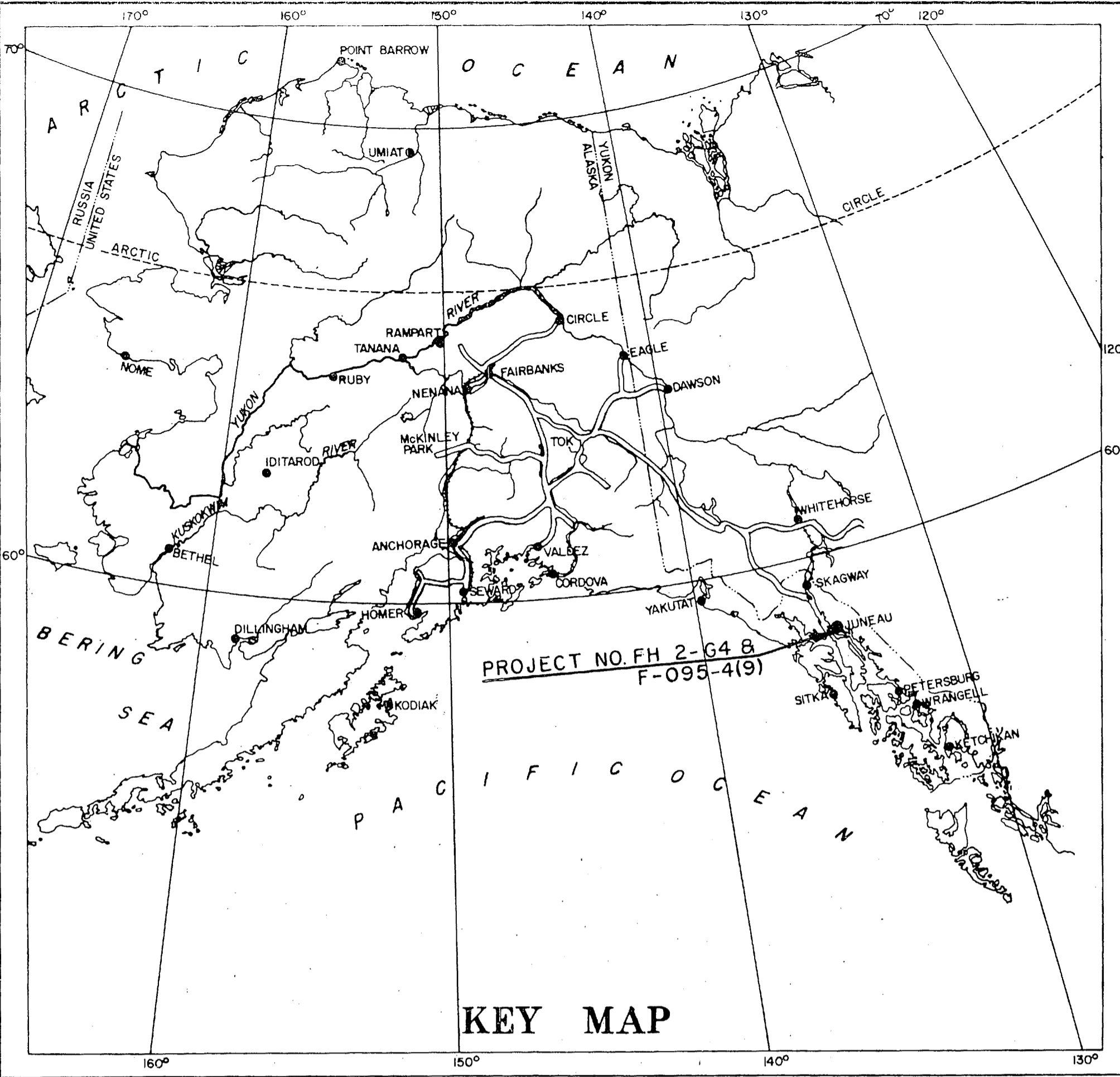


STATE	ROUTE	SECTION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	FH 2 FAP 95	G4 4	1960	1	24



U. S. DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS
REGION 10

**PLAN AND PROFILE
PROPOSED HIGHWAY PROJECT**
PROJECT NO. FH 2-G4 & F-095-4(9)
GRADING & DRAINAGE
GLACIER HIGHWAY
ROUTE NO. 2 - PT. BISHOP AND ECHO COVE
CLASS 1-44.4 MILES, CLASS 2-21.4 MILES, CLASS 3-2.3 MILES, TOTAL-68.1 MILES
ALASKA FOREST HIGHWAY SYSTEM

TONGASS NATIONAL FOREST
ALASKA

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	TYPICAL SECTIONS AND ESTIMATE OF QUANTITIES
3-11	PLAN & PROFILE
12	PLAN & PROFILE HAUL ROAD
13-17	CULVERTS & MISCELLANEOUS WORK
18	LIST OF RIGHT-OF-WAY MONUMENTS
19	TYPICAL SIGNS
20	STD. APPROACH ROADS
21	STANDARD CULVERTS
22	STD. IDENTIFICATION SIGNS
23	STANDARD BARRICADES
24	STANDARD END SECTIONS

Detailed cross sections for this project are available for inspection in the B.P.R. Division office at Juneau.

KEY MAP

PROJECT SUMMARY

WIDTH OF SUBGRADE	30 FT.
LENGTH OF GRADING & DRAINAGE	25,004.9 FT. = 4.736 MI.
LENGTH OF EXCEPTION	115.9 FT. = 0.022 MI.
TOTAL LENGTH OF PROJECT	25,120.8 FT. = 4.758 MI.

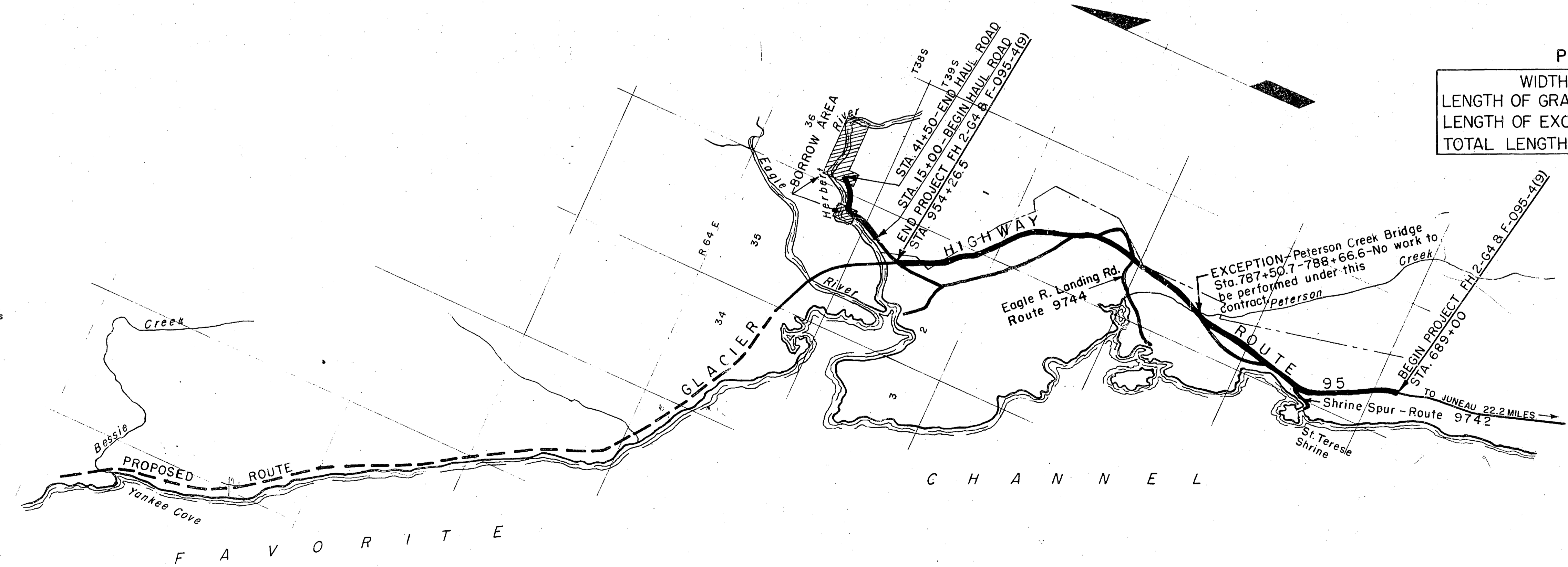
TYPE 0011 IMPROVEMENT

PREPARED BY
U. S. DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS
REGION TEN JUNEAU, ALASKA

