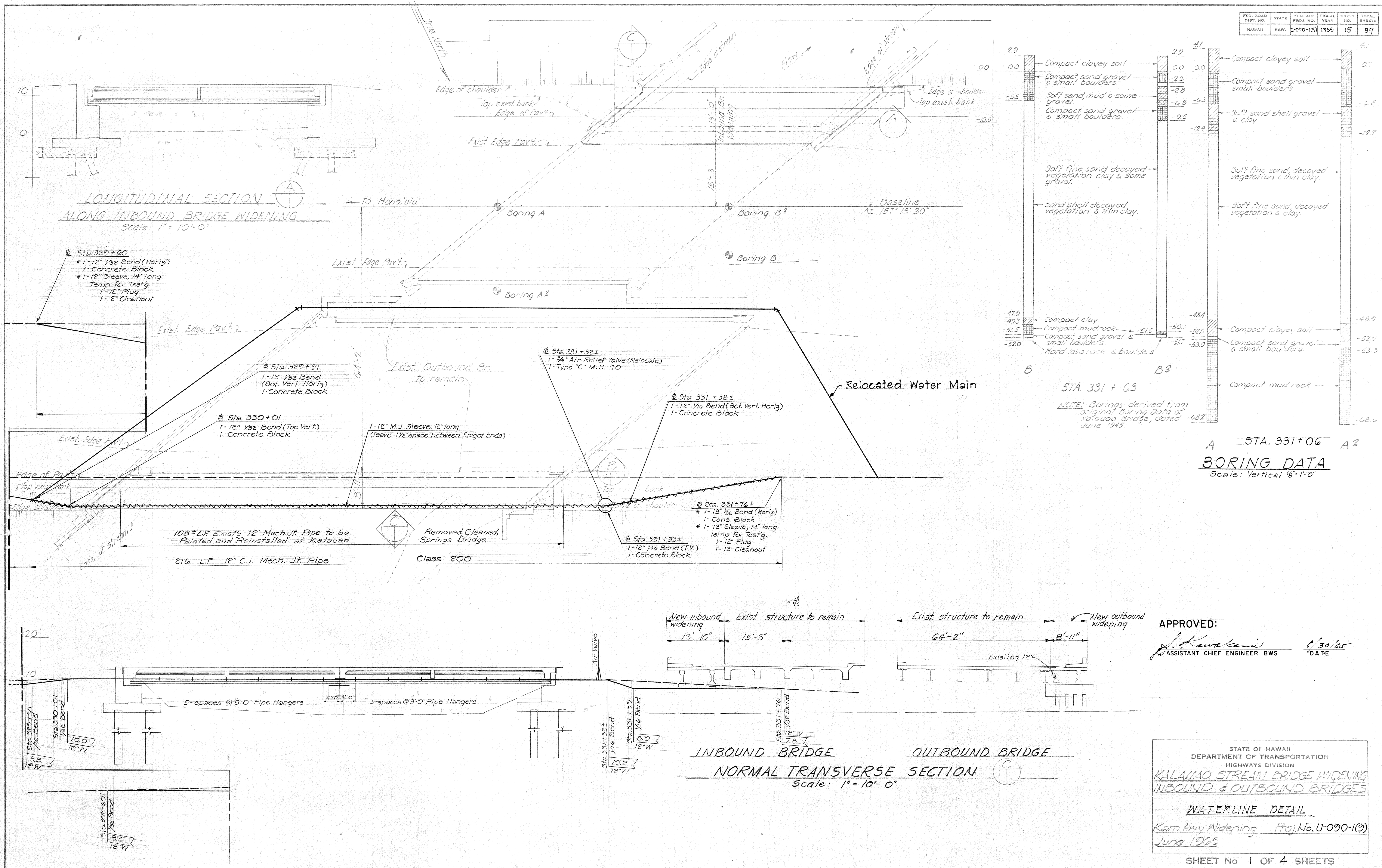
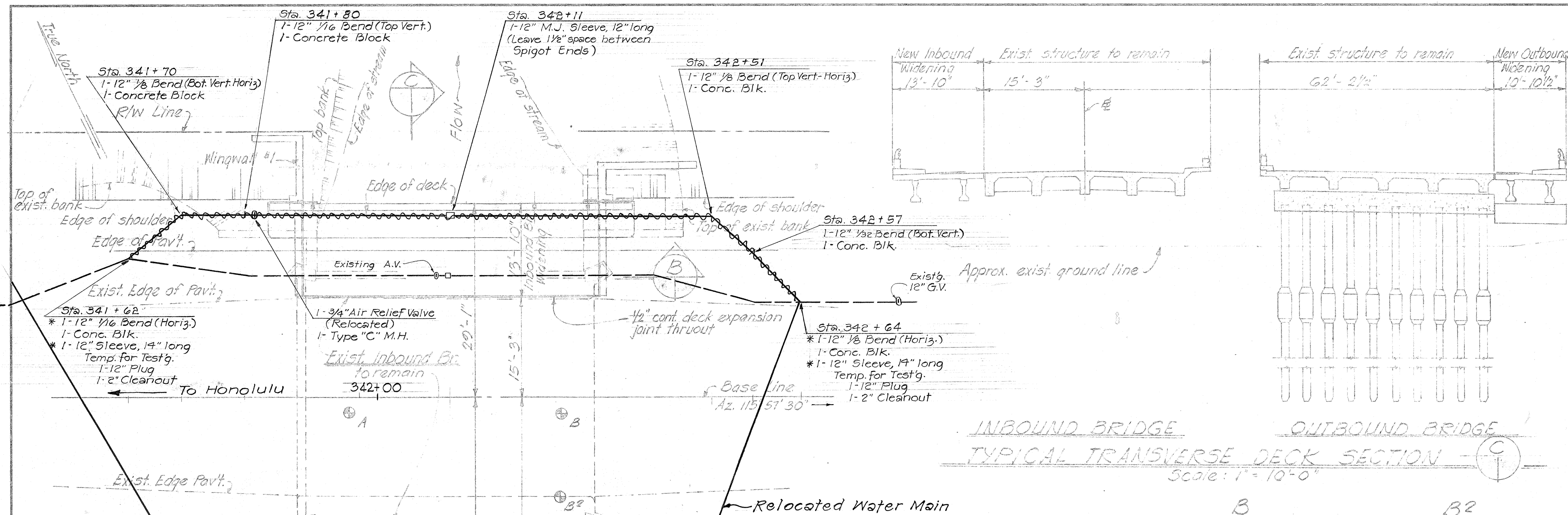
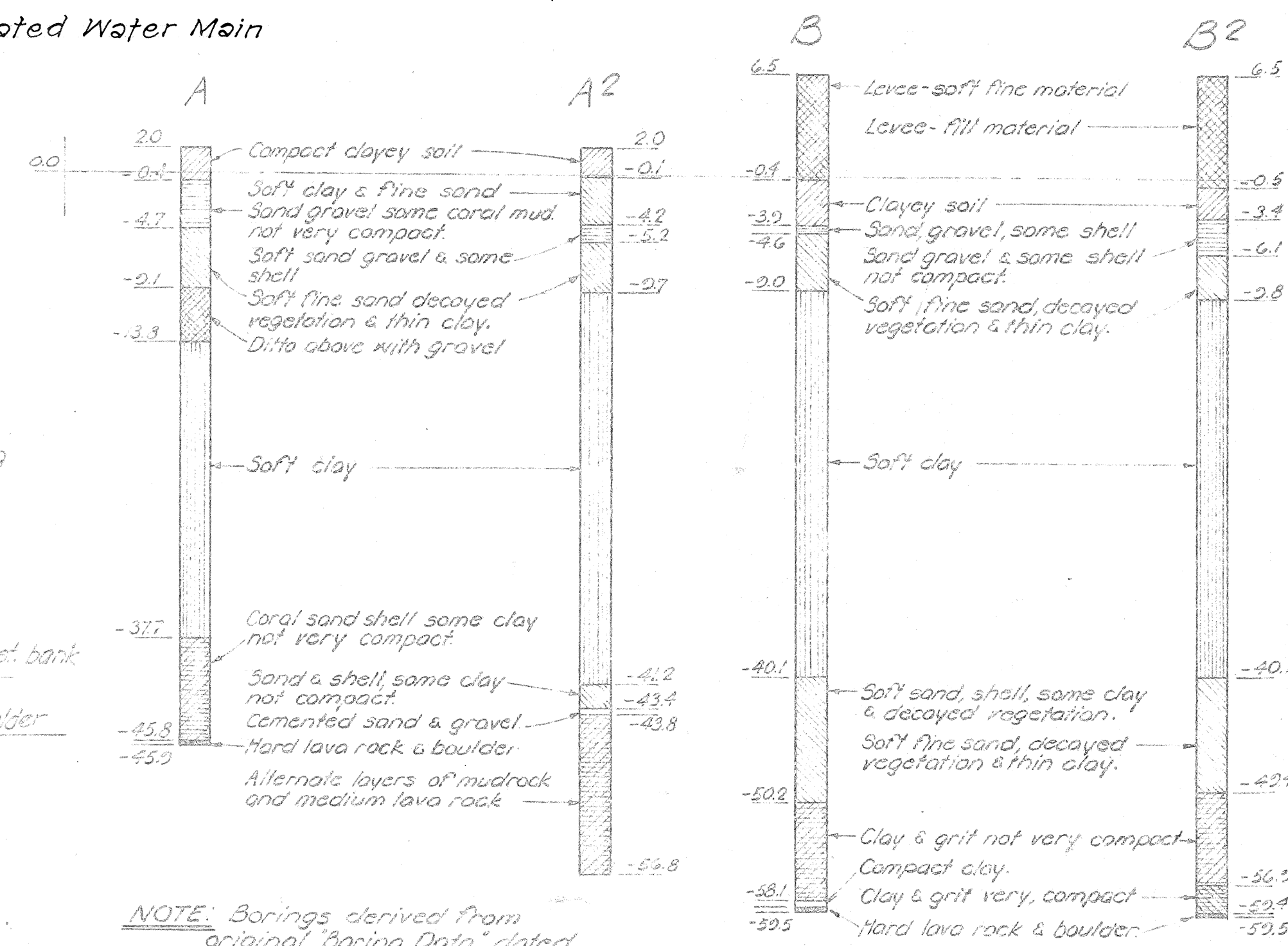
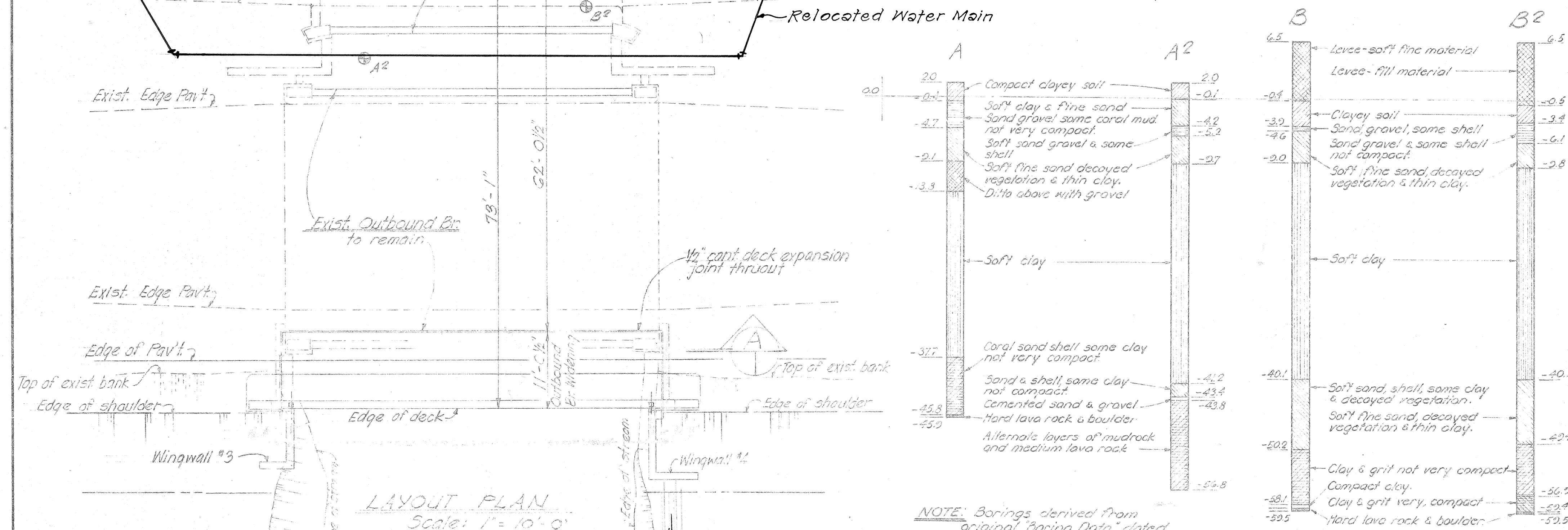




FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	4-070-1(9)	1965	16	87



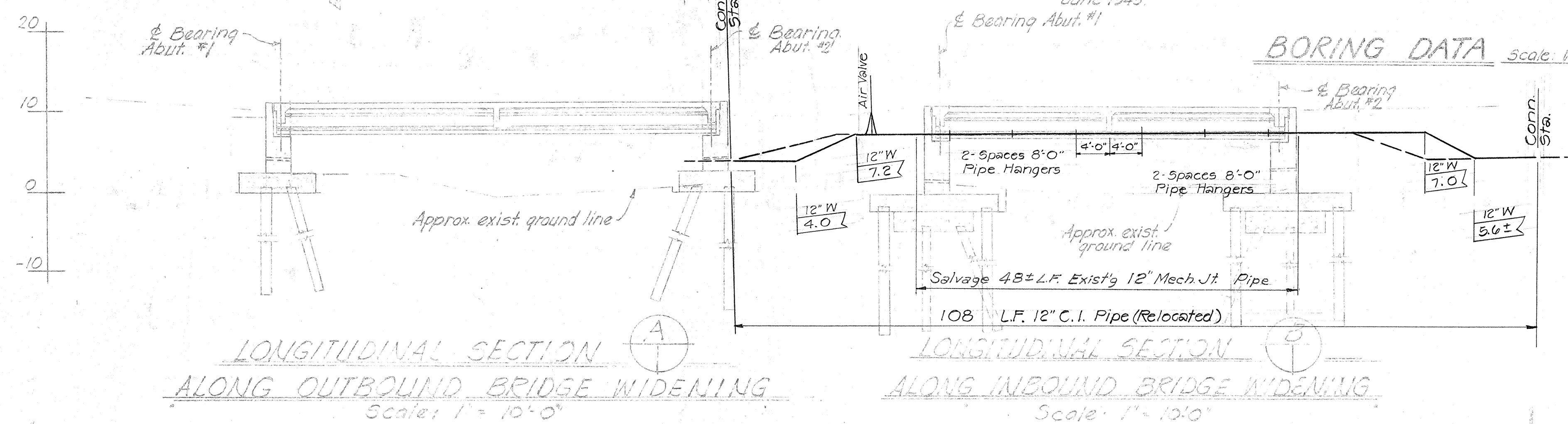
NOTE: Water Service 12" main shall be maintained at all times except during connection.



APPROVED:

S. Hawakemi
ASSISTANT CHIEF ENGINEER BWS

6/30/65
DATE



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALAUAA SPRINGS BRIDGE WIDENING
INBOUND AND OUTBOUND

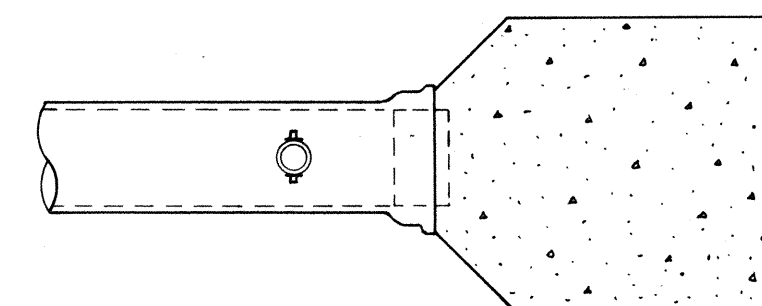
WATERLINE DETAIL

Kenn Hays Widening Proj. No. U-030-1(9)
June 1965

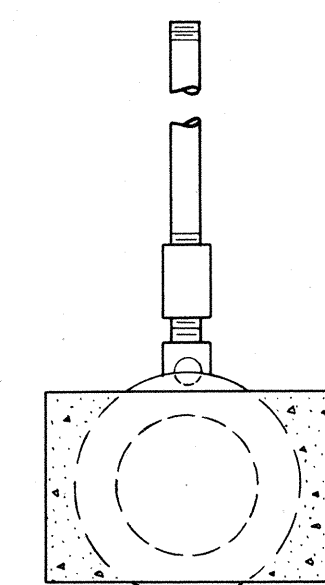
SHEET No. 2 OF 4 SHEETS

FED AID DIST. NO.	STATE	FED AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	U-090-1(9)	1965	17	87

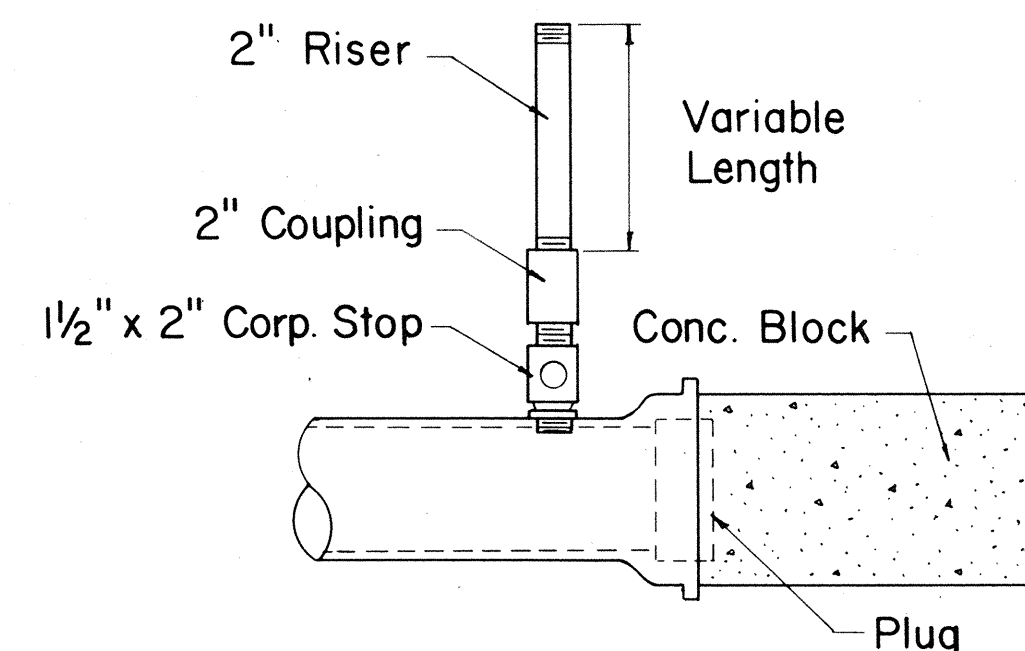
NOTE:
Contractor to furnish 1/2" brass plug (Tapered thread) to replace corporation stop upon completion of chlorination.



