

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-072-1 (51)	2007	48	106

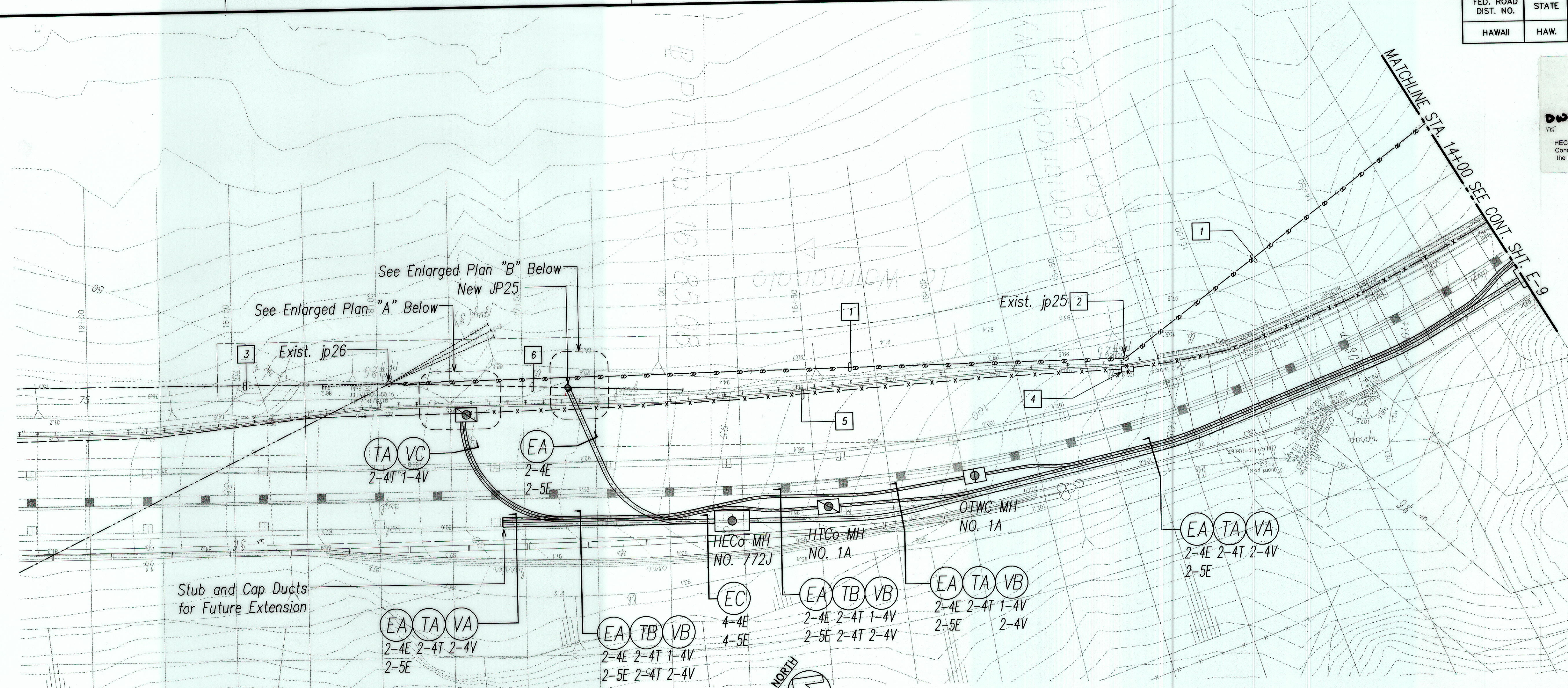
DRAWING REVIEW

Reviewed for HECO's Facilities Only

Date 2/05/07 By [Signature]

Engineering Department
Hawaiian Electric Company, Inc.

