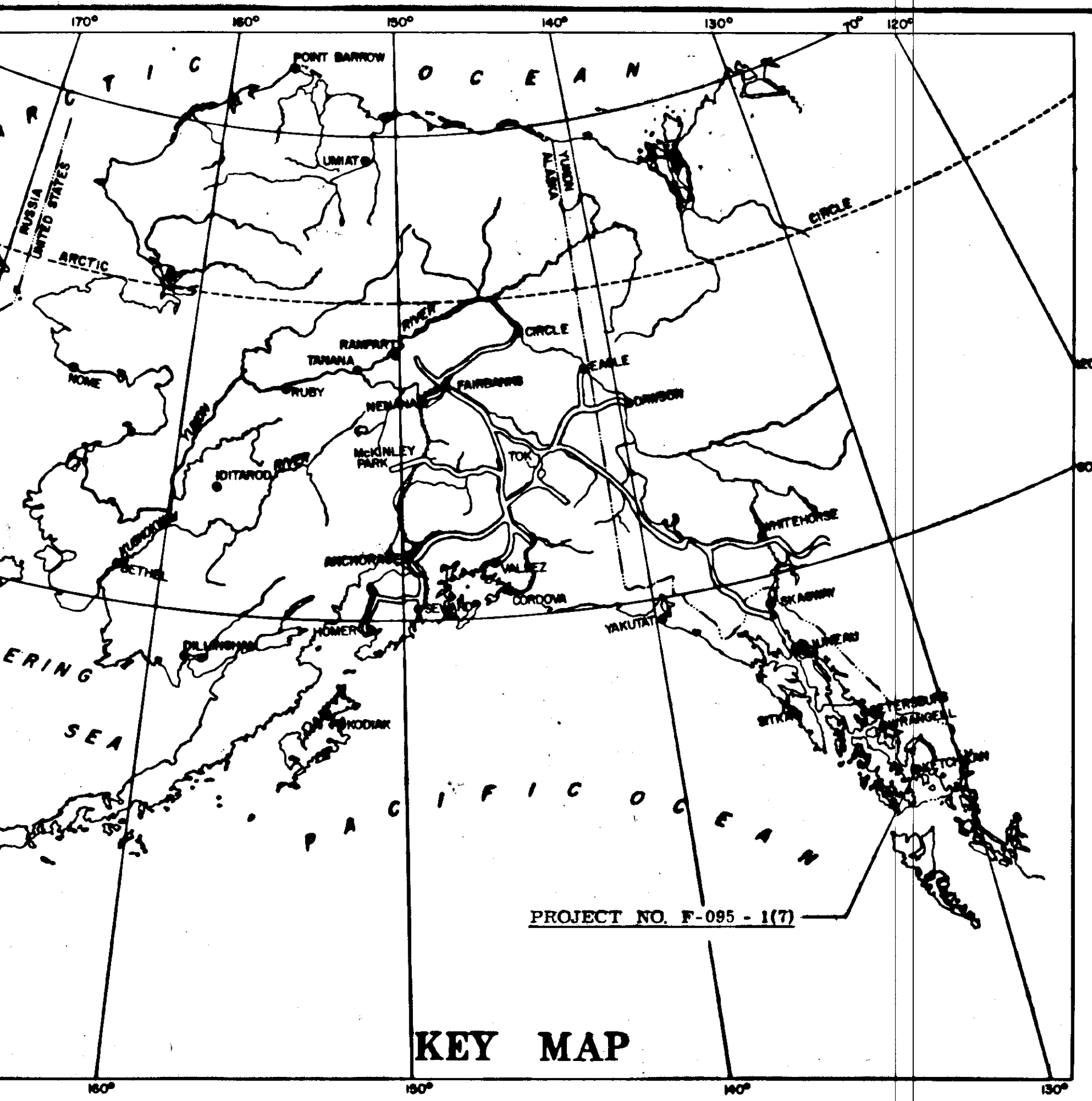


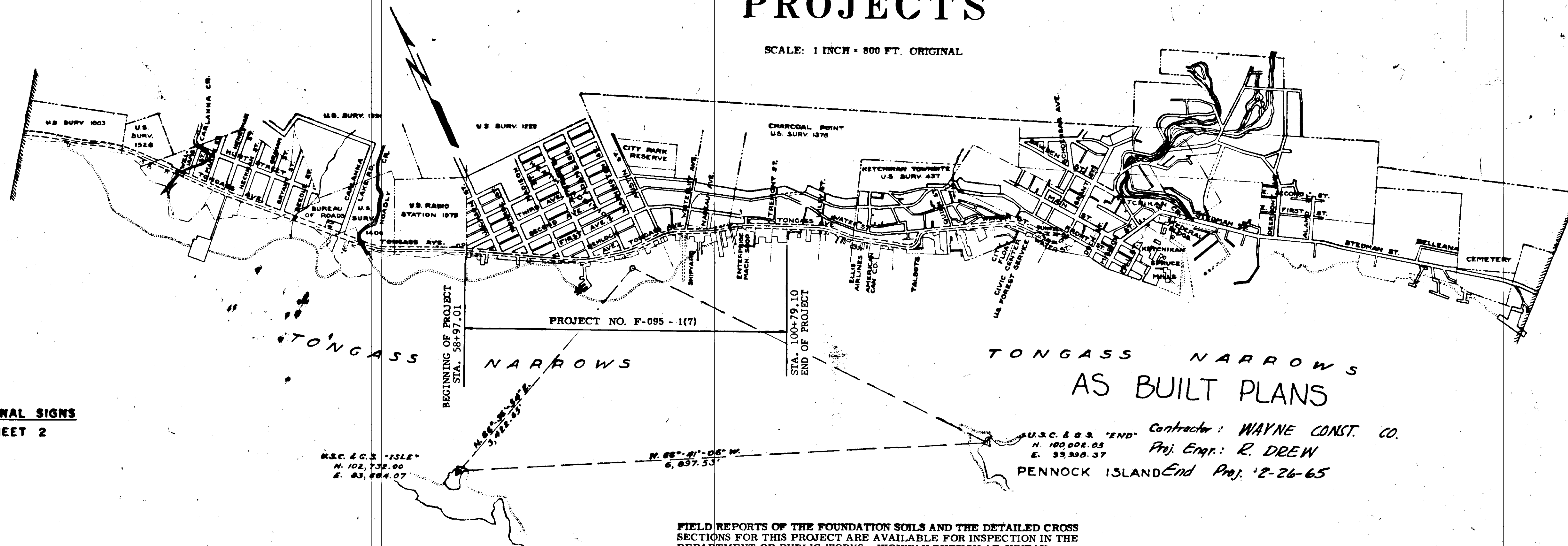


STATE OF ALASKA DEPARTMENT OF PUBLIC WORKS DIVISION OF HIGHWAYS

PLAN AND PROFILE PROPOSED HIGHWAY PROJECT NO F-095-1(7) TONGASS AVENUE KETCHIKAN, ALASKA GRADING AND PAVING

WITH RELATED CITY WATER AND SEWER PROJECTS

SCALE: 1 INCH = 800 FT. ORIGINAL



CONVENTIONAL SIGNS
SEE SHEET 2

FIELD REPORTS OF THE FOUNDATION SOILS AND THE DETAILED CROSS SECTIONS FOR THIS PROJECT ARE AVAILABLE FOR INSPECTION IN THE DEPARTMENT OF PUBLIC WORKS - HIGHWAY DIVISION AT JUNEAU, ALASKA.

PROJECT SUMMARY

44 FEET CURB TO CURB CONCRETE PAVEMENT
TWO 8'-0" CONCRETE SIDEWALKS

Grading & Paving

4182.09 Ft. 0.792 MI.

NOTE: REDUCED DRAWINGS (11"x18")
ARE APPROXIMATELY
ONE-HALF RECORDED
SCALE

As Built entered 7-31-68 by P. Ward

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	F-095-1(7)	1962	1	64

AB-19

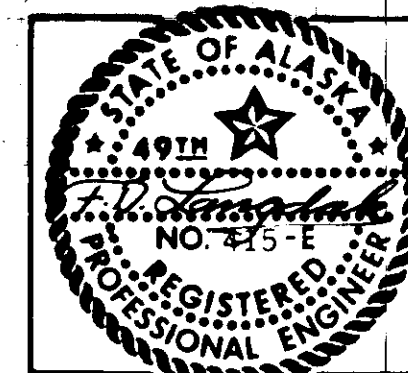
INDEX OF SHEETS
SEE SHEET 2

PREPARED BY
LANGDALE AND CONNELL
ENGINEERS
SEATTLE, WASHINGTON

REVISED BY DEPT. OF HIGHWAYS

DESIGN DESIGNATION
ADT (1959) = 4000 D = 65%
ADT (1980) = 6400 T = 6%
DHV (1980) = 832 V = 35 MPH

TYPE OF IMPROVEMENT
T201
GRADING AND PAVING



SUBMITTED
DATE JUNE 1960
LANGDALE AND CONNELL
1031 SECURITIES BLDG.
SEATTLE, WASH.
F.D. Langdale
F.D. LANGDALE

APPROVED
CITY MANAGER Robert E. Thompson 7/1/61
ADOPTED BY THE CITY COUNCIL
MAYOR R. D. Langdale 7-1-1961
CITY CLERK Linda McKay 2-1-1961

APPROVED
STATE OF ALASKA
DEPARTMENT OF HIGHWAYS
COMMISSIONER OF HIGHWAYS

APPROVED
REGIONAL ENGINEER
BUREAU OF PUBLIC ROADS
REGION TEN

INDEX OF SHEETS

SHT. NO.	DESCRIPTION	SHT. NO.	DESCRIPTION
1.	COVER SHEET	33.	DETAILS - CONCRETE CATCH BASINS AND DRAIN INLETS
2.	INDEX OF DRAWINGS ABBREVIATIONS AND SYMBOLS	34.	DETAILS - BOX INLETS
3.	ESTIMATE OF QUANTITIES SHT. 1 of 2	35.	DETAILS - C. M. P. CLEANOUT, GUTTER INLET, DRIVEWAYS, PAVEMENT JOINTS
4.	ESTIMATE OF QUANTITIES SHT. 2 of 2	36.	MISCELLANEOUS DETAILS
5.	TYPICAL CROSS-SECTIONS	37.	CROSS SECTIONS - CULVERTS
6.	GENERAL NOTES AND WORK ITEMS ON ALIGNMENT AND TOPOGRAPHY SHEETS NO. 7 THROUGH SHEET NO. 13.	38.	CROSS SECTIONS - CULVERTS
7.	ALIGNMENT AND TOPOGRAPHY STA. 58+97 TO STA. 65+00	39.	CROSS SECTIONS - CULVERTS
8.	ALIGNMENT AND TOPOGRAPHY STA. 65+00 TO STA. 70+50	40.	LIST OF CULVERTS AND MISCELLANEOUS WORK
9.	ALIGNMENT AND TOPOGRAPHY STA. 70+50 TO STA. 76+50	41.	LIST OF CULVERTS AND MISCELLANEOUS WORK
10.	ALIGNMENT AND TOPOGRAPHY STA. 76+50 TO STA. 82+75	42.	LIST OF CULVERTS AND MISCELLANEOUS WORK
11.	ALIGNMENT AND TOPOGRAPHY STA. 82+75 TO STA. 89+00	43.	LIST OF CULVERTS AND MISCELLANEOUS WORK
12.	ALIGNMENT AND TOPOGRAPHY STA. 89+00 TO STA. 95+25		
13.	ALIGNMENT AND TOPOGRAPHY STA. 95+25 TO STA. 100+79		
14.	ROADWAY CONSTRUCTION STA. 58+97 TO STA. 65+00		
15.	ROADWAY CONSTRUCTION STA. 65+00 TO STA. 70+50		
16.	ROADWAY CONSTRUCTION STA. 70+50 TO STA. 76+50		
17.	ROADWAY CONSTRUCTION STA. 76+50 TO STA. 82+75		
18.	ROADWAY CONSTRUCTION STA. 82+75 TO STA. 89+00		
19.	ROADWAY CONSTRUCTION STA. 89+00 TO STA. 95+25		
20.	ROADWAY CONSTRUCTION STA. 95+25 TO STA. 100+79		
21.	THIRD AVENUE INTERSECTION & TIMBER STAIR DETAILS		
22.	SECOND AVENUE INTERSECTION		
23.	MADISON STREET INTERSECTION		
24.	NADEAU STREET INTERSECTION		
25.	FIRST AVENUE INTERSECTION		
26.	SEA SIDE RETAINING WALLS STA. 59+00 TO STA. 73+92.78		
27.	SEA SIDE RETAINING WALLS STA. 79+52 TO STA. 87+15.90		
28.	SEA SIDE RETAINING WALLS STA. 88+38 TO STA. 100+77.77		
29.	LAND SIDE RETAINING WALLS STA. 60+50 TO STA. 100+79.10		
30.	SECOND AVENUE AND NADEAU STREET RETAINING WALLS		
31.	RETAINING WALL CROSS SECTIONS		
32.	DETAILS - CONCRETE STORM MANHOLES AND CULVERT INLET		

ABBREVIATIONS

G. I.	Gutter Inlet
B. I.	Box Inlet
C. B.	Catch Basin
C. M. P.	Corrugated Metal Pipe
C. M. P. A.	Corrugated Metal Pipe Arch
Culv.	Culvert
Perf.	Perforated
C. I.	Cast Iron
A. -C.	Asbestos-Cement
W. M.	Water Main
W. S.	Water Service
G. V.	Gate Valve
F. H.	Fire Hydrant
B. F.	Blind Flange
F. E.	Flange End
F. O.	Flanged Outlet
M. H.	Manhole
H. S.	House Sewer
C. O.	Clean Out
P. P.	Power or Utility Pole
G. P.	Guy Pole
Approx.	Approximate
Bikhd.	Bulkhead
Conc.	Concrete
Contr.	Contraction
C - C	Center to Center
Dwy. or Drwy.	Drive Way
El.	Elevation
Engr.	Engineer
Est.	Estimated
Excav.	Excavate or Excavation
Exist.	Existing
Exp.	Expansion
Fr.	Frame
Gar.	Garage
Inv.	Invert
Jt.	Joint
L. S.	Land Side
Min.	Minimum
Plk.	Plank
Pvmt.	Pavement
R.	Radius
Res.	Residence
S. S.	Sea-Side
S. W.	Sidewalk
Tmbr.	Timber

TYPICAL DESIGNATION OF SURVEY POINTS

H.	etc.	-	P. I. of Base Line Survey Tangents.
H _N	etc.	-	P. I. of Centerline Tangents Originally Established.
L ₁	etc.	-	P. I. of Revised Centerline Tangents.

CONVENTIONAL SIGNS

R/W	RIGHT-OF-WAY
•	EXISTING SURVEY POINT OR MONUMENT
•	INTERSECTION POINT, P. I.'s AND ETC.
---	U.S. SURVEY BOUNDARY AND MEANDER LINE.
---	LOT LINE.
---	FENCE
	EXISTING FILL AREAS ADJACENT TO R/W.
	TOE OF NEW FILL SLOPE
	EXISTING PLANKED DECK
○	EXISTING UTILITY POLE OR GUY POLE.
○	NEW CLEANOUT
○	NEW 42" I. D. DRAIN INLET
○	NEW 36" I. D. CATCH BASIN OR DRAIN INLET
■	NEW GUTTER INLETS AND BOX INLETS EXISTING INLETS, ETC.
---	EXISTING CULVERT - EXCEPT AS NOTED ON WATER AND SEWER SHEETS
---	NEW CULVERT.
▲	FIRE HYDRANT.
○	EXISTING GATE VALVE.
○	NEW GATE VALVE.
○	EXISTING CORPORATION STOP.
○	NEW 3/4" TO 1-1/2" ORISEAL VALVE
○	NEW 2" ORISEAL VALVE
△	CONCRETE BLOCKING (Figure indicates Sq. Ft. of bearing area)
○	EXISTING MANHOLE.
○	NEW STORM MANHOLE.
○	NEW SANITARY SEWER MANHOLE.
○	NEW UTILITY POLE - NUMBERED ON TONGASS AVE.
○	POLE ANCHOR
○	NEW GUY POLE

STATE OF ALASKA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYSPROJECT F-095-1 (7)
TONGASS AVENUE
KETCHIKAN, ALASKAINDEX OF SHEETS
ABBREVIATIONS
CONVENTIONAL SIGNSLANGDALE AND CONNELL
ENGINEERS
1981 SECURITIES BLDG.
SEATTLE 1, WASHINGTONDATE: NOV.
SHEET 2 OF 6

AS BUILT

ESTIMATE OF QUANTITIES

ITEM	QUANTITY	UNIT	DESCRIPTION
10	\$30,000	All Req'd.	EXTRA AND MISCELLANEOUS WORK AS AUTHORIZED IN ARTICLE 9.4
100(5)	— —	Lump Sum	CLEARING AND GRUBBING
102(1)	14,300	Cu. Yd.	UNCLASSIFIED EXCAVATION
102(5)	3,000	Cu. Yd.	BORROW EXCAVATION - CASE 2
103(1)	2800	Cu. Yd.	EXCAVATION FOR STRUCTURES
103(3)	200	Cu. Yd.	FOUNDATION FILL
105(2)	100	Yd. Mi.	OVERHAUL (2000 Feet Freehaul Distance)
200(4)	8,040	Ton	CRUSHED AGGREGATE BASE - GRADING D-1
330(2)	22,200	Sq. Yd.	PLAIN PORTLAND CEMENT CONCRETE PAVEMENT
406(2)	664	Cu. Yd.	CLASS AA CONCRETE
406(8)	382	Lin. Ft.	DRILLED HOLE IN SOLID ROCK
407(1)	64,600	Pound	REINFORCEMENT STEEL
453(5A)	4,230	Lin. Ft.	8 INCH ASBESTOS-BONDED C.M.P. WITH PAVED INVERT
453(5C)	266	Lin. Ft.	12 INCH ASBESTOS-BONDED C.M.P. WITH PAVED INVERT
453(5E)	23	Lin. Ft.	18 INCH ASBESTOS-BONDED C.M.P. WITH PAVED INVERT
453(5G)	20	Lin. Ft.	24 INCH ASBESTOS-BONDED C.M.P. WITH PAVED INVERT
454(5B)	316	Lin. Ft.	22x13 INCH ASBESTOS-BONDED C.M.P.A. WITH PAVED INVERT
454(5D)	613	Lin. Ft.	29x18 INCH ASBESTOS-BONDED C.M.P.A. WITH PAVED INVERT
454(5E)	161	Lin. Ft.	36x22 INCH ASBESTOS-BONDED C.M.P.A. WITH PAVED INVERT
454(5G)	72	Lin. Ft.	50x31 INCH ASBESTOS-BONDED C.M.P.A. WITH PAVED INVERT
457(1)	15,910	Sq. Yd.	REMOVE AND DISPOSE - EXISTING CONCRETE PAVEMENT, CURB, GUTTER AND SIDEWALK
458(1)	1,187	Lin. Ft.	REMOVE AND DISPOSE - EXISTING PIPE AND CULVERT
459(1)	16	Each	REMOVE AND DISPOSE - EXISTING CATCH BASIN OR BOX INLET
520(9A)	1,496	Lin. Ft.	8 INCH ASBESTOS-BONDED PERFORATED C.M.P. UNDERDRAIN
521(1A)	1	Each	CONCRETE STORM MANHOLE STA. 75+17.5

ITEM	QUANTITY	UNIT	DESCRIPTION
521(1B)	1	Each	CONCRETE STORM MANHOLE STA. 87+95.5
521(2A)	114	Each	BOX INLET - CONCRETE TYPE I
521(2B)	12	Each	BOX INLET - CONCRETE TYPE II
521(2C)	6	Each	42 INCH I.D. DRAIN INLET - CONCRETE
521(2D)	1	Each	CULVERT INLET - CONCRETE
521(2E)	17	Each	INLET - SIDE OUTLET - OLYMPIC FOUNDRY NO. 5231 - OR EQUAL
521(3A)	12	Each	36 INCH I.D. CATCH BASIN OR DRAIN INLET - CONCRETE
521(5A)	131	Pair	METAL FRAME AND GRATING - OLYMPIC FOUNDRY NO. 5435 - OR EQUAL
521(5B)	1	Pair	METAL FRAME AND GRATING - OLYMPIC FOUNDRY NO. 5760 - OR EQUAL
521(6A)	13	Pair	METAL FRAME AND COVER - OLYMPIC FOUNDRY NO. 5911 - OR EQUAL
521(6B)	2	Pair	METAL FRAME AND COVER - OLYMPIC FOUNDRY NO. 5920 - OR EQUAL
521(6C)	9	Pair	METAL FRAME AND COVER - OLYMPIC FOUNDRY NO. 5831 - OR EQUAL
521(7)	2	Each	ADJUSTING MANHOLES
521(10)	9	Each	18 INCH DIAM. CLEANOUT - CORRUGATED METAL - ASBESTOS-BONDED
521(11)	4	Each	RELOCATE GUTTER INLET
521(12A)	4	Each	REMOVE AND SALVAGE - METAL FRAME AND COVER
521(12B)	2	Each	REMOVE AND SALVAGE - METAL FRAMES, GRATES AND INLETS
521(13)	29	Lin. Ft.	6 INCH CONCRETE SEWER PIPE
524(1)	326	Lin. Ft.	CONCRETE CURB - 1'-6" DEPTH
524(3)	26	Lin. Ft.	CONCRETE CURB AND GUTTER - 6" DEPTH
525(1)	8,400	Lin. Ft.	INTEGRAL CONCRETE CURB
530(1)	6,143	Sq. Yd.	CONCRETE SIDEWALK
530(2)	827	Sq. Yd.	6 INCH CONCRETE DRIVEWAY
560(5)	17	Each	BRASS CAP MONUMENTS
561(1)	17	Each	MONUMENT CASES
563(1)	320	Lin. Ft.	STANDARD CHAIN LINK FENCE

SUMMARY

ITEM NOS.	457(1)	102(1)	105(2)	100(5)
Sheet No.	Exist. Conc. Pavement Cu. Yds.	Exca. Cu. Yds.	Waste Cu. Yds.	Overhaul (2000 Ft. F. H.) Yd. Mi.
1	358	1218	3507	
2	338	638	1322	
3	311	2020	70	
4	332	1285	--	
5	400	1090	10	
6	357	1400	570	
7	293	1170	--	
Totals	2389	8821	5479	100
GRAND TOTAL		14300	100	Lump Sum

STATE OF ALASKA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS
PROJECT F-095-1(7)
TONGASS AVENUE
KETCHIKAN, ALASKA

ESTIMATE OF QUANTITIES
SHEET 1 OF 2

LANGDALE AND CONNELL
ENGINEERS
1001 SECURITY BLDG.
SEATTLE 1, WASHINGTON

DATE: NOV. 1962
SHEET 3 OF 64

J-9

ESTIMATE OF QUANTITIES

STATE	PROJECT DESIGNATION	YEAR	SHEET No.	TOTAL SHEETS
ALASKA	F-095-1(7)	1962	4	64

WATER

ALT. 'A' ITEM	ALT. 'B' ITEM	QUANTITY	UNIT	DESCRIPTION ALT. 'A' - STEEL PIPE ALT. 'B' - CAST IRON PIPE
1W	1W	2090	C. Y.	UNCLASSIFIED EXCAVATION - INCLUDING BACKFILL
2W	2W	50	Ea.	2 INCH ORISEAL VALVE
3W	3W	35	Ea.	3/4 INCH ORISEAL VALVE
4W	4W	17	Ea.	1 INCH ORISEAL VALVE
5W	5W	1	Ea.	1-1/4 INCH ORISEAL VALVE
6W	6W	11	Ea.	1-1/2 INCH ORISEAL VALVE
7W	7W	1128	L. F.	3/4 INCH TYPE 'K' SOFT COPPER TUBING
8W	8W	573	L. F.	1 INCH TYPE 'K' SOFT COPPER TUBING
9W	9W	28	L. F.	1-1/4 INCH TYPE 'K' SOFT COPPER TUBING
10W	10W	323	L. F.	1-1/2 INCH TYPE 'K' SOFT COPPER TUBING
11W	11W	1650	L. F.	2 INCH TYPE 'K' SOFT COPPER TUBING
12W	12W	6	Ea.	3/4 INCH CAP
13W	13W	3	Ea.	1-1/2 INCH CAP
14W	14W	17	Ea.	2 INCH CAP
15W	15W	1	Ea.	2 INCH PLUG
16W	16W	49	Ea.	C. I. SERVICE BOX NO. B-33
17W	17W	61	Ea.	C. I. SERVICE BOX NO. B-33 WITH NO. 715 BASE
18W	18W	37	Ea.	C. I. VALVE BOX B-56
19W	19W	10	Ea.	WOOD SERVICE BOX
20W	20W	4	Ea.	WOOD VALVE BOX
21W	21W	202	L. F.	RELAY EXISTING COPPER TUBING
22W	22W	240	L. F.	RELAY EXISTING CAST IRON PIPE
23W	23W	150	L. F.	INSULATION FOR COPPER TUBING
24W	24W	4	Ea.	ANCHOR ASSEMBLY FOR COPPER TUBING
25W	49W	4155	L. F.	10 INCH PIPE
26W	50W	206	L. F.	8 INCH PIPE
27W	51W	804	L. F.	6 INCH PIPE
28W	52W	115	L. F.	4 INCH PIPE
29W	53W	28	L. F.	3 INCH PIPE
30W	54W	5	Ea.	10 x 10 x 8 INCH TEE
31W	55W	21	Ea.	10 x 10 x 6 INCH TEE
32W	56W	3	Ea.	10 x 10 x 4 INCH TEE
33W	57W	1	Ea.	10 x 10 x 3 INCH TEE
34W	58W	3	Ea.	8 x 6 x 6 INCH TEE
35W	59W	1	Ea.	10 INCH 11-1/4° BEND
36W	60W	6	Ea.	8 INCH BEND - 45° MAXIMUM
37 W	61W	7	Ea.	6 INCH BEND - 45° MAXIMUM
38W	62W	1	Ea.	8 INCH HUB ADAPTER
39W	63W	3	Ea.	8 INCH BLIND FLANGE
40W	64W	9	Ea.	6 INCH BLIND FLANGE
41W	65W	2	Ea.	4 INCH BLIND FLANGE
42W	66W	7	Ea.	10 INCH GATE VALVE
43W	67W	4	Ea.	8 INCH GATE VALVE
44W	68W	24	Ea.	6 INCH GATE VALVE
45W	69W	3	Ea.	4 INCH GATE VALVE
46W	70W	1	Ea.	3 INCH GATE VALVE
	71W	1	Ea.	SERVICE CLAMP FOR 6" PIPE - 2" TAP
	72W	49	Ea.	SERVICE CLAMP FOR 10" PIPE - 2" TAP
47W	73W	11	Ea.	FIRE HYDRANT
48W	74W	1	L. S.	CONCRETE VALVE CHAMBER, COMPLETE

SEWER

ALT. A		ALT. B		ALT. C		UNIT	DESCRIPTION
ITEM	QUANTITY	ITEM	QUANTITY	ITEM	QUANTITY		ALT. 'A' - ASBESTOS BONDED C. M. P. WITH PAVED INVERT ALT. 'B' - ASBESTOS-CEMENT PIPE ALT. 'C' - CONCRETE PIPE
1	4560	22	4600	50	4600	C. Y.	UNCLASSIFIED EXCAVATION - INCLUDING BACKFILL
		23	3760	51	3760	L. F.	6 INCH PIPE FOR HOUSE SEWERS *
		24	20	52	20	L. F.	6 INCH CAST IRON PIPE FOR HOUSE SEWERS
2	6611	25	2831	53	2831	L. F.	8 INCH PIPE
3	1018	26	1018	54	1018	L. F.	10 INCH PIPE
4	924	27	924	55	924	L. F.	12 INCH PIPE
		28	340			L. F.	14 INCH PIPE
5	340			56	340	L. F.	15 INCH PIPE
6	194	29	194	57	194	L. F.	12 INCH C. M. P. FOR OUTFALL
7	431	30	431	58	431	L. F.	18 INCH C. M. P. FOR OUTFALL
		31	1	59	1	Ea.	6 x 6 x 6 INCH WYE
		32	14	60	14	Ea.	6 x 6 x 6 INCH TEE
		33	173	61	173	Ea.	6 INCH BEND - 45° MAXIMUM
		34	77	62	77	Ea.	6 INCH CAP OR PLUG **
8	80	35	2	63	2	Ea.	8 x 8 x 8 INCH TEE
9	12					Ea.	8 x 8 x 8 INCH WYE
10	180	36	7	64	7	Ea.	8 INCH BEND - 45° MAXIMUM
11	117	37	2	65	2	Ea.	8 INCH PLUG OR CAP
		38	64	66	64	Ea.	8 x 8 x 6 INCH TEE
		39	11	67	11	Ea.	8 x 8 x 6 INCH WYE
12	33					Ea.	10 x 10 x 8 INCH TEE
		40	33	68	33	Ea.	10 x 10 x 6 INCH TEE
13	25					Ea.	12 x 12 x 8 INCH TEE
		41	25	69	25	Ea.	12 x 12 x 6 INCH TEE
14	9					Ea.	15 x 15 x 8 INCH TEE
				70	9	Ea.	15 x 15 x 6 INCH TEE
		42	9			Ea.	14 x 14 x 6 INCH TEE
15	2	43	2	71	2	Ea.	TYPE I CLEANOUT
16	3	44	3	72	3	Ea.	TYPE II CLEANOUT
17	21	45	21	73	21	L. S.	CONCRETE MANHOLES
18	301	46	301	74	301	L. F.	RELAY EXISTING CONCRETE PIPE
19	408	47	408	75	408	L. F.	RELAY EXISTING A. -C. PIPE
20	17	48	17	76	17	Ea.	METAL FRAME & COVER, OLY. FDRY. NO. 5921
21	4	49	4	77	4	Ea.	ANCHOR ASSEMBLY FOR SEWER PIPE

* CAST IRON BELL END PIPE NECESSARY TO EXTEND HOUSE SEWERS THRU CONCRETE WALLS IS INCLUDED. APPROX. 38 PIECES 3 FT. LONG REQUIRED.

** C. I. PLUGS REQUIRED WITH ABOVE C. I. PIPE NOT INCLUDED. APPROXIMATELY 38 PLUGS REQUIRED.

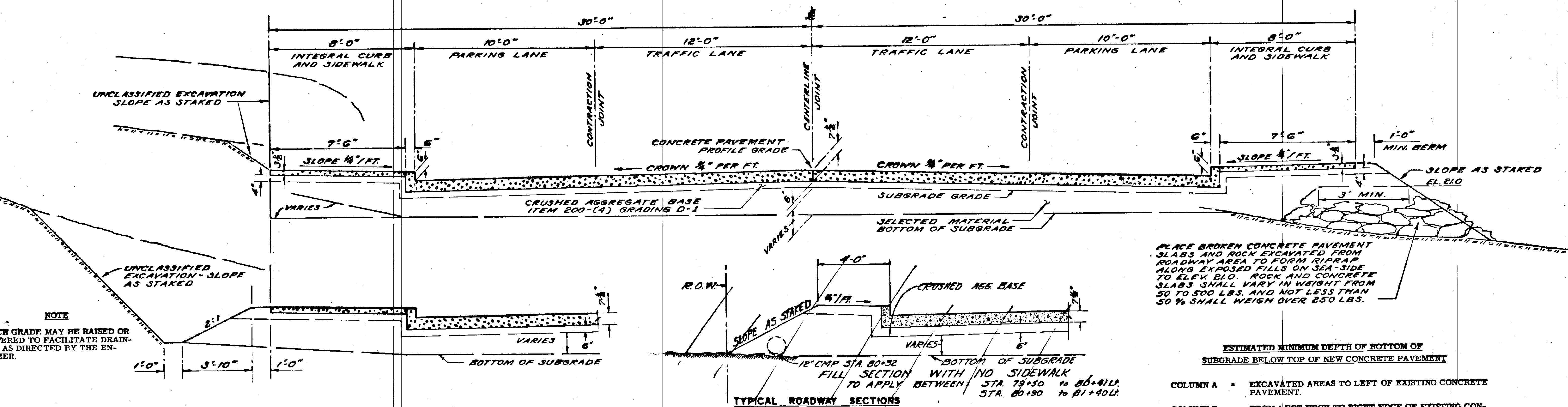
STATE OF ALASKA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS
PROJECT F-095-1(7)
TONGASS AVENUE
KETCHIKAN, ALASKA

ESTIMATE OF QUANTITIES
SHEET 2 OF 2

LANGDALE AND CONNELL
ENGINEERS
1601 SECURITY BLDG.
SEATTLE 1, WASHINGTON

DATE: NOV. 1962
SHEET 4 OF 64

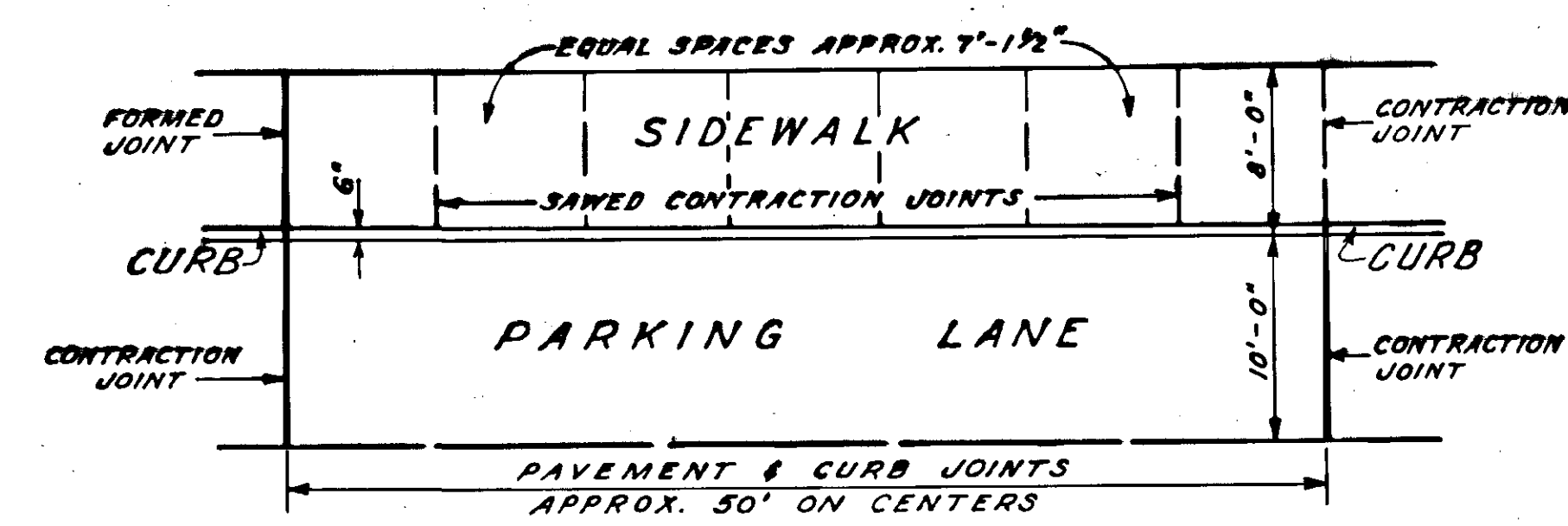
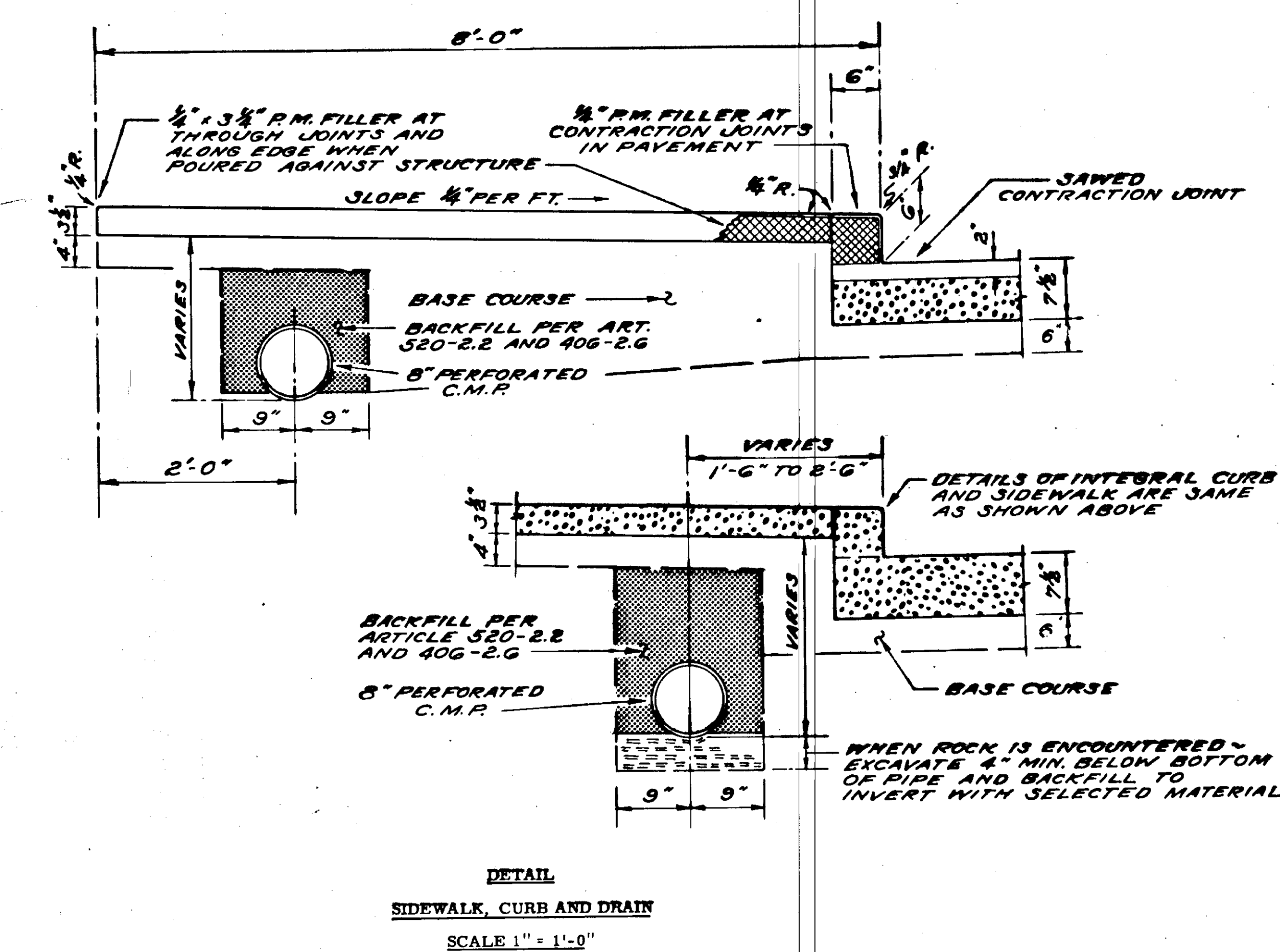
AS BUILT



ESTIMATED MINIMUM DEPTH OF BOTTOM OF SUBGRADE BELOW TOP OF NEW CONCRETE PAVEMENT

- COLUMN A - EXCAVATED AREAS TO LEFT OF EXISTING CONCRETE PAVEMENT.
- COLUMN B - FROM LEFT EDGE TO RIGHT EDGE OF EXISTING CONCRETE PAVEMENT.
- COLUMN C - EXCAVATED AREAS TO RIGHT OF EXISTING CONCRETE PAVEMENT.

FROM APPROX. STATION	TO APPROX. STATION	ESTIMATED DEPTH IN INCHES		
		COL. A	COL. B	COL. C
58+87	60+50	24	18 15	24
60+50	68+00	22 15	18 15	24
68+00	71+00	24	18 15	24
71+00	71+50	22 15	18 15	24 15
71+50	73+00	24	18 15	24 15
73+00	75+50	24	18 15	18
75+50	76+00	18	18	18
76+00	79+50	18 15	18 15	18
79+50	85+65	18 15	18 15	18 15
85+65	86+25	24	24	24
86+25	87+00	18 15	18	18
87+00	88+00	18 15	18	-
88+00	90+10	24	18 15	-
90+10	91+00	18 15	18 15	-
91+00	96+75	24	18 15	-
96+75	100+79	18 15	18 15	-



NOTES

1. LOCATE 1/4" x 3-1/4" PREMOLDED FILLER THROUGH THE SIDEWALK AT ALTERNATE PAVEMENT AND MATCHING CURB JOINTS AND AS SHOWN IN THE VARIOUS DETAIL SHEETS. SINCE PAVEMENT AND CURB JOINTS ARE SPACED APPROX. 50' ON CENTERS, THE SPACING BETWEEN FORMED SIDEWALK JOINTS WILL THEN BE APPROX. 100'. THIS LENGTH SHALL BE DIVIDED INTO EQUAL SPACES BY SAWED OR FORMED CONTRACTION JOINTS. DEEP. ALL JOINTS SHALL BE SEALED WITH JOINT SEALING MATERIAL.
2. DETAILS OF OTHER SIDEWALKS LESS THAN 7'-6" IN WIDTH ARE THE SAME AS SHOWN ABOVE.
3. ALL SIDEWALKS AND CURBS SHALL BE CLASS "AA" CONCRETE.

STATE OF ALASKA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

PROJECT F-095-1(7)
TONGASS AVENUE
KETCHIKAN, ALASKA

TYPICAL
CROSS-SECTIONS

LANGDALE AND CONNELL
 ENGINEERS
 1001 SECOND AVENUE
 SEATTLE 1, WASHINGTON

DATE: NOV. 1962
 SHEET 5 OF 64

STATE	PROJECT DESIGNATION	YEAR	SHEET No.	TOTAL SHEETS
ALASKA	F-095-1(7)	1962	6	64

AS BUILT

STA.	DESCRIPTION	C. Y.	L. F.	Remove & Dispose Pipe & Culverts	Remove & Dispose Catch Basin or Box Inlet	Adjusting Manholes	Relocate Existing C. I. Gutter Inlet	Remove & Salvage Metal Frames & Covers	Remove & Salvage Metal Frames, Grates & Inlets
58+99	Remove and dispose 15' x 22" C. M. P. A. culvert.		15						
59+01.5	Raise existing C. I. M. H. frame and cover approximately 3".					1			
59+03	Remove & dispose 84' x 22" C. M. P.		84						
59+87	Remove and dispose existing concrete and wood box inlet.				1				
60+32	Remove and dispose 53' x 22" C. M. P. culvert.		53						
62+48	Remove and dispose 53' x 22" tile and wood box culvert in R/W.		53						
63+17	Remove and dispose 53' x 22" tile and 12" wood pipe culvert in R/W and wood box catch basin.		53		1				
63+35.5	Remove and dispose 34' x 22" existing wood flume, 8" wood pipe culvert and two wood box catch basins.		34		2				
63+71	Remove existing M. H. to two feet minimum below subgrade grade and fill with suitable compacted material.	1.8							
63+40	Remove and dispose 30' x 22" C. M. P. culvert (Actual length unknown).		30						
64+27	SECOND AVE. (0+00 - Intersection of 2nd Ave. Centerline with Tongass Ave. Survey Line.)								
0+35	Relocate existing concrete mail box post (Item 10).								
0+58	Remove and dispose 14' x 22" C. M. P. culvert.		14						
0+72	Remove and dispose 20' x 22" C. M. P. culvert		20						
1+33	Remove and dispose 48' x 22" tile culvert.								
1+53	Remove and dispose existing concrete box inlet. Salvage C. I. grate.								
65+43.5	Remove and dispose existing wood box inlet and 14' x 22" wood stove pipe drain in R/W.		14		1				1
67+35	Remove and dispose 54' x 22" existing 15" C.M.P. culvert.		54						
69+22	Remove and dispose 65' x 22" existing 12" tile and wood box culvert.		65						
70+84	Remove and dispose 48' x 22" tile culvert.		48						
71+05	Remove and dispose existing concrete box inlet. Salvage C. I. grate.				1				
71+43	Remove and dispose existing concrete box inlet. Salvage C. I. grate.				1				
71+06	Remove and dispose 34' x 22" concrete drain and plug connection to existing 12" concrete storm line.		34						
71+40	Lower existing C. I. frame and M. H. cover approximately 2".					1			
71+70	Remove and salvage existing C. I. gutter inlet.								1
72+05	Remove and dispose 48' x 22" wood stove pipe culvert.		46						
72+10	Remove and dispose 55' x 22" tile and C. M. P. culvert and wood box catch basin.		55		1				
73+00	Remove concrete walls of existing valve chamber to two feet minimum below subgrade grade and fill with suitable compacted material.	1.5							
73+08	Remove and dispose 17' x 22" C. M. P. drain and wood box inlet.		17		1				
75+01	Remove and dispose 23' x 4" log culvert and 31' x 22" C. M. P. culvert.		84						
75+21	Cut, remove and dispose 10' x 22" C. M. P. culvert to permit construction of new M. H.								
77+77	Cut, remove and dispose 59' x 22" C. M. P. culvert in R/W.		59						
79+80	Remove and dispose 33' x 22" C. M. P. culvert, and wood box catch basin.		33		1				
80+41	Remove and dispose 32' x 22" C. M. P. culvert.		32						
81+15	Remove and dispose existing wood box catch basin and 38' x 22" tile culvert.		36		1				
81+47.5	Remove and dispose existing wood box catch basin <i>connecting to</i>				1				
82+82	Remove and dispose existing wood box catch basin and 24' x 22" C. M. P. in R/W.		24		1				
84+43	Relocate existing C. I. gutter inlet (Austin St.)						1		
84+82	Remove and dispose 147' x 22" tile sewer and wood box inlet to permit installation of new culvert. Existing 8" A. - C. sewer will be extended to new manhole on Tongass Ave. under city sewer project.		147		1				
86+05	Remove and salvage existing C. I. M. H. frame and cover for re-use in sewer project. Manhole to be removed in sewer project.							1	
87+77.5	Relocate existing C. I. gutter inlet to Sta. 87+72.5.						1		
87+78.5	Remove and dispose existing concrete box inlet. Salvage C. I. grate. (Whitecliff St.)				1				
87+82	Remove and dispose existing concrete box inlet. Salvage C. I. grate. (Whitecliff St.)				1				
87+95	Cut, remove and dispose 20' x 22" C. M. P. A. and 38' x 22" tile culvert in R/W to permit construction of new M. H. and installation of new culvert.		58						
89+25	STA. 89+00 TO STA. 89+25								
89+72	Relocate existing C. I. gutter inlet to Sta. 91+08.						1		
90+76.5	Remove and salvage existing C. I. M. H. frame and cover for re-use in sewer project. Remove existing brick M. H. to two feet minimum below subgrade grade and fill with suitable compacted material.	1.9						1	
92+05	Relocate existing C. I. gutter inlet to Sta. 91+55						1		
92+81.3	Remove and salvage existing C. I. M. H. frame and cover for re-use in sewer project. Remove concrete M. H. to two feet minimum below subgrade grade and fill with suitable compacted material.	4.3						1	
95+44.5	Remove and salvage existing C. I. M. H. frame and cover for re-use in sewer project. Remove concrete M. H. to two feet minimum below subgrade grade and fill with suitable compacted material.	4.5							1
98+58	Remove and dispose 45' x 22" C. M. P. culvert. (Actual length unknown).	14.0	1187		45				
	TOTAL	14.0	1187		18		2	4	2

GENERAL NOTES

When not encountered during new construction or Roadway excavation, existing sewer, culvert and drain pipe is to be abandoned in place unless otherwise designated in the tabulation.

WORK TO BE PERFORMED BY OTHERS

Clear Right-of-Way of all encroaching permanent buildings to the existing floor level. Small frame structures, walls, posts, signs, etc., remaining shall be removed by the Contractor under Item 100 (5) - CLEARING AND GRUBBING.

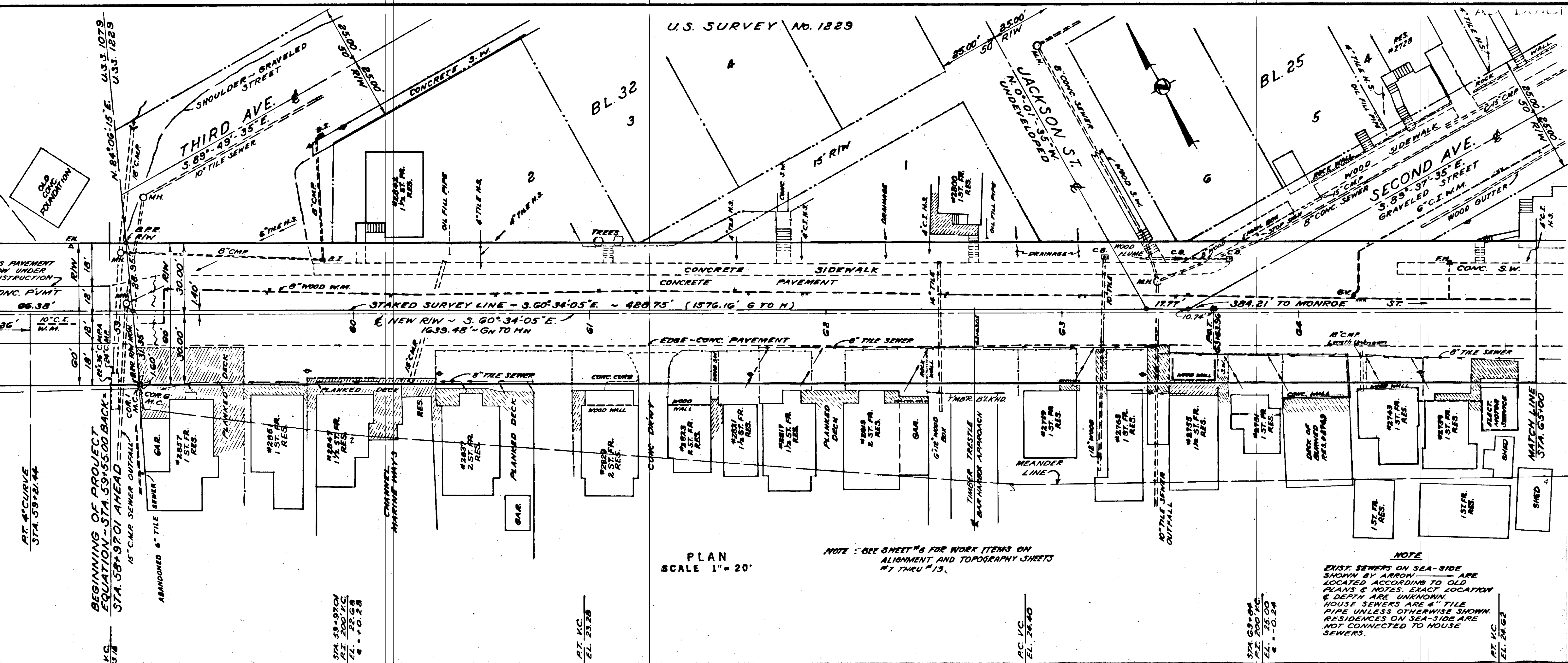
Install new Utility poles, relocate certain existing Utility poles, install new guy poles, and transfer all transmission, distribution and communication lines, together with all other electrical appurtenances.

STATE OF ALASKA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS
PROJECT F-095-1(7)
TONGASS AVENUE
KETCHIKAN, ALASKA

GENERAL NOTES AND WORK ITEMS
ON ALIGNMENT AND TOPOGRAPHY
SHEET NO. 7 THROUGH SHEET NO. 13

LANGDALE AND CONNELL
ENGINEERS
1081 SECURITY BLDG.
SEATTLE 1, WASHINGTON

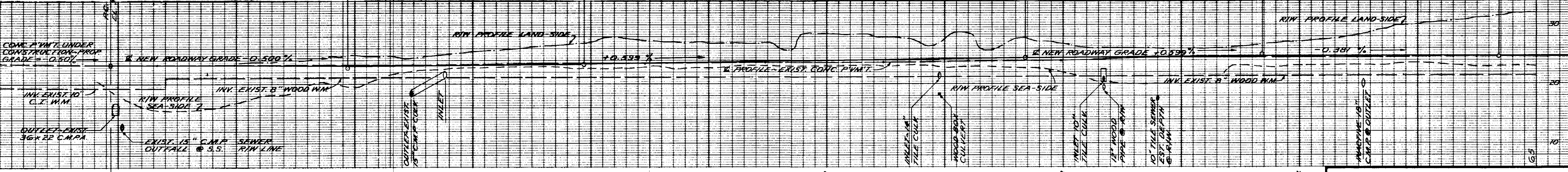
DATE: NOV. 1960
SHEET 6 OF 64



PLAN
SCALE 1" = 20'

NOTE: SEE SHEET #6 FOR WORK ITEMS ON ALIGNMENT AND TOPOGRAPHY SHEETS #7 THRU #13.

NOTE
EXIST. SEWERS ON SEA-SIDE SHOWN BY ARROW ARE LOCATED ACCORDING TO OLD PLANS & NOTES. EXACT LOCATION & DEPTH ARE UNKNOWN. HOUSE SEWERS ARE 4" TILE PIPE UNLESS OTHERWISE SHOWN. RESIDENCES ON SEA-SIDE ARE NOT CONNECTED TO HOUSE SEWERS.



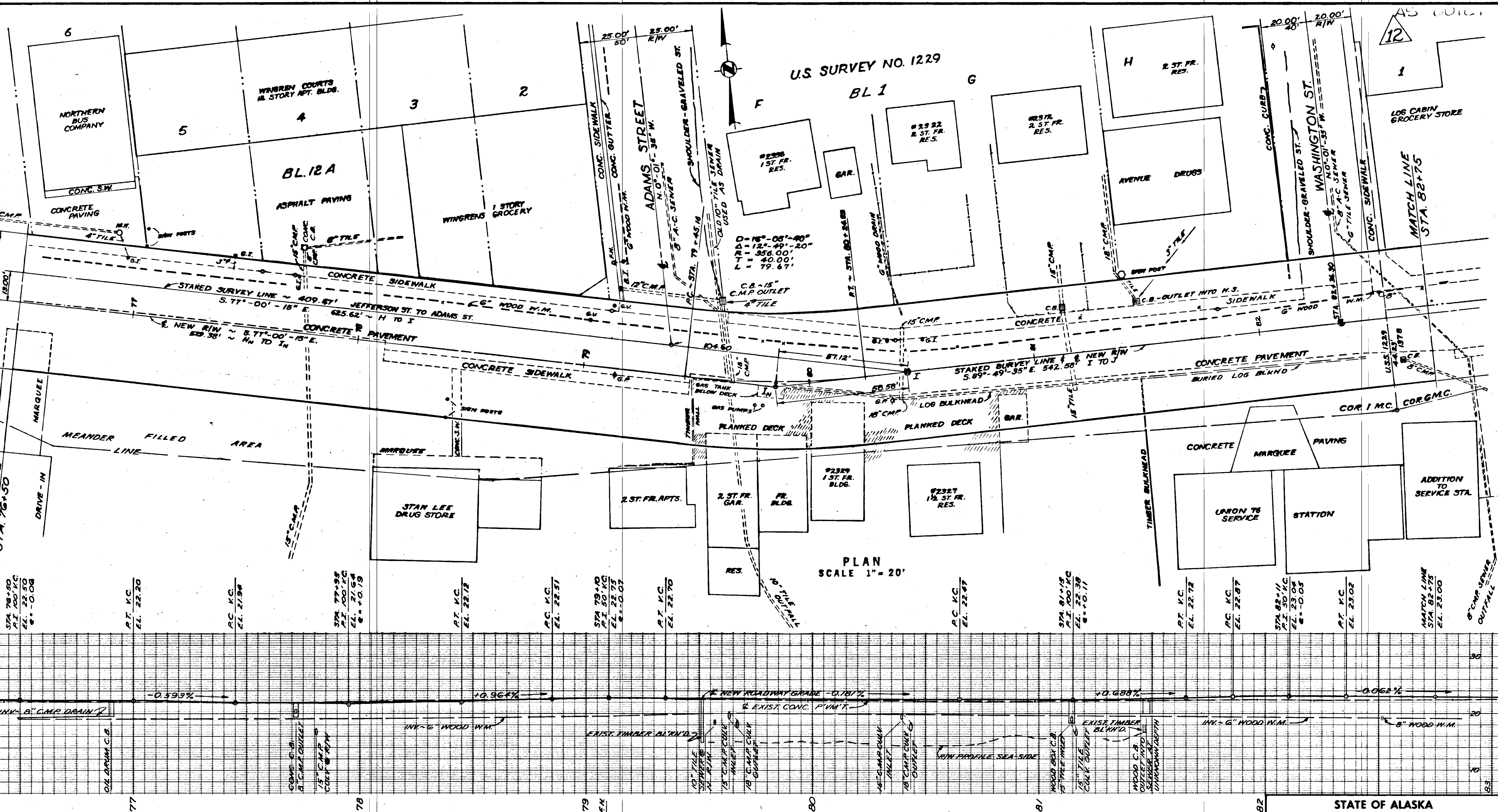
ELEV. 0.00
U.S.C. & G.S. M.L.L.W. DATUM
CITY
PROFILE
SCALE 1" = 20' HORIZ. 1" = 8' VERT.

STATE OF ALASKA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS
PROJECT F-095-1(7)
TONGASS AVENUE
KETCHIKAN, ALASKA
ALIGNMENT & TOPOGRAPHY
STA. 58+97 TO STA. 65+00

THE ALIGNMENT AND GRADE AS SHOWN HEREON ARE SUBJECT TO ADJUSTMENT.

LANGDALE AND CONNELL
ENGINEERS
1031 SECURITIES BLDG.
SEATTLE 1, WASHINGTON

DATE: JUNE, 1960
SHEET 7 OF 64



NOTE - EXISTING SEWERS
EXISTING HOUSE SEWERS FROM RESIDENCES #2336, 2322 & 2312 ARE BELIEVED TO OUTFALL ON TIDE LAND. SIZE & LOCATION ARE UNKNOWN. NO HOUSE SEWERS ARE KNOWN TO EXIST ON SEA-SIDE.

B.M. T.V.
SOUTH HEAD BOLTON F.H.
AT ADAMS ST.
EL. 25.470

PROFILE
SCALE 1" = 20' HORIZ. 1" = 8' VERT.

B.M. T.H.
SPRINKLE IN P.P.
EL. 25.560

THE ALIGNMENT AND GRADE AS SHOWN HEREON ARE SUBJECT TO ADJUSTMENT.

STATE OF ALASKA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

PROJECT F-095-1(7)
TONGASS AVENUE
KETCHIKAN, ALASKA

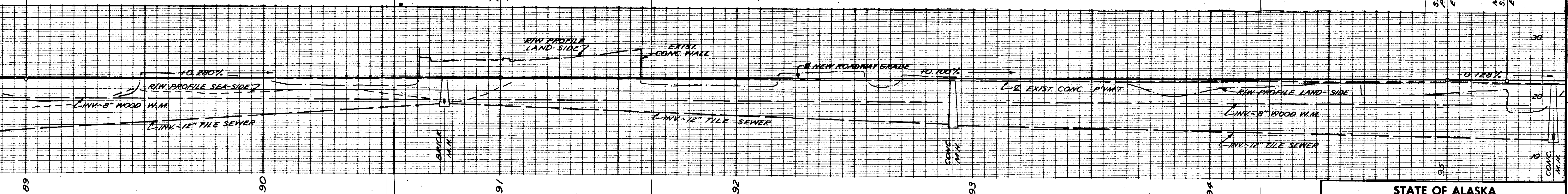
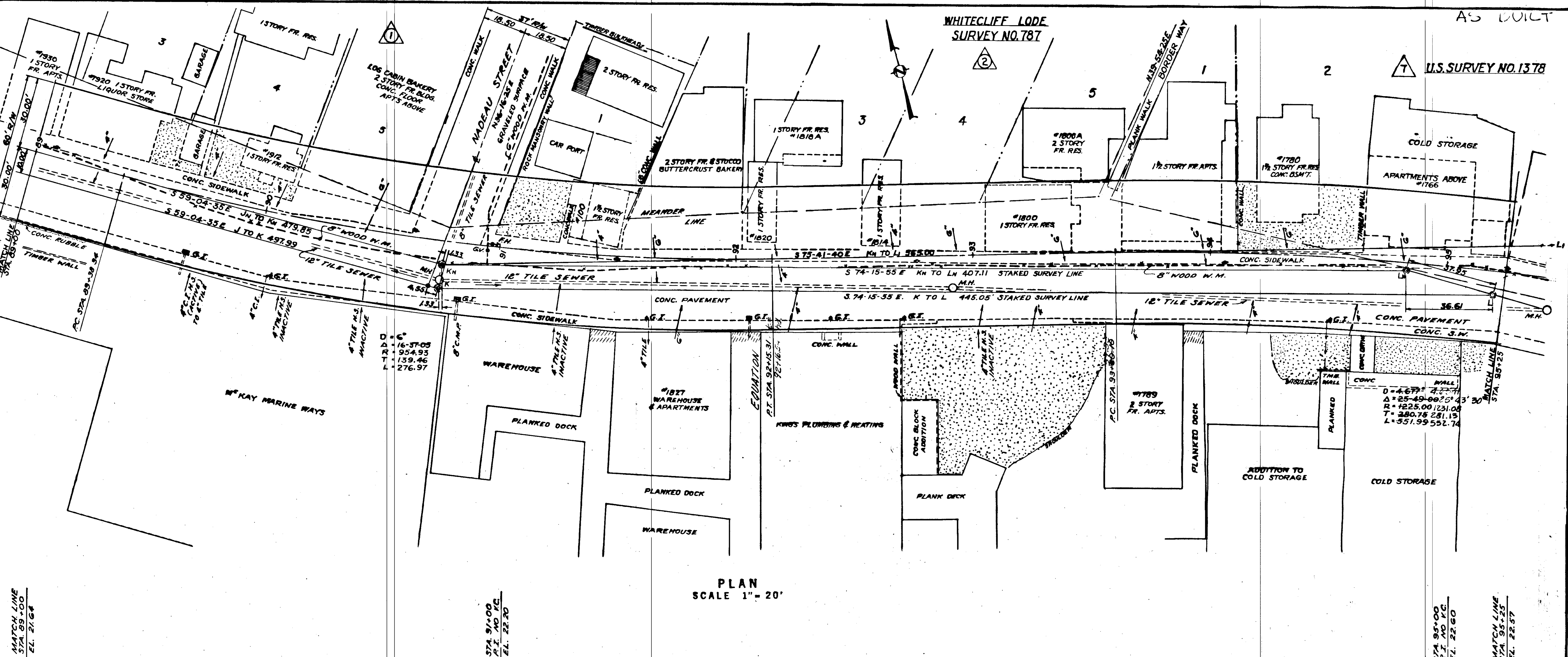
ALIGNMENT & TOPOGRAPHY
STA. 76+50 TO STA. 82+75

LANGDALE AND CONNELL
ENGINEERS
1031 SECURITIES BLDG.
SEATTLE 1, WASHINGTON

DATE: JUNE, 1960
SHEET 10 OF 64



THE ALIGNMENT AND GRADE
AS SHOWN HEREON ARE
SUBJECT TO ADJUSTMENT.



NOTE - EXISTING HOUSE SEWERS
SEE NOTE, SHEET 11.

B.M. T.D.
SPIKE IN P.A.
EL. 24.70

STATE OF ALASKA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS
PROJECT F-095-1(7)
TONGASS AVENUE
KETCHIKAN, ALASKA

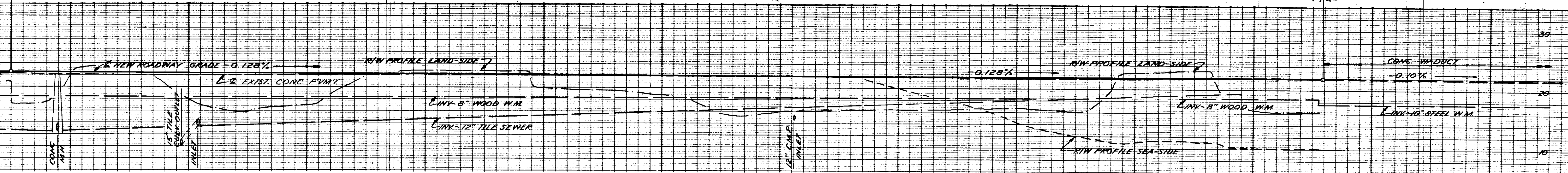
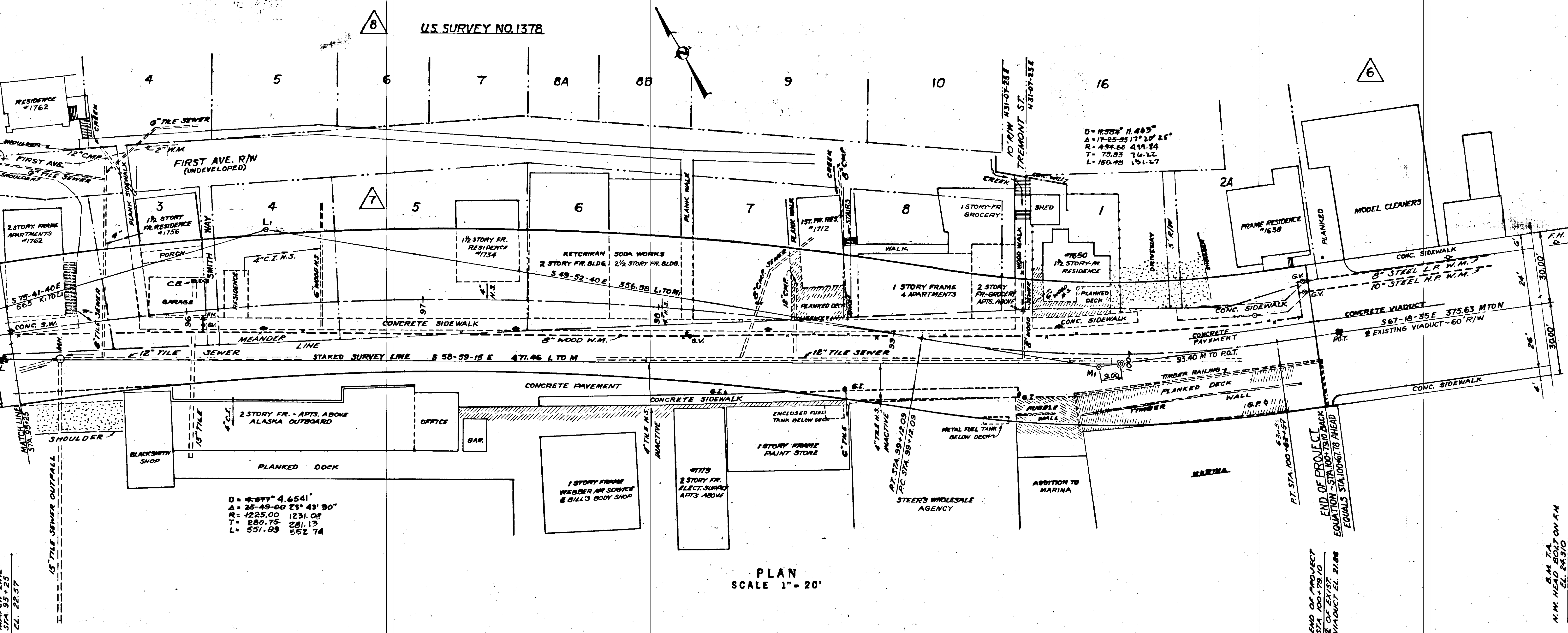
ALIGNMENT & TOPOGRAPHY
STA. 89+00 TO STA. 95+25

THE ALIGNMENT AND GRADE
AS SHOWN HEREON ARE
SUBJECT TO ADJUSTMENT.

LANGDALE AND CONNELL
ENGINEERS
1031 SECURITIES BLDG.
SEATTLE 1, WASHINGTON

DATE: JUNE, 1960
SHEET 12 OF 64

AS BUILT



NOTE - EXISTING HOUSE SEWERS
SEE NOTE, SHEET 11.

PROFILE
SCALE 1" = 20' HORIZ. 1" = 8' VERT.

B.M. T.B.
SPIKE IN P.P.
EL. 23.880

THE ALIGNMENT AND GRADE
AS SHOWN HEREON ARE
SUBJECT TO ADJUSTMENT.

