

**Los Angeles County
Metropolitan Transportation Authority
Office of the Inspector General**

**Review of I-405 Sepulveda Pass
Widening Project
Community Claims Process**

Report No. 13-AUD-10

June 12, 2013



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Metro

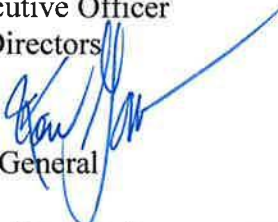
Los Angeles County
Metropolitan Transportation Authority

Office of the Inspector General
818 West 7th Street, Suite 500
Los Angeles, CA 90017

213.244.7300 Tel
213.244.7343 Fax

DATE: June 12, 2013

TO: Metro Chief Executive Officer
Metro Board of Directors

FROM: Karen Gorman 
Acting Inspector General

SUBJECT: Review of I-405 Sepulveda Pass Widening Project Community Claims Process
(Report No. 13-AUD-10)

EXECUTIVE SUMMARY

On December 13, 2012, the Board of Directors of the Los Angeles County Metropolitan Transportation Authority (Metro) directed the Office of the Inspector General (OIG) to conduct a review of the I-405 Sepulveda Pass Widening Project community claim process including the response time, subcontractor oversight, investigative process, and overall due diligence. (See Attachment A for the board motion.) This report does not evaluate and make any conclusions about the merit of any individual claim.

The contract between the Metro and Kiewit calls for a contractor-controlled insurance policy to handle claims. Kiewit, not Metro, is responsible and liable for community claims submitted toward the I-405 Sepulveda Pass Widening Project. Metro's Construction Relations Office is responsible for notifying the contractor of all claims received by Metro.

Since the inception of the project to November 15, 2012, 340 claims have been submitted that relate to the I-405 Sepulveda Pass Widening Project. Of this total, Metro received and forwarded 234 claims to Kiewit, and Kiewit received 106 claims directly from the claimants. Most of the claims were from commuters who claimed damage to their vehicles from construction work such as damage from traffic cones, loose steel plates, rocks, and debris. Other claims were from residents and businesses near the construction site who claimed property damage from construction work, such as cracks in the house and damage to outside property.

1. Community Claim Process

Our review found that Metro, Kiewit, and subcontractors had developed a process for processing community claims for the I-405 Sepulveda Pass Widening Project. However, the following concerns regarding the claim process were noted during our review:

- a. Written Policies And Procedures Are Not In Place. Neither Metro's Construction Relations Office nor Kiewit's Community Relations Office has written policies and

procedures in place to guide the community claim process. Lacking written policies and procedures weakens the overall control of the claim process, which may result in claims being processed inconsistently and/or not timely.

- b. Independent Appeal Process Should Be Developed. Kiewit gave claimants 30 days to submit additional supporting documents from the date of the denial letter for Kiewit to reconsider their claims. However, the additional information and documents submitted were reviewed and processed by the same office that processed and investigated the original claim. An independent person/office should review the additional information and consider appeals.
- c. Additional Information Would Enhance Management Of Community Claims. Our review found that Kiewit's Community Relations Office claim log does not have certain key information such as claim report date, date Kiewit received claim, first contact date, claim paid date, claim denied date, and responsible entity. More comprehensive claim information will enhance management and oversight of claims by providing Kiewit personnel information to monitor and determine the status of claims, lapsed time to process claims, number of claims paid and denied, and who is responsible for handling the claims.
- d. Contractor Did Not Provide Some Requested Information. During the review, Kiewit provided numerous documents and records to the OIG. However, as of the report date, Kiewit had not provided the OIG some requested claim information such as certain construction activity logs, four claim files, an updated master claim log, and the status of 13 claims being handled by subcontractors. This information was requested during April 30 to May 6, 2013.

2. Community Claims Response Time

The majority of claims processed by Kiewit were completed within 90 days; however, there were some outliers that took over 180 days to complete. The following matters regarding the response time to handle claims were noted during our review:

- a. Aging Of Claims Handled By Kiewit. As of November 15, 2012, Kiewit took 90 days or less to process 167 (73%) of 229 completed claims, 91 to 180 days to process 29 (13%) completed claims, and over 180 days to process 15 (6%) completed claims; we were unable to determine the processing time for 18 (8%) other completed claims because relevant dates were not provided by Kiewit. As of November 15, 2012, 31 claims remained open. Of this total, 24 claims (77%) were open for less than 90 days, 1 (3%) was open 91 to 180 days, and 3 (10%) were open over 180 days; we were unable to determine the aging for 3 (10%) other open claims because relevant dates were not provided by Kiewit.

- b. Claims On-Hold Status Were Lacking Written Agreement. As of November 15, 2012, there were 8 claims (not included in the claims discussed above) being handled by Kiewit that were “on-hold” for an average of 441 days. According to Kiewit’s former Community Relations Manager, there are mutual agreements between Kiewit and the claimants to place these claims on-hold until construction is substantially completed. However, we found that only one of these claims has an agreement to put the claim on hold documented in writing. The manager stated that the other mutual agreements were reached verbally. All agreements should be documented.
- c. Clarification Needed Concerning Responsibility Of Pothole Damage Claims. In several instances, the Metro Construction Relations Office directed Kiewit Community Relations Office to pay pothole damage claims which had been initially denied by Kiewit. Kiewit believed that these claims should be handled by Caltrans. However, the contract with Kiewit states that: “The Design Builder shall be responsible for all maintenance work normally performed by Caltrans.”

3. Investigative Process and Due Diligence

Kiewit paid 40% of the total claims completed and the subcontractors paid 11% of claims completed. None of the 34 claims for property cracks were paid. Kiewit’s decision to deny these claims was based mainly on pre-construction survey inspections and pictures, vibration monitoring reports, daily construction activity reports, and on-site inspections. We found that for most of the claims, the required forms and actions were documented in the claim files. However, our review of 69 completed claims identified instances where the required documents and actions were not in the claim files:

- a. Some Claim Files Were Missing The Required Checklist Or Incident Report. Most of the claim files reviewed contained the third party claims checklist (81%) and the incident report (78%); however, 13 claim files (19%) did not have checklists and 15 claim files (22%) did not have incident reports. Therefore, it is not clear if all procedures were followed consistently; and in some cases, it is not clearly documented how decisions were made and approved.
- b. Some Claims Lack Evidence Of Investigation. Most (90%) of claim files reviewed contained evidence of an investigative process (such as review of daily construction activity reports, review of vibration monitoring report, and inspection of damaged property). However, 7 (10%) claim files did not contain documentation of investigative actions. Therefore, it is not clear what, or if any investigation, took place for these claims.
- c. Some Claims Lack Evidence Of Contact With Claimant. Most (81%) of the claim files reviewed contained evidence of contact with the claimant (such as visits to the claimant’s home, telephone calls, or emails to claimant); however, 13 (19%) of the claim files did not contain documentation of contact with the claimant. Therefore, it is unclear if those claimants were notified during the process to investigate the claims.

- d. Some Denial Letters Were Missing Or Did Not Cite The Reason for Denial. Kiewit could not locate the denial letter for 3 claims, and the denial letter for 2 claims did not cite the reason for denial. Therefore, the files are not complete, and those two claimants for whom the claim was denied received no further explanation.

4. Subcontractor Oversight

Kiewit forwarded 68 claims to 9 subcontractors to process the claims because the claims were related to their work and to pay claims if appropriate. Our review found that Kiewit's oversight of its subcontractors needed improvement:

- a. A Subcontractor Did Not Provide Requested Information. On January 28, 2012, the OIG requested 4 claim files from Foundation Pile. Although the OIG made numerous follow up requests via telephone calls and emails, Foundation Pile did not return our calls or provide the requested information. The OIG commenced legal action to obtain the subcontractor's cooperation and served Foundation Pile with a subpoena for the records related to these claims. Subsequent to receiving the subpoena, Foundation Pile provided the requested claims information on June 10, 2013. However, there was insufficient time for us to analyze this information before the issuance of this report on June 12, 2013.
- b. Subcontractor Could Not Locate Three Claim Files. Statewide Traffic Safety could not locate information concerning three claims files we requested. Subcontractor personnel claimed that they did not receive these claims from Kiewit. After we brought this matter to Kiewit's attention, these claims were sent to Statewide.
- c. Increase Monitoring Of Claims By Kiewit. Kiewit's Community Relations Office did not maintain information for determining the status and the outcome of claims tendered to subcontractors such as the date the claim was tendered to the subcontractor, date and amount paid, and denial date.

5. Other Observations

- a. Metro Needs To Increase Follow-up On Claims Status And Outcome. The Metro Construction Relations Office follows up on certain claims to answer questions or inquires. However, they did not have a process in place to periodically obtain the status and outcome of all claims.
- b. Dates On Metro's Letters Sent To Claimants Were Incorrect. For three claims, incorrect dates were on the Metro letters sent to the claimants that were dated 2 months prior to the claimants' report date.

- c. Tort Claims And Litigation. In addition to the 340 claims received as of November 15, 2012, there are a number of tort claims and lawsuits that were filed in regard to construction activity on the I-405 project.

6. Opportunities for Improvement

This report makes several recommendations to improve the claims process, processing time, investigative process, and subcontractor oversight; and to promote public confidence in the community claim process.

OBJECTIVES, SCOPE, AND METHODOLOGY OF REVIEW

The objectives of the review were to evaluate the (1) community claims process, (2) response time to process claims, (3) investigative process, (4) subcontractor oversight, and (5) overall due diligence of claims for alleged damage associated with the I-405 Sepulveda Pass Widening Project. This review is not for the purpose of determining the merit of any particular claim.

The scope of our review covered community claims submitted by claimants from the beginning of the project in late 2009 to November 15, 2012. The scope of our review was limited because Foundation Pile Inc., a subcontractor for the I-405 Project, did not promptly provide us with the information requested to perform our review, and there was insufficient time to analyze the information before the issuance of this report. Also, Kiewit did not provide certain claim documentation as of the report date.

To achieve the objectives of this review, we requested information that relates to the Board motion from Metro's construction relations office, Kiewit, and subcontractors, and requested supplemental relevant information that would provide further insight. In addition, we:

- ◆ Reviewed the sections of the design build contract between the Metro and Kiewit Pacific Company (Kiewit) that concerns community claims and liability.
- ◆ Visited and interviewed the Metro Construction Relations Manager and the Metro Project Director for the I-405 Sepulveda Pass Widening Project to determine Metro's role in the claims process.
- ◆ Visited and interviewed a Principal Deputy County Counsel at Metro to gain understanding of contract language and legal matters.
- ◆ Visited and interviewed Kiewit's former Community Relations Manager and Claim Coordinator to understand Kiewit's claim process.
- ◆ Contacted three subcontractors to determine the claims process and visited two of the subcontractors' offices.

- ◆ Toured the adjacent communities that had the most claims filed by the property owners.
- ◆ Requested and obtained from both Metro’s Construction Relations Office and Kiewit’s Community Relations Office a schedule of claims and related-relevant information.
- ◆ Reviewed samples of claims handled by Kiewit to determine whether each claim’s decision is supported by a due diligent review and investigation, and claimants were notified of the receipt of the claim and final decision.
- ◆ Reviewed samples of claims handled by subcontractors to determine whether each claim’s decision is supported by a due diligent review and investigation, determine whether claimants were notified of the receipt of the claim and final decision, and evaluate the oversight over subcontractors’ claim process.
- ◆ Determined claim process time and aging of claims.

This review is not an audit; therefore, Government Auditing Standards are not applicable to this review.

BACKGROUND

A. I-405 Widening Project

In April 2009, Metro awarded a design build contract to Kiewit Pacific Company (Kiewit) for the construction of the I-405 Sepulveda Pass Widening Project. This project (1) adds a 10-mile HOV lane on the northbound I-405 between the I-10 and US-101 Freeways, (2) requires removing and replacing the Skirball Center Drive, Sunset Boulevard and Mulholland Drive bridges, (3) realigns 27 on-and off-ramps, (4) widens 13 existing underpasses and structures, and (5) constructs approximately 18 miles of retaining and sound walls. The project might have certain impacts on the adjacent communities including the traffic, noise, vibration, and property damages. Metro has established a Construction Relations Office for this project that carries out community meetings and receives community claims.

B. Responsibility/Liability for Community Claims

From review of the I-405 Construction Contract and discussions with Metro and Kiewit officials, we determined that Kiewit, not Metro, is responsible for processing and liable for valid community claims submitted toward the I-405 Sepulveda Pass Widening Project. The contract between Metro and Kiewit states that Kiewit is responsible for managing the project by reducing the risk of claims or loss to third parties and for insuring against claims for property damage arising out of its construction activities. Section 7.10 (Prosecution of Claims) of the contract states:

“Unless otherwise directed by LACMTA in writing, the Design Builder shall be responsible for reporting and processing all potential claims by the Design Builder, LACMTA, or other additional insureds against the insurance required to be provided. The Design Builder agrees to report timely to the insurer(s) any and all matters that may give rise to an insurance claim and to promptly and diligently pursue any and all insurance claims on behalf of LACMTA, whether for defense or indemnity or both. LACMTA agrees to promptly notify the Design Builder of LACMTA’s incidents, potential claims, and matters that may give rise to an insurance claim by LACMTA, to tender its defense or the claim to the Design Builder, and to cooperate with the Design Builder as necessary for the Design Builder to fulfill its duties hereunder.”

A Principal County Counsel at Metro stated that Metro has moved from an owner controlled insurance program to a contractor controlled insurance program in its major construction projects. The design build contract between the Metro and Kiewit requires certain insurance policies and limits, and some third party claims may fall under those coverages. Community claims can be handled by the contractor and/or through the contractor’s insurance program as required in the contract. Metro’s Construction Relations Office is responsible for notifying the contractor of all claims received by Metro.

Kiewit’s subcontractors are responsible to process and liable to pay for any valid claims that arise out of their construction activities on the project.

C. Historical Data on Claim Payouts and Denials

Because community claims are usually handled and processed by contractors and their insurance carriers, Metro Construction Relations Office does not have historical data related to claim payouts and denials for construction projects. We contacted personnel from the County Counsel, Highway Capital Management, Risk Management, and Caltrans¹ to ascertain whether they had or knew where to obtain such data. None of the individuals we contacted had this information. The Caltrans official advised us that Caltrans construction contracts also require the construction contractor to be responsible for claims. When claims are submitted to Caltrans, they are referred to the contractor for the project.

D. Actions to Document Impact of Construction Activity

1. Pre-Construction Surveys

At the beginning of the project, Kiewit selected 256 properties east of the I-405 freeway (mostly residents and some businesses) for pre-survey (inspections and photographs of property) based on their proximity to construction activities. Of this total, 193 homes and businesses east of the freeway abutting Sepulveda Boulevard or the freeway were pre-surveyed with the owners’ permission. According to Kiewit staff, homes west of the freeway were not pre-surveyed prior

¹ We contacted a Deputy District Director for California Department of Transportation District 7 (Los Angeles and Ventura Counties).

to construction because construction activities occurred mainly on the eastside of the freeway, including pile driving at the Montana Avenue Bridge.

2. Hiring of Experts.

During the construction period, Kiewit and its subcontractors hired experts as subcontractors to monitor vibration or provide assessments. For example:

- a. Vibration Monitoring For Pile Driving. In December 2010, Foundation Pile (subcontractor) conducted pile driving on the eastside of the I-405 Freeway at Montana Avenue. Foundation Pile hired a third party firm, EarthSpectives, to conduct vibration monitoring. Four seismographs were used to collect data on vibration levels. Two seismographs were placed on the eastside of the I-405 freeway and the two others were placed on the westside of the freeway. The report from EarthSpectives concluded: “These levels of vibration are not considered significant and are not considered harmful for nearby impacted structures.” To determine if there is a history that might impact the credibility of the third party firm, we contacted the owner of EarthSpectives who said that in the past 3 years they conducted vibration monitoring on about 10 to 15 projects (other than the I-405) for Foundation Pile. He said that for vibration monitoring on other projects, some vibration levels might have exceeded the threshold cited in the Caltrans Vibration Guidance Manual for potential damage to structures. When this occurred on other projects, they immediately notified Foundation Pile. For the I-405 project, the measured vibration levels did not exceeded the threshold for potential damage to structures.
- b. Vibration Monitoring for Drilling Activities. Kiewit hired TGR Geotechnical (TGR), a third party firm, to monitor vibration levels of drilling activity at the sound walls along the I-405 freeway. We contacted the TGR President who stated that in the past 3 years, TGR had not performed vibration monitoring tests for Kiewit on any other projects except for the vibration monitoring conducted on the I-405 project. He said that all of the vibration readings on the I-405 project were below the threshold for potential damage to structures according to safe levels addressed by the United States Department of the Interior.
- c. Inspection Of Cracks in Homes. Kiewit hired Caston, Inc. (Caston), a plastering expert, to inspect six homes of residents who submitted claims for property cracks. A report prepared by Caston on March 4, 2011, stated: “All of the areas where we observed cracking seem to be structurally sound and pose no immediate threat of failure. Without having evidence of the condition of these residences prior to the new construction operations on the 405 Freeway, it is impossible for us to accurately comment on what caused the cracking to occur.” We contacted the Office Manager who stated that Caston had not performed any prior inspections or work for Kiewit except for the inspection of homes related to the I-405 construction project.

RESULTS OF REVIEW

A. Community Claim Process

1. Metro Claim Process

The Metro Construction Relations Office receives claims directly from claimants through Metro Customer Relations or from Caltrans. Metro has not developed written procedures for this function. We interviewed staff who advised us that when a claim is received, the Construction Relations Officer:

- ◆ Enters the claim information into a manual field report log and assigns a sequential control number.
- ◆ Prepares a “Community Relations Field Report” that contains the claimant’s contact information and narrative description of the claim.
- ◆ Reviews the claim to determine if the claim concerns the I-405 project. If so, sends a letter notifying the claimant that the claim was submitted to the construction contractor (Kiewit) for investigation and resolution; and the claim will be handled through Kiewit’s claim process.
- ◆ Forwards the notification letter, the Community Relations Field Report, and any supporting documents submitted by the claimant to Kiewit.
- ◆ Stores documents in Metro’s IQ9 project database.
- ◆ Follows up periodically on certain claims with Kiewit.

The Construction Relations Manager stated that once a claim is submitted to Kiewit, Metro normally does not have any further involvement. The claims are handled by the contractor and subcontractors. Kiewit does not always provide results of claims to Metro’s Construction Relations Office. The office only follows up on the status of certain claims.

