

**Virginia Polytechnic Institute and State University
Facilities Department Procedures**

11020 UNIFORM STATEWIDE BUILDING CODE INSPECTION PROCEDURE

Date: November 23, 2015

Revision: 0

Purpose:

To provide for the processing of the Building and Trade inspections in accordance with the Virginia Uniform Statewide Building Code (VUSBC) and the 2015 Higher Education Management Act between the Commonwealth of Virginia and the university. These procedures will clearly define the roles and responsibilities of all parties involved in the inspection process, increase awareness of the inspection requirements, and create a uniform procedure applicable to all campus projects.

Responsible Staff:

- The University Building Official (UBO) is responsible for permit plan review, the issuance of the building permits, code mandated inspections, and the issuance of the Certificate of Occupancy. The UBO is responsible for the development and maintenance of all operations, inspections, and procedures for the Office of the University Building Official.
- The UBO Office staff are responsible for managing the permit application and review process as well as the issue, inspection, and approval of final work in the field for code compliance.
- The Permit Technician (Permit Tech) is responsible for coordinating incoming and outgoing permits and permit information. The Permit Tech also coordinates the permit management program used to issue the permits and manages related inspection results.
- The Project Manager (PM) is the person who has been given the responsibility and authority to manage a project. Typically, they will be university employees from either the Facilities or Housing and Residence Life (Residence and Dining) Departments. The PM is responsible for permit inspection compliance and must provide the UBO with the information required to conduct inspections.
- The Contractor, either a General Contractor (GC), Design Builder (DB) or Construction Manager (CM), is responsible for the construction of the project in accordance with the contract and construction documents and the VUSBC. This includes the coordination and direction of all subcontractors, fabricators, and material suppliers. The Contractor is generally responsible for the means and methods of construction, as well as for construction site safety and scheduling inspections and tests. The Contractor is the primary person or firm responsible for compliance with OSHA and VOSHA standards and regulations.
- The Primary Registered Design Professional of Record (PRDP) or Architect/Engineer (A/E) is the primary agent responsible for the design and design team. The PRDP reviews and acts upon conditions noted in plan review comments and inspection reports, while providing submittal review and approval, development of or approval of fabrication and erection documents, as well as those revisions and change orders affecting work to be inspected or tested. The following sub-classifications of a PRDP may be an active part of any given project depending on the nature of the work and should be noted:
 - The Architect of Record (AR) is typically the PRDP in responsible charge of the architectural building elements and may also serve as the Primary Design Professional for the project.
 - Geotechnical Engineer of Record (GER) is the Registered Design Professional (RDP) in responsible charge of the Geotechnical analysis and design of support systems for the footing and foundation support. They may be contracted directly by the owner or by sub-contract to the A/E.

- The Structural Engineer of Record (SER) is the RDP in responsible charge of the structural system. They may be contracted directly by the owner or by sub-contract to the A/E.
- The Mechanical/Electrical/Plumbing/Fire Protection Engineers of Record are the RDPs in responsible charge of the HVAC systems, electrical systems, plumbing and fire protection systems. They may be contracted directly by the owner or by sub-contract by the A/E.
- The Code Inspectors are responsible for performing plan reviews and inspections for all projects that have a permit in accordance with the building code. The lead inspector will work the other UBO inspectors and staff, as well as other agencies as required, to coordinate the various discipline inspections and maintain the master file of information relating to the project.
- In accordance with the VCC, the owner shall contract with a firm or team of firms to provide the Special Inspections (SI), which are separate from other contract compliance, owner, or contractor inspections. The SI program shall conform to the requirements provided in the University Building Official Virginia Uniform Statewide Building Code Special Inspection Procedures.
- Independent or Third Party Inspectors may be used during times or events where the code enforcement staff cannot provide for an inspection when requested by the PM or Contractor. The PM may submit a request to utilize an Independent or Third Party Inspector, who is normally an engineer to conduct the inspection in lieu of the code official. Based on the situation, the UBO may or may not approve the use of the third party or independent inspector.
- In order to administer the contract and construction, the Owner (PM) has the authority to employ one or more additional inspectors or inspection firms. These firms and inspectors are separate and apart from the code inspectors and shall not have the authority of or the responsibility for code related inspections.

