

BASIS OF HORIZONTAL CONTROL:
 A LOCAL SURFACE PLANE COORDINATE SYSTEM BASED ON A SERIES OF LEAST SQUARE ADJUSTED STATIC GPS OBSERVATIONS PERFORMED BY MCCLINTOCK LAND ASSOCIATES. NGS STATION 'BOB', A 3-1/2" BRASS TABLET IN A 6"x6" CONCRETE POST HAS A NAD83 GEODESIC POSITION OF 52°12'05.8182" NORTH, 174°11'46.9733" WEST, DETERMINED WITH MULTIPLE STATIC GBS OBSERVATIONS WITH AN AVERAGE OPUS SOLUTION. CONVERTED TO ALASKA STATE PLANE ZONE 10 COORDINATES.

BASIS OF VERTICAL CONTROL:
 THE VERTICAL DATUM IS NAVD88, ESTABLISHED WITH AN AVERAGED OPUS ARITHMETIC SOLUTION AT NGS CONTROL STATION 'BOB' AS 193.81 FEET.

MONUMENT NAME	NORTHING	EASTING	ELEVATION NOTE
BOB	443,738.25	3,685,323.91	193.81 NGS MONUMENT
PCA 3	439,892.66	3,686,422.42	74.36 ALUM CAP
5/8 REBAR	439,608.17	3,685,190.87	184.65 5/8" REBAR

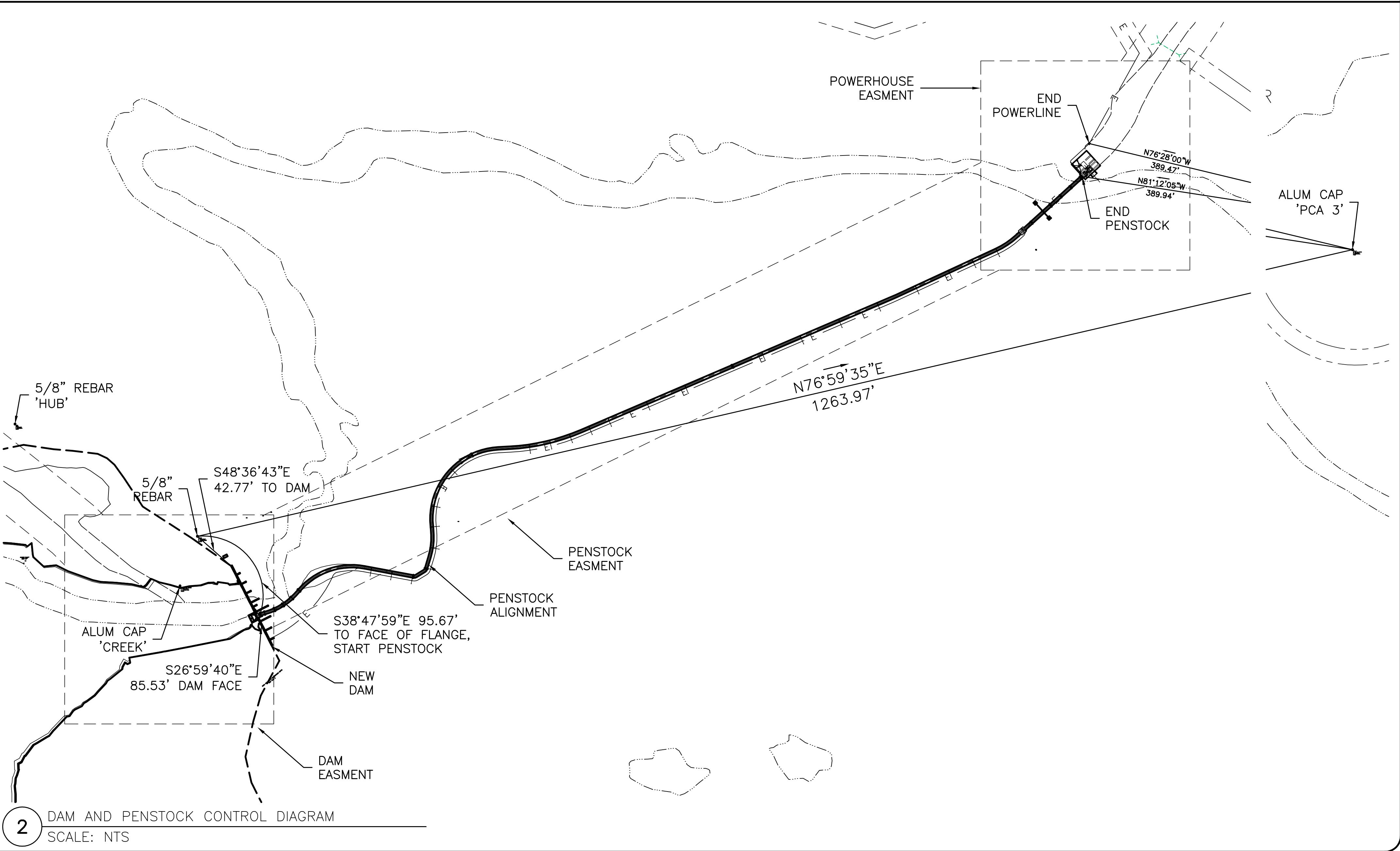
FEATURE	NORTHING	EASTING	ELEVATION NOTE
START ELECTRIC	442,222.65	3,684,860.11	SC-1 STA 0+00
END ELECTRIC	439,983.77	3,686,043.75	XFMR STA 28+51.75
START PENSTOCK	439,533.61	3,685,250.82	HDPE FLANGE FACE
END PENSTOCK	439,950.94	3,686,035.61	TRANSITION FLANGE FACE
START DAM	439,579.90	3,685,222.96	169.00 LEFT DAM ABUTMENT

