

# PROJECT MANAGEMENT PLAN

## ANKARA ETLİK INTEGRATED HEALTH CAMPUS PROJECT

Project Code: 56

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## 1 SCOPE

This Project Management Plan (hereinafter also referred to as PMP) describes the criteria, responsibilities and operational methods implemented by Astaldi-Türkerler J.V. in order to meet Contract requirements taken on by the acquisition of the Project relating to “Ankara Etlik Integrated Health Campus Project”.

In order to manage the activities, Astaldi-Türkerler J.V. shall adopt the management method described by the documents of the Company Quality Safety and Environment Integrated Management System (hereinafter also referred to as IMS) of which this document represents an implementation.

### 1.1. CONFIDENTIALITY

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**2 REFERENCE DOCUMENTS**

The PMP makes specific reference to the following documents:

**2.1. CONTRACT DOCUMENTS**

- Contract,
- Technical Specifications,
- Republic of Turkey Laws and Regulations

**2.2. OTHER REFERENCE DOCUMENTS**

Astaldi - Türkerler JV Code of Ethics;

**TS EN ISO 9000, December 2005 edition** “Quality Management Systems - Fundamentals and Vocabulary”;

**TS EN ISO 9001, December 2008 edition** “Quality Management Systems – Requirements”;

**TS EN ISO 10005, January 2005 edition** “Quality management systems — Guidelines for quality plans”;

**OHSAS 18001, July 2007 edition** “Occupational Health and Safety Management Systems - Requirements”;

**TS EN ISO 14001, December 2004 edition** “Environmental Management Systems- Requirements and Guidelines”

### 3. DEFINITIONS AND ABBREVIATIONS

**UNI EN ISO 9000, December 2005 edition** “Quality Management Systems - Fundamentals and Vocabulary”;

**IMS:** Quality Safety and Environment Integrated Management System of ASTALDI – TÜRKERLER JV

Contract Documents: as per § 2.1

**PMP** : Project Management Plan;

**Contractor:** Astaldi-Türkerler J.V.;

**Project Company (SPV):** Ankara Etlik Health Services Management Investment Inc.

**Engineer:** NKY & ITEC Joint Venture

The definitions and acronyms set forth in the Quality, Safety and Environment Manual of Astaldi Türkerler JV are validly applicable hereto.

EXTERNAL ENTITIES	
ACRONYM	DEFINITIONS
<b>SCARM</b>	Sponsor’s Corporate - Area Risk Manager
<b>SRP</b>	Sponsor’s Representative

DEPARTMENTS	
ACRONYM	DEFINITIONS
<b>BOR</b>	Board of Representative
<b>EXC</b>	Executive Committee
<b>PD</b>	Project Director
<b>PM</b>	Project Manager
<b>PMA</b>	Project Manager Assistant
<b>PCM</b>	Project Control Manager
<b>PLC</b>	Planning Chief
<b>PLE</b>	Planning Engineer
<b>CCC</b>	Cost Control Chief
<b>CCE</b>	Cost Control Engineer
<b>LW</b>	Lawyer
<b>CON</b>	Senior Contracts Manager
<b>CE</b>	Contracts Engineer
<b>PRO</b>	Procurement Chief



<b>PRO Assistant</b>	Procurement Assistant
<b>QHSE</b>	Quality, H&S and Environmental Manager
<b>QC</b>	Quality Assurance and Quality Control Chief
<b>QAE</b>	Quality Assurance Engineer
<b>QAE Assistant</b>	Quality Assurance Engineer Assistant
<b>QCI</b>	Quality Control Site Inspector
<b>DCC</b>	Document Controller
<b>LABS</b>	Laboratory Superintended
<b>HSEC</b>	Health and safety,Enviroment Chief
<b>ENVE</b>	Environment Engineer
<b>HSES</b>	HSE Superintended
<b>HSEI</b>	HSE inspector
<b>HSET</b>	HSE Training
<b>HSEO</b>	HSE Officer
<b>TOM</b>	Technical Office Manager
<b>TOC</b>	Technical Office Chief
<b>SCO</b>	Survey Works Coordinator
<b>SEN</b>	Survey Engineer
<b>STE</b>	Survey Technician
<b>ACO</b>	Architect Works Coordinator
<b>ECO</b>	Electrical Works Coordinator
<b>MCO</b>	Mechanical Works Coordinator
<b>DM</b>	Design Manager
<b>CONST</b>	Ext.Cons.Coordin.Team
<b>TS</b>	Technical Staffs
<b>SDC</b>	Structural Design Chief
<b>CENG</b>	Civil Engineers
<b>ADC</b>	Architect Design Chief
<b>ARC</b>	Architect
<b>EDC</b>	Electrical Design Chief
<b>ELE</b>	Electrical Engineer
<b>MDC</b>	Mechanical Design Chief
<b>MENG</b>	Mechanical Engineer
<b>MEFC</b>	Medical Equipment&Furniture Chief
<b>MCO</b>	Medical Equipment&Furniture Coordinators
<b>DRA</b>	Draftman
<b>TMM</b>	Technical Manager Medical
<b>MEE</b>	Medical Engineer
<b>CM</b>	Construction Manager
<b>SEC</b>	Senior Electrical Coordinator

<b>SMC</b>	Senior Mechanical Coordinator
<b>SSC</b>	Senior A/Structrure Coordinator
<b>DCM</b>	Deputy Construction Manager
<b>CC</b>	Construction Chief
<b>SWC</b>	Structural Works Chief
<b>GF</b>	General Foreman
<b>AWC</b>	Architect Works Chief
<b>FORC</b>	Foremen for Civil Works
<b>MWC</b>	Mechanical Works Chief
<b>FORM</b>	Foreman for Mechanical Works
<b>EWC</b>	Electrical Works Chief
<b>FORE</b>	Foreman for Electrical Works
<b>ELC</b>	Electricians
<b>CCI</b>	Construction Chief Infrastructure
<b>CCL</b>	Construction Chief Landscaping
<b>ADM</b>	Administrative and Finance Manager
<b>ACC</b>	Accounting Office Chief
<b>ACC Assistant</b>	Accounting Office Chief Assistant
<b>PUC</b>	Purchase Chief
<b>PUC Assistant</b>	Purchase Assistant
<b>LCC</b>	Logistic and Custom Chief
<b>SC</b>	Store Chief
<b>DE</b>	Depot Clerks
<b>HRC</b>	Human Resources Chief
<b>HRC Assistant</b>	Human Resources Assistant
<b>ITS</b>	Information Technology Supervisor
<b>ITS Assistant</b>	IT Assistant
<b>SCC</b>	Site Camp Chief
<b>TSE</b>	Tea Seller
<b>UNW</b>	Unskilled Workers
<b>CLE</b>	Cleaners
<b>AS</b>	Administrative Supervisor
<b>DRI</b>	Drivers
<b>SEC</b>	Security Chief
<b>LD</b>	Legal Department
<b>PR</b>	Public Relations
<b>DPMC</b>	Deputy Project Manager Construction
<b>QSC</b>	Quantity Survey Chief
<b>SUBE</b>	Subcontract Engineer
<b>IPE</b>	Payment Engineer

## 4. PROJECT DESCRIPTION

### 4.1. GENERAL INFORMATION

PROJECT INFORMATION	
PROJECT NAME	Ankara Etlik Integrated Health Campus
PROJECT COMPANY (SPV)	Ankara Etlik Health Services Management Investment Inc.(Special Purpose Vehicle)
CONTRACT TYPE	EPC
EPC CONTRACTOR	Astaldi-Türkerler J.V.
LEADER PARTNER	ASTALDI S.P.A
<b><u>PARTNERS:</u></b>	<b><u>PARTNERSHIP SHARES:</u></b>
ASTALDI S.p.A	51,00%
TÜRKERLER İNŞ. TUR.MAD. EN. ÜR. TIC.SAN.	49,00%

Through a PPP Model, a scheme of up to 28.5 years (up to 3.5 years construction plus a 25 year operating term) for the development, design, engineering services, financing and the provision of products and services will be held by Ankara Etlik Health Services Management Investment Inc. and the construction of the Ankara Etlik Integrated Health Campus (IHC) will be held by Türkerler-Astaldi Joint Venture.

Ankara Etlik Integrated Health Campus Project is one of the first PPP project in the Turkish healthcare sector with the participation of The Ministry of Health of the Republic of Turkey (MoH).

This project aims to:

- Renovate the insufficient healthcare infrastructure that will serve increasing healthcare demands
- Bring smaller hospitals together under one campus
- Increase service quality and efficiency

Ankara Etlik Health Services Management Investment Inc. has signed an EPC contract with Astaldi-Türkerler J.V.

Ankara Etlik IHC – PPP will be a facility with a total capacity of 3,566 beds consisting of:

A 694-bed general hospital, a 500-bed woman's hospital, a 468-bed children's hospital, a 362-bed cardiovascular surgery hospital, a 484-bed oncology hospital, a 478-bed orthopedics hospital, a 300-bed rehabilitation hospital, a 40-bed autism center, a 34-bed diagnosis and treatment unit, a 106-bed psychiatric hospital and a 100-bed high-security psychiatric hospital.

## 4.2. CONTRACT HEADING

Ankara Etlik Integrated Health Campus Project

## 4.3. PROJECT LOCATION

Project's general Location/Layout Plan is shown below.



## 5. RESPONSIBILITIES

The organization implemented by Astaldi-Türkerler J.V. for the management of the Project and, consequently, the responsibilities, are described in detailed in the documents listed here below and attached to this PMP:

- Project's Organization Chart;
- Job Description Handbook.

Board of Representatives (BOR), the Executive Committee (EXC) and Project Manager (PM) are responsible for the successful delivery of the works in accordance with the "Main Contract" requirements and with "Project Management Plan (PMP)".

Project Director (PD), Project Manager (PM)'s duties are set by the Board of Representatives (BOR). The Project Director (PD) is responsible to the Executive Committee (EXC).

The following document, attached to this PMP, may be taken as reference in order to clearly understand the various offices and departments who take part in the management of the Project:

Matrix of Responsibilities;

### **Documents drawn up:**

- Project's Organization Chart (Annex 1 to the PMP);
- Job Description Handbook (Annex 2 to the PMP);
- Matrix of Responsibilities (Annex 3 to the PMP).

## 6. MANAGEMENT AND TRAINING OF HUMAN RESOURCES

### Astaldi Türkerler JV Human Resources Policy

- Creation and updating of organization structures and of organization charts;
- Planning of the needs for Human Resources prior starting of project
- Planning Human Resources mobility and development within partners production units
- Selection of personnel within and out of partners in order to ensure to avail itself of personnel provided with the necessary skills to carry out the relevant activities;
- Assessment of personnel's skills and performance;
- Remuneration policy: promotions and increase in remuneration;
- Remuneration policy: rewarding system;
- Training.

### 6.1. WORKING OUT AND UPDATING THE ORGANIZATION CHART

The definitions and changes in the Project's Organization Chart are made under the PM responsibility.

### 6.2. RESEARCH, SELECTION, HIRING AND TRANSFER OF PERSONNEL

#### 6.2.1. Selection criteria

The selection criteria to be adopted for the identification of Project's personnel are at least the following:

- Academic titles;
- Professional experience accrued;
- Qualification and/or certifications obtained;
- Registration with professional rolls;
- Foreign languages known.

Evidence of compliance with such requirements shall be given in the candidates CV and by providing copy of the documents attesting the qualifications and/or certifications held as stated. The selection phase, in which all the requesting Departments/Offices take part, shall be carried out by interviews made by HR's personnel aimed at assessing the candidate's global profile and his/her suitability for the vacancy.



A candidates having terminated, for any reason whatsoever, their labor relationships with any of the partners during the last three years prior to selection should be avoided.

#### 6.2.2. Research and selection of personnel other than workers

The process of search and selection of the members of personnel is started by PM by means of a formal request, by specifying the necessary requirements, to be sent to HR.

Personnel Request Form (PRF) to be transmitted to Project Director (PD) for verification and for process.

Administrative and Finance Department (ADM), supported by the HR, manages and updates the list of the project personnel.

The list of Project Personnel (including the Expatriates and the Local Staff) is managed and updated by Administration Manager (ADM) on the appropriate Personnel Management Form (PMF) to be transmitted to the Executive Committee (EXC) for verification every 6 months (end of May and November).

#### 6.2.3. Search, selection and hire of workers

The hire of workers, identified by the respective Department/Office are made official by the latter by filling-in the Personnel Entry Form (PEF) form, authorized by Executive Committee (EXC), and forwarded to ADM to make the employment official and give notice thereof to the competent bodies.

### 6.3. PLANNING OF TRAINING

Any need for training is determined by the managers of Project Departments/Offices who may consider the same as useful.

Newly employed personnel will take orientation on the first day working day and will be also trained in HSE, and recorded with Orientation Form (OF)

Also courses and seminars may be applied for in order to obtain a closer knowledge of general aspects and concepts, such as quality, safety, environment, mandatory laws and regulations, etc.

Each Department / Office having planned training activities for its personnel shall draw up and issue the Training Plan (TP). The TP is approved by PM and filed by Human Resources (HR). Copy of the approved Training Plan (TP) shall be forwarded Executive Committee (EXC)

#### 6.3.1. Training of Newly Hired Personnel or of Personnel Assigned to New Tasks

The Manager of the Department/Office where newly hired members of personnel work provides them with the shadow training by means of members of personnel having accrued appropriate experience.

Similarly, the managers of Departments/Offices/Units provide the members of personnel assigned to new tasks with proper training, if necessary.

Training records are managed as set forth in paragraph 6.3.4.

### 6.3.2. Training of Project's Operative Personnel

Projects' personnel's attendance at courses administered by third-party bodies, and the relevant expense commitment, are authorized by PM.

Training activities carried out by Astaldi-Türkerler J.V.'s personnel at Projects' sites, organized by HR and attended by that same Project's employees and workers, are authorized directly by PM.

Courses records are managed as set forth in paragraph 6.3.4.

### 6.3.3. Technical Documents of Courses and/or Seminars

Every Manager of Department/Office who took part, personally or through personnel the same is responsible for, in courses and seminars, files the texts which are usually provided to participants at his/her office, so as to such texts available for possible future consultation.

### 6.3.4. Training Activity Records

In the event the training activity is carried out at the premises of a third-party entity, the Concerned Department/Office shall ensure that a document attesting each employee/worker's attendance at the course is issued by such entity, or shall make a specific request to such purpose.

In the event that the third-party body does not issue the training certificate, or in the event of in-house training or shadow training, the training activity is recorded by using the appropriate "Training Course Form" (TCF) or an equivalent thereof.

HR is responsible for the collection and filing of the Training Records (TREC / certificates) related to the project personnel in the respective folders.

#### **Documents drawn up:**

- Employee Request Form (PRF)
- Personnel\_Entry\_Form (PEF)
- Personnel Management Form (PMF)
- Orientation Form (OF)
- Training Course Form (TCF);
- Training Plan (TP);
- Training Records (TREC)
- Subcontractor Social Security Tracking (SSST)
- Personnel Leave Form (PLF)



## 7. CONTRACT MANAGEMENT

### 7.1. EXECUTION OF THE WORKS PENDING PROJECT COMPANY'S (SPV) APPROVAL

During the execution of the works, there could be an additional works not provided in the contract agreement in this event the Project Manager (PM) with the support of Contract Manager (CON) and all other related department shall evaluate to fulfill of the require preconditions before executing the works.

The above activity, duly evidenced by the Project Manager (PM), is submitted to Executive Committee (EXC) for approval.

### 7.2. REVIEW OF CONTRACT DOCUMENTS

During the management of the Project, the continual review activity is evidenced by all the contractual documents, including the contractual correspondence with the Project Company (SPV), and eventually by claims accompanied with all the documents produced to support the claims filed.

The cases which are considered as particularly important from the contract point of view are presented to Executive Committee (EXE) and Board of Representatives (BOR)

Any contract variation is recorded onto "Contract Variation Form (CVF)" by the Project Contracts Manager (CON) and it is submitted to Executive Committee by the Project Manager (PM) for approval.

The Project Manager (PM) maintains the file of all the Contract Variation Forms (CVF).

### 7.3. CLAIMS

The Project Manager (PM) coordinates the management of the contract, jointly with the Project Director (PD), supported by the Contract Manager (CON), in such a way to ensure that "contemporary records" (correspondence, periodical reports on production, labor, and installations, works log, drawings record, etc.) are constantly updated. The Project Company (SPV) is promptly given notice of any situations differing from the contract provisions, and the consequent claims for higher charges incurred and time spent in carrying those activities.

In particular, the Project Manager (PM), with Contracts Manager (CON)'s assistance, shall draw up and keep the "Schedule of Claims Filing Terms (SCFT)" duly updated. This form is submitted to Executive Committee (EXC). PM shall take actions according to the expiry dates set forth therein.

The Legal Department (LD) is required to take action upon occurrence and/or receipt of a communication regarding a possible non-compliance of a certain issue or fact with the

provisions of contract documents, or when an explanation on any contractual or non-contractual issue is required vis-à-vis the Project Company (SPV).

The Project Manager (PM), in agreement with the Project Director (PD), coordinates the drawing up and filing of the claims with the Legal Department (LD) and Contract Department (CON) assistance.

To such purpose, the Project Manager (PM), with Contracts Manager (CON)'s assistance, draws up and updates the Claims Information Sheet (CIS) chronologically recording all the claims, then transmitted to the Project Manager (PM) who submits for approval to the Executive Committee (EXC).

PM sends a copy thereof on the occasion of the quarterly financial statements by no later than the fifteenth day of the month following the quarter of reference, to the PD and Executive Committee (EXC).

The PM shall, under Executive Committee supervision and control and through the PD, and availing himself of Legal Department (LD) / Contracts Manager (CON)'s assistance, take care of the activities summarized here below:

- a) Forwarding, to the Legal Department (LD) the documents of a general nature as set forth under item 1 of "Summary of Support Documentation for Claims/Disputes (SSDCD)". when said documentation is fully executed and complete;
- b) Orderly preserving and forwarding to the Legal Department (LD), on the occasion of the site clearance or upon official filing of the document starting a judicial dispute (arbitration application / writ of summons), all the documentation indicated under item 2 of "Summary of Support Documentation for Claims/ Disputes (SSDCD)". It is clear that the form refers to the most recurrent kinds of claims, but similar documentation, to be agreed upon from time to time with the Legal Department (LD), shall be kept and subsequently forwarded also for other kinds of claims which are more unusual and therefore not specifically referred to;
- c) Periodically forwarding the main correspondence regarding the contract's evolution to the Legal Department (LD).

#### **7.4. MANAGEMENT OF EXPROPRIATIONS**

Superficial rights of the land will be transferred from Ministry of Health to the Project Company (SPV) "Ankara Etlik Health Services Management Investment Inc."

## 7.5. MANAGEMENT OF DOCUMENTS

Except as otherwise noted for by the PMP, all the contractual correspondence is filed by the Project Director (PD)/ Project Manager (PM), who keeps its archive up to date and takes care of its distribution to the competent Head Office departments/offices.

The documentation relating to the contract management phase is managed and filed by the PM who, anyway, takes care of providing Legal Department (LD) with a copy of the Contract (and possible subsequent addenda, including the works start-up notices, suspensions, provisional acceptance and final take-over certificates).

