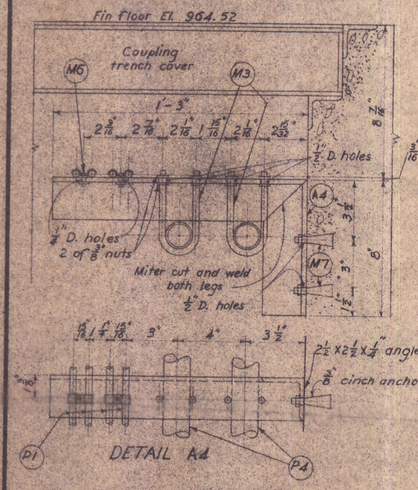
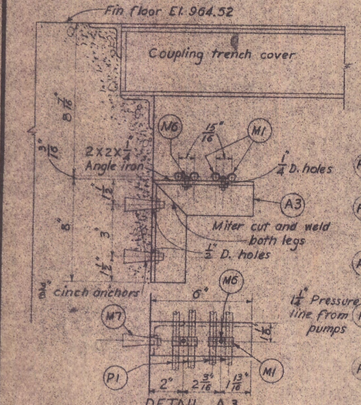
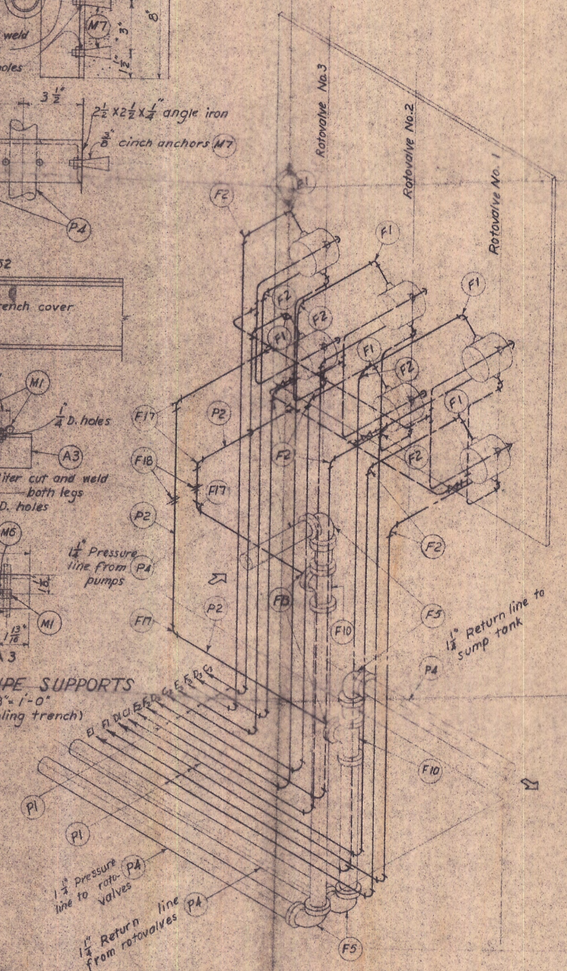
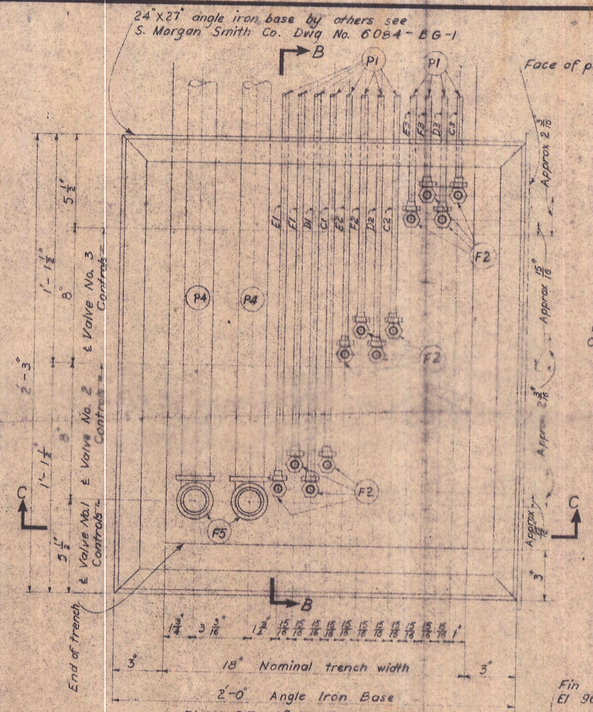




