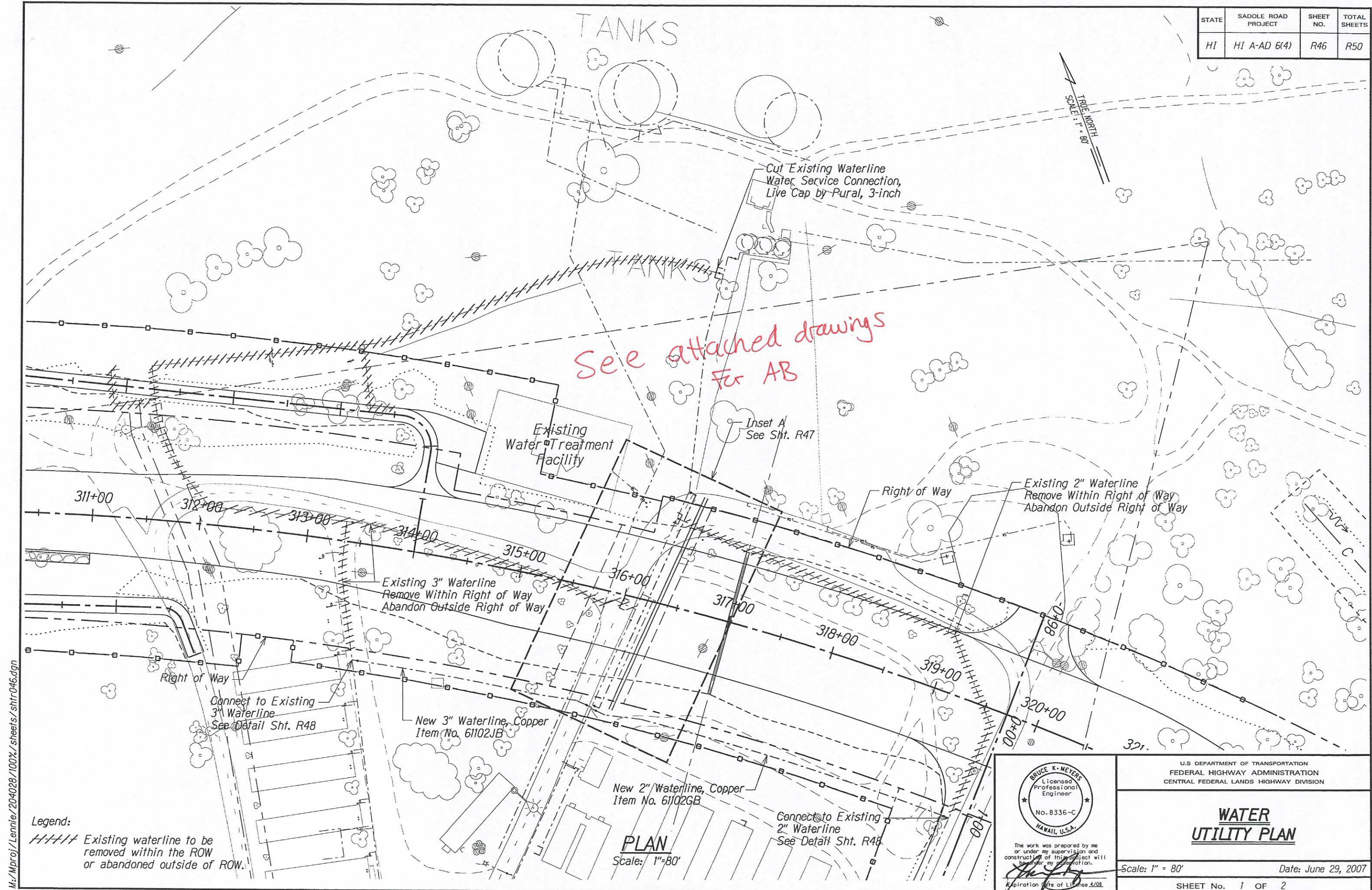


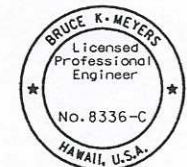
STATE	SADDLE ROAD PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI A-AD 6(4)	R46	R50



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Legend:
--- Existing waterline to be removed within the ROW or abandoned outside of ROW.

