

RESOLUTION NO. 2024- 436

A RESOLUTION AUTHORIZING A PROFESSIONAL SERVICES AGREEMENT WITH SARGENT & LUNDY, HAMILTON, NJ TO PROVIDE ARCHITECTURAL AND ENGINEERING SERVICES RELATED TO ACE (ATLANTIC CITY ELECTRIC) 69KV INTERCONNECTION LINE RELAY REPLACEMENT AND RELAY SETTINGS, IN AN AMOUNT NOT TO EXCEED \$319,500.00.

WHEREAS, the City Council of the City of Vineland has adopted Resolution No. 2023-630, a Resolution pre-qualifying certain firms to submit proposals for as needed Architectural and Engineering Services; and

WHEREAS, the City of Vineland has a need for Professional Architectural and Engineering Services related to ACE 69kV Interconnection Line Relay Replacement and Relay Settings; and

WHEREAS, the Director of Electric Utility has recommended that a contract for the required services be awarded to Sargent & Lundy, Hamilton, NJ, in accordance with Professional Services Contract No. C24-0020 and Sargent & Lundy's proposal dated August 27, 2024, pursuant to a fair and open process; and

WHEREAS, this contract is awarded in an amount not to exceed \$319,500.00; and

WHEREAS, the availability of funds for said Professional Services Contract to be awarded herein have been certified by the Chief Financial Officer; and

WHEREAS, the Local Public Contract Law (N.J.S.A. 40A:11-1, et seq) requires that the Resolution authorizing the award of contract for Professional Services without competitive bidding and the contract itself must be available for public inspection.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Vineland that said contract for Professional Architectural and Engineering Services related to ACE 69kV Interconnection Line Relay Replacement and Relay Settings be awarded to Sargent & Lundy, Hamilton, NJ in accordance with Professional Services Contract No. C24-0020 and in accordance with proposal dated August 27, 2024, pursuant to a fair and open process, in an amount not to exceed \$319,500.00.

Adopted: September 24, 2024

President of Council

eea

ATTEST:


City Clerk

kp



**REQUEST FOR RESOLUTION FOR CONTRACT AWARDS UNDER
40A:11-5 EXCEPTIONS
(PROFESSIONAL SERVICES, EUS, SOFTWARE MAINTENANCE, ETC)**

1. GOODS OR SERVICES (DETAILED DESCRIPTION): 69kV Interconnection Line Relay Replacement and Relay Settings
2. TYPE: RFP ORFQ NUMBER: C24-0020 (Pre approved services)
 NON-FAIR & OPEN (PAY TO PLAY DOUCMENTS REQUIRED)
 FAIR & OPEN: HOW WAS RFP ADVERTISED? _____
3. AMOUNT TO BE AWARDED: \$319,500
 ENCUMBER TOTAL AWARD ENCUMBER BY SUPPLEMENTAL RELEASE
4. BUDGETED ITEM: YES NO ACCOUNT NUMBER: 40555512900052000E353
5. CAPITAL ORDINANCE: YES NO ORDINANCE NUMBER: _____
6. TRACKING ID(S): E353 COMMODITY CODE(S): _____
7. CONTRACT PERIOD (IF APPLICABLE): 12/31/2025
8. DATE TO BE AWARDED: 9/24/2024
9. RECOMMENDED VENDOR NAME AND ADDRESS: Sargent & Lundy
1AAA Dr Suite 201 Hamilton NJ 08691
10. JUSTIFICATION FOR VENDOR RECOMMENDATION (INCLUDE ADDITIONAL INFORMATION FOR COUNCIL):
Work is required to ACE relay upgrades

11. EVALUATION PERFORMED BY: Emily Smith Management Specialist
(NAME, TITLE AND EXTENSION NUMBER)
12. APPROVED BY: 
SIGNATURE (DIRECTOR, DEPARTMENT HEAD, SUPERVISOR)
13. ATTACHMENTS: AWARING PROPOSAL OTHER: _____

COPY TO:
PurchasingOffice@vinelandcity.org

***ACE-VMEU
69kV Interconnection
Line Relay Replacement
and Relay Settings***



City of Vineland

Vineland Municipal Electric Utility

Proposal Prepared by:



August 27, 2024

This S&L proposal contains proprietary information and data that is privileged and/or confidential. The information contained in this proposal is business sensitive and the discussion, review, or release of this information to individuals not directly employed by the proposal recipient is prohibited without S&L's written permission. This specifically includes but is not limited to subcontractors and consultants.

