



SAN FRANCISCO BAY AREA RAPID TRANSIT DISTRICT  
INDEPENDENT OFFICE OF THE INSPECTOR GENERAL

# LACK OF PROCEDURAL UNDERSTANDING FUELED ALLEGATIONS AGAINST CONSULTANT

## INVESTIGATION RESULTS



Intellectual property theft, improper billing, falsification of experience, and misrepresentation of work were among the allegations made against a BART Consultant (Consultant A). We did not substantiate those allegations but did determine that the allegations, submitted in good faith, resulted from a lack of procedural clarity. Procedures for contracting and professional engineering work were either not followed, misunderstood, or undocumented leading to three individuals believing that Consultant A performed work that they were not qualified to perform, violated California law, and presented the technical work of a professional engineer (Consultant B) as their own. This raised concerns of a potentially unreliable or unsafe rail system and it highlighted potential inequity, as Consultant B is a woman who routinely faces challenges in the construction and engineering industries, often being discredited for her capabilities and contributions. It also placed Consultant A in a position to defend themselves for work that BART tasked them to complete.

## RELEVANT CALIFORNIA LAW



The [California Professional Engineers Act \(CPEA\)](#) states, “no person shall practice civil, electrical, or mechanical engineering unless appropriately licensed or specifically exempted from licensure....” Collectively, civil, electrical, or mechanical engineers are Professional Engineers, which the CPEA defines as, “person[s] engaged in the professional practice of rendering service or creative work requiring education, training and experience in engineering sciences and the application of special knowledge of the mathematical, physical and engineering sciences....”

## WHY THIS INVESTIGATION MATTERS



To protect life, health, safety, and public welfare, only licensed professional engineers should be identified as having prepared technical work requiring such licensure.

Supporting equity reduces fraud, waste, and abuse by improving business performance, increasing innovation, ensuring procurement competitiveness, and enhancing resilience to crises and economic shocks.

Procedures assist in the achievement of organizational objectives by reducing errors, improving consistency, and communicating expectations.

## RECOMMENDATIONS IN BRIEF

To support equity goals and uniform processes, BART management should:

- Develop procedures for tech memos.
- Record the technical designs to BART’s official records.

See page 11 for details.

## SPECIAL NOTE

Consultant B confirmed her pronouns and consented to the OIG using them in this report.

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## ALLEGATIONS

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The independent Office of the Inspector General (OIG) received whistleblower complainants from three separate complainants concerning Consultant A and their firm. Each complainant made more than one allegation of fraud, waste, or abuse for a total of seven allegations. We did not substantiate five allegations, substantiated one, and found one to be inconclusive. The complainants' alleged that Consultant A or their firm:

1. Claimed to prepare a technical memo and designs developed by a professional engineer, obtained the documents illegally, and billed the District for the services already rendered by the actual preparer of the documents. Allegation not substantiated.
2. Misrepresented their qualifications, experience, and education to obtain contract work, which resulted in Consultant A performing critical traction power work without having the required qualifications or licensure. Allegation not substantiated.
3. Violated conflict-of-interest rules by hiring a BART employee's relative. Allegation not substantiated.
4. Billed the District for excessive and unnecessary overtime. Allegation not substantiated.
5. Received favoritism by a BART employee who bypassed contracting rules to award workplans to Consultant A's firm. Allegation substantiated, but practice previously addressed by the OIG.
6. Violated the California Professional Engineers Act by offering professional engineering services on their firm's behalf. Allegation inconclusive but there does not appear to be a violation of law.
7. Claimed credit for work awarded to and performed by a different firm. Allegation not substantiated.

We received two additional complaints that did not fall under our purview. We forwarded those complaints to the appropriate authorities for investigation. Information regarding those complaints is confidential.



### Evidence Sufficiency

The OIG reviewed over 100 documents, including contracts, workplans, invoices, and emails; conducted 20 interviews; conferred with an external engineering subject-matter expert and District officials; conducted reference checks; reviewed relevant laws; and sought guidance from the Board of Professional Engineers, Land Surveyors, and Geologist. Collectively, this evidence provides assurance that the investigation results are complete and accurate.

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## ALLEGATION ONE OF SEVEN

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In January 2019, the District contracted for professional engineering services for the development of a technical (tech) memo and designs for undertrack ductbank construction. Ductbank construction is a horizontal directional drilling designed to protect and group or consolidate electrical cables. The cables are laid in polyvinyl chloride or vinyl (PVC) pipes and bundled together and protected with either steel or reinforced concrete casings. Consultant B, who is a licensed professional engineer in the field of electrical engineering, provided those services to BART under an on-call contract awarded to her employer. The complainant alleged that Consultant A, who is not a professional engineer, stole Consultant B's work, presented it as their own, and then billed for the services already paid for by BART. We did not substantiate the allegations. However, we did confirm that Consultant B's signature was replaced by Consultant A's signature in the "prepared by" section of the revised tech memo, and that Consultant A added their name as "checked by" on the revised technical drawings. This was accepted by the BART professional engineer (Employee A) who was in responsible charge of the project in accordance with the [California Professional Engineers Act CPEA](#).

