



SPECIAL INSPECTION REGISTRATION PROGRAM

Agency Facilities, Equipment, Records and Personnel Survey Checklist

(09/17)

Survey Preparations by the Agency

On the day of the agency survey/inspection, the agency should:

- have a conference room in which the survey/inspection team and the supervising laboratory technician can meet and work
have supervising testing personnel available and prepared to participate
have samples all applicable equipment available (including any item on the list of field or laboratory equipment needed to perform the test or inspection in each of the categories for which the agency has applied for registration)
have testing and project records accessible for review

1. Agency and Key Personnel Information

Survey/Inspection Date ___/___/___

Agency (name) EIN No.

(city) (state) (zip code)

Agency Contact (name) (title/position)

Agency Contact Phone No. () FAX Phone No. ()

Agency Contact (E-mail):

Technical Director (name)

Supervising Laboratory Technician (name)

Special Inspection Field Supervisor (name)

Special Inspection Field Supervisor (name)

Special Inspection Field Supervisor (name)

AGENCY SURVEY CHECKLIST

Registration is for the following type(s) of (testing and inspection) work:

- | | |
|---|---|
| <input type="checkbox"/> Reinforced Concrete* | <input type="checkbox"/> Structural Welding |
| <input type="checkbox"/> Prestressed Concrete** | <input type="checkbox"/> Spray-Applied Fire-Resistive Materials |
| <input type="checkbox"/> Shotcrete** | <input type="checkbox"/> Lateral Wood |
| <input type="checkbox"/> Structural Masonry | <input type="checkbox"/> Cold-Formed Steel Framing |
| <input type="checkbox"/> Structural Steel and Bolting | <input type="checkbox"/> Fire-Resistant Penetrations and Joints |
| <input type="checkbox"/> Proprietary Anchors | |

*Requires current ACI certification as an ACI Field Technician-Grade 1.

**Reinforced Concrete registration is a prerequisite for obtaining this inspector registration.

WABO agency inspection team:

_____	_____
(name)	(name)
_____	_____
(name)	(name)

Agency Survey Explanation-

Registration of an agency is based on an assessment of an Agency Registration Application, and accompanying Applicant Qualification Documentation, and an agency on-site facilities, equipment and records survey/inspection. Below is a list of the items the survey/inspection team will confirm when inspecting an agency.

Agency Survey Team Directions-

For items below, if an item is confirmed place a check in the space; if an item is deficient, place a number in the space to coincide with the numbered deficiency explanations on the final page of this checklist.

2. Quality Assurance

- Confirmed sample pickup procedures
- Confirmed sample pickup transportation methods
- Confirmed sample log-in system
- Confirmed sample marking methods
- Confirmed sample sorting/storage methods
- Confirmed method of correcting logbook entry errors
- Confirmed records include sample receipt date
- Confirmed traceability of samples to inspection reports and testing reports issued by the agency

AGENCY SURVEY CHECKLIST

Directions: Obtain at least three (3) different commercial construction projects (one large concrete project, a masonry project, and one small to medium concrete project) and select samples received approximately three to six months prior to the audit to ensure all the tests and reports should be in a completed file.

<u>Job/ID Name/No.</u>	<u>Date Cast</u>	<u>Sample ID No.</u>	<u>Sample Type</u>	<u>Break-log Value</u>	<u>Report Value</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Section 2 Inspector Notes:

3. Equipment Calibration and Maintenance

Directions: Copy the ID No., description, and calibration sticker information (e.g. date due) of six different types of equipment surveyed in the lab. Include any and all nonconforming items found. Use this list to complete the checking of the calibration records and equipment lists in the Records Section.

<u>Equipment ID No.</u>	<u>Description</u>	<u>Calibration Sticker</u>	<u>Equipment Log Entry</u>	<u>Calibration Documentation</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Section 3 Inspector Notes:

AGENCY SURVEY CHECKLIST

4. Registration Categories/Types of Work

4.1 Reinforced Concrete and Prestressed Concrete

4.1.1 Laboratory Equipment:

- R Confirmed adequate facilities for curing concrete specimens in accordance with ASTM Method C192
(NOTE: These facilities may consist either of a thermostatically controlled fog room with required temperature and humidity control or thermostatically controlled tanks containing saturated lime solution.)
- Confirmed curing room temperatures and humidity are being maintained, or
- Confirmed curing tank temperature, humidity and water solutions are being maintained
- R Confirmed a screw (or hydraulic) type compressive testing machine with sufficient capacity to test concrete specimens
- R 250,000 lbs. (normal strength concrete)
- 400,000 lbs. (high strength concrete)
(NOTE: The testing machine shall conform to all the requirements of ASTM Practices E4, Load Verification of Testing Machines and ASTM Test Method C39 for Compressive Strength of Cylindrical Concrete Specimens. The machine shall be verified annually in accordance with ASTM Practices E4 and documentation of verification shall be available.)
- R Confirmed adequate equipment/facilities for preparing concrete test specimens in accordance with ASTM Method C192, Making and Curing Concrete Test Specimens in the Laboratory
- R Confirmed that paperwork has been maintained regarding lab verification that equipment conforms to ASTM specifications, i.e. single use molds, reusable molds, flexural beam molds, cube molds
- R Confirmed that physical testing of capping compounds conform to ASTM guidelines and that test records are maintained
- Confirmed, that equipment prescribed for the following ASTM test methods conforms to ASTM guidelines and that the lab is maintaining equipment maintenance and applicable calibrating records.
- C142, Test Methods for Clay Lumps and Friable Particles in Aggregate
 - Balance to .1% of weight of test sample
 - Oven (temperature 110 +/- 5 degrees)
- C123, Test Method for Lightweight Pieces and Aggregate
 - Balance to .1 g
 - # 50/ 4 sieve
 - Hydrometer
- C117, Test Method for Materials Finer Than #200 Sieve in Mineral Aggregates by Washing (NOTE: Includes physical inspection of sieves)
 - R # 200/ 16 sieve
 - R Oven
 - R Dispersing agent (i.e. dish washing soap)

*R=minimum requirement

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- ___ C40, Test Method for Organic Impurities in Fine Aggregates for Concrete
 - ___R Reference card or color solutions
 - ___R Solution or sodium hydroxide to make solution
 - ___R Graduated glass container
- ___ C136, Method of Sieve Analysis of Fine and Coarse Aggregates (NOTE: Includes physical inspection of sieves)
 - ___R Balance
 - ___R Sieves
- ___ C128, Test Method for Specific Gravity and Absorption of Fine Aggregate
 - ___R Cone & Tamper
 - ___R Balance
 - ___R Pycnometer Jar
- ___ C127, Test Method for Specific Gravity and Absorption of Course Aggregate.
 - ___R Balance
 - ___R Water tank
 - ___R Wire mesh container
- ___ C566, Test Method for Total Moisture Content of Aggregates by Drying
 - ___R Balance
 - ___R Oven (temperature 110 +/- 5 degrees
- ___ C29, Test Method for Unit Weight and Voids in Aggregate
 - ___R Balance
 - ___R Tamping rod
 - ___R Unit weight bucket
 - ___R Plate glass
- ___ Test for flexural strength of concrete in accordance with ASTM Test Methods C31 and C78, for Flexural Strength of Concrete (**NOTE:** Using Simple Beam and Third-point Loading)
- ___ ASTM C131, Test Methods for Resistance to Degradation of Small Size Coarse Aggregate by Abrasion and Impact (Los Angeles Machine)
 - ___ In-house
 - ___ External
- ___ ASTM C88, Test Method for Soundness of Aggregates (Sodium Sulfate or Magnesium Sulfate & Hydrometer)
 - ___ In-house
 - ___ External
- ___ Physical and chemical analysis of cement (Chemistry Laboratory)
 - ___ In-house
 - ___ External
- ___ Testing of curing compounds, admixtures and related material (Chemistry Laboratory)
 - ___ In-house
 - ___ External
- ___ Determination of modulus of elasticity (Jig with Dial Gauges and Break Machine)
 - ___ In-house
 - ___ External

*R=minimum requirement

AGENCY SURVEY CHECKLIST

- ___ A screw (or hydraulic) type testing machine of sufficient capacity to test any tendon specimen which may be involved-normally a multiple range machine with at least 200,000 lb. capacity, jaws extensometer
 - ___ In-house
 - ___ External

4.1.2 Field Inspection:

- ___ Confirmed that the lab is maintaining calibration logs on the equipment required for the following ASTM test methods and that they are verifying that personnel is performing testing as per guidelines:
- ___ C231, Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method (air meters)
 - ___R Air pot
 - ___ C173, Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method
 - ___ Volume metric type air meter-"roll-o-meter"
 - ___ C31, Test Method for Making and Curing Concrete Test Specimens in the Field
 - ___R Cylinder molds
 - ___R Tamping rods
- ___ C172, Test Method of Sampling Freshly Mixed Concrete
 - ___R Cylinder molds
 - ___R Tamping rods
- ___ C143, Test Method for Slump of Portland Cement Concrete
 - ___R Slump cones
 - ___R Tamping rods
 - ___R Scoop
- ___ C138, Test Method for Unit Weight, Yield and Air Content (Gravimetric) of Concrete
 - ___R Air pot
 - ___R Strike-off plate
 - ___R Thermometer
- ___ C1064, Test Method for Temperature of Freshly Mixed Concrete
 - ___R Thermometer

