STATE	PROJECT	SHEET NO.	TOTAL SHEETS
ALASKA	FH-10-2 (3) R-50932	1	23

STATE OF ALASKA
DEPARTMENT OF HIGHWAYS

PLAN AND PROFILE
PROPOSED HIGHWAY PROJECT

ALASKA FOREST HIGHWAY FH 10-2(3)
GRADING, DRAINAGE & BRIDGE
YAKUTAT HIGHWAY

R-50932

MILLER CREEK TO DANGEROUS RIVER
TONGASS NATIONAL FOREST
ALASKA

KEY MAP

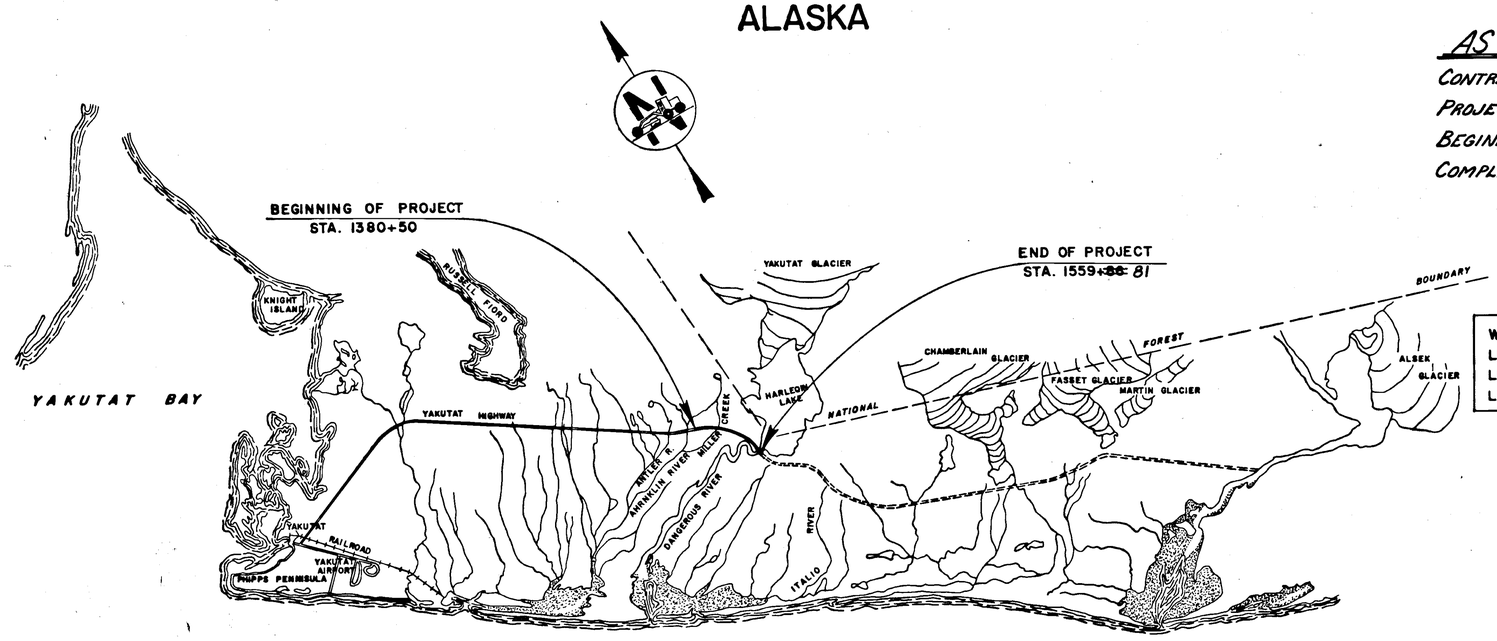
INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	TYPICAL SECTION & TURNOUT DETAILS
3	ESTIMATE OF QUANITIES
4	SUMMARY TABLES
5	MISCELLANEOUS DETAILS
6-12	PLAN & PROFILE SHEETS
13	CULVERT DETAILS
14-23	DANGEROUS RIVER BRIDGE PLANS

The following Standard Drawings apply to this project: A-1, C-00.02, C-11.01, D-02.02, D-03.01, D-07.00, D-30.10, G-04.13, G-04.31, G-13.00, G-14.00, G-30.02, G-30.13, I-80.00, M-13.01, S-00.10, S-05.00, S-20.10, S-30.11

AS-BUILT PLANS

CONTRACTOR: PAMCO CONSTRUCTION, SEATTLE
PROJECT ENGINEER: JOHN R. EDWARDS
BEGINNING DATE: APRIL 5, 1977
COMPLETION DATE: SEPT. 24, 1977



DESIGN DESIGNATION

ADT	(1973)	= 0
ADT	(1993)	= 60
DHV	20%	= 12
D	=	60-40%
V	=	40 mph

PROJECT SUMMARY

WIDTH OF SUBGRADE		14'
LENGTH OF GRADING	= 17,506.09'	= 3.316 MI.
LENGTH OF BRIDGE	= 429.92'	= 0.081 MI.
LENGTH OF PROJECT	= 17,936.01'	= 3.397 MI.

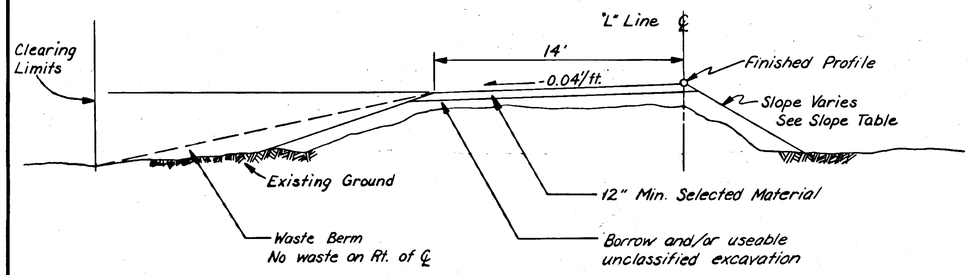
Note: See Plan & Profile Sheet for minor equations

STATE OF ALASKA
DEPARTMENT OF HIGHWAYS
APPROVED
Morton J. Cook
for SOUTHEASTERN DESIGN ENGINEER DATE

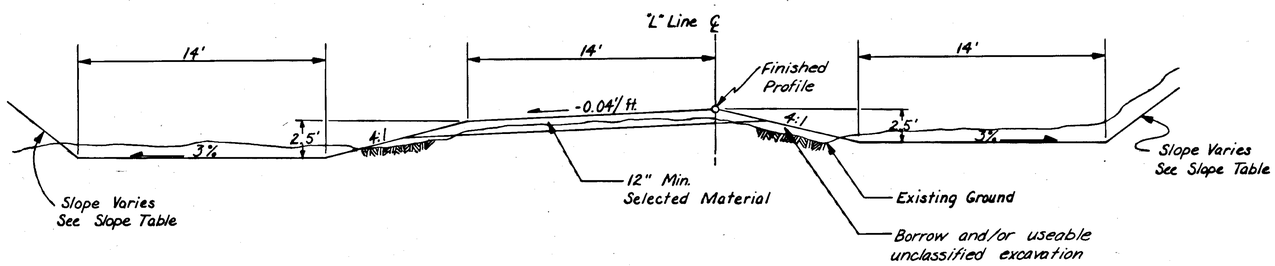
STATE OF ALASKA
DEPARTMENT OF HIGHWAYS
APPROVED
Dick Chetty Date
DEP. COMMISSIONER OF HIGHWAYS

