JOAO ABILIO SILVA; MARIA SILVA (his wife), **Plaintiff(s),** **v.** **CONTI ENTERPRISES, INC; THE CONTI GROUP; CONTICO CORP.; CONTICO CORPORATION; MANUEL "MANNY" BARBOSA; FORD MOTOR COMPANY; JACOBS ENGINEERING GROUP INC.; READING EQUIPMENT & DISTRIBUTION, LLC; FRED BEANS FORD INC.; NAIK CONSULTING GROUP, PC; JIM CAFFREY; PAUL DECASAS; BILL MOSER; JEFF BOWSER; CHARLIE ANDERSON; JOHN WALDORF; JOHN DOES 1-20; ABC CORPORATIONS 1-20,** **Defendant(s).**	**SUPERIOR COURT OF NEW JERSEY** **LAW DIVISION - MIDDLESEX COUNTY** **DOCKET NO.: MID-L-7167-15** **Civil Action**

PLAINTIFFS' STATEMENT OF MATERIAL FACTS IN OPPOSITION TO DEFENDANT JACOBS ENGINEERING GROUP INC.'S MOTION FOR SUMMARY JUDGMENT AND IN SUPPORT OF PLAINTIFFS' CROSS-MOTION FOR PARTIAL SUMMARY JUDGMENT ON THE ISSUE OF BREACH

Clark Law Firm, PC
811 Sixteenth Avenue
Belmar, New Jersey 07719
(732) 433-0333
gclark@clarklawnj.com
mmorris@clarklawnj.com
Attorneys for Plaintiffs, Joao Abilio Silva and Maria Silva

Of Counsel and on the Brief
Gerald H. Clark, Esq.- 048281997
Mark W. Morris, Esq.-118292015

TABLE OF CONTENTS

I. Case Background Facts

1. This is a construction project workplace injury case.

2. The project involved the rehabilitation of a three mile stretch of the New Jersey Turnpike near the Hackensack River. (*Exhibit A- Deposition of Kelly Herlihy at 10-11*) (*Exhibit L Olcott dep. at 34*)

3. The project hierarchy was as follows: the owner was the New Jersey Turnpike Authority. Below that was the prime contractor, Jacobs Engineering Group, Inc. ("Jacobs"), which was given the title resident engineer and construction manager for the project. Below that was plaintiff's direct employer, the general contractor, Conti Enterprises, Inc. ("Conti"). (*Exhibit D- Job Organization and Jacobs Hierarchy Charts*)

4. The incident happened close to midnight on December 10, 2013. (*Exhibit C- Incident Reports*)

5. At the time of the incident plaintiff Joao Silva was working as a laborer for Conti. He was working with his co-worker, Pedro Purificacao and their foreman, Manuel Barbosa, also a Conti employee. (*Exhibit C- Incident Reports*)

6. Toward the end of their shift, the three men were doing a final sweep of the highway span picking up debris. Foreman Barbosa was driving a 2007 Ford F-350 Utility body pickup truck. Plaintiff Silva and Pedro Purificacao were walking on the ground picking up debris. (*Exhibit P, Barbosa dep at 39-40; Purificacao dep at 6-7*) (*Exhibit C- Incident Reports*)

7. At some point Barbosa checked his mirrors and then backed up the truck in a slow and controlled fashion, less than five miles per hour; Silva and Purificacao were about 80-100 feet away. (*Exhibit C- Incident Reports*) (*Exhibit P, Barbosa deposition at 15*, 43)

II. Worker Struck by Backing Vehicle With an Obstructed Rear View

1. The 2007 Ford F-350 truck at issue was sold by Ford to a dealer as an incomplete chassis. (*Exhibit BB- Ford F-350 Incomplete Chassis and Modification Invoices*).

2. As an incomplete chassis, the vehicle has an unobstructed view out the back window. (*Exhibit BB- Ford F-350 Incomplete Chassis and Modification Invoices*).

3. After it was sold by Ford, the dealer, Fred Beans Ford, had the rear service utility body installed in the vehicle by defendant Reading Equipment & Distribution, LLC ("Reading"). (*Exhibit, BB- Ford F-350 Incomplete Chassis and Modification Invoices*)

4. The Reading service utility body is shown in the scene photos of the truck. *(Exhibit E- Scene Photos of Truck)*

5. The Reading service utility body is designed to provide a mobile office, work station, secure storage space and more. *(Exhibit F, Reading Service Utility Body Description)*

6. The Reading service utility body results in an obstructed view out the back window of the 2007 Ford F-350 truck. *(Exhibit E- Scene Photos of Truck)* *(Exhibit H- Photos of Truck after Sold by Conti)* *(Exhibit F, Reading Service Utility Body Description)* *(Exhibit L Olcott dep. at 103)*

7. The utility body itself covers a portion of the rear window of the truck. *(Exhibit E- Scene Photos of Truck)* *(Exhibit F, Reading Service Utility Body Description)*

8. The large storage compartments of the Reading service utility body further obstructs the view out the rear. *(Exhibit E- Scene Photos of Truck)* *(Exhibit H- Photos of Truck after Sold by Conti)*(*Exhibit F, Reading Service Utility Body Description)* *(Exhibit A- Deposition of Kelly Herlihy at 38)* *(Exhibit L Olcott dep. at 77-78)* *(Exhibit K, Accident Review/Lessons Learned Document)* *(Exhibit M- Post Incident Emails)*

9. Additionally, the truck at issue had a large spare tire, work tools and a metal rack body which further obstructed the view out the rear. *(Exhibit E- Scene Photos of Truck)* *(Exhibit H- Photos of Truck after Sold by Conti)* *(Exhibit C- Incident Reports)* *(Exhibit M- Post Incident Emails at J015969)* *(Exhibit A at 101)* *(Exhibit B, Decasas dep at 120-121)* *(Exhibit L Olcott dep. at 77-78)* *(Exhibit AA, Hogan dep. at 87-88)* *(Exhibit P, Barbosa dep at 20-22, 27-28)* *(Exhibit K, Accident Review/Lessons Learned Document)* *(Exhibit M- Post Incident Emails)*

10. The truck was in this condition on this job for two years prior to the incident. *(Exhibit P, Barbosa dep at 20-22)*

11. OSHA defines the phrase "obstructed to the rear," as follows:

> A simple interpretation would be "anything" that would "blockout" (interfere) with the overall view of the operator of the vehicle to the rear of the vehicle, at ground level.
>
> "Obstructed view to the rear" could include such obstacles as any part of the vehicle such as structural members, its load (gravel, dirt, rip-rap) . . . in addition, it could include restricted visibility due to weather conditions such as heavy fog; or work being done after dark, without proper lighting.

(Exhibit Z - OSHA - Standard Interpretations - "Obstructed View to the Rear" Relative to Use of Back-up Alarms) (emphasis added).

12. Jacobs Safety official, Kelly Herlihy (*Exhibit A at 71*), testified:

Q. So just common sense looking at that picture, does it appear that the tire and tools are partially obstructing the view out the rearview window?
...
THE WITNESS: I would say yes.

(*Exhibit A at 40*)

13. The Conti official most knowledgeable in safety on the project testified:

Q. Okay, great. And let's focus on Photo No. 3 of Olcott-6 if you can. Do you see there's a spare tire in the truck?
A. Yes.
Q. And it seems to be up in the bed -- why don't you describe where it is.
A. It is on the left side of the bed of the truck inside adjacent to or up against the driver's side toolbox.
Q. And are you able to see the entire rear window of the cab portion of the vehicle?
A. No.
Q. Why not?
A. Because there's a tire.
Q. And why else?
A. There is a rack that's installed on the truck and what appears to be shovels standing up on the right side.
Q. And you testified you're not able to see the entire rear window, correct?
A. That's correct.
Q. And is that because your view of that is obstructed by the things you just described?
A. My view is, yes.
Q. ...And your point of view in looking at that picture is essentially standing behind the truck?
A. That's correct.
...
Q. And so are you familiar with the basic safety principal with regard to backing up that if the driver cannot see the pedestrian, the pedestrian cannot see the driver?
A. Yes.

(*Exhibit L Olcott dep. at 77-78*)

14. Conti safety official Patrick Hogan testified:

THE WITNESS: I see the tire and shovel standing up.
Q. Do you see how they are blocking the rear window to some degree?

...
THE WITNESS: Yes.
Q. And it's common sense, right, that those materials would tend to obstruct the view of the operator looking back?
...
A. The tire and the shovels are an obstruction, yes.
Q. Now, also if the operator is in the truck attempting to reverse and there are the construction flood lights going into the rearview mirrors, that also could tend to obstruct the view as well ...through mirrors, would you agree with that?
...
THE WITNESS: It could, yes.

