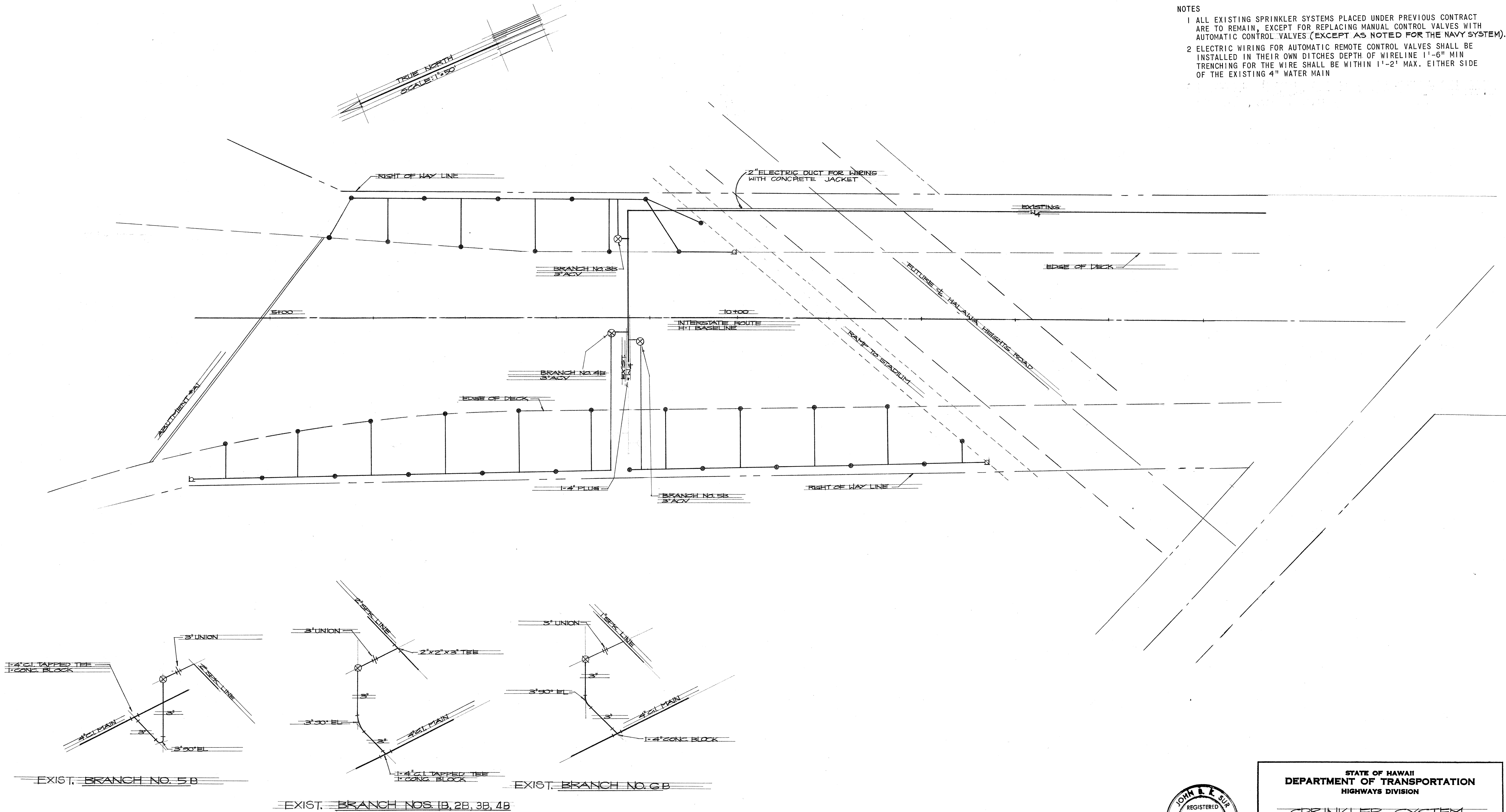
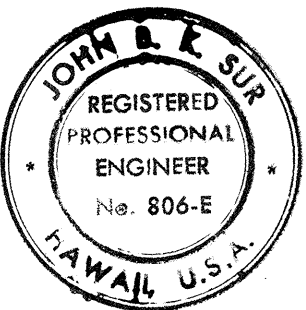


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1 (71)-14	1974	23	61

- NOTES
- ALL EXISTING SPRINKLER SYSTEMS PLACED UNDER PREVIOUS CONTRACT ARE TO REMAIN, EXCEPT FOR REPLACING MANUAL CONTROL VALVES WITH AUTOMATIC CONTROL VALVES (EXCEPT AS NOTED FOR THE NAVY SYSTEM).
 - ELECTRIC WIRING FOR AUTOMATIC REMOTE CONTROL VALVES SHALL BE INSTALLED IN THEIR OWN DITCHES DEPTH OF WIRELINE 1'-6" MIN TRENCHING FOR THE WIRE SHALL BE WITHIN 1'-2' MAX. EITHER SIDE OF THE EXISTING 4" WATER MAIN



SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	



THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION.
John A. K. Sir

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SPRINKLER SYSTEM
AT VIADUCT SECTION

INTERSTATE ROUTE H-1
F.A.I. PROJECT NO. I-HI-(71)-14

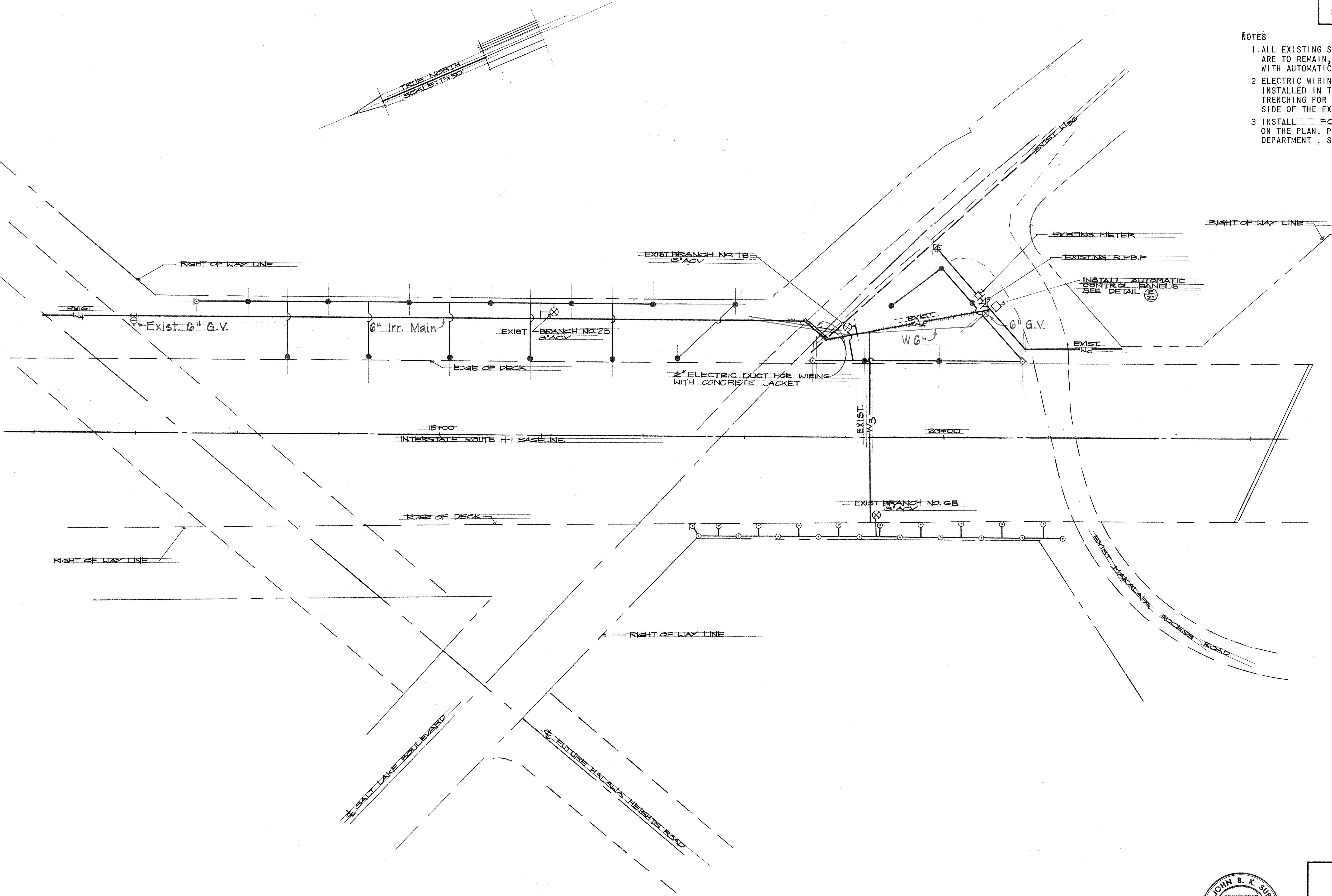
SCALE AS SHOWN

DATE: JUNE 9, 1974

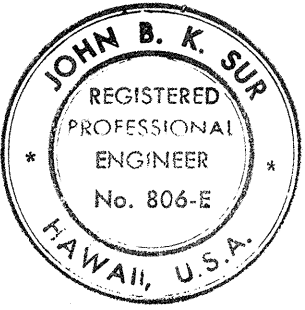
SHEET No. 1 OF 7 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-H-1 (71)-14	1974	24	61

- NOTES:
1. ALL EXISTING SPRINKLER SYSTEMS PLACED UNDER PREVIOUS CONTRACT ARE TO REMAIN, EXCEPT FOR REPLACING MANUAL CONTROL VALVES WITH AUTOMATIC CONTROL VALVES. (EXCEPT AS NOTED BY NAVY SYSTEM).
 2. ELECTRIC WIRING FOR AUTOMATIC REMOTE CONTROL VALVES SHALL BE INSTALLED IN THEIR OWN DITCHES. DEPTH OF WIRELINE 1'6" MIN. TRENCHING FOR THE WIRE SHALL BE WITHIN 1' - 2' MAX. EITHER SIDE OF THE EXISTING 12" WATER MAIN.
 3. INSTALL FOUR AUTOMATIC CONTROL PANELS AS DESIGNATED ON THE PLAN. PANEL SHALL MEET THE APPROVAL OF THE TRANSPORTATION DEPARTMENT, STATE OF HAWAII.



ORIGINAL PLAN	DATE
DESIGNED BY	
CHECKED BY	
NO.	



