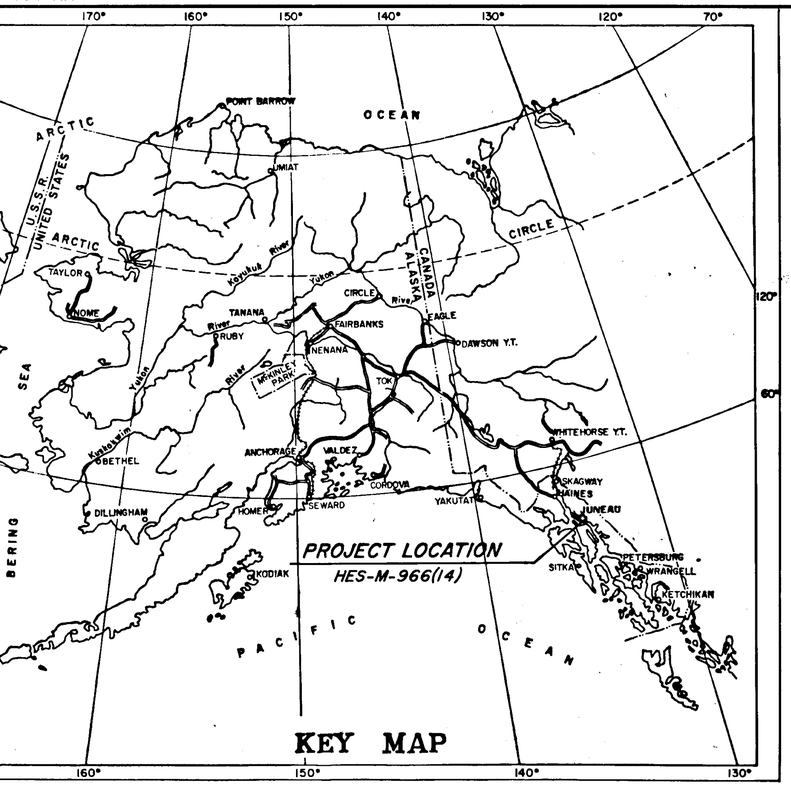


KEY MAP

DESIGN DESIGNATION

ADT (1987)	17,831
ADT (2008)	19,701
DHV	2,364
% T	5
T.I.	9.5
V(m.p.h.)	40

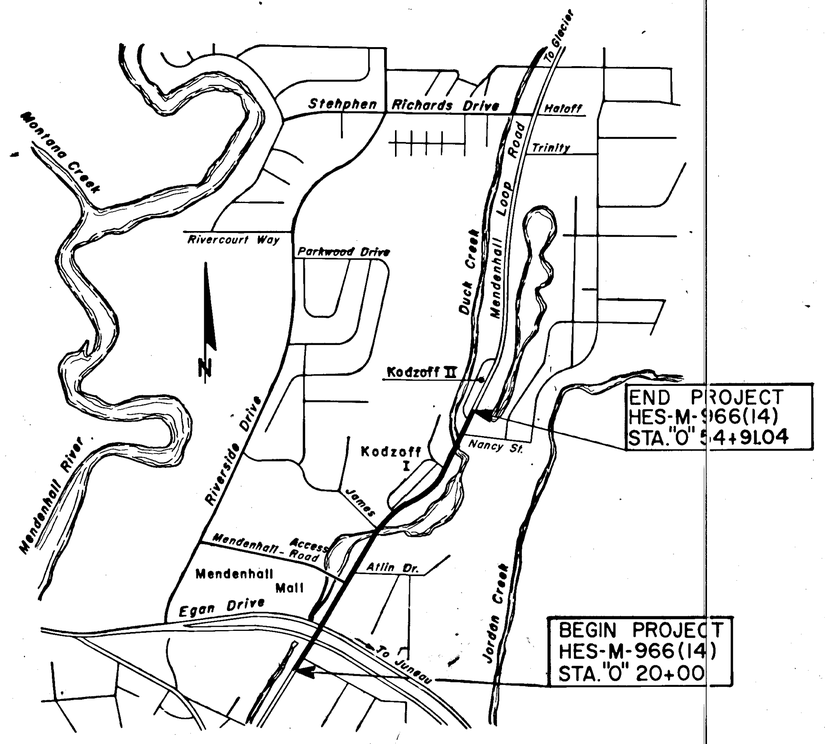
PROJECT SUMMARY

LENGTH OF PROJECT - 3,491.04 FEET (0.66 MILE).
ADD CURB & GUTTER, BUS TURNOUTS, STRIPING AND DRAINAGE FACILITIES TO EXISTING ROADWAY ; AND SIGNALIZE THE INTERSECTION AT MENDENHALL LOOP ROAD AND ATLIN DRIVE.
LENGTH OF 3/4" ASPHALT CONCRETE OVERLAY = 3,376 FEET.

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
&
PUBLIC FACILITIES

PLAN AND PROFILE
PROPOSED HIGHWAY PROJECT

JUNEAU MENDENHALL LOOP/MALL/JAMES BLVD. SIGNAL AND LEFT TURN LANE
HES-M-966(14) 69058



STATE	PROJECT	SHEET NO.	TOTAL SHEETS
ALASKA	HES-M-966(14)	1	28

INDEX OF SHEETS

The following Standard Drawings apply to this project:
A-1, C-01.02, C-02.00, C-03.01, C-05.00, D-01.00, D-04.10, D.-05.10, D-20.01, D-23.00, D-26.01, D-27.01, G-04.03W, L-10.01, L-23.00, L-30.01, M-20.10, M-23.10, S-00.00, S-05.00, S-30.01, T-20.00, T-21.01, T-22.01, T-30.00, T-31.00, T-32.00, T-33.00, T-33.01, T-34.00, T-52.01, G-04.035.

"As-Built Plans"

CONTRACTOR: ASSOCIATED SAND & GRAVEL
PROJ. ENG.: SOC KREUZENSTEIN
DATE BEGAN: APRIL 17, 1989
DATE COMPLETED: AUGUST 7, 1989

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND
PUBLIC FACILITIES
SOUTHEASTERN REGION DESIGN SECTION

APPROVED
S.E. Region Design Chief — Date 6-22-88

APPROVED
for Director, S.E. Region Design & Construction — Date 6-22-88

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOT SHE
ALASKA	HES-M-966(14)	'88	2	28

ESTIMATE OF QUANTITIES

Item No.	Item		Unit	Total
109 (2)	DBE and WBE Adjustments		C.S.	All Req'd.
110 (1)	Mobilization and Demobilization		Lump Sum	All Req'd.
111 (1)	Temporary Erosion and Pollution Control		C.S.	All Req'd.
114 (1)	Construction Surveying by the Contractor		Lump Sum	All Req'd.
115 (1)	Traffic Maintenance		Lump Sum	All Req'd.
115 (2)	Traffic Control		Lump Sum	All Req'd.
115 (3)	Permanent Construction Signing	CO 1	Lump Sum	All Req'd.
115 (4)	Traffic Control Devices		C.S.	All Req'd.
115 (5)	Flagging		Man-Hours	~~100~~ 487
116 (1)	Furnishing and Maintaining Field Office		Lump Sum	All Req'd.
~~116 (2)~~	~~Furnishing and Maintaining Field Laboratory~~	EWO 2	~~Lump Sum~~	~~All Req'd.~~
201 (2B)	Clearing and Grubbing		Lump Sum	All Req'd.
202 (2)	Removal of Pavement	CO 1	Square Yard	~~1,600~~ 1,936
202 (4)	Removal of Culvert Pipe		Linear Foot	~~138.0~~ 136
202 (11)	Relocate and Install Mailboxes		Lump Sum	All Req'd.
202 (12)	Removal of Curb		Linear Foot	~~655~~ 605
203 (3)	Unclassified Excavation (Approx. 450 C.Y.)		Lump Sum	All Req'd.
301 (1)	Crushed Aggregate Base Course		Ton	~~1,350~~ 1,073.9
304 (1)	Subbase, Grading "E"		Ton	~~3,900~~ 1,501
401 (1A)	Asphalt Concrete, Type II	CO 1	Ton	~~450~~ 4067
401 (1B)	Asphalt Concrete, Type III		Ton	~~990~~ 1,173.4
401 (2)	Asphalt Cement, AC-5	CO 1	Ton	~~86.4~~ 100.02
402 (1)	CSS-1 Asphalt for Tack Coat		Ton	~~4.0~~ 5.6
603 (1-12)	12 Inch Corrugated Steel Pipe	CO 1	Linear Foot	~~20~~ 108.8
603 (1-18)	18 Inch Corrugated Steel Pipe		Linear Foot	20
603 (13-12)	12 Inch Corrugated Aluminum Pipe		Linear Foot	~~79~~ 106
603 (13-18)	18 Inch Corrugated Aluminum Pipe	CO 1	Linear Foot	~~1337.5~~ 1225
603 (30)	Slotted Drain Pipe		Lineal Foot	~~845~~ 800.8
~~604(3)~~	~~Reconstruct existing manholes~~	EWO 1	~~Each~~	~~1~~
604(4)	Adjust existing Manholes		Each	3
604(5A)	Inlet, Type "A"		Each	18
604(5B)	Inlet, Type "A" with Petroleum Separator		"	7
606 (1)	Beam Type Guardrail, Type I Post		Linear Foot	75
604(3A)	*Reconstruct Existing Manhole*	EWO 1	*Each*	*1*
609 (2)	Curb and Gutter		Linear Foot	~~6,040~~ 6070.7
610 (1)	Ditch Line		Linear Feet	~~942~~ 1046
615 (1)	Standard Sign		Square Foot	~~82.5~~ 98.5
615 (2)	Remove and Relocate Existing Signs		Each	~~10.0~~ 9
618 (1)	Seeding		MSF	~~70.0~~ 60.6
660(1B)	*Miscellaneous Electrical Work*	EWO 4	*Lump Sum*	*All Req'd.*
660(1A)	*Additional Opticom*	EWO 3	*Lump Sum*	*All Req'd.*
660 (1)	Traffic Signal System Complete		Lump Sum	All Req'd.
660 (10)	Master Traffic Signal Control System		Lump Sum	All Req'd.
660 (11)	Master Traffic Signal System Interconnect		Lump Sum	All Req'd.
660 (9)	Adjustment of Existing Electroliers		Lump Sum	All Req'd.
670 (1)	Painted Traffic Markings		Lump Sum	All Req'd.
670 (8)	Preformed Pavement Markings		Lump Sum	All Req'd.

BASIS OF ESTIMATE

Item No.	Estimating Factor
301 (1)	1.96 Tons per Cubic Yard
304 (1)	1.87 Tons per Cubic Yard
401 (1)	116 Pounds per Square Yard per Inch Depth
401 (2)	6% of Item 401 (1)
402 (2)	0.04 Gallons per Square Yard, 256 Gallons per Ton @ 60° F.

STANDARD SIGN SCHEDULE ⚠

NO.	STATION ⚠	OFFSET ⚠ Left	OFFSET ⚠ Right	CODE NO.	LEGEND	SIGN PANEL THICKNESS CLASS	Framed	Unframed	AREA-S.F.	POST No. of Post	Type	Size	Length ⚠	Imbedment	FACING TRAFFIC
(1)	"0" 26+07.5	6.0'	0	R3-5L	ONLY	T		0.080	7.5	⚠					N.E. Bound
(2)	"0" 26+07.5		6.0'	R3-6R		T		0.080	7.5	⚠					N.E. Bound
(3)	"0" 33+81		52.0'	R7-101 ⚠	NO PARKING ANYTIME	T		0.080	1.5	1	P.S.T.	2"x2"	14.0'	3.5'	⚠
(4)	"0" 39+85	35.0'		R7-101 ⚠	NO PARKING ANYTIME	T		0.080	1.5	1	P.S.T.	2"x2"	14.0'	3.5'	⚠
(5)	"0" 47+75		32.0'	W4-2		T		0.080	9.0	1	P.S.T.	2"x2"	15.0'	3.5'	N. Bound
(6)	"0" 49+94	55.0'		R7-101 ⚠	NO PARKING ANYTIME	T		0.080	1.5	1	P.S.T.	2"x2"	14.0'	3.5'	⚠
(7)	"0" 50+28		48.0'	R7-101 ⚠	NO PARKING ANYTIME	T		0.080	1.5	1	P.S.T.	2"x2"	14.0'	3.5'	⚠
(8)	"0" 31+98	48.0'		R1-1 ⚠	"STOP"	Bike		0.080	2.25	1	P.S.T.	2"x2"	10.0'	3.5'	N.E. Bound
(9)	"0" 32+24		49.0'	R1-1 ⚠	"STOP"	Bike		0.080	2.25	1	P.S.T.	2"x2"	10.0'	3.5'	N.E. Bound
(10)	"0" 33+12		53.0'	R1-1 ⚠	"STOP"	Bike		0.080	2.25	1	P.S.T.	2"x2"	10.0'	3.5'	S.W. Bound
(11)	"0" 37+21	56.0'		R1-1 ⚠	"STOP"	Bike		0.080	2.25	1	P.S.T.	2"x2"	10.0'	3.5'	N.E. Bound
(12)	"J" 10+75		22.0'	R1-1 ⚠	"STOP"	Bike		0.080	2.25	1	P.S.T.	2"x2"	10.0'	3.5'	S.E. Bound
(13)	"0" 44+43	56.0'		R1-1 ⚠	"STOP"	Bike		0.080	2.25	1	P.S.T.	2"x2"	10.0'	3.5'	S.W. Bound
(14)	"0" 49+13		51.0'	R1-1 ⚠	"STOP"	Bike		0.080	2.25	1	P.S.T.	2"x2"	10.0'	3.5'	N.E. Bound
(15)	"0" 49+80		51.0'	R1-1 ⚠	"STOP"	Bike		0.080	2.25	1	P.S.T.	2"x2"	10.0'	3.5'	S.W. Bound
(16)	"0" 50+69	54.0'		R1-1 ⚠	"STOP"	Bike		0.080	2.25	1	P.S.T.	2"x2"	10.0'	3.5'	N.E. Bound
(17)	"0" 51+29	54.0'		R1-1 ⚠	"STOP"	Bike		0.080	2.25	1	P.S.T.	2"x2"	10.0'	3.5'	S.W. Bound
(18)	"0" 32+51	52.0'		R3-6 SL		T		0.080	7.5	⚠					N.W. Bound
(19)	"0" 32+39	52.0'		R3-5R ⚠	ONLY	T		0.080	7.5	⚠					N.W. Bound
(20)	"0" 32+35		38.0'	R3-5R ⚠	ONLY	T		0.080	7.5	⚠					E. Bound
(21)	"0" 32+47		38.0'	R3-6 SL		T		0.080	7.5	⚠					E. Bound
(22)	"0" 45+25				LEFT LANE ENDS MERGE RIGHT				16						N. Bound

⚠ New sign shall be mounted on the mast arm of existing signal pole. Existing signs mounted on the mast arm shall be removed.

⚠ Shall be facing toward the roadway centerline.
⚠ Lengths shown are only approximate for estimating purposes.
⚠ Stations and offsets are approximate and can be adjusted to better fit field conditions and in conformance with the Engineer.
⚠ These signs shall be mounted below the Bus stop signs. These existing Bus stop signs are to be removed and relocated from it's existing location along Mendenhall Loop Road.
⚠ From Alaska Sign Design Specification.
⚠ Stop sign for pedestrian traffic shall be 18" x 18"
⚠ All existing signs to be removed shall be the property of the State to be delivered by the Contractor to the DOT / PF Building at 7 mile Glacier Hwy., Juneau Ak.
⚠ New sign shall be mounted on the mast arm of proposed signal pole no. 1, see sheet no. 21 for location.
⚠ New sign shall be mounted on the mast arm of proposed signal pole no. 3, see sheet no. 21 for location.

STATE OF ALASKA 49TH Wm. L. Townsend Wm. L. Townsend CE-5543 REGISTERED PROFESSIONAL ENGINEER

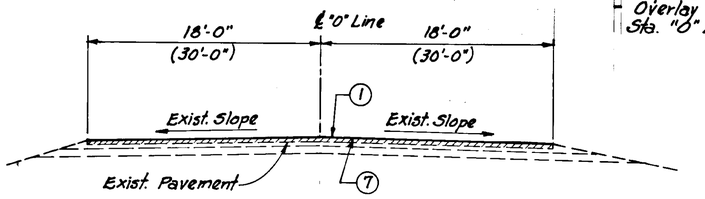
EXISTING SIGN

EXIST. LOCATION Station	Offset left	Offset right	PROPOSED LOCATION Station	Offset left	Offset right	LEGEND	FACING TRAFFIC	NOTES ⚠
"0" 30+94		37.0'	-			"LANE ENDS MERGE RIGHT"		Remove existing sign mounted on lumnaire pole.
"0" 32+12	48.0'		-			"STOP"		Remove existing sign.
"0" 32+38		50.0'	-			"YIELD"		Remove existing sign.
"0" 32+75		39.0'	-			"STOP"		Remove existing sign.
"0" 32+83	57.0'		-			"STOP" & "NO BURNING"		Existing sign to remain in place.
"0" 36+17		37.0'	-					Removed existing sign mounted on luminaire pole.
"0" 37+28	42.0'		"0" 37+24	42.0'		"STOP"	S.E. Bound	Existing sign to be relocated. James Boulevard.
"0" 38+48	53.0'		-			"STOP"		Existing pedestrian stop sign to remain in place.
"0" 38+55	49.0'		-			"STOP"		Existing sign to remain in place.
"0" 39+04	59.0'		-			"STOP"		Existing pedestrian stop sign to remain in place.
"0" 40+23		37.0'	"0" 39+59	56.0'		"BUS"	⚠	Existing sign on luminaire pole to be relocated on the same post as sign no. (4)
"0" 43+89	36.0'		"0" 43+80	39.0'		"STOP"	S.E. Bound	Existing sign to be relocated.
~~"0" 43+95~~	~~54.0'~~		~~"0" 43+80~~	~~65.0'~~		~~"STOP"~~	~~N.E. Bound~~	~~Existing pedestrian stop sign to be relocated.~~
"0" 49+60		54.0'	"N" 10+72	32.0'		"STOP"	West Bound	Existing sign to be relocated.
"0" 49+58	37.0'		"0" 50+11.5	55.0'		"BUS"	⚠	Existing sign on luminaire pole to be relocated on the same post as sign no. (6)
"0" 50+00		37.0'	"0" 50+59		38.0'		N.E. Bound	Existing sign to be relocated on existing luminaire pole.
"0" 50+59		38.0'	"0" 50+28		48.0'	"BUS"	⚠	Existing sign mounted on lumnaire pole to.be relocated on the same post as sign no. (7)
"0" 50+76	38.0'		"0" 50+70	40.0'		"STOP"	S.E. Bound	Existing sign to be relocated.
"0" 52+62		37.0'	-			"BEGIN CENTER LANE"		Existing sign to remain in place.
"0" 39+05	37.0'		"0" 33+68		52.0'	"BUS"	⚠	Existing sign on luminaire pole to be relocated on same post as sign no. (3)

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	HES-M-966(14)	'88	3	28

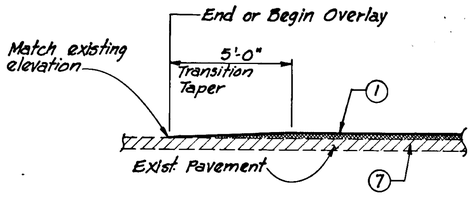
NOTES

1. Roadway widths transition from 36'-0" to 60'-0" between Sta. "0" 20+14.5 to Sta. "0" 24+96.
2. Dimensions in parenthesis corresponds to stations in parenthesis.
3. Overlay not required between Sta. "0" 24+82 to Sta. "0" 25+93.

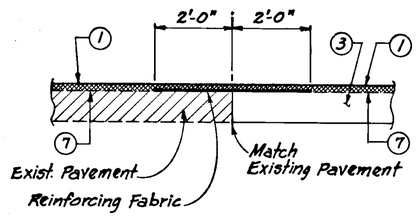


Typical Section

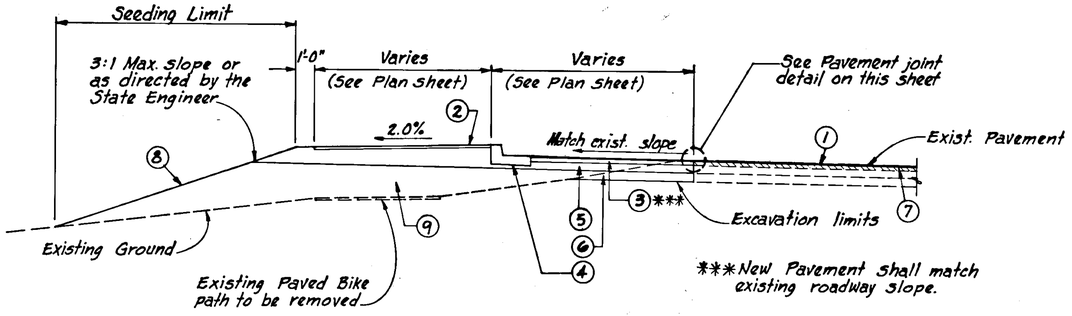
Sta. "0" 20+00 to Sta. "0" 24+96
(Sta. "0" 24+96 to Sta. "0" 26+60)



Overlay Taper Detail

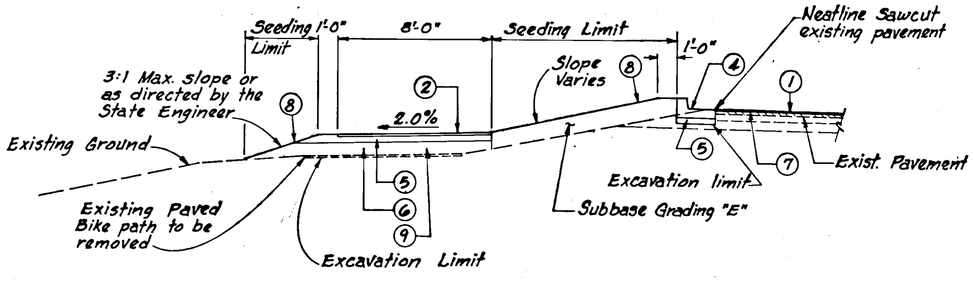


Pavement Joint Detail



Section A-A

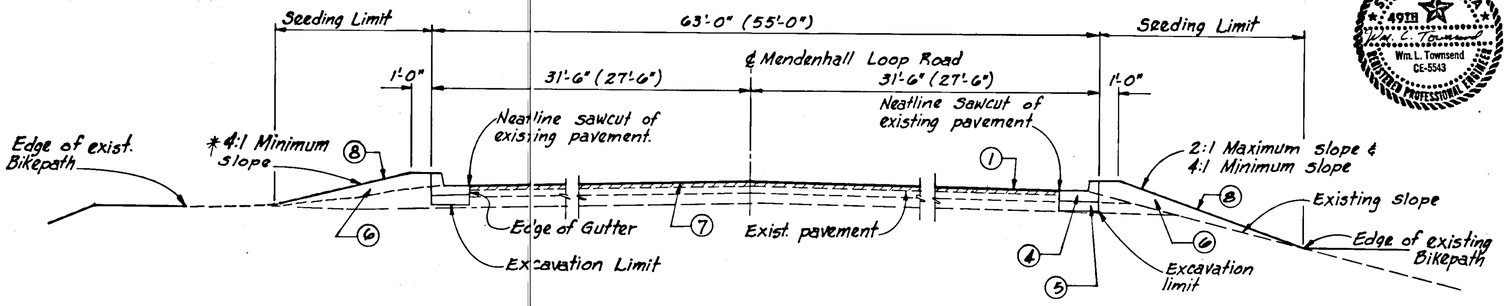
WIDENING FOR BUS TURNOUT



Section B-B

Bikepath at Bus Turnout

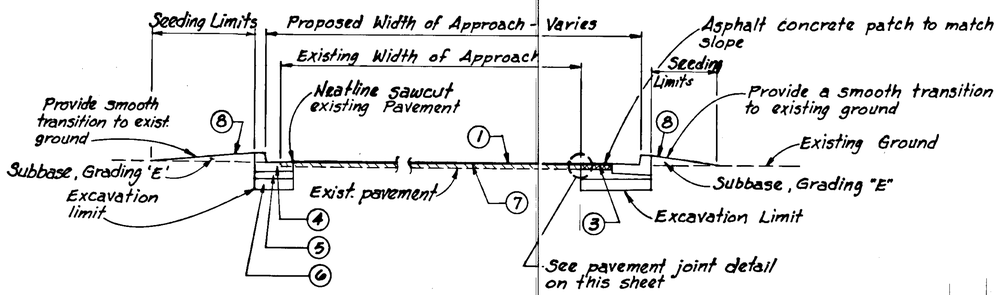
*Toe of foreslope shall be at edge of existing bikepath, unless resulting slope is flatter than 4:1.