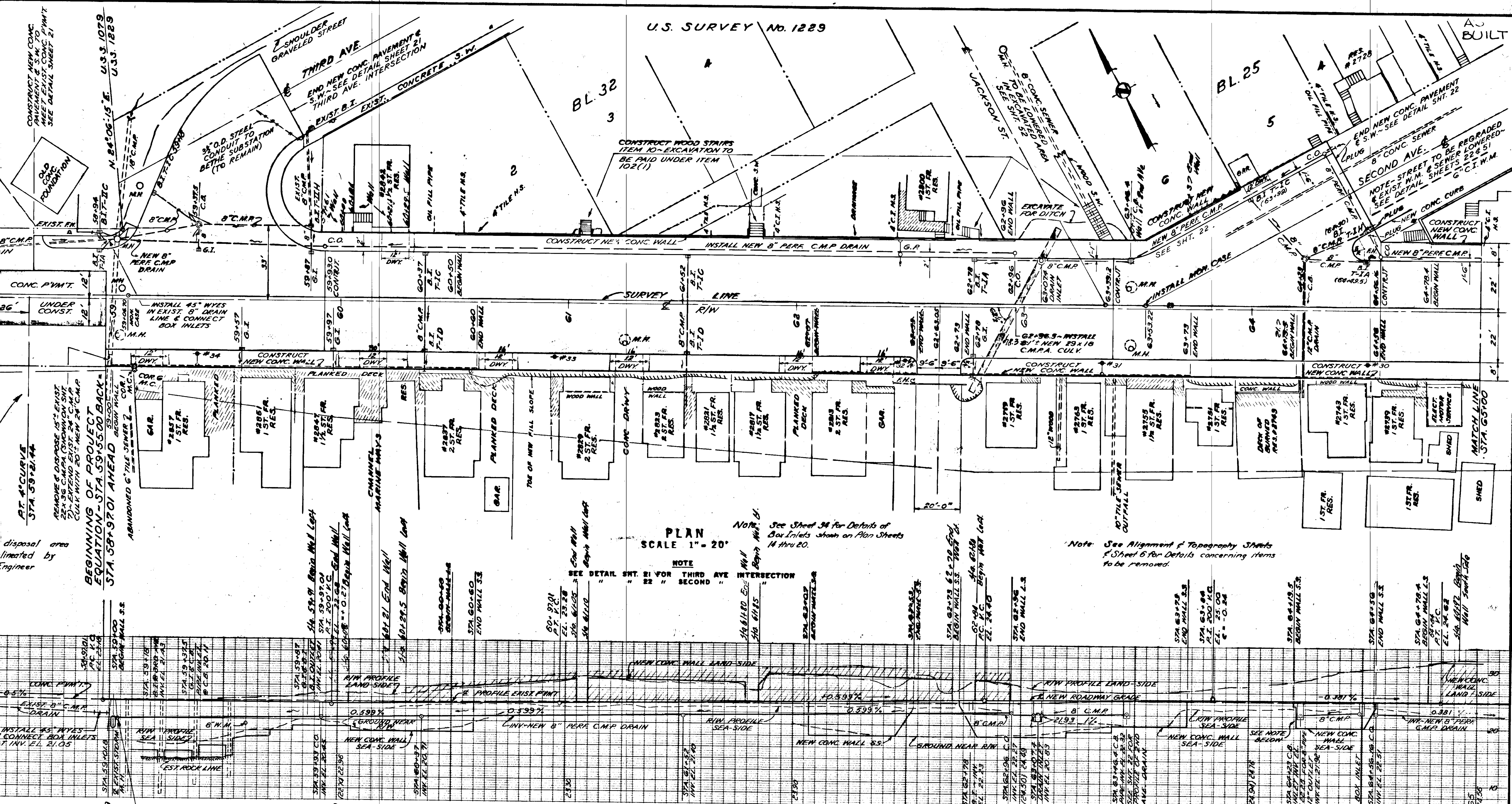
STATE OF ALASKA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

PROJECT F-095-1(7)
TONGASS AVENUE
KETCHIKAN, ALASKA

ALIGNMENT & TOPOGRAPHY
STA. 95+25 TO STA. 100+79

LANGDALE AND CONNELL
ENGINEERS
1031 SECURITIES BLDG.
SEATTLE 1, WASHINGTON

DATE: JUNE, 1960
SHEET 13 OF 64



PLAN
SCALE 1" = 20'

NOTE
SEE DETAIL SHT. 21 FOR THIRD AVE INTERSECTION
" 22 " SECOND "

Note: See Alignment & Topography Sheets
& Sheet 6 for Details concerning items
to be removed.

NOTE
STA. 58+97 TO STA. 100+79
WATER PIPE AND SEWERS SHOWN ON PROFILE
ARE TO BE INSTALLED UNDER CITY PROJECT
DURING THIS ROADWAY CONSTRUCTION. OR
ARE EXISTING PIPES THAT WILL REMAIN IN
SERVICE. EXISTING WATER PIPE AND SEWERS
TO BE REMOVED OR ABANDONED IN PLACE ARE
NOT SHOWN. ALL PIPES ARE SHOWN WHERE
LOCATED AT THE NEW DRAIN LINE UNLESS
OTHERWISE NOTED.

PROFILE
SCALE 1" = 20' HORIZ. 1" = 8' VERT.

STA. 58+97 TO STA. 65+00
UNCL. EX. 4725 C.Y.
EMB. 1570 C.Y.
INCLUDES 280 C.Y. IN 3RD. AVE. RM
AND 2710 " " 2ND. "

NOTE - SECOND AVE.
LAY 8" C.M.P. FROM BOX INLET ON
NORTH SIDE OF 2ND. AVE. ON 1 1/4"
GRADE TO CATCH BASIN. LAY 12"
C.M.P. OUTLET PIPE FROM CATCH
BASIN ON 1 1/4" MIN. GRADE TO
DAYLIGHT. SEE SHT. 22 FOR
INVERT ELEVATIONS OF BOX
INLETS & OTHER DETAILS.

STATE OF ALASKA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

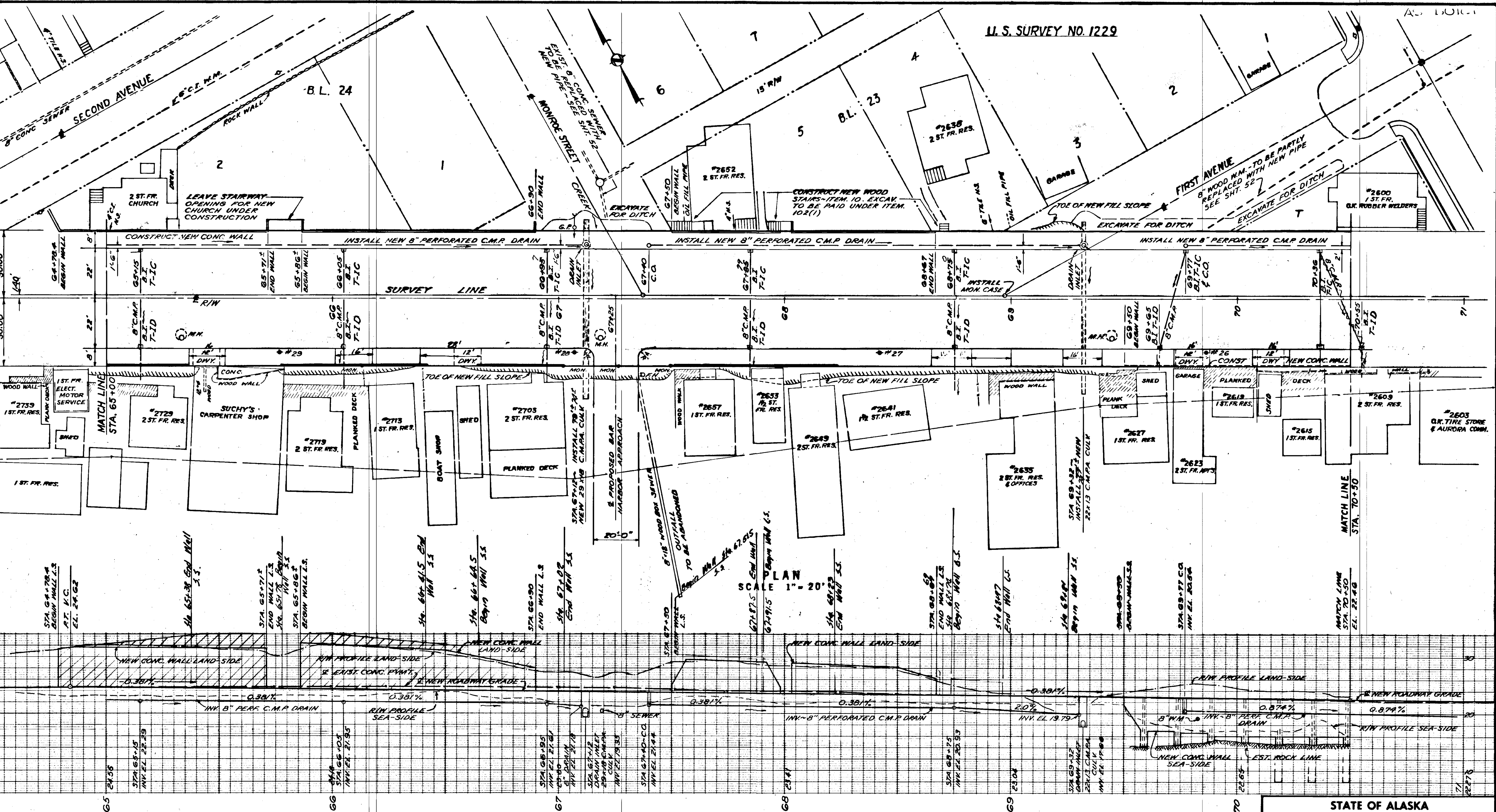
PROJECT F-095-1(7)
TONGASS AVENUE
KETCHIKAN, ALASKA

ROADWAY CONSTRUCTION
STA. 58+97 TO STA. 65+00

LANGDALE AND CONNELL
ENGINEERS
1031 SECURITIES BLDG.
SEATTLE 1, WASHINGTON

DATE: NOV. 1960
SHEET 14 OF 64

THE ALIGNMENT AND GRADE
AS SHOWN HEREON ARE
SUBJECT TO ADJUSTMENT.

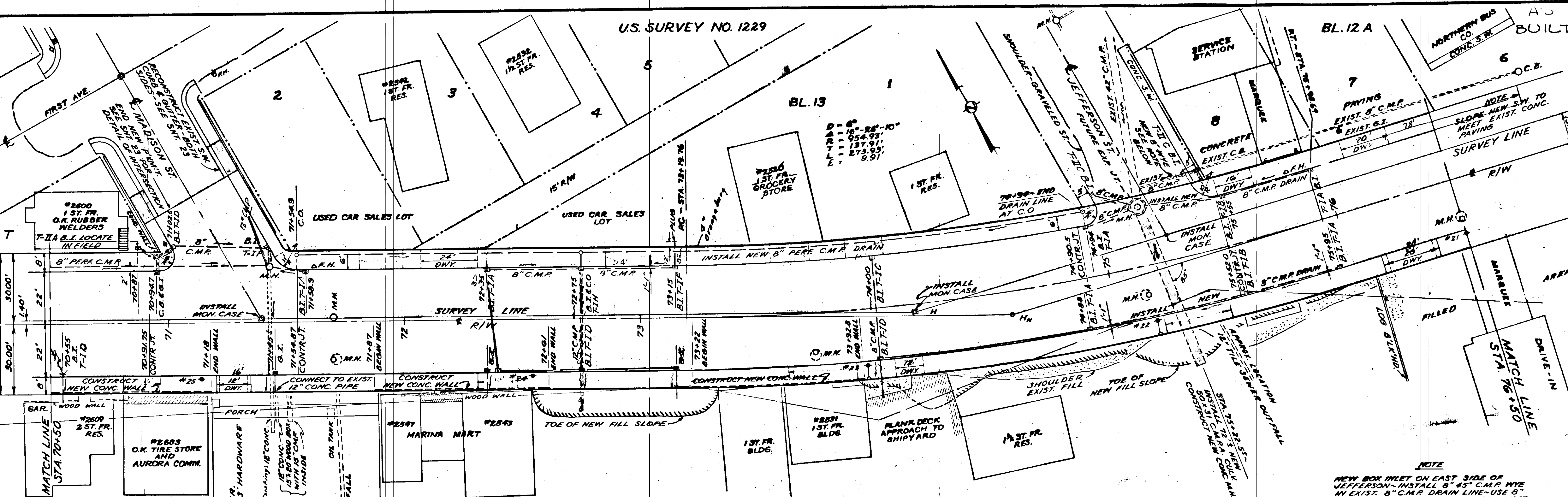


PROFILE
SCALE 1" = 20' HORIZ. 1" = 8' VERT.

STA. 65+00 TO STA. 70+50
UNCL. EX. 1960 C.Y.
EMB. 975 C.Y.

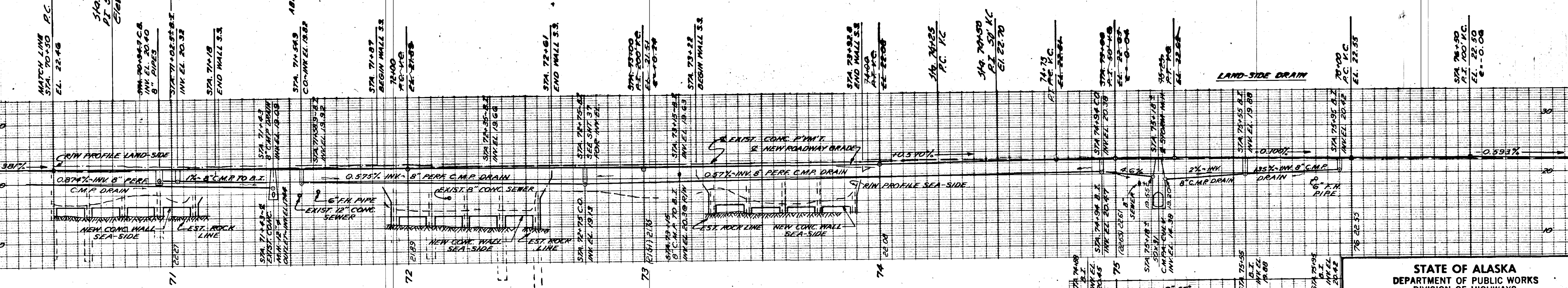
THE ALIGNMENT AND GRADE
AS SHOWN HEREON ARE
SUBJECT TO ADJUSTMENT.

STATE OF ALASKA DEPARTMENT OF PUBLIC WORKS DIVISION OF HIGHWAYS PROJECT F-095-1(7) TONGASS AVENUE KETCHIKAN, ALASKA	
ROADWAY CONSTRUCTION STA. 65+00 TO STA. 70+50	LANGDALE AND CONNELL ENGINEERS 1031 SECURITIES BLDG. SEATTLE 1, WASHINGTON
DATE: NOV. 1960 SHEET 15 OF 64	



PLAN
SCALE 1" = 20'

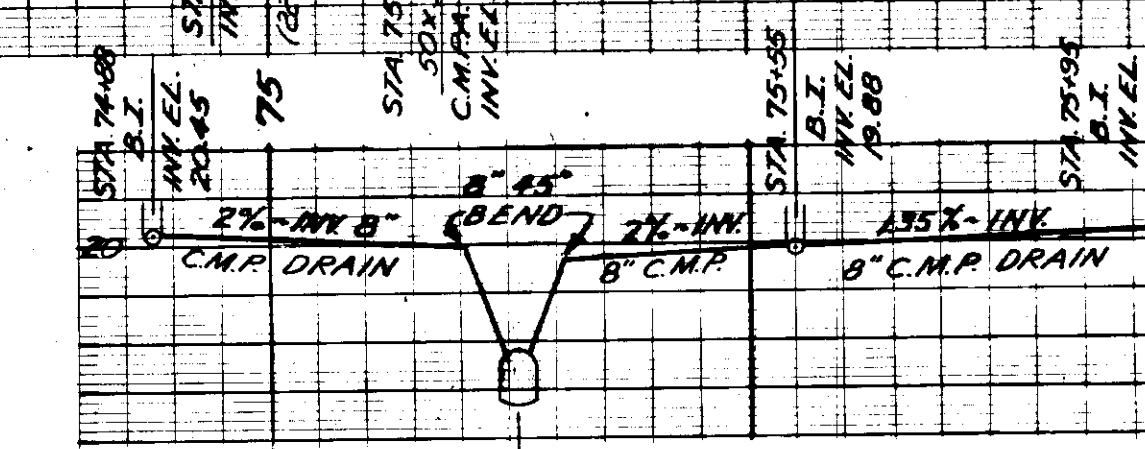
NOTE
SEE DETAIL SHT. 23 FOR MADISON ST. INTERSECTION



PROFILE
SCALE 1" = 20' HORIZ. 1" = 8' VERT.

STA. 70+50 TO STA. 76+50
UNCL. EX. 2090 C.Y.
EMB 1180 C.Y.
INCLUDES 155 C.Y. IN MADISON ST. RW

NOTE
SEE PLAN, SHT. 23, FOR INVERT
ELEVATIONS OF BOX INLETS AT
MADISON ST.



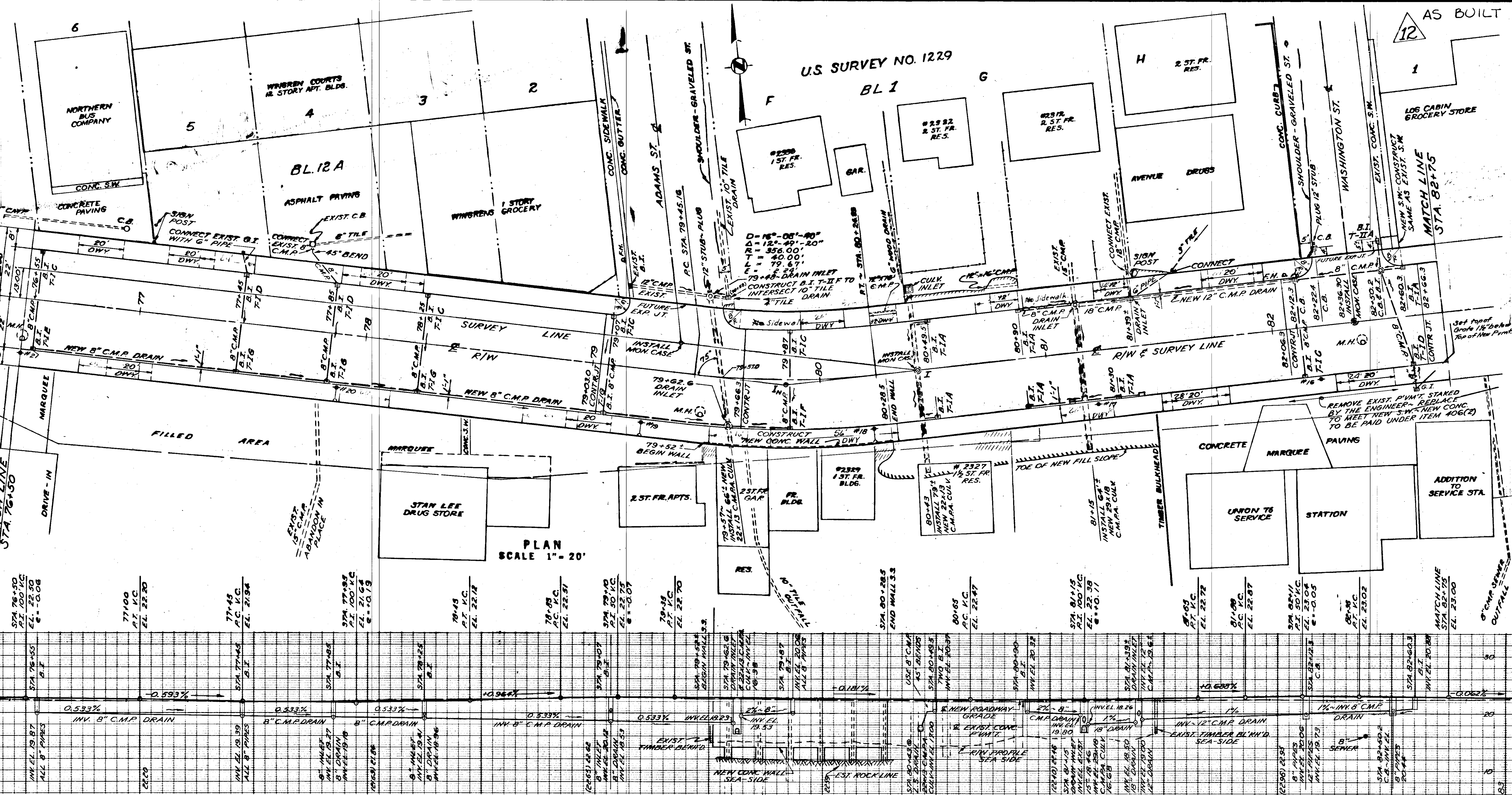
STATE OF ALASKA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS
PROJECT F-095-1(7)
TONGASS AVENUE
KETCHIKAN, ALASKA

ROADWAY CONSTRUCTION
STA. 70+50 TO STA. 76+50

THE ALIGNMENT AND GRADE
AS SHOWN HEREON ARE
SUBJECT TO ADJUSTMENT.

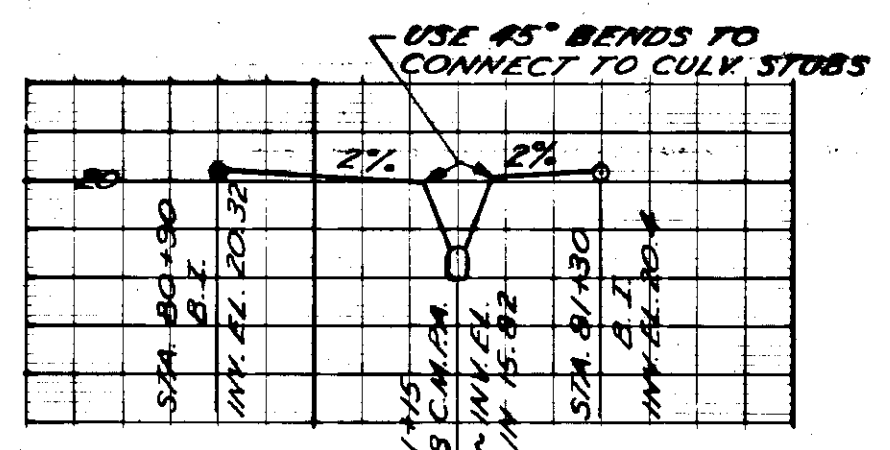
LANGDALE AND CONNELL
ENGINEERS
1031 SECURITIES BLDG.
SEATTLE 1, WASHINGTON

DATE: NOV. 1, 1964
SHEET 16 OF 64



PROFILE
SCALE 1" = 20' HORIZ. 1" = 8' VERT.

STA. 76+50 TO STA. 82+75
UNCL. EX. 1285 C.Y.
EMB. 2520 C.Y.



THE ALIGNMENT AND GRADE
AS SHOWN HEREON ARE
SUBJECT TO ADJUSTMENT.

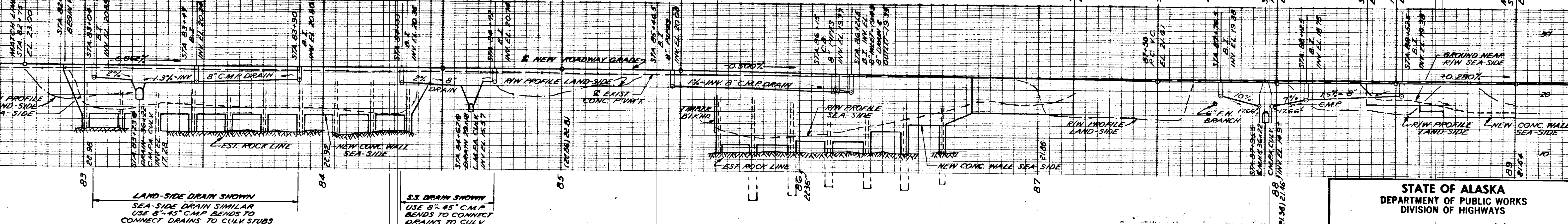
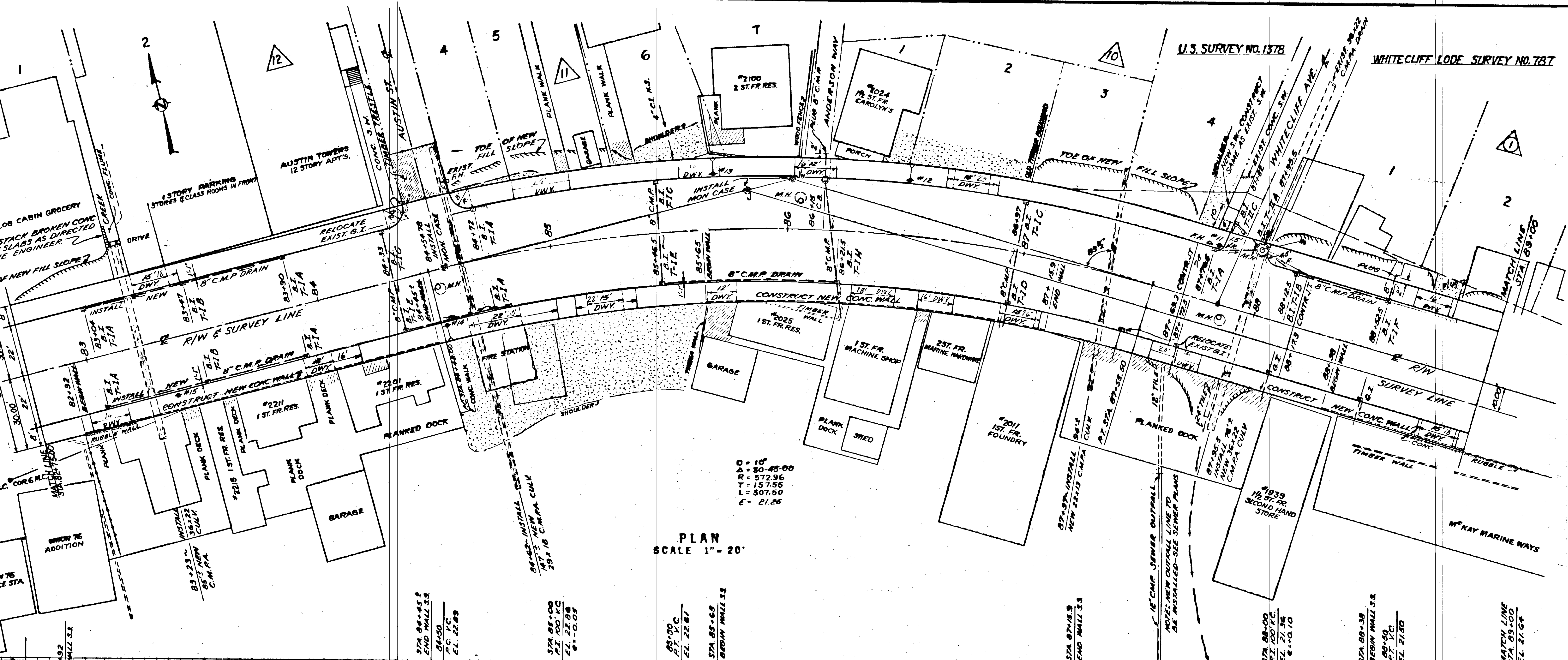
STATE OF ALASKA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

PROJECT F-095-1(7)
TONGASS AVENUE
KETCHIKAN, ALASKA

ROADWAY CONSTRUCTION
STA. 76+50 TO STA. 82+75

LANGDALE AND CONNELL
ENGINEERS
1031 SECURITIES BLDG.
SEATTLE 1, WASHINGTON

DATE: NOV., 1960
SHEET 17 OF 64



STA 82+75 TO STA 89+00
UNCL. EX. EMB.
1100 C.Y.
1740 C.Y.

THE ALIGNMENT AND GRADE
AS SHOWN HEREON ARE
SUBJECT TO ADJUSTMENT.

STATE OF ALASKA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

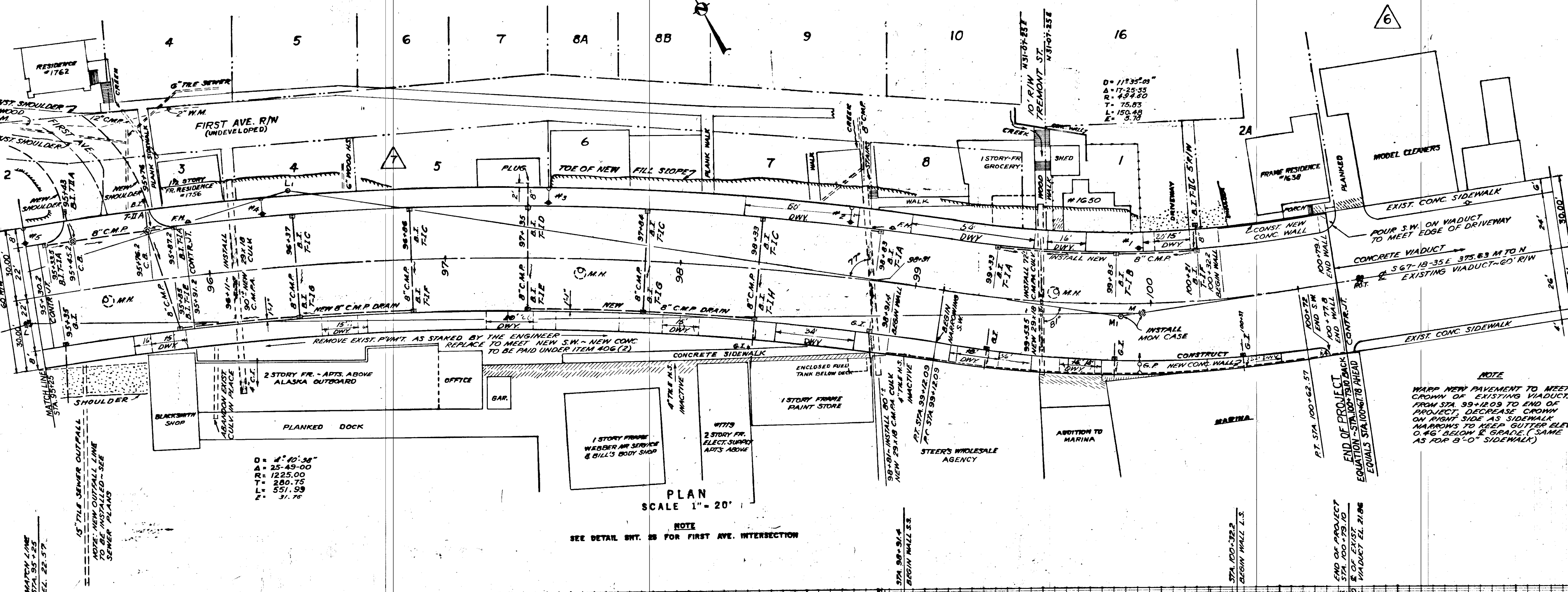
PROJECT F-095-1(7)
TONGASS AVENUE
KETCHIKAN, ALASKA

ROADWAY CONSTRUCTION
STA. 82+75 TO STA. 89+00

LANGDALE AND CONNELL
ENGINEERS
1001 SECURITIES BLDG.
SEATTLE 1, WASHINGTON

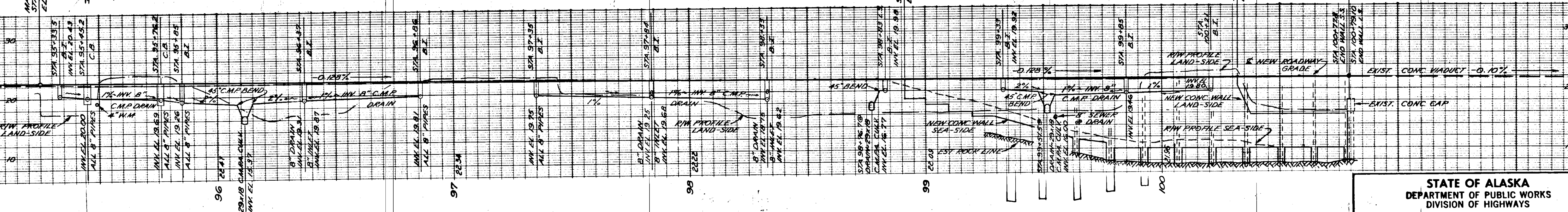
DATE: NOV. 1960
SHEET 18 OF 64

U.S. SURVEY NO. 1378



NOTE
WARP NEW PAVEMENT TO MEET
CROWN OF EXISTING VIADUCT.
FROM STA. 99+12.09 TO END OF
PROJECT, DECREASE CROWN
ON RIGHT SIDE AS SIDEWALK
NARROWS TO KEEP GUTTER ELEV.
0.46' BELOW 2' GRADE. (SAME
AS FOR 8'-0" SIDEWALK)

END OF PROJECT
STA. 100+79.10
E OF EXIST.
VIA DUCT EL. 21.86



PROFILE
SCALE 1" = 20' HORIZ. 1" = 8' VERT.

<u>STA. 95+25</u>	<u>TO</u>	<u>STA. 100+79</u>
UNCL. EX.		1170 C.Y. ^①
EMB.		2320 C.Y. ^②
① INCLUDES 50 C.Y. IN FIRST AVE. R/W		
② " " 100 " " " " " "		

STATE OF ALASKA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

PROJECT F-095-1 (7)
TONGASS AVENUE
KETCHIKAN, ALASKA

ROADWAY CONSTRUCTION
STA. 95+25 TO STA. 100+79

THE ALIGNMENT AND GRADE
AS SHOWN HEREON ARE
SUBJECT TO ADJUSTMENT.

LANGDALE AND CONNEL
ENGINEERS
1031 SECURITIES BLDG.
SEATTLE 1, WASHINGTON

DATE: _____ NOV. _____
SHEET 20 OF _____

STATE	PROJECT DESIGNATION	YEAR	SHEET No.	TOTAL SHEETS
ALASKA	F-095-1(7)	1962	21	64

AS BUILT

CURVE DATA AT FACE OF CURB

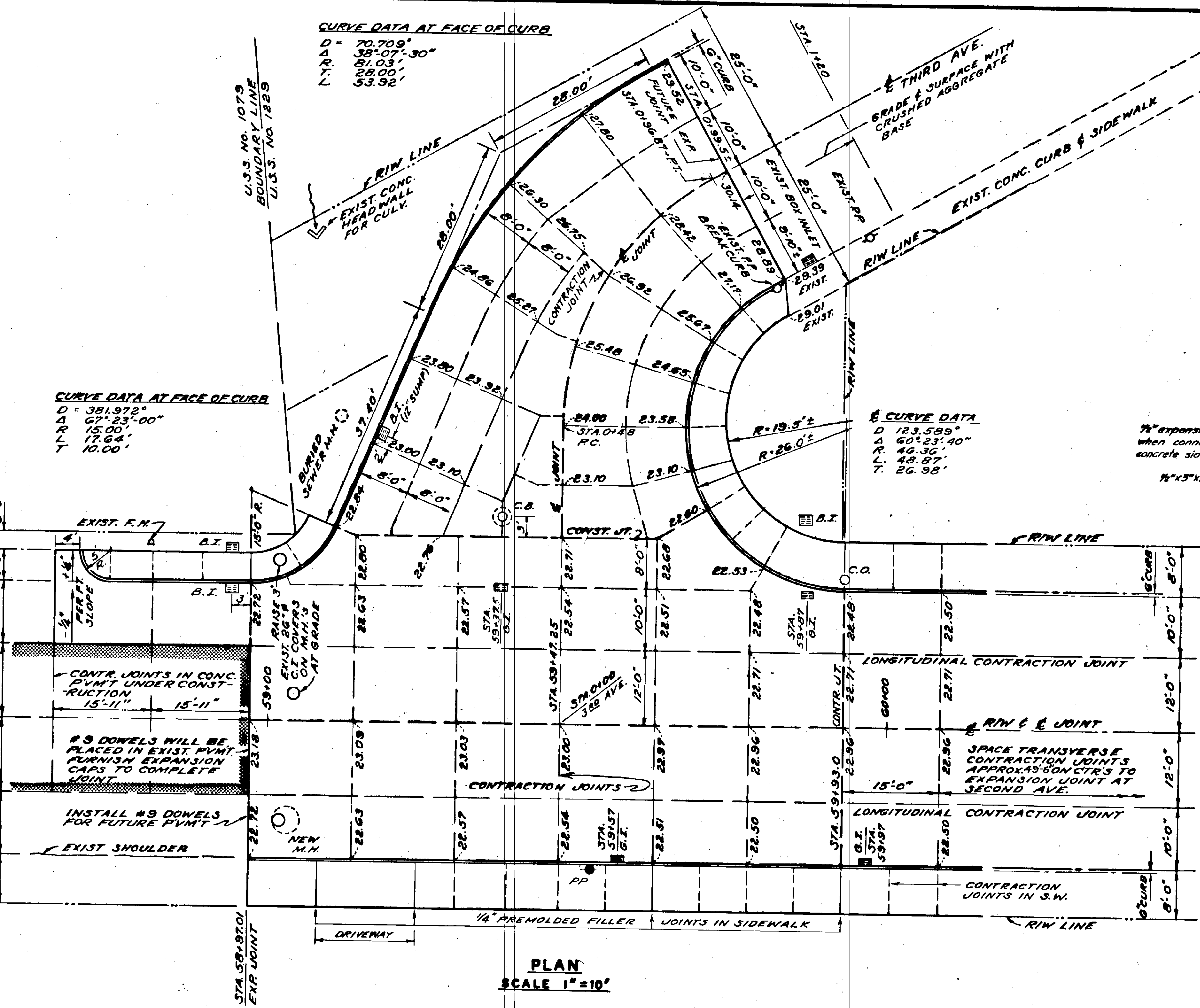
D = 70.709°
 A = 38°-07'-30"
 L = 81.03'
 T = 28.00'
 L = 53.92'

CURVE DATA AT FACE OF CURB

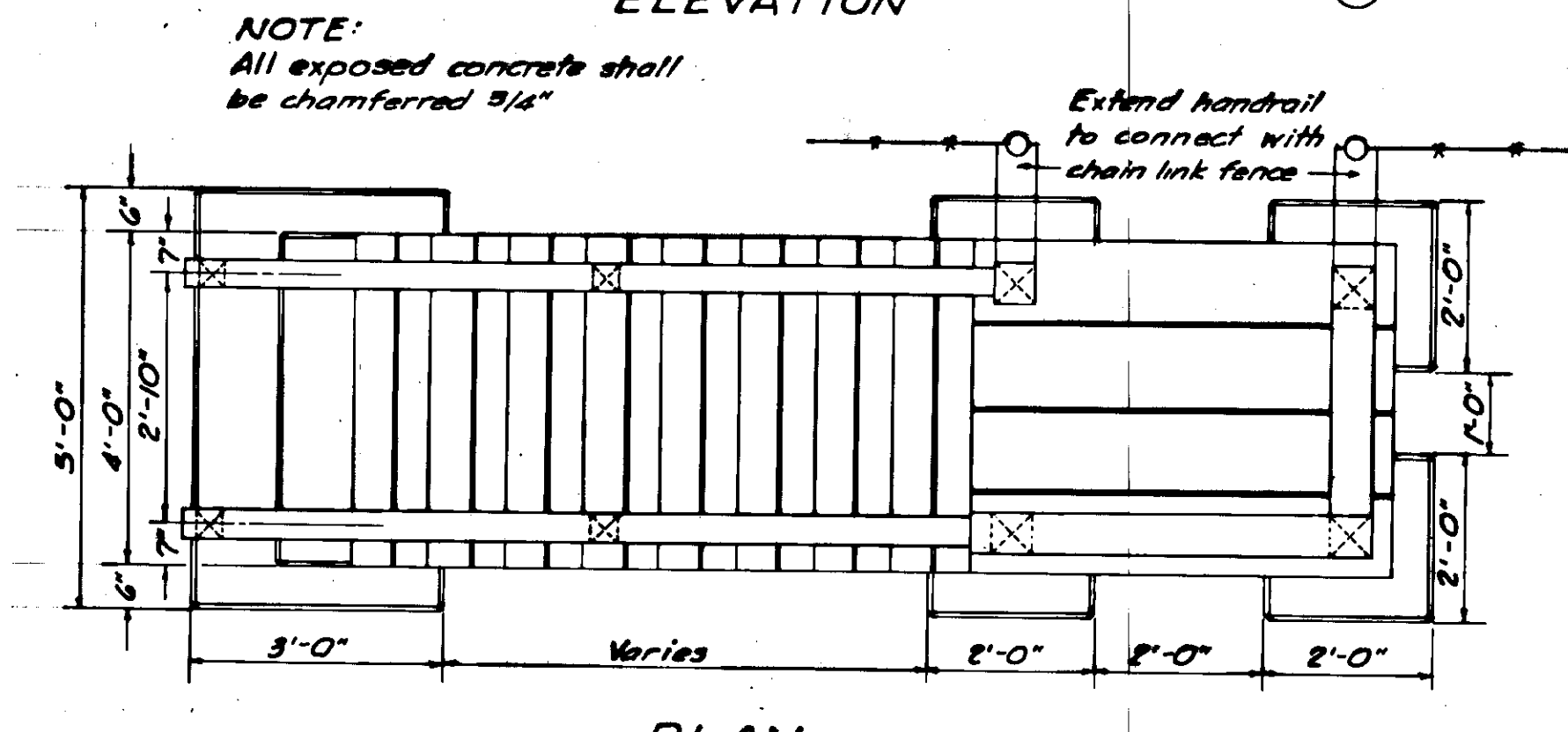
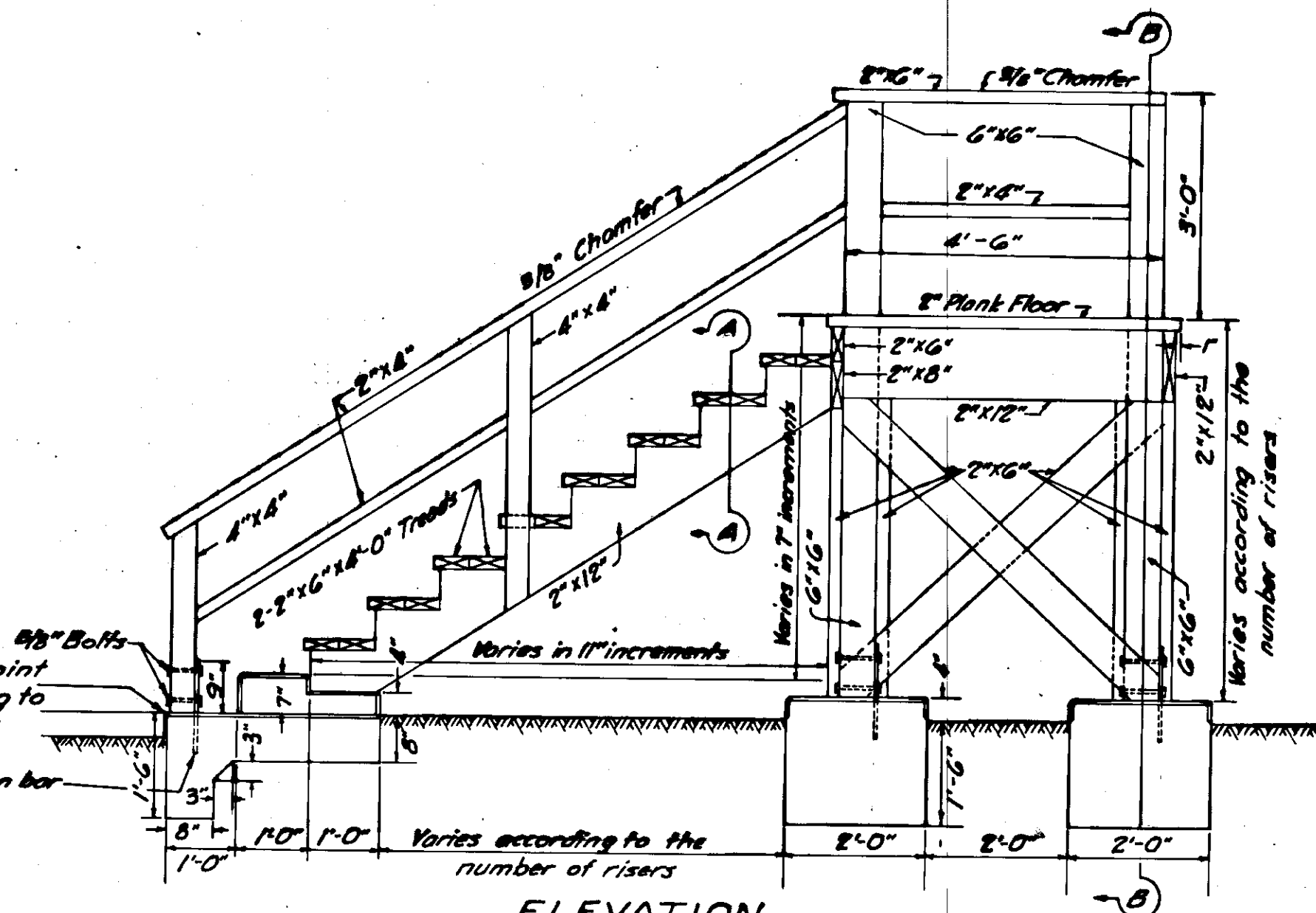
D = 381.972°
 A = 67°-23'-00"
 L = 15.60'
 T = 10.00'

CURVE DATA

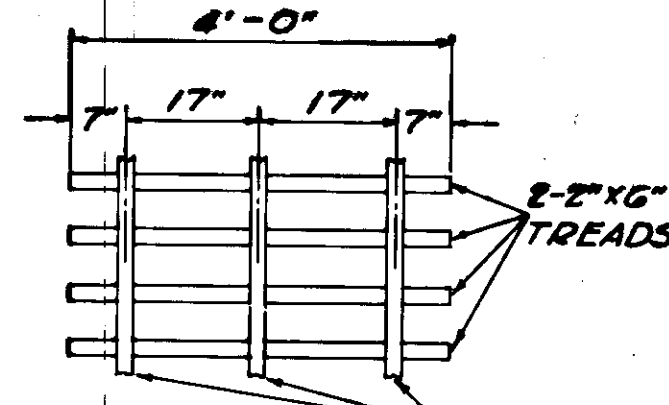
D = 123.589°
 A = 60°-23'-40"
 L = 46.30'
 T = 26.95'



PLAN
 SCALE 1"=10'

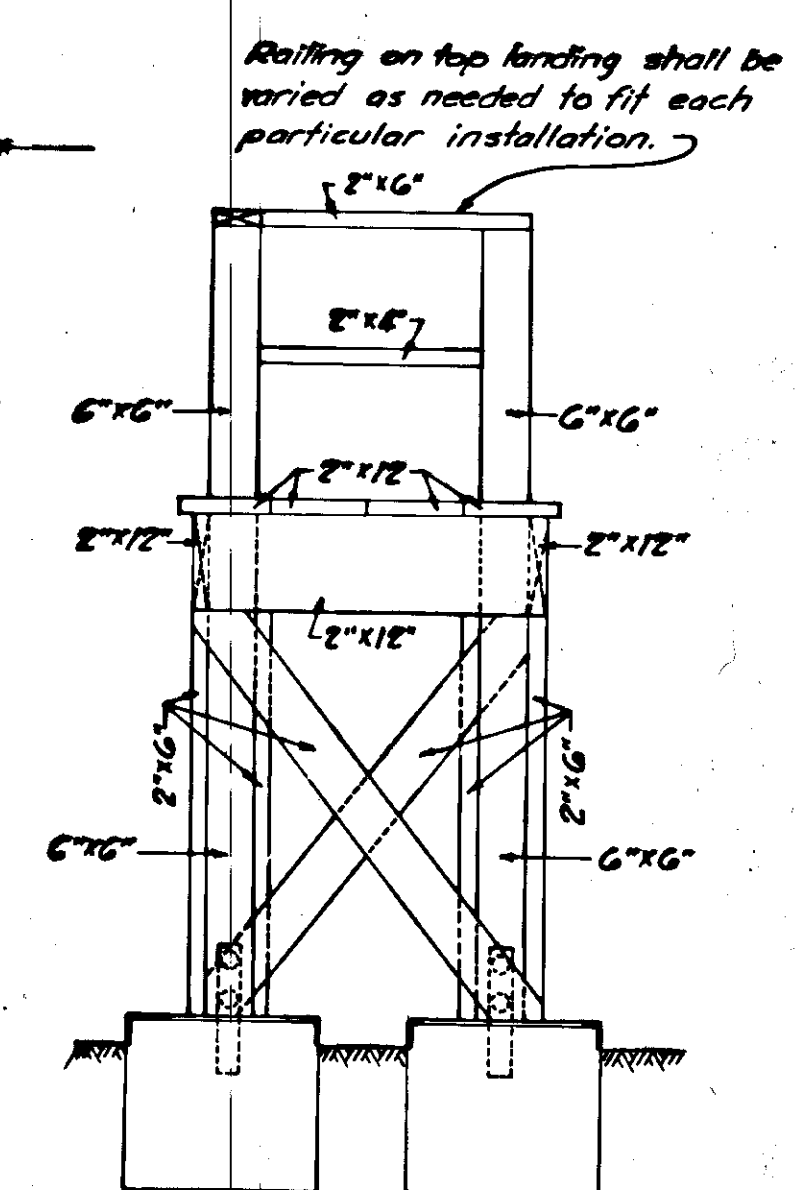


TIMBER STAIR DETAILS
 NOTE: Stairs detailed for 4'-0" width. Construct at other widths where designated on the plans or as stated by the engineer.



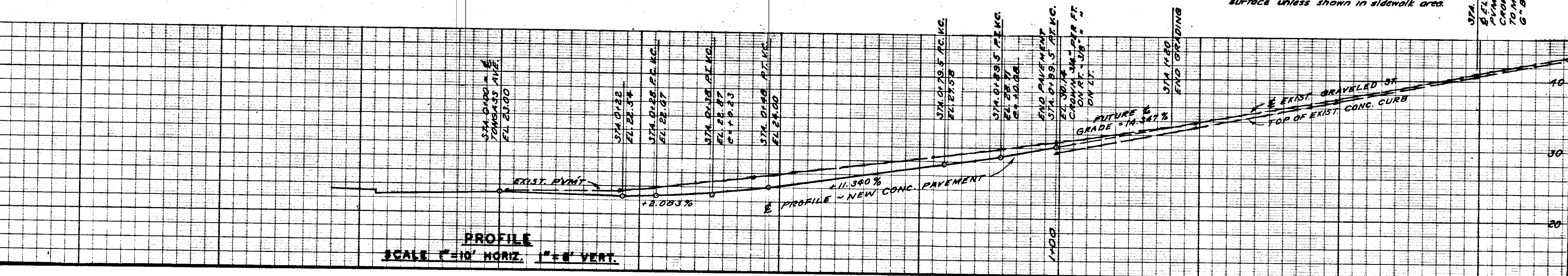
SECTION A-A

GENERAL NOTES
 All wood construction shall be of creosote pressure treated timber and lumber.
 All concrete shall be Class A.



SECTION B-B

NOTE: Scale plan for location of joints see sheets 5 & 25 for joint details. Elevations shown are for pavement surface unless shown in sidewalk area.



PROFILE
 SCALE 1"=10' HORIZ. 1"=8' VERT.

STATE OF ALASKA
 DEPARTMENT OF PUBLIC WORKS
 DIVISION OF HIGHWAYS

PROJECT F-095-1(7)
 TONGASS AVENUE
 KETCHIKAN, ALASKA

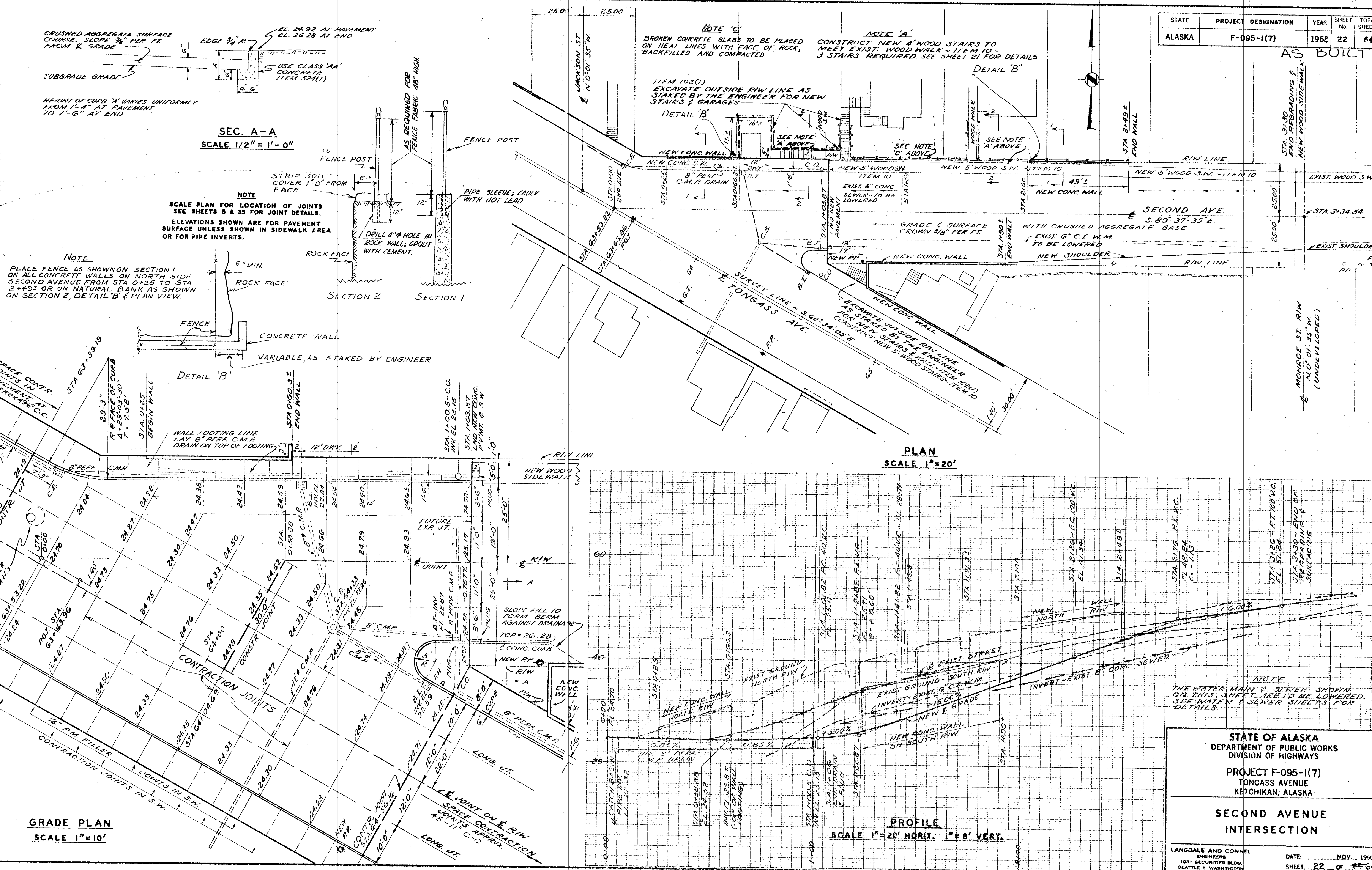
THIRD AVENUE INTERSECTION

LANGDALE AND CONNELL
 ENGINEERS
 1801 SEVENTH AVE.
 SEATTLE 1, WASHINGTON

DATE: NOV., 1962
 SHEET 21 OF 64

STATE	PROJECT DESIGNATION	YEAR	SHEET No.	TOTAL SHEETS
ALASKA	F-095-1(7)	1962	22	64

AS BUILT



NOTE
THE WATER MAIN & SEWER SHOWN ON THIS SHEET ARE TO BE LOWERED. SEE WATER & SEWER SHEETS FOR DETAILS.

STATE OF ALASKA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

PROJECT F-095-1(7)
TONGASS AVENUE
KETCHIKAN, ALASKA

SECOND AVENUE
INTERSECTION

LANGDALE AND CONNELL
ENGINEERS
1031 SECURITY BLDG.
SEATTLE 1, WASHINGTON

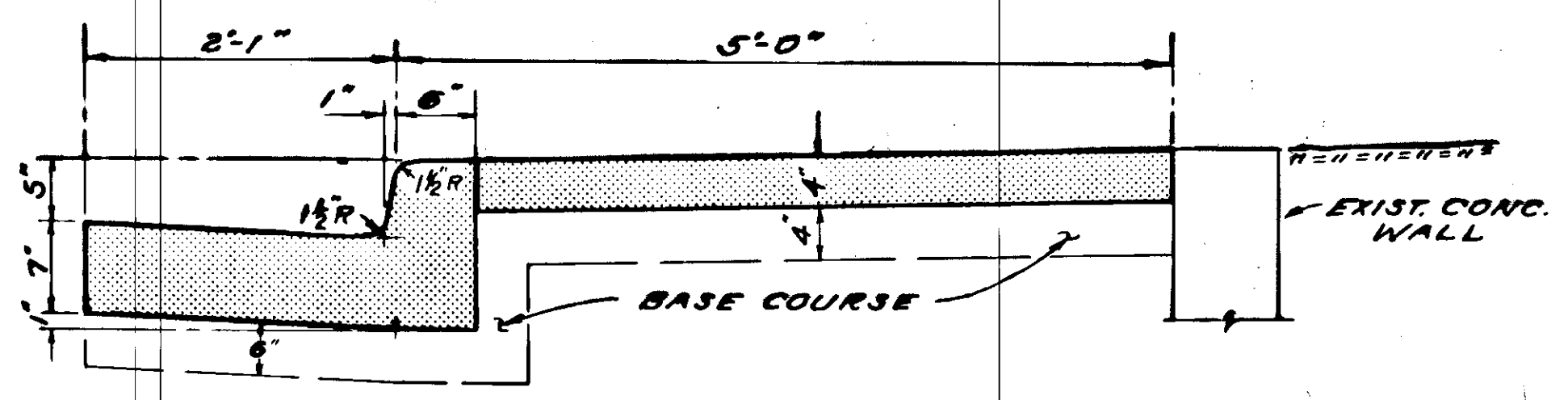
DATE: NOV. 1962
SHEET 22 OF 64

This OK'D By Beca & Becke

STATE	PROJECT DESIGNATION	YEAR	SHEET No.	TOTAL SHEETS
ALASKA	F-095-1(7)	1962	23	64

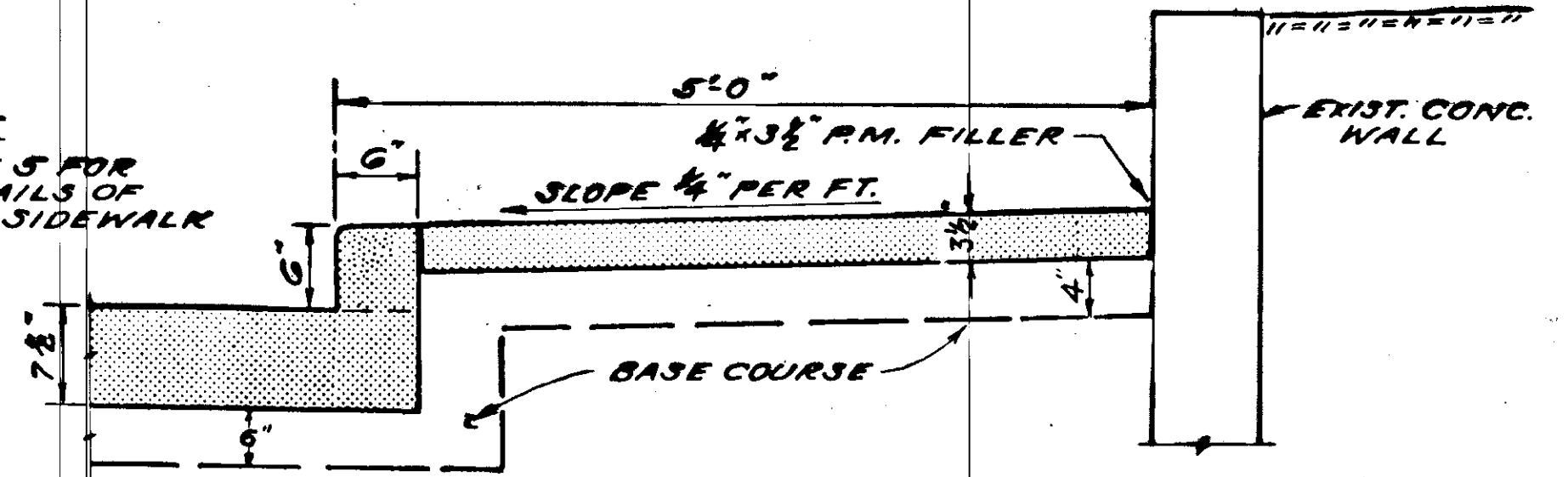
AS BUILT

NOTE
CONSTRUCT NEW CURB AND GUTTER SAME AS EXISTING EXCEPT WARP TO MEET NEW PAVEMENT AND CURB. ITEM 524(3).



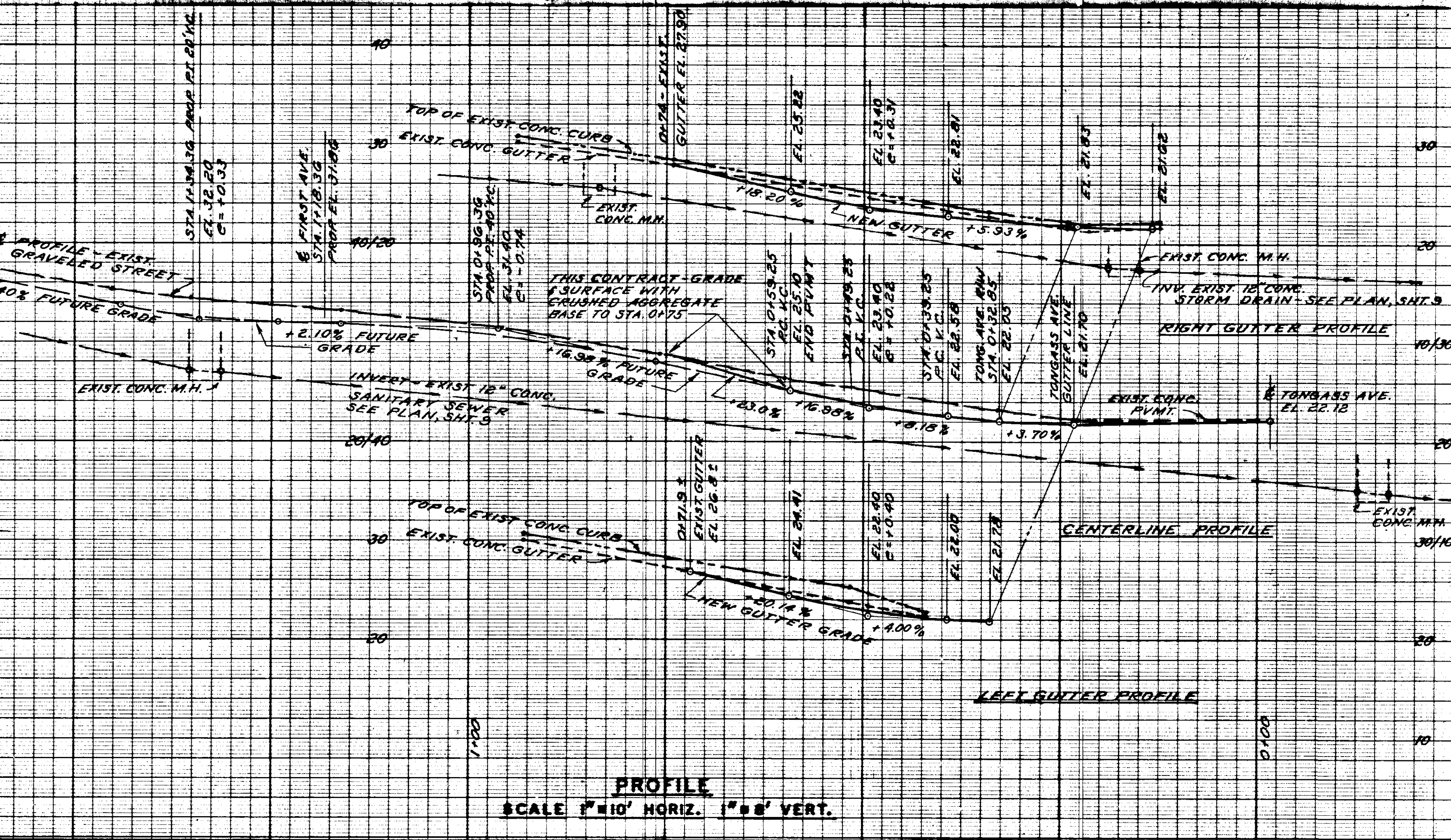
SEC. B-B
EXIST. SIDEWALK, CURB & GUTTER
SCALE 1" = 1'-0"

NOTE
SEE SHEET 5 FOR OTHER DETAILS OF CURB AND SIDEWALK

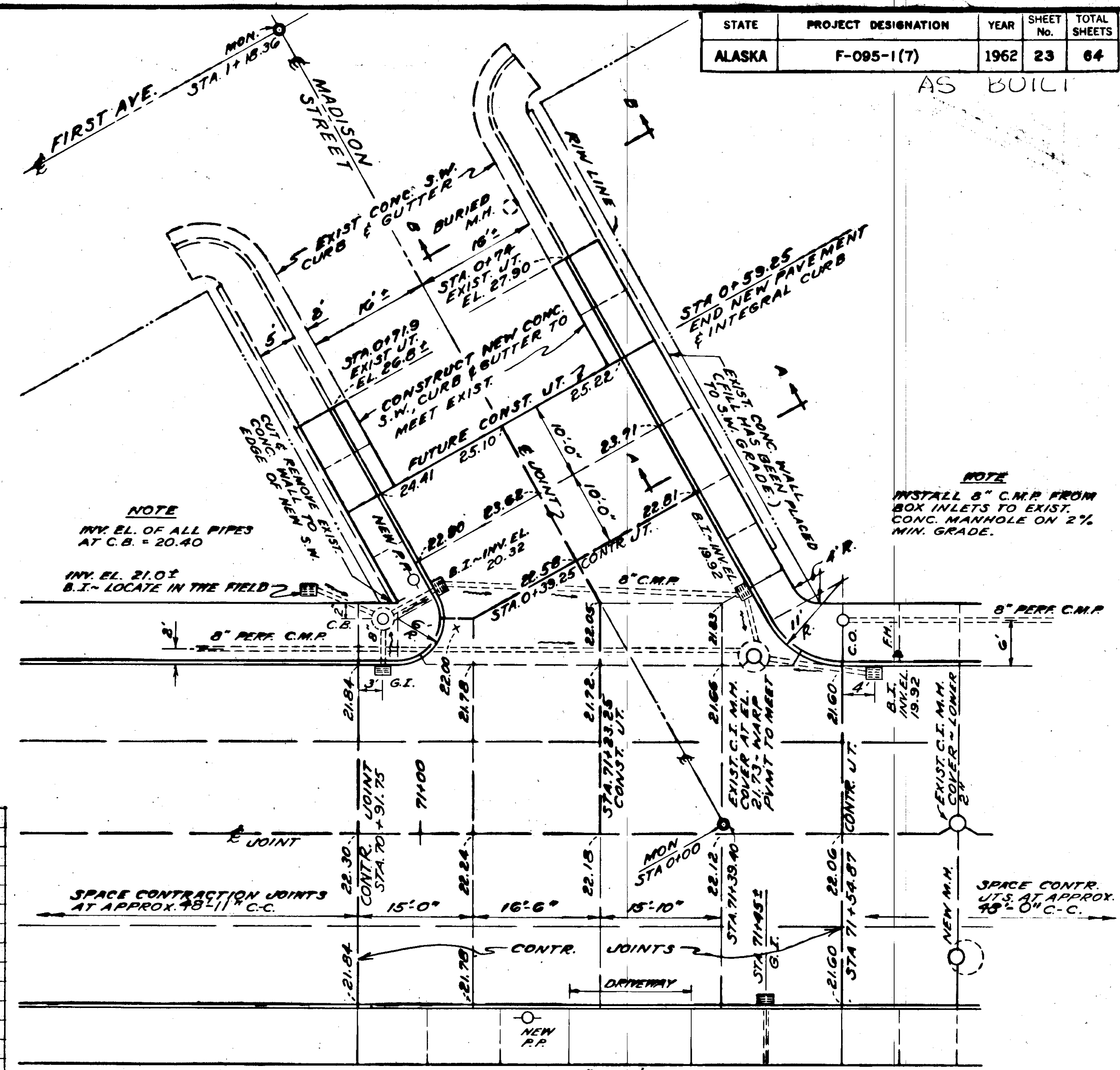


LEFT SIDE IS SIMILAR EXCEPT THAT GROUND LINE AT EXIST. RETAINING WALL IS BELOW EXISTING AND NEW SIDEWALK GRADE.

SEC. A-A
NEW INTEGRAL CURB & SIDEWALK
SCALE 1" = 1'-0"



PROFILE
SCALE 1" = 10' HORIZ. 1" = 8' VERT.



