

The following standard specification is intended to be edited according to the specifics of the project. Brackets [] and areas shaded in gray [e.g. format] indicate requirements that are optional depending upon the type of system being provided or per instructions associated with the [] and project requirements. Consult with University's Representative and campus stakeholders.

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SECTION 26 08 00 COMMISSIONING OF ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Commission all systems and equipment listed in the table below per the requirements of Section 01 91 00 Commissioning. The Installation/Start-up Verification (ISV) and Functional Performance Test (FPT) forms listed are required [and will be provided by the University]. Refer to the project website for standard commissioning forms.

[Edit the table and the checklists as required by the project.]

Equipment/System	ISV Form	FPT Form
Electrical System	N/A	FPT-26 00 00
Medium Voltage Feeders and Primary Service Feeders	ISV-26 05 13	N/A
Feeders and Branch Circuits	ISV-26 05 19	N/A
Grounding and Bonding for Electrical Systems	ISV-26 05 26	N/A
Lighting Control Devices	ISV-26 09 23	FPT-26 09 23
Central Dimming Controls	ISV-26 09 33	FPT-26 09 33
Medium Voltage Transformers	ISV-26 12 00	N/A
Medium Voltage Circuit Breaker Switchgear	ISV-26 13 13	FPT-26 13 13
Dry-Type, Low-Voltage Transformers	ISV-26 22 00	N/A
600V Switchgear/Switchboards	ISV-26 24 13	w/ FPT-26 00 00
Distribution and Branch Circuit Panelboards	ISV 26 24 16	w/ FPT-26 00 00
Motor Control Centers	ISV-26 24 19	w/ FPT-26 00 00
Enclosed Bus Assemblies	ISV-26 25 00	N/A
Electricity Metering	ISV-26 27 13	w/ FPT-26 00 00
Emergency Power Generators and Distribution Systems	ISV-26 32 00	w/ FPT-26 00 00
Central Battery Equipment	ISV-26 33 23	w/ FPT-26 00 00
Automatic Transfer Switches	ISV-26 36 23	w/ FPT-26 00 00
600V Molded Case Circuit Breakers	ISV-26 28 00	w/ FPT-26 00 00

- B. Coordinate the work of Contractor's Independent Electrical Testing Agency.
- C. Coordinate the checkout of the Fire Alarm System and the approval of the regulatory authorities with the commissioning process.

1.2 RELATED WORK AND DOCUMENTS

- A. Section 01 79 00 Demonstration and Training
- B. Section 01 91 00 Commissioning.
- C. Division 26 Electrical

1.3 COMMISSIONING DEFINITIONS AND ABBREVIATIONS

- A. Refer to Section 01 91 00 Commissioning

1.4 REFERENCE STANDARDS

- A. National Electric Code (NEC)
- B. American Society for Testing and Materials (ASTM)
- C. Electronics Industry Association/Telecommunications Industry Association (EIA/TIA)
- D. Illuminating Engineering Society (IES)
- E. Institute of Electrical and Electronics Engineers (IEEE)
- F. International Electrical Testing Association (NETA)
- G. National Electrical Manufacturers Associates (NEMA)
- H. National Fire Protection Association (NFPA)
- I. Underwriters Laboratory, Inc. (UL)

1.5 SUBMITTALS

- A. Submit commissioning documents for all equipment and systems listed in table above per the requirements of Section 01 91 00 Commissioning.

1.6 INDEPENDENT ELECTRICAL TESTING AGENCY

- A. Provide the services of an Independent Electrical Testing Agency as required to support the ISV and FPT checks and tests for all equipment and systems listed in the table above.

PART 2 - PRODUCTS

2.1 INSTRUMENTATION

- A. Refer to Section 01 91 00 Commissioning.

2.2 INFRARED THERMOGRAPHIC SCANNER

- A. Provide infrared scanning equipment for use in the testing of electrical equipment. Infrared scanning equipment shall be an AGA (or equal) thermovision set capable of viewing an entire bus or equipment assembly at one time and have a sensitivity of 0.2 degrees Celsius with a liquid nitrogen reference.

PART 3 - EXECUTION

3.1 INSTALLATION/START-UP VERIFICATION

- A. Perform all checks and tests included in the ISV checklists and complete the checklists as specified in Section 01 91 00 Commissioning.

3.2 FUNCTIONAL PERFORMANCE TESTS

- A. Perform all checks and tests included in the FPT checklists and complete the checklists as specified in Section 01 91 00 Commissioning.

3.3 TRAINING OF UNIVERSITY PERSONNEL

- A. Provide training of University's personnel for the number of hours specified in the table below and as specified in Section 01 79 00 Demonstration and Training.

[Edit the table as required by the project. Project Manager to coordinate with A&E Engineering and O&M Facilities]

Equipment/System	Section Number	Orientation Hours	Training Hours	DVD Recording
Electrical System	26 00 00	2	N/A	N/A
Lighting Control Devices	26 09 23	1	4	N/A

PROJECT TITLE
 CONTRACT TITLE
 UNIVERSITY OF CALIFORNIA, DAVIS
 CITY, CALIFORNIA

PROJECT NO: 0000000
 GRANT NO: 0000000

Equipment/System	Section Number	Orientation Hours	Training Hours	DVD Recording
Central Dimming Controls	26 09 33	1	2	N/A
Medium Voltage Transformers	26 12 00	1	N/A	N/A
Medium Voltage Circuit Breaker Switchgear	26 13 13	1	N/A	N/A
600V Switchgear/Switchboards	26 24 13	1	N/A	N/A
Distribution and Branch Circuit Panelboards	26 24 16	2	N/A	N/A
Motor Control Centers	26 24 19	1	N/A	N/A
Electricity Metering	26 27 13	1	2	N/A
600V Molded Case Circuit Breakers	26 28 00	1	N/A	N/A
Emergency Power Generators and Distribution Systems	26 32 00	1	2	N/A
Central Battery Equipment	26 33 23	1	1	N/A
Automatic Transfer Switches	26 36 23	1	N/A	N/A

END OF SECTION 26 08 00