2. Kiewit’s Claim Process

Kiewit receives claims forwarded by Metro and directly from claimants. Kiewit investigates claims for which it is responsible and forwards other claims for which subcontractors are responsible to the appropriate subcontractor. Kiewit has not developed written procedures for this function. Kiewit’s former Community Relations Manager provided us with a flowchart of the third party claims procedures (see Attachment C) and described their third party claims process as follows:

- ◆ The Metro Construction Relations Office forwards claims received from the public to Kiewit on a standard form called “Community Relations Field Report.” Kiewit also receives some community claims directly from claimants.
- ◆ Kiewit staff assigns a control number and records the claim information onto a log.
- ◆ Kiewit’s Project Claims Coordinator investigates the claim by contacting the claimant to gather additional information, and attempts to verify the damage incident through

- review of daily work activity records, vibration monitoring records, traffic control records, field inspections, photographs, witnesses, supervisor interviews, weather reports, equipment records, roadway maintenance records, etc. (See Attachment H for a sample of vibration report conducted by a third party.)
- ◆ The Project Claims Coordinator uses a standard checklist (“Third Party Claims Checklist”) to record the claimant’s contact information, incident background, communication log, coordinator’s investigation notes, and other information as necessary. (See Attachment E for sample of Kiewit’s Third Party Claims Checklist.)
 - ◆ At the completion of the investigative process, the Project Claims Coordinator completes a claim summary (Community Relations Incident Report) that includes the claim information and investigation result, and gives a recommendation for resolving the claim. (See Attachment D for sample of Kiewit’s Community Relations Incident Report.)
 - ◆ Kiewit’s Community Relations Manager reviews the incident report, and:
 - If the claim has potential to cost more than \$2,500, involves personal injury, or requires assistance from the insurance administrator, the manager instructs the Project Claims Coordinator to file the claim with Kiewit’s Insurance Department, which will monitor the case. Kiewit’s Community Relations Office for the I-405 project follows up quarterly with the Insurance Department on the status of claims.
 - If the investigation finds that Kiewit is at fault, the manager instructs the Project Claims Coordinator to prepare settlement documentation and Kiewit makes payment to the claimant.
 - If the investigation finds that Kiewit is not at fault, the manager instructs the Project Claims Coordinator to prepare a denial letter to the claimant. The claimant has 30 days to provide additional documentation for the Coordinator to review and consider. If the claimant does not provide additional documentation within 30 days, the Kiewit Community Relations Office closes the case. Kiewit does not have an appeal process that is handled by person independent of the original claims investigation process.
 - If the Project Claims Coordinator investigation finds that the claim concerns a subcontractor, the manager instructs the coordinator to send a tender letter to the subcontractor or subcontractor’s insurance company. Meanwhile, Kiewit sends a letter of denial to the claimant stating that Kiewit is not responsible for the claim and the claim concerns a subcontractor which will handle the claim. The subcontractor and/or its insurance company is responsible for investigating and resolving the claim, paying for any damage that is the fault of the subcontractor, and issuing a denial letter if the subcontractor is not at fault. The Kiewit Project Claims Coordinator maintains a separate log showing the status of claims forwarded to each subcontractor, and periodically follows up on the case status of these claims.

Kiewit’s former Community Relations Manager stated that some claims are forwarded to the company’s headquarter in Nebraska, where the insurance department handles the claims and his department does not always receive the status of claims from the insurance department.

The manager also stated that some subcontractor's insurance companies do not provide result of claims to his department. See Appendixes A-1 & A-2 for examples of investigation process on claims denied, and see Appendixes B-1, B-2, & B-3 for examples of investigation process on claim paid.

3. Subcontractor Claim Process

As of November 15, 2012, Kiewit forwarded claims to nine subcontractors. We contacted three of the subcontractors (Statewide Traffic Safety, Foundation Pile, and Drill Tech Drilling) that received the most claims, interviewed personnel in charge of third party claims, and obtained the following claim processing information:

- ◆ Statewide Traffic Safety (Statewide) layed traffic cones in construction areas on the I-405 project. Statewide forwards most claims to its insurance carrier for processing and handling. A person in charge of claims gathers necessary documents to help with the investigative process. Settlement or denial letters are generated by the insurance carrier and sent to the claimants. Claims related to Statewide were mostly from commuters who claimed damage to their vehicles from hitting cones on freeway.
- ◆ Foundation Pile performed pile driving services on the I-405 project. It handles most claims in house. Claims related to Foundation Pile were primarily from residents who complained of cracks inside their home due to vibration. A Foundation Pile representative stated that usually a vibration test is conducted by an independent firm when pile driving activity is performed near structures. The company's decision to pay or deny a claim mostly relies on vibration reports to determine whether the recorded vibration level was above the threshold that would potentially cause damage to structures. The company prepares settlement or denial letters and sends them to the claimants.
- ◆ Drill Tech Drilling (Drill Tech) performed drilling services such as at the sound walls on the I-405 project. The company's legal department handles most of the claims, and some complex claims are forwarded to its insurance carrier. The legal department conducts interviews, reviews project related documents, and investigates the matters involved with the claims. Settlement or denial letters are prepared by either the legal department or the insurance carrier. Claims made toward Drill Tech were primarily from commuters who alleged vehicle damage from debris, concrete slurry, and drill fluid. We also obtained written claim processing procedures from Drill Tech's legal department.

Finding 1 – Written Policies and Procedures Are Not In Place.

We found that neither Metro’s Construction Relations Office nor Kiewit’s Community Relations Office have written policies and procedures in place to guide the community claim process. Written policies and procedures will help to ensure that correct processes are followed, provide means of performance measurement, and define responsibilities.

Recommendation 1. The Metro Construction Relations Office should develop written policies and procedures for the community claim process, and advise the Kiewit Community Relations Office to develop written policies and procedures for its community claim process, including oversight of subcontractor claim process.

Finding 2 – Independent Appeal Process Should Be Developed.

Our review found that the appeal process for claims denied by Kiewit was insufficient. Kiewit gave claimants who appealed denials 30 days from the date of the denial letter to submit additional supporting documentation for Kiewit to reconsider their claims. However, additional supporting documents and/or rebuttals were reviewed and processed by the same office that processed and investigated the original claim. We believe that Kiewit should have an independent person/office review the additional information submitted by claimants. This would increase public confidence in the claims process.

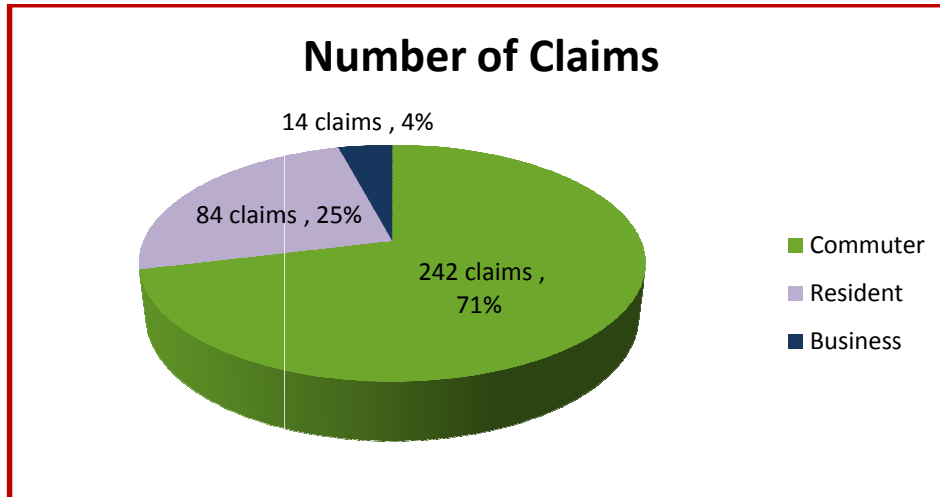
Recommendation 2. The Metro Construction Relations Office should work with Kiewit to explore adding an independent second level reviewer to consider appeals on denied claims.

B. Summary of Claims

1. **Number Of Claims Received.** As of November 15, 2012, a total of 340 claims² were received consisting of 234 claims forwarded from Metro and 106 claims received directly by Kiewit. Of this total, 242 (\$264,760) claims were from commuters, 84 claims (\$128,896) were from residents, and 14 claims (\$39,960) were from businesses (see Chart A below and Table 1 in Attachment B-1 for more detail). The total dollar amount claimed may be greater because 59 claims were submitted without a claim dollar amount.

² Many of these claims were from commuters who claimed damage to their vehicles from construction work such as damage from traffic cones, loose steel plates, rocks, and debris. Other claims were from residents and businesses near the construction site who claimed property damage, such as cracks in the house and outside property damage.

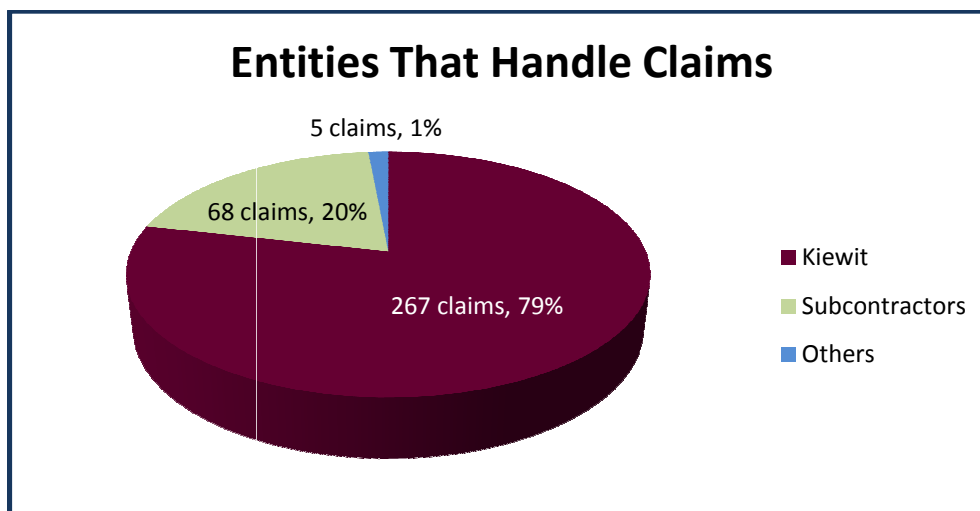
Chart A – Claims By Type of Claimant



Based on our review of the information provided by the Metro and Kiewit for the 340 claims, we found: 29 claims (\$233,513) had claim amounts of more than \$2,500; 252 claims (\$200,103) had a claim amount of less than \$2,500; and 59 claims did not include a dollar claim amount when submitted. (See Table 2 in Attachment B-1 for details.)

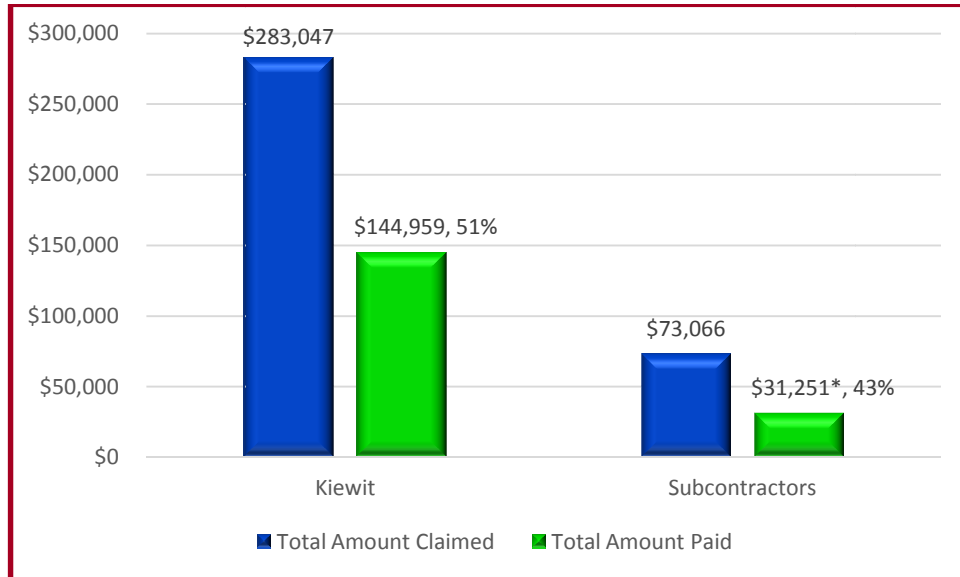
2. Entity Responsible For Handling Claims. Of the 340 claims received, 267 (\$345,789) were handled by Kiewit; 68 (\$86,627) were forwarded to Kiewit’s subcontractors; and 5 (\$1,200) were forwarded to other entities (Caltrans and Chevron) who are responsible for the claims (see Chart B below and Table 3 in Attachment B-1 for more detail).

Chart B – Claims Handled By Contractor, Subcontractors, And Others



3. Claims Paid. Kiewit paid \$144,959 (51%) of the \$283,047 claimed; 91 of 229 completed claims were paid which is 40% of the total number of claims Kiewit completed (see Attachment B-3). The subcontractors paid a total of \$30,745 and Kiewit paid \$506 (total \$31,251, or 43%) of the \$73,066 claimed; 5 claims were paid which is 11% of the 47 completed claims. (See Chart C below and Attachment B-4 for more detail.)

Chart C – Amount Claimed and Paid by Contractor and Subcontractors



* The \$31,251 in the chart is comprised of \$506 paid by Kiewit after subcontractor denied the claim and \$30,745 paid by subcontractors.

4. Claims Completed By Kiewit. Of 267 claims handled by Kiewit, 229 claims were completed as of November 15, 2012. Of the 229 completed claims, 13 were submitted by businesses, 152 were submitted by commuters, and 64 were submitted by residents who live near the I-405 Project. Of this total, 91 claims (40%) were paid and 138 claims (60%) were denied (see Attachment B-3).

We analyzed the number of completed claims paid by the type of damage claimed, and found that certain categories of damages had a higher pay-out ratio than other categories. Table A below summarizes the number of claims paid for certain damage categories for 147 of the 229 completed claims (see Attachment B-3 for a schedule showing the outcome of all 229 completed claims):

Table A – Claims Handled By Kiewit Completed And Paid By Damage Category

Categories of Claims	Number of Claims Completed	Number of Claims Paid	%	Note
Businesses				
Construction crew/truck involved damage	6	6	100%	a
Commuters				
Windshield damage	36	14	39%	
Construction item/debris hit car	21	12	57%	a
Tire damage	20	4	20%	
Hit steel plate	16	14	88%	c
Residents				
Property cracks	34	0	N/A	b
Construction crew/truck involved damage	8	6	75%	a
Pool damage	3	3	100%	d
Dust damage	3	0	N/A	
TOTAL	147	59	40%	

Notes:

- a. For many of these claims, Kiewit’s work crews were at the scene when the damage occurred; thus Kiewit was able to corroborate the claimants’ report for most of these claims.
 - b. No claims for property cracks were paid. One property crack claim was settled thru litigation together with another claim for tree damage. The settlement terms are not public; thus, we could not determine the amount of the settlement for property cracks, if any.
 - c. Includes 10 claims for damages from a loose steel plate. Kiewit’s investigation confirmed the claimants’ statements and all 10 of the claims were paid.
 - d. All 3 claims for pool damage were paid because Kiewit’s investigation found that the dirt in the pools came from construction activities.
5. Claims For Property Cracks. Forty-seven claims were for residential property cracks (41 claims handled by Kiewit, of which 34 were completed; and 6 claims handled by subcontractors). As of November 15, 2012, none of these claims have been paid. For 19

of the 47 claims, a pre-survey (pictures and inspection) was conducted of the claimant's property. Kiewit's Community Relations Manager stated that they reviewed every claim individually and thoroughly and claims were not "universally" denied. For property crack claims, Kiewit's decision to deny the claims was mainly based on pre-construction survey pictures, vibration monitoring reports, daily construction activity reports, and on-site inspections. We learned that six claimants who submitted property crack claims contacted the office of a Metro Board Director. We expanded the review to include all six of these claims (see Appendixes C-1 and C-2 for summary of these six claims).

The majority of the claims submitted as of November 15, 2012, for residential property cracks were from residents who live near construction areas between Montana Avenue and Sunset Boulevard (see Attachments B-5 and B-6 for maps of residential property cracks locations). Work activities in this area include:

- Piling driving at east side of the freeway and Montana Avenue to expand the I-405 freeway,
- Demolishing and rebuilding the Sunset Boulevard Bridge,
- Realigning Sepulveda Boulevard on the eastside of the I-405 freeway, and
- Building retaining walls adjacent to Sepulveda Boulevard.

6. Claims Received By Metro. Our review of the field report log maintained by the Metro Construction Relations Office as of November 15, 2012, found that Metro had received and forwarded to Kiewit a total of 238³ claims associated with the I-405 project. However, the last sequential number on the manually maintained log was 338, which is the number of claims mentioned in the Metro Board Motion (see Attachment A). This discrepancy of 238 versus 338 claims resulted from a data entry error when staff mistakenly skipped 100 numbers while assigning claim control numbers on the field report log. In addition, we determined that 3 of the claims forwarded by Metro were duplicates and 1 claim forwarded was not related to the I-405 project. Thus, there was a total of 234 claims received by Metro and forwarded to Kiewit.

For the 234 claims, the total claimed amount was \$264,369. Of the 234 claims, 160 claims (\$131,194) were from commuters, 66 claims (\$122,015) were from residents, and 8 claims (\$11,160) were from businesses. The total dollar amount claimed may be greater because 40 of the claims were submitted without a dollar amount. (See Table 4 in Attachment B-1 for details.)

7. Claims Received Directly By Kiewit. Kiewit received a total of 108 claims (\$171,261) directly from claimants. We found that 2 claims were duplicates totaling \$2,014. Thus, the total claim amount of 106 claims, excluding the duplicated claims, was \$169,247. Of the 106 claims, 82 claims (\$133,566) were from commuters, 18 claims (\$6,881) were from residents, 6 claims (\$28,800) were from businesses. The total dollar amount

³ We subsequently determined that 4 of the 238 claims should be omitted from the total because in three instances Kiewit had received the same claim directly from the claimant and one claim was not related to the I-405 project.

claimed may be greater because 19 of the claims were submitted without a dollar amount. Since these claims were sent directly to Kiewit, the Metro Community Relations Office was not aware of most of these claims until we advised them of this fact during a meeting on December 4, 2012. (See Table 5 in Attachment B-1 for details.)

8. Payments On Claims Received By Metro Versus Claims Received Directly By Kiewit. We compared the amount and number of claims paid between the claims forwarded by Metro and claims received directly by Kiewit. Our analysis of claims data showed that 22% of the claims received by Metro were paid while 60% of the claims received directly by Kiewit were paid, as shown below:

a. Claims Forwarded By Metro

As of November 15, 2012, Kiewit completed 183 claims forwarded by Metro. Of this total, 41 claims (22%) were paid by Kiewit. The amount claimed totaled \$211,757 and the amount paid totaled \$59,496 or 28% as shown in Table B below.

Table B – Claims Forwarded By Metro That Were Paid

	Total # of Claims	Total \$ Amount Claimed	Total \$ Amount Paid	% of Paid vs. Total \$ Claimed	# of Claims Paid	% of Paid vs. Total # Claims
Claims handled by Kiewit	183	\$ 211,757	\$ 59,496	28%	41	22%

b. Claims Received Directly By Kiewit

As of November 15, 2012, 84 claims received directly by Kiewit were completed. Of this total, 50 claims (60%) were paid by Kiewit. The amount claimed totaled \$134,032 and the amount paid totaled \$85,463 or 64%, as shown in Table C below.

