

**Approved,
Inspector general**

SCHEDULE TO CHECK THE QUALITY OF THE CONSTRUCTION WORKS

REHABILITATION OF THE RAILWAY LINE BUCUREȘTI – BRAȘOV, COMPONENT
PART OF THE IV PAN – EUROPEAN CORRIDOR, FOR THE TRAINS CIRCULATION WITH
MAXIMUM SPEED OF 160 KM/H

– STUPINI STATION –

As a beneficiary.....
• represented by.....

As a designer :**Italfer S.p.A – Scott Wilson – Obermayer – Tecnic – AREX LIDER
COMPANY**
represented by.....

As a contractor.....
• represented by.....

Complying with Law no. 10/1995, HG no. 766/1997, HG no. 272/1994, HG no. 273/1994
and the norms in force.

They agree together on this shedule to check the quality of the construction works.

Crt. No.	Works to be inspected, checked or taken over from quality point of view, for which written documents must be drawn up	Written document to be concluded: PV – Report PVRC – Report for acceptance the works quality PVT – Tracing report CRM – Register for material acceptance	Document concluded and signed by: I – inspection for constructions B – beneficiary E – contractor P – designer G –geotechnical engineer	No. and date of the concluded document
0	1	2	3	4
I	DEVELOPMENT OF PASSENGER BUILDING			
	Demolition works, repar works, infrastructure consolidations			
1.1	Necessary crushings and excavation in order to carry out the necessary empty spaces for mounting the reinforced	P.V.	B.E.	

	concrete tie-columns and cladding the foundation bolster with r.c.			
1.2	The dismantling of the partition walls existing on the ground floor provided by the work	P.V.	B.E.	
1.3	Carrying out the appropriate proppings	P.V.	B.E.	
1.4	Creating new empty spaces provided by the work in the structural walls for doors, windows and technological empty spaces	P.V.	B.E.	
1.5	Evacuating the overloads coming from the dismantling	P.V.	B.E.	
1.6	Decisive phase – Checking the mounting of reinforcement in the case of tie-columns and of reinforcement of the cladding for the foundation bolster before casting the concrete	P.V.R.C.	I.B.E.P.	
1.7	Concreting (consolidation by introducing tie-columns and the foundation bolster provided by the project)	P.V.	B.E.	
1.8	Checking the quality and the aspect of the consolidated elements (beams, walls, columns)	Conc. book + notes	B.E.	
	<i>Demolition works, repair works, consolidations of superstructure</i>			
1.9	The crushings necessary for building the empty space necessary for mounting the reinforced concrete tie-columns and cladding the exterior walls with r.c.	P.V.	B.E.	
1.10	DECISIVE PHASE A.– Checking the mounting of reinforcement in the reinforced concrete tie-beams B. - Checking the mounting of the reinforcement necessary for cladding the exterior walls	P.V.R.C.	I.B.E.P.	
1.11	Concreting (consolidation by introducing tie-columns and by cladding the reinforced concrete walls provided by the project)	P.V.	B.E.	
1.12	Checking the quality and the aspect of the consolidated elements	Conc. book + notes	B.E.	
1.13	Decisive phase Acceptance at the end of the works	P.V.R.C.	I.B.E.P.	
	<i>II SHELTER BUILDING</i>			
2.1	Site Rendering – Reception	P.V.	B.E. P.	
2.2	Performing the excavation	P.V.	B.E.	
2.3	Checking the terrain stratification at the end of the excavation	P.V.	B.E.G.	
2.4	Decisive phase – Checking the	P.V.R.C.	I.B.E.P.	

	geometry of the excavation - Checking the reinforcement before casting the concrete			
2.5	Checking the anchorage system of the containers in the foundation before casting the concrete	P.V.	B.E.P.	
2.6	Concreting the foundation	P.V.	B.E.	
2.7	Checking the quality and the aspect of the foundation	Condica bet. + buletine	B.E.	
2.8	Decisive phase Reception at the end of works	P.V.R.C.	I.B.E.P.	
III	PLATFORMS			
3.1	Survey for passages for the existing TCF, IE, TTR cables in order not to be destroyed and in front of them the precast elements shall be executed cast-in-place in order to be emdedded	PV	B.E.	
3.2	Site delivery - tracing the new platforms, according to the design	P.V.T.	B.E.P.	
3.3	Carrying out the necessary excavation in trenches	P.V.	B.E.G.	
3.4	Compacting the bottom of the excavation, laying the levelling layer necessary the component elements	P.V.	B.E.	
3.5	Tracing and mounting the retaining wall type elements	P.V.T.	B.E.	
3.6	Constructing the installation networks, foundations for the lighting poles, for the torchère etc.	P.V.	B.E.	
3.7	Carrying out the compacted filling and laying the gravel layer and the polyethylene film	P.V.	B.E.	
3.8	Checking the mounting of the prefabricated slabs on the retaining wall-type elements, of the reinforcement in order for concreting between them for completing the cast-in-place zones and the level crossings	P.V.	B.E.	
3.9	Concreting the platform slabs	P.V.	B.E.	
3.10	Acceptance at the end of the works – Decisive phase	P.V.	B.E.P.I.	
IV	NEW CANOPIES			
4.1	Site Rendering – Reception	P.V.	B.E.P	
4.2	Tracing the new canopies according to the design	P.V.T.	B.E	
4.3	Carrying out excavations / fillings, according to the design	P.V.	B.E.G	
4.4	Constructing the installation networks, CED AND TTR underpassings, manholes etc.associated to the platform	P.V.	B.E	