STATE OF ALASKA
DEPT. OF PUBLIC WORKS
DIVISION OF HIGHWAYS

APPROVED
Ronald R. Peterson Date 7-7-60
Acting DIRECTOR, DIVISION OF HIGHWAYS

APPROVED
Jim Ahern Date 8/12/60
REGIONAL ENGINEER
BUREAU OF PUBLIC ROADS
REGION TEN



SCALE 2 Miles

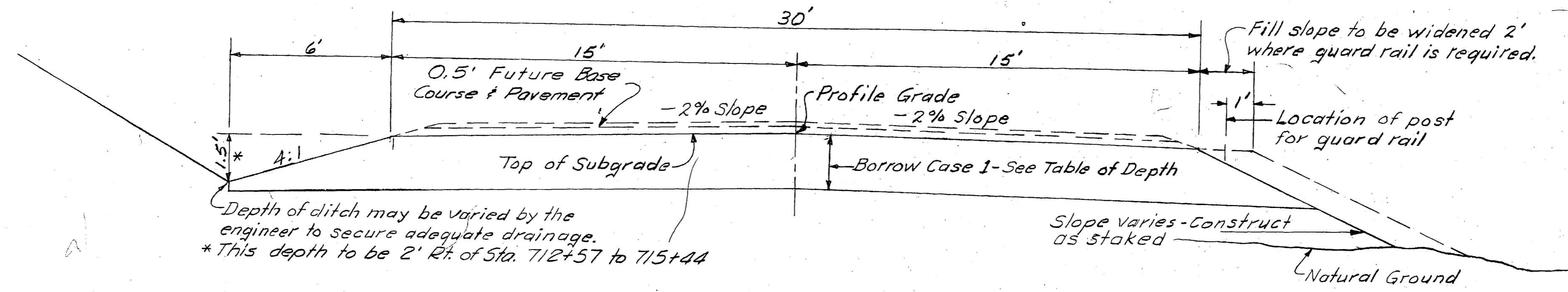
CONVENTIONAL SIGNS

SECTION LINE	---
CULVERT	—•—
UTILITY POLE	•
"P" LINE	—P—
LINE TO BE CONSTRUCTED	—•—
MILE POST	61
RIGHT OF WAY LINE	—•—
TRAVELED WAY	—•—
RIGHT-OF-WAY MONUMENT	•
EXISTING R.O.W. LINE	—•—
FOREST BOUNDARY LINE	—•—

TABLE OF SLOPES

Height of Cut or Fill	Earth Slope
0' - 10'	4:1
10' - 15'	3:1
Over 15'	2:1

In rock, slopes shall be steeper as directed by the engineer.



Depth of ditch may be varied by the engineer to secure adequate drainage.
*This depth to be 2' Rt. of Sta. 712+57 to 715+44

GENERAL NOTES

1. Culvert lengths are approximate only and are subject to minor revisions.
2. Grades and alignment shown on these plans are subject to minor revisions.
3. Between Sta. 689 & 765 waste excavation shall be disposed of in areas shown on the plans as directed by the engineer. Between Sta. 765 & 954+26 waste material shall be placed as shown in Typical Section below.
4. Waste material shall be disposed of as shown on the plans or as directed by the engineer.
5. The 4' maximum depth of waste material shown on the plans may be increased if directed by the engineer.
6. Waste berms must be placed so they do not obscure the view or impede drainage. On the downhill side the top of berm shall not be higher than the shoulder of road. On the uphill side no berms shall be placed at shallow cuts.
7. Channel Change excavation for diverting the Herbert River adjacent the borrow pit, 4200 feet right of Sta. 953+80, shall be paid for under item 102(II). All other Ch. Ch. Exca. shall be paid for under item 102(I).

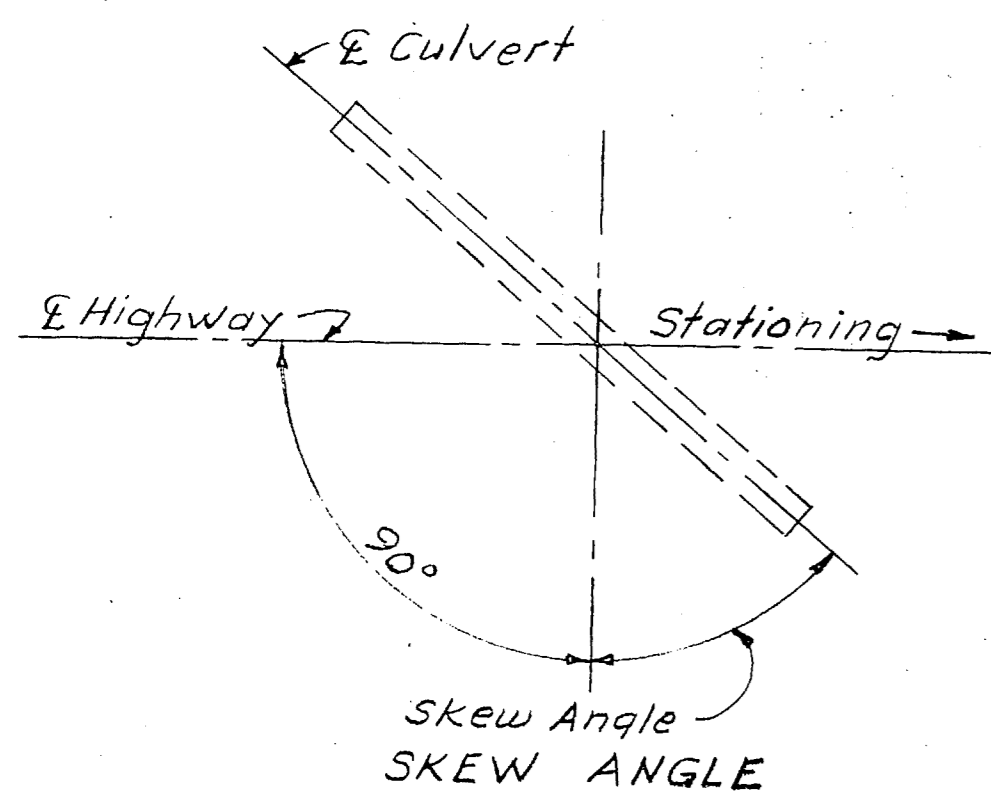
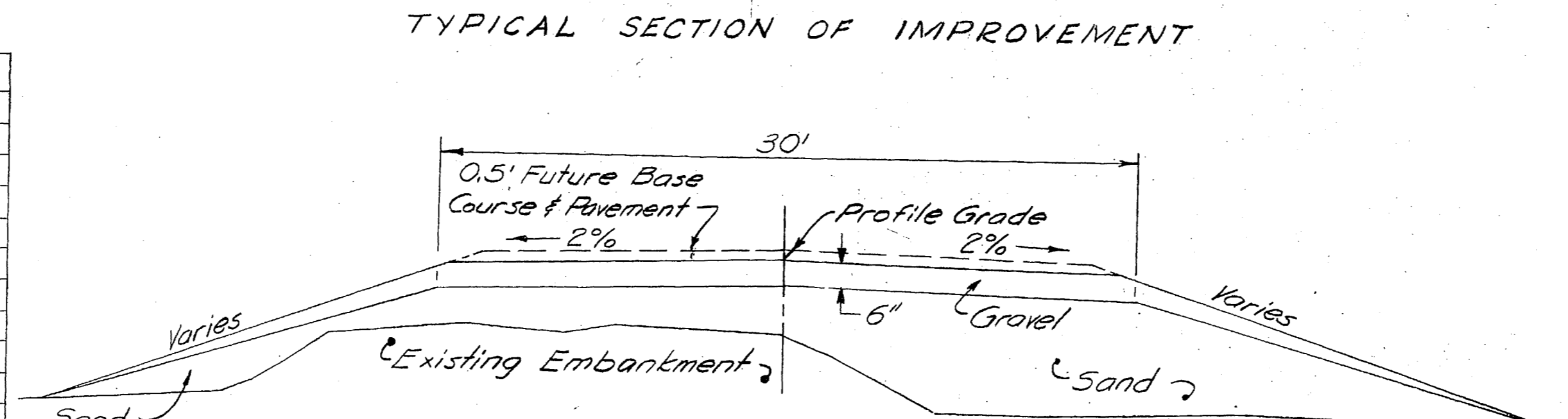


TABLE OF BORROW

STATION	STATION	DEPTH
689+00	720+25	18"
720+25	730+75	12"
730+75	733+25	18"
733+25	743+60	12"
743+60	751+25	18"
751+25	754+00	30"
754+00	797+50	18"
797+50	814+75	ALL
814+75	836+25	18"
836+25	906+00	ALL
906+00	920+00	18"
920+00	928+00	ALL
928+00	937+00	18"
937+00	954+26	ALL

Above depths may be varied as directed by the engineer.



