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 DATE: 8/9/2019 14:59
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 DESIGNED: WW
 CHECKED: WW
 DRAFTED: WJP

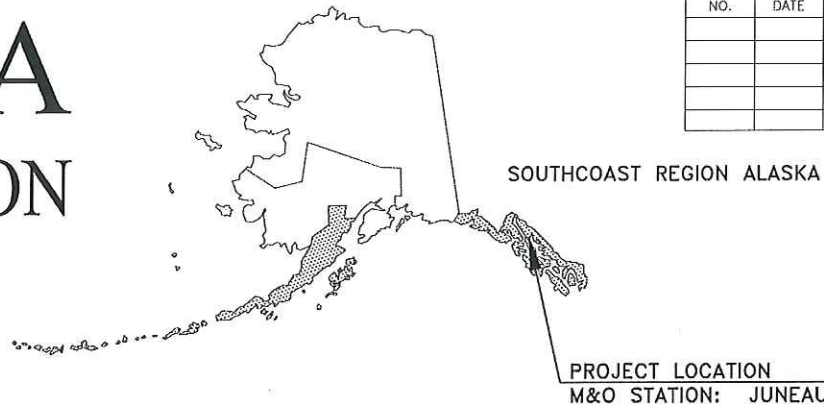
STATE OF ALASKA

DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES

PROPOSED HIGHWAY PROJECT

JUNEAU-RIVERSIDE AND STEPHEN RICHARDS CONGESTION MITIGATION PROJECT NO. 0003207/SFHWHY00081

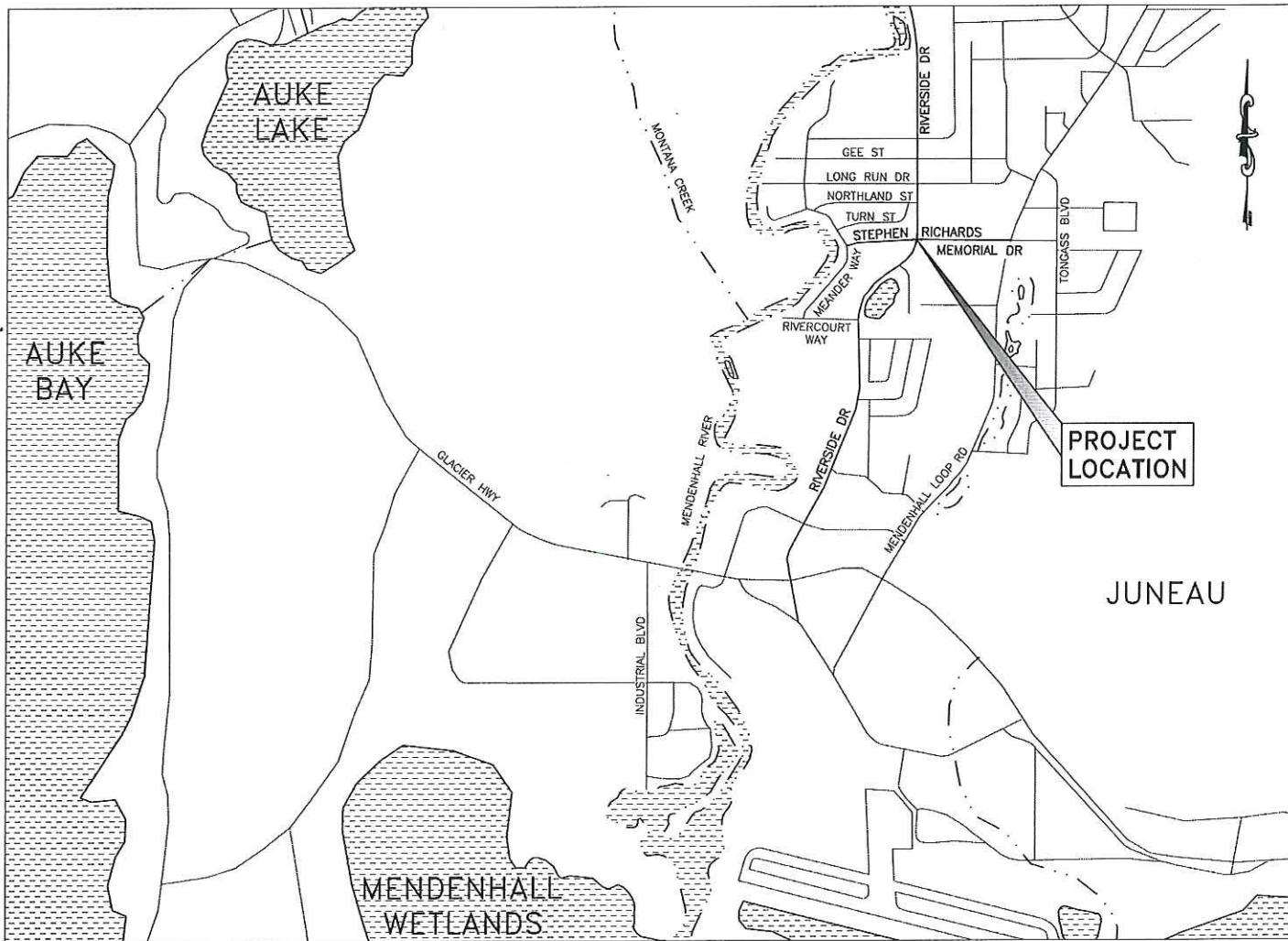
GRADING, PAVING, SIDEWALKS, SIGNING, STRIPING, ILLUMINATION & SIGNALIZATION



NO.	DATE	REVISIONS	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0003207/SFHWHY00081	2019	A1	29
				CDS ROUTE: 296500	MILEPOINT: 1.04 TO 1.08		
				LATITUDE: 58°23'1.9"N	LONGITUDE: 134°35'0.6"W		

PROJECT SUMMARY	
RIVERSIDE AND STEPHEN RICHARDS	
WIDTH OF PAVEMENT	VARIES
LENGTH OF PAVING	95'
LENGTH OF PROJECT	95'

DESIGN DESIGNATIONS		
PROJECT TYPE	RECONSTRUCTION	
ROAD	RIVERSIDE	STEPHEN RICHARDS
FUNCTIONAL CLASS	MINOR ARTERIAL	MAJOR COLLECTOR
ADT (2016)	9,514	3,221
ADT (2040)	10,000	3,400
DHV	12%	12%
PERCENT TRUCKS (T)	4%	4%
DIRECTIONAL SPLIT (D)	48%/52%	83%/17%
DESIGN SPEED (V)	40	35
DESIGN ESAL'S (20 YEARS)	747,150	474,368



VICINITY MAP

The undersigned hereby certifies that this duplicated document is an exact and true copy of the original.

Jessica Pukala

December 13, 2019

USE THESE PLANS IN CONJUNCTION WITH THE STATE OF ALASKA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2017 EDITION AND THE PROJECT SPECIAL PROVISIONS.

STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
 6860 GLACIER HIGHWAY, JUNEAU, AK 99801
 (907) 465-1763

APPROVED: *[Signature]* 8/15/19
 REGIONAL PRECONSTRUCTION ENGINEER DATE
 L. PAT CARROLL, P.E.
 CONCUR: *[Signature]* 15 AUG 2019
 REGIONAL DIRECTOR DATE
 D. LANCE MEARIG, P.E.

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd., Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. 1102
 FILE 00081_A2_Layout.dwg DATE 8/8/2019 3:00 PM LAYOUT A2 DESIGNED GMD CHECKED ISM DRAFTED WJP

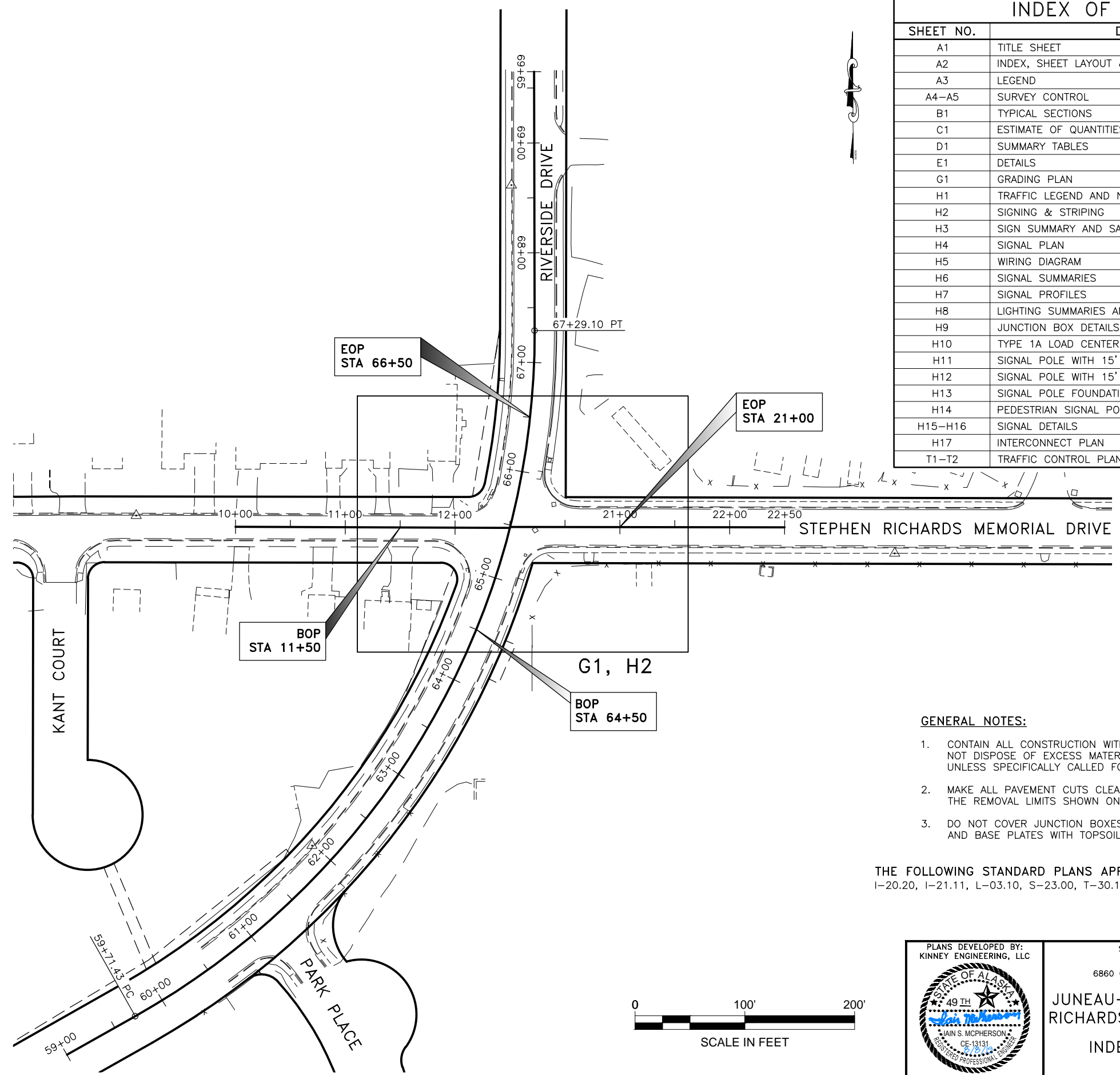
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0003207/SFHwy00081	2019	A2	29

ABBREVIATIONS

ADA	AMERICANS WITH DISABILITIES ACT
ADT	AVERAGE DAILY TRAFFIC
ASDS	ALASKA SIGN DESIGN GUIDE
ATM	ALASKA TRAFFIC MANUAL
BLM	BUREAU OF LAND MANAGEMENT
BMP	BEST MANAGEMENT PRACTICE
CBJ	CITY AND BOROUGH OF JUNEAU
CF	CUBIC FOOT
CGP	CONSTRUCTION GENERAL PERMIT
CKT	ELECTRICAL CIRCUIT
CPM	CRITICAL PATH METHOD
CRT	CONTROLLED RELEASE TERMINAL
DESC	DESCRIPTION
DHV	DESIGN HOURLY VOLUME
DIA	DIAMETER
DIR	DIRECTION
DOT&PF	DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
EA	EACH
EB	EASTBOUND
EGC	EQUIPMENT GROUND CONDUCTOR
ESAL	EQUIVALENT SINGLE AXLE LOAD
EX	EXISTING
H	HORIZONTAL
HGT	HEIGHT
HMA	HOT MIX ASPHALT
GLO	GENERAL LAND OFFICE
GND	GROUND
IES	ILLUMINATING ENGINEERING SOCIETY
ILL	ILLUMINATION
I/C	INTERCONNECT
IN OR "	INCH
JBOX, J-BOX	JUNCTION BOX
LED	LIGHT EMITTING DIODE
LF	LINEAR FOOT
L.O.C.	LIP OF CURB
LT	LEFT
MMA	METHYL METHACRYLATE
MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
NB	NORTHBOUND
NE	NORTHEAST
NEMA	NATIONAL ELECTRIC MANUFACTURERS ASSOCIATION
NO.	NUMBER
N.I.C.	NOT IN CONTRACT
NTS	NOT TO SCALE
NW	NORTHWEST
O.C.	ON CENTER
PC	POINT OF CURVE
PCC	PRECAST CONCRETE
PHB	PEDESTRIAN HYBRID BEACON
PI	POINT OF INTERSECTION
PT	POINT OF TANGENCY
QUAD	QUADRANT OR CORNER
ROW, R.O.W.	RIGHT OF WAY
RP	REFERENCE POINT
RT	RIGHT
SB	SOUTHBOUND
SE	SOUTHEAST
SF	SQUARE FOOT
SMFO	SINGLE MODE FIBER OPTIC
STE-1	SPECIAL TACK EMULSION
SW	SOUTHWEST, SIDEWALK
SWPPP	STORM WATER POLLUTION PREVENTION PLAN
SY	SQUARE YARD
TYP.	TYPICAL
USC&GS	U.S. COAST AND GEODETIC SURVEY
V	VERTICAL
WB	WESTBOUND
W/	WITH
W/O	WITHOUT

INDEX OF SHEETS

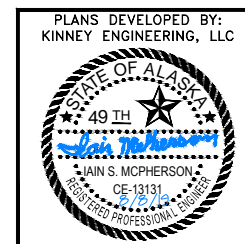
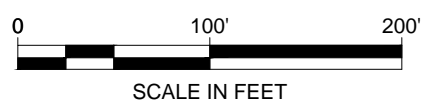
SHEET NO.	DESCRIPTION
A1	TITLE SHEET
A2	INDEX, SHEET LAYOUT & GENERAL NOTES
A3	LEGEND
A4-A5	SURVEY CONTROL
B1	TYPICAL SECTIONS
C1	ESTIMATE OF QUANTITIES
D1	SUMMARY TABLES
E1	DETAILS
G1	GRADING PLAN
H1	TRAFFIC LEGEND AND NOTES
H2	SIGNING & STRIPING
H3	SIGN SUMMARY AND SALVAGE SIGN SUMMARY
H4	SIGNAL PLAN
H5	WIRING DIAGRAM
H6	SIGNAL SUMMARIES
H7	SIGNAL PROFILES
H8	LIGHTING SUMMARIES AND DETAILS
H9	JUNCTION BOX DETAILS
H10	TYPE 1A LOAD CENTER
H11	SIGNAL POLE WITH 15' TO 35' MASTARM, LOWER SECTION
H12	SIGNAL POLE WITH 15' TO 35' MASTARM, UPPER SECTION
H13	SIGNAL POLE FOUNDATION DETAILS
H14	PEDESTRIAN SIGNAL POLE AND FOUNDATION DETAIL
H15-H16	SIGNAL DETAILS
H17	INTERCONNECT PLAN
T1-T2	TRAFFIC CONTROL PLAN AND DETAILS



GENERAL NOTES:

1. CONTAIN ALL CONSTRUCTION WITHIN THE RIGHT-OF-WAY. DO NOT DISPOSE OF EXCESS MATERIAL WITHIN THE RIGHT-OF-WAY, UNLESS SPECIFICALLY CALLED FOR IN THE PLANS.
2. MAKE ALL PAVEMENT CUTS CLEAN, VERTICAL, AND TRUE TO THE REMOVAL LIMITS SHOWN ON THE PLANS.
3. DO NOT COVER JUNCTION BOXES OR POLE FOUNDATION BOLTS AND BASE PLATES WITH TOPSOIL.

THE FOLLOWING STANDARD PLANS APPLY TO THIS PROJECT:
 I-20.20, I-21.11, L-03.10, S-23.00, T-30.11, T-34.01



PLANS DEVELOPED BY:
 KINNEY ENGINEERING, LLC

STATE OF ALASKA DEPARTMENT OF
 TRANSPORTATION
 AND PUBLIC FACILITIES
 6860 GLACIER HIGHWAY, JUNEAU, AK 99811
 (907) 465-1763

**JUNEAU-RIVERSIDE AND STEPHEN
 RICHARDS CONGESTION MITIGATION**

**INDEX, SHEET LAYOUT &
 GENERAL NOTES**

	RECOVERED	SET
BLM MONUMENT		
GLO MONUMENT		
USC&GS MONUMENT		
PRIMARY MONUMENT		
CENTERLINE MONUMENT IN CASING		
PRIMARY R.O.W. MONUMENT		
BEARING OBJECT		
MISCELLANEOUS MONUMENT		
LINE OF SIGHT MONUMENT		
CONCRETE R.O.W. MONUMENT		
BENCHMARK		
REBAR AND CAP		
REBAR		
IRON PIPE		
PK NAIL		
SPIKE		
HUB AND TACK		
CONSTRUCTION CENTERLINE		
MICELLANEOUS CENTERLINE		
STATION EQUATION	${}^L 48+97.23 \text{ POT BK} =$ ${}^O 48+97.23 \text{ PC AHD}$	
PROJECT RIGHT-OF-WAY LINE		
EXISTING RIGHT-OF-WAY LINE		
EXISTING PROPERTY LINE		
CONTROLLED ACCESS LINE		
EXISTING EASEMENT LINE		
PROPOSED EASEMENT LINE		
PROPOSED CUT SLOPE LIMIT		
PROPOSED FILL SLOPE LIMIT		
SECTION LINE		
1/4 SECTION LINE		
1/16 SECTION LINE		
TOWNSHIP & RANGE LINE		
MEANDER LINE		

	EXISTING	PROPOSED
SANITARY SEWER (FLOW DIRECTION →)		
FUEL LINE		
GAS LINE		
WATER LINE		
METER, VALVE, FIRE HYDRANT		
EXISTING STORM DRAIN (FLOW DIRECTION →)		
PROPOSED STORM DRAIN		
FIBER OPTIC LINE		
DIRECT BURIAL TELEPHONE CABLE		
DIRECT BURIAL ELECTRIC CABLE		
ELECTRIC LINE (OVERHEAD)		
POWER POLE LINE		
JOINT USE POWER & TELEPHONE		
TELEPHONE POLE LINE		
POLE ANCHOR		
STUB POLE (POWER OR TELEPHONE)		
TELEPHONE DUCT		
TELEPHONE PEDESTAL		
BURIED CABLE MARKER		
PIPELINE MARKER OR VALVE		
CATCH BASIN OR DROP INLET		
MANHOLE		
SANITARY SEWER CLEAN OUT		
RIPRAP		
SPECIAL DITCH CENTERLINE		
HIGH TIDE LINE		
GRADE BREAK		
WATER VALVE		

	EXISTING	PROPOSED
ROADWAY/PAVEMENT EDGE		
FENCE		
CURB AND GUTTER		
DETECTABLE WARNINGS		
GUARDRAIL		
CULVERT PIPE		
SIGN		
MAILBOX		
RAILROAD TRACKS		
RAILROAD DEVICES		
TREE LINE		
WATER BOUNDARY		
ORDINARY HIGH WATER LINE		
FLOW CENTERLINE		
FLOW DIRECTION		
WETLANDS		
EXISTING BUILDINGS		
POST OR BOLLARD		
WELL OR MONITORING WELL		
SEPTIC PIPE		
FUEL TANK FILL PIPE/VENT		
SATELLITE DISH		
TEST HOLE		
CONIFER TREE		
DECIDUOUS TREE		
GRAVE		
THERMOSIPHON		
PARKING METER		
VEHICLE PLUG-IN		
DELINEATOR/GUIDE MARKER		

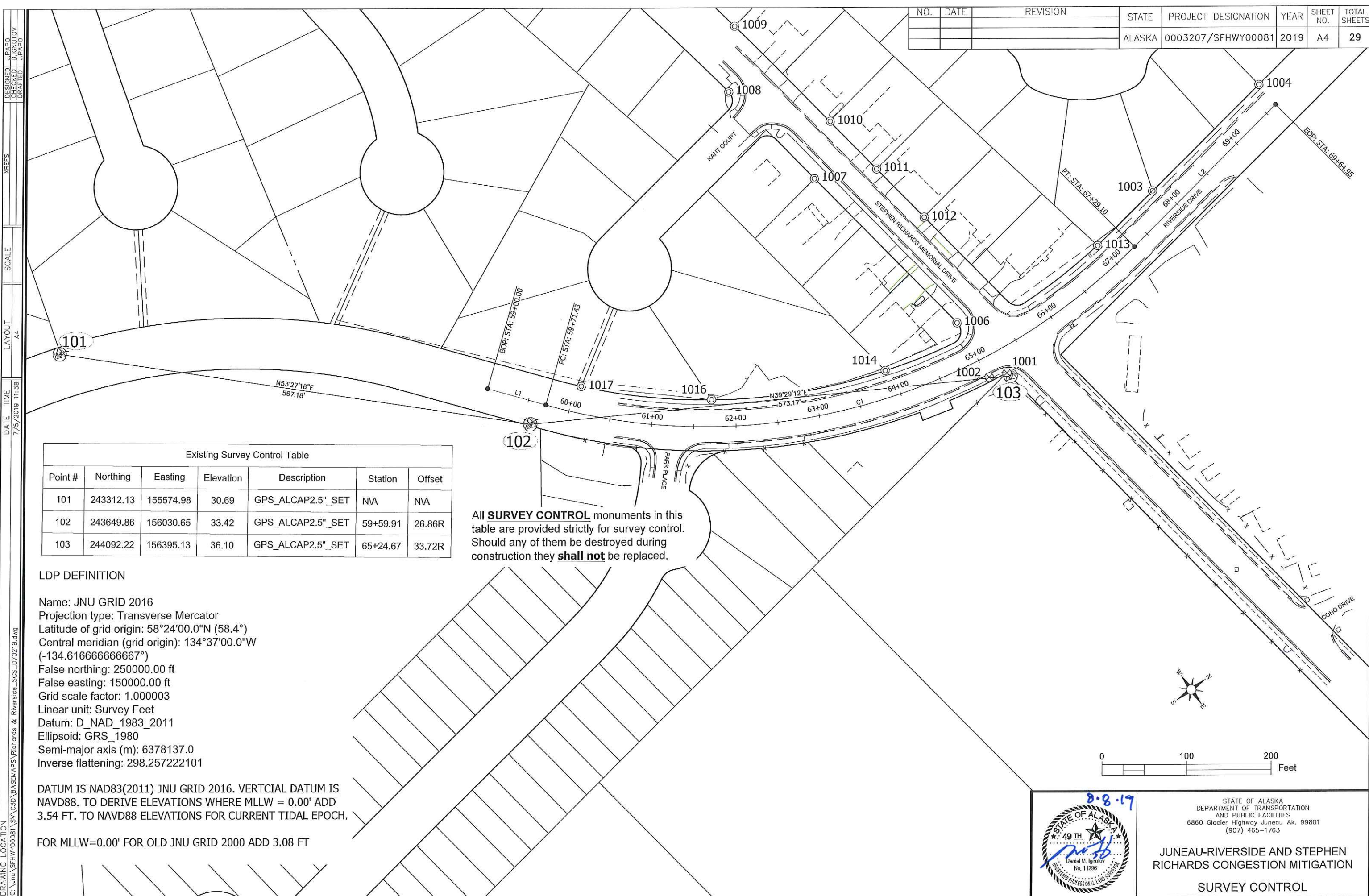
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0003207/SFHWY00081	2019	A3	29

	EXISTING	PROPOSED
JUNCTION BOX, TYPE IA		
JUNCTION BOX, TYPE II		
JUNCTION BOX, TYPE III		
JUNCTION BOX, ABOVE GRADE		
SIGNAL FACE, VEHICULAR		
SIGNAL FACE, BACKPLATE		
SIGNAL FACE, LEFT TURN, BACKPLATE		
SIGNAL FACE, PEDESTRIAN		
LOOP DETECTOR		
VIDEO DETECTOR		
RADAR DETECTOR		
OPTICOM DETECTOR		
PAN, TILT, ZOOM CAMERA		
PEDESTRIAN PUSH BUTTON		
SIGNAL POST W/O MAST ARM		
SIGNAL POLE W/MAST ARM		
INTERCONNECT MANHOLE		
TRAFFIC CONTROLLER		
LOAD CENTER		
POST MOUNTED TRANSFORMER AND DISCONNECT SWITCH		
LUMINAIRE		
LUMINAIRE REPLACEMENT ON EXISTING POLE AND MAST ARM		
RIGID METAL CONDUIT		
TRAFFIC SIGNAL INTERCONNECT		

H = HOUSE	
G = GARAGE	
M = MERCHANT/STORE	
B = BARN	
S = SHED	
P = PRIVY	
SS = SERVICE STATION	
W = WAREHOUSE	

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC	STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES 6860 GLACIER HIGHWAY, JUNEAU, AK 99811 (907) 465-1763
	JUNEAU-RIVERSIDE AND STEPHEN RICHARDS CONGESTION MITIGATION
	LEGEND

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0003207/SFHWY00081	2019	A4	29



Existing Survey Control Table

Point #	Northing	Easting	Elevation	Description	Station	Offset
101	243312.13	155574.98	30.69	GPS_ALCAP2.5" SET	N/A	N/A
102	243649.86	156030.65	33.42	GPS_ALCAP2.5" SET	59+59.91	26.86R
103	244092.22	156395.13	36.10	GPS_ALCAP2.5" SET	65+24.67	33.72R

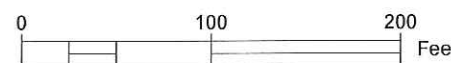
All **SURVEY CONTROL** monuments in this table are provided strictly for survey control. Should any of them be destroyed during construction they **shall not** be replaced.

LDP DEFINITION

Name: JNU GRID 2016
 Projection type: Transverse Mercator
 Latitude of grid origin: 58°24'00.0"N (58.4°)
 Central meridian (grid origin): 134°37'00.0"W (-134.616666666667°)
 False northing: 250000.00 ft
 False easting: 150000.00 ft
 Grid scale factor: 1.000003
 Linear unit: Survey Feet
 Datum: D_NAD_1983_2011
 Ellipsoid: GRS_1980
 Semi-major axis (m): 6378137.0
 Inverse flattening: 298.257222101

DATUM IS NAD83(2011) JNU GRID 2016. VERTICAL DATUM IS NAVD88. TO DERIVE ELEVATIONS WHERE MLLW = 0.00' ADD 3.54 FT. TO NAVD88 ELEVATIONS FOR CURRENT TIDAL EPOCH.

FOR MLLW=0.00' FOR OLD JNU GRID 2000 ADD 3.08 FT



STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION
 AND PUBLIC FACILITIES
 6860 Glacier Highway Juneau Ak. 99801
 (907) 465-1763

**JUNEAU-RIVERSIDE AND STEPHEN
 RICHARDS CONGESTION MITIGATION**
SURVEY CONTROL

DESIGNED: J.PAPOI
 CHECKED: D.IGNOLOV
 DRAFTED: J.PAPOI
 XREFS
 SCALE
 LAYOUT: A4
 DATE: 7/5/2019 11:58
 TIME
 DRAWING LOCATION
 G:\jnu\SFHwy00081\SV\C3D\BASEMAPS\Richards & Riverside_SCS_070219.dwg

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0003207/SFH00081	2019	A5	29

RIVERSIDE DRIVE DESIGN ALIGNMENT									
SEGMENT	STATION	NORTHING	EASTING	DISTANCE	BEARING	STATION	RADIUS	LENGTH	DELTA
L1	59+00.00	243643.83	155965.27	71.43	N60° 35' 01"E	59+71.43			
C1	59+71.43	243678.92	156027.49			67+29.10	715.00	757.67	60°42'55"
L2	67+29.10	244303.38	156391.32	235.85	N0° 07' 53"W	69+64.95			

Existing Property					
Point #	Northing	Easting	Description	Station	Offset
1000	242995.08	155489.64	BC2.5" _FND_50+69.52_23.48LT	N/A	N/A
1003	244364.86	156359.84	PLASCAP _FND_3650LS	67+90.66	31.34L
1004	244542.03	156360.12	PLASCAP _FND_3650LS	N/A	N/A
1006	244091.59	156305.80	SPINHOLE_5/8" Rebar	64+97.09	51.37L
1007	244091.97	156064.64	REBAR_5/8"	63+73.34	273.64L
1008	244091.84	155919.49	PLASCAP_No Marking	62+18.33	393.77L
1009	244151.12	155869.41	REBAR_5/8"	62+53.82	470.12L
1010	244152.93	156029.96	SPINHOLE	64+42.69	331.33L
1011	244152.12	156109.18	PLASCAP_No Markings	64+89.52	257.02L
1012	244152.01	156189.69	SPINHOLE	65+24.55	180.24L
1013	244273.48	156359.61	REBAR	66+97.91	31.13L
1014	243991.91	156285.22	PLASCAP_LS3650	63+90.92	31.81L
1016	243822.10	156162.94	PLASCAP_1401S	61+71.08	31.74L
1017	243724.18	156042.05	PLASCAP	60+07.96	31.38L

Existing Property to be Referenced & Replaced					
Point #	Northing	Easting	Description	Station	Offset
1001	244091.72	156389.46	ALCAP3.5" _FND_65+23.97_28.68RT	65+22.69	28.42R
1002	244073.39	156378.17	BC2.5" _FND_65+03.75_23.26RT	65+02.56	23.06R

ALL PROPERTY MONUMENTS IN THIS TABLE SHALL BE REFERENCED PRIOR TO DISTURBANCE FROM CONSTRUCTION AND RE-ESTABLISHED IN THEIR ORIGINAL HORIZONTAL POSITION AND A RECORD OF MONUMENT FORM IN ACCORDANCE WITH A.S.34.65.040 SHALL BE SUBMITTED TO DOT FOR REVIEW PRIOR TO RECORDING.

MONUMENT NOTES:

- IF ANY PAIR OF CONTROL POINTS DISAGREES FROM PUBLISHED VALUE BY MORE THAN 1:10,000 HORIZONTALLY OR VERTICALLY THEN A THIRD NETWORK POINT MUST BE TIED TO ASCERTAIN WHICH POINT IS IN ERROR OR HAS BEEN DISTURBED.
- WHETHER LISTED OR NOT, ALL PROPERTY MONUMENTS, OR PROPERTY MARKERS, CORNERS OR ACCESSORIES WHICH WILL BE DISTURBED OR BURIED SHALL BE REFERENCED PRIOR TO BEING DISTURBED, AND RE-ESTABLISHED IN THEIR ORIGINAL HORIZONTAL POSITION AND A RECORD OF MONUMENT FORM IN ACCORDANCE WITH (A.S.34.65.040) AND (A.S.19.10.260) SHALL BE SUBMITTED TO THE CONSTRUCTION ENGINEER FOR REVIEW PRIOR TO RECORDING. COORDINATE VALUES LISTED ARE FOR INFORMATIONAL PURPOSES AND SHOULD BE USED TO RESET MONUMENTS ONLY AS A LAST RESORT.
- RIGHT OF WAY LOCATION IS SHOWN FOR GRAPHICAL ORIENTATION PURPOSES ONLY. REFER TO ALASKA DOT&PF RIGHT OF WAY MAPS FOR RIGHT OF WAY INFORMATION.
- HORIZONTAL AND VERTICAL CONTROL MUST BE FIELD VERIFIED BY THE CONTRACTOR. DISCREPANCIES WILL BE REPORTED TO DOT&PF CONSTRUCTION PROJECT ENGINEER.



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6860 Glacier Highway Juneau Ak. 99801
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**JUNEAU-RIVERSIDE AND STEPHEN
RICHARDS CONGESTION MITIGATION
SURVEY CONTROL**

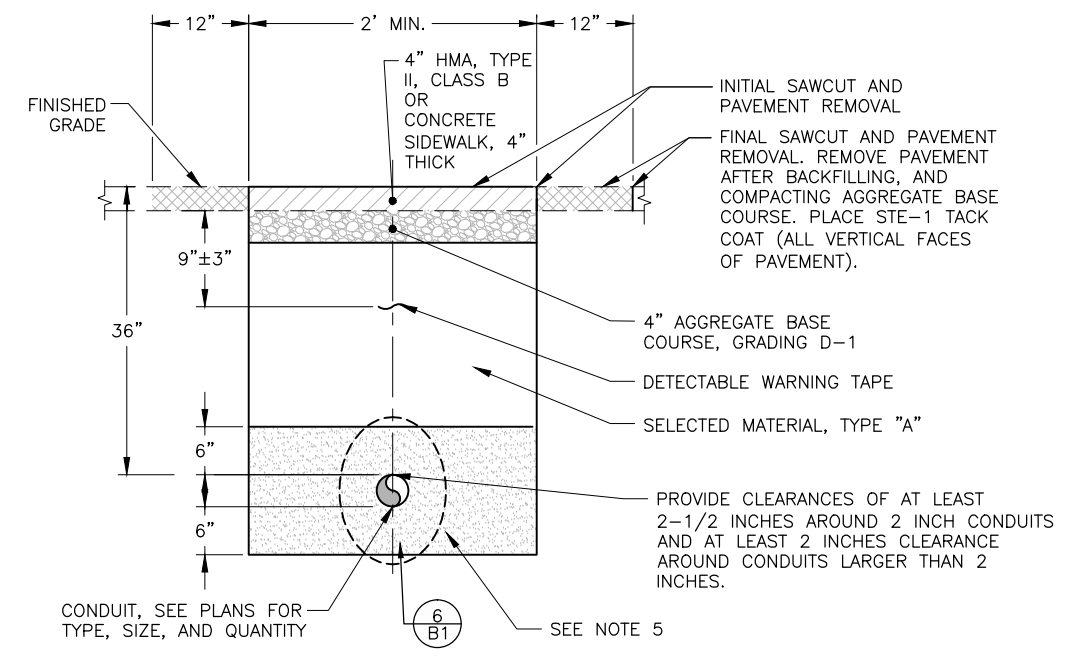
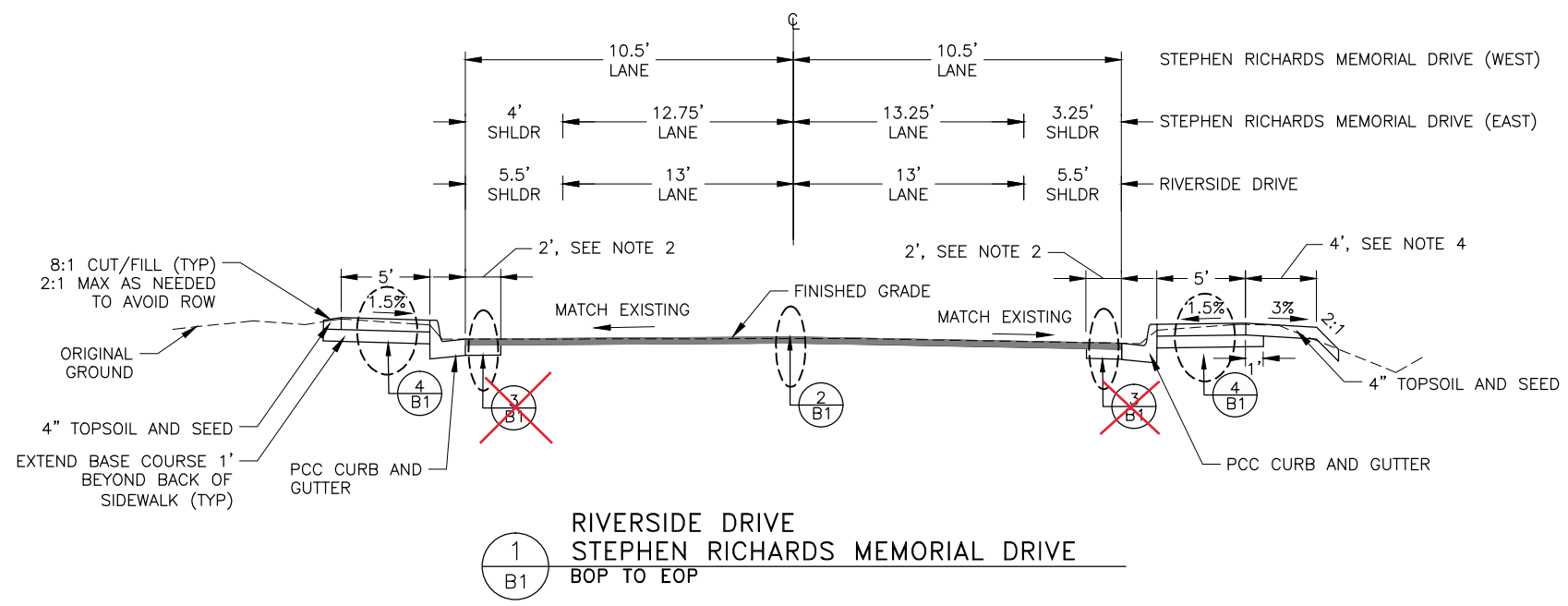
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DATE TIME: 7/5/2019 11:58
LAYOUT: A5
SCALE:
XREFS:
DESIGNED: J.PAPOI
CHECKED: D.IGNOTOV
DRAFTED: J.PAPOI

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd., Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. 1102
 FILE 00081_B1_Typ.dwg DATE 8/8/2019 3:00 PM LAYOUT B1 DESIGNED GMD CHECKED ISM DRAFTED WJP

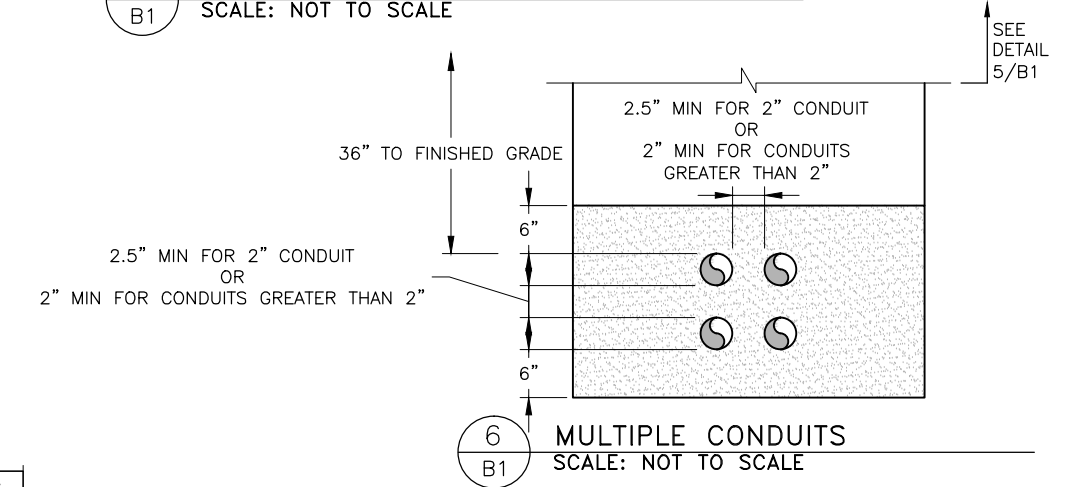
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0003207/SFHwy00081	2019	B1	29

TYPICAL SECTION NOTES

- REFER TO SHEET G1 FOR MORE INFORMATION REGARDING FINISHED SURFACE MATERIAL, GRADES, AND WIDTH OF GRADING OFF BACK OF SIDEWALK.
- WHERE CONSTRUCTING CURB AND GUTTER, SAWCUT AND REMOVE 2 FEET OF EXISTING ASPHALT TO PROVIDE SPACE TO COMPACT AGGREGATE BASE COURSE, GRADING D-1.
- FINISHED EMBANKMENT SLOPES SHALL BE NO STEEPER THAN 2:1. EXCAVATION AT 1:1 IS ALLOWABLE.
- PROVIDE GRASS LANDING BEHIND SIDEWALK TO ACCOMMODATE SIGNAL EQUIPMENT IN THE NORTHEAST CORNER OF THE INTERSECTION. ALL OTHER LOCATIONS, FOLLOW DIAGRAM ON LEFT SIDE OF TYPICAL SECTION.
- PROVIDE CONDUIT BEDDING AND BACKFILL PER SPECIFICATIONS SECTION 660-3.01.3, EXCAVATING AND BACKFILLING. BACKFILL MATERIAL WITHIN 6" OF CONDUIT SHALL BE EASILY COMPACTABLE, FREE OF ROCKS EXCEEDING 1" MAXIMUM DIMENSION AND HAVE A PLASTICITY INDEX NOT GREATER THAN 6.
- APPLY 4" TOPSOIL AND SEED TO ALL DISTURBED AREAS, NOT OTHERWISE CALLED OUT.

