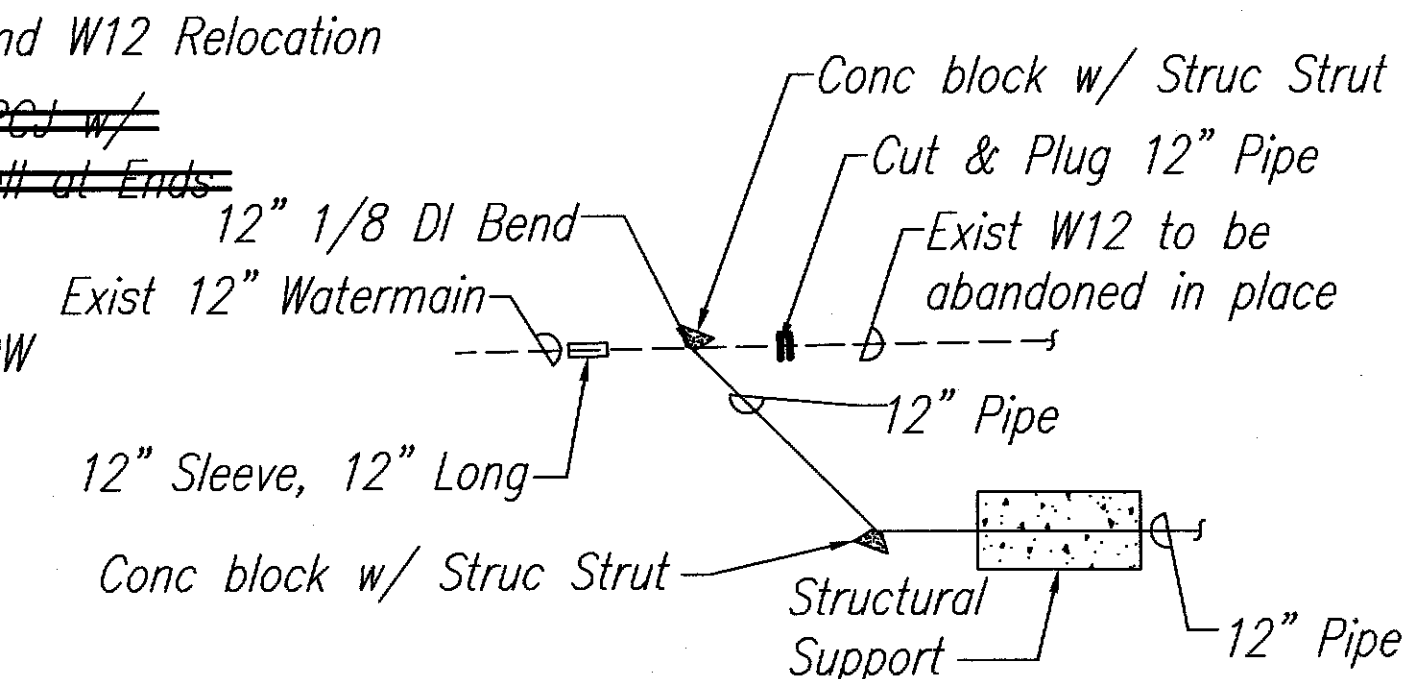
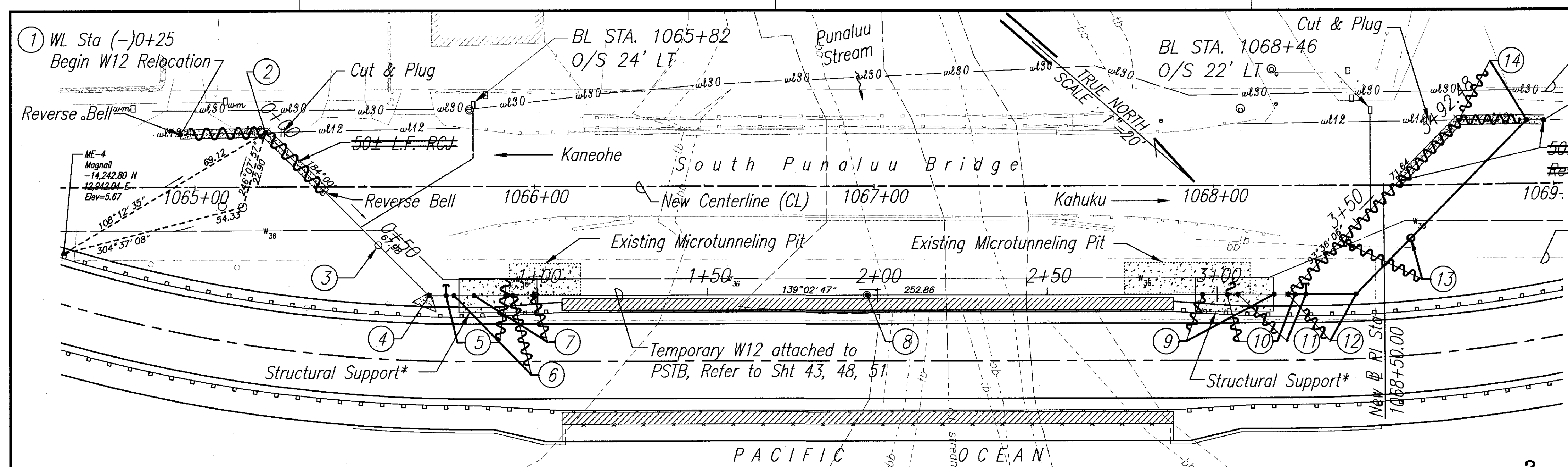


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-083-1(42)	2009	C.O.38	121



CONNECTION POINT
WL STA 0+00 & 3+92.48
 Not to Scale

- 1 WL Sta (-)0+25
New CL Sta 1064+96.26± o/s 12.02 Lt
Begin New W12
Connect to existing W12 (DI)
1-12" Sleeve, 12" Long
8± L.F. 12" DI Pipe, Class 52
Temporary Materials for Testing:
1-12" Cap w/ 2-1/2" C.O.
