ARC FLASH STUDIES

Electrical Safety Compliance for Federal Facilities
Optional Add-On Available: IR Thermographic Scan



VETEGRITY

Columbia, MD

SDVOSB / TS FACILITY CLEARED / DCAA AUDITED

VETEGRITY

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COMPANY OVERVIEW

Vetegrity, LLC delivers turnkey Arc Flash Study services to federal agencies, DoW installations, and civilian government facilities. Our end-to-end program — from site data collection through final IEEE 1584-2018-compliant analysis, labeling, and remediation planning — eliminates the compliance burden for facility managers and contracting officers while protecting personnel and property.

AT A GLANCE

- Service-Disabled Veteran-Owned Small Business
- CAGE: 4VCP4
- UEI: CHAQCM272M38
- GSA Schedule 47QRAA23D0033 | SIN 541330ENG
- Top Secret Facility Clearance
- DCAA-Approved Accounting System
- Founded 2008 | Columbia, MD
- Small Business FAR Part 19 Eligible

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Why Federal Agencies Choose Vetegrity

- Full IEEE 1584-2018 / NFPA 70E compliance delivered by licensed PEs
- Active DoW contracts — proven at mission-critical facilities
- Top-Secret Facility Clearance — cleared for classified site access
- GSA Schedule 47QRAA23D0033 (SIN 541330ENG) — no competition required
- SDVOSB / VOSB set-aside eligible — satisfies socioeconomic goals

PRIMARY SERVICE

Arc Flash Hazard Analysis — full IEEE 1584-2018 study with protective device coordination, equipment labeling, NFPA 70E compliance documentation, and a site-specific Electrical Safety Program.

OPTIONAL ADD-ON

IR Thermographic Scan — complements the Arc Flash study by detecting thermal anomalies, hotspots, and loose connections before they cause failures. Performed during the same site mobilization to minimize disruption.

SERVICE OVERVIEW

1 / ARC FLASH HAZARD ANALYSIS — PRIMARY SERVICE

Vetegrity performs comprehensive Arc Flash Studies in full conformance with IEEE 1584-2018, NFPA 70E, UFC 3-501-01, and UFC 3-560-01. Our studies quantify incident energy at every electrical node, determine appropriate PPE categories, and produce the complete documentation package required by federal safety and facility standards.

- Complete single-line diagram development and as-built verification
- Protective device coordination analysis — time-current curve modeling
- Incident energy calculations per IEEE 1584-2018 at every node
- Arc Flash boundary determination and PPE category assignment
- Grounding, bonding, and short-circuit (bolted fault) analysis
- Arc Flash equipment labeling — NFPA 70E / OSHA 1910.333 compliant
- Electrical Safety Program (ESP) documentation
- Remediation recommendations with prioritized corrective actions

2 / IR THERMOGRAPHIC SCAN- OPTIONAL ADD-ON

Infrared thermography detects electrical anomalies invisible to the naked eye — overloaded circuits, deteriorating connections, failing breakers, and phase imbalances — before they become arc flash events or equipment failures. Scheduling IR scanning concurrent with the Arc Flash study eliminates a separate mobilization and minimizes downtime.

- FLIR thermal imaging under normal operating load conditions
- Detection of hotspots, loose connections, overloads, and phase imbalances
- NETA MTS-2019 and NFPA 70B-compliant reporting
- Prioritized findings: Critical / Serious / Monitor categories
- Full image documentation with GPS-tagged location data
- Coordinated scheduling with Arc Flash study for single mobilization