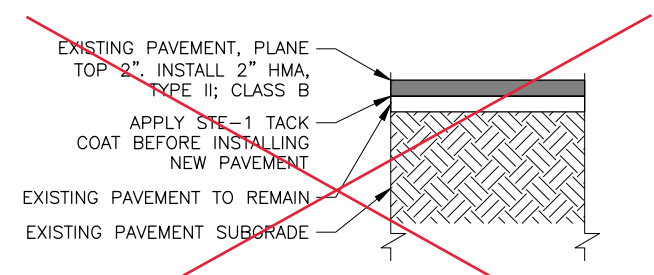


5 TRENCH
SCALE: NOT TO SCALE



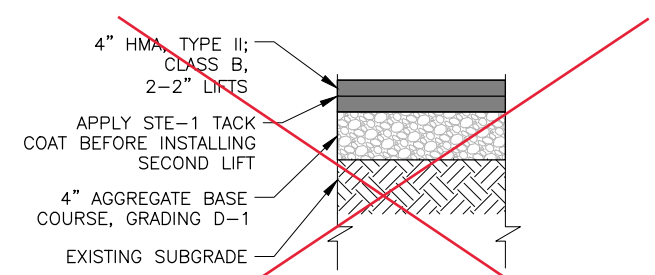
6 MULTIPLE CONDUITS
SCALE: NOT TO SCALE

Existing pavement completely removed, new D1 layer poured and compacted, a single 2.5" HMA, Type II, Class B lift was poured over new D1 layer

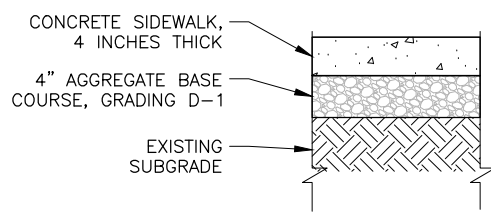


2 PAVEMENT SECTION
SCALE: NOT TO SCALE

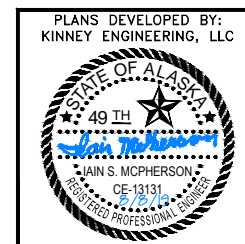
Eliminated during construction



3 PAVEMENT SECTION
SCALE: NOT TO SCALE



4 SIDEWALK SECTION
SCALE: NOT TO SCALE



PLANS DEVELOPED BY:
KINNEY ENGINEERING, LLC

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6860 GLACIER HIGHWAY, JUNEAU, AK 99811
(907) 465-1763

**JUNEAU-RIVERSIDE AND STEPHEN
RICHARDS CONGESTION MITIGATION**

TYPICAL SECTIONS

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
1	9/23/19	CHANGED BINDER	ALASKA	0003207/SFHWHY00081	2019	C1	29

ESTIMATE OF QUANTITIES

ITEM NO.	SSHC 2017 ITEM NO.	DESCRIPTION	UNIT	TOTAL
202.0001.0000	202(1)	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LUMP SUM	ALL REQ'D
202.0002.0000	202(2)	REMOVAL OF PAVEMENT	SQUARE YARD	36 726.3
202.0003.0000	202(3)	REMOVAL OF SIDEWALK	SQUARE YARD	90 71.9
202.0009.0000	202(9)	REMOVAL OF CURB AND GUTTER	LINEAR FOOT	143 145.0
203.0003.0000	203(3)	UNCLASSIFIED EXCAVATION	CUBIC YARD	8 4.5
301.0001.00D1	301(1)	AGGREGATE BASE COURSE, GRADING D-1	TON	37 71.0
401.0001.002B	401(1b)	HMA, TYPE II; CLASS B	TON	79.0 142.8
401.0004.5828	401(4)	ASPHALT BINDER, GRADE PG 58-28	TON	5 8.1
410.2001.0000		PAVEMENT COLD PLANING	SQUARE YARD	631 667.4
604.0003.0000	604(4)	RECONSTRUCT EXISTING MANHOLE	EACH	3
608.0001.0004	608(1a)	CONCRETE SIDEWALK, 4 INCHES THICK	SQUARE YARD	98 92.6
608.0006.0000	608(6)	CURB RAMP	EACH	6
609.0002.0001	609(2)	CURB AND GUTTER, TYPE 1	LINEAR FOOT	143 178.91
609.0003.0000	609(3)	BACKING CURB	LINEAR FOOT	38.0 44.81
615.0001.0000	615(1)	STANDARD SIGN	SQUARE FOOT	95.5 95.56
615.0006.0000	615(6)	SALVAGE SIGN	EACH	17 18
618.0002.0000	618(2)	SEEDING	POUND	1
620.0001.0000	620(1)	TOPSOIL	SQUARE YARD	403 40.29
627.2011.0000		REMOVE AND REPLACE WATER VALVE BOX AND LID	EACH	3
640.0001.0000	640(1)	MOBILIZATION AND DEMOBILIZATION	LUMP SUM	ALL REQ'D
641.0001.0000	641(1)	EROSION, SEDIMENT AND POLLUTION CONTROL ADMINISTRATION	LUMP SUM	ALL REQ'D
641.0003.0000	641(3)	TEMPORARY EROSION, SEDIMENT AND POLLUTION CONTROL	LUMP SUM	ALL REQ'D
641.0005.0000	641(5)	TEMPORARY EROSION, SEDIMENT AND POLLUTION CONTROL BY DIRECTIVE	CONTINGENT SUM	ALL REQ'D
641.0006.0000	641(6)	WITHHOLDING	CONTINGENT SUM	ALL REQ'D
642.0001.0000	642(1)	CONSTRUCTION SURVEYING	LUMP SUM	ALL REQ'D
642.0003.0000	642(3)	THREE PERSON SURVEY PARTY	HOUR	10 0.0
642.0006.0000	642(6)	REPLACE EXISTING WITH PRIMARY MONUMENT	EACH	1
642.0007.0000	642(6)	REPLACE EXISTING WITH SECONDARY MONUMENT	EACH	1 0.0
642.0010.0000	642(10)	MONUMENT CASE	EACH	2 1
643.0002.0000	643(2)	TRAFFIC MAINTENANCE	LUMP SUM	ALL REQ'D
643.0003.0000	643(3)	PERMANENT CONSTRUCTION SIGNS	LUMP SUM	ALL REQ'D
643.0023.0000	643(23)	TRAFFIC PRICE ADJUSTMENT	CONTINGENT SUM	ALL REQ'D
643.0025.0000	643(25)	TRAFFIC CONTROL	CONTINGENT SUM	ALL REQ'D
643.0032.0000		FLAGGING	CONTINGENT SUM	ALL REQ'D
646.0001.0000	646(1)	CPM SCHEDULING	LUMP SUM	ALL REQ'D
652.0001.0000	652(1)	INTERIM WORK PRICE ADJUSTMENT	CONTINGENT SUM	ALL REQ'D
660.0001.0000	660(1)	TRAFFIC SIGNAL SYSTEM COMPLETE RIVERSIDE DR / STEPHEN RICHARDS DR	LUMP SUM	ALL REQ'D
660.2007.0000		REMOVE AND REPLACE LUMINAIRE	EACH	3
660.2016.0000		ELECTRICAL ILLUMINATION MODIFICATIONS	LUMP SUM	ALL REQ'D

Modified by CO 3. See 660(1A).

ESTIMATE OF QUANTITIES

ITEM NO.	SSHC 2017 ITEM NO.	DESCRIPTION	UNIT	TOTAL
661.0002.0000	661(2)	LOAD CENTER, TYPE 1A	EACH	1
670.0001.0000	670(1)	PAINTED TRAFFIC MARKINGS	LUMP SUM	ALL REQ'D
682.2000.0000		VAC-TRUCK POTHOLE	CONTINGENT SUM	ALL REQ'D

ESTIMATING FACTORS

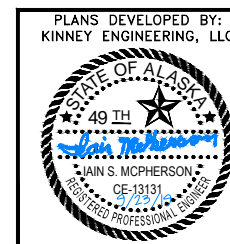
ITEM NO.	DESCRIPTION	UNIT
301.0001.00D1	AGGREGATE BASE COURSE, GRADING D-1	148 LBS. / CUBIC FOOT
401.0001.002B	HMA, TYPE II; CLASS B	115 LBS. / S.Y.-INCH
401.0004.5828	ASPHALT BINDER, GRADE PG 58-28	5.5% WEIGHT OF 401.0001.002B
618.0002.0000	SEEDING	1 LBS. / 1000 SQUARE FOOT

ESTIMATE OF QUANTITIES, CHANGE ORDER

ITEM NO.	SSHC 2017 ITEM NO.	DESCRIPTION	UNIT	TOTAL
410.2002.0000		CO 4 - COLD PLANING, CORRECTIVE	LS	ALL REQ'D
660.001A.0000	660(1A)	CO 3 - TRAFFIC SIGNAL COMPLETE, RIVERSIDE DR - STEPHEN RICHARDS DR	LS	ALL REQ'D
660.0018.0000		CO 6 - STREET LIGHTING REPAIR	LS	ALL REQ'D

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd., Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. 1102

FILE 00081_C1_Estimate.dwg DATE 9/23/2019 12:33 PM LAYOUT C1 DESIGNED GMD CHECKED ISM DRAFTED WJP



PLANS DEVELOPED BY:
KINNEY ENGINEERING, LLC

STATE OF ALASKA DEPARTMENT OF
TRANSPORTATION
AND PUBLIC FACILITIES
6860 GLACIER HIGHWAY, JUNEAU, AK 99811
(907) 465-1763

JUNEAU-RIVERSIDE AND STEPHEN
RICHARDS CONGESTION MITIGATION

ESTIMATE OF QUANTITIES

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd., Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. 1102
 FILE 00081_D_Summaries.dwg DATE 8/8/2019 3:00 PM LAYOUT D1 DESIGNED GMD CHECKED ISM DRAFTED WJP

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0003207/SFHwy00081	2019	D1	29

202.0001.0000 REMOVAL OF STRUCTURES AND OBSTRUCTION – LUMP SUM		
STATION	OFFSET	REMARKS
65+33.11	38.90' RT	REMOVE WOODEN POLES, GUYS, AND ASSOCIATED OVERHEAD SIGNAL <i>Work Complete: 8/24/2020</i>
65+58.52	42.10' LT	
65+69.28	29.86' LT	REMOVE WOODEN POLE AND METER <i>Work Complete: 8/25/2020</i>

202.0002.0000 REMOVAL OF PAVEMENT – SQUARE YARD					
BEGIN STATION	BEGIN OFFSET	END STATION	END OFFSET	AREA (SY)	REMARKS
64+91.76	LT	65+19.89	LT	9 9	SW QUAD <i>9/12/2020</i>
65+06.23	RT	65+41.64	RT	10 10	SE QUAD <i>9/8/2020</i>
65+44.79	LT	65+83.55	LT	12 12	NW QUAD <i>9/11/2020</i>
65+76.62	RT	65+88.50	RT	5 5	NE QUAD <i>8/31/2020</i>
TOTAL:				36 726.3	

202.0003.0000 REMOVAL OF SIDEWALK – SQUARE YARD					
BEGIN STATION	BEGIN OFFSET	END STATION	END OFFSET	AREA (SY)	REMARKS
64+81.27	LT	65+15.84	LT	21 9.32	SW QUAD <i>9/25/2020</i>
65+06.18	RT	65+38.06	RT	21 20.995	SE QUAD <i>8/31/2020</i>
65+59.97	LT	65+83.82	LT	15 13.89	NW QUAD <i>8/29/2020</i>
65+78.91	RT	66+13.14	RT	30 27.7	NE QUAD <i>9/1/2020</i>
TOTAL:				90 71.9	

202.0009.0000 REMOVAL OF CURB AND GUTTER – LINEAR FOOT					
BEGIN STATION	BEGIN OFFSET	END STATION	END OFFSET	LENGTH (LF)	REMARKS
64+90.63	LT	65+16.46	LT	36 34.29	SW QUAD <i>9/14/2020</i>
65+06.19	RT	65+38.78	RT	40 42.52	SE QUAD <i>9/8/2020</i>
65+47.77	LT	65+83.75	LT	48 46.93	NW QUAD <i>9/11/2020</i>
65+79.57	RT	65+90.38	RT	19 21.38	NE QUAD <i>8/31/2020</i>
TOTAL:				143 145.0 (for Significant Decimal rounding)	

604.0003.0000 RECONSTRUCT EXISTING MANHOLE – EACH			
STATION	OFFSET	QUANTITY (EA)	REMARKS
65+51.18	22.83' RT	1	SANITARY SEWER MANHOLE <i>Work Complete: 9/12/2020</i>
65+64.22	28.21' LT	1	STORM DRAIN MANHOLE <i>Work Complete: 9/12/2020</i>
65+76.91	33.95' RT	1	STORM DRAIN MANHOLE <i>Work Complete: 9/10/2020</i>
TOTAL:		3	

19.83

608.0001.0004 CONCRETE SIDEWALK, 4 INCHES THICK – SQUARE YARD					
BEGIN STATION	BEGIN OFFSET	END STATION	END OFFSET	AREA (SY)	REMARKS
64+81.27	LT	65+15.84	LT	21 23.63	SW QUAD <i>9/25/2020</i>
65+06.18	RT	65+38.06	RT	21 19.83	SE QUAD <i>9/10/2020</i>
65+52.21	LT	65+83.82	LT	23 21.44	NW QUAD <i>9/11/2020</i>
65+78.91	RT	66+13.14	RT	30 27.7	NE QUAD <i>9/5/2020</i>
TOTAL:				95 92.6	

608.0006.0000 CURB RAMP – EACH			
STATION	OFFSET	QUANTITY (EA)	REMARKS
65+00.47	23.31' LT	1	PARALLEL CURB RAMP W/ BACKING CURB <i>9/25/2020</i>
65+14.36	18.26' RT	1	PARALLEL CURB RAMP <i>9/10/2020</i>
65+34.10	26.58' RT	1	PARALLEL CURB RAMP <i>9/10/2020</i>
65+52.39	33.83' LT	1	PARALLEL CURB RAMP <i>9/11/2020</i>
65+75.14	19.88' LT	1	PARALLEL CURB RAMP W/ BACKING CURB <i>9/11/2020</i>
65+82.86	30.59' RT	1	PARALLEL CURB RAMP <i>9/5/2020</i>
TOTAL:		6	

609.0002.0001 CURB AND GUTTER, TYPE 1 – LINEAR FOOT					
BEGIN STATION	BEGIN OFFSET	END STATION	END OFFSET	LENGTH (LF)	REMARKS
64+90.63	LT	65+16.46	LT	36 34.29	SW QUAD <i>9/14/2020</i>
65+06.19	RT	65+38.78	RT	40 42.52	SE QUAD <i>9/9/2020</i>
65+47.77	LT	65+83.75	LT	48 46.93	NW QUAD <i>9/11/2020</i>
65+79.57	RT	65+90.38	RT	19 55.17	NE QUAD <i>9/3/2020</i>
TOTAL:				143 178.91	

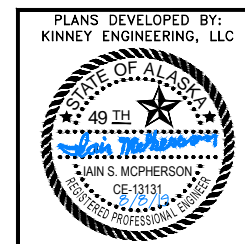
609.0003.0000 BACKING CURB – LINEAR FOOT					
BEGIN STATION	BEGIN OFFSET	END STATION	END OFFSET	LENGTH (LF)	REMARKS
64+89.40	LT	65+03.19	LT	15.4 30.4	SW QUAD <i>9/25/2020</i>
65+69.13	LT	65+84.40	LT	15.5 14.41	NW QUAD <i>9/25/2020</i>
TOTAL:				30.9 44.81	

627.2011.0000 REMOVE AND REPLACE WATER VALVE BOX AND LID – EACH			
STATION	OFFSET	QUANTITY (EA)	REMARKS
65+27.61	20.15' RT	1	<i>Work Complete: 9/8/2020</i>
65+28.83	15.70' RT	1	<i>Work Complete: 9/10/2020</i>
65+95.97	27.47' RT	1	<i>Work Complete: 9/1/2020</i>
TOTAL:		3	

642.0006.0000 REPLACE EXISTING WITH PRIMARY MONUMENT – EACH			
STATION	OFFSET	QUANTITY (EA)	REMARKS
65+22.69	28.42' RT	1	
TOTAL:		1	

642.0007.0000 REPLACE EXISTING WITH SECONDARY MONUMENT – EACH			
STATION	OFFSET	QUANTITY (EA)	REMARKS
65+02.56	23.06' RT	1 0	
TOTAL:		1 0	

642.0010.0000 MONUMENT CASE – EACH			
STATION	OFFSET	QUANTITY (EA)	REMARKS
65+02.56	23.06' RT	1 0	SECONDARY MONUMENT
65+22.69	28.42' RT	1	PRIMARY MONUMENT
TOTAL:		2 1	

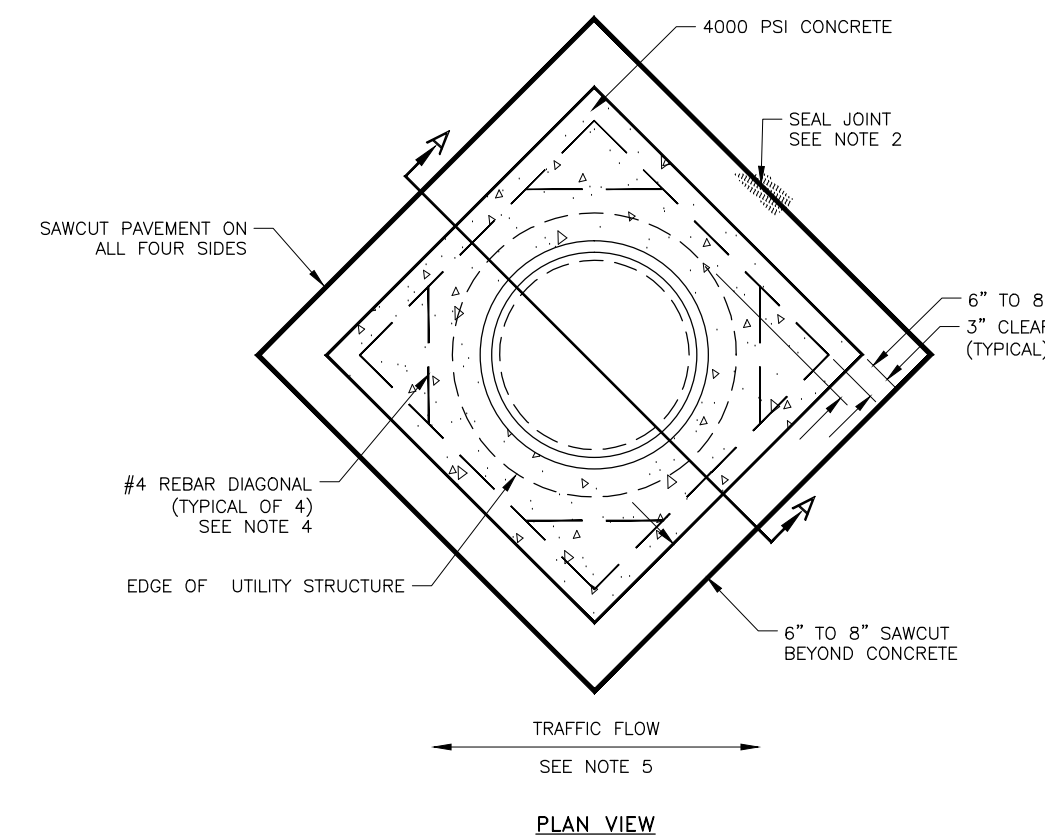
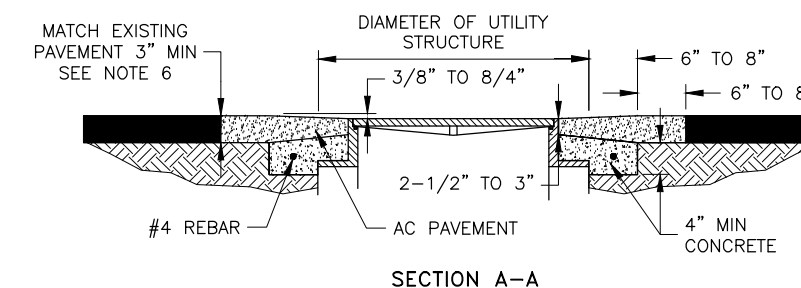


PLANS DEVELOPED BY:
 KINNEY ENGINEERING, LLC
 STATE OF ALASKA DEPARTMENT OF
 TRANSPORTATION
 AND PUBLIC FACILITIES
 6860 GLACIER HIGHWAY, JUNEAU, AK 99811
 (907) 465-1763
**JUNEAU-RIVERSIDE AND STEPHEN
 RICHARDS CONGESTION MITIGATION**

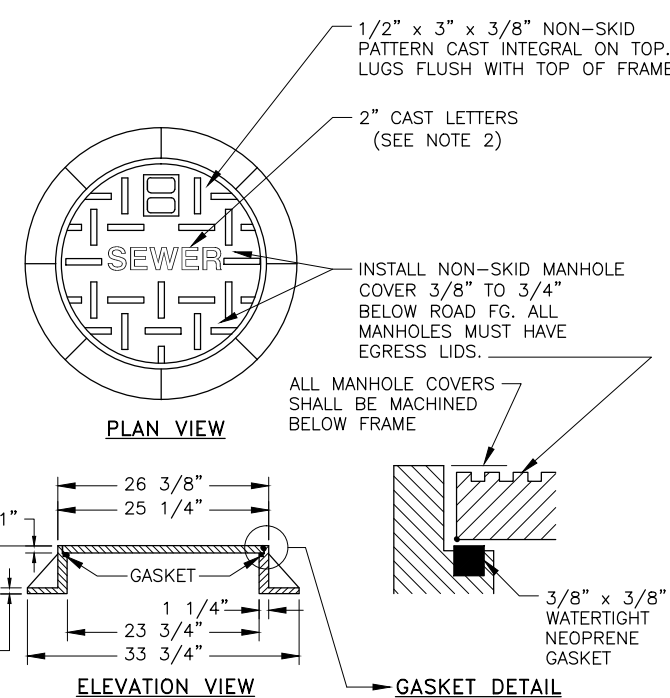
SUMMARY TABLES

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
▲	9/23/19	CHANGED SEALANT IN DETAIL 3/E1	ALASKA	0003207/SFHwy00081	2019	E1	29

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd., Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. 1102
 FILE 00081_E1_DETAILS.dwg DATE 9/23/2019 11:32 PM LAYOUT E1 DESIGNED GMD CHECKED ISM DRAFTED WJP



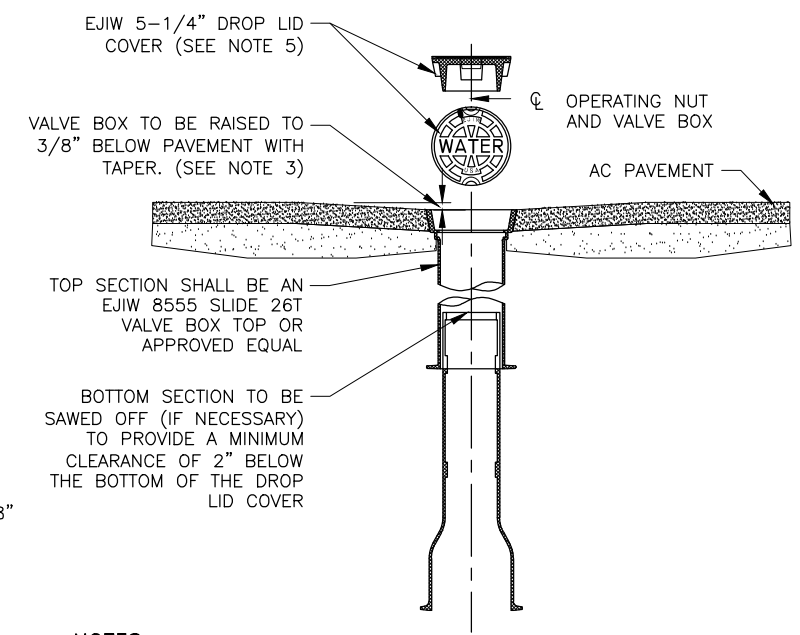
- NOTES:**
- ALL FRAMES SHALL BE RAISED TO FINISH GRADE PRIOR TO PAVING. STRUCTURES NOT WITHIN ALLOWABLE TOLERANCES AFTER PAVING SHALL BE RECONSTRUCTED TO THIS DETAIL AT THE CONTRACTORS EXPENSE
 - ▲ ALL SAWCUT JOINTS SHALL BE SEALED WITH PG 58-28 OR STE-1 TACK COAT. MINIMUM WIDTH OF SEAL ON ALL JOINTS SHALL BE 3".
 - ALL SAWCUTS AND EXCAVATIONS SHALL BE PROTECTED WITH STEEL PLATES OR OTHER SUITABLE MATERIALS, IF EXPOSED.
 - CONCRETE SHALL BE 4000 PSI, REBAR TO BE #4 AS SHOWN. FIBER MESH CONCRETE MAY BE SUBSTITUTED FOR REBAR.
 - THE DIAGONAL OF THE CONCRETE COLLAR SHALL BE CONSTRUCTED PARALLEL TO THE TRAFFIC FLOW.
 - REPLACEMENT OF EXISTING ASPHALT THICKER THAN 3" SHALL BE PAVED IN TWO EQUAL LIFTS.



- NOTES:**
- FRAME MUST BE MACHINED TO FIT WATERTIGHT NEOPRENE GASKET.
 - MANHOLE COVER SHALL BE WATER TIGHT WITH NO HOLES, SHALL HAVE THE WORD "SEWER", "WATER" OR "STORM DRAIN" CAST IN COVER AND SHALL BE PROVIDED WITH AN INTEGRAL POCKET LIFT HANDLE.
 - FRAME AND MANHOLE COVER DIMENSIONS SHALL BE IN ACCORDANCE WITH OLYMPIC CONSTRUCTION CASTINGS NO. MH30A WITH EGRESS LID, OR AN APPROVED EQUAL.
 - FRAME AND MANHOLE COVER SHALL BE DUCTILE OR CAST IRON AND A TYPE THAT WILL NOT CREATE A HAZARD FOR BICYCLE TRAFFIC.
 - IF MAINLINE IS 20" OR GREATER, PROVIDE MANHOLE WITH 30" OPENING IN COVER & FRAME.
 - ALL MANHOLE COVERS SHALL BE MACHINED BELOW FRAME AS SHOWN IN GASKET DETAIL ABOVE.

1 CBJ STANDARD MANHOLE COVER AND FRAME
E1 CBJ STANDARD 206A

SCALE: NOT TO SCALE



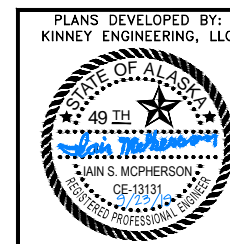
- NOTES:**
- IF WATER MAIN IS MORE THAN 6' DEEP, USE 4" ID CAST IRON SOIL PIPE WITH TOP SECTION EJIW 8555 SLIDE (26T OR 16T) VALVE BOX.
 - THIS DETAIL APPLIES TO ALL MAINLINE VALVES AND ALL WATER VALVES 4" IN DIAMETER OR GREATER.
 - VALVE BOXES ARE TO BE RAISED DURING PAVING OPERATIONS A MINIMUM OF 3/8", MAXIMUM OF 5/8" BELOW FINISHED PAVEMENT. VALVE BOXES THAT DO NOT MEET GRADE SPECIFICATIONS SHALL BE SAWCUT AND RAISED TO GRADE ACCORDING TO CBJ STANDARD 126.
 - NO MORE THAN 1 VALVE BOX PAVING RISER IS ALLOWED PER VALVE.
 - VALVE BOX COVER SHALL BE 5-1/4" DROP LID TYPE WITH 1" RAISED LETTERING (RECESSED FLUSH) AND 2 CLOSED PICKHOLES.

2 CBJ MAINLINE VALVE
E1 CBJ STANDARD 407

SCALE: NOT TO SCALE

3 CBJ CONCRETE COLLAR
E1 CBJ STANDARD 126

SCALE: NOT TO SCALE



PLANS DEVELOPED BY:
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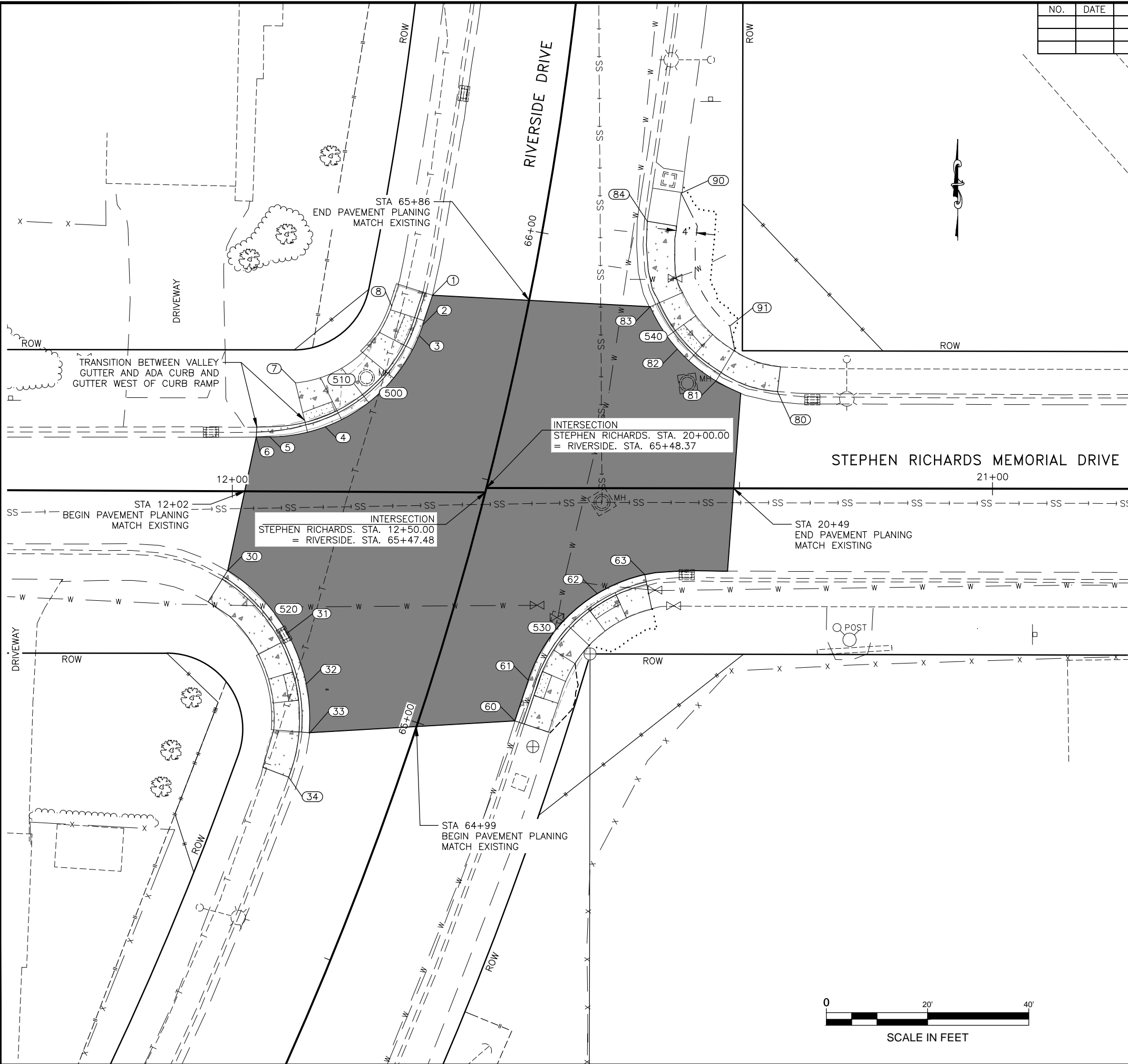
STATE OF ALASKA DEPARTMENT OF
TRANSPORTATION
AND PUBLIC FACILITIES
6860 GLACIER HIGHWAY, JUNEAU, AK 99811
(907) 465-1763

JUNEAU-RIVERSIDE AND STEPHEN
RICHARDS CONGESTION MITIGATION

DETAILS

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd., Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. 1102
 FILE 00081_g1_Grading Plan.dwg DATE 8/8/2019 3:00 PM LAYOUT G1 DESIGNED GMD CHECKED ISM DRAFTED WJP

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0003207/SFHwy00081	2019	G1	29

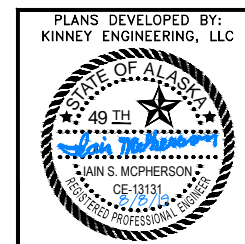


GRADING POINT TABLE

PT#	STATION	OFFSET	ELEV	DESC
1	65+83.59	18.94 L	34.61'	PI, ME
2	65+77.32	19.59 L	34.65'	PC
3	65+75.03	19.89 L	34.68'	RAMP CENTER
4	65+52.38	33.86 L	35.10'	RAMP CENTER
5	65+47.49	43.96 L	35.36'	PT
6	65+46.72	46.56 L	35.44'	PI, ME
7	65+59.83	41.65 L	35.87'	PC, BEGIN SIDEWALK
8	65+79.73	26.38 L	34.81'	PT
30	65+17.90	44.92 L	35.13'	PC, ME
31	65+09.18	30.01 L	34.44'	LOW POINT, ME LOCAL DEPRESSION
32	65+00.46	23.31 L	34.49'	RAMP CENTER
33	64+91.03	19.69 L	34.53'	PT, ME C&G, SW
34	64+81.27	20.65 L	34.97'	PI, ME SW
60	65+06.20	18.13 R	36.08'	PI, ME
61	65+14.46	18.26 R	36.10'	PC, RAMP CENTER
62	65+34.10	26.58 R	36.05'	RAMP CENTER
63	65+39.93	34.62 R	35.95'	PT, ME C&G, SW
80	65+77.16	44.63 R	36.54'	PI, ME SW
81	65+78.45	39.37 R	36.13'	PC, ME C&G, ME GRASS LANDING
82	65+82.86	30.59 R	36.22'	RAMP CENTER
83	65+89.74	23.71 R	36.27'	PT, ME G&G, PAVEMENT
84	66+05.77	20.08 R	36.71'	PI, ME SW, BEGIN 4' GRASS LANDING
90	66+12.14	25.76 R	36.84'	BEGIN TRANSITION TO 4' GRASS LANDING
91	65+89.07	39.87 R	36.05'	END 4' GRASS LANDING

RADIUS POINT TABLE

PT#	STATION	OFFSET	RADIUS	DESC
500	65+80.84	51.41 L	32'	LOC
510	65+82.22	48.26 L	22'	BACK OF SW
520	64+82.37	52.68 L	34.5'	LOC
530	65+13.84	49.75 R	31.5'	LOC
540	66+06.81	50.24 R	32'	LOC



STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
 6860 GLACIER HIGHWAY, JUNEAU, AK 99811
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JUNEAU-RIVERSIDE AND STEPHEN RICHARDS CONGESTION MITIGATION
 GRADING PLAN

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0003207/SFHwy00081	2019	H1	29

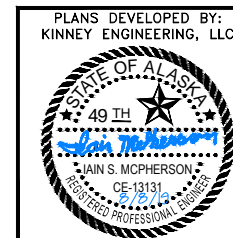
TRAFFIC MARKING KEY

- 4"W 4" WHITE LINE
- 4"WS 4" WHITE SKIP LINE (10' STRIPE/30' SKIP PATTERN)
- 4"WD-1 4" WHITE DOTTED LINE (2' STRIPE/6' SKIP PATTERN)
- 4"WD-2 4" WHITE DOTTED LINE (3' STRIPE/9' SKIP PATTERN)
- 4"Y 4" YELLOW LINE
- 4"YS 4" YELLOW SKIP LINE (10' STRIPE/30' SKIP PATTERN)
- 4"DY 4" DOUBLE YELLOW LINE
- 8"W 8" WHITE LINE
- 8"WD-1 8" WHITE WIDE DOTTED LINE (2' STRIPE/4' SKIP PATTERN)
- 8"WD-2 8" WHITE WIDE DOTTED LINE (3' STRIPE/9' SKIP PATTERN)
- 24"W 24" WHITE LINE
- STD SEE STANDARD DRAWING
- DTL SEE DETAILS

TRAFFIC MARKING NOTES:

1. ALL PROPOSED PAVEMENT MARKINGS SHALL BE PAINT.
2. MATCH EXISTING STRIPING AT SAWCUTS/MATCH LINES. MAINTAIN LANE WIDTH ON RIVERSIDE DRIVE AND MAINTAIN SHOULDER WIDTH ON STEPHEN RICHARDS MEMORIAL DRIVE.
3. EXISTING MARKINGS SHOWN ARE FROM AS-BUILTS. CONTRACTOR SHALL FIELD VERIFY THE EXISTING STRIPING DIMENSIONS AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
4. BEGIN PAVEMENT MARKINGS BY INSTALLING THE INTERSECTION CROSSWALKS FIRST. LAYOUT THE CROSSWALKS PER THE CALLOUTS IN THE PLANS. CROSSWALK REFERENCE CALLOUT IS AT INTERSECTION OF CROSSWALK MARKING AND LIP OF GUTTER OR WHERE CROSSWALK MARKINGS INTERSECT WITH EACH OTHER.
5. REMOVE ALL EXISTING PAVEMENT MARKINGS NOT COINCIDING WITH THE NEW MARKINGS. THIS WORK IS SUBSIDIARY TO 670 PAY ITEMS.
6. DIMENSIONS REFER TO THE CENTER OF LANE STRIPE, DOUBLE YELLOW STRIPE GROUP, EDGE OF PAVEMENT OR LIP OF GUTTER WHEN PRESENT. CROSSWALK DIMENSIONS REFER TO EDGE OF MARKING.
7. STRIPING CONFIGURATIONS IN THIS PLAN SET ARE APPROXIMATE. THE CONTRACTOR SHALL PERFORM PRELIMINARY SPOTTING (RABBIT TRACKING) OF STRIPING AT LEAST 48 HOURS PRIOR TO APPLICATION OF MARKINGS. THE ENGINEER WILL THEN APPROVE THE LAYOUT OR MAKE MODIFICATIONS AS REQUIRED.

