

BEFORE THE NORTH CAROLINA
OCCUPATIONAL SAFETY AND HEALTH REVIEW COMMISSION

COMMISSIONER OF LABOR OF THE) DOCKET NO: OSHANC 2022-6509
STATE OF NORTH CAROLINA,) INSPECTION NO: 318240728
) CSHO ID: G2933
Complainant)
)
-vs-) ORDER FOLLOWING HEARING
) **FILED**
CONCRETE STRATEGIES, LLC,)
) **NOV 7 2024**
Respondent)

On October 9, 2022 and October 16, 2022, the parties virtually appeared before this Hearing Examiner, together with their legal counsel Sage Boyd (DOL) and Portia Kayser (Concrete Strategies), who each gave brief opening statements, presented arguments and evidence in support of their positions, and gave brief closing arguments.

Complainant's witnesses who appeared and testified under oath at hearing were:

Jacob ("Jake") Boggeman, a union carpenter employed by Respondent, who was present at the site on the day of the accident;
Benjamin Teal, Complainant's Compliance Safety and Health Officer ("CSHO");
Mark Oster, a subcontractor previously operating as "Oster Group," who was present at the site on the day of the accident;
Jonathan McElrath, a crane operator employed by Superior Cranes, Inc., who was operating the crane at the time of the accident;
Robert ("Bobby") Faircloth, a crane operator employed by Superior Cranes, Inc. who was present at the site on the day of the accident;
Joseph ("Joe") Parsons III, a foreman employed by Superior Cranes, Inc. who was present at the site on the day of the accident;

Respondent's witnesses who appeared and testified under oath at hearing were:

John Voss, an erection foreman employed by Respondent, who was directing Respondent's tilt-up operation and was present at the site on the day of the accident;
Reid Lenhart, Respondent's Safety Director; and
Barclay Gebel, Respondent's Executive Vice President.

Exhibits offered by the parties and admitted into evidence without objection were:

Complainant's Exhibits 2, 3, 4, 5, 6, 13, 14, 15, 16, and Demonstrative Exhibit 17; and Respondent's Exhibits A, D, K, M, N, W.

Respondent objected to admission of Complainant's Exhibit 1 (a certified copy of Complainant's inspection file), arguing that it contained inspections for multiple different entities. This argument was undermined by the sworn certification statement on page 1 of Complainant's Exhibit 1, in which Anne P. Weaver, attested she was the custodian of the files containing investigative reports produced by personnel in the OSH Division, and certified:

[T]he attached file is the unredacted copy of the official inspection report, obtained from District 4 of the Compliance Bureau of the Occupational Safety and Health Division of NCOLD, for the investigation of Concrete Strategies LLC – OSH File No. 318240728.

While the undersigned appreciates that employees of three entities were present at the time of the accident and interviewed by Complainant's CSHO as part of his investigation of Respondent, and at least one entity besides Respondent was ultimately cited by the Complainant for OSH violations, there is nothing in Complainant's Exhibit 1 that indicated it was anything other than the Complainant's inspection report for the Respondent in the above-referenced matter, as Ms. Weaver certified and attested. Accordingly, there being no other objection, Respondent's objection was overruled and Complainant's Exhibit 1 was admitted.

At the conclusion of the hearing, Respondent's counsel offered to provide post-hearing briefing, but the undersigned indicated that would not be necessary and instead offered counsel the opportunity to submit any case law or other materials applicable to the issues in this case by October 25, 2022. Neither party submitted any such materials.

Based upon careful consideration of the sworn testimony of witnesses at the hearing, the exhibits admitted into evidence, and the entire record of the proceeding, the undersigned makes the following Findings of Fact and Conclusions of Law. In making the Findings of Fact, the undersigned has weighed all the evidence and assessed the credibility of the witnesses, taking into account appropriate factors including but not limited to the demeanor of the witness, and any interests, bias or prejudice the witness may have. Further, the undersigned has carefully considered the opportunity of the witness to see, hear, know and/or remember the facts or occurrences about which the witness testified, whether the witness's testimony is reasonable, and whether the testimony is consistent with all other believable evidence in the case. Based on the foregoing, the undersigned makes the following:

FINDINGS OF FACT:

1. This case was initiated by Respondent's timely Notice of Contest challenging a citation issued by Complainant on September 21, 2022, alleging Respondent's serious violation of 29 CFR 1926.1417(p) on March 24, 2022, at a worksite located at 7575 Aviation Blvd, Concord, N.C. ("the Worksite"), and proposing a penalty of \$6,300.

2. Complainant is an agency of the State of North Carolina charged with administration and enforcement of the provisions of the Act, including making inspections and issuing citations and other pleadings.

3. Respondent is a foreign limited liability company authorized to do business in the State of North Carolina from November 30, 2007 through the date of this Order.

4. Respondent annually employs approximately 700¹ employees and is an "employer" within the meaning of N.C.G.S. § 95-127(11).

5. Respondent is in the business of commercial concrete operations including tilt-up concrete panel wall erection.

6. On March 24, 2022, Jacob Boggeman ("Boggeman") and John Voss ("Voss") were "employees" of Respondent within the meaning of N.C.G.S. § 95-127(10) and were working at the Worksite.

7. SL Management Group Southeast ("SLM") was the general contractor for the construction of two industrial buildings at the Worksite, the exterior of which were comprised of concrete wall panels poured on the ground at the worksite, then "tilted up" and put into place with a crane, and then braced to secure them in place and prevent falling, (hereinafter "the Project").