PLAN
SCALE 1" = 10'

SEE NOTE - SHEET 22

STATE OF ALASKA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

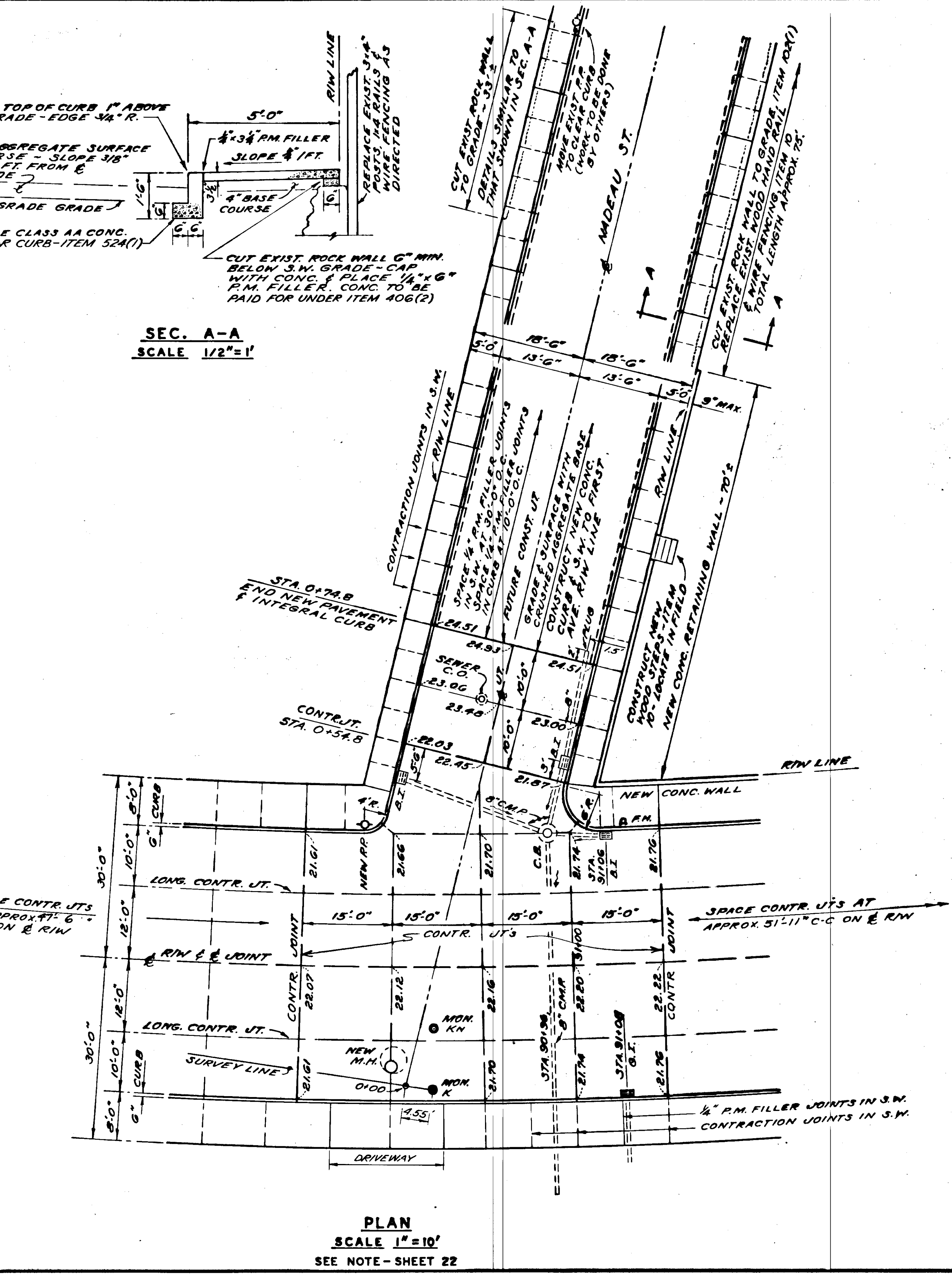
PROJECT F-095-1(7)
TONGASS AVENUE
KETCHIKAN, ALASKA

**MADISON STREET
INTERSECTION**

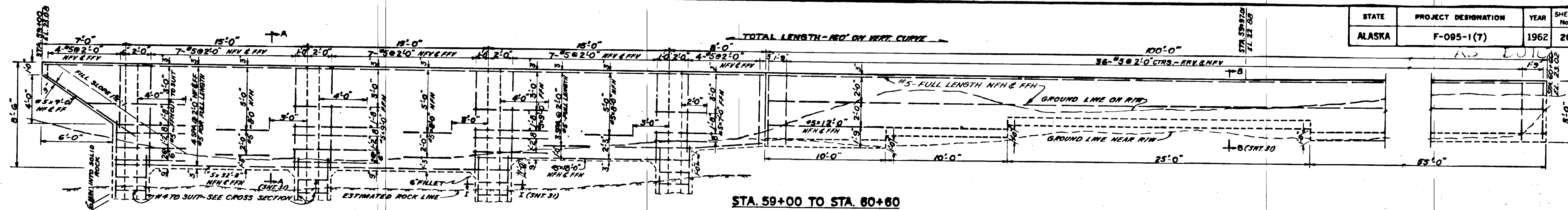
LANGDALE AND CONNELL
ENGINEERS
1981 SECURITIES BLDG.
SEATTLE 1, WASHINGTON

DATE: NOV., 1960
SHEET: 23 OF 64

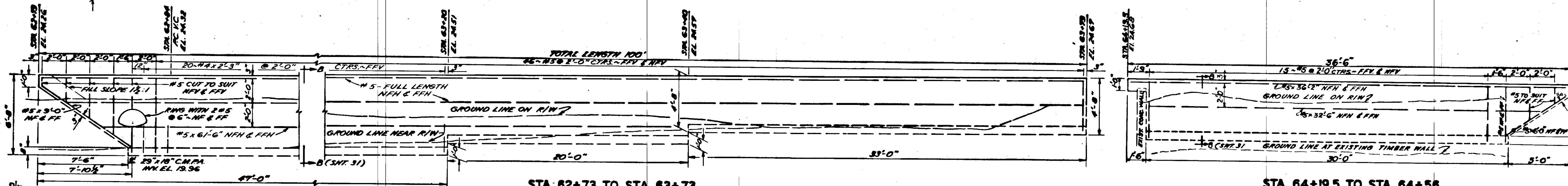
STATE	PROJECT DESIGNATION	YEAR	SHEET No.	TOTAL SHEETS
ALASKA	F-095-1(7)	1962	24	64



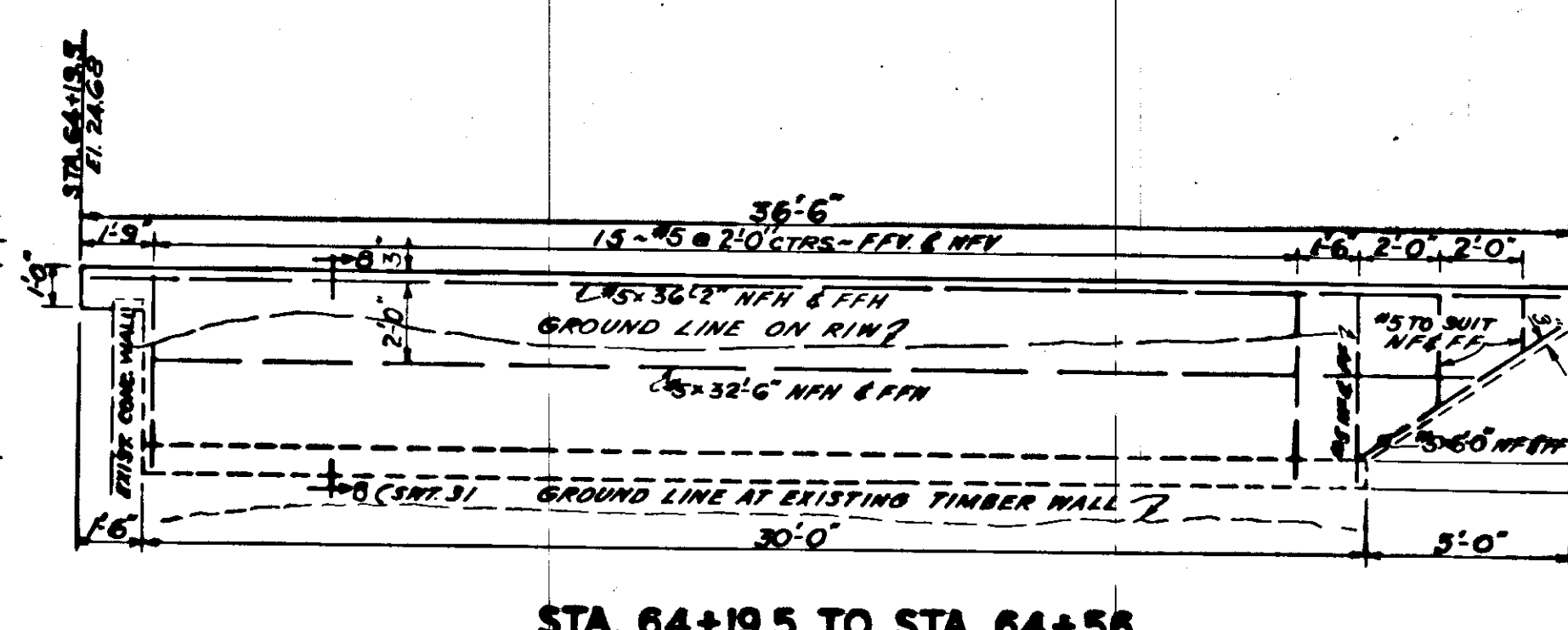
STATE	PROJECT DESIGNATION	YEAR	SHEET No.
ALASKA	F-095-1(7)	1962	28



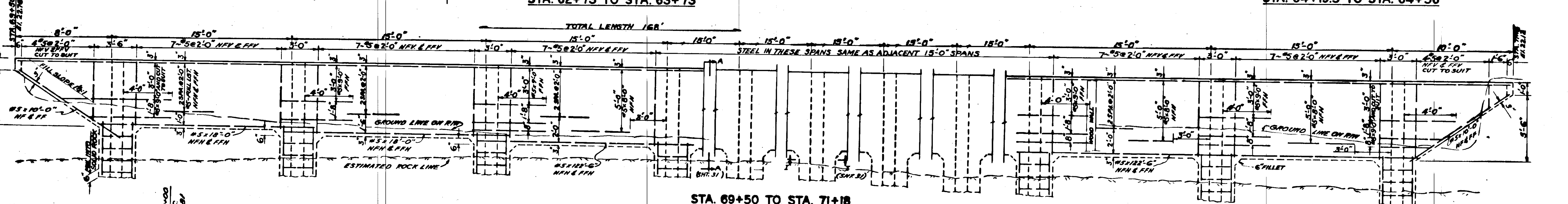
STA. 59+00 TO STA. 60+80



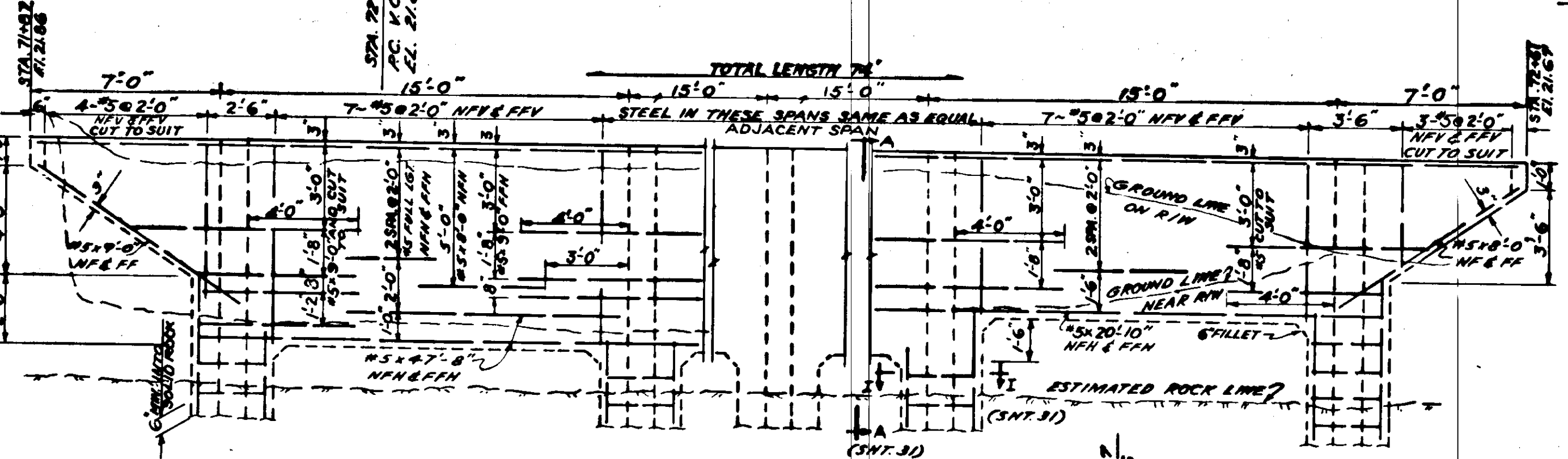
STA. 62+73 TO STA. 63+73



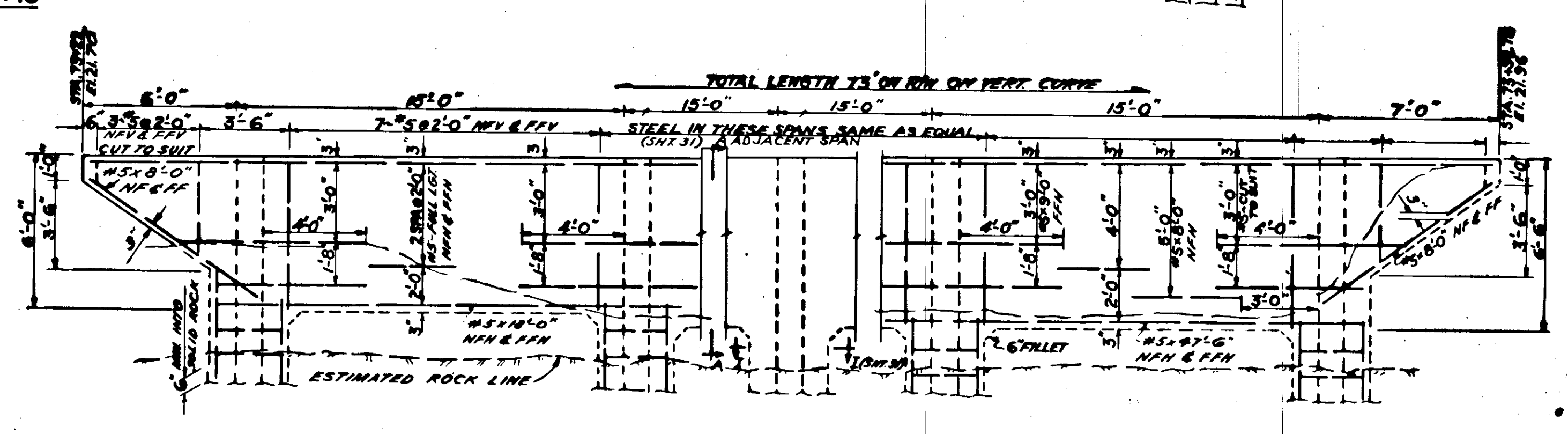
STA. 64+19.5 TO STA. 64+58



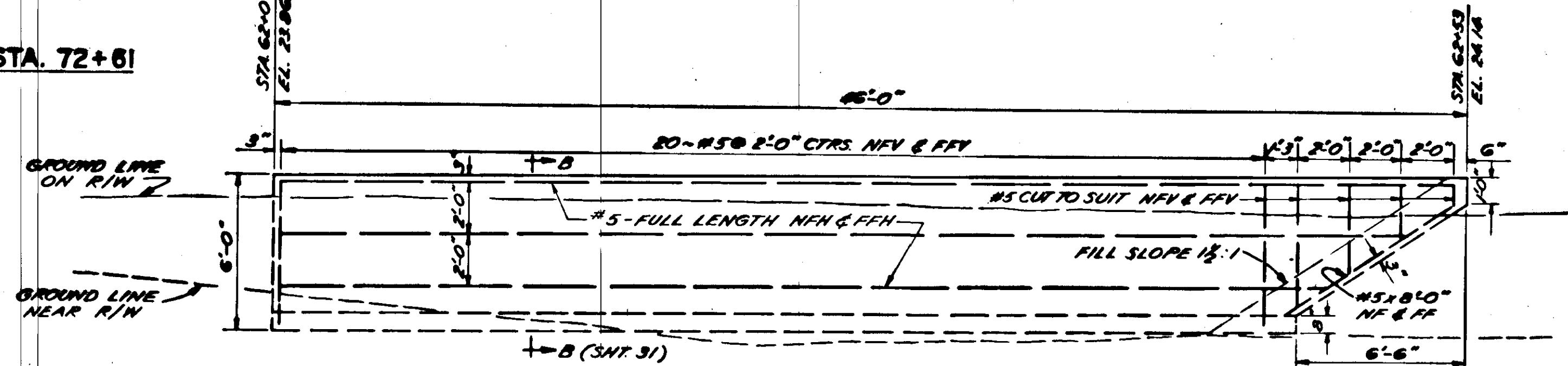
STA. 69+50 TO STA. 71+18



STA. 71+87 TO STA. 72+61



STA. 73+22 TO STA. 73+92.78



STA. 62+07 TO STA. 62+53

SCALE: 1/4"=1'-0"
ALL VIEWS

NOTE

ALL ELEVATIONS SHOWN ARE FOR TOP OF WALL. CONSTRUCT TOP OF WALL 1 INCH BELOW CENTERLINE GRADE. SLOPE TOP AT DRIVEWAYS. SEE DETAILS, SHEET 31. SEE NOTES, SHEET 28.

STATE OF ALASKA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

PROJECT F-095-1(7)
TONGASS AVENUE
KETCHIKAN, ALASKA

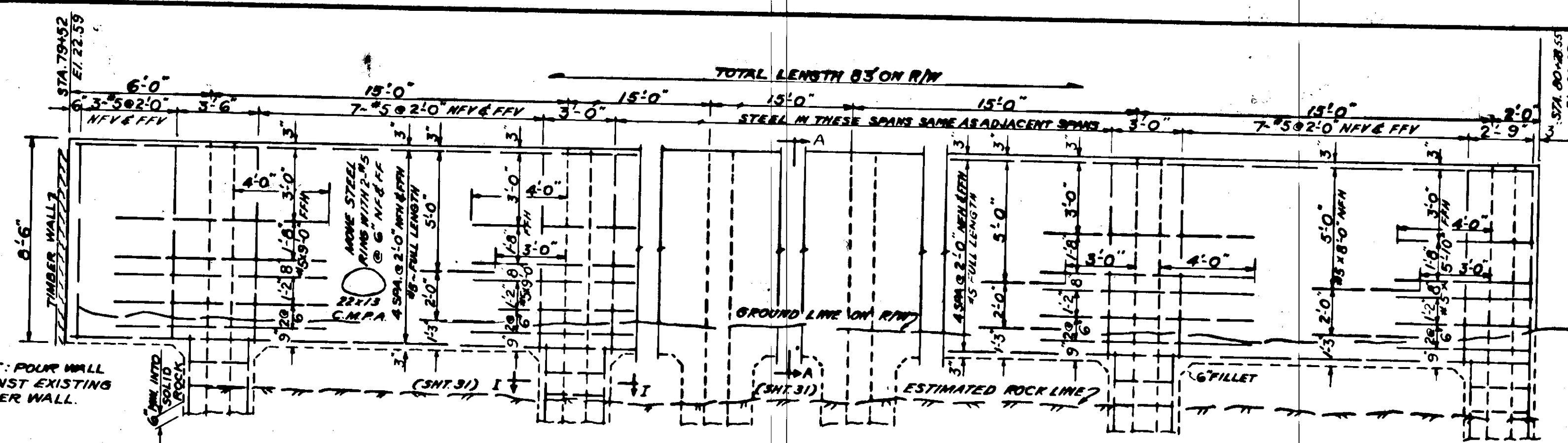
SEA SIDE
RETAINING WALLS
STA. 59+00 TO STA. 73+92.78

LANGDALE AND CONNELL
ENGINEERS
1031 SEQUOIA BLVD.
SEATTLE 1, WASHINGTON

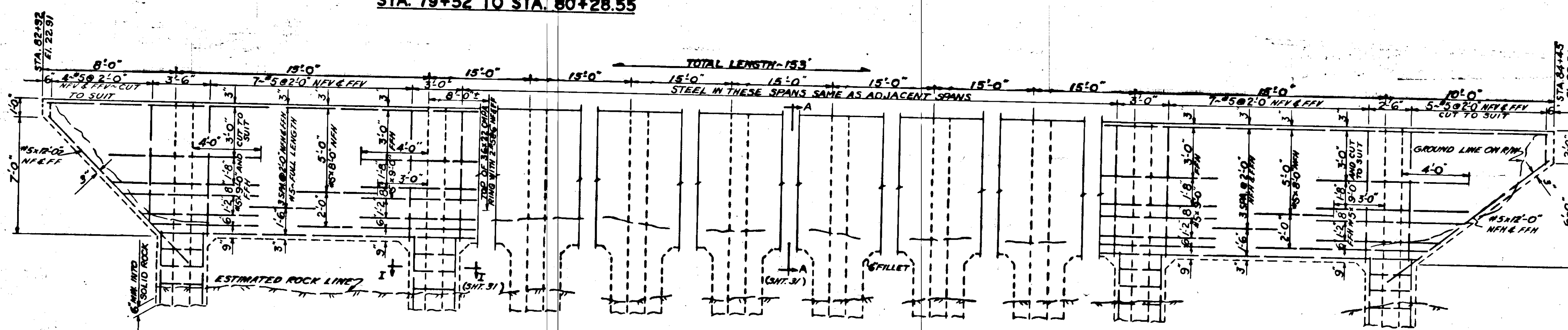
DATE: NOV. 11
SHEET 28 OF 64

STATE	PROJECT DESIGNATION	YEAR	SHEET No.	TOTAL SHEETS
ALASKA	F-095-1(7)	1962	27	64

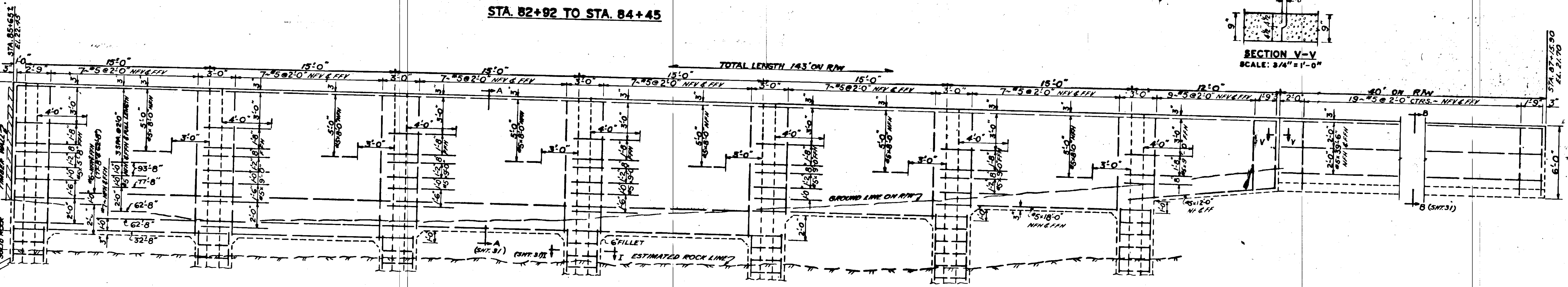
AS BUILT



STA. 79+52 TO STA. 80+28.55



STA. 82+92 TO STA. 84+45

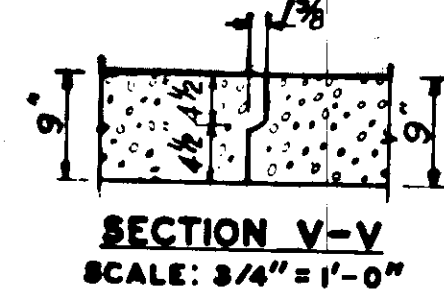


STA. 85+65 TO STA. 87+15.90

SCALE: 1/4" = 1'-0"
ALL VIEWS
UNLESS NOTED

NOTE

ALL ELEVATIONS SHOWN
ARE FOR TOP OF WALL.
SEE NOTES - SHEET 26 & 28



STATE OF ALASKA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

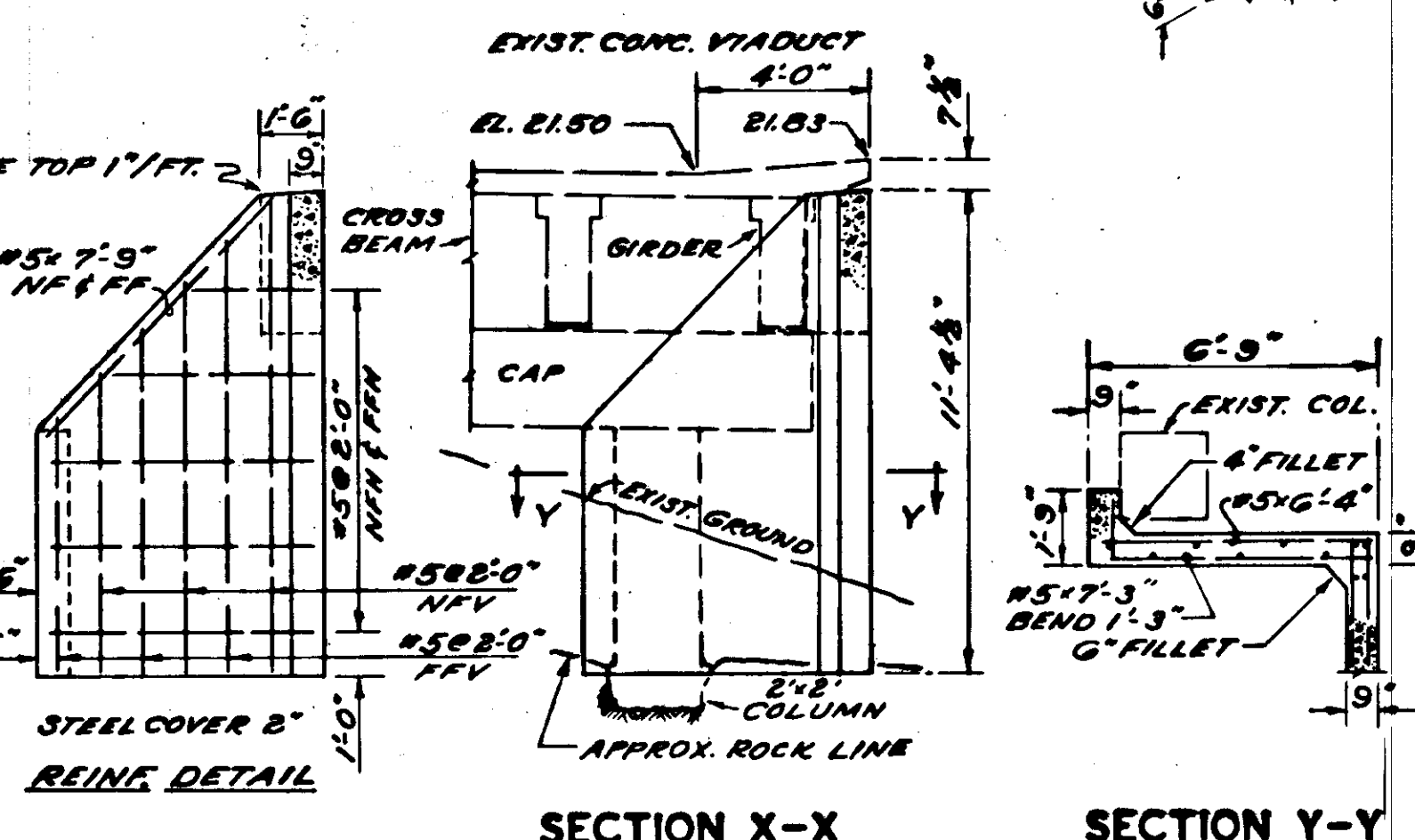
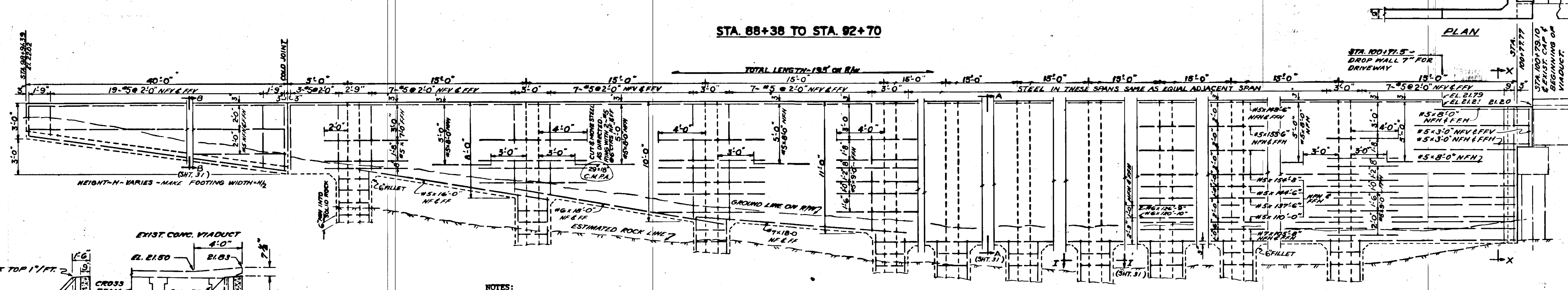
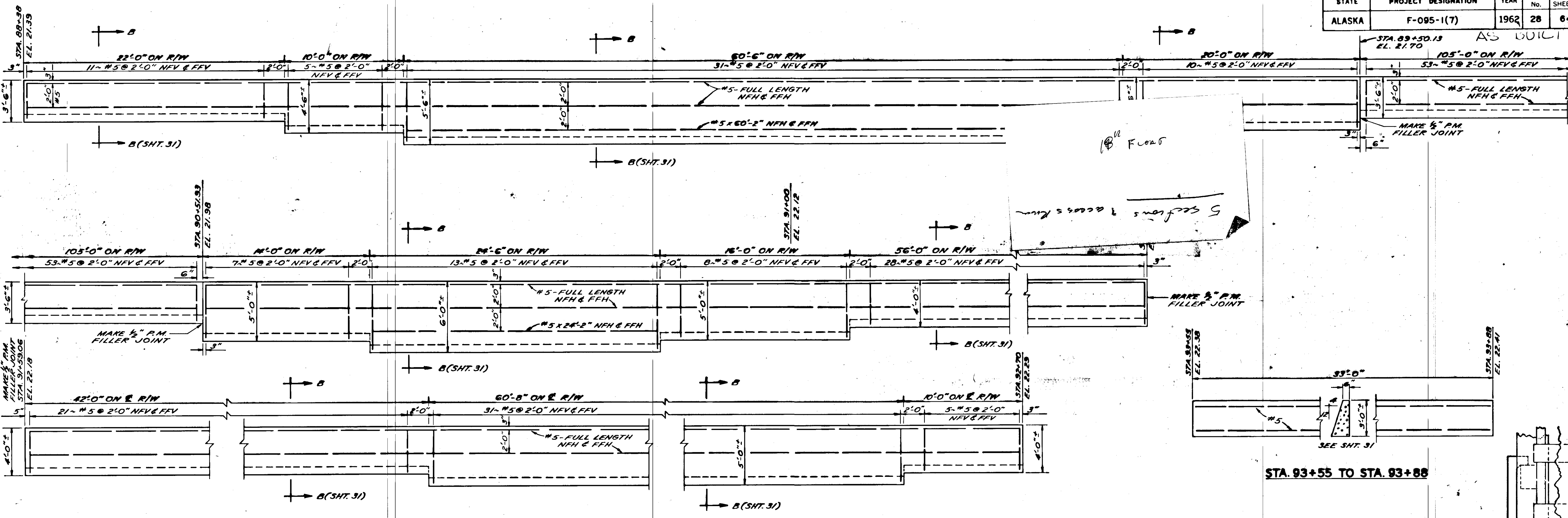
PROJECT F-095-1(7)
TONGASS AVENUE
KETCHIKAN, ALASKA

**SEA SIDE
RETAINING WALLS**
STA. 79+52 TO STA. 87+15.90

LANGDALE AND CONNELL
ENGINEERS
1001 SECURITY BLVD.
SEATTLE 1, WASHINGTON

DATE: NOV. 1960
SHEET 27 OF 64

STATE	PROJECT DESIGNATION	YEAR	SHEET No.	TOTAL SHEETS
ALASKA	F-095-1(7)	1962	28	64



NOTES:

RETAINING WALL CONSTRUCTION SHALL BE COORDINATED WITH ROADWAY DRAINAGE, WATER AND SEWER PLAN SHEETS. ACCESS HOLES FOR RELATED PIPE SHALL BE PROVIDED AT LOCATIONS TO SUIT. STEEL SHALL BE MOVED RATHER THAN CUT.

WEEP HOLES, 4" DIAM., SHALL BE LOCATED AT 20 FEET, MAX., INTERVALS AND ONE FOOT ABOVE FINAL OUTSIDE GROUND ELEVATION IN COUNTER PIER WALL CONSTRUCTION.

THE LENGTHS GIVEN FOR STEEL BARS ARE THE CORRESPONDING CONTINUOUS LENGTHS. THE CONTRACTOR MAY PURCHASE HIS STEEL IN ANY LENGTHS DESIRED, EXCEPT THAT THE FOLLOWING CRITERIA SHALL PREVAIL:

ALL CUT BARS REQUIRED TO COMPLETE A CONTINUOUS LENGTH SHALL BE LAPPED 1'-0" MIN. AT THE CONTRACTOR'S EXPENSE. IN COUNTER PIER WALL CONSTRUCTION, BAR SPLICES ON THE INSIDE FACE OF THE WALL SHALL OCCUR AT MID-SPAN BETWEEN PIERS, AND BAR SPLICES ON THE OUTSIDE FACE OF THE WALL SHALL OCCUR AT THE PIERS. SPLICES SHALL NOT OCCUR IN ADJACENT BARS AT THE SAME LOCATION.

THE STATIONING OF ENDS OF WALLS AND THE HEIGHT OF WALLS IS NOT ABSOLUTE. EACH SHALL BE SUBJECT TO APPROPRIATE REVISION DURING CONSTRUCTION. THE CONTRACTOR SHALL CONFIRM THE PLAN LOCATIONS BEFORE PROCEEDING.

THE TOP OF SEA SIDE RETAINING WALLS AND GRAVITY WALLS SHALL BE CONSTRUCTED PARALLEL TO AND ONE INCH BELOW THE CENTERLINE GRADE.

STATE OF ALASKA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

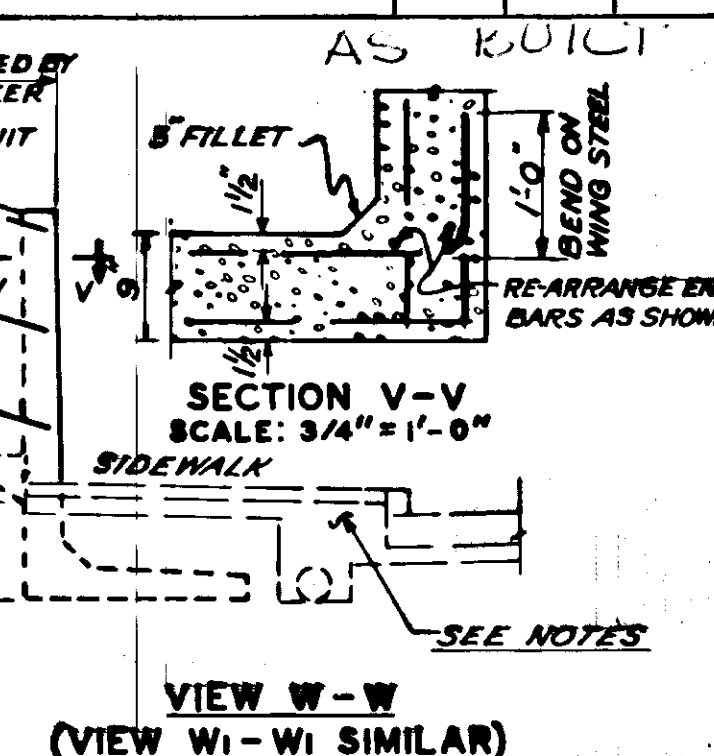
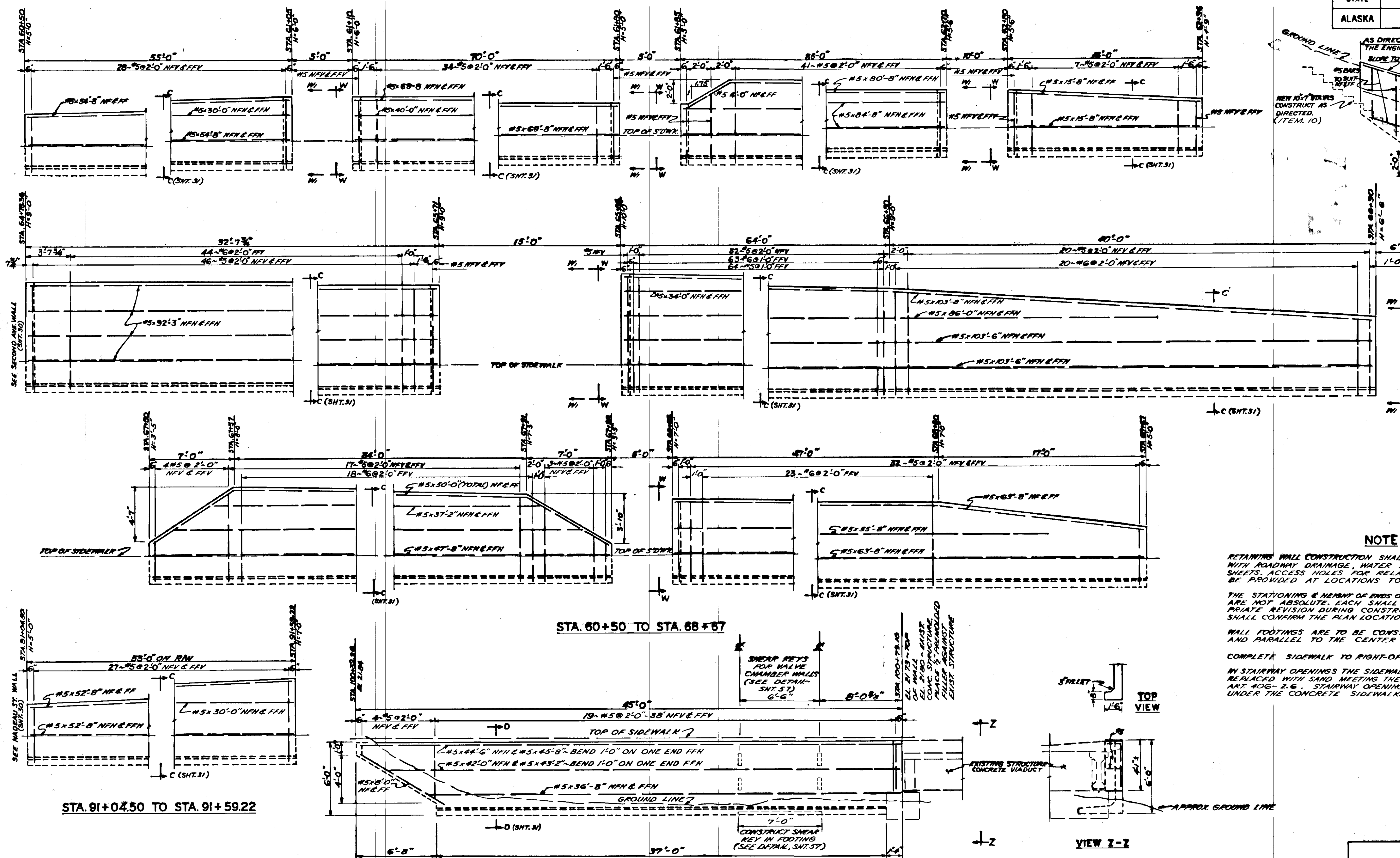
PROJECT F-095-1(7)
TONGASS AVENUE
KETCHIKAN, ALASKA

SEA SIDE
RETAINING WALLS
STA. 88+38 TO STA. 100+77.77

LANGDALE AND CONNELL
 ENGINEERS
 1031 SECURITIES BLDG.
 SEATTLE 1, WASHINGTON

DATE: NOV. 1962
 SHEET: 28 OF 64

STATE	PROJECT DESIGNATION	YEAR	SHEET No.	TOTAL SHEETS
ALASKA	F-095-1(7)	1962	29	64



NOTE

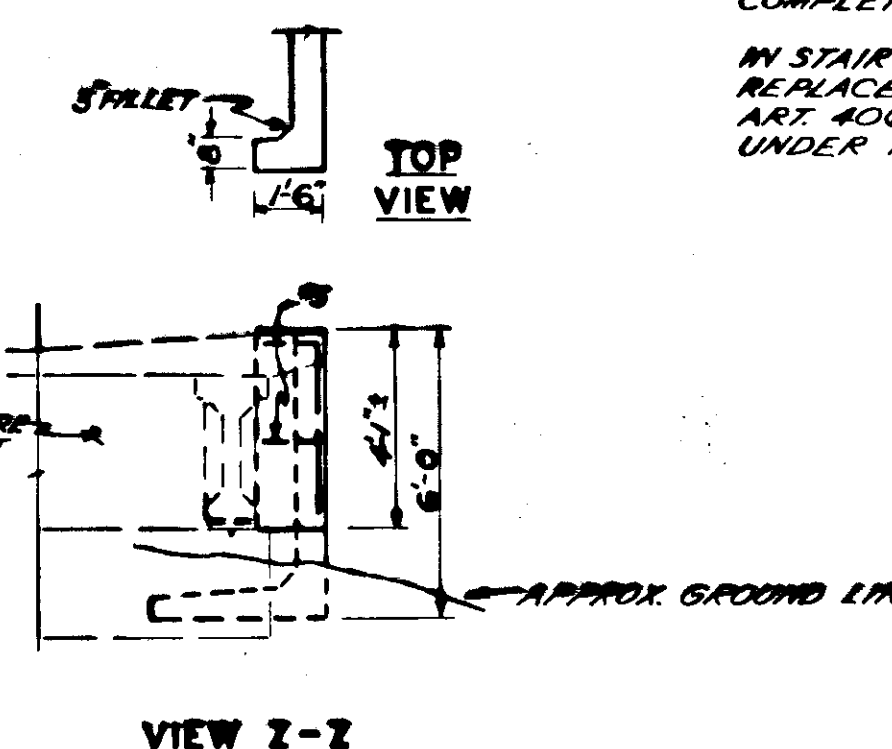
RETAINING WALL CONSTRUCTION SHALL BE COORDINATED WITH ROADWAY DRAINAGE, WATER AND SEWER PLAN SHEETS. ACCESS HOLES FOR RELATED PIPE SHALL BE PROVIDED AT LOCATIONS TO SUIT.

THE STATIONING & HEIGHT OF ENDS OF WALL & STAIRWAY OPENINGS ARE NOT ABSOLUTE. EACH SHALL BE SUBJECT TO APPROPRIATE REVISION DURING CONSTRUCTION. THE CONTRACTOR SHALL CONFIRM THE PLAN LOCATION BEFORE PROCEEDING.

WALL FOOTINGS ARE TO BE CONSTRUCTED 2.21 FEET BELOW AND PARALLEL TO THE CENTER LINE GRADE.

COMPLETE SIDEWALK TO RIGHT-OF-WAY IN STAIRWAY OPENINGS.

IN STAIRWAY OPENINGS THE SIDEWALK BASE COURSE SHALL BE REPLACED WITH SAND MEETING THE GRADING REQUIREMENTS OF ART. 406-2.6. STAIRWAY OPENING SHALL BE GRADED TO DRAIN UNDER THE CONCRETE SIDEWALK.



STA. 100+32.26 TO STA. 100+79.10

SCALE: 1/4" = 1'-0"
ALL VIEWS
UNLESS NOTED

STATE OF ALASKA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

PROJECT F-095-1(7)
TONGASS AVENUE
KETCHIKAN, ALASKA

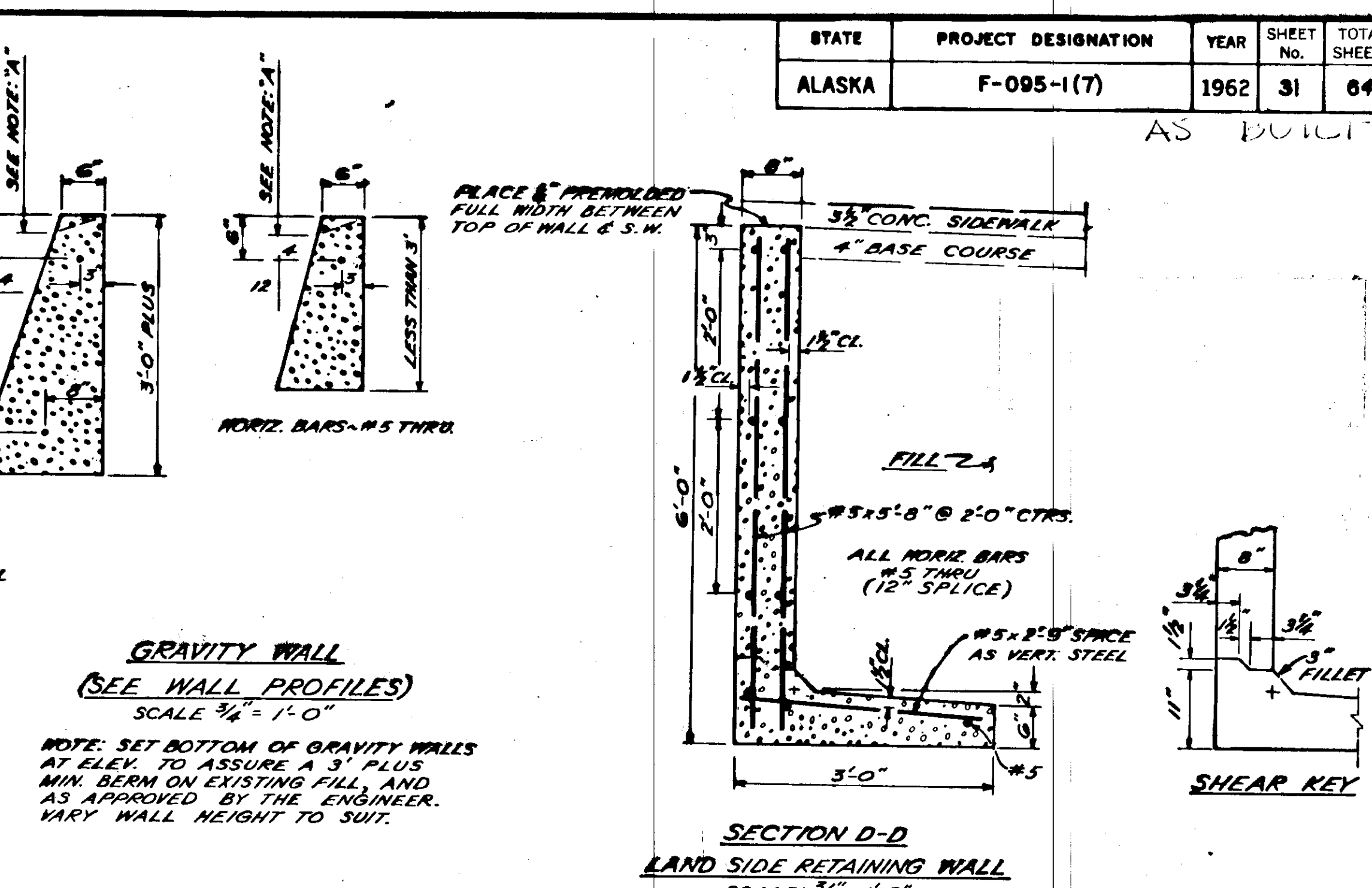
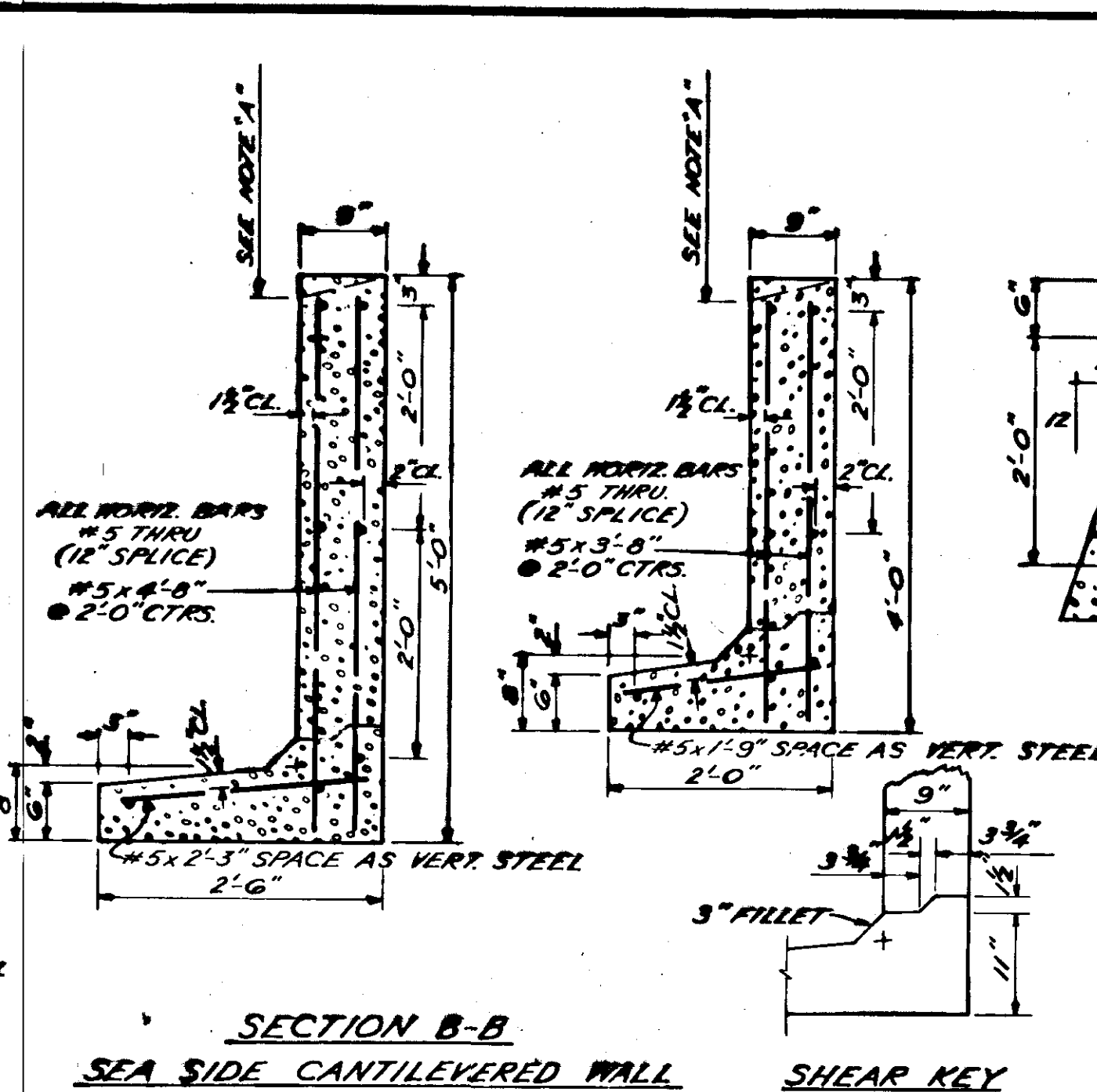
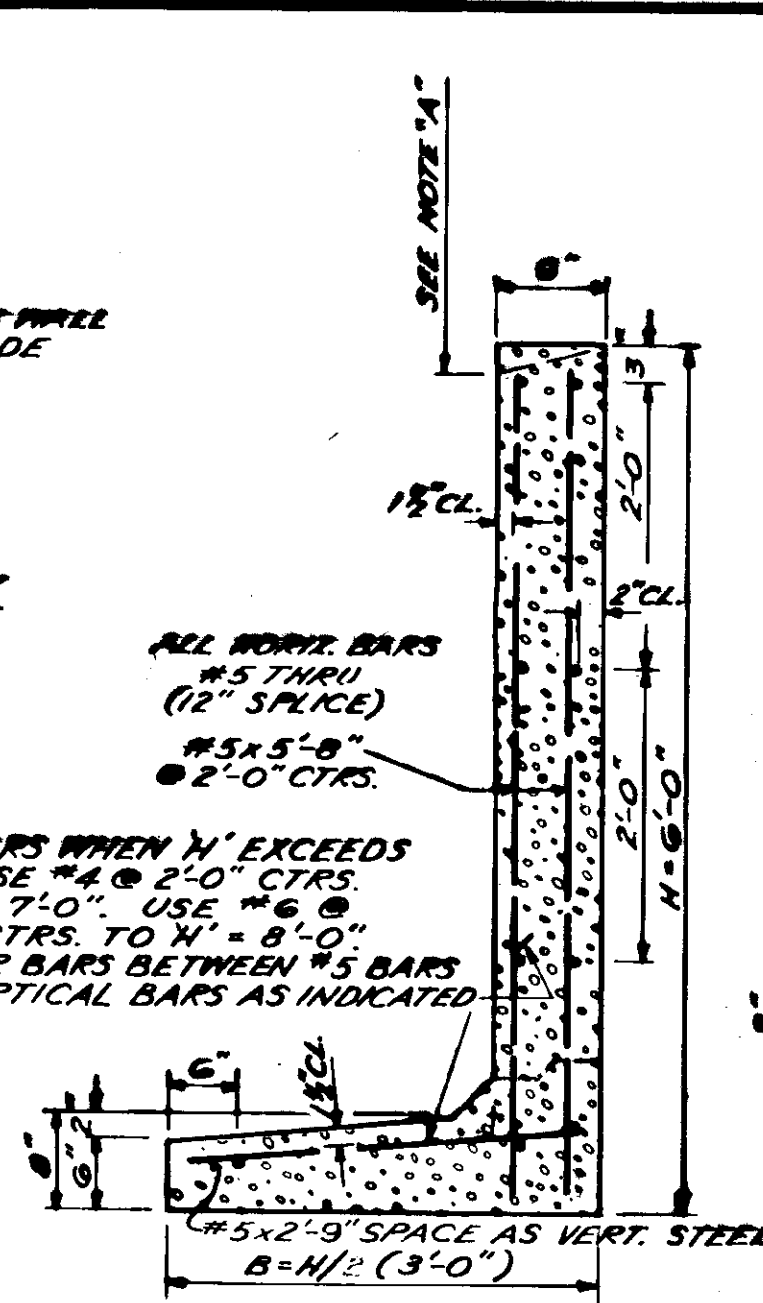
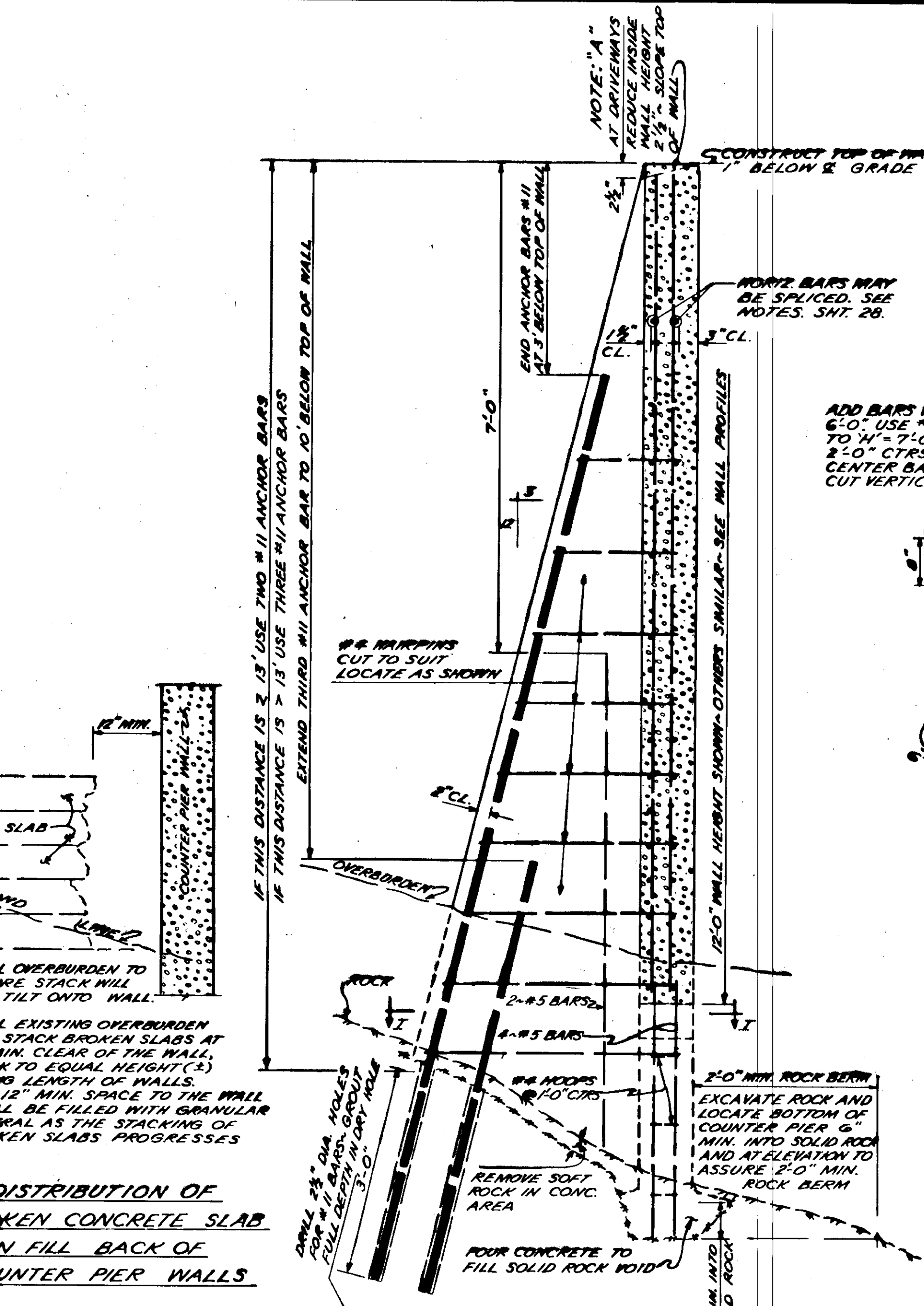
LAND SIDE
RETAINING WALLS
STA. 60+50 TO STA. 100+79.10

LANGDALE AND CONNELL
ENGINEERS
1031 SECURITIES BLDG.
SEATTLE 1, WASHINGTON

DATE: NOV. 1960
SHEET 29 OF 64

STATE	PROJECT DESIGNATION	YEAR	SHEET No.	TOTAL SHEETS
ALASKA	F-095-1(7)	1962	31	64

AS BUILT



EXCAVATION IN ROCK

WHERE ROCK IS ENCOUNTERED, THE ROCK IS TO BE EXCAVATED ON A NEAR VERTICAL PLANE AT THE RIGHT-OF-WAY UNDER ITEM 102 (1) - "UNCLASSIFIED EXCAVATION". VARIATIONS SHALL BE LIMITED TO BEYOND THE RIGHT-OF-WAY, AND SHALL BE HELD TO A MINIMUM. CONCRETE IS TO BE POURED AGAINST THE FINAL ROCK SURFACE FOR THE FULL HEIGHT OF THE ROCK. THE CONCRETE SHALL BE STRUCK OFF TO ASSURE DRAINAGE RUN TO THE NEAREST DRAINAGE TRENCH.

EXCAVATION IN COMMON

WHERE ROCK IS NOT ENCOUNTERED, EXCAVATION SHALL BE EXTENDED TO 1'-6" BEYOND THE RIGHT-OF-WAY UNDER ITEM 102 (1) - "UNCLASSIFIED EXCAVATION". THE WALL FOOTING SHALL BE POURED TO THE RIGHT-OF-WAY. THE 1'-4" DEPTH OF THE FOOTING SHALL BE BACKFILLED WITH COMPACTED IMPERVIOUS UNCLASSIFIED EXCAVATION BEFORE THE FORMS ARE SET FOR THE REMAINDER OF THE WALL. AFTER THE WALL IS COMPLETED, THE WALL SHALL BE BACKFILLED WITH SELECTED GRANULAR UNCLASSIFIED EXCAVATION, APPROVED BY THE ENGINEER.

THE GROUND ADJACENT TO THE WALL SHALL BE SLOPED TO 6 INCHES BELOW THE TOP OF THE WALL.

VERTICAL DRAINAGE TRENCH

VERTICAL DRAINAGE TRENCHES, 2'-0" x 1'-0" IN DEPTH BEYOND THE RIGHT-OF-WAY, SHALL BE PROVIDED IN THE ROCK EXCAVATION, AND ACCOMMODATED IN THE CONCRETE POUR. THE DRAINAGE TRENCHES SHALL BE LOCATED AT THE LOW POINTS IN THE TOP OF THE ROCK TO ACCOMMODATE SEEPAGE, AND AT 30 FEET MAXIMUM INTERVALS.

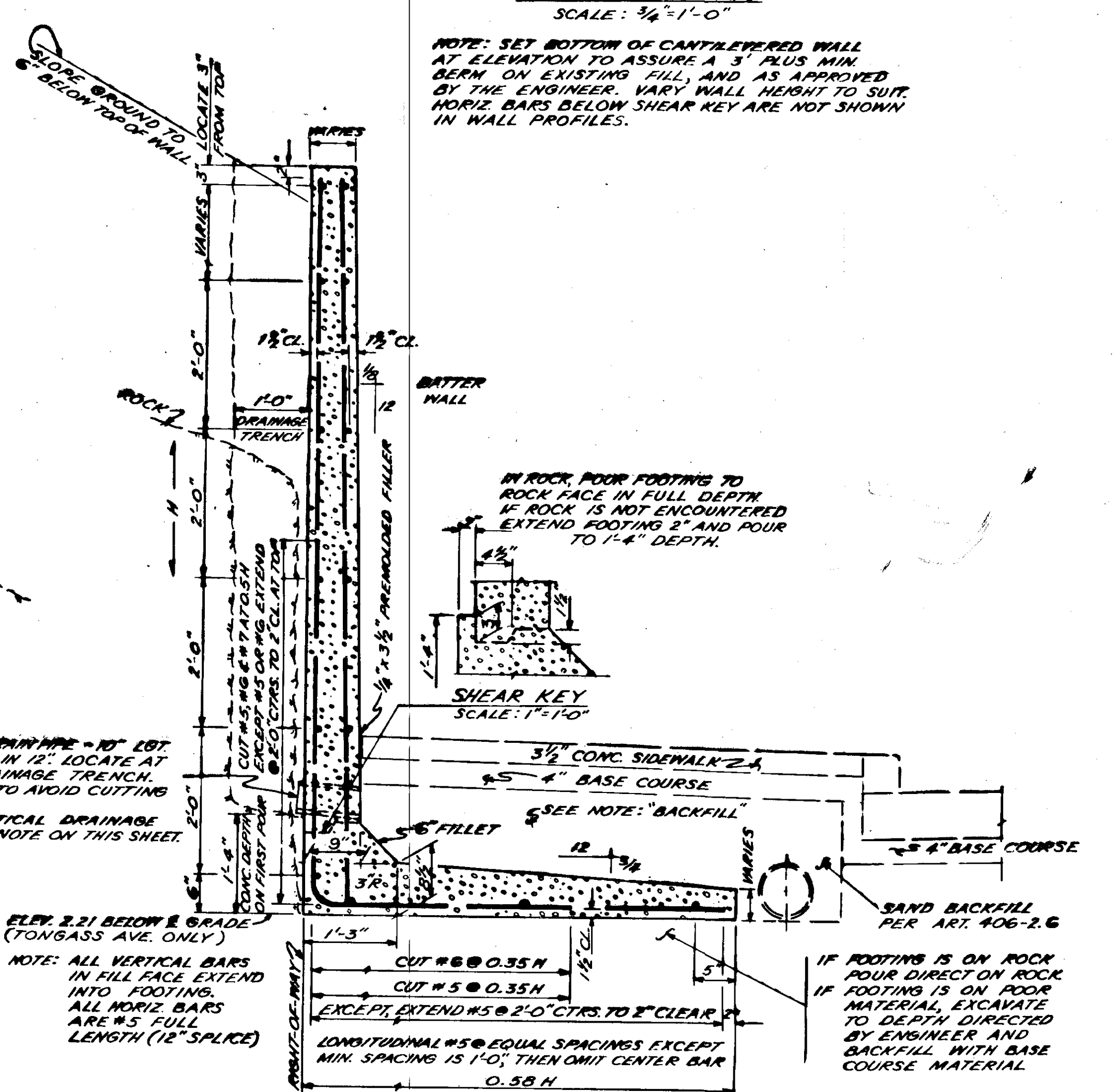
AT LOW AREAS IN THE FINAL GROUND ELEVATION ALONG THE TOP OF THE WALL WHERE DRAINAGE IS LIKELY TO COLLECT, A 2'-0" x 1'-0" VERTICAL DRAINAGE TRENCH SHALL BE CONSTRUCTED BEHIND THE WALL, AND EXTENDED THROUGH THE UNDERLYING ROCK TO THE DRAIN TILE.

BACKFILL

THE 2'-0" x 1'-0" VERTICAL DRAINAGE TRENCHES SHALL BE BACKFILLED WITH SAND MEETING THE REQUIREMENTS OF ARTICLE 406 - 2.6.

THE RETAINING WALL FOOTING SHALL BE COVERED WITH SELECTED UNCLASSIFIED EXCAVATION TO THE BOTTOM OF THE 4" BASE COURSE UNDER THE SIDEWALK AND WELL COMPACTED.

AT EACH DRAIN TILE IN THE WALL, A 2'-0" TRENCH - CENTERED ON THE TILE - SHALL BE DUG FOR THE FULL DEPTH TO THE TOP OF THE FOOTING, AND CONTINUED AT THE FOOTING SLOPE TO INTERSECT THE PERFORATED DRAIN PIPE TRENCH. THE 2'-0" TRENCH SHALL BE BACKFILLED WITH SAND MEETING THE REQUIREMENTS OF ARTICLE 406 - 2.6.



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PROJECT F-095-1(7)
 TONGASS AVENUE
 KETCHIKAN, ALASKA

**RETAINING WALL
 CROSS SECTIONS**

LANGDALE AND CONNELL
 ENGINEERS
 1601 SECURITIES BLDG.
 SEATTLE 1, WASHINGTON

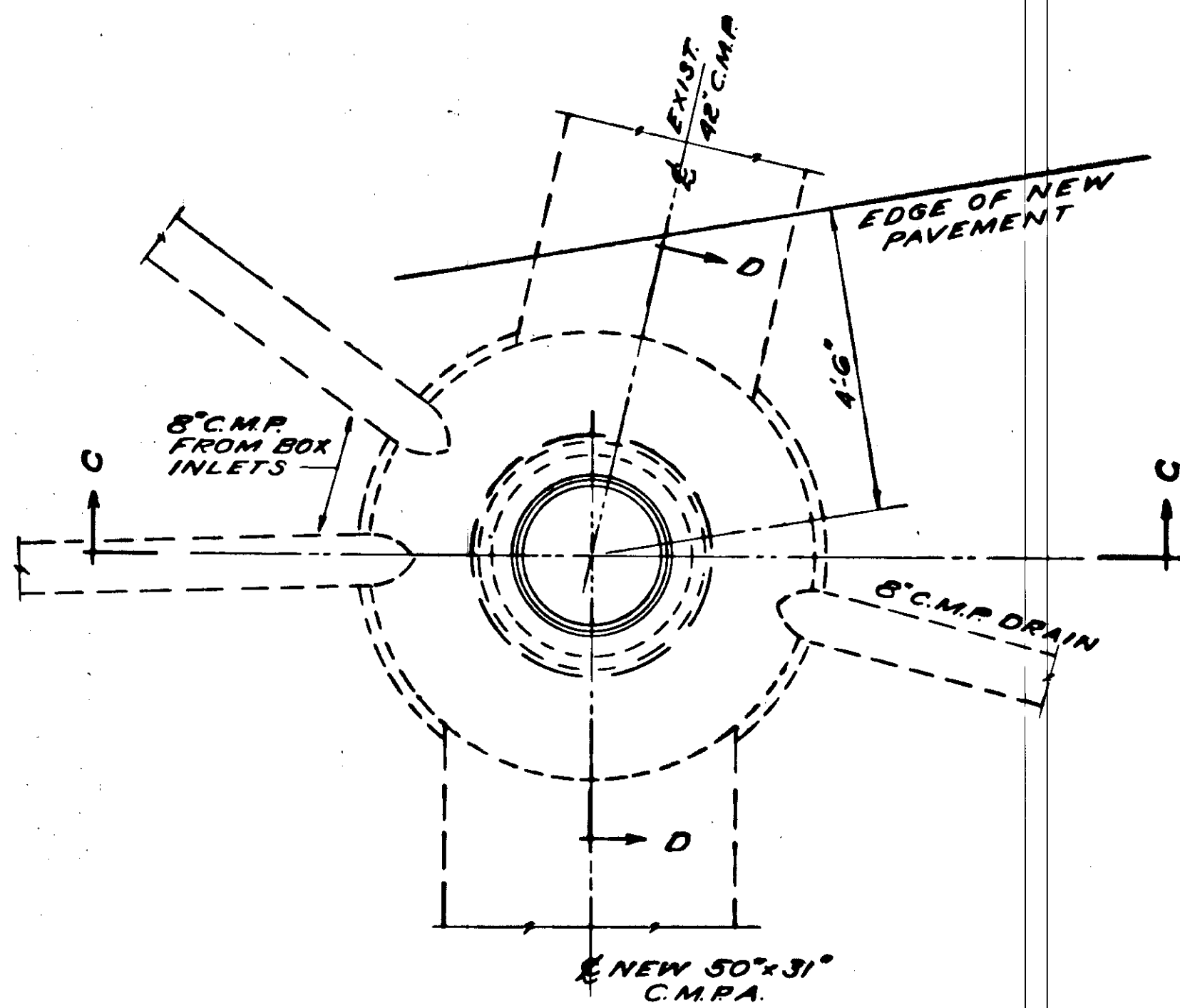
DATE: NOV. 1960
 SHEET 31 OF 64

STATE	PROJECT DESIGNATION	YEAR	SHEET No.	TOT SHEET
ALASKA	F-095-1(7)	1962	32	64

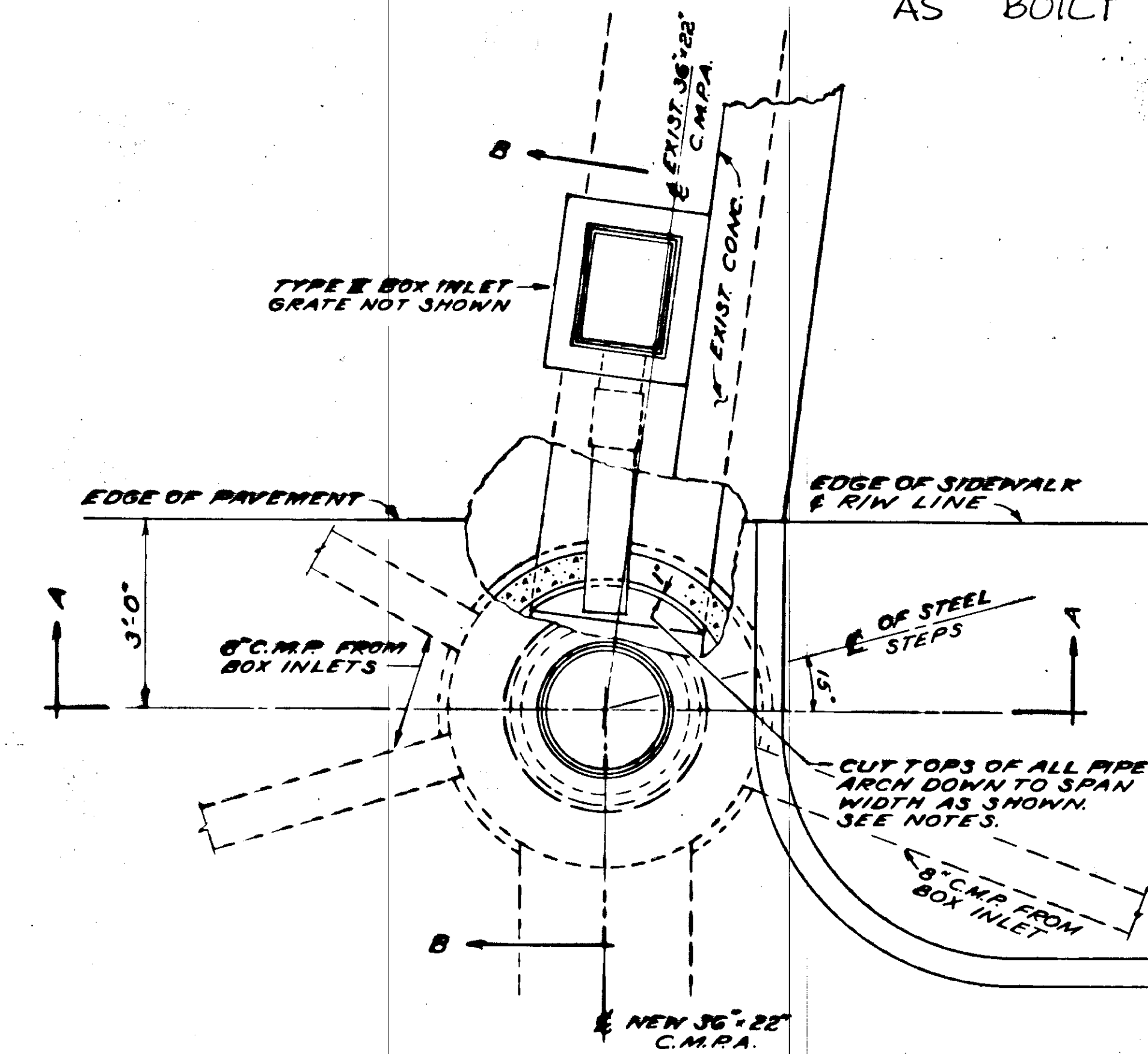
AS BUILT

LETTER DESIGNATIONS SHOWN ON DRAWINGS

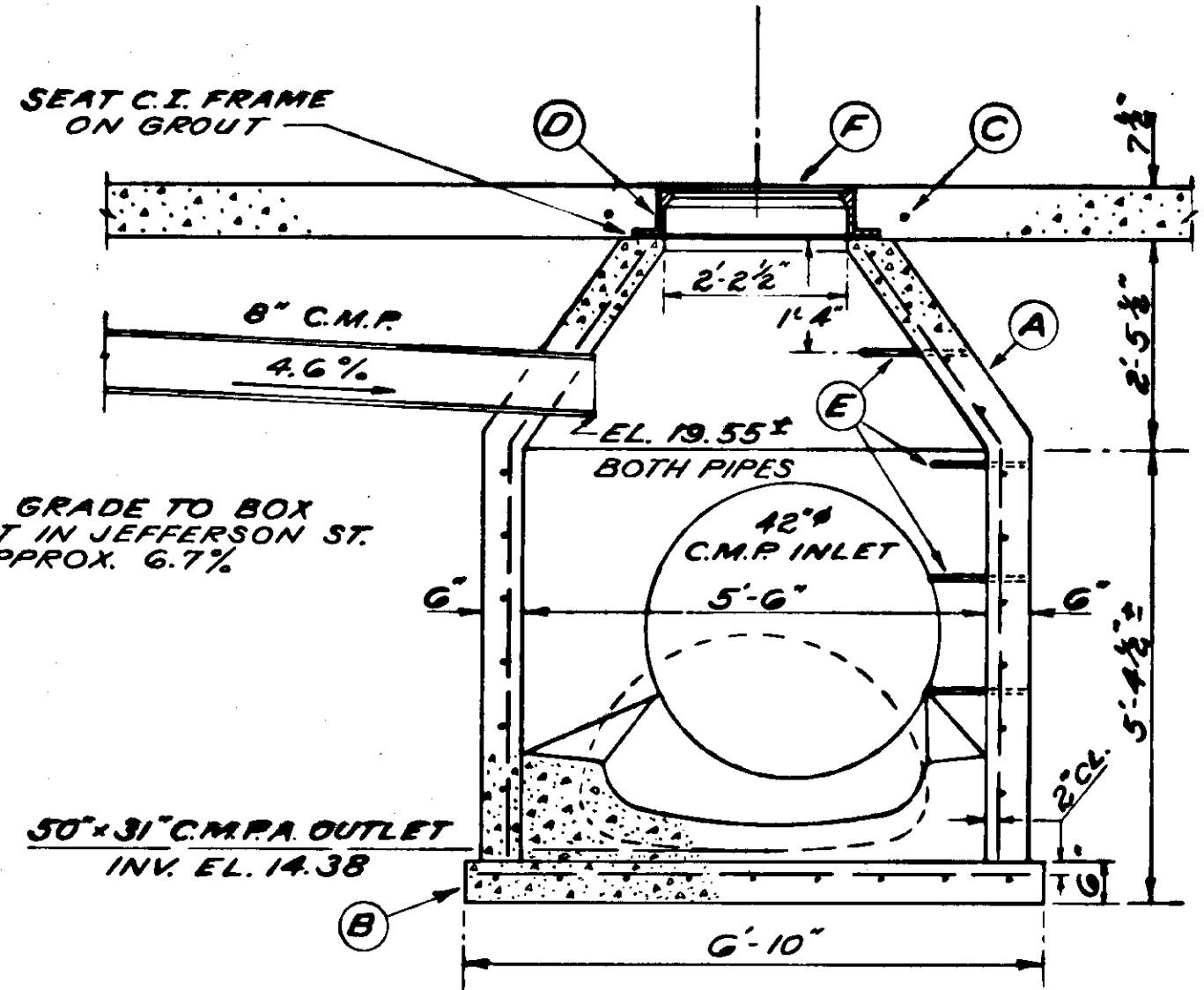
- A STRAIGHT AND TAPERED SECTION. POURED-IN-PLACE CONCRETE OR PRECAST ONE PIECE OR IN SECTIONS. REINFORCING STEEL IS NO. 3 BARS SPACED 9" ON CENTERS WITH 2" COVER AS SHOWN. CUT STEEL TO CLEAR PIPES.
- B POURED-IN-PLACE CONCRETE BASE. REINFORCING STEEL IS NO. 3 BARS SPACED 9" ON CENTERS WITH 2" COVER AS SHOWN.
- C NO. 5 x 3'-6" DIAMETER REINFORCING BAR AROUND FRAME.
- D 1/4" PREMOLDED FILLER AROUND FRAME.
- E 1" DIAMETER GALVANIZED STEEL STEP - OLYMPIC FOUNDRY NO. 5999 OR EQUAL. SPACE 1'-4" ON CENTERS. COAT WITH KOPPERS BITUPLASTIC NO. 33 OR EQUAL AFTER STEPS ARE IN PLACE.
- F CAST IRON FRAME AND COVER (COVER NOT SHOWN) OLYMPIC FOUNDRY NO. 5920 OR EQUAL.
- G CAST IRON FRAME AND GRATE (GRATE NOT SHOWN) OLYMPIC FOUNDRY NO. 5760 OR EQUAL.