Table C – Claims Received Directly By Kiewit That Were Paid

	Total # of Claims	Total \$ Amount Claimed	Total \$ Amount Paid	% of Paid vs. Total \$ Claimed	# of Claims Paid	% of Paid vs. Total # Claims
Claims handled by Kiewit	84	\$ 134,032	\$ 85,463	64%	50	60%

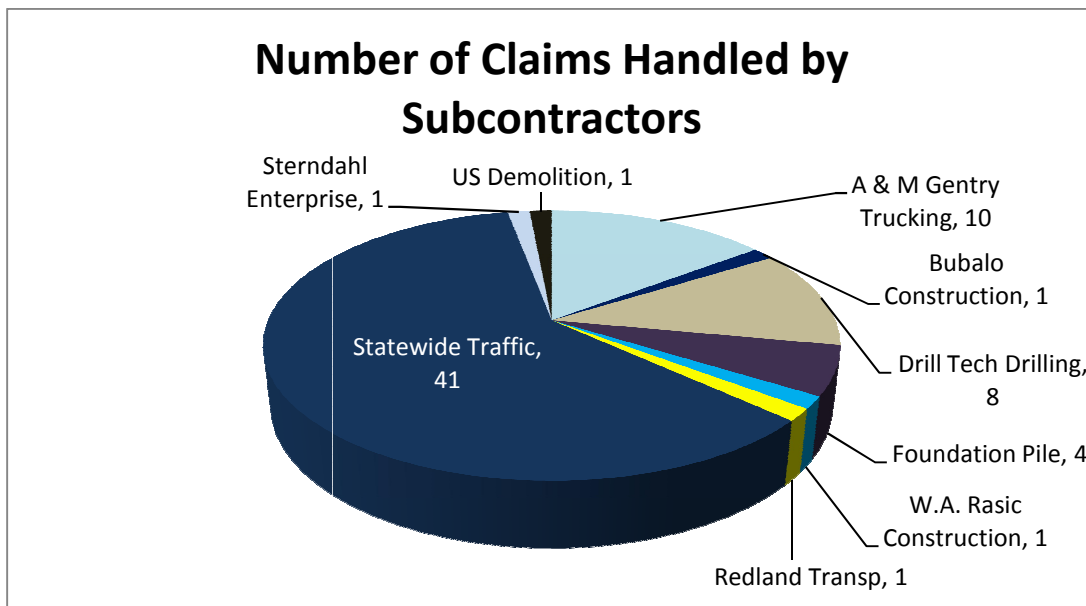
c. Reason For Payout Difference

We asked Kiewit personnel to explain the payout difference between claims forwarded by Metro and claims received directly by Kiewit. Kiewit’s former Community Relations Manager stated that: *“In summary, the high dollar cases caused the paid vs. claimed percentage to rise significantly. We are proactive when early on, it is clear we should compensate claimants for damage such as when our crews witness an incident in the field. In that case, the claim often goes directly to Kiewit. These seem to be more costly than the average.”*

Our analysis found that Kiewit received more claims for damages that were obviously caused by Kiewit. For example, 16 claims were for damages caused by Kiewit vehicles or equipment; in these instances, motorist stopped and Kiewit crews were at the scene of the incident. Also, claims were for a loose steel plate that caused damage to vehicles. For the 26 claims, Kiewit paid a total of \$49,760. These 26 claims accounted for more than half of the 50 claims paid. Without these 26 claims, the percentage of the claims paid on claims received directly by Kiewit would have been significantly lower (see Attachment B-2).

9. Claims Forwarded To Subcontractors. Kiewit forwarded 68 claims (\$86,627) to 9 subcontractors that worked on the I-405 Sepulveda Pass Widening Project. Of the 68 claims, 7 (\$4,999) were from residents and 61 (\$81,628) were from commuters. The total amount paid by the subcontractors was \$30,745 (35%). (See Chart D below and Table 8 and 9 in Attachment B-1 for additional detail.)

Chart D – Claims Handled By Subcontractors



Of the 68 claims forwarded to subcontractors, we found that 47 claims were completed by the subcontractors and 10 were open as of November 15, 2012. We do not know the status of 11 claims.⁴ Of the 47 completed claims, 43 were submitted by commuters, and 4 were submitted by residents who live near the I-405 Project. Five claims (11%) were paid and 42 claims (89%) were denied. Thirty-three of the 47 completed claims were related to vehicles hitting cones on the I-405 freeway. None of these 33 claims were paid as of November 15, 2012. According to Statewide Traffic Safety, Kiewit's subcontractor, cones are placed on the road according to construction requirements and the cone placing activity is videotaped. In addition, Statewide crews periodically inspect the placed cones about 3 to 4 times in an 8-hour shift. According to the Statewide's claims coordinator, if a vehicle hits a cone that was knocked from its original placement by another vehicle, Statewide is not liable. Statewide is responsible for damages if the cones are not properly placed by their crews or if Statewide does not make the required inspections of the cones. We found that Statewide paid one claim after our November 15, 2012, cut-off date because Statewide determined that there was a 5 hours gap between inspections of cones.

See Attachment B-4 for a more comprehensive analysis of the categories of claims processed by subcontractors including claim amount paid.

Finding 3 – Metro Did Not Have Information For All Claims.

As of November 15, 2012, the Metro Construction Relations Office received 234 community claims related to the I-405 project. Metro staff forwarded these claims to Kiewit and maintained a log and information on these claims. However, Metro staff were not aware of the 108 community claims that Kiewit received directly from claimants. We believe that Metro should maintain information on these claims in order to provide oversight and stewardship over the entire claim process.

Recommendation 3. The Metro Construction Relations Office should advise Kiewit to provide them with information and/or periodic reports on claims that Kiewit receives directly from claimants.

Finding 4 – Additional Information Would Enhance Management Of Community Claims.

Our review found that Kiewit's Community Relations Office claim log tracks third party claims by claim number, claimant information, alleged date of loss, estimated damage reserve, amount paid by Kiewit, location, claim description, status, and nature of claims. However, the claim log does not have certain key information such as claim report date, date Kiewit received claim, first contact date, claim paid date, claim denial date, and responsible entity. More comprehensive claim information will enhance management and oversight of claims by providing Kiewit personnel information to determine claim status, lapsed time to process claim, number of claims paid and denied, and who is responsible for handling the claim.

⁴ We requested Kiewit to provide the status of these 11 claims processed by subcontractors, but Kiewit did not provide the data as of the report date.

Recommendation 4. The Metro Construction Relations Office should work with Kiewit to maintain more comprehensive information in the claim log to keep track of community claims in the future.

Finding 5 – Contractor Did Not Provide Some Requested Information.

Kiewit provided numerous documents and records to the OIG. However, as of the report date, Kiewit had not provided the OIG with some requested claim information such as construction activity logs for certain dates, four claim files, updated master claim log, and the status of 13 claims being handled by subcontractors. This information was requested during April 30 to May 6, 2013. The contract between Metro and Kiewit requires Kiewit to provide records related to the contract to Metro.

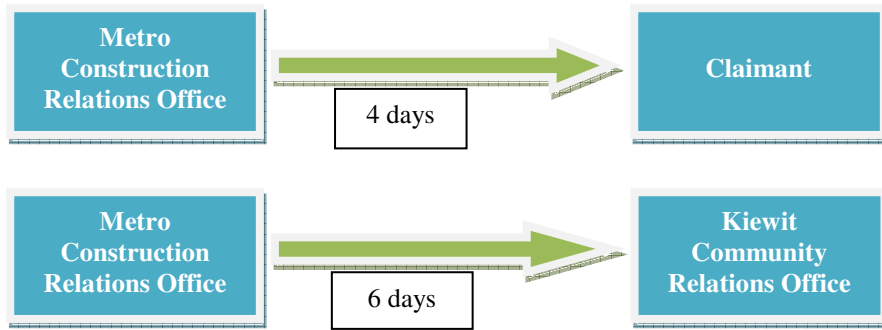
Recommendation 5. The Metro Construction Relations Office should work with Kiewit to ensure that the contractor’s claims record system can promptly provide relevant information concerning requests for information on any individual claim or group of claims to ensure that the contractor complies with contract terms and provisions concerning providing records and documents.

C. Claim Process Time

1. Metro Construction Relations Office

Our review found that Metro’s Construction Relations Office recorded claims received on a manual log. The Construction Relations Manager told us that the office began recording claims electronically after the start of this review. We requested and obtained from both Metro’s Construction Relations Office and Kiewit’s Community Relations Office a schedule of claims submitted to Metro that includes claim number, claimant information, nature of claim, type of claim, event date, report date, date Metro sent letter to claimant, date claim received by Kiewit, Kiewit’s first contact date, claim paid date, claim denied date, amount claimed, amount paid, status of claims, and other related information. The schedule we obtained contained a number of clerical errors. After reviewing supporting documentation, we made corrections to the schedule.

We determined that it took an average of 4 days from the date the Metro Construction Relations Office received a claim to the date the office sent a letter acknowledging receipt of the claim to the claimant. As stated earlier, the Metro Construction Relations Office forwards to Kiewit all claim documents including the receipt acknowledgment letter to the claimant. We determined that it took an average of 6 days from the date Metro Construction Relations Office received a claim to the date Kiewit received the claim documents. See diagrams below:



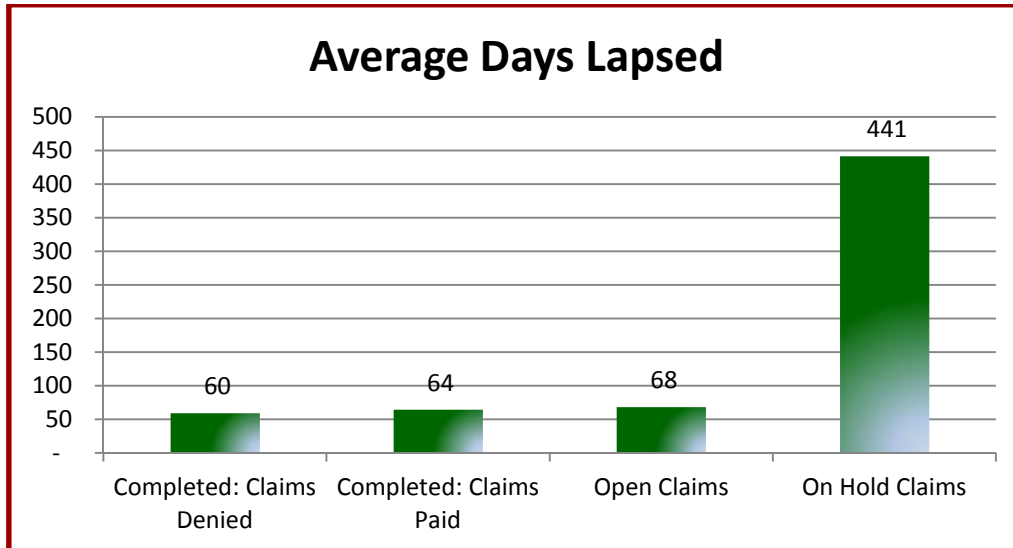
2. Kiewit Community Relations Office

We obtained from Kiewit’s Community Relations Office a schedule of claims directly submitted to Kiewit that includes claim number, claimant information, nature of claim, type of claim, event date, report date, Kiewit’s first contact date, claim paid date, claim denied date, amount claimed, amount paid, status of claims, and other related information. This schedule contained a number of clerical errors. After reviewing supporting documentation, we made corrections to the schedule.

We determined that it took an average of 3 days from the date Kiewit received the claim documents (either from the Metro or the claimant) to the date Kiewit’s Project Claims Coordinator first contacted the claimant. For the 267 claims handled by Kiewit, our analysis found:

- ◆ An average of 64 days to complete the processing of the 86 claims paid.
- ◆ An average of 60 days to complete the processing of the 125 claims denied.
- ◆ 28 open claims and 7 on-hold (see Finding 8) claims have been open for an average of 68 days and 441 days, respectively, as of November 15, 2012.
- ◆ The processing time for 21 claims (18 completed and 3 open) could not be determined because related dates were not provided by Kiewit. (See Chart E on the next page showing average days elapsed for claims paid, denied, and open.)

Chart E – Average Days Elapsed for Claims Paid, Denied, And Open



For the 234 claims received by Metro, there is an additional 6 days of Metro average processing time to the above average processing times. (See Tables 6 and 7 in Attachment B-1 that provides additional information on aging of the claims.)

Kiewit’s former Community Relations Manager claimed that his office conducts extensive investigative process before decisions are reached on claims. The manager stated that it takes considerable time for the Project Claim Coordinator to contact the claimants, meet with claimants when needed, conduct site visit to look at the alleged damage, talk to construction field workers, review pre-construction surveys, request and obtain vibration monitoring reports from third party, hire third party assessor to conduct investigation, and review other documents such as daily work activity records, traffic control records, photographs, and roadway maintenance records.

3. Subcontractor Claim Processing Time

We requested supporting documents for samples of claims that were handled by three Kiewit subcontractors: Statewide Traffic Safety, Drill Tech Drilling, and Foundation Pile. From our review, we determined that:

- ◆ Statewide took an average of 53 days to complete the processing of the claims denied. Statewide did not pay any claims as of November 15, 2012.
- ◆ Drill Tech took an average of 57 days to complete the processing of claims denied, and an average of 129 days to complete the processing of claims paid. The claims we selected for review have a total claim amount of \$13,586, and a total of \$26,660 was paid to claimants as of November 15, 2012. The total claim amount is understated because 4 claims were submitted with no dollar amount.

- ◆ Foundation Pile did not provide the claim data requested by the OIG. On January 28, 2013, we interviewed a manager at Foundation Pile, and he agreed to provide related documents for four claims. However, he did not respond to our emails and telephone calls following up on the status of the requested information. The OIG commenced legal action to obtain the subcontractor's cooperation and served Foundation Pile with a subpoena for the records related to these claims. Subsequent to receiving the subpoena, Foundation Pile provided the requested claims information on June 10, 2013. However, there was insufficient time for us to analyze this information before the issuance of this report on June 12, 2013. (See Finding 14 under Subcontractor Oversight.)

Finding 6 – Some Relevant Claim Dates Were Missing.

Kiewit did not provide relevant claim receipt and/or completion dates for 21 claims. Therefore, we were unable to determine the processing time for the 21 claims (18 completed and 3 open). To determine the processing time for claims, the date of denial/payment and date Kiewit received the claim are needed.

Recommendation 6. The Metro Construction Relations Office should advise Kiewit to maintain a complete record of relevant claim dates such as the date the claim was received and the date the claim was paid or denied.

Finding 7 – Aging Of Claims Handled By Kiewit.

Most of the claims were completed within 90 days; however, there were some outliers that took over 180 days to complete. Our review found that as of November 15, 2012, Kiewit took 90 days or less to process 167 (73%) of the 229 completed claims, and 91 to 180 days to process 29 (13%) completed claims, and over 180 days to process 15 (6%) completed claims; we were unable to determine the processing time for 18 (8%) other completed claims because relevant dates were not provided by Kiewit. As of November 15, 2012, 31 claims remained open. Of this total, 24 claims (77%) were open for less than 90 days, 1 (3%) was open 91 to 180 days, and 3 (10%) were open over 180 days; we were unable to determine the aging for 3 (10%) other open claims because relevant dates were not provided by Kiewit. (See Table 7 in Attachment B-1 for details.)

Recommendation 7. The Metro Construction Relations Office should advise Kiewit to:

- a. Strive to process claims within 90 days. For claims that need more than 90 days to complete, Kiewit should periodically communicate updates to claimants on the status of claims.
- b. Ensure that relevant dates are recorded in the claim files such as the date the claim was received and the date the claim was paid or denied.

Finding 8 – On-Hold Claims Were Lacking Written Agreement.

As of November 15, 2012, there were 8 claims⁵ from 6 home-owners being handled by Kiewit and a subcontractor that were “on-hold” for an average of 441 days. These claims were for property damage to homes allegedly caused by construction work on the Sunset Bridge and retaining walls #1720 and #1730 between Montana Avenue and Sunset Boulevard. Three of these homes are located above Sepulveda Boulevard between Montana Avenue and Sunset Boulevard where Sepulveda Boulevard is being realigned, which requires construction of a high retaining wall adjacent to residential areas. The other three homes are located near Sunset Boulevard where the Sunset Bridge is being widened, which requires demolishing and rebuilding the bridge. (See Attachment B-6 for a map of the on-hold claims.)

According to Kiewit’s former Community Relations Manager, there are mutual agreements between Kiewit and the claimants to put these claims on-hold until construction is substantially complete. However, we found only one of these claims has a written mutual agreement to put the claim on hold. The manager stated that other mutual agreements were reached verbally.

Recommendation 8. The Metro Construction Relations Office should advise Kiewit to obtain a written mutual agreement for the claims that are on hold to avoid undue delay or other future disputes.

Finding 9 – Clarification Needed Concerning Responsibility For Pothole Damage Claims.

We found several instances where the Metro Construction Relations Office directed Kiewit Community Relations Office to pay pothole damage claims which were initially denied by Kiewit. Kiewit believed that these claims should be handled by Caltrans. However, Caltrans believed Kiewit is responsible for the roadway. Kiewit sent pothole claims to Metro; but Metro sent them back stating they are Kiewit’s responsibility. Metro’s Construction Relations Office directed Kiewit to pay the claims because they believed that Kiewit knew about these potholes and should have promptly fixed them.

From email correspondence, it appears that Kiewit’s Community Relations Office was expecting reimbursement from Caltrans for the paid potholes claims. However, according to a Metro Construction Relations Manager, Metro and Caltrans do not plan on reimbursing Kiewit for these claims. No resolution has been reached on this matter as of the report date.

The contract between Metro and Kiewit states that Kiewit is responsible for maintaining and up keeping the freeway during construction period. Technical Provision of the Construction Contract Section 19.1 – General, states: *“Design Builder shall be responsible for the maintenance and upkeep of the entire area within the planned right of way limits, including freeway, local roads, bridges, landscaping and appurtenant facilities, and shall also be responsible for maintenance and upkeep of facilities within those portions of the Planned Right*

⁵ Seven claims are being handled by Kiewit and one claim is being handled by a subcontractor.

of Way limits outside of the planned right of way limits while construction Work is ongoing in the area or while such facilities are being used for maintenance of traffic related to the Project.”

Also Section 19.2.3 – Scope and Schedule of Maintenance, states: *“The areas/facilities to be maintained include both the areas/facilities under construction and the areas/facilities open to public traffic, including existing facilities. The Design Builder shall be responsible for all maintenance work normally performed by Caltrans for such facilities.”*

Recommendation 9. The Metro Construction Relations Office should clarify to Kiewit that Kiewit is responsible for the maintenance and upkeep of the freeway during the construction period, fixing potholes, and any damages caused by potholes to prevent delaying processing of pothole claims.

D. Investigative Process And Due Diligence

From the 340 claims submitted to Kiewit, we selected 69⁶ completed claims for detailed review of:

- The required Third Party Claims Checklist,
- The required Community Relations Incident Report,
- Evidence of actions to investigate the claim,
- Contact with claimant, and
- Reasons for denying claims.