PLAN
Scale: 1"=80'



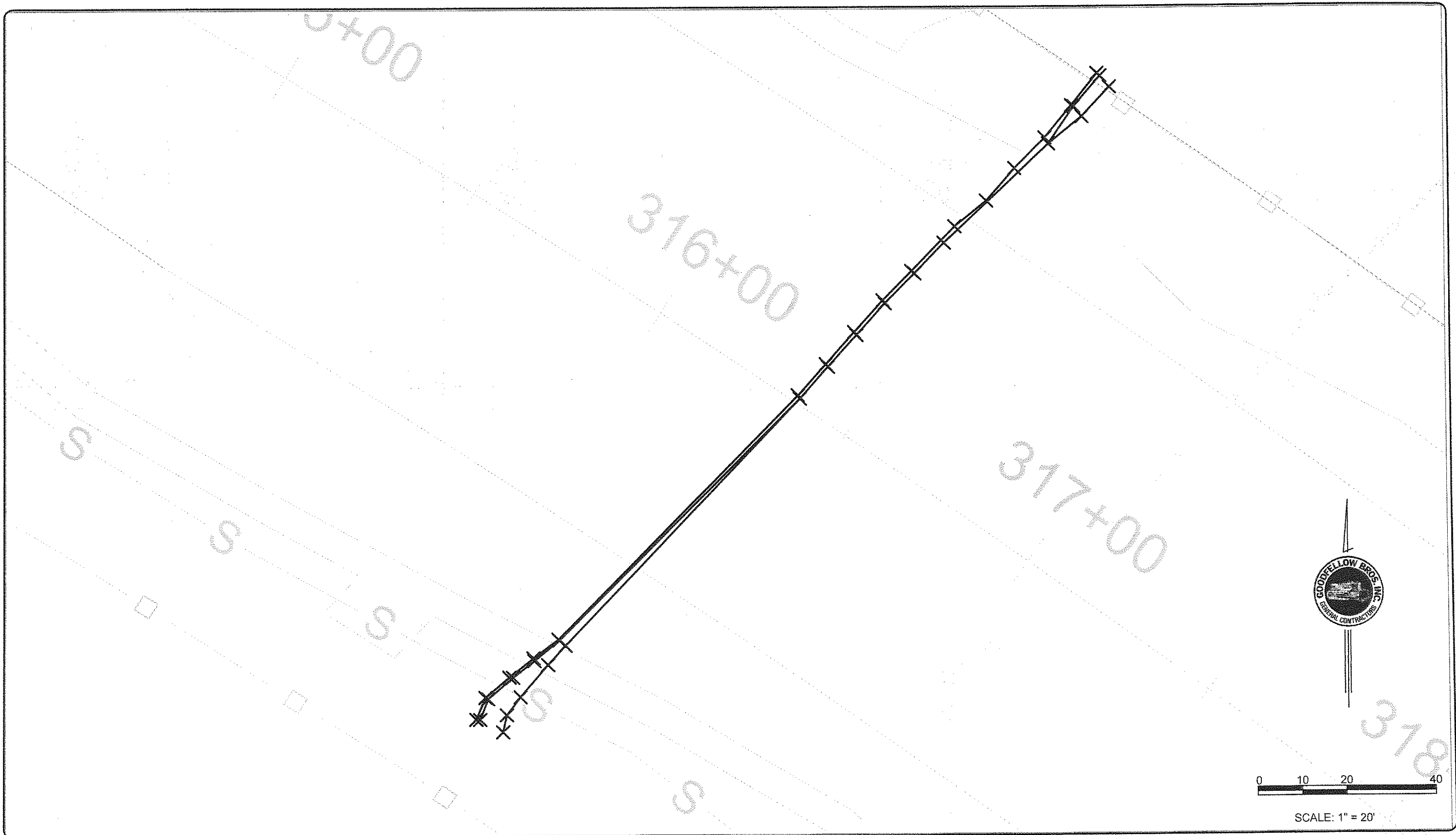
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Expiration Date of License 4/08.

