

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-083-1(35)	1996	30	40

WATER NOTES FOR ADJUSTMENT/RELOCATION OF EXISTING MAINS:

1. Unless otherwise specified, all materials and construction of water system facilities and appurtenances shall be in accordance with the STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, dated 1985, as amended, of the Hawaii Highways Division, Department of Transportation, and the City and County of Honolulu Board of Water Supply's "WATER SYSTEM STANDARDS' VOLUME 1, DATED 1985, THE "APPROVED MATERIAL LIST AND STANDARD DETAILS FOR WATER SYSTEM CONSTRUCTION", VOLUME 2, DATED 1985, THE "WATER SYSTEM EXTERNAL CORROSION CONTROL STANDARDS", VOLUME 3, DATED 1991, and all subsequent amendments and additions.
2. Test pressure shall be 150 psi.
3. Prior to installation, the contractor shall submit for approval by Board of Water Supply, the manufacturer's certification that all cast iron (gray or ductile) fittings for the project conform in all respects to the Water System Standards, dated 1985.
4. The contractor shall notify BWS Planning and Engineering Division, Construction Section one week prior to commencing work on the water system.
5. Contractor shall cut and plug all existing unused laterals at the main whether or not shown on the plans. The damaged area shall be repaired to an equal or better condition than the immediate area. All work shall be done at the expense of the Contractor.
6. The Contractor shall be responsible for the protection of all water lines during construction. The Contractor shall be especially careful when excavating behind water lines, tees and bends wherever there is a possibility of water line movement due to the removal of the supporting earth beyond the existing reaction blocks. The Contractor shall take whatever measure necessary to protect the water lines, such as constructing special reaction blocks (with BWS approval) and/or modifying his construction method.
7. The existence and location of underground utilities and structures as shown on the plans are from the latest available data but is not guaranteed as to the accuracy or the encountering of other obstacles during the course of the work. The contractor shall be responsible and shall pay for all damages to existing utilities.
8. Polygon shape for mechanical joint glands as described in AWWA Standard C111 shall be "straight-sided" or approved equal on a job to job basis.
9. Re-approval shall be required if this project is not under construction within a period of two years.
10. The Contractor shall chlorinate the entire inside surface of each pipe and fitting with disinfection solution of 5 ounces of sodium hypochlorite mixed with 10 gallons of water. (FOR CONNECTION ONLY.)
11. All waterline construction requiring shutdown shall be scheduled for normal working hours and maximum downtime shall be six (6) hours, to be done concurrently at both connections.
12. The Contractor shall obtain a NPDES and/or any required permits prior to chlorination and/or dewatering. The Contractor shall provide a copy of the permits if applicable to the Board of Water Supply, Planning and Engineering Division, Construction Section.
13. All ductile iron pipe, fittings, and valves shall be wrapped with two layers of 8 mil. polyethylene wrap.

DESIGNED BY	DATE
DRWN BY	11-26-96
CHECKED BY	
DESIGNED BY	
DRWN BY	
CHECKED BY	
DESIGNED BY	
DRWN BY	
CHECKED BY	

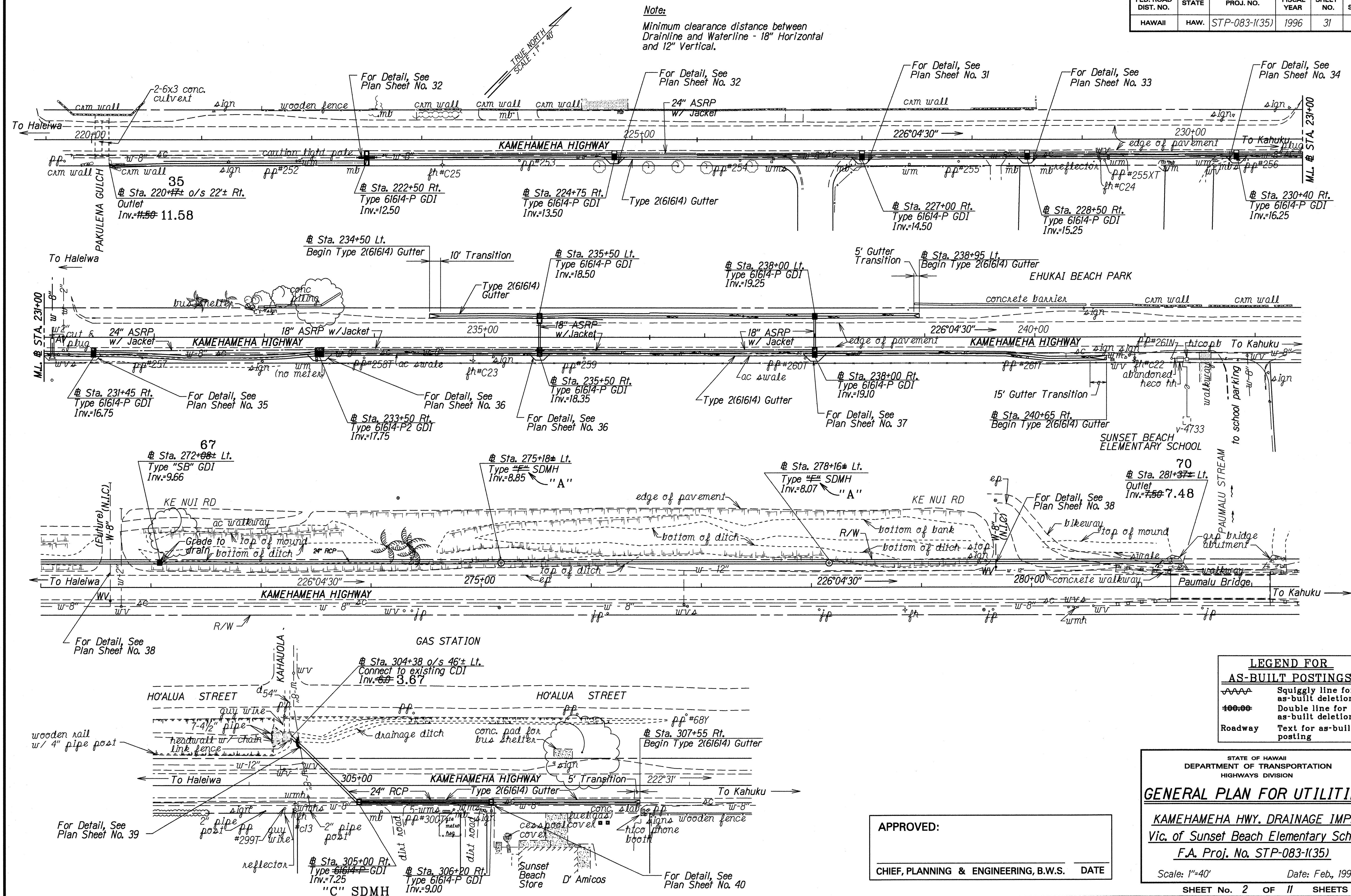
APPROVED:

CHIEF, PLANNING & ENGINEERING B.W.S. DATE 2/26/96

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
UTILITY NOTES
**KAMEHAMEHA HIGHWAY DRAINAGE
IMPROVEMENT**
Vicinity of Sunset Beach Elementary School
Federal Aid Project No. STP-083-1(35)
Date: Feb, 1996

SHEET No. 1 OF 10 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-083-1(35)	1996	31	40



APPROVED:

CHIEF, PLANNING & ENGINEERING, B.W.S.

DAT

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KAMEHAMEHA HWY. DRAINAGE IMP.
Vic. of Sunset Beach Elementary School
F.A. Proj. No. STP-083-1(35)

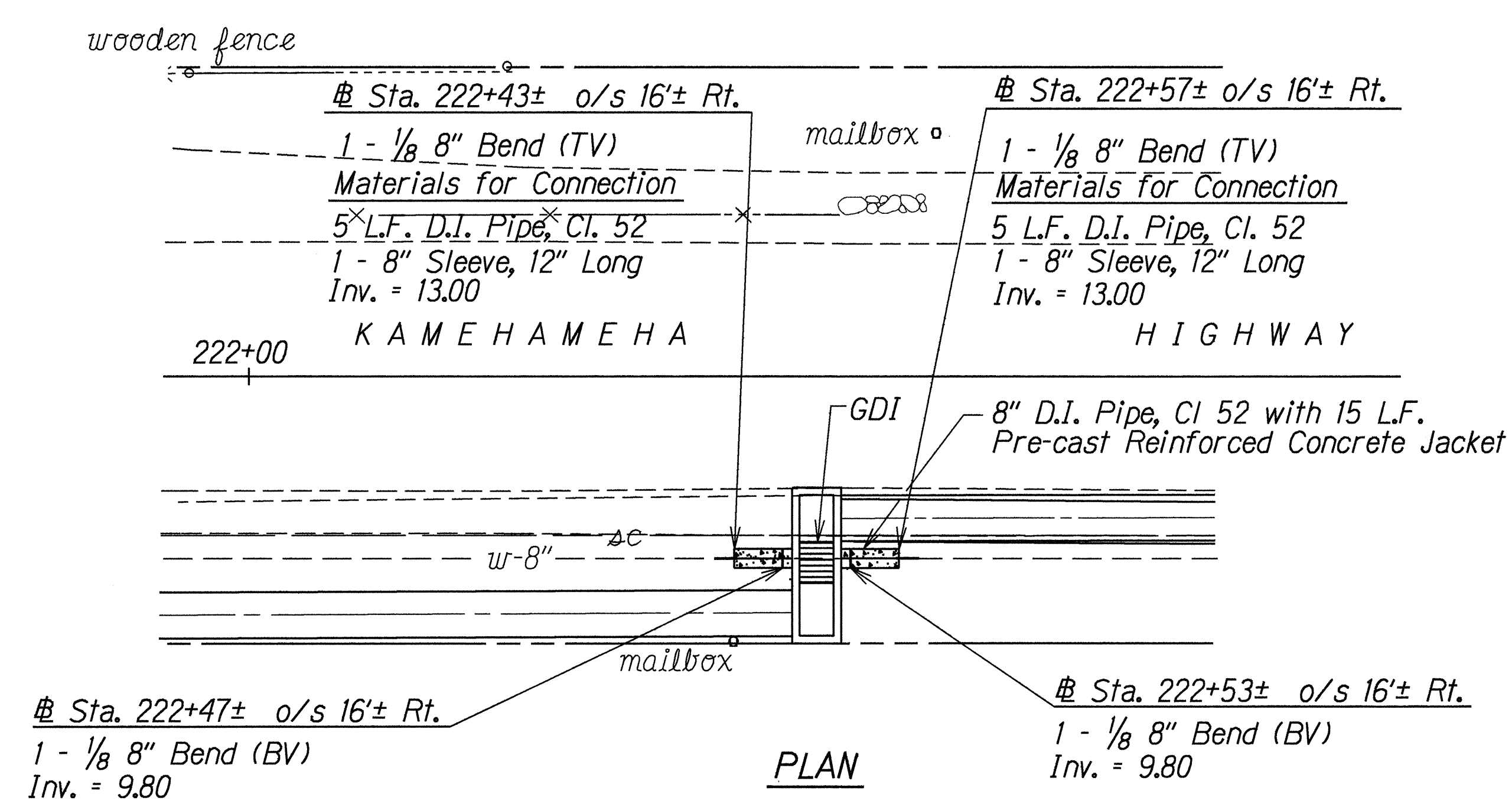
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SHEET No. 2 OF 11 SHEETS

