



**CONSTRUCTION CONTRACTOR
PLANNING
for
FIXED-PRICE CONSTRUCTION**

A Report to
The Construction Industry Institute
The University of Texas at Austin

Under the Guidance of
Task Force 83-6
Cost/Schedule

from
Texas A&M University
College Station, TX

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CHAPTER I

INTRODUCTION

Background and Objectives

The creeping erosion of construction efficiency and productivity with the concomitant increase in construction costs is well documented in the Business Roundtable's Construction Industry Cost Effectiveness (CICE) Project reports. Wasteful labor practices, ineffective cost, schedule, quality, and materials control systems, outdated contracting procedures and a host of other factors were all cited as contributors to the overall problem. But, a major general conclusion reached in these reports is that most of these problems are really attributable to management failure -- somehow, many of the modern management principles and techniques available and practiced elsewhere in industry seem to have escaped much of the construction segment.

In all fairness, construction is unique when compared to manufacturing, process, distribution, transportation and other industries. Each project is different; most contracts are awarded based on a competitive bidding or selection process; projects must usually be planned and executed under extreme time pressure; the workforce is transient and involves many crafts; union contractors may be dealing with more than a dozen unions; much of the work is subject to the vagaries of weather; a tremendous variety of materials and equipment must be handled and managed; and construction workers are continually working themselves out of a job. These differences add up to an extreme management challenge.

Fixed-price contracting for construction is a common contracting strategy for owners. Occasionally, such contracts are negotiated, but, more often, they are competitively bid. For bid projects, a number of contractors are provided identical sets of drawings, specifications and other contract requirements and given a period of time for preparing their pricing and other submittals. A contractor is eventually selected based on whatever criteria the owner has chosen, the contract awarded and a notice-to-proceed given. The time available for bid/proposal preparation is invariably short, and the time available between contract award and expected mobilization date is equally short. Yet, the contractor is expected to meet all bidding requirements by the bid date and to have final control schedules, procedures

and other control documentation available for client review shortly after contract award. For all of this to reach a successful conclusion requires detailed planning.

Pre-mobilization planning by a contractor for competitively bid, fixed-price construction is the subject of this paper. It will address planning from the time a contractor receives a set of bidding documents or a request for proposal until mobilization. The definition of planning and its role in project success will be discussed first. Next, the characteristics of fixed-price construction which influence planning will be identified. Finally, the principles of planning will be applied to the fixed-price construction situation and a planning structure. The ultimate goal of the paper is the definition of a planning structure which best:

- Assures development of an accurate cost proposal and other bid submittals.
- Establishes the framework for rapid conversion of preliminary plans into workable final plans after contract award.

Research Approach

Guiding this research was the premise that project planning begins with the decision to bid, that the project must first be built on paper to establish logic and strategy, that resource availability and allocation must be considered early in the planning process, that estimating must be linked to scheduling, and that all pre-award functions must flow as an integrated effort which contribute directly, without reformatting, to the construction phase. This premise essentially restates some of the recommendations in the Business Roundtable's Construction Industry Cost Effectiveness Project Report A-6, *Modern Management Systems*.

Research involved both literature search and interview of personnel in the construction industry. A large number of project management/construction management texts were reviewed and the publications of the American Association of Cost Engineers, Project Management Institute and American Society of Civil Engineers provided a number of thoughts.

Personal interviews were conducted with personnel of the companies listed in the ACKNOWLEDGEMENTS section.

As research progressed, it soon became apparent that project planning for fixed-price construction is not a controversial subject. Practitioners universally endorse the need for planning and accept the premise noted previously on which this study was based. What appears to be lacking is a commitment to the process and implementing procedures. Thus, the project did not become a process of evaluating a variety of opinions and approaches with the ultimate derivation of a recommended approach but simply the explanation in detail of what needs to be done.

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CHAPTER II

PLANNING -- GENERAL

Planning Defined

Planning can be simply defined as making decisions today with a view towards the future. One must consider the who, what, why, when and where for a particular effort today while trying to anticipate its effect at some future date. Planning is also defined as preparing for the commitment of resources. This future-oriented decision process involves setting objectives, gathering and organizing information, determining feasible courses of action and choosing among them, implementing the actions, and monitoring the results to assure compliance with the objectives.