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FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

**WATER
UTILITY PLAN**

Scale: 1" = 80' Date: June 29, 2007

SHEET No. 1 OF 2

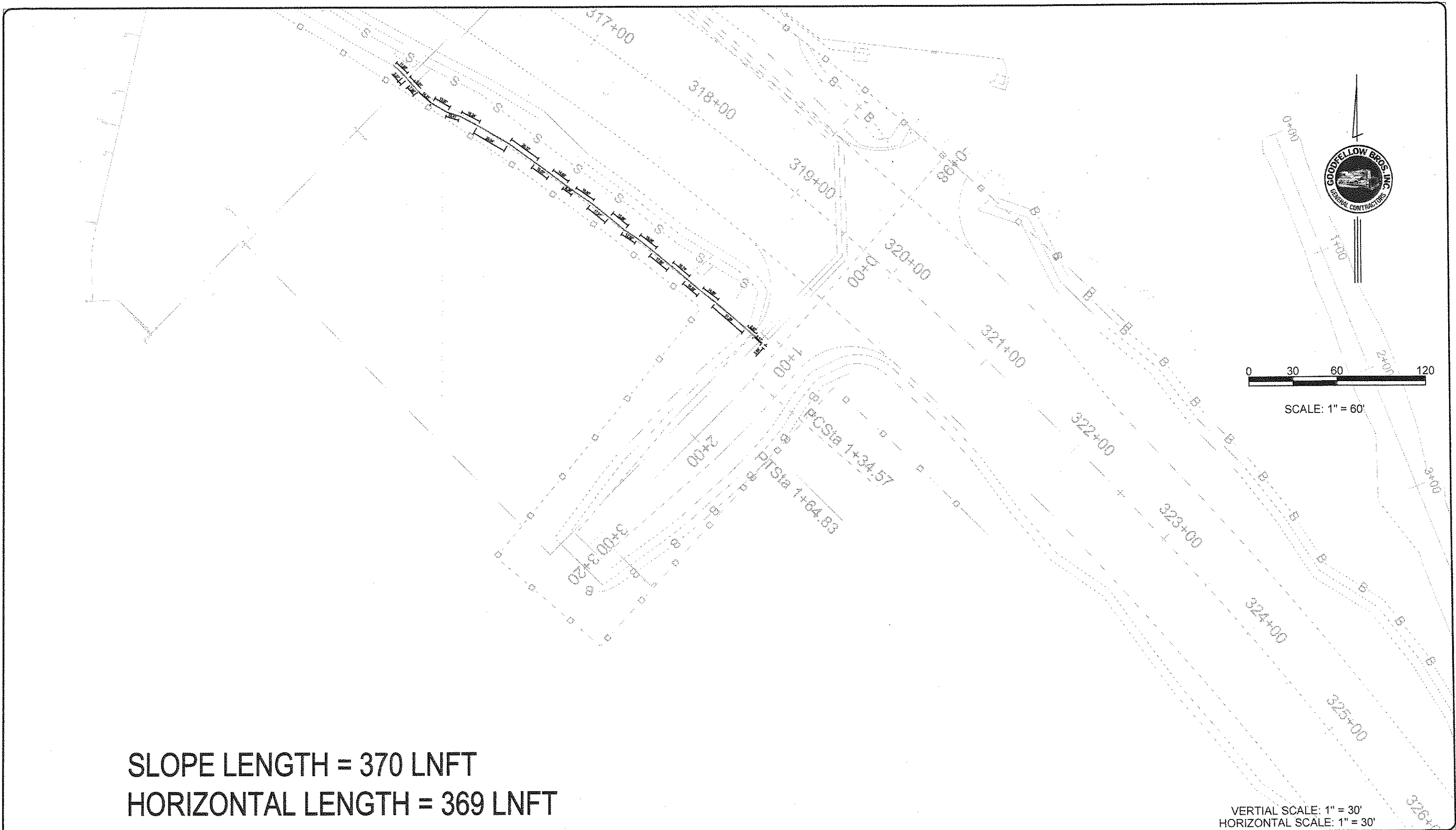


GOODFELLOW BROS., INC.