8. The Project was to be completed in two Phases.² The accident that gave rise to the citation occurred during Phase II.

9. On or about November 19, 2021 SLM subcontracted Mark Oster ("Oster"), then operating as Oster Group Consulting, to perform work commencing in February 2022 and ending in March 2022, including but not limited to:

- a. excavation, backfill, and removal of excess dirt for perimeter building footings;
- b. installing concrete slab on grade and vapor barriers for the site's buildings;
- c. developing the tilt wall panel layout;
- d. pouring and installing tilt-up pre-cast concrete panels for the buildings' perimeter walls and concrete ramps;
- e. furnishing and installing forms (such as braces) required to install the tilt wall panels,
- f. furnishing/renting a 350-ton crane for tilt wall panel erection in two lifting sequences within a one-month period, and
- g. pouring a 800' x 3' x 4' concrete "deadman" to which the bottom of the braces for the concrete tilt-up walls would be affixed. Complainant's EXH. 1 at pp. 81-103, 100-02.

¹ Respondent's EXH. D. p. 14 was Complainant's OSHA-300 Data/Safety and Health Program Evaluation of Respondent dated May 15, 2023, which identified an annual average of 727 employees in 2021, 742 employees in 2020, and 677 in 2019.

² The witnesses variously referred to the work as having two "Phases" or "Sequences." For brevity, they will be referred to in this Order as "Phases."

10. For the work in both Phase I and Phase II, Oster subcontracted (a) Meadow Burke Engineering (“Meadow Burke”) to create a bracing plan for the concrete panels once they were tilted up and in place, (b) Maxim Crane to provide an appropriate crane for erecting the concrete tilt-up walls, (c) Jose Antonio Rodriguez Rios (“Rios”), d/b/a Rodriguez Labor Services to provide general laborers on the Worksite; and (d) Respondent to develop an erection plan specifying where the concrete panels would be poured, where they would be placed, and the order in which they would be placed; provide rigging equipment; and perform the erection of the tilt-up walls including placement of the braces according to Meadow Burke’s bracing plan.

11. On February 11, 2022, Respondent’s Executive Vice President, Barclay Gebel (“Gebel”), transmitted a draft erection plan for Phases I and II to Oster, Maxim Crane, and two other employees of Respondent. In that email, Gebel stated that the plan required a 350-ton hydro crane. Complainant’s EXH. 1 at p. 118; Gebel testimony.

12. On February 14, 2022, Gebel created a revised erection plan that required use of a 300-ton rubber tire hydro crane, which he then forwarded on February 15, 2022 to Oster, Maxim Crane, and three other employees of Respondent, along with his suggestion that Oster hire the crane company, and his representation that Respondent would provide a 3-man erection crew, specifically, the erection foreman and two riggers. *See* Complainant’s EXH. 1 at pp. 132-33; Complainant’s EXH. 4. Gebel testified that a 300-ton crane was sufficient to safely erect every panel according to his erection plan.

13. Respondent’s employee, John Voss (“Voss”) worked at the Worksite for Phase I; only he and another Respondent employee, Jacob Boggeman (“Boggeman”) worked at the Worksite on Phase II.

14. Voss has worked in the concrete industry since 2003 and for Respondent since 2006. He is highly experienced in erecting concrete tilt-up walls, and at the hearing identified himself as the “erection superintendent”³ for Phases I and II of the Project, testifying that his job responsibilities included making sure everything was set up, keeping an eye on the rigging and making sure there were no issues with the rigging, keeping everyone away, directing the order in which concrete tilt-up panels were lifted and placed as specified in Gebel’s erection plan; determining the placement of braces on each panel as specified in Meadow Burke’s bracing plan; and acting as signalman for the crane operator including: (a) signaling the crane operator’s movement to rotate the boom to center it over the panel to be lifted; lower the boom so that rigging could be attached from the crane to the concrete panel; adjust and set the rigging attaching the concrete panel to the crane; signal the crane operator’s lifting, movement and positioning of the panel in its standup location, determining that the braces on the panel were properly and securely braced; signaling the crane operator to lower the boom so that the rigging could be released from the panel; and directing the crane operator to the next panel.

15. Boggeman testified that he is a union carpenter who has been employed by Respondent since approximately 2018, and during the tilt-up operation in Phase II he assisted Voss and Rios’ employees with attaching and detaching the rigging on each panel, adjusting the panel

³ This term appears to be synonymous of “erection foreman” and there was no testimony that it had different responsibilities from an “erection foreman.” Hereinafter, Voss will be referred to as an “erection foreman.”

in its tilt-up location, and using a manlift to reach and drill the top portion of each brace into the concrete panel, as directed by Voss. Boggeman also testified that after he attached the top of a brace to the panel, Rios' crew would drill into the deadman to attach the bottom of that brace,⁴ as directed by Voss, then he and Voss would make any other necessary adjustments to the shims, and then Voss would confirm that each brace was securely attached with a solid connection to the deadman and the panel by vigorously shaking the brace. Boggeman testified that once Voss determined that all braces on the panel were securely attached with a solid connection to the deadman, he would signal the crane operator to lower the boom, and Boggeman and Rios' crew would release the rigging from the erected panel.

16. During Phase I and II, Voss decided where each brace would be attached on the concrete panel and on the deadman based upon the bracing plan prepared by Meadow Burke.

17. During Phase II, there were no bolts for the braces pre-poured into the concrete panel or the deadman, and it was up to Voss to review Meadow Burke's bracing plan and decide where to drill in each panel and in the deadman to place the braces.

18. The work on Phase I occurred from on or around March 1, 2022 to on or around March 5, 2022, and the work on Phase II was set to occur from March 22 to March 25, 2022.

