

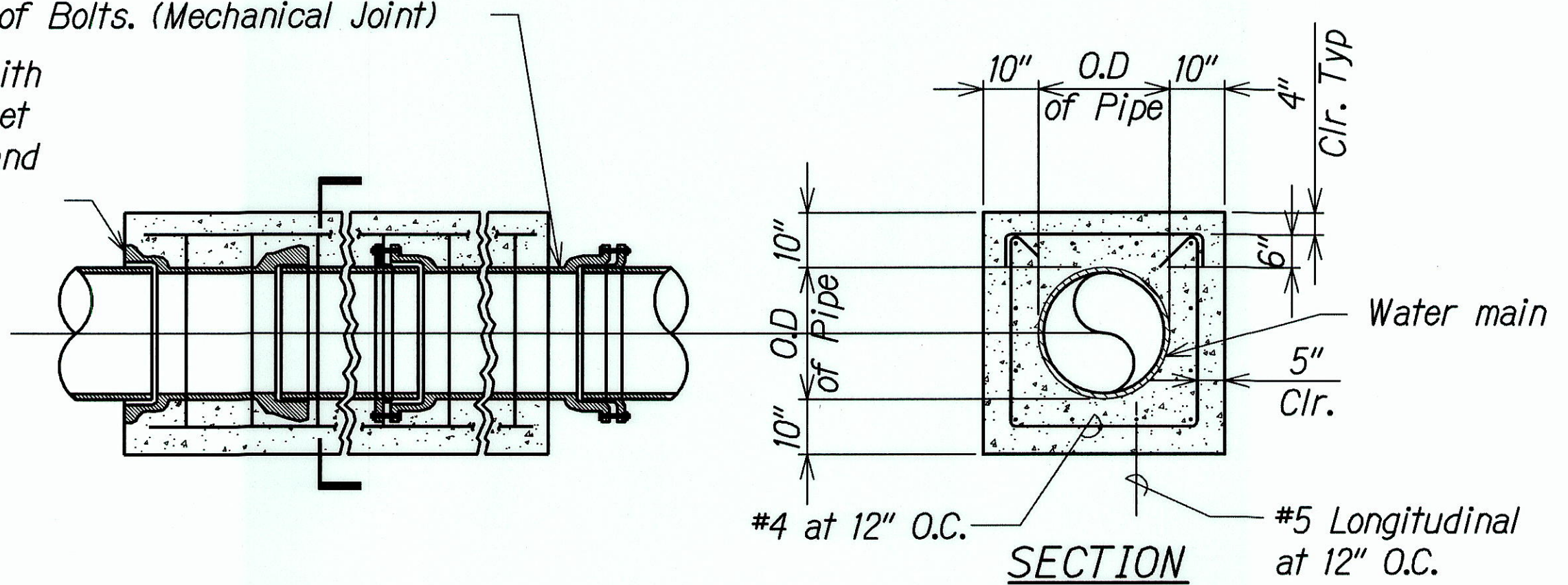
TYPICAL WATERLINE TRENCH DETAIL

NOTES:

