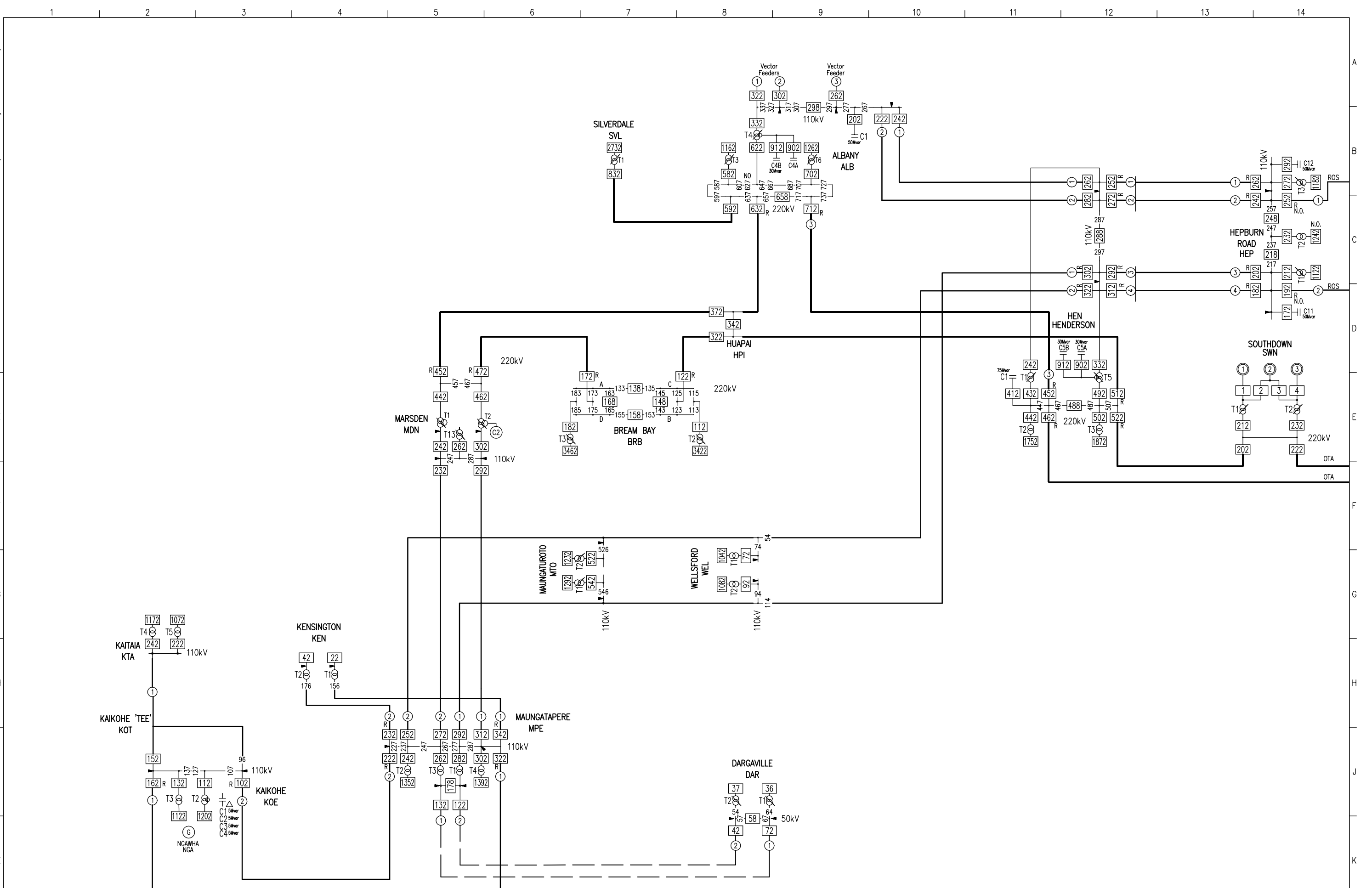


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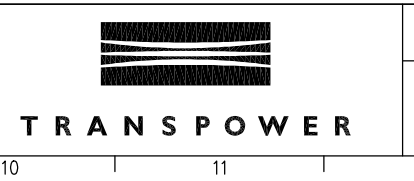
30435/NIPS-1