### **Documents drawn up:**

- Contract Amendment Report (CAR);
- Summary of Support documentation for Claims/Disputes (SSDCD)
- Claims Information Sheet (CIS);
- Schedule of Claim Filing Terms (SCFT).

## 8. PLANNING OF PRODUCTION PROCESS

The Project Manager (PM)'s primary responsibility is planning all the activities subsequent to the acquisition of the Project and related to the execution of project works.

As a general rule, such activities are the following:

- Identifying Project Company (SPV) requirements;
- Identifying mandatory requirements, also in terms of Quality, Safety and Environment, and all that is necessary and not better specified by the Project Company (SPV);
- Identifying the objectives in matter of quality, safety and environment;
- Identifying, assessing and controlling risk;
- Identifying the processes and the necessary resources;
- Defining the Project operative structure;
- Drawing up the Project Management Plan (PMP);
- Drawing up the Safety Management Plan (SMP)
- Environmental Management Plan (EMP);
- Drawing up the Risk Management Plan (RMP);
- Time-scheduling (works time-schedule, procurement, subcontracting, on-site supplies, design);
- Identifying the necessary machinery, installations, and equipment, including those regarding Site Plants;
- Working out the Economic-financial budget;
- Identifying the technical/economic control activities for the monthly monitoring of the objectives defined in the Budget and in schedules;
- Initiating administrative and financial activities;
- Starting production activities and the relevant management;
- Market research to identify Subcontractors and Suppliers;
- Other activities related to the specific features of the Project.

On a monthly basis, the PM, through the management of their own operative structure monitors the identified processes.

The main processes subject to monitoring may be grouped as follows:

- Project's contract management processes;
- Project's Production Processes;
- Planning and Scheduling Processes;
- Economic and Management Control Processes.

## 8.1. PROJECT'S TIME-SCHEDULING AND CONTROL

### 8.1.1 Works Time-scheduling and Progress Control

Project works time scheduling and progress controls are carried out with Primavera Project Planner 6.0 through instruments classified according to four main levels:

#### SCHEDULE (SCH)

##### **1st LEVEL: general summary documents for the Contract and the Company's Top Management**

###### **General Contract Programme:**

The General Contract Program shows the sequence of the Project's main events as provided for by the contract and by work variations.

It is annexed to the contract and, therefore, is in agreement with the "Contract Time-Schedule".

During the period of execution of Project works, such document is revised exclusively in connection with work variations approved by the Project Company (SPV).

##### **2nd LEVEL: General time-scheduling documents providing a global whole-life overview of Project's activities**

###### **Project's Operative Time-Schedule (POTS) / "S" curve**

The Project's Operative Time-Schedule shows a chronological order of project's activities, from engineering until take-over (Target Time-Schedule) and, consequently, the resources sooner or later required.

The Project's Operative Time-Schedule is worked out by Project Control Manager (PCM) with the assistance of the managers of the various sectors: preliminary, administration; engineering, procurement, construction, testing and commissioning.

On the basis of such data, the Project's Operative Time-Schedule (POTS) allows to draw the "S" curves relating to quantities, progress by field of activity, area, kind of work, etc.

The actual progress of activities is reported on a monthly basis by issuing the POTS showing a graphical representation of each activity of the two chronological bars, the time-schedule bar and the actual progress bar.

Similarly, the quantity of executed works and the relevant analysis of deviation from

the time-schedule are shown on the "S" curves.

### **3rd LEVEL: short-term documents showing the programme for the coordination of the project's various activities**

#### **General Short-Term Programme:**

The General Short-Term Programme is drawn up with the purpose of coordinating, in the short term, all the various activities, and is further taken as a basis of the "Project's Weekly Meeting".

Such meeting is attended by the whole Project's Group and, if necessary, by other internal or third-party entities, depending on the topics of the agenda. The Project Control Manager (PCM) is entrusted with the task of issuing the minutes of Project's meetings.

The General Short-Term Programme is worked out by Planning Chief (PC), in collaboration with the relevant departments, and shows in detail the activities time-scheduled in the Project's Operative Time-Schedule, thus providing a reliable time-schedule of the activities to be carried out during the first two months and an estimate of the two-month period coming thereafter. Subject document is revised on a monthly basis.

### **4th LEVEL: Detailed Programs**

Such documents are managed directly by department managers

To follow the project, more detailed schedules will be needed. The 4 week look ahead program, worked out under the form of bar chart, will be used for this purpose to show the progress of engineering, procurement and construction activities in more detail. This schedule will be prepared based on the Project's Operative Time-Schedule (POTS) and be updated weekly by the department managers.

#### 8.1.1.1. Physical Progress Control – "S" Curves

The Physical Progress Control is aimed at verifying the reference Project's Operative Time-Schedule (POTS) and shows, by means of "S" curved the works progress by sector or by work detail.

In relation to a construction project, following S-Curves will be prepared;

- Design;
- Procurement
- Preliminary Site Activities
- Execution of construction works;
- Erection of installations and plants;

- Tests during the execution of the works;
- Testing & commissioning of installations/ plants.

Project Control Manager (PCM) shall receive data from related department, on monthly basis relating to the works progress

- Work out "S" curves showing the works progress;
- Shall issue detailed works progress reports by field of activity, setting forth the "S" curves and an estimation of main deviations;
- Issue a proposal of correction actions to be taken.

### 8.1.2 Cost Control

The first cost control document to be drafted by Project Control Manager (PCM) is the cost code center list, which is the basis of the technical-operative control of costs and revenues. Such list shall be drafted by Project Control Manager (PCM) based on the Work Breakdown Structure (WBS) and by taking into account the works necessary to carry out the project.

Then, Project Control Manager (PCM) makes a revision of the estimation of costs and revenues worked out upon acquisition (Project Budget) by taking into account the control elements (cost center). Such operative budget, worked out as described above, shall be the project's initial reference documents and its data shall be entered in BAAN Project.

On the basis of the Priced Bill of Quantities (BOQ), market researches and other elements which will have become available in the meanwhile, Project Control Manager (PCM) shall draw up, according to the information given by and in agreements with the managers of the various departments - Design Manager (DM), Administrative and Finance (ADM) , Construction and Assembly (CM), Tests (QA/QC), Staff Units,(HRM) etc.- the "Operative Budget" according to said Cost Center Structure.

After issuing the "Operative Budget", Project Control Manager (PCM) checks the compliance with the Budget's assumptions, and takes care of updating the estimated final value of costs and revenues on the basis of the evolution of the engineering design, of the commitments taken on vis-à-vis third parties by the issue of orders and contracts, and of actual values of industrial accounting, as far as costs are concerned, and on the basis of variations and claims as far as revenues are concerned. The update of the estimated cost at completion shall be entered in the Cost Control Report to be issued according to the agreed intervals.

Finally, Project Control Manager (PCM) takes part in the procurement cycle by defining the available budget amount for each Purchase Order (ODA) expected to be issued according to the Procurement Plan (PAC).



Production forms will be utilized for asphalt, aggregate, concrete and tracking forms will be utilized for machinery, service note, subcontractor machinery, tower crane

**Documents drawn up:**

- Safety Management Plan (SMP) - (Annex 8 to the PMP);
- Environmental Management Plan (EMP) - (Annex 9 to the PMP);
- Risk Management Plan (RMP) - (Annex 10 to the PMP);
- General Contract Programme - (Annex 4 to the PMP);
- Project's Operative Time-Schedule;
- General Short-Term Program (1 month look ahead, 6 month look ahead)
- Project Design Plan (PDP) - (Annex 6 to the PMP);
- Weekly Programmes;
- Works Progress Reports
- Asphalt production form
- Aggregate procurement form
- Concrete production form
- Machinery form
- Service note form
- Subcontractor machinery list
- Tower crane form
- Project Budget - (Annex 7 to the PMP)
- "CONTGEST" report;
- Monthly Cost Control Report
- Project Monthly Report



## 9. DESIGN MANAGEMENT

### 9.1. PROJECT COMPANY (SPV) REQUIREMENTS AND SELECTION OF DESIGNERS

Project Manager (PM) and Technical Office Manager(TOM) taking advantage of the assistance provided by Design Manager(DM), Technical Office Chief (TOC), Quantity Survey Chief (QSC) review bid and contract documents:

- Contract
- Special Conditions of Contract
- Specifications and/or Technical Instructions,
- Tender/ Bid documents/ design,
- as well as any other document attached and/or referred therein and/or applicable thereto

, identify the Project Company (SPV) requirements to be met by the engineering design of the works to be executed. The bid study team takes part in this phase, to the extent of its own competence.

### 9.2. PLANNING OF DESIGN ACTIVITIES

Design activities are carried out according to the time-schedule defined within the Design Plan (PDP) or the equivalent. Such plan is drawn up, in compliance with the provisions of the general work programme, by Design Manager (DM). Such plan is approved by Project Manager (PM). The Design Plan (PDP) contains at least the following:

Design Plan (PDP)	
	Description of design activities
	Kind of document
	Responsibilities
	Expected date of delivery of design drawings and reports

The Design Plan (PDP), or the equivalent issued to such purpose, shall set forth the dates of the activities of verification / review of design, to any possible extent. The Design Plan shall be updated upon any partial issue of design documents (drawings, reports, models, etc.) and/or upon occurrence of events, which cause any change in the time-schedule of contract activities.

## Drawing Discipline (DWG)

SW	Site Works
AR	Architectural
FF	Fire Fighting
ST	Structural
ME	Mechanical
EE	Electrical Sys.
HM	Furniture and Medical Equip.

## Drawings (DWG)

Design Drawings and Reports by Designer

<b>KP</b>	Final Design (KESIN PROJE)
<b>UP (6 Set hard copy/ soft copy)</b>	Construction Drawings
<b>AB (6 Set hard copy/ soft copy)</b>	As Built Drawings

Permit Drawings and Reports for Ministry of Health prepared by Designer

<b>DD or CD (according to discipline) (5 Set hard copy/ soft copy)</b>	Final Design (KESIN PROJE)
<b>DD or CD (according to discipline) (5Set hard copy/ soft copy) Ministry of Health will return 2 copies to SPV</b>	Construction Drawings

Building Permit Documents – prepared by Designer

<b>AU</b>	Building Permit
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Site Drawings and Report - prepared by Subcontractor, reviewed by Designer

**SD**  
**(2 Set hard copy/ soft copy)**

Shop Drawing

### 9.3. DESIGN VERIFICATION

Design verification activities are carried out by those who work out design drawings and reports and manage design consultancy activities by checking the integrity, the consistency between them and with the basic data, the technical accuracy of calculations and drawings.

Designer/Technical Office Manager(TOM)/Design Manager(DM)/Technical Office Chief(TOC)/Quantity Survey Chief (QSC) shall give evidence of such verification, made on the single drawing or on the drawings/ documents concerning parts of works, by filling-in the Design Verification Form (DVF).

The verification is carried out methodically on all drawings worked out and is aimed at checking the technical accuracy of the contents of drawings and reports.

The main kinds of controls refer to:

Design Verification Form (DVF)	
	Consistency of results with basic data;
	Compliance with the requirements of applicable laws and regulations;
	Completeness of the elements contained in the design drawing/report.
	Contractual Compliance
	Construction feasibility within budget (check between Design Manager (DM), (CM), Technical Office Chief (TOC), Project Control Manager (PCM), Technical Office Manager(TOM)

In the event the Design Manager(DM) deems that the design solutions proposed need to be amended and/or supplemented, the same shall be agreed upon with the designers who shall subsequently revise the solutions proposed and/or look for alternative technical-economic solutions.

## 9.4. DESIGN REVIEW

During the drawing up of design documents, Design Manager(DM)/ Technical Office Manager (TOM)/ Project Manager (PM) Technical Office Chief(TOC) shall meet periodically to examine and discuss design proposals and to assess the same in connection with the following aspects:

Minutes of Design Review (MoM)	
	General: Requirements set by the Project Company (SPV), Local laws and/or regulations, Analysis of risks etc.
	Procurement
	Design Works
	Construction Methodology & Budget Study
	Mobilization
	Engineering Tracking List

Weekly design meetings are held with Design Manager(DM) and Engineer Company NKY-ITEC. Design meetings are held with medical advisor, project company (SPV), Service Providers (IT, Life and Fire Safety, medical gas, medical equipment etc.)

## 9.5. ISSUE AND APPROVAL OF DESIGN

Design Drawings (KP - DWG)	
↓	<p>Designer</p> <p>Design drawings/reports issued by Designers shall be signed by the Designer in the proper space provided in the title page of all drawings/reports before being submitted to Project Manager (PM). Designers will deliver to the EPC Contractor Astaldi Türkerler JV, 6 copies on paper and two on non-editable electronic versions. They will be issued with a cover letter or an appropriate Document Transmittal Form (DTF) with list of deliverables.</p>
↓	<p>EPC Contractor - Astaldi-Türkerler JV</p> <p>The filing of engineering design drawings/reports is kept up to date by Document Control Centre (DCC), Design Manager (DM)/Technical Office Manager(TOM) by using the Register of Design Drawings and Reports (DDRREG) or an equivalent document, or electronically.</p>

	The PM shall check the documents received from the designers and affix his/her signature in the proper space provided in the title page of all drawings/reports. The same shall subsequently forward 6 copies on paper and 2 on non-editable electronic versions to the Project Company (SPV) for final approval;
↓	Project Company – SPV  Approval of Project Company (SPV) shall take place within the term set forth in the Contract. In the event the Project Company (SPV) denies the approval, the proposed design documents shall be revised and checked by taking into account the Project Company's (SPV) remarks. After Project Company's (SPV) approval, Design Manager (DM) will transmit drawings to Consultant – NKY ITEC and Administration - Ministry of Health.
↓	Consultant – NKY ITEC  Consultant – NKY ITEC will review final Design and Implementation Drawings.
↓	Administration - Ministry of Health  Administration - Ministry of Health will review and approve final Design and Implementation Drawings.

UP-DWG or CD-DWG (according to discipline)	
↓	EPC Contractor - Astaldi-Türkerler JV  Design Manager (DM) will provide Contract Manager (CON), set of Drawings and Specifications to be included in contract. Drawings shall be stamped with the wording "FOR <b>CONSTRUCTION</b> " or equivalent.

## 9.6. VALIDATION OF DESIGN

In order to ensure that the works/ work portions executed satisfy the user's needs and requirements, they are caused to undergo, under operating conditions defined in specifications and/or requirements, test activities to validate the design on the basis of which works are executed.

Such activities, performed either on the final products or on the semi-finished products (work elements), are evidenced by documents showing the fulfilment of requirements; examples thereof are all acceptance tests, load tests, and operation tests performed on the products and/or components and officially stated in the technical test reports on completed works or on works in progress.

In the event of particularly critical situations, on-site tests may be carried out also by means of tests and trials (i.e. test fields for jet grouting, stays, diaphragms, hydraulic models, etc.).

## 9.7. CHANGES IN ENGINEERING DESIGN DOCUMENTS

In the event that, during execution and erection of works/plants it is deemed that changes should be made to the engineering design approved by the Project Company (SPV), after considering the importance and the impact of changes on the design itself, Variations during Execution of the Works or Detail Changes shall be worked out as set forth here below.

### 9.7.1. Variations during the Execution of the Works

Subcontractors will use the forms Request for Information (RFI) for requesting clarification on drawings and specifications.

Request for Information (RFI)	
	Reference No of Drawing, Specification, laws, regulations, etc.
	Description of Requested Clarification

If proposed changes, solutions creates big variations in the current Project set, variation in design is discussed internally (Project Manager (PM), Technical Office Manager(TOM),Design Manager(DM), Deputy Project Manager Construction (DPMC), Technical Office Chief(TOC)) and externally (Project Company - SPV, Designer – Studio Altieri, Ministry of Health). After the agreement of all Parties, Contract Manager (CON) sends Variation Order (VOR) to the Subcontractor.

Variation Order (VOR), Contract Addendum	
	Reference No of Drawing, Specification, laws, regulations, etc.
	Time / Cost Impact

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### Revisions to Construction Drawings (CD – DWG), Specifications, BoQ

	EPC Contractor - Astaldi-Türkerler JV
	↓
	↓
	Subcontractor / Supplier / Service Provider

In order to ensure that only the latest revision of documents is used, the Document Control Centre (DCC), DM/TOM shall share the Register of Design Drawings and Reports (DDRREG) with the site's operative personnel.

Revisions to design drawings/reports, made following to variations made by the Project Company (SPV), trigger the issue of a new release of the same, which shall follow the same procedure described above in connection with first issue drawings/reports (verification, revision, issue, approval, validation and filing). The revision number is shown on the design drawings/reports by updating the number in the proper space in the title block (Rev. 0, 1, 2 ...). The new issue invalidates previously issued drawings/reports.

Only one of the copies previously issued is kept with the site records, to which the stamp "**SUPERSEDED**", or equivalent, shall be affixed, and all the copies given to the involved offices/departments, to subcontractors and suppliers shall be, if possible, withdrawn and destroyed, simultaneously with the delivery, by the proper personnel, of the newly issued copy.

#### 9.7.2. Detail Changes

These are those slight modifications, which entail slightly important changes in the Engineering Design Approved, due to reasons connected with the construction site. In this case, the person directly accountable therefor Construction Manager (CM), Technical Office Manager(TOM) shall give notice thereof to Design Manager (DM).

#### Request of Change (RoC)

Request is made by the issue of the Request of Change (RoC) form, or an equivalent document, clearly and exhaustively setting forth the description of the change and the reasons therefor.

The RoC, jointly with the supporting evidence, if any, is checked and considered by the PM/ Technical Office Manager(TOM) with the assistance, if so deemed necessary, of other site Units/Departments and, if necessary, is submitted to the Designer for approval.



In the event the designer denies the approval, the proposed detail change shall be revised by taking into account the designer's remarks.

The request of change, to be approved by the designer, shall supplement the engineering design documents and, therefore, may be used immediately by the site's operative units.

In order to allow the RoC to be promptly put in relation with the drawings/reports having undergone partial changes consequently thereto, the changes made to the drawings/reports shall be highlighted by setting forth the RoC's data; moreover, in order to facilitate the issue of the "As Built drawings" upon completion of the works, the ID number of the RoC having caused changes in design drawings/reports shall be set forth in the appropriate column of the " Design Plan (PDP) And Register Of Design Drawings And Reports (DDRREG) ".

Effected Plan / Register	Reference link
Design Plan (PDP)	Drawing and related Request of Change (RoC) Ref No.
Register Of Design Drawings And Reports (DDRREG)	Drawing and related Request of Change (RoC) Ref No.

Shop Drawings (SD – DWG) (for Façade, Doors, Windows, Furniture, Medical Equipment, Roof, Mechanical, Electrical)	
	Subcontractor / Supplier / Service Provider
↓	Subcontractor / Supplier / Service Provider provides shop drawings to EPC Contractor - Astaldi-Türkerler JV
	EPC Contractor - Astaldi-Türkerler JV
↓	EPC Contractor - Astaldi-Türkerler JV reviews the shop drawings with Designer – Studio Altieri

## 9.8. IDENTIFICATION, STANDARD TITLE BLOCK AND FORMAT

Unless otherwise specified by contract provisions, design drawings/reports shall be identified by an appropriate title block setting forth at least the following information:



Title Block	
	Alphanumeric code identifying the drawing
	Administration 's name
	Project Company's (SPV) name
	Name of the project and/or of the works and/or of the site
	Designer's name
	Contractor's name
	Title
	Selected scaling
	Table of revisions
	Designer's signature acknowledging the drawing up, check and approval, to be affixed to design drawings to undertake the liabilities provided for by the law
	Signature attesting approval by the PM/TOM, in connection with contractual obligations vis-à-vis the Project Company

As to the format, the following formats are generally used:

- A4 and/or A3 for reports;
- A0, A1, A3 for drawings.

