

DESIGN REVIEW CHECKLIST

STEAM DISTRIBUTION

- ☑ **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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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>

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 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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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	