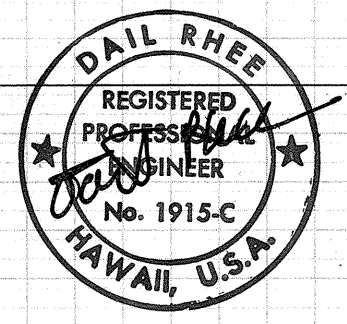
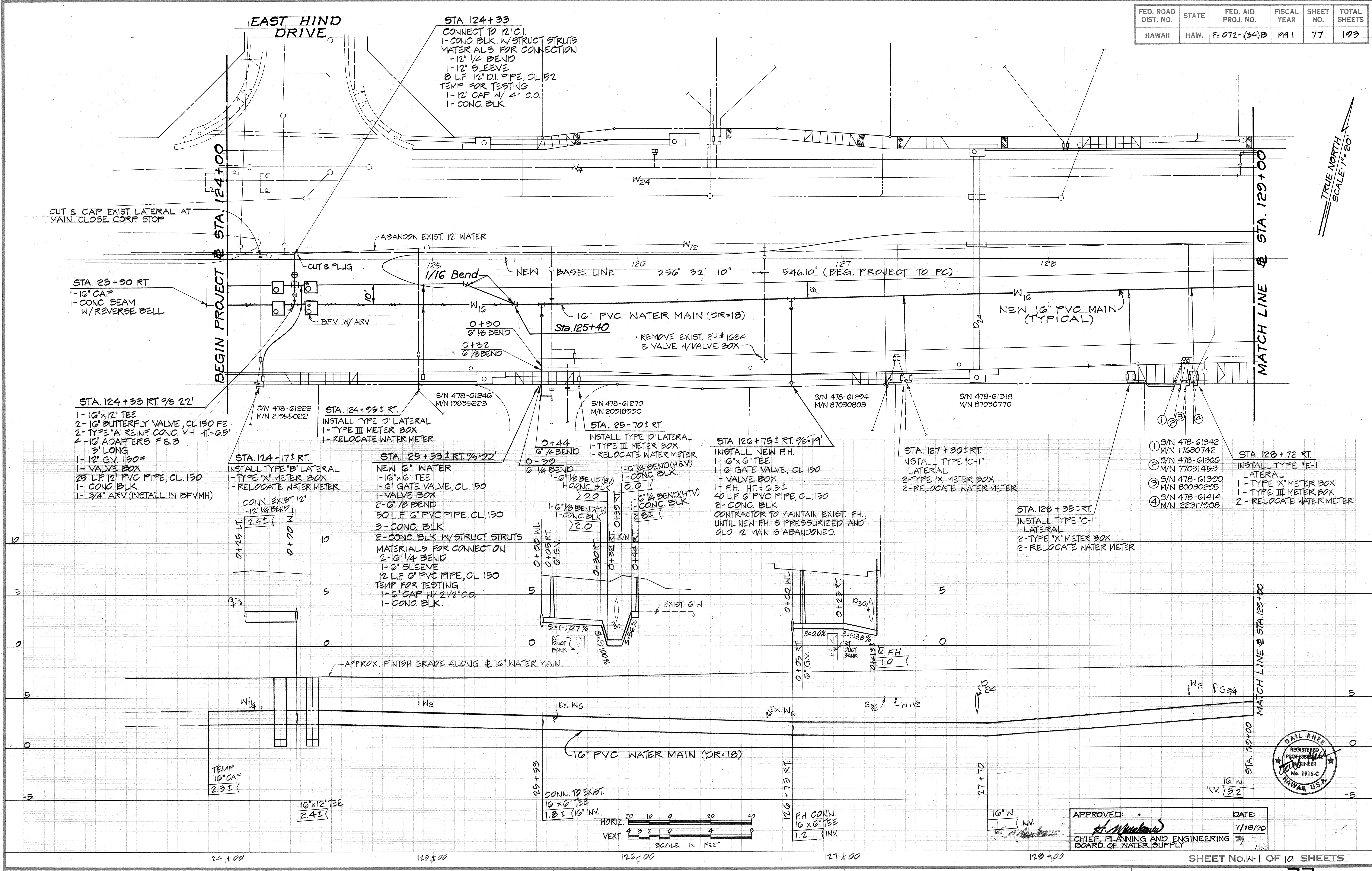


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-072-1(34)B	1991	77	103

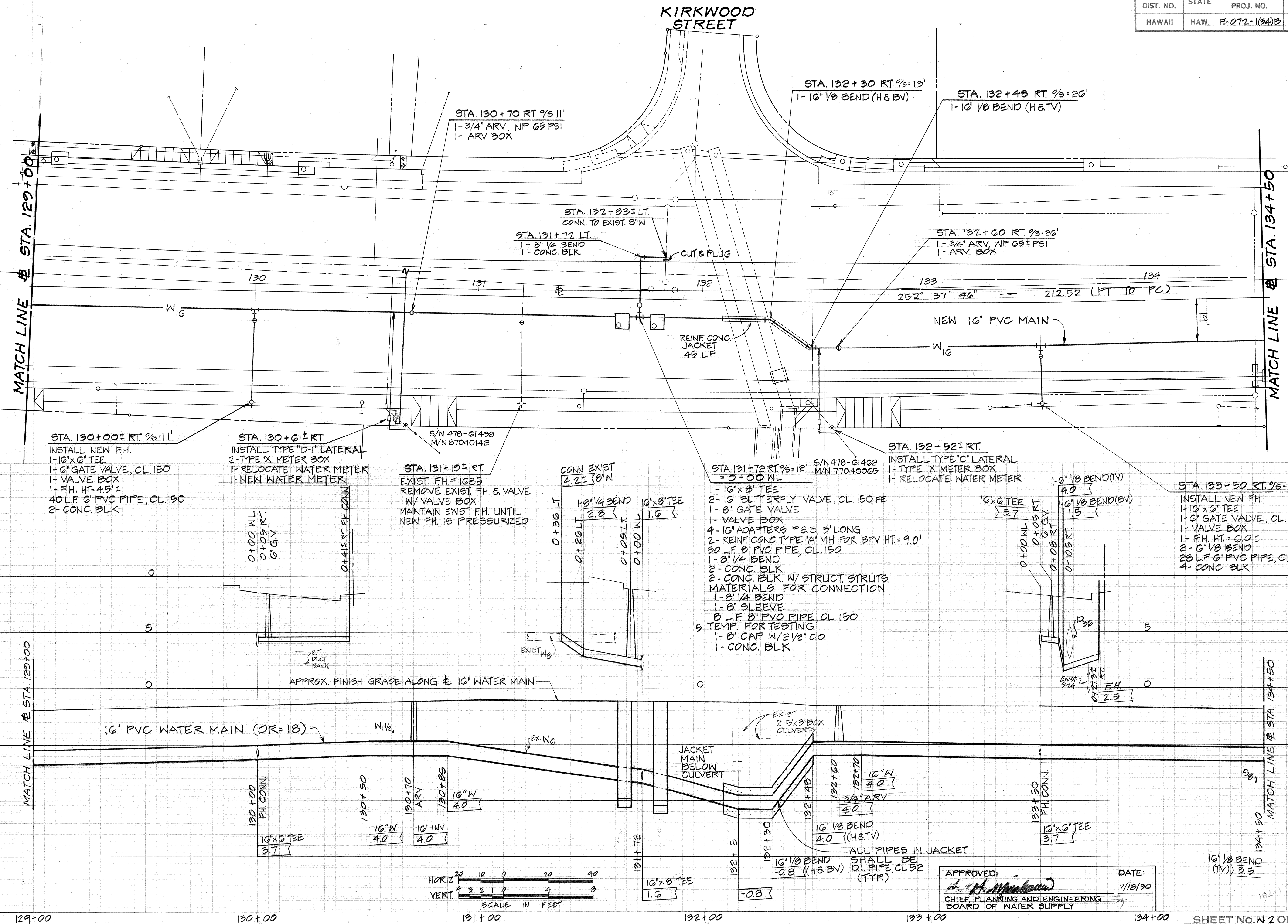
TRUE NORTH
SCALE: 1" = 20'