	Buswork					

Key For Colour Version Only

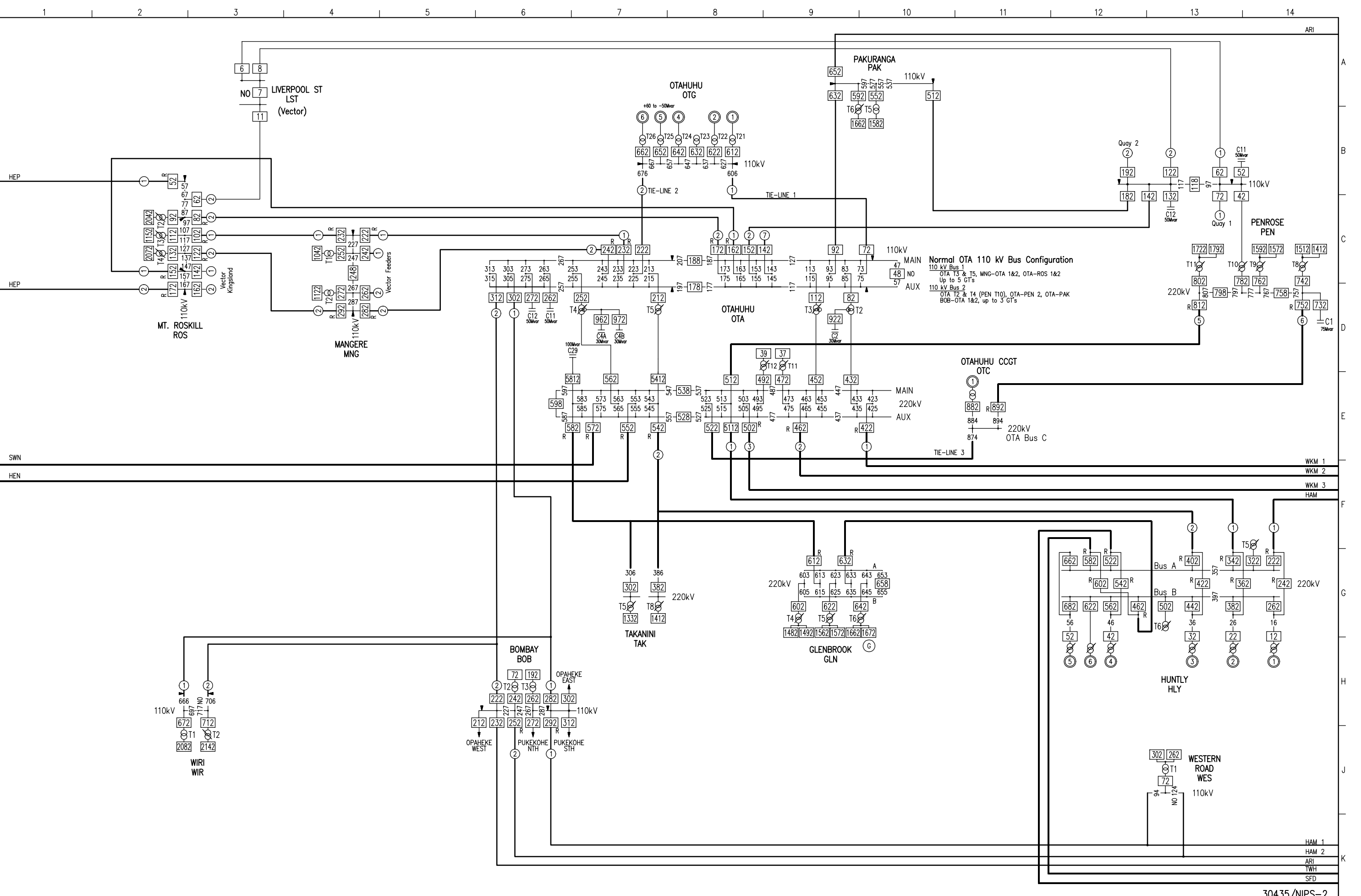
	Equipment under Transpower operational control
	Equipment not under Transpower operational control

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CHECKED	M. Frater	8/93
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TRANSPOWER TRANSMISSION	NIPS-1
NORTH ISLAND POWER SYSTEM DIAGRAM (SHEET 1 OF 5)	
ISSUE AE	(SEE NIPS-7)

