

343 (3) 2nd to 10th

BOOK 3

343(3)



343 (3) STRUCTURES Book # 3

1974-1975

343-13) 2nd to 10th N

ENGINEER'S ESTIMATE
STATE ROAD COMMISSION OF UTAH
DEPARTMENT OF HIGHWAYS

R-21

JUNE 10 19 75

Name of Project 10th WEST 2ND to 10th NORTH Project No. CR 343(3)

County of CACHE Length _____ Ft. _____ Miles

Type _____ Surfacing _____ Ft. Wide

Made by PBW Station _____ to Station _____

Checked by: _____

7612
71835
57876
20
4
6.34

NO.	QUANTITY	UNIT	ITEM	PRICE	AMOUNT
1-	L.S.	L.S.	MOBILIZATION	\$5000.00	\$ 5000 00
2-	L.S.	L.S.	CLEARING AND GRUBBING	55.00	5500 00
3-	1761.23	CU.YD.	ROADWAY EXCAVATION	0.50	3806 00
4-	786.35	CU.YD.	EXCAVATION FOR STRUCTURES	3.50	2752 23
5-	57876.7	TONS	BORROW	1.00	57876 00
6-	18200.06	TONS	GRANULAR BORROW	1.00	18200 00
7-	1	EACH	HAND SLIDE GATES (18" TYPE M)	50.00	50 00
8-	3	EACH	CMP CLEAN OUTS	250.00	750 00
9-	2	EACH	45° 36" ELBOW (14. GA.)	100.00	200 00
10	50T	LINE FT.	8" Alum. CMP	5.50	275 00
11	498	LINE FT.	12" Alum CMP	8.00	3984 00
12	986	LINE FT.	18" Alum CMP	10.30	10155 80
13	74	LINE FT.	24" Alum CMP	14.50	1073 00
14	72	LINE FT.	30" Alum CMP	17.00	1224 00
15	680	LINE FT.	36" Alum CMP	24.50	16660 00
16	222	LINE FT.	22"/13" Alum CMP	11.50	2553 00
17	102	LINE FT.	26"/15" Alum CMP	13.00	1326 00
18	9253.3	TON	UNTREATED BASE COURSE	2.75	25446 58
19	180.40	CUYD	SMALL DITCH EXCAVATION	1.50	270 60
20	9	CUYD	LOOSE RIP RAP (8" cov.)	20.00	180 00
21	15	EACH	DELINEATORS (TYPE 1)	15.00	225 00
22	12	EACH	DELINEATORS (TYPE 2)	15.00	180 00
23	16	EACH	RIGHT-OF-WAY MARKERS	30.00	480 00
24	2	EACH	STOP SIGN (30")	150.00	300 00
25	4	EACH	WARNING SIGN (30")	150.00	600 00
26	7	EACH	ADJUST MANHOLES	300.00	2100 00
27	LS	L.S.	ROADSIDE CLEAN-UP	LS	2000 00
28	105	LBS	REINFORCING STEEL	1.00	105 00
29	4	EACH	FRAME & GATE	150.00	600 00
30	6.34	CUYDS	CONCRETE SMALL STRUCTURES	300.00	1902 00
	9835.95		Finic		
	4		10' Gate		
	15		16' Gate		

INDEX

CR 343(3) Structures Book No. 2

Pipe Structures.
Cont. from book #1

Pg 2 → 25

PIPE SUMMARY

PAGE 28

FIELD WORK

Pg. 50-

MISCELLANEOUS CONTRACT
ITEMS

Pg 70

SUMMARY OF PROJECT

PAGE 100-

2
Sta ELEV Gr Cut Area No. of L Cufft

0+20 0 0 3 1 3
0+19 2 6

6 18 108

0+01 2 6

3 1 3

0+00 0 0

119

TOTAL = 4.22 yd cu.

Sta 197+00~

Parallel to G

Side drain under private approach
Place in gutter at LEFT
(to be done by change order)

12" x 20' placed G.A.

6

Sta	ELEV.	Gr.	Gut	Area	A.A.	L	Cuft
0+18			0	0			
					3	1	3
0+17			2	6			
					6	16	96
0+01			2	6			
					3	1	3
0+00			0	0			
							102

TOTAL = 3.78 cu yds.

