

**CITY OF TUCSON, WATER DEPARTMENT
DESIGN STANDARD NO. 8-03
DESIGN ACCEPTANCE REQUIREMENTS, Developer-Financed Projects**

TABLE OF CONTENTS

8-03.0.0 DESIGN ACCEPTANCE REQUIREMENTS, DEVELOPER-FINANCED PROJECTS .. 2

- 8-03.1.0 GENERAL..... 2
 - 1.1 Purpose..... 2
 - 1.2 Definitions..... 2
 - 1.3 Applicability..... 2
 - A. Tucson Water Approval..... 3
 - B. Approval to Construct Requirements of ADEQ 3
 - C. Exemptions from Plan Review Requirements of ADEQ 3
- 8-03.2.0 SUBMITTAL, REVIEW AND ACCEPTANCE PROCESS REQUIREMENTS 4
 - 2.1 Water Assurance Letters 4
 - 2.2 Water Master Plan Requirements 4
 - A. Research Water Master Plan 5
 - B. Overall Water Master Plan 6
 - C. Water Master Plan 7
 - 2.3 Design Plan Review and Water Plan Acceptance 7
 - 2.4 Water Plan Revisions 9
 - 2.5 Plan Finalization or Cancellation 10
 - A. Plan Finalization 10
 - B. Plan Cancellation 10
 - 2.6 Fees..... 10
- 8-03.3.0 APPROVAL REQUIREMENTS – ARIZONA DEPT. OF ENVIRONMENTAL QUALITY..... 10
- 8-03.4.0 DESIGN CHANGES TO APPROVED PROJECTS 11
 - 4.1 Tucson Water Approval of Design Changes 11
 - A. Cover Sheet Revisions 11
 - B. Revising Affected Sheets 11
 - 4.2 ADEQ Approval..... 11
 - A. Material Design Change Determination..... 11
 - B. Submittal and Review of Material Design Change 12
 - C. Approval of Material Design Change 12

**CITY OF TUCSON, WATER DEPARTMENT
DESIGN STANDARD NO. 8-03
DESIGN ACCEPTANCE REQUIREMENTS, Developer-Financed Projects**

DESIGN ACCEPTANCE REQUIREMENTS, DEVELOPER-FINANCED PROJECTS

- 8-03.1.0 General**
 - 8-03.2.0 Submittal, Review and Acceptance Process Requirements**
 - 8-03.3.0 Approval Requirements – Arizona Dept. of Environmental Quality**
 - 8-03.4.0 Design Changes to Approved Projects**
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8-03.0.0 DESIGN ACCEPTANCE REQUIREMENTS, Developer-Financed Projects

8-03.1.0 General

1.1 Purpose

This section describes the requirements to obtain acceptance from Tucson Water for the design of developer-financed public water projects.

The following paragraph is intended to clarify the use in this section (8-03) of the terms accept, accepted, acceptance, or any other derivative:

The action taken on these proposed projects submitted for review is to “accept” the projects—denoting that the project meets the requirements of Tucson Water, and may be forwarded to ADEQ for “approval” consistent with State statutes and regulations.

1.2 Definitions

Section 8-18 contains a list of definitions, abbreviations, and acronyms.

1.3 Applicability

The water project acceptance requirements listed herein are unique to developer-financed public water projects.

Additional requirements are contained in other sections of the water project design standards manual that are associated with each type of water project. Depending on the developer-financed water facilities required for the developer’s project, additional water project design standards shall be applicable.

Typical water projects that are governed by this standard include developer-financed water projects for onsite and off-site water system improvements. These typically consist of water line extensions, but may also include the construction of the following water projects:

- water storage facilities,
- water pumping stations,
- water pressure reducing stations, and
- other water facilities as may be required by Tucson Water to ensure compliance with the objectives stated in this Manual, and

**CITY OF TUCSON, WATER DEPARTMENT
DESIGN STANDARD NO. 8-03
DESIGN ACCEPTANCE REQUIREMENTS, Developer-Financed Projects**