Evidence supports that in the fall of 2019, BART required revisions to the tech memo and that Consultant B was tasked with making those revisions, but not asked to sign as preparer or to check the drawings. Employee A told the OIG that they believed Consultant B was no longer providing services to BART and was unavailable when the tech memo and drawings were routed for review and signatures. Unknown to Employee A was that Consultant B was still providing services to the District under her employer's contract with BART on another project that did not involve Employee A at the time the revision was routed.

Evidence showed that in September 2020, BART obtained Consultant A's services to "support and coordinate the submission" of the tech-memo revision. This supported that Consultant A was authorized to have the tech memo and drawings. Evidence supported that the firm billed BART in accordance with their on-call agreement with the District and did not double bill for the services already rendered by Consultant B. Consultant A said that they were instructed by Employee A to sign the tech memo as "prepared by" and add their name as "checked by" on technical drawings. Employee A said they found it acceptable for Consultant A to have done so though could not recall giving those directions.



There were no procedures describing BART’s process for tech memos. Therefore, we asked what “prepared by” and “checked by” meant in the context of the tech memo and drawings, and most of those we spoke to were uncertain or could not say. However, a BART executive official said that “prepared by” means to prepare the tech-memo package, not develop the technical guidelines or drawings. The executive also said that Consultant A checked the drawings as part of preparing the package. We noted that the tech memo and drawings went through multiple checks and approvals, with most involved being licensed professional engineers. Further, the drawings were signed and sealed by a professional engineer in accordance with CPEA.

## Approvals, Checks, & Seal

### *Tech Memo*

- ✓ 10 professional engineer approvals
- ✓ 3 traction power management approvals
- ✓ 2 professional engineer checks

### *Drawings*

- ✓ Sealed by a professional engineer
- ✓ Approved by a professional engineer
- ✓ Checked by a professional engineer
- ✓ Drawn by an engineer in training

The approvals, checks, & seal support that the professional engineering work complied with CPEA requirements.

We consulted with an independent subject-matter expert (SME) in professional engineering to understand the implications of Consultant A signing the tech memo as “prepared by” and adding their name as “checked by” on the technical drawings. We also asked the SME to opine on whether any improprieties took place. The SME is a third-party unaffiliated with our office or BART. The SME saw no legal violation by Consultant A signing and initialing the documents. The SME stated it was appropriate to remove Consultant B’s name from the revision because Employee A believed Consultant B was “vacant” from the project at the time the revision was finalized and signed. Additionally, the BART contract governing the project says that design plans must be sealed by a California registered professional engineer. That responsibility went to Employee A who is registered with the State of California as a professional engineer.

During our investigation, BART employees charged with maintaining official records of BART’s technical designs informed us that the designs associated with this investigation are not on record for the District. According to those employees, the project team did not use the “BART Engineering Change Order” process to record the technical designs as required.

We saw no laws, regulations, or other legal restrictions indicating who may add their name and signature on tech memos and drawings. However, the lack of standard operating procedures that clarify the District’s requirements for tech memos and drawings gave the appearance of gender inequity and intellectual property theft. It also raised the concern that a contractor knowingly double billed for services and that Consultant A falsely presented themselves as a professional engineer. These allegations could have been avoided with clear procedural guidelines.

## Allegation One Recommendations

1. Develop standard operating procedures that clarify the District's requirements for tech memos and drawings, including the meaning of prepared and checked by as discussed in this investigatory report, and that require the completion of a BART Engineering Change Order to ensure drawings are recorded to BART's official records.
2. Record the technical drawings associated with this investigation to BART's official records.

*Management agreed with the OIG's recommendations. See page 11 for their responses.*

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## ALLEGATION TWO OF SEVEN

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The complainants to this investigation alleged that Consultant A misrepresented their qualifications, experience, and education to obtain contracts with BART, and that Consultant A and their firm performed critical traction power work without having the required qualifications or professional engineer licensure to do so.<sup>1</sup> A traction power system is a network designed to supply ongoing electrical power to an electrified rail network. The complainants further alleged that a safety incident occurred because of these misrepresentations. We did not substantiate the allegations.

We reviewed Consultant A's and their business partner's statements of qualifications, federal regulation [49 CFR 213.7](#), and the workplans awarded to Consultant A's firm; interviewed BART employees who worked with Consultant A; and consulted again with our subject-matter expert in professional engineering. We also conducted reference checks on Consultant A. The evidence supported that Consultant A was awarded contract work that they were qualified to perform and that their firm has the necessary qualifications for traction power projects, including having a licensed professional engineer as a business partner.

