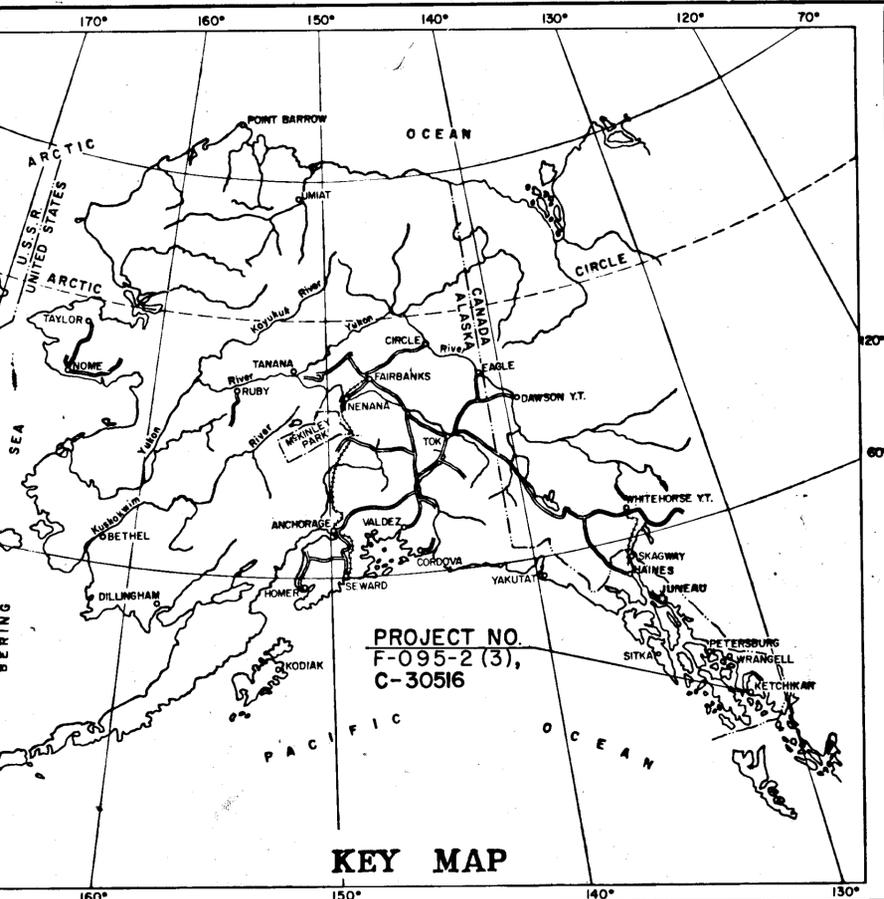


STATE	ROUTE DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	F-095-2(3)	1971	1	91



# STATE OF ALASKA DEPARTMENT OF HIGHWAYS

## PLAN AND PROFILE PROPOSED HIGHWAY PROJECT

F-095-2(3) C-30516

MISSION STREET TO DEERMOUNT STREET,  
& MAIN STREET, KETCHIKAN  
GRADING, DRAINAGE, PAVING  
& STRUCTURE

### INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2-3	TYPICAL SECTIONS
4-5	ESTIMATE OF QUANTITIES
6	SUMMARY TABLES
7-11	PLAN AND PROFILE SHEETS
12	INTERSECTION DETAIL
13	GUARDRAIL DETAIL; INTERSECTION PROFILES
14-15	DRAINAGE PROFILES AND DETAIL
16	INMAN STREET STAIRWAY
17-18	RETAINING WALLS
19-20	MISCELLANEOUS DETAILS
21-22	SPECIAL CURB CUTS AND APPROACHES
23	MONUMENT SUMMARY
24-32	ILLUMINATION, SIGNING, AND PAVEMENT MARKINGS
33-43	WATER AND SEWER UTILITY PLANS
44	MAIN STREET PLAN & PROFILE
45-72	ELECTRICAL AND TELEPHONE UTILITY PLANS
73-88	VIADUCT PLANS
89-91	PARKING STRUCTURE PLANS

THE FOLLOWING STANDARD DRAWINGS APPLY TO THIS PROJECT:  
A-1, D-1a, D-3, D-4, M-1, M-2, R-1, R-5, T-1, T-2, T-4, T-9, T-15, T-16 (sheets 1&2), T-18, T-19, T-20, T-30 (sheets 1&2), T-31, T-51, T-53, T-54.

BEGIN PROJECT F-095-2(3)  
STA. "0" 0+42.64 =  
"As Built" STA. 0-23.73

BEGIN PROJECT C-30516  
Sta. "B" 0+04.92

### DESIGN DESIGNATION

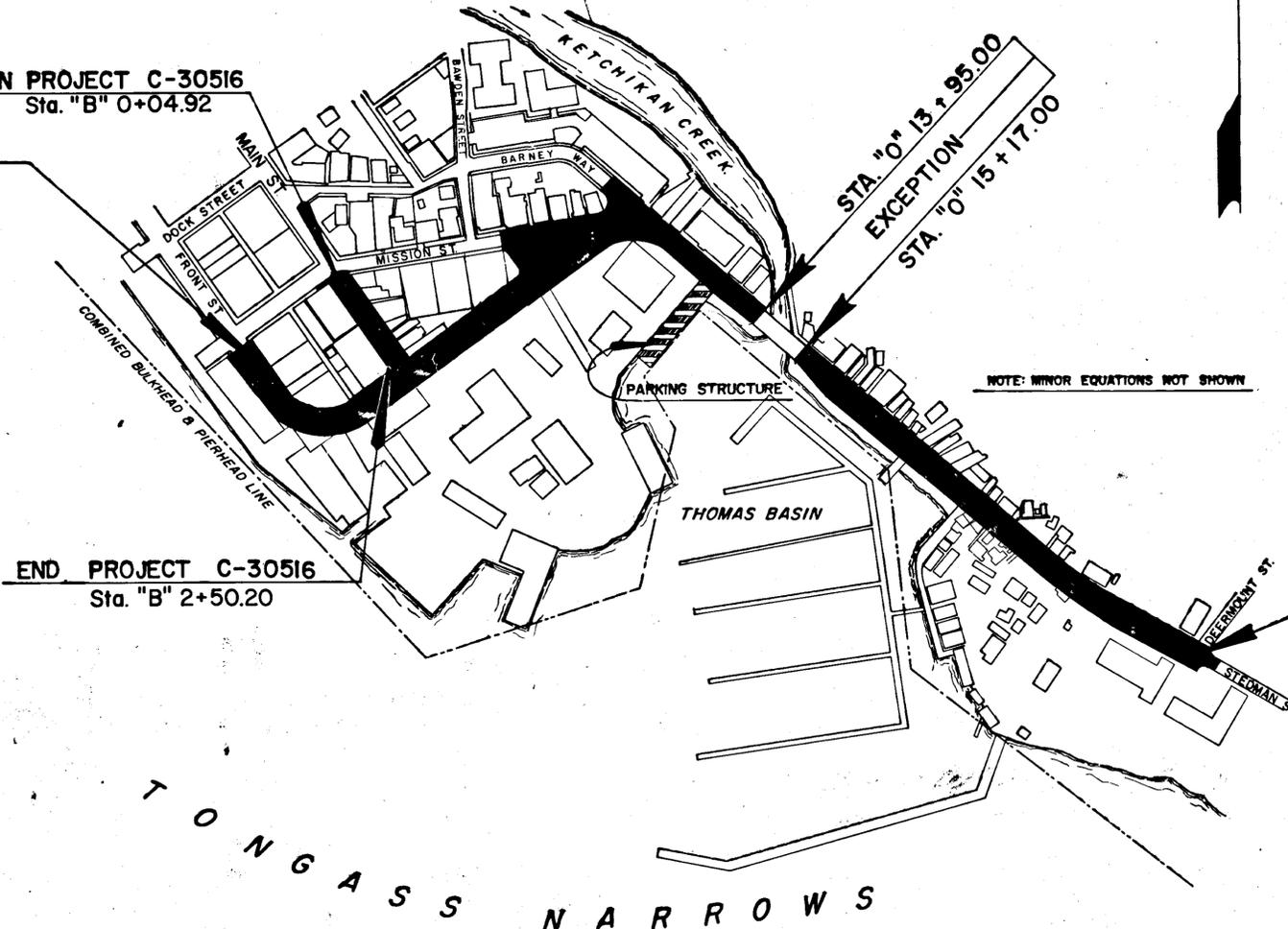
F-095-2(3)  
ADT (1970) = 6,150  
ADT (1990) = 10,150  
DHV (13%) = 1,320  
D = 45-55%  
T = 7%  
V = 30 MPH

### PROJECT SUMMARY

F-095-2(3) C-30516

	F-095-2(3)	C-30516
WIDTH OF ROADWAY	Varies 31' to 45'	47'
WIDTH OF PAVEMENT	Varies 27' to 41'	29'
LENGTH OF GRADING	2,177.94' = 0.412 Mi.	245.28' = 0.046 Mi.
LENGTH OF PAVING	2,177.94' = 0.412 Mi.	245.28' = 0.046 Mi.
LENGTH OF STRUCTURE	307.36' = 0.058 Mi.	-----
LENGTH OF TRANSITION	28.71' = 0.005 Mi.	-----
LENGTH OF PROJECT	2,485.30' = 0.471 Mi.	245.28' = 0.046 Mi.
LENGTH OF EXCEPTION	122.00' = 0.023 Mi.	-----

END PROJECT C-30516  
Sta. "B" 2+50.20



"AS BUILT PLANS"  
LINDBROOK CONSTRUCTION Co. Inc.  
JOHN E. SWANSON P.E.  
BEGIN WORK MARCH 20, 1972  
END WORK AUGUST 21, 1973

END PROJECT F-095-2(3)  
STA. "0" 26+31.50 =  
"As Built" DA-NR3 STA. 11+11.29

STATE OF ALASKA  
DEPARTMENT OF HIGHWAYS

APPROVED:  
*Harold E. Miller* P.E. DATE 6/15/71  
SOUTHEASTERN DISTRICT ENGINEER

APPROVED:  
*W. Matlock* DATE 6-15-71  
for COMMISSIONER OF HIGHWAYS

**LABELING INDEX**

- 1. Prime coat - width varies
- 2. 3-2 Course hot bituminous concrete pavement
- 3. 6" Crushed aggregate base, Grading D-1
- 4A. 4" Subbase, Grading B
- 4B. 6" Subbase, Grading B
- 5. 6" Minimum selected material
- 6. Useable unclassified excavation and/or borrow
- 7. Curb and gutter type 2 (See std. chg. R-1)
- 8. Curb and gutter type 2A (See Note)
- 9. 4" Concrete sidewalk
- 10. 6" Topsoil and seeding (See sheet 12 for limits)

Note: Curb and Gutter, Type 2a, shall be used where pavement slopes away from gutter, in which case the gutter slope shall conform with the pavement slope. Transition between such slopes shall be 50'.

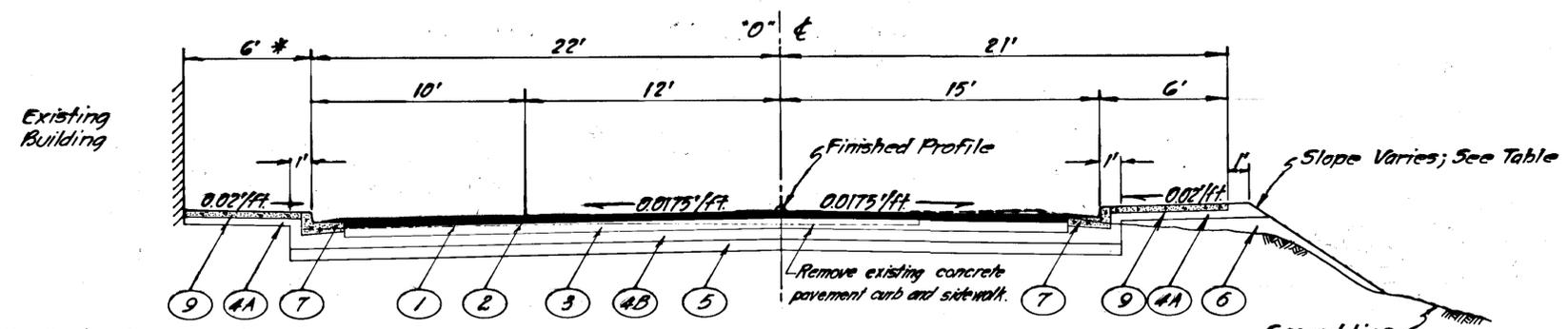
**FILL SLOPES**

LEFT		RIGHT			
Sta. to Sta.	Slope	Sta. to Sta.	Slope		
0'3+50	0'4+67	*	0'3+50	0'3+60	3:1
0'4+67	0'6+20	2:1	0'3+70	0'4+80	2:1
0'6+40	0'6+75	4:1	0'5+00	0'12+83	4:1
0'6+75	0'7+60	*	0'12+84	0'15+50	1 1/2:1
0'7+60	0'13+10	4:1	0'15+50	0'18+55	*
0'13+20	0'13+70	1 1/2:1	0'18+55	0'19+70	3:1
0'13+70	0'13+95	*	0'19+70	0'20+60	*
0'13+95	0'20+00	1 1/2:1	0'20+60	0'22+00	1 1/2:1
			0'23+00	0'26+60	4:1
"B", "M" Lines		3:1	"B", "M" Lines		3:1

**CUT SLOPES**

LEFT		RIGHT			
Sta. to Sta.	Slope	Sta. to Sta.	Slope		
0'3+50	0'21+00	3:1	0'3+50	0'20+00	3:1
0'21+30	0'21+60	6:1	0'21+00	0'23+50	1/4:1
0'22+00	0'25+00	2:1	0'24+00	0'26+60	3:1
0'25+20	0'26+00	1:1			
0'26+10	0'26+60	3:1			
"B", "M" Lines		2:1	"B", "M" Lines		3:1

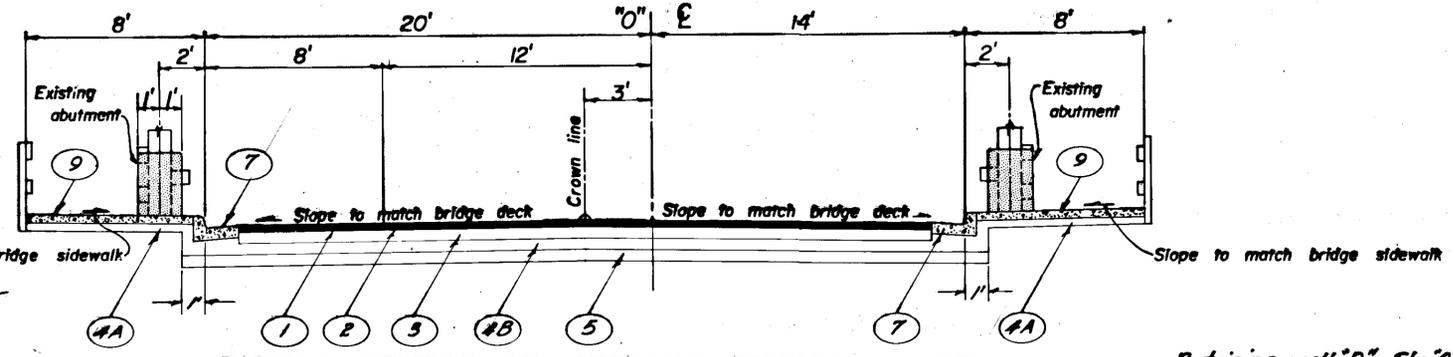
\* Retaining wall, see detail sheets 17 & 18



\* Width of sidewalk varies to match buildings abutting existing sidewalk.

Retaining wall "C" and special sidewalk, Sta. 0+13+70 to 0+13+95, See Detail, sheets 17 & 18.

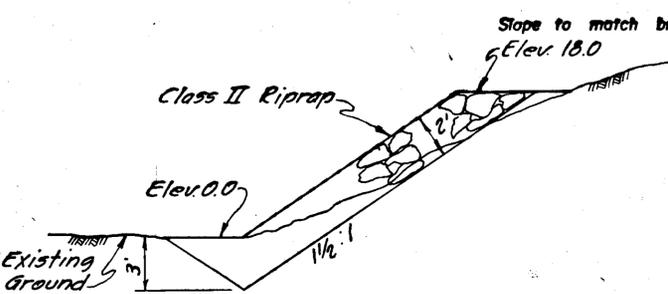
**TYPICAL SECTION OF IMPROVEMENT**  
Sta. "0" 11+05.93 to Sta. "0" 12+95.00  
TRANSITION SECTION INTO EXISTING BRIDGE  
STA. "0" 12+95.00 TO STA. "0" 13+95.00



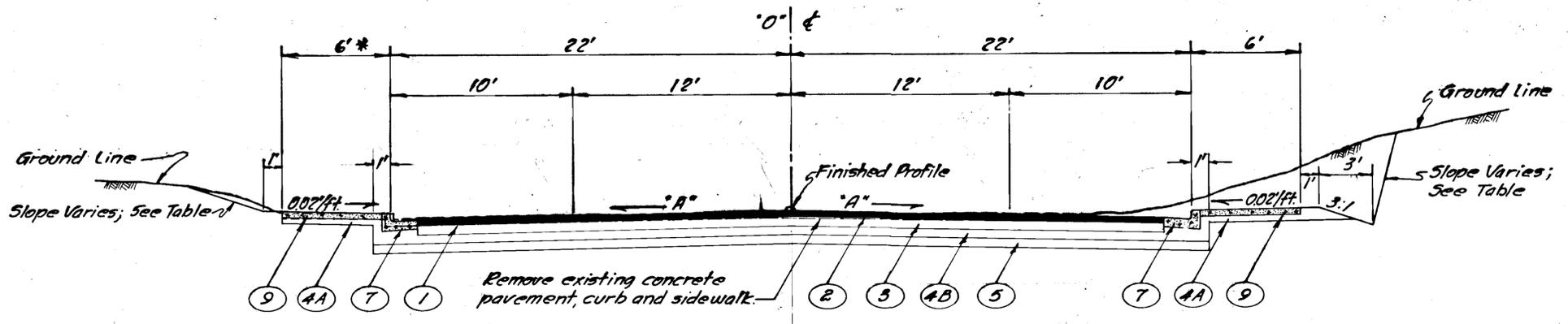
Retaining wall "D", Sta. 0+15+50 to 0+18+55 See Detail, sheets 17 & 18

Retaining wall "E", Sta. 0+19+70 to 0+20+60 See Detail, sheets 17 & 18

**TYPICAL SECTION AT STEDMAN STREET BRIDGE**  
Sta. "0" 13+95 & Sta. "0" 15+17  
TRANSITION SECTION FROM EXISTING BRIDGE  
STA. "0" 15+17.00 TO STA. "0" 16+17.00



**RIPRAP DETAIL**  
Sta. "0" 13+30 to Sta. "0" 14+00 (Right)



\* Width of sidewalk varies to match buildings abutting existing sidewalk, Sta. 0+15+20 to 0+19+60

\* "A" - Slope varies; to Sta. 19+80, 0.0175'/ft. and from Sta. 20+05, 0.02'/ft.

**TYPICAL SECTION OF IMPROVEMENT**  
Sta. "0" 16+17.00 to Sta. "0" 26+20.21  
TEMPORARY TRANSITION  
Sta. "0" 26+20.21 to Sta. "0" 26+60.21



# ESTIMATE OF QUANTITIES

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.
ALASKA	F-095-2(3) C-30516	1971	5

ITEM No	ITEM	UNIT	SHEET NUMBERS													C-30516		F-095-2(3)		GRAND TOTAL
			57	58	59	60	61	62	63	64	65	66	67	TOTAL	TOTAL	TOTAL				
680(1)	Vaults	Ea.	1			1		1		1		1						5	5	
680(2A)	2" PVC Conduit	L.F.	615	2450	1645	2248	1605	2205	2475	2119	1760	2159	170				1025	18,426	19,451	
680(2B)	4" PVC Conduit	L.F.	420	1300		2296		1940	1928			2978					405	10,457	10,862	
680(2C)	2" Aluminum Conduit	L.F.	580	790	180		110	865	180	220							80	2845	2925	
680(2D)	4" Aluminum Conduit	L.F.	740					500										1240	1240	
680(3A)	Telephone Cable, 600 pr. #24 PIC	L.F.		510		504											320	694	1014	
680(3B)	Telephone Cable, 400 pr. #24 PIC	L.F.						610										610	610	
680(3C)	Telephone Cable, 300 pr. #24 PIC	L.F.							482									482	482	
680(3D)	Telephone Cable, 300 pr. #22 PIC	L.F.										607						607	607	
680(3E)	Telephone Cable, 50 pr. #22 PIC	L.F.				100						160						260	260	
680(3F)	Telephone Cable, 25 pr. #22 PIC	L.F.		410	310		315	885	290	180	155							2545	2545	
680(3H)	Telephone Cable, 6 pr. #19 PIC	L.F.		2130	1690	954	620	795	630	702	50	1402	170			1590		7553	9143	
680(3I)	Telephone Cable, 2 pr. #19 PIC	L.F.	1560		225	540		880	1735	715	1190	240				225		6860	7085	
680(3J)	RCA Cable, 54 pr. #19 PIC	L.F.		510		504		610	482			667				320		2453	2773	
680(3K)	TV Cable, Trunk Coaxial (Installation Only)	L.F.		1020		1008		1220	964			1554						5766	5766	
680(3L)	TV Cable, Feeder Coaxial (Installation Only)	L.F.		810		100	315		180				40					1790	1790	
680(3M)	TV Cable, Service Drop (Installation Only)	L.F.		1120	2225	450	620	960	1730	625	1240	140						9110	9110	
680(3N)	TV Control Cable, 25 pr. #19 PIC (Installation Only)	L.F.		510		504		610	482		200							2306	2306	
680(5A)	Terminal Pole Assemblies-Telephone System	Ea.		1				1	1	1	1	2						7	7	
680(5B)	Terminal Pole Assemblies-RCA	Ea.		1								1						2	2	
680(5C)	Terminal Pole Assemblies-Fire Alarm System	Ea.		1					1			2						4	4	
680(5D)	Terminal Pole Assemblies-Television System	Ea.		2								2						4	4	
680(5E)	Telephone Terminal Box, 200 pr.	Ea.	1			1												2	2	
680(5F)	Telephone Terminal Box, 100 pr.	Ea.						1	1									2	2	
680(5G)	Telephone Terminal Box, 50 pr.	Ea.				1						1						2	2	
680(6)	Fire Alarm Station	Ea.	3			2		1	1			1						8	8	
680(7)	Retirement of Existing Facilities (Telephone, Fire Alarm, RCA)	L.S.																All Req'd	All Req'd	
680(8)	Retirement of Existing Facilities (Television)	L.S.																All Req'd	All Req'd	
681(1A)	Vaults, 8' x 8' x 14'	Ea.				1		1	1			1						4	4	
681(1B)	Vaults, 8' x 8' x 18'	Ea.	1															1	1	
681(2A)	2" PVC Conduit	L.F.	70	10	500	20	715	495	1255	250	1345	155						4815	4815	
681(2B)	3" PVC Conduit	L.F.		1070	1720	605	1135	165	995	710		280	130			1330		5480	6810	
681(2C)	4" PVC Conduit	L.F.	630	1395		1632		1625	1646	280	2471	40				405		9314	9719	
681(2D)	2" Aluminum Conduit	L.F.					110	310	30	50								500	500	
681(2E)	3" Aluminum Conduit	L.F.		390					90									480	480	
681(2F)	4" Aluminum Conduit	L.F.	1060	400				725	160									2345	2345	
681(3A)	Conductor, 250 MCM Aluminum, 5 KV Shielded	L.F.		3060		3024		4425	3432	140	5262					1920		17,423	19,343	
681(3B)	Conductor, #2/0 AWG Aluminum, 5 KV Shielded	L.F.											120					120	120	
681(3C)	Conductor, #1/0 AWG Aluminum, 5 KV Shielded	L.F.		340		1815	155						390					2700	2700	
681(3D)	Conductor, #2 AWG Aluminum, 5 KV Shielded	L.F.		930					300			840						2070	2070	
681(3E)	Conductor, #2 AWG Aluminum, 5 KV Unshielded	L.F.	40			40		40	40			40						200	200	
681(3F)	Conductor, 600 MCM Aluminum, 600 V RHW	L.F.		2460														2460	2460	
681(3G)	Conductor, 350 MCM Aluminum, 600 V RHW	L.F.					765		495									1260	1260	
681(3H)	Conductor, 300 MCM Aluminum, 600 V RHW	L.F.		900					630									1530	1530	
681(3I)	Conductor, 250 MCM Aluminum, 600 V RHW	L.F.		2180	2610	1008		1970	810	3714	140	1754				2560		11,626	14,186	
681(3J)	Conductor, #4/0 AWG Aluminum, 600 V RHW	L.F.			2565		1005									2130		1440	3570	
681(3K)	Conductor, #3/0 AWG Aluminum, 600 V RHW	L.F.			1500		390			450								2340	2340	
681(3L)	Conductor, #2/0 AWG Aluminum, 600 V RHW	L.F.						420	1025		540		40					2025	2025	
681(3M)	Conductor, #1/0 AWG Aluminum, 600 V RHW	L.F.		340		605	2240	1965	3015	405	3045	420	130					12,165	12,165	
681(3N)	Conductor, #2 AWG Aluminum, 600 V RHW	L.F.		310					300			280						890	890	
681(3O)	Conductor, #6 AWG Aluminum, 600 V RHW	L.F.							580									580	580	
681(3P)	Conductor, #10 AWG Copper, 600 V RHW	L.F.	180															180	180	
681(3Q)	Conductor, #12 AWG Copper, 600 V RHW	L.F.		30		30		30	30			30						150	150	
681(5)	Terminal Pole Assemblies	Ea.		1		1	1	1	1	2	2	4						13	13	
681(6A)	Load Break Switches, Loop & Solid Tap	Ea.	2			2												4	4	
681(6B)	Load Break Switches, Loop & Switched Tap	Ea.										1						1	1	
681(7A)	Fused Disconnect Switches, Single Phase	Ea.	5			3		4	4			2						18	18	
681(7B)	Fused Disconnect Switches, 3-Phase	Ea.	1			2		1	1			3						8	8	
681(8)	Transformers (Installation Only)	Ea.	4			2		3	3			2						14	14	
681(9)	Transclosure (Installation Only)	Ea.										1						1	1	
681(10)	Retirement of Existing Facilities	L.S.																All Req'd	All Req'd	

**SUMMARY TABLES**

DEMOLITION OF STRUCTURES & OBSTRUCTIONS		
Station	Offset	Description & Remarks
"0" 0+45 to "0" 5+10	Varies	Front St. and Mill St. timber trestle and sidewalks. See viaduct plans for reconstruction of wharf approach.
"0" 0+45 to "0" 2+25	6' Rt. to 35' Rt.	Demolish two buildings between warehouse & E. Warehouse wall will be removed and reconstructed beyond R/W limits by others. See section 202 in specifications.
"0" 3+65 Ahd. to "0" 4+85	10' Rt. to 70' Rt.	Ketchikan Spruce Mills commercial building
"0" 5+20	±	K. S.M. Time Shack.
"0" 5+15 to "0" 6+15	21' Lt. to 48' Lt.	2-Story Commercial Building
"0" 6+80 to "0" 7+95	3' Lt. to 133' Lt.	Commercial Building
"0" 8+15 to "0" 8+45	30' Rt. to 87' Lt.	K. S.M. Lumber storage shed. Cut off portion of shed within the R/W and rebuild end wall to correspond with original construction.
"0" 9+90 to "0" 10+25	33' Lt. to 79' Lt.	Coffee Cup Cafe
"0" 10+25	32' Lt.	Bench & Shelter. Remove from base & deliver to Ketchikan city storage yard.
"0" 20+20 to "0" 20+50	11' Rt. to 41' Rt.	Two-story frame building (#400 Stedman St.) Remove party wall between this building and adjoining house (#164 Thomas St.) and repair latter building as called for in Section 202 of the specifications.
"0" 20+45 to "0" 20+70	11' Rt. to 46' Rt.	#404 Stedman St.
"0" 20+75 to "0" 21+10	11' Rt. to 23' Rt.	#408 Stedman St.
"0" 20+75 to "0" 21+00	24' Rt. to 46' Rt.	#124 Short St. (includes adjoining shed.)
"0" 21+10 to "0" 21+35	6' Rt. to 38' Rt.	#414 Stedman St.
"0" 21+35 to "0" 21+55	9' Rt. to 37' Rt.	#418 Stedman St.
"0" 22+70 to "0" 23+05	7' Rt. to 40' Rt.	#518 Stedman St.
"0" 23+20 to "0" 23+40	18' Rt. to 49' Rt.	Concrete slab

CURB CUTS		
STATION	SIDE	TYPE
"0" 1+58.11	RT.	I
"0" 2+12.95	RT.	I
"0" 2+72.71	RT.	50' Wide
"0" 3+60 Bk.	RT.	I
"0" 3+65.5 Ahd.	LT.	II
"0" 4+22	LT.	I
"0" 4+97	RT.	I
"0" 7+26	RT.	I
"0" 8+60	RT.	I
"0" 9+40	RT.	I
"0" 11+82	LT.	II
"0" 12+12	RT.	I
"0" 12+72	LT.	II
"0" 13+33	RT.	II
"0" 16+84	LT.	II
"0" 17+68	LT.	II
"0" 19+90	LT.	II
"0" 21+02	LT.	II
"0" 21+45	LT.	I
"0" 21+82	LT.	I
"0" 22+82	LT.	I
"0" 23+47	RT.	I
"0" 23+69	LT.	I
"0" 24+24	LT.	24' Wide
"0" 24+38	RT.	70' Wide
"0" 25+17	RT.	70' Wide
"0" 26+16	RT.	26' Wide
"B <sub>w</sub> " 0+44	---	1
"B <sub>w</sub> " 0+74	---	20' Wide
"B <sub>w</sub> " 1+53	---	1
"0" 12+45	RT.	25' Wide

HANDRAIL			
From Station	To Station	Side	
"0" 12+84	"0" 13+26	LT.	X
"0" 13+40	"0" 13+95	RT.	X
"0" 13+19	"0" 13+95	X	
"0" 15+17	"0" 18+28		X
"0" 18+47	"0" 18+55		X
"0" 19+90	"0" 20+00		X
"0" 20+22	"0" 20+60		X

See sheet 16 for Inman St. stairs.

GUARDRAIL	
Station	Location
"0" 13+82.5 to "0" 13+95.0	140' RT.
"0" 15+17.0 to "0" 15+29.5	19.5' LT.

INLET REMOVAL	
STATION	LOCATION
"M" 10+46	8' LT.
"M" 10+52	16' RT.
"M" 11+27	7' LT.
"M" 12+74	7' RT.
"0" 9+69	23' LT.
"0" 13+69	20' LT.
"0" 15+41	20' LT.
"0" 15+41	15' RT.
"0" 18+05	21' LT.
"0" 18+05	15' RT.
"0" 25+69	16' LT.
"0" 26+03	18' LT.

6' CHAIN LINK FENCE	
STATION	LOCATION
"0" 3+50.0 to "0" 8+15.0	30.5' RT.

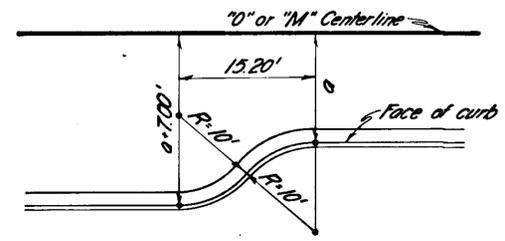
DRIVEWAY GATES	
STATION*	LOCATION
"0" 3+60.0 BK.	30.5' RT.
"0" 4+97.0	30.5' RT.
"0" 7+26.0	30.5' RT.

\* Station at center of double swing gates, each 24.0' total width.

BASIS OF ESTIMATE	
ITEM NO.	QUANTITIES
203 (5)	1.87 Tons per cubic yd.
304 (1)	1.96 Tons per cubic yd.
307 (1)	1.96 Tons per cubic yd.
403 (1)	112 lb. per sq. yd. (1 in depth)
403 (2)	60% of 403 (1)
408 (2)	0.25 gal. per sq. yd. (2.5 gal. per ton @ 60°F)
611 (1A)	1.80 Tons per cubic yd.
611 (1B)	1.80 Tons per cubic yd.

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	F-095-2(3)	1971	12	91

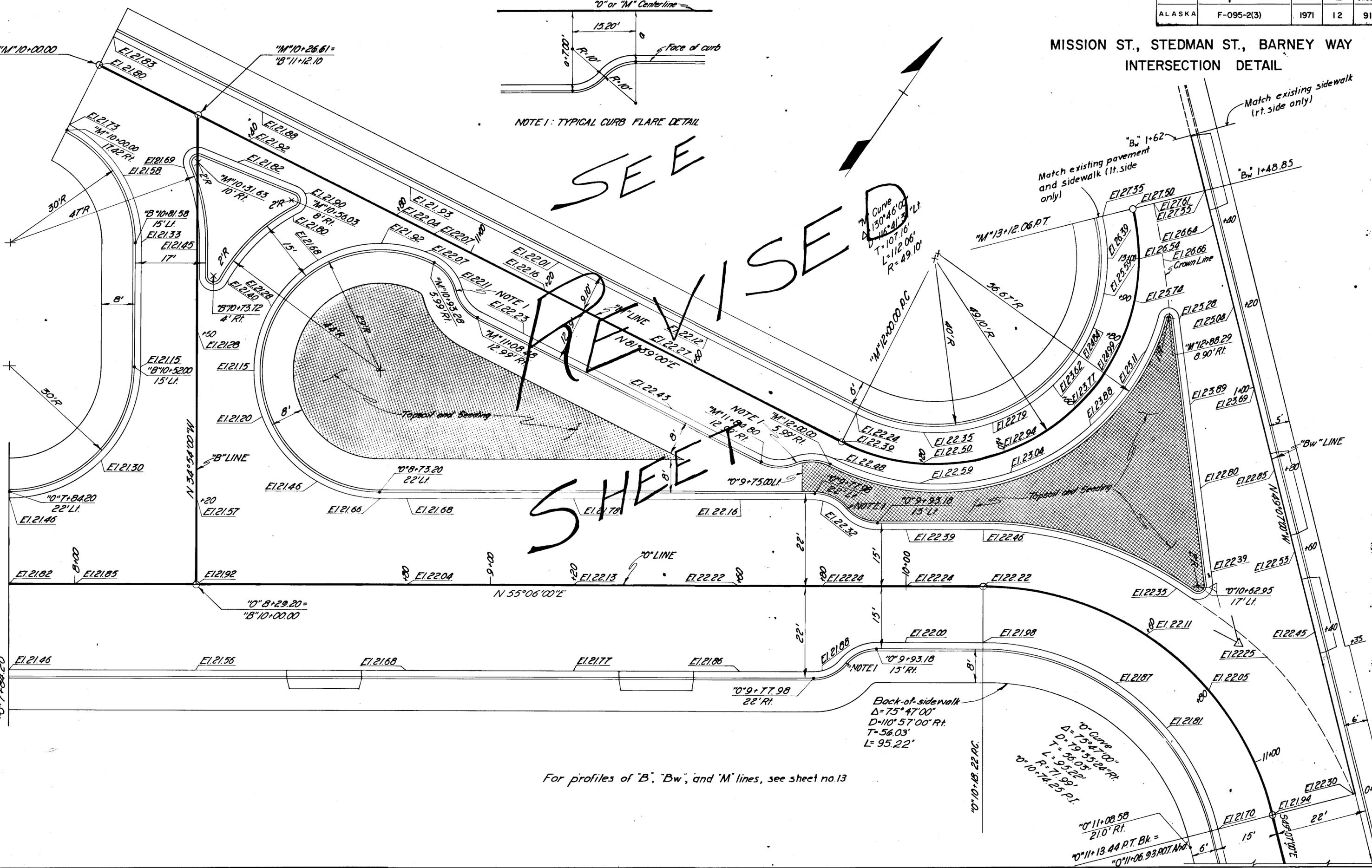
MISSION ST., STEDMAN ST., BARNEY WAY  
INTERSECTION DETAIL



NOTE 1: TYPICAL CURB FLARE DETAIL

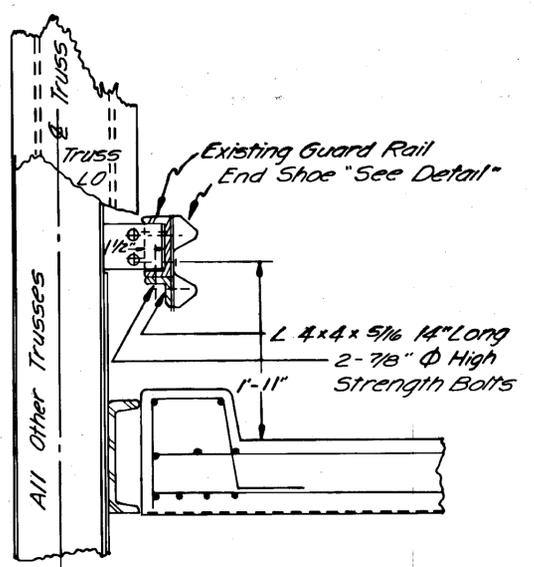
SEE  
DRAWING

SHEET

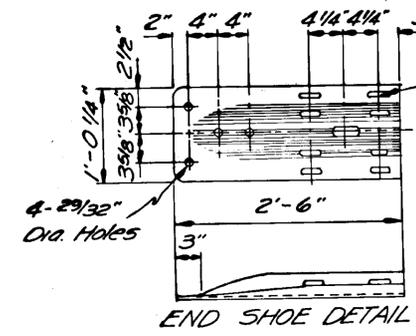
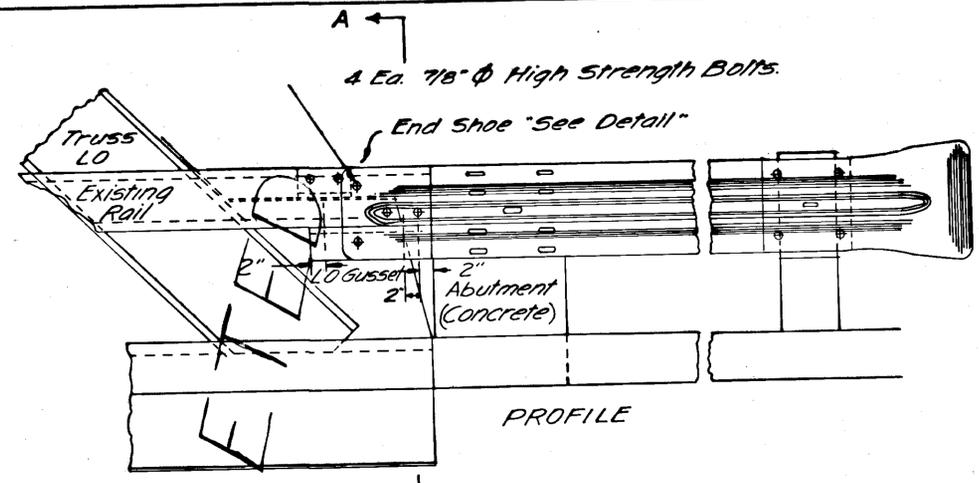


STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	F-095-2(3)	1971	13	91

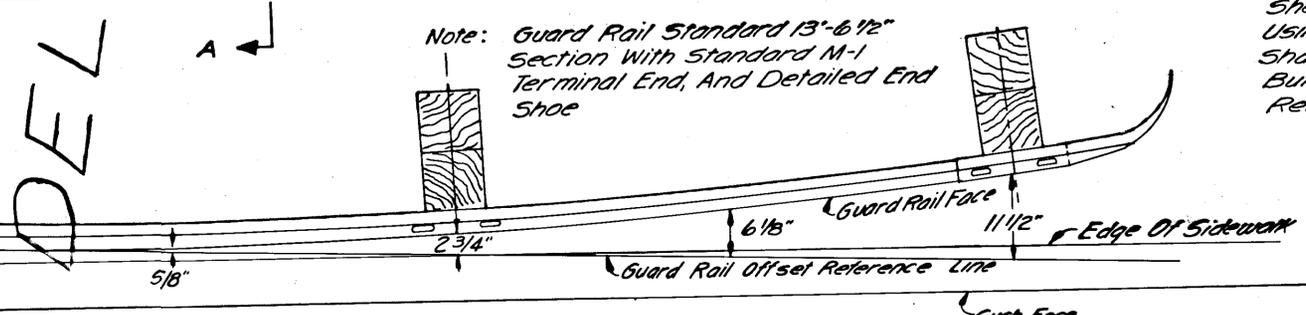
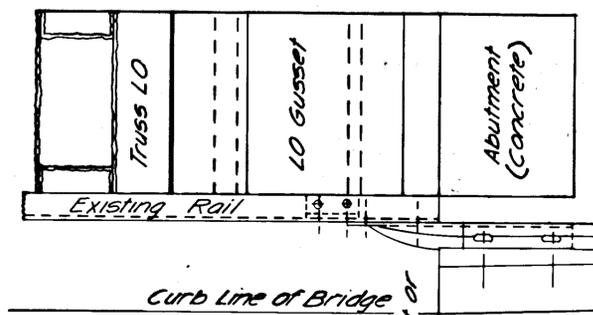
**GUARD RAIL CONNECTION-STEMAN ST. BRIDGE**



SECTION A-A

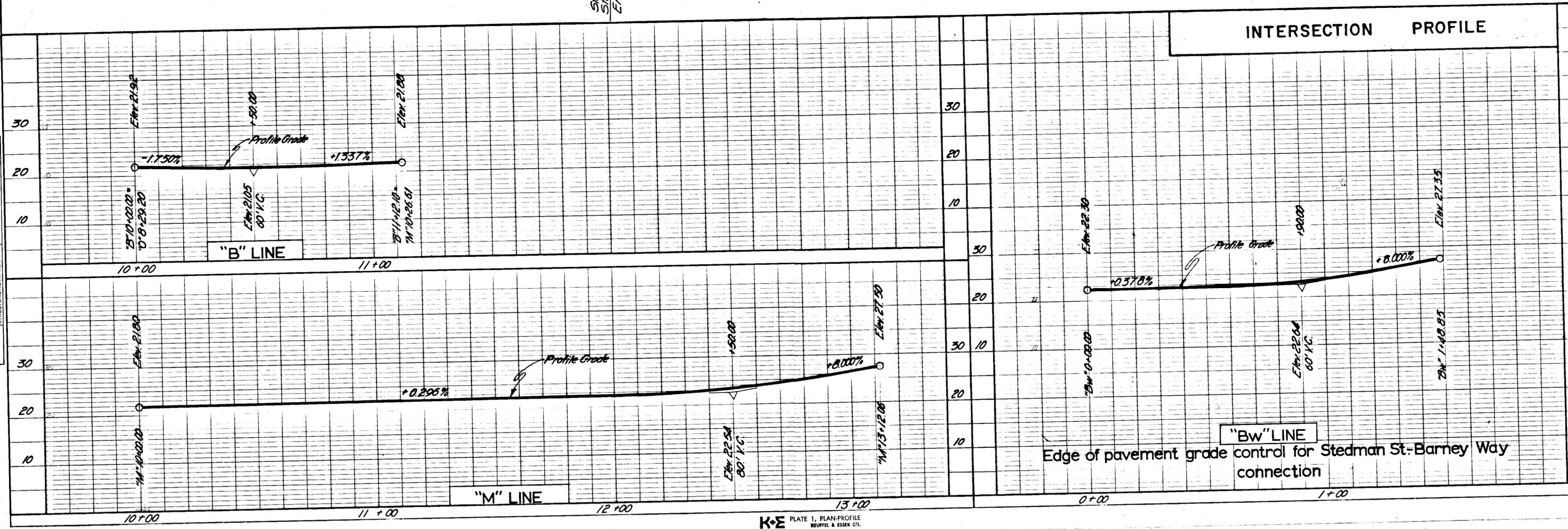


Note: At Station "0" 13+95 (Rt.) Enlarge Slotted Holes In End Shoe And Guard Rail Section To 29/32" x 1 3/4" Slots. Pack Joint Between End Shoe And Guard Rail With 1/16" Sheet Asbestos, And Fasten Using 8-3/4"  $\Phi$  Bolts. Nut Shall Be Finger Tight And Burred To Prevent Easy Removal.

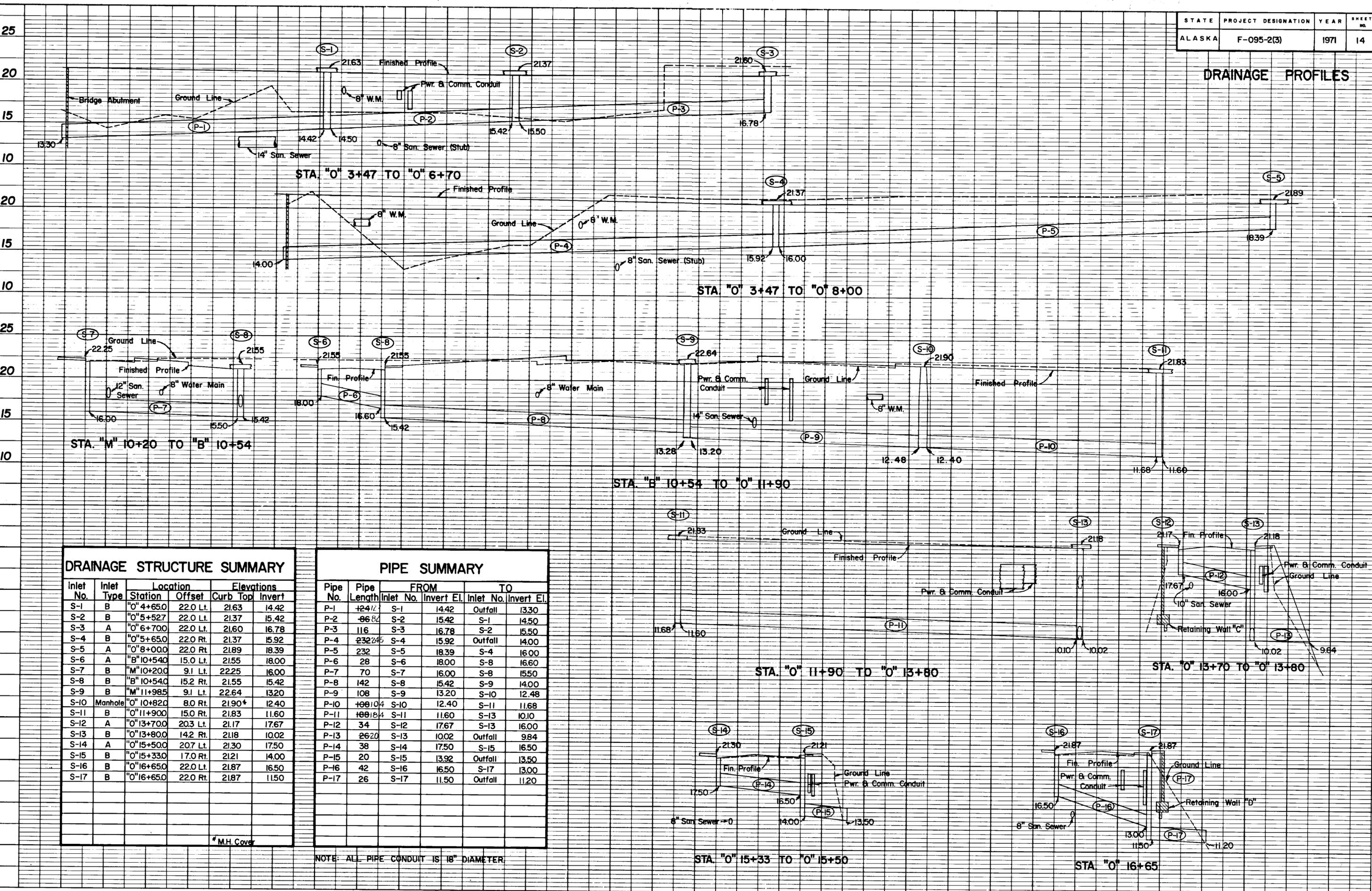


PLAN- GUARD RAIL AT STATION "0" 15+17 LEFT  
(Reverse For Installation At Station "0" 13+95 Rt.)

