SECTION 2 – SYSTEM CABLES

2–1 LOCATING AND UNPACKING CABLES

This section assumes Signa Horizon 8.x (LX) with SGD System, Fixed–site Kit, and options are delivered complete with all cables present.

Cables shipment containers have color coded labels which identify the cable routing areas:

Green – Equipment Room

Purple – Operator's Room

Orange – Magnet Room

TABLE 2–1
CABLES

Run#	One End	Other End	Part Number	Rev.	Where Use
820	OW1A15 MONITOR	OW1A4 VIDEO	2150533	5	2154895
869	MG3A2J8	MG2A14A2	46–317252G4	0	2216200
830	Magnet Interface	FJ2	2222797	0	2221624
824	PP1–J10	FJ1	46–328000G975	0	2221624
829	PP1–J48	FJ2	46–328000G976	0	2221624
825	MSM1–J8	PP1–J48	46–328000G977	0	2221624
826	MSM1–J9	FJ3	46–328000G978	0	2221624
823	MSM1–J10	MR2A11–J24	46–328000G979	0	2221624
833	MS5A6	FJ4	46–328000G981	0	2221624
827	MS5A5A1J1	FJ3	46–328578P1	3	2221624
848	MG2A11J4	MG2A4J3	2221945–2		2243340
862	MG2A4J1	MG2A5RJ1	2221946–2		2243340
863	MG2A4J2	MG2A5LJ2	2221946–2		2243340
861	MG2A33J5/6/7 MG2A39J10/11	MG2A4J4	2221947–2	0	2243340
897	MG2A39J9	MG2A4J3	2221948–2	0	2243340
857	MG2A40J4	Table Pivot Switches	2251298	0	2263199
874	MG2A40J5	MG2A40A1&A2	2255805	0	2263199
872	MG2A40J9	Iso Ctr Laser	2255895	0	2263199
843	MG2A40J6	PP1–J20	2260535	0	2263199
871	MG2A40J8	"Laser –25,0,+25"	2261329	0	2263199
848	MG2A11J4	MG2A4J3	2221945–2	2	2263199
862	MG2A4J1	MG2A5RJ1	2221946–2	1	2263199
863	MG2A4J2	MG2A5LJ2	2221946–2		2263199
861	MG2A33J5/6/7 MG2A39J10/11	MG2A4J4	2221947–2	1	2263199
897	MG2A39J9	MG2A4J3	2221948–2	0	2263199

2–1 LOCATING AND UNPACKING CABLES (continued)

Run#	One End	Other End	Part Number	Rev.	Where Use
859	MG3A33J3	PT1–J14	2263200–10	0	2263199
860	MG3A33J2	PT1–J13	2263200–11	0	2263199
866	PT1–J12	MG2A40J3	2263200–12	0	2263199
873	MG2A40J1	MG3A2J6	2263200–13	0	2263199
920	MG2A40J2	PP1–J12	2263200–17	0	2263199
928	PP1A11J72	MG3A3J6	2263200–25	0	2263199
842	MG2A39J7	PP1–J15	2263200–4	0	2263199
849	MG2A39J1	MG2A33J4	2263200–5	0	2263199
850	MG2A39J3	MG2A33J7	2263200–6	0	2263199
851	MG2A39J2	MG2A33J8	2263200–7	0	2263199
856	MG2A39J8	MG2A40J7	2263200–8	0	2263199
858	MG2A39J4	PT1–J15	2263200–9	0	2263199
749	MG2A36	MG2A33J10	46–328354P1	2	2263199
889	PP1–J4	PT1–J6	2262697	A	2263647
746	PP1–J44	To run #912	2263075	0	2263647
935	PP1J44	To run #745	2263075	0	2263647
887	PP1–J4	To run #932	2263076	0	2263647
888	PP1–J83	To run #933	2263076	0	2263647
890	PP1–J83	PT1–J7	2262697–2	A	2263647
745	PP1–J44	MR1A23–J4	46–287688G5	0	2263647
932	MR1A24–NC	To run #887	46–287688G7	0	2263647
933	MR1A24–NO	To run #888	46–287688G8	0	2263647
912	MG3A3J1	To run #746	46–287688G9	0	2263647
830	Magnet Interface	FJ2	2222797	0	2265809
914	PP1–J62	FJ5	2262699	0	2265809
913	MS1A1A4P302–1	PP1–J62	2263158	0	2265809
916	MSM1–J7	”FJ1, FJ5, FJ6”	2263159	0	2265809
915	MSM1A2–J1	FJ6	2263160	0	2265809
919	MS1A1A4P302–3	PP1–J10	2264859	0	2265809
824	PP1–J10	FJ1	46–328000G975	0	2265809
829	PP1–J48	FJ2	46–328000G976	0	2265809
825	MSM1–J8	PP1–J48	46–328000G977	0	2265809
826	MSM1–J9	FJ3	46–328000G978	0	2265809
823	MSM1–J10	MR2A11–J24	46–328000G979	0	2265809
833	MS5A6	FJ4	46–328000G981	0	2265809
827	MS5A5A1	FJ3	46–328578P1	3	2265809
762	MR3–J3	MG2A12A1–1/2	2100948–10	0	2120963–4
763	MR3–J4	MG2A12A1–3/4	2100948–11	0	2120963–4

