

APPENDIX B**TESTING, INSPECTION, AND OBSERVATION BY OWNER**

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Administrative and procedural requirements for Owner's quality control.
- B. Owner's testing, inspection, and observation services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
- C. Unless otherwise specified, provisions specified herein are included as requirements for Owner's Construction Testing Laboratory (CTL), Owner's consultants, or other testing or inspections agencies hired by the Owner and shall be considered information only to Contractor.
- D. Index of Sections (Quick Links): All sections listed may not be applicable to all projects.
 - 1. 01454 - Architect-Engineer Site Observation
 - 2. 03905 - Interior Concrete Slab Repairs and Joint Filler Replacement
 - 3. 05090 - Post-Installed Concrete and Masonry Anchors
 - 4. 05400 - Cold Formed Metal Framing
 - 5. 07530 - Elastomeric Membrane Roofing
 - 6. 11400 - Food Service Equipment
 - 7. 16050 - Basic Electrical Materials and Methods
- E. Related Requirements:
 - 1. Construction Contract between Walmart and Contractor: Inspections, testing, and approvals required by public authorities. Contractor obligations to perform work in accordance with Contract Documents.
 - 2. Section 01452 - Contractor Quality Control: Administrative and procedural requirements for Contractor quality assurance and quality control.

1.2 REFERENCES

- A. The publications listed below form a part of this Appendix to the extent referenced. The publications are referred to within the text by the basic designation only.
- B. American Association of State Highway and Transportation Officials (AASHTO)
 - 1. AASHTO R18 - Establishing and Implementing a Quality System for Construction Materials Testing Laboratories.
 - 2. AASHTO T164 - Quantitative Extraction of Asphalt Binder from Hot Mix Asphalt (HMA).
 - 3. AASHTO T166 - Bulk Specific Gravity (Gmb) of Compacted Hot-Mix Asphalt (HMA) Using Saturated Surface-Dry Specimens.
 - 4. AASHTO T245 - Resistance to Plastic Flow of Bituminous Mixtures Using Marshall Apparatus.
 - 5. AASHTO T275 - Bulk Specific Gravity (Gmb) of Compacted Hot Mix Asphalt (HMA) Using Paraffin-Coated Specimens.
 - 6. AASHTO T308 - Determining the Asphalt Binder Content of Hot-Mix Asphalt (HMA) by the Ignition Method.
 - 7. AASHTO T312 - Preparing and Determining the Density of Asphalt Mixture Specimens by Means of the Superpave Gyrotory Compactor.
 - 8. AASHTO T318 - Water Content of Freshly Mixed Concrete Using Microwave Oven Drying (Formerly AASHTO TP 23)
 - 9. AASHTO T331 - Bulk Specific Gravity (Gmb) and Density of Compacted Hot Mix Asphalt (HMA) Using Automatic Vacuum Sealing Method.