- modifications to existing water infrastructure.
- A. Tucson Water Approval
All projects require Tucson Water approval. Any change made to the Tucson Water system must be recorded and on file with the Tucson Water Mapping/GIS Section.
- B. Approval to Construct Requirements of ADEQ
All public water projects must meet the Approval to Construct requirements of ADEQ before the initiation of construction. Refer to ARS 49-353(A)(2) and AAC R18-5-505, Approval to Construct, for current requirements.
- C. Exemptions from Plan Review Requirements of ADEQ
Exemptions from the plan review requirements of ADEQ, including the requirements for the Approval to Construct and the Approval of Construction, pursuant to ARS 49-353 (A)(2)(e), are based on the drinking water project cost including design cost.
 1. Project Cost of \$12,500 or less
Pursuant to AAC R18-5-505, a project is exempt from the plan review requirements of ADEQ if the project cost is \$12,500 or less and
 - a. if the water line is not for a subdivision requiring plat approval by a city, town, or county, and
 - b. if the design is prepared by a professional engineer registered in Arizona, and
 - c. if the construction is reviewed for conformance with the design by a professional engineer registered in Arizona.
 2. Water Line Cost Between \$12,500 and \$50,000
Pursuant to AAC R18-5-505(B)(3)(b), a project is exempt from the plan review requirements of ADEQ if the project cost is between \$12,500 and \$50,000 and
 - a. if the water line is not for a subdivision requiring plat approval by a city, town, or county, and
 - b. if the design is sealed and signed by a professional engineer registered in Arizona, and
 - c. if the construction is reviewed for conformance with the design by a professional engineer registered in Arizona.
 3. Notice of Compliance
Pursuant to AAC R18-5-505(B)(4), upon completion of a project exempt from the plan review requirements of ADEQ, Tucson Water must provide to ADEQ a “notice of compliance” which contains:
 - fair market value cost estimate for the project,
 - the name of the design engineer,
 - the name of the review engineer,
 - the project completion date, and

**CITY OF TUCSON, WATER DEPARTMENT
DESIGN STANDARD NO. 8-03
DESIGN ACCEPTANCE REQUIREMENTS, Developer-Financed Projects**

- the total construction time.

4. Reclaimed Water Projects

At this time no reclaimed water conveyance (including pumping stations and storage facilities) or treatment facilities (including recharge basins and filtration plants) are submitted to ADEQ for review and/or approval.

8-03.2.0 Submittal, Review and Acceptance Process Requirements

The submittal, review and acceptance process for developer-financed water projects includes:

- Water Assurance Letters
- Water Master Plan Requirements
- Design Plan Review and Water Plan Acceptance
- Water Plan Revisions
- Plan Finalization or Cancellation
- Fees

2.1 Water Assurance Letters

Application for a Water Assurance Letter is required for developer-financed water projects that meet any one of the following condition(s):

- Planning and Zoning changes, subdivision plat process,
- Cost estimates, including design, greater than \$12,500,
- Outside of Tucson City limits, and
- Water line extensions greater than 200 feet.

Application for a Water Assurance Letter is made through the Tucson Water New Development Unit and should include:

- an 8.5"x11" drawing delineating the area to be served
- township-range-section
- number and size of services, if known

Issuance of a Water Assurance letter should not be construed as Tucson Water acceptance of water plan or as containing construction review comments relative to conflicts with water lines and a development.

Water Assurance Letters are valid for a period of one year from issuance.

2.2 Water Master Plan Requirements

Water master plans are required for all developer-financed water projects.

All types of water master plans shall be submitted on 24" x 36" plan sheets, with a scale not to exceed 1" = 200; and shall contain the information described herein.

**CITY OF TUCSON, WATER DEPARTMENT
DESIGN STANDARD NO. 8-03
DESIGN ACCEPTANCE REQUIREMENTS, Developer-Financed Projects**

This subsection contains the following major topics:

- Research Water Master Plan
- Overall Water Master Plan
- Water Master Plan

A. Research Water Master Plan

Depending on the scope and location of a proposed developer-financed project, a “research” water master plan review is highly recommended. The review would examine the proposed water system and identify any required upgrades to the existing water system due to the developer-financed water project.

The research review does not replace the water master plan review process. The research review is a comprehensive analysis to describe for the owner/developer “unforeseen expenditures” that may affect the scope of the water project.

1. Research Water Master Plan Submittals

Submittals required for Tucson Water to perform a research water master plan review include:

- a completed Research Water Master Plan Checklist, obtained from the Tucson Water New Development Unit, and
- a copy of a valid Water Assurance Letter, obtained from the Tucson Water New Development Unit.