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ME OR UNDER MY SUPERVISION

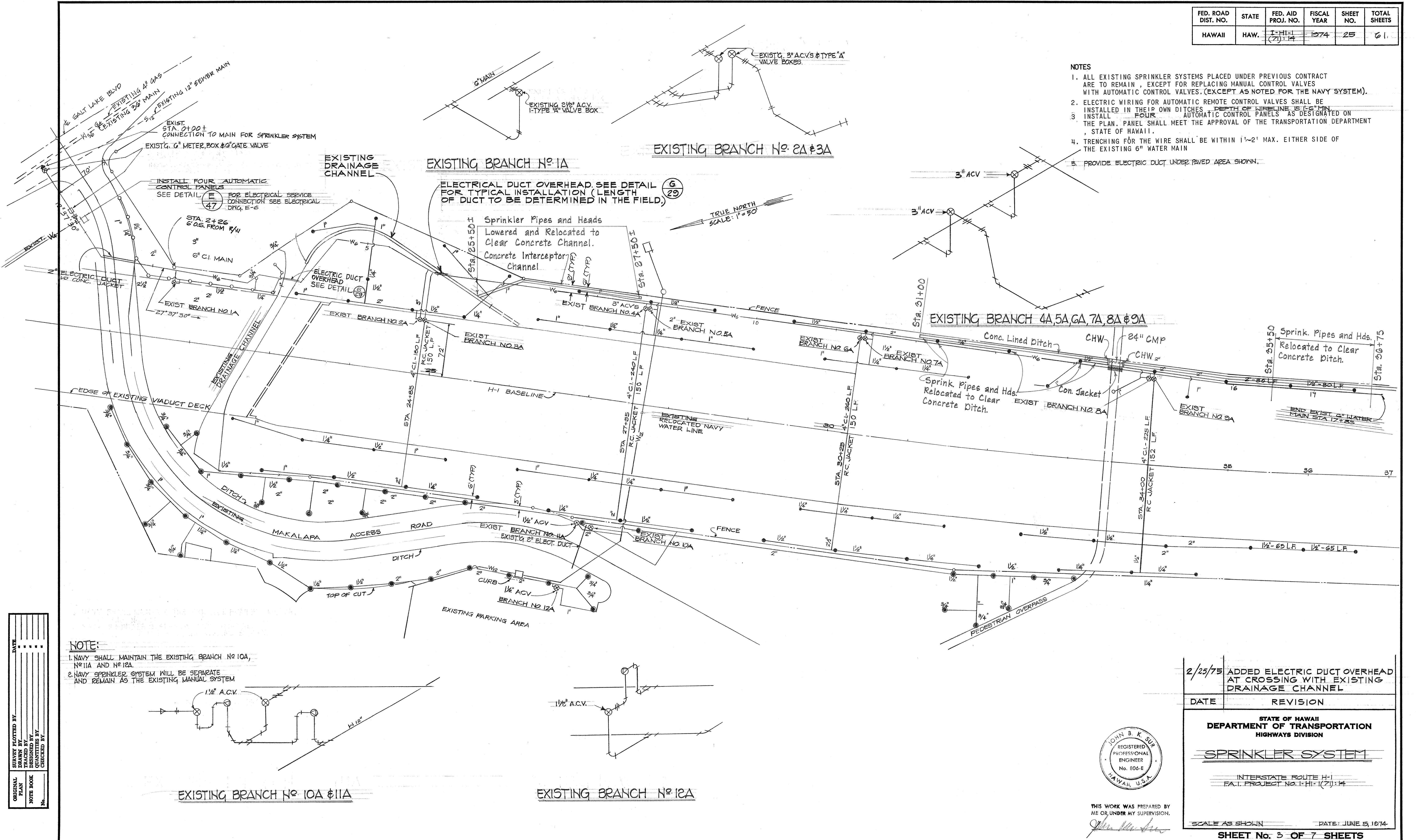
John B. K. Sur

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SPRINKLER SYSTEM
AT VIADUCT SECTION
INTERSTATE ROUTE H-1
F.A.I. PROJECT NO. 1-H-1 (71)-14

SCALE AS SHOWN
DATE: JUNE 6, 1974
SHEET No. 2 OF 7 SHEETS

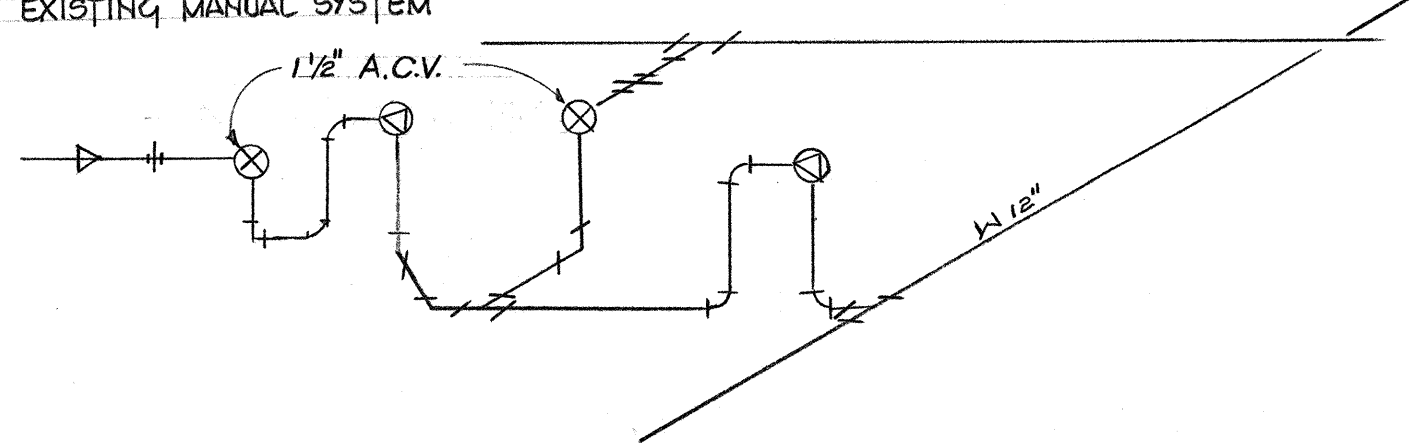
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-HI-1 (71)-14	1974	25	61



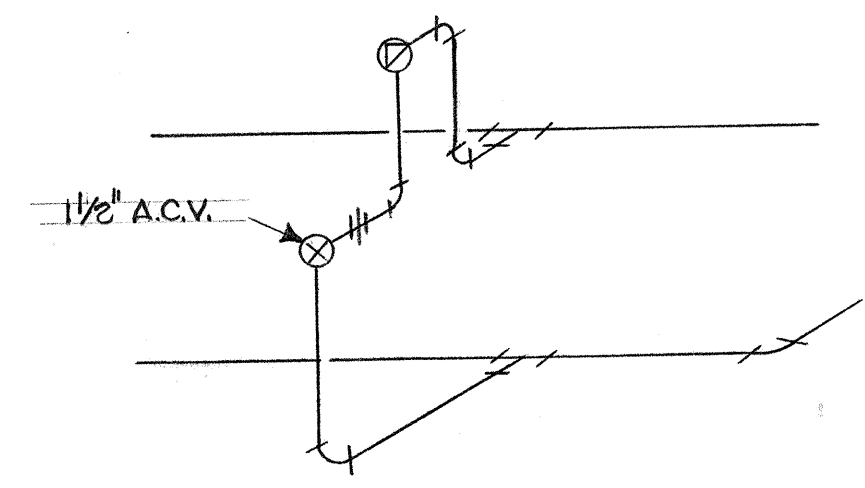
- NOTES
1. ALL EXISTING SPRINKLER SYSTEMS PLACED UNDER PREVIOUS CONTRACT ARE TO REMAIN, EXCEPT FOR REPLACING MANUAL CONTROL VALVES WITH AUTOMATIC CONTROL VALVES. (EXCEPT AS NOTED FOR THE NAVY SYSTEM).
 2. ELECTRIC WIRING FOR AUTOMATIC REMOTE CONTROL VALVES SHALL BE INSTALLED IN THEIR OWN DITCHES. DEPTH OF WIRELINE IS 6" MIN.
 3. INSTALL FOUR AUTOMATIC CONTROL PANELS AS DESIGNATED ON THE PLAN. PANEL SHALL MEET THE APPROVAL OF THE TRANSPORTATION DEPARTMENT, STATE OF HAWAII.
 4. TRENCHING FOR THE WIRE SHALL BE WITHIN 1'-2' MAX. EITHER SIDE OF THE EXISTING 6" WATER MAIN
 5. PROVIDE ELECTRIC DUCT UNDER PAVED AREA SHOWN.

NOTE:

1. NAVY SHALL MAINTAIN THE EXISTING BRANCH NO 10A, NO 11A AND NO 12A.
2. NAVY SPRINKLER SYSTEM WILL BE SEPARATE AND REMAIN AS THE EXISTING MANUAL SYSTEM



EXISTING BRANCH No 10A & 11A



EXISTING BRANCH No 12A

DATE	
SURVEY MONITOR BY	
DRAWN BY	
DESIGNED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	

2/25/75	ADDED ELECTRIC DUCT OVERHEAD AT CROSSING WITH EXISTING DRAINAGE CHANNEL
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SPRINKLER SYSTEM

INTERSTATE ROUTE H-1
F.A.I. PROJECT NO. 1-HI-1 (71)-14

SCALE AS SHOWN DATE: JUNE 5, 1974

SHEET No. 3 OF 7 SHEETS

JOHN B. K. SUP
REGISTERED PROFESSIONAL ENGINEER
No. 806-E
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

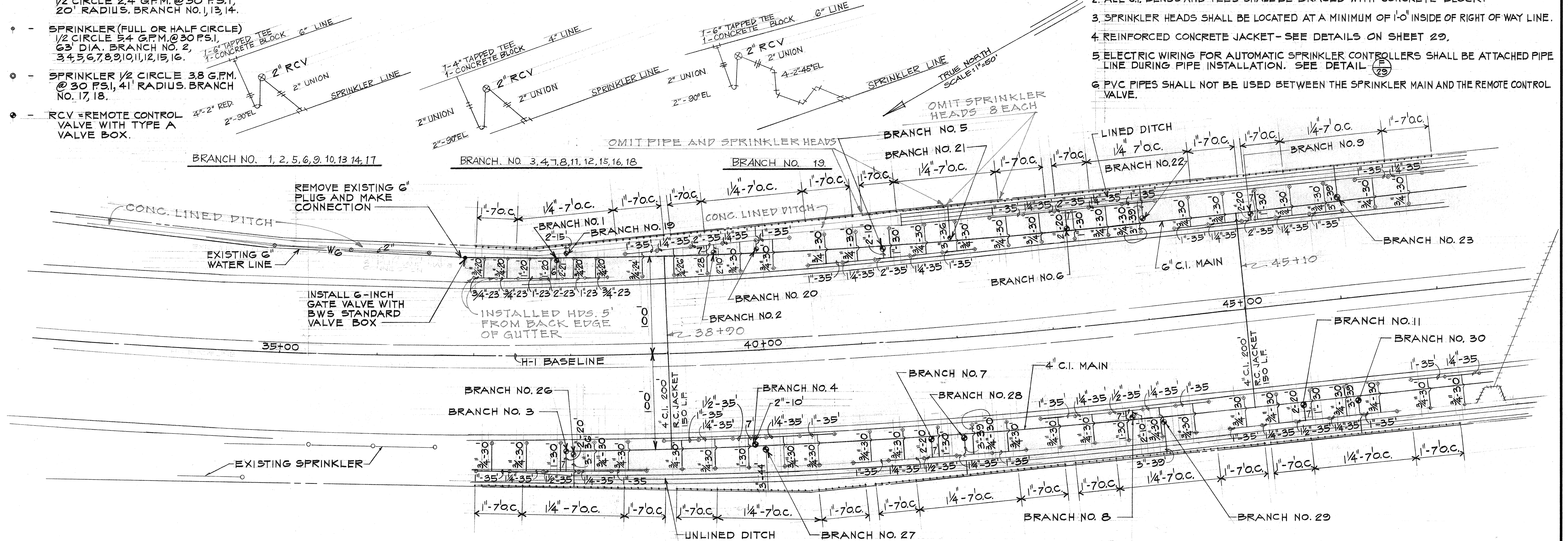
[Signature]

