Annex F: Coordination Study Checklist (Page 1 of 2)

Coordination study is required for all projects that have equipment loads due to the following NEC Articles: NEC 240.12, 240.100, 517.17, 517.30 (G), 620.62, 645.27, 700.28, 701.27, 708.54. The coordination study shall be completed by a Virginia licensed Professional Engineer.

Coordination study shall be completed prior to energizing electrical service. Provide a coordination study in PDF format. All time current curves shall be in color, not black and white. An approved coordination study is required prior to service inspection(s).

It is highly recommended that the coordination study be completed prior to ordering any of the equipment, to avoid costly changes later if the coordination study revises any of the equipment.

It will be the responsibility of a professional engineer to submit the following PDF documents for a coordination study review. All submitted documents shall follow the naming convention in Section A-5, page 5:

1) **Completed, Signed/Sealed Coordination Study**
2) **Completed Coordination Study Checklist**
3) **Completed Plan Intake Sheet (See Annex G for the Plan Intake Sheet)**
4) **(if applicable) When the coordination study is done by an engineer other than the engineer of record, the engineer of record shall review the coordination study and provide a letter, signed and sealed, to the City of Richmond certifying the construction documents adhere to the coordination study. If any changes need to be done to the construction documents, the engineer of record shall submit those plans to the City for review.**
5) **(if applicable) For all time current curves that overlap, provide all manufacturers data for paired-coordinated overcurrent protection devices. Clearly label all paired-coordinated overcurrent devices.**

	For projects with new and existing overcurrent devices
____	All new devices shall coordinate with the existing overcurrent protection device above and below the new device(s).
	For projects with all new overcurrent devices (Check all that apply)
____	Coordination study one-line diagrams shall show only the devices that require coordination. Do not show devices that are not going to be coordinated.
____	For all overcurrent protection devices required to be coordinated, provide overcurrent protection device(s) manufacturer's type on the coordination study emergency and normal one-line diagrams.
____	For all overcurrent protection devices required to be coordinated, provide overcurrent protection device(s) manufacturer's number on the coordination study emergency and normal one-line diagrams.
____	For all overcurrent protection devices required to be coordinated, provide overcurrent protection device(s) manufacturer's frame size on the coordination study emergency and normal one-line diagrams.
____	For all overcurrent protection devices required to be coordinated, provide overcurrent protection device(s) manufacturer's trip size on the coordination study emergency and normal one-line diagrams.
____	Make sure the coordination study one-line matches the approved electrical plans. If not the approved plans must be revised to match the coordination study.
____	Provide maximum fault current, for **normal** and **emergency** power, located at each piece of equipment on the normal and emergency one-line diagrams.
____	Coordination shall be done from normal power supply and emergency generator supply, down to the branch circuit overcurrent protection devices. If for any panel there are different size and/or type branch overcurrent protection devices, a separate time-current curve is required for each type of overcurrent protection device.
____	When the coordination study is done by an engineer other than the engineer of record, the engineer of record shall review the coordination study and provide a letter to the City of Richmond certifying the construction documents adhere to the coordination study. **If any changes need to be done to the construction documents, the engineer of record shall submit those plans to the City for review.**

Annex F: Coordination Study Checklist (Page 2 of 2)

When submitting coordination study for City review, check the option below that applies to the project.
Option #1 - Total Selective Coordination

____	Provide total selective coordination showing no overlapping curves in the Time Current Curves.

Option #2 - Coordination to 0.01 Seconds

____	Coordination study shall coordinate to 0.01 seconds.
____	For all time current curves that overlap, provide all manufacturers data for paired-coordinated overcurrent protection devices. Clearly label all paired-coordinated overcurrent devices.

Option #3 - Coordination to 0.1 Seconds [For Hospitals only, see NEC Article 517.30 (G)]

____	Coordination study shall coordinate to 0.1 seconds.
____	For all time current curves that overlap, provide all manufacturers data for paired-coordinated overcurrent protection devices. Clearly label all paired-coordinated overcurrent devices.