Sta 197+00~

Parallel to E ⁷

Side Drain under pipe to approach
 Place in gutter @ RIGHT
 (To be done by change order)

~~20' pt~~
 15' plumb. side

10

Sta ELEV Gr Cut Area Area L Cft

1+00	²⁹ 4450 ⁷⁴	545	0	0			
					4.9	4	17.52

0+96		25	8.75		8.25	16	140
------	--	----	------	--	------	----	-----

0+80		25	8.75				
------	--	----	------	--	--	--	--

					8.25	60	175 5250
--	--	--	--	--	------	----	------------------------

0+20		25	8.75		8.25	16	140
------	--	----	------	--	------	----	-----

0+04		25	8.75				
					4.9	4	17.52

0+00	³⁷ 4454 ⁷⁴	558	0	0			
------	-------------------------------------	-----	---	---	--	--	--

							840.04
							490.70

TOTAL = 31.11 cu yds

X-Drain

11

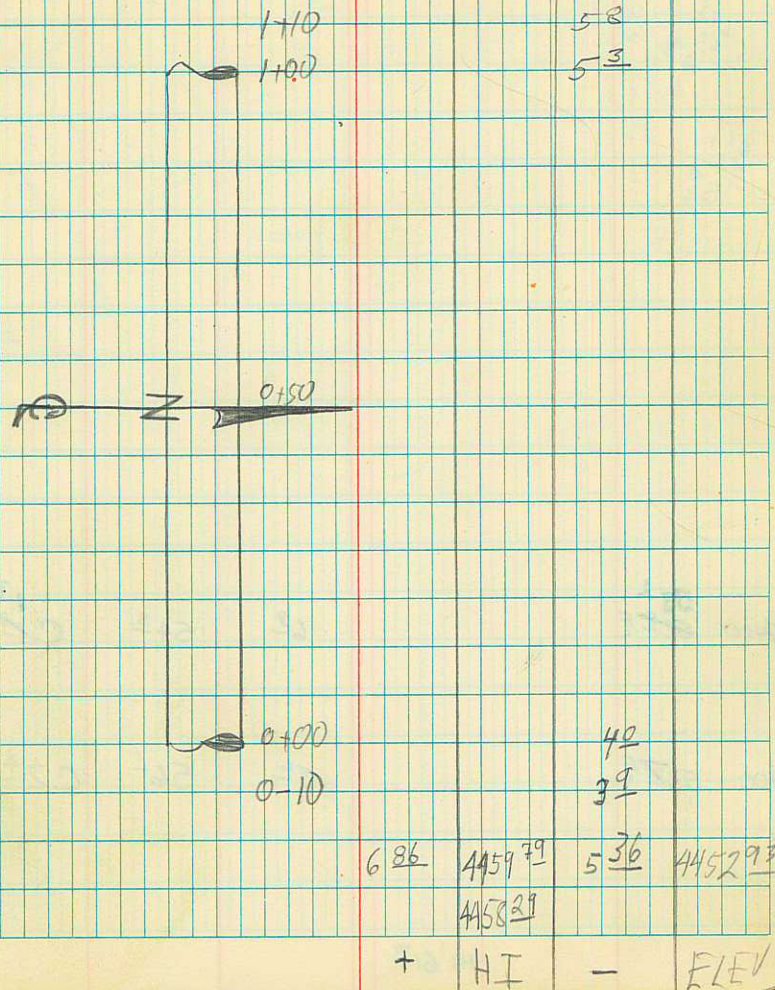
Sta 200 +55

@ 90° to C

18" CMP 100' Length

Cross drain

(To be done by Change Order)



Sta	ELEV	Gr	Cut	Area	A.A	L	Cuft	
0+22			0	0				
0+18			2	6	3°	4	12	
0+04			0	6	6°	14	84	
0+00			0	0	0	3°	4	12
							108	

Sta 202+50 to Sta 202+72 Parallel to E

12" pipe culvert 22' length

Side drain under private approach

place in gutter at LEFT

(for right side see pg 19)

x 0+92

x 0+82

sta 202+72

0+72

0+22

Not placed, B.L.K.

0+50

0+25

0+00

x 0-10

x 0-20

18
Sta ELEV Gr Cut Area Av. L Cnft

Sta	ELEV	Gr	Cut	Area	Av. L	Cnft
0+24			0	0		
					3 4	12
0+20			2	6		
					6 16	96
0+04			2	6		
					3 4	12
0+00			0	0		
						120

TOTAL = 4.44 cu yds

Sta 202+50 to 202+74 Parallel to E
12" pipe culvert 24' length
Side drain under private approach
Place in gutter at RIGHT.

