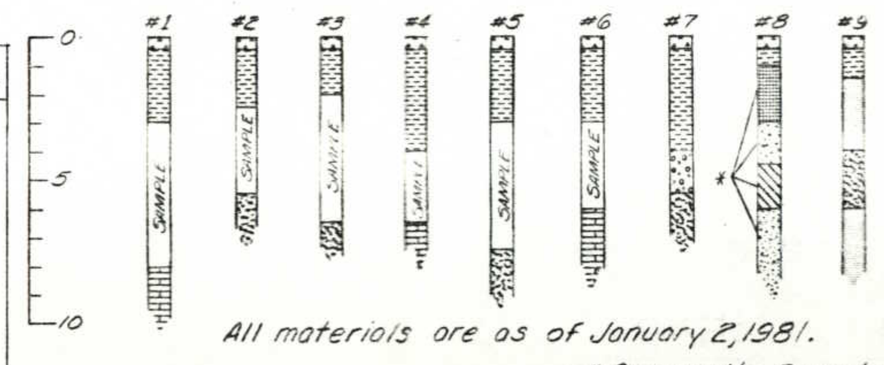
Test No.	Depth	Percent Passing 1½"	1"	¾"	½"	⅜"	#4	#8	#16	#50	#100	#200	LL.	PL	PI	Sand Equiv.
1-C	3'-8'		100	99	95	92	79	60	40	14	8	4.7	NV	NP	NP	67
2-C	2½'-5½'	100	98	97	93	90	77	58	40	12	7	4.8	NV	NP	NP	67
3-C	2½'-6½'	100	98	96	92	87	74	61	40	13	8	5.2	NV	NP	NP	74
4-C	4'-6½'	100	98	97	95	92	83	64	42	10	6	4.1	NV	NP	NP	65
5-C	3'-7½'	100	99	98	95	91	77	57	40	16	8	5.5	NV	NP	NP	57
6-C	3'-6'	100	99	98	96	94	84	64	43	11	5	3.4	NV	NP	NP	70
8C-8F	1'-9+'	100	99	96	91	86	69	51	36	15	9	7	NV	NP	NP	61

SUMMARY OF APPROXIMATE QUANTITIES

No.	Item	Unit	Quantity	FINAL	266#
203	Stripping	Cu.Yd.	3,000	6,230	23
212	Seeding (Native)	Lb.	6	11	27
212	Fertilizer (Available N)	Lb.	40	52	26
212	Fertilizer (Available P)	Lb.	40	52	26
212	Soil Preparation (Native)	Acre	1	1.3	27
213	Mulching	Ton	2	2.7	27
607	Corner and Line Brace Post	Each	–	-	-
607	Fence Barbed Wire with Metal Posts	Lin.Ft.	–	-	-

LOG OF PIT

No. 04248



All materials are as of January 2, 1981.
*Composite Sample

Sod
Overburden
Silty Clay
Shale
Sand and Gravel
Course Sand
Fine Sand and Gravel
Sand
Sand and Gravel with Shale Layers

DESIGNATED MATERIALS PIT INFORMATION

PIT NAME SNADER PIT
OWNER'S NAME EDWARD R. SNADER III
OWNER'S ADDRESS KEOTA RT. GOVER, COLORADO 80729
PIT LOCATION (LEGAL) A PORTION OF SECTION 22, T. 9, N., R. 60 W., WELD COUNTY, COLORADO
TYPE OF PIT SAND AND GRAVEL
ROYALTY FEE TWENTY-FIVE CENTS (25¢) PER TON
ROYALTY CHECKS PAYABLE TO *SEE BELOW
OPTION EXPIRATION DATE DECEMBER 30, 1982
OPTION DATE NOVEMBER 18, 1980

PIT CONSTRUCTION AND RECLAMATION REQUIREMENTS

*1. TWO CHECKS WILL BE MADE AT THE TIME OF EACH PAYMENT FOR MATERIAL REMOVED. ONE CHECK, BASED ON THE TONNAGE REMOVED DURING THAT PERIOD MULTIPLIED BY FIFTEEN CENTS (15¢), WILL BE MADE PAYABLE TO THE OWNER (EDWARD R. SNADER III). THE SECOND CHECK, BASED ON THE TONNAGE REMOVED DURING THAT PERIOD MULTIPLIED BY TEN (10¢), WILL BE MADE PAYABLE TO THE OWNER (EDWARD R. SNADER III) AND THE MORTGAGEE (THE TRAVELERS INSURANCE COMPANIES).