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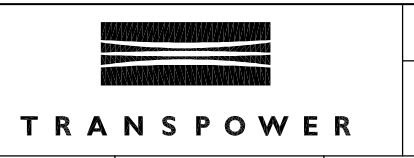
**Normal OTA 110 kV Bus Configuration**  
 110 kV Bus 1  
 OTA T3 & T5, MNG-OTA 1&2, OTA-ROS 1&2  
 Up to 5 GT's  
 110 kV Bus 2  
 OTA T2 & T4 (PEN T10), OTA-PEN 2, OTA-PAK  
 BOB-OTA 1&2, up to 3 GT's

	HVDC		Buswork		102 Circuit Breaker		T1 Transformer Banks		Auto-Trans. with Tertiary		V Voltage Transformer		Auto Earth Switch Reactor
	220 kV AC		163 Disconnector		518 CB Auto Reclose		Transformer Three Winding		Voltage Regulator		C Capacitor V.T.		Capacitor
	110 kV AC		163 NO Normally Open		518 CB Normally Open		On Load Tap Change		C Condenser		S Syncro. V.T.		Syncro. Cap. V.T.
	50/66 kV AC		Generation		* Limited C.B.s (No Protection)		Transformer Three Winding (OLTC)		Synchronising Point		H Harmonic Filter		
	1 Circuit Numbers		G Local Generation										

**Key For Colour Version Only**

	Equipment under Transpower operational control
	Equipment not under Transpower operational control