(for left side deep 15) x 0+94
x 0+84
sta 202+74 ~ 0+74
0+24

0+50

0+25

sta 202+50 ~ 0+00
x 0+10
x 0+20

22
Sta ELEV Gr Cut Area Area L Cuft

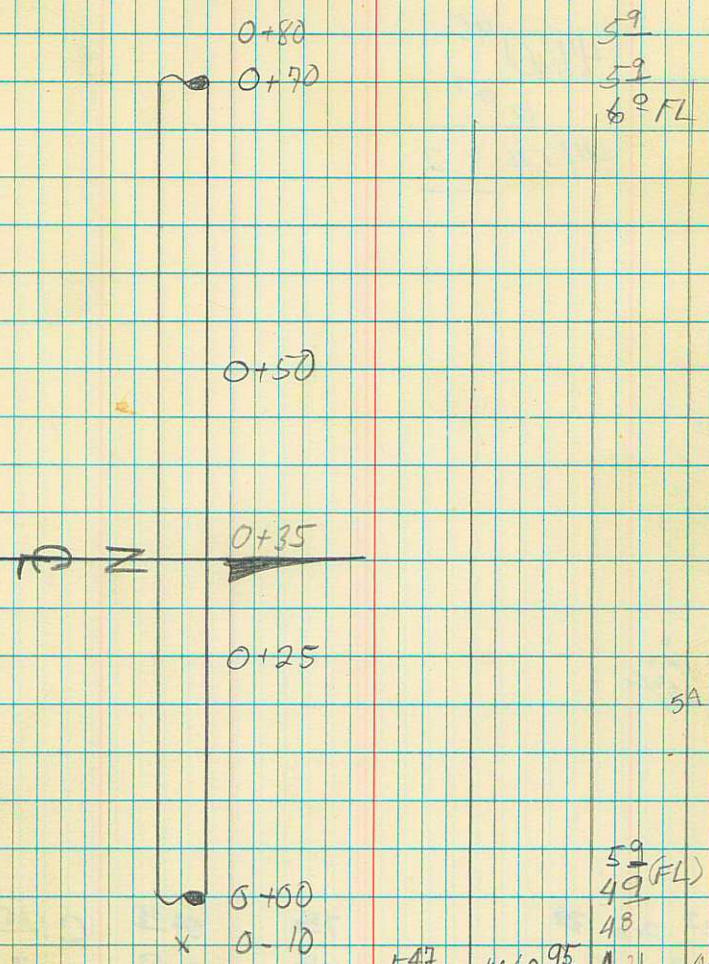
0+68	4957 ²	55°	0	0				
	4955				94	4	17.60	
0+64		2.5	8.75		87.5	14	122.50	
0+50		2.5	8.75					
					87.5	30	262.50	
0+20		2.5	8.75		87.5	16	140	
0+04		56°	2.5	8.75	94	4	17.60	
0+00	4952 ²	0	0	0				
							560.20	

TOTAL = 20.75 cu yds

Sta 203+27 X-Drain @ 90° to E

18" pipe culvert 70' length
Cross drain conforming to existing ditch

68' place of
Elev



547 4460⁹⁵ 43.1 4455-48
4459⁷⁹
+ H I - ELEV

+

HI

-

EL

4460	95
6	67
<hr/>	
4454	32
<hr/>	

61	71
+736	
<hr/>	
54	35
52	30
<hr/>	
C1	65

54	6
52	30
<hr/>	
C1	65

F 522 0+70 72

F 522 0+00

+750

60 71

736

713

621

54 35

54 59

55 30

1454 21

C1 65

C1 7

NEW Bm Bm N

Bm

TP RR. SNAKE

9340-100

28

PAGE	8"	12"	18"	24"	30"	36"	22/13	26/15	CU. YD.
2		20							4.22 ✓
6		18							3.78 ✓
10			100						31.11 18.16 ✓
14		22		NO PIPE PLACED					
18		24							4.44 ✓
22			68						20.75 ✓

TOTAL 0 84 168 - - - - - ~~51.35~~
64.30

PBW

CHECKED 6-9-75 JNO W.

29

OCT 4, 1974 FIGURED DITCH GRADE FOR
FIELD DITCH STATION 185 TO 188+50
AND 189 TO 193+50 ON THE DITCH 185-188+50
I USE -0.01% SLOPE ON THE DITCH 189-193+50
I USED $+0.004\%$ SLOPE FOR MY CALCULATIONS
CHANGE SLOPE OF DITCHES TO $.07\%$ ON EACH ONE
THIS HELPED TO MAKE DITCH LESS DEEP.

OCT 7, 1974 CHANGE PIPE AT STA 203+27
WE PUT IT DEEPER INTO THE GROUND
ADDED 3 GATES TO PLANS BETWEEN
6TH AND 10TH NORTH. AND CHANGED
LOCATION OF ONE OTHER —

52

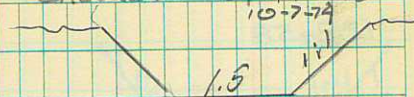
	FL	Ground	Cut	Aver W	Aver H	Aver D ₁	L ₁
193+58	50 ³	52 ³	20	2.85	56	20	8.85 58'
193~	50 ²	52 ³	3 ¹	3 ²	12.09	1.39 8.77	100
192~	50 ¹	51 ²	1 ⁸	2 ⁶	4.68 4.25	4.91 4.67	100
191~	49 ⁵	51 ⁴	1 ⁹	2 ⁷	5.13	1.91 4.11	100
190~	48 ⁸	50 ⁶	1 ⁴	1 ⁶ 2 ²	4.68 3.08	6.47 5.67	100
189~	47 ⁹	49 ⁹	2 ⁵	3 ³	8.25	9.50 10.77	40
188+60 188+60	47 ¹	50 ²	2 ⁹	3 ¹ 1 ²	10.73 11.18	12.18	

