

Bay Area Toll Authority Oversight Committee

December 11, 2019

Agenda Item 4f

BATA Resolution No. 133 – BATA Project Risk Management Policy and Procedures

Subject: A request for Committee authorization to refer BATA Resolution No. 133 to the Authority for approval of the BATA Project Risk Management Policy and Procedures.

Background: Project risk management is a process of planning, identifying, analyzing, managing and responding to projects risks through all phases of project delivery to optimize the chances of project success. On August 28, 2018, the California State Auditor concluded their audit of the Toll Bridge Seismic Retrofit Program and found that the effective use of project risk management by Caltrans and BATA on that program resulted in significant cost avoidance and savings that should be applied on major projects across the State.

In practice, BATA has been applying Caltrans' project risk management policy on BATA directly managed projects for some time. The Auditor found and recommended that BATA formally adopt a scalable project risk management policy for directly managed projects. For projects when BATA is only providing project funding, the implementing agency would follow their own risk management policy with recommended minimum standards of care.

BATA Project Risk Management Policy

Because all BATA directly managed projects are on the State Highway System and thus require Caltrans oversight, BATA generally follows Caltrans' guidance on project risk management in practice. To fulfill the Auditor's recommendation to adopt a formal scalable risk management policy, BATA staff recommends formally adopting a project risk management policy consistent with Caltrans' guidance to maintain policy consistency on highway projects.

The guidance sets minimum risk management requirements that are scalable as shown below.

Scalability Level	Project Capital Cost Estimate (Construction and R/W)	Risk Management Requirements
0	Less than \$350,000	None
1	\$350,000 to \$1 million	Risk Register with deterministic qualitative risk analysis
2	Greater than \$1 million to \$75 million	Risk Register with deterministic or probabilistic quantitative risk analysis
3	Greater than \$75 million	Risk Register with probabilistic quantitative risk analysis

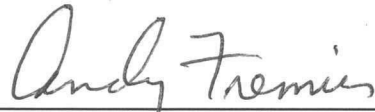
The risk management requirements may be raised or lowered by the Project Manager based on the scope and complexity of the project. The Project Manager is responsible for implementation of the policy.

Further, these policies are consistent with proposed RM3 policies and procedures that require adequate risk management practices such as maintaining a risk register with quantitative risk analysis for large projects.

Issues: None

Recommendation: Refer BATA Resolution No. 133 to the Authority for approval.

Attachments: BATA Resolution No. 133

A handwritten signature in cursive script, reading "Andy Fremier", written in dark ink.

Andrew B. Fremier

Date: December 18, 2019
W.I.: 1251
Referred by: BATA Oversight

ABSTRACT

BATA Resolution No. 133

This resolution adopts the project risk management policies for BATA Capital Projects.

Further discussion of this resolution is contained in the BATA Oversight Committee Summary Sheet dated December 11, 2019.

Date: December 18, 2019
W.I.: 1251
Referred by: BATA Oversight

RE: BATA Project Risk Management Policy

BAY AREA TOLL AUTHORITY
RESOLUTION NO. 133

WHEREAS, Streets and Highways Code Sections § 30950 et seq. created the Bay Area Toll Authority (“BATA”); and

WHEREAS, Streets and Highways Code § 30950 et seq. transfers to BATA certain duties and responsibilities of the California Transportation Commission (“CTC”) and California Department of Transportation (“Caltrans”) for the toll bridges owned and operated by Caltrans in the San Francisco Bay Area; and

WHEREAS, in accordance with Streets and Highways Code §§ 30950.2 and 30886, BATA is responsible for the administration of all toll revenues from state-owned toll bridges within the jurisdiction of the Metropolitan Transportation Commission (“MTC”); and

WHEREAS, Bay Area bridges are defined in Streets and Highways Code § 30910 to include the Antioch, Benicia-Martinez, Carquinez, Richmond-San Rafael, San Francisco-Oakland, San Mateo-Hayward, and Dumbarton Bridges, and

WHEREAS, pursuant to Streets and Highways Code § 30952, the State of California Department of Transportation (“Caltrans”) is responsible for the capital improvements of the state-owned toll bridges in accordance with programming and scheduling requirements as adopted by Authority; and

WHEREAS, Caltrans and the Authority are responsible for the Regional Measure 1 (RM1) Program, Rehabilitation (Rehab) Program and the Toll Bridge Seismic Retrofit Program (SRP) on the state-owned toll bridge,; and

WHEREAS, pursuant to Streets and Highways Code § 30914, the Authority is responsible for the budgeting and disbursing of Regional Measure 2 (RM2) toll revenues for capital projects in the Regional Traffic Relief Program; and

WHEREAS, pursuant to Streets and Highway Code § 30914.7, Authority is responsible for the budgeting and disbursing of Regional Measure 3 (RM3) toll revenues for capital and operating projects in the Bay Area Traffic Relief Plan; and