SURVEY PLOTTED BY	DATE
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NOTE BOOK	
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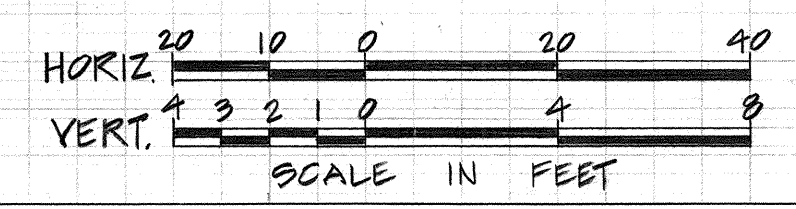


APPROVED: *[Signature]* DATE: 1/18/90
CHIEF, PLANNING AND ENGINEERING
BOARD OF WATER SUPPLY

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-072-1(34)B	1991	78	123



ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
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CHECKED BY		
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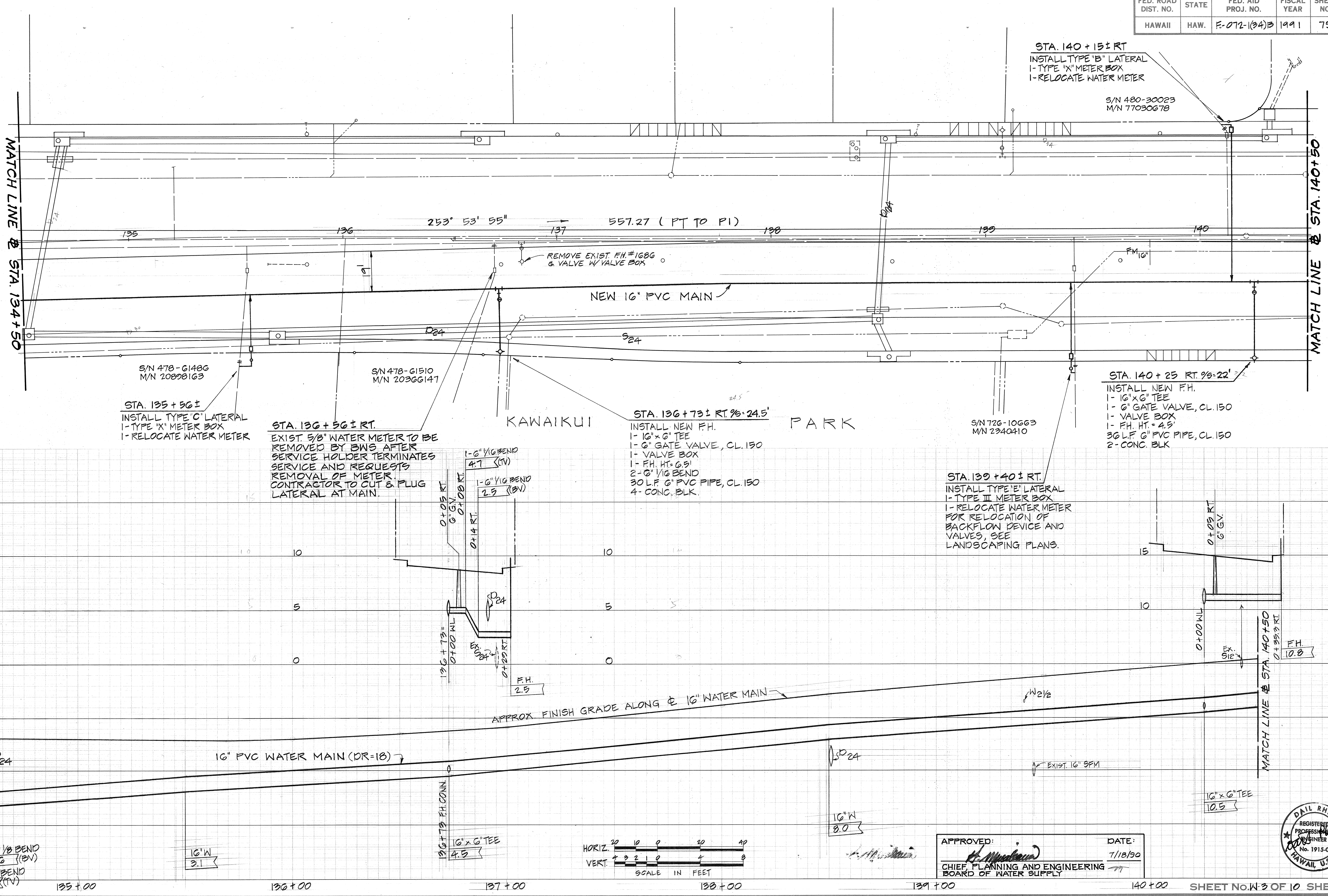


APPROVED: *[Signature]* DATE: 7/18/90
 CHIEF, PLANNING AND ENGINEERING
 BOARD OF WATER SUPPLY



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-072-1(34)B	1991	79	123

TRUE NORTH
SCALE 1"=20'



STA. 135 + 56 ±
INSTALL TYPE 'C' LATERAL
1- TYPE 'X' METER BOX
1- RELOCATE WATER METER

STA. 136 + 56 ± RT.
EXIST. 5/8" WATER METER TO BE
REMOVED BY BWS AFTER
SERVICE HOLDER TERMINATES
SERVICE AND REQUESTS
REMOVAL OF METER.
CONTRACTOR TO CUT & PLUG
LATERAL AT MAIN.