Procedure:

When Inspections are Required:

1. All permits require an inspection to close. Separate permits are required for building, mechanical, electrical, gas and plumbing work. No requested inspection is performed unless a valid permit exists for that work. Work performed without a permit, when a permit is required, is a violation of the law. If there is a question whether a permit is required, or if work is within the scope of any permit issued, call the UBO Office.
2. The PM or contractor shall provide formal notification to the UBO Office of a request for inspection, as outlined in the Uniform Statewide Building Code Permit Procedures (Facilities Procedure 11010). This can be in writing, by email or fax, or a phone call. Until UBO staff has confirmed the inspection, it has not been scheduled. Requests shall be made with the following information:
 - a. Address or location of job (floor number, room or suite number, etc.)
 - b. Permit number – requests for inspection will not be accepted without the building permit number
 - c. Type of inspection requested (footing, rough in, final, etc.)
 - d. What systems are to be inspected
 - e. The intended limits of the requested inspection
 - f. Name of person making the request

- g. Contact or callback number of person making the request
- 3. Inspection requests shall be honored as schedules permit. Flexibility is required on the part of both the inspector and requestor.
- 4. In no situation shall work shall be concealed until written confirmation from the UBO Office is provided noting that inspections are complete and all code related deficiencies have been resolved.
- 5. Sub-contractors must schedule all inspections through the PM, CM, or GC.
- 6. Project Managers and Special Inspectors are expected to have verified the equipment to be inspected prior to the UBO arriving.
- 7. When requesting a concrete or masonry grout inspection, forms must be in place with all reinforcement, covered or integrated electrical, plumbing, mechanical and structural equipment installed and fastened in place a minimum of two (2) hours prior to the scheduled pour. Please provide the exact time of the proposed pour. A failed inspection will normally delay or cancel the pour.

Note the following conditions apply: Due to the nature of the process, the UBO staff cannot set a specific appointment time. The UBO Office will provide an approximate time of arrival that is estimated to be plus or minus four hours. In the event the inspection and review load is heavy, some inspections may be delayed and prioritized. A 24 hour notice is the minimum. It is possible that inspections may be scheduled for, and inspected within, two (2) business days following the request. Inspections will be scheduled as far in advance as the contractor desires. Failure to be ready for an inspection is cause to reject and reschedule without further inspection. If an email has been sent and confirmation of the inspection has not been returned by the end of the day, the requestor should not assume the message has been received.

Inspection Process:

- 1. The UBO Office shall perform requested code required inspections. The Permit Tech will assign the inspection to the UBO staff as required and available. The Permit Tech or the Inspector who provides the inspection shall:
 - a. Review inspection request forms for completeness and accuracy
 - b. Review the status of past inspections
 - c. Review the project status
 - d. Review the approved drawings
 - e. Provide the inspection and discuss the results with the PM or PC on site if possible. The goal is to make as many corrections as possible if timely and not leave deficiencies for follow up inspections.
 - i. Failure to have the buildings and trade permits posted is cause to reject and terminate the inspection.

- ii. Failure to have the UBO approved drawings on site for reference during inspection is cause to reject and terminate the inspection.
 - iii. If work is not complete and open for inspection, it may be subject to disapproval and require re-inspection.
 - iv. Any issue that cannot be resolved in a timely manner is subject to being rejected and will be noted and must be re-inspected when corrected.
- f. Annotate comments on the inspection request form
- g. Provide the completed inspection form to:
- i. The PM or his/her designee; and the
 - ii. UBO Permit Technician
2. The UBO Office's hours are from 8:00 a.m. to 5:00 p.m. Monday to Friday when the University is open. The Office is not open weekends, or on state or university holidays. Inspections must be requested no later than 4:00 p.m. to be placed on the inspector's schedule for the next available inspection opportunity. Any request received after 4:00 p.m. may be placed on the schedule for the following working day(s).
- a. Examples:
- i. Inspections requested at 3:30 p.m. on Tuesday 12/13/2015 will be placed on the inspection schedule for Wednesday 12/14/2015
 - ii. Inspections requested at 4:15 p.m. on Tuesday 12/13/2015 will be placed on the inspection schedule for Thursday 12/15/2015
3. The inspectors may contact the PM and/or Contractor concerning inspections after having an opportunity to review the assignment schedule. Please note the inspector is not able to schedule a specific time for an inspection.
4. Inspectors are not allowed to inspect a job without a responsible party (usually the permit holder) present with them during the inspection. It is the permit holder's responsibility to furnish a ladder if one is needed for a requested inspection.
5. Special weather conditions may affect the inspector's ability to perform inspections. Should you have a question concerning inspections for a particular day, please contact the Permit Tech at 540-231-5534. If inspections are cancelled for any particular day, the inspector will notify the requestor.
6. An existing building typically only requires a final inspection to close the permit. However, alterations to existing buildings, new buildings, additions to existing buildings, buildings and spaces which have undergone a change of use, and shell spaces which have never been occupied will require a certificate of occupancy from the UBO before the space is occupied. Requests for final inspection

shall be scheduled a minimum of five (5) days in advance. It is the responsibility of the requestor to coordinate the inspection with the UBO.