53

Vol. cu ft

CALCULATED BY D. WAED

10-7-74



NOTE: AT STA 193~
WE STARTED DIGGING
AT C 3~ WE RAISED
THE GRADE TO C 02
BUT CALC. ARE TO
C 3~

193+
513.30830
817491
467491
411647
467380
511.00
508+80=588

TOTAL 2573 cu ft (25.3 cu yds)

193+

193-

192-

191-

190-

189-

TOTAL 3361.34³
124.49 cu. yds.

+ vol HI

54

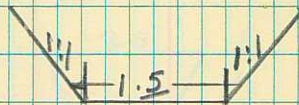
	FLOW LINE	GROUND	CUT	AVER WIDTH	AREA	AVER	LENG.
188+58			0		0		
1						2.22	58
188 ~ 49 ⁶		51 ⁵	1 ²	2.1	51 ³		
						3.02	100
187 ~ 50 ³		51 ⁰	0.1	1.5	10 ²		
						.975	100
186 ~ 51 ⁰		51 ⁰	0.6	1.5	0.2		
						1.53	100
185 ~ 51 ¹		52 ⁰	1.2	1.8	2.1 ⁶		
						1.08	30
184+70			0		0		

55

SQ. FT.

149.06

148.72



CALCULATED BY PBLW
11-22-74

309.0

97.5

153.0

32.4

27.49 cu. YDS.

740.96 27.49 ✓

56

57

DITCH ON MR. JONES' LAND STA 196-

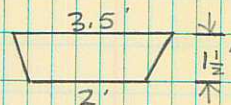
DITCH LENGTH - 140'

$$\text{AREA} = 3.5 + 2 = 5.5 \div 2 = 2.75$$

$$2.75 \times 1.5 = 4.13 \times 140' = 577.50$$

$$577.50 \times \frac{1}{27} = 21.39$$

21.39 cu. yds.



PBW 6-10-75

DITCH ON SOUTH SIDE OF 10TH NORTH.
STA 203 + 50 RUNNING WEST-

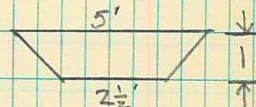
DITCH LENGTH - 51'

$$\text{AREA} = 5 + 2\frac{1}{2} = 7\frac{1}{2} \div 2 = 3.75$$

$$3.75 \times 1 = 3.75 \times 51 = 191.25$$

$$191.25 \times \frac{1}{27} = 7.08$$

7.08 cu. yds.



PBW 6-10-75

MISCELLANEOUS CONTRACT ITEMS

No.	NAME	UNIT	AMOUNT \$	DATE	SIGNED
				COMPLETED	
1-	MORILATION	LUMP	5000.00	6-75	PBW
2-	CLEAR & GRUB	LUMP	5,500.00	6-75	PBW
3-	ROADWAY EXCA-	CU. YD.	6,700.00	6-75	PBW
5-	BORROW	TON	14,700.00	6-75	PBW
6-	GRANULAR BOR.	TON	18,200.00	6-75	PBW
7-	R/W FENCE	LIN. FT	11,440.00		
8-	14 FT. METAL GATE	EACH	1,650.00		
9-	16 FT METAL GATE	EACH	150.00		
22-	UNTREATED BASE	TON	19,635.00	6-75	PBW
24-	LOOSE RIP-RAP 8"	TON	340.00	6-75	PBW
25-	DELINEATORS TYPE 1	EACH	225.00	6-75	PBW
26-	DELINEATORS TYPE 2	EACH	180.00	6-75	PBW
27-	R/W MARKERS	EACH	300.00		
28-	30" STOP SIGN	EACH	300.00	6-75	PBW
29-	30" WARNING SIGN	EACH	600.00	6-75	PBW
30-	ADJ. EXIST. M.H.	EACH	2,100.00	6-75	PBW
31-	ROADSIDE CLEAN-UP	LUMP	2,000.00	6-75	PBW
32-	REINFORCING STEEL	LBS.	105.00	6-75	PBW
33-	FRAME AND GATES	EACH	450.00	6-75	PBW
34-	CONCRETE	CUBIC YARD		6-75	PBW
35-	PIPES			6-75	PBW

INDEX TO ITEMS

PAGE	DESCRIPTION OF ITEM
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113	26 ¹ / ₁₅ " PIPE CULVERT.
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126	FRAME & GATES
127	CONCRETE SMALL STRUCTURES
128	ROADSIDE CLEAN-OUTS
129	SMALL DITCH EXCAVATION
130-131	FENCE & GATES

MOBILIZATION - CONSISTS OF TRANSPORTING EQUIPMENT TO AND FROM THE JOB SITE AND PREPARATION OF EQUIPMENT -

UNIT OF MEASUREMENT - LUMP SUM.
 BID AMOUNT - \$5,000.00

PAY CONTRACTOR - \$5,000.00

PBW.