DESCRIPTION	QUANTITY	REMARKS
4"W	39 LF	Work Complete: 9/17/2020
4"DY	29 LF	Work Complete: 9/17/2020
24"W	710 SF	Work Complete: 9/17/2020



PLANS DEVELOPED BY:
KINNEY ENGINEERING, LLC

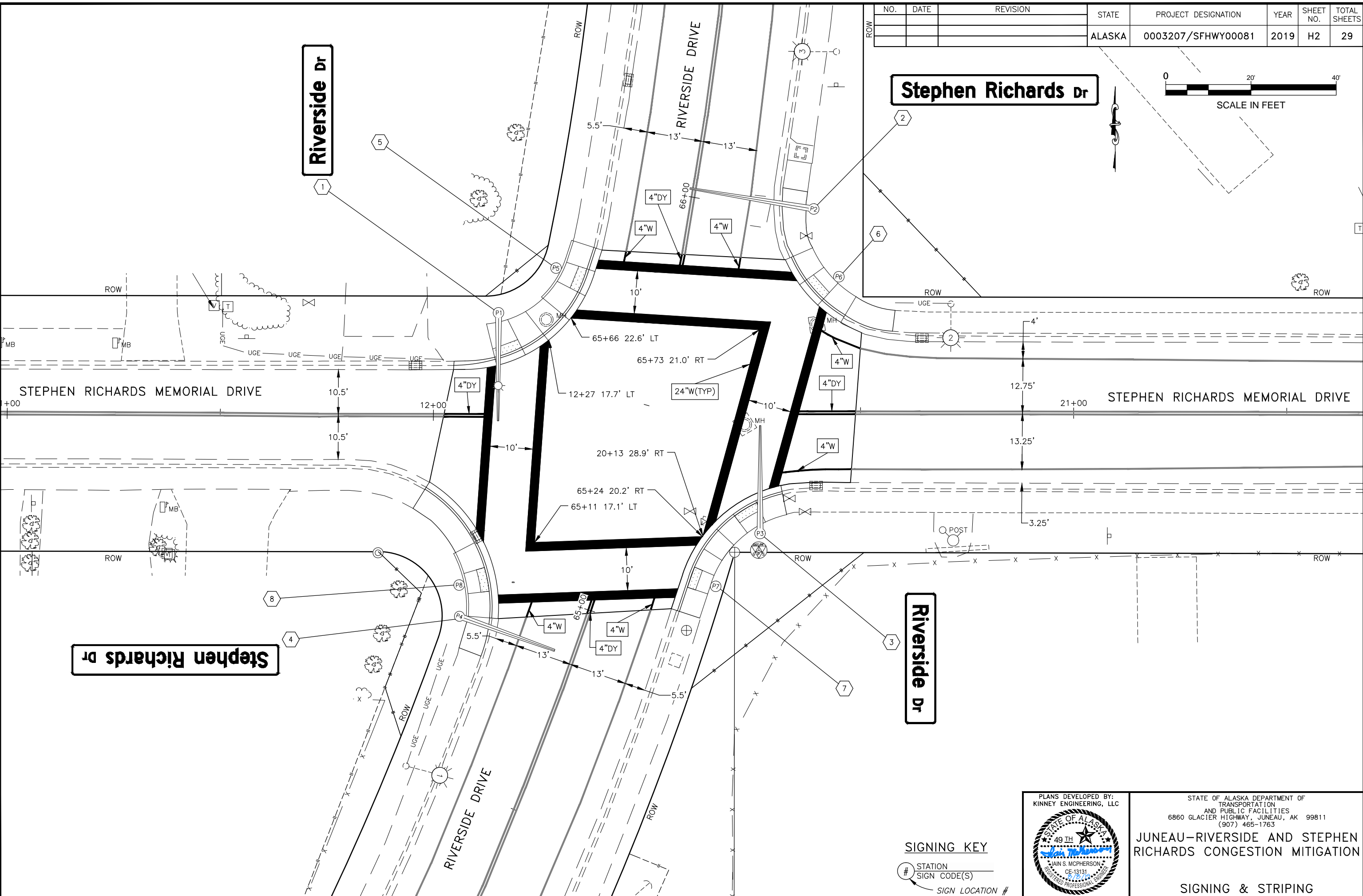
STATE OF ALASKA DEPARTMENT OF
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**JUNEAU-RIVERSIDE AND STEPHEN
RICHARDS CONGESTION MITIGATION**

TRAFFIC LEGEND AND NOTES

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd, Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. 1102
 FILE 00081_H2_Signing & Striping.dwg DATE 8/8/2019 3:01 PM LAYOUT H2 DESIGNED GMD CHECKED ISM DRAFTED WJP

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0003207/SFHwy00081	2019	H2	29



Stephen Richards Dr

Stephen Richards Dr

Riverside Dr

SIGNING KEY

- # STATION SIGN CODE(S)
- SIGN LOCATION #



STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
 6860 GLACIER HIGHWAY, JUNEAU, AK 99811
 (907) 465-1763

JUNEAU-RIVERSIDE AND STEPHEN RICHARDS CONGESTION MITIGATION

SIGNING & STRIPING

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0003207/SFHwy00081	2019	H3	29

SIGN SUMMARY

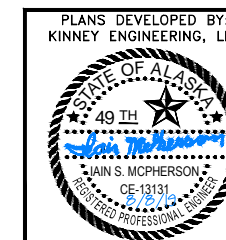
SHEET	POST NO.	LOCATION	TYPE	LEGEND	SIZE		AREA (FT ²)	SIGN FACES	POST(S) NO., SIZE, & TYPE	FRAMED		REMARKS
					WIDTH (IN)	HEIGHT (IN)				YES	NO	
H2	1	SIGNAL POLE 1	R10-3eL	PUSH BUTTON EDUCATIONAL (LT ARROW)	9	15	0.94	E	N/A			ON POLE
			D3-1	RIVERSIDE DR	102	24	17.00 17.04	E	N/A	X		ON MAST ARM
H2	2	SIGNAL POLE 2	D3-1	STEPHEN RICHARDS DR	162	24	27.00	S	N/A	X		ON MAST ARM
			D3-1	RIVERSIDE DR	102	24	17.00 17.04	W	N/A	X		ON MAST ARM
H2	3	SIGNAL POLE 3	R10-3eL	PUSH BUTTON EDUCATIONAL (LT ARROW)	9	15	0.94	W	N/A			ON POLE
			D3-1	STEPHEN RICHARDS DR	162	24	27.00	N	N/A	X		ON MAST ARM
H2	4	SIGNAL POLE 4	D3-1	STEPHEN RICHARDS DR	162	24	27.00	N	N/A	X		ON MAST ARM
H2	5	SIGNAL POLE 5	R10-3eR	PUSH BUTTON EDUCATIONAL (RT ARROW)	9	15	0.94	S	N/A			ON POLE
H2	6	SIGNAL POLE 6	R10-3eR	PUSH BUTTON EDUCATIONAL (RT ARROW)	9	15	0.94	W	N/A			ON POLE
			R10-3eL	PUSH BUTTON EDUCATIONAL (LT ARROW)	9	15	0.94	S	N/A			ON POLE
H2	7	SIGNAL POLE 7	R10-3eR	PUSH BUTTON EDUCATIONAL (RT ARROW)	9	15	0.94	N	N/A			ON POLE
H2	8	SIGNAL POLE 8	R10-3eR	PUSH BUTTON EDUCATIONAL (RT ARROW)	9	15	0.94	W	N/A			ON POLE
			R10-3eL	PUSH BUTTON EDUCATIONAL (LT ARROW)	9	15	0.94	N	N/A			ON POLE
TOTAL							95.60					
							95.56					

Work Complete: 9/25/2020
 Work Complete: 9/10/2020
 Work Complete: 9/14/2020
 Work Complete: 9/11/2020
 Work Complete: 9/25/2020
 Work Complete: 9/17/2020
 Work Complete: 9/25/2020
 Work Complete: 9/25/2020
 Work Complete: 9/25/2020
 Work Complete: 9/25/2020
 Work Complete: 9/25/2020
 Work Complete: 9/25/2020

SALVAGE SIGN SUMMARY

STATION	CL OFFSET	ASDS CODE	LEGEND	REMARKS
21+74	LT	SPECIAL	STOP AHEAD	Was Not Located
62+36	RT	W3-1	STOP AHEAD (SYMBOL)	Work Complete: 9/29/2020
65+00	RT	R1-1	STOP	Work Complete: 9/29/2020
		R1-3	4-WAY	Work Complete: 9/29/2020
65+06	LT	D3-100	RIVERSIDE DR	Work Complete: 9/29/2020
		D3-100	STEPHEN RICHARDS DR	Work Complete: 9/29/2020
		R1-1	STOP	Work Complete: 9/29/2020
		R1-3	4-WAY	Work Complete: 9/29/2020
65+70	LT	W11-2	PEDESTRIAN (SYMBOL)	Work Complete: 9/28/2020
65+89	RT	D3-100	RIVERSIDE DRIVE	Work Complete: 9/29/2020
		D3-100B	STEPHEN RICHARDS DR	Work Complete: 9/29/2020
		R1-1	STOP	Work Complete: 9/29/2020
		R1-3	4-WAY	Work Complete: 9/29/2020
65+94	RT	W11-2	PEDESTRIAN (SYMBOL)	Work Complete: 9/28/2020
65+95	LT	R1-1	STOP	Work Complete: 9/29/2020
		R1-3	4-WAY	Work Complete: 9/29/2020
69+32	LT	W3-1	STOP AHEAD (SYMBOL)	Work Complete: 9/29/2020

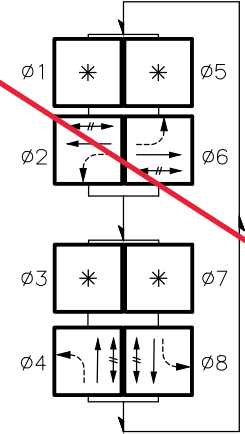
W3-1 (STOP AHEAD (SYMBOL)) Two additional signs located and removed as not to conflict with new signal. Stationing not available.



STATE OF ALASKA DEPARTMENT OF
 TRANSPORTATION
 AND PUBLIC FACILITIES
 6860 GLACIER HIGHWAY, JUNEAU, AK 99811
 (907) 465-1763
**JUNEAU-RIVERSIDE AND STEPHEN
 RICHARDS CONGESTION MITIGATION**
**SIGN SUMMARY AND SALVAGE
 SIGN SUMMARY**

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd., Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. 1102
 FILE 00081_H4_Signal_Plan.dwg DATE 8/8/2019 3:01 PM LAYOUT H4 DESIGNED GMD CHECKED ISM DRAFTED WJP

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0003207/SFHWHY00081	2019	H4	29



PHASE DIAGRAM

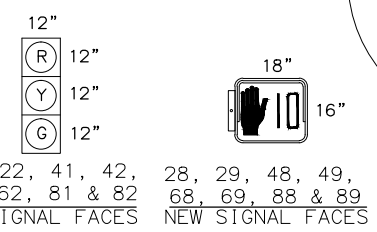
RIVERSIDE DRIVE / STEPHEN RICHARDS MEMORIAL DRIVE

INTERCEPT EXISTING CONDUIT RUNNING TO EXISTING METER BEFORE DRIVEWAY

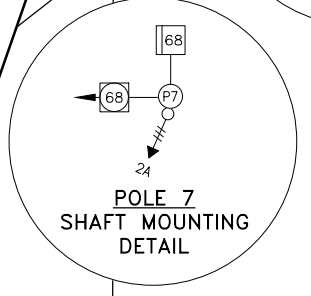
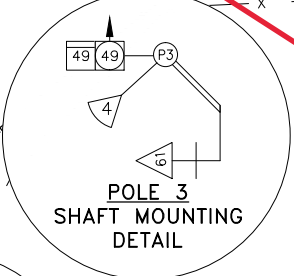
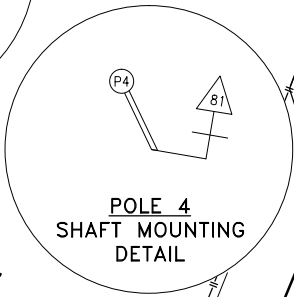
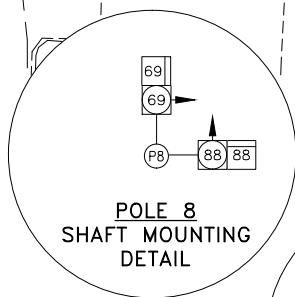
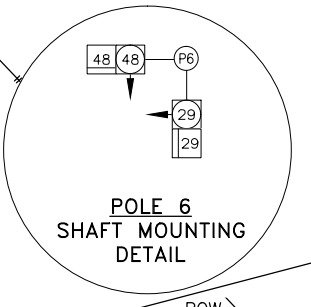
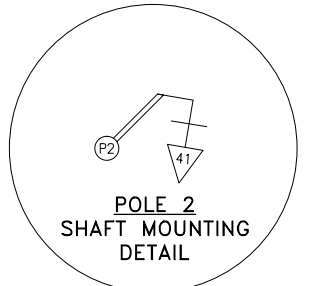
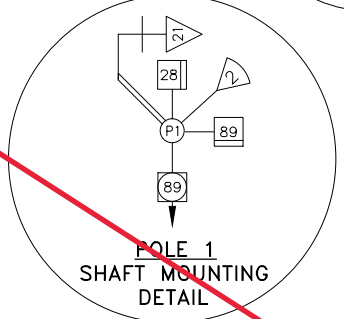
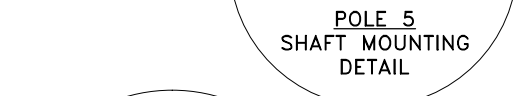
INTERCEPT EXISTING CONDUIT BEFORE THE END OF NEW SIDEWALK.

SHEET DELETED BY CO 3

LIGHTING NOTES:
 1. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS BEFORE MAKING MODIFICATIONS. NOTIFY THE ENGINEER OF ANY DISCREPANCIES.



SIGNAL HEAD CONFIGURATIONS
 RIVERSIDE DRIVE / STEPHEN RICHARDS MEMORIAL DRIVE



PLANS DEVELOPED BY:
 KINNEY ENGINEERING, LLC
 STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
 6860 GLACIER HIGHWAY, JUNEAU, AK 99811
 (907) 465-1763
JUNEAU-RIVERSIDE AND STEPHEN RICHARDS CONGESTION MITIGATION

SIGNAL PLAN

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0003207/SFHWY00081	2019	H5	29

OPC = OPTICOM CABLE	5c#14	TRAFFIC SIGNALS
LL = LOOP LEAD-IN	7c#14	PROTECTED-PERMITTED SIGNALS
INT = INTERCONNECT	5c#14	PEDESTRIAN SIGNALS
PWR = POWER CONDUCTORS FOR SIGNAL CONTROLLER	2c#14	PEDESTRIAN PUSH-BUTTON
T = TRANSFORMER	3pr#18	} LOOP LEAD-IN CABLE & VD ET
PTZ = PAN, TILT, ZOOM CAMERA	6pr#18	
GND = GROUND	9pr#18	
ILL = ILLUMINATION	15pr#18	
RMC = RIGID METAL CONDUIT	3c#8	ILLUMINATION SIGNAL POWER
PVC = POLYVINYL CHLORIDE CONDUIT	3c#6	BARE COPPER GROUND
HDPE = HIGH DENSITY POLYETHYLENE	1c#8	BARE COPPER GROUND
PPB = PEDESTRIAN PUSH-BUTTON	18pr#19	PE-39 INTERCONNECT CABLE
SIG# = SIGNAL HEAD NUMBER	1c#6	BARE COPPER GROUND
PED = PEDESTRIAN SIGNAL	APT MATRIX 2	RDET HOME RUN CABLE
DET = DETECTION CONDUIT	CAT-6A	DATA CABLE
F = FUTURE USE	SMFO	SINGLE MODE FIBER
RDET = RADAR DETECTION	OPTIC	
EX = EXISTING TO REMAIN		
AAWF = ACTIVE ADVANCED WARNING FLASHER		

- NOTES:**
- CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS BEFORE MAKING MODIFICATIONS. NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
 - INSTALL 1-1c#8 BARE COPPER GROUND CONDUCTOR IN ALL CONDUITS UNLESS ANOTHER GROUND CONDUCTOR IS SPECIFIED.
 - WORK TO INSTALL JUNCTION BOX 5, AND CONDUIT AND CONDUCTORS RUNNING TO AND FROM IT, AND OTHER LIGHTING SYSTEM MODIFICATIONS SHALL BE PAID FOR UNDER 660.2016.0000 ELECTRICAL ILLUMINATION MODIFICATIONS. SPLICE NEW CONDUCTORS TO EXISTING IN LIGHT POLE BASE. SPLICES IN JUNCTION BOXES ARE NOT PERMITTED. SEE SHEET H8 FOR LIGHTING DESIGN INFORMATION.

SHEET DELETED BY CO 3

Eliminated from design

- WIRING LEGEND:**
- INDICATES EXISTING CONDUIT RUN
 - INDICATES NEW RIGID METAL CONDUIT RUN(S)
 - E ----- INDICATES THE CONNECTION BETWEEN EXISTING AND NEW CONDUIT



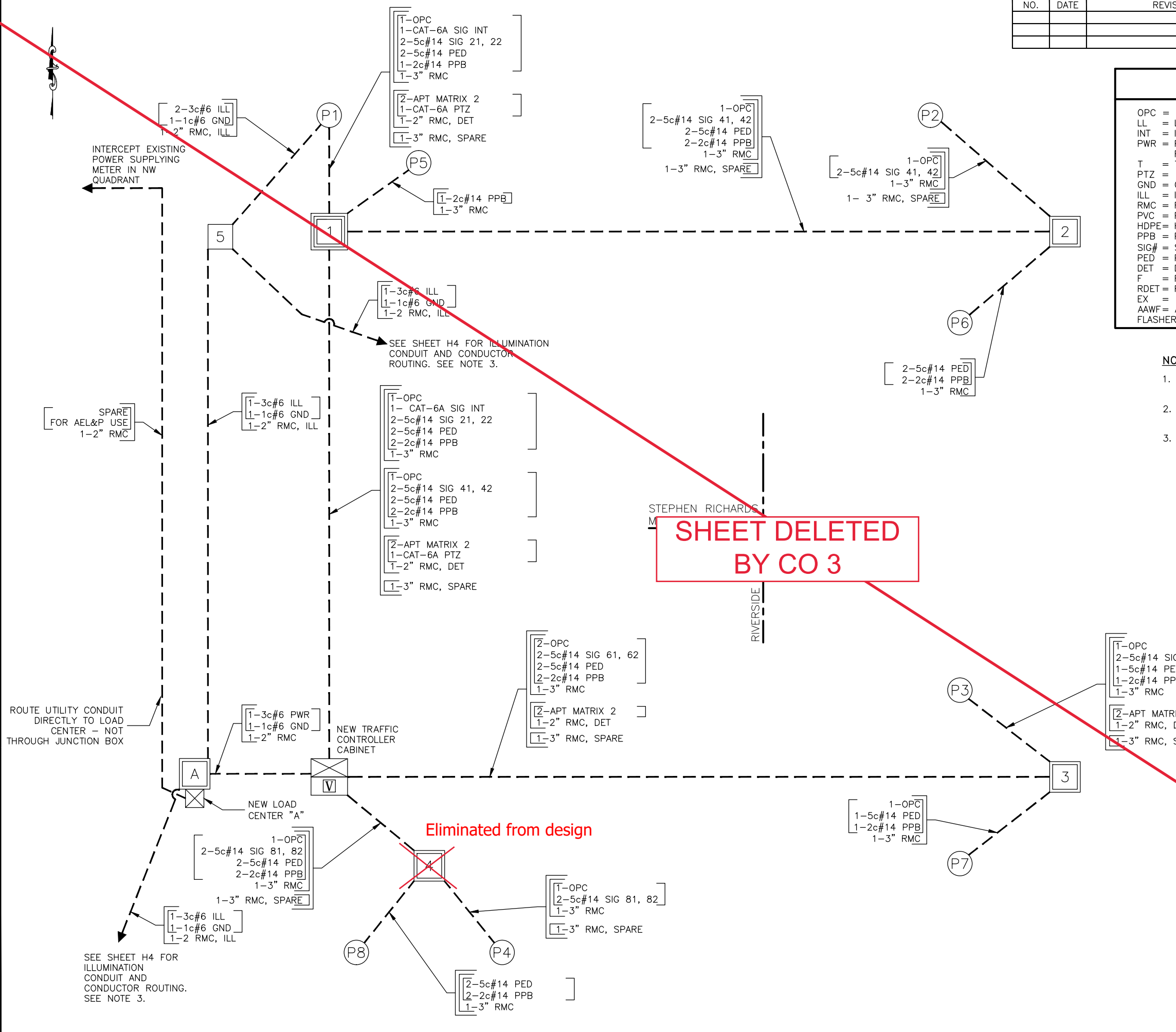
PLANS DEVELOPED BY:
KINNEY ENGINEERING, LLC

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
6860 GLACIER HIGHWAY, JUNEAU, AK 99811
(907) 465-1763

JUNEAU-RIVERSIDE AND STEPHEN RICHARDS CONGESTION MITIGATION

WIRING DIAGRAM

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd., Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. 1102
 FILE 00081_H5_Wiring Diagram.dwg
 DATE 8/8/2019 3:01 PM
 LAYOUT H5
 DESIGNED GMD
 CHECKED ISM
 DRAFTED WJP



INTERCEPT EXISTING POWER SUPPLYING METER IN NW QUADRANT

SEE SHEET H4 FOR ILLUMINATION CONDUIT AND CONDUCTOR ROUTING. SEE NOTE 3.

SPARE FOR AEL&P USE
1-2" RMC

ROUTE UTILITY CONDUIT DIRECTLY TO LOAD CENTER - NOT THROUGH JUNCTION BOX

SEE SHEET H4 FOR ILLUMINATION CONDUIT AND CONDUCTOR ROUTING. SEE NOTE 3.

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd., Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. 1102
 FILE 00081_H5_Wiring Diagram.dwg
 DATE
 LAYOUT H5
 DESIGNED GMD
 CHECKED ISM
 DRAFTED WJP

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
1	8/18/20	REMOVED JUNCTION BOX #4	ALASKA	0003207/SFHWY00081	2019	H5a	29

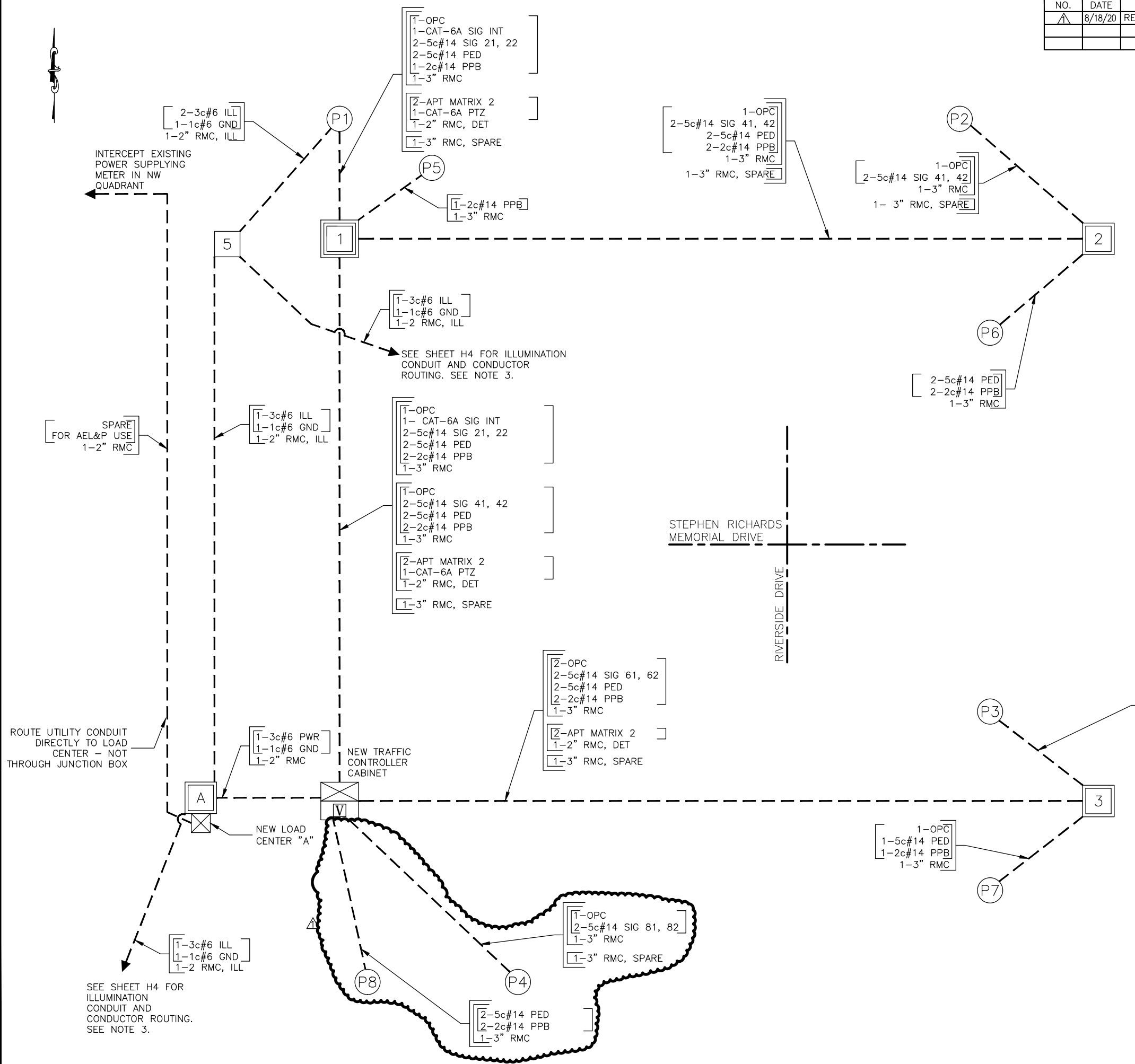
WIRING DIAGRAM CODING LEGEND		
OPC = OPTICOM CABLE	5c#14	TRAFFIC SIGNALS
LL = LOOP LEAD-IN	7c#14	PROTECTED-PERMITTED SIGNALS
INT = INTERCONNECT	5c#14	PEDESTRIAN SIGNALS
PWR = POWER CONDUCTORS FOR SIGNAL CONTROLLER	2c#14	PEDESTRIAN PUSH-BUTTON
T = TRANSFORMER	3pr#18	} LOOP LEAD-IN CABLE & VD ET
PTZ = PAN, TILT, ZOOM CAMERA	6pr#18	
GND = GROUND	9pr#18	
ILL = ILLUMINATION	15pr#18	} ILLUMINATION
RMC = RIGID METAL CONDUIT	3c#8	
PVC = POLYVINYL CHLORIDE CONDUIT	3c#6	SIGNAL POWER
HDPE = HIGH DENSITY POLYETHYLENE	1c#8	BARE COPPER GROUND
PPB = PEDESTRIAN PUSH-BUTTON	1c#8	BARE COPPER GROUND
SIG# = SIGNAL HEAD NUMBER	18pr#19	PE-39 INTERCONNECT CABLE
PED = PEDESTRIAN SIGNAL	1c#6	BARE COPPER GROUND
DET = DETECTION CONDUIT	APT MATRIX 2	RDET HOME RUN CABLE
F = FUTURE USE	CAT-6A	DATA CABLE
RDET = RADAR DETECTION	SMFO	SINGLE MODE FIBER
EX = EXISTING TO REMAIN	OPTIC	
AAWF = ACTIVE ADVANCED WARNING FLASHER		

NOTES:

1. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS BEFORE MAKING MODIFICATIONS. NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
2. INSTALL 1-1c#8 BARE COPPER GROUND CONDUCTOR IN ALL CONDUITS UNLESS ANOTHER GROUND CONDUCTOR IS SPECIFIED.
3. WORK TO INSTALL JUNCTION BOX 5, AND CONDUIT AND CONDUCTORS RUNNING TO AND FROM IT, AND OTHER LIGHTING SYSTEM MODIFICATIONS SHALL BE PAID FOR UNDER 660.2016.0000 ELECTRICAL ILLUMINATION MODIFICATIONS. SPLICE NEW CONDUCTORS TO EXISTING IN LIGHT POLE BASE. SPLICES IN JUNCTION BOXES ARE NOT PERMITTED. SEE SHEET H8 FOR LIGHTING DESIGN INFORMATION.

WIRING LEGEND:

- INDICATES EXISTING CONDUIT RUN
- INDICATES NEW RIGID METAL CONDUIT RUN(S)
- E ----- INDICATES THE CONNECTION BETWEEN EXISTING AND NEW CONDUIT



STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
6860 GLACIER HIGHWAY, JUNEAU, AK 99811
(907) 465-1763

JUNEAU-RIVERSIDE AND STEPHEN RICHARDS CONGESTION MITIGATION

WIRING DIAGRAM

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd., Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. 1102
 FILE 00081_H6_Signal_Summaries.dwg DATE 9/3/2019 1:52 PM LAYOUT H6 DESIGNED GMD CHECKED ISM DRAFTED WJP

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0003207/SFHWY00081	2019	H6	29

STRUCTURE SCHEDULE

LOCATION		POLE NO.	FG ELEVATION	BASE TYPE		REMARKS
STATION	OFFSET			CIDH	A	
65+63.2	39.5' LT	1	35.69'	X		SEE NOTE 1
66+02.2	28.1' RT	2	36.74'	X		
65+28.3	33.0' RT	3	36.15'	X		
64+88.7	28.5' LT	4	35.12'	X		SEE NOTE 2
65+76.9	28.1' LT	5	35.16'		X	
65+88.2	36.6' RT	6	36.30'		X	
65+14.1	26.0' RT	7	35.75'		X	
64+96.0	31.0' LT	8	34.99'		X	

Work Complete: 9/1/2020
 Work Complete: 9/14/2020
 Work Complete: 9/8/2020
 Work Complete: 9/17/2020
 Work Complete: 9/21/2020
 Work Complete: 9/21/2020
 Work Complete: 9/21/2020
 Work Complete: 9/21/2020

- STRUCTURE SCHEDULE NOTES:**
- CIDH = CAST IN DRILLED HOLE. SEE SHEET H11.
 - FOR TYPE A FOUNDATIONS SEE SHEET H14.
 - FG ELEVATION PROVIDED IS TOP OF FOUNDATION.

JUNCTION BOX SCHEDULE

LOCATION		JUNCTION BOX NO.	JUNCTION BOX TYPE		
STATION	OFFSET		IA	II	III
65+65.6	35.1' LT	1			X
65+94.7	31.0' RT	2		X	
65+23.4	23.6' RT	3		X	
64+99.4	33.5' LT	4		X	
65+04.7	47.2' LT	A		X	

Work Complete: 8/31/2020
 Eliminated from design
 Work Complete: 8/17/2020

RADAR DETECTION SCHEDULE

DET. NO.	PHASE CALL	TYPE	FACING DIR.	POLE NO.	LOCATION	RADAR TYPE
1	6	STOP BAR	SOUTH West	1	SIGNAL MAST ARM	SMARTSENSOR MATRIX
2	8	STOP BAR	EAST	X 3	SIGNAL Mast Arm	SMARTSENSOR MATRIX
3	2	STOP BAR	NORTH	X 1	SIGNAL Pole Shaft	SMARTSENSOR MATRIX
4	4	STOP BAR	SOUTHWEST	3	SIGNAL POLE SHAFT	SMARTSENSOR MATRIX

9/23/2020
 9/17/2020
 9/24/2020
 9/23/2020

RADAR DETECTOR NUMBER

TRAFFIC PREEMPTION SCHEDULE

LOCATION	DETECTOR NO.	PHASE CALL	FACING DIRECTION	PREEMPTION PRIORITY (2)	MODEL NO.
SIGNAL POLE 1 MAST ARM	1	2	E		721
SIGNAL POLE 2 MAST ARM	2	4	S		721
SIGNAL POLE 7 EXTENSION	2A	4	SW		721
SIGNAL POLE 3 MAST ARM	3	6	W		721
SIGNAL POLE 4 MAST ARM	4	8	N		721

Work Complete: 9/10/2020
 Work Complete: 9/14/2020
 Work Complete: 9/11/2020
 Work Complete: 9/17/2020

OPTICOM DETECTOR NUMBER

- TRAFFIC SIGNAL PREEMPTION NOTES:**
- VERIFY THAT EACH EMERGENCY VEHICLE PREEMPTION (EVP) DETECTOR HAS DIRECT, UNOBSTRUCTED LINE-OF-SIGHT TO APPROACHING VEHICLES. **Verified: 9/30/2020**
 - PREEMPTION PRIORITY IS FOR FUTURE REFERENCE.

SHEET DELETED BY CO 3

LOAD CENTER SUMMARY

LOAD CENTER: "A"	TYPE: 1	UTILITY SOURCE: UNKNOWN					
SIDE DR & STEPHEN RICHARDS, SW CORNER OF INT.	MAINTAINED BY CBJ	SERVICE: UNKNOWN					
MAKER: 200 AMP, 2-POLE, 240/120 VOLT		MAX. AVAILABLE FAULT CURRENT: UNKNOWN					
		INTERRUPTING RATING: 10,000 AMP					
AUXILIARY EQUIPMENT SUMMARY							
DESCRIPTION	VOLT	POLES	AMP				
SURGE ARRESTOR	240	2					
PANEL 'A' SCHEDULE							
240/120 VOLT, 1-PHASE, 3-WIRE, 225A MLO		INTERRUPTING RATING: 10,000 AMP					
CKT. NO.	DESCRIPTION	CKT. BKR.	KVA	CT. NO.	DESCRIPTION	CKT. BKR.	KVA
1	LED/HPS STEPHEN RICHARDS EAST LIGHTING	20A/2P	2.1	2	SIGNAL CONTROLLER	50A/1P	4.4
3	(8 POLES, 3 LED, 5 HPS LUMINAIRES)*		2.1	4	LED STREET LIGHTING SOUTH	20A/2P	1.3
5	SPARE	20A/2P	1.3	6	(1 POLE, 1 LUMINAIRE)		1.3
7				8	SPACE		
9	SPACE		0.0	10	SPACE		
11	SPACE		0.0	12	SPACE		
13	SPACE		0.0	14	SPACE		
15	SPACE		0.0	16	SPACE		
17	SPACE		0.0	18	SPACE		
19	SPACE		0.0	20	SPACE		
21	SPACE		0.0	22	SPACE		
23	SPACE		0.0	24	SPACE		
SERVICE LOAD:		CONNECTED:	7.8	3.4	11.2	KVA	48
		DEMAND:			12.0	KVA	50

Cabinet Installed: 8/18/2020
 Meter Installed: 8/26/2020

NOTES:
 * CIRCUIT INCLUDES 2 PEDESTRIAN FLASHING BEACONS TO THE EAST ON STEPHEN RICHARDS

LOAD CENTER DESIGN BY: PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 	SIGNAL DESIGN BY: PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 	STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES 6860 GLACIER HIGHWAY, JUNEAU, AK 99811 (907) 465-1763 JUNEAU-RIVERSIDE AND STEPHEN RICHARDS CONGESTION MITIGATION SIGNAL SUMMARIES
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PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd., Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. 1102
 FILE 00081_H6_Signal_Summaries.dwg
 DATE
 LAYOUT H6
 DESIGNED GMD
 CHECKED ISM
 DRAFTED WJP

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
1	8/18/20	REMOVED JUNCTION BOX #4	ALASKA	0003207/SFHWY00081	2019	H6a	29

STRUCTURE SCHEDULE

LOCATION		POLE NO.	FG ELEVATION	BASE TYPE		REMARKS
STATION	OFFSET			CIDH	A	
65+63.2	39.5' LT	1	35.69'	X		SEE NOTE 1
66+02.2	28.1' RT	2	36.74'	X		
65+28.3	33.0' RT	3	36.15'	X		
64+88.7	28.5' LT	4	35.12'	X		
65+76.9	28.1' LT	5	35.16'		X	SEE NOTE 2
65+88.2	36.6' RT	6	36.30'		X	
65+14.1	26.0' RT	7	35.75'		X	
64+96.0	31.0' LT	8	34.99'		X	

- STRUCTURE SCHEDULE NOTES:**
- CIDH = CAST IN DRILLED HOLE. SEE SHEET H11.
 - FOR TYPE A FOUNDATIONS SEE SHEET H14.
 - FG ELEVATION PROVIDED IS TOP OF FOUNDATION.

TRAFFIC PREEMPTION SCHEDULE

LOCATION	DETECTOR NO.	PHASE CALL	FACING DIRECTION	PREEMPTION PRIORITY (2)	MODEL NO.
SIGNAL POLE 1 MAST ARM	1	2	E		721
SIGNAL POLE 2 MAST ARM	2	4	S		721
SIGNAL POLE 7 EXTENSION	2A	4	SW		721
SIGNAL POLE 3 MAST ARM	3	6	W		721
SIGNAL POLE 4 MAST ARM	4	8	N		721

—||—(A) OPTICOM DETECTOR NUMBER

- TRAFFIC SIGNAL PREEMPTION NOTES:**
- VERIFY THAT EACH EMERGENCY VEHICLE PREEMPTION (EVP) DETECTOR HAS DIRECT, UNOBSTRUCTED LINE-OF-SIGHT TO APPROACHING VEHICLES.
 - PREEMPTION PRIORITY IS FOR FUTURE REFERENCE.

JUNCTION BOX SCHEDULE

LOCATION		JUNCTION BOX NO.	JUNCTION BOX TYPE		
STATION	OFFSET		IA	II	III
65+65.6	35.1' LT	1			X
65+94.7	31.0' RT	2		X	
65+23.4	23.6' RT	3		X	
65+04.7	47.2' LT	A		X	

RADAR DETECTION SCHEDULE

DET. NO.	PHASE CALL	TYPE	FACING DIR.	POLE NO.	LOCATION	RADAR TYPE
1	6	STOP BAR	SOUTH SW	1	SIGNAL MAST ARM	SMARTSENSOR MATRIX
2	8	STOP BAR	EAST	1 3	SIGNAL POLE SHAFT	SMARTSENSOR MATRIX
3	2	STOP BAR	NORTH	3 1	SIGNAL MAST ARM	SMARTSENSOR MATRIX
4	4	STOP BAR	SOUTHWEST	3	SIGNAL POLE SHAFT	SMARTSENSOR MATRIX

—(A)— RADAR DETECTOR NUMBER

Signal Mast Arm

Signal Pole Arm

LOAD CENTER SUMMARY

LOAD CENTER: "A" TYPE: 1 UTILITY SOURCE: UNKNOWN
 LOCATION: RIVERSIDE DR & STEPHEN RICHARDS, SW CORNER OF INT. SERVICE: UNKNOWN
 REMARKS: MAINTAINED BY CBJ MAX. AVAILABLE FAULT CURRENT: UNKNOWN

MAIN BREAKER: 200 AMP, 2-POLE, 240/120 VOLT INTERRUPTING RATING: 10,000 AMP

AUXILIARY EQUIPMENT SUMMARY				
DESCRIPTION	VOLT	POLES	AMP	REMARKS
SURGE ARRESTOR	240	2		

PANEL 'A' SCHEDULE 240/120 VOLT, 1-PHASE, 3-WIRE, 225A MLO INTERRUPTING RATING: 10,000 AMP

CKT. NO.	DESCRIPTION	CKT. BKR.	KVA	KVA / LNE	CKT. NO.	DESCRIPTION	CKT. BKR.	KVA
1	LED/HPS STEPHEN RICHARDS EAST LIGHTING	20A/2P	2.1	6.5	2	SIGNAL CONTROLLER	50A/1P	4.4
3	(8 POLES, 3 LED, 5 HPS LUMINAIRE)*		2.1	3.4	4	LED STREET LIGHTING SOUTH	20A/2P	1.3
5	SPARE	20A/2P		1.3	6	(1 POLE, 1 LUMINAIRE)		1.3
7				0.0	8	SPACE		
9	SPACE			0.0	10	SPACE		
11	SPACE			0.0	12	SPACE		
13	SPACE			0.0	14	SPACE		
15	SPACE			0.0	16	SPACE		
17	SPACE			0.0	18	SPACE		
19	SPACE			0.0	20	SPACE		
21	SPACE			0.0	22	SPACE		
23	SPACE			0.0	24	SPACE		

NOTES:
 * CIRCUIT INCLUDES 2 PEDESTRIAN FLASHING BEACONS TO THE EAST ON STEPHEN RICHARDS

LOAD CENTER DESIGN BY: KINNEY ENGINEERING, LLC
 SIGNAL DESIGN BY: KINNEY ENGINEERING, LLC

JAMES H. PARKER
EE 7433
REGISTERED PROFESSIONAL ENGINEER

JAIN S. MCPHERSON
CE 13131
REGISTERED PROFESSIONAL ENGINEER

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 AND PUBLIC FACILITIES
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 (907) 465-1763

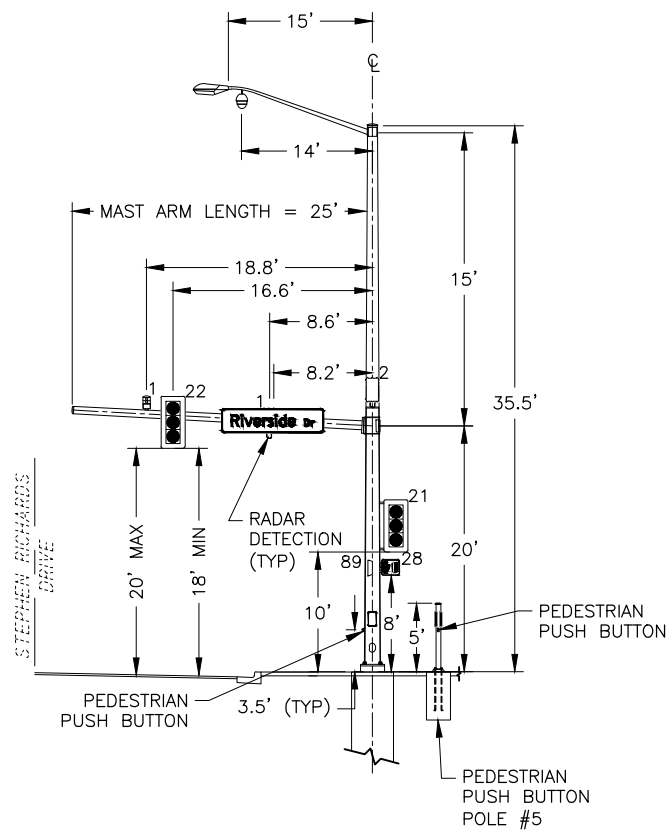
JUNEAU-RIVERSIDE AND STEPHEN RICHARDS CONGESTION MITIGATION

SIGNAL SUMMARIES

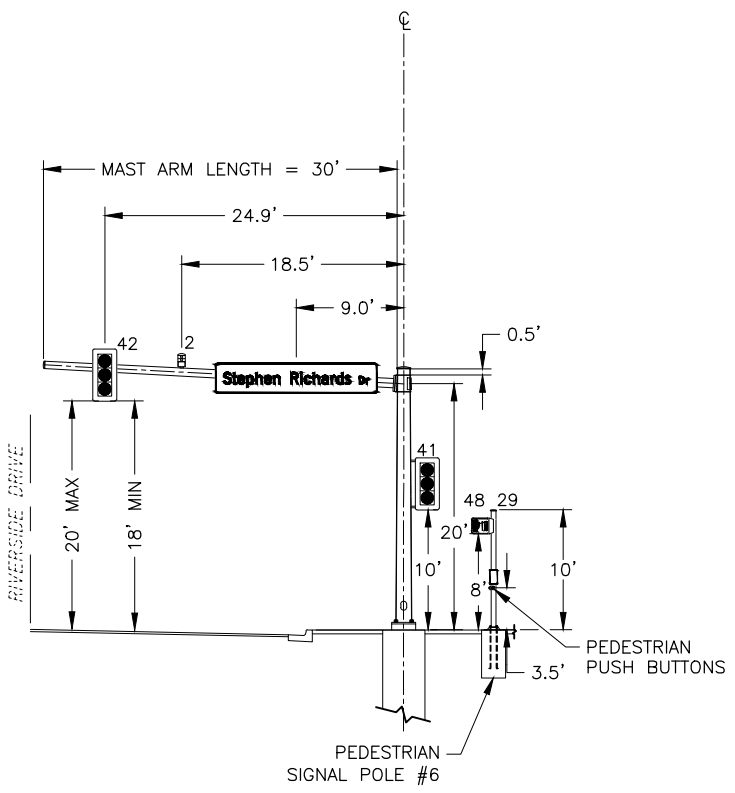
PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd, Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. 1102
 FILE 00081_H7_SIGNAL_PROFILES.dwg DATE 8/8/2019 3:01 PM LAYOUT H7 DESIGNED GMD CHECKED ISM DRAFTED WJP

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0003207/SFH00081	2019	H7	29

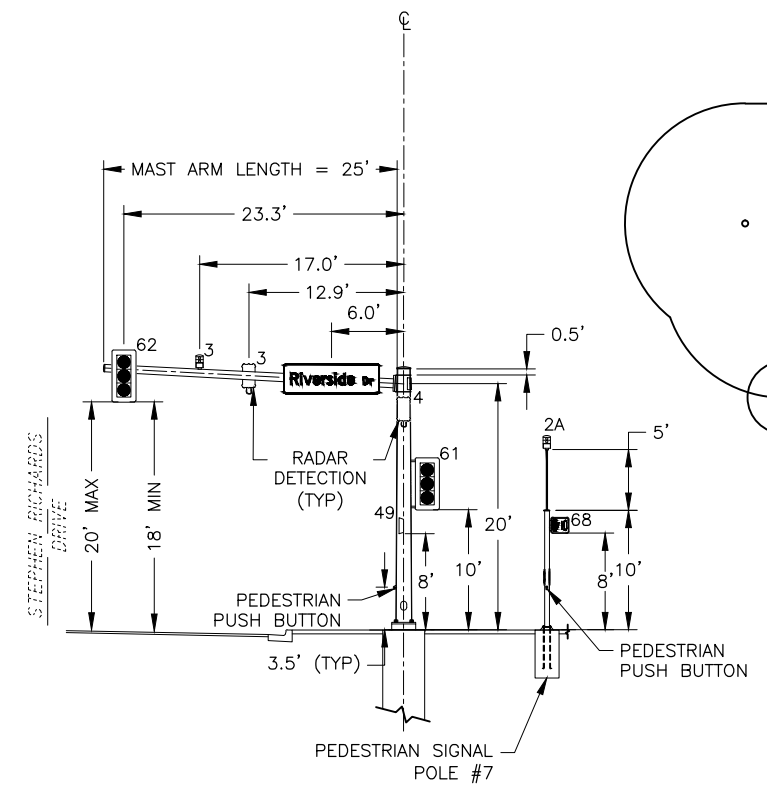
- NOTES:**
- SIGNAL POLES AND FOUNDATIONS SHALL BE FABRICATED IN ACCORDANCE WITH THE DETAILS IN THE PLANS, ALASKA STANDARD PLANS AND THE SPECIAL PROVISIONS.
 - STEEL PILE BASE CAP SHALL MATCH THE PROVIDED SIGNAL POLE BASE PLATE PATTERN BASE CIRCLE.
 - REFER TO THE SIGN SUMMARY SHEETS FOR MORE INFORMATION ABOUT SIGN SIZING AND INSTALLATION.
 - ROADWAY FEATURES ARE SHOWN FOR REFERENCE.



