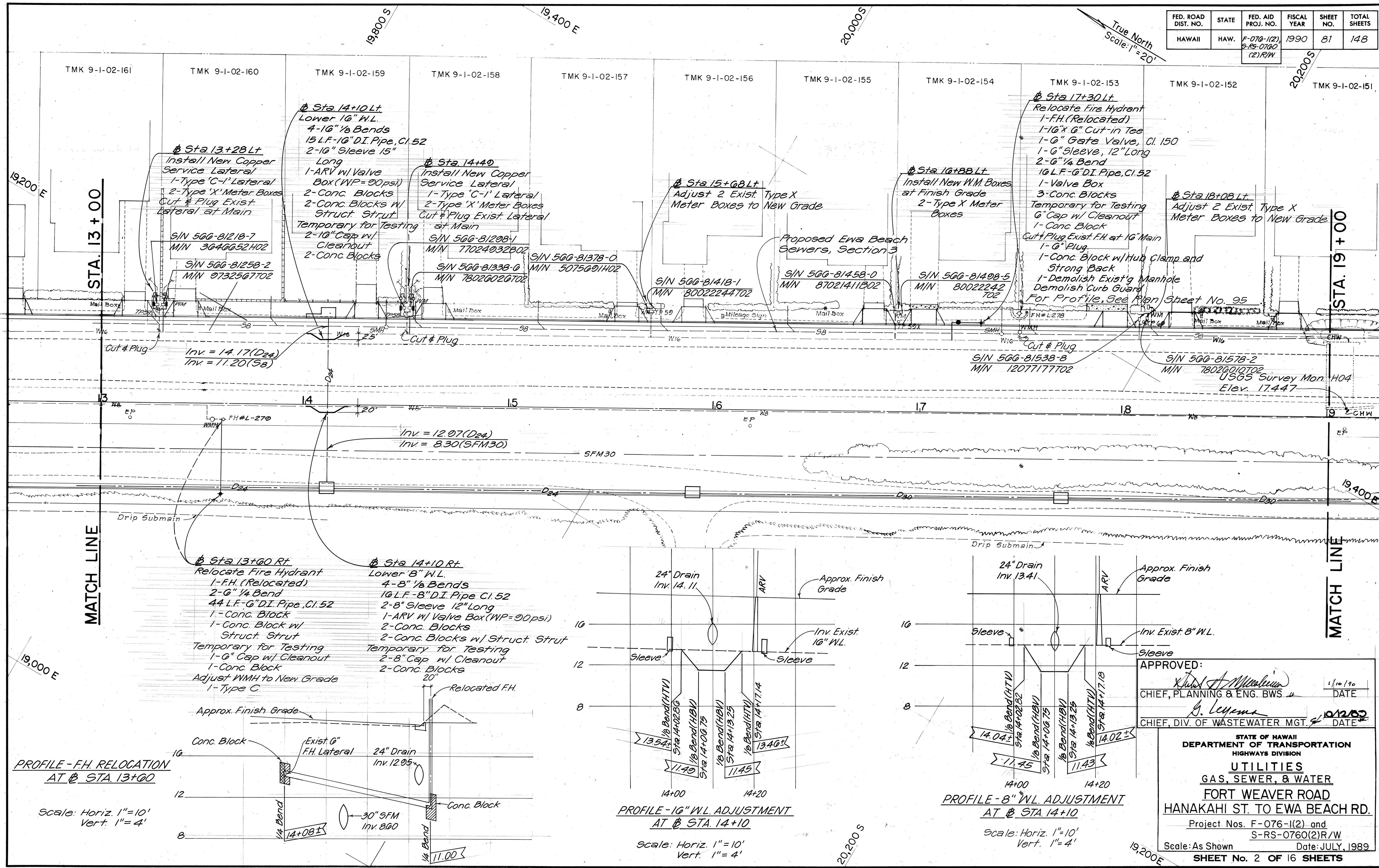


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-076-1(2), S-RS-0760(2)R/W	1990	81	148



DATE	.....
DESIGNED BY	.....
CHECKED BY	.....
ORIGINAL PLAN	.....
NOTE BOOK	.....

PROFILE - F.H. RELOCATION
AT STA. 13+00

Scale: Horiz. 1"=10'
Vert. 1"=4'

PROFILE - 16" W.L. ADJUSTMENT
AT STA. 14+10

Scale: Horiz. 1"=10'
Vert. 1"=4'

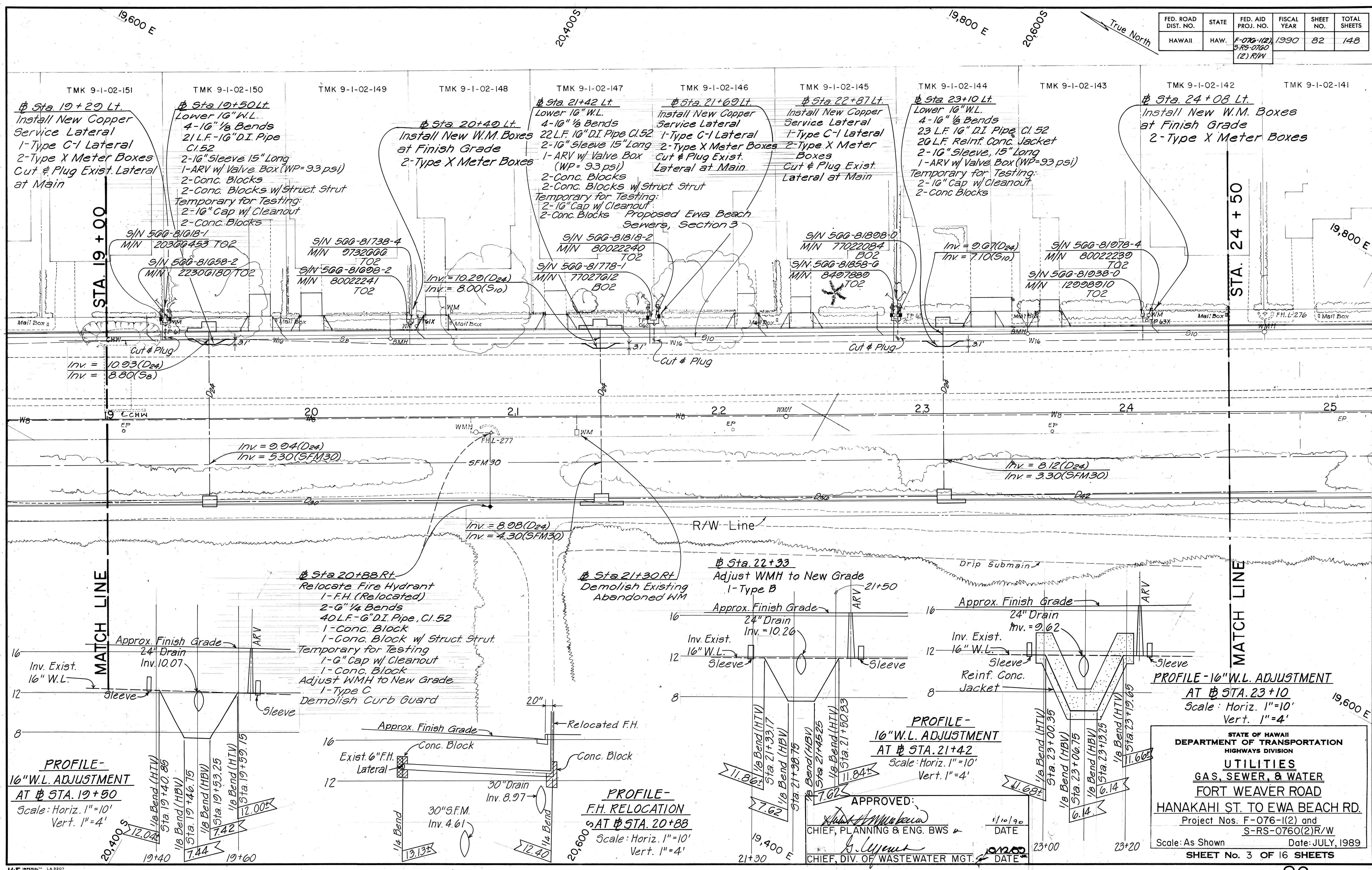
PROFILE - 8" W.L. ADJUSTMENT
AT STA. 14+10

Scale: Horiz. 1"=10'
Vert. 1"=4'

APPROVED:
[Signature] 1/10/90
CHIEF, PLANNING & ENG. BWS DATE
[Signature] 10/12/89
CHIEF, DIV. OF WASTEWATER MGT. DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
UTILITIES
GAS, SEWER, & WATER
FORT WEAVER ROAD
HANAKAHI ST. TO EWA BEACH RD.
Project Nos. F-076-1(2) and
S-RS-0760(2)R/W
Scale: As Shown Date: JULY, 1989
SHEET No. 2 OF 16 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-076-1(2) S-RS-0760 (2) R/W	1990	82	148



DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
DESIGNED BY	_____
NOTED BY	_____
CHECKED BY	_____

**PROFILE-
16" W.L. ADJUSTMENT
AT STA. 19+50**
Scale: Horiz. 1"=10'
Vert. 1"=4'

Sta. 20+88 Rt.
Relocate Fire Hydrant
1-F.H. (Relocated)
2-6" 1/4 Bends
40 L.F.-6" D.I. Pipe, C.I. 52
1-Conc. Block
1-Conc. Block w/ Struct. Strut
Temporary for Testing
1-6" Cap w/ Cleanout
1-Conc. Block
Adjust WMH to New Grade
1-Type C
Demolish Curb Guard

Sta. 21+30 Rt.
Demolish Existing
Abandoned WM

Sta. 22+33
Adjust WMH to New Grade
1-Type B
Approx. Finish Grade
24" Drain
Inv. = 10.26
Inv. Exist. 16" W.L. Sleeve

**PROFILE-
16" W.L. ADJUSTMENT
AT STA. 21+42**
Scale: Horiz. 1"=10'
Vert. 1"=4'

**PROFILE-16" W.L. ADJUSTMENT
AT STA. 23+10**
Scale: Horiz. 1"=10'
Vert. 1"=4'

**PROFILE-
F.H. RELOCATION
AT STA. 20+88**
Scale: Horiz. 1"=10'
Vert. 1"=4'

APPROVED:

CHIEF, PLANNING & ENG. BWS

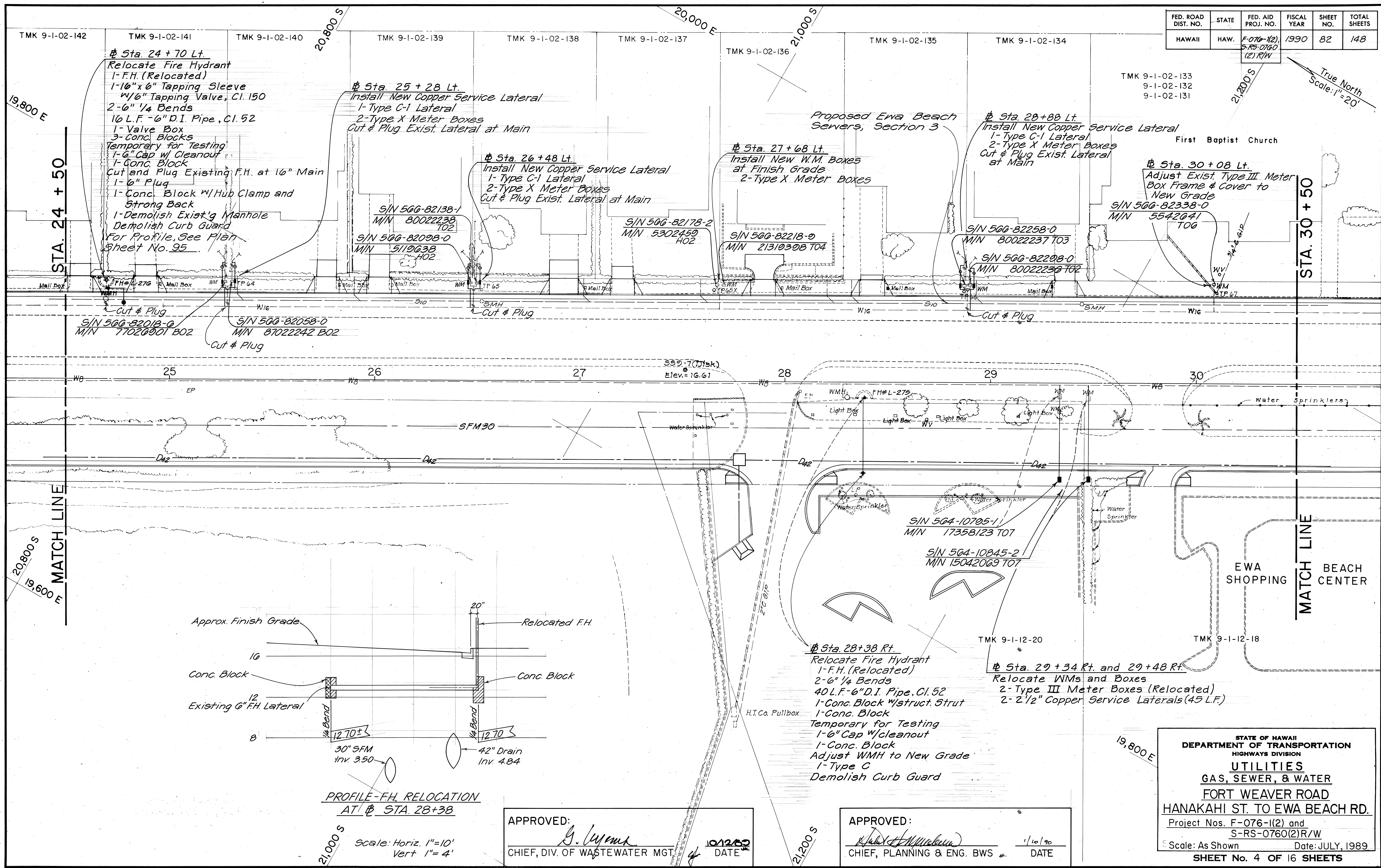
CHIEF, DIV. OF WASTEWATER MGT.
DATE: 11/10/90

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
UTILITIES
GAS, SEWER, & WATER
FORT WEAVER ROAD
HANAKAHI ST. TO EWA BEACH RD.
Project Nos. F-076-1(2) and
S-RS-0760(2) R/W
Scale: As Shown Date: JULY, 1989
SHEET No. 3 OF 16 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-076-1(2) S-RS-0760(2) R/W	1990	82	148

TMK 9-1-02-133
9-1-02-132
9-1-02-131

True North
Scale: 1"=20'



DATE	10/12/90
SURVEY PLOTTED BY	W. J. ...
DESIGNED BY	W. J. ...
NOTED BY	W. J. ...
CHECKED BY	W. J. ...

