



National Housing Quality Quality Management System Requirements For Builders

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INTRODUCTION

These quality management system requirements were developed based on ISO 9000 quality principles and adapted to residential builder business practices based on the experience of the NAHB Research Center working with numerous builders and trade partners.

As with any good quality management system, this set of requirements is continually subject to improvements. As experience is gained on the effectiveness of this type of quality management system with home builders, it will be changed and improved. The overall intent is to provide a system that will assure consistent customer satisfaction and continual improvement.

This document establishes the quality management system requirements that apply to all home builder organizations in residential new construction seeking NHQ certification. The builder organization shall be responsible for the establishment and execution of a quality management system that satisfies these requirements.

NOTES

The following notes may be used to clarify these requirements:

1. The intent of these requirements is to define the major elements of a practical and effective quality management system for home builders.
2. Considerable latitude is allowed for the builder to develop and implement a quality management system customized to their organization's needs. The organization/format of the quality manual does not need to follow the organization of these requirements; however, a compliant system shall cover all the clauses of these requirements.
3. The terms *effective* or *adequate* should be interpreted to mean that evidence is available to demonstrate that the process/system is working well enough to assure the quality management system is functioning as intended to ensure customer satisfaction and the quality of the work.
4. Where the term "procedure" or "process" is used and when there is no requirement for documentation, the company shall be able to demonstrate effective implementation. Undocumented processes are common but these should be clearly and uniformly understood by those in the organization needing to use them. Flow charts and brief process outlines are encouraged wherever practical. Where the term "documented procedure" appears within these requirements, this means that the procedure is established, documented, implemented and maintained. These requirements explicitly state when a retrievable record is required by the use of the terms *document*, *defined*, *record*, or *written*. The term *policy* is also used to indicate the need for a retrievable record.
5. A *functional area* is a separate department or independently managed area within the company. Each functional area has its own quality representative reporting to the company quality representative, and administering its own policies and procedures within the company's quality management system. The company must include in the quality management system functional areas covering production (inclusive of the purchasing activities), warranty/service, and sales. A company may include other functional areas as they see benefit in doing so. Other functional areas may include but are not limited to land development, design center, mortgage finance, design, and marketing.
6. A *functional position* is a position in the organization with specific responsibilities for implementing some or all of the company's quality management system.
7. A jobsite can be considered a community where a builder is building multiple houses at one time.
8. Where the requirement refers to "periodic" or "periodically", the quality manual or supporting documented procedure shall specify the frequency of the particular activity. The frequency shall be such that the on-going effectiveness of the activity is ensured.
9. Builders actively working to achieve NHQ certification of their critical trade partners are not required to fully meet requirement 3.3.4 for the initial qualification; however, they are expected to have a plan in place to achieve full compliance with 3.3.4 within two years of the initial certification audit (by the third audit) and significant progress should be seen by the second audit.

1.0 GENERAL

1.1 SCOPE

The quality manual shall define the scope of the services and/or housing products provided and the geographic region served by the company (or division of the company).

1.2 LEADERSHIP

Senior management shall provide demonstrated executive leadership to the company's quality and safety initiatives. This shall include setting policy and performance expectations, communicating to the organization the importance of safety and meeting customer expectations, providing resources, and reviewing the effectiveness of the quality management system and safety program.

1.3 QUALITY AND SAFETY STATEMENT

There shall be written statement(s) by senior management that describe(s) the company's commitment to quality, safety, and meeting customer's expectations. The statement(s) will commit the entire organization to continuous improvement, achieving measurable quality results, and a safe workplace and shall be communicated to customers, suppliers, trade partners, and employees.

1.4 QUALITY MANUAL

The company shall develop, document, and maintain a controlled, quality management system that promotes continual improvement. The quality management system shall be defined in a quality manual. This system shall define or reference the company's policies, processes, procedures, and documents that assure that customer expectations and company standards are met. The company shall provide ready access to the most current versions of the pertinent quality management system documents to those personnel needing them. The quality management system will, at a minimum, include those functional areas included in Sections 3.0, 4.0 and 5.0. (See Note 5.)