Typical Section

Sta. "0" 26+50 to Sta. "0" 41+00
(Sta. "0" 41+00 to Sta. "0" 54+00)

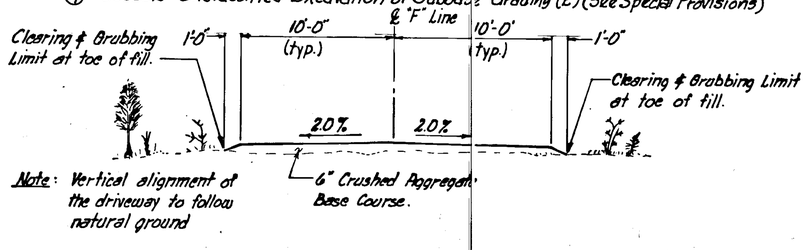
Note:
- Dimensions in parenthesis corresponds to stations in parenthesis.
- Roadway width transition from 63'-0" to 55'-0" between Sta. "0" 39+00 to 41+00.
- 3/4" overlay shall end at Sta. "0" 54+91.04
- Curb & Gutter shall end at Sta. "0" 54+00.



Approaches

Labeling Index

1. 3/4" Asphalt Concrete, Type III overlay
2. 1 1/2" Asphalt Concrete, Type II
3. 3" Asphalt Concrete, Type II
4. Concrete Curb & Gutter (See General Notes #2)
5. 4" Crushed Aggregate Base Course
6. 6" Subbase, Grading "E"
7. CSS-1 Asphalt for Tack Coat
8. Seeding
9. Useable Unclassified Excavation or Subbase Grading (E) (See Special Provisions)



Note: Vertical alignment of the driveway to follow natural ground

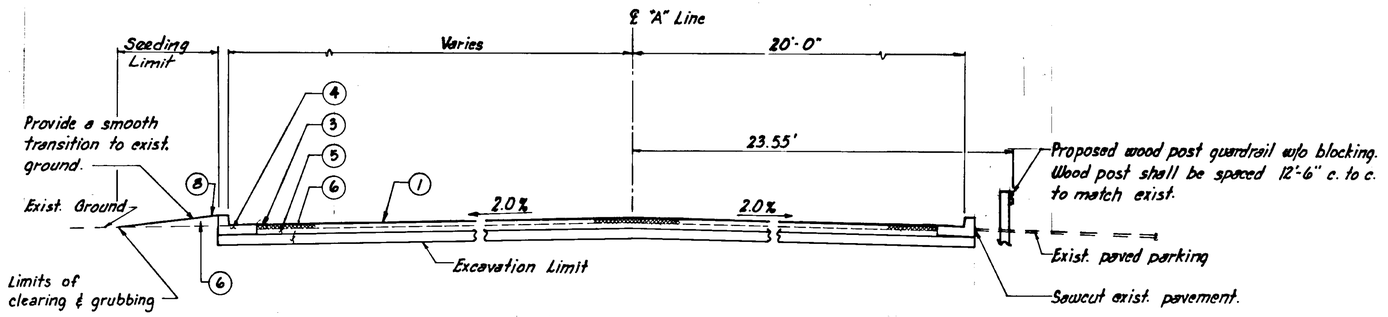
Typical Section - Forest Service Driveway

Sta. "F" 10+13 to Sta. "F" 12+10

General Notes

1. All types of pavement removal (bikepath, patching, roadway, island, etc.) shall be paid under pay item 202 (2), Removal of Pavement.
2. Curb & Gutter, Type I shall be used if existing slope drains toward the proposed curb and Type II shall be used if existing slope drains away from the proposed curb.
3. Reinforcing fabric shall be considered incidental to pay item 401 (1A), Asphalt Concrete, Type II.
4. Localized low spots on existing pavement shall be pre-level with asphalt concrete, Type III to match surrounding pavement prior to overlay.
5. Existing slopes that are disturbed shall be seeded, see Special Provisions, Section 618.
6. Tack coat shall be applied to edge of gutter prior to paving.
7. Existing topsoil shall be stockpiled and applied to all fill slopes with a minimum thickness of one (1) inch, see Section 618 of the Special Provision.

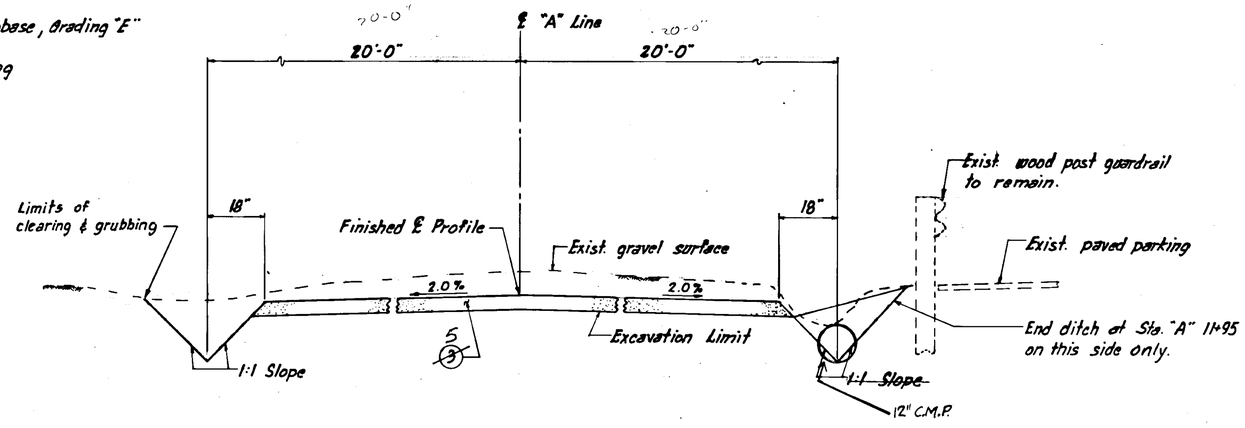
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	HES-M-966(14)	'88	4	28



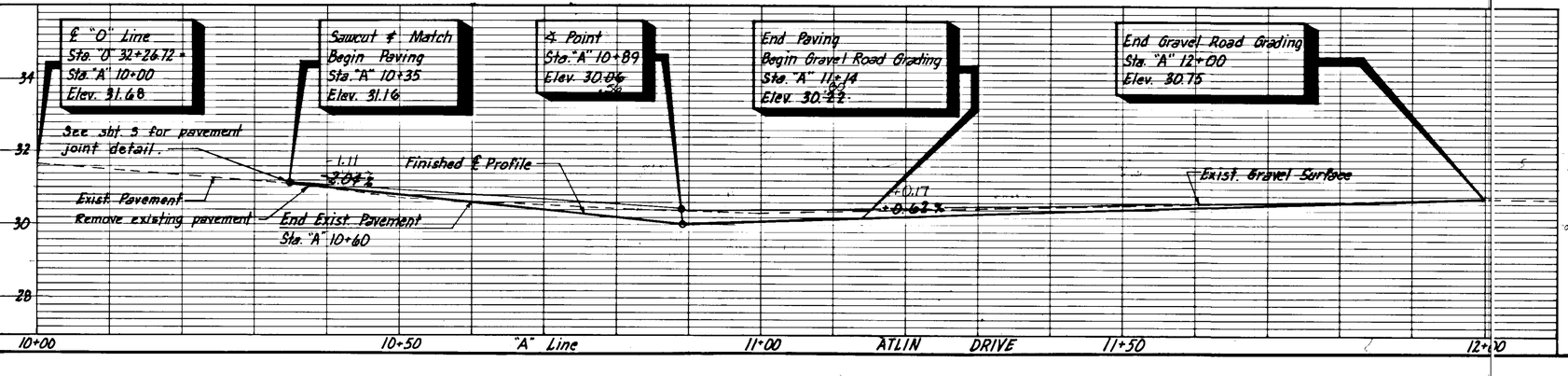
ATLIN DRIVE
STA. "A" 10+35 TO STA. "A" 11+14

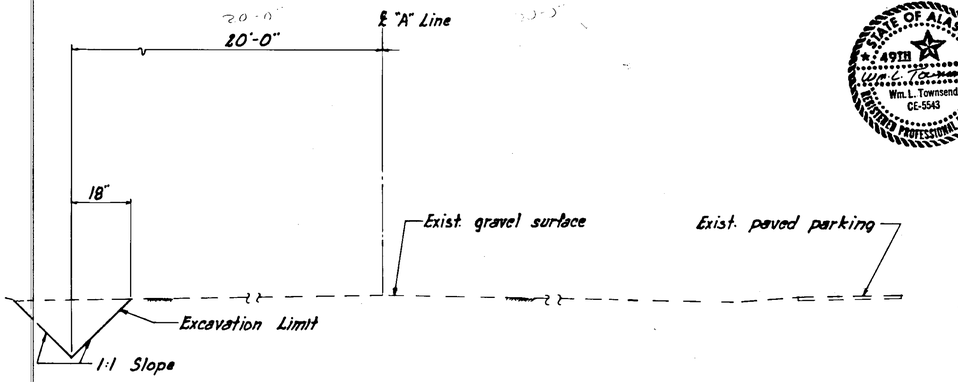
Labeling Index

(1) ¾" Asphalt Concrete, Type III, Overlay
(3) 3" Asphalt Concrete, Type II
(4) Concrete Curb and Gutter
(5) 4" Crushed Aggregate Base Course
(6) 6" Subbase, Grading "E"
(8) Seeding



ATLIN DRIVE
STA. "A" 11+14 TO STA. "A" 12+00



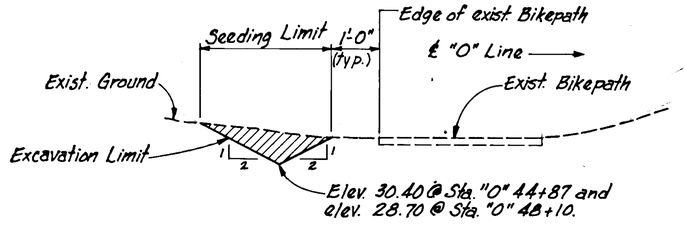


ATLIN DRIVE
STA. "A" 12+00 TO STA. "A" 12+50

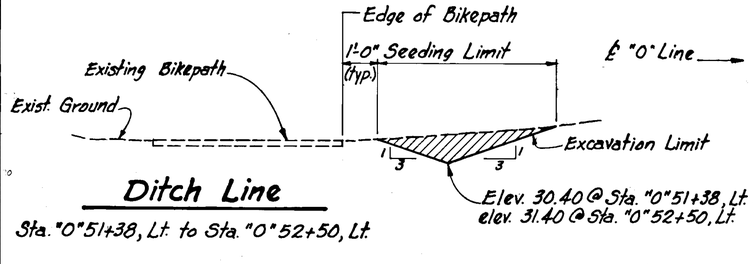
GENERAL NOTES

1. Roadway shall match exist. pavement at Sta. "A" 10+35 and transition to a 2.0% typical cross section at Sta. 10+89. The edge of pavement shall rotate about the proposed centerline profile in the transition area.

2. Curb and Gutter type I shall be used if exist. or proposed grade drains toward the proposed curb and type II shall be used if exist. or proposed grade drains away from the proposed curb.



Ditch Line
Sta. "O" 44+87, Lt. to Sta. "O" 48+10, Lt.



Ditch Line
Sta. "O" 51+38, Lt. to Sta. "O" 52+50, Lt.

NOTE: See Sheet 10 for work items between Sta. "0" 20+00 to Sta. "0" 25+48.11

GUARDRAIL NOTES

1. Relocation of exist. guardrail shall be paid under pay item 606(1), Beam Type Guardrail, Type I Post.
2. Steel post blocking to be added shall be considered incidental to pay item 606(1).
3. Any other work necessary to complete the guardrail relocation and addition of post blocking to exist. guardrail posts shall be considered incidental to pay item 606(1).

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	HES-M-966(14)	'88	5	28

STATE OF ALASKA 49TH Wm. L. Townsend REGISTERED PROFESSIONAL ENGINEER Wm. L. Townsend CE-5543

PLAN LAYOUT

0' 40' 80' 120' SCALE IN FEET

CENTERLINE MONUMENT STA. 25+48.11

Provide a steel post blocking at exist. steel post (2).

Begin guardrail relocation Sta. "0" 26+24.5, 31.5' Lt.

End guardrail relocation Sta. "0" 26+62, 34.5' Lt.

Sta. "0" 27+18, 31.5' Lt.

Relocate exist. guardrail as shown.

Begin Curb & Gutter Sta. "0" 26+50, 32.5' Lt.

Curb & Gutter

Existing R/W

Remove existing paved bikepath

Sta. "0" 31+48, Lt.

Exist. paved bikepath

To Mendenhall Mall

"M" Line N 59° 39' 24" W

See sht. no. 7 for Mendenhall Mall Rd. and Mendenhall Loop Rd. intersection detail

End ¾" overlay, 60.0' Lt. of "0" Line.

Curve Data
D = 4°00'00" Rt.
Δ = 20°21'14"
R = 1,432.39'
L = 508.85'
T = 257.13'

Drive

To downtown Juneau

Egan

See sht. 11 for Island construction detail

MENDENHALL LOOP ROAD

400' rad.

"0" Line 944.27'

N 30°20'35.5" E

29'-6" (typ.)

30+00

Sta. "0" 32+41.00 = Sta. "M" 10+00

Sta. "0" 32+26.72 = Sta. "A" 10+00

Edge of Gutter

Exist. electrolier to be removed, see sht. 27

35+00

Curb & Gutter

Edge of Gutter

STA. "0" 36+50

MATCH LINE

End Radius Sta. "0" 27+18, 31.5' Rt.

Special Ditch

Begin ¾" overlay

Concrete Spillway

100' radius

Radius Point Sta. "0" 26+96.50, 75.48' Rt.

See sht. 11 for bikepath layout & details.

Radius Point Sta. "0" 27+18, 131.5' Rt.

Remove and Reconstruct bike path from Sta. 29+10 to Atlin Dr.

Exist. ditch line shall be replaced to its original condition after installation of the drainage pipe and shall be paid under pay item 610(1), Ditch Line.

Existing R/W

Exist. Paved Bikepath

Proposed R/W

Existing R/W

See sht. no. 7 for Atlin St. and Mendenhall Loop Rd. intersection and bus turnout detail.

P.C. Sta. "0" 34+92.38

Atlin Drive S 89° 39' 24" E

End ¾" overlay

"A" Line

"F" Line N 00° 20' 36" E

See sht. no 7 for Forest Service driveway layout.

Forest Service Storage Facility

Forest Service Bldg.

See sht. no. 7 for James St. and Mendenhall Loop Road intersection detail.

End ¾" overlay, 45.0' Lt. of "0" line.

"J" Line

P.I. Monument Sta. "0" 37+49.51

N 42°26'40" W

James Blvd.

See sht. no. 7 for Driveway Approach "B" and Mendenhall Loop Road intersection detail.

End ¾" overlay, 48.0' Lt. of "0" line

Driveway Approach "B"

Existing R/W

Relocate exist. electrolier, see sht. 27.

See sht. no. 7 for bus turnout detail.

Exist. edge of pavement

P.O.T. Monument Sta. "0" 41+68.28

End ¾" overlay, 43' Lt. of "0" line.

See sht. no. 8 for Kodzoff I and Mendenhall Loop Road intersection detail.

Kodzoff I Acres Trailer Park

Begin Ditch Line * Sta. "0" 44+87, Lt.

Exist. paved bikepath

STA. "0" 47+00

MATCH LINE

MENDENHALL LOOP ROAD

40+00

N 50° 41' 50" E 168.04'

45+00

"0" Line

Curb & Gutter

Curb & Gutter

25'-6" (typ.)

Sta. "0" 37+44.80 = Sta. "J" 10+00.00

P.T. Sta. "0" 40+01.23

P.C. Sta. "0" 41+69.27

Existing R/W

Exist. paved bikepath

Curve Data
D = 4°00'28" Lt.
Δ = 26°12'40"
R = 1,429.62'
L = 654.01'
T = 332.83'

* See sht. 4 for details.

NOTE: Distance from edge of gutter to centerline of roadway ("0" Line) shall transition from 29'-6" to 25'-6" between Sta. "0" 39+00 to Sta. "0" 41+00.

NOTE: Existing conduits for the existing electroliers are assumed to run directly between poles and are buried 30" below existing ground. See Special Provisions Section 107-1.16

BASIS OF CONTROL

Basis of Horizontal Control

The basis of bearing for this project is the line of sight between the Loop Road monument, station "0" 17+45.83 P.I., and the intersection monument at Loop Road and Egan Drive, Egan Drive stationing of "L" 393+81.12 P.OT., with a bearing of N30° 02' 03" E.

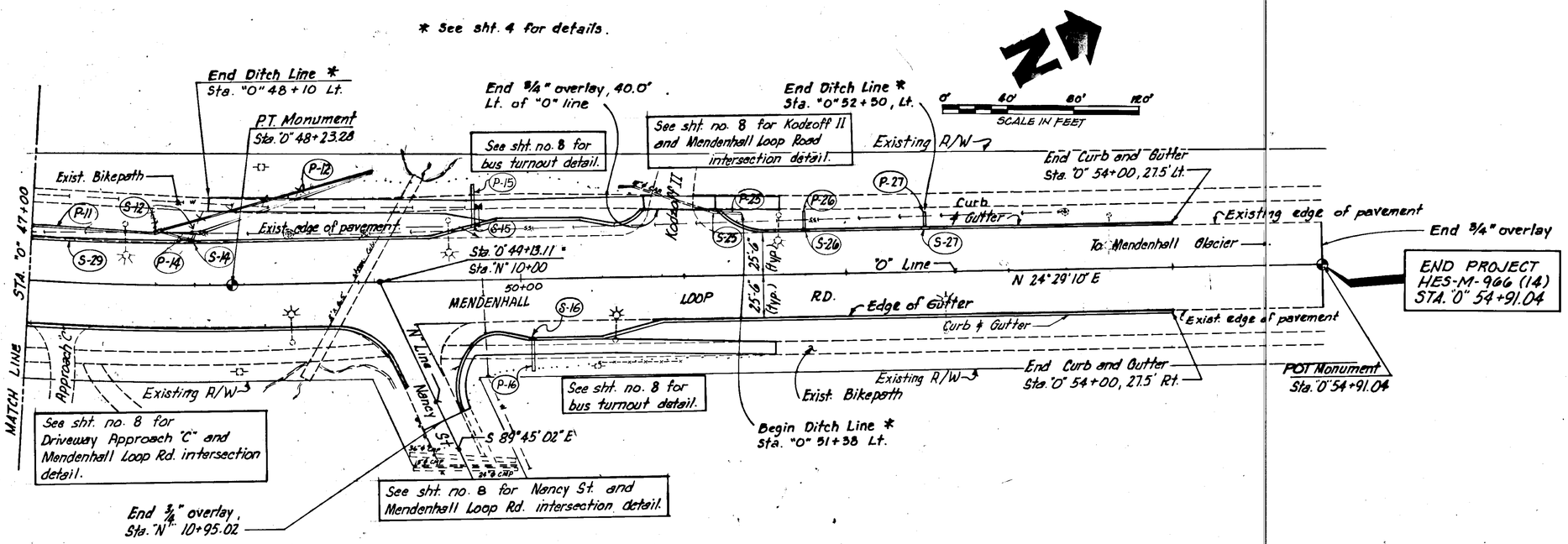
The basis of coordinates for this project is the intersection monument, at Loop Road and Egan Drive with project coordinates of N. 89036.025 E. 29383.933

Basis of Vertical Control

The basis of vertical control is the top of the monument at the intersection of Loop Road and Egan Drive with an accepted elevation of 29.92 feet above MLLW.

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	HES-M-966 (14)	'88	6	28

STATE OF ALASKA 49TH — Wm. L. Townsend CE-5543 — REGISTERED PROFESSIONAL ENGINEER



PLAN LAYOUT

EXISTING MONUMENT TABLE *		
STATION "O"	NORTH	EAST
25+48.11	89036.025	29383.933
37+49.51	90072.854	29990.856
41+68.28	90341.541	30319.095
48+23.28	90855.884	30715.357
54+91.04	91463.591	30992.127

* Existing monument coordinates are for reference only. See sheet no. 5 for basis of control.

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	HES-M-966 (14)	'88	7	28

INTERSECTION AND BUS TURNOUT DETAIL

STATE OF ALASKA 49TH — Wm. L. Townsend CE-5543 — REGISTERED PROFESSIONAL ENGINEER

MENDENHALL MALL ACCESS INTERSECTION

End curb & gutter 60.0' Left of center line

Removed exist. paved bikepath as shown.

Sawcut & match exist. bikepath and re-align as shown. Sta. "0" 31+48, Lt.

Radius Point Sta. "0" 31+70.5, 81.5' Lt.

50.0' rad.

℄ Bikepath

"M" Line

N 59°39'24" W

End bikepath, 6.00 Lt. elev. to match back of depressed curb & gutter

Radius Point Sta. "0" 33+11.5, 81.5' Lt.

Begin depressed curb & gutter

Sta. "0" 32+01, 41.06 Lt. End bikepath, match elev. of back of depressed curb & gutter.

Sta. "0" 32+41 = Sta. "M" 10+00

End depressed curb & gutter

Sta. "0" 33+10, 31.0' Lt. match elev. of back of depressed curb & gutter

Remove exist. bikepath as shown

Exist. R.O.W.

Sawcut & match exist. bikepath at edge of trench for P.I.

Proposed bikepath shall match existing bikepath's alignment.

Sta. "0" 33+92.96, 41.5' Rt. Bikepath shall begin transition from elev. of the back side of curb to exist. bikepath elev. at Sta. "0" 34+25, Rt.

Sawcut and match exist bikepath's width and elevation at Sta. "0" 34+25, Rt.

Sta. "0" 33+42.96, 41.5' Rt.

MENDENHALL LOOP ROAD

W 30°20'35.5" E — "0" Line

Sta. "0" 32+26.72 = Sta. "A" 10+00

Sawcut and match exist. pavement, 30.31' Lt. of "0" ℄

Exist. pipes to be removed & disposed.

Exist. edge of pavement

Sta. "0" 34+32.96, 31.5' Rt. *

29'-6" (Typ.)

12'-00 — 33'-00 — 34'-00

S-3 — A

P-1A — S-1A — P-3 — S-2 — P-2 — P-1 — S-1 — P-2A — P-2B — P-22

Existing R.O.W.

Radius Point Sta. "0" 31+98.14, 71.5' Rt. — 40.0' rad.

Relocate exist. mailboxes (3) and newspaper boxes (3) as shown.

Begin wood post guardrail, provide ~~terminal~~ end w/o breakaway terminal, Sta. "A" 10+56.21, 23.55' Rt.

End wood post guardrail, spliced to exist guardrail. Removed exist. terminal end. Sta. "A" 10+93.71, 23.55' Rt. Realign exist. wood post to a plumb position.

End Paving on Atlin Drive - Sta. "A" 11+14

Exist. wood post guardrail w/o post blocking, spaced 12'-6" c. to c.

Signal Poles

Exist. paved bikepath

Edge of paved bikepath

Exist. R.O.W.

38.0' rad.

Proposed R.O.W

Radius Point Sta. "0" 33+12.98, 57.5' Rt.

Radius Point Sta. "0" 33+34.40, 69.5' Rt.

S 89°39'24" E

Begin Forest Service Driveway Reconstruction Sta. "F" 10+13

End Forest Service Driveway Reconstruction Sta. "F" 12+10

N 52°20'35" E

P.C. Sta. "F" 11+49.5

P.T. Sta. "F" 11+99.42

55' rad.

10'

18'

N 00°20'35" E

"F" Line

Clearing & Grubbing Limit at the toe of fill.

Radius Point Sta. "F" 11+49.5, 55.0' Rt.

36' x 60' bldg

Provide a 12"ϕ CMP (approx. 30' long), align to match proposed ditch line.

17.0' (min.)

Relocated mailboxes (3) and newspaper boxes (3) shall be installed on a new gang box type installation. Sta. "A" 11+77.5, Rt. 12+50

Sta. "A" 11+95.5 = Sta. "F" 10+00

"A" Line

8" CMP

ATLIN DRIVE INTERSECTION

NOTE : See Sheet 3 for Sections A-A and B-B.

* Provide a minimum of a 5.0' radius at these angle points

End curb and gutter at the edge of bikepath.

Sawcut and match exist. pavement.

Radius Point Sta. "0" 39+16.50, 57.20' Lt.

Proposed curb and gutter Sta. "0" 39+54, 40.80' Lt.

Edge of paved bikepath

Sta. "0" 39+84, 39.80' Lt. Bikepath shall begin transition from elev. of the back side of curb to exist. bikepath elev. at Sta. "0" 40+90, Lt.