LEGEND

- STEAM BUBBLER HEAD, HALF CIRCLE 4.2 G.P.M. @ 10 P.S.I.
- SPRINKLER (FULL OR HALF CIRCLE) 1/2 CIRCLE 2.4 G.P.M. @ 30 P.S.I. 20' RADIUS, BRANCH NO. 1, 13, 14.
- SPRINKLER (FULL OR HALF CIRCLE) 1/2 CIRCLE 5.4 G.P.M. @ 30 P.S.I. 63' DIA. BRANCH NO. 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 15, 16.
- SPRINKLER 1/2 CIRCLE 3.8 G.P.M. @ 30 P.S.I. 41' RADIUS, BRANCH NO. 17, 18.
- RCV = REMOTE CONTROL VALVE WITH TYPE A VALVE BOX.

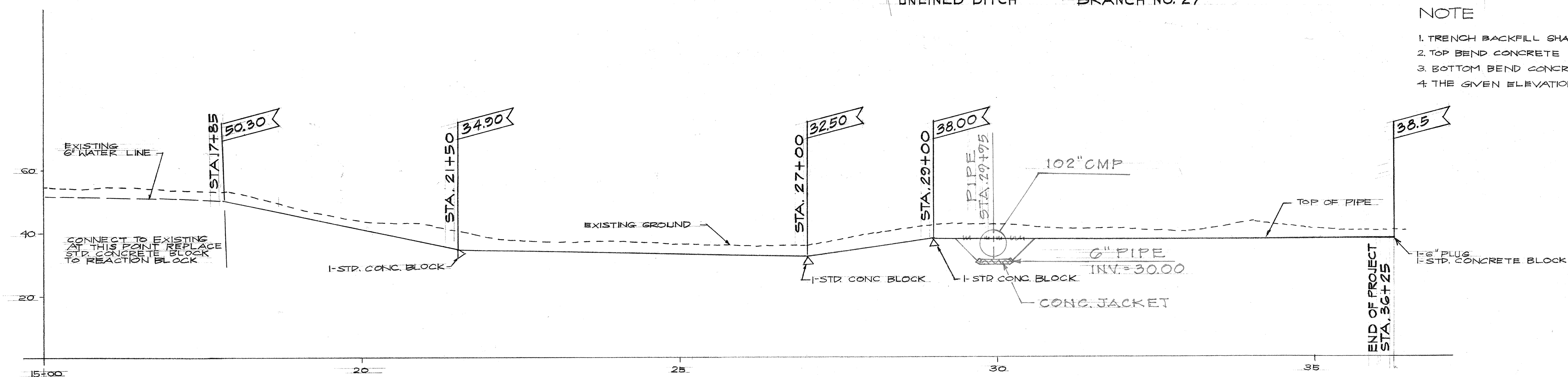
GENERAL NOTES:

- ALL PIPES UNLESS DESIGNATED AS "C.I." SHALL BE GALVANIZED STEEL PIPES, STANDARD WEIGHT COPPER PIPES OR PLASTIC PIPES, PVC CLASS 160.
- ALL C.I. BENDS AND TEES SHALL BE BRACED WITH CONCRETE BLOCK.
- SPRINKLER HEADS SHALL BE LOCATED AT A MINIMUM OF 1'-0" INSIDE OF RIGHT OF WAY LINE.
- REINFORCED CONCRETE JACKET - SEE DETAILS ON SHEET 29.
- ELECTRIC WIRING FOR AUTOMATIC SPRINKLER CONTROLLERS SHALL BE ATTACHED PIPE LINE DURING PIPE INSTALLATION. SEE DETAIL (29).
- PVC PIPES SHALL NOT BE USED BETWEEN THE SPRINKLER MAIN AND THE REMOTE CONTROL VALVE.



NOTE

- TRENCH BACKFILL SHALL PROVIDE A MINIMUM COVER OF 2 FT.
- TOP BEND CONCRETE REACTION BLOCK DETAIL (29).
- BOTTOM BEND CONCRETE BLOCK DETAIL (29).
- THE GIVEN ELEVATIONS ARE FOR TOP OF PIPE.



PROFILE OF 6" WATER LINE

SCALE: HORIZONTAL 1"=100'
VERTICAL 1"=20'

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H-1 (71)-14	1974	26	61

2/25/75 ADD 6-INCH GATE VALVE WITH BWS STANDARD VALVE BOX. REPLACED ANGLE CONTROL VALVE WITH REMOTE CONTROL VALVE. ADDED GENERAL NOTE 6.

DATE REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SPRINKLER SYSTEM

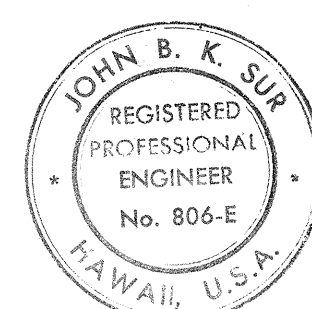
INTERSTATE ROUTE H-1
F.A.I. PROJECT NO. I-H-1-(71)-14

SCALE AS SHOWN

DATE: JUNE 5, 1974

SHEET No. 4 OF 7 SHEETS

ADD. 26

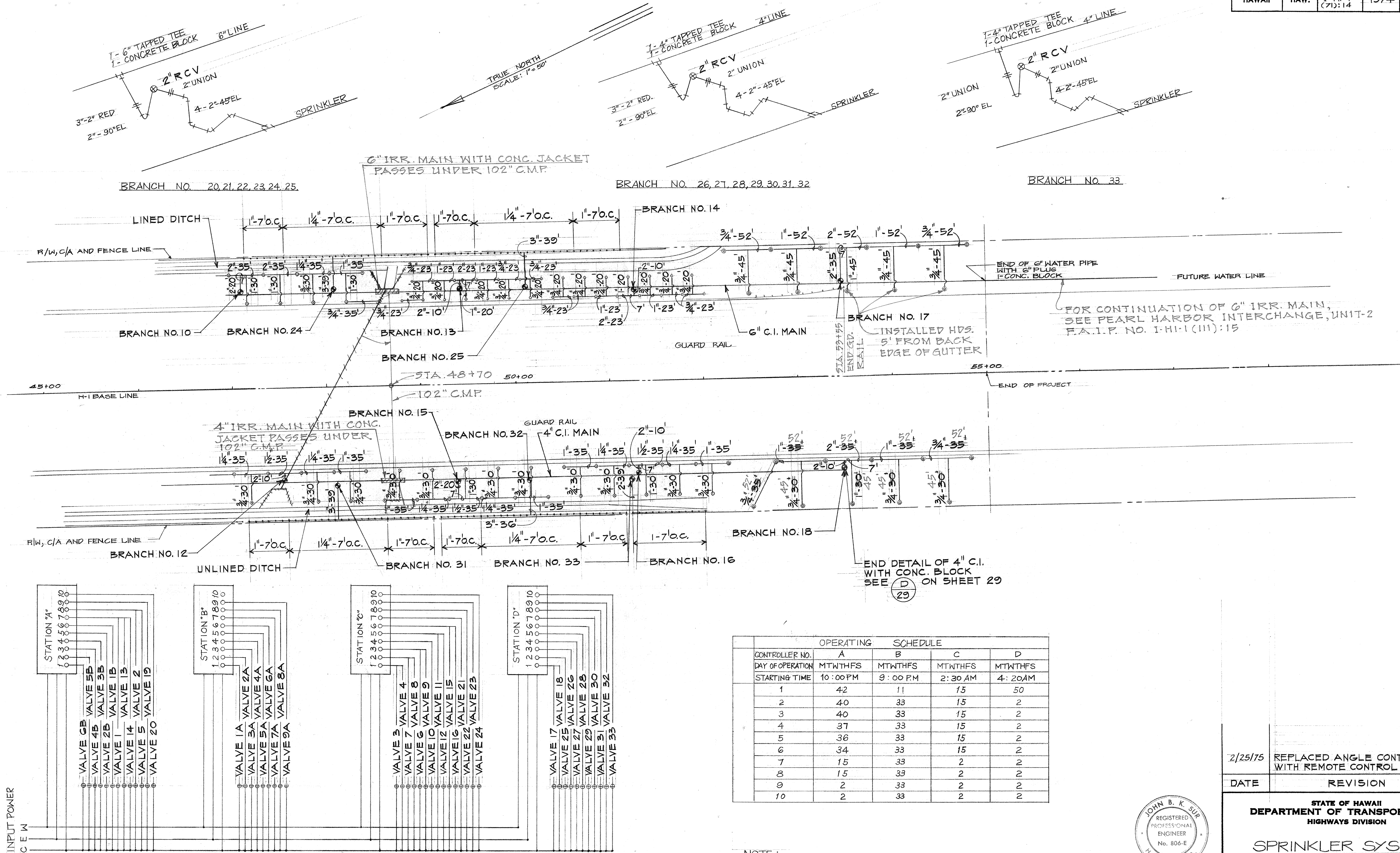


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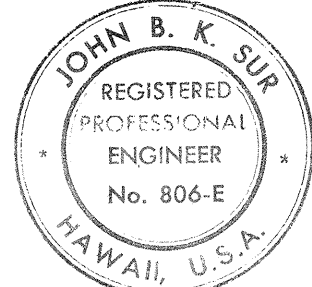
John B. K. Sur

DATE	...
DESIGNED BY	...
CHECKED BY	...
ORIGINAL PLAN	...
NOTE BOOK	...
No.	...