Note: Guard Rail Offset Reference Line Is Parallel To "0" Line And Offset From It 14'-5 3/4" Rt. And 20'-5 3/4" Lt.



### DRAINAGE PROFILES



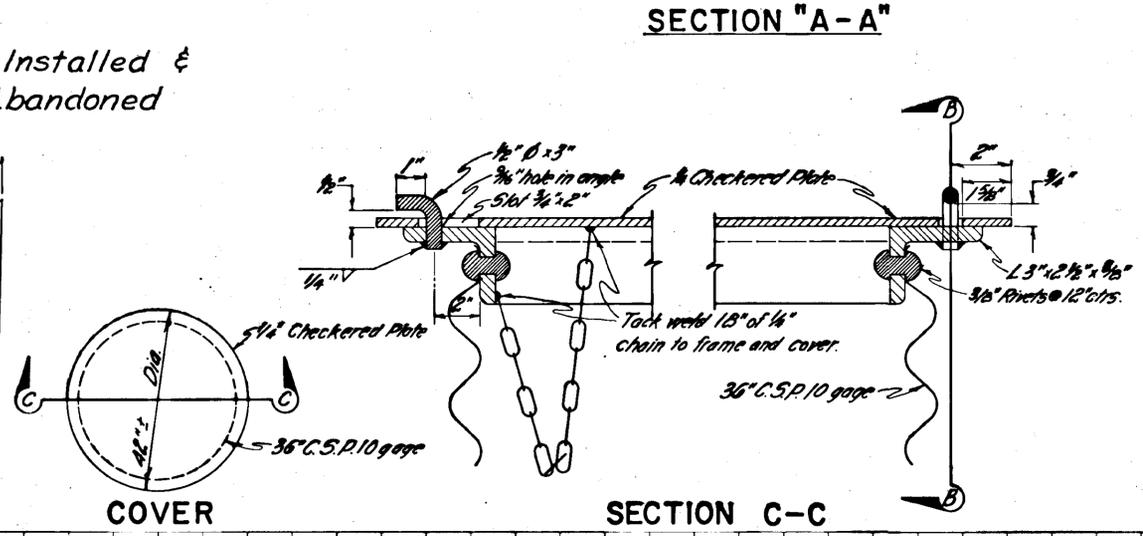
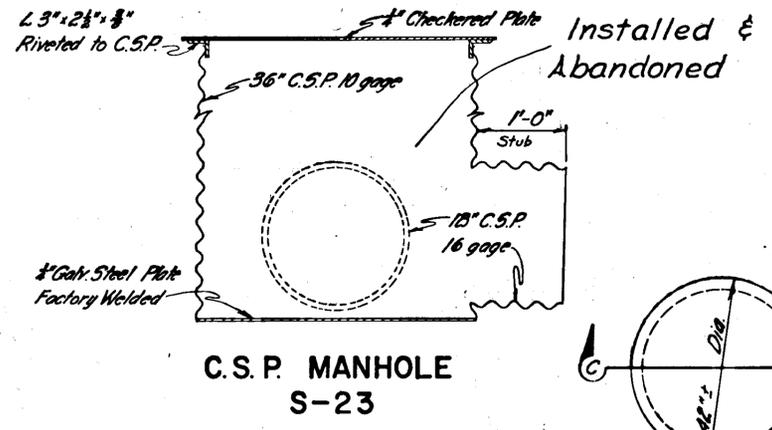
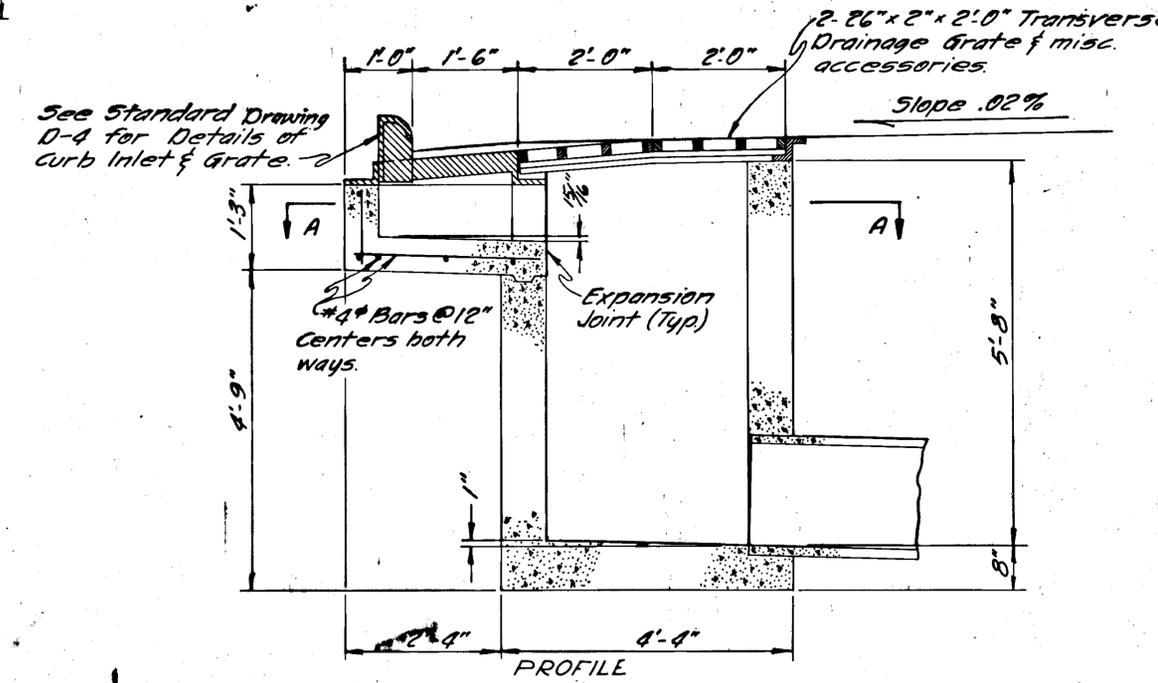
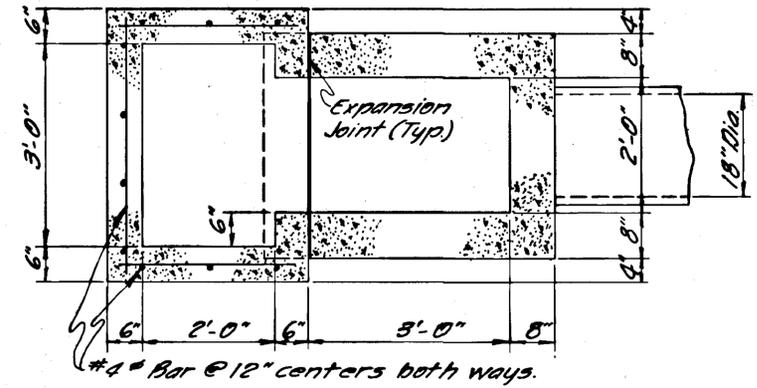
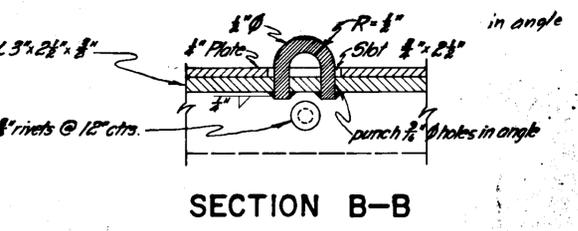
DRAINAGE STRUCTURE SUMMARY					
Inlet No.	Inlet Type	Location		Elevations	
		Station	Offset	Curb Top	Invert
S-1	B	"O" 4+65.0	22.0 Lt.	21.63	14.42
S-2	B	"O" 5+52.7	22.0 Lt.	21.37	15.42
S-3	A	"O" 6+70.0	22.0 Lt.	21.60	16.78
S-4	B	"O" 5+65.0	22.0 Rt.	21.37	15.92
S-5	A	"O" 8+00.0	22.0 Rt.	21.89	18.39
S-6	A	"B" 10+54.0	15.0 Lt.	21.55	18.00
S-7	B	"M" 10+20.0	9.1 Lt.	22.25	16.00
S-8	B	"B" 10+54.0	15.2 Rt.	21.55	15.42
S-9	B	"M" 11+98.5	9.1 Lt.	22.64	13.20
S-10	Manhole	"O" 10+82.0	8.0 Rt.	21.90*	12.40
S-11	B	"O" 11+90.0	15.0 Rt.	21.83	11.60
S-12	A	"O" 13+70.0	20.3 Lt.	21.17	17.67
S-13	B	"O" 13+80.0	14.2 Rt.	21.18	10.02
S-14	A	"O" 15+50.0	20.7 Lt.	21.30	17.50
S-15	B	"O" 15+33.0	17.0 Rt.	21.21	14.00
S-16	B	"O" 16+65.0	22.0 Lt.	21.87	16.50
S-17	B	"O" 16+65.0	22.0 Rt.	21.87	11.50

\* M.H. Cover

PIPE SUMMARY						
Pipe No.	Pipe Length	FROM		TO		
		Inlet No.	Invert El.	Inlet No.	Invert El.	
P-1	124.12	S-1	14.42	Outfall	13.30	
P-2	96.82	S-2	15.42	S-1	14.50	
P-3	116	S-3	16.78	S-2	15.50	
P-4	232.245	S-4	15.92	Outfall	14.00	
P-5	232	S-5	18.39	S-4	16.00	
P-6	28	S-6	18.00	S-8	16.60	
P-7	70	S-7	16.00	S-8	15.50	
P-8	142	S-8	15.42	S-9	14.00	
P-9	108	S-9	13.20	S-10	12.48	
P-10	108.104	S-10	12.40	S-11	11.68	
P-11	108.184	S-11	11.60	S-13	10.10	
P-12	34	S-12	17.67	S-13	16.00	
P-13	26.20	S-13	10.02	Outfall	9.84	
P-14	38	S-14	17.50	S-15	16.50	
P-15	20	S-15	13.92	Outfall	13.50	
P-16	42	S-16	16.50	S-17	13.00	
P-17	26	S-17	11.50	Outfall	11.20	

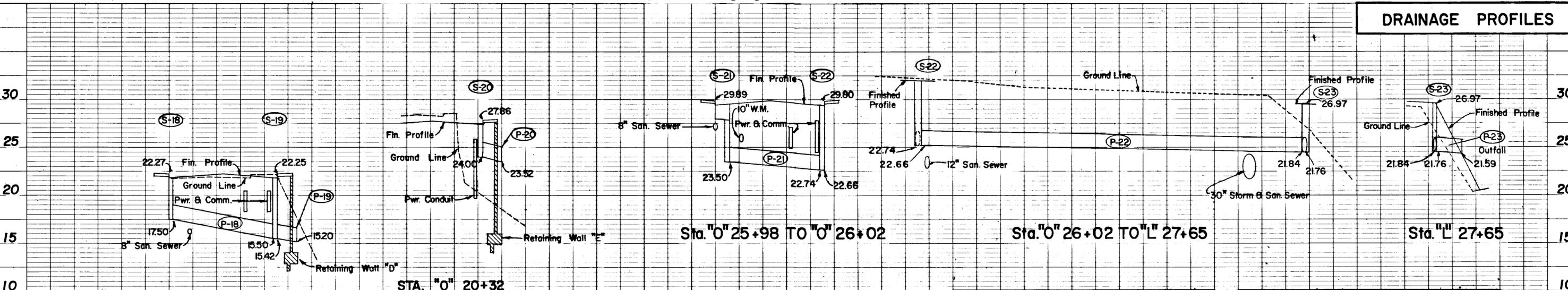
NOTE: ALL PIPE CONDUIT IS 18" DIAMETER.

**DRAINAGE DETAILS**



**TYPE "C" INLET AT STA. "O" 25+98 Lt. S-21**

**DRAINAGE PROFILES**



Inlet No.	Inlet Type	Location		Elevations	
		Station	Offset	Curb Top	Invert
S-18	A	"O" 18+65.0	22.0 Lt.	22.27	17.50
S-19	A	"O" 18+56.0	22.0 Rt.	22.25	15.42
S-20	A	"O" 20+32.0	22.0 Rt.	27.86	24.00
S-21	A	"O" 25+98.0	22.0 Lt.	29.89	23.50
S-22	B	"O" 26+02.0	22.0 Rt.	29.84	22.66
S-23	C.S.P.MH	"L" 27+65.0	22.0 Rt.	26.97*	22.76

Pipe No.	Pipe Length	FROM		TO	
		Inlet No.	Invert El.	Inlet No.	Invert El.
P-18	42	S-18	17.50	S-19	15.50
P-19	8	S-19	15.42	Outfall	15.20
P-20	8	S-20	24.00	Outfall	23.52
P-21	38	S-21	23.50	S-22	22.74
P-22	16.0	S-22	22.66	S-23	21.84
P-23	12	S-23	21.76	Outfall	21.59

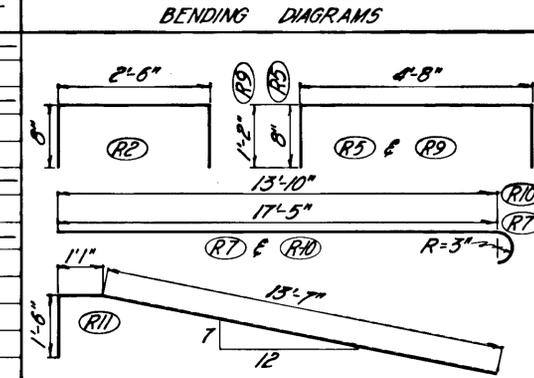
\* M.H. cover

NOTE: ALL PIPE CONDUIT IS 18" DIAMETER.

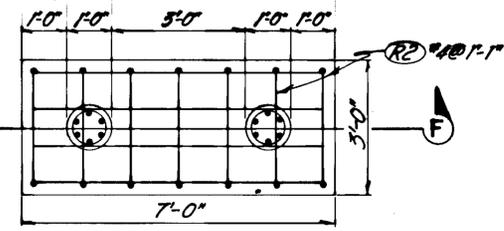
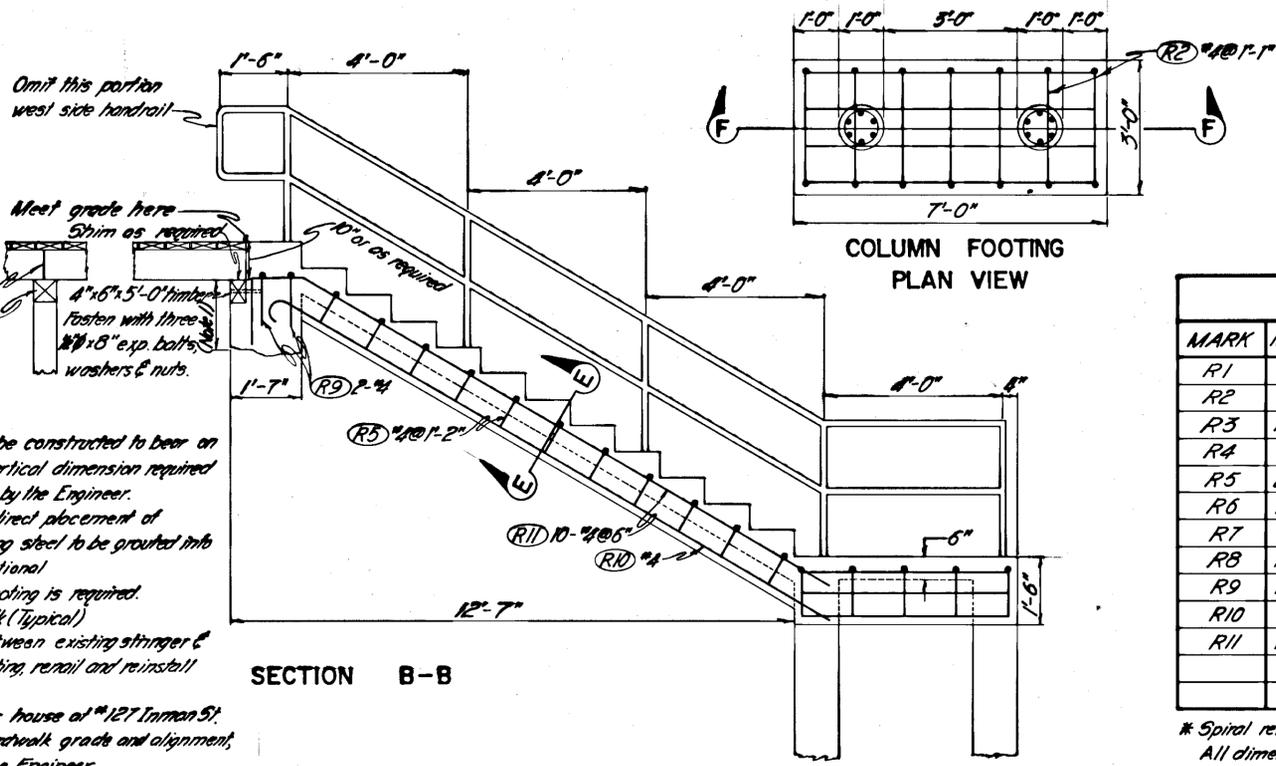
# INMAN STREET STAIRWAY DETAILS

ESTIMATE OF QUANTITIES	
Class "A" Concrete	774 cu. yd.
Reinforcing Steel	820 lb.
Pipe Handrail	77 ft.

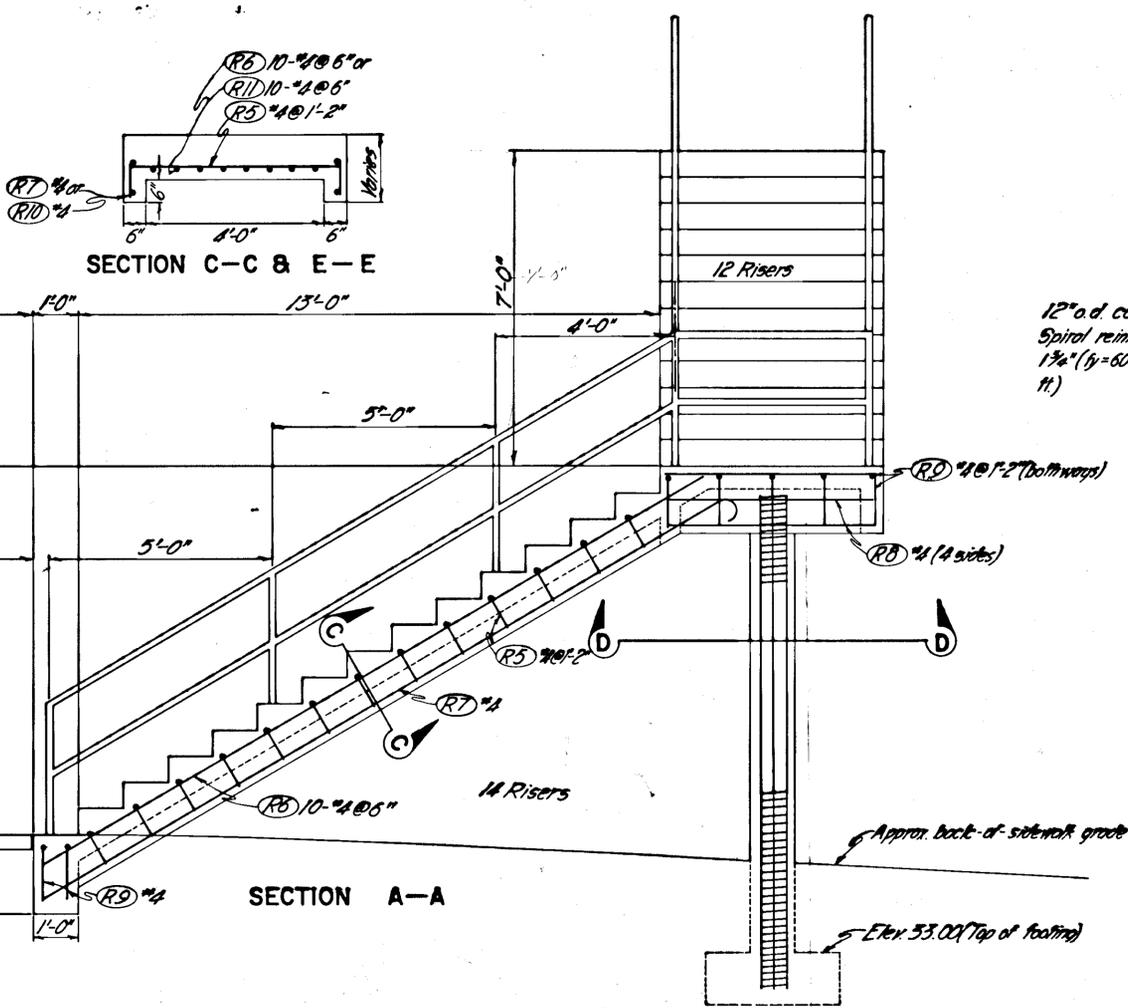
REINFORCING STEEL				
MARK	NO.	SIZE	LENGTH	TYPE
R1	8	4	6-6	
R2	7	4	4-0	Bent
R3	12	5	11-0	
R4	2	#	11-0	Spiral
R5	24	4	6-0	Bent
R6	10	4	17-0	
R7	2	4	18-3	Bent
R8	12	4	4-8	
R9	14	4	7-0	Bent
R10	2	4	14-8	Bent
R11	10	4	16-2	Bent



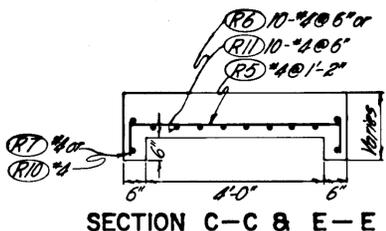
\* Spiral reinforcement shall be  $\frac{3}{8}$ "  $\phi$  @  $1\frac{1}{4}$ " pitch.  
All dimensions are "out-to-out".



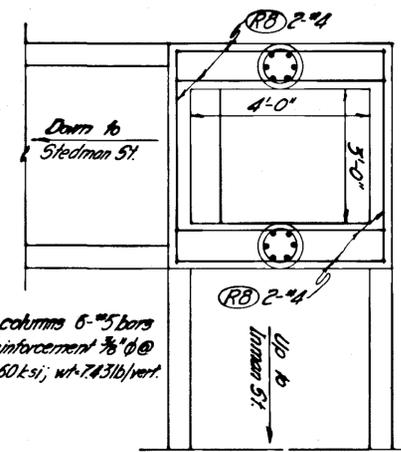
COLUMN FOOTING  
PLAN VIEW



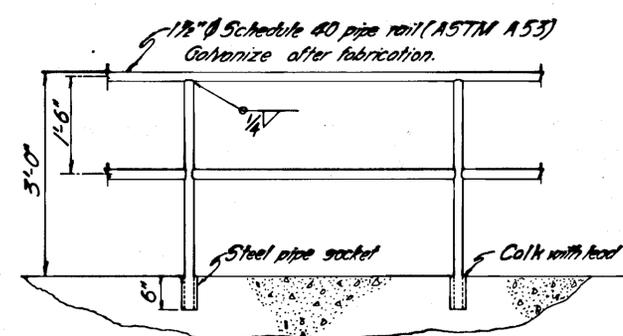
SECTION A-A



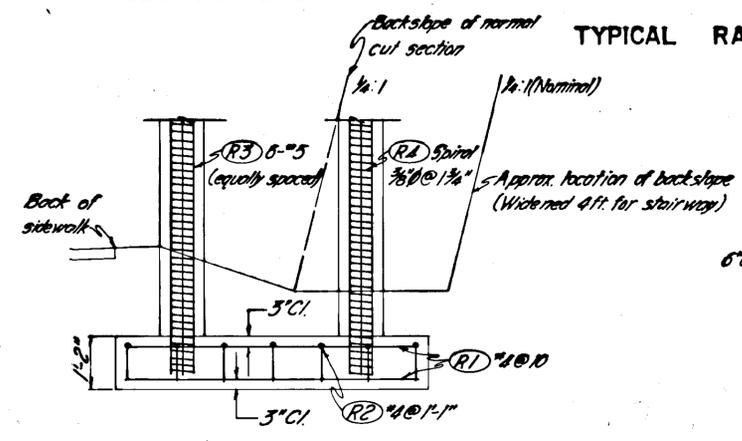
SECTION C-C & E-E



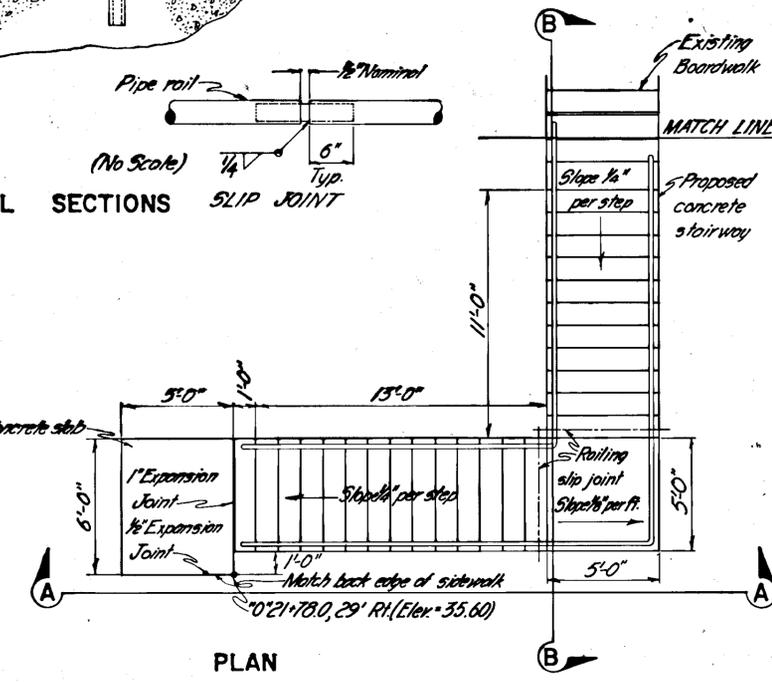
SECTION D-D



TYPICAL RAIL SECTIONS  
SLIP JOINT



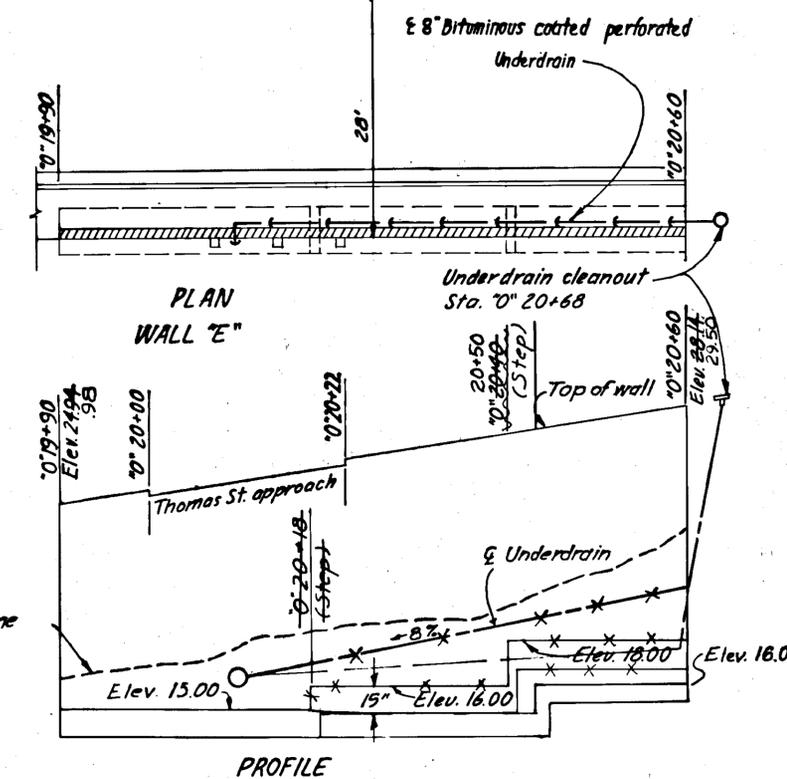
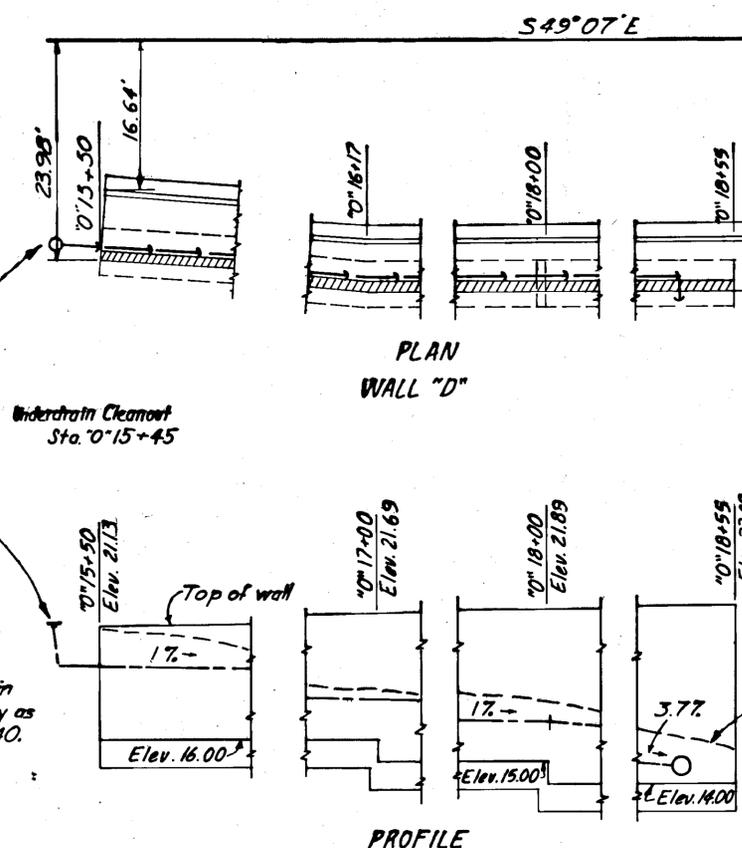
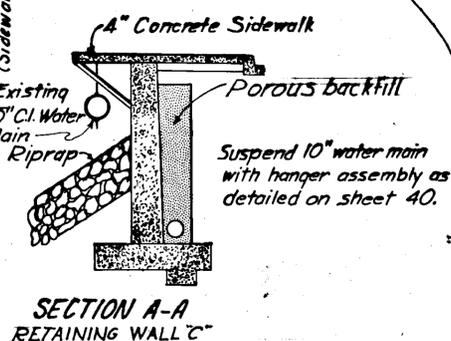
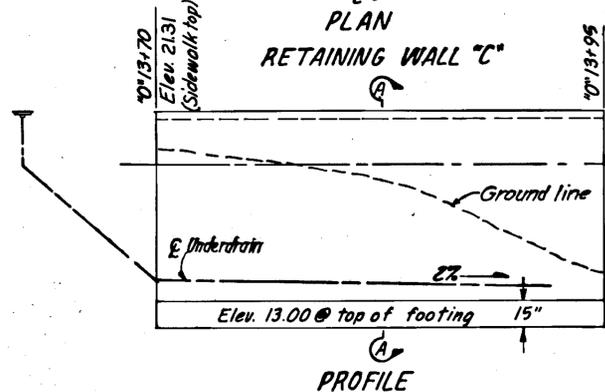
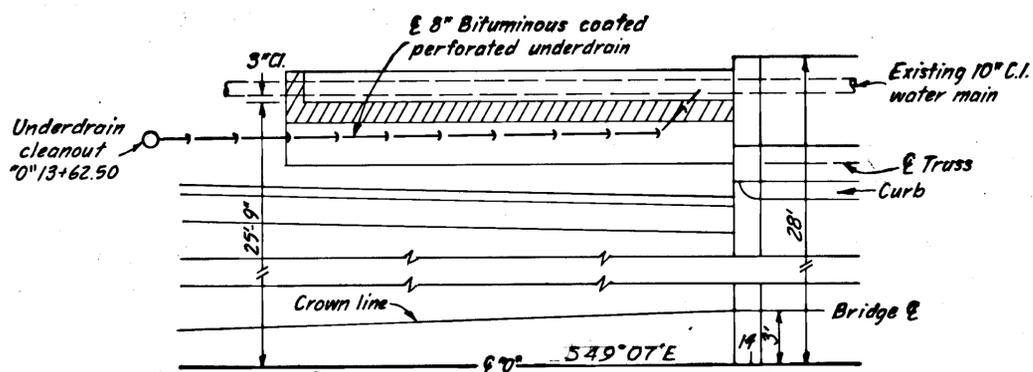
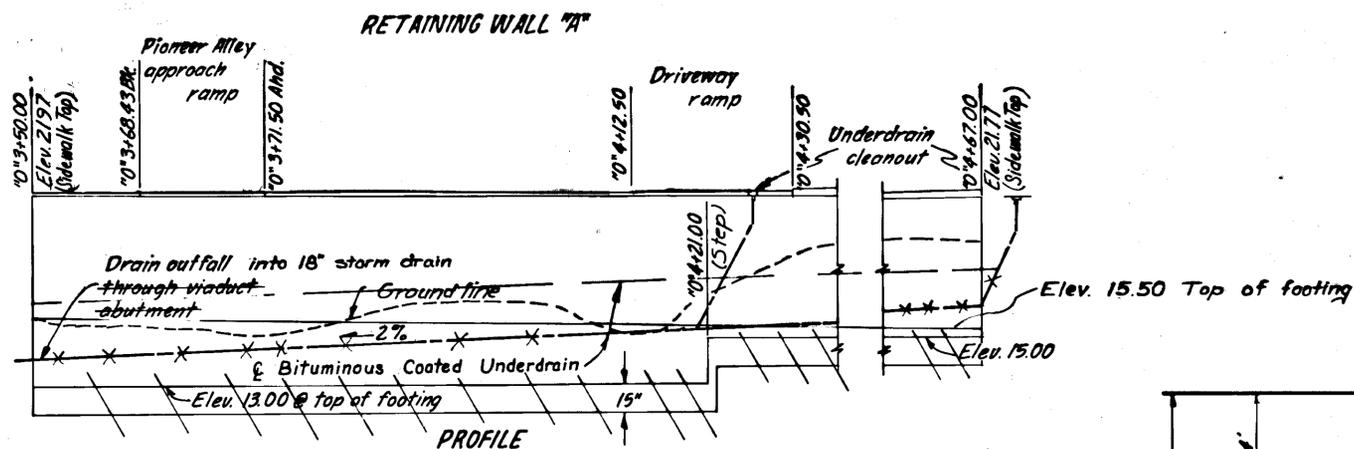
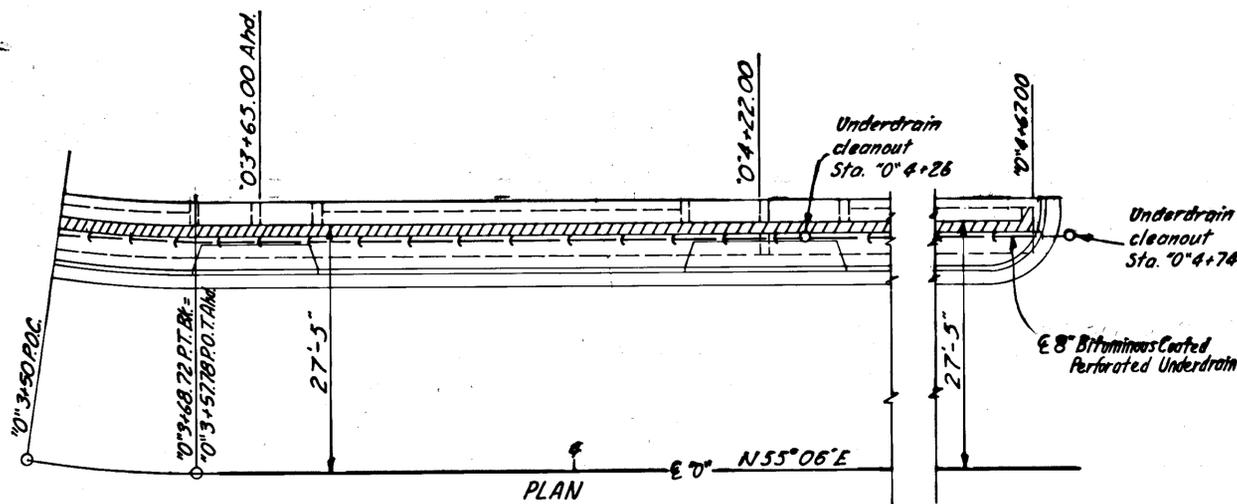
SECTION F-F

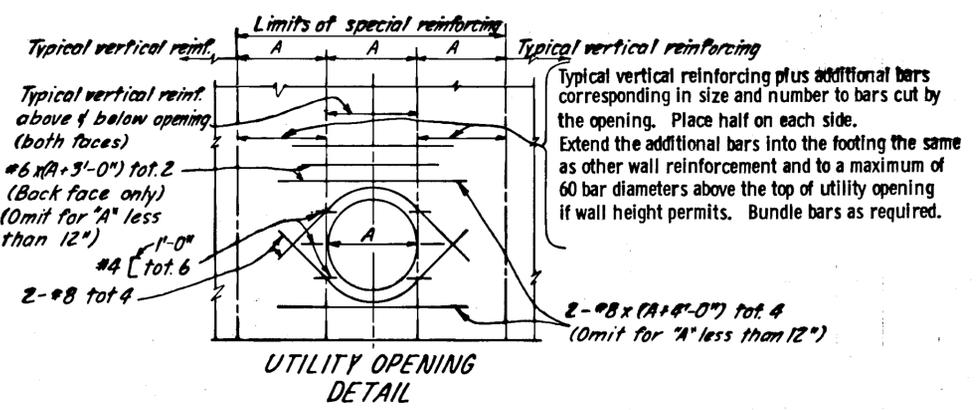
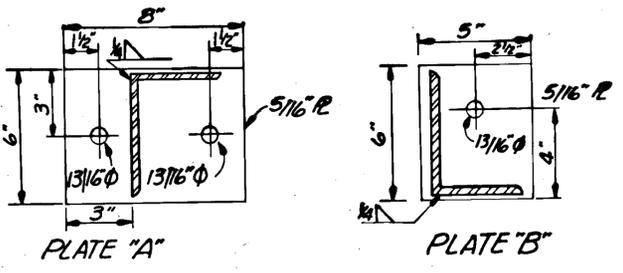


PLAN

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	F-095-2(3)	1971	17	91

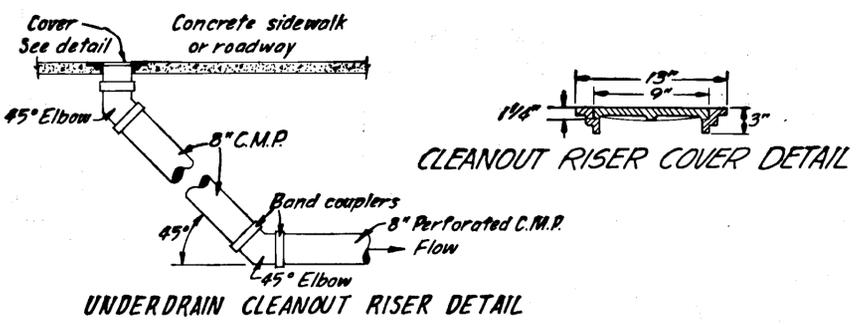
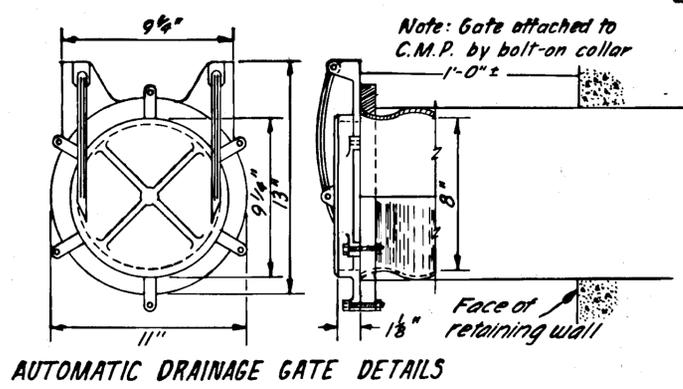
# RETAINING WALL DETAILS





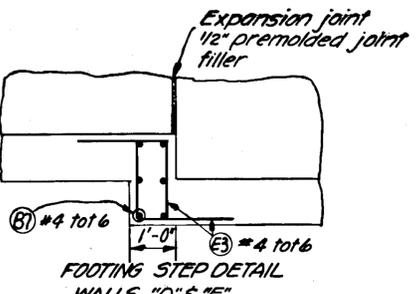
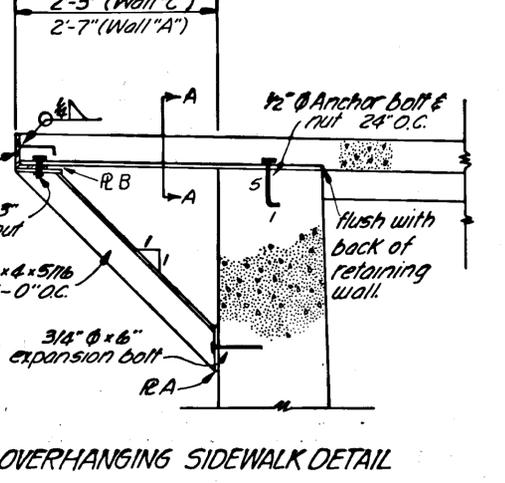
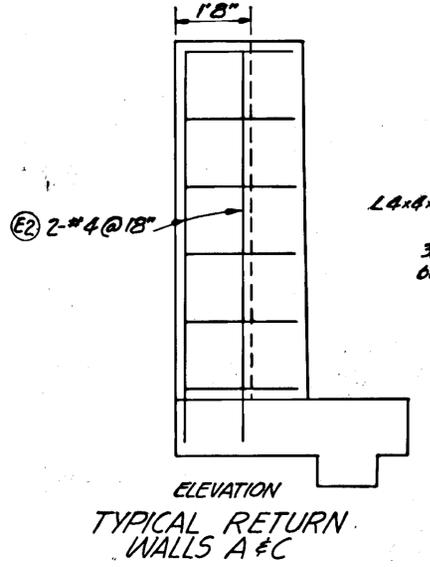
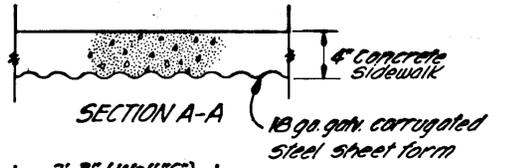
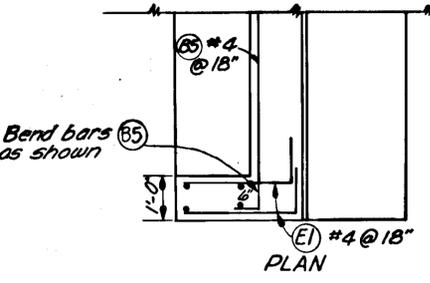
Horizontal reinforcing to be typical except as shown. All reinforcement to clear wall opening 2" minimum. Expansion joints shall not be located within the limits of special reinforcing. Maximum size of opening "A" shall be 48".

All hardware, steel sheet forms, and fasteners used on retaining walls and associated structures shall be galvanized.



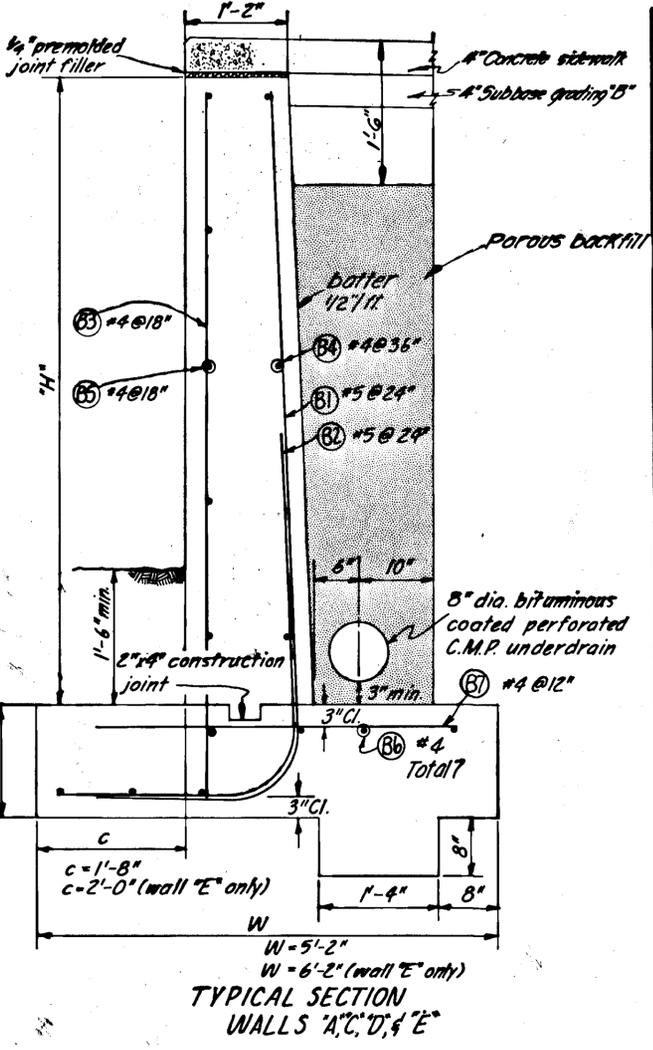
CLEANOUT RISER COVER DETAIL

- RETAINING WALL DETAILS**
- GENERAL NOTES**
- Expansion joints shall have a maximum spacing of 90 feet.
  - Contraction joints shall have a maximum spacing of 30 feet.
  - All exposed corners shall have a 3/4" chamfer.
  - The footing step detail shall be used wherever there is a change in footing elevation.
  - All underdrain outfalls below elevation 18.00 shall be provided with automatic drainage gates.
  - Cleanout risers and automatic drainage gates shall be incidental to Item 605(3), 8" bituminous coated perforated C.M.P. for underdrains.
  - Design Data:  $f_c = 1200$  psi  
 $f'_c = 3000$  psi  
 $f_s = 20$  ksi  
 $n = 10$   
 density of earth = 120 pcf
  - All reinforcing steel in retaining wall footings and stems shall have 3" minimum cover, unless otherwise indicated.