TYPICAL ROADWAY SECTION Where embankment is constructed with sand

ESTIMATE OF QUANTITIES

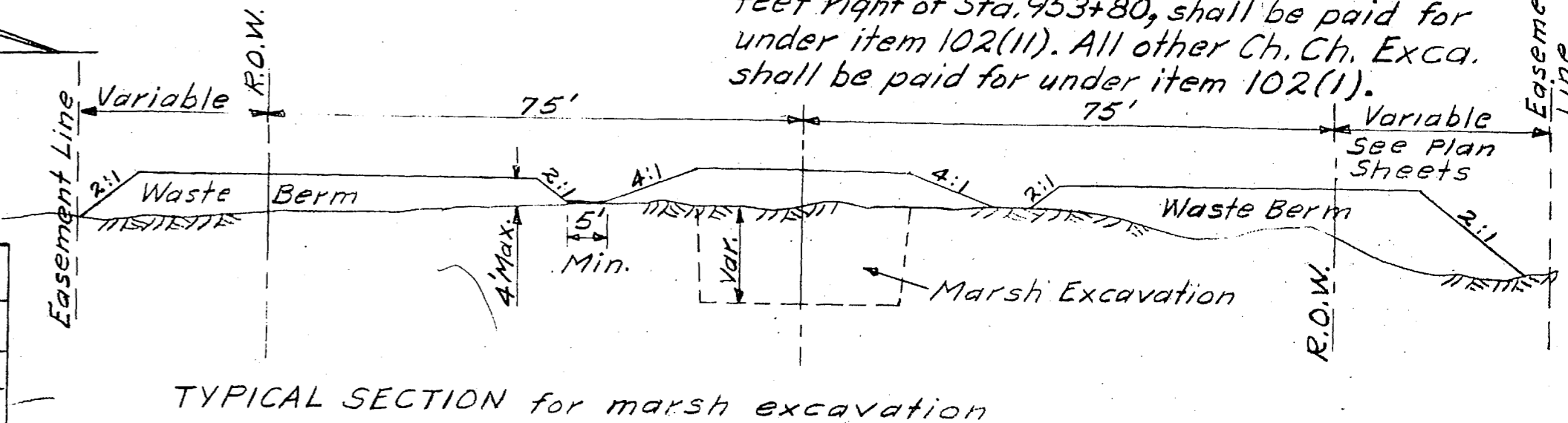
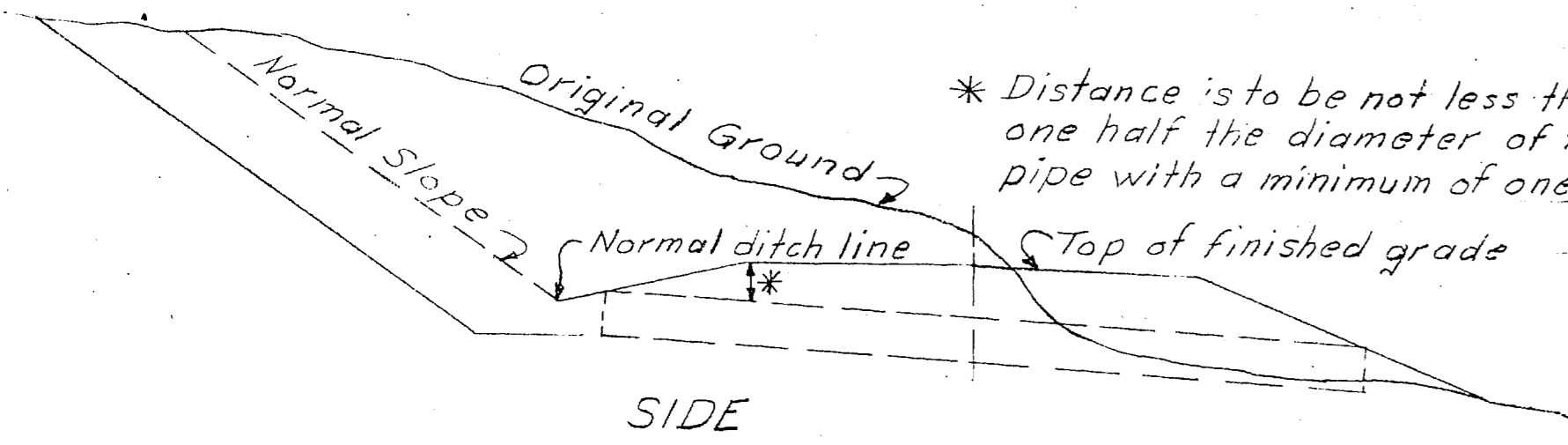
ITEM NO.	QUANTITY	UNIT	ITEM
10	All Req'd		Extra & Misc. Force Account Work
100(1)	41	Acre	Clearing
100(2)	19	Acre	Grubbing
102(I)	118,000	Cu. Yd.	Unclassified Excavation
102(4)	210,000	Cu. Yd.	Borrow Excavation, Case 1
102(10)	540	Dragline Hours	Special Marsh Excavation
102(II)	18,000	Cu. Yd.	Channel Change Excavation. (See Sheet No. 12)
103(I)	2,400	Cu. Yd.	Excavation for Structures
105(2)	7,000	C.Y.M.	Overhaul (2000' Freehaul)
111(I)	-166	Unit	Obliteration of old Roadways
453(4C)	182	Lin. Ft.	12" Asb. Bonded Corrugated Metal Pipe, 16 Gage
453(4G)	2,538	Lin. Ft.	24" Asb. Bonded Corrugated Metal Pipe, 14 Gage
453(4H)	336	Lin. Ft.	30" Asb. Bonded Corrugated Metal Pipe, 14 Gage
453(4I)	264	Lin. Ft.	36" Asb. Bonded Corrugated Metal Pipe, 12 Gage
453(4K)	94	Lin. Ft.	48" Asb. Bonded Corrugated Metal Pipe, 12 Gage
455(5A)	58	Lin. Ft.	6'-1" x 4'-7" Bit Coated Struct. Plate Pipe Arch ①
455(5F)	206	Lin. Ft.	7'-8" x 5'-5" Bit Coated Struct. Plate Pipe Arch ①
455(5G)	90	Lin. Ft.	7'-11" x 5'-7" Bit Coated Struct. Plate Pipe Arch ①
455(5S)	228	Lin. Ft.	11'-10" x 7'-7" Bit Coated Struct. Plate Pipe Arch ②
455(6A)	74	Lin. Ft.	60" Bit Coated Structural Plate Pipe ①
457(I)	650	Lin. Ft.	Remove and Dispose Existing Culvert
458(I)	8	Each	Remove and Dispose Existing Bridges
460(4G)	92	Each	Bit Coated Metal End Sections For 24" CMP
460(4H)	10	Each	Bit Coated Metal End Sections For 30" CMP
460(4I)	8	Each	Bit Coated Metal End Sections For 36" CMP
520(9C)	44	Lin. Ft.	12" Asb. Bonded Perforated CMP Under drain, 16 Gage
560(I)	77	Each	Right-of-Way Monuments

NOTE: Information for estimating purposes only.
The estimated overhaul of borrow quantity for 205,000 Cu. Yds. of borrow case 1, hauled from the pit 4200' right of Sta. 953+80 is 432,000 C.Y.M.
① Top & Sides 12 Gage, Bottom 10 Gage
② Top & Sides 8 Gage, Bottom 7 Gage

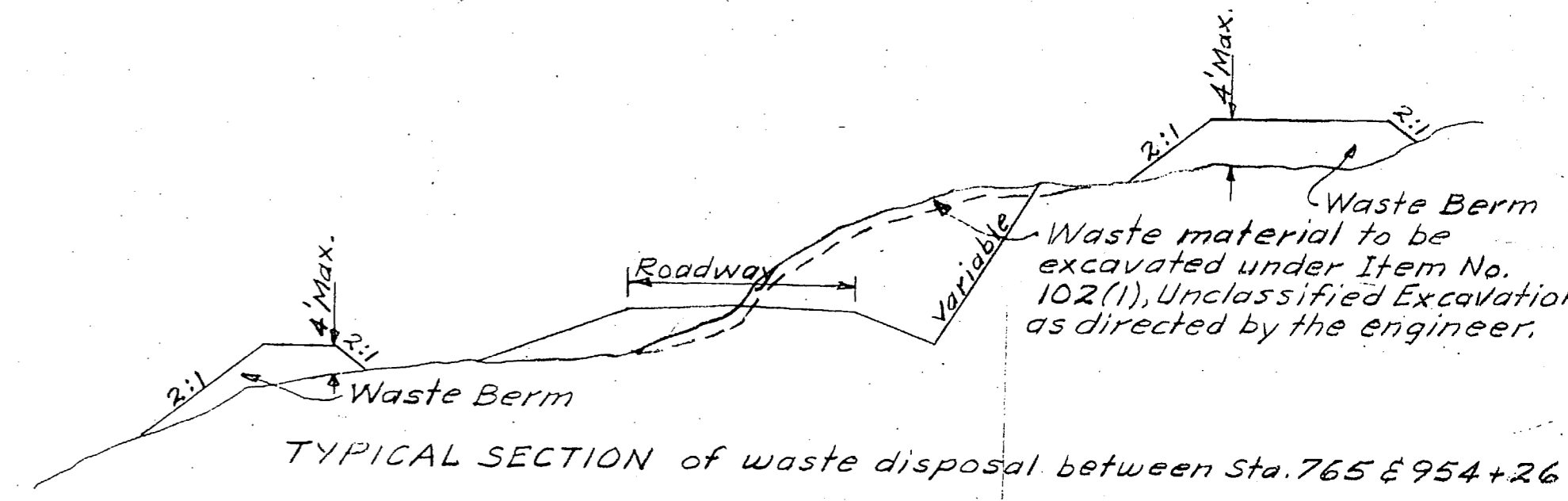
SUPERELEVATION

DEGREE OF CURVE	GRADES 0.00% - 3.99%	GRADES 4.00% - 6.00%	GRADES 6.00% & UP
1°	0.02	0.02	0.02
1° 30'	0.03	0.03	0.03
2°	0.04	0.04	0.04
2° 30'	0.05	0.05	0.05
3°	0.06	0.06	0.05
3° 30'	0.07	0.06	0.05
4°	0.08	0.06	0.05
Over 4° 00'	0.08	0.06	0.05

