

# Contractor Performance Incentive Report

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## Executive Summary

- There are a large number of contractors who support New Start project development and construction.
  - They fall into two broad categories:
    - professional services consultants who enable project development and approval; and,
    - construction management and construction contractors who manage or perform construction work.
- Overall, the grantee has the ultimate responsibility for projects meeting cost, scope, and schedule projections. However, contractors play a significant role in execution of project development and construction.
- Overall, incentives already exist in contracts to support the New Starts process.
  - No new additional authority is needed, and they are currently being used throughout the country.
  - Many contracts already provide incentives for contractors.
    - The only limitations are legal (Federal standards for suitability and/or state/local limitations) and technical (grantee's ability to oversee/manage more complex or sophisticated contracts)
  - There also are additional innovative procurement practices, such as design-build, design-build-operate-maintain, and construction manager/general contractor, that provide greater incentive opportunities for contractors.
- However, the *suitability* of contractors to receive incentives based on final project cost is limited.
  - It is only those construction contractors that can directly influence the final cost of the project that are best suited to receive incentives based upon project cost.
- Finally, only the more experienced grantees are likely to be able to successfully employ these more complex or sophisticated incentives and innovative procurement practices.

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## Background

### *FTA's New Starts Capital Investment Grant program*

The Federal Transit Administration's (FTA) New Starts program is the Federal government's primary financial resource for supporting locally planned, implemented, and operated major transit capital investments. Authorized by 49 U.S.C. 5309, the New Starts program is the original component of FTA's "Capital Investment Grant" program, also referred to as "Section 5309." Participation in this program and funding is based upon competitive selection and the availability of annual appropriations.

The New Starts program funds new and extensions to existing fixed guideway transit systems in every area of the country. These projects include commuter rail, light rail, heavy rail, bus rapid transit, streetcars, and ferries. Recently, the Safe, Accountable, Flexible, Efficient Transportation Efficiency Act: A Legacy for Users (SAFETEA-LU) established project size thresholds for the New Starts program and introduced a second capital investment grant program for smaller fixed guideway projects. Under these new provisions, New Starts projects are focused on those projects seeking \$75 million or more in FTA Capital Investment Grant funds *or* have a total project cost of greater than \$250 million. SAFETEA-LU also created the Small Starts program to provide grants to those projects seeking less than \$75 million in FTA Capital Investment Grant funding *and* have a total project cost of less than \$250 million.

As the Small Starts program is new, beginning in Fiscal Year 2007, the findings of this report are based on the experiences of the New Starts program. However, many of the opportunities and constraints identified may be transferable to the Small Starts program. These are identified below.

### *Report on Contractor Incentives: Requirement and Context*

SAFETEA-LU directs the Secretary of Transportation to submit a report on the "suitability of allowing contractors to public transportation agencies that undertake new fixed guideway capital projects under the [New Starts and Small Starts programs] to receive performance incentive awards if a project is completed for less than the original cost" 49 U.S.C. 5309(l)(3). This report responds to this requirement.

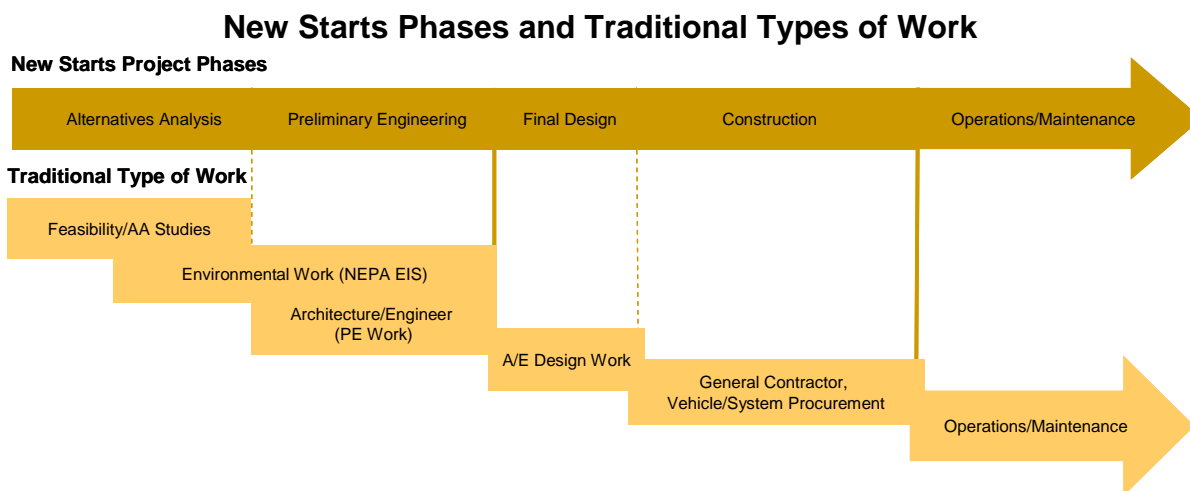
This report is a part of a larger consideration of incentives authorized for the New Starts/Small Starts program by SAFETEA-LU. For grantees, SAFETEA-LU authorizes the Secretary to allow for additional scope to be added to a Full Funding Grant Agreement (FFGA) project if the final cost comes in below the original FFGA project cost, 49 U.S.C. 5309(h)(2). Further, a grantee may receive a higher share of Federal funding if "the Secretary determines that "the net project cost of the project is not more than 10 percent higher than the net project cost estimated at the time the project was approved for advancement into preliminary engineering (49 U.S.C. 5309(h)(3)(A)); and, "the ridership estimated for the project is not less than 90 percent of the ridership estimated for the project at the time the project was approved for advancement into preliminary engineering", 49 U.S.C. 5309(h)(3)(B).

