

AD/CD Qualified Designer Program

1. Qualification Basis

- 1.1. SDG&E requires that any non-employee, who is providing gas and/or electric design services, be prequalified by SDG&E.
- 1.2. Qualification will be achieved through the Qualification Designer Program. Proficiency will be determined through testing and the review of submittals and actual design work submitted to SDG&E for review.
- 1.3. SDG&E may provide training if the design firm does not already have a qualified designer or if there is a business need. Normally, the applicant must seek training from outside sources or be self-taught. Some formal process training is required of new contractors prior to taking any design qualifying exams who have previously not performed any design work for SDG&E in the past. This formal process training is recommended for contractors who do have an SDG&E qualified designer on staff. Contractor process training consists of a two-day course which focuses on timelines and examples of deliverables associated with franchise design needs (Rule 20, Municipal Relocations, MHP, and Surcharge jobs).

2. Qualified Designer Program

- 2.1. The Qualification Program offers four disciplines: Overhead Electric, Underground Electric, Gas, and Transformer Vault. Each discipline has its own unique test.
- 2.2. Applicants may enroll in one or any combination of disciplines with one exception: The Transformer Vault discipline requires the applicant to first become a qualified underground electric designer prior to enrolling in the Transformer Vault discipline.
- 2.3. Applicants for the Qualified Designer Program should apply to the Project Management Policies and Procedures Department for enrollment in the Qualified Designer Program.
- 2.4. Qualification applies to both Contract and Applicant Design qualification.
- 2.5. Applicants for the Qualified Designer Program will be referred to as "Qualifying Designer Applicant", "QDA" for the remainder of this document.
- 2.6. For each design discipline, applicants may become qualified by:
 - 2.6.1. Passing a written exam.
 - 2.6.2. Submitting quality design work to SDG&E and meeting the minimum number of approved design hours for the given discipline as outlined in this document. Designer hours will be approved, or rejected, by the design reviewer using the attached RUBRIC.
- 2.7. The QDA will first be formally tested in the discipline they wish to pursue. These design tests will demonstrate their knowledge of design, including but not limited to GO95, GO128 and SDG&E Construction and Design Standards, overhead, underground and gas engineering calculations, OCalc-Pro and SDG&E construction methods. A passing grade must be received before the QDA may proceed further in the Qualified Designer Program.

- 2.8. The QDA will be limited to two attempts to pass any test within a 12-month period for a given discipline. SDG&E may, at its discretion, grant a QDA a third and final attempt at passing a test.
- 2.9. The QDA may submit applicant design work to SDG&E as their own designs, without being associated with an SDG&E qualified designer. (SDG&E will not contract work to a QDA unless they work for a firm which is contracting to SDG&E. SDG&E, at its discretion, may contract work to a QDA in order to test the QDA's knowledge of design.)
- 2.10. All work must be performed by the QDA, although coaching and training assistance is acceptable. Work designed by another party and drafted or input by the QDA will not qualify for equivalent hours. The submittal of work for approved equivalent hours, which is not done by the QDA, will be grounds for disqualification from the program for both the QDA and any qualified designer acting in collusion with the QDA.
- 2.11. Overhead qualification requires a minimum of 500 approved overhead design hours. While accruing hours, the applicant must take SDG&E OCalc-Pro Compliance Training. See Paul Greco for details. OCalc-Pro Certification must be maintained after the applicant has accrued 500 overhead design hours in order to maintain the Qualified Designer status.
- 2.12. Underground qualification requires a minimum of 1,000 approved underground design hours.
- 2.13. Gas qualification requires a minimum of 150 approved gas design hours.
- 2.14. Transformer Vault qualification requires a minimum of 250 approved transformer vault design hours
- 2.15. Qualification in any discipline requires evidence of the ability to design in most aspects of that discipline and have a thorough knowledge of proper application of the filed rules and the ability to apply proper costing methods to the submitted designs. For example, overhead qualification must include a mix of work not a limited scope of work such as all cable poles or pole replacements.
- 2.16. Design hours will be based on SDG&E's standard assignment of hours for contract and applicant design.
- 2.17. SDG&E will review designs for acceptability. If the design is not acceptable, no design hours will be credited towards the QDA's hours of approved design work.

3. Design Submittals

- 3.1. In order to be considered for design hour credit, the QDA must attach a written transmittal, along with their first submission of design documents, stating that they want the submitted design to be reviewed as part of the Qualified Designer Program.
- 3.2. The QDA is responsible for supplying all the necessary documents of the design package items.
- 3.3. The design supervisor will estimate the standard design hours for the job based on the hours that would be assigned to an SDG&E designer.
- 3.4. Contract jobs will already have the design hours estimated.

4. Design Review

- 4.1. The design reviewer will review the design for compliance to all SDG&E's standards and design practices.

- 4.2. The design reviewer will document design errors and give written instructions of corrections that will be required.
- 4.3. The design reviewer will decide whether the submitted design was acceptable to receive approved design hour credit toward the QDA's minimum hour requirements.
- 4.4. The design reviewer may seek guidance from the program coordinator and Supervisor as to the acceptability of the design.
- 4.5. The design reviewer will forward the QDA file to the program coordinator.

