

Raceway Diagram
(Not to scale)

Refer to Electrical Legend - Sheet EL
Refer to Electrical Layout - Sheet E1

The use of 90 degree ells is not acceptable; use 45 degree bends at all raceway corners. The use of crossover tunnels at all applicable locations is required.

Conduit Required						
General Notes						
1. All conduit runs must take most direct route point to point.						
2. All conduit runs must have a pull string.						
Conduit	From	To	Cable Type	Minimum Conduit Size	Maximum Conduit Length	Special Requirements
G 1	CB1	ST	1	(P)	3/4"	50'
G 2	CB2	ST	1	(P)	3/4"	50'
B 3	CB1	ME	1	(P)	2"	-
B 4	CB2	MR	1	(P)	1 1/2"	-
C 5	MR	MR	1	(S)	1 1/2"	50'
C 6	MR	DS	1	(S)	1 1/2"	50'
A 7	MR	ME	1	(S)	2"	25'
A 8	MR	MB	1	(P)	2 1/2"	49'
A 9	MR	MR	1	(S)	2 1/2"	49'
A 10	MR	MR	1	(P)	2 1/2"	65'
A 11	MR	MR	1	(S)	1 1/2"	65'
A 12	MR	MR	1	(S)	1 1/2"	49'
A 13	MR	MR	1	(S)	1 1/2"	65'
A 14	MR	MR	1	(S)	2"	49'
A 15	MR	MR	1	(P)	1 1/2"	55'
A 16	MR	MR	1	(S)	1 1/2"	55'
A 17	MR	MR	1	(S)	2"	55'
A 18	MR	MR	1	(S)	2"	55'
A 19	MR	MR	1	(P)	2"	39'
A 20	MR	MR	1	(S)	2 1/2"	39'
A 21	MR	MR	1	(H)	2 1/2"	39'
A 22	MR	MR	1	(S)	2"	39'
A 23	MR	MR	1	(P)	2 1/2"	39'
A 24	MR	MR	1	(S)	2 1/2"	39'

All dimensions must be off the final finished wall.

If a wall is furred out to hide electrical duct or boxes, the dimensions included in this plan must come off the finished furred wall.

