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| **~~~~ SPECIFIER NOTES ~~~~~**  This specification guidelines, its sections, and text included, is intended to be used in the preparation of Contract Documents. It contains **Specifier Notes** which shall guide editing by the A/E consultant for the uniqueness of each project during the preparation of the Project Manual. Where **[Optional]** appears in this document, it indicates requirements which may/may not be relevant to the subject project depending upon the project complexity, scope, and unique conditions. For **DRAFT** specifications prepared during the design process, use Microsoft Word, Track Changes. Set Criteria so that deletion show as strikethrough. Deletions and additions are to be in red text.  Notes unique to this section:  *1.*  *2.*  ***~~~ END OF SPECIFIER NOTES ~~~~*** |

SECTION 01 4000 - QUALITY REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Submittals

B. Quality assurance

C. References and standards

D. Testing and inspection agencies and services

E. Contractor's construction-related professional design services

F. Contractor's design-related professional design services

G. Control of installation

H. Mock-ups

I. Tolerances

J. Manufacturers' field services

K. Defect Assessment

1.02 RELATED REQUIREMENTS

A. Drawings and general provisions of the Contract, including the General Conditions for Washington State Facilities Construction and other Division 01 specification sections, apply to this section.

B. Washington State Department of Enterprise Services, Forms and Reference Documents may be obtained at <https://www.des.wa.gov/services/facilities-leasing/public-works-design-construction/formsreference-documents> including forms:

1. Department of Enterprise Services - [Notice of Nonconformance](https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.des.wa.gov%2Fsites%2Fdefault%2Ffiles%2Fpublic%2Fdocuments%2FFacilities%2FEAS%2FForms%2FDivision01%2F01-Template_NoticeofNonconformance_Final_8-1-2022.docx%3F%3D626d2&wdOrigin=BROWSELINK)

C. Section 01 4216 - Definitions

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| **~~~~ SPECIFIER NOTES ~~~~~**  *Means and methods for identification of needed Reference Standards is the sole responsibility of the A/E and is not included as part of the DES Division 01 Specification Guidelines. A/E should consider inclusion of section 01 4219 to identify necessary standards not covered by other elements of the Contract Documents.*  *A/E should delete this paragraph if Section 01 4219 will not be included in Project Manual.*  ***~~~ END OF SPECIFIER NOTES ~~~~*** |

D. Section 01 4219 - Reference Standards: Products and workmanship specified by reference to a document or documents not included in the Project Manual.

1.03 DEFINITIONS

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| **~~~~ SPECIFIER NOTES ~~~~~**  *Include this section when the project includes Contractor-Designed or Bidder-Designed, elements.*  ***~~~ END OF SPECIFIER NOTES ~~~~*** |

A. Contractor's Professional Design Services: Design of some aspect or portion of the project by party other than the design professional of record. Provide these services as part of the Contract for Construction.

1. Design Services Types Required:

a. Construction-Related: Services Contractor needs to provide in order to carry out the Contractor’s sole responsibilities for construction means, methods, techniques, sequences, and procedures.

b. Design-Related: Design services explicitly required to be performed by another design professional due to highly technical and/or specialized nature of a portion of the project. Services primarily involve engineering analysis, calculations, and design, and are not intended to alter the aesthetic aspects of the design.

B. Quality Assurance Services: Activities, action, and procedures performed before and during execution of the Work to guard against defects and deficiencies and to ensure that proposed construction complies with requirements.

C. Quality Control Services: Test, inspections, procedures, and related actions during and after execution of the Work used to evaluate the actual product incorporated into the Work comply with requirements. Services do not include Contract enforcement activities performed by the Architect.

1.04 CONTRACTOR'S CONSTRUCTION-RELATED PROFESSIONAL DESIGN SERVICES

A. Coordination: Contractor's professional design services are subject to requirements of project's General Conditions for construction.

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| **~~~~ SPECIFIER NOTES ~~~~~**  *A/E shall edit this paragraph as appropriate for the project scope.*  ***~~~ END OF SPECIFIER NOTES ~~~~*** |

B. Provide such engineering design services as may be necessary to plan and safely conduct certain construction operations, pertaining to, but not limited to the following:

1. Temporary sheeting, shoring, or supports.

2. Temporary scaffolding.

3. Temporary stairs or steps required for construction access only.

4. Temporary hoist(s) and rigging.

5. \_\_\_\_\_\_\_\_\_\_.

