




WO Sandnes - Stavanger Request for quotation (RFQ) Norwegian Frame Contract Signaling System

Applicable Requirements SGRS Interface Requirements Specification (IRS)

00B	BL 3.0	09.11.1011	XSMISIL	XDATR	ESL
Revision	Reason for issue	Date	Created by	Contr. by	Appr. by
Title: Sørlandsbanen, (Egersund) - Stavanger WO Sandnes - Stavanger Applicable Requirements IRS		Pages:	11		
		Produced by:	JERNBANEVERKET UTBYGGING		
		Prod.doc.no.:			
		Replaces:			
		Replaced by:			
Project:	SignAn	Document-/drawing number:		Revision:	
Area:	Sandnes - Stavanger	SSG-10-A-00068		00B	
 Jernbaneverket		Operator's document-/drawing no:		Operator's rev.:	
		NA		NA	

INTRODUCTION

The reader should be familiar with the documents "Instruction to Tenderer" and "Tender overview" in order to relate this document to the entire RFQ.

The reader should also be familiar with the document "Scope of work" – appendix A – in order to relate requirements described in this document to the delivery as described in "Scope of work". This document states which requirements that are applicable for this project.

Statuses:

A	Applicable Requirement
NA	Not Applicable Requirement
Ai	Applicable information
NAi	Not Applicable information

WO Sandnes - Stavanger
 Norwegian Frame Contract Signaling System
 Applicable Requirements SGRS
 Interface Requirements Specification (IRS)

Doc.: SSG-10-A-00068
 Date: 09.11.2011
 Rev.: 00B
 Page: 3 of 11

Generic			Frame Agreement			WO SS	
Document	ID	Status Conv	Status ERTMS	Status	Comments	Status	Comments
IRS001	SSI -DK1- 1	Ai	Ai	Ai		Ai	
IRS001	SSI -DK1- 2	NAi	Ai	NAi	Only applicable for ERTMS.	NAi	Only applicable for ERTMS.
IRS001	SSI -DK1- 3	NAi	Ai	NAi	Only applicable for ERTMS.	NAi	Only applicable for ERTMS.
IRS001	SSI -DK1- 4	Ai	Ai	Ai		Ai	
IRS001	SSI -DK1- 5	Ai	Ai	Ai		Ai	
IRS001	SSI -DK1-12	Ai	Ai	Ai		Ai	
IRS001	SSI -DK1-13	Ai	Ai	Ai		Ai	
IRS001	SSI -DK1-14	Ai	Ai	Ai		Ai	
IRS001	SSI 1-1	A	A	A		A	
IRS001	SSI 1-2	A	A	A		A	
IRS001	SSI 1-3	A	A	A		A	
IRS001	SSI 1-4	A	A	A		A	
IRS001	SSI 2-1	A	A	A		A	
IRS001	SSI 3-1	NA	A	NA	Only applicable for ERTMS.	NA	Only applicable for ERTMS.
IRS001	SSI 4-1	NA	A	NA	Only applicable for ERTMS.	NA	Only applicable for ERTMS.
IRS001	SSI 4-1 a)	NA	A	NA	Only applicable for ERTMS.	NA	Only applicable for ERTMS.
IRS001	SSI 4-1 b)	NA	A	NA	Only applicable for ERTMS.	NA	Only applicable for ERTMS.
IRS001	SSI 5-1	A	A	A		A	
IRS001	SSI 5-2	A	A	A		A	
IRS001	SSI 5-3	A	A	A		A	
IRS001	SSI 5-4	A	A	A		A	
IRS001	SSI 6-1	A	A	A		A	
IRS001	SSI 6-1 a)	A	A	A		A	Applicable for VICOS TCS
IRS001	SSI 6-1 b)	A	A	A		A	
IRS001	SSI 6-2	NA	A	NA	Only applicable for ERTMS.	NA	Only applicable for ERTMS.
IRS001	SSI 13-1	A	NA	A	ATC balises is not applicable for ERTMS.	A	
IRS001	SSI 14-1	A	A	A		A	
IRS001	SSI 15-1	A	A	A		A	
IRS002	EC -DK1- 1	Ai	Ai	Ai		Ai	

