APPROX. SCALE IN FEET

CONSTRUCT NEW EARTHEN EMBANKMENT WITH CREST ELEVATION OF 860 FEET.

NEW CYLINDER PUMP STATION

EXISTING EKLUTNA DAM

IMPROVED AND WIDENED ROAD FOR CONSTRUCTION & MAINTENANCE ACCESS

EXISTING POND

CONSTRUCT NEW TRAPEZOIDAL OUTLET CHANNELS

NEW ELECTRICAL BUILDING

EXISTING EKLUTNA CAMPGROUND

CONSTRUCT NEW EARTHEN EMBANKMENT

NEW 36"Ø GRAVITY INTAKE PIPELINE. APPROX. 2,500' (BEARING & EXACT LENGTH TO BE DETERMINED VIA BATHYMETRY DATA)

EXISTING EKLUTNA CAMPGROUND

IMPROVED AND WIDENED ROAD FOR CONSTRUCTION & MAINTENANCE ACCESS

NEW ELECTRICAL BUILDING

NEW CYLINDER PUMP STATION

EXISTING EKLUTNA DAM

CONSTRUCT NEW TRAPEZOIDAL OUTLET CHANNELS

CONSTRUCT NEW EARTHEN EMBANKMENT WITH CREST ELEVATION OF 860 FEET.

CONSTRUCT NEW INTAKE CRIB INVERT EL. 804'

LEGEND

EXTENTS OF IMPROVED ROAD (20' WIDTH)
NEW TRAPEZOIDAL CHANNEL
NEW EARTHEN EMBANKMENT
NEW GRAVITY INTAKE PIPELINE
EXISTING PUBLIC USE CABIN
NEW PUMP STATION, ELECTRICAL BLDG

FIGURE 1 - PUMP STATION ALTERNATIVE OVERALL PROJECT VIEW
Construct new earth embankment with crest elevation of 860 feet.

New cylinder pump station.

Existing Eklutna Dam.

Improved and widened road for construction, maintenance access.

New trapezoidal pond outlet to channel.

Rainbow trout public use cabin (existing).

Channel improvements as required based on ground survey data.

Legend:
- Extents of improved road (20' width)
- New trapezoidal channel
- New earth embankment
- New gravity intake pipeline
- Existing public use cabin
- New pump station, electrical bldg

Figure 2 - Pump station alternative. Enlarged view near cylinder pump station.
16' Ø PUMP STATION

36" REINFORCED CONCRETE GRAVITY INTAKE PIPELINE

48" Ø PUMP ACCESS HATCHWAY (TYP OF THREE)

18" DUCTILE IRON DISCHARGE PIPE ↑ EL. 860 (TYP OF THREE)

18' Ø PUMP STATION

SECTION CUT IS TYPICAL FOR THREE PUMPS

FIGURE 3 — PLAN VIEW OF CYLINDER PUMP STATION
12" VENTILATION PIPE FOR PUMP STATION WITH SCREENED INLET

48" Ø PUMP ACCESS HATCHWAY (TYP OF THREE)

EL. 880'

EL. 860'

18" DISCHARGE PIPE
EL. 860'
(TYP OF THREE)

18" PIPE TO DISCHARGING TO TRAPEZOIDAL CHANNEL LEADING TO UPSTREAM FACE OF EXISTING DAM

AVERAGE WATER LEVEL

16' 

LAKE WATER PUMP MOUNTED ON RETRIEVAL AND MAINTENANCE RAIL. (TYP OF THREE)

18" DUCTILE IRON PIPE

36" REINFORCED CONCRETE GRAVITY INTAKE PIPE FROM EKLUTNA LAKE

EL. 802.5'

EL. 855'

12" x 18" REDUCER

LOW WATER LEVEL

48" Ø PUMP ACCESS HATCHWAY (TYP OF THREE)

GRAVITY INTAKE PIPE INVERT EL. 801'

GRAVITY INTAKE PIPE EL. 802.5'

FIGURE 4 – SECTION VIEW OF CYLINDER PUMP STATION
MEA SUPPLY
13.47 KV
ON WOODEN POLES
FROM EKLUTNA LAKE RD.

300 KVA DRY
TYPE TRANSFORMER

MAIN SERVICE BREAKER #1

TIE BREAKER (NO)

300 KVA DRY
TYPE TRANSFORMER

MAIN SERVICE BREAKER #2

MANUAL TRANSFER SWITCH

EMERGENCY GENERATOR

VFD OR SOFT START

PUMP #1 (100 hp)

VFD OR SOFT START

PUMP #2 (100 hp)

VFD OR SOFT START

PUMP #3 (100 hp)

120-240 VOLT STATION NEEDS

25 KVA DRY TYPE TRANSFORMER

FIGURE 5 — PRELIMINARY ELECTRICAL SINGLE LINE DIAGRAM