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City and County of Denver

Performance-Based Infrastructure Program

Implementation Guidelines



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1 Introduction

1.1 Purpose

This document provides guidance on the ongoing monitoring of the project once it has passed Gateway 3: Commercial Close and as it goes through the stages of construction, commissioning, and operations. At Commercial Close, the Preferred Proposer and the City and County of Denver (the City) execute the Project Agreement, and the Preferred Proposer is now referred to as the Private Partner.

These guidelines are most relevant to the Sponsoring Agency, or other implementing City agency as assigned, and the Private Partner. This stage of the PBI Program is illustrated in Figure 1.

These guidelines address implementation and monitoring of the Project Agreement, with a focus on risk-based planning, development of open communications, management of Project Agreement modifications, and collection of appropriate performance data. The collection of data on the performance of the project over its life is important for providing transparency and informing future PBI decisions.

Section 1.3 summarizes the implementation process with an emphasis on procedures, roles, and responsibilities under the PBI Program. The rest of the document provides best practices for implementing PBI projects.

Many of the issues addressed herein relate to the Project Agreement. This guideline is not intended to supplement actual contracts but provides a high-level overview of how the Sponsoring Agency (or other implementing agency) should prepare for possible events and risks during the life of PBI projects.

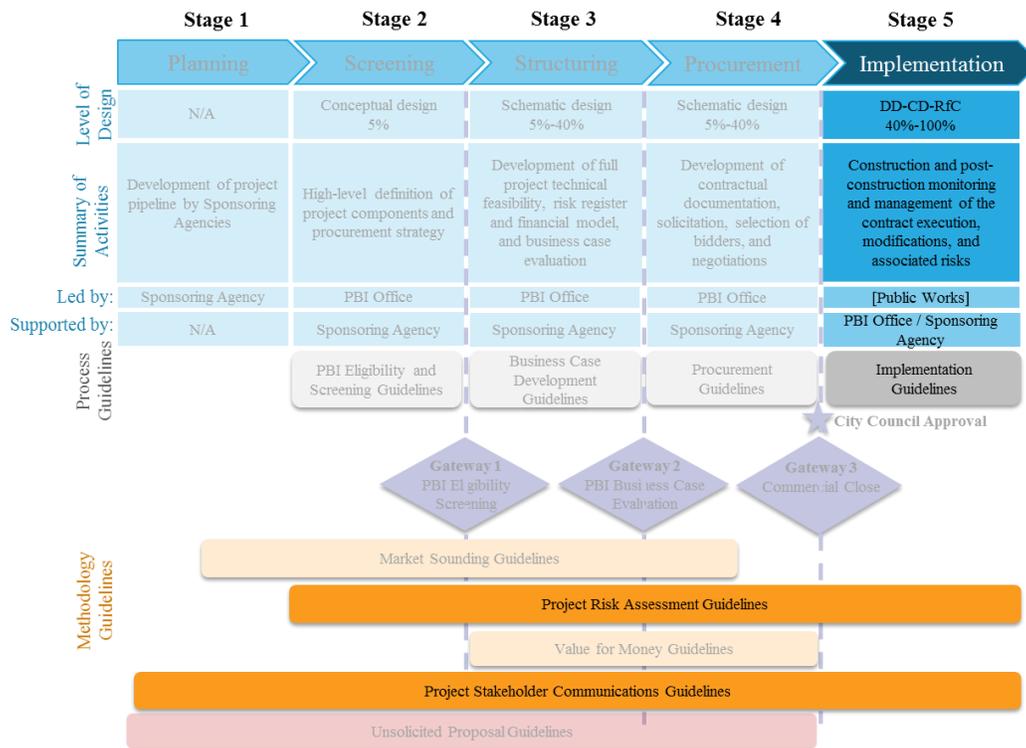


Figure 1: Implementation Stage of the PBI Program

1.2 Intended Audiences

This document is intended to be used by the following entities:

- The PBI Office, as a guide for understanding ongoing roles of the PBI project stakeholders after Commercial Close and in reviewing data on PBI project performance
- The Sponsoring Agency (or other implementing City agency) responsible for overseeing construction and operations, monitoring and administering the Project Agreement, and managing any modifications, as well as for making financial and performance information available online
- The private partner, responsible for meeting project performance specifications and reporting financial and performance data
- All relevant project stakeholders who want to familiarize themselves with the PBI project Implementation Stage (other third parties such as lenders likely have their own implementation and monitoring requirements)

1.3 Process of the Implementation Stage

The Implementation Stage is led by an Implementation Team, defined in Section 4. The Implementation Team is responsible for meeting owner obligations in the Project Agreement in a timely manner, which include but are not limited to the following tasks:

- Meeting the City’s conditions precedent to reach Financial Close, as may be applicable
- Reviewing design submittals, change orders, notices of relief events, and/or other notices and reports issued by the Private Partner during the design-build process
- Overseeing the Private Partner’s performance of construction obligations such as but not limited to schedule and quality control
- Making performance-based payments during the operating period
- Addressing facilities issues with the Private Partner when they arise

Proactive contract management is essential for a successful PBI project and to achieve best value over time.

As part of the contract management function, the Implementation Team is responsible for reviewing and analyzing performance data provided by the Private Partner, as well as reporting the data to the PBI Office and making recommendations as needed.

To track success of implemented projects and to inform future PBI project decisions, the PBI Office should compile a database of information from all projects delivered under the Program.

The Private Partner is responsible for providing periodic updates on budget and schedule during and at the end of construction, and for providing operational and financial data throughout the term of the Project Agreement. These obligations are contained in the Project Agreement.

The City Attorney’s Office is responsible for supporting the Implementation Team by reviewing and assisting with interpretation of the Project Agreement, dispute resolution items, and any changes to the Project Agreement.

2 Monitoring Principles

The foundations for efficient contract management should be contained in the Project Agreement and address the three phases of the project during the Implementation Stage:

1. Design and construction, substantial completion, and commissioning
2. Operation
3. Hand-back/termination

The contract management terms pertaining to these phases are developed, reviewed, and agreed by all parties prior to signing the Project Agreement.

Existing project monitoring requirements used by the City in traditionally procured design-build projects may be applied on a case-by-case basis. However, consideration should be made for PBI-specific project risks that may not apply to a traditional procurement.

3 Change Management

The Project Agreement lays out change management procedures, which follow City best practices. The Sponsoring Agency or other implementing agency brings any owner-directed scope and budget changes that exceed the project contingency to the PIC for approval.

Significant changes to the Project Agreement are handled as appropriate under the Denver City Charter. In certain cases, a change management policy may be developed to address specific protocols.

4 Implementation Team

An experienced and committed Implementation Team is crucial to ensure efficient execution – avoiding delays that could increase the costs of the project and delay service to the public. Although the Project Agreement is signed by the City, the PBI Office and Sponsoring Agency (or other implementing City agency) designate a specific team to manage the project according to the Project Agreement.

The Implementation Team is formed and led by specialists from the appropriate City agencies, representatives from the PBI Office and, as deemed necessary, external advisors and subject matter experts.

Continuity between the Procurement Team and the Implementation Team is recommended to ensure knowledge transfer so that the contract management team is familiar with the relevant Project Agreement provisions and the rationale

behind those terms. At a minimum, a handoff meeting should take place between the two teams prior to the Implementation Stage, while the Procurement Team is still engaged. Some or all members of the Procurement Team should be available to advise the Implementation Team on an as-needed basis.

The responsibilities of the Implementation Team, per the faculties granted to the City in the Project Agreement, change as the project progresses. They consist of the following:

- Project Agreement oversight — This includes monitoring and managing the risks retained by the City, as specified in the Project Agreement. It also includes monitoring that the Private Partner is delivering the project on time and on budget, achieving contractually-specified construction milestones, achieving the performance requirements, carrying out quality control and quality assurance, and issuing contractually-required reports that are timely, complete, and accurate. This responsibility includes monitoring public funding contributions to the project and ensuring that Project Agreement provisions are met by both the City and the Private Partner.
- Design review — Associated with actions necessary on issues that arise as the Private Partner develops and finalizes design documents. This review is in addition to and separate from the City acting in its regulatory capacity (as applicable).
 - Construction oversight — Includes reviewing and deciding on claims, change orders, and construction disputes, as well as fulfillment of completion tests and commissioning requirements.