(*Exhibit AA, Hogan dep. at 57-58*)

15. The driver's view was further obstructed by jobsite lighting towers and the headlights from the vehicles on the turnpike. *(Exhibit C- Incident Reports)* (*Exhibit I, Scene Photos*) (*Exhibit L, Olcott dep at 144*) (*Exhibit AA, Hogan dep. at 57-58*)

16. This was a common condition on the job site. (*Exhibit AA, Hogan dep. at 59*)

17. David Olcott testified:

Q. Well...Jacobs knew northbound traffic was going to be traveling northbound at the time the work was going to be done, right?
...
THE WITNESS: Yeah.
Q. And obviously the traffic is going to have their headlights on, right?
A. Yes.
Q. And that can pose a hazard to the workers because it can blind them like you just talked about, right?
THE WITNESS: Yes.
Q. So that was a well-known hazard before the work even began, right?
...
THE WITNESS: Yes.
Q. And if a worker driving a truck is potentially going to be blinded or have a disrupted vision because of that, that would be all the more reason to have a backup alarm on the truck, right?
THE WITNESS: Perhaps.

(*Exhibit L, Olcott dep at 222-223*)

18. According to OSHA, poor lighting constitutes an "obstruction." (*Exhibit Z - OSHA -*

Standard Interpretations - "Obstructed View to the Rear" Relative to Use of Back-up Alarms) (emphasis added); (*Defense Exhibit K - Deposition of Vincent Gallagher* at 129:14-19).

19. As such, the driver never saw the worker he backed up over. (*Exhibit P, Barbosa dep at 18, 25*)

20. At the time of the incident, the 2007 Ford F-350 truck was not equipped with a backup camera, backup alarm, nor any other proximity warning device. (*Exhibit C- Incident Reports*)

21. Spotters were also not used. (*Exhibit P, Barbosa dep at 16*)

22. Although the driver checked his mirrors and proceeded in a slow and controlled manner (less than 5 mph), and the workers were wearing high visibility safety gear, the driver did not see the workers standing behind the truck. (*Exhibit C- Incident Reports*) (*Exhibit P, Barbosa dep at 18, 25, 44*)

23. The driver did not see the workers standing behind the truck because his view was obstructed. (*Exhibit E- Scene Photos of Truck*) (*Exhibit H- Photos of Truck after Sold by Conti*)(*Exhibit F, Reading Service Utility Body Description*) (*Exhibit A- Deposition of Kelly Herlihy at 38*) (*Exhibit L Olcott dep. at 77-78*) (*Exhibit C- Incident Reports*) (*Exhibit M- Post Incident Emails at J015969*) (*Exhibit A at 101*) (*Exhibit B, Decasas dep at 120-121*) (*Exhibit L Olcott dep. at 77-78*) (*Exhibit AA, Hogan dep. at 87-88*) (*Exhibit P, Barbosa dep at 20-22, 27-28*) (*Exhibit K, Accident Review/Lessons Learned Document*) (*Exhibit M- Post Incident Emails*) (Exhibit S- Expert Report of Vincent Gallagher at 18); (*Exhibit T- Expert Report of Keith Bergman* at 20); (*Exhibit U- Expert Report of Don Phillips* at 7); (*Defense Exhibit K - Deposition of Vincent Gallagher* at 80:17-25, ". . . Olcott-5 has three photos. And the third one would be one of the two that I think are most descriptive of the obstruction to the rear.").

24. After proceeding in reverse about 80-100 feet, the 2007 Ford F-350 truck struck Joao Silva. (*Exhibit C- Incident Reports*) (*Exhibit P, Barbosa deposition at 15, 43*)

25. He sustained catastrophic injuries. (*Exhibit G, Medical Reports*)

26. The Jacobs on site inspector, Jesse Kidd, was at the scene and immediately called 911. (*Exhibit N at J023017*) (*Exhibit C- Incident Reports*) (*Exhibit P, Barbosa dep at 52-53*)

27. The lack of backup alarm on the truck was the root cause of the incident. (*Exhibit K, Accident Review/Lessons Learned Document at CONTI 03619*) (*Exhibit M- Post Incident Emails*) (*Exhibit A at 63-64*) (*Exhibit S- Expert Report of Vincent Gallagher* at 25-26) (*Exhibit T- Expert Report of Keith Bergman* at 26) (*Exhibit U- Expert Report of Don Phillips* at 37-38).

28. It would have cost $80 to have a backup alarm installed on the truck; .002% of the overall purchase price of the vehicle. (*Exhibit L, Olcott dep at 114*); (*Exhibit BB- Ford F-350 Incomplete Chassis and Modification Invoices*)

III. Incident Investigation

1. A Conti incident report states that in addition to light towers obstructing the driver's view, "The vehicle contains toolboxes on either side, which may have added additional blind spots." (*Exhibit C- Incident Report at CONTI 04302*)

2. An investigatory email from Jacobs on the day of the incident states, "...the foreman couldn't see him over a larger knack box (tool box) in the bed of his truck obstructing his view out of the back windshield." (*Exhibit M at J015969*)

3. The Conti incident report also states, "The vehicle was not equipped with an audible reverse signal alarm, which may have given Joao Silva an advanced warning that the vehicle was approaching." (*Exhibit C- Incident Report at CONTI 04302*)

4. This same reports lists this corrective action:

> All trucks and site vehicles will be equipped with a reverse signal alarm audible above in the surrounding noise level. When engaging the reverse gear, employees will be instructed and required to allow the audible reverse signal alarm to sound at least three times prior to removing their foot from the break.

(*Exhibit C- Incident Report at CONTI 02872*)

5. A Daily Log report from the day of the incident notes, "truck does not have back up alarm." (*Exhibit C- Incident Reports and Daily Log at CONTI 03605*)

6. Jacobs and Conti collaborated on the creation of a post incident PowerPoint presentation document entitled "Accident Review/Lessons Learned." (*Exhibit K, Accident Review/Lessons Learned Document*) (*Exhibit M- Post Incident Emails*) (*Exhibit A, Deposition of Kelly Herlihy at 57-59, 142-143*)

7. Included in its bulleted list of the "root cause of incident" were the following:

- The foreman's truck Mr. Barbosa was driving contains a tool box which may have hindered his view of Mr. Silva.
- the foreman's truck Mr. Barbosa was driving was not equipped with a back up alarm which could have warned Mr. Silva in time to move out of the way

(*Exhibit K, Accident Review/Lessons Learned Document at CONTI 03619*)

8. The document also listed the following corrective measure, "Install backup alarms on all utility body foreman trucks, Superintendent trucks, site trucks and vehicles with obstructed views." (*Exhibit K, Accident Review/Lessons Learned Document at CONTI 03620*)

9. A backup alarm was installed on the incident truck after the incident. (*Exhibit A at 78*)

(*Exhibit B, Decasas dep at 134*) (*Exhibit AA, Hogan dep. at 38-39*) (*Exhibit P, Barbosa dep at 12, 35-37*)

10. Paul Decasas testified he did not learn any new lesson from "Lessons Learned" document; he always knew the truck should have had a backup alarm. (*Exhibit B, Decasas dep at 144-146*)

11. The incident was not the fault of Joao Silva. (*Exhibit B, Decasas dep at 218*)

12. Jacobs safety official Kelly Herlihy and Jacobs Resident Engineer Paul Decasas, both testified that if this were a Jacobs vehicle on the job, a backup alarm would have been required as Jacobs has a rule that backup alarms are to be installed on all of their vehicles. (*Exhibit A at 69-70, 107, 145*) (*Exhibit X- Jacobs Safety Documentation*) (*Exhibit B, Decasas dep at 113, 116, 145-146*)

13. The job at issue had numerous prior incidents where vehicles backing up resulted in damage. (*Exhibit J, Prior Backing Incidents*)

14. One incident actually involved the site safety engineer for the project, Gary Moseley. (*Exhibit J at 05060*) (*Exhibit B, Decasas dep at 68*) (*Exhibit L, Olcott dep at 14-16*)

15. In fact, a Daily Log report from the day of the subject incident makes note of one of these prior incidents, "*NOTE: 12/5/13 had another backing incident, vehicle vs. vehicle" (*Exhibit C- Incident Reports and Daily Log at CONTI 03605*)

16. It is a basic safety principle that prior incidents and "near misses," even if no one gets hurt, are important learning tools in preventing injuries. (*Exhibit A at 136-137*) (*Exhibit B, Decasas dep at 63-65, 147*)