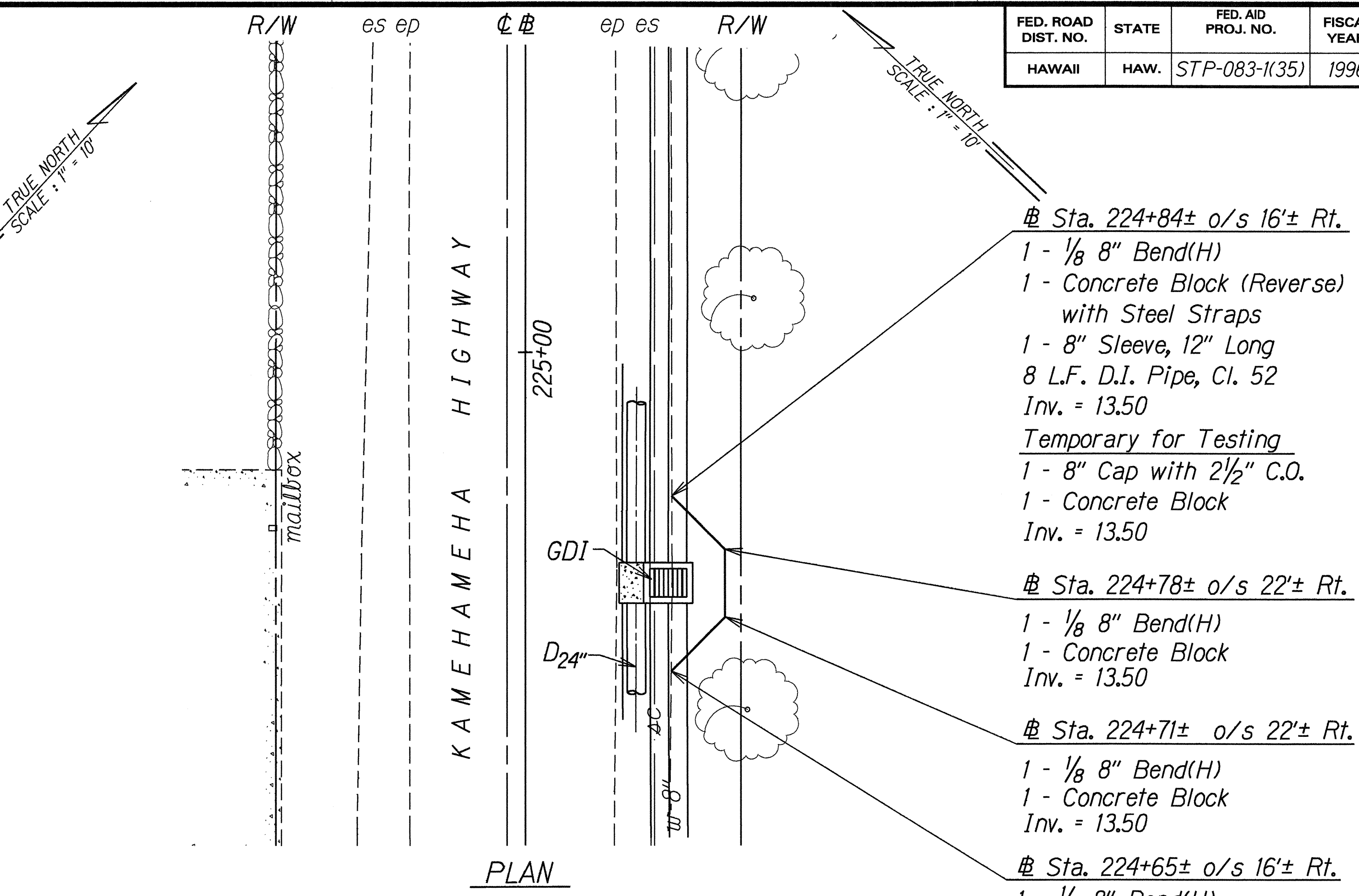
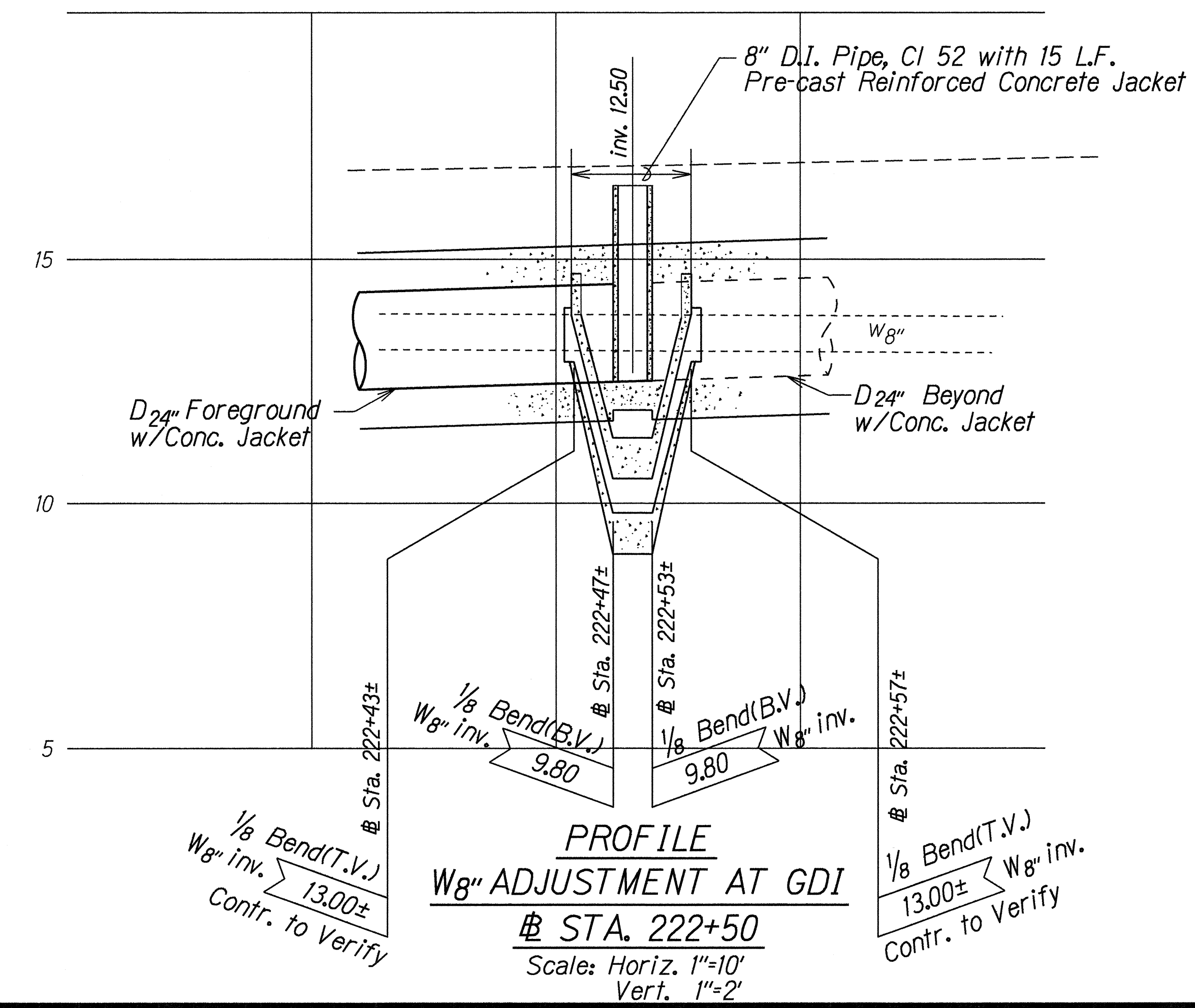
"AS-BUILT"

31

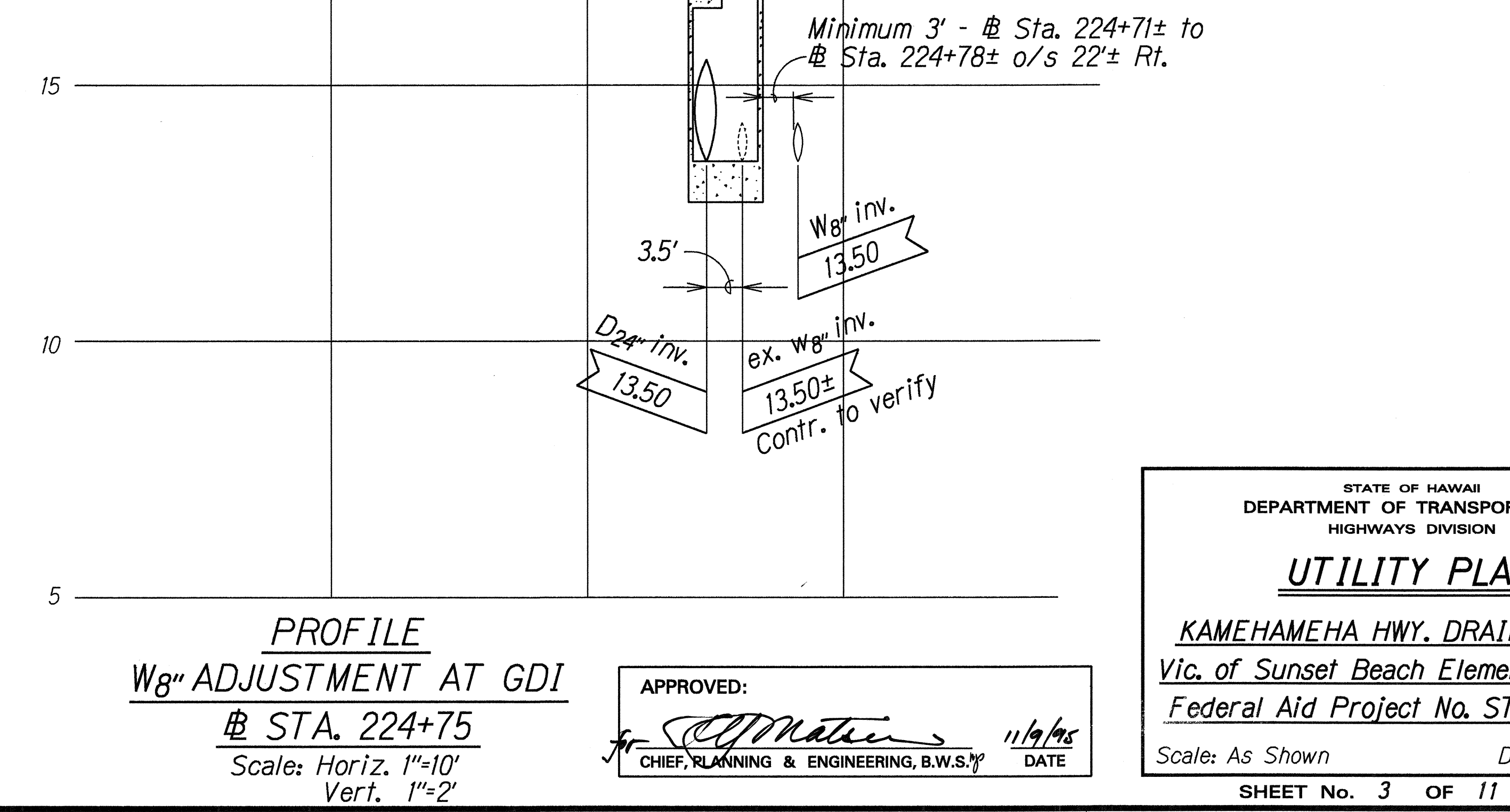
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-083-1(35)	1996	32	40



Note: New pipe section including piping, fittings and concrete jacket shall be fabricated, chlorinated and tested prior to connection. Provide Test Plug Anchorage Assembly per detail on Sheet No. 34.



Note: New pipe section including piping, fittings and concrete jacket shall be fabricated, chlorinated and tested prior to connection. Provide Test Plug Anchorage Assembly per detail on Sheet No. 34.