1.5 QUALITY RESPONSIBILITIES

Quality responsibilities shall be established for all employees including accountability for adhering to quality management system policies and procedures. The quality management system manual shall outline the major responsibilities of the senior manager (e.g., quality manager) responsible for the company-wide quality management system. Each operating area or functional area included in the quality management system of the company shall have a designated quality representative with responsibility for managing the quality management system in their area. Management responsibilities shall include ensuring that all employees have an awareness of the quality management system and the quality commitment, are following those portions of the system appropriate to their job, and understand the importance of the system.

1.6 ORGANIZATION CHART

There shall be a company organization chart showing position titles and names and reporting relationships of all functional positions. The senior manager(s) responsible for quality and safety shall be identified on the organization chart. (See Note 6.)

1.7 COMPETENT PERSONNEL

Personnel in each functional area shall be qualified and competent to fill assigned positions. Each functional area shall develop and maintain job descriptions that define the responsibilities and qualification requirements of all positions key to meeting customer expectations and/or the quality of the "as built" house and the safety of the jobsite operations.

1.8 TRAINING

A program of training for all personnel involved in meeting new homebuyer expectations shall be implemented. This training shall address new employee orientation/training, functional area orientation/training, and training in the technical requirements of the positions, and operation of the company's quality management system.

1.9 CORPORATE COMMUNICATIONS

Procedures shall be implemented to assure communication exists between all areas of the company and the trade partners of the company. This includes identification of and communication to other functional areas to address recurring non-conformances in production, service, sales, and jobsite safety. There shall be procedures implemented to communicate with new home buying customers and to manage their expectations.

1.10 CUSTOMER FEEDBACK

The company shall establish and implement procedures to evaluate customer satisfaction with the company's work. This assessment shall be conducted at least annually and shall identify overall satisfaction as well as satisfaction with the functional areas of the company that come in contact with the new home buying customer. The results of this assessment shall be considered in analyzing the effectiveness of the quality management system and initiating changes to the system. These procedures shall be documented and records kept of the customer feedback.

1.11 PERFORMANCE MEASURES

The company shall establish performance measures and goals that are indicative of the effectiveness of the quality management system and safety program. These shall be defined, documented, and quantified for each functional area covered by the company's quality management system. Progress towards meeting these goals shall be documented and reported quarterly to the management of the various functional areas.

1.12 COMPANY PROCESS FLOW

The company shall define and document a sequence or sequences of activities (process flow) for the overall company and their relationships to each other. Each sequence shall include all major planning, work, and quality assurance activities.

1.13 SAFETY PROGRAM

The company shall develop, document, implement, and maintain a job site safety and accident prevention program. This program shall include:

1.13.1 Safety Responsibilities

Safety Responsibilities shall be established for all employees regarding adherence to the safety program. The program shall outline the duties of the functional position responsible for safety. Management responsibilities shall include ensuring that all employees have an awareness of the safety commitment and the safety program, and its application to their work activities.

1.13.2 Competent Personnel

At least one employee who is generally available at the job site shall have completed the OSHA 10-hour training class. This person shall have the authority to address safety related issues on the job site. (See Note 7.)

1.13.3 Safety Plans

The production operation shall develop and implement applicable safety plans for hazards on the jobsite. Trade partners shall be required to comply with or to have their own compliant plans in these same areas, where applicable, to their work activities on the jobsite.

1.13.4 Training

Periodic ongoing training shall be implemented to focus on identified opportunities for improvement that leads to prevention of recurring or potential safety non-conformances in the builder's operation. Periodic training shall be implemented for safe work methods/accident prevention and operation of the company's safety program.

1.13.5 Safety Inspections

Periodic safety inspections shall be made and documented at all jobsites. Trade partners not in compliance with the company safety program and safety expectations will be notified immediately.

1.13.6 Corporate Communications

The company shall formally communicate to their trade partners the company's safety policy and expectations.