17. Jacobs knew about these prior incidents. (*Exhibit A at 77, 83-84, 97-98*)

IV. As the Construction Manager and Resident Engineer, Jacobs Had Significant Managerial Control Over the Project and Conti, Including Significant Authority and Control over Job Safety

1. On March 15, 2011, Jacobs submitted an Expression of Interest in "Supervision of Construction Services" document to the Turnpike Authority in connection with their bid for the job. (*Exhibit Q- Expression of Interest, Supervision of Construction Services*)

2. In the Expression of Interest, Supervision of Construction Services document, Jacobs details why it is qualified to supervise the construction project, including supervising safety. (*Exhibit Q- Expression of Interest, Supervision of Construction Services*)

3. The document accurately summarizes what Jacobs's actual role was on the project. (*Exhibit A- Deposition of Kelly Herlihy at 23-37*) (*Exhibit B, Decasas dep at 30-45, 226-228*)

4. The document states that Jacobs is fully familiar with the nature and scope of the work and what the supervision of construction role will entail. (*Exhibit Q at 1*)

5. It states that its field project managers and resident engineers have performed the supervision of construction services on other similar projects. (*Exhibit Q at 1*)

6. The document also states:

d. Understanding of the Project and the Authority's Needs

...We are cognizant that this project will require field supervision on an around-the-clock basis on certain nights and weekends. We have developed an hourly, high-intensity cycle timeline to verify Contractor compliance for completion of the work in an hourly progression to verify that the Contractor will complete the work in the allotted time frame. In addition, we will provide a staffing chart with cell phone numbers for each of the operations in order to provide 24/7 communication to the NJTA Project Engineer.

Safety - Safety is Jacobs's first order of business. ...we have been working with NJTA's OCIP insurance carrier, who is performing spot site visits to confirm that the Contractor and consultant are adhering to the contract's safety provisions and that each Contractor is adhering to their Safety Plan. We are aware that we will verify Contractor compliance with its contractual relationship with the NJTA, and we have and will continue to take action on behalf of the NJTA.
The benefit by this action: Paul had a Contractor employee removed from the project for not tying off which resulted in the Contractor requiring a safety tailgate and sign-off of all employees on the project site for harness safety. We had no other safety issues as a result of this action. The true benefit is that every individual who worked on that site went home every night to their family. In addition, the Contractor and their employees understand there is zero tolerance and consequences for not conforming to the NJTA's policies and procedures.

Provide Leadership and Coordination - Jim will lead our Team, report directly to the NJTA's Project Engineer, and be responsible for managing the Contractor...

(*Exhibit Q at 4*) (underline added)

Drive the Schedule - Our Team will review monthly updates from the Contractor(s) concerning shop-drawing submittals, material approvals, working drawings, and work activity progress. At each progress meeting, we will have a two-week look ahead and a one-week look-behind to review the progress of the critical path activities and near critical activities. We are also going to request the Contractor submit with their baseline schedule the resources (man-power and major pieces of equipment) for each of the activities in order to monitor actual to planned resources.

Any negative variance on a critical activity will require a meeting with the Contractor to discuss the variance and if required, a recovery plan to get back on schedule.

In addition, prior to the start of new work activities, we will have a pre-installation meeting in order to vet out any potential issues that may occur in the field and will have contingency plans in place for recovery, if necessary. We will discuss with the Contractor the man-power, equipment, and material to be utilized for these work activities in order to determine if the Contractor has the right tools to perform the work in the designated timeframe. This allows the Contractor to fully comprehend the work activities and allows us to understand and comment on the work to be performed. We can then verify and recommend other options that the Contractor may not have thought of, since our senior staff has seen many different ways contractors have successfully performed or failed in performing the same type of work.

...

Utilize a "Team" Approach - Jacobs always prides itself as a working partner with the client and Contractor...

e. Approach to the Project

...During actual construction, our Team will continually monitor the Contractor(s) progress and workmanship for strict adherence to the approved schedules and quality. Any deviation in quality, time, or anticipated budget will be immediately flagged with the NJTA and the Contractor(s) notified so that proper changes can be made. Paul, Bill, and John will field verify all existing conditions prior to the start of construction with a clear notation of any potential problems that may hamper construction. The Design Engineer (DE) and the Contractor(s) will be promptly notified so that resolutions can be made prior to the Contractor(s) mobilizing in the affected areas. As the project progresses, Jim will observe our staff, as well as the Contractor(s) progress to verify that we have adequate professional personnel to monitor the day-to-day work and to accurately record all construction activity for compliance with the plans and specifications. Our Team will be given the responsibility for observing and expediting the work, maintaining good relationships with all project parties, and being responsive to the flow of inquiries, submittals, and requests.

...We understand that there may be conflicts with other contracts working nearby at some locations and will resolve scheduling conflicts prior to the start-up.

g. Commitment to Quality Management

We are absolutely committed to maintaining an exceptionally high-level of quality service, while achieving the NJTA's goal of a project built on-time, within budget, according to plans and specifications, and in a safe manner.

Our Team will be responsible for observing and expediting the work, maintaining good relations with all project parties, and being responsive to the flow of inquires,

submittals, and requests. The assigned filed staff has been trained to monitor and document all work tasks performed by the Contractor and testing laboratories.

(*Exhibit Q at 5-8*) (underline added)

7. Jacobs' Expression of Interest, Supervision of Construction Services document was instrumental in it being awarded the job of supervising the construction project. (*Exhibit Q at 1*)

8. The document accurately summarizes what Jacobs's actual role was on the project. (*Exhibit A- Deposition of Kelly Herlihy at 23-37*)

9. Jacobs was the construction manager of the project. (*Exhibit AA, Dep of Hogan at 23*)

10. The cover letter to the contract states that Jacobs will be supervising the project. (*Exhibit R- Contract Documents*) (*See also Exhibit A- Deposition of Kelly Herlihy at 21-22, 24*)

11. The Contract provides that Jacobs will review and approve Conti's site-specific Health and Safety Plan. (*Exhibit R at CONTI 00686, 687*) (*See also Exhibit A at 75-76, 81-82*)

12. Jacobs did review and approve Conti's site-specific Health and Safety Plan. (*Exhibit R at CONTI 00686, 687*) (*See also Exhibit A at 75-76, 81-82, 92*) (*Exhibit B, Decasas dep at 82*)

13. In fact, Kelly Herlihy, a Jacobs safety manager at the time of the incident, was actually involved in drafting the Conti safety plan, having worked for Conti at the time it was drafted. (*Exhibit A at 93, 96*)

14. That safety plan required a backup alarm on the construction truck at issue. (*Exhibit A- Deposition of Kelly Herlihy at 93-95*) (*Exhibit W- Conti Site Safety and Health Plan at CONTI 05568, 77, 05616-17*)

15. The contract required that OSHA be followed on the project. (*Exhibit R at CONTI 00441*)

16. The Contract provides that Jacobs as the engineer shall have control over the work of Conti. (*Exhibit R at CONTI 01397-98*)

17. The Contract states:

SECTION 104 - CONTROL OF WORK

102.02 Authority of the Engineer.

The performance of the Work shall at all time and in all respects be subject to the inspection and approval of the Engineer. The engineer shall give instructions necessary to attain strict and entire conformity with the Plans and Specifications.

(*Exhibit R at CONTI 01397-98*)

18. The Contract further states:

104.05 Inspection of Work.
Inspectors or other authorized representatives may be stationed on the work site to report to the Engineer as to the progress thereof and the manner in which it is being performed, to inform him whenever it appears that the materials furnished and the work performed by the Contractor fail to comply with the requirements of the Plans and Specifications, and to direct the attention of the Contractor to such failure.

...If a difference of opinion arises between him and the Contractor relating to the materials furnished or the performance of the work, he has the authority to reject the materials and suspend the work until such time as the question at issue can be referred to an decided by the Engineer.

104.06 Contractor's Organization.

...Any worker [of Conti] not properly qualified for the Work or performing in an unsatisfactory manner or contrary to the Specifications or the Engineer's instruction, or who is disorderly, or who shall work in an unsafe manner, shall be discharged from this Project, if so directed by the Engineer, and shall not be employed again on the Project except with the approval of the Engineer.

The superintendent, the number of workers, and the equipment employed, shall at all times be adequate and sufficient, in the opinion of the Engineer, to insure the completion of the Project within the time stipulated therefore. The measure of the capacity, adequacy and efficiency of machinery and equipment shall be based upon its ability to perform the work. The equipment shall be operated so as not to damage public or private property. All equipment shall be subject to the approval of the Engineer.