This report also relates to the annual Contractor Performance Assessment Report required under 49 U.S.C. 5309(1)(2), where FTA reports on the accuracy of contractor projections for cost and ridership from entry into Preliminary Engineering (PE) through two years after the system is open for service. This report will provide grantees with an opportunity to review the past practices of those New Starts contractors involved in the design stages of the project, from entry into preliminary engineering through final design. The first annual FTA Contractor Performance Assessment Report, focusing on methodology, was transmitted to Congress on August 10, 2006.

## The Relationship of Contractors to New Starts Projects

The New Starts process consists of a series of several major phases of project selection, development, construction/acquisition, and operations. Each phase has a distinct set of activities that are required, and often reflect the specific scope of work carried out under contract.

While the grantee has ultimate responsibility to manage the New Starts project’s cost, scope, and schedule, contractors play a critical role in overall project success. The level of involvement of contractors in a New Starts project varies broadly, often based upon the in-house experience and expertise of the grantee. Generally, grantees with more experience in the New Starts process have developed in-house expertise enabling them to manage more innovative procurement methods so that they are not as dependent upon consultants for project management advice. In contrast, grantees new to the New Starts process may contract out almost all aspects of project development, management, design, and construction.



### *Typical New Starts Contractor Support*

During **Alternatives Analysis**, grantees or their contractors will conduct feasibility studies and other assessments to determine the locally-preferred alternative. In addition, environmental work related to meeting the requirements of the National Environmental Policy Act (NEPA) will be initiated. These tasks can be performed by the grantee, or, if contracted out, by an individual or group of consultants. Often the alternative analysis work can be a part of the NEPA review process in order to evaluate the impacts of different alternatives on the environment and the project’s purpose and need.

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During **Preliminary Engineering**, project development work shifts to creating more detailed design and engineering work. During this period, it is possible that the environmental work required to complete the Environmental Impact Statement and related activities, if not performed by the grantee, will continue under the same contract as established during Alternatives Analysis.

Council for Environmental Quality regulations, 40 C.F.R. 1506.5(c), require contractors to sign a disclosure statement specifying that they have no financial or other interest in the outcome of the project. Accordingly, once the project is approved for entry into Final Design, the grantee will usually be required to select a new consultant to continue the detailed design and engineering work.

The **Final Design** phase requires the grantee to address any remaining uncertainties in the construction cost estimate that were specified at the end of preliminary engineering. During this phase, grantees and their contractors prepare detailed specifications and bid documents, and address all remaining financial, technical, and regulatory issues necessary to begin construction. It is during Final Design that the most detailed designs, and resulting cost estimates, are established.

Once the grantee enters into a Full Funding Grant Agreement (FFGA) with FTA – a multiyear funding commitment between FTA and the grantee, the **Construction** phase begins. At this time, the grantee will typically select a general contractor, specialty construction and related subcontractors, and begin vehicle and system procurement. The scope and duration of these contracts will be based on the size of the project and on whether the grantee selects a more innovative approach to project construction, such as design-build, design-build-operate-maintain, or construction manager/general contractor. More information on these types of contracts is discussed later in this report.