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	FH10-2 (3) (R-50932)	1976	2	23

TYPICAL SECTIONS OF IMPROVEMENT



TYPICAL FILL SECTION

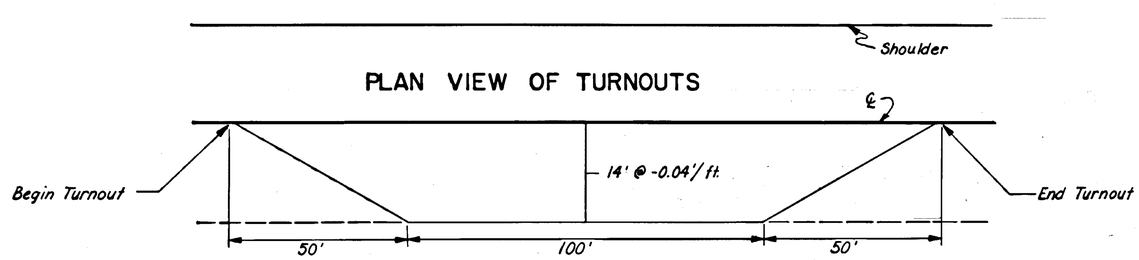


TYPICAL CUT SECTION

SLOPE TABLE

Height of Cut or Fill	Slope
0 - 5'	4:1
5'-10'	2:1
10' and over	1.5 : 1

Note: The table above is a guide only, slopes may be varied to meet field condition.



PLAN VIEW OF TURNOUTS

TURNOUT SCHEDULE

Begin	End
1386+50	1388+50
1393	1395
1401+50	1403+50
~~1407~~ 1406	~~1408~~ 1408
1412+50	1414+50
1422	1424
1430+50	1432+50
1440+50	1442+50
1449+50	1451+50
1459+50	1461+50
1469+50	1471+50
1476	1478
1486	1488
1496	1498
1506	1508
1516	1518
1526	1528+50
1535	1537
1545	1547
~~1551~~	~~1553~~
1549+50	1550+50

GENERAL NOTES

1. The grades and alignment shown on these plans are subject to minor revisions.
2. The clearing and grubbing limits shall be to a neat line ten feet beyond the slope limits in cut sections and five feet beyond the slope limits in fill sections or to the R.O.W. limits whichever is less, unless otherwise shown on the plans.
3. The existing road is approximately within 18" of the finished grade shown on the profile. The Contractor shall complete all excavation and embankment work including the construction of all ditches, roadway widening, clean up and dressing of slopes, disposal of all debris left by the previous Contractor, and all other incidental work necessary to complete the project in accordance with the lines, grades and typical sections shown on the plans.
4. From Sta. 1495+00 to 1520+00± and from Sta. 1535+00 to 1538+00± the roadway is at or near finished grade. These areas will require reconstruction in order to meet the requirement of 4" minus in the top 12" as specified in Sect. 203. Payment will be made under 203(3) or 203(5A).
5. Turnouts shall be constructed right of centerline with a cross slope of minus 4% to the shoulder
6. Remove and Relocate the Dead End sign and barrier guardrail from the present location to the end of this project as directed by the Engineer.
7. Construct a 100' transition right of centerline at the beginning of the project to taper from a 28' to 14' roadbed.
8. Construct a well graded earth barricade at the End of Project as directed by the Engineer.
9. The Alsec Highway from 2½ mile to the B.O.P. is not maintained from Nov 1st until June 30th and any snow removal operations necessary to the Contractor's operation during this period shall be the Contractor's responsibility.
10. The Department has been advised that the previous campsite may not be available. It shall be the Contractor's responsibility to make arrangements with the Forest Service for a campsite.

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	FH 10-2 (3) (R-50932)	1976	3	23

ESTIMATE OF QUANTITIES

ITEM NO.	ITEM	UNIT	ROADWAY TOTAL	BRIDGE TOTAL
1	Furnishing & Maintaining Engineering Facilities	L.S.	~~All Req'd~~ 15,000	
2A	Meals	Ea.	~~1350~~ 480	
2B	Lodging	Ea.	~~450~~ 163	
110 (1)	Mobilization	L.S.	~~All Req'd~~ 130,000	
111 (1)	Temporary Erosion & Pollution Control	C.S.	~~All Req'd~~ NONE REQ'D.	
114 (1)	Construction Engineering by the Contractor	L.S.	~~All Req'd~~ 75,000	
201 (38)	Clearing & Grubbing	L.S.	~~All Req'd~~ 60,000	
203 (3)	Unclassified Excavation	C.Y.	18,781	
203 (5A)	Borrow	C.Y.	17,766	
602 (4)	Miller Creek Drainage Structures *	L.S.	~~All Req'd~~ $80,000	
603 (2)	4'10" x 3' Corrugated Steel Pipe Arch	L.F.	6	
603 (22G)	24" Pipe Conduit	L.F.	~~92~~ 232	
603 (32)	State Furnished Conduit	L.F.	~~842~~ 811	
606 (1)	Beam Type Guardrail, Type I Post	L.F.	350	
611 (1)	Riprap, Class I	C.Y.	~~309~~ 265.7	
615 (1)	Standard Sign	S.F.	32	
501 (1)	Class A Concrete	L.S.		~~All Req'd~~ $187,000
502 (2)	Class S Concrete	C.Y.		~~94.2~~ 96.07
503 (1)	Reinforcing Steel	L.S.		~~All Req'd~~ $8,000
504 (1)	Structual Steel Furnished, Fabricated & Erected	L.S.		~~All Req'd~~ $40,000
505 (3)	Structual Steel Piles Furnished & Driven	L.F.		~~1492~~ 2849
508 (1)	Dangerous River Bridge Superstructure	L.S.		~~All Req'd~~ $342,600
508 (2)	Repairing Glu-Lam Timber Girder	L.S.		$ 35,608.29

* See Miller Creek Alternate Table, sheet 4

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	FH 10-2 (3) (R-30932)	1976	4	23

SUMMARY TABLES

CULVERT SUMMARY

STATION	24" Pipe Conduit L.F.		2' 5" x 1' 6" Pipe Arch L.F.	3' 7" x 2' 3" Pipe Arch L.F.	4' 10" x 3' 0" Pipe Arch L.F.		Remarks
~~1386 + 00~~	48'						Remove and Reinstall
1385 + 95							
1391 + 56	44'						Contractor Furnished, Install
~~1392 + 74~~			~~50'~~				~~Install~~
1399 + 61	~~38'~~	44'					Contractor Furnished, Install
1404 + 40			48'				Install
1405 + ~~00~~ 05	~~42'~~	46'					Install
1406 + ~~00~~ 05	~~46'~~	50'					Install
1411 + 00	Miller Creek Drainage Structures, see table this sheet *						
1419 + 50			~~46'~~	48'			Install
1424 + 75			42'				Install
1428 + 75					76'		Skew 50° Ah. Lt. Contractor Furn. 6', Install
1433 + 86			36'				Install
1449 + ~~50~~ 47			~~48'~~	54'			Install
1451 + ~~54~~ 62			~~42'~~	52'			Install
1463 + ~~22~~ 30			60'				Skew 40° Ah. Lt., Install
1466 + ~~50~~ 79			~~40'~~	48'			Install
~~1472 + 00~~			~~36'~~	44'			Install
1471 + 95							
1475 + ~~36~~ 35			~~50'~~	140'			Install Contractor Furnished
~~1488 + 91~~			~~38'~~				~~Install~~
1495 + ~~40~~ 49			~~46'~~	50'			Install
1507 + ~~30~~ 32			54'				Install
1531 + ~~50~~ 25	~~10'~~	15'					Extend Rt., Contractor Furnished
1537 + ~~25~~ 40			~~36'~~	38'			Install
1549 + 97							
~~1550 + 00~~			6'				Extend Rt.
~~1550 + 00~~			6'				Extend Lt.