TOP VIEW



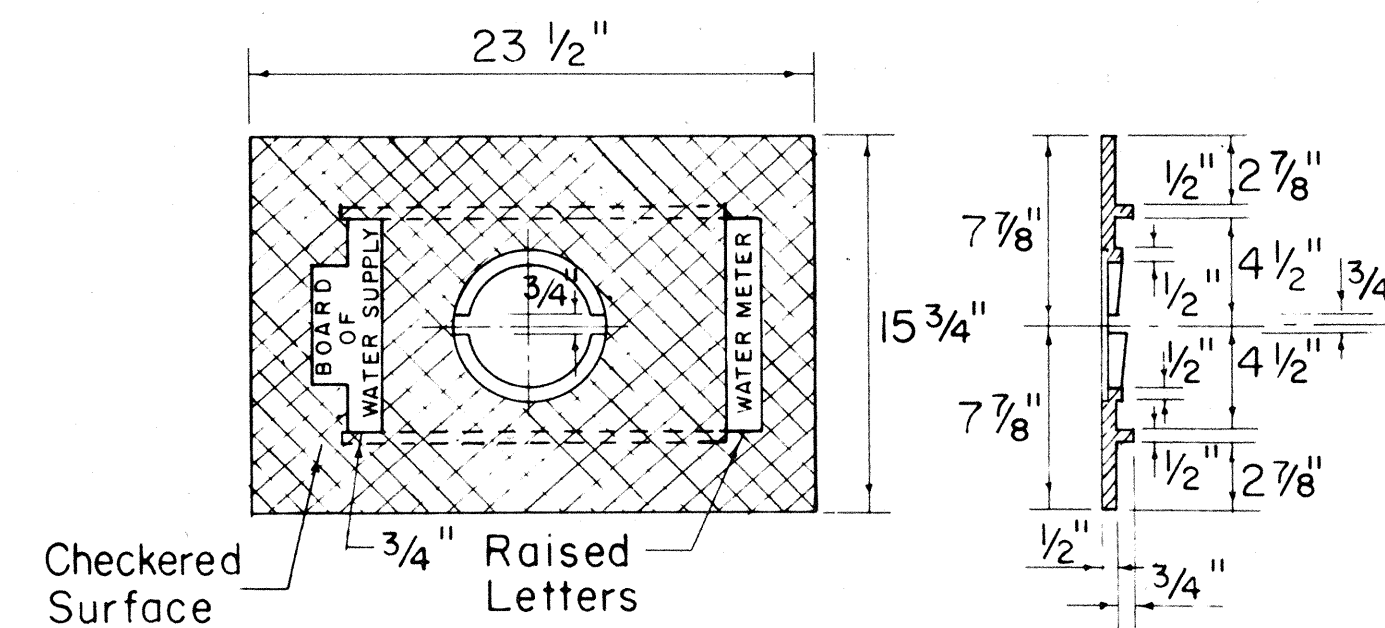
END VIEW



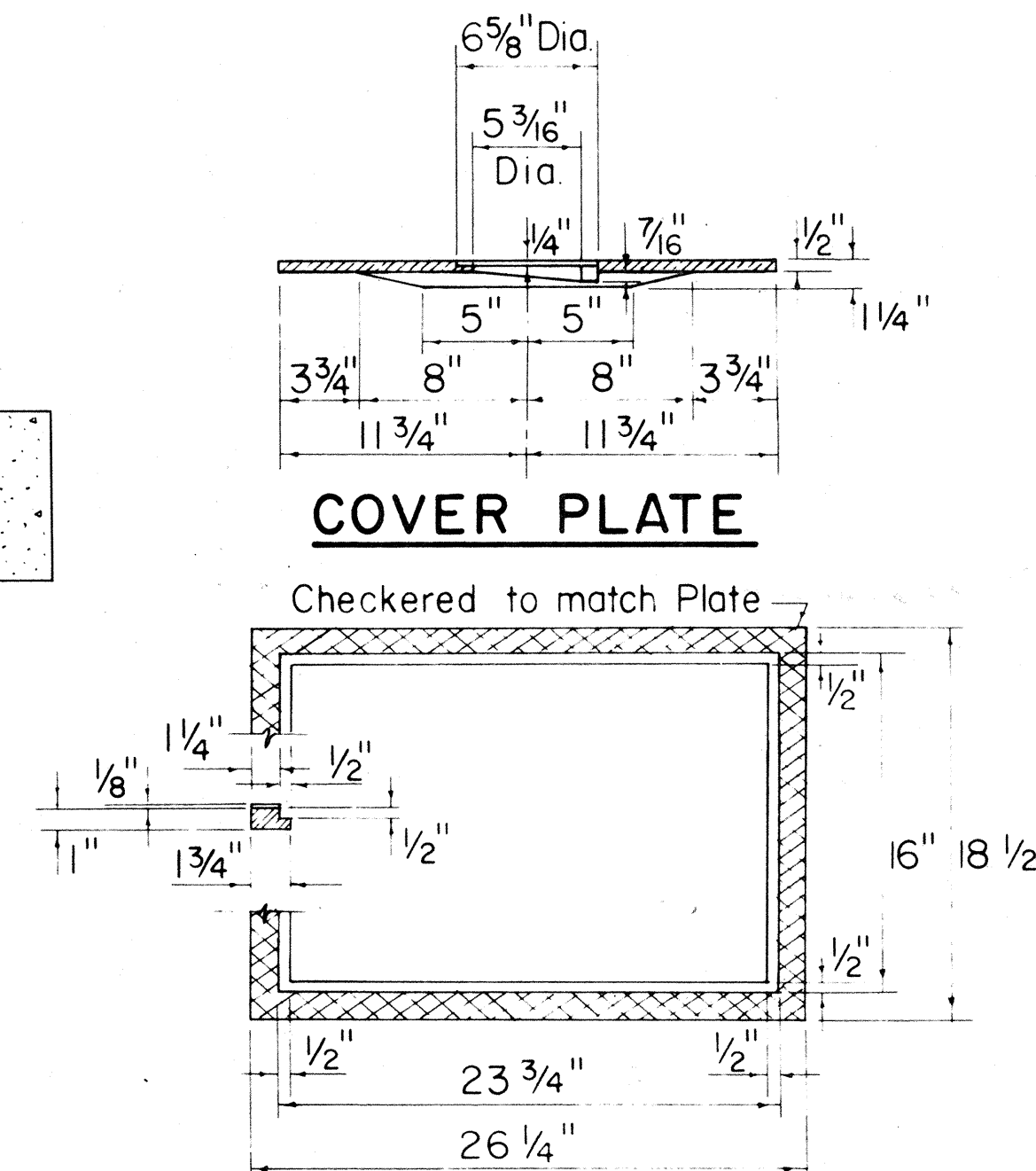
SIDE VIEW

DETAIL OF TEMPORARY 2" CLEANOUT

Not to Scale

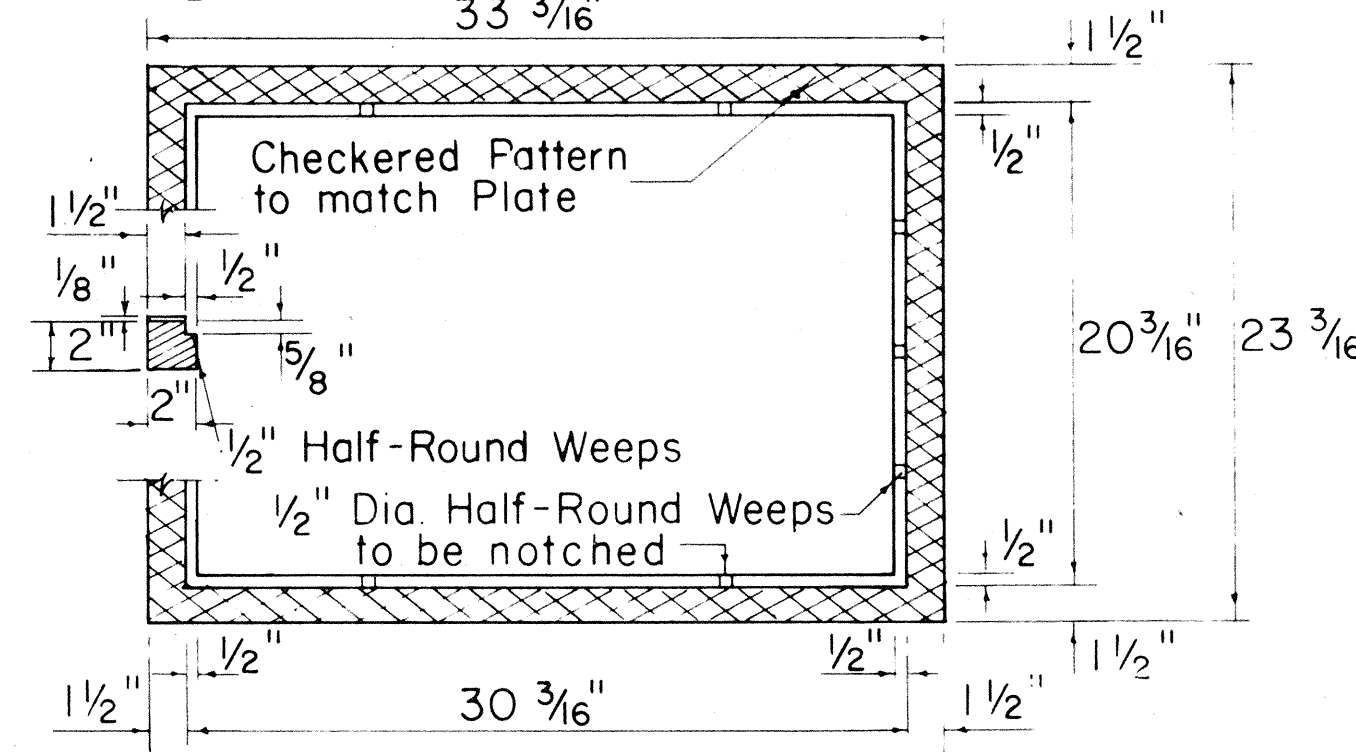


COVER PLATE

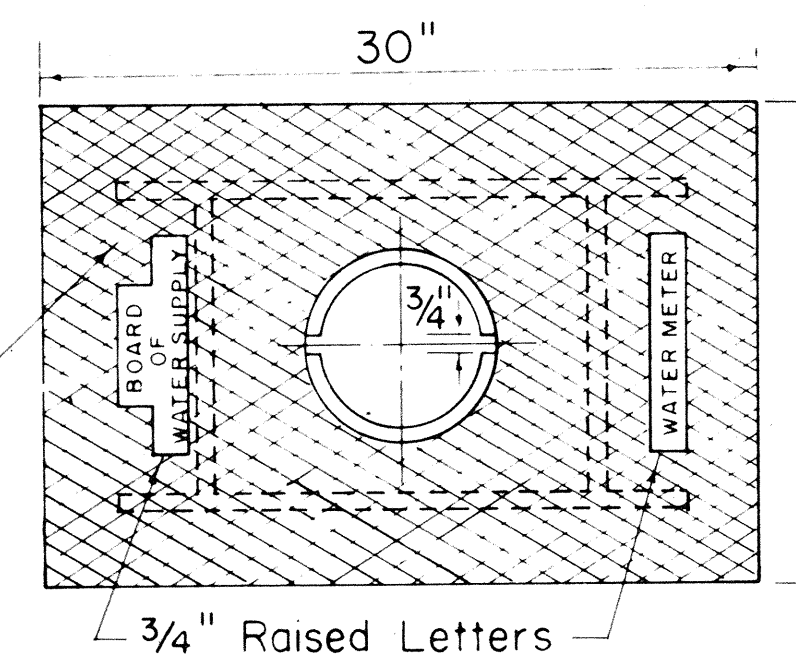


FRAME CAST IRON FRAME AND PLATE TYPE II

Scale: 1 1/2" = 1'-0"



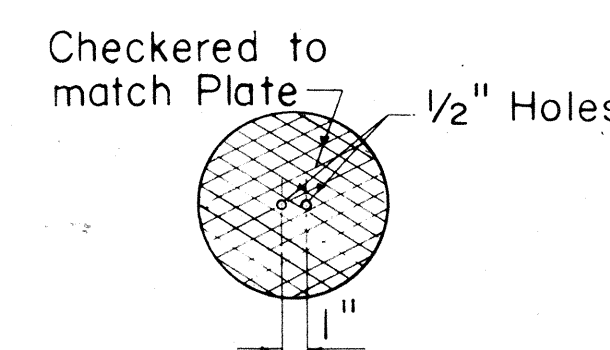
FRAME



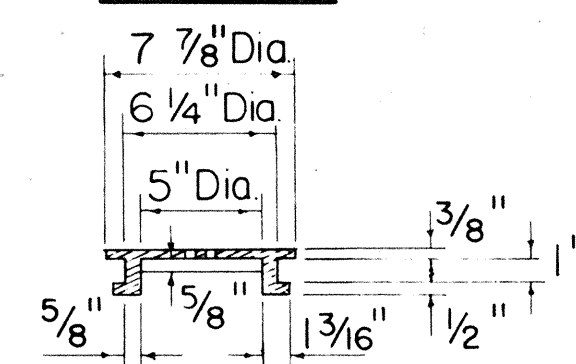
COVER PLATE

CAST IRON FRAME, PLATE AND COVER TYPE III

Scale: 1 1/2" = 1'-0"



READING COVER

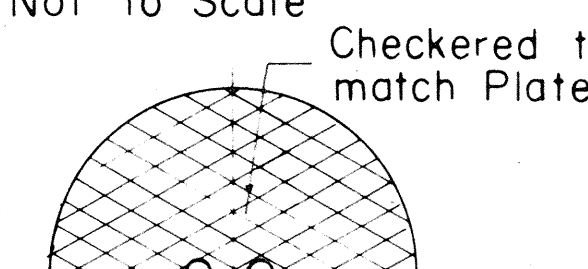