We found that for most of the claims, the required forms and actions were documented in the claim files. However, our review identified instances where evidence of the required documents and actions were not in the claim files, as shown in Table D below:

Table D - Evidence Of Claim Process On Sampled Claims

Supporting Documents	Yes		No	
Claims Checklist	56	81%	13	19%
Incident Report	54	78%	15	22%
Evidence of Investigation	62	90%	7	10%
Evidence of Contact with Claimant	56	81%	13	19%

We also reviewed 7 open claims and 7 claims on hold. These claims were in various phases of completion. However, we did note that there was no evidence in two claim files of contact with the claimant (see Finding 12).

⁶ Of this total, 46 of the claims were originally received by Metro and forwarded to Kiewit and 23 of the claims were sent directly to Kiewit. Out of 69 completed claims, 21 were paid and 48 were denied.

Finding 10 – Some Claim Files Were Missing The Required Checklist Or Incident Report.

Our review found that most of the claim files reviewed contained the required third party claims checklist (81%) and the incident report (78%); however, 13 (19%) claim files did not have checklists and 15 claim files (22%) did not have incident reports. Kiewit personnel stated that some of the claim files did not have these documents because Kiewit had not developed a checklist and incident report for use during the earlier phase of the I-405 Project. We confirmed that most of the claims without a checklist were submitted in 2010. However, we determined that 4 claims handled after the checklist was developed were missing checklists, and 9 claims handled after the incident report was developed were missing incident reports. Therefore, it is not clear if all procedures were followed consistently; and in some cases, it is not clearly documented how decisions were made and approved.

Recommendation 10. The Metro Construction Relations Office should work with Kiewit to ensure all completed claim files include the required Third Party Claims Checklist and Community Relations Incident Report.

Finding 11 – Some Claims Lack Evidence Of Investigation.

We found that 90% of the claim files reviewed contained evidence of investigative process (such as review of daily construction activity reports, review of vibration monitoring report, and inspection of damaged property). However, 7 (10%) claim files did not contain documentation of investigative actions. Kiewit personnel stated that those claims without investigative process were because they either could not get in touch with claimants or some claims submitted did not warrant an investigation. Therefore, it is not clear what, or if any investigation, took place for these claims.

Recommendation 11. The Metro Construction Relations Office should work with Kiewit to ensure all claims have the investigative process documented or have documentation in the claim file to explain the reason for no investigative action.

Finding 12 – Some Claims Lack Evidence Of Contact With Claimant.

Our review of completed claims found 81% of the claim files reviewed contained evidence of contact with claimant (such as visits to the claimant's home, telephone calls, or emails to claimant); however, 13 (19%) of the claim files did not contain documentation of contact with the claimant. We also reviewed 7 open claims and 7 claims that were on hold, in addition to the 69 completed claims. We found 1 open and 1 on-hold claim did not have evidence that the claimant was contacted. Kiewit personnel said that those claims without evidence of contact with claimant were because they could not get in touch with claimants or some claims were more straight-forward than others and did not need to contact the claimant. Kiewit personnel stated that they telephoned claimants and in some cases the claimant did not answer the phone or call back. In these cases, Kiewit did not send a follow up letter to the claimant. Therefore, it is unclear if those claimants were notified during the process to investigate the claims. We believe

that Kiewit should make more than one attempt to contact the claimant such as sending follow up letters if the claimant does not respond to the initial telephone call.

Recommendation 12. The Metro Construction Relations Office should advise Kiewit to strive to contact claimants and document contacts in the claim file, and also document in the claim file any reason for not contacting the claimant. Kiewit should also send follow up letters to the claimants who do not return or respond to telephone calls.

Finding 13 – Some Denial Letters Were Missing Or Did Not Cite The Reason For Denial.

Of the 69 claims completed by Kiewit in our sample, denial letters were sent for 43 claims⁷. We found denial letters for 40 of the 43 claims, and Kiewit could not locate the denial letter for 3 claims. Our review of the 40 denial letters also found that 38 of the letters stated a reason for denying the claim, and 2 letters did not cite a reason. Therefore, the files are not complete, and those two claimants for whom the claim was denied received no further explanation. See Table E below:

Table E - Reason On Denial Letter

Denial Letter	# of Claims	%
Yes	38	95%
No	2	5%
Total	40	100%

For one of the two claims denied without a stated reason, we found documentation in the claim file that the claim was denied because vibration monitoring reports showed vibration levels were below the threshold for potential damage to structures. However, for the other claim, we could not determine the reason for denial because the claim file did not contain documentation of the required checklist, incident report, and other evidence of investigative process.

- **Example Of Denial Letter That Does Not Provide Reason For Denying Claim.** A resident claimed sewer line problem. “After a thorough investigation it has become clear that the breakage was not due to our construction activity.” (See Attachment F.)
- **Example Of Denial Letter That Provides Reason For Denying Claim.** A motorist claimed tire damage from striking metal object in traffic lane. “A comprehensive investigation was completed that included a thorough review of the traffic records, maintenance logs, and statements from personnel overseeing the construction activities around the time and place the damage occurred. On September 17, 2011, there was no construction activity that required a Kiewit vehicle or equipment to travel on the N/B 405 freeway in the area where the incident allegedly occurred. The object was not recovered.

⁷ The remaining 26 claims comprised of 21 paid claims and 5 other claims including multiple claims resulted in one denial letter, some claimants decided not pursuing the claim after contacted, and lawsuits handled by Kiewit’s legal department.

There is no evidence suggesting that Kiewit is responsible for this object; that Kiewit caused it to be on the freeway or that it is connected in any way to Kiewit's work." (See Attachment G.)

Kiewit personnel advised us that they try to provide as much detailed reasoning as possible in the denial letter. However, based on advice from Kiewit's legal counsel, they used denial letters with general language in some instance. We believe that providing more detail in the denial letter will lead to less confusion, less rebuttals from claimants, add confidence in the claims process.

Recommendation 13. The Metro Construction Relations Office should work with Kiewit to (a) ensure that there is a denial letter in claim file for each denied claim, (b) ensure that the denial letter states the reason(s) for denial, and (c) provide as much detail as possible in the denial letter of the reason for denying the claim.

E. Subcontractor Oversight

As mentioned above, Kiewit forwarded 68 claims to 9 subcontractors who were responsible for processing the claims. We obtained and reviewed a log that Kiewit used to keep track of these claims by claim number, claimant information, alleged date of loss, estimated damage, amount paid by Kiewit, location, claim description, status, and notes. Kiewit's Community Relations Manager advised us that they periodically follow up with certain subcontractors on the status of the claims tendered. However, sometimes subcontractors' insurance carriers do not share claim results with Kiewit.

We determined that Foundation Pile and Drill Tech Drilling provided Kiewit a copy of their denial and settlement letter for most claims. Statewide does not generally provide details of settlement because their claims are handled by their insurance carrier. We found that in some instances Statewide's insurance carrier provided a copy of the denial letter to Kiewit's Community Relations Manager.

Finding 14 – A Subcontractor Did Not Provide Requested Information.

On January 28, 2013, the OIG meet with the Vice President of Sales for Foundation Pile and requested 4 claim files. At the meeting, the Vice President said that he would send us the requested information. However, we have not received this information, although we made a number of follow-up inquires via telephone and email on the status of the information request. The Vice President did not respond to any of our follow-up inquiries. We subsequently advised Kiewit's former Community Relations Manager of Foundation Pile's non-response to our information request. He said that he would follow up on the status of the request; but we did not receive the requested information. Therefore, the OIG served Foundation Pile with a subpoena for the records related to these claims. Subsequent to receiving the subpoena, Foundation Pile provided the requested claims information to Kiewit's Third Party Claims Coordinator who forwarded the information to the OIG on June 10, 2013. However, there was insufficient time for us to analyze this information before the issuance of this report on June 12, 2013. In

addition, information was provided for only three of the four claims files requested. Foundation Pile stated that they did not have information concerning one of the claim files requested. However, Kiewit's claim log showed that this claim (#111) was tendered to Foundation Pile. Therefore, it is unclear what entity, if any, is investigating this claim. If Foundation Pile had provided the requested information in January, this discrepancy would have been identified earlier and the matter could have been resolved.

The contract between the Metro and Kiewit requires subcontractors to provide records relating to the contract with Metro. Section 19.2 of the contract states: “ *The Design Builder shall, in accordance with 49 CFR 18.36 (i), grant to LACMTA’s authorized representatives or its third party auditors, ... audit rights and access to and the right to copy all Records ... of the Design Builder, its Subcontractors and Suppliers, and any Design Builder-Related Entity, as the auditors may request from time to time in connection with the issuance of Modifications or Change Orders, the resolution of disputes, the resolution of Claims, and such other matters as the auditors deem necessary for purposes of complying or verifying compliance with the Contract Documents and Government Rules.*”

Recommendation 14. The Metro Construction Relations Office should work with Kiewit to ensure that Foundation Pile understands the provision in the contract concerning providing relevant information to Metro and promptly complies with this contract provision in the future. Also, resolve the status of the claim (#111) that Foundation Pile is unaware of and has no record.

Finding 15 – Subcontractor Could Not Locate Three Claims Files.

Statewide Traffic Safety could not locate information concerning three claim files (Kiewit Claim #148, #169, and #173) we requested. Statewide personnel claimed that they did not receive these claims from Kiewit. After we brought this matter to their attention, Kiewit resent these claims to Statewide on April 17, 2013.

Recommendation 15. The Metro Construction Relations Office should advise Kiewit that part of its oversight role is to ensure that subcontractors receive and complete investigation of claims tendered to them by Kiewit.

Finding 16 – Increase Monitoring Of Subcontractor Claims.

Our review found that Kiewit's Community Relations Office did not maintain information to determine the status and outcome of most claims tendered to subcontractors. Kiewit's claim log did not include information on the date a claim was tendered to the subcontractor, amount paid by the subcontractors, payment date, and denial date. We believe that this information is essential for determining the status and outcome of claim investigations by subcontractors and to monitor claims handled by subcontractors.

Recommendation 16. The Metro Construction Relations Office should advise Kiewit to obtain quarterly updates from subcontractors of claims processed that include: (a) claim payment amount and payment date, or (b) denial date and denial letter with detailed reason.

OTHER OBSERVATIONS AND MATTERS

A. Other Findings

Finding 17 – Increase Follow Up On Claims Status And Outcome.

Metro’s Construction Relations Office followed up on certain claims to answer questions or inquire. However, they did not have a process in place to periodically obtain the status and outcome of all claims. Although the contractor is responsible for claims, Metro should seek to obtain feedback on the status of claims to ensure that claims are being processed in a timely manner and provide stewardship over the claims process.

Recommendation 17. The Metro Construction Relations Office should obtain quarterly updates of Kiewit’s schedule of claims that shows claim details, status, and outcome.

Finding 18 – A Claim Was Not Documented By Metro’s Construction Relations Office.

We found that Kiewit’s Claim #150 was forwarded by Metro’s Construction Relations Office along with a “Community Relations Field Report” and a reference number C0882-00907. However, this claim was not recorded on Metro’s Claim Log and a letter was not sent to the claimant. According to a Metro Construction Relations official, he did not believe that the claimant was making a claim, and thought that the submission was just an inquiry for the contractor to check her property. However, we found that Kiewit inspected the claimant’s home and made necessary repairs.

Recommendation 18. The Metro Construction Relations Office should ensure that all community claims relating to the I-405 Project are included on the claim log and a letter is sent to the claimant acknowledging receipt of the claim.

Finding 19 – Dates On Metro’s Letters Sent To Claimants Were Incorrect.

We found that three claims (C0882-0308, C0882-0318, and C0882-0324) had incorrect dates on the Metro letters sent to the claimants. All three letters were dated 2 months prior to the claimants’ report date. We believe these were clerical errors.

Recommendation 19. The Metro Construction Relations Office should ensure that information on correspondence sent to claimants is accurate.

B. Other Matters

In addition to the 340 claims received as of November 15, 2012, there are a number of lawsuits that were filed in regard to construction activity on the I-405 project. Metro is named in about 15 lawsuits related to the I-405 construction project. Six of the lawsuits are closed and nine are pending. The Kiewit Project Attorney provided the following information concerning litigation:

- Kiewit is required in certain situations to defend and indemnify Metro for cases alleging damages resulting from Kiewit's actions. In those cases, Kiewit coordinates with County Counsel and discusses how the matter will be handled.
- Not all of the lawsuits are reflected in Kiewit's Master Claims Log. Only the matters that originate as a third party claim are included and tracked in the log. Some of those matters later became lawsuits. In those cases, the claimant that filed the lawsuit would also show up on the log. However, in other cases, a lawsuit is filed by someone who never previously filed a complaint on the project. In those cases, the lawsuit is not reflected on the log.
- Metro is aware of lawsuits to which it is a named party. Kiewit is not required to inform Metro of lawsuits filed directly against Kiewit that do not involve Metro directly.
- Kiewit has been involved in four Small Claims Hearings related vehicle damages. Two of these claims resulted in no damages owed to the plaintiff. For the other two claims, a judgment was entered for the plaintiff and payment was made upon receipt of order.

Also, the County Counsel provided us with a list of 18 tort claims involving small property damage, which have been referred to Kiewit for processing.

CONCLUSION

Our review found that both Metro and Kiewit have a reasonable process in place to handle claims. We believe Kiewit and its subcontractors (with the exception of Foundation Pile⁸) conducted good faith investigations of claims that included reviewing daily work activity records, vibration monitoring records, traffic control records, field inspections, photographs, witnesses, supervisor interviews, weather reports, equipment records, and roadway maintenance records. In cases where the claimant or contractor records showed that Kiewit's/subcontractor's actions caused the damage, the claim was paid. Kiewit paid 40% of the total claims completed, and the subcontractors paid 11% of claims completed. In many instances, there was no direct evidence that the contractor was at fault and/or contractor records showed that the construction activity would not have caused the alleged damage such as low vibration test readings or no construction activity at time of alleged damage.

We found that all 47 property crack claims (34 handled by Kiewit and 13 handled by subcontractors) were denied. One group of six claimants (homeowners) expressed concerns about the claim process to the office of a Metro Board Director. Accordingly, we included the claims from these residents in our review. There is no dispute that cracks exist in the homes and in some cases on the property outside of the homes. The residents believe that the cracks were caused by recent I-405 freeway construction activities, and Kiewit and its subcontractors believe that their construction activities did not cause the cracks. Kiewit's decision to deny the claims were mainly based on pre-construction survey pictures, vibration monitoring reports, daily

⁸ We express no opinion on Foundation Pile because the subcontractor did not promptly provide us with the information requested to perform our review, and there was insufficient time to analyze the information before the issuance of this report.

construction activity reports, and on-site inspections. From the documentation and reports in the claim files, there is no conclusive evidence that indicates that Kiewit or subcontractor construction activities caused the damages to the property. Without evidence to refute Kiewit's or its subcontractors' reports or to show the condition of these residences prior to the start of the construction operations on the I-405 freeway, it is difficult to show that the cracking occurred by of the construction activity, and was the cause for the cracking.

Although Kiewit has performed considerable investigative work, the claimants continue to believe that the construction activities caused the damages to their homes and property. In this regard, we believe that Kiewit needs to improve on communicating the reasons for denying claims, sharing results of inspections and tests with the claimants, and providing claimants with guidelines or criteria on acceptable/unacceptable vibration levels.

The report includes a number of recommendations to improve the community claims process and promote public confidence in the community claim process such as.

- Developing written procedures for the community claim process.
- Adding a second level reviewer to consider appeals on denied claims.
- Maintaining more comprehensive information in the claim log to better track claims.
- Obtaining written agreements for “on-hold claims.”
- Clarifying to Kiewit that Kiewit is responsible for damages caused by potholes.
- Ensuring that all completed claim files include the required checklist and incident report.
- Communicating more information on the reasons for denial of claims.
- Ensuring that all claims have the investigative process documented.
- Ensuring that contacts with the claimant are documented in the claim file.
- Obtaining updates on the status and outcome of claims.

In April 2013, we provided the former Kiewit Community Relations Manager, the Kiewit Third Party Claims Coordinator, and the Metro Construction Relations Manager with preliminary drafts and schedules of our review concerning the number of claims, processing times for claims, and claim files. We also provided them with 8 potential findings. The former Kiewit Community Relations Manager provided some comments, and we incorporated these comments into our final report. On June 7, 2013, we provided Kiewit's Third Party Claims Coordinator, Kiewit's former Community Relations Manager, and Metro's Construction Relations Manager a final draft of the findings and schedules in this report. On June 10, 2013, the Metro Construction Relations Manager informed us that she had “no edits.” We did not receive feedback from Kiewit prior to the report date. However, they had only a short period to review the draft.

NEXT STEPS

We will monitor actions taken by Metro and Kiewit to implement the recommendations in the report.

APPENDIXES

Examples of Kiewit's Investigation Process on Claims Denied

DENIED CLAIM EXAMPLE #1

Claim background:

On June 1, 2011, a claimant contacted Metro's Construction Relations Office to report crack damages to her house since the start of drilling activity near the Mulholland Drive Bridge. The claimant stated that she could hear the noise and feel the vibration of the work and would like an investigation into the cracks in her home.

Actions Taken by Metro's Construction Relations Office:

1. On June 1, 2011, a "Community Relations Field Report" was completed that included the information about the claimant and claim.
2. Also, on June 1, 2011 Metro's Construction Relations Office sent a letter to the claimant stating that Metro has received her claim and it will be addressed through Kiewit's claim process.
3. On June 1, 2011 Metro forwarded the "Community Relations Field Report" and other supporting documents to Kiewit's Community Relations Office.

Actions Taken by Kiewit's Community Relations Office:

1. On June 2, 2011, Kiewit contacted the claimant and left a message.
2. Using Google Earth software, Kiewit's Community Relations office determined that the claimant's address is at least 2 miles west of the construction activities at the Mulholland Drive Bridge. Based upon the home's location, it is unlikely that vibration from construction activities at Mulholland Drive Bridge caused cracks in the claimant's home.
3. Kiewit contacted the claimant on June 15, 2011 to discuss the claim. The resident stated that they understand their house is far away from the construction area, but they are upset by the activity. They can hear loud noise from the machinery, which disturbs them at night, and feel the house vibrate, especially at night.

Kiewit's Conclusion:

Kiewit denied the claim on September 12, 2011. The denial letter stated: "The work schedule is designed so that quieter operations are performed at night. The sound emitted by each piece of equipment is measured. All vehicles and equipment utilized exhaust silencers and the engine compartment is closed. Engines are turned off instead of allowing them to idle. Sound attenuating blankets are placed around various types of equipment. Kiewit retained the service of an independent geotechnical engineering company to perform vibration monitoring in the work area and adjacent neighborhoods. The findings show that vibrations are consistently far below minimum allowable standard. Your home is approximately 2 miles away from the nearest work site, which makes it virtually impossible for Kiewit's construction activities to be the source of the alleged property damages."