## 9.9. DRAWING UP AND ISSUE OF A S-BUILT DRAWINGS AND REPORTS

Whenever it is so provided for by contract provisions, or whenever it is deemed necessary by the PM/ PD, "**AS BUILT**" drawings, taken from the latest revision of design drawings and reports approved by the Project Company, are issued.

Said design drawings and reports are identified by affixing the stamp "AS BUILT" to each drawing/report, together with the date and PM's signature. Such documents shall be included in the project records.

As Built Drawings (AB - DWG)	
↓	Subcontractor / Supplier / Service Provider
↓	Designer - Studio Altieri
↓	EPC Contractor - Astaldi-Türkerler JV

### 9.10. CALCULATION SOFTWARE

As far as software is concerned, only duly recognized standard software and, therefore, certified as valid by their respective software house, will be used.

In the event that, because of particular needs, specific non-commercial software, developed in-house by Astaldi-Türkerler J.V. and/or Designers, is used, the same shall have been already validated through the comparison method according to widely recognized standard operative procedures.

In such latter case, evidence thereof shall be given by proper Validation Report to be issued by

#### **Documents drawn up:**

- Design Plan (PDP) (Annex to the PMP);
  - Design Documents;
  - Design Verification Form (DVF)
  - Register of Design Drawings and Reports (DDRREG);
  - Minutes of Design Verification, Minutes of Review (MoM)
  - Request of Change (RoC),
  - Request for Information (RFI)
  - Variations during the Execution of the Works;
- As-Built Drawings and Reports;  
Request for change log (RFC Log).

## 10. MANAGEMENT OF PROCUREMENT AND SUBCONTRACTS AND TRANSPORTATION

### 10.1. PROCUREMENT

#### 10.1.1. Procurement Plan (PAC)

Project Manager (PM) / CM / PROCUREMENT CHIEF (PRO) / TOC works out the Procurement Plan (PAC) by defining the main and strategic supplies necessary for the Project, in terms of quantities and expected dates of availability on the basis of the time-schedule set forth in the Works Program and/or the program of activities.

Upon Project start-up and, subsequently, on the occasion of the revision of the Annual Budget and Business Plan, such document is sent by Project Manager (PM) to Executive Committee (EXC) and Board of Representatives (BOR) for approval.

#### 10.1.2. Issue of Purchase Request (RDA)

Based on the provisions of the Procurement Plan (PAC) and of the works progress, the relevant Project departments issues the relevant Purchase Requests (RDA).

The Purchase Request (RDA) shall set forth the following information:

The Purchase Request (RDA)	
	Description of the product which is the subject-matter of the request
	The requested quantity
	The measurement unit
	In the event of assets, the period of their expected use
	If the purchase cost is included in the Budget
	Project's identification data
	The period of time within which the product shall be made available at the site and its monthly performance
	Date and signature of the member of personnel issuing the request
	Date and signature of the manager of the relevant Department/Office
	Reference to specifications, standards, drawings, Technical Specifications, etc.

The certifications to be requested to the supplier (including quality, safety, products certifications, etc).

In the event of any Purchase Request (RDA) relating to spare parts for out-of-service machinery/plants, the wording **Out-of-Service Machinery** must be set forth in the Purchase Request (RDA).

In connection with any Purchase Request (RDA) relating to the purchase of technological fixed assets (i.e. software products, hardware and telecommunication apparatuses), PM shall ask the Information Technology Supervisor (ITS) for advice prior to approving the same.

The RDA issued by Site Personnel shall be verified and approved by the Sector Manager (relevant head of department) and, then, forwarded to Store Chief (SC). SC checks whether the requested product / material / equipment is available at the site. In the event the product / material / equipment are not available at the site, the SC attribute the progressive number to Purchase Request (RDA) and send it to PRO, who issues the Quotation Request (RDO).

The Quotation Request (RDO) shall be issued using the RDO form attached hereto BaaN software, and they may be issued under the form of paper only in the event BaaN software is unavailable. The Quotation Request (RDO) for purchases, setting forth the necessary information and by prior verification of the reference approved Budget shall be forwarded by PRO to suppliers. PRO draws up and brings the Register of Quotation Requests (RDO) issued up to date.

#### 10.1.2.1. Project Complimentary items and Donations

Such kind of supplies (i.e. various gifts, events and/or recurring events, sponsoring, etc.) shall be subject to the following.

The Quotation Request (RDO), setting forth also the name of the beneficiary/ies, are drawn up and signed by Project Manager (PM) authorized by Executive Committee (EXC), and forwarded by the latter to the PRO to start market research and order/contract drafting activities.

PRO shall annually provide PM and Executive Committee (EXC) with the list of complimentary items given and donations made during the year of reference, further setting forth the beneficiaries and the relevant amounts.

#### 10.1.3. Drawing up the Quotation Request (RDO)

PRO, for purchases, starts the market research, aimed at obtaining the lowest quotation in line with Quality Safety Environment Corporate (QSE) Policy and Responsible Procurement Policy, by issuing the Request of Quotation (RDO) to minimum three qualified/ nominated suppliers. The RDO shall be issued with the Technical Bid Documents (T.B.D.), which are useful to correctly define the product to be purchased.

### Technical Bid Documents ( T.B.D. ) for Procurement Contract

No	Description	Related Department
	General Conditions (Draft Contract)	Contract Manager (CON), PRO, Administration and Finance Manager (ADM)
Annex 1	Particular Conditions: (Related clauses of Volume 1 of the Main Contract (general conditions) applicable to Contractors Works. Describes main philosophy of the works and details are presented in other Annexes 2, 3, 6, 7.	Contract Manager (CON), Design Manager (DM), QA/QC Manager, Construction Manager (CM)
Annex 2	Scope of Work (Interface Matrix)	PRO in coordination with related departments
Annex 3	<ul style="list-style-type: none"> <li>• Technical specification, drawings</li> <li>• MSDS- Material Safety Data Sheets, certificates, warranty certificate</li> <li>• Spare parts, operation and maintenance manuals</li> <li>• Compliance Matrix</li> <li>• Adequacy, Tests and Supervision Matrix</li> <li>• Quality-related documents</li> <li>• HSE</li> <li>• Responsible Procurement Policy</li> </ul>	Technical Department Manager (TOM), DM, PRO, SC  QHSE Manager
Annex 4	Time Schedule	Project Control Manager (PCM)
Annex 5	Bill of Quantities (to be priced)	Quantity Survey Chief (QSC)
Annex 6	6.a) Spare Parts and Consumables Lists for Warranty Period (to be priced)	Project Company (SPV)

	6.b) Spare Parts and Consumables List for 10-years after Warranty Period (to be priced)	
Annex 7	Special Tools a Test Equipment List (to be priced)	Project Company (SPV)
Annex 8	Form of Down Payment Guarantee	Administration and Finance Manager (ADM)
Annex 9	Form of Performance Bond	Administration and Finance Manager (ADM)
Annex 10	Process Flow of the Delivery of the Equipment	PRO in coordination with related departments, Logistic and Custom Chief (LCC)
Annex 11	Shipping & L/C Documents	Administration and Finance Manager (ADM), PRO
Annex 12	Signature Circular Power of Attorney for Contractor	Administration and Finance Manager (ADM), PRO, Contract Manager (CON)
Annex 13	Signature Circular Power of Attorney for Customer	Administration and Finance Manager (ADM), PRO, Contract Manager (CON)

#### 10.1.4. Examination of Quotations

After completing the market research phase, PRO, Administrative and Finance Manager (ADM), CM, TOM for purchases, shall examine the quotations received, shall make a table of the same and shall make a selection, evidenced by the issue of the Supplier Selection Criterion (SSC).

## Supplier Selection Criterion (SSC)

1	Lower bid
2	Technical skill
3	Vendor List
4	Previews Contracts
5	Quality Insurance
6	Presence on the Area
7	Professional Specialization

### 10.1.5. Purchase Order (ODA)

After completion of all the activities described above, PRO, for purchases, draws up the Purchase Order (ODA) and Contract.

Prior to forwarding the Purchase Order (ODA) to the supplier, PRO enters in the BAAN software all the data relating to the order being issued.

The data relating to purchases registered in the BAAN software are:

## Purchase Order (ODA)

	Purchase order's progressive number
	Reference to the RDA
	Product code
	Description of material
	Supplier's name/code and company name
	Order's quantity
	Project
	Type of shipment
	Terms of delivery, payments and possible penalties
	Guarantees
	Packaging method
	Cost Code Center

Moreover, the data entered in the BAAN software include information relating to the delivery of the product for subsequent fulfillment of administrative and financial obligations.

#### 10.1.6. Review and Approval of Purchase Order

Before being officially issued, the order shall be examined by PRO, in order to check the correct indication of the requirements to be met by the supplier.

In particular, such review shall be aimed at:

- Verifying the completeness and clear indication of data, information and requirements;
- Verifying the appropriate description of the product;
- Verifying the presence of technical documents/ specifications to be attached thereto.
- Verifying the presence of Engineer's approval (NKY- ITEC)

Such review activity is attested by the initials of the Buyer having managed the negotiations to be affixed to the Purchase Order (ODA) after approval by ADM and PM.

Changes to orders already issued and affecting technical or quality-related requirements, shall be notified to the suppliers by the issue of a new order, which shall be managed according to the same method adopted for issuing the initial order.

#### 10.1.7. Issue/Transmittal of Purchase Order

PRO distributes the Purchase Order (ODA) for the purchases, as follows:

- To the supplier, bearing the PM, Administrative and Finance Manager (ADM) signatures;
- To the shipping agent, if necessary, as signed and scanned copy of Purchase Order (ODA);
- 1 copy in the Folder kept in the Project's Archive. Such folder shall contain all the documents relating to the specific purchase (RDA, RDO, SSC, etc....) and is filed by PRO.



## 10.1.8. Inspection of Purchased Product upon Delivery

### 10.1.8.1. Inspection upon Delivery to the Project

Shipping Documents include:

Shipping Documents		
	Item	Note,
1	Bill of Lading / Airwaybill or CMR (Convention Merchandise Routier) Forwarding Agent's Receipt	Required for import, Sent to Customs, Customs will send to Accountant (ACC)
2	Commercial Invoice (Project Name shall be stated)	Required for import, Sent to Customs, Customs will send to Accountant (ACC)
3	Packing List including Customs tariff no.	Required for import, Sent to Customs, Customs will send to Accountant (ACC)
4	ATR or EUR 1 (where applicable)	Required for import, Sent to Customs, Customs will send to Accountant (ACC)
5	Certificate of Origin stamped and signed by the Local Chamber of Commerce (where applicable)	Required for import, Sent to Customs, Customs will send to Accountant (ACC)
6	CE Conformity Declaration (where applicable)	CE is required if source is Far East.
7	Customs exit declaration (EX-1)	Provides information that origin of material is foreign country. Required for eximbank credits. Will be provided to the Banks
8	Factory Acceptance (mechanical and electrical) Test Certificate	Provided with customs documentation. Sent to QA/ QC Department

9	Any other document necessary for eligibility of the procurement under Financial Institutes	
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All products purchased on arrival at site store, are subject to inspection upon delivery.

In particular, the inspection upon delivery essentially consists in checking:

Receiving Inspection Report (RIR)	
	The physical integrity of packages and products; Upon delivery of the materials to the site, SC, with the assistance of the other Project's key personnel QA/QC Manager (QA/QC)/ CM / TOM checks that said materials have not been damaged during transportation.
	That the kind, quantity, quality of products received correspond to the purchase documents (Purchase Order (ODA)/ Purchase Request (RDA)); If possible upon delivery, checks that the quality, quantity and the kind of goods received correspond to the document accompanying the goods themselves (DDT / Packing List) and to the Purchase Order (ODA).
	The completeness and appropriateness of the marks affixed, if so required by the purchase documents; After carrying out the inspection upon delivery SC affixes the stamp, signature and date to the DDT/ Delivery Note accompanying the supplied goods in order to attest that the goods have been received and inspected and, in the event any irregularity is found, records any such irregularity in the DDT / Delivery Note.
	The completeness and correspondence between the accompanying documents (packing list, certificates, if any, manuals, etc.) and the purchase documents; Soon after, if not done upon delivery of the goods, SC checks that the quality and the kind of goods received correspond to the document accompanying the goods themselves (DDT / Packing List) and to the Purchase Order (ODA).
	The presence of the safety data sheets, if any, relating to the material;
	The consistency between invoice prices and order prices;
	The correct unloading of products in stocking/warehousing areas.

The record of such inspection of the goods received is made by taking note of the relevant results in the Receiving Inspection Report (RIR). The RIR shall be issued, in the form of paper.

SC shall affix stamp, signature and date to the Receiving Inspection Report (RIR), which shall be filed and used to prepare the **Project's Records File**.

After completion of such phase, SC makes the warehouse/site incoming materials registrations; after such registrations are made, the personnel shall take care of preserving the documents so collected.

In the event that any non-conformity (NC) is found when carrying out the Inspection upon Delivery, SC shall register any such non-conformity in the DDT/ Delivery Note, if possible, and in the RIR and SC /QA/QC Manager (QA/QC) shall issue a Non-Conformity Report (NCR), a copy of which shall be forwarded to PRO who shall get in touch with the Supplier.

Then, PRO shall make the relevant complaints against the concerned suppliers and shall take care of the relevant follow-up if necessary with the coordination of Legal and Administrative Department.

In the event that the goods purchased cannot be inspected immediately upon delivery, the goods are accepted with remark.

#### 10.1.8.2. Project Company's (SPV) Verification of Goods Purchased

If so provided for by the contract, the Project Company (SPV) (or its representative) is entitled to verify, at the source or upon delivery that the product purchased meets with the requirements set forth in the contract documents.

Such verification allows the Project Company to ascertain the conformity of the goods supplied, without detriment to PM's full responsibility for the purchased goods.

## 10.2. LOGISTICS AND TRANSPORTATION

Logistics and Transportation will be detailed after selection of Logistics Company.

## 10.3. WORKS/ACTIVITIES ENTRUSTED TO THIRD PARTIES

The following chapter describes the management activities relating to the execution of subcontract agreements for:

- Works, according to the various forms of contract (subcontracts);
- Services, including professional services <sup>1</sup>, rendered by Natural Persons on a direct basis, and by Legal Persons on an indirect basis;
- Supplies and Supplies with installation;
- Rentals and Rentals with operator.

Such activities are managed directly by PM who avail themselves of the assistance of Administrative Finance Manager (ADM), Contract Manager (CON) and Quantity Survey Chief (QSC).

The word Subcontract will be used hereinafter to refer to all said types of contract.

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<sup>1</sup> Professional services are those services rendered by professionals, usually, but not exclusively, professionals registered with professional rolls held by specific professional orders acknowledged by the law (such as, by way of example, chartered accountants, lawyers, engineers, architects, etc.), who carry out their activity on a regular basis and autonomously, holding a VAT registration number or the equivalent in foreign countries.

### 10.3.1. Issue Of Purchase Request (RDA) To Subcontract Project Works To Third Parties

PM shall issue the Subcontracts Plan included in the Procurement Plan with assistance of Contracts Manager (CON), Administrative and Finance Manager (ADM) for approval of Executive Committee (EXC).

On the basis of Procurement Plan, Administrative and Finance Manager (ADM), CM, TOM shall issue the specific Purchase Request (RDA) according to the Subcontracts Plan and the Subcontractors Vendor List, to be asked for quotations. Project Control Manager (PCM) will check expenditure commitment against approved Project's Budget.

Quantity Survey Chief (QSC) will collect subcontractors list from sponsors database and other sources. Executive Committee (EXC) will evaluate and agree on a list of subcontractors. Quantity Survey Chief (QSC) will request prequalification documents (PRE) from the agreed list of subcontractors.

### 10.3.2. Issue Of Quotations Requests, Table of Quotations, Valuation and Selection of Quotation

Contract Manager (CON) will collect Technical Bid Documents (T.B.D) from related Departments.

Quotations Requests (RDO) bearing, with the Technical Bid Documents annexed is processed by Quantity Survey Chief (QSC), The RDO shall bear all the information and documents necessary to get correct quotations.

<b>Technical Bid Documents (T.B.D.) for Subcontract</b>			
<b>Table of Contents</b>	<b>Code</b>	<b>Description</b>	<b>Related Department</b>
Main doc	CON	Draft Contract	Contracts Manager (CON)
Annex.1.1	BOQ	Bill of Quantities and Unit Price Descriptions	DM, Quantity Survey Chief (QSC)
Annex.1.2	SPC LST	General Specifications, Interface list b/w JV and the Subcontractors	CM, TOM, Contract Manager (CON)

	SPC	Technical Specifications,	DM, TOM
	MST	Method Statements	TOM, CM
Annex.1.3		Drawings	DM
Annex.2	SCH	Programme of Works	Project Control Manager (PCM)
Annex.3	LST	List of Equipment and Material	CM
Annex.4		Advance Payment Bond Form Performance Guarantee Bond Form Retention Bond	Administrative and Finance Manager (ADM)
Annex.5.1	QA/QC	Astaldi Türkerler JV's QA/ QC Policy, QA/ QC Documents, QA/ QC Forms	QHSE Manager
Annex.5.2	HSE RAS  HSE FORMS  REF  POL  CON	Astaldi Türkerler JV's HSE Specifications and requirements, Risk Assessments  HSE Forms  Reference to ESIA, ESMMP, ESAP, ESMP and all linked Plans  Policies (Responsible Procurement Policy, Human Resource Policy, Code of Conduct, Code of Ethics etc.)  Typical worker contract	QHSE Manager
Annex 6.	CoE	Astaldi Türkerler JV's Code Of Ethics	HR Chief

After all (at least three) quotations are received, and the negotiations with the selected Subcontractors, if any, are carried out, such quotations are then included within the Table of Quotation prepared by Quantity Survey Chief (QSC) and analyzed and assessed in order to make the final selection.

The criteria for the selection of the subcontractor, depending on the works to be executed and of the value thereof, are the following:

Subcontractor Review Sheet (SRS)	
1	Bid Unit Prices and Total Prices Including Payment Conditions
2	Financial Adequacy (Bank Letter of Guarantees, Regular Payment of Taxes , Regular Payment of Social Security Institution Contributions)
3	HSE Certificates, TSE and Other Quality Certificates
4	HSE performance and statistics (annual number of work accidents, fatality rate and annual number of lost days)
5	Ability to comply with Work program and References
6	Personnel List and their Professional Qualification, Organization Chart, Engineering Skills, Technological Innovation, Equipment and Machinery Aspects

Notice about the outcome of such activity shall be given to CM / Contract Manager (CON) / Administrative and Finance Manager (ADM) and TOM by sharing said **Table of Quotations**. Project Manager (PM) will make the evaluation.

Finally, in the event that the quotation selected exceeds the limits set by the Budget, Executive Committee (EXE) is asked for authorization. If quotation exceeds expenditure limits of Executive Committee, Board of Representatives (BOR) is asked for authorization.