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1 (71):14	1974	27	61



(E) 27 SCHEMATIC WIRE DIAGRAM



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2/25/75 REPLACED ANGLE CONTROL VALVE WITH REMOTE CONTROL VALVE

DATE REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SPRINKLER SYSTEM

INTERSTATE ROUTE H-1
F.A.I.P. PROJECT NO. I-HI-1(71):14

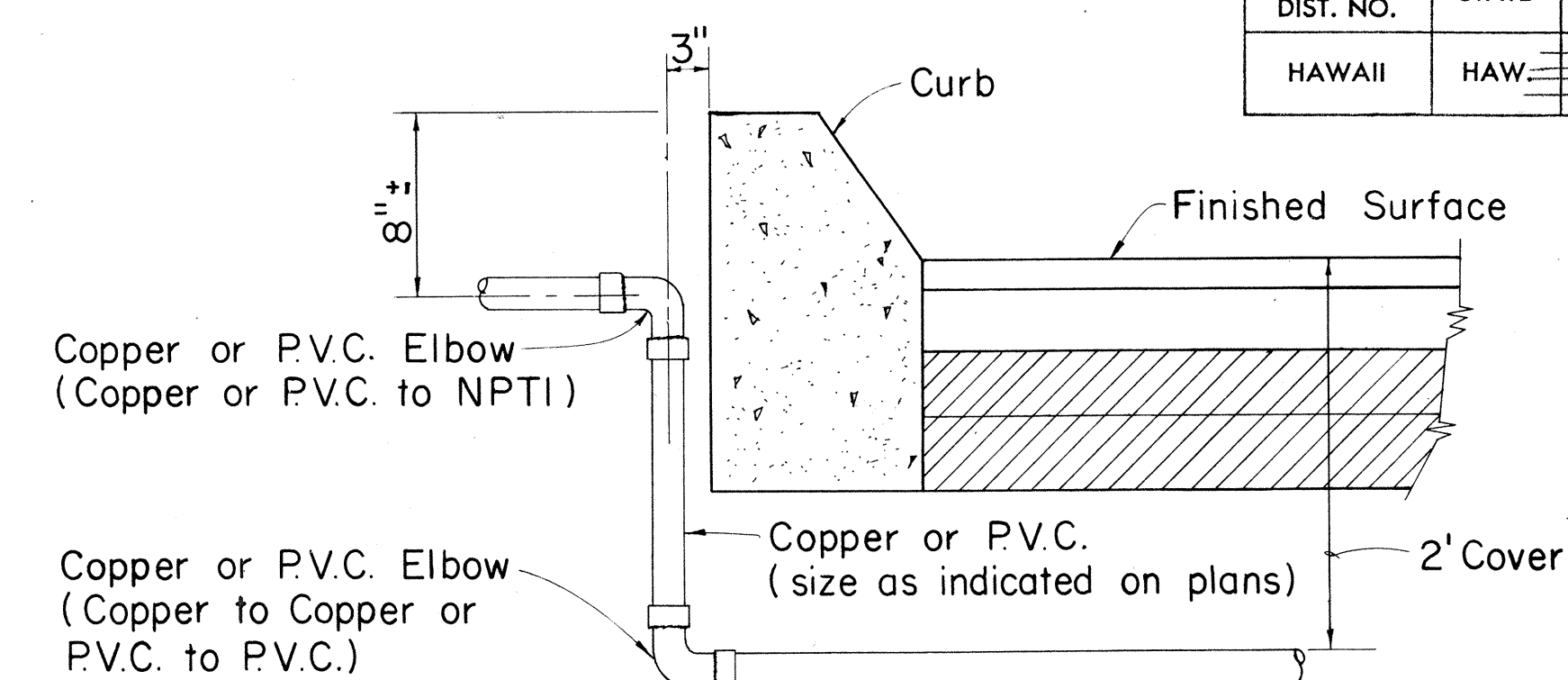
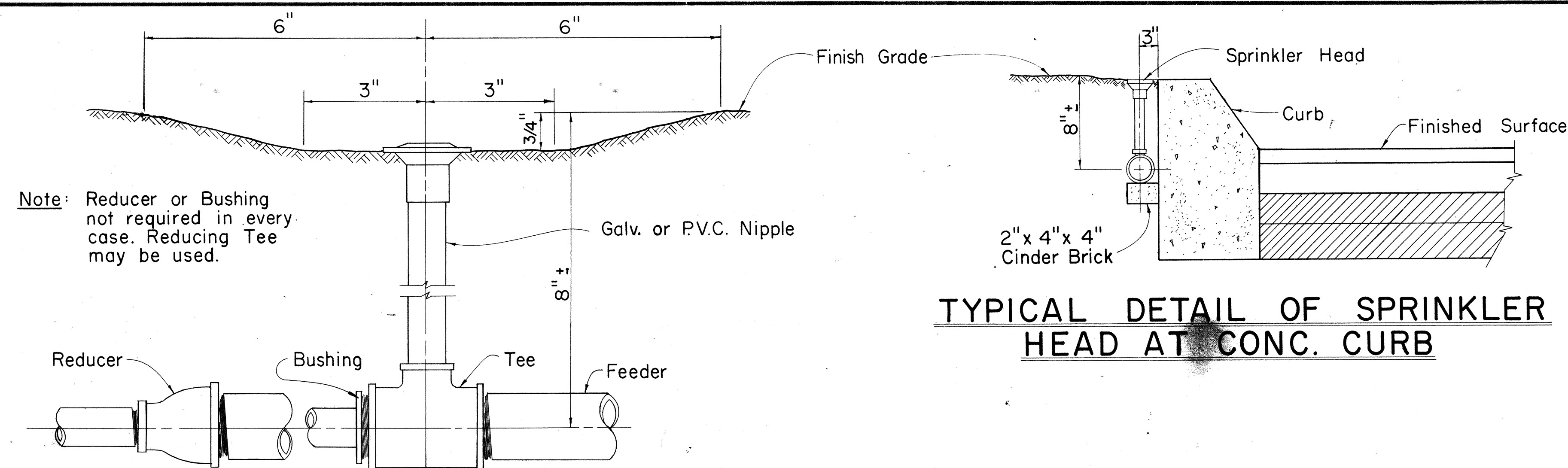
SCALE AS SHOWN DATE: JUNE 5, 1974

SHEET No. 5 OF 7 SHEETS

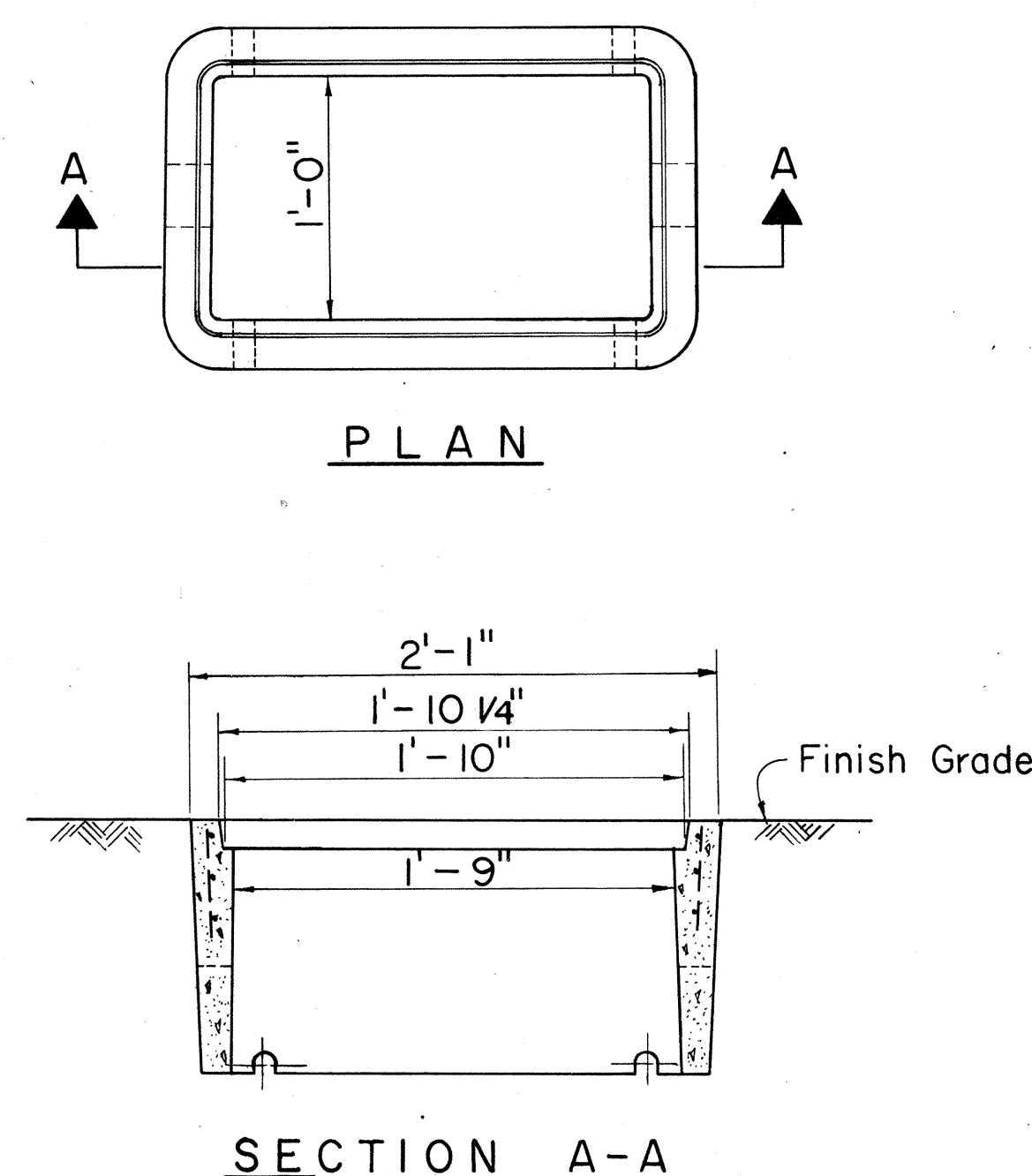
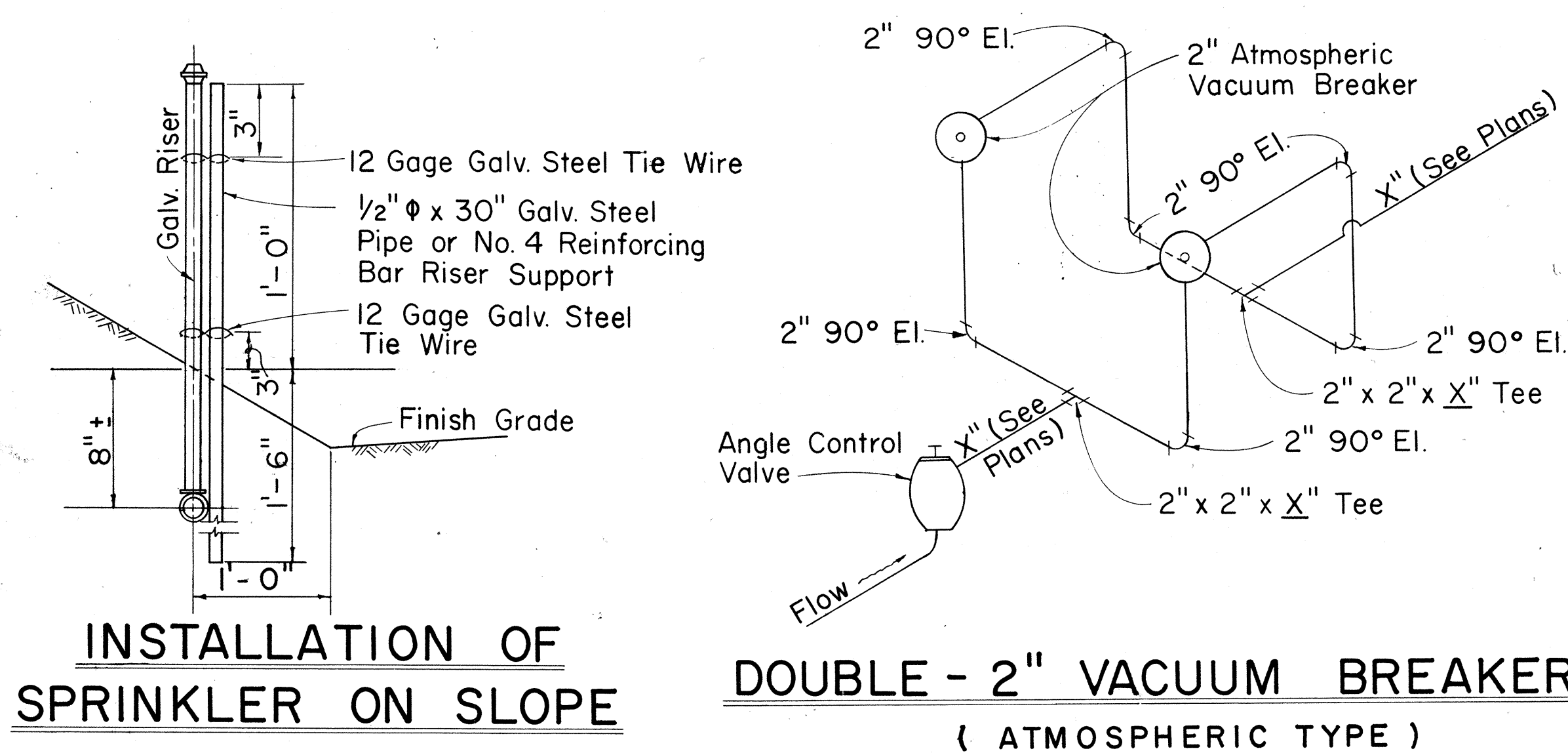
ADD. 27