INSTALLATION OF VALVE BOX FOR GATE VALVES

Not to Scale

Concrete Pedestal or Brick Pedestal Cement Mortared Under Valves

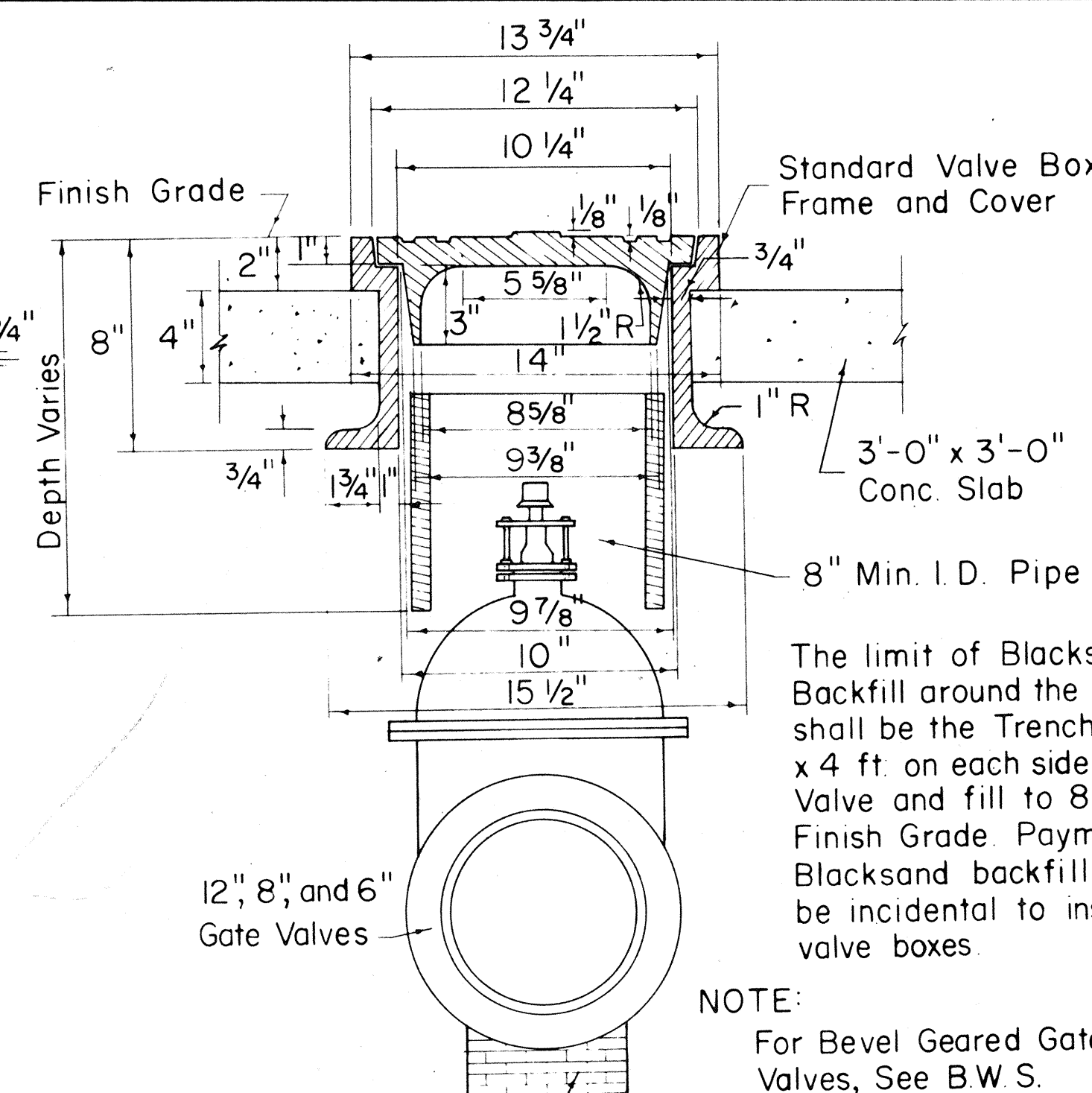
NOTE:
For Bevel Geared Gate Valves, See B.W.S. Standard (Detail Sheet filed in B.W.S. Engr. Division)



READING COVER

CAST IRON COVER FOR TYPE II FRAME

Not to Scale



The limit of Blacksand Backfill around the Valve shall be the Trench Width x 4 ft. on each side of Valve and fill to 8" below Finish Grade. Payment for Blacksand backfill shall be incidental to installing valve boxes