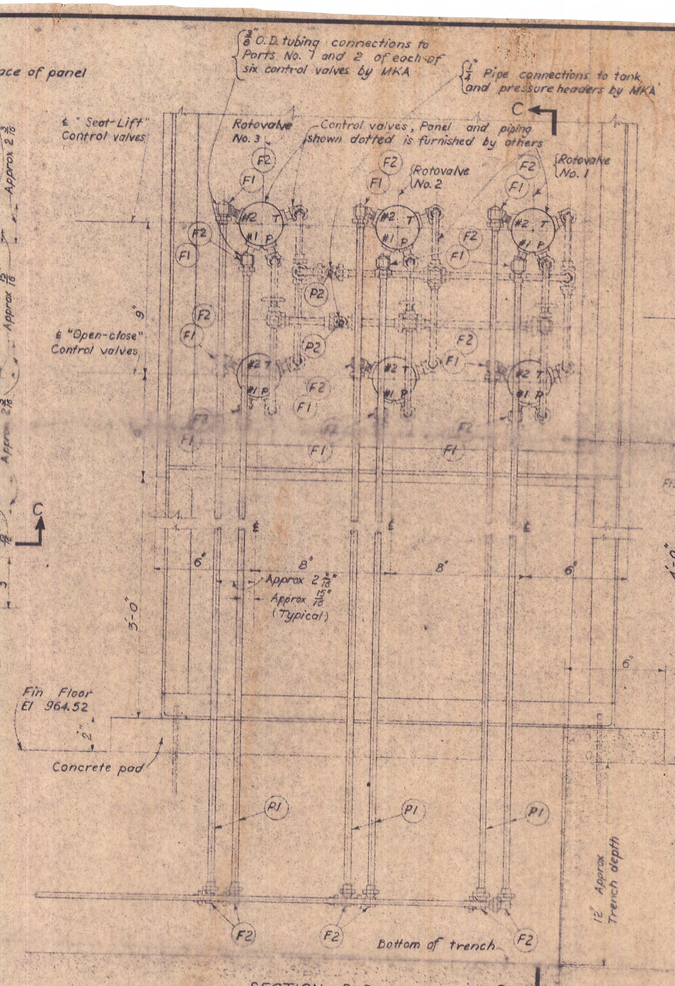
DETAIL OF PIPE SUPPORTS
Scale: 3" = 1'-0"
(For lines in coupling trench)



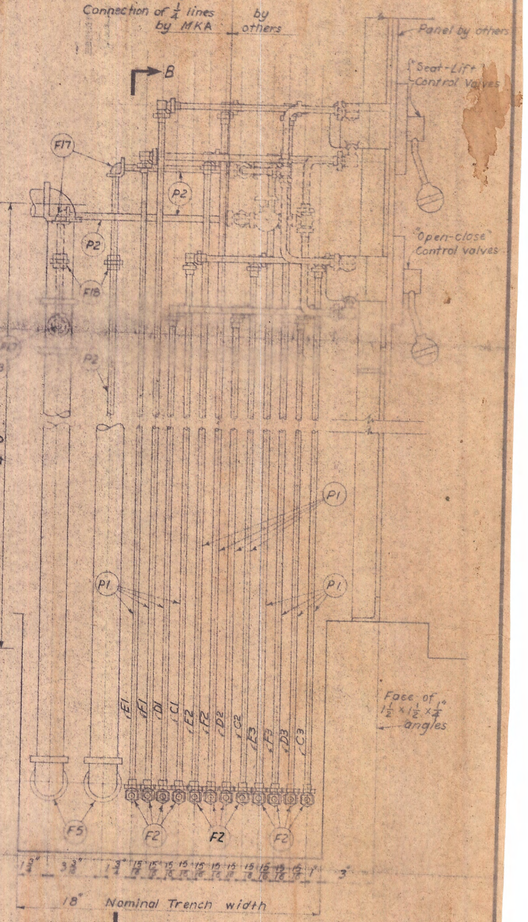
ISOMETRIC OF CONTROL PANEL PIPING
(Dotted piping by others)



PLAN OF 18" TRENCH AT CONTROL PANEL BASE
Scale: 3" = 1'-0"



SECTION B-B
Scale: 3" = 1'-0"



SECTION C-C
Scale: 3" = 1'-0"

GENERAL NOTES

1. Recommended procedure for installing hydraulic system
   (a) Prior to assembly of rotovalves, each valve part (plus cylinders) must be thoroughly cleaned of protective grease coatings, dirt, etc.
   (b) Install sump tank and pumps in place with connecting piping as shown.
   (c) During the hydrostatic test of each rotovalve, oil pressure from the pumps shall be temporarily piped to the "lift" and "rotate" cylinders of valve being tested, to insure proper valve operation prior to the second stage pour. Additional 1¼" pipe, valves and fittings are included in the bill of materials for this piping.
   (d) Upon completion of the test and placement of the second stage concrete, the control system piping shall be permanently installed in the trenches as shown. All piping shall be supported on 8'-0" minimum centers and additional pipe supports shall be provided if required.
   (e) The hydraulic control system shall then be hydrostatically tested at 450#/sq.in. for eight hours and proven tight. (Note: Suction Piping to be tested at 100#/sq.in.)
   (f) System shall then be filled with cleaning oil (Item 02 in Bill of Materials) and so maintained for 8 hours, minimum. Cleaning oil shall then be drained and system shall be entirely flushed with operating oil, (Item 01 in Bill of Materials). A complete change of new operating oil shall then be admitted. (Approx. 385 gallons) and all air subsequently expelled from the system. Care shall be taken to exclude all dirt, pipe dope, scale, rust, etc. from pipe, tubing and component parts of the system.

MORRISON - KNUDSEN AFGHANISTAN, INC.

KAJAKAI DAM
IRRIGATION TUNNEL
ROTOVALVE CONTROL PIPING
DETAILS

INTERNATIONAL ENGINEERING CO., INC.

DESIGNED E.S.	CHKD. E.S.	SUBMITTED [signature]
DRAWN M.A.	INSP. CML NYH	RECOMMENDED H.W. Birkeland
		APPROVED [signature]

15-F-67 SAN FRANCISCO, CAL. DATE AUG. 5, 1952