As for the safety matter, BART's official report on the incident stated that BART employees failed to follow standard operating procedures. Those procedures required field checks that the employees did not perform resulting in equipment contact with a live electric third rail. Consultant A was not implicated in the matter.

Finally, we confirmed that Consultant A did not state that they have a college degree on their statement of qualifications submitted with official contract proposals to BART. We did note that Consultant A's statement of qualifications shows that they attended college overseas. Foreign education systems differ and should not be equated with colleges in the United States.



### 49 Code of Federal Regulations (CFR) 213.7 - Federal Track & Safety Standards

CFR 213.7 requires the person designated to supervise track renewals and inspect tracks to have:

- At least 1 year of experience in railroad track maintenance under traffic conditions; or a combination of experience in track maintenance and college education or course training in track maintenance.
- Demonstrated to the track owner that they know and understand the requirements of the track restoration and renewal they are responsible for; can detect deviations from the requirements; and can prescribe appropriate remedial action to correct or safely compensate for deviations.
- Authorization from the track owner to prescribe remedial actions to correct or safely compensate for deviations from the requirements.

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<sup>1</sup> Consultant A left the services of the firm they worked for in our discussion of Allegation One to start their own business.

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### ALLEGATION THREE OF SEVEN

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In 2022, Consultant A hired a relative of a BART employee to provide services under a BART on-call contract. The OIG received a complaint alleging that Consultant A violated BART's conflict-of-interest rules by doing so. We did not substantiate the allegation.

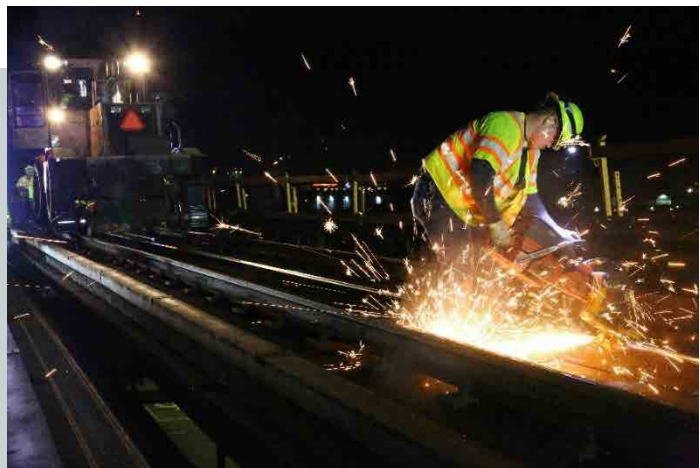
Evidence supported that Consultant A's firm served as a subconsultant to the BART on-call contract in question and that the prime contractor reported the potential conflict of interest to the Office of the General Counsel (General Counsel) and Procurement. General Counsel concluded that Consultant A's employment of the BART employee's relative did not violate District conflict-of-interest policies or state law. General Counsel noted that the BART employee does not provide any services under the contract awarded to Consultant A's firm, and that the relative does not provide any services to BART related to the BART employee's official job duties. Evidence also supported that the BART employee did not have a role in awarding work to Consultant A's firm or the prime contractor. By reporting the potential conflict to Procurement, the prime contractor met its obligations under the District's Contractor Code of Conduct and contract terms.

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### ALLEGATION FOUR OF SEVEN

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The fourth allegation claimed that Consultant A routinely billed BART for unnecessary and excessive overtime. We did not substantiate this allegation. However, we did confirm that Consultant A worked overtime without obtaining prior approval from the BART project manager, as required under the contract. The project manager later approved the overtime and informed Consultant A that they must obtain prior approval for overtime in the future. According to the project manager, they confirmed the work was done and that Consultant A performed overtime to support completing the project. The project manager said that overtime is common for the work Consultant A was performing for the District because it requires system shutdowns that can be minimized with overtime. We considered the matter corrected based on the project manager's actions.



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## ALLEGATION FIVE OF SEVEN

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The fifth complaint alleged that a BART employee awarded Consultant A's firm workplans under on-call contracts despite qualified firms already being subconsultants to those contracts. We substantiated this allegation.

During a 12-month period from February 2022 through January 2023, Consultant A's newly created firm was added as a subconsultant to four of the District's on-call contracts and awarded workplans totaling approximately \$2.2M. For three of the four additions, a BART employee either directed the prime contractor to add Consultant A's firm as a subconsultant or introduced the prime contractor to Consultant A for the purpose of fulfilling workplans. The three workplans accounted for \$1.6M awarded to Consultant A's firm. BART's agreement manager approved all four of the additions. However, BART contract terms state that subconsultants may be added only for "specialized skills" not already available from the prime contractor or its subconsultants. The services to be rendered by Consultant A's firm were not specialized and the prime contractors with active on-call contracts at the time had committed to providing those services using their existing subconsultants.