Refer to Electrical Legend - Sheet EL

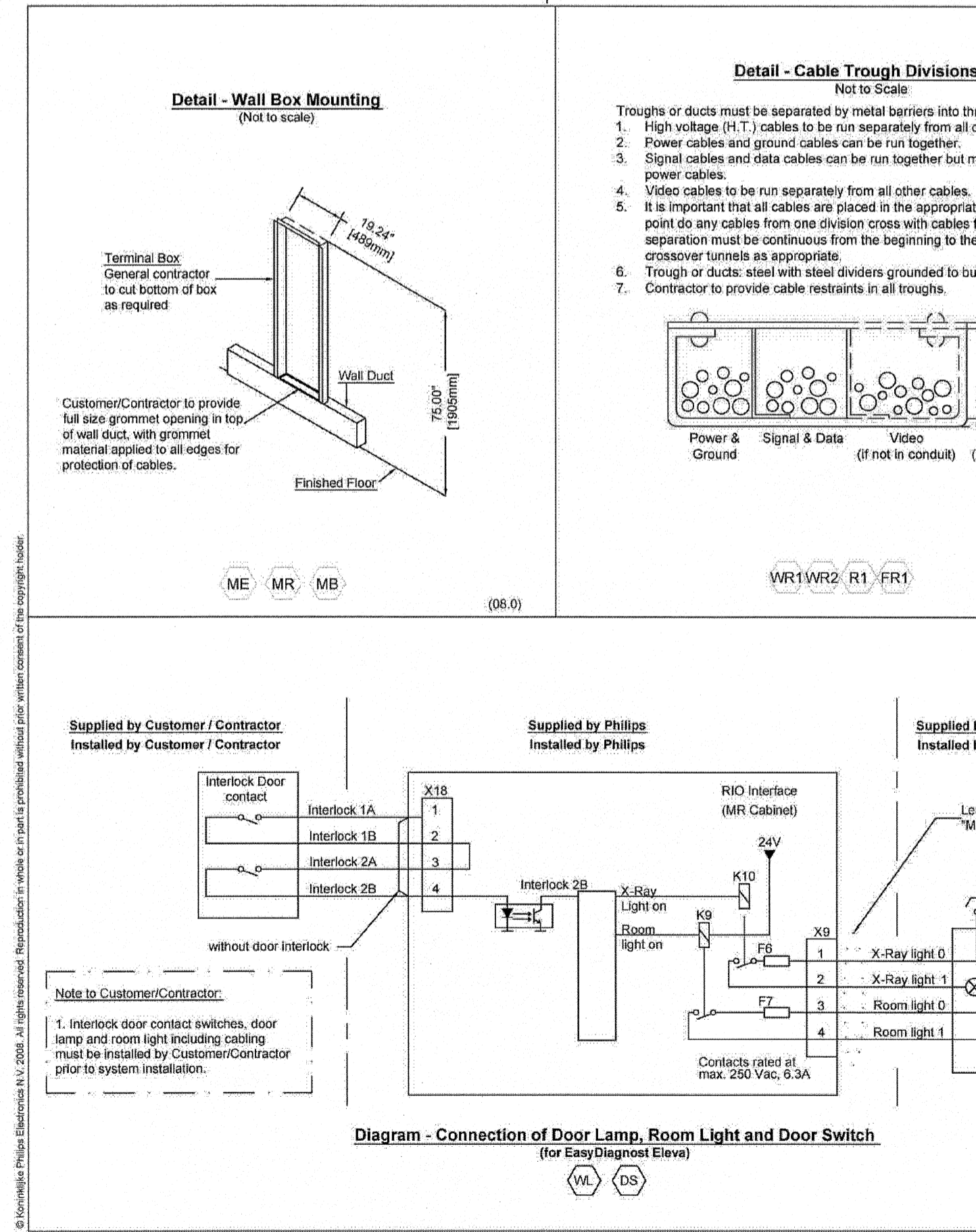
PHILIPS

Project: EasyDiagnose Eleva
Maine Medical Center
Portland, ME
- Room 6

Philips Contacts:
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Drawn By: J.P. Galloway

Project Details:
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Order: 6000983030000

E2



Detail - Wall Box Mounting
(Not to scale)

1. High voltage (H.V.) cables to be run separately from all other cables.
2. Power cables and ground cables can be run together.
3. Signal cables and data cables can be run together but must be separated from power cables.
4. Video cables to be run separately from all other cables.
5. It is important that all cables are placed in the appropriate trough and at no given point do any cables from one division cross with cables from another. Trough separation must be continuous from the beginning to the end of the run. Utilize crossover tunnels as appropriate.
6. Trough or ducts: steel with steel dividers grounded to building ground.
7. Contractor to provide cable restraints in all troughs.

Diagram - Connection of Door Lamp, Room Light and Door Switch
(See EasyDiagnose Eleva)