2. THE CONTRACTOR WILL BE REQUIRED TO CONSTRUCT A 4-WIRE BARB WIRE FENCE TO SEPARATE THE PIT, PLANT, STOCKPILE, AND HAUL ROAD AREAS FROM THE ADJACENT GRAZING LAND. THE FENCE, WHICH IS TO BE LEFT IN PLACE, WILL BE CONSTRUCTED PRIOR TO THE START OF ANY GRAVEL OPERATIONS. THE EXACT LOCATION OF THE FENCE WILL BE DESIGNATED BY THE ENGINEER. THE AREA ENCLOSED BY THIS FENCE WILL BE REFERRED TO AS THE AFFECTED AREA.

3. TWO BARBED WIRE GATES WILL BE CONSTRUCTED IN THE FENCE MENTIONED IN THE ABOVE ITEM NO. 2. ONE GATE WILL BE BUILT IN THE EAST PROPERTY BOUNDARY FENCE WHERE THE HAUL ROAD ENTERS COUNTY ROAD 105. THE OWNER WILL DESIGNATE THE LOCATION OF THE SECOND GATE.

4. ALL OF THE CONTRACTOR'S ACTIVITIES RELATING TO THE GRAVEL OPERATION INCLUDING, BUT NOT LIMITED TO, SUCH ITEMS AS STOCKPILE AREA, VEHICLE PARKING, PLANT AREA, AND HAUL ROADS SHALL BE CONFINED WITHIN THE FENCED AREA.

5. 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.

6. A SCREENING PLANT WILL BE REQUIRED TO PRODUCE SPECIFICATION MATERIAL.

7. THE CONTRACTOR WILL BE REQUIRED TO STOCKPILE THE SCREENED MATERIAL PRIOR TO MIXING IT WITH ASPHALT CEMENT TO AID IN ASSURING THAT A UNIFORM PRODUCT IS BEING PRODUCED.

8. THE GRAVEL EXCAVATION WILL START AT THE NORTH OR SOUTH END OF THE PIT AREA AND PROCEED BACK INTO THE DEPOSIT. ALL MATERIAL DESIGNATED BY THE ENGINEER AS USEABLE WILL BE REMOVED TO A FULL WIDTH AND DEPTH OF THE DEPOSIT AS THE EXCAVATION PROCEEDS ALONG THE RIDGE.

9. THE CONTRACTOR WILL SUPPLY AND USE EQUIPMENT CAPABLE OF WORKING A VERTICAL FACE WHEN EXCAVATING THE GRAVEL. HOWEVER, IF IN THE OPINION OF THE ENGINEER, THE MATERIAL IN THE PIT IS SUCH THAT IT CAN BE WORKED BY REMOVING THE MATERIAL IN HORIZONTAL LAYERS, HE MAY GRANT WRITTEN PERMISSION TO DO SO.

10. THE TOP SIX INCHES OF OVERBURDEN IN THE PIT, STOCKPILE, AND HAUL ROAD AREAS WILL BE STRIPPED AND STOCKPILED.

11. ANY EXCESS OVERBURDEN FROM THE PIT AREA WILL ALSO BE STRIPPED AND STOCKPILED. HOWEVER, IT IS TO BE IN A SEPARATE STOCKPILE FROM THE MATERIAL REMOVED FROM THE TOP SIX INCHES.