SIGNAL POLE #1
 RIVERSIDE DRIVE /
 STEPHEN RICHARDS DRIVE
 LOOKING WEST

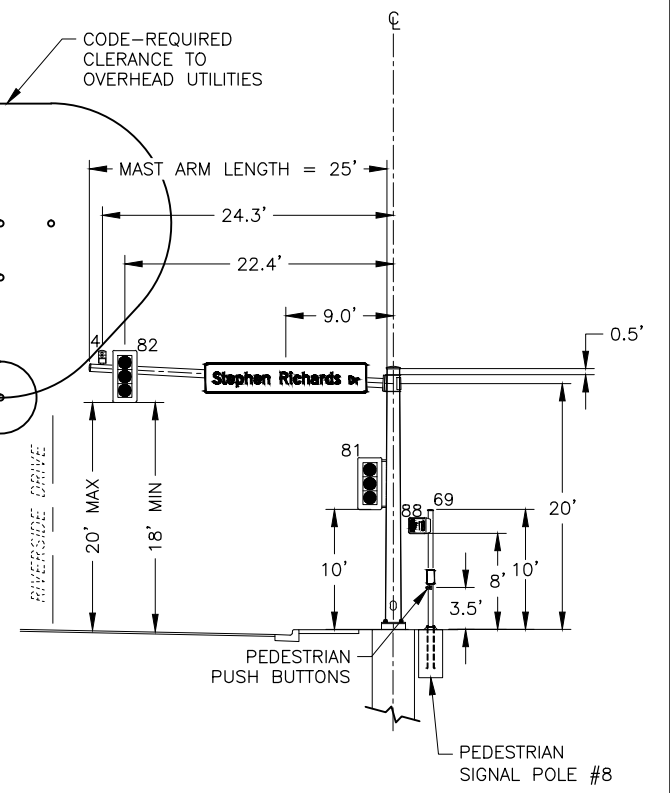


SIGNAL POLE #2
 RIVERSIDE DRIVE /
 STEPHEN RICHARDS DRIVE
 LOOKING NORTH

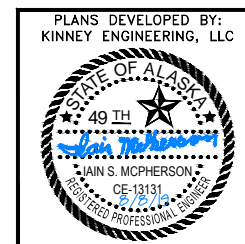


SIGNAL POLE #3
 RIVERSIDE DRIVE /
 STEPHEN RICHARDS DRIVE
 LOOKING EAST

PEDESTRIAN SIGNAL POLE #7 NOTE:
 MOUNT OPTICOM 2A ON POLE 7 USING A SIDE-MOUNT
 TERMINAL COMPARTMENT AND PIPE



SIGNAL POLE #4
 RIVERSIDE DRIVE /
 STEPHEN RICHARDS DRIVE
 LOOKING SOUTH



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**JUNEAU-RIVERSIDE AND STEPHEN
 RICHARDS CONGESTION MITIGATION**

SIGNAL PROFILES

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 FILE 00081_H8_LUM_Replac.e.dwg DATE 8/8/2019 3:01 PM LAYOUT H8 DESIGNED GMD CHECKED ISM DRAFTED WJP

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0003207/SFHWY00081	2019	H8	29

ELECTROLIER SUMMARY

LUMINAIRE NO.	STATION	LOCATION	POLE TYPE	BASE TYPE	LUMINAIRE			ADJUSTABLE OUTPUT	CIRCUIT	MOUNT HEIGHT	MAST ARM LENGTH	REMARKS
					TYPE	VOLTAGE	WATTAGE					
1	64+49.84	LT	EX	EX	C	240	122		A-4	40'(EX)	15'(EX)	Work Complete: 9/17/2020
2	65+87.22	RT	EX	EX	C	240	122		A-1	40'(EX)	15'(EX)	Work Complete: 9/23/2020
3	66+38.09	RT	EX	EX	C	240	122		A-1	40'(EX)	15'(EX)	Work Complete: 9/14/2020

LUMINAIRE SCHEDULE

TYPE	LIGHT SOURCE	IES TYPE OPTICS	INITIAL LUMENS	COLOR TEMP (CCT)	DRIVER CURRENT	VOLTAGE & WATTS	POWER FACTOR	MOUNTING	REMARKS
C	LED	TYPE III	14,000	4000K		240V / 122W		MAST ARM	NOTES 1, 2, 3

- NOTES:**
- ALL LUMINAIRES SHALL BE FURNISHED WITH 0-10V DIMMING BALLAST, 7-PIN NEMA PHOTOCELL RECEPTACLE, AND PHOTOCELL.
 - PROVIDE ALL LUMINAIRES WITH FIELD ADJUSTABLE OUTPUT, ADJUSTABLE IN APPROXIMATELY 10 TO 15% INCREMENTS.
 - BASIS OF DESIGN WAS ERLH_14C340 BY GENERAL ELECTRIC. PROVIDE LUMINAIRE THAT MEETS LIGHTING CRITERIA AND SPECIFICATIONS.

JUNCTION BOX SCHEDULE

LOCATION		JUNCTION BOX NO.	JUNCTION BOX TYPE		
STATION	OFFSET		IA	II	III
65+73.0	28.9' LT	5	X		

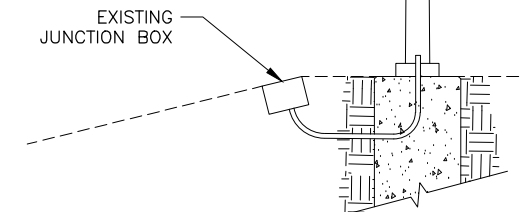
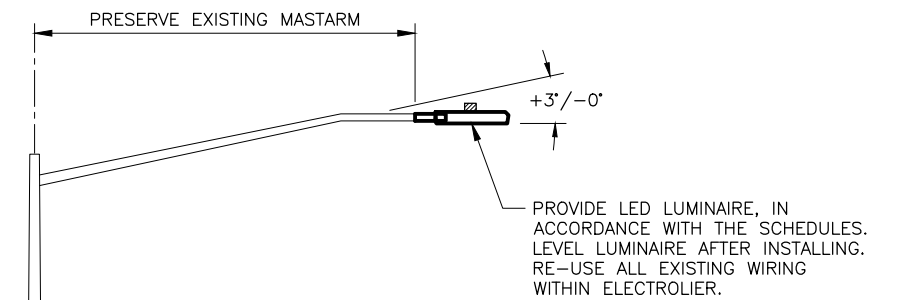
STREET LIGHTING CRITERIA

ROADWAY CHARACTERISTICS	
ROADWAY LIGHTING STANDARD:	IESNA RP-8-2014
CALCULATION ZONE:	CROSSWALKS
PEDESTRIAN CLASSIFICATION:	LOW, MEDIUM DENSITY RESIDENTIAL
PAVEMENT CLASSIFICATION:	R3
TRAFFIC FLOW:	TWO-WAY
LANE WIDTH:	12 FT.
NO. OF LANES, LEFT / RIGHT:	1
MEDIAN:	NONE
LUMINAIRE DEPRECIATION	
LED - TOTAL LIGHT LOSS FACTOR (LFF):	0.85
PEDESTRIAN CONFLICT AREAS CRITERIA	
MAINTAINED AVERAGE (Eavg):	0.4 Fc
MINIMUM VERTICAL ILLUMINANCE* (E _{vmin}):	0.1 Fc
E _{avg} /E _{min} RATIO (MAXIMUM):	<= 4.0:1

* AT 5 FT ABOVE PAVEMENT SURFACE

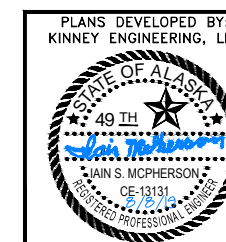
INTERSECTION LIGHTING CRITERIA

ROADWAY CHARACTERISTICS	
ROADWAY LIGHTING STANDARD:	IESNA RP-8-2014
CALCULATION ZONE:	INTERSECTION
INTERSECTION CLASSIFICATION:	MAJOR/COLLECTOR
PEDESTRIAN CLASSIFICATION:	LOW
PAVEMENT CLASSIFICATION:	R3
TRAFFIC FLOW:	TWO-WAY
LANE WIDTH:	12 FT.
NO. OF LANES, LEFT / RIGHT:	1
MEDIAN:	NONE
LUMINAIRE DEPRECIATION	
LED - TOTAL LIGHT LOSS FACTOR (LFF):	0.85
INTERSECTION ILLUMINANCE CRITERIA	
AVERAGE MAINTAINED (E _{avg}):	1.5 Fc
MINIMUM MAINTAINED (E _{min}):	AS REQ'D TO MEET E _{avg} /L _{min} RATIO
E _{avg} /E _{min} RATIO (MAXIMUM):	<= 3.0:1



- NOTES:**
- PROVIDE LUMINAIRE ON EXISTING MAST ARM IN ACCORDANCE WITH THE SCHEDULES, ALASKA DOT&PF STANDARD PLANS, AND SPECIFICATION SECTION 740.
 - RETAIN EXISTING JUNCTION/PULLBOX AND ASSOCIATED HIGHWAY LIGHTING CIRCUITS.

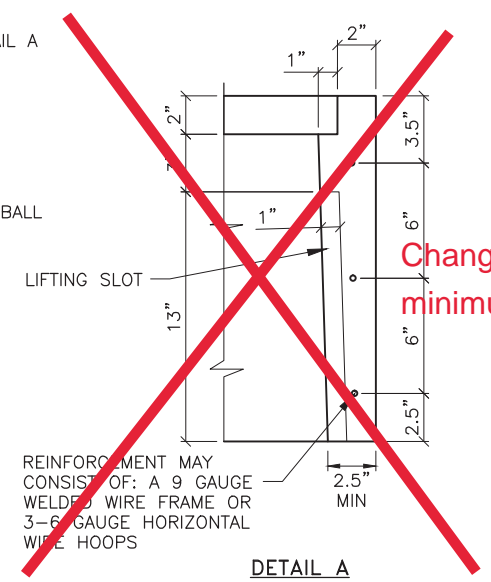
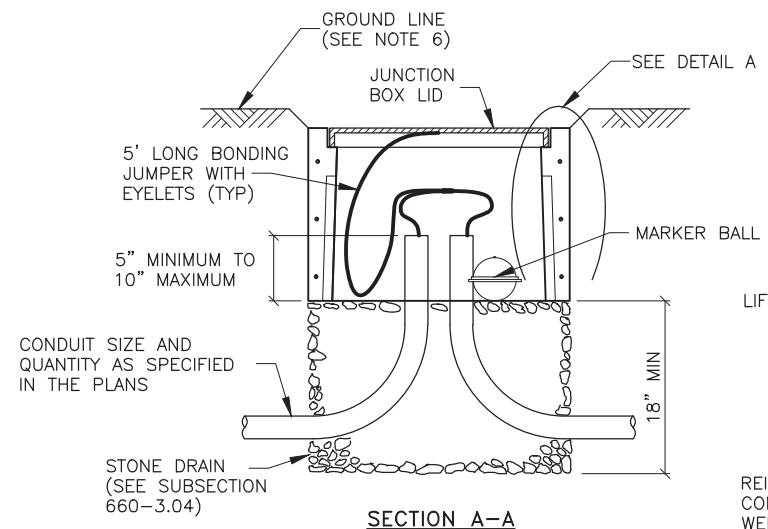
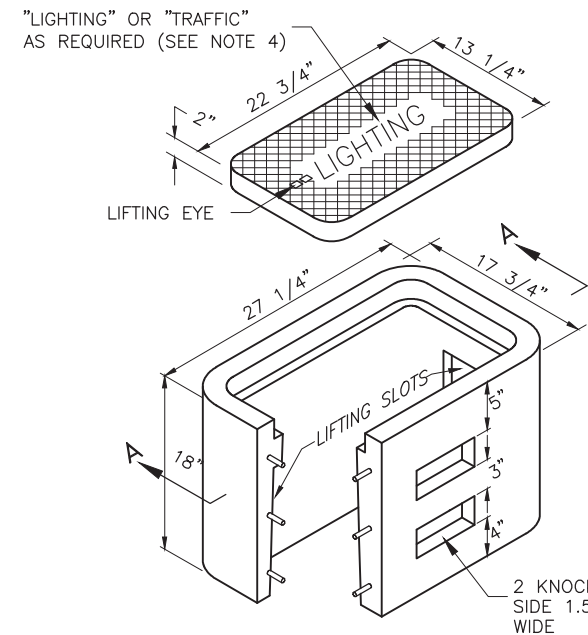
2 EXISTING ELECTROLIER ELEVATION - MAST ARM POLE TYPE
H8 SCALE: NOT TO SCALE



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**JUNEAU-RIVERSIDE AND STEPHEN
 RICHARDS CONGESTION MITIGATION**
 LIGHTING SUMMARIES
 AND DETAILS

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd., Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. 1102
 FILE 00081_H9_JUNCTION BOX.dwg DATE 8/8/2019 3:01 PM LAYOUT H9 DESIGNED GMD CHECKED ISM DRAFTED WJP

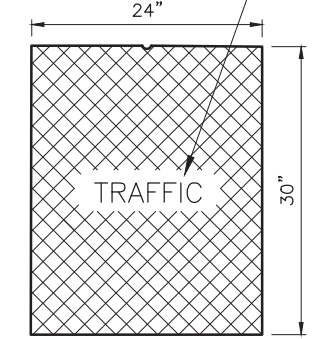
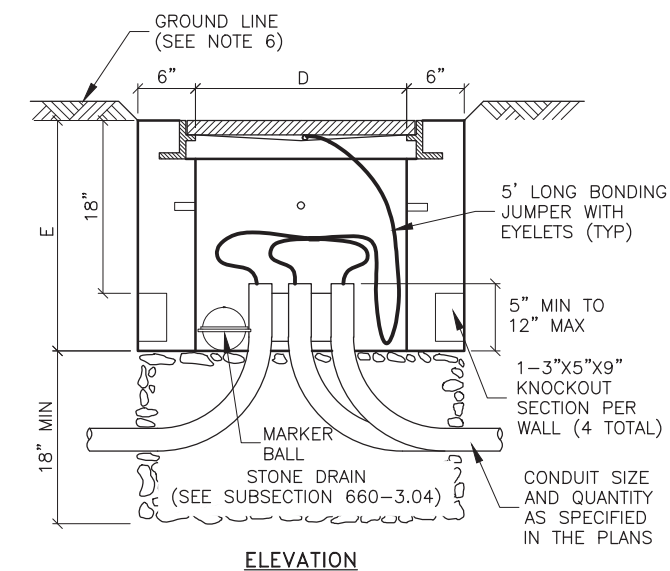
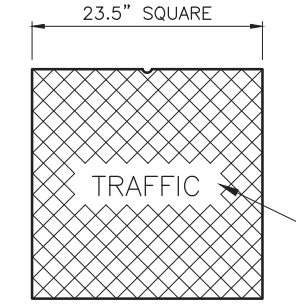
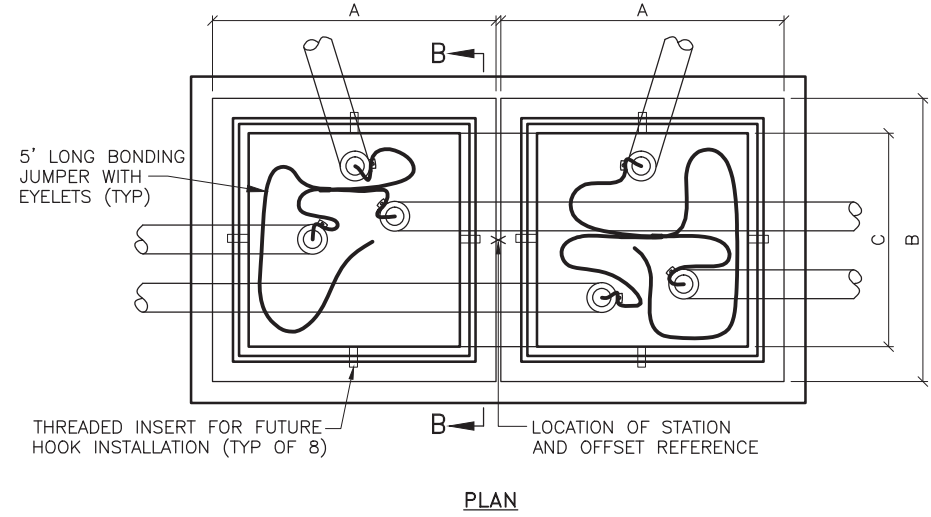
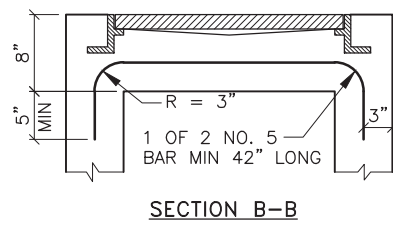
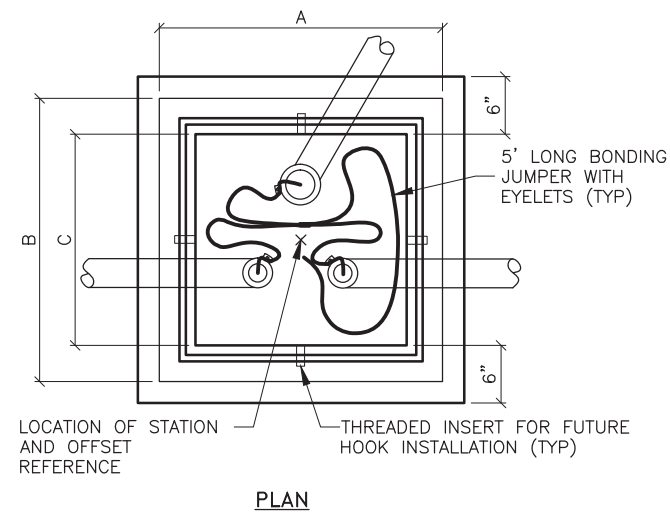
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0003207/SFHWY00081	2019	H9	29



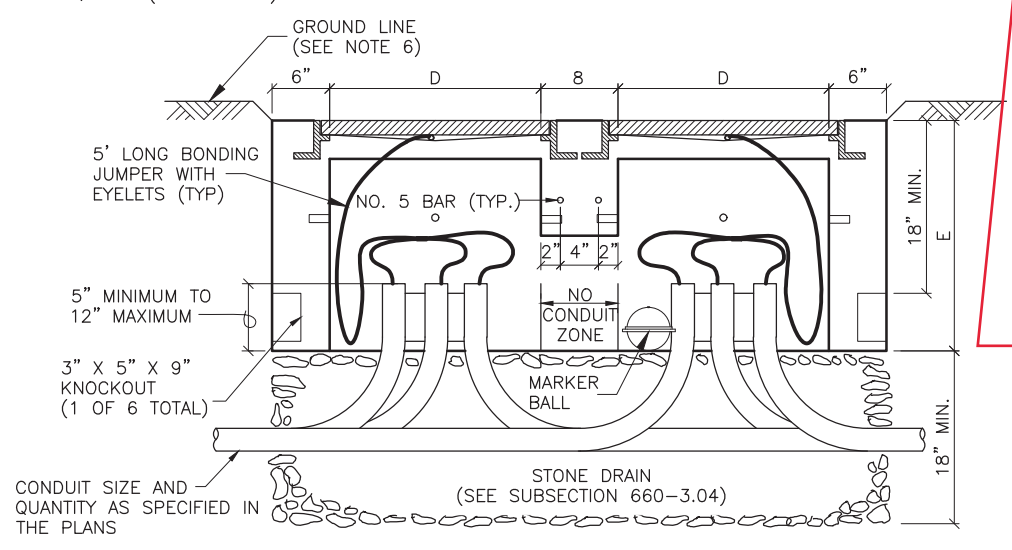
Change Order #1 allows minimum weight of 200 lbs.

Detail A is modified to that from L-23.01 by Change Order #1.

TYPE IA JUNCTION BOX



"LIGHTING" OR "TRAFFIC" AS REQUIRED (SEE NOTE 4)



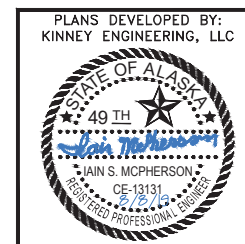
TYPE III/IV JUNCTION BOX

NOTES:

- AVOID INSTALLING TYPE IA JUNCTION BOXES IN DRIVEWAYS OR IN LOCATIONS SUBJECT TO USE BY HEAVY TRUCKS. INSTALL JUNCTION BOXES ONLY AT THE LATERAL LOCATIONS ALLOWED IN SUBSECTION 660-3.04.
- FURNISH TYPE II, III AND IV JUNCTION BOXES WITH CAST IRON FRAMES AND LIDS THAT WEIGH A MINIMUM OF 210 POUNDS AND ARE RATED FOR HEAVY TRAFFIC LOADS IN COMPLIANCE WITH AASHTO M306. FURNISH TYPE IA JUNCTION BOXES WITH CAST IRON LIDS THAT WEIGH A MINIMUM OF 50 POUNDS.
- ~~CONSTRUCT JUNCTION BOXES ACCORDING TO SECTION 501 USING CLASS A CONCRETE.~~ REINFORCE TYPE IA JUNCTION BOXES AS SHOWN. SYNTHETIC STRUCTURAL FIBER-REINFORCED CONCRETE THAT MEETS ASTM C 1116 AND CONTAINS FIBER IN PROPORTIONS AS RECOMMENDED BY THE FIBER MANUFACTURER MAY BE ADDED FOR STRENGTH.
- FOR JUNCTION BOXES THAT CONTAIN ILLUMINATION CONDUCTORS EXCLUSIVELY, FURNISH LIDS WITH THE WORD "LIGHTING" INSCRIBED INTO THEM. FOR OTHER JUNCTION BOXES, FURNISH LIDS WITH THE WORD "TRAFFIC" INSCRIBED INTO THEM.
- UNDER JUNCTION BOXES, INSTALL STONE DRAINS THAT CONSIST OF POROUS BACKFILL MATERIAL CONFORMING TO SUBSECTION 703-2.10.
- SET THE TOPS OF JUNCTION BOXES WITH THE FOLLOWING DIMENSIONS BELOW THE FINISHED SURROUNDING SURFACE:
 1" IN PAVED MEDIANS AND ADJACENT TO PEDESTRIAN FACILITIES
 1/4" IN PEDESTRIAN FACILITIES
 2" IN ALL OTHER AREAS
- BOND JUNCTION BOX LIDS TO THE SYSTEM OF EQUIPMENT GROUNDING CONDUCTORS ACCORDING TO SUBSECTION 660-3.06. ATTACH BONDING JUMPERS TO THE JUNCTION BOX LIDS WITH BRASS OR STAINLESS STEEL HARDWARE.
- INSTALL LOOP DETECTOR TAILS THROUGH ONE OF THE KNOCKOUTS OF TYPE IA JUNCTION BOXES. AFTER SETTING THE BOXES TO GRADE, INSTALL GROUT IN THE GAPS THAT REMAIN IN THE KNOCKOUT.
- INSTALL A 1/2" THICK PREFORMED BITUMINOUS JOINT MATERIAL AROUND JUNCTION BOXES INSTALLED IN PORTLAND CEMENT CONCRETE WALKWAYS.
- INSTALL AN ELECTRONIC MARKER BALL IN ALL JUNCTION BOXES PER SUBSECTION 660-3.04.
- PRIOR TO INSTALLATION MARK ALL JUNCTION BOX LOCATIONS WITH A WIRE STAFF VINYL FLAG. THE FLAG SHALL BE RED IN COLOR AND MINIMUM 4-INCHES TALL BY 5-INCHES WIDE. THE WIRE STAFF SHALL BE 21-INCHES IN LENGTH AND CONSTRUCTED OF MINIMUM 15.5 GAUGE STEEL.
- WHERE MODIFIED TYPE II JUNCTION BOXES ARE REQUIRED FOR DETECTOR LOOP TAIL INSTALLATIONS, ADD ONE(1) ADDITIONAL 5" DEEP X 3" HIGH X 18" WIDE KNOCKOUT 12" BELOW TOP OF JUNCTION BOX.

J-BOX TYPE	DIMENSIONS				
	A (MAX.)	B (MAX.)	C (MIN.)	D (MIN.)	E (MIN.)
II	29 1/2"	29 1/2"	22"	22"	24"
III	29 1/2"	29 1/2"	22"	22"	24"
IV	30"	36"	30"	24"	30"

Per CO #2: CONSTRUCT JUNCTION BOXES ACCORDING TO SECTION 550 USING CLASS B CONCRETE.



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JUNEAU-RIVERSIDE AND STEPHEN RICHARDS CONGESTION MITIGATION

JUNCTION BOX DETAILS

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd., Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. 1102
 FILE 00081_H11-12_DETAILS.dwg
 DATE 8/8/2019 3:01 PM
 LAYOUT H11
 DESIGNED GMD
 CHECKED ISM
 DRAFTED WJP

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0003207/SFHWY00081	2019	H11	29

MASTARM DATA			
MASTARM			
LENGTH (FT.)	ALLOWED DEFLECTION DUE TO GALLOPING (FT.)	FIXED END O.D. (IN.)*	THICK (IN.)
15	0.670	9.35	0.239
20	0.670	10.05	0.239
25	0.670	10.75	0.239
30	0.670	11.45	0.239
35	0.670	12.15	0.239

*FIXED END DIAMETER MEASURED AT CONNECTION TO BASEPLATE.

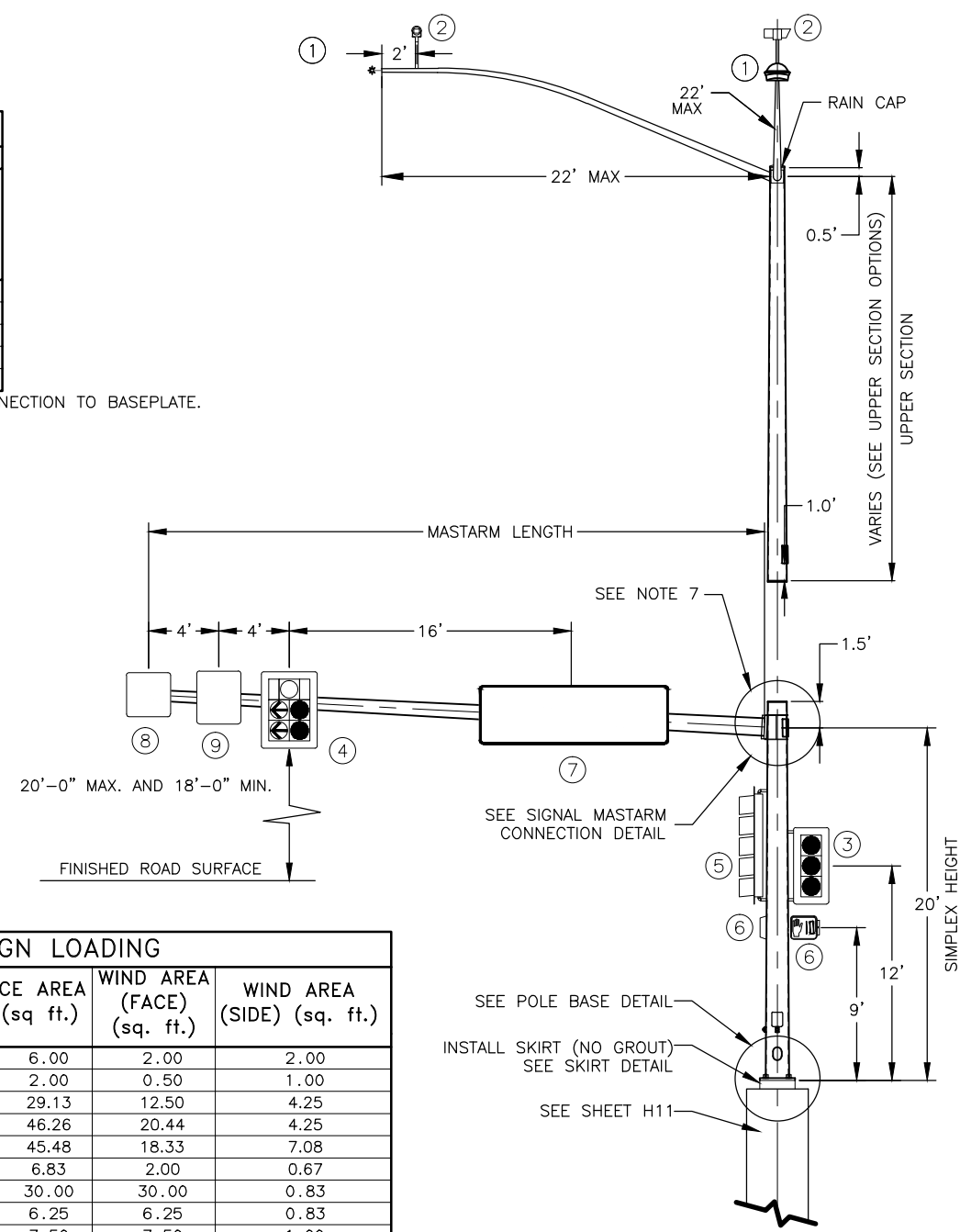
MATERIAL REQUIREMENTS	
ALL ASSEMBLIES	
STEEL THROUGH 1/2" THICK	ASTM A572 OR A595
STEEL OVER 1/2" THICK	AASHTO M270 F3 (50KSI)
FINISH	AASHTO M111 & M232
MASTARM BOLTS	AASHTO M164
ANCHOR RODS	SEE FOUNDATION DETAIL

POLE (LOWER SECTION)	
DESIGN LENGTH	21.5'
SECTION SHAPE	ROUND
SIMPLEX HEIGHT	20'
FIXED END DIAMETER	15.0" O.D.
TAPER	0.14"/FT
TUBE THICKNESS	0.375"
BASE PLATE	24" X 24" X 2.25"
BOLT CIRCLE	24"
SIGNAL ARM PLATE	20" X 20" X 2.25"
TOP RING THICKNESS	0.375"
BOTTOM RING THICKNESS	0.375"
GUSSET PLATE THICKNESS	0.375"
HANDHOLE COVER THICKNESS	10 GA
POLE SKIRT THICKNESS	10 GA

MASTARM	
DESIGN LENGTH	35'
SECTION SHAPE	ROUND
TAPER	0.14"/FT
TUBE THICKNESS	MASTARM DATA
MASTARM RISE	3.0 DEGREES
BASE PLATE	20" X 20" X 2.25"
BOLT CIRCLE	20"
MASTARM BOLTS	1.5" X 4.5"

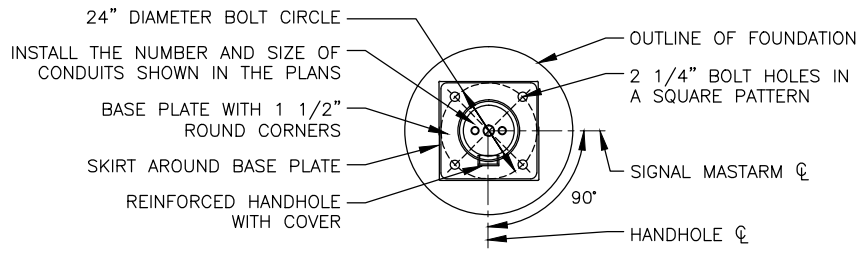
NOTES:

- PROVIDE POLE ASSEMBLIES MEETING THE FOLLOWING DESIGN CRITERIA; 2013 AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS WITH 2015 INTERIM REVISIONS, THE LATEST EDITION OF THE ALASKA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION INCLUDING STANDARD MODIFICATIONS AND, SPECIAL PROVISIONS. DESIGN FOR A BASIC WIND SPEED OF 100 MPH, FATIGUE CATEGORY III, WITH GALLOPING. MEASURE ALLOWED DEFLECTION DUE TO GALLOPING AT THE FREE END OF MASTARM.
- PROVIDE POLES TO ACCOMMODATE THE MAXIMUM LENGTH SHOWN IN THE MASTARM DATA WITH THE GIVEN LOADS, DIMENSIONS AND MATERIAL REQUIREMENTS.
- THIS DRAWING SHOWS LOADS (SIGNS AND SIGNALS) TO BE USED BY MANUFACTURERS WHEN DESIGNING POLES. IT DOES NOT SHOW ACTUAL LOADING OF POLES/MASTARMS ON INDIVIDUAL PROJECTS. THIS POLE/MASTARM DESIGN MAY BE USED WITHOUT FURTHER ANALYSIS IF THE FOLLOWING CONDITIONS ARE MET:
 - THE GUIDE SIGN (LOAD #7) IS ATTACHED TO THE MASTARM BASE SECTION AND,
 - NOT MORE THAN 4 TRAFFIC SIGNALS AND/OR SIGNS ARE ATTACHED TO THE MASTARM. IF THESE CONDITIONS ARE NOT MET, THIS STANDARD POLE/MASTARM DESIGN MAY ONLY BE USED IF DESIGN COMPUTATIONS ARE SUBMITTED THAT DEMONSTRATE CONFORMANCE TO DESIGN CRITERIA (NOTE 1) USING ACTUAL LOADS. NOTE: DEVICES WITH LESS THAN 1 SQUARE FOOT OF PROJECTED AREA MAY BE ADDED TO THE MASTARM WITHOUT CAUSING A NEED FOR ADDITIONAL DESIGN COMPUTATIONS.
- THE MANUFACTURER IS TO DETERMINE WELD SIZES. ALL WELDS AND TESTING SHALL CONFORM TO THE LATEST EDITION OF THE STRUCTURAL WELDING CODE AWS D1.1. PROVIDE VISUAL TEST (VT) OF 100% OF ALL WELDS. PROVIDE MAGNETIC PARTICLE TEST (MT) OF 100% OF ALL FILLET WELDS. PROVIDE RADIOGRAPHIC (RT) OR ULTRASONIC TEST (UT) OF 100% OF ALL COMPLETE JOINT PENETRATION WELDS AND A RANDOM 25% OF ALL PARTIAL JOINT PENETRATION LONGITUDINAL SEAM WELDS.
- FABRICATE POLE TUBES FROM NO MORE THAN 2 PIECES OF STEEL. WHEN USING 2 PIECES, PLACE THE LONGITUDINAL WELDED SEAMS DIRECTLY OPPOSITE ONE ANOTHER.
- FABRICATE LUMINAIRE ARMS AND CONNECTIONS ACCORDING TO STANDARD PLAN L-03.10.
- PROVIDE PERMANENT TAGS ON ALL POLE SECTIONS PER SECTION 740 TABLE 740-1 OF THE SPECIFICATIONS. PROVIDE A RAIN CAP WHEN NO UPPER SECTION IS SPECIFIED.
- THE DEPARTMENT WILL REJECT DAMAGED OR DEFECTIVE POLES FOR ANY OF THE FOLLOWING; VARIANCES FROM APPROVED SHOP DRAWINGS, VARIANCES FROM MATERIAL REQUIREMENTS, SECTIONS MORE THAN 2-PERCENT OUT OF ROUND, SECTIONS BOWED MORE THAN 1-INCH THROUGHOUT THE LENGTH OF THE POLE, MASTARM, OR SEGMENT AND, DAMAGED OR DENTED FINISHES.
- DRILL A 1" MAXIMUM DIAMETER HOLE AT EACH TRAFFIC SIGNAL LOCATION. ORIENT THE HOLE ON THE HORIZONTAL AXIS OF MASTARMS.
- INSTALL POLE PLUMB BY ENSURING THE SIDE OPPOSITE THE MASTARM IS VERTICAL IN ITS FINAL DEFLECTED POSITION.
- CLEAN AND REMOVE DIRT, BURRS, MILL SCALE, AND EXCESS GALVANIZATION ON ALL FAYING SURFACES AND THREADED PARTS BEFORE ASSEMBLY. LUBRICATE THE THREADS OF ALL BOLTS AND NUTS WITH LUBRICANT CONTAINING A VISIBLE DYE. TIGHTEN ALL BOLTS ACCORDING TO SECTION 504 OF THE SPECIFICATIONS.