CHECKED 6-9-75 M.O.W.

102

CLEARING AND GRUBBING
 CONSISTS OF REMOVAL OF
 BUILDINGS, TREES, FENCES, ETC.
 WHICH STAND WITH-IN THE JOB
 BOUNDS AS DIRECTED BY THE
 ENGINEER

UNIT OF MEASUREMENT - LUMP SUM
 BID AMOUNT - \$5,500.00

PAY CONTRACTOR \$5,500.00

PEW

CHECKED 6-9-75 M.D.W.

103

UNTREATED BASE COURSE -

CONSISTING OF UNTREATED BASE
 MATERIAL COMPACTED IN PLACE

UNIT OF MEASUREMENT - TONS
 PRICE PER TON - \$2.75
 ORIGINAL ESTIMATE - 7140 TONS
 AS BUILT - ~~9256.9~~ TONS
 9253.3 TONS

\$25,446.58

PAY CONTRACTOR \$25,456.48

PEW

CHECKED 6-9-75 M.D.W.

CALCULATIONS TAKEN FROM
 WEIGHT SLIPS FOR PROJECT 343(3)

104

BORROW

CONSISTS OF BACKFILL MATERIAL
AND MATERIAL USED TO BUILD-UP
EXISTING GROUND TO SUB-BASE LEVEL.
THIS MATERIAL IS PIT-RUN MATERIAL.

UNIT OF MEASUREMENT -	TONS
PRICE PER TON	- \$1.00
ORIGINAL ESTIMATE	- 14,700 TONS
AS BUILT	- 57,516 TONS
	+ 360
	<u>57876</u>

PAY CONTRACTOR	- \$57,516.00
	57876.00

P.B.W.

BORROW AMOUNTS CALCULATED FROM
WEIGHT SLIPS FOR PROJECT 343(3)
CHECKED 6-9-75 M.D.W.

Extra borrow used to support pipes to
be placed in unsuitable areas:

1212 LF. pipe x 1/2" thick x 42" wide x $\frac{1}{24}$ x 2 = 35786 CY
Use - 360 CY.

105

GRANULAR BORROW

CONSISTS OF MATERIAL TO BUILD
UP TYPICAL SECTION AND TO PREPARE
GRADE FOR UNTREATED BASE COURSE -
THIS MATERIAL IS PIT RUN MATERIAL.

UNIT OF MEASUREMENT -	TONS
PRICE PER TON	- \$1.00
ORIGINAL ESTIMATE	- 18,200 TONS
AS BUILT	- 18,200 TONS

PAY CONTRACTOR	- \$18,200.00
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P.B.W.

CHECKED 6-9-75 M.D.W.

CALCULATIONS TAKEN FROM
WEIGHT SLIPS FOR PROJECT 343(3)

106.

8" PIPE CULVERT

CONSISTS OF ONLY THE PIPE

UNIT OF MEASUREMENT — LIN. FEET

AMOUNT OF LIN. FEET — 50 FEET

PRICE PER LIN. FT. FOR PIPE — \$5.50

TOTAL PIPE COST — \$275.00

PAY CONTRACTOR — \$275.00

PBW

CHECKED 6-9-75, M.D.W.

SEE BOOK 2 343(3) FOR AMOUNT
OF PIPE USED

107

12" PIPE CULVERT.

CONSISTS OF ONLY THE PIPE

UNIT OF MEASUREMENT — LIN. FEET

NUMBER OF LIN. FT. —

ORIGINAL EST. 360.00

AS BUILT ~~482.00~~

498.00'

PRICE PER LIN. FT. — \$8.00

\$ 3984.00

PAY CONTRACTOR — ~~\$3856.00~~

PBW

CHECKED 6-9-75 M.D.W.

SEE BOOK 2 & 3 FOR AMOUNT
OF PIPE USED

18" PIPE CULVERT

CONSISTS OF ONLY THE PIPE

UNIT OF MEASUREMENT - LIN. FEET

NUMBER OF LIN. FT -

ORIGINAL EST - 760

AS BUILT - 986

PRICE PER LIN. FT - \$10.30

PAY CONTRACTOR \$10155.80

PBW

CHECKED 6-9-75 M.D.W.

SEE BOOK 342 FOR AMOUNT OF
PIPE USED

24" PIPE CULVERT

CONSISTS OF ONLY THE PIPE

UNIT OF MEASUREMENT - LIN. FEET

NUMBER OF LIN. FT.