19. On March 22, 2022, the general contractor, SLM, learned that Maxim would be delayed in coming to the Worksite for Phase II, so contacted Superior Cranes, Inc. ("Superior") to obtain a bid for the crane work for Phase II. Complainant EXH 1 at p. 108

20. In response to SLM's inquiry, on March 22, 2022, Superior submitted a bid that included pricing for a 350-ton all-terrain crane, counterweights for the crane, operator overtime, permits, the fee for the crew required to move the crane around the Worksite, and fuel costs. Complainant EXH. 1 at p. 110. SLM accepted this bid the same day.

21. On the afternoon of March 22, 2023, Superior delivered a Grove GMK 6300L rubber tire hydro crane to the Worksite for the Phase II tilt-up concrete erection operation to be performed by Respondent. This crane was a mobile crane with a maximum lift capacity of 350 tons. The cab of the crane was located on the crane superstructure, that is, the upper revolving frame of the crane that also held operating machinery, the crane's hydraulic boom and the counterweight. The superstructure was above the crane truck's tires, and elevated approximately 8-9 feet about the ground. When seated in the crane's cab on the superstructure, the crane's hydraulic boom and elevating cylinder were on the crane operator's right, and the counterweight was behind the crane operator.

22. Along with the crane, on March 22, 2023, Superior sent employees to the Worksite to assemble the crane, and on March 23 and 24, 2022, Superior sent employees to the Worksite to perform Superior's work on Phase II: (a) employee Jonathan McElrath (hereinafter "McElrath") to operate the crane during tilt-up operations; and (b) employees Joe Parsons (foreman), Bobby

⁴ The Phase II crane operator, McElrath, also testified that the Respondent installed each brace one at a time, with Boggeman attaching the top of each brace from a manlift and Oster or Rios' crew attaching the bottom of the brace into the deadman.

Faircloth (crane operator), Matt Bryant (building/oiler), and Skylar Standridge (spotter) (hereinafter cumulatively referred to as "crew") to assist in driving and setting the crane whenever it needed to be moved to facilitate the tilt-up process. While driving the crane to the new location, Respondent's crew spotted the crane to prevent it from coming into contact with potential obstructions.

23. Superior was responsible for determining where the crane would be placed after considering, among other things, the location of each of the poured concrete panels to be moved (as specified by Voss), the location at which each of these panels would be placed (as specified by Voss), the weight of each panel (as specified by Voss), and any obstructions or defects in the ground or surrounding area that would prevent safe operation of the crane.

24. It was hazardous to move the crane to a new placement, and each move was planned to allow the crane to safely lift and move several panels before being moved again.

25. Superior considered tilt-up operations highly dangerous, its crew was not trained to provide assistance during tilt-up operations, it never provided signaling assistance during tilt-up operations; and it did not agree to spot the operation of the crane during tilt-up operations, nor was it asked to do so.

26. Over the course of the Phase II work on March 23 and 24, 2022, Superior's crew moved the crane approximately seven times to the locations they had determined were necessary to safely lift and move the concrete tilt-up panels as specified by Voss. Each time Superior's crew moved the crane to the new placement, they set the outriggers and had the crane operator, McElrath, perform a 360° rotation of the superstructure while the crew watched to confirm that the superstructure would not hit any obstructions when rotated, and then the crew retreated from the Worksite until they were needed to move the crane to its next placement.

27. The actions of Superior's crew in leaving the immediate location of the crane after setting the crane in its new placement was consistent with Respondent's Corporate Safety Plan, see Complainant's EXH 1 at pp. 159-197 at 176 ("personnel shall be clear of the entire erection area, excluding erection crew...").

28. At all times during the tilt-up operations of the crane on March 23 and 24, 2022, Voss was the designated signal person for Superior's crane operator, McElrath, and provided signals for up/down and rotational movement (swing) of the crane. Voss was experienced and qualified to perform in this role, Oster and Superior's employees knew that Voss was the designated signal person, and McElrath testified that Voss's signaling was clear and he relied on Voss's signaling during the tilt-up operation.

29. McElrath has been certified as a crane operator since 2017 or 2018, and was proficient in all functions of the crane provided by Superior for the Project. On March 22, 2022 he traveled with the rest of Superior's crew to help put the crane together. On March 23-24, 2022, after the crane was set in each location based upon Voss's specifications, McElrath's job was to operate the crane from the cab in the crane's superstructure: to center, lower and lift the boom as directed by Voss, lift the concrete tilt-up panel as directed by Voss, rotate to move the panel to the location specified by Voss, hold the panel as directed by Voss, lower the boom as directed by Voss

so that Voss and others could release the rigging on the panel, and then rotate the crane's boom to the location of the next panel to be moved, as indicated by Voss.

30. During McElrath's work on March 23 and 24, 2022, his view from the crane's cab was obstructed as follows:

a. Front view: Because of the computer screen in the front of his cab, the McElrath could not see all the way to the ground, so while he could see the top of braces directly in front of him, he could not see the bottom of the braces or where they were bolted to the deadman:

b. Right-side view: The boom cylinder and cab brace blocked McElrath's view through his right window, so that he could not see the braces installed to his right as he was facing the installed panel:

c. Rear view: The counterweights attached to the back of the cab blocked McElrath's view behind his cab.⁵

31. McElrath's testimony regarding the obstruction to his right-side view is consistent with the photographs admitted as Complainant's EXH. 3.16, 3.21, 3.44.

32. None of Superior's employees, including McElrath, had a copy of the erection plan created by Gebel, and none of them knew the order or placement of the concrete panels except as directed by Voss.

33. None of Superior's employees, including McElrath, had a copy of the bracing plan created by Meadow Burke Engineering, and none of them knew where each brace was to be placed. Superior's foreman, Joe Parsons, testified at hearing that some of the braces along the wall under construction were set on the inside (western) side of a wall panel, and some were set on the outside (eastern) side of a wall panel, so that they could not anticipate from Voss's brace placement on prior panels where he would place the braces for remaining panels.

