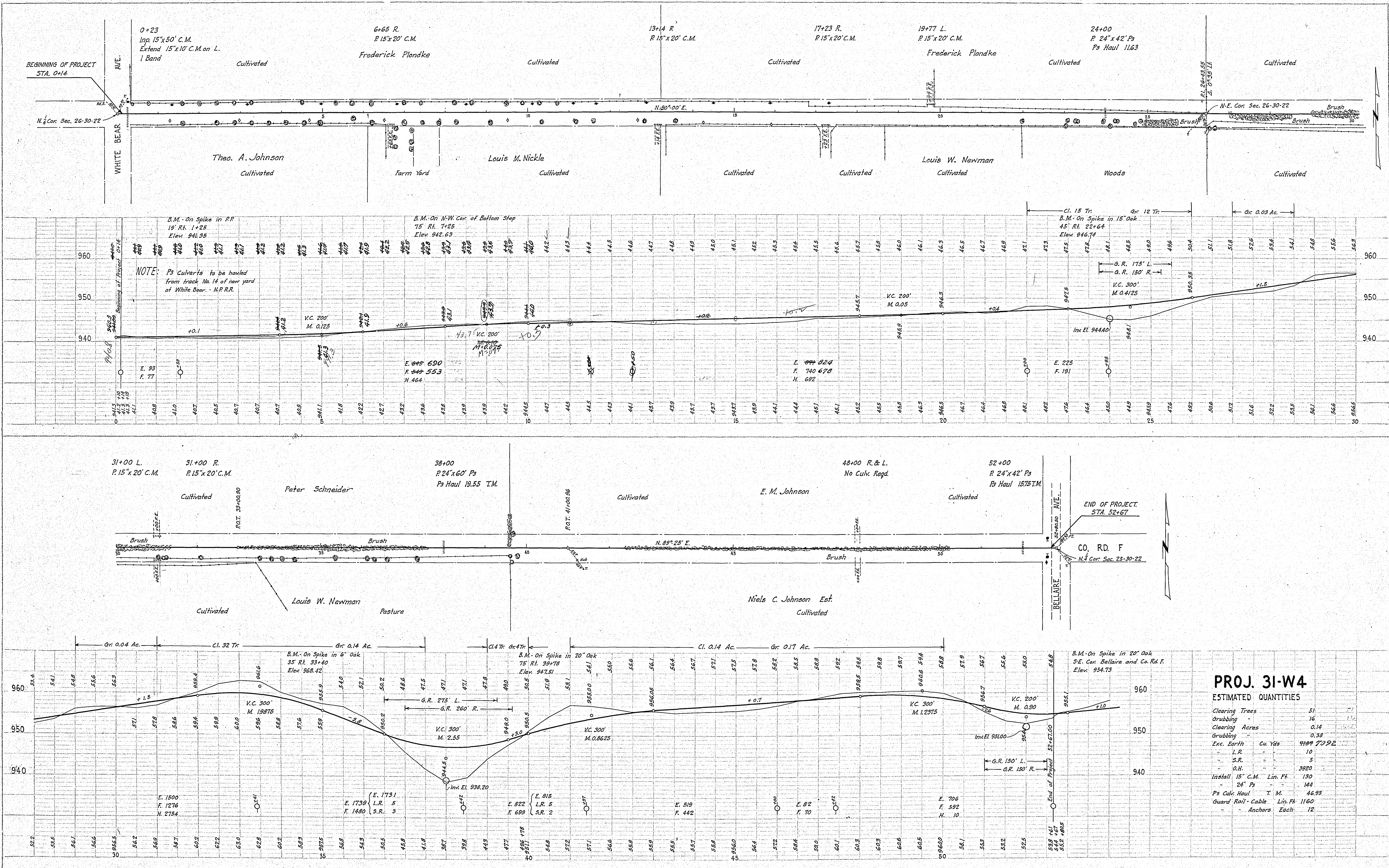


PLAN
 SURVEYED
 PLOTTED
 CHECKED
 DATE
 BY

PROFILE
 SURVEYED
 PLOTTED
 CHECKED
 DATE
 BY



PROJ. 31-W4

ESTIMATED QUANTITIES

Clearing Trees	51	
Grubbing	16	
Clearing Acres	0.14	
Grubbing	0.38	
Exc. Earth	4987	7092
L.R.	10	
S.R.	5	
O.H.	3972	
Install 15" C.M. Lin. Fk	130	
24" Ps	144	
Ps Culk. Haul	T.M.	46.98
Guard Rail - Cable	Lin. Fk	1160
Anchors	Each	12