DESIGNED BY	DATE
CHECKED BY	
NOTED BY	
ORIGINAL PLAN	
NO.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-HI-1 (21) 14	1974	28	61

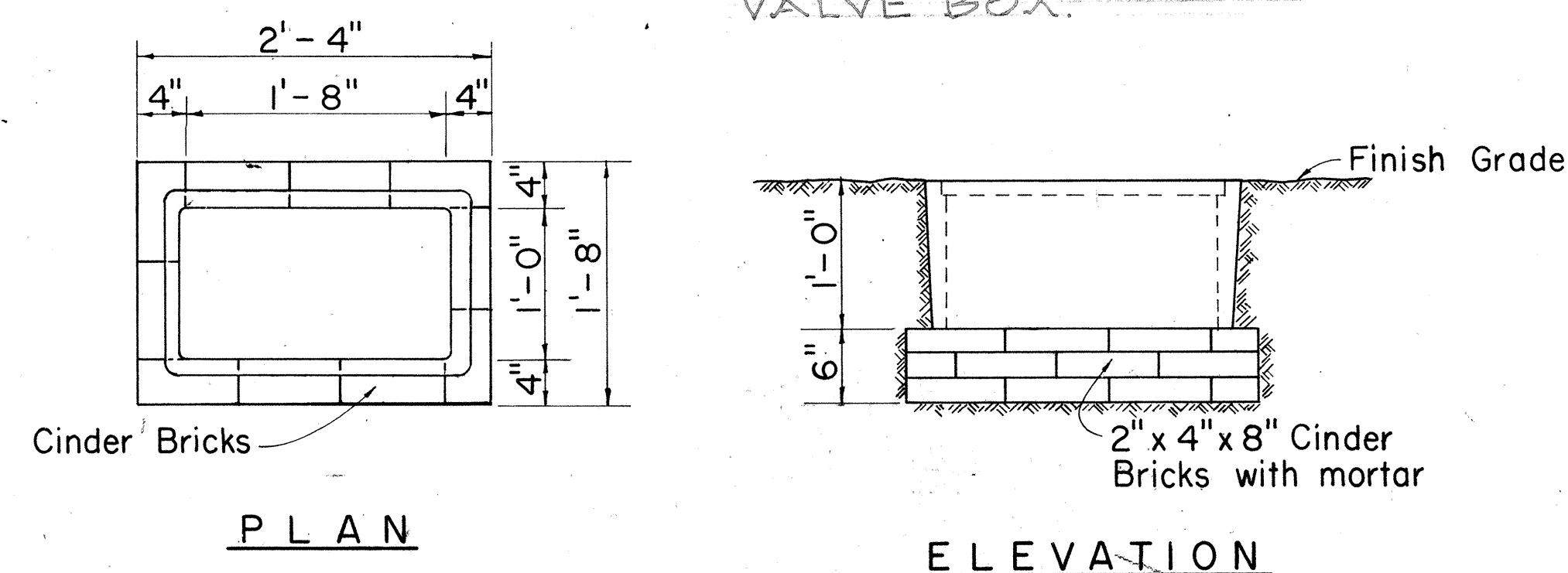


CONNECTION OF SPRINKLER HEAD TO FEEDER

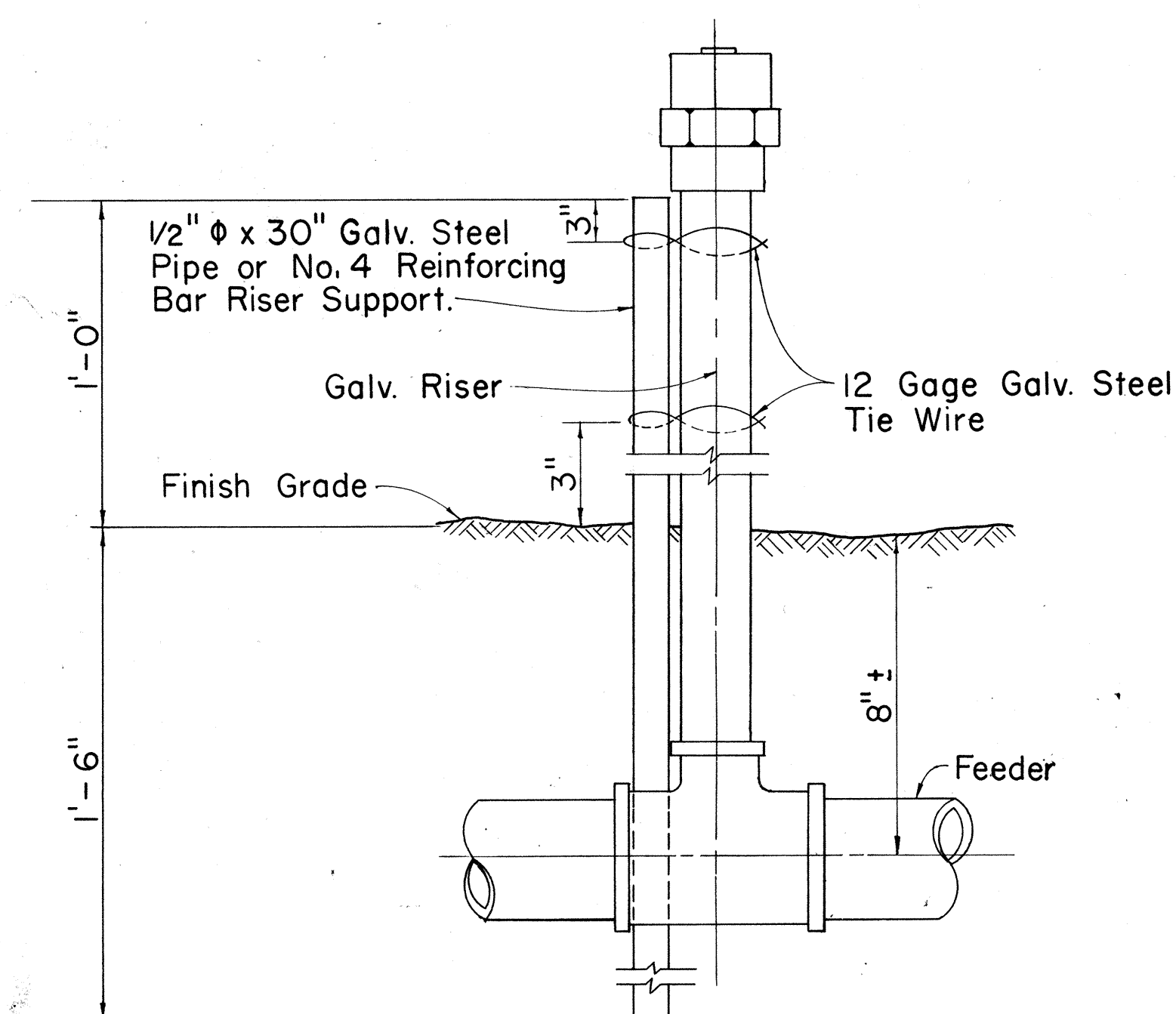


TYPE "A" VALVE BOX

NOTE:
PLASTIC VALVE BOXES
INSTALLED THROUGHOUT
IN LIEU OF TYPE-A
VALVE BOX.