Some planning must precede the other management functions of organizing, staffing, directing, and controlling. However, planning is more than just setting the stage. Since all management functions necessarily intermesh, planning is an ongoing process which involves constant updating and revision. It is a continuous interactive process (17). Planning, or the enforcement of it, and the development of a positive planning attitude throughout the organization is a specific task of top management (8).

Some authorities (10,13,16) have stated that planning is not just one of the many functions of management, but rather planning is management -- an over-all, all-enveloping thought process that cannot be compartmentalized and set within a single department. Fayol's maxim, "Managing means looking ahead," (10) provides the outlook of the business world. It is true that, if foresight is not the whole of management, at least it is an essential part of it.

Importance of Planning

It would be convenient if cost:benefit studies were available to prove the value of planning. In theory, planning pay off could be measured by relating the value of planning results to the cost of planning. Unfortunately, there are seldom two identical opportunities which can be tested -- one with planning, one without -- so one must look to other indicators. One such indicator is a study by the Stanford Research Institute on the question, "Why Companies Grow?" One major conclusion

of this study was that those companies that support planning programs have shown a superior growth rate (4).

The reason why companies which plan are the ones most likely to grow seems fairly obvious when one thinks about the cyclic process that leads to growth, namely:

- Planning
- Monitoring and Controlling
- Feedback

Given any project or opportunity, a company develops a plan for maximizing the opportunity. In developing this plan they use the best information available. When the plan is implemented, all activity is carefully monitored and controlled using the plan as a reference baseline. Complete records are maintained throughout this phase. Then, in the third phase, the experience gained is fed back to the company databases to increase the base of knowledge for the next planning action. This cycle is the *learning curve* in action -- each repetition makes planning for and achievement of the next opportunity that much easier. Lacking commitment to such a cycle, a company is continually "reinventing the wheel," wasting time and money, and probably sealing their doom in the competitive marketplace.

The Planning Process

Plans are the products of a planning process. This process consists of (6):

- Establishing a set of goals and objectives required to achieve the desired result.
- Formulating alternative plans, or means of achieving the goals and objectives.
- Establishing criteria by which it will be possible to screen out those alternatives which will not achieve the desired result or meet the goals and objectives established.

- Selecting an alternative from the acceptable alternatives remaining after screening using the criteria developed.
- Implementing the alternative selected.
- Developing a feedback loop or mechanism to relay back to the planners information as to how the alternative is faring compared to what was expected.

A structured approach to planning as described above will yield very significant benefits as compared to a random approach. The first benefit of a structured approach is the minimization of potential for overlooking something. Second, the process forces definition of scope of the project or activity being studied. Third, if handled as a team effort, it permits all viewpoints and ideas to be heard. Fourth, the plan produces a baseline for control during the execution phase.

Hierarchy of Plans

Most management and project management literature agree that there are multiple levels of management planning. These are representative levels:

- Policy.
- Strategic.
- Tactical
- Operational.

Policy planning establishes permanent or semi-permanent guidelines or procedures which reflect standing top management policy. These guidelines help lower-tier managers solve many problems without reference to top management.

Strategic planning is considered to be long range, but the definition of long range may be as short as one year or as long as twenty. This planning requires the participation of most functional units within the organization since it affects future organizational structures, equipment needs, personnel requirements, and budgets. Strategic plans chart the direction of the company based on the knowns at the time

the plan is prepared. The strategic plan is usually updated annually. A Five-Year Plan is a typical strategic plan.

Tactical planning is for a shorter period of time (how long is again a matter of opinion). This planning takes the near-term portion of the strategic plan and fleshes it out in more detail. Tactical plans should be in place to guide annual budgeting.

Operational planning may be considered synonymous with tactical planning but, for purposes of this paper, it is useful to separate it and define it as planning related to a specific project, operation, or opportunity within the total of those included in the tactical plan.

Establishing A Planning Culture

Although each level of management has responsibility for some aspect of planning, the initial commitment to planning must come from top management, and this commitment must be projected to everyone in the organization. If top executives do not put their influence behind the planning process and create the environment to bring order out of disorder from their level down, the tasks of lower level managers become more difficult and the planning process may be inefficient and meaningless (4).

