



**Australia Indonesia Partnership**  

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**Kemitraan Australia Indonesia**



# **EINRIP**

# **Project Management**



**MINISTRY OF PUBLIC WORKS**  
**Directorate General of Highways**

# EINRIP - What's New

1. **Emphasis** is given to improved procedures for implementation, supervision, accountability and oversight
2. **Designs** have been completed using a new Design Specification and are not subject to design review (see **Section 3.3**).
3. **Bidding Documents** have been revised, based on FIDIC international General Conditions of Contract (see **Section 5.1.1**).
4. **The Supervision Consultant** will act as the Engineer for the civil works contract (see **Section 8.1.4**).
5. **A Disputes Board** should be established for every contract, even if there are no disputes. It will be funded 50% by the Employer and 50% by the Contractor (see **Section 8.3.10**).
6. **Independent auditors** will be appointed for technical and financial audit (see **Section 8.1.5**)
7. **The GOI contribution** is set in the Loan Agreement as a fixed amount, the Tax Letter states what the GOI contribution comprises, and the PMM establishes the initial percentage shares of various activities to achieve the GOI contribution (see **Section 9.1.2**)

# Project Management

- **Project Management Arrangements**
  - Project Organization
  - Authorities and Responsibilities;
  - Roles of PAS, PMSC, RSC, Auditors;
- **Management of Implementation**
  - Supervision of Works
  - Pre-Construction Meeting
  - Quality Management,
    - Contractor's Quality Plan
    - Engineer's QA Plan
    - Employer Audit Plan
    - Holding Points
    - Technical Audits
    - Tests on Completion
- Specifications
  - Construction Equipments
  - Materials
  - Laboratory Services,
- Special Requirements
  - Traffic Management and Safety,
  - Health and Safety,
  - Environmental and Social Safeguards



INSTITUSI	PERAN	TANGGUNGJAWAB
Badan Perencanaan Nasional (BAPPENAS)	Ketua Tim Pengarah	Strategi Investasi Nasional Mengkoordinasikan Kebijakan Pemerintah berkaitan dengan Proyek Arahana Penyiapan Anggaran Tahunan
Departemen Keuangan DJ Anggaran DJ Perbendaharaan DJ Pengelolaan Hutang	Penganggaran Akuntansi Pengelolaan Pinjaman	Kebijakan Penganggaran dan Perbendaharaan Penyiapan Anggaran Tahunan Budget Pelaksanaan dan Pelaporan Perundingan Pinjaman dan Pengembalian Pinjaman
Bank Indonesia	Proses Pembayaran	Memproses Pembayaran Mengoperasikan Rekening Khusus
BPK Inspektorat Jenderal PU	Audit	Audit Keuangan Audit Teknis

# Ringkasan Peran dan Tanggung jawab

Unit Organisasi	Peran	Tanggung jawab
Menteri Pekerjaan Umum	Mengawasi Executing Agency	<ul style="list-style-type: none"> <li>•Menetapkan Kontrak diatas Rp. 50 Milyar</li> <li>•Bertanggung jawab atas Anggaran Departemen.</li> <li>•Mengevaluasi penyerapan Pinjaman</li> <li>•Mengangkat Kepala Satker, PPK dan Pejabat Inti Satker</li> </ul>
Direktorat Jenderal Bina Marga (DJBM)	Executing Agency	<ul style="list-style-type: none"> <li>•Menyetujui variasi kontrak yang mengakibatkan kenaikan harga.</li> <li>•Menerbitkan PMM</li> <li>•Mengangkat Direksi Pekerjaan (Seksi 4.3.1.c dan Seksi 8.1.1.)</li> </ul>
Inspektorat Jenderal Departemen PU	Audit	Mengevaluasi hasil Audit bersama AusAID ( <a href="#">Seksi 2.2.2</a> )
BPKSDM Departemen PU	Audit dan review	<ul style="list-style-type: none"> <li>•Memberikan saran atas hasil Audit jika diminta Inspektorat Jenderal (<a href="#">Seksi 2.2.2</a>)</li> <li>•Memberikan pertimbangan kepada Menteri PU untuk Penetapan Pemenang Lelang diatas Rp. 50 Milyar</li> </ul>