Note: All Conduit is State furnished unless otherwise noted above.

* If the Structural Plate Pipe Arch option is used, they will be Contractor furnished.

SIGN SCHEDULE

No.	Station	Dist. from ℄ Lt.	Dist. from ℄ Rt.	Code No.	Legend	Sign Panel Thickness Size	Unframed	Framed	Area S.F.	Post No. of Posts	Type	Size	Length	Embedment	Facing Traffic	Remarks
1	Asblt. 1370 + 50		28	W20-4	One Lane Road 1000 Ft.	48"x48"			16.0	2	tube	2"	11.5'	3.0'	SB	
	1554 + 02															
2	~~1553 + 74~~		6	T1-1.0	Dangerous River	24"x48"			8.0	1	tube	2"	21.0'	5.0'	SB	
3	1558 + ~~54~~ 36	20		T1-1.0	Dangerous River	24"x48"			8.0	1	tube	2"	21.0'	5.0'	NB	

Notes:
1. All posts shall be 2" perforated galvanized steel tubing, 12 ga., See S-30.00.
2. Sign locations are approximate only and shall be located by the Engineer.

GUARDRAIL SUMMARY

From	To	Offset	Length	Remarks
1553 + 04	1554 + 04	Rt.	100	Install
1553 + 29	1554 + 04	Lt.	75	Install
1558 + 34	1559 + 34	Lt.	100	Install
1558 + 34	1559 + 09	Rt.	75	Install

Note: The Contractor may furnish native timber bridges at the locations shown in the table in lieu of steel plate pipe arches. The bridges shall meet the following requirements:

1. Bridge shall be designed by the Contractor.
2. The bridge shall conform to A.A.S.H.O. standard specifications for Highways Bridges 1973 edition and designed for a H-20 A.A.S.H.O. live load, working drawings of the proposed structure shall be submitted to the Engineer for review & approval. The submittal shall include design calculations when requested by the Engineer. The plans shall show the design criteria allowable stress. The design & detailing of the bridge shall be consistant with good engineering practices.
3. The bridge shall have a clear width of 14' and have at least a 12"x12" bull rail along each side.
4. Minimum Channel Opening for Timber Bridges shall be as shown on the Alternate Culvert Summary.
5. The bridge deck shall have a minimum elevation of 109.2 ft. and the bridge ℄ located 7' Lt. of Roadway ℄.
6. No construction which may effect the bridge site shall be done prior to the approval of the Contractor's bridge plans. Prior to the approval of the bridge plans, any work done involving the bridge site shall be at the Contractors risk. Construction & materials for the bridge shall be in accordance with the approved bridge plans.
7. Materials not covered by the contract specifications shall be subject to the approval of the Engineer.
8. Untreated native timber, including lumber & logs, may be used. Logs used in contact with the ground shall be peeled.

MILLER CREEK DRAINAGE STRUCTURES ALTERNATES

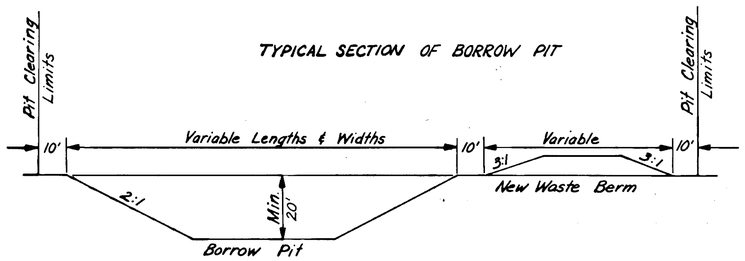
STATION	12'10" x 8'4" S.P.P.A. (L.F.)	TIMBER BRIDGE MIN. CHANNEL OPENING (S.F.)
1410 + 67	50'	360
1410 + 83	50'	
1412 + 02	56'	480
1412 + 18	56'	

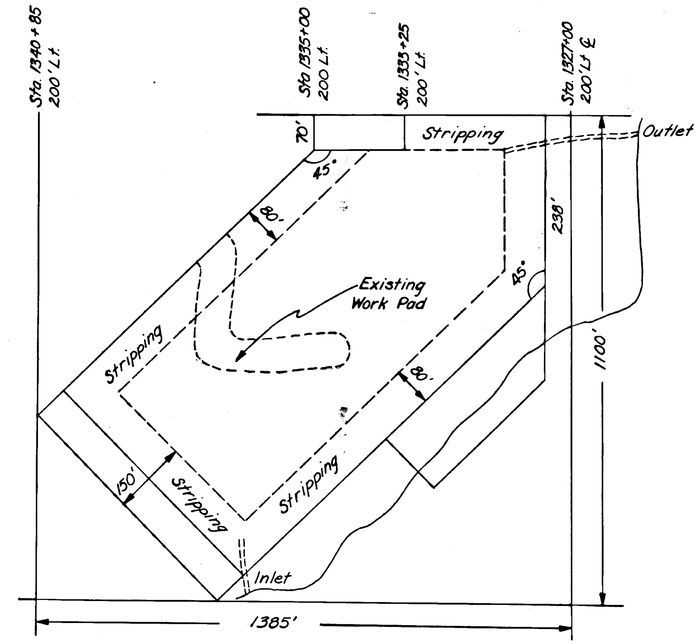
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	FH10-2(3) (R-30932)	1976	5	23

MISCELLANEOUS DETAILS

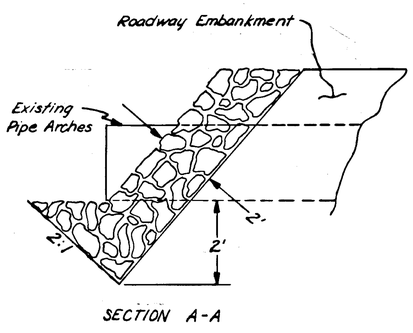
Notes:

1. The pit dimensions shown are subject to adjustment by the engineer.
2. Waste berm slopes shall be dressed to blend into the natural landscape.
3. The existing work pad left by others, shall be removed to the depth shown on typical section. This material shall be incorporated into the embankment as directed by the Engineer.