Finally, once the construction and related acquisition activities are complete, the project moves beyond the New Starts process into **Operations and Maintenance**. It is at this point that the project begins service and, assuming all FFGA funding is complete, the project graduates from the New Starts program.

### *Other Contractor Support*

As mentioned earlier, grantees with less in-house expertise in transit capital project management may seek further contractor assistance during project development and construction. In these cases, a grantee will employ a Project or Program Management contractor to oversee all aspects of the New Starts process. This contract would be in addition to other contracts for specific technical and design work required by each phase of the New Starts process.

## **An Overview of Contracts**

### *Contract Requirements, Rules, Limitations*

Contracts to support New Starts project grantees are subject to the same rules and regulations as all other procurement contracts. The laws governing most grantee procurement contracts are derived from Federal statutes set forth in 49 U.S.C. Chapter 53 and other cross-cutting Federal

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statutes, such as Davis Bacon Act prevailing wage rate provisions, Civil Rights Act responsibilities, bid protest procedures, etc. The Federal Common Grant Rule Procurement regulations at 49 C.F.R. 18.36 must also be honored in addition to Federal implementing regulations.

FTA requires grantees to comply with FTA guidance on Third-Party Contracting (FTA Circular 4220.1E), except as superseded by Federal law. This circular applies to all FTA grantees that contract with outside sources under FTA assistance programs. In this Circular, FTA sets forth requirements that grantees must adhere to in the solicitation, award and administration of its third party contracts. These requirements are based on the common grant rules, Federal statutes, Executive Orders and their implementing regulations, and FTA policy.

Beyond the Federal level, State statutes, regulations, and case law also influence grantee procurements, particularly with respect to competition requirements and contracting procedures, sometimes significantly. Certain types of procurement contract types, for example, are not permitted by some States. Additionally, State legislative and regulatory provisions may limit a grantee's ability to use incentives or awards for contracts, or to use some of the innovative procurement practices noted below. Regardless of Federal rules and regulations on procurement, each State will dictate how much flexibility each grantee in its jurisdiction will have in terms of employing innovative or incentive-based contracts.

### *General Contract Characteristics*

There are two broad categories of contractors employed by any public or private sector owner seeking to build facilities or infrastructure like utilities or transportation systems. First, professional services contractors like engineering and architectural companies, environmental and project management consultants enable the owner to develop the scope of work to be accomplished, estimate its cost, complete environmental analyses, and prepare detailed design drawings and specifications. All of the work accomplished by these professional services contractors and consultants is a prerequisite to gain government grants, private financing such as bonds, and various project planning and execution approvals by local, state and Federal regulatory and taxing authorities.

Some of these contracts, such as those for design work, are covered by the Federal Brooks Act (chapter 11 of Title 40, United States Code) which provides for competition based on technical qualifications and negotiations for the prices of the services to be performed. In the alternative, if before August 10, 2005, a State has enacted a law establishing qualifications-based requirements for contracting for architectural, engineering, and design services, the grantee may comply with that State law, as authorized by 49 U.S.C. 5325.

The expertise and talent of these contractors can shorten or extend the time and cost for project planning, design, and construction based on the quality of work products and the experience of the owner, project partners, and government approval agencies in performing this type of development work. Evaluation of contractor performance is often subjective until the project construction and operations phases are underway or completed.

The second broad category of contractors employed by owners can be categorized as companies that actually perform demolition, construction, testing, and project management. Evaluation of the performance of construction contractors can be more quantitative based on time and cost to complete the project, safety records, community complaints and quality of the finished product. Overall, the type of contract mechanism selected by the grantee to procure these construction services is based upon the nature of the work to be conducted by the contractor. There is a range of contracts that are used by New Starts grantees which generally fall into two classes: Cost Reimbursement (or “Cost-Plus”) and Fixed Price.