A team approach to planning which involves all levels of management builds confidence in the organization because it stimulates communication among all affected parties and promotes their commitment to plans they helped develop. It also shows that management has a direction, that decision making is under control, and that the total organization is working to achieve the same objectives. An additional, but no less important, benefit is the training that lower-tier managers receive in company procedures and operations while engaged in planning. They will be in a much better position to assume higher levels of responsibility as opportunities develop and will bring with them a planning philosophy that is fully ingrained.

In a systems planning context, a positive planning attitude is a clearly established bias concerning the importance and effectiveness of planning which is accepted and

demonstrated in daily actions by everyone in the organization. This means that planning is an accepted and continuing way of life in the organization; not just a necessary evil that is carried out cyclically or haphazardly.

Planning must be made endemic to the value systems of managers. Cleland & King (6) suggest that the following premises be accepted as a starting point in developing a positive organizational planning attitude:

- Planning activities must be performed by the managers who will ultimately be responsible for implementation of the plan.
- Professional planners can facilitate the planning process, but they cannot do the planning for management.
- Creative planning is inherently a group activity, since it involves many different functional units of the organization, each with their own expertise.
- Managers must be motivated to spend time on planning through a formalized system which permits their contribution to be recognized, assessed and evaluated.
- The planning process must provide for the development of relevant data bases -- qualitative and quantitative -- which facilitate the definition and evaluation of strategic alternatives.

Note the emphasis is on *managers*, not planners. If managers play a passive role in the planning process, the output will reflect the values of the technicians rather than those of managers. The manager who plays only an active reviewing role of the planning technicians loses a large degree of control over the organization's destiny.

Planning is NOT Just Scheduling

There is considerable misunderstanding in the field regarding the difference between planning and scheduling. Planning defines the actions and activities, the time and cost targets, the resources, and the performance milestones which will

lead to the successful achievement of project objectives. Scheduling is a subset of planning just as selecting objectives, evaluating alternatives, estimating and other functional activities are. A schedule provides that interrelationship of time and tasks which best meets the time objectives of management. Networks, line-of-balance graphs, bar charts and other scheduling techniques are no more than tools to aid in the planning of a project. Planning and scheduling are not synonymous.

Planning vs. Controlling

As noted previously, planning establishes the baseline for controlling. Thus, it is essential that planning formats be totally compatible with control formats. For example, the estimate must be broken down into the same structure that will be used for cost tracking. First level reporting systems must be established to acquire raw data. A system (usually computerized) must be specified for input, storage, and processing of information, and a reporting system designed to meet specific contract requirements and the needs of various levels of management.

CHAPTER III

THE FIXED-PRICE CONSTRUCTION PLANNING CHALLENGE

Characteristics of Fixed-Price Construction

In Chapter I, brief mention was made of some of the unique characteristics of construction as compared to other industries. It is useful to discuss some of these in more detail, particularly as they may influence the planning process.

The Fixed-Price Commitment. The fixed-price contract establishes the price to be paid the contractor for work described within the contract documents. Very often other commitments must be made in the form of submittals such as a schedule, the management reporting system, or quality control program. For the successful contractor there is no turning back from these commitments so extremely careful planning is essential to avoid the consequences of omissions and other errors.

The Competition. Normally, fixed-price contracts are competitively bid. Most often, awards are based solely on price as long as the contractor meets basic qualification criteria. The contractor's challenge is to bid a price that covers the work involved and provides a reasonable profit while still being better than that of the competitors. To do this the contractor must plan bid preparation so that no requirements are overlooked and that accurate data is assembled for pricing. Included in planning must be detailed evaluation of work methods and work sequencing to provide the desired products in the most economical manner. Unfortunately, the competition factor can cause a contractor to adopt cost-cutting strategies both in pre-planning and in execution, the philosophy being that the field management personnel will have the experience and ability to "pull it off." More often than not this strategy backfires in the form of cost/schedule overruns, lower quality work and lost owner confidence.

Bidding Time. Bids are usually prepared under great time pressure. This pressure comes from two sources. First, the time allowed by the client between the invitation to bid/propose and the date it is due is usually very

tight. Second, a contractor is normally working on more than one bid/proposal at a time and must split his resources among all active invitations. If a contractor is to effectively operate in this atmosphere, he/she must have complete, established procedures to guide all but the most controversial features of bid preparation. Policy planning (standard operating procedures and guidelines) will have established such a structure for use on all bid work.