Examples of Kiewit's Investigation Process on Claims Denied

DENIED CLAIM EXAMPLE #2

Claim background:

On October 7, 2011, a claimant and his four family members were inside a vehicle driving westbound in lane #1 on Mulholland Drive between Casiano Road and the Mulholland Drive Bridge when their car hit a rectangular "patch" pothole. The front right tire immediately went flat. The claimant reported the incident to Kiewit employees at the Mulholland equipment yard.

Actions Taken by Metro's Construction Relations Office:

None. Metro was not involved because this claim was submitted directly to Kiewit.

Actions Taken by Kiewit's Community Relations Office:

1. On October 10, 2011, Kiewit's Community Relations Office contacted the claimant and obtained a statement of what happened as stated above.
2. On October 14, 2011, Kiewit determined that Department of Water & Power created the patch pothole that caused the damage to claimant's tire. Review of the daily construction activity reports showed that Kiewit was not working in the area when the damage occurred.
3. On October 19, 2011, Kiewit tendered a claim to LA City Attorney's claim office that concerns the incident. Kiewit also provide the claimant a copy of the DWP claim instructions and claim form.

Kiewit's Conclusion:

Kiewit denied the claim on October 17, 2011. The denial letter stated: "A review of traffic records, maintenance logs and statements from personnel overseeing the construction activity was conducted. The Los Angeles Department of Water & Power dug the trench and created the pothole. The DWP is a municipal utility company. Kiewit does not direct or supervise their workmanship. There is no evidence to suggest that Kiewit was negligent. We are not responsible for this event and must respectfully deny liability."

Examples of Investigation Process on Claims Paid

PAID CLAIM EXAMPLE #1

Claim background:

On July 16, 2012, a claimant reported to Metro's Construction Relations Office that on April 1, 2012, she was traveling westbound on Wilshire Boulevard just before the Sepulveda Boulevard, where debris or materials from construction activity hit and damaged her vehicle.

Actions Taken by Metro's Construction Relations Office:

1. On July 16, 2012, a "Community Relations Field Report" was completed that included information about the claimant and claim.
2. Also, on July 16, 2012, Metro's Construction Relations Office sent a letter to the claimant stating that Metro has received her claim and it will be addressed through Kiewit's claim process.
3. On July 16, 2012, Metro forwarded the "Community Relations Field Report" and other supporting documents to Kiewit's Community Relations Office.

Actions Taken by Kiewit's Community Relations Office:

1. On July 18, 2012, Kiewit's Community Relations Office telephoned the claimant and left a message.
2. On July 25, 2012, Kiewit called the claimant again and obtained her statement of the incident. The claimant stated that she was traveling westbound at 10:00 P.M. and when going under the I-405 overpass a piece of resin fell from the overpass hitting the windshield of her vehicle. She turned around and obtained the piece of the resin. The vehicle has been repaired. She further stated that she has photos she took at the scene, repair estimate, and copy of the check to the repair shop.
3. Kiewit determined that they have a duty to maintain the construction site and to monitor their sub-contractors to ensure that they comply with safety and equipment maintenance techniques. Failure to maintain the area or oversee the sub-contractor's activity could result in Kiewit being found liable for the claimant's property damage.

Kiewit's Conclusion:

On August 17, 2012, Kiewit Community Relations Manager sent a letter of settlement to the claimant stated: "A check in the amount of \$4,936.67 is provided to reimburse you for the repairs to your vehicle. Your acceptance of this check represents a full and final release and satisfaction of any and all claims that you have against Kiewit."

Examples of Investigation Process on Claims Paid

PAID CLAIM EXAMPLE #2

Claim background:

On June 6, 2012, a Kiewit superintendent reported to Kiewit's Community Relations Office that the rear window of a car was shattered by a pipe sliding off a Kiewit truck. The claimant was driving Eastbound on Wilshire Boulevard attempting to make a left turn onto Northbound Sepulveda Boulevard at a stop sign. A Kiewit employee took photos of the damaged car and exchanged information with the claimant.

Actions Taken by Metro's Construction Relations Office:

None. Metro was not involved because this claim was submitted directly to Kiewit.

Actions Taken by Kiewit's Community Relations Office:

1. On June 6, 2012, Kiewit's Community Relations Office contacted the claimant and obtained his statement of accident. Claimant's statement matched the reported prepared by the Kiewit employee.
2. On June 7, 2012, Kiewit's Community Relations Manager directed the claimant be paid for the damage because a Kiewit employee operated a company vehicle and failed to secure equipment.

Kiewit's Conclusion:

On June 12, 2012, Kiewit sent a letter to the claimant with a check of \$2,127.35 to settle the claim.

Examples of Investigation Process on Claims Paid

PAID CLAIM EXAMPLE #3

Claim background:

On December 22, 2011, a claimant representing his business client reported that Kiewit's crew was digging a sound wall and severed a 96 pair fiber optic cable at Sepulveda Boulevard and Montana Avenue intersection.

Actions Taken by Metro's Construction Relations Office:

None. Metro was not involved because this claim was submitted directly to Kiewit.

Actions Taken by Kiewit's Community Relations Office:

1. On December 22, 2011, Kiewit contacted the claimant and left message.
2. On December 28, 2011, the claimant returned phone call and gave a statement of incident and submitted an invoice to Kiewit. Kiewit determined that a Kiewit Segment Manager was aware of the incident.
3. On January 11, 2012, Kiewit reviewed "Incident Alert" (Utility Strike Case) that clearly identified the utilities on the as-built drawing but was not included on the dig permit at the time of incident. Kiewit determined that the crew was not aware of the utility location.

Kiewit's Conclusion:

On January 12, 2012, Kiewit sent a check of \$13,151.68 to the claimant.

Review of Six Property Crack Claims Denied by Kiewit

Six claimants of property cracks claims contacted the office of a Metro Board Director. The claims for two of the claimants were included in the 69 completed claims we reviewed in detail. For the remaining four claims, we requested and reviewed the claim files from Kiewit and/or Drill Tech Drilling & Shoring, Inc. (“Drill Tech”), a subcontractor of Kiewit.

A. Summary

Our review of the claim files for the six claimants found that all of the claims were denied based on the results of investigations, inspections, and vibration reports conducted by the contractor and subcontractors. (See Appendix C-2 for summary of claim data.)

- All of the six claims involved purported cracks inside the house and some claims also involved property damage outside of the home.
- None of the claims included a dollar amount to repair damages.
- For five of the claims, the homes are located in the same vicinity adjacent to the Westside of the I-405 Freeway on or near Montana Avenue (see photograph at Appendix C-3). All five claimants cited that cracks to their houses occurred during different periods between October and December 2010.
- The sixth claim was for a home located about 7 miles further north on Del Gado Drive (see photograph at Appendix C-4). The claimant cited cracks occurred in the house and other locations on the property from December 2011 to December 2012.
- All six of the claims were denied.
 - The denial letters to the five residents on or near Montana Avenue stated that seismic testing results indicated a very low vibration level and the construction activity did not affect the structural integrity of their homes. In addition, for four of the claims, the timeframe of the alleged damage did not match with construction activity.
 - The denial letters sent to the resident on Del Gado Drive stated that (1) recorded vibration levels were below levels that would cause damage to structures, and (2) cracks on the property appeared to pre-exist construction activity.

To investigate the claims, personnel from Kiewit’s Community Relations Office visited and inspected the properties, hired a plastering expert who inspected five of the homes, reviewed vibration reports from third party firms, and reviewed daily planned construction activity logs and Daily Reports of actual construction activities to identify the type of construction operations that occurred during the timeframe that damages were purported to have occurred.

Review of Six Property Crack Claims Denied by Kiewit

B. Kiewit Work Activity And Vibration Monitoring Near Montana Avenue

From reviewing claim files and interviewing Kiewit personnel, we gathered the following information:

1. Work activities⁹ performed (at night) during October 2010, were: (1) excavate and lay temporary storm drain and slope work for foundation, (2) grade for pile and crane access, (3) excavate a bridge and MSE wall at Montana Avenue, and (4) remove an old pipe. Kiewit claims that the vibration produced by these operations is less than that imposed by a pile driving hammer and would not cause any vibration damage to nearby homes.
2. No construction work was performed between October 26 and November 11, 2010, in the area.
3. During the night shift on November 12, 2010, a small portion of the Montana Avenue Bridge was demolished. The subcontractor (Penhall) removed a masonry sound wall and bridge barrier rail. Small pieces of concrete and masonry were removed from the wall and dropped onto steel plates on the street (Montana Avenue). This activity and the claimants' residences on Montana Avenue are separated by 250 feet or more; and the I-405 freeway which sits on approximately 20 feet of embanked soil. Penhall denies that this activity could cause vibration beyond damage threshold. The Kiewit Project Director stated: "This seems reasonable considering the energy of falling masonry and concrete debris is far less than that imposed by a pile driving hammer; therefore, producing less found vibration. During pile driving operations [December 6 to December 16, 2010] in the same area, vibration was recorded at levels well below damage thresholds."
4. Work activities performed (at night) from November 13 through November 30, 2010 were: (1) saw cut for storm drain, set plates, remove concrete, and backfill pipe, (2) excavate, lay, and backfill storm drain and exposed pipe, (3) conduct construction activity for storm water pollution prevention plan, (4) excavate abutment, and (5) saw cut and chip existing abutment. Kiewit claims that the vibration from these operations would not have caused any damage to nearby homes.
5. On December 6, 7, 8, 9, 13, 14, and 16, 2010, Foundation Pile (subcontractor) conducted pile driving near Montana Avenue and the eastside of the I-405 Freeway.¹⁰ The claimants' homes are located on the westside of the freeway. Foundation Pile hired a third party firm "EarthSpectives" to conduct vibration monitoring at the area on December 6, 7, and 8,

⁹ We requested Kiewit to provide daily work activities logs for the time period of the alleged damage. Kiewit only provided us logs for a limited number of days. We have not received all of the daily work activities logs requested as of the report date.

¹⁰ Construction activity was performed on the eastside of the I-405 freeway where additional lanes were being constructed to widen the freeway.

Review of Six Property Crack Claims Denied by Kiewit

2010.¹¹ Four seismographs were used to collect data on vibration levels. Two seismographs were placed on the eastside¹² of the I-405 freeway and the two others were placed on the westside¹³ of the freeway about 250 feet from the construction activity and near the claimants' homes (see Appendix C-3 for location of seismograph equipment). The report from EarthSpectives shows that during the test period, the maximum Peak Particle Velocity (PPV) at each of the two test sites east of the freeway was 0.075 inch per second (in/s) and 0.043 in/s; and the maximum PPV at each of the two test sites west of the freeway was 0.040 in/s, and 0.058 in/s. The report concluded that: "These levels of vibration are not considered significant and are not considered harmful for nearby impacted structures."

6. Caltrans' Vibration Guidance Manual (dated June 2004) indicates that a vibration level of PPV 0.04 in/s from Continuous Intermittent Sources such as impact pile drivers, will be distinctly perceptible to humans. However, the potential damage threshold is PPV 0.3 in/s or higher for older residential structures. The highest vibration monitoring results recorded by EarthSpectives for the pile driving activity near the homes on Montana Avenue was PPV 0.058 in/s, which is significantly below the PPV 0.3 in/s threshold cited in the Caltrans Vibration Guidance Manual for potential damage to homes.
7. At the beginning of the project, Kiewit selected properties for pre-survey (photographed and/or inspected) based on their proximity to construction activities. Some homes and businesses east of the freeway abutting Sepulveda Boulevard or the freeway were pre-surveyed with the owners' permission. According to Kiewit staff, homes west of the freeway (including the 5 homes discussed above) were not pre-surveyed prior to construction because they are relatively far from the construction activities, including pile driving, which occurred on the eastside of the freeway.

We contacted the owner of EarthSpectives who told us that during the last 3 years, his firm had conducted 10-15 vibration monitoring tests for Foundation Pile on construction projects other than the I-405 project. He said that in some cases, data from these 10-15 vibration tests on other projects might show vibration levels on or above PPV 0.3 in/s threshold cited in the Caltrans Vibration Guidance Manual for potential damage to older structures. When vibration levels reach or exceed PPV 0.3 in/s, EarthSpectives immediately informs Foundation Pile.

¹¹ On the three days, vibration testing was conducted during the entire period that pile driving activities occurred. A Kiewit representative said that a third party testing firm was hired to establish a representative sample of vibration results. He stated that similar operations using similar equipment can be assumed to produce similar vibrations in a given soil at a given distance.

¹² One seismograph was placed near 398 Sepulveda Blvd and the other was placed near 11284 Montana Ave.

¹³ One seismograph was placed near 11332 Montana Ave and the other was placed near 11327 Montana Ave. These seismographs were located closer to the construction activity than the five claimants' homes on or near Montana Ave.

Review of Six Property Crack Claims Denied by Kiewit

C. Details Of Investigation Of Claims

Our review of the claim files and supporting documentation for each of the six claims are summarized below:

1. Kiewit Claim #31/Metro Claim #18:

- a. On December 8, 2010, a claimant reported cracks at different locations in her home. She noticed the cracks during the first part of November. The claimant believes that these cracks are a result of the demolition work on the Montana Avenue Bridge since she felt the house vibrate.
- b. A Kiewit Community Relations Manager inspected the claimant's home on February 1, 2011. The inspection notes stated:
 - Resident claims that crack in bedroom have grown.
 - Living room plaster ceiling is cracked longitudinally.
 - Not concerned that cracks are structural.
 - Plumbing makes strange sound. Resident was told to get a plumber to check it out.
- c. Because some residents expressed concern over the structural integrity of their plaster ceilings, Kiewit hired a plastering expert (Caston Inc.) to inspect this home and the four other homes on or near Montana Avenue. On March 4, 2011, Caston Inc. prepared a letter summarizing the results of all the homes inspected:
 - "All of the areas where we observed cracking seem to be structurally sound and pose no immediate threat of failure."
 - Without having evidence of the condition of these residences prior to the new construction operations on the I-405 Freeway, it is impossible for us to accurately comment on what caused the cracking to occur."
 - "Some cracks appear to be relatively new, others are old cracks that have been repaired years ago and have reopened, some appear to be result of leaky roofs, and in a few cases old thick layers of paint that has shrunk at the surfaces gives the impression of cracked plaster."
 - "All of the homes visited can easily be repaired by opening cracks, filling and sanding. Texturing to match existing finish, and repainting as necessary...Due to the age and location of these homes, there is no guarantee that these cracks will not return even when properly repaired."

We contacted the owner and office manager of Caston who told us that during the last 3 years, his firm had not perform inspections for Kiewit other than the properties related to the I-405 project.

Review of Six Property Crack Claims Denied by Kiewit

- d. Kiewit's Vibration Analysis stated that the construction work activities (including pile driving) and the claimant's residence are separated by 250 feet (see map at Appendix C-3). A representative from Foundation Pile said that if the residence is separated by more than 100 feet from the pile driving location, damage to the home is very unlikely to occur. In addition, recorded vibration levels from seismographs located near the claimant's home were not significant and were not considered harmful to nearby structures.
- e. On November 12, 2010, a small portion of the westside of the I-405 bridge over Montana Avenue was demolished. The subcontractor claims that the vibration from this operation would not have caused any damage to the homes on or near Montana Avenue that were 250 or more feet from this construction activity (see B.3. above).
- f. Kiewit denied the claim on June 3, 2011. The denial letter stated: "Kiewit Infrastructure Group retained the services of an independent seismic testing company who placed seismographs near your home to monitor the vibrations. Their report indicates the peak particle velocities were very low.¹⁴ The construction activity did not affect the structural integrity of your home. In addition, you stated that the damage began in early November 2010, however this time frame is prior to the start of the activity that you allege caused the damage." Our review of documents show that pile driving activity occurred from December 6 to 16, 2010, and demolition work on the Montana Avenue Bridge occurred on November 12, 2010.

2. Kiewit Claim #29/Metro Claim #19:

- a. On December 8, 2010, a claimant reported cracks at different locations in her home. She claimed that she first noticed the cracks approximately 2 months ago (about October 9). The claimant believes that these cracks are a result of the demolition work on the Montana Avenue Bridge since she felt her house vibrate. In addition, she was concerned that a waterline may have been disrupted since her water bill has increased.
- b. Kiewit's Community Relations Manager inspected the claimant's home on December 29, 2010. The inspection notes stated: "Minor cracks in upstairs bedroom plaster ceiling, downstairs living room plaster ceiling, and driveway. The claimant worried about the structural integrity of the house."
- c. A plastering expert inspected the home, and concluded that all of the areas where cracking was observed seem to be structurally sound. The inspection results were included in a letter, dated March 4, 2011, that addressed all five of the claimants on or near Montana Avenue (see discussion of contents of the letter in paragraph C.1.c. above).
- d. Kiewit claims that the construction activities (including pile driving) and the claimant's residence are separated by 300 feet. A representative from Foundation Pile said if the residence is separated by more than 100 feet from the pile driving location, damage to the

¹⁴ The vibration monitoring results are discussed in paragraph B5 above.

Review of Six Property Crack Claims Denied by Kiewit

home is very unlikely to occur. In addition, recorded vibration levels from seismographs located near the claimant's home were not significant and were not considered harmful to nearby structures.

- e. On November 12, 2010, a small portion of the westside of the I-405 bridge over Montana Avenue was demolished. The subcontractor claims that the vibration from this operation would not have caused any damage to the homes on or near Montana Avenue that were 250 or more feet from this construction activity (see B.3. above).
- f. Kiewit denied the claim on June 3, 2011. The denial letter stated: "Foundation Pile Inc. provided you with a copy of the vibration monitoring report. The construction activity did not affect the structural integrity of your home. In addition, you stated that the damage began in October 2010; however, this time frame is two months prior to the start of the activity that you allege caused the damage." Our review of documents show that pile driving activity occurred from December 6 to 16, 2010, and demolition work on the Montana Avenue Bridge occurred on November 12, 2010.

3. Kiewit Claim #30/Metro Claim #25:

- a. On December 8, 2010, a claimant reported cracks at different locations in his home. He noticed the cracks around Thanksgiving (November 25, 2010). The claimant believes these cracks are a result of the work at the Montana Avenue Bridge.
- b. Kiewit's Community Relations Manager inspected the claimant's home on January 26, 2011. The inspection notes stated:
 - Resident heard dishes rattling during pile driving; concerned about structural integrity of the plaster ceiling.
 - Minor cracking outside.
 - Gaps in wood paneling; need assurance they are not structural damage.
 - Roof leak was not from vibrations.
- c. A plastering expert inspected the home, and concluded that all of the areas where cracking was observed seem to be structurally sound. The inspection results were included in a letter, dated March 4, 2011, that addressed all five of the claimants on or near Montana Avenue (see discussion of contents of the letter in paragraph C.1.c. above).
- d. The construction activities (including pile driving) and the claimant's residence are separated by 360 feet. A representative from Foundation Pile said that if the residence is separated by more than 100 feet from the pile driving location, damage to the home is very unlikely to occur. In addition, recorded vibration levels from seismographs located near the claimant's home were not significant and were not considered harmful to nearby structures.

Review of Six Property Crack Claims Denied by Kiewit

- e. On November 12, 2010, a small portion of the westside of the I-405 bridge over Montana Avenue was demolished. The subcontractor claims that the vibration from this operation would not have caused any damage to the homes on or near Montana Avenue that were 250 or more feet from this construction activity (see B.3. above).
 - f. Kiewit's denial letter dated on June 3, 2011 stated: "Kiewit Infrastructure Group retained the services of an independent seismic testing company who placed seismographs near your home to monitor the pile driving vibrations. Their report indicates the peak particle velocities were very low. The construction activity did not affect the structural integrity of your home. In addition, you stated that the damage began around Thanksgiving of 2010, however this time frame is prior to the start of the activity that you allege caused the damage." Our review of documents show that pile driving activity occurred from December 6 to 16, 2010, and demolition work on the Montana Avenue Bridge occurred on November 12, 2010.
4. Kiewit Claim #32/Metro Claim #27:
- a. On December 8, 2010, a claimant reported cracks at different locations in her home, and new cracks on the driveway. She noticed the cracks the week of December 6 after feeling her house vibrate at night. The claimant believes that these cracks are a result of the work at the Montana Avenue Bridge.
 - b. Kiewit's Community Relations Manager inspected claimant's home on January 12, 2011. The inspection notes stated "cracks appear in crown molding only – newly remodeled house."
 - c. A plastering expert inspected the home, and concluded that all of the areas where cracking was observed seem to be structurally sound. The inspection results were included in a letter, dated March 4, 2011, that addressed all five of the claimants on or near Montana Avenue (see discussion of contents of the letter in paragraph C.1.c. above).
 - d. The construction activities (including pile driving) and the claimant's residence are separated by 250 feet. A representative from Foundation Pile said that if the residence is separated by more than 100 feet from the pile driving location, damage to the home is very unlikely to occur. In addition, recorded vibration levels from seismographs located near the claimant's home are not significant and are not considered harmful to nearby structures.
 - e. On November 12, 2010, a small portion of the westside of the I-405 bridge over Montana Avenue was demolished. The subcontractor claims that the vibration from this operation would not have caused any damage to the homes on or near Montana Avenue that were 250 or more feet from this construction activity (see B.3. above).
 - f. Kiewit denied the claim on June, 3, 2011. The denial letter stated: "Kiewit Infrastructure Group retained the services of an independent seismic testing company who placed

Review of Six Property Crack Claims Denied by Kiewit

seismographs near your home to monitor the vibrations. Their report indicates the peak particle velocities were very low. The construction activity did not affect the structural integrity of your home. In addition, you stated that the vibrations were felt during the night. There was no pile driving performed during the nighttime hours.” Our review of documents show that pile driving activity occurred from December 6 to 16, 2010, during day light hours (from 7 a.m. to 3:30 p.m.), and demolition work on the Montana Avenue bridge occurred on November 12, 2010.

5. Kiewit Claim #39/Metro Claim #29:

- a. On December 27, 2010, a claimant reported cracks in his home. He noticed the cracks shortly after the holidays and believes the cracks are a result of the pounding that took place at the Montana Avenue Bridge.
- b. Kiewit’s Community Relations Manager inspected the claimant’s home on January 31, 2011. The inspection notes stated:
 - One crack in kitchen at top of cabinets under crown molding.
 - Cracks in kitchen and living room plaster ceiling.
 - Not concerned about structural integrity.
- c. A plastering expert inspected the home, and concluded that all of the areas where cracking was observed seem to be structurally sound. The inspection results were included in a letter, dated March 4, 2011, that addressed all five of the claimants on or near Montana Avenue (see discussion of contents of the letter in paragraph C.1.c. above).
- d. The construction activities (including pile driving) and the claimant’s residence are separated by 350 feet. A representative from Foundation Pile said that if the residence is separated by more than 100 feet from the pile driving location, damage to the home is very unlikely to occur. In addition, recorded vibration levels from seismographs located near the claimant’s home were not significant and were not considered harmful to nearby structures.
- e. On November 12, 2010, a small portion of the westside of the I-405 bridge over Montana Avenue was demolished. The subcontractor claims that the vibration from this operation would not have caused any damage to the homes on or near Montana Avenue that were 250 or more feet from this construction activity (see B.3. above).
- f. Kiewit denied the claim on June, 3, 2011. The letter stated that: “Kiewit Infrastructure Group retained the services of an independent seismic testing company who placed seismographs near your home to monitor the vibrations. Their report indicates the peak particle velocities were very low. The construction activity did not affect the structural integrity of your home.”

Review of Six Property Crack Claims Denied by Kiewit

6. Kiewit Claim #253/Metro Claim #279:

- a. On June 25, 2012, a claimant reported that the construction of the wall on the eastside of the freeway in Sherman Oaks caused a great deal of shaking. This wall has been under construction since last year. The claimant claims that the excessive shaking may have caused cracks at various locations on his property. He is also concerned about the foundation of the home being disturbed. The claimant subsequently claimed additional damage to his property occurred after he submitted his initial claim on June 25, 2010.
- b. Personnel from both Kiewit Community Relations Office and Metro Construction Relations Office inspected claimant's home on June 22, 2012, and August 10, 2012. Notes from these inspections stated:
 - No indication of new cracks or damage.
 - Separations contained dirt and debris.
 - No damage or separation at the west wall, closest to construction activity.
 - Eastern wall by pool cracking through patchwork.
 - Wall in stairway cracking through patchwork; cracks do not look fresh.
 - Pipes on north side detached.
 - Cracks have been patched before on north side.
 - Cracks by back windows have the same cracks, previously patched.
 - Cracks in plaster wall, previously patched.
 - Cracks in stucco/plaster on side of stairway, previously patched.
 - Cracking in plaster on back of the house, previously patched.
 - Stucco peeling off on corner of house in back.
 - Pool tilts down in south corner.
 - Sidewalk by pool caves in.
 - Plaster cracking in corner of pool.
 - Crack in corner fence/wall.
 - Crack in plaster under deck.
- c. The claimant provided the following dates/periods on which he felt vibration or shaking from construction work occurred.
 - November 6, 2012
 - October 26, 2012
 - Week of September 12, 2012
 - July 16, 2012 (night)
 - April 12, 2012 (night)
 - October 2011 to December 2011
 - April 13 to 21, 2011

Review of Six Property Crack Claims Denied by Kiewit

Drill Tech responses to the above dates are:

- November 6, 2012: Drill Tech did not perform work on sound wall 2004 at night on this date.
 - October 26, 2012: Drill Tech was testing tieback anchors on sound wall 2004 during the day, a quarter mile away from the residence. No night work was performed on this date.
 - September 12, 2012: Drill worked on the north end of the wall 200 feet from the residence.
 - July 16, 2012 (night): Drill Tech did not perform work on the night of July 16th at sound wall 2004. The claimant's email to LACMTA at 1:49 a.m. on July 17, 2012, claimed shaking since 9:30 p.m. on July 16th.
 - April 12, 2012 (night): Drill Tech did not perform night work at sound wall 2004 on this date or other dates this week.
 - October 2011: Drill tech did not perform any work on sound wall 2004 during October 2011.
 - November 2011: Drill Tech installed two verification soil nails on sound wall 2004 on November 3, 2011. This installation was 874 feet south of the subject residence. No vibration could have impacted the subject property at this distance.
 - December 2011: Drill Tech began drilling soil nails. Drilling started 350 feet from subject residence and continued south away from the residence. No vibration could have impacted the subject property at this distance.
- d. On September 12, 2012, Kiewit denied the claim and tendered the claim to Drill Tech Drilling. The denial letter stated: "The cracks observed on the exterior of your home, in and around your pool, along the driveway and along the North and West walls were not due to Kiewit's construction work. The construction activity did not affect the structural integrity of your home or its foundation. There is no supportive evidence to suggest any liability on the part of Kiewit." The claimant requested additional investigation and reconsideration of the denial.
- e. A report, dated October 23, 2012 from TGR Geotechnical, a third party firm hired by Kiewit, showed vibration monitoring results for drilling activity at Sound Wall 2004 on October 16, 2012. The vibration measurements showed a PPV range from 0.01 in/s to 0.125 in/s. The report concluded that these measurements fall under Barely Perceptible to Distinctly Perceptible range, for human response and within safe vibration levels for residential buildings located approximately 40 or more feet away.
- f. On December 13, 2012, Kiewit responded to the claimant's request for reconsideration of the denial of claims. Kiewit's letter to the claimant states:

Review of Six Property Crack Claims Denied by Kiewit

- “In view of your specific complaint of work performed near the retaining wall construction on the I-405 North bound (sound wall 2004), Kiewit hired a geotechnical consultant to conduct ground vibration monitoring at this location during the soil nail drilling process...The study determined that the ground vibration levels ranged from .01 PPV – within the Barely Perceptible Range – for Human Response. The study also verified that the PPV’s generated by the work were far below the minimum levels required to cause even cosmetic damage in structures. This is consistent with Government published vibration charts which confirm that Human Response levels to vibrations are far below the actual levels required to cause even cosmetic damage...The U.S. Department of Interior vibration table is reproduced in the TGR report. PPV’s below 1.0 are acceptable and minimum velocities of .5 to .75 are required to cause damage to plaster or drywall. The PPV’s recorded from drilling operation ranged from 0.1 to .125. The highest recorded level was 800% below the acceptable level and 400% below any level that would generate cosmetic damage to structures.”
 - “The cracks observed on the exterior of your home, around the pool, along the driveway and the North and West walls, likely pre-existed your purchase of the property in 2009, as they have been previously patched by persons unknown to you. The few photographs provided depicting the residence prior to your claim, were included with the refinance Appraisal Report of September 2011. The cover photo from the appraisal clearly shows a large crack in the curb that was also photographed during the property inspection of August 2012 as related to construction.”
 - “You have also cited dates unrelated to construction at SNW2004 [sound wall 2004] but we have not identified any equipment utilized or operation performed which could generate ground vibration anywhere near the levels sufficient to cause the alleged damage.”
 - “For the reasons cited above, we must reaffirm our denial.”
- g. On December 21, 2012, Drill Tech’s Southern California Area Manager completed a comprehensive investigative report, which was shared with the claimant. The report stated that:
- “Drill Tech’s scopes of work do not produce significant vibration, especially not to the magnitude to cause any damage to structures. The drilling of soil nails is the operation that would produce the greatest levels of vibration. As documented in TGR’s Vibration Monitoring and Analysis Report of nail drilling for sound wall 2004, the levels of recorded vibration are in the range of “barely perceptible” and 4 to 17 times less in magnitude than the lowest threshold for plaster crack.”
 - “After visiting and investigating the claimant’s property on November 20, 2012, and documenting the damages to the house and pool, it was apparent that the damage was most likely pre-existing and/or in a long term deterioration process. Many of the cracks in the stucco of the house had been previously patched. The cracks in the driveway and pool area had been previously caulked or epoxy patched. And, most significantly the shoring wall supporting the backfill around

Review of Six Property Crack Claims Denied by Kiewit

the pool had rotten and failed allowing the backfill material to wash out. Likewise, several of the supports for the pool deck had rotted and come unattached. The failed shoring wall and supports are in the northwest corner of the pool and is the obvious reason as to why the pool is settling in this corner.”

- h. On February 12, 2013, Drill Tech denied the claim. The denial letter referenced the above report (dated December 21, 2012) and stated: “The conclusions are numerous and appear on the last four pages of the report. It is clear from Drill Tech’s investigation and from the report and its conclusions that Drill Tech did not in any way or to any degree cause or contribute to any of the things for which you have expressed complaints or concerns. Neither the facts, nor the law as applied to the facts, support any legal liability on part of Drill Tech.” The denial letter also stated:
- “Drill Tech interviewed a prior owner of the premises who corroborated Drill Tech’s conclusions that the damages which you allege to have occurred to your home occurred well before you lived there and well before the I-405 project began.”
 - “Drill Tech has learned that you are not an owner of record title to the premises and thereby you have no legal standing to assert any property damage claims.”
 - “For the reasons stated, Drill Tech respectfully fully denies liability or responsibility for your alleged claims.”

We found that both Kiewit and Drill Tech have sent communications to the claimant regarding his claim, and provided him with related information on concerning the investigation of the claim. We contacted the TGR President who told us that during the last 3 years, his firm had not perform vibration monitoring study for Kiewit other than the I-405 project. He also stated that there was no vibration monitoring result that shows Peak Particle Velocity above the damage threshold for structures.

D. Conclusion

All six of the claims were denied by Kiewit and/or subcontractors. There is no dispute that some cracks exist in the homes and in some cases on the property outside the homes. The residents believe that the cracks were caused by recent I-405 construction activities, and Kiewit and its subcontractors believe that their construction activities did not cause the cracks. Kiewit and its subcontractor investigated the claims and provided the claimants with reasons for the denials such as:

- Specific to the five homes on or near Montana Avenue:
 - Independent vibration monitoring showed that the vibration levels were below the threshold for causing damage to structures.
 - The five homes in questions were 250 feet or more from pile driving activities. Subcontractor staff said that if the residence is separated by more than 100 feet from the pile driving location, damage to the home is very unlikely to occur.

Review of Six Property Crack Claims Denied by Kiewit

These homes were also 250 feet or more from the demolition work performed on November 12, 2010.

- In some instances, the time period when the alleged damage occurred were before the construction activity (pile driving) began that supposedly caused the damage.
 - Inspection of the claimants' properties indicated that some of the cracking were old, have been repaired, and have reopened.
- Specific to the Del Gado Drive property:
 - Ground vibration monitoring by a third party firm found that the vibration from drilling soil nails was significantly below the threshold to cause cosmetic damage to structures.
 - Inspection of the property concluded that the damages were most likely pre-existing and/or in a long term deterioration process. Cracks have been previously patched or caulked. The shoring wall supporting the backfill around the pool had rotten and failed, and several supports for the pool deck had rotten.
 - A crack in the curb photographed during a property inspection in August 2012 is also shown in a photograph included with a refinance appraisal report of September 2011, which was prior to the timeframe (December 2011 to December 2012) that claimant claimed that damage occurred.
 - The prior owner of the property corroborated Drill Tech's conclusions that the alleged damages occurred well before the I-405 project began.

From the documentation and reports in the claim files, there is no conclusive evidence that indicates that Kiewit or subcontractor construction activities caused the damages to the property. Without evidence of the condition of these residences prior to the start of the construction operations on the I-405 freeway, it is not possible to determine when the cracking occurred and the cause for the cracking.

We believe Kiewit and its subcontractors conducted good faith investigations of these six claims that included interviewing claimants, inspecting the properties for damages, reviewing Daily Reports of actual construction activities, reviewing third party inspection reports, and reviewing independent vibration monitoring reports. Although Kiewit has performed considerable investigative work, the claimants continue to believe that the construction activities caused the damages to their homes and property. In this regard, we believe that Kiewit needs to improve communicating the reasons for denying claims, sharing results of inspections and tests with the claimant, and providing the claimant with guidelines or criteria on acceptable/unacceptable vibration levels. We also believe that the appeal process can be improved by adding an independent person as the reviewed/adjudicator of appeals. These suggested improvements are incorporated in our overall report on the I-405 claims process.

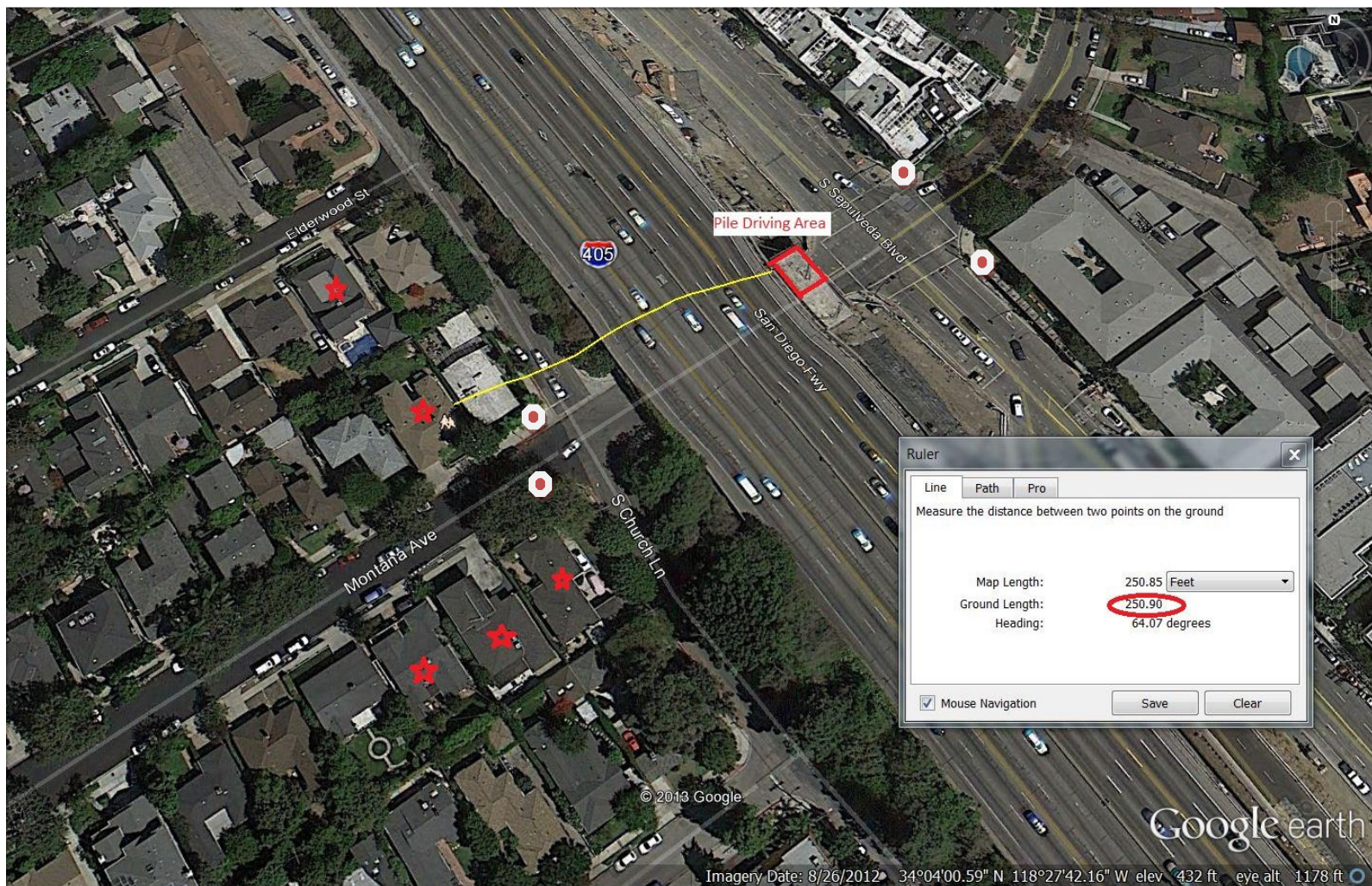
Summary Information for the Six Claims Referred to Board Director's Office

	Nature of Claim	Event Date	Claimant Report Date	Metro Responding to Claimant Date	First Kiewit contact date *	Claim Denied Date	Amount Claimed	Amount Paid	Responsible Party	Evidence of Kiewit Investigation (Yes/No)	Evidence of Kiewit Communication with Claimants (Yes/No)	Gave Reason on Denial Letter (Yes/No)
Clamaint #18	Cracks in house	2nd or 3rd week of Nov 10, 2010	12/8/2010	12/9/2010	12/21/10	6/3/2011	Unknown**	-	Kiewit	Yes	Yes	Yes
Clamaint #19	Cracks in house	Around 10/9/2010	12/8/2010	12/09/10	12/20/10	06/03/11	Unknown**	-	Kiewit	Yes	Yes	Yes
Clamaint #25	Cracks at house	Around Thanksgiving, 2010	12/8/2010	12/09/10	12/21/10	6/3/2011	Unknown**	-	Kiewit	Yes	Yes	Yes
Clamaint #27	Cracks at house	Week of Dec 6, 2010	12/8/2010	12/9/2010	12/21/10	6/3/2011	Unknown**	-	Kiewit	Yes	Yes	Yes
Clamaint #29	Cracks at ceiling of house	Month of Dec 2010	12/27/2010	1/13/2011	12/21/10	6/3/2011	Unknown**	-	Subcontractor	Yes	Yes	Yes
Clamaint #279	Cracks on property	Dec 2011 to Dec 2012	06/22/12	06/25/12	06/22/12	09/12/12	Unknown**	-	Subcontractor	Yes	Yes	Yes

* In some instances, Kiewit Community Relations Office was aware of the claims directly from claimants and started contacting the claimants before claims were forwarded from Metro.