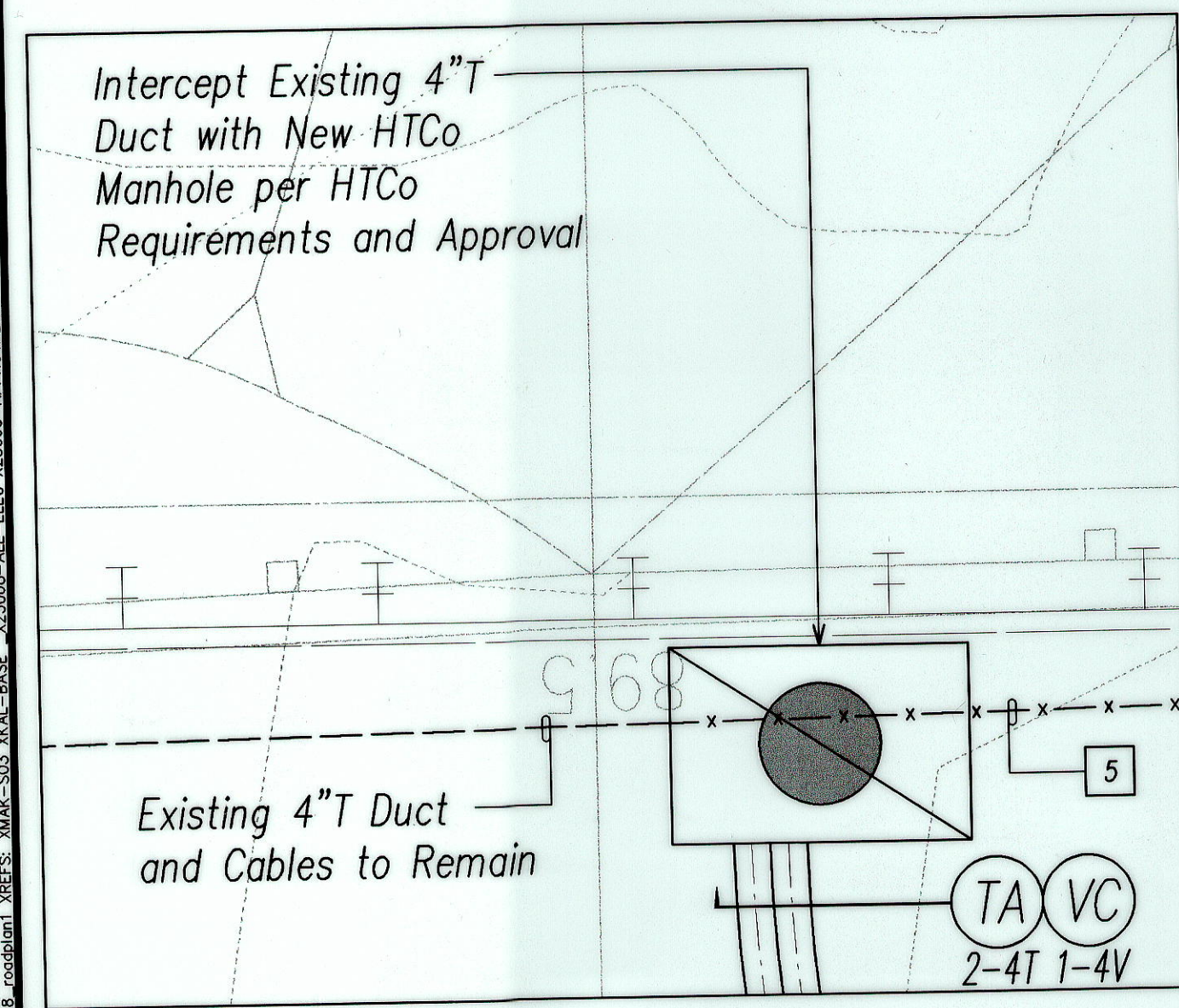
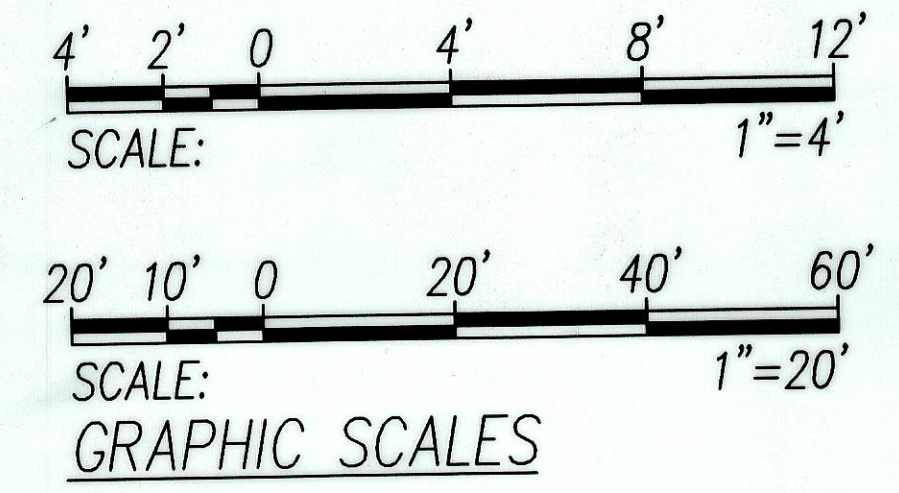
HECO's review of these drawings shall in no way relieve the Customer, its Consultant, its Contractor or anyone acting on the Customer's behalf from the responsibility for engineering, design, materials and any other liability associated with this project.



