STEAM DISTRIBUTION

**DESIGN REVIEW CHECKLIST**

**☑Reviewers should -** Use Checklists when reviewing any type of VA construction project for the following disciplines:

* Architectural,
* Electrical,
* Heating, Ventilating, and Air Conditioning (HVAC),
* Plumbing, Fire Protection, and Sanitary,
* Site and Landscape,
* Steam Generation and Distribution, and
* Structural.

**☑Reviewers should -** Ensure that DESIGN REVIEW Submission Instructions
(PG-18-15) for Schematic, Design Development, and Construction Documents are followed for various types of VA construction projects.

**☑Reviewers should -** Ensure that every VA construction project is in compliance with all life safety issues.

**☑Reviewers should -** Be aware that these checklists are not all-inclusive but only provide minimum review items.

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**DESIGN REVIEW CHECKLIST**

**TITLE\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_PROJECT NO.**

**LOCATION\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_DATE**

**REVIEWED BY**

**ORGANIZATION**

**GENERAL INFORMATION FOR REVIEWERS**

The reviewer should be thoroughly familiar with the following VA standards before conducting a design review. These are available on *Internet:* [***https://www.cfm.va.gov/til***](https://www.cfm.va.gov/til)

| ITEM | DESCRIPTION |
| --- | --- |
| **1.** | **DESIGN MANUALS (PG-18-10)** |
| **2.** | MASTER CONSTRUCTION SPECIFICATIONS (PG-18-1) |
| **3.** | **STANDARD DETAILS (PG-18-4)** |
| **4.** | **DESIGN AND CONSTRUCTION PROCEDURES (PG-18-3)**  |
| **5.** | DESIGN GUIDES (PG-18-12)  |
| **6.** | DESIGN ALERTS |
| **7.** | **DESIGN REVIEW SUBMISSION INSTRUCTIONS (PG-18-15)** |
| **8.** | **VA CAD and BIM STANDARDS**  |

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**SCHEMATIC 1**

| NO. | STEAM DISTRIBUTION – SCHEMATIC 1 ITEM | COMMENTS/YES/NO/NA |
| --- | --- | --- |
| 1 | Have DESIGN REVIEW Submission Requirements (PG-18-15) for this review been met? List omissions. |  |
| 2 | Does DESIGN REVIEW have latest VA Master Specifications? |  |
| 3 | Does DESIGN REVIEW have latest VA Standard Details? |  |
| 4 | Does DESIGN REVIEW have latest VA Design Manual? |  |
| 5 | Does DESIGN REVIEW have access to Corps of Engineers Concrete Shallow Trench Details? |  |
| 6 | Compliance with VA CAD and BIM Standards  |  |

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**SCHEMATIC 2**

| NO. | STEAM DISTRIBUTION – SCHEMATIC 2 ITEM | COMMENTS/YES/NO/NA |
| --- | --- | --- |
| 1 | Have DESIGN REVIEW Submission Requirements (PG-18-15) for this review been met? List omissions. |  |
| 2 | Life cycle cost method complies with NIST Handbook 135? |  |
| 3 | Acceptable responses to previous comments? |  |
| 4 | Compliance with VA CAD and BIM Standards  |  |

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**DESIGN REVIEW CHECKLIST**

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**ORGANIZATION**

**DESIGN DEVELOPMENT**

|  |  |  |
| --- | --- | --- |
| NO. | STEAM DISTRIBUTION – DESIGN DEVELOPMENT ITEM | COMMENTS/YES/NO/NA |
| 1 | Have DESIGN REVIEW Submission Requirements (PG-18-15) for this review been met? List omissions. |  |
| 2 | System design complies with Outside Steam Distribution Design Manual. |  |
| 3 | Steam and condensate load calculations acceptable? |  |
| 4 | Plan view and sections of tunnels or manholes show adequate space for maintenance access? |  |
| 5 | Manholes properly ventilated? |  |
| 6 | Manholes properly drained? |  |
| 7 | Piping in manholes arranged to allow thermal expansion without overstress? |  |
| 8 | System layout drawings show all other underground systems within 20 feet of new system. |  |
| 9 | Acceptable responses to previous comments? |  |
| 10 | Coordination with other disciplines |  |
| 11 | Compliance with VA National CAD Standard Application Guide and applicable National CAD Standard modules. |  |
| 12 | Are calculations complete including pipe and equipment sizing, steam traps, thermal expansion, pipe stress? |  |
| 13 | Are Master Specs to be utilized of current issue? |  |
| 14 | Is all pipe stress within ASME B31.1 limit? |  |
| 15 | Do expansion joint movement requirements include safety factor? |  |
| 16 | Has adequate clearance been shown for maintenance access in manholes and tunnels? |  |
| 17 | Have steam lines been shown in profile with proper slope and drip traps? |  |
| 18 | Have warm-up bypasses been provided for all steam main gate valves? |  |
| 19 | Have drip pockets and steam traps been provided ahead of all steam main gate valves? |  |

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**ORGANIZATION**

**CONSTRUCTION DOCUMENTS**

| NO. | STEAM DISTRIBUTION – CONSTRUCTION DOCUMENTS ITEM | COMMENTS/YES/NO/NA |
| --- | --- | --- |
| 1 | Have DESIGN REVIEW Submission Requirements (PG-18-15) for the review been met? List omissions. |  |
| 2 | Acceptable responses to previous comments? |  |
| 3 | Have any major steam lines been relocated since last review? This would require a revised stress analysis. |  |
| 4 | Are all valves, steam traps, and expansion joints accessible for maintenance? |  |
| 5 | Do structural and architectural drawings show complete details of manhole, tunnel, or trench construction? |  |
| 6 | Are locations of all pipe hangers and supports shown and types of hangers identified? |  |
| 7 | Are structural supports for pipe anchors and pipe supports in tunnels, manholes and trenches shown? |  |
| 8 | Are pipe anchors detailed for tunnels, trenches, manholes? |  |
| 9 | Coordination with other disciplines |  |
| 10 | Compliance with VA CAD and BIM Standards  |  |