Award to Mobilization Time. The time normally allowed between award of a contract and required mobilization date is also short, often less than a month. Yet, during this period a contractor must finalize most of the detailed plans associated with the project and implement all actions to achieve mobilization. The contractor often is expected to produce a detailed critical path format schedule within 30-90 days of award. To meet these requirements, the contractor must have been preparing preliminary plans and formatting other actions which need only to be fleshed out during this period.

Contract Approach. The contractor may choose to subcontract all work, perform all work using direct-hire forces, or use a combination of direct-hire and subcontracting. Direct-hire craft personnel may be hired under either union or open shop rules. If all work is subcontracted, the options are union, open or merit shop. These decisions are required very early in the operational planning process. In some instances, the client will have dictated the approach in the bidding documents or the contractor may have union obligations that dictate his/her mode of operation. Once the approach is selected, implementing personnel and subcontracting plans must be formulated.

Direct-Hire Labor Force. With the exception of key supervisory personnel, the hiring of the direct-hire labor force will be handled from the area of the project, although recruiting may extend elsewhere. If the contractor intends to perform the work under union conditions, the contractor must coordinate with all involved union locals to obtain local bargaining agreements that will govern pay and work rules for each craft. Or, he/she may choose to seek a Project Labor Agreement rather than work under the separate craft

agreements. Such an agreement must originate with the Building Trades, AFL-CIO, at the international level and then be signed off at the local level. Either approach requires considerable time and effort and must be started very early in the bid preparation process since the results will affect wage hour scales and work rules which relate to crew sizing and productivity.

If the project is direct-hire open shop, the contractor must conduct a thorough area labor survey to determine availability of labor and area wage scales. If there is a labor shortage of any kind, plans must be developed to compensate. One option is to recruit in areas outside the project area. A second is to establish special craft training programs. A third is to compensate for shortages by extended scheduling. In any case, plans must be made for personnel recruiting, screening, and training (if applicable) as part of operational planning.

Turnover. Construction proceeds from the civil/structural phase through mechanical, electrical and instrumentation phases and is finally completed with startup and landscaping/site cleanup. Over these phases more than a dozen crafts will have come and gone and any number of subcontractors and vendors may have been on site. This turnover particularly impacts on all functions relating to personnel management, site organization, safety and security and must be considered in the planning.

Project Controls. The owner may specify a project controls system which the contractor must adopt to interface with the owner system or may only provide performance type specifications relating to scheduling and reporting, allowing the contractor to choose the system. In either case, the contractor must plan the project control support very carefully so that adequate project controls personnel and computer capability is planned for.

Materials Management. Permanent materials for the project will be some combination of owner-furnished and contractor-furnished. Construction supplies are normally supplied by the contractor. On-site warehousing responsibilities for these materials may be split between owner and contractor to parallel the procurement responsibilities, but are more often assigned totally to the contractor. The contractor must develop preliminary

procurement plans for materials for which he/she is responsible and a warehousing/materials control plan for assigned on-site materials management responsibilities since these functions have considerable cost implications.

Environmental Protection. Construction work can create a variety of environmental problems. When surface vegetation is removed, it creates conditions for dust, erosion, and possible silting of waterways. If refueling and equipment maintenance facilities are maintained on site there is potential for fuel and oil spillage which can infiltrate into water supplies of nearby communities. Also, a number of other hazardous materials may be handled during the course of construction (such as some paint products and herbicides) which can pollute the air or ground if not controlled. In urban areas, special noise protection may be required. Environmental regulations have become very specific and significant fines may be levied against contractors for non-compliance. There are Federal regulations which have national application and there may be additional state and local regulations. A contractor should have standard procedures which reference known environmental regulations and outline generic protection plans but local requirements must be surveyed and the generic plans adapted to each site.

Site Conditions. Each construction site is different and these differences have considerable cost implications. An open site with ample space for all construction activities should, if properly organized, contribute to better productivity. Procurement timing and warehousing plans are directly affected by laydown and warehousing space available. Space and access considerations will affect decisions on on-site versus off-site fabrication. If there is inadequate employee parking space, a bus plan may be required. The site configuration may put constraints on the size of the work force at any one time and thus affect the schedule. Site security is also directly affected by site conditions.

Weather. Most construction is weather sensitive. Weather patterns in the project area must be studied and construction plans adjusted to best fit these patterns.

