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ROSENDIN

QUALITY UP TO SPEED

BUILDING QUALITY

After a cold winter, Spring gives us all the hope to ‘turn over a new leaf’ as some may say - and just like the seasons, we are constantly changing. The quality group has been working diligently to work towards a common goal of training our teams throughout the regions by a certification process to align with our mission statement of “Building Quality, Building Value, and Building People.” The twelve videos launched in LinkedIn Learning on April 2021 and have reached over 136 participants who are ready to begin the certification training. This collection of video content serves as the introductory prerequisite path to starting the “QA/QC Certification Course” at Rosendin. Before formal classroom training, this video collection must be watched by the attendees.

The certification training will include a combination of both video and classroom settings developed with the most current trends and instruction provided. The in-depth courses will include; QA/Cx Overview, How-to Guides, BIM 360 Training, QA/QC Certification, Commissioning Certification, QA/QC Manager Training, Startup/Cx Manager Training, and QA/Cx Manager Training. For more information click on the link below, or reach out to your Regional Quality Manager.

[QA/QC Certification Course Videos](#)

NEW RELEASE

EQUIPMENT AND BUILDING MODULE

Alright, it's time to turn this equipment on." Have you ever felt some cringe factor to energizing a piece of equipment that you did not install yourself or look over thoroughly? This can be nerve-racking.

What about when someone says, "The county inspector is coming to give us our final inspection to get occupancy tomorrow." Do you start to feel uneasy? Do you have a small bead of sweat coming down your face? Don't worry Rosendin has you covered!

It's not uncommon to feel this way, especially with a fast schedule, new team, and small hiccups along the way. A project can get out of control fast. The great thing about working at Rosendin is we don't let our teams fail. We are so excited to bring you our full QA/QC Certification program! This means we are in the final stages of our QA/QC Certification program rollout. The last 2 courses of all 8 (In-person courses) are completed. These two courses that we are featuring are our "QA/QC for General Building Construction" and "Equipment Installation Inspections." These courses allow us to make all the right checks during the entire process. Attendees will learn the correct ways to gate a safe energization of equipment and pass all our inspections with flying colors.

QA/QC FOR GENERAL BUILDING CONSTRUCTION
QA/QC CERTIFICATION PROGRAM

WHY QA/QC

TASKS	INSTALLER	FOREMAN	GENERAL FOREMAN	QA/QC
RESPONSIBLE FOR AN ELECTRICAL INSTALLATION RESPONSIBLE FOR AN ELECTRICAL AREA CENTER INSPECTION	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RESPONSIBLE FOR ALL ELECTRICAL SYSTEMS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RESPONSIBLE FOR DRYING AND WINDING THROUGH AN INSPECTION PROCESS RESPONSIBLE FOR MARKINGS AND TRACING ISSUES RESPONSIBLE FOR A SECOND SET OF EYES TO THE UP RESPONSIBLE FOR ALL ACTIVE INSTALLATIONS DURING DAILY WORK	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Scope of Work
The General Contractor has asked your team when they will purchase and hang the plywood backboards in the IT riser closets. Go to the "Scope of Work Document" in PlanGrid, find the information, and prepare your answer.

Identify The Right Checklist

- ✓ Conduit Installation
- ✓ Overhead Racks
- ✓ Wall or Area
- ✓ Grounding
- ✓ Cable Tray
- ✓ Busway
- ✓ Ceiling

ROSENDIN QUALITY
Quality means doing it right when no one is looking.
- Henry Ford

This 8-part QA/QC Certification Program will provide a return on investment by engaging participants in robust classroom activities. These activities include but are not limited to:

- 1) Showing that attendees can find and verify SCCS breaker settings.
- 2) Attendees searching for massive amounts of information in all contract documentation.
- 3) Attendees will navigate ways to communicate effectively with teams, owners, and contractors
- 4) Improve the field team competency in working with vendors and 3rd party testing companies.
- 5) Attendees will leverage problem-solving solutions to eliminate future rework and repeat issues on projects.