DESIGNED BY	DATE
DRAWN BY	10/20/95
CHECKED BY	
APPROVED BY	
QUANTITIES BY	
REVISIONS BY	

APPROVED: *[Signature]* 11/9/95
CHIEF, PLANNING & ENGINEERING, B.W.S. DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

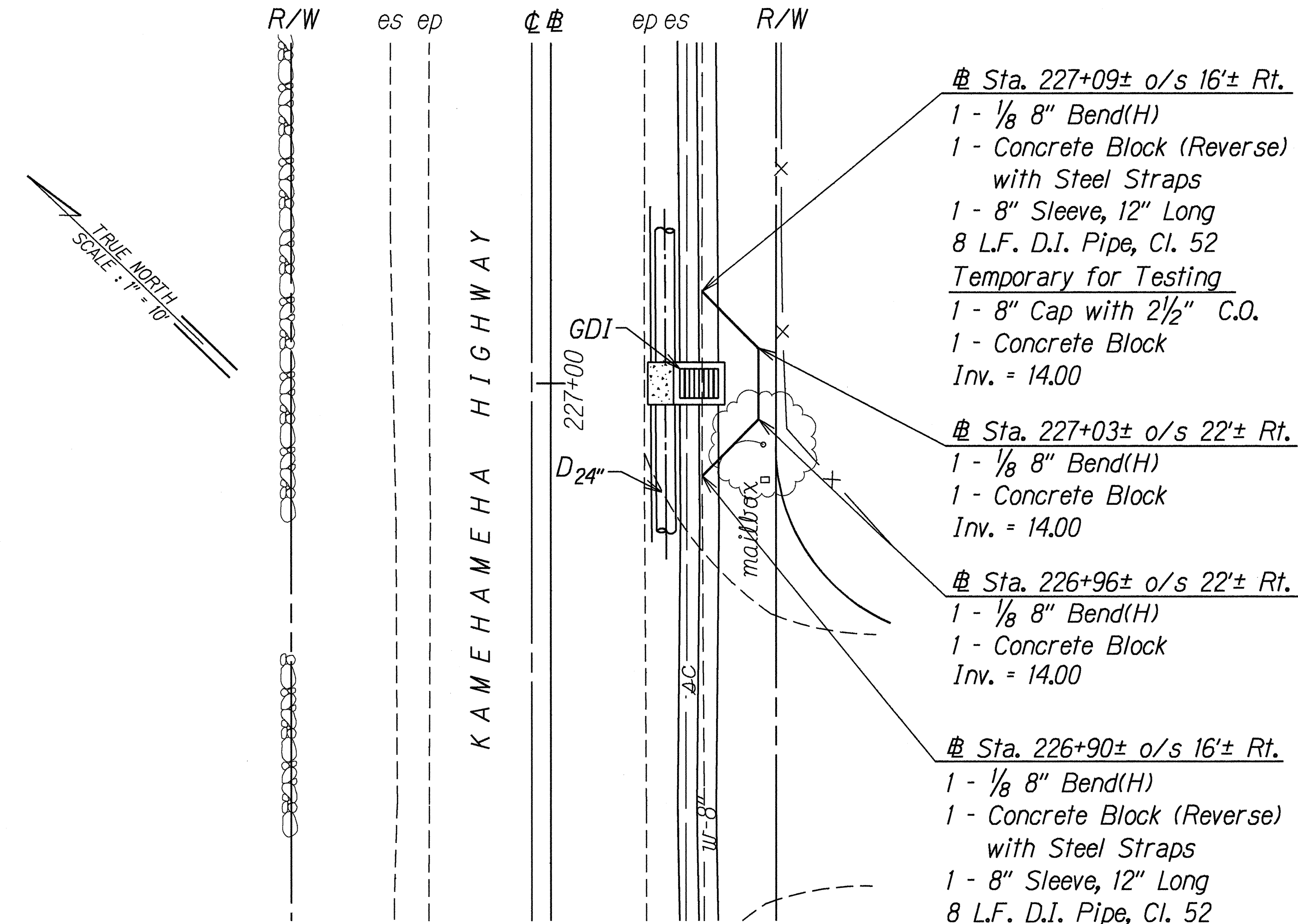
UTILITY PLAN

KAMEHAMEHA HWY. DRAINAGE IMP.
Vic. of Sunset Beach Elementary School
Federal Aid Project No. STP-083-1(35)

Scale: As Shown Date: June, 1995

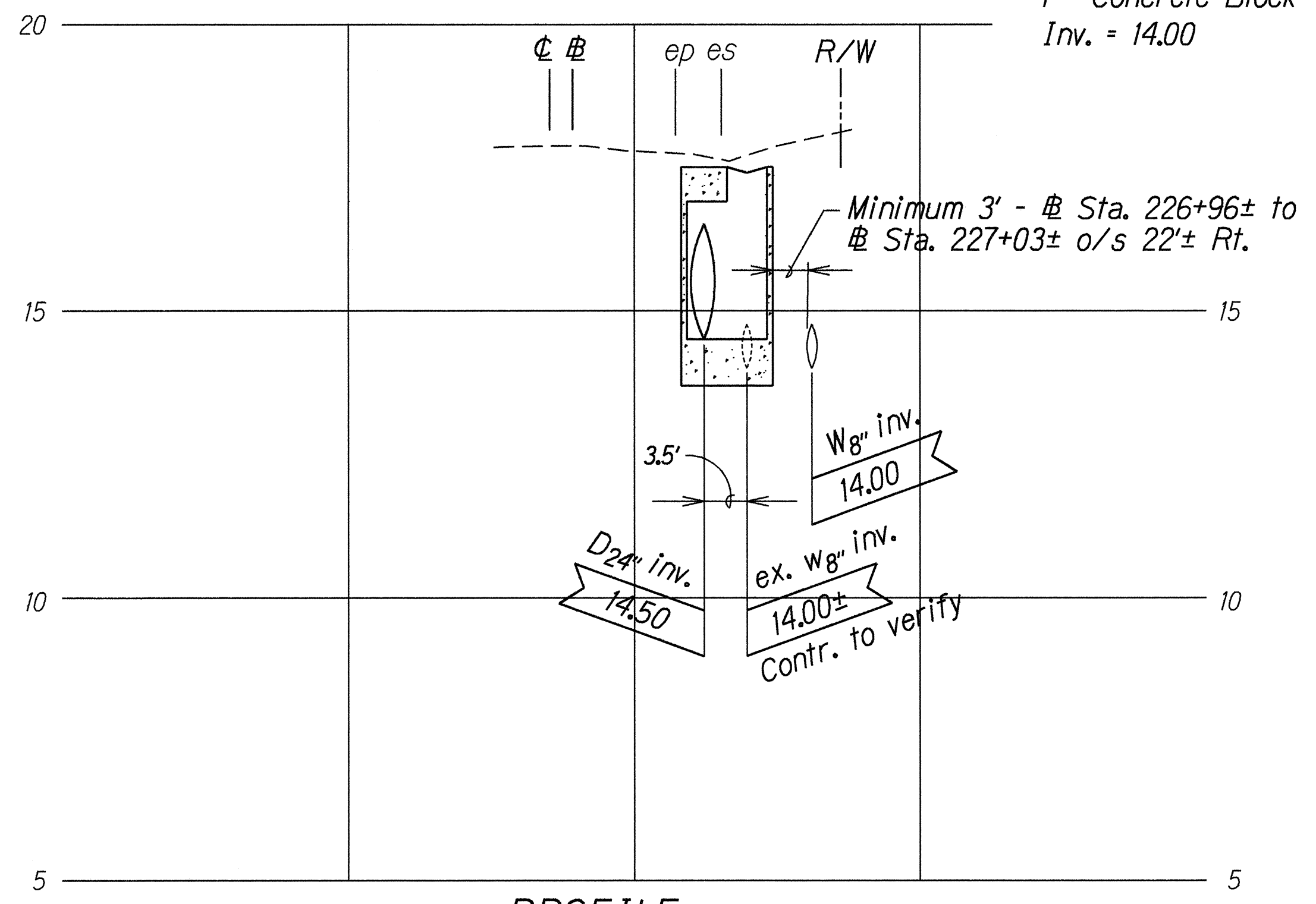
SHEET No. 3 OF 11 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-083-1(35)	1996	33	40



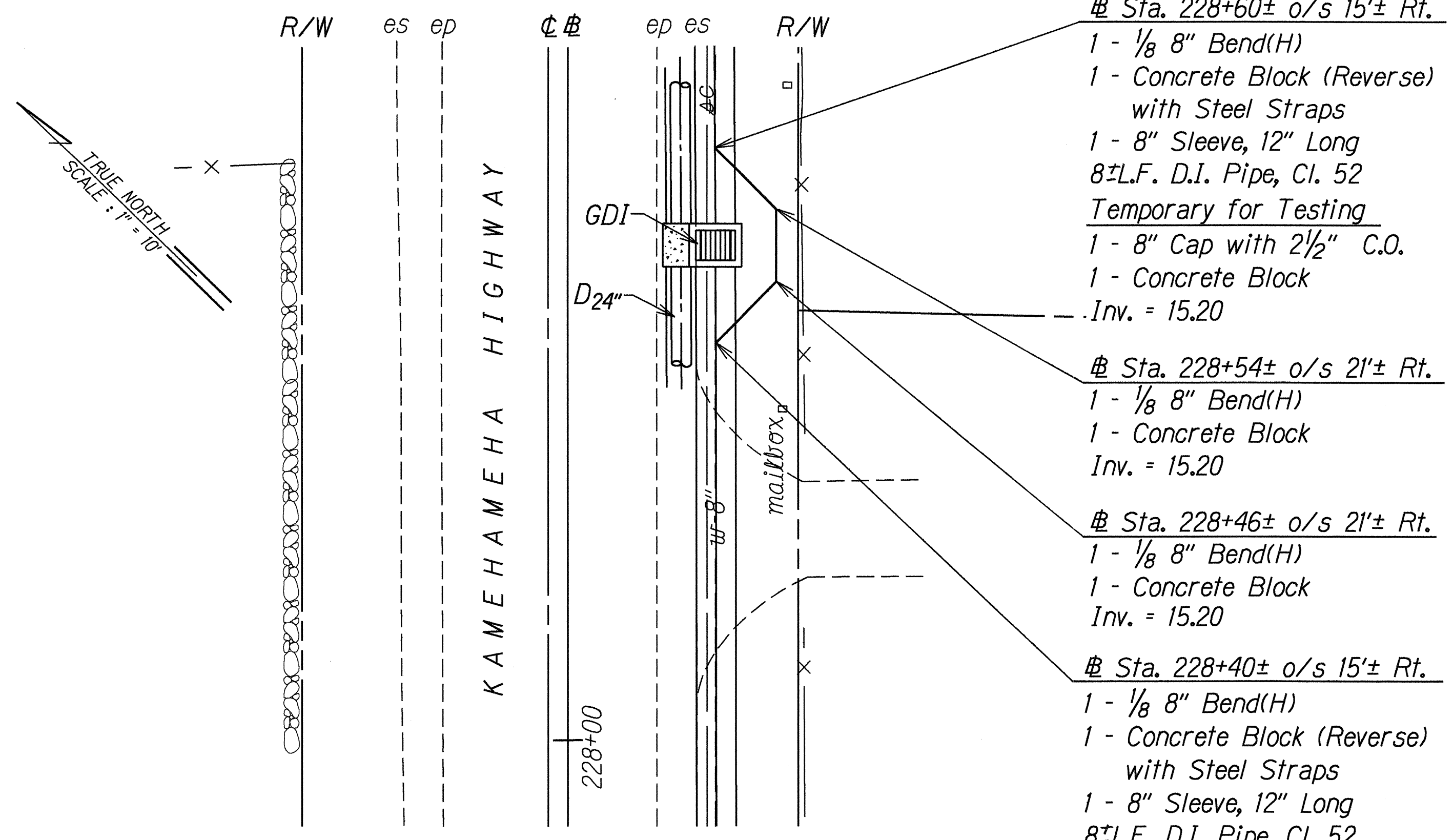
- Sta. 227+09± o/s 16'± Rt.
1 - 1/8" Bend(H)
1 - Concrete Block (Reverse) with Steel Straps
1 - 8" Sleeve, 12" Long
8 L.F. D.I. Pipe, Cl. 52
Temporary for Testing
1 - 8" Cap with 2 1/2" C.O.
1 - Concrete Block
Inv. = 14.00
- Sta. 227+03± o/s 22'± Rt.
1 - 1/8" Bend(H)
1 - Concrete Block
Inv. = 14.00
- Sta. 226+96± o/s 22'± Rt.
1 - 1/8" Bend(H)
1 - Concrete Block
Inv. = 14.00
- Sta. 226+90± o/s 16'± Rt.
1 - 1/8" Bend(H)
1 - Concrete Block (Reverse) with Steel Straps
1 - 8" Sleeve, 12" Long
8 L.F. D.I. Pipe, Cl. 52
Temporary for Testing
1 - 8" Cap with 2 1/2" C.O.
1 - Concrete Block
Inv. = 14.00