Standard Valve Box Frame and Cover

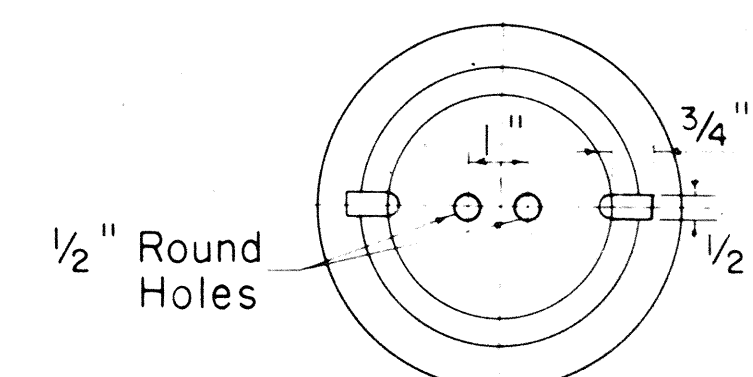
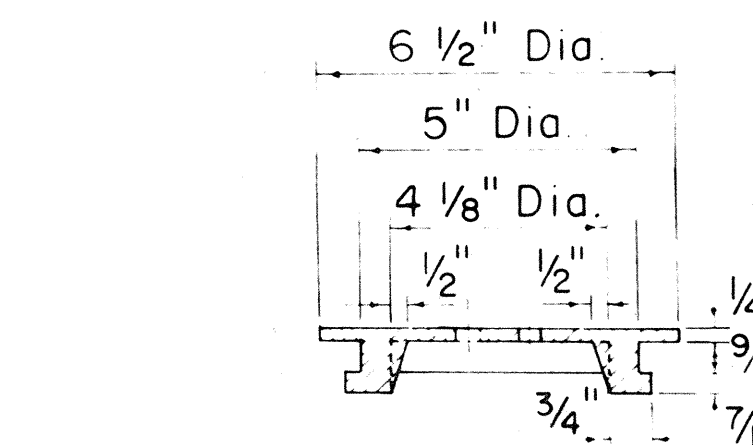
3'-0" x 3'-0" Conc. Slab

8" Min. I.D. Pipe

NOTE:
For Bevel Geared Gate Valves, See B.W.S. Standard (Detail Sheet filed in B.W.S. Engr. Division)

CAST IRON FRAME AND COVER

Scale: 3" = 1'-0"

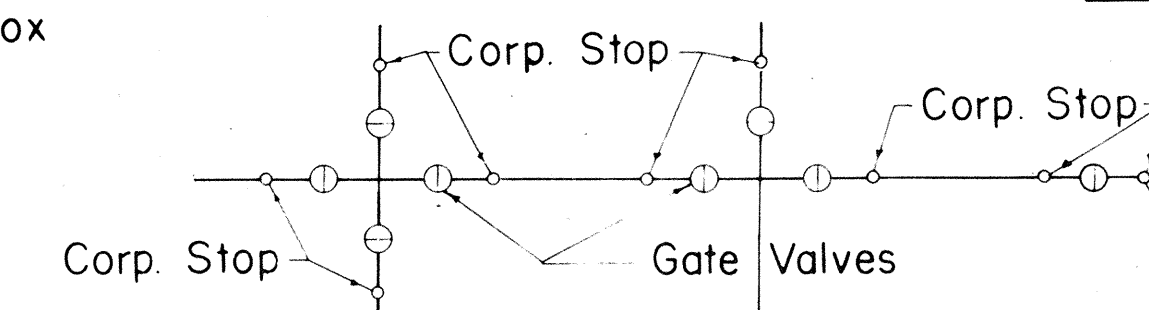


1/2" Round Holes

APPROVED:

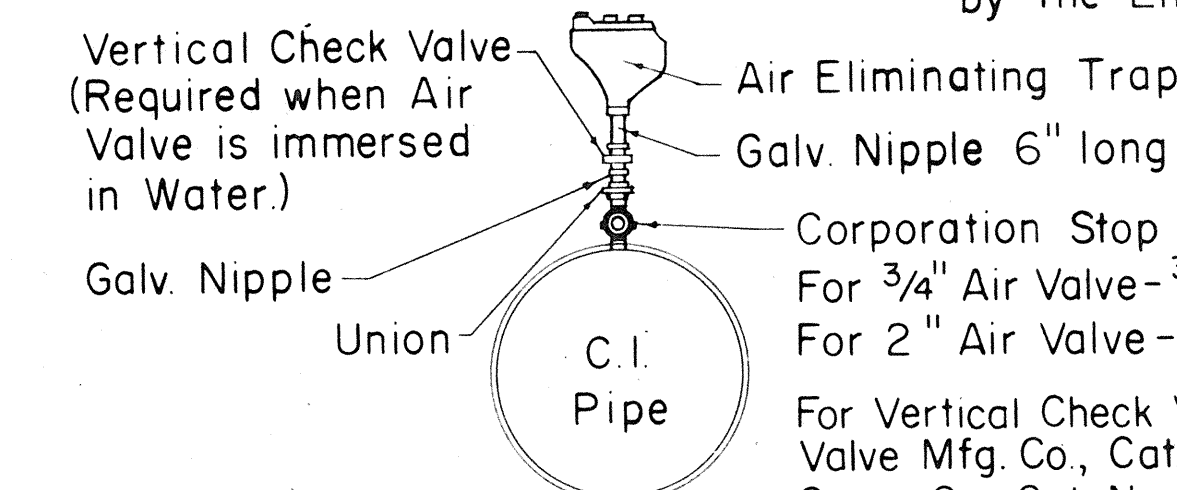
DIRECTOR OF TRANSPORTATION DATE

ASSISTANT CHIEF ENGINEER DATE
BOARD OF WATER SUPPLY



CORP. STOP LAYOUT

Not to Scale

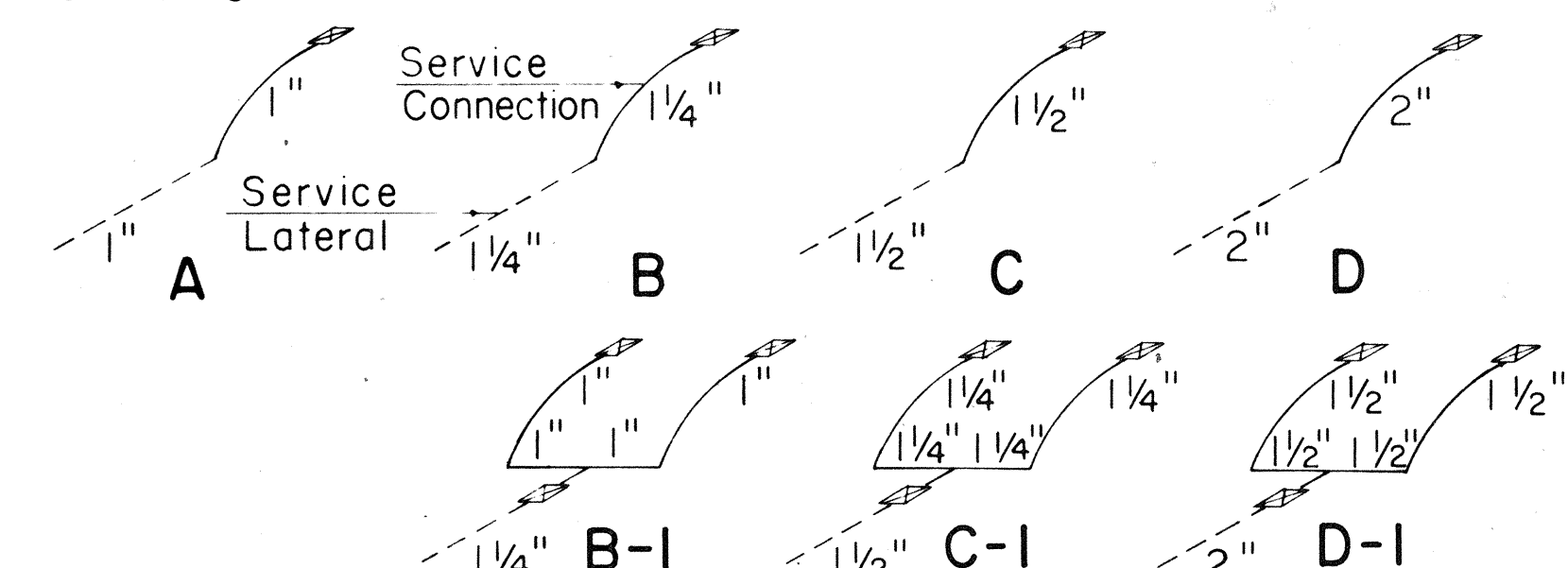


DETAIL OF CONNECTION FOR AIR ELIMINATING TRAP

Not to Scale

Offset word "WATER" 1 3/4" high, 1/8" deep

NOTE:
All castings shall be made accurately to the dimensions shown. Seat and Cover shall be ground where necessary to secure flat and true surfaces. The Cover shall not rattle in any position.
Minor changes in dimensions may be made to suit foundry conditions provided such changes are approved by the Board of Water Supply.