STA. 136 + 73 ± RT. % .24.5'
INSTALL NEW F.H.
1- 16" x 6" TEE
1- 6" GATE VALVE, CL. 150
1- VALVE BOX
1- F.H. HT. 6.9'
2- 6" 1/2 BEND
30 L.F. 6" PVC PIPE, CL. 150
4- CONC. BLK.

STA. 139 + 40 ± RT.
INSTALL TYPE 'E' LATERAL
1- TYPE III METER BOX
1- RELOCATE WATER METER
FOR RELOCATION OF
BACKFLOW DEVICE AND
VALVES, SEE
LANDSCAPING PLANS.

STA. 140 + 25 RT. % .22'
INSTALL NEW F.H.
1- 16" x 6" TEE
1- 6" GATE VALVE, CL. 150
1- VALVE BOX
1- F.H. HT. 4.5'
30 L.F. 6" PVC PIPE, CL. 150
2- CONC. BLK.

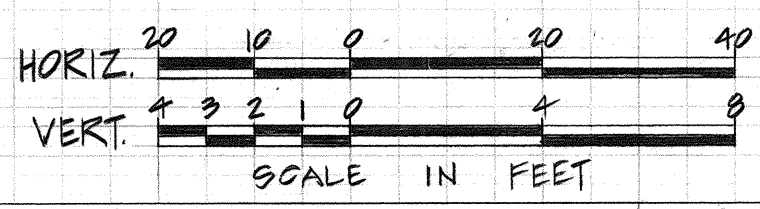
STA. 140 + 15 ± RT
INSTALL TYPE 'B' LATERAL
1- TYPE 'X' METER BOX
1- RELOCATE WATER METER

S/N 480-30023
M/N 77030678

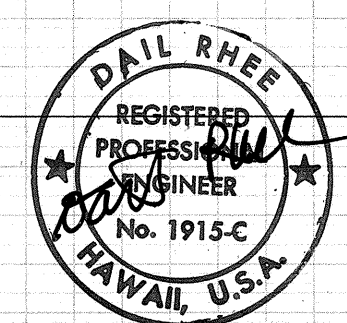
S/N 726-10663
M/N 2340410

APPROX. FINISH GRADE ALONG 16" WATER MAIN

16" PVC WATER MAIN (DR=18)

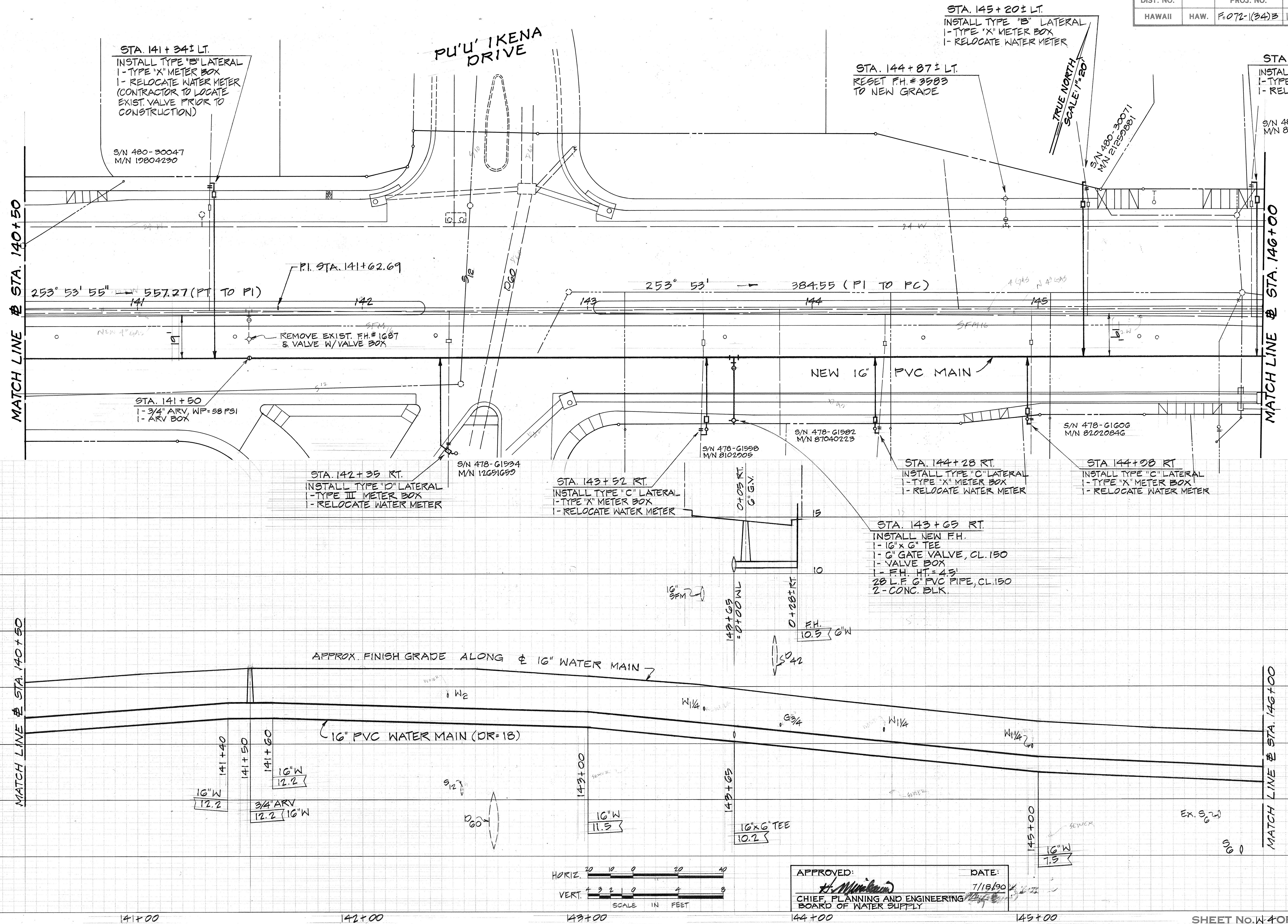


APPROVED: *[Signature]* DATE: 7/18/90
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BOARD OF WATER SUPPLY