7. In addition to these required inspections, the VUSBC states that structures may be inspected at any time during construction. Occasionally, inspectors will visit jobs unannounced and when not requested.
8. The UBO will consider on a case by case basis the use of Independent Inspectors, third party inspectors, photo verification and video inspection. In no case is the UBO bound to accept any inspection without prior approval, review of the firms or individuals, and evaluation of the situation. If the use of alternative inspection processes is denied, a UBO staff inspection shall be provided at the earliest available date and time.
9. A project or permit will not be considered complete until a Certificate of Occupancy (CO), an Authorization to Reoccupy, or a Final Inspection is successfully completed.

Pre-Construction Meeting and Post Construction Closeout:

1. Pre-Construction Meeting
 - a. When required by the UBO, pre-construction meetings are to be conducted by the PM at the start of the project.
 - b. The meeting must be attended by the following individuals:
 - i. Building Official (or designee)
 - ii. Contractor
 - iii. Subcontractor's representatives for each trade of work
 - iv. Special Inspector (if part of project)
 - v. Project Manager or owner
 - c. RDP(s) of Record for each scope of work specified are to be notified of the pre-construction meeting and are encouraged to attend whenever possible
 - d. The meeting will provide a forum to review and explain the following:
 - i. Work to be reviewed as specified in the VUSBC inspection.
 - ii. Discussion of the inspections and testing to be performed.
 - iii. Timely notification required by the Contractor to the UBO of when the work is ready for inspections during the course of the work.
 - iv. Procedures to document, correct, re-inspect, and complete items found to be non-compliant or deficient.
 - v. Identification of the RDP designated to resolve field deviations and non-compliant items if different from the RDPs responsible for preparing the construction documents.

- vi. Contact information of individuals involved with the project.
- vii. Proper submission and distribution of reports and supplemental information.
- viii. Discussion of coordination of all work to be performed in accordance with the contract documents and that no changes shall be permitted unless authorized and approved in writing by the RDP of Record for the work in question.

2. Post Construction Closeout

- a. At the conclusion of the final inspection, the PM shall be responsible for submitting the required closing documents found in the CPSM as modified for the UBO Office. These can also be found at the UBO Website.
- b. At that time the PM may request a Final Inspection or TCO in order to occupy the building. The PM should only ask for the Inspection or CO when the work is complete. A TCO may be issued if all of the life, fire and safety measures are complete and the SFMO concurs with the evaluation of safety.
- c. When required or appropriate, the UBO staff shall review the file and contact other related state agencies for clearance documents if they have not been provided.
- d. If the paperwork is complete and the building is complete, the UBO shall issue the CO.
- e. In the case of work on an existing building, the final inspection may stand in the place of a new CO. Depending on the project, the UBO may opt to issue a revised CO for the building.

References:

- 2012 edition of the Virginia Construction Code that adopts by reference and amends the 2012 edition of the ICC code family published by the International Code Council.
- ASTM E-329, Standard specification for agencies engaged in construction inspection and testing. West Conshohocken: ASTM, Intl.; American Society of Testing Materials, 2007

Abbreviations and Definitions:

Abbreviations:

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| 1. ACI | ACI International (American Concrete Institute) |
| 2. AISC | American Institute of Steel Construction, Inc. |
| 3. AISI | American Iron and Steel Institute |
| 4. ASCE | American Society of Civil Engineers |
| 5. ASNT | American Society of Non-Destructive Testing |
| 6. ASTM | American Society for Testing Materials |
| 7. AWS | American Welding Society |
| 8. BIA | Brick Industry Association |
| 9. CASE | Council of American Structural Engineers |

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10. CM	Construction Manager
11. DB	Design Builder
12. DHCD	Department of Housing and Community Development
13. EDI	Exterior Design Institute
14. EIFS	Exterior Insulation and Finish Systems
15. GC	General Contractor
16. IBC	International Building Code
17. ICC	International Code Council, Inc.
18. NCMA	National Concrete Masonry Association
19. NEC	National Electric Code
20. NFPA	National Fire Protection Association
21. NICET	National Institute for Certification in Engineering Technologies
22. MEPR	The Mechanical/Electrical/Plumbing Engineer of Record
23. OSHA	United States Department of Labor Occupational Safety and Health Administration
24. PCA	Portland Cement Association
25. PCI	Pre-cast/Pre-stressed Concrete Institute
26. PM	Project Manager
27. PTI	Post Tensioning Institute
28. RDP	Registered Design Professional
29. SDI	Steel Deck Institute
30. SJI	Steel Joist Institute
31. TMS	The Masonry Society
32. TPI	Truss Plate Institute
33. VOSHA	Virginia Occupational Safety and Health Administration

Definitions:

Words used in this procedure shall have a meaning as defined in the VUSBC and/or the International Building Code (IBC). Unless otherwise expressly stated, other words and terms shall have the meaning below. Where terms are not defined, such terms shall have ordinarily accepted meanings such as the context implies.