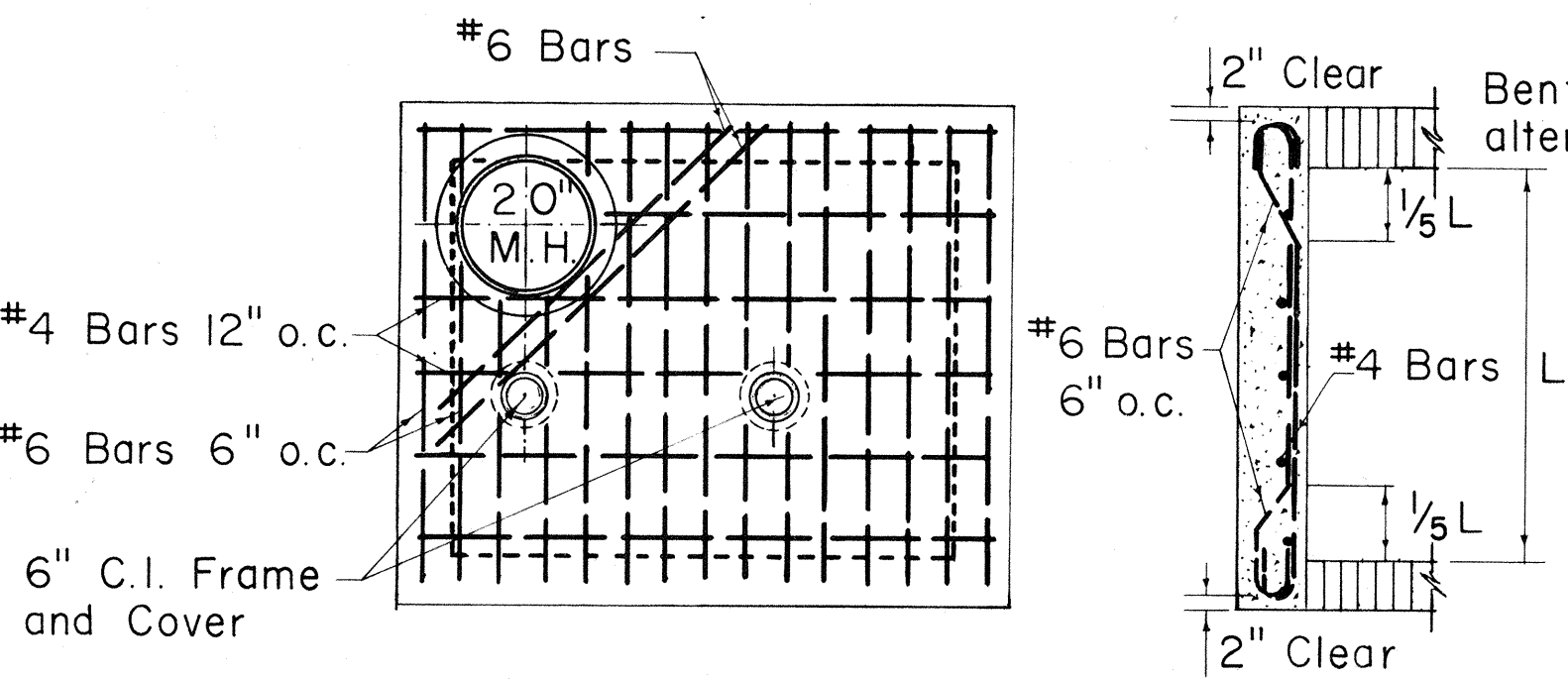


TYPICAL LAYOUT OF SERVICE LATERALS AND CONNECTIONS

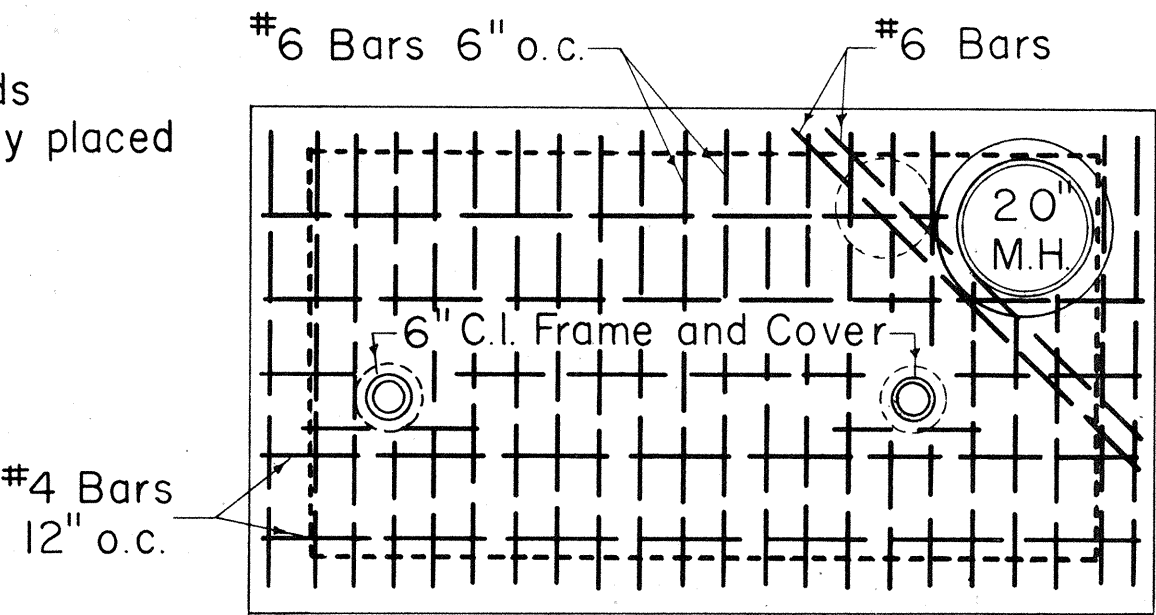
Not to Scale

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
BOARD OF WATER SUPPLY
CITY & COUNTY OF HONOLULU
KAMEHAMEHA HIGHWAY WIDENING
PROJ. NO. U-090-1(9)

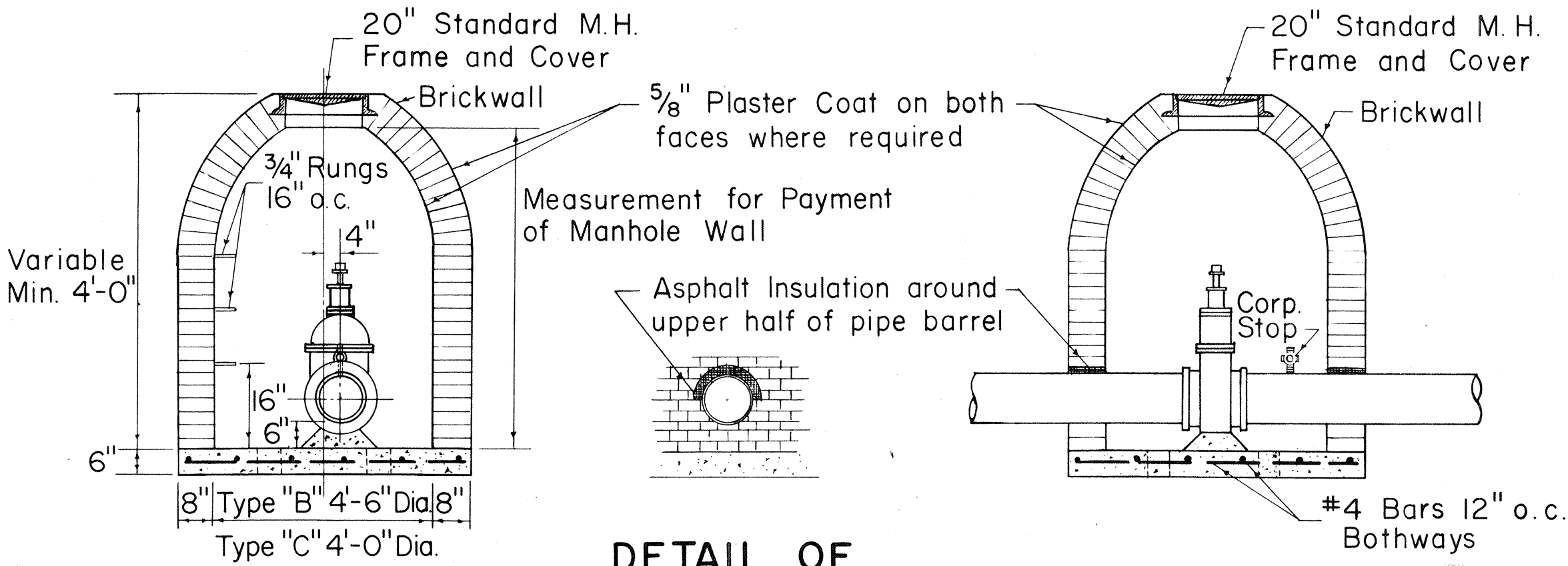
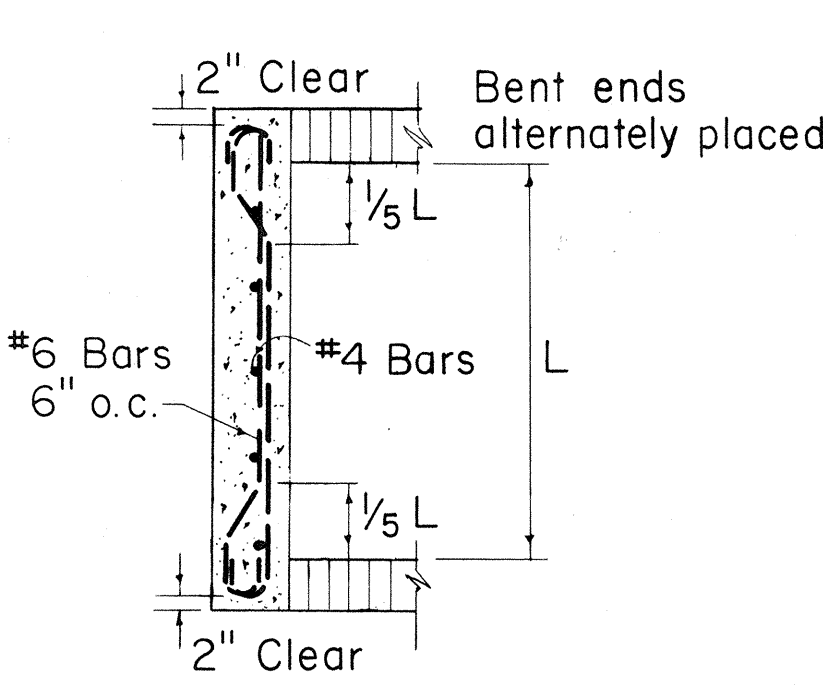
Scale: As Noted Date July, 1965
SHEET NO. 3 OF 4 SHEETS