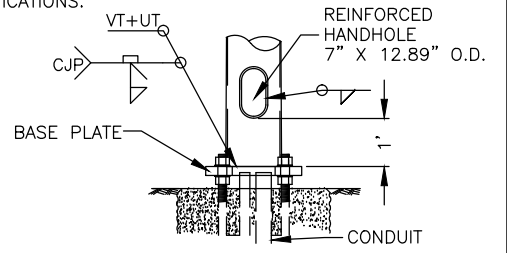


ELEVATION VIEW
SCALE: NOT TO SCALE

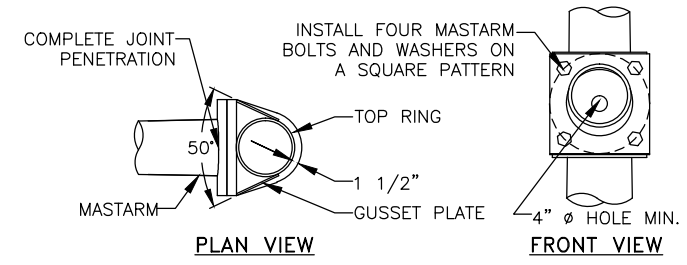
POLE DESIGN LOADING					
LOAD COMPONENT	HEIGHT (ft.)	WEIGHT (lbs.)	ICE AREA (sq ft.)	WIND AREA (FACE) (sq. ft.)	WIND AREA (SIDE) (sq. ft.)
1 = LUMINAIRE	0.67	50	6.00	2.00	2.00
2 = CAMERA	0.50	20	2.00	0.50	1.00
3 = SIGNAL	5.00	60	29.13	12.50	4.25
4 = SIGNAL	5.33	100	46.26	20.44	4.25
5 = SIGNAL	7.33	100	45.48	18.33	7.08
6 = PED HEAD	1.33	25	6.83	2.00	0.67
7 = SIGN	2.50	120	30.00	30.00	0.83
8 = SIGN	2.50	25	6.25	6.25	0.83
9 = SIGN	3.00	30	7.50	7.50	1.00



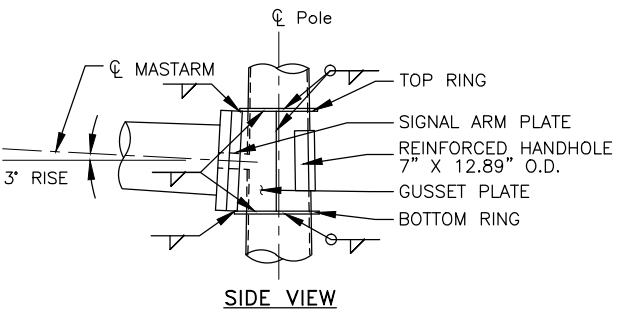
PLAN VIEW
(SHOWN WITHOUT ANCHOR BOLTS AND NUTS FOR CLARITY)



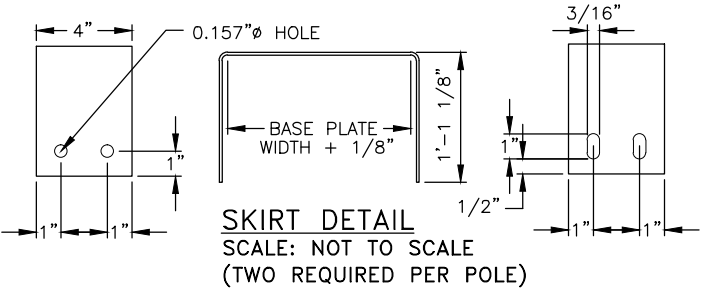
FRONT VIEW
(SKIRT OMITTED FOR CLARITY)



SIGNAL MASTARM CONNECTION DETAIL
SCALE: NOT TO SCALE
(ELEVATION VIEW OF A RING STIFFENED BUILT-UP BOX)



SIDE VIEW



SKIRT DETAIL
SCALE: NOT TO SCALE
(TWO REQUIRED PER POLE)

POLE BASE DETAIL
SCALE: NOT TO SCALE



PLANS DEVELOPED BY:
KINNEY ENGINEERING, LLC

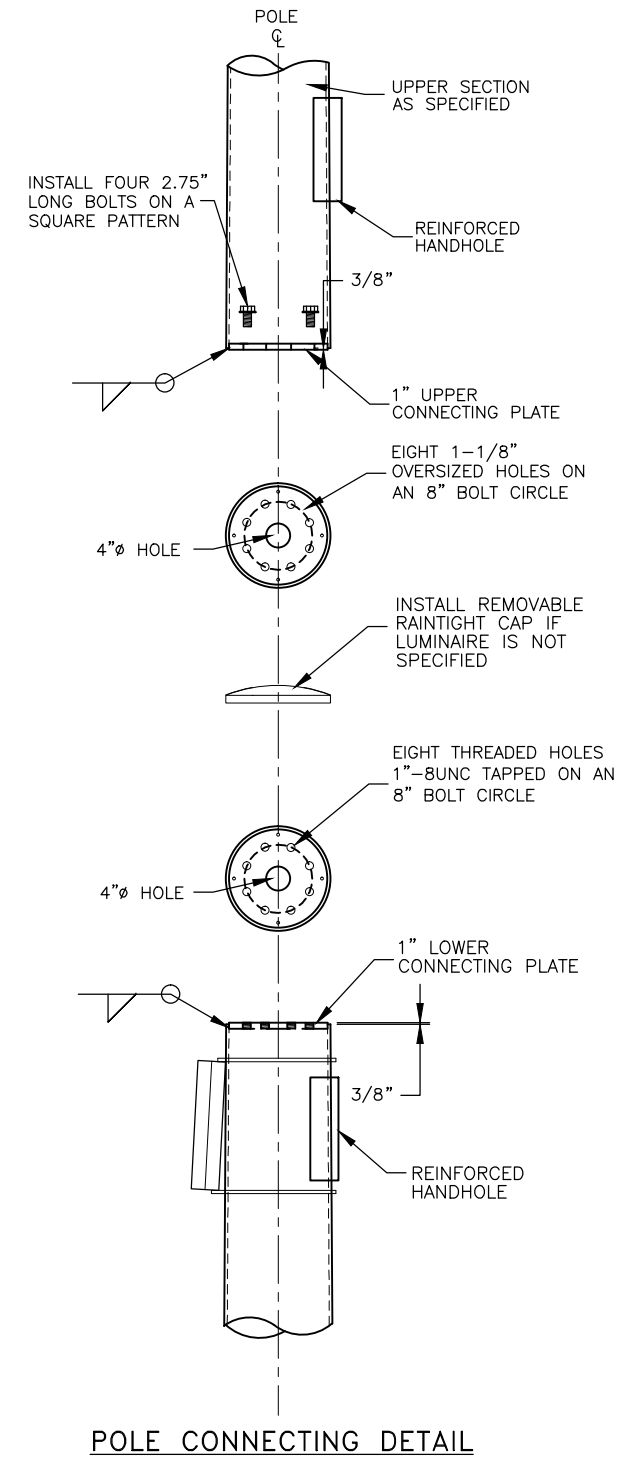
STATE OF ALASKA DEPARTMENT OF
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AND PUBLIC FACILITIES
6860 GLACIER HIGHWAY, JUNEAU, AK 99811
(907) 465-1763

**JUNEAU-RIVERSIDE AND STEPHEN
RICHARDS CONGESTION MITIGATION**

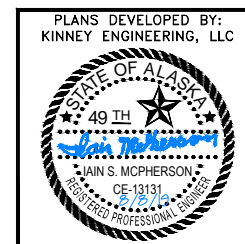
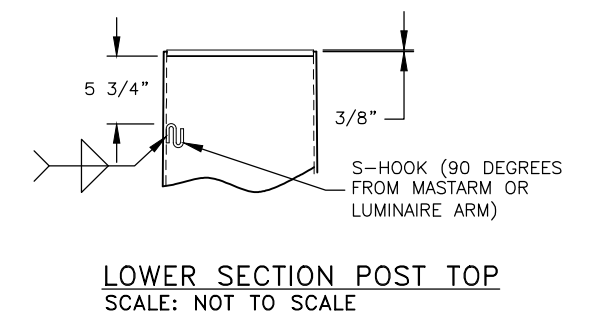
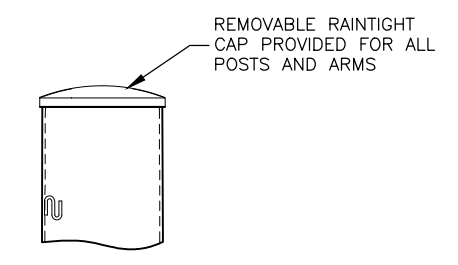
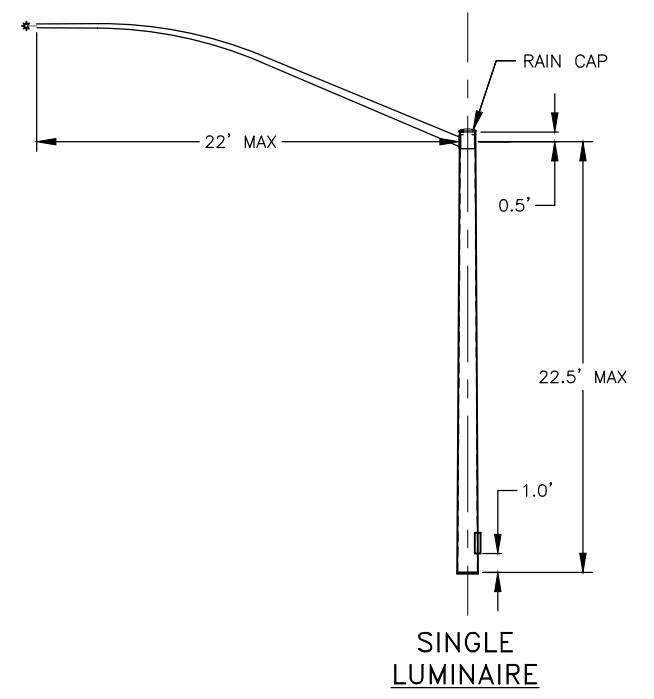
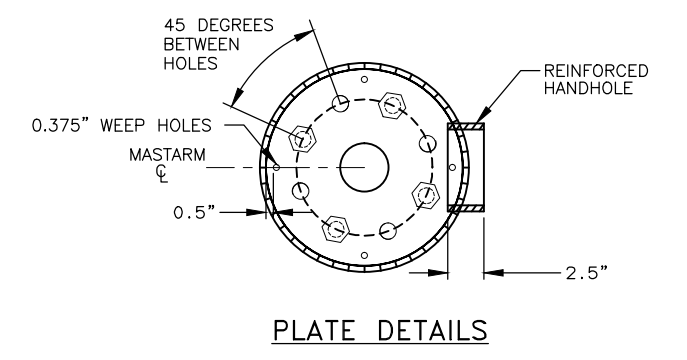
**SIGNAL POLE WITH 15' TO 35'
MASTARM, LOWER SECTION**

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0003207/SFHWHY00081	2019	H12	29

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd., Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. 1102
 FILE 00081_H11-12_DETAILS.dwg DATE 8/8/2019 3:01 PM LAYOUT H12 DESIGNED GMD CHECKED ISM DRAFTED WJP



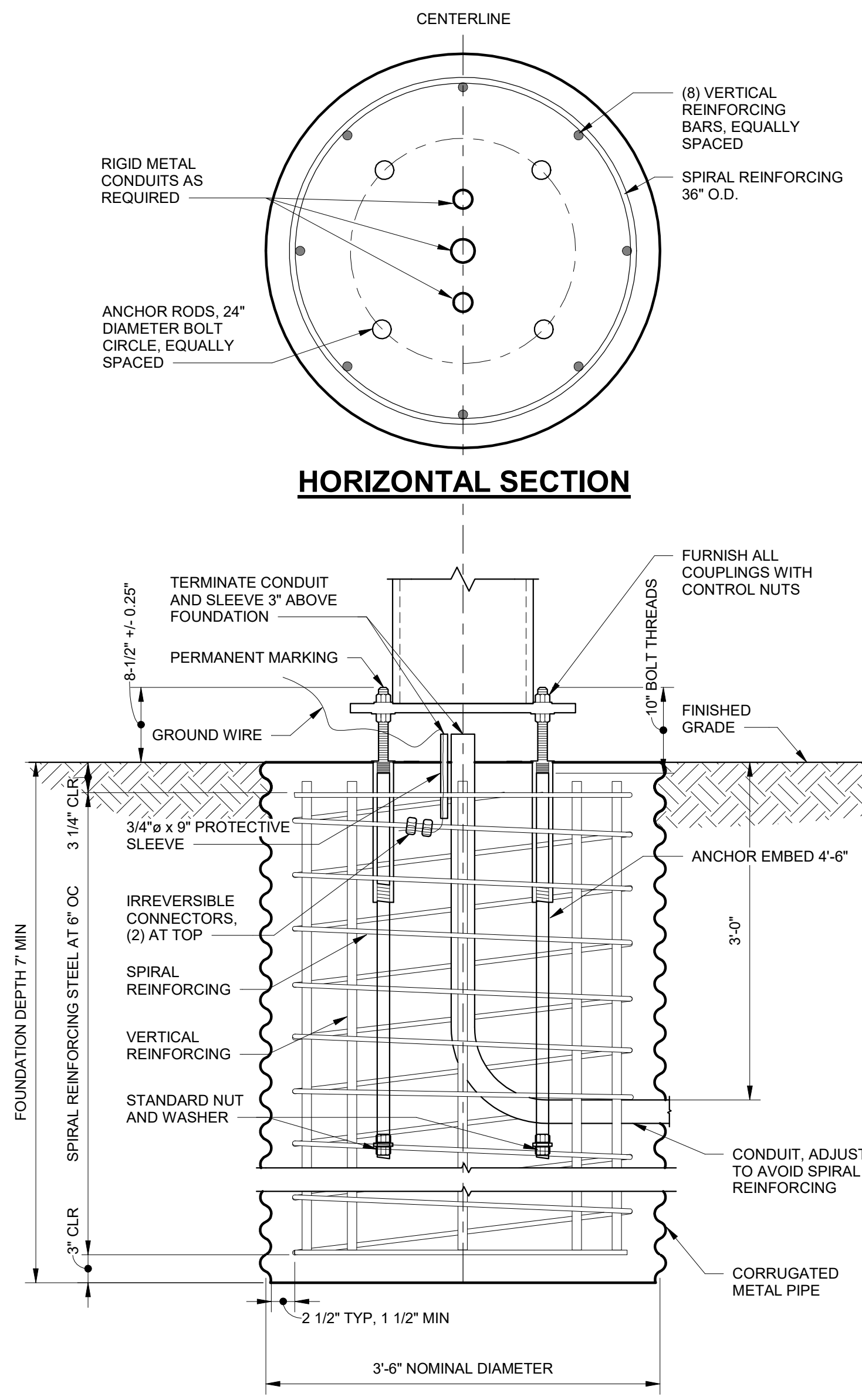
MATERIAL REQUIREMENTS	
MATERIALS	
TUBE MATERIAL	A572, A595 GR A OR A1011 50 KSI MIN
SINGLE LUMINAIRE TUBE	7 GA
DOUBLE LUMINAIRE TUBE	7 GA
DAVIT LUMINAIRE TUBE	7 GA
LOWER CONNECTING PLATE	AASHTO M270 F3
UPPER CONNECTING PLATE	AASHTO M270 F3
CONCENTRIC REDUCER	A572 OR A595 GR A
CONNECTION TUBE	A572 OR A595 GR A
LUMINAIRE ARM MATERIALS	SEE L-03.10
UPPER SECTION ATTACHMENT BOLTS	1"-8UNC / AASHTO M164
LUMINAIRE ATTACHMENT BOLTS	3/4"-10 / AASHTO M164
SLIP-FIT THROUGH BOLT	5/8" / AASHTO M164
FINISH	AASHTO M111 & M232
HANDHOLE	7" X 12.89" O.D.
SINGLE LUMINAIRE	
DESIGN LENGTH	22.5'
SECTION SHAPE	ROUND
FIXED END DIAMETER	11.99" O.D.
TAPER	0.14"/ft
LUMINAIRE ARM DETAILS	SEE L-03.10



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 (907) 465-1763
**JUNEAU-RIVERSIDE AND STEPHEN
 RICHARDS CONGESTION MITIGATION**
**SIGNAL POLE WITH 15' TO 35'
 MASTARM, UPPER SECTION**

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0003207/SFHWHY00081	2019	H13	29

PLANS DEVELOPED BY: PDC ENGINEERING, 2700 Gambell Street, Anchorage, Alaska 99503 (907) 743-3200 CERT. OF AUTH. NO. AEC0605
 FILE PDC-STRU-19223AN_RV19.rvt
 DATE
 LAYOUT H13
 DESIGNED JMS
 CHECKED AKM
 DRAFTED JMS



MATERIAL REQUIREMENTS		
CONCRETE	CLASS A	$f_c = 4,000$ PSI
CMP	AASHTO M218	14ga
VERTICAL REINFORCING STEEL	AASHTO M31 #8	GR 60
SPIRAL REINFORCING STEEL	AASHTO M31 #5	GR 60
GROUND WIRE	-	#4 AWG
ANCHOR RODS	ASTM F1554	GR 105
FASTENERS, WASHERS	AASHTO M293	
FASTENERS, NUTS	AASHTO M292	
FINISH, ANCHOR RODS, AND FASTENERS	AASHTO M232	
CONDUIT	SCH 40	RMC
PROTECTIVE SLEEVE	SCH 40	PVC

SAND SLURRY MIX DESIGN		
ITEM	BATCHING QUANTITIES PER CYD BATCH (LBS)	APPLICABLE SPECS
PORTLAND CEMENT CONCRETE	188	701-2.01
WATER (52.1 GAL)	435	712-2.01
FINE AGGREGATE SSD	3,041	703-2.01
ADMIXTURE: MICROAIR	2.0 OZ	711-2.02
TOTAL	3,664	-

- DESIGN NOTES:
- DESIGN STANDARD:
 - 2013 STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS WITH 2015 INTERIM.
 - DESIGN LOAD:
 - 4,600 LBS AXIAL, 3,500 LBS SHEAR, 63,000 FT-LBS MOMENT.
 - CONSTRUCTION STANDARD:
 - LATEST EDITION OF THE STATE OF ALASKA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION WITH SPECIAL PROVISIONS.
- NOTES:
- THIS FOUNDATION IS APPROVED FOR TRAFFIC SIGNAL APPLICATIONS IN COHESIONLESS SOILS WITH AN N1-60 VALUE OF 10 OR GREATER PER AASHTO T-206, "STANDARD PENETRATION TEST" (SPT). THIS FOUNDATION SHALL NOT BE USED IF ANY OF THE FOLLOWING ARE ENCOUNTERED: WATER TABLE ABOVE THE BOTTOM OF FOUNDATION, VERY LOOSE SOILS, ORGANIC SOILS, COHESIVE SOILS (CLAY), OR SOILS SUSCEPTIBLE TO FROST JACKING. IF ANY OF THESE CONDITIONS ARE ENCOUNTERED, STOP FOUNDATION WORK AND CONTACT THE ENGINEER.
 - PLACE FOUNDATION IN DRILLED OR EXCAVATED HOLE WITH CENTERLINE OF FOUNDATION LOCATED AT THE STATION, OFFSET, AND ELEVATION SPECIFIED IN PLANS. SET FOUNDATION FLUSH WITH SURROUNDING SURFACE. GRADE TO DRAIN AWAY FROM FOUNDATION WITHOUT EXPOSING MORE THAN 4" OF THE FOUNDATION FROM THE SURROUNDING GROUND SURFACE.
 - FORM THE FOUNDATION IN CORRUGATED METAL PIPE CONFORMING TO SUBSECTION 707-2.01 OF THE SPECIFICATIONS.
 - PROVIDE 1.5 EXTRA TURNS AT EACH END OF THE SPIRAL REINFORCING STEEL. REINFORCING STEEL SHALL NOT BE SPLICED. TIE VERTICAL REINFORCING STEEL TO EACH INTERSECTION OF THE SPIRAL REINFORCING STEEL.
 - CONNECT GROUND WIRE NEAR THE TOP OF SPIRAL REINFORCING STEEL WITH TWO IRREVERSIBLE CONNECTORS AS SHOWN. FASTEN CONNECTORS ACCORDING TO THE MANUFACTURERS' RECOMMENDATIONS INCLUDING THE USE OF MANUFACTURER SPECIFIED TOOLS. THE GROUND WIRE MAY BE BARE SOLID, STRANDED, OR BRAIDED COPPER. PROTECT GROUND WIRE WITH PROTECTIVE SLEEVE AS SHOWN AND FILL WITH SILICON SEALANT.
 - ANCHOR RODS ARE SUBJECT TO CHARPY V-NOTCH IMPACT TESTING. SUBMIT MILL CERTIFICATIONS FOR ANCHOR RODS, NUTS, AND WASHERS. GALVANIZE ANCHOR RODS FULL LENGTH. PROVIDE PERMANENT MANUFACTURER'S IDENTIFICATION AND PERMANENT GRADE IDENTIFICATION ON EACH END OF ANCHOR ROD BY STEEL DIE STAMP. SECURE EXPOSED ANCHOR RODS WITH A "RING PLATE" WHEN NOT IN SERVICE. INSTALL ANCHOR RODS PLUMB. ANCHOR RODS GREATER THAN 1:40 OUT-OF-PLUMB WILL RESULT IN FOUNDATION REJECTION.
 - COMPLETE ALL CONCRETE WORK IN CONFORMANCE WITH SECTIONS 501, 503, AND 660 OF THE SPECIFICATIONS. USE A TUBE WITH A HOPPER HEAD OR OTHER APPROVED DEVICE WHEN DROPPING CONCRETE MORE THAN 5 FEET PER SUBSECTION 501-3.08. VIBRATE CONCRETE DURING PLACEMENT BY MECHANICAL VIBRATION PER SUBSECTION 501-3.08. ENSURE UPPER ANCHOR THREADS ARE PROTECTED FROM CONTACT WITH CONCRETE DURING POUR.
 - BACKFILL AND COMPACT ACCORDING TO SECTION 205, AND SUBSECTIONS 203-3.04 AND 660-3.01 OF THE SPECIFICATIONS. USE SELECT MATERIAL, TYPE A OR SAND SLURRY AS BACKFILL MATERIAL. ENSURE AREA BELOW FOUNDATION MEETS COMPACTION REQUIREMENTS AND IS FREE OF LOOSE MATERIAL AND DEBRIS PRIOR TO CONCRETE WORK.

1 TYPICAL SIGNAL POLE FOUNDATION DETAIL
 H13 SCALE: 1" = 1'-0"



PLANS DEVELOPED BY:
 PDC ENGINEERS

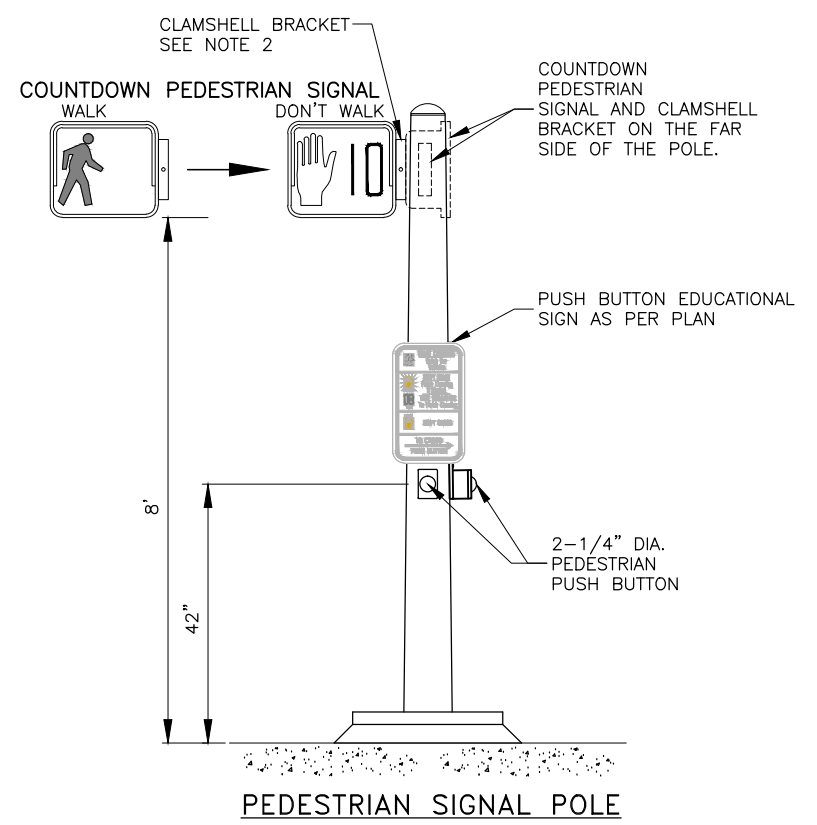
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**JUNEAU-RIVERSIDE AND
 STEPHEN RICHARDS CONGESTION
 MITIGATION**

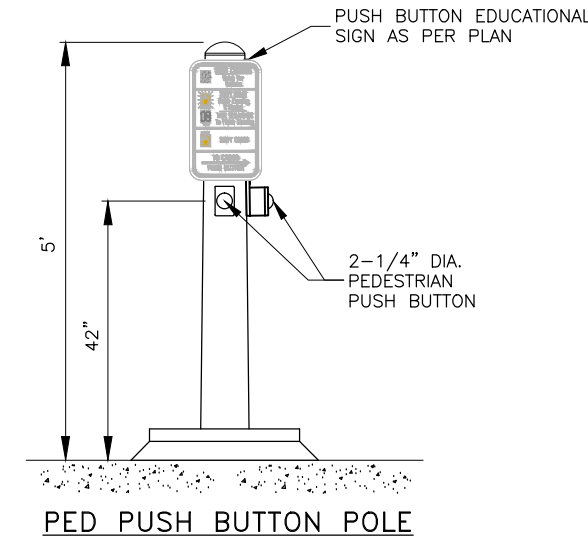
SIGNAL POLE FOUNDATION DETAILS

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd., Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. 1102
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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0003207/SFHWY00081	2019	H14	29



PEDESTRIAN SIGNAL POLE

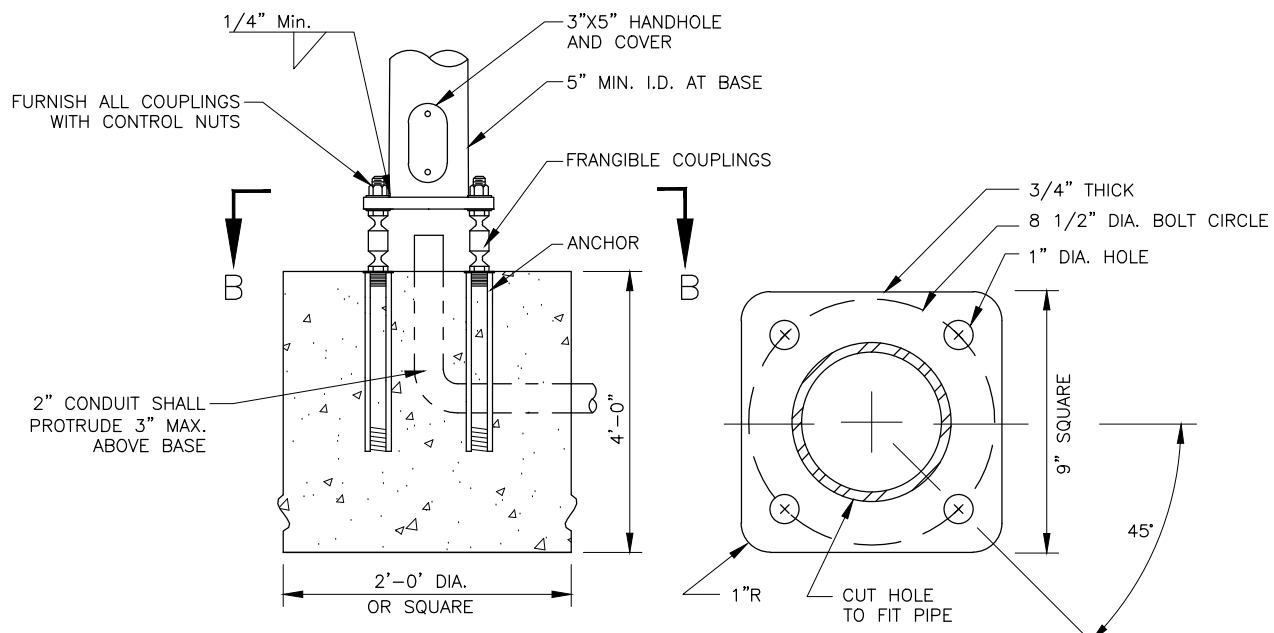


PED PUSH BUTTON POLE

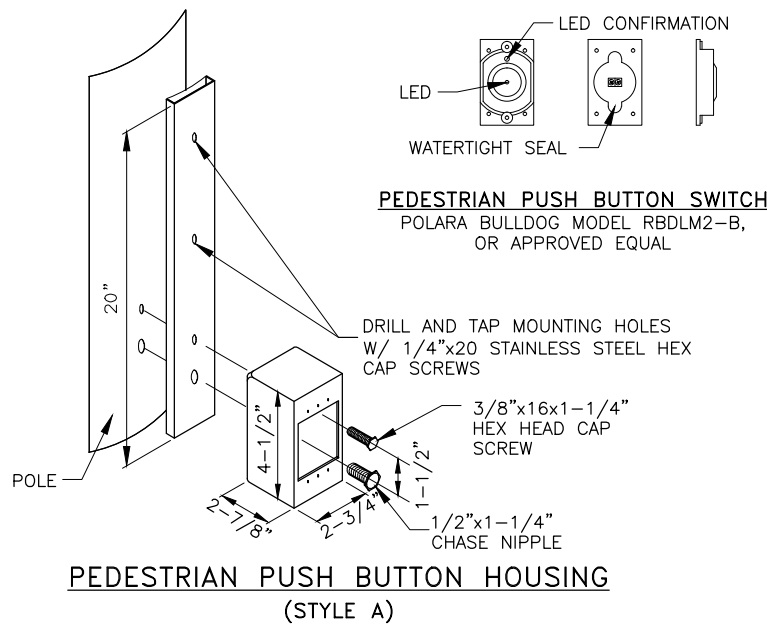
FIXED DESIGN ELEMENTS	
ALL ASSEMBLIES	
LENGTH	10'(TYP, MAY VARY IN PLANS)
FIXED END DIAMETER O.D.	5.5"
TAPER	0.14" /FT
TUBE THICKNESS	7 GA.
HAND-HOLE O.D.	3" X 5"
BASE PLATE	9" X 9" X 0.75"
BOLT CIRCLE	8.5"
FRANGIBLE BASE	MODEL 5100 POLE SAFE OR APPROVED EQUAL
MATERIAL PROPERTIES	
TUBE	ASTM A572 GR. 55
BASEPLATE	AASHTO M270 F3, GR 50
TOP PLATE	ASTM A36
HANDHOLE REINFORCEMENT	ASTM A53, GR. B
FINISH	AASHTO M111 & M232

NOTES:

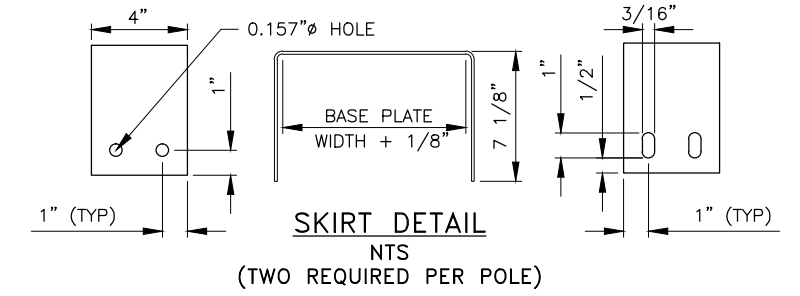
- USE CLAMHELL BRACKETS TO INSTALL ALL PEDESTRIAN SIGNALS.
- INSTALL PEDESTRIAN INDICATION TO FACE THE CENTER OF THE FAR SIDE CROSSWALK. ACCEPTABLE VARIANCE IS +/- 1 DEGREE.
- FIELD DRILL THE HOLES NEEDED FOR ATTACHING ALL SIGNAL HARDWARE. USE HOLE SAWS WHEN DRILL BITS ARE NOT AVAILABLE. TREAT THE BARE STEEL SURFACES IN ACCORDANCE WITH SECTION 660-3.01.8, REPAIRING DAMAGED FINISHES, OF THE SPECIFICATIONS.
- COMPLETE ALL CONCRETE WORK IN CONFORMANCE WITH SECTIONS 501 AND 660 OF THE SPECIFICATIONS. USE A TUBE WITH A HOPPER HEAD OR OTHER APPROVED DEVICE WHEN DROPPING CONCRETE MORE THAN 5 FEET PER SUBSECTION 501-3.08. VIBRATE CONCRETE DURING PLACEMENT BY MECHANICAL VIBRATION PER SUBSECTION 501-3.08. ENSURE ANCHOR THREADS ARE PROTECTED FROM CONTACT WITH CONCRETE DURING POUR.
- BACKFILL AND COMPACT ACCORDING TO SECTION 205, AND SUBSECTIONS 203-3.04 AND 660-3.01 OF THE SPECIFICATIONS. USE SELECT MATERIAL, TYPE A OR SAND SLURRY AS BACKFILL MATERIAL. ENSURE AREA BELOW FOUNDATION MEETS COMPACTION REQUIREMENTS AND IS FREE OF LOOSE MATERIAL AND DEBRIS PRIOR TO CONCRETE WORK.
- INSTALL ALL ANCHORS ACCORDING TO THE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS. ANCHORS SHALL BE INSTALLED PLUMB. ANCHORS GREATER THAN 1:40 OUT-OF-PLUMB WILL RESULT IN FOUNDATION REJECTION.
- DESIGN POLE ASSEMBLIES TO THE 2013 AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS WITH 2015 INTERIM REVISIONS, LUMINAIRE AND TRAFFIC SIGNALS, THE ALASKA STANDARD SPECIFICATIONS, STANDARD MODIFICATIONS, SPECIAL PROVISIONS AND THESE PLANS. DESIGN FOR A BASIC WIND SPEED OF 100 MPH, FATIGUE CATEGORY II.
- POLES SHALL BE DESIGNED AND FABRICATED TO INCORPORATE ALL FIXED DESIGN ELEMENTS.
- DESIGN AND FABRICATE TUBES FROM ONE PIECE OF TAPERED STEEL.
- STEEL GREATER THAN 1/2" THICK SHALL CONFORM TO AASHTO M270 AND SHALL MEET THE FRACTURE CRITICAL CHARPY V-NOTCH IMPACT TEST REQUIREMENTS FOR ZONE 3.
- INSTALL A 0.625" THICK 3003-H14 ALUMINUM SHEET SKIRT AROUND THE FRANGIBLE COUPLINGS FASTENED WITH STAINLESS SHEET METAL SCREWS.
- THE DEPARTMENT WILL REJECT DAMAGED OR DEFECTIVE POLES FOR ANY OF THE FOLLOWING, INCLUDING BUT NOT LIMITED TO:
 - VARIANCES FROM APPROVED SHOP DRAWINGS.
 - VARIANCES FROM FIXED DESIGN ELEMENTS.
 - OUT OF ROUND. SECTIONS ARE OUT OF ROUND WHEN THE DIAMETERS OF ROUND MEMBERS EXCEED 2 PERCENT OF THE DIMENSION SPECIFIED ON THE SHOP DRAWINGS.
 - BOWED WITH SWEEPS EXCEEDING 0.75" INCH THROUGHOUT THE LENGTH OF THE POLE, MASTARM, OR SEGMENT.
 - DAMAGED OR DENTED FINISHES.
- WELD SIZE TO BE DETERMINED BY MANUFACTURER.
- PROVIDE PERMANENT TAGS PER SECTION 740 TABLE 740-1 OF THE SPECIFICATIONS.
- THIS DRAWING IS INTENDED FOR POLE DESIGN PURPOSES ONLY. ASSEMBLY CONFIGURATIONS ARE FOR LOADING PURPOSES AND MAY DIFFER FROM THOSE SHOWN IN PLANS. POLES HAVE NOT BEEN EVALUATED FOR LOADING CONDITIONS MORE SEVERE THAN THOSE SHOWN AND WILL REQUIRE INDIVIDUAL ANALYSIS WHEN ENCOUNTERED.



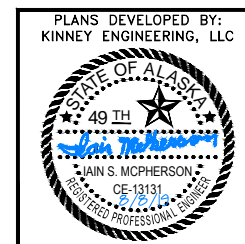
BREAKAWAY SIGNAL BASE POST TYPE "A"



PEDESTRIAN PUSH BUTTON SWITCH HOUSING (STYLE A)



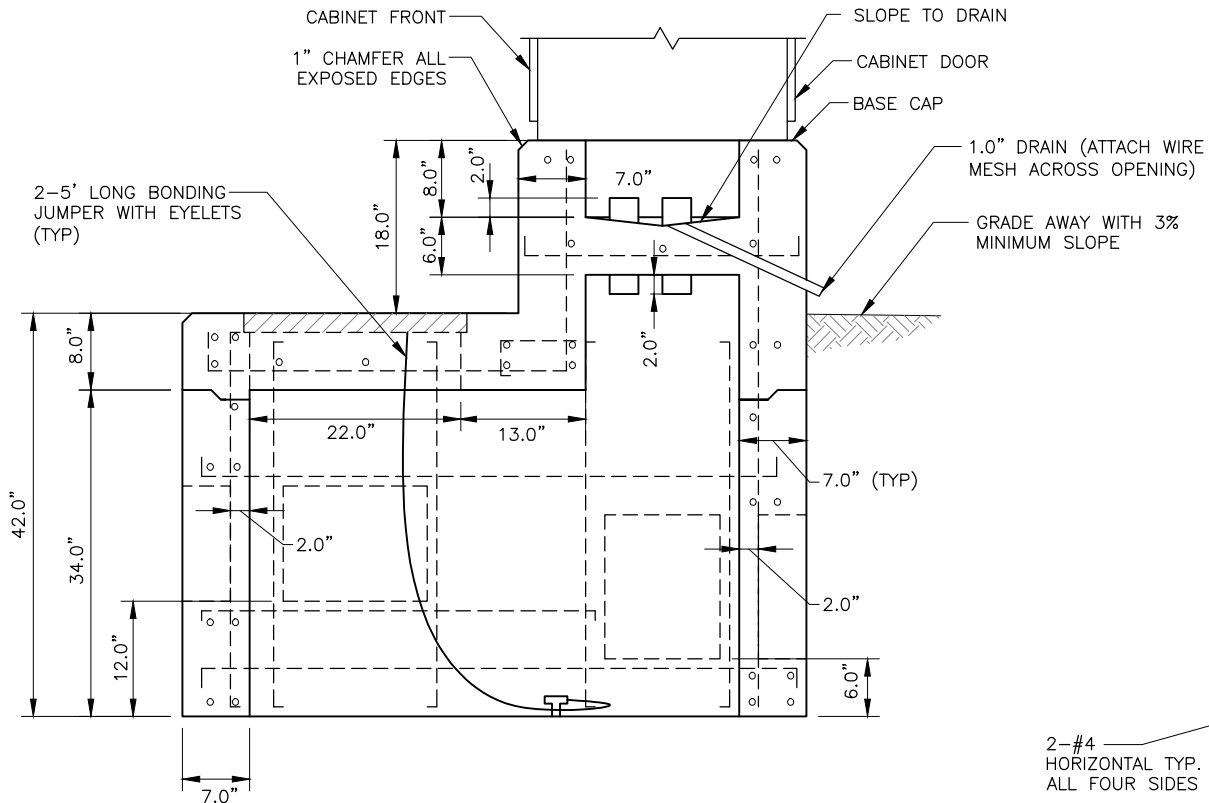
SKIRT DETAIL NTS (TWO REQUIRED PER POLE)



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 (907) 465-1763
**JUNEAU-RIVERSIDE AND STEPHEN
 RICHARDS CONGESTION MITIGATION**
**PEDESTRIAN SIGNAL POLE
 AND FOUNDATION DETAIL**

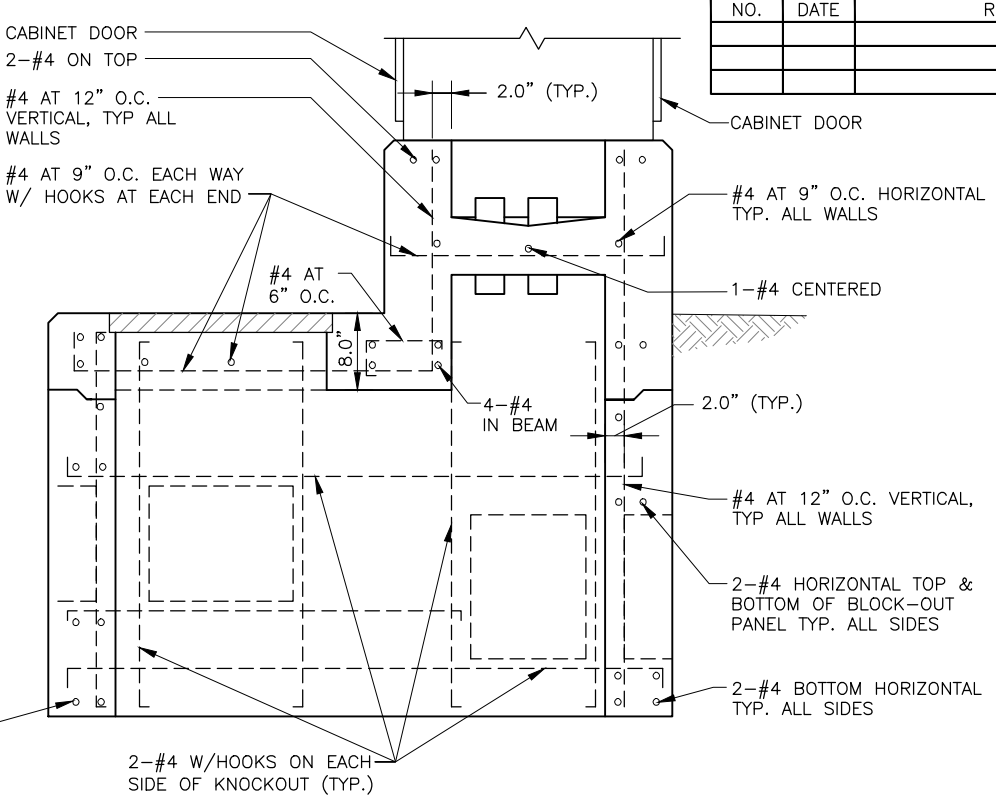
PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd, Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. 1102
 FILE 00081_H15-H16_Signal_Details.dwg DATE 8/8/2019 3:02 PM LAYOUT H15 DESIGNED GMD CHECKED ISM DRAFTED WJP

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0003207/SFHWHY00081	2019	H15	29



SECTION A-A

NOTE: SEE SECTION B-B FOR REBAR DETAILS

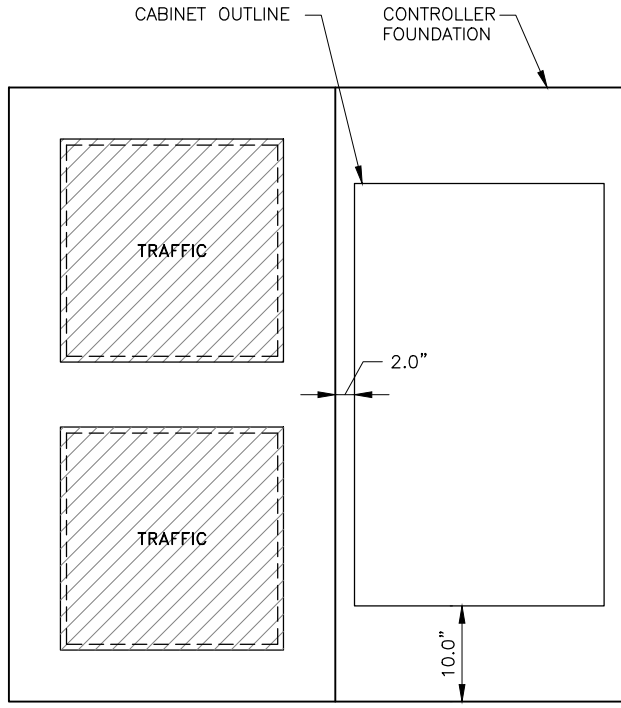
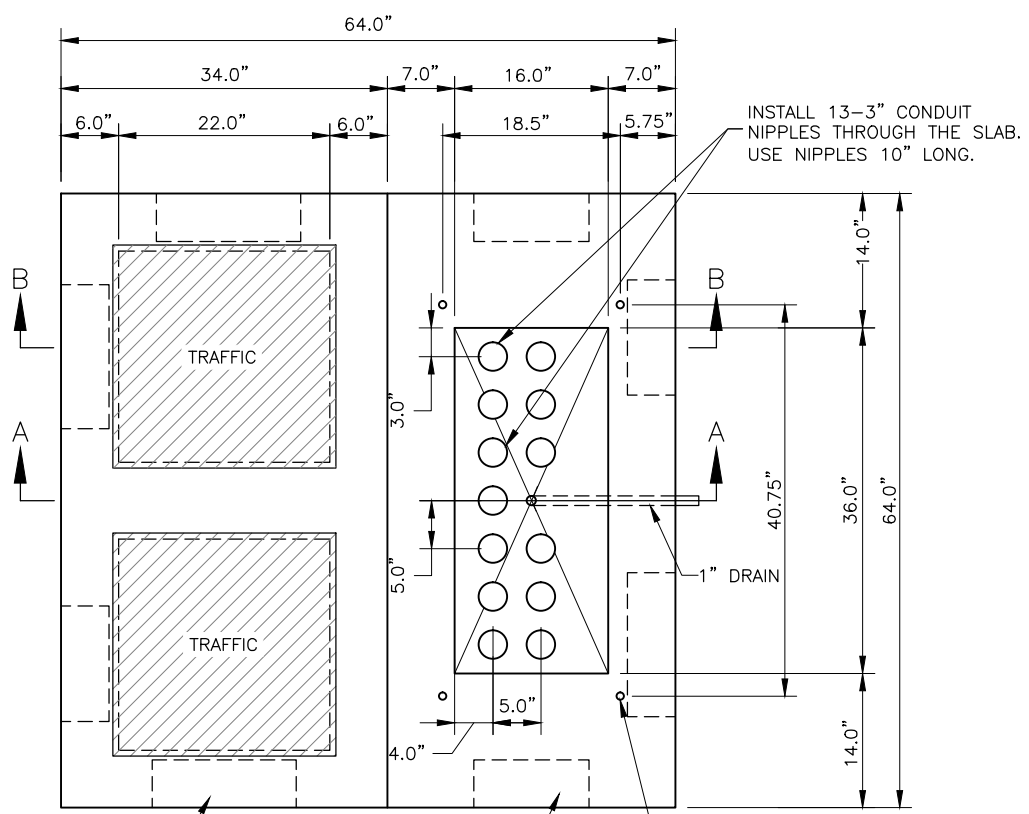


SECTION B-B

NOTE: SEE SECTION A-A FOR DIMENSIONAL DETAILS

NOTE:

- ANCHOR BOLTS SHALL NOT PROTRUDE MORE THAN 1.5" ABOVE THE TOP OF THE FOUNDATION. ANCHOR BOLT DIMENSIONS SHALL BE AS SPECIFIED BY THE CABINET MANUFACTURER.
- SEAL UNUSED CONDUIT STUBS WITH WATERTIGHT CAPS. SEAL STUBS CARRYING CONDUCTORS WITH WATERTIGHT SEALING BUSHINGS DESIGNED TO SEAL AROUND CONDUCTORS AND AGAINST THE CONDUIT WALLS.
- ROUTE THE FIVE FOOT COPPER GROUNDING JUMPER THROUGH THE 2" PIPE NIPPLE AND ATTACH IT TO THE GROUNDING BUSHING ON THE FEEDER CONDUIT.
- STOP HORIZONTAL & VERTICAL STEEL AT THE BLOCK-OUT PANELS & THE JOINT USING 90 DEGREE HOOKS. USE 2 EXTRA #4 HORIZONTAL & VERTICAL BARS. ALL SIDES AS SHOWN.
- INSTALL TRAFFIC CONTROLLER WITHIN 1-DEGREE OF PLUMB.