Sawcut and match exist. bikepath's width and elevation. Sta. "0" 40+90, Lt.

Proposed bikepath shall match exist. bikepath alignment.

40.0' rad.

8.5'

Sta. "0" 49+34, 28.80 Lt.

Edge of exist. pavement.

DRIVEWAY APPROACH "B" INTERSECTION

MENDENHALL LOOP ROAD

"0" Line

N 50°41'50.1" E

P.T. Sta. "0" 40+01.23

(only one on this sheet)

* Provide a minimum of 5.0' Radius at ~~these~~ this angle point.

JAMES BOULEVARD INTERSECTION

End curb and gutter at the edge of bikepath

Radius Point Sta. "0" 37+01.24, 71.5' Lt.

40' rad.

Edge of exist. pavement

N 42°06'40" W

James Boulevard

"J" Line

End curb and gutter at the edge of bikepath.

Radius Point Sta. "0" 38+05.89, 71.5' Lt.

40.0' rad.

40' rad.

P-24

Radius Point Sta. "0" 38+23, 71.5' Lt.

Proposed Concrete Curb and Gutter.

DRIVEWAY APPROACH "B" INTERSECTION (see Above Detail)

29'-6" (Typ.)

"0" Line

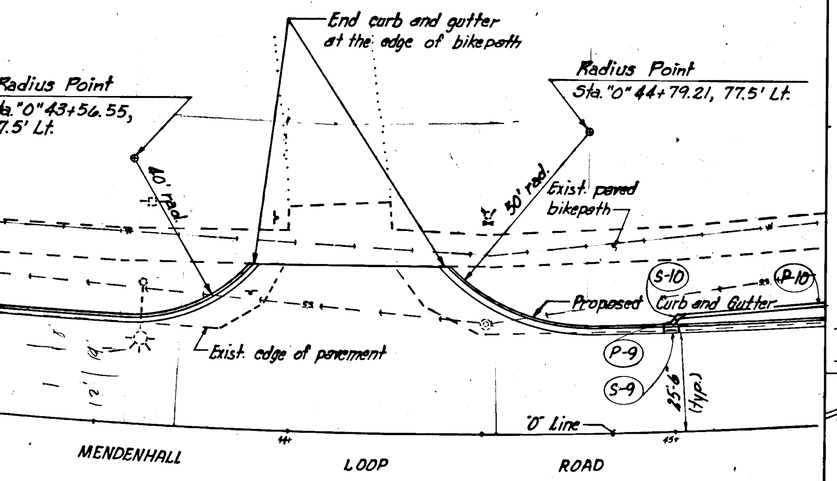
MENDENHALL

Sta. "0" 37+44.80, P.O.C. = Sta. "J" 10+00

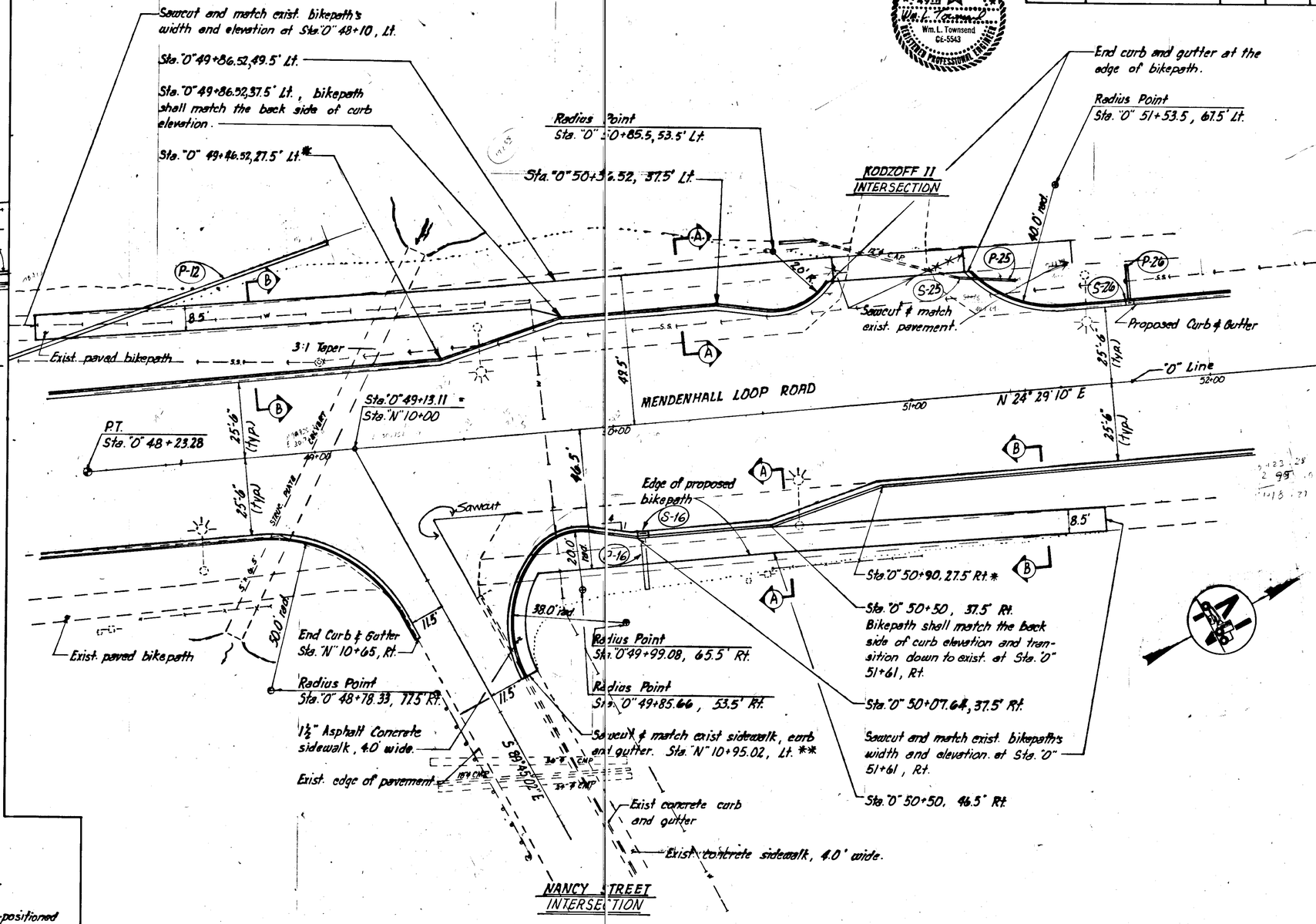
LOOP ROAD

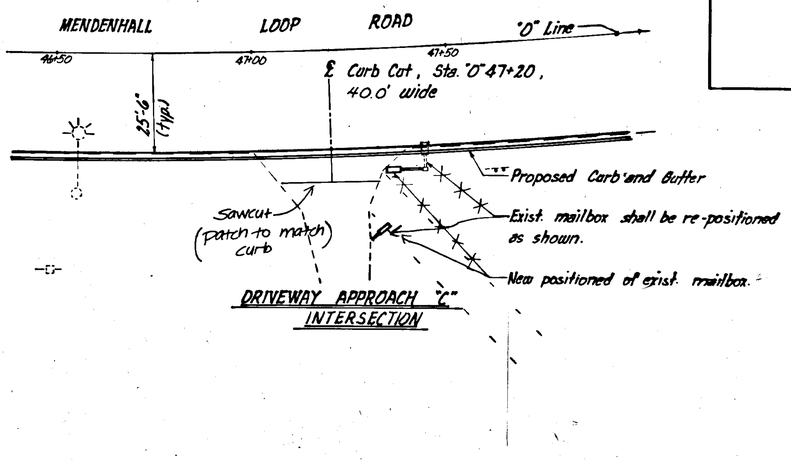
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	HES-M-966(14)	'88	8	28

STATE OF ALASKA 49TH
Wm. L. Townsend
REGISTERED PROFESSIONAL ENGINEER
Wm. L. Townsend
06-5543



KODZOFF I INTERSECTION





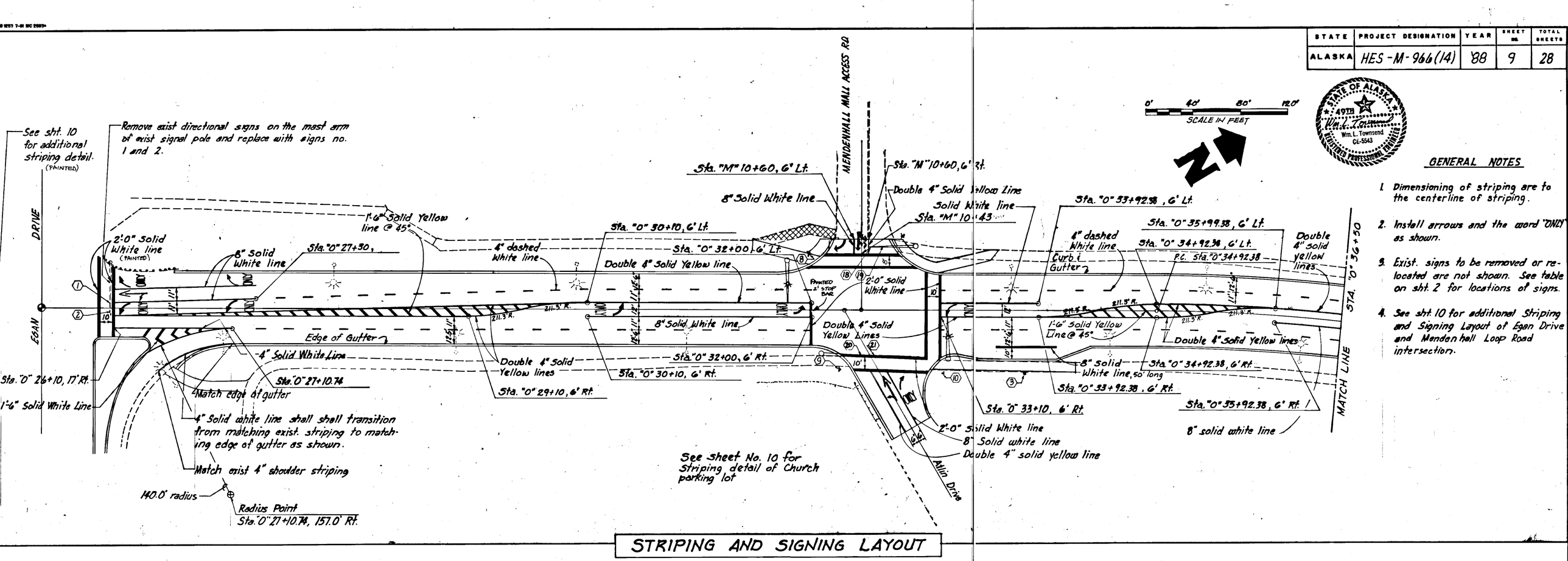
DRIVEWAY APPROACH "C" INTERSECTION

NOTE: See Sheet 3 for Sections A-A and B-B

* Provide a minimum of 5.0' radius at these angle points.

** Proposed sidewalk shall transition to match exist. sidewalk at 12:1 slope.

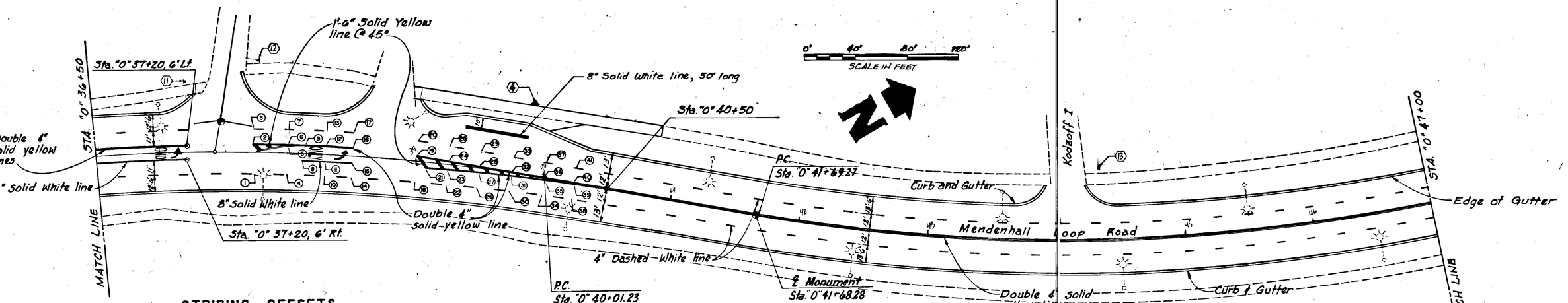
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	HES-M-966(14)	'88	9	28



GENERAL NOTES

1. Dimensioning of striping are to the centerline of striping.
2. Install arrows and the word "ONLY" as shown.
3. Exist. signs to be removed or relocated are not shown. See table on sht. 2 for locations of signs.
4. See sht. 10 for additional Striping and Signing Layout of Egan Drive and Mendenhall Loop Road intersection.

STRIPING AND SIGNING LAYOUT



STRIPING OFFSETS

(1) 37+70, 17.0' Rt.	(10) 38+25, 17.0' Rt.	(19) 39+00, 3.5' Lt.	(28) 39+50, 1.4' Lt.	(37) 40+00, 12.0' Lt.
(2) 37+70, 6.0' Lt.	(11) 38+25, 6.0' Rt.	(20) 39+00, 14.8' Lt.	(29) 39+50, 12.9' Lt.	(38) 40+25, 12.7' Rt.
(3) 37+70, 17.0' Lt.	(12) 38+25, 5.6' Lt.	(21) 39+08, 5.2' Rt.	(30) 39+75, 14.9' Rt.	(39) 40+25, 0.8' Rt.
(4) 38+00, 17.0' Rt.	(13) 38+25, 16.6' Lt.	(22) 39+25, 16.0' Rt.	(31) 39+75, 3.0' Rt.	(40) 40+25, 0.1' Lt.
(5) 38+00, 5.0' Lt.	(14) 38+50, 17.0' Rt.	(23) 39+25, 4.6' Rt.	(32) 39+75, 0.9' Lt.	(41) 40+25, 12.0' Lt.
(6) 38+00, 5.9' Rt.	(15) 38+50, 6.0' Rt.	(24) 39+25, 2.5' Lt.	(33) 39+75, 12.2' Lt.	
(7) 38+00, 16.9' Lt.	(16) 38+50, 5.2' Lt.	(25) 39+25, 13.9' Lt.	(34) 40+00, 13.7' Rt.	
(8) 38+10, 6.0' Rt.	(17) 38+50, 16.2' Lt.	(26) 39+50, 15.4' Rt.	(35) 40+00, 2.0' Rt.	
(9) 38+10, 6.0' Lt.	(18) 39+00, 16.6' Rt.	(27) 39+50, 3.9' Rt.	(36) 40+00, 0.3' Lt.	

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	HES-M-966(14)	'88	10	28

STATE OF ALASKA · 49TH · Wm. L. Townsend · Wm. L. Townsend CE-5543 · REGISTERED PROFESSIONAL ENGINEER

SCALE IN FEET 0' 40' 80' 120'

Kodzoff II

Sta. "0" 47+00

Sta. "0" 48+20, 12.0' Lt.

Sta. "0" 49+60.98, 12.0' Lt.

Sta. "0" 49+03.62, 12.0' Lt.

8" solid white line

4" dashed white line

1'-6" Solid White line @ 45°

8" Solid White Line 50.0' long

10'

1'-6" solid yellow line @ 45°

Sta. "0" 51+10 12.0' Lt.

Sta. "0" 52+20, 12.0' Lt.

Sta. 52+50, 12.0' Lt.

4" solid yellow line

POT Monument Sta. "0" 54+91.04

Curb and Gutter

"0" Line

211.3' R.

Double 4" solid yellow line

Sta. "0" 48+23.30 P.T.

35' R.

46' R.

To Mendenhall Glacier

Match exist. Striping

4" double yellow line

4" dashed yellow line

Curb and Gutter

10'

8" Solid White line, 45' long

Sta. "0" 51+20

Sta. "0" 52+50

4" solid white line

Match exist. shoulder striping

Sta. "0" 49+03.62

Sta. "0" 49+30

Sta. "N" 10+40

Sta. "0" 49+60.98

2.0' solid white line

Nancy Street

Exist. striping to remain

Match Line

SIGNING AND STRIPING LAYOUT

SCALE IN FEET 0' 40' 80' 120'

See sht. 9 for additional striping detail

Repaint exist. crosswalk

P.I. Monument Sta. "0" 17+45.83

4" Solid White Line

Edge of exist. pavement

Match exist. striping

Match exist. 4" Solid White Line

Approx. 60.0' Rad.

Double 4" Solid Yellow Line

Sta. "0" 26+10

Approx. 60.0' Rad

Sta. "0" 25+48.11, ℄ Pt. Δ = 0° 18' 33"

Sta. "As Blt." 393+81.12 Ahd. =

Sta. "As Blt." 393+81.54 Bk.

12.0'

12.0'

N 30° 02' 03" E

"0" Line

260.2' Rad.

8.0' Solid White Striping

N 30° 20' 36" E

Mendenhall Loop Road

Begin Striping Sta. "0" 20+00

Sta. "0" 21+60, 3.70' Rt.

4" Solid White Line

Double 4" Solid Yellow Line

1'-6" Solid Yellow Line @ 45°

Sta. "0" 22+60, 6.0' Lt.

Sta. "0" 22+60, 6.0' Rt.

8" Solid White Line

Exist. edge of pavement

Hurlock Ave.

Sta. "0" 24+67, 6.0' Rt.

Approx. 70.0' Radius

Sta. "As Blt." 393+39

Match exist. 4" Solid White Line.

Egan Drive

2.0' long white striping spaced 4.0' apart.

PARKING LOT STRIPING NOTES

1. Install arrows as shown and conforming to Standard Drawing T-22-01, except it shall be yellow in color.
2. Exist. striping in conflict with the proposed striping shall be removed.

MENDENHALL LOOP ROAD

"0" Line

N 30° 20' 36" E

ATLIN DRIVE

Exist. 4" Solid Yellow Line

8'-6" (typ.)

60° (typ.)

4" Solid Yellow Line

18'-0" (typ.)

Exist Guardrail

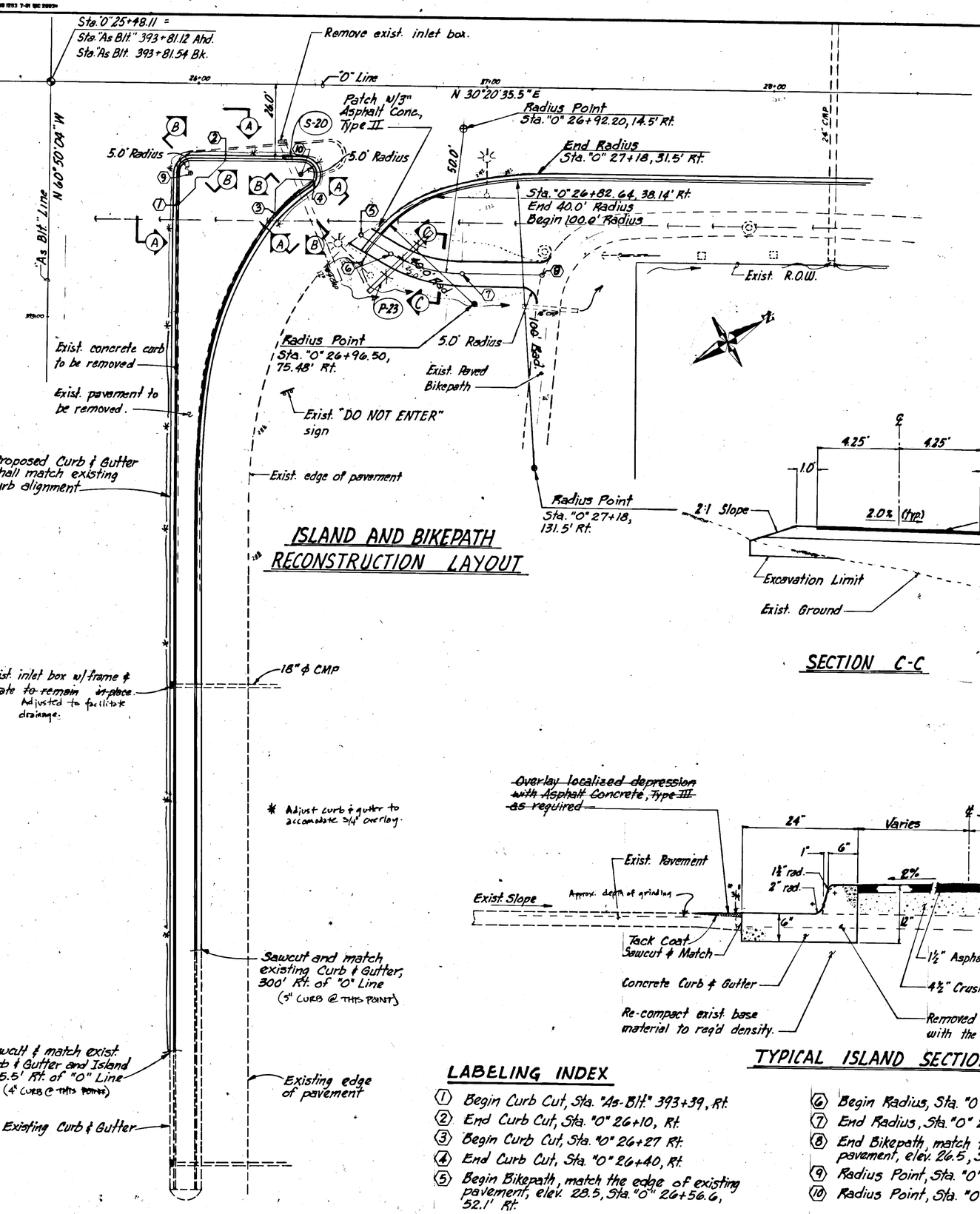
St. Paul's Catholic Church Bldg.