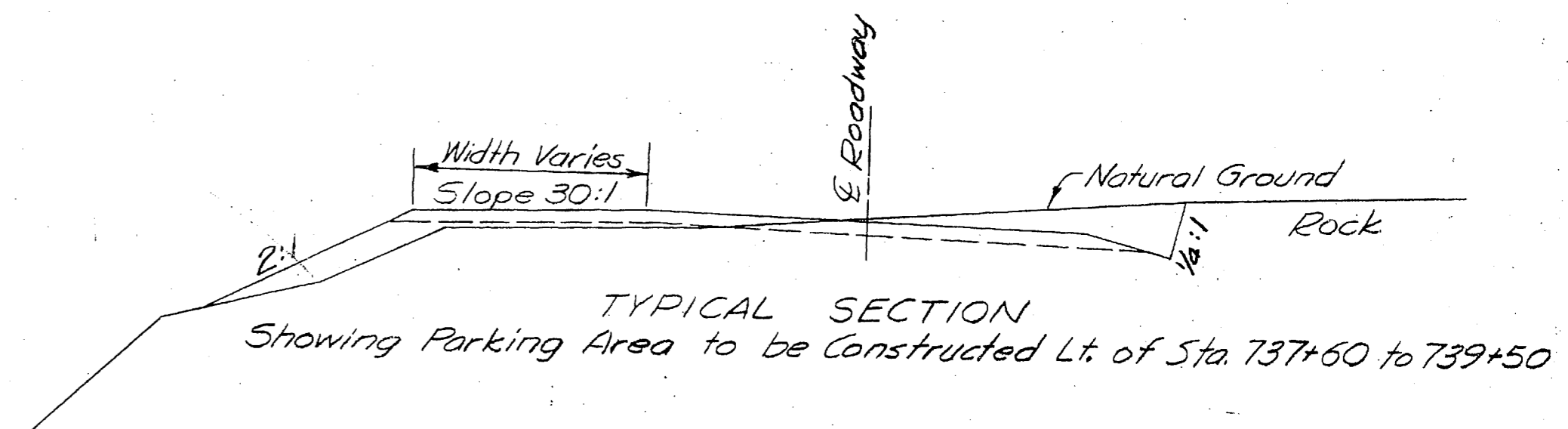
Rate of superlevation shown in feet per foot width of roadway. On curves superelevate from shoulder grade. On tangents rotate superlevation about center line.
Rate of superlevation and length of transition may be decreased by the engineer due to reduced speed zones, excessive grades, insufficient distance between reversing curves or other such conditions.
Full superlevation on curves shall not be less than 0.02 feet per foot.



TYPICAL SECTION for marsh excavation



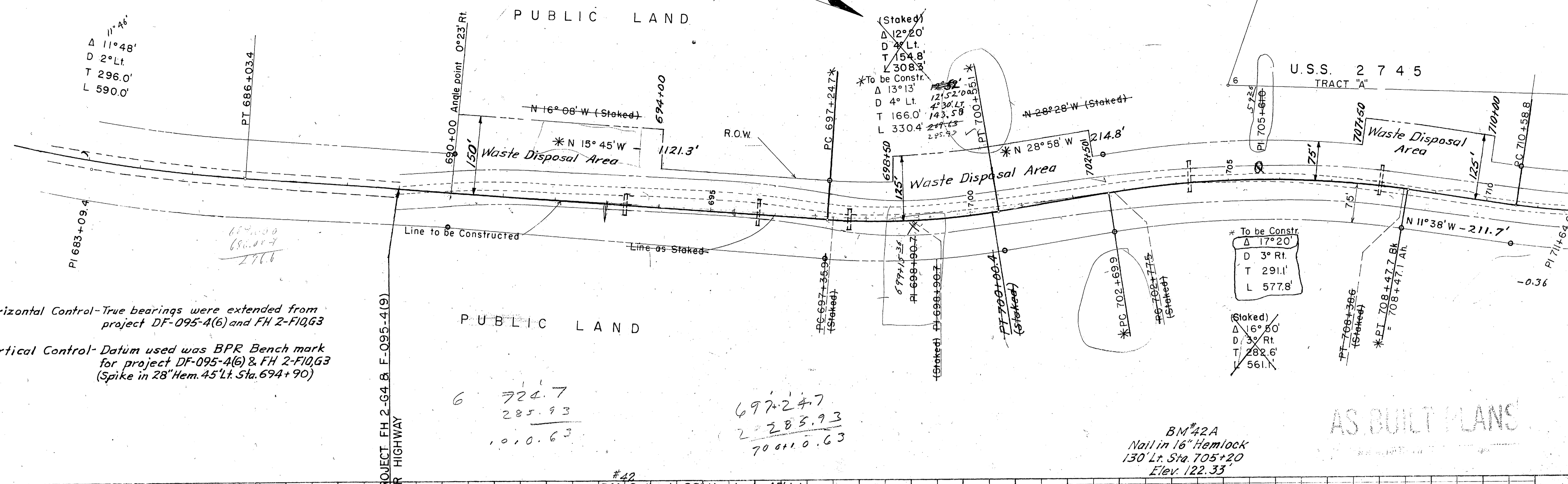
TYPICAL SECTION of waste disposal between Sta. 765 & 954+26



TYPICAL SECTION Showing Parking Area to be Constructed Lt. of Sta. 737+60 to 739+50

PLAN
 SURVEYED BY: [Blank]
 PLOTTED BY: [Blank]
 CHECKED BY: [Blank]
 DATE: [Blank]

FILE
 SURVEYED BY: [Blank]
 PLOTTED BY: [Blank]
 CHECKED BY: [Blank]
 DATE: [Blank]



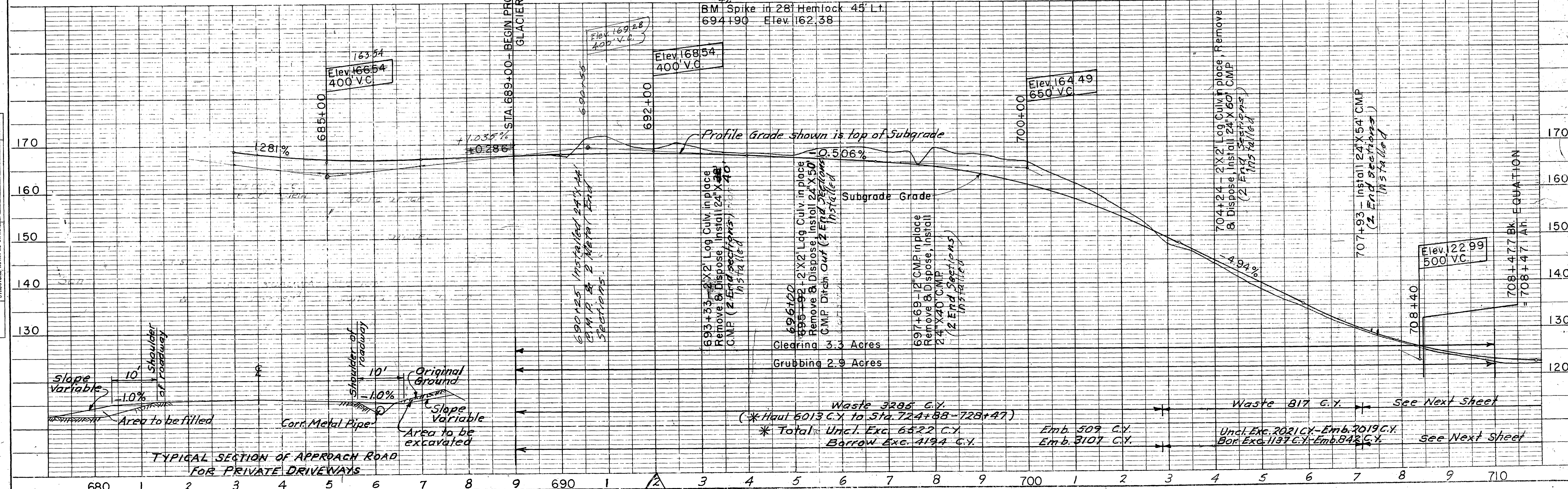
Horizontal Control-True bearings were extended from project DF-095-4(6) and FH 2-F10G3
 Vertical Control-Datum used was BPR Bench mark for project DF-095-4(6) & FH 2-F10G3 (Spike in 28" Hem. 45' Lt. Sta. 694+90)

6 724.7
 285.93
 1010.63

697.247
 2283.93
 7081.063

BM #42A
 Nail in 16" Hemlock
 130' Lt. Sta. 705+20
 Elev. 122.33

AS BUILT PLANS



TYPICAL SECTION OF APPROACH ROAD FOR PRIVATE DRIVEWAYS

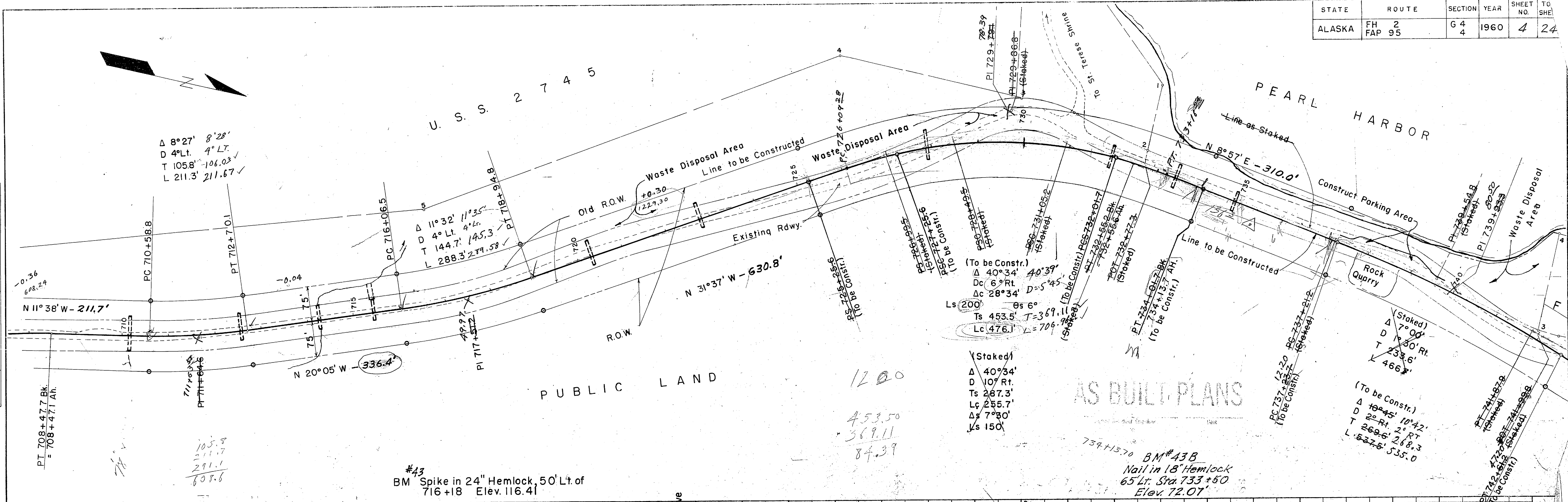
Waste 3295 C.Y.
 (* Haul 6013 C.Y. to Sta. 724+88-728+47)
 * Total: Uncl. Exc. 6522 C.Y.
 Borrow Exc. 4194 C.Y.