<p>Dit. Bina Program (<a href="#">Seksi 2.2.1</a>, <a href="#">2.2.2</a>, <a href="#">2.4.1</a>, <a href="#">2.6.3</a>, 4.1, 6.1.2 dan 9.1.5)</p>	<ul style="list-style-type: none"> <li>•Perencanaan, Pemrograman, dan Pemaketan sub-proyek.</li> <li>•Mengelola PMU</li> <li>•Menangani pengadaan dan pelaksanaan PMSC</li> </ul>	<ul style="list-style-type: none"> <li>•Menyiapkan anggaran seluruh kegiatan proyek.</li> <li>•Membentuk, mengarahkan dan mensupervisi PMU</li> <li>•Mengelola Kontrak PMSC (finansial) melalui Satker.</li> <li>•Mengelola pengadaan Peralatan IT</li> </ul>
<p>Dit Bina Teknik (<a href="#">Seksi 2.2.2</a>, <a href="#">2.5.1</a>, 4.1, 6.1.1, 8.4.4)</p>	<p>Menerbitkan Standar Teknik Menyetujui desain untuk jalan/jembatan Non-Metropolitan Menangani pengadaan material jembatan rangka baja</p>	<p>Manage technical audit</p> <ul style="list-style-type: none"> <li>•Menangani aspek lingkungan untuk semua pekerjaan jalan dan jembatan.</li> <li>•Menyetujui standar desain, dokumen lelang standar, dan spesifikasi untuk semua pekerjaan jalan dan jembatan.</li> <li>•Menyetujui desain untuk jalan dan jembatan di wilayah Non-Metropolitan</li> <li>•Mengelola pengadaan material jembatan rangka baja</li> </ul>
<p>Dit. Jalan dan Jembatan Wilayah Timur (DJJWT) (<a href="#">Seksi 2.2.2</a>, <a href="#">2.4.2</a>, <a href="#">2.4.3</a>, 4.1, 5.3.5)</p>	<p>Menangani pengadaan dan pelaksanaan implementation of RSC Memantau pelaksanaan pekerjaan jalan dan jembatan di wilayah Non-Metropolitan</p>	<ul style="list-style-type: none"> <li>•Mangelola RSC dan PAS (teknis)</li> <li>•Mangelola RSC dan PAS (keuangan) melalui satker (DJJWT)</li> <li>•Membantu Dirjen Bina Marga untuk masalah-masalah kontrak</li> </ul>

Dit Jalan Bebas Hambatan dan jalan Perkotaan ( <b>Seksi 4.1</b> )	<ul style="list-style-type: none"> <li>•Mengawasi desain, pevelangan, dan pelaksanaan pekerjaan di wilayah Metropolitan<sup>[1]</sup></li> </ul>	<ul style="list-style-type: none"> <li>•Menyetujui desain utk jalan/jembatan di Wilayah Metropolitan</li> <li>•Menjamin penerapan standar &amp; prosedur yang telah disetujui, melaksanakan jaminan mutu pekerjaan, dan usaha perlindungan lingkungan dan sosial</li> </ul>
Balai (Besar) Jalan Nasional ( <b>Seksi 2.2.3, 10.3.2</b> )	Mengawasi pelaksanaan pekerjaan jalan dan jembatan di Wilayah Non-Metropolitan	Menjamin penerapan standar & prosedur yang telah disetujui, melaksanakan jaminan mutu pekerjaan, dan usaha perlindungan lingkungan dan sosial
PUSJATAN – Badan Litbang Departemen PU	Audit	Memberikan advis teknik atas hasil audit bila diminta Inspektorat Jenderal PU ( <b>Seksi 2.2.2</b> )
Project Management Unit (PMU) (banyak rujukan)	<ul style="list-style-type: none"> <li>•Saluran komunikasi antara AusAID dan GOI, dan diantara seluruh unit –unit pelaksanaan komponen proyek GOI</li> <li>•Menjamin pelaksanaan ACAP yang efektif</li> </ul>	<ul style="list-style-type: none"> <li>•Memantau status proyek dan seluruh komitmen yang terkait.</li> <li>•Menyiapkan Laporan Pemantauan Keuangan.</li> <li>•Memutakhirkan PMM dan menjaga agar Unit-unit Pelaksanaan memperhatikan tanggungjawabnya</li> <li>•Mengelola layanan PMSC (teknis)</li> <li>•Mangelola pelaksanaan yg efektif atas ketentuan-ketentuan dalam ACAP</li> <li>•Memantau kinerja RSC dan PAS</li> </ul>
Bagian Keuangan Setditjen Blna Marga	Penghubung Audit Keuangan	Membantu Inspektorat Jenderal PU, jika diminta mereview hasil audit keuangan ( <b>Seksi 2.2.2 and 2.5.2</b> )

<p>Satker / SNVT Pembangunan /Pemeliharaan Jalan Provinsi atau Satker Pembangunan Metropolitan (banyak rujukan)</p>	<ul style="list-style-type: none"> <li>•Melaksanakan lelang dan pelaksanaan Pekerjaan.</li> <li>•Menjalankan Kontrak Pekerjaan sebagai Pemilik (Unit Pelaksanaan untuk Pekerjaan)</li> </ul>	<ul style="list-style-type: none"> <li>•Menetapkan Kontrak sampai dengan Rp. 50 milyar.</li> <li>•Bertanggung jawab atas mutu pelaksanaan teknis dan pendanaan dengan bertindak sebagai Pemilik Kontrak Pekerjaan dengan tanggung jawab termasuk melaksanakan proses Lelang, mengevaluasi Penawaran, menetapkan Pemenang (<math>\leq</math> Rp. 50 M) dan menanda-tangani Kontrak, mengurus perizinan, memberitahu ketersediaan dana kepada Kontraktor, menyetujui Perintah Perubahan yang menambah biaya dan waktu, melakukan pembayaran, melakukan serah terima lapangan, berhak memutus Kontrak</li> </ul>
<p>Satker/SNVT Perencanaan dan Pengawasan (P2JJ) <b>(Seksi 3.4.3)</b></p>	<p>Pemutakhiran / Revisi Desain</p>	<p>Mengevaluasi proposal dari Direksi Pekerjaan untuk Pemutakhiran/Revisi desain, memberikan laporan kepada Balai + Dit. Bintek / Dit. JBHJK</p>
<p>Dinas Pekerjaan Umum Propinsi</p>	<p>Penghubung dengan Gubernur.</p>	<ul style="list-style-type: none"> <li>•Menyerasikan perencanaan seluruh program Jalan Nasional di Propinsi.</li> <li>•Membantu Dirjen/ Direktur/Ka Balai jika diperlukan</li> <li>•Mengkoordinasikan dengan badan, pemda dan masyarakat untuk membantu penyiapan dan pelaksanaan pekerjaan.</li> </ul>