### 10.3.3. Processing and Review of Subcontracts

Contract Manager (CON) shall distribute the standard text of subcontracts to Head of Departments.

Contracts are processed and subsequently reviewed by the concerned Department/Office to carry out a closer examination on the specific aspects of any individual contract and to be subsequently submitted to the Office hierarchically higher in rank than the Office/Department having requested the subcontract and by PM.

The outcome of such review shall be set forth in the Subcontract Review Sheet (SRS) form, which shall also mandatorily include the selection criteria adopted and the amendments made to the standard texts of contract used.

In the event significant amendments to the standard texts of contract which may affect the protocols of the Model of Organization, Management and Control, notice thereof shall be given, by the Contract Manager (CON) to Project Manager (PM) that will inform the Executive Committee (EXC).



The issue of the Subcontract Review Sheet (SRS), corresponding to an authorization to enter into the contract following review, shall be given according to the following alternatives:

- Subcontract value / Addendum value within the limits of Project Manager (PM) power of attorney.
- Subcontract value / Addendum value within the limits of By Executive Committee (EXC)'s power of attorney.
- Subcontract value / Addendum value value within the limits of By Board of Representatives (BOR)'s power of attorney.

The Subcontract Review Sheet (SRS), jointly with the Table of Quotations shall be kept with the records (DCC) of each individual case and jointly with all the documents drawn up, available to audit bodies during the execution of periodical audit activities.

#### 10.3.4. Management of Authorizations and Administrative Documents relating to Subcontracts

Before entering into the Subcontract Agreement, the Project Manager (PM) shall acquire all the technical-administrative documents required for the Project Company's (SPV) authorization of the subcontract, if so provided for by the provisions of the laws and regulations in force and/or the contract (by way of example, certificates, quality certifications, etc.).

The subcontract authorization request is then submitted by Project Manager (PM) to the Project Company (SPV).

The subsequent renewals provided for by the laws and regulations in force and/or by contract provisions shall be managed by said managers.

ADM shall manage, in connection with the obligations to be fulfilled by the subcontractors, the verification of the fulfillment of periodical administrative obligations (payment of social security contributions, premiums relating to general insurance and mandatory insurance policies providing coverage for accidents at work, guarantees and sureties, etc.).

#### 10.3.5. Execution of Subcontracts

After the Subcontract Review Sheet (SRS) form is approved and nomination granted by the Project Company (SPV), the subcontract may be entered into.

#### 10.3.6. Amendments to Subcontract Agreement

Any amendment to the Subcontract Agreement, such as Addenda and/or settlement Agreements, shall be managed according to the same provisions applicable to contract initially executed.

#### 10.3.7. Distribution of Subcontract and of Subcontract Review Sheet

The Manager of the department/office who requested the subcontract shall distribute said documents, soon after the same are signed by the parties, to the following corporate departments / offices:

- Original of the contract and of the Subcontract Review Sheet (SRS) shall be sent to Document Control Manager, copy of the contract to Contract Manager (CON), jointly with a copy of the Subcontract Review Sheet (SRS);
- 1 copy of the contract to Administrative and Finance Manager (ADM);
- 1 copy of the contract to Quantity Survey Chief (QSC)
- The contract shall be made available in the Project's e-room.

Moreover, the Manager of the department/office requesting the subcontract is entrusted with the task of causing the contract be signed by the Subcontractor and to provide the same with one copy thereof against the issue of a proper receipt.

Moreover, one copy of the contract is sent to the Project Company, if so expressly provided for by applicable laws and regulations.

#### 10.3.8. Management of Documents

The documents produced are managed by PM.

All such documents shall be kept as required by the relevant law, effective from the date of completion of the works, unless otherwise provided for by the provisions of the laws and regulations in force and/or by contract provisions.

#### **10.4. ASSESSMENT AND RE-ASSESSMENT OF SUPPLIERS AND SUBCONTRACTORS FOLLOWING TO MONITORING**

After assessing and selecting the Supplier/ Subcontractor according to the method described above, the same is managed by reference project departments/offices and the latter take care of continuously monitoring the same. The purpose of such monitoring activity is to obtain contract services according to the standards set in the contract documents.

##### **Documents drawn up:**

- Procurement Plan (PAC)
- Purchase Request (RDA);
- Quotation Request (RDO);
- Transportation Request (RDT);
- Supplier Selection Criteria (SSC);
- Purchase Order (ODA);
- Prequalification Forms (PRE)
- Subcontract Review Sheet (SRS);
- Subcontracts Contract;
- Procurement Contract
- Receiving Inspection Report (RIR).
- Bond Register (BOND)
- Bank Order Form (BOR)



**11. MANAGEMENT OF THE PRODUCT SUPPLIED BY THE PROJECT COMPANY (SPV)**

The control activity carried out by Astaldi Türkerler JV on the products supplied by the Project Company shall be carried out according to the same method described in the foregoing paragraph 10.1.8.1. "Inspection upon Delivery to the Project" relating to the controls on products purchased by the Project.

In the event that packages are opened at the time when products are used, i.e. later than when the same were delivered to the site, the personnel entrusted with such task shall anyway accept the same with reserve, such reserve to be removed when the inspection upon delivery, in the event of products, and the final inspection, in the event of components, machinery and plants, may be carried out.

In the event the supply is considered as non-conforming, the personnel in charge of carrying out the inspection shall issue the appropriate Non-Conformity Report (NCR), shall identify the NC product, and the PM shall give the Project Company written notice thereof in order to reach an agreement for its solution.

**Documents drawn up:**

- Receiving Inspection Report (RIR).

## 12. EXECUTION OF THE WORKS

In accordance with the contract and to any practicable extent, suppliers and subcontractors are required to implement an appropriate management system in agreement with the provisions set forth herein and in applicable reference documents.

The personnel of Astaldi-Türkerler J.V. entrusted with such task shall verify the suitability of such system during supervision activities and/or Audit Activities.

In the event the supplier/subcontractor was not able to work out any appropriate Quality Safety Environment Management System, the Integrated (Quality, Safety, and Environment) Management System of Astaldi-Türkerler J.V. shall be fully adopted by the same. All forms should be universal for all Subcontractors & Suppliers which will be provided through the "Document Control System"

### 12.1. INSPECTION AND TESTING

A Preparatory or Pre-Installation Meeting is held for each "Definable Feature of Work (DFOW)" to ensure that the Foreman directly supervising the work fully understands the requirements to complete the work in compliance with the contract documents. The Preparatory or Pre-Installation Meeting is to be held no earlier than two weeks prior to the start of work. Premature Preparatory or Pre-Installation Meetings will lose their effectiveness if held beyond this limit. Each Preparatory or Pre-Installation Meeting is held to ensure that the Subcontractor Foreman understands the contract documents, RFIs, and Quality expectations.

The Preparatory Meeting should include an agreement on the scope and schedule for the Initial Inspection. The Foreman must understand that there is no authorization to progress beyond this scope without an approved Initial Inspection.

The assessment of whether products meet contract requirements is made by means of inspections, controls and tests carried out on site, at the laboratory or at the plant; normally, such controls consist in the following:

- Inspections upon delivery of the materials and/or products to the site (at the warehouse or area devoted thereto);
- Controls during the execution of the works and upon completion of the respective production phases;
- Final controls, before the works are officially taken over by the Project Company (SPV).

#### 12.1.1. Quality Control Plans (QCP)

Quality Control Plans (QCP) describe, in connection with a work/part of work/component, etc. the inspections and tests to be carried out, in terms of quantity and quality, identified on the basis of the contractual requirements, of the requirements set by the Quality System and on the basis of the analysis of the operative/management processes involved. Quality Control Plan (QCP) term is used in the Project, reflecting Inspection Test Plan (ITP).

Such documents are drawn up by QA/QC Manager (QA/QC) jointly with Project's personnel, each to the extent of the respective sphere of competence, checked by DM and submitted to PM for final approval.

Therefore, such approval represents the official attribution of responsibilities.

The standard of such documents is as follows:

Quality Control Plan (QCP)	
<b>Process Phases</b>	Planning the phases of the process to be checked/tested;
<b>Characteristics of Inspections and Tests:</b>	The characteristics (i.e. kind, nature, etc.) of inspections and tests shall be defined such as, by way of example "visual, topographical, etc."
<b>Kind of Inspection / Test:</b>	<p>The kind of inspection / test of the respective phase shall be specified according to the following:</p> <p><b>Hold Point (H):</b> A point of inspection or test, during the production process, which cannot be overstepped without a formal authorization to be issued by a specific party (by way of example, Works Owner / Supervising Engineer)</p> <p><b>Witness Point (W):</b> A stage throughout the process sequence during which an independent party may officially attend the inspections/tests to be carried out by another party.</p> <p><b>Records to provide (R):</b> A stage throughout the process sequence during which inspections/tests are carried out by personnel having the responsibility of determining the acceptability of the product / work and to register the relevant results.</p>
Acceptance criteria:	Defines minimum and/or maximum parameters provided for by contract documents and/or by technical rules and/or operative procedures required for the acceptance of the inspections and tests to be carried out;
Recurrence of Controls:	Defines the recurrence of the control to be carried out in order to complete the tests and inspections to be carried out; such data may be usually taken from the specifications;
Reference	References to drawings, procedures, specifications, rules

Documents:	necessary for inspections and tests;
<b>Records to be issued:</b>	The records to be produced in order to confirm that the inspections and tests have been carried out (by way of example, inspection/test reports, checklists, conformity certificates, etc.).
Responsibilities:	Identification of the member(s) of personnel of Astaldi Türkerler JV / the Subcontractor/ the Supplier and / or the Project Company (SPV), responsible for the management of the specific phase; the signatures and dates affixed next to any and all phases set forth in the Quality Control Plans (QCP) attest the successful completion of the reference work/part of work;
Notes:	Notes / remarks, which have become apparent during the execution of tests and inspections, and possible reference to Non-conformity Reports shall be set forth.

The competent members of personnel take part in all the phases of the inspections and tests referred to in the Quality Control Plans (QCP) and records the relevant results in proper documents drawn up to such purpose and described here below.

Upon completion of any phase, the personnel entrusted with the management of the Quality Control Plans (QCP), after properly checking that the phase has been successfully completed and that the relevant records (control, inspection reports, etc.) are available, signs the Quality Control Plans (QCP) next to the phase inspected and tested, thus attesting the successful completion of the same.

#### 12.1.2. Inspections upon Delivery

Upon delivery of the products/ materials /components to the site, Store Manager (SM), with the assistance, if required, of the other Project's key personnel (QA/QC Manager (QA/QC)/ CM) carries out the inspection upon delivery of the products/ materials /components in accordance with the provisions of paragraph 10.1.8.1. "Inspection upon Delivery to the Project":

The outcome of the inspection is recorded by Store Manager (SM):

1. By affixing the stamp, date and signature in the DDT/Delivery Note upon delivery of the goods/materials/components to the site;
2. In the "Report of the Inspection upon Delivery (RIR)" to be issued after checking the quality, quantity and type of goods/material/element received.

In the event that any non-conformity (NC) is found when carrying out the Inspection upon Delivery, the Store Manager (SM) shall register any such non-conformity in the DDT/Delivery Note, if possible, and in the RIR and Store Manager (SM) /QA/QC Manager (QA/QC) shall issue a Non-Conformity Report (NCR), a copy of which shall be forwarded to Purchase Manager (PUM) who shall get in touch with the Supplier, in the event of purchase made directly by the Project.

In the event that, for urgency reasons, it is necessary to use products purchased and delivered to the site without the relevant certificates, the personnel entrusted with such task shall record the same in the Report of the Inspection (RIR) in order to allow the delivery and/or the replacement in the event their characteristics are considered as unsatisfactory.

The details of the Report of the Inspection (RIR) (progressive number: by way of example, RIR 123/2013) are set forth in the form filled in to provide evidence of the situation of inspections and testing activities.

The goods supplied by the Project Company (SPV) are subject to inspection and control upon receipt in agreement with the provisions of paragraph 11. "Management of the Product Supplied by the Project Company - SPV".

### 12.1.3. Initial Inspections and Testing During the Execution of the Works

Initial Inspections are performed on "representative samples of work" to confirm that materials, methods, and final product meet the contract requirements. The product of the Initial Inspection, once approved, will be the standard for all future work.

An Initial Inspection occurs as each new work is introduced on a project site. The location and quantity of work to be put in place is determined at the Preparatory or Pre-Installation Meeting. Any action items generated during the Preparatory or Pre-Installation Meeting are required to be closed and confirmed before the Initial Inspection. The Initial Inspection must be approved before the Subcontractor can proceed with work beyond this area. If discrepancies are noted during the inspection, no additional work will be installed until the Subcontractor has successfully rectified the discrepancies.

After defining the inspections, controls and tests to be carried out during the execution of the works, the personnel entrusted with such task manages said activities in order to ensure that Project's production processes are properly controlled and verified in accordance with contract specifications.

Such activities are carried out continually (in-process), evidenced by the certificates produced and recorded in pre-arranged or equivalent forms providing evidence of the status of said activities.

In the event the contract provides for the involvement of the Project Company or its Representative, the personnel responsible for the controls shall give the same reasonable prior notice thereof, setting forth the date on which and the place where the inspection will be carried out.

In general, the controls to be carried out during the execution of the works may be divided into:

- Preliminary controls;
- Inspections and investigations concerning the work or portions thereof;
- Trials;
- Surveillance.

#### 12.1.3.1. Preliminary Controls

Preliminary controls are carried out to check compliance with a series of requirements concerning the quality of the work activities to be subjected to control.

Such controls may include, by way of example:

The verification of personnel's qualifications, of the methods and equipment to be used, in the event of special processes;

The verification of the status of acceptability of materials, parts and/or components to be used;

The verification of the availability of equipment and means necessary for the operations to be carried out;

The verification of the correct identification and calibration of test and measurement instruments, and of other devices used for test and measurement activities;

The verification that the supporting technical documents (drawings, Instructions, PCQ, etc.) is valid, approved and updated.

#### 12.1.3.2. Tests and Trials

##### Direct Examinations and Inspections:

Direct examinations are carried out to determine whether the products meet the requirements specified and include, by way of example:

- Visual controls;
- Dimensional controls;
- Topography controls;
- Controls of physical parameters (temperature, pressure, etc.);
- Destructive and non-destructive exams.

##### Tests and trials carried out by Astaldi-Türkerler J.V.'s site personnel:

Tests and trials are carried out by specifically trained personnel of Astaldi-Türkerler J.V. in compliance with the methods of operations set forth in the standards and/or the Instructions for the execution of the test/trial.

The personnel entrusted with such task of executing tests/trials is responsible for checking that all the conditions preliminary to the execution of the same are met and that they are executed in accordance with contract documents and with the provisions of the documents connected therewith.

Evidence of tests/trials so executed shall be given by said personnel by using proper forms, to be registered and filed or to be delivered to the QA/QC Manager (QA/QC) so as to provide evidence, at a certain date and for a certain phase of the Quality Control Plan (QCP), of the status of inspections, controls and tests carried out.



#### Tests/trials executed by third-party laboratories:

In the event of Tests/Trials executed by third-party laboratories, the personnel entrusted with such task shall coordinate the relevant activities.

The laboratories, after executing the test/trials, shall issue the relevant certificates.

In the event samples are taken and delivered to the laboratory for the execution of tests/trials, the personnel entrusted with such task shall issue the Sample-Taking Report (see standard form) or signs the report drawn up by the Laboratory, by keeping copy thereof after identifying the same.

If so provided for by the contract, the Sample-taking report shall be signed by the Project Company or its representative, prior to being forwarded to the Laboratory jointly with the properly identified sample.

#### Evaluation of Controls:

At the end of any specific control phase set forth in the Quality Control Plan (QCP), the personnel entrusted with such task signs that part of the Quality Control Plan (QCP), relating to such phase in the event all the controls have a successful outcome; in the event of any irregularity, inconsistency, mistakes and any other thing in with conflict the provisions of the contract, any such irregularity is evaluated and, if necessary, an appropriate Non-conformity Report (NCR) is issued without affixing any signature to the control phase.

After the non-conformity is solved, the personnel entrusted with such task makes the control once again, if necessary and affixes the signature to that part of the Quality Control Plan (QCP) relating to the respective phase only in the event of successful outcome.

The signature affixed to that part of the Quality Control Plan (QCP), is evidence that all the trials, controls and tests have been carried out with successful outcome.

#### 12.1.3.3. Supervision Activities

Such activities are carried out by personnel duly entrusted therewith, at the site and/or at the Suppliers'/Subcontractors' plants, in order to verify that any and all quality-related activities are carried out in compliance with applicable contract requirements.

Supervision activities are verification activities supplementary to inspections, tests/trials and controls, basically aimed at controlling the operative methods (processes) of the various site sectors, including those executed by Suppliers/ Subcontractors.

The outcome of the control/inspection carried out is evidenced by the Surveillance Report (SR) to be issued and signed by the personnel having carried out the inspection itself and countersigned by the Supplier/ Subcontractor.

#### 12.1.3.4. Follow-Up Inspections and Testing During the Execution of the Works

Follow-up Inspections re-confirm that materials and methods demonstrated during the Initial Inspection continue to be installed to the agreed-upon standard. The Follow-up Inspection should occur every three to four weeks for each Work. If deviations from standard exist, the



Subcontractor Foreman will be advised of the deficiencies and will be required to bring the work back into conformance.

#### 12.1.4. Inspections and Testing Carried Out by Suppliers/ Subcontractors During the Execution of the Works

In accordance with the contract and to any practicable extent, Suppliers and Subcontractors are required to implement an appropriate management system in agreement with the provisions set forth herein and in applicable reference documents.

The verification of the suitability of such system is carried out by Astaldi-Türkerler J.V.'s personnel during supervision and/or Inspection activities.

The control activity to be carried out by Astaldi-Türkerler J.V. on the most important Suppliers and/or Subcontractors during the execution of the works entrusted to the same, includes the following:

- Being present at the control phases set forth in Subcontractors' Quality Control Plans (QCP);
- Periodically carrying out supervision activities on the processes of the same;
- Making inspections during the execution of the works and final inspections on the products or the works.

In the event the Supplier/Subcontractor has its own Quality System, the same shall issue the Quality Control Plans (QCP), or other equivalent documents, relating to the activity entrusted to the same, and submit the same to Project Manager (PM), or to the personnel entrusted with such task, for review and approval.

Project Manager (PM) / DM/ QA/QC Manager (QA/QC) determines the trials, inspections and tests which, because of their importance, shall be attended by one of its representative and, in the event the contract provides for the involvement of the Project Company (SPV), shall give the same reasonable prior notice thereof setting forth the date on which and the place where the inspection/trial/test will be carried out.

In this case, the activities carried out shall be recorded by using the Supplier's/ Subcontractor's forms.

Upon completion of the phase provided for by the Supplier's/Subcontractor's Quality Control Plans (QCP), in the event that all intermediate controls have had a successful outcome, the part of the QCP relating to the respective control phase is signed jointly (by the Subcontractor, Astaldi-Türkerler JV Project Manager (PM), and the Project Company (SPV) if so provided for by the Contract).

Moreover, prior to completion of the works, the Subcontractor shall sign all the Quality-related records as set forth in the reference documents.