PLAN



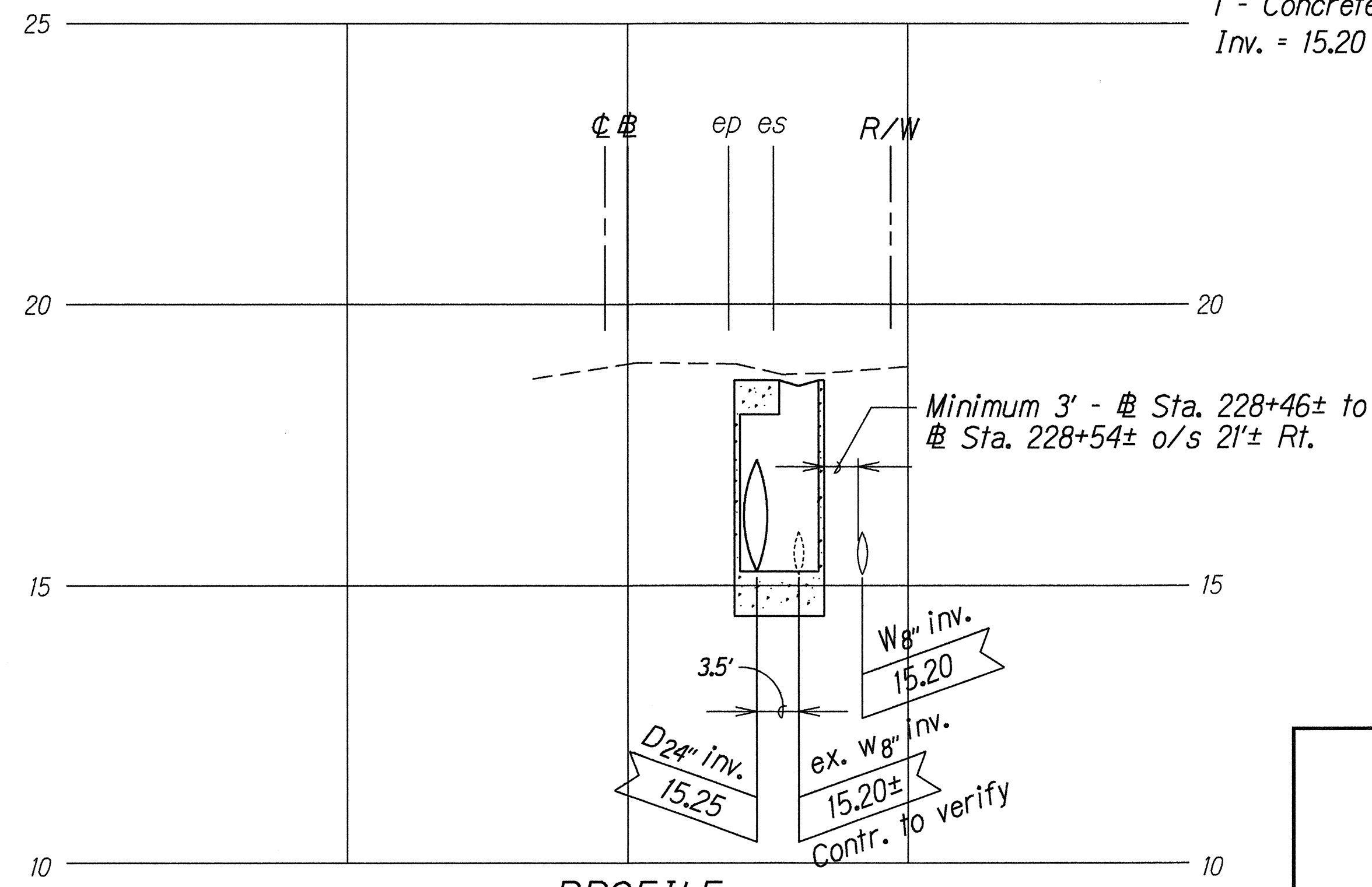
PROFILE
W8" ADJUSTMENT AT GDI
Sta. 227+00
Scale: Horiz. 1"=10'
Vert. 1"=2'

APPROVED:
[Signature]
CHIEF, PLANNING & ENGINEERING, B.W.S.'
11/9/95
DATE



- Sta. 228+60± o/s 15'± Rt.
1 - 1/8" Bend(H)
1 - Concrete Block (Reverse) with Steel Straps
1 - 8" Sleeve, 12" Long
8±L.F. D.I. Pipe, Cl. 52
Temporary for Testing
1 - 8" Cap with 2 1/2" C.O.
1 - Concrete Block
Inv. = 15.20
- Sta. 228+54± o/s 21'± Rt.
1 - 1/8" Bend(H)
1 - Concrete Block
Inv. = 15.20
- Sta. 228+46± o/s 21'± Rt.
1 - 1/8" Bend(H)
1 - Concrete Block
Inv. = 15.20
- Sta. 228+40± o/s 15'± Rt.
1 - 1/8" Bend(H)
1 - Concrete Block (Reverse) with Steel Straps
1 - 8" Sleeve, 12" Long
8±L.F. D.I. Pipe, Cl. 52
Temporary for Testing
1 - 8" Cap with 2 1/2" C.O.
1 - Concrete Block
Inv. = 15.20

PLAN



PROFILE
W8" ADJUSTMENT AT GDI
Sta. 228+50
Scale: Horiz. 1"=10'
Vert. 1"=2'

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

UTILITY PLAN

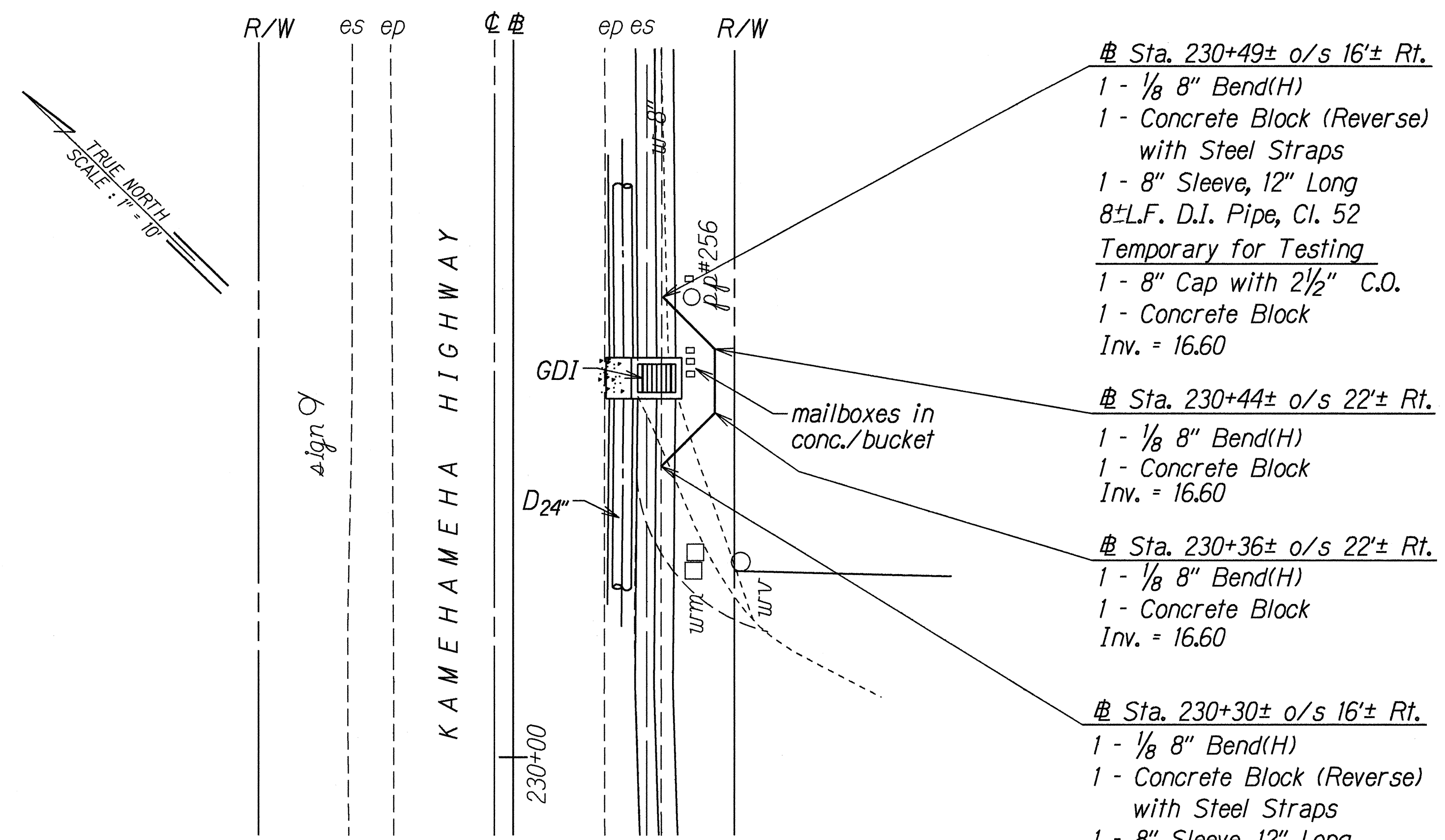
KAMEHAMEHA HWY. DRAINAGE IMP.
Vic. of Sunset Beach Elementary School
Federal Aid Project No. STP-083-1(35)