1. Agents of Special Inspector (Agents): qualified individuals or agencies working under the direction of the Special Inspectors who are providing the inspections and tests necessary to complete the special inspection process
2. Approved: See VCC Chapter 2 as amended
3. Approved Agency: See VCC Chapter 2 as amended
4. Approved Documents: Includes building construction documents approved by the jurisdiction including all approved revisions; Also includes fabrication and erection documents approved by jurisdiction including all approved revisions
5. Approved Fabricator: See VCC Chapter 2 as amended, 1702.1
6. Architect and Engineer (A/E, A&E): The registered design professional, professionals, or professional firm retained by the owner to provide specifications, designs, and other professional services to develop project and construction documents in conformance with the VUSBC and contract documents
7. Architect of Record (AR): The registered design professional licensed in the Commonwealth of Virginia as an architect and retained by the owner to design or specify architectural construction in

accordance with the VUSBC and whose signature and seal appears on the approved architectural construction documents

8. Authority Having Jurisdiction (AHJ): The organization, office, or individual responsible for approving equipment, materials, installation, or procedure. In the case of Virginia Tech, the AHJ for the building code is the University Building Official (UBO) and the AHJ for the State Fire Code is the State Fire Marshalls Office (SFMO)
9. Building: See VCC Chapter 2 as amended
10. Building Official (also referred to as the University Building Official (UBO) at Virginia Tech and Building Official or Commissioner in some jurisdictions): The local government authority charged with the administration and enforcement of the VUSBC. This shall include any duly authorized technical assistants as specified in the VUSBC. See also AHJ.
11. Certificate of Compliance: See VCC Chapter 2 as amended, 1704.2.5.2
12. Certificate of Occupancy or Certificate of Use and Occupancy (CO): This is an authorization for occupancy of a building upon the completion of the work based on the approved construction documents and successful acceptance after all fire code and building code related inspections are satisfied. This recognizes the building is considered in general compliance, although under the building code there is an additional two year period in which code violations can be identified and required to be resolved.
13. Construction Documents: See VCC Chapter 2 as amended
14. Contractor: A firm or person licensed in the Commonwealth of Virginia to provide construction services; See Commonwealth of Virginia, Title 54.1
15. Discrepancy: A deviation from the approved plans and specifications and/or VUSBC
16. Fabricated Item: See VCC Chapter 2 as amended
17. Fabrication and Erection Documents (Placement Drawings): All of the written, graphic, and pictorial documents prepared or assembled after issuance of a building permit and in addition to the university approved construction documents, describing the design, location, and physical characteristics of the building components or materials necessary for fabrication, assembly, or erection of the elements of the project (Examples would include, but are not limited to, concrete reinforcing shop drawings, steel fabrication and erection shop drawings, and metal building fabrication and erection shop drawings)
18. Final Report of Special Inspections: A certification by the SI which shall indicate that all construction elements subject to special inspections as identified by the jurisdiction approved Statement and Schedule of Special Inspections (SSI) for all materials or phases of construction have been inspected prior to concealment, and in the SI's professional opinion and knowledge, the construction project complies with jurisdiction's approved construction documents
19. Geotechnical Engineer of Record (GER): The Registered Design Professional retained to investigate and determine soil conditions and/or to design and specify earthwork and foundation support in accordance with the VUSBC, and whose seal and signature appear on the jurisdiction approved geotechnical report
20. Inspection: The continuous or periodic observation of work and the performance of tests for certain building or structural components to establish conformance with jurisdiction approved documents as required by the VUSBC and the IBC
21. Independent Inspection: Building Code inspections performed by an approved independent third party, when approved in advance by the UBO as a substitute for an inspection by the UBO staff. This approval is typically reserved for inspections outside normal working hours or when required at distant sites from campus.
22. Inspection Certificate: See VCC Chapter 2, as amended
23. Inspection and Testing Agency: An established and recognized agency or agencies, meeting the requirements of ASTM E 329 and accredited, retained by the owner, independent of the contractors

performing the work subject to special inspections, to perform special inspections and materials testing required by the VUSBC and the IBC; See IBC-1703.1 approved agency