34. On March 23, 2022, Oster, Voss, Boggeman, McElrath, Superior's crew, and Rios' crew worked on Phase II of the Project from approximately 9:00 a.m. to 5:30 p.m. During this time, the crane was moved multiple times by Superior's crew, and performed multiple tilt-up operations as directed by Voss.

35. On March 24, 2022, Oster, Voss, Boggeman, McElrath, Superior's crew and Rios' crew worked on Phase II of the Project from approximately 8:00 a.m. until approximately 6:55 p.m.⁶ During this time, the crane was moved multiple times by Superior's crew and performed multiple tilt-up operations as directed by Voss.

⁵Respondent's investigative report, see Complainant EXH. 1 at pp. 231-32, also reported it saw no evidence of a rear-facing camera or proximity sensors in the crane.

⁶According to Respondent, sunset on this day was at 7:38pm, so lack of available light was not a contributing factor in this accident. Complainant's EXH. 1 at p. 199.

36. When only Panels 51, and 71-74 remained to be placed, Superior's crew conferred and determined the location for the placement of the crane based on Voss's direction regarding the location of these panels in their casting beds, the order in which each panel would be moved, the weight of each panel, and where each panel would be placed.

37. Superior's crew determined that the last placement of the crane needed to be approximately five feet closer to the wall being built than its prior placements in order to allow the crane to safely lift and move Panel 51,⁷ as directed by Voss. Voss was present during this discussion, knew about, and acceded to this decision.

38. The last placement of the crane was east of and parallel to the wall being built, with the crane truck facing north, and four outriggers extending approximately from the truck body to the east and west. For placement of Panels 71-74,⁸ the superstructure of the crane rotated from the casting beds on the east side of the crane truck, to where the panel would be placed on the west side of the crane truck, and vice versa.

39. The west side of the crane truck was 36 feet from the location of the tilt-up walls, and the edge of each outrigger and the end of the counterweight attached to the crane's superstructure were approximately 12 feet from where Panel 73 was to be placed. Complainant's EXH. 1 at p. 234.

40. After the final placement of the crane on March 24, 2022, and after having McElrath perform a 360° rotation to ensure there were no obstructions within its swing path, all of Superior's crew retreated from the Worksite except for Faircloth, who stayed to watch the lift of Panel 51 to make sure that the crane did not subside or shift due to the heavy weight of Panel 51. Once he confirmed that the crane did not shift or subside when it lifted Panel 51, Faircloth left the Worksite. The remaining crew went to their vehicles approximately 100 feet away and waited until they were next needed to move the crane.

41. The braces for Panels 71-74 were not present when McElrath performed the 360° rotation.

42. Voss directed the order of lifting and placing Panel 51, and Panels 71-74.

43. After Panel 51 was securely placed, Voss successfully directed the placement of Panels 71, 72, and 73.

44. Panel 73 was a U-shaped concrete panel, weighing approximately 38,000 pounds (19 tons). Voss directed the placement of two braces in Panel 73, with Boggeman placing each brace in the upper portion of the concrete panel, as directed by Voss, and Rios' crew placing the bottom of the brace in the deadman, as directed by Voss.

⁷ McElrath testified that Panel 51 weighed approximately 100,000 pounds.

⁸ McElrath testified that, unlike Panels 71-74, Panel 51 was poured inside the walls of the structure at the location of the hand-written "30" on Complainant's EXH. 4, p. 2.

45. Voss caused the bottom of the northernmost brace on Panel 73 to be placed between the crane's outriggers approximately 16.36 feet from Panel 73.

46. As a result of Voss's direction, the northernmost brace on Panel 73 was within the swing path of the crane's counterweight.

47. Approximately 7-9 employees were exposed to the hazardous condition created by Voss placing the northernmost brace of Panel 73 within the swing path of the crane's counterweight: Voss, Boggeman, McElrath, Rios, and 3-5 people on Rios' crew.⁹

48. After Voss placed the braces in Panel 73 and Rios' crew had released the rigging, McElrath rotated the boom of the crane from facing Panel 73 to facing the location of Panel 74, as directed by Voss. However, Voss determined that the boom was not centered over Panel 74, so Voss directed McElrath to rotate (swing) another 5 degrees to center the boom over Panel 74. When McElrath performed this operation at Voss's direction, the counterweight on the rear of the crane struck the northernmost brace on Panel 73, which caused that brace to fail, which then caused the second brace to fail and Panel 73 to fall toward the crane.

49. Voss, Boggeman and Oster each testified that when they heard the loud pop signifying the failure of the northernmost brace, they immediately recognized the serious danger¹⁰ and everyone ran, with Voss and Boggeman running away from Panel 73, and Rios running for shelter near the crane.

50. When Panel 73 fell it struck Rios and knocked him under the crane.

51. Oster immediately attempted to revive Rios but was unsuccessful and despite the intervention of emergency medical personnel, Rios died at the scene as a result of blunt force trauma to his head.

52. Neither McElrath nor Superior's crew knew or should have known in the exercise of reasonable diligence that the counterweight of the crane would strike the brace on Panel 73:

- a. obstacles prevented McElrath from seeing where Voss had placed the struck brace, and McElrath testified that Voss and Boggeman were experienced in tilt-up operations, in McElrath's experience tilt-up erection foremen made adjustments to the location of braces in recognition of potential obstructions, and he trusted Voss and Boggeman to recognize and adjust the location of braces if there were potential obstructions; and
- b. the remainder of the Superior crew were not present to observe the placement of the struck brace or its proximity to the outriggers and counterweight.