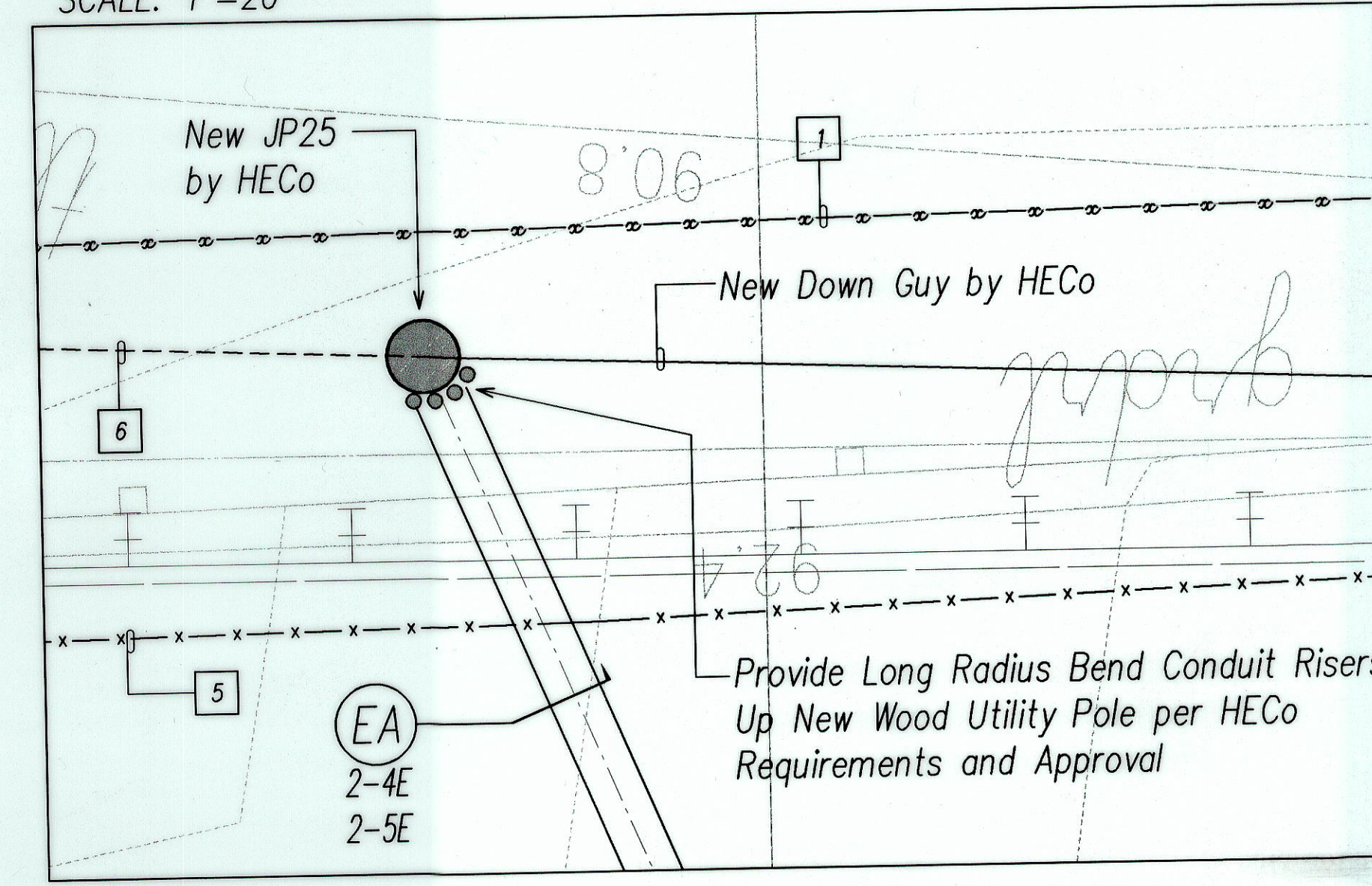
PARTIAL ELECTRICAL PLAN I
SCALE: 1"=20'

PLAN NOTES

- Existing HECO overhead lines to be removed by HECO.
- Existing Wood Utility Pole and Down Guy to be Removed by HECO.
- Existing HECO overhead lines to remain.
- Existing HTCo 2'x4' Pullbox to be Demolished and Removed after HTCo and OTWC Removes Their Respective Cables.
- Existing 4"T Duct to be Abandoned in Place; HTCo and OTWC to Remove Their Cables As Required.
- New HECO overhead lines by HECO.



ENLARGED ELECTRICAL PLAN "A"
SCALE: 1"=4'



ENLARGED ELECTRICAL PLAN "B"
SCALE: 1"=4'

DATE	
SURVEY PLOTTED BY	
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
NOTED	
REVISIONS	

RONALD M. S. HO & ASSOC., INC.
ELECTRICAL ENGINEERS

ANDREW I. MIYASATO
LICENSED PROFESSIONAL ENGINEER
No. 4340-E
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Signature: [Signature]
Expiration Date of the License: 04-30-08

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

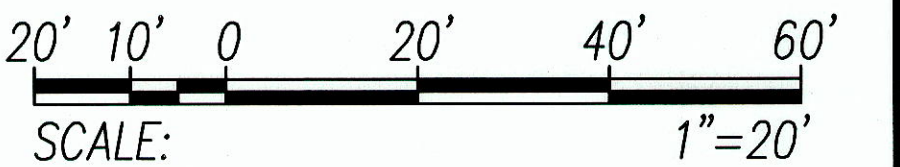
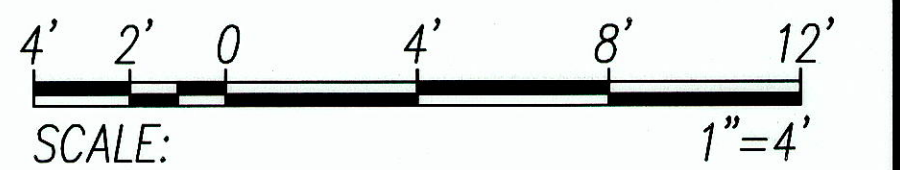
PARTIAL ELECTRICAL PLAN I

Kalaniana'ole Highway Improvements
Retaining Wall at Makapuu, Oahu
Federal Aid Project No. NH-072-1 (51)