WO Sandnes - Stavanger
 Norwegian Frame Contract Signaling System
 Applicable Requirements SGRS
 Interface Requirements Specification (IRS)

Doc.: SSG-10-A-00068
 Date: 09.11.2011
 Rev.: 00B
 Page: 4 of 11

Generic			Frame Agreement			WO SS	
Document	ID	Status Conv	Status ERTMS	Status	Comments	Status	Comments
IRS002	EC -DK1- 2	Ai	Ai	Ai		Ai	
IRS002	EC -DK1- 3	Ai	Ai	Ai		Ai	
IRS002	EC -DK1- 4	Ai	Ai	Ai		Ai	
IRS002	EC -DK1- 5	Ai	Ai	Ai		Ai	
IRS002	EC -DK1- 6	Ai	Ai	Ai		Ai	
IRS002	EC -DK1- 7	Ai	Ai	Ai		Ai	
IRS002	EC -DK1- 8	Ai	Ai	Ai		Ai	
IRS002	EC -DK1- 9	Ai	Ai	Ai		Ai	
IRS002	EC -DK1-10	Ai	Ai	Ai		Ai	
IRS002	EC -DK2-1	Ai	Ai	Ai		Ai	
IRS002	EC -DK2-2	Ai	Ai	Ai		Ai	
IRS002	EC -DK2-3	Ai	Ai	Ai	LOP shall have two push buttons and a lamp.	Ai	
IRS002	EC -DK2-4	Ai	Ai	Ai	LOP shall have two push buttons and a lamp.	Ai	
IRS002	EC -DK2-5	Ai	Ai	Ai		Ai	
IRS002	EC -DK3-1	Ai	Ai	Ai		Ai	
IRS002	EC -DK3-2	Ai	Ai	Ai		Ai	
IRS002	EC -DK3-3	Ai	Ai	Ai		Ai	
IRS002	EC -DK3-4	Ai	Ai	Ai		Ai	
IRS002	EC -DK3-5	Ai	Ai	Ai		Ai	
IRS002	EC -DK3-6	Ai	Ai	Ai		Ai	
IRS002	EC -DK4-1	Ai	Ai	Ai		Ai	
IRS002	EC -DK4-2	Ai	Ai	Ai		Ai	
IRS002	EC -DK4-3	Ai	Ai	Ai		Ai	
IRS002	EC 1-1	A/NA	A	A/ NA		A	
IRS002	EC 1-1 a)	A	A	A		A	
IRS002	EC 1-1 b)	A	A	A		A	
IRS002	EC 1-1 c)	NA	A	NA	Radio communication is not applicable.	NA	Radio communication is not applicable.

WO Sandnes - Stavanger
 Norwegian Frame Contract Signaling System
 Applicable Requirements SGRS
 Interface Requirements Specification (IRS)