SADDLE ROAD HI A-AD/STP 6(4)

4" ELECTRICAL CONDUIT

SHEET
1 OF 1



GOODFELLOW BROS., INC.

SADDLE ROAD HI A-AD/STP 6(4)
2" COPPER WATER LINE

SHEET
1 OF 1

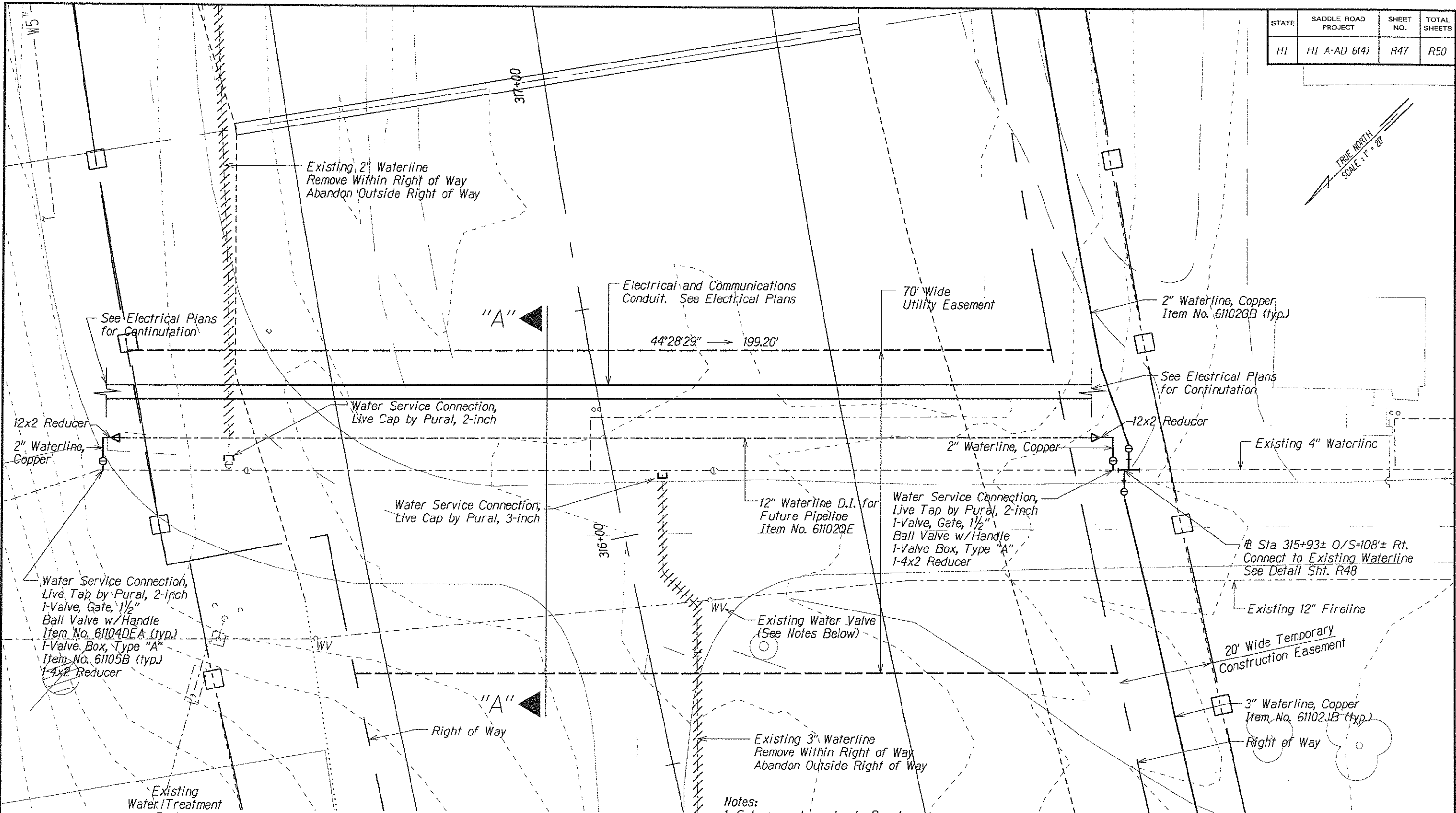
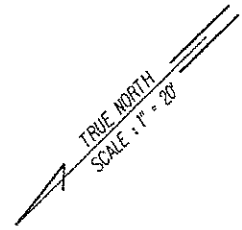