Other Risk Factors. A fixed-price contract transfers much of the risk to the contractor. Some risks have already been mentioned, but there are others -- the completion date may be protected with a liquidated damages clause; the owner often disclaims responsibility for hidden conditions; there is the potential for *force majeure* conditions (ACTS OF GOD) or labor unrest, etc. A contractor must carefully evaluate these risk factors in pricing his/her bid. Not all risks pass to the contractor; the owner still has responsibilities that are part of the contract even though not written into the contract documents. See following discussion of the implicit responsibilities of the owner.

The Explicit Duties of the Contractor and Implicit Duties of the Owner.

In every fixed-price contract contractor responsibilities are explicitly defined in the contract documents. In summary, these are:

- The work to be done.
- The quality of the work.
- The time for performing the work.
- Various administrative requirements.

Although the contract documents may not describe the owner's duties, the owner has certain implicit obligations. He/she is essentially assuring that:

- The design is adequate and specifications are clear.
- The contract documents are complete and clear.
- The design is constructable.
- The contractor may rely on owner representations.
- The contractor will have reasonable site and work access.
- The schedule and intermediate milestones are attainable.
- Owner furnished engineering will be delivered when needed.
- Owner furnished materials will be delivered when needed.
- Time and cost implications of owner deviations will be recognized.
- Extra work will be funded and time allowed.
- Owner representatives will not interfere with prosecution of work.
- Owner administrative functions will be handled in a timely manner:
 - Responses to requests for clarification.

- Processing of change orders.
- Review of submittals requiring owner action.
- Processing of periodic requests for payment.
- Processing of claims.

Thus, the contractor must include in his/her price the costs necessary to achieve the contractor's explicit duties. However, the contractor is entitled to assume that the owner organization or its representatives will perform its implicit duties and need not add contingency in anticipation of potential failure by the owner to do so.

Frisby (11) represents these duties with a contractor fence (Figure 1) which is a graphic portrayal of the risks in a construction project and by whom the cost of these risks are borne.

How Important Is Construction Planning?

Fluor Corporation made an interesting study of factors contributing to project success/failure during the early 1960's. In their records of hundreds of projects that had been completed, they noted that many projects successfully achieved their basic project objectives, while others failed to achieve them. The histories of many of these projects were carefully reviewed to identify conditions and events common to successful projects, vis-a-vis those conditions and events that occurred frequently on less successful projects. Their study revealed that the major factor directly influencing success was the quality and depth of early planning by the project management group. Execution of the plan by a strong project management group was a second major contributor to success (6).

The importance of construction planning is also validated by the results of a study by Choromokos & McKee (5) who surveyed the 400 ENR construction companies to determine the relative importance of a number of home office pre-construction functions on construction productivity. The respondents were asked to rate the functions of planning, scheduling, estimating, communications, marketing, procurement, drafting, specifications, and engineering and evaluate them as having a high, medium or low potential impact. The results are displayed in Table 1.

THE CONTRACTOR'S FENCE

Owner Economic Risks

Unreasonable Delays

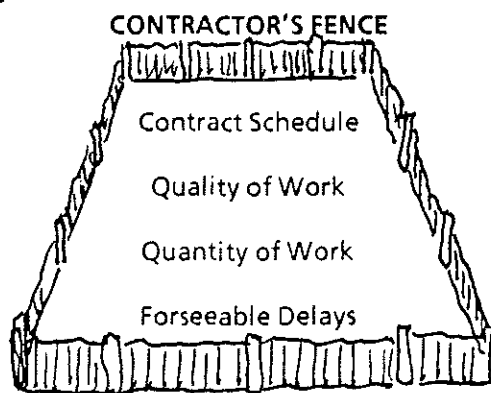
- Requests for Information
- Conducting inspections
- Issuing change orders
- Submittals
- Decisions
- Payments

Cardinal change

Change order

Denial of work
access

Ambiguous specifications



Owner Economic Risks

Delayed/Defective OFE

Wrongful termination

Active interference

Breach of contract

Suspension of work

Misrepresentations

Inadequate design

Impossibility of
Performance

Unjustified denial
of time extension

Interruption of contractor's
production flow

Figure 1. The Contractor's Fence (11)

Planning was rated as the variable with the highest potential (55 percent) which is eleven percent higher than the next-variable -- scheduling. Planning was given a 92% rating for having at least medium potential. One comment from a contractor participating in this study was, "A prerequisite for productivity improvements is long-range and short-range planning and scheduling, strong material expediting and control, knowledgeable and cost-conscious superintendents, and good cost control and unit measurement systems."

