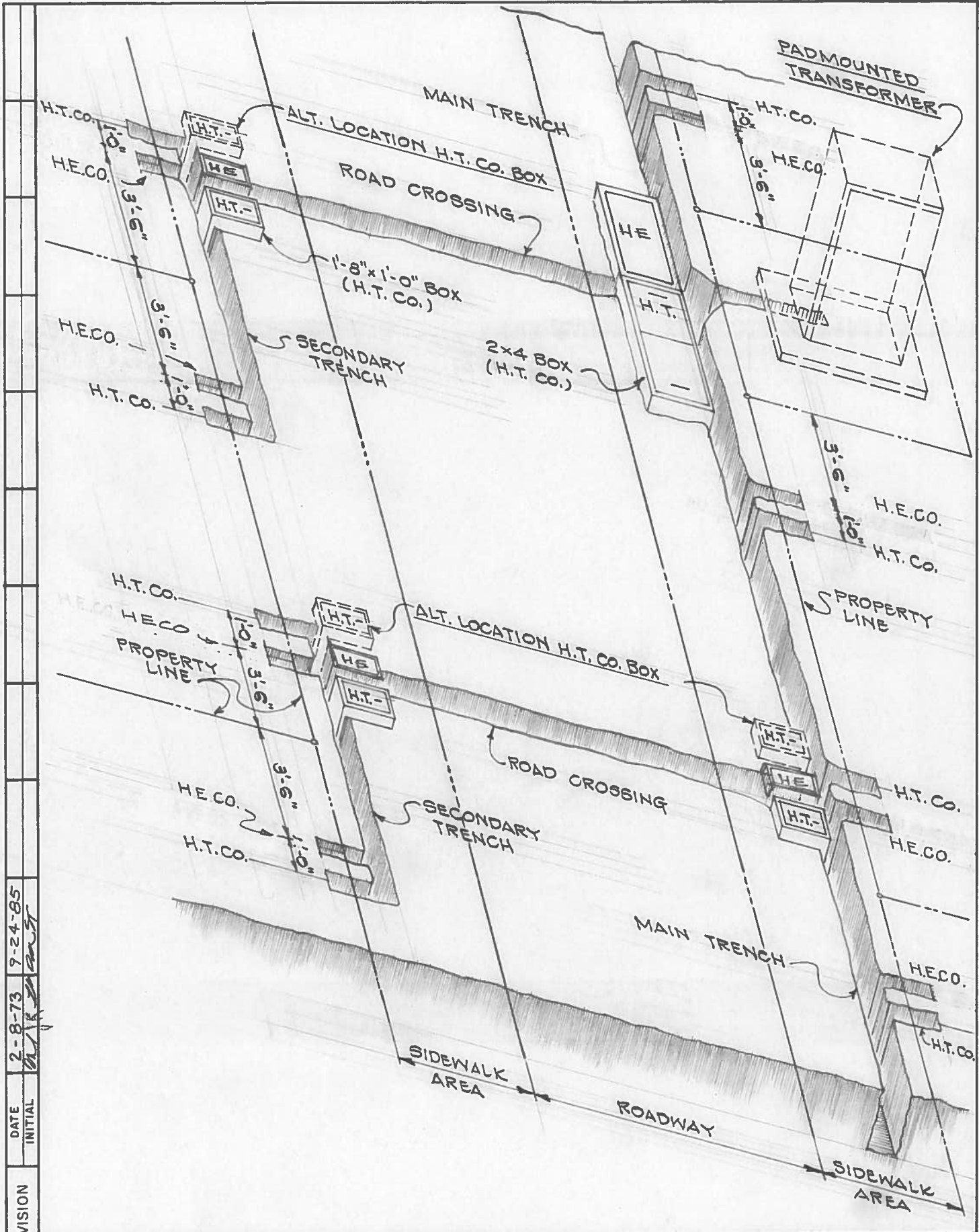


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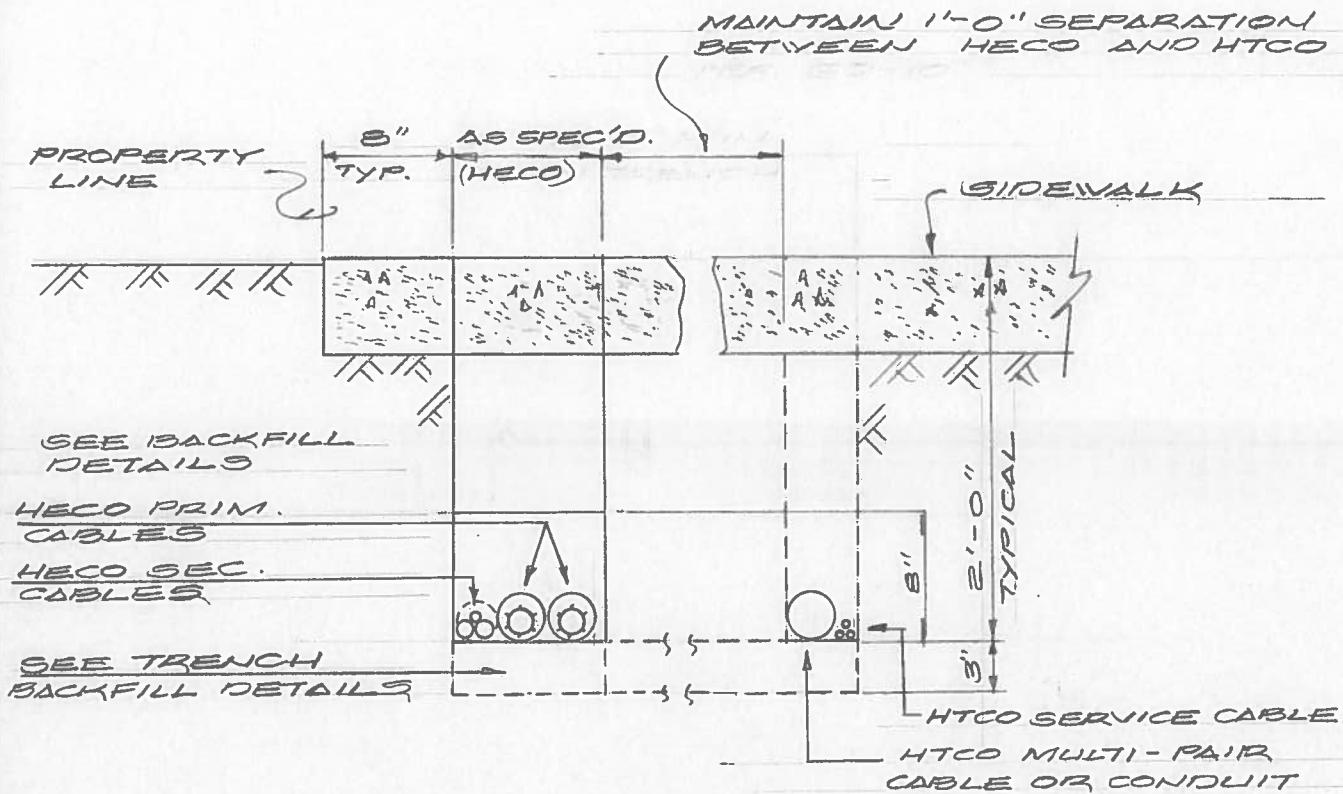
The information found in this document are general guidelines that may be used to aid in the preparation of your service request proposal. Please be advised that depending on the specific needs and actual conditions of your project, Hawaiian Electric may require your design to comply with different specifications including specifications that include more stringent requirements than those included in these design specification guidelines. For further guidance and clarification on the actual specifications that will apply to your particular project, please refer to instructions issued by Hawaiian Electric's Planner or Engineer who is assigned to your particular (Project/Review Request/...). Additionally, please be advised that Hawaiian Electric reserves the right to require additional modifications to any approved design if it is determined during actual construction that additional modifications must be made to address certain field conditions that were not detected or Hawaiian Electric was unaware of during the design review process.