# Main Responsibility of the Employer

## Procurement:

- a) Issue Invitation for Bids (ITB 6.2)
- b) Clarify bidding documents, arrange site visit and pre-bid meeting, if allowed (ITB 7.1)
- c) Amend bidding documents (ITB 8.1)
- d) Manage bidding process (ITB 22,23)
- e) Evaluate bids (ITB 34)
- f) Award contract (ITB 38,39,40)

## Implementation:

- g) Hand over site (2.1, 4.13)
- h) Arrange permits (2.2)
- i) Inform Contractor of financing (2.4)
- j) Appoint the Engineer (3.1)
- k) Approve Variation Orders that have financial implications (3.1)
- l) Approve extensions of time (3.1)
- m) Provide site data (4.10)
- n) Arrange payments (14.7, 14.9)
- o) Take over the site (10.1)
- p) Be entitled to terminate the contract (15.2)
- q) Return Performance Security after issue of the Performance Certificate (4.2)

# **The Engineer's authorities specified in the Contract**

- 1) **With specific approval from the Employer before taking action under following sub-clauses:**
  - Agreeing or determining a time extension and/or additional cost (GCC 4.12)
  - Instructing a variation, except in an emergency situation as determined by the Engineer
  - Approving a proposal for a variation submitted by the Contractor (GCC 13.1, 13.2, 13.3)
  - Specifying the amount payable in each of the applicable currencies (GCC 13.4)
  - Determination of a contractor's claim under Sub-Clause 17.4 , Consequences of Employer's Risks (SP-CC)
  - Determination of a contractor's claim under Sub-Clause 13.7, Adjustments for Changes in Legislation (SP-CC)
  - Determination of a contractor's claim under Sub-Clause 13.8, Adjustments for Changes in Cost
2. **Consult with all parties and make determinations on Contractual matters between the Employer and the Contractor (3.5)**
3. **Give guidance and/or instructions to Contractor in relation to work methods, and the timeliness and quality of the work (4.1)**
4. **Approve additional sub-contracting of any part of the Works (8.10)**
5. **Issue the formal notice to the Contractor to commence with the Works (8.10)**
6. **Approve or disapprove work before covering up (7.3, 7.5)**

# **The Engineer's authorities specified in the Contract**

- 7) **Witness testing by Contractor (7.4)**
- 8) **Evaluate contractor's proposal for variations, and propose variation orders to the Employer that have financial implications (13.1 + 3.1)**
- 9) **Approve variations in the quantities, and evaluate contractor's proposals for variations which do not have financial implications (13.1)**
- 10) **Monitor the contractor's use of time, and evaluate proposal for extensions of time (4.12, 8.4 + 3.1)**
- 11) **Approval to the use of day works, provisional sums (including contingencies) (13.5, 13.6)**
- 12) **Withdraw approval to the Contractor's Representative (6.9)**
- 13) **Issue Taking Over Certificates for the whole or parts of the Works (10.1)**
- 14) **Authorize payment certificates (14.2, 14.6)**
- 15) **Issue Defect Liability Certificate (11.1)**
- 16) **Issue Performance Certificate (11.9)**
- 17) **Certify contractor's Statement at Completion (14.10)**
- 18) **Give evidence as a witness before Arbitrators (20.6)**

# Fungsi PMSC :

- Dukungan Manajemen.
- Manajemen dan Monitoring Keuangan.
- Pemantauan dan Pelaporan Progres Pekerjaan.
- Jaminan Mutu dan Review Kinerja untuk Konsultan Supervisi
- Memantau Proses Pengadaan dan Konsultan PAS:
- Melaksanakan Tindakan Anti Korupsi, dan Memantau keefektifannya.
- Manajemen Informasi dan Diseminasi..
- Memantau Pelaksanaan Usaha Perlindungan Lingkungan dan Sosial, Environmental and Social Safeguards (ESS):.
- Dukungan untuk Pemantauan dan Evaluasi Kinerja Proyek..
- Pelatihan untuk Mendukung Pelaksanaan Proyek.
- Pelaporan.