53. At 9:09 a.m. on March 25, 2022, Oster reported the fatality to the Complainant, and Complainant dispatched its CSHO to the scene to investigate. Once at the Worksite, the CSHO

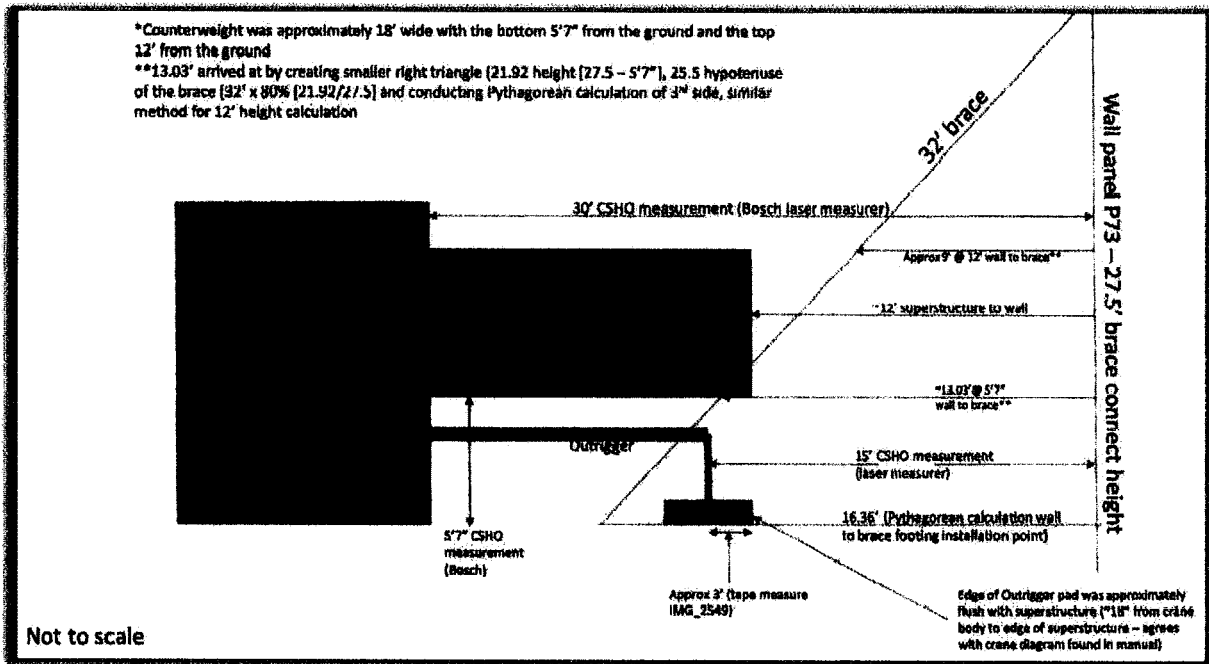
⁹ The actual figure could not be determined because Rios died and his crew left the Worksite when he was killed and did not return. Several witnesses testified at the hearing, however, that they recall Rios had a crew of 3-5 employees.

¹⁰ Boggeman testified that he "ran for his life."

conducted an opening conference with each of SLM's representatives, Superior's representatives, Oster, and Respondent's representatives, advising each of the nature, purpose and scope of the inspection (namely a limited investigation of the accident, any "plain view" hazards, and hazards brought to the attention of the SCHO during the inspection). Each representative gave permission for the CSHO to conduct an inspection, and the CSHO interviewed Voss and Boggeman (who each refused to provide a signed statement), as well as McElrath.

54. During his inspection of the Worksite, the CSHO was accompanied by Oster and Respondent's Safety Director, Reid Lenhart, and took multiple measurements and photographs with Mr. Lenhart documenting those measurements and taking photographs whenever the CSHO did.

55. Using the measurements he obtained during his inspection, the CSHO created an illustration showing his measurements¹¹ and the locations of the struck brace, crane body, outriggers, and counterweight at the time of the accident, which was admitted into evidence at Complainant's EXH. 1, p. 234:



56. The Respondent did not submit any evidence or argument challenging the CSHO's measurements or the accuracy of his illustration.

57. According to the Complainant's measurements and illustration:

¹¹ During the hearing the CSHO testified that his measurement specifying 30 feet from the crane body to where Panel 73 was placed was a typographical error and should have been 36 feet, and Respondent's investigative report submitted to the Complainant agreed. See Complainant's EXH. 1 at p. 207. No one corrected or disputed the CSHO's other measurements.

- a. the struck brace for Panel 73 was 32 feet long, the top of the struck brace was placed at a height of 27.5 feet on Panel 73, and the bottom of the brace was placed approximately 16.36 feet¹² from Panel 73;
- b. Voss directed placement of the struck brace approximately 1.36 feet closer to the crane body than the center of its outrigger;
- c. when McElrath rotated the crane so that it faced Panel 74, the western edge of the counterweight was approximately 12 feet from Panel 73, and the bottom edge of the counterweight was 5'7" from the ground;
- d. the struck brace for Panel 73 was within the swing path of the crane's counterweight.

58. The placement of the struck brace between the crane body and the outrigger, and within the swing path of the crane's counterweight is also shown in photographs admitted as Complainant's EXH. 3.3, 3.37, and 3.58.

59. Voss testified he was physically within 4-5 feet of each brace on each panel as they were being secured to the deadman, and Voss and Boggeman each testified that Voss either vigorously shook each brace himself to confirm that each brace was securely attached, or watched someone else vigorously shake each brace.

60. Voss knew where each brace had been placed relative to the crane.

61. On March 23 and 24, 2022, Voss was able to observe the rotation of Superior's crane on more than 40 occasions, see Complainant's EXH. 4, p. 2 (identifying the panels to be moved, and the order of movement), and knew or, in the exercise of reasonable diligence should have known, that the crane's counterweight extended beyond the center of the crane's outrigger and to the outer edge of the outrigger pad.