2–1 LOCATING AND UNPACKING CABLES (continued)

Run#	One End	Other End	Part Number	Rev.	Where Use
764	MR3–J5	MG2A12A1–5/6	2100948–12	0	2120963–4
	Peripheral Pluse Cable		2133207	0	2122268–4
	MG2A11–J5 & J6	PHOTOPLETH	46–317903G4	1	2122268–4
792	”OW1A2A1 MIC, AUDIO”	OW1A1A4–J11/13	2148290	1	2154392–2
812	OW1A153 DB–9 (MODEM)	OW1A15 RS232	2188746	1	2154392–2
813	”OW1A2A1 KEYBD,MS,COM0”	OW1A15 RS232	2188747	0	2154392–2
814	OW1A2A1 COM2	OW1A1A4–J9	2196990	2	2154392–2
815	OW1A16	OW1A15 SCSI on PCI	2198983	1	2154392–2
819	OW1A2A7 IN	OW1A15 SCSI	2198995	1	2154392–2
810	OW1A1A2–J8	”OW1A15KEYBD,MS”	2141980–2	1	2154392–2
809	”OW1A1A2–J12,14”	”OW1A15AUD,MIC”	2141981–2	0	2154392–2
811	OW1A2A4 PORT2	OW1A15 ETHERNET	2153396–3	3	2154392–2
817	OW1A2A5–J3	OW1A1A4–J17	46–328000G958	0	2154392–2
870	MG3A2J7	MG2A14A1	46–317157G7	0	2216200–2
896	ECG	PAC Remote I/F	2219096–2		2227142–2
895	Peripheral Pulse	PAC Remote I/F	2219097–2		2227142–2
894	RESP	PAC Remote I/F	46–317758P1	2	46–244813G69
818	”OW1A16 PORTS 6,7,8”	MR2A11J31	2198993	1	46–258771G41
837	PP1A18–J2	OW1A17–J4	2263200	0	46–258771G41
906	PT1–J11	PP1–J47	2263200–14	0	46–258771G41
910	OW1A16–PORT3	OW1A17–J2	2263200–15	0	46–258771G41
911	OW1A16–PORT5	OW1A17–J1	2263200–16	0	46–258771G41
921	PP1–J11	PT1–J8	2263200–18	0	46–258771G41
922	PP1–J80	PT1–J1	2263200–19	0	46–258771G41
838	PP1–J51	OW1A17–J3	2263200–2	0	46–258771G41
923	PP1–J81	PT1–J2	2263200–20	0	46–258771G41
924	PP1–J82	PT1–J3	2263200–21	0	46–258771G41
925	PP1–J7	PT1–J4	2263200–22	0	46–258771G41
926	PT1–J9	PP1A15J78	2263200–23	0	46–258771G41
927	PT1–J10	PP1A16J77	2263200–24	0	46–258771G41
929	PP1–J7	MR2A11–J5	2263200–26	0	46–258771G41
934	PP1–J8	MG3A3A5OUT	2263200–27	0	46–258771G41
841	PP1–J51	PT1–J5	2263200–3	0	46–258771G41
706	PD1–J3	MR2A11–J14	46–258431G808	1	46–258771G41
703	PD1–J2	MR2A11–J23	46258431G809	1	46–258771G41
702	MR2A11–J18	MR1A7–J5	46–258431G810	0	46–258771G41
774	MR2A11–J25	MR1A7–J32	46–258431G908	0	46–258771G41