PLAN OF TOP SLAB



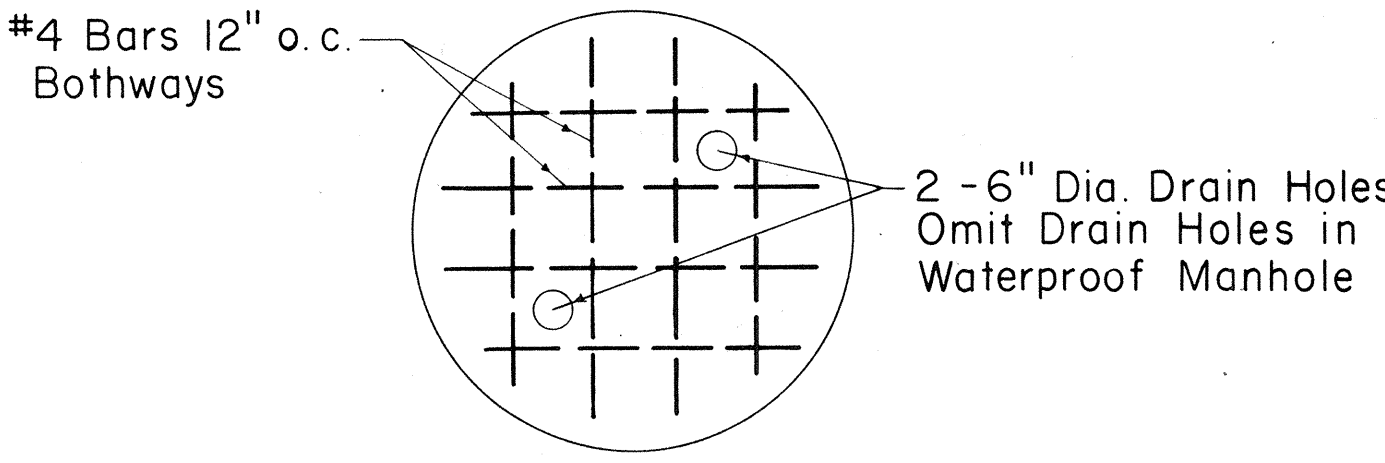
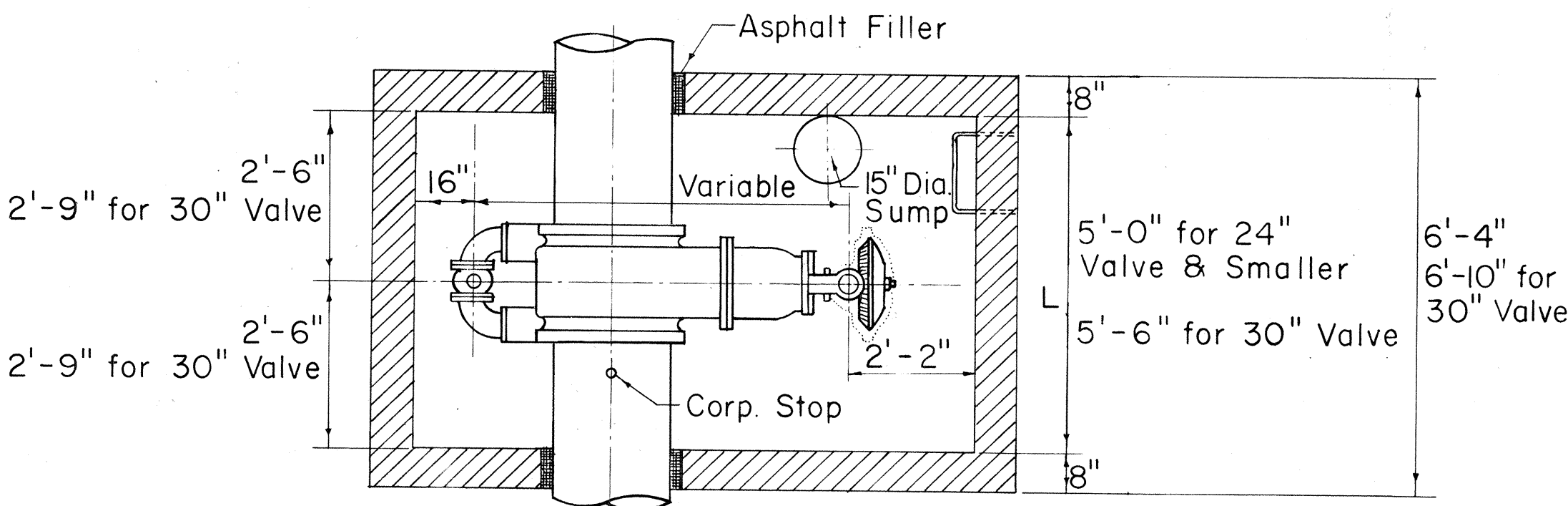
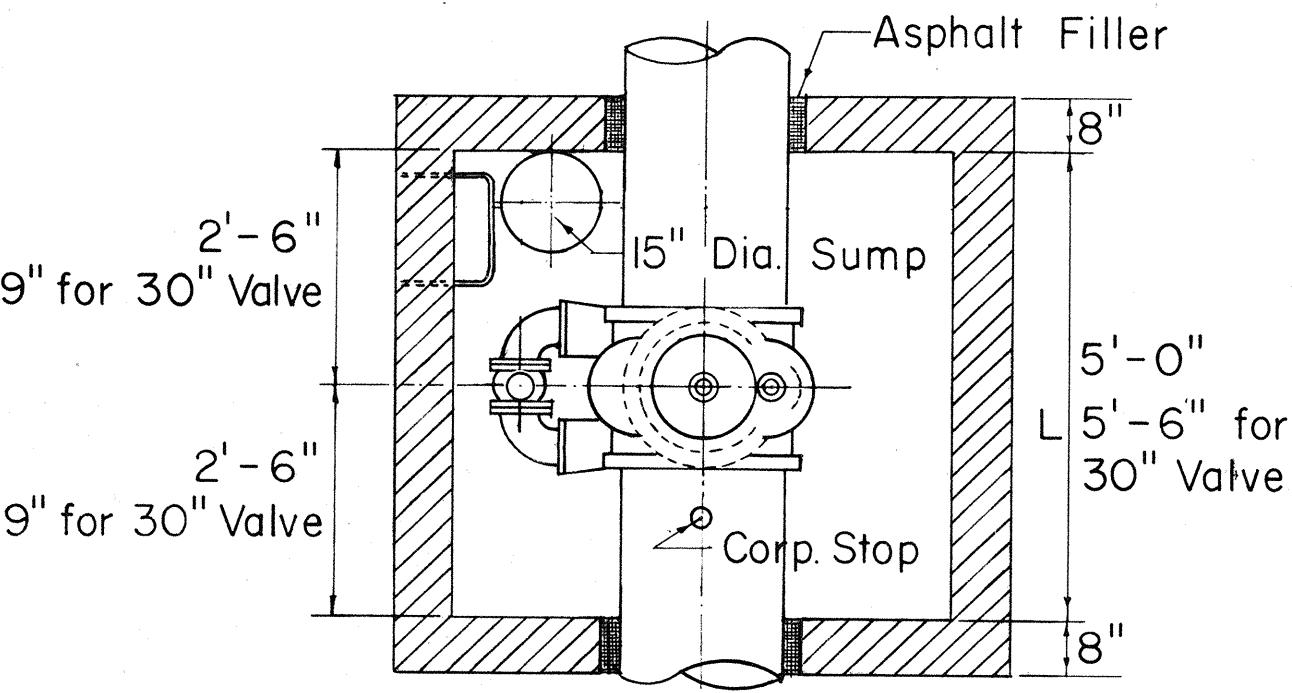
PLAN OF TOP SLAB