12. ALL BACKSLOPES CREATED BY THIS EXCAVATION, EXCEPT THOSE OUTLINED IN NO. 13 BELOW, WILL BE LEFT NO STEEPER THAN 4:1. ANY BACKSLOPES WITH A HORIZONTAL DISTANCE THAT IS GREATER THAN 10 FEET FROM TOP TO TOE OF SLOPE MUST BE BENCHED AT THE APPROXIMATE MIDPOINT OF THE SLOPE TO AID IN PREVENTING WATER EROSION.

13. THE BACKSLOPES ON THE EAST AND WEST SIDES OF THE EXCAVATION WILL BE DAYLIGHTED INTO THE EXISTING SLOPES OF THE RIDGE AT THE APPROXIMATE ELEVATION OF THE BOTTOM OF THE EXCAVATION. THIS IS TO ALLOW DRAINAGE FROM THE EXCAVATED AREA. HOWEVER, IF THE ENGINEER DETERMINES THAT SUCH DAYLIGHTING WOULD BE IMPRACTICAL IN CERTAIN AREAS DUE TO EXCESSIVE ADDITIONAL EXCAVATION, THOSE CERTAIN AREAS WILL BE BACKSLOPED AS OUTLINED IN ITEM NO. 12 ABOVE.

14. A MAXIMUM WIDTH OF 30' WILL BE ALLOWED FOR THE HAUL ROAD CROSSING THE OWNER'S PROPERTY.

15. ALL ASPHALT AND ASPHALT MIX IS TO BE REMOVED FROM THE OWNER'S PROPERTY.

16. THE BOTTOM OF THE EXCAVATED AREA IS TO BE LEFT RELATIVELY SMOOTH WITH NO LARGE HUMPS OR DEPRESSIONS.

17. ALL LOCATIONS IN THE AFFECTED AREA THAT HAD OVERBURDEN REMOVED OR VEGETATION DISTURBED BY THE CONTRACTOR'S OPERATION WILL BE RIPPED TO A MINIMUM DEPTH OF SIX INCHES AT THE COMPLETION OF THE GRAVEL OPERATION.

18. THE STOCKPILED EXCESS OVERBURDEN WILL THEN BE PLACED UNIFORMLY OVER THE BOTTOM OF THE AREA WHERE GRAVEL WAS REMOVED.

19. THE STOCKPILED TOP SIX INCHES OF OVERBURDEN WILL BE SPREAD UNIFORMLY OVER THE AREAS FROM WHICH IT WAS REMOVED.

20 ALL LOCATIONS IN THE AFFECTED AREA THAT WERE COVERED WITH THE STOCKPILED OVERBURDEN OR RIPPED WILL BE FERTILIZED, SEEDED, AND MULCHED AS INDICATED BELOW:

SEEDING PLAN

COMMON NAME	SCIENTIFIC NAME	RATE - PLS/ACRE	FINAL
SIDE-OATS GRAMA (VAUGHN)	BOUTELOUA CURTIPENDULA	3.6	3.6
BLUE GRAMA (LOVINGTON)	BOUTELOUA GRACILIS	1.2	-
LITTLE BLUESTEM (PASTURA)	SCHIZACHYRIUM SCOPARIUM	1.4	1.4
*BUFFALO (CHARLESTON IMPROVED)	TEXOKA		3.3
	TOTAL LBS. PLS/ACRE - SEEDING	6.2	8.3

*DOH FORM 105 #21

MULCH

MULCHING MATERIAL - 2 TONS PER ACRE NATIVE HAY.

FERTILIZER

COMMERCIAL FERTILIZER	LBS/ACRE
AVAILABLE NITORGEN	40
AVAILABLE PHOSPHATE	40

(R-1) 21. A NUISANCE PAYMENT OF $500.00 WILL BE MADE TO THE PIT OWNER IF HIS PIT IS NOT USED.