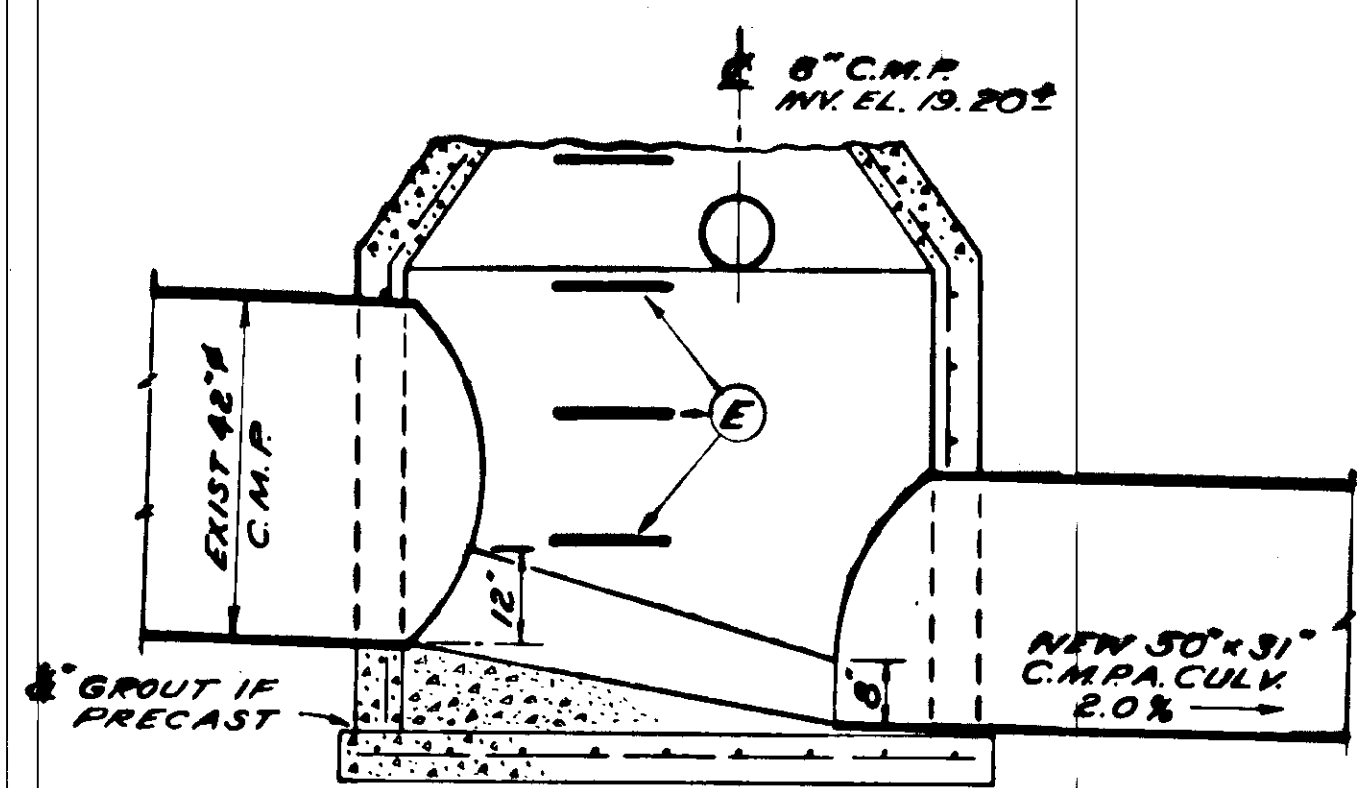
PLAN AND SECTION
CONCRETE CULVERT INLET AT STA. 80+43
SCALE 3/4" = 1'-0"



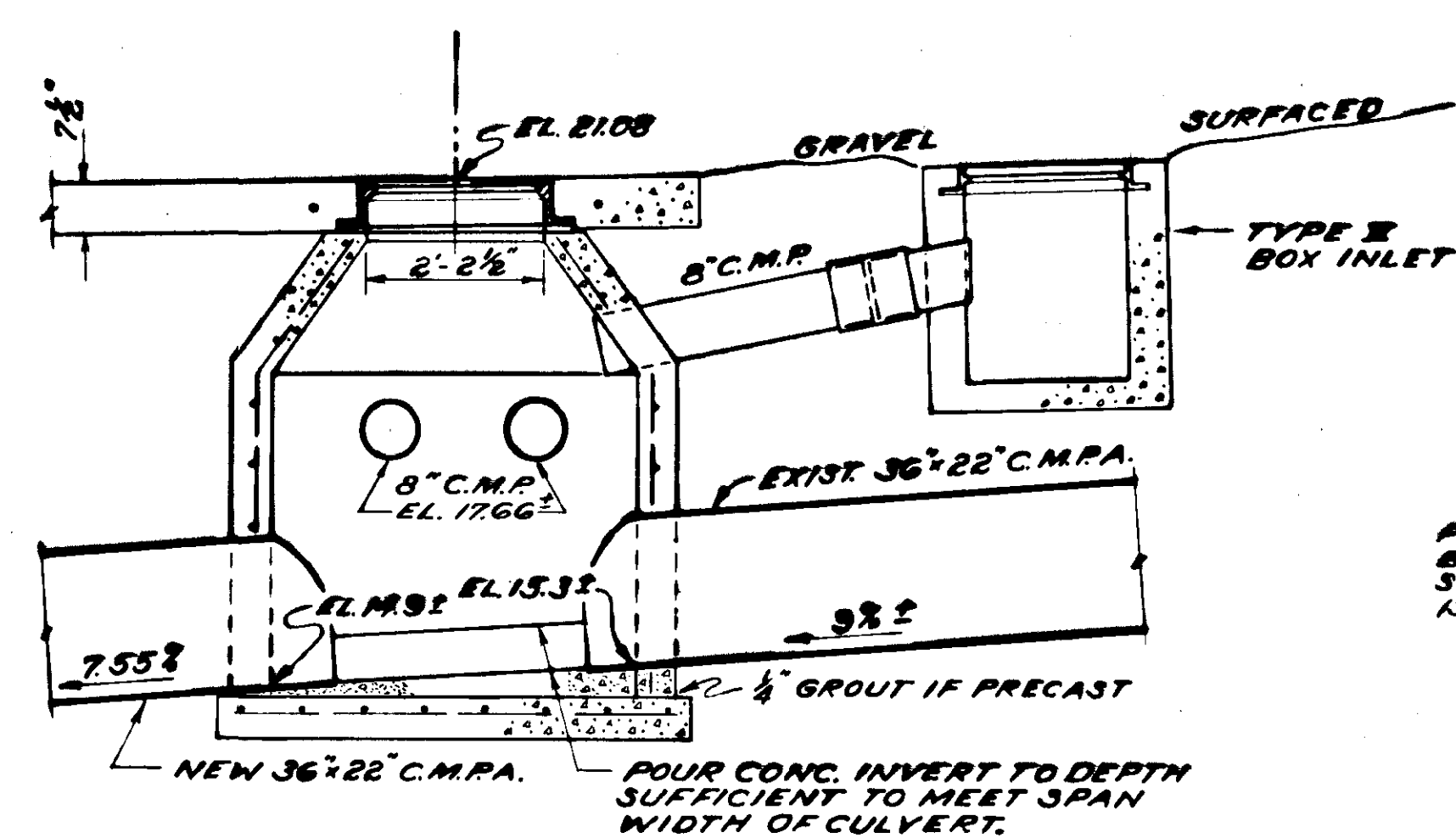
PLAN AND SECTION A - A
CONCRETE MANHOLE AT APPROX. STA. 87+85.5
SCALE 1/2" = 1'-0"



PLAN AND SECTION C - C
CONCRETE MANHOLE AT APPROX. STA. 75+17.5
SCALE 1/2" = 1'-0"



SECTION D - D



SECTION B - B

GENERAL NOTES

- ALL CONCRETE SHALL BE CLASS "AA". THE USE OF A LIQUID MEMBRANE - FORMING CURING COMPOUND CONFORMING TO THE REQUIREMENTS OF AASHTO M 148 WILL BE PERMITTED FOR CURING CONCRETE. EITHER TYPE I OR TYPE II MAY BE USED. ALL PROVISIONS OF ARTICLE 408 - 3.18 SHALL BE COMPLIED WITH.
- EACH METAL FRAME SHALL BE WRAPPED ALL AROUND WITH 1/4" PREMOLDED FILLER BEFORE CONCRETE IS PLACED AND THE JOINT SEALED WITH JOINT SEALING MATERIAL.
- FOUNDATION FILL SHALL BE PLACED BELOW THE FOUNDATION ELEVATION OF MANHOLES, INLETS, CATCH BASINS, CLEANOUTS & OTHER STRUCTURES TO A DEPTH AND WIDTH AS SPECIFIED AND DIRECTED BY THE ENGINEER.
- DEPTH OF EXISTING PIPES MAY VARY FROM ELEVATION SHOWN. CONCRETE MANHOLES AND OTHER STRUCTURES WILL BE POURED IN PLACE OR PRECAST TO MEET EXISTING PIPES AND PIPE ARCH CULVERTS.

STATE OF ALASKA
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PROJECT F-095-1(7)
TONGASS AVENUE
KETCHIKAN, ALASKA

DETAILS
CONCRETE STORM MANHOLES
CULVERT INLET

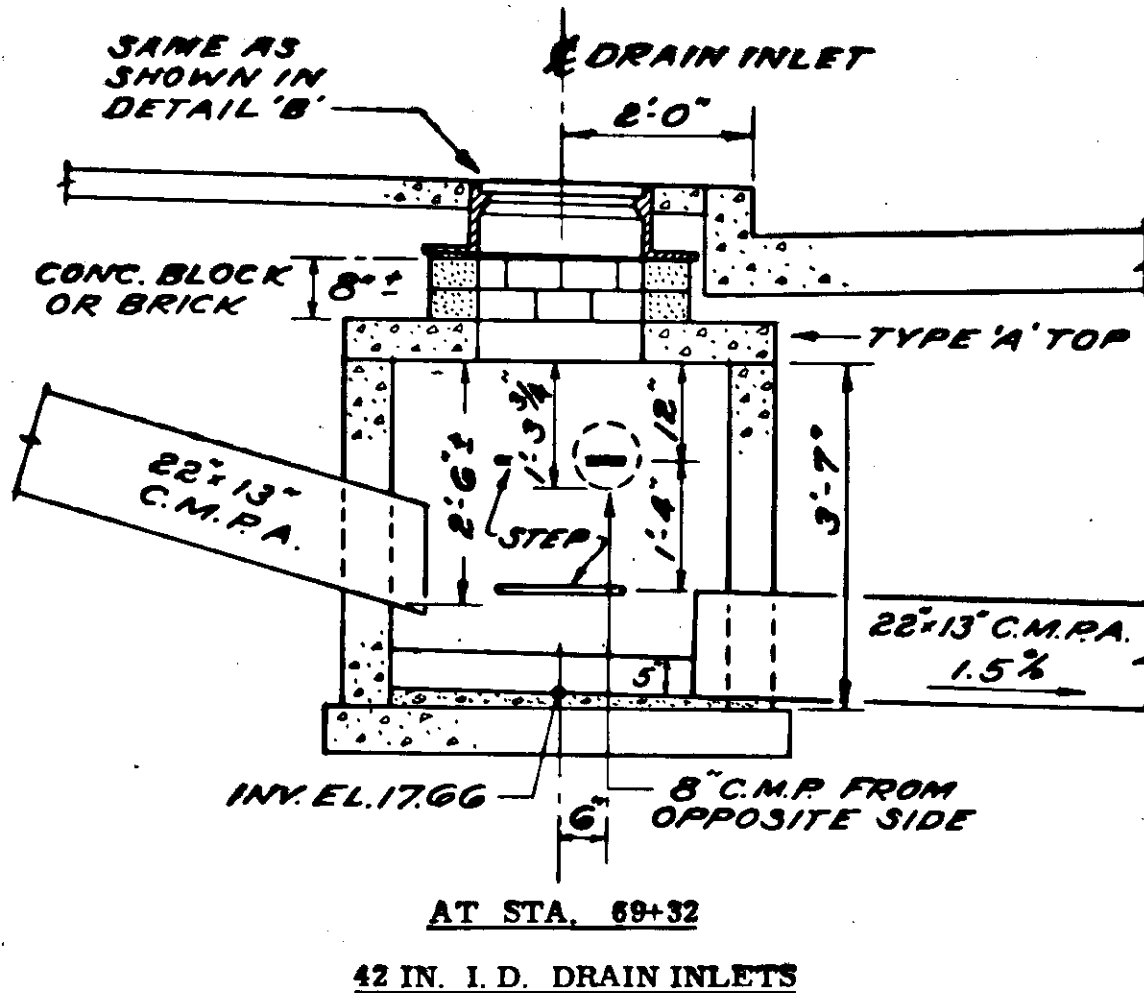
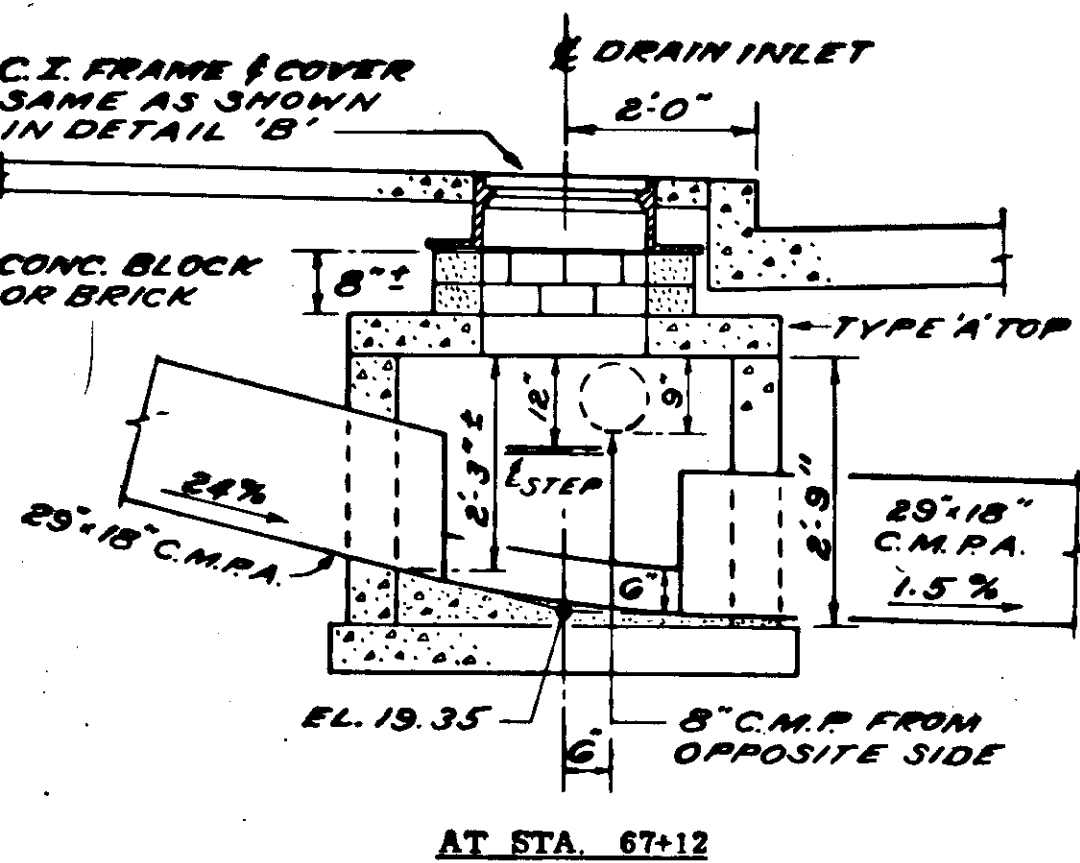
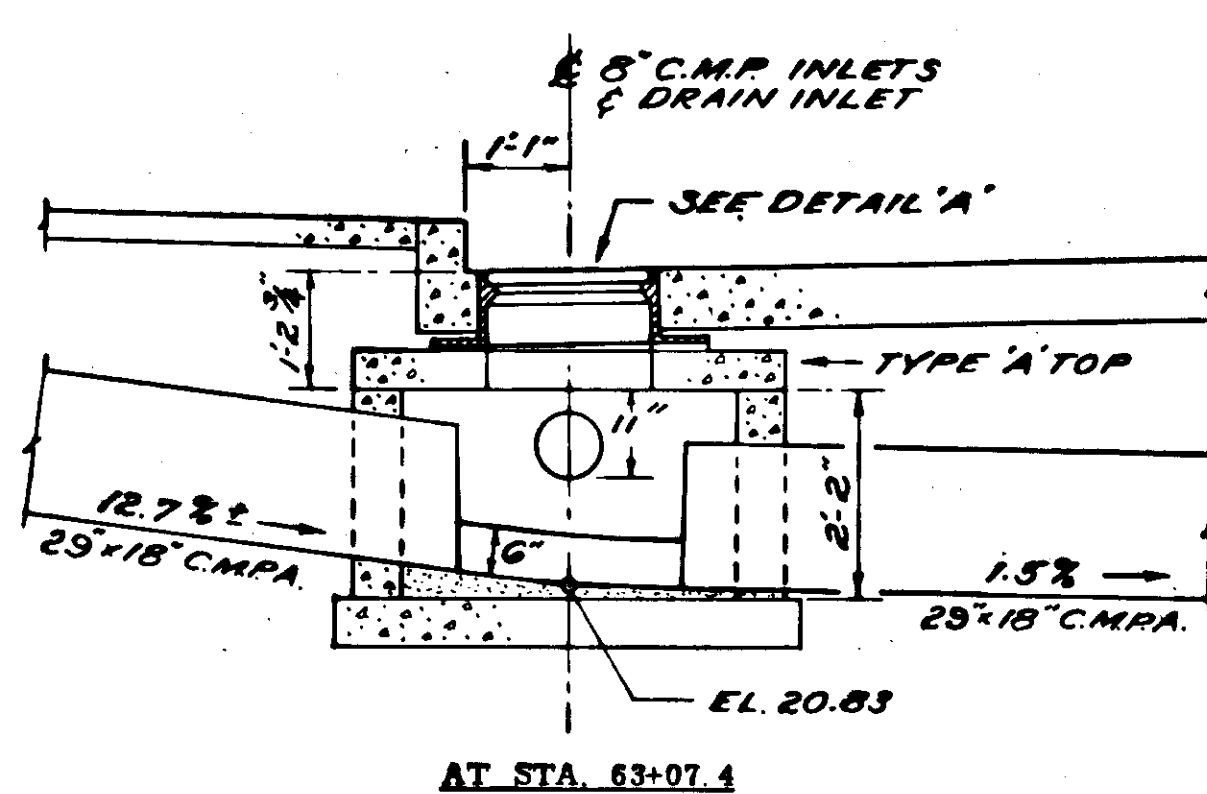
LANGDALE AND CONNELL
ENGINEERS
1001 SECURITY BLDG.
SEATTLE 1, WASHINGTON

DATE: NOV. 1962
SHEET 32 OF 64

STATE	PROJECT DESIGNATION	YEAR	SHEET No.
ALASKA	F-095-1(7)	1962	33

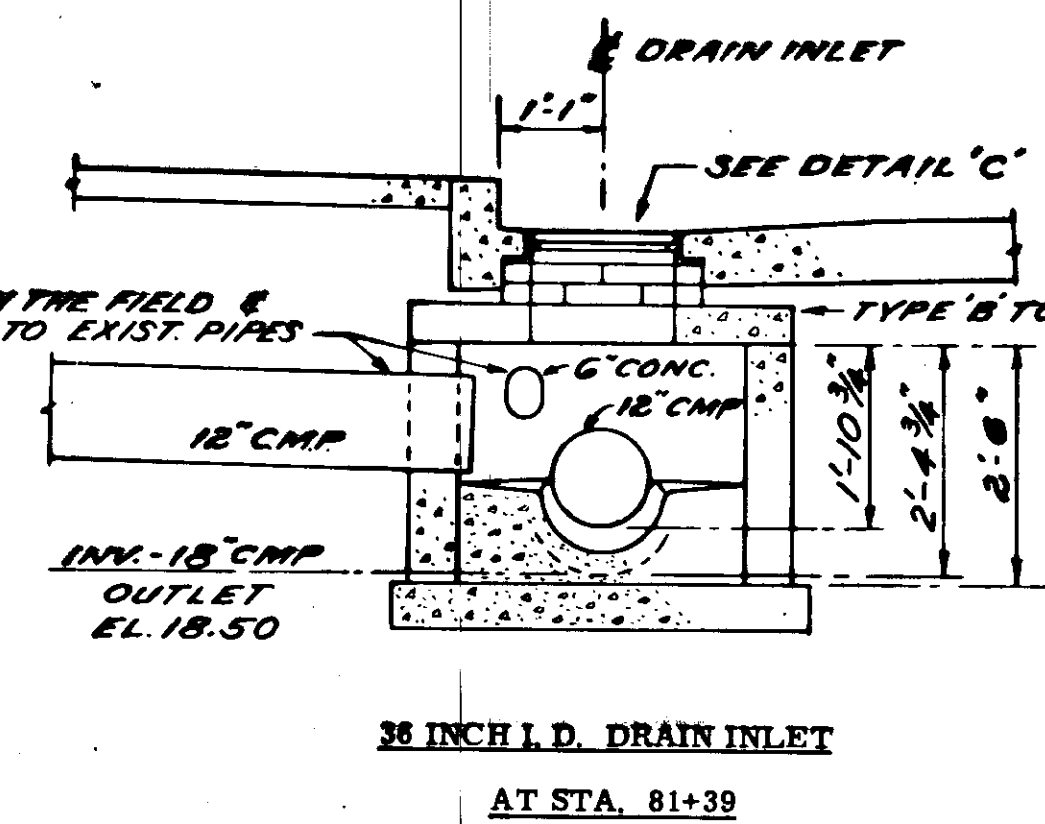
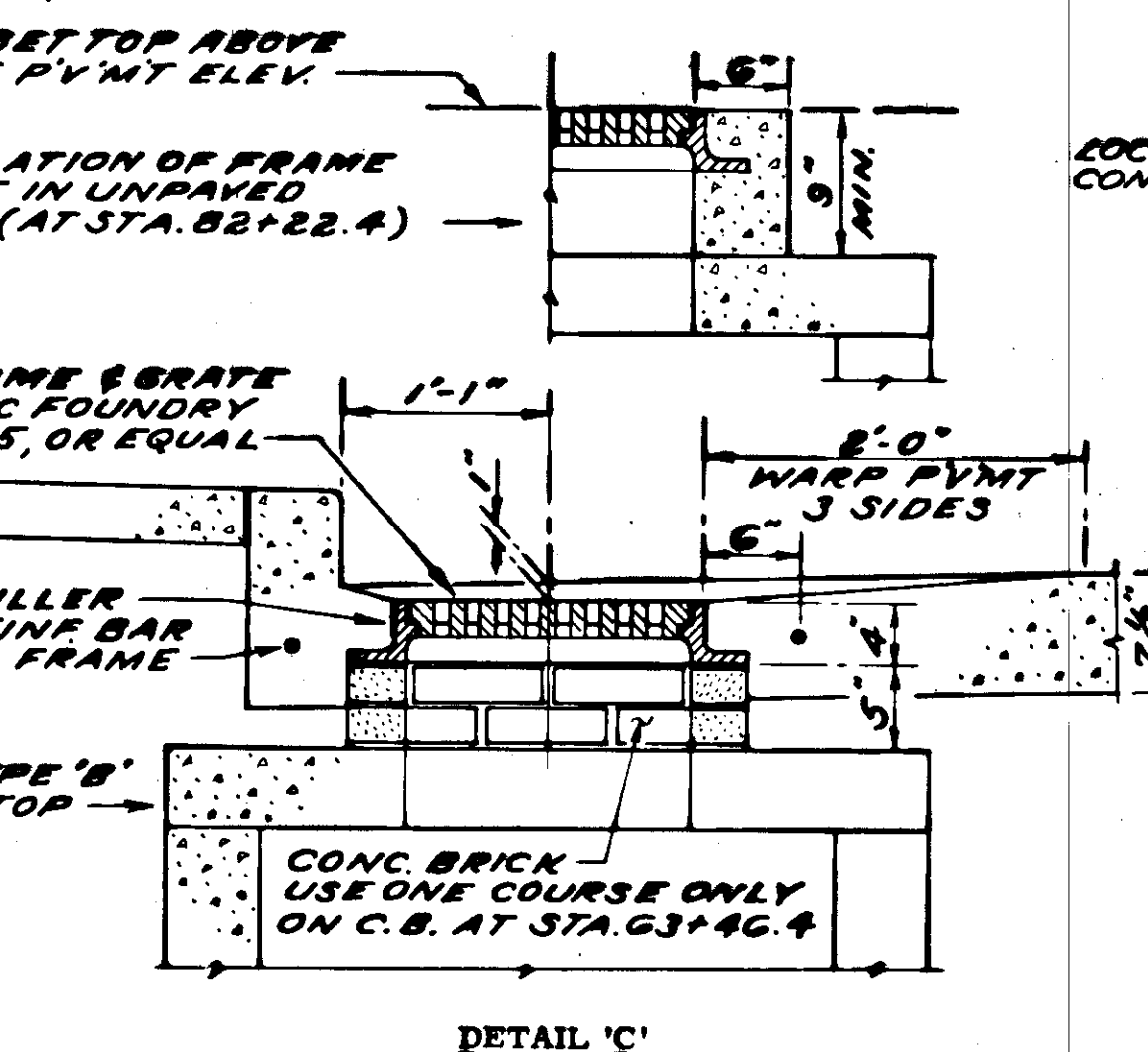
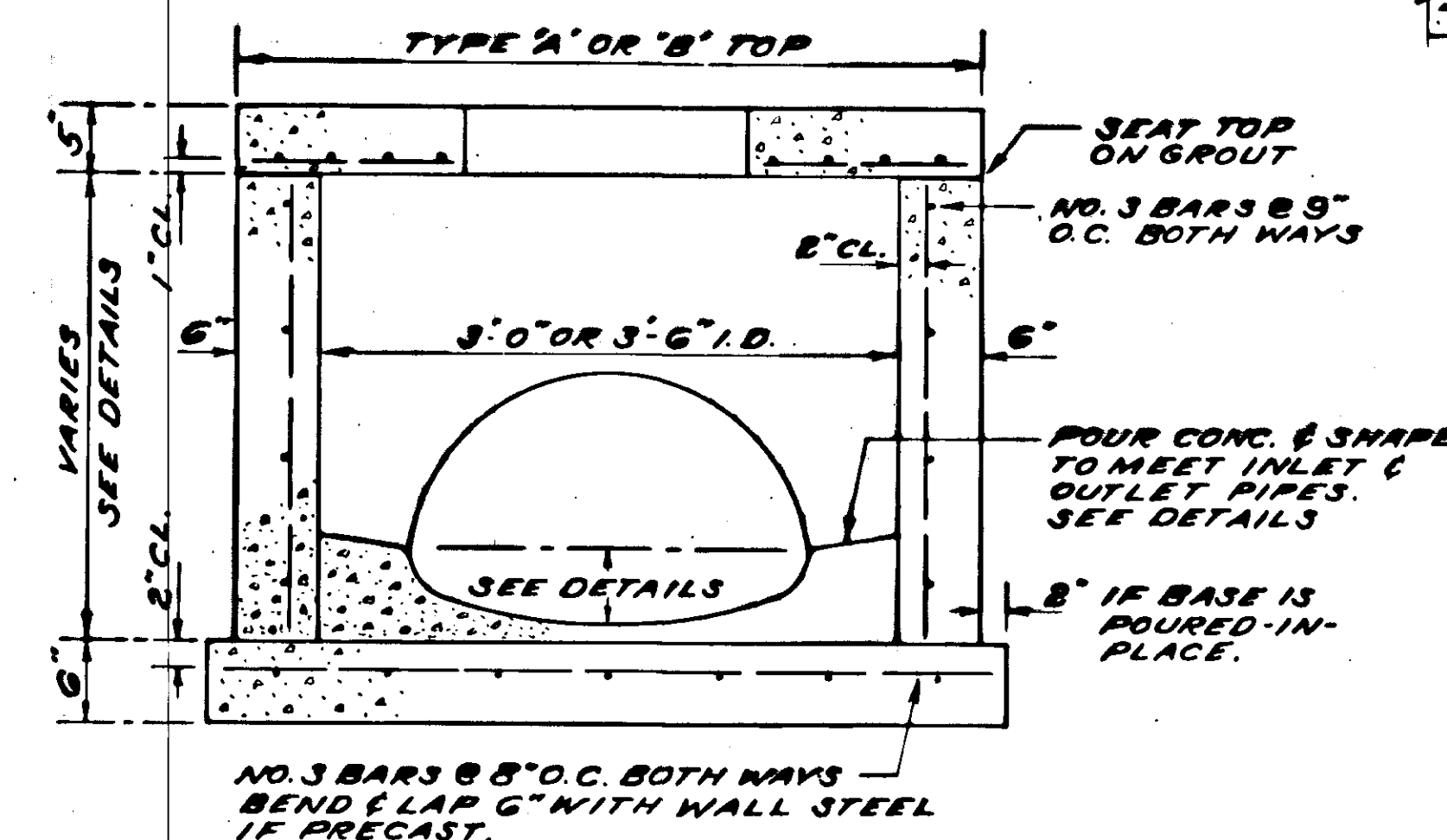
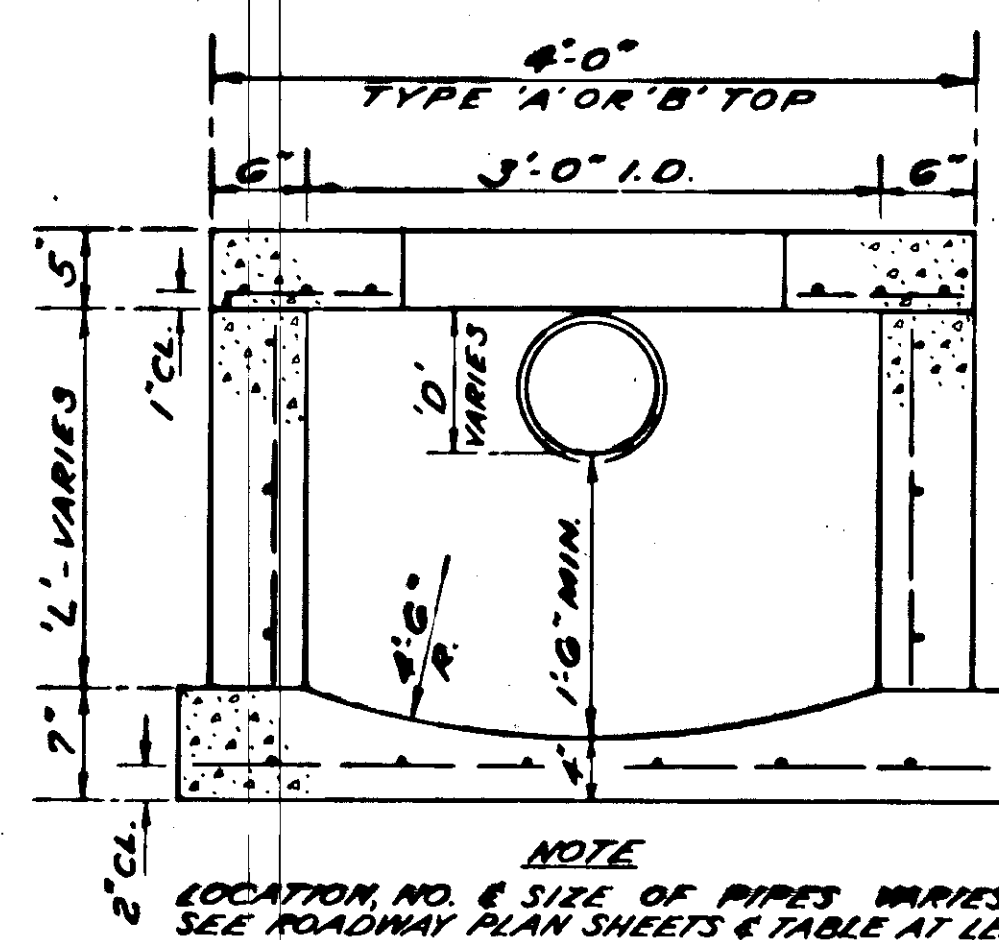
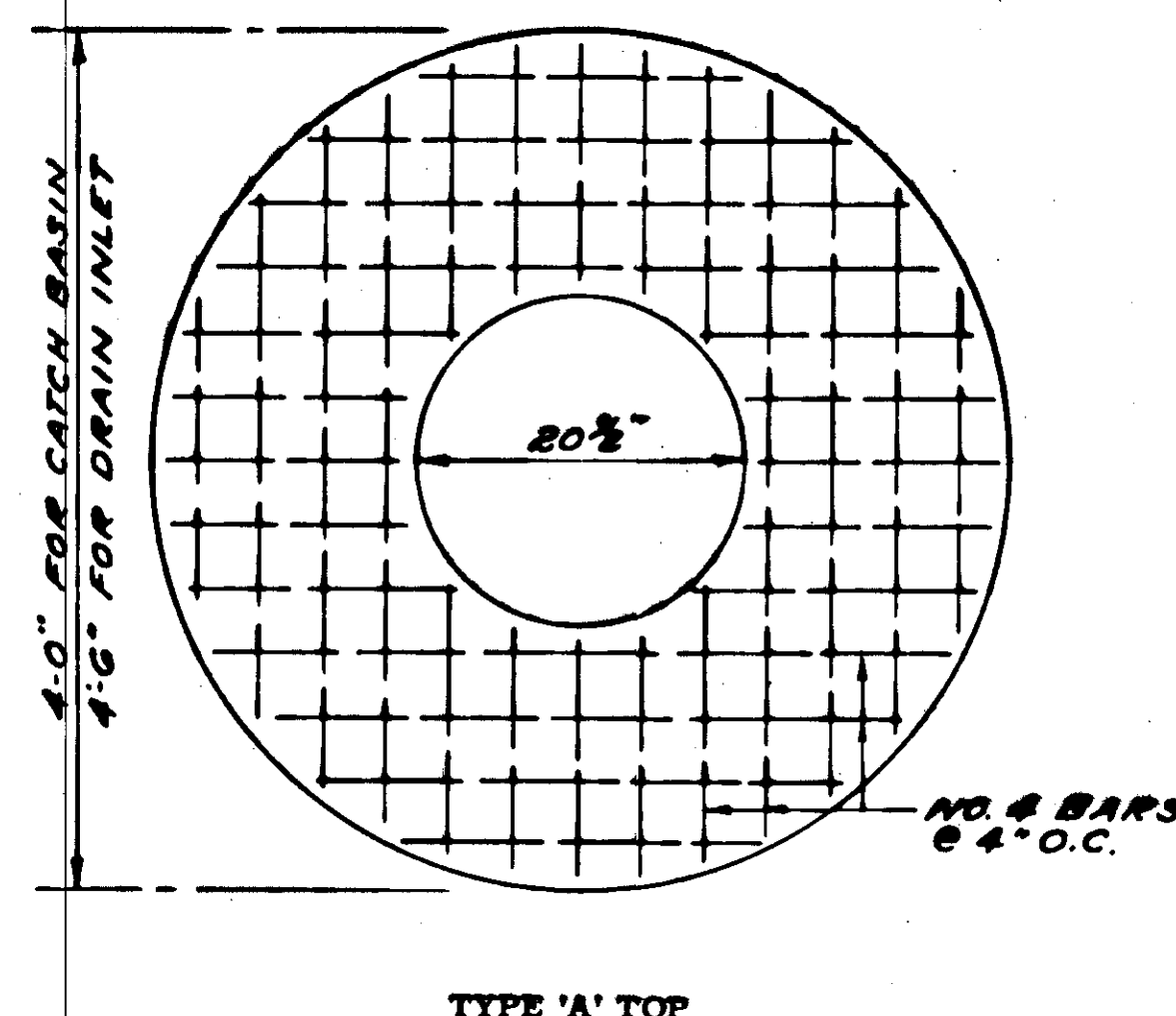
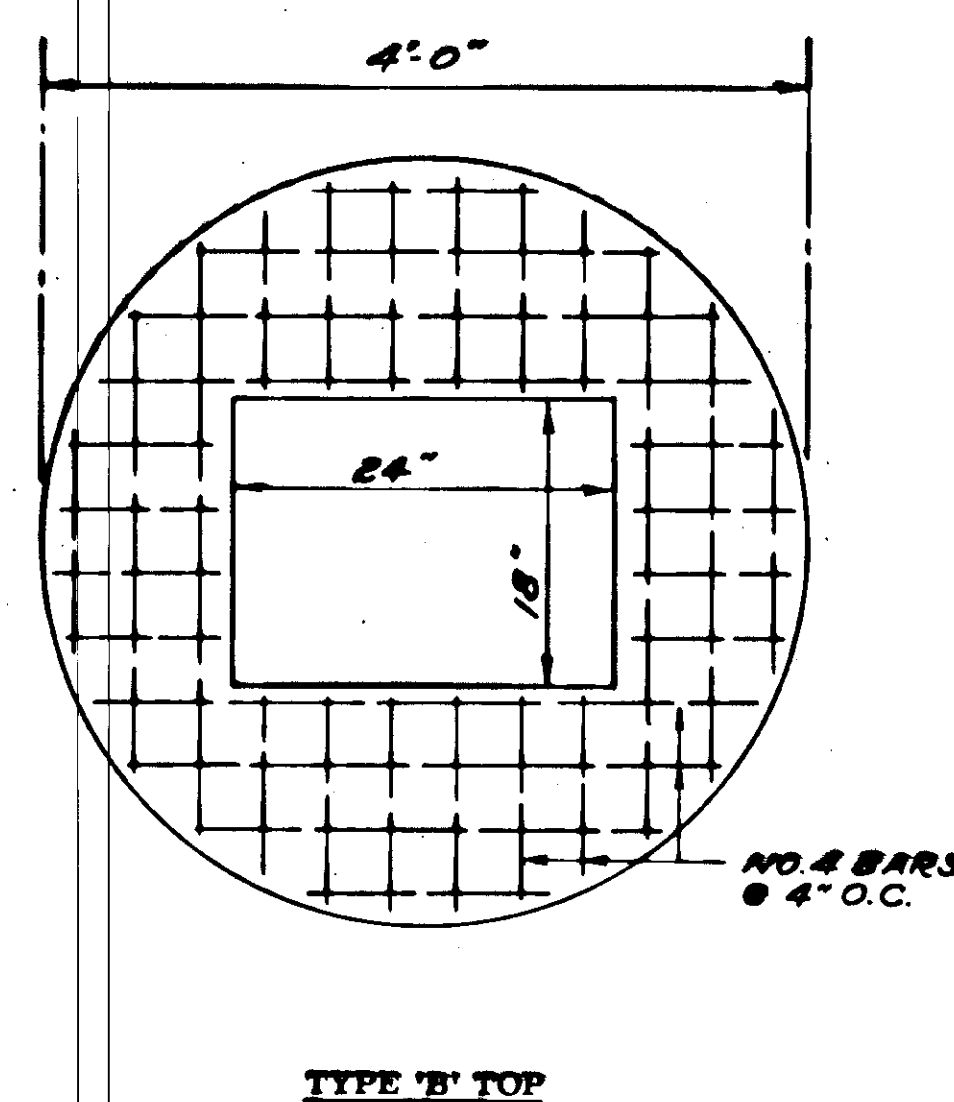
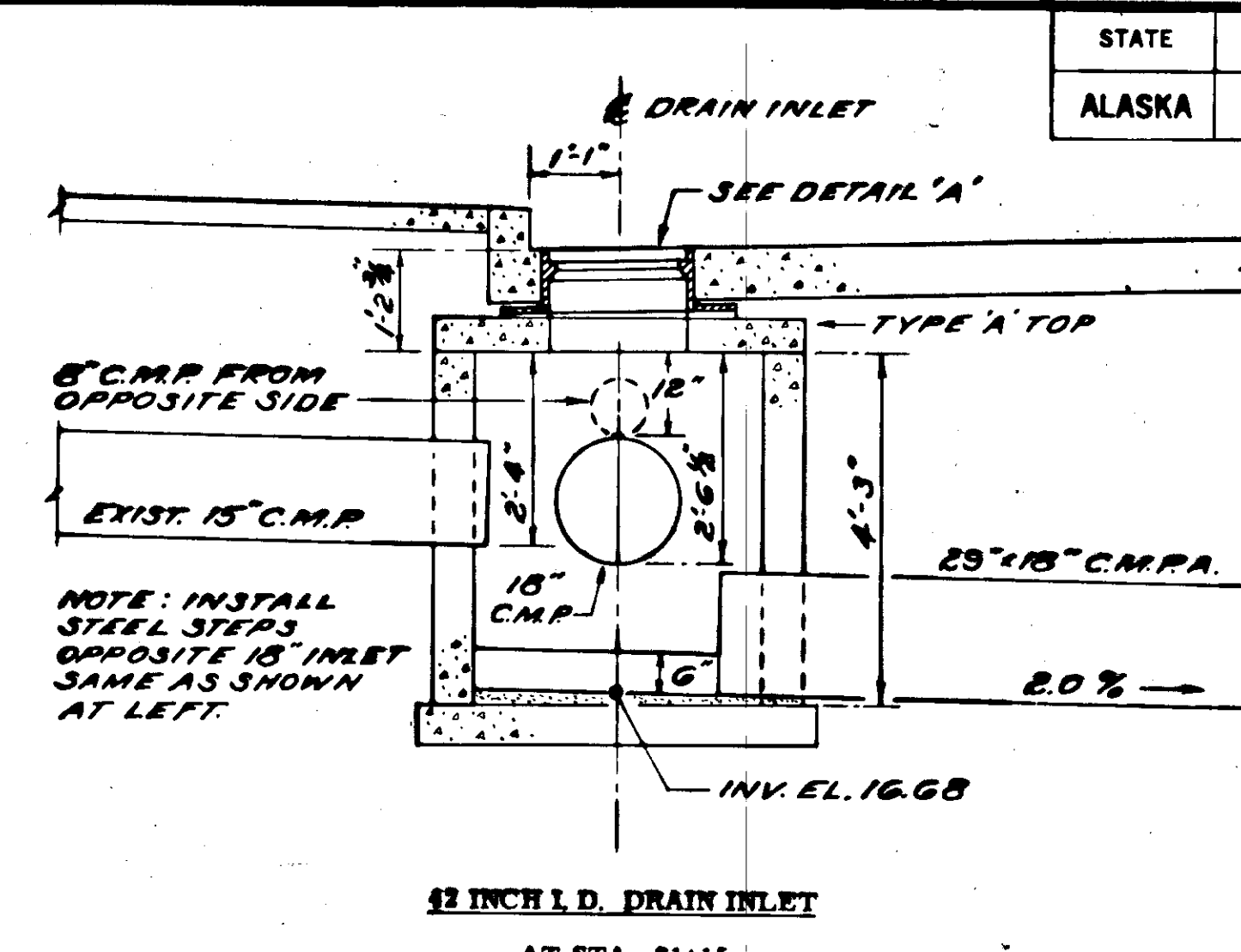
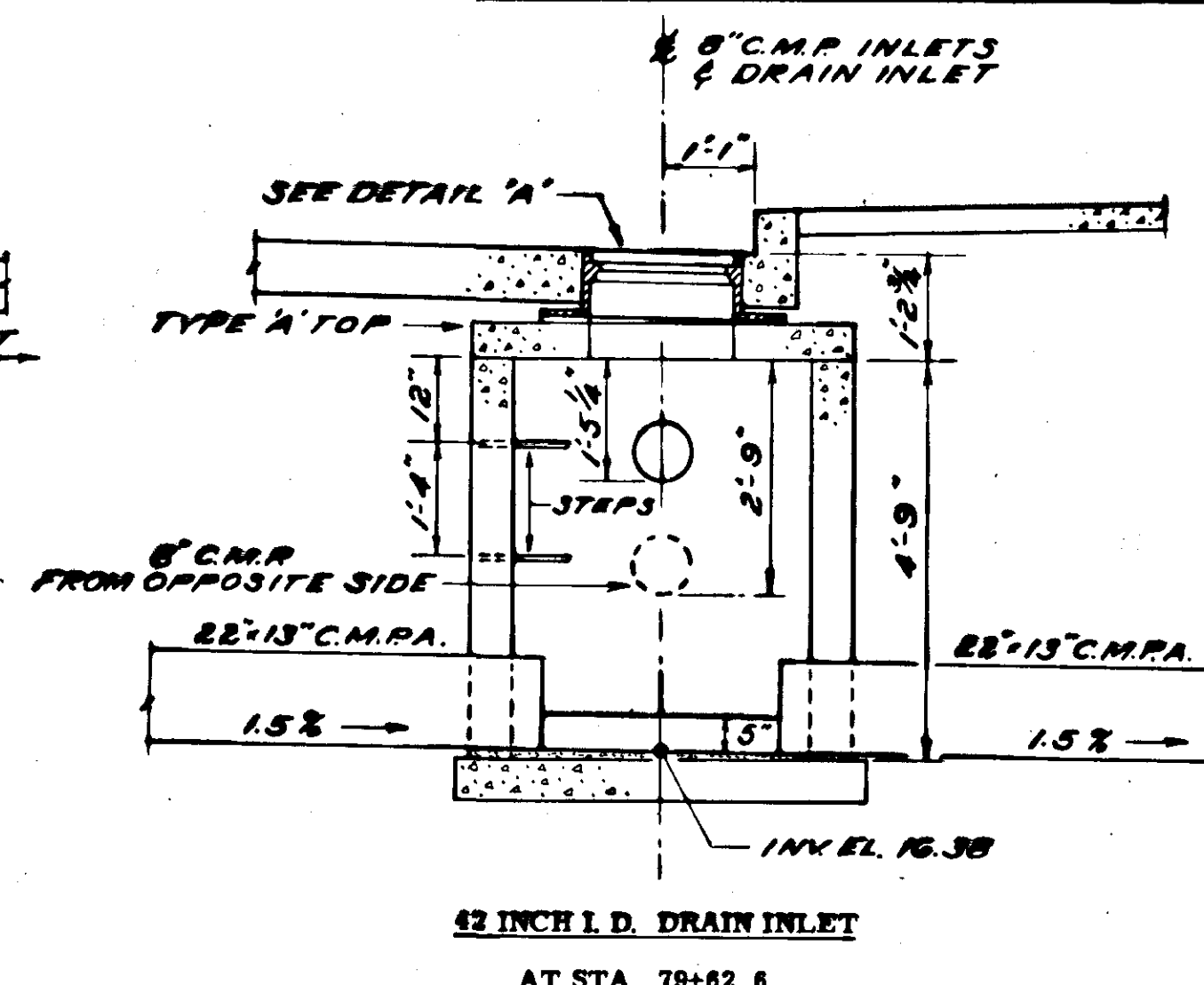
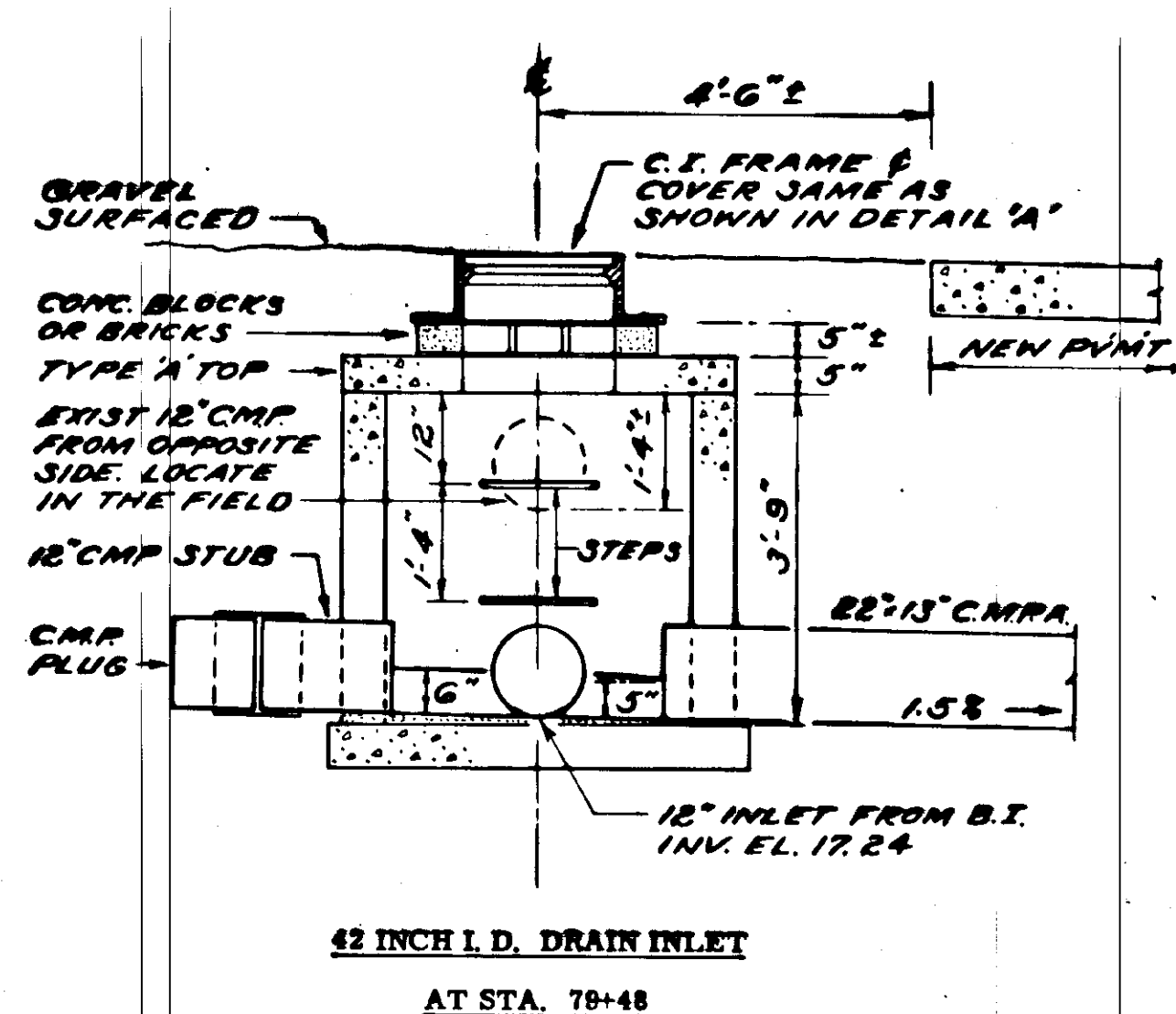
AS BUILT

8" STEEL PLATE WELDED TO PIPE COAT SAME AS FABRICATE IN SHOP
C.M.P. PIPE NO SCALE



LIST OF CONCRETE CATCH BASINS

STATION	INLET AND OUTLET PIPES NO.	DESCRIPTION	'D' FT. - IN.	TOTAL DEPTH 'L' FT. - IN.	SEE DETAIL
59+37.5	3	8" C.M.P.	1-6 3/8	3-0	A
63+46.4	2	8" C.M.P.	0-10 3/8	2-4 1/2	C
64+23	3	8" C.M.P.	0-10	2-8	A
70+94.7	2	8" C.M.P.	0-3 3/8	2-4 1/2	B
82+12.3	2	8" C.M.P.	1-2 7/8	3-1	C
82+22.4	2	12" C.M.P.	1-6 1/8	3-2	C
82+50.2	4	8" C.M.P.	0-10 1/2	2-4 1/2	A
86+15	2	8" C.M.P.	0-10	2-4	C
90+96	4	8" C.M.P.	0-10	2-4	A
95+45.2	3	8" C.M.P.	0-10 1/4	2-4 1/2	A
95+76.2	4	8" C.M.P.	1-1 1/2	2-7 1/2	A



NOTE
LOCATION, NO. & SIZE OF PIPES VARIES.
SEE ROADWAY PLAN SHEETS & TABLE AT LEFT

CONCRETE CATCH BASIN

GENERAL DETAILS
SCALE 1" = 1'-0"

CONCRETE DRAIN INLET

NOTE
CONCRETE CATCH BASINS AND DRAIN INLETS MAY BE POURED-IN-PLACE OR PRECAST.
STEEL STEPS FOR DRAIN INLETS ARE SAME AS DESIGNATED FOR STORM MANHOLES, SHEET 32.
CONCRETE BRICKS ARE 3-3/4 X 7-5/8 X 2-1/4 IN.
SEE GENERAL NOTES, SHEET 32.

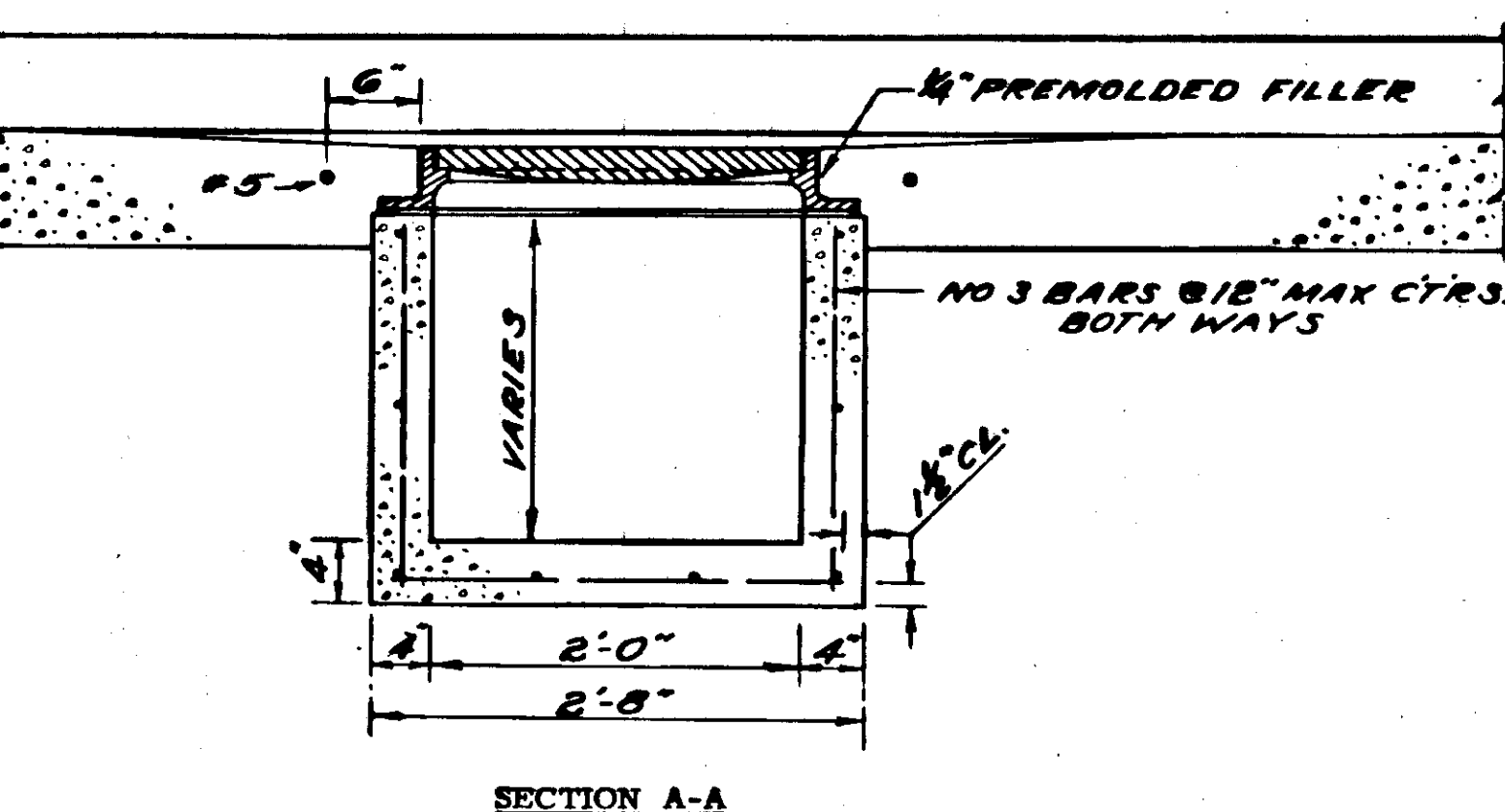
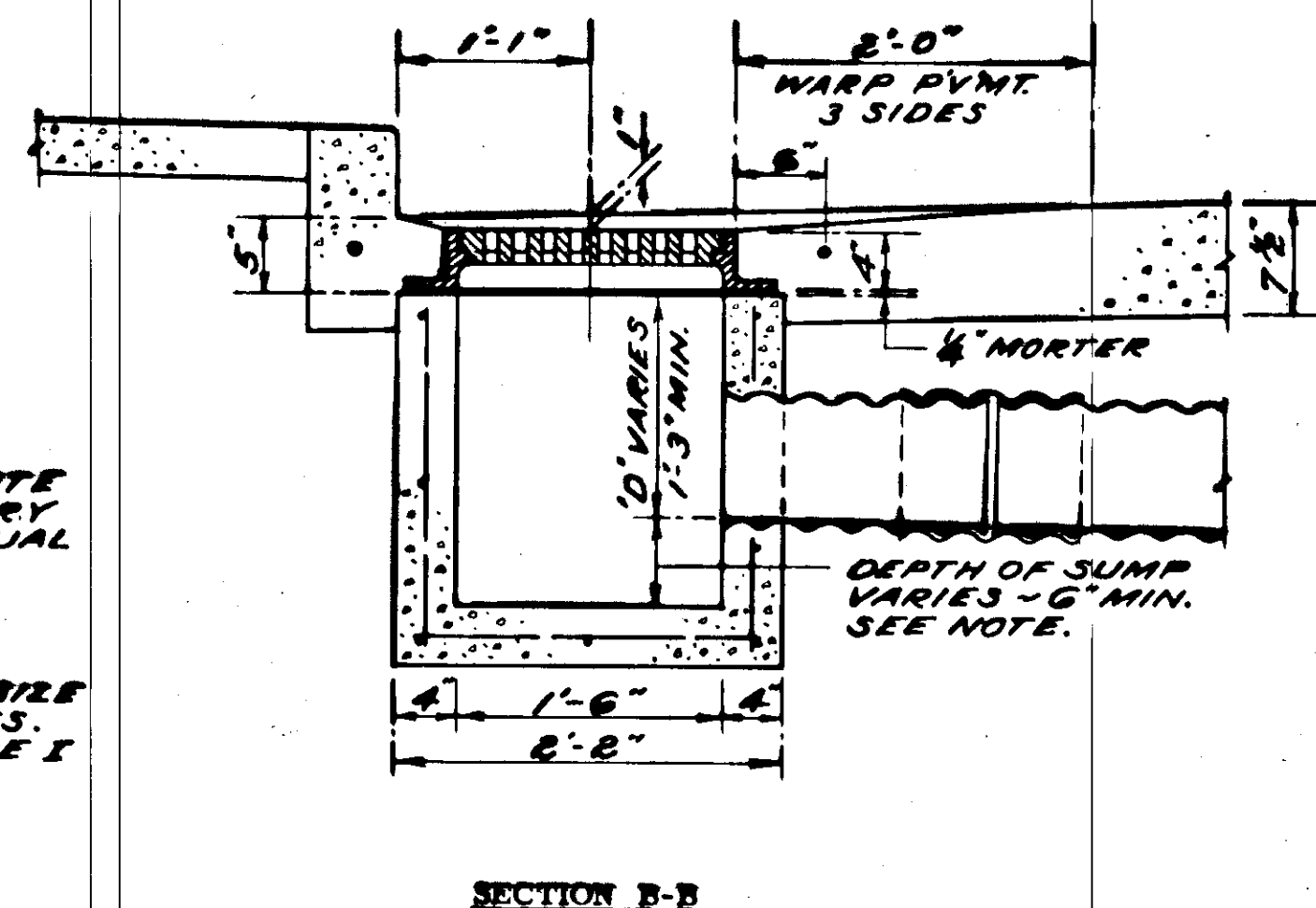
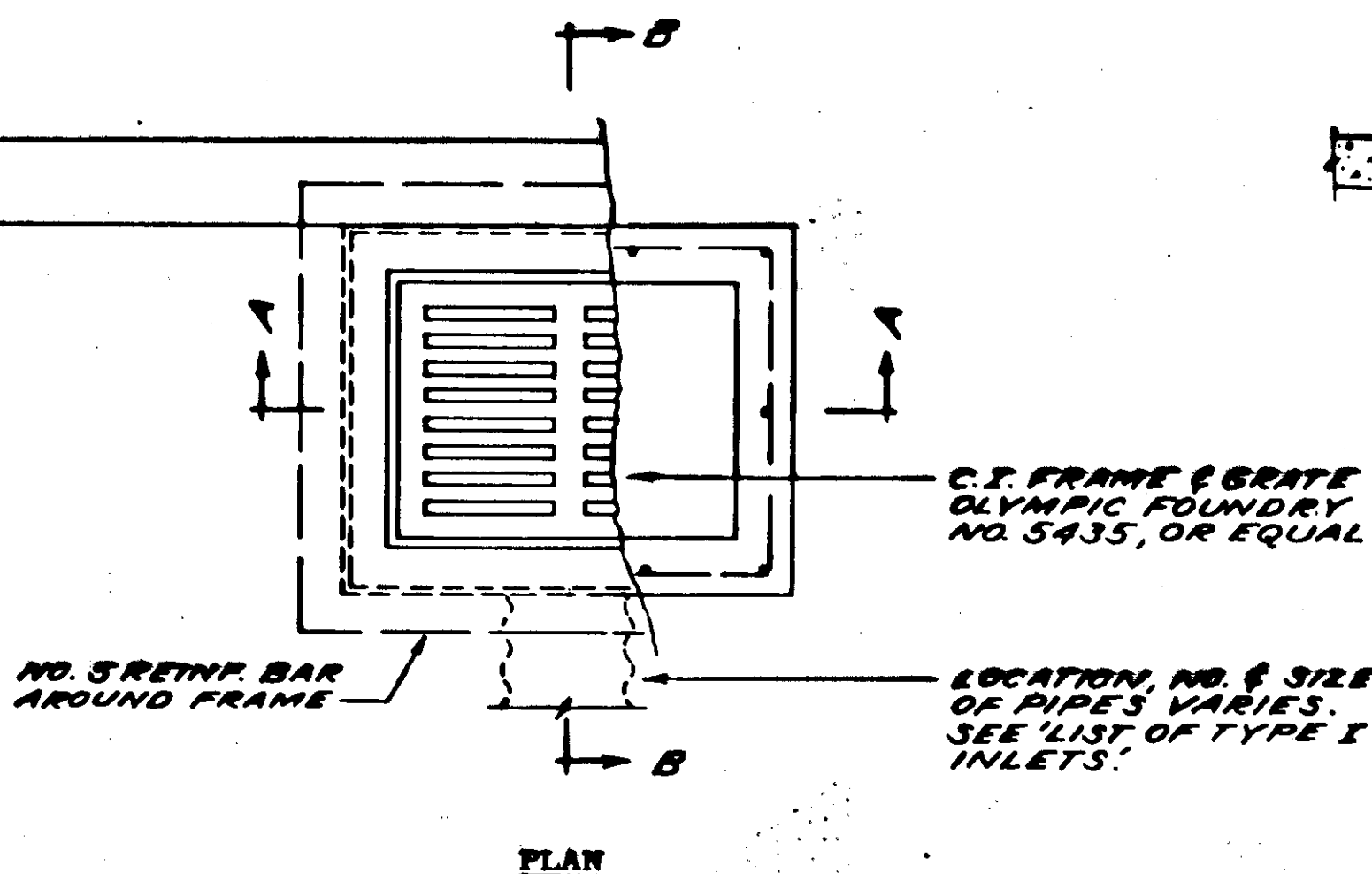
STATE OF ALASKA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS
PROJECT F-095-1(7)
TONGASS AVENUE
KETCHIKAN, ALASKA