Doc.: SSG-10-A-00068
 Date: 09.11.2011
 Rev.: 00B
 Page: 5 of 11

Generic				Frame Agreement		WO SS	
Document	ID	Status Conv	Status ERTMS	Status	Comments	Status	Comments
IRS002	EC 2-1	A	A	A		A	
IRS002	EC 2-2	A	A	A		A	
IRS002	EC 3-2	A	A	A		A	
IRS002	EC 3-3	A	A	A		A	
IRS002	EC 4-1	A	A	A		A	
IRS002	EC 4-3	A	A	A		A	
IRS002	EC 5-2	A	A	A		A	
IRS002	EC 5-3	A	A	A		A	
IRS002	EC 6-1	A	A	A		A	
IRS002	EC 6-1 a)	A	A	A		A	
IRS002	EC 6-1 b)	A	A	A		A	
IRS002	EC 7-2	A	A	A		A	
IRS002	EC 7-3	A	A	A		A	
IRS002	EC 8-1	A	A	A		A	
IRS002	EC 8-1 a)	A	A	A		A	
IRS002	EC 8-1 b)	A	A	A		A	
IRS002	EC 8-1 c)	A	A	A		A	
IRS002	EC 9-2	A	A	A		A	
IRS002	EC 9-3	A	A	A		A	
IRS002	EC10-1	A	A	A		A	
IRS003	ED -DK1-1	Ai	Ai	Ai		Ai	
IRS003	ED -DK1-3	Ai	Ai	Ai		Ai	
IRS003	ED -DK1-4	Ai	Ai	Ai		Ai	
IRS003	ED -DK2-1	Ai	Ai	Ai		NAi	Track circuits are not applicable
IRS003	ED -DK2-2	Ai	Ai	Ai		NAi	Track circuits are not applicable
IRS003	ED -DK2-3	Ai	Ai	Ai		NAi	Track circuits are not applicable

WO Sandnes - Stavanger
 Norwegian Frame Contract Signaling System
 Applicable Requirements SGRS
 Interface Requirements Specification (IRS)

Doc.: SSG-10-A-00068
 Date: 09.11.2011
 Rev.: 00B
 Page: 6 of 11

Generic			Frame Agreement			WO SS	
Document	ID	Status Conv	Status ERTMS	Status	Comments	Status	Comments
IRS003	ED -DK2-4	Ai	Ai	Ai		NAi	Track circuits are not applicable
IRS003	ED -DK2-5	Ai	Ai	Ai		NAi	Track circuits are not applicable
IRS003	ED -DK2-6	Ai	Ai	Ai		NAi	Track circuits are not applicable
IRS003	ED -DK2-7	Ai	Ai	Ai		NAi	Track circuits are not applicable
IRS003	ED 10-1	A	A	A		A	
IRS003	ED 10-1 a)	A	A	A		A	
IRS003	ED 10-1 b)	A	A	A		A	
IRS003	ED 3-1	A	A	A		A	
IRS003	ED 3-2	A	A	A		A	
IRS003	ED 4-1	A	A	A		A	
IRS003	ED 4-1 a)	A	A	A		A	
IRS003	ED 4-1 b)	A	A	A		A	
IRS003	ED 5-1	A	A	A		A	
IRS003	ED 5-1 a)	A	A	A		A	
IRS003	ED 5-1 b)	A	A	A		A	
IRS003	ED1-1	A	A	A		A/NA	
IRS003	ED1-1 a)	A	A	A		A	
IRS003	ED1-1 b)	A	A	A		A	
IRS003	ED1-1 c)	NA	A	NA	Radio communication is not applicable.	NA	Radio communication is not applicable.
IRS003	ED 2-1	A	A	A		A	
IRS003	ED 2-2	A	A	A		A	
IRS004	EN -DK1-1	Ai	Ai	Ai		Ai	
IRS004	EN -DK1-2	Ai	Ai	Ai		Ai	
IRS004	EN -DK1-8	Ai	Ai	Ai		Ai	
IRS004	EN -DK1-9	Ai	Ai	Ai		Ai	

WO Sandnes - Stavanger
 Norwegian Frame Contract Signaling System
 Applicable Requirements SGRS
 Interface Requirements Specification (IRS)