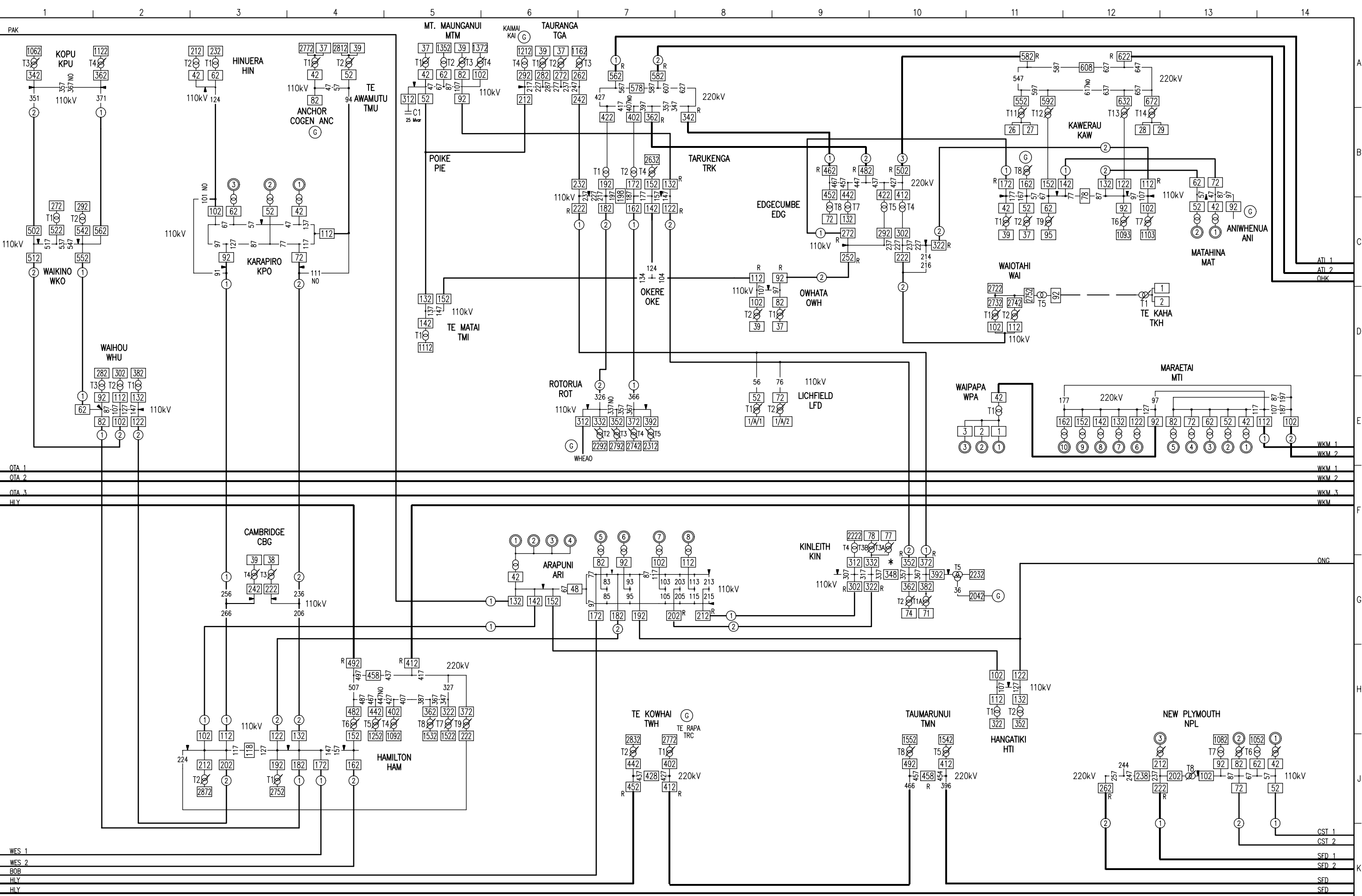
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TRANSPOWER TRANSMISSION	NIPS-2
NORTH ISLAND POWER SYSTEM DIAGRAM (SHEET 2 OF 5)	
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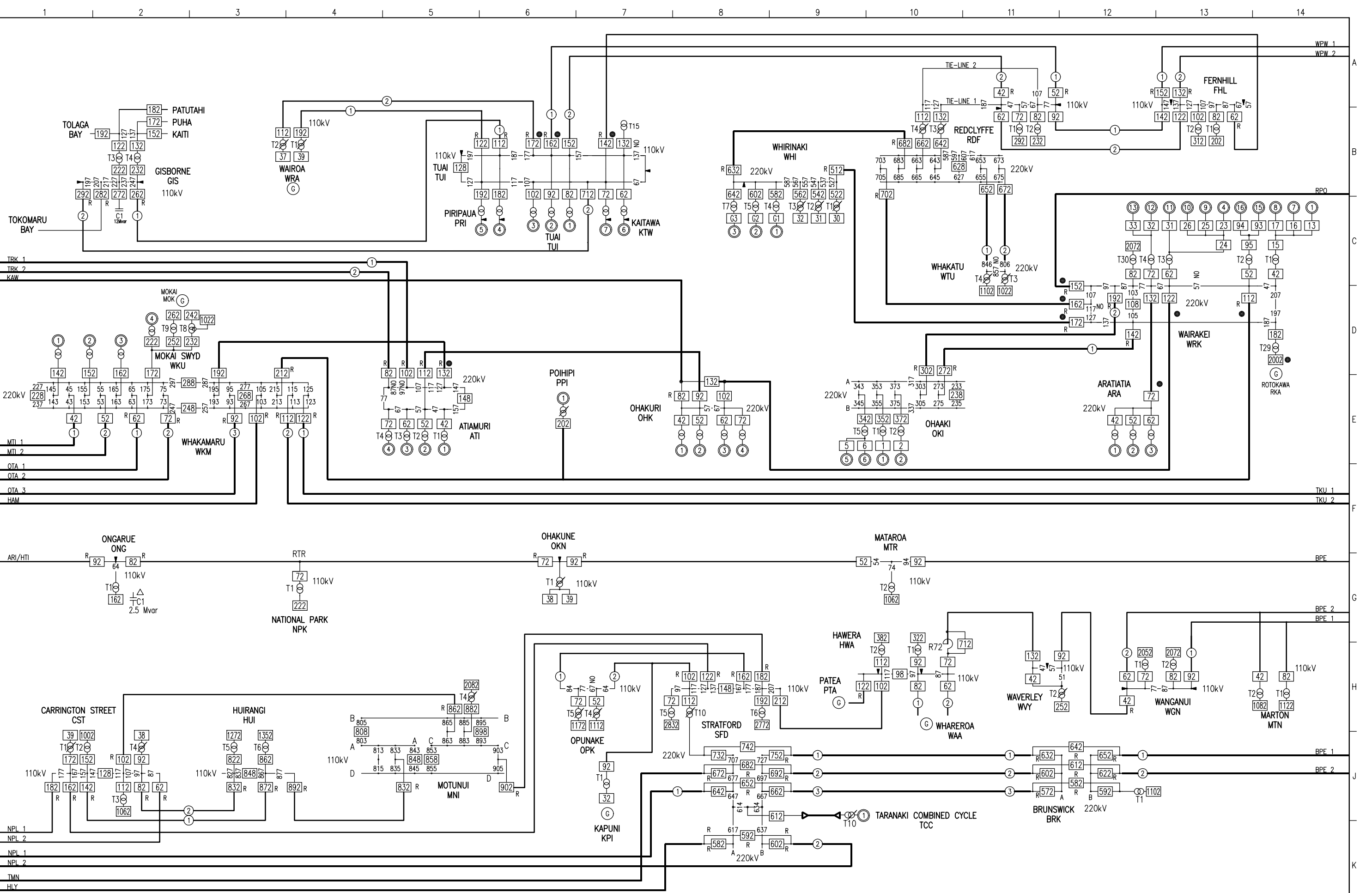
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<p> <b>Legend:</b>            HVDC — HVDC            220 kV AC — 220 kV AC            110 kV AC — 110 kV AC            50/66 kV AC — 50/66 kV AC            Buswork — Buswork            -163- Disconnector — -163- Disconnector            -163 NO Normally Open — -163 NO Normally Open            Generation (G) — Generation            Local Generation (G) — Local Generation            Limited C.B.s (No Protection) (*) — Limited C.B.s (No Protection)            Circuit Breaker (102) — Circuit Breaker            CB Auto Reclose (518) — CB Auto Reclose            CB Normally Open (518) — CB Normally Open            Transformer Banks (T1) — Transformer Banks            Transformer Three Winding — Transformer Three Winding            On Load Tap Change — On Load Tap Change            Transformer Three Winding (OLTC) — Transformer Three Winding (OLTC)            Auto-Trans. with Tertiary — Auto-Trans. with Tertiary            Voltage Regulator — Voltage Regulator            Condenser (C) — Condenser            Synchronising Point — Synchronising Point            Voltage Transformer — Voltage Transformer            Capacitor V.T. — Capacitor V.T.            Syncro. V.T. — Syncro. V.T.            