SADDLE ROAD HI A-AD/STP 6(4)

Water Line Design For New 2x6" Water Line

SHEET
1 of 1

STATE	SADDLE ROAD PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI A-AD 6(4)	R47	R50



- Notes:
1. Salvage water valve to Pural.
 2. Install D.I. nipple with flanged connections.
 3. Backfill valve box and compact to match roadway compaction.

INSET A
Scale: 1"=20'

Legend:
 - - - - - Existing waterline to be removed within the ROW or abandoned outside of ROW.

BRUCE K. MEYERS
 Licensed Professional Engineer
 No. 8336-C
 HAWAII, U.S.A.

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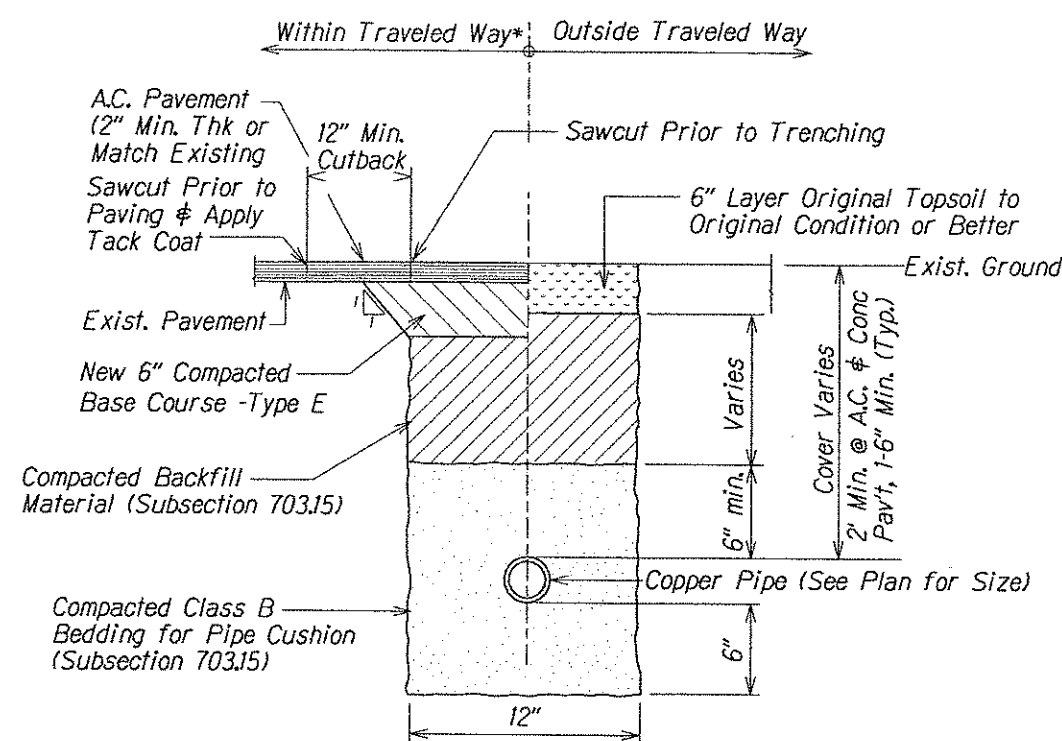
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 FEDERAL HIGHWAY ADMINISTRATION
 CENTRAL FEDERAL LANDS HIGHWAY DIVISION

WATER UTILITY PLAN
INSET "A"