PLAN VIEW

15" W x 12" H x 5" D KNOCKOUT (TYPICAL OF 4)
 12" W x 15" H x 5" D KNOCKOUT (TYPICAL OF 4)
 0.75" ANCHOR BOLT (TYPICAL OF 4)

SIZE 6 OR 7 CONTROLLER CABINET FOUNDATION

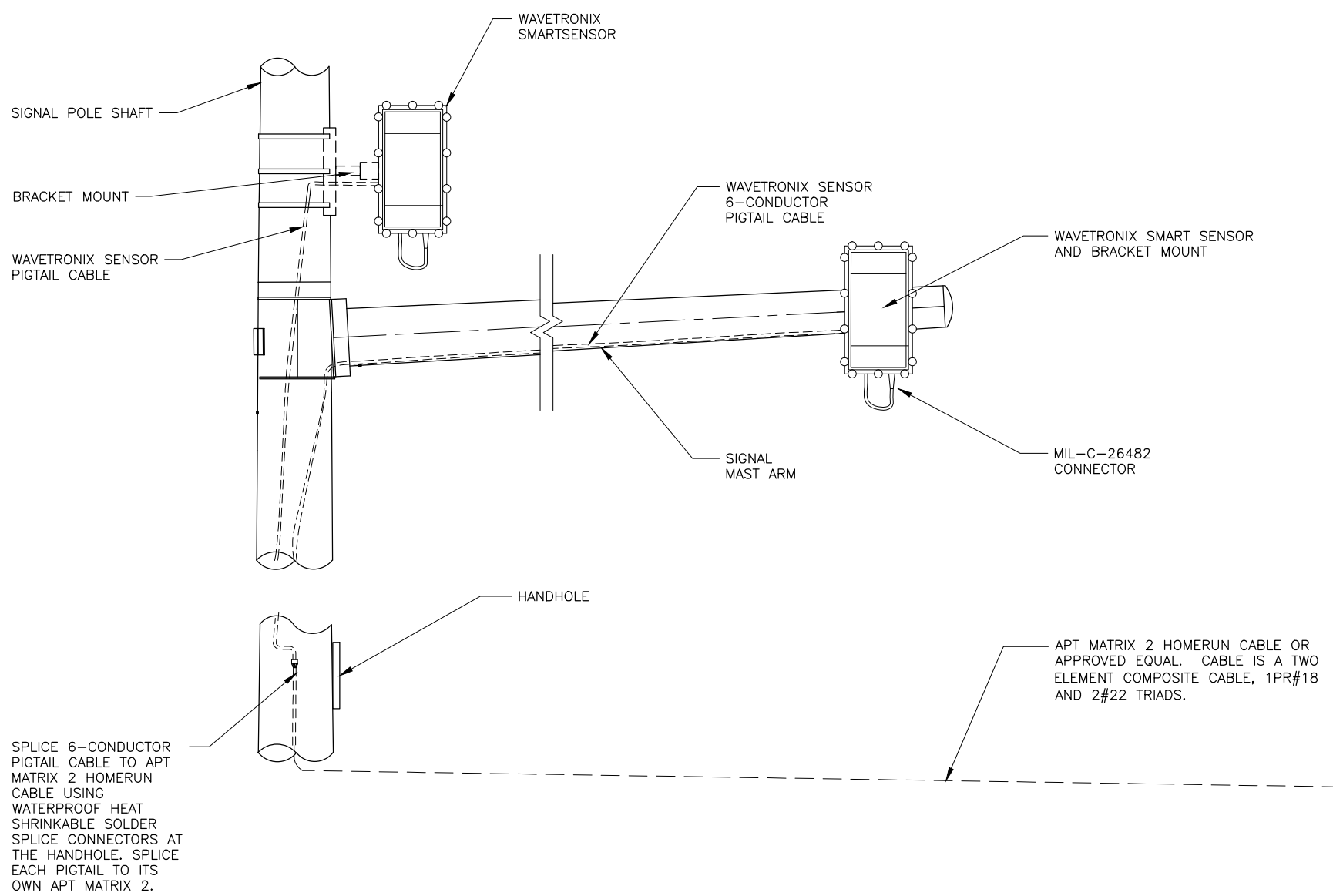
NOTE: BOLT SPACING DIMENSIONS SHOWN FOR TS2 CONTROLLER CABINETS.



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**JUNEAU-RIVERSIDE AND STEPHEN
 RICHARDS CONGESTION MITIGATION**
**CONTROLLER CABINET
 FOUNDATION**

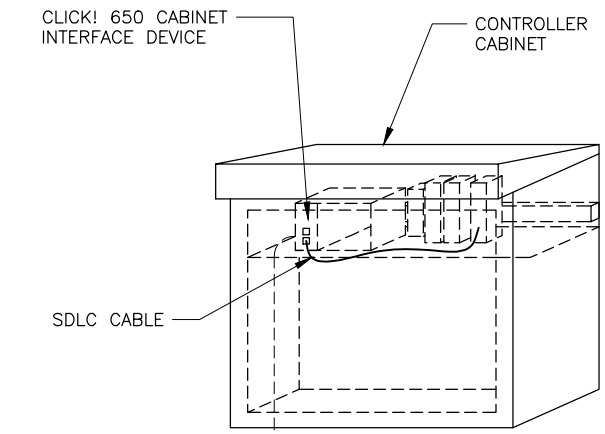
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0003207/SFHWHY00081	2019	H16	29

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 FILE 00081_H15-H16_Signal_Details.dwg
 DATE 8/8/2019 3:02 PM LAYOUT H16
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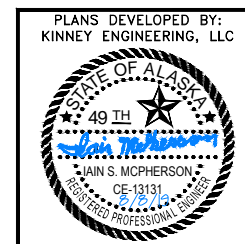


RADAR INSTALLATION NOTES:

1. PROTECT CABLE ENDS FROM MOISTURE AT ALL TIMES.
2. PULL CABLE IN ACCORDANCE WITH SECTION 660 OF THE SPECIAL PROVISIONS. PULL CABLE SO THAT THERE IS SUFFICIENT LENGTH TO REACH THE TOP OF THE CONTROLLER CABINET. CABLES ARE TO BE PULLED WITHOUT CONNECTORS ATTACHED. WHEN CABLE HAS BEEN PULLED TO FINAL LOCATIONS INSTALL AND MAKE FINAL CONNECTIONS.
3. CABLE RUNS ARE TO BE MADE CONTINUOUS WITHOUT SPLICES.
4. CABLE WITH DAMAGED INSULATION, OR THAT HAS BEEN CRIMPED OR BENT BEYOND THE MINIMUM BEND RADIUS MUST BE REPLACED AT CONTRACTORS EXPENSE.
5. THE MINIMUM BEND RADIUS SHALL NOT EXCEED MANUFACTURERS RECOMMENDATIONS.
6. ENSURE ADEQUATE LENGTH OF EACH CABLE TO ALLOW WORK ON THE ENDS OF THE CABLE IN THE CONTROLLER CABINET, AT THE POLE MOUNT ENCLOSURE AND RADAR MOUNTING LOCATION.
7. MOUNT THE RADAR AT THE LOCATION STATED IN THE PLANS. PLACEMENT MAY BE ADJUSTED BY THE ENGINEER TO ALLOW FOR BETTER AIMING OF THE RADAR OR TO AVOID OTHER HAZARDS.
8. INSTALL WATERTIGHT RUBBER GROMMETS WHERE CABLE PASSES THROUGH THE POLE.
9. FURNISH ONLY NEW EQUIPMENT OF THE BRAND AND TYPE LISTED OR ITS APPROVED EQUAL. PROVIDE AT NO ADDITIONAL COST ALL NECESSARY DEVICES, WIRES, BRACKETS/HARDWARE ETC. TO PROVIDE A FULLY FUNCTIONING RADAR DETECTION SYSTEM.



RADAR INSTALLATION DETAIL
SCALE: NOT TO SCALE

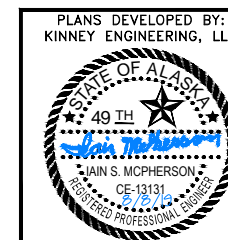


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**JUNEAU-RIVERSIDE AND STEPHEN
 RICHARDS CONGESTION MITIGATION**
 RADAR INSTALLATION DETAILS

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0003207/SFHWHY00081	2019	H17	29

NOTES:

1. ALL ANTENNA MOUNTING HARDWARE SHALL BE HOT DIPPED GALVANIZED OR STAINLESS STEEL.
2. WHENEVER PENETRATING TRAFFIC SIGNAL POLES OR ELECTROLIERS, PAINT THE PENETRATION HOLE WITH A COAT OF ZINC RICH PAINT AND INSERT A RUBBER GROMMET AROUND THE INSIDE OF THE HOLE.
3. WORK TO INSTALL INTERCONNECT SHALL BE PAID UNDER 660.0001.0000 TRAFFIC SIGNAL SYSTEM COMPLETE, RIVERSIDE DR/STEPHEN RICHARDS DR.



PLANS DEVELOPED BY:
 KINNEY ENGINEERING, LLC

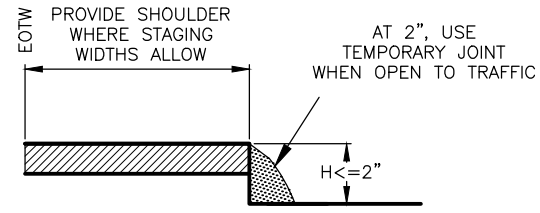
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 (907) 465-1763

**JUNEAU-RIVERSIDE AND STEPHEN
 RICHARDS CONGESTION MITIGATION**

INTERCONNECT PLAN

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0003207/SFHwy00081	2019	T2	29

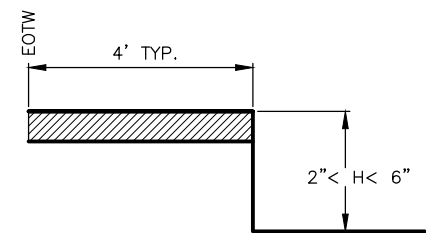
VERTICAL DROP-OFFS



CASE A

DROP-OFFS < 2 INCHES (PAVED SURFACES ONLY)

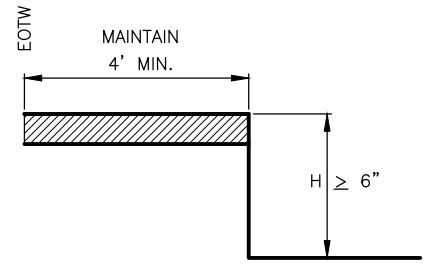
1. USE "UNEVEN LANES" (CW8-11) SIGNS FOR ALL DROP-OFFS IN BETWEEN TRAFFIC LANES.
2. LEAVE NO DROP-OFFS > 1.5" IN THE TRAFFIC LANE OR ACTIVE WHEEL TRACK.



CASE B

2" < DROP-OFFS < 6" (ALL ROADWAY SURFACES)

1. PLACE CONES OR CANDLES FOR DROP-OFFS ≥ 4 FEET AND ≤ 30 FEET FROM THE EOTW.
2. USE DRUMS OR TYPE II BARRICADES FOR DROP-OFFS < 4 FEET FROM THE EOTW.

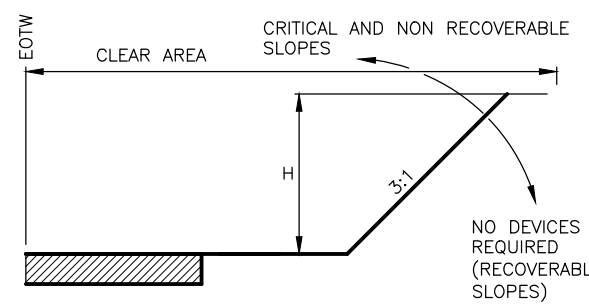


CASE C

DROP-OFFS ≥ 6" (ALL ROADWAY SURFACES AND ROADSIDE SLOPES)

1. PLACE DRUMS OR TYPE II BARRICADES FOR DROP-OFFS ≤ 24" WITHIN THE CLEAR AREA.
2. PROVIDE PORTABLE CONCRETE BARRIER FOR DROP-OFFS > 24" WITHIN 15 FEET OF THE EOTW. USE DRUMS OR TYPE II BARRICADES IF BEYOND 15 FEET.

CUT SLOPES



EOTW = EDGE OF TRAVELED WAY

CLEAR AREA REQUIREMENTS

	LOW SPEED < = 35 MPH
URBAN	10' DITCH SECTIONS, OR 2' BEHIND CURB

CHANNELIZING DEVICE REQUIREMENTS FOR SLOPES 3:1 OR STEEPER WITHIN THE CLEAR AREA

	$H \leq 15'$
> 2000 VPD	TYPE II BARRICADE OR DRUMS

EQUIPMENT NOTES:

1. WHEN THERE IS ACTIVE, NONMOBILE CONSTRUCTION EQUIPMENT WITHIN THE CLEAR AREA, DELINEATE THE ROADSIDE WITH TRAFFIC CONES.
2. SEPARATE PROCEDURES ARE REQUIRED FOR MOBILE WORK ZONE OPERATIONS AND SHORT DURATION WORK OF LESS THAN 12 HOURS.

WINTER SHUTDOWN NOTES:

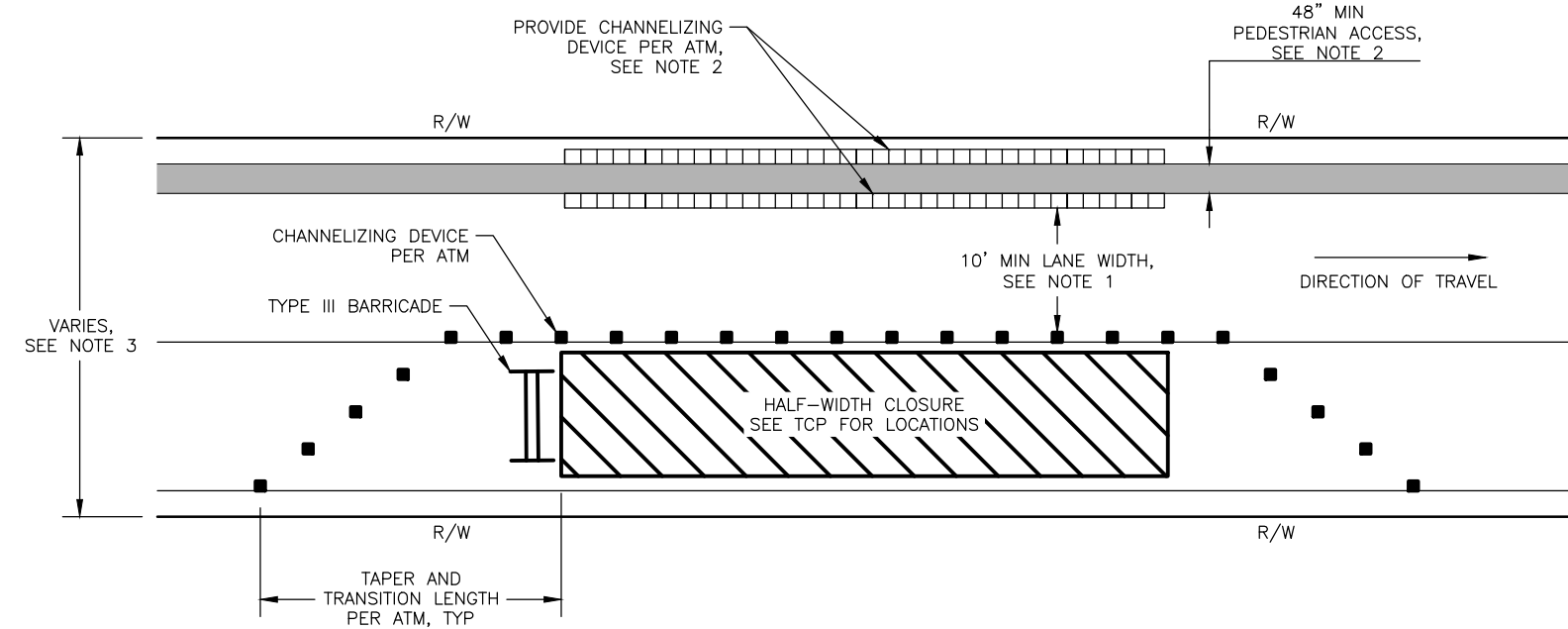
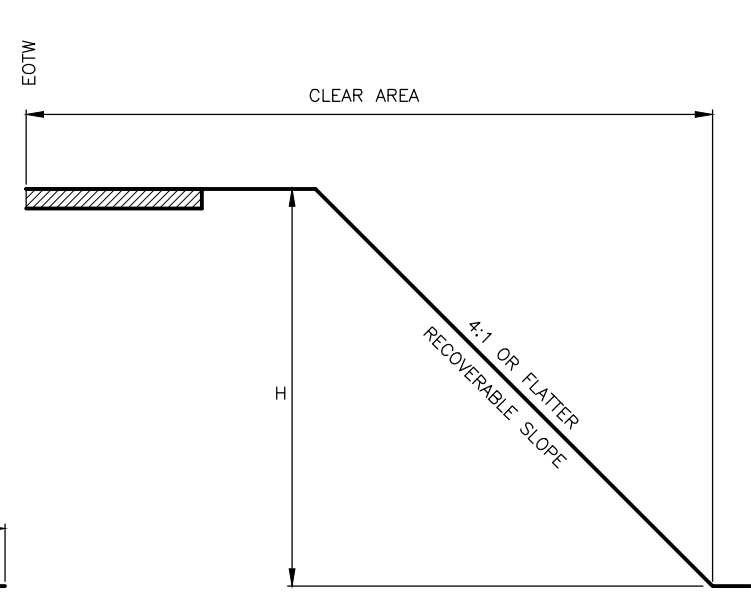
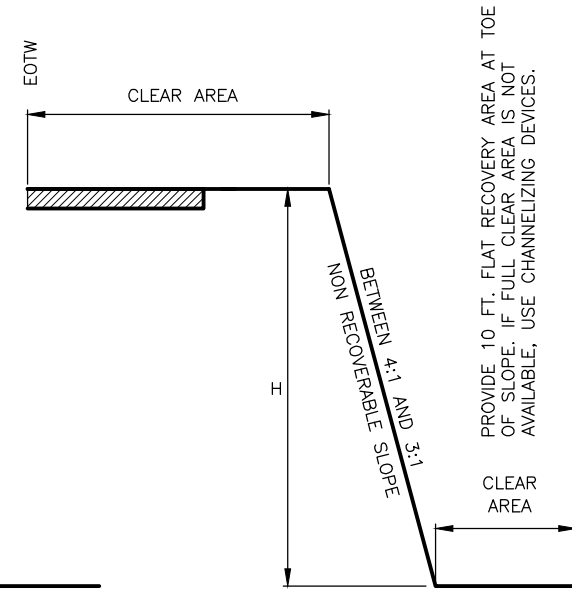
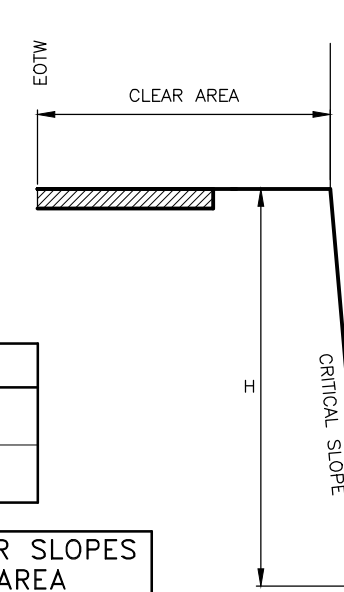
1. WHEN REQUIRED, USE CHANNELIZING DEVICES WHICH CAN BE MAINTAINED OVER WINTER.
2. NO CHANNELIZING DEVICES ARE REQUIRED IF:
 - A) CONSTRUCTION SLOPES ARE RECOVERABLE, AND
 - B) SLOPES ARE SMOOTH AND COMPACTED, AND
 - C) REQUIRED CLEAR AREA IS PROVIDED

FILL SLOPES

STEEPER THAN OR EQUAL TO 3:1

BETWEEN 4:1 AND 3:1

FLATTER THAN OR EQUAL TO 4:1



HALF-WIDTH CLOSURE DETAIL

TRAFFIC CONTROL NOTES:

1. USE THE EXISTING CROSS-SECTION (PRIOR TO CONSTRUCTION) AS A BASIS FOR DETERMINING WHEN CHANNELIZING DEVICES ARE NEEDED.
2. INSTALL CHANNELIZING DEVICES WHEN THE HORIZONTAL OR VERTICAL CURVATURE IS MADE MORE SEVERE.
3. INSTALL FLEXIBLE DELINEATORS WHEN ALL VEGETATION OVER 4 FEET HIGH IS CLEARED FROM ALL FILL SLOPES THAT ARE 3:1 OR STEEPER IN THE CLEAR AREA.
4. USE PORTABLE CONCRETE BARRIER FOR WARRANTING CONDITIONS WHICH LAST LONGER THAN 3 DAYS. FOR CONDITIONS LASTING LESS THAN 3 DAYS, OTHER CHANNELIZING DEVICES MAY BE INSTALLED.

HALF-WIDTH CLOSURE NOTES:

1. PROVIDE MINIMUM 10' LANE WIDTH AS MEASURED FROM NEAR FACE OF CHANNELIZING DEVICE TO NEAR FACE OF CHANNELIZING DEVICE OR CURB FACE.
2. WHEN POSSIBLE, ROUTE PEDESTRIANS ON EXISTING OR NEWLY CONSTRUCTED SIDEWALK. OTHERWISE, DELINEATE TEMPORARY PEDESTRIAN ACCESS USING CHANNELIZING DEVICES PER MUTCD. TEMPORARY PEDESTRIAN ACCESS SHALL BE A MINIMUM 48" WIDTH AS MEASURED FROM NEAR FACE OF CHANNELIZING DEVICE TO NEAR FACE OF CHANNELIZING DEVICE WITH AN ADA-COMPLIANT SMOOTH SURFACE. PROVIDE ADA-COMPLIANT WHEELCHAIR RAMPS AT LOCATIONS WHERE PEDESTRIANS ARE ROUTED FROM THE SIDEWALK INTO THE STREET. PHASE WORK IN A MANNER THAT GUIDES PEDESTRIANS THROUGH THE WORK ZONE IN THE MOST CONTINUOUS AND DIRECT ROUTE PRACTICABLE AND THAT MINIMIZES CROSSINGS TO THE OPPOSITE SIDE OF THE ROADWAY.
3. RIGHT-OF-WAY WIDTH VARIES BETWEEN 55' - 66'. SEE PLAN SHEETS FOR RIGHT-OF-WAY LIMITS. LOCATE TEMPORARY TRAFFIC CONTROL WITHIN LIMITS OF RIGHT-OF-WAY.

PLANS DEVELOPED BY:
KINNEY ENGINEERING, LLC

TCP NOT SEALED IN ACCORDANCE WITH ALASKA HIGHWAY PRECONSTRUCTION MANUAL SECTION 1400.3.5 DATED JANUARY 30, 2012.

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
6860 GLACIER HIGHWAY, JUNEAU, AK 99811
(907) 465-1763

JUNEAU-RIVERSIDE AND STEPHEN RICHARDS CONGESTION MITIGATION

TRAFFIC CONTROL DETAILS

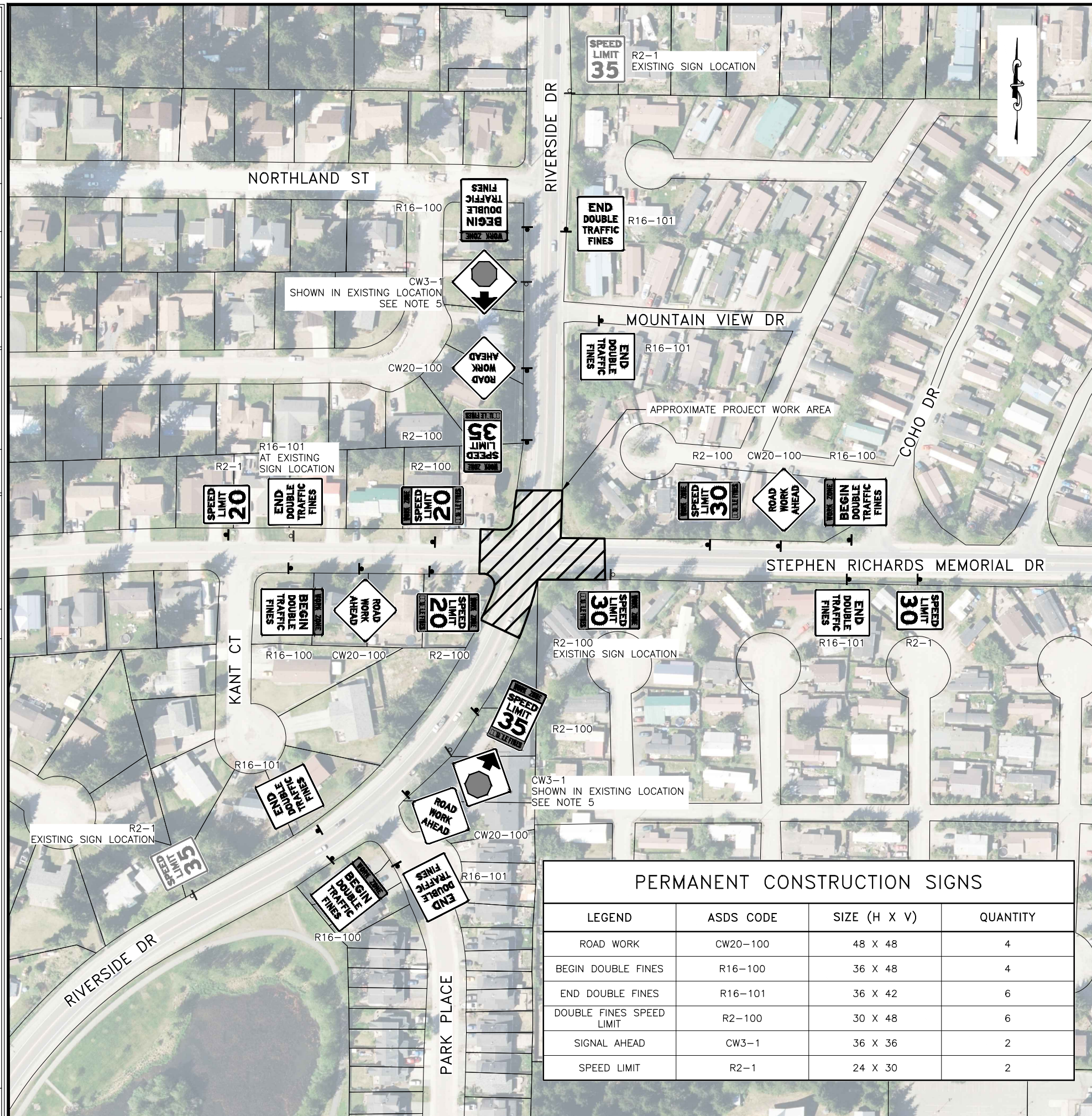
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 FILE 00081_T2_DETAILS.dwg
 DATE 9/3/2019 1:06 PM
 LAYOUT T2
 DESIGNED GMD
 CHECKED ISM
 DRAFTED WJP

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd., Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. 1102
 FILE 00081_T1_TCP.dwg DATE 9/3/2019 1:04 PM LAYOUT T1 DESIGNED GMD CHECKED ISM DRAFTED WJP

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0003207/SFHwy00081	2019	T1	29

GENERAL TRAFFIC CONTROL PLAN NOTES

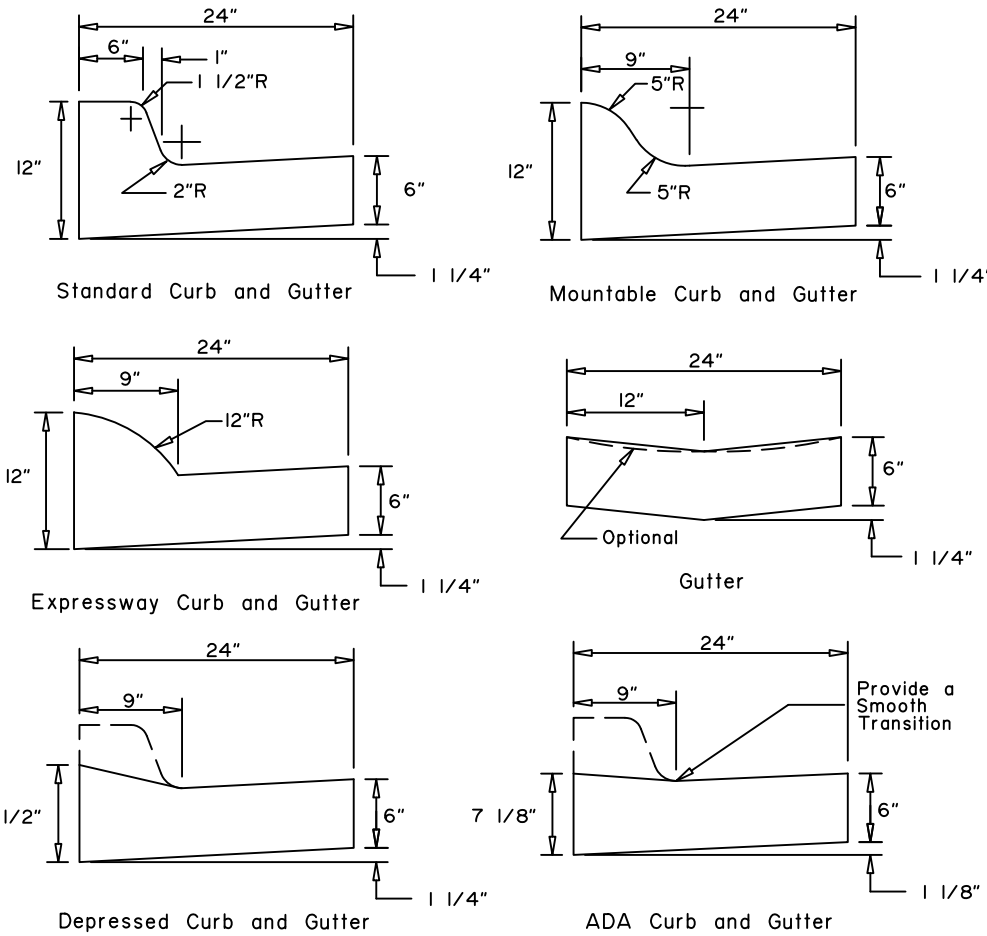
- THIS IS A GENERALIZED TRAFFIC CONTROL PLAN (TCP) TO SHOW ALLOWABLE LANE CLOSURES, ROAD CLOSURES, AND DETOUR ROUTES. THE CONTRACTOR SHALL DEVELOP AN APPROVED TCP AND AN APPROVED CONSTRUCTION PHASING PLAN IN ACCORDANCE WITH THIS PLAN AND SECTION 643 OF THE PROJECT SPECIFICATIONS.
- PROJECT IS SCHEDULED FOR CONSTRUCTION SAME YEAR AS MENDENHALL LOOP ROAD CAPACITY PROJECT NO. Z676220000. COORDINATE TCP WITH THAT PROJECT.
- MAINTAIN, AT A MINIMUM, TWO-WAY, ONE LANE TRAFFIC THROUGH INTERSECTION DURING CONSTRUCTION ACTIVITIES.
- WHEN NO CONSTRUCTION ACTIVITY IS TAKING PLACE, MAINTAIN 4-WAY STOP CONTROL AT INTERSECTION UNTIL SIGNAL SYSTEM IS ACTIVATED.
- STOPPING SIGHT DISTANCE ON RIVERSIDE DR IS OBSTRUCTED. MAINTAIN A CW3-1 SIGN 305 FT FROM STOP SIGN LOCATION. WHEN STOP SIGN IS LOCATED AT INTERSECTION USE THE EXISTING W3-1 SIGN LOCATION.
- PROVIDE ACCESS TO RESIDENTIAL PROPERTIES AT ALL TIMES.
- PROVIDE ACCESS TO COMMERCIAL PROPERTIES DURING THEIR BUSINESS HOURS. CONTRACTOR SHALL CONTACT ALL BUSINESSES IN THE PROJECT AREA TO COORDINATE AND ENSURE ACCESS.
- DRIVEWAYS ADJACENT TO AN EXCAVATION SHALL BE RAMPED TO PROVIDE ACCESS.
- TCPs WHICH REQUEST CLOSURE OF ANY RESIDENTIAL OR COMMERCIAL ACCESS SHALL BE SUBMITTED FOR APPROVAL IN ACCORDANCE WITH SECTION 643. ANY ACCESS CLOSURE SHALL NOT OCCUR WITHOUT WRITTEN APPROVAL OF THE ENGINEER. COORDINATE CLOSURE PLANS WITH THE AFFECTED PROPERTY OCCUPANT AND/OR OWNER. THE CONTRACTOR SHALL NOTIFY THE AFFECTED PROPERTY A MINIMUM OF 48 HOURS PRIOR TO IMPLEMENTATION OF AN APPROVED ACCESS CLOSURE.
- PROVIDE ACCESS THROUGH THE PROJECT FOR EMERGENCY VEHICLES.
- PROVIDE ACCESS FOR TRANSIT BUSES AND ITS USERS.
- PROVIDE PUBLIC NOTICE OF DETOURS AND CLOSURES IN ACCORDANCE WITH SECTION 643.
- BEFORE BEGINNING WORK WITHIN THE PROJECT LIMITS, ERECT TRAFFIC CONTROL DEVICES REQUIRED BY THE APPROVED TCP.
- PROVIDE TRAFFIC CONTROL DEVICES MEETING THE REQUIREMENTS OF SECTION 643.
- EXISTING SIGNS WHICH CONFLICT WITH CONSTRUCTION SIGNS SHALL BE COVERED.
- CONSTRUCTION SIGNS MAY NOT BE PLACED ON PORTABLE SIGN SUPPORTS FOR MORE THAN THREE CONSECUTIVE CALENDAR DAYS. SIGNS REQUIRED LONGER THAN THIS PERIOD SHALL BE MOUNTED ON A PERMANENT SIGN POST WITH THE EXCEPTION OF PEDESTRIAN TRAFFIC CONTROL SIGNS AND SIGNS MOUNTED ON A TYPE III BARRICADE WHICH MAY BE INSTALLED ON PORTABLE SIGN SUPPORTS FOR THE DURATION OF THEIR INSTALLATION.
- SIGNS DEPICTED ON THIS SHEET ARE PERMANENT CONSTRUCTION SIGNS. LOCATIONS SHOWN ARE APPROXIMATE. SPACE BETWEEN SIGNS SHALL BE 100 FT. LOCATE EXISTING UNDERGROUND UTILITIES BEFORE INSTALLING SIGN FOUNDATIONS.
- RESTORE EXISTING ROADSIDE SIGNS IMPACTED BY CONSTRUCTION SIGNAGE TO THEIR PRECONSTRUCTION CONDITIONS UNLESS OTHERWISE NOTED IN PLANS.
- SPECIAL CONSTRUCTION SIGNS SHALL BE FABRICATED OF MATERIALS CONFORMING TO SECTION 615 OF THE SPECIFICATIONS AND SHALL HAVE A BLACK LEGEND ON ORANGE BACKGROUND.
- CONSTRUCTION SIGNS ARE NOT PERMITTED TO BE INSTALLED ON UTILITY POLES.
- ALL SIGNS SHALL BE SUPPLEMENTED WITH HIGH LEVEL WARNING DEVICES.
- ALL BARRICADES SHALL HAVE ONE OPERABLE FLASHING LIGHT FOR EACH 10 FEET OF BARRICADE, WITH A MINIMUM OF TWO LIGHTS PER TYPE III BARRICADE EXCEPT IN A TAPER WHERE ONLY THE FIRST TWO LIGHTS SHALL FLASH (TYPE "A") AND THE REMAINDER SHALL BE STEADY BURN (TYPE "C").
- TYPE "A" FLASHING WARNING LIGHTS SHALL BE USED TO MARK THE TYPE III BARRICADES, ROAD CLOSURES, AND ADVANCE DETOUR SIGNING AT NIGHT.
- DEVICE SPACING ON TAPERS AND TANGENTS SHALL BE ONE (1) X THE POSTED SPEED LIMIT (IN FEET).
 RIVERSIDE DRIVE - 35 MPH
 STEPHEN RICHARDS DR WEST OF INTERSECTION - 20 MPH
 STEPHEN RICHARDS DR EAST OF INTERSECTION - 30 MPH
- TEMPORARY STRIPING SHALL BE EITHER TEMPORARY RAISED PAVEMENT MARKERS OR PREFORMED PAVEMENT MARKING TAPE.
- TRAFFIC CONTROL ZONES PROVIDING TWO-WAY TRAFFIC ON A ROAD REDUCED TO A SINGLE LANE REQUIRE A FLAGGER LOCATED AT EACH END.



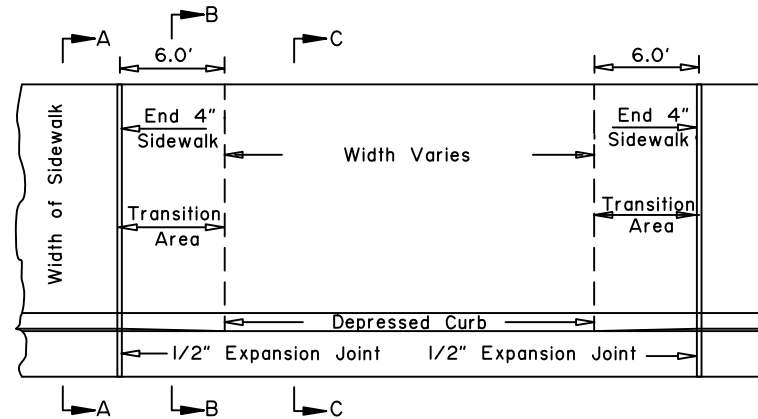
PERMANENT CONSTRUCTION SIGNS			
LEGEND	ASDS CODE	SIZE (H X V)	QUANTITY
ROAD WORK	CW20-100	48 X 48	4
BEGIN DOUBLE FINES	R16-100	36 X 48	4
END DOUBLE FINES	R16-101	36 X 42	6
DOUBLE FINES SPEED LIMIT	R2-100	30 X 48	6
SIGNAL AHEAD	CW3-1	36 X 36	2
SPEED LIMIT	R2-1	24 X 30	2

PLANS DEVELOPED BY:
 KINNEY ENGINEERING, LLC
 TCP NOT SEALED IN ACCORDANCE WITH ALASKA HIGHWAY PRECONSTRUCTION MANUAL SECTION 1400.3.5 DATED JANUARY 30, 2012.