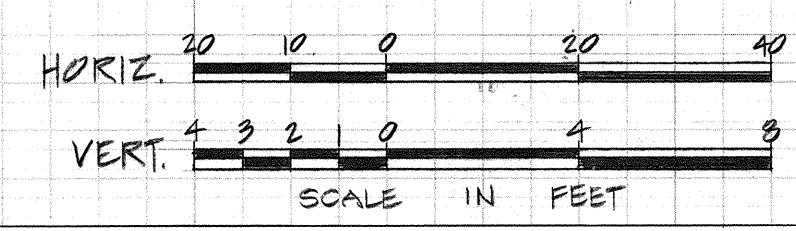


ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
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	QUANTITIES BY	
	CHECKED BY	

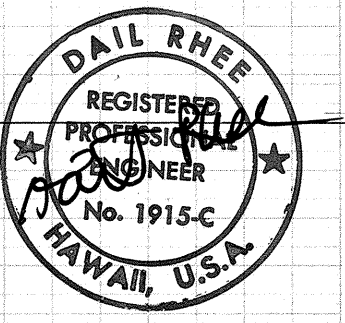
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-072-(34)B	1991	80	103



SURVEY PLOTTED BY	DATE
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APPROVED: *[Signature]* DATE: 7/18/90
 CHIEF, PLANNING AND ENGINEERING
 BOARD OF WATER SUPPLY



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-072-1(34)B	1991	81	123

STA. 146+05± LT.
INSTALL TYPE "B" LATERAL
1- TYPE "X" METER BOX
1- RELOCATE WATER METER

HAWAII-LOA STREET

STA. 147+07± LT.
CONNECT TO EXIST. 16" C.I.P.
1- CONC. BLK. W/ STRUCT STRUTS
MATERIALS FOR CONNECTION
1- 16" 1/8 BEND
1- 16" SLEEVE
8 L.F. 16" PVC PIPE, CL. 150
TEMP FOR TESTING
1- 16" CAP W/ 4" C.O.
1- CONC. BLK.

STA. 148+72± LT.
INSTALL TYPE "B" LATERAL
1- TYPE "X" METER BOX
1- RELOCATE WATER METER

STA. 149+45± LT.
INSTALL TYPE "C-1" LATERAL
2- TYPE "X" METER BOX
2- RELOCATE WATER METER

STA. 150+04± LT.
INSTALL TYPE "B" LATERAL
1- TYPE "X" METER BOX
1- RELOCATE WATER METER

TRUE NORTH
SCALE: 1" = 20'

STA. 146+02 RT.
1- 16" 1/8 BEND
1- CONC. BLK.

STA. 147+00 RT. 1/2 20'
1- 16" 1/8 BEND
1- CONC. BLK.

STA. 148+30 RT. 1/2 1'
1- 16" 1/8 BEND
1- CONC. BLK.

NEW 16" PVC MAIN

MATCH LINE @ STA. 151+50

STA. 146+03± RT. 1/2 18'
1- 16" 1/8 BEND (TV)
1- CONC. BLK.

S/N 478-61630
M/N 80021495

S/N 478-61654
M/N 77021599

S/N 478-61678
M/N 18584680

S/N 478-61702
M/N 87021498

STA. 148+15± RT.
INSTALL TYPE "C-1" LATERAL
2- TYPE "X" METER BOX
2- RELOCATE WATER METER

S/N 478-61714
M/N 18599968

S/N 478-61726
M/N 84021292

S/N 478-61750
M/N 780214090

STA. 150+71± RT.
INSTALL TYPE "C" LATERAL
1- TYPE "X" METER BOX
1- RELOCATE WATER METER

STA. 151+32± RT.
INSTALL TYPE "C" LATERAL
1- TYPE "X" METER BOX
1- RELOCATE WATER METER

STA. 146+35± RT.
INSTALL TYPE "C-1" LATERAL
2- TYPE "X" METER BOX
2- RELOCATE WATER METER

STA. 146+75 RT. 1/2 23'
INSTALL NEW F.H.
1- 16" x 6" TEE
1- 6" GATE VALVE, CL. 150
1- VALVE BOX
1- F.H. HT. = 4.3
24 L.F. 6" PVC PIPE, CL. 150
2- CONC. BLK.

STA. 146+02 RT. 1/2 23'
1- 16" x 16" TEE
2- 16" BUTTERFLY VALVE, CL. 150 FE
2- TYPE "A" REINFC. CONC. MH HT. = 6.0'
4- 16" ADAPTERS, F&B, 3' LONG
36 L.F. 16" PVC PIPE, CL. 150
1- CONC. BLK.

STA. 149+27± RT.
INSTALL TYPE "C" LATERAL
1- TYPE "X" METER BOX
1- RELOCATE WATER METER

STA. 149+77± RT.
INSTALL TYPE "C" LATERAL
1- TYPE "X" METER BOX
1- RELOCATE WATER METER

STA. 150+48 RT. 1/2 11'
INSTALL NEW F.H.
1- 16" x 6" TEE
1- 6" GATE VALVE, CL. 150
1- VALVE BOX
1- F.H. HT. = 4.3
36 L.F. 6" PVC PIPE, CL. 150
2- CONC. BLK.

MATCH LINE @ STA. 146+00

ET DUCT BANK

EX. 90 INV. = 0.23'

146+75: 0 TOOKT. 0 TOOKT.

146+02 10" x 16" TEE 5.0

10" x 6" TEE 5.0

F.H. 6.2 6" W

147+15 16" W 4.6

147+00 16" W 4.4

148+00 16" W 3.8

HORIZ. 20 10 0 20 40
VERT. 1 2 1 0 1 2
SCALE IN FEET

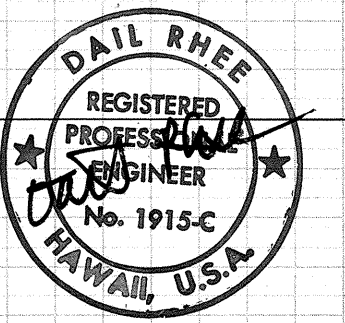
APPROX. FINISH GRADE ALONG 16" WATER MAIN

16" PVC WATER MAIN (DR-18)