The Sponsoring Agency may take over the role of the Implementation Team once the project is operational. During this stage, they are responsible for operations monitoring. This includes monitoring that the Private Partner complies with the reporting, performance, technical, and other requirements defined in the Project Agreement.

In some cases, it may be worth establishing committees consisting of representatives from both the Private Partner and the City to address issues arising during design, construction, commissioning, and/or operations.

The key tasks for the Implementation Team are as follows:

- Develop and follow an implementation plan to oversee the project, manage the risks retained by the City, and administer the Project Agreement
- Engage with and ensure good communications with the Private Partner and external stakeholders
- Manage amendments to the Project Agreement, if any
- Monitor the Private Partner's performance through the conclusion of the Project Agreement

The Implementation Team reports to the PBI Office Executive Director and the Sponsoring Agency's executive director, or other agency executive director as necessary if Sponsoring Agency is not leading the engagement for the City. The reporting structure is determined on a project by project basis.

5 Contract Implementation Plan

The Implementation Team develops a written implementation plan to serve as a reference manual throughout the project design, construction, completion, commissioning, and operations. This manual applies from Commercial Close through the end of the Project Agreement.

The goals of the implementation plan are as follows:

- Define the roles and responsibilities of the staff positions for the Implementation Team, including defining the appropriate interfaces and communications protocols with other City departments and agencies, the Private Partner, and other stakeholders
- Defining a risk management plan to manage risks retained by the City, as defined in the Project Agreement
- Assign responsibility and decision making process for tasks that arise during the implementation process
- Promote a good working relationship among the parties and ensure regular communication to make it possible to identify and take action proactively if and when the project does not meet performance requirements
- Establish appropriate document management and project controls procedures and protocols
- Define reporting requirements, timing, and procedures

5.1 Contract Management

The implementation plan lays out an approach to address the City's obligations under the Project Agreement, as well as provide a framework for managing risks and other unforeseen circumstances. Since circumstances likely change during the life of the project, the implementation plan should be flexible and should be updated accordingly.

The Implementation Team staff should have sufficient experience and understand the Project Agreement. This allows them to evaluate, prioritize, and proactively take action on future changes, allowing them to resolve issues.

The main topics that the implementation plan should cover, as applicable, are outlined in this section. Specific project circumstances may warrant modifications and/or additional topics.

Implementation Team's Operations

The implementation plan should include the following items:

- Identification of the Implementation Team's obligations regarding deliverables, reporting, and resourcing
- Identification of the necessary regular meetings, specifying topics for the standing agendas, required and optional participants, and a schedule
- Development of a decision-making matrix to provide a consistent, standardized framework
- Handoff procedures from the Procurement Team to the Implementation Team (at the time of Commercial and Financial Close) and from the design and construction managers to the operations managers (at the time of project commissioning and start of operations)

Sponsoring Agency Payment Obligations

As defined in the Project Agreement, the following items should be included in the implementation plan, as applicable:

- Milestone/progress capital payments — Tracking and reporting to verify that the prerequisites for each capital payment have been met. The Implementation Team should ensure early on that the Private Partner understands the expectations and specific contractual conditions that must be met for a payment to be released.
- Availability payments — These are usually linked to the following via a contractually-specified payment mechanism:
 - Performance monitoring requirements — These should be prioritized and reassessed regularly (e.g., quarterly) to ensure adequate staffing is available to address them.
 - Non-compliance events — Actions for the Implementation Team include noting the timing requirements for action on their part, calculating the applicable penalties or other repercussions, and documenting and tracking the event.
- Claims — The Implementation Team evaluates the claims and determines how to proceed according to the terms in the Project Agreement. They keep records of the claims for future reference on other projects.
- Scope changes — These may be City initiated changes to the scope of the project that may have payment and/or schedule implications. The Implementation Team coordinates with the Sponsoring Agency and other City departments to define the scope changes and evaluate their implications, negotiates with the Private Partner, and manages the process until they are formalized as change orders under the Project Agreement.