ORIGINAL EST - 74 FT

AS BUILT - 74 FT

PRICE PER LIN. FT. \$14.50

PAY CONTRACTOR \$1,073.00

PBW

CHECKED 6-9-75 M.D.W.

SEE BOOK 2 FOR AMOUNT OF
PIPE USED

110

30" PIPE CULVERT

CONSISTS OF ONLY THE PIPE

UNIT OF MEASUREMENT - LIN. FEET

NUMBER OF LIN. FT.

ORIGINAL - EST - 72 FT

AS BUILT - 72 FT

PRICE PER LIN. FT. \$17.00

PAY CONTRACTOR \$1,224.00

PBW

CHECKED 6-9-75 M.D.W.

SEE BOOK 2 FOR AMOUNT OF PIPE USED

111

36" PIPE CULVERT

CONSISTS OF ONLY THE PIPE -

UNIT OF MEASUREMENT - LIN. FT.

NUMBER OF LIN. FT

ORIGINAL EST - 672

AS BUILT - 680

PRICE PER FOOT - \$24.50

PAY CONTRACTOR - \$16660.00

PBW

CHECKED 6-9-75 M.D.W.

SEE BOOK 2 FOR AMOUNT OF PIPE USED

112

22"/13" PIPE CULVERT

CONSISTS OF PIPE ONLY

UNIT OF MEASUREMENT - LIN. FEET

NUMBER OF LIN. FT. —

ORIGINAL EST - 120 FT.

AS BUILT — 222 FT

PRICE PER LIN. FT. — \$11.50

PAY CONTRACTOR - \$2553.00

PBW

CHECKED 6-9-75 M.D.W.

SEE BOOK 2 FOR AMOUNT OF
PIPE USED

113

26"/15" PIPE CULVERT

CONSISTS OF ONLY THE PIPE

UNIT OF MEASUREMENT - LIN. FEET

NUMBER OF LIN. FEET -

ORIGINAL EST - 102

AS BUILT — 102

PRICE PER LIN. FT. — \$13.00

PAY CONTRACTOR - \$1,326.00

PBW

CHECKED 6-9-75 M.D.W.

SEE BOOK 2 FOR AMOUNT
OF PIPE USED

114

EXCAVATION FOR STRUCTURES

CONSISTS OF EXCAVATION
FOR PIPES AND SMALL STRUCTURES
AND ALSO BACKFILLING OF EXCAVATED
AREA. ACCORDING TO UTAH STATE
STANDARD SPEC. 1970 EDITION SEC 213

UNIT OF MEASUREMENT - CUBIC YARDS

AMOUNT OF EXCAVATION

ORIGINAL EST. - 635 cu yds.

AS BUILT - 776.2 cu yds.

786.35 cu yds.

PRICE PER CUBIC YARD - \$3.50

\$ 2752.23

PAY CONTRACTOR - \$ 2716.70

PBW

CHECKED 6-9-75 J.D.W.

FOR QUANTITIES SEE BOOKS 243
343(3) PAGES 1589159 IN BOOK 2 AND
PAGE 28 BOOK 3-

115

CMP CLEAN-OUTS

CONSISTS OF PIPE CLEAN-OUT
AND ITS INSTALLATION.

UNIT OF MEASUREMENT - EACH
NUMBER OF CLEAN-OUTS - 3

PRICE PER CLEAN-OUT - \$250.00

PAY CONTRACTOR - \$750.00

PBW

CHECKED 6-9-75 J.D.W.

SEE PAGES 15 AND 19 BOOK 2 343(3)

116

45° CMP ELBOW

CONSISTS OF A 45° ELBOW
MADE OF 14GA. ALUM.

UNIT OF MEASUREMENT - EACH
NUMBER REQUIRED - 2
PRICE PER EACH - \$100.00

PAY CONTRACTOR \$200.00

PBW

CHECKED 6-9-75 M.D.W.

SEE PAGE 15 BOOK 2 (343(3))

117

AJUST EXISTING MANHOLES

CONSISTS OF CONCRETE RINGS AND
LABOR NECESSARY TO RAISE MANHOLES
TO GRADE.

UNIT OF MEASUREMENT - EACH
NUMBER OF MANHOLES - 7
TOTAL FEET & INCHES OF ADJUSTMENT
REQUIRED: ORIGINAL EST - 13'3"
AS BUILT - 14'5"

PRICE PER MANHOLE - \$300.00

PAY CONTRACTOR \$2,100.00

PBW

CHECKED 6-9-75 M.D.W.