1.13.7 Safety Records

Safety records relating to inspections, equipment, training, meetings, and injury occurrence shall be kept. The records that satisfy all local, state, and federal safety management record keeping requirements shall be kept available and accessible during the prescribed period.

1.13.8 Safety Management Committee

A safety management committee shall be established and at a minimum shall consist of the functional position responsible for safety, appropriate management representatives, and representative field managers. The committee shall meet periodically to review the overall safety program and safety plans. Minutes of all meetings shall be documented.

1.13.9 Annual Management Review

At least annually the safety management committee shall review the operation and effectiveness of the safety program with the senior management of the company. This meeting shall be documented identifying participants, significant issues discussed, conclusions, recommendations, and planned changes.

2.0 QUALITY MANAGEMENT SYSTEM MANAGEMENT

2.1 MANAGEMENT COMMITTEE

A quality management committee shall be established and at a minimum shall consist of the quality manager, the quality representatives for each functional area, and a senior management representative. This committee shall meet periodically to review the regular operation of the quality management system, review the results of any internal audits and discuss opportunities for improvement. Minutes of the committee meetings shall be documented.

2.2 INTERNAL AUDITS

The company shall conduct internal audits at periodic intervals to assess effectiveness of the quality management system. The company quality management committee, or similar group, shall provide the oversight of planning, conducting, and reporting results of internal audits of the production, sales, and warranty operations to assure that the policies and procedures of the builder's quality management system and safety program are met. The auditor shall be trained and independent of the functional area being audited. Results of these audits shall be documented. When deficiencies in the operation of the quality management system or safety program are identified, actions to correct any nonconformance shall be taken in a timely manner and further documented. Frequency and scope of internal audits shall be sufficient to assure the effectiveness of the quality management system, but shall be conducted at least twice each year.

2.3 ANNUAL MANAGEMENT REVIEW

At least annually the quality management committee shall review the operation and effectiveness of their respective systems with the senior management of the company. The annual review shall include a summary of the internal and external audits of the activities of each functional area of the company, performance measures, customer feedback, trade partner and supplier feedback, complaints, and recommendations from the quality representatives. The annual review shall also include assuring compliance with these requirements, setting new annual goals, and addressing needed changes to the system. Records shall be maintained for each review. The records shall be in sufficient detail to disclose the participants; significant issues; conclusions; recommendations; and planned changes.

2.4 NHQ CERTIFICATION

The NHQ builder quality management system shall be evaluated by the NAHB Research Center to assess compliance with the NHQ requirements. This evaluation shall occur in accordance with the NHQ program audit guidelines to verify the continuous effective operation of the quality management system.

2.5 QUALITY MANAGEMENT SYSTEM CHANGES

The company shall have a documented procedure for approving and incorporating changes and improvements to the quality management system. Individual functional area quality management system changes must be approved and integrated into the overall company quality management system.

2.6 DOCUMENT CONTROL

The company shall document the procedure for updating and controlling the quality management system documents to assure they are current. The company shall have procedures for assuring that obsolete documents cannot be used. These documents include the quality manual, reference documents, and supporting procedures.

2.7 RECORD KEEPING

The company shall establish and document a procedure to define the controls for the retention of records and shall specify which records shall be kept and for how long. Further, it shall specify how records are disposed of once they have matured beyond the retention period. Records shall be maintained at least for a period of time consistent with the state's statute of repose.

2.8 UPDATE OF REFERENCED DOCUMENTS

The company shall provide a procedure that assures applicable codes; regulations; industry standards; company standards; or manufacturer's instructions are reviewed for changes, and the references for each in the quality program are updated annually. The company shall effectively communicate any changes to key personnel and appropriate trade partners. Any such changes are to be incorporated into the builder's and the trade partner's quality management system, as needed.

3.0 PRODUCTION OPERATIONS (Purchasing & Construction)

3.1 PRODUCTION OPERATIONS QUALITY POLICIES AND PROCEDURES

3.1.1 Scope of the Production Operations

The production operation shall define the scope of its purchasing and construction operations.

3.1.2 Process Flow

The company shall define and document a sequence or sequences of activities (process flow) for the production operation of the company. This sequence shall include all major planning, construction phases by trade, and quality assurance activities.