62. Voss knew that he had placed or directed placement of the bottom of the struck brace to a spot on the deadman that was between the crane body and the outrigger and 16.36 feet from Panel 73.

63. Voss knew or in the exercise of reasonable diligence should have known that he had placed or directed placement of the struck brace within the swing path of the crane's counterweight.

64. Voss knew, or in the exercise of reasonable diligence should have known, that his placement of the northernmost brace on Panel 73 created an obstruction to the swing of the crane's counterweight.

¹² It appears that Meadow Burke's brace plan required Respondent to place the top of each brace on Panel 73 at height of 27.6 feet, and the bottom of each brace at 16.23 feet from the panel wall. See Complainant's EXH. 1 at p. 211. This observation, if accurate, does not affect the undersigned's decision. Additionally, Voss's potential variance of 1.56 inches in the bottom brace and 1.2 inches in top brace might not have been sufficient to avoid the accident, but contrary to Respondent's arguments at hearing, it does suggest that Voss exercised some flexibility in his placement of the braces.

65. Voss could have shifted the location of the brace from where Meadow Burke had specified but did not do so, explaining that Respondent would be liable if the brace failed and Meadow Burke had not approved the change.

66. Voss could have directed Boggeman or a member of Rios' crew, or Oster, or anyone on Superior's crew, to spot the rotation of the crane from Panel 73 to the location of Panel 74, but he did not do so.

67. Superior did not create a hazardous condition violative of OSHA standards by placing the crane five feet closer to the wall under construction: there was no hazardous condition violative of the cited standard until Voss created an obstruction by placing the northernmost brace of Panel 73 within the swing path of the crane's counterweight.

68. As the designated signalman, Voss had a duty to signal safe movement of the crane in relation to potential obstructions, such as the braces he or others under his direction had placed in the crane's swing path.

69. During the initial part of the investigation on March 25, 2022, the CSHO interviewed Voss and Boggeman, each of whom confirmed that the counterweight of the crane struck the northernmost brace on Panel 73 when Voss signaled McElrath to "bring the boom around" (swing) to pick up Panel 74. Complainant's EXH. 1 at p. 56. However, Superior's Safety Director, Reid Lenhard, prohibited Voss or Boggeman from providing a written statement confirming their statements to the CSHO, stating company policy that legal counsel approve their statements first.

70. Following the inspection on March 25, 2022, Superior submitted the handwritten (but not sworn) statements of Voss and Boggeman, see Complainant's EXH. 1 at pp. 202, 203. Voss's handwritten statement omitted his admission to the CSHO on March 25, 2022, that he signaled the crane boom to swing around, and instead stated:

I was centering up the boom over the center of the panel. I was giving him the boom up hold the load signal to bring the boom closer to the center of the panel. When the boom was centered I turned and walked toward the top of the panel, at that time I heard a loud pop and turned around and seen [sic] the panel falling. ...

71. Voss's written statement is not credible, as all witnesses who testified at the hearing -- including Voss -- agreed that the struck brace was hit by the counterweight, the counterweight could only have hit the struck brace during rotational (horizontal) movement, and there is no testimony that anyone saw the crane rotate after the boom was centered. By contrast, Complainant's CSHO testified that when he interviewed Voss and McElrath on March 25, 2022, Voss stated that he directed the crane operator to swing the boom around to center it up with the panel to be lifted -- a direction requiring rotation of the crane --and McElrath stated that the counterweight hit the brace when he rotated an additional 5 degrees to center the boom, as directed by Voss. This testimony was consistent with the CSHO's inspection report, see Complainant's EXH. 1 at pp. 56-57. Additionally, at the hearing McElrath reiterated that the crane came into contact with the struck brace when he rotated an additional 5 degrees at Voss's direction, and Voss

testified at hearing that he heard some cracking and a loud pop (the brace giving way) as McElrath was centering the boom at his direction.

72. Voss had the authority to require that Superior move the crane further from the wall at any time, including after placement of Panel 51.

73. Voss testified at hearing that he was "almost positive" and "pretty sure" he asked McElrath if they wanted to move the crane further from the wall after Panel 51 was placed, but this testimony is not credible: his testimony was tentative and made without conviction, he did not mention any such conversation in either his interview with the CSHO or his subsequent written statement submitted after review by legal counsel, see Complainant's EXH. 1 at p. 202, and no such conversation was included in Respondent's investigative report subsequently delivered to the Complainant, *id.* at pp. 231-232, as it would have been if Voss had actually had this conversation with McElrath. Moreover, McElrath testified that Voss never said anything to him about moving the crane. Accordingly, the undersigned finds that the conversation Voss is "almost positive" and "pretty sure" occurred did not, in fact, occur.

74. Superior proffered its Executive Vice President, Gebel, as an expert in the concrete tilt-up industry for purposes of establishing that the accident was the fault of either Oster or Superior, and not Respondent, but Mr. Gebel's testimony was not credible:

a. First, Gebel blamed Oster for not following Respondent's erection plan when Oster failed to pour Panel 51 so that Voss could not erect it in Phase 1 as planned, and then Oster poured Panel 51 on the southern end of the casting slabs for Panels 71-74, moving those panels north of their designated positions on the erection plan, which complicated the movement of the crane as it picked panels from the casting bed and moved them to their tilt-up position. Gebel characterized this as "grave mistakes that jeopardized employees." However, Gebel also testified that "things change from the conceptual plan that happen on the worksite," Voss knew of Oster's alleged failures to follow the erection plan but did not report them to Respondent or seek development of a new erection plan, Voss possessed the experience and knowledge to independently devise a solution, and he would not expect Voss to report the change. Moreover, Gebel was never present at the Worksite, and McElrath testified that Panel 51 was poured inside the building walls, at the location of the hand-notated "30," see Complainant's EXH. 4 at p. 2, not at the location Gebel stated in his testimony.