ARC FLASH TECHNICAL METHODOLOGY

1	**Site Survey & Data Collection**	Field engineers perform a comprehensive walkthrough of all electrical infrastructure — utility entrance through distribution panels, switchgear, MCCs, and branch circuits. Data includes nameplate ratings, conductor sizing, protective device types and settings, bus configurations, and equipment condition.
2	**Electrical System Modeling**	Collected field data is entered into SKM PowerTools or ETAP for detailed power system modeling. The model captures every node, protective device, and impedance path. Model accuracy is validated against field measurements.
3	**Short-Circuit & Fault Analysis**	Bolted fault and arcing fault currents are calculated at each bus using IEEE 1584-2018 methodology. Calculations account for utility impedance, transformer sizing, conductor impedance, motor contributions, and system configuration — critical for determining accurate incident energy values.
4	**Protective Device Coordination**	Time-current curves (TCCs) developed for each protective device. Coordination verified to clear faults in minimum time — reducing incident energy while maintaining selective coordination to minimize outage scope.
5	**Incident Energy & Arc Flash Boundary Calculations**	IEEE 1584-2018 arc flash incident energy is calculated at every electrical node. Results determine: Incident Energy (cal/cm^2), Arc Flash Protection Boundary (AFPB), PPE Category (1-4 per NFPA 70E Table 130.5(G)), and Limited/Restricted Approach Boundaries.
6	**Equipment Labeling & Documentation**	NFPA 70E-compliant arc flash warning labels are produced for every piece of equipment analyzed, including: nominal voltage, incident energy level, PPE category, arc flash and shock protection boundaries, and equipment ID. Labels are provided in print-ready format, not printed nor applied.
7	**Final Report & Electrical Safety Program**	The complete deliverable package includes: Executive Summary, full technical report with all calculations, labeled single-line diagrams, equipment label set (print-ready PDFs), PPE matrix by location, Electrical Safety Program (ESP) documentation, and a prioritized Remediation Plan with cost estimates for mitigation.

OPTIONAL ADD-ON: IR THERMOGRAPHIC SCAN

OPTIONAL ADD-ON SERVICE: IR THERMOGRAPHIC SCAN — METHODOLOGY & DELIVERABLES

When added to an Arc Flash study engagement, Vetegrity's IR Thermographic Survey is performed during the same site mobilization, eliminating separate scheduling. All surveys comply with NETA MTS-2019 and NFPA 70B standards.

Pre-Survey Planning
Coordination with facility personnel to identify critical equipment, develop a scan sequence, and schedule around minimum load thresholds (typically ≥40% nameplate load for meaningful thermal differential). Safety coordination with qualified electrical personnel is arranged.

Thermal Imaging Survey
Certified thermographers scan all energized electrical equipment including: switchgear and motor control centers (MCCs), panelboards and distribution boards, transformers, bus ducts and cable trays, and mechanical/HVAC electrical equipment. Images are captured under load using calibrated thermal cameras (640×480 minimum resolution).

Analysis & Classification
Thermal anomalies are classified per IEC 60068 and NETA MTS-2019 priority guidelines: Critical (>40°C rise — immediate action required), Serious (20-40°C rise — address within 30 days), and Monitor (10-20°C rise — schedule maintenance).

Reporting
The IR Survey Report includes: thermal and visual image pairs for each finding, GPS/location mapping of all anomalies, repair recommendations with priority rankings, and a maintenance cost-avoidance summary.

SERVICE TIERS & PRICING

Vetegrity's Arc Flash Study pricing is based on facility size (square footage), number of floors, electrical system complexity, and bus/node count. All pricing is GSA Schedule compliant and DCAA-audited. Below are representative ranges by facility tier.

FACILITY TIER	FACILITY DESCRIPTION
Tier 1 / Small	<50,000 SF | 1-2 floors up to 50 buses
Tier 2 / Medium	50K – 150K SF | Multi-floor, moderate complexity, 50-200 buses, mixed voltages
Tier 3 / Large	150K – 400K SF | Multi-building/campus, 200-600 buses, high-voltage feeds
Tier 4 / Enterprise	400K+ SF | Data centers, large campus, complex substations, 600+ buses

LARGE-FACILITY SCOPING CAPABILITY

Vetegrity has scoped and priced Arc Flash Study + IR Scan engagements for mission-critical federal buildings exceeding 400,000 SF, involving 3,600+ labor hours across 7 labor categories — demonstrating the depth of expertise and scalability to handle the most complex federal facility assignments.

KEY PRICING VARIABLES

- Square footage and number of floors
- Total switchgear / panel / bus count (nodes analyzed)
- System voltage levels (480V, 4kV, 15kV, etc.)
- Availability of existing as-built drawings
- Travel / per diem (CONUS standard GSA rates)
- Data center vs. general office electrical complexity
- Number of site visits required for verification

TYPICAL DELIVERABLES

Vetegrity provides comprehensive engineering assessments and documentation to help federal agencies improve facility safety, maintain compliance, and identify needed upgrades. Typical deliverables include the following, with additional services available based on project requirements.