# Regional Supervision Consultant (RSC)

- As a part of Project Quality Management
- be responsible for supervision of works and have the role of 'Engineer'.
- to ensure that the contractors correctly carry out quality control tests on the contractor's materials and workmanship as required by the Technical Specification, and either to certify that they have achieved the required results or to reject the materials / workmanship found to be sub-standard.
- preparation and maintenance of a quality assurance plan, validation and updating of designs, supervision of all civil works, environmental and social monitoring and management, and support for financial and progress monitoring and reporting.
- The Quality Assurance program will provide a framework within which internal performance monitoring will be continuously conducted, and supervision performance can be assessed. It is expected that this will provide a basis for continued improvement of supervision practices and procedures in each Field Supervision Team.
- Separately, the performance of the RSC in this activity will be independently verified by the PMSC, and will be required to meet predetermined and agreed standards. Sanctions will be applied in the event of sub-standard performance, as described in their Terms of Reference

# Fungsi PAS

- Melaksanakan review semua pengaturan yang dibuat untuk mendukung pelelangan,
  - “kesiapan” Panitia Lelang (pengisian personil, pengalaman, pelatihan);
  - pengaturan administratif
  - dukungan; kecukupan peralatan dan material;
  - kesesuaian dan kelayakan rencana pengadaan untuk kontrak, dan semua hal yang berkaitan dengannya.
- Merekomendasikan tindakan perbaikan yang diperlukan untuk meningkatkan efektifitas proses pelelangan dan mereview tanggapannya.
- Melapor kepada Ditjen Bina Marga dan AusAID mengenai kesiapan Panitia Lelang dan sarana pendukungnya untuk memulai lelang.
  - Rekomendasi yang diberikan dalam laporan akan merupakan prasyarat penerbitan NOL untuk memulai lelang;

# Fungsi PAS

- Membantu penyusunan dan pengelolaan penggunaan sistem “semi” e-procurement untuk EINRIP di kantor masing-masing PPK yang menangani kontrak-kontrak EINRIP;
- Memberikan dukungan untuk publikasi semua material yang diperlukan di website resmi, termasuk:
  - Undangan lelang
  - Dokumen lelang dan gambar-gambar yang dipilih  
Clarification of bids
  - Berita acara Pembukaan Penawaran
  - Informasi tentang Penetapan Pemenang Lelang
  - Material-material lain yang dibutuhkan Ditjen Bina Marga dan ketentuan-ketentuan ACAP (**Lampiran 3**).

# Fungsi PAS

- Mengembangkan tindakan pencegahan terjadinya praktek-praktek persekongkolan/kecurangan pada pelelangan, dan membantu serta memantau pelaksanaan dan penerapannya;
- Memantau kepatuhan Panitia terhadap jadwal lelang, dan membantu agar seluruh proses lelang dan penetapan pemenang dibuat pada kerangka waktu yang disetujui, dan kelambatan dan risiko yang menyertainya dapat dihindarkan;
- Penghubung dengan layanan bantuan yang sejajar yang dibentuk dalam SRIP, dan memanfaatkan pengalaman mereka untuk menemukan jalan untuk membantu kinerja proses lelang;
- Memantau pengalaman lapangan dari layanan ini untuk mengidentifikasi isu-isu yang berkembang dan keefektifan tindakan yang dilakukan untuk menanggapinya. Menyusun prosedur untuk menjadikan pengalaman tersebut sebagai umpan balik terhadap layanan yang sedang berjalan dan Ditjen Bina Marga secara umum.