2–1 LOCATING AND UNPACKING CABLES (continued)

Run#	One End	Other End	Part Number	Rev.	Where Use
296	PP1–J18	EO2	46–271692G601	0	46–258771G41
297	PP1–J18	EO1	46–271693G1	AD	46–258771G41
231	PP1–J8	MR2A11–J2	46–301125G100	0	46–258771G41
487	PP1A15–J78	MR1A7–J20	46–301125G764	0	46–258771G41
488	PP1–J80	MR2A11–J8	46–301125G765	0	46–258771G41
489	PP1–J81	MR2A11–J9	46–301125G766	0	46–258771G41
490	PP1–J82	MR2A11–J10	46–301125G767	0	46–258771G41
701	MR2A11–J15	RF DOOR SWITCH	46–301125G807	0	46–258771G41
715	PP1–J14	MG2A33J1	46–301125G822	0	46–258771G41
726	PP1A16J77	MR1A7–J18	46–301125G831	0	46–258771G41
229	MR2A11–J17	MR1A7–J3	46–301125G98	1	46–258771G41
716	PP1–J89	MG2A11J2	46–317359G931	0	46–258771G41
768	PP1–J20	MR1A7–J31	46–328000G902	0	46–258771G41
769	PP1–J15	MR1A7–J34	46–328000G903	0	46–258771G41
770	PP1–J11	MR1A7–J41	46–328000G904	0	46–258771G41
771	PP1–J47	MR1A7–J36	46–328000G905	0	46–258771G41
772	PP1–J14	MR1A7–J40	46–328000G906	0	46–258771G41
773	PP1A17–J1	MR1A7J35	46–328000G907	1	46–258771G41
775	PP1A11–J92	MR1A7–J42	46–328000G915	0	46–258771G41
788	PP1–J12	OW1A1A4–J7	46–328000G937	0	46–258771G41
789	MR2A11–J26	OW1A1A4–J18	46–328000G938	1	46–258771G41
791	MR2A11–J30	OW1A16 PORT 1	46–328000G939	1	46–258771G41
40	MS1–Gnd	Scr Rm Gnd	2103427	1	46–258790G10
65	WC1	”PD1 26,27”	2223355	2	46–258790G10
907	PP1A18–J1	MDP	2262698	0	46–258790G10
48	PD1 GRN/YEL BUS	OW1A2A5–GND	46–255947G11	1	46–258790G10
37	PD1 GRN/YEL BUS	MR2A12–GND	46–255947G607	1	46–258790G10
44	PP1–GND	MR1A7–GND	46–255947G9	0	46–258790G10
30	”PD1 GRN/YEL,N 16,17,18”	MR2A12–J1 AC IN	46–271364G517	0	46–258790G10
47	”PD1 GRN/YEL,N 25,31”	OW1A2A5–J1	46–307832P4	3	46–258790G10
49	OW1A1A1 PWR	OW1A2A5–J2	46–307829P1	1	46–307830G1
836	MR2A11–J21	OW1A15 BIT3	2241052	0	46–317249G39
708	MR2A11–J16	MR1A7–J27	46–317076G602	0	46–317249G39
710	MR2A11–J17	MR3–J2	46–317085G603	0	46–317249G39
711	MR2A11J13	PP1–J9	46–328078G5	0	46–317249G39
712	MR2A11J13	PP1–J9	46–328078G5	0	46–317249G39
711	PP1–J91	MG2A33J11–13	46–328079G9	1	46–317249G39
712	PP1–J91	MG2A11J9–10	46–328079G9	1	46–317249G39

2–1 LOCATING AND UNPACKING CABLES (continued)