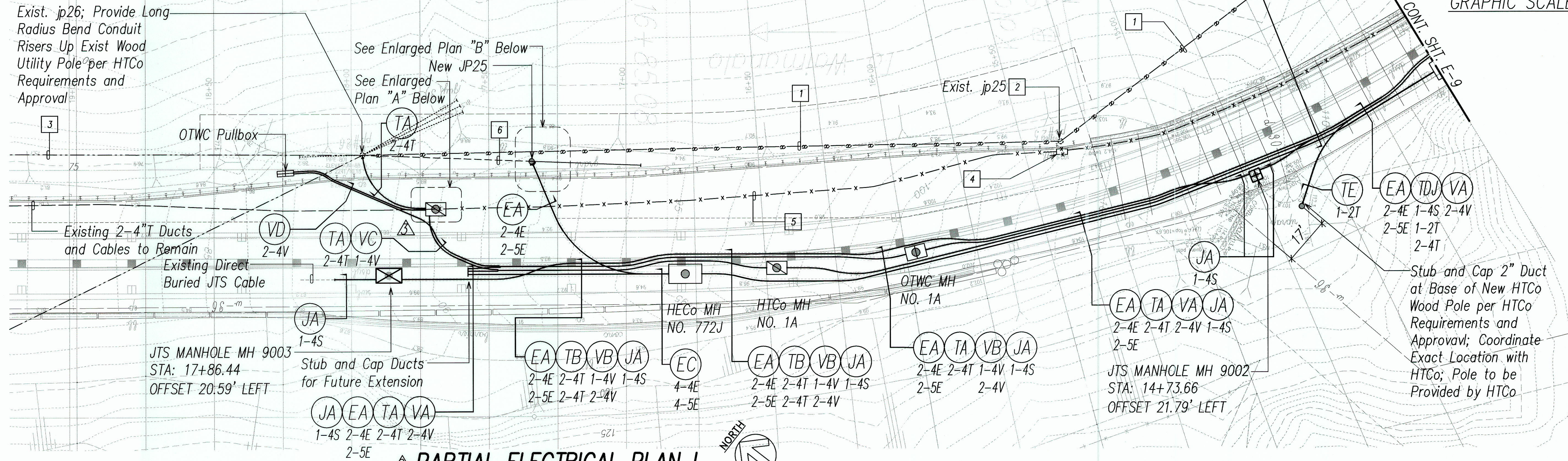
SCALE: AS NOTED
SHEET No. E-8 OF 18 SHEETS

DATE: APR. 2007

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-072-1 (51)	2007	C.O. 48	106