3.1.3 Codes and Regulations

Procedures shall be implemented to assure that all applicable codes, and governmental regulations, including safety, are identified and complied with. The company shall have access to all applicable codes.

3.1.4 Company Standards

Company standards shall be documented to define the requirements for workmanship, including tolerance requirements, industry standards, construction procedures, and material specifications. These company standards shall be included in scopes of work or other agreed upon document(s). When a conflict exists between local practice and other requirements (e.g., industry standards, manufacturer's instructions, etc.), there shall be a procedure for allowing exceptions while maintaining quality. There shall be a procedure to require that all equipment used in the construction process requiring calibration is properly calibrated and maintained. (Note: Some company standards may vary by community.)

3.1.5 Manufacturer's Product Installation Instructions

The production operation shall develop, document, and implement procedures for obtaining and maintaining current copies of all installation/application instructions. Production operations shall ensure that all products are properly installed. (Note: When products are installed by NHQ Certified trade contractors, the builder may satisfy this requirement (for the certified trades) by referencing the instructions maintained by the trade contractor provided the builder's staff needing to understand those instructions has convenient access to the instructions maintained by the trade contractor.)

3.1.6 Trade Partner and Supplier Contract Documents and Scopes of Work

Procedures shall be implemented to prepare and review the subcontracts and construction documents specific to the work of each trade utilized by the production operation to assure that builder requirements and typical home buyer expectations will be met. Trade contracts, scopes of work, or other documents shall include mutually agreed upon job ready conditions and procedures to follow when these conditions are not met. Trade contracts shall also include provisions requiring the trade partner to comply with all safety regulations and provide their accident prevention plan to the company. Trade partners shall be required to periodically report to builder management on non-compliance of job ready conditions at the builder's various communities.

3.1.7 Scheduling

Schedules for organizing and completing the work to meet established time requirements shall be documented. Processes to monitor the house specific work progress shall be established and shall have criteria under which deviations from the time requirements can occur. Procedures shall be established for communicating all schedules as well as any schedule changes to trade partners, suppliers, and new home buyer customers.

3.1.8 Approval and Selection of Trade Partners, Materials, and Other Support Services

Procedures shall be established and implemented for review, approval, selection, and monitoring of:

- 3.1.8.1 trade partners;
- 3.1.8.2 materials and suppliers; and
- 3.1.8.3 other support services.

These procedures shall include a review of quality performance, warranty history, and their safety record. An approved vendor list shall be maintained of all suppliers, trade partners and support services. This list shall be reviewed at least annually. This list shall identify trade partners that are NHQ certified, trade partners that are not NHQ certified but have formal quality management systems implemented audited and verified by the builder, and trades that require quality management activities to be conducted by the builder. (See 3.3.4.) This list shall also identify those trade partners considered as small trade partners as defined in 3.3.4. There shall be a procedure for adding and removing suppliers, trade partners or support services firms from the builder's approved vendor list

3.1.10 Control of Plans, Specifications, and Options

Procedures shall be established and implemented to assure that all plans, specifications, and options are updated when changes are made, and that no outdated or obsolete versions of any construction document can inadvertently be used.

3.1.11 Job Completion Policy

Senior management shall establish a policy that states the conditions under which a new home can be closed. It shall include a process for how unfinished items or defects are to be completed or corrected after closing or other formal turnover.

3.2 PRODUCTION OPERATIONS INSPECTIONS

3.2.1 General

Various inspections will be conducted by production operations to ensure construction activities comply with codes, regulations, scopes of work, manufacturer's instructions, and company standards. Consistent with the builder's experience with each trade partner, the frequency and detail of these inspections shall be sufficient to ensure compliance. Production operations will develop checklists and/or other documentation for recording the inspection results. The inspection criteria shall be consistent with the company standards and scopes of work. Items requiring corrections shall be recorded, corrected, and their status documented. The production operation shall take steps to ensure any item requiring correction is not covered up before the correction is completed and documented. The quality management system shall document the who; what; when; where; and where/how inspections are to be recorded for the inspection processes. The personnel conducting inspections will be trained in the inspection and documentation process.