Standard Arc Flash Study Deliverables

- Technical Study Report (IEEE 1584-2018 compliant) — complete analysis documentation
- Verified / Developed Single-Line Diagrams (PDF + native CAD files)
- Arc Flash Incident Energy Calculations — all buses, full tabular output
- Protective Device Coordination Study — TCC plots
- Equipment Arc Flash Warning Labels — print-ready PDF, NFPA 70E compliant
- PPE Matrix by Location / Equipment Category
- Grounding and Bonding Verification Report
- Electrical Safety Program (ESP) Document
- Prioritized Remediation Plan with cost estimates
- Executive Summary (non-technical, agency leadership ready)
- Data files — SKM or ETAP project files provided to government

IR SCAN DELIVERABLES (ADD-ON)

- IR Survey Report — thermal/visual image pairs with all findings
- Anomaly Classification Table (Critical / Serious / Monitor)
- GPS/Location-tagged anomaly map
- Repair recommendations with priority ranking
- Maintenance cost-avoidance summary

Delivery Schedule

Draft deliverables are typically provided within 30-45 calendar days of site survey completion. Final deliverables follow government review and comments. Complex or multi-site projects are scheduled with phased delivery milestones.

PAST PERFORMANCE

For more than a decade, Vetegrity has delivered engineering, facility management, and technical support services for government agencies, including DISA and other Department of Defense organizations. Our experience spans critical infrastructure assessments, facility operations, and engineering oversight, helping federal customers maintain safe, reliable, and mission-ready facilities.

QUALIFICATIONS & TEAM

Vetegrity assembles project-specific teams from its bench of qualified electrical engineering professionals. The profiles below represent the types of personnel assigned to Arc Flash study engagements.

Professional Credentials & Certifications

Professional Engineers (PE)	Licensed electrical PEs on every study team
IEEE 1584-2018	Current arc flash analysis methodology — all studies
NFPA 70E	Electrical safety standards for the workplace
FLIR Thermography	Certified thermographers for all IR scan work
OSHA 30	All field personnel trained; OSHA 1910.333 compliant

Typical Project Team Profiles

Program Manager (PMP-Certified)

PMP-certified senior manager with 20+ years of DoW/federal engineering program experience. Responsible for schedule, budget, client communication, and deliverable quality. Holds active security clearance. Coordinates directly with CORs and contracting officers for all task order requirements.

Lead Field Electrical Engineer (PE)

Licensed Professional Electrical Engineer with 15+ years of electrical distribution system design and Arc Flash study experience. Leads all IEEE 1584-2018 analysis, protective device coordination, and technical report production. Experience with medium-voltage systems, mission-critical substations, and classified facilities.

Technical Manager / Lead Electrical Engineer (PE)

Senior PE with federal facility and DoW datacenter electrical engineering expertise. Deep experience with high-voltage systems, large-scale switchgear, and complex multi-bus studies. Provides QA/QC on all technical deliverables.

IR Survey Team (Add-On)