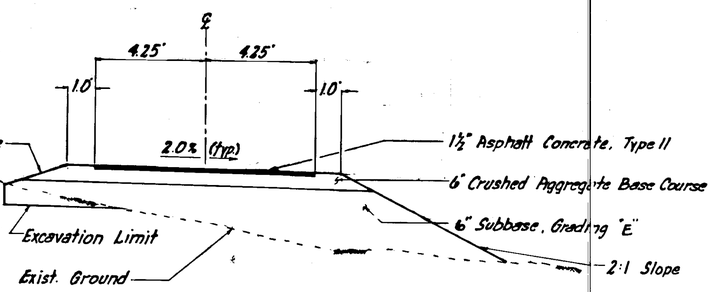
End of guardrail

5'-0"

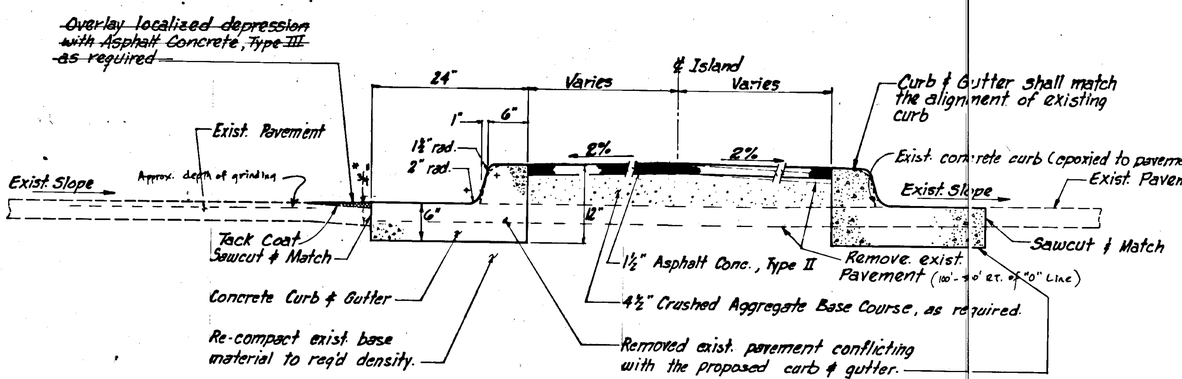
"A" Line

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	HES-M-966(14)	'88	11	28

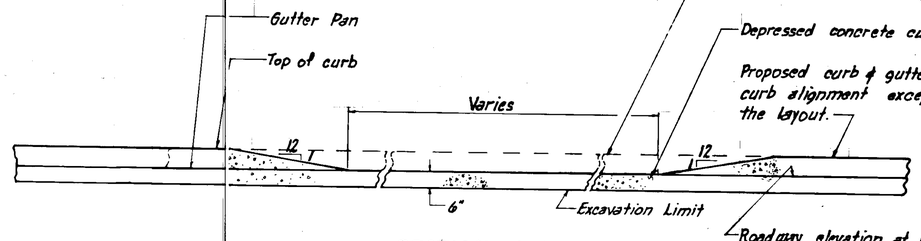




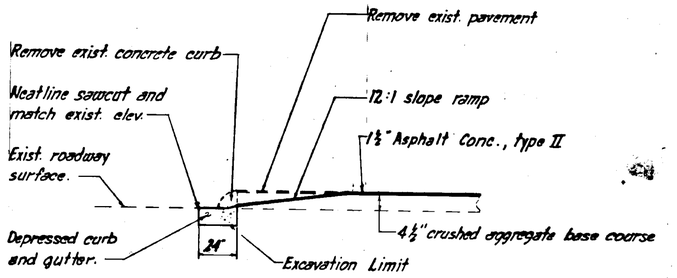
SECTION C-C



TYPICAL ISLAND SECTION



SECTION A-A



SECTION B-B

GENERAL NOTES

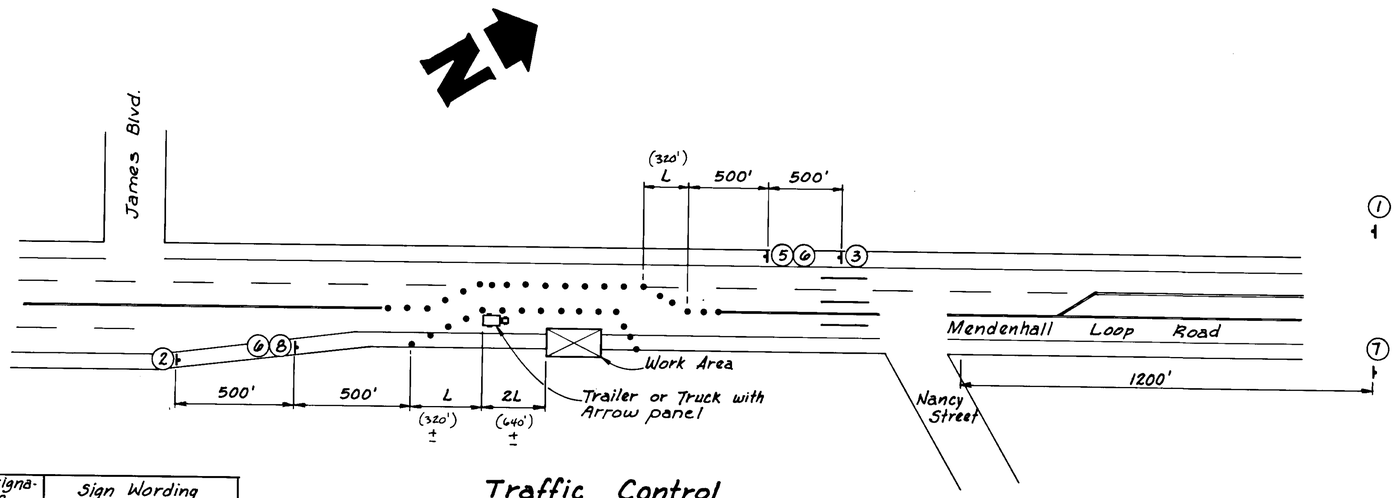
1. Concrete curb and gutter for the paved island shall be paid under pay item 609(2) Curb and Gutter.
2. The proposed curb and gutter shall match the exist. curb alignment except where shown on the plan layout.
3. The asphalt concrete for paving the island shall be paid under pay item 401(1A) Asphalt Concrete, Type II.

LABELING INDEX

1. Begin Curb Cut, Sta. "As-Blt." 393+39, Rt.
2. End Curb Cut, Sta. "0" 26+10, Rt.
3. Begin Curb Cut, Sta. "0" 26+27 Rt.
4. End Curb Cut, Sta. "0" 26+40, Rt.
5. Begin Bikepath, match the edge of existing pavement, elev. 28.5, Sta. "0" 26+56.6, 52.1' Rt.
6. Begin Radius, Sta. "0" 26+67.20, 57.8' Rt.
7. End Radius, Sta. "0" 26+92.20, 64.50' Rt.
8. End Bikepath, match the edge of existing pavement, elev. 26.5, Sta. "0" 27+20, 64.5' Rt.
9. Radius Point, Sta. "0" 25+97.37, 31.0' Rt.
10. Radius Point, Sta. "0" 26+36, 31.0' Rt.

STATE OF ALASKA
49TH
Wm. L. Townsend
Wm. L. Townsend
CE-5543
REGISTERED PROFESSIONAL ENGINEER

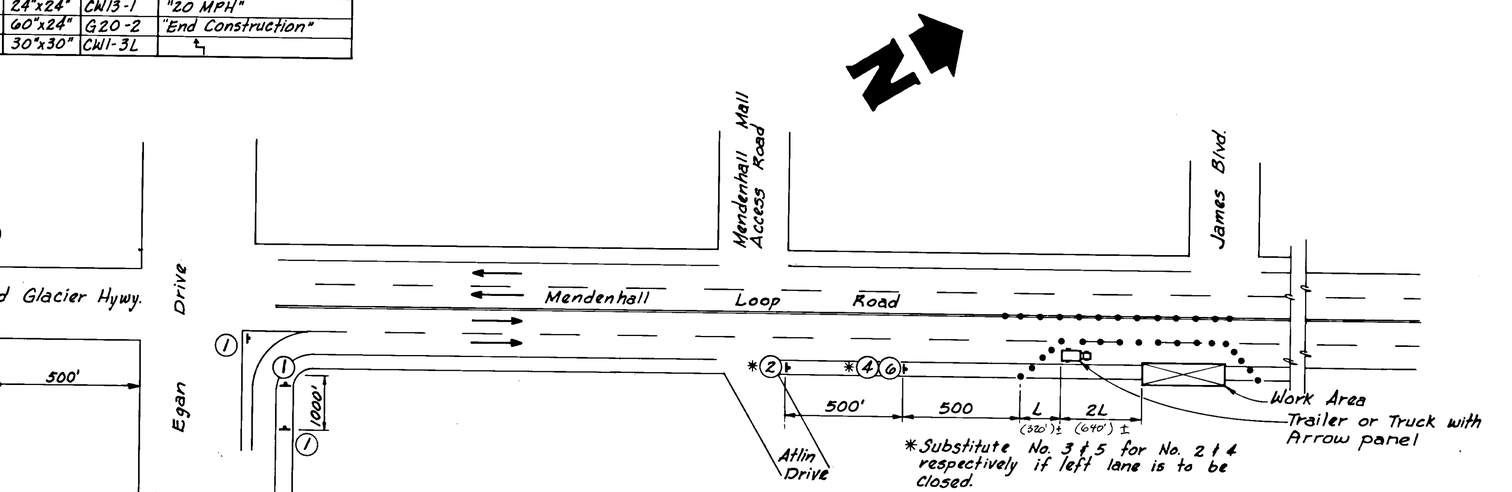
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	HES-M-966(14)	'88	12	28



Size	Designation	Sign Wording
48"x48"	CW 20-1F	"Road Construction Ahead"
48"x48"	CW20-5RF	"Right Lane Closed Ahead"
48"x48"	CW20-5LF	"Left Lane Closed Ahead"
48"x48"	W4-2R	
48"x48"	W4-2L	
24"x24"	CW13-1	"20 MPH"
60"x24"	G20-2	"End Construction"
30"x30"	CW1-3L	

Traffic Control

James Blvd. to EOP



Traffic Control

Egan Drive to James Blvd.

• Cones or Tubular Markers

Taper Formula Notes

$L = WS^2/60$ Minimum length of taper = 320 FT in feet

-S = Numerical value of posted speed limit. 40

-W = Width of offset in feet. ± 12

- Maximum spacing between channelizing devices in taper should be approximately equal in feet to the speed limit.

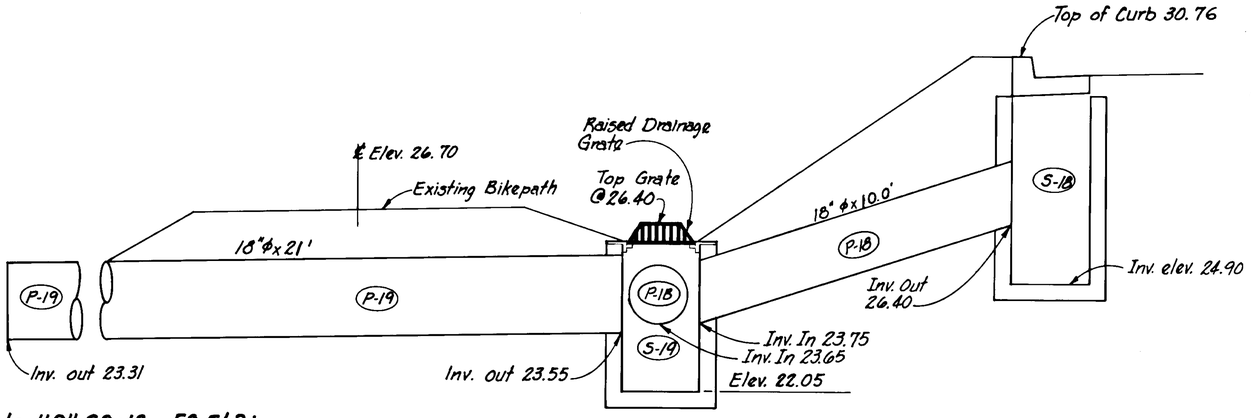
Traffic Control Plan Notes

1. Two (2) Southwest bound lanes and one (1) Northeast bound lane shall be maintained between Egan Drive and Nancy Street from 6:30 A.M. to 8:30 A.M., from Monday thru Friday.
2. Two (2) Northeast bound lanes and one (1) Southwest bound lane shall be maintained between Egan Drive and James Blvd. and one (1) Northeast bound lane and one (1) Southwest bound lane shall be maintained between James Blvd. and Nancy Street from 4:00 P.M. to 6:00 P.M., from Monday thru Friday.
3. Two (2) directional traffic (minimum of one lane for each direction) shall be maintained at all times except as outlined in note #1 & 2 above.
4. Closures and Detours will not be allowed.
5. Additional speed advisory signs may be required adjacent to work area and will be paid under pay item 115 (3), Permanent Construction Signing.
6. Construction debris shall be removed from the paved bikepath prior to the end of each shift.
7. Continuous access to Mendenhall Mall, James Blvd., Nancy Street, Kodzoff I and Kodzoff II Trailer Parks shall be provided at all times. Closure to their access will not be allowed.
8. Bicycle/Pedestrian access shall be provided on both sides of the roadway at all times. Minimum width of the bicycle/pedestrian access shall be 4.0' wide. Plan for the temporary access shall be submitted to the Engineer for approval.

STATE OF ALASKA 49TH
Wm. L. Townsend
Wm. L. Townsend
CE-5543
REGISTERED PROFESSIONAL ENGINEER

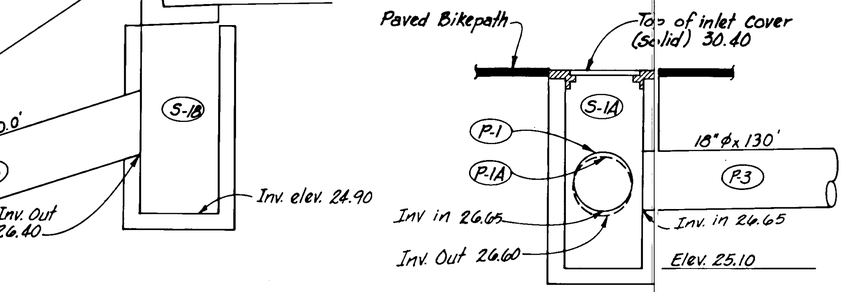
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	HES-M-966(14)	'88	13	28

STATE OF ALASKA 49TH Wm. L. Townsend CERTIFIED PROFESSIONAL ENGINEER Wm. L. Townsend CE-5543



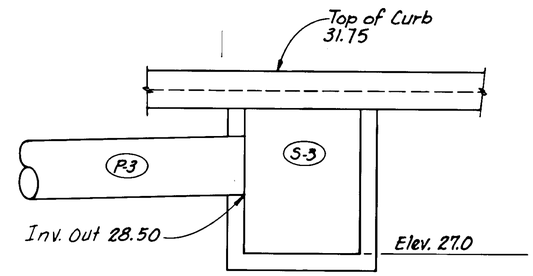
Sta. "0" 29+12, 58.5' Rt.

Sta. "0" 29+23, 40.5' Rt.

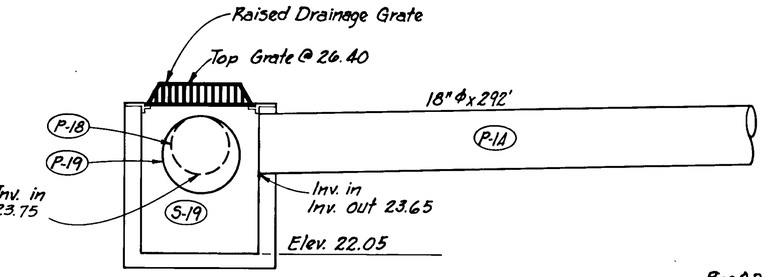


Sta. "0" 29+23, 31' Rt.

Sta. "0" 32+15, 41.0' Rt.



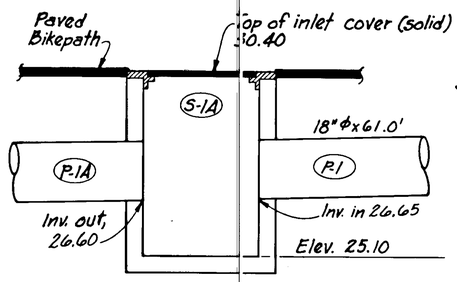
Sta. "0" 33+45, 41.0' Rt.



Sta. "0" 29+23, 40.5' Rt.

Inlet Frame and Cover Notes

1. Drainage grate for S-19 shall be a maximum of six (6) and a minimum of five (5) inches in height. All four sides and the top shall have open grates.
2. Inlet cover for S-1A shall be solid and rated to handle HS-20 loading.
3. Inlet frame for both S-1A & S-19 shall fit around the inlet perimeter as shown. Inlet frame shall conform to Section 604.
4. Minimum weight for the inlet frame & grate for S-1B and the inlet frame & cover for S-1A shall be 350 lbs.
5. Inlet cover for S-1A shall be set 1/4" below the paved bikepath elevation.



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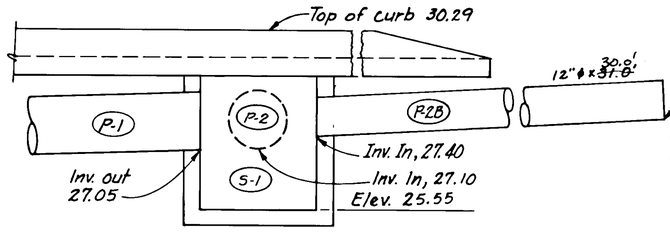
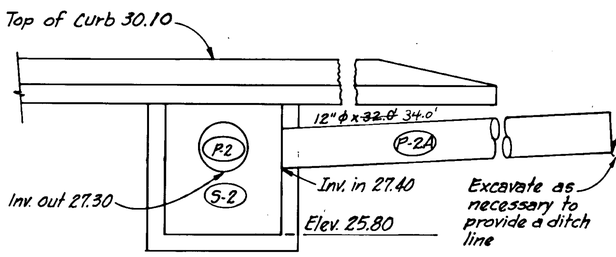


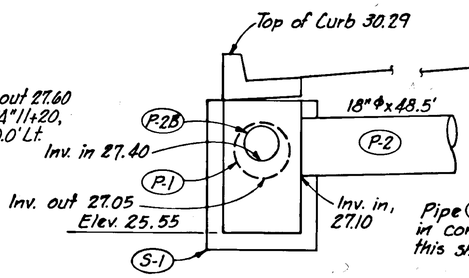
Sta. "A" 10+89, 20.0' Rt.

Concrete Cradle, Class "W" concrete shall be continuous from S1 to S2. Concrete and reinforcing steel shall be incidental to 603 (13-18), 18 inch corrugated aluminum pipe.

Concrete Pipe Cradle Detail



Sta. "A" 10+89, 29.25 Lt.



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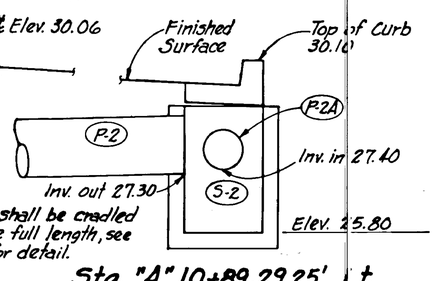


Sta. "A" 10+89, 29.25' Lt.

INLET SUMMARY

Structure	Type	Location	Offset Left	Offset Right	Top Curb Elev.	Invert Elev.
S-1	"A"	"A" 10+89		20.0'	30.29	25.55
S-1A	"A"	"0" 32+15		41.0'	30.40 *	25.10
S-2	"A"	"A" 10+89	29.25		30.10	25.80
S-3	"A"	"0" 33+45		41.0'	31.75	27.00
S-18	"A"	"0" 29+23		31.0'	30.76	24.90
S-19	"A"	"0" 29+23		40.5'	25.90 **	22.05

* Elevation at the top of the inlet's cover.
** Elevation at the top of the inlet's grate.

PIPE SUMMARY

Pipe	Diameter	Length	From Struct./Station	From Elev.	To Struct./Station	To Elev.
P-1	18"	61.0'	S-1	27.11	S-1A	26.65
P-1A	18"	292'	S-1A	26.60	S-19	23.65
P-2	18"	48.5'	S-2	27.30	S-1	27.10
P-2A	12"	~~32.0'~~ 34'	"A" 11+06.5, 19.0' Lt.	27.60	S-2	27.40
P-2B	12"	~~31.6'~~ 30'	"A" 11+06.5, 19.0' Rt.	27.60	S-1	27.40
P-18	18"	10.0'	S-18	26.40	S-19	23.70
P-19	18"	21.0'	S-19	23.55	"0" 29+12, 58.5' Rt.	23.31
P-3	18"	130.0'	S-3	28.50	S-1A	26.65
P-2C	12"	74.8	"A" 11+20 RT		"A" 11+94 RT	

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	HES-M-966 (14)	'88	14	28

STATE OF ALASKA — 49TH — Wm. L. Townsend — Wm. L. Townsend CE-5543 — REGISTERED PROFESSIONAL ENGINEER

INLET SUMMARY

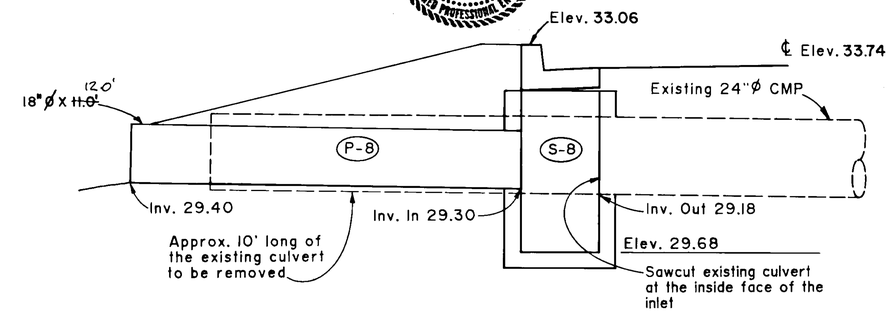
STRUCT.	TYPE	LOCATION	OFFSET LEFT	OFFSET RIGHT	TOP OF CURB ELEV.	INVERT ELEV.
S-5	"A"	"0" 36+50		31.0'	32.59	27.30
S-6	"A"	"0" 38+00		31.0'	32.66	26.68
S-7	"A"	"0" 39+00		31.0'	32.81	26.50
S-8	"A"	"0" 41+69	27.0'		33.06	27.68
S-21	"A"	"0" 35+25		31.0'	32.73	27.00

PIPE SUMMARY

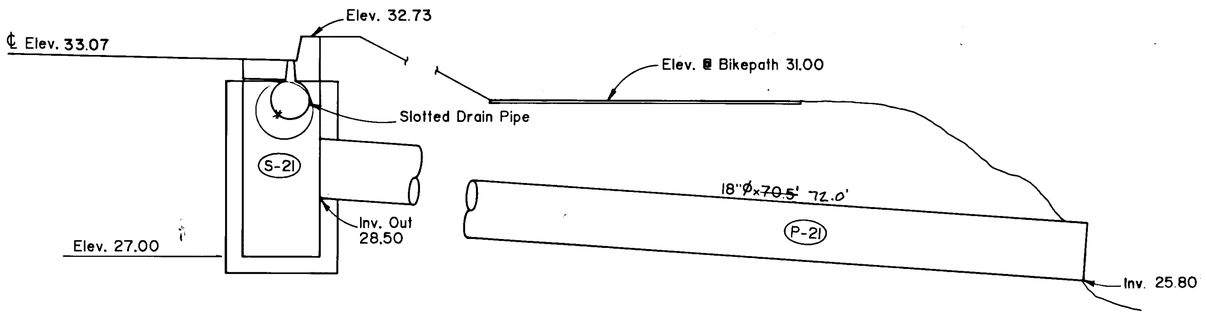
PIPE	DIA.	LENGTH	FROM STRUCT./STA.	FROM INV. EL.	TO STRUCT./STA.	TO INV. EL.
P-5	18"	31.5'	S-5	28.80	"0"36+50,62.0' Rt.	25.50
P-6	18"	~~85.0'~~ 36'	S-6	28.18	"0"38+80, 59' Rt.	25.00
P-7	18"	~~29.0'~~ 24'	S-7	28.00	"0"39+00,59.5' Rt.	26.50
P-8	18"	~~11.0'~~ 12'	"0"41+69,37.5' Lt.	29.40	S-8	29.30
P-21	18"	~~70.5'~~ 72'	S-21	28.50	"0"35+85,67.0' Rt.	25.80

GENERAL DRAINAGE NOTES :

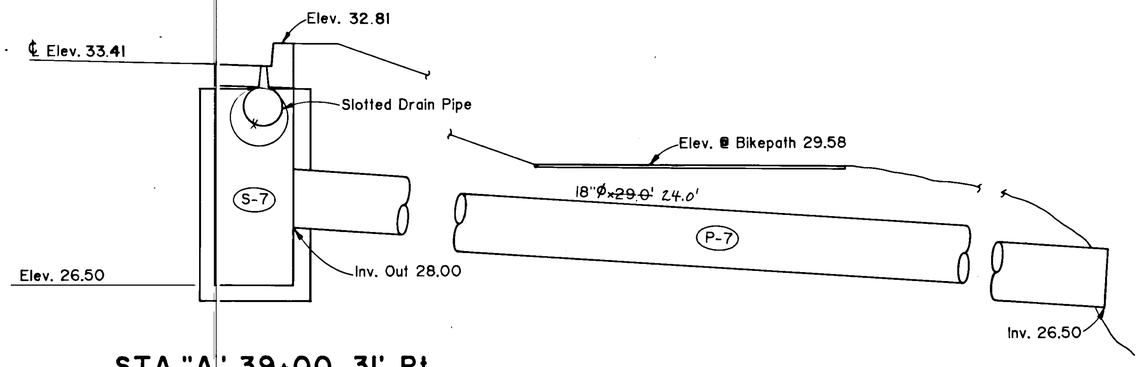
1. Curb inlet offsets are shown to face of curb.
2. Standard curb inlet grates shall conform to design pattern G3R or G3L as shown on the Standard Drawing D-23.00.
3. Curb inlet locations may be field adjusted if required as approved by the Engineer.
4. See sheet 18 for listing of inlets with Petroleum separator.
5. All pipes except the slotted drain pipes shall be a minimum thickness of 0.064" for the galvanized steel and 0.060 for the aluminum pipe.
6. Pipe lengths and inverts can be adjusted to better fit field conditions as approved by the Engineer.
7. All pipe shall be aluminum except as noted.



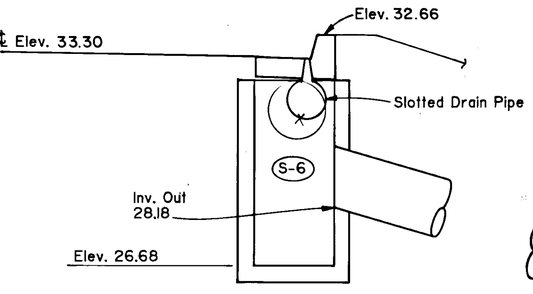
STA."A" 41+69, 27' Lt.