DIVISION OF HIGHWAYS, STATE OF COLORADO
D. O. H. FORM NO. 126
REV. FEB., 1977

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	HES 0004 (17)	9	10

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

(R-1) Rev. & Added Notes Removed Scale 7-30-81 PDL

☆ ASHBAUGH PIT

Location: NE. 1/4 of N.E. 1/4 of Sec. 16, T. 7N., R. 59 W.

Owner: State of Colorado - State Board of Land Commissioners

Quantity Available: 27,000 Cu Yds.

Haul Distance: 4.4 Mi. to Station 945+50

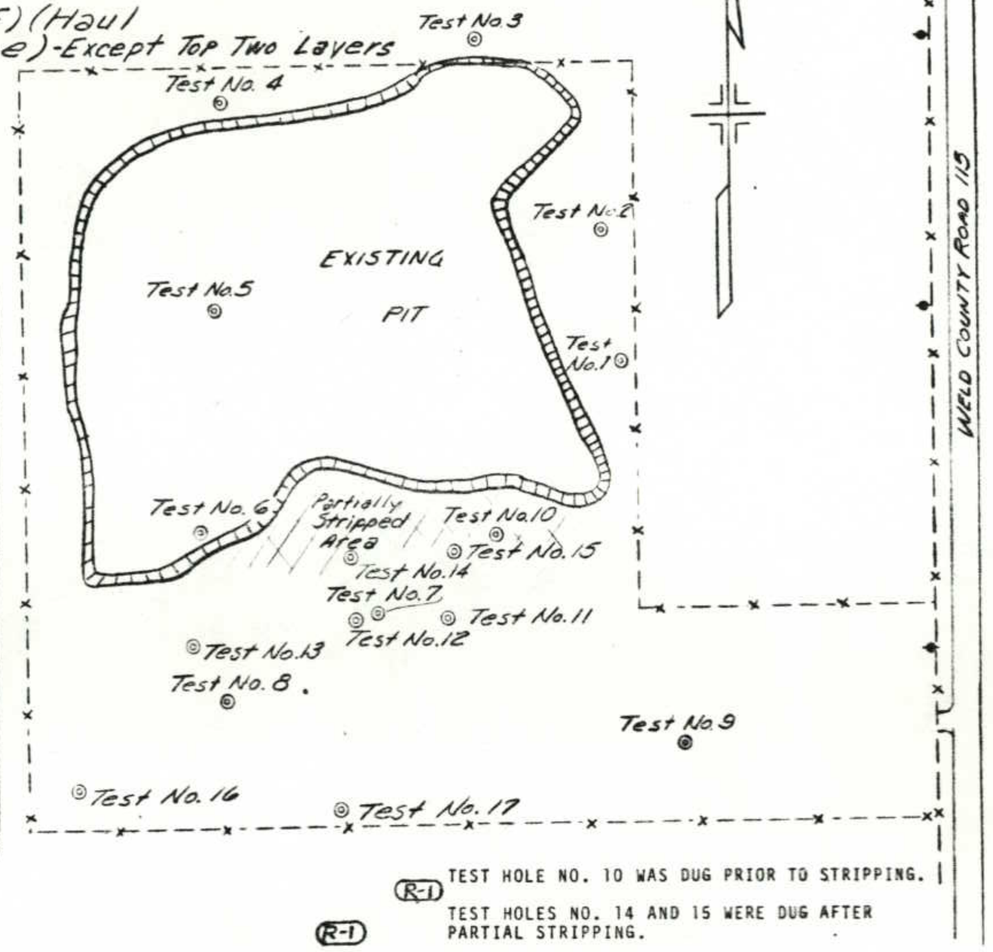
(R-1) Proposed Use: Hot Bituminous Pavement (Grading F) (Haul Asphalt and Hydrated Lime) - Except Top Two Layers

Stripping: Removing Overburden 1,800 Cu Yds.
Replacing Overburden 1,800 Cu Yds.