- Contingency plans — Develop procedures and scenarios for events such as natural disasters or project default, including a framework to assess cost and schedule impacts.

Project Performance

The implementation plan should adequately address the following items:

- Thorough information collection, analysis, and management practices to control risk
- Document control and management of project records using suitable protocols, including providing a secure location for sharing project documents, controlling access, assigning responsibility for archiving, and ensuring a backup is kept off-site
- Public outreach

Administration of the Project Agreement including Modifications

The implementation plan should adequately address the following items:

- Protocols for contractual change management, including changes in Project Agreement parameters such as scope, schedule, cost, risk allocation, and investment plan and duration
- Significant Project Agreement changes may require external legal advice, such as the following:
 - Modification or renegotiation of the Project Agreement
 - Changes in the stakeholder composition of the Private Partner, particularly during the initial years. Substitutions should match or exceed the technical qualifications of the predecessor, unless expressly warranted otherwise at the City's discretion
 - Possible external events that could have significant impact on the Project Agreement, such as force majeure, material adverse government action, change in law, etc.
 - Refinancing
 - Dispute resolution
- In particular, provisions to manage the City's role and responsibilities in unusual scenarios, as defined in the Project Agreement, such as, but not limited to, the following:
 - Right of PBI project lenders to step in the shoes of the Private Partner in cases such as non-performance and/or default
 - Termination of the Project Agreement

Substantial Completion of Construction and Start of Operations

The implementation plan should adequately address the following items:

- Schedule of reviews and approvals by City agencies or departments as required under the Project Agreement (but not related to the reviews that may be required by the City acting as a regulator).
- Depending on the type of facility, the following plans as applicable:
 - A move-in plan with key activity dates, roles and responsibilities, and budget – it is important to note that the City’s move-in plans may not be specified in the Project Agreement
 - A change management plan to assist with disseminating construction updates, project information, and other updates on project initiatives, with key activity dates, roles and responsibilities, and budget

Additional elements that may be considered for inclusion in the implementation plan include: organizational charts, contact lists, specific decision-making processes, and summaries of the key contractual provisions for major project phases and milestones.

5.2 Risk Administration

When developing the implementation plan, the emphasis should be on administering the risks, particularly risks explicitly retained by the City under the Project Agreement. These may include the following:

- Risks explicitly stated as retained by the City under the Project Agreement
- Risks not specifically identified in the Project Agreement with certain probability of occurrence
- Risk of default/failure by the Private Partner
- Risk of inadequate Project Agreement risk management by the Implementation Team
- Risk introduced by Project Agreement modifications

When developing the implementation plan, emphasis on the following improves risk management:

- Collecting and analyzing appropriate data
- Developing a comprehensive understanding of the legal, regulatory, and commercial influences on the project
- Establishing an adequate and sustained budget to staff the Implementation Team

- Identifying and regularly updating risks not specifically identified in the Project Agreement, understanding their interdependencies, identifying consequences, and implementing mitigations
- Anticipating and planning for changes in the project risk profile over its life
- Regularly reviewing the Private Partner’s ability to manage risks and trends in their achievement of the project’s key performance indicators (KPIs) and other indicators such as, but not limited to, schedule and safety

6 Performance Reporting and Monitoring

A key aspect of contract management is the collection and analysis of adequate data to determine whether the construction, commissioning, and operations of the project are in line with expectations and to evaluate performance.

The Private Partner — as the entity leading the project’s construction, commissioning, and operation — is responsible for providing the Implementation Team (during construction) and the Sponsoring Agency (during operations) with detailed, complete, accurate, and regular reporting in this regard. These requirements are specified in the Project Agreement.

This section outlines the required information and key considerations for the Implementation Team and the Sponsoring Agency.

The Implementation Team uses performance data provided by the Private Partner, which may be supplemented by its own data, independent observations and monitoring, to identify risks and inform decisions. Appropriate public reports should also be made available, ideally online.