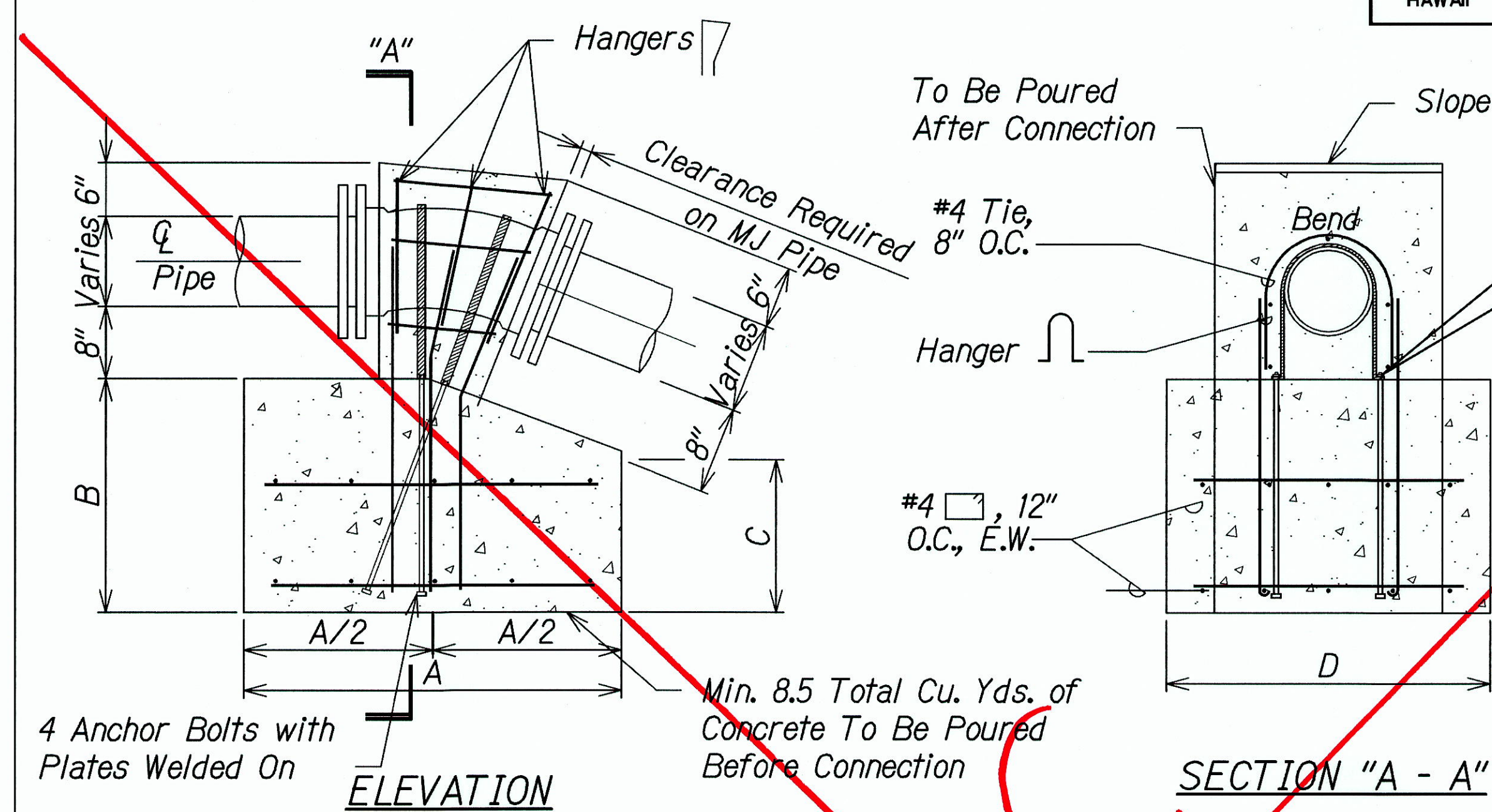
1. Wherever Construction Joints are required, DWS approved 6" Rubber or Neoprene Waterstops or Concrete Bonding Agent approved by the manager shall be installed.
2. No Concrete Jacketing of PVC Pipe or existing ac pipe will be allowed.
3. Concrete shall be DWS 2500

Face of Jacket shall be set back from Joint to provide sufficient working space for removal of Bolts. (Mechanical Joint)

Bell Flush with Face of jacket (Lead Joint and Slip Joint)

