

Planning

OVERVIEW:

International Construction Consulting, LLC, organized and incorporated in 2000 is a project and construction management service company based in Tulsa, Oklahoma and currently providing consulting services in the upstream energy sector worldwide. Clients include government regulatory agencies, major oil and gas companies and international engineering and construction companies. The range of services provided includes:

- Project Management
- Construction Management
- Detailed cost estimates, including manpower, equipment and support resource requirements
- Conceptual design development and cost estimates
- Budgetary cost estimates
- Feasibility Studies
- Execution Plan development, including construction management, logistics, scheduling, etc. for remote work areas
- Risk and Sensitivity Analysis
- Tender document preparation and bid analysis
- Pipeline engineering support
- Constructability reviews



International Construction Consulting, LLC is fully committed to support the requirements of the Client's Project Objectives and Key Project Goals, specifically:

- ✓ Safety
- Quality
- ✓ Cost Target
- ✓ Schedule Completion
- ✓ Project Deliverables

It is the goal of **International Construction Consulting, LLC** to fully align with the Client and the agreed to Project Objectives Statement (POS) and goals; our approach is driven by a commitment to achieve and maintain excellence in all areas.

PROJECT MANAGEMENT:

Once a project is awarded and the scope of work is analyzed, the functionality of the required organization will be developed and a detailed description of the main roles and responsibilities of the key members of the PMT will be developed along with a Project Management Plan (PMP).

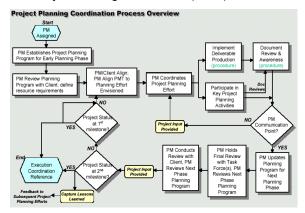


FIGURE 1

The PMP will include among other details, a Project Execution Plan (PEP), a list of deliverables and target completion dates, all of which will be developed to guide the PMT through the project execution process. See Figure 1 (above) for an overview of a typical process that shows the Project Manager's (PM) role throughout project execution.

CONSTRUCTION MANAGEMENT:

Construction Management services provided by **International Construction Consulting**, **LLC** are dependent on the client needs, but typically contain the following elements:

- Detailed Construction Execution Planning
- Logistics
- Subcontracting Strategy
- Equipment and Personnel Mobilization
- Construction Sequencing and Scheduling
- Engineering and Construction Interfaces
- Constructability Program
- Environmental Management Plan (EMP) Review

The ICC Construction Managers Handbook contains guidance (expectations and practices) to facilitate effective and consistent management of the client's construction project. This guidance is intended to:

- Continuously improve SHE performance with the ultimate intent of the Client achieving and maintaining world-class safety performance.
- Develop and maintain effectiveness of personnel and resources.





- Provide Construction Management oversight, tools, and supervision needed to effectively plan and execute energy projects and to achieve all Client objectives:
- Provide oversight for construction the activities of the project.
- Identify and maintain organizational and positional roles, including clearly defined lines of accountability and responsibility, for project construction personnel that meet the business needs of the Client.
- Encourage the use and sharing of key Lessons Learned and "Construction Best Practices."
- Identify key performance indicators of the system to facilitate continuous improvement.

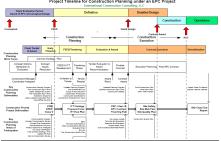


Define expectations and communicate them to project construction employees, consultants, and strategic contractors.

International Construction Consulting, LLC provides an efficient, cost-effective, seamlessly integrated spectrum of high-quality project and construction management for the oil & gas industry – including the following:

- Cross-country Gas and Liquid Pipelines
- Gas Distribution Systems
- Compressor / Pump / Meter Stations
- Storage Facilities
- Processing Facilities
- LNG Facilities

Proper execution of projects through a systematic application of best practices leads to improved project and construction management capabilities and performance consistent with business needs.



FEASIBILITY STUDIES:

Feasibility Studies are developed to allow for the early business decisions to be made regarding investment decisions for oil & gas field development programs. A Feasibility Study will typically include the following major focus areas:

- Field Development Planning
- Conceptual Engineering and Design
- Conceptual/Budgetary Cost Estimates
- Strategic Project and Business Planning
- Risk Assessments (Business, Political, Currency, Market, etc.)



A normal Feasibility Study will cover the following areas:

- Determine process requirements of the facility or facilities
- Develop a Basis of Design for the flowlines, pipelines, and facilities
- Determine the basic field layout, including a Process Flow Diagram (PFD)



- Determine distribution requirements (i.e. flow lines, storage, pipelines)
- Determine major equipment needed
- Determine a cost estimate for:
 - o Detailed engineering & procurement
 - Construction of drilling locations (may include rig movements or related drilling support)
 - Construction of infrastructure (roads, bridges, jetty's, etc.)
 - Construction of flow lines and pipelines





- Construction of required processing facilities
- Estimate of "owner costs"
- Identify key project risks
- Develop a Level 1 project schedule
- Develop a basic contracting strategy
- Develop an Early Project Execution Plan (EPEP)

There will normally be a conceptual look at the process but only to a level of detail sufficient to arrive at a high level design basis and cost basis but no detail design will be done relative to the process, chemical processing, treating, etc.