24. **Main Windforce-Resisting System:** An assemblage of structural elements assigned to provide support and stability for the overall structure. The system generally receives wind loading from more than one surface.
25. **Owner:** See VCC Chapter 2, as amended
26. **Pre-Engineered Structural Elements:** Structural elements specified by the SER but which may be designed by a specialty RDP (Examples are items such as open web steel joists and joist girders; wood trusses; combination wood, metal and plywood joists; pre-cast concrete elements; prefabricated wood or metal buildings; tilt-up concrete panel reinforcement and lifting hardware)
27. **Primary Registered Design Professional of Record (PRDP):** The leader of the design team charged with the preparation of construction documents, either an architect or professional engineer. The PRDP is responsible for determining and interpreting the needs of the client or for coordinating the work of the other members of the design team.
28. **Primary Structural System:** The combination of elements which serve to laterally brace and support the weight of the building's structural shell, the applicable live loads based upon use and occupancy, wind, snow, ice, thermal and seismic environmental loads
29. **Registered Design Professional (RDP):** An architect or professional engineer, licensed to practice architecture and engineering, as defined under Section 54.1-400 of the code of Virginia (also see VCC Chapter 2). Note that state contract documents may also refer to this person, persons, or firm as the A/E.
30. **Registered Design Professional in Responsible Charge:** A registered design professional engaged by the owner to review and coordinate certain aspects of the project, as determined by the UBO, for compatibility with the design of the building or structure, including submittal documents prepared by others, deferred submittal documents and phased submittal documents (also see VCC Chapter 2). Note that state contract documents may also refer to this person, persons, or firm as the A/E.
31. **Registered Design Professionals Seal:** A seal placed on documents prepared by or under the supervision of a RDP. The application of a professional seal indicates that the professional has exercised direct control and personal supervision over the work to which it has been affixed. An appropriately licensed certified professional shall apply a seal to all final documents in which they have had direct control and personal supervision thereof.
32. **Risk Category:** See VCC Chapter 2, 1604.5
33. **Seismic Design Category:** See VCC Chapter 2 as amended
34. **Seismic Force Resisting System:** See VCC Chapter 2 as amended
35. **Shear Wall:** See VCC Chapter 2 as amended
36. **Structural Observation:** See VCC-1702.1
37. **Shall:** This term indicates mandatory requirements
38. **Special Inspector (SI):** The SI is the Registered Design Professional in Responsible Charge who is directly responsible for special inspections, materials testing, and related services as described in the approved Statement of Special Inspections. The SI shall be retained by the owner, independent of the contractors performing the work subject to special inspection The SI shall be listed as Agent 1 on the SSI; See VCC Chapter 2
39. **Special Inspection (SI):** The process as outlined in VCC Section 1704 for the independent inspection of specific elements in the construction of a structure
40. **Special Inspection, Continuous:** The full time observation of work requiring special inspection by an approved SI who is present in the area where the work is being performed (Noted as "c" on the scope or schedule of inspections in the statement of special inspections); See VCC Chapter 2

41. Special Inspection, Periodic: The part-time or intermittent observation of work requiring special inspection by an approved SI who is present in the area where the work has been, or is being performed, or at the completion of groups of task involved in completion of the work. One-hundred percent of the work required to be inspected shall be inspected. Under special circumstances, and after substantiating data is reviewed, the UBO may decrease the percentage of work that is required to be inspected; See VCC Chapter 2
42. Sprayed Fire-Resistant Materials (SFRM): See VCC Chapter 2-1702.1
43. Statement of Special Inspections (SSI): A statement prepared by an RDP and approved by the appropriate RDP(s) of Record and submitted by the permit applicant. The SSI includes the scope (schedule) of the special inspection services applicable to a construction project, and the RDP's and inspection and testing agencies that will provide those services. The SSI is required as a condition for permit issuance in accordance with IBC as amended by VUSBC and must be approved by the UBO.
44. Structural Engineer of Record (SER): The RDP that is licensed as and experienced in engineering who designs or specifies structural documents in accordance with the VUSBC, and whose signature and seal appear on the jurisdiction approved structural construction documents
45. Structure: See VCC-Chapter 2 as amended
46. Submittal Review Stamp: A stamp applied to a submittal indicating that the RDP has reviewed the submittal, and that the submittal clearly and completely indicates in detail the product(s) that are proposed to be installed. In addition to the product, the RDP and/or UBO, may require the method(s) of installation to be completely and clearly defined. The intent of the shop drawing review process is to ensure that the RDP's intended results coincide with the contractors proposed products and methods.
47. Temporary Certificate of Occupancy and/or the Temporary Certificate of Use and Occupancy (TCO): This is an authorization for occupancy of a building for a specific time and for a specific set of limitations. While it is issued only where the minimum requirements for fire, and general safety as well as egress are meet for a specific set for situations, it is not indicative of a completed structure.
48. Third Party Inspection: See Independent Inspection
49. Virginia Construction Code (VCC): Part I of the VUSBC which adopts and amends the International Building Code
50. Virginia Uniform Statewide Building Code (VUSBC): The adopted statewide building code in Virginia and includes Parts I, II, and III

Approval and Revisions:

Reviewed and Approved by:



Christopher H. Kiwus, PE, Ph.D.
Associate Vice President and Chief Facilities Officer

11-23-15

Date

Appendix:

General:

1. Code enforcement inspections are provided for in VCC Section 113. The minimum inspections are provided for in Section 113.3. The guidelines and procedures below provide further detail on how the minimum inspections are achieved on university projects.
2. In addition, Section 113.3 provides for inspections as a prerequisite to issuing a permit if in the judgment of the UBO additional information is required for review. Section 113.4 provides the authority for the UBO to specify additional inspections during construction if required. Inspections outside the minimum are determined and managed on a case by case basis based on the specifics of the issues involved. This procedure does not provide further direction, so please refer to the VCC for direction for prerequisite and additional inspections.
3. Third party or independent inspections conducted for the UBO are authorized under VCC Section 113.47. The guidelines and procedures related to these inspections are a separate document entitled Guidelines and Procedures for Third Party Inspections.

