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**EXECUTIVE SUMMARY OF
INVESTIGATIVE FINDINGS**

City of Modesto
Traffic Electrical Division
November 1, 2019

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*Waived by
City Council
11/12/19*

I. Brief Introduction

Van Dermyden Maddux Law Corporation (Firm) commenced an independent investigation for the City of Modesto (City). The investigation arose from an incident that occurred on April 9, 2018 during the installation of a streetlight pole that resulted in the death of Electrical Assistant Tyrone Hairston (Incident).

A Serious Accident Review Team (SART), consisting of representatives from Public Works Departments of several surrounding municipalities, conducted an initial investigation to determine the factors that caused the Incident on April 9, 2018. SART identified several issues related to the Incident including: the Traffic Electrical Division's (Division) culture and safety practices, light pole installation techniques, employees not having Crane Operator Certifications, work zone safety practices, employees' failure to have tailgate safety meetings, employees not utilizing spotters around high voltage overhead lines, and employees' failure to adhere to electrical shock protection boundaries.

After SART released its report, the City had concerns regarding the Division's practices and supervisors' oversight related to the issues identified in the SART report. We were tasked with gathering additional factual information related to these issues at the time of the Incident in April 2018.

This serves as the Executive Summary. It is not intended to be a comprehensive recitation of the evidence. Instead, it provides an overview of the investigative methodology and a summary of my findings.

II. The Investigative Methodology

I conducted 11 interviews of 11 witnesses. I reminded interviewees they were subject to governing policies prohibiting retaliation for either bringing a claim or participating in this review process. I also reviewed hundreds of documents provided by the City and witnesses.

I drew my conclusions in this Executive Summary from the totality of the record and a thorough analysis of all the facts. Where necessary, I made credibility determinations.

I reviewed, compared and analyzed the information provided under a preponderance of the evidence standard. "Preponderance of the evidence," for purposes of this Executive Summary, means that the evidence on one side outweighs, or is more than, the evidence on the other side. This is a qualitative, not quantitative, standard.

The City and its representatives allowed me discretion to conduct this review as I determined to be necessary. The City gave me complete access to all requested witnesses and documents. No person interfered with, or attempted to influence, the findings in this Executive Summary.

III. Summary Of Findings

A. Culture And Safety

Training. I find by a preponderance of the evidence:

- Prior to the Incident, retired Electrical Supervisor Rodney Nelson sent Electricians and Electrical Assistants to IMSA Work Zone Temporary Traffic Control Technician and Traffic Signal Technician Level I trainings within their first year of hire.^{1,2}
- Prior to the Incident, the Division did not have a standard training protocol, but Nelson sent Electricians and Electrical Assistants to various external training classes related to safety. Some of these classes included safety-related practices for working around high voltage lines.
- Prior to the Incident, Nelson met with Electricians and Electrical Assistants each Wednesday morning to discuss topics related to safety.
- While Nelson raised concerns before and after the Incident regarding Electricians' and Electrical Assistants' lack of training, the employees were only denied Fiber Optics Training prior to the Incident.

I make these findings for the following reasons.

First, a review of the Electricians' and Electrical Assistants' training records showed they typically attended the Work Zone Temporary Traffic Control Technician and Traffic Signal Technician Level I trainings within their first year of hire. With one exception, each of the Electricians' and Electrical Assistants' training records showed they took Work Zone Safety training early in their employment. Although one Electrical Assistant's training records did not reflect he completed that course, they showed he attended the Traffic Signal Technician Level I training in his second year of employment, which requires Work Zone Safety as a prerequisite. These training records were also consistent with witnesses' accounts that they each attended those two trainings in their first year of hire.

Second, the training records showed the Division did not have a standard training protocol because employees attended trainings on an inconsistent basis. While the training records showed multiple witnesses often attended the same trainings at a time, the trainings offered each year varied widely. Two witnesses had training records going back to 2010, and many of the trainings they attended were not repeated by them or other employees in later years. Also, some employees attended trainings that other employees did not attend. However, many of these trainings were related to safety, such as Arc Flash Training, Standard Operating Procedures (SOP)

¹ IMSA stands for the International Municipal Signal Association. According to its website, IMSA offers internationally-recognized certification programs for the "safe installation, operation, and maintenance of public safety systems."