- C. American Concrete Institute (ACI):
1. ACI 301 – Structural Concrete.
 2. ACI 305.1 - Hot Weather Concreting.
 3. ACI 318.14 – Building Code Requirements for Structural Concrete.
- D. ASTM International (ASTM):
1. ASTM C 31 - Making and Curing Concrete Test Specimens in the Field.
 2. ASTM C 39 - Concrete Specimens, Compressive Strength of.
 3. ASTM C 42 - Standard Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete.
 4. ASTM C 129 - Non-Load-Bearing Concrete Masonry Units.
 5. ASTM C 138 - Standard Test Method for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete.
 6. ASTM C 140 – Standard Test Method for Sampling and Testing Concrete Masonry Units and Related Units.
 7. ASTM C 143 - Standard Test Method for Slump of Hydraulic Cement Concrete.
 8. ASTM C 172 - Sampling Freshly Mixed Concrete.
 9. ASTM C 173 - Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method.
 10. ASTM C 174 - Standard Test Method for Measuring Thickness of Concrete Elements Using Drilled Concrete Cores
 11. ASTM C 231 - Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method.
 12. ASTM C 318 - Gypsum Formboard
 13. ASTM C 1019 - Method of Sampling and Testing Grout.
 14. ASTM C 1064 - Standard Test Method for Temperature of Freshly Mixed Hydraulic Cement Concrete.
 15. ASTM C 1077 - Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation.
 16. ASTM C 1093 - Accreditation of Testing Agencies for Unit Masonry.
 17. ASTM D 422 – Standard Test Method for Particle-Size Analysis of Soils.
 18. ASTM D 698 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort.
 19. ASTM D 1188 - Standard Test Method for Bulk Specific Gravity and Density of Compacted Bituminous Mixtures Using Coated Samples.
 20. ASTM D 1633 - Compressive Strength of Molded Soil-Cement Cylinders.
 21. ASTM D 2487 - Classification of Soils for Engineering Purposes.
 22. ASTM D 2488 - Description and Identification of Soils (Visual-Manual Procedure).
 23. ASTM D 2726 - Standard Test Method for Bulk Specific Gravity and Density of Non-Absorptive Compacted Bituminous Mixtures.
 24. ASTM D 2922 - Standard Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
 25. ASTM D 3740 - Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.
 26. ASTM D 3666 - Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials.
 27. ASTM D 5444 - Standard Test Method for Mechanical Size Analysis of Extracted Aggregate
 28. ASTM D 6938 - In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth).
 29. ASTM E 165 - Liquid Penetrant Examination for General Industry.
 30. ASTM E 329 - Agencies Engaged in the Testing and/or Inspection Of Materials Used in Construction.
 31. ASTM E 543 - Agencies Performing Nondestructive Testing.
 32. ASTM E 699 - Criteria for Evaluation of Agencies Involved in Testing, Quality Assurance, and Evaluating Building Components in Accordance with Test Methods Promulgated by ASTM Committee E-6.
 33. ASTM E 709 - Magnetic Particle Testing.
 34. ASTM E 1155 - Determining Floor Flatness and Levelness Using the F-Number System (Inch-Pound Units).
 35. ASTM F 1869 - Standard Test Method For Measuring Moisture Vapor Emission Rate Of Concrete Subfloor Using Anhydrous Calcium Chloride

- E. American Welding Society (AWS):
 1. AWS D1.1 - Structural Welding Code.
 2. AWS D1.3 - Structural Welding Code - Sheet Steel.
- F. Research Council on Structural Connections (RCSC):
 1. RCSC Specification for Structural Joints Using ASTM A 325 or A 490 Bolts.
- G. Masonry Standards Joint Committee (MSJC):
 1. TMS 402/ACI 530/ASCE5 and TMS 602/ACI 530/ASCE 6 - Building Code Requirements and Specifications for Masonry Structures.
- H. National Fire Protection Association (NFPA):
 1. NFPA 70E -Standard for Electrical Safety in the Workplace.

1.3 DEFINITIONS

- A. Testing: Evaluation of systems, primarily requiring physical manipulation and analysis of materials, in accordance with approved standards.
- B. Inspection: Evaluation of systems primarily requiring observation and engineering judgment.
- C. Observation: Evaluation of systems primarily requiring observation and professional judgment.
- D. Quality Assurance: Activities, actions, and procedures performed by the Contractor before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will substantially comply with construction documents.
- E. Quality Control: Tests, inspections, procedures, and related actions performed by the Contractor during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction substantially comply with construction documents.
- F. Construction Testing Laboratory (CTL): The independent testing and inspection agency employed by the Owner.
- G. Contractor: The General (prime) Contractor for the Project. Also referred to as GC.
- H. Architect of Record (AOR): The prime consultant in charge of overall design and coordination of the building.
- I. Engineer of Record (EOR): The Registered Engineer in responsible charge of engineering design for the project.
- J. Refrigeration Engineer of Record (REOR): The registered engineer in responsible charge of refrigeration engineering design for the project.
- K. Structural Engineer of Record (SER): The Registered Engineer in responsible charge of the structural design for the project.
- L. Civil Engineering Consultant (CEC): The Registered Engineer in responsible charge of the civil design for the project.
- M. Fire Protection Consultant: Consultant that provides professional design services and construction documents related to fire protection for the project.
- N. Architect - Engineer (A/E): A collective term to include the AOR, CEC, SER, and the Mechanical, Electrical, and Fire Protection EOR.
- O. Building Official: The Officer or his duly authorized representative charged with the administration and enforcement of the local building code.