Run#	One End	Other End	Part Number	Rev.	Where Use
458	PP1–J17	OM3	46–243775G707	AA	46–317271G1
457	PP1–J17	OM1–TB4	46–317992G1	1	46–317271G1
805	OW1A7	OW1A1A4–J6	2114561–38	0	NA
821	OW1A15 MONITOR	OW1A6 RBG	2150533–2	5	NA
601	MS1A1A3	MS7–J?	46–260723G1	0	NA
602	MS1A1A3	MS7–J?	46–260723G2	0	NA
604	MS1A1A4P304	MS7–J?	46–260724G1	2	NA
930	MR1A7–J37	PCC–CNTL	2259428	0	No where used
864	MG2A39J6	MG2A15A2	2261328	0	No where used
865	MG2A39J5	MG2A15A1	2261328	0	No where used
905	PT1–J10	MG3A4J4	2262694	0	No where used
879	MG3A4J3	PT1–J5	2262695	0	No where used
881	PT1–J15	MG3A4J2	2262696	0	No where used
931	MR1A7–J47	PCC	2259428–2	0	No where used
606	Magnet End	ERU/MRU	2128699	2	Not in nMR?
807	OW1A5–DASM	OW1A2A3	2163386	0	Not in nMR?
624	MS1A1A2	”PP1–F5,F6,F7,F8”	2218292	1	Not in nMR?
621	MS5	MS1A1A1	2154502–2	0	Not in nMR?
622	MS5	MS1A1A1	2154505–2	0	Not in nMR?
623	Compressor	”PP1–F1,F2,F3,F4”	2155316–2	0	Not in nMR?
832	Cold Hd#1	MS1A1A6J1	2214062–2		Not in nMR?
832	Sleeve	MS1A1A6J2	2214062–2		Not in nMR?
624	MS1A1A1	”PP1–F1,F2,F3,F4”	2218292–2		Not in nMR?
880	PT1–J9	MG3A4J9	2262694–2	0	Part # not on GPC
875	MG3A4J6	PT1–J1	46–317220G22		Part # not on GPC
876	MG3A4J7	PT1–J2	46–317220G23		Part # not on GPC
877	MG3A4J8	PT1–J3	46–317220G24		Part # not on GPC
878	MG3A4J5	PT1–J4	46–317220G25		Part # not on GPC
891	MG3A4J1	PT1–J6	46–320888G3		Part # not on GPC
892	MG3A4J10	PT1–J7	46–320888G4		Part # not on GPC
844	To run #908	To run #845			Part # Unknown
845	To Primary Heaters	To run #844			Part # Unknown
846	To run #909	To run #847			Part # Unknown
847	To primary sensors	To run #846			Part # Unknown
852	MG3A3J7	MG2A12A15J1			Part # Unknown
853	MG3A3J9	MG2A12A15J2			Part # Unknown
854	MG3A3J8	MG2A12A14J1			Part # Unknown

2–1 LOCATING AND UNPACKING CABLES (continued)

Run#	One End	Other End	Part Number	Rev.	Where Use
855	MG3A3J10	MG2A12A14J2			Part # Unknown
882	PT1–J14	MG3A5J4			Part # Unknown
883	PT1–J13	MG3A5J3			Part # Unknown
884	PT1–J11	MG3A5J1			Part # Unknown
885	PT1–J12	MG3A5J5			Part # Unknown
886	MG3A7	PT1–J8			Part # Unknown
893	MG3A3J2	MG3A3A5IN			Part # Unknown
908	PP1A18	To run #844			Part # Unknown
909	PP1A18	To run #846			Part # Unknown
918	MS1	PT1–GND			Part # Unknown
	MS1A1A4P304	MS9–J?			Part # Unknown

2–2 SORTING AND ROUTING CABLES

System power, ground, and interconnect cables are color coded at each end by destination per colors shown on Cable Map.

1. Sort cables by destination. Normally, it is best to sort cables originating from the farthest cabinet or component from the PDU first. This will make it easier to pull cables through the troughs.

Note

Carefully review architectural drawings to insure that all ducts are properly installed and that all signal and power cables are accounted for before starting to route cable runs.

2. Unroll coiled cables along the intended route to insure that they will lay freely without twists or kinks. Route cables in accordance with the applicable System Interconnect Diagram.
3. Plan for storage location of coiled cable excess length if cables are to remain at delivered length. Some cables are usually cut to length such as gradient cables, power cables, Heliax, and Fiber–optic cables.
4. Place cables in provided troughs, conduit, or ducts. Leave sufficient slack for later connection when cabinets are in final position according to site architectural plans. Route cables inside exam room to Rear Pedestal area with sufficient length remaining to complete routing and connecting within Magnet Enclosure.