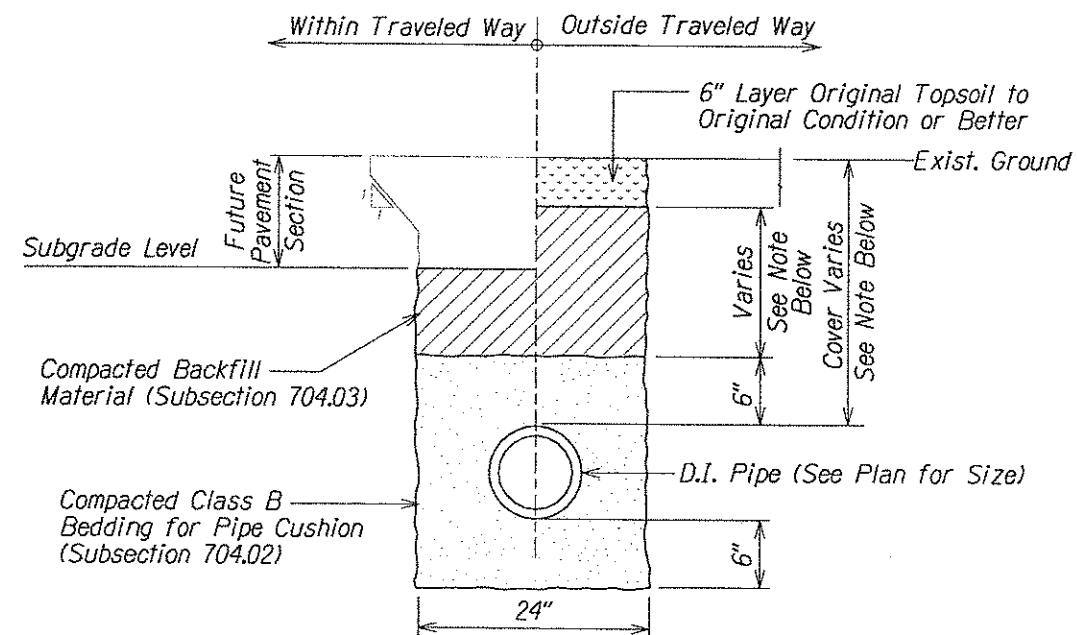
Scale: 1" = 20' Date: June 29, 2007

SHEET No. 2 OF 2

STATE	SADDLE ROAD PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI A-AD 6(4)	R48	R50