1-Concrete Block
- 2 WL Sta 0+00
New CL Sta 1065+20.82± o/s 16.03 Lt
1-12" 1/8 Bend (H)
- 3 WL Sta 0+47
New CL Sta 1065+54.08 o/s 17.18' Rt
1-12" GV #150
1-Valve Box
- 4 WL Sta 0+67.98
New CL Sta 1065+68.92 o/s 32.00' Rt
1-12" 1/8 Bend (H) (MJ)
1-Concrete Block
- 5 WL Sta 0+90.55
New CL Sta 1065+91.49 o/s 32.00' Rt
1-12" Tee (MJ)
1-Cap
1-Structural Reaction Support
- 6 WL Sta 0+92.86
New CL Sta 1065+93.80 o/s 32.00' Rt
1-12" 1/8 Bend (BV)
- 7 WL Sta 0+98.61
New CL Sta 1065+99.75 o/s 32.00' Rt
1-12" 1/8 Bend (TV)
- 8 WL Sta 1+96.91
New CL Sta 1066+97.85 o/s 32.00' Rt
1-3/4" Air Relief Valve, Accessable & Protected from Vandals
- 9 WL Sta 2+96.76
New CL Sta 1067+97.70 o/s 32.00' Rt
1-12" 1/8 Bend (TV)
- 10 WL Sta 3+02.98
New CL Sta 1068+03.92 o/s 32.00' Rt
1-12" 1/8 Bend (BV)
- 11 WL Sta 3+06.09
New CL Sta 1068+07.03 o/s 32.00' Rt
1-12" Tee (H)
1-Cap
1-Structural Reaction Support
- 12 WL Sta 3+20.84
New CL Sta 1068+21.78 o/s 32.00' Rt
1-12" 1/8 Bend (H) (MJ)
1-Concrete Block
- 13 WL Sta 3+43.92
New CL Sta 1068+43.97 o/s 15.56' Rt
1-12" GV #150
1-Valve Box
- 14 WL Sta 3+92.48
New CL Sta 1068+72.24 o/s 18.82 Lt
1-12" 1/8 Bend (H)
- 15 WL Sta 3+92.48
New CL Sta 1068+72.24 o/s 18.82 Lt
End New W12
Connect to existing W12
1-12" Sleeve, 12" Long
8± L.F. 12" DI Pipe, Class 52
Temporary Materials for Testing:
1-12" Cap w/ 2-1/2" C.O.