3.2.2 Job Ready Inspection

The production operations shall ensure the worksite is prepared for the work of the next trade to begin via an inspection consistent with agreed upon job ready requirements. If a trade is required to begin work when the job ready conditions are not met, the production operations will ensure that the proper procedure (see 3.1.6) is followed. Deviations from the job ready conditions shall be recorded on the job ready inspection record.

3.2.3 In-Process Inspections

Activities and work done in the production operation shall have in-process inspections to assure that the builder's quality policy and procedures are being followed. These inspections shall be documented. Items requiring correction shall be documented, corrected, and confirmed prior to the covering or concealment of any trade's completed work. The inspection criteria shall be consistent with the company standards and scopes of work.

(Note: If an NHQ Certified trade contractor provides the builder with a copy of their inspection reports, this will satisfy this requirement for work of that trade provided the builder maintains a copy of this inspection document and periodically verifies the accuracy of the trade contractor's inspection.)

3.2.4 Final Inspection

Each completed house shall have a final inspection. Any non-conformance(s) to the builder's documented standards for completed work shall be recorded. Corrections shall be completed and documented.

3.2.5 Inspection Records

Records shall be maintained of all code compliance, third-party inspections, company quality inspections, and the correction of noted non-conformances.

3.3 PRODUCTION OPERATIONS CONTINUAL IMPROVEMENT

3.3.1 Corrective and Preventive Actions

The production operation shall define and implement on-going actions to eliminate recurring quality issues. These documented actions shall include identification, prioritization, root-cause analysis, and development and implementation of an action plan. The effectiveness of these actions shall be evaluated. When identified issues have not been eliminated, the plan shall be reassessed and appropriate alternate actions initiated. (Note: These actions are intended to support trade partners in eliminating recurring issues through their "hot spot" or other improvement process, as well as address recurring issues resulting from the builder's processes and operations.)

3.3.2 Production Operations Training

A program of ongoing training shall be implemented for all production operations employees involved in meeting quality and safety requirements, and meeting new home buyer customer expectations. This training shall focus on identified opportunities for improvement that lead to reducing recurring quality and safety issues in the production operation. Training of production personnel shall include how to assure that job ready conditions exist for all phases of construction work and how to maintain a safe jobsite. This training shall include both task specific skills and training in the operation of the production operation's quality management system and shall be documented.

3.3.3 Trade Partner Quality Assurance Program Support

The production operations quality management system shall support the quality assurance programs of trade partners and other material and service providers. Communication shall be established between the production quality representative of the company and the quality representatives of the trade partners to support the quality initiatives of each other. Feedback shall be periodically provided to the trade partner to enable the trade partner to improve the quality and safety of their work. Feedback shall be periodically solicited from the trade partner in order for the company to improve the quality and safety of the company's work.

3.3.4 Trade Partner Quality Management Oversight

All critical construction activity shall be supervised by a documented quality management system. The builder shall define a list of critical trades that require formal quality management system oversight. This list shall include at a minimum all trades involved with the building envelope; HVAC; plumbing; electrical; and any work that becomes concealed during the production process. Trades that have a significant impact on customer satisfaction, as identified by the builder, shall also be considered critical trades. (See Note 9.)

The production operation shall ensure quality management supervision of each critical trade by:

- a) Utilizing NHQ Certified trade partners, and/or
- b) Conducting and documenting periodic quality audits sufficient in scope and detail to verify the implementation and effectiveness of the trade partner's quality management system per the NHQ requirements, and/or

- c) Internally providing all quality management activities comparable to the NHQ requirements. (Note: For small trade partners with three or fewer working crews and where the owner is daily involved with the work on the job site, the builder can meet this requirement by:
 - 1) Conducting and documenting (or accepting the trade's documentation) for appropriate in-process and job complete inspections; and
 - 2) Documenting quarterly review meetings with the owner of the trade partner to discuss recurring issues, needed crew training, workmanship standards, and providing/receiving feedback. The documentation can be brief but should note date, participants, and topics discussed.)