b. Second, Gebel testified that Oster was at fault for not using a bigger crane, but this ignores the evidence that SLM (not Oster) hired Superior Crane, and Superior provided a larger crane (350-ton) than Gebel's revised plans required (300-ton). See Complainant EXH. 1 at p. 118.

c. Third, Gebel testified that Superior was to blame for McElrath's movement that struck the brace because McElrath had equal authority with Voss. In support of his position Gebel vigorously asserted that some crane operators in California perform their work in tilt-up operations with no signaling at all, and repeatedly asserted that Superior's crane operator was responsible for the operation of the crane, while Voss was only responsible for the rigging. Gebel also argued that this equal dual authority was set out in a paragraph of a publication issued by the Tilt-up Concrete Association, Respondent's EXH. W at p. 8, in which the author (Hugh Brooks) stated:

The rigging crew typically consists of the crane operator, driver/oiler, two riggers, and a rigger foreman. Assisting them are several carpenters and laborers supplied by the general contractor for such duties as setting braces, drilling bolt insert holes, cleaning panels, shimming and other housekeeping shores [sic].

Contrary to Gebel's testimony, how some crane operators may operate on unidentified jobsites in other states is not relevant, and the foregoing paragraph simply does not assign any authority or responsibility to the crane operator. Moreover, Gebel's interpretation ignores the more plausible reading that the "rigger foreman" -- as the highest ranking person on the "rigging crew" -- was responsible for the actions of each person on the "rigging crew," including the crane operator and his movement of the crane during tilt-up operations.

d. Fourth, Gebel opined that Superior was liable because it placed the crane too close to the wall being constructed, but this ignores Superior employee's testimony that Voss participated in and acquiesced to that decision, and Voss's testimony that he knew where the crane was placed, as well as testimony that Voss had the authority to ask that the crane be moved further away from the wall, but did not.

e. Fifth, Gebel testified that the crane operator was inexperienced and did not understand his crane (i.e., did not know where the back end of the crane's counterweight was, comparing it to a car driver who would not know where the back end of a bus is), and Superior should have had a spotter ("oiler") present. However, this testimony ignores other testimony, as outlined above, regarding the actual operations of this worksite:

- i. Voss was the erection foreman directing or overseeing the work of everyone involved in rigging, setting the panel in place, and attaching the braces;
- ii. All witnesses agreed that Voss was the designated signal man, and was the sole person directing the crane's movement during the tilt-up operation;
- iii. Superior's personnel were responsible for moving and placing the crane at the location necessary to safely lift and move the panels identified by Voss to the location identified by Voss, but did not participate in directing or spotting the movement of the crane after it was set in place except on the final placement when Fairecloth confirmed that the crane did not shift or subside when it lifted Panel 51;
- iv. There were no obstructions to Superior's crane's rotation when Superior placed the crane in its final location;
- v. Voss knew that the crane's final placement was approximately five feet closer to the wall being constructed than its previous placements;
- vi. Voss was an experienced erection foreman who understood the erection/tilt-up process and the operation of the crane during that process;
- vii. Over the course of two days, Voss observed the movement of the crane on at least 40 occasions, including the swing of its boom and counterweight;
- viii. Voss determined where each brace was to be placed by referencing the bracing plan provided by Meadow Burke;

- ix. Neither McElrath nor anyone on Superior's Crew had a copy of the bracing plan or knew where each brace was to be placed;
- x. Obstacles prevented McElrath from being able to see the placement of the braces, particularly including the location of the struck brace;
- xi. Voss was fully aware of where each brace had been placed, including the struck brace, in relation to the crane;
- xii. Voss directed that the bottom of the struck brace be placed between the crane's outrigger and the crane body, and within the swing path of the crane's counterweight;
- xiii. Voss knew or in the exercise of reasonable diligence could have known, that the his placement of the struck brace created an obstruction to the swing path of the crane's counterweight;
- xiv. Voss could have removed the obstruction (the struck brace) by asking Superior to move the crane, but he did not do so;
- xv. The brace was struck by the crane's counterweight when Voss directed McElrath to rotate another 5° to center the boom over Panel 74;
- xvi. Voss could have prevented the crane from coming into contact with the obstruction (the struck brace) by directing Boggeman, or Rios, or one of Rios' crew, or Oster, or even one of Superior's crew to act as spotter, but he did not do so.

75. Gebel's testimony is also inconsistent with the American Society of Mechanical Engineers' Safety Standards (hereinafter "ASME Standards") submitted by Respondent with its internal investigative report. See Complainant's EXH. 1 at pp. 258-327. Specifically,

- a. The ASME Standards identify five areas of responsibility for crane operations: the crane owner, the crane user,¹³ the site supervisor, the lift director, and the crane operator. *Id.* at p. 302 (§ 5-3.1.3);
- b. Under the ASME Standards, the "lift director" directly oversees the work being performed by the crane and the associated rigging crew. Complainant's EXH. 1 at p. 302 (§ 5-3.1.3);
- c. Under the ASME Standards, the lift director's responsibilities include informing the crane operator of the weight of loads to be lifted, as well as the lifting, moving, and placing locations for these loads, obtaining the crane operator's verification that this weight does not exceed the crane's rated capacity, ensuring that a crane's load rigging is performed by personnel that meet competence requirements, ensuring that the load