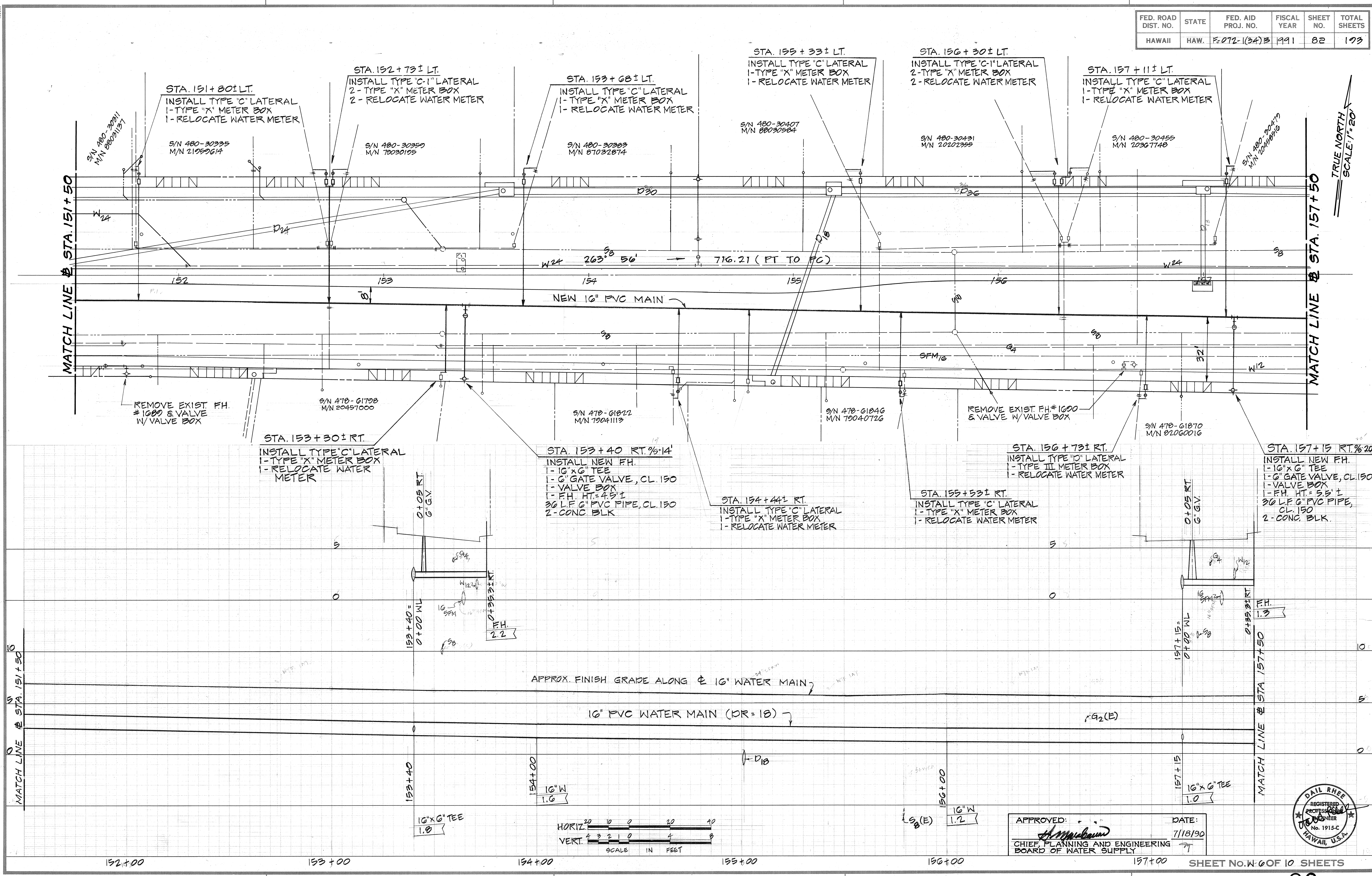
149+50 16" W 3.0

150+48 16" x 6" TEE 2.8

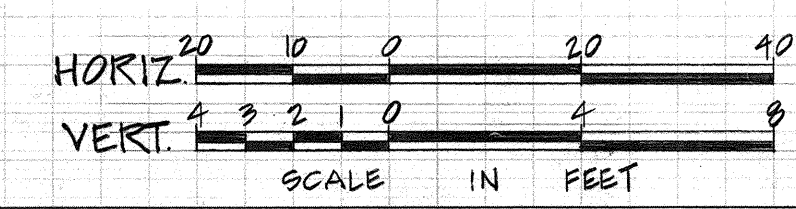
APPROVED: *[Signature]* DATE: 7/18/90
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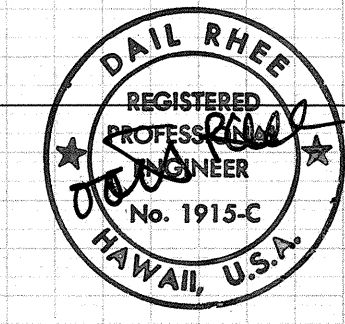
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-272-1(34)B	1991	82	193



ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
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DESIGNED BY		
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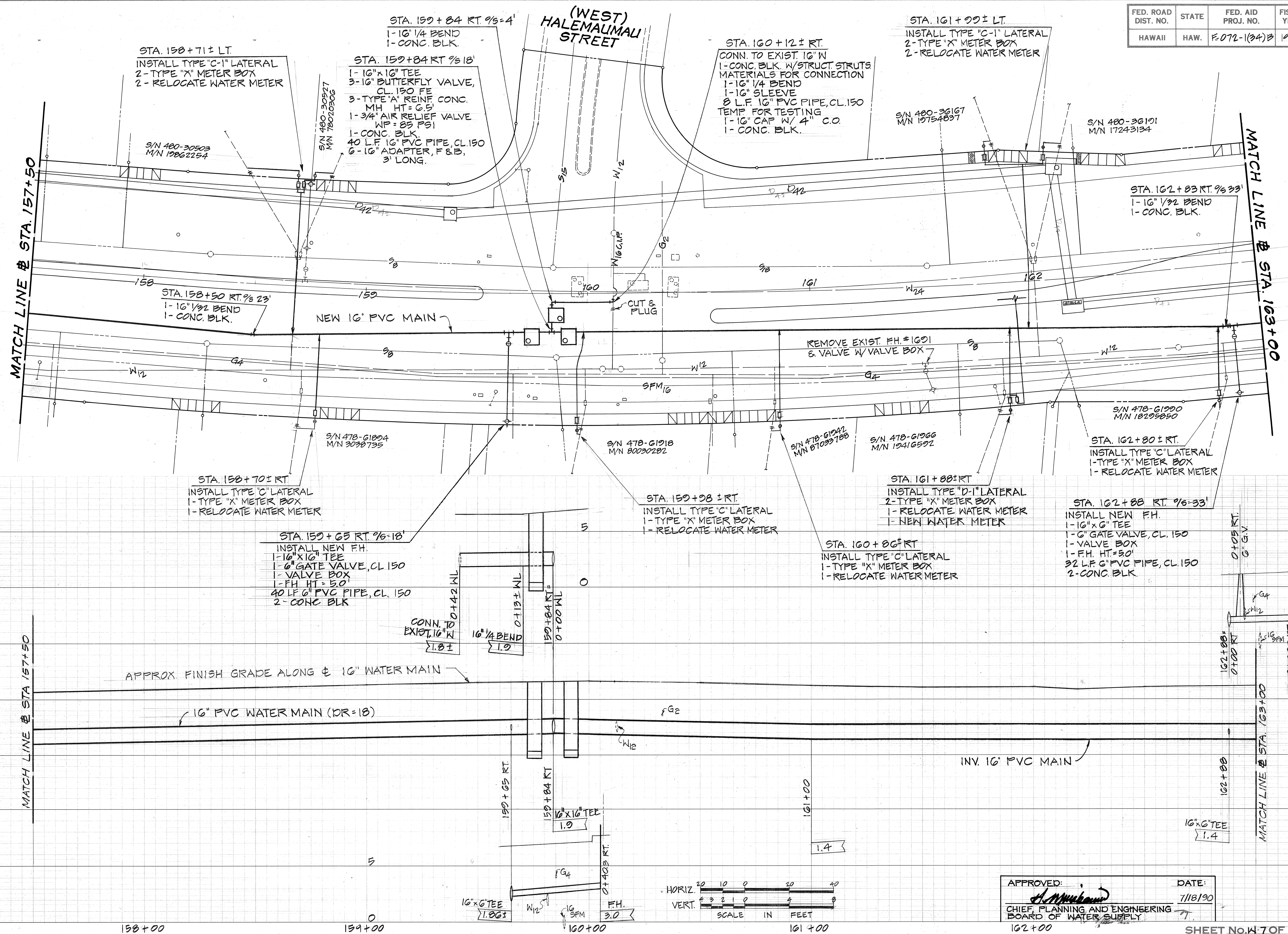