In the event the Supplier/ Subcontractor has no Quality and Safety System, the IMS of Astaldi - Türkerler JV shall be fully adopted by the same.

### Source Inspection (Factory, Manufacturer Tests):

A Source Inspection is an off-site, external Quality Audit to verify that a fabrication or manufacturing facility has a quality process that is effective and reliable. Project specifications will identify requirements for Source Inspections; however, the majority of Source Inspections are performed to limit risk in schedule delays from delinquent or substandard materials.

#### 12.1.5. Tests Managed by the Project Company (SPV) During the Execution of the Works

Trials, controls and tests include those carried out directly by the Project Company (SPV) in compliance with the laws or the contract provisions.

Project Manager (PM) are responsible for coordinating, in agreement with the Project Company and the Testers, the operational methods for the execution of tests and for drawing up the necessary documents.

To such purpose, all the documents/certificates produced on the basis of the provisions of the Quality Control Plan (QCP) shall be considered as valid reference.

Test reports issued in connection with tests carried out during the execution of the works are official documents, to be drawn up by the Project Manager (PM). Copy of such reports is preserved and attached to the Quality Control Plan (QCP), which the tests refer to.

#### 12.1.6. Final Inspection and Testing

Final inspections and tests are carried out by the personnel entrusted with such task, after verifying that all tests have been successfully carried out in accordance with contract provisions. The Final Inspection, is the last step in the Quality Process, provides the client the opportunity to verify work performed by Subcontractors meets the requirements of the contract. In particular, the checks will confirm:

- The status of works, of materials and components to be handed over to the Project Company; any defect or problem which may be found are eliminated before take-over by the Project Company (SPV);
- The adequacy and integrity of all quality-related records produced (inspection reports, test reports, certificates, etc.) relating to materials, components, work activities, to be taken over by the Project Company (SPV) if so provided for by the contract;
- That any and all non-conformities found during the whole construction phase have been solved as provided for.

The outcome of the control/inspection carried out, as well as the relevant acceptance and take-over by the Project Company (SPV) , is evidenced by an Inspection Report (IR) issued and signed by the personnel having carried out the inspection itself and countersigned by the Project Company (SPV), or by minutes (take-over minutes, works completion minutes, minutes of final acceptance, etc.) to be issued by the Project Company (SPV) and signed by Project Manager (PM).

#### 12.1.7. Final Inspections and Tests on Suppliers/Subcontractors

In this case, the same procedure as set forth hereinabove shall be followed.

Before accepting the works ordered, Astaldi-Türkerler J.V.'s personnel entrusted with such task carries out, at the site or at factory, a final inspection in order to check the status of preservation of the products/parts of works manufactured and that all the documents are complete and comply with the provisions of contract documents.

All issues, if any, shall be solved prior to take-over by/delivery to the Project Company (SPV).

#### 12.1.8. Final Tests Managed by the Project Company (SPV)

After completion, the works are taken over by the Project Company (SPV) and the same shall carry out the final test in accordance with reference laws and regulations in force.

This is the phase of final acceptance of all the works by the Project Company (SPV).

The final tests are managed according to the same methods set forth in the above paragraph 12.1.7 "Tests managed by the Project Company (SPV) during the execution of the works", apart from the registration of deeds/reports/minutes, etc., in the respective Quality Control Plan (QCP).

#### **Documents drawn up:**

- Quality Control Plan (QCP);
- Report of Topographic Activity (RTA);
- Register of Sampling and Concrete Casting Activities (RSCCA);
- Inspection Report (IR);
- Receiving Inspection Report (RIR);
- Surveillance Report (SR);
- Inspection and Testing Status Summary Sheet (ITSSS);
- Sample-Taking Report (STR).

## **12.2. STATUS OF INSPECTION AND TESTING**

The purpose of the status of inspections and tests on materials, products, components and parts of work is to provide evidence, at any time, of the status of compliance of the same with the relevant requirements and to prevent materials, products, components, works and plants found non-compliant at the control points sets in the Quality Control Plan (QCP) from continuing to be produced and/or installed.

Evidence of such activity is given by means of the daily registration or, at least, the weekly registration, in the Inspection and Testing Status Summary Sheet (ITSSS) or the equivalent, of all the quality-related documents drawn up at a certain date and relevant to a certain phase set forth in the Quality Control Plan (QCP).

The QA/QC Manager (QA/QC), of other member of personnel entrusted with such task, shall coordinate and collect all the above documents.

**Documents drawn up:**

- Inspection and Testing Status Summary Sheet (ITSSS) or register equivalent thereto.

**12.3. CONTROL OF SYSTEM RECORDS**

All Project documents and records worked out as a consequence of application of the Project Management Plan (PMP) and/or Safety Management Plan (SMP), Environmental Management Plan (EMP) and Risk Management Plan (RMP) are considered as System Records.

EPC will check to ensure that the Subcontractors and Suppliers effectively implement documented procedures that make provision for ensuring that all manufacturing, fabrication, construction, installation, commissioning, and turn-over activities, are carried out under controlled conditions that include the following:

- Documented work instructions defining the manner of production.
- Use of suitable and adequately maintained production and installation equipment.
- Suitable working environment.
- Compliance with relevant standards, codes and Quality Assurance/Quality Control Plans.
- Monitoring and control of processes and product characteristics.
- Approval of processes and equipment, as applicable.
- Definition of criteria for workmanship.
- Control of "special processes"; i.e. those processes whose results cannot be fully verified by subsequent inspection and testing and which may therefore result in deficiencies becoming apparent only after the product is in use. Processes that fall into this category are subject to continuous monitoring and/or compliance with documented procedures; the personnel are qualified and comply with specified requirements; records are maintained of qualified processes, equipment and personnel as appropriate.
- Compliance with Health, Safety and Environmental procedures.

**12.3.1. Draft, Check and Approval**

The documents are officially issued only after being checked and approved (signature) by the Managers involved, listed in Matrix of Responsibilities (see Attachment 3).

**12.3.2. Updating**

System documents, whenever needed, are subject to updating/revision by the managers who issued the same.

Updating is identified by changing the document revision/date. The new revision must be checked and approved by the same departments/offices having checked and approved the previous version, unless otherwise provided for.

Superseded copies must be removed from all places of issue and use and, if preserved, the relevant holders must mark them as "**SUPERSEDED**" or equivalent wording.

NOTE: For all document revisions, possible consequences on other documents must be checked.

### 12.3.3. Distribution

The updated version of documents and records must be duly preserved and, if needed, must be quickly traceable and available for use.

Distribution can be carried out in a "Controlled" or "Non-controlled" manner, as required and in paper or electronic format; in this latter case the Office responsible for the issue shall ensure the completeness of the document, including date and identification of the author. The Office receiving the document shall ensure the immediate traceability of the same by printing the document and the related e-mail message, or directly in its password-protected electronic file.

Project Manager (PM)'s authorization shall be required for distribution to third parties.

When a newly revised version of a document is issued, it is distributed to all those Departments/Sectors/Third Parties which received a "Controlled" copy of the previous version.

Whoever receives a new revision of a document shall remove the superseded version or, if the same wishes to keep it, shall identify it by the wording "**SUPERSEDED**".

The Department responsible for the issue shall check and record the distribution of the respective documents by using specific Documents Distribution Lists (DDL) and/or cover letter.

### 12.3.4 Filing

The originals of documents are filed by the issuing Department/Sector. Distributed copies are kept by the receiving parties in their respective files.

In order to ensure proper traceability of documents, each sector prepares and updates specific registers listing the document title, revision date and code.

Depending on needs, filing can be done in the following ways:

- The documents can be gathered and preserved in hard folders, according to the type of document, and placed in cabinets and/or on shelves;
- The outer spines of folders shall be provided with a small identification label showing the type of documents contained;
- An updated filing sheet/list of documents shall be kept inside the folders.

## 12.4. IDENTIFICATION AND TRACEABILITY OF PRODUCTS

EPC will check that to ensure that the Subcontractors and Suppliers effectively implement documented procedures that make provision for the following:

- Identifying the product during all stages of production, delivery and installation.
- Identifying the Inspection & Test status.
- Maintaining and recording unique identification of individual product.

The methods for identification and traceability of products may vary depending on the type of product, possible mandatory laws and regulations in force in the Country where activities are carried out and/or specific contract provisions.

In general principle, based on the typical needs of the industrial sector of application, identification and traceability criteria are provided for with reference to the below products to which mandatory law provisions apply:

- Concrete;
- Steel and rolled metal sections.

Similarly, identification and traceability criteria are set, also in connection with contract requirements, if any, for permanent materials to which no specific domestic law and regulation is applicable. Such products are referred to in paragraph 12.4.3 as "Miscellaneous Products".

#### 12.4.1. Concrete

The identification of such products is ensured by prior qualification of the plant(s) of origin (concrete ready-mixing plants) and of the relevant mixtures (mix designs) manufactured by the same.

Subsequently, during the execution of the works, samples (concrete cubes) will be taken according to the laws and regulations applicable in foreign countries (by way of example, concrete cylinders) and possible additional contract provisions, through the use of the appropriate Sampling Report, setting forth the following information:

Sampling Report	
	Sampling date and time;
	Plant of origin;
	Place where sample was taken;
	Works affected by sampling activity;
	Quantity taken;
	Typical strength of concerned samples;
	Progressive alphanumeric code of identification (by way of example, CLS ...);
	Tests to be carried out on samples;
	Place where tests are carried out;

The certificate to be issued by the Site or third-party lab thereafter will set forth all the above information and the report's and certificate's details will be set forth on the standard form stating the situation of inspections and tests to be attached to the Quality Control Plan (QCP) of reference, or register equivalent thereto.

#### 12.4.2. Reinforcement Steel and Rolled Metal Sections

The identification of such products is ensured according to the laws and regulations applicable in foreign and possible additional contract provisions, through the certificates of origin accompanying the supplies and subsequent direct verification of the identification mark affixed to the products themselves.



Traceability is ensured through the use of Receiving Inspection Report (RIR), in the event of supplies of products already processed (machined/shaped), bearing attached the relevant Purchase Request (RDA) indicating the product supplied, the Purchase Order (ODA), the documents accompanying the products (Packing List) to be issued by the supplier, and the certificates of origin (Certificates of Origin - CoO).

If the product is delivered under the form of bars to be machined/shaped at the site, their traceability will still be ensured through the Receiving Inspection Report (RIR), to which will be attached the above documents setting forth the work / portion of work for which the product has to be machined/shaped.

Also in connection with such products, the provisions of par. 12.4.1 shall apply to the subsequent registration of Receiving Inspection Report (RIR) on the forms/registers to be associated with the Quality Control Plan (QCP).

#### 12.4.3. Miscellaneous Products

The Receiving Inspection Report (RIR) shall be used also for products in connection with which no specific mandatory law and regulation has to be complied with, provided it always bears the following documents attached thereto:

- Purchase Request (RDA): setting forth the work / portion of work for which the product was requested;
- Purchase Order (ODA): setting forth the work / portion of work for which the product was ordered;
- Packing List (DDT)

and/or technical and/or certifying documents accompanying the goods;

- If possible, the "Warehouse Delivery Voucher" associated with the Receiving Inspection Report (RIR).

Upon delivery of the materials, products and components to the site, the Store Manager (SM) is responsible for associating the Receiving Inspection Report (RIR) with the lot of goods received or affixing identification tags / labels.

Such activity is carried out by affixing copy of the Receiving Inspection Report (RIR) duly filled-in directly to the lot of goods stored or by affixing identification tags / labels.

By this way, when products, materials and components are taken from the warehouse, the warehouse keeper will associate the Delivery Voucher with the work the item taken is intended for (and, therefore, with the Receiving Inspection Report (RIR) and all the documents attached thereto).

Subsequently, by the management of the Quality Control Plan (QCP), the Receiving Inspection Report (RIR) may be associated with any and all the design drawings/reports, specifications, etc. in order to form the set of documents relating to a specific work / portion of work, or to work out the "**AS BUILT**" design.

#### 12.4.4. Safety certificates

In compliance with the contract and/or the law and regulations in force (by way of Labor Law No. 4857, etc.) Project Manager (PM) is responsible for obtaining, with the assistance provided



by the Health and Safety Manager, before the start of the site works, all the authorizations and/or certificates required in matter of Prevention of Accidents at Work and Occupational Health and Safety in force (by way of Labor Law No. 4857, Occupational Health and Safety Law No. 6331 , Social Security and General Health Insurance Law No. 5510 etc.) and/or as may be required under the Contract.

**Documents drawn up:**

- Receiving Inspection Report (RIR);
- Sample-Taking Report (STR);
- Identification Tags/Labels (IDTAG).

**12.5. MANAGEMENT OF INSPECTION, MEASURING, AND TEST EQUIPMENT**

The Manager [QA/QC Manager (QA/QC)/Laboratory Chief (LC)/Survey Chief (PSC)/ DM] entrusted with the management of inspection, measuring and test equipment etc., identifies the kind of measurements to be carried out for the project and the accuracy required, thus identifying the equipment which are more appropriate thereto and preparing the list of inspection, measuring and test equipment.

The personnel entrusted with the use of Inspection, Measuring and Test Equipment (IMTE) is responsible for the correct use, maintenance and preservation of the same in appropriate and protected environments in compliance with the relevant user's and maintenance manuals, in order to prevent any improper use.

The personnel entrusted with the control of Inspection, Measuring and Test Equipment (IMTE), after identifying the same, shall carry out the following activities:

1. Draws up the Inspection, Measuring and Test Equipment Calibration Time-Schedule (IMTECTS) on the basis of contract requirements and the Instructions set forth in user's and maintenance manuals provided by the manufacturers;
2. In the event the manuals were not available, shall issue, by availing himself of site personnel's assistance, the Instructions for Calibration/ Control of Inspection, Measuring and Test Equipment (IMTEICC) for equipment to be calibrated at the site;
3. Shall fill-in the proper Inspection, Measuring and Test Equipment Data Sheet (IMTEDS), on paper or electronic format, for each inspection, measuring and test equipment.

Upon site demobilization or earlier, in the event of displacement, the Manager entrusted with such task takes care of shipping the equipment, together with the relevant Inspection, Measuring and Test Equipment Data Sheets (IMTEDS) and the documents attesting calibrations/inspections carries out, to the new sites or to Head Office central deposit.

If necessary, he may use the Calibration/Verification Report (CVR) to record the verification/calibration made, and then files such report in the equipment's records.

IMTE having undergone inspection are, to any possible extent, identified by tags originally affixed by the relevant manufacturer or by proper tags (CALTG).

In the event tags cannot be used (by way of example weighing devices of the concrete mixing plant, topographic instruments, etc.), the status of calibration is guaranteed by the data set forth in Inspection, Measuring and Test Equipment Data Sheets (IMTEDS) and/or by Calibration/Verification Reports/Certificates (CVR).

If necessary, or when so required, the calibration/inspection of IMTE may be performed by accredited third-party bodies/companies (at the site or at the latter's premises), which shall also issue the relevant calibration/inspection certificate.

In the case of specific equipment, such as optical measuring instruments, calibration may be carried out directly by the manufacturers c/o their technical centers.

In such cases, the Manager entrusted with such task holds the relationships with such Bodies/Companies and checks the certificates issued by the same.

In the event that non-calibrated instruments were found, the personnel entrusted with such task shall remove the same from the places of use and identify the same as "**NOT-CALIBRATED**" so as to prevent the same from being improperly used and shall remove the same from/identify the same in, the list of IMTE.

Non-calibrated and/or damaged IMTE are checked in order to verify whether they can be repaired at the site or by duly authorized third-party entities.

If they cannot be repaired, the instrument/equipment is definitely dismissed and the personnel responsible for the IMTE records such dismissal in the IMTEDS, thus removing the same also from Calibration Time-Schedule (IMTECTS).

#### **Documents drawn up:**

- Inspection, Measuring and Test Equipment Calibration Time-schedule (IMTECTS);
- Inspection Measuring and Test Equipment Data Sheet (IMTEDS);
- Instructions for Calibration/ Control of Inspection Measuring and Test Equipment (IMTEICC);
- Calibration/ Verification Report (CVR);
- Calibration Identification Tags (CALTG).

## **12.6. MANAGEMENT OF NONCONFORMING PRODUCTS**

### **12.6.1. Identification of NCs and Subsequent Issue of Non-Conformity Report**

The Non-conformities (NC) relating to products, materials, equipment supplied or to parts of work, etc., may be detected by any member of personnel directly or indirectly involved in the execution of the relevant activities (by way of example, site personnel, Project Company, Engineer, Subcontractors, Auditors, etc.).

Any member of site personnel identifying a potential non-conformity shall report it to CM / the manager directly higher in rank and to the manager entrusted with the management of Project's non-conformities (QA/QC Manager (QA/QC)).

After an appropriate evaluation, the personnel entrusted with such task register and gives evidence of the non-conformity by issuing the Non-conformity Report (NCR).

In the event of serious NC which may be detrimental to the contractual relationships with Project Company, the PM gives prompt notice thereof to the Board of Representatives (BOR)

Any member of site personnel, when identifying non-conforming products, shall give notice thereof to the member of personnel directly responsible for the relevant activity and ensures that the product is isolated and anyway excluded from the production flow until the NC is solved.

Whenever necessary, the Manager directly responsible for the activity shall identify the non-conforming element by means of tags or colored tapes in order to avoid any unintentional continuation of construction activities or the unintentional use, in the event the non-conformity refers to materials, products and components.

EPC will check that at the Subcontractors and suppliers effectively implement documented procedures that ensure that any product that does not conform to specified requirements is prevented from unintended use or installation. The Contractors are required to:

- Identify, document, evaluate and segregate or clearly mark non-conforming products.
- Inform all affected parties.
- Propose the disposition to the Consultant.
- In the case of proposed disposition by Employer concession to propose to Hill.
- Re-inspect/re-test repaired or reworked product in accordance with the' requirements and/or documented procedures.

The QA/QC Manager must keep copies of all non-conformance reports and corrective action reports.

The site personnel shall give evidence of the NC by using the "Non-conformity Report (NCR)" form, which is divided into the following sections:

#### **Section 1 - Place and description of NC:**

This part sets forth the date and place of occurrence and the description of the non-conformity, as well as the issuer's signature and possible references to applicable technical/contractual documents.

#### **Section 2 - Description of Remedy/Corrective Action.**

The remedy/corrective action is proposed and decided by the concerned Sector (Site personnel and/or Supplier/Subcontractor) and approved by Project Manager (PM); in the event that the NCR's blank intended for containing the description of the solution is not enough, additional documents may be attached to the NCR to be referred to in said section.

The solution of the NC may consist in any of the following:

- Repair;
- Elimination or demolition;
- Downgrading for other applications;

- Acceptance as is (tel quel).

The acceptance "as is" may be required in the event that the product/work which is considered as non-conforming to specific acceptance criteria is, anyway, acceptance and suitable for use.

The proposed solution is approved and becomes effective starting from when Project Manager (PM) affixes his signature to the NCR for approval. If so provided for by the contract, also the Project Company's signature may be required for the solution to be implemented (see Section 3 below).

### **Section 3 - Project Company's participation**

If so provided for by the contract, the participation of the Project Company and/or the latter's Representative may be necessary before implementing the solution.

After approval by Project Manager (PM), the NCR is forwarded to the Project Company for approval and/or comments thereon.

