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|  | FDOT Traffic Engineering Research Laboratory (TERL)  NEMA Traffic Controller Compliance Matrix | By signing this form, the applicant declares that he/she has read and understands the provisions of Section 671 and 995 of the FDOT *Standard Specifications for Road and Bridge Construction* and all implemented modifications. The requirements listed on this matrix are derived from Sections 671 and 995, and are the basis for determining a product’s compliance and its acceptability for use on Florida’s roads. |

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| --- | --- | --- | --- |
| Date: | Click here to enter a date. | Applicant’s  Name (print): |  |
| Manufacturer: |  |  |  |
| Item, Model No.: |  | Signature: |  |

| **ID No** | **Section** | **Requirement** | **Item Comply? (Yes/No/NA)** | **Comments (Applicant must provide information as indicated)** | **TERL Evaluation Method** |
| --- | --- | --- | --- | --- | --- |
| The following compliance matrix criteria are for all NEMA controllers. | | | | | |
| 1 | 995-1.1 | Equipment is permanently marked with the manufacturer’s name or trademark, part number, and serial number. |  | *Applicant may provide comments in this field.* | Physical Inspection |
| 2 | 995-10 | The controller meets the requirements of NEMA TS-2-2021 |  | *Provide product literature, specifications, user manual, or similar information that shows the product meets this requirement.* | Document Review and  Functional Inspection |
| *Indicate location of requested information in submittal.* |
| 3 |  | Controller must meet AASHTO/ITE/NEMA ATC 5201, v06.25. |  | *Provide product literature, specifications, user manual, or similar information that shows the product meets this requirement.* | Document Review and  Functional Inspection |
| *Applicant may provide comments in this field.* |
| 4 |  | Controller provides functionality meeting or exceeding operational characteristics, including NTCIP support, as described in NEMA Standards Publication TS-2-2021 |  | *Indicate which sections of the NEMA Standards Publication TS 2-2021 are met.* | Document Review and  Functional Inspection |
| *Indicate location of requested information in submittal.* |
| 5 |  | The controller captures all mandatory event-based data elements listed in supplemental requirement SR-671-2Supplemental Traffic Controller High Resolution Data Logging Requirements. |  | *Provide product literature, specifications, user manual, or similar information that shows the product meets this requirement.* | Document Review and  Functional Inspection |
| *Indicate location of requested information in submittal.* |
| 6 |  | The controller provides and makes Management Information Bases (MIBs) available for Traffic Signal Controller Broadcast Messages (TSCBM) to local agencies and FDOT that are compatible with Society of Automotive Engineer (SAE) J2735. |  | *Provide product literature, specifications, user manual, or similar information that shows the product meets this requirement.* | Document Review and  Functional Inspection |
| *Indicate location of requested information in submittal.* |
| 7 |  | The controller supports programming of destination Internet Protocol (IP) addresses via controller front panel for interface with Roadside Units (RSU), and other devices or systems. |  | *Provide product literature, specifications, user manual, or similar information that shows the product meets this requirement.* | Document Review and  Functional Inspection |
| *Indicate location of requested information in submittal.* |
| The following compliance matrix criteria are derived from the NEMA TS-2-2021 Standard. | | | | | |
| 8 | TS2,  Section 2 | The controller meets the environmental requirements of NEMA Standards Publication TS-2-2021 v03.08, Section 2. |  | *Provide a third party test report that demonstrates compliance with this requirement. The test report must be less than 5 years old, and meet the requirements of FDOT Product Certification Handbook (PCH), section 7.2.* | Document Review |
| *Indicate location of requested information in submittal.* |
| 9 | TS2,  Section 3.2 | The controller meets the physical requirements for controller units of NEMA Standards Publication TS-2-2021 v03.08, Section 3.2. |  | *Provide product literature, specifications, user manual, or similar information that shows the product meets this requirement.* | Document Review and  Physical Inspection |