We addressed subconsultant favoritism and not abiding by the BART subconsultant addition process in a prior investigation. We issued a report on the matter on [February 3, 2023](#).<sup>2</sup> The additions we investigated here took place prior to that report and BART agreed to implement reforms in the subconsultant addition process. Those processes are in development.



### February 2023 Report Recommendation

BART management should implement written workplan selection guidelines that create more transparency and support accountability in how firms are chosen to perform work under their on-call contracts. Some options include a rotational basis that results in firms receiving work in a sequence, or having all firms with on-call contracts submit workplan proposals for evaluation. Regardless of the option chosen, the process should minimize the risk that favoritism is the driver or gives the appearance of being the driver behind the selection. The guidelines should include a requirement to consider overhead rates in the selection decision and to document the rationale for the selection for future reference.

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<sup>2</sup> Workplan Selection Process Gives Appearance that Favored Firms Could Receive an Unfair Advantage (7/8/22)



## ALLEGATION SIX OF SEVEN

The sixth allegation claimed that Consultant A is prohibited by the [California Professional Engineers Act \(CPEA\)](#) to offer professional engineering services or to sign contracts for such services on their firm's behalf. Available evidence supports that there was no violation. However, we consider our finding inconclusive because the California Board of Professional Engineers, Land Surveyors, and Geologists (Board) has not responded to our February 2023 request for assistance on the matter. The Board is responsible for enforcing CPEA. Therefore, we acknowledge that they could disagree with our finding and their conclusions would be the leading authority.



[California Professional Engineers Act § 6730-§ 6738](#) and [California Code of Regulations \(CCR\) § 404.1](#) support the OIG's interpretation that Consultant A is not prohibited by law from offering professional engineering services or signing contracts for such services on behalf of their firm.

### *CPEA § 6730-§ 6738*

- ✓ *§ 6730* - Practicing engineer must be licensed in their branch of offered engineering. Consultant A's firm employs licensed professional engineers who offer services in their branch of engineering. This includes a partner to the firm.
- ✓ *§ 6735.3* - Engineering documents must be prepared, signed, and sealed by a professional engineer. Consultant A's firm employs licensed professional engineers who meet this requirement, including a partner to the firm.
- ✓ *§ 6738* - An unlicensed person may be a partner if there is also a partner who is a licensed professional engineer in the branch of offered engineering. Consultant A's business partner is a licensed professional engineer in the branch of offered engineering.

### *CCR § 404.1*

- ✓ *§ 404.1* - A licensed professional engineer must be in responsible charge of projects requiring services in their branch of engineering. Consultant A's firm employees licensed professional engineers who meet this requirement, including a partner to the firm.

We also confirmed that CalTrans, LA Metro, and San Francisco City and County allow for non-licensed administrators to offer and execute contracts for professional engineering services on behalf of their employer. One procurement professional noted that some engineering contracts are for multiple disciplines, and it would be impractical to have them all submit a written proposal and execute the contract for their firm. Likewise, many firms employ multiple professional engineers and their availability under a contract may change, meaning the person who signed the contract could be replaced by a different professional engineer. Such issues support that CPEA differentiates professional engineering services offered and provided by an individual versus a firm. The OIG believes that this evidence supports that it is acceptable for Consultant A to have offered professional engineering services and to sign contracts for those services for their firm.

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**ALLEGATION SEVEN OF SEVEN**

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The seventh allegation claimed that Consultant A's firm took credit for another firm's work on a BART project. We did not substantiate the allegation. We confirmed that BART issued a contract workplan to Consultant A's firm for the project in question.

## MANAGEMENT RESPONSE

Allegation One Recommendations	
<b>1 Recommendation:</b>	Develop standard operating procedures that clarify the District's requirements for tech memos and drawings, including the meaning of prepared and checked by as discussed in this investigatory report, and that require the completion of a BART Engineering Change Order to ensure drawings are recorded to BART's official records.
<b>Implementation Date:</b>	May 1, 2024
<b>Corrective Action Plan:</b>	This action has already begun with a draft template for Tech Memos and a revision to the Design Quality Management Plan expected to be complete in May 2024. The Design Quality Management Plan will include definitions and requirements for BART Engineering Change Orders (BECO).
<b>2 Recommendation:</b>	Record the technical drawings associated with this investigation to BART's official records.
<b>Implementation Date:</b>	April 1, 2024
<b>Corrective Action Plan:</b>	Management will ensure that the technical drawings associated with this investigation are included in the official project files.

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