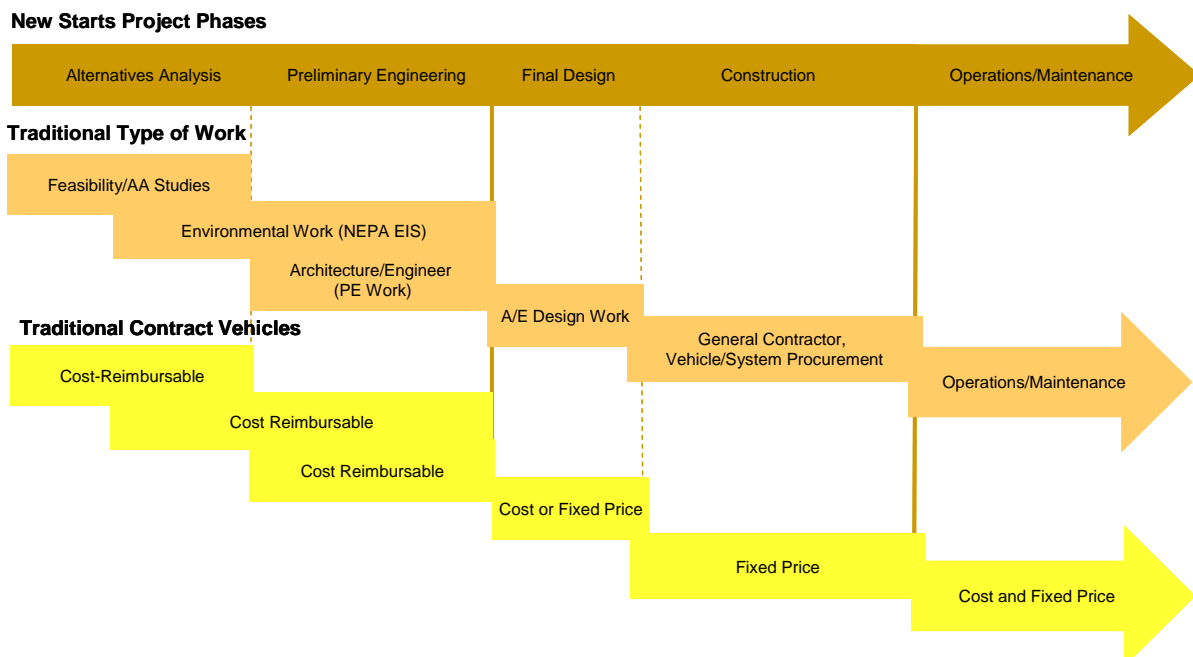
### Risk Level of Contract Types



The most commonly-used types of procurement contracts are described above based on the degree of risk assumed by the contractor and, inversely the grantee, with each type. These range from cost-no-fee and cost-plus-fixed-fee, where the contractor has minimal risk for performance costs and the fee amount (if any) is not adjusted in response to actual costs or performance, to firm-fixed-price, representing contractor assumption of all cost risk.

A **Cost-plus contract** is a contract framed in such a way that when the contractor finishes the agreed-upon work, it receives compensation equal to its expenses plus some bonus, which for

### Traditional Types of New Starts Contract Vehicles





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Federally assisted contracts can be a fixed amount). Grantees may not award Federally assisted contracts on the basis of cost plus a percentage of cost, 49 C.F.R. 18.36(f)(4). Even if the contractor suffers cost overruns, it will still receive full compensation agreed upon under the contract (with the possibility that overrun costs will also be honored) plus their expected profit. There is little or no direct financial incentive to minimize costs, since the contractor will always be fully reimbursed (plus profit) upon contract completion.

Typical uses of cost-based contracts within the New Starts process are for professional services, program management, feasibility studies, environmental assessments, alternatives analysis that supports project development and delivery of construction work.

A **Fixed-price contract** is a contract framed in such a way that, when the contractor finishes the agreed-upon work, it will only receive the amount reflected in its bid price (pre-arranged compensation), regardless of what costs it incurred. The contractor's bid price is usually based on the expense it expects to incur to complete the work, plus an amount that will provide it a profit instead of breaking even. If the contractor is able to complete the work under budget, those savings become extra profit for the contractor. Going over-budget, however, reduces the amount of profit the contractor realizes from the contract and may even result in the contract being a net financial loss to the contractor, so that the contractor has a strong incentive to minimize expenses.

Within the New Start project process, fixed price contracts are typical for construction, system/vehicle procurement, and other aspects of development where a specific product/deliverable is expected.

### *Incentive-Based Contracts*

For most phases of New Starts projects, grantees already use incentive-based contracts for their support work. As mentioned above, the use of a specific type of contract is based upon the nature of the work; whether a fixed deliverable or ongoing effort. At the same time, use of a specific type of incentive is also based upon the nature of the work; but also on what type of motivation the grantee seeks through the use of incentives.

There are two typical types of incentives used by grantees in the New Start process: award fee, and incentive fee. Both Cost Plus and Fixed Price contracts can contain these types of incentives, but with very different goals in mind.