- P. Special Inspector (SI): The Special Inspector under the direct supervision of a registered civil/structural engineer (unless otherwise specified) regularly engaged in inspection, and experienced with the type of work requiring related testing and inspection. The categories of special inspector are:
1. Technical I (TI): A Technician who is an employee of a qualified and approved testing laboratory. Lab work shall be performed in a qualified testing laboratory.
 2. Technical II (TII): A Technician with a minimum of 2 years' experience, or a graduate engineer, and is an employee of a qualified and approved testing laboratory.
 3. Technical III (TIII): An engineer regularly engaged in related work with a minimum of 4 years of experience, licensed in the State in which the project is located, and is an employee of a qualified and approved testing laboratory. This licensed engineer shall review and approve all final field reports.
 4. Structural I (StI): A graduate civil/structural engineer, or other trained and experienced personnel acceptable to the SER, with experience in the testing and inspection of related structural systems.
 5. Structural II (StII): A civil/structural engineer regularly engaged in related work with a minimum of 4 years of experience, licensed in the State in which the project is located. The licensed engineer shall review and approve all inspection reports.
 6. Independent Roofing Inspector (IRI): A technician employed or subcontracted by the CTL for the purpose of field observation of roofing installation. The IRI shall be certified as a Registered Roofing Observer (RRO) by the Institute of Roofing, Waterproofing, and Building Envelope Professionals (RCI) (Formerly Roof Consultants Institute).
 7. Roofing Technician: A technician employed by the CTL with training and experience in roofing construction or inspection. The Roofing Technician shall be under the direct supervision of the IRI and shall provide continuous inspection during roofing work.
 8. Unique special inspector requirements, for specific materials and system, are noted in related technical specification sections.
- Q. Continuous Inspection: The full-time observation of work requiring inspection by an approved Special Inspector who is present in the area where the work is being performed.
- R. Periodic Inspection: The part-time or intermittent observation of work requiring inspection by an approved Special Inspector who is present in the area where the work has been or is being performed and at the completion of the work.
- S. Deviation: Any item or component of work that does not substantially conform to the requirements of the construction plans and/or specifications and which has not been corrected by the end of business on the day it is identified. A life-safety deviation is any construction deviation that poses a serious hazard to any person.

1.4 CONSTRUCTION TESTING LABORATORY (CTL) QUALITY REQUIREMENTS

- A. CTL shall comply with requirements of ASTM C 1077, ASTM C 1093, ASTM D 3740, ASTM D 3666, ASTM E 329, ASTM E 543, ASTM E 699, and AASHTO R18.
- B. CTL shall be authorized to operate in state in which Project is located.
- C. CTL Testing Equipment shall be calibrated at reasonable intervals with devices of an accuracy traceable to either National Institute of Standards and Technology (NIST) standards or accepted values of natural physical constants.
- D. CTL shall have and maintain a written Quality Manual (QM) for its laboratory conforming to the Appendix requirements ASTM E 329 or AASHTO R18. The QM shall be available for review by the Owner's Construction Manager upon request. The QM shall be organized similar to Quality Manual Requirements of AASHTO R18 and include the following:
 1. Organization and Organizational Policies.
 2. Staff.
 3. Equipment.
 4. Test Data Control and Reports.
 5. Diagnostic and Corrective Action.
 6. Internal Quality System Review.
 7. Subcontracting.