*R=minimum requirement

Category (Reinforced Concrete and Prestressed Concrete) Inspector Notes:

AGENCY SURVEY CHECKLIST

4.2 Shotcrete

(Reinforced Concrete registration is a prerequisite for this registration)

4.2.1 Laboratory Equipment:

- ___ Confirmed coring equipment (or access to equipment) capable of removing samples from shotcrete panels
 - ___R Coring machine
 - ___R Compression machine
- ___R Confirmed equipment (or access to equipment) for preparing perpendicular core ends
 - ___ Cut-off saw

Category (Shotcrete) Inspector Notes:

4.3 Structural Masonry

4.3.1 Laboratory Equipment:

- ___R Confirmed a screw (or hydraulic) type compression machine of sufficient capacity to test any specimen which may be involved in masonry construction - normally a multiple range machine with at least 250,000 lb. capacity. (NOTE: A 500,000 lb. capacity machine should be accessible) (The testing machine shall conform to all the requirements of ASTM E4, "Load Verification Testing Machines." The machine shall be calibrated annually and a report giving details of the calibration shall be readily available.)
- ___R Confirmed adequate facilities for curing mortar and grout specimens in accordance with ASTM C192.
 - ___ Curing room temperature and humidity are being maintained, or
 - ___ Curing tank temperature and water solutions are being maintained
- ___R Confirmed adequate facilities and equipment for testing mortar in accordance with ASTM C780 & grout in accordance with 4 ASTM C1019
- ___R Confirmed adequate procedures and documentation pertaining to verification that equipment conforms to IBC and ASTM specifications, e.g. single use molds, reusable molds, and cube molds
- ___R Confirmed that physical testing of capping compounds conforms to ASTM guidelines and that test records are maintained
- ___R Confirmed adequate facilities for curing prisms in accordance with ASTM C1314
- ___R Confirmed adequate facilities for capping prisms in accordance with ASTM C1314
- ___R Confirmed use of proper loading platens of thickness and hardness in accordance with ASTM C1314

*R=minimum requirement

AGENCY SURVEY CHECKLIST

Category (Structural Masonry) Inspector Notes:

4.4 Structural Steel and Bolting

4.4.1 Laboratory Equipment:

- ___ Confirmed access to facilities for mechanical testing of steel
 - ___ In-house
 - ___ External
- ___ Confirmed access to facilities for analysis of constituents and alloying elements of structural steel (Chemistry Laboratory)
 - ___ In-house
 - ___ External

4.4.2. Field Inspection:

- ___ Confirmed the following equipment:
 - ___R Steel tape, rule, calipers and other appropriate measuring equipment
 - ___R Inspector's identification stamp or tags
 - ___R Torque wrench for high strength bolts
 - ___R Tension calibration device (Skidmore or equivalent)
 - ___R Feeler gauges for load indicator washers

Category (Structural Steel & Bolting) Inspector Notes:

4.5 Structural Welding

4.5.1 Laboratory Equipment:

- ___ Confirmed access to facilities for mechanical testing of welded samples
 - ___ In-house
 - ___ External

4.5.2. Field Inspection:

- ___ Confirmed the following equipment:
 - ___R steel tape, rule, calipers and other appropriate measuring equipment
 - ___R weld dimension gage
 - ___R weld viewing shield

*R=minimum requirement

AGENCY SURVEY CHECKLIST

- R strong hand light
- R thermometer or temperature measuring crayons
- R inspector's identification stamp or tags

4.5.3 Nondestructive Testing:

- Confirmed access to nondestructive testing which meets the requirements of ASTM E543, Practice for Determining the Qualifications of Nondestructive Testing Agencies
 - In-house
 - External

Category (Structural Welding) Inspector Notes:

4.6 Spray-applied Fire-resistive Materials

4.6.1 Laboratory Equipment:

- R Confirmed oven capable of drying samples to constant weight at 120 degrees F and fifty percent (50%) relative humidity.
- R Confirmed scales of sufficient accuracy for obtaining dry weight
- Glass Beads
- Funnel
- 200 mL container