**Cost-Plus Incentive Fee** and **Fixed Price Incentive Fee** contracts provide incentives to the contractor strictly on cost-based, quantitative evaluation of contract work. In these contracts, a fee is awarded to the contractor based upon the ability of that contractor to meet the targeted cost. There is no evaluation of the quality of the work, just that the work was done and – hopefully – under the target project cost.

**Cost-Plus Award Fee** and **Fixed Price Award Fee** contracts provide incentives to the contractor based upon the *quality* or *performance* of the contract work. In these contracts, the contractor is evaluated using qualitative measures, and an award is given if the work meets or exceeds certain performance standards.

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More details on each of these incentive contract vehicles are provided in the appendix to this document.

## *Other Innovative Procurement Practices*

### **Design-Build**

Design-build is a project delivery method that combines two, usually separate services into a single contract. With design-build procurements, owners execute a single, fixed-price contract for both architectural/engineering services and construction. The design-build entity may be a single firm, a consortium, joint venture or other organization assembled for a particular project.

With design-build delivery, the design-builder assumes responsibility for the majority of the design work and all construction activities, together with the risks associated with providing these services for a fixed fee. When using design-build delivery, owners usually retain responsibility for defining the scope of work or expected system performance, financing, operations and maintenance of the project. While design-build procurement has been more prevalent in private sector work, it is also gaining acceptance among many public sector transportation infrastructure owners. The Hiawatha Light Rail project in Minneapolis-St. Paul, explained in Case Study 1, is an example of how design-build is utilized for a transit project.

### **Case Study 1**

#### **Design Build: Hiawatha Light Rail Transit**

Hiawatha Light Rail links downtown Minneapolis with Minneapolis-St. Paul (MSP) International Airport and the Mall of America. Project scope includes 12.0 miles, 17 stations including a subway station at MSP International Airport and up to 26 light rail vehicles.

The project utilized two separate design-build contracts: one for rail vehicles, and one to place rail and signal and communication equipment along the alignment.

Although design-build contracts are used for the remainder of the route, the Metropolitan Airport Commission officials opted on a design-bid-build procurement for the two 7,400 foot airport tunnels. This decision was based on the risk of tunneling below two runways and building two 30-ft-high, 60-ft-wide, and 500-ft-long stations 66 feet below grade in the middle of the airport. The tunnels were built adjacent to each other to carry northbound and southbound train traffic. Each tunnel is 7,400 feet (1.4 miles) in length. The Lindbergh Terminal and Humphrey Terminal stations are open for service. The stations opened on December 4, 2004.

### **Design-Build-Operate-Maintain (DBOM)**

The build-operate-transfer (BOT) / design-build-operate-maintain (DBOM) model is an integrated partnership that combines the design and construction responsibilities of design-build procurements with operations and maintenance. These integrated methods transfer design, construction, and operation of a single facility or group of assets to a private sector partner. This project delivery approach is practiced by several governments around the world and is known by a number of different names, including "turnkey" procurement, BOT, and DBOM.

The advantage of the BOT / DBOM approach is that it combines responsibility for usually disparate functions—design, construction, operations and maintenance—under a single entity.

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This allows the private partners to take advantage of a number of efficiencies. The project design can be tailored to the construction equipment and materials that will be used. In addition, the BOT team is also required to establish a long-term maintenance program up front, together with estimates of the associated costs. The team's detailed knowledge of the project design and the materials utilized allows it to develop a tailored maintenance plan that anticipates and addresses needs as they occur, thereby reducing the risk that issues will go unnoticed or unattended and then deteriorate into much more costly problems. New Jersey Transit's Hudson-Bergen Light Rail project, highlighted in Case Study 2, provides an example of how the DBOM model was utilized in a transit project.

## Case Study 2

### Design-Build-Operate-Maintain: Hudson-Bergen Light Rail (Stage 1)

As a part of the FTA Turnkey Demonstration Program, New Jersey Transit Corporation used a DBOM 15 year fixed price contract in 1996 to design and construct a 9.5 mile initial operating segment with a guaranteed completion date, provide a fleet of light rail vehicles, and 15 years of operation and maintenance.

The DBOM project delivery approach was selected because of the estimated eight years that would be saved compared to the traditional multiple design/bid/award/construct approach.

Overall, the initial stage of this light rail system is a 9.3-mile line with 16 stations, parking, maintenance, and storage facilities. This light rail line runs principally along the Hudson River waterfront in Hudson and Bergen Counties, New Jersey.