² I did not interview Nelson as part of this investigation because his representative raised concerns about his participation. However, I reviewed a September 21, 2018 recorded interview of Nelson during a previous investigation to gain insight on his perspective regarding the issues in the scope of this investigation. As such, I determined his interview was not necessary to reach my findings.

for High Voltage Street Light Maintenance, Lockout/Tagout (Control of Hazardous Energy), Employee Safe Driving Boot Camp, Safety Inspection Workshop and Safe Electrical Work Practices, among others.

In addition, each of the witnesses, including the Division Supervisors, stated the Division did not have a standard training protocol.³ Nelson and former Crew Leader Trent Bellew, who were responsible for the day-to-day supervision of the Division, acknowledged the Division did not have a standard training protocol for employees.⁴ During a September 21, 2018 interview in a previous investigation, Nelson candidly stated that he intended to create a curriculum, but had not done so because of his work load. This was further corroborated by a witness familiar with the administrative functions of the Division.

Third, the record supports Nelson met with employees on Wednesdays to discuss safety-related topics. Although these meetings were not documented, witnesses consistently said they occurred and they had discussions related to safety.

Fourth, the evidence supports Electricians and Electrical Assistants were only denied Fiber Optics training prior to the Incident. Three witnesses were only aware of employees being denied Fiber Optics trainings. Also, retired Traffic Operations Engineer Mark Murphy credibly stated that while only a limited number of employees could attend Fiber Optics each year, he approved every other training requested by Nelson. Murphy's claim that he approved training regardless of the training budget is consistent with the Division's training expenditures, which show the Division exceeded the budget in three of the six previous fiscal years. Murphy also credibly stated none of the other specific trainings Nelson requested for employees prior to the Incident were denied.

While two witnesses believed multiple training classes were denied, the evidence did not support their statements. They were unable to provide any specific trainings or dates to support their claims. While one witness claimed employees were "never" allowed to attend high voltage training, his training records showed he attended three different high voltage trainings within the two years leading up to the Incident. Also, while another witness claimed employees were denied a Work Zone Safety training prior to the Incident, the training records showed each of the Electricians and Electrical Assistants had Work Zone Safety training.

Policies. I find by a preponderance of the evidence:

- Although retired Traffic Engineer Jeff Barnes, Murphy and Nelson were aware of the City's Injury and Illness Prevention Program (IIPP), they did not provide it to Electricians and Electrical Assistants or otherwise make them aware of the IIPP prior to the Incident.
- Division Supervisors did not provide Electricians and Electrical Assistants with the Electrical Safety Program because it was not finalized at the time of the Incident.

I make these findings for the following reasons.

³ "Division Supervisors" refers to the Division's supervisors at the time of the Incident, including former Traffic Engineer Jeff Barnes, former Traffic Operations Engineer Mark Murphy, former Electrical Supervisor Rodney Nelson, and former Crew Leader Trent Bellew.

⁴ Bellew is now the acting Electrical Supervisor of the Division.

First, Nelson, Murphy and Barnes each acknowledged they were aware of the IIPP. They also acknowledged they did not provide Electricians and Electrical Assistants with the policy. Murphy and Barnes both claimed they did not believe it was their responsibility to provide the policies to their subordinates.

Second, each of the Electricians and Electrical Assistants interviewed said they were unaware of the IIPP prior to the Incident. Even Bellew, who was a Crew Leader, was unaware the IIPP existed prior to the Incident. This supports that Nelson, Murphy and Barnes did not provide it to Electricians and Electrical Assistants.

Third, witnesses consistently stated Nelson, Murphy and Barnes did not provide Electricians and Electrical Assistants with the Electrical Safety Program. They explained the Electrical Safety Program was not finalized at the time of the Incident. Murphy and two other witnesses said they were involved in finishing the Electrical Safety Program, but it had not been finalized at the time of their interviews.

Personal Protective Equipment. I find by a preponderance of the evidence:

- Division Supervisors did not provide Electrical Assistants with electrical-rated gloves prior to the Incident because Electrical Assistants were not allowed to work on energized circuits.
- Division Supervisors did not deny any Electrician's or Electrical Assistant's specific requests for Personal Protective Equipment (PPE).
- None of the Electricians or Electrical Assistants raised any concerns to Division Supervisors prior to the Incident regarding not having adequate PPE to perform their job safely.

I make these findings for the following reasons.

First, Nelson, Murphy and Bellew consistently said Electrical Assistants were not issued electrical-rated gloves prior to the Incident because they were not permitted to work on energized circuits. While this explanation was questionable in light of the Incident, it was corroborated by other witnesses' statements.