PRESSURE REGULATOR BOX



DETAIL OF SPRINKLER HEAD ON RISER

- GENERAL NOTES

1. Type "A" Valve Box and Pressure Regulator Box is similar to a Honolulu Board of Water Supply Type "X" Meter Box. However, instead of the words "Board of Water Supply" and "Water Meter" on the Cast Iron Covers, imprint the words "Sprinkler Valve" on the Valve Box Cover and "Pressure Regulator" on the Pressure Regulator Box Cover.
2. Locate the sprinkler valve at a sufficient depth in the Valve Box to make it operable with the cover in place.
3. Side openings in the Brick wall for the Pressure Regulator Box shall be provided to correspond to the location of the regulator inlet and outlet.
4. Riser less than 20" will not require support.
5. Riser support will be considered incidental to the various items of the sprinkler system.

NO.	REVISION	APPROVED BY	DATE
1.	This sheet supersedes sheet DH18 dated December 17, 1969.	H.C.	6-5-

APPROVAL RECOMMENDED:

P. Sakam
HYDRAULIC DESIGN ENGINEER

6-5-7.
DATE

APPROVED

S. S. S. S.
ASSISTANT CHIEF, ENGINEERING

G-5-1
DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

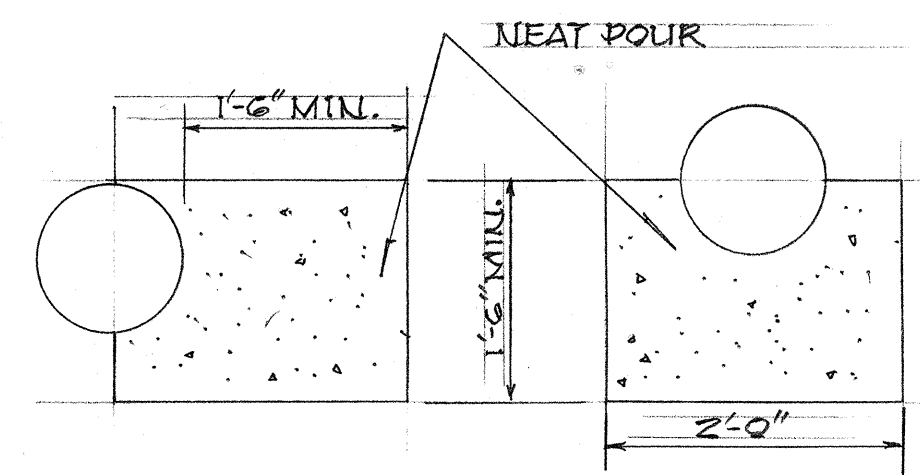
STANDARD DETAILS

SPRINKLER SYSTEM

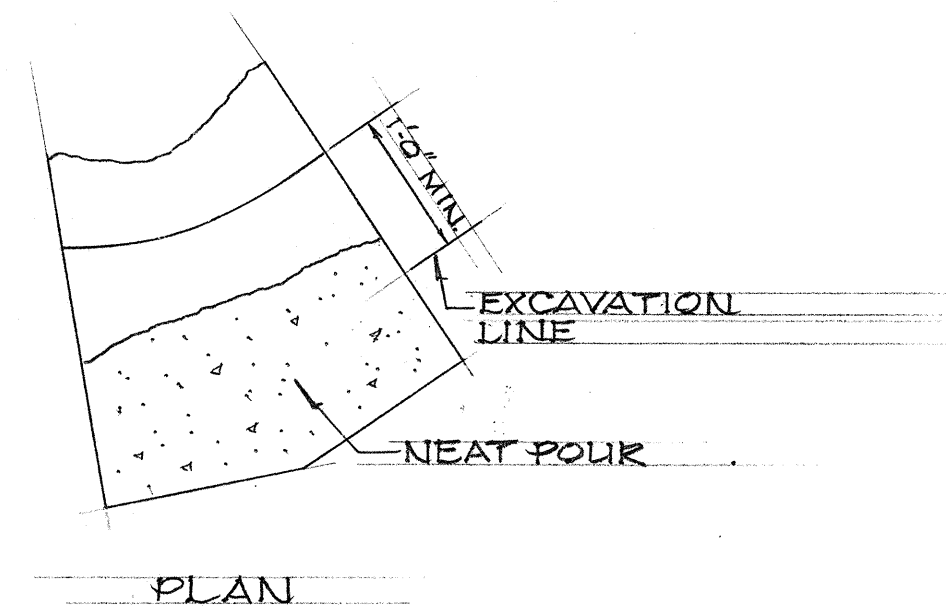
Not to Scale

SHEET No. 6 OF 7 SHEETS DH 18

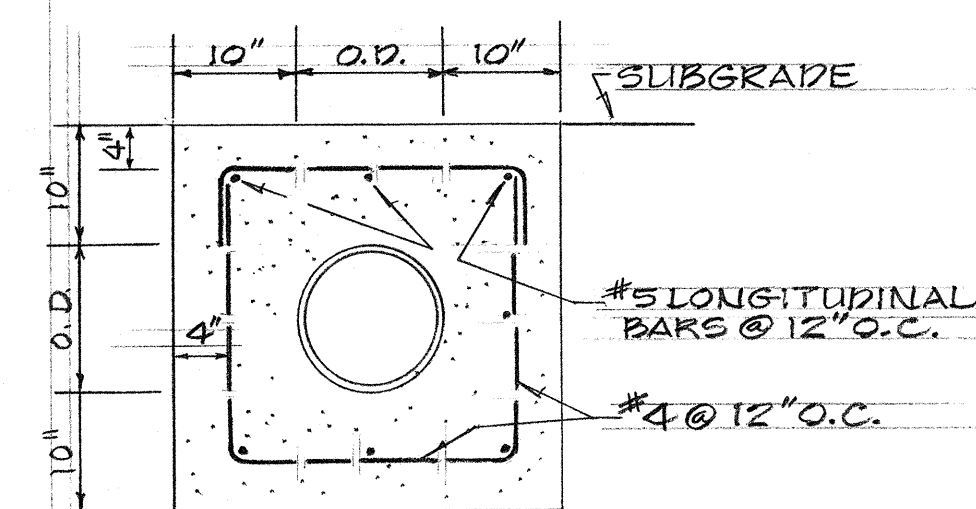
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-HI-1 (71):14	1974	29	61



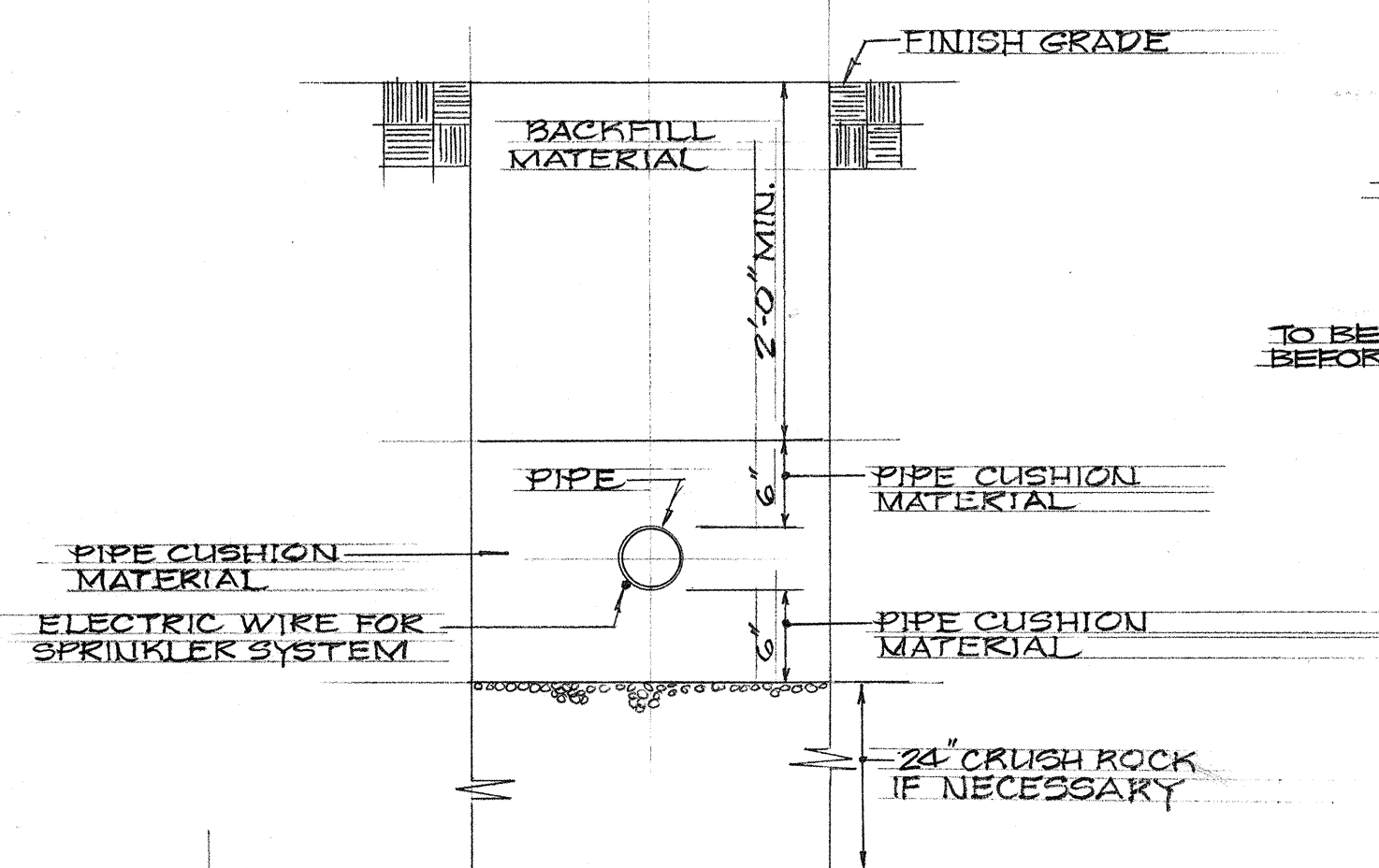
<u>SECTION</u> FOR HORIZONTAL BENDS	<u>SECTION</u> FOR VERTICAL BOTTOM BENDS
---	--



A STANDARD CONCRETE BLOCK
29 SCALE: 3/4"=1'-0"