APPROVED: *G. ...*
CHIEF, DIV. OF WASTEWATER MGT. DATE 10/12/90

APPROVED: *...*
CHIEF, PLANNING & ENG. BWS DATE 1/10/90

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
UTILITIES
GAS, SEWER, & WATER
FORT WEAVER ROAD
HANAKAHI ST. TO EWA BEACH RD.
Project Nos. F-076-1(2) and S-RS-0760(2) R/W
Scale: As Shown Date: JULY, 1989
SHEET No. 4 OF 16 SHEETS

TMK 9-1-02-133
9-1-02-132
9-1-02-131

Sta 31+85Lt + 31+90Lt
Adjust WMHs to New Grade
1-Type B
1-Type C

TMK 9-1-02-1

Sta 33+03Lt TMK 9-1-02-297
Relocate Fire Hydrant
1-FH (Relocated)
1-10"x0" Tapping Sleeve
w/0" Tapping Valve, CI.150
2-6" 1/4 Bends
10LF-6" DI. Pipe, CI.52
1-Valve Box
3-Conc. Blocks
Temporary for Testing
1-6" Cap w/ Cleanout
1-Conc. Block
Cut & Plug Exist. FH at 10" Main
1-6" Plug
1-Conc. Block w/ Hub Clamp and
Strong Back
Tel Booth
1-Demolish Exist. Manhole
Demolish Curb Guard

Sta 35+42Lt
Adjust WMH to New Grade
1-Type B
Sta 35+48Lt
Adjust WV Box
to New Grade

Sta 35+00Lt
Relocate WM and Box
1-Type I Meter Box
1-Type I Meter Box Frame & Cover (Relocated)
20LF-8" DI. Pipe, CI.52
2-Conc. Blocks
Temporary for Testing
1-8" Cap w/ Cleanout

ILIMA INTERMEDIATE SCHOOL
Sta 34+75Lt
Relocate WMs & Boxes
1-Type III Meter Box (Reloc.)
1-Type B Meter Box (Reloc.)
1-2" Copper Service
Lateral

S/N 301-66360-1
M/N 80189611KY18
Inv. = 9.94 (Top)
8.32 (Bottom)

S/N 564-52349-4
M/N 77024438B02
Inv. = 0.78 (Top)
Inv. = -1.500 (SFM30)

S/N 566-71027-5
M/N 9002168700

S/N 564-10895-1
M/N 79033393CN03

Sta 35+27Rt
Adjust WMH to New Grade
1-Type B

Sta 35+39Rt
Relocate WM
1-Type B Copper Service Lateral
1-Type X Meter Box
Cut & Plug Existing Lateral at Main

Sta 35+48Rt &
35+49Rt
Adjust WMHs to New Grade
2-Type B

Sta 36+25Rt
Relocate Water Meter to
Sta 36+05Rt (Sht. G)
Cut & Plug at 8" Main

First Baptist Church

Texaco
Service Station

Ewa Beach
Professional Bldg.

ILIMA INTERMEDIATE SCHOOL

MATCH LINE

STA. 30 + 50

MATCH LINE

STA. 36 + 50

PAPIPI ROAD

Proposed Ewa
Beach Sewers,
Section 3

Re-align HECO
Ductlines (see sht.
C.O.100.

Inv. = 6.67 (D24)
Inv. = 4.70 (S10)

Inv. = 5.75 (D24)
Inv. = 1.00 (SFM30)

S/N 564-10855-0
M/N 87040357R04

TMK 9-1-12-18

EWA

BEACH

SHOPPING

CENTER

Sta 31+75Lt
Relocate Fire Hydrant
1-FH (Relocated)
1-8"x0" Tapping Sleeve
w/0" Tapping Valve, CI.150
1-Valve Box
15LF-6" DI. Pipe, CI.52
1-Valve Box
1-Conc. Block
Temporary for Testing
1-6" Cap w/ Cleanout
1-Conc. Block
Cut and Plug Existing FH
at 8" Main
1-6" Plug
1-Conc. Block w/ Hub Clamp
and Strong Back
1-Demolish Exist. Manhole

APPROVED:

CHIEF, DIV. OF WASTEWATER MGT.

10/12/90
DATE

APPROVED:

CHIEF, PLANNING & ENG. BWS

1/10/90
DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

UTILITIES

GAS, SEWER, & WATER

FORT WEAVER ROAD

HANAKAHI ST. TO EWA BEACH RD.

Project Nos. F-076-1(2) and
S-RS-0760(2)R/W

Scale: 1" = 20'

Date: JULY, 1989

SHEET No. 5 OF 16 SHEETS

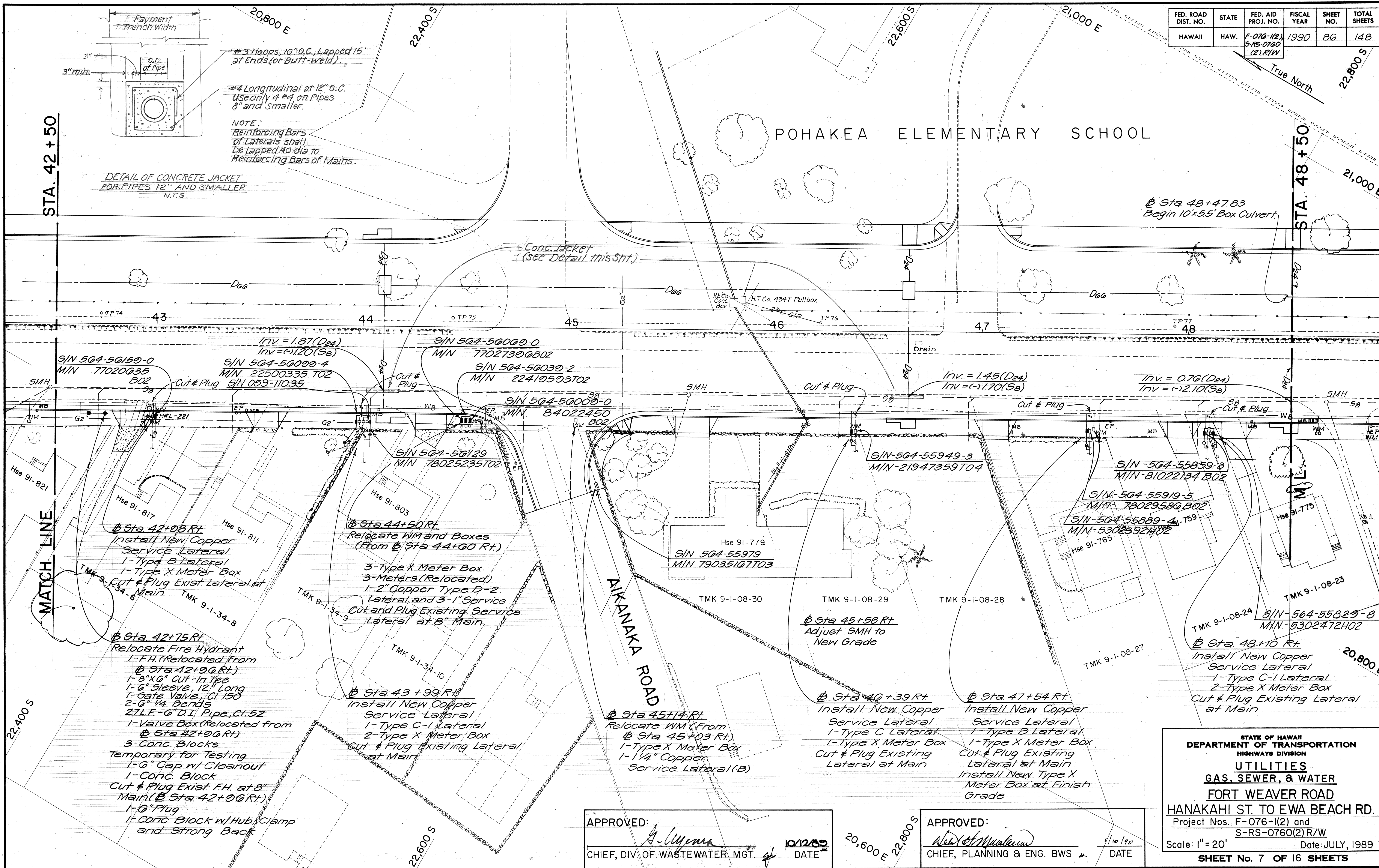
"AS-BUILT"

84

DATE	
DESIGNED BY	
CHECKED BY	
NOTED BY	
ORIGINAL	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-076-1(2), S-RS-0760(2) R/W	1990	86	148

True North



DETAIL OF CONCRETE JACKET FOR PIPES 12" AND SMALLER N.T.S.

#3 Hoops, 10" O.C., Lapped 15' at Ends (or Butt-weld).
#4 Longitudinal at 12" O.C. Use only 4 #4 on Pipes 8" and Smaller.

NOTE: Reinforcing Bars of Laterals shall be Lapped 40 dia to Reinforcing Bars of Mains.