Second, the evidence supports Nelson and Bellew did not deny any requests for PPE. Bellew stated he had never denied a request for PPE. Murphy and Barnes further corroborated they were unaware of anyone denying a request for PPE. Each of the witnesses said they did not have any request for PPE denied. They also never heard of anyone having a request denied. To the contrary, they spoke positively regarding Nelson's and Bellew's efforts to ensure they each had the PPE they needed for their job.

Third, none of the Electricians or Electrical Assistants said they raised any concerns to any supervisor regarding their PPE. They also were unaware of anyone else raising any concerns about their PPE. An Electrical Assistant said that even though he has been provided with electrical-rated gloves since the Incident, he has not used them. This makes it unlikely any other Electrical Assistant raised concerns about not being issued PPE.

B. Light Pole Installation

Light Pole Installation. I find by a preponderance of the evidence:

- The Division did not have any written procedures or policies related to light pole installation.
- Electricians and Electrical Assistants learned how to install light poles through on-the-job training by other, more experienced, Electricians. None of the Division Supervisors provided oversight during this on-the-job training for light pole installation.
- The Electricians, Electrical Assistants and Nelson did not request training, or raise any concerns regarding a lack of training, for light pole installation prior to the Incident.

I make these findings for the following reasons.

First, each of the Division Supervisors, Electricians and Electrical Assistants said the Division did not have any written procedures or policies related to light pole installation. They consistently stated the employees learned how to install light poles through on-the-job training by other Electricians. A review of the Division's policies did not produce any written procedures related to light pole installation. While the Division had an SOP for High Voltage Street Light Maintenance, it did not provide any procedures for light pole installation.

Second, Barnes, Murphy and Bellew acknowledged they did not provide oversight during the on-the-job training for light pole installation.

Third, five of the six Electricians and Electrical Assistants interviewed said Division Supervisors were not involved in training them. They each said they learned on the job from other Electricians. Only one witness thought Nelson may have come out to the jobsites to provide oversight to the construction crews. However, this witness said he had not worked a construction crew in three to four years, so I gave his perspective less weight than the others who had worked construction crews in recent years.

Fourth, the evidence supports none of the Electricians or Electrical Assistants raised any concerns to Division Supervisors regarding a lack of training for light pole installation prior to the Incident. The Division Supervisors consistently said they were unaware of any concerns regarding employee training related to light pole installation prior to the Incident. Also, none of the witnesses said they raised concerns regarding their training for this task, or heard of anyone else raising concerns.

Spotters. I find by a preponderance of the evidence:

- Prior to the Incident, some Electricians and Electrical Assistants designated a spotter while operating the Digger Derrick around high voltage lines.
- Division Supervisors did not require Electricians and Electrical Assistants to designate a spotter while operating the Digger Derrick around high voltage lines.

I make these findings for the following reasons.

First, the evidence supports some Electricians and Electrical Assistants designated a spotter. Three of the five witnesses who installed light poles prior to the Incident said they did not use spotters on any occasion. Two witnesses said they used spotters occasionally, although it was typically not the spotter's primary duty. Also, Murphy said he had observed employees using spotters in the past.

Second, each of the Division Supervisors acknowledged they did not tell Electricians and Electrical Assistants to use spotters. They each said it was Nelson's job as the Electrical Supervisor to train the employees to use spotters. However, Nelson acknowledged during his interview in the previous investigation that he did not tell employees to use spotters.

Third, each of the Electricians and Electrical Assistants said they were not required to use spotters. They each said the Division Supervisors had not mentioned to them that they should use spotters.

C. Digger Derrick Operation

I find by a preponderance of the evidence:

- None of the Electricians or Electrical Assistants had their Crane Operator Certifications at the time of the Incident because Division Supervisors believed City employees were exempt.
- Electricians and Electrical Assistants had not attended any formal training related to rigging since January 18, 2012.⁵
- Electricians and Electrical Assistants learned how to operate and rig the Digger Derrick on the job from other, more experienced, Electricians. Division Supervisors did not provide oversight during this on-the-job training.
- None of the Electricians and Electrical Assistants requested their Crane Operator Certifications, or raised concerns regarding not having them, prior to the Incident.

I make these findings for the following reasons.