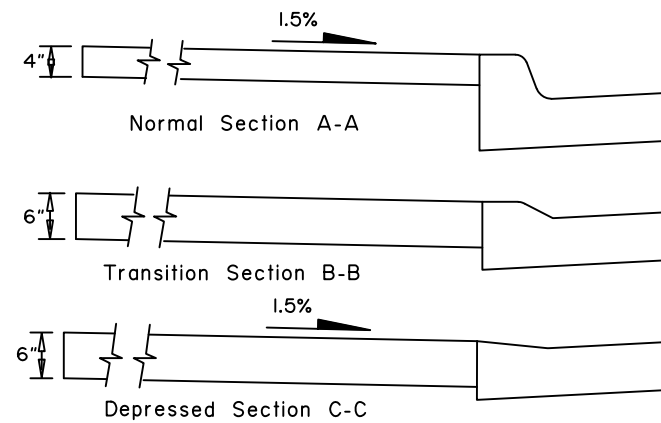
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
 6860 GLACIER HIGHWAY, JUNEAU, AK 99811
 (907) 465-1763
JUNEAU-RIVERSIDE AND STEPHEN RICHARDS CONGESTION MITIGATION
 TRAFFIC CONTROL PLAN



CURB and GUTTER DETAILS



DRIVEWAY CURB CUT DETAILS

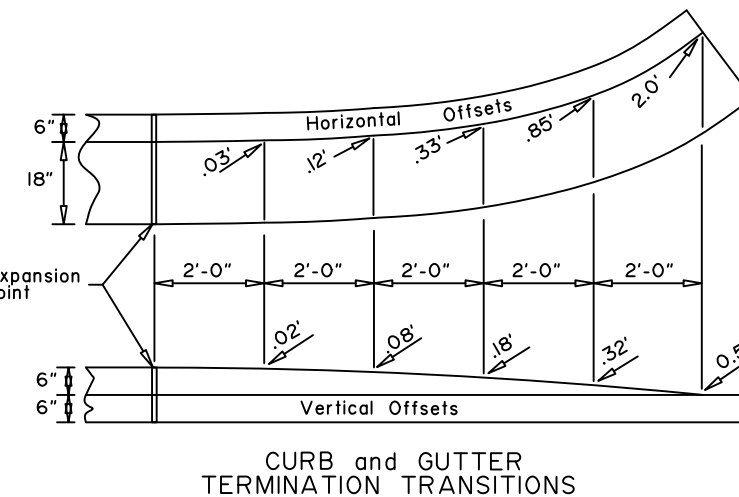
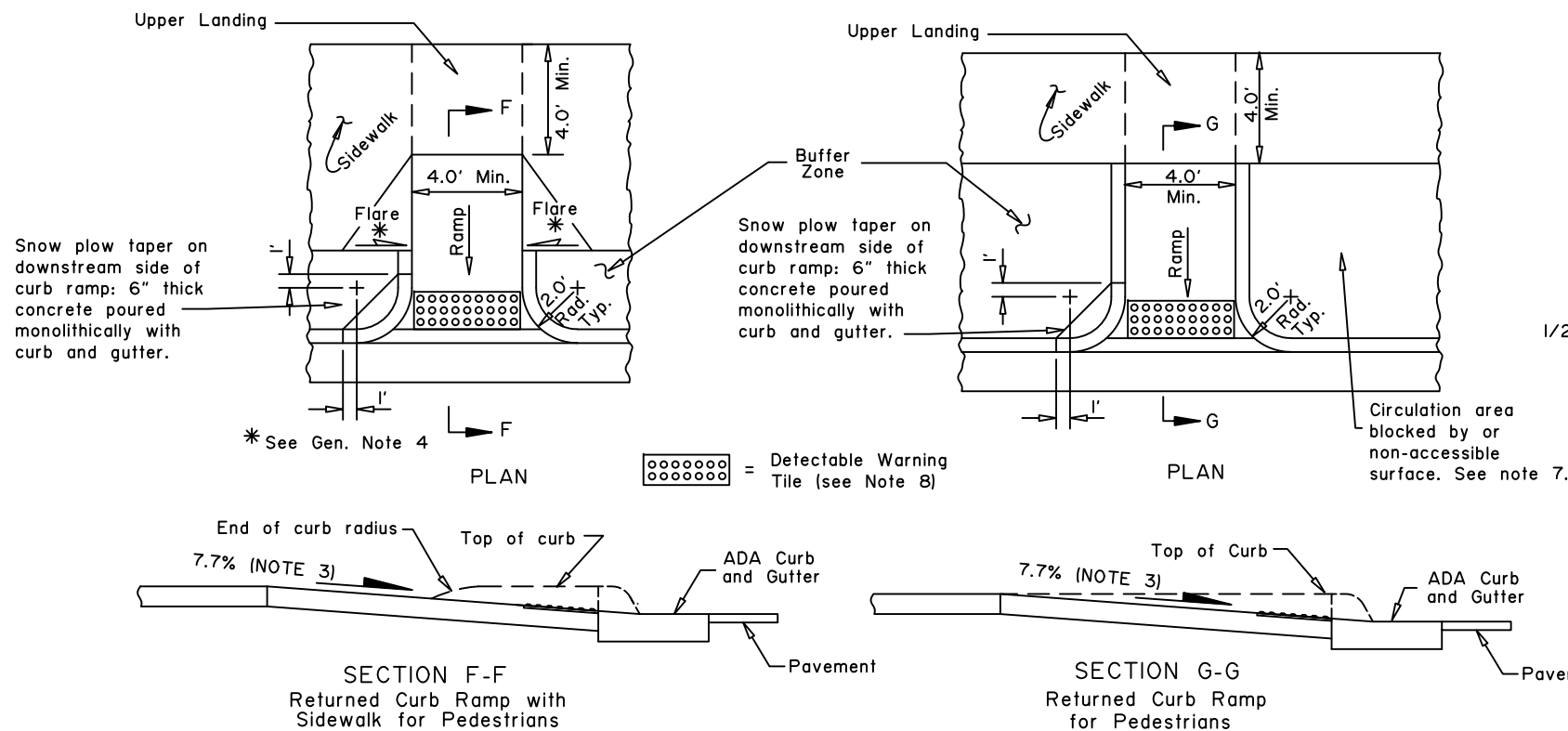


CONSTRUCTION NOTES:

1. Use the type of curb and gutter shown on the plans.
2. Construct ramp runs and landings of concrete, regardless of whether the sidewalk is asphalt or concrete.
3. Construct ramp slopes at a 7.7% nominal grade, or flatter. Ramp slopes may be increased to a maximum of 8.3% when site conditions warrant it. Ramp lengths should be increased to keep grades under the 8.3% maximum, but are not required to exceed 15.0 feet. The resulting ramp grade at a 15.0 foot ramp length is acceptable even if it exceeds 8.3%.
4. Construct flare slopes at 8.3% (measured parallel to the curb line) or flatter, sidewalk cross slopes at 1.5% nominal (1.0% min. and 2.0% max), and ADA Curb and Gutter gutter pan slopes at 4.7% nominal. Construct grade breaks perpendicular to ramp runs.
5. Do not construct flare slopes steeper than 10.0%, sidewalk cross slopes steeper than 2.0% and ADA Curb and Gutter gutter pan slopes steeper than 5.0%. These are the steepest slopes allowed under the 2006 ADA Standards for Transportation Facilities.
6. Provide a coarse broomed finish on ramp runs perpendicular to the ramp slope.
7. When approved by the Engineer, curb returns may be replaced with flares at locations where access to the side of a ramp run is free of poles, utility boxes, other obstructions, or non-accessible surfaces such as a dirt planter strips. See Standard Drawing I-22 for flare details.
8. Install 24\"/>

DESIGN NOTES:

1. Use Mountable or Expressway curbs on medians and traffic islands.
2. These details are compliant with the 2006 ADA Standards for Transportation Facilities.



CURB and GUTTER TERMINATION TRANSITIONS

Note: Drawing not to scale

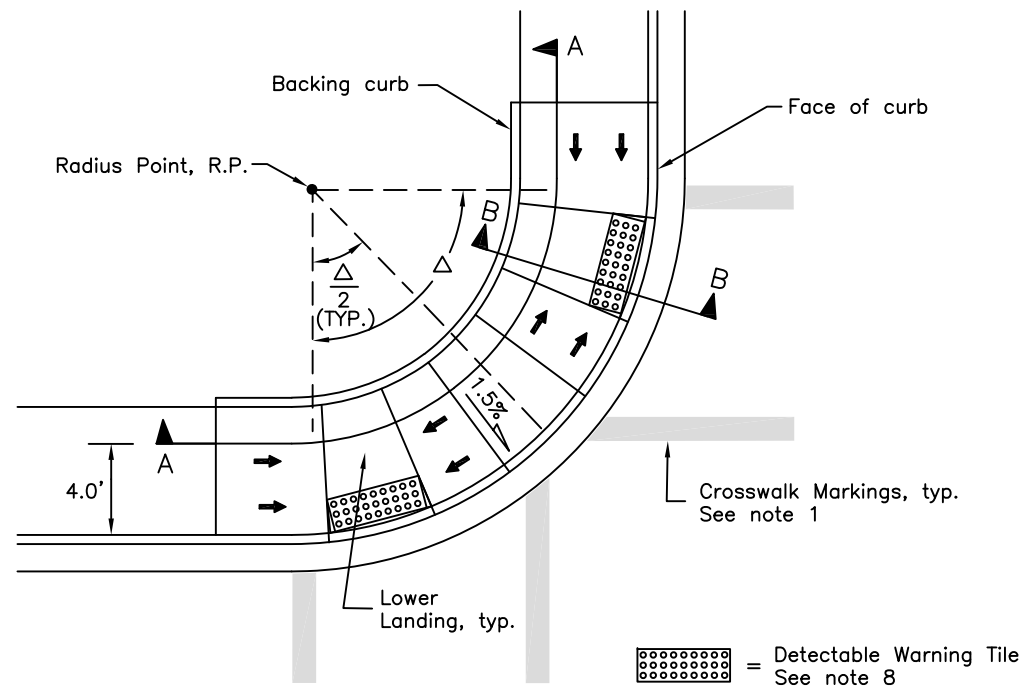
State of Alaska DOT&PF
ALASKA STANDARD PLAN
CURB CUT,
CURB & GUTTER
AND CURB RAMP DETAILS

Adopted as an Alaska Standard Plan by: *Kenneth J. Fisher*
Kenneth J. Fisher, P.E.
Chief Engineer

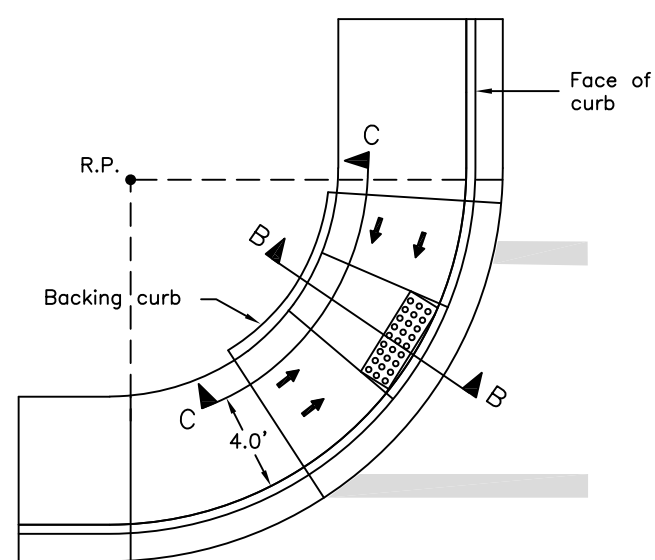
Adoption Date: 02/08/2019

Last Code and Stds. Review By: Date:

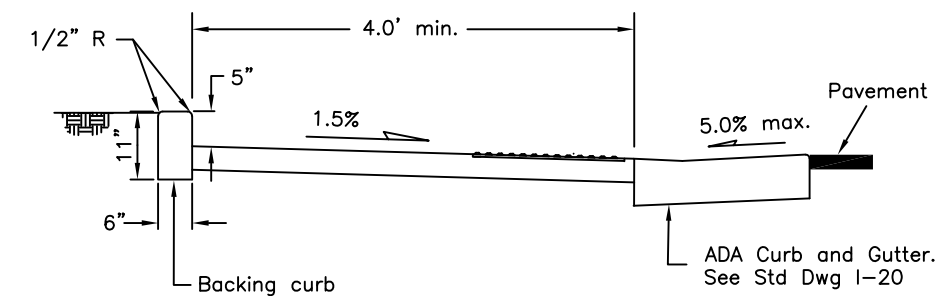
Next Code and Standards Review date: 02/08/2029



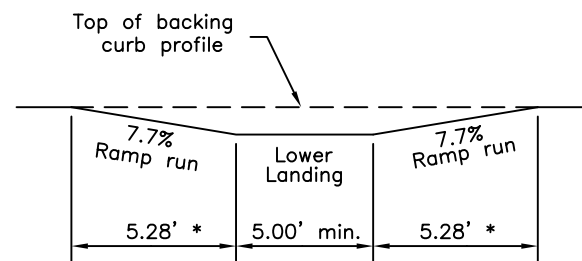
TWO CROSSING DIRECTIONS
At corner



ONE CROSSING DIRECTION
At corner - generic location shown

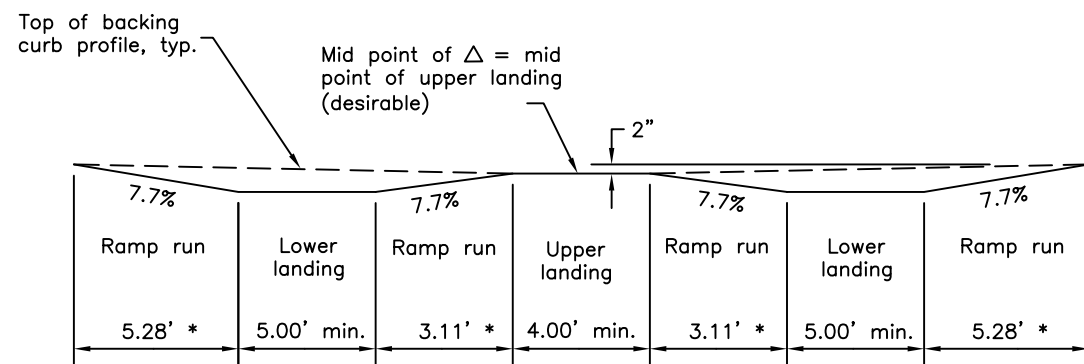


SECTION B-B



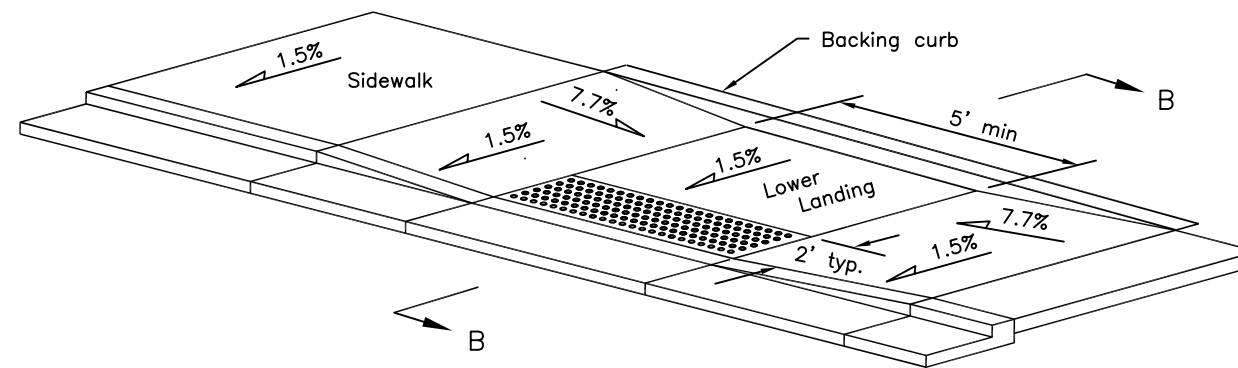
PROFILE C-C

* See Const. Note 5



* See Const. Note 5

PROFILE A-A



MID-BLOCK

Note: Drawing not to scale

CONSTRUCTION NOTES:

1. See plans for ramp type at specific locations. See striping plans for crosswalk layouts.
2. Construct ramp runs and landings of concrete, regardless of whether the sidewalk is asphalt or concrete.
3. When one parallel curb ramp will serve two directions, use the One Crossing Direction detail and refer to the striping plans for crosswalk layouts.
4. Ramp run lengths are shown for a flat sidewalk grade. For other sidewalk grades, increase or decrease ramp and flare lengths to maintain the slopes shown.
5. Construct ramp slopes at a nominal 7.7% grade, or flatter. Ramp slopes may be increased to a maximum of 8.3% when site conditions warrant it. Ramp lengths should be increased to keep grades under the 8.3% maximum, but are not required to exceed 15.0 feet. The resulting ramp grade at a 15.0 foot ramp length is acceptable even if it exceeds 8.3%.
6. Construct sidewalk cross slopes at 1.5% nominal (1.0% min. and 2.0% max).
7. Provide a coarse broomed finish running perpendicular to the curb on ramp runs and upper landings and parallel to the curb on lower landings.
8. Install 24" detectable warning tiles meeting Section 705.1 of the 2006 ADA Standards for Transportation Facilities for the full width of the ramp.
9. Maximum cross slope on lower landings is 2.0% as measured in any direction. Maximum cross slope on ramps is 2.0% measured perpendicular to the ramp run.
10. Provide 4" minimum thick concrete on ramps and landings.

DESIGN NOTES

1. Parallel curb ramps are typically used when the sidewalk is at least 4' wide but can not be constructed wide enough for perpendicular ramps.
2. When one curb ramp is installed in a curb radius to serve both directions of pedestrian traffic, construct it in accordance with the One Crossing Direction detail.
3. Locate lower landings within the inner edges of marked crosswalks or, if crosswalks are not marked, within the area a standard marked crosswalk would enclose. See Standard Drawing T-23 for standard crosswalk layout.
4. Avoid drainage grates within marked crosswalks or, if crosswalks aren't marked, within the area a standard marked crosswalk would enclose. If a drainage grate is located directly in the pedestrian accessible route (e.g. a wheel chair must pass over it), install a grate meeting the requirements of Section 302.3 of the 2006 ADA Standards.
5. These details are compliant with the 2006 ADA Standards for Transportation Facilities, except for the 15' maximum ramp length noted in Construction Note 5, which is from the Draft 2011 PROWAG.

State of Alaska DOT&PF
ALASKA STANDARD PLAN

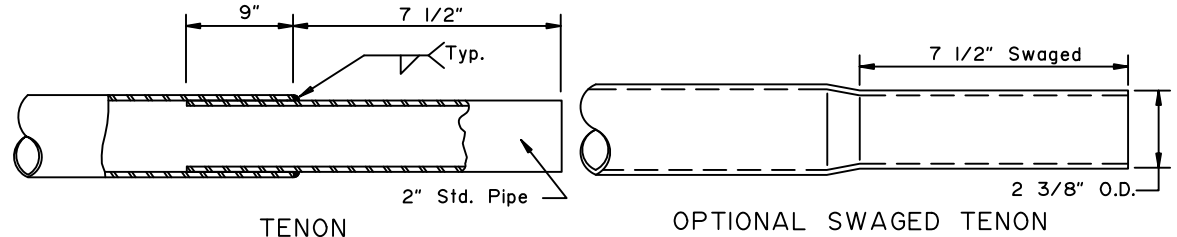
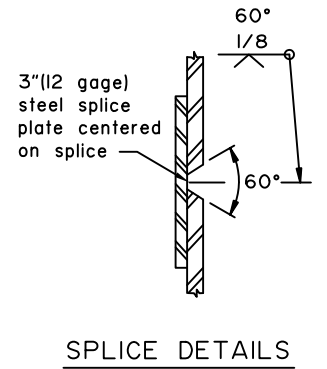
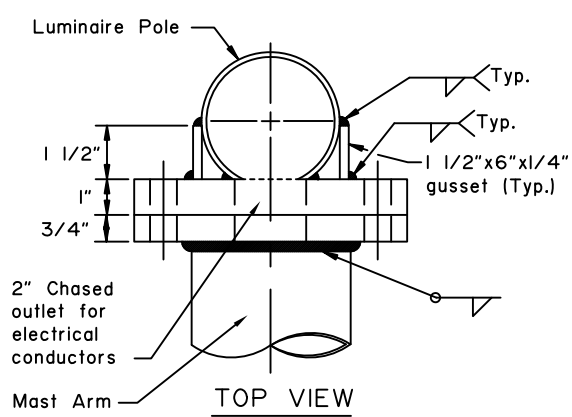
PARALLEL CURB RAMP

Adopted as an Alaska Standard Plan by:
Kenneth J. Fisher, P.E.
Chief Engineer

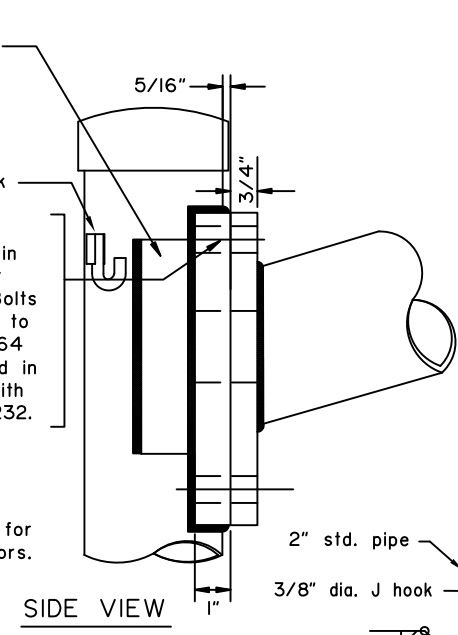
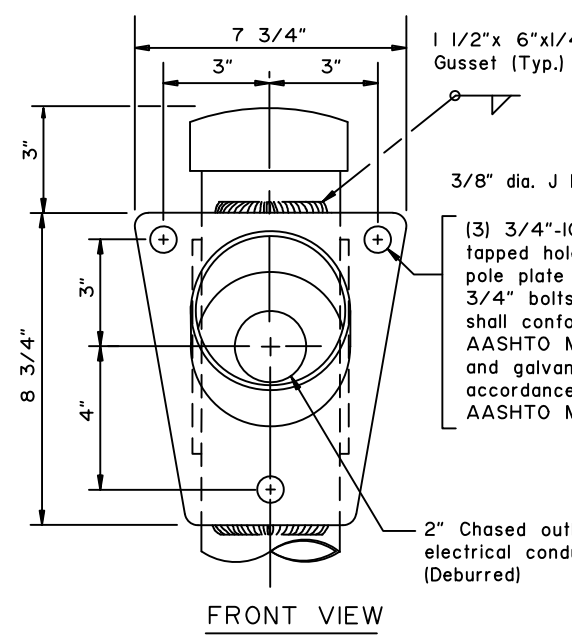
Adoption Date: 02/08/2019

Last Code and Stds. Review By: Date:

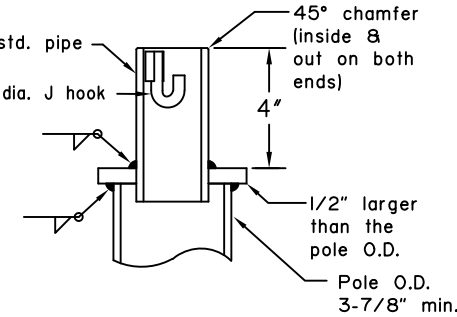
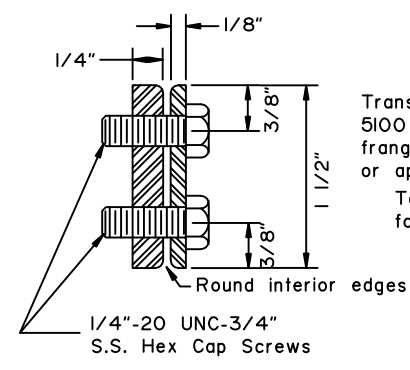
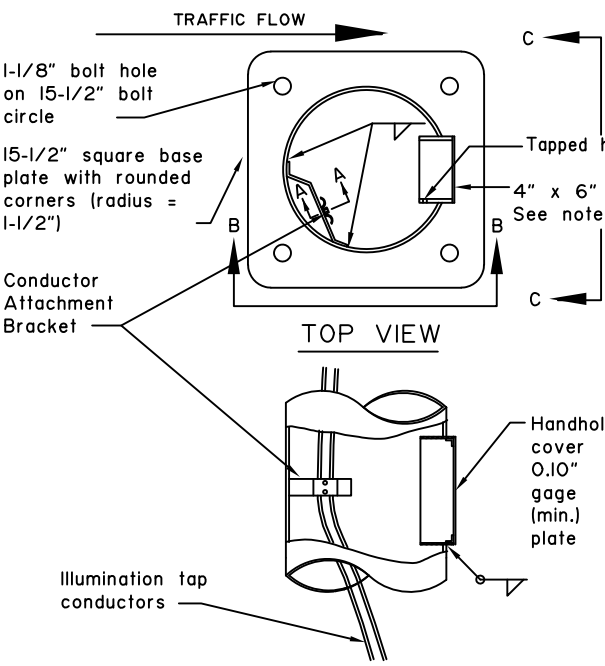
Next Code and Standards Review date: 02/08/2029



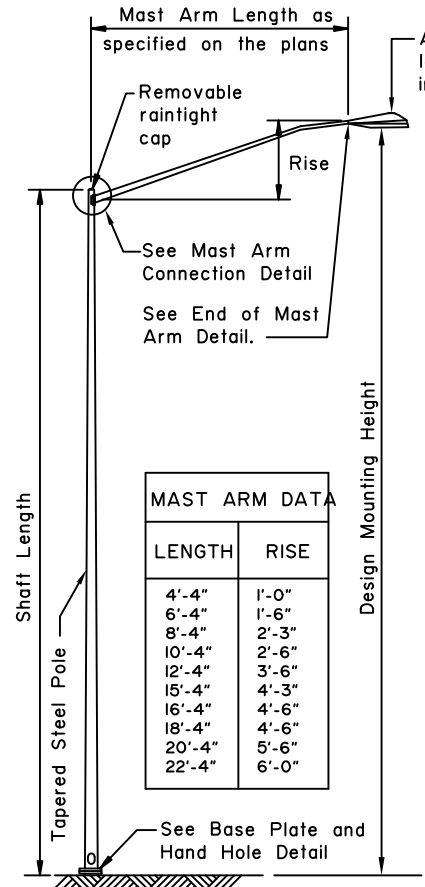
END OF MAST ARM DETAIL



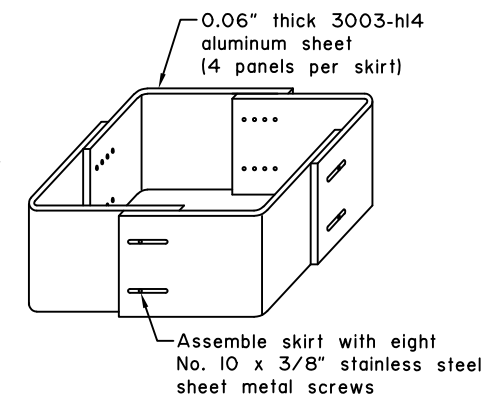
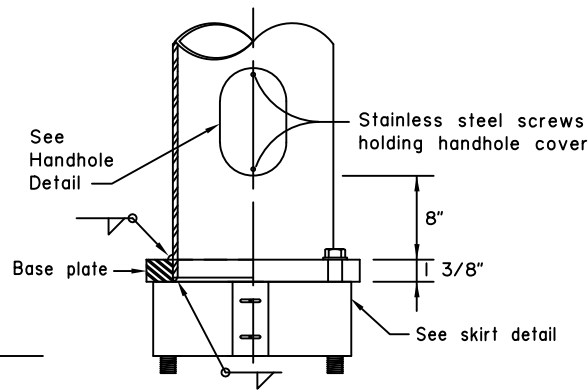
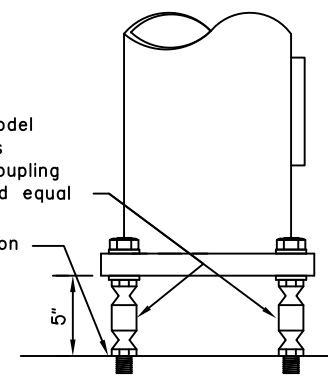
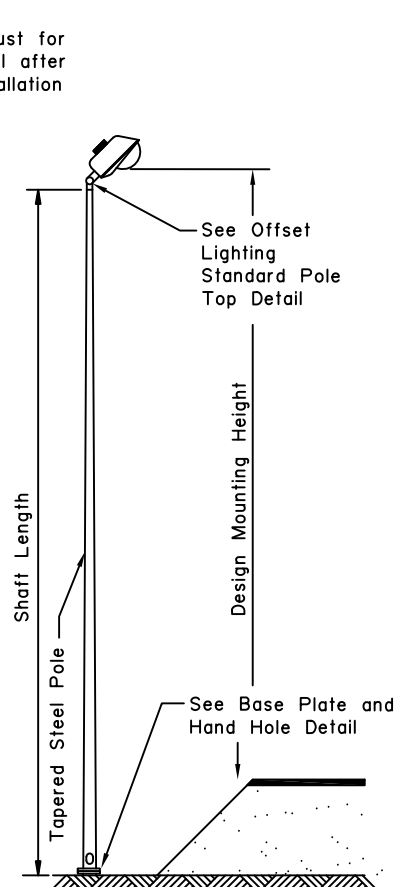
MAST ARM CONNECTION DETAIL



OFFSET LIGHTING STANDARD POLE TOP DETAIL (CUTAWAY FOR CLARITY)



MAST ARM DATA	
LENGTH	RISE
4'-4"	1'-0"
6'-4"	1'-6"
8'-4"	2'-3"
10'-4"	2'-6"
12'-4"	3'-6"
15'-4"	4'-3"
16'-4"	4'-6"
18'-4"	4'-6"
20'-4"	5'-6"
22'-4"	6'-0"



GENERAL NOTES

- Design and fabricate all shafts to support a mast arm 22' long with luminaire. Assume each offset fixture weighs 60 lbs. and has an effective projected area of 2.8 SF. Assume each Cobra head weighs 55 lbs. and has an effective projected area of 1.2 square feet. With this dead load, limit the angular rotation of the pole top to 1° 40' maximum.
- Weld size to be determined by manufacturer.
- Mounting height, if specified in the plans, refers to the height of luminaire above the roadway. Adjust each pole's shaft length to maintain this difference in elevation whenever slope and/or offset varies.
- Minimum outside diameter at the top of pole equals 3-7/8". Pole diameter shall taper uniformly from the top of pole to the base plate, with a maximum taper rate of 0.15" per foot.
- Mast arm rise may vary ±0.5ft from the values listed in the table.
- Locate the handhole at 90 degrees to the mast arm on the side of pole downstream from traffic flow.
- Furnish all poles with a j-hook to support the illumination tap conductors. Furnish all mast arm poles with a removable raintight cap.
- Frangible couplings shall be NCHRP 350, Test Level 3 compliant and have no measured torque requirement.
- Frangible couplings shall be installed into flush mounted female anchors so that no fixed hardware extends above the foundation top.
- Install all components of the breakaway support system in accordance with the manufacturer's written instructions.
- Fabricate the skirt from four pieces of 0.06" thick 3003 h-14 aluminum sheet. Bend each plate to provide corners with a 3/4" radius. Assemble the skirt with 10 x 3/8" self tapping stainless screws or pop rivets. The assembled skirt measures about 12-7/8" square.

State of Alaska DOT&PF
ALASKA STANDARD PLAN

LIGHTING STANDARDS

Adopted as an Alaska Standard Plan by: *Kenneth J. Fisher*
Kenneth J. Fisher, P.E.
Chief Engineer

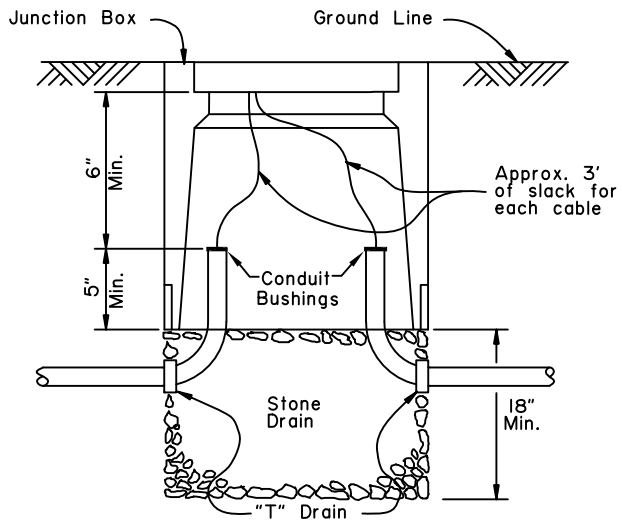
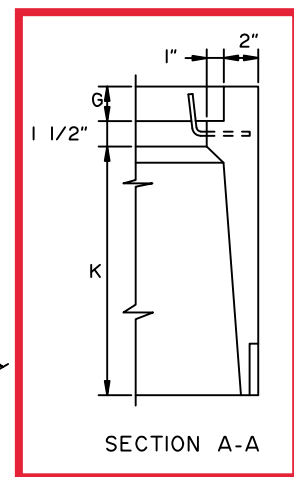
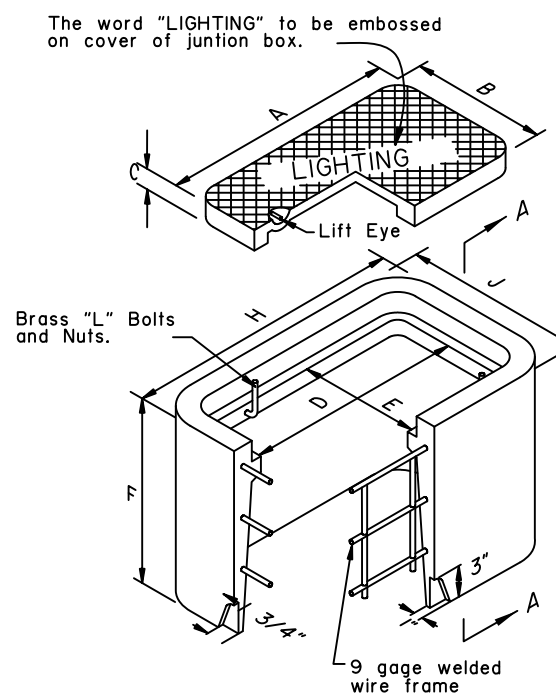
Adoption Date: 02/08/2019

Last Code and Stds. Review By: Date:

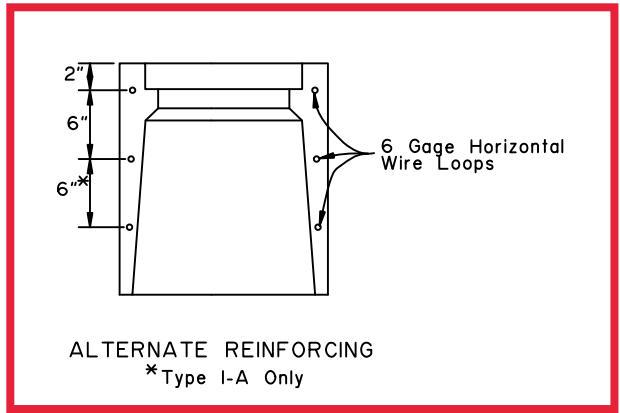
Next Code and Standards Review date: 02/08/2029

GENERAL NOTES:

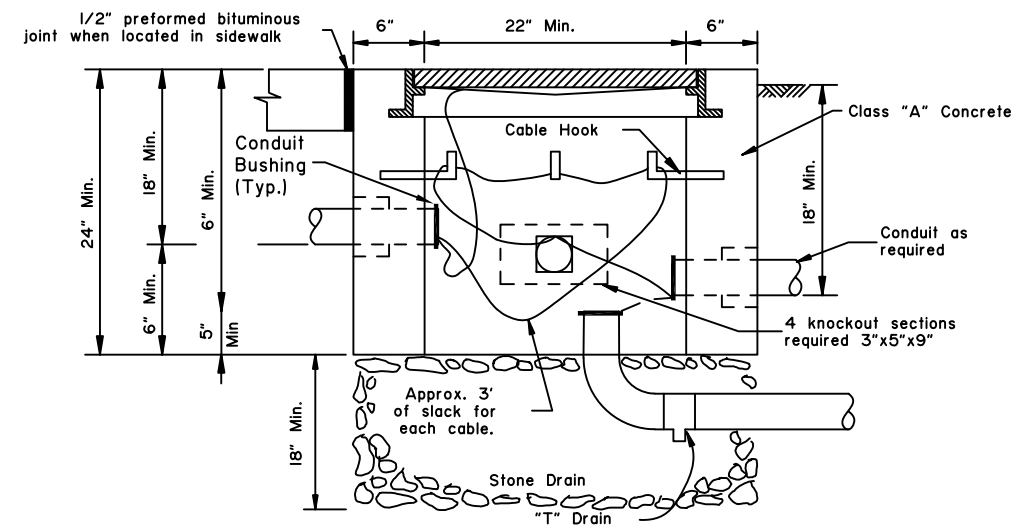
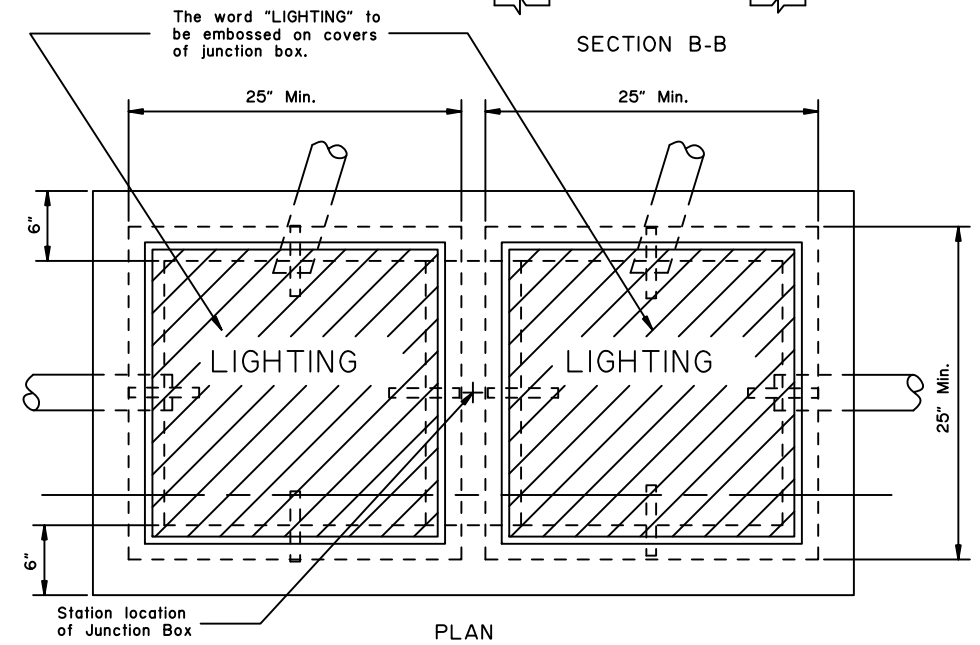
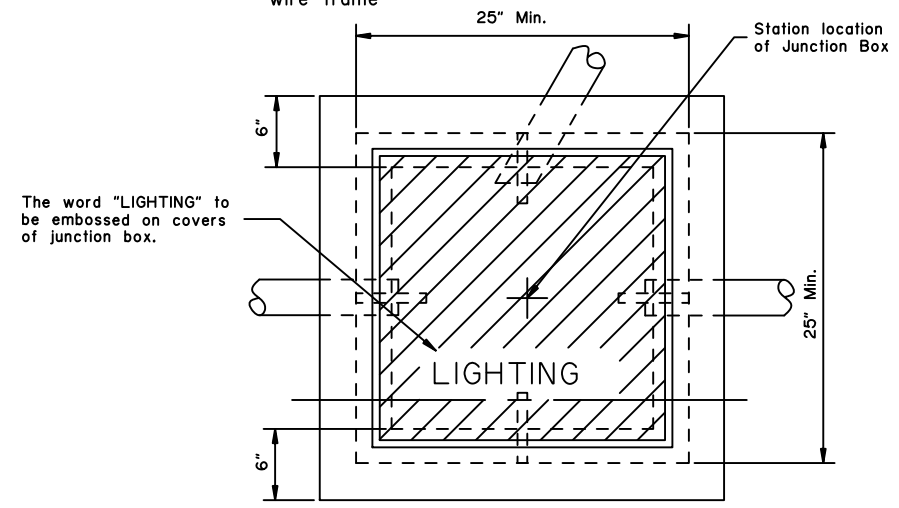
- Each frame and cover for Type II and Type III junction boxes shall be of cast iron for light duty use with a minimum weight of 210 pounds. Covers for type I & IA junction boxes shall be either aluminum or cast iron.
- Junction boxes located in a sidewalk shall be installed with a 1/2" preformed bituminous joint material around its perimeter.
- All conduits shall be bonded to form a continuous electrically secure system with the ground at the load center junction box.
- All junction box covers shall be bonded to ground with copper braid of #8 AWG cross section. For types I & IA, the length shall be 3 feet, and 5 feet for types II & III.
- All conduits shall be grouted in knockout sections in accordance with the Alaska Specifications for Highway Construction, latest edition.
- Junction boxes shall be set flush with the surrounding surface except in an unpaved shoulder, when they shall be located 2" below grade.