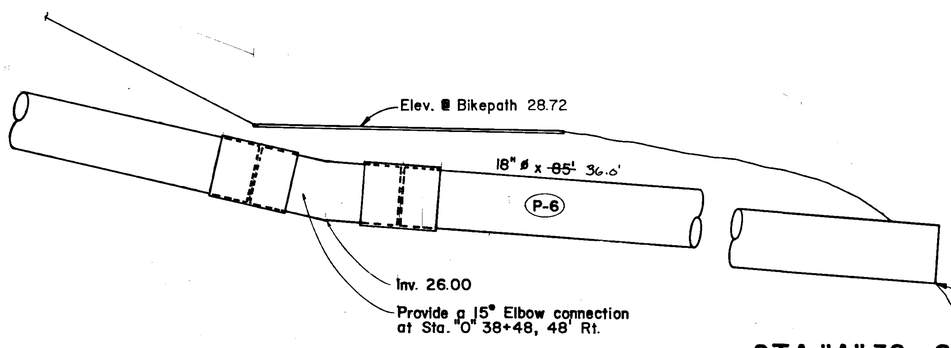


STA."A" 35+25, 31' Rt.



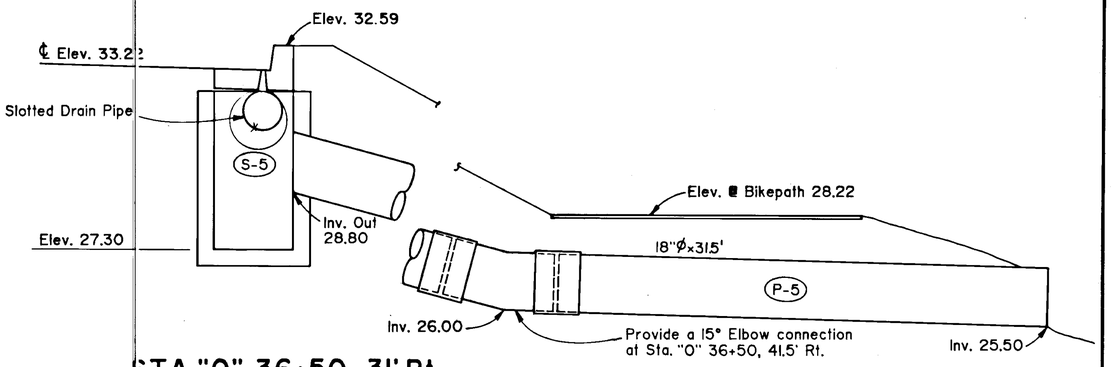
STA."A" 39+00, 31' Rt.





STA."A" 38+00, 31' Rt.

STA."A" 38 + 80, 59' Rt.



STA."0" 36+50, 31' Rt.

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	HES-M-966(14)	'88	15	28

STATE OF ALASKA 49TH Wm. L. Townsend CE-5543 REGISTERED PROFESSIONAL ENGINEER

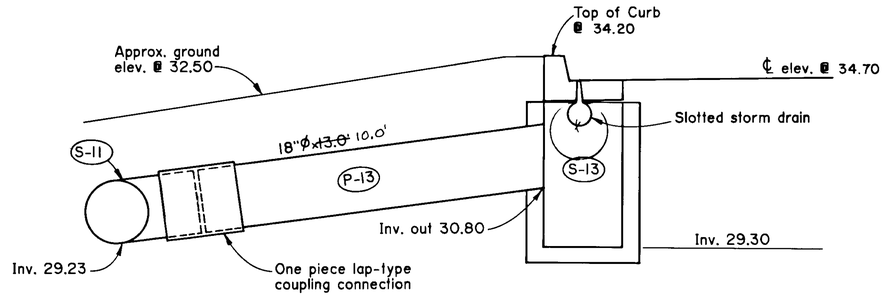
Inlet Summary

Structure	Type	Location	Offset Left	Offset Right	Top Curb Elev.	Invert Elev.
S-9	"A"	"0" 45+00	27.0'		33.80	29.10
S-10	45° Elbow *	"0" 45+02	28.5'			30.50
S-11	45° Lateral *	"0" 46+59	35.5'			29.23
S-12	"A" **	"0" ~~47+73~~ 48+00	32.0'		33.60	26.75
S-13	"A"	"0" 46+50	27.0'		34.20	29.30
S-14	"A"	"0" 48+00	27.0'		34.36	29.50
S-15	"A"	"0" 49+70	37.0'		34.49	29.50
S-16	"A"	"0" 50+10		37.0'	35.22	30.24

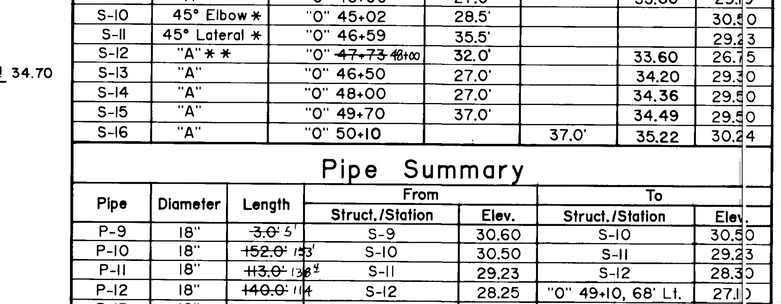
Pipe Summary

Pipe	Diameter	Length	From Struct./Station	From Elev.	To Struct./Station	To Elev.
P-9	18"	~~3.0'~~ 5'	S-9	30.60	S-10	30.50
P-10	18"	~~152.0'~~ 153'	S-10	30.50	S-11	29.23
P-11	18"	~~113.0'~~ 138'±	S-11	29.23	S-12	28.30
P-12	18"	~~140.0'~~ 114'	S-12	28.25	"0" 49+10, 68' Lt.	27.10
P-13	18"	~~13.0'~~ 10'	S-13	30.80	S-11	29.23
P-14	18"	~~27.0'~~ 24'	S-14	31.00	S-12	28.30
P-15	18"	~~25.0'~~ 24'	S-15	31.00	"0" 49+70, 61' Lt.	30.50
P-16	18"	~~22.0'~~ 16'	S-16	31.74	"0" 50+10, 59' Rt.	31.30

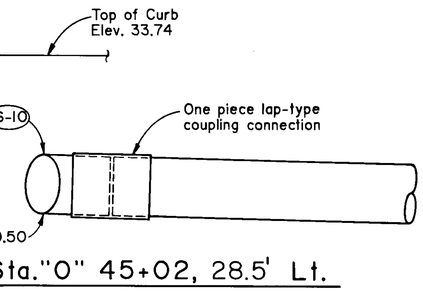
* See sheet #17 for details.
** Inlet Type "A" with frame and cover.



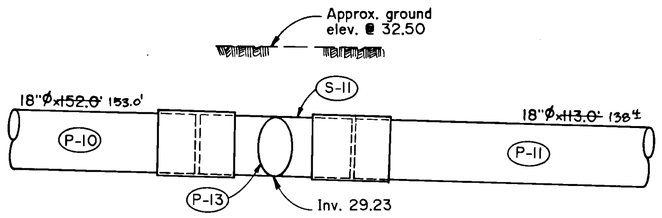
Sta."0" 46+59, 35.5' Lt.



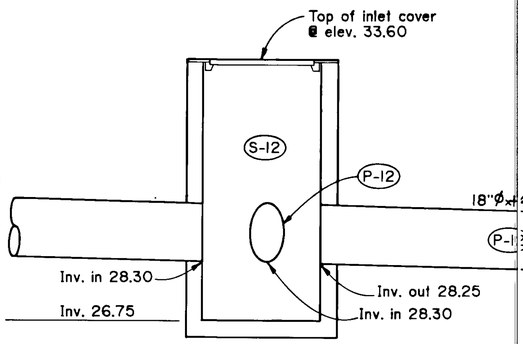
Sta."0" 46+50, 27.0' Lt.



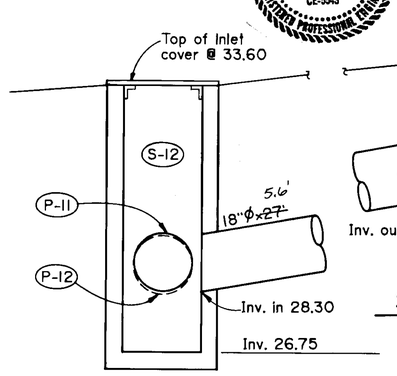
Sta."0" 45+02, 28.5' Lt.

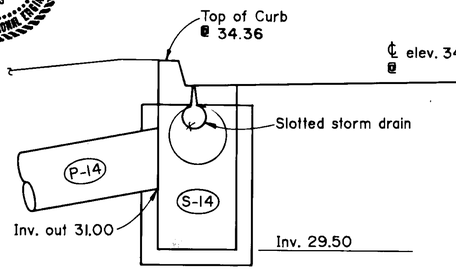


Sta."0" 46+59, 35.5' Lt.



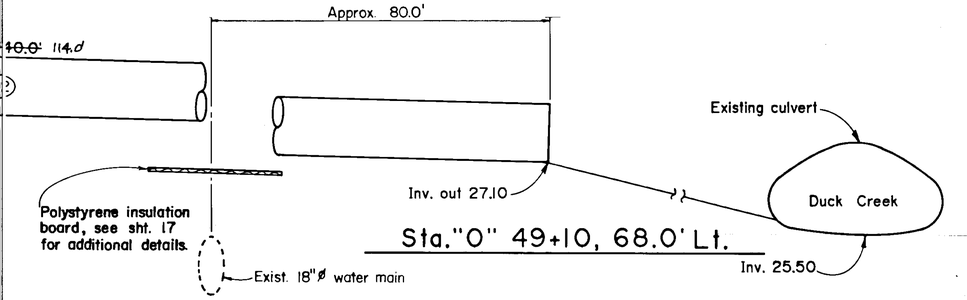
Sta."0" 47+73, 32.0' Lt.



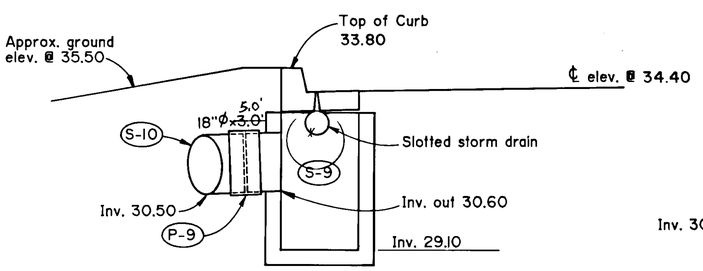


Sta. "0" 48+00, 27.0' Lt.

Sta. "0" 47+73, 32.0' Lt.

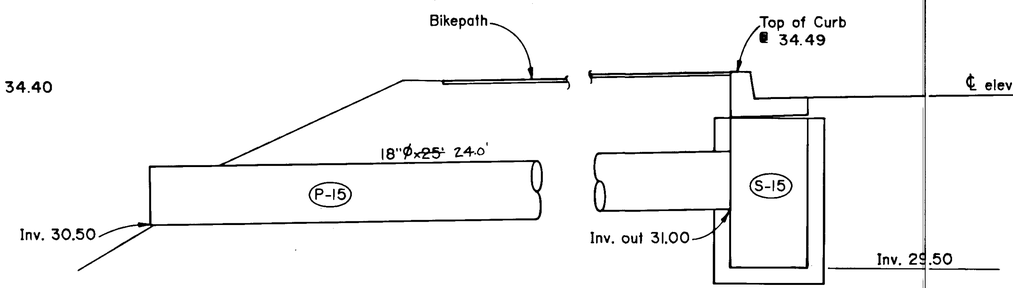


Sta."0" 49+10, 68.0' Lt.

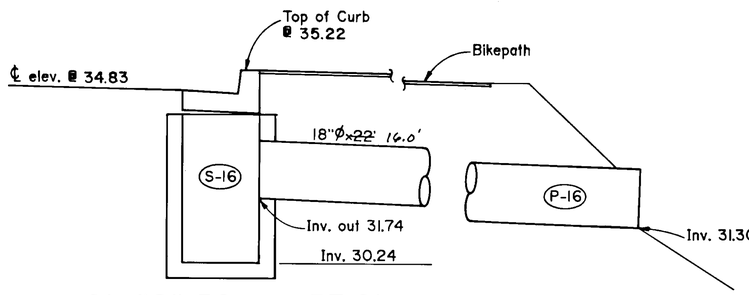


Sta."0" 45+02, 28.5' Lt.

Sta."0" 45+00, 27.0' Lt.



Sta."0" 49+70, 37.0' Lt.



Sta."0" 50+10, 37.0' Rt.

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	HES-M-966(14)	'88	16	28

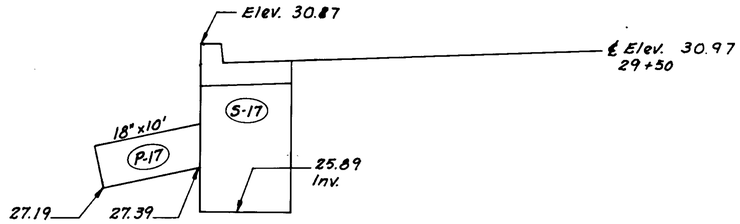
INLET SUMMARY

Struct.	Type	Location	Offset Left	Offset Right	Top Curb Elev.	Invert Elev.
S-20	"A"	"0" 26+32.83		26.0'	29.78	24.43
S-25	15° Elbow	"0" 51+18	40.1'		—	30.34
S-17	"A"	"0" 29+50	31'		30.87	25.89

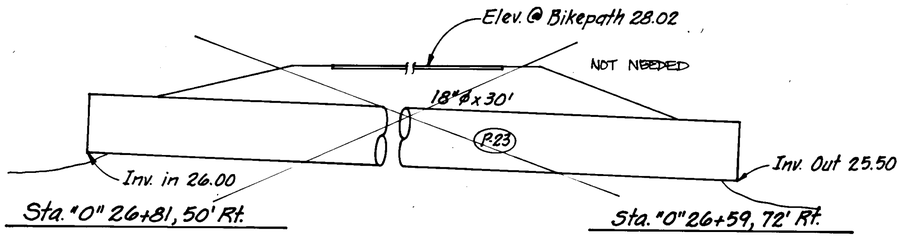
PIPE SUMMARY

Pipe	Diameter	Length	From Struct. / Station	From Elev.	To Struct. / Station	To Elev.
P-17	18"	10'	S-17	27.39	29+50, 40' Lt.	27.19
~~P-23~~	~~18"~~	~~30'~~	~~"0" 26+81, 50' Rt.~~	~~26.00~~	~~"0" 26+59, 72' Rt.~~	~~25.50~~
P-24	18"	20'	"0" 37+88.5, 56.5' Rt.	28.96	"0" 37+68.5, 59' Rt.	28.68
P-25	12"	~~20'~~ 22	"0" 51+38, 40.1' Lt.	30.50	25	30.34
P-25A	12"	12'	"0" 50+70 LT			

NOT NEEDED

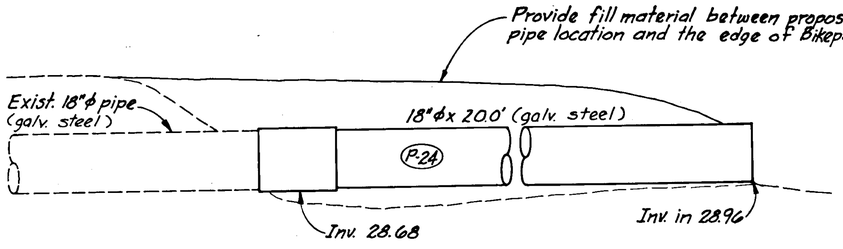


29+50, 31' Lt.



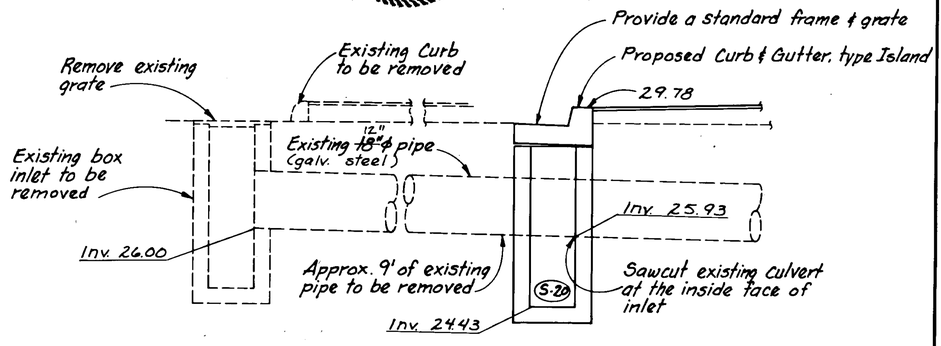
Sta. "0" 26+81, 50' Rt.

Sta. "0" 26+59, 72' Rt.



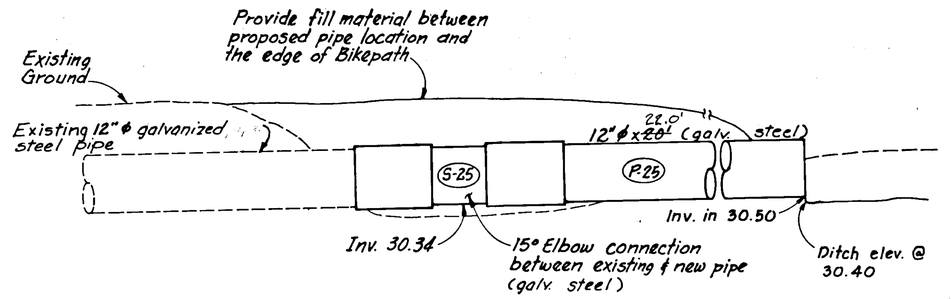
Sta. "0" 37+68.50, 59' Rt

Sta. "0" 37+88.50, 56.5 Rt.



Sta. "0" 26+28.45, 18.87 Rt.

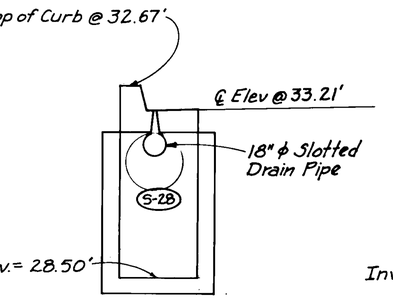
Sta. "0" 26+32.83, 26' Rt.



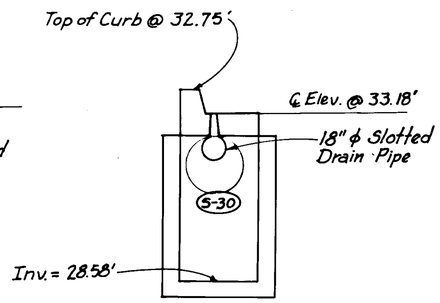
Sta. "0" 51+18, 40.1' Lt.

Sta. "0" 51+38, 40.1' Lt.

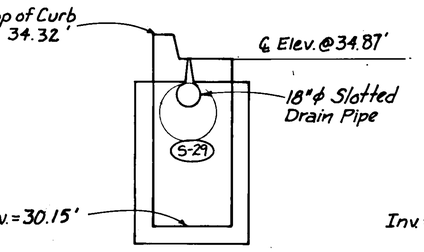
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	HES-M-966(14)	'88	17	28



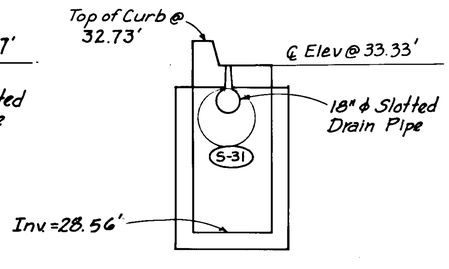
STA. "0" 37+25, 31' RT.



STA. "0" 35+87.5, 31' RT.



STA. "0" 47+25, 27' LT.



STA. "0" 38+50, 31' RT.

INLET SUMMARY

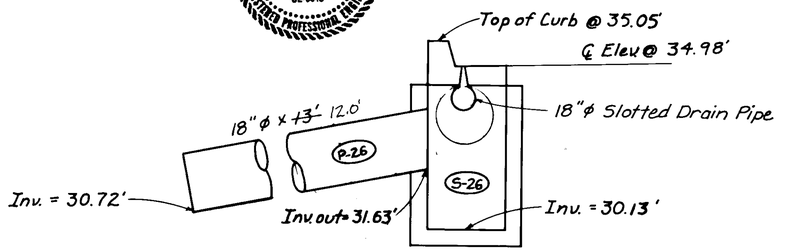
STRUCT.	TYPE	LOCATION	OFFSET LEFT	OFFSET RIGHT	TOP CURB ELEV.	INVERT ELEV.
S-26	"A"	"0" 51+75	27'		35.05'	30.13'
S-27	"A"	"0" 52+50	27'		35.11'	30.19'
S-28	"A"	"0" 37+25		31'	32.67'	28.50'
S-29	"A"	"0" 47+25	27'		34.32'	30.15'
S-30	"A"	"0" 35+87.5		31'	32.75'	28.58'
S-31	"A"	"0" 38+50		31'	32.73'	28.56'

SLOTTED DRAIN PIPE SUMMARY

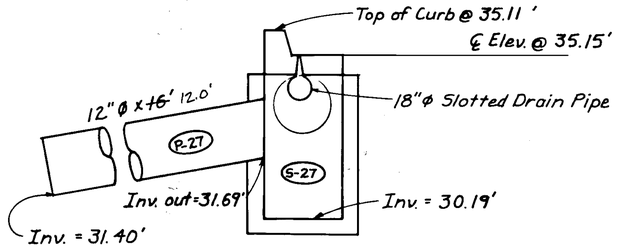
PIPE	DIAMETER	LENGTH	FROM STRUCT./STA.	TO STRUCT./STA.
P-32	18"	~~62.5'~~ 61.2'	S-21	S-30
P-33	18"	~~75'~~ 74.5'	S-5	S-28
P-34	18"	~~75'~~ 73.2'	S-28	S-6
P-35	18"	~~50'~~ 49.0'	S-6	S-31
P-36	18"	~~50'~~ 21.5'	44+50, 27' LT.	S-9
P-37	18"	~~50'~~ 48.5'	46+00, 27' LT.	S-13
P-38	18"	~~75'~~ 73.5'	S-13	S-29
P-39	18"	~~75'~~ 74.0'	S-29	S-14
P-40	18"	~~50'~~ 47.5'	S-14	48+50, 27' LT.
P-41	18"	75'	S-26	S-27
P-42	18"	~~50'~~ 47.2'	S-27	53+00, 27' LT.
P-43	18"	~~25'~~ 24.5'	35+00, 31 RT.	S-21
P-44	18"	~~62.5'~~ 61.2'	S-30	S-5
P-45	18"	~~50'~~ 48.5'	S-31	S-7
P-46	18"	~~20'~~ 21.5'	51+55, 27' LT.	S-26

PIPE SUMMARY

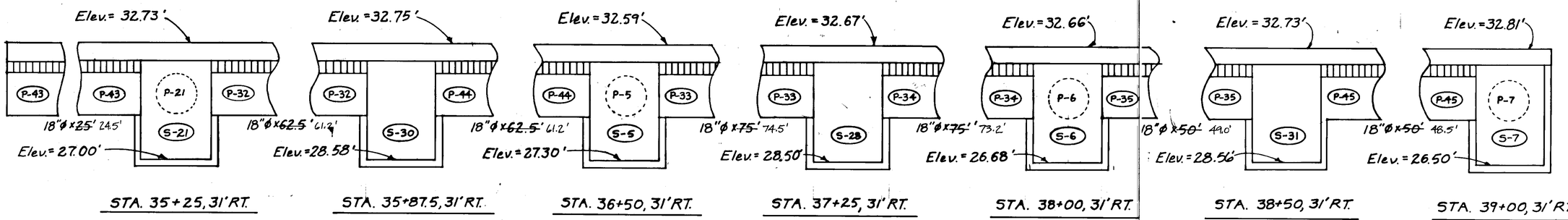
PIPE	DIAMETER	LENGTH	FROM STRUCT./STA.	FROM ELEV.	TO STRUCT./STA.	TO ELEV.
P-26	18"	~~13'~~ 12.0'	S-26	31.63	"0" 51+75, 39.5' LT.	30.72'
P-27	12"	~~16'~~ 12.0'	S-27	31.69	"0" 52+50, 42.5' LT.	31.40'



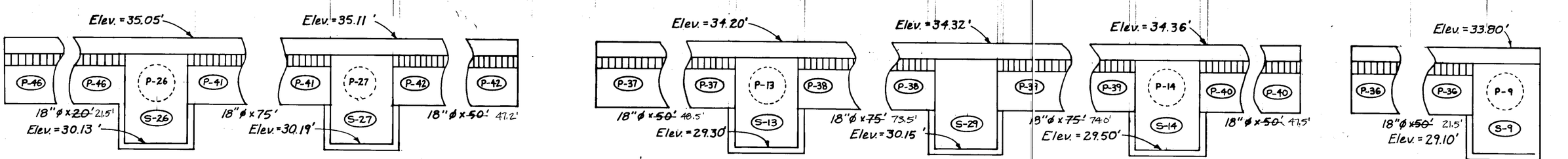
STA. "0" 51+75, 27' LT.