Required Minimum Inspections:

The following are the inspections required by the Virginia Construction Code and referenced International Codes and associated references. The building or trade permit which has been issued gives authority for work to commence based on the UBO approved design documents. The stamped, approved plans, returned with this permit, shall be retained at the job site and be available for inspectors on request. It shall be the applicant's responsibility to perform all work in accordance with the VUSBC, and within the scope of what was authorized by the plans submitted and approved. Changes to these plans must be approved by the UBO Office. Permit placards must be placed in a prominent location, preferably visible from the street or sidewalk that provides common access to the work site.

Inspections at various stages of work are required by this office, under provisions of the VUSBC. The required inspections for buildings are listed below by trade.

1. Building Inspections Required:

- a. Footing Inspection – To be made after basement or footing trenches are excavated and forms, where applicable, are erected. All reinforcement steel, when necessary, must be in place and anchored. This inspection must be made prior to pouring concrete. If slab on grade (monolithic pour) construction, this inspection includes the foundation inspection. The inspector will also check for the required erosion control measures as shown on the approved site plan. If these items (e.g., silt fence, construction entrance, etc.) are not properly installed this inspection may be disapproved.
- i. Footings, foundations and water and sewer line inspections will be given a priority when requested to assist you in pours and covering open excavations. Same day inspections will be considered on an emergency basis only. For a same day inspections request to be covered, you must FIRST request the inspection through one of the methods described above. Be sure to indicate on your request that this is an emergency situation and you need an inspection as

soon as possible. Same day inspections cannot be guaranteed and will only be performed if inspectors are available.

b. Foundation

- i. **Masonry Foundation Wall Inspection:** The foundation block must be completed to the level of the finish grade, and be continuous over any steps or grade changes. Piers must be complete to the level of finish grade and any brick or other veneer must also be in place. All bonding or other lateral support of intersection walls must be complete and visible. All form boards or step boards must be removed and the foundation trench ready for backfilling. The top of the footings must be clean and clearly visible. Inspectors will not wait more than several minutes until the footing is made visible if they arrive and find it has been covered.
 - ii. **Floor Joists Inspection:** To be made after load-bearing walls to the first floor sill height have been erected, beams and floor-joists have been installed, and grading within the perimeter walls has been completed. Sub-flooring shall not be installed before this inspection has been approved. In basements, the first floor system (box) shall have all approved (on plans) supports (posts, columns, posts) for beams and girders in place and secured.
 - iii. **Damp-Proofing Inspection:** Basements must be inspected for water-proofing method, drains, gravel, and filter cloth before being backfilled.
 - iv. **Concrete slab and under floor inspection** to be made after any required reinforcement, building service equipment, piping (including sprinkler main), conduits and other ancillary equipment items are in place.
 - v. **Lowest floor elevation inspection** when the building is located in a flood hazard area. The elevation certification required in IBC Section 1612.5 shall be submitted to the building official.
- c. **Fireplace Inspection –** Where there is to be a fireplace(s) installed in a building, this inspection must take place while combustible clearances can be inspected. This must be before the interior is insulated and sheet rocked, but may be after the fireplace is finished. This includes all types of fireplaces; masonry, prefab, and vent-less. NOTE: A separate mechanical permit is required for gas fireplace appliances.
- d. **Framing Inspection –** To be made after the roof, all framing fire-stopping, blocking and bracing is in place, and the Sub-flooring has been installed. Do not install insulation before the framing inspection is approved. The building should be “weathered in” including windows, doors, and roof shingles for this inspection. The inspector will also check the condition of the required erosion control measures. If these items are not in good condition, this inspection may be disapproved. Structures with fire walls, fire barriers, fire rated assemblies will have additional inspections as required by the inspector as construction progresses. Issues to be addressed include but not limited to:
- i. **Frame inspection** to take place after the roof deck or sheathing, all framing, fire blocking and bracing are in place and plumbing, mechanical, and electrical systems are in place and have been approved. Partial framing inspections are acceptable in large projects.