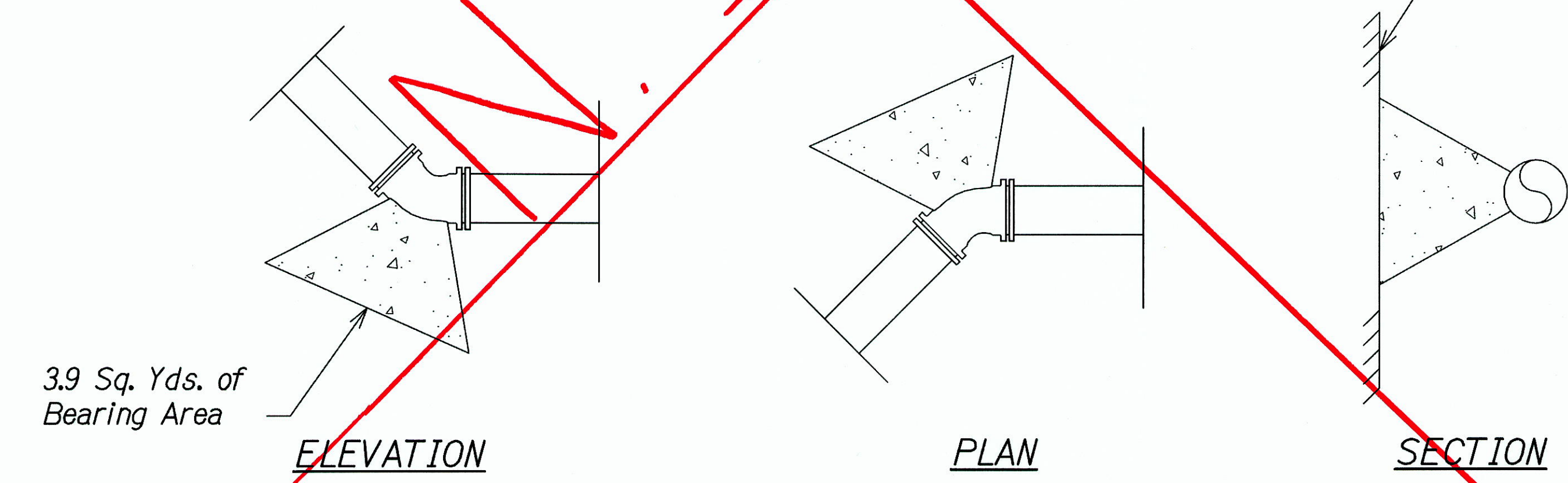


REINFORCED CONCRETE JACKET DETAIL



Approximate Thrust Block Dimensions (Yds.)			
A	B	C	D
2.5	1.66	66	2.5

TOP VERTICAL BEND



BOTTOM VERTICAL BEND

24" WATERLINE CONCRETE BLOCK DETAIL

APPROVED:

[Signature]

MANAGER AND CHIEF ENGINEER, BWS (For work Affecting BWS Facilities in City/State R/W & BWS Easements only)

4/24/12 DATE

KEVIN K. NAKAMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10304-S
HAWAII USA