2. Research Review Fee

A research review fee will be assessed according to the number of sheets submitted. The review fee schedule is included in the Developer-Financed Water Project Handbook (“Handbook”) available from the Tucson Water New Development Unit or can be found at http://www.tucsonaz.gov/water/misc_fees.htm.

3. Research Review Purpose

The research review will include hydraulic modeling to examine the effect of the proposed development on the existing water system. Any potential improvements, which may include offsite water main extensions, new or existing facility upgrades, and onsite water mains, will be identified during the model scenario analysis.

The research review also will identify issues in regard to protected mains and facilities, required easements, area fees, and engineering conflicts.

4. Expiration

Research done on the proposed development is valid for a period of one year after the review.

**CITY OF TUCSON, WATER DEPARTMENT
DESIGN STANDARD NO. 8-03
DESIGN ACCEPTANCE REQUIREMENTS, Developer-Financed Projects**

B. Overall Water Master Plan

Water master plans that are divided into “Phases” require an overall water master plan review. The overall review examines the “stand alone” capability of each phase until the last phase is completed. Each phase must meet minimum pressure and storage requirements set by ADEQ.

The overall water master plan does not encompass design review of construction drawings. Once the overall water plan meets minimum standards, an acceptance letter will be issued.

Acceptance of the overall water master plan is a “conceptual acceptance” and minor changes may be shown in subsequent phased master plan reviews.

1. Overall Water Master Plan Submittals

Submittals required for Tucson Water to perform an overall water master plan review include:

- a completed Water Master Plan Checklist, obtained from the Tucson Water New Development Unit, and
- a copy of a valid Water Assurance Letter, obtained from the Tucson Water New Development Unit.

Each phase of the overall water master plan must be submitted to the New Development Unit, Tucson Water, for a phased master plan and design plan review. If the scope of the phased project no longer matches the overall water master plan or fire-flow requirements change, then the consultant/engineer will be required to resubmit that phase of the project for a new master plan review. If the New Development Unit reviewer determines a phased portion of the overall master plan has changed considerably from the approved overall master plan layout, a new overall water master plan submittal and review may be required.

2. Master Plan Review Fee

A master plan review fee will be assessed according to the number of sheets submitted. The review fee schedule is included in the Developer-Financed Water Project Handbook (“Handbook”) available from the Tucson Water New Development Unit or can be found at http://www.tucsonaz.gov/water/misc_fees.htm.

3. Master Plan Review Purpose

The overall master plan review will use hydraulic modeling to interconnect phases and determine if there is adequate looping to existing water mains and new water mains in order to meet minimum peak day water demand plus fire-flow conditions.

**CITY OF TUCSON, WATER DEPARTMENT
DESIGN STANDARD NO. 8-03
DESIGN ACCEPTANCE REQUIREMENTS, Developer-Financed Projects**

4. Expiration

The acceptance letter is valid for a period of one year from issuance date.

C. Water Master Plan

1. Purpose

The purpose of the Master Plan is to assure the plan complies with the policies and standards as required by Tucson Water and State statutes.

2. General Information

The scope of the project may be established by a water assurance letter, meeting with a master plan reviewer, telephone contact or direct submittal. All developer-financed projects shall be subject to Water Master Plan review to ensure hydraulic compliance.

3. Submittal Documents

- One full-size copy of the plan
- Water Master Plan Checklist
- Tentative Plat or document showing existing elevations
- Grading Plan, Sewer Plan or document showing finished grades
- Appropriate review fee check

4. Review Process

The proposed Water Master Plan will be forwarded to the primary reviewer to be reviewed and returned to the Developer's Engineer for correction, if needed. Corrections shall be resubmitted in a timely manner. The process shall continue until the plan meets all applicable requirements. Once the Water Master Plan is accepted, the Developer's Engineer shall be informed in writing.

5. Disposition

The accepted Master Water Plan shall remain valid for a period of one calendar year from date of approval. At that time the Master Water Plan shall be cancelled and Tucson Water shall be released from any commitments relating to the allocation of resources to the project.

2.3 Design Plan Review and Water Plan Acceptance

- A. All developer-financed water project designs must be reviewed and accepted by Tucson Water prior to construction. The Applicant shall be fully responsible for all aspects of the construction drawings. Review and acceptance by Tucson Water shall in no way relieve the Applicant of this responsibility.