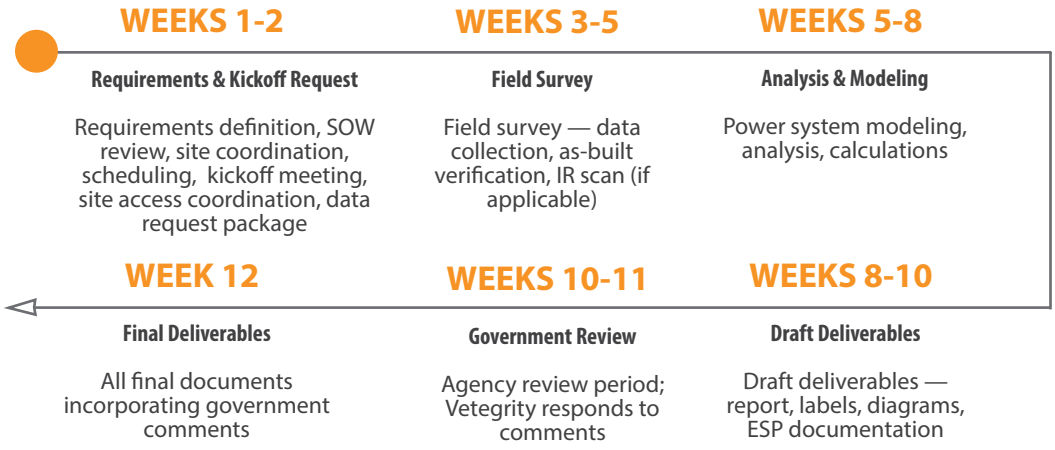
FLIR-certified thermographers with NETA MTS-2019 training. Conduct all thermal imaging surveys, analyze and classify anomalies, and produce the IR Survey Report. Deployed concurrent with Arc Flash field team (Critical / Serious / Monitor), and produce the IR Survey Report with GPS-tagged anomaly maps.

FEDERAL PROCUREMENT & ENGAGEMENT

Acquisition Vehicles

VEHICLE	CONTRACT/DETAILS	NOTES
GSA Schedule 47QRAA23D0033	SIN 541330ENG Engineering Services FAR 8.4 compliant	Lowest-risk acquisition path — compliant, no competition required for task orders
SDVOSB Set-Aside (FAR 19.14)	Direct award or competitive set-aside eligible	Satisfies VA Rule of Two; meets SDVOSB socioeconomic goals
Small Business Set-Aside	FAR Part 19 eligible NAICS 541330	Available for any competitive procurement
IDIQ / MAC Task Orders	Compatible with most DoW and civilian IDIQs	Existing DISA vehicle demonstrates compatibility
Sole Source / J&A	Justified via prior performance + clearance	Available where unique qualifications are documented

TYPICAL ENGAGEMENT TIMELINE *12 Weeks*



SDVOSB & SMALL BUSINESS CERTIFICATIONS

SDVOSB	VOSB	GSA SCHEDULE 47QRAA23D0033	TOP-SECRET FACILITY CLEARED	DCAA AUDITED	SMALL BUSINESS
Service-Disabled Veteran-Owned Small Business	Veteran-Owned Small Business	SIN 541330ENG Engineering Services	Cleared for classified site access	DCAA-Approved Accounting System	FAR Part 19 Eligible — NAICS 541330

Set-Aside Eligible

Vetegrity qualifies for SDVOSB and Small Business set-asides, enabling direct awards without full and open competition when the Rule of Two is satisfied.

GSA Schedule — No Bid Required

Task orders against GSA Schedule 47QRAA23D0033 are fully compliant at any dollar threshold. Fastest path from requirement to contract.

VA Rule of Two Compliant

For VA procurements, Vetegrity's SDVOSB status supports Rule of Two compliance directly — no additional documentation required.

Proven Past Performance

Two active/completed DISA contracts under our GSA Schedule and SDVOSB status demonstrate acquisition-ready, mission-capable performance.

INFORMATION NEEDED

As we begin the project scoping process, Vetegrity will work with your team to understand your facility, existing infrastructure, and project requirements. The following information is helpful in guiding those initial discussions. Not all items will apply to every project, and complete details are not necessary to get started.

BASIC FACILITY INFORMATION

- Facility location, type, and primary use
- Approximate square footage and number of buildings
- Age of facility and history of major renovations
- General description of existing systems and infrastructure
- Security requirements or access restrictions
- Overview of the project objectives and areas of concern

ADDITIONAL INFORMATION (IF AVAILABLE)

- Existing facility drawings, diagrams, or as-built documentation
- Previous engineering studies, assessments, or inspection reports
- Maintenance records and known system deficiencies
- Relevant equipment inventories or system specifications
- Recent upgrades or planned facility improvements
- Desired project timeline and scheduling considerations
- Any special operational requirements or site constraints

CONTACT VETEGRITY

Ready to scope your facility's Arc Flash study? Vetegrity provides no-obligation preliminary estimates based on your facility profile. We work directly with contracting officers, facility managers, and safety personnel to structure a compliant, cost-effective engagement.

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