First, each of the Division Supervisors, Electricians and Electrical Assistants interviewed said employees did not have their Crane Operator Certifications prior to the Incident because Division Supervisors believed City employees were exempt. Witness statements on this issue were consistent and not contradicted by other evidence. It is plausible Division Supervisors believed City employees were exempt, as documentary evidence showed OSHA previously had an exemption related to Digger Derricks in its construction standard.⁶

⁵ Rigging training typically involves proper pre-use inspection, use and application of the gear and assemblies required to move objects using cranes.

⁶ I do not make any legal findings regarding whether or not an exemption applied to City employees.

Second, a review of the Division's employees' training records showed none of the Electricians or Electrical Assistants received formal training specific to Digger Derrick operation. While Bellew had previous training on operating the forklift and bucket truck, and another witness had training on operating the forklift, they did not have training related to the Digger Derrick. Each witness said employees learned how to operate the Digger Derrick on the job from other, more experienced, Electricians.

Third, documentary evidence shows Bellew and two other witnesses received formal training related to rigging on January 18, 2012, consistent with Bellew's statement. However, the evidence showed none of the employees had rigging training since then.

Fourth, the evidence supports that none of the Division Supervisors provided oversight during the on-the-job training for Electricians and Electrical Assistants. Murphy explained he expected the Electrical Supervisor to go out to the jobsites and ensure employees knew how to safely operate the Digger Derrick. However, Nelson indicated during an interview in a previous investigation he had too much work in the office to supervise work crews in the field. This was consistent with Electricians' and Electrical Assistants' statements that supervisors were not involved in their on-the-job training.

Finally, the evidence supports none of the witnesses requested to obtain their Crane Operator Certifications, or otherwise raised concerns regarding their Crane Operator Certifications. None of the Electricians or Electrical Assistants said they themselves requested Crane Operator Certifications, or were aware of anyone else doing so. Rather, each of them consistently explained they thought City employees were exempt.

D. Tailgate Safety Meetings

I find by a preponderance of the evidence:

- Prior to the Incident, some Electricians and Electrical Assistants had undocumented tailgate safety meetings in which they discussed the potential hazards of a job before beginning the job.
- None of the Division Supervisors told Electricians and Electrical Assistants they were required to have tailgate safety meetings in which they discussed the potential hazards of a job before beginning the job.

I make these findings for the following reasons.

First, the evidence supports some Electricians and Electrical Assistants had undocumented tailgate safety meetings prior to the Incident, where they discussed the potential hazards of a job before beginning the job. Half of the witnesses interviewed said they had tailgate safety meetings before each job and half said they did not. This supports some employees had undocumented tailgate safety meetings and they occurred on an inconsistent basis.

Second, while the IIPP outlined the requirement for Electricians and Electrical Assistants to have tailgate safety meetings at least once every 10 working days, witnesses consistently stated they were unaware of the policy prior to the Incident.

Third, the evidence supports Division Supervisors did not tell Electricians and Electrical Assistants they were required to have tailgate safety meetings prior to the Incident. Barnes, Murphy and Bellew each said Electricians and Electrical Assistants were not required to have tailgate safety meetings. While Murphy claimed he told employees to make sure a job was safe before beginning it, he did not specifically require them to meet and discuss a job before starting it. Also, none of the employees recalled any Division Supervisor discussing tailgate safety meetings with them.

E. Electrical Shock Protection Boundaries

I find by a preponderance of the evidence:

- Electricians and Electrical Assistants were generally aware of the requirement to maintain a 10-foot electrical shock protection boundary from high voltage power lines.
- Electricians and Electrical Assistants received training on electrical shock protection boundaries prior to the Incident.

I make these findings for the following reasons.

First, with one exception, each of the witnesses consistently stated they were aware of the requirement to maintain a 10-foot boundary from overhead power lines. While one witness claimed he was unaware of the requirement to maintain a 10-foot boundary from high voltage power lines, documentary evidence showed he attended three training classes within two years of the Incident that discussed electrical shock protection boundaries – Arc Flash Electrical Safety NFPA 70E, SOP for High Voltage Street Light Maintenance and Lockout/Tagout (Control of Hazardous Energy). As such, I gave his perspective less weight.

Second, four witnesses said Nelson and other employees often reminded each other about the electrical shock protection boundaries.

Third, documentary evidence showed each of the Electricians and Electrical Assistants interviewed attended trainings prior to the Incident that discussed electrical shock protection boundaries. Specifically, they each attended SOP for High Voltage Street Light Maintenance and Lockout/Tagout (Control of Hazardous Energy.)



This concludes the investigation.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "Erich Knorr".

Erich Knorr