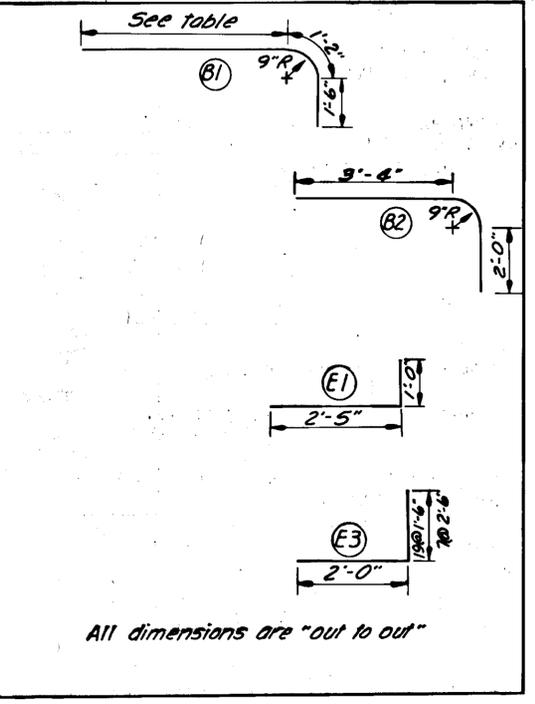
**WALL OFFSET VALUES**

Offset "W" as follows:	H	W
Stem as constructed	4'	1/4"
8'	3/8"	
10'	1/2"	
12'	5/8"	
	12'	3/4"



**REINFORCING STEEL**

Mark	Total Quantity	Size	NUMBER/LENGTH				TYPE
			Wall "A"	Wall "C"	Wall "D"	Wall "E"	
B1	267	5	24 @ 9'-0" 40 @ 11'-0"	13 @ 10'-7"	76 @ 7'-11" 29 @ 10'-8"	36 @ 12'-2"	Bent
B2	265	5	63 @ 6'-6"	13 @ 6'-6"	153 @ 6'-6"	36 @ 6'-6"	Bent
B3	354	4	31 @ 7'-1" 52 @ 9'-1"	18 @ 8'-8"	101 @ 6'-0" 67 @ 7'-6" 37 @ 8'-9"	48 @ 10'-3"	
B4	33	4	3 @ 45'-9" 4 @ 77'-3"	4 @ 24'-6"	4 @ 54'-9" 3 @ 100'-0" 3 @ 149'-9"	4 @ 19'-6" 4 @ 21'-6" 4 @ 27'-6"	
B5	53	4	5 @ 45'-9" 6 @ 77'-3"	6 @ 24'-6"	6 @ 54'-9" 5 @ 100'-0" 4 @ 149'-9"	7 @ 19'-6" 7 @ 21'-6" 7 @ 27'-6"	
B6	63	4	7 @ 45'-9" 7 @ 77'-3"	7 @ 24'-6"	7 @ 54'-9" 7 @ 100'-0" 4 @ 149'-9"	7 @ 19'-6" 7 @ 21'-6" 7 @ 27'-6"	
B7	510	4	92 @ 4'-8"	25 @ 4'-8"	314 @ 4'-8"	79 @ 5'-8"	
E1	22	4	10 @ 3'-5"	12 @ 3'-5"			Bent
E2	8	4	4 @ 7'-1"	4 @ 8'-8"			
E3	26	4			12 @ 3'-6" 7 @ 4'-6" 7 @ 3'-6"		Bent



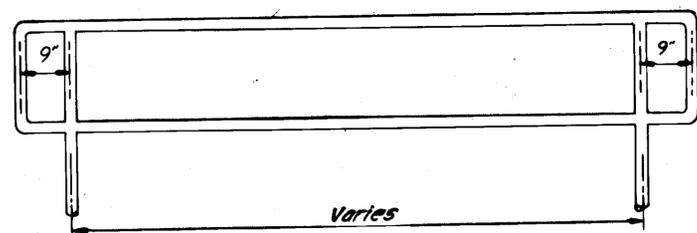
**RETAINING WALL QUANTITIES**

WALL	LOCATION		LENGTH*	CONCRETE (C.Y.)	REINFORCING STEEL (LB)	PIPE UNDERDRAIN (L.F.)	POROUS BACKFILL (CY)
	STATION	STATION					
A	0+3+50	0+4+67	Lt. 123.80	19,359.89	4179	128.12	42.33
C	0+13+70	0+13+95	Lt. 25.00	17.11	743	26	8
D	0+15+50	0+18+55	Rt. 305.12	17,985	7750	308.298	74.86
E	0+19+90	0+20+60	Rt. 70.00	62.63	2408	54.50	31.32

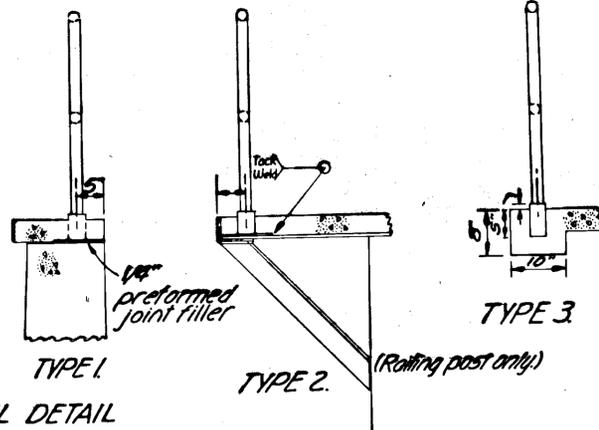
\* Measured along face of wall

Quantities include retaining walls, plus approaches and special curb cuts but not 4" and 6" sidewalk.

MISCELLANEOUS DETAILS

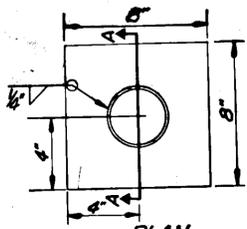


PROFILE

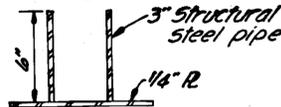


TYPICAL HANDRAIL DETAIL

SECTIONS



PLAN

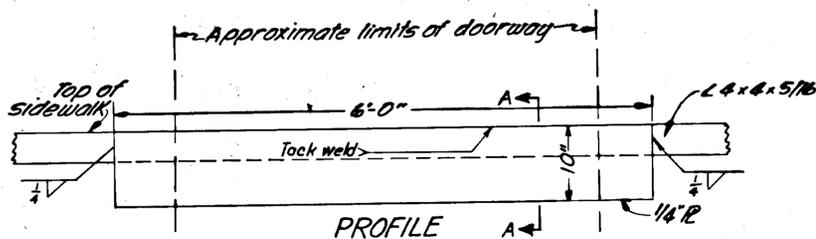


SECTION A-A

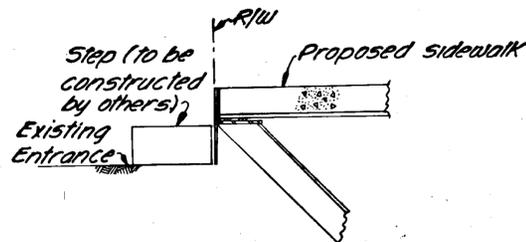
Notes:

1. Rails and posts shall be 2" standard steel pipe at 3.65 lb./ft.
2. Miter, butt weld, and grind smooth all rail to post connections.
3. All handrail and sockets shall be shop galvanized after fabrication.
4. All posts set in sockets shall be caulked with lead.
5. Where types 1 and 2 embedment details are used for installation of sign posts, use stationing and offsets from "O" & as shown on signing plans.

HANDRAIL/SIGN POST SOCKET DETAIL



PROFILE

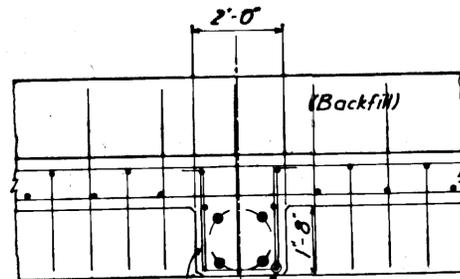


SECTION A-A

UNION ROOMS ENTRANCE DETAIL

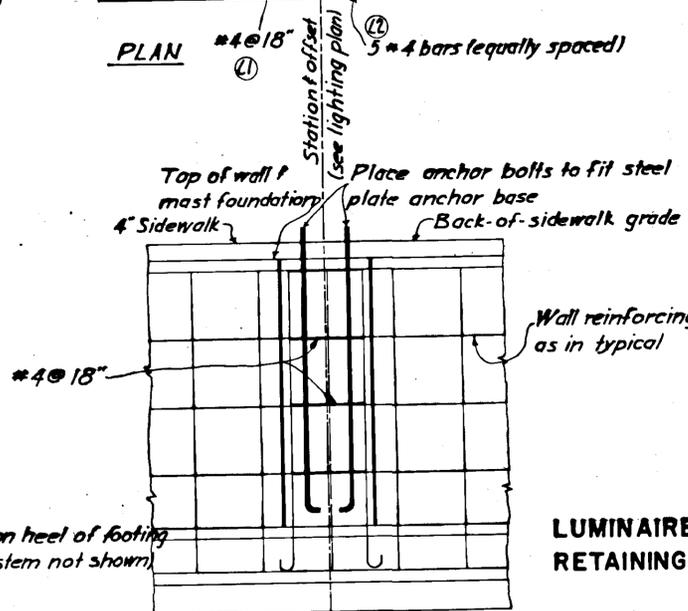
FILLER PLATE (2 Required)

Note: center plates on each doorway to Union Rooms Hotel, located approximately at Sta. "0" 3+80 and "0" 3+93 (30' Lt.). Fasten to sidewalk angle as shown. Steps from the sidewalk down to each entrance will be installed by others.



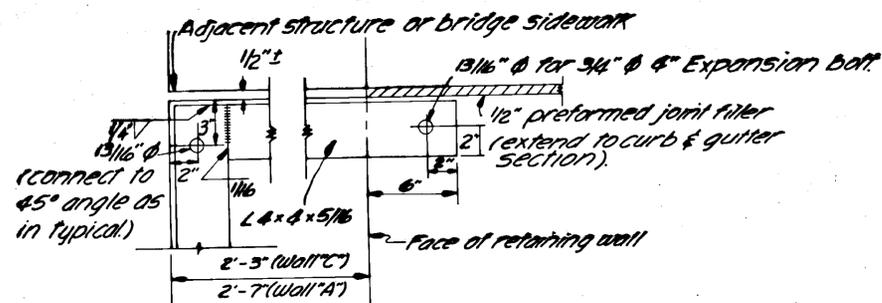
PLAN #4 @ 18" 5 #4 bars (equally spaced)

Wall "D" or "E" (continue reinforcing in body of wall and footing as in typical)

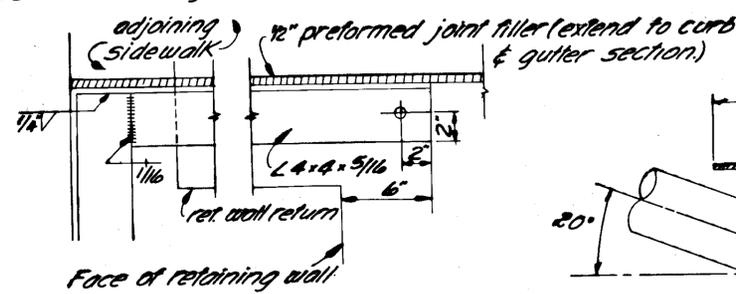


FRONT ELEVATION

LUMINAIRE MAST FOUNDATION RETAINING WALLS "D" and "E"

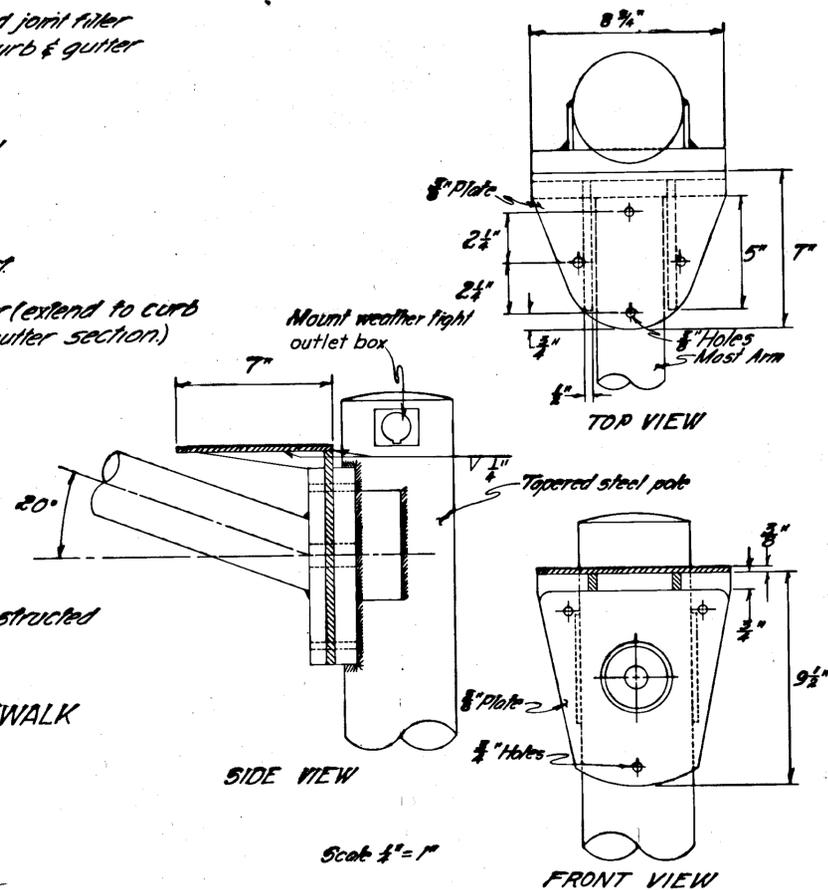


PLAN Case I: where abutting sidewalk on bridge or viaduct



PLAN Case II: where abutting sidewalk constructed on subbase material

END DETAILS FOR OVERHANGING SIDEWALK

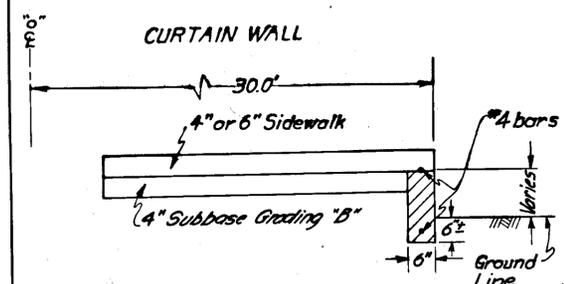


FIRE SIGN BRACKET (3 Required)

Brackets shall be installed on luminaire poles of Sta. "0" 3+01.95 (Rt.), "0" 10+03 (Rt) and "0" 26+29 (Rt). On these luminaire poles, mount a weather tight outlet box above the mast arm attachment. Wire with #12 cable and stub out other end in fire alarm box. Connection in fire alarm box will be made by others.

REINFORCING STEEL				
MARK	NO.	SIZE	LENGTH	TYPE
L1	32	4	7'-8"	Bent
L2	25	4	Varies	Bent

ACI Std. Hook  
 5 @ 11'-0"  
 5 @ 9'-0"  
 15 @ 7'-0"  
 (cut to size in field, if necessary)  
 All dimensions are "out to out."



Curtain wall shall be built Sta. "0" 23+90 to "0" 26+05 Lt. where staked by the Engineer. Installation of curtain will only be provided where grade of existing loading area is lower than that of new sidewalk.

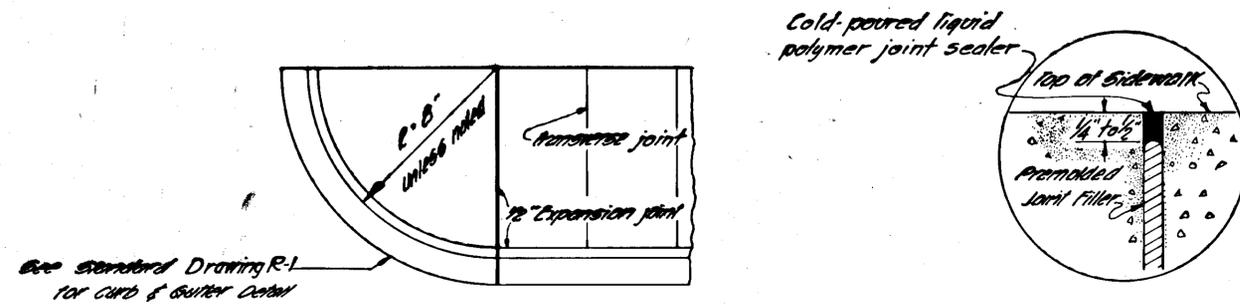
Estimate of Quantities

Class "A" Concrete	3 c.y.
Reinforcing Steel	135 lb.

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	F-095-2(3)	1971	20	91

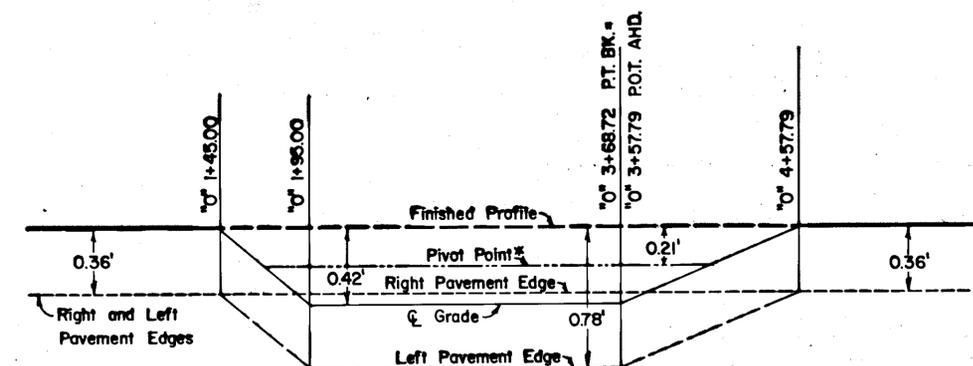
MISCELLANEOUS DETAILS

TYPICAL EXPANSION & CONTRACTION JOINT DETAILS



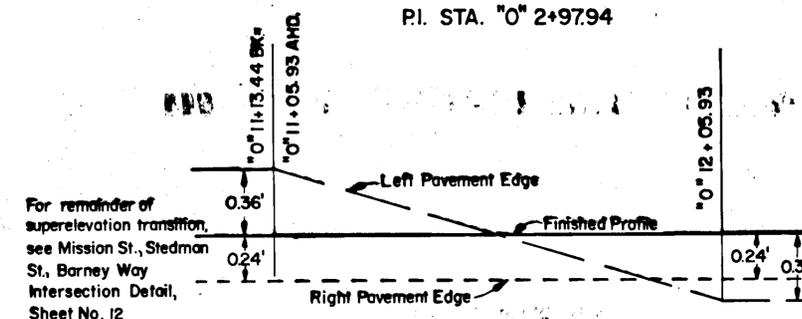
See Standard Drawing R-1 for curb & gutter detail

CURB & SIDEWALK



\*Superelevation pivot point is 12.0' right of "0" G.

FRONT-MILL ST. CURVE  
P.I. STA. "0" 2+97.94

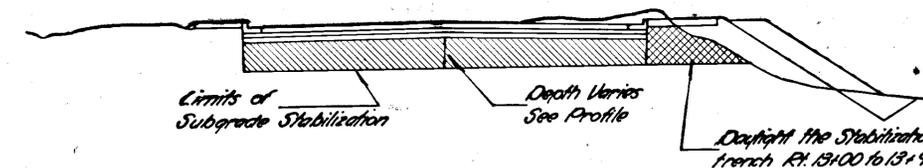


MILL- STEDMAN ST. CURVE  
P.I. STA. "0" 10+74.25

NO SUPERELEVATION

STEDMAN ST. CURVE  
P.I. STA. "0" 23+10.99

SUPERELEVATION DETAIL



TYPICAL SECTION  
SUBGRADE STABILIZATION  
STA. 5+00 TO STA. 10+00  
STA. 13+00 TO STA. 13+95

- Subgrade stabilization procedure:
1. Subexcavate to the depth shown on the profile, stockpiling usable material for later use.
  2. Scarify the base of the excavation to a depth of 8" and compact to at least 90% of its maximum density.
  3. The stockpile materials which do not contain large concentrations of organics, wood, or other debris may then be replaced in the open excavation in lifts not to exceed 8" in uncompacted thickness up to the bottom of the select material. Compaction of these lifts shall be to 95% of maximum density.

GENERAL NOTES

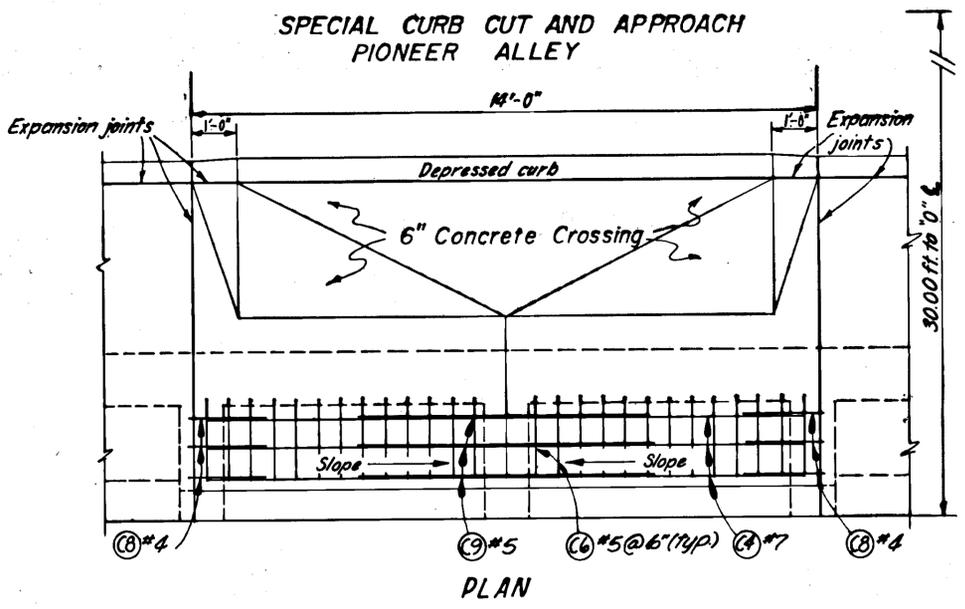
1. Premolded expansion joint filler and liquid polymer joint sealer (see specifications) shall be considered incidental to pay items 608(1) and 608(4), concrete sidewalks, and no separate payment shall be made therefor.
2. In curb and gutter, 1/2" transverse expansion joints shall be placed at 30 ft. centers and at the end of curb returns and on each side of all curb cuts.
3. Expansion joints in sidewalks shall be opposite expansion joints in adjoining curb and gutter. Premolded expansion joint material 1/2" thick shall be placed longitudinally where sidewalk abuts buildings or other structures. Transverse cuts shall be at uniform 6' intervals except where shorter sections are necessary for closures.

### SPECIAL CURB CUTS

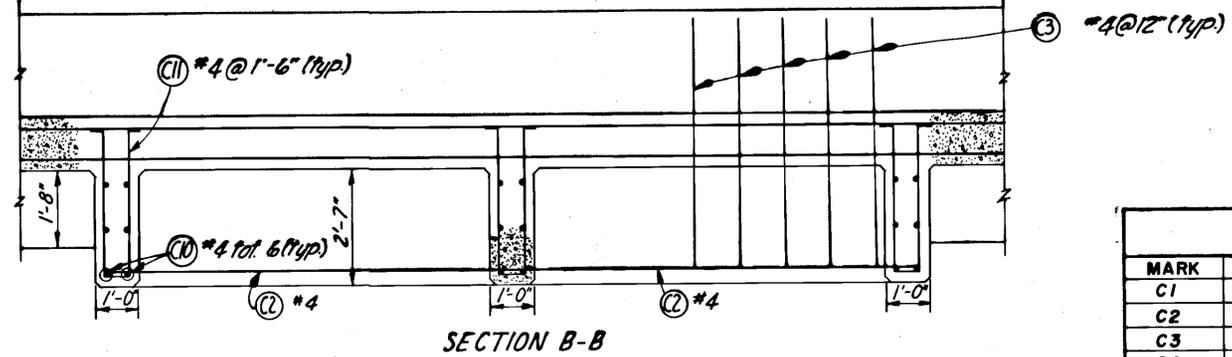
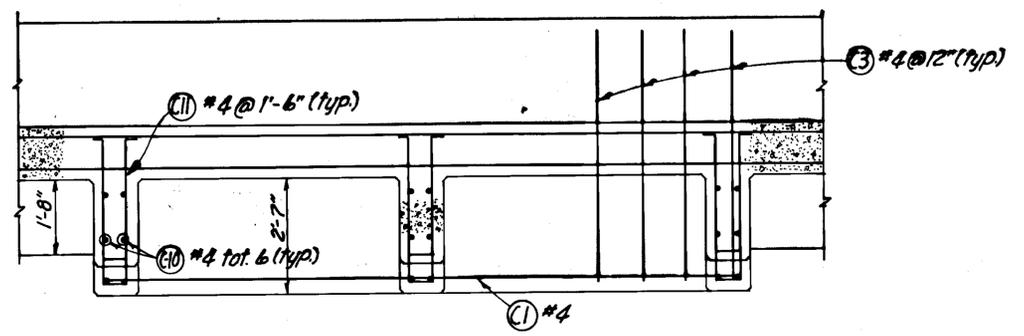
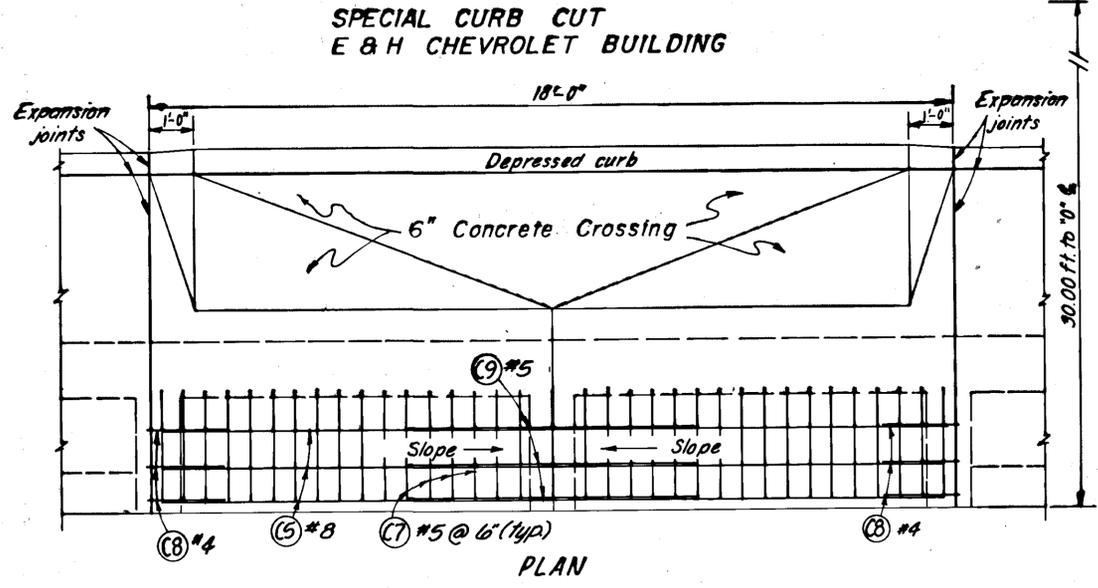
#### GENERAL NOTES:

1. Finish top of slab, gutter, and curb to conform with Standard Drawing R-1
2. Continue reinforcing steel in body of retaining wall "A" in the typical section, except
3. See sheet no. 22 for detail of connection to Pioneer Alley plank street.

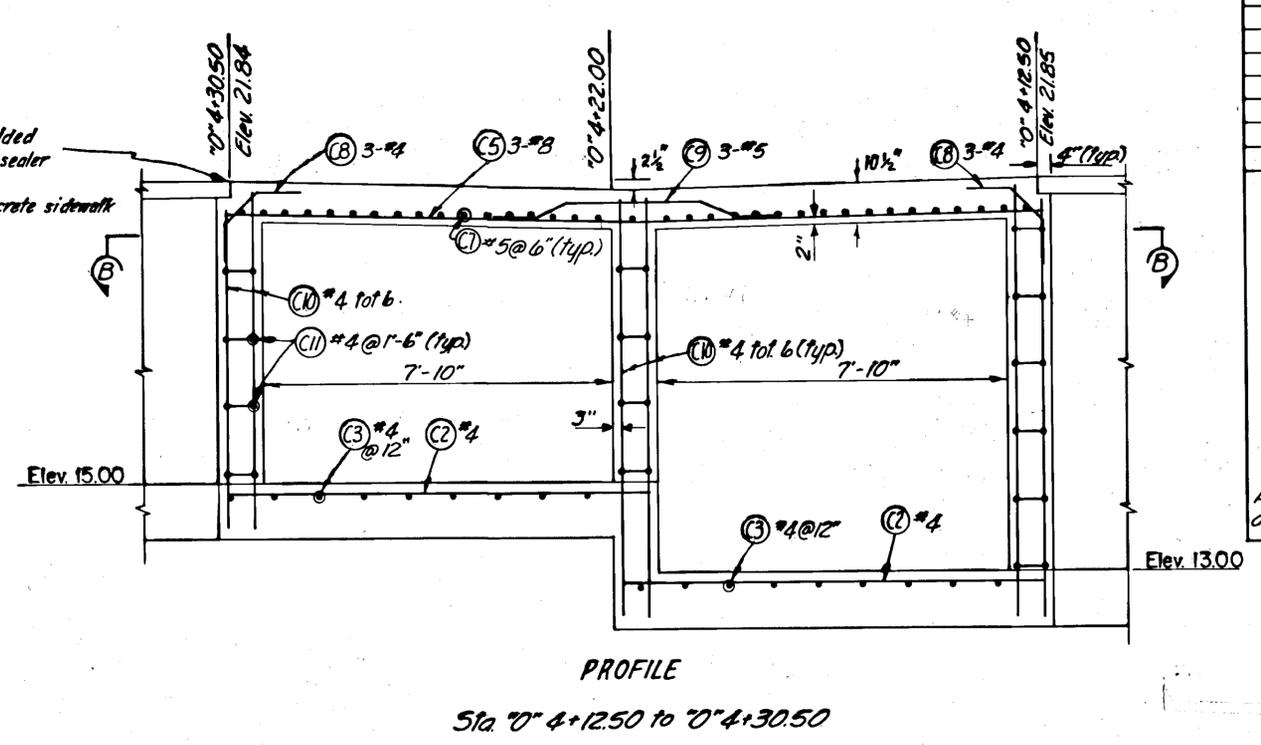
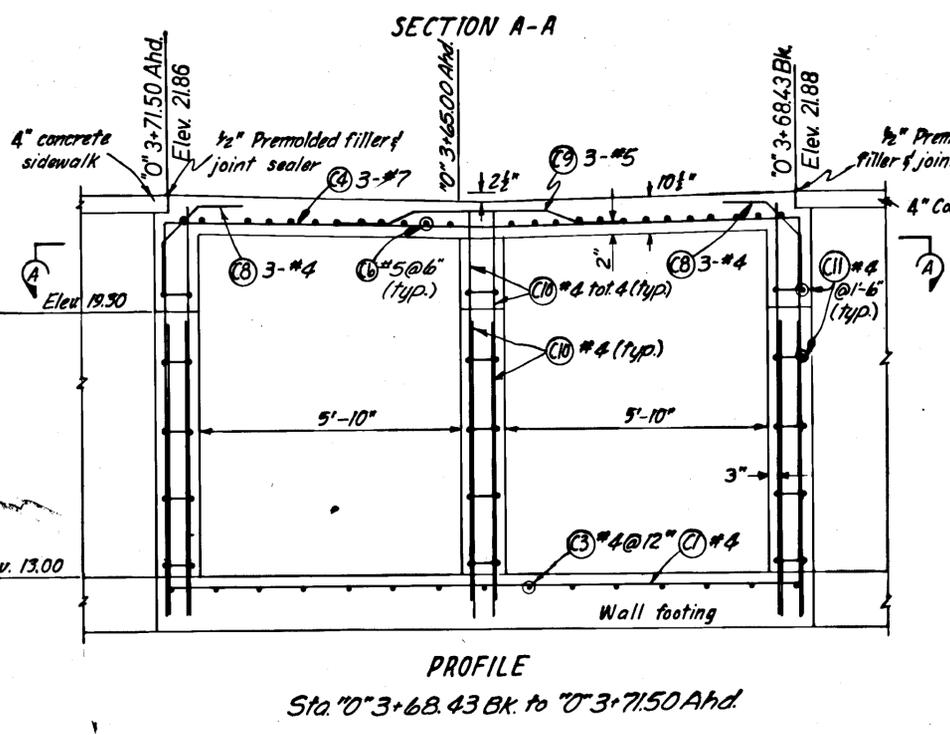
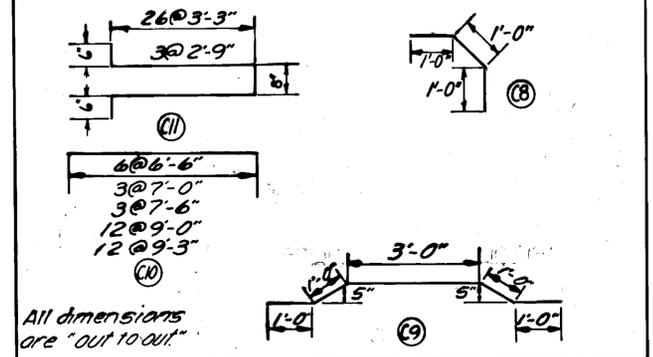
#### SPECIAL CURB CUT AND APPROACH PIONEER ALLEY



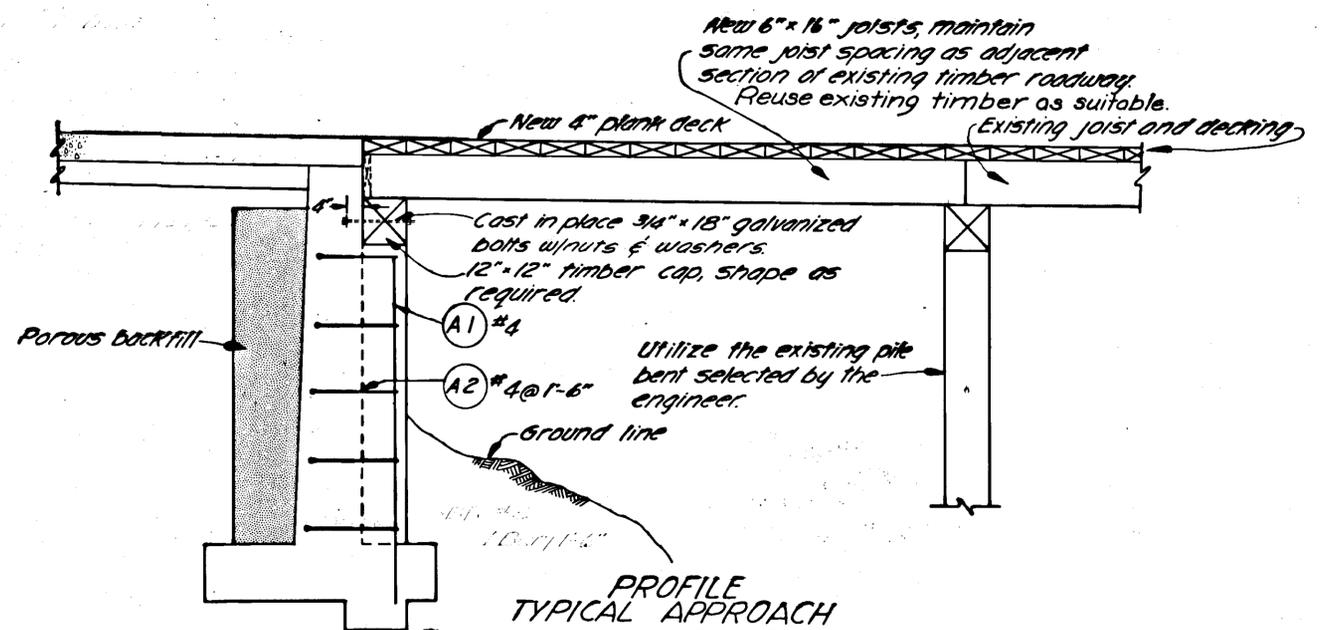
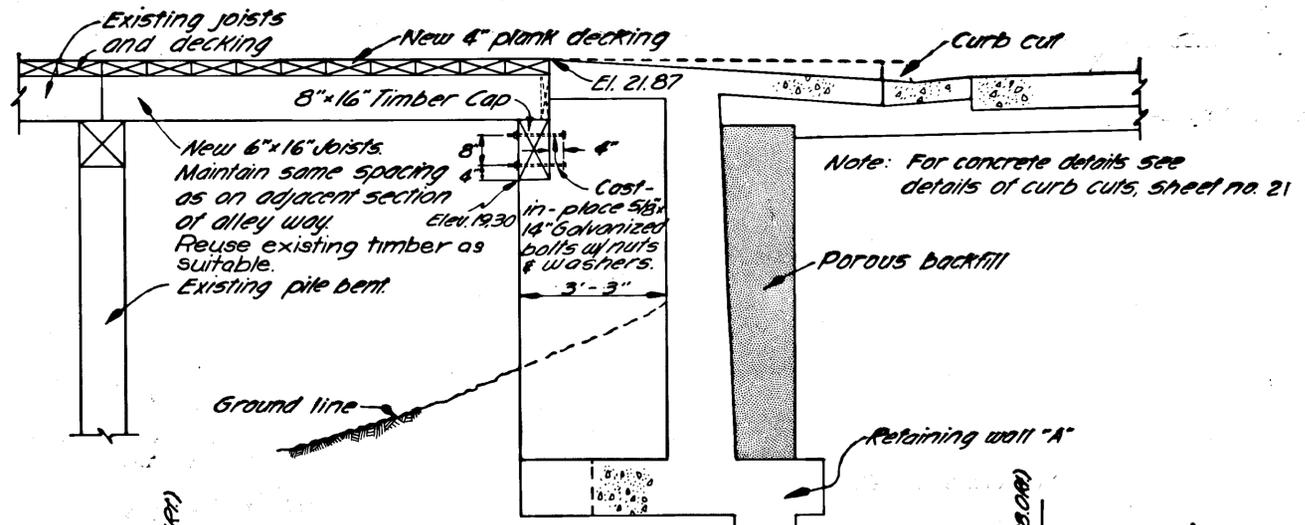
#### SPECIAL CURB CUT E & H CHEVROLET BUILDING



REINFORCING STEEL				
MARK	NO.	SIZE	LENGTH	TYPE
C1	1	4	14'-4"	
C2	2	4	9'-6"	
C3	33	4	5'-6"	
C4	3	7	14'-0"	
C5	3	8	18'-0"	
C6	26	5	1'-9"	
C7	34	5	2'-6"	
C8	12	4	3'-0"	Bent
C9	6	5	7'-0"	Bent
C10	36	4	Varies	
C11	29	4	Varies	Bent

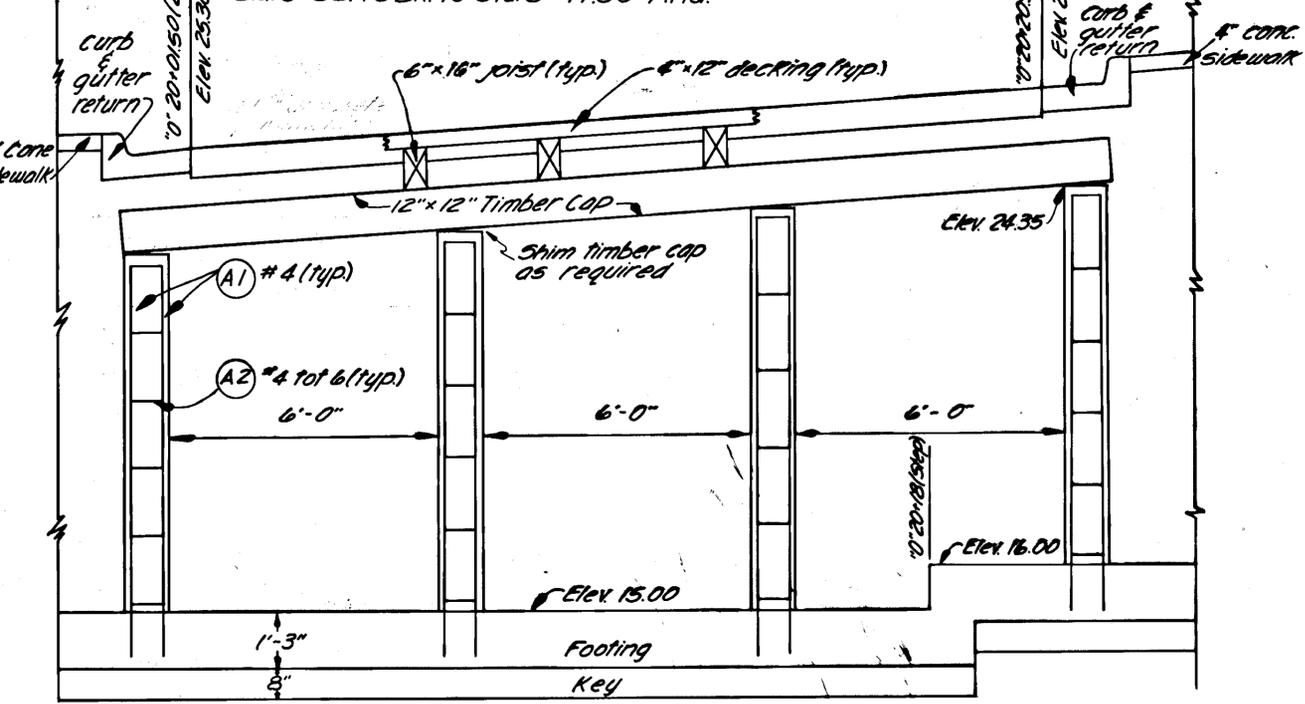


**SPECIAL APPROACHES**

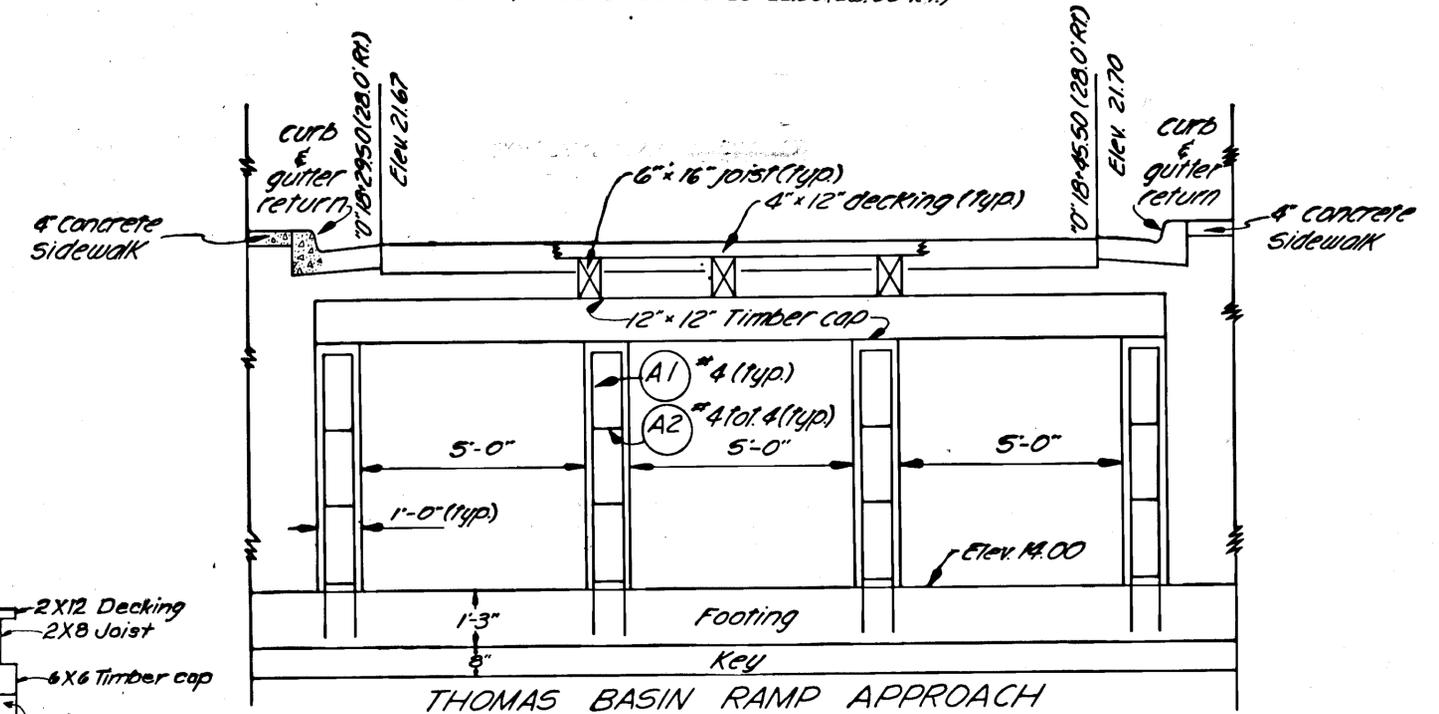


**PIONEER ALLEY APPROACH**  
Sta. 3+68.43 BK to Sta. 3+71.50 Ahd.

**PROFILE TYPICAL APPROACH**  
Thomas Basin Ramp, "0"18+28.00 to "0"18+47.00 (28.00' RT.)  
Thomas St., "0"20+00.00 to "0"20+22.00 (28.00' RT.)