STA. "0" 52+50, 27' LT.



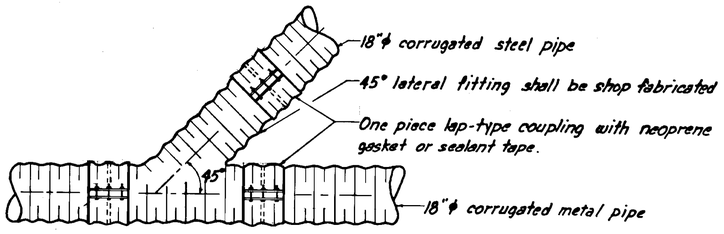
STA. 35+25, 31' RT. | STA. 35+87.5, 31' RT. | STA. 36+50, 31' RT. | STA. 37+25, 31' RT. | STA. 38+00, 31' RT. | STA. 38+50, 31' RT. | STA. 39+00, 31' RT.



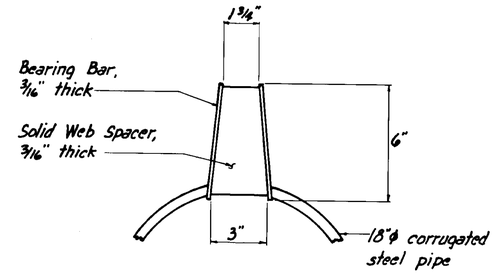
STA. 51+75, 27' LT. | STA 52+50, 27' LT. | STA. 46+50, 27' LT. | STA 47+25, 27' LT | STA 48+00, 27' LT. | STA. 45+00, 27' LT.

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	HES-M-966(14)	'88	18	28

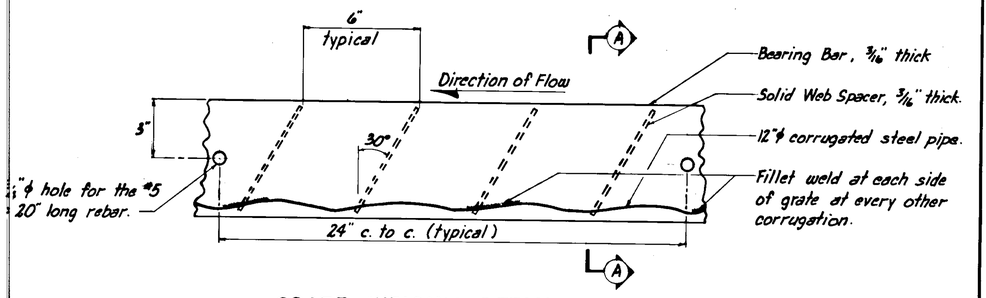
STATE OF ALASKA 49TH Wm. L. Townsend GE-5543 REGISTERED PROFESSIONAL ENGINEER



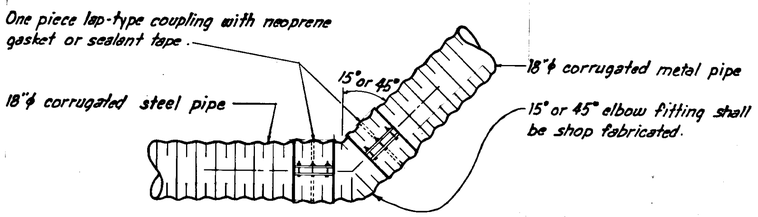
45° LATERAL CONNECTION DETAIL



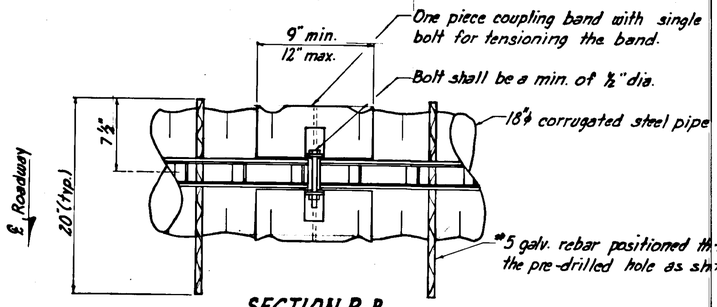
SECTION-A-A
STANDARD GRATE DETAIL



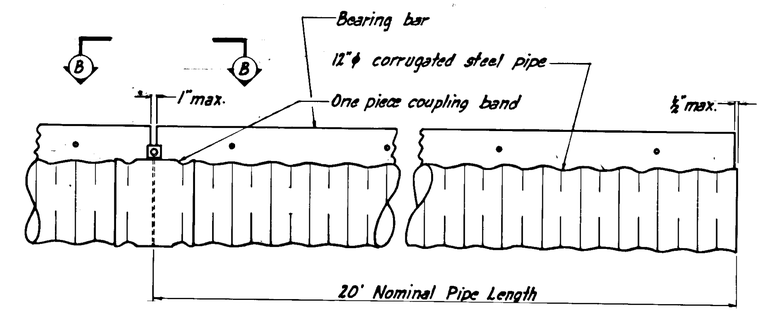
GRATE WELDING DETAIL



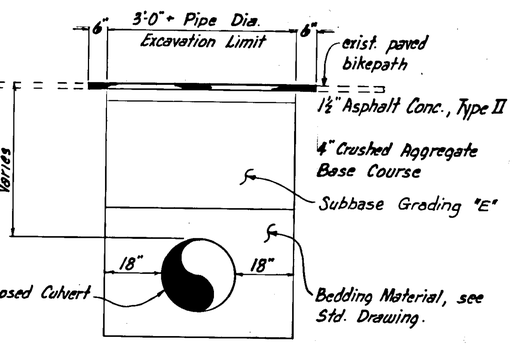
ELBOW CONNECTION DETAIL



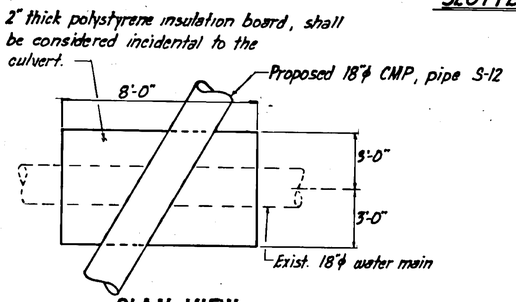
SECTION B-B
SLOTTED DRAIN JOINT DETAIL



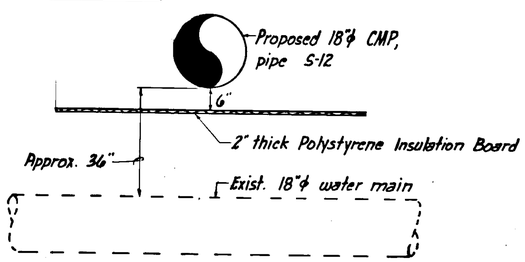
TYPICAL SLOTTED DRAIN PIPE SECTION



CULVERT CROSSING DETAIL AT BIKEPATH



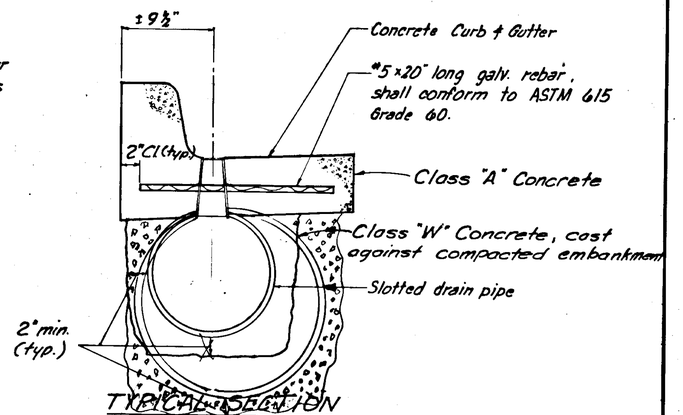
PLAN VIEW
WATER MAIN CROSSING



ELEVATION VIEW
WATER MAIN CROSSING

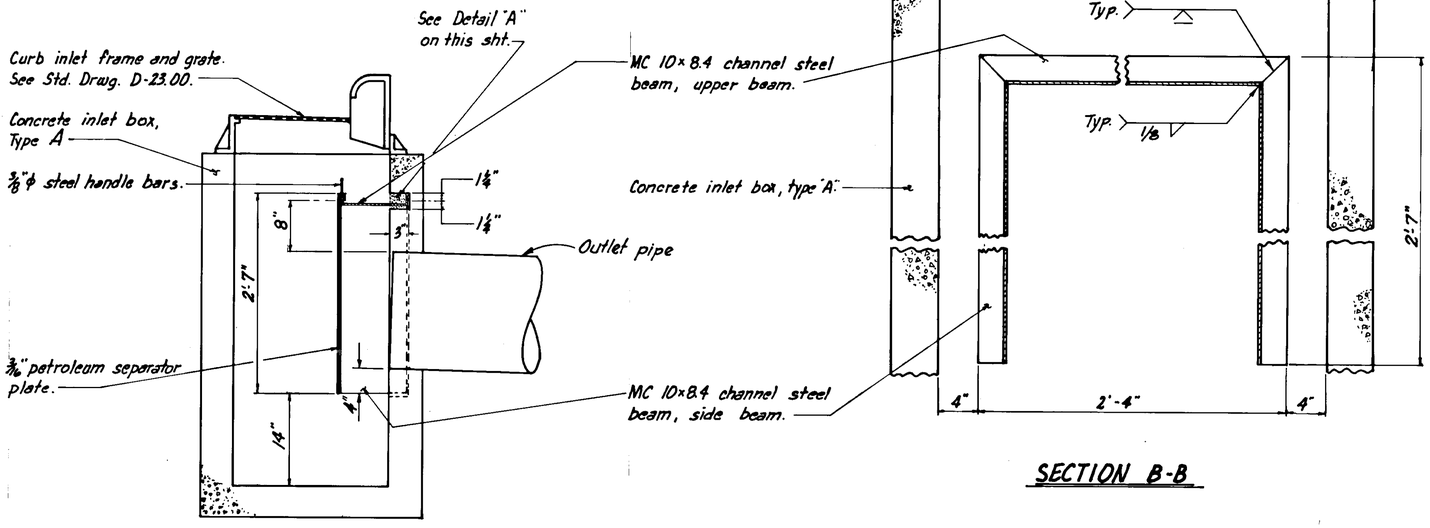
SLOTTED DRAIN PIPE NOTE

1. Slotted drain pipe shall be galvanized 18"ϕ nominal diameter and min. thickness of 0.079".
2. The grate assemblies shall be hot dip galvanized after fabrication to meet the requirements of ASTM A-123.
3. Web spacers shall be joined to the bearing bars in such a manner that the 6" deep grating shall provide 15,000 lbs. of tension across the slot.
4. One piece coupling band shall be used for connection between pipes. A single bolt, ½" min. diameter, for tensioning the coupling band is required.
5. Coupling band shall be the same base metal and galvanized as the pipe.
6. Class W concrete for securing the slotted drain pipe shall be considered incidental to pay item 603(30), Slotted Storm Drain.

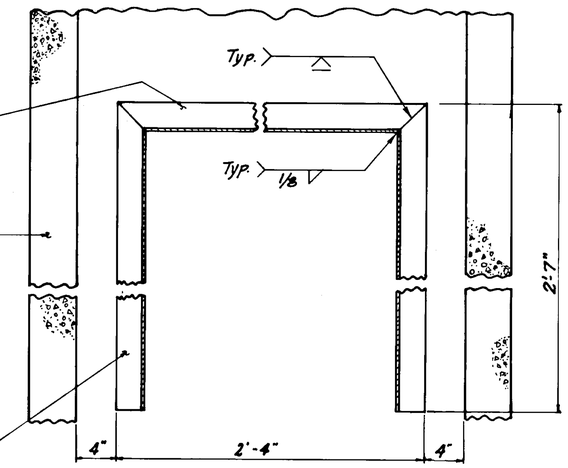


TYPICAL SECTION

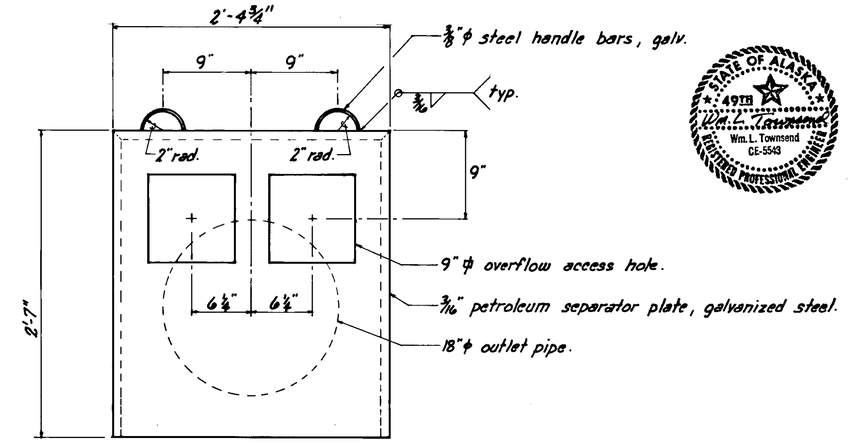
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	HES-M-966(14)	'88	19	28



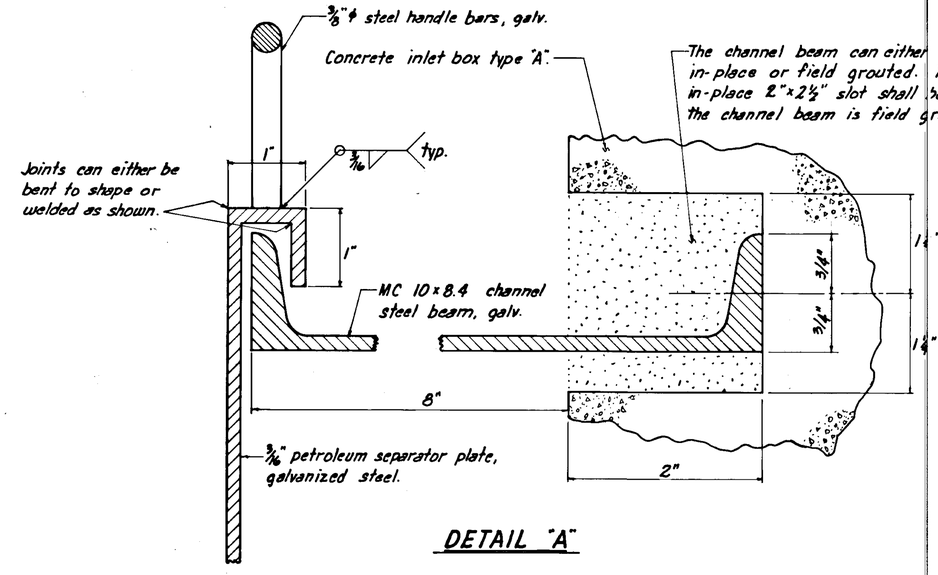
SECTION A-A



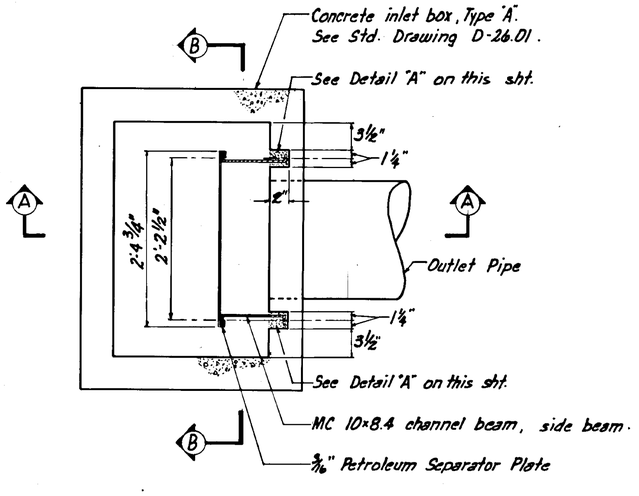
SECTION B-B



PETROLEUM SEPARATOR PLATE DETAIL



DETAIL "A"



PLAN VIEW
PETROLEUM SEPARATOR

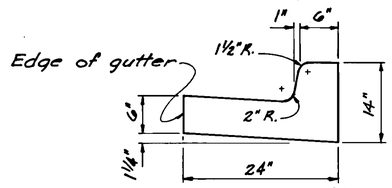
PETROLEUM SEPARATOR NOTES

1. Petroleum separator plate shall be installed on inlets S-5, S-6, S-7, S-12, S-15, S-16 & S-18.
2. All fabrication shall be made in the shop and galvanized after fabrication.
3. Inlets with petroleum separator assembly shall be paid under pay item 604(5B), Inlet, Type "A" w/Petroleum Separator.

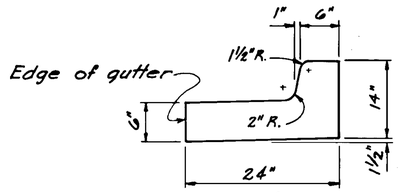
STATE OF ALASKA 49TH Wm. L. Townsend Wm. L. Townsend CE-5543 REGISTERED PROFESSIONAL ENGINEER

PETROLEUM SEPARATOR DETAILS

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	HES-M-966(14)	'88	20	28



Curb and Gutter Type I



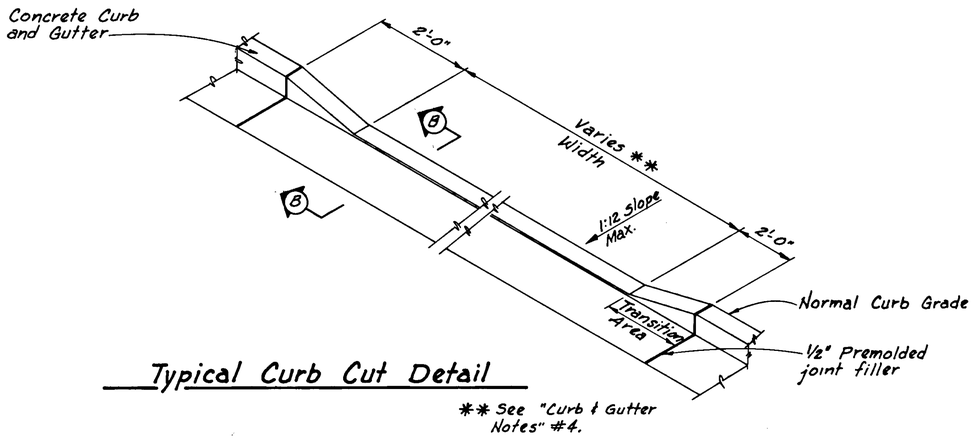
Curb and Gutter Type II

EXISTING UTILITIES APPURTENANCE SUMMARY

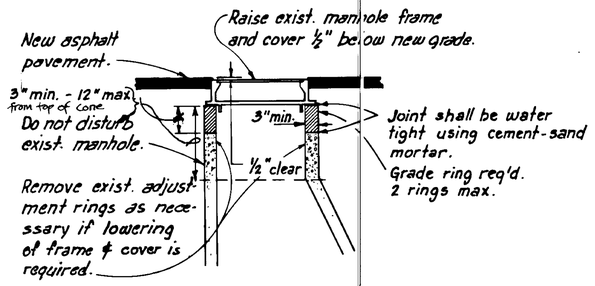
STATION	OFFSET Left	OFFSET Right	REMARKS
"0" 32+53.5		45.5'	~~Adjust~~ exist. sewer manhole
"0" 39+10	23.0'		" " " "
"0" 44+51	28.0'		" " " "
~~"0" 49+04~~ 48+54	30.0'		~~Reconstruct~~ exist. sewer manhole
			ADJUST

Curb and Gutter Notes

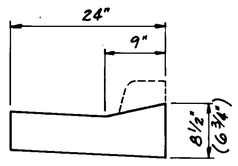
1. Premolded expansion joint filler and Polymer joint sealer shall be considered incidental to item 609(2).
2. Curb and Gutter expansion joints shall be at each end of the curb returns and immediately preceeding and following curb cuts. Thereafter they shall be placed at 30'-0" (max.) intervals except where shorter sections are needed for closure.
3. All curb and gutters shall be Class "A" concrete with minimum 28 day compressive strength of f_c = 3000 p.s.i.
4. Curb cuts shall be provided at all pedestrian cross-walks, bike paths and as shown on the intersection details. Curb cut width shall match the width of the pedestrian cross-walk, bike path or as shown on the intersection details.
5. Curb and Gutter, Type I, shall be used if existing roadway cross slope drains toward the curb. Curb and Gutter, Type II shall be used if existing roadway cross slope drains away from the curb.
6. Curb and Gutter Type I and Type II shall be paid under pay item 609(2) Curb and Gutter
7. Depression depth at the flow line for the inlet grate as shown on D-23.00 of the Standard Drawing shall be changed from 1½" to ¾".



Typical Curb Cut Detail

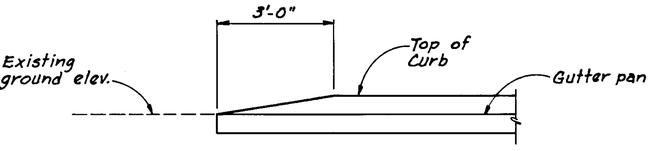


Manhole Adjustment Detail

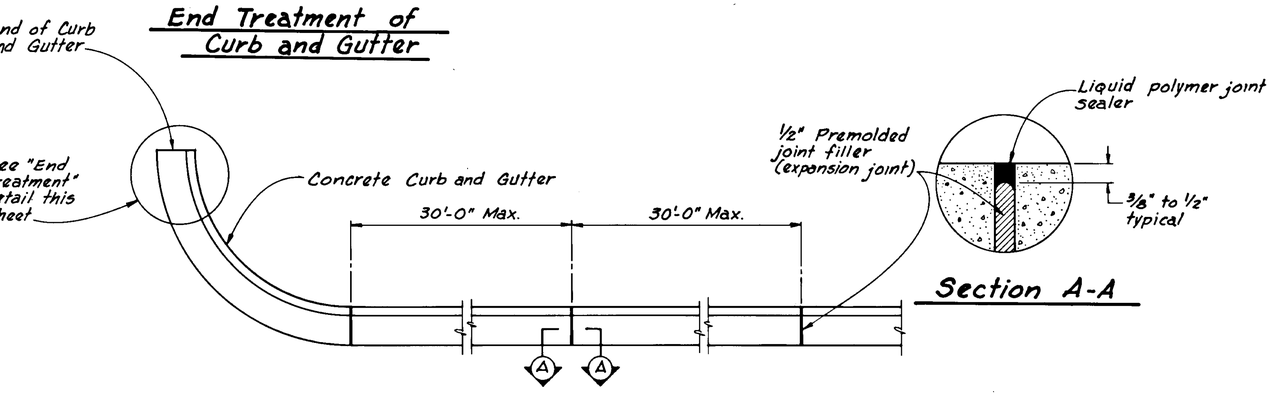


Dimension in parenthesis is for Curb & Gutter Type II.