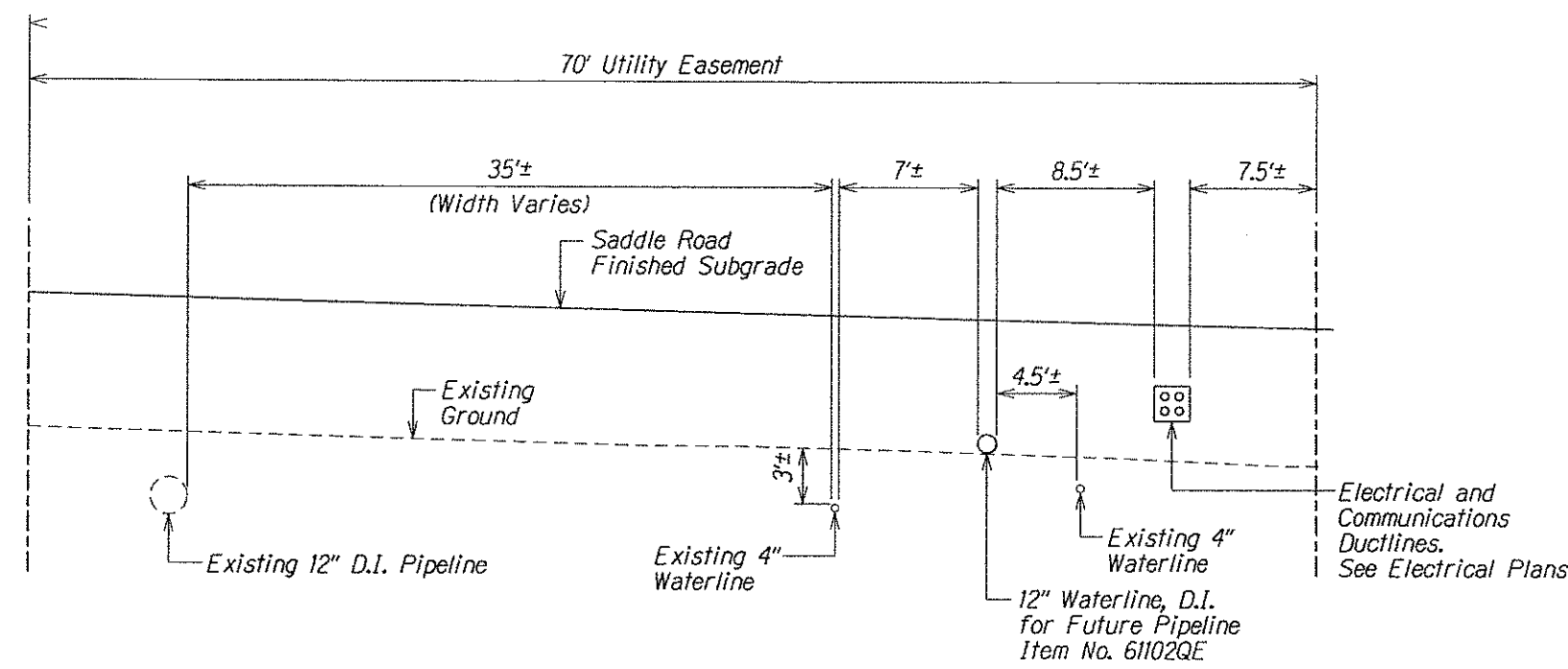


2" and 3" WATERLINE TRENCH DETAIL
 *Note: The paved areas refer to the existing PTA roads.

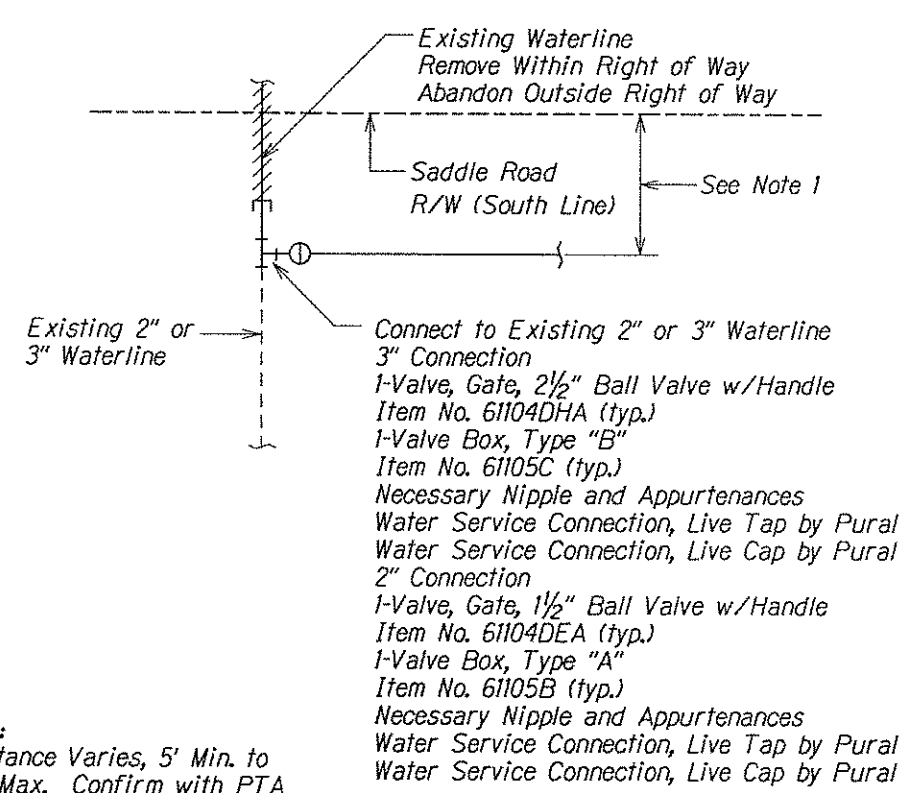


TYPICAL TRENCH SECTION FOR 12" DUCTILE IRON PIPE

NOTE: Minimum cover is 3' within State ROW traveled way and shoulders for all sizes, 2' for 6" diameter, and 2.5' for 12" diameter, the latter two being outside the state ROW. The minimum cover in the State ROW is from the final paved surface in a future project.