(*Exhibit R at CONTI 01401-02*) (underline added)

19. The Contract further states:

106.22 Character of Workmen, Methods and Equipment.

Any person employed by the Contractor or by any Subcontractor who, in the opinion of the Engineer, does not perform his Work in a proper and skillful manner, or is intemperate or disorderly, shall at the written request of the Engineer, be removed promptly by the Contractor or Subcontractor employing such person, and shall not be again employed in any portion of the Work without approval.

(*Exhibit R at CONTI 01434*)

20. Appendix V to the Contract, the Turnpike Authority Health and Safety Plan Requirements, states in pertinent part:

- Accident prevention procedures shall be based on industry standards including, but not limited to:

  - OSHA Standards
  - Mine Safety and Health Regulations.
  - American National Standards Institute (ANSI)
  - National Fire Protection Association (NFPA)
  - American Conference of Governmental Industrial Hygienists (ACGIH).

- Absence of an applicable standard or regulation does not preclude the Contractor from providing appropriate controls within a SWP.
- Such occurrences may be governed by the OSHA Act - General Duty Clause, 5 (a) 1. Specific references in the SWP to codes standards and regulations are not necessary.

3.04 ACCIDENT AND INCIDENT NOTIFICATION

A. The Contractor shall immediately notify the Engineer of each accident involving personal injury, causing damage to property or the environment, or affecting the safe movement of traffic. The Contractor shall transmit copies of the required Accident Investigation Report(s) to the Engineer...within 24 Hours of each accident....

B. In the event of a serious accident, the Safety Representative shall convene an accident investigation meeting as soon as reasonable possible, which shall include the Engineer...for the purpose of determining the cause of the accident and actions to be taken to prevent a recurrence o such an accident. Information derived from the accident investigation meeting may result in changes to the HASP, which shall be immediately revised and submitted to the Engineer...

3.23 MOTOR VEHICLES AND MOBILE CONSTRUCTION EQUIPMENT

Self-propelled shall be equipped with backup lights and a reverse signal alarm.

(*Exhibit V at CONTI 03643, 45, 51- Turnpike Authority Health and Safety Plan Requirements*) (underline added)

21. Jacobs was required to enforce Conti's Site Safety and Health Plan. (*Exhibit L Olcott dep. at 31-33, 54*) (*Exhibit AA, Hogan dep. at 25-26*) (*Exhibit S - Expert Report of Vincent Gallagher* at 15) (*Exhibit Q*)

22. Conti's Site Safety and Health Plan provides in pertinent part as follows:

3.3.2 Heavy Equipment/Vehicle Traffic
Considerations for controlling the movement of personnel and equipment in a construction area are vitally important to any project, as injuries may occur while working with or adjacent to such equipment. This category includes all operations, which utilize moving heavy equipment:...trucks. Conti will take every precaution necessary to ensure the safety of the pedestrians and the on-site personnel during traffic movement operations.

...All equipment will have electronic backup alarms.

3.3.15 Night Work
Night work activities have the potential to expose personnel to additional hazard. Night work hazards include poor visibility for motorist/workers, risk of Fatigue, etc. In order to control these hazards Conti will implement specific controls.

First means of control will be visibility; personnel will utilize reflective clothing erect traffic control measures and the use of work area lighting.

7.18 Motor Vehicles and mechanized Equipment
...To minimize accidents resulting from the use of motor vehicles, the following safety procedures need to be implemented and enforced on all company projects:

- Operators should not travel in reverse with motor equipment having an obstructed rear view unless:
  - The vehicle is equipped with an audible, functioning reverse signal alarm.
  - The vehicle is backed up only under the guidance of an observer who says that it is safe to do so.

(*Exhibit W- Conti Site Safety and Health Plan at CONTI 05568, 77, 05616-17*)

23. The intent of these rules is to prevent needless injuries to workers and anyone else that may come near the job site. (*Exhibit AA, Hogan dep. at 53*)

24. David Olcott testified:

Q. And the idea is that control on the job goes from the top down; is that right?
A. Yes.
Q. So Jacobs has control over Conti consistent with the chart and the way the job progressed, correct?
THE WITNESS: Yes.

(*Exhibit L Olcott dep. at 84-85*) (*Exhibit D- Job Organization and Jacobs Hierarchy Charts*)

25. Jacobs was on site at all times while work was ongoing, supervising the construction;

they were the prime contractor. (*Exhibit B, Decasas dep at 9-11, 22-23, 34, 55, 78-79, 197*) (*Exhibit L Olcott dep. at 79, 84-85*) (*Exhibit D*)

26. This included Jacobs was on scene at the time of the incident and called 911. (*Exhibit N at J023017*) *(Exhibit C- Incident Reports*) (*Exhibit P, Barbosa dep at 52-53*)

27. Jacobs had the power and authority to remove a contractor's employee if the person was not following safe work practices. (*Exhibit A- Deposition of Kelly Herlihy at 29-30*) (*Exhibit B, Decasas dep at 25-26 42-43, 49-50, 55*)

28. Jacobs provided leadership and coordination on the project and drove the schedule. (*Exhibit A- Deposition of Kelly Herlihy at 31-33*)

29. Jacobs also involved itself in the manner and means of how the work got done, including it had the power and authority to make recommendations to Conti about that. (*Exhibit L, Olcott dep at 24-26*). (*Exhibit B, Decasas dep at 74-76, 106-107*) (*Exhibit P, Barbosa dep at 12-15*, 59-50) (*Exhibit Q at 5-8*- "We can then...recommend other options [in how to do the work] that the Contractor may not have thought of, since our senior staff has seen many different ways contractors have successfully performed or failed in performing the same type of work.") (*Exhibit R at CONTI 01397-98*) (*Exhibit A at 88-90*)

30. Manuel Barbosa testified that both the Jacobs resident engineer, Paul Decasas, and the Jacobs inspector, Jesse Kidd, got involved in the manner and means of the work, including as to safety issues. (*Exhibit P, Barbosa dep at 12-15, 30, 35-36*, 59-60)

31. Barbosa testified:

Q. What did this person do on the job, looking at the photo of Paul DeCasas, what did he do on the job as far as you can tell?
THE WITNESS: He was an inspector.
Q. And what kinds of things would he do on the job?
A. He would inspect what we were doing, he would see if we were doing good, if we're doing well. If it was something bad, he would call our attention and say you can not do it like that. It was more or less what it was. When we would close the lanes he would call the representative of the police to close the lane or to open the lane.
Q. Was there always someone from Jacobs on site while work was ongoing?
THE WITNESS: Yes.
Q. You said that if you were doing something bad by way of work that he would correct you?
A. Yes. He would call our attention, say this cannot be done like that. If we had the lights turned towards the traffic, he would call our attention to turn them.
Q. And the lights towards the traffic in the example that you just gave would be a safety issue, correct?
THE WITNESS: If it turned to the traffic then. We could not turn them toward the traffic.
Q. And the lights shining on the traffic is dangerous, right?
THE WITNESS: Yes. You would blind the traffic.

Q. And you would correct it or take the right action, correct?
A. Yes.

(*Exhibit P, Barbosa dep at 12-15*) (underline added)

32. Safety issues, or not complying with safety protocol, can have an effect on the project schedule. (*Exhibit A- Deposition of Kelly Herlihy at 33*) (*Exhibit B, Decasas dep at 105-106*)

33. In fact, the job was shut down as a result of this incident. *(Exhibit A- Deposition of Kelly Herlihy at 23-37*) (*Exhibit B, Decasas dep at 105-106*)

34. David Olcott testified:

Q. And with regard to the work, safety concerns cannot be neatly separated from carrying out the job concerns or work progress concerns, there's a significant overlap with regard to a job like this in terms of getting the job done and safety, correct?
THE WITNESS: Correct.
Q. And it was not unusual for this vehicle to back up on the job, correct, that's expected they would have to do that?
A. Correct.
Q. So it would have been common on this job site with regard to this work for vehicles such as this Ford to back up, correct?
A. Yes.
Q. And it's foreseeable, is it not, that if a vehicle has an obstructed rear view and there is no backup alarm, it's foreseeable that that could pose a safety work risk to workers, correct?
A. Yes.
Q. It's foreseeable that one of the safety risks could be the worker getting struck by the vehicle, right?
A. Yes.

(*Exhibit L Olcott dep. at 81-83*)

Q. So on this job, there was an overlap of work progress, considerations and work safety concerns, correct?
THE WITNESS: Yes.
Q. And Jacobs had a responsibility to supervise the work of Conti?
THE WITNESS: Yes.
Q. And a safety issue such as an injury or death to a worker could result in slowing down the progress of the work, right, and cause a job stoppage?
A. Absolutely.
Q. And, in fact, in this case...the one incident report...says that the brass had come down and...halted the job, do you recall that?
A. Yes.