Emb. 509 C.Y.
 Emb. 3107 C.Y.

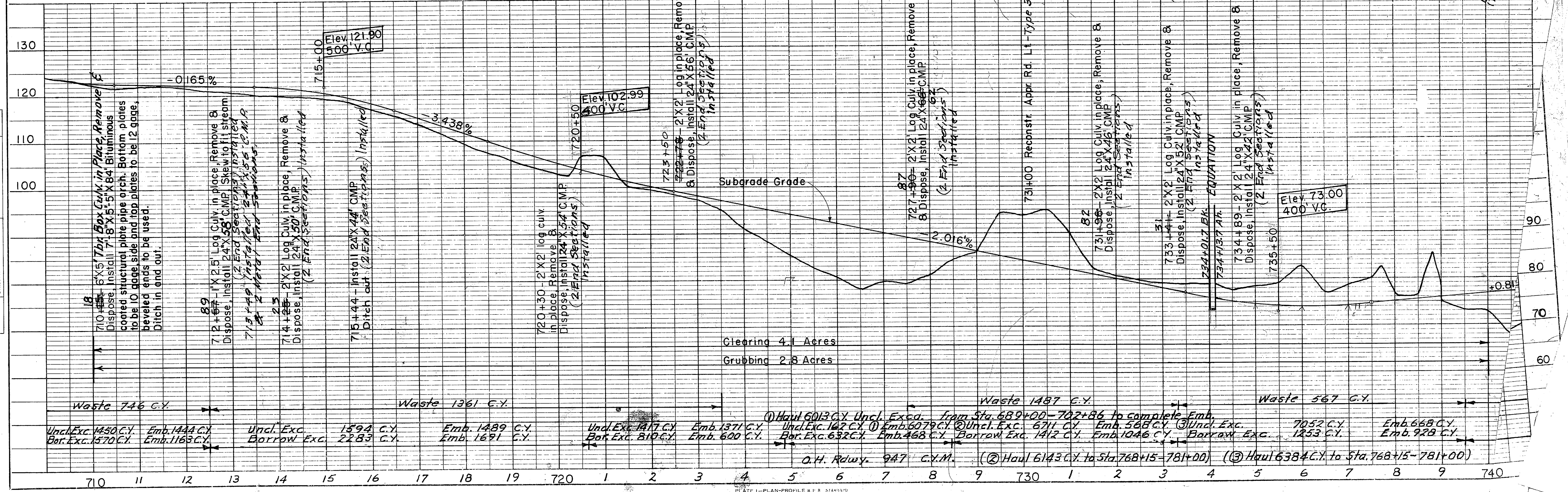
Waste 817 C.Y. See Next Sheet

Uncl. Exc. 2021 C.Y. - Emb. 2019 C.Y.
 Bor. Exc. 1137 C.Y. - Emb. 842 C.Y. See Next Sheet

DATE	BY
SURVEYED	
PLOTTED	
CHECKED	
BY	
NO.	
PLAN	
NO.	
NOTE BOOK	
NO.	
RT. OF WAY CHECKED	
NO.	



DATE	BY
SURVEYED	
PLOTTED	
CHECKED	
BY	
NO.	
PROFILE	
NO.	
STRUCTURE NOTATION CHKD.	

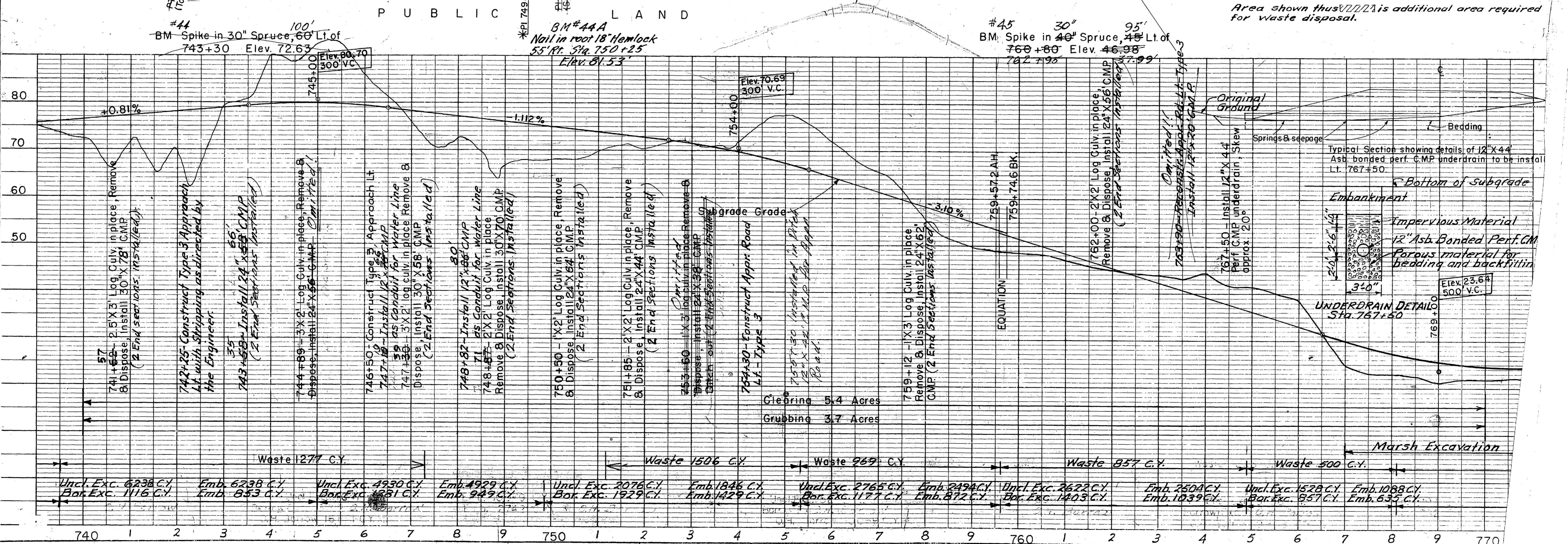
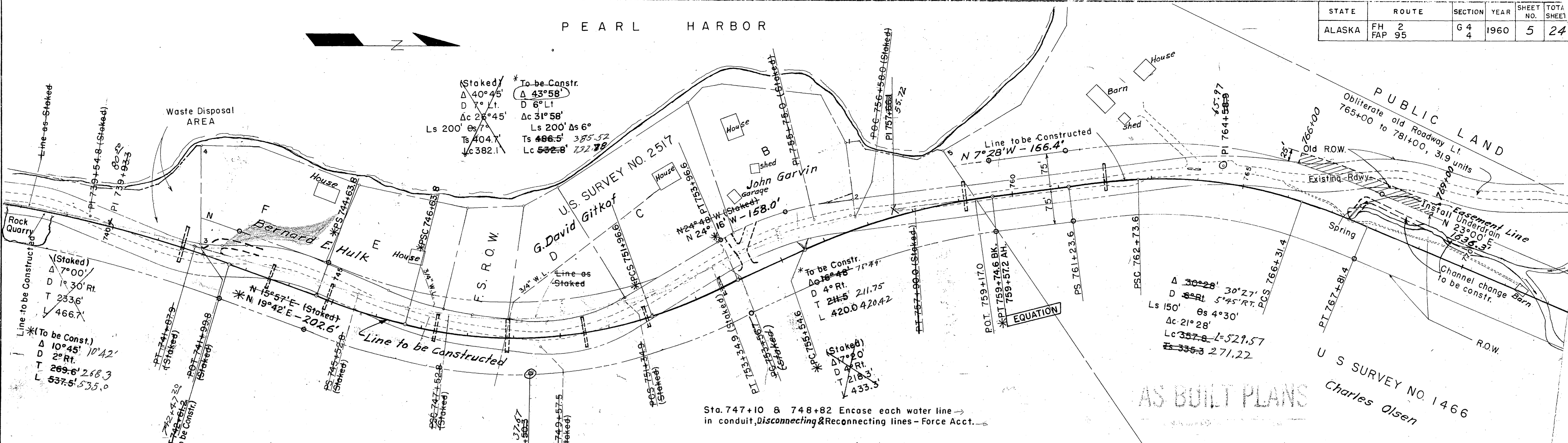