Udit Narayanan
Project Manager
Phone: (814) 753-0359
Email: udit.narayanan@sargentlundy.com

August 27, 2024
Proposal No.: SL-EGIS-COV-2024-004

Emily Smith
City of Vineland – Vineland Municipal Electric Utility – Engineering
57 W Park Ave, Suite A
Vineland, NJ 083604
Subject: ACE 69kV Interconnection Line Relay Replacement and Relay Settings

Mr. Smith,

Sargent & Lundy (S&L) is pleased to submit this commercial proposal to the Vineland Municipal Electric Utility (VMEU) to offer engineering services to replace 69kV Line Protection Relays and to develop the associated Line Relay Settings for VMEU's 69kV Atlantic City Electric (ACE) Interconnection Lines (Lines 0761, 0778, and 0711).

PROJECT SCOPE

ACE has recently upgraded their Line Protection Relays for the 69kV Transmission Lines that interconnect VMEU with ACE at their Sherman Avenue and Monroe substations. The City of Vineland has purchased SEL Line Protection Relays (detailed below), which shall be upgraded and installed by S&L. Additionally, S&L will develop line relay settings and provide miscellaneous supports. The following is the scope at each VMEU substation associated with the line relay upgrades:

69kV Line 0761 at VMEU West Substation to ACE Sherman Ave Substation:

- Upgrade the existing relay panel replacing the existing line relay with a SEL-411L for primary protection and a SEL-311C for backup protection.
- SEL-411L Primary protection will utilize the Channel 1 Fiber port for:
 - Line Current Differential
 - Breaker Failure Transfer Trip
- SEL-311C Backup protection will utilize an EIA-232 serial port with a SEL-2829 Transceiver for:
 - POTT over mirrored bits
 - Stepped-Distance Zone Impedance Protection if communication channel fails

69kV Line 0778 at VMEU Butler Substation to ACE Sherman Ave Substation:

- Upgrade the existing relay panel replacing the existing line relays with a SEL-311L for primary protection and a SEL-311L for backup protection.
- SEL-311L Primary protection will utilize an EIA-232 serial port with a SEL-2829 Transceiver for:
 - POTT and Breaker Failure Transfer Trip over mirrored bits
 - Stepped-Distance Zone Impedance Protection if communication channel fails
- SEL-311L Backup protection will utilize the Channel X Fiber port for:

- Line Current Differential

69kV Line 0711 at VMEU Central North Substation to ACE Monroe Substation:

- Upgrade the existing relay panel replacing the existing line relays with a SEL-411L for primary protection and a SEL-311L for backup protection.
- SEL-411L Primary protection will utilize the Channel 1 Fiber port for:
 - Line Current Differential
 - Breaker Failure Transfer Trip
- SEL-311L Backup protection will utilize an EIA-232 serial port with a SEL-2829 Transceiver for:
 - POTT over mirrored bits
 - Step-Distance Zone Impedance Protection if communication channel fails

As part of this proposal and scope of services, the following is the methodology S&L will utilize to form implementation of the line relay upgrades:

1. Report to VMEU to kick-off the project and visit VMEU's ACE interconnection substations (West Vineland, Butler, and Central North substations). Report back to VMEU for a 60% design review page turn.
2. Collect the relay settings of existing VMEU relays at each substation.
3. Collect the factory relay settings, part numbers and firmware of the newly purchased SEL relays for this project.
4. Create or revise relay and control panel layout drawings (including panel BOMs) as required.
5. Create or revise all required relay operating one line diagrams, AC and DC elementary diagrams, panel wiring diagrams, cable schedules, and demolition drawings to design and interconnect the proposed new line relays/controls.
6. Update the existing network and tele-protection block diagrams, communication schematics and communication panel wiring diagrams as required.
7. Revise control house interior plan and Unistrut drawings if required.
8. Create or revise Cable Routing Plans and Conduit and Cable Trench Plans and Details if required. This is to cover if there are any yard wiring connections necessary to fully implement the design scope.
9. Update VMEU's ASPEN OneLiner electric system model with the new Line Protection Relays being installed.
10. Utilize VMEU's updated ASPEN OneLiner electric system model to develop the Line Protection Relay Settings for three 69kV lines interconnected to ACE.
11. Develop Relay & Control Settings for VMEU's SEL Line Protection Relays, including:
 - Relay Settings Basis Document.
 - Relay Setting Configuration Files .RDB (SEL).
 - RTU/SCADA and Annunciator/HMI Control Settings/Configuration Files.
12. Coordinate with ACE P&C Engineers as required for alignment on the Drawings and Relay Settings Development.
13. Incorporate review comments and feedback from VMEU (and ACE) into the final drawing deliverables.
14. Incorporate review comments and feedback from VMEU and ACE into the final Relay Settings files.
15. Provide construction support during the outage.
16. Review post construction test reports and finalize as-left relay and control settings, including providing approval to place settings in service.

Note: S&L is currently supporting ACE with Engineering services to upgrade all the 69kV Line Protection Relays at ACE's Sherman Ave. Substation. This includes 2 Vineland interconnection

Lines TSOM #0761 & TSOM #778. Therefore, S&L is well positioned with ACE and their key stakeholders for interfacing/coordination on this project.

ASSUMPTIONS AND CLARIFICATIONS

1. This proposal is based on the scope as defined in the "Project Scope" section of this document. If the scope varies from this description, S&L will discuss any potential budget or schedule impacts with VMEU before proceeding.
2. S&L will utilize PJM Manual Section 07: PJM Protection Standards to be aligned with ACE.
3. Existing substations (West Vineland, Butler, and Central North substations) drawing files will be available in CAD format within five (5) business days of each request.
4. S&L has included hours for the review of ACE's 69kV Interconnection Line Relay Settings. S&L has not included hours for the development or modification of ACE'S Line Relay settings in this proposal.
5. S&L has not included AC or DC sizing/load calculations to determine adequacy of the auxiliary power systems at any of VMEU's ACE interconnection substations (West Vineland, Butler, and Central North substations). S&L assumes that existing auxiliary systems have sufficient capacity, and sufficient DC panel branch circuits are available to power the new line relays.
6. The addition of new ethernet switches is not included in the scope of this proposal.
7. It is assumed that the existing RTU system at the substation has sufficient inputs/outputs for status/alarms/controls associated with the new Line Relays. The addition of an RTU is not included in the scope of this proposal.
8. S&L has included 24 hours of outage construction support per outage as part of this proposal
9. S&L has included 24 hours of relay and control settings construction support per outage as part of this proposal.
10. S&L has not included the development of relay test plans or end-to-end functional testing. S&L's proposal only includes providing the relay and control settings as described in the Project Scope section of this proposal.
11. S&L has not included any as-builts as a part of this proposal.

QUALITY ASSURANCE

- S&L work shall be performed under S&L's Quality Assurance Program (ISO 9001 Certified), SL-QAP for non-safety related work. Industry standards and procedures shall also be followed as applicable.
- All applicable deliverables will be prepared under the supervision of a professional engineer registered in the State of New Jersey and deliverables issued for fabrication and/or construction will be sealed according to S&L General Engineering Guideline GEG-3100-02-NJ and/or in accordance with state law.