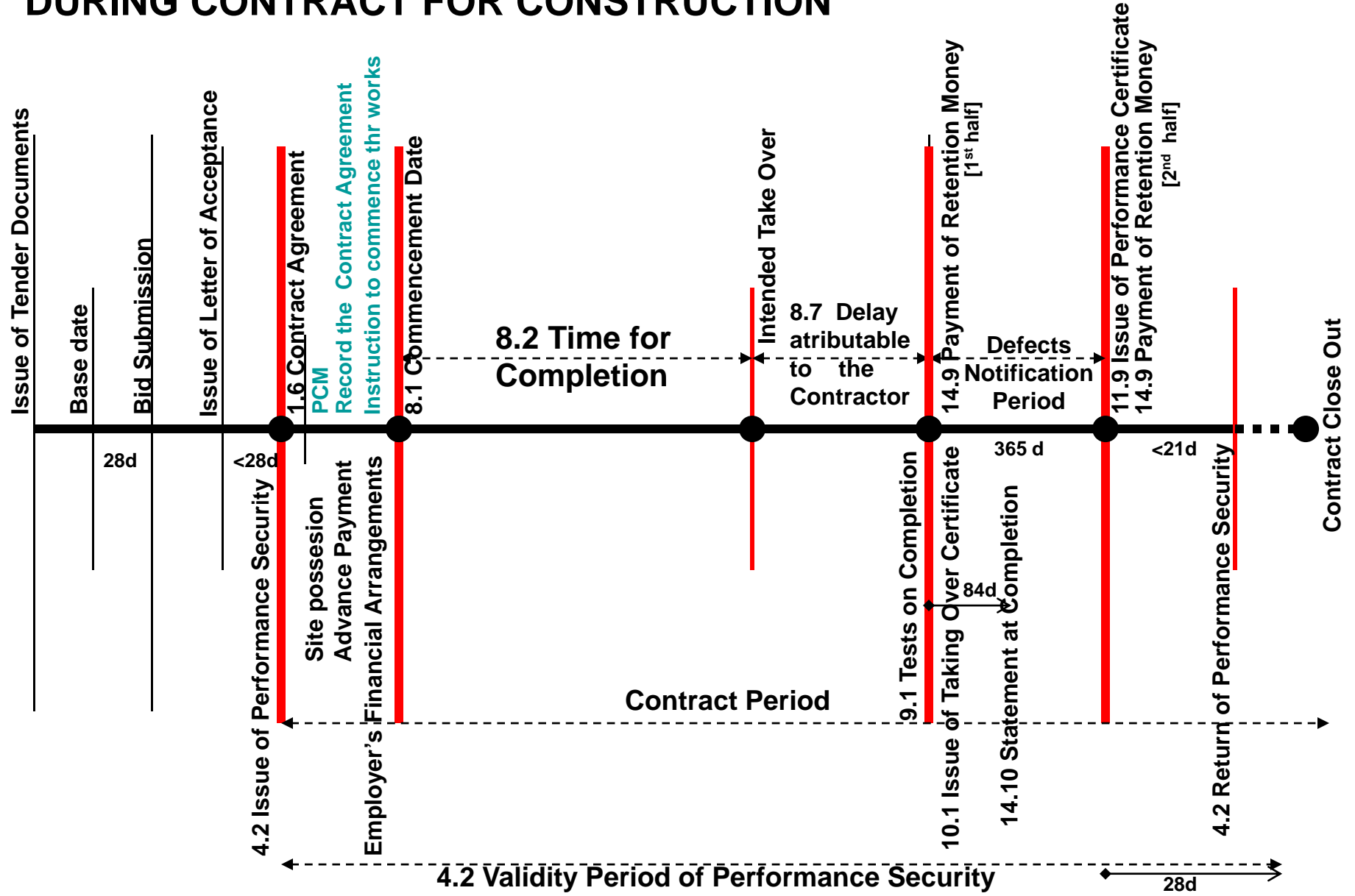
# Supervision of Works

## MEMPERKUAT SUPERVISI PEKERJAAN

- EINRIP menerapkan pola hubungan **GARIS LURUS** antara Pemilik, Direksi Pekerjaan dan Kontraktor menurut ketentuan FIDIC yang berlaku secara Internasional.
- Pemilik mengangkat pejabat sebagai Pejabat Pembuat Komitmen. Pejabat tersebut akan berperan sebagai **Wakil Pemilik**.
- Team Leader RSC berperan sebagai **Direksi Pekerjaan (Engineer)**
- Team Leader tersebut akan melimpahkan wewenang kepada CSE setiap Kontrak sebagai **Asisten Direksi Pekerjaan**
- RSC dilengkapi dengan fasilitas supervisi dan personil yang digaji memadai

Terhadap pemenuhan ketentuan ini berikut penetapan para pejabatnya, AusAID akan menerbitkan NOL sekaligus dengan NOL Disbursement.