The Implementation Team also provides relevant information to the PBI Office on a regular basis, permitting the PBI Office to build a project performance database. As outlined in other PBI Program guidelines, this growing database can be used by the City to inform future PBI project analyses and decisions.

In large and/or complex projects, the Implementation Team may hire a supervising engineer or subject matter expert(s) to monitor the construction. The Sponsoring Agency may do the same for the operation of the project.

Commissioning is often a phase of the project that warrants consideration of specialized expertise to support the Implementation Team and assist in the successful transition from construction completion to operational startup.

6.1 Construction

There are usually two phases in the construction of a project: completion of design and construction, and commissioning.

6.1.1 Design and Construction

During this phase, the Implementation Team has the following key responsibilities:

- Oversee and review design and construction
- Manage and coordinate City-driven design decisions
- Manage claims, scope changes, and/or relief and other events defined in the Project Agreement
- Monitor progress according to schedule and budget
- Monitor quality
- Manage and oversee communication with the general public
- Manage project information
- Authorize payment requests utilizing to public funds
- Oversee completion tests
- Oversee commissioning
- Conduct final evaluation and issue final acceptance of project work

This role is informed through use of one or more on-site engineers. The Implementation Team's site engineer(s) review regular construction reports produced by the Private Partner, and may supplement that with their independent observations and review of other data sources.

The frequency and depth of the Private Partners' reports is defined in the Project Agreement. Monthly reports are usually recommended during construction. Additional reporting should be aligned with the timing of payment requests and achievement of milestones. Reports should contain the following information:

- A description of project scope and objectives
- The original projections and actual performance for the following:
 - Overall construction schedule and progress to date, in particular a critical path analysis
 - Total capital expenditures (CapEx), total CapEx to date, and total CapEx in the reporting period
- An explanation of differences, including possible impacts to construction completion, and plans to resolve or recover them
- A revision of the following, particularly if a significant difference between projected and actual progress or costs to date are observed:
 - Schedule to complete

- CapEx to complete
- Information on new or incremental project risks
- Performance on requirements defined in the Project Agreement including but not limited to the following:
 - Quality control and quality assurance
 - Aesthetics
 - Health and safety
 - Permits and permit conditions
 - Environmental management and mitigation
 - Management of traffic, noise, vibration, dust control, etc.
 - Sustainability
 - Labor and diversity
 - Public outreach and communications
 - Licensing and certifications
- Certification, if required, from a third party that the information is correct and complete (e.g., from an Independent Engineer for purposes of releasing construction funds)

Reporting requirements should also include development of an annual budget by the Private Partner for the upcoming year, to be approved by the Implementation Team prior to the start of the year. It is recommended that the Project Agreement makes this a requirement.

6.1.2 Completion and Commissioning

Commissioning and project completion require the development of detailed plans and procedures by the Private Partner and the involvement of the Implementation Team. At Commercial Close the Project Agreement specifies the general requirements and process, including the requirement for the development of detailed documents according to a specified schedule during the construction phase.

The Implementation Team has an important role in overseeing and verifying that the project is completed according to specifications, equipment is installed and commissioned correctly, systems are integrated and coordinated, and services enter operation smoothly and meet technical standards.

The Private Partner prepares the commissioning plan, as directed under the Project Agreement, for review and approval by the Implementation Team. This is done well in advance of the commissioning process itself, usually during the development of the design and selection of systems and equipment. The plan

includes development of relevant operations manuals that may be required during the operations phase. The plan sets out protocols for testing and for involvement of the Implementation Team. It is recommended that the requirements and schedule for the commissioning plan be specified in the Project Agreement.

A supervising engineer may be retained or hired by the Implementation Team to assist with oversight of this process, review the plan, and witness and verify the fulfillment of completion test parameters. It is recommended that the supervising engineer role be explicitly required in the Project Agreement.

6.2 Operations

The operations phase of the project contains two types of activities: operations and routine maintenance, and lifecycle investments. These guidelines consider the scenario in which these activities are the responsibility of the Private Partner.

6.2.1 Operations and Maintenance

Operations consist of the daily activities necessary to keep the facility functioning, while routine maintenance consists of periodically recurring repairs and small-scale replacements of parts (weekly/monthly/annually).