1.05 CONTRACTOR'S DESIGN-RELATED PROFESSIONAL DESIGN SERVICES

A. Coordination: Contractor's professional design services are subject to requirements of project's General Conditions for construction.

B. Base design on performance and/or design criteria indicated in individual specification sections.

1. Submit a Request for Information to A/E if the criteria indicated are not sufficient to perform required design services.

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| **~~~~ SPECIFIER NOTES ~~~~~**  *Include a list of all scope elements requiring Contractor Design Services. Examples might include Fire sprinkler design, pre-engineered metal buildings, DAS systems, etc.*  ***~~~ END OF SPECIFIER NOTES ~~~~*** |

C. Scope of Contractor's Professional Design Services: Provide for the following items of work:

1. \_\_\_\_\_\_\_\_\_\_.

1.06 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Project Quality Plan (PQP): Submit within 14 days of the Notice to Proceed a written plan detailing the organization and procedures proposed to achieve quality assurance and quality control so that materials, products, workmanship, on-site and off-site fabrication, construction, and operations are both in total compliance with the Contract Documents and within generally accepted quality standards for similar work. Demonstrate a thorough knowledge of Contract requirements. The PQP is intended to function as a "living document," anticipating requirements and documenting results. At minimum, the PQP shall include the following:

1. Qualification Data: For Quality Assurance Manager (QAM) and any Contractor-provided testing agencies, to demonstrate their capabilities and experience. For testing agencies, include proof of qualifications in the form of a recent agency inspection report performed by a recognized authority.

2. A letter, signed by an officer within the Contractor's organization, summarizing the responsibilities of the QAM, including the authority and obligation to stop nonconforming work, and specifically acknowledging that the QAM's performance is continuously subject to Architect and Owner approval.

3. Schedule and Log of Tests and Inspections: For all (Owner and Contractor) required tests and inspections. Prepare in tabular form and include the following:

a. Identify if the test/inspection is being provided by Owner or Contractor.

b. Specification Section number and title.

c. Description of test or inspection.

d. Identification of applicable standards.

e. Identification of test and inspection methods.

f. Number/frequency of tests and inspections required.

g. Time schedule (or time span) for tests and inspections.

h. Entity responsible for performing tests and inspections.

i. Requirements for obtaining samples.

j. Unique characteristics of each quality control service.

C. QAM Daily Reports: Submit at weekly intervals.

D. Permits, Licenses, and Certificates: For Architect's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.07 QUALITY ASSURANCE

A. Quality Assurance Organization: The umbrella for the Contractor's quality assurance and quality control activities is the Quality Assurance Organization. This organization consists of the Quality Assurance Manager, supported by additional staff as necessary to perform the activities described in this Section.

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| **~~~~ SPECIFIER NOTES ~~~~~**  *For projects of Limited Scope, use the following Quality Assurance Manager section. In general, a Limited Scope project may be one of the following:*  *1. A MACC under $1M*  *2. Only a few subcontractor trades*  *3. Are interior tenant improvement projects*  ***~~~ END OF SPECIFIER NOTES ~~~~*** |

B. Quality Assurance Manager (QAM): An individual, may be the project Superintendent, Project Manager, or other identified personnel, with complete authority to take actions necessary to ensure compliance with the Contract Documents. The QAM's authority shall include the ability and obligation to stop nonconforming work and direct all corrective measures. The QAM's responsibilities shall be to manage the Contractor's Project Quality Plan and to review all submittals in accordance with Section 01 3000 - Administrative Requirements and continuously monitor construction activity.