# TYPICAL SEQUENCE OF PRINCIPAL EVENTS DURING CONTRACT FOR CONSTRUCTION



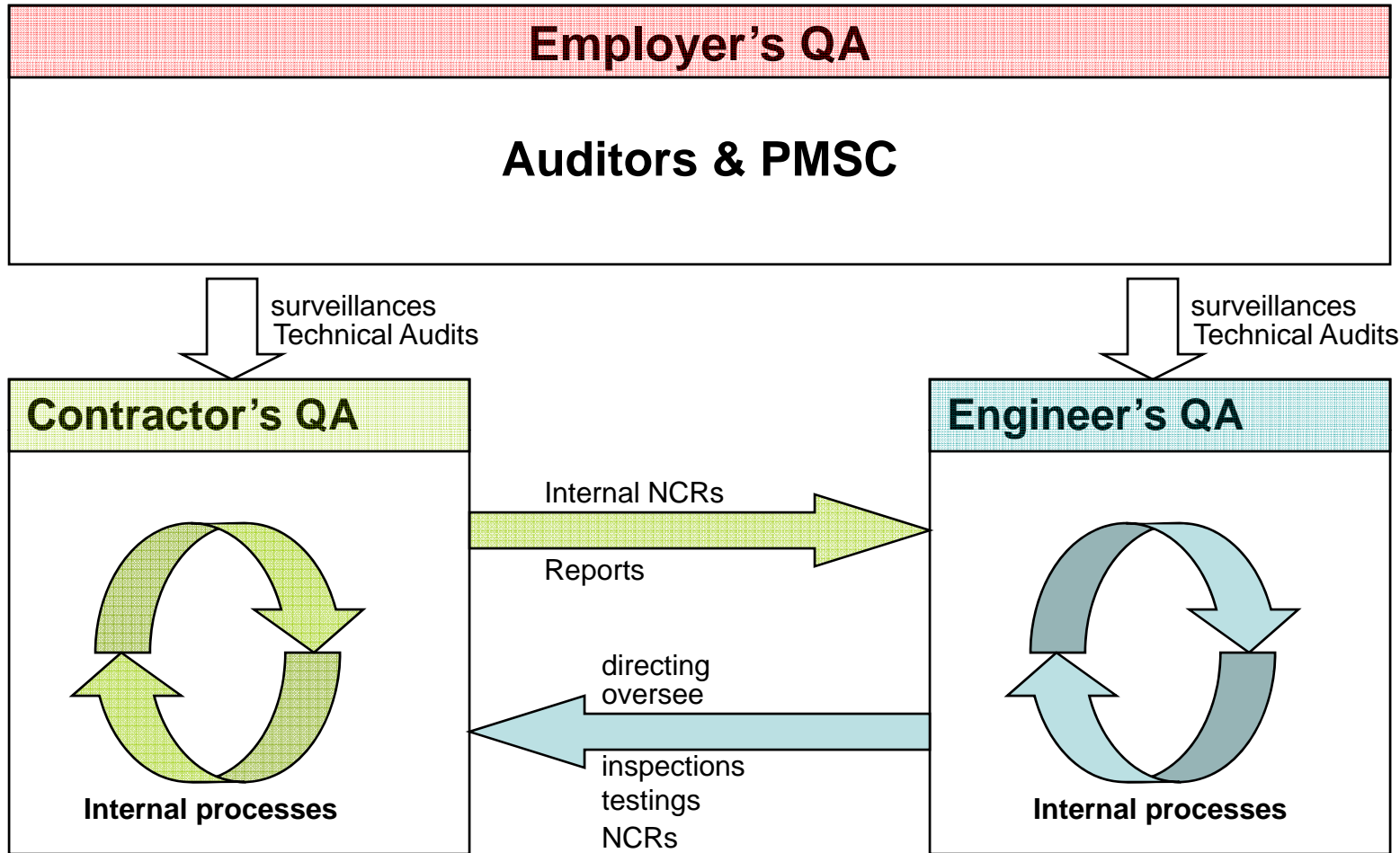
# DIVISION 1 - GENERAL

## Pre-Construction Meeting

**PCM harus dilaksanakan dalam waktu 14 hari setelah kontrak ditandatangani**

### Contents:

- Introduction
  - Exchange Organization Charts
    - Employer's Organization
    - Contractor's Organization
    - Engineer's Organization
  - Site Issues, for example:
    - Right of Way
    - Sources of Materials
    - Location of Base Camp
  - Permits
  - Submittals
  - Final Construction Documents
  - Phasing and Milestones
- Contractor's Work Plan, includes:
    - Outline Construction Schedule indicating the timing and sequence of the principal activities comprising the Works
    - Mobilization Plan
    - Public Utilities Relocation Plan
    - Health and Safety Plan
    - Quality Control Plan
    - Traffic Management and Safety Plan
    - Environmental and Social Safeguards
  - Engineer's Quality Assurance Plan
  - Employer's Audit Plan
  - Communication and correspondence
  - Coordination meetings, schedule and frequency
  - Reporting and monitoring



# PROJECT TOTAL QUALITY MANAGEMENT

## DIVISION 1 - GENERAL

# Quality Management – QC Manager

- The Contractor shall designate one person as the **Quality Control Manager (QC Manager)** who shall be responsible for the implementation of the QC Plan.
- The QC Manager shall be **at arms length** from the productivity part of the Contractor's organization and **specifically shall not be** the Project Manager or the Project Superintendent.
- The Engineer recognizes the **Contractor's Project Manager and Superintendent** as the personnel responsible for making the product meet the contractual requirements, but the **QC Manager's** duties include being responsible **to measure conformance** and **to ensure that quality** is not compromised by production pressures.
- The QC Manager, **shall remain on Site** at all times the Contractor is performing Work which must be tested or inspected in-process, and must be readily accessible and able to return when off- Site.