Creating a knowledgeable workforce with the tools to succeed is our mission in the quality department. This training and content are the first of their kind, it currently does not exist anywhere else. We are so happy to bring it to every office. This program will provide Rosendin with the competitive edge of "building quality" that we all deserve when coming to the table. If you are interested in this certification training reach out to your area QA/Cx Regional Manager or email quality@rosendin.com.

Equipment Installation Inspections
(Level 3 Documentation)
QA/QC Certification

ROSENDIN

First The Basics... WHO?

Actions to Complete, Prior to Final Inspection

- Conduit & Stub Up Inspection to complete
- Review of installation location and equipment orientation
- Expectations set for conductor routing and bundling, termination hardware and tags to be used.
- Daily Walks

Types Of Documentation

What if... The inspection fails?

- Assess the nature of the issues.
- Determine show stopper issues.
- Determine the issue priority level.

JOB REVIEW & WALKS

PLANTED SEEDS BEGIN TO TAKE ROOT

Spring is in the air and the time and effort put forth by project teams toward completing job reviews are establishing the roots for achieving organizational excellence. The end of December 2021 marked the completion of the initial rollout phase of the job review process throughout Rosendin. The participation of project teams and organizational management has allowed for open discussion and ideas for improving the efficiency of completing job reviews within BIM360. These improvement recommendations from project teams over the past year have led to impactful changes to the job review process.

One change brought forward has Quality and Compliance currently sending out Job Review Notification emails to project teams in sequence with CAC approval and Oracle Dashboard updates. This process change will allow Quality & Compliance to notify project teams of reviews using the most up-to-date Oracle Dashboard information that aligns better with actual project completion status. It is anticipated that this change will also bring improvement to a project team's ability to complete all due job reviews within the allowable timeframe, which will increase our overall completion rate and strengthen data-driven decisions for improving project success.

As the Quality team reviewed and scored checklist results collected over the year, concern about the validity of these results developed based on feedback received about the importance project teams place on the scoring of job reviews. Several responses received by the Quality team indicated that emphasis was being placed on achieving a favorable review score with intention of casting a positive light on a project. This is contrary to the main objective of the job review process. The purpose of job review scoring is to provide a means for measuring adherence to processes, procedures, and best-known methods as outlined in our manuals that are believed to be important to the outcome of a truly successful project.

A low score, or a low percentage of procedural adherence, does not necessarily mean a job will be unsuccessful or will lose money. It simply means that the project team did not follow some of the standard Rosendin processes and procedures that could help them stay on track for success throughout the lifecycle of a project. A low score can also [tell](#)

us that some processes and procedures may need to be updated or can be removed as they no longer provide value relevant to the way we currently operate. As of January 2022, revised checklists with more robust scoring that is tied closely to Rosendin processes and procedures have been published to provide a stronger basis for evaluating what is most important and would add value to the job review process and our projects. Therefore, project teams must provide honest results that reflect what is actually being done on a project so that we, as a company, will have the insight and meaningful data for use in driving positive change throughout the organization and within the industry.

Project teams have been given the tools needed to deliver successful projects more consistently. As the Quality team prepares to move into the growth phase of the job review process, it is imperative that we work together to complete the job review process at all phases. From this, we will achieve improved results at each project milestone that will build on lessons learned for sharing across the organization.

NEW FEATURE IN BIM 360 NEXT GENERATION

Autodesk has released a new feature within BIM360 Next Generation that allows users to attach documentation to checklist items directly from their computer. Previously, during a job review, the project teams had to take the additional step of uploading the documents to the Job Review Document Folder prior to being able to attach to a checklist item. This new feature removes that additional step and has streamlined the process of attaching supporting evidence to a job review checklist. As such, Quality & Compliance will no longer create Job Review Folders in the Documentation Management module of BIM360. The [Job Review Procedure](#) has been updated with the new process.

THE NEW “JOB REVIEW” JOB AID

Recently, the Quality and Training Teams collaborated to create and publish a new Job Walk Job Aid intended to support project teams in more quickly and efficiently completing the milestone Job Walks. The [Job Review Documentation Job Aid](#) and [printer-friendly](#) outlines of all of the supporting evidence project teams should upload for the 10/25/50/75 Job Walks. **It is important to note, that only the items outlined on the Job Aid are needed for the review process.** Quality & Compliance staff have found that project teams are taking additional steps to upload and attach supporting evidence to all checklist items, likely due to the scoring detail information that was added to the checklists this year. However, this is not needed, and project teams are only required to attach evidence to checklist items that specifically state, “Please provide evidence”. The Quality Team hopes that this new job aid will help to communicate this message and save project teams time during the job walk process. The Job Review Documentation Job Aid is located at Rosendin -> Forms -> PM Forms.