4.6.2 Field Inspection:

- R Confirmed procedures used for sampling of materials
- Confirmed the following equipment
 - R Depth measuring devices
 - R Template
 - R Tape
 - R Adhesion equipment
 - R Epoxy
 - R Jar lids
 - R Calibrated scale

*R=minimum requirement

Category (Spray-applied Fire-resistive Materials) Inspector Notes:

AGENCY SURVEY CHECKLIST

4.7 Lateral Wood

4.7.1 Laboratory Equipment (N/A)

4.7.2 Field Inspection

___ Confirmed the following equipment:

___R Moisture Meter

___R Tape Measure

___R Pull Test Assembly

Category (Lateral Wood) Inspector Notes:

4.8 Cold-Formed Steel Framing

4.8.1 Laboratory Equipment (N/A)

4.8.2 Field Inspection

___R Fillet Weld Gauge

___R Magnifying Glass

___R Flashlight

___R Steel Tape, Rule, Caliper

___R Weld Viewing Shield

Category (Cold-Formed Steel Framing) Inspector Notes:

4.9 Proprietary Anchors

4.9.1 Laboratory Equipment (N/A)

4.9.2 Field Inspection

___R Pull Test Assembly

___R Steel Tape, Ruler, Caliper

___R Torque Wrench

*R=minimum requirement

Category (Proprietary Anchors) Inspector Notes:

4.10 Fire-Resistant Penetrations and Joints

4.10.1 Laboratory Equipment:

- R Calibrated scale/balance
- R Thickness Gauge
- R Outside Caliper
- R Mil Thickness Gauge

4.10.2 Field Inspection:

- R Razor Knife
- R Steel tape measure, ruler
- R Thickness Gauge/depth measuring device
- R Outside/Digital Caliper
- Strong hand light
- Magnifying glass
- Inspector identification markers
- Drill bits
- Spatula or putty knife
- R Mil Thickness Gauge

*R=minimum requirement

Inspection procedure and required forms:

- Inspection procedure for E 2174
- Inspection procedure for E 2393
- Inspection forms for E-2174
- Inspection forms for E -2393

Category (Fire-Resistant Penetrations and Joints) Inspector Notes:

- 5. Codes and Standards** – *current adopted edition per International Building Code*
- 5.1 BASIC (any and all types of work)
 - 5.1.1 International Building Code
 - 5.1.2 American Society for Testing and Materials (ASTM) Standards (applicable to the types of work performed by the agency)

 - 5.2 REINFORCED CONCRETE
 - 5.2.1 American Concrete Institute (ACI) Standard 318
 - 5.2.2 American Concrete Institute (ACI) Manual of Concrete Practice
 - 5.2.3 American Concrete Institute (ACI) Manual of Concrete Inspection (SP-2)
 - 5.2.4 Portland Cement Association (PCA) Design & Control of Concrete Mixtures
 - 5.2.5 Concrete Reinforcing Steel Institute (CRSI) Manual of Standard Practice

 - 5.3 STRUCTURAL MASONRY
 - 5.3.1 Masonry Institute (MI) Inspectors Handbook Reinforced Concrete Masonry Construction
 - 5.3.2 Masonry Institute (MI) Reinforced Grouted Brick Masonry
 - 5.3.3 ACI 530 Building Code Requirements for Masonry Structures

 - 5.4 PRESTRESSED CONCRETE
 - 5.4.1 Manual for Quality Control for Plants and Production of Precast and Prestressed Concrete Products (PCI Manual 116)
 - 5.4.2 Field Procedures Manual for Unbonded Single Strand Tendons (PTI)

 - 5.5 STRUCTURAL STEEL & BOLTING
 - 5.5.1 American Institute for Steel Construction (AISC) Manual of Steel Construction
 - 5.5.2 Steel Joist Institute (SJI) Code of Standard Practice
 - 5.5.3 AISC 360- Chapter N “Minimum Requirements for Inspection of Structural Steel Buildings”
 - 5.5.4 AISC 341 – Chapter J “Special Inspection of Seismic Force-resisting Systems”

 - 5.6 STRUCTURAL WELDING
 - 5.6.1 American Welding Society (AWS) Structural Welding Code - Steel (D1.1)
 - 5.6.2 American Welding Society (AWS) Structural Welding Code - Sheet Steel (D1.3)
 - 5.6.3 American Welding Society (AWS) Structural Welding Code - Reinforced Steel (D1.4)
 - 5.6.4 Structural Welding Code – Seismic Supplement (AWS D1.8)
 - 5.6.5 American Welding Society (AWS) Guide for Visual Inspections of Welds (AWS B1.11)