Scale: As Shown Date: June, 1995

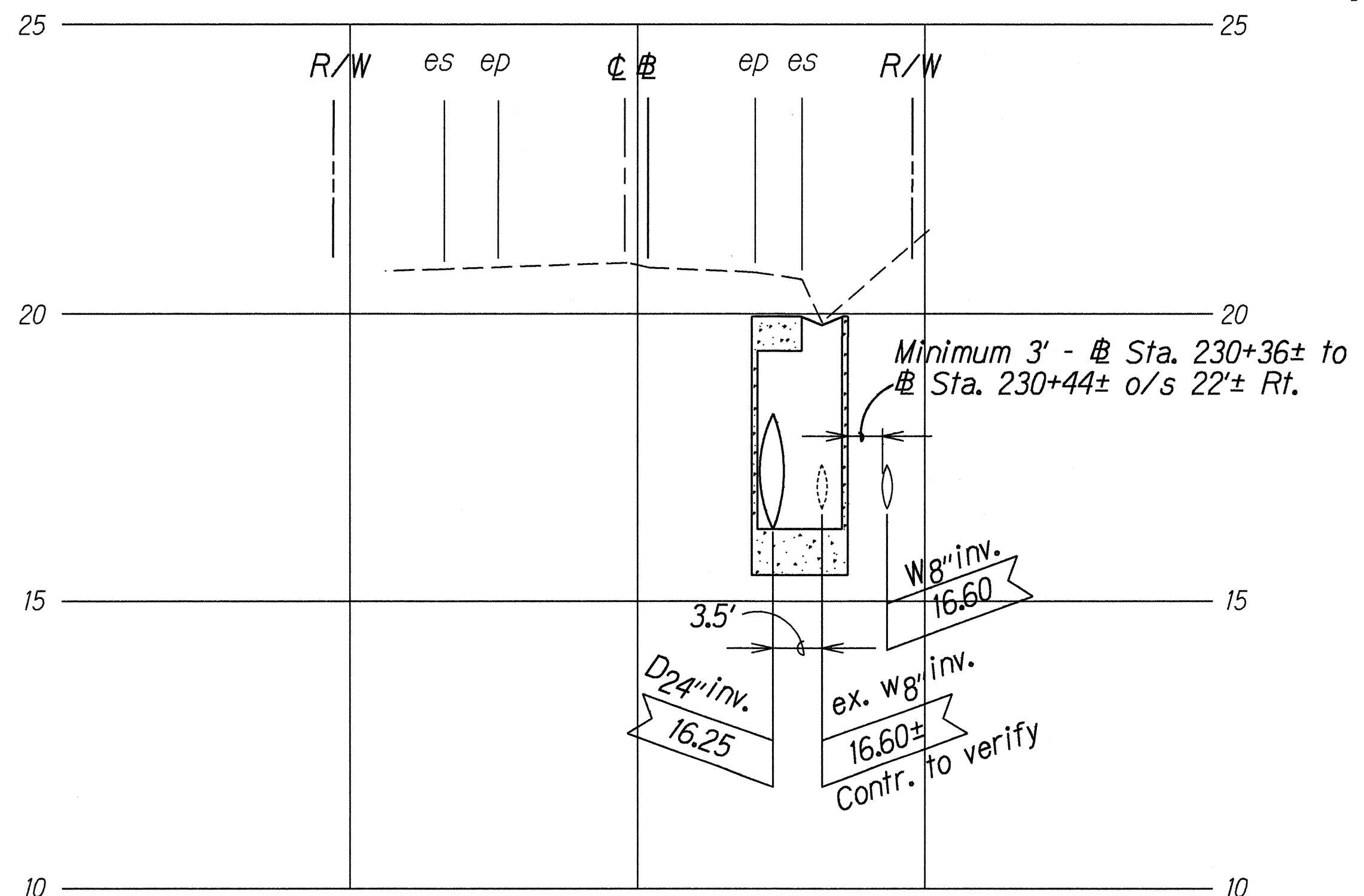
SHEET No. 4 OF 11 SHEETS

GENERAL NOTES:
1. DATE: 10-20-95
2. DESIGNED BY: R. Hironaka
3. CHECKED BY: R. Hironaka
4. QUANTITIES BY: R. Hironaka
5. CHECKED BY: R. Hironaka

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-083-1(35)	1996	34	40



PLAN



PROFILE
W8" ADJUSTMENT AT GDI
STA. 230+40
Scale: Horiz. 1"=10'
Vert. 1"=2'

Note:
The Contractor shall verify the clear distance from the mailboxes and waterline. If necessary, the Contractor shall adjust the mailboxes to meet the minimum 18" clear distance. This work shall be incidental to the 8" waterline adjustment.

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
APPROVED BY	
DESIGNED BY	
DRAWN BY	
CHECKED BY	
APPROVED BY	

APPROVED:
[Signature] 11/9/95
CHIEF, PLANNING & ENGINEERING, B.W.S.T. DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

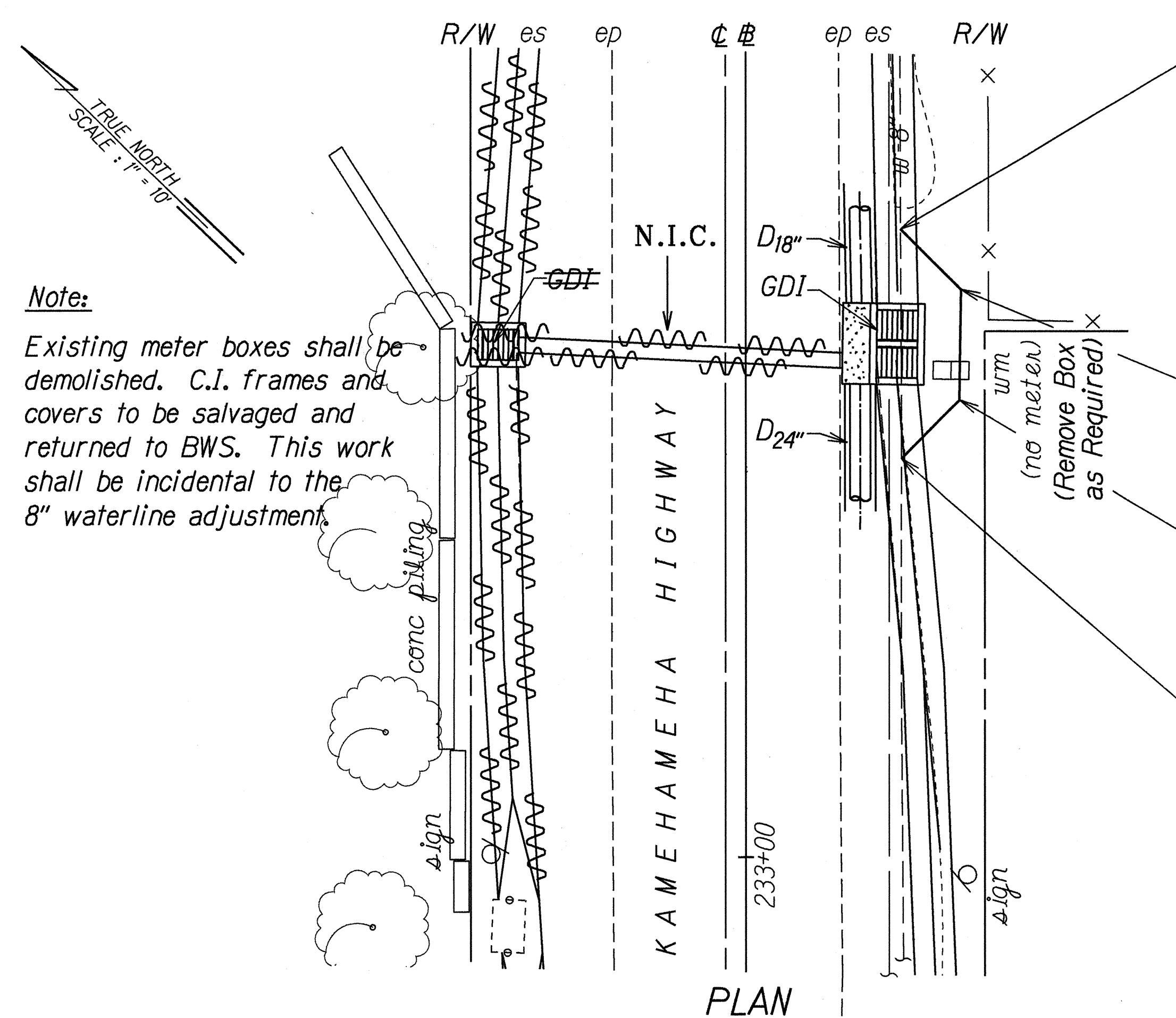
UTILITY PLAN

KAMEHAMEHA HWY. DRAINAGE IMP.
Vic. of Sunset Beach Elementary School
Federal Aid Project No. STP-083-1(35)

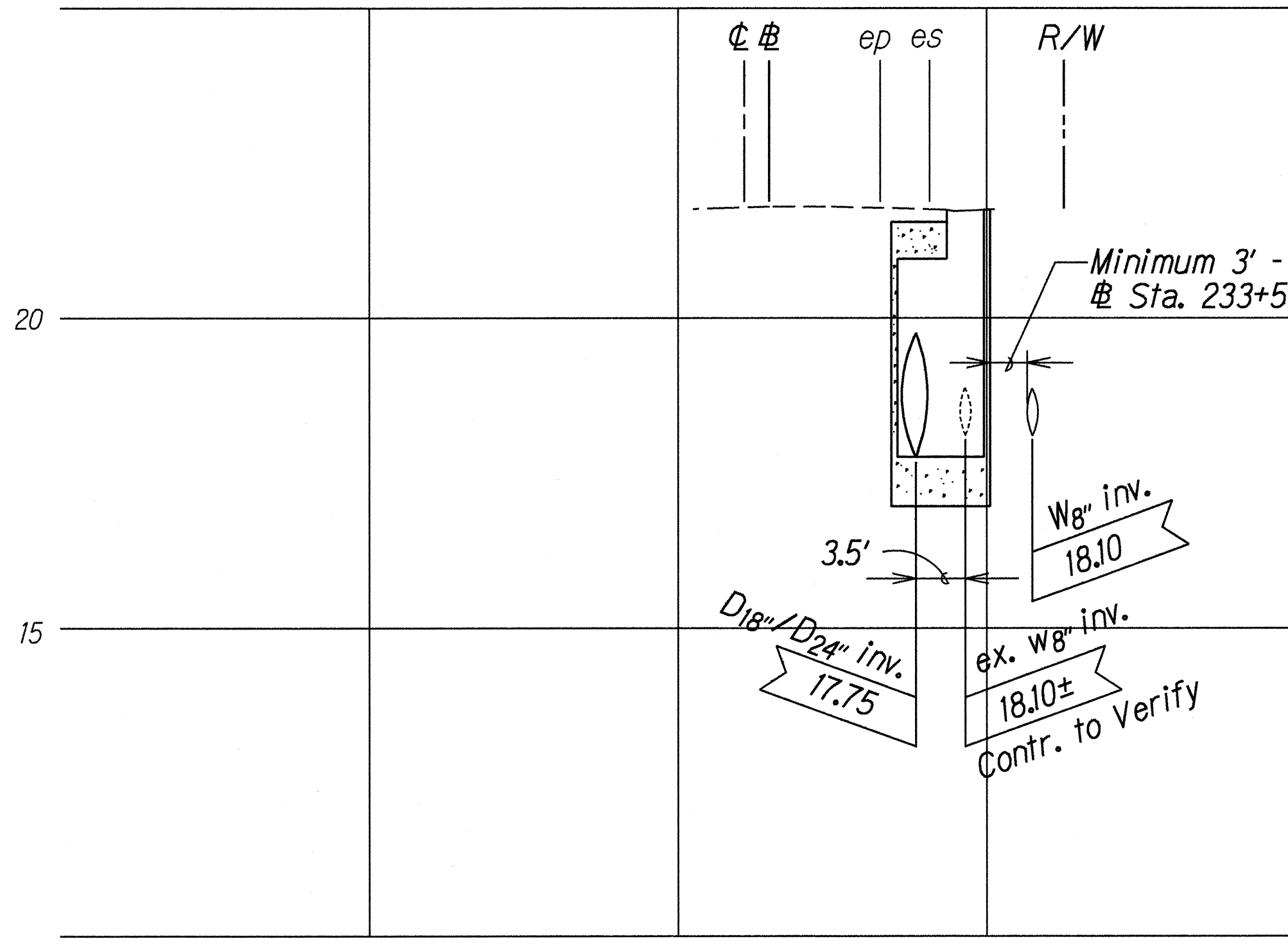
Scale: As Shown
Date: June, 1995

SHEET No. 5 OF 11 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-083-1(35)	1996	36	40