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| **~~~~ SPECIFIER NOTES ~~~~~**  *For projects over a $1M MACC, the requirements for:*  *1. Quality Assurance Manager to be separate from the Superintendent and Project Manager should be reviewed for appropriateness of the project scope and budget.*  *2. Quality Assurance Manager to be on-site at all times and have no other duties should be reviewed for appropriateness of the project scope and budget.*  ***~~~ END OF SPECIFIER NOTES ~~~~*** |

C. Quality Assurance Manager (QAM): An individual, separate from the Superintendent and Project Manager, with complete authority to take actions necessary to ensure compliance with the Contract Documents. The QAM shall be on site at all times during progress of the Work unless specifically authorized by the Architect. The QAM's authority shall include the ability and obligation to stop nonconforming work and direct all corrective measures. The QAM's sole responsibilities shall be to manage the Contractor's Project Quality Plan and to review all submittals in accordance with Section 01 3000 - Administrative Requirements and continuously monitor construction activity. The QAM shall engage in no production activities except those affecting quality-assurance and quality-control.

1. Quality Assurance Manager Qualifications: Documented prior experience as a QAM, Construction Project Engineer, CQC Representative, Superintendent, Architect's On-site Representative, Testing Laboratory Inspector, or Owner's Representative on projects of similar scope and complexity as the Project. The QAM must be approved by the Architect before Contract Work can begin. Evaluation of the QAM's performance will be based principally on the QAM's timeliness, accuracy, and completeness of assessment of all elements of the Contract Work. If the QAM fails to perform to the satisfaction of the Owner, the Contractor shall replace him/her within 14 days of written notice.

2. Within the Contractor's organization, the QAM shall report solely to the Project Manager or a company officer.

D. Contractor's Design-related Professional Design Services: Where professional design services or certifications by a design professional are specifically required of Contractor, provide products and systems complying with indicated performance and design criteria, or where not indicated, with performance and design criteria of authorities having jurisdiction. In addition to shop drawings, product data, and other required submittals, submit a statement, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional, indicating that the products and systems are in compliance with performance and design criteria indicated. Include the list of codes, loads, and other factors used in performing these services.

1. Professional Engineer Qualifications: A professional legally qualified to practice in the State of Washington and experienced in providing engineering services of the kind indicated.

E. Basic Quality Assurance Qualifications: Wherever the Specifications refer to installers, manufacturers, fabricators, specialists, or factory-authorized service representatives, provide entities with the following qualifications:

1. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.

2. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance.

3. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

4. Specialists: Certain sections of the Specifications require that specific construction activities be performed by recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.

a. Requirements for specialists shall not supersede building codes and regulations governing the Work.

5. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products similar in material, design, and extent to those indicated for this Project.

1.08 REFERENCES AND STANDARDS

A. For products and workmanship specified by reference to a document or documents not included in the Project Manual, also referred to as reference standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.

B. Comply with reference standard of date of issue current on date of Contract Documents, except where a specific date is established by applicable code.

C. Obtain copies of standards where required by product specification sections.

D. Maintain copy at project site during submittals, planning, and progress of the specific work, until Substantial Completion.

E. Should specified reference standards conflict with Contract Documents, request clarification from A/E before proceeding.

F. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of A/E shall be altered from Contract Documents by mention or inference otherwise in any reference document.

1.09 TESTING AND INSPECTION AGENCIES AND SERVICES

A. As indicated in individual specification sections, Owner or Contractor shall employ and pay for services of an independent testing agency to perform specified testing.

1. Contractor shall coordinate performance of all testing and inspections unless otherwise indicated.

B. Employment of agency in no way relieves Contractor of obligation to perform Work in accordance with requirements of Contract Documents.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 CONTROL OF INSTALLATION

A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce work of specified quality.

B. Comply with manufacturers' instructions, including each step in sequence.

C. Should manufacturers' instructions conflict with Contract Documents, request clarification from A/E before proceeding.

D. Comply with specified standards for quality of the work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

E. Have work performed by persons qualified to produce required and specified quality.

F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.

G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement.

3.02 MOCK-UPS

A. Before installing portions of the Work where mock-ups are required, construct mock-ups in location and size indicated for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work. The purpose of mock-up is to demonstrate the proposed range of aesthetic effects and workmanship. The contractor’s QAM should be present.

B. Provide supervisory personnel who will oversee mock-up construction. Provide a QAM on project to review workers that will be employed during the construction at Project.

C. Tests shall be performed under provisions identified in this section and identified in the respective product specification sections.