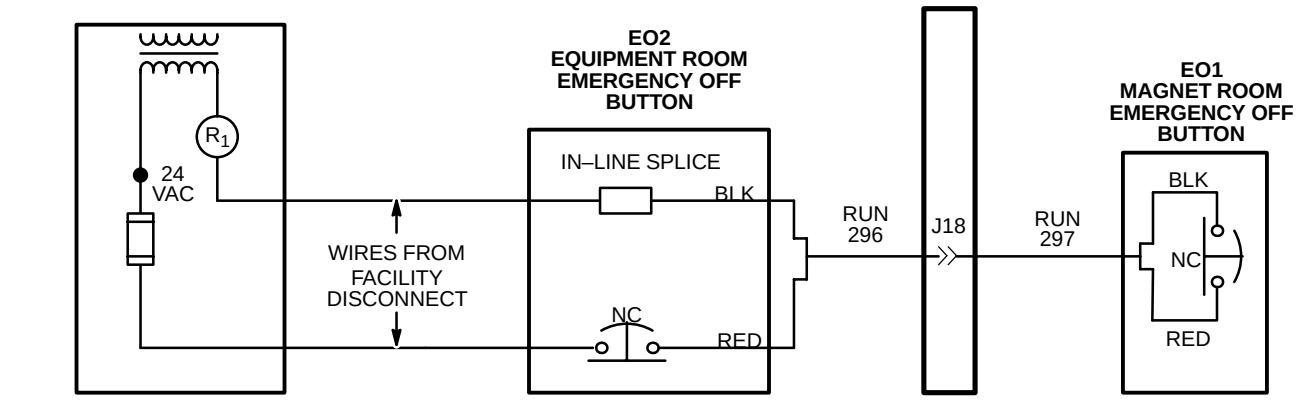
2–3 EMERGENCY OFF CONNECTIONS

Run 296 is routed to EO2 (Equipment Room Emergency Off) and connected to EO2 and wire from Facility Disconnect. Run 297 is routed from Penetration Panel to EO1 (Magnet Room Emergency Off Button). Refer to *Direction 2120460, Signa Horizon Pre–Installation*, Section 5–3–1, Protective Disconnect Device, for detailed wiring diagram.

1. Complete routing of Run 296 to EO2 (Equipment Room Emergency Off) location, and trim cable to length. Locate red and black pair of wires and prepare ends for applicable terminals.

   Aside: In Illustration 2–8, black and red wires are used for connections in Runs 295 and 297. Actually any pair of wires on these runs could be used so long as both ends are consistent with one another. Runs 296 and 297 are actually nine wire cables.

2. At equipment room room "Emergency Off" (EO2) location, terminate red wire at end of Run 296 with local supplied terminal and connect to customer supplied Equipment Room Emergency Off Button (EO2). See Illustration 2–8.
3. Terminate customer supplied wire (from fuse in Protective Disconnect Device) with local supplied applicable terminal and connect to customer supplied Emergency Off Button (EO2). See Illustration 2–8.
4. Terminate customer supplied wire from R1 in Protective Disconnect Device with local supplied push–on terminal.
5. Terminate black wire at end of Run 296 with local supplied "push–on" terminal.
6. Connect black wire from end of Run 296 to customer supplied wire from protective disconnect device with local supplied in–line splice. See Illustration 2–8.
7. Complete routing of Run 297 to EO1 (Magnet Room Emergency Off) location, and trim cable to length. Locate red and black pair of wires and prepare ends for applicable terminals.
8. Terminate red and black wires at end of Run 297 with local supplied terminals and connect to customer supplied Magnet Room Emergency Off Button (EO1). See Illustration 2–8.



EMERGENCY OFF WIRING
ILLUSTRATION 2–8

2–4 RUN 701 (RF DOOR SWITCH) CONNECTIONS

1. Route Run #701 (from System Cabinet) to RF Door Switch. This 100 ft cable has a 9–pin subminature “D” plug on one end. The other end is cut off with the black and red leads from pair #1 dressed for connecting to a switch. Should it be desired to cut off excess length, make sure that the black and red leads have continuity to pins 1 and 6 on the 9 pin subminature D plug.
2. Connect black lead on Run #701 to RF Door Switch COM (common) contact.
3. If RF door switch is normally open, proceed to step 4. If normally closed, proceed to step 5.
4. Connect red lead on Run #701 to RF Door Switch N.O. (normally open) contact.
5. If RF door switch is not normally open, connect red lead on Run #701 to RF Door Switch N.C. (normally closed) contact.

2–5 CABLE INTERCONNECTION DOCUMENTATION

Fold–out System Interconnect Cable Maps are provided at the end of this section. They are:

Tape map in a convenient location to check off routed cable. Upon completion of connecting cables, return fold–out map to the binder for future reference.