Table 1
Functions vs. Potential Impact
on Productivity

Functions	Percentages			
	High	Medium	Low	No comment
Planning	55	37	8	0
Scheduling	46	41	13	0
Estimating	34	40	26	0
Communications	35	50	15	0
Marketing	26	41	33	0
Procurement	18	55	27	0
Drafting	15	41	39	5
Specifications	21	43	32	4
Engineering	24	46	28	2

Hohns (12) reported that he and his company, having scheduled and monitored progress on over 1500 construction projects, the function that most affected construction efficiency and cost was planning. Based on an index of 100 as the base (expected cost with reasonable planning), he judged the degree of planning to have resulted in a final cost on those projects monitored to be within a range from 60 to 500 with an average of 150. Expressed another way, exceptional planning could result in a 40% cost savings or less than than satisfactory planning could create up

to a 400% overrun of that expected with reasonable planning. And, on average, the typical poorly planned project costs 50% more than it should.

In another study (19), the researchers conducted a field survey among over 400 general and project managers to determine reasons for schedule slips and budget overruns. They were asked to indicate on a five-point scale their perception of how frequently certain problems are responsible for schedule slips and budget overruns. Figure 2 summarizes their opinions. The data indicate that project managers perceive these problem sources in a somewhat different order than their superiors. Project managers cited the following five as being most responsible for poor project performance:

- Customer & management changes.
- Technical complexities.
- Unrealistic project plans.
- Staffing problems.
- Priority shift.

Senior management ranked them somewhat differently:

- Insufficient front-end planning.
- Unrealistic project plans.
- Underestimated project scope.
- Customer & management changes.
- Insufficient contingency planning.

In summary of this study, project managers are more concerned about post-mobilization influences such as changes, complexity of work, staffing problems, and work priorities, while senior managers focus more on what should and can be done up front to avoid problems. In effect, the project managers see themselves in a reactive management role having been handed the project, well-planned or not. The senior managers understandably look at the proactive management role. The two viewpoints are not inconsistent. Extensive pre-planning will certainly limit the exposure of the project manager, but will not eliminate all changes, job complexities, staffing problems, and priority shifts.