## Construction Manager/General Contractor (CM/GC)

An additional method of non-traditional procurement is called Construction Manager/General Contractor (CM/GC). The CM/GC form of contracting is a technically complex project delivery system. Unlike the design-build form of contracting, the CM/GC form of contracting does not contemplate a "single point of responsibility" under which the contractor is responsible for successful completion of all work related to a performance specification.

With CM/GC, the contractor is selected during the design process and provides value engineering and constructability reviews; the CM/GC contractor is not responsible for final design, however, the selection is based on several evaluation criteria, such as technical and management experience; prior performance; safety record; proposed quality control plan; proposed community outreach, including disadvantaged business participation and workforce hiring/training programs; and, maximum percentage fee on construction value.

In a CM/GC contract, the contractor assumes responsibility for the entire construction package with a dual role as the *construction manager* for all project work, self-performed and subcontracted, and the *general contractor*, soliciting bids from and executing contracts with subcontractors. The owner contracts only with the CM/GC contractor. Construction price is negotiated once final design is complete.

Like all other procurement actions, there are State and local legal barriers that may limit the ability for a grantee to use a CM/GC-type procurement. Additionally, the grantee must be experienced in construction and have the internal resources to check contractor cost proposals

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and negotiate a contract with confidence that the agreed upon terms are fair and reasonable. The Trimet Interstate MAX Light Rail in Portland, Oregon, highlighted in Case Study 3, provides an example of how CM/CG was successfully utilized.

### Case Study 3

#### **Construction Manager/General Contractor: Trimet Interstate MAX Light Rail**

TriMet, the regional transit agency for the Portland, OR area has developed over 44 miles of light rail and has another two projects in final FTA approval to expand its system to new jurisdictions. Given the expertise gained over the years, TriMet has successfully used innovative procurement strategies like the Construction Manager/General Contractor (CM/GC) to build its Interstate Max line.

This 5.8 mile light rail extension was completed ahead of schedule and for less than the approved budget due to excellent grantee project management and through the use of CM/GC contracting for a portion of the construction. Shared risks between the owner, TriMet and the contractor and contractor input into the final design, allowed the Guaranteed Maximum price that was negotiated after the initial contract competition, to be more accurate than the traditional design-build-low bid process. For example, design conflicts and unknown contingencies were identified and either resolved to allow more definitive pricing or specific cost allowances were provided in the bid rather than using speculative (high) estimates.

## Overall Suitability

This report focuses on the suitability of contractors to receive performance incentives if a New Starts project comes in below cost. Thus, while incentive contracts are available to all New Starts contractors, the *suitability* falls in two areas: 1) where contractors play an influential role in *forecasting* final project costs; and, 2) where contractors play an influential role in *meeting* final project costs.

As discussed above, the grantee has ultimate responsibility to manage the New Starts project's cost, scope, and schedule. This makes it difficult to link specific contractor work to overall project performance. Grantees establish project assumptions, manage information, and are the final decision makers throughout the New Start process.

### *Early Planning Stages through Preliminary Engineering*

While the level of contractor involvement during the Alternative Analysis and Preliminary Engineering phases varies by grantee, the actual influence of those contractors on final project cost (and ridership) is quite limited. During the development of cost and ridership forecasts, contractors generally make extensive use of information and other forecasts and estimates provided by external parties, such as project sponsors, Metropolitan Planning Organizations (MPOs), and other local agencies. In these cases, the final product of these contractors may be heavily influenced by assumptions and information beyond the contractor's control.

In addition to the limited influence of contractors on specific data during these early phases, there may also be difficulty providing incentives for project completion for many years after

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these phases are completed. Even simple New Starts projects may not be completed until five to ten years after preliminary engineering is initiated. During this early project development phase, the project alignment, scope, and other critical factors may change, further reducing the influence of these early contractors on final project cost. Additionally, by the time a New Starts project is completed, the contractor company may cease to exist, or the staff involved in the project may no longer be with that firm.

### *Final Design*

It is in the final design phase that the engineering designs, vehicle/systems specifications, and other detailed items related to the project are completed. These detailed, construction-level specifics allow the contractor, and thus, grantee, to produce a project cost estimate with the greatest level of confidence. The resulting contract work during this phase, while still based upon some assumptions provided by the grantee, is more reliant on standard engineering and construction practices than the earlier phases. Therefore, it may be suitable for grantees to provide final design contractors with incentives based upon the final cost.