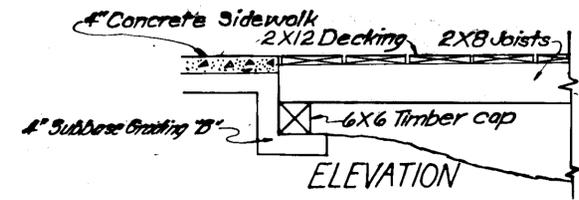
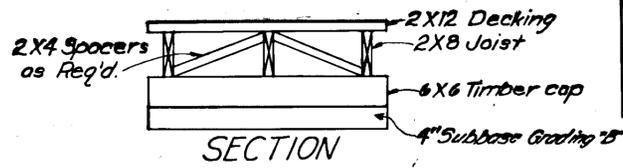


**THOMAS STREET APPROACH**



**THOMAS BASIN RAMP APPROACH**

REINFORCING STEEL				
MARK	NO.	SIZE	LENGTH	TYPE
A1	16	4	Varies	
A2	40	4	5'-4"	BENT



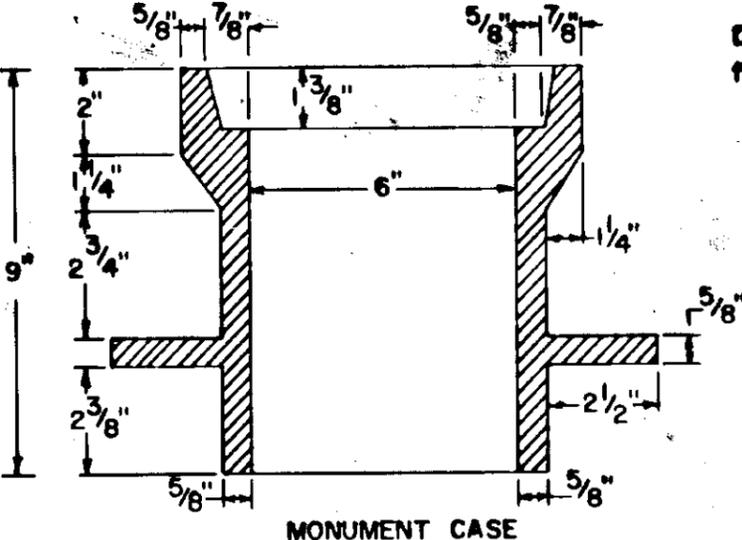
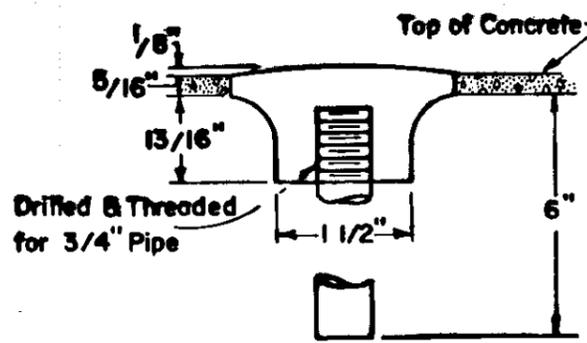
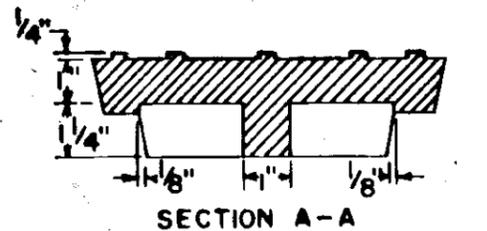
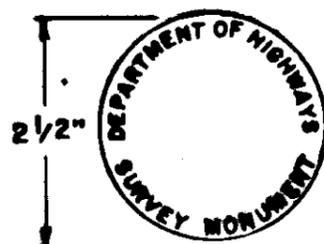
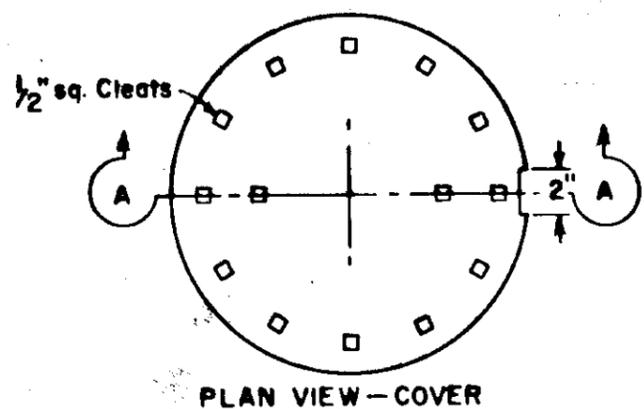
**CONCRETE SIDEWALK-BOARDWALK APPROACH**

1. Use existing timber, as suitable.
2. Dimension Boardwalk to match existing

Note: All timber used on approaches shall be treated.

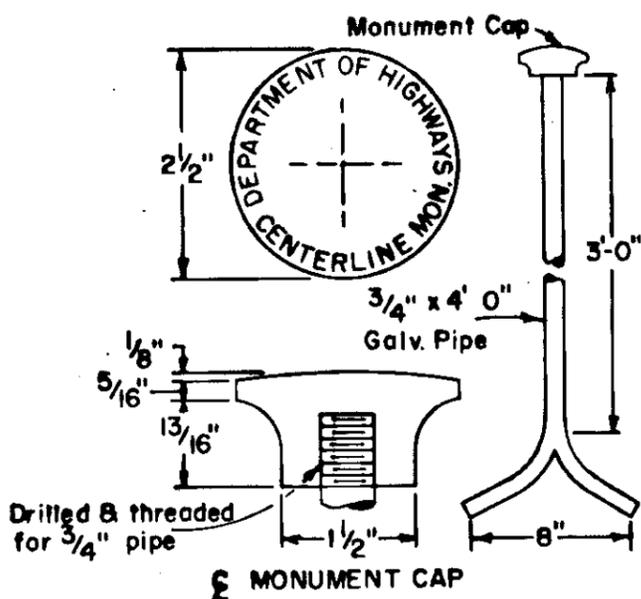
# SURVEY MONUMENT & MONUMENT CASE

STATE	PROJECT DESIGNATION/YR.	SHEET NO.	TOTAL SHEETS
ALASKA	F-095-2(3)/1971	23	91



**NOTE:**  
Where monument cases are to be placed in a bituminous paved or surfaced road, the top of the case shall be the same elevation as the top of the roadway.

Each monument cap shall be installed at each highway & control point where indicated. All existing monuments indicated shall be replaced with brass caps as in the survey monument detail.



SUMMARY OF BRASS CAP MONUMENTS & MONUMENT CASES									
STATION	MON	MON CASE	OFFSET	REMARKS	STATION	MON	MON CASE	OFFSET	REMARKS
"O" 1+15.46	1		27.05'LT.	Existing	"O" 16+39.97	1		25.08'LT.	Existing
"O" 1+66.23	1		27.06'LT.	Existing	"O" 16+59.07	1		25.09'LT.	Existing
"O" 1+73.94	1	+	Q	P.C.	"O" 16+78.15	1		25.11'LT.	Existing
"O" 1+95.97	1		25.52'LT.	Existing	"O" 17+30.99	1		25.12'LT.	Existing
"O" 2+60.53	1		11.99'RT.	Existing	"O" 17+56.26	1		25.13'LT.	Existing
"O" 3+68.72B K.	1	1	Q		"O" 17+78.17	1		25.15'LT.	Existing
"O" 3+57.79AHD	1	1	Q		"O" 18+01.94	1		25.20'LT.	Existing
"O" 4+89.95	1	1	Q	Intersection	"O" 18+28.26	1		25.18'LT.	Existing
"O" 5+11.99	1	1	18.35'LT.	Existing	"O" 18+39.55	1		25.21'LT.	Existing
"O" 8+29.20	1	1	Q	Intersection	"O" 18+67.45	1		25.19'LT.	Existing
"M" 10+26.61	1	1	Q	Intersection	"O" 18+93.45	1		25.24'LT.	Existing
"M" 10+58.27	1		22.12'RT.	Existing	"O" 19+25.97	1		25.27'LT.	Existing
"M" 10+77.81	1		11.93'LT.	Existing	"O" 20+11.70	1		25.14'LT.	Existing
"M" 11+17.77	1		11.92'LT.	Existing	"O" 22+04.76	1	1	Q	P.C.
"M" 11+62.34	1		11.91'LT.	Existing	"O" 22+88.43	1	1	5.65'LT.	Existing
"M" 11+97.70	1		11.93'LT.	Existing	"O" 22+88.48	1		5.63'LT.	Existing
"M" 12+00.00	1	1	Q	P.C.	"O" 22+88.67	1		5.67'LT.	Existing
"M" 12+35.90	1		0.78'RT.	Existing	"O" 23+86.22	1		1.77'RT.	Existing
"M" 13+12.06	1	1	Q	P.T.	"O" 23+86.35	1		7.83'LT.	Existing
"O" 10+74.25	1	1		P.L.	"O" 23+87.38	1		8.62'LT.	Existing
"O" 10+70.56	1		25.37'LT.	Existing	"O" 24+16.85	1	1	Q	P.T.
"O" 10+81.50	1		28.72'LT.	Existing	"O" 26+20.21	1	1	Q	P.O.T.
"O" 10+86.63	some	1	14.51'LT.	Existing	"O" 16+88.65	1		25.11'LT.	Existing
"O" 10+86.64	cap	+	14.39'LT.	Existing	"O" 17+15.89	1		25.11'LT.	Existing
"O" 10+87.28	1	1	13.48'LT.	Existing	"O" 19+56.07	1		25.26'LT.	Existing
"O" 10+91.54	1		29.51'LT.	Existing	"O" 23+10.99	1	1	-	Existing P.
"O" 11+12.76	1		24.86'LT.	Existing					
"O" 11+59.22	1		24.48'LT.	Existing					
"O" 11+75.99	1		24.76'LT.	Existing					
"O" 12+37.04	1		25.02'LT.	Existing					
"O" 13+17.47	1		25.04'LT.	Existing					
"O" 15+22.79	1		25.05'LT.	Existing					
"O" 15+85.92	1		25.05'LT.	Existing					

# SUMMARY OF STANDARD SIGNS

TYPE	SIZE	DESCRIPTION	SHEET NUMBER										TOTAL		
			25	26	27	28	29	30							
R1-1	30x30	Stop		3				1	1						5
R1-2	36x36x36	Yield			1										1
R3-2	24x30	No Left Turn		1	1										2
R4-7	24x30	Keep Right		1											1
R6-2L	18x24	One Way ←			1										1
R6-2R	18x24	One Way →		1											1
R7-1R	12x18	No Parking Any Time ←	1	3	1	1									6
R7-1R	12x18	No Parking Any Time →		1		1									2
R7-1LR	12x18	No Parking Any Time ↔	2		3										5
R7-6L	12x18	No Parking Loading Zone ←	1												1
R7-7L	12x18	No Parking Bus Stop ←	1		1										2
R7-7R	12x18	No Parking Bus Stop →	1	2	1		2								6
W1-1R	30x30	Turn Right		1											1
W5-1	30x30	Road Narrows							1						1
Type III-R	12x36	Object Marker				2									2
M1-2	24x24	ALASKA 7			2				1						3
M3-2L	21x15	Advance Turn Arrow			1										1
D-3	30x8	Barney Way (Detailed)			1										1
D-3	30x8	Stedman St Deermount Street (Detailed)							1						1
D-3	30x8	Inman Street (Detailed)						1							1
D-3	30x8	Main Street (Detailed)		1											1
D-3	30x8	Mill Street (Detailed)		2	1										3
D-3	30x8	Mission Street (Detailed)		1											1
D-3	30x8	Mission Way (Detailed)		2											2
D-3	30x8	Stedman Street (Detailed)			1		2	1							4
D-3	30x8	Thomas Street					1								1

## GENERAL ILLUMINATION NOTES

1. Luminaires shall be USASI/IES Type III, medium distribution, semi-cutoff, conforming to the following:

Location	Mounting Height Above Roadway	LAMP		
		USASI Type	Wattage	Initial Lumens
"0" 13+94	35'	H35-18ND/C	700	41,000
"0" 15+20				
All Others	30'	H33-1GL/C	400	20,500

- All luminaires shall be fitted with individual photoelectric controls.
- All luminaires shall operate at 240 volts.
- Metering and distribution centers shall be installed in underground utilities vaults as shown on the plans. Installation details shall conform to the practice of Ketchikan Public Utilities.
- All interconnecting cable shall be #8 AWG.
- Routings for street lighting cable conduit are approximate only and may be varied to conform to field requirements. Conduit shall be connected to stub-outs furnished at each power vault, as noted on the underground utility plans. All conduit shall be 2" rigid metal.
- Install fire siren mount and electrical outlet on designated luminaire poles. Fire sirens will be installed by others.

### DISTRIBUTION PANEL LOAD SCHEDULE

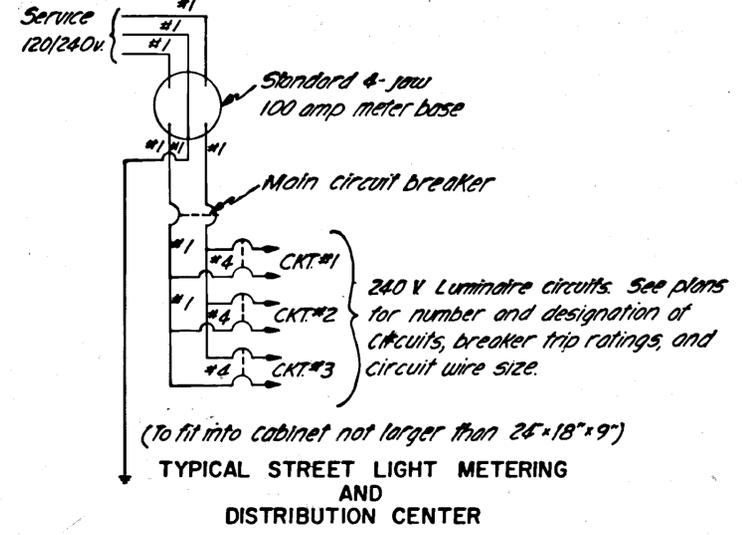
PANEL CIRCUIT	A	B	C	D	E	F	G
TOTAL WATTAGE	3720	2325	2790	2325	2465	4525	4185
FUSE (AMPS)	30	20	25	20	20	40	35
MAIN FUSE (AMPS)	50		70			90	

## GENERAL SIGNING NOTES

- See Standard Drawings T-1, T-2, T-18, T-19, and T-20 for sign placement and other details.
- All signs indicated to be attached to light standards shall be banded with stainless steel straps using flared leg sign brackets, or equal.
- Caution shall be used when driving sign posts to avoid hitting buried lighting cables and other underground utilities.
- For sign details see Alaska Sign Design Specifications.

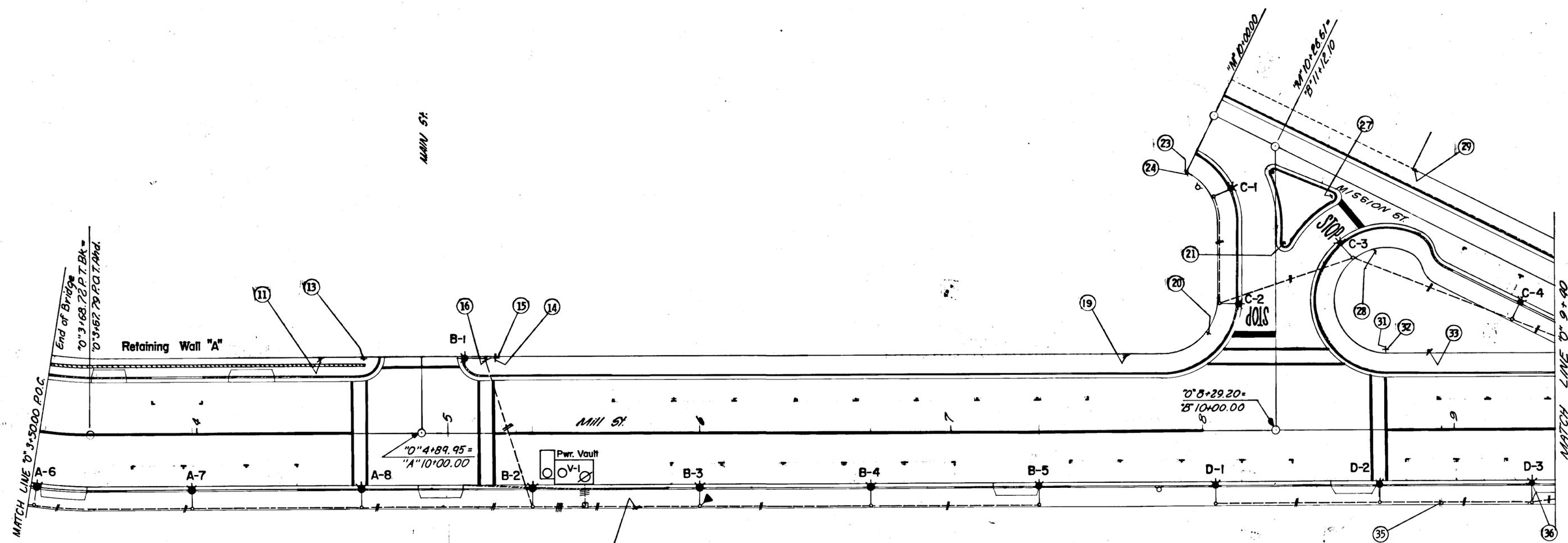
## GENERAL PAVEMENT MARKING NOTES

1. See Standard Drawings T-30 and T-31 for locations, dimensions, and layout stencils of pavement markings.





### ILLUMINATION, SIGNING, & PAVEMENT MARKINGS



**ILLUMINATION SCHEDULE**

STATION	POLE OFFSET		MAST ARM LENGTH	LUMINAIRE TYPE	CIRCUIT
	L	R			
"O" 3+52		29'	8'	III	A
"O" 3+98		29'	8'	III	A
"O" 4+65		29'	8'	III	A
"O" 5+16	29'		8'	III	B
"O" 5+34		29'	8'	III	B
"O" 6+00		29'	8'	III	B
"O" 6+68		29'	8'	III	B
"O" 7+35		29'	8'	III	B
"O" 8+05		29'	8'	III	D
"O" 8+70		29'	8'	III	D
"O" 9+30		29'	8'	III	D
"B" 10+50	23'		8'	III	C
"B" 10+68		31.5'	8'	III	C
"B" 10+92	24.5'		8'	III	C
"B" 11+42		19.5'	8'	III	C

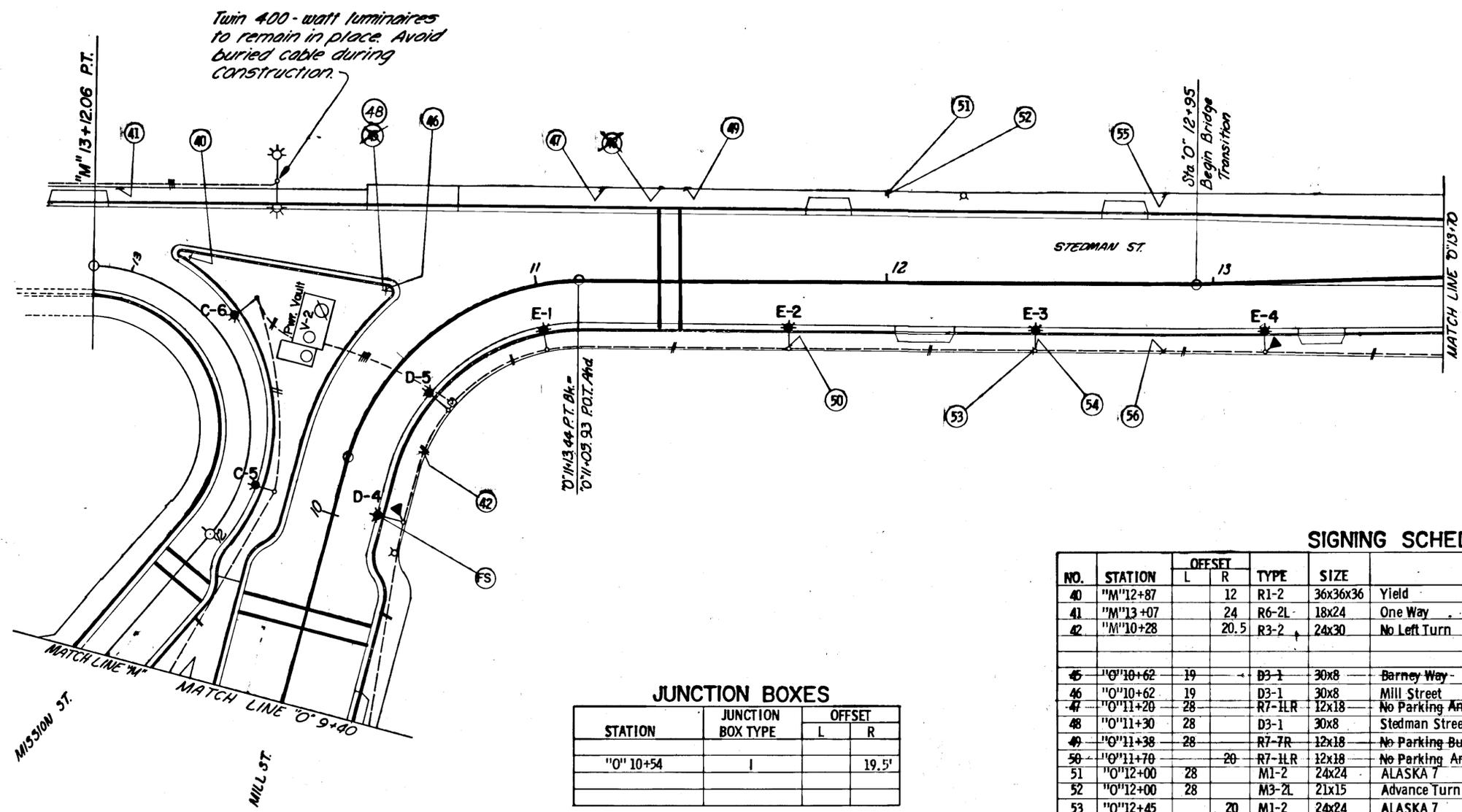
**JUNCTION BOXES**

STATION	JUNCTION BOX TYPE	OFFSET	
		L	R
"O" 5+54	I		29'

**SIGNING SCHEDULE**

NO.	STATION	OFFSET		TYPE	SIZE	LEGEND	REMARKS
		L	R				
11	"O" 4+50	29		R7-1L	12x18	No Parking Any Time	
13	"O" 4+66	29.5		R1-1	30x30	Stop	
14	"O" 5+19	29		D3-1	30x8	Main Street	
15	"O" 5+19	29		D3-1	30x8	Mill Street	Above No. 14
16	"O" 5+16	28		R7-7R	12x18	No Parking Bus Stop	Band to light pole.
17	"O" 5+75	30		R7-7R	12x18	No Parking Bus Stop	
19	"O" 7+70	30		R7-1R	12x18	No Parking Any Time	
20	"B" 10+38	27		R1-1	30x30	Stop	
21	"B" 10+74	4		R4-7	24x30	Keep Right	
23	"M" 10+00	25		D3-1	30x8	Mission Street	
24	"M" 10+00	25		D3-1	30x8	Mission Way	Above No. 23
27	"M" 10+57		8	R3-2	24x30	No Left Turn	
28	"M" 10+82	20		R1-1	30x30	Stop	
29	"M" 10+82	16		R6-2R	18x24	One Way	
31	"O" 8+73	31		D3-1	30x8	Mission Way	
32	"O" 8+73	31		D3-1	30x8	Mill St.	Above No. 31
33	"O" 8+90	31		R7-1L	12x18	No Parking Any Time	
35	"O" 8+95	29		W1-1R	30x30	Turn Right	Band to light pole
36	"O" 9+30	29		R7-1L	12x18	No Parking Any Time	Band to light pole

### ILLUMINATION, SIGNING, & PAVEMENT MARKINGS



**JUNCTION BOXES**

STATION	JUNCTION BOX TYPE	OFFSET	
		L	R
"O" 10+54	I		19.5'

**SIGNING SCHEDULE**

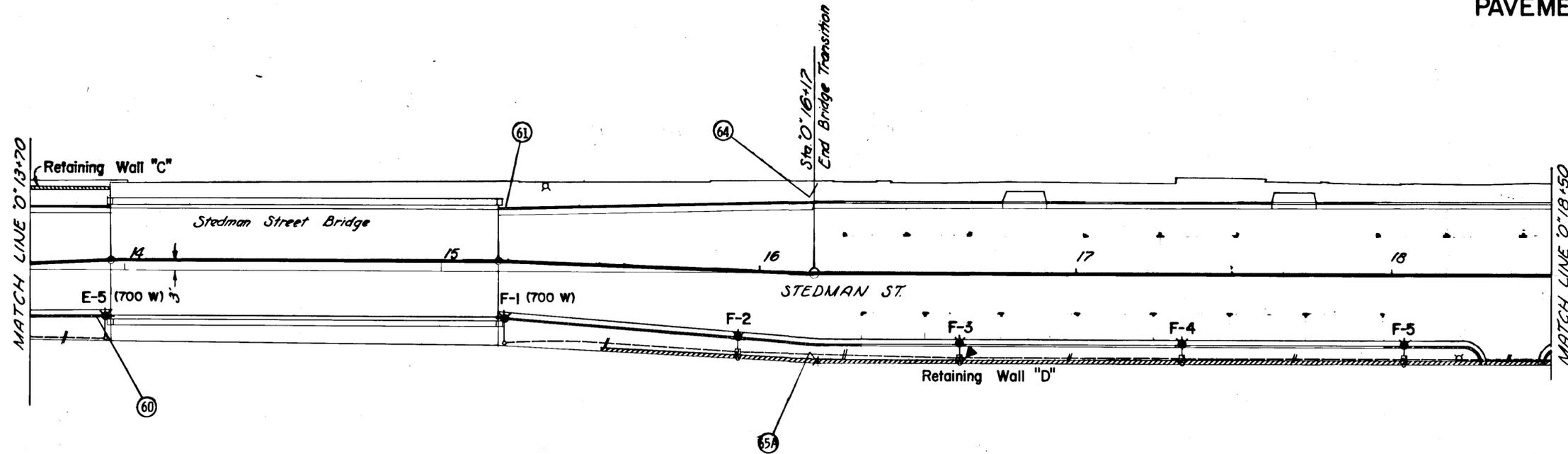
NO.	STATION	OFFSET		TYPE	SIZE	LEGEND	REMARKS
		L	R				
40	"M" 12+87		12	R1-2	36x36x36	Yield	
41	"M" 13+07		24	R6-2L	18x24	One Way	
42	"M" 10+28		20.5	R3-2	24x30	No Left Turn	
45	"O" 10+62	19		D3-1	30x8	Barney Way	
46	"O" 10+62	19		D3-1	30x8	Mill Street	Above No. 45
47	"O" 11+20	28		R7-1LR	12x18	No Parking Any Time	
48	"O" 11+30	28		D3-1	30x8	Stedman Street	
49	"O" 11+38	28		R7-7R	12x18	No Parking Bus Stop	
50	"O" 11+70		20	R7-1LR	12x18	No Parking Any Time	Band to Light Pole
51	"O" 12+00	28		M1-2	24x24	ALASKA 7	
52	"O" 12+00	28		M3-2L	21x15	Advance Turn Arrow	Below No. 51
53	"O" 12+45		20	M1-2	24x24	ALASKA 7	Band to Light Pole
54	"O" 12+45		20	R7-7L	12x18	No Parking Bus Stop	Band to Light Pole
55	"O" 12+80		28	R7-1LR	12x18	No Parking Any Time	
56	"O" 12+80		21	R7-1L	12x18	No Parking Any Time	

**ILLUMINATION SCHEDULE**

STATION	POLE OFFSET		MAST ARM LENGTH	LUMINAIRE TYPE	CIRCUIT
	L	R			
"O" 10+03		22'	8'	III	D
"M" 12+20		11'	6'	III	C
"M" 12+68.50		16'	8'	III	C
"O" 10+50		20.5'	8'	III	D
"O" 11+00		21'	6'	III	E
"O" 11+70		20'	6'	III	
"O" 12+45		20'	6'	III	
"O" 13+20		20'	6'	III	E

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	F-095-2(3)	1971	28	91

**ILLUMINATION, SIGNING, & PAVEMENT MARKINGS**



**ILLUMINATION SCHEDULE**

STATION	POLE OFFSET		MAST ARM LENGTH	LUMINAIRE TYPE	CIRCUIT
	L	R			
"0" 13+94		21.5'	8'	III	E
"0" 15+20		21.5'	8'	III	F
"0" 15+93		22.4'	8'	III	
"0" 16+63		28.8'	8'	III	
"0" 17+33		28.8'	8'	III	
"0" 18+03		28.8'	8'	III	F

**JUNCTION BOXES**

STATION	JUNCTION BOX TYPE	OFFSET	
		L	R
"0" 15+93			25.5'
"0" 16+63			26.0'
"0" 17+33			26.0'
"0" 18+03			26.0'

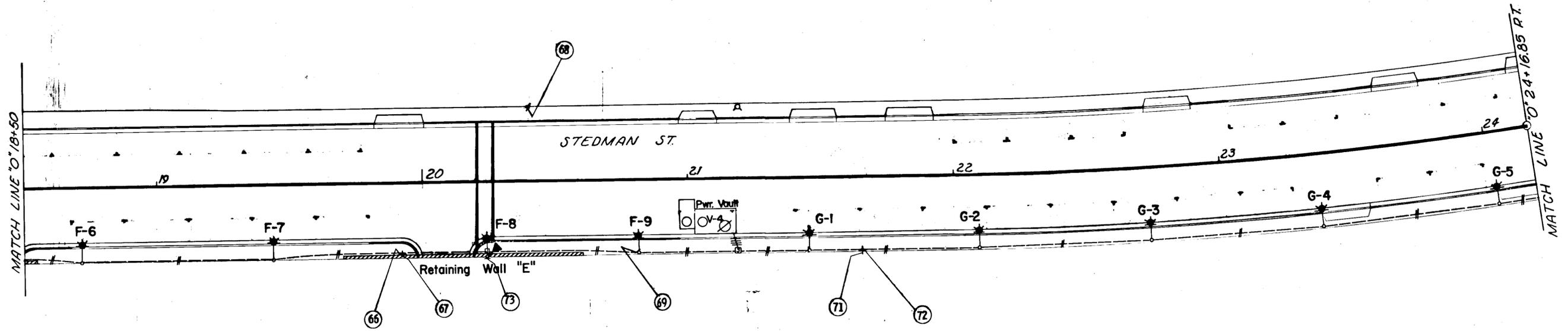
**SIGNING SCHEDULE**

NO.	STATION	OFFSET		TYPE	SIZE	LEGEND
		L	R			
60	"0" 13+93		13.5	III-R	12x36	Object Marker
61	"0" 15+19	19.5		III-R	12x36	do
64	"0" 16+18	27.0		R7-1L	12x18	No Parking Any Time
65A	"0" 16+18		28.0	R7-1R	12x18	No Parking Any Time

\*SEE LUMINAIRE MAST FOUNDATION DETAIL, SHEET NO. 19

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	F-095-2(3)	1971	29	91

## ILLUMINATION, SIGNING, & PAVEMENT MARKINGS



### ILLUMINATION SCHEDULE

STATION	POLE OFFSET		MAST ARM LENGTH	LUMINAIRE TYPE	CIRCUIT
	L	R			
"0" 18+73		29.0'	8'	III	F
"0" 19+45		29.0'	8'	III	
"0" 20+26		28.8'	8'	III	
"0" 20+82		27'	6'	III	F
"0" 21+46		27'	6'	III	G
"0" 22+10		27'	6'	III	
"0" 22+74		27'	6'	III	
"0" 23+38		27'	6'	III	
"0" 24+03		27'	6'	III	G

### JUNCTION BOXES

STATION	JUNCTION BOX TYPE	OFFSET	
		L	R
"0" 20+24	I		26'
"0" 21+18	I		27'

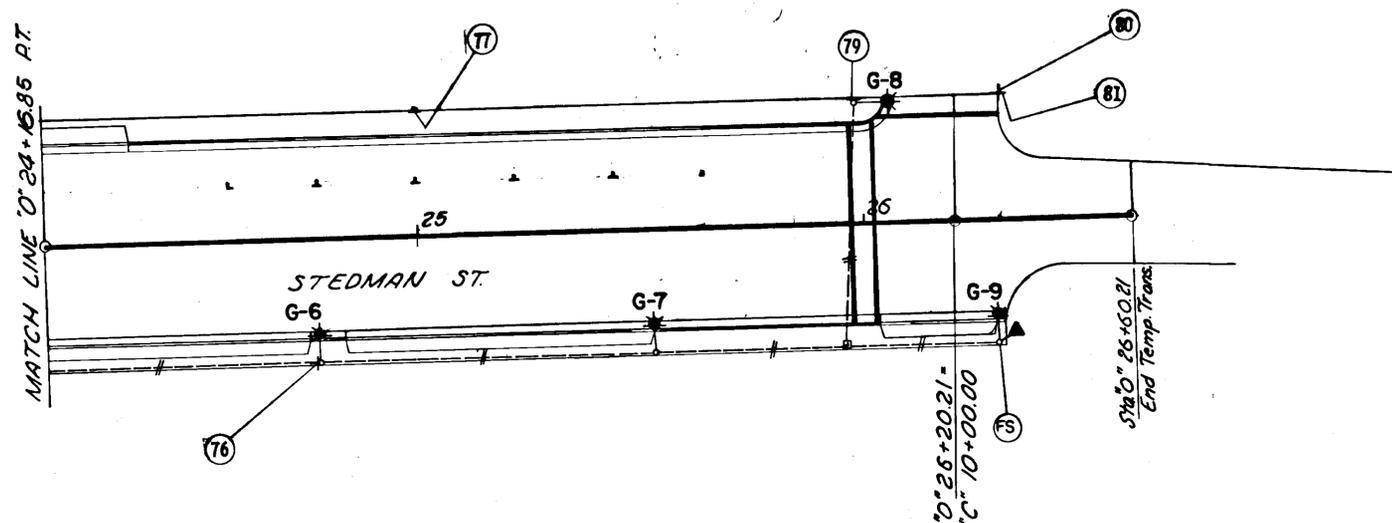
### SIGNING SCHEDULE

NO.	STATION	OFFSET		TYPE	SIZE	LEGEND	REMARKS
		L	R				
66	"0" 19+97		27	D3-1	30x8	Stedman Street	
67	"0" 19+97		27	D3-1	30x8	Thomas Street	Above No. 66
68	"0" 20+40		28	R7-7R	18x24	No Parking Bus Stop	
69	"0" 20+82		27	R7-7R	18x24	No Parking Bus Stop	Band to Light Pole
71	"0" 21+66		27	D3-1	30x8	Ifman Street	Above No. 72
72	"0" 21+66		27	D3-1	30x8	Stedman Street	
73	"0" 20+26		29.5	R1-1	30x30	Stop	Band to Light Pole

\*SEE LUMINAIRE MAST FOUNDATION DETAIL, SHEET NO.

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	F-095-2(3)	1971	30	91

ILLUMINATION, SIGNING, & PAVEMENT MARKINGS



ILLUMINATION SCHEDULE

STATION	POLE OFFSET		MAST ARM LENGTH	LUMINAIRE TYPE	CIRCUIT
	L	R			
0+24+78		27'	6'	III	G
0+25+53		27'	6'	III	
0+25+98	27'		6'	III	T
0+26+29		27'	6'	III	G

JUNCTION BOXES

STATION	JUNCTION BOX TYPE	OFFSET	
		L	R
0+25+95	I		27'

SIGNING SCHEDULE

NO.	STATION	OFFSET		TYPE	SIZE	LEGEND	REMARKS
		L	R				
76	0+24+78		27'	W5-1	30x30	Road Narrows	Band to light pole
77	0+25+00		28	M1-2	24x24	ALASKA 7	
79	0+25+98		28	R1-1	30x30	Stop	Band to light pole
80	0+26+31		28	D3-1	30x8	Deermount Street	
81	0+26+31		28	D3-1	30x8	Stedman St.	Above No. 80

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	F-095-2(3)	1971	31	91

**SPECIAL STANDARD  
SIGN DETAILS**

4 Inch Series "C" Letters

Letter	M	I	S	S	I	O	N	S	T								
Letter Width	2.59	0.56	2.19	2.19	0.56	2.31	2.19	1.65	1.50								
Space Width	0.90	0.90	0.73	0.90	0.90	0.90	4.06	0.56									
Cumulative Width	2.59	3.49	4.05	4.95	7.14	7.87	10.06	10.96	11.52	12.42	14.73	15.63	17.82	21.88	23.52	24.08	25.58

3 Inch Series "C" Letters

4 Inch Series "C" Letters

Letter	S	T	E	D	M	A	N	S	T								
Letter Width	2.19	2.00	2.00	2.19	2.59	2.50	2.19	1.65	1.50								
Space Width	0.67	0.67	0.67	0.67	0.84	0.67	4.00	0.50									
Cumulative Width	2.19	2.86	4.86	5.53	7.53	8.20	10.39	11.23	13.82	14.49	16.99	17.66	19.85	23.85	25.49	25.99	27.49

3 Inch Series "C" Letters

4 Inch Series "C" Letters

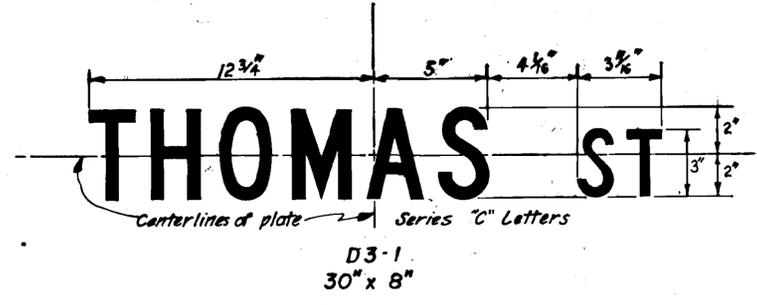
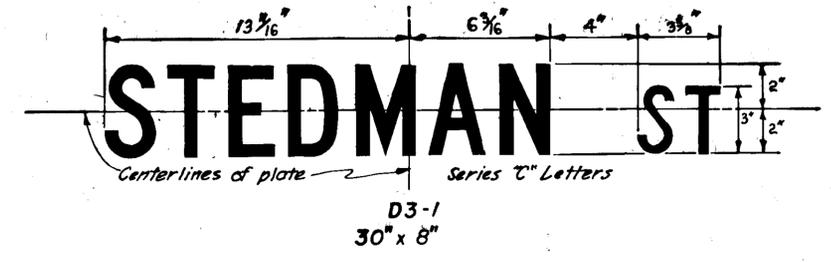
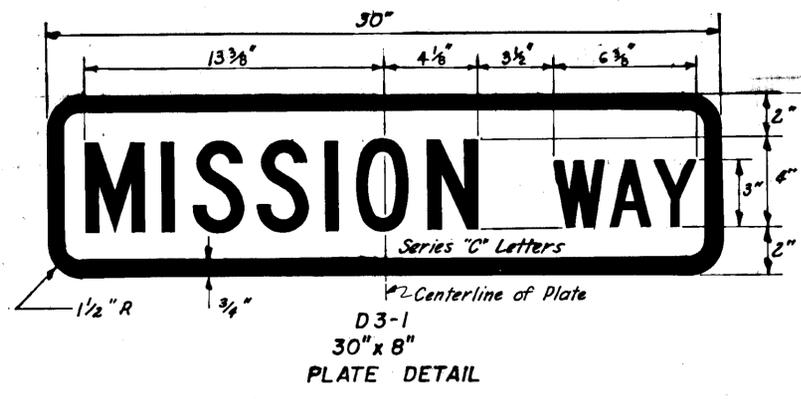
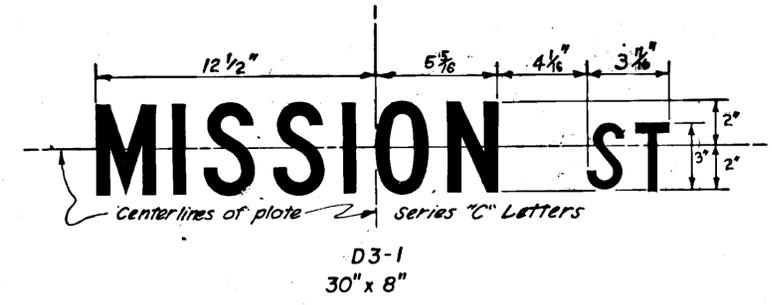
Letter	T	H	O	M	A	S	S	T							
Letter Width	2.00	2.19	2.31	2.59	2.50	2.19	1.65	1.50							
Space Width	0.73	0.90	0.90	0.73	0.73	4.06	0.56								
Cumulative Width	2.00	2.73	4.92	5.82	8.13	9.03	11.62	12.35	14.85	15.58	17.77	21.83	23.47	24.03	25.53

3 Inch Series "C" Letters

4 Inch Series "C" Letters

Letter	M	I	S	S	I	O	N	W	A	Y									
Letter Width	2.59	0.56	2.19	2.19	0.56	2.31	2.19	2.25	1.88	1.88									
Space Width	0.84	0.84	0.67	0.84	0.84	0.84	3.50	0.17	0.17										
Cumulative Width	2.59	3.43	3.99	4.83	7.02	7.69	9.88	10.72	11.28	12.12	14.43	15.27	17.46	20.96	23.21	23.38	25.26	25.43	27.31

3 Inch Series "C" Letters

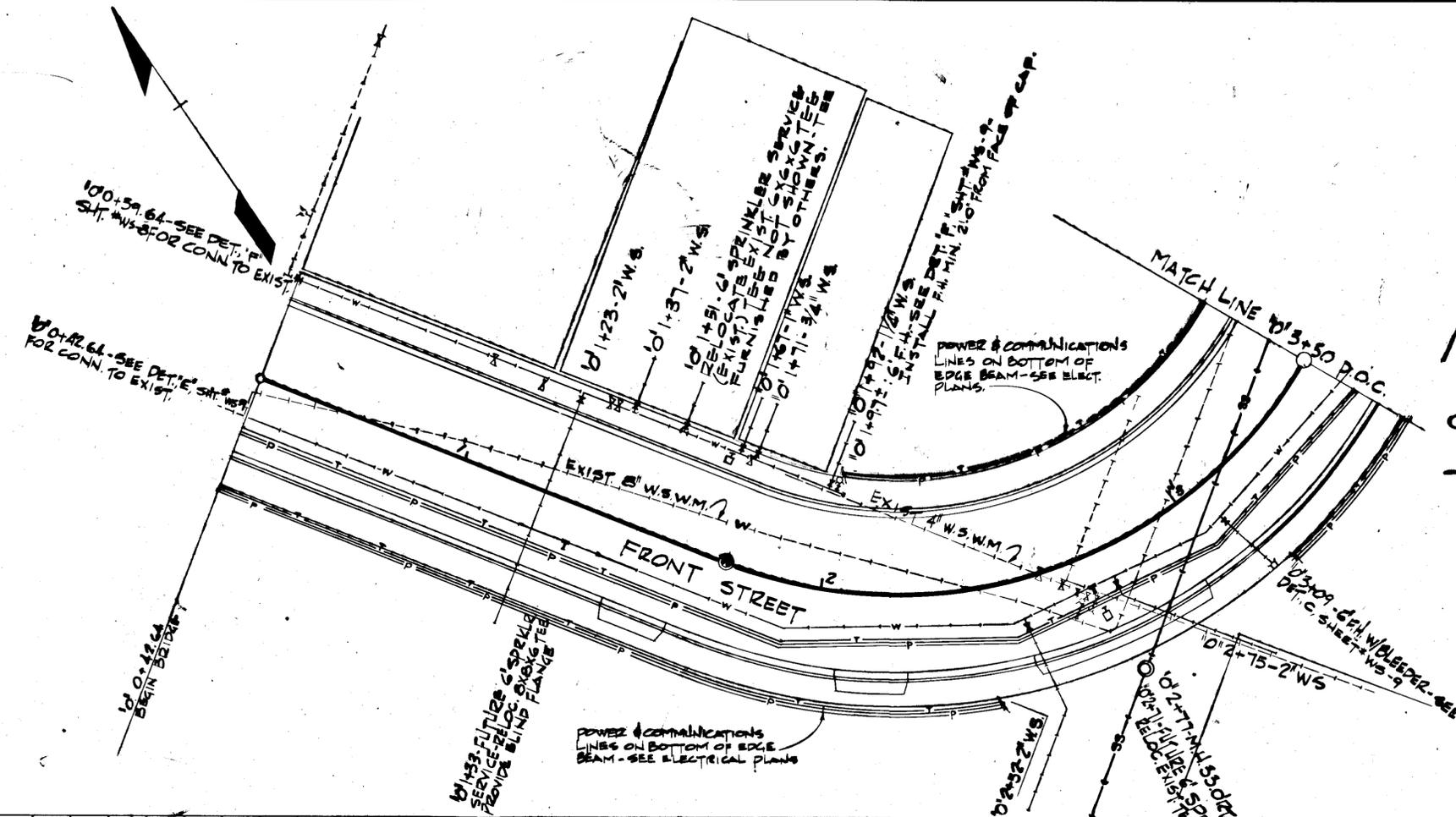




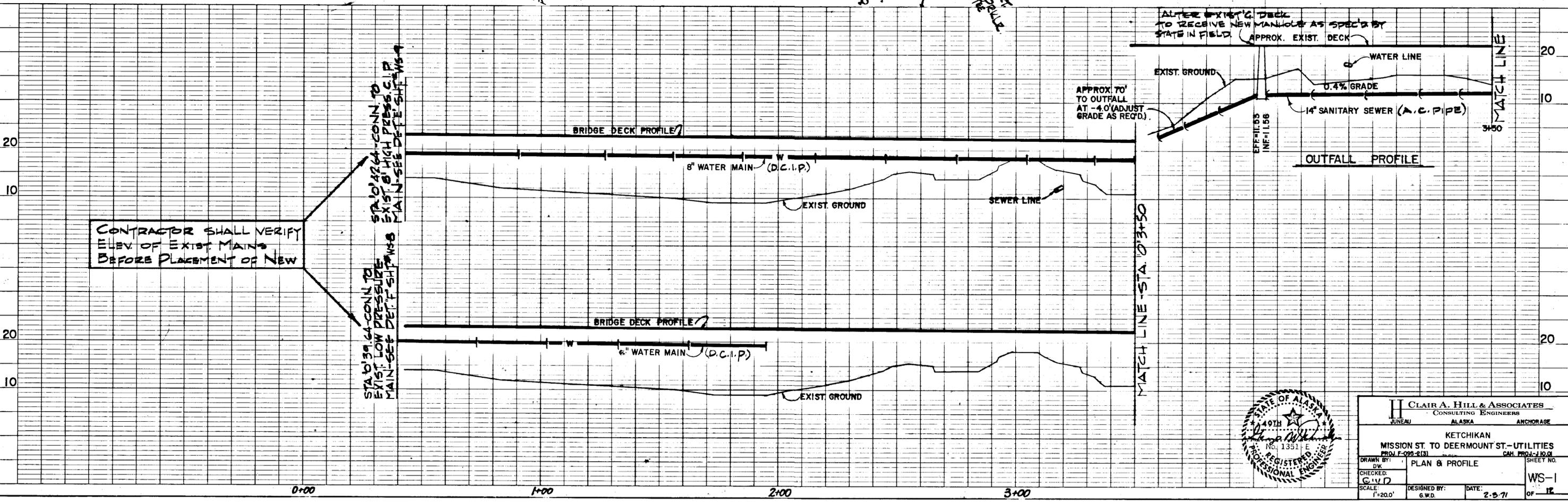
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	F-095-2(3)	1971	33	91

**NOTES**

- 1) ALL WATER MAIN JOINTS TO BE MECHANICAL UNLESS NOTED OTHERWISE.
- 2) 1/6 PIPE BENDS TO BE LOCATED @ PIPE STATIONS 10'+13.94 (P.C.), 10'+19.82, 10'+24.69, 10'+29.05.