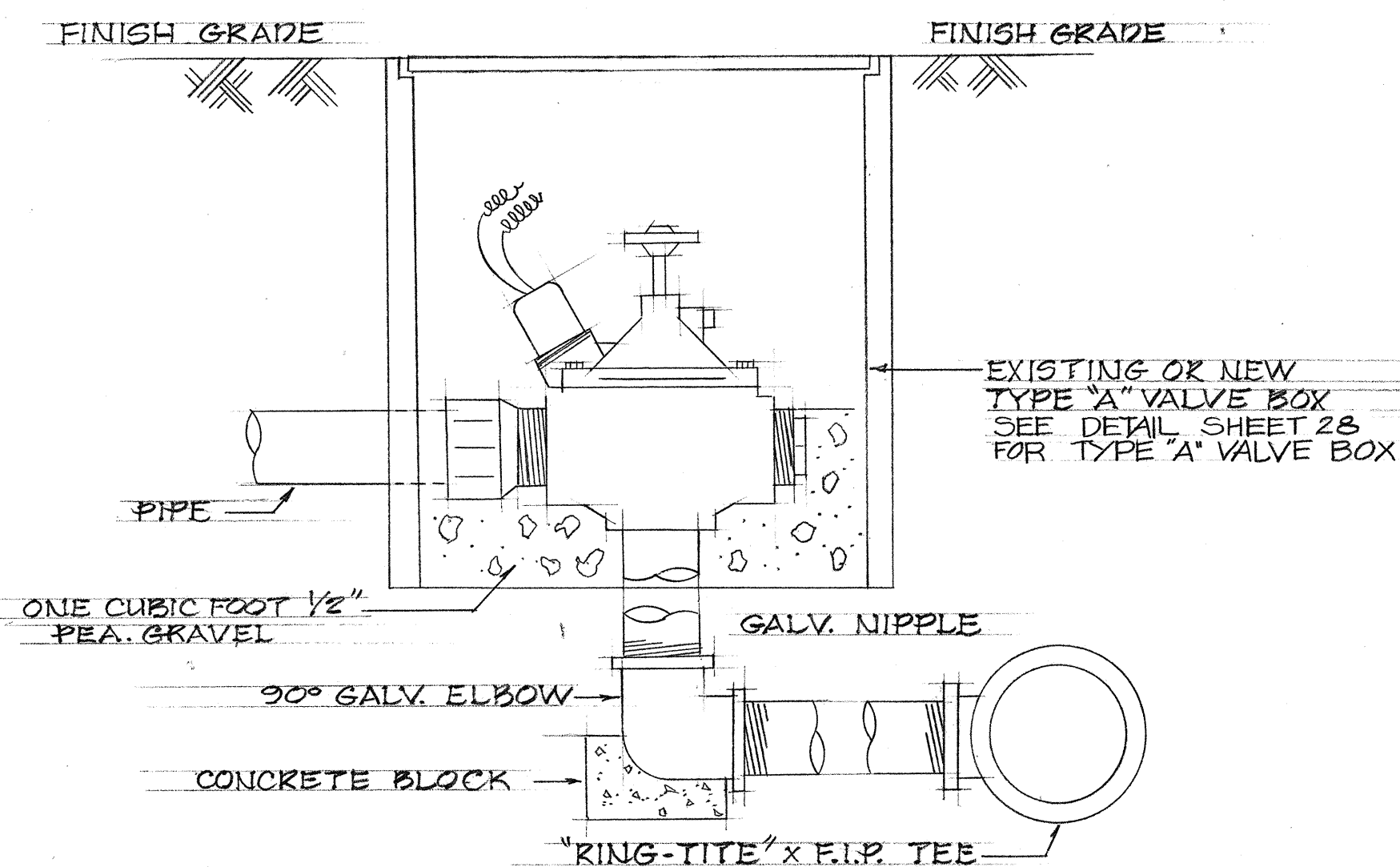


B REINFORCED CONCRETE JACKET
29 NOT TO SCALE

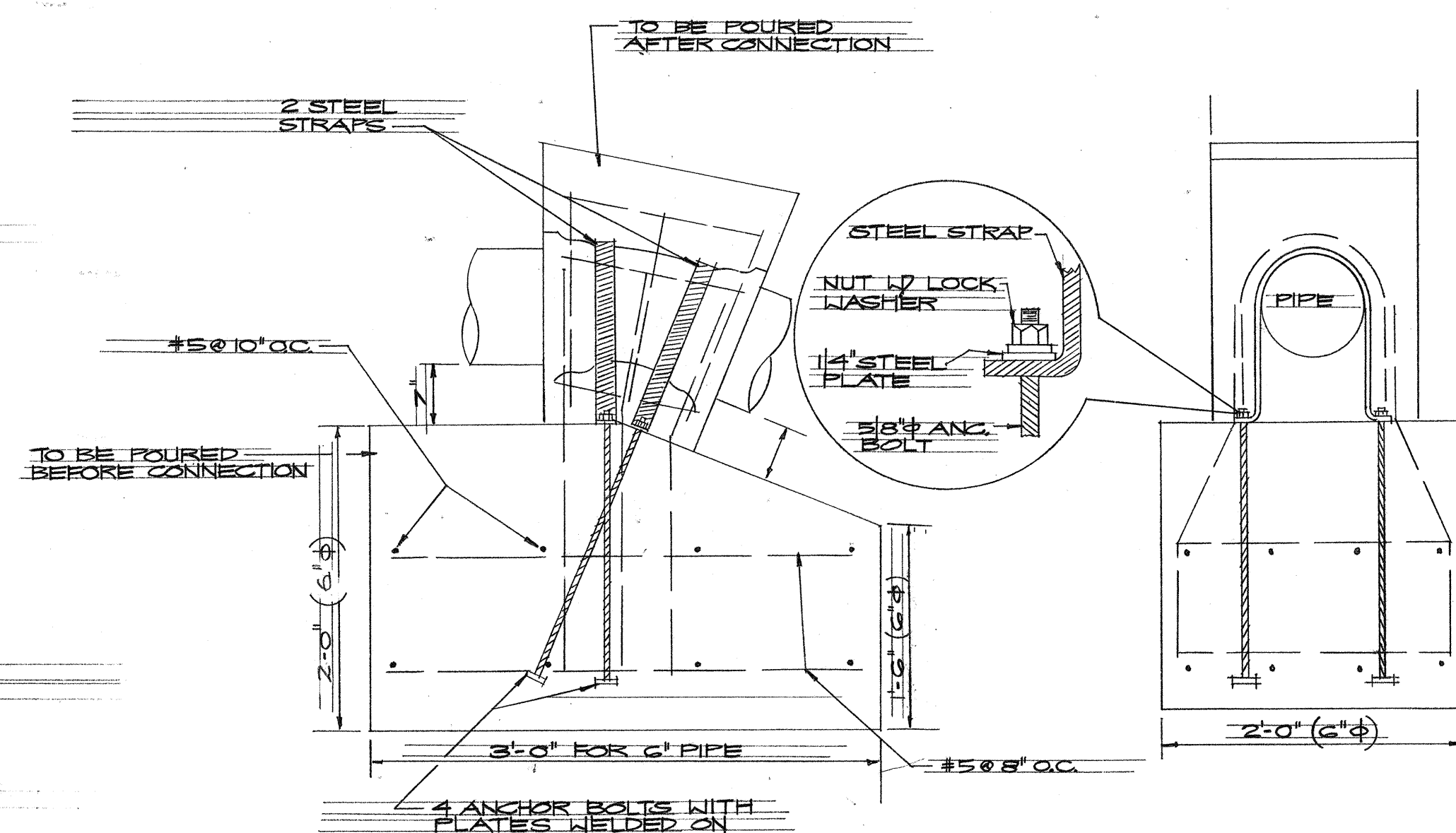


F PIPE INSTALLATION & TRENCH BACKFILL
29 SCALE: 1"=1'-0"

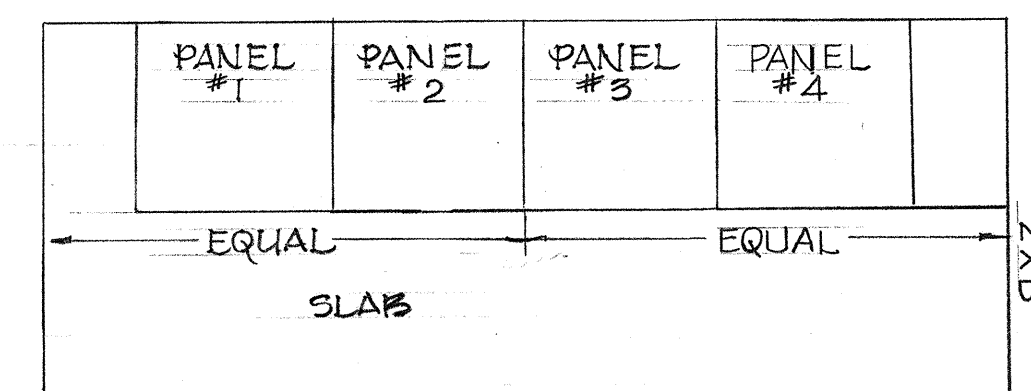
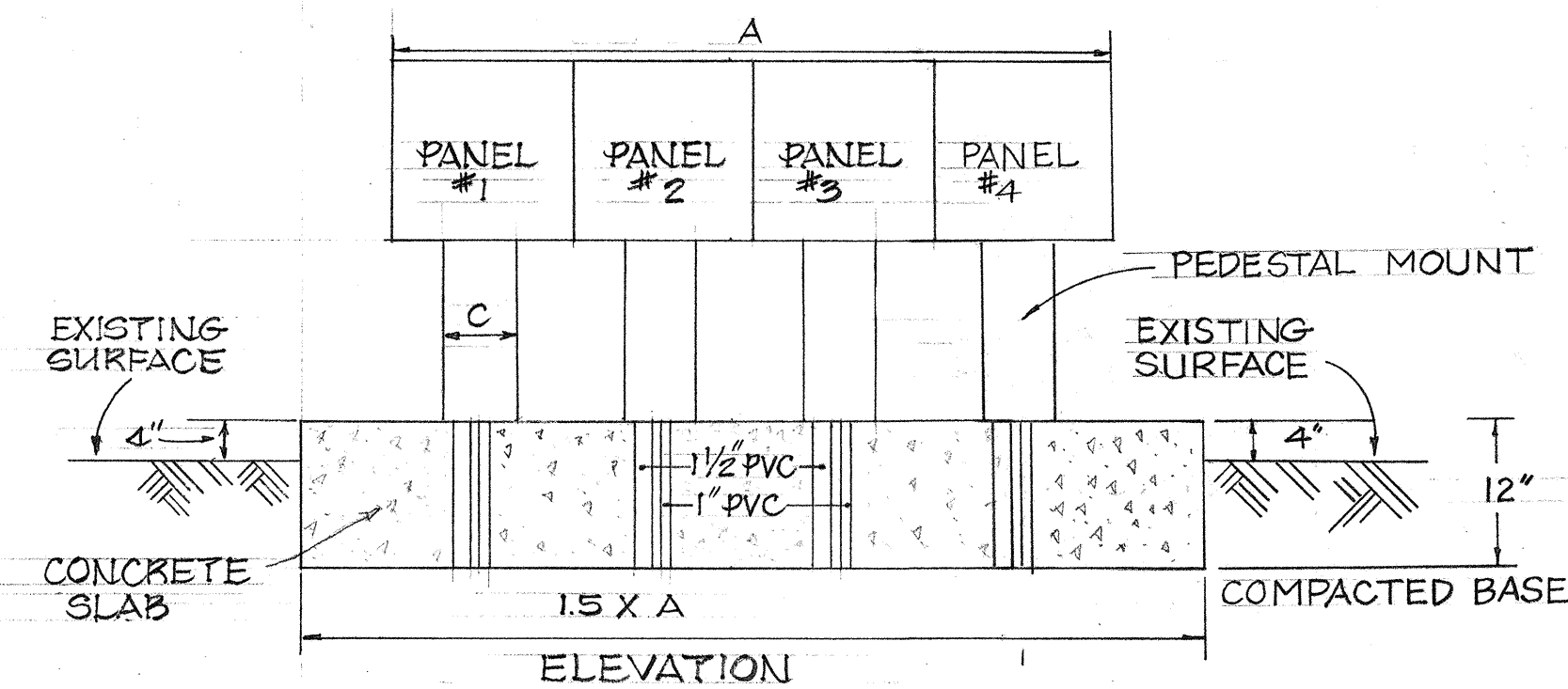
NOTE
1. TYPICAL REMOTE CONTROL VALVE DETAIL
IS TO BE USED FOR PLANNING. ACTUAL DESIGN
OF VALVE VARIES WITH MANUFACTURER
(SUCH AS MOODY, BUCKNER, RAINBIRD, ETC.)