1-Concrete Block

LEGEND FOR AS-BUILT POSTINGS

~~~~ Squiggly line for as-built deletion

== Double line for as-built deletion

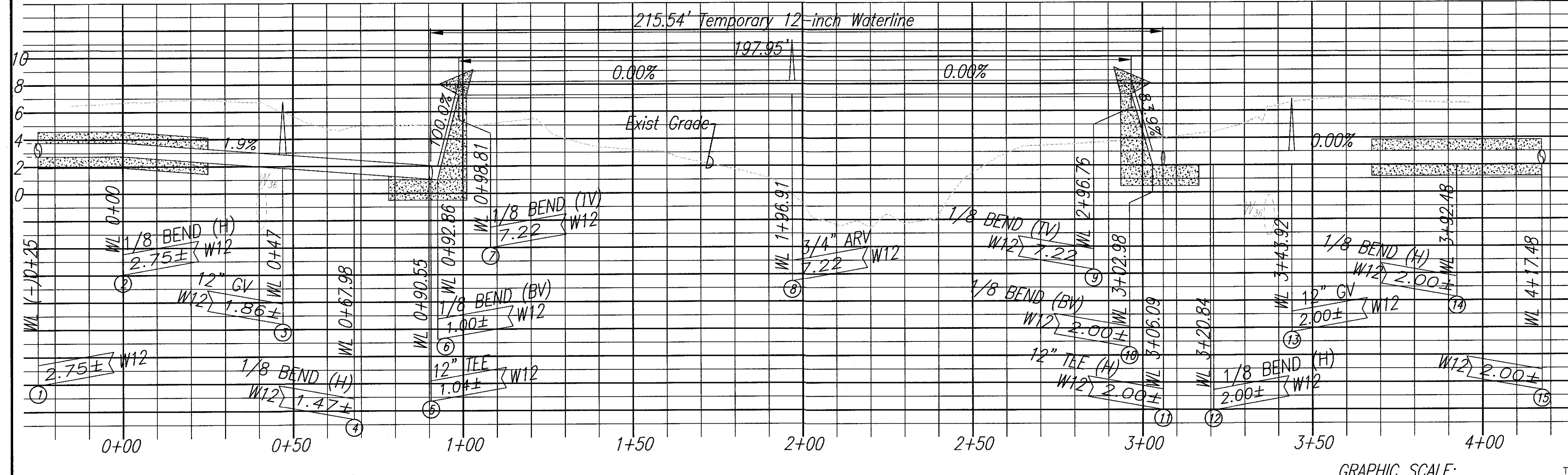
Roadway Text for as-built posting

\* Refer to Structural Sheets for Structural Supports and PSTB details.

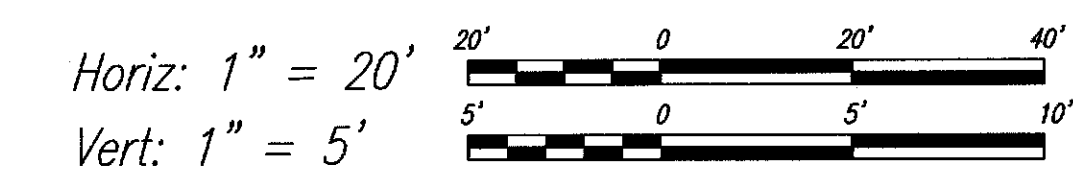
Approved: \_\_\_\_\_

Chief, Capital Projects Division  
 Board of Water Supply, City & County of Honolulu

Date \_\_\_\_\_



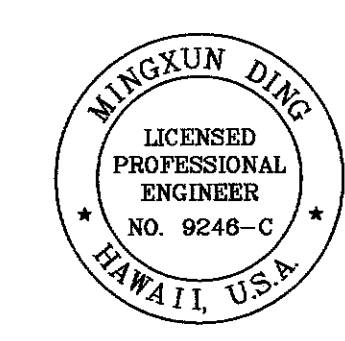
**12-INCH WATERLINE PLAN & PROFILE**  
 HORIZ SCALE: 1" = 20'  
 VERT SCALE: 1" = 5'



THIS WORK WAS PREPARED BY ME  
 OR UNDER MY SUPERVISION.

\_\_\_\_\_  
 SIGNATURE

4/30/16  
 EXPIRATION DATE  
 OF LICENSE



7/20/12 1 New water line connection

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**12-INCH WATERLINE DIVERSION  
 BRIDGE RELOCATION**

KAMEHAMEHA HIGHWAY - REPLACEMENT  
 OF SOUTH PUNALUU STREAM BRIDGE  
 Federal Aid Project No. BR-083-1(42)

Scale: As Shown Date: May 2009

SHEET No. C38 OF 40 SHEETS

| ORIGINAL PLAN     | DATE |