DETAILS
CONCRETE CATCH BASINS
AND DRAIN INLETS

LANGDALE AND CONNELL
ENGINEERS
1001 DECATUR BLVD.
SEATTLE 1, WASHINGTON
DATE: _____
SHEET 33 OF 33

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	F-095-1(7)	1962	34	64

AS BUILT



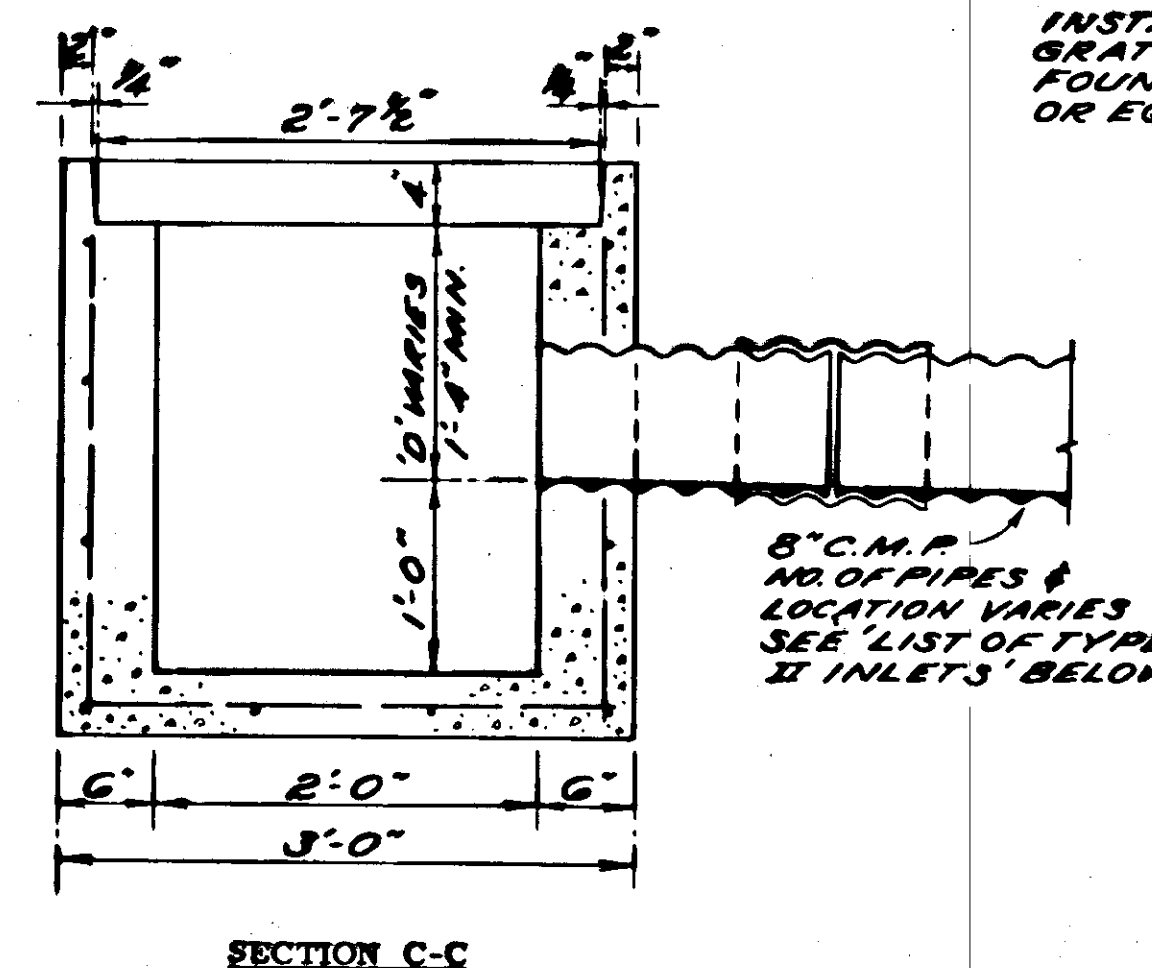
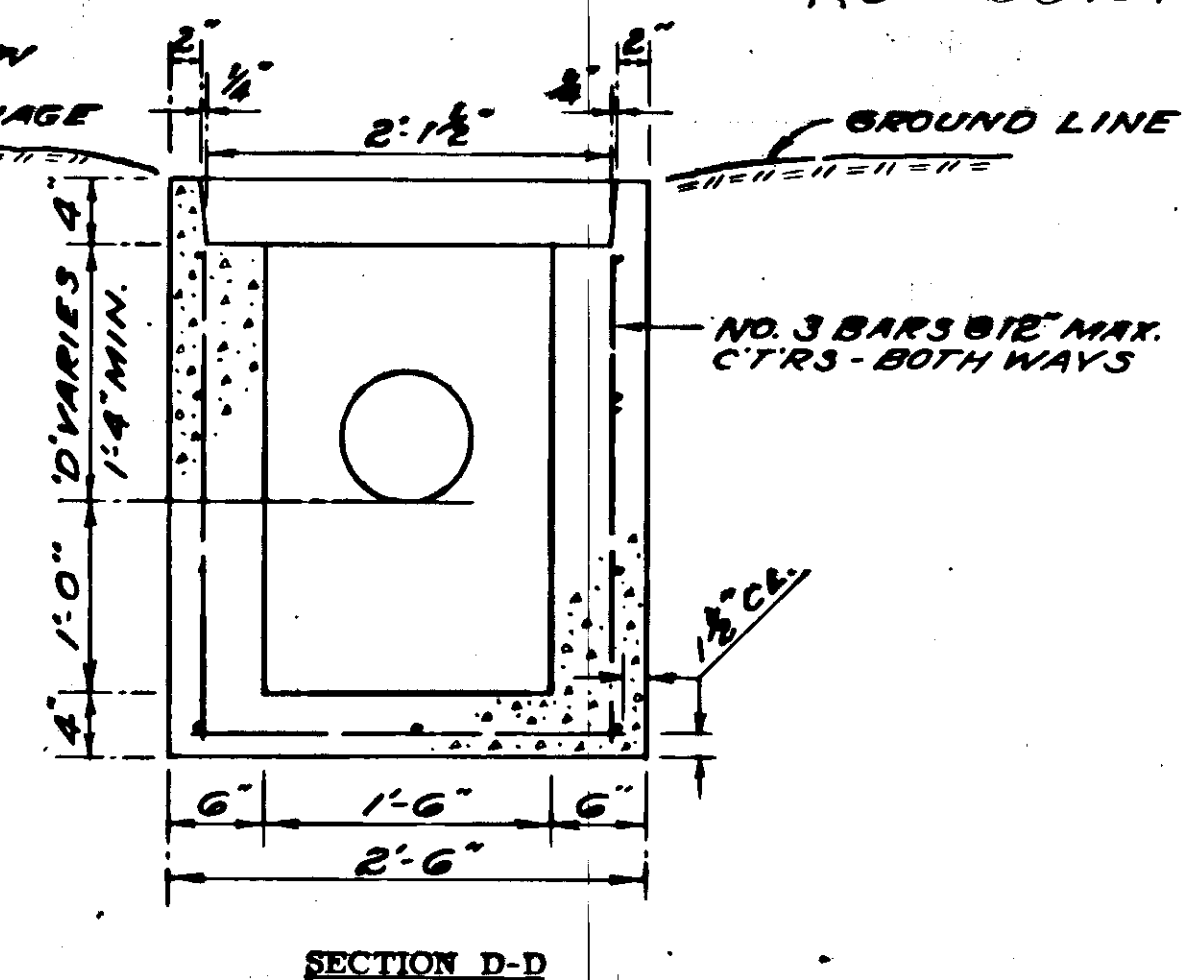
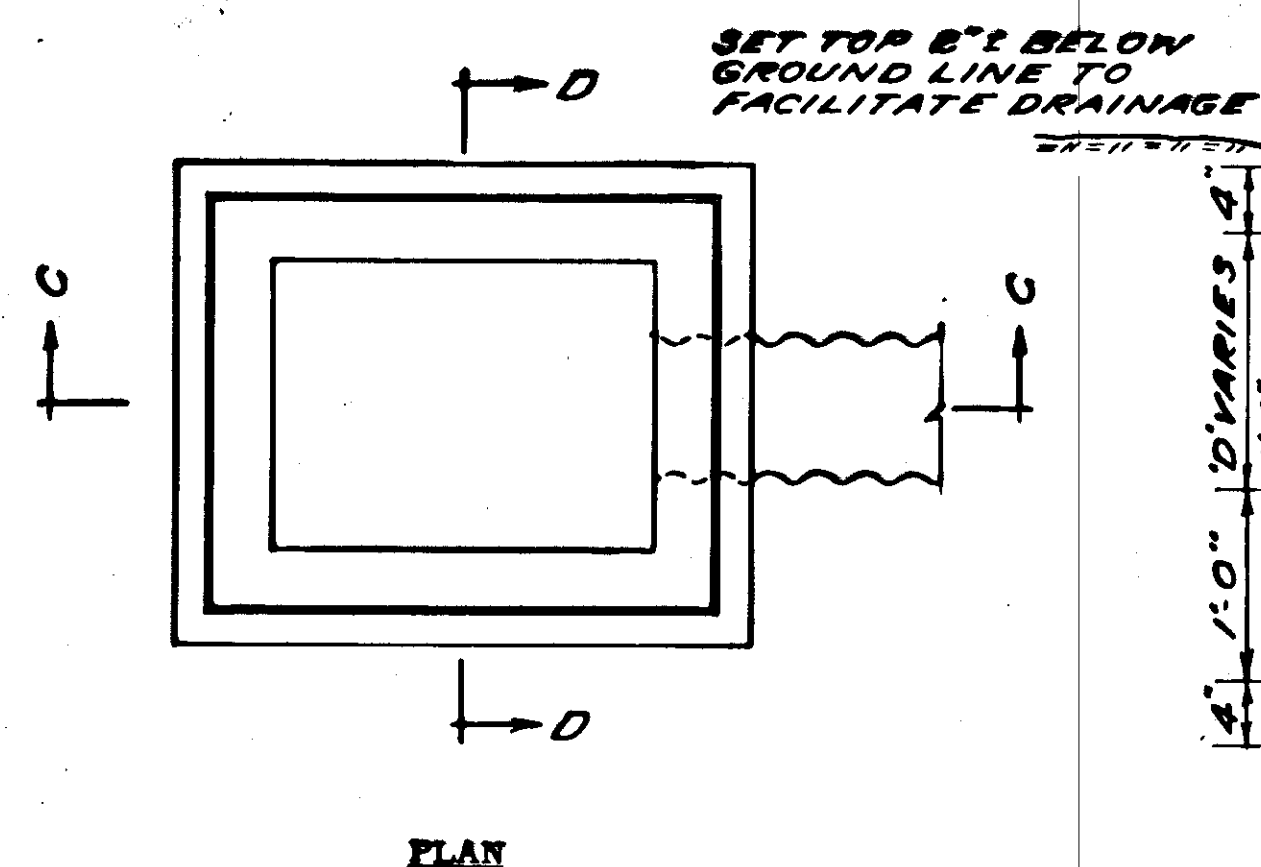
TYPE I CONCRETE BOX INLET
FOR INSTALLATION IN CONCRETE PAVEMENT
SCALE 1"=1'-0"

NOTE
TYPE I INLETS TO BE INSTALLED AT THE FOLLOWING
LOCATIONS ARE TO BE CONSTRUCTED WITH SUMPS 12
INCHES DEEP:

STA. 59+18	-	THIRD AVE.
STA. 63+89	-	SECOND AVE.
STA. 64+50	-	SECOND AVE.
STA. 71+02.5	-	MADISON ST.
STA. 71+42	-	MADISON ST.
STA. 74+84	-	JEFFERSON ST.
STA. 75+55	-	JEFFERSON ST.
STA. 80+71	-	NADEAU ST.
STA. 80+88	-	NADEAU ST.

CONSTRUCT ALL OTHER TYPE I INLETS WITH SUMPS
6 INCHES DEEP.

SEE DIAG.	APPROX. NO. REQD.	APPROX. 'D' FT.-IN.	C. M. P. DIA. IN.	STA. OR SHT.
A	28	1-3	8	14 thru 20
B	5	1-10	8	16, 18
B	1	1-3	8	90+88
B	1	1-7 3/4	8	90+85
C	29	1-3	8	14 thru 20
D	7	1-3	8	17, 19, 20
D	14	1-8 1/8	8	14 thru 19
D	1	2-9 3/4	12	72+75
E	1	2-4 1/4	8	95+85
E	4	1-8 1/8	8	17, 18, 20
F	3	1-3	8	18, 19, 20
F	1	1-6	8	71+42
F	3	1-8 1/8	8	17, 19, 20
G	1	1-8 1/8	8	77+45
G	1	1-9 1/8	8	77+85
G	1	2-1 1/2	8	78+25
G	1	3-3 1/8	8	78+07
G	1	2-5 1/2	8	92+56
G	1	2-3 1/8	8	93+06
G	1	2-0 3/4	8	93+56
G	1	1-10 1/2	8	94+05
G	1	2-2 3/4	8	96+37
G	1	2-1 1/4	8	97+84
H	1	D1 1-3	8	64+50
		D2 1-3	8	
		D4 1-3	8	
H	1	D1 1-11 5/8	8	86+21.5
		D2 2-0 1/2	8	
		D3 2-0 1/2	8	
H	1	D1 1-11 5/8	8	92+08
		D4 2-8	8	Sea-Side
		D3 3-0	12	
H	1	D1 1-6 1/2	8	92+08
		D2 1-6 1/2	8	Land-Side
		D3 1-6 1/2	8	
H	1	D1 1-8 1/4	8	98+33
		D2 2-6 5/8	8	
		D3 2-6 5/8	8	
H	1	D1 1-10 3/8	8	72+75
		D2 1-10 3/8	8	
		D3 2-2 3/8	12	
		D4 1-10 3/8	8	

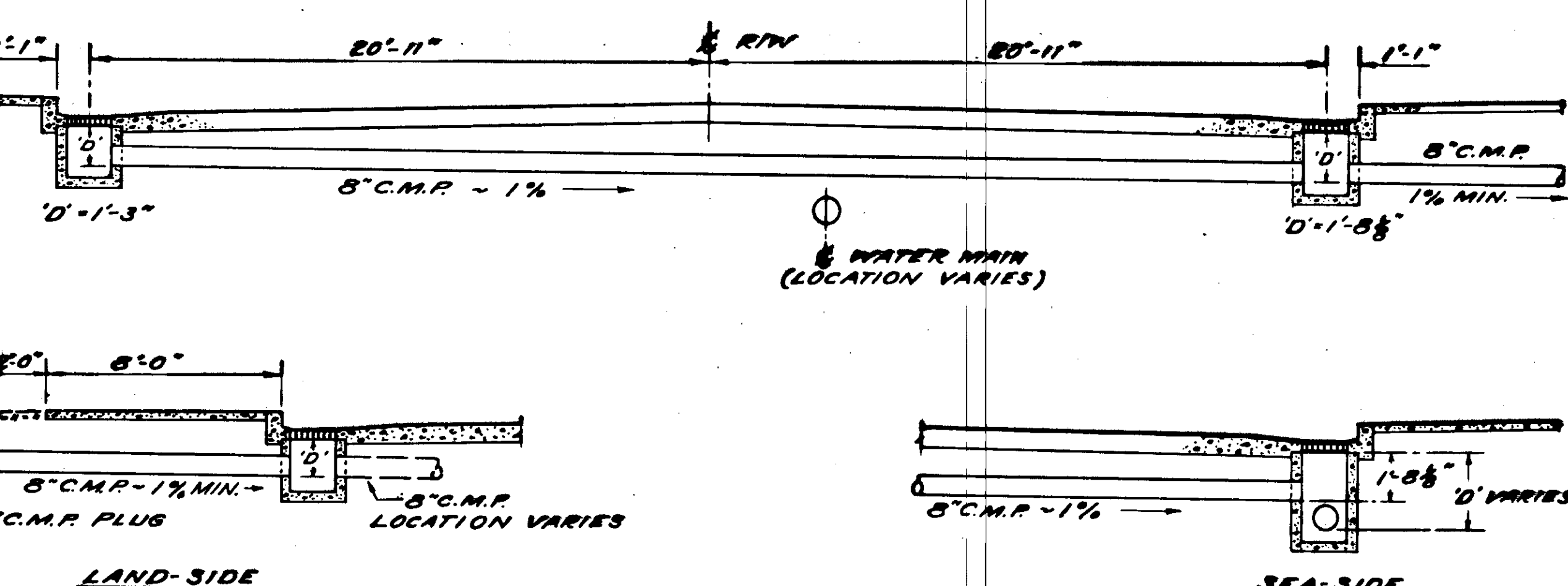


TYPE II CONCRETE BOX INLET
FOR INSTALLATION IN UNPAVED LOCATIONS
SCALE 1"=1'-0"

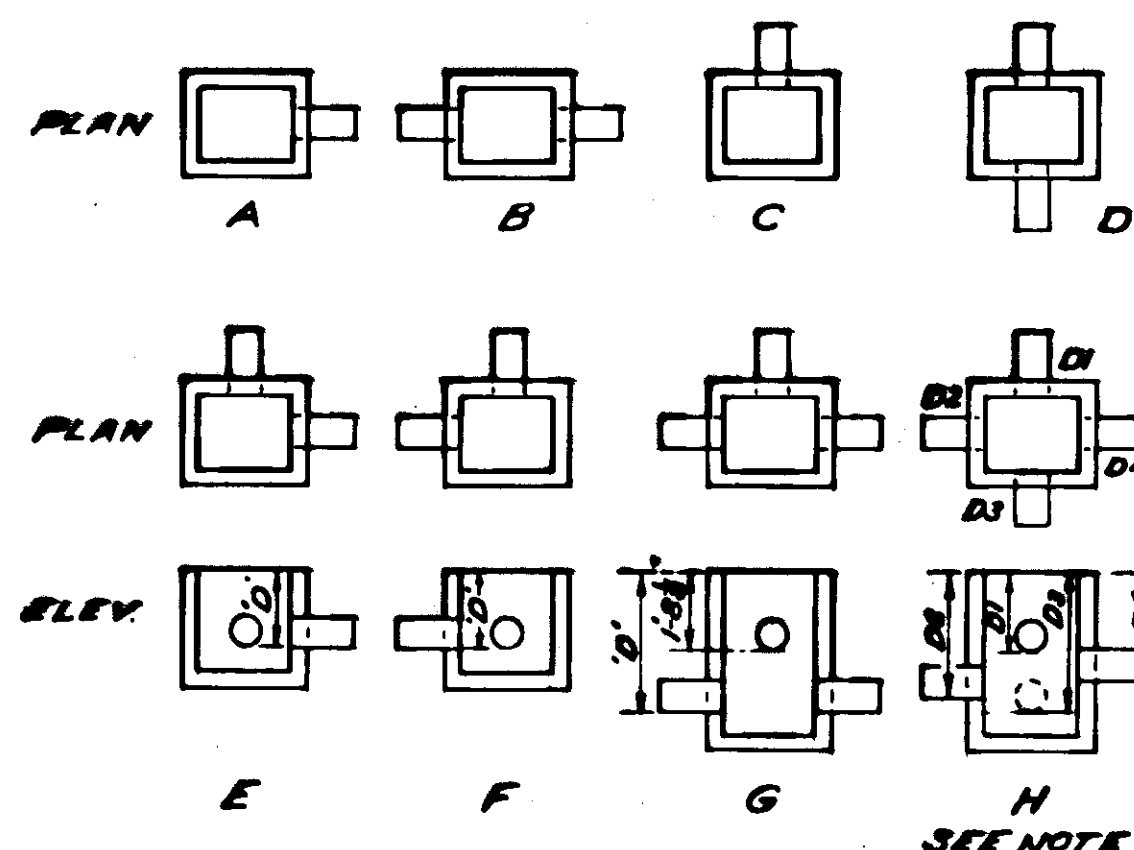
LIST OF TYPE II BOX INLETS

SEE DIAG.	APPROX. NO. REQD.	APPROX. 'D' FT.-IN.	LOCATION
A	6	1-4	See Sheet 16, 17, 18 & 20
C	4	1-4	See Sheet 14, 16, 18 & 20
F	1	3-8	STA. 79+58*
H	1	D1 2-3	STA. 59+87
		D2 " "	
		D3 1-4 1/2	

*USE 12" C. M. P. FOR OUTLET PIPE.
INLET PIPE IS EXISTING 10" TILE DRAIN.



TYPICAL SECTIONS
SHOWING INSTALLATION OF BOX INLETS
SCALE 1/4"=1'-0"



NOTE

PIPES ARE SKEWED AT CERTAIN LOCATIONS. SEE ROADWAY CONSTRUCTION SHEETS.

DIAGRAM H SHOWS FOUR PIPES. ONLY THREE PIPES ARE REQUIRED, AS LISTED, EXCEPT AT STA. 72+75.

GENERAL NOTES

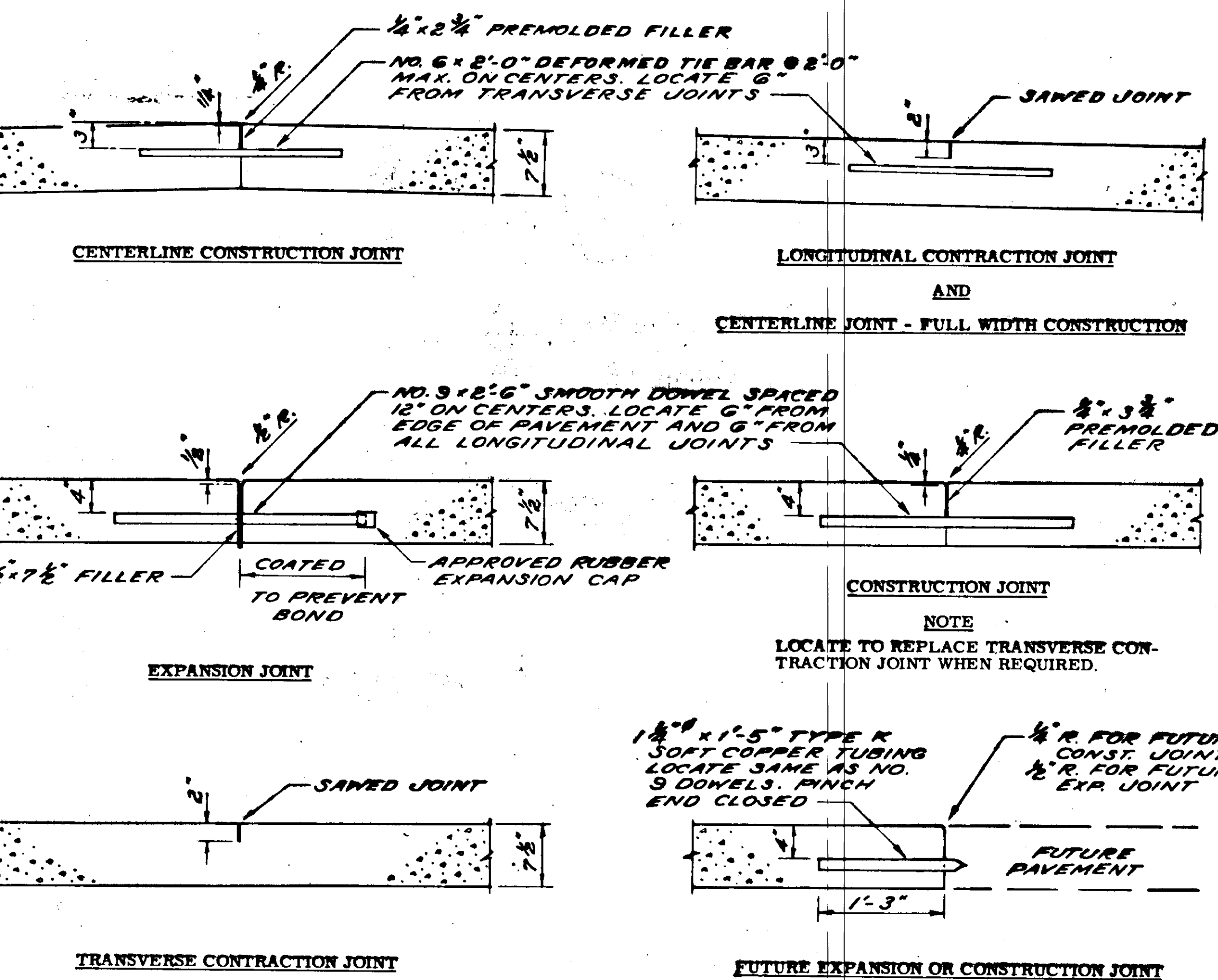
- BOX INLETS MAY BE POURED-IN-PLACE OR PRECAST.
- USE CLASS 'AA' CONCRETE. SEE GENERAL NOTES, SHEET 32.
- LAY OUTLET PIPE ON 1% MIN. GRADE WHEN NOT OTHERWISE INDICATED IN THE PLANS.

STATE OF ALASKA
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PROJECT F-095-1(7)
TONGASS AVENUE
KETCHIKAN, ALASKA

DETAILS
BOX INLETS

LANGDALE AND CONNELL
ENGINEERS
1001 SECURITIES BLDG.
SEATTLE 1, WASHINGTON

DATE: NOV., 1960
SHEET 34 OF 64

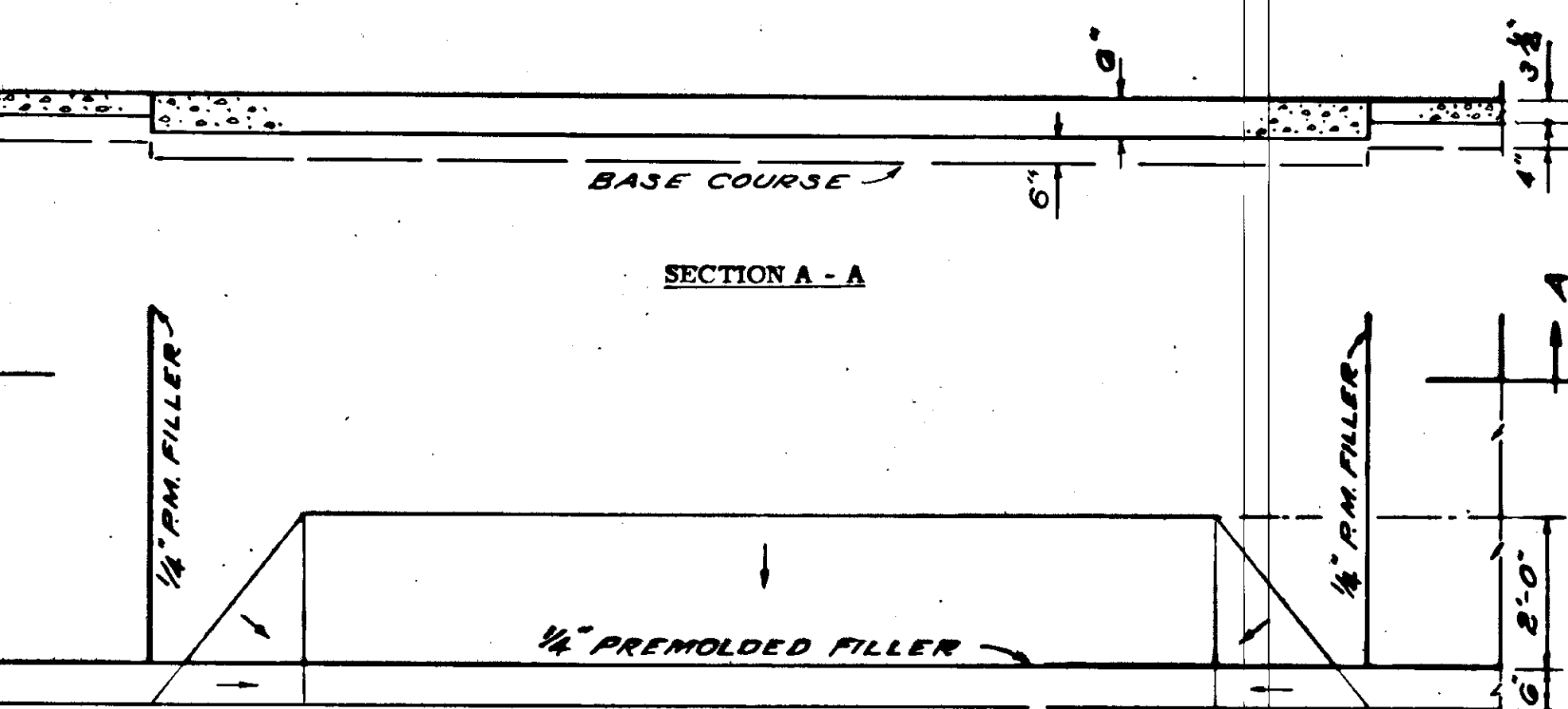


PAVEMENT JOINT DETAILS

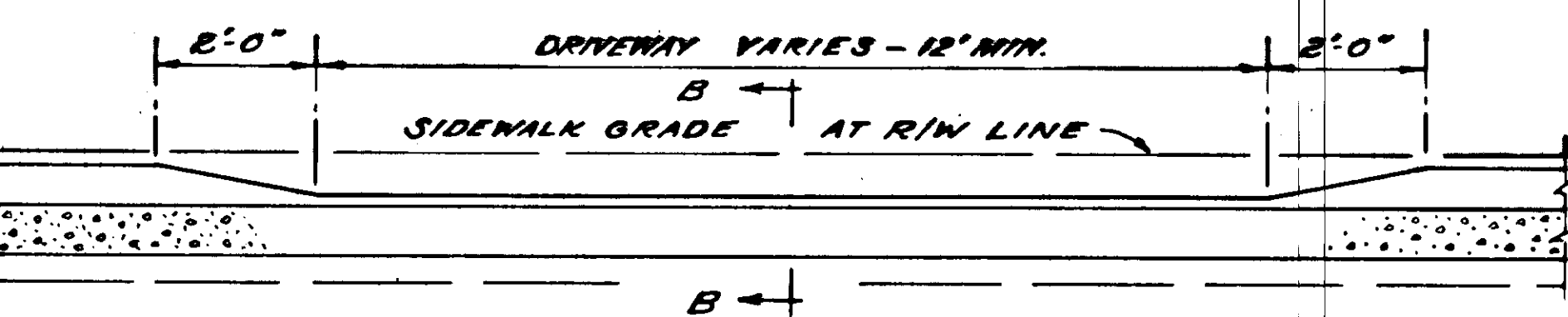
SCALE 1" = 1'-0"

NOTE

SEAL ALL JOINTS WITH JOINT SEALING MATERIAL.

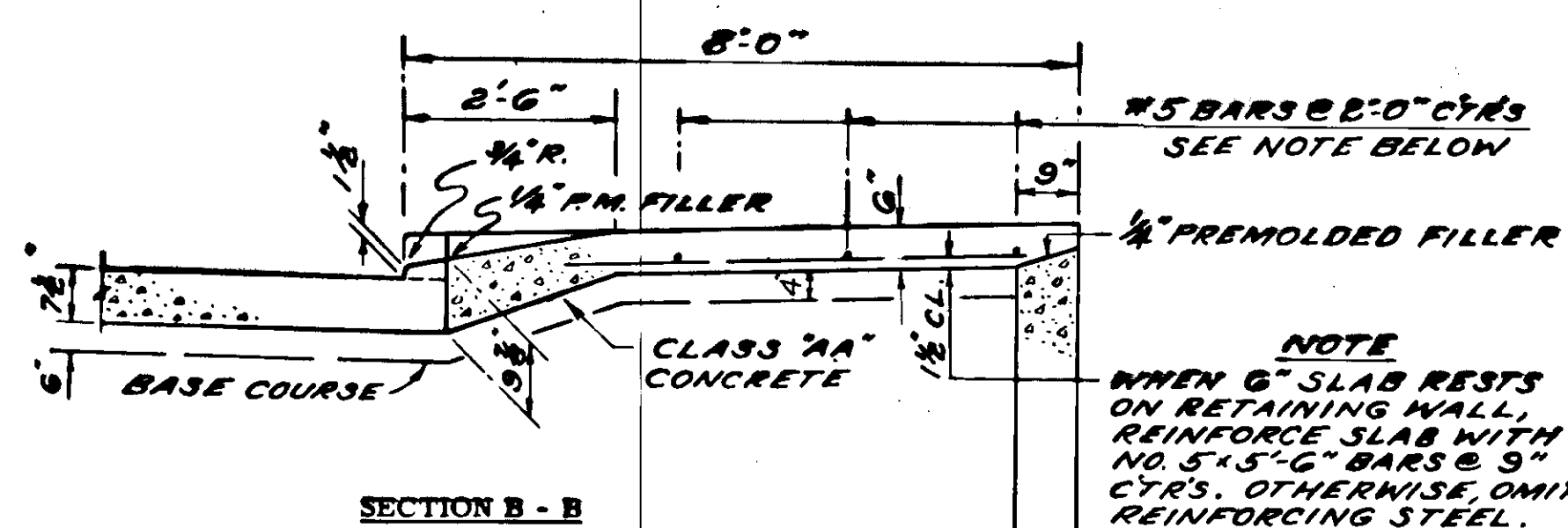


PLAN



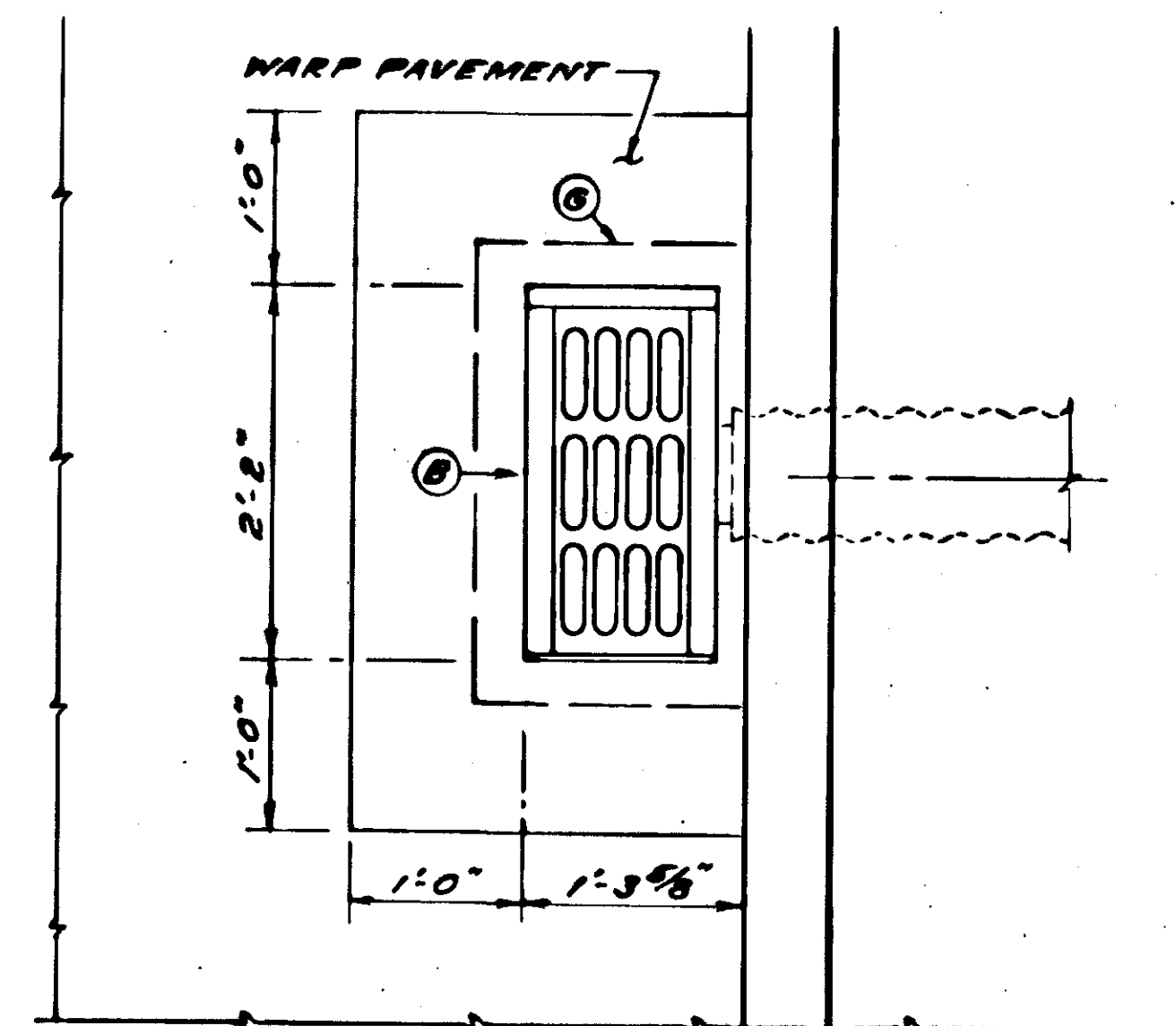
DRIVEWAY DETAIL

SCALE 1/2" = 1'-0"



DETAIL OF PAVEMENT AT INTERSECTIONS

SCALE 1/2" = 1'-0"

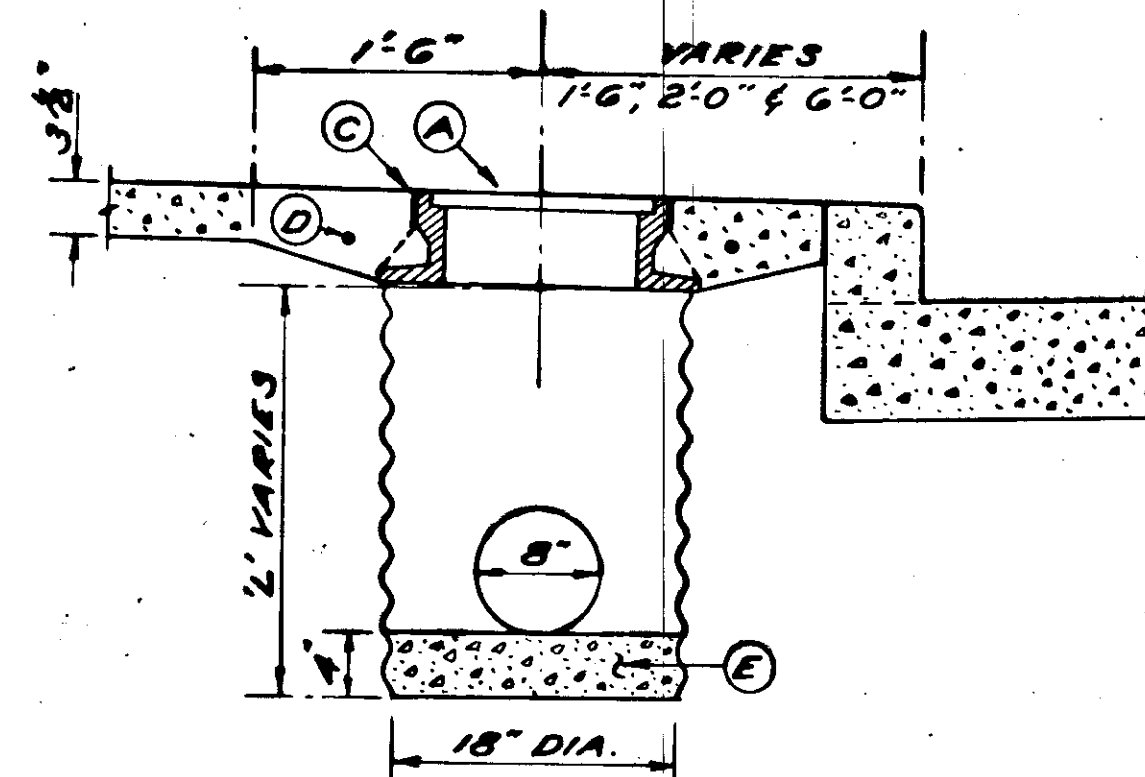
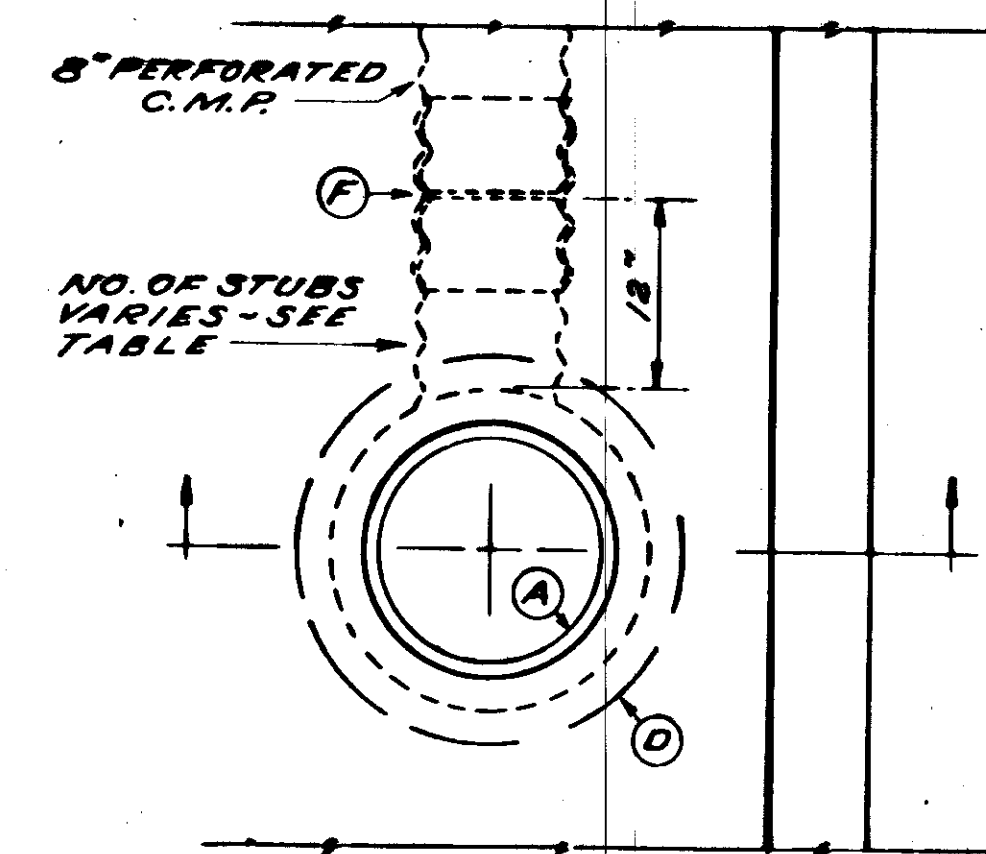
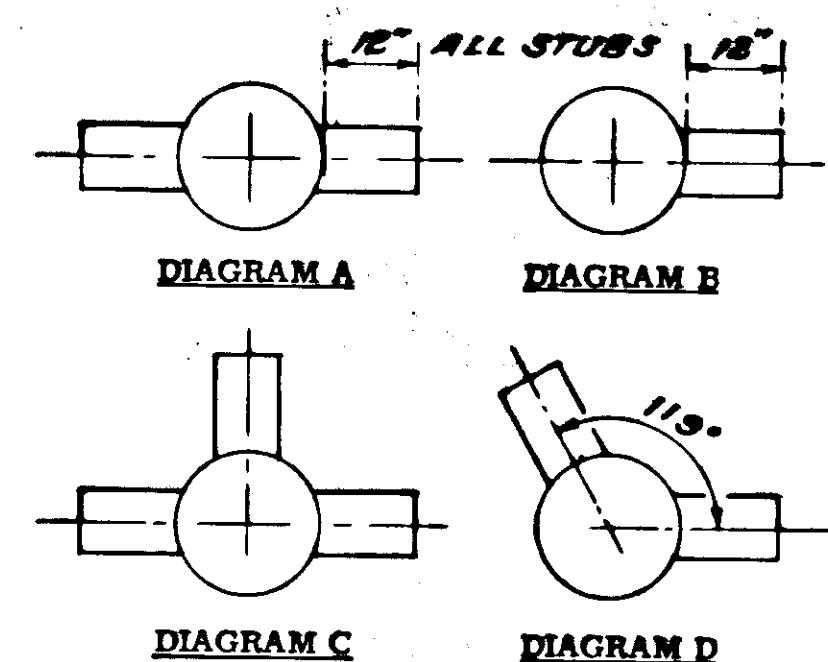


GUTTER INLET

SCALE 1" = 1'-0"

LIST OF 18 INCH C. M. P. CLEANOUTS

STA.	LENGTH L' - IN.	NO. STUBS	SEE DIAGRAM
59+53	2 - 5	2	A
62+06	2 - 1 1/2	1	B
2nd AVE.	2 - 0	3	C
64+56.2	2 - 1 1/2	2	D
67+40	2 - 1 1/2	1	B
69+77	2 - 1 1/2	1	B
71+54.9	2 - 3	1	B
72+75	2 - 7 5/8	3	C
74+84	2 - 2 3/4	1	B



SCALE 1" = 1'-0"

NOTE

- ALL C. M. P. STUBS ON CLEANOUTS ARE TO BE FABRICATED IN THE SHOP.
- THE CONCRETE BASE IN C. M. P. CLEANOUTS IS CONSIDERED SUBSIDIARY TO ITEM 521 (3) AND SHALL NOT BE PAID FOR DIRECTLY.
- SEE GENERAL NOTES, SHEET 32.

LETTER DESIGNATIONS SHOWN ON DRAWINGS

- CAST IRON FRAME AND COVER
OLYMPIC FOUNDRY NO. 5831 OR EQUAL.
- CAST IRON GUTTER INLET.
OLYMPIC FOUNDRY NO. 5231 OR EQUAL.
- 1/4" x 2" MIN. PREMOLDED FILLER.
- NO. 5 x 2 FT. DIA. REINFORCING BAR.
- CLASS "AA" CONCRETE.
- 12 IN. CONNECTING BAND.
- NO. 5 REINFORCING BAR AROUND INLET.
- CLASS "AA" CONCRETE BEARING BLOCK
2 FT. x 3 FT. x 10 IN.
- ASPHALT IMPREGNATED PACKING
ROPAX OR EQUAL.

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PROJECT F-095-1(7)
TONGASS AVENUE
KETCHIKAN, ALASKA

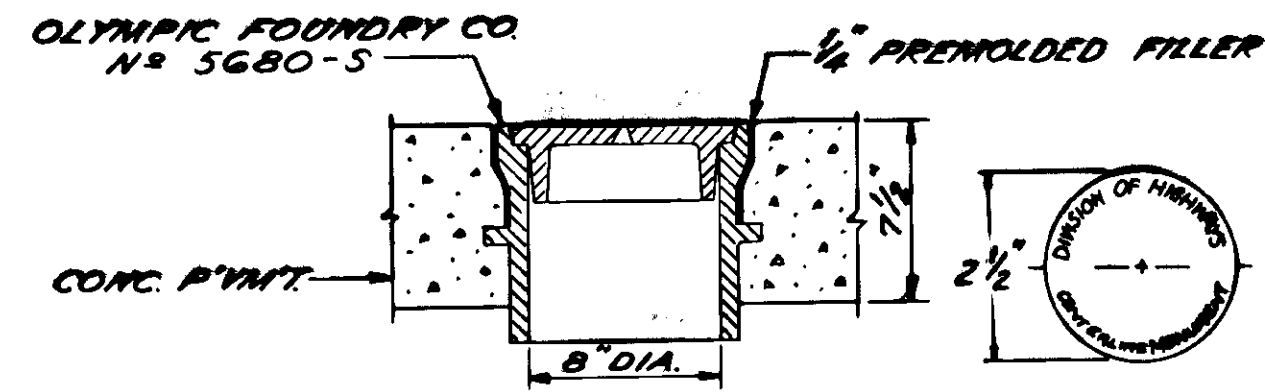
DETAILS - C. M. P. CLEANOUT
GUTTER INLET - DRIVEWAYS
PAVEMENT JOINTS

LANGDALE AND CONNELL
ENGINEERS
1091 SECURITIES BLDG.
SEATTLE 1, WASHINGTON

DATE: NOV., 1960
SHEET 35 OF 64

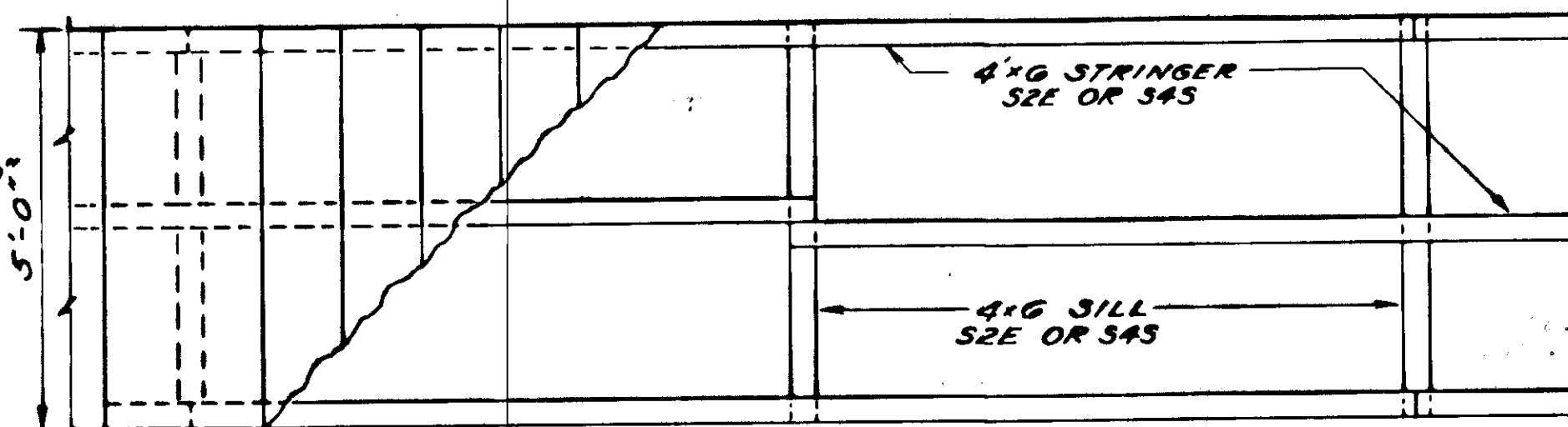
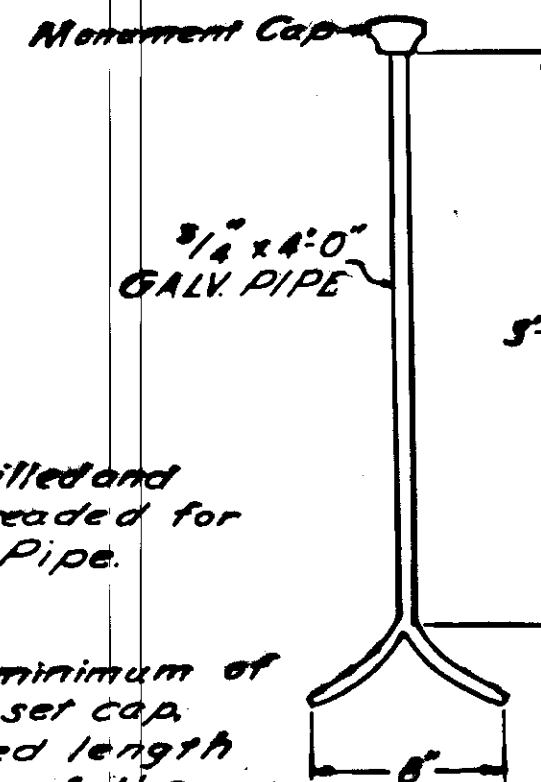
STATE	PROJECT DESIGNATION	YEAR	SHEET No.	TOTAL SHEETS
ALASKA	F-095-1(7)	1962	36	64

AS BUILT



MONUMENT CASE
SCALE 1-1/2" = 1'-0"

NOTE:
In solid rock, drill 2" ϕ , a minimum of 1'-0", fill with mortar and set cap. 3/4" x 9" galv. pipe, designated length when set in mortar. The top of the monument shall be the same elevation as the bottom of the monument case.



2-12 SIZE UNTREATED
1/4" SPACING BETWEEN PLANKS
NAIL WITH 2 20d NAILS PER STRINGER
PLACE ROUGH SIDE UP

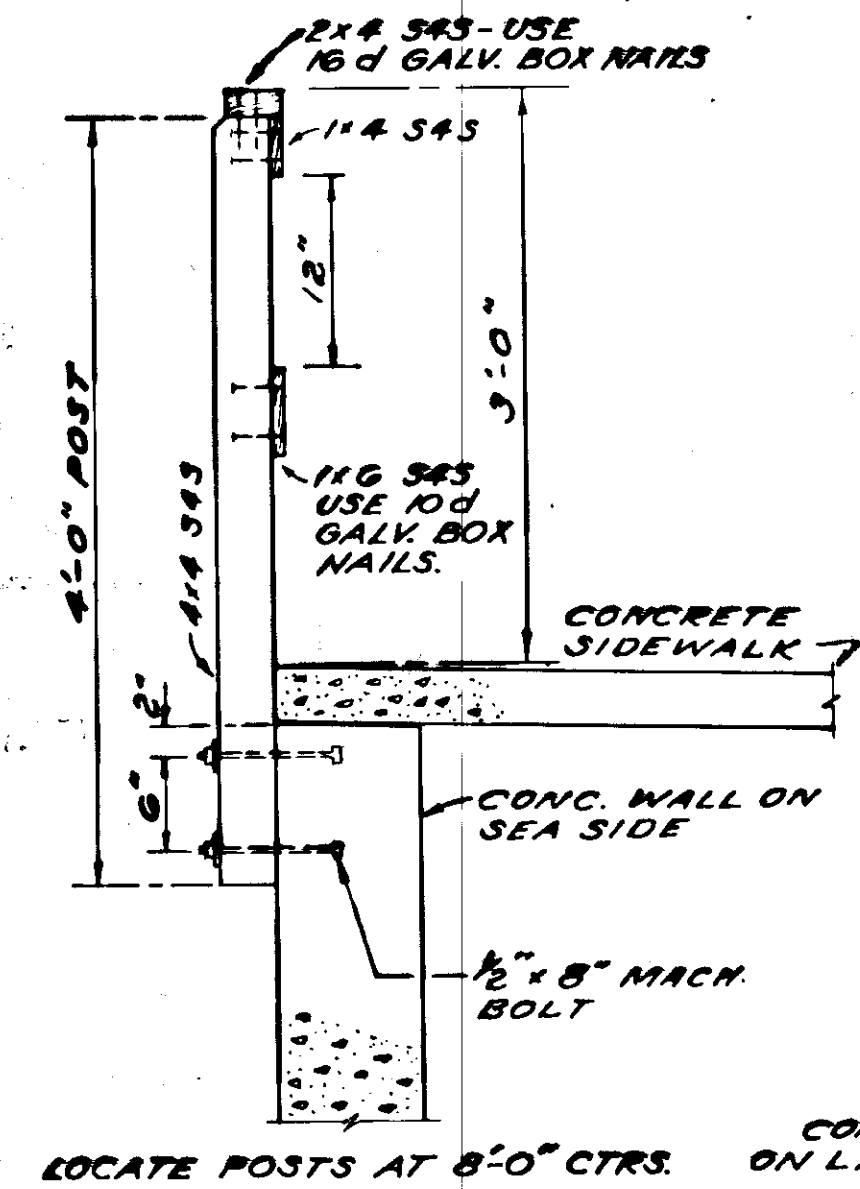
PLAN AND ELEVATION

WOOD SIDEWALK

SCALE 1/2" = 1'-0"

NOTE

TO BE PAID FOR UNDER ITEM 10.
SILLS AND STRINGERS SHALL BE CREOSOTE TREATED DOUGLAS FIR
CONFORMING TO ARTICLE 420 - 2.10. UNTREATED PLANKS MAY BE
DOUGLAS FIR OR SITKA SPRUCE. ALL LUMBER SHALL BE NO. 1
COMMON. USE GALVANIZED NAILS.

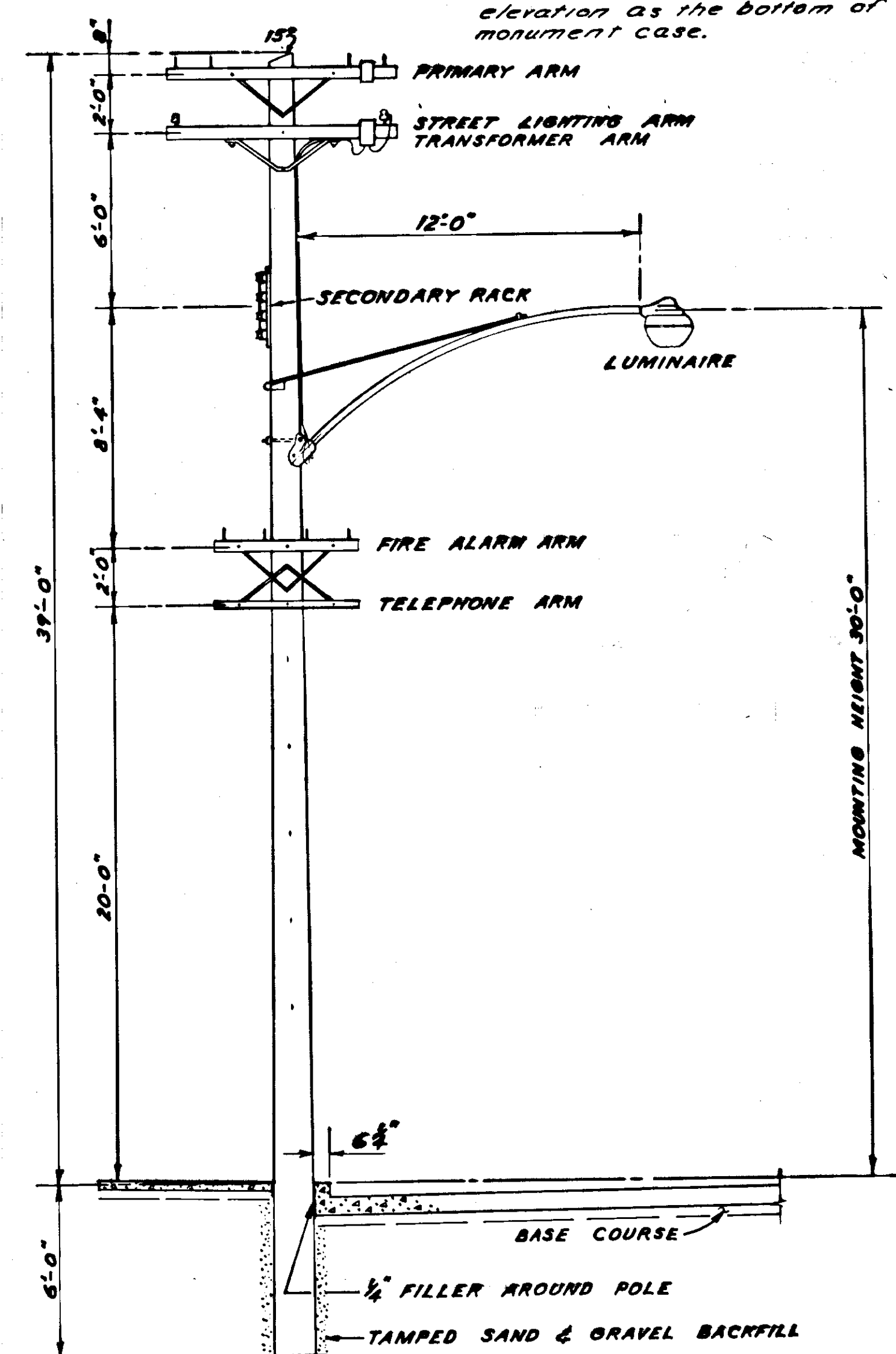


WOOD HANDRAIL

SCALE: 1" = 1'-0"

NOTES:

1. TO BE LOCATED IN THE FIELD AS DIRECTED BY THE ENGINEER. TO BE PAID FOR UNDER ITEM 10.
2. POSTS ARE TO BE NO. 1 COMMON ALASKA RED CEDAR. RAILS ARE TO BE NO. 1 COMMON SITKA SPRUCE OR DOUGLAS FIR. BOLTS, WASHERS, NAILS AND OTHER HARDWARE SHALL BE GALVANIZED.
3. ALL WOOD SHALL BE SOAKED IN A 5 PER CENT SOLUTION OF PENTACHLOROPHENOL IN NO. 2 FUEL OIL FOR NOT LESS THAN 48 HOURS.

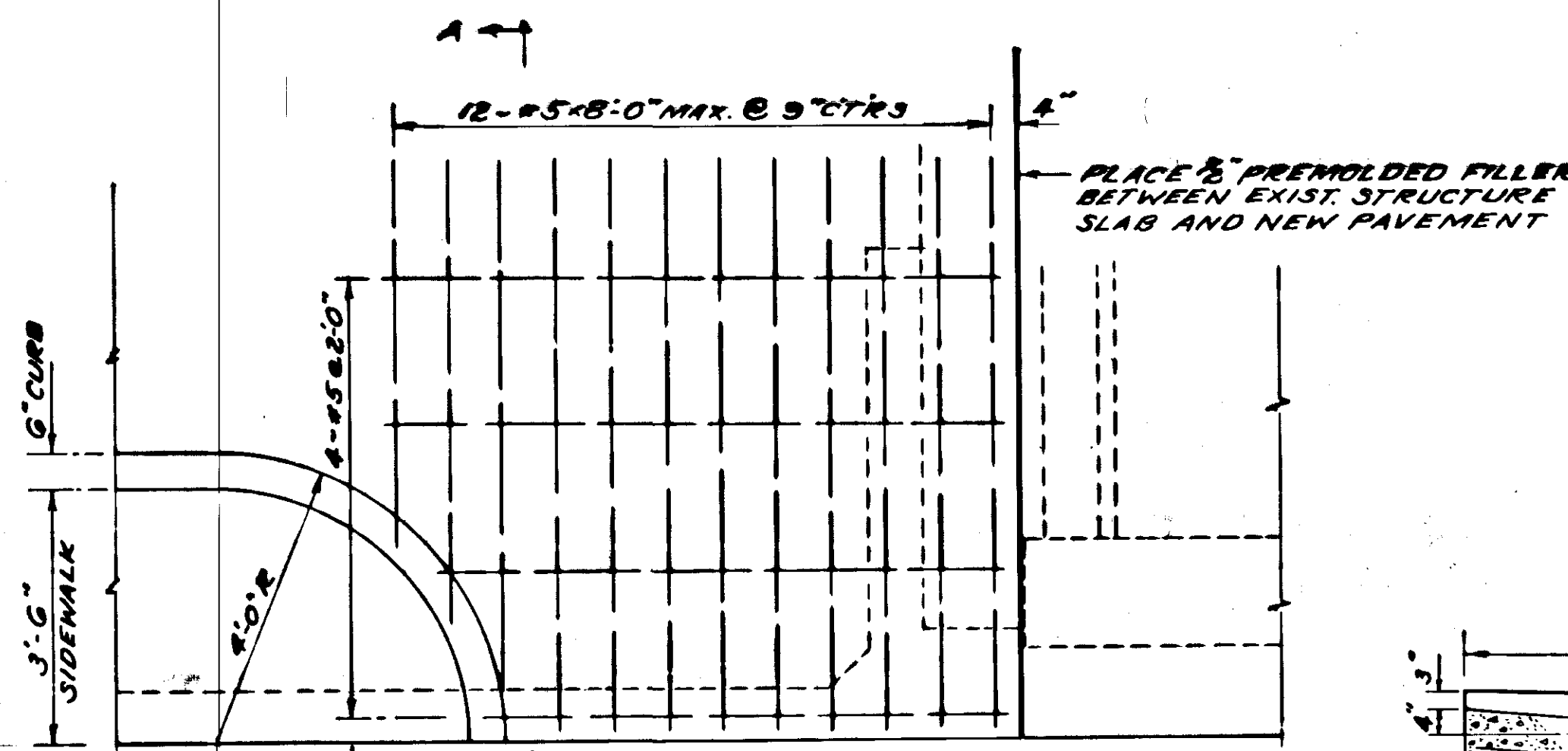


NEW UTILITY POLE

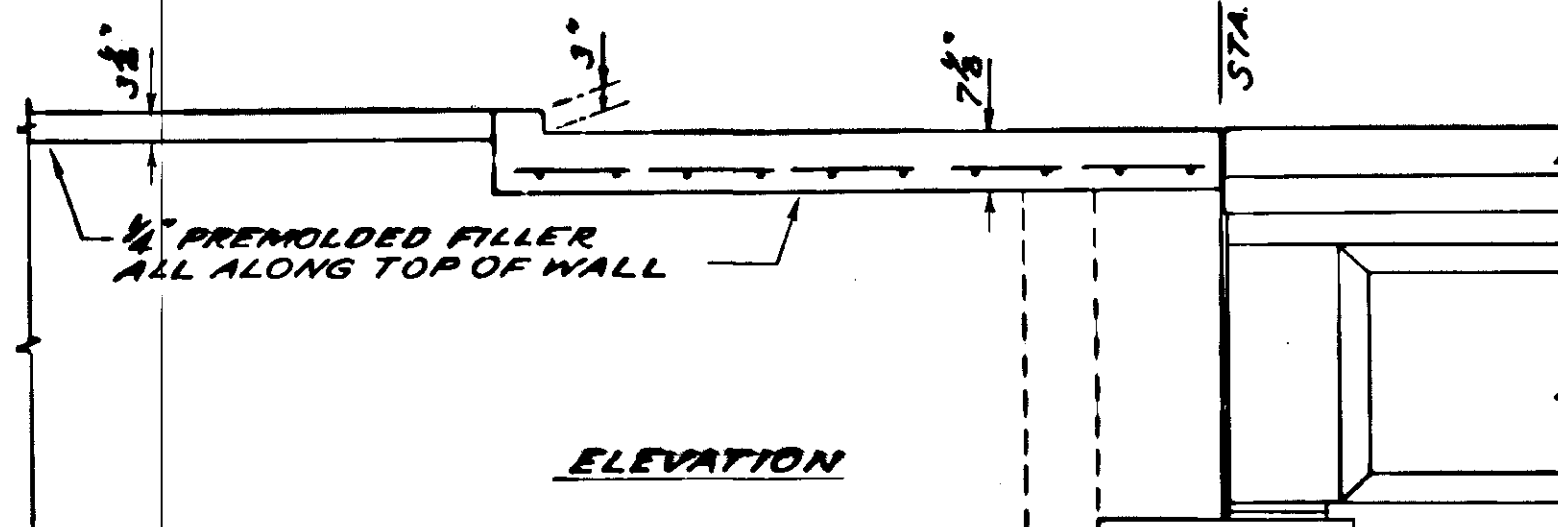
SCALE 1/4" = 1'-0"

NOTE

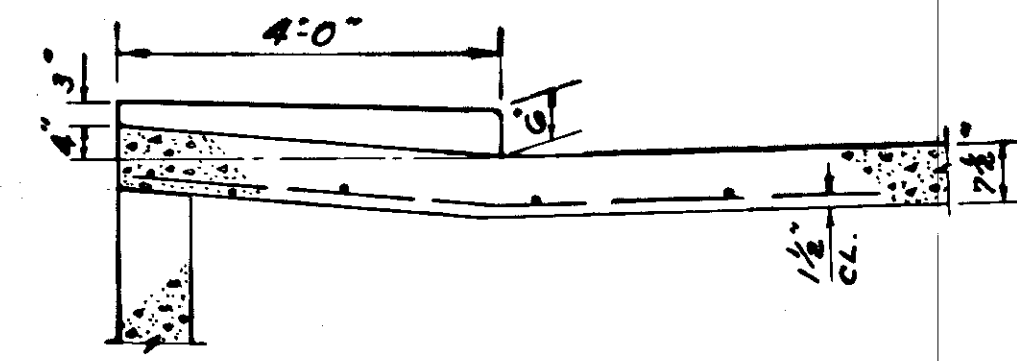
NEW POLES ARE TO BE INSTALLED BY OTHERS BEFORE PAVEMENT, CURB AND SIDEWALK IS CONSTRUCTED.