CONVENTIONAL SIGNS & ABBREVIATIONS

STATE LINE	EXCAVATION	F
COUNTY LINE	EMBANKMENT	F
TOWNSHIP LINE	OVERHAUL	H
SECTION LINE	SURFACING	S
CITY, VILLAGE, OR BOROUGH	GUARD RAIL	GR
FENCE LINE	INTERSECTION ANGLE	A
RIGHT-OF-WAY LINE	RADIUS	R
TRAVELLED WAY	ELEVATION	EL
RAILROADS	VERTICAL CURVE	VC
RETAINING WALL	BENCH MARK	B.M.
BASE OR SURVEY LINE	SECTIONAL CONCRETE CULVERT	P1
LEVEE	CORRUGATED METAL CULVERT	C.M.
GRAVEL PIT	CULVERT HAUL	P.L.H.
SAND PIT	TON MILES	T.M.
CLAY PIT	IN PLACE	Imp.
ROCK QUARRY	REPLACE	Rep.
CULVERTS	RIGHT	R
PLAIN	LEFT	L
WITH FACEWALLS	HAND DITCHING	H.D.
WITH WINGWALLS	POINT OF CURVE	P.C.
DROP INLET	POINT OF TANGENT	P.T.
POWER POLE LINE	POINT OF INTERSECTION	P.I.
TELEPHONE OR TELEGRAPH LINE	SPECIAL EXCAVATION	SE
MARSH	SPECIAL PLOWING	SP.
HEDGE, BRUSH, OR TIMBER	TELEPHONE POLE	T&P.
GROUND ELEVATION		
GRADE ELEVATION		