| *Indicate location of requested information in submittal.* |
| 10 | TS2,  Section 3.3 | The controller meets the interface standards of NEMA Standards Publication TS-2-2021 v03.08, Section 3.3. |  | *Provide product literature, specifications, user manual, or similar information that shows the product meets this requirement.* | Document Review and  Functional Inspection |
| *Indicate location of requested information in submittal.* |
| 11 | TS2,  Section 3.3.1 | The controller includes a Port 1 Interface meeting the physical and protocol requirements of NEMA Standards Publication TS-2-2021 v03.08, Section 3.3.1. |  | *Provide product literature, specifications, user manual, or similar information that shows the product meets this requirement.* | Document Review and  Functional Inspection |
| *Indicate location of requested information in submittal.* |
| 12 | TS2,  Section 3.3.2 | The controller includes a Port 2 Interface with a 25-pin metal shell “D” subminiature connector meeting the requirements of NEMA Standards Publication TS-2-2021 v03.08, Section 3.3.2. |  | *Provide product literature, specifications, user manual, or similar information that shows the product meets this requirement.* | Document Review and  Functional Inspection |
| *Indicate location of requested information in submittal.* |
| 13 | TS2,  Section 3.3.3 | The controller includes a Port 3 System Interface with a 9-pin metal shell “D” subminiature connector meeting the requirements of NEMA Standards Publication TS-2-2021 v03.08, Section 3.3.3. |  | *Provide product literature, specifications, user manual, or similar information that shows the product meets this requirement.* | Document Review and  Functional Inspection |
| *Indicate location of requested information in submittal.* |
| 14 | TS2,  Section 3.3.4 | The controller includes a Type 1 Interface meeting the requirements of NEMA Standards Publication TS-2-2021 v03.08, Section 3.3.4. |  | *Provide product literature, specifications, user manual, or similar information that shows the product meets this requirement.* | Document Review and  Functional Inspection |
| *Indicate location of requested information in submittal.* |
| 15 | TS2,  Section 3.3.5 | The controller includes a Type 2 Interface meeting the requirements of NEMA Standards Publication TS-2-2021 v03.08, Section 3.3.5. |  | *Provide product literature, specifications, user manual, or similar information that shows the product meets this requirement.* | Document Review and  Functional Inspection |
| *Indicate location of requested information in submittal.* |
| 16 | TS2,  Section 3.3.6 | The controller complies with the latest versions of the relevant NTCIP standards per the requirements of NEMA Standards Publication TS-2-2021 v03.08, Section 3.3.6. |  | *Provide product literature, specifications, user manual, or similar information that shows the product meets this requirement.* | Document Review and  Functional Inspection |
| *Indicate location of requested information in submittal.* |
| 17 | TS2,  Section 3.4 | The controller meets the requirements of NEMA Standards Publication TS-2-2021 v03.08, Section 3.4 for Pretimed Control. |  | *Provide product literature, specifications, user manual, or similar information that shows the product meets this requirement.* | Document Review and  Functional Inspection |
| *Indicate location of requested information in submittal.* |
| 18 | TS2,  Section 3.5 | The controller meets the requirements of NEMA Standards Publication TS-2-2021 v03.08, Section 3.5 for Actuated Control. |  | *Provide product literature, specifications, user manual, or similar information that shows the product meets this requirement.* | Document Review and  Functional Inspection |
| *Indicate location of requested information in submittal.* |
| 19 | TS2,  Section 3.6 | The controller meets the requirements of NEMA Standards Publication TS-2-2021 v03.08, Section 3.6 for Actuated Coordination. |  | *Provide product literature, specifications, user manual, or similar information that shows the product meets this requirement.* | Document Review and  Functional Inspection |
| *Indicate location of requested information in submittal.* |