### *Construction*

The most appropriate phase of the New Starts process for providing contractor incentives linked to projects completed below the original cost estimate is the construction phase. By the time a New Starts project enters into a Full Funding Grant Agreement, the engineering designs are set and vehicle and system plans are finalized. In addition, the nature of the work – to complete a tangible product in a pre-determined time – lends itself to be suitable for contractor incentives. Additionally, the construction phase lends itself to more innovative contracting mechanisms, such as Design-Build, DBOM, and CM/GC, which provide inherent incentives to contractors (as well as potential cost savings to grantees) through the packaging of many steps into one fixed-price contract.

### *Limitations: Grantee Location and Experience*

While specific phases and contract types related to New Starts project development lend themselves to incentive contracts, two additional factors must be taken into account in assessing suitability. Specifically, while Federal procurement regulations provide overarching parameters for procurement contracts done by New Starts grantees, they are still limited to specific State rules and regulations. State contract law may limit a grantee's ability to use incentive contracts, and, in several instances, may expressly prohibit a grantee's ability to use contracting mechanisms like Design-Build, DBOM, and CM/GC.

Finally, new, less-experienced grantees may shy away from incentive-based contracts and more innovative contract mechanisms because they require greater understanding of contract mechanics. As such, grantees new to the New Starts process may elect not to use incentive-based contracts or, because of their complexity, be less successful in their implementation.

## **Conclusion**

While incentives are feasible in all contracts related to the New Starts development process, it is in the Final Design and Construction contracts where the use of incentives based upon meeting project costs is the most appropriate. These phases of New Starts project development are most

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closely linked to the determination and implementation of the final project cost. In addition, the nature of the work of these phases is deliverable-based, providing tangible products that are easy to link to incentive-type rewards.

More importantly, however, incentives should only be viewed as one way of facilitating on or below budget New Starts projects. The success of a New Starts project lies with the grantee's experience, technical capability, and the ability to effectively manage the project. And, finally, a successful New Starts project is also linked to access to ongoing FTA technical assistance and close project oversight throughout all phases of the project.

## Appendix – Specifics on Incentive Contracts

*(The following is based on Federal Acquisition Regulation standards of 48 C.F.R. Subpart 1.)*

**Cost-plus-award-fee (CPAF)** - CPAF contracts include an estimated cost and an award fee amount that is paid based upon periodic subjective evaluations of contractor performance. The award fee determination is made unilaterally by the grantee and is not subject to Disputes clause procedures. In non-services contracts, while not encouraged, a base fee may be included which is paid based on the contractor achieving at least satisfactory performance. CPAF contracts offer significant evaluation flexibility in two ways: the flexibility to evaluate on a judgmental basis, taking into consideration both contractor performance levels and the conditions under which such levels were achieved; and the flexibility to adjust evaluation plans quickly to reflect changes in Government management emphasis or concern.

*Application.*

- (1) The cost-plus-award-fee contract is suitable for use when --
  - (i) The work to be performed is such that it is neither feasible nor effective to devise predetermined objective incentive targets applicable to cost, technical performance, or schedule;
  - (ii) The likelihood of meeting acquisition objectives will be enhanced by using a contract that effectively motivates the contractor toward exceptional performance and provides the Government with the flexibility to evaluate both actual performance and the conditions under which it was achieved; and
  - (iii) Any additional administrative effort and cost required to monitor and evaluate performance are justified by the expected benefits.
- (2) The number of evaluation criteria and the requirements they represent will differ widely among contracts. The criteria and rating plan should motivate the contractor to improve performance in the areas rated, but not at the expense of at least minimum acceptable performance in all other areas.
- (3) Cost-plus-award-fee contracts provide for evaluation at stated intervals during performance, so that the contractor will periodically be informed of the quality of its performance and the areas in which improvement is expected. Partial payment of fees generally corresponds to the evaluation periods. This makes the incentive effective which the award fee can create by inducing the contractor to improve poor performance or to continue good performance.

*Limitations.*

No cost-plus-award-fee contract shall be awarded unless --

- (1) The contractor's accounting system is adequate for determining costs applicable to the contract; and the grantee's surveillance during contract performance is sufficient to provide reasonable assurance that efficient methods and effective cost controls are used.
- (2) The contract amount, performance period, and expected benefits are sufficient to warrant the additional administrative effort and cost involved.