|-------------------|------|
| SURVEY PLOTTED BY |      |
| DRAWN BY          |      |
| DESIGNED BY       |      |
| QUANTITIES BY     |      |
| CHECKED BY        |      |
| No.               |      |

"AS-BUILT"

C.O.38







| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | BR-083-1(42)       | 2009        | C.O.39    | 121          |

# LEGEND:

30" WATERLINE

GRP

CONCRETE BLOCK

WATER VALVE

— w130 —

— w12 —

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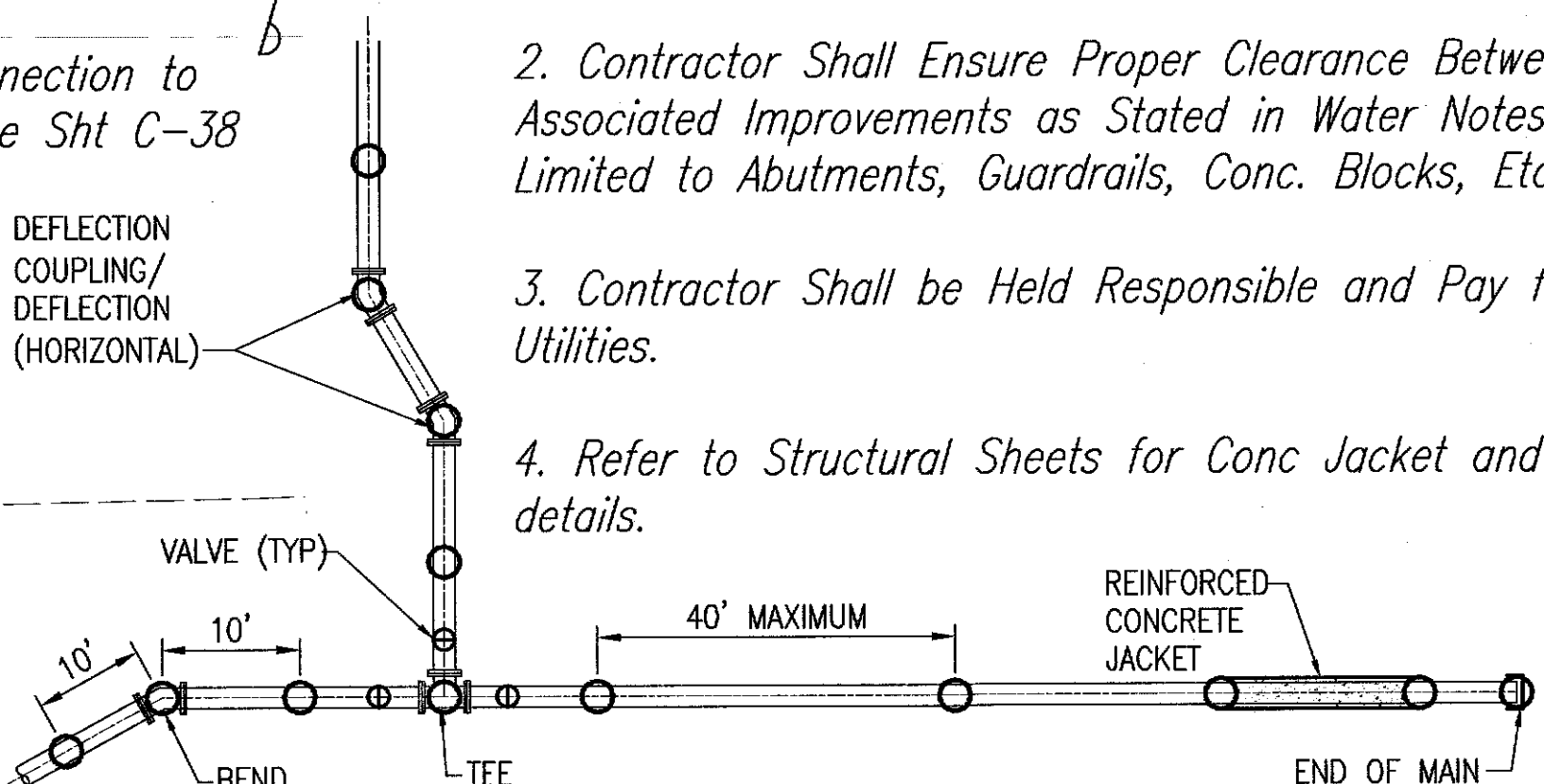
— w12 —

## LEGEND FOR AS-BUILT POSTINGS

- Squiggly line for as-built deletion
- Double line for as-built deletion
- Roadway Text for as-built posting

### Notes:

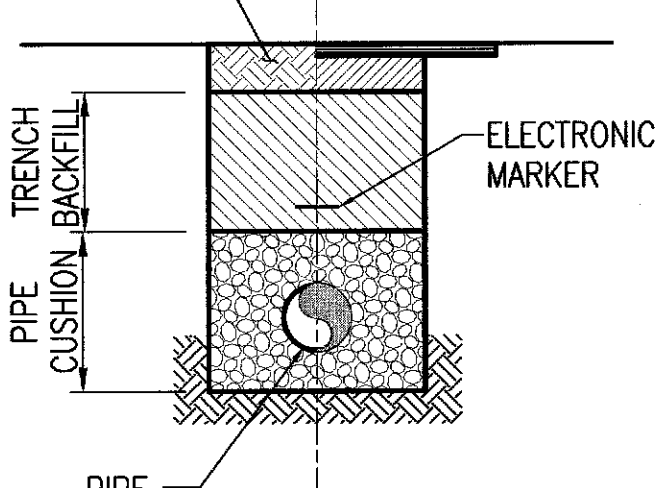
- Contractor Shall Verify the Locations of Existing Waterlines Both Horizontally and Vertically Via Toning/Excavating Prior to Construction.
- Contractor Shall Ensure Proper Clearance Between Waterlines and Associated Improvements as Stated in Water Notes, Including but not Limited to Abutments, Guardrails, Conc. Blocks, Etc.