OFFICE OF COUNTY SURVEYOR

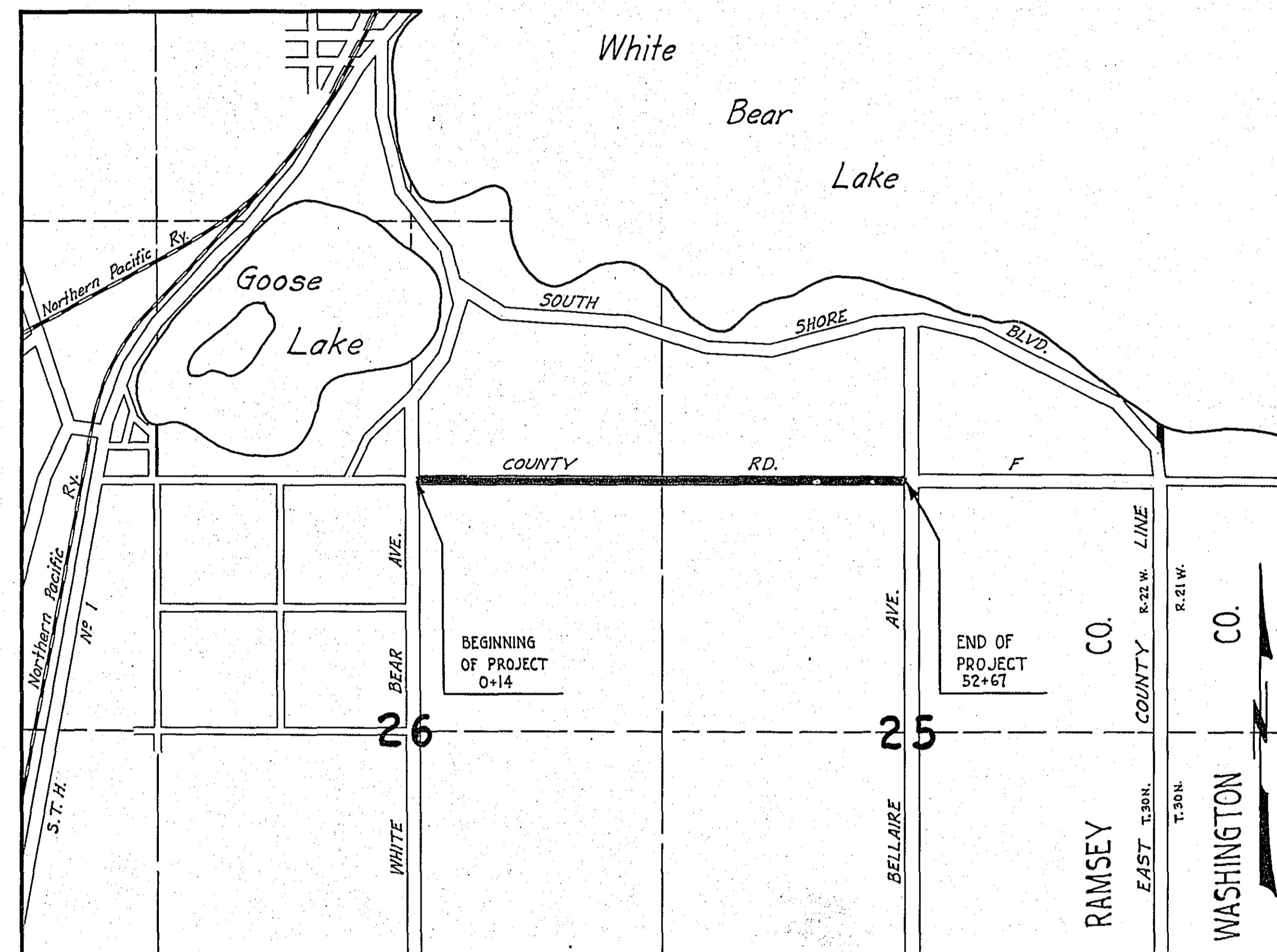
RAMSEY COUNTY

Plan and Profile of County Project No. 31-W4

From a point 14.0 ft. E. of N. $\frac{1}{4}$ Cor. of Sec. 26-30-22 to a point 12.5 ft. W. of N. $\frac{1}{4}$ Cor. of Sec. 25-30-22
Give proper reference to Sections, Township and Range

GROSS LENGTH- 5253.00 FEET 0.99 MILES
 LENGTH OF EXCEPTIONS- FEET MILES
 NET LENGTH- 5253.00 FEET 0.99 MILES
 PLAN, 1 Inch = 100 Feet
 PROFILE, Horiz. 1 Inch = 100 Feet. Vert. 1 Inch = 10 Feet
 WORKING PLANS { Horiz. 1 Inch = 100 Feet
 Vert. 1 Inch = 10 Feet
 Cross-Sections, 1 Inch = 10 Feet

LAYOUT
 SCALE, 1 Inch = 1320 Feet



INDEX OF SHEETS

- Sheet No. 1. Title Sheet and Layout Map
- " No. 2. Typical Cross-Sections and Statement
- " No. 3. Plan and Profile, Sta. 0+14 to Sta. 52+67
- " No. 4. to 7 inc. Cross-Sections