DATE INITIAL
 2-8-73 JH
 7-24-85 JH

REVISION	DRAWN JH	DESIGNED TH/EM	APPD. JH RDL TEL	REDRAWN
SUPERSEDES	TYPICAL URD TRENCHING LAYOUT LIQ SYSTEMS			ORIGINAL 9-14-70
STANDARD CONSTRUCTION HAWAIIAN ELECTRIC CO. INC.				22-1012
				Rev. 2
				SHEET 1



TYPICAL TRENCHING DETAIL
UNDER SIDEWALK
FIGURE 1

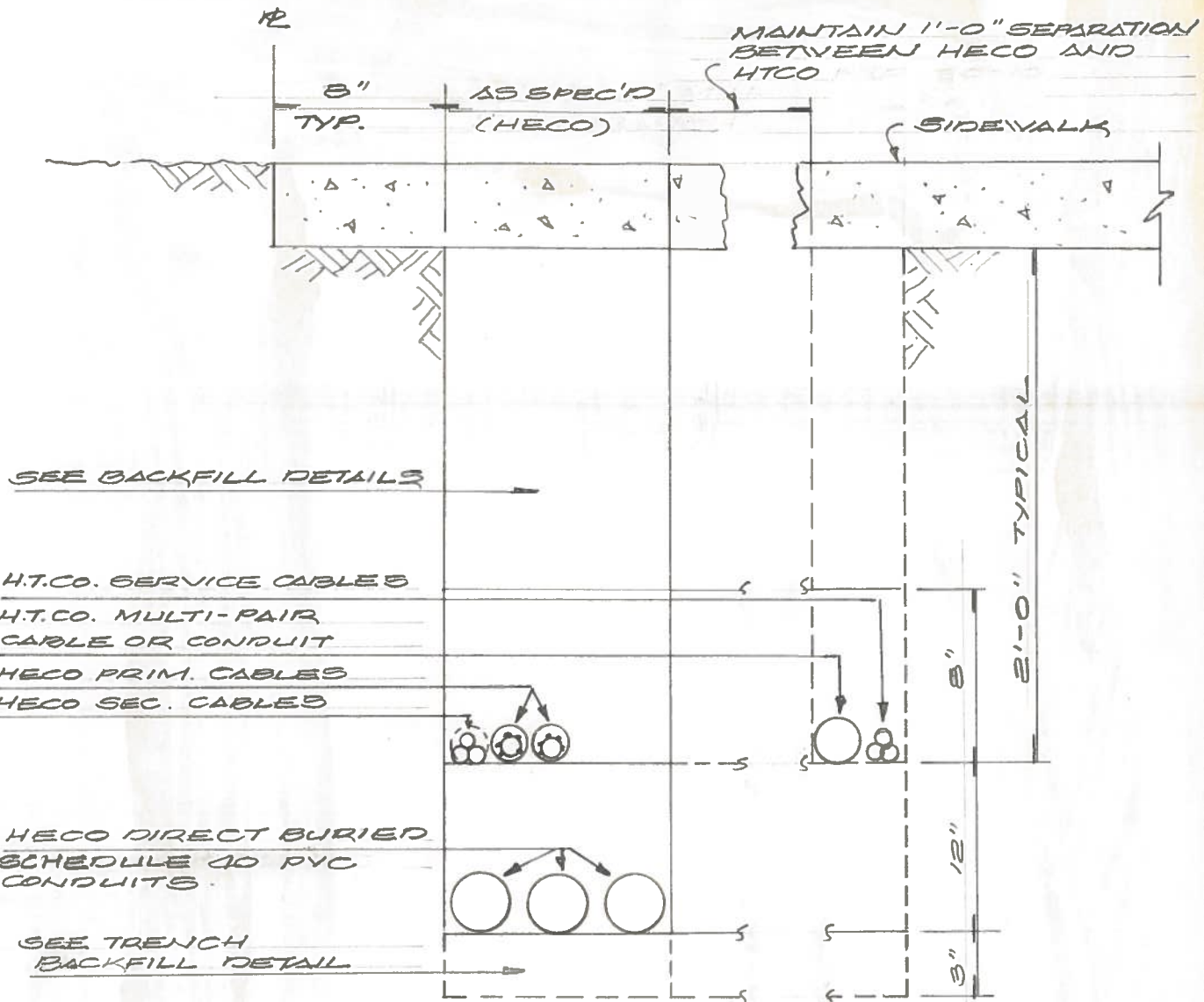
The depth and width for the main trench shall normally be as shown in this detail, unless indicated otherwise on the work print. The HECO & HTCO Engineering Dept. shall specify wider trenches when necessary to adequately accommodate cables and/or conduit with all of the cables and/or conduit occupying the trench floor.