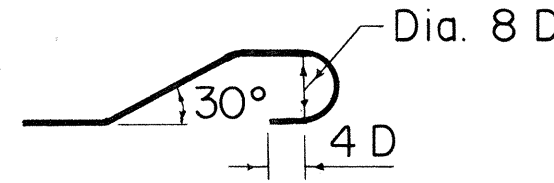
DETAIL OF ASPHALT FILLER

TABLE "A"
REQUIRED CORPORATION STOP SIZES
AT GATE VALVE

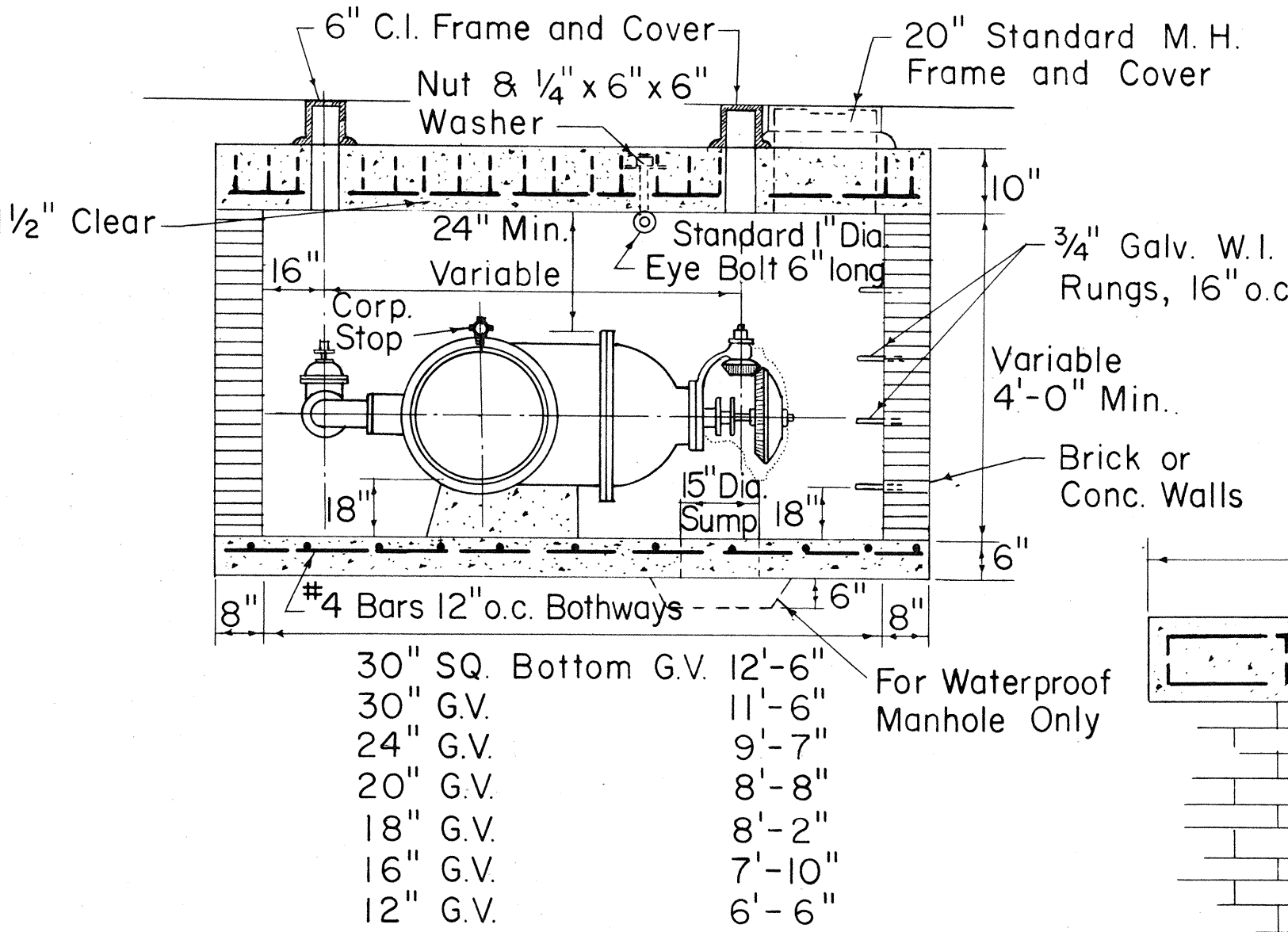
DIA. OF MAIN INCHES	SIZE OF CORP STOP
4	1" x 1/4"
6	1" x 1/4"
8	1" x 1/4"
12	1" x 1/4"
16	1" x 1/4"
20	1" x 1/4"
24	1 1/2" x 2"
36	1 1/2" x 2"
42	1 1/2" x 2"



STEEL DETAIL
IN BOTTOM SLAB



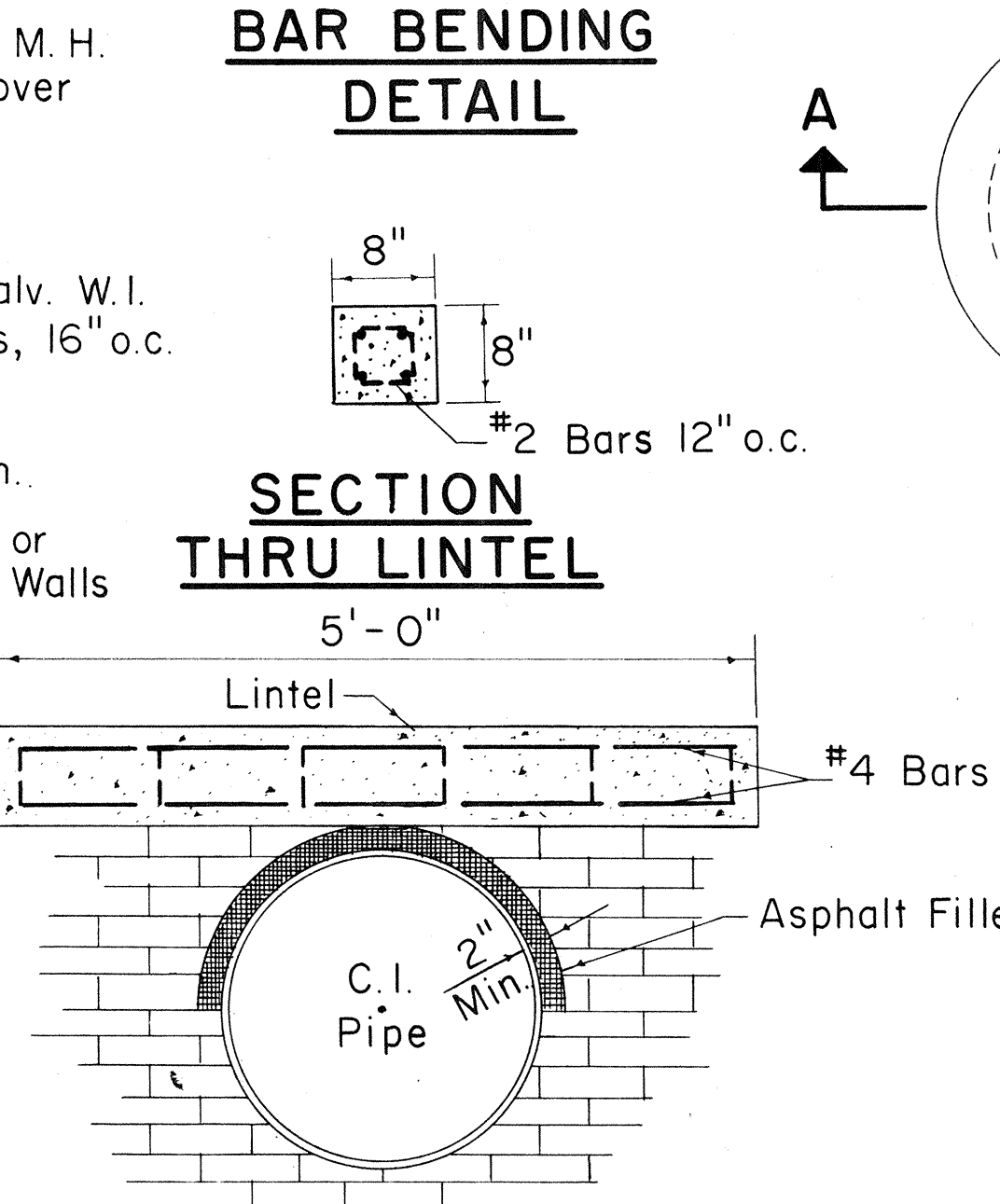
BAR BENDING
DETAIL



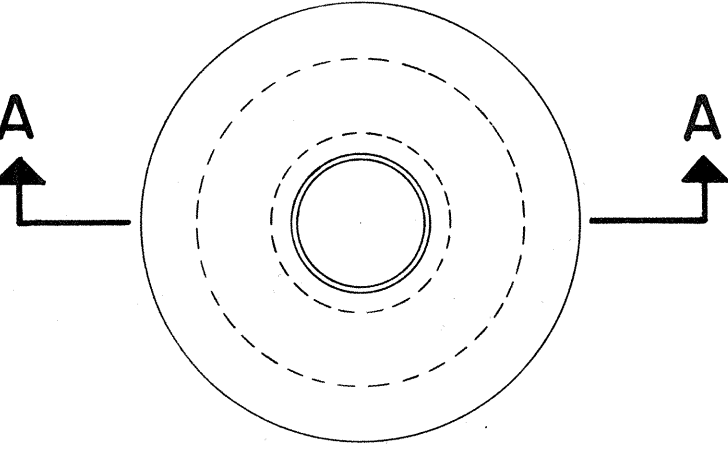
SECTION

TYPE "A" MANHOLE

FOR BEVEL GEARED GATE VALVES



DETAIL OF LINTEL
AND ASPHALT FILLER



PLAN

TYPE "B" AND "C" MANHOLES
TYPE "B" 4'-6" DIA. (FOR 12" G.V.)
TYPE "C" 4'-0" DIA. (FOR 6" & 8" G.V.)

APPROVED:

DIRECTOR OF TRANSPORTATION DATE

ASSISTANT CHIEF ENGINEER DATE
BOARD OF WATER SUPPLY

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
BOARD OF WATER SUPPLY
CITY & COUNTY OF HONOLULU
KAMEHAMEHA HIGHWAY WIDENING
PROJ. NO. U-090-1(9)

Not to Scale Date July, 1965
SHEET NO. 4 OF 4 SHEETS