PLAN
PAVEMENT REINFORCING
AT DRIVEWAY - STA. 100+79.10
SCALE 1/2" = 1'-0"



ELEVATION



SECTION A-A
SCALE 1/2" = 1'-0"

STATE OF ALASKA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

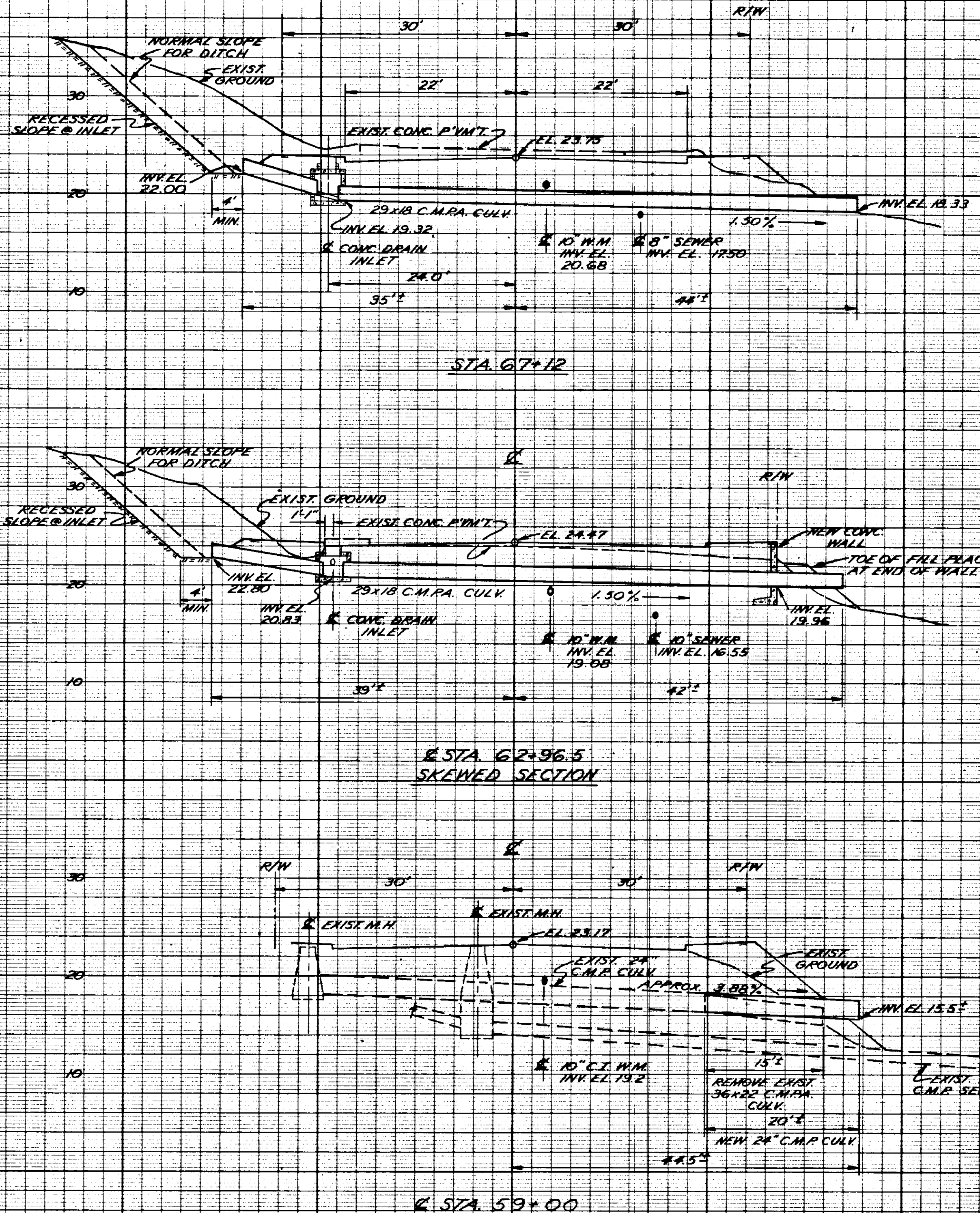
PROJECT F-095-1(7)
TONGASS AVENUE
KETCHIKAN, ALASKA

MISCELLANEOUS
DETAILS

LANGDALE AND CONNELL
ENGINEERS
1001 SECURITIES BLDG.
SEATTLE 1, WASHINGTON

DATE: NOV. 1, 1962
SHEET 36 OF 64

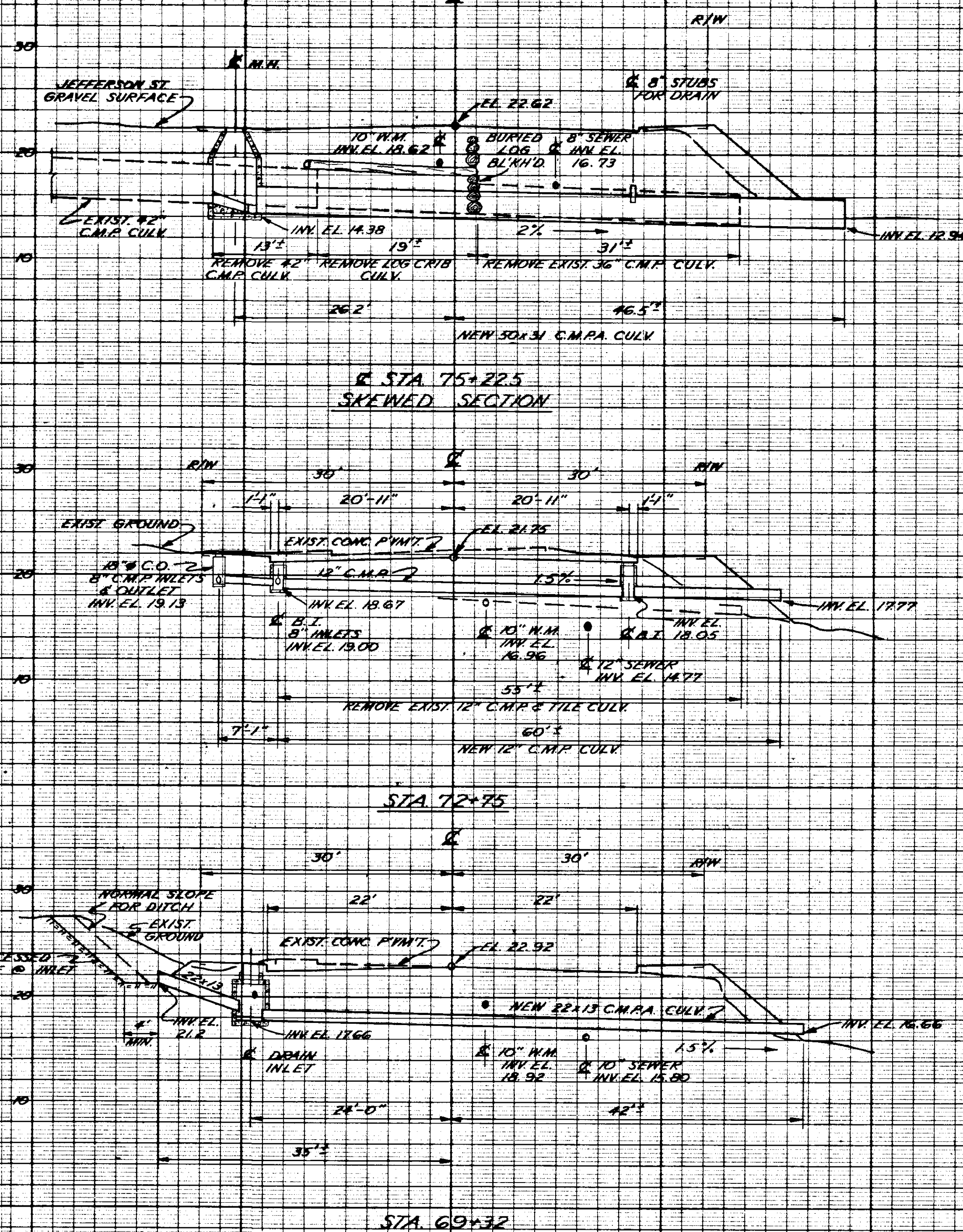
AS BUILT



STA 59+00

HORIZ. SCALE: 1" = 10'
VERT. SCALE: 1" = 8'

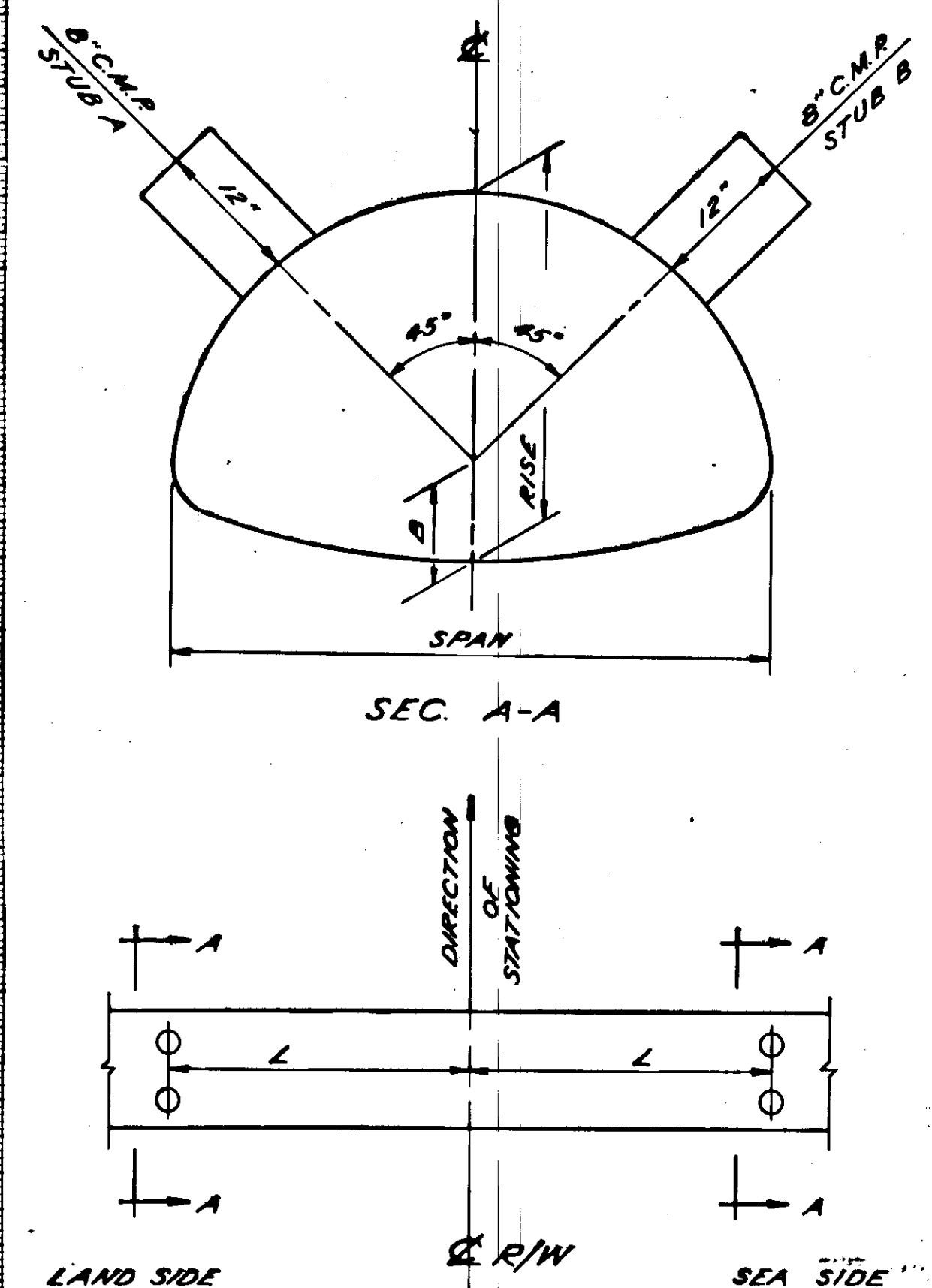
THE ALIGNMENT AND GRADE
AS SHOWN HEREON ARE
SUBJECT TO ADJUSTMENT.



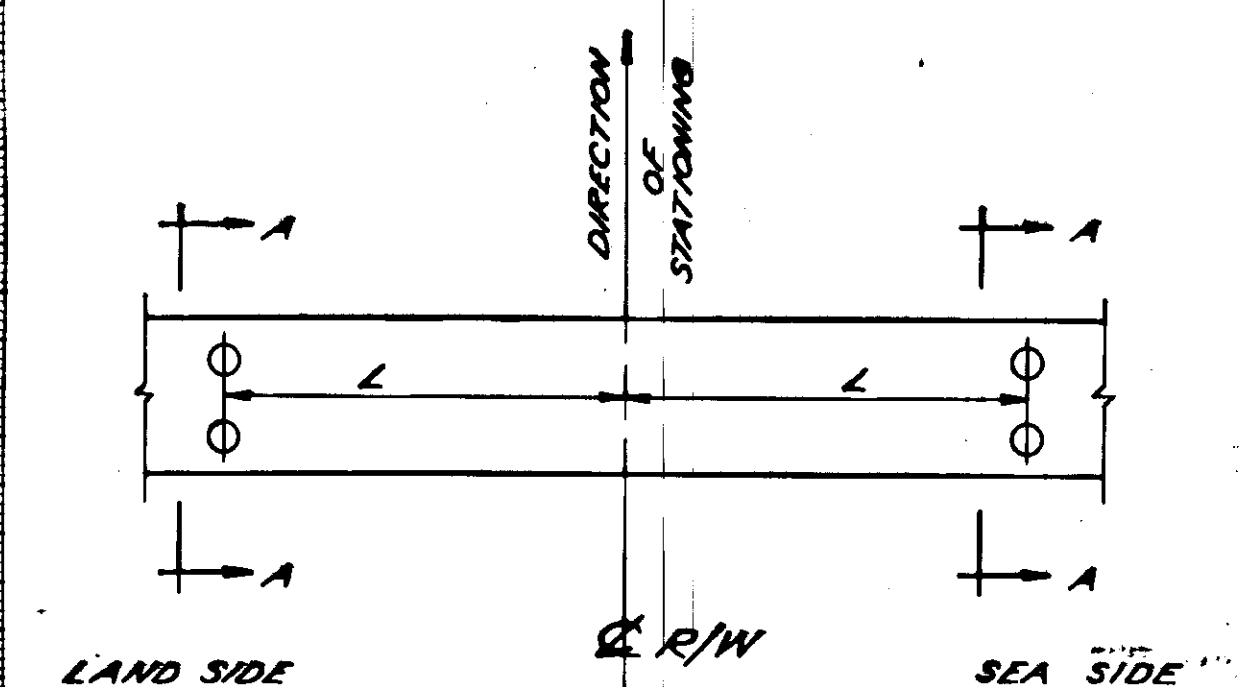
STA 69+32

NOTES

- SEE SECTION NUMBER 103 OF B. P. R. SPECIFICATIONS FP-57 FOR EXCAVATION BEDDING AND BACKFILL REQUIREMENTS FOR PIPE CULVERTS.
- THE CULVERT LENGTHS SHOWN ARE APPROXIMATE. ACTUAL LENGTHS WILL BE FURNISHED BY THE ENGINEER.
- THE WATER MAIN & SEWER SHOWN ON THESE SECTIONS ARE TO BE INSTALLED UNDER THE CITY WATER AND SEWER PROJECT. SEE WATER MAIN AND SEWER PLAN SHEETS. THE EXISTING WATER MAIN AND SEWERS ARE NOT SHOWN.
- EXISTING CULVERT PIPE SHOWN IS TO BE REMOVED & DISPOSED OR ABANDONED IN PLACE AS INDICATED.
- EXISTING LOG BULKHEADS SHOWN ON THESE SECTIONS ARE TO BE REMOVED AND DISPOSED WITHIN THE LINES FOR TRENCH EXCAVATION AS STAKED BY THE ENGINEER.



SEC. A-A



LIST OF CULVERTS REQUIRING FABRICATED 8 INCH C. M. P. STUBS

STA.	CULVERT DIMENSIONS			8 INCH STUBS REQUIRED		L' FT. - IN.
	SPAN IN.	RISE IN.	B IN.	LAND SIDE	SEA SIDE	
75+22.5	50	31	8		A&B	21-2
80+43	22	13	4-3/4	B	B	20-11
81+15	28	18	5-1/2		A&B	20-11
83+23	36	22	6-1/4	A&B	A&B	20-11
84+62	28	18	5-1/2	B	A&B	20-11
98+11	28	18	5-1/2		A&B	20-11
98+81	28	18	5-1/2	B		21-4
99+53.5	28	18	5-1/2	A&B		21-0

NOTE:

C. M. P. STUBS ARE TO BE FABRICATED TO PIPE ARCH IN THE SHOP. CONNECT TO DRAIN LINES WITH 8 INCH C. M. P. AND 45° BENDS AS INDICATED ON ROADWAY CONSTRUCTION SHEETS.

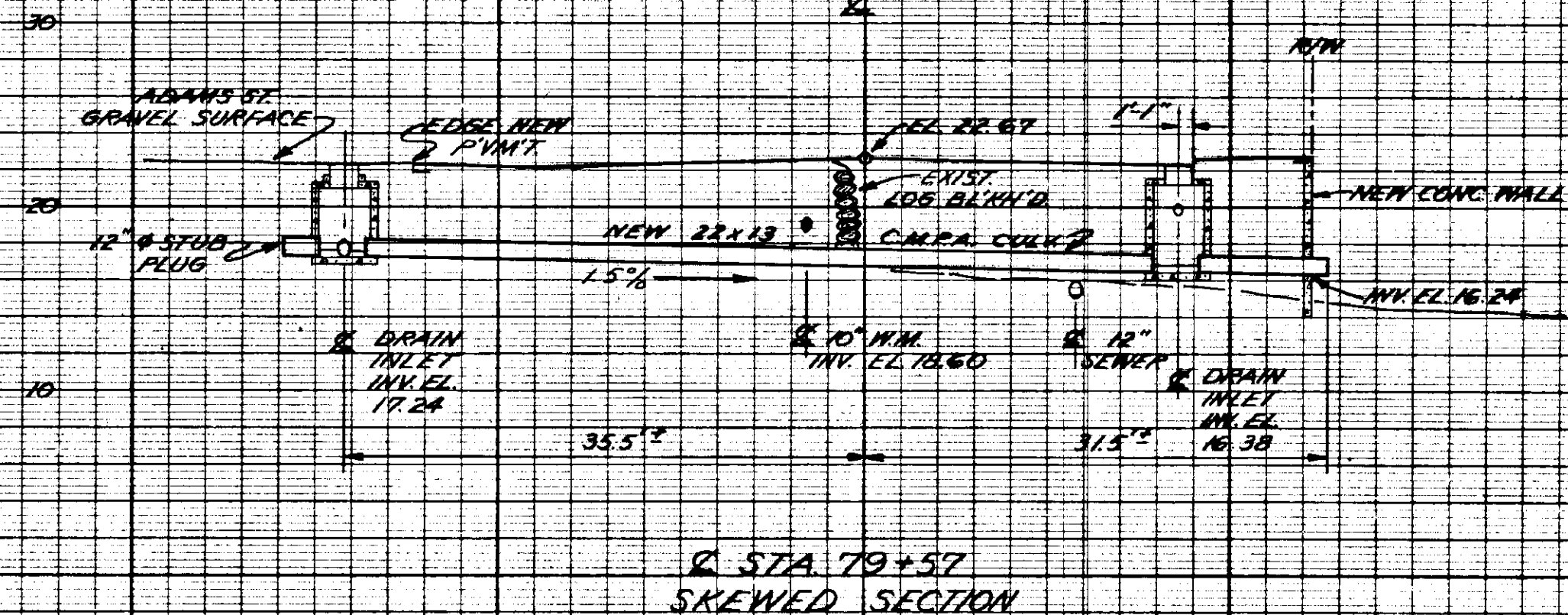
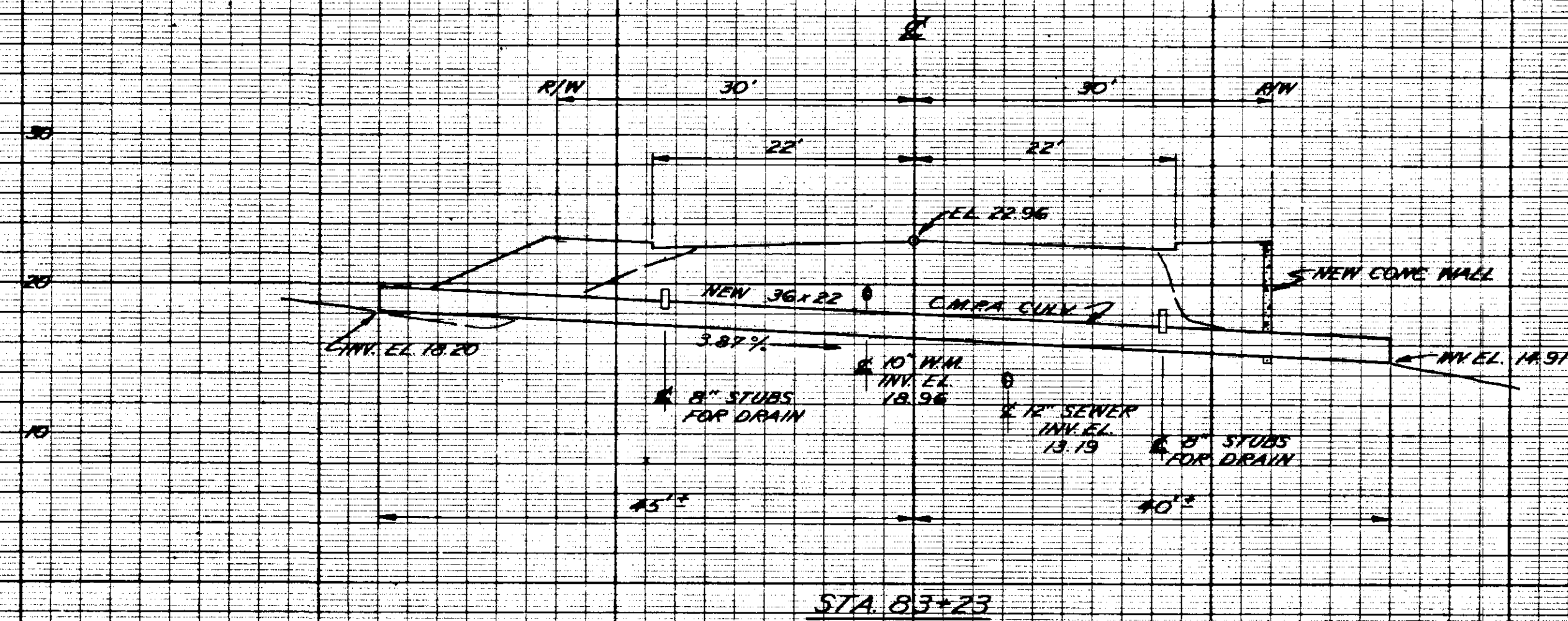
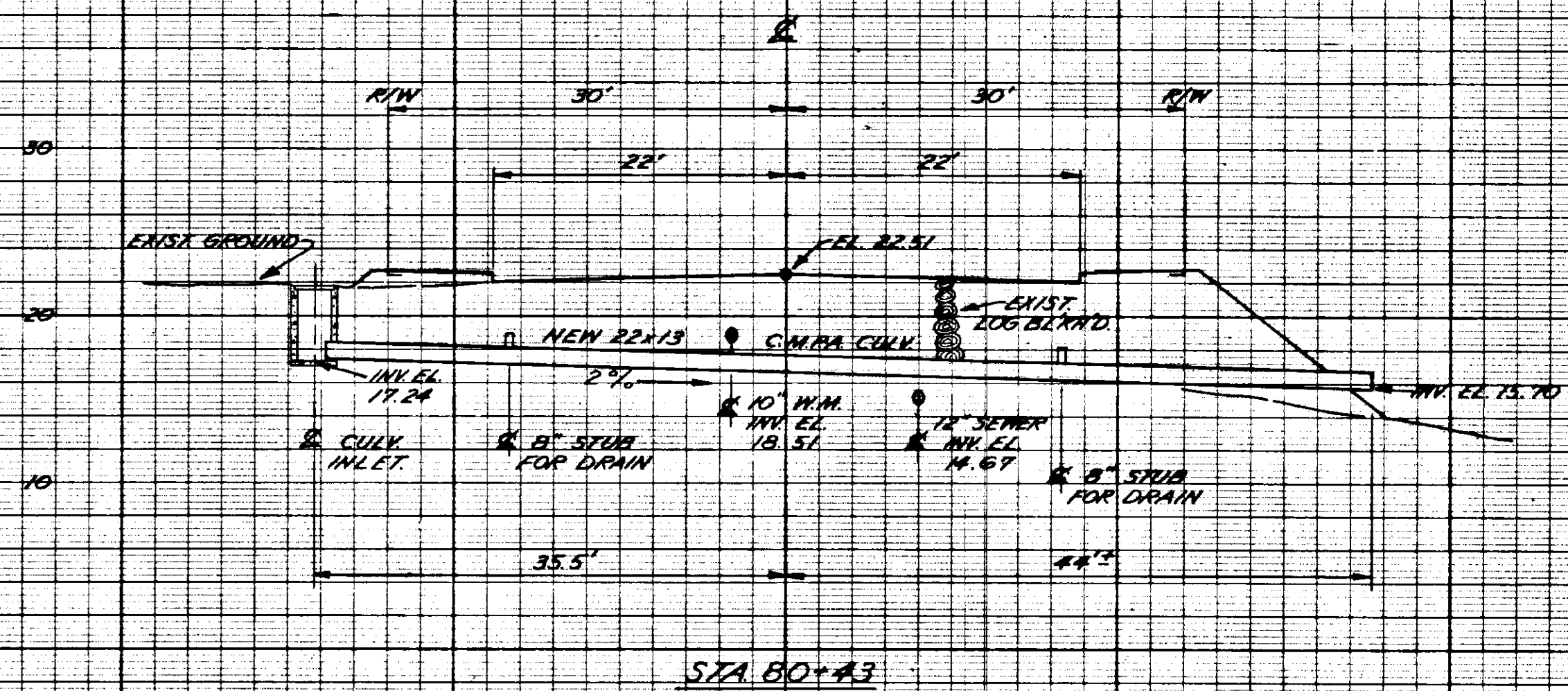
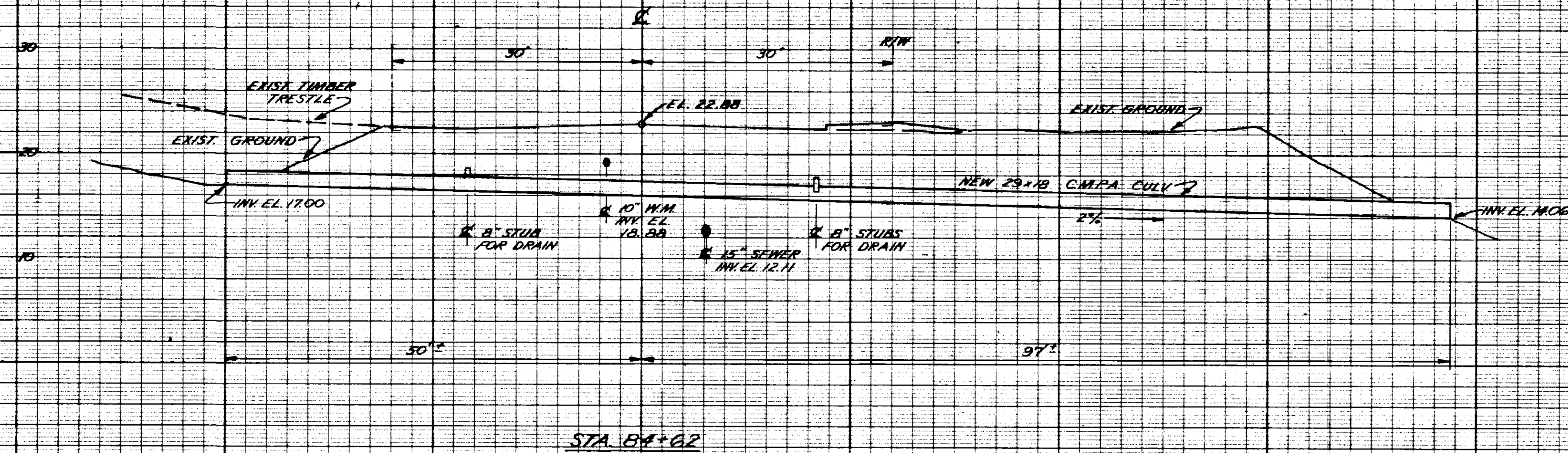
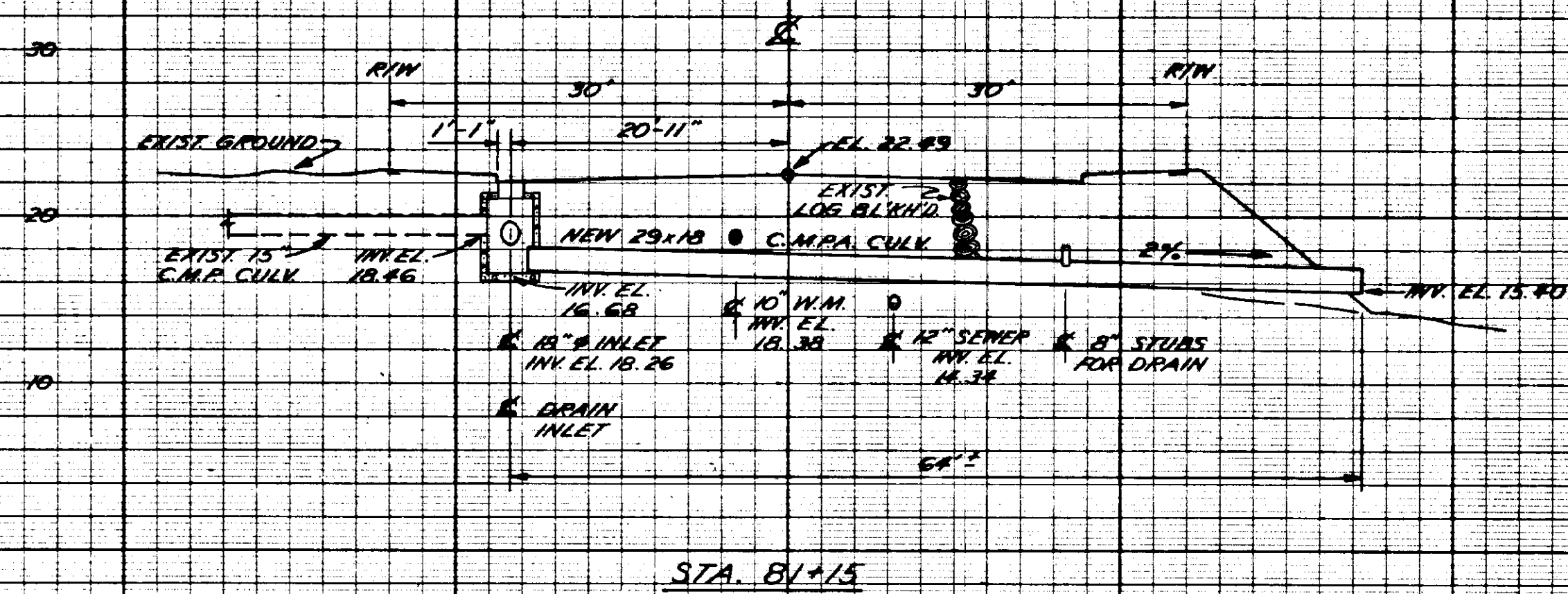
STATE OF ALASKA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

PROJECT F-095-1(7)
TONGASS AVENUE
KETCHIKAN, ALASKA

CROSS SECTIONS
CULVERTS

LANGDALE AND CONNELL
ENGINEERS
1001 SECURITY BLDG.
SEATTLE 1, WASHINGTON

DATE: NOV. 1960
SHEET 37 OF 64



NOTE
SEE SHT. 37 FOR TABLE & NOTES

HORIZ. SCALE: 1" = 10'
VERT. SCALE: 1" = 8'

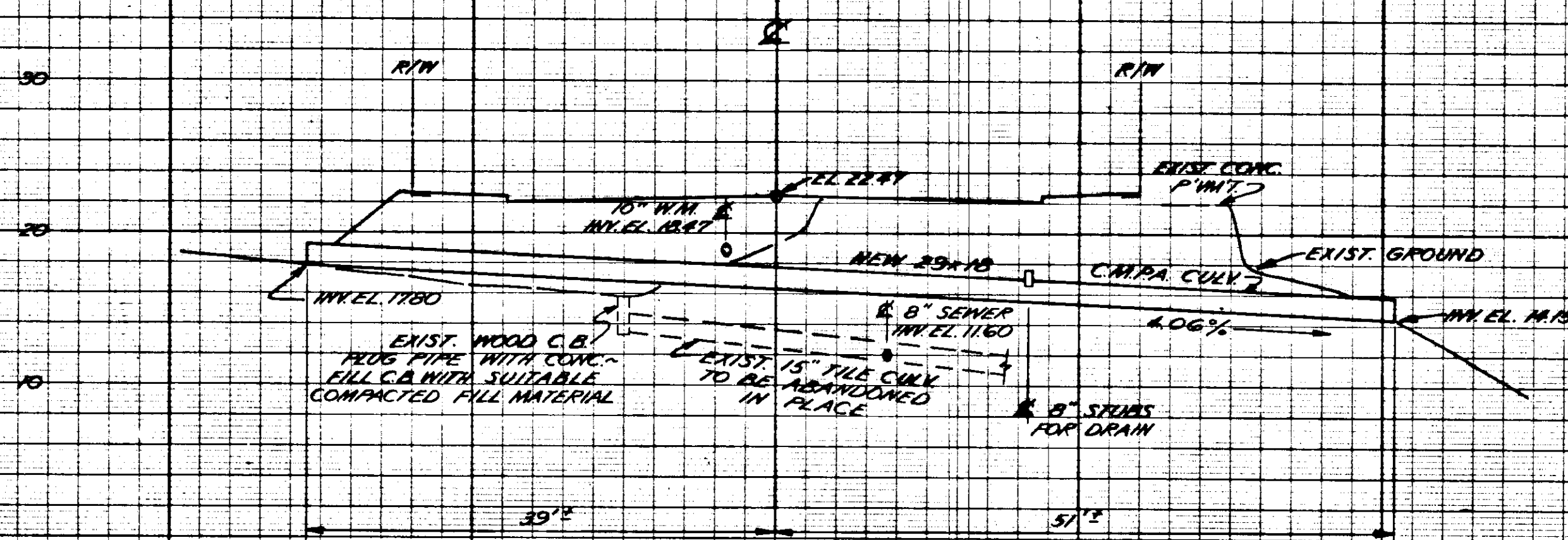
THE ALIGNMENT AND GRADE
AS SHOWN HEREON ARE
SUBJECT TO ADJUSTMENT.

STATE OF ALASKA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS
PROJECT F-095-1(7)
TONGASS AVENUE
KETCHIKAN, ALASKA

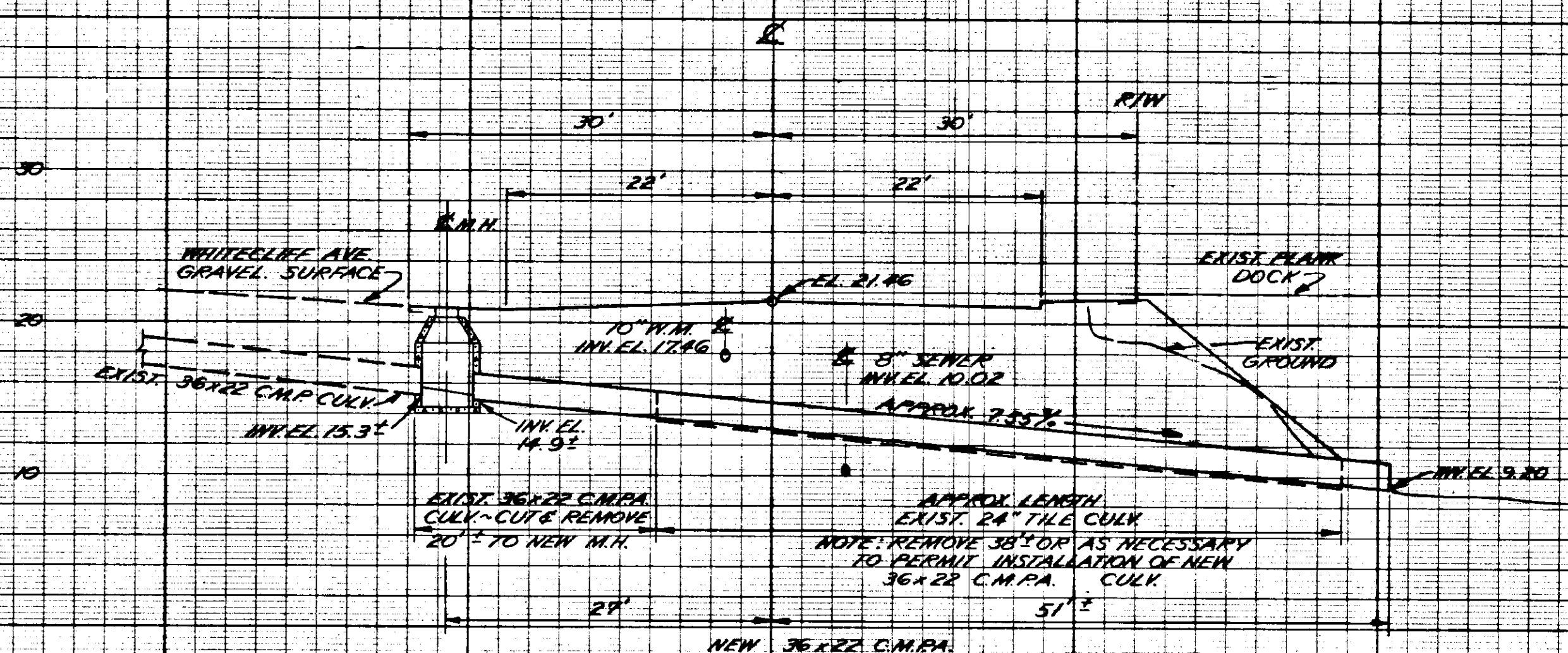
CROSS SECTIONS
CULVERTS

LANGDALE AND CONNELL
ENGINEERS
1081 SECURITIES BLDG.
SEATTLE 1, WASHINGTON

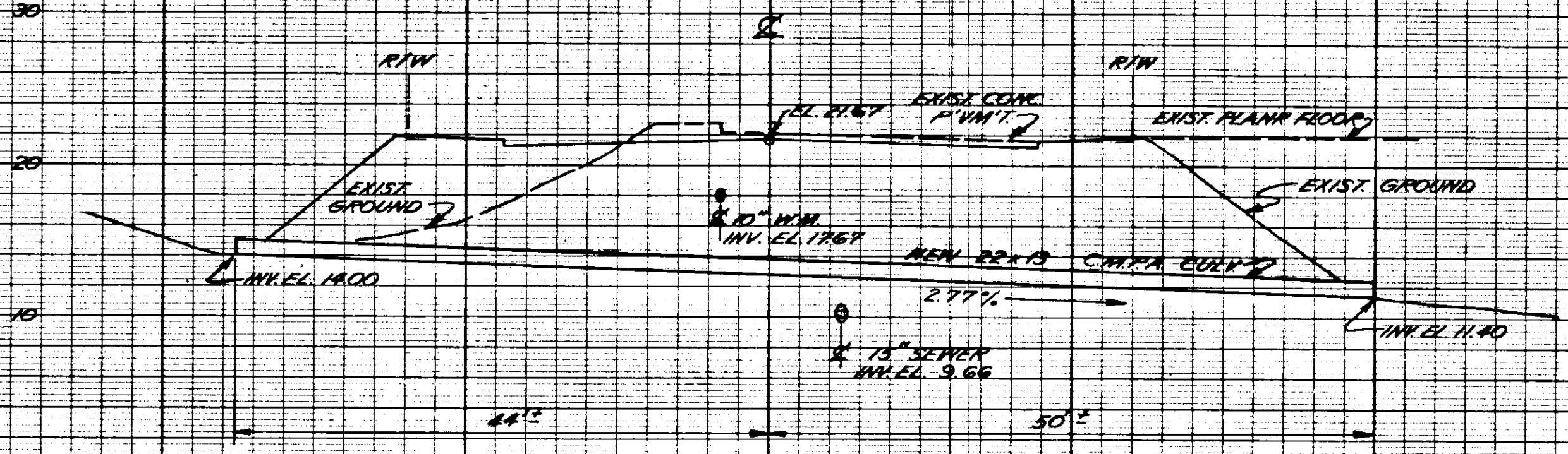
DATE: NOV., 1960
SHEET 38 OF 64



STA 96+11



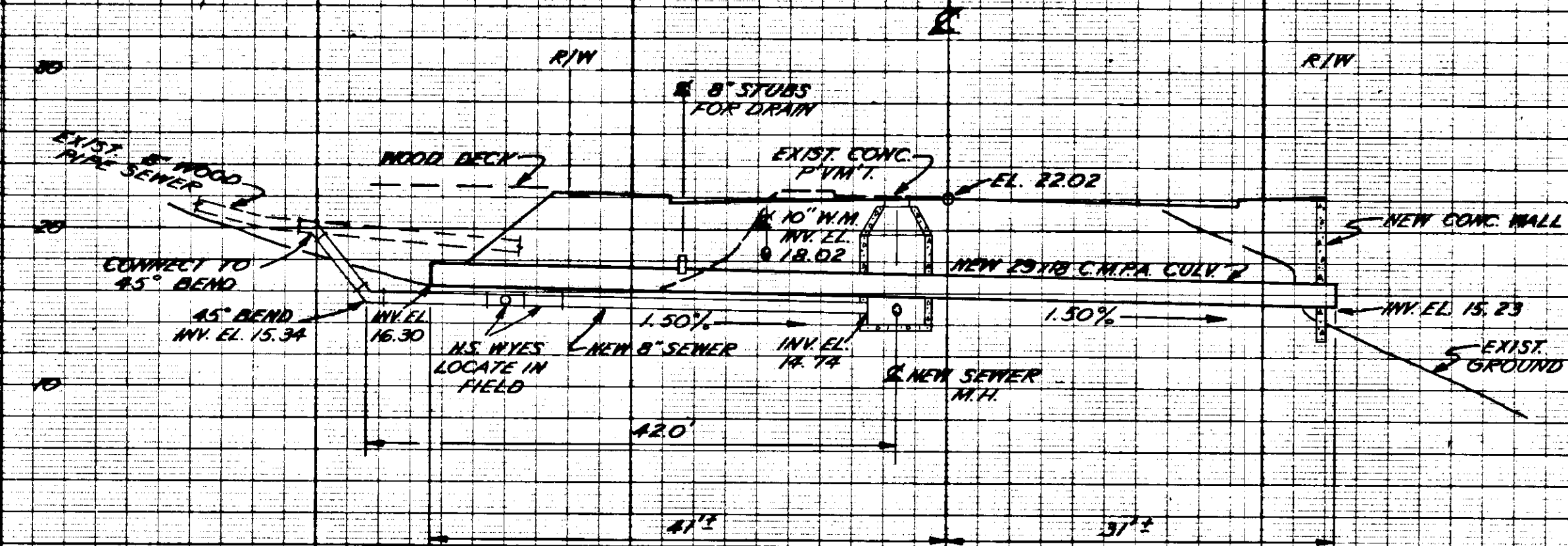
STA 87+95.5



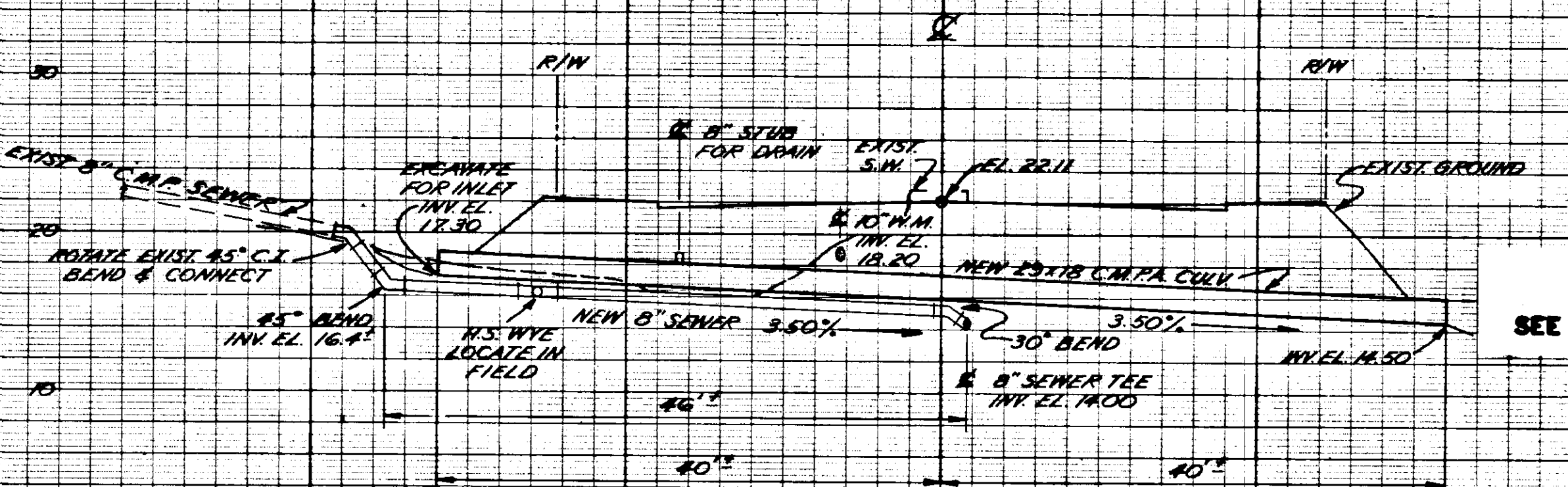
STA 87+37
SKEWED SECTION

HORIZ. SCALE: 1" = 10'
VERT. SCALE: 1" = 8'

THE ALIGNMENT AND GRADE
AS SHOWN HEREON ARE
SUBJECT TO ADJUSTMENT.



STA 99+53.5
SKEWED SECTION



STA 98+59.1
SKEWED SECTION

NOTE
SEE SHT. 37 FOR TABLE & NOTES

STATE OF ALASKA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS
PROJECT F-095-1(7)
TONGASS AVENUE
KETCHIKAN, ALASKA

CROSS SECTIONS
CULVERTS

LANGDALE AND CONNELL
ENGINEERS
1001 SECURITY BLDG.
SEATTLE 1, WASHINGTON
DATE: NOV., 1960
SHEET 39 OF 64

LIST OF CULVERTS AND MISCELLANEOUS WORK

[illegible]

✓ - 9

AS BUILT

LIST OF CULVERTS AND MISCELLANEOUS WORK

STATION	L.S. (LAND-SIDE) S.S. (SEA-SIDE)	DESCRIPTION
95+35	S.S.	STA. 95+35 TO STA. 100+78.10 Install Gutter Inlet and 8" C.M. outlet pipe.
95+33.5 95+43	L.S.	Construct Box Inlet. Connect to catch basin at Sta. 95+45.2 with 8" C.M.P.
95+45.2	L.S.	Construct Catch Basin. Connect to catch basin at Sta. 95+76.2 with 8" C.M.P.
95+76.2 95+87.2	L.S.	Construct Box Inlet. Connect to catch basin at Sta. 95+76.2 with 8" C.M.P.
95+76.2	L.S.	Construct Catch Basin. Connect to box inlet at Sta. 95+85 with 8" C.M.P.
95+85	S.S.	Construct Box Inlet. Connect to culvert stub with 8" C.M.P.
96+11		Install 29" x 18" C.M.P.A. Culvert.
96+37 96+86		Construct Box Inlet on L.S. and S.S. Connect with 8" C.M.P.
96+11 96+86	S.S.	Install 8" C.M.P. drain to connect Box Inlets on Sea-side to culvert stub.
97+35 97+84 98+33		Construct Box Inlet on L.S. and S.S. Connect with 8" C.M.P.
97+35 to 98+33	S.S.	Install 8" C.M.P. drain to connect Box Inlets on Sea-side. Install 8" C.M. outlet pipe from box inlet at Sta. 98+33 S.S.
98+81		Install 29" x 18" C.M.P.A. culvert.
98+83 98+33 98+85 100+37	L.S. L.S. S.S. S.S.	Construct Box Inlet. Connect to culvert stub with 8" C.M.P.
100+37	L.S.	Install Gutter Inlet and 8" C.M. outlet pipe.
98+33.5		CONSTRUCT BOX INLETS. CONNECT TO B.I. AT STA. 99+88 WITH 8" C.M.P.
P.I. 'M' P.I. 'N'		Install 29" x 18" C.M.P.A. culvert.
95+80 ± 96+54 ± 98+02 ± 99+70 ± 100+11	S.S. L.S.	Construct 15' driveway.
97+27 ±	S.S.	Construct 20' driveway.
99+30 ±	S.S.	Construct 18' driveway.
95+81 to 98+85	S.S.	Remove existing concrete pavement and sidewalk as stated by the Engineer. Place new concrete 12" thick, poured to meet the new sidewalk grade. At locations abutting new driveways, curbs must be 6" thick to meet the new driveway elevation and width - ITEM 408 (2).

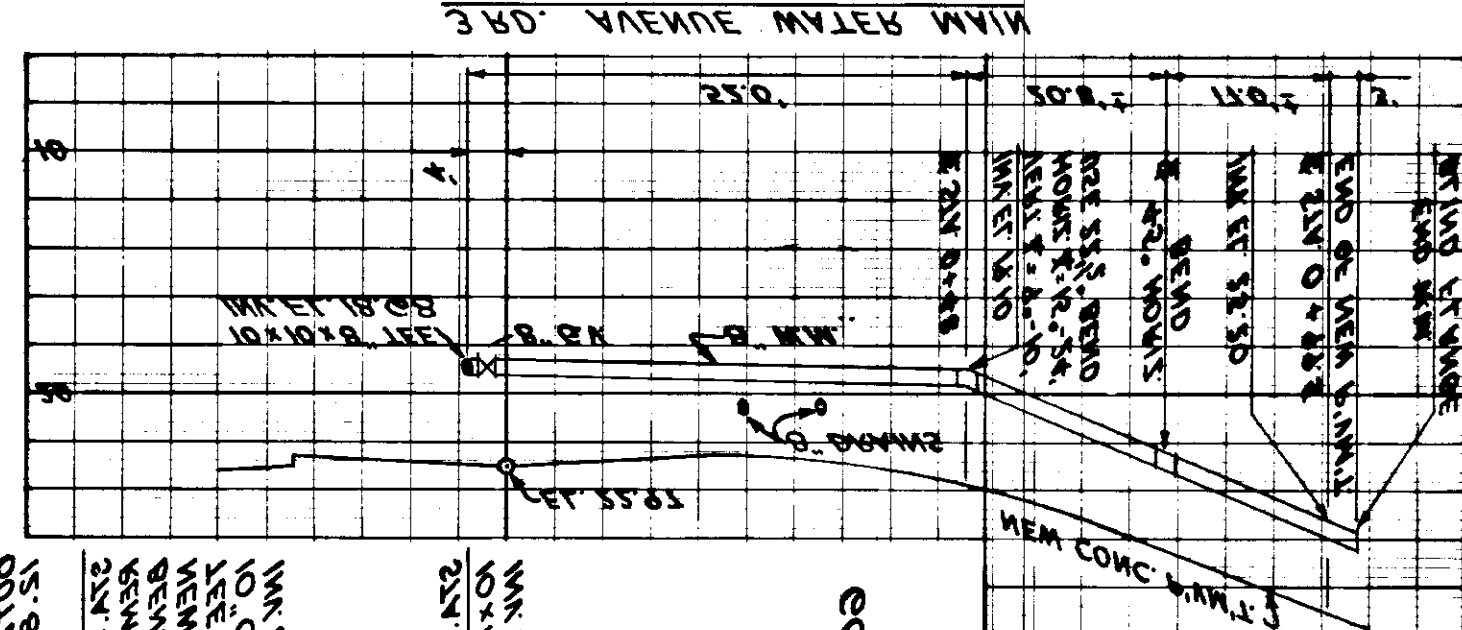
STATE	PROJECT DESIGNATION	YEAR	SHEET No.	TOTAL SHEETS
ALASKA	F-095-1(7)	1962	43	6

21A 28+01 TO 21A 22+00
WATER MAINS & SEWERS
RELATED CITY PROJECT

KETCHIKAN, ALASKA
LONGVIEW AVENUE
PROJECT E-082-1(1)
DIVISION OF HIGHWAYS
DEPARTMENT OF PUBLIC WORKS
STATE OF ALASKA

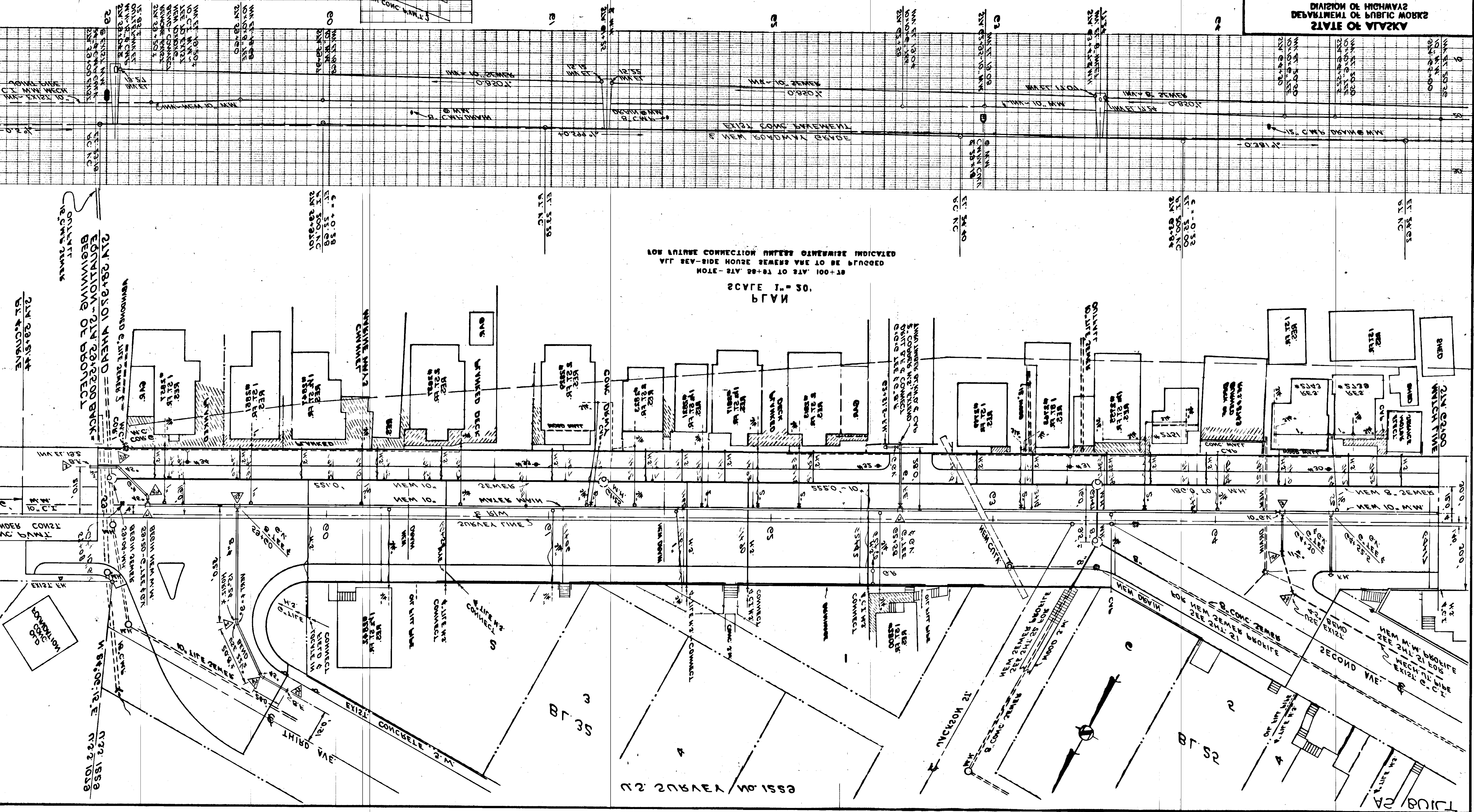
SUBJECT TO ADJUSTMENT
AS SHOWN HEREON ARE
THE ALIGNMENT AND GRADE

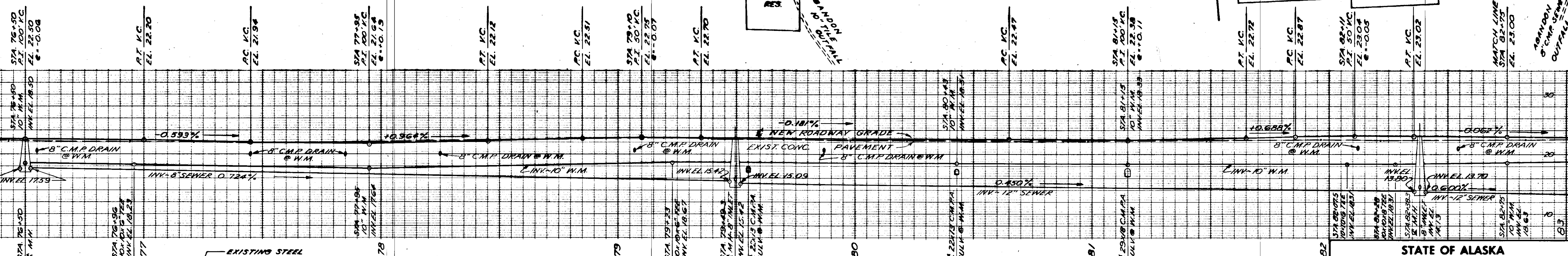
SCALE 1" = 30' HORIZ. 1" = 8' VERT.
PROFILE



LOW LIFTING CONNECTION UNLESS OTHERWISE INDICATED
VIT. 22V-SIDE HOUSE SEWERS ARE TO BE PLACED
NOTE: 21A 28+01 TO 21A 100+10

SCALE 1" = 30'
PLAN





STATE OF ALASKA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

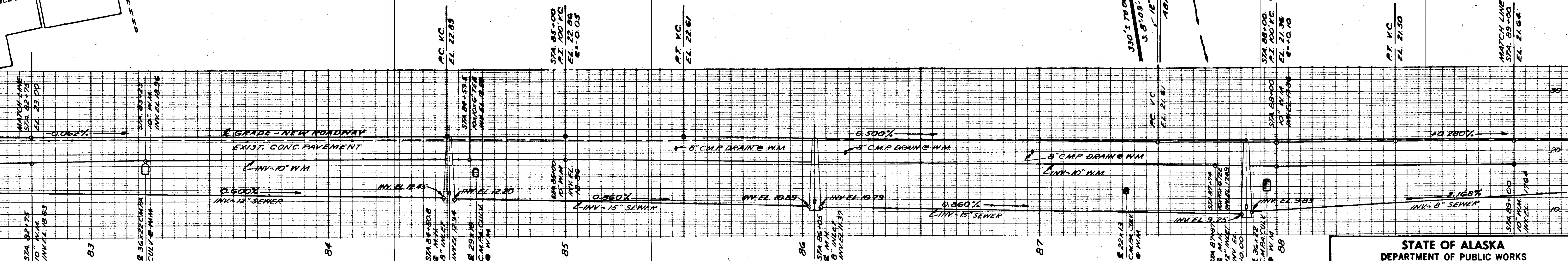
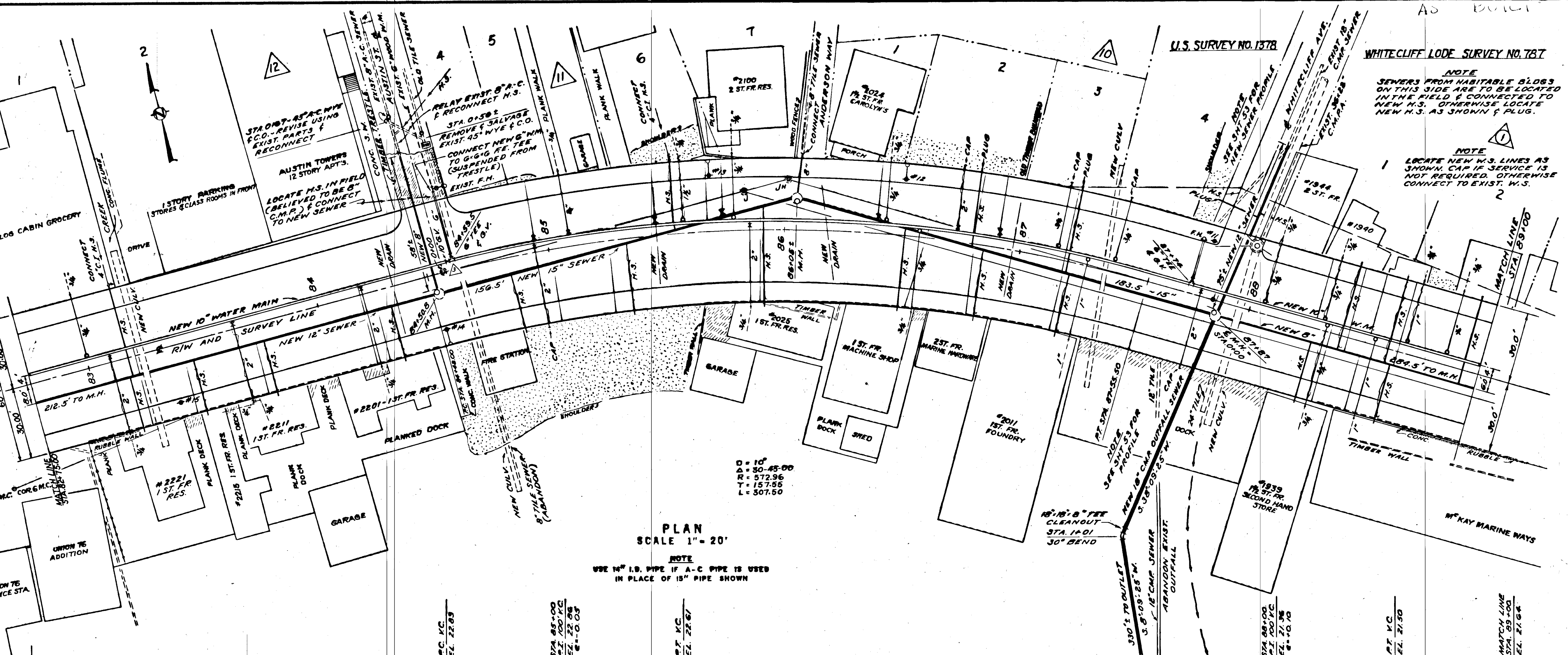
PROJECT F-095-1(7)
TONGASS AVENUE
KETCHIKAN, ALASKA

RELATED CITY PROJECT
WATER MAINS & SEWERS
STA. 76+50 TO STA. 82+75

LANGDALE AND CONNELL
ENGINEERS
1031 SECURITIES BLDG.
SEATTLE 1, WASHINGTON

DATE: _____ NOV, 1968
SHEET 47 OF 64

THE ALIGNMENT AND GRADE
AS SHOWN HEREON ARE
SUBJECT TO ADJUSTMENT.



STATE OF ALASKA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

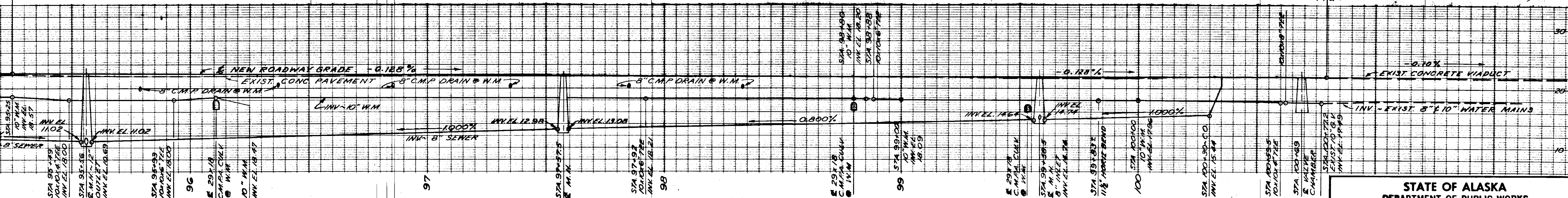
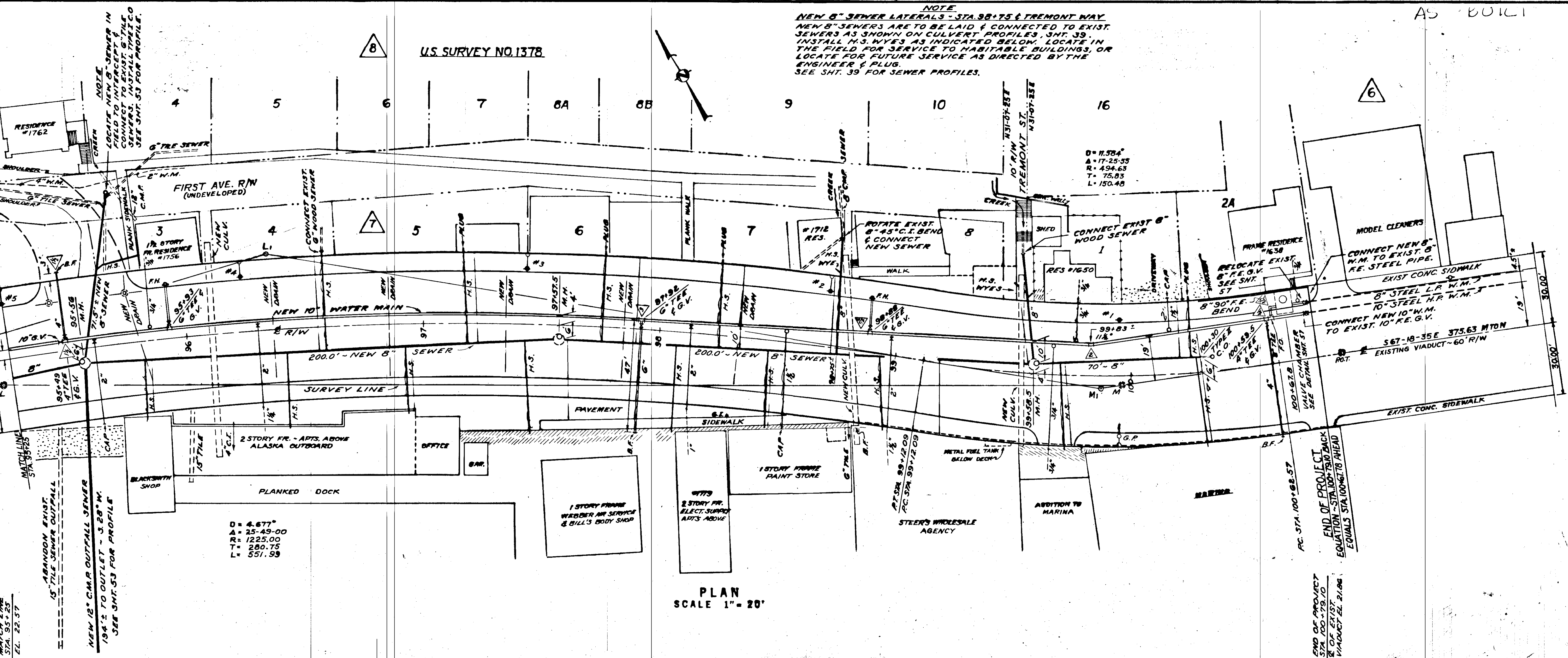
PROJECT F-095-1(7)
TONGASS AVENUE
KETCHIKAN, ALASKA

RELATED CITY PROJECT
WATER MAINS & SEWERS
STA. 82+75 TO STA. 89+00

LANGDALE AND CONNELL
ENGINEERS
1821 SECURITY BLDG.
SEATTLE 1, WASHINGTON

DATE: NOV. 1960
SHEET: 48 OF 64

THE ALIGNMENT AND GRADE AS SHOWN HEREON ARE SUBJECT TO ADJUSTMENT.