- Contractor Shall be Held Responsible and Pay for Any Damages to Utilities.
- Refer to Structural Sheets for Conc Jacket and Structural Supports details.



### PLAN VIEW

#### NOTES:

- INSTALL ELECTRONIC MARKER OVER CENTER LINE OF PIPE AT A MINIMUM DEPTH OF 2 FEET AND A MAXIMUM DEPTH OF 3 FEET FROM FINISH GRADE.
- INSTALL TRENCH BACKFILL AND PIPE CUSHION MATERIAL IN ACCORDANCE TO THE PLANS AND SPECIFICATIONS.
- INSTALL ELECTRONIC MARKER AT A MINIMUM CLEARANCE OF 6 INCHES, WHERE POSSIBLE. INSTALL MARKERS ON OR ABOVE CONCRETE JACKETS.



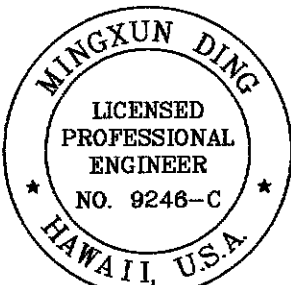
### SECTION VIEW

## TYPICAL ELECTRONIC MARKER INSTALLATION

NOT TO SCALE

Approved:

Chief, Capital Projects Division Date  
Board of Water Supply, City & County of Honolulu



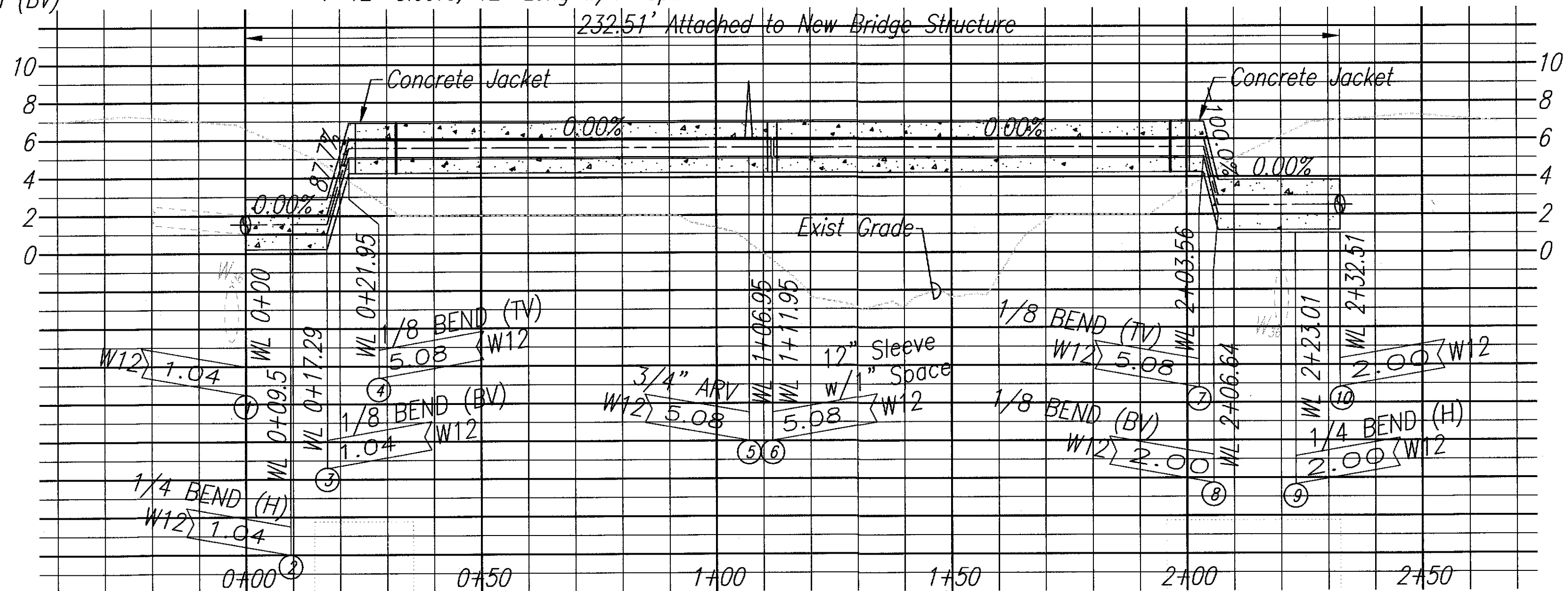
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE

4/30/16  
EXPIRATION DATE OF LICENSE

|                                                                                                            |                |                   |
|------------------------------------------------------------------------------------------------------------|----------------|-------------------|