	and the canopy			
4.5	Compacting the bottom of the excavation, construction of the compacted ballast cushion (checking the thickness, compaction degree, smoothness), checking the foundation elevation, according to the design	P.V.L.A.	B.E.G	
4.6	Casting of simple concrete (levelling layer)	P.V.	B.E	
4.7	Checking the longitudinal and transversal axis networks for the canopy foundations, according to the design	P.V.T	B.E	
4.8	Formwork and reinforcement for the foundations of the canopy columns, including the anchorage bolt cage, checking the dimensions, elevations - DECISIVE PHASE	P.V.L.A.- F.D.	B.E.P.I	
4.9	Concreting the foundations of the canopy columns (checking the material quality certificate)	P.V.R.C.	B.E	
4.10	Checking the quality, the aspect, the shape, the dimensions and the protection coats, the metal works at the site reception	C.R.M.	B.E	
4.11	Checking the electrical unloading of the contact line in the zone where the columns of the canopy columns (according to the work standards for the electric railway zone)	P.V.	B.E	
4.12	Mounting the canopy columns, the transversal beams associated to the position demanded by the design (in association with the columns of the canopy over the pedestrian tunnel)	P.V.	B.E	
4.13	Checking the gauge at the canopy structure (plane and vertical on the axis of every column)	P.V.R.C.	B.E.(P)	
1.14	Casting the undercasting mortar for the canopy columns	P.V.	B.E	
4.15	Carrying out the compacted filling up to the superior level of the foundations of the canopy columns (in association with the platform works)	P.V.	B.E	
4.16	Concreting the base of the columns (bolt head protection), connecting the drain network to the installations network and completing the filling up to the level in the design, compacting it (in association with the platform works)	P.V.	B.E	
4.17	Mounting the other subassemblies of the canopy (chock, bracing, roof covering	P.V.R.C.	B.E	

	etc.)			
4.18	Checking the execution of the roof covering as a surface, joints, smoothness, color, draining slopes, gutters and buckets	P.V.R.C.	B.E	
4.19	Checking the overall gauge of the canopy (in plane and on a vertical direction)	P.V.	B.E	
4.20	Acceptance at the end of the works - DECISIVE PHASE	P.V.R.C.- F.D.	B.E.P.I	
V	CONSTRUCTIONS ASSOCIATED TO INSTALLATIONS			
5.1	Site delivery, checking the correct tracing as indicated by the plans	P.V.R.C	B.E.	
5.2	Checking the dimensions of the dimensions of the performed excavations	P.V.R.C	B.E.	
5.3	Checking the quality of the materials on the site reception	C.R.M	B.E.	
5.4	Checking the dimensions and the correct mounting of the formworks	P.V.R.C	B.E.	
5.5	Checking the quality and the positioning of the reinforcement in the walls	P.V.R.C.	I.B.E.	
5.6	Checking the quality and the aspect of the reinforced concrete casted in the walls	P.V.R.C	B.E.	
5.7	Checking the quality and the positioning of the reinforcement and of the metal works embedded in the concrete	P.V.R.C	I.B.E.	
5.8	Checking the quality and the aspect of the reinforced concrete casted in the slabs	P.V.R.C	B.E.	
VI	GSM-R ANTENNA			
6.1	Site Rendering – Reception	P.V.	B.E. P.	
6.2	Performing the excavation	P.V.	B.E.	
6.3	Checking the terrain stratification at the end of the excavation	P.V.	B.E.G.	
6.4	Decisive phase – Checking the mounting of the micropiles before injecting the mortar for concreting the micropiles - Checking the mounting of the micropile head	P.V.R.C.	I.B.E.P.	
6.5	Injection of mortar for concreting the micropiles	P.V.	B.E.	
6.6	Checking the foundation raft reinforcement before casting the concrete	P.V.	B.E.P.	
6.7	Checking the anchoring system from the rafter before casting the concrete	P.V.	B.E.P.	

6.8	Concreting the foundation raft	P.V.	B.E.	
6.9	Checking the quality and the aspect of the foundation	Conc. book + notes	B.E.	
6.10	Decisive phase Reception at the end of the works	P.V.R.C.	I.B.E.P.	

NOTE:

1. Column 4 is to be filled on the date when the document foreseen at column 2 was concluded.
2. The contractor will inform in writing all the other concerned participants with minimum 10 days before the date when the checking is to take place.
1. 3. At the taking over an objective, one copy of this completed schedule will be annexed to the Construction Book.

BENEFICIARY:

DESIGNER:

CONTRACTOR:

AREX LIDER COMPANY