### **Section 4 - Closing of Non Conformity (NC)**

When the above sections have been completed, QA/QC Manager (QA/QC) provides copy of the NCR to the concerned sector for the purpose of implementing the corrective action.

When the Non Conformity (NC) is solved, the competent Manager, after a proper verification, affixes his signature at foot of the NCR, thus attesting the successful implementation of the corrective action.

In the event inspections and tests are required for the purpose of verification, the relevant minutes/certificates of inspection may be attached to the NCR or, in the alternative, referred to in the report itself.

In the event it is so provided for in the contract, also the Project Company and/or its Representative are required to affix their signature to the NCR so as to attest that the NC has been successfully solved.

The originals of NCRs, identified by means of a progressive number, are filed by QA/QC Manager (QA/QC), in the respective folders. QA/QC Manager (QA/QC) shall manage, preserve and keep the Register of Non-Conformities (NCRLIST) up-to-date, in order to monitor and check the situation of NCs.

#### **12.6.2. Trend Analysis**

QA/QC Manager (QA/QC) shall periodically review the NCR issued, divided by material, component, work in order to check the reliability of Site Personnel, of Subcontractors, Suppliers, and to propose to Project Manager (PM) possible corrective actions and/or preventive measures.

#### **12.6.3. Use of Non-Conforming Materials, Products and Components**

Due to site's needs, it may be necessary to use materials, products and components which are considered as non-conforming but still awaiting solution of the NC found; this possibility is evaluated by Project Manager (PM), after hearing the Project Director (PD) opinion, if necessary, and after the Project Company's prior approval.

Such materials, products and components may be used provided that they may trace back by means of an appropriate identification, so as to allow their subsequent removal in the event the NC solution provides for their elimination.

#### 12.6.4. Suppliers/Subcontractors' Obligations

Suppliers and subcontractors are required to adopt a proper system for the management of NCs.

In such a case, NC reports issued by site's suppliers/subcontractors are submitted to PM of Astaldi-Türkerler J.V. for approval, prior to starting the activity aimed at solving the NC itself. The NC solution process is carried out as in the case of NCs found by Astaldi-Türkerler J.V.

In the event the suppliers/subcontractors are not able to fulfill the above obligations, the personnel of Astaldi-Türkerler J.V. shall directly solve the solution by means of its own management system.

#### **Documents drawn up:**

- Non - conformity Report (NCR);
- Register of Non-conformities (NCRLIST).

**Note: The SMP and the EMP set forth the criteria, the responsibilities and the operational methods for the management, identification, registration and assessment Non-conformities relating to the management of HSE within the framework of the Project.**

#### 12.6.5. Quality Meetings

Quality meetings will be held at regular intervals with Quality Managers from all of the Subcontractors and Consultants to assess the current issues, the quality system and its continual improvement for the duration of the Project.

The agenda for these meeting will be prepared, this agenda will be continuously adjusted to suit the conditions associated with the current construction phase, and it will not be limited to:

- Quality Records
- Non-Conformance Reports
- Materials
- Method Statements & Inspection Test Plans (ITP)
- EPC Site Supervision Engineer's Complaints
- Issues of Concern
- Improvements

#### 12.6.6. Technical Submittals

PMC Project Management Team has the responsibility for review and approval, releasing or questioning the Consultants' approvals/rejections for reconsideration/justification.

The concerned Project/Construction Manager and relevant technical staff will review technical submittals and EPC Project Director/Manager has the responsibility for final sign off for submission to the Subcontractor.

#### 12.6.7. Quality Records

EPC will ensure that the Subcontractors and Suppliers implement equivalent procedures for the identification, collection, indexing, access, filing, storage, maintenance and disposition of quality records.

EPC will verify that:

- Quality records are legible and are stored in a readily retrievable manner in facilities that provide a suitable environment to minimize deterioration or damage and to prevent loss.
- Retention times of quality records are established.

#### 12.6.8. Evaluation of Subcontractors & Suppliers

Evaluations of Subcontractors and Suppliers will be carried out prior to approval in accordance with the Procedure for approval of Subcontractors/Suppliers. The Subcontractor/Supplier quality systems will be monitored to verify that the products and workmanship comply with the relevant Standards and Contract Requirements.

### 12.7. HANDLING, STORAGE, PRESERVATION AND DELIVERY

Warehouse incoming materials shall undergo an inspection upon delivery to be carried out in accordance with the provisions of paragraph 12.1.2 "Inspection and Testing upon Delivery".

After completion of such phase, Store Manager (SM) makes the warehouse/site incoming materials registrations; after such registrations are made, the personnel shall take care of preserving the documents so collected.

Upon receipt of the invoice, ADM verifies the consistency between the invoice and the reference documents and keeps a copy of the Purchase Order (ODA) together with the documents accompanying the goods and the original of the invoice.

In the event of inconsistency between the materials received, the materials ordered and the documents accompanying them, the provisions of paragraph 12.1.2 "Inspection and Testing upon Delivery" shall apply.

Following inspection upon receipt, the personnel entrusted with such task attributes a code to the materials / products and places them in the storage areas devoted thereto.

#### 12.7.1. Handling

The on-site handling of materials, products, prefabricated elements and parts of plants which are considered as important for the purpose of quality, is performed under the responsibility of the Store Manager (SM) / DPMC and activities are coordinated by specialized personnel and by using appropriate equipment in order to prevent any events that could result in damage to people or things.

The following documents provide express Instructions for the performance of these activities:

- Safety Management Plan (SMP);



- Risk Assessment Reports of Activities:
  - Documents of assessment of the risk of conflicting activities (DUVRI);
  - Documents of assessment of the risk (DVR) connected with fixed equipment and plants;
- Environmental Management Plan (EMP);
- Laws and regulations in force in matter of safety;
- Construction designs setting forth weights, slinging points, centroids, securing/fastening methods, etc.;
- Suppliers' Instructions;
- Technical specifications of the contract / designers' Instructions.

The handling and transportation of goods is carried out by competent personnel and all the equipment used must be adequate to avoid damage to surfaces and/or alterations of products quality.

Products, materials and components are handled within work areas by personnel entrusted therewith using appropriate equipment and means guaranteeing safety (in agreement with the Instructions set forth in the documents of assessment of the risk) and the characteristics of the product, material or component being handled.

If any material, product or component requires special handling operations, the DM, with the support of the QA/QC Manager (QA/QC), arranges, in agreement with the supplier's Instructions and/or the contract specifications, specific operating procedures aimed at both minimizing the possibility of damage and maintaining the identification.

For this purpose, the Store Manager (SM), taking advantage of the assistance to be provided by QA/QC Manager (QA/QC)/ Health and Safety Manager (HSEM)

/ DM / CM, shall identify the criteria and minimum requirements to be met for storing / handling the most important permanent materials and/or products.

During the execution of the works, the CM shall ensure that the Instructions set forth in the operating procedures, if any, are followed.

#### 12.7.2. Storage of Products

Store Manager (SM) ensures the correct storage and preservation of products according to the specific techniques provided for by the contract and/or the technical specifications and of safety of the products themselves, in order to preserve their efficiency, identification, control and acceptance before use and use in compliance with prevention and protection laws and regulations.

Store Manager (SM) , with the support (if any) of QA/QC Manager (QA/QC)/ HSEM/ DM/ CM/ DCM, defines the arrangement/location of the products / materials / spare parts within the warehouse, if necessary, by drawing up a specific lay-out.



As far as non-conforming materials are concerned, the Store Manager (SM) designates special areas to prevent these from being improperly used, or identifies the same by suitable white-red bands and/or tapes.

The storage of materials outdoor is defined by the Store Manager (SM), jointly with Health and Safety Manager (HSEM)/ DM/ CM, after possibly hearing Project Manager (PM)'s advice.

In order to prevent the improper and/or incorrect delivery of stored materials (especially permanent materials), they are identified by the Store Manager (SM) by specific identification signs / tags.

Store Manager (SM) keeps the warehouse and storage facilities tidy, clean and properly protected in relation to the type of materials stored and according to safety regulations and environmental prevention required by documents of assessment of the risk and safety data sheets.

#### 12.7.2.1. Outdoor (open-air) stocking area

Materials that do not suffer from adverse weather conditions may be stored in these areas, which shall be suitably fenced and guarded. The materials are stored by taking into account the criteria and minimum requirements to be met for storing / handling the most important permanent materials and/or products.

These materials are identified, if necessary, by tags, marks, labels, etc. affixed by the Supplier or by the company personnel (see paragraph 12.4. "Products Identification and Traceability").

#### 12.7.2.2. Indoor/sheltered stocking areas

In general, sheltered/indoor stocking areas, providing protection from adverse weather conditions, are used to store spare parts and perishable materials, by taking into account the criteria and minimum requirements to be met for storing / handling the most important permanent materials and/or products.

Materials are identified by trademarks, tags or labels affixed by the Supplier or by Astaldi-Türkerler J.V. personnel to the products, packages and/or containers themselves.

The above areas, properly guarded and fenced, shall comply with the requirements in matter of safety and protection from fire currently in force in the country.

#### 12.7.2.3. Access to Site Storage Facilities

Access to the facilities or areas intended for site storage is forbidden to all unauthorized personnel.

The Project Manager (PM) appoints if necessary, by proper notice, the site personnel authorized to enter storage areas and makes arrangements so that access thereto is restricted to any other member of personnel.

#### 12.7.2.4. List of Expiring Products

The expiry date of such products (e.g. concrete, chemical resins, paints, etc.) must be checked upon delivery of the same to the site, and must be recorded in the appropriate list Products Subject to Expiration (PSE).

#### 12.7.3. Packaging

Products purchased already packaged and delivered to the site as expressly set forth in the purchase documents (Purchase Order (ODA)/ Purchase Request (RDA)), are kept and preserved in this state for the entire period during which the same are stored in the storage facilities, in order to ensure suitable protection and prevent any damage.

Store Manager (SM) is responsible for such preservation.

#### 12.7.4. Delivery of Product to the Requesting Sector

Whenever any material stored in the storage facilities is required to be used, a "Warehouse Delivery Voucher (WDV)" is issued; Store Manager (SM) checks the availability of the required material at the warehouse and, if available, takes it from the storage area and registers the delivery of the same on the voucher, keeping a copy thereof.

The Warehouse Delivery Voucher (WDV), which may be single or multiple, shall set forth the following information:

The Warehouse Delivery Voucher (WDV)	
	Date of delivery;
	Warehouse code;
	Product code;
	Description of material;
	Cost account / code of equipment/machinery in case of spare part.

The Warehouse Delivery Voucher (WDV) is signed by the person in charge of distribution; by the person responsible for the delivery, by the Manager of the requesting sector and by Store Manager (SM).

Store Manager (SM) collects all the Warehouse Delivery Vouchers (WDV) issued and, by the end of the day of issue of the respective Delivery Voucher, makes the relevant warehouse outgoing materials registrations.

Store Manager (SM) prepares a comparative table of the movements of materials of the previous month with monthly closure and a summary table of the total progressive movements of goods.

On a fortnightly basis, Store Manager (SM) shall give the General Foreman (GF) information about the inventory and stocks of spare parts and consumables (tyres, lubricants, filters, etc.) and CM information of other stocks.

#### 12.7.5. Rotating Inventory

Store Manager (SM) carries out a rolling inventory, according to typology, of materials/spare parts existing at the warehouse for book-keeping/physical verification and assessment; as far as concerns the most important types of goods (by way of example, aggregates, concrete, steel, diesel fuel) such inventory shall be made on a monthly basis.

After carrying out the rolling inventory of warehouse stocks, Store Manager (PM) gives notice thereof to Purchase Manager (PUM).

PUM checks the inventory and stocks, including spare parts and consumables (tyres, lubricants, filters, etc.) – and Project Manager (PM) notice of any irregularity found in warehouse stocks.

Moreover, on the occasion of half-yearly (June) and annual (December) financial statements, Store Manager (SM) shall draw up, jointly with ADM, the general warehouse inventory within the 10th of month following the reference month.

#### 12.7.6. Stock Accounting

For the purpose of correctly keeping warehouse accounting records, Store Manager (SM):

- After completing the inspection and control upon receipt, shall make the relevant warehouse/site incoming materials registrations and provides ADM with the documents so collected, for the purpose of subsequent administrative control activities;
- Collects all the Warehouse Delivery Vouchers (WDV) issued consequently to the delivery of the goods to the requesting sector and, by the end of the day of issue of the respective Delivery Voucher, makes the relevant warehouse outgoing materials registrations.

#### 12.7.7. Periodical Inspection at Storage Areas

Periodically, according to the recurrence determined by the Project Manager (PM) and/or by contract covenants, Store Manager (SM), with the support, if necessary, of QA/QC Manager (QA/QC)/ Health, Safety and Environmental Manager (HSEM) shall inspect storage areas in order to verify compliance with the provisions set forth in this procedure and the directions, if any, given by PM.

The personnel responsible for such inspections shall issue the appropriate Surveillance Report (SR). If reiterated and substantial deficiencies are found, either in outdoor/indoor storage areas or in site warehouses, the same shall send a copy of the Surveillance Report (SR) to the Project Manager (PM) / Purchase Manager (PUM) for information and action.

#### 12.7.8. Documents and Registration of Activities

The warehouse book-keeping, tax and management documents shall be gathered by the site administration sector for proper action.

##### **Documents drawn up:**

- Receiving Inspection Report (RIR);
- Warehouse Delivery Voucher (WDV);

- List of Expiring Products / Materials (LEP);
- Surveillance Report (SR).

## 12.8. MANAGEMENT OF PLANTS AND MACHINERY

### 12.8.1. Definition of Project's Plants and Machinery

During the Project start-up phase, Project Director (PD)/ Project Manager (PM) / TOM/ Purchase Manager (PUM) shall take action, in accordance with the provisions governing the bidding phase and, subsequently, in the Procurement Plan (PAC) on the occasion of the review of the Annual Budget and Business Plan, to make the equipment and machinery necessary for the execution of the works available.

The Quotation Request (RDA) relating to the purchase of items considered as "fixed tangible assets" (plants, machinery and equipment) are sent, after verification of the reference Budget approved, by Project Director (PD)/ Project Manager (PM), Executive Committee (EXC).

If any such equipment is delivered to the site, PM shall cause the same to be inspected and the relevant accompanying documents to be examined, as set forth in the purchase order. More in detail:

- By means of Store Manager (SM), checks the fixed asset's conformity to what is stated in the Purchase Order (ODA);
- By means of General Foreman (GF), checks the fixed asset received and the relevant accompanying documents as stated in the Purchase Order (ODA) and, moreover, checks the good operation of the fixed asset received and takes care of preserving the same and the accompanying documents.

Project Control Manager (PCM) creates the relevant **cost account** and informs Project Manager (PM) that the fixed asset has been included in the Project's production management under the responsibility of Project's key personnel.

Notice of any irregularity / non-conformity (NC) found upon inspection of the goods delivered to the site shall be given to Purchase Manager (PUM), QA/QC Department.

### 12.8.2. Management of Machinery and Equipment at Construction Site

Since when they are delivered to the site, fixed assets shall be correctly managed, kept and any improper use of the same shall be avoided.

In the event of any improper use of the same causing a machinery downtime and/or repair costs, then all the actions provided for by the regulation governing the use of machinery shall be duly taken.

By means of a specific Report, to be issued on a monthly basis, General Foreman (GF) informs Project Control Manager (PCM), Project Manager (PM) on the performance of production means (hourly costs, downtime, estimated reinstatement costs, etc.), in order to give evidence of their efficiency and to optimize their exploitation.

#### 12.8.2.1. Stand-by of Site Machinery and Equipment

In the event it is necessary to put one or more machinery/equipment (hereinafter referred to as fixed assets) out of the Project's production process (hereinafter referred to as Stand-by), for a period equivalent to or longer than six continuous months, for reasons attributable to works time-scheduling or discontinuance of work activities because of unexpected events or due to Project Company's Instructions, only the physical wear and tear of the fixed assets shall be taken into account for tax depreciation purposes, thus by application of a tax rate equivalent to 10% of the common tax rate applicable to the reference tax class (by way of example, Specific Plants: common tax rate (15%), then 10% of the common tax rate = 1.5%) starting from when the fixed asset enters the Stand-by period and until the same is used back in the production process.

To such purpose, the General Foreman (GF) shall prepare, upon PM's Instructions, the proper Machine Stand-by Statement (MSS) form, to be entirely filled-in and bearing attached the photographs of the fixed asset at the time when the stand-by period starts and the relevant documents. The MSS form is checked by CM and approved by Project Manager (PM).

#### 12.8.3. Machine's Logbook

The Machine's Logbook (MLOG), which is of a fundamental importance for a correct management of the assets, bears all the information useful for the correct management of the lifecycle of each machinery.

The Logbook MLOG shall set forth all the maintenance and/or repair and/or modification operations, and the information relating to the return of plants and/or machinery to the depot, and/or their relocation to other production units. A copy of the Machine Logbook duly updated shall always be kept aboard the machine. General Foreman (GF) is responsible for duly operation.

The relevant Machine Logbooks (MLOG) duly updated;

The relevant user's and maintenance manuals and other technical specifications/administrative documents, if any, relating to the Machinery itself;

The spare parts and consumables to be transferred, stocked at the warehouse and which can no longer be used by the Project,

#### 12.8.4. Internal Identification of the Fixed Asset

All the Corporate fixed assets shall bear the identification tag setting forth the Owner of the asset and the internal registration code.

General Foreman (GF) shall take care of affixing said tags to the fixed assets owned, also for the purpose of a periodical physical inventory of fixed assets.

#### **Documents drawn up:**

- Machine Logbook (MLOG);
- Machine Stand-By Statement (MSS).

## 12.9. MANAGEMENT OF HEALTH, SAFETY, ENVIRONMENT AND MONITORING

The methods of application of such procedures are explained in two documents attached to the PMP:

- The Safety Management Plan (SMP);
- The Environmental Management Plan (EMP).

### 12.9.1. Integrated HSE management

In order to synergically improve the performance in matter of health, safety and the environment, some management activities of the management system are closely connected one another. The main integrated processes are set forth below.

#### 12.9.1.1. Identification and Periodical Evaluation of Applicable Law Requirements

In agreement with the provisions of reference management procedures, Health, Safety and Environmental Manager (HSEM), each to the extent of the respective sphere of competence, shall draw up and update a list of the main requirements applicable to the project (including local agreements and commitments, although not governed by applicable laws) in matter of health, safety and environment.

Such document (REGNORM) is a table setting forth the obligations to be fulfilled in connection with the relevant project and its adequacy is periodically assessed.

The correct fulfillment of obligations is assessed by Health, Safety and Environmental Manager (HSE) at the intervals previously set.

#### **Documents connected with the above**

- Register of main laws, regulations and standards applicable in matter of safety and environment (REGNORM).

#### 12.9.1.2. Project's HSE Performance Improvement Plan

In agreement with the provisions of reference management procedures, HSEM, each to the extent of his respective sphere of competence, shall draw up and update a safety and environment improvement plan (PROSAC) setting forth HSE improvement objectives, the improvement actions which are the subject-matter of project's investments, and those responsible therefor.

#### **Documents connected with the above**

- Project's Environment and Safety Improvement Plan (PROSAC).



### 12.9.1.3. Information, Training and Enhancement of Personnel's Awareness

A skills grid shall be defined within the project setting forth the needs of personnel involved in project's activities, including visitors and third-party companies. On the basis of such needs, a training program is defined, which shall be closely connected with the quality management plan.