The Sponsoring Agency may have the following key responsibilities during the operations phase of the project, depending on the obligations and performance requirements of the Private Partner defined in the Project Agreement:

- Monitor performance in relation to KPIs
- Manage interface issues between users and the Private Partner, and obtain user feedback
- Evaluate and manage potential changes to performance specifications or KPIs due to changing regulations, technologies, or user needs
- Manage changes planned in the Project Agreement, e.g., adjustments of payments for inflation or other parameters
- Monitor environmental impact, mitigation, and sustainability metrics

This role requires regular facility visits and review of operations reports prepared by the Private Partner. The frequency and depth of the reports depend on the complexity of the project; however, quarterly or semi-annual reports are recommended during operations. Reports should be aligned with the timing of payments by the City to the Private Partner, as applicable.

Reports should contain the following information:

- A description of project scope and objectives
- The original projections and actual performance for the following:

- Planned routine maintenance schedule and compliance to date
- Total operations and routine maintenance expenditures (OpEx) to date, total OpEx in the reporting period
- Planned and actual revenue to date (if applicable)
- Project KPIs, per the Project Agreement, including historic deductions and penalties
- An explanation of any differences and plans to resolve them if necessary
- Any revisions of the following, particularly if a significant difference between projected and actual progress or costs are observed:
 - Operations and routine maintenance budgets
 - Revenue projections over the life of the project
 - Lifecycle rehabilitation and replacement budget and schedule (see Section 6.2.2 below)
- Information on other project risks not specifically identified in the Project Agreement whose probability of occurrence may be material
- Performance on requirements defined in the Project Agreement including but not limited to:
 - Quality control and quality assurance
 - Health and safety
 - Permits and permit conditions
 - Environmental management and mitigation
 - Management of traffic, noise, vibration, dust control, etc. (e.g., as applicable during lifecycle maintenance interventions)
 - Sustainability
 - Labor and diversity
 - Public outreach and communications
 - Licensing and certifications

It is recommended that the Project Agreement require the development of an annual budget by the Private Partner for the upcoming year, to be approved by the Implementation Team prior to the start of the year.

6.2.2 Lifecycle Investments

Lifecycle investments are non-recurring refurbishment and/or replacement of facility systems or components as they reach the end of their useful life. They are required for the project to continue to provide adequate service, to comply with

operating and maintenance KPIs, and to meet the hand-back requirements at the end of the Project Agreement.

These investments are planned and occur at specific times during the Project Agreement period. Unplanned investments may also be needed. The performance and other conditions that trigger planned and unplanned lifecycle investments, and the allocation of responsibility for their cost, are specified in the Project Agreement.

The Private Partner lays out their planned scope, schedule, and budget for lifecycle investments at the beginning of the operations period. When these events occur, the Private Partner performs engineering work, which is overseen and approved by the Sponsoring Agency.

Plans should address expected operational down times, especially those that affect the facility's availability and use by the City and/or the public, and contingencies for unexpected events.

The Private Partner's regular operations and maintenance reports include updates on and changes to the lifecycle investment budget and schedule, changes to the lifecycle reserve accounts, and justification of these changes.

6.3 End of Project Agreement / Termination

The Implementation Stage ends with either all parties complying with their obligations at the end of the Project Agreement or the early termination of the Project Agreement.

Regardless of the outcome, the Sponsoring Agency should continue its role for a short time after the Project Agreement is wrapped up or terminated, working with the PBI Office to assess the performance of the project holistically, including the following considerations:

- Was the procurement process reasonable?
- Did the asset perform as expected in terms of design, specifications, lifecycle cost, and operations and maintenance costs and requirements? Did it adequately deliver the required services?
- Were environmental and sustainability objectives met?
- Did the parties involved carry out their responsibilities in a timely manner according to the Project Agreement expectations and industry best practices?
- What are the lessons learned, and can how can these be used to update best practices for the PBI Program and industry?

The depth of the review depends on the project, with more complex or innovative projects receiving closer attention.