**Claimants did not provide estimate dollar damage amount with the claims.

Map of the Five Claimants' Residences, Pile Driving Location, and Seismograph Locations



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- Yellow line indicates distance of about 250 feet between pile driving area and the nearest claimant's home.
- Locations of four seismographs used to collect vibration data
- ★ Claimants' property location

Map of the Sixth Claimant's Resident

Picture of residence on Del Gado Drive. Construction activity included widening of the I-405 freeway and construction of freeway sound wall, which is adjacent to the homeowners property.



Claimant's home.



Construction area of additional lane and sound wall. Drilling of soil nails for sound walls is the operation that would cause the greatest level of vibration.

ATTACHMENTS

Board Motion

**Construction Committee
November 15, 2012**

Motion Director Yaroslavsky

In August 2009, construction for the I-405 Sepulveda Pass Widening Project began. Once completed, this project will add a 10-mile HOV lane from the I-10 Santa Monica Freeway to the 101 Ventura Freeway. This extraordinary undertaking has required the removal and replacement of three bridges, realignment of 27 on and off ramps, widening of 13 underpasses and structures and the construction of 18 miles of retaining and sound walls.

Needless to say, the impact to the adjacent communities has been significant, not only in terms of traffic, but noise and vibration at all hours of the night, as well as property damage. Thus far, 338 claims have been sent by Metro staff to Kiewit, the prime contractor. These claims are a combination of property damage and/or vehicle damage. It is estimated that 75-90% of these claims have been denied. The claimants wait months for a response from the contractor. Once they receive a response, if denied, it is limited with no real explanation for the denial. Furthermore, many of the claims are forwarded to the subcontractor. The claimant must then wait months for an investigation and response from the subcontractor. Once again, in the case of a denial, there is minimal information and reasons for the denial. This situation is untenable and needs to be addressed. I am concerned about the number of denials, the contractor's

Board Motion

oversight of the subcontractor, the process of the investigation and the timeliness of the responses

I, THEREFORE, MOVE that an independent audit/review be conducted by the Inspector General of the claims process, including the response time, subcontractor oversight, investigative process and overall due diligence. I

FURTHER MOVE that the Inspector General report back at the January meeting on a path forward for this investigation.

Tables of Claims Data Analyses

Table 1 –Total Claims Grouped by Type of Claimant

Type of Claimant	# of Claims	% of Total Claims	Total Amount Claimed*	% of Total Claims	Total Amount Paid*
Commuters	242	71%	\$ 264,760	61%	\$ 76,844
Residents	84	25%	128,896	30%	39,661
Businesses	14	4%	39,960	9%	28,960
Total	340	100%	\$ 433,616	100%	\$ 145,465

Table 2 –Total Amounts Claimed and Paid

Amount	# of Claims	% of Total Claims	Total Amount Claimed*	% of Total Claims	Total Amount Paid*
Claims more than \$2500	29	9%	\$ 233,513	54%	\$ 87,292
\$2500 or less	252	74%	200,103	46%	58,173
Unknown	59	17%	-	0%	-
Total	340	100%	\$ 433,616	100%	\$ 145,465

Table 3 – Entities that Handled Claims

Entity	Number of Claims	% of Total Claims	Total Amount Claimed*	% of Total Claimed	Total Amount Paid	% of \$ Amount Paid
Kiewit	267	79%	\$ 345,789	80%	\$ 144,959	42%
Subcontractors	68	20%	86,627	20%	31,251**	36%
Others***	5	1%	1,200	0%	-	n/a
Total	340	100%	\$ 433,616	100%	\$ 176,210	41%

*Amount claimed may be greater due to some claims submitted with no dollar amount.

**\$31,251 is comprise of \$506 paid by Kiewit after subcontractor denied the claim and \$30,745 paid by subcontractors.

***Caltrans and Chevron.

Tables of Claims Data Analyses

Table 4 – Type of Claims Forwarded to Kiewit by Metro

Type	# of Claims	% of Total Claims	Total Amount Claimed	% of Total Claims	Total Amount Paid*
Commuters	160	68%	\$ 131,194	50%	\$ 24,958
Residents	66	29%	122,015	50%	34,378
Businesses	<u>8</u>	<u>3%</u>	<u>11,160</u>	<u>0%</u>	<u>160</u>
Total	234	100%	\$ 264,369	100%	\$ 59,496

Table 5 – Type of Claims Received Directly by Kiewit

Type	# of Claims	% of Total Claims	Total Amount Claimed	% of Total Claims	Total Amount Paid*
Commuters	82	77%	\$ 133,566	79%	\$ 51,886
Residents	18	17%	6,881	12%	5,283
Businesses	<u>6</u>	<u>6%</u>	<u>28,800</u>	<u>9%</u>	<u>28,800</u>
Total	106	100%	\$ 169,247	100%	\$ 85,969

Table 6 – Status of Claims Handled by Kiewit

Status	# of Claims	% of Total Claims	Total Amount Claimed	Total Amount Paid*	% of Amount Paid	Average Days Lapsed
Completed: Claims Paid	86	38%	\$ 142,868	\$ 140,335	98%	64
Completed: Claims Denied	125	54%	123,605	-	N/A	60
Completed: Unknown Elapsed Days**	<u>18</u>	<u>8%</u>	<u>20,775</u>	<u>4,624</u>	<u>22%</u>	<u>N/A</u>
<i>Completed subtotal</i>	<i>229</i>	<i>100%</i>	<i>\$ 287,248</i>	<i>\$ 144,959</i>	<i>50%</i>	
Completed Claims	229	86%	287,248	144,959		
Open Claims	28	10%	33,042	-		68
On-hold Claims	7	3%	25,500	-		441
Open Claims with Unknown Elapsed Days**	<u>3</u>	<u>1%</u>	<u>4,200</u>	<u>-</u>		<u>N/A</u>
Total	267	100%	\$ 349,990	\$ 144,959	41%	

* Amount claimed may be greater due to some claims submitted with no dollar amount.

** The elapsed days for processing these completed claims cannot be determined because the relevant claim receipt date, payment date, or denial date was not in the claim files.

Tables of Claims Data Analyses

Table 7 – Aging of Claims Handled by Kiewit

Aging	Completed	Open	On Hold	Total
30 days or less*	98	16	-	114
31 to 60 days*	45	7	-	52
61 to 90 days*	24	1	-	25
91 to 120 days**	14	1	-	15
121 to 180 days**	15	0	-	15
over 180 days	15	3	7	25
Unknown	18	3	-	21
Total	229	31	7	267

*90 days or less = 167 claims completed and 24 claims open.

** 91 days to 180 days = 29 claims completed and 1 claim open.

Table 8 – Status of Claims Handled by Subcontractors

Type	# of Claims	Total Amount Claimed	% of Total \$ Claimed	Total Amount Paid by Subcontractors	% of Paid vs. Claimed (Amount)
Completed Claims	47	\$ 73,066	84%	\$ 30,745	42%
Open Claims	10	4,872	6%	0	N/A
Unknown	11	8,689	10%	0	N/A
Total	68	\$ 86,627	100%	\$ 30,745	

Table 9 – Claims Handled by Subcontractors

Subcontractor Name	# of Claims	Total Amount Claimed	% of Total Claims
A & M Gentry Trucking	10	\$ 7,876	9%
Bubalo Construction	1	350	0%
Drill Tech Drilling & Shoring	8	25,787	30%
Foundation Pile	4	3,849	4%
W.A, Rasic Construction	1	400	1%
Redland Transportation	1	813	1%
Statewide Traffic Safety	41	43,542	50%
Sterndahl Enterprises	1	4,010	5%
U.S. Demolition	1	0	0%
Total	68	\$ 86,627	100%

**Comparison of Payments for
Claims Forwarded by Metro and Claims Received Directly by Kiewit**

Claims Forwarded by Metro:

Entities	# of Claims	% of Total Claims	Total Amount Claimed	Total Amount Paid	% of Paid vs. Claimed (Amount)	Number of Claims Paid	% of Paid vs. Claimed (#)
Claims handled by Kiewit	183	78%	\$ 211,757	\$ 59,496	28%	41	22%
Claims Kiewit forwarded to its subcontractors	47	20%	51,412	-	n/a		
Claims towards others	4	2%	1,200	-	n/a		
Subtotal	234	100%	\$ 264,369	\$ 59,496	23%		
Number of Claims Paid	41		62,133	59,496			

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Claims Received Directly by Kiewit:

Entities	# of Claims	% of Total Claims	Total Amount Claimed	Total Amount Paid	% of Paid vs. Claimed (Amount)	Number of Claims Paid	% of Paid vs. Claimed (#)
Claims handled by Kiewit	84	79%	\$ 134,032	\$ 85,463	64%	50	60%
Claims Kiewit forwarded to its subcontractors	21	20%	35,215	506	n/a		
Claims towards others	1	1%	-	-	n/a		
Subtotal	106	100%	\$ 169,247	\$ 85,969	51%		
Number of Claims Paid (a)	50		85,509	85,463			

Comparison of Payments for Claims Forwarded by Metro and Claims Received Directly by Kiewit

Reconciliation to Claims Received Directly by Kiewit:

Categories of Claims	# of Claims	Note
Residents	9	Claims of damages caused by Kiewit vehicles or equipment. In these cases, Kiewit employees were at the scene of the incident.
Commuters	7	Claims of damages caused by Kiewit vehicles or equipment. In these cases, the motorist stopped and Kiewit employees were at the scene of the incident.
Commuters	<u>10</u>	There was a loose metal plate that was not welded; 10 claims were filed and paid by Kiewit.
Total	26	

Our review found that for the above 26 claims, Kiewit paid a total of \$49,760. These 26 claims were more than half of the 50 claims paid. Without these 26 claims, percentage of the claims paid on claims received directly by Kiewit would have been much lower.

Categories of Completed Claims Processed by Kiewit

Categories of Claims	Number of Claims Processed	Total \$ Amount Claimed	Total \$ Amount Paid	% of Amount Paid/Claimed	Number of Claims Paid	Number of Claims Paid (%)	Note
	(a)	(b)	(c)	(d) = (c)/(b)	(e)	(f) = (e)/(a)	
Businesses							
Construction crew/truck involved damage	6	\$ 28,800	\$ 28,800	100%	6	100%	1
Dust damage	2	-	-		0	0%	
Property Cracks	2	10,000	-	0%	0	0%	
Other	2	160	160	100%	1	50%	2
Landscape	1	1,000	-	0%	0	0%	
<i>Subtotal businesses</i>	<i>13</i>	<i>39,960</i>	<i>28,960</i>		<i>7</i>	<i>54%</i>	
Commuters							
Windshield damage	36	24,257	10,562	44%	14	39%	
Construction item/debris hit car	21	20,541	12,959	63%	12	57%	1
Tire damage	20	12,436	2,563	21%	4	20%	
Hit plate	16	29,065	29,018	49%	14	88%	3
Pothole	16	16,966	8,262	49%	7	44%	
Hit rock	15	11,578	8,006	69%	11	73%	4
Other	13	10,543	4,335	41%	5	38%	5
Hit metal	10	18,669	-	0%	0	0%	
Car accident	3	464	464	100%	1	33%	
Construction crew/truck involved damage	2	170	170	100%	1	50%	1
<i>Subtotal Commuters</i>	<i>152</i>	<i>144,689</i>	<i>76,338</i>	<i>53%</i>	<i>69</i>	<i>45%</i>	
Residents							
Property crack	34	47,630	-	0%	0	0%	6
Construction crew/truck involved damage	8	6,466	5,816	90%	6	75%	1
Other	6	4,485	650	14%	2	33%	5
Dust damage	3	-	-	0%	0	0%	
Landscape	3	30,100	30,000	100%	1	33%	7
Pool damage	3	2,620	2,620	100%	3	100%	8
Sewer damage	3	5,700	178	3%	1	33%	
Water damage	3	1,000	-	0%	1	33%	9
Car accident	1	397	397	100%	1	100%	
<i>Subtotal Residents</i>	<i>64</i>	<i>98,398</i>	<i>39,661</i>	<i>40%</i>	<i>15</i>	<i>23%</i>	
TOTAL	229	283,047	144,959	51%	91	40%	

Note:

1. Kiewit was able to collaborate claimant's claim and most time Kiewit's crews were at the scene.
2. Includes claims of rodent and leaky pipe. The claim of rodent was paid.
3. There were 10 claims on the same steel plate. Kiewit's investigation supported claimants' claims and paid most of them.

Categories of Completed Claims Processed by Kiewit

4. Kiewit's investigations showed those rocks were from construction activities. Therefore, they paid these claims.
5. Other paid claims included claims of rodents, car hitting delineator, car hitting gawk screen panel on roadway, broken gate, and etc.
6. No claim of property cracks were paid except for the 1 claim settled together with the tree damages in Note 6.
7. One landscape claim was settled thru lawsuit. Settlement included tree damages and property cracks. This was a non-disclosed settlement. Therefore, we do not have detail breakout of the payment.
8. All three pool damage claims were paid because Kiewit's investigation supported that dirt in pools was from construction activities.
9. Kiewit fixed the V ditch claimant claimed the damage occurred.

Categories of Completed Claims Processed by Subcontractors

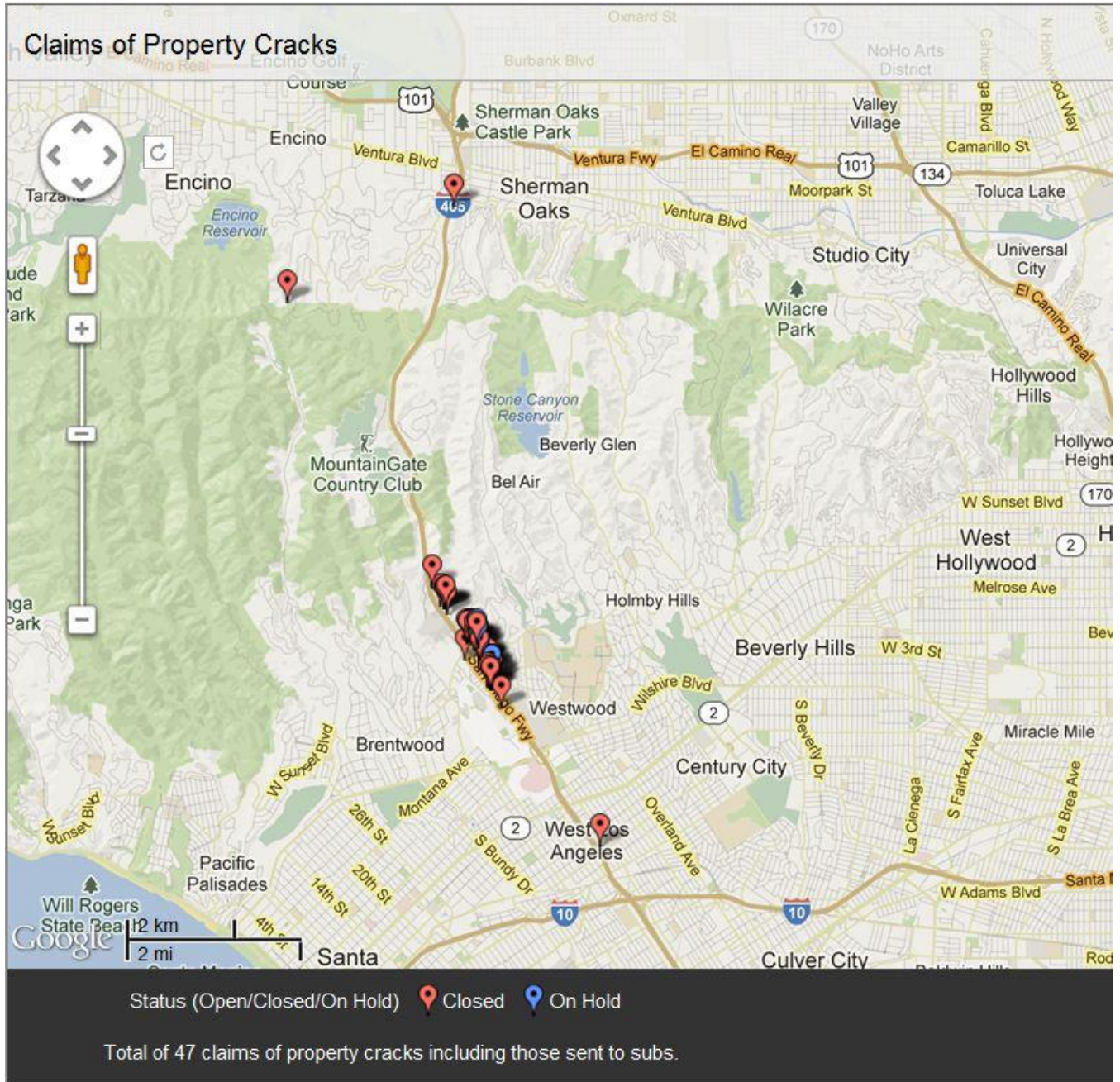
Categories of Claims	Number of Claims Processed	Total \$ Amount Claimed	Total \$ Amount Paid	% of Amount Paid/Claimed	Number of Claims Paid	Number of Claims Paid (%)	Note
	(a)	(b)	(c)	(d) = (c)/(b)	(e)	(f) = (e)/(a)	
<i>Commuters</i>							
Hit cone	33	\$ 38,670	\$ -	0%	0	0%	1
Construction item/debris hit car	4	17,386	16,261	94%	3	75%	2
Windshield damage	4	1,911	-	0%	0	0%	
Construction crew/truck involved damage	2	11,250	14,484	129%	2	100%	2
<i>Subtotal Commuters</i>	43	69,217	30,745	44%	5	12%	
<i>Residents</i>							
Property crack	4	3,849	-	0%	0	0%	3
<i>Subtotal Residents</i>	4	3,849	-	0%	0	0%	
TOTAL	47	\$ 73,066	\$ 30,745	42%	5	11%	

Note:

- None of the claims for vehicle hitting cones were paid as of November 15, 2012. According to Statewide Traffic Safety, Kiewit's subcontractor, cones were placed on road according to the construction requirements and Kiewit videotaped the activity once per shift. Statewide crews make periodic inspection about 3 to 4 times in an 8-hour shift. However, one claim was paid after our cut-off date because Statewide determined that there was a 5 hours gap between inspections of cones.
- These were vehicle damages resulted from construction debris. For most of these, construction crews were at the scene of incidents.
- None of property cracks claims were paid.