Date of Resolution for Preparation of Plans October 19 1931

Planned by M. W. Casley ASSISTANT ENGINEER

Recommended for Approval [Signature] ASSISTANT ENGINEER

Plans Approved and Recommended for Consideration [Signature] COUNTY SURVEYOR

Approved by Town Board 11/9/31 [Signature] CHAIRMAN OF TOWN BOARD

Approved by County Board Nov. 9 1931 [Signature] CHAIRMAN OF COUNTY BOARD

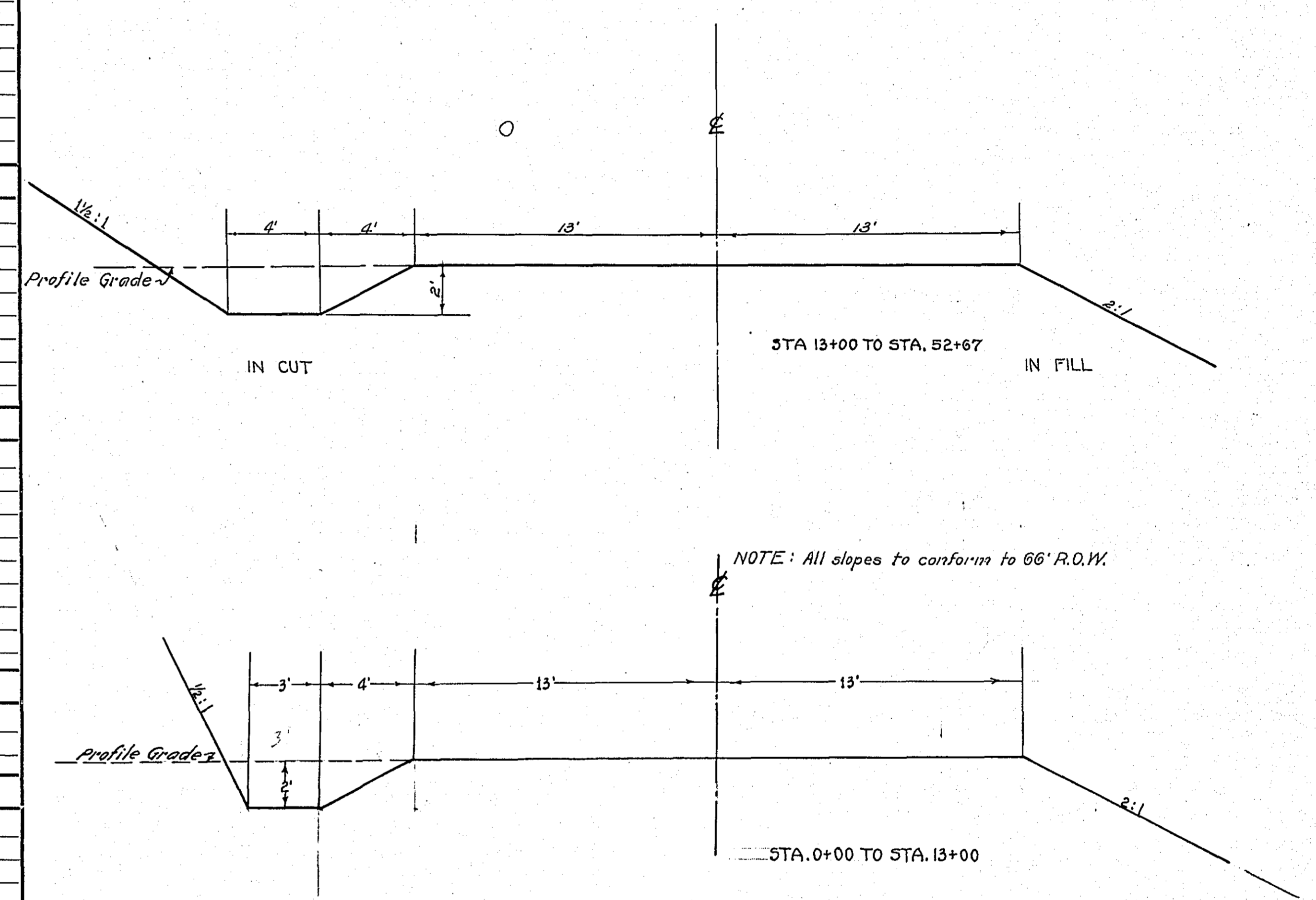
STATEMENT OF ESTIMATED QUANTITIES AND COSTS.