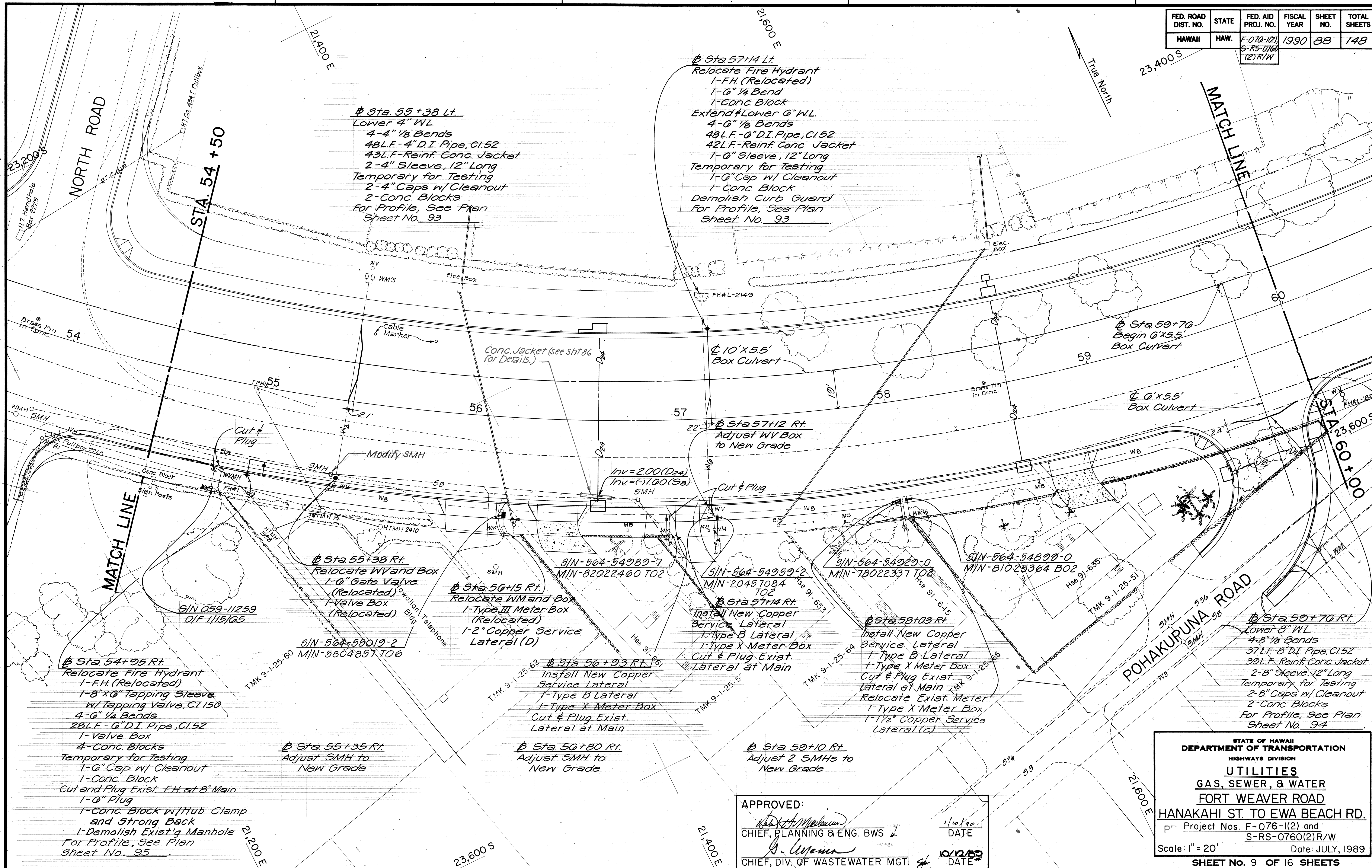
ORIGINAL PLAN	DATE
DESIGNED BY	
CHECKED BY	
NOTED BY	
QUANTITIES BY	
DATE	

APPROVED: *G. Uyema*
CHIEF, DIV. OF WASTEWATER MGT. DATE 10/28/90

APPROVED: *Stanley M. Mui*
CHIEF, PLANNING & ENG. BWS DATE 11/10/90

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
UTILITIES
GAS, SEWER, & WATER
FORT WEAVER ROAD
HANAKAHI ST. TO EWA BEACH RD.
Project Nos. F-076-1(2) and S-RS-0760(2) R/W
Scale: 1" = 20' Date: JULY, 1989
SHEET No. 7 OF 16 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-076-1(2) S-RS-0760 (2) R/W	1990	88	148



DATE	11/15/85
SURVEY PLOTTED BY	...
DRAWN BY	...
DESIGNED BY	...
QUANTITIES BY	...
CHECKED BY	...

APPROVED:

[Signature]
CHIEF, PLANNING & ENG. BWS

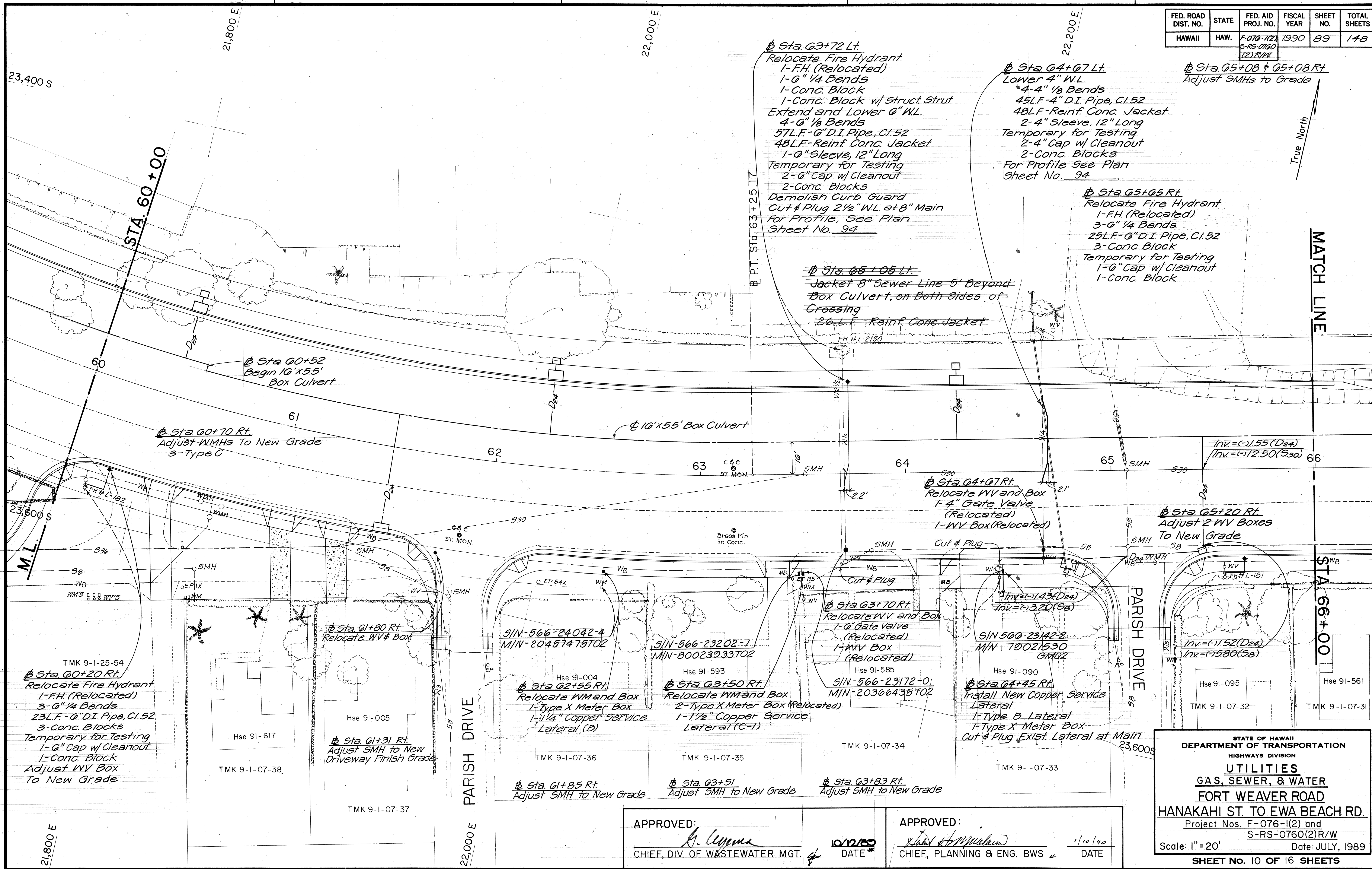
[Signature]
CHIEF, DIV. OF WASTEWATER MGT.

11/10/90
DATE

10/12/89
DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
UTILITIES
GAS, SEWER, & WATER
FORT WEAVER ROAD
HANAKAHI ST. TO EWA BEACH RD.
Project Nos. F-076-1(2) and
S-RS-0760(2) R/W
Scale: 1" = 20'
Date: JULY, 1989
SHEET No. 9 OF 16 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-076-1(2) S-RS-0760 (2) R/W	1990	89	148



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

APPROVED:

 CHIEF, DIV. OF WASTEWATER MGT.

10/12/89
 DATE

APPROVED:

 CHIEF, PLANNING & ENG. BWS

1/10/90
 DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
UTILITIES
 GAS, SEWER, & WATER
FORT WEAVER ROAD
HANAKAHI ST. TO EWA BEACH RD.
 Project Nos. F-076-1(2) and
 S-RS-0760(2)R/W
 Scale: 1" = 20' Date: JULY, 1989
SHEET NO. 10 OF 16 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-076-1(2) S-RS-0760 (2) R/W	1990	90	148

True North

STA. 66+00

STA. 72+20

23,200 S
 # Sta 67+25
 Relocate Fire Hydrant
 1-F.H. (Relocated)
 1-8"x6" Tapping Sleeve
 w/6" Tapping Valve, C.I. 150
 1-6" 1/4 Bend
 1-Conc. Block
 1-Conc. Block w/struct. Strut
 Extend and Lower 6" W.L.
 4-6" 1/8 Bends
 87L.F.-6"D.I. Pipe, C.I. 52
 56L.F.-Reinf. Conc. Jacket
 1-Valve Box (Relocated)
 Temporary for Testing
 1-6" Cap w/ Cleanout
 1-Conc. Block
 Demolish Curb Guard
 For Profile, See Plan Sheet No. 94

Sta. 71+47 Rt.
 Install New Copper Service Lateral
 1-Type B Lateral
 1-Type X Meter Box
 Cut & Plug Exist. Lateral at Main

Sta. 71+50 Rt.
 Relocate Fire Hydrant
 1-F.H. (Relocated)
 1-8"x6" Tapping Sleeve
 w/6" Tapping Valve, C.I. 150
 3-6" 1/4 Bends
 31L.F. 6"D.I. Pipe, C.I. 52
 1-Valve Box
 4-Conc. Block
 Temporary for Testing
 1-6" Cap w/ Cleanout
 1-Conc. Block
 Cut & Plug Exist. F.H. @ 8" Main
 1-6" Plug
 1-Conc. Block w/Hub Clamp
 and Strong Back
 1-Demolish Exist. Manhole

MATCH LINE

HAPALUA STREET

SIN-566-23112-1
 M/N-81025654B02
 Hse 91-561
 TMK 9-1-07-31

SIN-566-23082-2
 M/N-80020313T02
 Hse 91-555
 TMK 9-1-07-51

Sta 66+45 Rt.
 Install New Copper Service Lateral
 1-Type C-1 Lateral
 2-Type X Meter Boxes
 Cut & Plug Exist. Lateral at Main

Sta. 67+52 & 67+52 Rt.
 Adjust SMHs to New Grade

TMK 9-1-07-58
 # Sta 68+00
 Lower 8" W.L.
 2-8" 1/8 Bend
 30L.F.-8"D.I. Pipe, C.I. 52
 30L.F.-Reinf. Conc. Jacket
 2-8" Sleeve, 12" Long
 Temporary for Testing
 2-8" Cap w/ Cleanout
 2-Conc. Blocks
 For Profile, See Plan Sht. No. 94

Sta. 68+83
 Adjust SMH to New Grade

TMK 9-1-07-74
 # Sta 69+50 Rt.
 Install New Copper Service Lateral
 1-Type B Lateral
 1-Type X Meter Box
 Cut & Plug Exist. Lateral at Main

Sta. 69+38 Rt.
 Adjust SMH to New Grade

TMK 9-1-07-45
 # Sta. 71+02 Rt.
 Adjust SMH to New Grade

Sta. 70+18 & 70+18 Rt.
 Adjust SMHs to New Grade

APPROVED:

Chief, Planning & Eng. BWS

Chief, Div. of Wastewater Mgt.

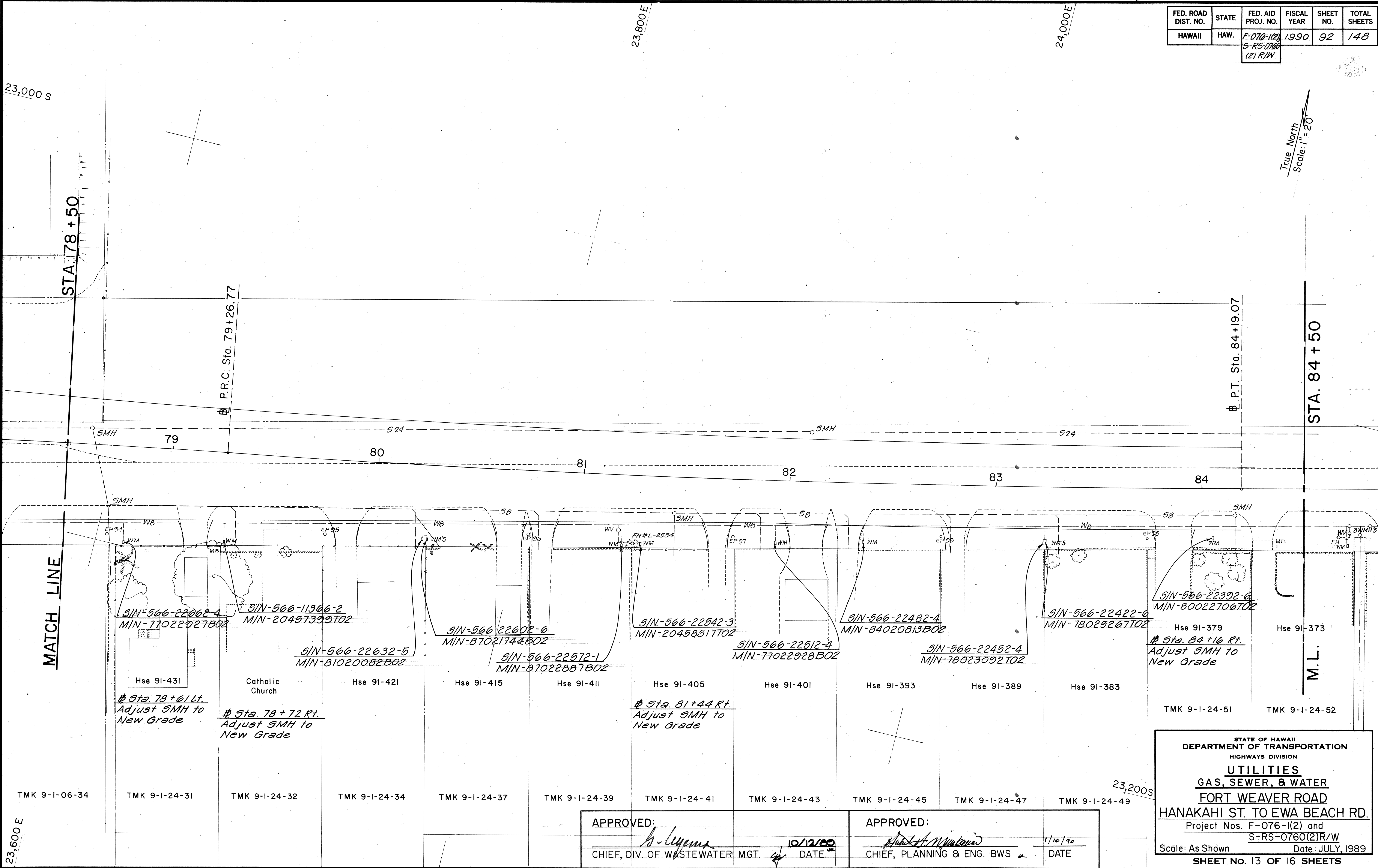
1/10/90
 DATE

10/2/90
 DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
 UTILITIES
 GAS, SEWER, & WATER
 FORT WEAVER ROAD
 HANAKAHI ST. TO EWA BEACH RD.
 Project Nos. F-076-1(2) and
 S-RS-0760(2)R/W
 Scale: 1" = 20' Date: JULY, 1989
 SHEET NO. 11 OF 16 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-076-1(2) S-RS-0760 (2) R/W	1990	92	148