PEARL HARBOR

STATE	ROUTE	SECTION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	FH 2 FAP 95	6 4	1960	5	24

PLAN	SURVEYED	DATE
	PLOTTED	
	ALIGNED	
	CHECKED	
	NO. OF DAT. CHECKED	
	BY	
	DATE	

PIPELINE	SURVEYED	DATE
	PLOTTED	
	ALIGNED	
	CHECKED	
	NO. OF DAT. CHECKED	
	BY	
	DATE	

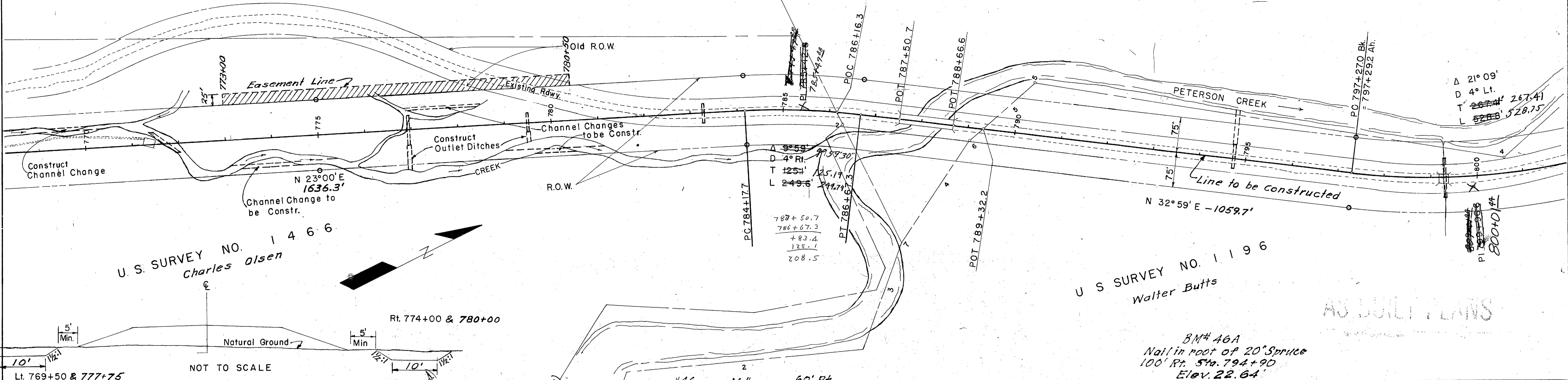


PUBLIC LAND

U S S 1 2 8 6
G.M. Peterson

Obliterate old roadway Lt.
765+00 to 781+00, 31.9 units.

PLAN
NO. 1466
DATE
BY
SURVEYED
PLOTTED
ALIGNMENT CHECKED
NOTE BOOK
NO. 1466
DATE
BY
STRUCTURE NOTATIONS CRVD.

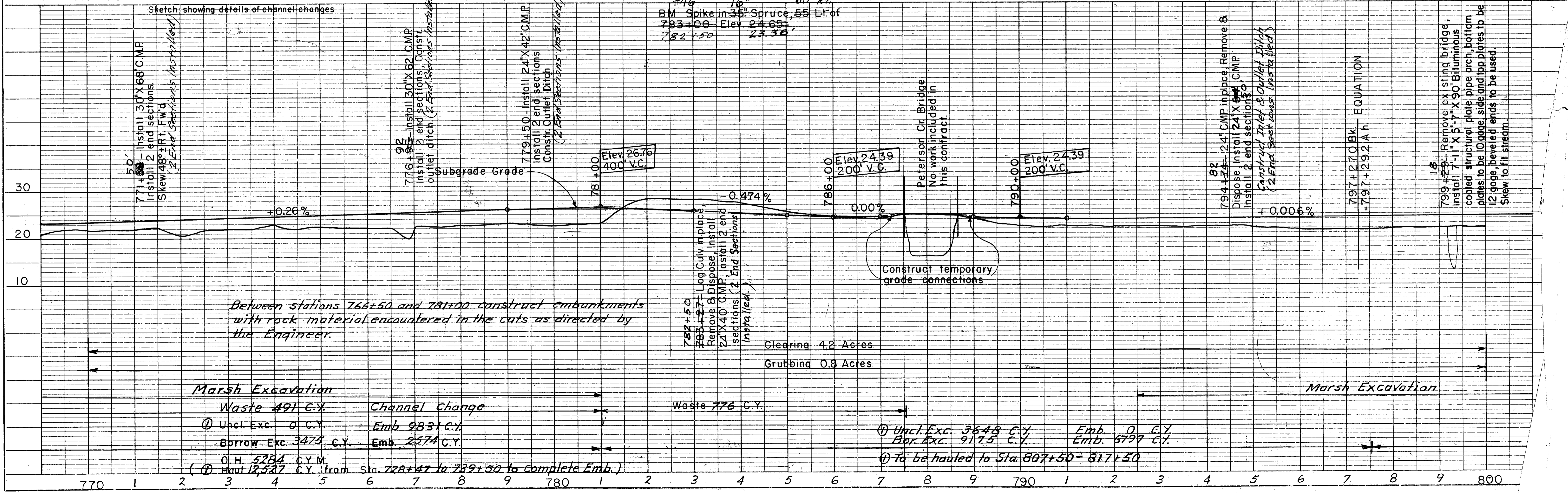
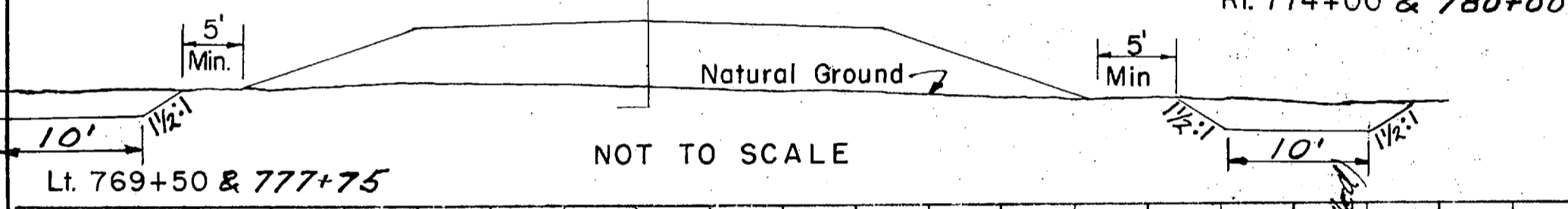


U.S. SURVEY NO. 1466
Charles Olsen

U.S. SURVEY NO. 1196
Walter Butts

BM# 46A
Nail in root of 20" Spruce
100' Rt. Sta. 794+90
Elev. 22.64'

ADJUTANT GENERAL



Between stations 768+50 and 781+00 construct embankments with rock material encountered in the cuts as directed by the Engineer.

Marsh Excavation

Waste 491 C.Y.
 (1) Uncl. Exc. 0 C.Y.
 Borrow Exc. 3475 C.Y.
 O.H. 5284 C.Y.M.
 Haul 12,527 C.Y. from Sta. 782+47 to 789+50 to complete Emb.

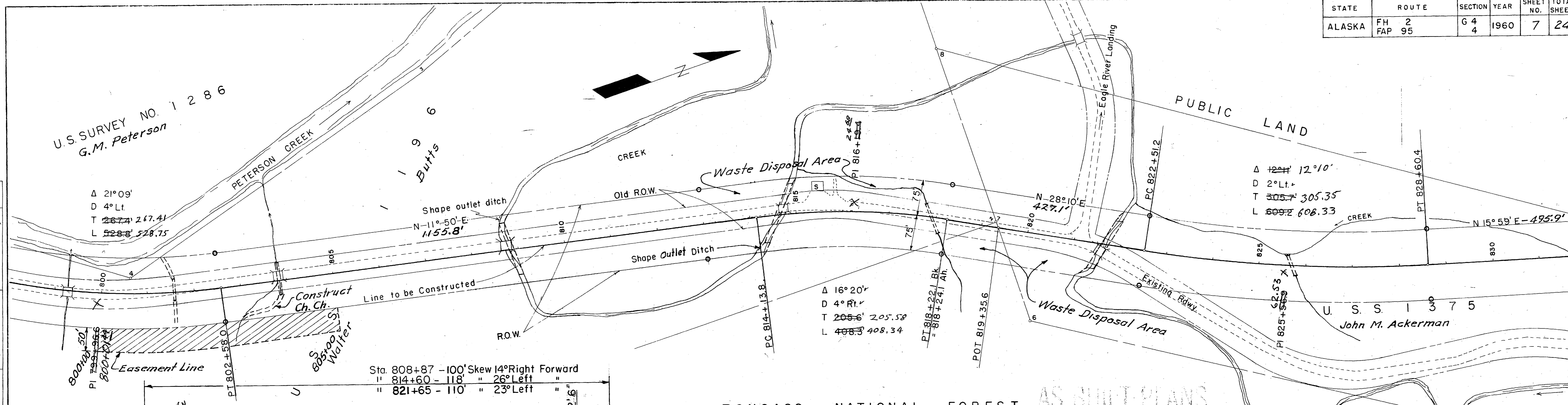
Channel Change
 Emb 9831 C.Y.
 Emb. 2574 C.Y.

Waste 776 C.Y.