Doc.: SSG-10-A-00068
 Date: 09.11.2011
 Rev.: 00B
 Page: 7 of 11

Generic			Frame Agreement			WO SS	
Document	ID	Status Conv	Status ERTMS	Status	Comments	Status	Comments
IRS004	EN -DK1-10	Ai	Ai	Ai		Ai	
IRS004	EN 1-1	A	A	A		A	
IRS004	EN 1-1 a)	A	A	A		A	
IRS004	EN 1-1 b)	A	A	A		A	
IRS004	EN 1-1 c)	NA	A	NA	Radio communication is not applicable.	NA	Radio communication is not applicable.
IRS004	EN 2-1	A	A	A		A	
IRS004	EN 2-2	A	A	A		A	
IRS004	EN 3-1	A	A	A		A	
IRS004	EN 3-6	A	A	A		A	
IRS004	EN 3-6 a)	A	A	A		A	
IRS004	EN 3-6 b)	A	A	A		A	
IRS004	EN 4-1	A	A	A		A	
IRS004	EN 6-1	A	A	A		A	
IRS004	EN 8-1	A	A	A		A	
IRS004	EN10-1	A	A	A		A	
IRS004	EN12-1	A	A	A		NA	High shunting signal is not applicable
IRS004	EN14-1	A	A	A		NA	Direction indicator is not applicable
IRS004	EN16-1	A	A	A		A	
IRS004	EN18-1	A	A	A		A	
IRS004	EN19-1	A	A	A		NA	Warning light is not applicable
IRS005	EH-DK1-1	Ai	Ai	Ai		NAi	Level crossing is not applicable
IRS005	EH-DK2-4	Ai	Ai	Ai		NAi	Level crossing is not applicable
IRS005	EH-DK3-6	Ai	Ai	Ai		NAi	Level crossing is not applicable

WO Sandnes - Stavanger
 Norwegian Frame Contract Signaling System
 Applicable Requirements SGRS
 Interface Requirements Specification (IRS)

Doc.: SSG-10-A-00068
 Date: 09.11.2011
 Rev.: 00B
 Page: 8 of 11

Generic				Frame Agreement		WO SS	
Document	ID	Status Conv	Status ERTMS	Status	Comments	Status	Comments
IRS005	EH33-1	A	A	A		NA	Level crossing is not applicable
IRS005	EH33-2	A	A	A		NA	Level crossing is not applicable
IRS005	EH33-3	A	A	A		NA	Level crossing is not applicable
IRS005	EH33-4	A	A	A		NA	Level crossing is not applicable
IRS005	EH36-1	A	A	A		NA	Level crossing is not applicable
IRS005	EH37-1	A/Ai	A/Ai	A/Ai		NA	Level crossing is not applicable
IRS005	EH37-1 a)	A	A	A		NA	Level crossing is not applicable
IRS005	EH37-1 b)	A	A	A		NA	Level crossing is not applicable
IRS005	EH37-1 c)	A	A	A		NA	Level crossing is not applicable
IRS005	EH37-1 d)	A	A	A		NA	Level crossing is not applicable
IRS005	EH37-1 e)	A	A	A		NA	Level crossing is not applicable
IRS005	EH37-1 f)	A	A	A		NA	Level crossing is not applicable
IRS005	EH37-1 g)	A	A	A		NA	Level crossing is not applicable
IRS005	EH37-1 h)	A	A	A		NA	Level crossing is not applicable

WO Sandnes - Stavanger
 Norwegian Frame Contract Signaling System
 Applicable Requirements SGRS
 Interface Requirements Specification (IRS)

Doc.: SSG-10-A-00068
 Date: 09.11.2011
 Rev.: 00B
 Page: 9 of 11

Generic				Frame Agreement		WO SS	
Document	ID	Status Conv	Status ERTMS	Status	Comments	Status	Comments
IRS005	EH38-1	A	A	A		NA	Level crossing is not applicable
IRS006	EI-DK1-1	Ai	Ai	Ai		NAi	Avalanche detection is not applicable
IRS006	EI-DK2-3	Ai	Ai	Ai		NAi	Avalanche detection is not applicable
IRS006	EI-DK3-5	Ai	Ai	Ai		NAi	Avalanche detection is not applicable
IRS006	EI12-1	A	A	A		NA	Avalanche detection is not applicable
IRS006	EI12-2	A	A	A		NA	Avalanche detection is not applicable
IRS006	EI12-3	A	A	A		NA	Avalanche detection is not applicable
IRS006	EI12-4	A	A	A		NA	Avalanche detection is not applicable
IRS006	EI24-1	A	A	A		NA	Avalanche detection is not applicable
IRS006	EI15-1	A/Ai	A/Ai	A/Ai		NA	Avalanche detection is not applicable
IRS006	EI15-1 a)	A	A	A		NA	Avalanche detection is not applicable
IRS006	EI15-1 b)	A	Ai	A		NA	Avalanche detection is not applicable
IRS006	EI15-1 c)	A	A	A		NA	Avalanche detection is not applicable
IRS006	EI14-1	A	A	A		NA	Avalanche detection is not applicable