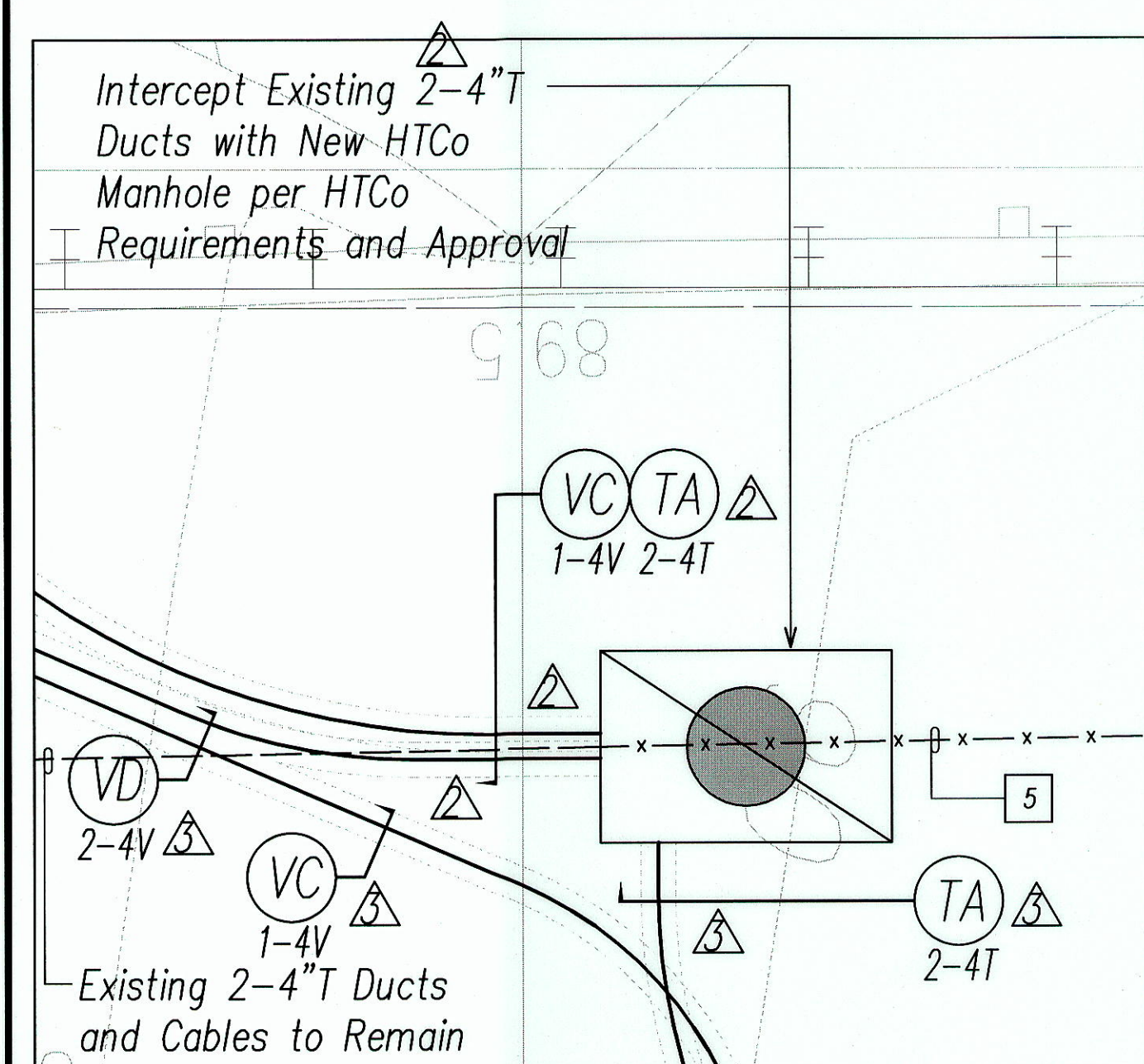
GRAPHIC SCALES



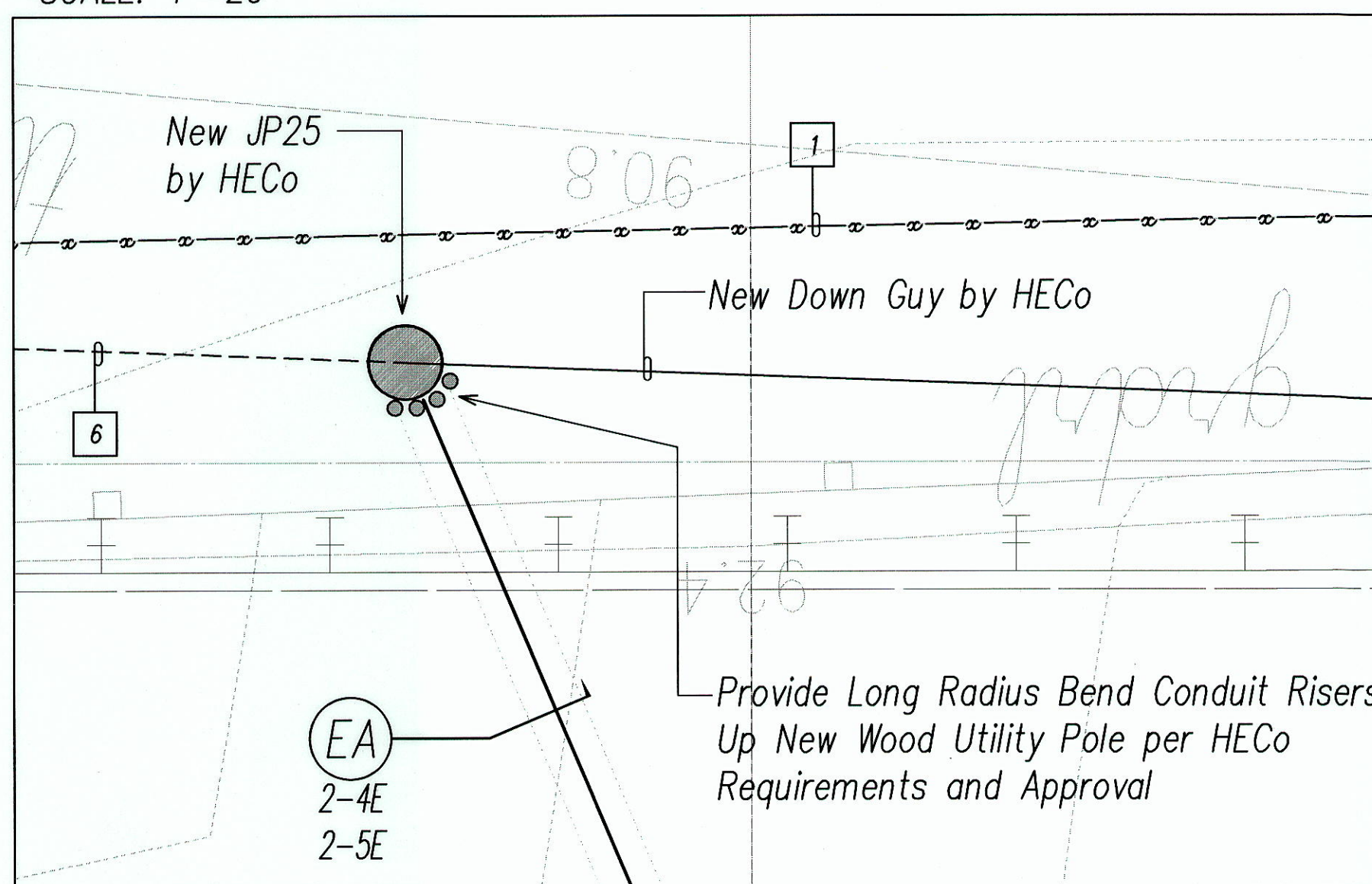
PARTIAL ELECTRICAL PLAN I
SCALE: 1"=20'

PLAN NOTES

- Existing HECO overhead lines to be removed by HECO.
- Existing Wood Utility Pole and Down Guy to be Removed by HECO.
- Existing HECO overhead lines to remain.
- Existing HTCo 2'x4' Pullbox to be Demolished and Removed after HTCo and OTWC Removes Their Respective Cables.
- Existing 4" T Duct to be Abandoned in Place; HTCo and OTWC to Remove Their Cables As Required.
- New HECO overhead lines by HECO.

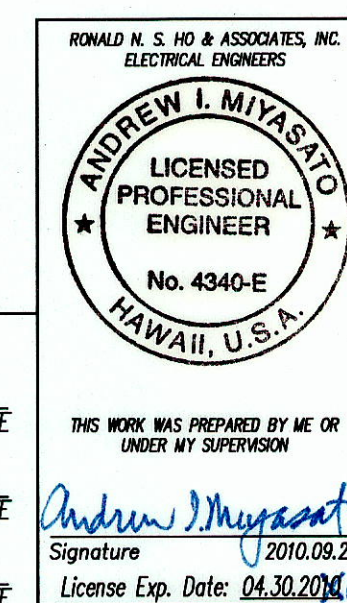


ENLARGED ELECTRICAL PLAN "A"
SCALE: 1"=4'



ENLARGED ELECTRICAL PLAN "B"
SCALE: 1"=4'