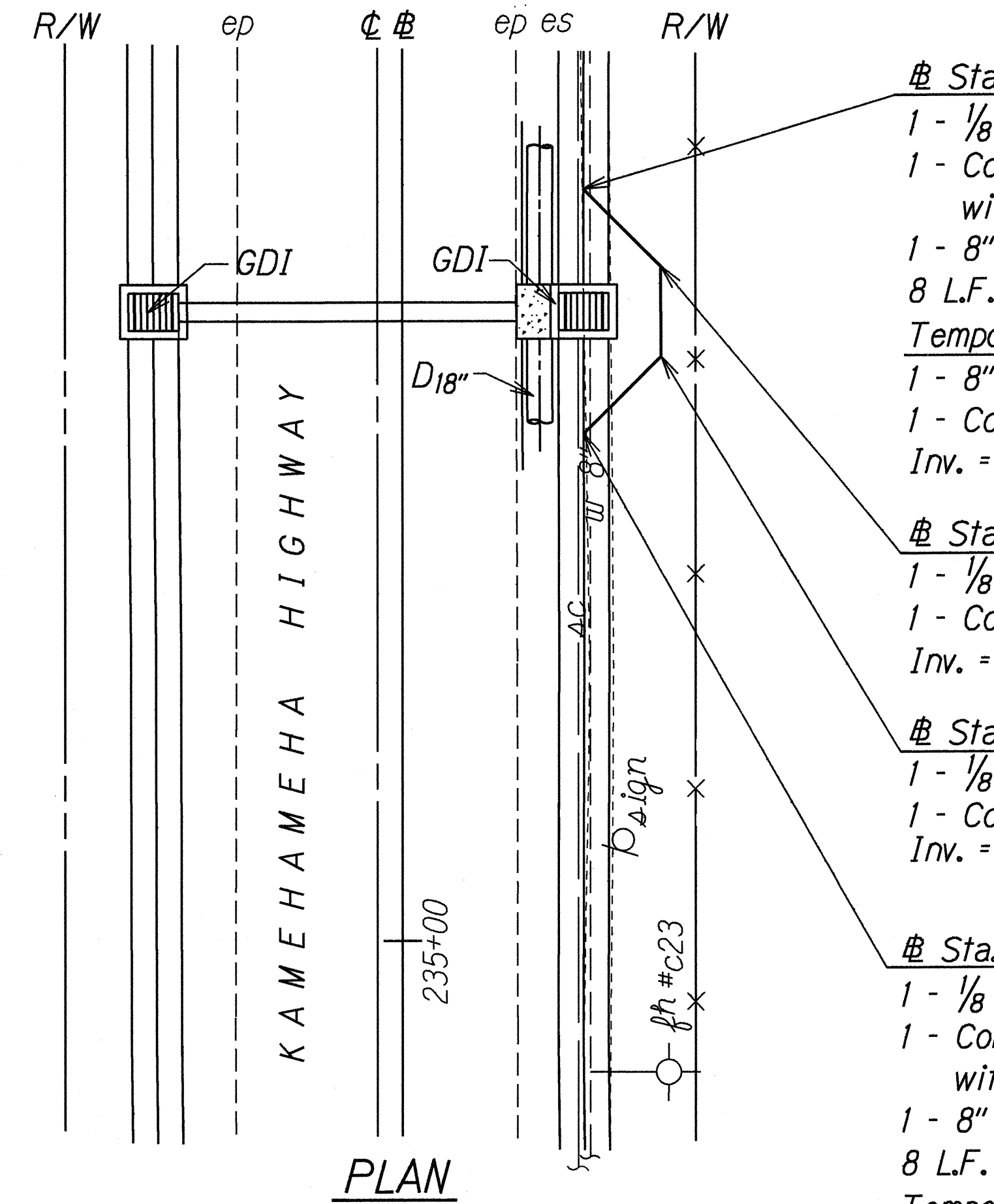


- # Sta. 233+61± o/s 15'± Rt.
1 - 1/8" 8" Bend(H)
1 - Concrete Block (Reverse) with Steel Straps
1 - 8" Sleeve, 12" Long
8 L.F. D.I. Pipe, Cl. 52
Temporary for Testing
1 - 8" Cap with 2 1/2" C.O.
1 - Concrete Block
Inv. = 18.10
- # Sta. 233+55± o/s 21'± Rt.
1 - 1/8" 8" Bend(H)
1 - Concrete Block
Inv. = 18.10
- # Sta. 233+44± o/s 21'± Rt.
1 - 1/8" 8" Bend(H)
1 - Concrete Block
Inv. = 18.10
- # Sta. 233+38± o/s 15'± Rt.
1 - 1/8" 8" Bend(H)
1 - Concrete Block (Reverse) with Steel Straps
1 - 8" Sleeve, 12" Long
8 L.F. D.I. Pipe, Cl. 52
Temporary for Testing
1 - 8" Cap with 2 1/2" C.O.
1 - Concrete Block
Inv. = 18.10

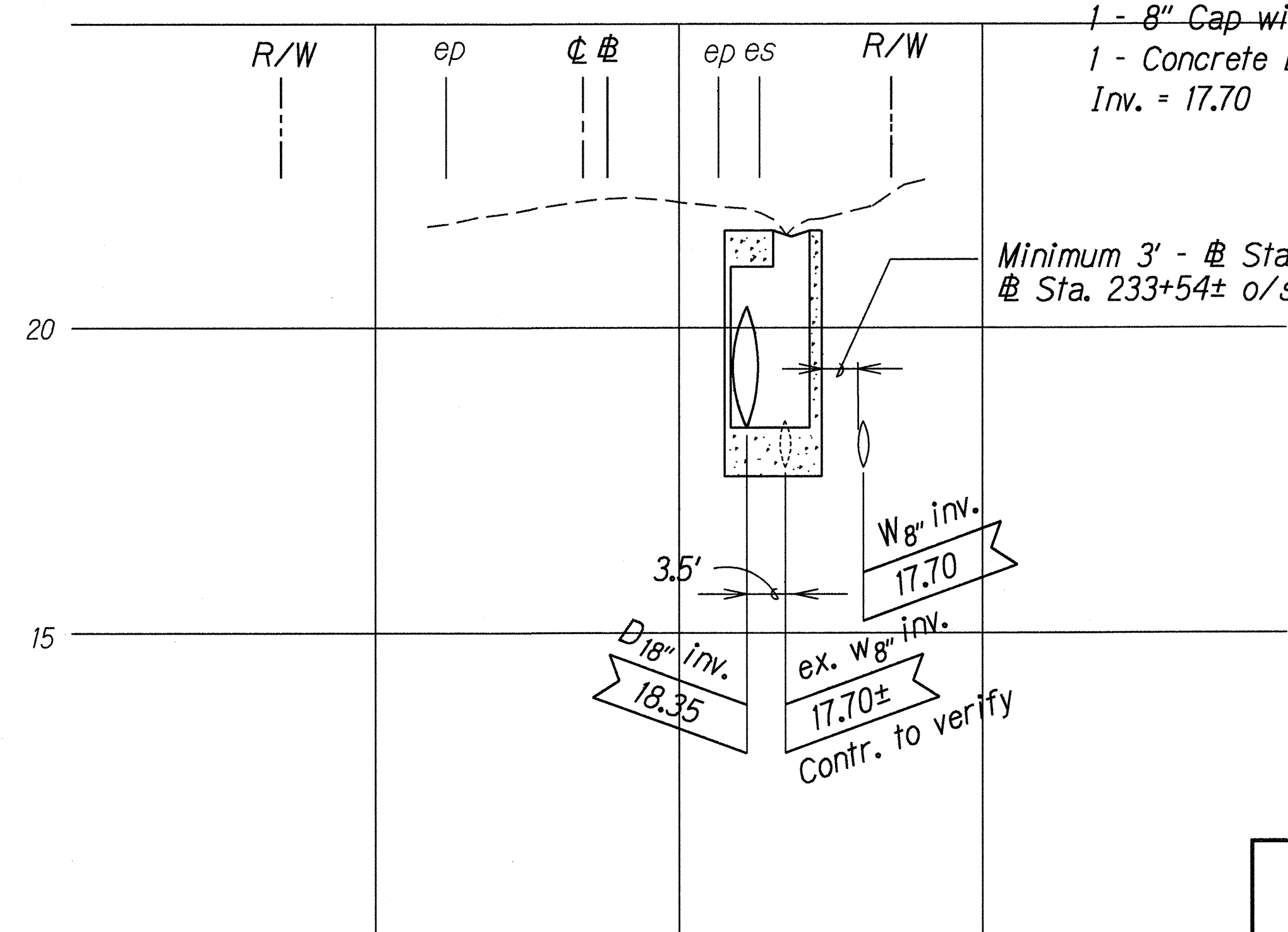


PROFILE
W8" ADJUSTMENT AT GDI
STA. 233+50
Scale: Horiz. 1"=10'
Vert. 1"=2'

APPROVED: _____
CHIEF, PLANNING & ENGINEERING, B.W.S. DATE _____



- # Sta. 233+60± o/s 14'± Rt.
1 - 1/8" 8" Bend(H)
1 - Concrete Block (Reverse) with Steel Straps
1 - 8" Sleeve, 12" Long
8 L.F. D.I. Pipe, Cl. 52
Temporary for Testing
1 - 8" Cap with 2 1/2" C.O.
1 - Concrete Block
Inv. = 17.70
- # Sta. 233+54± o/s 21'± Rt.
1 - 1/8" 8" Bend(H)
1 - Concrete Block
Inv. = 17.70
- # Sta. 233+46± o/s 21'± Rt.
1 - 1/8" 8" Bend(H)
1 - Concrete Block
Inv. = 17.70
- # Sta. 233+41± o/s 14'± Rt.
1 - 1/8" 8" Bend(H)
1 - Concrete Block (Reverse) with Steel Straps
1 - 8" Sleeve, 12" Long
8 L.F. D.I. Pipe, Cl. 52
Temporary for Testing
1 - 8" Cap with 2 1/2" C.O.
1 - Concrete Block
Inv. = 17.70



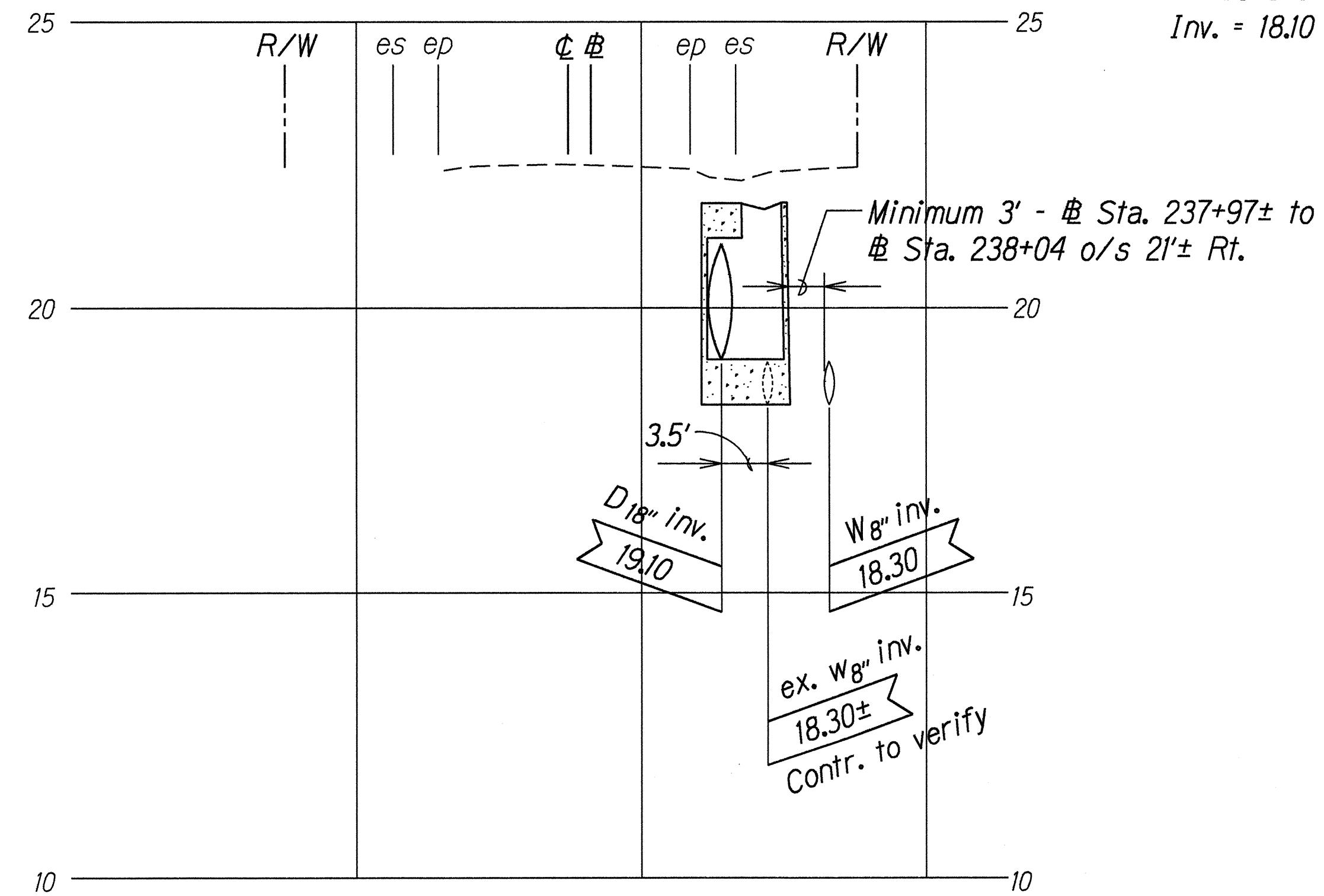
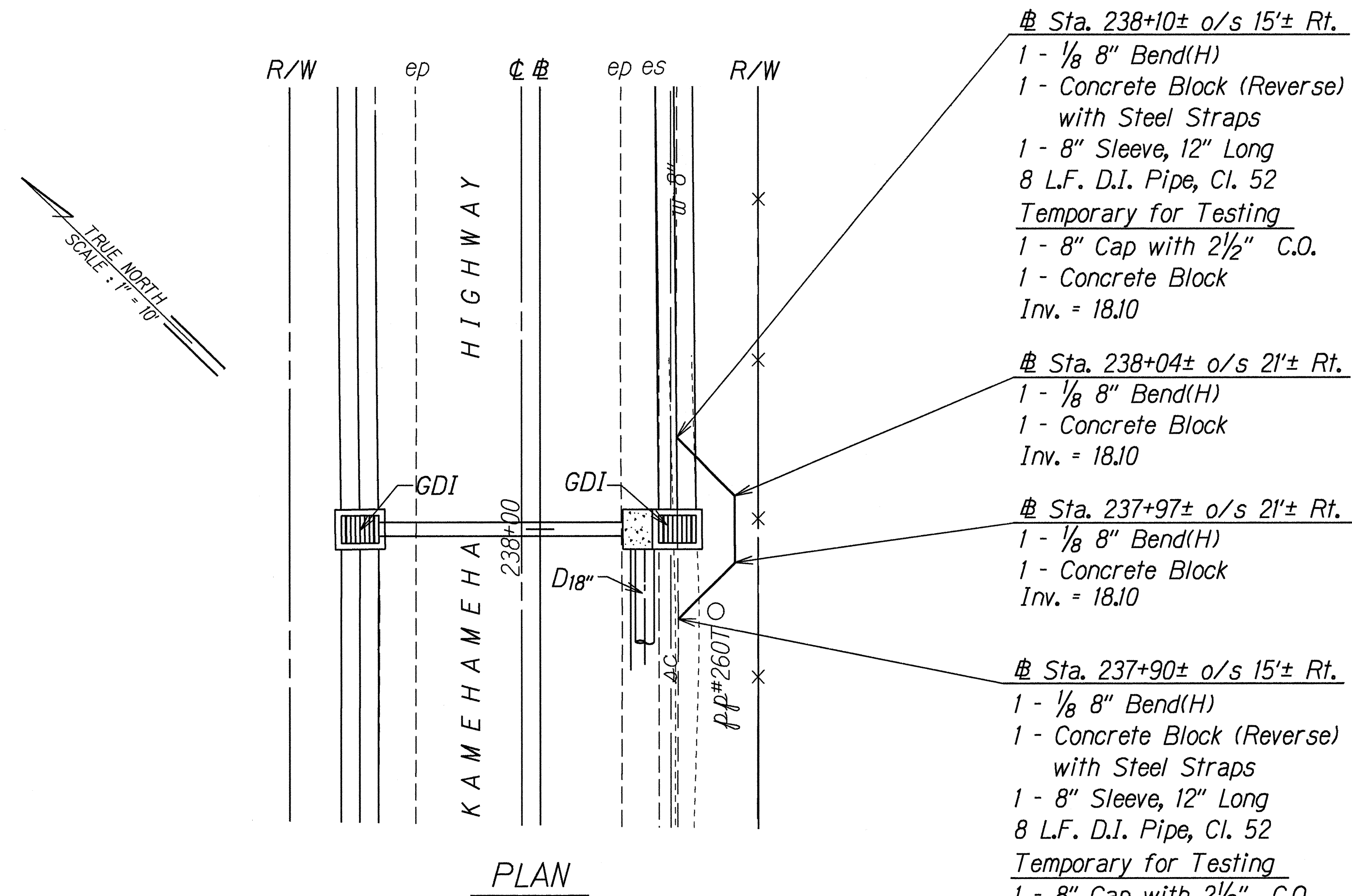
PROFILE
W8" ADJUSTMENT AT GDI
STA. 235+50
Scale: Horiz. 1"=10'
Vert. 1"=2'

LEGEND FOR AS-BUILT POSTINGS	
	Squiggly line for as-built deletion
	Double line for as-built deletion
Roadway	Text for as-built posting

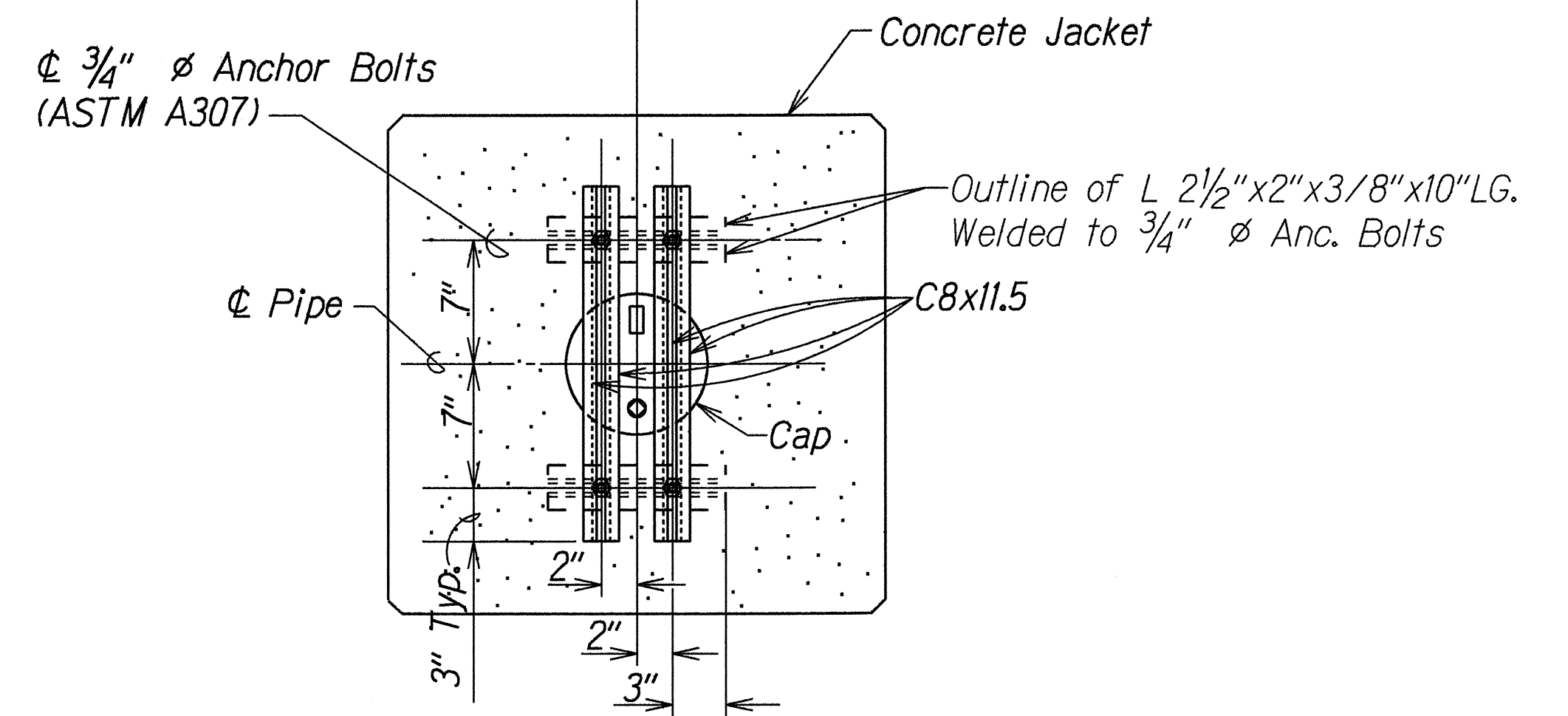
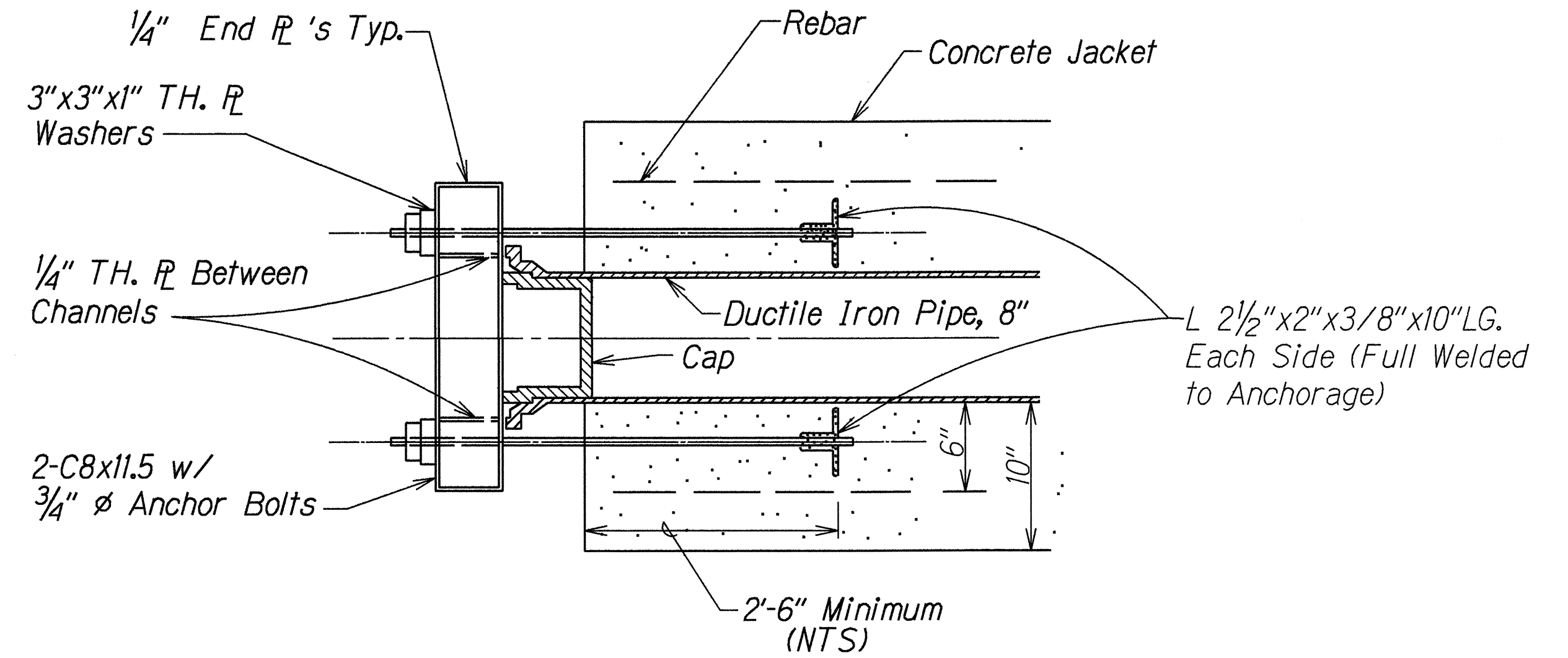
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
UTILITY PLAN
KAMEHAMEHA HWY. DRAINAGE IMP.
Vic. of Sunset Beach Elementary School
Federal Aid Project No. STP-083-1(35)
Scale: As Shown Date: Feb., 1996
SHEET No. 7 OF 11 SHEETS

"AS-BUILT"

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-083-1(35)	1996	37	40



PROFILE
W₈" ADJUSTMENT AT GDI
Sta. 238+00
 Scale: Horiz. 1"=10'
 Vert. 1"=2'

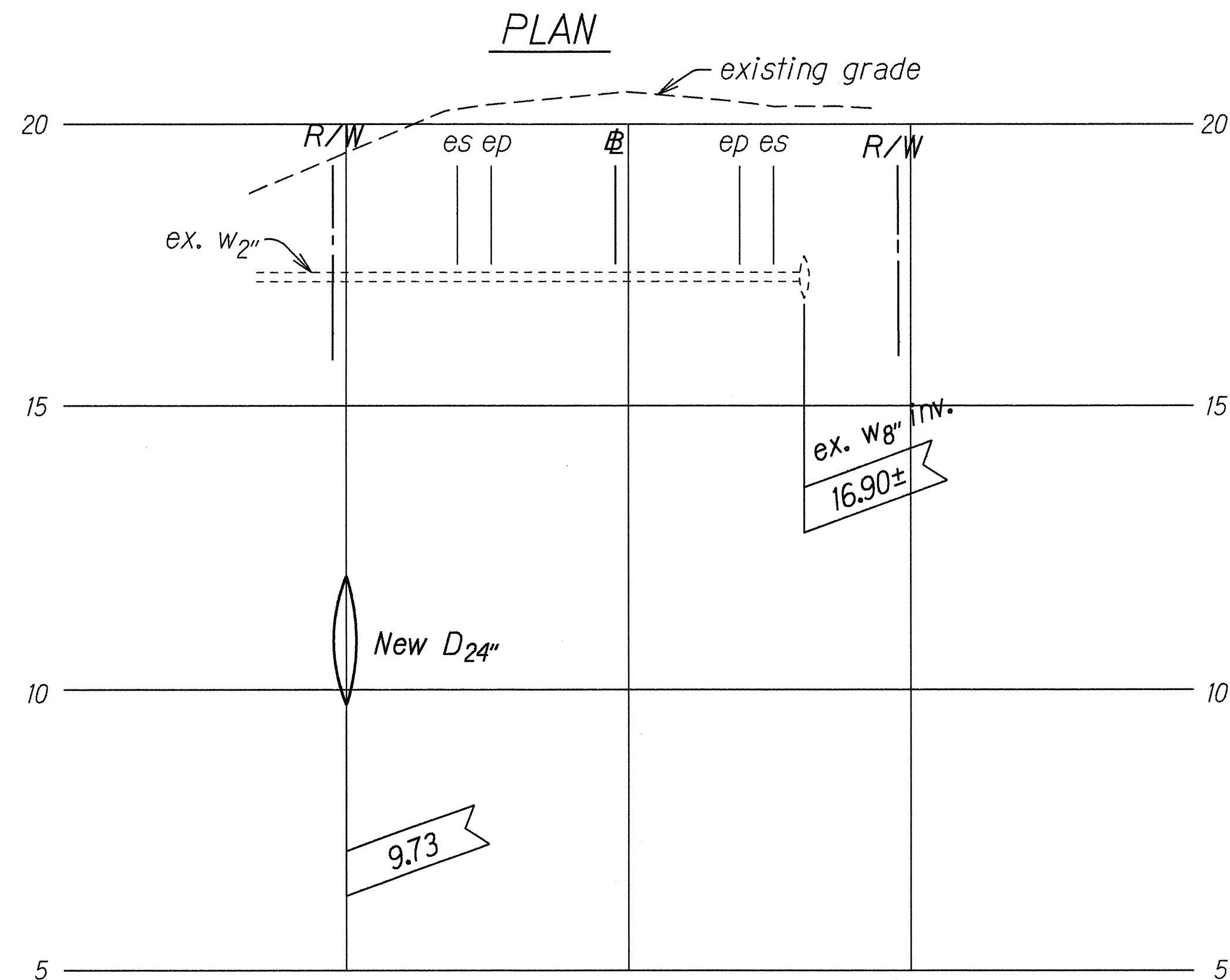
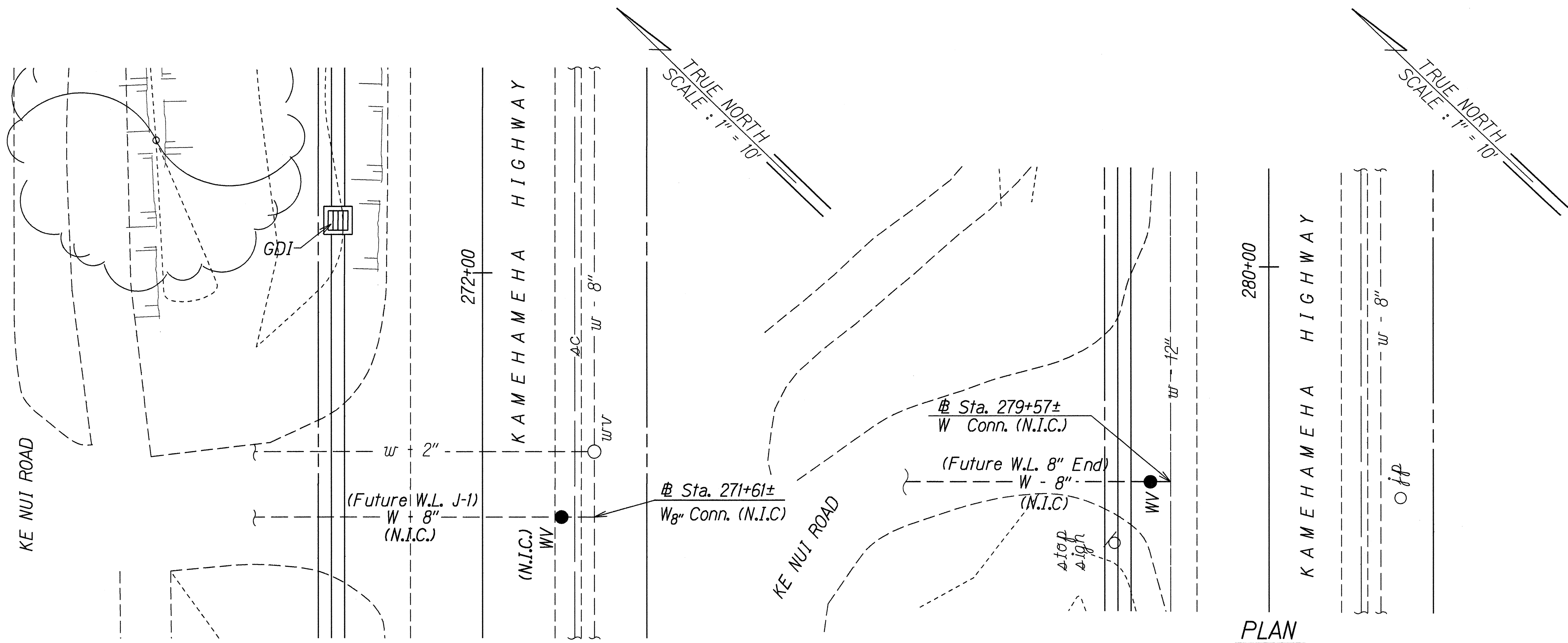


TEST PLUG ANCHORAGE ASSEMBLY DETAIL
 Scale: 1 1/2"= 1'

APPROVED:
 [Signature]
 CHIEF, PLANNING & ENGINEERING, B.W.S.'Y
 DATE 11/9/95

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
UTILITY PLAN
KAMEHAMEHA HWY. DRAINAGE IMP.
Vic. of Sunset Beach Elementary School
Federal Aid Project No. STP-083-1(35)
 Scale: As Shown Date: June, 1995
 SHEET No. 8 OF 11 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-083-1(35)	1996	38	40

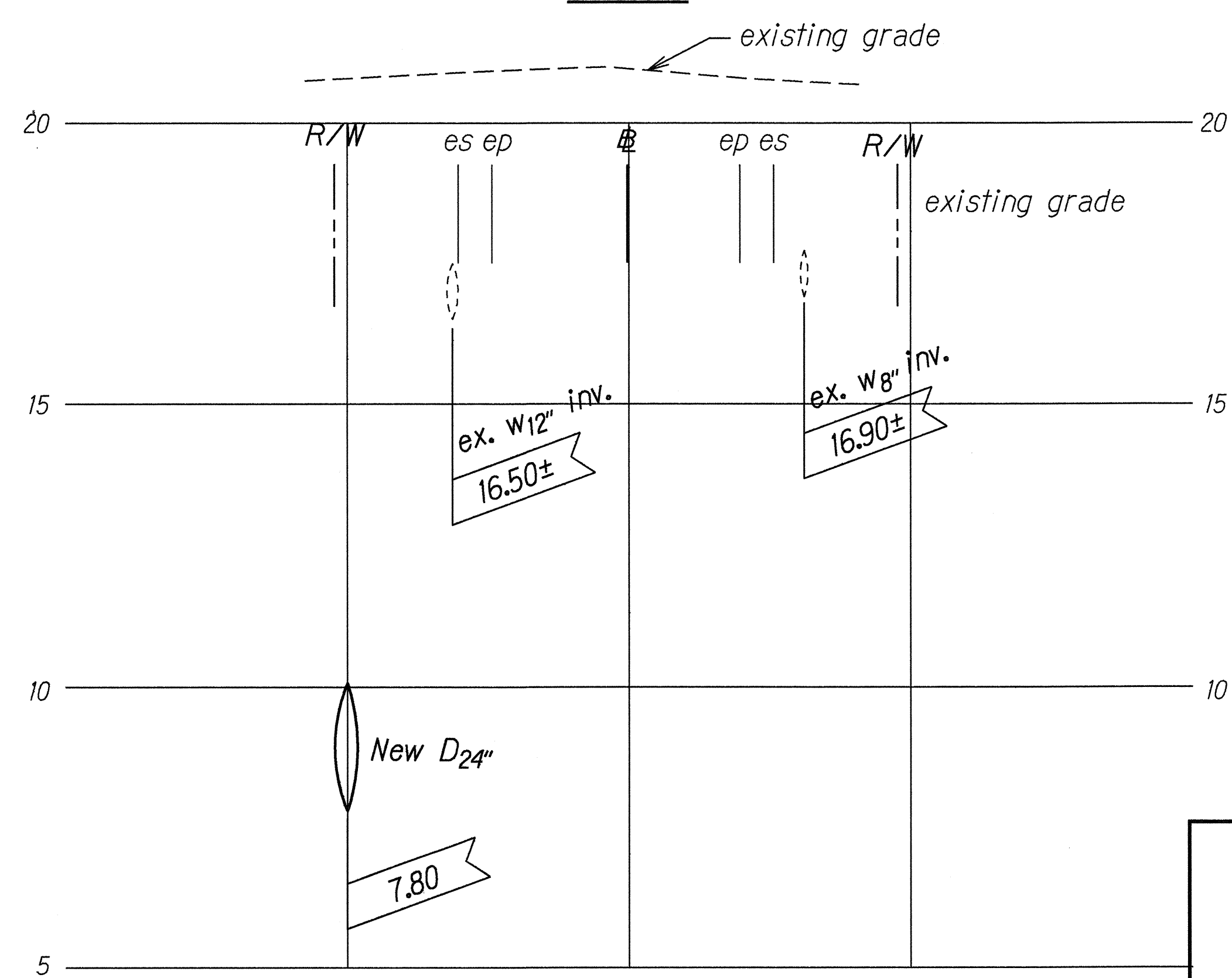


PROFILE
W_{8"} LATERAL AT
Sta. 271+73±
 Scale: Horiz. 1"=10'
 Vert. 1"=2'

APPROVED:

[Signature]
 CHIEF, PLANNING & ENGINEERING, B.W.S.'Y

11/9/95
 DATE



PROFILE
W_{8"} LATERAL AT
Sta. 279+67±
 Scale: Horiz. 1"=10'
 Vert. 1"=2'

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

UTILITY PLAN

KAMEHAMEHA HWY. DRAINAGE IMP.
 Vic. of Sunset Beach Elementary School
 Federal Aid Project No. STP-083-1(35)

Scale: As Shown Date: June, 1995

SHEET No. 9 OF 11 SHEETS