STATE OF ALASKA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

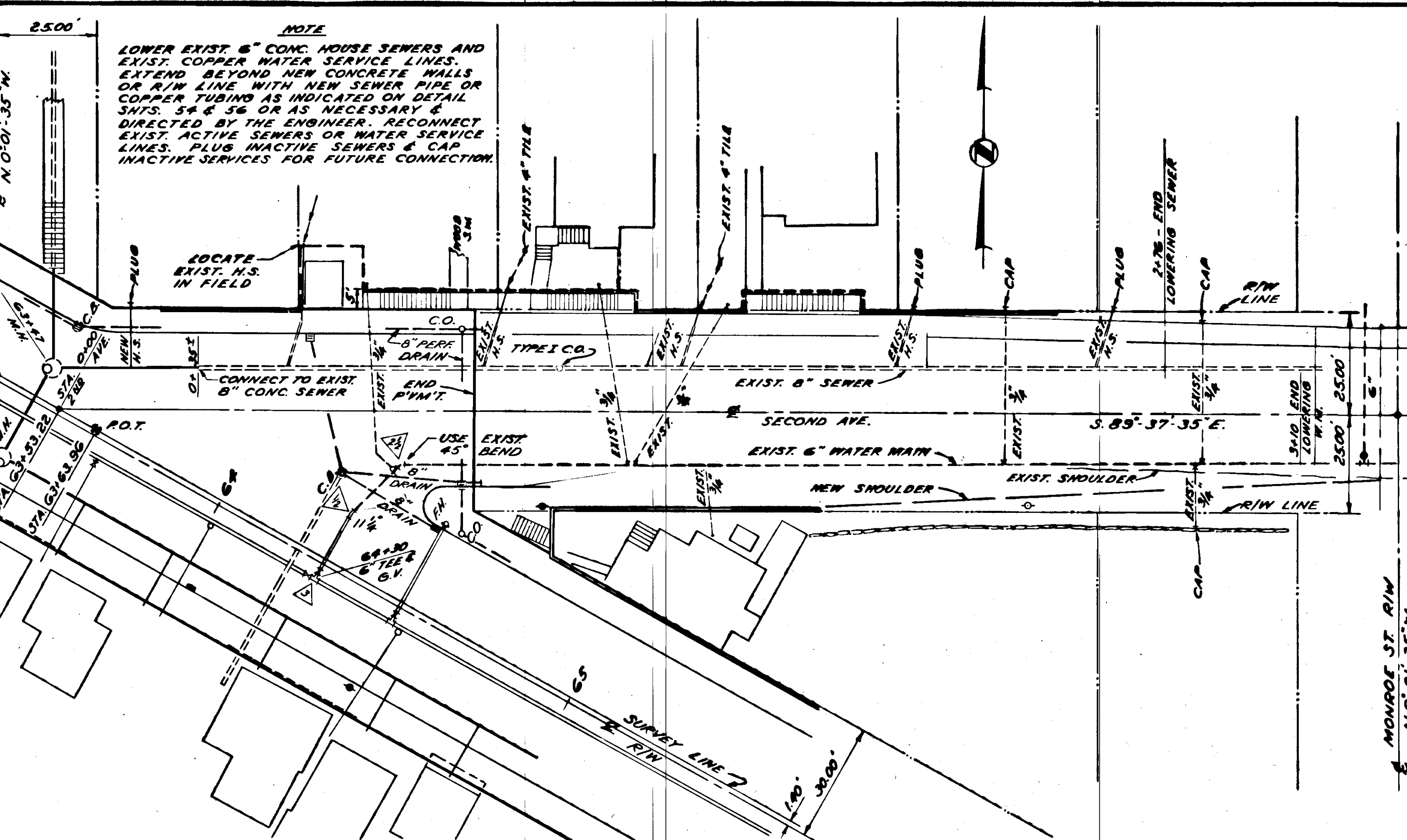
PROJECT F-095-1(7)
TONGASS AVENUE
KETCHIKAN, ALASKA

RELATED CITY PROJECT
WATER MAINS & SEWERS
STA. 95+25 TO STA. 100+79

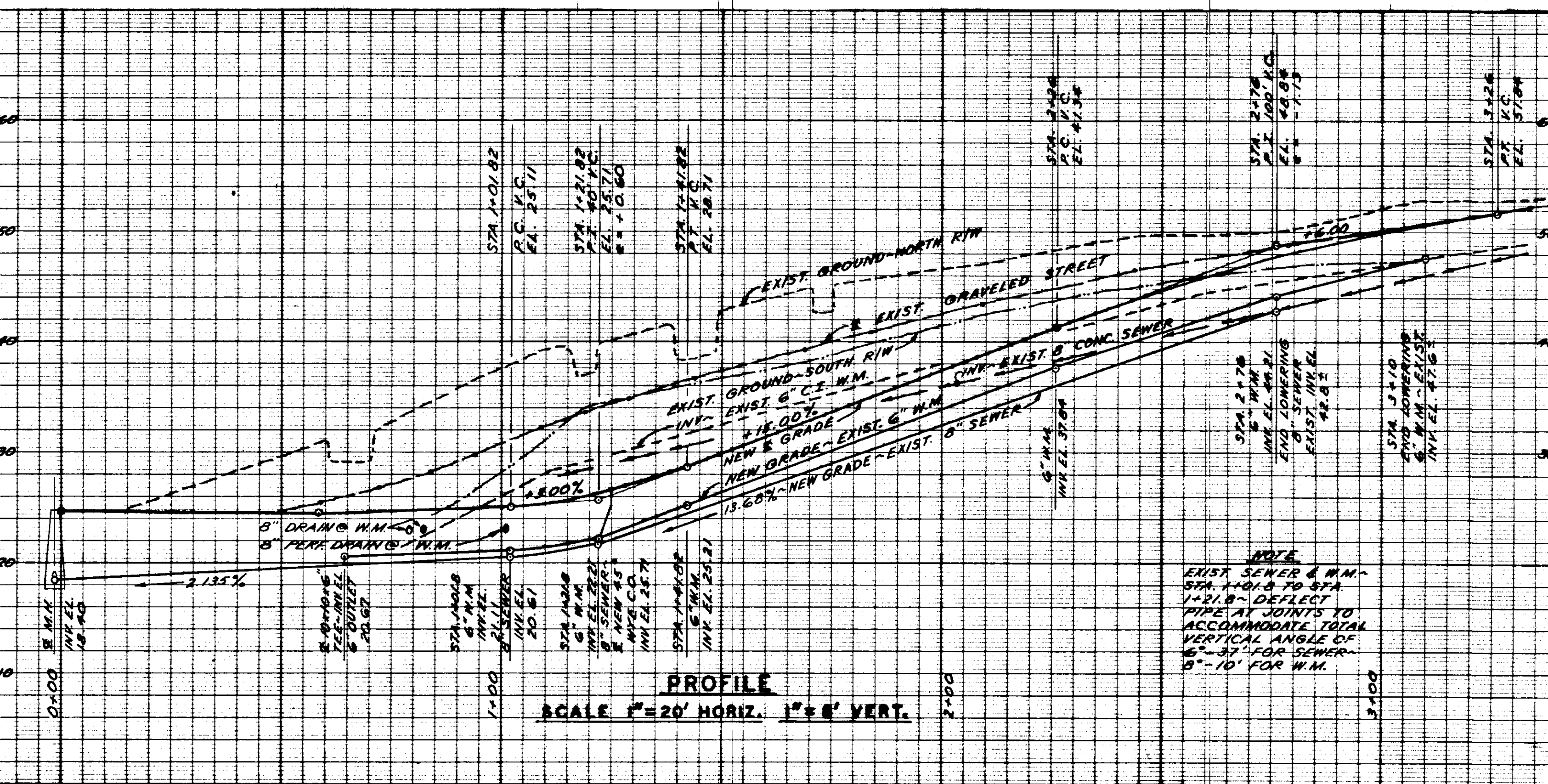
LANGDALE AND CONNELL
ENGINEERS
1001 SECURITY BLDG.
SEATTLE 1, WASHINGTON

DATE: NOV., 1960
SHEET 80 OF 64

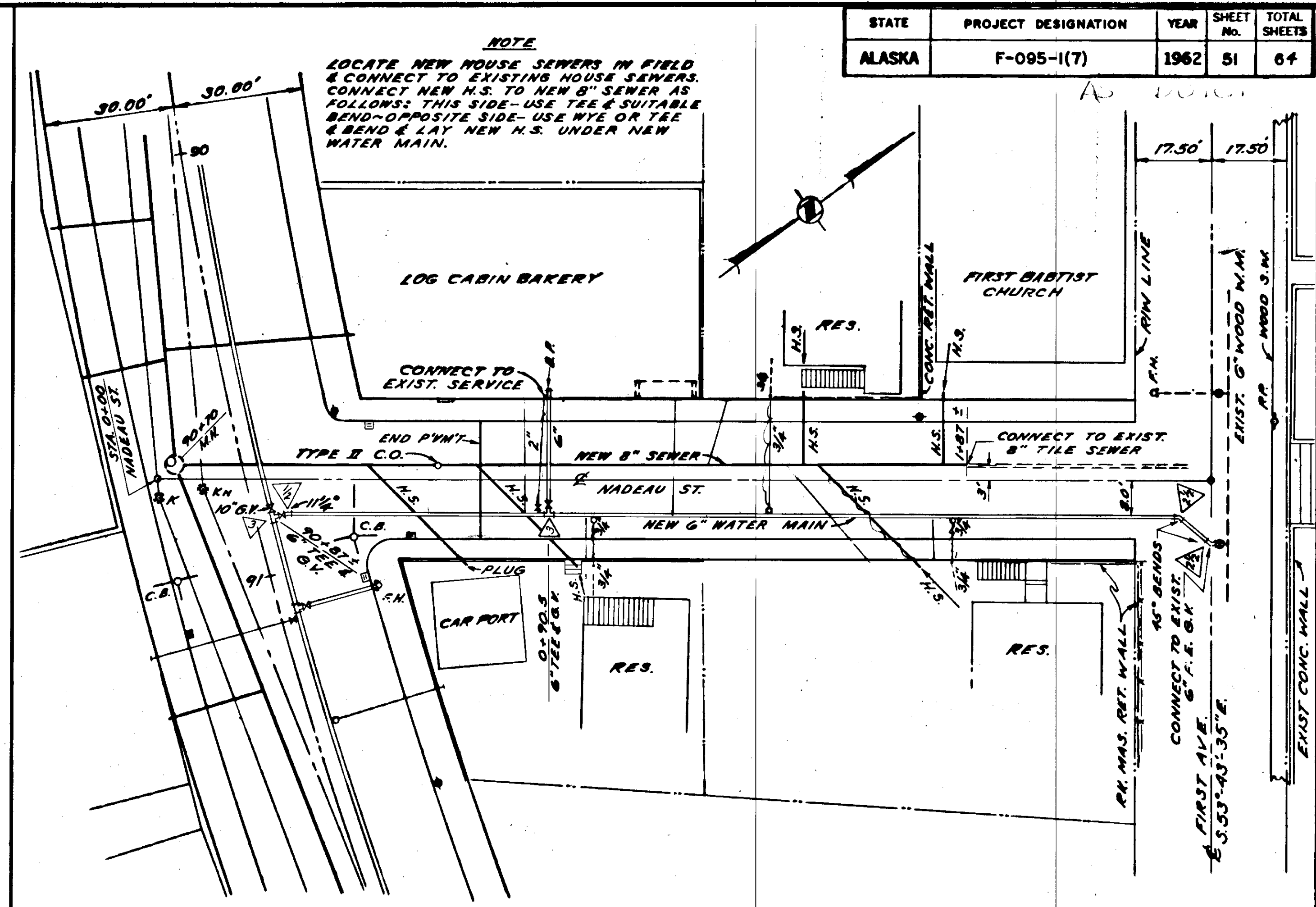
THE ALIGNMENT AND GRADE
AS SHOWN HEREON ARE
SUBJECT TO ADJUSTMENT.



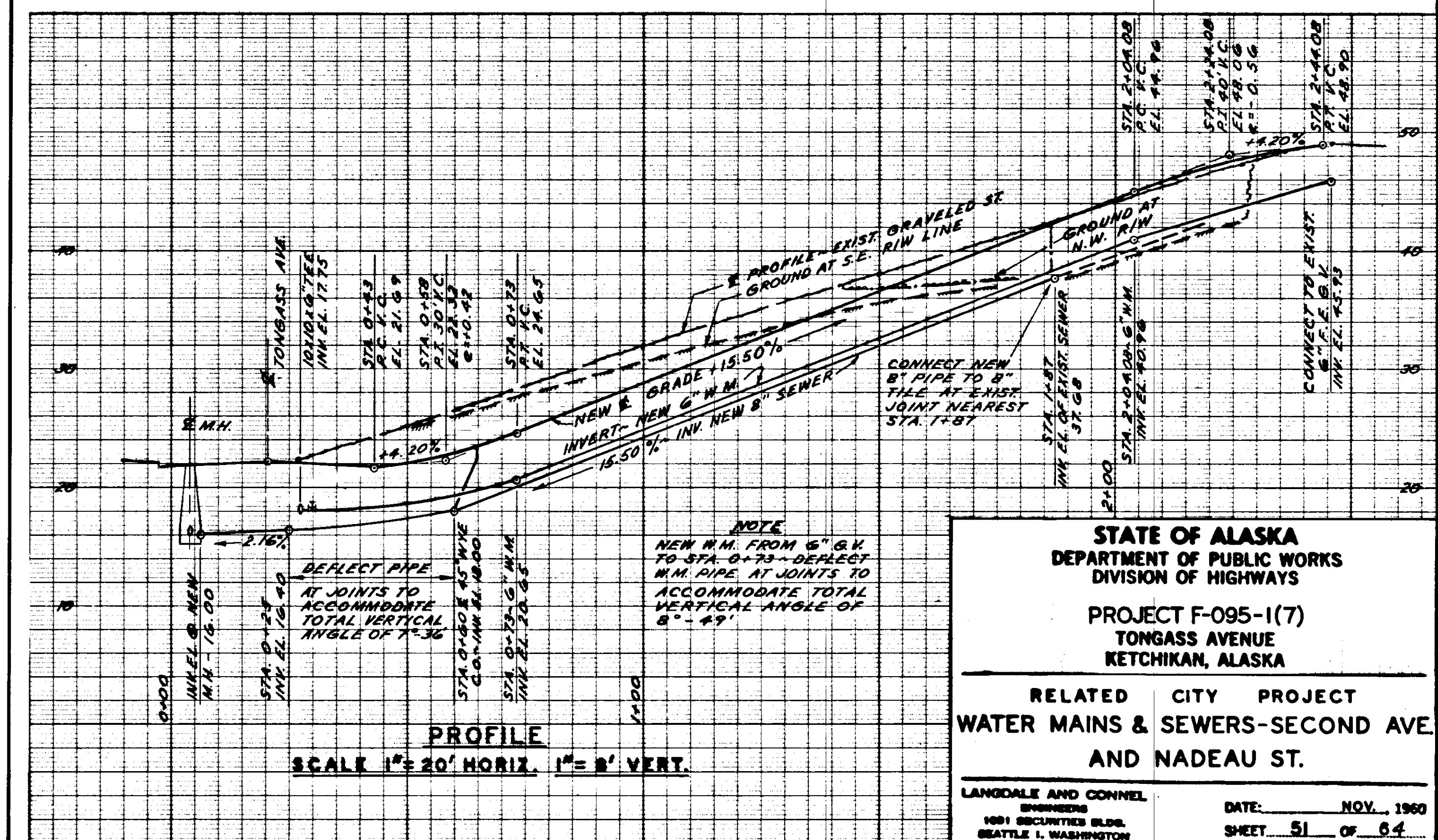
PLAN
SCALE 1"=20'
SECOND AVENUE



PROFILE
SCALE 1"=20' HORIZ. 1"=8' VERT.



PLAN
SCALE 1"=20'
NADEAU STREET



PROFILE
SCALE 1"=20' HORIZ. 1"=8' VERT.

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	F-095-1(7)	1962	51	64

STATE OF ALASKA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

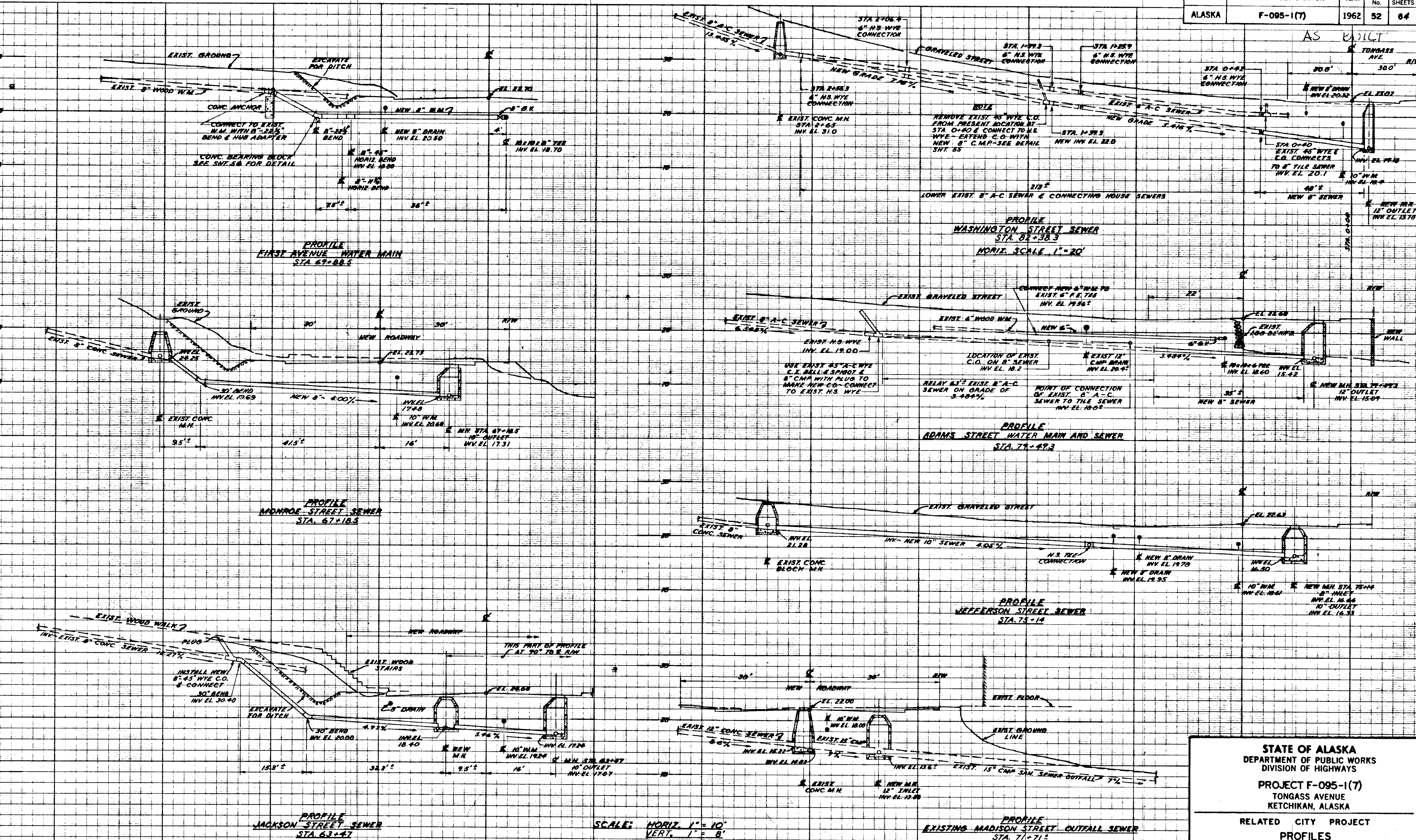
PROJECT F-095-1(7)
TONGASS AVENUE
KETCHIKAN, ALASKA

RELATED CITY PROJECT
WATER MAINS & SEWERS-SECOND AVE
AND NADEAU ST.

LANGDALE AND CONNELL
ENGINEERS
1001 SECURITY BLVD.
SEATTLE 1, WASHINGTON

DATE: NOV., 1960
SHEET 51 OF 64

STATE	PROJECT DESIGNATION	YEAR	SHEET No.	TOTAL SHEETS
ALASKA	F-095-1(7)	1962	52	64



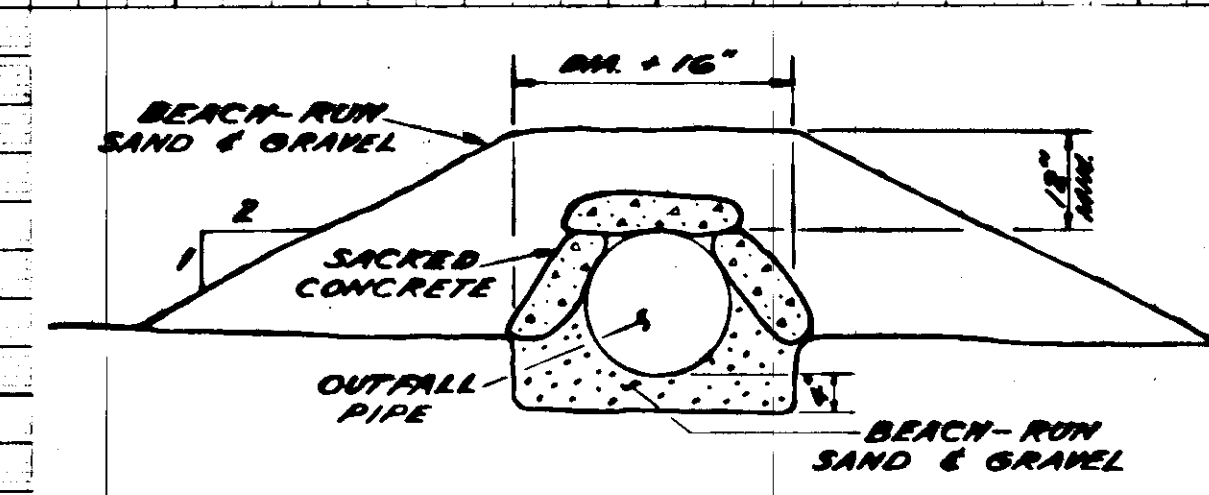
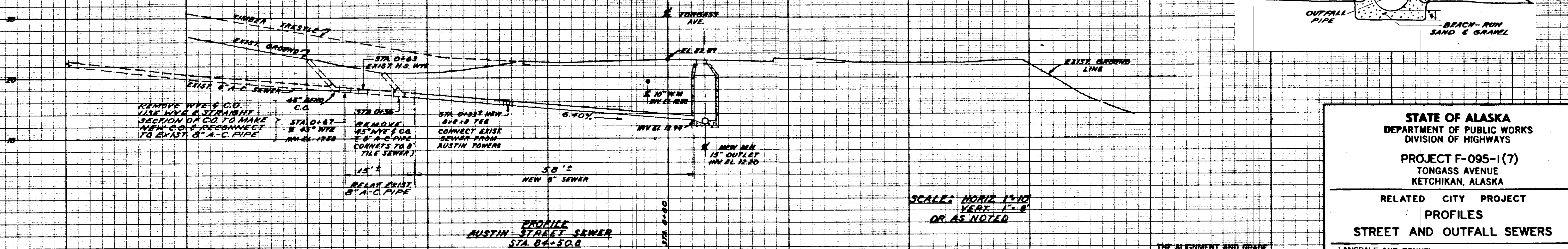
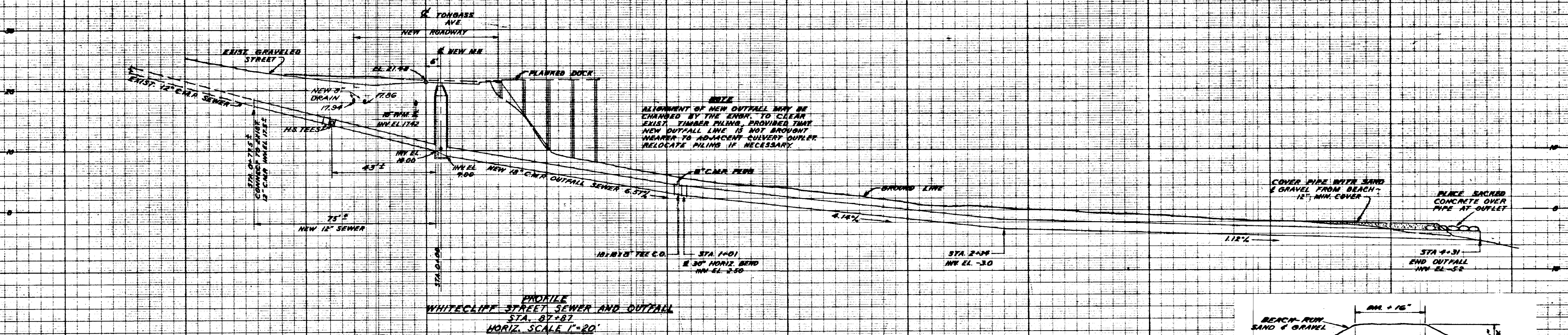
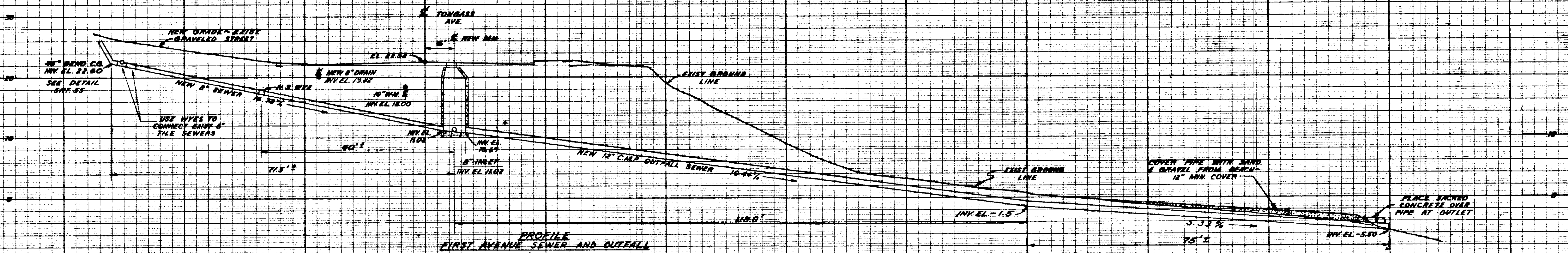
STATE OF ALASKA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

PROJECT F-095-1(7)
TONGASS AVENUE
KETCHIKAN, ALASKA

RELATED CITY PROJECT
PROFILES
WATER MAINS AND SEWERS

STATE	PROJECT DESIGNATION	YEAR	SHEET No.	TOTAL SHEETS
ALASKA	F-095-1(7)	1962	53	64

AS BUILT



SCALE: HORIZ. 1"=10'
VERT. 1"=8'
OR AS NOTED

THE ALIGNMENT AND GRADE AS SHOWN HEREON ARE SUBJECT TO ADJUSTMENT.

STATE OF ALASKA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

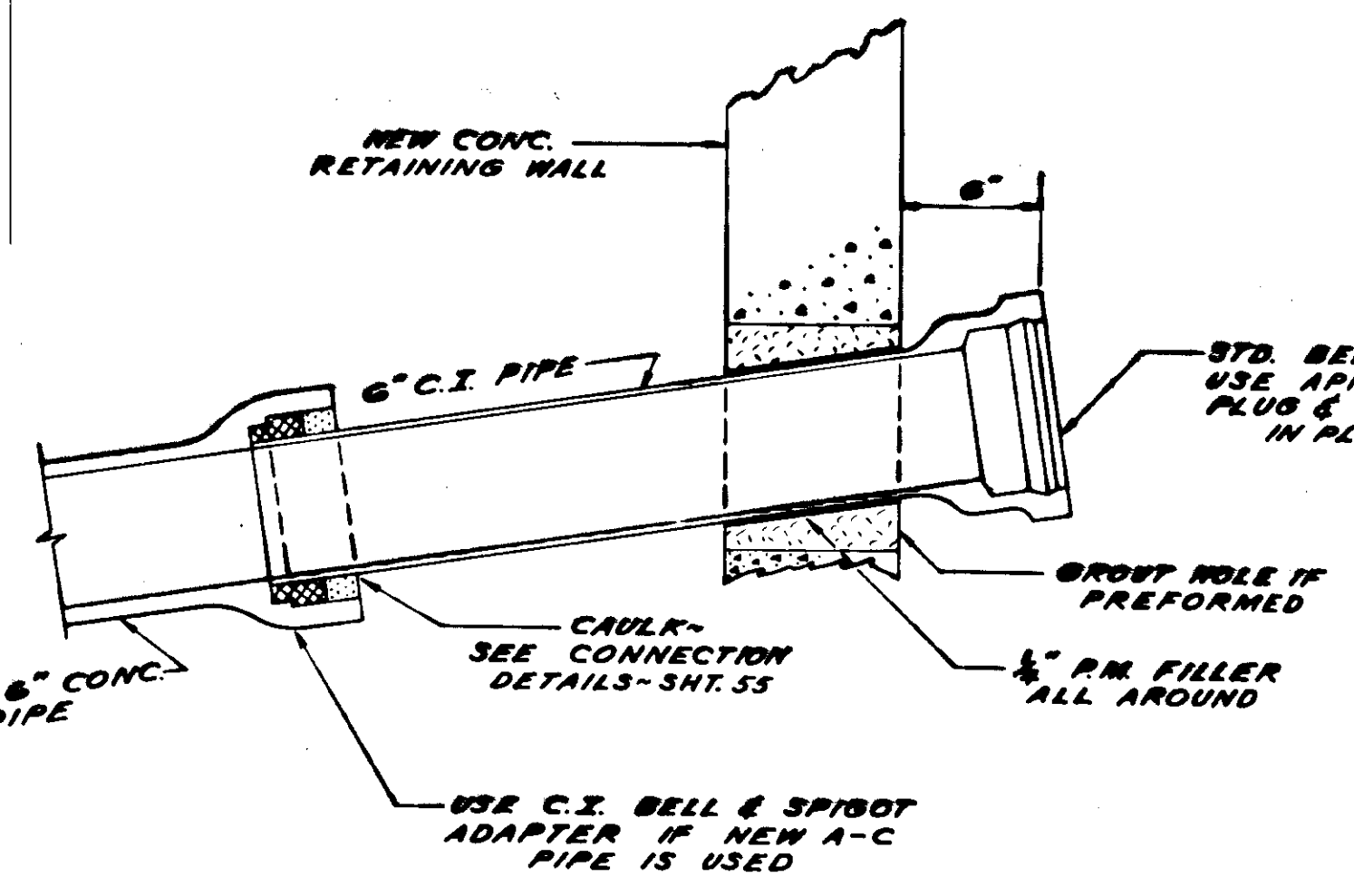
PROJECT F-095-1(7)
TONGASS AVENUE
KETCHIKAN, ALASKA

RELATED CITY PROJECT
PROFILES
STREET AND OUTFALL SEWERS

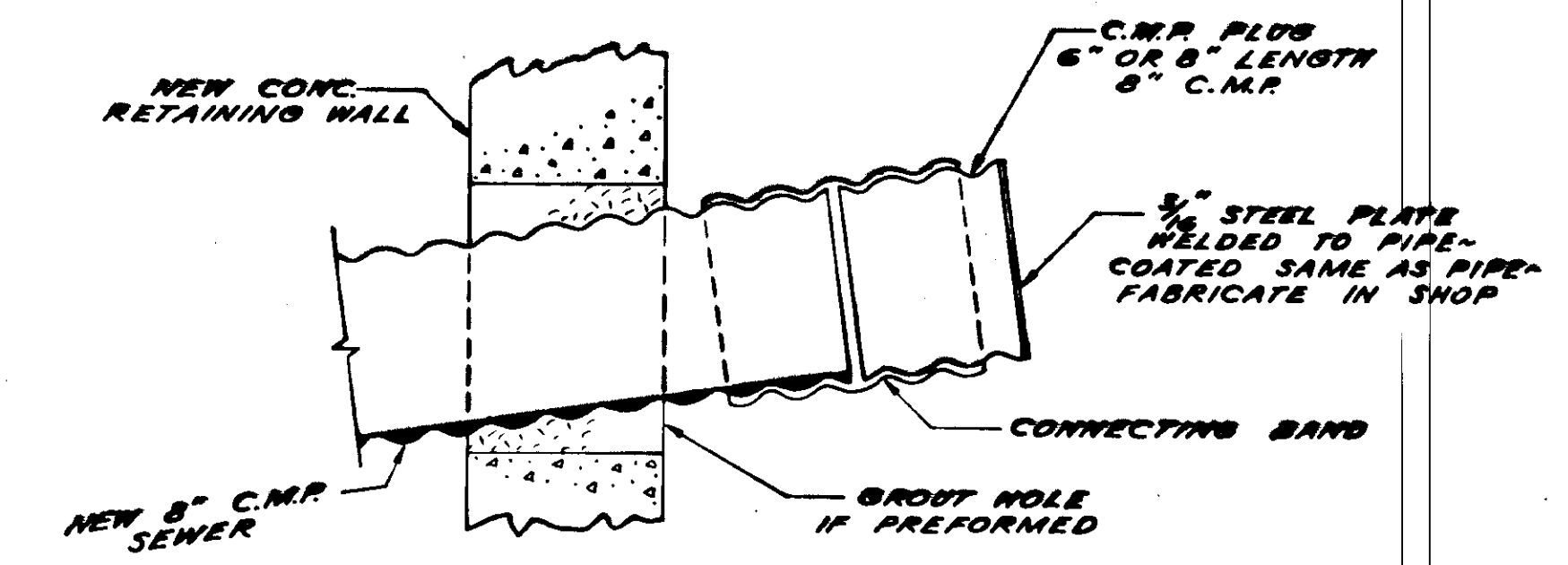
LANGDALE AND CONNELL
ENGINEERS
1001 SECURITIES BLDG.
SEATTLE 1, WASHINGTON

DATE: NOV. 1962
SHEET 53 OF 64

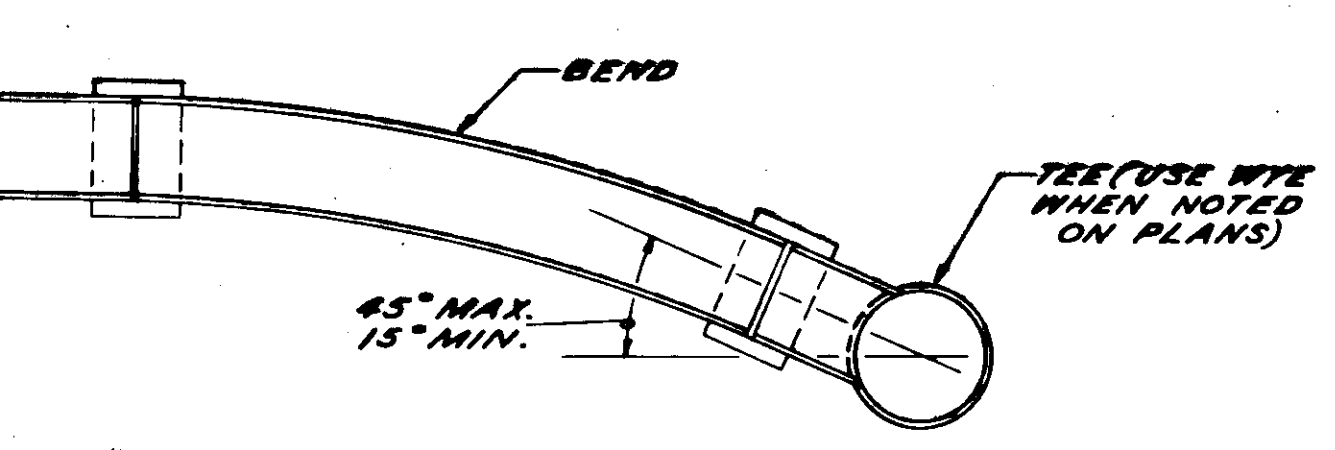
AS BUILT



DETAIL A
NOT TO SCALE



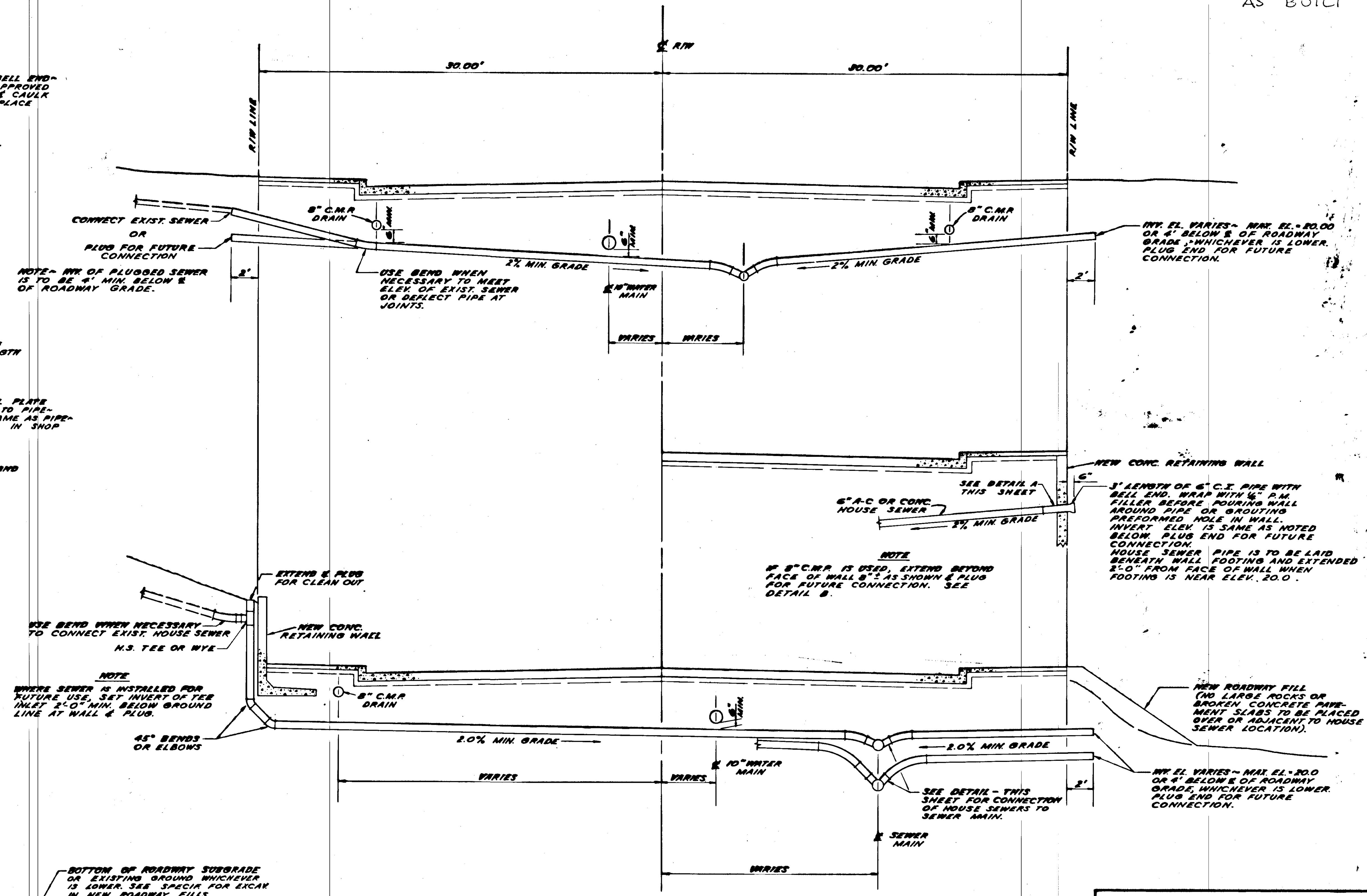
DETAIL B
C.M.P. PLUG
NOT TO SCALE



TYPICAL HOUSE SEWER CONNECTION
NOT TO SCALE

	A		B	W
	COMMON EXCAV.	ROCK EXCAV.		
SEWER PIPE CONC. OR A-C	6"	12"	12"	I.D. + 16"
C.M.P.	4"	6"	6"	I.D. + 16"
WATER PIPE	4"	6"	6"	I.D. + 16"
COPPER TUBING	0	2"	3"	18"

PAY LINES FOR TRENCH & SELECT BACKFILL



TYPICAL SECTIONS
SCALE: 1/4" = 1'-0"

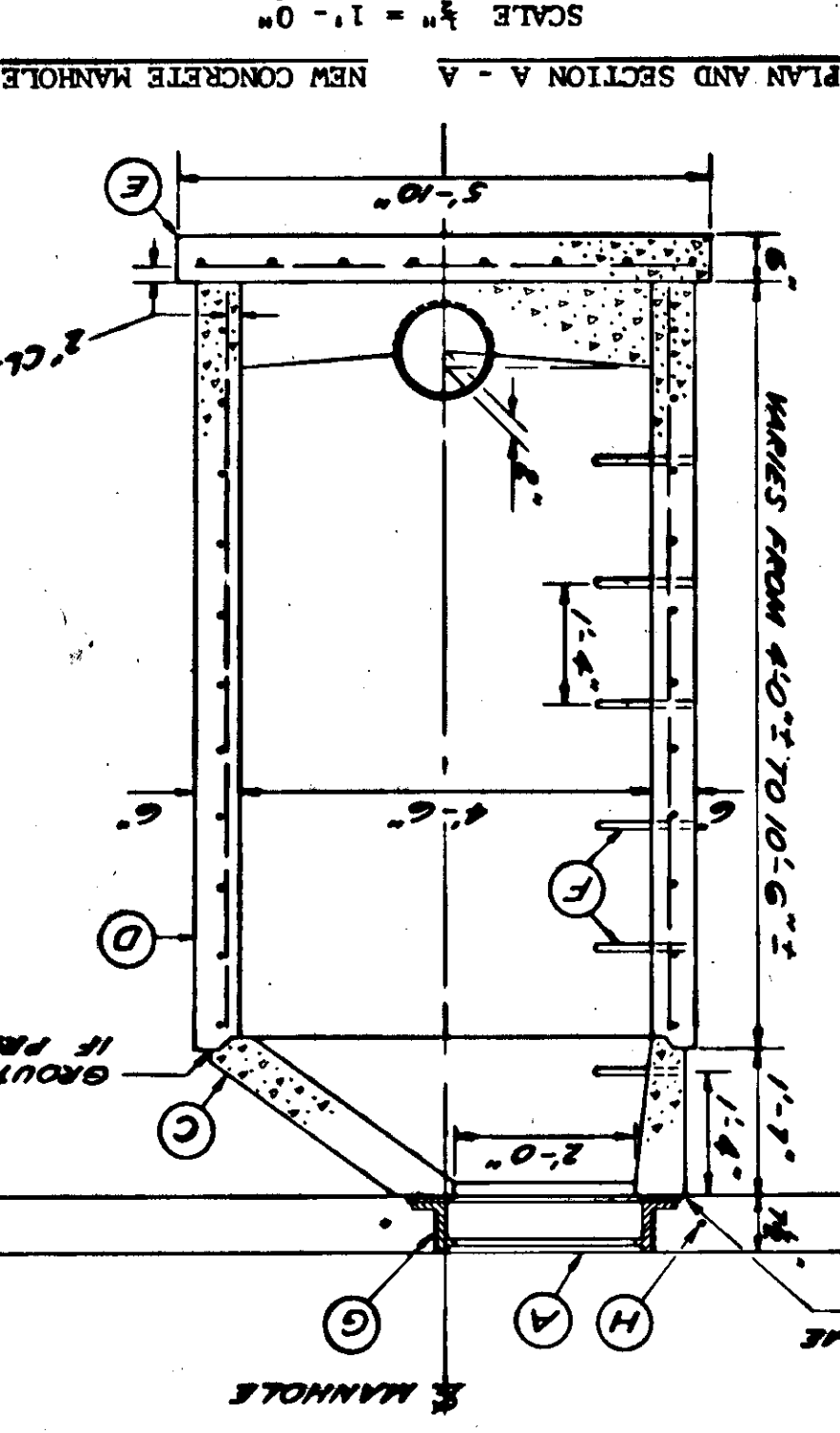
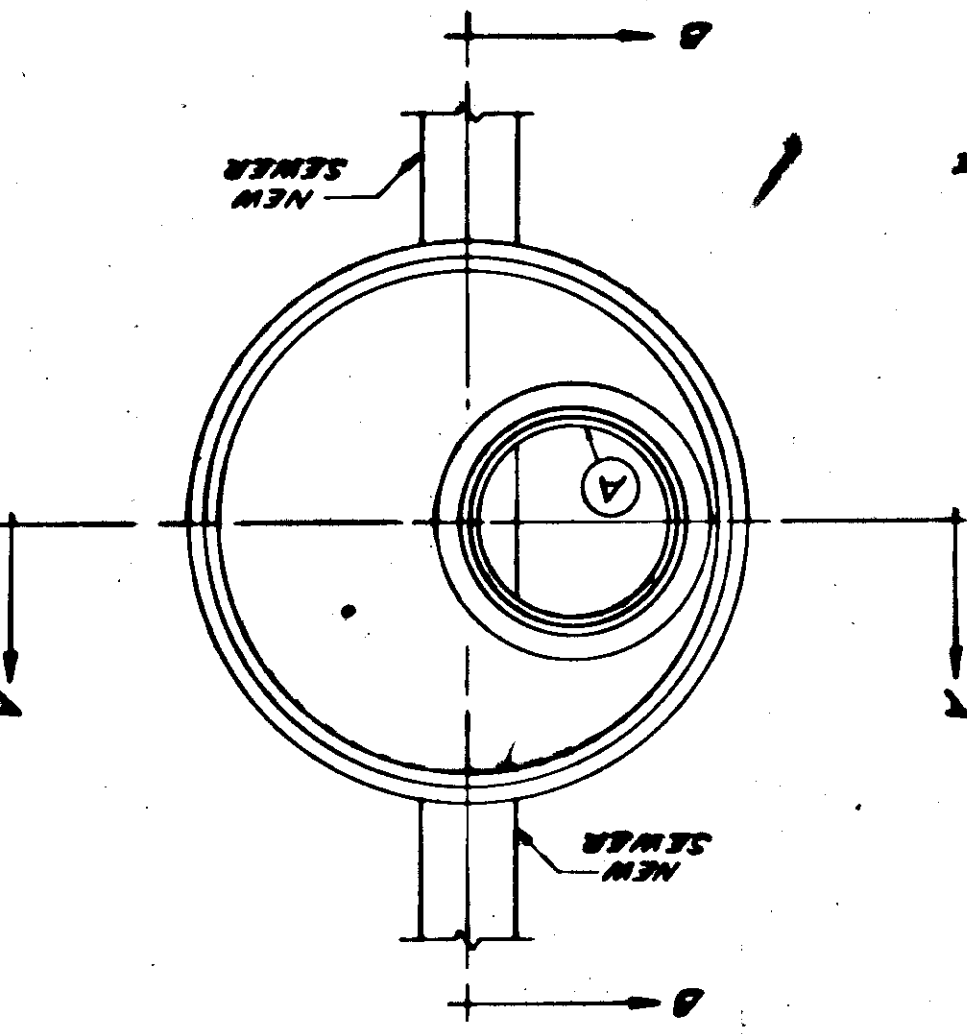
STATE OF ALASKA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

PROJECT F-095-1(7)
TONGASS AVENUE
KETCHIKAN, ALASKA

RELATED CITY PROJECT
TYPICAL SECTIONS-HOUSE SEWERS
WATER & SEWER TRENCH

LANGDALE AND CONNELL
ENGINEERS
1001 SECURITIES BLDG.
SEATTLE 1, WASHINGTON

DATE: NOV. 1960
SHEET 54 OF 64

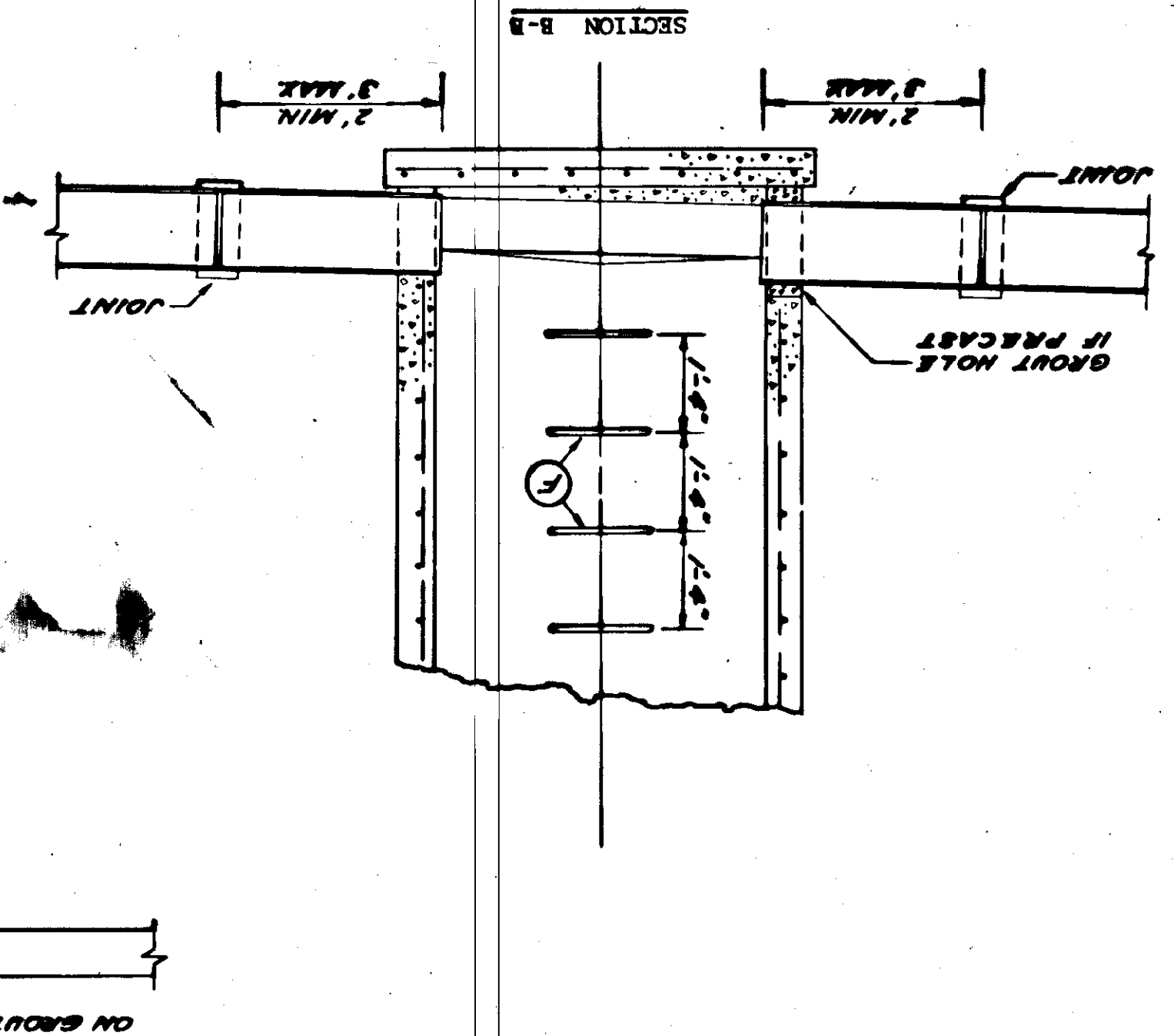
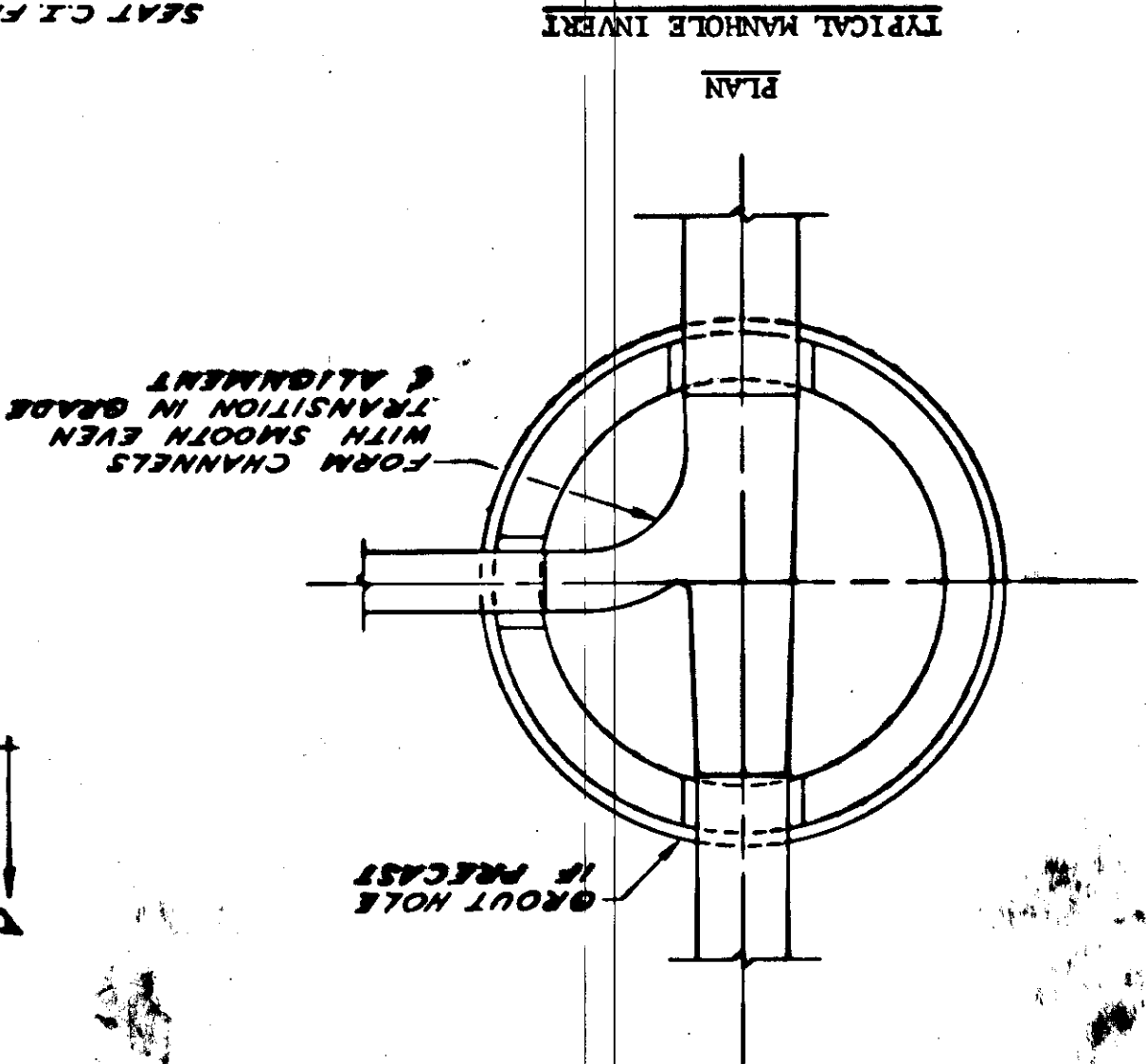


ALL CONCRETE SHALL BE CLASS AA.
SEE NOTES 1, 2, AND 3, SHEET 32.

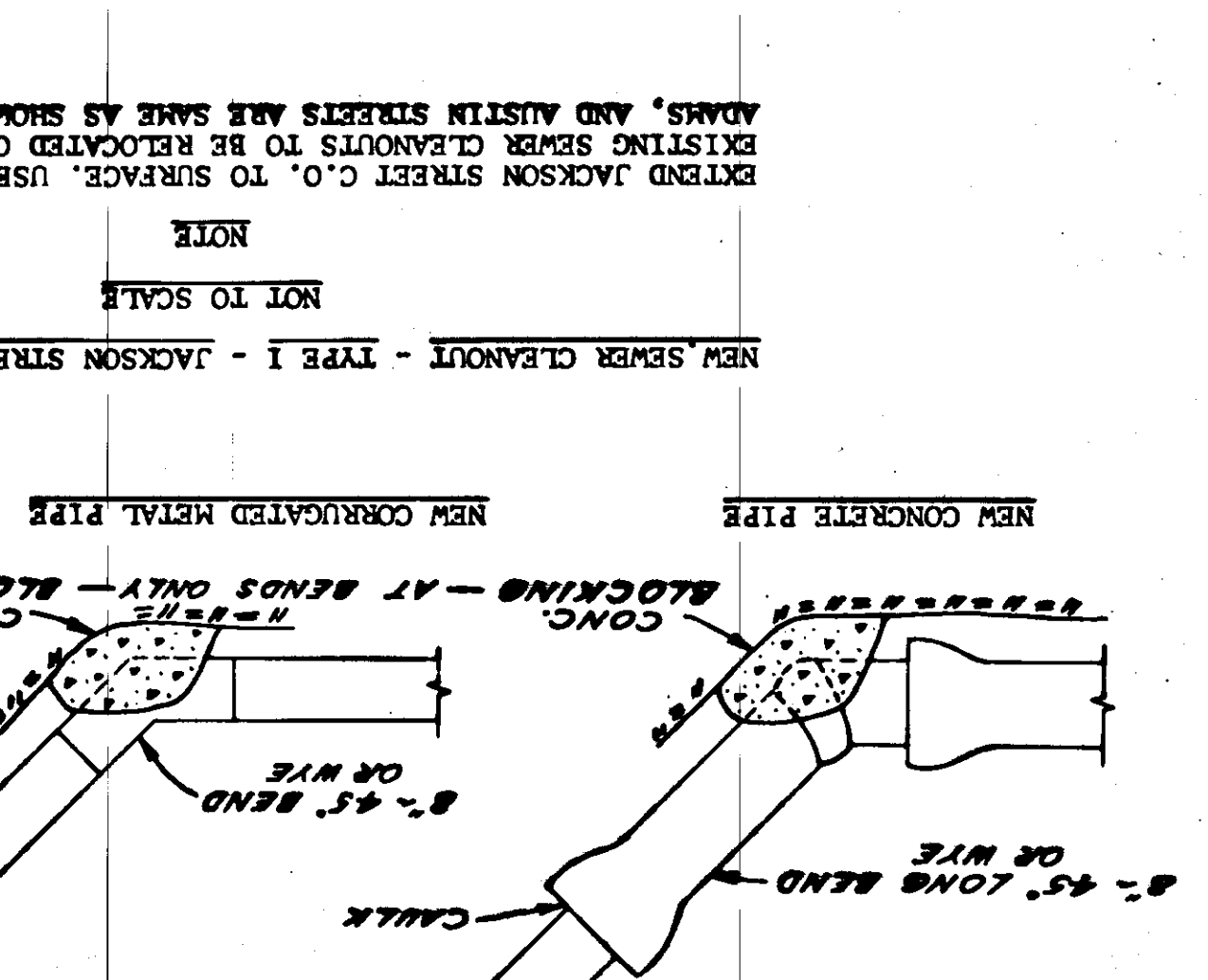
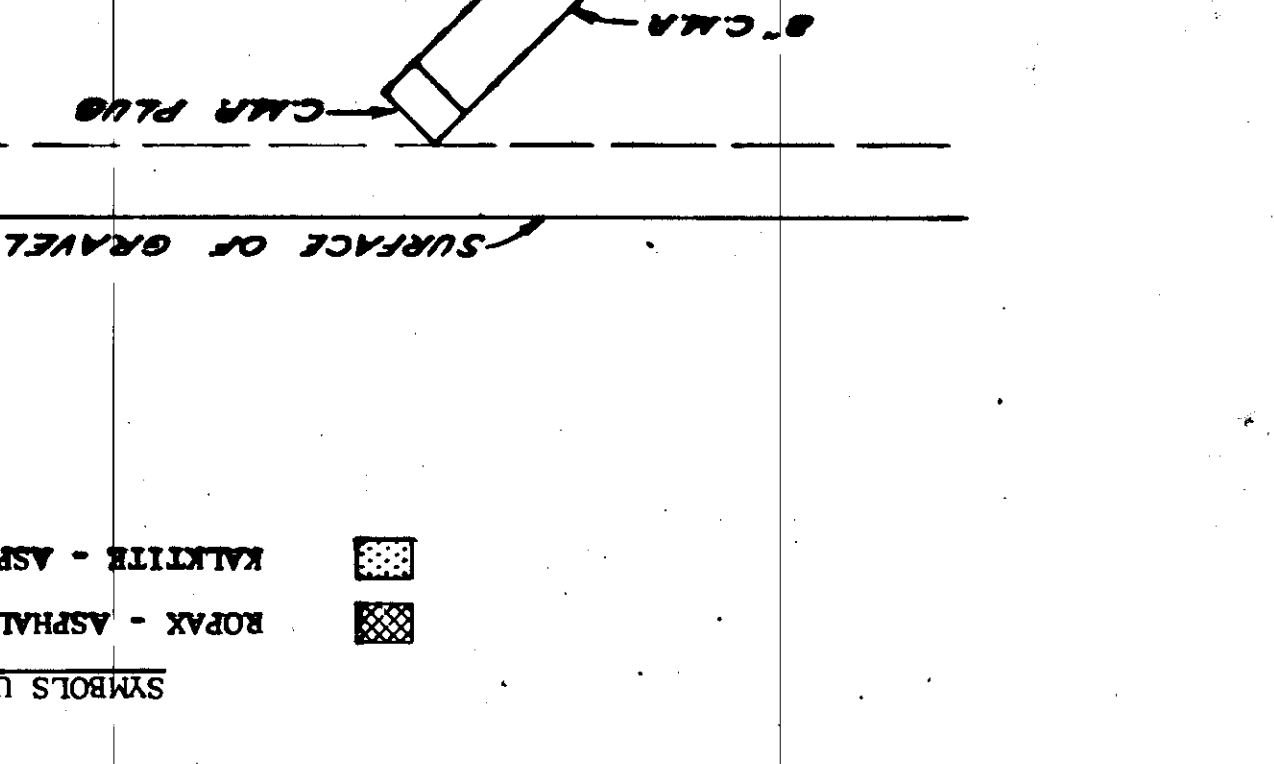
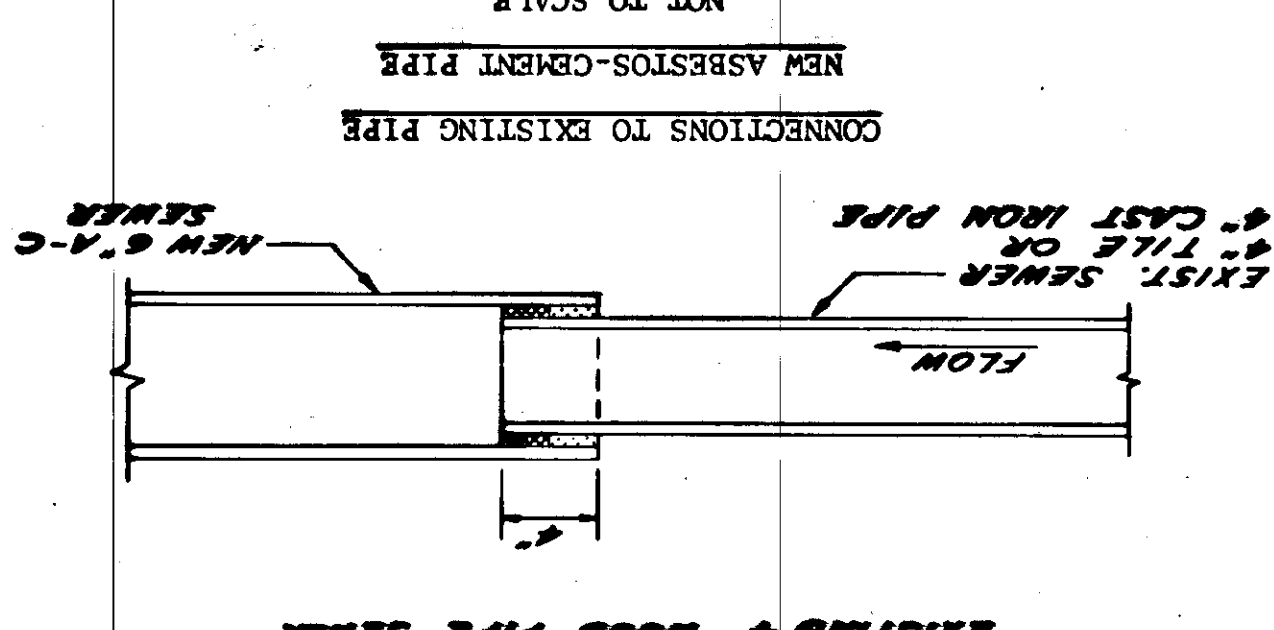
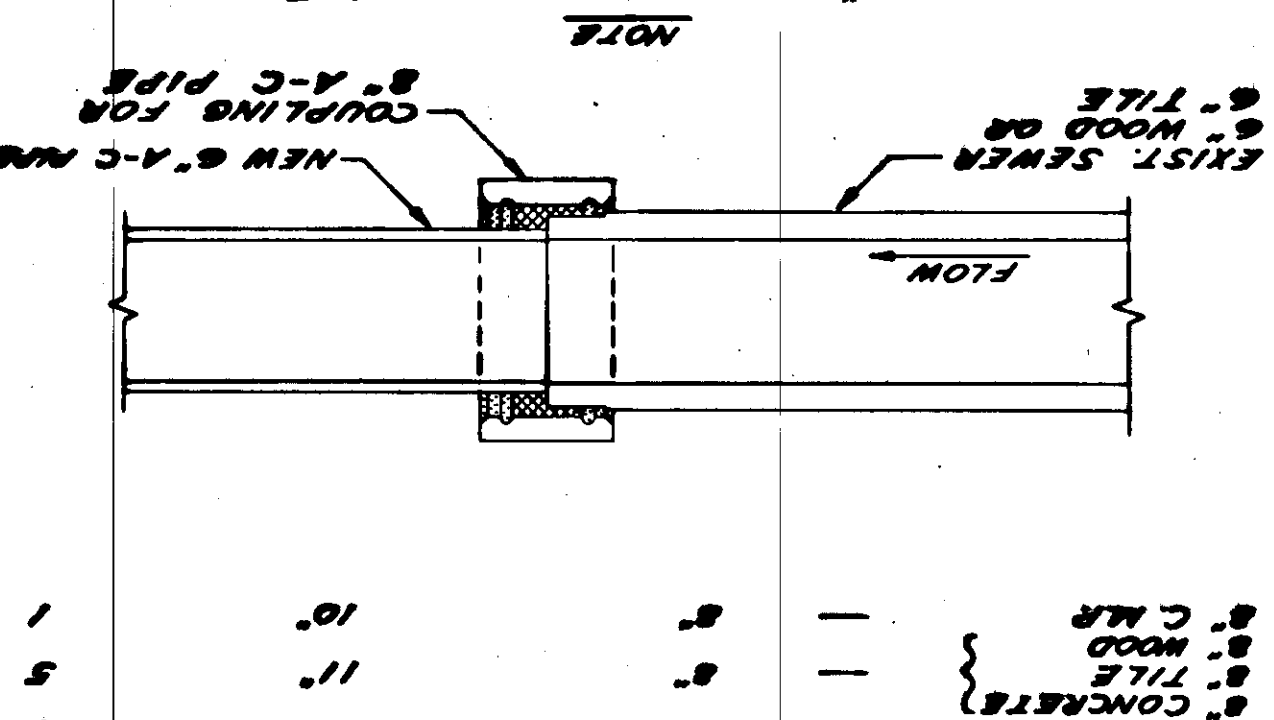
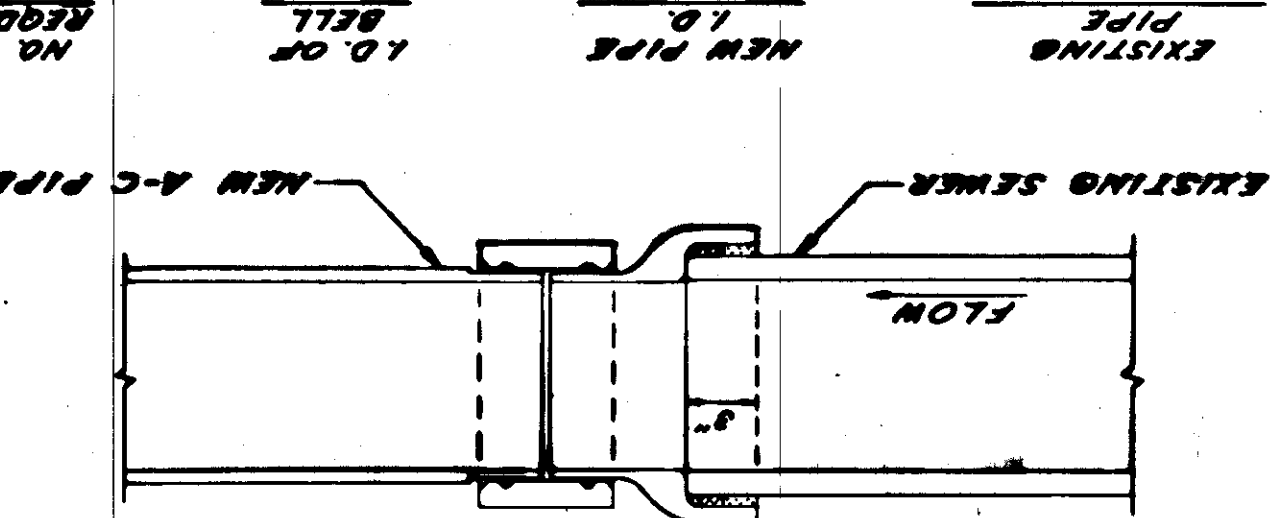
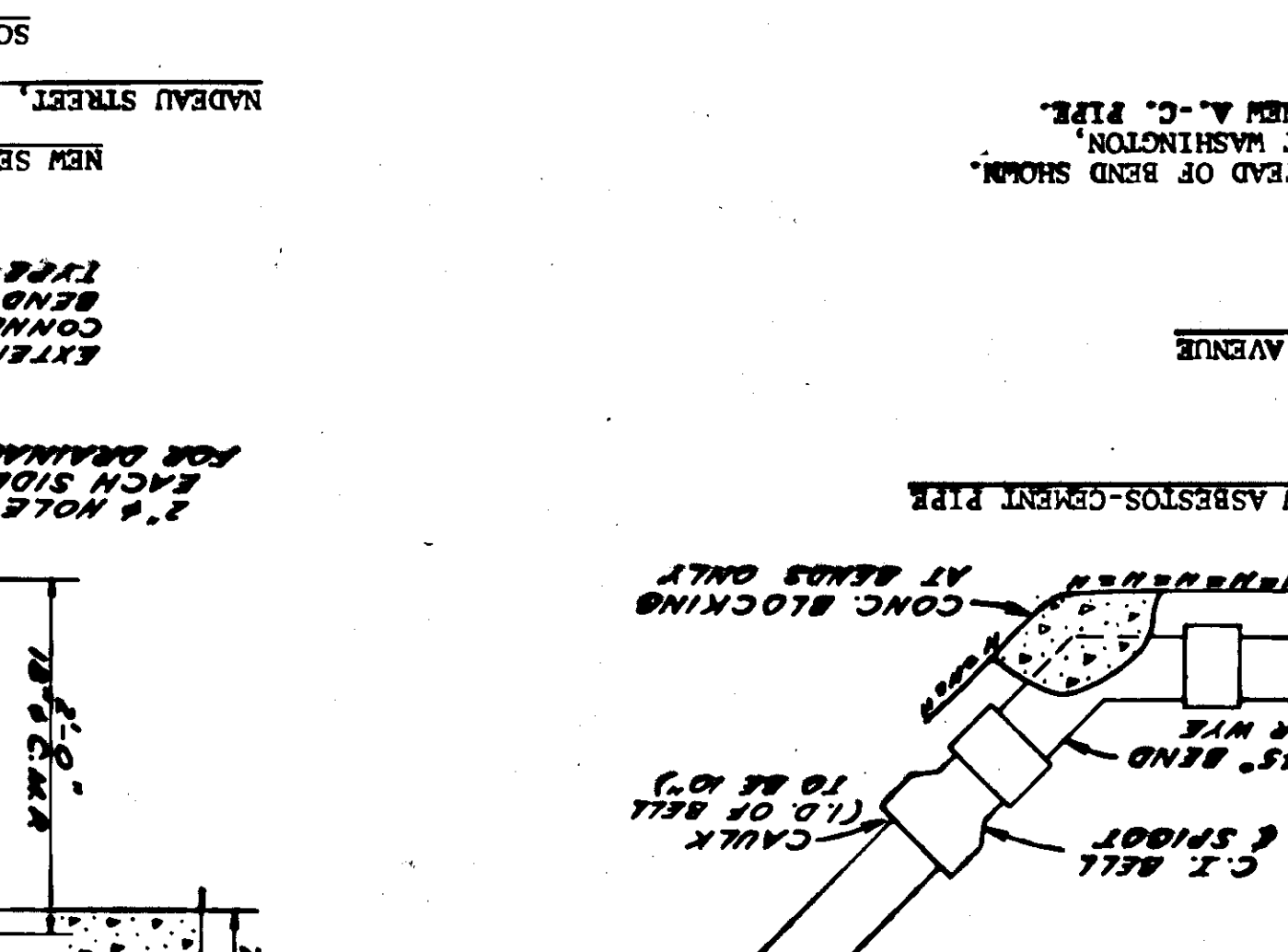
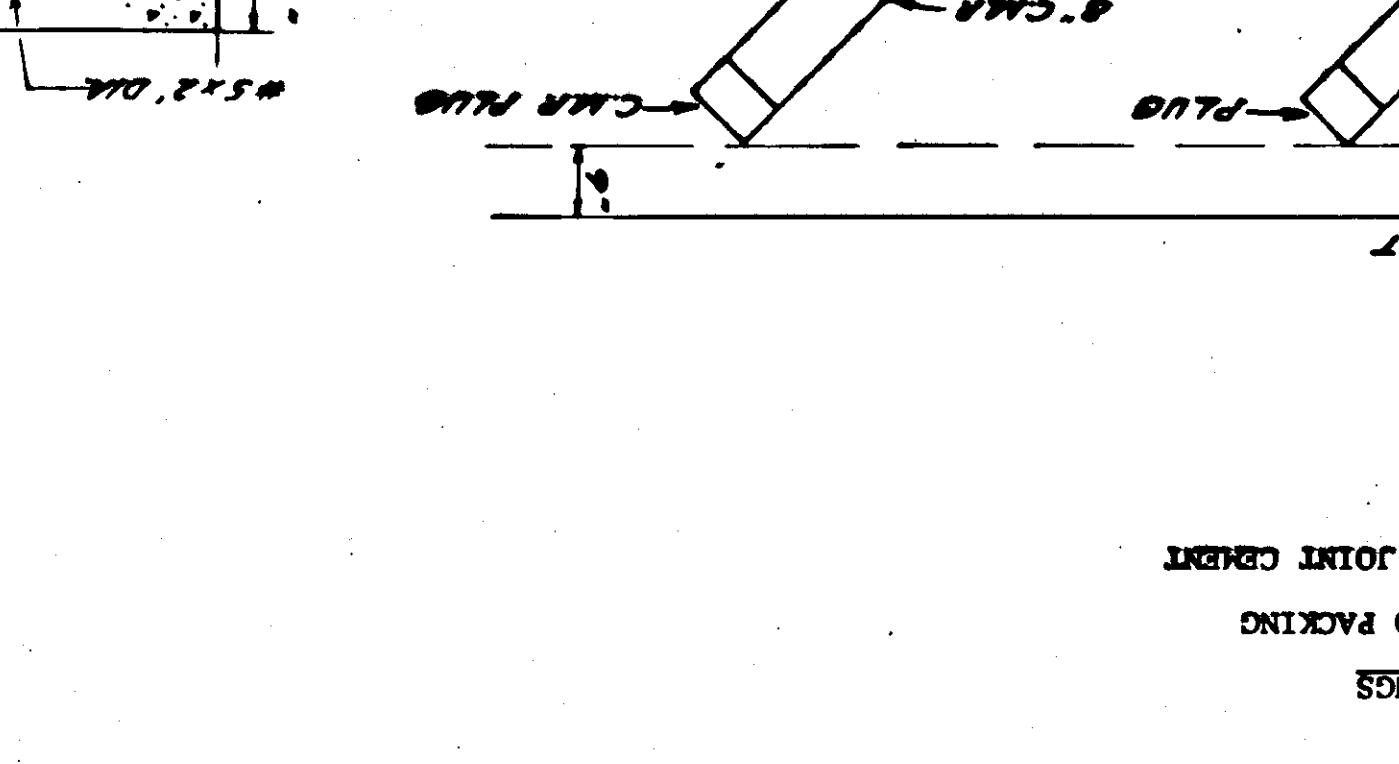
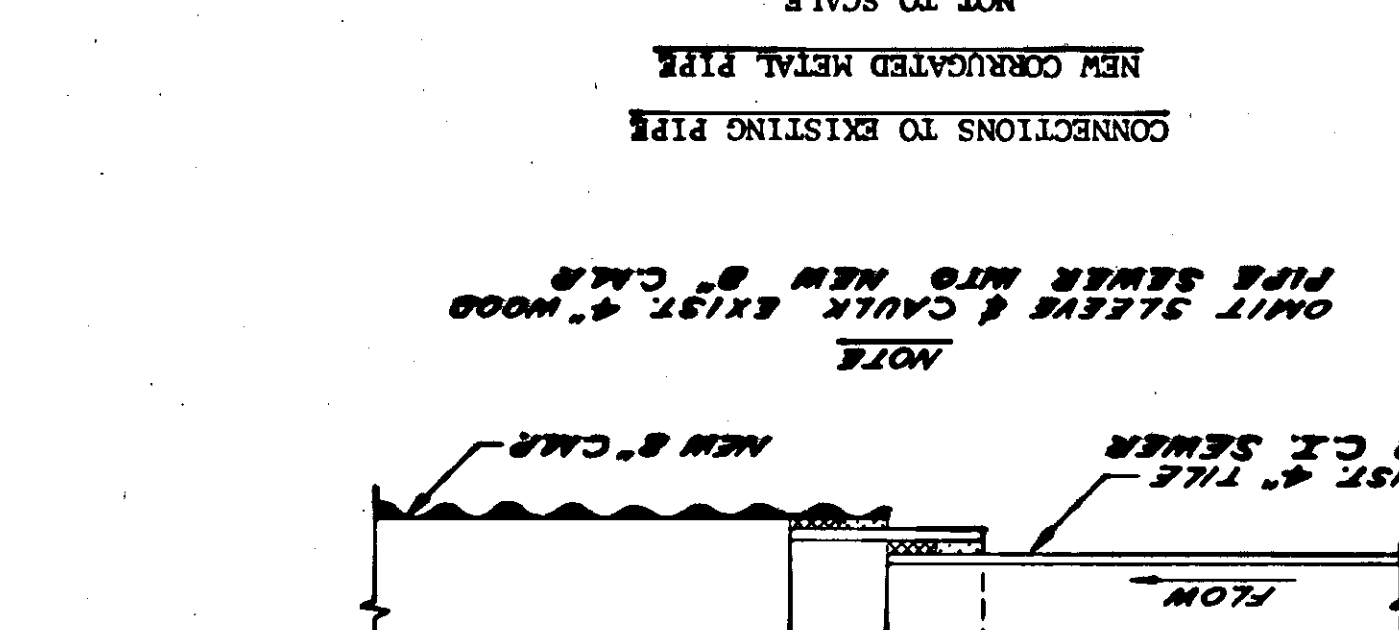
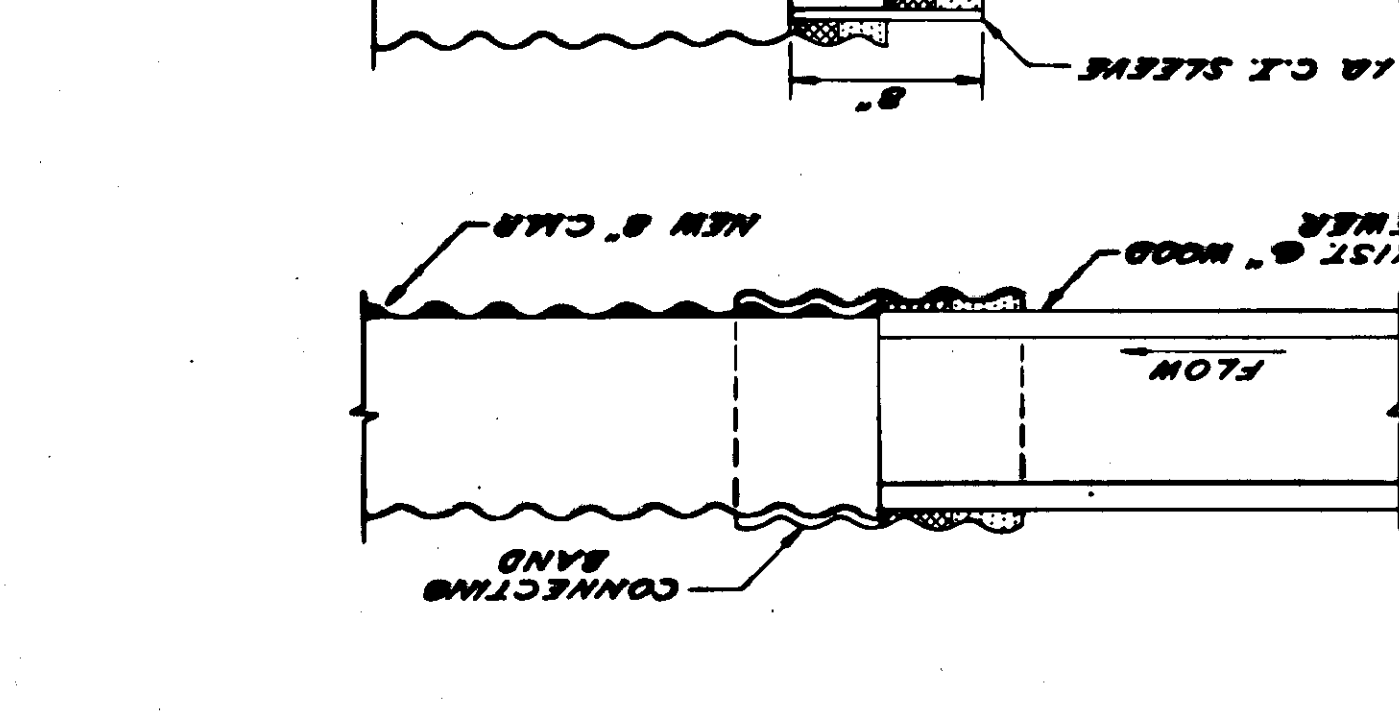
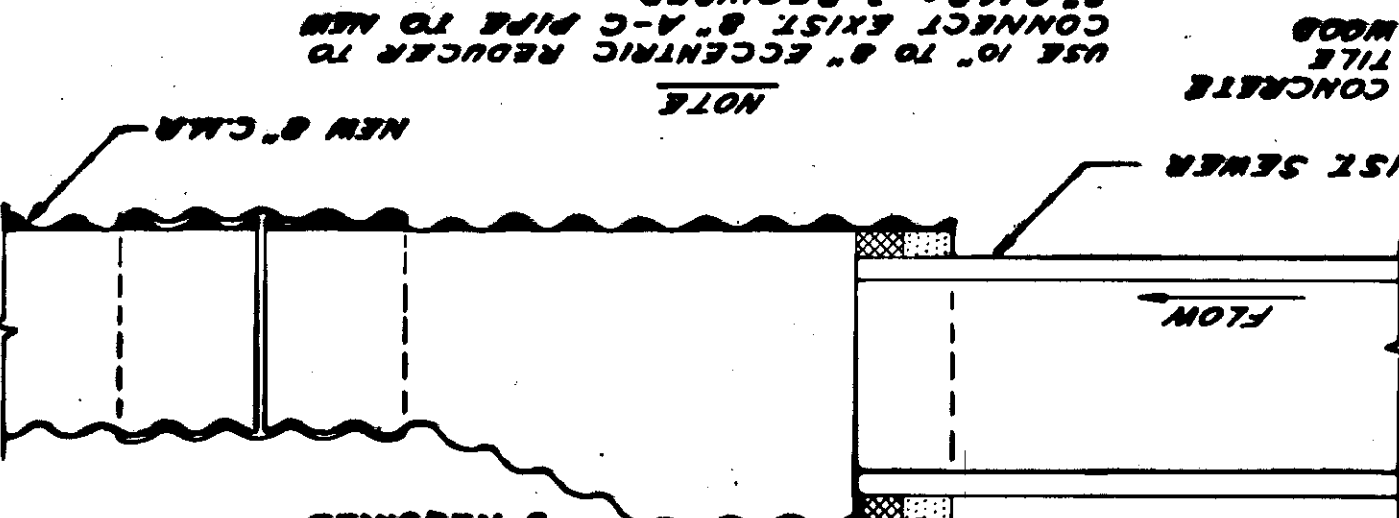
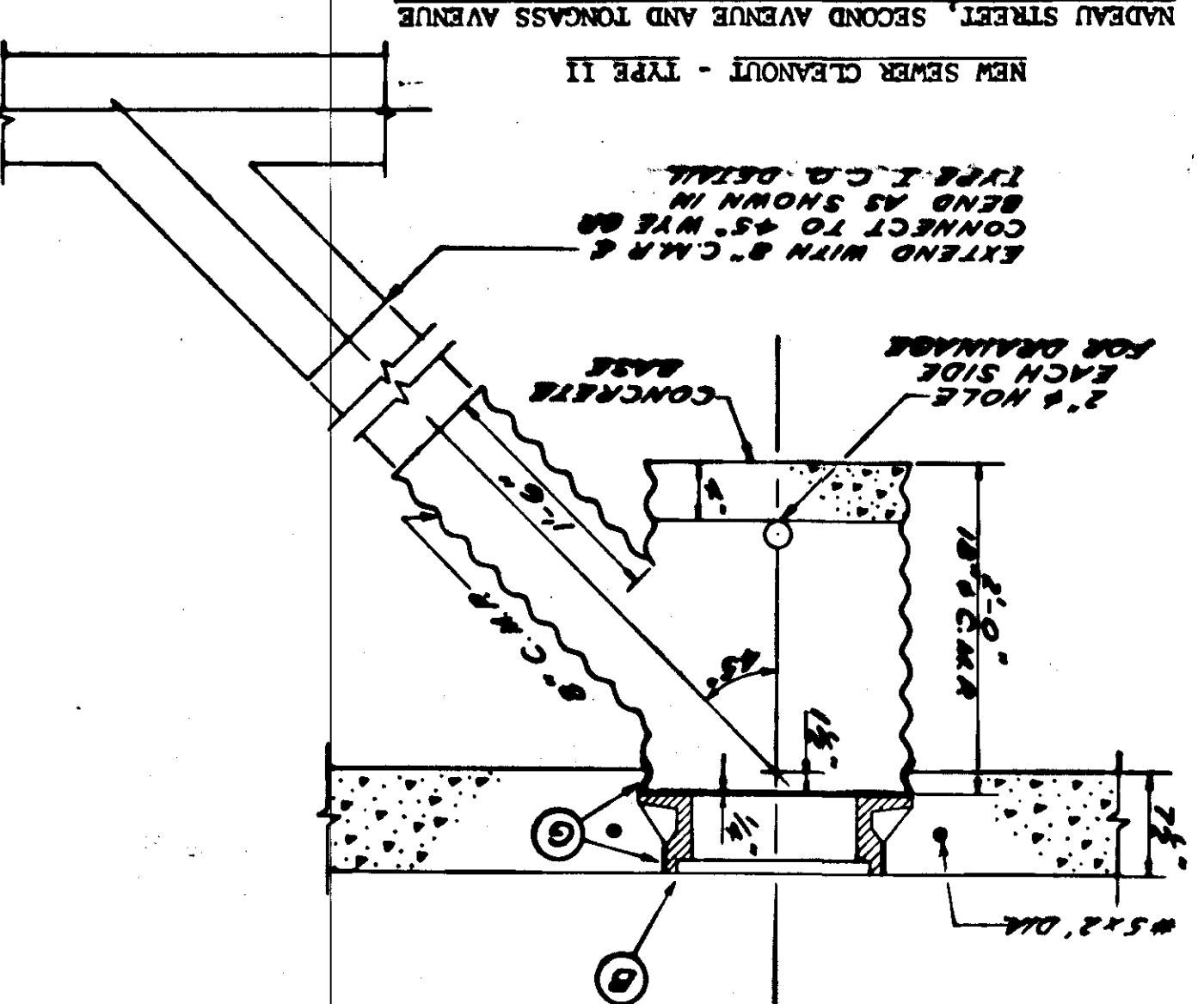
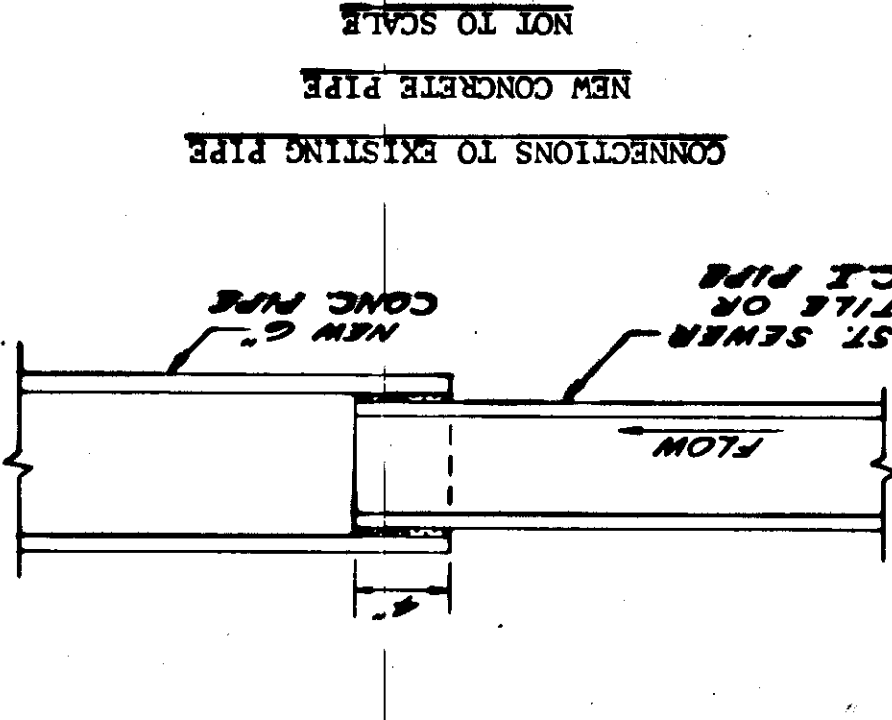
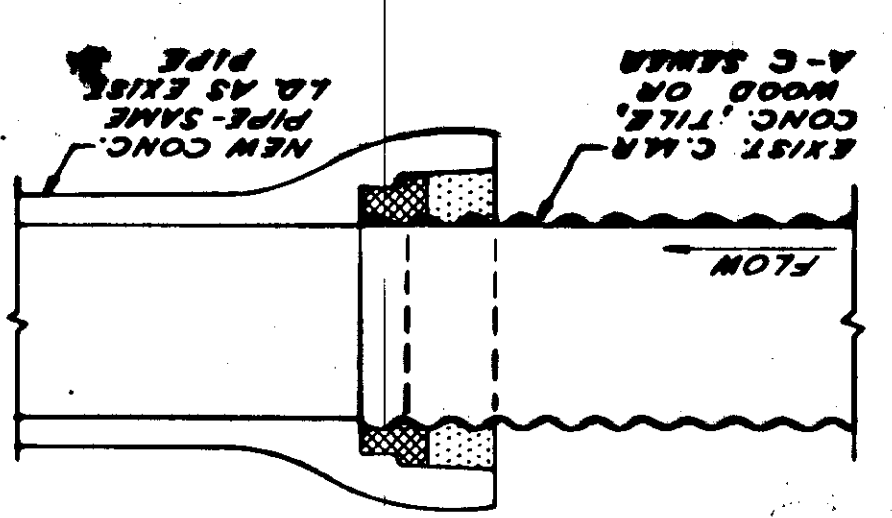
NOTE
SCALE 1/4" = 1'-0"