True North
Scale: 1" = 20'



ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	

APPROVED: *[Signature]*
CHIEF, DIV. OF WASTEWATER MGT. *[Signature]* 10/12/89
DATE

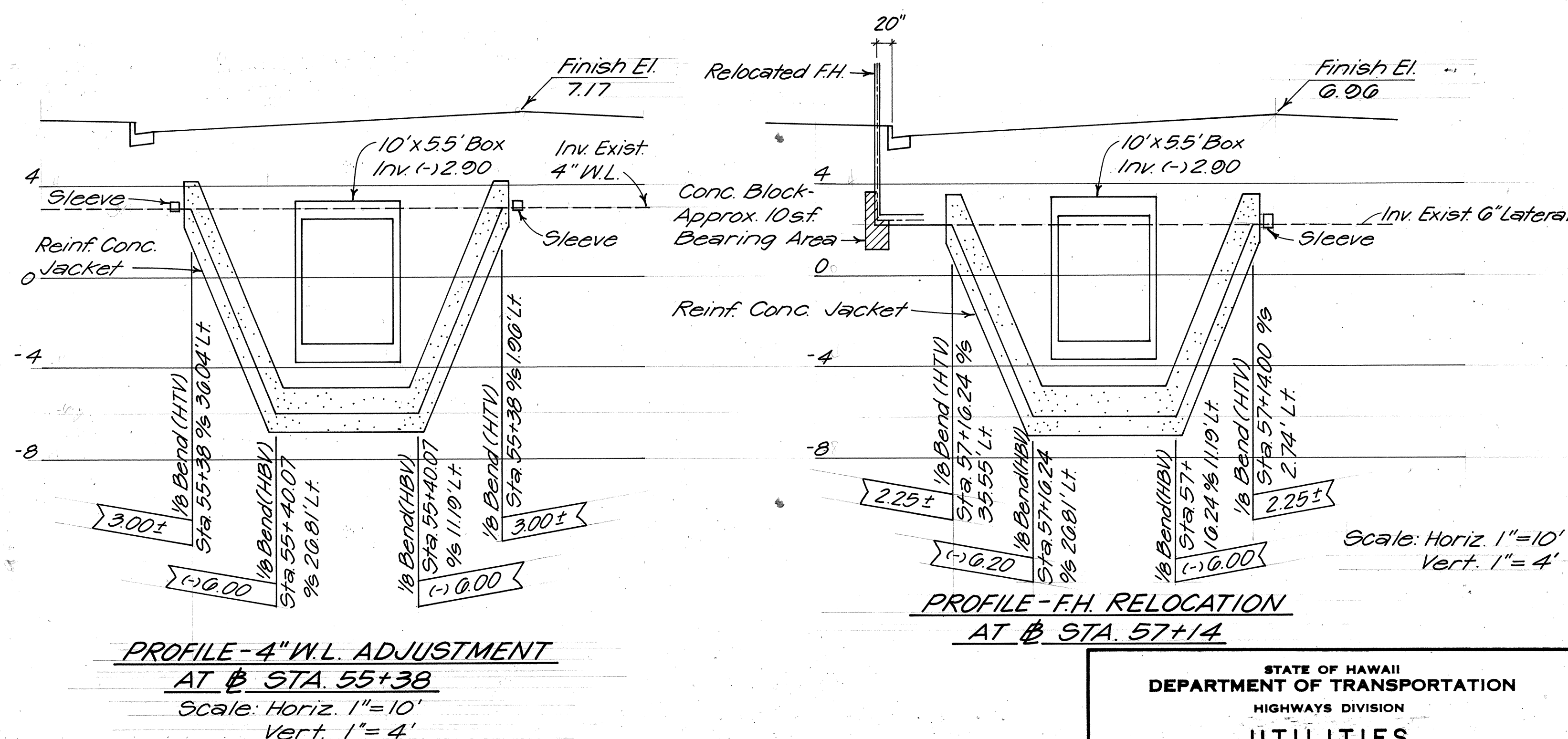
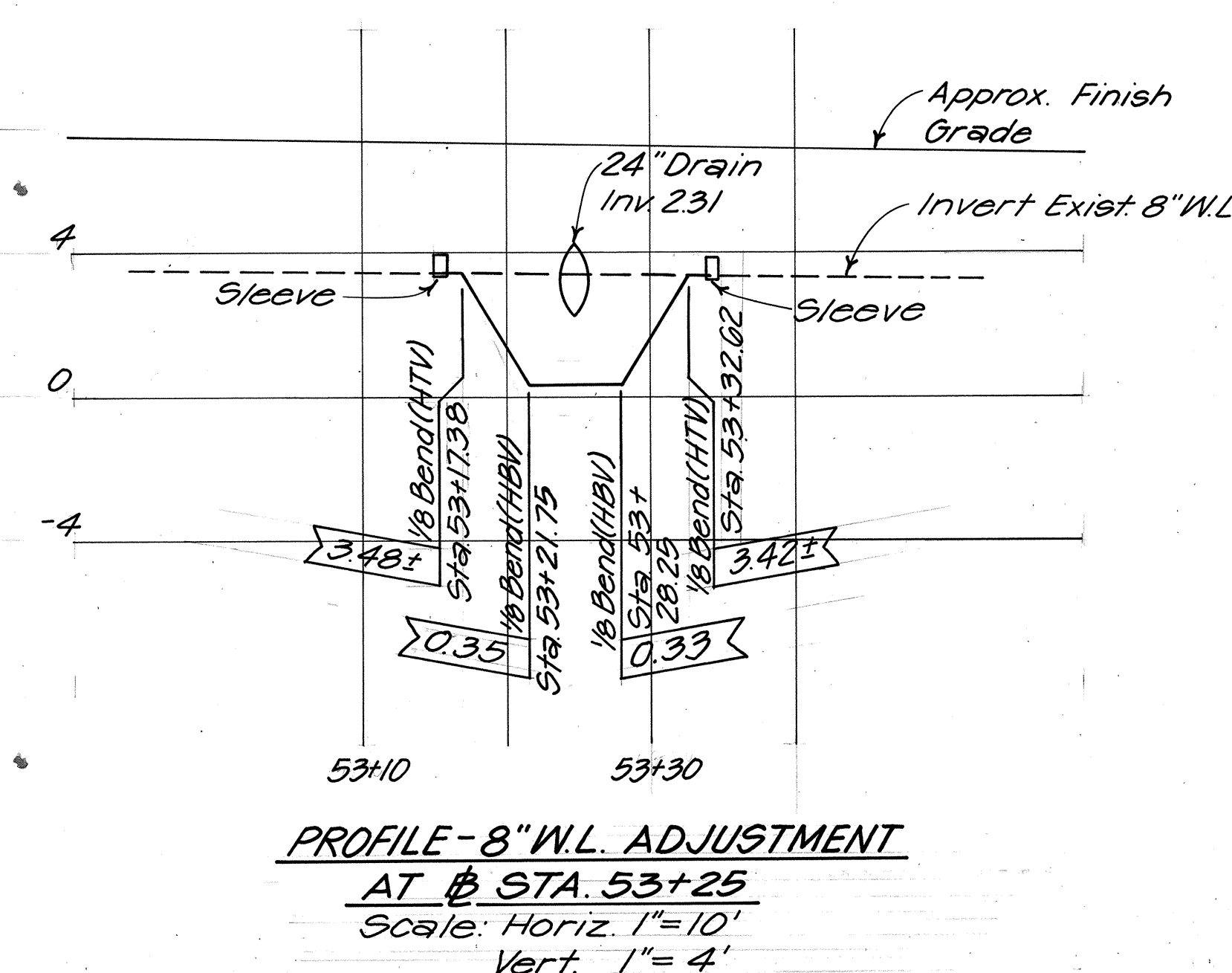
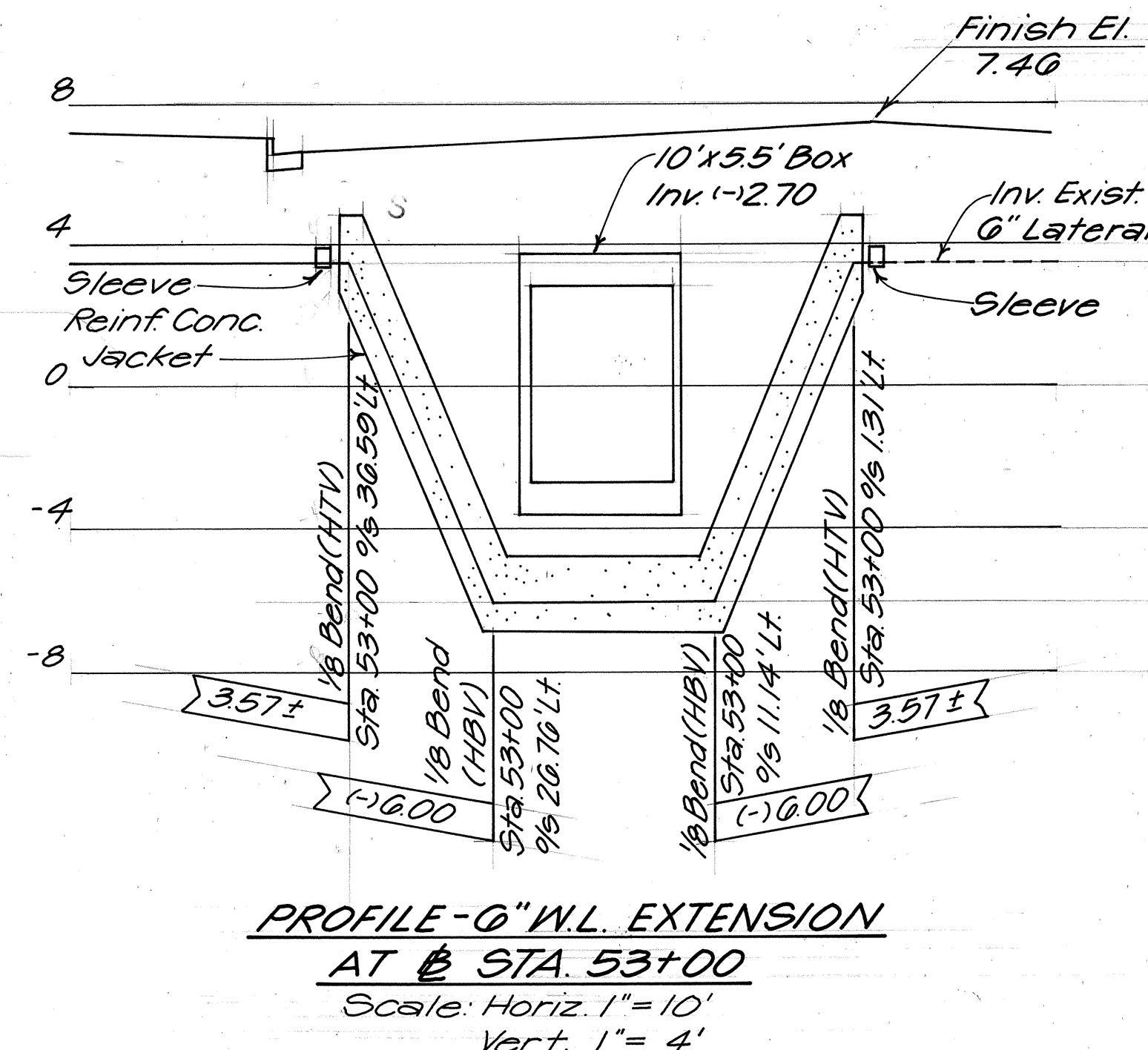
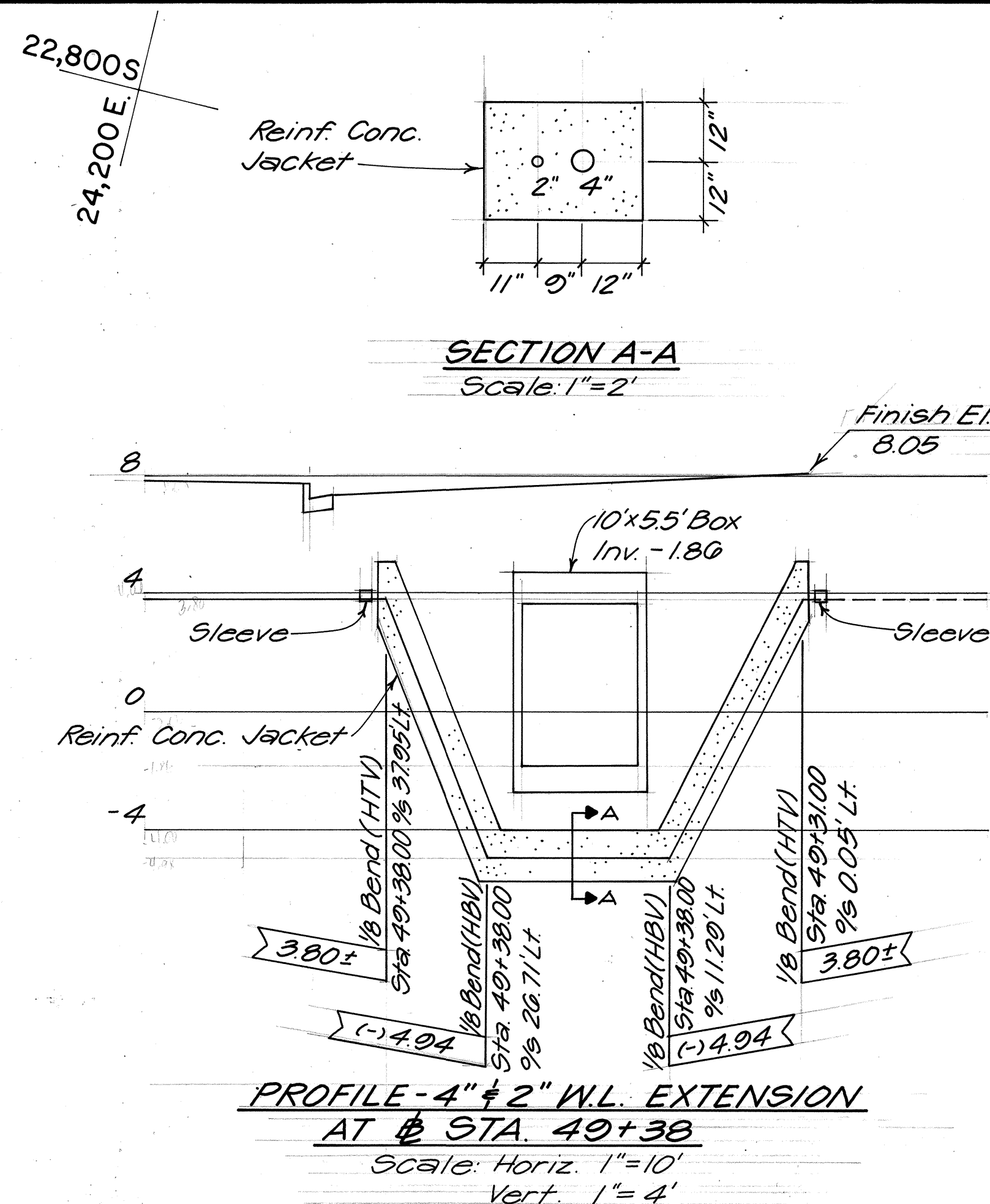
APPROVED: *[Signature]*
CHIEF, PLANNING & ENG. BWS *[Signature]* 11/10/90
DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
UTILITIES
GAS, SEWER, & WATER
FORT WEAVER ROAD
HANAKAHI ST. TO EWA BEACH RD.
Project Nos. F-076-1(2) and
S-RS-0760(2)R/W
Scale: As Shown Date: JULY, 1989
SHEET No. 13 OF 16 SHEETS