COREY M. MATSUOKA
LICENSED PROFESSIONAL ENGINEER
NO. 10330-C
HAWAII USA

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

[Signature] COREY MATSUOKA 4/30/12

SIGNATURE

EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WATER DETAILS

FARRINGTON HIGHWAY DRAINAGE IMPROVEMENTS

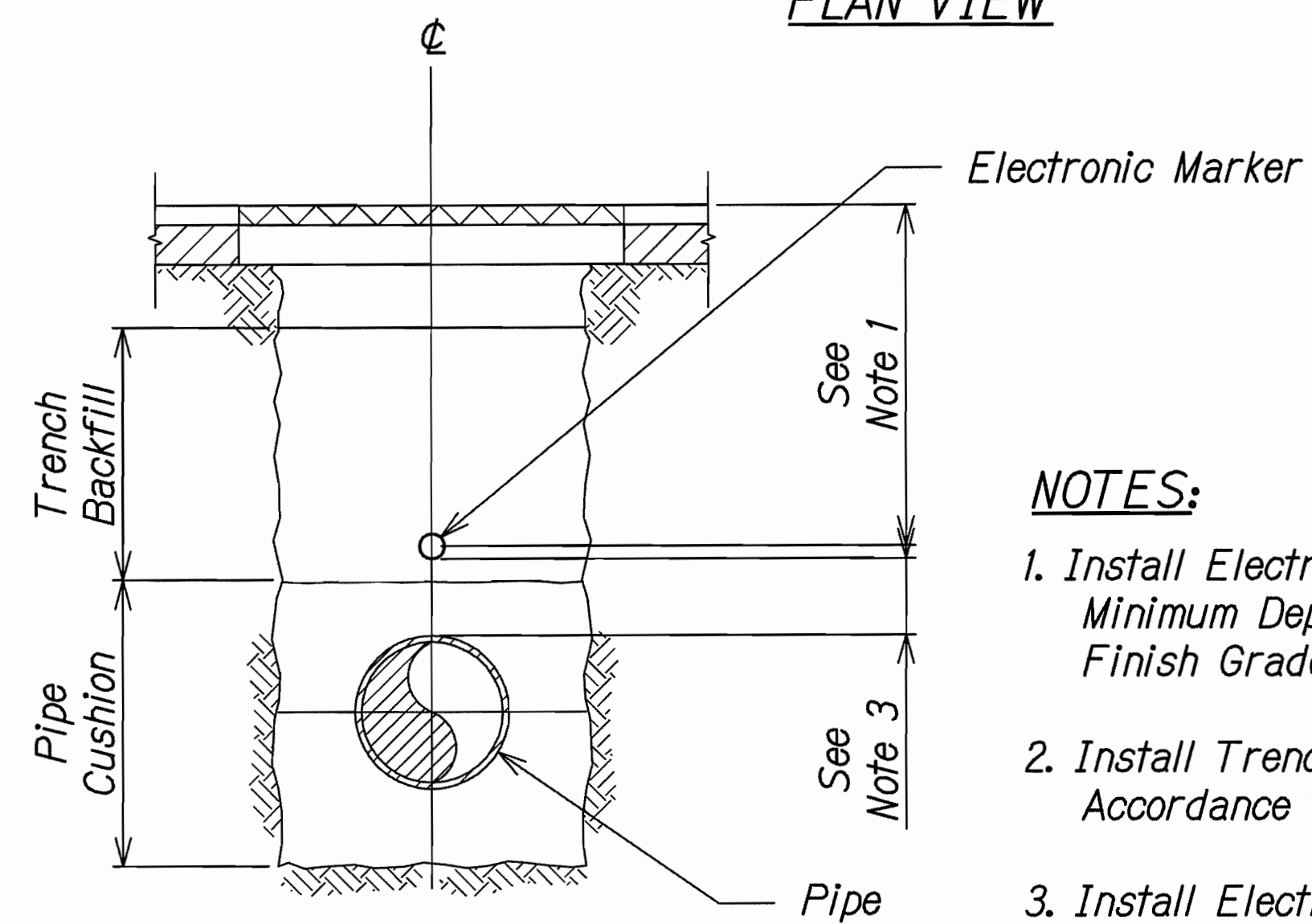
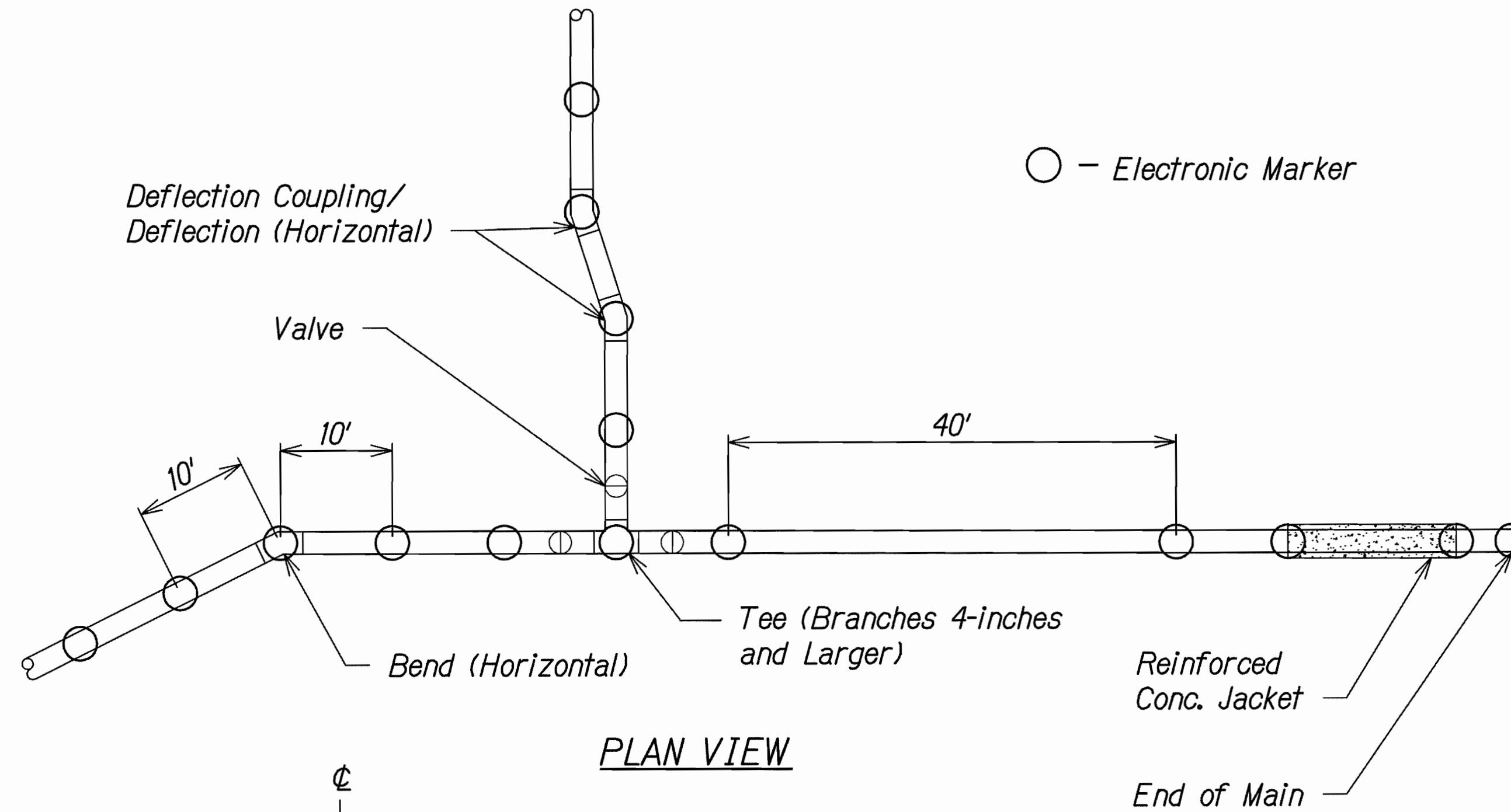
Vicinity of Orange St.

Project No. 93B-01-11

Scale: NTS Date: FEB 2012

SHEET No. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	93B-01-11	2012	21	38



NOTES:

1. Install Electronic Marker over Center Line of Pipe at a Minimum Depth of 2 Feet and a Maximum of 3 Feet from Finish Grade.
2. Install Trench Backfill and Pipe Cushion Material in Accordance to the Plans and Specification.
3. Install Electronic Marker at a Minimum Clearance of 6-inches above the Pipe or Concrete Jacket.

TYPICAL ELECTRONIC MARKER INSTALLATION

APPROVED:

[Signature]
MANAGER AND CHIEF ENGINEER, BWS
(For work Affecting BWS Facilities In
City/State R/W & BWS Easements only)

4/30/12
DATE



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION

[Signature]
SIGNATURE

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WATER DETAILS

FARRINGTON HIGHWAY DRAINAGE IMPROVEMENTS

Vicinity of Orange St.

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SHEET No. 2 OF 2 SHEETS