Std. 30-1010 Typical Backfill Details

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DATE INITIAL
REVISION

DRAWN MM	DESIGNED TN/DM	APPD. <i>[Signature]</i>	REDRAWN SEPT 1985
SUPERSEDES			ORIGINAL 9/14/70
TYPICAL URD TRENCHING UNDER SIDEWALK UG SYSTEMS			22-1012
			SHEET 2
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TYPICAL TRENCHING DETAIL
UNDER SIDEWALK WITH
DIRECT BURIED CONDUITS
FIGURE 2

SEE SHEET 2 FOR NOTES

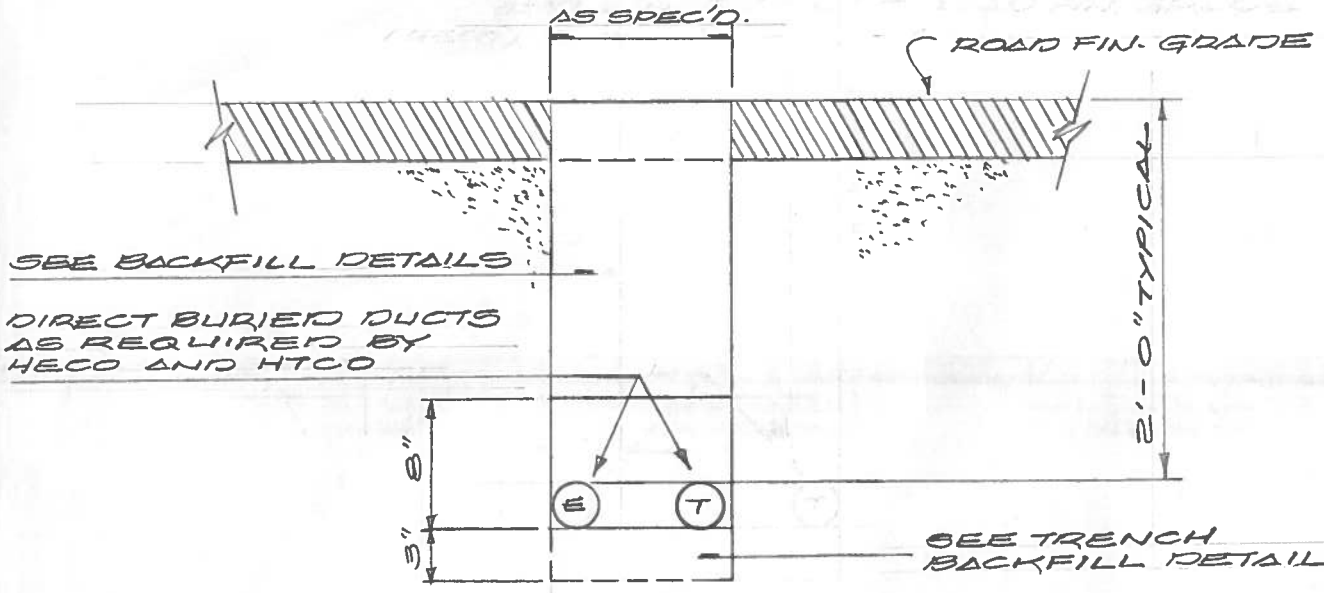
HE 534/C
 REVISION
 DATE INITIAL
 3-14-89
 [Signature]