| 3/05/12                                                                                                    | 1              | Added 12" blowoff |
| STATE OF HAWAII<br>DEPARTMENT OF TRANSPORTATION<br>HIGHWAYS DIVISION                                       |                |                   |
| <b>12-INCH WATERLINE FINAL<br/>BRIDGE RELOCATION</b>                                                       |                |                   |
| KAMEHAMEHA HIGHWAY - REPLACEMENT<br>OF SOUTH PUNALUU STREAM BRIDGE<br>Federal Aid Project No. BR-083-1(42) |                |                   |
| Scale: As Shown                                                                                            | Date: May 2009 |                   |
| SHEET No. C39 OF 40 SHEETS                                                                                 |                |                   |

|                   |       |
|-------------------|-------|
| DATE              | _____ |
| SURVEY PLOTTED BY | _____ |
| DRAWN BY          | _____ |
| DESIGNED BY       | _____ |
| CHECKED BY        | _____ |
| NOTE BOOK         | _____ |
| No.               | _____ |

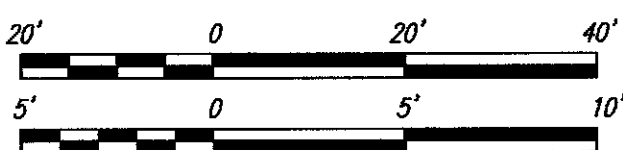


## 12-INCH WATERLINE PLAN & PROFILE

HORIZ SCALE: 1" = 20'  