118

HAND SLIDE GATE

CONSISTS OF TYPE M, 18"
HAND SLIDE GATE AND CMP FRAME

UNIT OF MEASUREMENT - EACH
NUMBER REQUIRED

ORIGINAL EST - 2

AS BUILT - 1

COST PER GATE - \$50.00

PAY CONTRACTOR \$50.00

PBW

119

ROADWAY EXCAVATION

CONSISTS OF EXCAVATION REQUIRED
FOR ROADWAY BASE AND BORROW
DITCHES.

UNIT OF MEASUREMENT - CUBIC YARDS
ORIGINAL AMOUNT - 13,400 cu. yds.
AS BUILT - 12,225.93 cu. yds.
PRICE PER CUBIC YARD \$0.50

PAY CONTRACTOR \$6112.96

PBW

Quantity Shovel = 8786
Ditch not exc 1174
7612 cy

SEE BOOK # 1 343(3) FOR
EXCAVATION AMOUNTS

120.

DELINEATORS

CONSISTS OF TYPE 1 DELINEATORS
AND THEIR INSTALLATION.

UNIT OF MEASUREMENT - EACH

NUMBER OF DELINEATORS - 15

PRICE PER EACH \$15.00

PAY CONTRACTOR \$225.00

PBW

DELINEATORS

CONSISTS OF TYPE 2 DELINEATORS
AND THEIR INSTALLATION.

UNIT OF MEASUREMENT - EACH

PRICE PER EACH - \$15.00

NUMBER REQUIRED - 12

PAY CONTRACTOR \$180.00

PBW

121

LOOSE RIPRAP

CONSISTS OF BROKEN CONCRETE
BLOCKS (MIN. 8"). PAYMENT IS
FOR HAULING AND PLACEMENT
OF RIPRAP.

UNIT OF MEASUREMENT - CUBIC YARDS
NUMBER OF CU. YDS.

ORIGINAL — 17 cu. yds.

AS BUILT — 9 cu. yds.

PRICE PER CUBIC YARD - \$20.00

PAY CONTRACTOR - \$180.00

PBW

122

RIGHT-OF-WAY MARKERS-

CONSISTS OF MARKERS AND
THEIR PLACEMENT.

UNIT OF MEASUREMENT- EACH
NUMBER REQUIRED - ~~10~~ ¹⁶
PRICE PER EACH - \$30.00
\$480.00

PAY CONTRACTOR - ~~\$300.00~~
PBW

123

STOP SIGNS

CONSISTS OF 30" SIGN AND
4"X4" WOOD POST AND SIGN ERECTION.

UNIT OF MEASUREMENT- EACH
NUMBER REQUIRED - 2
PRICE PER EACH - \$150.00

PAY CONTRACTOR - \$300.00
PBW

WARNING SIGNS

CONSISTS OF 30" WARNING
SIGN, 4"x4" WOOD POST AND
SIGN INSTALLATION-

UNIT OF MEASUREMENT - EACH
NUMBER OF SIGNS NEEDED - 4
PRICE PER EACH - \$150.00

PAY CONTRACTOR - \$600.00

PBW

REINFORCING STEEL

CONSISTS OF REINFORCING STEEL
FOR SMALL CONCRETE STRUCTURES
AND ITS INSTALLATION-

UNIT OF MEASUREMENT - LBS.
NUMBER OF LBS. REQUIRED - 105
PRICE PER LBS. \$1.00

PAY CONTRACTOR \$105.00

PBW

USED EST. AMOUNT OF 30# FOR
EACH IRRIGATION BOX AND 45# FOR
CLEAN-OUT BOX

FRAMES AND GATES

CONSISTS OF FRAME SET
IN CONCRETE WITH HAND SLIDE
GATE.

UNIT OF MEASUREMENT - EACH
NUMBER REQUIRED

ORIGINAL EST - 5

AS BUILT - ~~3~~ 4

PRICE PER EACH - \$150.00

\$600.00

PAY CONTRACTOR - ~~\$450.00~~

PBW

SEE PAGES 110, 44, 81, BOOK #2 343(3)

CONCRETE SMALL STRUCTURES

CONSISTS OF CONCRETE USED
FOR CONSTRUCTION OF SMALL
STRUCTURES. AND LABOR REQUIRED
FOR THE POURING.

UNIT OF MEASUREMENT - CU. YDS
NUMBER REQUIRED

ORIGINAL EST - 9 CU. YDS.

AS BUILT - ^{6.34}~~9~~ CU. YDS.

PRICE PER CU. YDS. - \$300.00

\$1902.00

PAY CONTRACTOR ~~\$1350.00~~

PBW

CALCULATIONS FOUND ON PAGES.
8, 46, AND 110 OF BOOK 2 CR343(3)

ROAD SIDE CLEAN-UP

CONSISTS OF REMOVAL OF
CONSTRUCTION EQUIPMENT AND
TOOLS, AND REMOVAL OF CONSTRUCTION
DEBRIS.