Section B-B

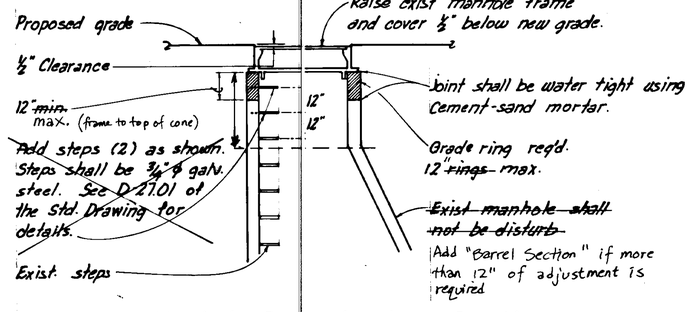


End Treatment of Curb and Gutter



Typical Curb and Gutter Joint Details

Section A-A



Manhole Reconstruction Detail

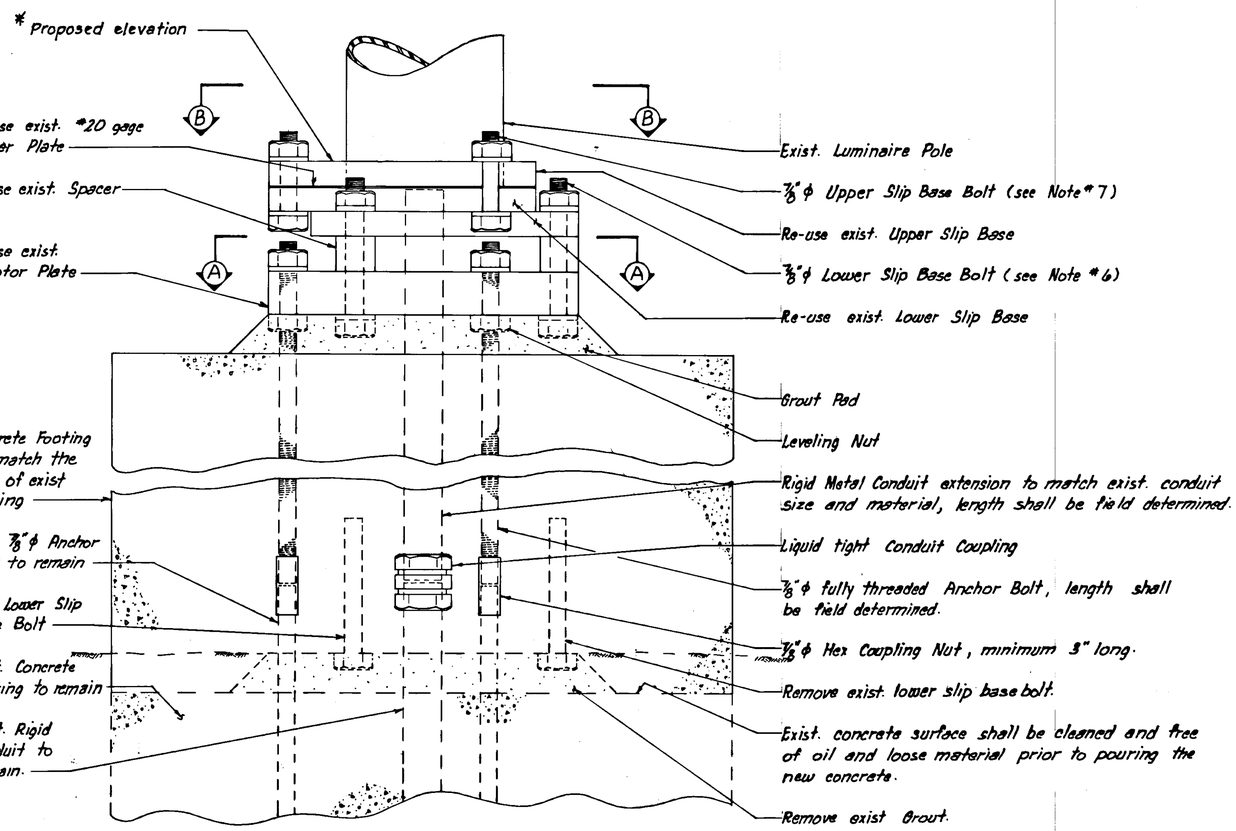
(E.W.O. No. 1)

Manhole Adjustment Notes

1. ✓ Grade rings shall be reset in full bed of mortar. Design and strength requirements for the grade rings shall conform to ASTM Designation C-478.
2. ✓ The Contractor can use bricks & mortar combination to raise manhole frame & cover to new grade if adjustment is less than three (3) inches.
3. Manhole located at Sta "0" ~~49+04~~ 48+54, 30.0' Lt. shall be ~~reconstructed~~ adjusted as shown on this sheet. ~~The two (2) steps to be added shall be considered incidental to pay item 604(3), Reconstruct Existing Manholes.~~

STATE OF ALASKA 49TH
Wm. L. Townsend
Wm. L. Townsend
CE-5543
REGISTERED PROFESSIONAL ENGINEER

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	HES-M-966(14)	'88	21	28



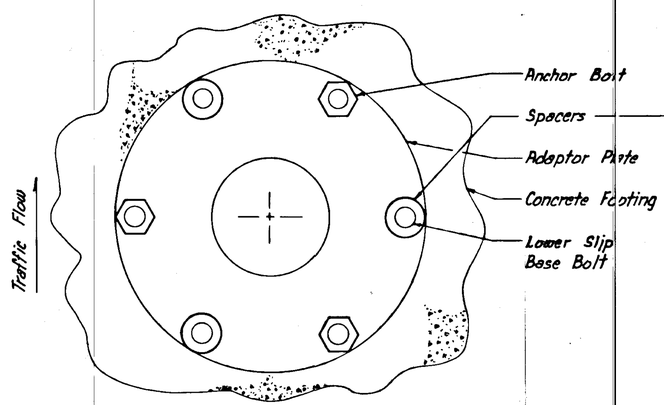
LUMINAIRE FOUNDATION EXTENSION DETAIL

LUMINAIRE FOUNDATION EXTENSION				
STATION	OFFSET LEFT	OFFSET RIGHT	EXIST. ELEVATION	PROPOSED ELEVATION*
49 "0" ~~47~~+56.5	37.0		32.24	33.77
"0" 50+59	~~38.0'~~	38.0'	34.02	35.50

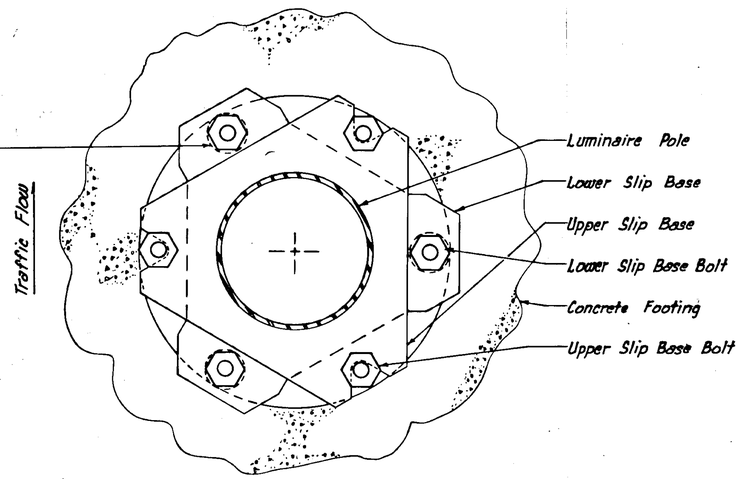
*Proposed elevation can be adjusted to better fit field conditions.

LUMINAIRE FOUNDATION NOTES

1. Wrench tighten the lower slip base bolts. There is no torque requirement.
2. A liquid tight conduit coupling shall be used for splicing an extension of the exist. conduit. The length of the extension shall be field determined.
3. Bolts, nuts, washer shall conform to ASTM A325 and galvanized in accordance with ASTM A153.
4. Luminaire footing shall be constructed using Class "A" concrete with minimum 28 day compressive strength of $f'_c = 3{,}000$ p.s.i.
5. Grout shall be 2" min to 3" max. in thickness. Grout mix shall be 3 parts sand to 1 part cement with only enough water to permit placing and packing.
6. The lower slip base bolt shall be 7/8" ϕ - 9NC x 7" long with nuts and washer.
7. The exist. upper slip base does not have to be separated from the lower slip base during construction. If the upper slip base bolt does get unbolted a new bolt, nut and washer shall be provided and torque to 1800 in-lbs.
8. New conductors will be required if there is not enough slack in existing conductor.



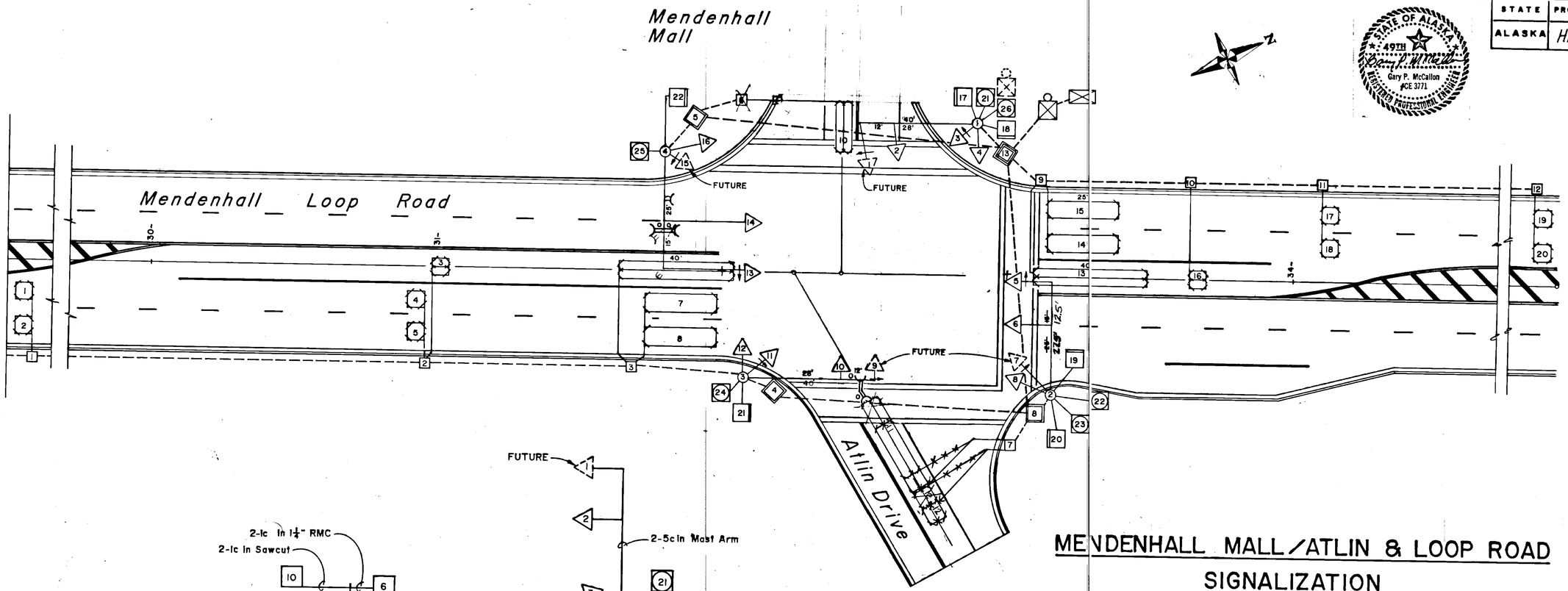
SECTION A-A



SECTION B-B

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	HES-M-966(14)	'88	22	28

STATE OF ALASKA 49TH — Gary P. McCallon #CE 3771 — REGISTERED PROFESSIONAL ENGINEER



MENDENHALL MALL/ATLIN & LOOP ROAD SIGNALIZATION

WIRING SCHEMATIC DIAGRAM

* Opticom Cable

Mendenhall Mall / Atlin & Loop Road Signalization Tables

Detector Summary

Number	Station	Offset Lt.	Offset Rt.	Type	Phase	Remarks
1	"0" 29+45		11'	6'x6' Loop	2	3 Turns
2	"0" 29+45		23'	6'x6' Loop	2	3 Turns
3	"0" 31+01	0'		6'x6' Loop	5	2-4-2 Quadrapole
4	"0" 30+92		11'	6'x6' Loop	2	3 Turns
5	"0" 30+92		23'	6'x6' Loop	2	3 Turns
6	"0" 31+~~84~~+76	0'		6'x40' Loop	5	2-4-2 Quadrapole
7	"0" 31+~~95~~+90		11'	6'x25' Loop	2	2 Turns
8	"0" 31+~~95~~+90		23'	6'x25' Loop	2	2 Turns
10	"0" 32+41	50'		6'x20' Loop	8	2-4-2 Quadrapole
11	"0"A10+~~67~~+73	0'		6'x30' Loop	4	2-4-2 Quadrapole
12	"0"A10+~~90~~+94	0'		6'x6' Loop	4	2-4-2 Quadrapole
13	"0"33+~~22~~+30	0'		6'x40' Loop	1	2-4-2 Quadrapole
14	"0"33+~~18.5~~+25	11'		6'x25' Loop	6	2 Turns
15	"0"33+~~18.5~~+25	23'		6'x25' Loop	6	2 Turns
16	"0" 33+67	0'		6'x6' Loop	1	2-4-2 Quadrapole
17	"0" 34+13	23'		6'x6' Loop	6	3 Turns
18	"0" 34+13	11'		6'x6' Loop	6	3 Turns
19	"0" 35+58	23'		6'x6' Loop	6	3 Turns
20	"0" 35+58	11'		6'x6' Loop	6	3 Turns
21	"0" 32+73	52'		Ped. Pushbutton	8	Install R10-4B(L)
22	"0" 33+01		41'	Ped. Pushbutton	4	Install R10-4B(L)
23	"0" 33+01		41'	Ped. Pushbutton	2	Install R10-4B(R)
24	"0" 32+02		41'	Ped. Pushbutton	2	Install R10-4B(R)
25	"0" 32+02	40'		Ped. Pushbutton	6	Install R10-4B(R)
26	"0" 32+73	52'		Ped. Pushbutton	6	Install R10-4B(L)

Detector Summary Notes :

1. Signs are incidental to Item 660(1), Traffic Signal System complete.
2. Loop Detector wire shall have it's own PVC ducting. The wire shall be #14 A.W.G. stranded T.H.H.N.(U.L.) 600V. The ducting shall be ULFR-1 rated 105°C, wall thickness 0.031", inner diameter nominal 0.186" moisture, chemical and oil resistant.

Signal Head Summary

Signal Head Number	Phase	Pole Number	Indication	Lens Size	Mounting Type	Remarks
1	7	1	LR-LY-LG	12"	Plumbizer	Future
2	4	1	R-Y-G	12"	Plumbizer	
3	5	1	LR-LY-LG	12"	S-2	
4	4	1	R-Y-G	12"	S-2	
5	5	2	LR-LY-LG	12"	Plumbizer	
6	2	2	R-Y-G	12"	Plumbizer	
7	3	2	LR-LY-LG	12"	S-2	Future
8	2	2	R-Y-G	12"	S-2	
9	3	3	LR-LY-LG	12"	Plumbizer	Future
10	8	3	R-Y-G	12"	Plumbizer	
11	1	3	LR-LY-LG	12"	S-2	
12	8	3	R-Y-G	12"	S-2	
13	1	4	LR-LY-LG	12"	Plumbizer	
14	6	4	R-Y-G	12"	Plumbizer	
15	7	4	LR-LY-LG	12"	S-2	Future
16	6	4	R-Y-G	12"	S-2	
17	6	1	Ped. Symbol	Neon	SW-2	
18	4	1	Ped. Symbol	Neon	SW-2	
19	4	2	Ped. Symbol	Neon	SW-2	
20	2	2	Ped. Symbol	Neon	SW-2	
21	2	3	Ped. Symbol	Neon	SW-1	
22	6	4	Ped. Symbol	Neon	SW-1	

Signal Pole Summary (State Furnished)

Number	Station	Offset Lt.	Offset Rt.	Type	Signal Mast Arm K	Signal Mast Arm M	Signal Mast Arm N	Foundation	Luminaire Mast Arm Length
1	"0" 32+78	52'		Standard	35'	12'	23'	Optional	
2	"0" 33+16		43.5 ~~41~~	Combination	40'	15'	25'	Optional	8'
3	"0" 32+08		38'	Standard	40'	12'	28'	Optional	
4	"0" 31+90	40'		Combination	40'	15'	25'	Optional	8'

Signal Pole Summary Notes :

1. All 4 poles shall have a R9-4 decal placed 5' above the ground level of the pole facing the crossing.

J-Box & Cabinet Base Summary

Number	Station	Offset Lt.	Offset Rt.	Type	Remarks
1	"0" 29+48		33'	1	
2	"0" 31+00		33'	1	
3	"0" 31+68		33'	1	
4	"0" 32+24		46'	2	
5	"0" 32+07	53'		2	
6	"0" 32+16	~~84'~~ 60'		1	
7	"0" 32+88		60'	1	
8	"0" 33+10		47'	2	
9	"0" 33+02	32'		1	
10	"0" 33+62	32'		1	
11	"0" 34+03	32'		1	
12	"0" 35+55	32'		1	
13	"0" 32+90	40'		3	
-	"0" 33+17	65'		Controller Cabinet	See notes

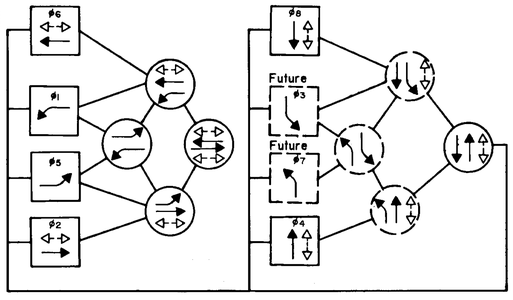
J-Box & Cabinet Base Summary Notes :

1. The Contractor shall supply 4-$\frac{3}{4}$"x16" anchor bolts for the Traffic Signal Controller Cabinet.
2. Contractor shall install a 50 AMP 120V Traffic Signal breaker in existing load center Cabinet.
3. Existing load center shall be relocated to a new pole at Sta. "0" 33+10, 65' Lt.

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	HES-M-966(14)	88	23	28

General Signalization Notes

1. All poles shall be field drilled for mounting hardware.
2. All signal heads shall have backplates.
3. Signal hardware shall be mounted as per Standard Drawing T-30.00 and T-52.01.
4. Each vehicle signal head shall have it's own "home run" cable.
5. All conduits shall be sloped to drain to a "T" drain.
6. The contractor shall locate all existing underground utilities, pipes, and culverts.
7. Conduit locations as shown on the signalization plan are schematic only and may be adjusted to suit field conditions.
8. J-Box locations may be adjusted to suit field conditions.
9. The State of Alaska shall furnish to the Contractor, as State furnished materials, the traffic signal poles (including mast arms and anchor bolts), and the controller cabinet, complete with all components. The Contractor shall furnish all other required material.
10. The signal poles and controller cabinet will be available at the DOT & PF Maintenance Station at 7 mile Glacier Highway.
11. Loop detector sawcuts shall be hydroblasted and blown dry.
12. Loop detector wire shall be held down at 2 foot intervals with pieces of $\frac{1}{2}$" diameter foam or wedging clamps.
13. Sawcuts for loop detectors shall be $\frac{3}{8}$" wide.
14. In lieu of 45° sawcuts on loop corners, 2-$\frac{1}{2}$" diameter holes may be bored in the pavement or the pavement may be chipped out to allow for a wire bending radius of no less than 1 inch.
15. The signal shall be equipped with an approved brand Opticom Emergency Vehicle Pre-emptor. All detectors and wire shall be supplied by the Contractor and wired to the State furnished controller cabinet. 4 detectors and 2 discriminator boards are required. The detectors shall be mounted on the mast arms over the roadway. The State furnished cabinet will have provisions for the Contractor to install the two Opticom Discriminator Boards.
16. Conduits shall be jacked or augered under pavement on Egan Drive and Mendenhall Loop Road.
17. Cables for future signal heads on poles shall be terminated at controller box and on mast arms at the signal head locations.
18. "C" = Conductor, "RMC" = Rigid Metal Conduit.
19. The existing signal at Egan Drive is equipped with a Opticom Emergency Vehicle pre-emptor. The Contractor shall supply and install two new discriminator boards for the State furnished new Signal Cabinet.



Phase Diagram

STATE OF ALASKA 49TH
Gary P. McCallon
ACE 3771
REGISTERED PROFESSIONAL ENGINEER

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	HES-M-966(14)	88	24	28

See Signal Interconnect Plan sheet

Loop Road

Egan Drive

Egan Drive

Mendenhall

Existing J-box for lighting circuit

conduit in 6" casing

conduit in 6" casing

Conduit in 6" casing

EGAN DRIVE & LOOP ROAD
SIGNALIZATION

1-6pr Telephone cable shall be installed in 2" PVC and be attached to the telephone pole. The PVC conduit shall go up pole to a point 18" below the telephone line. The telephone cable shall be tied off and connected by others.

STATE OF ALASKA
49TH
Gary P. McCallon
ACE 3771
REGISTERED PROFESSIONAL ENGINEER

EGAN DRIVE & LOOP ROAD SIGNALIZATION TABLES

Detector Summary

Number	Station	Offset Lt.	Offset Rt.	Type	Phase	Remarks
5	"E" 394+43	36'		Quadrapole		Abandon in place
6	"E" 394+43	25'		Quadrapole		Abandon in place
13	"E" 393+35		37'	Quadrapole		Abandon in place
14	"E" 393+35		25'	Quadrapole		Abandon in place
19	"E" 393+74		85'	Quadrapole		Abandon in place
38	"E" 394+35	36'		35'x6' Quadrapole	4	2-4-2
39	"E" 394+35	25'		35'x6' Quadrapole	4	2-4-2
40	"E" 393+81	94'		40'x6' Quadrapole	1	2-4-2
41	"E" 393+68	94'		40'x6' Quadrapole	1	2-4-2
42	"E" 396+83	26'		6'x6' Loop	4	3 Turns
43	"E" 396+83	37'		6'x6' Loop	4	3 Turns
44	"E" 393+34		25'	35'x6' Quadrapole	8	2-4-2
45	"E" 393+34		37'	35'x6' Quadrapole	8	2-4-2
46	"E" 390+88		37'	6'x6' Loop	8	3 Turns
47	"E" 390+88		25'	6'x6' Loop	8	3 Turns
48	"E" 394+24		54'	Ped. Pushbutton	8	Install RIO-4B(R)(see note #1)
49	"E" 393+42		52'	Ped. Pushbutton	8	Install RIO-4B(L)(see note #1)
50	"E" 393+42		52'	Ped. Pushbutton	1	Install RIO-4B(R)(see note #1)
51	"E" 393+42	82'		Ped. Pushbutton	1	Install RIO-4B(L)(see note #1)
11	"O" 28+18	17'		6'x6' Loop	2	Abandon in place
12	"O" 28+18	6'		6'x6' Loop	2	Abandon in place
52	"O" 28+17	17'		6'x6' Loop	2	
53	"O" 28+17	6'		6'x6' Loop	2	
1	"O" 24+62	35'		Ped. Pushbutton	4	See note 4
18	"O" 24+66		40'	Ped. Pushbutton	4	See note 4

Detector Summary Notes :

1. Signs are incidental to Item 660(1), Traffic Signal System-Complete.
2. Loop detector wire shall have it's own P.V.C. ducting. The wire shall be #14 A.W.G. stranded T.H.H.N. (U.L.) 600V. The ducting shall be UL FR-1 rated 105° C., wall thickness is 0.031", inner diameter nominal 0.186", moisture, chemical and oil resistant.
3. "E" = Egan Drive stations; "O" = Mendenhall Loop Road stations, this sheet.
4. Change complete pedestrian pushbutton assembly. Remove or tape all wire ends except 24V DC and common.

Signal Pole Summary

Number	Station	Offset Lt.	Offset Rt.	Type	Remarks
6	"E" 394+24		54'	Optional	Replace or modify to accomodate two Pedestrian pushbuttons.
8	"E" 393+42		52'	Optional	Pole shall be installed with 1" Frangible anchor bolts. See detail at right.

Signal Head Summary

Signal Head Number	Phase	Pole Number	Indication	Lens Size	Mounting Type	Remarks
22	8	3	Ped. Symbol	Neon	SW-1	Use existing spare wires
23	8	8	Ped. Symbol	Neon	TW-2	
24	1	8	Ped. Symbol	Neon	TW-2	
25	1	4	Ped. Symbol	Neon	SW-1	
9	2	3	R-Y-G-LG	12"-8"	Plumbizer	Remove-LG
13	1	3	R-Y-G	12"	Plumbizer	Install-LG from 9
4	2	1	R-Y-G-LG	12"-8"	S-1	Remove-LG
26	1	8	R-Y-G	12	T-1	
12	1	3	R-Y-G			Remove

Signal Head Summary Notes :

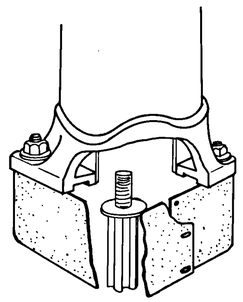
1. Spare signal head will be property of DOT & PF.

J-Box & Cabinet Base Summary

Number	Station	Offset Lt.	Offset Rt.	Type	Remarks
20	"O" 24+30	35'		II	
21	"O" 24+30		40'	II	
22	"E" 392+65	55'		II	
23	"E" 392+65	10'		II	
24	"E" 392+95		50'	II	
25	"E" 392+85		80'	I	
-	"O" 24+40	45'		Cabinet	Install new cabinet
26	"E" 390+88	10'		I	
27	"E" 396+83	65'		I	
8	"O" 27+17	31'		I	Relocate J-Box, abandon loops.
9	"O" 28+18	31'		I	Relocate J-Box
28	"O" 23+50		36'	I	See note #1.