Syncro. Cap. V.T. — Syncro. Cap. V.T.            Auto Earth Switch Reactor — Auto Earth Switch Reactor            Capacitor — Capacitor            Harmonic Filter — Harmonic Filter         </p>		<p> <b>Key For Colour Version Only</b>            42 Equipment under Transpower operational control            42 Equipment not under Transpower operational control         </p>		<p> <b>Key For Colour Version Only</b>            DRAWN D. Chapman 8/93            CHECKED M. Frater 8/93            REC. ISSUE S. Mutton 8/93            APP. ISSUE P. Clark 9/93            DATE OF CURRENT ISSUE 9/06         </p>		<p><b>TRANSPOWER</b></p>		<p> <b>TRANSPOWER TRANSMISSION</b>  <b>NORTH ISLAND</b>  <b>POWER SYSTEM DIAGRAM</b>  <b>(SHEET 3 OF 5)</b> </p>		<p> <b>NIPS-3</b>  <b>ISSUE</b>  <b>AE</b>  <small>(SEE NIPS-7)</small> </p>	
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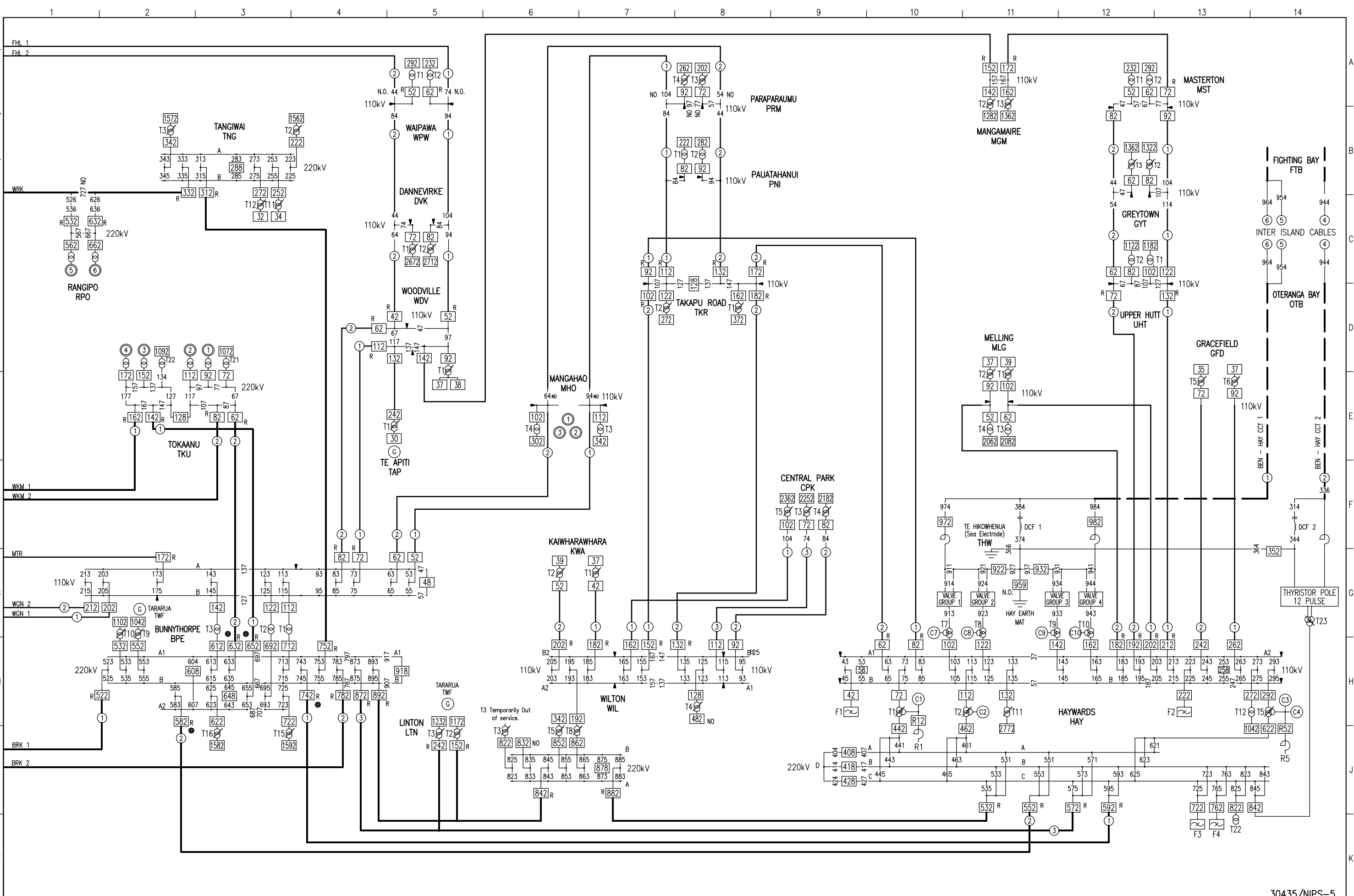
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<p> <b>Legend:</b>            — HVDC            — 220 kV AC            — 110 kV AC            — 50/66 kV AC            (1) Circuit Numbers            (G) Local Generation            * Limited C.B.s (No Protection)            T1 Transformer Banks            Transformer Three Winding            On Load Tap Change            Transformer Three Winding (OLTC)            Auto-Trans. with Tertiary            Voltage Regulator            (C) Condenser            Synchronising Point            Auto Earth Switch Reactor            Capacitor            