10% Job Review



PROJECT START-UP

- 2.1 Final Contract or Letter of Intent or Notice to Proceed
- 2.2 Certificates of Insurance
- 2.3 Required Bond(s) Submitted
- 2.6 Project Turnover Meeting Minutes
- 2.7 Project Start-Up Meeting Minutes



FINANCIALS

- 3.7 Evidence that the project team is notified when PCO is updated to B status (Email)



PROJECT MANAGEMENT

- 4.2 Spec Review Checklist
- 4.3 IFC Specifications and Revisions (PlanGrid screenshot)
- 4.4 Material Submittal Record
- 4.5 Issued Submittals (PlanGrid screenshot)
- 4.6 RFI Log
- 4.7 RFIs (PlanGrid screenshot)
- 4.8 Current Drawing Revisions (PlanGrid screenshot)
- 4.9 Complete BOM Package Email to Buyer
- 4.10 Conduit Tracker Log
- 4.10 Wire Tracker Log
- 4.11 Current Weekly Status Letter to GC/Owner
- 4.14 Current REI Project Schedule
- 4.15 Biweekly Project Team Meeting Minutes
- 4.16 REI Standard File Structure used for Project (screenshot)
- 4.19 Project Team Roles & Responsibilities Matrix and/or Project Org Chart



FIELD MANAGEMENT

- 5.5 Completed Site Layout & Material Handling Checklist
- 5.7 Current 3-Week Planner used on Project
- 5.8 Completed Pre-Task Plan
- 5.9 Sample of As Build Drawings from Project



SAFETY

- 6.1 Site-Specific Safety Plan for Project
- 6.2 Subcontractor/EHS Pre Construction Meeting Minutes
- 6.6 Scheduled/Completed Safety Training (Outlook Invitation, Sign In Sheets)
- 6.7 Lock Out Tag Out (LOTO Plan)



QUALITY

- 7.1 Site-Specific QA/Cx Plan for Project



BIM

- 8.9 Completed BIM CAC for Project



ENGINEERING

- 9.1 Engineering Start-Up Meeting Minutes
- 9.5 Completed Engineering CAC for Project

(Parentheses indicate acceptable screenshots and items)

25/50/75% Job Walk



FINANCIALS

- 3.9 Evidence that VP approval has been received for dollar amounts in CAC Additional Pend (Email)



PROJECT MANAGEMENT

- 4.2 IFC Specifications and Revisions (PlanGrid screenshot)
- 4.3 Material Submittal Record
- 4.4 Issued Submittals (PlanGrid screenshot)
- 4.5 RFI Log
- 4.6 RFIs (PlanGrid screenshot)
- 4.7 Current Drawing Revisions (PlanGrid Screenshot)
- 4.8 Current Weekly Status Letter to GC/Owner
- 4.10 Biweekly Project Team Meeting Minutes
- 4.11 Customer/Owner/Architect Meeting Minutes



FIELD MANAGEMENT

- 5.3 Current GC/Owner Project Schedule
- 5.5 Photo Evidence of Installer's Work Area
- 5.6 Current 3-Week Planner used on Project
- 5.7 Completed Pre-Task Plan
- 5.8 Sample of As Build Drawings from Project
- 5.9 Mechanical, Electrical, Plumbing or MEP Coordination Meeting Minutes



SAFETY

- 6.3 Evidence of Safety Report Distribution (Email)
- 6.4 Scheduled/Completed LOTO Training (Outlook Invitation, Sign In Sheets)
- 6.5 Log Out Tag Out (LOTO Log)
- 6.7 Near Miss Report (If Near Misses Reported)
- 6.9 Foreman's Report (If First Aids Reported)
- 6.11 Five Why's Analysis (If Recordables Reported)
- 6.13 Five Why's Analysis (If Lost Time Incidents Reported)
- 6.14 Evidence of active Craft Empowerment Program on Project (Outlook Invitation, Meeting Minutes)