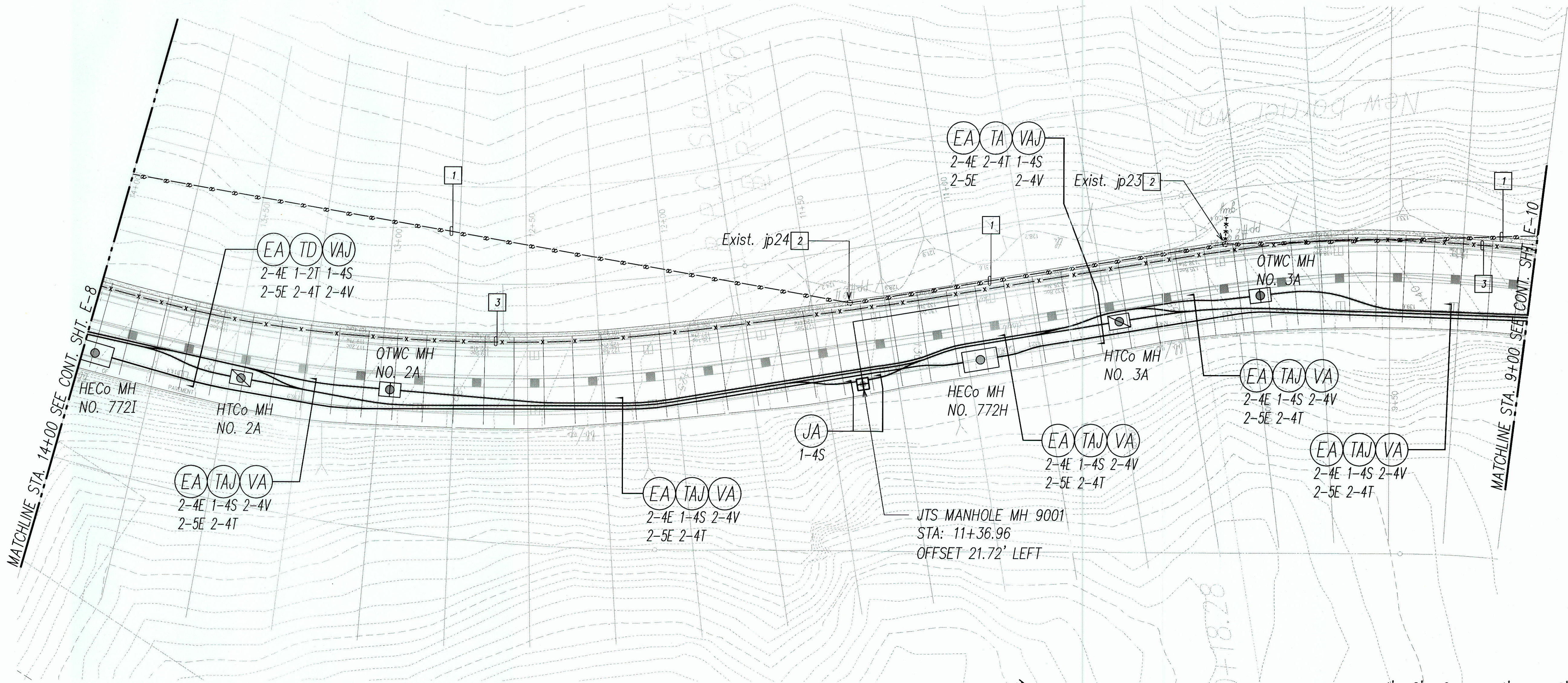
APPROVED BY:	
HAWAIIAN ELECTRIC COMPANY (HECO)	DATE
HAWAIIAN TELCOM (HTCo)	DATE
OCEANIC TIME WARNER CABLE (OTWC)	DATE



DATE	REVISION
06/03/2010	Revised OTWC Ductline Termination from HTCo Manhole to OTWC Pullbox
03/09/2010	Added JTS Ductline and Manholes; Added 2-4" HTCo Ductline Risers to jp26; Added 2" HTCo Ductline System for BWS Service
<p>STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION</p> <p>PARTIAL ELECTRICAL PLAN I</p> <p>Kalanianaʻole Highway Improvements Retaining Wall at Makapuu, Oahu Federal Aid Project No. NH-072-1 (51) SCALE: AS NOTED DATE: APR. 2007</p> <p>SHEET No. E-8 OF 18 SHEETS</p>	

SURVEY PLOTTED BY	DATE
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DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTEBOOK	
No.	

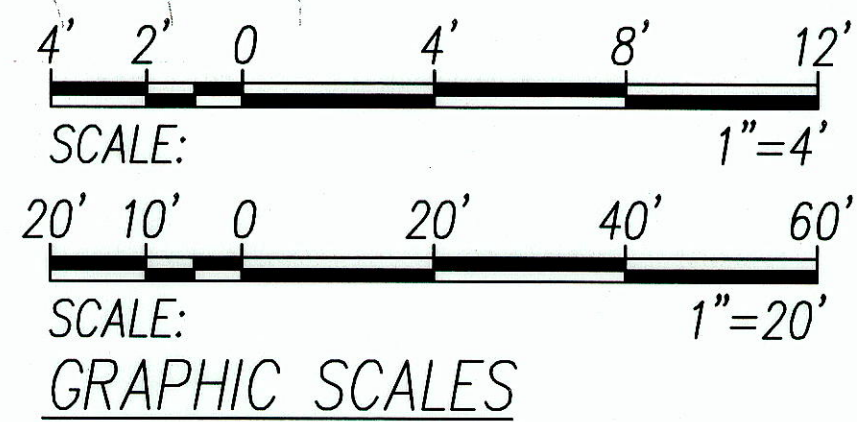
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-072-1 (51)	2007	C.O. 49	106



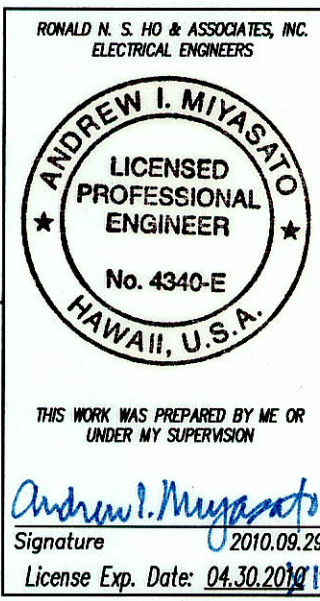
PARTIAL ELECTRICAL PLAN II
SCALE: 1"=20'

PLAN NOTES

- Existing HECo overhead lines to be removed by HECo.
- Existing Wood Utility Pole and Down Guy to be Removed by HECo.
- Existing 4" T Duct to be Abandoned in Place; HTCo and OTWC to Remove Their Cables As Required.