The effective quality management activities to be ensured include code compliance, workmanship standards, compliance with manufacturer's instructions, documented inspections, corrective actions, preventive actions, and training.

4.0 WARRANTY AND SERVICE OPERATIONS

4.1 WARRANTY AND SERVICE OPERATIONS QUALITY POLICIES AND PROCEDURES

4.1.1 Scope of the Warranty and Service Operations

The warranty and service operation shall define the scope of its operations including whether employees or trade partners typically do warranty service work in existing homes, and what conditions must be met to affect “turnover” from production operations to warranty and service operations.

4.1.2 Process Flow

The company shall define and document a sequence or sequences of activities (process flow) for the warranty and service operation of the company. This sequence shall include all major communications, service work in existing homes, managing and tracking service requests, and quality assurance activities.

4.1.3 Warranty Documents, Repair Procedures, and Installation Manuals

4.1.3.1 Warranty Policy

The company shall have a defined warranty policy that is provided to each home buyer customer.

Annually all warranty documents including performance standards for all items and systems found in a new home shall be reviewed to assure expectations of the new home buyer customer are met.

4.1.3.2 Individual Trade’s Performance Standards

Scopes of work or construction documents for trade partners providing warranty service shall define the warranty service performance requirements expected of the trade partner.

4.1.3.3 Procedures and Manuals

The warranty and service operation will maintain access to current copies of repair procedures and installation manuals for any materials or equipment that requires repair or replacement.

4.1.4 Codes, Standards, Regulations, and Manufacturer’s Instructions

Procedures shall be implemented to assure identification of and compliance with all applicable codes, industry standards, governmental regulations, and manufacturer’s instructions. (See 3.1.5)

4.1.5 Warranty and Service Operations Policies

The warranty and service operations shall have a warranty request completion policy. Procedures shall be developed, documented, and implemented for communicating the company’s warranty and service obligations, procedures, and the company’s customer satisfaction commitment to the new home buyer.

4.1.6 Scheduling

Processes for scheduling and monitoring the warranty service work progress shall be established and shall have criteria under which deviations from the time requirements can occur. Procedures shall be established for communicating all schedules and any schedule changes to trade partners, suppliers, and new home buyer customers.

4.1.7 Selection and Approval of Trade Partners, Materials, and Other Support Services to Complete Warranty Service Work

Procedures shall be established and implemented for review, approval, selection, and monitoring of any trade partner or consultant not already approved by the company. These procedures shall be in compliance with Section 3.1.8.

4.1.8 Version Control

Procedures shall be established and implemented to assure that the records for all new homes covered under the company's warranty documents clearly indicate which version of the company's warranty applies to each new home sold. When more than one version of the company's warranty exists, all warranty and service personnel shall understand the terms and coverage of the warranty as it relates to each specific home.

4.1.9 Confirmation of Completed Warranty and Service Work

There shall be a procedure that obtains the homeowner's confirmation that a warranty or service request has been completed. This procedure shall address when and under what conditions a warranty or service request can "remain open" until some reasonable confirmation that the warranty or service work is, in fact, satisfactory.

4.1.10 Protection of Work

There shall be procedures established to protect all affected areas of a completed home during the warranty or service work by individual trades or other warranty personnel. These procedures shall address the process for correcting any damage that occurs during the performance of this work and the process of authorizing any such correction.

4.2 WARRANTY AND SERVICE OPERATIONS INSPECTIONS

4.2.1 Confirmation of Needed Warranty or Service Work

There shall be procedures established and implemented to determine the scope of the actual work required for each warranty claim received in accordance with the company's Warranty and Service Operations Policy and who is responsible for the completion of this work.

4.2.2 Final Inspection

The completed warranty and service work shall have a final inspection. All non-conformances to the Warranty and Service Operation's policies and procedures shall be documented. Corrections shall be completed and documented in accordance with the Warranty and Service Operations Policy. Each trade partner shall be required to provide to the builder documented assurance that, their warranty work is complete and meets the builder's requirements. (Note: This does not mean that the trade is required to give the builder a copy of their final inspection report but the trade contractor is expected to at least notify the builder, via a document, that the job is complete, correct, and acceptable to the homeowner.)