D TYPICAL REMOTE CONTROL VALVE DETAIL
29 NOT TO SCALE

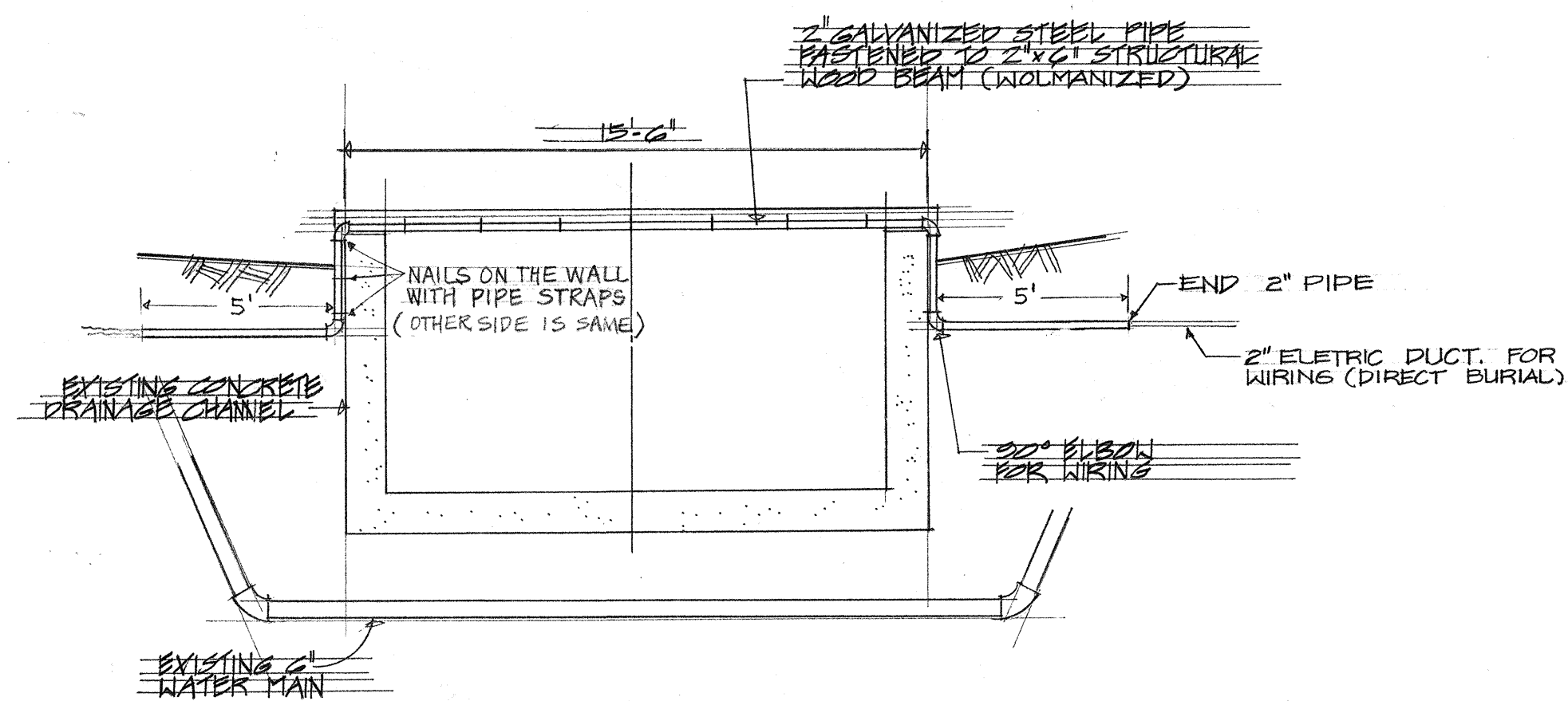
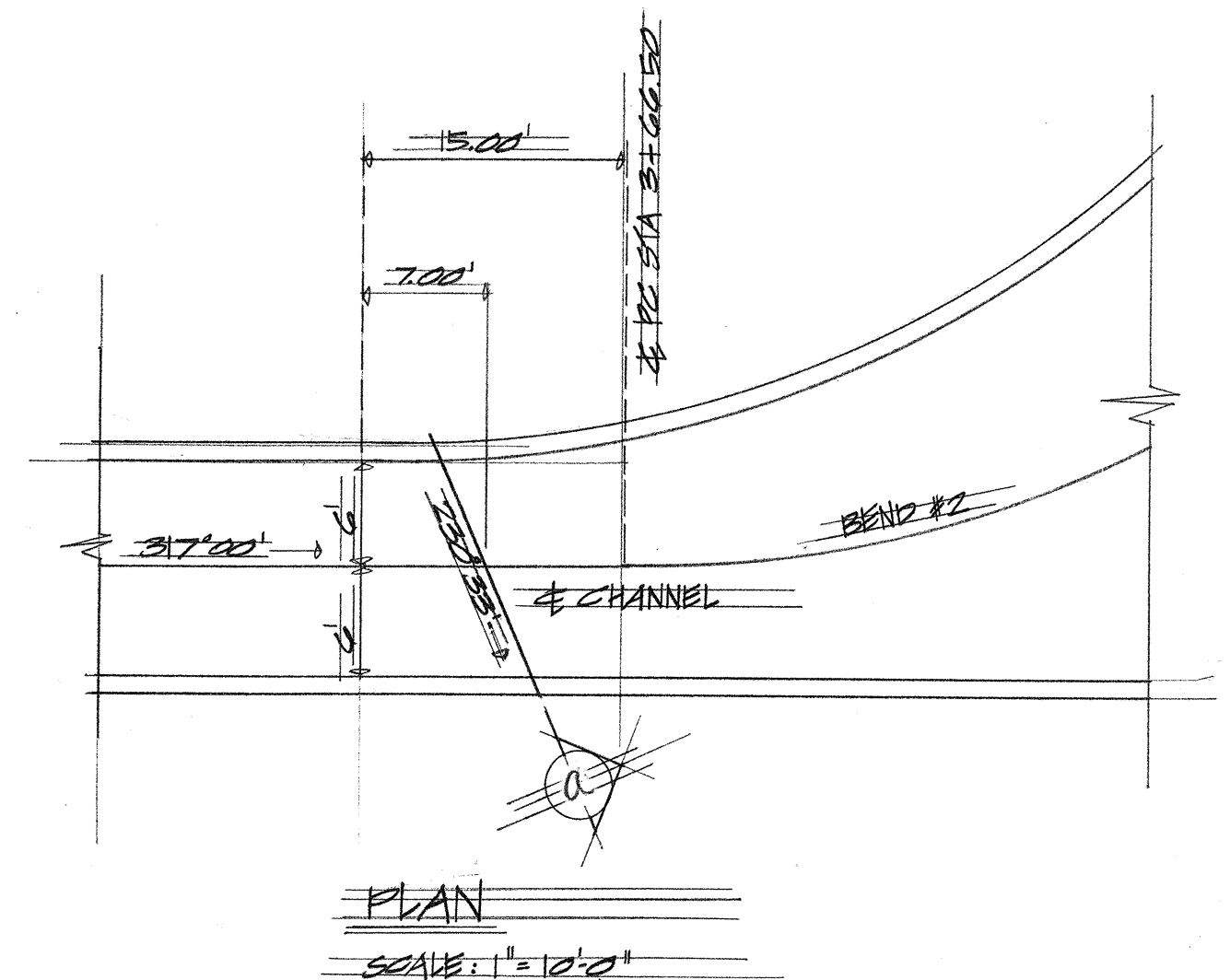


29 CONCRETE REACTION BLOCK FOR VERTICAL TOP BENDS
SCALE: 1" = 1'-0"

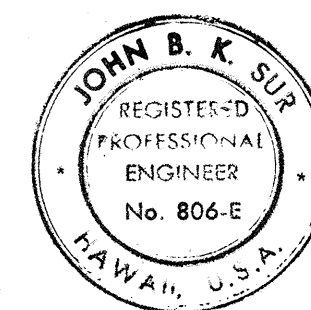


PLAN
TYPICAL MOUNT CONTROLLER
DETAIL
NTS
NOTE

1. A, B, C VARIES WITH MANUFACTURER.
2. ELECTRICAL WIRE WILL COME THROUGH IN SLAB.
3. INPUT WIRE SHALL RUN THROUGH 1" PVC. OUTPUT & COMMON WIRES RUN THROUGH 1/2" PVC.
4. PEDESTAL & PANEL SHALL BE OF SAME MANUFACTURER.
5. FOR ELECTRICAL SERVICE CONNECTION SEE ELECTRICAL DRAINING



 ELECTRIC DUCT OVERHEAD DETAIL



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ME OR UNDER MY SUPERVISION.

**STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION**

SPRINKLER SYSTEM DETAIL

INTERSTATE ROUTE H-1
E.A.I. PROJECT I-HI-1(71): 14

SCALE AS SHOWN DATE: JUNE 5, 1974
SHEET No. 7 OF 7 SHEETS