**CITY OF TUCSON, WATER DEPARTMENT
DESIGN STANDARD NO. 8-03
DESIGN ACCEPTANCE REQUIREMENTS, Developer-Financed Projects**

- B. After a water plan has received master plan acceptance, the plan will be reviewed for system design, drafting and sheet format consistent with the requirements of this manual.
- C. Plans shall be submitted to Tucson Water, New Development Unit.
- D. Review fees shall be paid at the time of plan submittal. The review fee schedule is included in the Developer-Financed Water Project Handbook (“Handbook”) available from the Tucson Water New Development Unit or at http://www.tucsonaz.gov/water/misc_fees.htm.
- E. All submittals shall conform to requirements set forth in this manual and the supplementary Handbook.
- F. A water plan submitted for the first design review must be accompanied by a completed First Design Review Checklist as presented in the Handbook. Submittal requirements for the water plan are identified in the first section of the checklist.
- G. Plans shall be resubmitted until compliance is achieved.
- H. Plans are reviewed on a first-come, first-served basis.
- I. An “Agreement for Construction of Water Facilities Under Private Contract” (hereinafter “Construction Agreement”) must be executed prior to construction. The document will be prepared by the Tucson Water New Development Unit and will be forwarded to the Owner/Developer as early in the design review process as possible. An executed Construction Agreement becomes a commitment by Tucson Water to provide water service and defines all requirements for construction, liability, dedication of facilities, protected mains, and any other special conditions. In the event that a water plan is cancelled, the Construction Agreement shall also be cancelled. The Agreement is not a commitment to provide water service until the Construction Agreement is signed by Tucson Water. An example of this document is included in the Handbook.
- J. The Applicant shall submit the PDEQ form titled “Water Service Agreement and Sewer Service Agreement” along with the water plan original when notified by the plan reviewer that the water plan is ready for acceptance. An example is included in the Handbook.
- K. All required signatures, other than the Tucson Water signature, within the acceptance block on the cover sheet original must be obtained prior to acceptance by Tucson Water.
- L. All accepted water plan originals will be retained by Tucson Water and become Tucson Water property. A full-size, reproducible copy of the accepted plan will be given to the Applicant for construction purposes.

**CITY OF TUCSON, WATER DEPARTMENT
DESIGN STANDARD NO. 8-03
DESIGN ACCEPTANCE REQUIREMENTS, Developer-Financed Projects**

- M. Plans are valid for one year from the date of acceptance. Plans that exceed the deadline without acquiring a “Notice to Proceed” shall be cancelled in accordance with the cancellation subsection.

2.4 Water Plan Revisions

- A. Water plans must, at all times, reflect the actual conditions and scope of the project. If the design concept, plat, or any other pertinent information changes after plan acceptance and prior to finalization, it will be the responsibility of the Applicant to promptly revise the original construction drawings.
- B. An accepted plan that requires alteration must be formally revised. Construction of the proposed revision may not commence prior to review and acceptance of the proposed revision.
- C. The Applicant shall submit to the Department a full-size copy of the accepted water plan with the proposed revision shown in red or any other contrasting color. The submittal shall include any appropriate documents pertinent to the revision, such as a revised plat, electric plan, easement description, or cost estimate.
- D. The revision fee shall be paid at the time of submittal. The fee schedule is included in the Handbook.
- E. The design reviewer will add any applicable comments to the submitted copy of the revised water plan. Depending upon the scope of the revision, the Master Plan reviewer may add additional comments or requirements.
- F. The mark-up of the proposed revision will be returned to the Applicant along with Tucson Water’s signed original of the accepted water plan.
- G. The Applicant shall revise the original water plan in accordance with the comments on the mark-up of the proposed revision.
- H. If any aspect of the fire protection system has been altered, the revised original must be reviewed and accepted by the appropriate fire authority prior to submitting the revised original to Tucson Water.
- I. The applicant shall submit the revised original, a full-size copy of the revised original, and the mark-up of the proposed revision to the design reviewer for review and acceptance.
- J. Upon acceptance, a reproducible copy of the revised plan will be made for the Applicant. Tucson Water will retain the revised original.