- ii. Lathe and gypsum board inspection for fire resistive assemblies or shear assembly are to take place after lathing and gypsum board, interior and exterior are in place, but before plastering is applied or gypsum board joints and fasteners are taped and finished.
- iii. Fire resistant penetrations. Protection of joints and penetrations in fire resistance rated assemblies shall not be concealed from view until inspected and approved.
- iv. Energy Efficiency inspection.
- v. Above ceiling framing and rough in
- vi. Other inspections including stucco, roofing, back veneer, masonry, etc.
- vii. Contact the UBO for details specific to the project.

NOTE: It will be necessary to request or schedule the trade rough-ins. All of the trade rough-ins may be conducted on the day the general contractor requests the framing inspection.

- e. Insulation Inspection – To be made when all required insulation has been installed. In the event that the contractor intends to use blown insulation in the ceilings, that portion of this inspection may be delayed until and during the final inspection.

Exception: Insulation between slabs and exterior walls will be inspected during the foundation inspection.

- f. Final Inspection – To be made after the building has been completed and ready for occupancy. This inspection will not be made until all required electrical, plumbing, and mechanical final inspections and fire system inspections have been made and the work approved. A Final or Certificate of Use or Occupancy is issued only after completion of this inspection. The structure may not be used or occupied in whole or part until issuance of a Certificate of Occupancy. The disturbed area must be stabilized or the required erosion control measures must be in good condition.
- g. Independent or Third Party Inspection – For situations where work will be done after business hours or on weekends and the UBO is closed, an independent or third party code inspection may be authorized. These are approved on a case by case basis and subject to prior discussion and review. Typically additional information on the inspector or inspectors will be required as well as a clear understanding of the scope and limits of the inspection and reporting. Refer to the VT Building Code *Independent Inspection Procedures* for additional details.
- h. Special Inspection – Refer to Special Inspection procedures for details.

2. Plumbing Inspections Required

- a. Water and Sewer - To be made after all water and sewer lines are installed from the water and sewer mains (or wells and septic tanks) to the structure. Trench must be open and all lines accessible to the inspector.

- b. Rough-In Inspection - Under-slab inspection to be made prior to pouring concrete (under-slab). Rough-in inspection after all interior piping (water and sewer) has been installed and tested, and prior to concealment.
- c. Final Inspection - To be made after all plumbing work has been done and all appliances involving water and/or sewer connections have been installed.

3. Electrical Inspections Required

- a. Rough-In Inspection - Under-slab inspection required prior to pouring concrete. Rough-in inspection to be made after all interior wiring and electrical equipment has been installed, but prior to covering or concealment and prior to installation of any insulation. When possible, the following requirements must be in place at this for the rough-in electrical inspection:
 - i. The grounds and neutrals in the electrical panel must be terminated.
 - ii. The meter base must be mounted.
 - iii. The service cable must be terminated.
 - iv. The panel cover shall be installed with two screws only, and the screws shall be only finger tight.
 - v. For residential:
 - 1. One 20-Amp breaker shall be installed in the panel for the washer outlet only.
 - 2. A GFI receptacle must be installed in the washer outlet.

NOTE: If all of the above-listed items are not completed at the time of the electrical rough-in inspection, the rough-in may be approved but the meter will not be released until the electrical trim-out has been completed and inspected.

- b. Final Inspection - To be made after electrical work is complete and power is turned on. Having the power on does not result in being able to occupy or use a structure. A Building Certificate of Occupancy is required before a structure can be used or occupied.

4. Mechanical Inspections Required

- a. Rough-In Inspection - Under-slab inspection to be made prior to pouring concrete. Rough-in inspection to be made after the installation of all equipment, duct work, gas lines, and fuel storage tanks, etc., and prior to covering or concealment.
- b. Gas Lines - Rough-in inspection required after installation of all lines and after pressure test is complete (but before concealment of any lines or fittings). Final inspection required after hookup of all gas appliances. Gas service will not be released to the utility company for connection until these inspections are approved. If service is interrupted, new pressure tests and inspections may be required prior to release to the utility company.

- c. Final Inspection - To be made after all heating, ventilating, and air conditioning installations have been completed and tested.
5. Every Permit Must Have at Least One Inspection Outstanding
 - a. Issues, failed inspections, RFI's, or Deviations may prevent or delay subsequent inspections.
 - b. A permit will expire if the work authorized by the permit is not started within six months (180 days) after it is issued and a permit will also expire if there is no activity recorded by the UBO Office in any six (6) month period. No work should be done under an expired permit and inspections cannot be scheduled or performed for an expired permit. If your permit has expired, you must submit a written request for an extension to the Building Inspections Division. It is your responsibility to prove to the UBO that the work has not been suspended or abandoned.

University Building Officials Office Inspection Guide:

It is the Project Manager's responsibility to ensure all inspections are conducted and approved in accordance with approved plans. Typical inspections are listed below but may not be all inclusive. Refer to VUSBC Section 113.