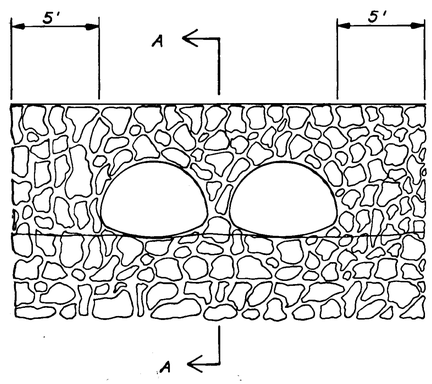




State Furnished Material Source
Pit No. 2

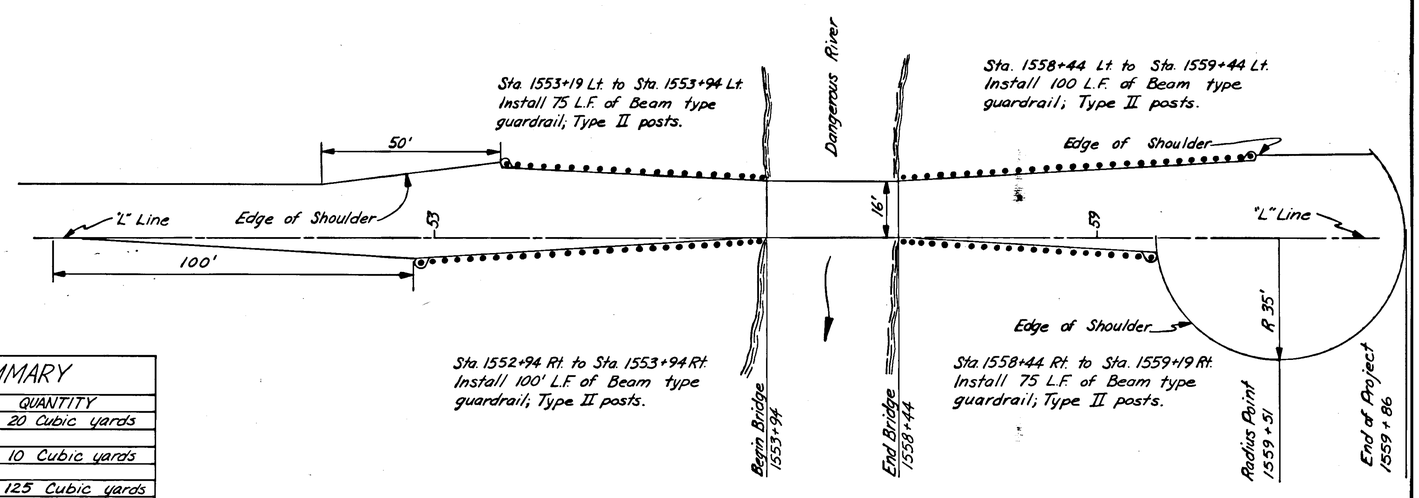


SECTION A-A

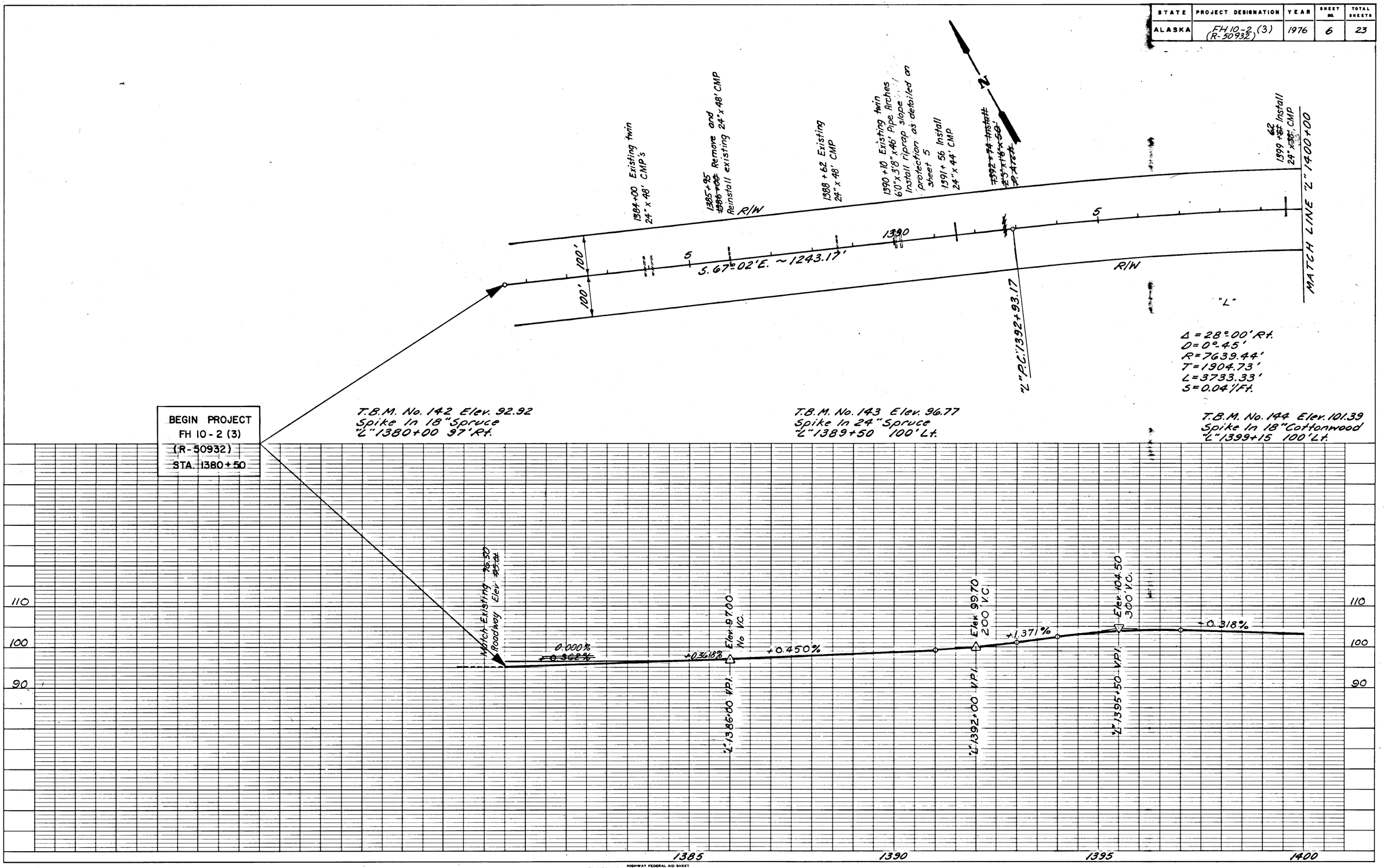


CLASS I RIPRAP END PROTECTION DETAIL
Sta. 1390 + 10 , Sta. 1404 + 00

RIP RAP SUMMARY	
STATION	QUANTITY
Sta. 1390+10 Lt.	20 Cubic yards
Sta. 1404+00 Lt.	10 Cubic yards
Sta. 1410+75 Lt.	125 Cubic yards
Sta. 1412+10 Lt.	154 Cubic yards



STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	FH 10-2 (3) (R-50932)	1976	6	23