ITEM	UNIT	MILE														TOTAL ESTIMATED QUANTITIES	ESTIMATED UNIT PRICES	AMOUNTS	TOTALS	
		Sta. 0+16 to Sta. 52+67	Sta. to Sta.	Sta. to Sta.	Sta. to Sta.	Sta. to Sta.	Sta. to Sta.	Sta. to Sta.	Sta. to Sta.	Sta. to Sta.	Sta. to Sta.	Sta. to Sta.	Sta. to Sta.	Sta. to Sta.	Sta. to Sta.					
1	Clearing	Acre	0.14															0.14		
2	Clearing	Tree	51															51		
3	Grubbing	Acre	0.38															0.38		
4	Grubbing	Tree	16															16		
5	Excavation - Earth	Cu. Yd.	4187 109/4															4187 109/4		
6	Excavation - Loose Rock	Cu. Yd.	10															10		
7	Excavation - Solid Rock	Cu. Yd.	5															5		
8	Excavation - Overhaul	Cu. Yd.	3920															3920		
9	Special Excavation	Lin. Ft.																		
10	Hand Ditching	Cu. Yd.																		
11	Tile Drain	in. Lin. Ft.																		
12	Tile Drain	in. Lin. Ft.																		
13	Tile Drain	in. Lin. Ft.																		
14	Porous Back Fill Material	Cu. Yd.																		
15	Stone Rip - Rip	Cu. Yd.																		
16	Stone Rip - Rip or Stone Drain Material	Cu. Yd. mile																		
17	Install 15" C.M.	Lin. Ft.	130															130		
18	Install	Lin. Ft.																		
19	Install	Lin. Ft.																		
20	Install	Lin. Ft.																		
21	Install	Lin. Ft.																		
22	Install	Lin. Ft.																		
23	Install	Lin. Ft.																		
24	Install	Lin. Ft.																		
25	Install 24" P ₃	Lin. Ft.	144															144		
26	Install 30" P ₃	Lin. Ft.																		
27	Install 36" P ₃	Lin. Ft.																		
28	P ₃ Culvert Haul	Ton Mile																		
29	P ₃ Culvert Haul	Ton Mile	46.93															46.93		
30																				
31																				
32																				
TOTAL ESTIMATED COST OF GRADING (IN 'TOTALS' COLUMN)																				
33	C.M. Culv. Material 15"	Lin. Ft.	90															90		
34	C.M. Culv. Band 15"	Each	1															1		
35	Culv. Material	Lin. Ft.																		
36	Culv. Material	Lin. Ft.																		
37	Culv. Material	Lin. Ft.																		
38	Culv. Material	Lin. Ft.																		
39	P ₃ Culv. Material 24"	Lin. Ft.	144															144		
40	P ₃ Culv. Material 30"	Lin. Ft.																		
41	P ₃ Culv. Material 36"	Lin. Ft.																		
TOTAL ESTIMATED COST OF PORTABLE CULVERT MATERIAL (IN 'TOTALS' COLUMN)																				
42	Gravel Pit Stripping	Cu. Yd.																		
43	Screening	Cu. Yd.																		
44	Loading	Cu. Yd.																		
45	Hauling	Cu. Yd. Mile																		
46	Shaping & Compacting	Man Hour																		
47	Shaping & Compacting	Man & Team Hour																		
48																				
49																				
50																				
51																				
TOTAL ESTIMATED COST OF GRAVEL HAUL (IN 'TOTALS' COLUMN)																				
52	Gravel Material F. O. B. PIT	Cu. Yd.																		
53	Freight (if any)	Cu. Yd.																		
54	Unloading from Cars	Cu. Yd.																		
TOTAL ESTIMATED COST OF GRAVEL MATERIAL (IN 'TOTALS' COLUMN)																				
55	Fine Grading - Exc. & Emb.	Cu. Yd.																		
56	Shoulders - Earth	Cu. Yd.																		
57																				
58																				
59	Pavement	Sq. Yd.																		
60	Integral Curb - One Course Concrete	Lin. Ft.																		
61	Sloping Curb	Lin. Ft.																		
62	Surface Drain	Lin. Ft.																		
63	Surface Drain Basins	Basin																		
64	Bridge Approach Slabs (Concrete)	Slab																		
65	Bridge Approach Slabs (Gravel)	Slab																		
66																				
67																				
68																				
TOTAL ESTIMATED COST OF PAVEMENT CONSTRUCTION (IN 'TOTALS' COLUMN)																				
69	Concrete	Cu. Yd.																		
70	Reinforcing Steel	Lb.																		
71	Excavation - Earth	Cu. Yd.																		
72	Excavation - Loose Rock	Cu. Yd.																		
73	Excavation - Solid Rock	Cu. Yd.																		
74	Bridge	* Bridge No.																		
75	Station																			
76	Concrete	Cu. Yd.																		
77	Reinforcing Steel	Lb.																		
78	Structural Steel	Lb.																		
79	Piling	Lin. Ft.																		
80	Temporary Crossing	Lump Sum																		
81	Removing old Bridge	Lump Sum																		
82	Bituminous Surface	Sq. Yd.																		
83																				
84																				
TOTAL ESTIMATED COST OF STRUCTURES (IN 'TOTALS' COLUMN)																				
85	Guard Rail - Cable	Lin. Ft.	1160															1160		
86	Anchors	Each	12															12		
87	Excavation for Gutter	Cu. Yd.																		
TOTAL ESTIMATED COST OF MISCELLANEOUS ITEMS (IN 'TOTALS' COLUMN)																				

TYPICAL CROSS SECTIONS AND DETAILS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SEC.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MINN.					

PROJ. 31-W4



* NOTE: BRIDGE ITEMS LISTED UNDER BRIDGE NUMBERS IN MILE COLUMNS REGARDLESS OF LOCATION