(*Exhibit L Olcott dep. at 85-86*)

35. Defendants' safety materials recognize:

> Vehicle accidents continue to be the leading cause of work-related deaths and can be a drain on company profits. ...Any disruption in the smooth flow of work caused by accidents...affects the financial stability of any company and jeopardizes employees' safety.

(*Exhibit Y - Safety Articles, Tailgate/Toolbox Safety Training, Topic 343: Driving Company Vehicles, CONTI 04749*)

36. Jacobs had the power to throw a Conti worker off the job for safety issues. (*Exhibit A, Deposition of Kelly Herlihy at 29-30, 63*) (*Exhibit B, Decasas dep at 39-41*)

37. It was Jacobs' responsibility to see to it Conti was following established safety rules, this includes Jacobs inspector Jesse Kidd who was on site at the time of the incident. (*Exhibit A-Deposition of Kelly Herlihy at 93*) (*Exhibit B, Decasas dep at 25-26, 28, 38-41, 84-87, 110, 195-197*) (*Exhibit L Olcott dep. at 79*) (*Exhibit AA, Hogan dep. at 25-26, 45-46*) (*Exhibit P, Purificacao dep at 11-12*)

38. The failure of the vehicle to have a backup alarm was contrary to Jacobs' own longstanding safety rules. (*Exhibit A at 145*) (*Exhibit B, Decasas dep at 113, 116, 232, 237*)

39. Jacobs conducted numerous job safety meetings which Conti was required to attend. (*Exhibit N, Safety Meeting Minutes*)

40. A meeting on June 21, 2011 noted that Conti had to deliver its Safe Work Plan to Jacobs, at least one week prior to the progress meeting. (*Exhibit N, Safety Meeting Minutes at CONTI 04962*)

41. The meeting also noted Jacobs had to be immediately notified of any safety incidents on the job. (*Exhibit N, Safety Meeting Minutes at CONTI 04963*) (*Exhibit A at 82*)

42. Jacobs also regularly conducted job site safety inspections where they would identify safety issues and direct Conti to correct them. (*Exhibit N, Safety Meeting Minutes*) (*Exhibit B, Decasas dep at 36-38*)

43. For example, on December 27, 2011, Rob Carson of Jacobs spoke with a Conti employee about a safety hazard involving a worker standing under an aerial lift, to which Conti corrected. (*Exhibit N, Safety Meeting Minutes at CONTI 03215*) (*Exhibit L, Olcott dep at 146-148*)

44. David Olcott said this was a "perfect example" of Jacobs' exercise of authority over Conti on safety issues. (*Exhibit L, Olcott dep at 148*)

45. A Jacobs Health, Safety & Environment Report from 6/22/12 documents numerous safety issues that Jacobs noted and directed Conti to fix, to which Conti complied. (*Exhibit N, Safety*

Meeting Minutes at CONTI 03285-87)

46. By way of further example, Jacobs conducted a safety inspection on December 5, 2013 and noted nine safety observations. (*Exhibit N, Safety Meeting Minutes at J023016*)

47. The minutes from that safety inspection state, "Jacobs requested Conti to address all reported concerns in an expedited manner- and advise Jacobs by e-mail what steps were taken to correct and/or address these issues." (*Exhibit N, Safety Meeting Minutes at J023016*)

48. The same report documents a December 19, 2013 follow up, "Mr. Jim Caffrey asked Conti to respond to his e-mail of 11/22/13, with all actions taken by Conti. Mr. Caffrey also said he would review Conti's lighting resolution with Conti on the platform before accepting it." (*Exhibit N, Safety Meeting Minutes at J023016*)

49. On January 24, 2013, Jacobs directed Conti to install certain cables to stabilize floorbeams on a river span structure. (*Exhibit N, Safety Meeting Minutes at CONTI 05349*)

50. On June 20, 2013, Jacobs made a safety recommendation to Conti dealing with safety cables and caution tape. (*Exhibit N, Safety Meeting Minutes at CONTI 05326*)

51. A July 18, 2013 progress note states, "Jacobs provided Conti with a list of six issues which require remediation." The note further documents that Jacobs "requested" Conti provide safety lighting near the bridge deck platform, to which it states, "Conti will comply." (*Exhibit N, Safety Meeting Minutes at CONTI 05317-18*)

52. In fact, Jacobs' safety inspection forms specifically address whether backup alarms on motorized equipment are in place. (*See, e.g., Exhibit N, Safety Meeting Minutes at CONTI 03218–31*)

53. Indeed, David Olcott testified:

Q. So a truck with an obstructed view and no backup alarm can pose the risk of injury or death to the workers on that job site, correct?
...
THE WITNESS: Assuming both conditions exist, yes.
Q. So that's something that should actually be inspected for by way of safety inspections, right?...
THE WITNESS: Yes...
Q. People with authority on a job site should not take a blind eye to safety concerns, right?
A. Agreed... [Jacobs'] job is to know what's going on on the project site that they are representing for the New Jersey Turnpike Authority.
Q. Including as to safety issues like this?
A. Yes.

(*Exhibit L Olcott dep. at 92, 95, 98*)

54. Jacobs had a representative on site at all times while work was ongoing. (*Exhibit B, Decasas dep at 9-11, 22-23, 34, 55, 78-79*)

55. Jacobs had the power and authority to issue stop work orders and shut the job down, and did so as a result of this incident. (*Exhibit O, Daily Log- "[Conti] was told to stop working by Jacobs..."*) (*Exhibit A, Deposition of Kelly Herlihy at 56, 79*) (*Exhibit B, Decasas dep at 77*) (*Exhibit L Olcott dep. at 80-81*)

56. If Jacobs gave Conti a safety directive, they were expected to comply. (*Exhibit A at 70-71, 86-90*) (*Exhibit B, Decasas dep at 25-26, 67, 74*)

57. It was common on the job for Jacobs to give directions to Conti, including about safety. (*Exhibit A at 88-90*) (*Exhibit L Olcott dep. at 24-26*)

58. If a Jacobs engineer or inspector sees a Conti employee in an unsafe situation, Jacobs had the power, authority and obligation to correct that, including giving the Conti worker a direct order. (*Exhibit L Olcott dep. at 31-33, 54*) (*Exhibit AA, Hogan dep. at 25-26*)

59. Jacobs never enforced any rules about backup alarms on this nor any other Conti truck on the job; it never required Conti trucks to have backup alarms. (*Exhibit A at 70-71, 97*).

60. Yet Jacobs knew this truck was on site for approximately two years prior to the incident. Jacobs also knew it would frequently back up and it never had a backup alarm until after the incident. (*Exhibit A at 78*) (*Exhibit B, Decasas dep at 134*) (*Exhibit AA, Hogan dep. at 38-39*) (*Exhibit P, Barbosa dep at 12, 35-37*)

61. There were three or four other trucks on the job site just like this one, with no backup alarms. (*Exhibit P, Barbosa dep at 35-37*)

62. Jacobs also knew there were several prior safety incidents involving trucks backing up and striking things. (*Exhibit A at 77, 83-84*) (*Exhibit B, Decasas dep at 199-200*)

63. Kelly Herlihy testified:

> Q. So given that there were several prior backing incidents, given that Jacobs would perform regular safety inspections and had all the requirements and responsibilities that you talked about, did Jacobs ever request, recommend or direct that Conti put backup alarms on trucks such as the one that was involved in the incident prior to the incident to your knowledge?
>
> THE WITNESS: No, to my knowledge Jacobs did not require them to put them on.
>
> Q. Don't you think they should have?
>
> THE WITNESS: I'm not -- I don't have an opinion on that.
>
> Q. If they are partners and Jacobs would have required it on its own truck and if safety is really the No. 1 priority for Jacobs and it all goes back to workers like Joe Silva can go back home to their family in the same condition they left that day, why wouldn't they do that?

...

THE WITNESS: I don't know why.

Q. Do you have any hindsight they should have? Would that have been a better safety practice?

THE WITNESS: In hindsight, I think it might have been good, I think the proximity sensors may have been better.

(*Exhibit A at 97-98*)

64. Kelly Herlihy further testified:

Q. And mindful of that and prior incidents that were marked as Herlihy-16, why didn't Jacobs do something about the lack of backup alarms on trucks like this on this job?

THE WITNESS: I don't know why they wouldn't have taken action to ask Conti to take further action for their vehicles.

Q. Why did it take an incident like this to finally make that happen?

THE WITNESS: I don't know that that was requested by Jacobs, that was Conti's decision to make those changes.