SEE  
REVISED  
SEWER  
PLANS

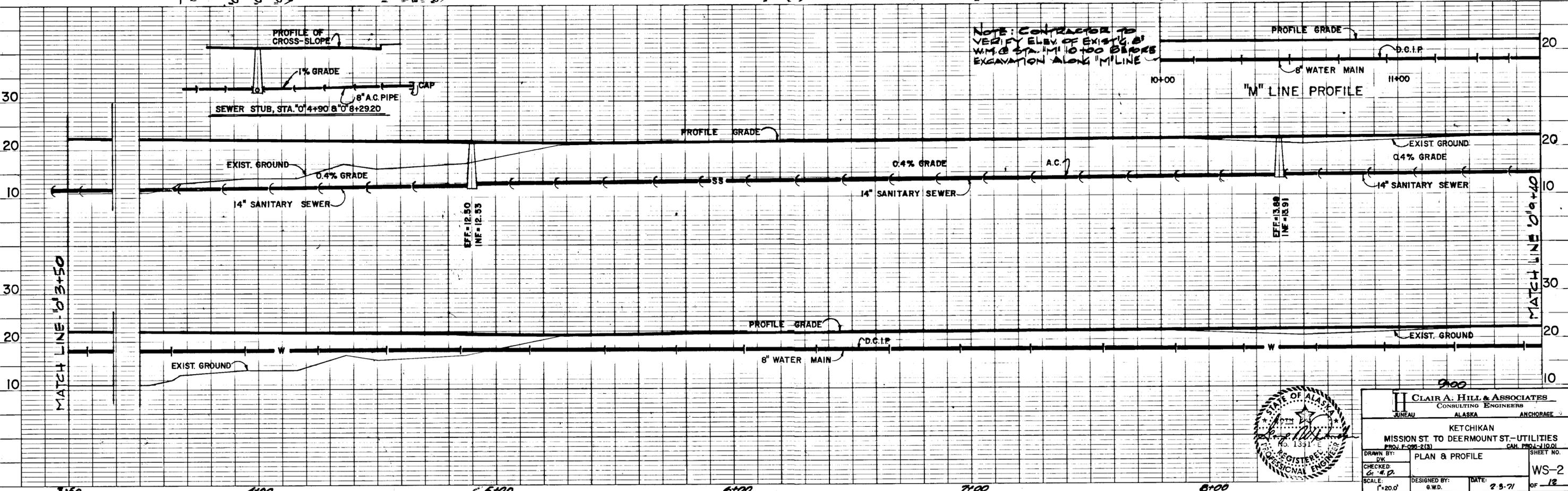
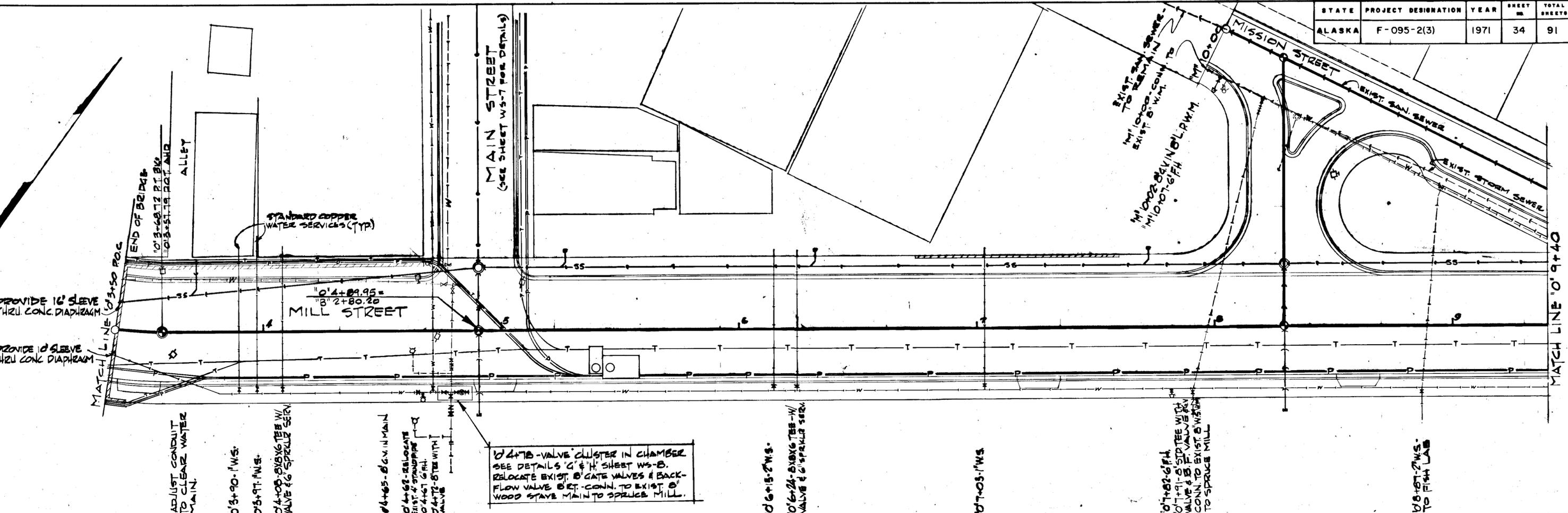


CONTRACTOR SHALL VERIFY ELEV. OF EXIST. MAINS BEFORE PLACEMENT OF NEW



<b>CLAIR A. HILL &amp; ASSOCIATES</b> CONSULTING ENGINEERS JUNEAU ALASKA ANCHORAGE			
KETCHIKAN MISSION ST. TO DEERMOUNT ST. - UTILITIES PROJ. F-095-2(3)			
DRAWN BY: DW	CHECKED: C.V.D.	DESIGNED BY: G.W.D.	DATE: 2-3-71
SCALE: 1"=20.0'		SHEET NO. WS-1 OF 12	

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	F-095-2(3)	1971	34	91



**CLAIR A. HILL & ASSOCIATES**  
CONSULTING ENGINEERS  
JUNEAU ALASKA ANCHORAGE

KETCHIKAN  
MISSION ST. TO DEERMOUNT ST.-UTILITIES  
PROJ. F-095-2(3) CAL. PROJ. 11001

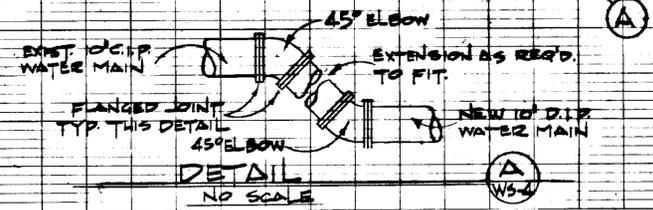
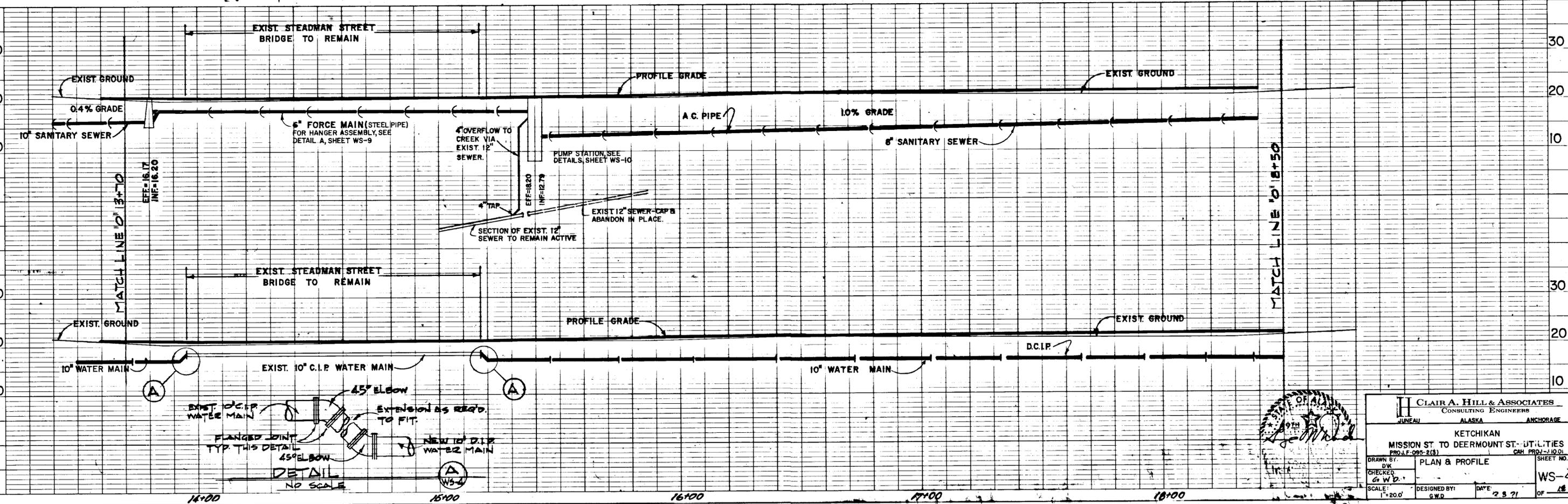
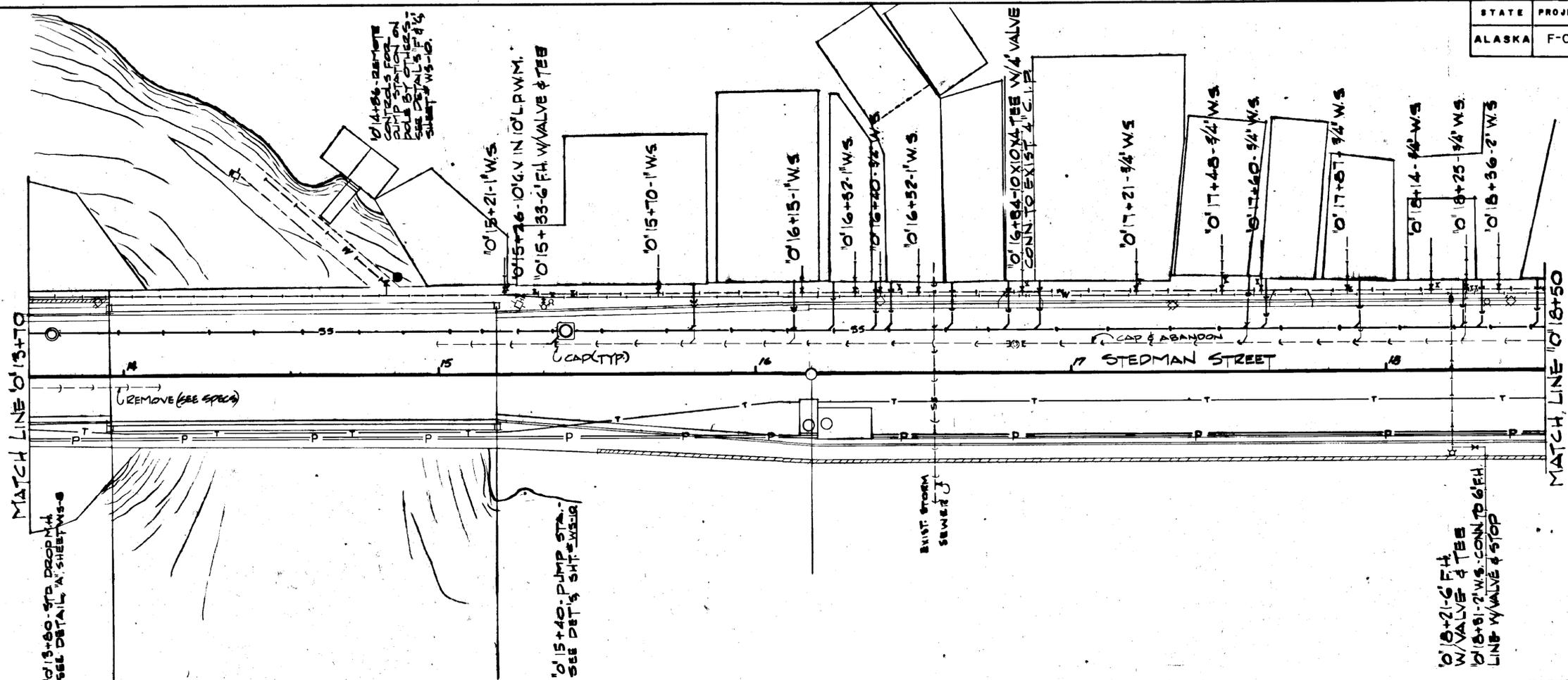
DRAWN BY: DW  
CHECKED: C.A.H.  
SCALE: 1"=20.0'

DESIGNED BY: G.W.D.  
DATE: 2-5-71

SHEET NO. WS-2 OF 12

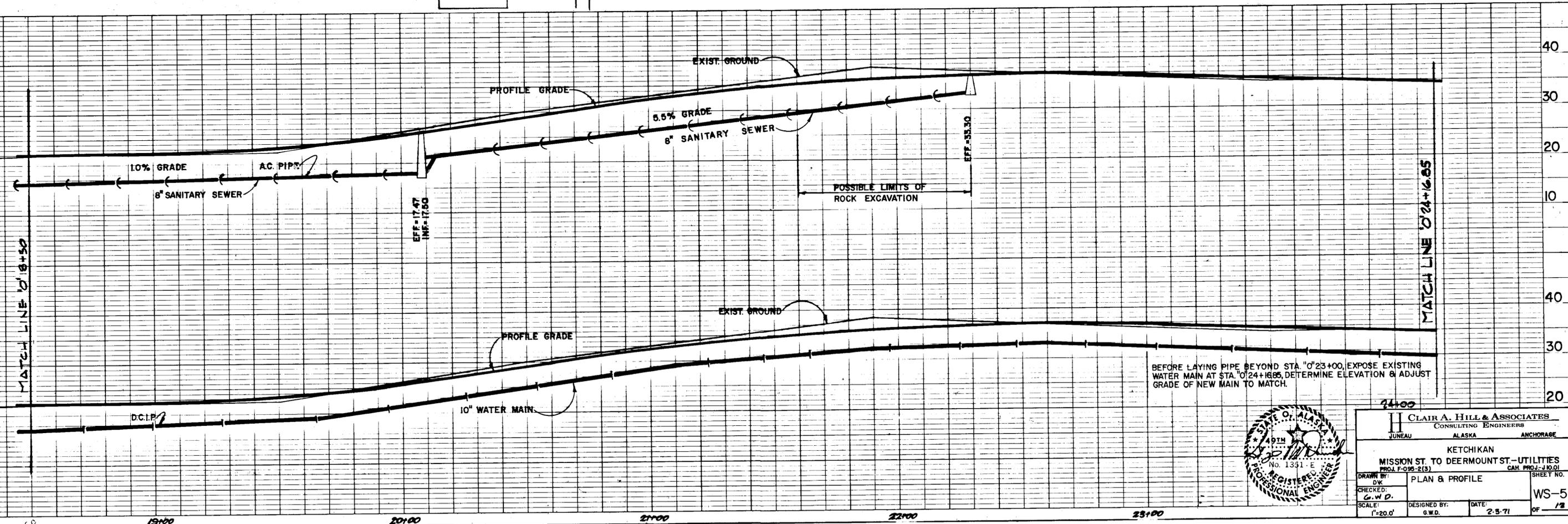
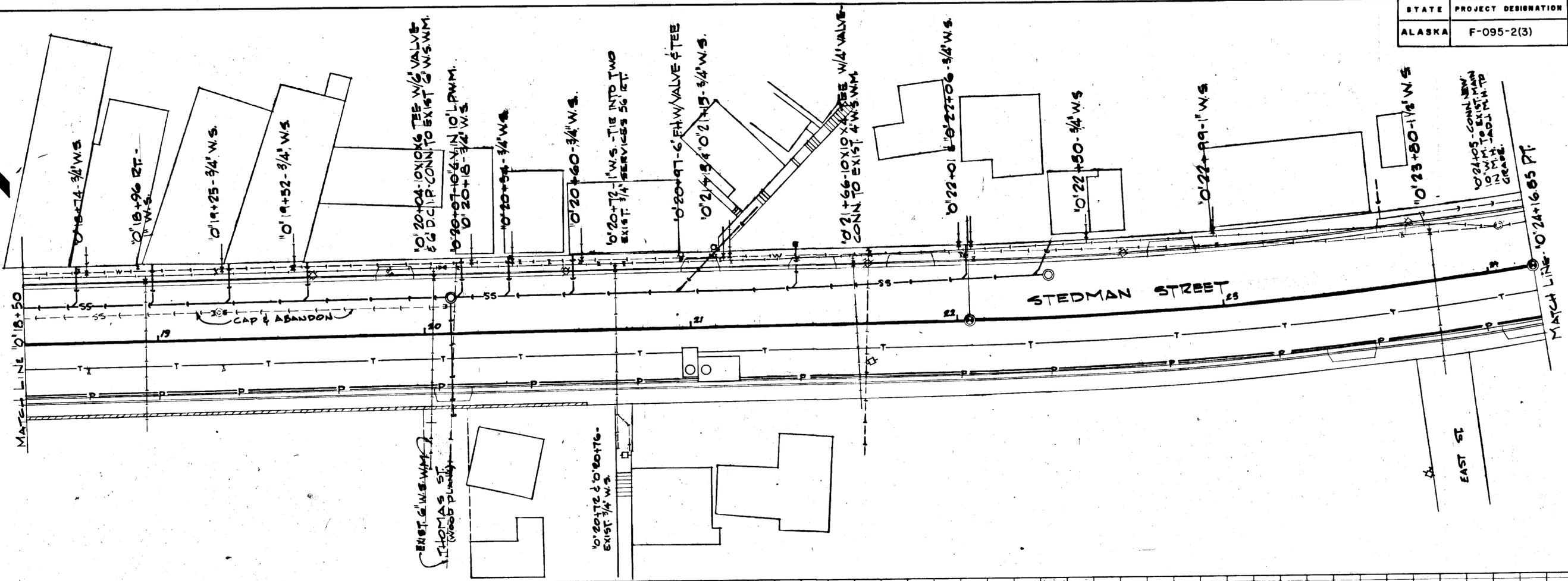


STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	F-095-2(3)	1971	36	91



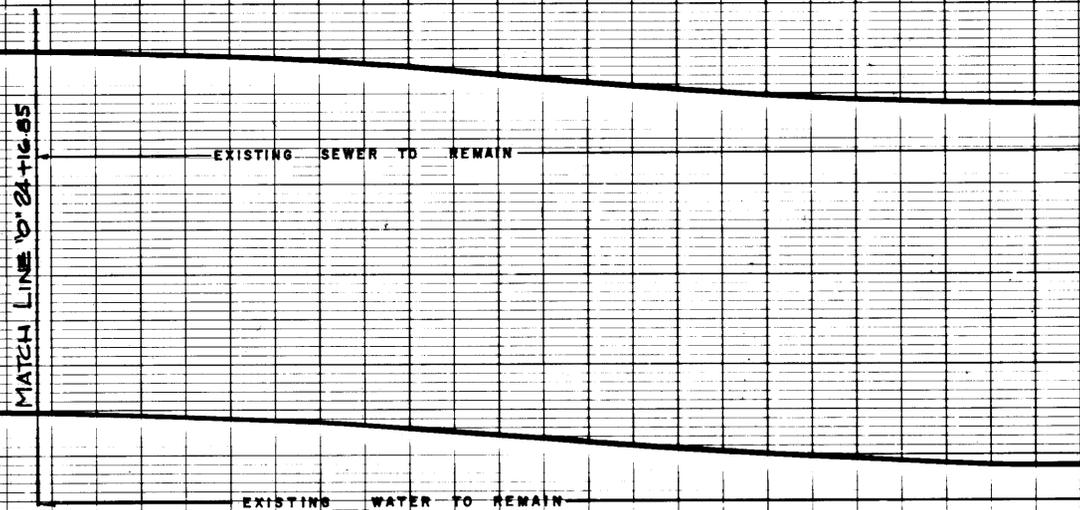
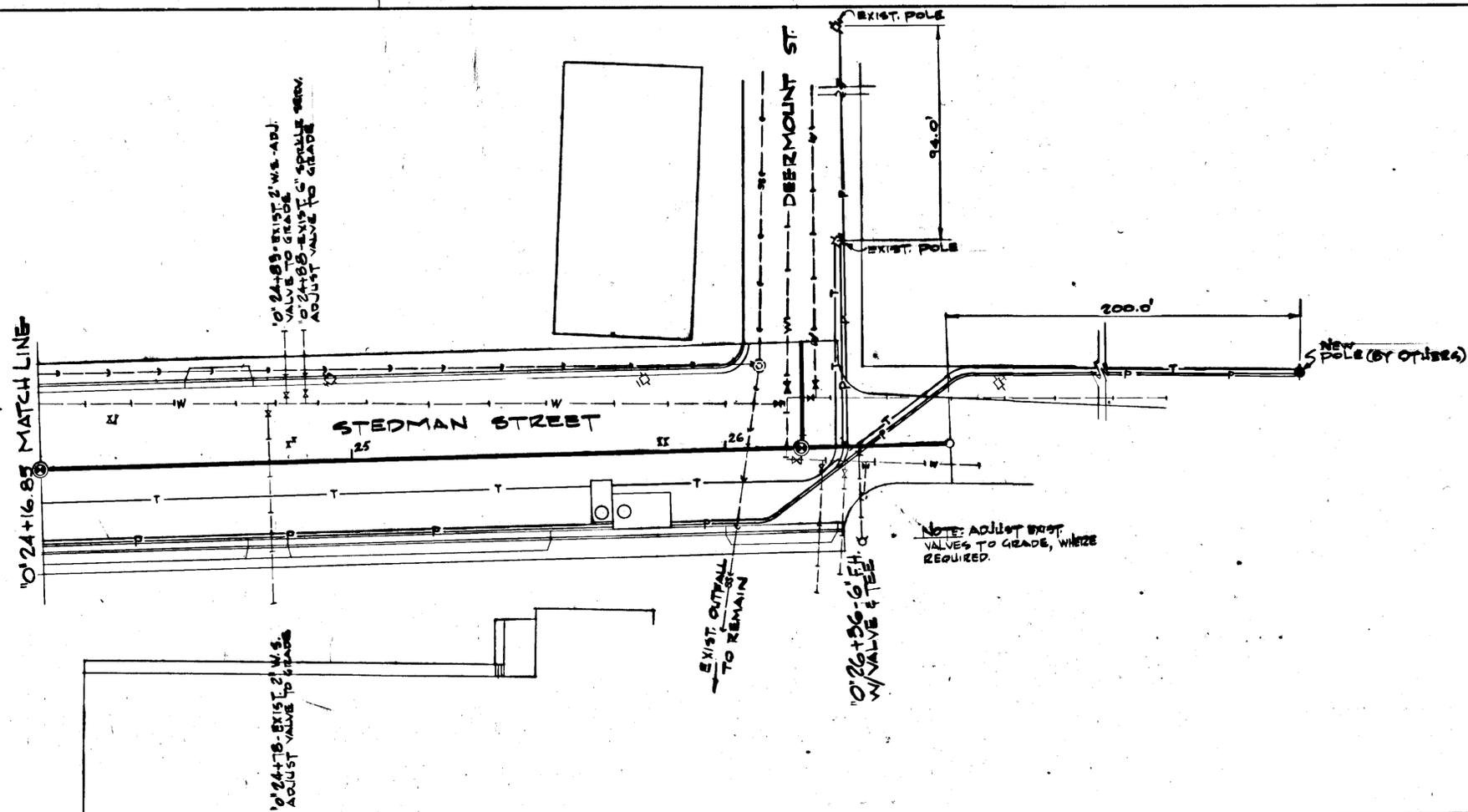
**CLAIR A. HILL & ASSOCIATES**  
 CONSULTING ENGINEERS  
 JUNEAU ALASKA ANCHORAGE  
 KETCHIKAN  
 MISSION ST. TO DEERMOUNT ST. UTILITIES  
 PROJ. F-095-2(3) CH. PROJ. 1001  
 DRAWN BY: [Signature] SHEET NO. WS-4  
 CHECKED BY: G.W.D.  
 SCALE: 1"=20' DESIGNED BY: G.W.D. DATE: 2.5.71 OF 18

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	F-095-2(3)	1971	37	91



**CLAIR A. HILL & ASSOCIATES**  
 CONSULTING ENGINEERS  
 JUNEAU ALASKA ANCHORAGE  
 KETCHIKAN  
 MISSION ST. TO DEERMOUNT ST. - UTILITIES  
 PROJ. F-095-2(3) CAH. PROJ. 4001 SHEET NO.  
 DRAWN BY: PLAN & PROFILE  
 CHECKED BY: G.W.D.  
 SCALE: 1"=20.0' DESIGNED BY: G.W.D. DATE: 2-5-71 OF 12  
**WS-5**

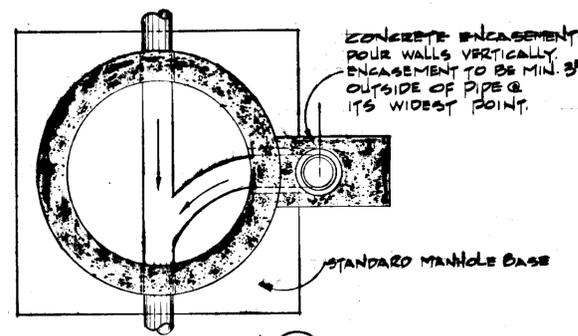
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	F-095-2(3)	1971	38	91



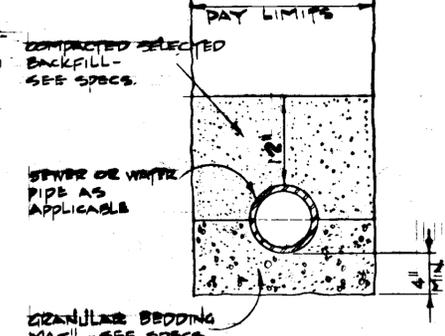
**CLAIR A. HILL & ASSOCIATES**  
 CONSULTING ENGINEERS  
 JUNEAU ALASKA ANCHORAGE  
 KETCHIKAN  
 MISSION ST. TO DEERMOUNT ST.—UTILITIES  
 PROJ. F-095-2(3) CAH. PROJ. 1001  
 SHEET NO. **WS-6** OF **12**  
 DRAWN BY: DW  
 CHECKED: G.W.D.  
 SCALE: 1"=20.0' DESIGNED BY: G.W.D. DATE: 2-3-71

K-E PLATE 1, PLAN-PROFILE  
KEUFFEL & ESSER CO.

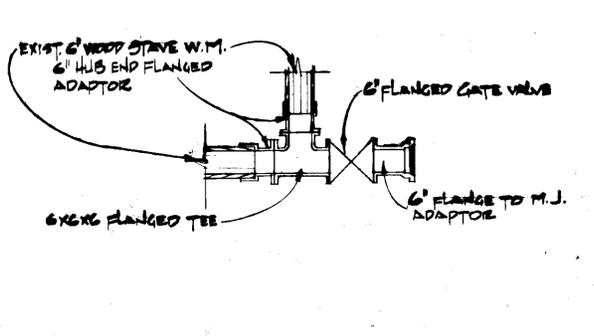
48 7024 HERCULENE® DRAFTING PAPER 38701  
MADE IN U.S.A.



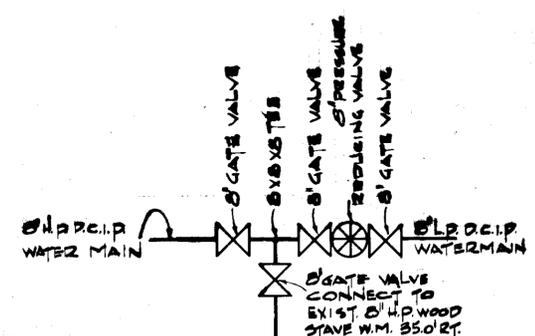
PLAN SECTION A-1



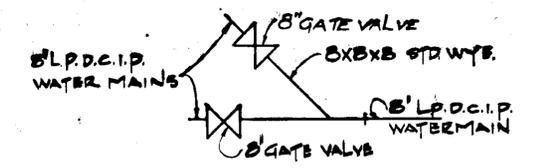
SECTION @ TRENCH C-1



6" W.M. CONN. DETAIL @ STA. 0+42.64 F



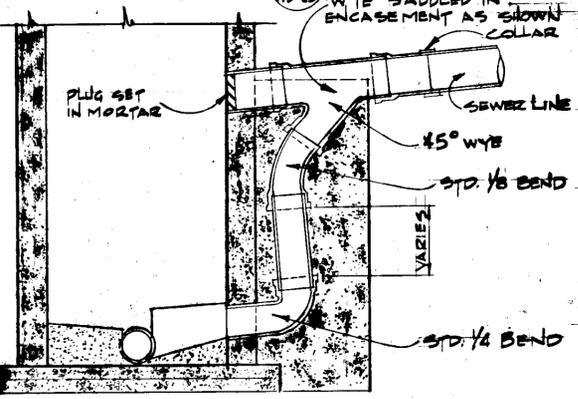
VALVE CLUSTER DETAIL @ STA. 0+47.8 H



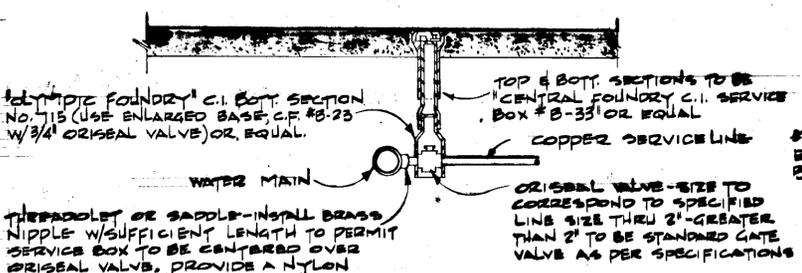
WYE CONNECTION DETAIL @ STA. 0+10+50.0 I

PIPE DIA.	4"	6"	8"	10"	12"	14"	16"	18"
W	22"	24"	26"	28"	30"	32"	34"	36"

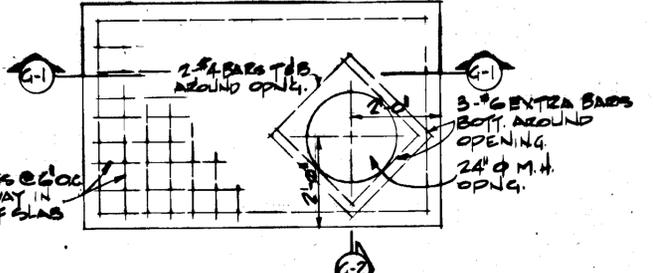
TYPICAL PIPE BEDDING DETAILS C



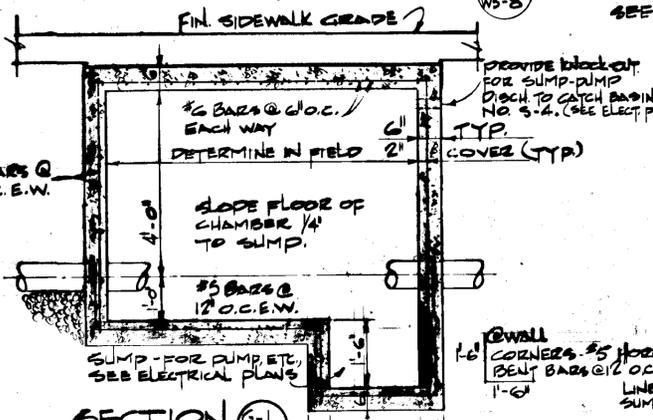
ELEVATION SECTION STANDARD DROP MANHOLE DETAILS A



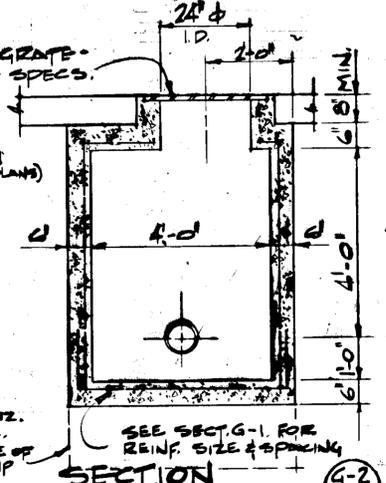
WATER SERVICE LINE CONNECTION D



PLAN VIEW - TOP SLAB G-3

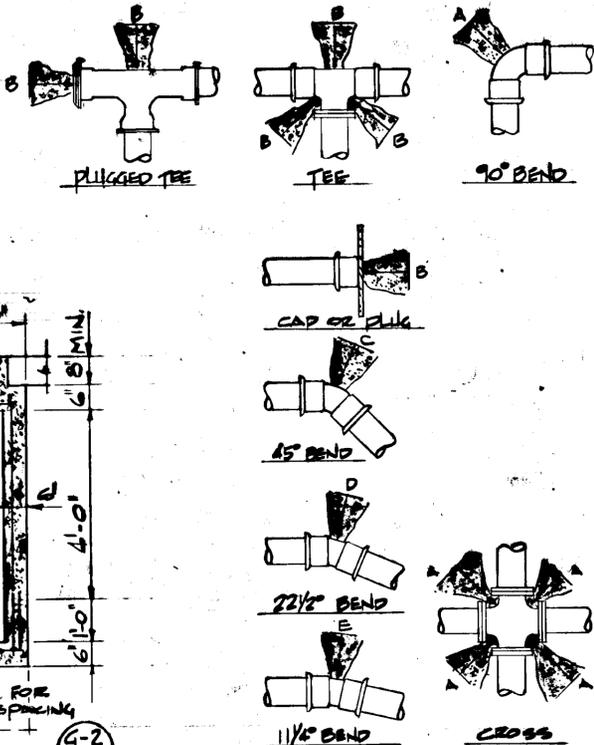


SECTION G-1

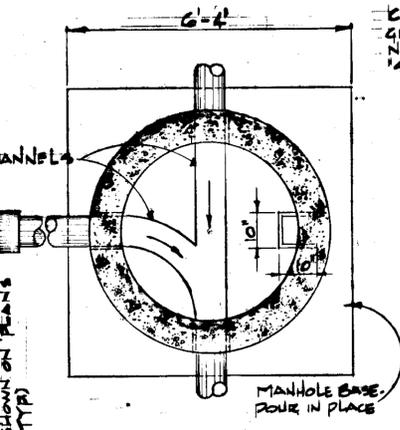


SECTION G-2

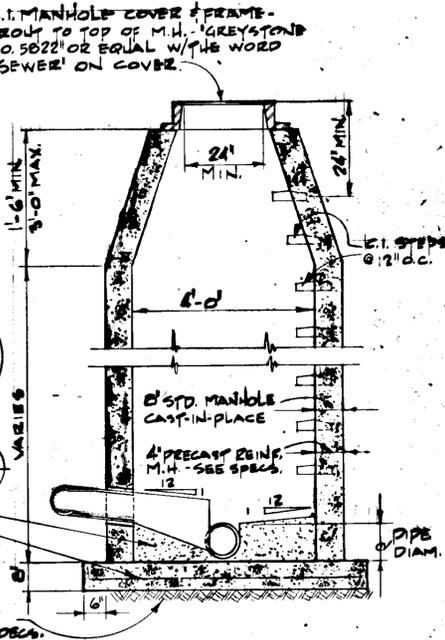
VALVE CHAMBER DETAILS G



THRUST BLOCK DETAILS J

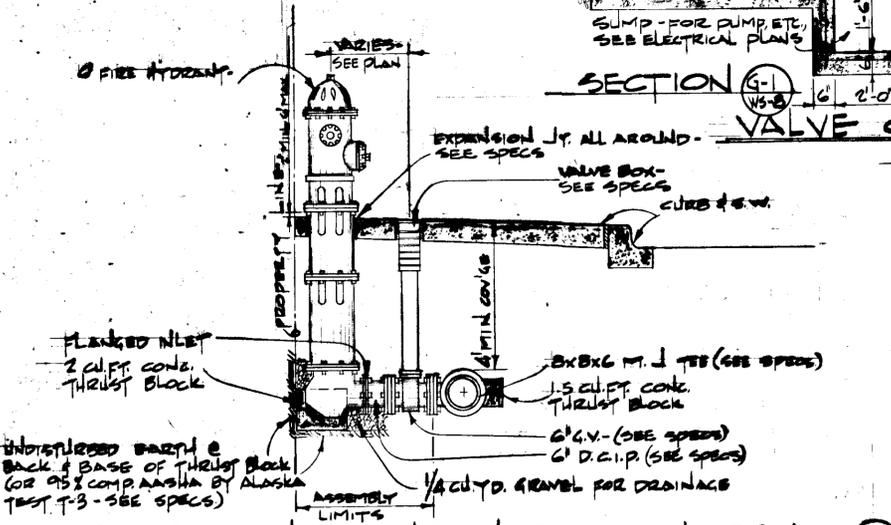


PLAN SECTION B-2



ELEVATION SECTION B-1

STANDARD MANHOLE DETAILS B

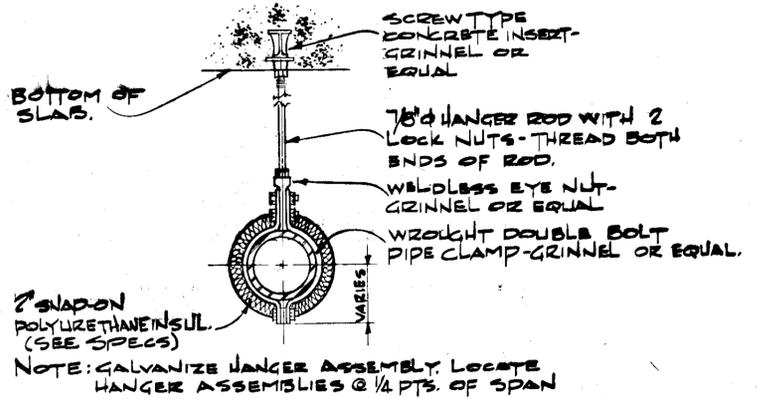


TYP. FIRE HYDRANT INSTALLATION DETAIL E

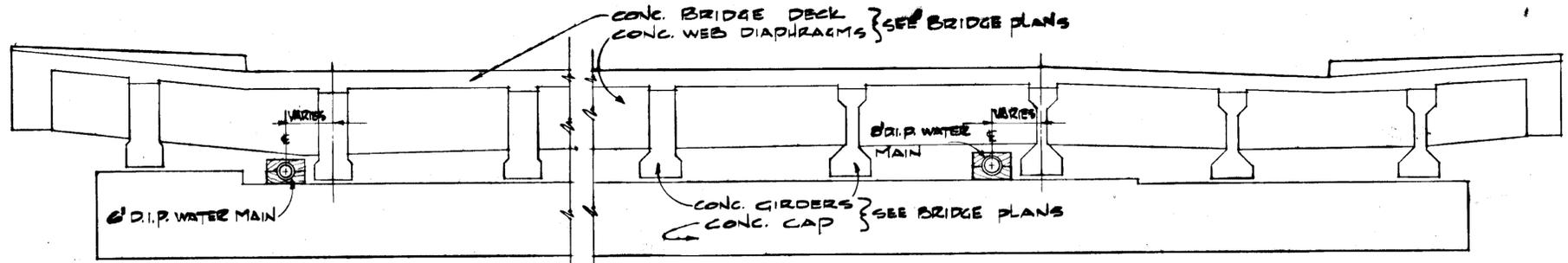
PIPE SIZE	MIN. BEARING AREA AGAINST UNDIST. SOIL IN SQUARE FEET.	A	B	C	D	E	X
4"	2	2	2	2	2	2	—
6"	4	3	2	2	2	2	—
8"	7	5	4	2	2	3	—
10"	11	8	6	3	2	4	—
12"	16	12	9	5	3	6	—
14"	22	16	12	6	3	9	—
16"	29	20	16	8	4	13	—



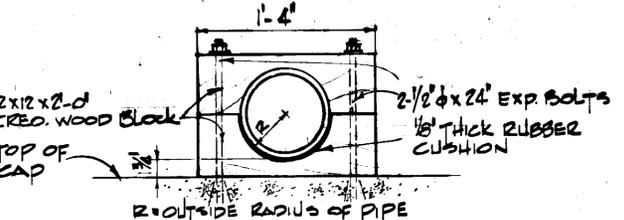
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	F-095-2(3)	1971	40	91



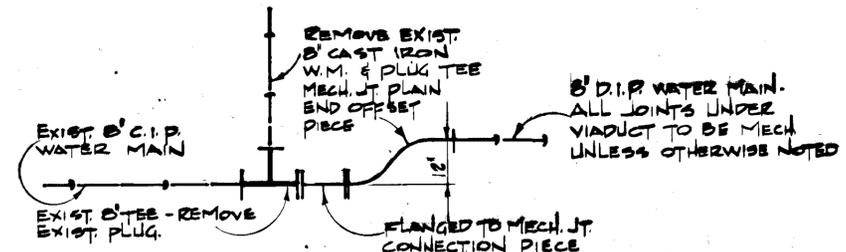
**HANGER ASSEMBLY FOR WATER MAIN** (A) WS-9  
NO SCALE



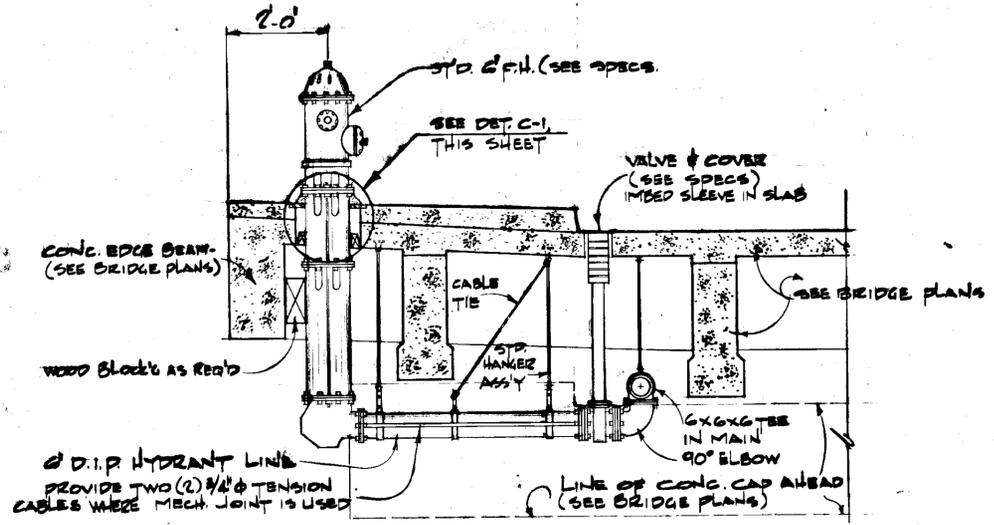
**TYPICAL SECTION THRU VIADUCT** (D) WS-9  
SCALE: 3/8" = 1'-0"



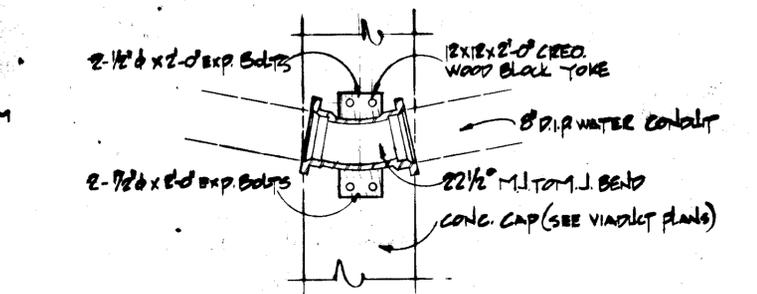
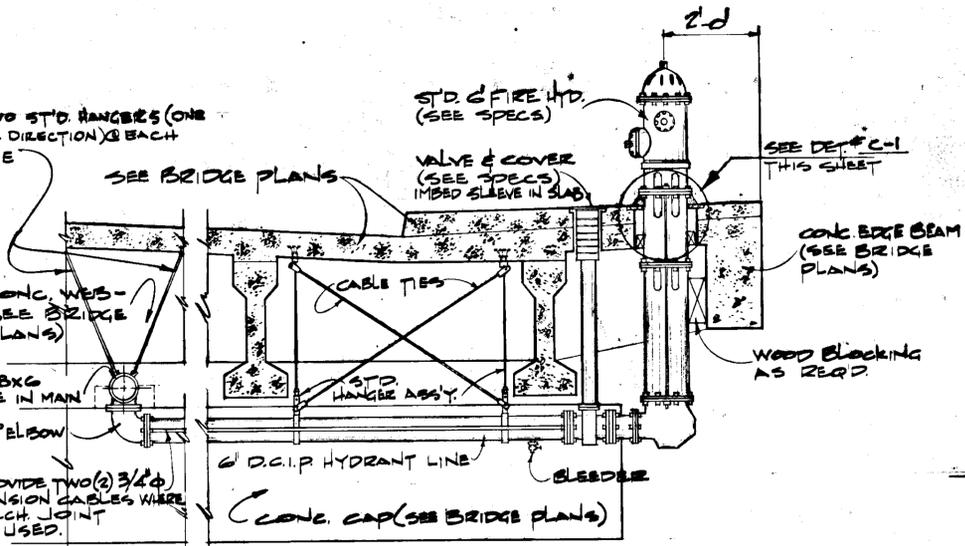
**WATER MAIN SUPPORT @ CAP** (B) WS-9  
NO SCALE



**WATER MAIN CONNECTION @ STATION '0'+42.64** (E) WS-9  
NO SCALE



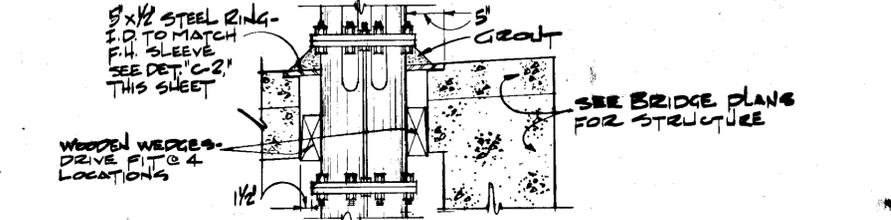
**FIRE HYDRANT DETAIL @ STA. '0'+97** (F) WS-9  
NO SCALE



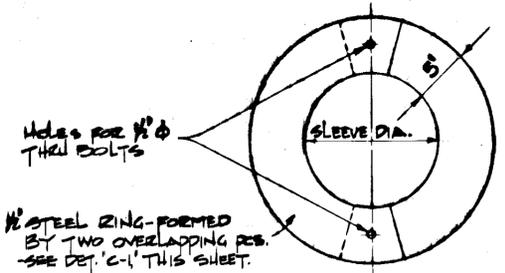
**PLAN @ WATER MAIN SUPPORT** (B-1) WS-9  
NO SCALE

NOTES:  
1) FOR INSULATION, SEE SPECS.