8. Statement certifying compliance with ASTM standards specified above.

1.5 OWNER RESPONSIBILITIES

- A. Employment and payment for services of the Construction Testing Laboratory (CTL), Special Inspector (SI), and other third party testing, inspection, and observation firms to perform specified testing and inspecting will be by the Owner under separate contract.
- B. The Owner will perform testing and inspection (T & I) but only as a means to satisfy the Owner of contract compliance and as assurance to the Owner of Contractor quality control performance.
- C. Owner T&I specified herein below will be performed by the Owner's Construction Testing Laboratory (CTL) unless otherwise specified.

1.6 CONSTRUCTION TESTING LABORATORY AND SPECIAL INSPECTOR RESPONSIBILITIES

- A. Responsibilities include inspections, tests, and related actions including reports performed by testing or inspection service. They do not include Contract enforcement activities performed by the Owner's Construction Manager or authorities having jurisdiction.
 - 1. Provide the Architect of Record a copy of the contractual provisions defining the CTL's and SI's scope of services.
- B. The CTL/SI representative shall attend a pre-construction meeting prior to actual start of the Project. Except for the roofing inspection, the CTL/SI representative shall be the Registered Professional Engineer assigned to the project.
- C. Maintain a copy of Contract Drawings and Specifications with all Addenda and Change Orders. Use the Contract Documents supplemented by the approved shop drawings and applicable material and workmanship provisions of the Code for testing and inspection of the work.
- D. Provide qualified personnel at site to comply with schedule and submit reports for each test and inspection as defined hereinafter. Testing and inspection, except roofing inspection, shall be under supervision of the Registered Professional Engineer (P.E.) in the state where Project is located.
- E. Perform specified inspection, sampling, and testing of work, materials, and equipment in accordance with specified standards.
- F. Ascertain compliance of materials and mixes with requirements of Contract Documents.
- G. Perform testing and inspections in a timely manner to avoid delay of work. Schedule and coordinate testing and inspections with Contractor and appropriate sub-contractors and installers.
- H. Coordinate and consolidate specified testing and inspection to be concurrent, to the maximum extent practicable, during each required site visit in order to minimize number of visits.
- I. If observed deviations from the Contract Drawings, Specifications, or building code will be probable cause of subsequent rejection of work or material, notify Contractor, the Owner's Construction Manager, Sitework Engineering Consultant, and Architect of Record, sufficiently in advance for determination to continue operations or take corrective measures before continuing. If uncorrected after a reasonable period of time, bring the situation to the attention of the Structural Engineer of Record, the Building Official, and to the Architect of Record.
- J. Track resolutions and remedial repairs to deviations and subsequent conformance to the Contract Documents on the Observation Log.
- K. Report any observed life safety issue immediately to Contractor and Owner's Construction Manager. After notification is given to the Contractor and the Owner's Construction Manager, the CTL/SI shall also log the life safety issue on Owner's Observation Log.

- L. Perform retesting due to non-conformance with the Contract Documents based on CTL testing.
- M. Provide a final conformance letter to Owner, SER, AOR and, if determined to be required, the AHJ. An example is attached at the end of this Appendix. CTL shall upload an electronic copy (pdf) to the Walmart Workspace in the Walmart Building Portal (www.bldgportal.com), CTL Reports/Letter of Conformance. CTL shall upload an electronic copy (pdf) to the Walmart Workspace in the Walmart Building Portal (www.bldgportal.com), CTL Reports/Letter of Conformance
- N. Testing and inspection by the Building Official do not preclude the normal field involvement and site observations by Architect or Structural Engineer of Record, nor shall it relieve the Contractor of any responsibility to complete the work in accordance with the approved drawings and specifications.
- O. Construction Testing Laboratory And Special Inspector Limits On Authority: The CTL or SI may not:
 1. Release, revoke, alter, or enlarge on requirements of Contract Documents.
 2. Approve or accept any portion of the Work.
 3. Assume any duties of Contractor.
 4. Stop the Work.
- P. Testing and inspecting services performed by the CTL (Construction Testing Laboratory) are required to verify compliance with requirements specified or indicated.
 1. CTL services do not relieve Contractor of responsibility for compliance with the Contract Document requirements nor limit Contractor's quality assurance and quality control procedures that facilitate compliance with the Contract Document requirements.
 2. Specific testing and inspection requirements for individual construction activities shall be as specified in the individual Appendix Sections.
 3. Requirements for Contractor to provide quality assurance and quality control services required by Architect, Owner, Construction Manager, or authorities having jurisdiction do not limit responsibilities of the CTL.