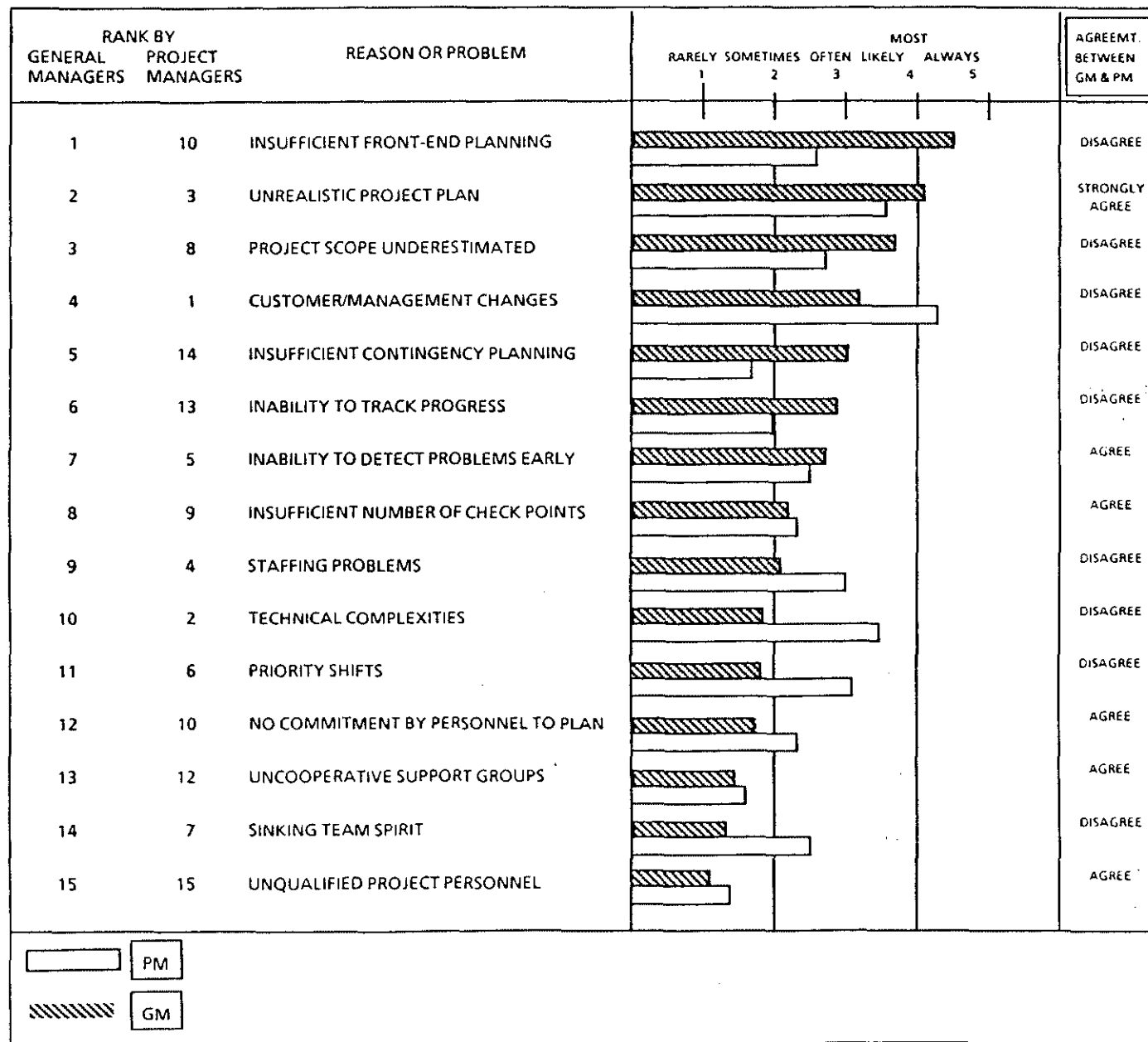


Figure 2. Causes of Overruns (19)

In recent research conducted by the Technion in Israel, there were decided improvements in schedule variances reported by contractors who performed both *planning* and *control*. The results of this research have not yet been published.

How Well is Planning Being Done

During the research for this paper, an interview question was included which was intended to determine the perception of various managers of planning adequacy. The question was, "Do you agree with the premise that the construction industry, and particularly your company, is doing a poor job of up-front planning?" Top management invariably said "Yes" or that it could be improved. On the other hand, functional and project managers were almost in total agreement that planning was adequate. Figure 3 may provide some explanation of this disparity. It shows that top management, while looking at the overall planning function, sees a series of planning islands with gaps between levels and functions, while the functional managers feel secure about planning within their individual functions at their levels. Senior managers are continually exposed to the boundary conflicts between levels and functions but these are not always apparent to the function managers. If the planning effort is to be considered adequate, all levels of management must agree that it is. For it to be adequate, the high level managers must provide the guidance and atmosphere needed to assure full integration, cooperation and communication among all levels and functions. This, in itself, requires major policy level planning on the part of those managers, as well as continuous follow up.

One example was revealed in this research of a general contractor specializing in fixed-price work who has prospered as a result of a total commitment to planning. This contractor logs more than \$250 million in work annually, yet enjoys the status of seldom having to competitively bid on projects -- he is able to attract essentially all the work he wants on a negotiated, fixed-price basis -- and he actually must turn work away. If he did competitively bid, his price would probably be among the highest. His policy planning has committed the company to total quality. This quality extends to every facet of their operation including a very structured project manager development program. Their strategic planning is based on controlled growth and the availability of fully qualified personnel. They refuse to commit themselves to more work than can be handled by their well-trained professional