Power Quality Requirements			
Voltage 60KVA Generator			
Power Output:	89KW		
Supply Configuration:	3 phase, 3 wire power and ground, Delta or wye OR		
	3 phase, 4 wire power w/ Neutral + ground, wye		
Nominal Line Voltage:	400, 440, 480, or 480 VAC, 60 Hz		
Line Voltage Variation:	± 10% steady state		
Line Voltage Balance:	2% maximum of nominal voltage between phases		
Frequency Variation:	± 1.0 Hz		
Voltage Surges:	To 110% of steady-state voltage 100 msec. Maximum duration, 5 per hour maximum		
Voltage Sags:	To 90% of steady-state voltage 100 msec. Maximum duration, 5 per hour maximum		
Line Impulses:	1000 VPK allows phase neutral RMS absolute maximum. No more than 1 impulse per hour to exceed 500 VPK.		
Neutral-Ground Voltage:	2.0 volts maximum RMS value		
Neutral-Ground Impulses:	No more than 1 per hour that exceeds 25 volts and 1 impulse		
High Frequency Noise:	3.0 volts steady-state maximum. Over 3.0 volts permitted for 100 msec. maximum, 1 per hour max.		
Grounded Conductor Impedance:	0.1 Ohms @ 60 Hz. maximum		
Branch Circuit and Wire Gauge Requirements			
Voltage 60KVA Generator			
Branch Power:	167 KVA		
Circuit Breaker to ME (CB1):	3 pole, 100ampers (@ 480V)		
Circuit Breaker to MR (CB2):	3 pole, 30ampers (@ 480V)		
Maximum Instantaneous Power:	180 KVA @ 100 KVP, 800 ms (Short Term)		
Maximum Stand-By Current:	< 90amp @ 3 mA, 110 KVP constant (Long Term)		
Recommended conductor sizes for 1% impedance of branch conductors to circuit breaker (CB1), provide splitter to CB2. Based on 20' copper conductors:			
#1 AWG	400 VAC	440VAC	480VAC
10 AWG	66R	80R	119R
20 AWG	83R	100R	119R
30 AWG	104R	126R	138R
40 AWG	132R	160R	172R
250 KCM	168R	204R	222R
300 KCM	197R	238R	260R
	236R	286R	312R
Maximum Instant Current @ CB Panel:	230 A	210 A	200 A
Maximum Phase-phase impedance @ CB Panel:	0.095 Ω	0.120 Ω	0.135 Ω
Maximum Load Voltage Drop @ CB Panel:	21.9 V	25.2 V	27.0 V
Percent Regulation at Maximum Load @ CB Panel:	5.5%	6.7%	6.9%
Circuit Breaker to ME (CB1):	400 VAC - 480 VAC	#1 AWG 50ft. max.	
Circuit Breaker to MR (CB2):	400 VAC - 480 VAC	#10 AWG 50ft. max.	