The cable maps illustrate the Signa System interconnect for all supplied cables and interface with customer supplied wiring. Interconnects for additional cables supplied with other options are illustrated in the installation manual shipped with the option.

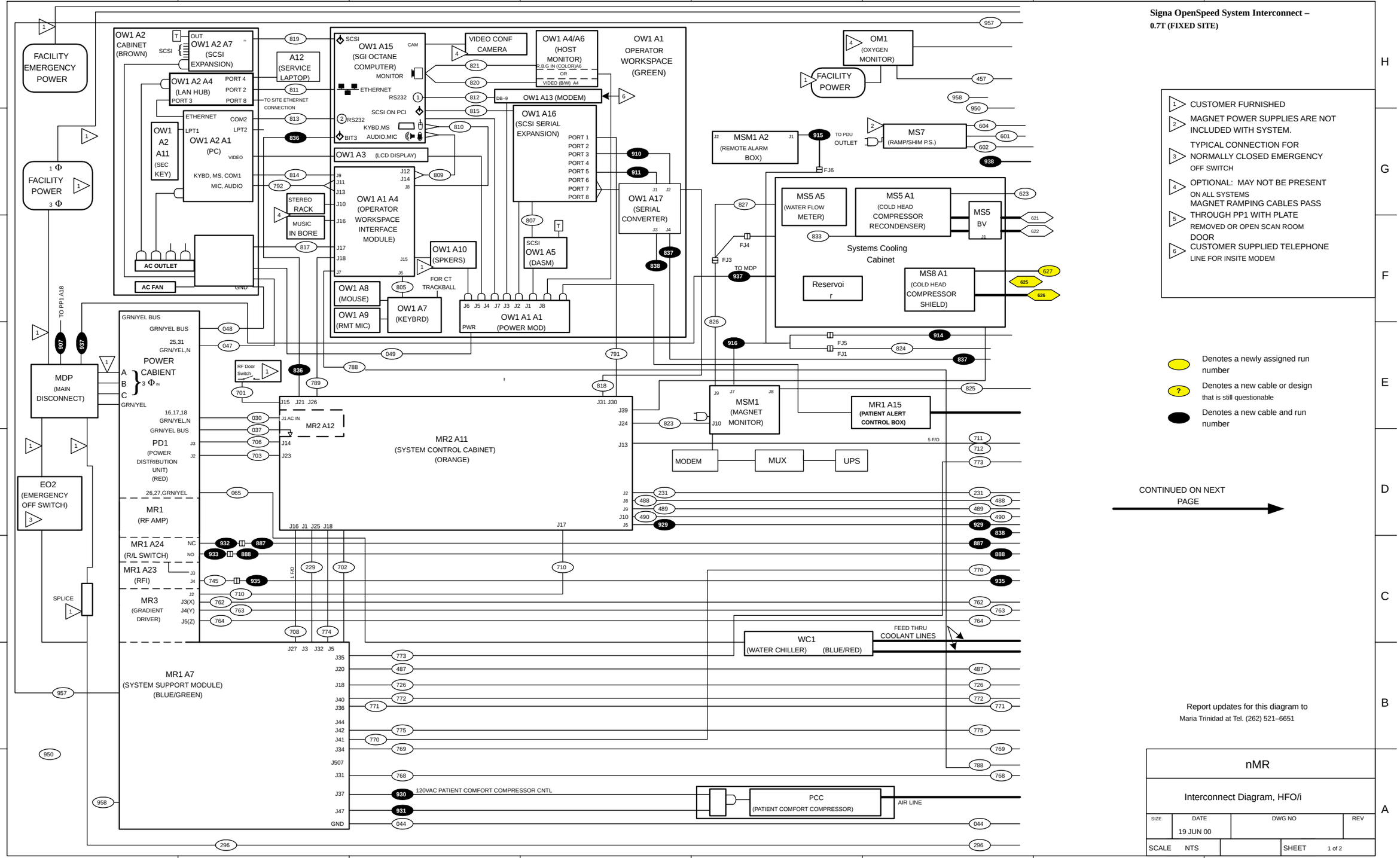
Instructions for connections for optional laser cameras are supplied with option.

Connection procedures for other options are covered in the installation manual shipped with the option.

Procedures for connections made at the Magnet Enclosure, Operator Workspace, cabinets, etc. are detailed in the respective installation section within this manual.