Note:

*Arms Length Principle: to be independent and on an equal footing*

## DIVISION 1 - GENERAL

### QM - Quality Control Manager shall-1

- **implement** the Contractor's QC Plan;
- be responsible for **measuring conformance** with all aspects of the contract quality;
- stop work when materials, product, processes or submittals are deficient;
- develop inspection and testing plans for each element of Work;
- Ensure all surveys, tests, technical audits, etc shall use GPS instruments for their exact coordinates (latitude-longitude).
- develop acceptance/non-acceptance reports and quality control checklists for each element of Work in sufficient detail to gauge conformance with all significant contractual requirements;
- ensure the requirements for quality management (including an overview of how the QC Plan operates, the worker's role in it, contractual specifications for the Work, and work procedures) are known to, understood by, and adhered to by all workers on the Site;

## DIVISION 1 - GENERAL

### QM - Quality Control Manager shall-2

- ensure that all QC checklists are signed-off by competent and responsible parties as close to the actual work as appropriate to the nature of the Work (e.g. by the actual worker or a foreman for most work; by a Professional Engineer for falsework erection; etc.)
- review, sign, and be responsible for all reports (materials and testing results);
- consult with field inspectors regarding materials and testing issues;
- receive notification by inspectors re deficiencies and ensure re-testing or rejection;
- provide weekly and monthly summary reports on testing and inspection results;

## DIVISION 1 - GENERAL

### QM - Quality Control Manager shall-3

- initiate the non-conformance process when materials or product do not meet the required specifications and, inform the Engineer of such nonconformance;
- consult with the Contractor Representative and initiate corrective action on non-conformance;
- respond to each Non-Conformance Report (NCR) issued by the Engineer within the time specified in the NCR;
- schedule testing and inspection services in coordination with the Contractor's superintendent and foremen;
- monitor QC testing and inspection procedures including those of the Subcontractors;
- work directly with the Engineer on matters related to QC;
- ensure required approvals and permits from the Engineer and others are obtained as and when required;

## DIVISION 1 - GENERAL

### QM - Quality Control Manager shall-4

- verify that all testing equipment is properly maintained and kept in good working order;
- keep an organized filing system to ensure that quality records are easily accessible so that auditors can obtain necessary information;
- review issued for construction drawings, calculations, and shop drawings and ensure that all concerned Contractor staff have current versions of documents applicable to their part of the Work;
- notify the Engineer of any changes in survey layout, location, line, grade, etc., for approval; notify the company principles of any issues that compromise the integrity or function of the Quality Management System, and
- provide an auditable trail for survey computations to the Engineer

## DIVISION 1 - GENERAL

# QM - Holding Points

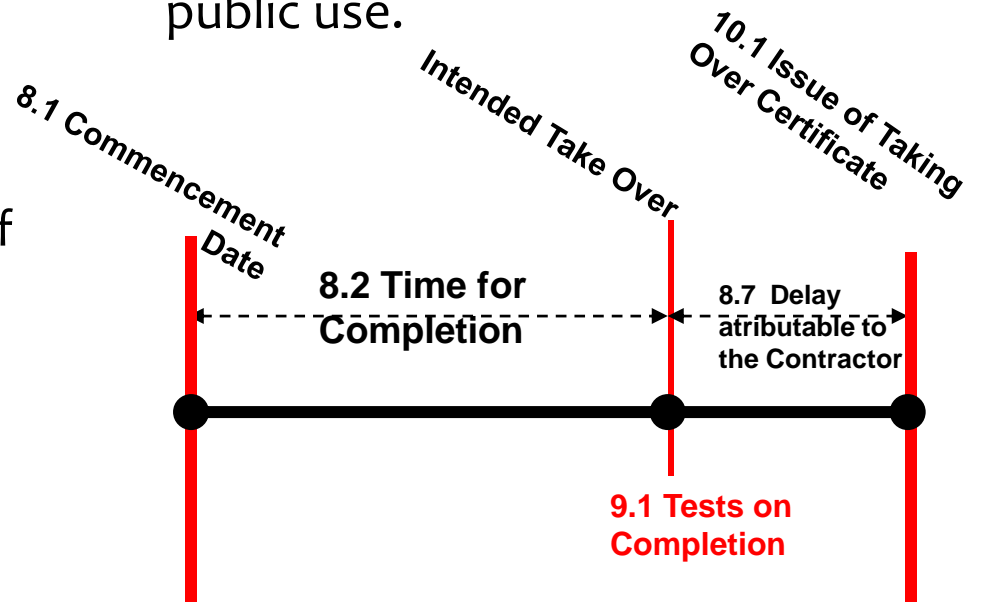
The Contractor shall notify the Engineer, and the Engineer or his delegate shall inspect and approve the following work stages before covering up:

- (a) Setting out
- (b) Ground level
- (c) Pile tests
- (d) Bridge foundation excavation
- (e) Steel reinforcement and formwork before concrete casting
- (f) Top of subgrade
- (g) Top of compacted Base B
- (h) Top of compacted Base A inclusive of proof rolling, impact hammer or other test nominated by the Engineer.
- (i) Existing asphalt preparation for overlay
- (j) Each asphalt layer
- (k) Pipe culverts, drainage structures
- (l) Subgrade drains, bleeder drain and permeable fill
- (m) Underground utilities

The Engineer may nominate other activities for which inspection is required, and may also nominate any test which is to be provided before giving approval for covering up.