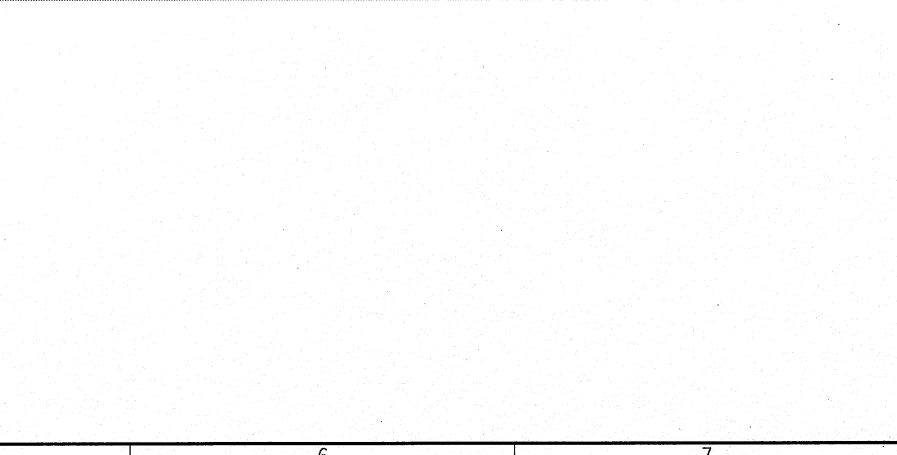
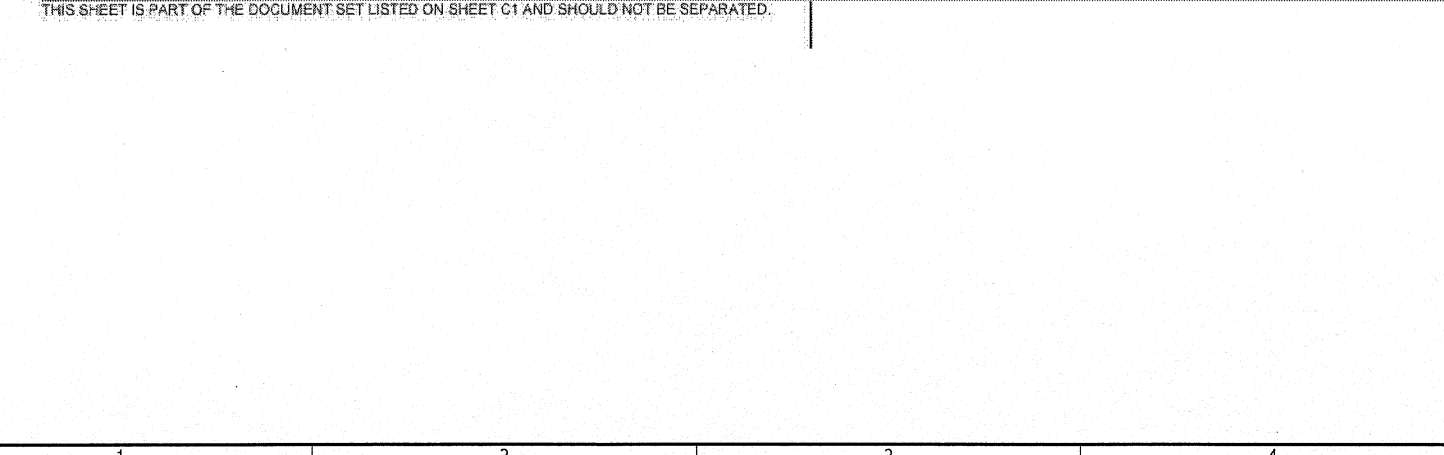
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