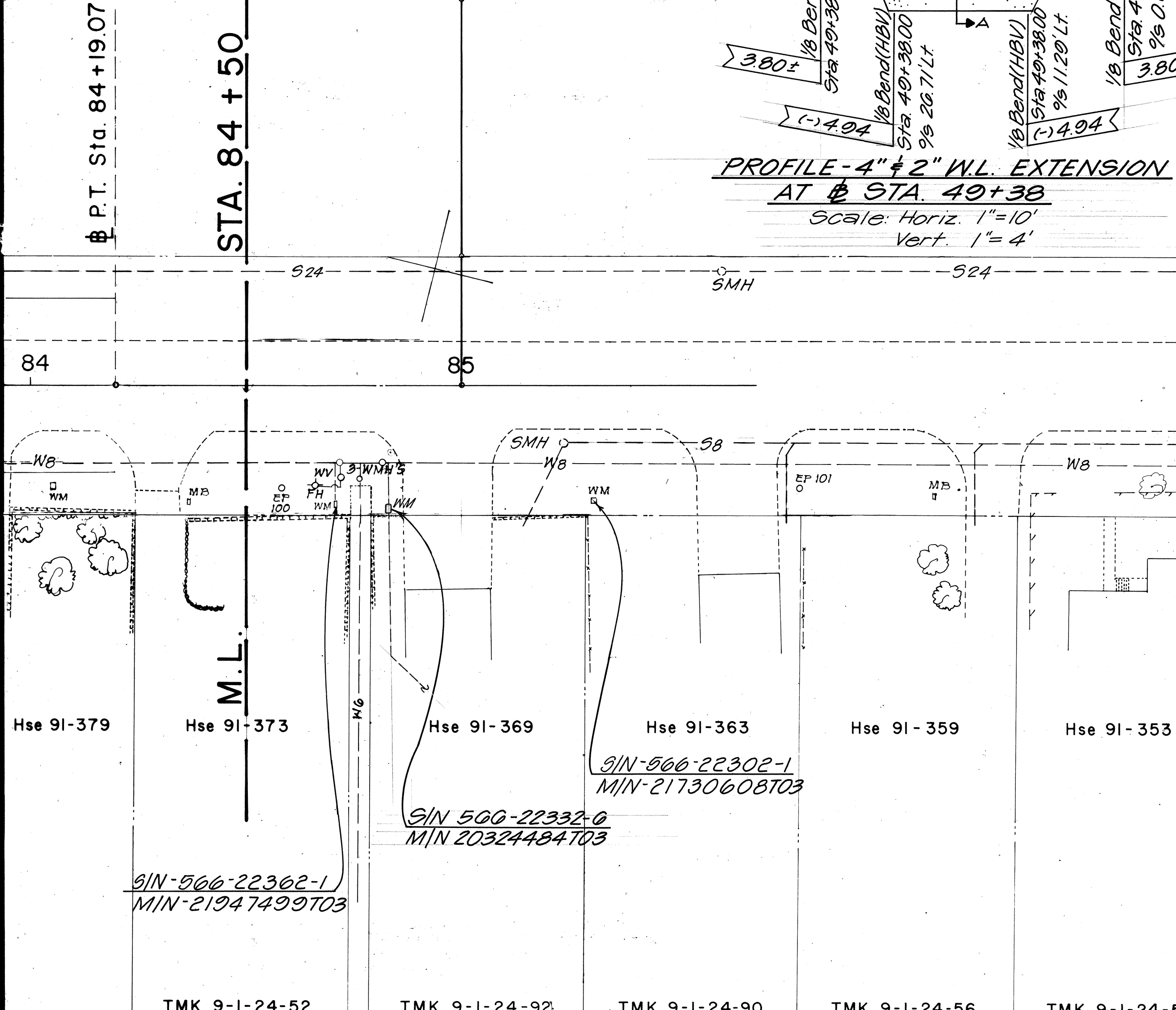
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-076-1(2) S-RS-0760 (2) R/W	1990	93	148

True North
Scale: 1" = 20'