1. Building Inspections Required:
 - a. Footing
 - b. Foundation
 - c. Masonry Foundation Wall Inspection
 - d. Floor Joist Inspection
 - e. Damp-Proofing Inspection
 - f. _ Fireplace Inspection
 - g. Framing Inspection
 - h. Structure, Anchorage
 - i. _ Shear Walls
 - j. _ Cavity Wall Components (Ties, Waterproof, etc.)
 - k. Poured Wall (Reinforcement, Thickness, Anchors, etc.)
 - l. _ Core Drills Prior to Fill
 - m. Fire Rated Assemblies and Penetrations
 - n. Insulation Inspection
 - o. Above Ceiling Inspection
2. Mechanical Inspections Required:
 - a. Rough In Inspection
 - b. Trade Final
3. Plumbing (Water and Sewer) Inspections Required:
 - a. Water and Sewer Trenches and Support
 - b. Rough in Inspection
 - c. Trade Final

4. Fire Suppression and/or Fire Alarm System Inspections Required:

- a. Water Piping Trenches and Support
- b. Rough in Inspection
- c. Alarm Test
- d. Pressure Test
- e. Witness the System Flush
- f. _ Witness Alarm Testing
- g. Witness Fire Damper Operations
- h. Trade Final

5. Electrical Inspections Required:

- a. Rough In Inspection
- b. Trade Final

6. Fuel Gas Inspections Required:

- a. Trenches and Support
- b. Gas Lines
- c. Pressure Testing
- d. Trade Final

7. Misc. Inspections Required:

- a. Sidewalks, Patio, etc. Reinforcement prior to placement of concrete
- b. Utility Piping (Water, Steam, Sewer)
- c. Health Department Inspection
- d. State Fire Marshall Inspection
- e. Special Inspections
- f. _ Third Party if specified by UBO

8. Permit Final



University Building Official – VUSBC Inspection Report

The Building Permit holder, Project Managers, coordinators, contractors and A/E's and all staff responsible for work governed by the VUSBC are fully responsible for complying with all laws, the VUSBC, regulations, VA Tech Standards, policies and contract documents.

Project Manager or Applicant: _____		Day/Date _____	
Permit Number: _____			
Project Title _____			
Location: _____			
Contractor: _____		Weather/Temp: _____	
<input type="checkbox"/>	Original Inspection (check below)	<input type="checkbox"/>	Partial
<input type="checkbox"/>	Above Ceiling (check below)	Date of Rejected (Original) Inspection: _____	
<input type="checkbox"/>	Rough-in (check below)	<input type="checkbox"/>	Trade Final
<input type="checkbox"/>	Re-inspection	<input type="checkbox"/>	Project Final

Work Description: _____ _____		
Use Group: _____	Type of Construction: _____	Area of Construction (SqFt): _____
Fire Suppression Type: _____	_____	Fire Alarm: _____

<input type="checkbox"/>	Soils	<input type="checkbox"/>	Roof Trusses, Wood or Steel (circle)
<input type="checkbox"/>	Footing	<input type="checkbox"/>	Roof finish (EPDM, Shingle, etc)
<input type="checkbox"/>	Foundation Piles, Piers, or columns	<input type="checkbox"/>	Spray on fireproofing
<input type="checkbox"/>	Foundation Wall (masonry)	<input type="checkbox"/>	Veneer Installation (brick, stone, etc)
<input type="checkbox"/>	Concrete Reinforcement Steel and/or Forms	<input type="checkbox"/>	EIFS
<input type="checkbox"/>	Concrete Slab incl. turndown	<input type="checkbox"/>	Mechanical
<input type="checkbox"/>	Framing, Wood or Light Gage Metal (circle)	<input type="checkbox"/>	Electrical
<input type="checkbox"/>	Fire Rated walls, penetrations, membranes	<input type="checkbox"/>	Plumbing
<input type="checkbox"/>	Structural steel	<input type="checkbox"/>	Utility (Re)connect (Elect, Gas, Trailer, temp.)
<input type="checkbox"/>	Wind/Seismic System	<input type="checkbox"/>	Fire Suppression
<input type="checkbox"/>	Insulation	<input type="checkbox"/>	Fire Alarm
<input type="checkbox"/>	Joists or floor trusses (circle)	<input type="checkbox"/>	Elevator or Hoist
<input type="checkbox"/>	Metal Deck, elevated slabs	<input type="checkbox"/>	Other: _____

Summary of Services/Inspection: _____

Attach additional sheets as required.

Inspector: _____		Date: _____	
<input type="checkbox"/>	Passed	<input type="checkbox"/>	Rejected, need to re-inspect
<input type="checkbox"/>	Other: _____		

Note: FAX copy of Utility (Re) Connect Inspect to VTES (Elect) or ATMOS (Gas)
 Top copy – Final, VA Tech UBO Office, Bottom copy – PM or leave in field or as directed by VT Project Manager (v. 01/03/12)