J-Box & Cabinet Base Summary Notes :

1. Locate existing RMC and cut conduit and connect conduit to J-Box.

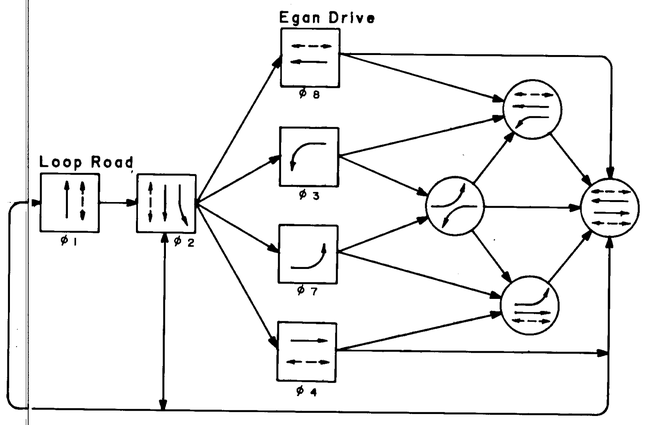


Frangible Anchor Bolt Detail

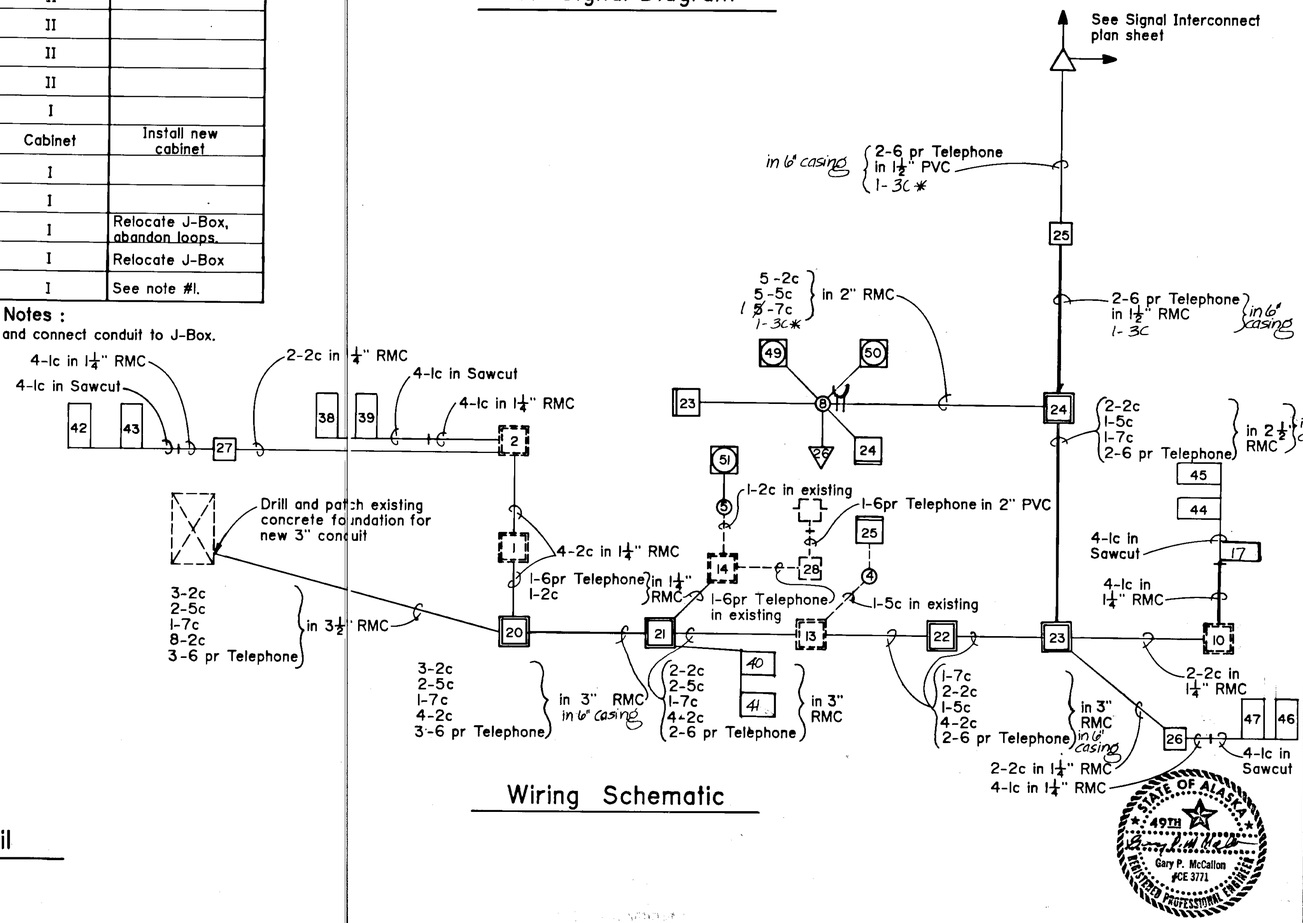
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	HES-M-966(14)	88	25	28

SIGNALIZATION TABLES

Egan Drive & Mendenhall Loop Rd.

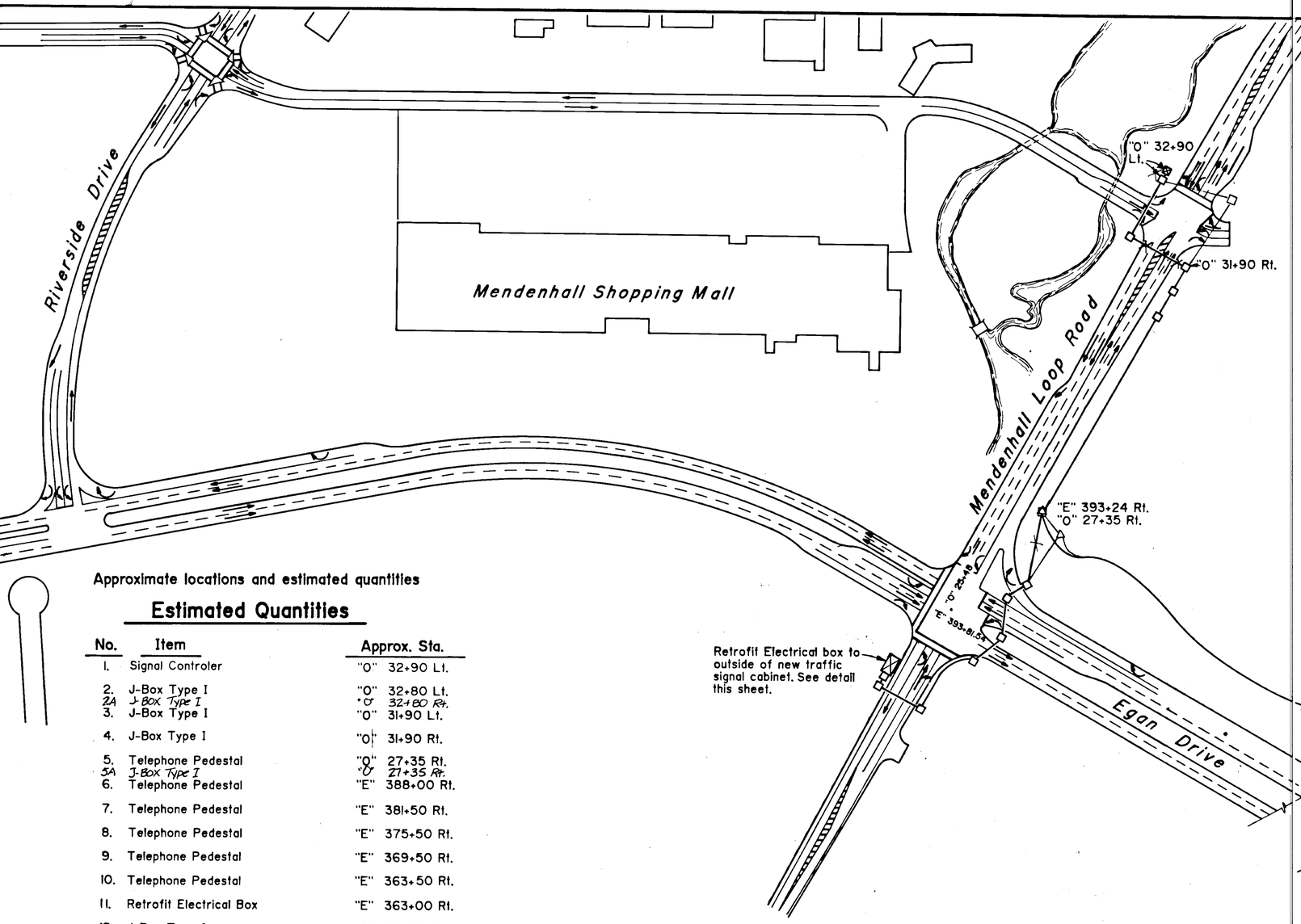


6ϕ Signal Diagram



Wiring Schematic

STATE OF ALASKA 49TH
Gary P. McCallon #CE 3771
REGISTERED PROFESSIONAL ENGINEER

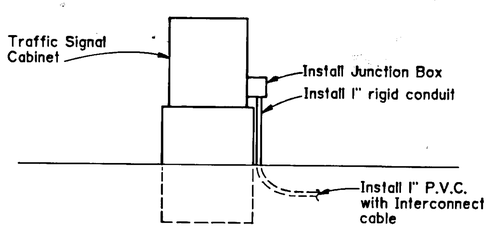


Approximate locations and estimated quantities

Estimated Quantities

No.	Item	Approx. Sta.
1.	Signal Controler	"O" 32+90 Lt.
2.	J-Box Type I	"O" 32+80 Lt.
2A	J-Box Type I	"O" 32+80 Rt.
3.	J-Box Type I	"O" 31+90 Lt.
4.	J-Box Type I	"O" 31+90 Rt.
5.	Telephone Pedestal	"O" 27+35 Rt.
5A	J-Box Type I	"O" 27+35 Rt.
6.	Telephone Pedestal	"E" 388+00 Rt.
7.	Telephone Pedestal	"E" 381+50 Rt.
8.	Telephone Pedestal	"E" 375+50 Rt.
9.	Telephone Pedestal	"E" 369+50 Rt.
10.	Telephone Pedestal	"E" 363+50 Rt.
11.	Retrofit Electrical Box	"E" 363+00 Rt.
12.	J-Box Type I	"O" 25+95 Rt.
13.	J-Box Type I	"E" 393+90 Centerline
14.	J-Box Type I	"E" 394+00 Lt.
15.	J-Box Type I	"O" 23+88 Rt.
16.	J-Box Type I	"O" 23+88 Lt.
17.	Retrofit Electrical Box	"O" 23+90 Lt.
18.	55 feet of 1" R.M.C.	(Jordan Creek Bridge)
19.	450 feet of 2" R.M.C.	(Roadway crossings)
20.	3,780 feet of 1" P.V.C. conduit	
21.	4,700 feet of 6 pair Telephone Interconnect cable	

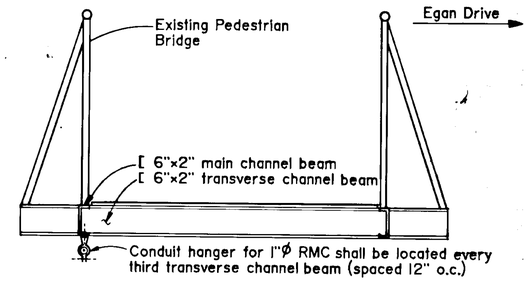
"O" = Mendenhall Loop Road and "E" = Egan Drive on this sheet only.



J-Box Retrofit Detail

Signal Interconnect General Notes

1. Telephone pedestals shall be above ground "Commercial Plant Housing" type (±34" above ground junction box), and contain the following components:
   A) Terminal Strip
   B) Fiberglass Housing
   C) Lockable Door or Cover.
2. Telephone pedestals are to be installed on the far outside right edge of the sidewalk with a maximum spacing of 600' at the approximate stations shown.
3. Any pavement repair necessary because of conduit or J-box pedestal installation shall be incidental to Item 660(11), Master Traffic Signal System Interconnect.
4. 1" P.V.C. conduit shall be installed between the fence and the edge of sidewalk along Egan Drive.
5. Conduit across Jordan Creek shall be 1" R.M.C. and be attached to the outside of the pedestrian bridge as shown.
6. Conduit to be installed under Egan Drive and Loop Road and shall be jacked or augered. No pavement cuts will be allowed.
7. The Contractor shall verify the location of all utilities and coordinate conflicts with the utility company before any work begins.
8. No cutting of pavement is allowed except at sidewalks and the Super Bear Mall entrance. Patching and repairing of pavement cuts will be incidental to Item 660(11).
9. Conduit, pedestal and J-box locations are schematic in nature and the final location of all installations shall be approved by the Engineer.
10. All J-box lids in the signal circuit shall be marked "TRAFFIC".
11. The Contractor shall repair and bear the expense of any damage that results from boring or trenching activities.
12. Interconnect cable shall be 6 pair, Telephone type 19 AWG copper, polyethylene insulated, twisted pairs, flooded with a water blocking compound, core wrapped, shielded with corrugated copper shield with a outer jacket of polyethylene conforming to type TEL CU WT.
13. △ = symbol for telephone pedestal.



Conduit Hanger Detail

Conduit Hanger Notes

1. Conduit hanger, nuts, bolts and washer shall be galvanized steel.
2. Hanger bolts shall be a minimum of ¼"Ø.
3. Conduit hanger shall be fastened securely with a bolt as shown on the detail.
4. Contractor shall submit the type of conduit hanger to be used for the Engineer's approval.

DATE	DESCRIPTION OF CHANGE
	RECORD OF REVISIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHEAST REGION DESIGN & CONSTRUCTION

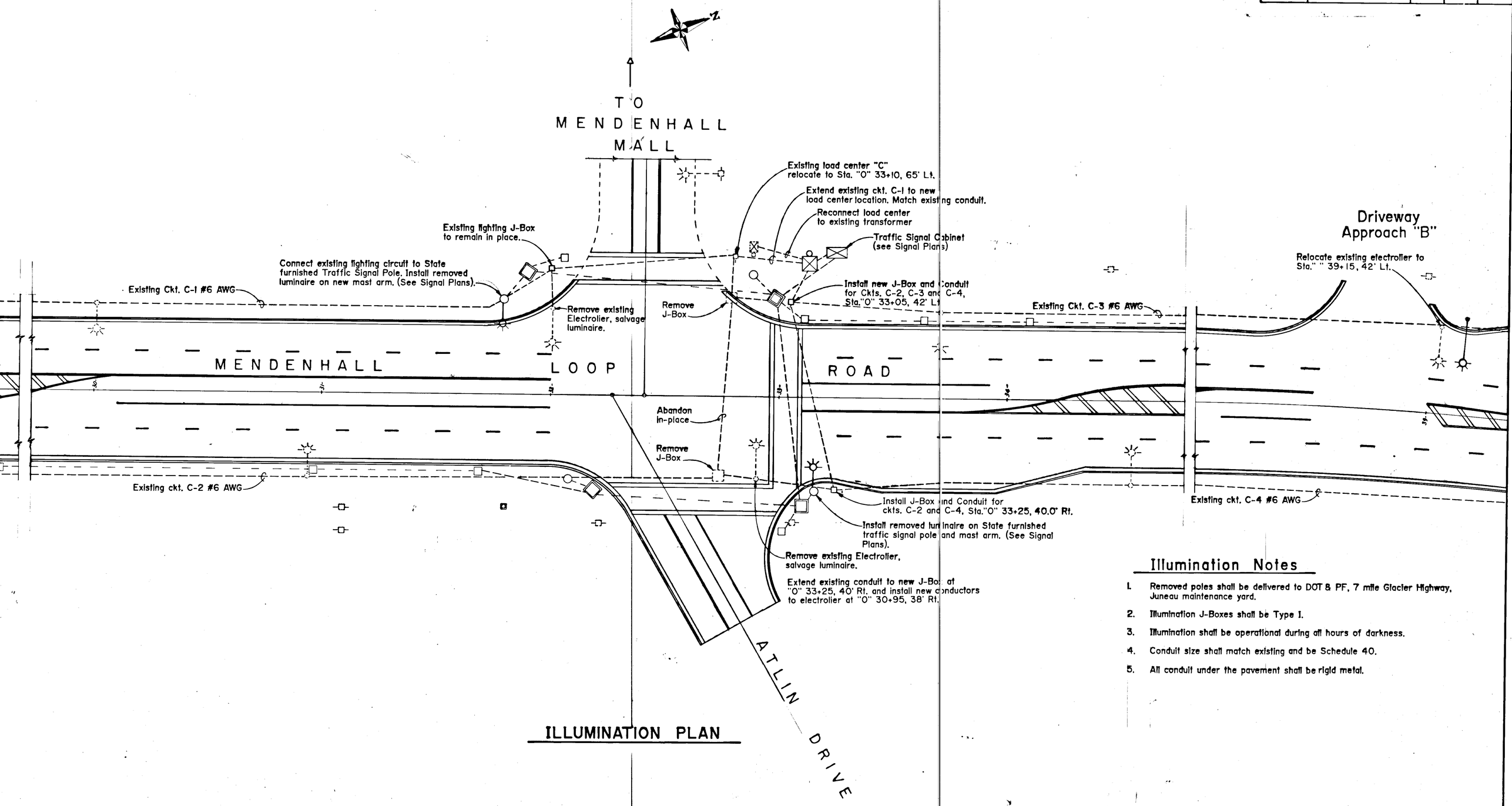
MASTER TRAFFIC SIGNAL SYSTEM INTERCONNECT

APPROVED BY: _____ DESIGN GROUP CHIEF _____ DATE
RECOMMENDED BY: _____ DESIGN ENGINEER, GROUP _____ DATE
PREPARED BY: _____ PROJECT MANAGER _____ LEAD DESIGNER

DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:
DATE:
SHEET 26 OF 28

ENGINEER'S STAMP
STATE OF ALASKA
49TH
Gary P. McCallon
#CE 3771
REGISTERED PROFESSIONAL ENGINEER

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	HES-M-966(14)	88	27	28



ILLUMINATION PLAN

Illumination Notes

1. Removed poles shall be delivered to DOT & PF, 7 mile Glacier Highway, Juneau maintenance yard.
2. Illumination J-Boxes shall be Type I.
3. Illumination shall be operational during all hours of darkness.
4. Conduit size shall match existing and be Schedule 40.
5. All conduit under the pavement shall be rigid metal.

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STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
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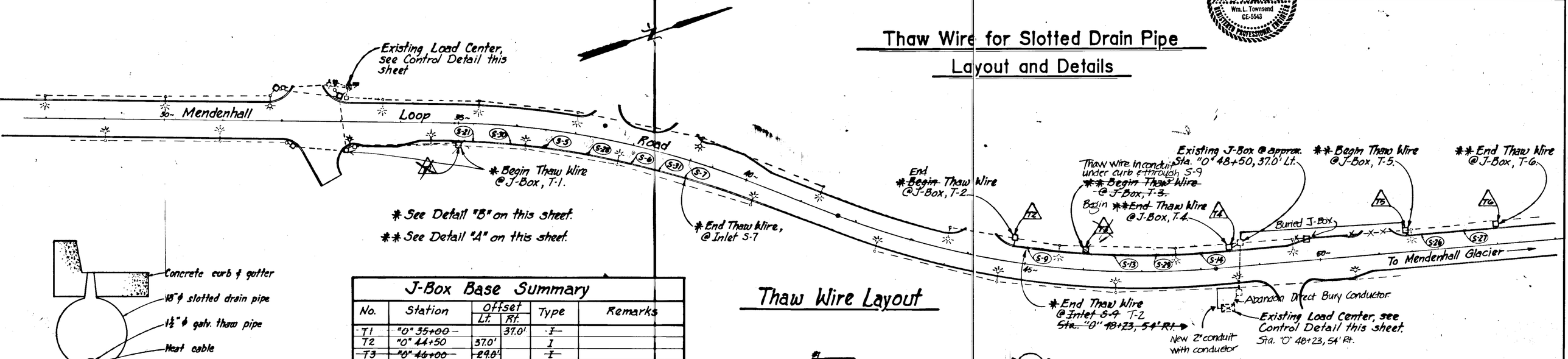
STATE OF ALASKA · 49TH · Wm. L. Townsend · Wm. L. Townsend CE-5543 · REGISTERED PROFESSIONAL ENGINEER

Thaw Wire for Slotted Drain Pipe Layout and Details

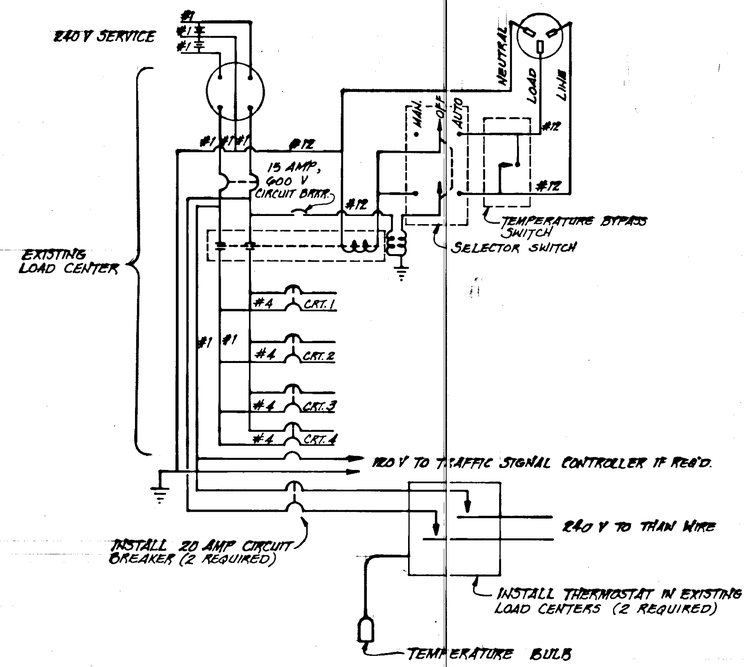


Typical Section Thaw Wire Installation

J-Box Base Summary

No.	Station	Offset Lt.	Offset Rt.	Type	Remarks
~~T1~~	~~"0" 35+00~~		~~37.0'~~	~~I~~	
T2	"0" 44+50	37.0'		I	
~~T3~~	~~"0" 46+00~~	~~29.0'~~		~~I~~	
T4	"0" 48+50	29.0'		I	
T5	"0" 51+50	37.0'		I	
T6	"0" 53+00	29.0'		I	

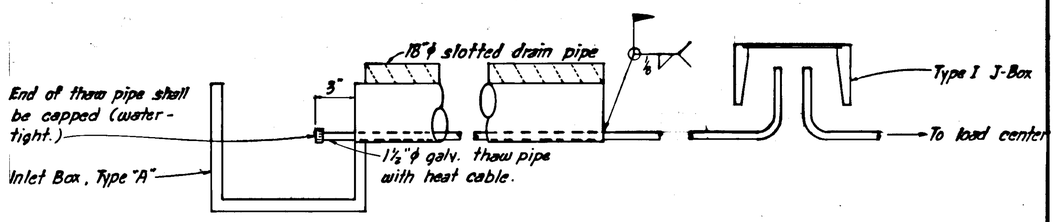
Thaw Wire Layout



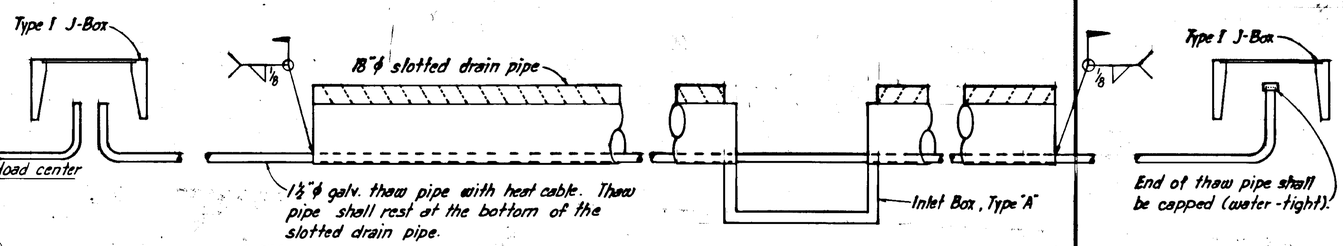
Control Detail

Thaw Wire Notes

1. Thermostats shall be 2 poles, 35 amp with a temperature range of 0-100° F.
2. Thermostat bulb shall be installed in a ¾" conduit housing as shown on Standard Drawing T-33.01.
3. Existing Illumination wires shall be removed from conduit and pulled back in with new cold conductor thaw wire cables. Cables shall be XHHW, AWG #12.
4. All splices shall be sealed with waterproof epoxy splice kits.
5. Approximately 890 feet total of thaw wire required.
6. Thaw pipe shall be 1½" diameter Standard galvanized pipe.
7. Heat cable output shall be a minimum of 4 watt per foot (240 operating voltage).



Thaw Wire Installation Detail "B"



Thaw Wire Installation Detail "A"