#### **Documents connected with the above**

- Grid of qualifications (MATCOM);

### 12.9.1.4. Analysis of accidents and near miss

Astaldi-Türkerler J.V. defined its own method of analysis of accidents and near miss in matter of environment and safety by means of a specific coding, which, based on a description as more detailed as possible of the event defines the direct causes and the basic causes of accidents and near miss, thus defining appropriate corrective/preventive actions.

#### **Documents connected with the above**

- Guidelines for injuries, accidents and near-miss analysis;
- Accident Analysis Form (AAF).

### 12.9.2. Management of Health and Safety

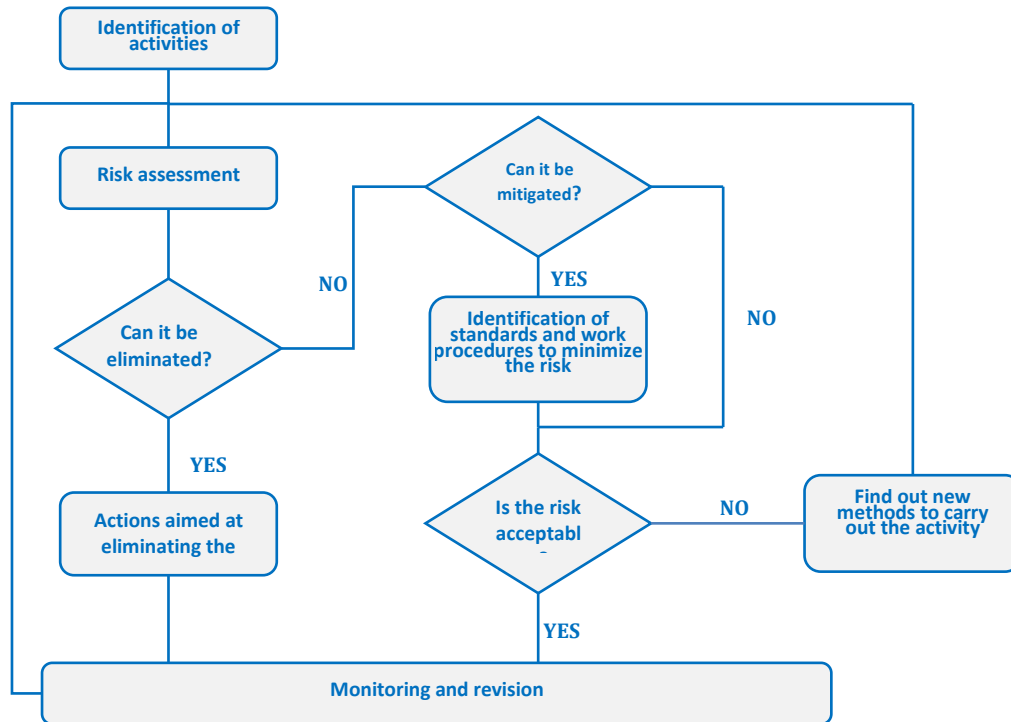
The management of health and safety is mainly implemented by means of the SMP defining the methods and responsibilities for the management of safety within the project, the final purpose of which is to improve the project's and ASTALDI Group's safety management performance.

Such SMP is drawn up by HSEM and approved by PM.

#### 12.9.2.1. Risk Assessment and Mitigation

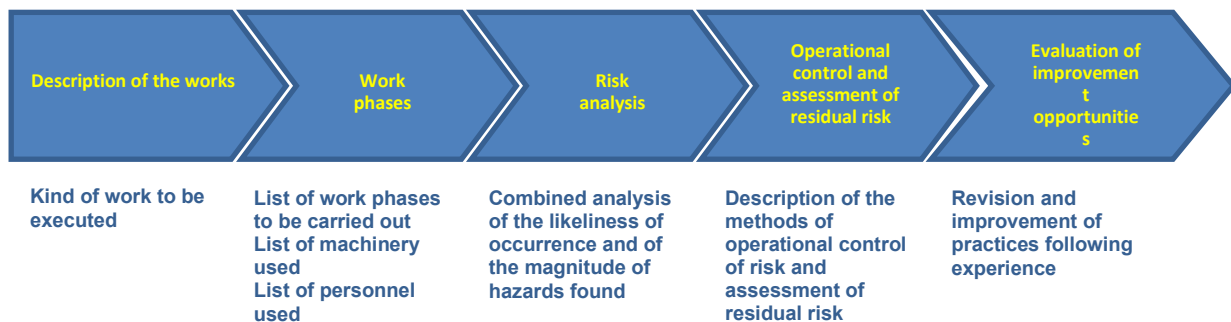
In Astaldi-Türkerler J.V., the risk assessment process may be outlined as follows:





Such scheme is implemented within risk assessment reports, which provides for the assessment of risk and the relevant methods of control through safe behavior datasheets.

The analysis and subsequent assessment of risk are carried out according to the following flow chart which allows to cyclically and continually improving performance also thanks to the exploitation of the experience accrued by the group and the project personnel.



Therefore, the Project risk assessment reports define and show procedures, Instructions and methods of work which allow to reduce the residual risk to an acceptable level also taking into consideration the methods for prompting and responding to emergencies which may take place during the execution of project's activities.

The risk assessment reports is drawn up by HSE and approved by PM.

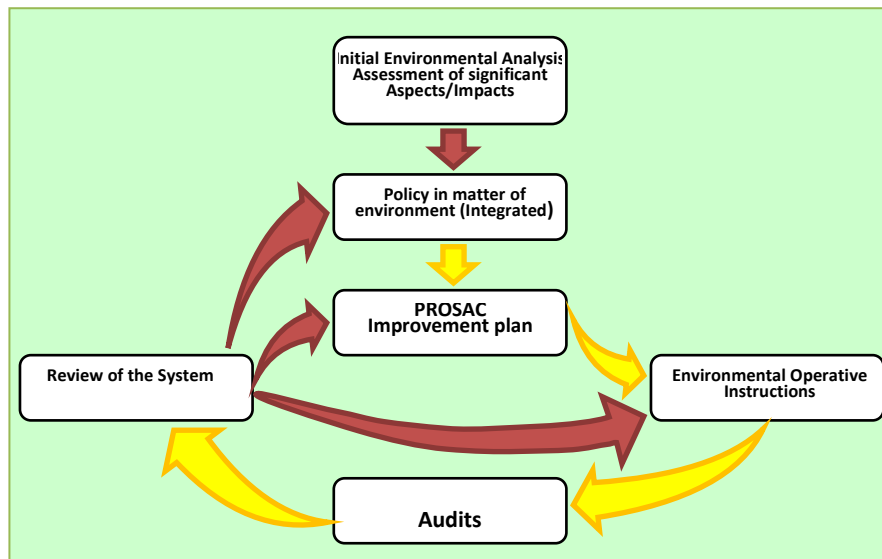
**Documents connected with the above**

- Safety Management Plan (SMP) – (Attachment 8 to PMP);
- Emergency Response Plan (ERP);
- Risk Prevention standards – Safety;

**12.9.3. Environmental Management**

The Environmental Management Plan (EMP) describes the methods according to which the below diagram is implemented within the project.

The EMP is drawn up by Health and Safety Manager (HSEM), and approved by Project Manager (PM).



The environmental management plan defines, the methods and responsibilities relating to:

- The execution of the initial environmental analysis of activities;
- The identification and assessment of Project's significant environmental aspects;
- The control of activities having a significant impact on the environment;
- The supervision, by means of appropriate indicators, of significant environmental aspects;
- The periodical verification of system's performance in order to continually improve the same also through the update of the environmental improvement plan.

Health and Safety Manager (HSEM) verifies and controls the effective implementation within the site, reporting to PM the critical points, if any.

#### Documents connected with the above

- The Environmental Management Plan (EMP) – (Attachment 9 to PMP)
- Initial Environmental Analysis
- Register of significant Environmental Aspects and Impacts on the Environment (REGASP);
- Risk Prevention Standards – Environment;

## 12.10 MANAGEMENT OF RISK AND MONITORING

### 12.10.1. Risk Assessment

The PM shall be responsible for the assessment of Project's risks; he may avail himself of the assistance the assistance to be provided by Sponsor's Corporate - Area Risk Manager / Risk Manager (RM) as well as by the Bid Study Team which identified and assessed the risks during the study phase carried out before award of the Project (International Bid Closing Information Sheet – SCOE - and the possible phase of negotiation with the Project Company - SPV).

Deputy Administrative and Finance Manager is acting as RM

Project Manager (PM), by taking advantage of Risk Manager (RM)'s assistance, shall carry out the assessment of risks and opportunities through Tagetik, in which has been introduced a dedicated section (RM Module) for the evaluation of risks and opportunities in connection with a series of events which may take place during the execution of Project works. The Risk Assessment of the bid, annexed to the SCOE, represents an initial comparison of the risk evaluation.

The Risk Management Module allows entering:

- The quantitative assessment of Risks/Opportunities;
- The qualitative assessment of Risks/Opportunities;

The criterion for filling-in the reference table (initial scenario) is as follows:

Risk Matrix	
	Identification of the class of risk the events belongs to, within Astaldi's Risk Universe;
	The description of the event of risk/opportunity, its placement within the specific context, and its effects in terms of impact on costs and/or revenues;

	The descriptive association with three scenarios of impact: Base case (the scenario assumed when drawing up the budget), Worst case (a scenario having a depreciatory effect on the project's results), Best case (a scenario having better-than-expected effects on the project);
	Identification of a probability of occurrence of the event over a reference period of time (from 0 to 100%);
	The quantification of the impacts expressed in €/000 with respect to Budget values, by using the rate of exchange taken as reference in the latest Business and Industrial Plan; in particular, as far as concerns the column "Base Case Costs", the value entered may correspond to the Contingency set aside;
	The selection of an appropriate reliability of the estimations, that is to say the possibility that, according to entity drawing up the report, the values expressed actually fall within the Best Case and the Worst Case singled out.
	The identification of the time of verification (a well determined period of time) of occurrence of the event.

The "Actions Summary Schedule (SSA)" is a summary of the data relating to the assessment of the risk associated with each single project.

## 12.10.2. Risk Management

### 12.10.2.1. Definition of Risk Management Plan

Soon after considering all possible alternatives which may be pursued to manage the risk, the PM, shall define the Project Risk Management Plan (RMP) to be adopted, taking into account the inclination to risk and the strategic orientations in matter of corporate Risk Management.

The Risk Management Plan is to create an integrated scheme of risk allocation and management that will support the achievement of the Project's goals for safety, cost, schedule, and quality. Risk management will seek to manage the uncertainty of loss, efficiently prepare for a loss, and minimize cost when a loss occurs. These costs can include the expected value of payments for losses, the cost of direct expenditures to control risk, the values of foregone activity, the cost of bearing risk, and the cost of financing risk. The risk management process involves three interrelated functions as shown below:

- The systematic and continuous identification of causes of risks, identification or risk loss exposures and evaluation of their nature, severity, and potential impact on the Project.
- The planning and organizing of appropriate risk control, risk transfer, and risk financing techniques to minimize the cost of risk.
- The implementation of those techniques internally at all levels of the Project, and externally with insurers, loss adjusters, and other risk finance specialists.

With large construction projects, risk management must also consider the unique effects of the schedule, mix of contractors, and the area in which the work is being performed. Risk management will assess the following categories of exposure:

- Liability Exposure: The risk of bodily injury
- Personnel Exposure: The risk of bodily injury to persons employed

- Property Exposure: The risk of physical loss

Sponsor's Corporate - Area Risk Manager / Risk Manager (RM) (not defined in organization chart, can be associated with Technical Manager) shall underline the main elements to be considered when assessing Project's alternative Risk Management Plans (RMP), such as:

- Feasibility of implementation;
- Expected effectiveness of the action;
- Costs of action;
- Availability of (human, technical ...) resources necessary for implementation;
- Time necessary for implementation.

After exposure has been determined, various loss scenarios determine loss limits for individual construction packages and for the Project. The means of managing risk are then evaluated with respect to the specific exposures of the Project.

After considering all possible alternatives which may be pursued to manage the risk, the PME, shall define the project's RMP to be adopted.

The Sponsor's Corporate - Area Risk Manager officially issues, with Risk Manager (RM)'s or the Bid Study Team's assistance, the Project's RMP by providing:

- The description of the actions to be taken;
- The member of personnel responsible for implementation;
- The date of beginning and the expected date of completion of activities;
- An estimate of the benefits deriving from the action plan in terms of mitigation of risk's impact;
- The costs for implementation of single management plans in order to appreciate the "Bet Benefit" of the risk management plan (Net Benefit = Benefit – Costs).

The RMP is issued by Risk Manager (RM) approved by PM.

#### 12.10.2.2. Definition of the benefits deriving from the Risk Management Plans in terms of residual risk

The advantageous effects of RMP on risk shall also be assessed. Such assessment shall be carried out by Project Manager PM, with Sponsor's Corporate - Area Risk Manager / Risk's assistance.

Such assessment may be of a qualitative nature, if input information and data are available and if so considered advisable, or of a quantitative nature.

The qualitative assessment shall be carried out on the basis of the experience accrued and of experts' opinions, in terms of mitigation of risk impact and decrease in the probabilities of occurrence.

Alternatively, "Risk Indicators" may be defined and their deviation with respect to the fixed target assessed.

The risk management process includes four strategies, which can be used individually or in combination as listed below:

<b>Mitigation</b>
<ul style="list-style-type: none"> <li>• Risk Avoidance. Risks are avoided through such matters as site selection, technology selection, design criteria, and monitoring for early risk event detection.</li> <li>• Risk Mitigation / Control. Proven programs that help control / mitigate risk include: <ul style="list-style-type: none"> <li>○ Environmental Health and Safety Program.</li> <li>○ Risk Management Process.</li> <li>○ Security Program</li> <li>○ Quality Program</li> <li>○ Cost Control</li> <li>○ Schedule Control</li> <li>○ Contract packaging/procurement strategies</li> <li>○ Construction Contracts</li> <li>○ Conflict resolution</li> </ul> </li> <li>• Risk Retention. Risk Retention techniques include payment of losses from current reserves as incurred, deductibles under insurance policies, and pre funding arrangements through self-insurance and captive insurance.</li> <li>• Risk Transfer. When analysis indicates that risk cannot be adequately retained, it is transferred to a party capable of bearing the risk at a lower cost. Techniques include transferring risk by: <ul style="list-style-type: none"> <li>○ Contractual risk transfer through releases, and indemnity agreements between project participants</li> <li>○ Insurance can be another parameter of risk transfer.</li> </ul> </li> </ul>

## RISK MANAGEMENT PROCESS

The following provides an overview of the risk process and procedures to be undertaken in order to effectively manage project-related risks.

### IDENTIFY RISK

- A member of the Project Management Team can identify a project related risk
- Risk Originator identifies a risk applicable to a particular aspect of the project (e.g. scope, deliverables, and timescales).
- Risk Originator completes a Risk Form and distributes the form to the Risk Manager.

## REGISTER RISK

The Risk Manager is to review all risks identified and determines whether the risk will:

- Impact a project deliverable specified within the project deliverables register.
- Impact a quality deliverable specified within the quality plan.
- Impact the timescale specified within the project plan.
- If the Risk Manager considers the risk appropriate to the project then a formal risk is raised in the Project Risk Register and a risk number assigned.

## ASSIGN RISK ACTIONS

Upon the review of the Project Risk Register, the Project Review Team will review each risk based upon the risk impact and may decide:

- To close the risk in the Risk Register, if there are no outstanding risk actions and the risk is no longer likely to impact the project.
- To raise a change request, if in order to mitigate the risk, a change to the project is required.
- To assign risk actions in order to mitigate the risk.

## IMPLEMENT RISK ACTIONS

The implementation of all actions assigned by the Project Review Team will include:

- Scheduling each action for completion.
- Implementing each action scheduled
- Reviewing the success of each action completed
- Communicating the success of each action completed Project Management Team

### 12.10.3. Drawing Up The Action Plan For Mitigation Of Risks

The possible actions to be taken in order to "mitigate" the risks which, following to assessment, show a Risk Factor equal to or higher than 3 could be:

- Elimination: eliminating the potential cause of risk from the project/programme. Such action is necessary above all when the severity of the situation may have a detrimental effect on the company's repute.
- Mitigation: mitigate the risk by defining the actions to be taken on the basis of the project/programme's requirements.
- Transfer: transfer the risk to other entities (by way of example, the other contracting party) by providing for specific contract or insurance clauses.

The identification of the actions to be taken is officially stated by drawing-up the "Action Plan" of the Risk Schedule (RS) divided into the following sections:

- Mitigating Actions: actions and relevant costs to be taken / incurred immediately which may transfer, mitigate or decrease the probability of occurrence and/or the impact of the undesired event.
- Recovery Actions (residual risk): in the event that Mitigating Actions have not completely eliminated the probability of occurrence and/or the impact of the risk,



they represent the actions to be taken and the costs to be incurred after occurrence of the risk in order to curb the relevant consequences.

- Provision: the amounts to be set aside for costs of restraining and recovery actions (to be weighed on the basis of the relevant probabilities of occurrence).
- Verification point: WBS completion or event providing univocal evidence of the fact that the risk occurred or not.
- The "Actions Summary Schedule (ASS)" summarizes all the Action Plans drawn up for a specific project.

A "convenient balance" between Risk Exposure and Provision set aside has always to be found for each risk which may be associated with any project.

According to logic of economic-financial convenience, regardless of possible restrictions imposed by time/performance, the selection of any arrangement of the Action Plan triggers a process of interactive comparison between:

- Exposure to the Risk;
- Provision for Contingencies;

coming to end upon definition of an Action Plan reducing to any possible extent the total Contingency with respect to Exposure to Risk.

#### 12.10.4. RISK MONITORING

PM, by taking advantage of the contribution given by the offices which support the Sponsor's Corporate - Area Risk Manager / Risk Manager (RM), takes care of the risk monitoring and reporting, thus defining the recurrence and watching over the recovery actions which may be required, if any.

**Risk Manager:** The Risk Manager receives records and monitors the progress of all risks within a project. The Risk Manager is formally responsible for:

- Receiving all Risk Forms and identifying which of the risks rose are appropriate to the project.
- Recording all risks in the Risk Register.
- Presenting all risks to the Project Review Team.
- Reporting and communicating all decisions made by the Project Review Team.
- Monitoring the progress of all risk-mitigating actions assigned.

The PM shall issue, by taking advantage of Project Risk Manager (PRM) (not defined in organization chart, can be associated with Technical Manager)'s assistance and by using the Risk Management Module of Tagetik, a quarterly report bearing as attachment, jointly with the table of reference, also an updating table structured as follows at the occurrence of every event:

Risk Matrix Monitoring	
	The descriptive association with the evolution of the three scenarios of impact in comparison with the previous estimation;
	An updated quantification of impacts, expressed in €/000 in comparison with

	the initial scenario, by using the rate of exchange taken as reference in the latest Business and Industrial Plan;
	Identification of a probability of occurrence of the event over a reference period of time (from 0 to 100%), such value being subject to changes in comparison with the initial estimation depending on the perceived possibility of whether the event may occur or not;
	Entering, in the "Commitment" column, the costs and revenues already incurred or likely to be incurred;
	The selection of an appropriate reliability of the estimations, that is to say the possibility that, according to entity drawing up the report, the values expressed actually fall within the Best Case and the Worst Case singled out. Such value being subject to changes in comparison with the initial estimation depending on the perceived possibility of whether the event may occur or not.