4.2.3 Inspection Records

Records shall be maintained of all warranty and service inspections.

4.3 WARRANTY AND SERVICE OPERATIONS CONTINUAL IMPROVEMENT

4.3.1 Corrective and Preventive Actions

The warranty and service operation shall define and implement on-going actions to eliminate recurring quality issues. These documented actions shall include identification, prioritization, root-cause analysis, and development and implementation of an action plan. When appropriate these actions shall include recommendations of changes in materials, equipment, trade partners, or company performance standards. The effectiveness of the corrective actions shall be evaluated. When identified issues have not been eliminated, the plan shall be reassessed and appropriate actions initiated. (Note: These actions are intended to support trade contractors in eliminating recurring issues through their "hot spot" or other improvement process, as well as address recurring issues resulting from the builder's processes and operations.)

4.3.2 Warranty Service Training

A program of ongoing training for all warranty and service operations employees and trade partners involved in meeting new home buyer customer expectations shall be implemented. This training shall focus on identified opportunities for improvement that lead to reducing recurring quality issues in the warranty and service operation. This training shall include both task specific skills (including safety) and training in the operation of the company's quality management system.

Warranty and service operations staff will be trained on required repair and installation procedures for equipment or products used in the warranty and service operation. Warranty and service personnel shall be trained on all current versions of the company's warranty in use and where and when those different versions apply. Warranty and service personnel shall be trained on industry performance standards, company performance standards, and work practices of the company's trade partners.

4.3.3 Trade Partner Quality Assurance Program Support

Communication shall be established between the warranty quality representative of the company and the quality representatives of the trade partners to support the quality initiatives of each other. Where a trade partner quality management system does not exist, the warranty and service quality representative will establish necessary procedures for assuring that the quality of any trade partner's warranty work meets customer expectations. Feedback shall be periodically provided to the trade partner to enable the trade partner to improve the quality of their warranty and service work. Feedback shall be periodically solicited from the trade partner in order for the warranty and service to improve the quality of the company's work.

5.0 SALES OPERATIONS

5.1 SALES OPERATIONS QUALITY POLICIES AND PROCEDURES

5.1.1 Scope of the Sales Operations

The sales operation shall define the scope of its operations including, whether employees or independent realtors typically perform new home sales functions, when the “turnover” occurs from sales operations, production operations, or to the warranty and service operation and also define the customer selections and options process.

5.1.2 Process Flow

The company shall define and document a sequence or sequences of activities (process flow) for the sales operation of the company. This sequence shall include all major outreach, advertising, and external communications needed to develop sales traffic; sales personnel approach to potential home buyers; writing, processing, and approving sales contracts; customer selections, options, and change orders; clearing contingencies, including financing; and communicating details of the new home to the production operation. The process shall include all necessary quality checkpoints to assure a satisfied new home buyer.

5.1.3 Sales Documents

Procedures shall be implemented to review all sales documents and marketing materials documents to assure that the expectations of the new home buyer customers are appropriately defined and managed. These procedures shall assure that these documents and materials are confirmed to be correct at least annually.

5.1.4 Sales Operation Policy

Procedures shall be developed, documented, and implemented for: soliciting and managing sales inquiries; communicating the company’s sales offerings and the company’s quality commitment to the new prospect or new home buyer; negotiating and completing sales contracts; defining the approval authority for the various sales decisions; confirming any agreements reached with new home purchasers; communicating the company’s job site safety procedures to the customer; obtaining customer concurrence at prescribed points in the new home construction process; tracking the sales process through contract, selections, contingency removal, home completion, and new home closing; determining the level of prospective customer satisfaction with the marketing and sales process; determining the level of new home buyer satisfaction with the marketing and sales operation; and identifying future steps to improve the marketing and sales process.