03/09/2010	Added JTS Ductline and Manholes; Added 2" HTCo Ductline System for BWS Service
DATE	REVISION



APPROVED BY:	DATE
HAWAIIAN ELECTRIC COMPANY (HECo)	
HAWAIIAN TELCO (HTCo)	
OCEANIC TIME WARNER CABLE (OTWC)	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
PARTIAL ELECTRICAL PLAN II
*Kalaniana'ole Highway Improvements
Retaining Wall at Makapuu, Oahu*
Federal Aid Project No. NH-072-1 (51)
SCALE: AS NOTED DATE: APR. 2007
SHEET No. E-9 OF 18 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-072-1 (51)	2007	50	106

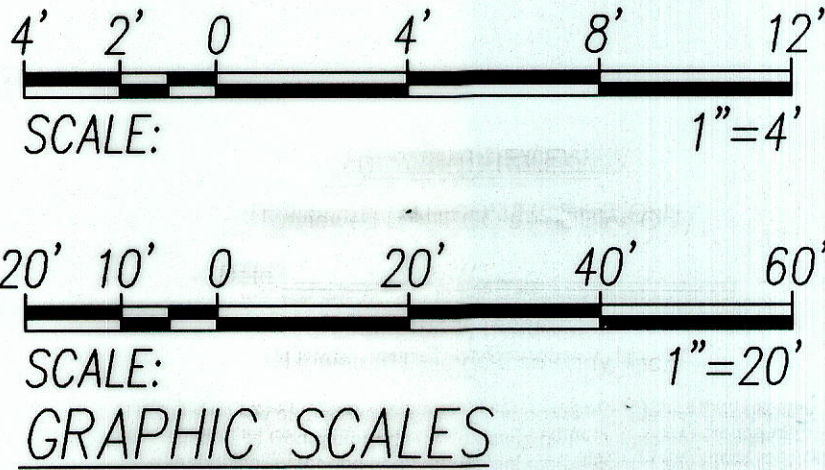


PLAN NOTES

- 1 Existing HECO overhead lines to be removed by HECO.
- 2 Existing Wood Utility Pole and Down Guy to be Removed by HECO.
- 3 Connect New Ductline to Existing Ductline Stub-Outs.
- 4 Sawcut and Patch Existing AC Pavement for Installation of New Utility Ducts Per Details on Sheet E-14.
- 5 Existing 4" T Duct to be Abandoned in Place; HTCo and OTWC to Remove Their Cables As Required.
- 6 Existing HTCo Pullbox to be Abandoned in Place.
- 7 Existing HECO Ducts to be Removed By Contractor After Existing Cables are Removed by HECO. Stub and Cap Existing Ducts 4'-0" From Existing HECO Manhole No. 772F.

PARTIAL ELECTRICAL PLAN III

SCALE: 1"=20'



DRAWING REVIEW

Reviewed for HECO's Facilities Only

Date 7/25/07 By [Signature]

Engineering Department
Hawaiian Electric Company, Inc.

HECO's review of these drawings shall in no way relieve the Customer, its Consultant, its Contractor or anyone acting on the Customer's behalf from the responsibility for engineering, design, materials and any other liability associated with this project.

APPROVED BY:

HAWAIIAN ELECTRIC COMPANY (HECO) [Signature]

HAWAIIAN TELCOM (HTCO) [Signature]

OCEANIC TIME WARNER CABLE (OTWC) [Signature]

DATE 8/14/07

RONALD N. S. HO & ASSOC., INC.
ELECTRICAL ENGINEERS

ANDREW I. MIYASATO
LICENSED PROFESSIONAL ENGINEER
No. 4340-E
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Signature: [Signature]