Q. But we went over this sort of already, Jacobs could have required that?...It's not solely up to Conti, right?

A. Jacobs could have requested that if they saw the hazards.

Q. And Conti would have been expected to comply, right?

THE WITNESS: Yes.

(*Exhibit A at 99-100*)

65. Although Herlihy could not explain it, the resident engineer for Jacobs produced as the person with the most knowledge about their role on the project, offered the following explanation:

Q. ...Nothing is more important to Jacobs vis-a-vis a project like this, than safety, correct?

A. Who am I speaking for when you say Jacobs? Like the policy? Or like a specific person? Because you know, reality? A higher-up maybe money is more important...

(*Exhibit B, Paul Decasas dep at 91*) (underline added)

66. It would have cost $80 to have a backup alarm installed on the truck. (*Exhibit L, Olcott dep at 114*)

67. Decasas further explained that in construction, time is money, so it was Jacob's job to see to it the job got done fast. (*Exhibit B, Decasas dep at 104-105*)

68. In fact, the job got done ahead of schedule. (*Exhibit B, Decasas dep at 107*)

69. Jacobs collaborated with Conti to investigate the incident. (*Exhibit M- Post Incident Emails*)

70. This included coordinating a meeting to review the "Accident Review/Lessons Learned" PowerPoint document. (*Exhibit K, Accident Review/Lessons Learned Document*)

71. Jim Caffrey, the Field Project engineer for Jacobs, had significant input in the Accident Review/Lessons Learned Document. (*Exhibit M- Post Incident Emails at J010089-99, J015979-80, J015989, J016001*) (*Exhibit B, Decasas dep at 73-74*)

72. Jim Caffrey of Jacobs noted, "On page five, I highlighted the first and last bullet because it's been reported to be that at the time Manny started his vehicle, Silva may have been 20 to 30 feet away from the truck.... This being the case, then not having a backup alarm may have been the more significant contributor vs. Mr. Silva's proximity to the truck." (*Exhibit M at J010089*)

73. OSHA investigates incidents like this to find out what happened so the same thing doesn't happen to others. (*Exhibit A, Deposition of Kelly Herlihy at 45*)

74. A common part of that is to speak to workers who know what happened. (*Exhibit A, Deposition of Kelly Herlihy at 45*)

75. But Jacobs didn't want its workers speaking to OSHA. (*Exhibit M- Post Incident Emails at J015989*) (*Exhibit B, Decasas dep at 204-205, 208*)

76. The Jacobs health and safety officer issued the following directive, "Please let all of our people know, should OSHA show up on site, they are not to engage them and they are to direct them to you and the office.... Please let me know when you guys have spoken to our people..." (*Exhibit M- Post Incident Emails at J015989*)

V. Safety Standards and their Purpose

A. Construction Vehicles Operating in Reverse Without a Backup Alarm is a Well Known Hazard

1. Between 2003 and 2016, 1,269 workers lost their lives at road construction sites. (*Exhibit Y - Safety Articles, Safety & Health Magazine,* Fatal Injuries at Road Construction Sites among Construction Workers, Nov. 2018, at 1).

2. Half of these fatalities were due to workers being struck by a vehicle or some type of mobile equipment. *Ibid.* (*Exhibit S - Expert Report of Vincent Gallagher* at 5).

3. 200 workers were killed by vehicles backing up between 2005 and 2010. (*Exhibit S - Expert Report of Vincent Gallagher* at 5) (*Exhibit Y - Safety & Health Magazine,* Fatal Injuries at Road Construction Sites among Construction Workers, Nov. 2018, at 5).

4. According to OSHA, "79 workers were killed in 2011 when backing vehicles or mobile

equipment, especially those with an obstructed view to the rear, crushed them against an object and/or struck or rolled over them." (*Exhibit Z - OSHA - Preventing Backover Injuries and Fatalities*).

5. Defendants' own Safety Training Materials acknowledge workers being struck by vehicles constitutes one of the leading causes of construction site deaths. (*Exhibit Y - Safety Articles, Tailgate/Toolbox Safety Training,* Topic 115: 12 Deadliest Accidents, CONTI 04753).

6. According to Defendants' own materials:

> Vehicle accidents continue to be the leading cause of work-related deaths and can be a drain on company profits. The success and profitability of your employer's business, to a great extent, is dependent upon the efficiency of overall company operations, including vehicles . . . Any disruption in the smooth flow of work caused by accidents or lack of maintenance affects the financial stability of any company and jeopardizes employees' safety.
>
> ...
>
> ***The following examples of situations show types of accidents which are preventable:***
>
> ...
>
> ***Backing*** - Practically all backing accidents are preventable. Even with a ground-guide, a driver must verify all clearances.

(*Exhibit Y - Safety Articles, Tailgate/Toolbox Safety Training,* Topic 343: Driving Company Vehicles, CONTI 04749).

B. Industry Safety Standards Call for Backup Alarms

7. OSHA, recognizing the need to prevent needless death or injury to workers in road work zones, issued the following regulations requiring the use of backup assistance on construction site vehicles such as pick up trucks:

> No employer shall use any motor vehicle equipment having an obstructed view to the rear unless:
>
> ...
>
> The vehicle has a reverse signal alarm audible above the surrounding noise level or:
>
> ...
>
> The vehicle is backed up only when an observer signals that it is safe to do so.

29 *C.F.R.* 1926.601 (emphasis added); *see also,* (*Exhibit S - Expert Report of Vincent Gallagher* at 10) (*Exhibit T - Expert Report of Keith Bergman* at 24-25) (*Exhibit U - Expert Report of Donald Phillips, P.E.* at 10).

8. While this minimal regulation is a start to preventing needless death and injury to road construction workers (and tragically was not complied with in this case), several sources, including Plaintiff's liability expert, Vincent Gallagher have urged for an even stricter standard to prevent needless injuries from reversing vehicles on construction sites:

Q. You've given some previous testimony about your opinion as to the OSHA standards being insufficient as it relates to back-up alarms, is that correct?
A. Yes, sir.

Q. Can you expand upon why you believe that the OSHA standard is insufficient?
A. Because it says you could use a spotter if you had an obstructed view to the rear instead of a backup alarm. And it would be nice if every driver of a truck could carry a guy around with him to spot every time he backs up. But the reality in the construction industry is you have to back up at times when there's nobody around to spot for you. And if you have an obstructed view to the rear you might run over somebody. It's not a very good alternative.

The fundamental basis of human factors, or ergonomics...say if you can reduce the risk through means that operate automatically, they're more reliable than relying on a person who is not as reliable.

A back-up alarm will work all the time that you're reversing as long as it's functioning properly. Other safety devices such as presence sensing devices do the same. They wouldn't rely upon a person.

OSHA's standard relies upon a person. It's not as reliable. It violates principles of human factors engineering to say you could use either the reliable method back-up alarm, it's not a hundred percent reliable, but it will operate a hundred percent of the time as long as it's maintained properly, and the human being who you can't control.

(*Defendant's Exhibit K - Deposition of Vincent Gallagher* at 98:11-99:20) (emphasis added).

9. An article published in the National Safety Council's *Safety & Health Magazine* states, "[d]espite advances in technology, fatalities and injuries resulting from backing vehicles remain a problem..." It further suggests an OSHA standard that requires an audible backup alarm in conjunction with a trained spotter. (*Exhibit Y - Safety & Health Magazine,* Preventing Backover Incidents, Jan. 2018, at 35) (Commenting on OSHA Standard 1926.601, "[i]t's very clear for many, many years that the current standard is not sufficient.").

10. Indeed, OSHA is a bare minimum standard. (*Exhibit A- Deposition of Kelly Herlihy at 68*) (*Exhibit B, Decasas dep at 118*) (*Exhibit L Olcott dep. at 69*)

11. The person most knowledgeable of construction site safety on the project, David Olcott, testified:

Q. So with regard to the backup alarm issue, you understand under the OSHA standard a construction vehicle that has an obstructed view is supposed to have a backup alarm, correct?
THE WITNESS: That's correct.

Q. And actually after that incident, you're aware that they required all vehicles to have backup alarms on the job site, you're aware of that corrective measure that was taken?
A. Yes.

Q. Regardless of whether or not the view was technically obstructed under the OSHA standard, you're aware of that?
A. Yes.

Q. So they actually went beyond the OSHA standard with regard to that safety corrective measure, correct?
A. Correct.

Q. And that's kind of how safety works, right, like OSHA isn't the be all and end all when it comes to safety, right?
A. Correct.

Q. OSHA is just a minimum standard, right?
A. That's correct.

Q. And there are many other industry safety standards which may be more protective of workers than the OSHA standard, correct?
A. Yes.