CONCEPTUAL COST ESTIMATES

A Company cannot optimally progress and develop new opportunities without the ability to produce representative cost estimates and schedules for potential developments from the earliest stages. However, to have confidence in the future success of new developments, a Company must also have confidence in all stages of the estimating process and hence in the cost and schedule estimates produced.



There are three main inputs to any economic evaluation of a prospect or opportunity, one of which is the phased cost profile, including operating costs, (the others being production forecast and sales terms). Hence, the relative attractiveness of the development is often significantly influenced by the capital cost and associated timeframe. Comparing alternative development concepts, and even whole projects, enables a Company to screen, rank and eliminate uneconomic projects, and concentrate resources towards the areas of potentially greatest return.



An increasingly important factor for all companies is the reduction of time taken between asset identification and project sanction, to enable a Company to monetise its assets earlier. The purpose of a conceptual estimate is to provide the phased cost input at a very early stage of a project, when little, if any, in the way of engineering has been carried out and there is therefore very little scope definition available. The conceptual estimating process used by **International Construction Consulting, LLC** is able to produce good quality estimates in a consistent manner, that are indicative of the likely cost of the project as defined at that time.

DETAILED COST ESTIMATES:

Once the project becomes more mature and further

FEED or even some detailed engineering is completed, International Construction Consulting, LLC can develop detailed cost estimates. These detailed estimates are developed using cost models applicable for either Owner companies or EPC service contractors. These



detailed cost estimates are normally used for project funding, review of contractor bids, project cost control, and change management for the project execution phase. Partners may also use these estimates to determine financial commitment to the project. Typically these are developed with detailed techniques based on quantity takeoffs and quotations for the major pieces of equipment. For complex projects, cost-risk assessments are used to evaluate uncertainty and establish contingency and cost targets.

This "living estimate" forms the baseline for project tracking and controls.

PROJECT EXECUTION PLANS AND PLANNING DOCUMENTS

International Construction Consulting, LLC provides complete Management Systems and planning expertise to offer the structured processes necessary to ensure the consistent application of Client's policies and expectations. They provide the mechanism to ensure continuous improvement and the spread of best practices. The Project will comply with:

- Client's Project Management System, and/or
- ICC's International Project Management System (IPMS).

Management Systems should have a structure consisting of:

- Clear objectives and a well defined scope,
- Documented processes for achieving the objectives,





- Assigned resources responsible and accountable for system administration and execution,
- Verification and measurement processes to determine if desired results are being achieved, and
- A feedback mechanism to provide a basis for further improvement.

Project plans and planning documents can be developed as soon as **International Construction Consulting, LLC** is brought on board to describe the overall project planning, management and execution activities for the project during design, procurement, fabrication / construction, transportation, installation, hook-up & commissioning and startup phases. These documents will address the associated strategies, plans, procedures and roles for the Project Management Team and applicable contractors.

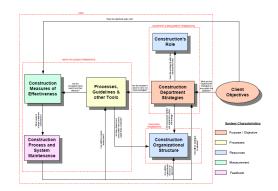


The objectives of the Plans will be:

- 1. Assure project activities are managed in compliance with the Client's Corporate Frameworks.
- 2. Assure required project and stakeholder deliverables (i.e., operating/maintenance procedures, emergency response plans, facility/regulatory documentation, personnel training, etc.) are aligned with the project and all stakeholders and are in place prior to startup.
- 3. Assure installed facilities meet regulatory requirements as defined in the Regulatory Compliance and Permitting Plans.
- 4. Assure project-related issues are reported and resolved through approved dispositions and follow-up to confirm acceptable results.
- 5. Project implementation will be achieved by establishing and stewarding goals and objectives and having trained / qualified personnel, clear requirements, assigned responsibilities, timely / clear communication, application of Lessons Learned,

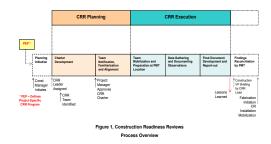
implementation planning, and verification (i.e., measures, assessments, etc.).

- 6. Project requirements for contractors will be identified in contract coordination procedures.
- 7. The Plans will define the SHE roles / responsibilities and activities to be taken by the project team and applicable contractors to achieve project goals / objectives and how project-specific requirements and strategies will be handled.



INDEPENDENT PROJECT REVIEWS (IPR'S)

International Construction Consulting, LLC is a Tulsa-based company formed to provide a full range of project related services to the oil and gas industry for pipelines and related facilities, including the development and management of Independent Project Reviews.