**FIRE HYDRANT SEATING DETAIL - STA. '0'+3+09** (C) WS-9  
NO SCALE



**FIRE HYDRANT SEATING DETAIL - STA. '0'+3+09** (C-1) WS-9  
NO SCALE



**FIRE HYDRANT RETAINER RING** (C-2) WS-9  
NO SCALE

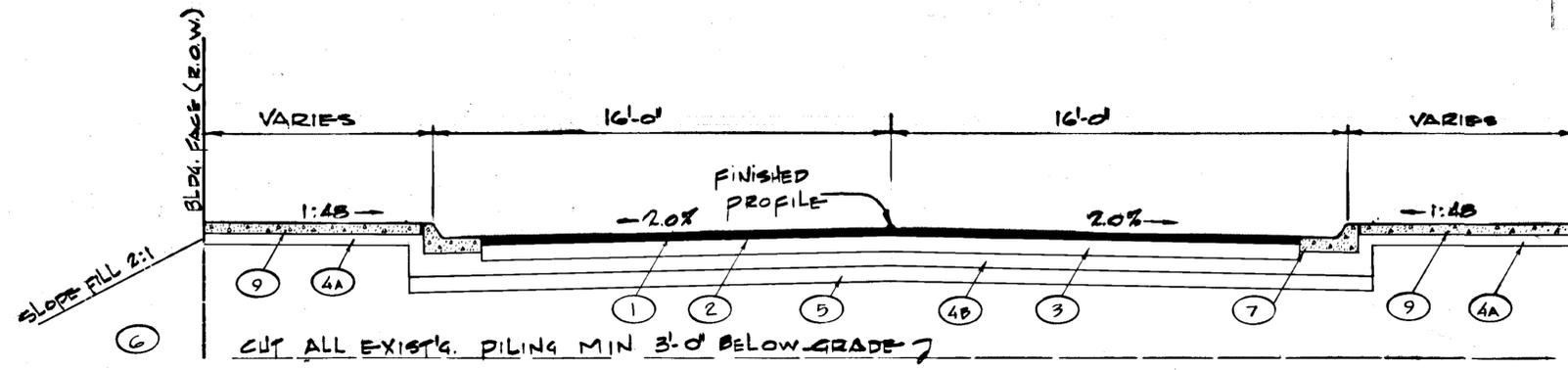


<b>CLAIR A. HILL &amp; ASSOCIATES</b> CONSULTING ENGINEERS JUNEAU ALASKA ANCHORAGE			
KETCHIKAN MISSION ST TO DEERMOUNT ST - UTILITIES PROJ. F-095-2(3) CAH PROJ. J 10.01			
DRAWN BY: D.K.	MISC. DETAILS	SHEET NO. <b>WS-9</b>	
CHECKED BY: G.W.D.	DESIGNED BY: G.W.D.	DATE: 2-5-71	OF 12

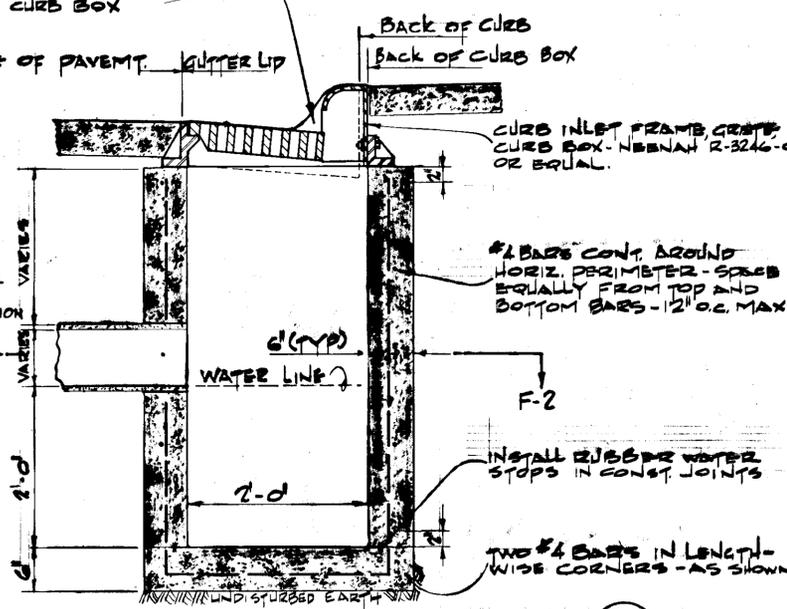


STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	F-095-2(3)	1971	42	91

RECESS & FAIR CURB INTO CURB BOX

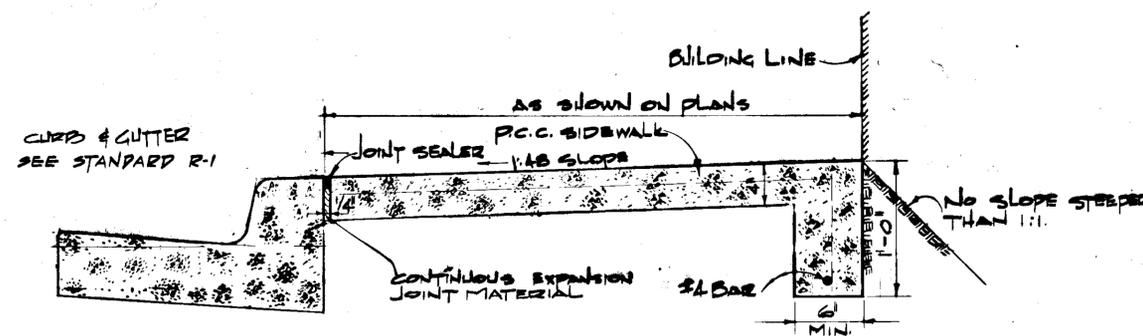


- 1 PRIME COAT
- 2 3-2 COURSE HOT BITUMINOUS CONCRETE PAVEMENT
- 3 6" CRUSHED AGGREGATE BASE GRADING D-1
- 4A 4" SUBBASE GRADING B
- 4B 6" SUBBASE GRADING B
- 5 6" MINIMUM SELECTED MATERIAL
- 6 USEABLE UNCLASSIFIED EXCAVATION AND/OR BORROW
- 7 CURB AND GUTTER TYPE F-2
- 9 4" CONCRETE SIDEWALK F-2

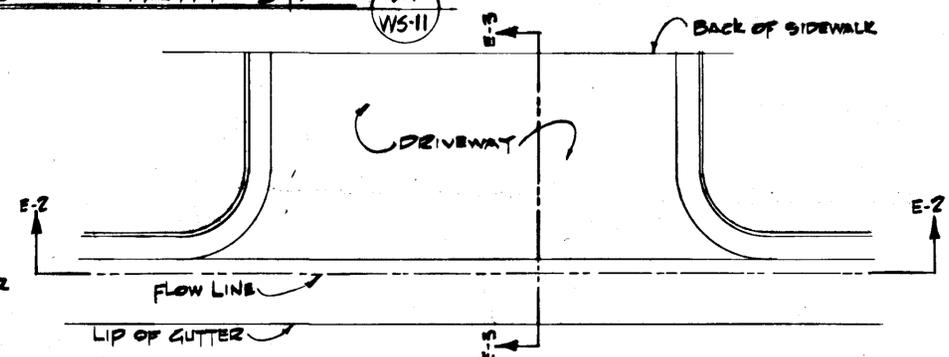


TYPICAL SECTION THRU MAIN ST. (A) WS-11

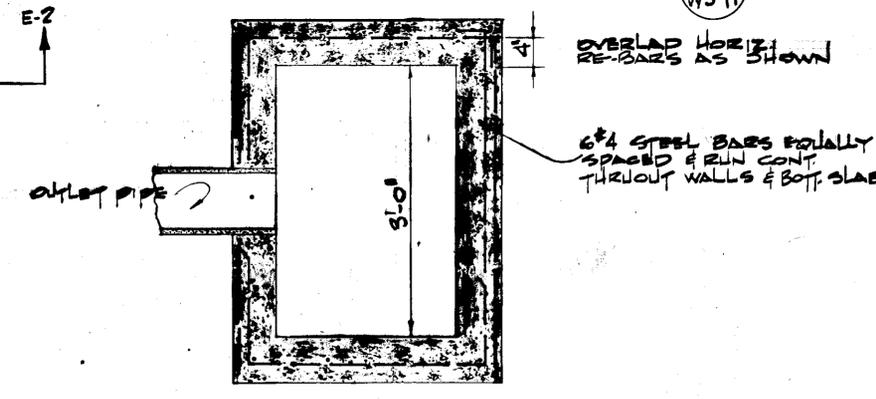
SIDE ELEVATION IN SECTION (F-1) WS-11



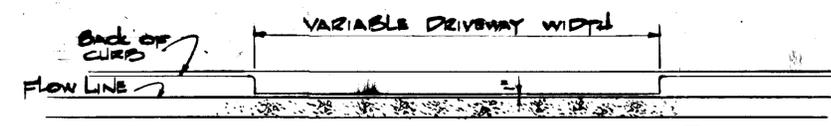
TYPICAL SECTION COMBINED CURB, GUTTER & SIDEWALK (B) WS-11 NO SCALE



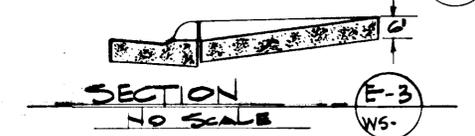
PLAN VIEW (E-1) WS-11 NO SCALE



TYPICAL CATCH BASIN DETAILS (MAIN STREET ONLY) (F) WS-11 NO SCALE



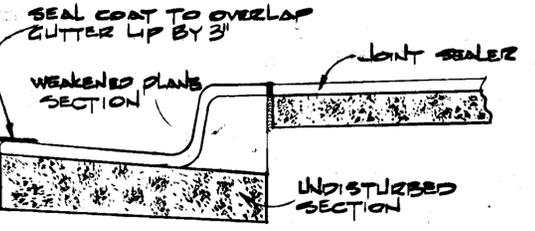
SECTION (E-2) WS-11 NO SCALE



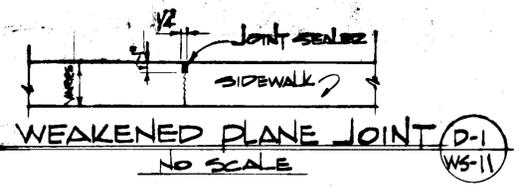
SECTION (E-3) WS-11 NO SCALE

DRIVEWAY ENTRANCE DETAILS (E) WS-11

NOTE: WEAKENED PLANE FORMED IN GUTTER WITH 1/2" SPACER WHEN POURING AND IN SIDEWALK WITH 1/4" SAW CUT IN SURFACE.



TYPICAL SECTION WEAKENED PLANE (D) WS-11 NO SCALE



WEAKENED PLANE JOINT (D-1) WS-11 NO SCALE



H. CLAIR A. HILL & ASSOCIATES CONSULTING ENGINEERS JUNEAU ALASKA ANCHORAGE			
KETCHIKAN MISSION ST. TO DEERMOUNT ST. - UTILITIES PROJ. F-095-2(3) CAH. PROJ. J-10.01			
DRAWN BY: D.K.	MAIN ST. SECTIONS & DETAILS		SHEET NO. WS-11
CHECKED BY: G.W.D.	DESIGNED BY: G.M.D.	DATE: 2-3-71	OF 12

### INSTALL WATER SERVICE CONNECTIONS

STATION	LIN. FT. FROM MAIN	LOCATION	SIZE	REMARKS
0'1+23	R&R 58.0	RT	2"	CONN. TO EXIST. HOUSE SERV.
0'1+37	4.0	LT	2"	"
0'1+67	5.0	LT	"	"
0'1+71	5.0	LT	3/4"	"
0'1+92	R&R 5.0	LT	1/4"	"
0'2+52	19.0	RT	2"	EXTEND TO PROPERTY LINE & CAP.
0'2+75	R&R 33.0	RT	2"	INSTALL NEW SERVICE
0'3+90	58.0	LT	"	CONNECT TO EXIST'G HOUSE SERVICE.
0'3+97	R&R 58.0	LT	"	"
0'6+15	57.0	LT	2"	INSTALL NEW SERVICE
0'7+03	58.0	LT	"	"
0'8+07	R&R 5.0	RT	2"	"
M'11+574	R&R 33.0	LT	2"	CONNECT TO EXIST'G HOUSE SERVICE
0'10+32	15.0	RT	2"	"
0'11+10	8.0	LT	1/4"	"
0'11+3+27	R&R 55.0	RT	4"	"
0'11+70	72.0	LT	2"	EXTEND TO PROPERTY LINE & CAP.
0'12+26	R&R 36.0	LT	1/2"	CONNECT TO EXIST'G HOUSE SERVICE
0'13+00	5.0	LT	1/2"	"
0'13+24	50.0	RT	3/4"	"
0'13+37	4.0	LT	"	"
0'15+21	4.0	LT	"	"
0'15+70	4.0	LT	"	"
0'16+15	4.0	LT	"	"
0'16+32	4.0	LT	"	"
0'16+40	5.0	LT	3/4"	"
0'16+52	5.0	LT	"	"
0'16+84	6.0	LT	4"	CONNECT TO EXIST'G 4" C.I.P. MAIN
0'17+21	4.0	LT	3/4"	CONNECT TO EXIST'G HOUSE SERVICE
0'17+43	6.0	LT	3/4"	"
0'17+60	5.0	LT	3/4"	"
0'17+87	4.0	LT	3/4"	"
0'18+14	4.0	LT	3/4"	"
0'18+25	R&R 4.0	LT	3/4"	"
0'18+31	15.0	RT	2"	FROM C.I.P. LINE TO FLOORS
0'18+36	R&R 4.0	LT	2"	EXTEND TO PROPERTY LINE & CAP.
0'18+74	4.0	LT	3/4"	CONNECT TO EXIST'G HOUSE SERVICE
0'18+96	53.0	RT	"	"
0'19+25	4.0	LT	3/4"	CONNECT TO EXIST'G HOUSE SERVICE
0'19+52	4.0	LT	3/4"	"
0'20+04	55.0	RT	6"	CONNECT TO EXIST'G 6" WOOD STAVE W.M.
0'20+18	4.0	LT	3/4"	CONNECT TO EXIST'G HOUSE SERVICE
0'20+34	4.0	LT	3/4"	"
0'20+60	4.0	LT	3/4"	"
0'20+72	53.0	RT	"	"
0'21+13	4.0	LT	3/4"	"
0'21+15	4.0	LT	3/4"	"
0'21+66	55.0	RT	4"	CONNECT TO EXIST'G 4" WOOD STAVE W.M.
0'22+01	2.0	LT	3/4"	CONNECT TO EXIST'G HOUSE SERVICE
0'22+06	2.0	LT	3/4"	"
0'22+50	2.0	LT	3/4"	"
0'22+99	23+73	LT	"	"
0'23+80	R&R 50.0	RT	1/2"	EXTEND TO PROPERTY LINE & CAP.
0'7+91	4.0	RT	8"	CONN. TO EXIST. W.S. W.M.
0'24+83	MAIN STREET	RT	8"	Extend to Property Line & Cap.
0'0+95	R&R 4.0	RT	1/2"	CONNECT TO EXIST'G HOUSE SERVICE
0'1+74	4.0	RT	1/2"	"
0'1+80	43.0	LT	1/2"	"
0'2+17	4.0	RT	1/2"	"
0'2+38	43.0	LT	1/2"	"
M'10+74	"	LT	"	"
M'11+75	33.0	LT	"	"
M'11+02	"	LT	"	"
M'11+38	"	LT	"	"

### INSTALL SEWER SERVICE CONNECTIONS

STATION	LIN. FT. FROM MAIN	LOCATION	SIZE	REMARKS
0'3+72	13.0	LT	6"	CONN. TO EXIST. HOUSE SEWER
0'5+25	37.0	LT	6"	CAP @ PROPERTY LINE
0'6+30	32.0	LT	6"	"
0'7+30	62.0	LT	6"	"
0'9+44	45.0	LT	6"	CONN. TO EXIST. HOUSE SEWER
0'10+53	63.0	LT	6"	"
0'10+85	63.0	RT	6"	"
0'10+96	32.0	LT	6"	REMOVE TO PROP. LINE LT.
0'11+58	32.0	LT	6"	REMOVE & REPLACE
0'11+92	86.0	LT	6"	"
0'11+92	95.0	RT	6"	"
0'12+15	48.0	LT	6"	"
0'12+87	94.0	LT	6"	"
0'13+17	14.0	LT	6"	CAP @ PROPERTY LINE
0'13+81	77.0	LT	6"	REMOVE & REPLACE
0'16+18	15.0	LT	6"	"
0'16+25	15.0	LT	6"	CONN. TO EXIST. HOUSE SEWER
0'16+38	15.0	LT	6"	CAP @ PROPERTY LINE
0'16+43	15.0	LT	6"	CONN. TO EXIST. HOUSE SEWER
0'16+63	15.0	LT	6"	"
0'16+81	15.0	LT	6"	CONN. TO EXIST. MAIN (BUKEY WAY)
0'16+90	15.0	LT	6"	CONN. TO EXIST. HOUSE SEWER
0'17+55	60.0	LT	6"	REMOVE & REPLACE
0'17+62	66.0	LT	6"	CONN. TO EXIST. HOUSE SEWER
0'17+91	86.0	LT	6"	REMOVE & REPLACE
0'18+25	15.0	LT	6"	"
0'18+38	37.0	LT	6"	CAP @ PROPERTY LINE
0'18+48	15.0	LT	6"	CONN. TO EXIST. HOUSE SEWER
0'18+70	68.0	LT	6"	"
0'18+98	19+02	LT	6"	"
0'19+27	14.0	LT	6"	"
0'19+57	56.0	LT	6"	CAP @ PROPERTY LINE
0'20+10	45.0	RT	6"	"
0'20+15	15.0	LT	6"	CONN. TO EXIST. HOUSE SEWER
0'20+32	15.0	LT	6"	"
0'20+56	15.0	LT	6"	"
0'20+98	15.0	LT	6"	CONN. TO EXIST. TATSUDA WAY LINE
0'21+10	35.0	LT	6"	CAP @ PROPERTY LINE
0'22+02	06.0	LT	6"	"
0'22+30	15.0	LT	6"	"
0'8+92	6.0	RT	6"	"
0'15+50	34.0	LT	6"	"
0'17+00	18.0	LT	6"	"
0'19+46	52.0	RT	6"	"
0'19+66	18.0	LT	6"	"
0'23+53	29.0	LT	6"	"
0'23+80	32.0	LT	8"	"
0'24+91	30.0	LT	6"	"
0'3+67	18.6	LT	8"	"
0'2+90	36.0	LT	8"	"
0'4+90	57.0	RT	8"	CAP @ PROPERTY LINE
0'8+29	57.0	RT	8"	CAP @ PROPERTY LINE
0'1+02	23.0	LT	6"	CONN. TO EXIST. HOUSE SEWER
0'1+29	24.0	RT	6"	"
0'1+56	23.0	LT	6"	"
0'1+82	23.0	LT	6"	"
0'2+01	23.0	LT	6"	"
0'2+26	23.0	LT	6"	"
0'2+41	24.0	RT	6"	"
0'2+45	23.0	LT	6"	"

### REMOVE & INSTALL WATER MAINS

STATION TO STATION	LOCATION FROM	LIN. FT.	SIZE	REMARKS
0'0+39.64 TO 0'4+65	28.0	LT	225	REMOVE EXIST. WOOD STAVE W.M. (SEE SPECS)
0'0+39.64 TO 0'1+26.97	28.0	LT	150	INSTALL ON VIADUCT. SEE DETAIL 'D' SHEET #WS-9
0'0+42.64 TO 0'4+79	VARIES	LT	136	REMOVE EXIST. WOOD STAVE W.M. (SEE SPECS)
0'0+42.64 TO 0'10+98.81	11.0	RT	1120	INSTALL NEW D.I.P. W.M. (SEE SPECS)
M'10+00 TO 0'10+55	20.0	RT	272	REMOVE EXIST. WOOD STAVE W.M. (SEE SPECS)
M'10+00 TO 0'10+55	20.0	RT	272	INSTALL NEW D.I.P. W.M. (SEE SPECS)
0'10+98.81 TO 0'13+96.95	23.5	LT	315	REMOVE EXIST. WOOD STAVE W.M. (SEE SPECS)
0'10+98 TO 0'13+96	24.0	LT	284	INSTALL NEW D.I.P. W.M. (SEE SPECS)
0'15+821 TO 0'24+05	26.0	LT	887	REMOVE EXIST. WOOD STAVE W.M. (SEE SPECS)
0'15+821 TO 0'24+05	24.0	LT	892	INSTALL NEW D.I.P. W.M. (SEE SPECS)
MAIN STREET				
0'0+14.50 TO 0'3+02	19.5	RT	200	INSTALL NEW D.I.P. W.M. (SEE SPECS)
0'0+20 TO 0'2+42	5.0	RT	222	REMOVE EXIST. WOOD STAVE W.M. (SEE SPECS)
0'0+14.50 TO 0'2+58	11.0	RT	244	REMOVE EXIST. WOOD STAVE W.M. (SEE SPECS)
M'10+27 TO 0'7+91	—	—	125.0	REMOVE EXIST. WOOD STAVE W.M. (SEE SPECS)

### INSTALL WATER VALVES

STATION	TYPE	SIZE	REMARKS
0'4+72	G.V.	8"	INSTALL EXIST. WOOD STAVE W.M. (SEE DET. 'H' SHEET #WS-8)
0'4+78	G.V. & R.V.	8"	RELOCATE - SEE NOTE, SHT #WS-2
M'10+02	G.V.	8"	"
0'10+55	G.V.	8"	2EA. - SEE DET. 'I' SHT #WS-2
0'11+03	G.V.	10"	"
0'15+26	G.V.	10"	"
0'20+07	G.V.	10"	"
0'26+12	G.V.	8"	ADJ. EXIST. TO GRADE
0'2+15	G.V.	8"	SEE PLAN - SHEET #WS-7
0'0+163 (11RT)	G.V.	6"	ADJ. EXIST. G.V. TO NEW GRADE - SEE PLAN SHT #WS-7

### ALTER & INSTALL MANHOLES

STATION	LOCATION FROM	FIN. GRADE	INVERT EL.	REMARKS
0'2+77	34.0	RT	22.0	TO OUTFALL (-4.0')
0'4+89.95	30.0	LT	20.05	DET. 'A' SHT #WS-8
0'8+29.25	26.0	LT	22.0	DET. 'B' SHT #WS-8
0'24+05	0	—	34.99	ADJUST TO GRADE
M'11+60	0	—	—	SET IN FIELD
0'10+25	15.0	LT	—	REMOVE - SEE SPECS
0'10+28	20.0	LT	22.05	DET. 'B' SHT #WS-8
0'10+96	2.0	RT	—	REMOVE - SEE SPECS
0'11+10	13.5	LT	22.0	DET. 'B' SHT #WS-8
0'13+80	13.5	LT	21.2	DET. 'A' SHT #WS-8
0'16+40	13.5	LT	—	LIFT STATION - SEE DET. SHEET #12
0'16+82	9.0	LT	—	REMOVE - SEE SPECS
0'19+24	10.0	LT	—	REMOVE - SEE SPECS
0'20+10	13.5	LT	26.2	17.49
0'22+30	16.0	LT	36.0	33.50
0'26+09	22.0	LT	29.2	—
- MAIN STREET				
0'0+50	0	—	22.4	18.47

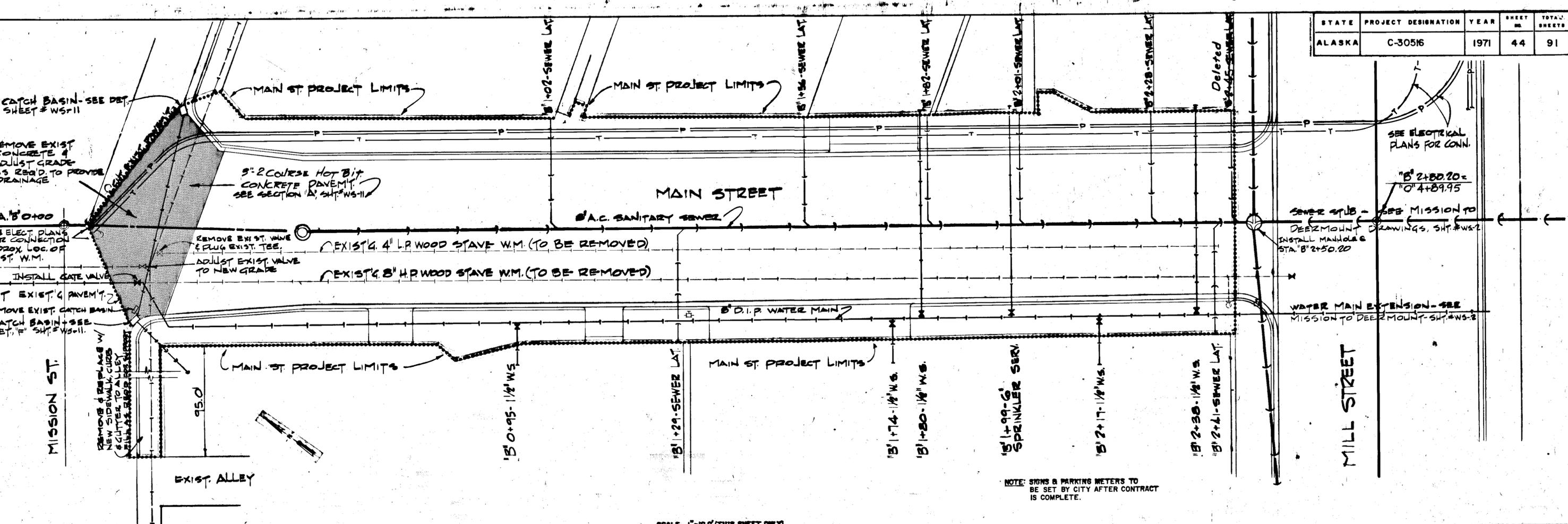
### REMOVE & INSTALL SEWER MAINS

STATION TO STATION	LOCATION FROM	LIN. FT.	SIZE	REMARKS
OUTFALL	—	—	—	—
0'2+77	34.0	RT	70	14'
0'2+77	26.0	LT	885	12'
0'11+10	15.0	LT	270	10'
0'13+80	13.0	LT	160	6'
0'15+40	13.0	LT	695	8'
0'15+40	13.0	LT	695	8'
0'22+35	0	—	199.5	8'
0'0+50	0	—	199.5	8'

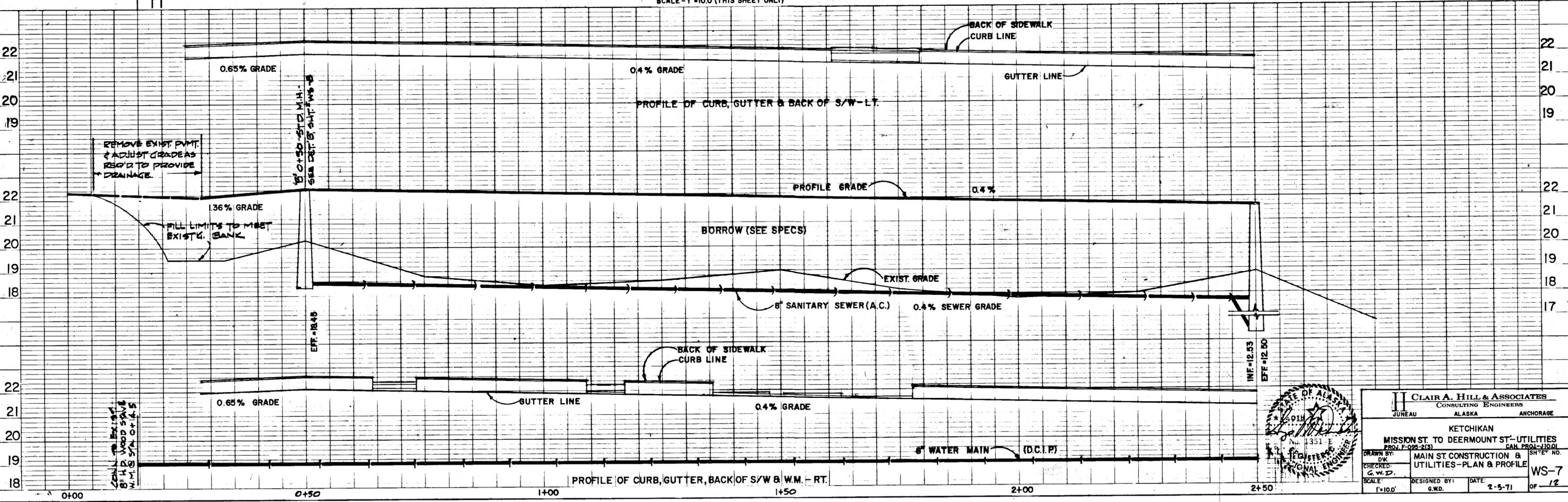
### INSTALL SPRINKLER SERVICE

STATION	LIN. FT. FROM MAIN	LOCATION	SIZE	REMARKS
0'1+75	VARIES	LT	6"	FRONT YARD
0'2+50	VARIES	LT	6"	FRONT YARD
0'3+75	VARIES	LT	6"	FRONT YARD
0'13+00	VARIES	LT	6"	FRONT YARD
0'18+75	VARIES	LT	6"	FRONT YARD
0'19+50	VARIES	LT	6"	FRONT YARD
0'1+50	VARIES	LT	6"	FRONT YARD
0'0+50	VARIES	RT	6"	FRONT YARD
M'11+00	VARIES	LT	6"	FRONT YARD

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	C-30516	1971	44	91



SCALE - 1"=10.0' (THIS SHEET ONLY)



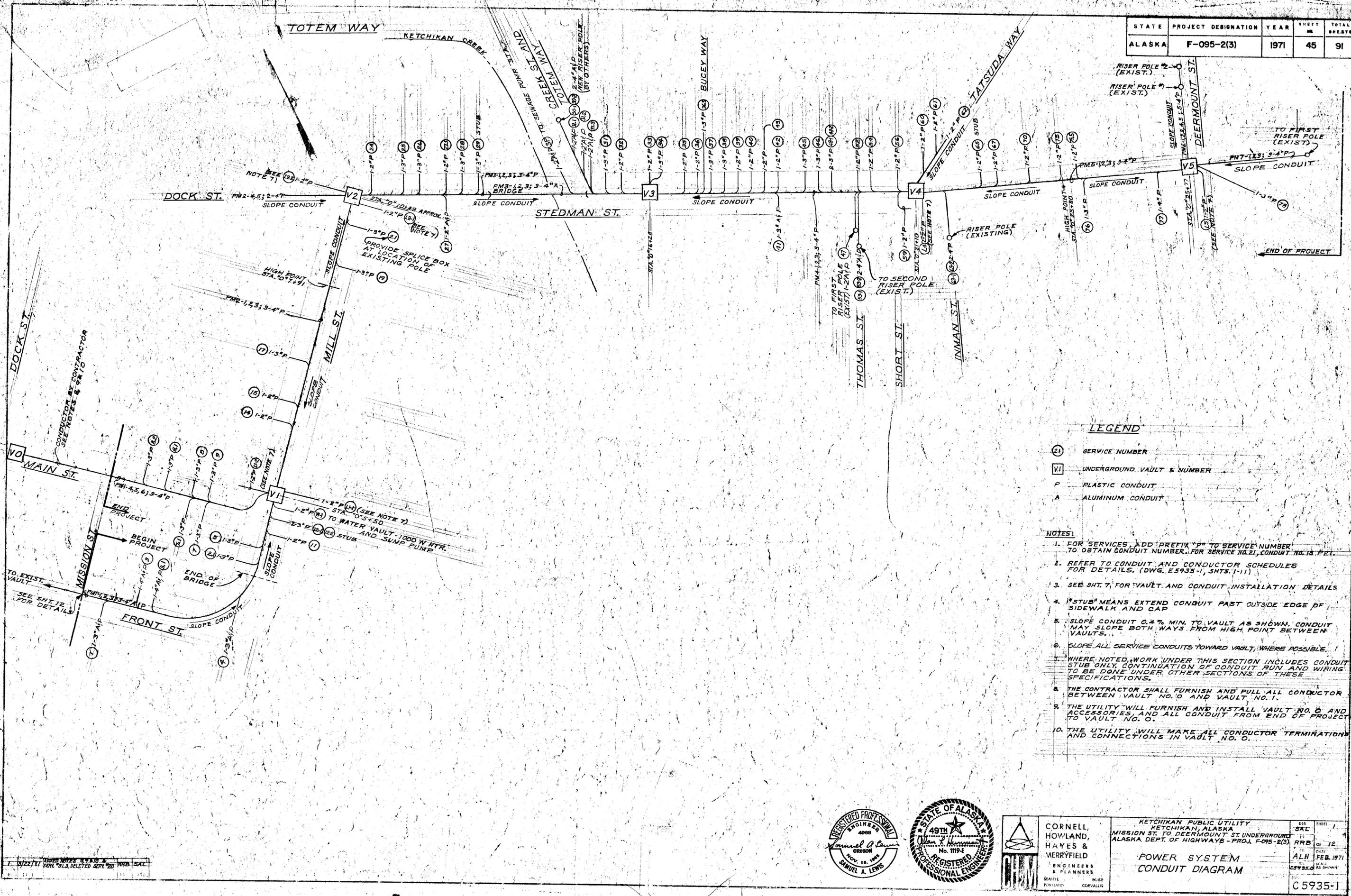
**CLAIR A. HILL & ASSOCIATES**  
CONSULTING ENGINEERS  
JUNEAU ALASKA ANCHORAGE

KETCHIKAN  
MISSION ST. TO DEERMOUNT ST.-UTILITIES  
PROJ. F-095-2(S) CAR. PROJ.-11001

MAIN ST. CONSTRUCTION & UTILITIES-PLAN & PROFILE  
SHEET NO. WS-7

DESIGNED BY: G.W.D. DATE: 2-5-71  
SCALE: 1"=10.0'

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	F-095-2(3)	1971	45	91



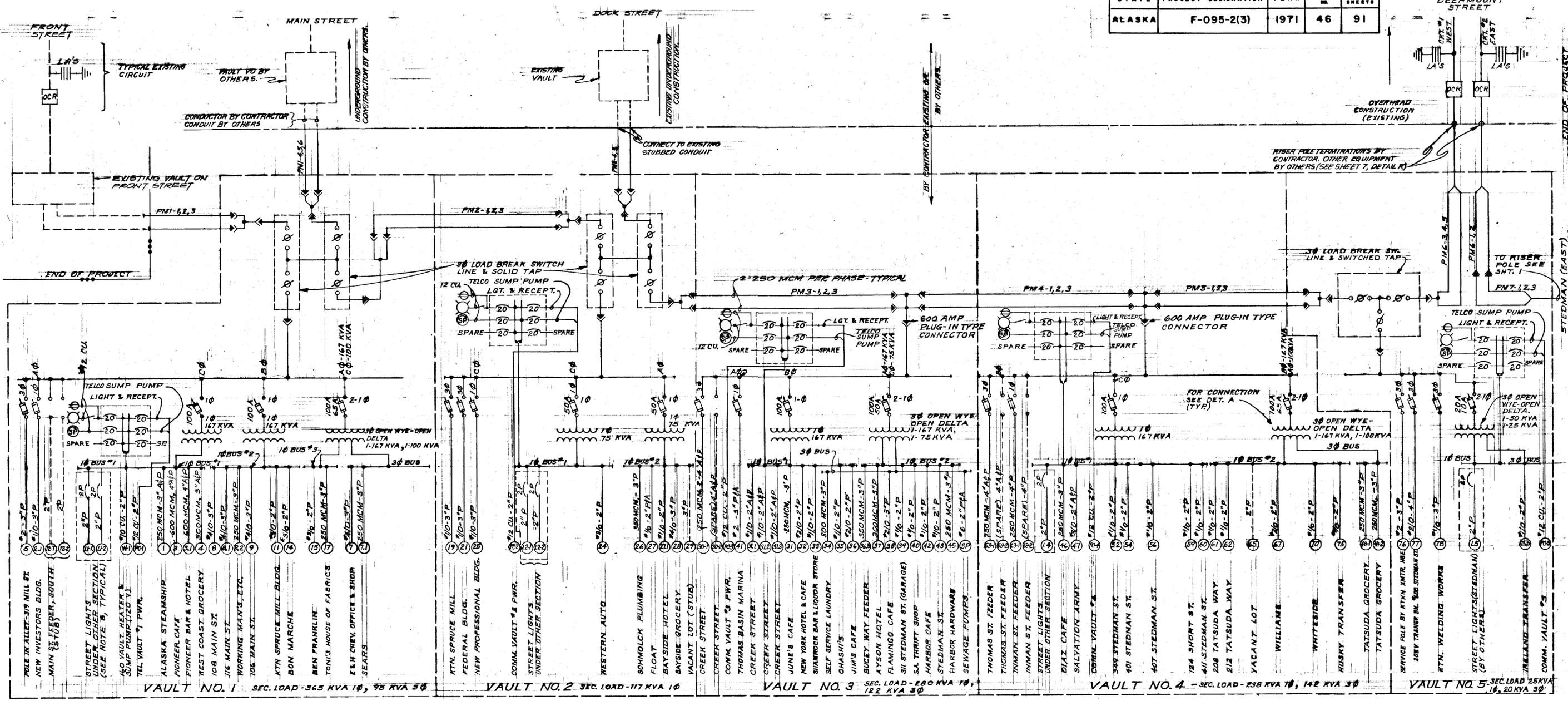
- LEGEND**
- (21) SERVICE NUMBER
  - (VI) UNDERGROUND VAULT & NUMBER
  - P PLASTIC CONDUIT
  - A ALUMINUM CONDUIT
- NOTES:**
1. FOR SERVICES, ADD PREFIX "P" TO SERVICE NUMBER TO OBTAIN CONDUIT NUMBER. FOR SERVICE NO. 21, CONDUIT NO. IS P21.
  2. REFER TO CONDUIT AND CONDUCTOR SCHEDULES FOR DETAILS. (DWG. E5935-1, SHTS. 1-11)
  3. SEE SHT. 7, FOR VAULT AND CONDUIT INSTALLATION DETAILS
  4. "STUB" MEANS EXTEND CONDUIT PAST OUTSIDE EDGE OF SIDEWALK AND CAP
  5. SLOPE CONDUIT 0.4% MIN. TO VAULT AS SHOWN. CONDUIT MAY SLOPE BOTH WAYS FROM HIGH POINT BETWEEN VAULTS.
  6. SLOPE ALL SERVICE CONDUITS TOWARD VAULT, WHERE POSSIBLE.
  7. WHERE NOTED, WORK UNDER THIS SECTION INCLUDES CONDUIT STUB ONLY. CONTINUATION OF CONDUIT RUN AND WIRING TO BE DONE UNDER OTHER SECTIONS OF THESE SPECIFICATIONS.
  8. THE CONTRACTOR SHALL FURNISH AND PULL ALL CONDUCTOR BETWEEN VAULT NO. 0 AND VAULT NO. 1.
  9. THE UTILITY WILL FURNISH AND INSTALL VAULT NO. 0 AND ACCESSORIES, AND ALL CONDUIT FROM END OF PROJECT TO VAULT NO. 0.
  10. THE UTILITY WILL MAKE ALL CONDUCTOR TERMINATIONS AND CONNECTIONS IN VAULT NO. 0.



CORNELL, HOWLAND, HAYES & MERRYFIELD ENGINEERS & PLANNERS SEATTLE PORTLAND BOISE CORVALLIS	KETCHIKAN PUBLIC UTILITY KETCHIKAN, ALASKA MISSION ST. TO DEERMOUNT ST. UNDERGROUND ALASKA DEPT. OF HIGHWAYS - PROJ. F-095-2(3)	DES. SHEET 1 SAL OF 12 RRB OF 12 ALH FEB. 1971 AS SHOWN C 5935-1
	<b>POWER SYSTEM          CONDUIT DIAGRAM</b>	

REVISED NOTES 5/22/71 SER. 51.3, DELETED SER. 20 PER SAJ

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	F-095-2(3)	1971	46	91



VAULT NO. 1 SEC. LOAD - 365 KVA 10, 75 KVA 30  
 VAULT NO. 2 SEC. LOAD - 117 KVA 10  
 VAULT NO. 3 SEC. LOAD - 280 KVA 10, 122 KVA 30  
 VAULT NO. 4 - SEC. LOAD - 238 KVA 10, 142 KVA 30  
 VAULT NO. 5 SEC. LOAD 25 KVA 10, 20 KVA 30

VAULT NO.	10 BUS #1	10 BUS #2	10 BUS #3	30 BUS
1	120	104	72	85
2	48	00	—	—
3	175	100	—	122
4	150	00	—	142
5	25	—	—	20

\*BASED PEAK MWPS

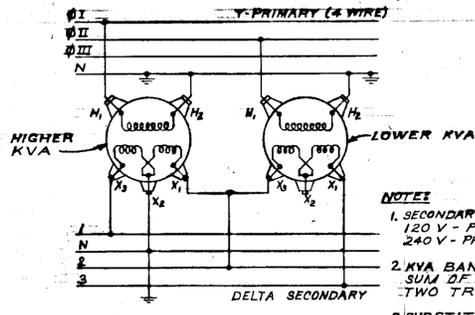
VAULT NO.	10 LOAD - 2300 VOLT	ΦA	ΦB	ΦC
1	TRANSF SERVICES (EST.)	107	107	107
2	TRANSF SERVICES (EST.)	75	—	75
3	TRANSF SERVICES (EST.)	107	107	75
4	TRANSF SERVICES (EST.)	100	107	107
5	TRANSF.	25	—	—
TOTAL		359	301	304

LEGEND

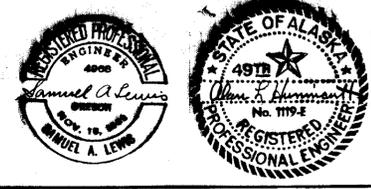
- WTL CIRCUIT RECLUSER, 3-PHASE, POLE MOUNTED, 5 KV
- TRANSFORMER, DISTRIBUTION TYPE
- LOAD BREAK SWITCH, 600 AMP, 15 KV, U.S. DIST. TYPE
- FUSED DISCONNECT SWITCH, LOAD BREAK, 1-PHASE OR 3-PHASE AS INDICATED, 5 KV.
- DISCONNECTIBLE TERMINATION U.S. DIST. TYPE - USE LOAD BREAK TYPE WHERE NOTED.
- CUSTOMER SERVICE NUMBER.
- VAULT LIGHTING FIXTURE 120 VOLT, 200 WATT INCANDESCENT.
- DUPLEX RECEPTACLE, 120 VOLT, 15 AMP., WP, GROUNDING TYPE
- SUMP PUMP
- ALUMINUM CONDUIT
- PLASTIC CONDUIT

NOTE

1. MW. RATING OF FUSES FOR PRIMARY SERVICES TO BE SELECTED BY UTILITY.
2. KW SHOWN FOR EACH VAULT ARE FOR PRESENT EXISTING 120/240 VOLT SERVICE LOAD, AND ARE APPROXIMATE ONLY.
3. ALL TRANSFORMERS ARE 2400-120/240 VOLT AND TO BE CONNECTED AS SHOWN FOR BEST LOAD BALANCING. TRANSFORMERS FURNISHED BY OWNER.
4. TRANSFORMER PRIMARY AND SECONDARY WIRE SIZES ARE SHOWN ON SHEET 6 DETAIL "F".
5. CONDUCTOR SIZES AS SHOWN ABOVE. SEE DWG. E5995-1 FOR CONDUIT & CONDUCTOR INFORMATION.
6. STREET LIGHT CIRCUITS TO BE 120/240 VOLT, 3-WIRE. EQUIPMENT AND WIRING BY OTHERS.
7. CONDUCTORS ARE ALUMINUM UNLESS OTHERWISE NOTED.
8. FOR ITEMS NOTED "UNDER OTHER SECTION", SEE NOTE 7, SHEET 1.
9. FOR MINIMUM CONDUCTOR DIAMETER, SEE NOTE 4, SHEET 6.



- NOTES
1. SECONDARY VOLTAGE: 120 V - PHASE TO GND, 240 V - PHASE TO PHASE
  2. KVA BANK CAPACITY = 86.6% OF SUM OF THE RATINGS OF THE TWO TRANSFORMERS
  3. SUBSTITUTE APPROPRIATE PHASE (A, B & C) FROM ONE-LINE DIAG. ABOVE FOR TYPICAL PHASE SHOWN HERE AS I, II & III.