CONTOURS:
 AEROMETRICS ANCHORAGE PREPARED ORTHOPHOTO AND TOPOGRAPHIC MAPPING FOR DEPARTMENT OF COMMUNITY AND REGIONAL AFFAIRS. BASE CONTOURS WERE PROVIDED AT TWO FOOT INTERVALS. SITE SURVEYS BY POLARCONSULT WERE CONDUCTED OCT 21 THROUGH OCT 22, 2009 BY POLARCONSULT ALASKA FOR AS-BUILT LOCATION OF THE POWERHOUSE AND TOPOGRAPHY OF PENSTOCK ALIGNMENT AND DAM LOCATION USING VERTICAL CONTROL ELEVATION OF 'BOB' FOR BASIS OF ELEVATION. ONE FOOT CONTOURS WERE ESTABLISHED FOR THE PROJECT AREA TO SUPPLANT BASE MAP CONTOURS.

ELECTRICAL TRANSMISSION LINE
 STA: 0+00 START OF PROJECT
 N: 442,224.06 E: 3,684,859.73
 STA: 28+53.20 END OF PROJECT
 N: 439,991.85 E: 3,686,043.72

LINE	LENGTH	BEARING
L1	2.56	S15°01'57"E
L2	10.53	S23°09'50"E
L3	23.35	S27°13'47"E
L4	69.22	S10°30'57"E
L5	192.40	S10°31'58"E
L6	197.73	S00°16'52"E
L7	448.24	S15°06'30"E
L8	148.99	S45°00'51"E
L9	343.25	S24°32'36"E
L10	42.40	S04°34'34"W
L11	366.36	S15°22'21"E
L12	354.34	S39°31'34"E
L13	139.99	S54°12'58"E
L14	119.86	S73°03'31"E
L15	124.30	N71°34'25"E
L16	105.64	S82°52'43"E
L17	58.78	S31°20'29"E
L18	98.79	S29°02'23"W

CURVE	LENGTH	RADIUS
C1	6.47	22.22



1 CONTROL DIAGRAM
 SCALE: 1 INCH = 300 FEET

2 DAM AND PENSTOCK CONTROL DIAGRAM
 SCALE: NTS

ISSUED FOR CONSTRUCTION

polarconsult alaska, inc.
 ENERGY SYSTEMS • ENVIRONMENTAL SERVICES • ENGINEERING DESIGN

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NO.	DATE	REVISIONS
1	5/1/10	REVISE DETAIL TITLES, ADD CONTOUR INFO

CHUNISAX CREEK HYDROELECTRIC PROJECT
 SURVEY CONTROL

CHUNISAX CREEK HYDROELECTRIC PROJECT
 EDA AWARD # 07-01-06108
 Atka, Alaska

DATE: 4/15/10
 DESIGNED: MDD
 DRAWN: MD
 CHECKED: EA
 SCALE: AS NOTED
 FILE: MAINDAM