# Tests on Completion shall include:

- An evaluation of all as-built documents and show that all completed works are comply with the work requirements and all Non-Conformance Reports (NCRs) are resolved.
- Submission of written Engineer's instructions and/or approval where the as-built documents depart from the work requirements.
- Checking on the overall performance of the final works completed showing compliance with the Employer's overall requirements or the intention of the design/drawings, e.g. dimensions, levels, functions such as pavement surface roughness, water flows, etc.
- Minimum random sampling for testing if required.
- The Engineer will evaluate the Engineer's QA documentations supplemented with Contractor's Documents to ensure that all completed works comply with the work requirements and all Non-Conformance Reports (NCRs) are resolved.
- Tests on Completion shall assure the readiness of the Works to be taken over by the Employer for public use.



## DIVISION 1 - GENERAL

# QM – Engineer's QA Plan

- The Engineer prepares and implements a Quality Assurance Plan, based on Work's requirements and the Contractor's Quality Control Plan.
- The Engineer undertakes random and systematic inspections of the Work and of the Contractor's QC documentation.
- The Engineer monitors the Contractor's operations and the Quality Control program to assure that standards are being met and to assess what payments have been earned under the terms of the Contract.
- The Engineer issues a Non-Conformance Report (NCR) for any instances of Unacceptable Work discovered.

## DIVISION 1 - GENERAL

# QM – Employer’s Quality Audit Plan

- The objective is to have an independent opinion on both QC and QA activities and be proactive in avoiding or reducing quality related issues by requiring the process of conformance verification to be systematic
- The auditors may be Employer employees or other persons appointed by the Employer which have not otherwise been involved with the Work
- the auditor(s) will report to the Employer and provide a systematic and independent assessment of whether or not the materials and Project activities and related results comply with the Contract, the Contractor’s QC Plan, and the Engineer’s QA Plan.

## DIVISION 1 - GENERAL

# QM – Employer’s Quality Audit Plan

Unit	Peran	Tanggungjawab
BPK	Audit	Sesuai Tupoksinya
BPKP	Audit	Sesuai Tupoksinya
Inspektorat Jenderal Departemen PU	Audit	Sesuai Tupoksinya Bekerja sama dengan Balitbang PU Mengevaluasi hasil Audit bersama AusAID
Technical Audit Consultants (TAC)	Tech. audit	<ul style="list-style-type: none"><li>• To assess compliance of works</li><li>• Report to AusAID</li></ul>
Financial Audit Consultants (FAC)	Financial audit	<ul style="list-style-type: none"><li>• To assess compliance of financial reports</li><li>• Report to AusAID</li></ul>

The Employer shall inform the audit schedules to the Contractor and the Engineer.

# Review hasil-hasil Audit

- Hasil seluruh Audit (dijelaskan pada **Seksi 8.4.4** dan **9.6.1**) akan direview oleh AusAID dengan Inspektorat Jenderal Departemen PU, yang akan mengundang unit pelaksana yang bersangkutan dan instansi-instansi berikut sesuai dengan keahliannya:
- Badan Pembinaan Konstruksi dan Sumber Daya Manusia (BPKSDM), Dep PU
- Pusat Penelitian dan Pengembangan Jalan dan Jembatan (PUSJATAN)
- Bagian Keuangan, Sekretariat Direktorat Jenderal Bina Marga

## DIVISION 1 - GENERAL

# Traffic Management and Safety

- The Contractor shall keep **the entire length of the project** in such condition that traffic **shall be accommodated safely** and road user's, Contractor's, Employer's and Engineer's employees **shall be protected**.
- the Contractor shall prepare and submit to the Engineer, a Traffic Management and Safety Plan (TMSP)
- The Contractor shall employ a qualified Traffic Management and Safety Coordinator (TMSC)

## DIVISION 1 - GENERAL

# Traffic Management and Safety - TMSC

**The TMSC duties shall include the following:**

- Understand the contractual requirements, including plans, specifications and the environment;
- Routinely inspect the condition and effectiveness of traffic control devices in use and ensure that they are in proper working order, clean, visible and conform to the specifications, plans and local regulations;
- Review and anticipate appropriate traffic control devices needs, advise the Engineer thereof, and ensure the TMSP is implemented for safe and efficient traffic movement;
- Coordinate maintenance of the traffic operations with the Engineer;
- Hold Contractor's traffic safety meeting prior to beginning construction, and periodic meetings thereafter as deemed necessary or as directed by the Engineer. The Engineer shall be noticed sufficiently advance to attend these meetings.

## DIVISION 1 - GENERAL

# Traffic Management and Safety - Tools

Description	Unit	Total
Flashers Lights	Each	.....
Traffic Barrier (Concrete Type)	Each	.....
Traffic Barrier ( Plastic Type)	Each	.....
Detachable Pedestrian Barrier	Each	.....
Traffic Aide (Flagman)	M-Hr	.....
Safety Supervisor	M-Hr	.....
Traffic Signboard (including post and concrete footings)	Each	.....
Rope light	Ln. m	.....
Pavement Ridgeline (150 mm wide, Solid Yellow line)	Ln. m	.....
Steel Plate (4'x8'x3/4")	Each	.....
Safety Net with 50 mm dia. Hor. and Vert. Bracing	Ln. m	.....
Warning Sign	Each	.....
Others		.....