Q. Because at the end of the day, we're supposed to make our best efforts to eliminate needless injury to workers and others that may come near the construction project, correct?
A. Yes.

Q. And that's kind of where OSHA's general duty clause comes into play, right?
THE WITNESS: Yes.

(*Exhibit L Olcott dep. at 68-70*) (*See also Exhibit V at CONTI 03643, 45, 51- Turnpike Authority Health and Safety Plan Requirements-* "Accident prevention procedures shall be based on industry standards...Absence of an applicable standard or regulation does not preclude the Contractor from providing appropriate controls...Such occurrences may be governed by the OSHA Act - General Duty Clause, 5 (a) 1. Specific references in the SWP to codes standards and regulations are not necessary.")

12. Indeed, the New Jersey Supreme Court recognizes that the standard for safety in the construction industry "[I]s derived from many sources, including codes adopted by the Legislature, regulations adopted by state and federal agencies, and standards adopted by professional organizations." *Fernandes v. DAR*, 222 N.J. 390, 405 (2015)

13. In that regard, the need to protect workers from reversing vehicles is well recognized across the construction industry. Groups like the American National Standards Institute ("ANSI") set forth the following standards:

6. Runover/Backover Prevention:

6.2 Backing Construction Vehicles and Equipment. When pedestrians are present in a work space and are potentially in the blind area of work vehicles or equipment, backing shall only be done with the use of mechanical backing assistive devices and/or under the direction of a spotter who can verify the path is clear.

6.2.1. Unless spotters are used to control backing, backup alarms should be supplemented by the use of mechanical backing assistive devices to alert drivers when workers on foot enter the blind area of a backing work vehicle or equipment.

6.2.3. Audible backup alarms shall be supplemented with visual warning devices (that is, flashing lights connected to the backup alarm) that alert pedestrians when a piece of equipment or vehicle is backing, especially during night time operations.

(*Exhibit S - Expert Report of Vincent Gallagher* at 10-11); (*Exhibit T - Expert Report of Keith Bergman* at 25-26).

14. Likewise, the Associated General Contractors of America *Accident Prevention Manual for Construction* states, when reversing a motor vehicle, such as a pickup truck, on a construction site, "a truck should be backed under the direction of a signal person if the operator cannot clearly see the area to the rear of the vehicle, and especially if the truck is not equipped with an automatic backup alarm. In many cases, a signal person is useful in connection with the backup alarm." (*Exhibit S - Expert Report of Vincent Gallagher* at 11).

15. Jacobs Safety official, Kelly Herlihy, testified:

Q. And what this all comes down to is that the benefits among other things is that the worker can go home every night to their family in basically the same condition they left in the morning, right?

THE WITNESS: That's correct.

(*Exhibit A- Deposition of Kelly Herlihy at 32*)

16. Everyone agrees it would have been safer to have a backup alarm on the truck. (*Exhibit A- Deposition of Kelly Herlihy at 66*) (*Exhibit B, Decasas dep at 150, 151, 152*) (*Exhibit L Olcott dep. at 193, 105*) (*See also Exhibit AA, Hogan dep. at 56*)

17. Jacobs agrees that practically all backing safety incidents are preventable. (*Exhibit A at 79*) (*Exhibit B, Decasas dep at 132-33*)

18. A backup alarm would have prevented this incident. (*Exhibit A at 137-139*)

19. Jacobs backing safety documentation states in pertinent part:

RULE #8: Vehicle Backing Safety

For most of us, busy schedules have become a way of life, but some of our most critical safety moments occur while behind the wheel. Did you know: The National Safety Council attributes backing accidents to cause an estimated 500 deaths and 15,000 injuries per year? Additionally, a significant amount of Jacobs MVI incidents involve the backing of vehicles.

20. In addition to the other suggestions, consider the following:

- Install a proximity warning device and back-up camera.

Backing up is one of the leading causes of motor vehicle incidents.

- Backing sensors are beneficial, since they inform he driver while backing up of an object behind the vehicle. (Our goal is to install backing sensors on all company vehicles.)

(*Exhibit X- Jacobs Safety Documentation*)

21. The Jacobs Resident Engineer, Paul Decasas, explained:

Q. Okay. So anyway, so there are certain safety rules in place on this project, right?
A. Yes.
Q. And Conti has a certain set of safety rules that they're supposed to follow, right?
A. Yes.
Q. And, part of Jacobs job on this job is to make sure that the job site is safe, correct?
A. Yes.
Q. And that includes making sure that Conti follows the safety rules it is supposed to follow vis-à-vis its agreement in practice with the Turnpike Authority, correct?
A. Yes.
Q. And, the reason for the safety rules is to protect anyone that may come in or near the project, right?
A. That includes everyone, yes.
Q. That includes workers and members of the public, right?
A. Yes.
Q. And that is sort of what the first page of DeCasas-1, this toolbox talk about the protecting of the public, is talking about.
Right?
A. Yes.

Q. Okay. Now, the second page of DeCasas-1, is topic 115, and it talks about the 12 deadliest accidents involving workers. Do you remember that section?
A. Going through the document just now, yes.
Q. Yeah. So, number three on the list of the 12 deadliest accidents listed by events were workers struck by vehicles. Do you see that?
A. Yes.
A. I believe so.
Q. And one of the things it points out is that the National Safety Council attributes backing accidents to cause an estimated 500 deaths and 15,000 injuries per year. Do you see that?
A. Yes.
Q. And, it goes on to talk about vehicle backing safety, right, it goes on to talk about that?
A. Yes.
Q. And then at the end it gives some bullet points of things to do to prevent workers from being backed up on, right?
A. Suggestions, yes.
Q. [P]lease read into the record the 5th bulleted suggestion.
A. Install a proximity warning device and back-up camera.

(*Exhibit B, Decasas dep at 127-130*)

22. And David Olcott confirmed:

Q. Okay. So did you find it significant or pertinent that the truck did not have a backup alarm?
A. Yes.

Q. So the safer thing to do is equip it with a backup alarm?
A. As we learned, yes.

(*Exhibit L Olcott dep. at 193, 105*) (*See also Exhibit AA, Hogan dep. at 56*)

23. Despite this, the driver testified:

Q. Did anyone from Jacobs, Conti or anyone else from the job site discuss with you what went wrong to prevent it from happening again?
THE WITNESS: No. It was spoken normally of as an accident as anything.
Q. Anything other than that?
A. No.
Q. Do you know what caused the incident?
THE WITNESS: No.
Q. Prior to the incident, did anyone from Jacobs require that the truck have a backup alarm on it?..To your knowledge?
A. Nobody ever asked me anything like that.
Q. Prior to the incident, did Jacobs ever require a spotter when trucks were

backing up like it was at the time of the incident to your knowledge?
THE WITNESS: No. ...

(*Exhibit P, Barbosa dep at 42-43*)

VI. The Opinions of the Experts

1. There is no dispute Mr. Silva was injured by a vehicle being operated in reverse without a backup alarm or spotter. (*Exhibit P, Barbosa dep at 16*) (*Exhibit U - Expert Report of Donald Phillips, P.E.* at 14-5).

2. Likewise, there is no dispute the F-350 vehicle which backed over Mr. Silva was equipped with a cargo box, a vertically mounted spare tire behind the driver's side window and various shovels and tools sticking up behind the passenger side rear window. (*Exhibit U - Expert Report of Donald Phillips, P.E.* at 7); (*Defense Exhibit K - Deposition of Vincent Gallagher* at 80:17-25) (". . . Olcott-5 has three photos. And the third one would be one of the two that I think are most descriptive of the obstruction to the rear.").

3. Although Defendant Barbosa testified he had an unobstructed view, this testimony is contradicted by Mr. Barbosa's own testimony, photographs of the subject vehicle at the time of the incident showing the utility body, tools and a tire blocking the rear window. It is also contradicted by common sense. As Mr. Gallagher testified:

A. He said he [had] an unobstructed view. And he also said he could see everything that was behind the truck. And he also said when he looked he didn't see Mr. [Silva]. So Mr. [Silva] was visible but he didn't see him. And he says there was no obstruction. And he said he has good eyesight. So something's not logical.

Q. He didn't look perhaps?
A. He testified that he looked.

Q. And do you believe that he looked?
A. I believe that he didn't see Mr. Silva and didn't know he was going to run him over. And I know he had an obstructed view to the rear because I could see obstructions in front of the window in the back.

(*Defense Exhibit K - Deposition of Vincent Gallagher* at 87:13-25).

4. Likewise, Vincent Gallagher testified based on his review of the discovery materials, the poor lighting on the job site was a contributing factor to the incident:

Q. Did you review any testimony or documentation about the lighting condition at the site?
A. Yes. The police said it was horrible. And you could see there was some glare. And by the way, with regard to obstruction, OSHA finds lighting condition to be an obstruction.