D. Assemble and erect specified items with specified attachment and anchorage devices, flashings, seals, and finishes.

E. Obtain A/E's approval of mock-ups before starting work, fabrication, or construction.

1. Any in-place mock-ups need to be approved by the Owner and A/E.

2. Failure to construct mock-up with specified materials or methods does not constitute approval of a change to the Contract Documents regardless of any approval. Any and all deviations must be documented by the Contractor in writing.

3. A/E will issue written comments within seven (7) working days of initial review and each subsequent follow up review of each mock-up.

4. Make corrections as necessary until Architect's approval is issued.

F. Accepted mock-ups shall be a comparison standard for the remaining Work.

G. Where mock-up has been accepted by A/E and is specified to be removed. Coordinate timing of removal with A/E.

H. Where mock-up are to remain as part of the finished work, Provide protection through completion of the project.

I. Where possible salvage and recycle the demolished mock-up materials.

3.03 TOLERANCES

A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.

B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from A/E before proceeding.

C. Adjust products to appropriate dimensions; position before securing products in place.

3.04 TESTING AND INSPECTION

A. See individual specification sections for testing and inspection required.

B. Testing Agency Responsibilities (Contractor provided and Owner provided):

1. Provide qualified personnel at site. Cooperate with A/E and Contractor in performance of services.

2. Perform specified sampling and testing of products in accordance with specified standards.

3. Ascertain compliance of materials and mixes with requirements of Contract Documents.

4. Promptly notify A/E and Contractor of observed irregularities or non-compliance of Work or products.

5. Perform additional tests and inspections required by A/E.

6. Submit reports of all tests/inspections specified.

C. Limits on Testing/Inspection Agency Authority:

1. Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.

2. Agency may not approve or accept any portion of the Work.

3. Agency may not assume any duties of Contractor.

4. Agency has no authority to stop the Work.

D. Contractor Responsibilities:

1. Provide access to Testing Agency to the designated location to obtain adequate samples of materials that require testing as required by the contract documents.

2. Cooperate with Testing Agency personnel and provide access to the Work.

3. Provide incidental labor and facilities:

a. To provide access to Work to be tested/inspected.

b. To obtain and handle samples at the site or at source of Products to be tested/inspected.

c. To facilitate tests/inspections.

d. To provide storage and curing of test samples.

4. Notify A/E and Testing Agency [48] hours prior to expected time for operations requiring testing/inspection services unless prior arrangements are made and agreed to.

5. Employ services of an independent qualified testing laboratory and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.

E. Re-testing required because of non-compliance with specified requirements shall be performed by the same agency on instructions by A/E.

F. Re-testing required because of non-compliance with specified requirements shall be paid for by Contractor.

G. Costs for testing visits not provided by the Testing Agency due to failure of the Contractor to schedule properly shall be paid by Contractor.

3.05 MANUFACTURERS' FIELD SERVICES

A. When required in individual specifications sections, or by product manufacturer as part of warranty, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust, and balance equipment as applicable, and to initiate instructions when necessary.

B. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

1. Submit report to Contractor and A/E.

3.06 DEFECT ASSESSMENT

A. Replace Work or portions of the Work not complying with specified requirements.

B. If, in the opinion of the A/E the Work is not complying with specified requirements, the A/E will issue a Notice of Nonconformance.

1. Contractor's QAM shall be responsible for providing a response to Notice of Nonconformance withing seven days of its issue indicating corrective measures to be undertaken.

2. If, in the opinion of the A/E, it is not practical to remove and replace the work, A/E will direct an appropriate remedy or adjust payment.

3. QAM shall maintain a Nonconformance log of all deficiencies, tracking them from identification to acceptable resolution.

3.07 QUALITY ASSURANCE MANAGER (QAM) DAILY REPORTS

A. Write daily reports for each calendar day where work was performed on-site, beginning with the date of the Notice to Proceed, on forms(s) approved by the Architect. QAM Daily Reports shall be factual records quantifying the Work and identifying quality assurance and control activities. Identify deficiencies as they occur and as they are resolved. Do not address production issues unless they impact quality assurance or quality control.

B. QAM shall sign and date all reports. Verification shall include a statement that all materials and products incorporated into the Work are in compliance with the terms of the Contract except as noted otherwise.

END OF SECTION 01 4000 - QUALITY REQUIREMENTS