DRAWN MM DESIGNED [Signature] APPD. [Signature] REDRAWN SEPT 1985

SUPERSEDES
 ENGINEERING STANDARD
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TYPICAL CURB TRENCHING
 UNDER SIDEWALK
 U.G. SYSTEMS

ORIGINAL 9/14/70
 22-1012 Rev. /
 SHEET 3

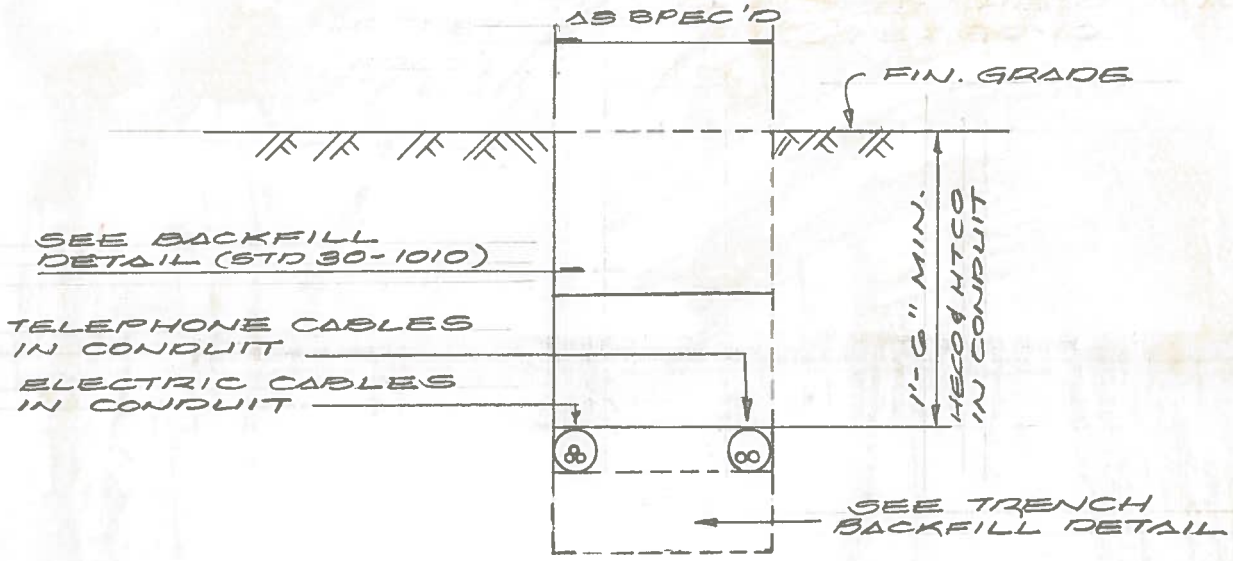


TYPICAL TRENCHING FOR ROAD CROSSINGS

FIGURE 3

The number and sizes of conduits for road crossings shall be specified by the HECO and HECO for each project.

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					SUPERSEDES			ORIGINAL <i>9/14/70</i>
					ENGINEERING STANDARD HAWAIIAN ELECTRIC CO. INC.			Rev. <i>0</i>
								TYPICAL URD TRENCHING FOR ROAD CROSSINGS UG SYSTEMS
							22-1012	
							SHEET <i>45</i>	



CONDUIT SERVICE TRENCH DETAIL
SERVICE TRENCHING WITHIN CUSTOMER'S PROPERTY
FIGURE 4

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SUPERSEDES

TYPICAL URD TRENCHING
 WITHIN CUSTOMER'S PROPERTY
 UG SYSTEMS

ORIGINAL 9/14/70

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