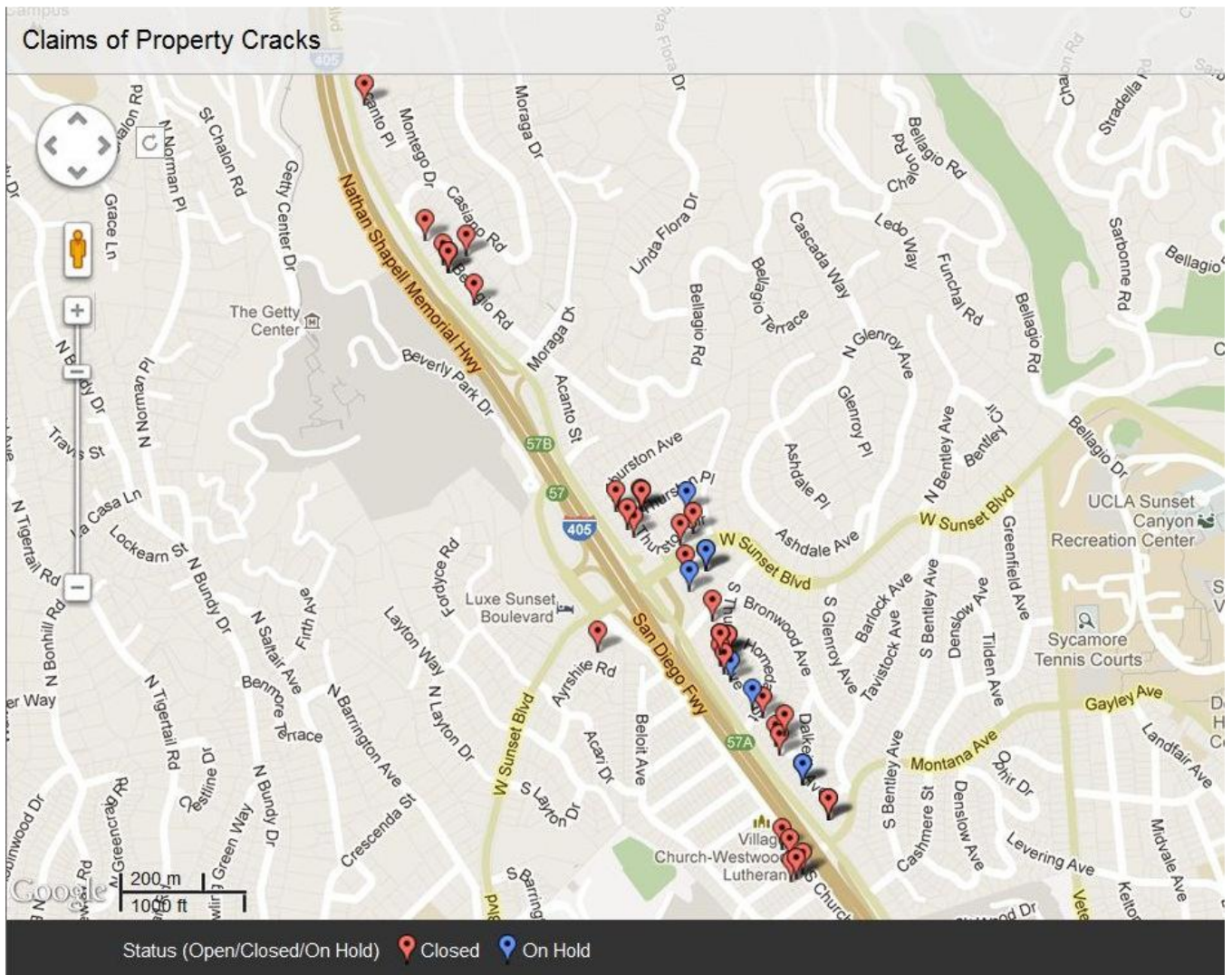
Locations of Claims of Residential Property Cracks

Locations of 47 homes that had property crack claims.



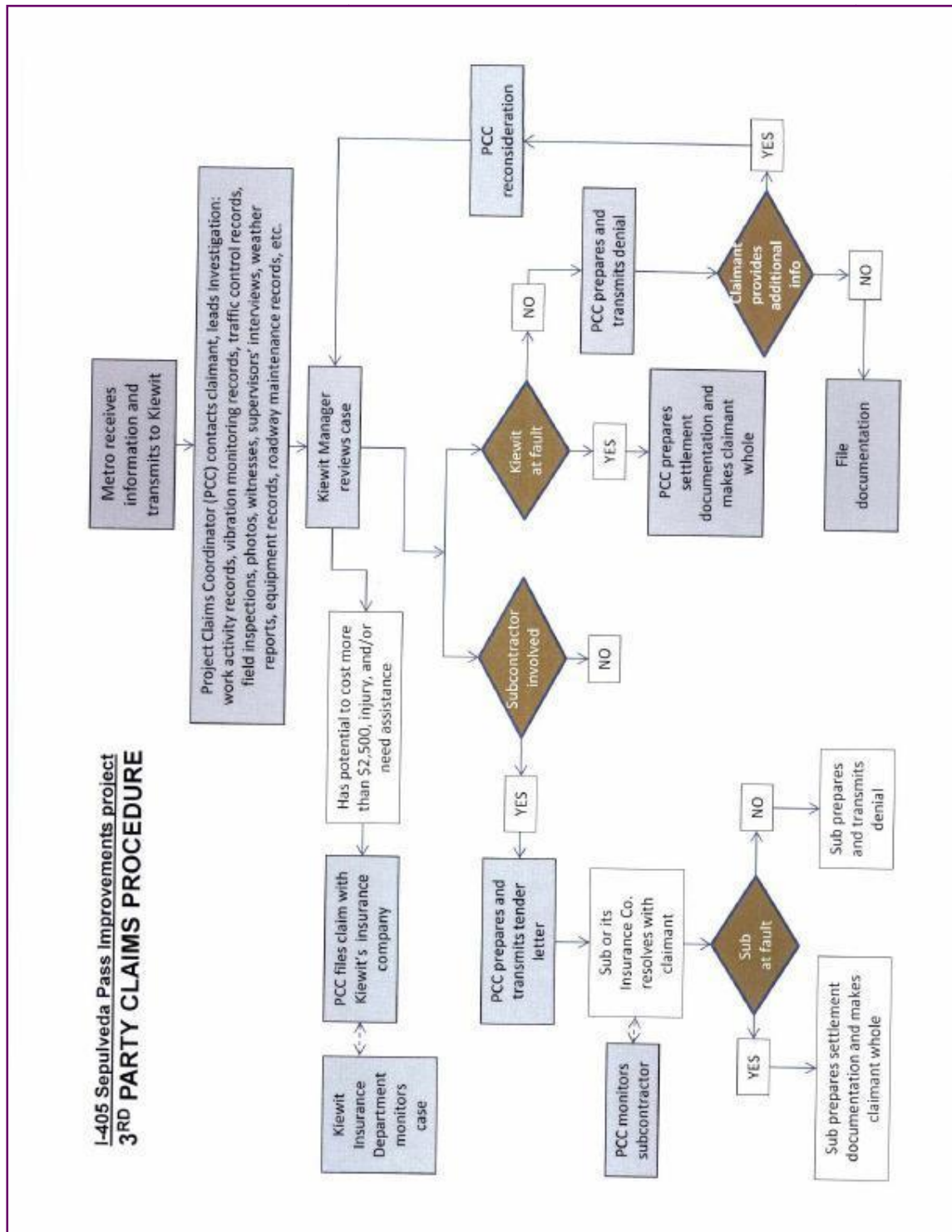
Locations of Claims of Residential Property Cracks

Locations of the majority (43 out of 47 claims) of homes that had property crack claims.



Note: There were a total of 8 claims on-hold for six homes; 2 home-owners submitted more than one claim. The locations of the six homes are shown above in “blue.”

Kiewit Third Party Claim Procedure Flowchart



Prepared by Kiewit Community Relations Office.

Kiewit Community Relations Incident Report

COMMUNITY RELATIONS INCIDENT REPORT

Kiewit Claim No.

Contact

Name : Phone :

Address :

Email :

Report by:

Incident

Date: / Time:

Location: :

Vehicle: : Estimated Cost: :

Narrative

Discussion

Argument against paying

1.

Argument in favor

1.

Recommended Action

cc De 4/16/12

Kiewit Third Party Claims Checklist

Third Party Claims Checklist

Page 1 of 3

Our Claim No.

Contact Info:

Name | Phone

Address

Email

Date of 1st contact: | Contacted by: |

Incident Description

Date: | Time: |

Where did it happen? Direction heading, On what road, What lane?

Speed you were traveling

What happened?

Vehicle/Property

Description

Who owns the vehicle/property?

Describe the damage.

Are there photos?

Is there a police report?

Kiewit Third Party Claims Checklist

Third Party Claims Checklist

Page 2 of 3

Contact Info

Name :

Reporting

To whom have you reported this?

Metro

Insurance company

Other

Repairs

What are the estimated repair costs?

Has it been repaired?

Who paid for the repairs?

Did insurance company pay for this?

Is there a receipt for damages?

Why do you feel this is the contractor's responsibility?

Next Step:

MR – 03/19/12

MR – 03/20/12

Kiewit Third Party Claims Checklist

Third Party Claims Checklist

Page 3 of 3

Contact Info

Name Dan Katz

Next Step:

MR - 03/22/12

MR - 03/23/12

Example of Kiewit Denial Letter Without Reason



February 4, 2011

Re: Claim concerning your sewer line problems
Subject: sewage backup

Dear

We have received your report concerning your sewer line problems at _____ in early November 2010. We understand your concern and thank you for reporting this incident.

After a thorough investigation it has become clear that the breakage was not due to our construction activity. We now consider this matter closed.

If you have any questions or concerns please contact me at 310-846-2400.

Sincerely,

Kiewit Infrastructure West Co., 1405 Project
Community Relations Manager

DK: nj
Attachments: none

KIEWIT INFRASTRUCTURE WEST CO.
6060 Center Drive, Suite 200, Los Angeles, CA 90045
(310) 846-2400 (310) 846-2405 fax



Example of Kiewit Detailed Denial Letter



December 12, 2011

Re: September 17, 2011 incident

Dear I

This is in response to the incident you reported regarding the property damage to your 350. According to your description, on Saturday, Sept. 17, 2011 at approximately 9:15am while driving northbound on the 405 freeway in lane #2, just north of the Skirball Center off-ramp, you noticed a grayish cylindrical metal object approximately 14 – 16 inches long lying in the traffic lane. You were unable to take evasive action due to surrounding traffic conditions and you drove over the object. Unfortunately your tire was slashed and the wheel rim was damaged. Thank you for taking the time to report this incident. Kiewit undertakes substantial effort to ensure that its construction activity does not cause any hazardous roadway conditions.

A comprehensive investigation was completed that included a thorough review of the traffic records, maintenance logs, and statements from personnel overseeing the construction activities around the time and place you stated the damage occurred. On Sept. 17, 2011 there was no construction activity that required a Kiewit vehicle or equipment to travel on the N/B 405 freeway in the area where the incident allegedly occurred. The object was not recovered. There is no evidence suggesting that Kiewit is responsible for this object; that Kiewit caused it to be on the freeway or that it is connected in any way to Kiewit's work. There is no indication that Kiewit was negligent or in any way obligated to pay for the damage to your vehicle. Based upon this information, we must respectfully deny liability for this incident.

If there is additional information or evidence that may cause us to reconsider our decision, please mail it to my attention within 30 days from the date of this letter, otherwise this matter will be closed.

Sincerely,

Kiewit Infrastructure West Co., I 405 Project
Community Relations Manager

KIEWIT INFRASTRUCTURE WEST CO.
6060 Center Drive, Suite 200, Los Angeles, CA 90045
(310) 846-2400 (310) 846-2405 fax



I-405 Sepulveda Pass Widening Project
Equal Opportunity Employer

Example of a Third Party Vibration Report



Geotechnical
Environmental
Hydrogeology
Material Testing
Construction Inspection

October 23, 2012

Project No. 11-3306

Kiewit Infrastructure West Co.
2nd Floor
6060 Center Drive
Los Angeles, CA 90045

Attention: Ms. Stephanie Koan-Irvin

Subject: Vibration Monitoring and Analysis Report, Soil Nail Drilling for wall SNW-2004 along I-405 in Los Angeles, I-405 Sepulveda Pass Widening, Contract No. C0882

Dear Stevi,

In accordance with your request, TGR Geotechnical, Inc. (TGR) is pleased to provide this report presenting the results of our vibration monitoring during soil nail drilling process on wall SNW-2004 along I-405 in Los Angeles.

The purpose of our study was to monitor vibration levels on surrounding residential area caused by drilling soil nails on wall SNW-2004 along northbound of I-405 in Los Angeles with respect to current general guidelines.

BACKGROUND AND STUDY APPROACH

The subject site is soil nail drilling on wall SNW-2004 along northbound of I-405 in Los Angeles. The drilling activity was monitored on October 16, 2012. At the time of our monitoring, the horizontal drill rig was utilized to drill approximately 10 holes, 20 feet long for the proposed wall.

Four seismographs were placed at the subject site on October 16, 2012. The locations of the seismographs are shown on Figure 1. The seismographs with Serial No.BA7195 V 10.30-8.17 BlastMate III, No.BA7014 V 10.30-8.17 BlastMate III, No.BA7606 V 10.30-8.17 BlastMate III, and No.BA8177 V 10.60-8.17 BlastMate III were installed 15 to 40 feet from the drill rig along wall SNW-2004 on I-405 (See Figure 1). The readings were initiated at approximately 10:30 am and terminated at approximately 11:30 am. Upon termination of the readings the seismographs were removed from the site and returned to our offices for data retrieval.

TGR GEOTECHNICAL
DBE & (a2) firm
3037 S. HARBOR BLVD
SANTA ANA, CA 92704
P 714 241 7189 F 714 621 7190
www.tgrgeotech.com

Example of a Third Party Vibration Report

Page 2

INSTRUMENTATION

As noted above, in order to collect the vibration data, four seismographs and analysis software (Blastware 10.3 by InstanTel) were utilized. The seismographs utilized were the BlastMate III manufactured by InstanTel, Inc. Each seismograph consists of a 3-axis velocity transducer, an air over-pressure transducer, and a data acquisition and storage device. The Blastware 10.3 analysis software provides features for graphical output of the wave forms in each of the three axes. The serial number and calibration date of the seismographs are presented below:

InstanTel Seismograph SN	Calibration Date
BA7195	2/17/2012
BA7014	2/17/2012
BA7606	2/17/2012
BA8177	5/16/2012

Each transducer measured velocities on three mutually perpendicular axes corresponding to a radial, transverse, and vertical component. The data acquisition equipment simultaneously recorded each geophone, in digital format, time-domain data for each of the three mutually perpendicular axes.

MEASUREMENTS

The vibration measurements from the seismographs of the subject site for the paving activities ranged from 0.01 to 0.160 in/sec (Appendix B) with Peak Particle Velocity (PPV) and peak vector sum presented below:

Seismograph No.	PPV, (peak Particle Velocity) (in/sec)	Peak Vector Sum (in/sec)
BA7014	0.125 @ 171 Hz	0.160
BA7195	0.040 @ 1 Hz	0.053
BA7606	0.030 @ 39 Hz	0.034
BA8177	0.070 @ 79 Hz	0.085

Example of a Third Party Vibration Report

Page 3

DATA ANALYSIS

Safe levels of vibration for various construction types using the particle velocity (in/sec) and frequency (Hz) have been addressed by the United States Department of the Interior (see referenced publication). This information is presented herein as Figure 2.

Per Caltrans Transportation and Construction Induced Vibration Guidance Manual (Caltrans, 2004) Table 6 (Human Response to Transient Vibration) the human response to a PPV (in/sec) is as follows:

PPV (in/sec)	Human Response
2.0	Severe
0.9	Strongly Perceptible
0.24	Distinctly Perceptible
0.035	Barely Perceptible

CONCLUSIONS AND RECOMMENDATIONS

The measured Peak Particle Velocity (PPV) of monitored seismographs ranged from 0.010 to 0.125 in/sec and the Peak Vector Sum from 0.01 to 0.160 in/sec for the subject site during the soil nail drilling activity between 10:30 am to 11:30 am on October 16, 2012. The frequency range was in general between 1 to 200 Hz. These measurements fall under Barely Perceptible to Distinctly Perceptible range, for human response according to studies by others. The PPV is well within the safe levels of vibration for residential buildings approximately 40 feet or more away from the soil nail drilling activity (Figure 2).

LIMITATIONS

Our professional services have been performed using that degree of care and skill ordinarily exercised under similar circumstances by reputable geotechnical engineer practicing in this or similar situations. The interpretation of the field data is based on good judgment and experience. However, no matter how qualified the geotechnical engineer or detailed the investigation, conditions cannot always be predicted beyond the points of actual sampling. No other warranty, expressed or implied, is made as to the professional advice included in this report.

TGR GEOTECHNICAL
DBE & 8(a) firm
3037 S. HARBOR BLVD
SANTA ANA, CA 92704
P 714.841.7189 F 714.841.7190
www.tgrgeotech.com



Example of a Third Party Vibration Report

Page 4

If you have any questions regarding this report, please do not hesitate to contact this office. We appreciate this opportunity to be of service.

Respectfully submitted,

TGR GEOTECHNICAL, INC.



Sanjay Govil, Ph.D., PE, No. 2382
Principal Geotechnical Engineer

Enclosures: Figure 1 – Vibration Monitoring Locations Map
Figure 2 – Blasting Level Criteria
Appendix A - References
Appendix B – Vibration Data

TGR GEOTECHNICAL
DBE & 8(a) firm
3037 S. HARBOR BLVD
SANTA ANA, CA 92704
P 714.641.7100 F 714.641.7100
www.tgrgeotech.com



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