#### Documents drawn up:

- Risk Management Plan (RMP) – (Attachment 10 to PMP);
- Risk Schedule (RS);
- Actions Summary Form (ASF).

## 13. AUDIT ON QUALITY, SAFETY AND THE ENVIRONMENT

### 13.1. INTERNAL AUDIT

QA/ QC Manager and HSE Manager (HSEM) plans the Internal Audits (IAU) to be carried out on the Project. The “purpose” of Quality Audit is to assist internal audit teams in evaluating each department in a consistent manner. Each audit steps through the fundamental requirements necessary to have a sound Quality Control and Health, Safety and Environment Program. The audit identifies areas of strength and brings focus to opportunities for improvement that will produce the greatest returns for the project.

Audit teams are usually comprised of two (2) or more independent individuals, which allows for an objective review of the Internal Quality Audit Program, which is comprised of QA/QC Manager, HSE Manager (HSEM), TOM and CM should be present during the audit.

The Quality Audit is divided into three segments: a site tour to evaluate the quality of work and stage of construction, a review of documentation demonstrating the Quality Process, and a closing meeting to discuss strengths and opportunities for improvement.

Internal Audit (IAU)

on the system is carried out by Audit Team according to the following five steps:

- Planning of Internal Audit (IAU);
- Execution of Internal Audit (IAU),
- Drawing up of the Internal Audit (IAU) Report;
- Defining corrective/preventive actions, if any;
- Verification of the results of any recommendations and/or corrective/preventive actions (follow-up).

For each Internal Audit (IAU) to be carried out, Audit Team draws up a specific Internal Audit Plan (IAUPLAN) and submits the same to the concerned Departments/Offices.

The Internal Audit (IAU) shall be carried out in four phases:

- Kick-off meeting;
- Execution of the audit activity;
- Issue of Internal Audit Report (AAR);
- Post-audit meeting.

Upon completion of any VI, the Lead Auditor shall issue the proper Internal Audit Report (AAR).

The Internal Audit Report (AAR), to be shared with the Project's managers, shall be signed by the person responsible for the VI and by the PM.

The Audit Team distributes copy of the Internal Audit Report (AAR) to the Project Manager (PM).

### 13.2. AUDITS CARE OF SUBCONTRACTORS/SUPPLIERS

During the execution of contract activities, the QA/QC Manager (QA/QC) shall carry out external audit to Subcontractors/Suppliers. The methods of execution are the same as the management of internal audits.

The Quality Audit will result in a full report detailing the strengths as well as areas requiring attention. Areas requiring follow-up action should be addressed prior to the next audit. Verification that previous concerns have been addressed is reviewed during subsequent audits.

**Documents drawn up:**

- Internal Audit Plan (IAUPLAN);
- Internal Audit Report (AAR)

## 14. CORRECTIVE AND PREVENTIVE ACTIONS

The need of implementing corrective/preventive actions originates from the monitoring of the IMS aspects listed below:

- Project Company's remarks/complaints following audit activities/inspections;
- Nonconformities (NC) relating to materials / products / work processes;
- Nonconformities deriving from failure to comply with the provisions of system documents (Company's manual, Management Procedures, PMP, SMP, EMP, RMP, etc.);
- Astaldi-Türkerler J.V.'s complaints against Suppliers/Subcontractors;
- Internal Audits (IAU);
- Certification Provider's audits;
- Nonconformities in matter of health, safety and environment;
- Observations in matter of health, safety and environment;
- Management's review

### 14.1. CORRECTIVE ACTIONS

#### 14.1.1. Planning of Corrective Actions

Preliminarily to any other activity, the phase of assessment of the (actual or potential) problem and the consequent search for the relevant (actual or potential) causes shall be carried out in any case.

The corrective actions are planned by the Department involved, with the support of the QHSE Manager / Risk Manager (RM) as follows:

- Evaluation of the causes of the problem;
- Identification and selection of the acceptable solutions in relation to their effectiveness, costs, timing and risks;
- Planning of actions to be taken (activities to be carried out, responsibilities, resources and timing).

The decisions taken are set forth in the Corrective Action Report (CPAREP) or in the Non-conformity Report (NCR) or in the Audit Activity Report (AAR) or in the Injury/Accident/Near-miss Analysis Report (MAI).

The RACs are managed and filed by the competent QHSE Manager / Risk Manager (RM) (not defined in organization chart, can be associated with Technical Manager) and by the office/department responsible for the implementation thereof.

The QHSE Manager / Risk Manager (RM) will keep the status of Corrective Actions up to date by means of registers.

#### 14.1.2. Implementation of the Corrective Action

The activities set forth in the Corrective/Preventive Action Report (CPAREP) are implemented by using the necessary resources and by up-dating, if necessary, the operating procedures, drawings, specifications, etc.

Monitoring is managed by QHSE Manager / Risk Manager (RM) to ensure the preservation of the results achieved and possible future improvements.

#### 14.1.3. Verification of Results and of the Effectiveness of the Corrective Action

For each corrective action, the department/office responsible for the implementation, with the assistance of the QHSE Manager / Risk Manager (RM), will verify the total resolution of the defect and subsequent verification of the effectiveness by recording the results in the appropriate space on the relevant Corrective/ Preventive Action Report (CPAREP) or Non Conformance Report (NCR) or Audit Activity Report (AAR) depending on the cases.

If the solution selected and described in the Corrective/Preventive Action Report (CPAREP) is not implemented or if it requires to be reprogrammed, the office/department responsible therefor shall determine new implementation time-schedule, by registering it in the report's space reserved to this purpose.

### 14.2. PREVENTIVE ACTIONS

If situations of potential Non-conformities (NC) were found as a result of audits, surveillance, document revision, reports from Company departments, QHSE Manager / Risk Manager (RM) has the duty to point them out to the persons directly involved in order to devise a suitable plan of Preventive Actions.

Such preventive actions, aimed at eliminating potential causes on non-conformity, may require:

- A need for further training and preparation of the personnel involved;
- Planning continuous improvements in the work processes;
- The acquisition of new resources;
- A redefinition of roles and relevant responsibilities;
- Amendments to Project's IMS;

Preventive Actions (PACT) is implemented according to the following phases:

- Verification of the source of the information through the aspects listed below:
- Quality indicators;
- Nonconformity reports and quality records;
- Irregularities in the management system;
- Project Company's complaints, if any;
- Remarks deriving from Internal/ External Audits.
- Planning of the preventive action;
- Implementation of the preventive action;

- Assessment of the results;
- Preservation and periodical review of the Preventive Actions.

Preventive actions are recorded in the appropriate form: "Corrective/Preventive Action Report (CPAREP)".

The RAPs are managed and filed by the competent QHSE Manager / Risk Manager (PRM) and by the office/department responsible for the implementation thereof.

The QHSE Manager / Project Risk Manager (RM) will keep the status of Preventive Actions up to date by means of registers.

**Documents drawn up:**

- Corrective/Preventive Action Report (CPAREP);
- Corrective/Preventive Actions Register (CPAREG).



## 15. ASSISTANCE

If specified in the Contract, this section shall set forth the operative procedures relating to:

- Assistance to the Project Company (SPV) during the construction phase until works take-over;
- Assistance to the Project Company (SPV) in the phase following works take-over.

If necessary, a specific Project's operative procedure shall be drawn up.

### Documents drawn up:

- Assistance time-schedule (to be drawn up only for post-take-over activities);
- Project Operative Procedures.

## 16. PROCESS INDICATORS AND STATISTICS TECHNIQUES

Following an official request made by the Audit Team, the Project Manager (PM) provides the information useful to determine Quality Performance Indicators relating to the monitoring of corporate aspects and/or processes undergoing a review.

## 17. PROJECT'S MONTHLY REPORT

Within the 15<sup>th</sup> of every month, the PM shall issue the Project's Monthly Report relating to the previous month.

The contents of the Report, taken from the monitoring of the above processes, unless otherwise specified in the Contract, should be as follows:

1. Project's Organization Information Sheet;
2. Works Program and Actual Works Progress;
3. Contractual situation;
4. Project's Income Statement and Cost Control;
  - 4.1. Works Progress;
    - 4.1.1. CONTGEST – Progress of Executed Works;
    - 4.1.2. Warehouse;
    - 4.1.3. Subcontracts – Supplies with Installation – Rentals with Operator;
  - 4.2. Control of Works Progress;
    - 4.2.1 Effectiveness control;
    - 4.2.2 Efficiency control;
  - 4.3. Engineering and Preliminary Activities;
  - 4.4. Procurement Plan;
  - 4.5. Risks and Opportunities;
5. Situation of Machinery, Equipment and Plants;
6. Project's Personnel and Organization;
7. Quality;
8. Occupational Health and Safety and Environment;
9. Photographic documents.

More detailed information to be entered in the Occupational Health and Safety and Environment section are set forth in the SMP and in the EMP, respectively.

If expressly provided for by the contract, the above report can be used as a reference for drawing up the one to be sent to the Employer, by omitting the information concerning aspects of internal management (e.g. economic and financial information, management control, budget, etc.).

Project Manager (PM) shall provide copy of the Project's Monthly Report, preferably in electronic format, to the Head Office departments.

In case any important event occurred in connection with one or more issues dealt with in the Report PM shall send a copy of the Report (or only the relevant part thereof as an abstract), not

only to the above mentioned Head Office departments/offices, but also to any involved department/office.

**Documents drawn up:**

- Project's Monthly Report.

## 18. MANAGEMENT OF DOCUMENTS AND DATA

### 18.1. MANAGEMENT OF DOCUMENTS ORIGINATING FROM INTERNAL SOURCES

The documents originating from internal sources are those originating from the application of the PMP.

Internal documents are filed as follows:

- The documents shall be collected by type and kept into folders;
- The outer spines of folders shall be provided with a small identification label bearing a reference to the project and the type of documents contained;
- A filing sheet (list) of documents shall be kept inside each folder and updated every time a new document is inserted therein.

In the event documents originating from internal sources were annexed to a cover letter or any other document similar thereto, such letter shall be filed and, therefore, registered according to the criteria adopted for correspondence while, as far as documents are concerned, they shall be filed as described above.

### 18.2. MANAGEMENT OF DOCUMENTS ORIGINATING FROM OUTER SOURCES

#### DOCUMENT CIRCULATION CHART

Document Name	From	To	Ref. Agreement	Article/Section
Ground survey report	EPC	SPV	EPC	7.8 / (a)
Final Project in full compliance with Tender	EPC	ADM	EPC	23.4
All reviewable design data	EPC	SPV & OM	EPC	23A.2
List of key personnel	EPC	SPV & ADM	EPC	25.2
Commissioning Program	EPC	SPV	EPC	28.1
Quality Plans, Manual and/or Procedure	EPC	ADM	EPC	31.4, 31.10
Any amendment to the Final Project	SPV	ADM	PA	7.9 / (b)
Draft copy of the Final Project which shall be prepared in compliance with the Tender Doc	SPV	ADM	PA	23.4
List of key technical personnel	SPV	ADM	PA	25.2

Any change in the Programme (amendmend)	SPV	ADM	PA	25.3
a report identifying the reasons for the delay	SPV	ADM	PA	25.4
Commissioning Program	SPV	ADM	PA	28.1
All Quality Plans and Service Plans	SPV	ADM	PA	31.4
Schedule of Programmed Maintenance and Repair	SPV	ADM	PA	33.1
delay event notice	SPV	ADM	PA	45.4
monthly and annual activity reports in compliance with Schedule 28	SPV	ADM	PA	58
A certified copy of Project Agr.	ADM	SPV	PA	69
a Programme related to the Construction Period determining the periods of the commencement of the Works, completion of Works, the completion of the Phases and entry into operation of the Health Facilities	SPV	ADM	SCHD	9
Phase Actual Completion Certificate	ADM	SPV	PA	28.11
printed and electronic copies of the revised Financial Model on the date of Financial Close	SPV	ADM	SCHD	19
Implementation Projects	SPV	ADM	SCHD	8
Phase Actual Completion Certificate	ADM	SPV	PA	28.18
programme for the timing and sequence of the preparation of the design	EPC	SPV	EPC	23A.3
A copy of Phase Actual Completion Certificate	SPV	EPC	EPC	28.11
EPC Final Completion Certificate	SPV	EPC	EPC	28.25/(b)
Interim Payment Certificate	SPV	EPC	EPC	39.10
Final Payment Certificate	SPV	EPC	EPC	39.19

The following documents originating from external sources are used for the management of the Project:

Code	Document Type	Responsible Department	Informed Department
A	Invoices, Accounting Documents, Bank Documents, Payments Certificates, Statement Of Accounts	ADM	

B	Faxes (Except Items C)		
C	Letters From Ministry Of Health, Project Company (SPV)	CON	
D	E-Mails		
E	From The Court, Police, Tax Office, Foreclosure, SGK, Prefecture, Municipality, Unions, All The State Bodies, Ministry	CON, LD	
F	From Third Parties As Suppliers, Sub-Contractors, Designer, External Laboratory, Certification Bodies	CON, CM, QA/QC	

These documents, such as designs, contracts, addenda, correspondence etc. are managed by PM. Upon receipt, the competent Secretary's office affixes the Correspondence Receipt/Distribution Stamp (CRDS) on the original with the following indications:

- Receiving Department/Office,
- Progressive incoming document number,
- Source;
- Date.

DCC then makes a copy of the letter received and delivers the original to the PM, who then signs it and indicates possible addressees of copies thereof.

DCC then keeps the incoming correspondence files up to date by using the specific Documents Filing Register (DFR) or equivalent record and the relevant filing system, by means of folders that are identified according to the type of document they contain, and numbered progressively.

As far as reference laws, regulations and standards are concerned, such documents are acquired by the PM who takes care of collecting, controlling and then distributing the same to the related departments

### **18.3. MANAGEMENT OF PROJECT'S CORRESPONDENCE**

#### 18.3.1. Issue encoding

- Coding Structure for Documents



Type of Document	Department	Location	Sequence No
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Example for Document Code : PLN-TMG-00-0001

- Coding Structure for Forms

Type of Form	Department or Discipline	Location	Sequence No
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Example for Form Codes: RDA-PLN-00-0001

- Coding Structure for Drawings

Building Block	Design Discipline	Work package	Document Number	Design Phase	Revision	Document Title	Language of text documents
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Example for Drawing Codes: 00-ST-GEN-0011-DD-R00-title-EN

- Coding Structure for Correspondences

Originator Department	Who has prepared	Who has Approved	Sequence No	Year
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Example for letter: ADM / OMA / LPA / 0001 / 2013

### 18.3.2. Filing of Correspondence issued

The documents shall be filed under the responsibility of the appointed offices, kept in folders identified by the description of the Project. The folders are numbered progressively, starting from

- Outgoing-01/2013

and recorded in the proper Documents Filing Register (DFR).

In addition to the above numbering system, the folders will also be identified according to the type of documents contained (filed) therein.

### 18.3.3. Filing of Incoming Correspondence

Incoming correspondence is numbered progressively on an annual basis as described for the documents and only with regard to the progressive number (e.g. 00 / Year) and recorded on the specific Documents Filing Register (DFR) or equivalent document.

- Incoming-01/2013

In addition to the above numbering system, the folders will also be identified according to the type of documents contained (filed) therein.

## 18.4. RECORDS ISSUED BY SUPPLIERS-SUBCONTRACTORS

The documents issued by Suppliers/ Subcontractors and to be handed over to Astaldi-Türkerler J.V., during or upon completion of the supply/ subcontract, are as provided for in the order documents, in the contracts and/or in the PMP/ SMP / EMP / RMP of the Project, which are specifically drawn up by the Supplier/Subcontractor.

In general, records such as

- Product/system certificates,
- Nonconformity reports,
- Calibration certificates,
- Test certificates,
- **AS-BUILT** documentation,
- Accident reports, etc.,

must be collected in such a way so that they can be put in relation with the products or activities which they refer to, together with the lists.

Completeness is checked during inspections and controls during execution of the works, during Inspections and/or Audit Activities and during the Final Inspection carried out at the end of the supply and/or subcontract.

If the above-stated documentation is found to be complete and compliant, Project Manager accepts the record documentation.

As far as the supplies of materials are concerned, documents are checked directly during inspection upon receipt of goods.

## 18.5. CONSULTATION AND/OR TRANSFER TO THE PROJECT COMPANY (SPV)

PMP records referring to the subject-matter Project are available for consultation and/or full or partial transfer to the Project Company (SPV) or its Representative, if so provided for by the contract.

The PD/ PM / TOM are responsible for the manner of transfer of this documentation to the Project Company or to its Representative.

Records will be collected in one or more containers, which will bear a label on the outside summarily identifying the documents being sent; this label will be signed and dated by the PM, as evidence that the documentation being sent is complete.

#### **18.6. TRANSFER OF SITE RECORD DOCUMENTS TO THE HEAD OFFICE**

Upon completion of the works and before site clearance, PD / PM / TOM arranges for the collection of IMS original records (or copies thereof if the originals have been delivered to the Project Company SPV) and for their shipment to the Head Office General Archive.

Such documentation (1 hard, 1 soft copy) must be packed in one or more containers bearing a label which summarizes the documents being sent; such label will be signed and dated by Sponsor's Representatives.

#### **18.7. IT MANAGEMENT OF DOCUMENTS THROUGH COMPANY PORTAL**

##### **Documents drawn up:**

- Documents Distribution List (DDL);
- Documents Filing Register (DFR);
- Correspondence Distribution Stamp (CDS).
- Document Transmittal Form (DTF)


**19. REVISION OF PROJECT MANAGEMENT PLAN**

The PMP and the relevant attachments may undergo a review. The PM is responsible for the issue of possible revisions.

**20. ANNEXES TO THE PMP**


1. Project's Organization Chart;
2. Job Description Handbook;
3. Matrix of Responsibilities;
4. Works Programme;
5. Procurement Plan (PAC);
6. Design Plan (PDP) - if applicable;
7. Project Budget;
8. Project's Safety Management Plan (SMP)
9. Project's Environmental Management Plan (EMP);
10. Project's Risk Management Plan (RMP).

The annexes to the PMP must be prepared, checked, and approved by the offices mentioned in the applicable reference procedures. Moreover, some annexes containing data and information considered as confidential for internal use may be not attached to the copies distributed within and/or out of the Company.

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# ANNEX 1


## PROJECT'S ORGANIZATION CHART

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# ANNEX 2


## JOB DESCRIPTION HANDBOOK



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# ANNEX 3

## MATRIX OF RESPONSIBILITIES

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# ANNEX 4

## WORKS PROGRAMME


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# ANNEX 5

## PROCUREMENT PLAN (PP)


# ANNEX 6

## DESIGN PLAN (PDP)

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# ANNEX 7

## PROJECT BUDGET (Confidential for Internal Purpose only to DGE, DCE, SPCP, PD, PM )

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# ANNEX 8


## SAFETY MANAGEMENT PLAN (SMP)

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# ANNEX 9

## ENVIRONMENTAL MANAGEMENT PLAN (EMP)



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# ANNEX 10

## RISK MANAGEMENT PLAN (RMP)