WHEREAS, pursuant to Streets and Highways Code §§ 30913 and 31010(b), the Authority is authorized to budget and fund eligible AB 1171 Capital Program projects from toll bridge seismic retrofit surcharge funds exceeding legal requirements to fund and finance the SRP; and

WHEREAS, on August 28, 2018, California State Auditor recommended that to ensure that future projects have adequate risk management, the Bay Area Toll Authority should formalize a scalable risk management policy so that projects it directs benefit from sufficient and ongoing risk management; and

WHEREAS, BATA has developed risk management policies for the implementation on BATA Toll Bridge Projects as forth in Attachment A to this Resolution, attachment hereto and incorporated herein as though set out in full; now, therefore, be it

RESOLVED, that BATA hereby adopts the attached risk management policies and procedures for the implementation on BATA Toll Bridge Projects as set forth in Attachment A; and, be it further

RESOLVED, that the Executive Director is hereby delegated the ability to make non-substantive changes to Attachment A as he or she deems appropriate.

BAY AREA TOLL AUTHORITY

Scott Haggerty, Chair

The above resolution was entered into by the Bay Area Toll Authority at a regular meeting of the Authority held in San Francisco, California on December 18, 2019.

BATA Project Risk Management Policy

BACKGROUND

Every project has risks, regardless of project size or complexity. Risk is defined as an uncertain event or condition that, if it occurs, has a negative (threat) or positive (opportunity) effect on at least one project objective (cost, schedule, scope and/or quality). The objectives of project risk management are to increase the likelihood and impact of positive events and decrease the likelihood and impact of negative events in the project. Project risk management minimizes surprises that impede successful project delivery through effective communication of risks throughout the delivery process.

On August 28, 2018, the California State Auditor concluded their audit of the Toll Bridge Seismic Retrofit Program and found that the effective use of project risk management by Caltrans and BATA resulted in significant cost avoidance and savings that should be applied on major projects across the State. In practice, BATA applies Caltrans' project risk management policy on BATA directly managed projects. The Auditor found and recommended that BATA formally adopt a scalable project risk management policy for directly managed projects. Because BATA directly managed projects generally are on the State Highway System and thus require Caltrans oversight at minimum, BATA proposes to follow Caltrans' guidance on Project Risk Management.

For projects when BATA is only a providing project funding, the implementing agency would follow their own risk management policy with recommended minimum standards of care.

BATA PROJECT RISK MANAGEMENT POLICY

The BATA Project Manager shall apply the following scalable Project Risk Management Policy on capital projects for which BATA has direct delivery responsibility as shown below.

Scalability Level	Project Capital Cost Estimate (Construction and R/W)	Risk Management Requirements
0	Less than \$350,000	None
1	\$350,000 to \$1 million	Risk Register with qualitative risk analysis
2	Greater than \$1 million to \$75 million	Risk Register with deterministic or probabilistic quantitative risk analysis
3	Greater than \$75 million	Risk Register with probabilistic quantitative risk analysis

The risks identified in the Risk Register shall be updated and managed throughout the project's entire lifecycle. The Risk Register communicates to the project stakeholders throughout the project delivery phases that the project's risks and responses are known, understood and managed.

The risk management requirements may be raised or lowered by the Project Manager based on the complexity of the project. The Project Manager is responsible for implementation of the policy. A partial list of factors that should be considered in determining a project's complexity when adjusting the risk scalability level include:

- Scope
- Environmental and Right of Way (R/W) impacts
- Political/community sensitivity
- Project location
- Sponsor's sensitivity to cost and/or schedule
- Stakeholders of the project
- Duration of the project
- New type of design or technology
- Alternative project delivery methods

DEFINITIONS

Project Risk Management (PRM) is a process of planning, identifying, analyzing, communicating, managing and responding to project risks through all phases of project delivery to optimize the chances of project success.

Qualitative Risk Analysis is the process of prioritizing risks for further analysis or action by assessing and combining their probability of occurrence and impact.

Quantitative Risk Analysis is the process of numerically analyzing the effect that cost and/or schedule related risks have on the overall project objectives. Quantitative risk analysis can primarily be performed in two different ways: deterministic or probabilistic.

Deterministic Quantitative Risk Analysis uses calculations to produce a single estimate from the effect of the risk and response efforts. Impact and probability values are assigned for discrete risks to determine what the impacts might be for each risk.

Probabilistic Quantitative Risk Analysis is a more sophisticated and comprehensive method that uses a Monte Carlo style simulation to estimate the effect of combined risks and response efforts. This method produces levels of confidence for the total project cost and schedule.

Risk is an uncertain event or condition that, if it occurs, has a negative (threat) or positive (opportunity) effect on at least one project objective (cost, schedule, scope and quality).

Risk Owner is the individual who owns, updates, manages, and statuses the identified risk(s) and is responsible for implementing the planned risk response actions until the risk is retired.

Risk Register is a document that contains a list of identified risks specific to the project, the results of a qualitative risk analysis and/or a quantitative risk analysis, the risk owners and an agreed-upon risk response strategy.

Scalable provides the level of effort that is appropriate to a particular project depending on its size and complexity.