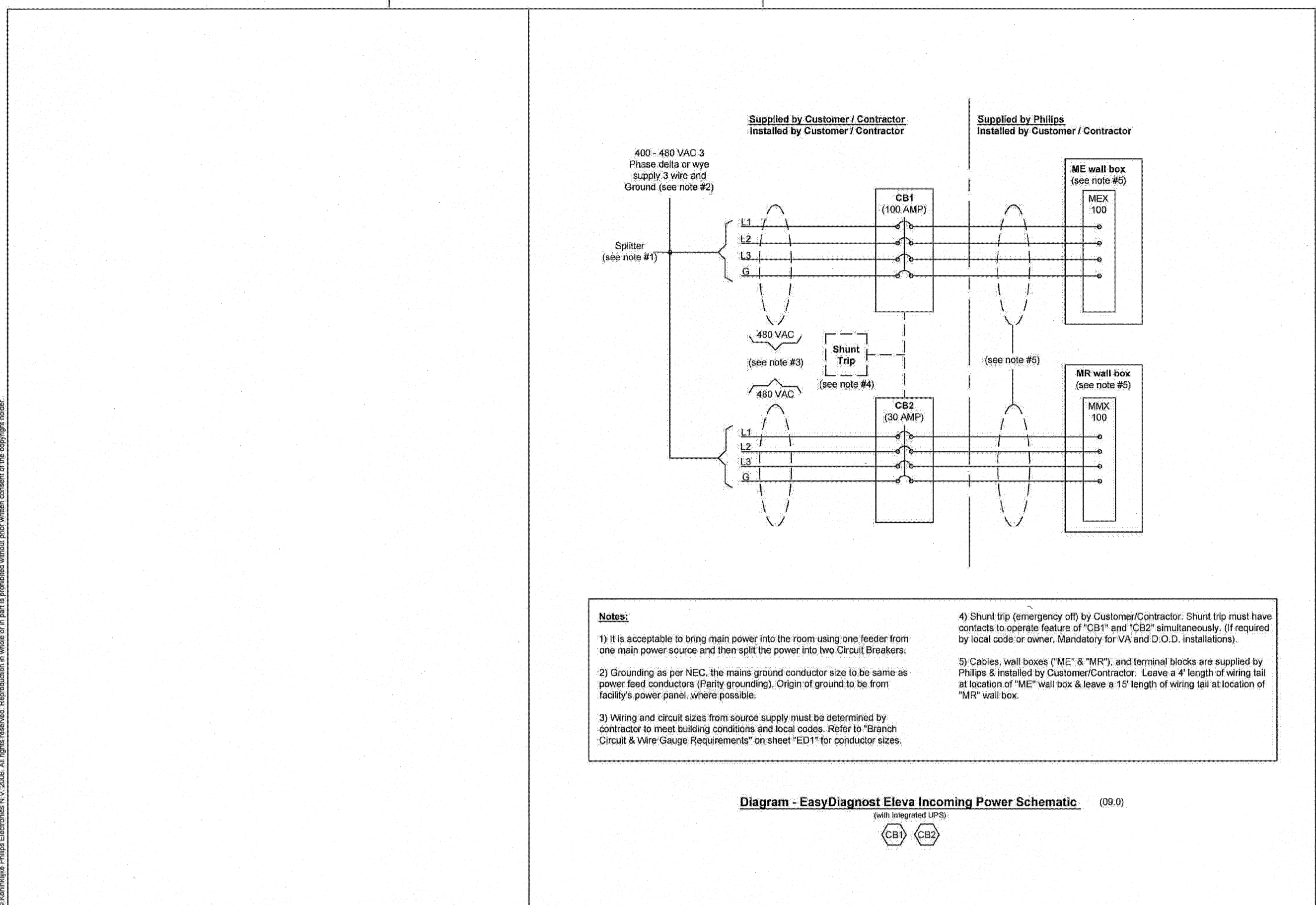
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E1