1.7 CONTRACTOR RESPONSIBILITIES

- A. Cooperate with CTL/SI and other third party personnel, and provide access to the Work and to manufacturer's facilities.
- B. Provide incidental labor and facilities to provide access to Work to be tested, to obtain and handle samples at the site or at source of products to be tested, to facilitate tests and inspections, and to provide storage and curing of test samples. Provide lift equipment as required for inspection personnel of the Owner or the Owner's representatives.
- C. Provide CTL 24 hour notice prior to expected time for operations requiring inspecting and testing services.
- D. Notify in writing the Owner's Construction Manager three working days prior to expected time for operations requiring inspecting and testing services.
- E. Provide the CTL/SI with access to the internet for the purpose of logging deviations onto the Walmart Observation Log on the Walmart Building Portal website.

1.8 REPORTS

- A. The CTL or other Owner's testing or inspection firm shall submit reports for T&I and other items as required herein.
- B. CTL Information: Testing laboratory name, address, and telephone number, and names of full time Registered Engineer and responsible officer.
- C. Roof Observation Program.
- D. Test and Inspection Reports:

1. Submit test and inspection reports showing the following information:
 - a. Date issued.
 - b. Project title and number.
 - c. Store number.
 - d. Firm name, address and telephone number
 - e. Name of responsible officer(s).
 - f. Name and signature of tester or inspector.
 - g. Name and seal of registered engineer in responsible charge (as applicable).
 - h. Date and time of sampling.
 - i. Date of test or inspection.
 - j. Identification of product and specification section.
 - k. Location in project, including elevations, grid location and detail.
 - l. Type of test or inspections.
 - m. Results of tests or inspections and interpretation of same.
 - n. Observations regarding compliance with Contract Documents or deviations therefrom.

- E. Submit required reports and other items to the following:
 1. CEC: 1 copy. (Site work T&I only)
 2. SER: 1 copy (Construction Administration Leader) (Bldg T&I only)
 3. AOR: 2 copies (Construction Administration Leader).
 4. Contractor: 3 copies.
 5. Building Official: Quantities as required.

- F. Submit a separate final signed report stating the work requiring inspection is, to the best of the inspector's knowledge, in conformance with the Contract Documents.

- G. Reports shall be made on 8-1/2 by 11 white paper, suitable for photocopying and binding in booklet form. Sheets shall have the testing/inspection firm's letterhead (including phone number and address). Larger sheets shall be folded and bound into the booklet.

- H. Submit Test and Inspection Reports within 3 working days of T&I occurrence. CTL shall also upload an electronic copy (pdf) to the Walmart Workspace in the Walmart Building Portal (www.bldgportal.com), CTL Reports.

- I. Tests and inspections indicating non-conformance (deviations) to the Contract Documents shall be brought to the attention of the Contractor, Sitework Engineering Consultant, and Architect of Record upon discovery in the form of hard copy reports and entered into the Walmart Observation Log within 24 hours.

- J. Deviations from the Contract Documents, as defined above, shall be logged onto the Walmart Observation Log by the CTL/SI representative on site. (www.bldgportal.com), enter username and password, select Observation Log. Follow instructions on the Observation Log website for entry of information.

- K. Owner's Construction Manager in conjunction with the CTL and/or SI will determine when to involve the AOR or EOR for remedial action.