**CITY OF TUCSON, WATER DEPARTMENT
DESIGN STANDARD NO. 8-03
DESIGN ACCEPTANCE REQUIREMENTS, Developer-Financed Projects**

2.5 Plan Finalization or Cancellation

A. Plan Finalization

1. Purpose

The purpose of plan finalization is to establish a process whereby all parties are notified of their compliance with responsibilities as prescribed in the Construction Agreement, the utility gains control of the system and the developer may order meters for installation.

2. General Information

A plan shall be considered complete when all the requirements of the Construction Section relative to the project have been successfully met. At such time, the Construction Section shall notify all applicable Tucson Water sections in writing.

3. Finalization Process

Once the Final Inspection and Acceptance Letter is received by the Tucson Water New Development Unit, the plan shall be purged in accordance with established procedures, appropriate records forwarded to Mapping/GIS section for archival purposes and the remainder of the file shall be retained for future reference.

B. Plan Cancellation

1. Purpose

The purpose of plan cancellation is to establish a process whereby all parties are notified of project inactivity and Tucson Water releases its resource allocation for the subject project for reallocation to other projects. A cancelled plan cannot be reactivated. It must be resubmitted as a new plan.

2. General Information

A plan shall be cancelled at the sole discretion of Tucson Water at such time as one calendar year has passed with no activity relative to the status of the project.

2.6 Fees

Mayor and Council have approved the collection of plan review fees; said fees can be found in Chapter 27 of the Tucson Code.

8-03.3.0 Approval Requirements – Arizona Dept. of Environmental Quality

Pipeline projects, are to be submitted to the PDEQ office, as provided for in ARS 49-107, local delegation of state authority. Submit projects for wells, storage and other appurtenances to ADEQ. The applicant is encouraged to meet with PDEQ and ADEQ at the initiation of their project planning process to ensure that the applicant is aware of the applicable approval requirements.

**CITY OF TUCSON, WATER DEPARTMENT
DESIGN STANDARD NO. 8-03
DESIGN ACCEPTANCE REQUIREMENTS, Developer-Financed Projects**

Generally, the project review and approval requirements of ADEQ are described in AAC R18-5-505, Approval to Construct, recodified January 30, 2004. This rule is required by ARS 49-353. Similar approval requirements are described in Chapter 1, section B. of the ADEQ Engineering Bulletin No. 10, Guidelines for the Construction of Water Systems, 5/78, but they are superseded by AAC R18-5-505.

8-03.4.0 Design Changes to Approved Projects

4.1 Tucson Water Approval of Design Changes

All design changes to a previously approved project design must comply with Section 8-07 of this Manual and will require Tucson Water approval. This includes:

- design changes before going to bid, after design approval,
- invitation for bid amendments, during the bidding process, and
- supplemental agreements/change orders, during construction.

A. Cover Sheet Revisions

Make revisions to revision block on cover sheet (or sheet index map) as follows:

1. Revision number
2. Revision date
3. Person designing revision
4. Revised sheets in "revision" column
5. Person checking revision
6. Seal and sign cover sheet

B. Revising Affected Sheets

Make revisions to the affected sheets as follows:

1. Retrieve original plan sheets from Mapping/GIS Section
2. "X" out deleted items
3. Draw a "cloud" around revised or added items
4. Put the revision number in triangle adjacent to each revisions
5. Fill in the revision block on each revised sheet
6. Seal and sign revision on each revised sheet

4.2 ADEQ Approval

A. Material Design Change Determination

Pursuant to AAC R18-5-506, Compliance with Approved Plans, any material change in the approved design will require approval by ADEQ if the change will affect:

- water quality,
- capacity,
- flow,
- sanitary features, or
- performance.

**CITY OF TUCSON, WATER DEPARTMENT
DESIGN STANDARD NO. 8-03
DESIGN ACCEPTANCE REQUIREMENTS, Developer-Financed Projects**

Revisions not affecting water quality, capacity, flow, sanitary features, or performance, may be permitted during construction without further ADEQ approval if record drawings document these changes, prepared by a professional engineer registered in Arizona.

B. Submittal and Review of Material Design Change

When there is a material change in the approved design, the revised plans and specifications and a written statement of the reasons for such change shall be submitted to ADEQ for review:

C. Approval of Material Design Change

Approval shall be obtained in writing from ADEQ before the work affected by the change is undertaken.