SCHEDULE

S&L is prepared to begin this work immediately upon award. The following project milestones have been established from the RFP:

Anticipated Contract AwardAugust 30, 2024
Deliverable #1: 30% Issue for Review (IFR)..... Sept 30, 2024
Relay Operating One Line Diagram
Network/Tele-protection Block Diagram
Panel Details and BOM and Panel Nameplates

- Deliverable #2: 60% Issue for Review (IFR)..... October 31, 2024**
 - 30% IFR Comments Incorporated
 - AC and DC Schematic Drawings
 - Preliminary Relay Settings
 - Preliminary SCADA/CONTROL Settings
- Deliverable #3: 90% Issue for Review (IFR).....December 2, 2024**
 - 60% IFR Comment Incorporated
 - Panel Wiring Diagrams
 - Outdoor Equipment and Yard Wiring Diagrams
 - Cable Schedule and Cable Plan
- Deliverable #4: Issue for Construction (IFC) January 15, 2025**
 - Complete Package

The deliverables shall be for all three substations at the same time. Due to the discreet nature of the work, all three substation packages can be issued at the same time. The dates shown above assume the contract is awarded by the date shown and that COV reviews each package and returns comments to S&L within ten (10) business days.

PROJECT TEAM / KEY PERSONNEL

This project will be executed from our Hamilton, NJ, Wilmington, DE and Elkridge, MD offices. S&L will staff this project as required to meet the project execution schedule. The following individuals listed are key members of the project team, led by Project Director, Jeremy Johnson, Project Manager, Udit Narayanan, and Project Engineer, Curtus Duff. These individuals have been selected by S&L based on having well-established relationships with the City of Vineland’s Vineland Municipal Electric Utility.

- Mr. **Jeremy Johnson, PE, PMP** will serve as the Project Director, overseeing project performance, including meeting schedule, budget adherence, a quality focus, and zero safety incidents.
- Mr. **Udit Narayanan** will serve as the Project Manager, acting as the point of contact for any technical, schedule, or budget issues.
- Mr. **Curtus Duff** will serve as the Project Engineer and Design Reviewer, overseeing all technical aspects of the project to ensure compliance with VMEU’s expectations and industry standards.
- Mr. **Muhib Mahmud** will serve as the Design Engineer, creating project deliverables according to the applicable standards.
- Mr. **Tyler Draper** will serve as the Relay Settings Preparer, creating project deliverables according to the applicable standards.
- Ms. **Maggie Besharati** will serve as the Relay Settings Reviewer, reviewing all project deliverables according to the applicable standards.

Resumes can be provided upon request.

GENERAL TERMS & CONDITIONS

S&L will perform the work under Professional Services Contract #C24-0020, dated February 21st, 2024, subject to the attached Services Agreement SA-36768.

Scope of Work	Pricing	Contract/Payment Terms
VMEU-ACE 69kV Interconnection Line Relay Replacement, SCADA/CONTROL Settings, Relay Settings for 0711 at VMEU Central Substation	\$ 106,500	Lump Sum/Schedule Below
VMEU-ACE 69kV Interconnection Line Relay Replacement, SCADA/CONTROL Settings, Relay Settings for 0761 at VMEU West Substation	\$ 106,500	Lump Sum/Schedule Below
VMEU-ACE 69kV Interconnection Line Relay Replacement, SCADA/CONTROL Settings, Relay Settings for 0778 at VMEU Butler Substation	\$ 106,500	Lump Sum/Schedule Below
Total	\$ 319,500	

PAYMENT TERMS

Deliverable based payment schedule below:


Deliverable	Payment Amount
30% Design	30%
60% Design	30%
90% Design	30%
IFC Design	10%

CONCLUSION

We appreciate the opportunity to serve City of Vineland and Vineland Municipal Electric Utility through this proposal for professional engineering services.

Please feel free to contact me at (814) 753-0359 if you should have any questions or require additional information on our proposal.

Yours very truly,

 Digitally signed
by Udit
Narayanan
Date:
2024.08.27
13:55:06-04'00'
Udit Narayanan
Project Manager

- Copies (Via Email):
 Jeremy Johnson (S&L)
 Curtus Duff (S&L)
 Maggi Besharati (S&L)
 Thomas Dunmore (VMEU)
 William Burns (VMEU)