¹³ According to the ASME Guidelines, the "crane user arranges the crane's presence on the worksite and controls its use there." Complainant EXH. 1, p. 302 (§ 5-3.1.3). The responsibilities of the crane user include using supervisors and crane operators that are qualified, ensuring the crane is in proper operating condition and has been inspected and maintained, has the necessary lifting capacity to perform the proposed lifting operations in the planned configuration, etc. *Id.*, p. 303 (§ 5-3.1.3.1.2).

is properly rigged and balanced before it is lifted more than a few inches, and stopping crane operations if alerted to an unsafe condition affecting those operations. Complainant EXH. 1, p. 304 (§ 5-3.1.3.2.2);

- d. The position of erection foreman, as described by Voss, is the functional equivalent of a “lift director” under the ASME Standards.
- e. Under the ASME Standards, the lift director is also responsible for seeing that the lift and swing path of the crane is clear of obstructions. Complainant’s EXH. 1, p. 306 (§ 5-3.2.1.5(a)(3));
- f. Additionally, the ASME has interpreted its Standards to require that the crane operator respond to the appointed signal person (in this case, Voss), places responsibility upon that signal person for directing the crane operator to move the load safely, and further specifies that the crane operator is not responsible for hazards or conditions that are not under his direct control, such as other contractors’ violation of OSHA standards, see Complainant’s EXH. 1, p. 322 (Interpretation 5-98 (1/31/12)).

76. On September 21, 2022, the Complainant issued a serious citation to the Respondent for violation of 29 CFR § 1926.1417(p), specifically: “The boom or other parts of the equipment must not contact any obstruction.”

77. In calculating the applicable penalty, the Complainant determined that the gravity of the violation was “high severity” because the violation could cause permanent disability or death, and the probability of injury was greater due to the number of employees exposed to the hazardous condition and their proximity to the hazardous condition.

78. Based upon the high severity and greater probability, the Complainant determined that the gravity-based penalty was \$7,000, but then erroneously reduced that penalty to \$6,300, based on a 10% reduction credit for history because the Respondent had no prior violations in North Carolina.

Based on the foregoing Findings of Fact, the undersigned makes the following

CONCLUSIONS OF LAW

1. To the extent that the foregoing Findings of Fact contain conclusions of law, or these Conclusions of Law are findings of fact, they are intended to be considered without regard to their given labels. *Charlotte v. Heath*, 226 N.C. 750, 755, 40 S.E.2d 600, 604 (1946); *Peters v. Pennington*, 210 N.C.App. 1, 15, 707 S.E.2d 724, 735 (2011); *Warren v. Dept. of Crime Control*, 221 N.C.App. 376, 377, 726 S.E.2d 920, 923, *discret. review denied*, 366 N.C.408, 735 S.E.2d 174 (2012). The foregoing Findings of Fact are incorporated by reference as Conclusions of Law to the extent necessary to give effect to the provisions of this Order.

2. The Respondent is subject to the provisions of the Occupational Safety and Health Act of North Carolina. N.C.Gen.Stat. § 95-126 *et seq.*

3. Pursuant to N.C.G.S. § 95-135, the Review Commission has jurisdiction over the parties and subject matter of this action.

4. The Complainant has proved by a preponderance of the evidence that
- a. the cited standard applies.
 - b. Respondent created an obstruction when Voss placed the struck brace within the swing path of the crane's counterweight, and Respondent violated the cited standard when Voss's direction caused McElrath to swing into that obstruction.
 - c. at least four employees, and potentially as many as nine employees, were exposed to the hazard covered by the standard.
 - d. Respondent knew or, with the exercise of reasonable diligence, could have known of the violative condition, and
 - e. the hazard caused by the Respondent created the possibility of an accident, and the substantially probable result of that accident was death or serious bodily injury.

5. The Complainant calculated the proposed penalty in accordance with applicable requirements, except that it should not have given the Respondent a 10% reduction for history because the violation was the proximate cause of a fatality. See Complainant's EXH. 6 at p. 13, par. 9(b)(iii).

6. The Complainant's citation nevertheless specified a \$6,300 penalty, and gave the Respondent notice of a potential \$6,300 penalty, and the undersigned will not now increase that penalty to correct the Complainant's error.

Based on the foregoing Findings of Fact and Conclusions of Law, it is hereby ORDERED:

1. The Complainant's serious citation is affirmed with a penalty of \$6,300.
2. The Respondent shall pay the penalty on the affirmed serious citation within 30 days of the date of this Order.
3. Each party shall bear its own costs and attorneys' fees.

This the 7th day of November, 2024.



Digitally signed by Laura J. Wetsch
DN: cn=Laura J. Wetsch, o=N.C. OSH Review
Commission, ou=Hearing Examiner,
email=lwetsch@winslow-wetsch.com, c=US
Date: 2024.11.07 14:06:44 -05'00'

Laura Wetsch, Hearing Examiner

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that I have this date served a copy of the foregoing ORDER upon:

PORTIA KAYSER
HARRIS DOWELL FISHER & YOUNG
15400 S OUTER FORTY, STE 202
CHESTERFIELD MO 63017

By depositing a copy of the same in the United States Mail, by certified mail, return receipt requested, postage prepaid at Raleigh, North Carolina, and upon:

SAGE BOYD
NC DEPARTMENT OF JUSTICE
LABOR SECTION
PO BOX 629
RALEIGH NC 27602

By depositing a copy of the same in the United States Mail, first class, postage prepaid at Raleigh, North Carolina, and upon:

NC DEPARTMENT OF LABOR
LEGAL AFFAIRS DIVISION
1101 MAIL SERVICE CENTER
RALEIGH, NC 27699-1101

via email.

THIS THE 8 DAY OF November 2024.

PAUL E. SMITH
CHAIRMAN



Karissa B. Sluss
Docket Administrator
NC Occupational Safety &
Health Review Commission
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