UNIT OF MEASUREMENT - Lump
SUM

PAY CONTRACTOR - \$ 2,000.00

PBW

SMALL DITCH EXCAVATION

CONSISTS OF EXCAVATING SMALL
DITCHES OUTSIDE OF RIGHT-OF-WAY

UNIT OF MEASUREMENT - CUBIC YARD
AMOUNT OF EXCAVATION REQUIRED

ORIGINAL EST - 200 cu yds

AS BUILT — 180.40 cu yds.

PRICE PER CU. YD. — \$1.50

PAY CONTRACTOR - \$270.60

PBW

SEE PAGES 52, 54, AND 57 BOOK 3

Right of Way Fence and
Metal Gates

<u>Rt. Side</u>	<u>Lt. Side</u>	<u>14' gate</u>	<u>16' Gate</u>
606.55			1
367.25			1
895.00			1
236.45			
416.09			1
301.92			1
536.69			1
687.10			1
349.73			1
288.73			
	107.24		1
	504.29		1
	339.30		1
	384.40		1
	512.13		1
	98.58		1
	514.18		1
	88.75	1	
	698.53	1	
	924.08	1	
	357.50	1	
	621.44		
4685.51	5150.44	4	15

placed on Lt. of 6th
for Scotland's drive

Summary

4685.51 ft.

5150.44

9835.95 Lin Ft.

~~pay~~14' gates = 4 pay16' gates = 15 pay

Calc. GFR

150

|||||

TABLE 11: LINES IN FEET, INCHES AND FORTHS OF FEET

Line	Feet	Inches	Feet	Inches	Feet	Inches	Feet	Inches	Feet
1	10.00	00	245.00	41	675.00	61	1065.00	81	1335.00
2	35.00	00	300.00	42	680.00	62	1070.00	82	1340.00
3	70.00	00	355.00	43	685.00	63	1075.00	83	1345.00
4	105.00	00	410.00	44	690.00	64	1080.00	84	1350.00
5	140.00	00	465.00	45	695.00	65	1085.00	85	1355.00
6	175.00	00	520.00	46	700.00	66	1090.00	86	1360.00
7	210.00	00	575.00	47	705.00	67	1095.00	87	1365.00
8	245.00	00	630.00	48	710.00	68	1100.00	88	1370.00
9	280.00	00	685.00	49	715.00	69	1105.00	89	1375.00
10	315.00	00	740.00	50	720.00	70	1110.00	90	1380.00
11	350.00	00	795.00	51	725.00	71	1115.00	91	1385.00
12	385.00	00	850.00	52	730.00	72	1120.00	92	1390.00
13	420.00	00	905.00	53	735.00	73	1125.00	93	1395.00
14	455.00	00	960.00	54	740.00	74	1130.00	94	1400.00
15	490.00	00	1015.00	55	745.00	75	1135.00	95	1405.00
16	525.00	00	1070.00	56	750.00	76	1140.00	96	1410.00
17	560.00	00	1125.00	57	755.00	77	1145.00	97	1415.00
18	595.00	00	1180.00	58	760.00	78	1150.00	98	1420.00
19	630.00	00	1235.00	59	765.00	79	1155.00	99	1425.00
20	665.00	00	1290.00	60	770.00	80	1160.00	100	1430.00

TABLE 12: LINES IN FEET, INCHES AND FORTHS OF FEET

Line	Feet	Inches	Feet	Inches	Feet	Inches	Feet	Inches	Feet	Inches
1	0.25	00	11.00	35	22.00	40	33.00	45	44.00	50
2	1.75	00	12.50	36	23.50	41	34.50	46	45.50	51
3	3.25	00	14.00	37	25.00	42	36.00	47	47.00	52
4	4.75	00	15.50	38	26.50	43	37.50	48	48.50	53
5	6.25	00	17.00	39	28.00	44	39.00	49	50.00	54
6	7.75	00	18.50	40	29.50	45	40.50	50	51.50	55
7	9.25	00	20.00	41	31.00	46	42.00	51	53.00	56
8	10.75	00	21.50	42	32.50	47	43.50	52	54.50	57
9	12.25	00	23.00	43	34.00	48	45.00	53	56.00	58
10	13.75	00	24.50	44	35.50	49	46.50	54	57.50	59
11	15.25	00	26.00	45	37.00	50	48.00	55	59.00	60
12	16.75	00	27.50	46	38.50	51	49.50	56	60.50	61
13	18.25	00	29.00	47	40.00	52	51.00	57	62.00	62
14	19.75	00	30.50	48	41.50	53	52.50	58	63.50	63
15	21.25	00	32.00	49	43.00	54	54.00	59	65.00	64
16	22.75	00	33.50	50	44.50	55	55.50	60	66.50	65
17	24.25	00	35.00	51	46.00	56	57.00	61	68.00	66