5. Design Acceptance Requirements

- 5.1. Design rejection may be based on the following: Sketch errors, Assembly Unit/Compatible Unit errors, engineering calculation errors, submittal completeness, and adhering to construction standards.
- 5.2. In addition, designs will be reviewed for completeness and adherence to, but not limited to, the items below.
- 5.3. Service Guide
- 5.4. Design Manual
- 5.5. Overhead Standards
- 5.6. Underground Standards
- 5.7. Gas Standards
- 5.8. Work Order Guidelines
- 5.9. Conversion Guidebook
- 5.10. Conversion Flowchart
- 5.11. SDG&E's Filed Tariff Schedules for Gas and Electric Service
- 5.12. State of California General Ordinances governing Gas and Electric Service.
- 5.13. Transformer loading at or above 100%, unless reasonable design criteria would not allow for it.
- 5.14. The design must be buildable as submitted. (Minor construction operations may be added by the Construction Advisor)
- 5.15. The design must be cost effective for both SDG&E and the customer.
- 5.16. The attached RUBRIC will be utilized to measure quality of design and associated work.
- 5.17. Global errors, such as using the wrong work type on several AU's or locations, will count as one error.
- 5.18. Corrections made for SDG&E's preference will not count as errors.
- 5.19. Program disqualification: Any QDA, who submits less than 200 approved design hours in a 12-month period may be disqualified from the program. Qualified Designers who submit less than 100 approved design hours in a 12-month period may be disqualified from the program.
- 5.20. QDA's who successfully completes the qualification program will have a status of "Qualified Designer" within the given discipline.

6. Program Documentation & RUBRIC

- 6.1. The program coordinator will notify design reviewers when QDA's pass initial testing and are enrolled in the qualification program, as well as when qualified designers have been placed on probation or have been disqualified.

- 6.2. The design reviewer will complete one RUBRIC for every work order performed by an external designer. This includes work from QDA's in the Qualification Program, designers who are already qualified, and qualified designers who have been placed on probation. The ensures we're treating external designers uniformly. A copy of the RUBRIC will be saved in the design folder.
- 6.3. When the design reviewer is handling a job performed by a QDA, or a qualified designer who has been placed on probation, the design reviewer will forward an electronic scan of the RUBRIC and documentation (described below) to the program coordinator within a single email after the design is fully approved.
 - 6.3.1. The documentation must include:
 - 6.3.1.1. QDA name
 - 6.3.1.2. A copy of the written transmittal, per 3.1, stating that they want the submitted design to be reviewed as part of the Qualified Designer Program.
 - 6.3.1.3. Submittal date of QDA request review
 - 6.3.1.4. Job Type (OH, UG, Gas, Transformer Vault)
 - 6.3.1.5. Work Type
 - 6.3.1.6. Approved or Rejected Design Hours assigned to work order
 - 6.3.1.7. RUBRIC
 - 6.3.1.8. Documentation for approval or rejection of design hours. Rejection of hours will be based on a "not proficient" rating in any of the following areas: sketch errors, AU/CU errors, engineering calculation errors, submittal package errors, or not adhering to construction standards.
- 6.4. Design hours for a QDA's design will not be approved if a Not Proficient rating is scored in any one category. Design hours will be approved if scores are rated in the Developing or Proficient categories.
- 6.5. If a Qualified Designer receives multiple Not Proficient ratings, they may be placed on probation or have their Qualified Designer status revoked.
- 6.6. The program coordinator will be responsible to document each QDA's progress in the program.
- 6.7. The program coordinator will track RUBRIC data for each external designer.

Job # _____

AD/CD Designer _____

Prior to submitting to SDG&E, this design was reviewed by _____

SDG&E Design Reviewer _____

Hours Approved _____

OH, UG, GAS, or Xfmr Vault? _____

| | NOT PROFICIENT 1 | DEVELOPING 2 | PROFICIENT 3 | RATING & COMMENTS |
|---|---|--|---|-----------------------------|
| SKETCH | EXAMPLE: A sketch having an abundance of graphic errors or has <u>many</u> instances where it does not adhere to SDG&E Work Order Guidelines or Conversion Guidelines. | EXAMPLE: A sketch requiring some corrections which would be anticipated during the first 1-2 years of design experience. | EXAMPLE: A construction ready sketch having minimal to no errors and is reflective of an experienced designer. | RATING = _____ Comments: |
| AU'S/CU'S | EXAMPLE: A design riddled with AU/CU errors and is not ready for construction review. Incorrect AU/CU's, missing AU/CU's, and wrong AU/CU attributes are examples of AU/CU errors. | EXAMPLE: A design reflective having some AU/CU errors as expected from a designer having 1-2 years of design experience. | EXAMPLE: A construction ready design having minimal AU/CU errors and is reflective of an experienced designer. | RATING = _____ Comments: |
| ENGINEERING CALCULATIONS * VDF * PULLING TENSION * OCALC * DEMAND ESTIMATING | EXAMPLE: Frequent Engineering calculation errors. Calculations which do not adhere to design standards. Miscalculations that would cause facilities to be sized incorrectly or may cause mechanical/electrical failure. | EXAMPLE: Engineering calculations which have few errors, demonstrate knowledge of SDG&E tools, and/or errors expected from a designer having 1-2 years of design experience. | EXAMPLE: A construction ready design having highly accurate engineering calculations and is reflective of an experienced designer | RATING = _____ Comments: |
| SUBMITTALS | EXAMPLE: An obviously incomplete submittal package, numerous items missing, lack of preparation is evident. Designs where corrections have not been made. Excessive number of design submittals. Refer to ADCD Manual 0303. | EXAMPLE: A submittal package having only minor discrepancies as may be expected from a designer having 1-2 years of design experience. | EXAMPLE: A complete, construction ready submittal package reflective of an experienced designer Refer to ADCD Manual 0303. | RATING = _____ Comments: |
| CONSTRUCTION STANDARDS | EXAMPLE: A design that blatantly fails to follow Overhead, Underground, or Gas Construction Standards. | EXAMPLE: Some coaching of standards provided as may be necessary for a designer having 1-2 years of experience. | EXAMPLE: A design which adheres to SDG&E construction standards as reflective of an experienced designer. | RATING = _____ Comments: |

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