Expiration Date of the License: 04-30-08

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PARTIAL ELECTRICAL PLAN III

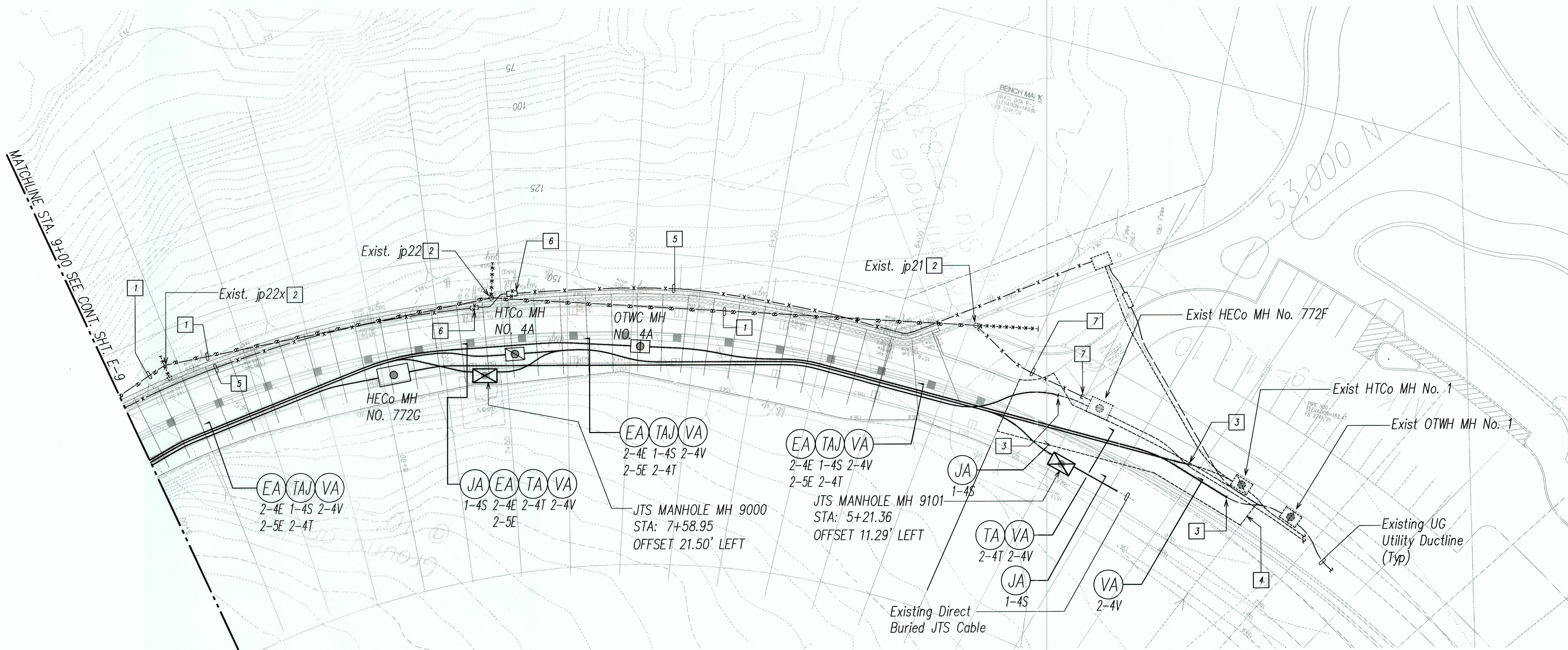
Kalaniana'ole Highway Improvements
Retaining Wall at Makapuu, Oahu
Federal Aid Project No. NH-072-1 (51)

SCALE: AS NOTED DATE: APR. 2007
SHEET No. E-10 OF 18 SHEETS

ORIGINAL PLAN	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
NO.	

LAST SAVE: 04/27/07 @ 12:47:52 BY: AM 1207 SC: 1:20
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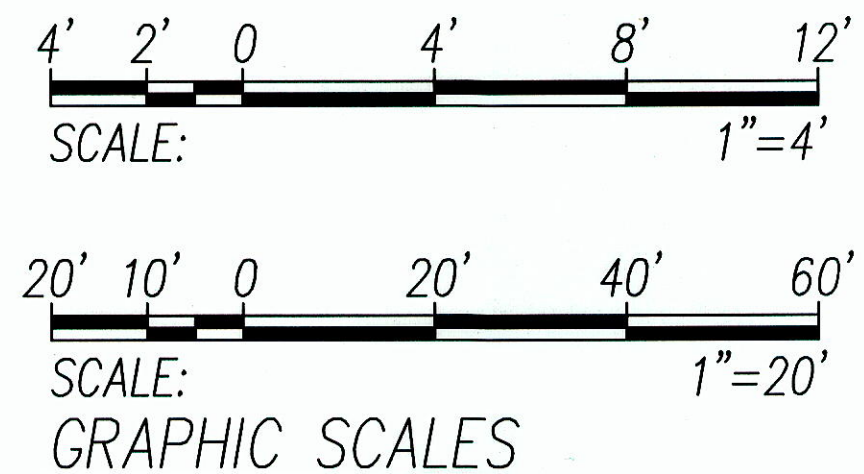
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-072-1 (51)	2007	C.O. 50	106



PLAN NOTES

- 1 Existing HECo overhead lines to be removed by HECo.
- 2 Existing Wood Utility Pole and Down Guy to be Removed by HECo.
- 3 Connect New Ductline to Existing Ductline Stub-Outs.
- 4 Sawcut and Patch Existing AC Pavement for Installation of New Utility Ducts Per Details on Sheet E-14.
- 5 Existing 4" T Duct to be Abandoned in Place; HTCo and OTWC to Remove Their Cables As Required.
- 6 Existing HTCo Pullbox to be Abandoned in Place.
- 7 Existing HECo Ducts to be Removed By Contractor After Existing Cables are Removed by HECo. Stub and Cap Existing Ducts 4'-0" From Existing HECo Manhole No. 772F.

PARTIAL ELECTRICAL PLAN III
SCALE: 1"=20'



APPROVED BY:	DATE
HAWAIIAN ELECTRIC COMPANY (HECo)	
HAWAIIAN TELECOM (HTCo)	
OCEANIC TIME WARNER CABLE (OTWC)	

ANDREW I. MIYASHIRO
LICENSED PROFESSIONAL ENGINEER
No. 4340-E
HAWAII, U.S.A.

03/09/2010	Added JTS Ductline and Manholes
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION PARTIAL ELECTRICAL PLAN III <i>Kalanianaoale Highway Improvements Retaining Wall at Makapuu, Oahu</i> Federal Aid Project No. NH-072-1 (51) SCALE: AS NOTED DATE: APR. 2007 SHEET No. E-10 OF 18 SHEETS	