International Construction Consulting, LLC have developed an Independent Project Assessment (IPA) Program consisting of a suite of 4 modules. The Program involves tools for conducting 4 distinct types of IPA's at critical decision points along the project execution timeline. The modules consist of:

- 1. Risk Assessments
- 2. Constructability Reviews
- 3. Construction Readiness Assessment
- 4. Operational Readiness Assessment (recently added)

The details of each of the modules are shown below:



- Assessment Planning Excellence
 - 1. **Risk Assessments** (RA) these are scenario based and would normally be conducted at:
 - Conceptual
 - FEED
 - Detail Design
 - Prior to start of construction

RA's, which should be specified in the Risk Management Plan (RMP), would be to develop a detailed listing of project and execution vulnerabilities along with mitigations and in some high impact issues, a resolution plan for close out. If an RMP does not exist, I can assist in developing one that will use recognized best practices to:

- Prioritize key risks
- Communicate those risks to stakeholders
- Develop a clear path to address and/or mitigate the key risks

An RMP typically consists of a table or series of tables, which lay out for each uncertainty a resolution plan and a strategy for the Project. Understanding risk, its management, and achieving alignment with decisions makers on these variables is critical in improving decision quality.

- 2. **Constructability Reviews** these would typically be performed at:
 - Conceptual
 - FEED
 - Early in Detail Design
 - At 50% completion of detailed design

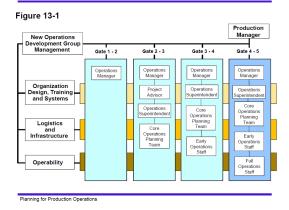


The objectives of Constructability Reviews is to meet the objectives of sound Project Management which is to assist in the identification of upgrades/ initiatives which will enhance project safety, quality, cost, schedule and risk management early in the project.

There are quantifiable benefits from a series of comprehensive Constructability Reviews, some of which are:

- Tangible Benefits
 - Construction Industry Institute (CII) claims reductions of approximately 4% of total project cost and 7.5% schedule reductions are not uncommon
- Intangible Benefits
 - Other project objectives enhanced (maintainability, reliability, operability, quality, and safety)
 - Design-Construction Interface Enhanced

TRANSITION TO PRODUCTION OPERATIONS



 Construction Readiness Assessment (CRA) – to be conducted prior to start of construction and would be to assess that adequate progress and plans are in place to initiate specific construction, fabrication or installation activities.

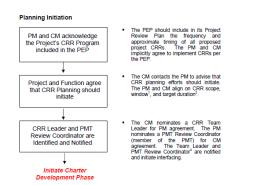
CRA's are not meant to be a technical audit or a complete validation of the project cost and schedule estimate. An independent assessment of the likelihood of achieving cost and schedule targets is not provided. Specific deliverables are reviewed for the primary purpose of confirming the status and effectiveness of existing project & construction management systems, processes, procedures, and plans. The primary objectives of the CRA are to:

- Provide an unequivocal message to Management
- Provide an independent assessment to Project Management and Senior Management
- Provide a Management tool for stewardship of risks and vulnerabilities
- Assess deliverables
- Assess adequate readiness to proceed to initiate specific site activities
 - Identify risks and vulnerabilities related to the both the PMT and construction Contractor activities

Planning



 Gain co-venture and stakeholder alignment (i.e. by participating in the CRA if appropriate)



- 4. Operational Readiness Assessment (ORA) to be conducted:
 - FEED
 - Detail Design
 - At start of construction
 - At a predetermined time prior to construction completion & turn over

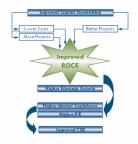
The ORA is tailored to assess the current state of a project's pre-operations planning. The results are an upgrade to operational assurance, identifying gaps in deliverables, prioritizing the focus items, and agreeing on actions required to achieve operational readiness by the end of the current project phase. This process can be applied on an existing project regardless of the phase or where a change in project scope or direction might determine that a re-look at a project's pre-operational activities is prudent.

SPECIALIZED STUDIES AND INVESTMENT ANALYSIS

International Construction Consulting, LLC routinely performs a variety of specialized studies as well as investment analysis on a wide diversity of energy related subjects. These studies include but are not limited to:

- Risk Assessments and identifying project vulnerabilities and mitigations (articles written for the December 06 issue of World Pipelines and the September 07 issue of World Oil)
- Constructability Reviews (article written in the June 07 issue of World Pipelines)
- Project and Construction Management training
- Position papers including:
 - Water crossing techniques & analysis, including Horizontal Directional Drilling (HDD) assessments,
 - Pipeline route selection,

- Pipe stacking studies,
- Valve study's, etc.)
- Buoyancy control studies
- Preparing tender packages and detailed tender evaluation plans (including pre-qualifications and contractor assessments)
- Design to capacity studies (evaluating the required maximum capacity of each system and major piece of equipment relative to the desired overall facility capacity)



International Construction Consulting, LLC also performs financial and investment analysis of major capital projects. These assessments include:

- Economic Analysis
- Financial Analysis Balance Sheet, Income Statement and Cash Flow Statement
- Terminal/Residual Value
- Project Financing, Leasing, Contractual Obligations
- Tax and Cash Repatriation
- Foreign Currency (FX)
- Overhead Costs
- Inflation, Real Growth, and Escalation
- Risk and Uncertainty
- Opportunity Costs