THIS SHEET IS PART OF THE DOCUMENT SET LISTED ON SHEET C1 AND SHOULD NOT BE SEPARATED.

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- Notes:**
- It is acceptable to bring main power into the room using one feeder from one main power source and then split the power into two Circuit Breakers.
 - Grounding as per NEC, the main ground conductor size to be same as power lead conductors (if any grounding). Origin of ground to be from facility's power panel, where possible.
 - Wiring and circuit sizes from source supply must be determined by contractor to meet building conditions and local codes. Refer to "Branch Circuit & Wire Gauge Requirements" on sheet "ED1" for conductor sizes.
 - Shunt trip (emergency off) by Customer/Contractor. Shunt trip must have contacts to operate feature of "CB1" and "CB2" simultaneously, (if required by local code or owner. Mandatory for VA and D.O.D. installations).
 - Cables, wall boxes ("ME" & "MR") and terminal blocks are supplied by Philips & installed by Customer/Contractor. Leave a 4' length of wiring tail at location of "ME" wall box & leave a 15' length of wiring tail at location of "MR" wall box.

Diagram - EasyDiagnose Eleva Incoming Power Schematic (08.0)

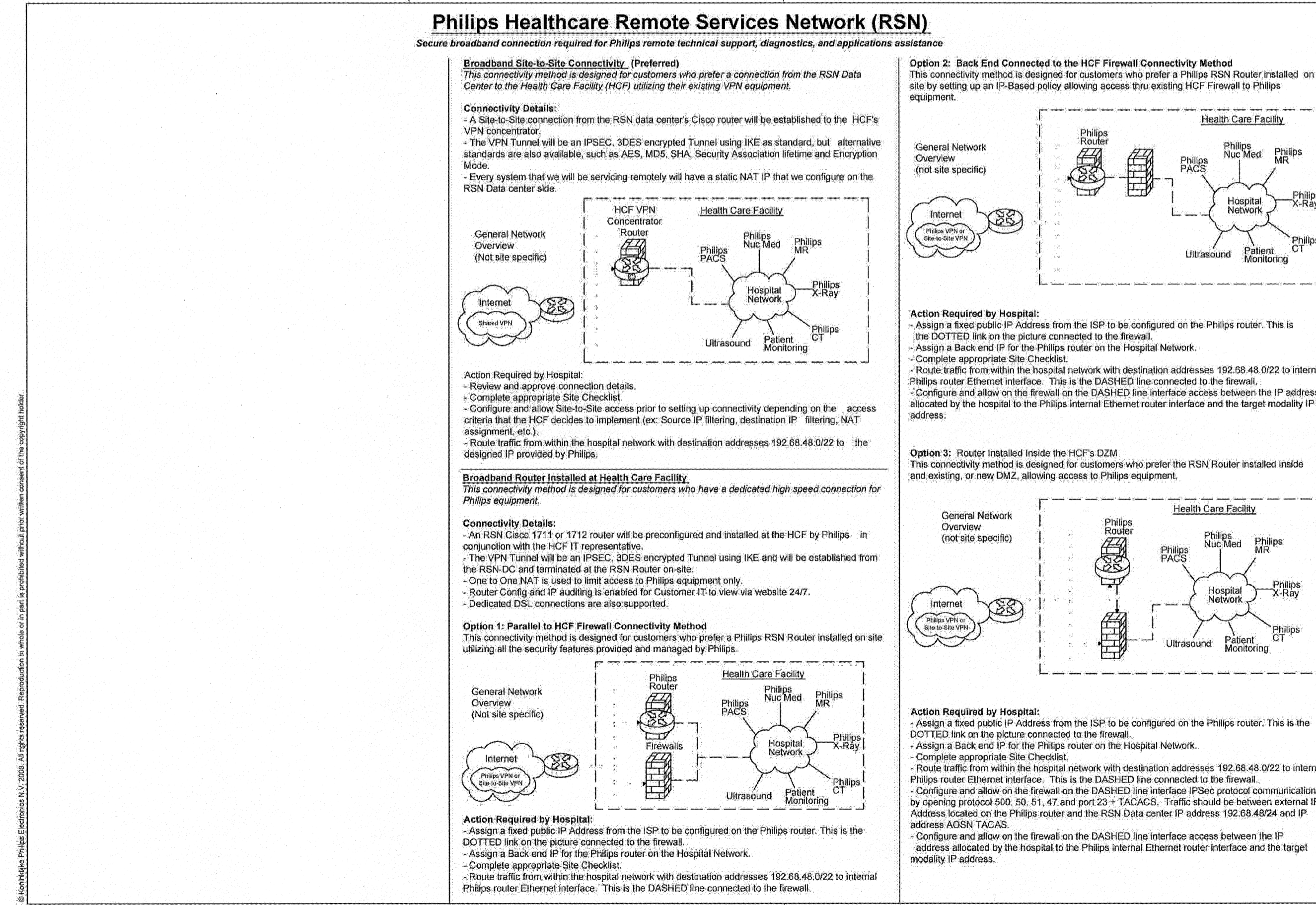
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ED2

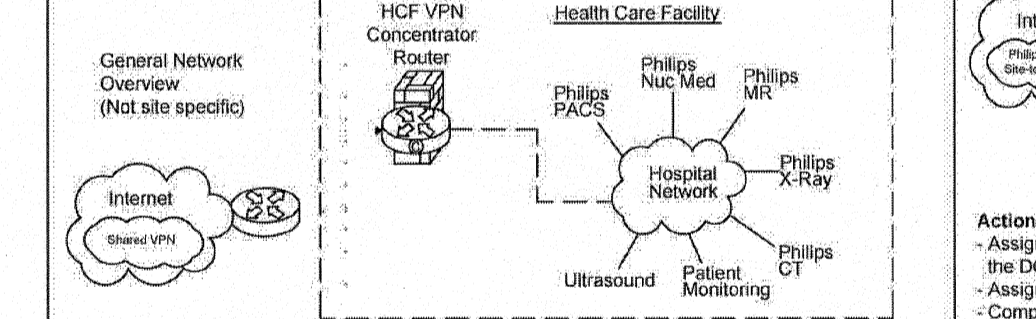


Philips Healthcare Remote Services Network (RSN)

Secure broadband connection required for Philips remote technical support, diagnostics, and applications assistance

Broadband Site-to-Site Connectivity (Preferred)
This connectivity method is designed for customers who prefer a connection from the RSN Data Center to the Health Care Facility (HCF) utilizing their existing VPN equipment.