PART 2 - and PART 3 - PRODUCTS and EXECUTION

2.1 TESTING AND INSPECTION BY OWNERS CONSTRUCTION TESTING LABORATORY (CTL)

- A. General Requirements:
 1. Testing and inspection shall be conducted as specified hereinafter listed by sections corresponding to section numbers of the Specifications. Sections related to CTL responsibilities include the following:
 - a. 03905 - Interior Concrete Slab Repairs and Joint Filler Replacement
 - b. 05090 - Post-Installed Concrete and Masonry Anchors
 - c. 05400 - Cold Formed Metal Framing
 - d. 07530 - Elastomeric Membrane Roofing
 2. CTL shall inspect the installation and securement of Building Mounted Signage.

3. Tests and inspections shall, as a minimum, be performed by Technical I (TI) inspector if not otherwise specified in the individual section.
 4. If inspection of fabricators' work is required, the Owner's representative may require testing and inspection of the work at the plant before shipment.
 5. Testing and inspection shall be performed in accordance with the industry standard used as the reference for the specific material or procedure unless other criteria are specified. In the absence of a referenced standard, tests shall be accomplished in accordance with generally accepted industry standards.
 6. Work shall be checked as it progresses, but failure to detect any defective work or materials shall in no way prevent later rejection if defective work or materials are discovered, nor shall it obligate Owner to accept such work.
- B. Testing or inspection in addition to that specified herein, shall be performed by the CTL as directed by the Owner for in-place work as further verification of Work or as verification of Contractor performed Quality Control testing and inspection.

2.2 OWNER'S TESTING, INSPECTION AND OBSERVATION BY OTHER THAN CTL

- A. Observation by Owner's Professionals of Record (POR):
1. Professionals of Record include:
 - a. Architect (AOR)
 - b. Structural Engineer (SER)
 - c. Mechanical or Electrical Engineer (EOR)
 - d. Refrigeration Engineer (REOR)
 - e. Fire Protection Engineer (EOR)
 - f. Civil Engineer (CEC)
 2. Sections herein related to POR observation include the following:
 - a. 01454 - Architect Engineer Site Observation
 - b. 13900 - Fire Suppression
 - a. 15600 - Refrigeration Systems
 - b. 15700 - Heating, Ventilating, and Air Conditioning Equipment
- A. Testing, Inspection, and Observation by Owner's Independent Inspectors:
1. Sections herein which include testing, inspection or observation by Owner hired independent entities include the following:
 - a. 11400 - Food Service Equipment: Food Service Equipment Supplier or Owner Furnished Equipment Manufacturer's Representative.
 - b. 16050 - Basic Electrical Materials and Methods: Owner's Independent Power Systems Study Consultant (PSSC).

SECTION 01454 - ARCHITECT-ENGINEER SITE OBSERVATION

2.1 CONTRACTOR AND OWNER COORDINATION AND SCHEDULING

- A. Contractor Responsibilities are specified in Specification Section 01454.
- B. Owner's Architect-Engineers (A/E) will perform site observation at no cost to the Contractor.