QUALITY

- 7.3 Receiving Checklist Report
- 7.5 Evidence of Weekly Issue Detail Report Distribution
- 7.6 Task List Report – PlanGrid Users Only
- 7.9 Field Report – PlanGrid Users Only



BIM

- 8.1 Biweekly BIM Coordination Meeting Minutes



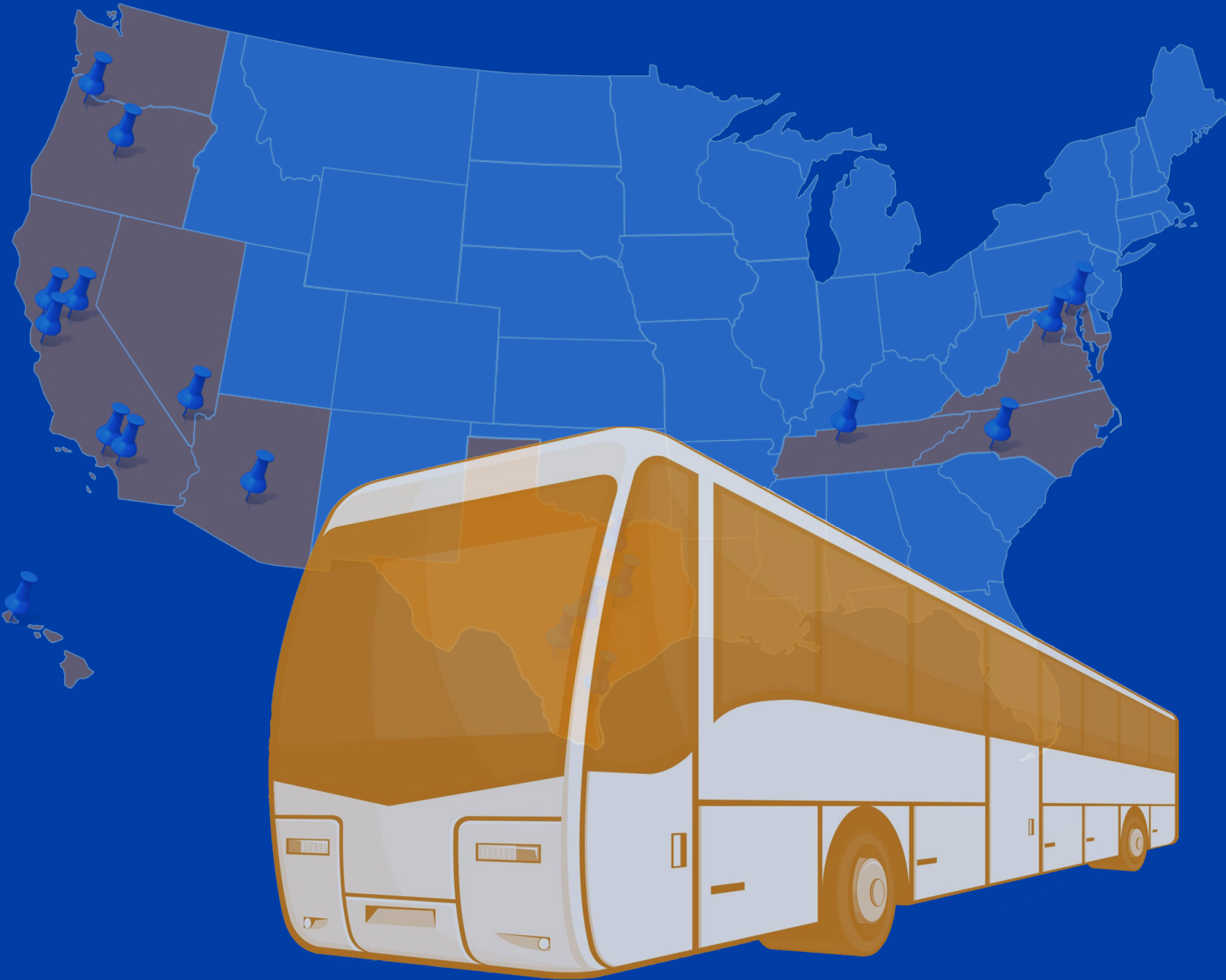
ENGINEERING

- 9.1 Biweekly Engineering Coordination Meeting Minutes

(Parentheses indicate acceptable screenshots and items)