(1) Uncl. Exc. 3648 C.Y.
 Bor. Exc. 9175 C.Y.
 Emb. 0 C.Y.
 Emb. 6797 C.Y.
 (1) To be hauled to Sta. 807+50 - 817+50

U.S. SURVEY NO. 1286
G.M. Peterson

PLAN SURVEYED BY DATE
PLOTTED BY
NOTE BOOK NO.
GRADES CHECKED BY
STANDARD NOTATION CHD.



Sta. 808+87 - 100' Skew 14° Right Forward
" 814+60 - 118' " 26° Left
" 821+65 - 110' " 23° Left

TONGASS NATIONAL FOREST AS BUILT PLANS

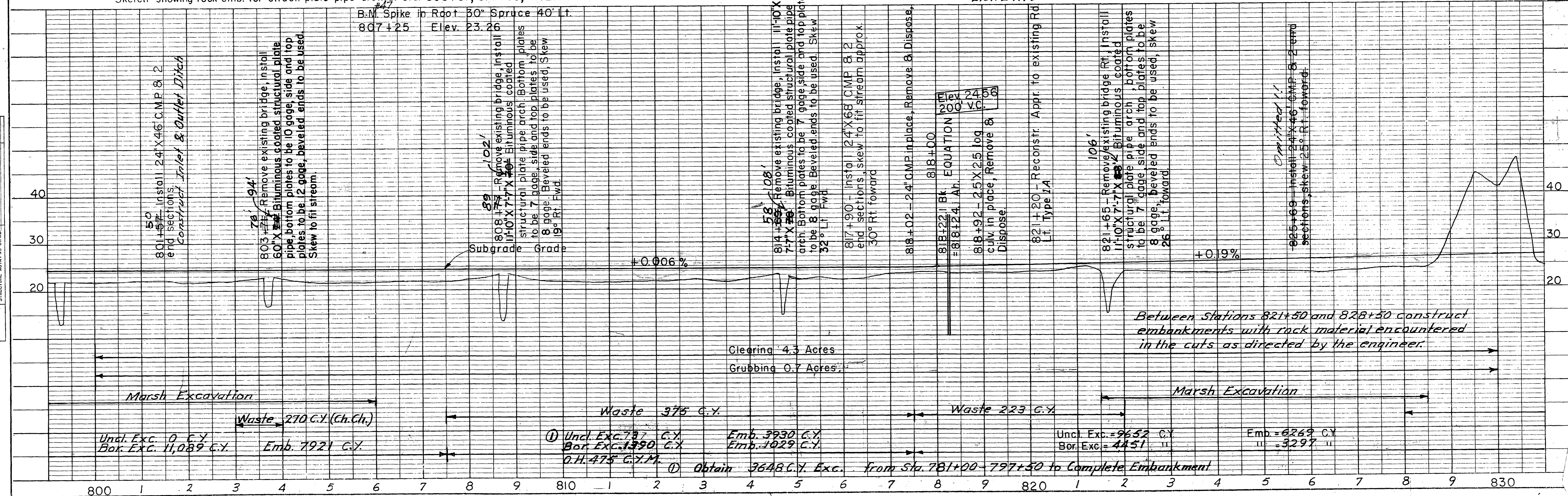
Between banks of stream Rt. & Lt. construct side of embankment with rock from roadway excavation as directed by the Engineer.

Sketch showing rock emb. for struct. plate pipe arch at sta. 808+87, 814+60, & 821+65
4:1 Fill Slope at Right Angle

TBM #47A
Nail in trunk of 30" Spruce
40' Lt. of Sta. 819+35
Elev. 24.79'

821+60 to 844+60 Obliterate existing roadway, 48.5 units.

PROFILE SURVEYED BY DATE
PLOTTED BY
NOTE BOOK NO.
GRADES CHECKED BY
STANDARD NOTATION CHD.



Between Stations 821+50 and 828+50 construct embankments with rock material encountered in the cuts as directed by the engineer.

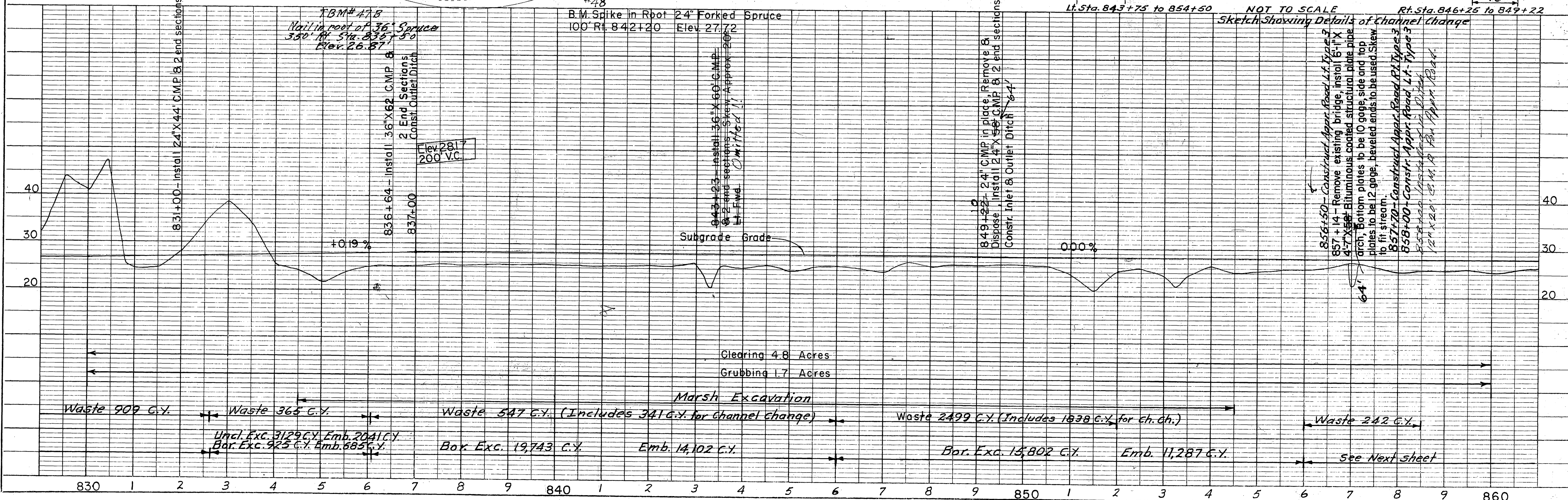
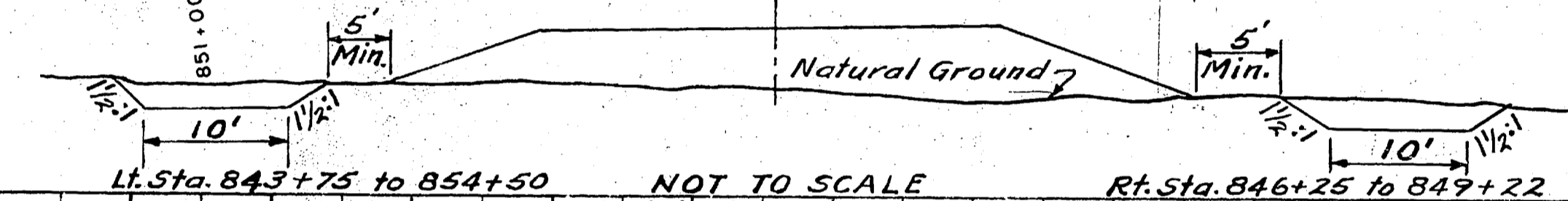
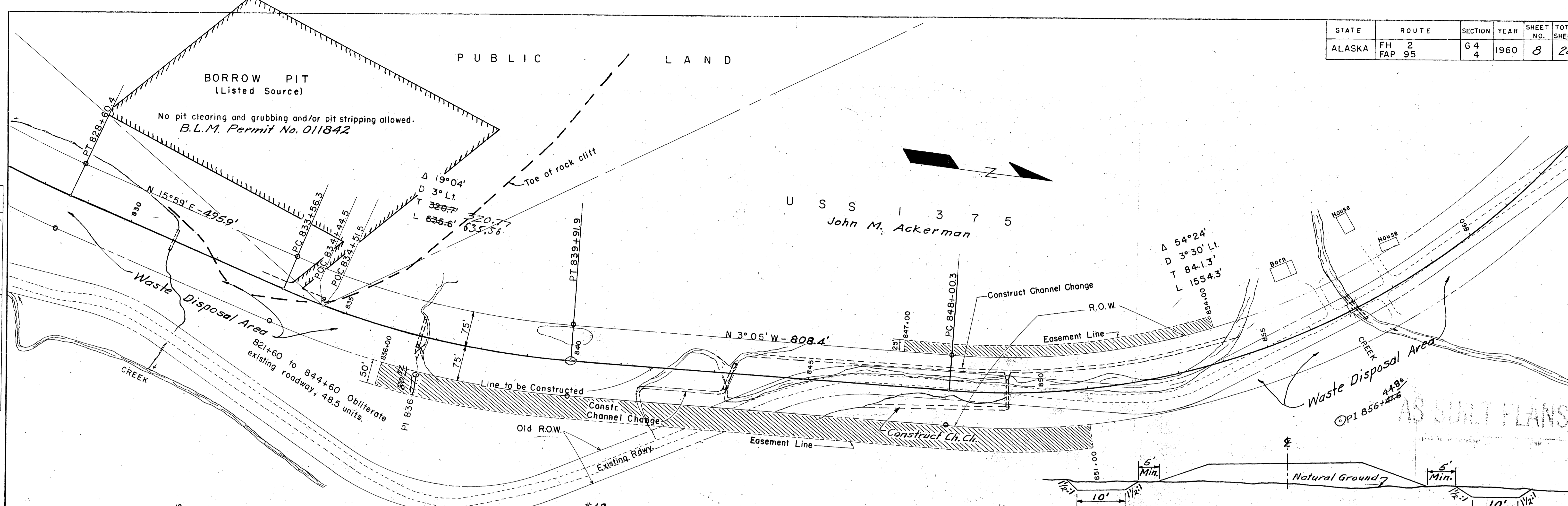
STATE	ROUTE	SECTION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	FH 2 FAP 95	G 4	1960	8	24