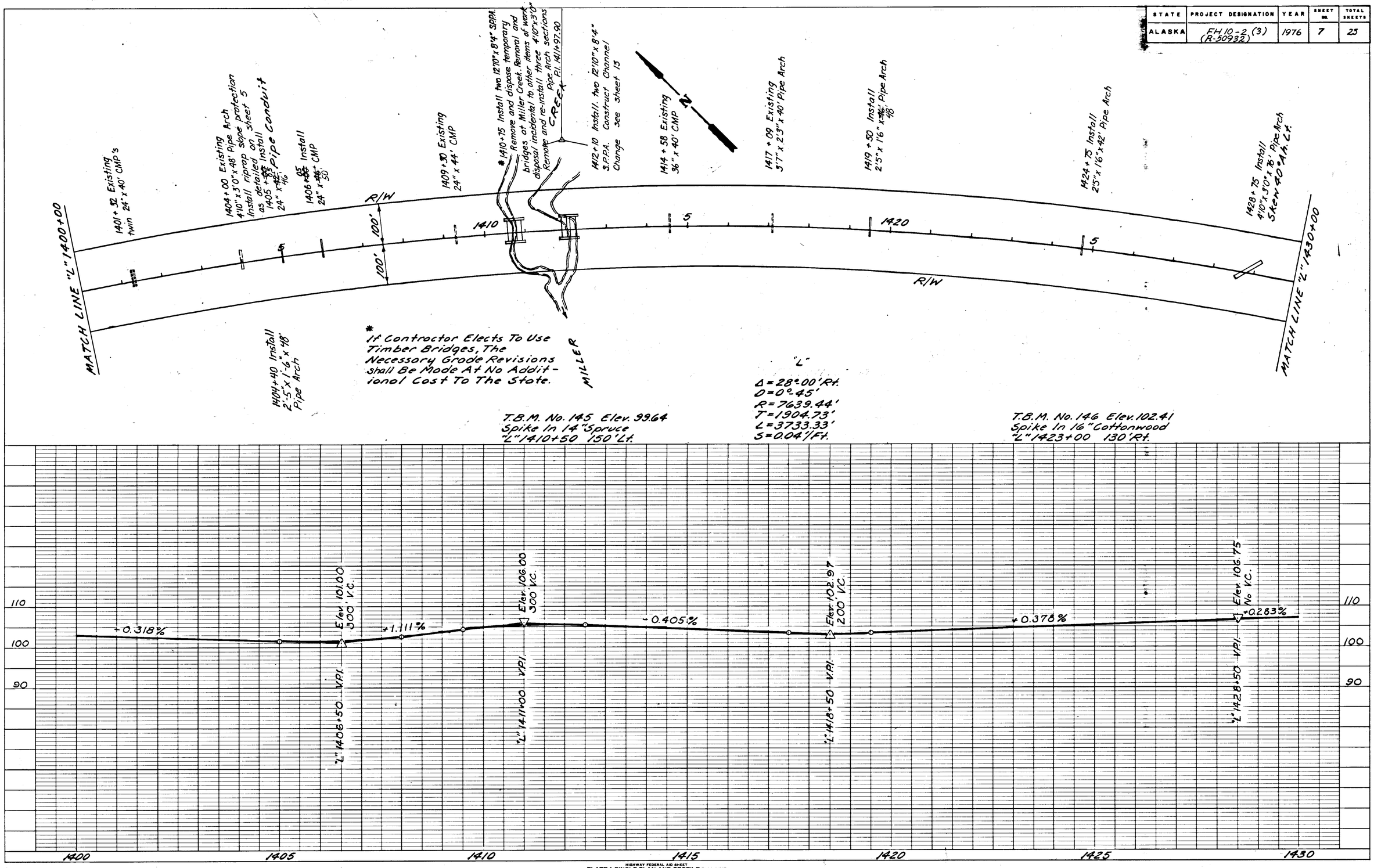


PLAN
NOTE BOOK No.
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
BY
DATE

PROFILE
NOTE BOOK No.
SURVEYED
PLOTTED
GRADES CHECKED
B. M.'s NOTED
STRUCTURE NOTATIONS CHECKED
BY
DATE

HIGHWAY FEDERAL AID SHEET
PLATE 1-SINGLE PLAN AND PROFILE-FULL LINE
TELEDYNE
PRINTED IN U.S.A.

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	FH 10-2 (3) (R-50932)	1976	7	23



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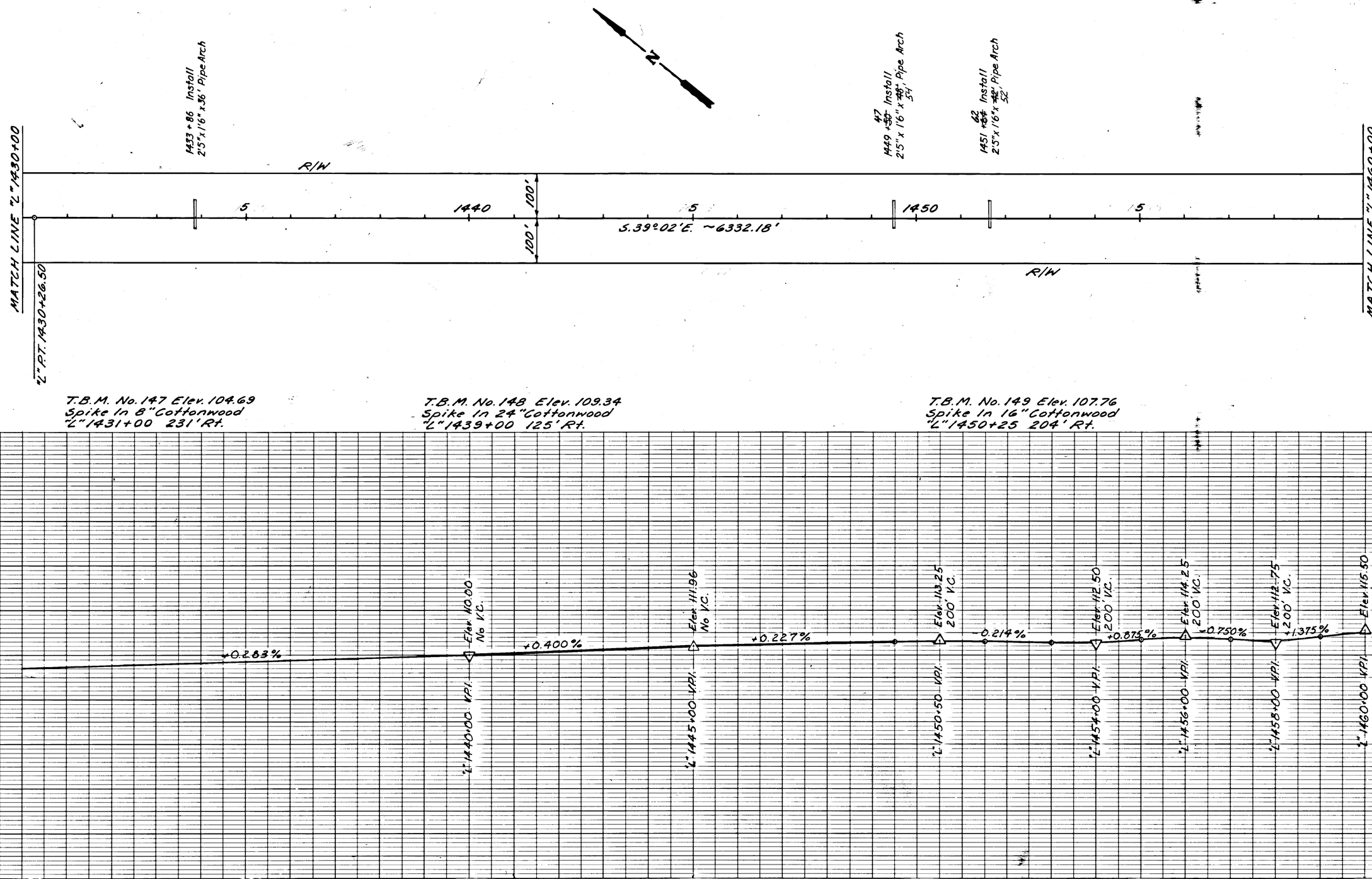
HIGHWAY FEDERAL AID SHEET
PLATE 1-SINGLE PLAN AND PROFILE-FULL LINE
TELEDYNE
PRINTED IN U.S.A.