QUALITY TEAM ROAD SHOW

We're taking it on the road! It's been a year since Rosendin's Quality Team implemented the revised job review process and it's time for a visit. The Quality Team would like to come to your office and have a chat with your team about the challenges and successes you've experienced with the job review process. Starting in May 2022, for those divisions that express interest, Quality Team staff will travel to your area with the intent to share information and gather feedback for meaningful change. Each visit will have an agenda catered to their specific need with items included such as Job Review Discussion and Feedback Session, Job Review Cost & Benefit Analysis, Review of Job Review Dashboard, Live BIM360 Training and Participation in a real time Job Review. If you and your project team are interested in this informal information sharing and training session, please ask your Division Manager to contact the Quality & Compliance Team at QATeam@Rosendin.com.



QUALITY RECOGNITIONS



Southwest – Ken Primus

Ken Primus has been an outstanding contributor for presenting the quality segment at a two-day Foreman Development training in March. Ken took time off from the Intel project during FPE's (Factory Planned Event) to share his knowledge with this group.



Northern California – Robert Rodriguez

After one month of dedicated QA/QX training, Robert has done an amazing job coordinating all CX activities, performing all the CX testing, documentation turn over to the GC, handling all City inspections, and closing out open issues on projects.



MPS – Blake Bohdanowicz

Blake Bohdanowicz from MPS is being recognized this quarter for his excellence in tracking conformance & reporting non-conformance as a Low Voltage QAQC Engineer.



MPS – Trevor Zeminsky

Trevor Zeminsky from MPS is also being recognized this quarter for his excellence in tracking conformance & reporting non-conformance as a Low Voltage QAQC Engineer.

FIELD INTERVIEW

BUILDING QUALITY; THROUGH A QUALITY MANAGER'S VIEW

Dee Farmer, Corporate Quality Coordinator Interviews Quality Manager, Christina Templeton out of the Renewables Division with her views on Building Quality at Rosendin. Christina has been working as a Groundman with the IBEW for the past 14 years and started her career in the Quality department for Rosendin in 2016.



Part of Rosendin's mission statement is "Building Quality". What are ways you "build quality" with your teams every day?

"I always tell our team that they are doing a great job and that they make my job easy by doing things right the first time, and making it look as I like to say; "pretty," I explain why we perform quality on each project, and why it's so important to avoid any unnecessary rework. It makes me feel good that they are proud of their craftsmanship when the job is done right."

Why do you think quality is important for today's construction industry?

"When I first started in this industry, QA/QC was pretty much nonexistent. It seemed contractors would do the bare minimum just to get the job done. In the last 5 years, Rosendin stepped up the QA program. People seem to think that the lowest bidder gets the job, but it's not. Quality plays a big role with the clients we work with, and it shows the pride your company takes in the work they do, and the pride they take in the people they hire to do the work. If you don't have quality, you don't have a job!"

Rosendin is proud to have you in your leading QA/Cx role as diversity is very important to our company. What is your advice to other women who wish to pursue a career in construction?

"It's scary jumping into what used to be a predominantly "man's" line of work. The advice I give women is that it's natural to be scared! You just gotta jump in with both feet and go for it! Set goals all the time for your self-growth. And most importantly, never think you know it all, there are always learning opportunities, learn from yours/others' mistakes!"

LESSONS LEARNED

NEAR MISS - COMMISSIONING – POTENTIAL ARC FLASH

Attention



NEAR MISS-COMMISSIONING-POTENTIAL ARC FLASH

What is it?