Harmonic Filter         </p>	<p> <b>Legend:</b>            [102] Circuit Breaker            [518] CB Auto Reclose            [518] CB Normally Open            T1 Transformer Banks            Transformer Three Winding            On Load Tap Change            Transformer Three Winding (OLTC)            Auto-Trans. with Tertiary            Voltage Regulator            (C) Condenser            Synchronising Point            Voltage Transformer            Capacitor V.T.            Syncro. V.T.            Syncro. Cap. V.T.         </p>	<p> <b>Key For Colour Version Only</b>            [42] Equipment under Transpower operational control            [42] Equipment not under Transpower operational control         </p>	<p> <b>Key For Colour Version Only</b>            DRAWN D. Chapman 8/93            CHECKED M. Frater 8/93            REC. ISSUE S. Mutton 8/93            APP. ISSUE P. Clark 9/93            DATE OF CURRENT ISSUE 9/06         </p>	<p><b>TRANSPOWER</b></p>	<p> <b>30435/NIPS-4</b>            TRANSPOWER TRANSMISSION            NORTH ISLAND            POWER SYSTEM DIAGRAM            (SHEET 4 OF 5)         </p>	<p> <b>NIPS-4</b>            ISSUE            AE            (SEE NIPS-7)         </p>
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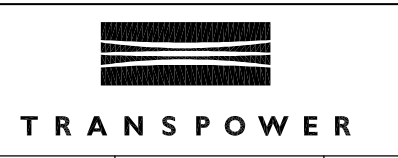
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TRANSPOWER TRANSMISSION	NIPS-5
NORTH ISLAND POWER SYSTEM DIAGRAM (SHEET 5 OF 5)	
ISSUE AE (SEE NIPS-7)	

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