Interconnect details for magnet subsystem is covered in the applicable magnet subsystem manual.

Signa OpenSpeed System Interconnect – 0.7T (FIXED SITE)



Report updates for this diagram to
Maria Trinidad at Tel. (262) 521–6651

nMR			
Interconnect Diagram, HFO/i			
SIZE	DATE	DWG NO	REV
	19 JUN 00		
SCALE NTS		SHEET 1 of 2	

Signa OpenSpeed System Interconnect – 0.7T (FIXED SITE)

SEE NOTES ON PAGE 1

FACILITY FILTERS
EXHAUST FAN
RF SHIELD ROOM COMMON GROUND
EXAM ROOM LIGHTS
MS4 (ERU)
MS1 (MAGNET) (BLUE)
OM3 (REMOTE O2 SENSOR)
MS1 A1 A6 (PREAMP)
MS1 A1 A7 (PRESSURE TRANSDUCER)
MG3 TB1 (QUENCH DETECTOR REED SWITCH)
MG2 A36 (TEMPERATURE SENSOR)
MS1 A1 A4 (INSTRUMENTATION BOX)
ERU/MRU
MS1 A1 A3 (MAGNET SERVICE TURRET)
MS1 A1 A1 (COLD HEAD RECONDENSER)
SLEEVE
COLDHEAD #1
MS1 A1 A2 (COLD HEAD SHIELD)
COLDHEAD #2
PIF (PUCK I/F)
MG2 A33 (SRI)
MG2 A39 (SRI SPLITTER)
MG2 A4 (OPERATOR DISPLAY)
MG2 A5 (RIGHT OPERATOR CONTROL)
MG2 A5 (LEFT OPERATOR CONTROL)
PP1 A18 (TCU)
TO MDP
MS1 A6 (HEATER/RTD DISTRIBUTION)
16 PRIMARY HEATERS
12 REDUNANT HEATERS
6 PRIMARY TEMP SENSORS
6 REDUNANT TEMP SENSORS
PNEUMATIC TUBE FEED THRU
PP1 A17 A1 (F/O REPEATER BD)
PP1 A17 (REPEATER PANEL)
PATIENT CALL FEED THRU
RESPIRATION
PERIPHERAL GATING
ECG
MG2 A11 (PAC II ASSEMBLY)
(PAC REMOTE INTERFACE)
SQZ BULB
RESPIRATION
PERIPHERAL GATING
ECG
PHOTO PLETHYSMOGRAPH
MG3 A7 (LONGITUDINAL MOTOR DRIVE)
PT1 (TABLE)
MG3 A4 (COIL I/F ELECTRONICS)
MG3 A5 (TABLE ELECTRONICS)
PP1 A7 (GRADIENT FILTER)
MG2 A12 A1 (GRADIENT COIL)
OUTPUT MG3 A3 A5 (BODY COIL PREAMPLIFIER)
MG3 A3 (BODY QUAD HYBRID)
MG2 A12 A15 (TOP RF BODY COIL)
MG2 A12 A14 (BOTTOM RF BODY COIL)
PP1 A15 (MC SW FLTR)
PP1 A16 (MC BIAS FLTR)
PP1 A11 (DYNAMIC DISABLE FILTER)
TABLE PIVOT SWITCH
MG2 A40 (MAGNET I/F BOARD)
MG2 A40 A1 (L PINCH SW)
MG2 A40 A2 (R PINCH SW)
MG2 A40 A3 (C PINCH SW)
MG3 A2 (PATIENT COMM BOX)
MG2 A37 (R PATIENT COMFORT MODULE)
MG2 A14 A2 (SPEAKER)
MG2 A15 A1 (LIGHT)
MG2 A38 (L PATIENT COMFORT MODULE)
MG2 A14 A1 (MIC)
MG2 A15 A2 (LIGHT)
AIR VENT
AIR VENT
+25Ø LASER DIODES
0Ø LASER DIODES
–25Ø LASER DIODES
ISO–CENTER LASER DIODE
PP1 (YELLOW)
EO1 (EMERGENCY OFF SWITCH)

Report updates for this diagram to
Maria Trinidad at Tel. (262) 521–6651

nMR			
Interconnect Diagram, HFO/i			
SIZE	DATE	DWG NO	REV
	19JUN 00		
SCALE NTS		SHEET 2 of 2	