6.3.1 Hand-Back

At the end of the contractual term, the intended outcome should be stated in the Project Agreement and may be one of the following:

- The project is decommissioned. In this case, the Private Partner is likely responsible for the costs, tasks, and permitting associated with the decommissioning process. The Sponsoring Agency is responsible for overseeing that the Private Partner complies with the contractual requirements, particularly regarding environmental cleanup and restoration and/or meeting social requirements as specified in the Project Agreement.
- The management of the project may be turned over from the Private Partner to the Sponsoring Agency or through a new procurement process to another operator. In this case, the Private Partner is likely responsible for ensuring the project is in good condition and has a minimum acceptable asset condition and/or remaining useful life as specified in the Project Agreement. The hand-back conditions, and criteria and methods for objectively measuring their achievement, are defined in the Project Agreement. These typically include a multi-year process prior to the end of the Project Agreement term to plan for and make the necessary lifecycle investments, prepare the project, and transition the operations. The Sponsoring Agency oversees this process, reviews reports, and is responsible for certifying achievement of the contractual requirements. The Sponsoring Agency manages the transfer of assets and records from the Private Partner to the new operating team.
- The Sponsoring Agency may negotiate an extension of the Project Agreement, following the procedures defined in it as applicable.

6.3.2 Termination

Under certain circumstances the Sponsoring Agency may decide to terminate the Project Agreement. This may be due to shortcomings on the part of the Private Partner or the Sponsoring Agency, or due to circumstances beyond either party's control, or it may be for convenience.

These scenarios and the subsequent actions are detailed in the Project Agreement.

The Implementation Team should be familiar with the termination provisions in the Project Agreement. The records the Implementation Team track and file throughout all phases of the project are important to the legal and commercial proceedings related to a termination.

Appendix A

KPIs and Performance Measurement

A1 Performance

Throughout the operations phase, the Implementation Team uses key performance indicators (KPIs) to measure the Private Partner's achievement of performance requirements. While accurate performance evaluation is relevant for most projects, it is particularly important for PBI projects where the basis of the Project Agreement is a system of incentives to achieve cost, schedule, and quality performance objectives.

The risk of achieving performance is allocated primarily to the Private Partner, with the City retaining a limited number of risks that it is in a better position to manage.

KPIs are project-specific and specified in the Project Agreement to ensure that both parties understand how the project is evaluated to determine whether it provides the desired services and meets certain performance objectives. An adequate system of KPIs includes definition of objective processes and metrics for measuring performance.

The following are examples of KPIs:

- For a highway: operational indicators may include response time of emergency vehicles to accidents, time to repair busted guardrails, wait time at toll plazas, standard pavement maintenance indicators, or the time to remove graffiti from signs
- For a water treatment plant: the concentration of various contaminants in the output water, exceeding air quality thresholds, performance of maintenance during planned down times, or the volume of water processed per day
- For a courthouse: elevator wait time and downtime, achieving room temperatures within set points, achieving lighting levels within set points, availability of court rooms, or cleanliness of facilities

The Project Agreement typically provides a reasonable period of time, referred to as cure period, for the Private Partner to resolve performance issues if and when KPIs are not achieved. To incentivize achievement of KPIs, payment deductions or other incentives are often associated with non-compliance following the cure period. They may accrue on a monthly, daily or hourly basis until the issue is resolved.

Primary responsibility for reporting of KPI achievement usually lies with the Private Partner, with escalating consequences if reporting is not timely or accurate.

Performance monitoring applies both to the oversight of the project by the Implementation Team and to broader reviews across PBI projects that the Sponsoring Agency or the PBI Office may conduct.

Performance monitoring is best carried out through a systematic approach as follows:

- KPIs are established based on measurable project performance goals and strategies and management systems to meet those goals. Performance measures are results-oriented, comparable with benchmarks, diverse enough to provide an all-encompassing view of the project, relevant over long time periods, straightforward, verifiable, and realistic.
- Performance is monitored against these KPIs. Objective and accepted methods and metrics for measuring and monitoring performance are required. The effectiveness of the management strategies under the impact of external environments or the stakeholders' internal environments is also considered.
- Measured results are reported with reference to the expected results and explanations of any variations.
- Results are evaluated to confirm whether they accomplish the goal of correctly reporting and quantifying performance over the life of the project.