WO Sandnes - Stavanger
 Norwegian Frame Contract Signaling System
 Applicable Requirements SGRS
 Interface Requirements Specification (IRS)

Doc.: SSG-10-A-00068
 Date: 09.11.2011
 Rev.: 00B
 Page: 10 of 11

Generic				Frame Agreement		WO SS	
Document	ID	Status Conv	Status ERTMS	Status	Comments	Status	Comments
IRS007	EM-DK1-1	Ai	Ai	Ai		NAi	Tunnel gate is not applicable
IRS007	EM-DK2-4	Ai	Ai	Ai		NAi	Tunnel gate is not applicable
IRS007	EM-DK3-5	Ai	Ai	Ai		NAi	Tunnel gate is not applicable
IRS007	EM27-1	A	A	A		NA	Tunnel gate is not applicable
IRS007	EM27-2	A	A	A		NA	Tunnel gate is not applicable
IRS007	EM27-3	A	A	A		NA	Tunnel gate is not applicable
IRS007	EM27-4	A	A	A		NA	Tunnel gate is not applicable
IRS007	EM30-1	A	A	A		NA	Tunnel gate is not applicable
IRS007	EM31-1	A	A	A		NA	Tunnel gate is not applicable
IRS007	EM31-1 a)	A	A	A		NA	Tunnel gate is not applicable
IRS007	EM31-1 b)	A	A	A		NA	Tunnel gate is not applicable
IRS007	EM31-1 c)	A	A	A		NA	Tunnel gate is not applicable
IRS007	EM31-1 d)	A	A	A		NA	Tunnel gate is not applicable
IRS007	EM29-1	A	A	A		NA	Tunnel gate is not applicable

REFERENCE LIST

Ref to following References in document

“Signalling System Generic Requirements Specification (SGRS) introduction and overall principles”

- [1] SGRS Change History, ERT-00-S-00066, rev 03E, S.800243-002
- [6] FRS005 Line side signalling, ERT-00-S-00020, rev 03E, S.800248-000
- [18] FRS009 Avalanche detection, ERT-00-S-00069, rev 03E, S.800321-000
- [9] IRS001 System specific interfaces, ERT-00-S-00063, rev 03E, S.800251-000
- [10] IRS002 Interface to point and derailer, ERT-00-S-00021, rev 03E, S.800252-000
- [11] IRS003 Interface to track vacancy proving, ERT-00-S-00022, rev 03E, S.800253-000
- [12] IRS004 Interface to line side signals, ERT-00-S-00023, rev 03E, S.800254-000
- [13] QRS001 Qualitative Requirements, ERT-00-S-00032, rev 03E, S.800255-000
- [28] ATC Hanbok, BVH 54.30000 (Banverket, Sweden)
- [29] NEK 400:2010 - Norsk elektroteknisk norm - Electrical low voltage installations.
- [37] EN 50159:2010 Railway applications. Communication, signalling and processing systems. Safety related communication in transmission systems
- [41] IRS005 Interface to level crossing, ERT-00-S-00072, rev 03E, S.800324-000
- [42] IRS006 Interface to avalanche detection, ERT-00-S-00073, rev 03E, S.800325-000
- [43] IRS007 Interface to tunnel gates, ERT-00-S-00074, rev 03E, S.800326-000