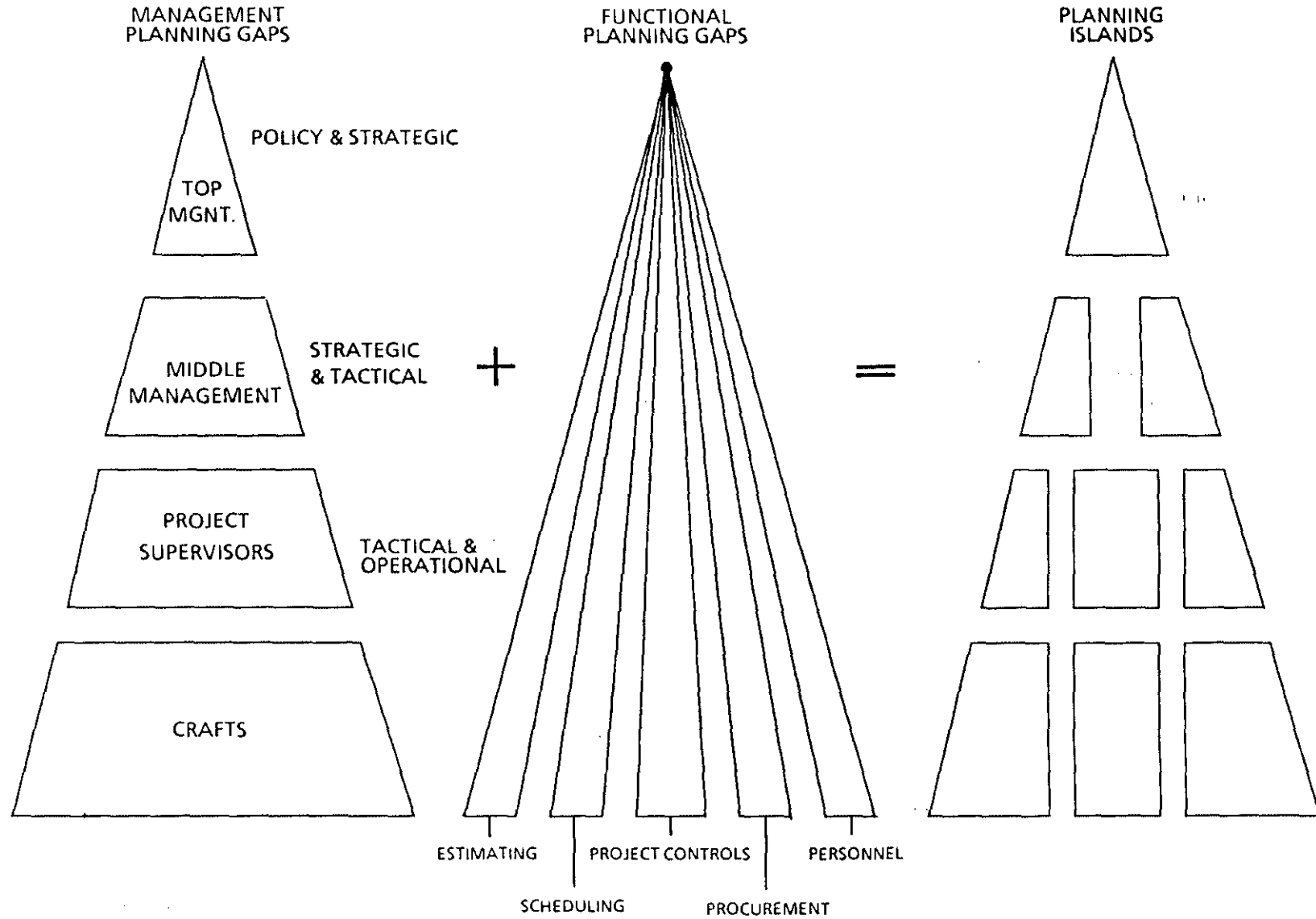


Figure 3. Planning Islands

staff and each project is carefully planned to totally satisfy the client. The result is repeat work and a reputation for total quality -- what every contractor dreams of.

Summary

The reasons justifying complete up-front planning for fixed price construction are very obvious:

- It is essential for establishing a base line that allows for positive project control and change documentation.
- It facilitates the integration of the estimate, schedule, and other functional planning into a total control plan that can be used without reformatting during construction.
- It permits lower bid submittals through:
 - More thorough evaluation of construction methods, materials and equipment in the interest of constructability and cost effectiveness.
 - More complete study and documentation of project logic.
 - More accurate risk evaluation -- the contingency factor is not overdone.
- It sets the stage for getting the project started off in the right direction. A project that starts right has a better chance of ending right.
- It increases the success potential of the bid in a highly competitive environment.
- It will promote client confidence in the ability of the contractor to perform.

Planning is an activity of proactive management. Without a plan, management is forced into a reactive mode. There is nothing in literature and no known