PLAN AND SECTION A-A - NEW CONCRETE MANHOLE.

STATE OF ALASKA
DIVISION OF HIGHWAYS
PROJECT F-095-1(7)
TONGASS AVENUE
KETCHIKAN, ALASKA
RELATED CITY PROJECT
CONCRETE MANHOLE-CLEAN
AND MISC. SEWER DETAIL
LANDLAGE AND CONNEL
ENGINEERS BLDG.
SEATTLE 1, WASHINGTON
SHEET 55



- LETTER DESIGNATIONS ON DRAWINGS
- C.I. FRAME AND COVER (COVER NOT SHOWN) OLYMPIC FOUNDRY NO. 5921.
 - C.I. FRAMES ARE TO BE RE-USED.
 - C.I. FRAME AND COVER - OLYMPIC FOUNDRY NO. 5831.
 - PRECAST SHORT CONE - MFG. BY GREYSTONE INC. CONE MAY BE POURED IN-PLACE AT CONTRACTOR'S OPTION. IF POURED-IN-PLACE, MAKE WALLS AT LEAST 6" THICK AND REINFORCE WITH NO. 3 BARS SPACED 9" ON CENTERS. BOTH WAYS AS SHOWN FOR STRAIGHT SECTION OF MANHOLE.
 - STRAIGHT SECTION - POURED-IN-PLACE CONCRETE OR PRECAST IN SECTIONS. REINFORCE WITH NO. 3 BARS SPACED 9" ON CENTERS WITH 2" COVER AS SHOWN. CUT STEEL TO CLEAR PIPES.
 - POURED-IN-PLACE CONCRETE BASE. REINFORCING IS NO. 3 BARS SPACED 9" ON CENTERS WITH 2" COVER AS SHOWN.
 - ONE INCH DIA. GALVANIZED STEEL STEP - OLYMPIC FOUNDRY CO. NO. 5999.
 - COAT WITH KOPERS BITUMASTIC NO. 33
 - 4" PRECASTED FILTER.
 - NO. 5 X 3/4" DIA. REINFORCING BAR.



SYMBOLS USED ON DRAWINGS

ROPAK - ASPHALT IMPREGATED PACKING

KALKITE - ASPHALTIC SEWER JOINT CEMENT

NOTE
NOT TO SCALE

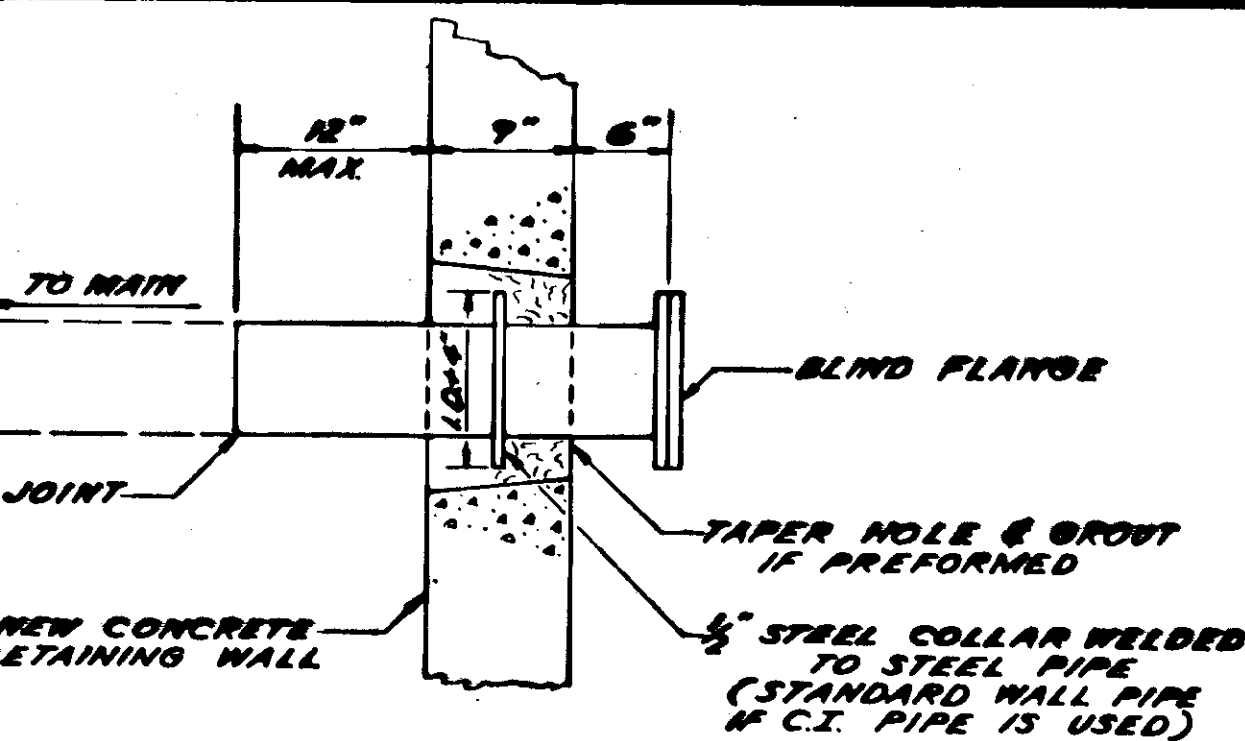
NEW SEWER CLEANOUT - TYPE I - JACKSON STREET AND FIRST AVENUE

ADAMS, AND AUSTIN STREETS ARE SAME AS SHOWN ABOVE FOR NEW A-C PIPE.
EXISTING SEWER CLEANOUTS TO BE RELOCATED OR SALVAGED AT WASHINGTON.

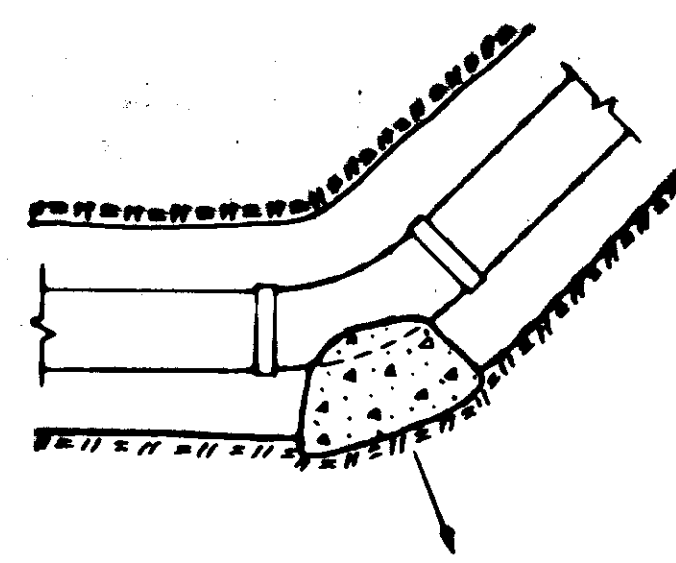
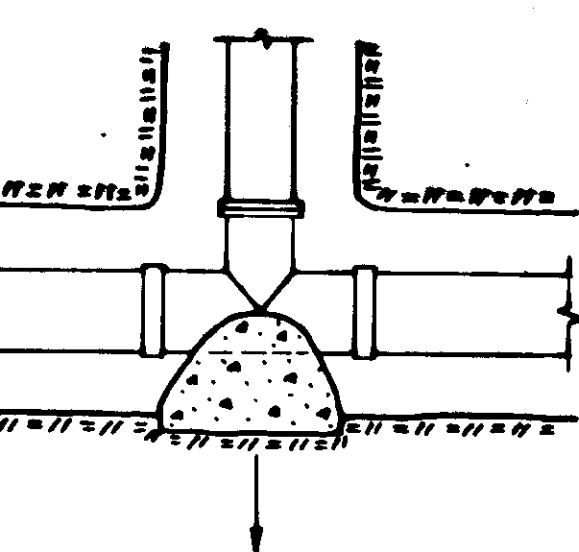
SCALE 1/4" = 1'-0"

NEW SEWER CLEANOUT - TYPE II
MADEAU STREET, SECOND AVENUE AND TONGASS AVENUE

STATE	PROJECT DESIGNATION	YEAR	SHEET No.	TOTAL SHEETS
ALASKA	F-095-1(7)	1962	58	64



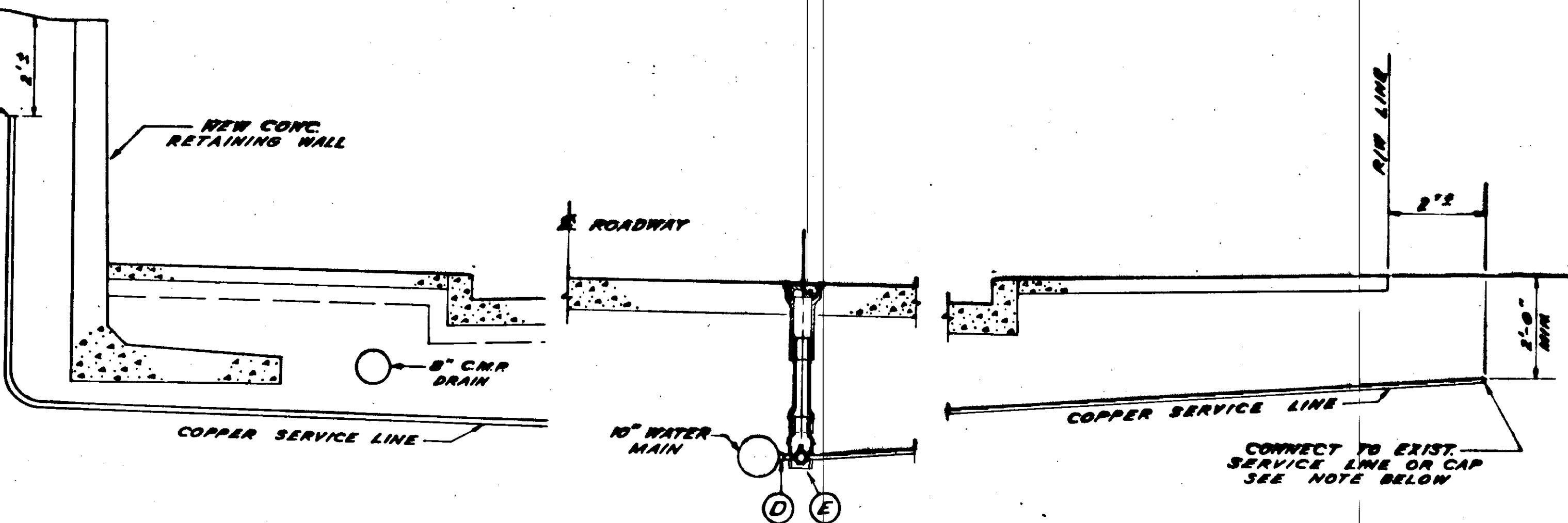
ANCHORAGE OF MECHANICAL JOINT OR SLIP-JOINT WATER PIPE
EXTENDING THROUGH CONCRETE WALLS
NOT TO SCALE



CONCRETE BLOCKING

NOTE

SYMBOL ON PLAN SHEETS INDICATES THE MINIMUM BEARING AREA REQUIRED AGAINST FIRM UNDISTURBED SOIL. WHEN CONCRETE IS POURED AGAINST SOLID ROCK, THE MINIMUM BEARING AREA SHALL BE ONE QUARTER OF THE INDICATED VALUE, BUT NOT LESS THAN 0.5 SQ. FT. ARROW SHOWS DIRECTION OF THRUST. USE CLASS AA CONCRETE.



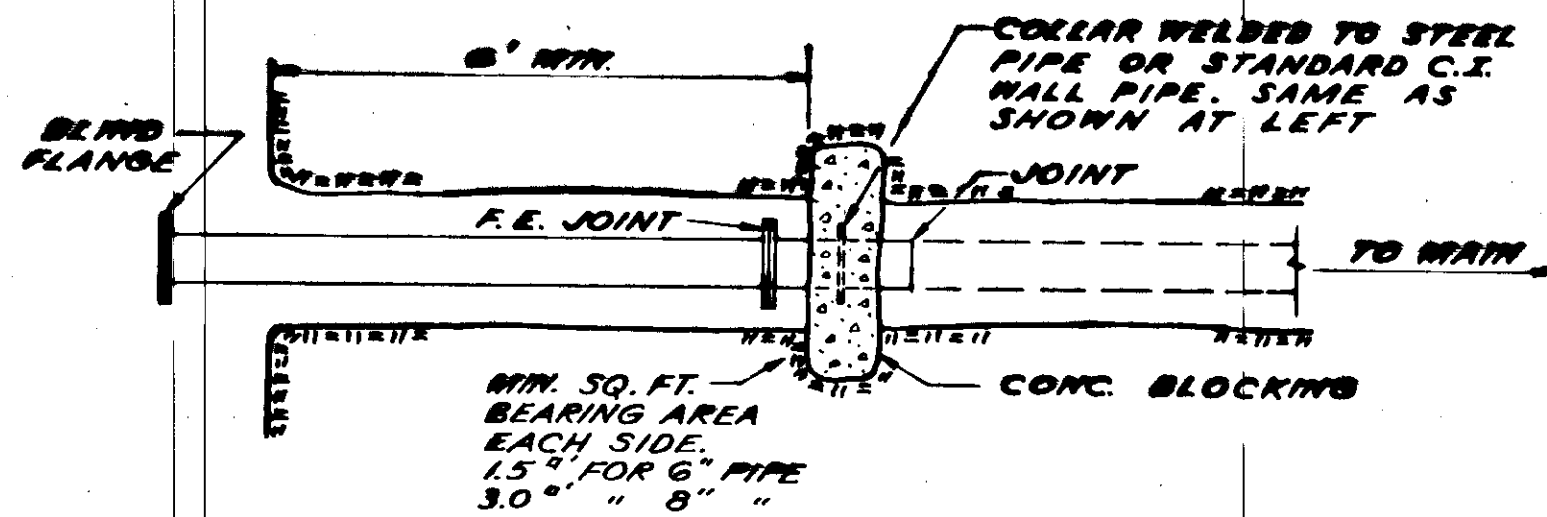
NEW WATER SERVICE LINES

NOT TO SCALE

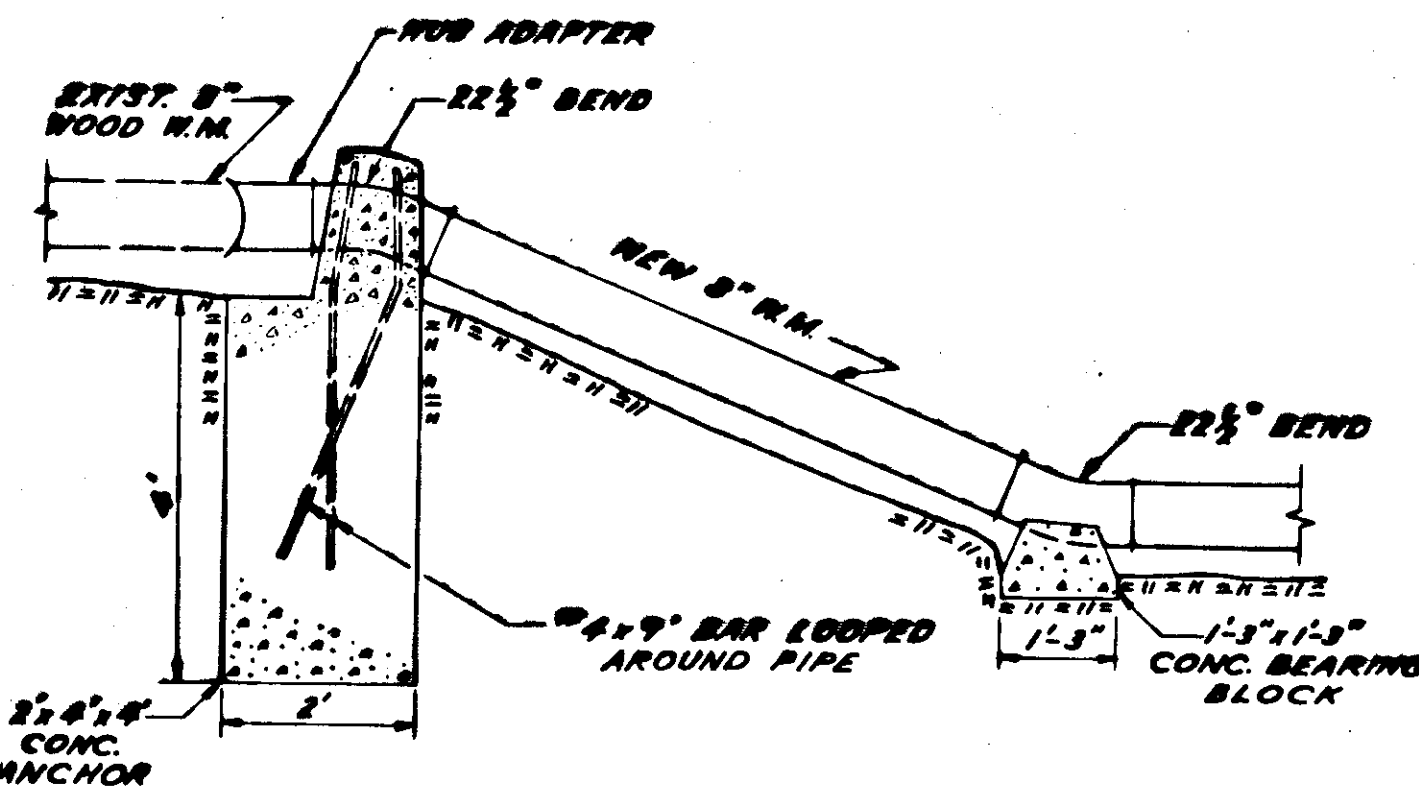
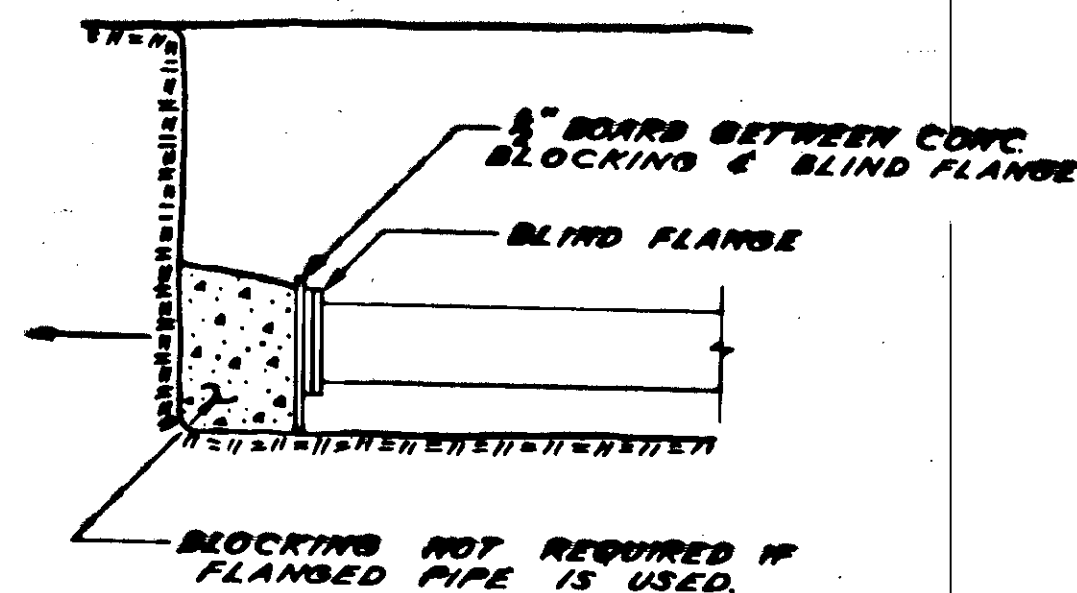
NOTE

CONNECT NEW SERVICE LINES TO EXISTING SERVICE PIPE OR CAP FOR FUTURE CONNECTION AS SHOWN ON PLAN SHEETS. CAPS SHALL BE MADE WITH MUELLER CO. TWO PART UNION NO. H-15405 AND COPPER DISC NO. H-15535. SEE CATALOG W-96. CONNECTIONS TO EXISTING PIPE ARE TO BE MADE USING APPROPRIATE COUPLINGS AND BENDS OR TEES AS REQUIRED.

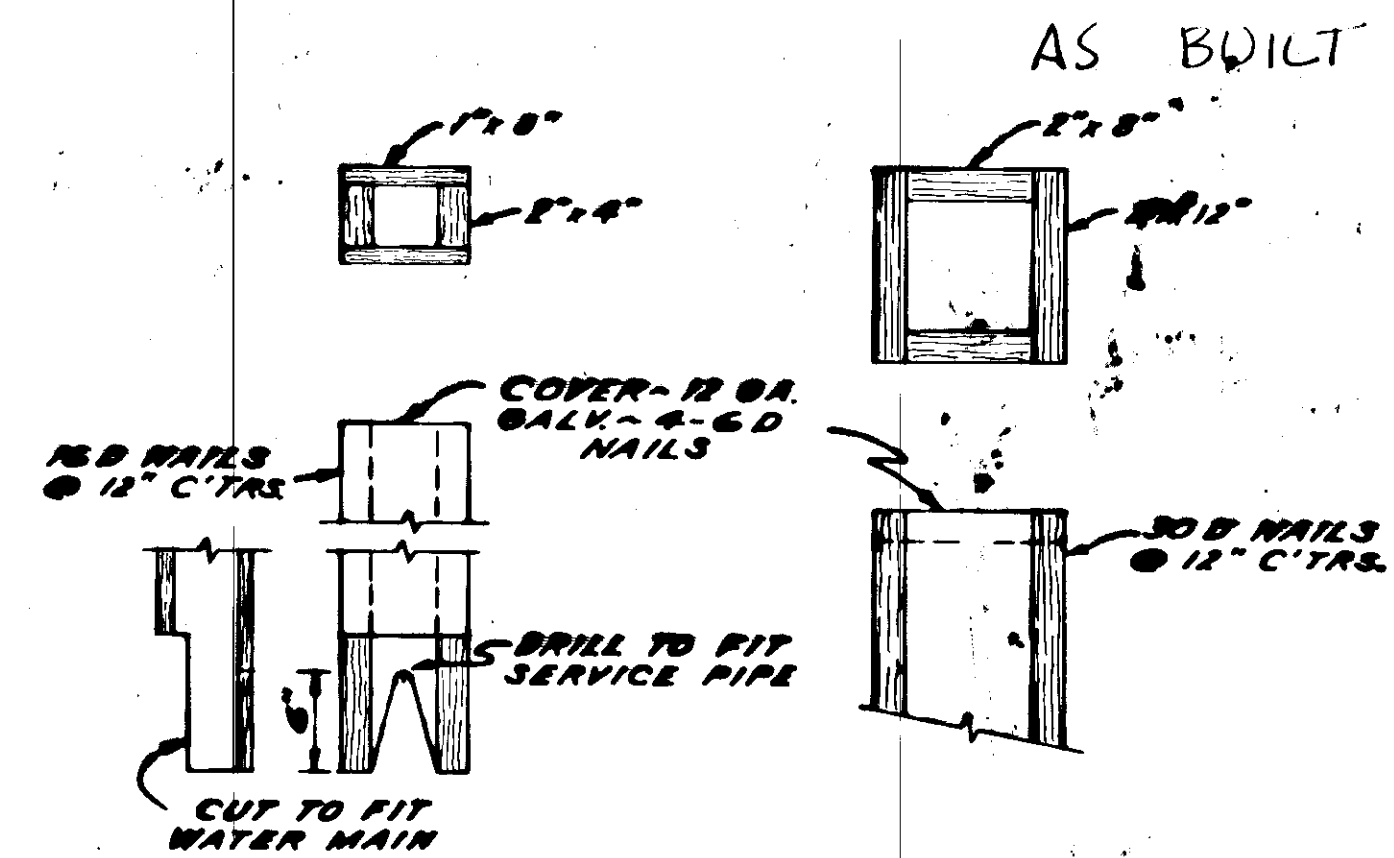
CHLORINATE ALL NEW SERVICE LINES TO THE POINT OF CONNECTION OR CAP WHEN WATER MAIN IS CHLORINATED. CONTRACTOR IS TO FURNISH TEMPORARY VALVES FOR USE DURING THIS PERIOD.



ANCHORAGE OF MECHANICAL JOINT OR SLIP-JOINT WATER PIPE
AT STA. 97+92 AND STA. 98+84.5
NOT TO SCALE



ANCHORAGE OF FIRST AVE. WATER MAIN
NEAR STA. 70+00 TONGASS AVE.
NOT TO SCALE



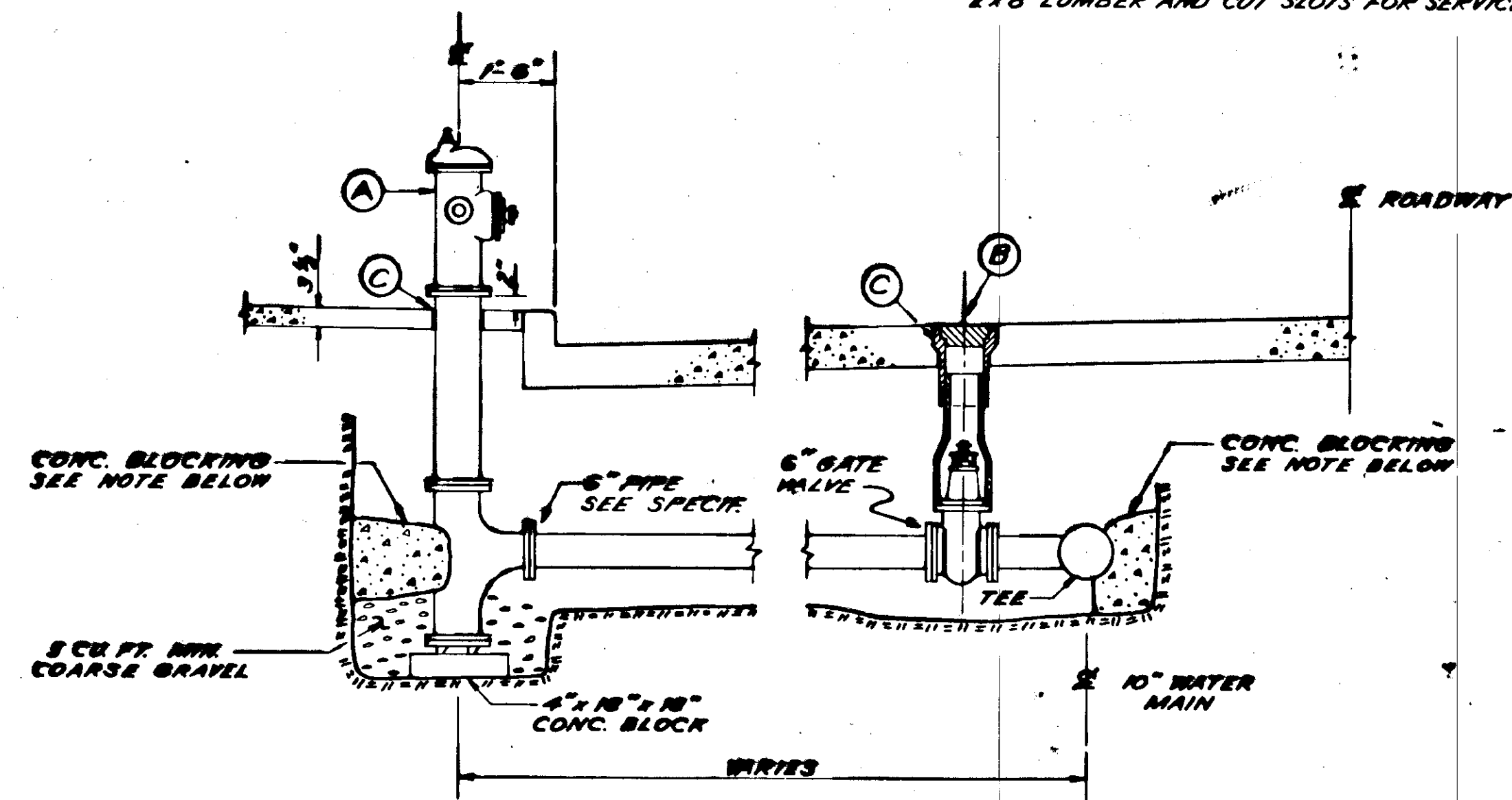
WOOD SERVICE BOX

NOT TO SCALE

NOTE

ALL LUMBER IS ALASKA RED CEDAR, ROUGH, UNTREATED. USE GALVANIZED NAILS. SET BOXES SO THAT TOP IS 6 INCHES BELOW SURFACE OF GRAVELED STREET.

SERVICE BOX SHOWN IS FOR CORPORATION STOPS ON SECOND AVE. WATER MAIN. WOOD SERVICE BOX FOR ORISEAL VALVES ON NABEAD ST. WATER MAIN IS SIMILAR EXCEPT USE 1 X 10 & 2 X 6 LUMBER AND CUT SLOTS FOR SERVICE PIPE.



FIRE HYDRANT DETAIL

NOT TO SCALE

NOTE

OMIT CONCRETE BLOCKING IF FLANGED CONNECTIONS ARE USED. OTHERWISE, POUR BLOCKING WITH MINIMUM BEARING AREA OF 2 SQ. FT. SEE SPECIFICATIONS FOR TYPES OF CONNECTIONS PERMITTED AND DESCRIPTION OF FIRE HYDRANT. FLANGED END HYDRANTS ARE REQUIRED AT STA. G2+51.5 AND STA. G7+37.5. SEE SHEETS 44, 45 AND 50 (STA. G2+58 AND STA. G7+31).

LETTER DESIGNATIONS ON DRAWINGS

- FIRE HYDRANT - 5" OR 5 1/4" VALVE OPENING, 6" FLANGED OR MECHANICAL JOINT INLET.
- USE 2" LENGTH NIPPLES TO CONNECT 3/4" AND 1" ORISEAL VALVES. USE 3 1/2" LENGTH NIPPLES TO CONNECT ORISEAL VALVES LARGER THAN 1" SIZE.
- CAST IRON SERVICE BOX - CENTRAL FOUNDRY CO. NO. B-33 WITH 'STAY ON' COVER WILL BE USED WITH 3/4" AND 1" ORISEAL VALVES.
- THREADOLET OR SADDLE IF STEEL PIPE IS USED. USE SADDLE ON CAST IRON PIPE FOR 2" SERVICES AND AS REQUIRED IN SPECIFICATIONS. INSTALL BRASS NIPPLE WITH SUFFICIENT LENGTH TO PERMIT SERVICE BOX TO BE CENTERED OVER ORISEAL VALVE.
- CAST IRON SERVICE BOX - CENTRAL FOUNDRY NO. B-33. USE ENLARGED BASE C.F. NO. B-23 WITH 3/4" & 1" ORISEAL VALVES. USE OLYMPIC FOUNDRY BOTTOM SECTION NO. 715. MADE TO FIT NO. B-33 BOTTOM SECTION, WITH 1 1/4", 1 1/2" & 2" ORISEAL VALVES.

STATE OF ALASKA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

PROJECT F-095-1(7)
TONGASS AVENUE
KETCHIKAN, ALASKA

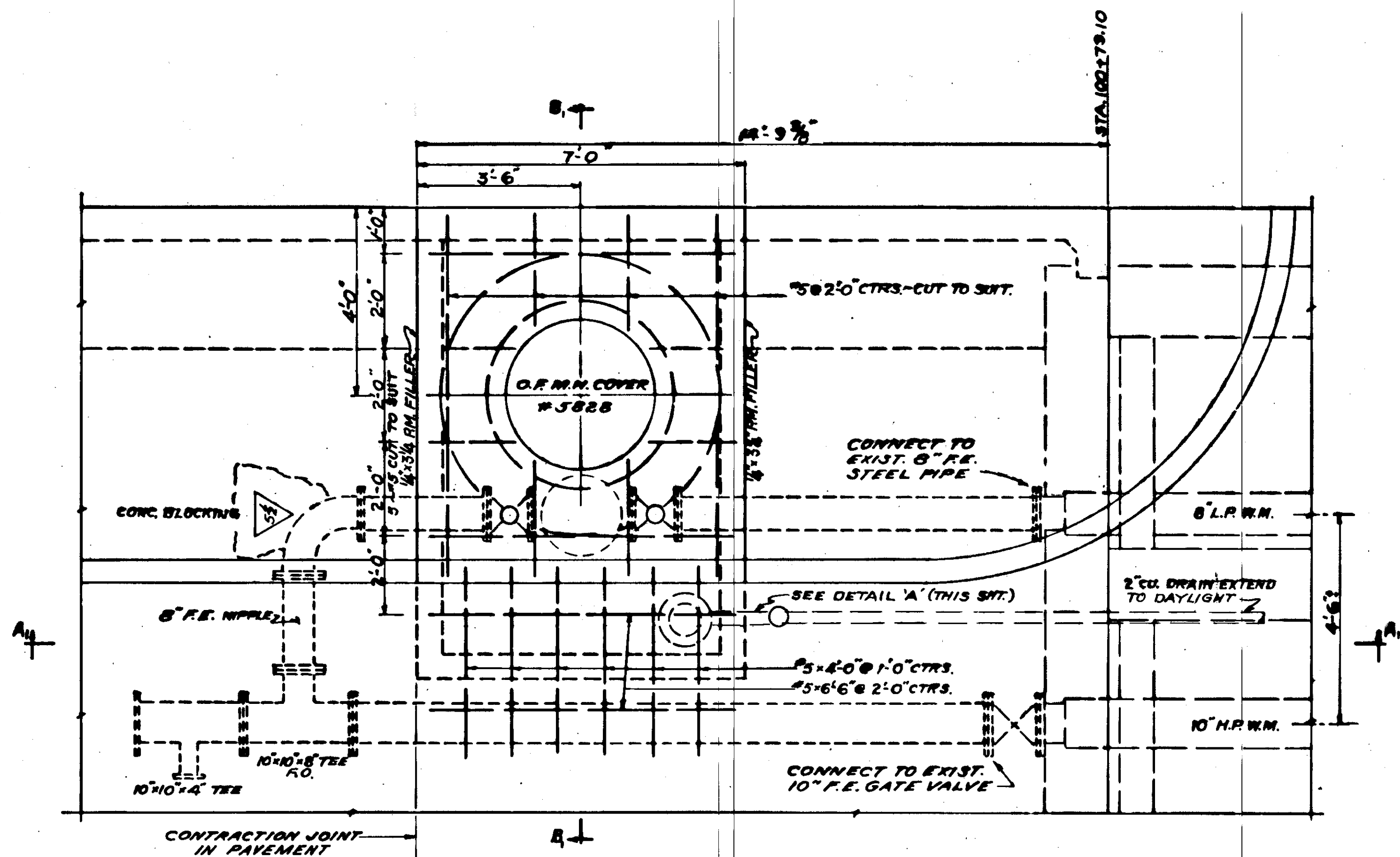
RELATED CITY PROJECT
FIRE HYDRANT - SERVICES
AND MISC. WATER MAIN DETAILS

LANGDALE AND CONNELL
ENGINEERS
1001 SECURITIES BLDG.
SEATTLE 1, WASHINGTON

DATE: NOV. 1960
SHEET 58 OF 64

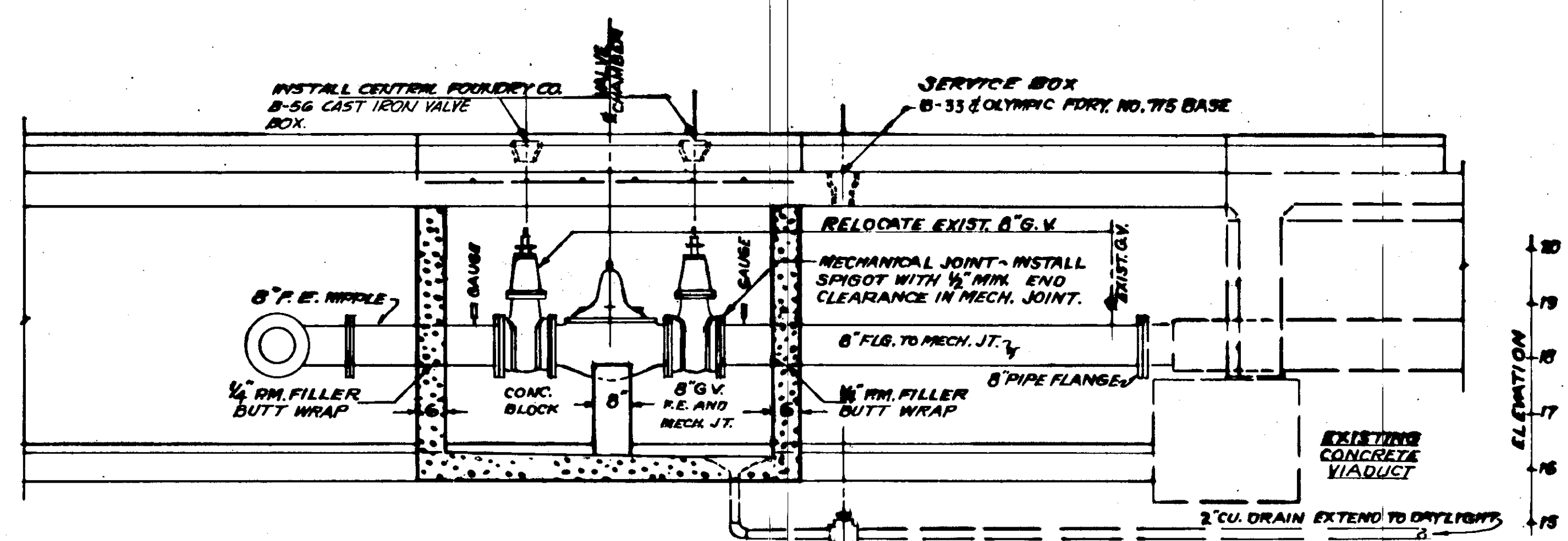
STATE	PROJECT DESIGNATION	YEAR	SHEET No.	TOTAL SHEETS
ALASKA	F-095-1(7)	1962	57	64

AS BUILT



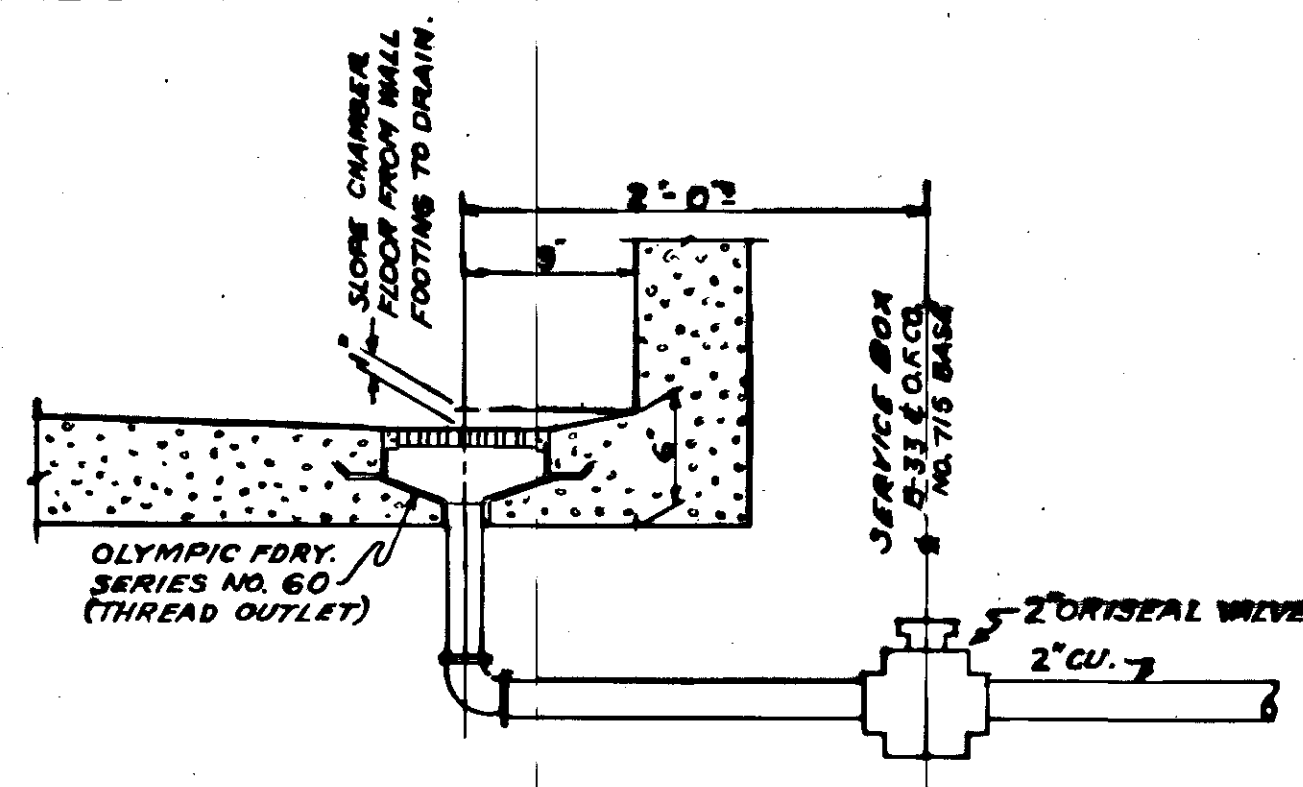
PLAN
SCALE: 1/2" = 1'-0"

REFERENCE SPECIFICATIONS - SECTIONS III AND IV

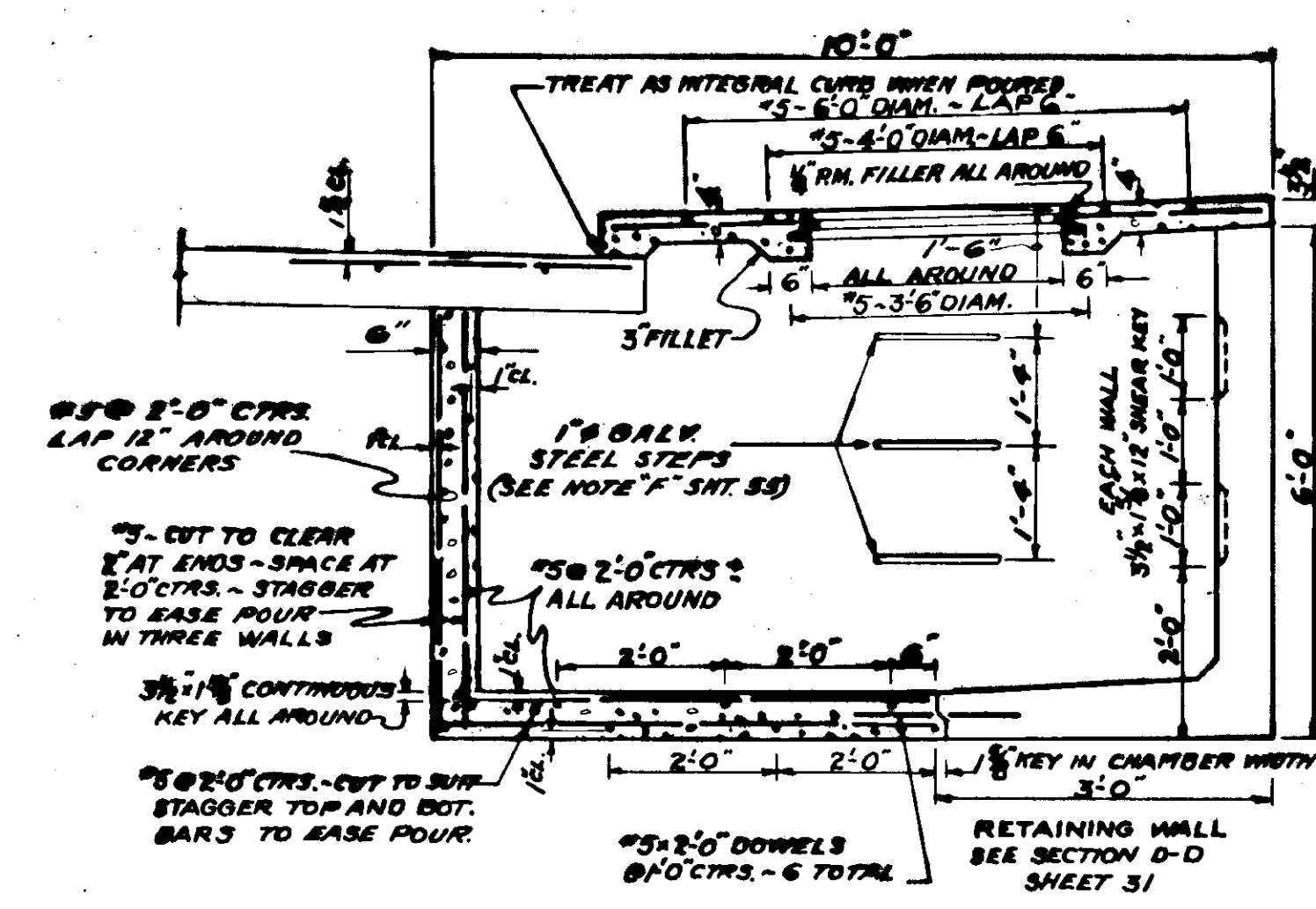


SECTION A-A
SCALE: 1/2" = 1'-0"

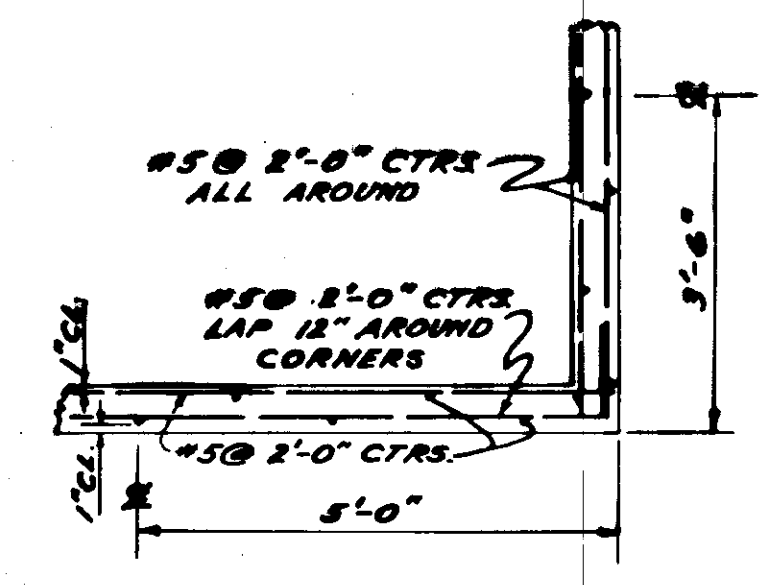
VALVE CHAMBER
SCALE AS NOTED



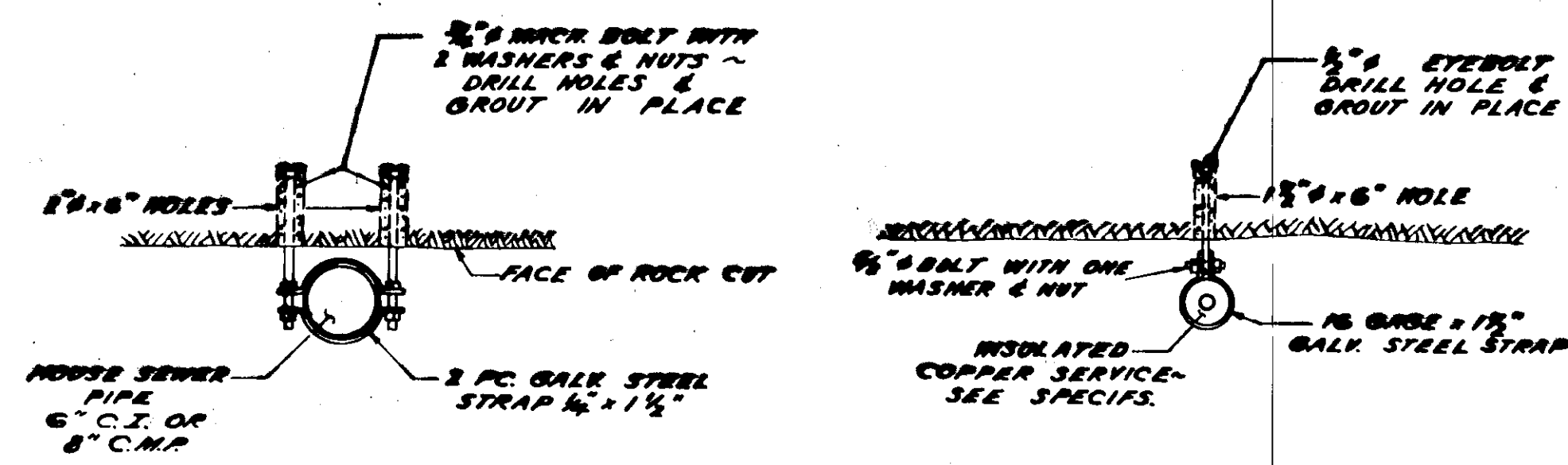
DETAIL A
SCALE: 1" = 10"



SECTION B-B
SCALE: 1/2" = 1'-0"



PLAN AT CORNER
SCALE: 1/2" = 1'-0"



NOTE
LOCATE ONE ANCHOR NEAR TOP OF ROCK CUT AND INSTALL ONE ANCHOR FOR EACH LENGTH OF PIPE OR AT 10' MAX. SPACINGS. APPLY 2 COATS OF KOPPERS BITUPLASTIC NO. 33 TO STRAPS & BOLTS AFTER ANCHORS ARE IN PLACE. ALL BOLTS, WASHERS & NUTS ARE TO BE GALVANIZED.

ANCHORAGE OF EXPOSED SEWER PIPE
AND WATER SERVICE LINES
NOT TO SCALE

STATE OF ALASKA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

PROJECT F-095-1(7)
TONGASS AVENUE
KETCHIKAN, ALASKA

RELATED CITY PROJECT
CONCRETE VALVE CHAMBER
& MISC. DETAILS

LANGDALE AND CONNELL
ENGINEERS
1001 SECURITY BLDG.
SEATTLE 1, WASHINGTON

DATE: NOV., 1960
SHEET 57 OF 64

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[illegible]

STA.	DESCRIPTION
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[illegible]

TONGASS AVENUE

SEE NOTE

TWO 10" DIA. x 12" OFFSETS ARE SHOWN ON PROFILE, SAT. 45 NEAR STA. 67+00. CONTRACTOR MAY CHOOSE TO DEFLECT PIPE AT JOINTS BETWEEN STA. 66+71 & STA. 67+52 IN ORDER TO CLEAR THE 8" DRAIN & 29"x18" C.M.P.A. CULVERT SHOWN, THUS OMITTING THE OFFSETS.
IF USED, OFFSETS WILL BE PAID FOR UNDER ITEM 25W OR 49W, AS EQUIVALENT LENGTH OF 10" PIPE.

LIST OF MISCELLANEOUS WORK SEWERS

STA.	DESCRIPTION	STA. 82+38.3 TO STA. 97+87 - WASHINGTON AND AUSTIN STREETS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010	1011	1012	1013	1014	1015	1016	1017	1018	1019	1020	1021	1022	1023	1024	1025	1026	1027	1028	1029	1030	1031	1032	1033	1034	1035	1036	1037	1038	1039	1040	1041	1042	1043	1044	1045	1046	1047	1048	1049	1050	1051	1052	1053	1054	1055	1056	1057	1058	1059	1060	1061	1062	1063	1064	1065	1066	1067	1068	1069	1070	1071	1072	1073	1074	1075	1076	1077	1078	1079	1080	1081	1082	1083	1084	1085	1086	1087	1088	1089	1090	1091	1092	1093	1094	1095	1096	1097	1098	1099	1100	1101	1102	1103	1104	1105	1106	1107	1108	1109	1110	1111	1112	1113	1114	1115	1116	1117	1118	1119	1120	1121	1122	1123	1124	1125	1126	1127	1128	1129	1130	1131	1132	1133	1134	1135	1136	1137	1138	1139	1140	1141	1142	1143	1144	1145	1146	1147	1148	1149	1150	1151	1152	1153	1154	1155	1156	1157	1158	1159	1160	1161	1162	1163	1164	1165	1166	1167	1168	1169	1170	1171	1172	1173	1174	1175	1176	1177	1178	1179	1180	1181	1182	1183	1184	1185	1186	1187	1188	1189	1190	1191	1192	1193	1194	1195	1196	1197	1198	1199	1200	1201	1202	1203	1204	1205	1206	1207	1208	1209	1210	1211	1212	1213	1214	1215	1216	1217	1218	1219	1220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* Use 16x16 Tee if A-C pipe is used.
 ** Use 6" if A-C or Concrete pipe is used.
 *** 8" C.M.P. if Contract is let for C.M.P.

STATE	PROJECT DESIGNATION	YEAR	SHEET No.	TOTAL SHEETS
ALASKA	F-095-1(7)	1962	62	64