(*Id.* at 129:14-19).

5. Indeed, in clarifying the meaning of the terminology, "obstructed view to the rear," OSHA offered the following guidance:

> A simple interpretation would be "anything" that would "blockout" (interfere) with the overall view of the operator of the vehicle to the rear of the vehicle, at ground level.
>
> "Obstructed view to the rear" could include such obstacles as any part of the vehicle such as structural members, its load (gravel, dirt, rip-rap) . . . in addition, it could include restricted visibility due to weather conditions such as heavy fog; or work being done after dark, without proper lighting.

(*Exhibit Z - OSHA - Standard Interpretations - "Obstructed View to the Rear" Relative to Use of Back-up Alarms*) (underline added).

6. OSHA recognizes the terminology "obstructed to the rear," applies in several contexts and is governed by several separate regulations:

> Many commercial or construction vehicles have audible alarms that sound when the vehicle is put into reverse and backs up. OSHA has three construction safety standards that require backup alarms or spotters when backing a vehicle with an obstructed view to the rear: 29 CFR Sec. 1926.601(b)(4) covers motor vehicles; Sec. 1926.602(a)(9)(ii) covers material handling equipment; Sec. 1926.952(a)(3) covers equipment used in power generation and transmission construction.

(*Exhibit Z - OSHA - Preventing Backover Injuries and Fatalities*) (emphasis added).

7. As such, after reviewing the facts in evidence, OSHA regulations, defendants' contractual agreements as well as industry standards, Vincent Gallagher opined Joao Silva was exposed to the following hazards:

> At the time of this incident, Joao Silva was exposed to the risk of being "struck by" the reversing pickup truck. The risk of the reversing pickup truck causing injury was increased because of the following risk factors:
>
> - The pickup truck lacked a self-adjusting backup alarm that automatically adjusted to 10 decibels above ambient noise levels.
> - Mr. Barbosa's view to the rear was obstructed by a toolbox, tire, tools, rack and shovels.
> - The investigating police officer indicated that the lighting was "horrible" and that "there's like no lighting."

(*Exhibit S - Expert Report of Vincent Gallagher* at 18).

8. Mr. Gallagher testified, throughout his career, he has "been involved in a lot of back-up

cases on road resurfacing projects . . . . It's a common hazard on road jobs because you have to back up trucks sometimes and people get run over. And that I've had a lot of experience with that problem, of people being run over by reversing trucks . . . . The driver couldn't see where he or she was going an[d] ran over somebody inadvertently." (*Defense Exhibit K - Deposition of Vincent Gallagher* at 28:2-19).

9. As to the lack of a backup alarm in this matter, Mr. Gallagher stated:

> In this case we have technology that could have prevented this injury. It would be fundamental to the field of ergonomics and human factors to apply reasonable safety technology. It's economically and tech[nologically] feasible that reduces the risk of catastrophic injury and death.
>
> That's what back-up alarms do. They sound when they sense somebody in a danger zone and they sound in the cab of the vehicle that's backing up to alert the driver as well as the person who is in the path of travel. So that's ergonomics. And that's fundamental to this case.

(*Defense Exhibit K - Deposition of Vincent Gallagher* at 57:4-15).

10. Mr. Gallagher testified that Jacobs, as the resident engineer had a duty to enforce job site safety rules both under OSHA and their own contractual agreement with Conti and they tragically failed in this regard. Indeed, Defendant Jacob's contractual documents state, "[i]t is the policy of Jacobs to select, contract with, and oversee subconsultants and subcontractors with the same priority and emphasis on health, safety and the environment . . . we practice for our own employees. It is a contractual requirement that subconsultants comply with all applicable Jacobs, client, state and federal health and safety and environmental regulations." (*Exhibit S - Expert Report of Vincent Gallagher* at 15) (emphasis added) (*Defense Exhibit K - Deposition of Vincent Gallagher* at 171:8-13 ("I understood, as indicated in my report, that [Jacobs] had a safety oversight role of Conti and the work being done at this site.").

11. Vincent Gallagher testified:

A. ...A lot of deposition testimony says that Jacobs had the responsibility to oversee the work, to make sure it was done safely in compliance with OSHA.

Q. Would that include making sure that the contract for the work being performed, the safety rules and the contract for work being performed was complied with as well?

A. Yes, sir.

Q. So before I think you were asked a question about the Site Health & Safety Plan...One of the provisions is under 2.0 3, it says, "Absence of an applicable standard or regulation does not preclude the contractor from providing appropriate controls within a safe work plan, SWP," and then it says, "Such occurrences may be governed by OSHA. Specific reference in the safe work plan to codes and standards and regulations are not necessary." Do you see

that part?
A. Yes, sir.
...
Q. Is it your understanding that it would be Jacob's responsibility as the entity in charge of safety on the job site to ensure that this contract was complied with by the contractors?...
A. Yes, sir.

Q. That would include contractors such as Conti, correct?
A. Yes, sir.

Q. That they were following the safety rules as envisioned under the contract?
A. Right.

(*Id.* at 171:22-173:6)

12. Mr. Gallagher found that Jacobs' contractual documents mandated contractors and subcontractors on their job site follow the same standards and rules as Jacobs, which required all of its vehicles regardless of whether they have an obstructed view, are an earth moving vehicle, or a pick up truck, to have backup alarms. (*Exhibit S - Expert Report of Vincent Gallagher* at 18, 23); (*Defense Exhibit K - Deposition of Vincent Gallagher* at 117:13-118:4) (". . . And then the deposition testimony of Jacobs' representatives point out that the policy of Jacobs is to have back-up alarms on all vehicles. So they had the responsibility to oversee with the same priority and emphasis on safety as their own policy...And they didn't.).

13. Mr. Gallagher stated in reviewing Jacobs contractual agreements, the absence of a specific standard or regulation did not prevent them from enforcing safety rules to keep workers free from unreasonable injury or death. Specifically, the "[a]bsence of an applicable standard or regulation does not preclude the contractor from providing appropriate controls." (*Exhibit S - Expert Report of Vincent Gallagher* at 15) (*Exhibit T - Expert Report of Keith Bergman* at 21).

14. Jacobs representatives recognized the dangers of vehicles being operated in reverse without backup alarms. Defendants' toolbox talk materials state, "[e]*quipment* or vehicles which have an obstructed view to the rear must have an automatic back-up alarm which may be heard over the usual noise of the work area, or an observer (ground guide) that signals it is safe to back up." (*Exhibit Y - Safety Articles, Tailgate/Toolbox Safety Training,* Topic 360: Safe Backing for Drivers, CONTI 04755). This is because, "[v]ehicle accidents continue to be the leading cause of work-related deaths and can be a drain on company profits." (*Exhibit Y - Safety Articles, Tailgate/Toolbox Safety Training,* Topic 343: Driving Company Vehicles, CONTI 04749).

15. Gallagher testified, consistent with the plain evidence and common sense, that based upon his review of the witnesses' testimony, photographs of the incident truck and of the lighting on the job site, the vehicle had an obstructed view, as defined by OSHA and should not have been reversed without a backup alarm or spotter and Jacobs failed in having this hazard corrected and communicating the importance of backup alarms to contractors such as Conti:

Deposition testimony of representatives of Jacobs Engineering make it clear that Jacobs Engineering recognized the efficacy of backup alarms in preventing worker injury and death. Its own policy for many years was to require all vehicles on construction sites to have backup alarms - no matter what. Jacobs Engineering also recognized that the risk of runovers could be reduced through the installation of proximity warning devices and a backup alarm. Jacob's goal was to install backing sensors on all company vehicles.

Despite the keen awareness of Jacob's understanding of the value of backup alarms, it did nothing to communicate with Conti the dangers of its pickup truck being without a backup alarm. The risk of being runover at this site was increased because of the lack of lighting, glare from lighting, obstruction to the rear of the incident pickup truck and a lack of a backup alarm on the incident pickup truck. The risk of a worker being runover by a reversing truck was well known at this site prior to the date of the incident. Paragraph V shows that there were four incidents which occurred prior to this incident that involved a risk of vehicles backing. Yet, there was never any instruction, guidance, recommendation or suggestion by Jacobs that the trucks of Conti be equipped with backup alarms - until after this incident. It should not have taken Mr. Silva's runover for Jacobs to have required Conti to equip its trucks with the same safety equipment that Jacobs requires of its own vehicles.

(*Exhibit S - Expert Report of Vincent Gallagher* at 15).

SJ opp- Facts7.wpd