PUBLIC LAND

BORROW PIT
(Listed Source)

No pit clearing and grubbing and/or pit stripping allowed.
B.L.M. Permit No. 011842

U S S I 3 7 5
John M. Ackerman

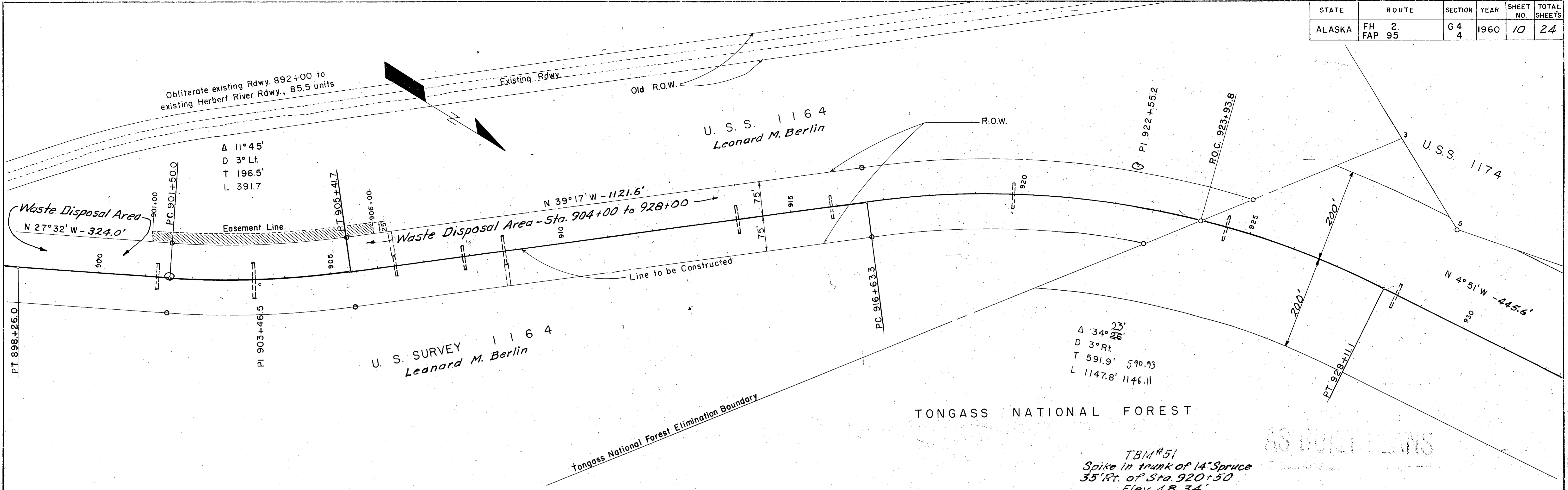


Waste 909 C.Y. Waste 365 C.Y. Waste 547 C.Y. (Includes 341 C.Y. for Channel Change) Waste 2499 C.Y. (Includes 1838 C.Y. for ch. ch.) Waste 242 C.Y.

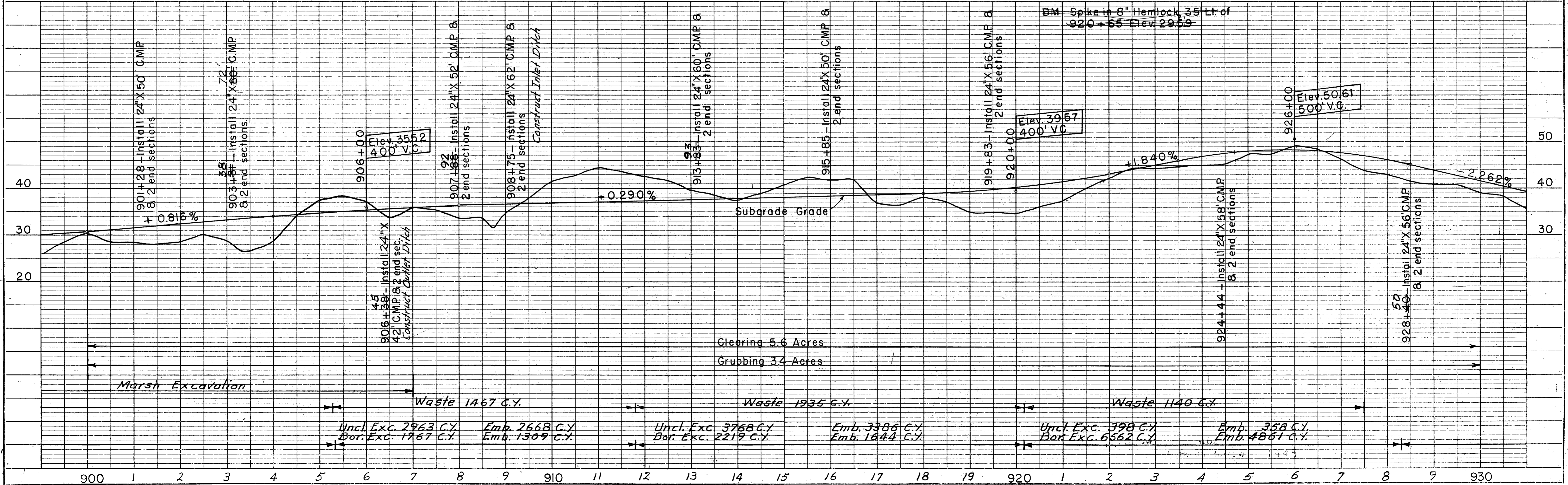
Und. Exc. 3129 C.Y. Emb. 2041 C.Y. Bar. Exc. 925 C.Y. Emb. 685 C.Y. Box. Exc. 19,743 C.Y. Emb. 14,102 C.Y. Bar. Exc. 15,802 C.Y. Emb. 11,287 C.Y.

STATE	ROUTE	SECTION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	FH 2 FAP 95	G 4 4	1960	10	24

PLAN	DATE
SURVEYED ALIGNED CHECKED RT. OF WAY CHECKED NO. _____ BY _____ DATE _____	



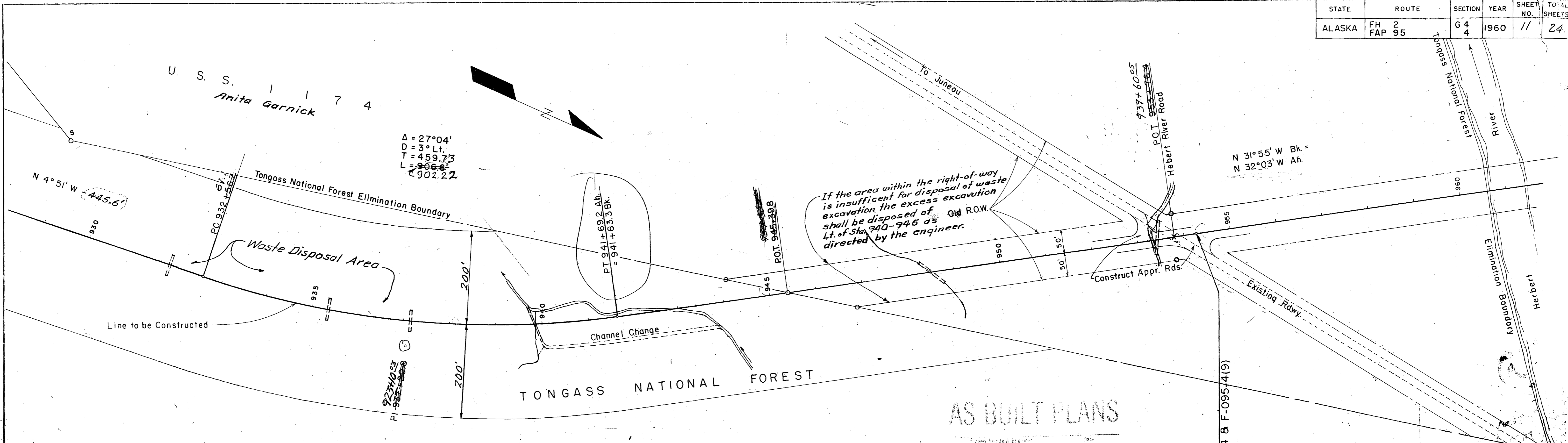
PROFILE	DATE
SURVEYED GRADES CHECKED B. M. 3 NOTED STRIKING NOTATIONS CHD. NO. _____ BY _____ DATE _____	



STATE	ROUTE	SECTION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	FH FAP 295	G 4	1960	11	24

PLAN	DATE
SIGNED NOTE BOOK NO.	BY

PROFILE	DATE
SIGNED NOTE BOOK NO.	BY



TBM # 52
Nail in 12" Spruce 85' Rt.
Sta. 937+30
Elev. 29.66'

#53
BM Spike in 18" Spruce, 60' Rt. of
953+18 Elev. 27.48