AGGREGATE TEST REPORT

Test No.	Depth	Percent Passing 6"	4"	3"	2½"	2"	1½"	1"	¾"	½"	⅜"	#4	#8	#16	#50	#100	#200	LL	PL	PI	Sand Equiv.
1B	3'-13+'	100	92	89	89	89	89	86	84	82	80	76	69	54	14	10	8.2	34	19	15	32
2B	2'-7'	Similar to 1B																			
2C	7'-14+'			100	98	96	93	91	89	87	85	82	79	40	8	6	5.2	33	20	13	53
4B	3'-11+'		100	95	88	84	79	72	66	60	56	49	41	30	15	13	10.5	58	23	35	21
5B	4'-12+'		100	94	85	81	75	71	67	64	61	56	48	33	13	11	8.9	51	20	31	25
6B	2'-12+'	100	82	75	75	74	70	65	61	56	52	46	39	31	13	11	9.2	59	22	37	20
7B	6'-13+'		100	93	84	79	76	70	67	62	59	52	44	34	20	17	14.4	44	19	25	17
8B	5'-11+'		100	91	87	79	72	64	61	57	53	48	41	33	18	16	13.6	57	21	36	15
10B	5'-11+'	100	93	85	77	73	67	62	58	53	50	46	40	32	19	16	13.3	45	20	25	16

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



(R-1) TEST HOLE NO. 10 WAS DUG PRIOR TO STRIPPING.

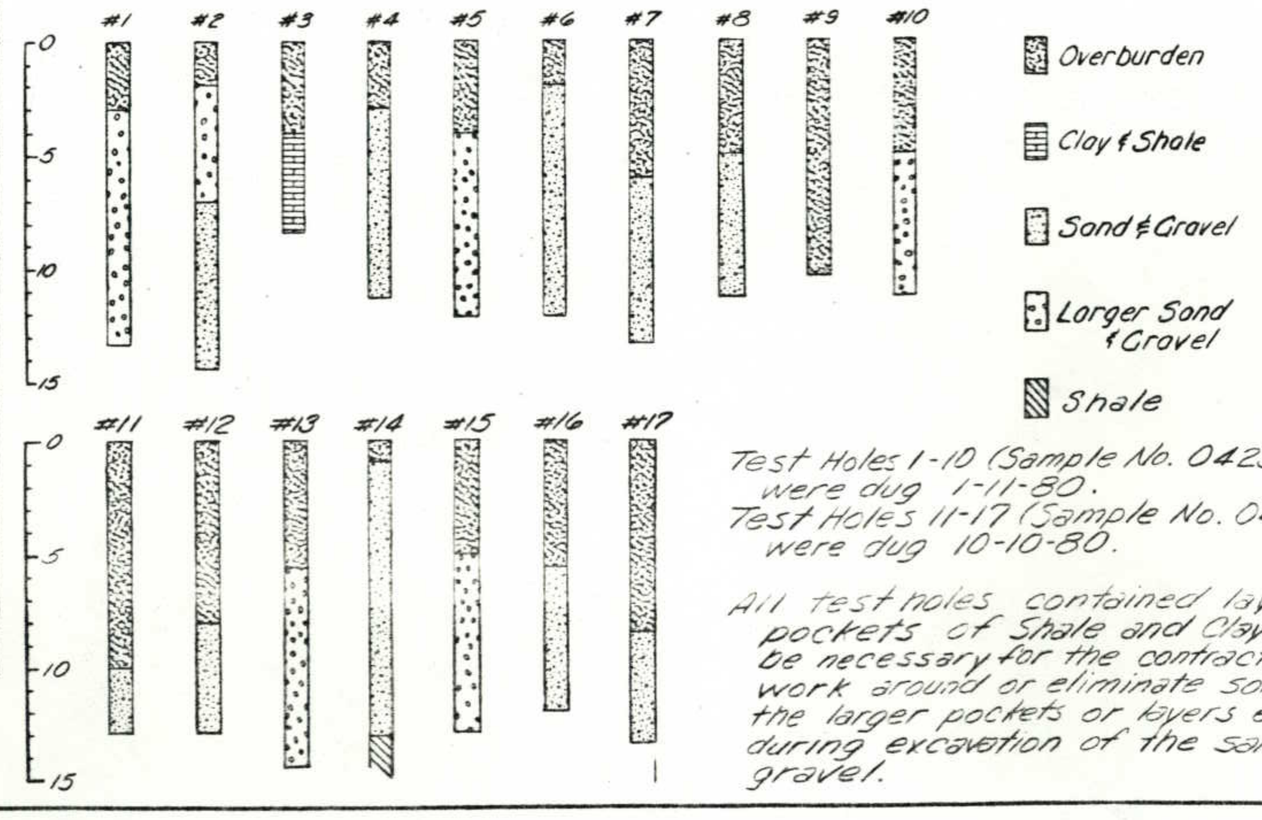
(R-1) TEST HOLES NO. 14 AND 15 WERE DUG AFTER PARTIAL STRIPPING.