**Cost-plus-incentive-fee (CPIF)** - CPIF contracts provide for a target cost and target fee, a minimum and maximum fee and a fee adjustment formula (e.g., 70/30, 60/40), all established at contract award. The fee and fee adjustment formula incentivize only cost performance. If desired, separate incentives may be included for other significant performance elements such as accomplishments, schedule, or quality. Upon contract completion, the formula is applied and, subject to the minimum and maximum fee limits, the fee is increased from target fee for underruns and decreased for overruns. Regardless of the final cost outcome, the contractor's risk is limited since the fee paid cannot be less than the minimum fee. However, the minimum fee can be zero or even a negative number. All allocable, allowable and reasonable costs incurred on the contract are paid.

*Application.*

- (1) A cost-plus-incentive-fee contract is appropriate for services or development and test programs when --
  - (i) A cost-reimbursement contract is necessary because uncertainties involved in contract performance do not permit costs to be estimated with sufficient accuracy to use any type of fixed-price contract; and
  - (ii) A target cost and a fee adjustment formula can be negotiated that are likely to motivate the contractor to manage effectively.
- (2) The contract may include technical performance incentives when it is highly probable that the required development of a major system is feasible and the Government has established its performance objectives, at least in general terms. This approach also may apply to other acquisitions, if the use of both cost and technical performance incentives is desirable and administratively practical.
- (3) The fee adjustment formula should provide an incentive that will be effective over the full range of reasonably foreseeable variations from target cost. If a high maximum fee is negotiated, the contract shall also provide for a low minimum fee that may be a zero fee or, in rare cases, a negative fee.



*Limitations.*

No cost-plus-incentive-fee contract, shall be awarded unless the contractor's accounting system is adequate for determining costs applicable to the contract; and the grantee's surveillance during contract performance is sufficient to provide reasonable assurance that efficient methods and effective cost controls are used.

**Fixed-price contracts with award fees (FP-AF)** - A fixed price consisting of all estimated costs and profit is established at contract award along with an additional, separate award fee amount. The fixed price is paid for satisfactory performance; the award fee is earned, if any, for performance beyond that required. FP-AF combinations are used when the grantee, although wanting to incentivize the contractor to deliver at an excellent or outstanding technical level, is unable to define that level in quantitative terms; or when metrics aren't available or their use is not practical.

a) Award-fee provisions may be used in fixed-price contracts when the Government wishes to motivate a contractor and other incentives cannot be used because contractor performance cannot be measured objectively. Such contracts shall --

(1) Establish a fixed price (including normal profit) for the effort. This price will be paid for satisfactory contract performance. Award fee earned (if any) will be paid in addition to that fixed price; and

(2) Provide for periodic evaluation of the contractor's performance against an award-fee plan.

(b) A solicitation contemplating award of a fixed-price contract with award fee shall not be issued unless the following conditions exist:

(1) The administrative costs of conducting award-fee evaluations are not expected to exceed the expected benefits;

(2) Procedures have been established for conducting the award-fee evaluation;

(3) The award-fee board has been established; and

(4) An individual above the level of the contracting officer approved the fixed-price-award-fee incentive.

**Fixed-price incentive (FPI)** - FPI contracts include a target cost and target profit, a ceiling price and a profit adjustment formula. Unlike CPIF contracts, there is no ceiling or floor on profit. At the end of the contract, using the formula, target profit is either increased for a cost underrun or decreased for an overrun up to a ceiling price. The contractor assumes full responsibility for all costs incurred beyond the ceiling. The contractor must successfully perform to the contract requirements within the ceiling price. FPI contracts are appropriate when a realistic firm target cost and profit and a profit formula can be established at the outset of the contract, which will

provide a fair and reasonable incentive for the contractor. Technical and cost uncertainties must be reasonably identified and the parties should be confident that performance can be achieved.

*Application.*

A fixed-price incentive (firm target) contract is appropriate when the parties can negotiate at the outset a firm target cost, target profit, and profit adjustment formula that will provide a fair and reasonable incentive and a ceiling that provides for the contractor to assume an appropriate share of the risk. When the contractor assumes a considerable or major share of the cost responsibility under the adjustment formula, the target profit should reflect this responsibility.

*Limitations.*

This contract type may be used only when --

- (1) The contractor's accounting system is adequate for providing data to support negotiation of final cost and incentive price revision; and
- (2) Adequate cost or pricing information for establishing reasonable firm targets is available at the time of initial contract negotiation.