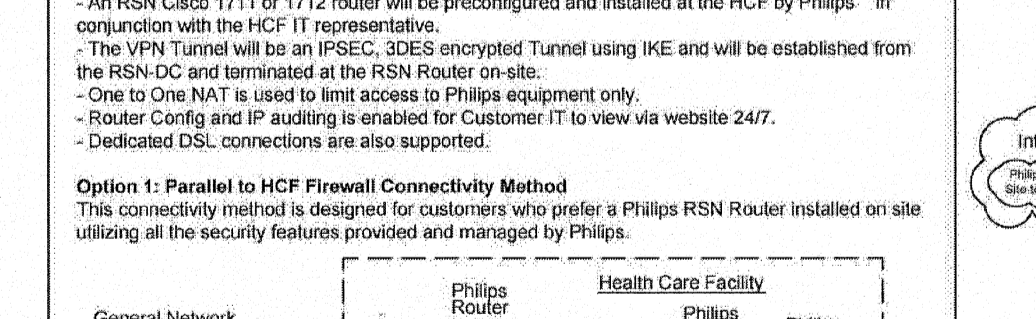
Connectivity Details:
- A Site-to-Site connection from the RSN data center's Cisco router will be established to the HCF's VPN concentrator.
- The VPN Tunnel will be an IPSEC, 3DES encrypted Tunnel using IKE as standard, but alternative standards are also available, such as AES, MD5, SHA, Security Association Lifetime and Encryption Mode.
- Every system that will be servicing remotely will have a static NAT IP that we configure on the RSN Data center side.



Action Required by Hospital:
- Review and approve connection details.
- Complete appropriate Site Checklist.
- Configure and allow Site-to-Site access prior to setting up connectivity depending on the access criteria that the HCF decides to implement (e.g. Source IP filtering, destination IP filtering, NAT assignment, etc.).
- Route traffic from within the hospital network with destination addresses 192.68.48.0/22 to the designated IP provided by Philips.

Broadband Router Installed at Health Care Facility
This connectivity method is designed for customers who have a dedicated high speed connection for Philips equipment.

Connectivity Details:
- An RSN Cisco 1711 or 1712 router will be reconfigured and installed at the HCF by Philips in conjunction with the HCF IT representative.
- The VPN Tunnel will be an IPSEC, 3DES encrypted Tunnel using IKE and will be established from the RSN-DC and terminated at the RSN Router on-site.
- One to One NAT is used to limit access to Philips equipment only.
- Router Config and IP auditing is enabled for Customer IT to view via website 24/7.
- Dedicated DSL connections are also supported.



Action Required by Hospital:
- Assign a fixed public IP address from the ISP to be configured on the Philips router. This is the DOTTED link on the picture connected to the firewall.
- Assign a Back end IP for the Philips router on the Hospital Network.
- Complete appropriate Site Checklist.
- Route traffic from within the hospital network with destination addresses 192.68.48.0/22 to internal Philips router Ethernet interface. This is the DASHED line connected to the firewall.

Option 1: Parallel to HCF Firewall Connectivity Method
This connectivity method is designed for customers who prefer a Philips RSN Router installed on site utilizing all the security features provided and managed by Philips.

Connectivity Details:
- An RSN Cisco 1711 or 1712 router will be reconfigured and installed at the HCF by Philips in conjunction with the HCF IT representative.
- The VPN Tunnel will be an IPSEC, 3DES encrypted Tunnel using IKE and will be established from the RSN-DC and terminated at the RSN Router on-site.
- One to One NAT is used to limit access to Philips equipment only.
- Router Config and IP auditing is enabled for Customer IT to view via website 24/7.
- Dedicated DSL connections are also supported.

Action Required by Hospital:
- Assign a fixed public IP address from the ISP to be configured on the Philips router. This is the DOTTED link on the picture connected to the firewall.
- Assign a Back end IP for the Philips router on the Hospital Network.
- Complete appropriate Site Checklist.
- Route traffic from within the hospital network with destination addresses 192.68.48.0/22 to internal Philips router Ethernet interface. This is the DASHED line connected to the firewall.

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N1

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