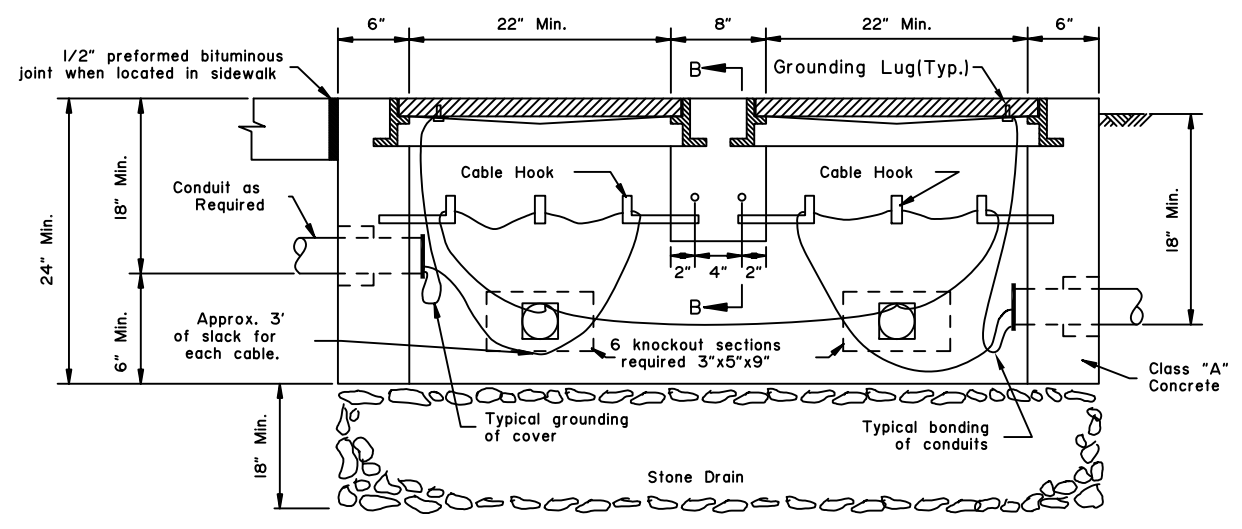
DIMENSIONS (IN.)		
TYPE I	TYPE I-A	
A	15	22 3/4
B	10	13 1/4
C	1 3/4	2
D	13 1/2	21 1/4
E	8 1/2	11 3/4
F	12	18
G	1 3/4	2
H	19 1/2	27 1/4
J	14 1/2	17 3/4
K	8 3/4	14 1/2



TYPE I & I-A JUNCTION BOX



TYPE II JUNCTION BOX



TYPE III JUNCTION BOX

State of Alaska DOT&PF
ALASKA STANDARD PLAN
**JUNCTION BOXES
FOR ELECTROLIER**

Adopted as an Alaska Standard Plan by: *Kenneth J. Fisher*
Kenneth J. Fisher, P.E.
Chief Engineer

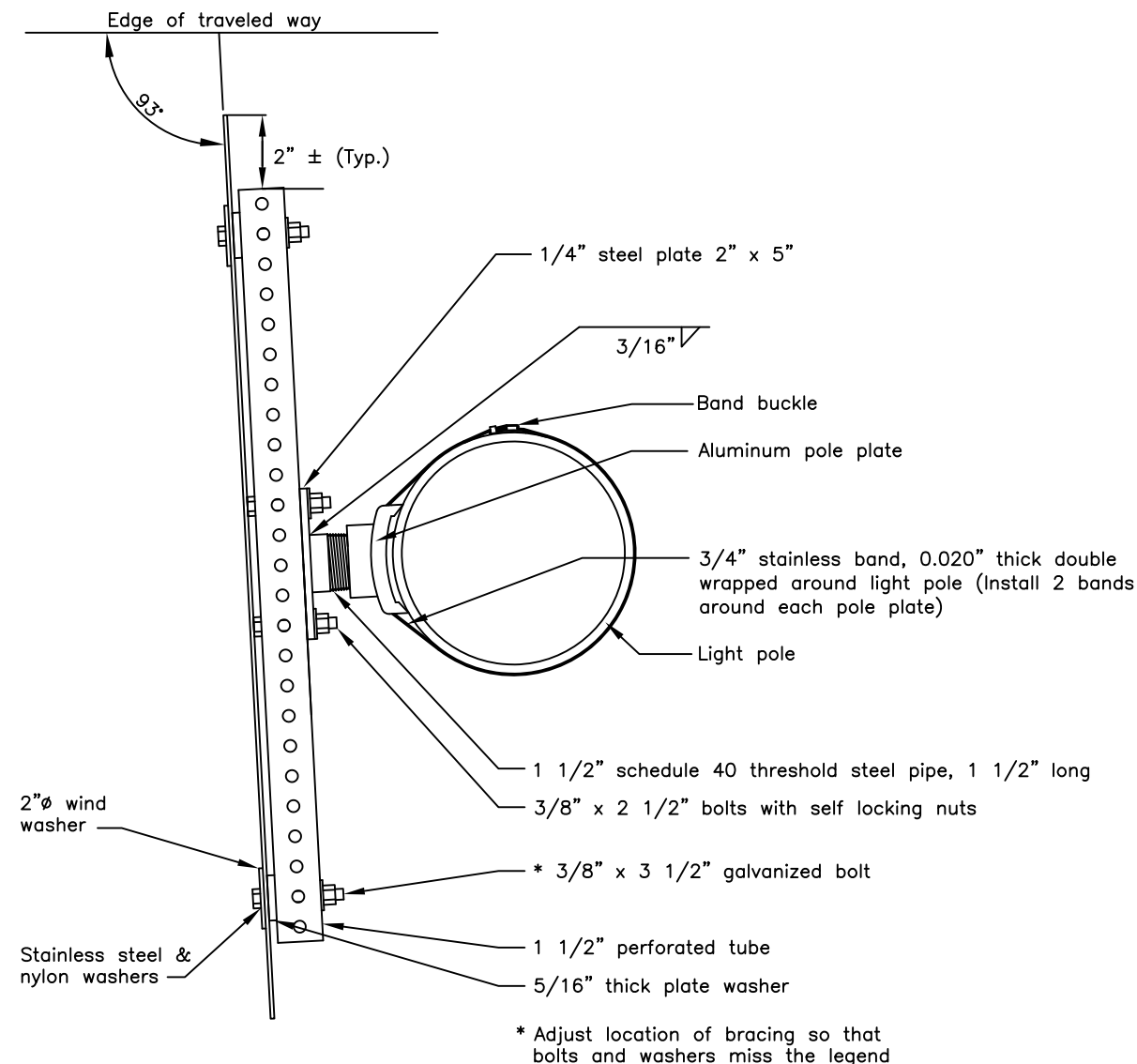
Adoption Date: 02/08/2019

Last Code and Stds. Review
By: Date:
Next Code and Standards Review date: 02/08/2029

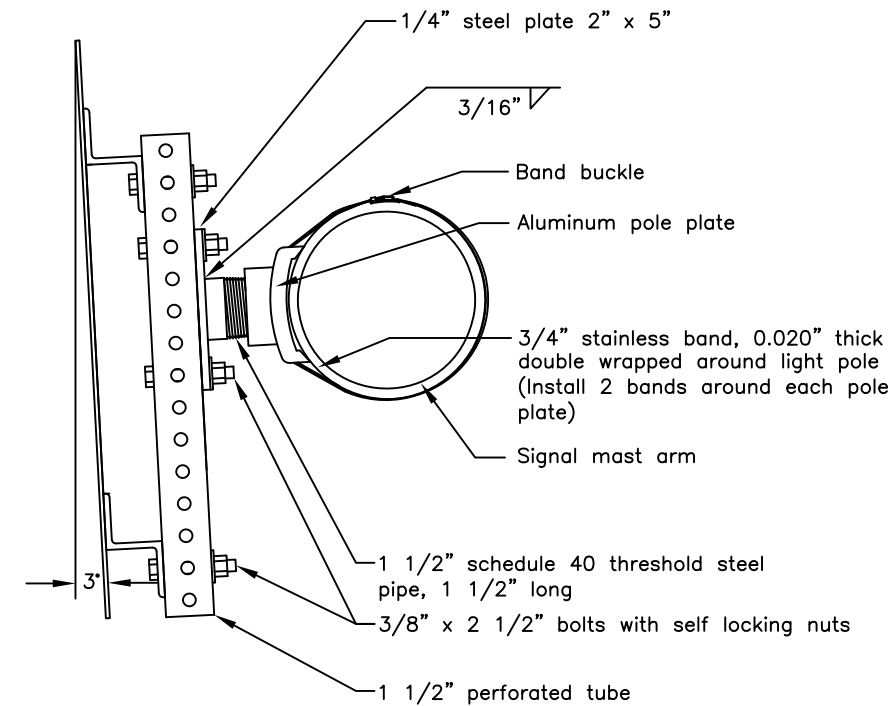
GENERAL NOTES

1. Use pole plate assemblies shown here to install signs on tapered mast arms and light poles. Install one pole plate per 10 square feet of sign panel. Use at least two plates for each installation.
 2. Fabricate each pole plate-to-perforated tube adapter (steel plate welded to pipe) using steel plate conforming to ASTM A36 and steel pipe conforming to ASTM A53. Paint these adapters in conformance with section 504 of the Standard Specifications for Highway Construction, latest edition.
 3. Paint the assemblies in accordance with AASHTO standard specification M69.
 4. Attach each pole plate with two bands of 3/4" wide by 0.020" thick stainless steel banding material. Double wrap each band and tighten it until the band stops moving through the buckle.
- Install bolts, nuts and washers conforming to
5. ASTM A325.

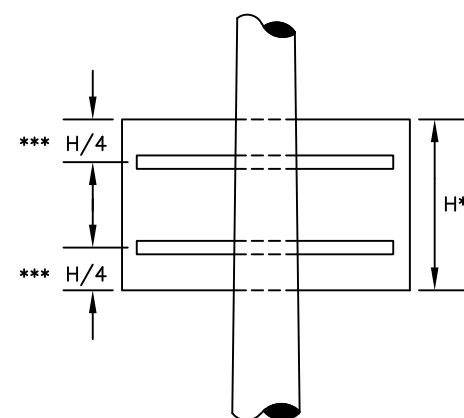
NO. OF POLE PLATES	OVERHANG	BETWEEN POLE PLATES	OVERHANG
2	0.2W	1 SPACE AT 0.6W	2 0.2W
3	0.15W	SPACES AT 0.35W	3 0.15W
4	0.125W	SPACES AT 0.25W	1 0.125W
5	0.2W	SPACE AT 0.6W	0.2W



ELECTROLIER SIGN MOUNTING
(PLAN VIEW)

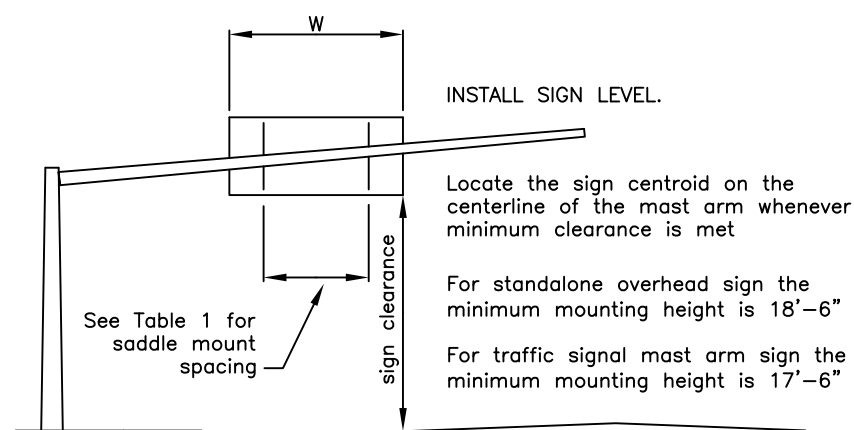
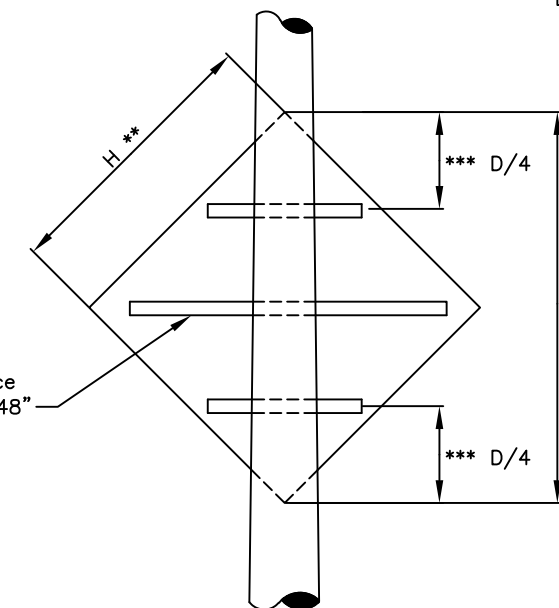


SIGNAL POLE MAST ARM SIGN MOUNTING
(ELEVATION VIEW)



1 1/2" PT brace only when H ≤ 48"

- ** Use two pole plates when H ≤ 48" use three pole plates when H > 48"
- *** When sign panels features predrilled mountings holes, use them to attach the perforated tubes



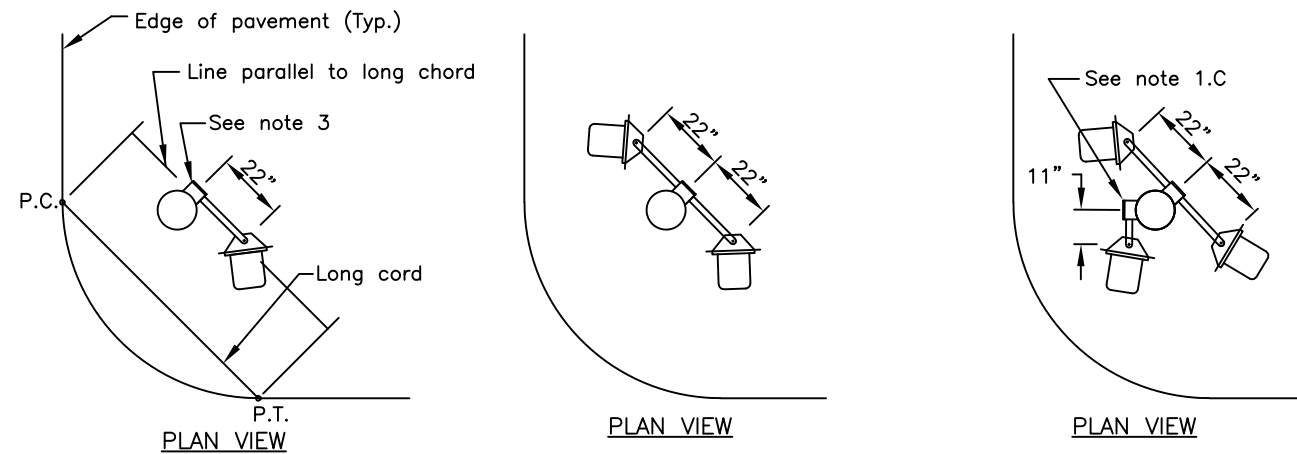
State of Alaska DOT&PF
ALASKA STANDARD PLAN
POLE AND MASTARM
SIGN MOUNTING

Adopted as an Alaska Standard Plan by: *Kenneth J. Fisher*
Kenneth J. Fisher, P.E.
Chief Engineer

Adoption Date: 02/08/2019

Last Code and Stds. Review By: Date:

Next Code and Standards Review date: 02/08/2029



GENERAL NOTES

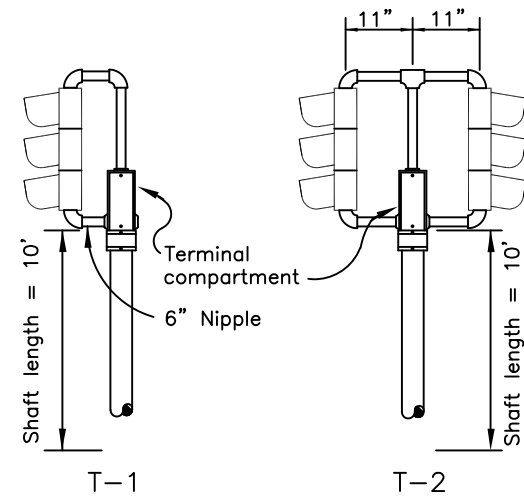
1. Install the signal faces in the plans as detailed on this sheet.
 - A. Use elevator plumbizers to install faces on mast arms and whenever 2" pipe tenons are specified. Install the plumbizer between the red and yellow signal indications.
 - B. Use signal frames to install signal faces on the sides of poles and on the tops of posts.
 - C. Use a second signal frame to install the third face when three side mounted signal faces are shown.

2. Furnish all signal frames with terminal compartments.
3. Install one terminal compartment on the side of the pole opposite the midpoint of the radius. Position the terminal compartment at the location where a line parallel to the long cord (P.C. to P.T.) of the radius is tangent to the pole.
4. Field drill the holes needed for attaching all signal hardware. Remove burrs after drilling. Treat the bare steel surfaces in accordance with AASHTO M36.
5. Provide back plates sized for the number of signal sections and mounting type, so that no light is visible between the back plate and the signal face.

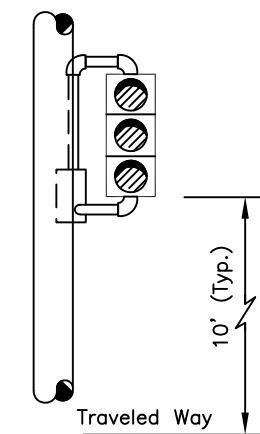
Attach all back plates using stainless steel rivets with large flange button heads. Install 3/16" diameter by 9/16" long stainless steel rivets that provide at least 535 lb. and 675 lb. shear and tensile strengths, respectively. Bore out the mounting hole in the back plates and signal heads to the diameter recommended by the rivet manufacturer.

7. Before installing the machine screws that secure the visors, coat the threads with an anti-seizing compound.

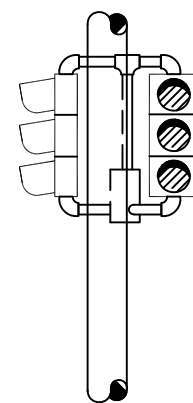
Furnish clamp assemblies for field-installed plumbizer mounts with 8. stainless steel hardware, AB-3007-L as manufactured by Pelco Products, Inc., or approved equivalent. The tenon shall be a 6" length of 2" rigid metal conduit with 1" tapered threads on one end. Drill the tenon to accept the plumbizer through bolt and deburr all openings. Coat the tenon threads with Z.R.C. Galviline, Crown-Gold Calvanizing Compound, or approved equivalent.



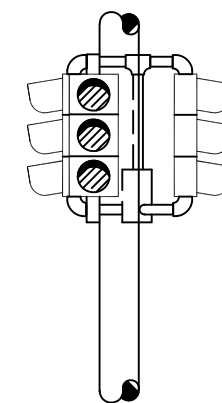
POST MOUNTED SIGNALS
(Shown without backplate)



S-1
Use a one way, L.O.D. frame for installing one face

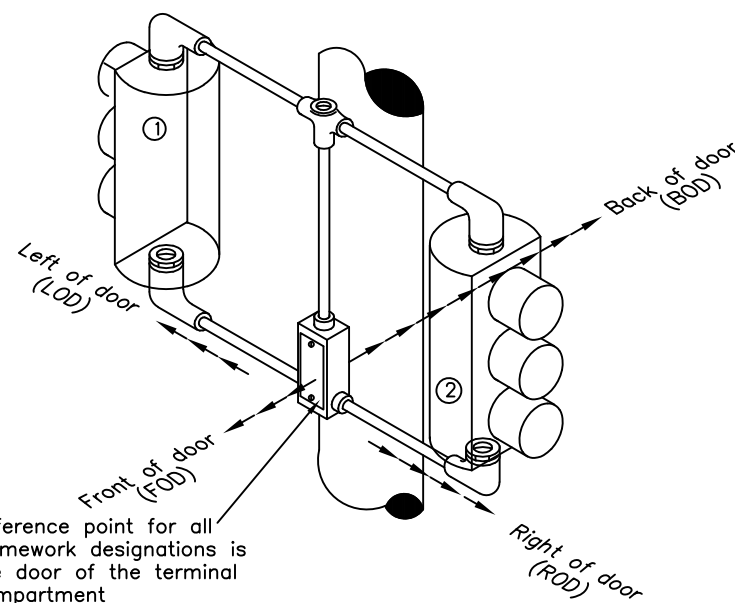


S-2
Use a two way frame for installing two faces



S-3
Use two frames for installing three faces: a two way and a one way R.O.D.

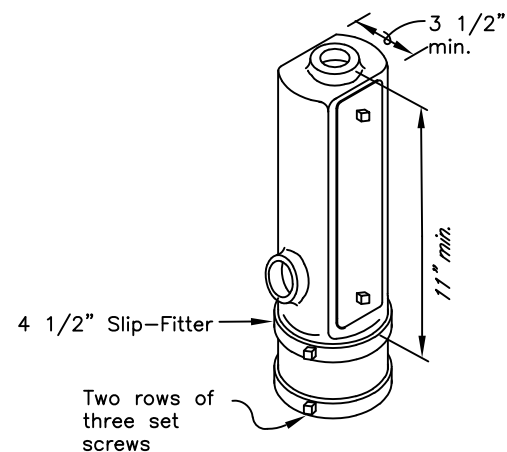
SIDE MOUNTED SIGNAL FRAMES WITH VEHICULAR SIGNALS
(Shown without backplates)



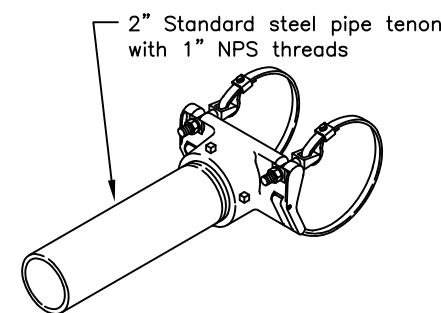
Reference point for all framework designations is the door of the terminal compartment

FRAMEWORK DESCRIPTION

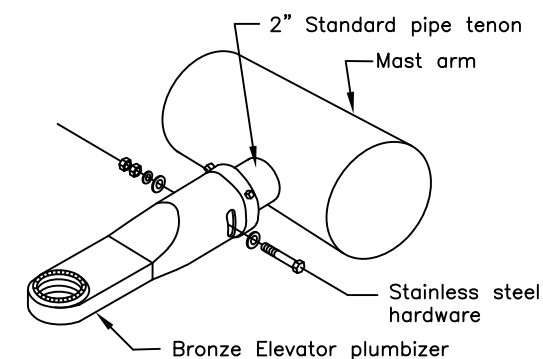
- Head no. ① offset L.O.D.
- Head no. ② offset R.O.D.



TERMINAL COMPARTMENT WITH SLIP FITTER
(See notes 1.C. and 2)



CLAMP ASSEMBLY FOR FIELD INSTALLED PLUMBIZER MOUNT
(See notes 4 and 8)



ELEVATOR PLUMBIZER
(See note 1.A.)

State of Alaska DOT&PF
ALASKA STANDARD PLAN

TRAFFIC SIGNAL HARDWARE

Adopted as an Alaska Standard Plan by: *Kenneth J. Fisher*
Kenneth J. Fisher, P.E.
Chief Engineer

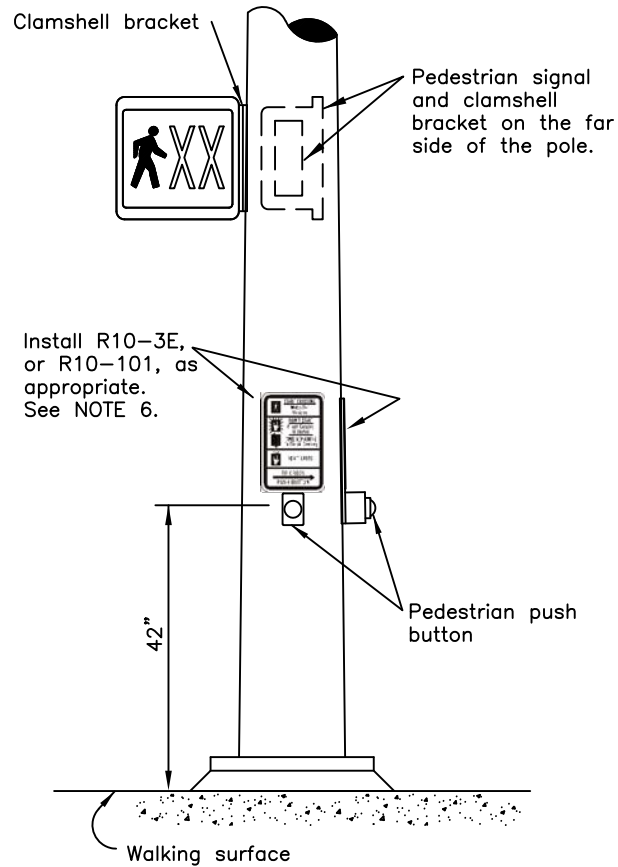
Adoption Date: 02/08/2019

Last Code and Stds. Review By: _____ Date: _____

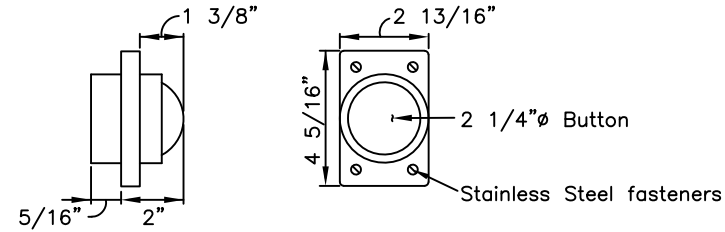
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GENERAL NOTES

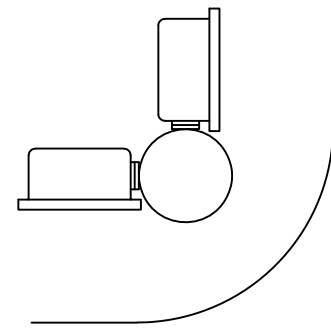
1. Install the signal faces in the plans as detailed on this sheet.
2. Use slip fitters to install pedestrian signals on the top of posts.
3. Use clamshell brackets to install all pedestrian signals except those that are post-top mounted.
4. Install pedestrian signals on the side of poles away from traffic, unless indicated otherwise in the plans.
5. Drill and tap the pole for all mounting holes for sign and pedestrian push button housing.
6. Install R10-3E if a push button is installed. Install R10-101 if no push button is installed.
7. Apply caint-seize compound to cap screws tapped directly into pole.



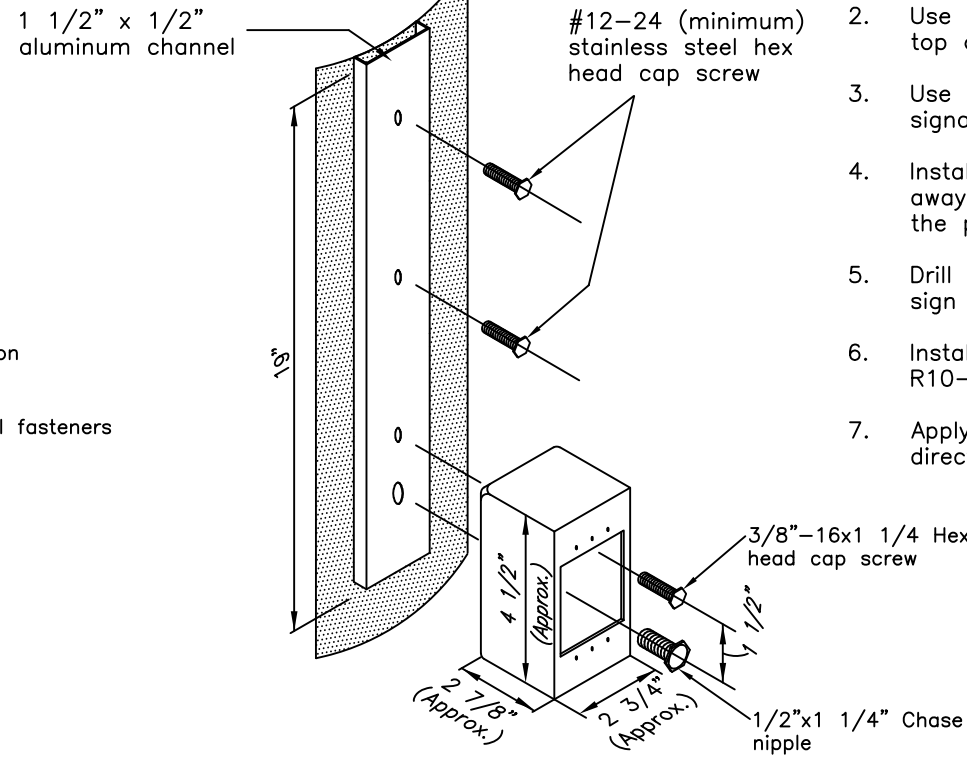
SIGNAL POLE MOUNTED PEDESTRIAN
HARDWARE & SIGNAGE



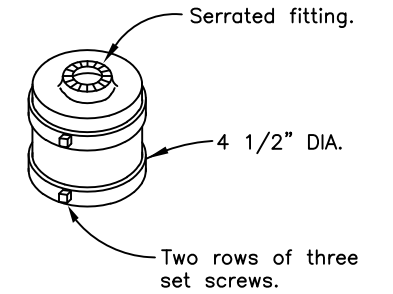
PEDESTRIAN PUSH BUTTON SWITCH



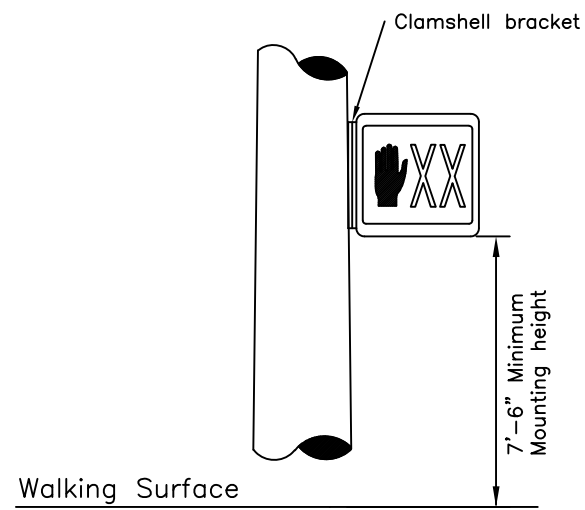
PLAN VIEW



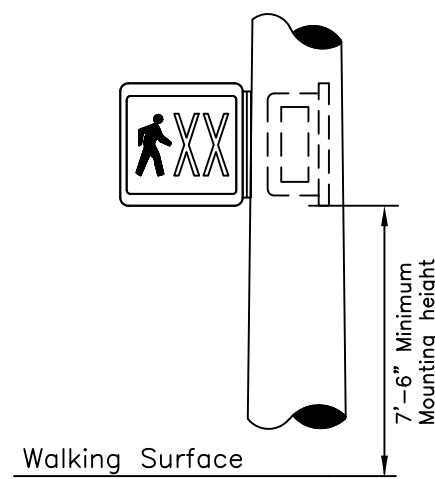
PEDESTRIAN PUSH BUTTON HOUSING



SLIP FITTER
(See note 2)

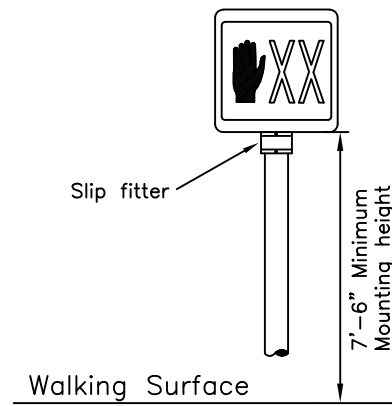


SW-1

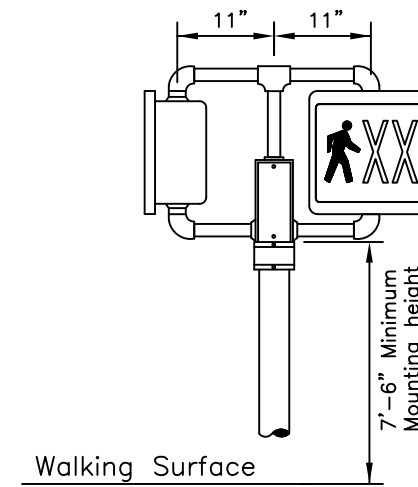


SW-2

SIDE MOUNTED SIGNALS



TW-1



TW-2

POST MOUNTED SIGNALS

State of Alaska DOT&PF
ALASKA STANDARD PLAN

TRAFFIC SIGNAL HARDWARE

Adopted as an Alaska
Standard Plan by: *Kenneth J. Fisher*
Kenneth J. Fisher, P.E.
Chief Engineer

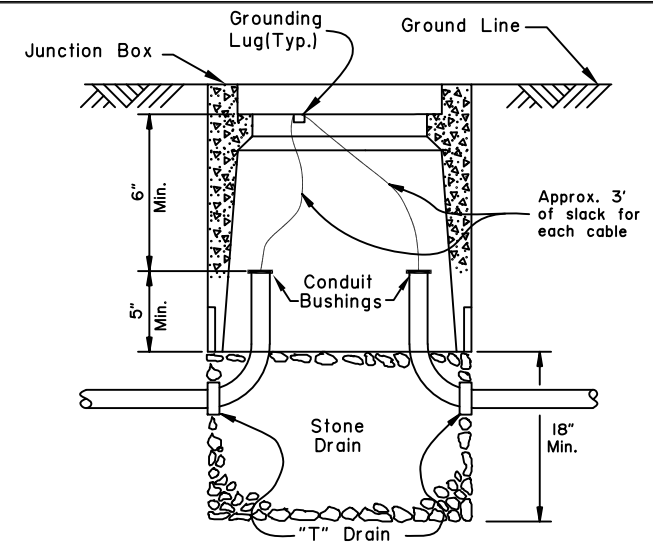
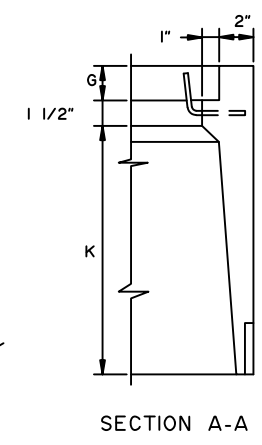
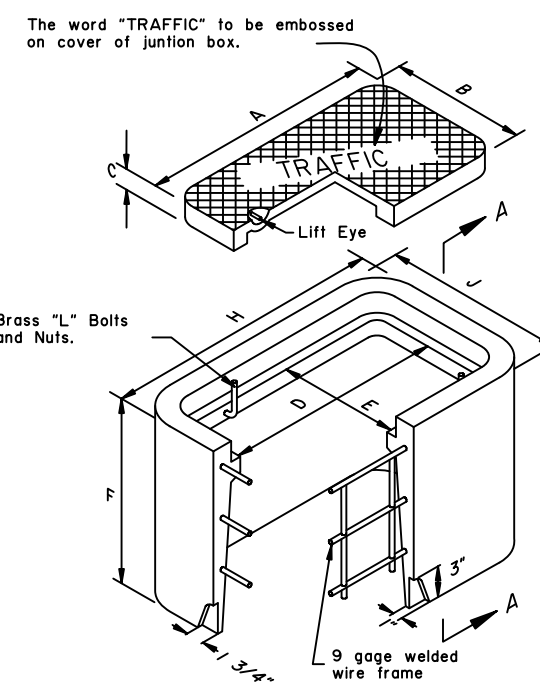
Adoption Date: 02/08/2019

Last Code and Stds. Review
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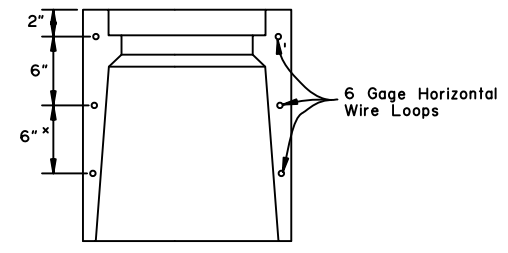
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GENERAL NOTES:

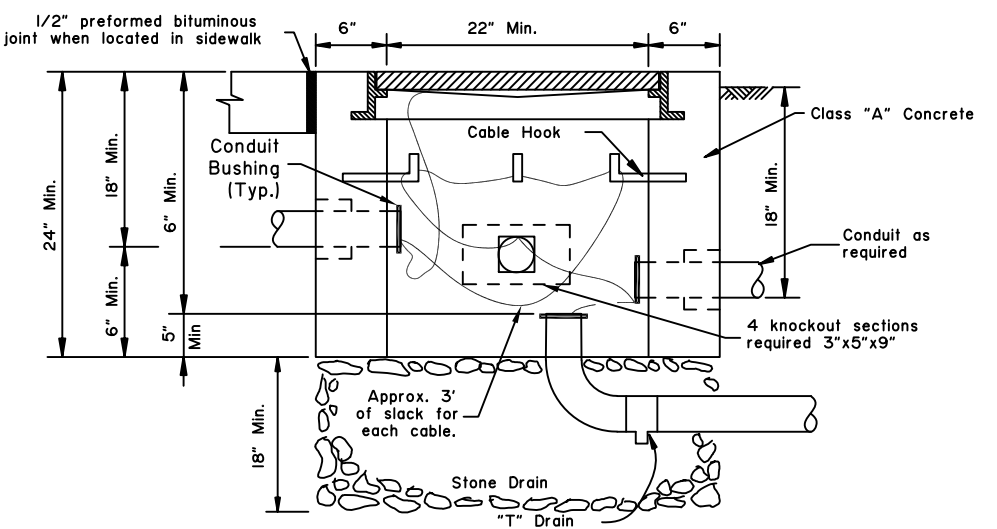
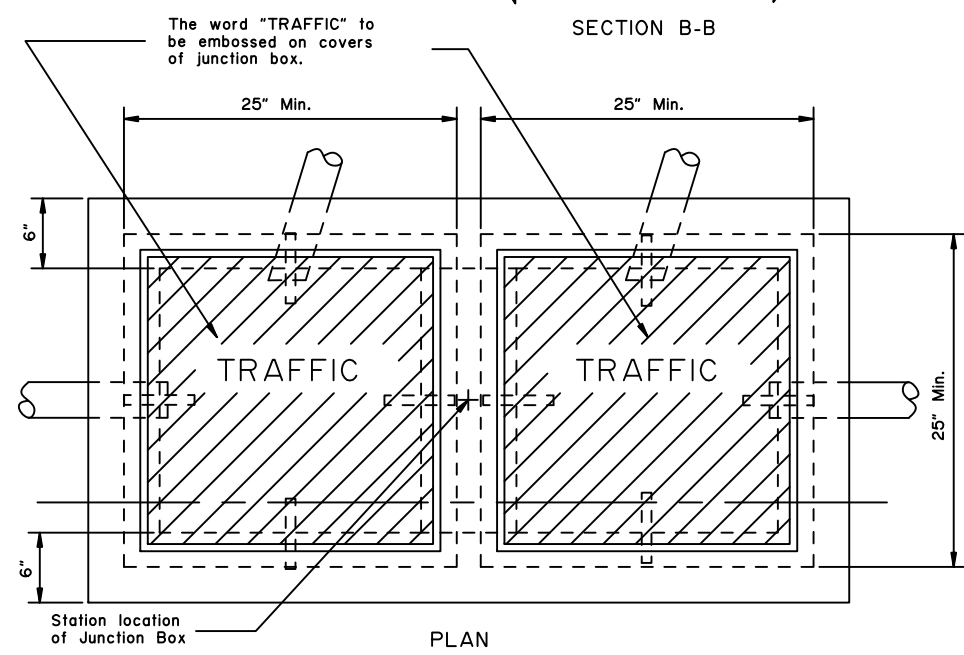
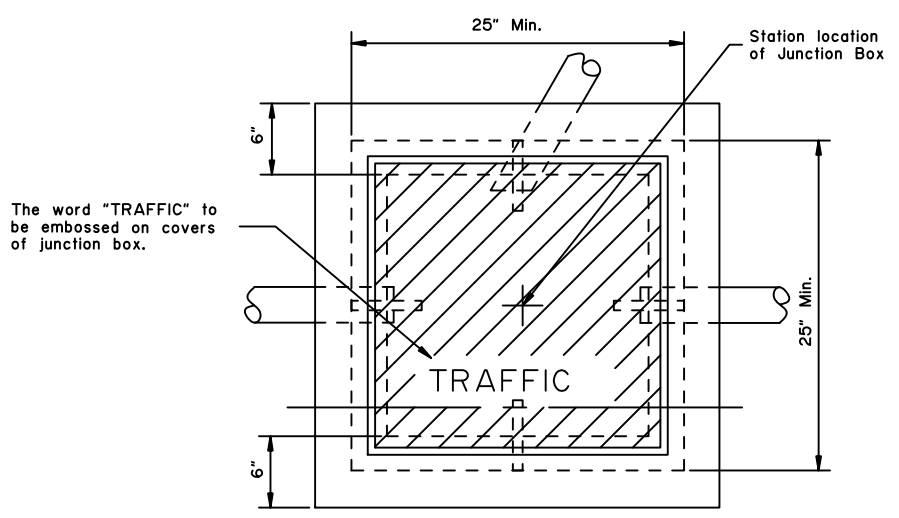
- Each frame and cover for Type II and Type III junction boxes shall be of cast iron for light duty use with a minimum weight of 210 pounds. Covers for type I & IA junction boxes shall be either aluminum or cast iron.
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- Junction boxes shall be set flush with the surrounding surface except in an unpaved shoulder, when they shall be located 2" below grade.



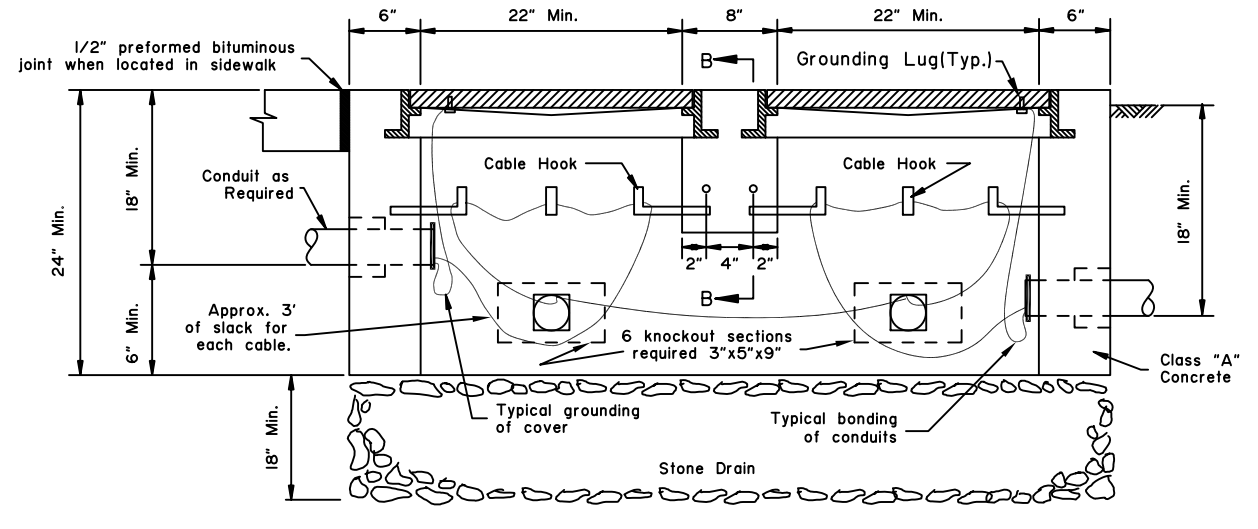
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K	8 3/4	14 1/2



TYPE I & I-A JUNCTION BOX



ELEVATION
TYPE II JUNCTION BOX



ELEVATION
TYPE III JUNCTION BOX

State of Alaska DOT&PF
ALASKA STANDARD PLAN
JUNCTION BOXES FOR
TRAFFIC SIGNALS

Adopted as an Alaska Standard Plan by: *Kenneth J. Fisher*
Kenneth J. Fisher, P.E.
Chief Engineer

Adoption Date: 02/08/2019

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