END OF PROJECT
@ STA. 85+00



ORIGINAL PLAN	DATE
DESIGNED BY	
TRACED BY	
QUANTITIES BY	
CHECKED BY	

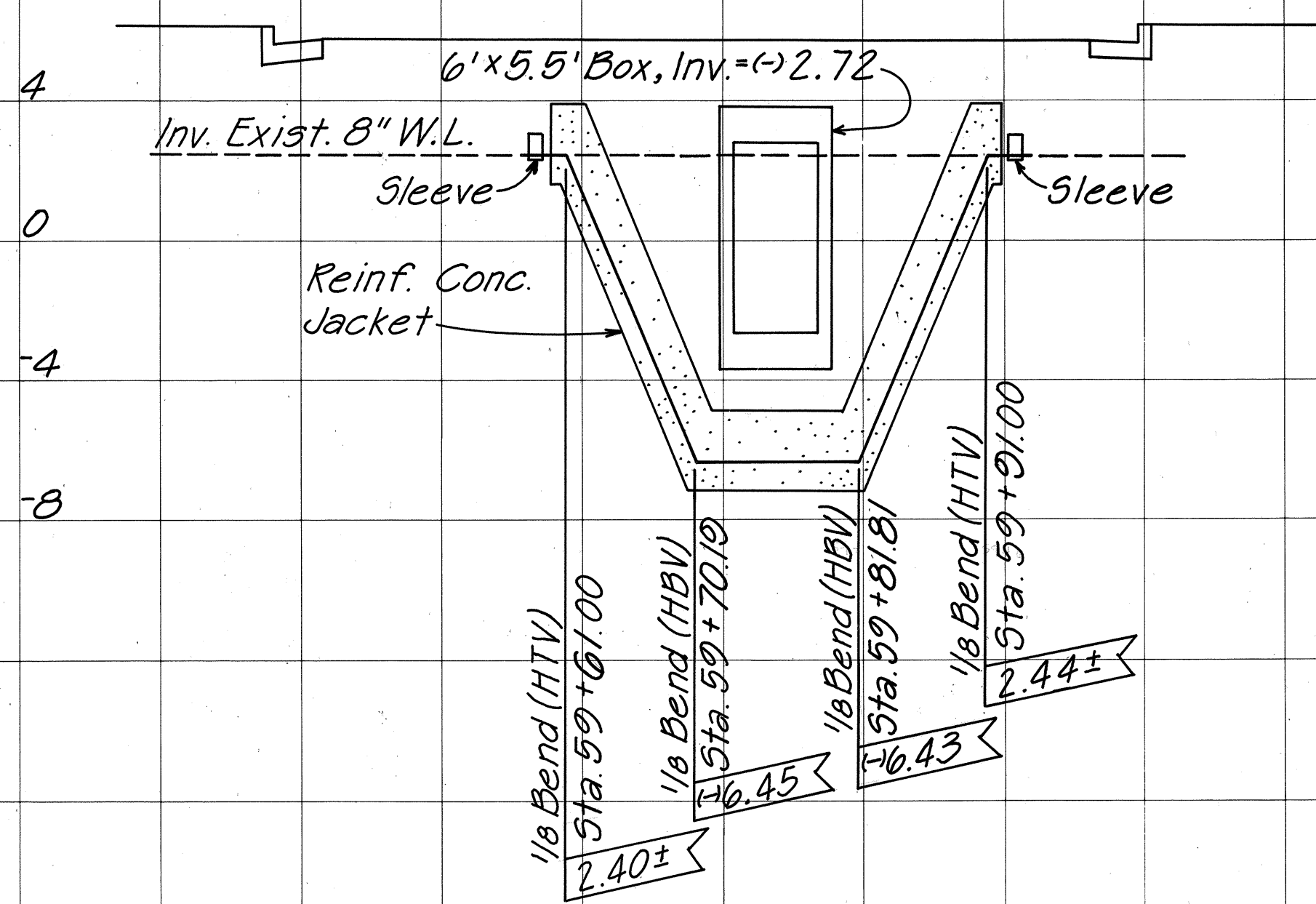


APPROVED:
[Signature]
CHIEF, PLANNING & ENG. BWS
DATE 1/10/90

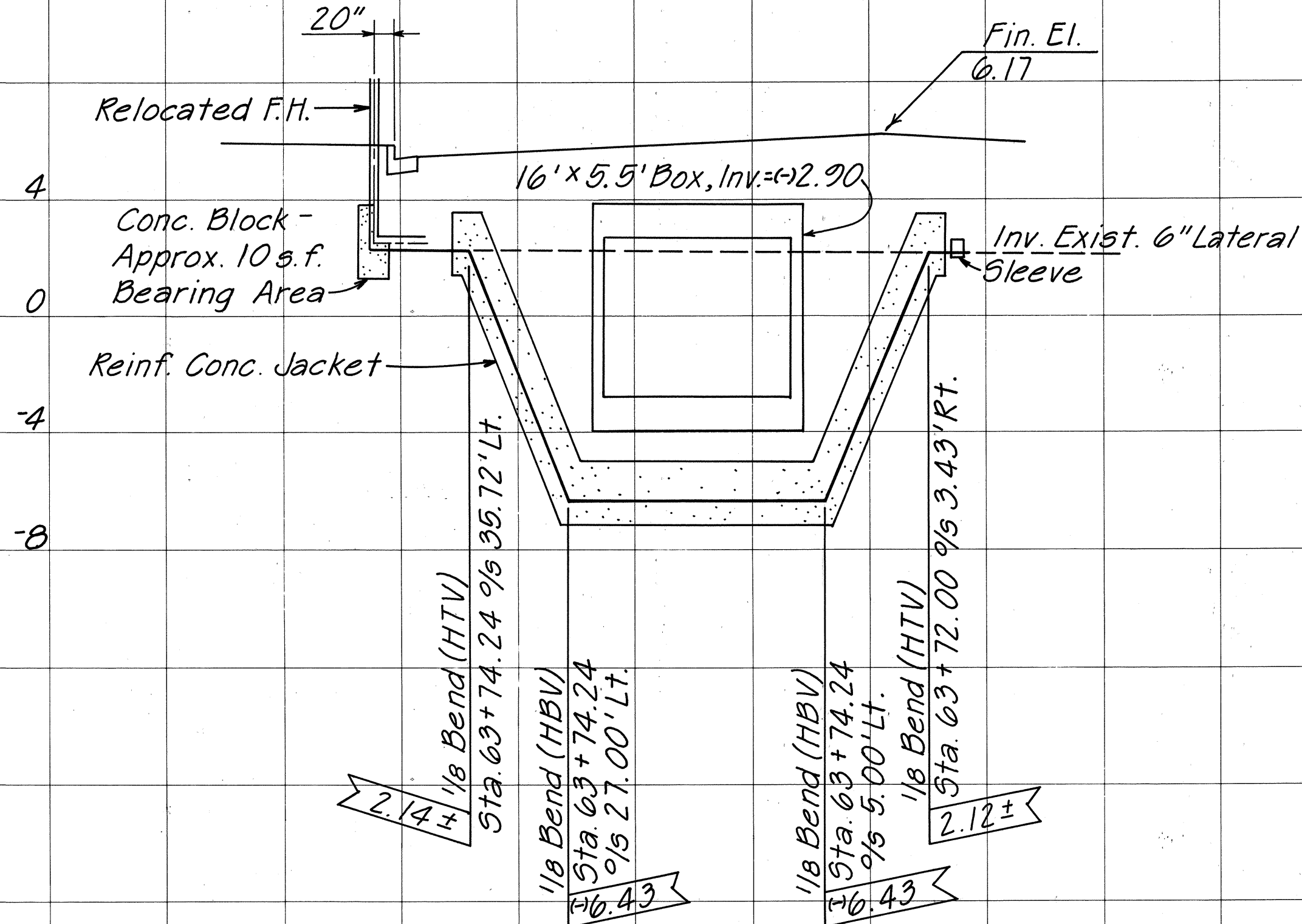
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
UTILITIES
GAS, SEWER, & WATER
FORT WEAVER ROAD
HANAKAHI ST. TO EWA BEACH RD.
Project Nos. F-076-1(2) and
S-RS-0760(2) R/W
Scale: As Shown Date: JULY, 1989
SHEET NO. 14 OF 16 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-076-1(2)	1990	94	148

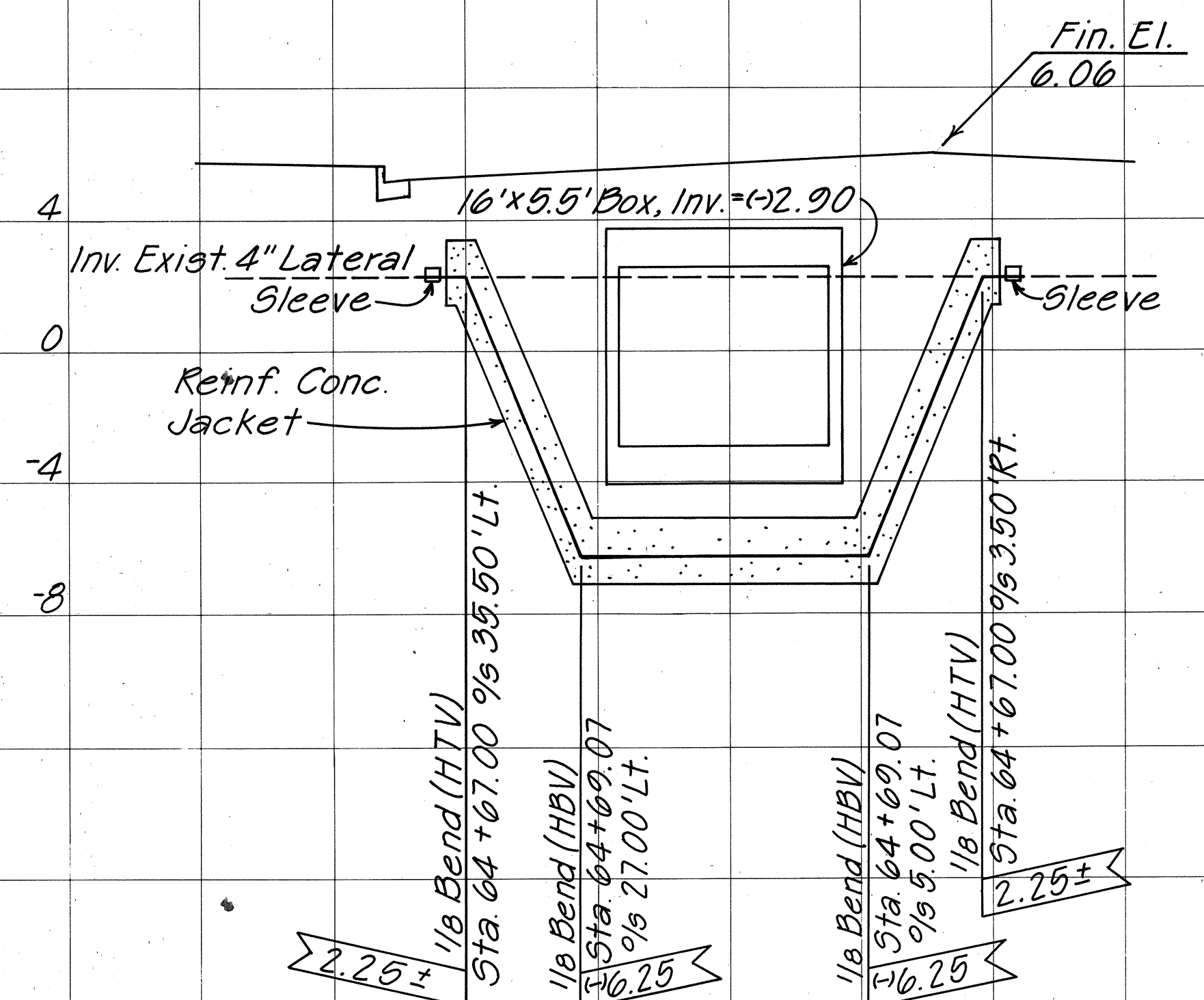
3-RS-0760(2) R/W



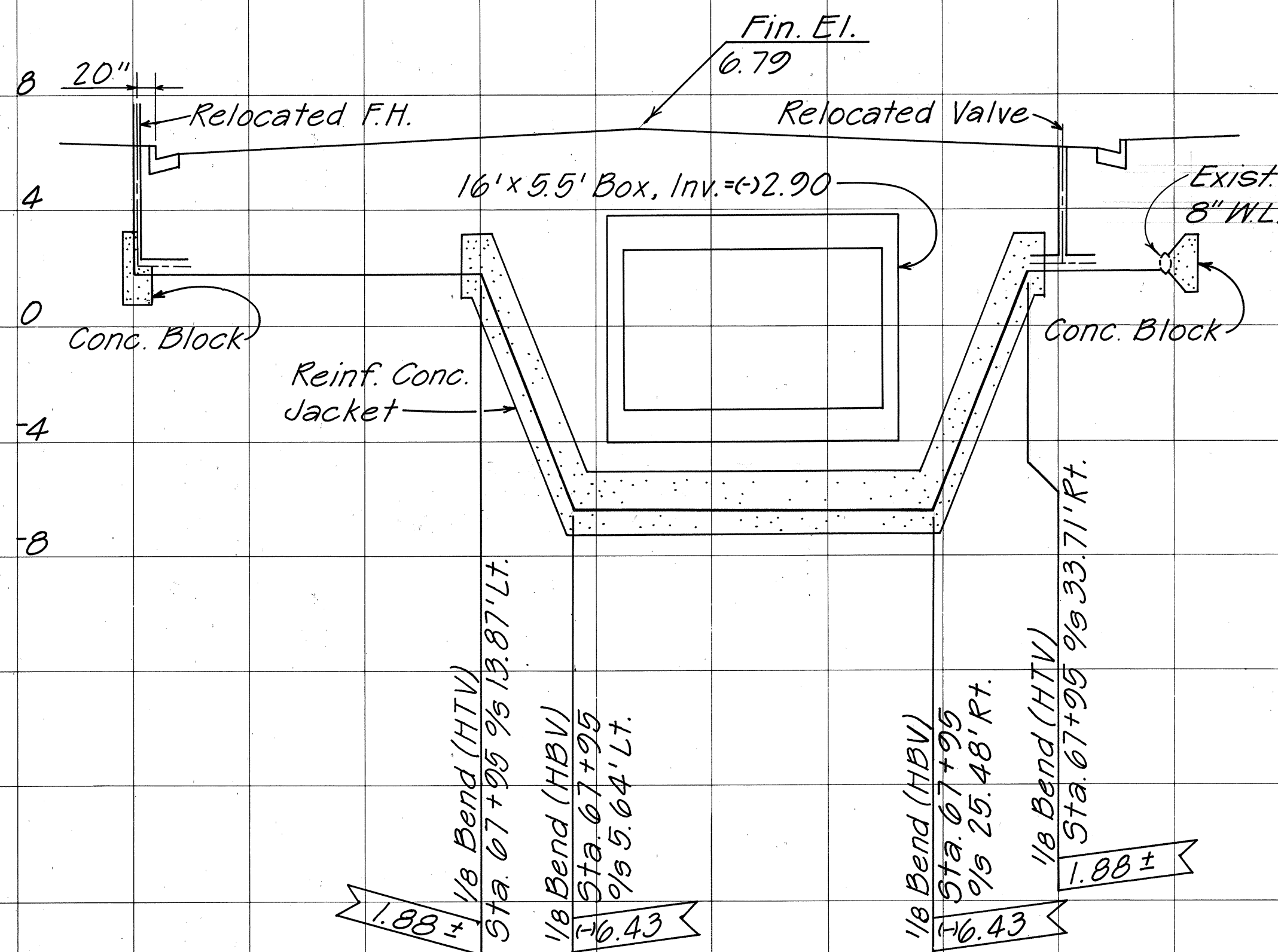
**PROFILE - 8" W.L. ADJUSTMENT
AT STA. 59+76**