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	FH 10-2 (3) (R-50932)	1976	8	23



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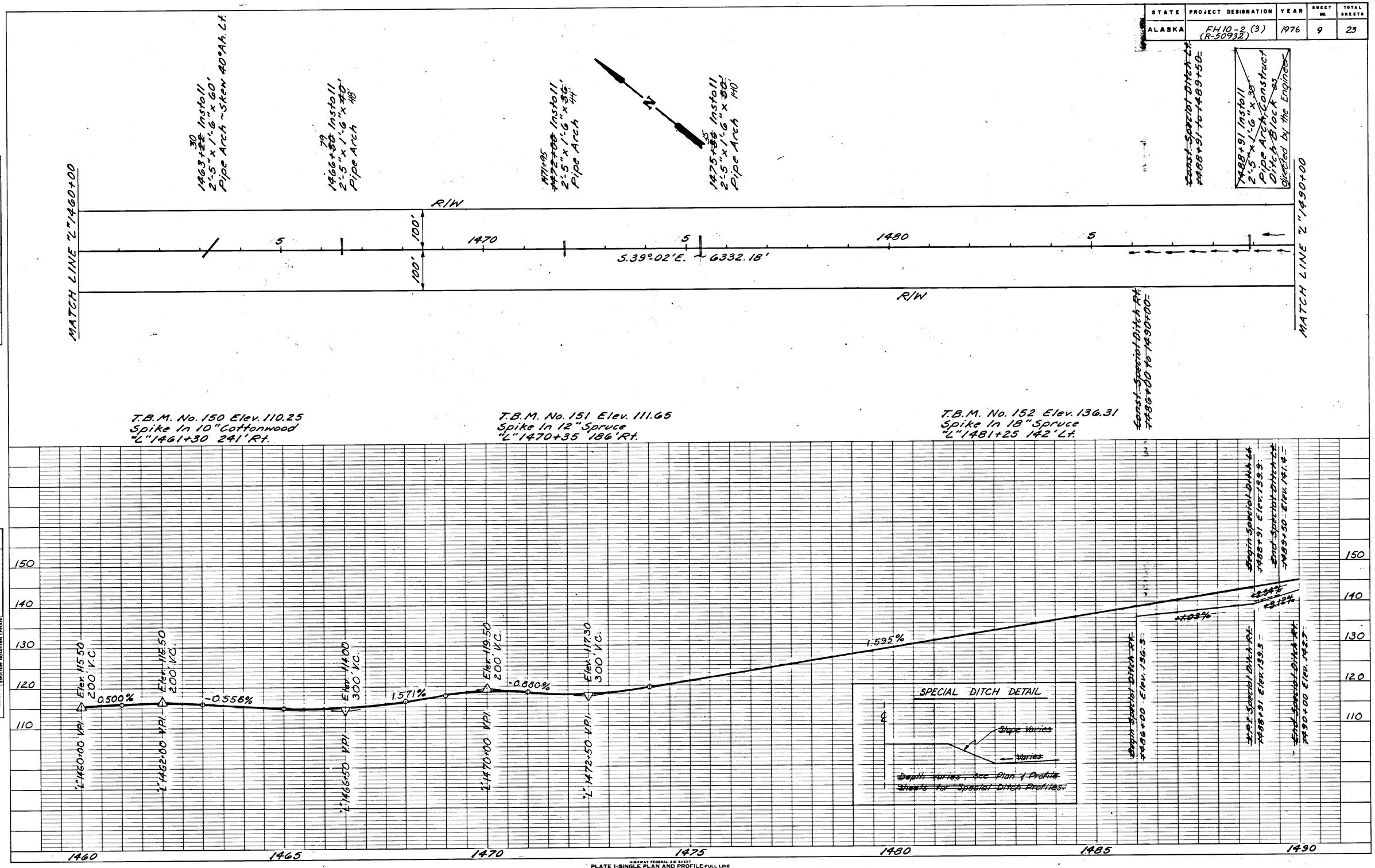
PROFILE — SURVEYED / PLOTTED / GRADES CHECKED / B.M.'S NOTED / STRUCTURE NOTATIONS CHECKED — NOTE BOOK No. — BY — DATE

HIGHWAY FEDERAL AID SHEET
PLATE 1-SINGLE PLAN AND PROFILE-FULL LINE
"R" TILEDINE

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	FH10-2(3) (R-50932)	1976	9	23



HIGHWAY FEDERAL AID SHEET
PLATE 1-SINGLE PLAN AND PROFILE-FULL LINE
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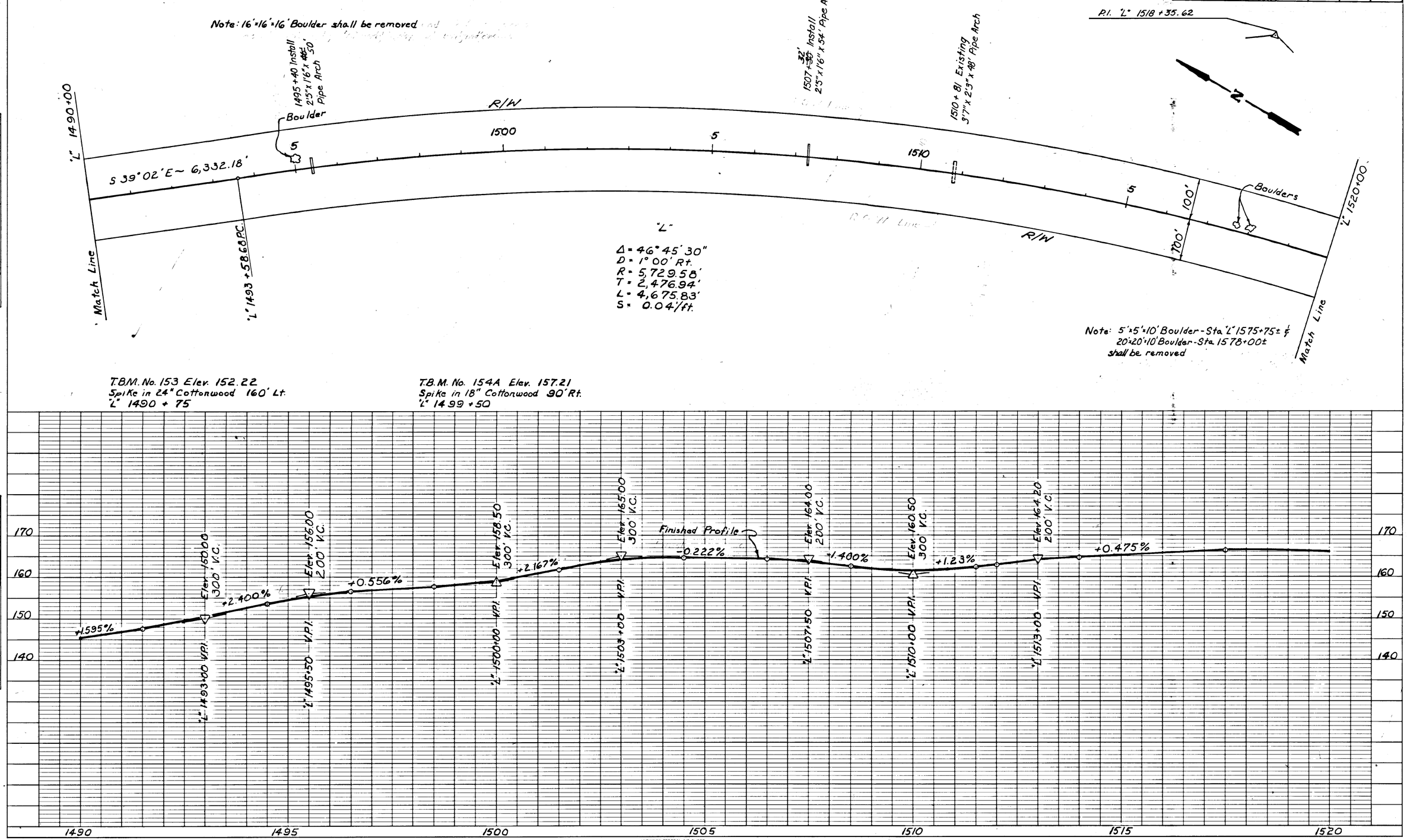
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	FH 10-2 (3) (R-50932)	1976	10	23



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PROFILE — NOTE BOOK No. — SURVEYED — PLOTTED — GRADES CHECKED — B. M.'s NOTED — STRUCTURE NOTATIONS CHECKED — BY — DATE

HIGHWAY FEDERAL AID SHEET
PLATE 1-SINGLE PLAN AND PROFILE-FULL LINE
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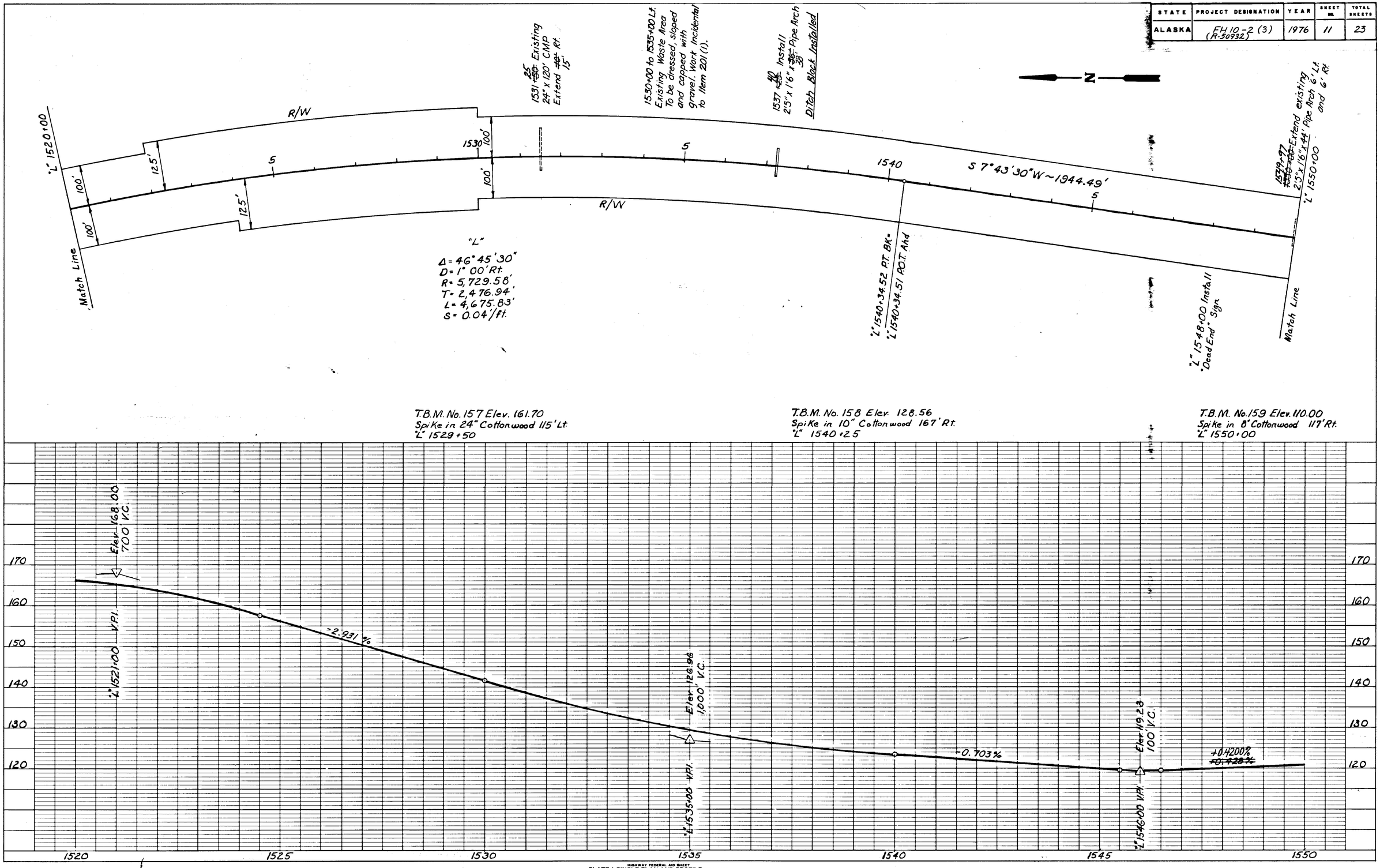
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	FH 10-2 (3) (R-50932)	1976	11	23



HIGHWAY FEDERAL AID SHEET
PLATE 1-SINGLE PLAN AND PROFILE-FULL LINE
"R"TELEDYNE
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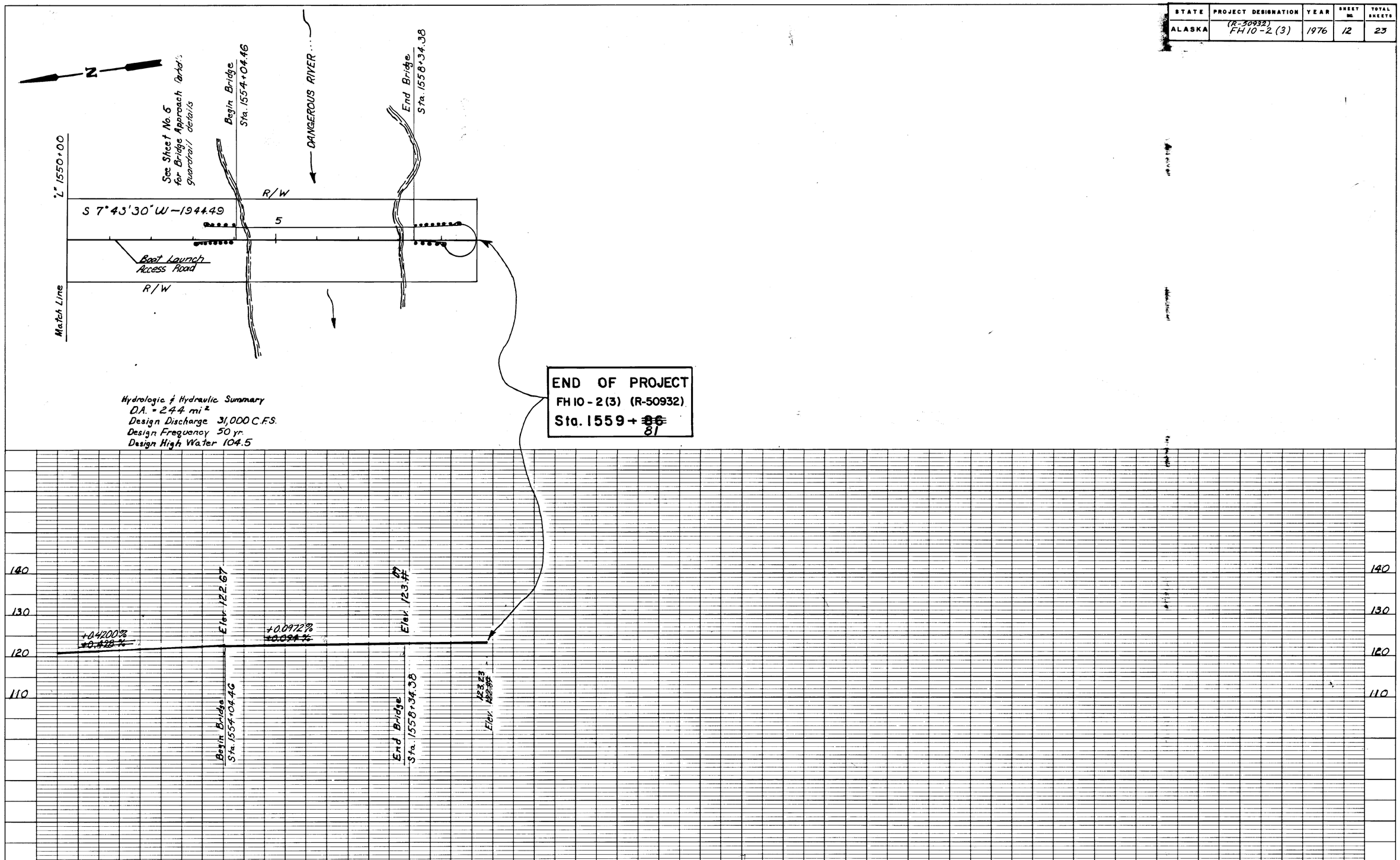
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	(R-50932) FH10-2(3)	1976	12	23