The sales operation shall maintain current copies of these procedures. These procedures shall be reviewed at least annually and updated as needed to improve customer satisfaction with the sales and marketing process.

5.1.5 Scheduling

Procedures shall be established for determining and communicating all schedules and any schedule changes between the production operation and new home buyer customers.

5.1.6 Version Control

Procedures shall be established and implemented to assure that the current version of sales contracts, warranty documents, and marketing materials are utilized in the sales operation. When more than one version of the company’s sales or marketing documents exists, all sales personnel shall understand the proper use of those different versions of the documents.

Procedures shall be established to ensure that the most current documents (including options, selections, and change orders) relating to the sale of a specific house are the actual documents available to, and referenced by all employees and trade partners.

5.1.7 Confirmation of Sales Process Completion

There shall be a procedure that secures the home owners confirmation that each step in the sales process has been completed. This procedure shall address when and under what conditions new information or action is required by either the new home buyer customer or any company personnel.

5.2 SALES OPERATIONS QUALITY REVIEW

5.2.1 Final Document Review

The sales operation shall develop and implement a document review procedure prior to filing a completed sales contract or a completed new home purchase. Any non-conformances to the sales policy and procedures shall be recorded. Corrections shall be completed and documented in accordance with the sales completion policy.

5.2.2 Corrective Action

Errors or deviations from the sales and marketing process shall be corrected in a timely fashion and in such a way as to assure the quality of the completed work and the satisfaction of the new home buyer customer. These deviations and their correction shall be documented.

5.2.3 Review Records

The sales operation shall document internal reviews of sales contracts in progress and completed sales. Records shall be maintained of all sales process reviews.

5.3 SALES OPERATIONS CONTINUAL IMPROVEMENT

5.3.1 Preventive Actions

The sales operation shall define and implement on-going actions to eliminate recurring quality issues. These documented actions shall include identification, prioritization, root-cause analysis, and development and implementation of an action plan. When appropriate these actions shall include recommendations of changes in sales and marketing procedures or documents. The effectiveness of the corrective actions shall be evaluated. When identified quality issues have not been eliminated, the plan shall be reassessed and additional appropriate actions initiated.

5.3.2 Sales Operations Training

A program of training for all sales operations employees and independent realtors involved in meeting new homebuyer sales and marketing expectations shall be implemented. This training shall include identified opportunities for improvement that lead to reducing recurring issues in the sales operation. This training shall also include both task specific skills and training in the operation of the company's quality management system. Suggestions for and coordination of the training subjects from the production operation and the warranty and service operation may be utilized to meet some of the requirements of this section. Sales operations staff will be trained on the use of approved documents and procedures for assuring a complete and accurate sales documentation process that meets the expectations of the new home buying customer. Sales personnel shall be trained on any different versions of the company's sales documents and when those different versions apply. Sales personnel shall be trained on applicable industry practices and safety regulations.

6.0 ADDITIONAL FUNCTIONAL AREAS

At the discretion of the company, additional functional areas (other than the required production, warranty, and sales) may be included in the company's quality management system. The quality management system for each of the additional functional areas shall include meeting the requirements of Sections 6.1-6.3.

6.1 FUNCTIONAL AREA QUALITY POLICIES AND PROCEDURES

The functional area will have a plan to understand and meet their customer's expectations. This plan shall also define the scope of the functional area activities and process flow. The plan shall include any internal or external standards that apply, any scheduling/timing expectations/commitments, training and personnel qualifications, and document/version control.

6.2 QUALITY ASSURANCE REVIEWS

Appropriate review and approval points to verify compliance with policies and procedures of the functional area shall be established along with criteria for that review and/or approval. Documentation requirements for these reviews shall also be defined and implemented.

6.3 CONTINUAL IMPROVEMENT

A process shall be defined and implemented for on-going actions to eliminate recurring quality issues. These documented actions shall include identification, prioritization, root-cause analysis, and development and implementation of an action plan. The effectiveness of these actions shall be evaluated. When identified issues have not been eliminated, the plan shall be reassessed and appropriate alternate actions initiated.