2.2 SITE OBSERVATION

- A. The A/E will perform construction site observations as agreed to with the Owner as listed below or as otherwise requested by the Authority Having Jurisdiction or Owner's Construction Manager to check a sample of the constructed Work for general conformance with the Contract Documents.
- B. Owner's A/E Consultant Quality Assurance Observation Schedule:
 - 1. AOR:
 - a. Observations as required by the Authority Having Jurisdiction or as directed by Owner.
 - 2. EOR:
 - a. Observations as required by the Authority Having Jurisdiction or as directed by Owner.
 - 3. SER:
 - a. Observations as required by the Authority Having Jurisdiction.
 - b. Observations for new masonry openings as directed by the Owner's Construction Manager.
 - c. Observations for modified masonry openings as directed by the Owner's Construction Manager.
- C. Specific items to be witnessed during the construction site observation (including but not limited to) are listed below in more detail by discipline to assist in scheduling the site observation at the proper time.
- D. Architectural: Architectural consultant site observation shall be by a competent representative of the AOR having complete knowledge of the project.
 - 1. Observe construction in progress and work completed, to determine if project is being constructed to meet the requirements of the Construction Documents.
 - 2. Review architecturally related construction documents currently used by the Contractor to assure that revisions and Construction Change Directives are incorporated and executed.
 - 3. Report deviations on the on-line Observation Log.
- E. Structural:
 - 1. Verify vertical reinforcing, control joint placement, foundation sizes, anchor bolt placement, CMU placement, grouting procedures, vertical and horizontal reinforcing, structural steel connections, roof decking attachment, and grouting of voids.
 - 2. Additional visits shall be as required to review repair of previous deviations.
- F. The A/E shall monitor the construction schedule and coordinate with the Contractor at least 21 days prior to scheduled date of construction completion to schedule site visits to occur at the most appropriate time. The A/E shall notify the Contractor and Owner's Construction Manager 14 days in advance of the date and time of each scheduled site visit.
- G. Testing and inspections by the Building Official shall not preclude the normal field involvement and site observations by the A/E, nor will it relieve the Contractor of any responsibility to complete the work in accordance with the approved drawings and specifications.
- H. The A/E shall not have control over or responsibility for construction means, techniques, sequences of operations or for safety programs and procedures in connection with the construction work.
- I. Work will be checked as it progresses, but failure to detect defective work or materials shall in no way prevent later rejection if defective work or materials are discovered, nor shall it obligate Owner to accept such work.

2.3 DEFICIENCY PROVISIONS

- A. The observation site visits listed above are to be performed at Owner's expense. Should there be outstanding items of non-conformance with the Contract Documents that warrant additional site visits to be performed by the A/Es, the A/Es shall receive approval from Owner prior to performing additional construction site observations until all deviations have been corrected by the Contractor and closed by the A/E. Reimbursement by the Contractor for costs for additional A/E site visits will be as specified in Section 01452.
- B. Deviations from the Contract Documents shall be entered into the on-line Walmart Observation Log by the A/E as required and will be tracked and noted by the A/E when resolved by subsequent conformance by the Contractor.
 - 1. Observation Log: www.bldgportal.com, enter username and password, select Observation Log. Follow instructions on the Observation Log website.

SECTION 03905 - INTERIOR CONCRETE SLAB REPAIRS AND JOINT FILLER REPLACEMENT

2.1 OWNER TESTING AND INSPECTION (T&I):

- A. Owner T&I will be performed by the Owner's Construction Testing Laboratory (CTL).
- B. Inspection:
 - 1. CTL shall inspect all repairs performed in accordance with this Section, whether shown on Drawings or not, for conformance with manufacturers' published instructions.
 - a. Perform inspection concurrently with gloss measurements specified in other sections.

SECTION 05090 - POST-INSTALLED CONCRETE AND MASONRY ANCHORS

2.1 OWNER TESTING AND INSPECTION (T&I):

- A. Owner T&I will be performed by the Owner's Construction Testing Laboratory (CTL).
- B. Owner T&I shall be performed by a Special Inspector - Technical II or Special Inspector - Structural I.
- C. Section Includes:
 - 1. Post-installed mechanical and adhesive anchors for structural members, equipment supports, and signage.
 - 2. Post-installed mechanical type anchors for sales floor shelving fixtures and storage racks.
 - 3. Periodically verify and inspect the following for each anchor specified in Section 05090:
 - a. General compliance with manufacturer's published instructions.
 - b. Product name and description.
 - c. Adhesive expiration date for adhesive anchors.
 - d. Compliance of drill bit with manufacturer's specifications.
 - e. Adhesive application technique for adhesive anchors.
 - f. Concrete type, compressive strength, and member thickness.
 - g. Hole diameter, depth, location, and edge distance.
 - h. Cleanliness of hole and anchor.
 - i. Anchor diameter, length, and steel grade.
 - j. Anchor embedment and spacing.
 - k. Required tightening torque for mechanical anchors.
- D. Testing: Perform pullout or shear tests to determine adequacy of suspected malfunctioning anchors when directed to do so by the Owner's Construction Manager upon recommendation by the CTL.