PLAN
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SURVEYED
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ALIGNMENT CHECKED
RT. OF WAY CHECKED
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DATE

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PLOTTED
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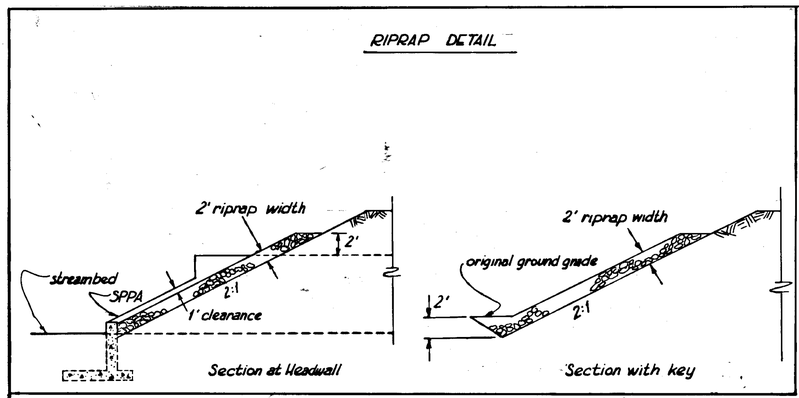
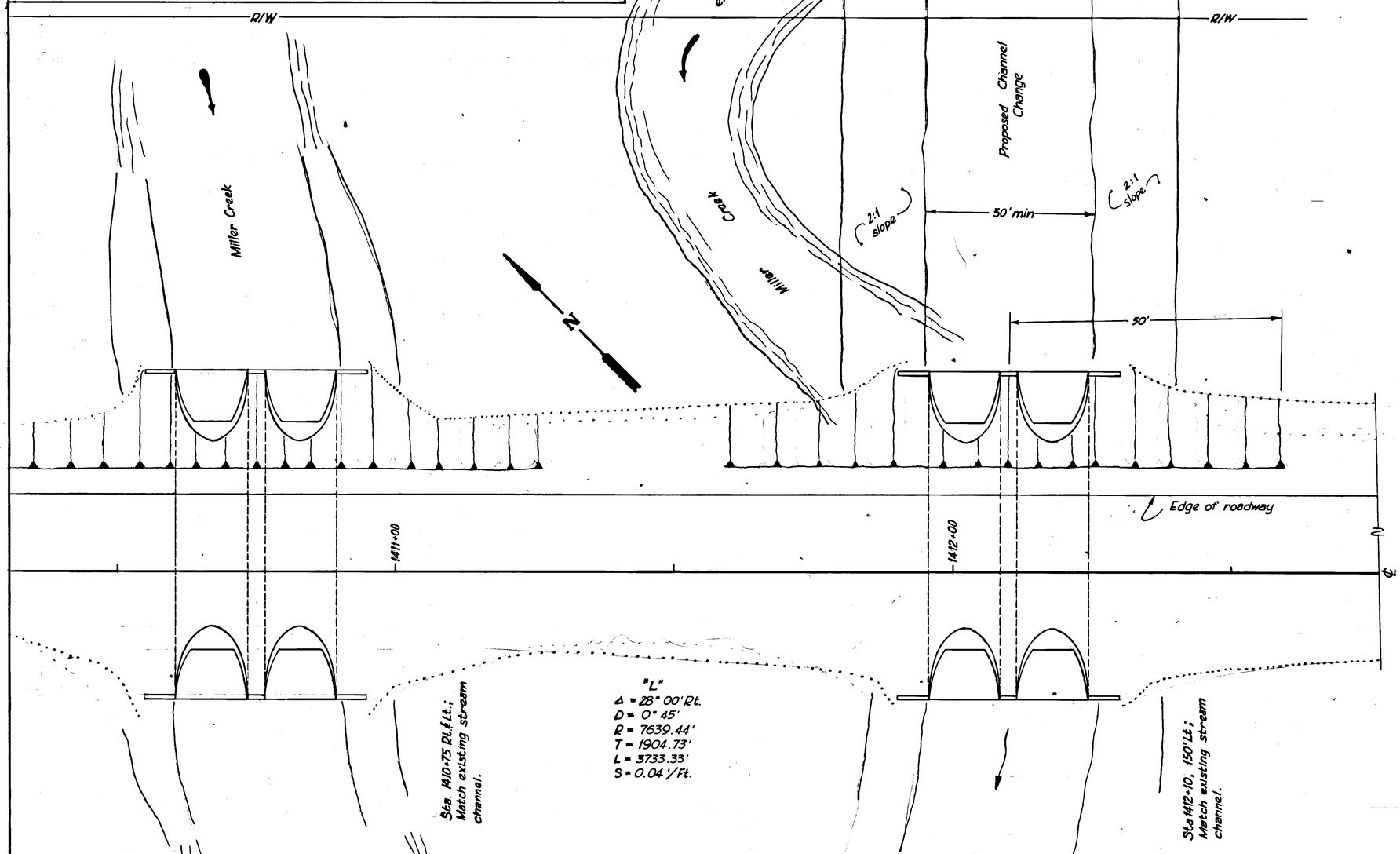
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	(R 30932) FH10-2(3)	1976	13	23

MILLER CREEK STRUCTURAL PLATE PIPE ARCHES





GENERAL NOTES:

1. SPPA's shall have a minimum of 2' of cover.
2. Type I headwall shall be used, see Standard Drawing D-30.10.
3. The bevel on the ends of the SPPA shall be 2:1
4. A 2' thick layer of Class I riprap shall be installed on the upstream end of both SPPA's. The riprap shall extend 50' laterally from the SPPA's as directed by the engineer.
5. The proposed channel change shall be constructed with a slight curve and wavy edges to avoid an artificial straight-shoot effect.
6. The vegetation on the southeast bank of the new channel and the northwest bank of Miller Creek shall be left undisturbed with no side-casting of material on these banks.
7. The old channel shall be completely filled, grass seeded and fertilized as directed by the engineer at no additional cost to the state.

Drainage Area = 12.4 sq. miles.
Q_{50} = 2900 cfs
Capacity of structures = 2900 cfs