| 20 | TS2,  Section 3.7 | The controller meets the requirements of NEMA Standards Publication TS-2-2021 v03.08, Section 3.7 for Preemption. |  | *Provide product literature, specifications, user manual, or similar information that shows the product meets this requirement.* | Document Review and  Functional Inspection |
| *Indicate location of requested information in submittal.* |
| 21 | TS2,  Section 3.8 | The controller meets the requirements of NEMA Standards Publication TS-2-2021 v03.08, Section 3.8 for Time Base Control. |  | *Provide product literature, specifications, user manual, or similar information that shows the product meets this requirement.* | Document Review and  Functional Inspection |
| *Indicate location of requested information in submittal.* |
| 22 | TS2,  Section 3.9.1 | The controller meets the requirements of NEMA Standards Publication TS-2-2021 v03.08, Section 3.9.1 for Flash. |  | *Provide product literature, specifications, user manual, or similar information that shows the product meets this requirement.* | Document Review and  Functional Inspection |
| *Indicate location of requested information in submittal.* |
| 23 | TS2,  Section 3.9.2 | The controller meets the requirements of NEMA Standards Publication TS-2-2021 v03.08, Section 3.9.2 for Dimming. |  | *Provide product literature, specifications, user manual, or similar information that shows the product meets this requirement.* | Document Review and  Functional Inspection |
| *Indicate location of requested information in submittal.* |
| 24 | TS2,  Section 3.9.3 | The controller meets the requirements of NEMA Standards Publication TS-2-2021 v03.08, Section 3.9.3 for Diagnostics. |  | *Provide product literature, specifications, user manual, or similar information that shows the product meets this requirement.* | Document Review and  Functional Inspection |
| *Indicate location of requested information in submittal.* |
| 25 | TS2,  Section 3.10 | The controller includes provision for future additional and/or modification that shall not be deemed to be impossible due to Input-Output Interface limitations. |  | *Provide product literature, specifications, user manual, or similar information that shows the product meets this requirement.* | Document Review |
| *Indicate location of requested information in submittal.* |
| 26 | TS2,  Section 3.11 | The controller meets the requirements of NEMA Standards Publication TS-2-2021 v03.08, Section 3.11 for Programming. |  | *Provide product literature, specifications, user manual, or similar information that shows the product meets this requirement.* | Document Review and  Functional Inspection |
| *Indicate location of requested information in submittal.* |
| 27 | TS2,  Section 3.12 | The controller meets the requirements of NEMA Standards Publication TS-2-2021 v03.08, Section 3.12 for Power Interruption. |  | *Provide a third party test report that demonstrates compliance with this requirement. The test report must* *be less than 5 years old, and meet the requirements of FDOT PCH, section 7.2.* | Document Review and  Functional Inspection |
| *Indicate location of requested information in submittal.* |
| 28 | 671-2 | If shown in the Plans, new installations include controllers that will deactivate the dimming circuit of LED street lighting during pedestrian activations. Pedestrian detector diagnostics are activated when this feature is used. |  | *Applicant may provide comments in this field.* | Functional Inspection |

**Document History for:**

**NEMA Traffic Controller Compliance Matrix**

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| --- | --- | --- | --- | --- | --- | --- |
| Rev | Description | Authored and Checked | Reviewed | Approved | Approval Date | Rev More Stringent? |
| 1.0 | Update CM to reflect changes from A671 of MSTCSD to 671 of SSRBC. | R. Meyer | C. Morse  J. Morgan | J. Morgan | 11/07/2014 | No |
| 2.0 | Corrected FA date from 7/1/2014 to 1/22/2014. No content change. | A. Burleson | J. Morgan | J. Morgan | 07/07/2015 | No |
| 3.0 | Updated to latest FA date of 12-17-18. | W. Geitz | M. DeWitt  J. Morgan | D. Vollmer | 10/10/2019 | No |
| 4.0 | Updated to reflect 5 year test report requirement in accordance with updated PCH. Update CM to latest NEMA TS-2 2021 standard and FA date of 10-24-2022. | W. Geitz | M. DeWitt  I. Sing | D. Vollmer | 02/10/2023 | No |
| 5.0 | Updated to latest FA date of 10-6-23 for spec 995. | W. Geitz | P. Blaiklock | D. Vollmer | 01/19/2024 | No |