SECTION 07530 - ELASTOMERIC MEMBRANE ROOFING

2.1 OWNER TESTING AND INSPECTION:

- A. Roof Inspection:

1. The Owner's Independent Roofing Inspector (IRI) will conduct roof inspections as specified herein. The IRI responsibilities will, in general, be as follows:
 - a. Provide full time inspection during roof installation.
 - b. Complete Roof Inspection Checklist.
 - c. Oversee remedial repairs in the field.
 - d. Enter roofing defects and required repairs defined as deviations by the IRC into the online Owner's Observation Log.
 - e. Issue Certification of Quality of Roof Construction upon completion of roof installation.
- B. The activities and responsibilities of the IRI shall not preclude any quality control responsibilities by the Contractor, the Roofing Contractor, or the Manufacturer's Technical Representative as specified herein.
- C. The IRI is neither authorized to change any specified requirement nor to approve any portion of the work.
- D. Failure to detect defective material or Work will neither prevent rejection when defects are discovered later nor will it obligate Owner to make final acceptance.

SECTION 11400 - FOOD SERVICE EQUIPMENT

2.1 OWNER TESTING AND INSPECTION (T&I):

- A. Owner T&I specified herein below will be performed by the Owner's Food Service Equipment Supplier or Owner Furnished Equipment Manufacturer's Representative who will also conduct operational tests on Owner Furnished Equipment at no cost to Contractor, except for items specifically indicated to be tested by Contractor.
- B. Owner will perform operational tests of equipment through full operational cycle and operate for a sufficient time to verify that equipment is operating within manufacturer's specifications.
- C. Operational tests will be completed no later than one week after Date of Possession.
- D. Contractor's Responsibility: Provide adjustments or changes as required from operation test results.

SECTION 16050 – BASIC ELECTRICAL MATERIALS AND METHODS

1.2 OWNER TESTING AND INSPECTION (T&I):

- A. Owner T&I specified herein below will be performed by the Owner's Power Systems Study Consultant (PSSC) who will perform an arc flash risk assessment, adjust devices in coordination with the study, and apply incident warning labels as described in Specifications Section 01351 at no cost to Contractor.
- B. Owner's PSSC:
 1. Brown & Caldwell, Inc., Walnut Creek, CA. Contact Katie Dorety, Project Manager (858) 571-6737, KDorety@BrwnCald.com
- C. PSSC will perform site visits as follows:
 1. 1st Site Visit: Coordinate with Contractor for access to required electrical distribution equipment for the purpose of collecting data at completion of electrical work.
 2. 2nd Site Visit: Coordinate with Contractor or Superintendent for access to required electrical distribution equipment at or as near as possible to Grand Opening.
- D. The activities and responsibilities of the PSSC shall not preclude any quality control responsibilities by the Contractor as specified in Specifications Section 16050.
- E. The PSSC is not authorized to change any specified requirement.

END OF APPENDIX

[Example Conformance Letter from Testing and Inspection Agency (CTL) - all items in parentheses are items to be edited for the project]

[Mr. Construction Manager]
Walmart Construction
Sam M. Walton Development Complex
2001 S. E. 10th Street
Bentonville, Arkansas 72716

[Re: Supercenter (Store #xxx) - City, State]

[Dear Construction Manager:]

The purpose of this letter is to state to Walmart, the Architect of Record and the Engineer of Record that, to the best of our knowledge, the construction on the above referenced project has been completed in substantial conformance with the approved Contract Documents and with the provisions of the applicable building code. In the capacity of owner's testing and inspecting agency, periodic reports as well as a final report have been issued. Those reports state that all of the on-site inspection and testing has been performed. Work requiring inspection was, to the best of the inspector's knowledge, in conformance with the approved plans, specifications, and applicable workmanship provisions of the code.

To our knowledge no outstanding items exist except as otherwise may be entered and shown on the Walmart Observation Log.

Sincerely,
[Testing and Inspection Agency]
[Include a seal, signature and date of signature]

cc: [ARCHITECT OF RECORD]
[ENGINEER OF RECORD]