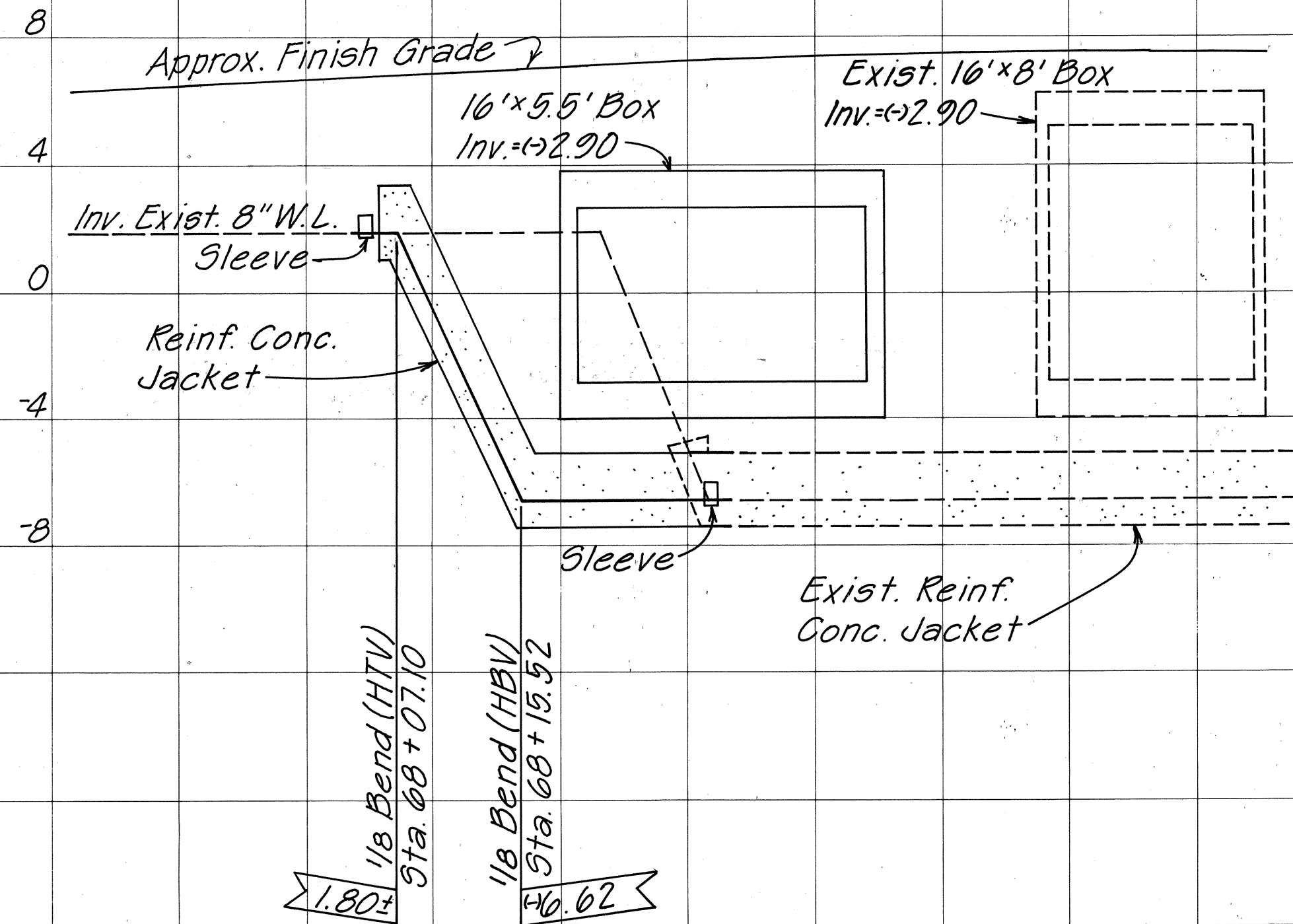
**PROFILE - F.H. RELOCATION
AT STA. 63+72**



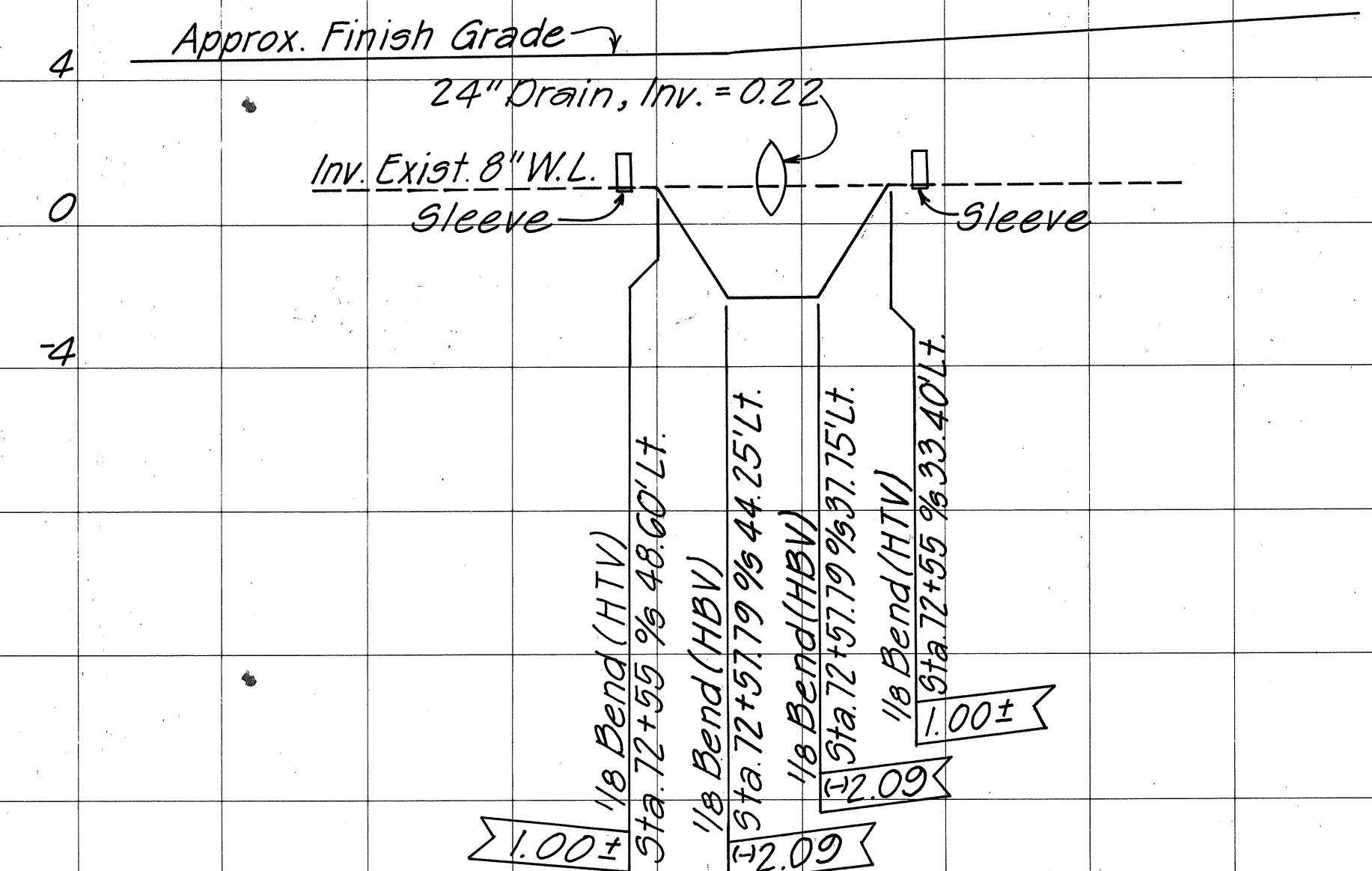
**PROFILE - 4" W.L. ADJUSTMENT
AT STA. 64+67**



**PROFILE - F.H. RELOCATION
AT STA. 67+95**



**PROFILE - 8" W.L. ADJUSTMENT
AT STA. 68+00**



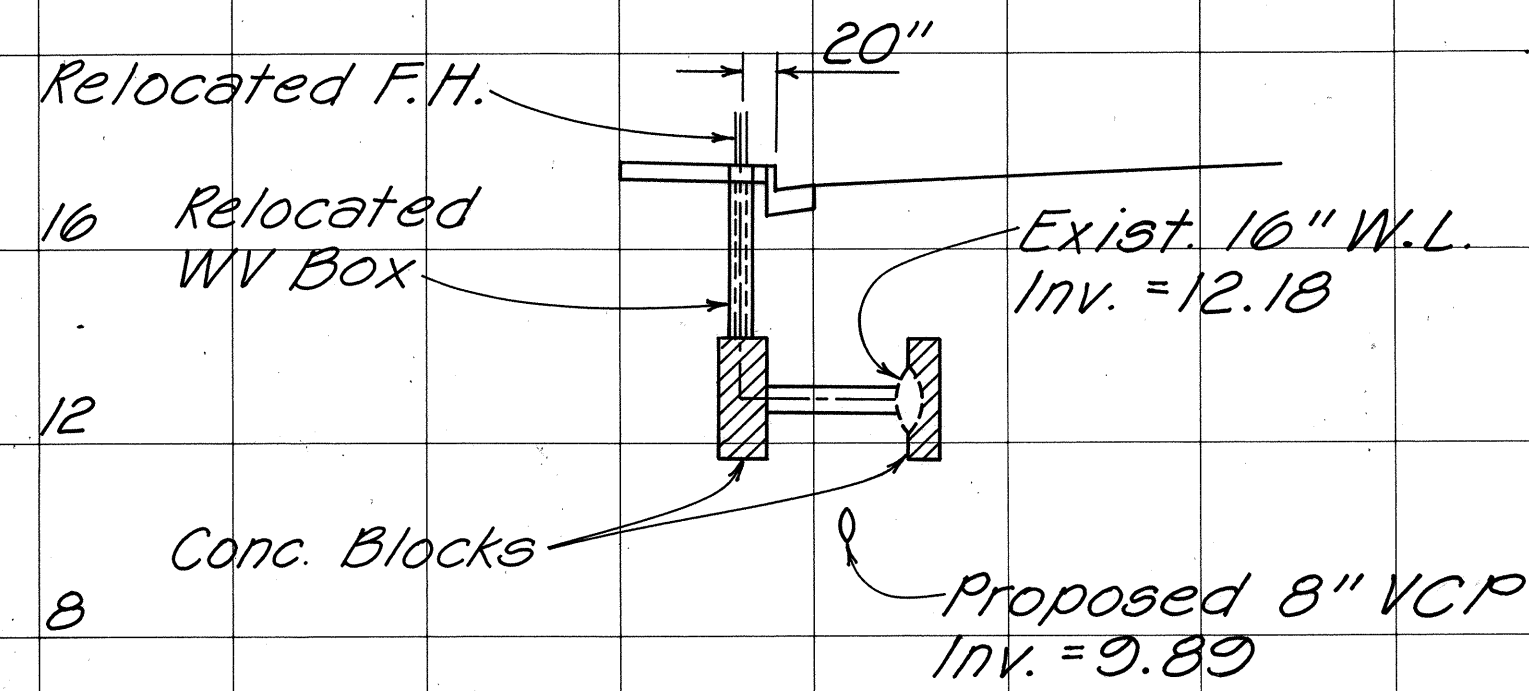
**PROFILE
12" W.L. ADJUSTMENT
AT STA. 72+55**

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
**PROFILE OF
WATER LINE ADJUSTMENTS**
FORT WEAVER ROAD
HANA KAHU ST. TO EWA BEACH RD.
Project Nos. F-076-1(2) and
3-RS-0760(2) R/W
Scale: Horiz. 1"=10', Vert. 1"=4' Date: July, 1990
SHEET No. 15 OF 16 SHEETS

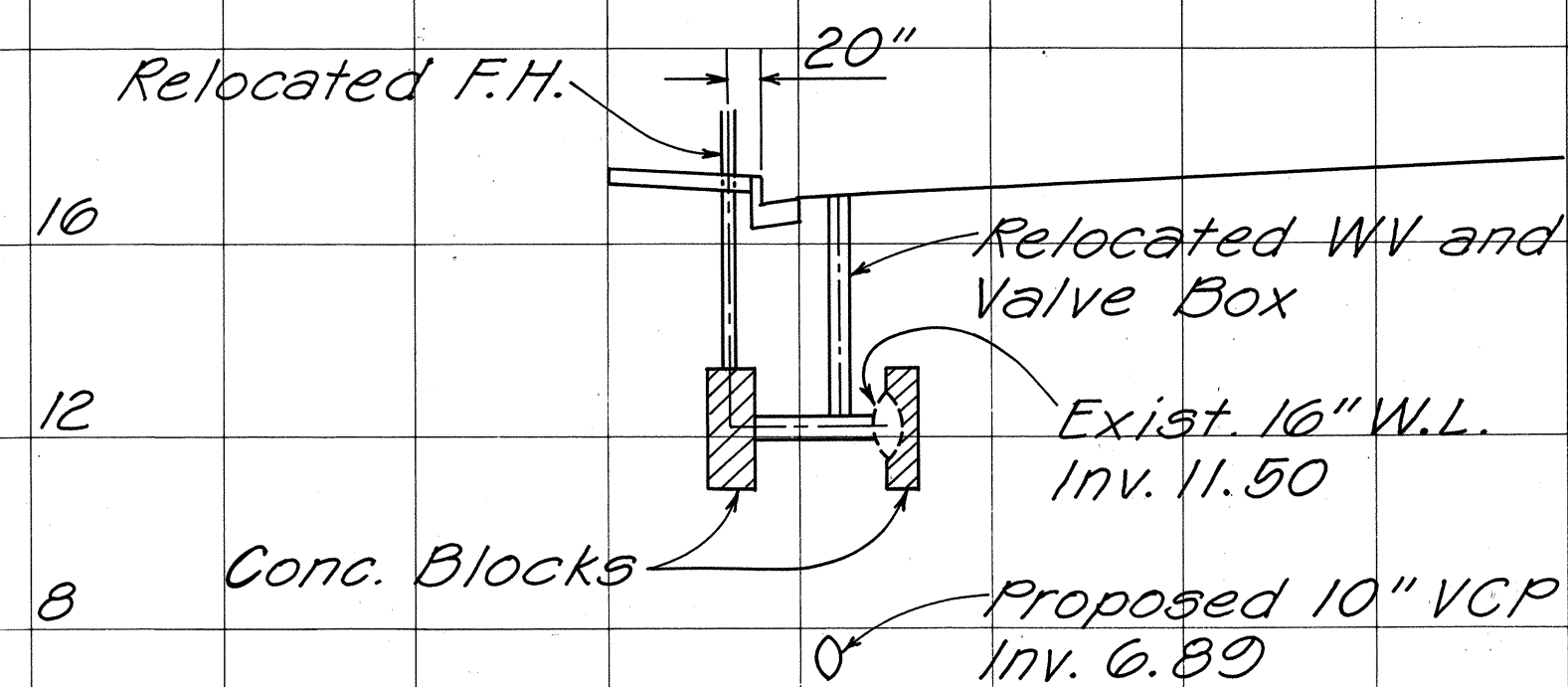
APPROVED:
[Signature]
CHIEF, PLANNING & ENG. BWS
1/10/90
DATE