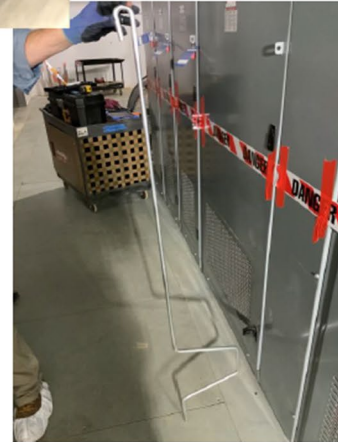
During a torque inspection prior to energization of 3MSB-A1 it was identified that the breaker racking mechanism had been stored in the back of the gear during shipment and was in contact with the bus bar. The mechanism was located behind the phase bus and was not easily noticeable from the front of the gear. 3MSB-A1 is directly against a wall which does not allow access to the back side of the gear.

What could go wrong?

- Significant arc flash could occur upon energization due to contact of the racking mechanism with the bus bar.
- Serious injury could occur to individuals involved in switching activities with the gear.

What can we do to prevent this?

- Ensure thorough pre-energization inspections are completed by all parties to verify that any potential arc flash hazards are mitigated.
- Reach out to equipment manufacturers to ensure loose parts are stored in more conspicuous locations. In this case, Schneider Electric was contacted regarding storage of the mechanism.



Site-Location: NHA

Contractor: [REDACTED]

Date: 01-11-22



Raised by:

Jacob Payne

Reviewed by:

Erin Hoffer

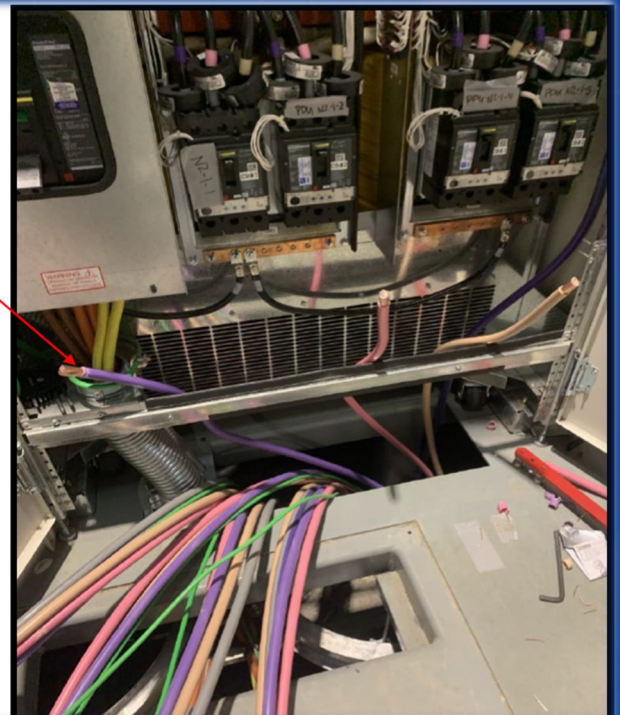
AA-022

ELECTRICAL SHOCK RCA 5 WHYS

Foreman received an electrical shock to their left hand/wrist area when they grabbed an "A" phase conductor at PDU-N2-1 and touched the PDU with their left hand. The employee was transported to the onsite medic for medical evaluation and subsequently transported to the nearest medical facility in order to receive an EKG to ensure their cardiac rhythms were functioning properly. The employee was medically cleared and returned to work. Upon further investigation, it was discovered that the electrical shock was caused by a megger testing operation on the other end of the conductor at the end feed box attached to the overhead busway by another contractor.

The lesson learned here is that we always need to coordinate with the 3rd Party testing companies regardless of whether they are under us to know where testing is happening each day. Also, danger tape should be used to barricade off equipment for insulation resistance testing with proper signage.

The "A" Phase conductor at PDU-N2-1 the REI Foreman was holding when the electrical shock took place.








QUALITY AND COMMISSIONING RESOURCES

Rosendin's Intranet page provides the Quality & Commissioning Department's information for access to the latest content on processes, procedures, and forms.

<https://reimicrosoft.sharepoint.com/sites/prod/Quality/SitePages/default.aspx>

DO YOU KNOW WHO YOUR REGIONAL QA/Cx MANAGERS ARE?

 QA/QC PLANS Project-Specific	 QA/Cx Hours Estimate Reviews	 QA/Cx Training Project Teams	 BIM 360 Project Specific Checklists	 QA/Cx CERTIFIED Certification Training Program
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Building Quality | Building Value | Building People