SUMMARY OF APPROXIMATE QUANTITIES

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

△ Deleted by 105 #13B

LOG OF PIT



Test Holes 1-10 (Sample No. 04238) were dug 1-11-80.
Test Holes 11-17 (Sample No. 04267) were dug 10-10-80.

All test holes contained layers or pockets of Shale and Clay. It may be necessary for the contractor to work around or eliminate some of the larger pockets or layers encountered during excavation of the sand and gravel.

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

1. ALL OF THE CONTRACTORS ACTIVITIES RELATING TO THE GRAVEL OPERATION INCLUDING, BUT NOT LIMITED TO, SUCH ITEMS AS STOCKPILE AREA, VEHICLE PARKING, PLANT AREA, AND HAUL ROADS SHALL BE CONFINED WITHIN THE FENCED AREA AROUND THE EXISTING PIT AREA. THE AREA ENCLOSED BY THIS FENCE WILL BE REFERRED TO AS THE AFFECTED AREA.
2. THE CONTRACTORS 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.
3. A CRUSHING PLANT WILL BE REQUIRED TO PRODUCE SPECIFICATION MATERIAL. ALL ROCK PASSING A 10" GRIZZLY WILL BE CRUSHED.
4. 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.
5. (R-1) EXCAVATION IS TO START AT THE SOUTH FACE OF THE EXISTING PIT AND PROCEED BACK INTO THE DEPOSIT.
6. WHEN EXCAVATING 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 INTHE PIT IS SUCH THAT IT CAN BE WORKED BY REMOVING MATERIAL IN HORIZONTAL LAYERS, HE MAY GRANT WRITTEN PERMISSION TO DO SO.
7. THE TOP 0.5' OF OVERBURDEN IN THE PIT, PLANT, AND STOCKPILE AREA WILL BE STRIPPED AND STOCKPILED.
8. ANY EXCESS OVERBURDEN THAT IS EXCAVATED WILL ALSO BE STOCKPILED.
9. ALL BACKSLOPES CREATED BY THE CONTRACTORS EXCAVATION WILL BE LEFT NO STEEPER THAN 3:1.
10. ALL ASPHALT AND ASPHALT MIX IS TO BE REMOVED FROM THE OWNER'S PROPERTY.
11. 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.
12. ANY STOCKPILED EXCESS OVERBURDEN WILL BE PLACED UNIFORMLY IN THE BOTTOM OF THE CONTRACTOR'S EXCAVATION.
13. THE STOCKPILED TOP 0.5' OF OVERBURDEN WILL THEN BE SPREAD UNIFORMLY BACK OVER THE AREAS FROM WHICH IT WAS STRIPPED.
14. 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
SIDEOATS 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

COMMERCIAL FERTILIZER	RATE
AVAILABLE NITROGEN	40 LBS./ACRE
AVAILABLE PHOSPHATE	20 LBS./ACRE
AVAILABLE POTASH	20 LBS./ACRE

15. A NUISANCE PAYMENT OF $500.00 WILL BE MADE TO THE PIT OWNER IF HIS PIT (R-1) IS NOT USED.