- 5.6.6 AWS Standard Symbols for Welding (A2.4)
- 5.7 SPRAY-APPLIED FIRE-RESISTIVE MATERIALS
 - 5.7.1 Standard Practice for Testing and Inspection of Field Applied Sprayed Fire-Resistive Materials (AWC 11 12A)
 - 5.7.2 Intumescent (AWC 12B)
 - 5.7.3 ASTM E736, 605
- 5.8 LATERAL WOOD
 - 5.8.1 International Building Code
 - 5.8.2 2001 National Design Specification for Wood Construction
 - 5.8.3 American Plywood Association Introduction to Lateral Design
 - 5.8.4 American Plywood Association Wood Construction Guide
 - 5.8.5 American Forest & Paper Association Special Design Provision for Wind and Seismic (SDPWS)
 - 5.8.6 ASTM – F1667 Standard Specification for Driven Fasteners: Nails, Spikes and Staples
- 5.9 COLD-FORMED STEEL FRAMING
 - 5.9.1 International Building Code (Chapter 17 and 22)
 - 5.9.2 ASTM C 1007 – Standard Specification for Installation of Load Bearing (Transverse and Axial) Steel Studs and Related Accessories
 - 5.9.3 AISI/COFS GP 2000 Standard for Cold-Formed Steel Framing – General Provisions
 - 5.9.4 AISI/COFS GP 2001 Prescriptive Methods for 1 and 2 Family Dwellings
 - 5.9.5 SSMA Product Technical Information from the Steel Stud Manufacturers Association
 - 5.9.6 AWS D1.1 & D1.3
 - 5.9.7 ASTM C 1513 Standard for Screws
 - 5.9.8 ASTM C955 Load Bearing Steel Studs, Runners, & Bracing for Screw Application of Gypsum & Metal Plaster Bases
- 5.10 SHOTCRETE
 - 5.10.1 International Building Code
 - 5.10.2 Guide to Shotcrete (ACI 506R)
 - 5.10.3 Specification for Shotcrete (core grading standard) 506.2.13
 - 5.10.4 ASTM C1140 Standard Practice for Preparing and Testing Specimens from Shotcrete Test Panels
 - 5.10.5 ASTM C1604 Standard Test Method for Obtaining and Testing Drilled Cores of Shotcrete
 - 5.10.6 ASTM C1385 Standard Practice for Sampling Materials for Shotcrete

5.11 PROPRIETARY ANCHORS

5.11.1 Appendix D – Anchoring to Concrete (ACI 318)

5.11.2 Qualification of Post-Installed Adhesive Anchors in Concrete (ACI 355.4)

5.11.3 Qualification of Post-Installed Expansive Anchors in Concrete (ACI 355.2)

5.12 FIRE-RESISTANT PENETRATIONS AND JOINTS

5.12.1 International Building Code

5.12.2 ASTM Standard E2174

5.12.3 ASTM Standard E2393

5.12.4 Special Inspection Manual

Section 5 Inspector Notes:

6. Equipment and Project Records

6.1 Equipment

- _____ Confirmed and reviewed equipment calibration procedures, practices and record keeping system
(**NOTE:** All calibrations shall be traceable to the National Bureau of Standards and calibrations shall be performed at frequencies as set forth in national standards. If a standard test method requires equipment calibration for which a frequency is not specified, then the agency shall establish a frequency which is consistent with existing guidelines.)
- _____ Confirmed equipment maintenance practices and record keeping system
- _____ Confirmed equipment log being maintained
- _____ Confirmed maintenance schedule is being adhered to
- _____ Confirmed procedures for marking equipment are being followed
- _____ Confirmed that calibration stickers are being placed on the equipment requiring calibration
- _____ Confirmed lists of field inspection equipment assigned to or provided by inspectors is being maintained

6.2 Project

- _____ Confirmed a system of dispatching qualified inspectors
- _____ Confirmed a system of documenting and maintaining training records
- _____ Confirmed that test results, log book entries, and reports can be correlated
- _____ Confirmed method of reviewing test and inspection reports
- _____ Confirmed deficiency identification, reconciliation and reporting tracking system
- _____ Confirmed method for compiling final letter information
- _____ Confirmed that project files are being maintained which include
 - _____ Description of scope of inspections
 - _____ Test and inspection reports
 - _____ Meeting notes
 - _____ Deficiency records
 - _____ Final letter

Section 6 Records Inspector Notes: