

## **Special Inspection Manual**

(REV. 4.15.21)

City of Richmond
Department of planning Development and Review
Bureau of Permits and Inspections

From 2015 IBC (Note: 2018 IBC family of codes can be used soon)

Adopted by Virginia Uniform Statewide Building Code 900 East Broad Street Room 110 Richmond, VA 23219

(804) 646-4169 FAX: (804) 696-1569

The purpose of this document is to familiarize the Owner, Engineer, Architect, Testing/Inspection Laboratory, and Contractor of the Special Inspections required by Chapter 17 of 2015 International Building Code, as adopted by the State of Virginia Uniform Statewide Building Code.

Chapter 17 of the 2015 International Building Code (IBC) has specific requirements for Structural Tests and Special Inspections. These tests and inspections are in addition to the inspections required by VUSBC section 113. The special inspection does not waive the requirement for inspections by the building inspector. The contractor is responsible for scheduling all inspections required by VUSBC, with the Bureau of Permits and Inspections. These tests and inspections are to be made by an agency, inspector, testing lab, and fabricator shop approved by the Commissioner of Buildings.

The approved agency, inspector, testing lab, and fabricator shop must be employed by the owner or the registered design professional in responsible charge acting as the owner's agent.

This handout outlines the mandatory requirements and responsibilities of all parties involved with special inspection and construction. However, recognizing that there are many ways to evaluate construction quality and inspection, this handout is NOT intended to be a step-by-step procedural specification sufficient for all projects. Adjustments may be needed to satisfy a project's particular conditions.

It is hoped that by becoming more familiar with items which will be examined by the special inspector, all parties to the construction process can better prepare to foster quality control in the constructed project.

When special inspection required by VCC 2015 edition, the registered design professional in responsible charge shall prepare a Statement of Special Inspections, for submittal by the permit applicant (see attached exhibit 2). This statement shall include the following:

- 1. The materials, systems, components, and work required to have special inspection
- 2. The type and extent of each inspection
- 3. The type and extent of each test
- 4. Identification as to whether it will be a continuous or periodic special inspection

This agreement applies to special inspections covered in Chapter 17 of the VCC. It does not waive any other inspections that do not fall under chapter 17. It is the permit holder's responsibility to call for all required inspections prior to concealment and prior to proceeding on with the work.

#### PRECONSTRUCTION MEETING / SPECIAL INSPECTION MEETING

Prior to the issuance of a building permit, a special inspection meeting shall be held at the building of Bureau of Permits and Inspections. The City of Richmond Senior Engineer shall inform the Register Design Professional in responsible charge of the project, owner or owner agent to contact the City of Richmond's Permit Architect, to schedule the meeting time and location. The following are required to attend this meeting.

- 1. The Building Official, Plans Examiner, and Building Inspector
- 2. Owner or designated agent
- 3. The Registered Design Professional in Responsible Charge or representative.
- 4. Architect of Record or representative.
- 5. Structural Engineer of record or representative
- 6. Geotechnical Engineer of Record or representative
- 7. The General Contractor or representative.
- 8. Special Inspections Engineer of Record or representative
- 9. The Approved Agency or representative.

#### I DEFINITIONS AND PURPOSE

#### A. Approval of Special Inspection Agencies, Special Inspectors, Fabricator Shop and/or Testing labs:

Special Inspections Agencies, Special Inspectors, Fabricator Shop, and Testing Labs shall disclose any possible conflicts of interest. The Registered Design Professional in responsible charge shall pre-qualify the designated Special Inspection Agencies, Special Inspectors, Fabricator Shop, and Testing Labs, and submit their qualifications as part of the Statement of Special Inspections. The City of Richmond Bureau of Permits and Inspections shall approve the designated Special Inspection Agencies, Special Inspectors, Fabricator Shops, and Testing Labs, prior to any work being performed.

#### B. Duties and Responsibilities of the Project Owner:

#### 1. Agree and sign the Special Inspection and Testing Agreement

#### 2. Employ and Fund Special Inspections and Testing Services:

The project Owner is responsible for employing and funding the Special Inspection and Testing services. The Special Inspection Agencies, Special Inspectors and Testing Labs, shall not be in the employ of the contractor, a subcontractor or material supplier. In the case of an Owner who is also acting as the contractor; Special Inspection Agencies, Special Inspectors, and Testing Labs shall be employed as specified and approved by the Commissioner of Buildings, and Bureau of Permits and Inspections.

#### C. Duties and Responsibilities of the Engineer of Record

The engineer or architect of record has many duties and responsibilities related to special inspection and structural observation activities. These include the following:

#### 1. Agree and sign the Special Inspection and Testing Agreement:

The Engineer or Architect of record shall complete the Special Inspection and Testing Agreement and submit with the Building Permit Application.

#### 2. Identify the need for special inspections and structural observation services:

The project plans and-or specifications which are submitted to the building official shall clearly indicate the design parameters and material selection. The engineer or architect of record is the development team member who analyzes the critical elements of the design and determines where special inspection and structural observation is required in accordance with 2015 VCC chapter 17. Special Inspection and Structural Observation Requirements. The engineer is responsible for submitting the special inspection and structural observation requirements form into the structural plan sets. Also one separate copy shall be submitted to the Bureau of Permits and Inspections Plan Examiner for office record.

#### 3. Respond to field discrepancies

Material and design discrepancies which are not resolved in a timely manner or are about to be incorporated in the work must be brought to the attention of the engineer or architect of record and the office of the Commissioner of Buildings. Uncorrected field deficiencies observed by the special inspector must also be brought to their attention. The engineer or architect of record is instrumental in effecting the remedial process of deficiency correction. The engineer or architect of record is responsible for any design changes in addition to acknowledgment and approval of shop drawings which may detail structural information, and for submission of such changes to the Bureau of Permits and Inspections for approval.

#### 4. Submit final special inspection completion report package

The engineer of record shall submit an overall final complete special inspection package (include <u>all</u> inspection reports & pictures etc.; all exhibits) to The Bureau of Permits and Inspections stating that all items requiring special inspection and structural observation were performed in accordance with the approved plans, specifications, and applicable workmanship provisions of the VUSBC. See Exhibit (5), Special Inspection Final Compliance Report and Exhibit (6), Structural Observation Final Compliance Report. Final special inspection completion report package shall also include (EXHIBIT 4; 5; 6 & 7 + 1; 2 & Schedule of Chapter 17 Inspections).

#### D. Duties and responsibilities of the engineer responsible for the structural observation program

The owner shall employ the engineer or architect responsible for structural design, or another engineer or architect designated by the engineer or architect responsible for structural design, to perform structural observation as defined in IBC. Observed deficiencies shall be reported in writing to the owner's representative,

Special inspector, contractor, and the City of Richmond Bureau of Permits and Inspections. The structural observer shall submit to the Commissioner of Buildings a written statement declaring that the site visits have been made and identify any reported deficiencies that, to the best of the structural observer's knowledge, have not been resolved. See exhibits 5 and 6 structural observation final compliance report.

#### E. Duties and Responsibilities of the Special Inspector

#### 1. Agree and sign the Special Inspection and Testing Agreement.

#### 2. Special Inspector:

The special inspectors are individuals with highly developed, specialized skills who observe those critical building or structural features which they are qualified to inspect. Duties of special inspectors and/or inspection agencies include the following:

#### 3. Observe and inspect all work for which they are responsible:

Special inspector shall inspect all work for conformance with the Bureau of Permits and Inspections approved plans and specifications and applicable of the code. The special inspector shall be on site at all times to observe construction operations that require continuous or periodic inspections as per tables 1705.2.3, 1705.3, 1705.6, 1705.7 and 1705.8 of VCC 2015 edition. Work shall be inspected according to the approved construction documents, listed standards and nationally recognized testing methods.

#### 4. Provide Timely Progress Report:

The special inspector should complete written inspection reports for each inspection visit and provide the report in a timely manner. The special inspector or inspection agency shall furnish these reports directly to the building official, engineer or architect of record and the general contractor. Special inspectors shall bring all non-conforming items to the immediate attention of the contractor. If any such item is not resolved in a timely manner or is about to be incorporated in the work, the engineer or architect of record and the building official shall be notified immediately. See exhibit 4. A copy of exhibit 4 shall be attached to every report done by the special inspector.

Special inspections reports are due within 48 hours of the inspection. The reports can be emailed or faxed to the Bureau of Permits and Inspections office, attn.: Permit Architect. Permit BLDC# & project address should be noted.

#### 5. Submit a Final Report.

Special inspectors or inspection agencies shall submit a final report that is sealed, signed and dated by the registered engineer or architect who is responsible for the special inspection to the Bureau of Permits and Inspections office stating that all items requiring special inspection and testing were constructed, to the best of their knowledge, in conformance with the approved design plans, specifications, approved change order and the applicable provision of the building code. See submit final special inspection completion report package (EXHIBIT 4; 5; 6 & 7 + 1; 2 & Schedule of Chapter 17 Inspections).

This report shall be submitted no later than 30 days prior to application for a Certificate of Occupancy or Temporary Certificate of Occupancy.

#### F. Duties and Responsibilities of the Contractor:

#### 1. Agree and sign the Special Inspection and Testing Agreement.

#### 2. Notifying the Special Inspection Agency, Special Inspector, and Testing Lab.

The contractor or the holder of the Building Permit is responsible for notifying the Special Inspector, special inspection agency and Testing Lab regarding special inspections required by the Bureau of permits and Inspections. Adequate notice shall be provided so that the special inspector has time to become familiar with the project. The permit holder is responsible for calling for all required inspections both from the building inspector and the special inspector.

#### 3. Provide access to approved Construction documents.

The contractor is responsible for providing the special inspector with access to approved plans, construction documents, and approved shop drawings.

#### 4. Retain special inspection records at the job site:

The contractor is responsible for retaining at the job site all special inspection records submitted by the special inspector and testing labs, and providing these records for review by the Bureau of Permits and Inspections inspector upon request.

#### 5. Obtain Bureau of Permits and Inspections approval prior to concealment:

The Contractor shall contact the Bureau of Permits and Inspections for required inspections and obtain approval prior to concealing any work requiring Special Inspections.

#### G. Duties and responsibilities of Bureau of the Permits and Inspections

The specific duties and responsibilities of the Bureau of Permits and Inspections relating to Special Inspections include the following:

# 1. Review and examine plans, specifications, structural observation, and contract documents for approval and compliance with the Code and Special Inspection Program Requirements:

The Bureau of Permits and Inspections is responsible for reviewing all submitted construction plans, specifications, forms related to the Special Inspection Program, and any other submitted documents for compliance with Virginia Uniform Statewide Building Code. All items submitted must be reviewed and approved prior to issuance of the Building Permit. This includes the following:

- Check the qualifications of each Special Inspector, Special Inspection Agency, Testing Lab, and Fabricator Shop
  that is listed on the Statement of Special Inspections in accordance with The City of Richmond's Qualification
  Standard for Special Inspections.
- Check that all parties involved in the Special Inspection Program have completed their portion of the Special Inspection and Testing Agreement.
- Issue the Building Permit with the approved Statement of Special Inspections, Special Inspection and testing Agreement, and permit conditions attached to the approved plans that will be kept on the job site.
- Determine if pre-construction meeting is required to review the Special Inspection Program with all appropriate members of the construction team.

#### 2. Monitor Special Inspection and Testing Activities:

The Bureau of Building Permits and Inspections might monitor work requiring Special Inspection and Testing Activities at the jobsite to assure that the designated qualified Special Inspectors are performing their duties when work requiring Special Inspection is in progress.

#### 3. Review Special Inspection Progress Reports:

The Bureau of Permits and Inspections will review the submitted Special Inspection progress reports and perform field inspections, as necessary, to verify conformance to the approved plans, construction documents, and specifications prior to concealing any work related to the Special Inspections

#### 4. Perform Final Inspection and Issue Certificate of Occupancy:

The Bureau of Permits and Inspections will approve all site inspections as partial inspection, and will not perform a final inspection nor approve the final inspection until the final Special Inspection Report has been reviewed and approved by the office of the Commissioner of Buildings.



## **ACKNOWLEDGMENTS**

## Exhibit (1)

| Project Address:                               |                                    |                          | Plan Number:  |
|--|------------------------------------|--------------------------|---|
| I have read and agree to comply with           | the terms, conditions, and my resp | onsibilities as they are | outlined in the Special Inspection and Testing Agreemen |
| Owner:   |                                    |                          |   |
| Print Name                                     | Provide Signature                  | Date                     | Digital Signature                                       |
| Register Design Professional in R              | esponsible Charge (Project E       | ngineer or Architec      | t of Record):   |
| Print Name/Company                             | Provide Signature                  | Date                     | Digital Signature                                       |
| Register Design Professional Stru              | ctural Engineer:                   |                          |   |
| Print Name/Company                             | Provide Signature                  | Date                     | Digital Signature                                       |
| Contractor:                                    |                                    |                          |   |
| Print Name/Company                             | Provide Signature                  | Date                     | Digital Signature                                       |
| Special Inspections, Testing Agen              | cies/Laboratories, and Indepe      | endent Special Inspe     | ectors:   |
| Print Name/Company                             | Provide Signature                  | Date                     | Digital Signature                                       |
| Print Name/company                             | Provide Signature                  | *<br>Date                | Digital Signature                                       |
| Print Name/company                             | Provide Signature                  | *<br>Date                | Digital Signature                                       |
| *This signature                                | must be that of responsible prof   | essional Engineer wi     | ithin the Special Inspection Agency                     |
| Α  | ccepted By the City of Richme      | ond Bureau of Pern       | nits and Inspections                                    |
| Print Plan Reviewer Name                       | Provide signature                  | Date                     |   |
| Print Name Permit Architect (City Of Richmond) | Provide Signature                  | Date                     |   |



# City of Richmond

# Statement of Special Inspections Exhibit (2)

| Project Address:   |   |   |   |
|--|---|---|---|
| Plan Number:   | Code F  | Edition:  |   |
| Permit Applicant:  |   |   |   |
| Applicant Address:   |   |   |   |
| Architect of Record:   |   |   |   |
| Structural Engineer of Record  | d:  |   |   |
| Geotechnical Engineer of Rec   | ord:  |   |   |
| Special Inspector/s Engineer of  | of Record:  |   |   |
| General Contractor:  |   |   |   |
| by the Virginia Uniform Statewide Buas the name of the Special Inspector, a The Special Inspector shall keep rec professionals. Discrepancies found fro correction, the City of Richmond Cod | ailding Code. It includes a sch<br>and any testing agencies retain<br>ords of all inspections and for<br>om the approved construction of<br>the Official, as well as the approal as required unless otherwise | nedule of special inspections (lated for conducting inspections durnish all inspections reports documents shall be brought to ropriate design professional of a agreed upon by the Building | to the code official and appropriate design<br>the immediate attention of the contractor for<br>f record. Daily, weekly, and monthly report<br>Official. A final report of special inspection |
| Prepared by:   |   |   |   |
| Type or print name   | Signature   | Date  | Digital Signature   |
| Owner/ Representative Authorizati  | ion   |   |   |
| Type or print name   | Signature   | Date  | _   |
| <b>Building Official Acceptance</b>  |   |   |   |
| Type or print name   | Signature   | Date  | _   |



# **Special Inspection Daily Report**

City of Richmond Bureau of Permits and Inspections
Exhibit (4)

| Permit No:                                 |            | <b>Date:</b>   |                  |
|--|------------|--|------------------|
| Project Name and Address:                  |            |  |                  |
| Inspection Type:   Continuous              | □ Periodic | Frequency:   |                  |
| Inspection Kind and Location:              |            |  |                  |
|  |            |  |                  |
| ☐ Inspection Approved ☐ Inspe<br>Comments: |            | Rejected Inspection approved on  |                  |
|  |            |  |                  |
|  | -          | e with the Bureau of Permits Inspections<br>C 2015 Edition Except as noted above | s approved plans |
| Signed:                                    | In         | spection Agency:   |                  |
| Print full name:                           | Ti         | me of Inspection:  |                  |

## Completion Report for Special Inspection of a Particular Construction Item

City of Richmond Bureau of Permits and Inspections
Exhibit (5)

| STOF RICHMONE |
|---------------|
| E B           |
| * * * * * *   |
| TABLISHED 112 |

| Permit No:  |   | Project Address:   |   |                         |
|---|---|--|---|-------------------------|
| <b>Special Inspections</b>                                  | Engineer of Record:   |  |   |                         |
| <b>Construction Item:</b>                                   |   |  |   |                         |
| completed. The build documents and the inspections for this | ding elements subjected to specia<br>Virginia Uniform Statewide Bu<br>particular construction item were | Special Inspections for construction item<br>inspections have been found to be in co-<br>ilding Code. All discrepancies discove<br>brought to the attention of appropriate<br>ficial for resolution and have been corre- | mpliance with project<br>red during the condu<br>e registered design pr | construction of special |
| Submitted by Speci  | al Inspections Engineer:  | SIER P. E. Seal & Sig  | nature  |                         |
|   |   | SIERT : E. Scar & Sig  | lature  |                         |
| Signature   | Date  |  |   |                         |
| Type or Print Nam   | e   |  |   |                         |
| Reviewed By:  |   |  |   |                         |
| •   | Professional of Record:   | <b>Building Official:</b>  |   |                         |
| Signature   | Date  | Signature  | Date  |                         |
| Type or Print Nam   | e   | Type or Print Name   |   |                         |



# Structural Observation Final Completion Report City of Richmond Bureau of Permits and Inspections

Exhibit (6)

| Date:   |  |  |
|---|--|--|
| Ms. Richa Bansal  |  |  |
| Permit Architect  |  |  |
| 900 East Broad Street   |  |  |
| Richmond, VA 23219  |  |  |
| Project Address:  | Permit No:   |  |
| In accordance with Chapter 17 of Virginia Constru following items:  | •  |  |
|   |  |  |
|   |  |  |
| Based upon inspections performed and my substantiat was performed in accordance with the approved pla Construction Code 2015 edition. | ting reports, it is my professional judgment that                        |  |
| Signed:   | Stamp of Engineer/Architect of Record  Performing structural observation |  |
| Type or Print Name  |  |  |
|   |  |  |
|   |  |  |



# Final Report of Special Inspections City of Richmond Bureau of Permits and Inspections

City of Richmond Bureau of Permits and Inspections
Exhibit (7)

| Permit Number:   |  |   |            |
|--|--|---|------------|
| Project Address  |  |   |            |
| <b>Special Inspections</b>   | Engineer of Record:                              |   |            |
|  |  | mond Special Inspections Program, I submit this final report of the   |            |
|  |  | pered to, and test Report number to, all                              |            |
| and reviewed prior   | to this Final Report, for                        | n a basis for, and are to be considered an integral part of this repo | ort.       |
| inspections have be<br>project specification<br>brought to the atter<br>Code Official for re | een found to be in compons. All discrepancies of | **  | nance with |
| susmiced by spe  | em mopeetions Engin                              | Stamp of Engineer/Architect of Record                                 |            |
|  |  | Performing structural observation                                     |            |
| Signature  | Date   |   |            |
| Type or Print Name   | e  |   |            |
| Reviewed by:<br>Register Design Pr   | ofessional of Record:                            | Accepted by: Building Official:                                       |            |
| Signature  | Date   | Signature Date  | _          |



#### Request for City of Richmond Certificate of Occupancy

Dept. of Planning and Development Review Bureau of Permits and Inspections 900 E. Broad Street, Room 110 (City Hall) Richmond Virginia 23219 804 646 4169 \* Fax 804 646 1569 www.rva.gov

Please complete this form and return to our office at least two (2) weeks prior to your final building inspection. There is no fee required with this form for Building Permit Certificate of Occupancy.

| Job/Property Location:   |  |
|--------------------------|--|
| Building Permit No.:     |  |
| Projected Occupancy Date |  |

This form does not schedule your final building inspection. You should call 311 or this office at 646-4169 to schedule your final inspection upon completion of the work.

As you prepare your final building inspection, please be aware of the following items:

- All trade permits need to be completed prior to requesting the building final. These can include, but are not limited to: electrical, mechanical (HVAC), plumbing, gas piping, sprinkler and elevator permits.
- Any required special inspection reports should also be submitted to this office. These must be signed/sealed by the engineer or architect who inspected the work.
- Any re-inspection fees and/or permit fees for increase in cost of work owed to the city shall be paid.
- Additionally, please be aware of the following:
- Any zoning requirements, including parking, signs, landscaping, etc., need to be completed. The Zoning Administration Office may be reached at 646-6340.
- Any public works requirements including site work, grading & seeding, work-in-street, etc., need to be completed. The Permits & Engineering Services Division may be reached at 646-5155 or 646-6440.
- Any public utilities requirements need to be completed. The Department of Public Utilities may be reached at 646-8544.
- Any health inspections, if needed, please contact the Health Department directly. (804) 205-3912.

# PARTIAL or TEMPORARY CERTIFICATE OF OCCUPANCY

## **Minimum Requirements**

#### **Building**

- 1. Complete and submit a C.O. application ("H-CO" form) and pay the required fee.
- 2. Submit two (2) sets of plans showing all areas to be occupied and egress paths to a public way.
- 3. All Structural work must be complete with a final inspection.
- 4. Certifications from special inspectors must be submitted by the owner and approved by the City.
- 5. Emergency vehicles including police, fire and ambulances must have acceptable access to the building.
- 6. Sufficient means of egress as required by the building code, for both ambulatory and handicapped individuals, shall exist to serve the areas being occupied and they must be fully complete and approved by the City. Occupants shall not be permitted to exit through areas that do not have a Certificate of Occupancy.
- 7. Posting of prominent warning signs to occupants and construction personnel that exits and egress ways shall be maintained at all times.
- 8. The occupant of the building shall develop an emergency fire plan, which must be accepted by the tenant management and approved by the Fire Marshal.
- 9. The means of egress from the areas to be occupied must be adequate, accessible, pressurized where required by code and must have all of the required egress and exit lighting installed.
- 10. Final inspections must be approved by the City for the areas to be occupied. All work in the areas to be occupied must be complete and approved by the City.

#### **Sprinklers**

- 1. All fire hydrants serving the building must be operable and accepted by the Department of Fire and Emergency Services.
- 2. In existing buildings all fire protection systems, including standpipe and alarm systems, must be complete, fully operable, tested and approved by the City. If the building has a central monitoring system or a fireman's communication system for fire emergencies, it must be fully complete, tested and approved by the City and accepted by the Department of Fire and Emergency Services.
- 3. In new buildings all standpipes must be in place and working and the sprinkler system must be tested and approved one floor above and one floor below the floor to be occupied.
- 4. All fire suppression systems within the building must be fully complete, tested and approved by the City.

#### Fire Alarm System

- 1. The fire alarm systems, including smoke detectors and the pull stations must be installed, tested and approved by the City for the entire building.
- 2. A signed agreement is required that all fire alarms will be reported to 911 unless advance notice is given that the system is being worked on.

#### **Electrical**

- 1. The electrical systems serving the area to be occupied must be complete and approved by the City.
- 2. The standby power system for the building must be installed, tested and approved by the City.
- 3. Areas to be occupied shall pass a light test showing that the egress lighting meets the building code requirement for one-foot candle.

#### **Heating, Ventilation and Air Conditioning**

- 1. The heating, ventilation and air conditioning system serving the area to be occupied must be complete and approved by the City.
- 2. Stair pressurization tests for stairs required for egress must be tested and the City must approve the test.
- 3. Smoke evacuation systems in areas to be occupied must be tested and approved by the City

#### **Plumbing**

- 1. All plumbing serving the area to be occupied must be complete, tested and approved by the City.
- 2. The sanitary sewer connection and lateral into the building must be complete, tested and approved by the City.
- 3. The City must accept chlorination reports.
- 4. The City must accept Backflow prevention test reports.
- 5. Backflow preventers devices must have an approved final inspection

#### **Sidewalks**

1. Sidewalks, driveways and all work in the right-of-way must be completed and approved by the City.

#### **Handicap Access**

- 1. The access into the building, the path of travel to the occupied area and the plumbing fixtures to serve the area being occupied shall be complete and approved by the City.
- 2. Handicapped parking spaces shall be provided with signs installed.

#### Zoning

- 1. In cases where parking is required, that number of spaces needed to satisfy the parking demand for a partial use of the building must be provided. These spaces must be paved and striped. If the property is subject to any special zoning approval, you must comply with any conditions of that approval.
- 2. If the parking is not paved or landscaping is not complete, a partial CO can be given for up to a 120-day period if there is sufficient reason due to seasonal problems (e.g. asphalt plant closed in winter months or heat of the summer will not allow planting).
- 3. A letter from the architect or engineer is required that states how long it will take to complete the work and the estimated cost of the remaining work. A bond may be required, depending on the value, to guarantee completion of the work.

## FINAL CERTIFICATE OF OCCUPANCY ISSUANCE

#### **Building**

- Fill out the Certificate of Occupancy Request form at least thirty (30) days prior to the date you want you certificate of occupancy
- All fees must be paid prior to the certificate of occupancy being printed or a final building inspection being approved
- All work must be complete and a final inspection approved unless a partial certificate of occupancy is being requested. (See Partial)
- For a partial Certificate of Occupancy you must fill out a separate application on an "H-CO" permit application form and pay fee. (See Partial)
- All approved plans must be on-site and available. Approved plans means the most current set bearing the City's approval stamps.
- Fees
- 1. For projects \$500,000 and above a fee audit will be performed
- 2. A completion report is required to be filled out by the general contractor
- 3. Other projects may be audited on a case by case basis
- 4. All permits will be listed and the building permit holder will have to provide final cost figures for each permit holder
- 5. The City will determine if any additional fees are due and provide the building permit holder with the list of fees.
- 6. This normally takes a week from the time the City receives the final contract amounts.
- 7. The general contractor or owner must supply:
  - a. Final contract price for the entire project
  - b. Breakout prices for each individual permit
  - c. Cost of any owner furnished equipment
  - d. Architectural and engineering costs can be excluded
  - e. Fees may be paid in one check or by individual checks.
  - f. If individual checks are to be used, the general contractor is responsible for getting them together and bring them in together

#### **Zoning**

- The permit holder must request a zoning final inspection (299) once all of the site work is complete, including required landscaping and parking improvements (paving and striping) is complete
- All approved plans must be on site and available. Approved plans means the most current set bearing the City's approval stamps.

#### Health

Check with the Health Department as far in advance as possible to give them time to do their inspection and to give you time to make any needed corrections.

#### <u>Trades (Electrical/Plumbing/Mechanical/Elevator)</u>

- All trade permits must have a final inspection prior to requesting a building final inspection.
- If a partial certificate of occupancy is desired, the trade permits must show a partial final inspection for the area to be occupied.

#### **Permits and Services**

- A final inspection (369) of all site work (final grading, paving & seeding) must be requested.
- Call for a final inspection on storm sewer plumbing permit

#### **Public Works**

- A final inspection (390) of all work in street permits must be requested.
  - Check with the Public Works Department as far in advance as possible to give them time to do their inspection and to give you time to make any needed corrections.
- Be sure all repairs relating to City streets, sidewalks, medians and other property are completed and are acceptable to DPW
- Call in for a Public Works final inspection on their "V" permit
- Make sure you have no encroachments that have not been approved

#### **Public Utilities**

- Check with the Public Utilities Department as far in advance as possible to give them time to do their inspection and to give you time to make any needed corrections.
- Be sure all repairs relating to City utility lines are completed and are acceptable to DPU
- Make sure all backflow preventer's have been inspected and approved by the plumbing division and by DPU

Required Inspections are as follows:

| Type of Permit    | Partial Final (No CO) | Partial Final (w/ CO) | Temporary C.O (H permit) | Final |
|-------------------|-----------------------|-----------------------|--------------------------|-------|
| Building Permit   |                       |                       |                          |       |
| Building          | 190                   | 191                   | 399                      | 199   |
| Zoning            |                       |                       | 299                      | 299   |
| W A D             |                       | 260                   |                          | 260   |
| Water Resources   |                       | 369                   |                          | 369   |
| DPU               |                       | 992                   |                          | 992   |
| DPW               |                       |                       |                          | 391   |
| Sign              |                       |                       |                          | 899   |
| Electrical        | 590                   | 591                   | 591                      | 599   |
| Plumbing          | 690                   | 691                   | 691                      | 699   |
| Gas               |                       | 691                   | 691                      | 699   |
| Sprinkler         |                       | 491                   | 491                      | 499   |
| Fire Alarm        |                       | 591                   | 591                      | 599   |
| Mechanical        | 490                   | 491                   | 491                      | 499   |
| Works (V Permits) |                       | 390                   |                          | 390   |
| Elevator          |                       |                       |                          | 799   |



## **Application for Permit Extension**

## Dept. of Planning and Development Review Bureau of Permits and Inspections

| Contact Name:    |  |
|------------------|--|
| Phone #:         | Date:  |
| Permit Number:   |  |
| Project Address: |  |
|                  | To Whom It May Concern: n on the above building permit due to the following reasons: |
|                  | Extension Request Fee: \$25.00   |
| BUREAU OF        | F PERMITS AND INSPECTION USE ONLY  |
| Open Violations: | Violation Inspector:   |
| Different Code?  | If yes, date of Last Inspection:   |
| Date Extended:   | Extended By:   |
| Date Received:   | Amount Paid: Receipt #:  |

#### Fee

Fees are based on the total cost of a permit's scope of work including material, labor, subcontracts, job expenses, overhead and profit. If a subcontractor obtains a permit for his work the fee is based on his scope of work including material, labor, subcontracts, job expenses, overhead and profit.

For building permits the building permit fee will not have to cover work covered by another permit such as plumbing, mechanical or electrical work. If the owner furnishes material the cost of the material must be included in the permit cost basis. Fees will be adjusted as follows:

- A. New permits
  - a. Fees will be based on the fee schedule in effect on the date the customer comes in to pay or the date we receive a mailed, faxed or emailed application for a new permit
- B. Amended permits
  - a. The fees will be based on the fee schedule in effect on the day payment is made
- C. Plan review on revised plans where the permit has been issued
  - a. For permits under \$500,000 in value a 10% fee will be assessed on each plan review after the permit has been issued. The fee is 10% of the original fee or \$30.00 whichever is greater
  - b. For permits \$500,000 and more, the 10% revision fee will be charged only on the first revision after the permit has been issued
  - c. Fees will be based on the fee schedule in effect on the day of payment
- D. Amended cost and plan review
  - a. On permits that have been issued where the scope of work changed and the contract amount increased, an amended fee will be charged. The fee increase will be based on the fee schedule in effect on the day payment is made
  - b. The 10% review fee is the same as outlined above in item C
- E. Audits
  - a. All projects valued at \$500,000 or more will require an audit.
  - b. The building inspector will not approve the final inspection until the fees have been paid
  - c. The City will not issue a certificate of occupancy until all fees have been paid
  - d. The owner or prime contractor shall submit a final completion affidavit and a spreadsheet showing final contract amounts broken down by permits
  - e. Projects valued at less than \$500,000 will be audited as time and staffing permit
  - f. Fees will be based on the fee schedule in effect on the day payment is made
  - g. Decreases in fees will be based on the fee schedule in place when the permit was issued



City of Richmond Bureau of Permits and Inspections 900 E. Broad Street Richmond, VA 23219

Ms. Richa Bansal,
Permit Architect (Name, Date & Initial)

#### **COMPLETION REPORT**

City ordinance Sec. 5-6 requires that the owner, or authorized agent of the owner, shall report to the Commissioner of Buildings the entire final value of work requiring a permit. This report shall include the entire actual cost to the owner of erecting, installing, enlarging, extending, repairing or altering such structure. In addition, City ordinances require the filing of an application for a Certificate of Occupancy. This report must be signed and witnessed. Permit fees will be adjusted on the basis of this report.

#### TO THE COMMISSIONER OF BUILDINGS:

| Owner:  |                                       |
|---|---------------------------------------|
| Contractor:   |                                       |
| Property Address:   |                                       |
| Permit Number   |                                       |
| I certify that the total value of the work to the owner, including mater permit was: \$ | · · · · · · · · · · · · · · · · · · · |
| And I certify that the attached breakdown of final contract amounts b                   | by permit number is accurate.         |
| Signed by contractor or owner:  | Date:                                 |
| Title: (Officer of corporation or managing partner of partnership)                      |                                       |
| (Officer of corporation or managing partner of partnership)                             |                                       |
| Signed by Owner:  | Date:                                 |
| Title:  | _                                     |

The work above includes the building, modular building foundations and site work, site mechanical-electrical-plumbing-sprinkler work, building plumbing, electrical, mechanical, sprinkler, refrigeration and all trade work: equipment, installation, overhead and profit to contractors and subcontractors. It also includes the value of owner furnished equipment.

Sec. 5-6. – Fee Adjustments.

Every person to whom a building permit is issued, before final inspection of the work, shall submit a cost affidavit to the Commissioner of Buildings. The value of the work shall be considered the higher of the contractor's stated final value or R S Means' estimated value. The value of work shall include all material, labor, subcontracts, owner furnished material, overhead and profit. Upon receipt of the cost affidavit from the permit holder, the Commissioner of Buildings shall adjust such fee and shall refund any excess fee to the permit holder or collect any additional fee as is necessary. If the stated final value exceeds that of R S Means, the stated final value shall be used. If the stated final value is less than R S Means, the R S Means value shall be used. The Commissioner of Buildings, or the designee thereof, may, at the Commissioner of Buildings; discretion, perform an audit on any project to which a building permit fee shall apply.

# **Preconstruction Meeting**

#### **Building Inspector will facilitate the Preconstruction Meeting**

Special Inspection meeting if required, contact

• Ms. Richa Bansal: richa.bansal@richmondgov.com cell. #: 804.773.1912

Partial or Temporary. C.O. requirements

#### **Electrical Inspection requirements:**

Rough-in inspection (fire stop must be come complete at that time or no approval)
Light schedule and Test
Generator schedule and Test
Fire Alarm schedule and Test
Low Voltage schedule and Test
Security schedule and Test
Va. Power (to set meter) schedule

## **Plumbing Inspection requirements:**

**Final inspection** 

Rough-in inspection (fire stop must be come complete at that time or no approval)
Elevator (sump pump test if required) schedule and Test
Storm water /Roof schedule and Test
Gas schedule and Test
Backflow schedule and Test
Bacterial water test (send or give report to inspector) schedule and Test
Exterior sanitary inspection to property line only schedule and Test
Final inspection

### **Elevator Inspection requirements:**

Rough-in inspection Third Party Final inspection Third Party

#### **Mechanical Inspection requirements:**

Rough-in inspection (fire stop must be come complete at that time or no approval)
Sprinkler schedule and Test
Fire pump schedule and Test
Fire alarm schedule and Test
Final inspection

### **Building Inspection requirements:**

Footing inspection if required if not Special Inspections
Foundation inspection if required if not Special Inspections
Slab inspection if required if not Special Inspections
Framing inspection if required if not Special Inspections
Insulation inspection if required if not Special Inspections
Sill inspection if required if not Special Inspections
Veneer inspection if required if not Special Inspections
Sign inspection if required if not Special Inspections
Final inspection

## **Zoning Inspection requirements:**

Site inspection (initial) Final inspection

#### **Health Inspection requirements:**

Site inspection (initial) Final inspection

## **Public Works Inspection requirements: DPW**

Contact that Department for requirements and inspections

## **Public Utilities Inspection requirements: DPU**

Contact that Department for requirements and inspections

## **Water Resource Inspection requirements:**

**Contact that Department for requirements and inspections** 



## City of Richmond

Department of Planning & Development Review Permits & Inspections

## Minimum Permit Requirements for New Buildings, Alterations, Renovations to Existing Buildings and Tenant Up-Fits

The following checklist contains the *minimum essential building code information required on plans* prior to processing the building permit application. This is a basic pre-submittal checklist that will reduce the number of plans placed on hold due to incomplete plans. *While providing all of the information needed will not guarantee approval of your plans, it will expedite the overall process and increase the likelihood that your plans will be approved on the first submission.* Please review these items and ensure that your plans are complete prior to submission. Please address any questions to the Department of Planning & Development Review, Bureau of Permits and Inspections at 900 East Broad St. (Rm # 110) Richmond, Virginia 23219, office# (804-646-4169).

#### Required Documents for Permit Application: Submissions via Online Permit Portal (OPP) or Microsoft OneDrive

- Completed Building Permit Application, filled out in its entirety and application fee's paid. Any additional changes, addition or deletion of work shall be re-submitted and a Completed Plan Intake Sheet filled out in its entirety and revision fee's paid.
- The City of Richmond has adopted and is currently using the **2015 Virginia Construction Code (VCC)** {which is derived from the International Building Code (IBC 2015)}, 2015 Virginia Mechanical Code, 2015 Virginia Plumbing Code, 2015 Virginia Energy Conservations Code, 2015 Virginia Fuel Gas Code, 2014 National Electric Code, 2009 OR 2012 American National Standards Institute Accessibility Code and the 2015 Virginia Residential Code. These codes are available from the International Code Council (ICC).
- Construction Documents should note the edition of the VCC or Model Code that the project was designed under. If it is not noted on the Construction Documents then the plans shall be reviewed under the current edition of the VCC.
- Registered Design Professionals may also use other Model Codes such as 2015 Virginia Existing Building Code.
- Minimum of (2) sets of plans are required to begin a Building Permit review. Additional Plans shall be submitted for each individual department that is required to review the permit. The additional separate sets of plans are for the follow independent departments' review.
  - 1. Zoning
  - 2. Public Works
  - 3. Utilities
  - 4. Planning
  - 5. Water Resources
  - 6. Health

**Note**: The Building permit, which is required to begin construction, shall not be issued, until each individual department associated with the building permit has been accepted and approved.

- Provide specifications as needed, if they contain building code information not provided on the plans.
- NOTICE: BUILDING PERMIT APPROVAL DOES NOT INCLUDE ANY REVIEW OF THE MECHANICAL, PLUMBING, ELECTRICAL OR OTHER TRADE PLANS. Mechanical, Plumbing and Electrical plans, intended for construction may be included with the construction documents and reviewed for coordination only.

- Mechanical, Plumbing and Electrical plans shall be submitted <u>separately</u> under their respected trade permits. If no Mechanical, Plumbing or Electrical work is to be performed then that must be clearly stated on the Building Permit Application sheet and plans.
- If asbestos abatement will occur. The asbestos abatement shall be performed as per the requirements of the "clean Air Act" national emission standards for hazardous air pollutant (NESHAPS) and (OSHA) standards for construction. Provide a completed Asbestos Certification Form per 2015 Virginia Building Code section 110.3.
- **Geotechnical Report**. Required for new land disturbance, new construction of footings and paved motorways. It is important to know whether the soil type present in new construction sites exhibits shrink-sell characteristics before construction begins. When soils shrink and swell, uneven pressure is exerted on foundations. This can result in the formations of cracks in a foundation.
  - o Shrink-Swell soils are the primary unsuitable soils that we must deal with.
  - o A perched water table is a layer of water that is trapped near the ground surface.
  - o Fill soils are soils that have been placed by man. Fill soils can be found anywhere in the city.
  - o Marine clays are soils that have high bearing pressure when undisturbed. However, when disturbed by moisture they become highly unstable and can lead to catastrophic failures
  - Other unsuitable soils
- **Site plan**. Required for new and existing buildings when any exterior work or any change in use occurs. The contractor must file separate permits for signage.
  - o Show outline of building.
  - o Displaying property lines, building location, utility and site access
  - o Show any streets and alleys and pedestrian right-of-ways
  - o Are there any encroachments onto City of Richmond property within the scope of this work
  - o Provide a point to point photometric site plan showing property line
- Statement of Special Inspections or Third Party Inspections request. The purpose of these documents is to familiarize the Owner, Engineer, Architect, Testing/Inspection Laboratory, and Contractor of the Special Inspections required by Chapter 17 of 2015 International Building Code, as adopted by the State of Virginia Uniform Statewide Building Code. Chapter 17 of the 2015 International Building Code (IBC) has specific requirements for Structural Tests and Special Inspections. These tests and inspections are in addition to the inspections required by VUSBC section 113. The special inspection does not waive the requirement for inspections by the building inspector. The contractor is responsible for scheduling all inspections required by VCC, with the Bureau of Permits and Inspections. These tests and inspections are to be made by Third Party agency, inspector, testing lab, and fabricator shop approved by the Commissioner of Buildings. The approved agency, inspector, testing lab, and fabricator shop must be employed by the owner or the registered design professional in responsible charge acting as the owner's agent.
- MSDS (Material Safety Data Sheet) shall be submitted if hazardous materials will be stored in the building or space.
   Provide a list of the hazardous materials, with hazard classifications noted, that will be stored or used in or surrounding the building.

#### **Building Plan Review Requirements:**

#### General

- A Virginia Professional seal (signed and dated) is required on the building plans in accordance with The Code of Virginia §54.1-402 or if prepared by a registered design professional with no seal maybe accepted under certain criteria. In such structures that do not require an A/E seal (see charts B & C), of The Code of Virginia §54.1-402.
- Construction documents and copies of, shall be neat, legible and all of the same size. No Free Hand Drawn plans shall be accepted. (Plans hand drawn to scale with a straight edge may be accepted)
- Construction documents shall be either 22" x 34" (D size) or 34" x 44" (E size). Other sizes may be approved by the Building Official upon request.
- Construction documents shall be at least 1/8" scale or larger. Standard architectural scales are required and all lettering shall be at least 1/8" in height. All electrical/mechanical rooms etc. shall be a minimum of ½" scale or larger.
- Each sheet shall be numbered
- Each sheet shall have a completed title block.
- List the name, company, address, and telephone number of the person who prepared the plans, the owner, owner agent, and contractor.

- Provide a key plan showing the overall building identifying the area for scope of work.
- The property address, building or street name shall be provided.
- Building code edition used.
- Floor plans must be complete, dimensioned, and drawn to scale indicating the use of each room
- If a change of occupancy, note the previous tenant and use of the space if known.
- Use of the building/space and Occupancy Group classification (VCC Chapter 3)
- If it is a mixed use building, note the method of treating mixed uses (VCC 302): Non-separated mixed use, separated mixed use (provide area square footage).
- Construction type (VCC Chapter 6).
- Occupant load (VCC 1004).
- Building height and number of stories.
- Multiple Buildings on the same site shall be submitted under <u>separate permits</u>. Multiple Buildings classified as one building on a site may be grouped into one permit.
- Indicate if building/space is equipped with any fire protection systems (sprinklers, alarms, or hood suppression).
- If the alteration involves a change of use, provide the method of compliance with height and area limitations (VCC Table 503), including calculations supporting height and/or area increases per VCC 504 and 506.
- Clearly identify new and existing construction.
- The location of all exits, exit signs, and egress lights should be clearly labeled on the plans.
- Provide a door schedule for all new and existing doors in areas where the means of egress system is affected by the alteration. The door schedule shall include the following:
  - o Door size
  - Lock type
  - o Hardware type (locks, latches, handles, closers, operating devices, access control systems)
  - o Door fire rating expressed in hours, if rated
- Provide typical wall sections or descriptions of partition types and construction materials to be used in wall construction (stud types, wall sheathing, insulation materials, and termination).
- All fire rated walls, new and existing, must be labeled as to type (fire partition, fire separation assembly, fire wall, smoke partition) and provide the design numbers and specifications (U.L., Gypsum Association, etc.) for all fire rated assemblies. Provide complete full height cross sections of all fire rated assemblies proposed for construction that identifies all materials used in the assembly and complete support and termination details.
- Provide UL design numbers, details and specifications for all through penetration fire stopping details.
- New and altered elements of existing buildings shall meet the energy code requirements
- Show all plumbing fixtures and label them new or existing.
- If there is a "change of use" for the space/building, the following existing fixtures are required: Water closets, Lavatories, Drinking fountains, Service sinks. They must be shown on the plan. Even if no work is being performed.
- All altered toilet rooms/restrooms must be fully dimensioned including fixture clearances.
- Any new restaurant/ food service use, the cooking equipment plan and all hoods must be shown and itemized.
- Show all the engineering details required in this checklist on the plans; providing this information in the specifications only is not sufficient.
- A legend shall be provided for all symbols.
- All spaces and rooms shall be labeled as to their use.

#### **Structural**

- A Virginia Professional seal (signed and dated) is required on the building plans per The Code of Virginia (§54.1-402) for all work.
- Identify all walls and other structural framing that will be affected by an alteration. If framing or foundation systems will be altered, provide complete foundation and framing plans with design loads listed. Framing plans should provide beam, joist, rafter and truss sizes and layouts. Foundation plans should show footing depths, sizes, and design bearing capacity.

#### **Disapproval and Comments**

 After review of the Permit and Construction Documents, if code deficiencies are found, they must be forwarded to the designer for correction.

- Code Sections must be cited for items that must be corrected.
- Plan Review Comments shall be issued in written form.

#### Revisions

- City of Richmond, Dept. Permits and Inspections, will not take revisions without a signed intake form. Revisions shall include a pre-signed intake form or a representative shall appear in-person to sign off on the drawings that are submitted.
- When design changes are made, plans must be reviewed again to ensure continued compliance with code requirements.
- All revisions shall be clouded, highlighted, marked or labeled.

#### **Code Modifications**

- Code Modifications are granted when some aspect of the proposed project cannot meet code.
- The ability to grant Code Modifications is an option provided to the Building Official in the VUSBC.
- Code Modifications do not omit or wave a code section, it provides an alternative that meets the intent of the code.
- Code Modifications typically involve conditions in an existing building where alterations are taking place.
- Code Modifications shall be submitted at the Permits and Inspection Front Counter. There is a fee that shall be paid before the code modification is processed. When it is processed it will be routed to the Building Commissioner for review
- Code Modifications are approved by the Building Commissioner. If there are questions regarding the code modification, the Building Commissioner will discuss and seek additional information regarding questions related to the code modification request.

#### **Mechanical Plan Review**

Mechanical application shall be filled out and submitted for review when any installation of heating, cooling, refrigeration and ventilation equipment is performed. <a href="http://www.richmondgov.com/planninganddevelopmentreview/forms/MechanicalAPP.pdf">http://www.richmondgov.com/planninganddevelopmentreview/forms/MechanicalAPP.pdf</a>

#### **Plumbing Plan Review**

Provide Construction documents for review per City of Richmond Requirements for new installations and remodeling of building plumbing systems. Provide two sets of plans of the same quality and detail as normally provided by an engineer shall be submitted for review. http://www.richmondgov.com/planninganddevelopmentreview/forms/Plumbing Checklist.pdf

#### **Electrical Plan Review**

Provide Construction documents for review per City of Richmond Requirements for electrical work performed on private property either inside or outside of a building. Provide two sets of plans of the same quality and detail as normally provided by an engineer shall be submitted for review.



Electrical\_Handout 2012\_2015.pdf

#### **Contact information**

Call the City of Richmond 311 call center to reach the Bureau of Permits and Inspections. The City of Richmond, Department of Community Development's web page is at: www.ci.richmond.va.us/departments/communitydev/

The International Code Council website is: www.iccsafe.org

The Virginia Department of housing and Community Development website is: www.dhcd.virginia.gov



## **Schedule of Chapter 17 Inspections**

| Name of Firm:  | Date: Project Address                     |     |      | Plan Number |          |            |                |                |
|--|---|-----|------|-------------|----------|------------|----------------|----------------|
| Work Type  | Description                               | y/n | Firm | Continuous  | Periodic | Chapter 17 | Other Standard | Non Chapter 17 |
| Soils see table 1705.6   |   |     |      |             |          |            |                |                |
| Verify material below shallow foundations are adequate to achieve the design bearing capacity.                     |   |     |      |             | Х        | 1705.6     |                |                |
| 2.Verify excavations are extended to proper depth and have reached proper material                                 |   |     |      |             | Х        | 1705.6     |                |                |
| 3.Perform classification and testing of compacted fill material  |   |     |      |             | X        | 1705.6     |                |                |
| 4. Verify use of proper materials, densities and lift thickness during placement and compaction of compacted fill. |   |     |      | х           |          | 1705.6     |                |                |
| 5.Prior to placement of compacted fill, observe subgrade and verify that site has been prepared properly           |   |     |      |             | Х        | 1705.6     |                |                |
| Structural Steel   |   |     |      |             |          |            |                |                |
| Quality control  | In plant inspection                       |     |      |             |          | 1705.2     | AISC 360       |                |
| 1. Bolts, nuts, washers  | Markings meets ASTM standards             |     |      |             |          | 1705.2     | AISC 360-10    |                |
| a. Marking   | Markings versus certificate of compliance |     |      |             | Х        | 1705.2     | AISC 335; LRFD |                |
| b. certificate of compliance   |   |     |      |             | Х        | 1705.2     | AISC 335; LRFD |                |

| 2. High strength bolting   | Field inspection                        |     |      |            |          | 1705.2       | AISC 360 M2.5               |                |
|--|---|-----|------|------------|----------|--------------|-----------------------------|----------------|
| Work Type  | Description                             | y/n | Firm | Continuous | Periodic | Chapter 17   | Other Standard              | Non Chapter 17 |
| a. bearing type connections  | Field inspection                        |     |      |            | Х        | 1705.2       | AISC 360 M2.5               |                |
| b. slip critical connections                                       | Field inspection                        |     |      |            | Х        | 1705.2       | AISC 360 M2.5               |                |
| 3. Material verification   | Material markings versus certifications |     |      |            |          | 1705.2       | ASTM A6, A568               |                |
| a. conforms to ASTM standards                                      |   |     |      |            |          | 1705.2       | ASTM A6, A568               |                |
| b. certified mill test reports                                     |   |     |      |            |          | 1705.2       | ASTM A6, A568               |                |
| 4. Verification of weld filler materials                           |   |     |      |            |          | 1705.2       |                             |                |
| a. markings conform to AWS specification in construction documents | Field inspection                        |     |      |            |          | 1705.2       | AISC 360                    |                |
| b. manufacturer's certificate of compliance                        |   |     |      |            |          | 1705.2.1     |                             |                |
| 5. Inspection of welding   | Field inspection                        |     |      |            |          | 1705.2       |                             |                |
| a. structural steel  |   |     |      |            |          | 1705.2       |                             |                |
| 1. penetrations of welds   |   |     |      | Х          |          | 1705.2.1     | AWS D1.1                    |                |
| 2. multi-pass fillet welds   |   |     |      | х          |          | 1705.2       | AWS D1.1                    |                |
| 3. Single pass welds >5/16"  |   |     |      | х          |          | 1705.2       | AWS D1.1                    |                |
| 4. Single pass welds <5/16   |   |     |      |            | Х        | 1705.2       | AWS D1.1                    |                |
| 5. Floor & roof deck welds   |   |     |      |            | Х        | 1705.2       | AWS D1.3                    |                |
| b. Reinforcing Steel   |   |     |      |            |          | 1705.2       |                             |                |
| 1. verification of weldability                                     |   |     |      |            | X        | 1704.5 item6 | AWS D1.4; ACI<br>318:26.6.4 |                |
| 2. Flexural & axial forces   |   |     |      |            |          | 1705.2       | AWS D1.4; ACI<br>318:3.5.2  |                |

| Work Type  | Description  | y/n | Firm | Continuous | Periodic | Chapter 17 | Other Standard             | Non Chapter 17 |
|--|--|-----|------|------------|----------|------------|----------------------------|----------------|
| 3. shear reinforcement   |  |     |      | Х          |          | 1705.2     | AWS D1.4; ACI<br>318:3.5.2 |                |
| 4. Other reinforcement   |  |     |      |            | Х        | 1705.2     | AWS D1.4; ACI<br>318:3.5.2 |                |
| 6. Steel Frame Joint inspections   |  |     |      |            |          | 1705.2.1   |                            |                |
| a. bracing & stiffening  |  |     |      |            |          | 1705.2     |                            |                |
| b. member locations  |  |     |      |            |          | 1705.2     |                            |                |
| c. joint details at connections  |  |     |      |            | Х        | 1705.2     |                            |                |
| Structural steel - installation  |  |     |      |            | Х        | 1705.2.1   | ASTM A6, A568              |                |
| Structural steel – size of each member   |  |     |      |            | Х        | 1705.2.1   | ASTM A6, A568              |                |
| Location of members  | Field inspection – per approved construction documents |     |      |            | Х        | 1705.2.1   | ASTM A6, A568              |                |
| Bearing of members   | Field inspection – per approved construction documents |     |      |            | X        | 1705.2.1   | ASTM A6, A568              |                |
| Bolts, nuts, washers - installation  | In place inspections                                   |     |      |            | X        | 1705.2.1   | AISC 335; LRFD             |                |
| Torque of bolts  | Field verify   |     |      |            | X        | 1705.2.1   | AISC 335; LRFD             |                |
| Connections  | Field verify   |     |      |            | X        | 1705.2.1   | AISC 335; LRFD             |                |
| Structural details   | Inspection in field                                    |     |      |            | X        | 1705.2.1   |                            |                |
| Deep Driven Foundation see table 1705.7  |  |     |      |            |          |            |                            |                |
| Verify pile materials, sizes and lengths comply with requirements and construction documents | Field inspection — per approved construction documents |     |      |            | X        | 1705.7     |                            |                |
| Determine capacities of test piles and conduct additional load tests as required             | Field inspection – per approved construction documents |     |      |            | X        | 1705.7     |                            |                |

| Work Type   | Description  | y/n | Firm | Continuous | Periodic | Chapter 17 | Other Standard | Non Chapter 17 |
|---|--|-----|------|------------|----------|------------|----------------|----------------|
| Observe driving operations and maintain complete and accurate records for each pile   | Field inspection — per approved construction documents                                   |     |      |            | X        | 1705.7     |                |                |
| 4. Verify placement locations and plumbing confirm type and size of hammer, record number of blows per foot of penetration, determine required penetrations to achieve design capacity, record tip and butt elevations and document any pile damage | Field inspection — per approved construction documents                                   |     |      | X          |          | 1705.7     |                |                |
| 5. for steel piles, perform additional inspections in accordance with section 1705.2  | Field inspection — per approved construction documents                                   |     |      |            |          | 1705.7     |                |                |
| 6. For concrete piles and concrete filled piles, perform additional inspections in accordance with section 1705.3   | Field inspection — per approved construction documents                                   |     |      |            |          | 1705.7     |                |                |
| 7. For specialty piles, perform additional inspections as determined by the registered design professional in responsible charge  | Field inspection — per approved construction documents                                   |     |      |            |          | 1705.7     |                |                |
| Pier and Curtain Wall Foundations see 1809.10   |  |     |      |            |          |            |                |                |
| Drilling  | Observe drilling and placement   |     |      |            |          |            |                | 1809.10        |
| Placement   | Verify placement, size, location, adequate bearing                                       |     |      |            |          |            |                | 1809.10        |
| Materials   | For concrete elements, perform additional inspections in accordance with section 1705.3. |     |      |            |          |            | ACI 318        | 1809.10        |
| Masonry see 1705.4  |  |     |      |            |          |            |                |                |
| Drilling  | Observe drilling and placement   |     |      |            |          | 1705.4     |                |                |
| Placement   | Verify placement, size, location, adequate bearing                                       |     |      |            |          | 1705.4     |                |                |

| Work Type                       | Description  | y/n | Firm | Continuous | Periodic | Chapter 17 | Other Standard          | Non Chapter 17    |
|---------------------------------|--|-----|------|------------|----------|------------|-------------------------|-------------------|
| Materials                       | Review products supplied versus material submitted     |     |      |            | X        | 1705.4     | ACI 318                 |                   |
| Acceptance test                 |  |     |      |            | Х        | 1705.4     | ACI 530                 |                   |
| Strength                        | Testing & review of strength                           |     |      |            | Х        | 1705.4     | ACI 530                 | 2105.2.1 2105.2.2 |
| Reinforcing in walls            | Field inspection — per approved construction documents |     |      |            | Х        | 1705.4     | ACI 318:3.5,7.1-7.7     | 1910.4            |
| Placement of anchors            | Field inspection — per approved                        |     |      |            | Х        | 1705.4     | ACI<br>318:8.1.3,21.2.8 | 1908.5 1909.1     |
| Mortar and grout placement      | construction documents                                 |     |      |            | Х        | 1705.4     | ASTM C 270              | 2103.9            |
| Mortar joints                   | Field inspection – per approved                        |     |      |            | Х        | 1705.4     | ACI 530                 |                   |
| Grout strength                  | construction documents                                 |     |      |            | Х        | 1705.4     | ASTM C 476              | 2103.13           |
| Mortar type                     | Field inspection – per approved                        |     |      |            | Х        | 1705.4     | ASTM C 270              | 2103.9            |
| Grade of reinforcing            | construction documents                                 |     |      |            | Х        | 1705.4     | ACI 530                 |                   |
| Cold weather construction       | Field inspection – per approved                        |     |      |            | Х        | 1705.4     | ACI 530                 | 2104.3            |
| Shallow Foundation section 1809 |  |     |      |            |          |            |                         |                   |
| Location of footing             | Field inspection of footing – per approved plans?      |     |      |            |          |            |                         | 1809.6            |
| Depth and Width of Footing      | Field inspection of footing- per Approved plans?       |     |      |            |          |            |                         | 1809.4            |
| Strength of footing PSI         | Laboratory testing— per approved plans?                |     |      |            |          |            |                         |                   |
| Stepped Footing                 | Field inspection of footing                            |     |      |            |          |            |                         | 1809.3            |

| Frost protection   | Field inspection of footing                          |     |      |            |          |                     |  | 1809.5                  |
|--|--|-----|------|------------|----------|---------------------|--|-------------------------|
| Work Type  | Description  | y/n | Firm | Continuous | Periodic | Chapter 17          | Other Standard                             | Non Chapter 17          |
| Prescriptive Footing for Light –frame construction   | Field inspection of footing                          |     |      |            |          |                     |  | 1809.7                  |
| Plain Concrete Footing   | Field inspection of footing                          |     |      |            |          |                     |  | 1809.8                  |
| Concrete Construction see Table 1705.3   |  |     |      |            |          |                     |  |                         |
| Inspection of reinforcing steel, including pre-stressing tendons, and placement.   | Field inspection including proper size and placement |     |      |            | X        | 1705.3              | ACI 318:3.5 7.1-<br>7.7                    | 1910.4                  |
| 2. Reinforcing steel welding   |  |     |      |            |          | 1705.2.2<br>item 2b | AWS D1.4<br>ACI318:3.5.2                   |                         |
| 3.Inspection of anchors cast-in concrete where allowable loads have been increased or where strength design is used  |  |     |      |            |          | 1705.3              | ACI 318:<br>8.1.8,21.2.8                   | 1908.5 1909.1           |
| 4.Inspection of anchors post-installed in hardened concrete members  |  |     |      |            | X        | 1705.3              | ACI 318: 3.8.6,<br>8.1.8,21.2.8            | 1909.1                  |
| 5.Verifying use of required design mix   |  |     |      |            | X        | 1705.3              | ACI 318: CH 4,5.2-<br>5.4                  | 1904.2 1910.2<br>1910.3 |
| 6.At the time fresh concrete is sampled to fabricate specimens for strength tests, perform slump and air content tests and determine the temperature of the concrete |  |     |      |            | х        | 1705.3              | ASTM C 172 ASTM<br>C 31 ACI<br>318:5.6,5.8 | 1910.10                 |
| 7. Inspection of concrete and shotcrete placement for proper application techniques.   |  |     |      | X          |          | 1705.3              | ACI 318:5.9,5.10                           | 1910.6 1910.7<br>1910.8 |
| 8. Inspection for maintenance of specified curing temperature and techniques.  |  |     |      |            | X        | 1705.3              | ACI 318: 5.11-5.13                         | 1910.9                  |
| 9.Inspection of pre-stressed concrete  |  |     |      |            |          | 1705.3              |  |                         |
| Application of pre-stressed forces   |  |     |      | X          |          | 1705.3              | ACI 318:18.20 ACI<br>318:18.18.4           |                         |

| Grouting of bonded pre-stressed tendons in the  |  |     |      | Х          |          | 1705.3     | ACI 318:18.20 ACI |                |
|---|--|-----|------|------------|----------|------------|-------------------|----------------|
| seismic-force resisting system  |  |     |      |            |          | 17.00.0    | 318:18.18.4       |                |
| Seisific-force resisting system   |  |     |      |            |          |            |                   |                |
| Work Type   | Description  | y/n | Firm | Continuous | Periodic | Chapter 17 | Other Standard    | Non Chapter 17 |
| 10.Erection of precast concrete members   |  |     |      |            |          | 1705.3     | ACI 318: CH16     |                |
| 11.Verification of in-situ concrete strength prior to stressing of tendons in posttensioned concrete and prior to removal of shores and forms from beams and structural slabs   |  |     |      |            | X        | 1705.3     | ACI 318:6.2       |                |
| 12.Inspect formwork for shape location and dimensions of the concrete member being formed, shoring and reshoring  |  |     |      |            | X        | 1705.3 VCC | ACI 318:6.1.1     |                |
| Cast- In-Place Deep Foundation Elements   |  |     |      |            |          |            |                   |                |
| Verification/Inspection see table 1705.8  |  |     |      |            |          |            |                   |                |
| Observe drilling operations and maintain complete     and accurate records for each element.  |  |     | Х    |            |          | 1705.8     |                   |                |
| 2. Verify placement locations and plumpness confirm element diameters, bell diameters (if applicable) lengths embedment into bedrock (if applicable) and adequate end-bearing strata capacity. Record concrete or grout volumes |  |     | X    |            |          | 1705.8     |                   |                |
| 3.For concrete elements perform additional inspections in accordance with section 1705.3  |  |     |      |            |          | 1705.3     |                   |                |
| Helical Piers   |  |     |      | X          |          | 1705.9     |                   |                |
| Slabs (ground or elevated)  |  |     |      |            |          |            |                   |                |
| Thickness   | Field inspection — per approved construction documents |     |      |            |          | 1705.3     |                   | Section 1910   |
| Rebar sizes   | Field inspection — per approved construction documents |     |      |            |          | 1705.3     |                   |                |

| Work Type  | Description  | y/n | Firm | Continuous | Periodic | Chapter 17   | Other Standard                     | Non Chapter 17 |
|--|--|-----|------|------------|----------|--------------|------------------------------------|----------------|
| Rebar spacing  | Field inspection – per approved construction documents |     |      |            |          | 1705.2.2.1.2 | AWS D1.4 ACI 318                   |                |
| Rebar location in slab   | Field inspection – per approved construction documents |     |      |            |          | 1705.2.2.1.2 | ACI 318                            |                |
| Floor penetrations   | Field inspection – per approved construction documents |     |      |            |          | 1705.2.2.1.2 |                                    | Section 714    |
| STEEL Construction see Table 1705.2.2  |  |     |      |            |          |              |                                    |                |
| Material verification of cold-formed steel deck:   |  |     |      |            | х        | 1705.2.2     |                                    |                |
| a. Marking   |  |     |      |            | х        | 1705.2.2     | Applicable ASTM material standards |                |
| b. certificate of compliance   |  |     |      |            | х        | 1705.2.2     |                                    |                |
| 2. Inspection of Welding:  |  |     |      |            | х        | 1705.2.2     |                                    |                |
| a. Cold-formed steel deck  |  |     |      |            |          | 1705.2.2     |                                    |                |
| 1.)Floor and roof deck welds   |  |     |      |            | х        | 1705.2.2     | AWS D1.3                           |                |
| b. Reinforcing steel:  |  |     |      |            |          | 1705.2.2     |                                    |                |
| 1.)Verification of weldability of reinforcing steel other than ASTM A 706  |  |     |      |            | х        | 1705.2.2     | AWS D1.4 ACI 318:<br>3.5.2         |                |
| 2.)Reinforcing steel resisting flexural and axial forces in intermediate and special moment frames and boundary elements of special structural walls of concrete and shear reinforcement | Markings meets ASTM standards                          |     |      | х          |          | 1705.2.2     | AWS D1.4 ACI 318: 3.5.2            |                |
| 3.) Shear reinforcement  | Markings versus certificate of compliance              |     |      | х          |          | 1705.2.2     | AWS D1.4 ACI 318:<br>3.5.2         |                |
| 4.) Other reinforcing steel  | Field inspection                                       |     |      |            | X        | 1705.2.2     | AWS D1.4 ACI 318:<br>3.5.2         |                |

| Work Type                     | Description   | y/n | Firm | Continuous | Periodic | Chapter 17           | Other Standard | Non Chapter 17            |
|-------------------------------|---|-----|------|------------|----------|----------------------|----------------|---------------------------|
| Wood                          |   |     |      |            |          |                      |                |                           |
| Fabrication/quality control   | Review submittals and installation  |     |      |            |          | 1704.2.5             |                |                           |
| High load diaphragms          | Inspection of sheathing, framing size nail and staple size, number of fasteners, and spacing of fasteners   |     |      |            |          | 1705.5.1             |                |                           |
| Structural wood               |   |     |      |            |          | 1705.5<br>1705.11.1  |                |                           |
| Fire resistive wood           |   |     |      |            |          |                      |                | 2303.2                    |
| Fire resistive wood marking   | Paint once on site on the sides so<br>that it can be identified when cut and<br>MFG markings aren't visible |     |      |            |          | 1703.5               |                | 2303.1.8.1                |
| Fire Resistance               |   |     |      |            |          |                      |                |                           |
| Spray on materials            | Review surface conditions, applications, thickness  |     |      |            | х        | 1705.13              |                | 722.5.2.2<br>722.5.1.3    |
| Fire resistant coatings       | Review surface conditions, applications, thickness  |     |      |            | Х        | 1704.11<br>1705.13.4 |                |                           |
| Thermal and Sound -Insulating | Review applications   |     |      |            |          |                      |                | Section 720               |
| Special Cases                 | Review surface preparations and applications  |     |      |            |          | 1705.1.1             |                |                           |
| Smoke Control See section 909 |   |     |      |            |          | 1705.18              |                |                           |
| Duct testing for leaks        | Prior to concealment  |     |      |            |          |                      |                | 909.5.2                   |
| Pressure and flow testing     | Prior to completion   |     |      |            |          |                      |                | 906.6,909.6.1,909.<br>6.2 |



## **SPECIAL INSPECTION MEETING**

| DATE OF SI MEETING:         |           | TIME / LOCATION:             |
|-----------------------------|-----------|------------------------------|
| VIRTUAL MEETING #:          | PASSWORD: | ESTIMATED CONSTRUCTION COST: |
| PROJECT ADDRESS:            |           | PLAN #:                      |
| PROJECT DESCRIPTION:        |           | CODE YEAR:                   |
| SPECIAL INSPECTION MANAGER: | <u></u>   | BUILDING PLAN REVIEWER:      |

|    | Firm Name | SIGNATURE | Telephone Number | Contact name | Email    |
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