APPROVED: *[Signature]* DATE: 7/18/90
 CHIEF, PLANNING AND ENGINEERING BOARD OF WATER SUPPLY



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-072-1(34)B	1991	83	103

TRUE NORTH
SCALE: 1" = 20'



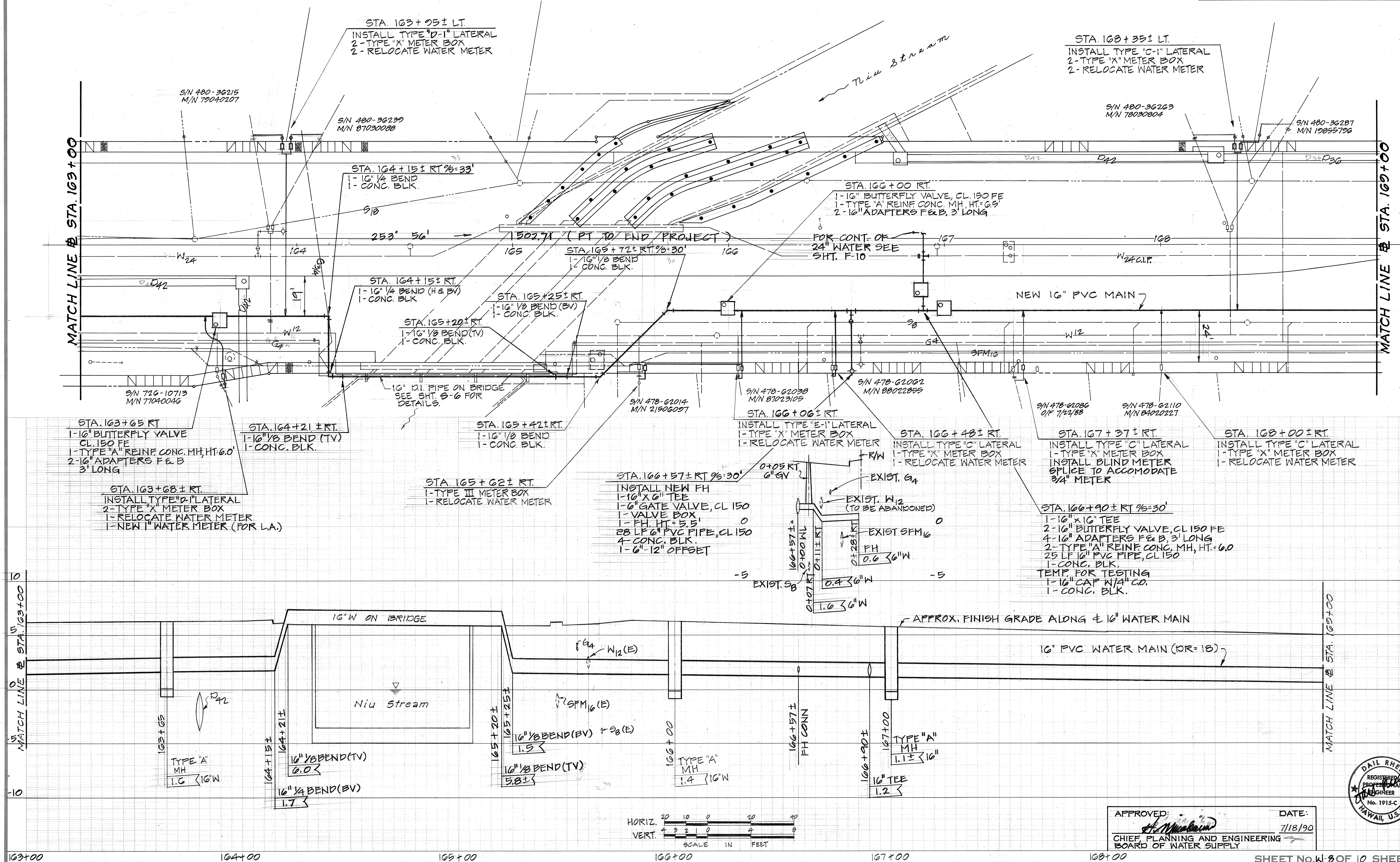
SURVEY PLOTTED BY	DATE
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APPROVED: *[Signature]* DATE: 7/18/90
CHIEF, PLANNING AND ENGINEERING
BOARD OF WATER SUPPLY
162+00

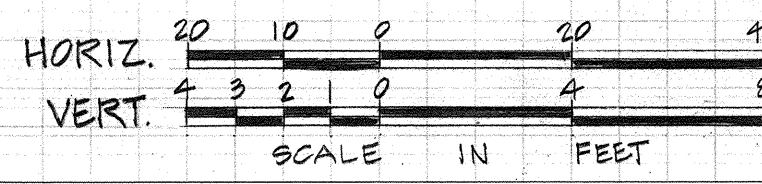


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-072-1(34)B	1991	84	193

TRUE NORTH
SCALE: 1" = 20'



SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
CHECKED BY	
NOTE BOOK	
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APPROVED: *[Signature]* DATE: 7/18/90
CHIEF PLANNING AND ENGINEERING
BOARD OF WATER SUPPLY



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-072-1(34)B	1991	85	103

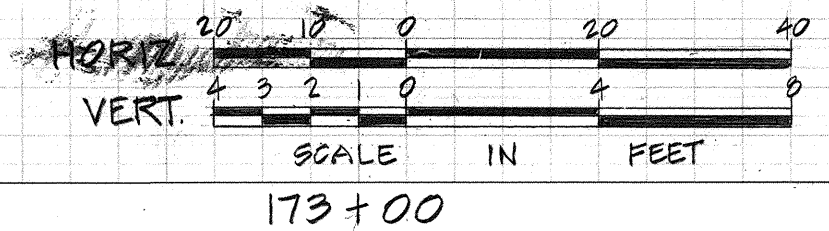
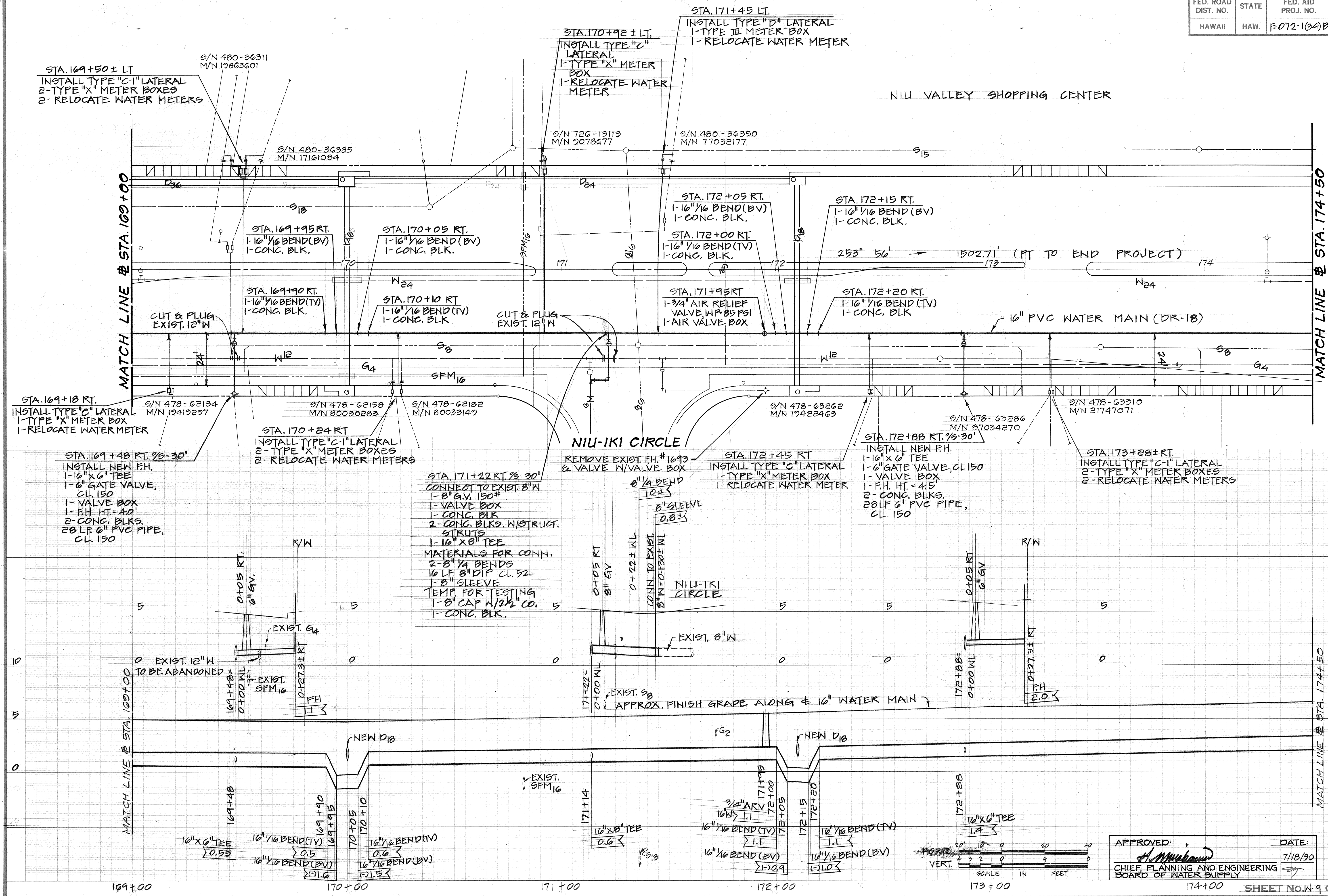
TRUE NORTH
SCALE: 1"=20'