VERT SCALE: 1" = 5'

Horiz: 1" = 20'  
Vert: 1" = 5'

GRAPHIC SCALE:

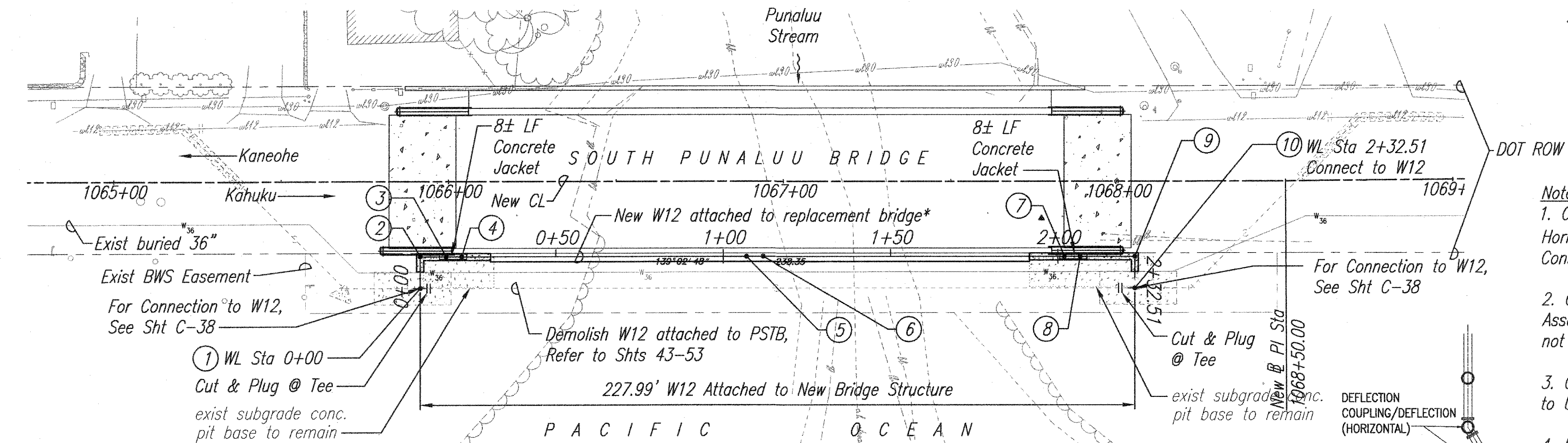


"AS-BUILT"

C.O.39

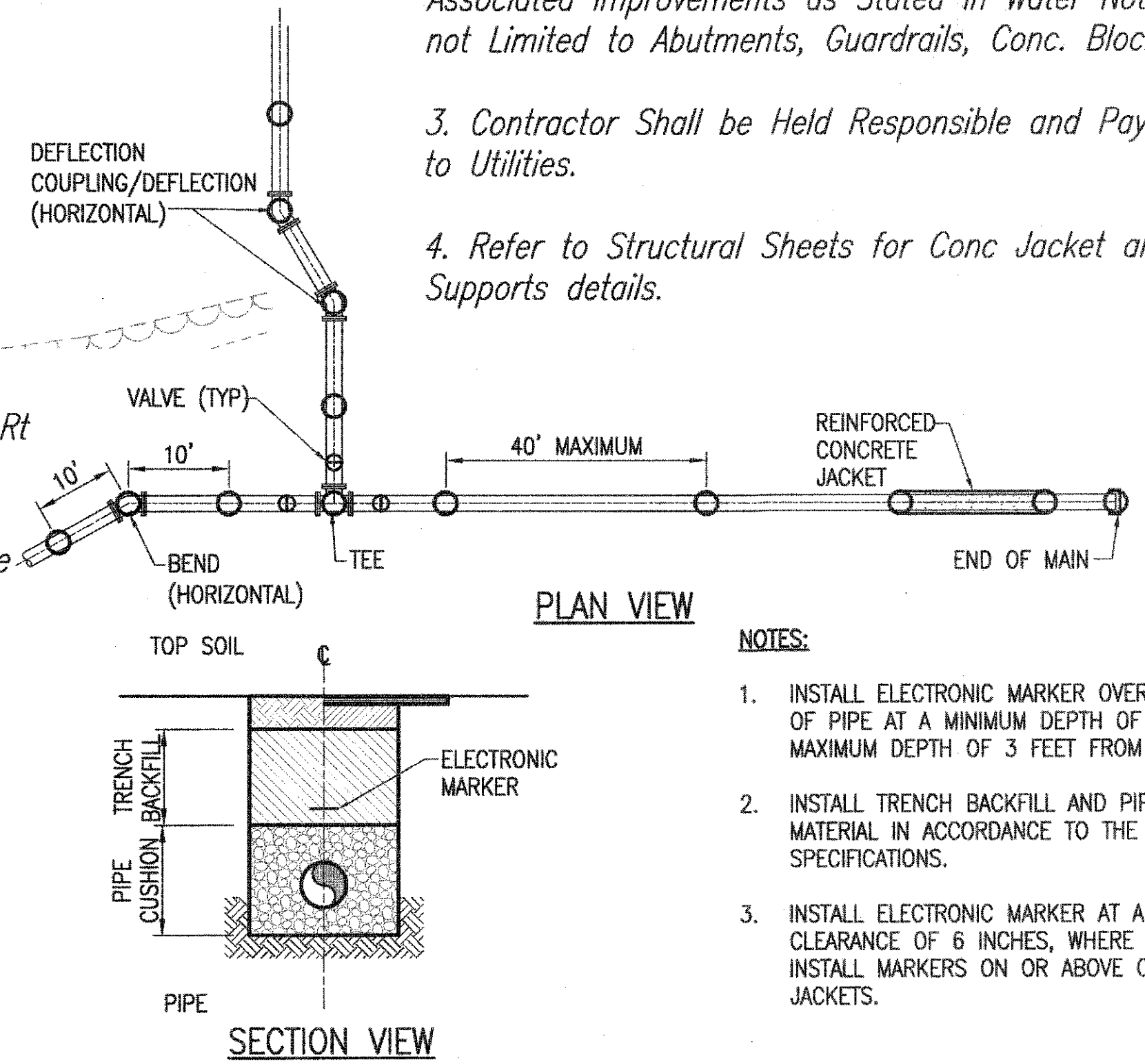


| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | BR-083-1(42)       | 2009        | 39        | 121          |



- Notes:
- Contractor Shall Verify the Locations of Existing Waterlines Both Horizontally and Vertically Via Toning/Excavating Prior to Construction.
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  - Contractor Shall be Held Responsible and Pay for Any Damages to Utilities.
  - Refer to Structural Sheets for Conc Jacket and Structural Supports details.

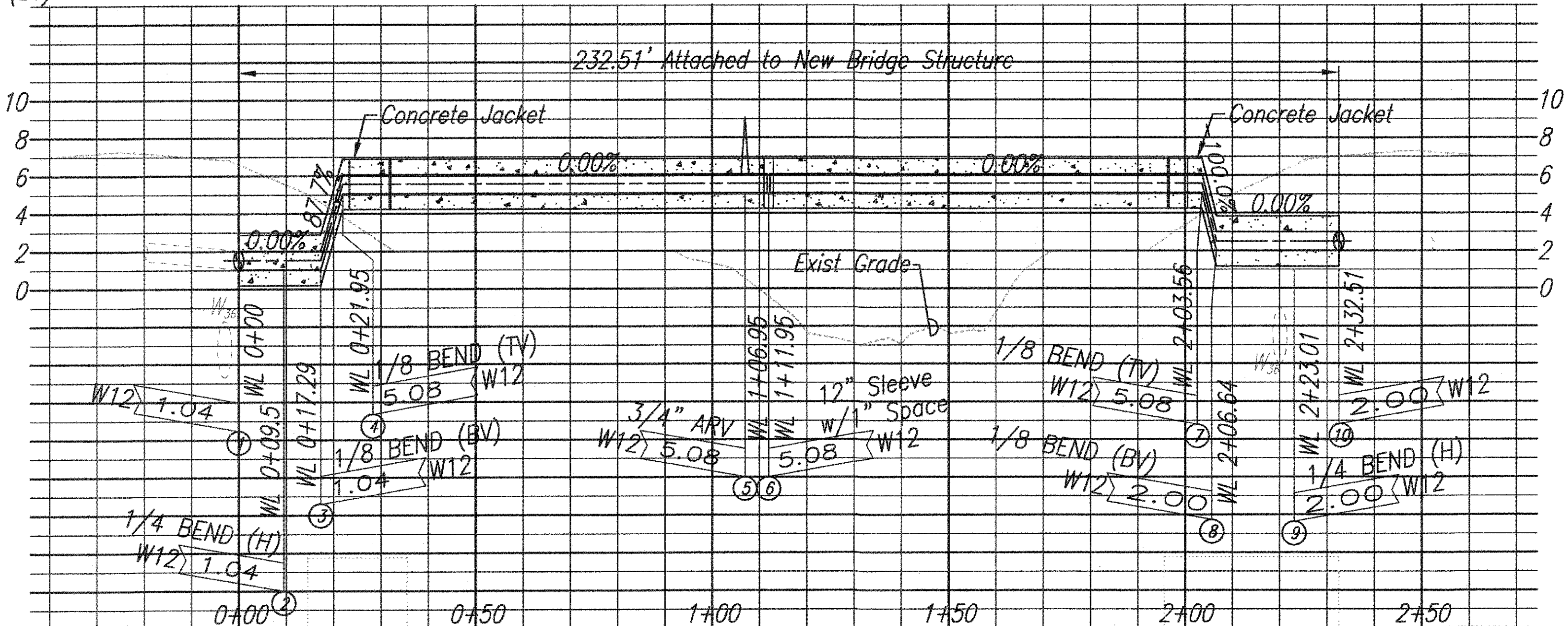
- WL Sta 0+00  
New CL Sta 1065+91.49 o/s 32' Rt  
8± L.F. 12" Pipe  
1-12' Plug  
1-Concrete Block  
1-Hub Clamp w/Strong Back Tie
- WL Sta 0+09.5  
New CL Sta 1065+91.49 o/s 22.75' Rt  
1-12" 1/4 Bend (H)  
Concrete Jacket
- WL Sta 0+17.29  
New CL Sta 1066+99.28 o/s 22.75' Rt  
1-12" 1/8 Bend (BV)
- WL Sta 0+21.95  
New CL Sta 1066+03.94 o/s 22.75' Rt  
1-12" 1/8 Bend (TV)
- WL Sta 1+06.95  
New CL Sta 1066+88.94 o/s 22.75' Rt  
1-Coupling  
1-3/4" ARV  
1-ARV Box, WP=75.8 psi., Accessable & Protected from Vandals