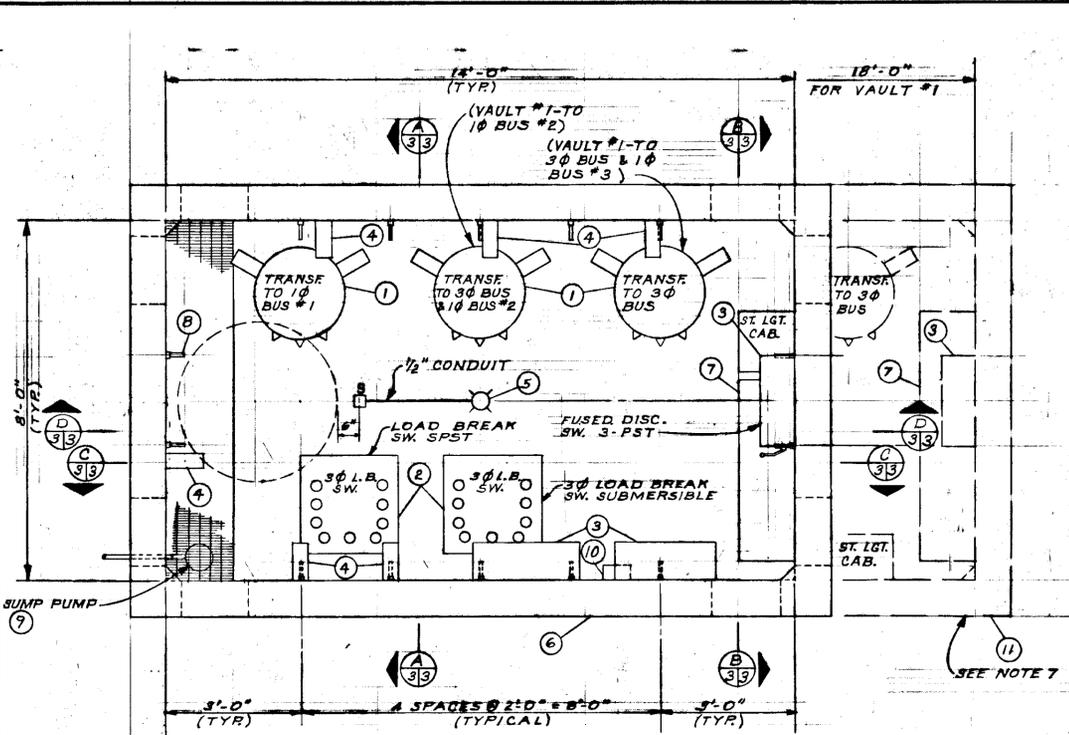
CORNELL, HOWLAND, HAYES & MERRYFIELD  
 ENGINEERS PLANNERS ECONOMISTS

KETCHIKAN PUBLIC UTILITY KETCHIKAN, ALASKA  
 MISSION ST. TO DEERMOUNT ST. UNDERGROUND ALASKA DEPT. OF HIGHWAYS PROJ. F-095-2(3)  
 POWER - ONE LINE DIAGRAM

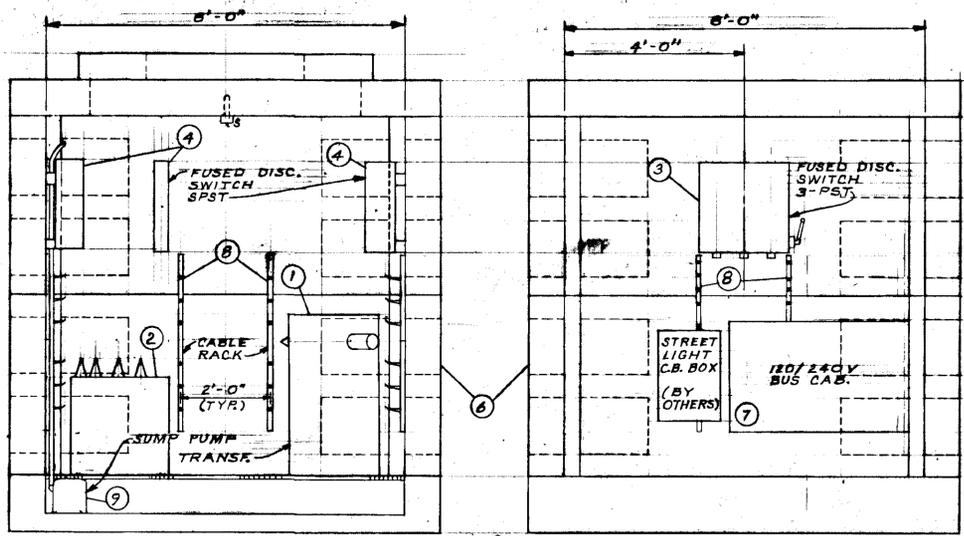
DWG NO.	SAL	SHEET	2
CHK'D BY	KJR	OF	12
DATE	ALH	FEB.	1971
BY	CB	SCALE	AS SHOWN
DWG NO.	E5995-1		

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	F-095-2(3)	1971	47	91

MATERIAL LIST		
ITEM NO.	DESCRIPTION	MANUFACTURER OR SOURCE
1	TRANSFORMER, DISTRIBUTION, CONVENTIONAL, SINGLE PHASE, 2400-120/240 VOLT (SEE NOTE 2). LOCATE AS NOTED ON PLAN. THIS SHT. FOR BUS CONNECTIONS SEE SHT. 6, DETAILS A & F.	FURNISHED BY OWNER
2	LOAD BREAK SWITCH, 5KV, 3 PHASE, SUBMERSIBLE, INDEPENDENT OPER. LOOP & SWITCHED TAP OR LOOP & SOLID TAP AS NOTED.	MCGRAW-EDISON TYPE DS
3	FUSED DISCONNECT SWITCH, 3-PHASE, 5KV, 600 AMP SW. GANG OPERATED BY HOT-STICK. SILVER SAND FUSE, AMPACITY AS INDICATED, TYPE A FUSE.	KEARNEY 150-QUENSUR
4	FUSED DISCONNECT SWITCH, SINGLE PHASE, 5000 VOLT, 200 AMP SW. HOOK STICK OPERATED, INDOOR SILVER SAND FUSE, AMPACITY AS INDICATED, CLT OR CLT-1 FUSE.	WESTINGHOUSE TYPE EFD
5	LIGHT FIXTURE ENCLOSED & GASKETED WITH GUARD, 120V, 200 W INCAND.	CROUSE HINDS #YXHF12
6	PRECAST CONCRETE VAULT, 8'-0" x 8'-0" x 14'-0" INSIDE DIMENSIONS. TOP SECTION #814-LA-80-E, RISER ADAPTOR #42-410B, W/ INSERTS FOR LADDER & SOLID COVER #4265 W/RETRACTABLE HANDLE.	CONC. CONDUIT CO. #814-LA-80-E (DWG. 814-LA)
7	BUS CABINET 120V/240V	SEE SHT. 6 DET. A & DET. C
8	CABLE RACK 22 1/2" LONG	RACK-CHANCE #1125 HOOKS-CHANCE #1131, #1132, #1133
9	SUMP PUMP, SUBMERSIBLE, 3200 GRH. CAPACITY AT DISCHARGE HEAD OF 10 FT., 1/3 HP, SINGLE PHASE, 115 V, 60 HERTZ, ALL BRONZE, AUTOMATIC WATER LEVEL CONTROL TO START PUMP BEFORE WATER REACHES TOP OF SUMP.	HYDROMATIC PUMP CO. MODEL NO. SP33AB
10	DISTRIBUTION CABINET, MAIN LUGS ONLY, CIRCUIT BREAKERS AS SHOWN ON ONE-LINE DIAG. SHT. 2	SQUARE D TYPE QO
11	PRECAST CONC. VAULT, SAME AS ITEM 6, EXCEPT 8'-0" x 8'-0" x 18'-0" INSIDE DIM.	CONC. CONDUIT CO. #818-LA-80-E (DWG. 818-LA)

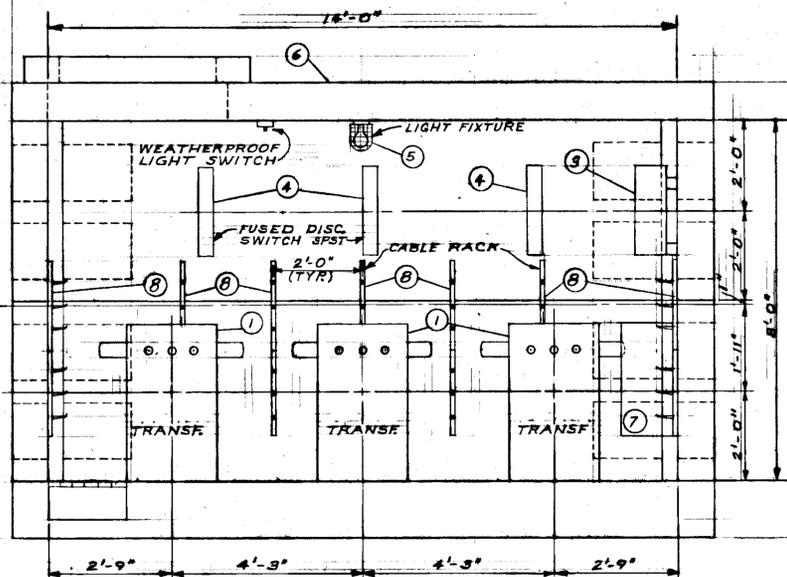


**PLAN**  
**POWER VAULT**  
1/2" = 1'-0"

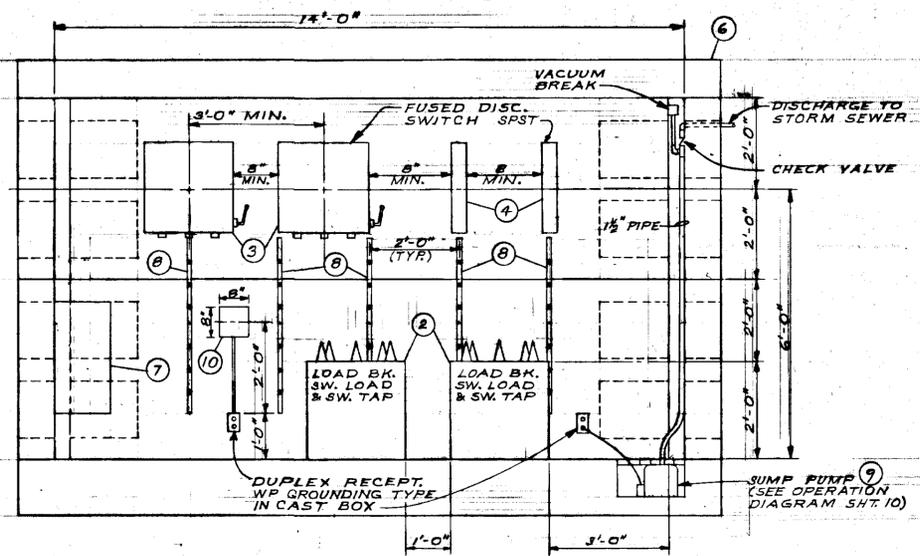


**SECTION A**  
1/2" = 1'-0"

**SECTION B**  
1/2" = 1'-0"



**SECTION D**  
1/2" = 1'-0"



**SECTION C**  
1/2" = 1'-0"

1. PRECAST CONCRETE VAULT PER CONCRETE CONDUIT CO. DWG. 814 LA VAULTS #2,3,4 & 5; 818 LA VAULT #1.
2. LAYOUT OF EQUIPMENT SHOWN HERE IS TYPICAL ONLY. INSTALL ONLY EQUIPMENT REQUIRED FOR EACH VAULT. SEE ONE LINE DIAGRAM, SHT. 2 FOR REQUIREMENTS.
3. FASTEN EQUIPMENT TO VAULT WALLS BY MEANS OF THE 1/2" INSERTS, CAST IN WALLS WHERE AVAILABLE.
4. FOR MOUNTING EQUIPMENT WHERE INSERTS ARE NOT AVAILABLE, INSTALL "RED HEAD" INSERTS, OR SIMILAR EXPANSION SHIELD.
5. UNLESS OTHERWISE NOTED, TYPE AND MANUFACTURER OF EQUIP LISTED ARE TO BE USED AS A GUIDE IN SELECTING THE ITEMS REQUIRED. EQUIPMENT OF SIMILAR QUALITY AND CHARACTERISTICS IS ACCEPTABLE IF APPROVED BY THE ENGINEER.
6. SEE SHT. 6 FOR POWER VAULT ELECTRICAL CONNECTION DETAILS.
7. VAULT NO. 1 TO BE 8' x 8' x 18' TO PERMIT INSTALLATION OF 4 TRANSFORMERS. ARRANGE EQUIP ACCORDINGLY.

SECTION OR DETAIL DESIGNATION  
SHEET WHERE SECTION OR DETAIL IS SHOWN  
SHEET WHERE SECTION OR DETAIL IS TAKEN  
**SECTION DESIGNATION**



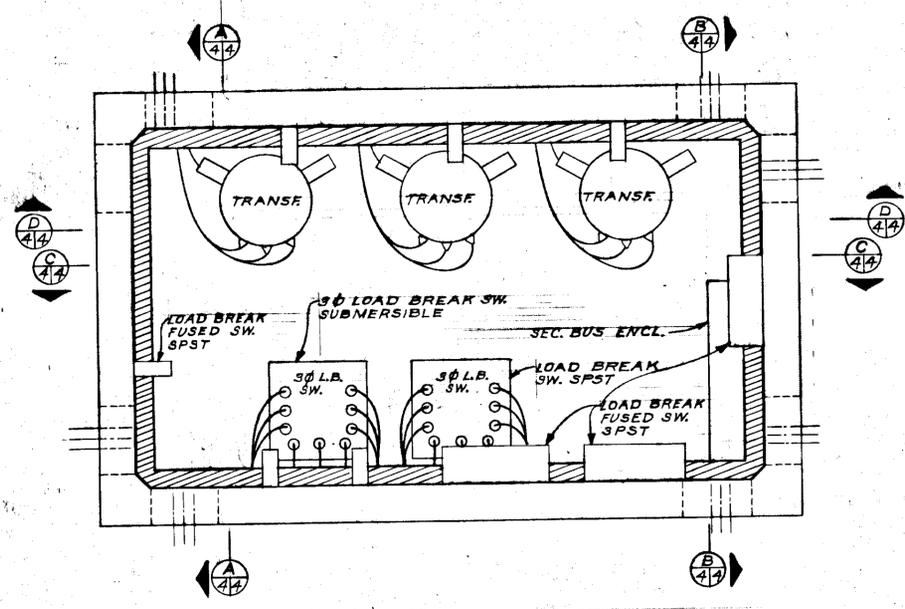
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ENGINEERS PLANNERS ECONOMISTS

KETCHIKAN PUBLIC UTILITY  
KETCHIKAN, ALASKA  
MISSION ST. TO DEERMOUNT ST. UNDERGROUND  
ALASKA DEPT. OF HIGHWAYS - PROJ. F-095-2(3)  
**POWER - TYPICAL LAYOUT OF ELECTRICAL EQUIP IN VAULT**

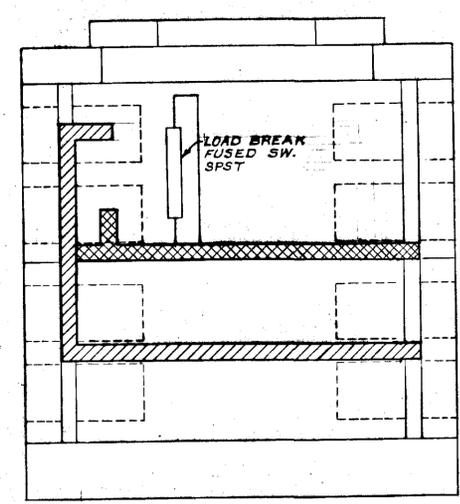
DES. SAL.	OR RRB.	DATE	SCALE
		FEB. 1971	AS SHOWN
DWG. NO.			
C5935-1			

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	F-095-2(3)	1971	48	91

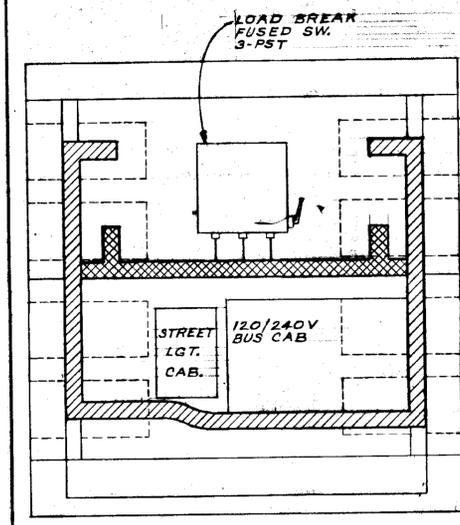
3/4" x 10'-0" MIN. GROUND ROD TO EXTEND 4'-0" MIN. BELOW BOTTOM OF VAULT. RUN GROUND WIRE THROUGH CONDUIT KNOCKOUT AND GROUT IN. CADWELD CONNECTIONS



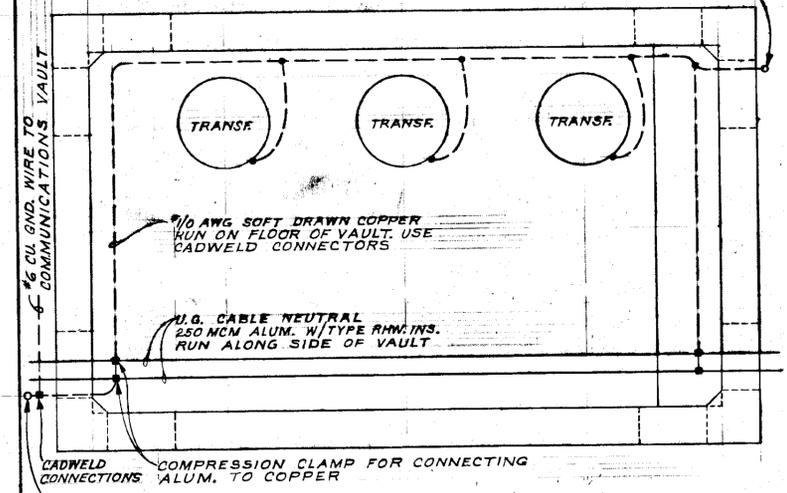
**PLAN  
POWER VAULT**



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

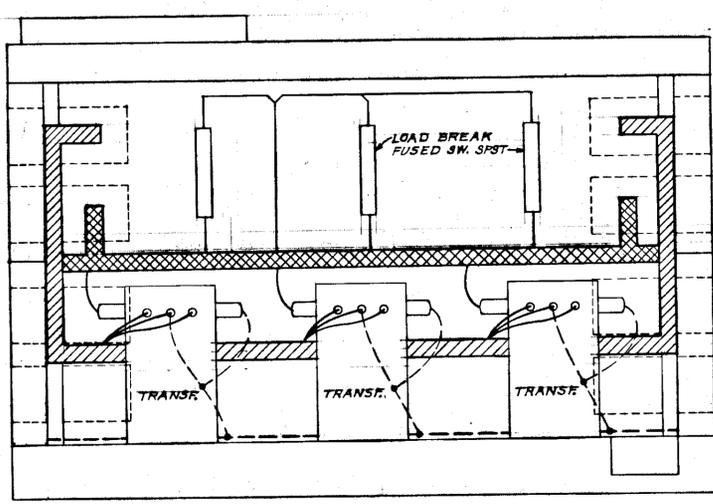


**SECTION B**  
1/2" = 1'-0"

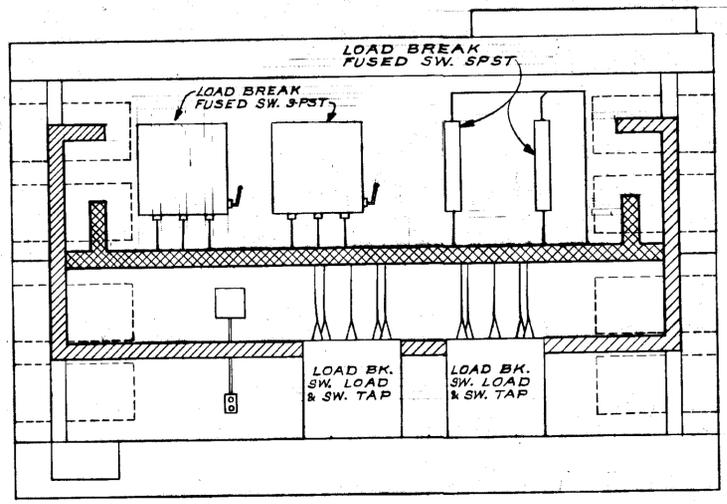


- NOTES:**
1. SEE SECTION (D) FOR TRANSFORMER GROUNDING.
  2. GROUND ALL NON-CURRENT CARRYING METAL FRAMES, ENCLOSURES, ETC. USE #6 AWG. CU. MIN.
  3. CONNECT SECONDARY NEUTRALS TO #2 CU. GND. CABLE. USE APPROVED COMPRESSION CONNECTORS FOR CU. TO ALUM. CONNECTIONS.

**GROUNDING PLAN  
POWER VAULT**  
1/2" = 1'-0"



**SECTION D**  
1/2" = 1'-0"



**SECTION C**  
1/2" = 1'-0"

**LEGEND**

- Secondary Cable Routing Area
- Primary Cable Routing Area
- Area Occupied by Both Primary and Secondary Cable (Plan View)

- NOTE:**
1. CABLE ROUTING AREAS SHOWN INDICATE RELATIVE LOCATION, AND IS NOT INTENDED TO CONFINED CABLES TO AREAS SHOWN.
  2. MOUNT ALL CABLES ON RACKS SHOWN ON SHT. 3. INSTALL SUFFICIENT SUPPORTS TO ADEQUATELY SUPPORT CABLES. LASH CABLES SECURELY TO SUPPORTS.
  3. SEE SHT. 3 FOR TYPICAL EQUIPMENT LAYOUT.
  4. SEE SHT. 6 FOR ELECTRICAL CONNECTIONS.
  5. ROUTE CABLES SO THAT MIN. BENDING RADIUS AS RECOMMENDED BY MANUFACTURER IS NOT EXCEEDED.



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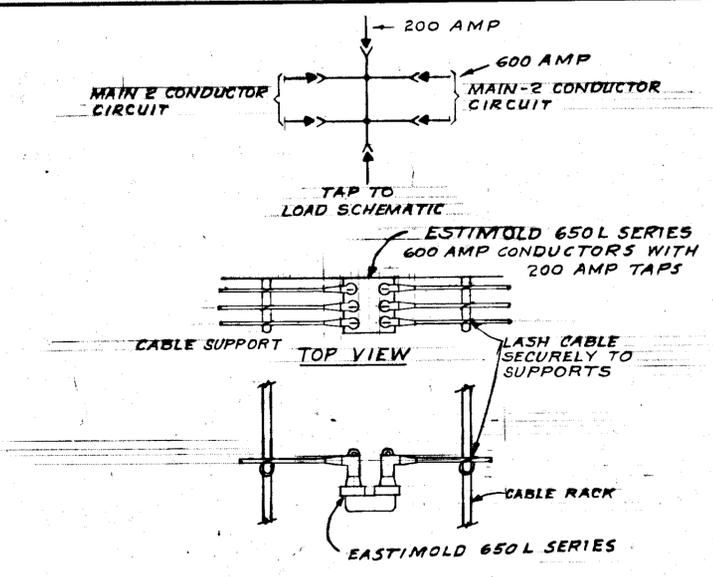
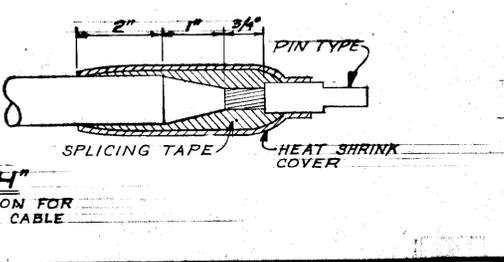
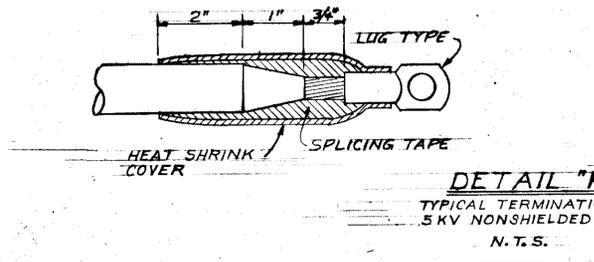
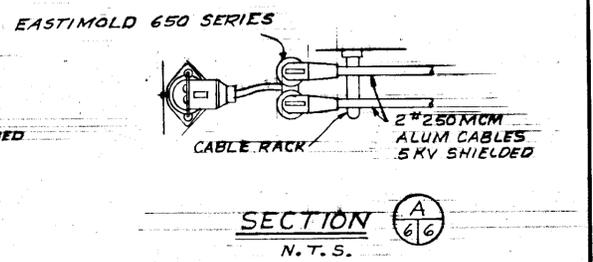
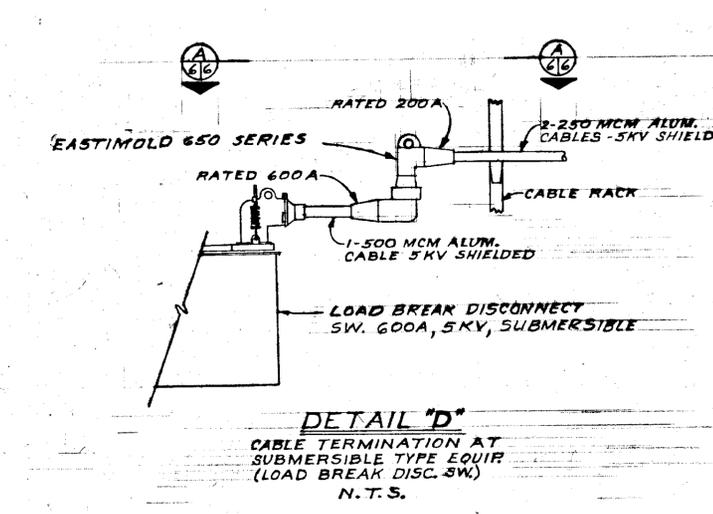
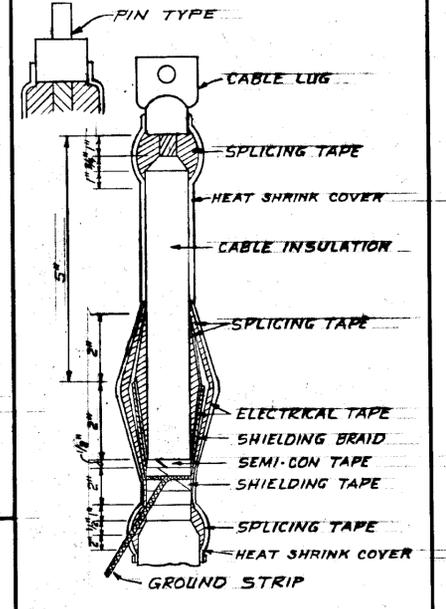
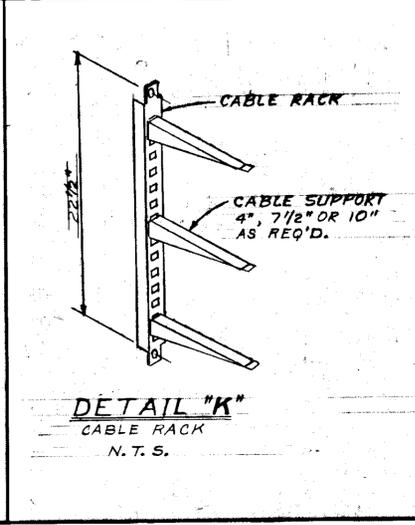
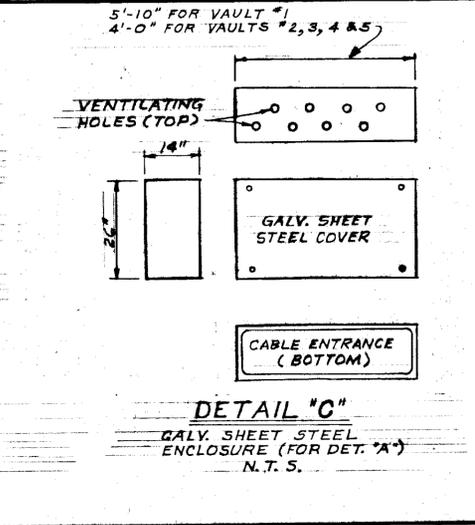
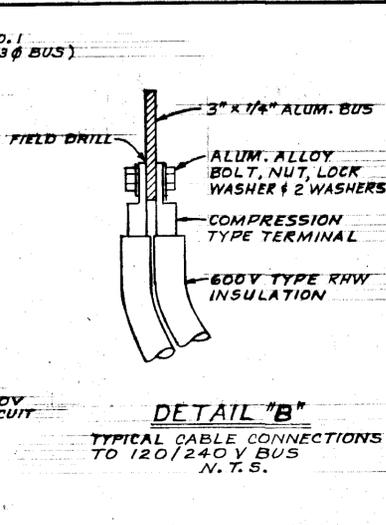
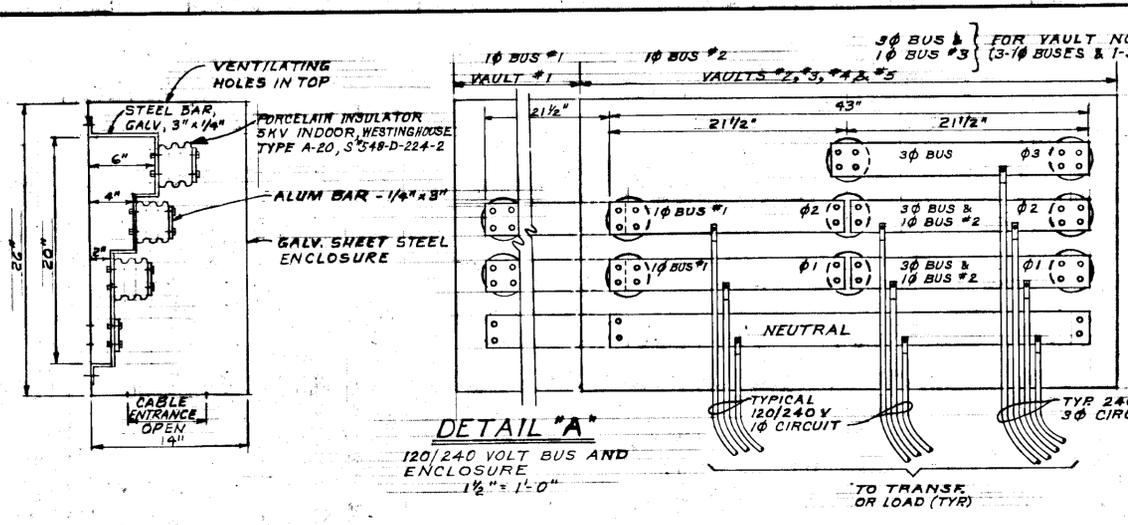
KETCHIKAN PUBLIC UTILITY  
KETCHIKAN, ALASKA  
MISSION ST. TO DEERMOUNT ST. UNDERGROUND  
ALASKA DEPT. OF HIGHWAYS - PROJ. F-095-2(3)

**POWER VAULT  
TYPICAL CABLE ROUTING  
AND GROUNDING**

DESIGNED BY	SAL	DATE	FEB. 1971
DRAWN BY	ALH	SCALE	AS SHOWN
CHECKED BY	DWC		

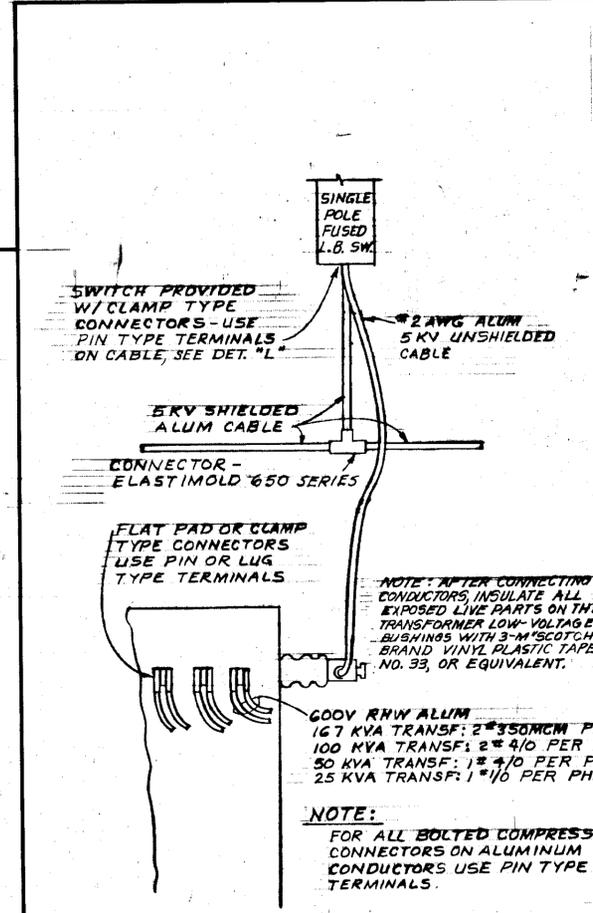
C 5935-



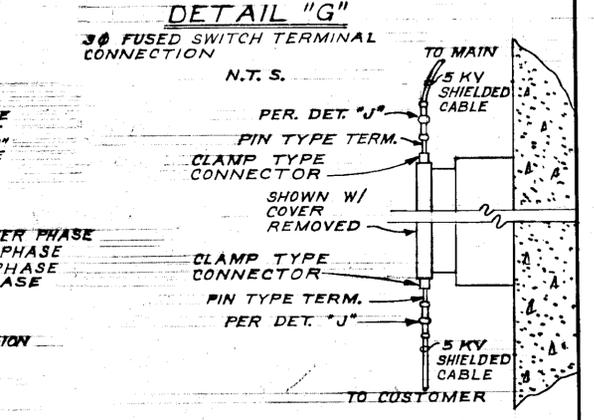
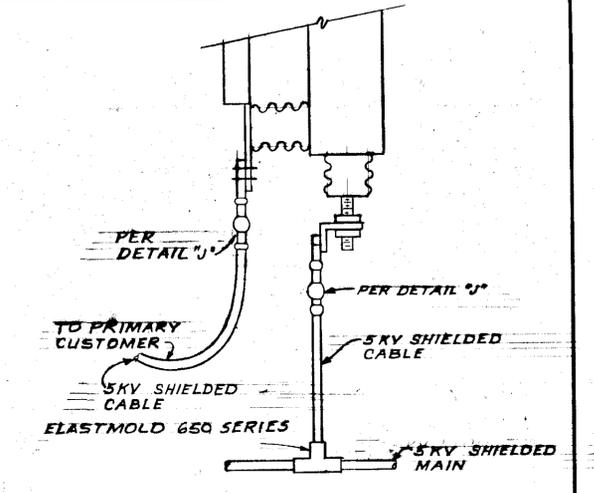


**NOTE:**  
 1. MAINS TO BE 250 MCM ALUM, SHIELDED.  
 2. TAPS FROM NON-SUBMERSIBLE EQUIP MAY BE UNSHIELDED CABLE

**DETAIL 'E'**  
 TYPICAL 5KV JUNCTION POINT IN VAULT  
 N.T.S.

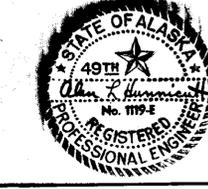


**DETAIL 'F'**  
 TRANSFORMER TERMINAL CONNECTIONS  
 N.T.S.



**DETAIL 'L'**  
 SINGLE PHASE FUSED SWITCH TERM. CONNECTION  
 N.T.S.

- NOTES:**
- SUBMERSIBLE TYPE CONNECTORS TO BE USED ON SUBMERSIBLE EQUIPMENT. CONNECTORS FOR NON-SUBMERSIBLE EQUIPMENT NEED NOT BE SUBMERSIBLE.
  - MANUFACTURERS AND TYPE SHOWN ARE INTENDED AS A GUIDE. SUITABLE EQUIPMENT OF OTHER MANUFACTURERS IS ACCEPTABLE IF APPROVED BY THE ENGINEER.
  - ALL CABLE TERMINATIONS SHALL BE MADE IN STRICT COMPLIANCE WITH CABLE MANUFACTURER'S RECOMMENDATIONS.
  - 200 AMP UNDERGROUND CONDUCTORS SPECIFIED HEREIN REQUIRE A CONDUCTOR WITH A MINIMUM DIAMETER OF .495 INCHES OVER THE INSULATION, WITH SHIELDING AND JACKET REMOVED. #2 AWG 5KV CONDUCTOR OF SOME MANUFACTURERS IS TOO SMALL TO MEET THIS REQUIREMENT.



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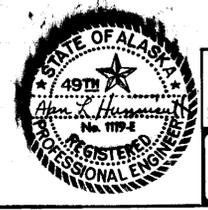
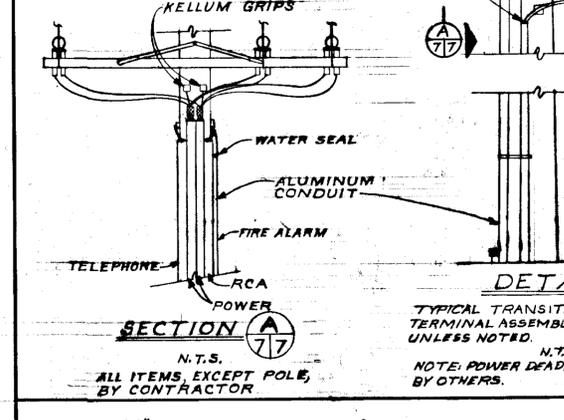
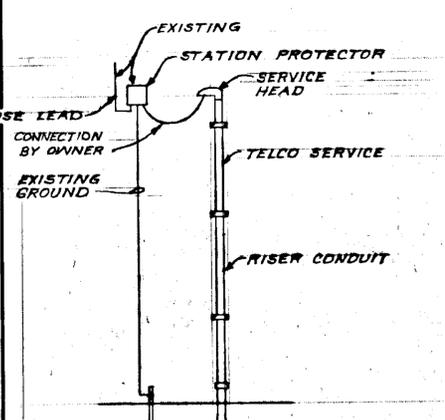
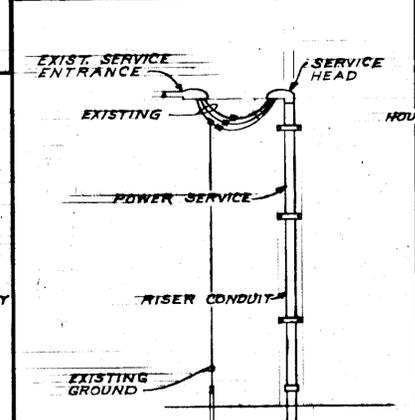
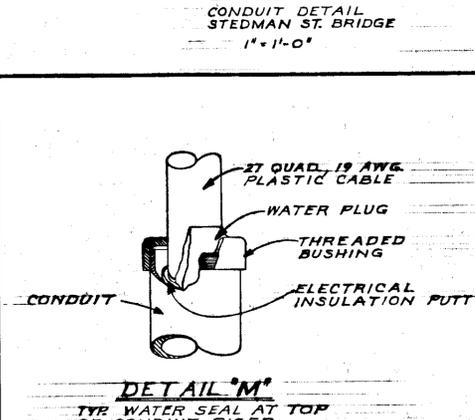
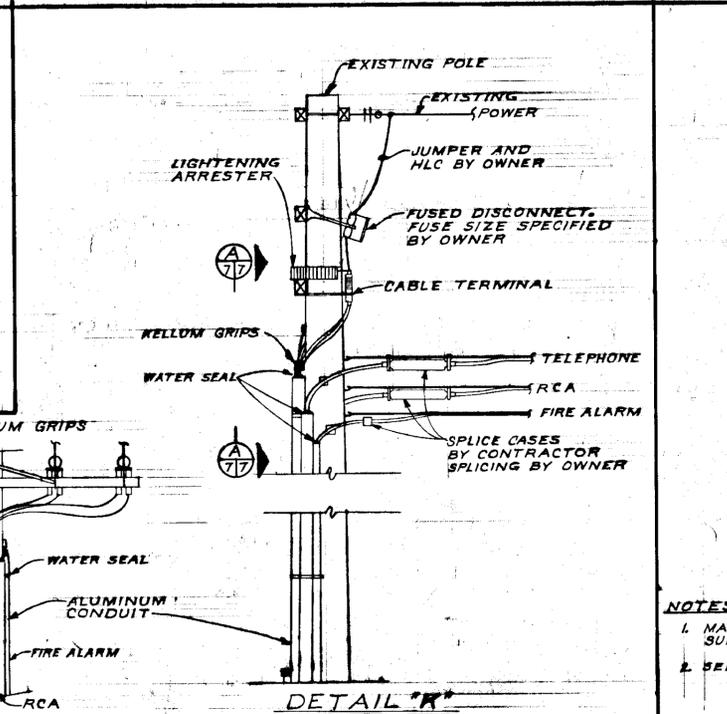
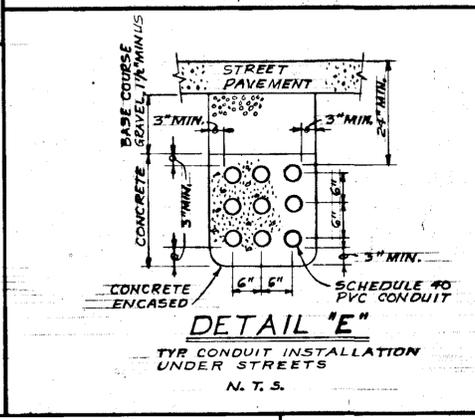
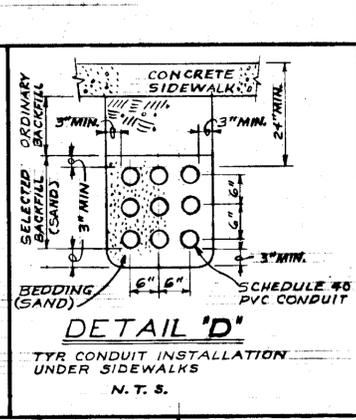
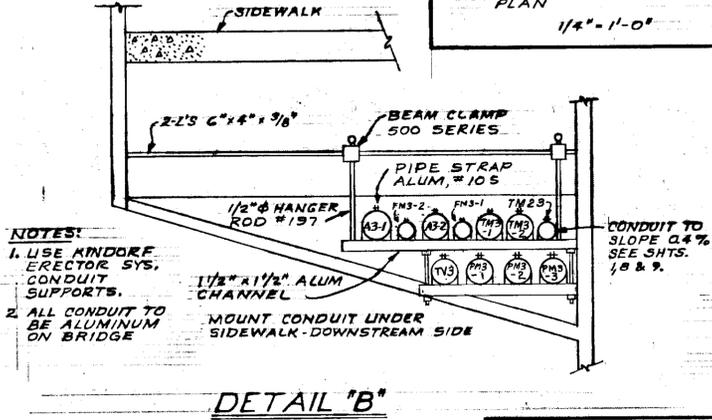
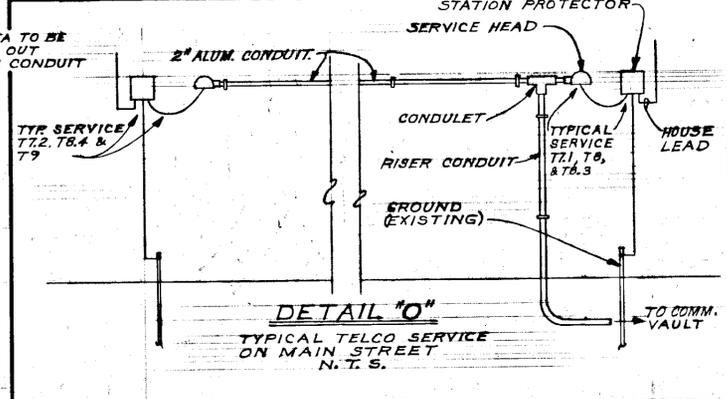
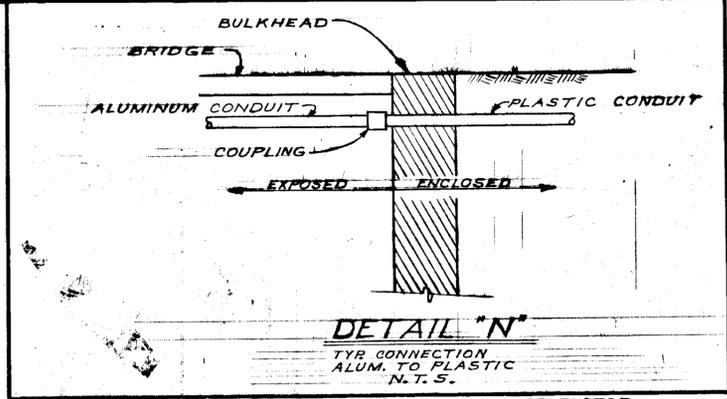
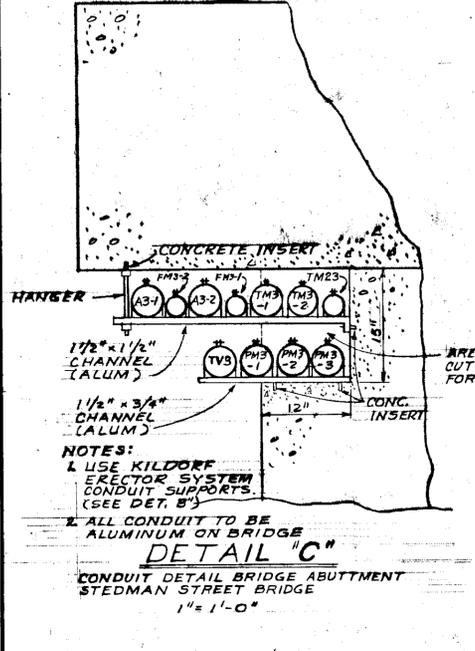
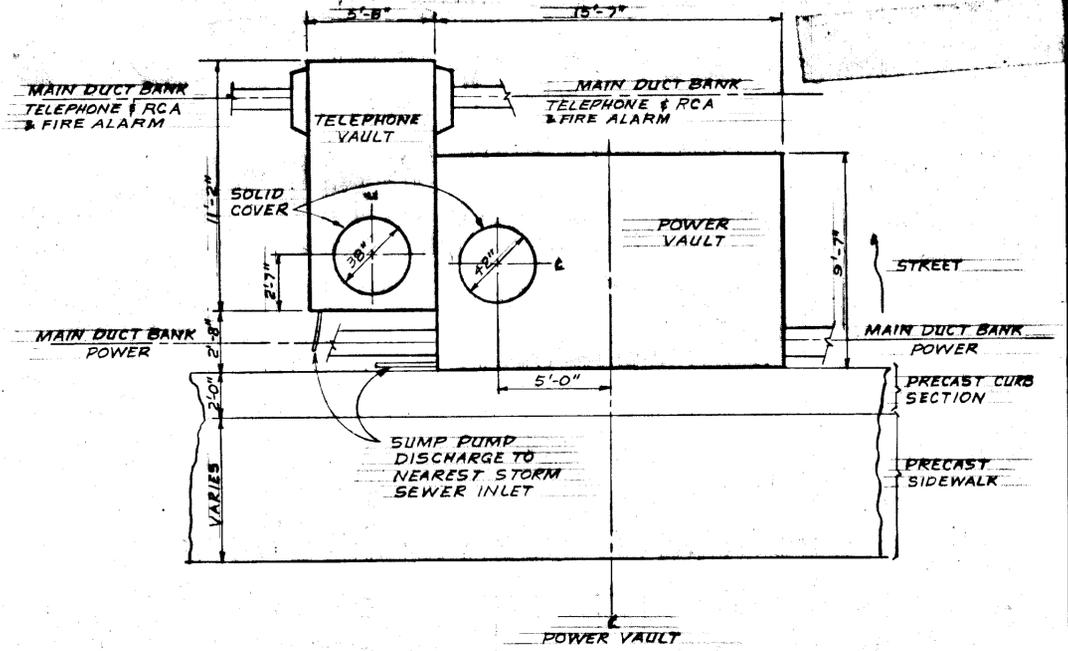
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	F-095-2(3)	1971	50	91

KETCHIKAN PUBLIC UTILITY  
 KETCHIKAN, ALASKA  
 MISSION ST. TO DEERMOUNT ST. UNDERGROUND  
 ALASKA DEPT. OF HIGHWAYS - PROJ. F-095-2(3)

**POWER VAULT ELECTRICAL CONNECTIONS**

DES. SAL ABC OF 12  
 DATE FEB. 1971  
 SCALE AS SHOWN  
 DWG. C5935-1

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	F-095-2(3)	1971	51	91



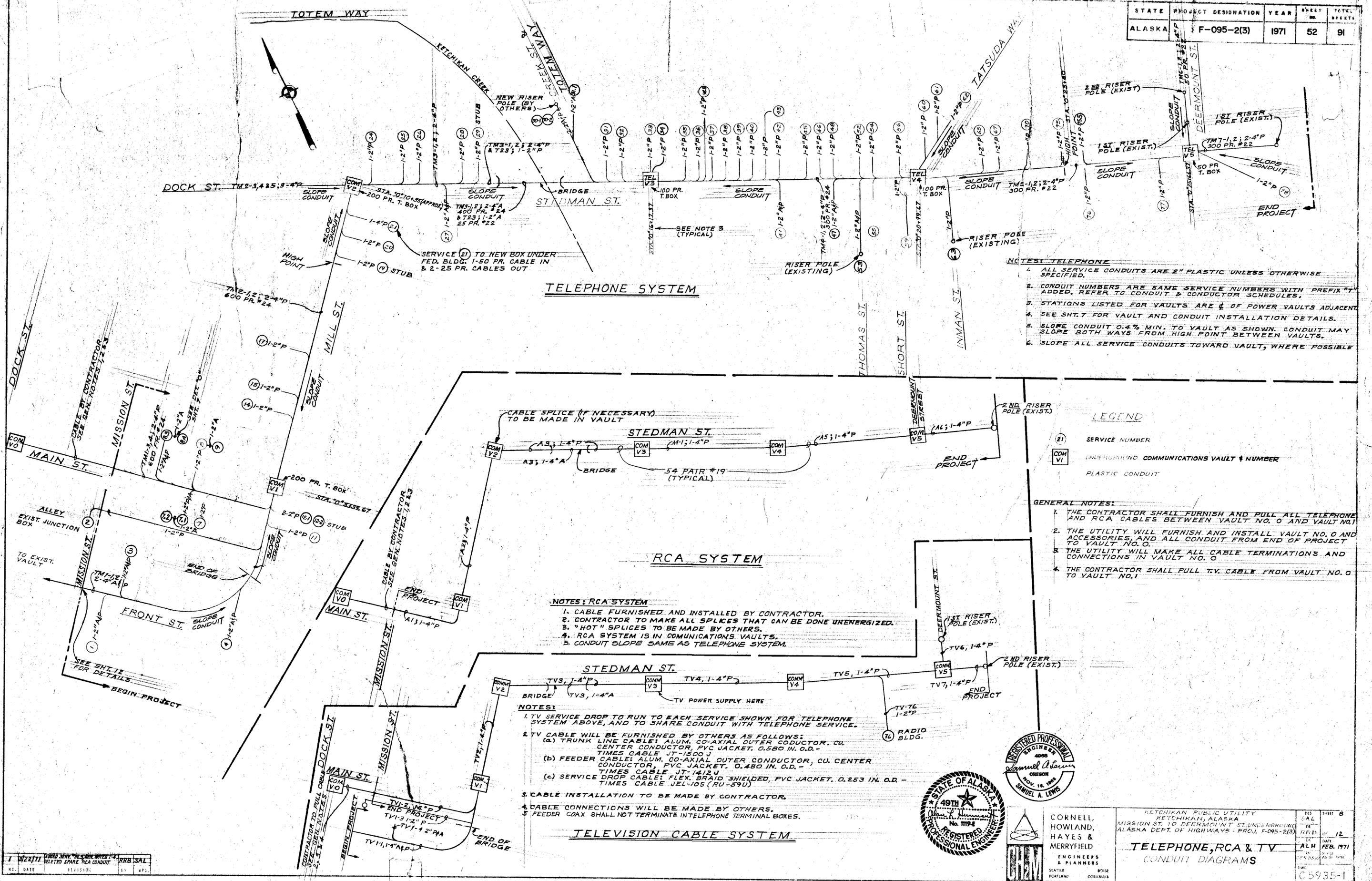
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ENGINEERS PLANNERS ECONOMISTS

KETCHIKAN PUBLIC UTILITY KETCHIKAN, ALASKA  
MISSION ST. TO DEERMOUNT ST. UNDERGROUND ALASKA DEPT. OF HIGHWAYS - PROJ. F-095-2(3)  
**VAULT & CONDUIT INSTALLATION DETAILS**

DES. SHEET	SAL 7
DATE	FEB. 1971
SCALE	AS SHOWN
DWG. NO.	C 5935-1

NO.	DATE	REVISION	BY	APP.
1	4/22/71	ADDED DETAIL "O" AND NOTE 1	PHB	SAL

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	F-095-2(3)	1971	52	91



**TELEPHONE SYSTEM**

- NOTES: TELEPHONE**
1. ALL SERVICE CONDUITS ARE 2" PLASTIC UNLESS OTHERWISE SPECIFIED.
  2. CONDUIT NUMBERS ARE SAME SERVICE NUMBERS WITH PREFIX "T" ADDED. REFER TO CONDUIT & CONDUCTOR SCHEDULES.
  3. STATIONS LISTED FOR VAULTS ARE 1/4 OF POWER VAULTS ADJACENT.
  4. SEE SHT. 7 FOR VAULT AND CONDUIT INSTALLATION DETAILS.
  5. SLOPE CONDUIT 0.4% MIN. TO VAULT AS SHOWN. CONDUIT MAY SLOPE BOTH WAYS FROM HIGH POINT BETWEEN VAULTS.
  6. SLOPE ALL SERVICE CONDUITS TOWARD VAULT, WHERE POSSIBLE.

- LEGEND**
- (21) SERVICE NUMBER
  - COM VI UNDERGROUND COMMUNICATIONS VAULT # NUMBER
  - PLASTIC CONDUIT

- GENERAL NOTES:**
1. THE CONTRACTOR SHALL FURNISH AND PULL ALL TELEPHONE AND RCA CABLES BETWEEN VAULT NO. 0 AND VAULT NO. 1.
  2. THE UTILITY WILL FURNISH AND INSTALL VAULT NO. 0 AND ACCESSORIES, AND ALL CONDUIT FROM END OF PROJECT TO VAULT NO. 0.
  3. THE UTILITY WILL MAKE ALL CABLE TERMINATIONS AND CONNECTIONS IN VAULT NO. 0.
  4. THE CONTRACTOR SHALL PULL TV CABLE FROM VAULT NO. 0 TO VAULT NO. 1.

**RCA SYSTEM**

- NOTES: RCA SYSTEM**
1. CABLE FURNISHED AND INSTALLED BY CONTRACTOR.
  2. CONTRACTOR TO MAKE ALL SPLICES THAT CAN BE DONE UNENERGIZED.
  3. "HOT" SPLICES TO BE MADE BY OTHERS.
  4. RCA SYSTEM IS IN COMMUNICATIONS VAULTS.
  5. CONDUIT SLOPE SAME AS TELEPHONE SYSTEM.

**TELEVISION CABLE SYSTEM**

- NOTES:**
1. TV SERVICE DROP TO RUN TO EACH SERVICE SHOWN FOR TELEPHONE SYSTEM ABOVE, AND TO SHARE CONDUIT WITH TELEPHONE SERVICE.
  2. TV CABLE WILL BE FURNISHED BY OTHERS AS FOLLOWS:
    - (a) TRUNK LINE CABLE: ALUM. CO-AXIAL OUTER CONDUCTOR, CU. CENTER CONDUCTOR, PVC JACKET. 0.580 IN. O.D. - TIMES CABLE JT-1500 J
    - (b) FEEDER CABLE: ALUM. CO-AXIAL OUTER CONDUCTOR, CU. CENTER CONDUCTOR, PVC JACKET. 0.480 IN. O.D. - TIMES CABLE JT-1412 J
    - (c) SERVICE DROP CABLE: FLEX. BRAID SHIELDED, PVC JACKET. 0.253 IN. O.D. - TIMES CABLE JEL-105 (RU-590)
  3. CABLE INSTALLATION TO BE MADE BY CONTRACTOR.
  4. CABLE CONNECTIONS WILL BE MADE BY OTHERS.
  5. FEEDER COAX SHALL NOT TERMINATE IN TELEPHONE TERMINAL BOXES.



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ENGINEERS & PLANNERS  
SEATTLE PORTLAND BOISE CORVALLIS

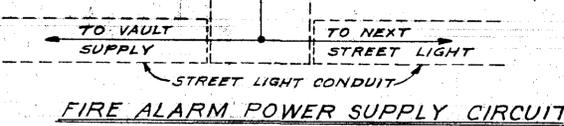
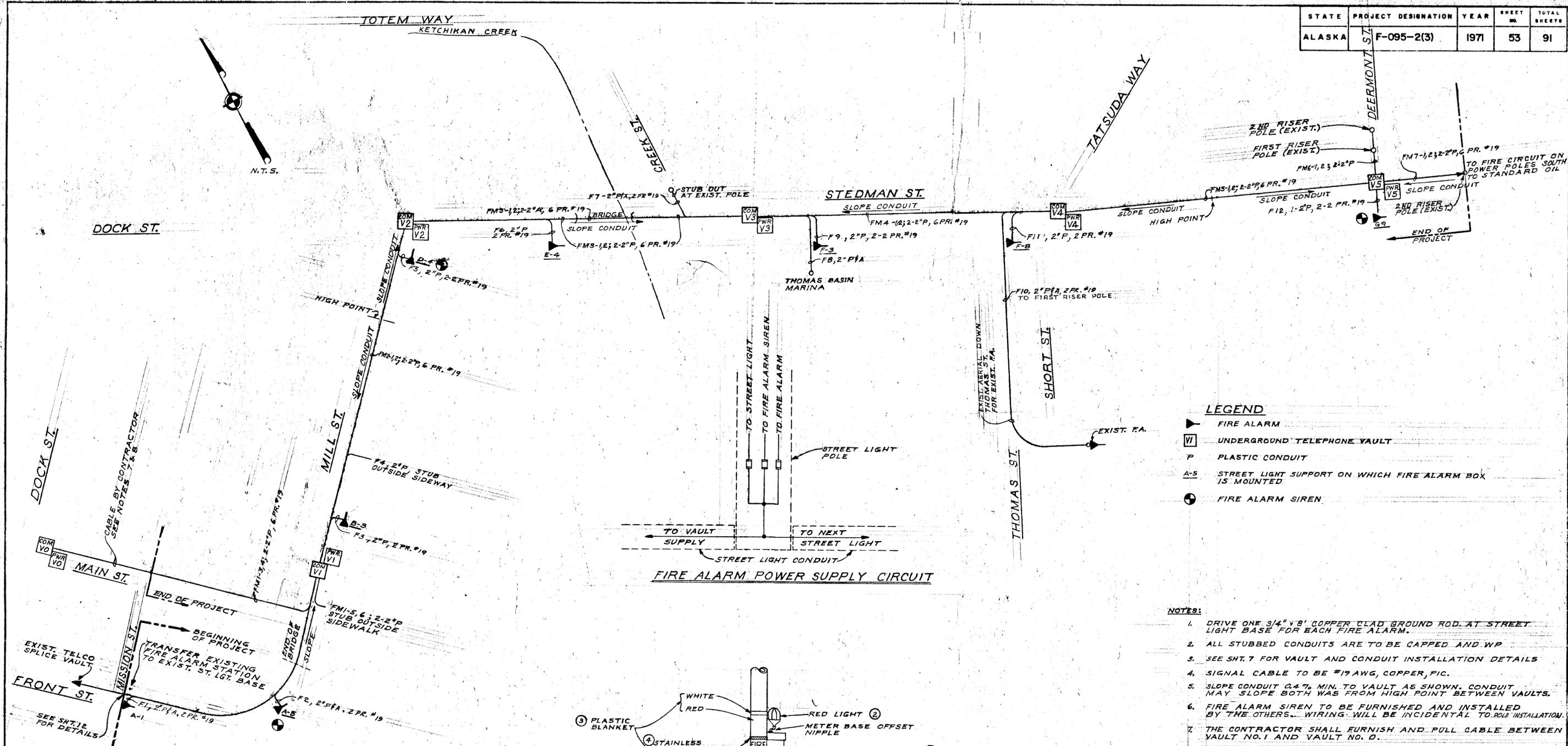
KETCHIKAN PUBLIC UTILITY  
MISSION ST. TO DEER MOUNT ST. UNDERGROUND  
ALASKA DEPT. OF HIGHWAYS - PROJ. F-095-2(3)

**TELEPHONE, RCA & TV CONDUIT DIAGRAMS**

DATE: FEB. 12, 1971  
SHEET: 52 OF 91  
PROJECT: ALH

NO.	DATE	REVISION	BY	APP.
1	1/22/71	REVISED TO PULL OVER DOCK ST. TO RELETED SPARE RCA CONDUIT	RRB	SAL

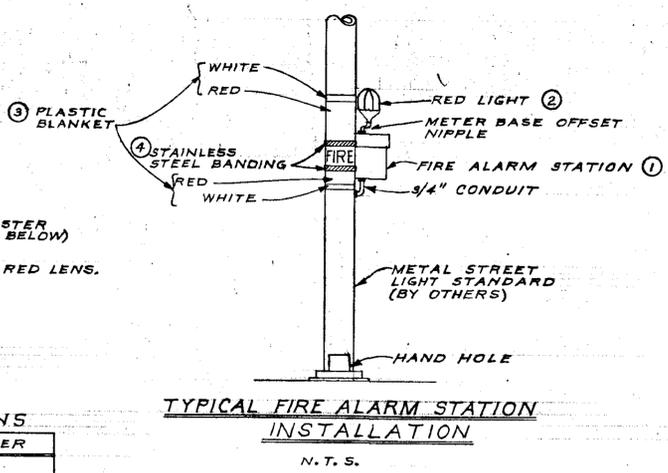
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	F-095-2(3)	1971	53	91



- LEGEND**
- ▲ FIRE ALARM
  - VI UNDERGROUND TELEPHONE VAULT
  - P PLASTIC CONDUIT
  - A-5 STREET LIGHT SUPPORT ON WHICH FIRE ALARM BOX IS MOUNTED
  - ⊕ FIRE ALARM SIREN

- NOTES:**
1. DRIVE ONE 3/4" x 8' COPPER CLAD GROUND ROD AT STREET LIGHT BASE FOR EACH FIRE ALARM.
  2. ALL STUBBED CONDUITS ARE TO BE CAPPED AND WP.
  3. SEE SHT. 7 FOR VAULT AND CONDUIT INSTALLATION DETAILS.
  4. SIGNAL CABLE TO BE #19 AWG, COPPER, PIC.
  5. SLOPE CONDUIT 0.4% MIN. TO VAULT AS SHOWN. CONDUIT MAY SLOPE BOTH WAYS FROM HIGH POINT BETWEEN VAULTS.
  6. FIRE ALARM SIREN TO BE FURNISHED AND INSTALLED BY THE OTHERS. WIRING WILL BE INCIDENTAL TO SIREN INSTALLATION.
  7. THE CONTRACTOR SHALL FURNISH AND PULL CABLE BETWEEN VAULT NO. 1 AND VAULT NO. 0.
  8. THE UTILITY WILL FURNISH AND INSTALL CONDUIT FROM END OF PROJECT TO VAULT NO. 0 AND WILL MAKE ALL CONNECTIONS AT VAULT NO. 0.

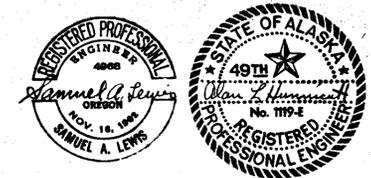
- SOURCE REFERENCE**
- ① FIRE ALARM STATION: GAMEWELL #9000, THREE FOLD MASTER SHUNT TYPE PLUS CODING. (SEE BELOW)
  - ② RED LIGHT: CROUSE-HINDS \*VDA 1759, WITH RED LENS.
  - ③ PLASTIC BASKET: WARREN OLIVER CO. 27 SOUTH STATE ST. LAKE OSWEGO, OREGON
  - ④ STAINLESS STEEL BANDS: SA-SO INC. CAT. #119 (R24)



**FIRE ALARM STATIONS**

ALARM NUMBER	CODE NUMBER
A-1	113
A-5	114
B-3	115
D-4	116
E-4	117
F-3	211
F-8	212
G-9	214

NO.	DATE	REVISION	BY	APP.
1	12/22/71	ADDED NOTES 6, 7, 8 & SIREN AT LGT. F-3	AKB/SAL	



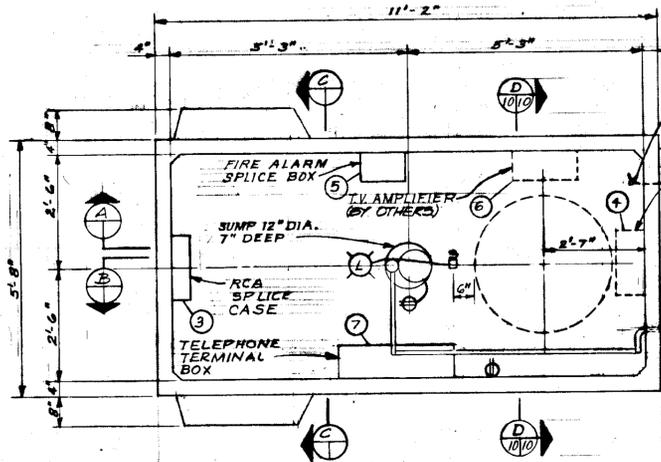
**CORNELL, HOWLAND, HAYES & MERRYFIELD**  
ENGINEERS & PLANNERS  
SEATTLE PORTLAND BOISE CORVALLIS

**KETCHIKAN PUBLIC UTILITY**  
KETCHIKAN, ALASKA  
MISSION ST. TO DEERMOUNT ST. UNDERGROUND ALASKA DEPT. OF HIGHWAYS PROJ. F-095-2(3)

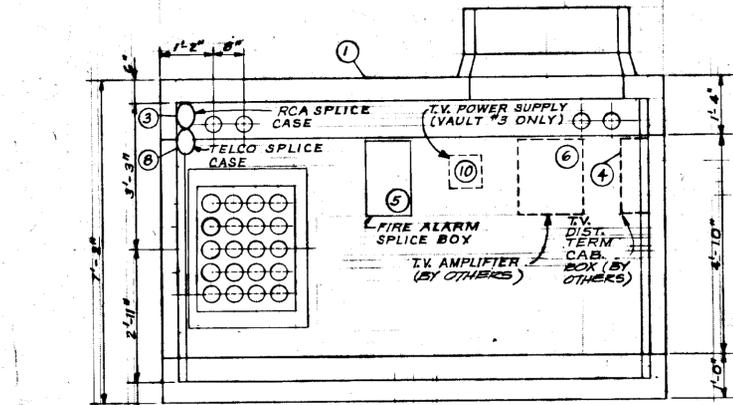
**FIRE ALARM SYSTEM CONDUIT DIAGRAM**

DATE: FEB. 1971  
SHEET: 9 OF 12  
JOB NO. C5935-1

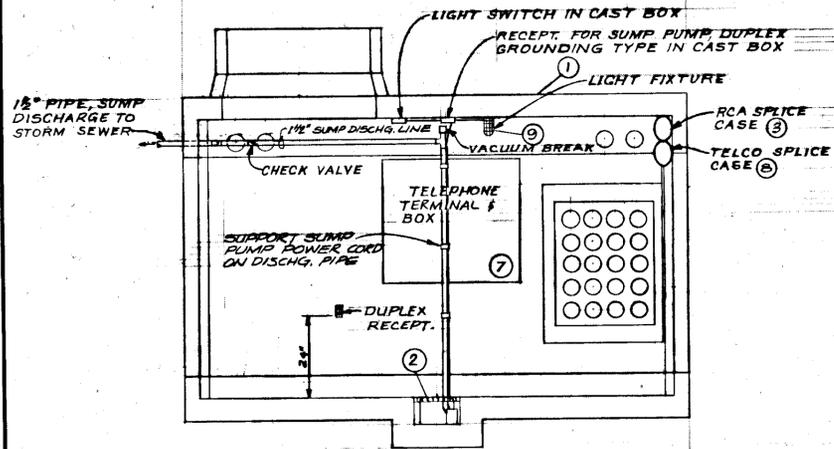
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	F-095-2(3)	1971	54	91



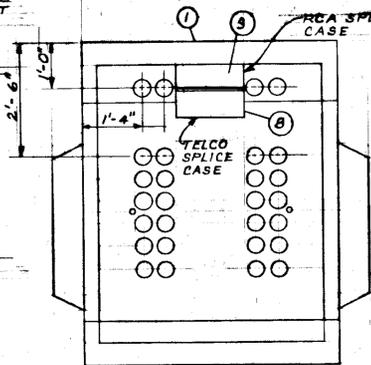
PLAN  
1/2" = 1'-0"



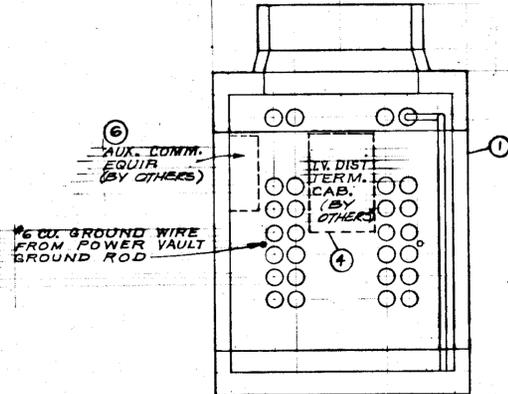
SECTION A  
1/2" = 1'-0"



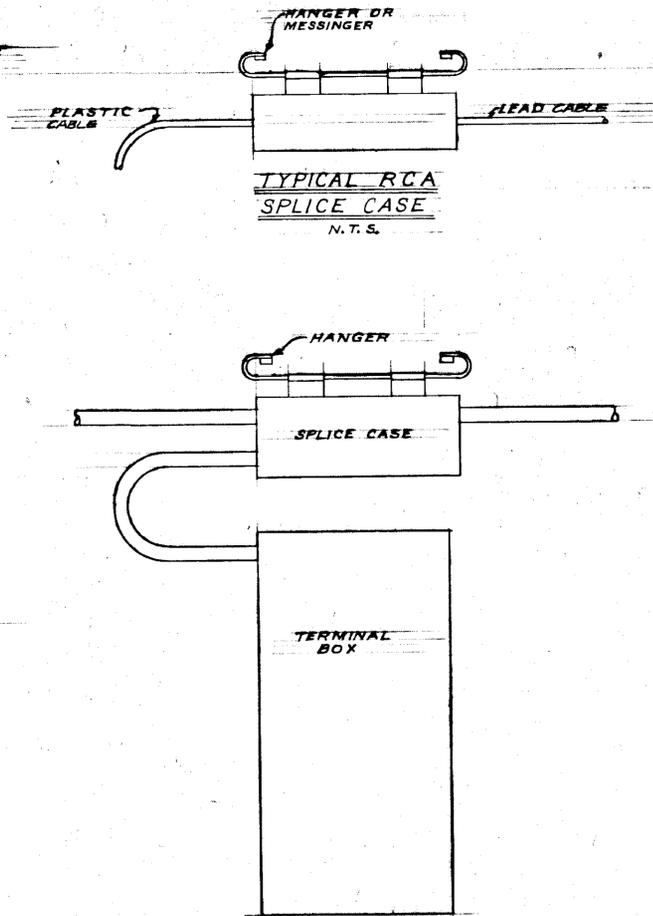
SECTION B  
1/2" = 1'-0"



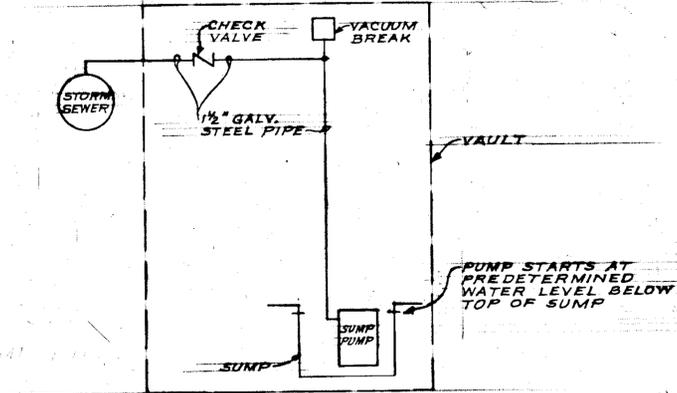
SECTION C  
1/2" = 1'-0"



SECTION D  
1/2" = 1'-0"



TYPICAL TELEPHONE  
SPLICE CASE &  
TERMINAL BOX  
N.T.S.

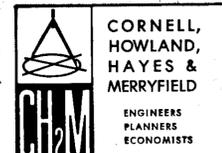


SUMP PUMP  
OPERATION DIAGRAM  
TYPICAL

ITEM NO.	DESCRIPTION	MANUFACTURER OR SOURCE
1	PRECAST CONCRETE VAULT 5'-0" x 6'-2" x 10'-6" INSIDE DIMENSIONS W/ SUMP, 12" DIA., 7" DEEP MINIMUM. RISER ADAPTER #41-3806 6" RISER #3806 & OR 12" RISER #3812 AS NEEDED	CONCRETE CONDUIT CO. # 5106-TCA
2	SUMP PUMP, SUBMERSIBLE, 3200 G.P.H. CAPACITY AT DISCHARGE HEAD OF 10 FT., 1/3 HP, SINGLE PHASE, 115V, 60 HERTZ, ALL BRONZE. AUTOMATIC WATER LEVEL CONTROL TO START PUMP BEFORE WATER REACHES TOP OF SUMP.	HYDROMATIC PUMP CO. MODEL NO. SP33AB
3	RCA SPLICE CASE COMPLETE WITH GROUNDING HARNESS, PLUG WITH AIR BY-PASS, ETC.	CEECO TYPE CZ#2
4	TV DISTRIBUTION TERMINAL CAB.	BY OTHERS
5	FIRE ALARM SPLICE BOX WATERPROOF, W/ WOOD BACKPLATE, 12" x 12" x 4" COMPLETE W/ 6 EACH SINGLE PAIR WIRE TERMINAL BLOCKS	RELIABLE #3551
6	TV AMPLIFIER	BY OTHERS (JERROLD STARLINE 20 SERIES)
7	TELEPHONE TERMINAL BOX	RELIABLE TYPE 6600 SERIES
8	TELEPHONE SPLICE CASE, COMPLETE W/ MOUNTING BRACKET	RELIABLE TYPE 21
9	LIGHT FIXTURE ENCLOSED & GASKETED WITH GUARD, 120V, 200W INCAND.	CROUSE HINDS #YXHF12
10	T.V. POWER SUPPLY	BY OTHERS (JERROLD MODEL SPS-12/W)

NOTES:

1. PRECAST CONCRETE VAULT PER CONCRETE CONDUIT COMPANY DWG. # 5106-TCA.
2. LAYOUT OF EQUIPMENT SHOWN HERE IS TYPICAL ONLY. INSTALL ONLY EQUIPMENT REQUIRED FOR EACH VAULT.
3. FASTEN EQUIPMENT TO VAULT WALLS BY MEANS OF THE 1/2" INSERTS AND "C" CHANNELS CAST IN WALLS, WHERE AVAILABLE.
4. FOR MOUNTING EQUIPMENT WHERE INSERTS ARE NOT AVAILABLE, INSTALL "RED HEAD" INSERTS, OR SIMILAR EXPANSION SHIELD.
5. UNLESS OTHERWISE NOTED, TYPE AND MANUFACTURER OF EQUIPMENT LISTED ARE TO BE USED AS A GUIDE IN SELECTING THE ITEMS REQUIRED. EQUIPMENT OF SIMILAR QUALITY AND CHARACTERISTICS IS ACCEPTABLE IF APPROVED BY THE ENGINEER.
6. FOR ACS CABLE, INSTALL SPLICE CASE IN VAULT 2 & MAKE 2 PULLS. DO NOT MAKE OTHER SPLICES IN CABLE.
7. CONTRACTOR TO PROVIDE CABLE RACKS TO SUITABLY SUPPORT ALL CABLES IN VAULT.
8. GROUND ALL NON-CURRENT CARRYING METAL FRAMES, ENCLOSURES ETC. TO #4 BARE COPPER GROUND WIRE CONNECTED TO POWER VAULT GROUNDING OUTSIDE VAULT. INDIVIDUAL CONNECTIONS TO EQUIPMENT TO BE #12 INSULATED COPPER. USE CAD WELD, OR COMPRESSION TYPE CONNECTORS FOR CABLE TO CABLE CONNECTIONS.



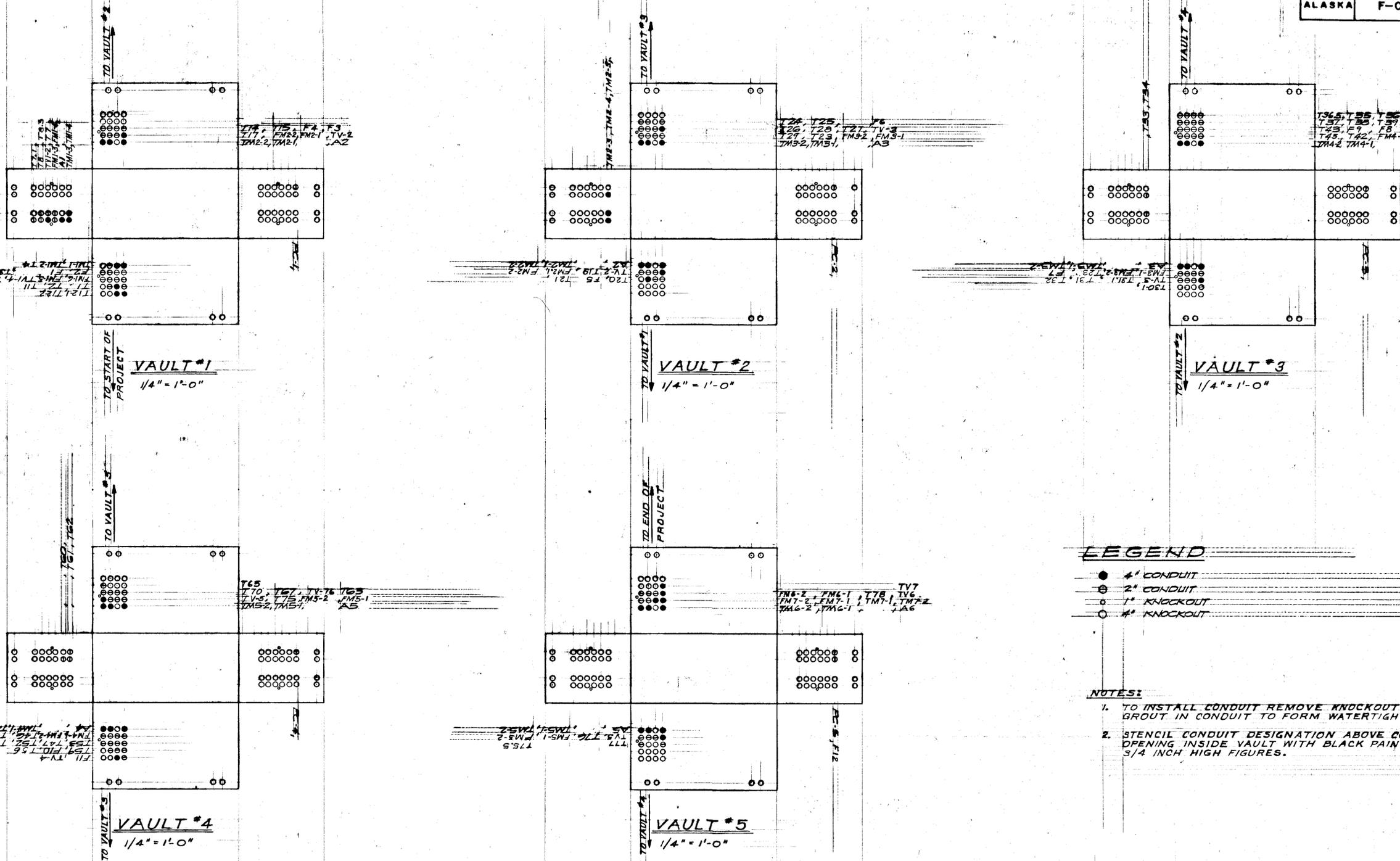
CORNELL, HOWLAND, HAYES & MERRYFIELD  
ENGINEERS PLANNERS ECONOMISTS

KETCHIKAN PUBLIC UTILITY  
KETCHIKAN, ALASKA  
MISSION ST. TO DEERMOUNT ST. UNDERGROUND  
ALASKA DEPT. OF HIGHWAYS PROJ. F-095-2(3)

COMMUNICATIONS VAULT  
TYR. EQUIP. LAYOUT

DES. SAL	SHEET 10
OR RRB	OF 12
DATE	FEB. 1971
BY ALH	SCALE AS SHOWN
C5935.0	DWG. C 5935-1

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	F-095-2(3)	1971	55	91



**LEGEND**

- 4" CONDUIT
- ⊕ 2" CONDUIT
- 1" KNOCKOUT
- 4" KNOCKOUT

**NOTES:**

1. TO INSTALL CONDUIT REMOVE KNOCKOUT AND GROUT IN CONDUIT TO FORM WATERTIGHT JOINT.
2. STENCIL CONDUIT DESIGNATION ABOVE CONDUIT OPENING INSIDE VAULT WITH BLACK PAINT AND 3/4 INCH HIGH FIGURES.

1 1/2" x 11" CONDUIT ADDED T31.3 RRB:SAE

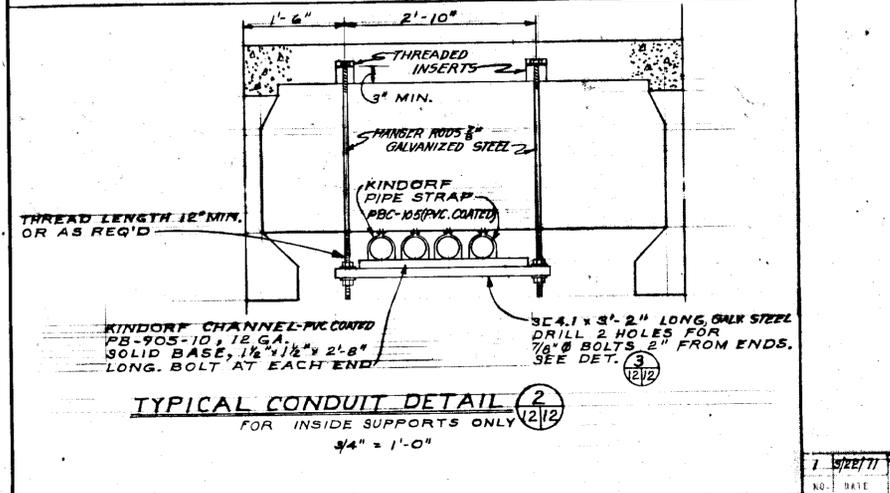
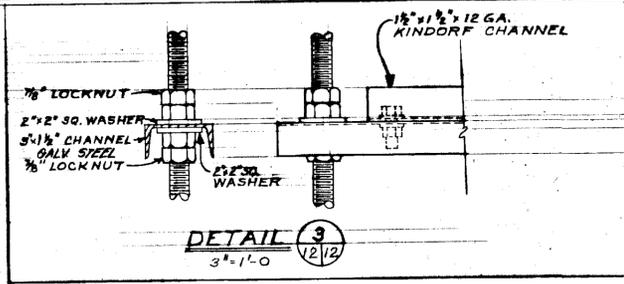
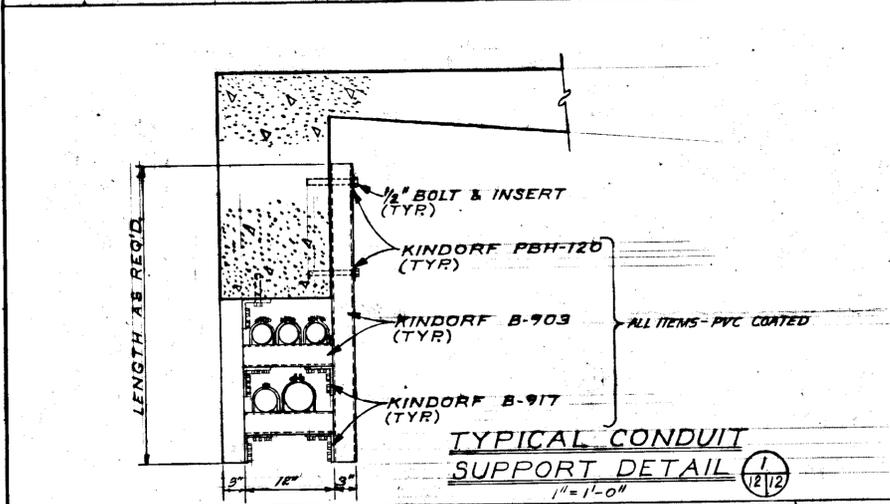
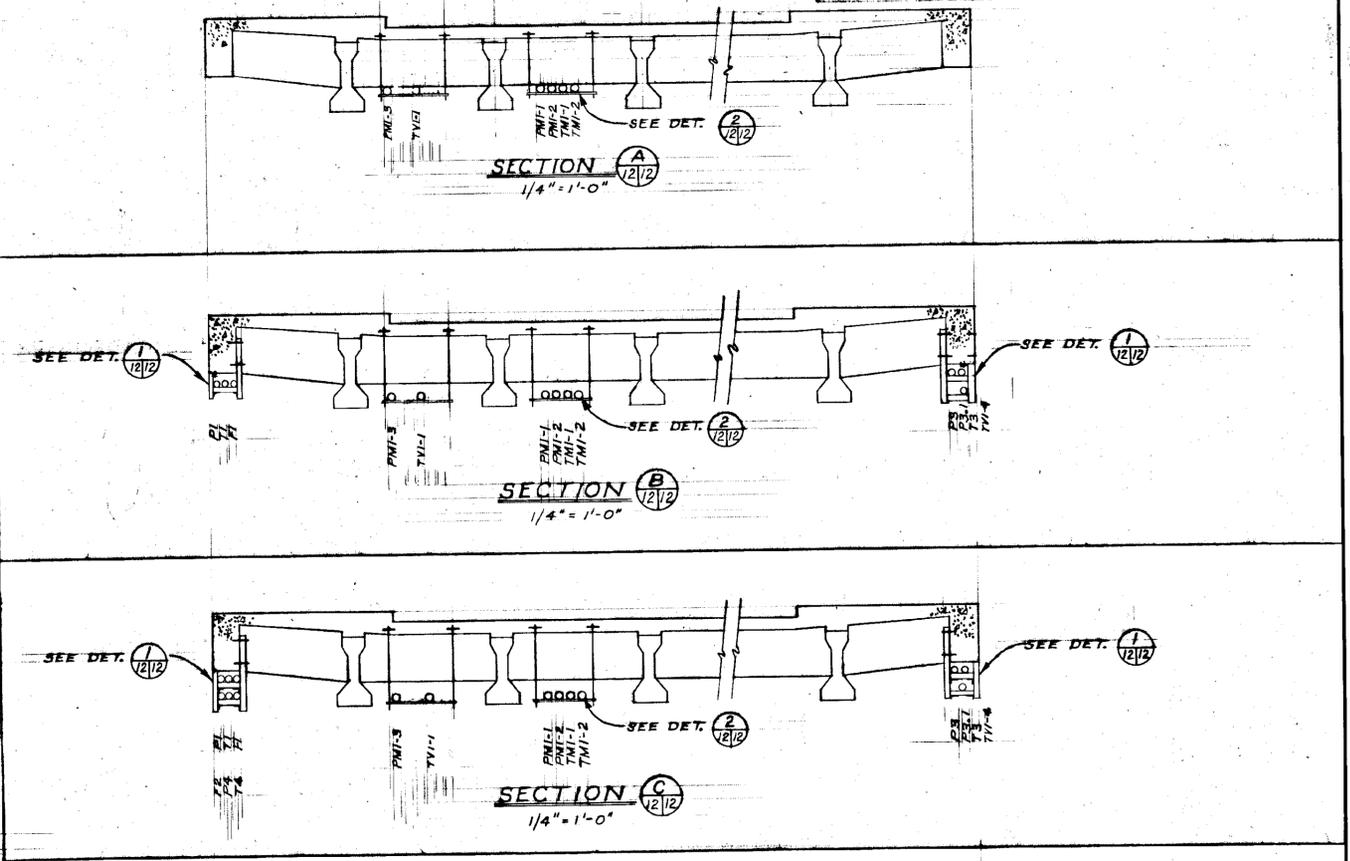
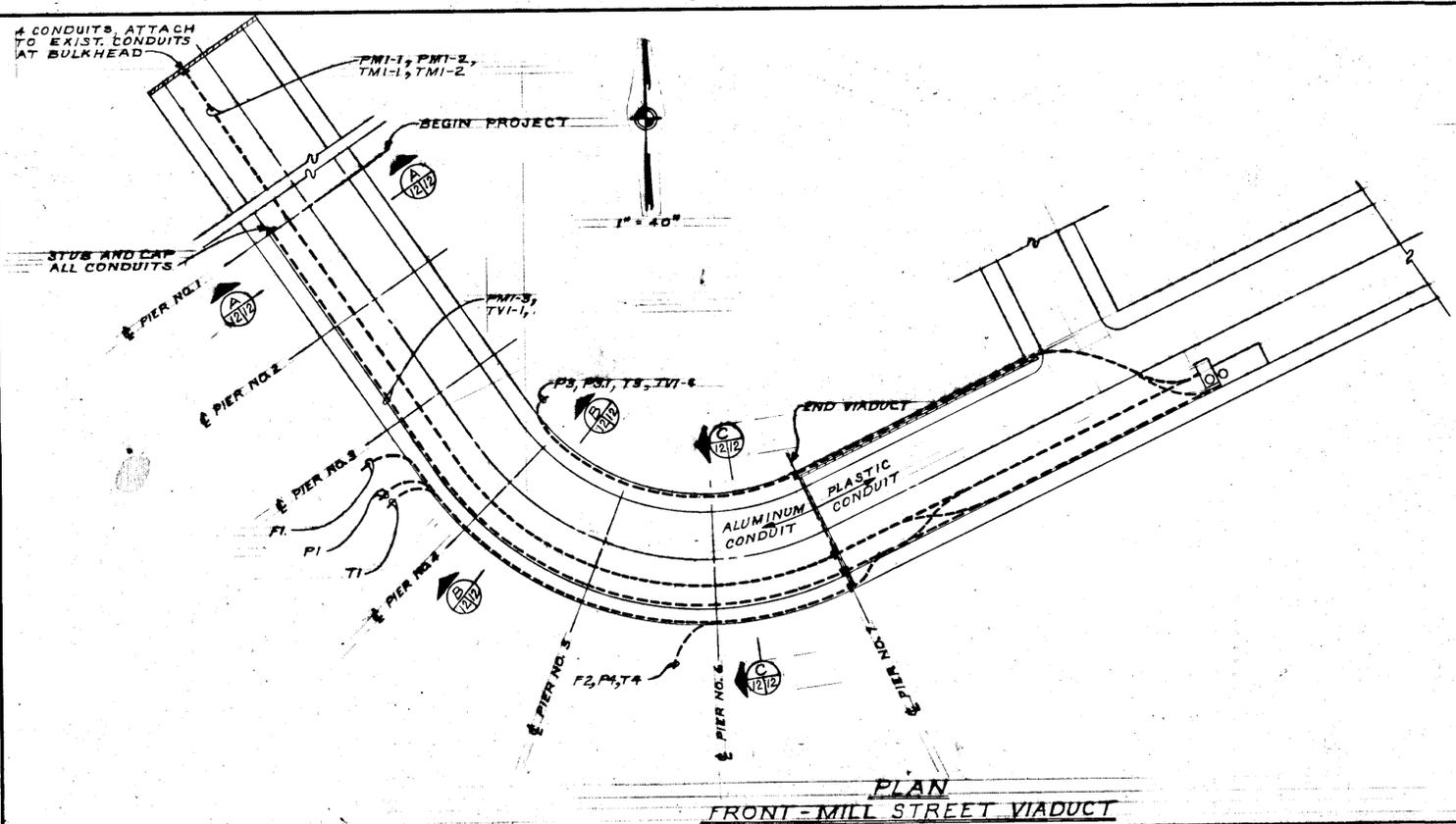


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KETCHIKAN PUBLIC UTILITY  
KETCHIKAN, ALASKA  
MISSION ST. TO DEERMOUNT ST. UNDERGROUND  
ALASKA DEPT. OF HIGHWAYS - PROJ. F-095-2(3)  
**COMMUNICATIONS VAULT  
CONDUIT ARRANGEMENT**

DES	SAL	SHEET	11
DR	RRB	OF	12
CK	ALH	DATE	FEB. 1971
BY	SAE	SCALE	AS SHOWN
DWG	C5935-1		

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	F-095-2(3)	1971	56	91



NOTES:  
 1. MAXIMUM DISTANCE BETWEEN CONDUIT HANGERS OR SUPPORTS ON VIADUCT TO BE 16 FEET.  
 2. SEE SHT. 7 FOR OTHER CONDUIT DETAILS



CORNELL, HOWLAND, HAYES & MERRYFIELD  
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KETCHIKAN PUBLIC UTILITY KETCHIKAN, ALASKA		DES. SAL	SHEET 72
MISSION ST. TO DEERMOUNT ST. UNDERGROUND ALASKA DEPT. OF HIGHWAYS - PROJ. F-095-2(3)		DR. RRB	OF 12
CONDUIT DETAILS FRONT ST. - MILL ST. VIADUCT		DATE FEB. 1971	BY CK
		SCALE AS SHOWN	DWG. C 5935-1

NO.	DATE	BY	APP.
1	12/22/71	RRB/SAL	