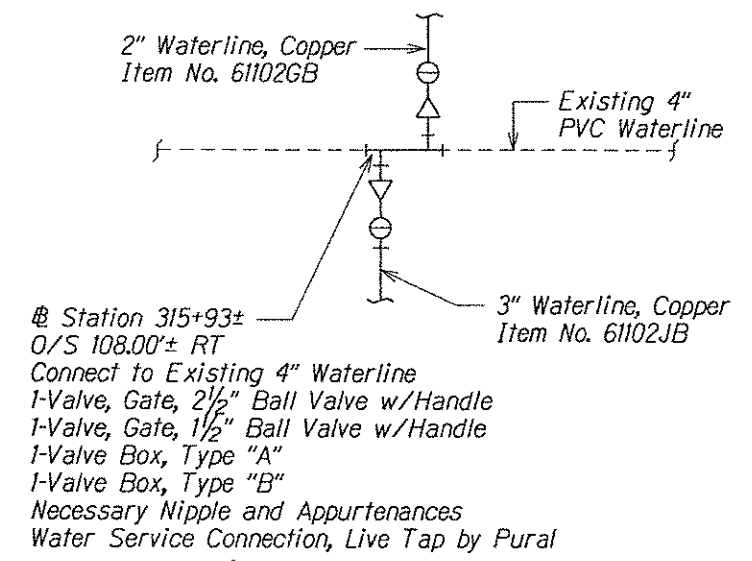


UTILITY CORRIDOR SECTION A-A



NOTE:
 1. Distance Varies, 5' Min. to 15' Max. Confirm with PTA DPW Staff Prior to Installation.
 2. Locate all Ball Valves Outside Normal Vehicle Traffic Areas.

TYPICAL CONNECTION TO EXISTING 2" OR 3" WATERLINE DETAIL



CONNECTION TO 4" WATERLINE DETAIL

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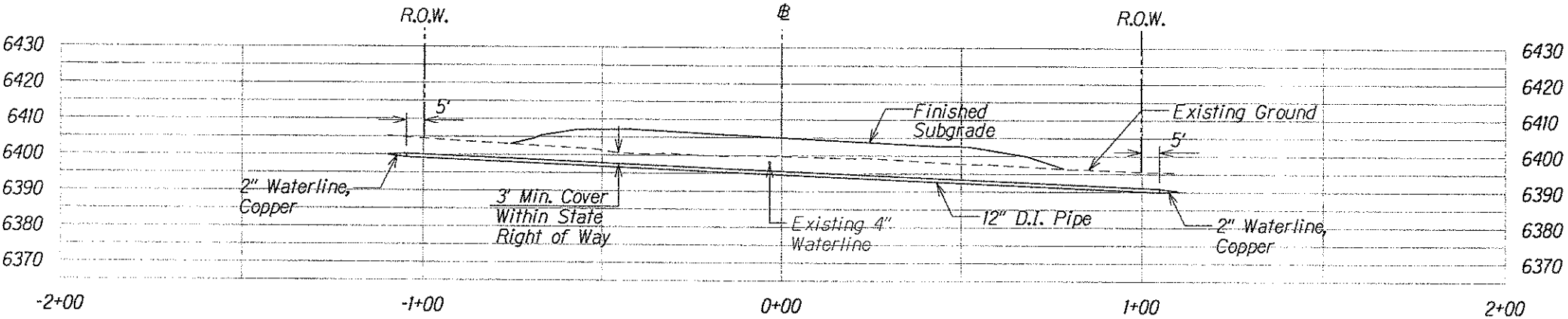
**WATERLINE/
 UTILITY DETAILS**

Scale: N.T.S. Date: June 29, 2007

SHEET No. 1 OF 2

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STATE	SADDLE ROAD PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI A-AD 6(4)	R50	R50



12" D.I. PIPE FOR FUTURE PIPELINE

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BRUCE K. MEYERS
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[Signature]
Expiration Date of License 4/08

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FEDERAL HIGHWAY ADMINISTRATION
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LONGITUDINAL PIPE SECTION

Scale: 1"=40' Date: June 29, 2007

SHEET No. 1 OF 1