- WL Sta 1+11.95  
New CL Sta 1066+93.94 o/s 22.75' Rt  
1-12" Sleeve, 12" Long w/1" Space
- WL Sta 2+01.95  
New CL Sta 1067+83.94 o/s 22.75' Rt  
1-12" 1/8 Bend (TV)
- WL Sta 2+06.64  
New CL Sta 1067+88.63 o/s 22.75' Rt  
1-12" 1/8 Bend (BV)
- WL Sta 2+23.01  
New CL Sta 1068+05 o/s 22.75' Rt  
1-12" 1/4 Bend (H)  
Concrete Jacket
- WL Sta 2+32.51  
New CL Sta 1068+05 o/s 32' Rt  
8± L.F. 12" Pipe  
1-Concrete Block  
1-Hub Clamp w/Strong Back Tie  
1-12" Plug



### TYPICAL ELECTRONIC MARKER INSTALLATION

NOT TO SCALE

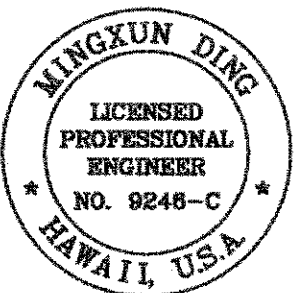
Approved: *[Signature]* 5/10/09  
 Chief, Capital Projects Division Date  
 Board of Water Supply, City & County of Honolulu



### 12-INCH WATERLINE PLAN & PROFILE

HORIZ SCALE: 1" = 20'  
 VERT SCALE: 1" = 5'

Horiz: 1" = 20'  
 Vert: 1" = 5'



THIS WORK WAS PREPARED BY ME  
 OR UNDER MY SUPERVISION.  
*[Signature]*  
 SIGNATURE 4/30/10  
 EXPIRATION DATE OF LICENSE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**12-INCH WATERLINE FINAL  
BRIDGE RELOCATION**  
KAMEHAMEHA HIGHWAY - REPLACEMENT  
OF SOUTH PUNALUU STREAM BRIDGE  
Federal Aid Project No. BR-083-01(42)  
Scale: As Shown Date: May 2009  
SHEET No. 1 OF 1 SHEETS

39