In addition to using results in the contractually prescribed manner, results are used by the PBI Office to adjust best practices to ensure that future projects benefit from the accumulated experience and experience better performance.

Appendix B

Glossary and Abbreviations

B1 Glossary

Term	Definition
City	City and County of Denver.
Co-development Solicitation Process	Solicitation process in which the Procurement Team plans to select a private partner with whom to co-develop the project based on the performance requirements of a Predevelopment Agreement or similar document. The selection can be done based on an RFQ and/or RFP. See Section 10 of the Procurement Guidelines for more details.
Firm-Bid Solicitation Process	A solicitation process in which the Procurement Team issues procurement documents; interested parties respond with a firm bid, generally including firm price and financing commitments; and, proposals are reviewed by the Procurement Team to select a private partner. See the Procurement Guidelines for more details.
Implementation Team	The staff and consultants assigned by the City to manage the implementation of a PBI project following execution of its Project Agreement.
Intent to Submit Form	Form that should be submitted by the Sponsoring Agency once the project passes Gateway 2, indicating their intention to prepare and submit a business case.
Notice of Intent to Procure PBI Services	Notification issued by the PIC to the Mayor / City Council once the PBI Office has reviewed the business case and considers the project suitable and ready for PBI procurement.
PBI Model	The financial model developed by the PBI Office to evaluate the risk-adjusted cash flows of a PBI procurement method during Stage 3: Structuring. It is used to develop the project's business case and the value for money analysis. At Stage 4: Procurement it is updated based on the proposals received and/or the Preferred Proposer's proposal. It may also be used to support evaluation of the financial models received from the proposers.
PBI Pipeline	The portfolio of projects approved by the PIC for evaluation as PBIs.
PBI Screening Application	Form submitted by Sponsoring Agencies along with the CIP Discretionary Funding Form, indicating whether the project passes PBI qualification criteria.
Preferred Proposer	The highest ranked proposer selected by the City after RFP responses are received and evaluated.
Private Partner	The private development partner after execution of the project agreement.
Procurement Team	The staff and consultants assigned by the City to manage the PBI procurement process.

Term	Definition
Project Agreement	The PBI contract signed by the City and the Preferred Proposer.
Project Liaison	The staff responsible for facilitating coordination between the different entities involved in the project development process such as, but not limited to, the PIC, CAO, and the PBI Office.
Public Sector Comparator	A hypothetical scenario representing the standard government procurement method that would be used to deliver a project in the absence of a PBI procurement option.
Term Sheet	The legal document that lays out the key terms of the project. Refer to the Procurement Guidelines for more information on the contents of the Term Sheet.
Sponsoring Agency	The applicable City entity that develops and identifies potential PBI projects during the screening stage. It coordinates with and supports the PBI Office during the project screening, structuring, and procurement stages. And it leads implementation of the PBI project after execution of the project agreement. During the implementation stage it may be referred to as Implementation Agency in instances when the agency in charge of implementing the project is different from the Sponsoring Agency in prior stages.

B2 Abbreviations

Abbreviation	Description
CAO	City Attorney's Office
CapEx	capital expenditure
CAPM	capital asset pricing model
CIP	Capital Improvement Plan
CORA	Colorado Open Records Act
CPP	Capital Planning and Programming
CPR	Capital Project Request Form
DoF	Department of Finance
DSRA	debt service reserve account

Abbreviation	Description
KPI	key performance indicator
MMRA	major maintenance reserve account
NPV	net present value
OpEx	operational expenditure
PBI	performance-based infrastructure
PDA	Predevelopment Agreement
PERT	Program Evaluation and Review Technique
PIC	Performance Infrastructure Committee
PSA	PBI Screening Application
PSC	Public Sector Comparator
PW	Public Works
RFAP	request for alternative proposals
RFAQ	request for alternative qualifications
RFDP	request for detailed proposal
RFI	request for information
RFP	request for proposals
RFQ	request for qualifications
USP	unsolicited proposal
VfM	value for money
WACC	weighted average cost of capital