NIU VALLEY SHOPPING CENTER

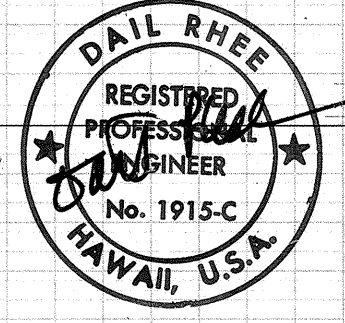
MATCH LINE @ STA. 169+00

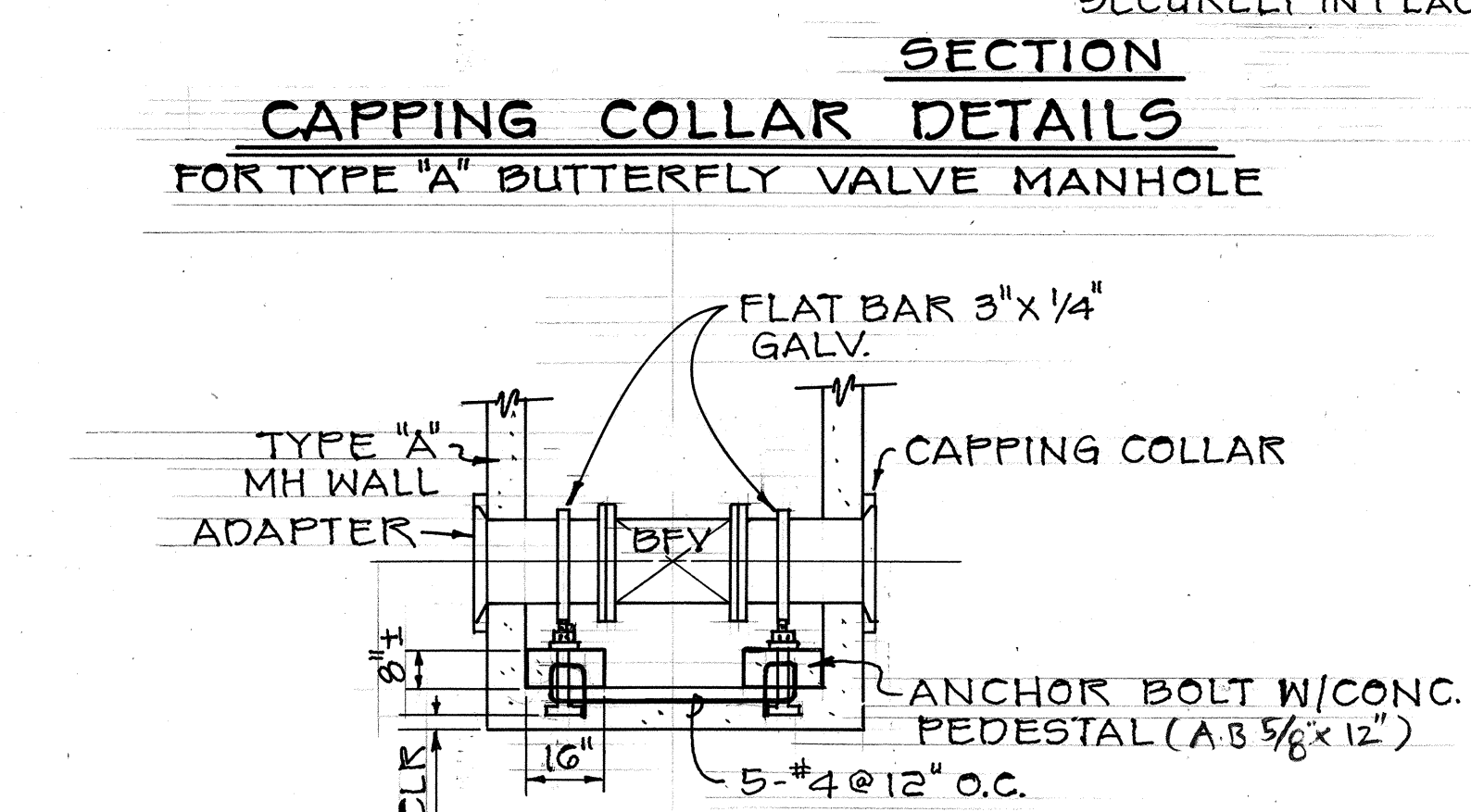
MATCH LINE @ STA. 174+50

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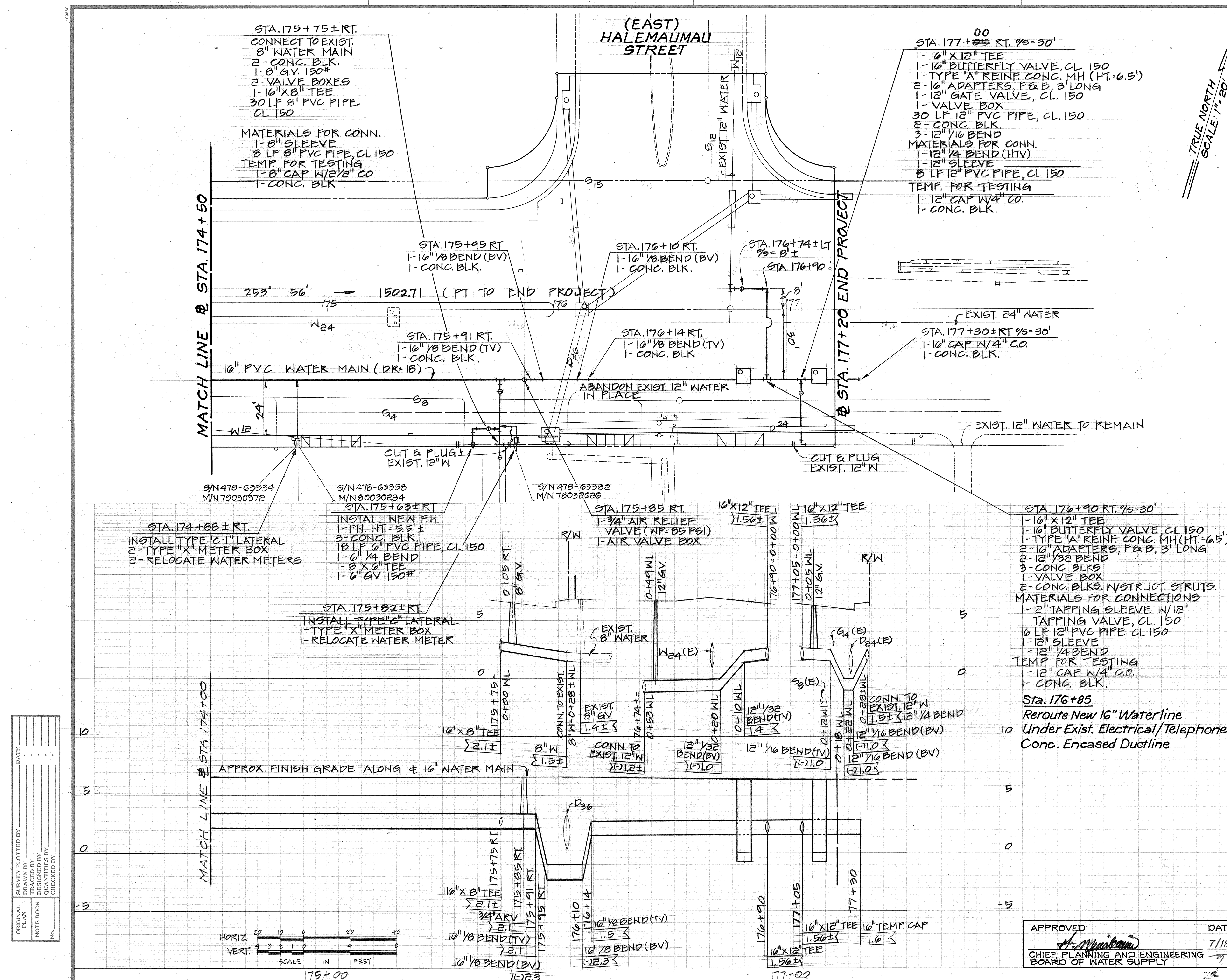


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BOARD OF WATER SUPPLY





BUTTERFLY VALVE ANCHOR BLOCK
FOR PVC PIPE @ REINF. CONC. TYPE "A" MANHOLE
NOTE: SEE STANDARD DETAILS FOR REMAINDER
OF MANHOLE DETAIL



APPROVED: H. Minkow DATE: 7/18/90
CHIEF PLANNING AND ENGINEERING
BOARD OF WATER SUPPLY 7