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-076-1(2)	1990	95	148

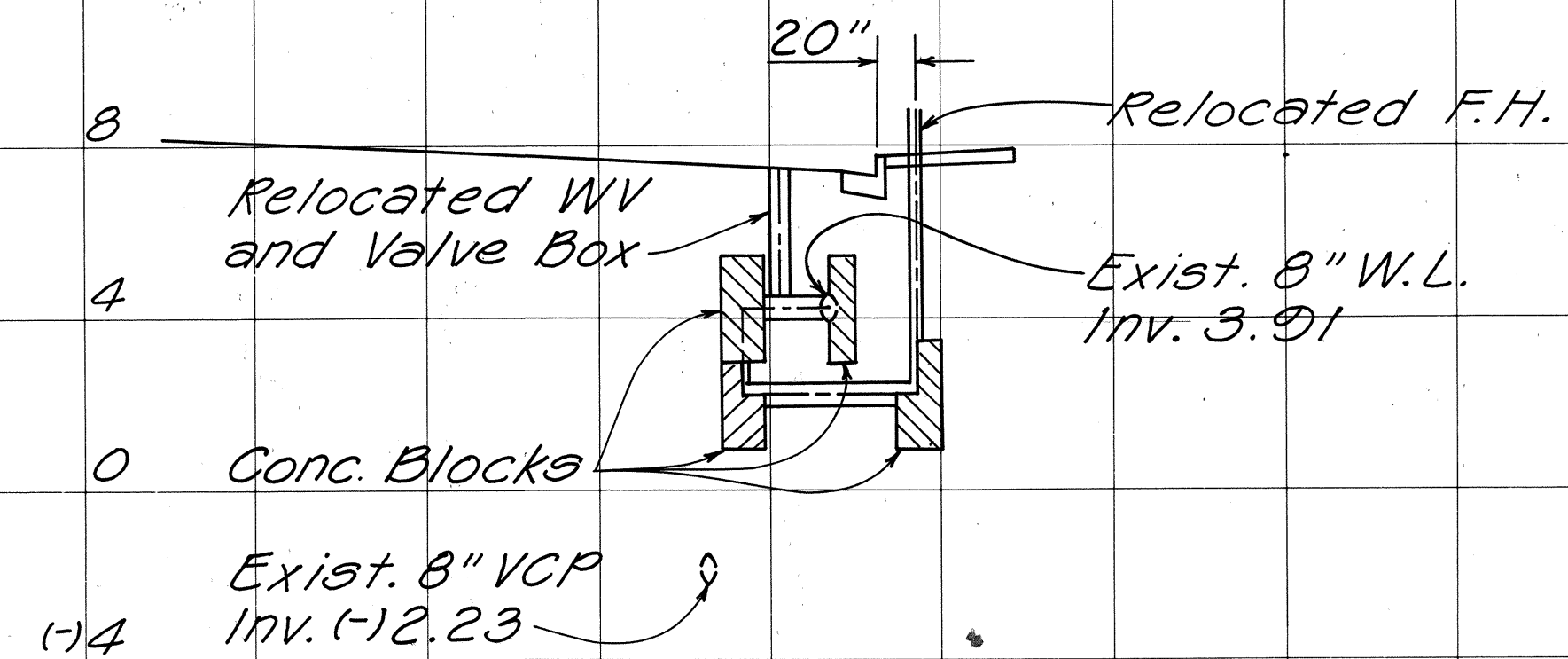
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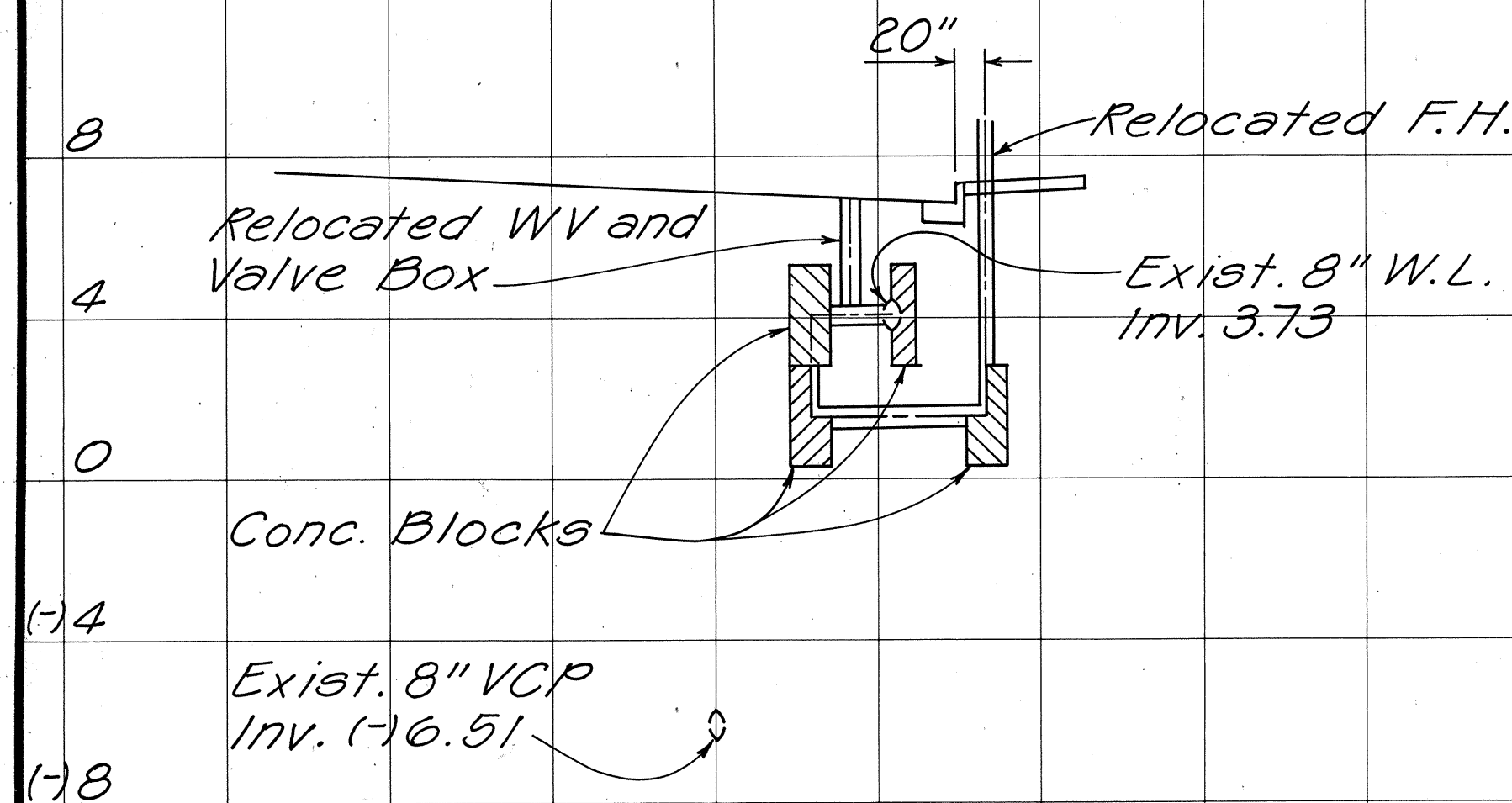
PROFILE - F.H. RELOCATION
AT STA. 17+30



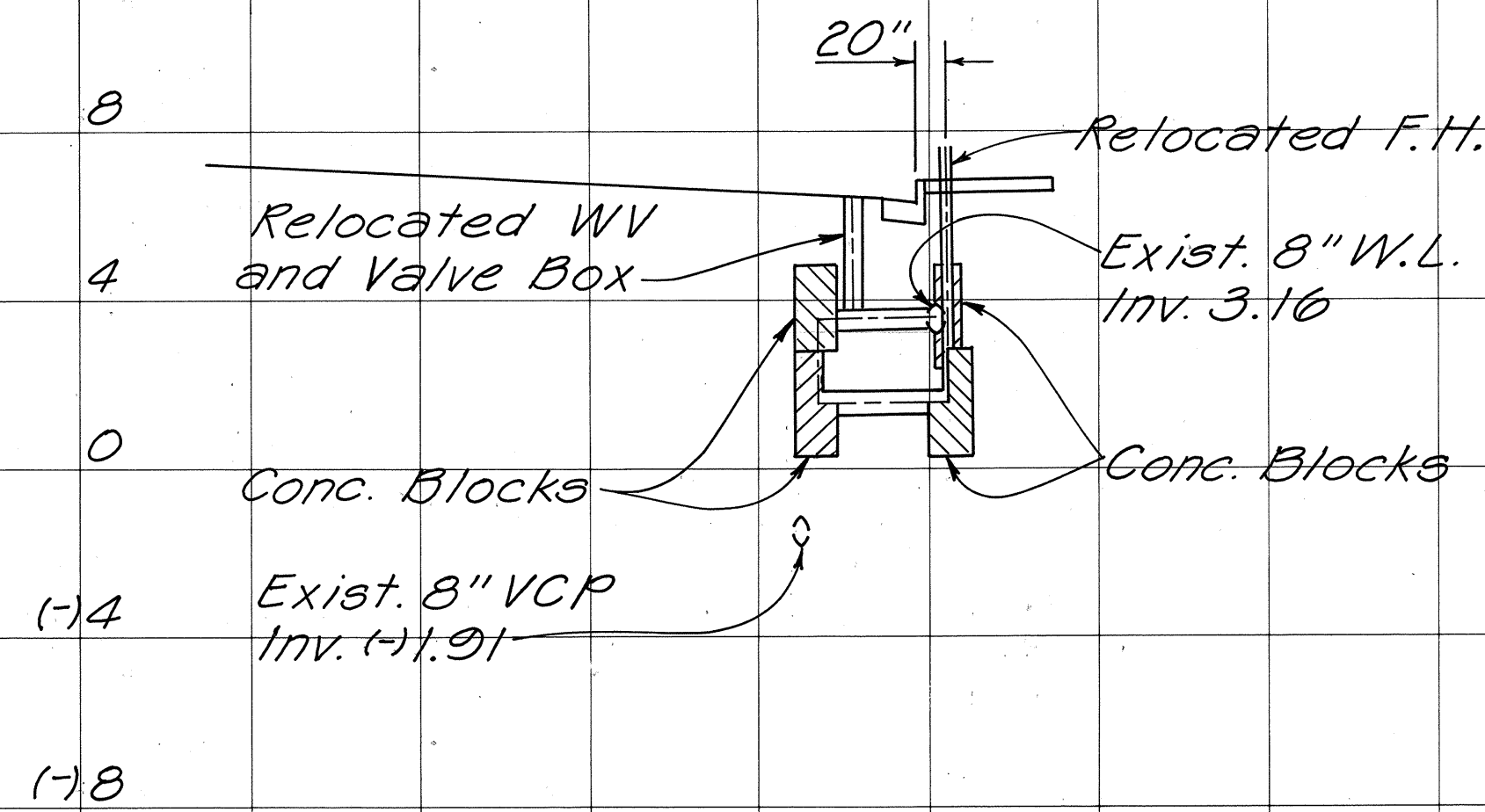
PROFILE - F.H. RELOCATION
AT STA. 24+70



PROFILE - F.H. RELOCATION
AT STA. 48+92



PROFILE - F.H. RELOCATION
AT STA. 51+62



PROFILE - F.H. RELOCATION
AT STA. 54+95

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
	DESIGNED BY	
	CHECKED BY	

APPROVED:
[Signature]
CHIEF, PLANNING & ENG. BWS
1/10/90
DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
**PROFILE OF FIRE
HYDRANT RELOCATIONS**
FORT WEAVER ROAD
HANAKAHI ST. TO EWA BEACH RD.
Project Nos. F-076-1(2) and
3-R3-0760(2) R/W
Scale: Horiz. 1"=10'; Vert. 1"=4' Date: July, 1990
SHEET NO. 16 OF 16 SHEETS