[ABC Contractor] – Example [or other organization]



Work Method [ Name ]

**Project Type**: **Trade-specific,**

**Prepared by:**

**[ ]**

**Prepared for:**

**[ABC Contractor] [name]**

**And for**

**CloudQM.Org, ACI Committee 121 and [ACI member organization ]**

**[Square brackets and light grey means that you should review what is requested and substitute the words that will represent your project – and then remove the square brackets.]**

**Proponent and Work Method Description**

**Type of WM:**

**Trade Specific Field Activity**

**Company Name** [General Contractor self-performing or Subcontractor]:

**Brief description of the Company** or see Company Quality Plan:

**Company representatives** [names]

**Typical or type of project** for which this WM will be generally applicable such as residential, 4-story multi-family, or infrastructure. Typically, we want to write the WMs so that they are reusable from project to project, except that project specific specs and drawings will require some details to be revised.

**Actual Project name – if the Inspection Checklist and WM are written for a specific project.**

**Brief description of the WM** (as context for WM users and reviewers):

Note: This is a controlled document. Those listed herein are recipients for future editions.

**[This document provides a focused Work Method (WM) format - for use as a template.]**

**[Wherever square brackets [ ] (or light grey text) are noted, WM writing organizations are to input their information and delete the original including the square brackets. Don’t be shy to make any and all changes to best reflect how you wish to implement this WM.]**

**[Feel free to shorten the WM, but you are urged to keep all of the key elements.]**

|  |
| --- |
| **Signature Page** |
| **Originator:** Name: Date:Signature: | **Quality Manager: Approver**Name: Date:Signature: |
| **Construction Supervisor:**Name: Date:Signature: | **Foreman:**Name: Date:Signature: |
| Project Manager: [optional]Name: Date:Signature: |  |

As Approver and [Quality Manager], with my signature, I confirm that this Work Method is the plan for construction of the work. If the plan changes, the person making the change will notify me so that the Work Method can be revised. Alternately, I will propose suggested revisions, review with the foreman or superintendent, for reissue to those on the distribution list.

As a Reviewer, my signature confirms that I have reviewed the document and any comments to the WM have been provided to the Originator and to the Approver

[Note: The limitation of liability clause below is only useful if you are a consultant writing Work Methods for Contractors, **or where you are a contractor providing the WM to a Subcontractor** for their upgrade and improvement. You need to be very clear that the risk and responsibility for any and all content (including any errors that may be included) is theirs to re-write and make their own.

The principle is that you do not direct a contractor or subcontractor or interfere with his “means and methods”. Those are his risks to manage. Additional note: If you are an employee of the contractor, this limitation of liability clause is not pertaining to your involvement as companies do not sue their own.]

**Limitation of Liability:**

**ABC Construction and any other user, authorized or not (collectively identified as The Contractor), agrees to use this Quality Plan, Quality Management Procedures, and/or Work Method (collectively referred to as the Quality Documents) only under the condition that those that have written and provided this Quality Documents including ACI are to be held harmless for any errors or omissions, any inaccuracies in content resulting in any damages to property or injury to any personnel that may be involved. It remains the sole responsibility of The Contractor to review any and all items contained in the above Quality Documents and to make changes that may be required in order to satisfy any specification or any regulatory or statutory obligation. As well, The Contractor shall review any and all suggested methods as contained herein and shall make any changes required and shall reissue prior to commencement of construction in order to provide a safe work site for all workers involved. Ownership and final responsibility for the use of all Quality Documents remains with The Contractor.**

**Source of schematic diagrams: these are very useful for field WMs**

See attached link as possible source of Schematic Diagrams:

http://chbanl.ca/wp-content/uploads/CMHC-Canadian-Wood-Frame-House-Construction.pdf

Google: [Images for ***C****anadian wood frame house construction*](https://www.google.com/search?q=canadian+wood+frame+house+construction&rlz=1T4MXGB_enCA573CA573&tbm=isch&tbo=u&source=univ&sa=X&ei=oQPcU4bUNYq6igL1lICoAw&ved=0CEEQsAQ)

Google: just about anything and add “schematic”

2018-09-19 10:33 AM

Good afternoon,

We are writing in response to your e-mail requesting copyright permission on CANADIAN WOOD-FRAME House Construction.

This is to confirm that Canada Mortgage and Housing Corporation (CMHC) gives permission for Jim Turnham/Turnham Consultants Inc to print and distribute CMHC content CANADIAN WOOD-FRAME House Construction. If Jim Turnham/Turnham Consultants Inc wishes to embark on any additional distributions of this content or change the content or format in any way in the future, it is requested that Jim Turnham/Turnham Consultants Inc returns to CMHC for prior written approval.

Please note that any CMHC-copyrighted material printed or distributed must be referenced in your publication as being owned by Canada Mortgage and Housing Corporation.

 Sincerely,

From: Call Centre/Centre d'appel <callcent@cmhc-schl.gc.ca>

Sent: 19 September, 2018 12:58 PM

There is no expiring date on the copy write permission given to you, therefore it can be used for any courses given by yourself or Turnham Consultants Inc.

If you have any further questions, you may contact us at: 1-800-668-2642.

Sincerely,

Jenny]

 **Contact Centre / Centre de contact**

contactcentre@cmhc.ca / centrecontact@schl.ca

T: 1-800-668-2642

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1. **PURPOSE**

[The **purpose** is the reason why the business exists, or why the team actually does what it does.

The **objective** is what it needs to do to achieve its goals. ... The **objective** could be to score more points or goals in a game than the opposition.

So teams should modify the templated wording below to be in line with “purpose”.]

To provide a construction methodology for field tasks thereby reducing the risk of errors, improving productivity and customer buy-in.

This work method envisages that [Own forces will self-perform], or [WM will be provided to Subcontractor for their review and changes and resubmittal].

1. **SCOPE**
	1. This work method shall apply to the construction of all [for example: exterior and interior wood framed walls. Input your scope. ]
	2. Reference Standards

[British Columbia Building Code, or the code in practice in your region].

1. **DEFINITIONS and ACRONYMS**

QC Quality Control

WM Work Method

ITP Inspection Test Plan

Inspection Checklist, (ICL) (but typically don’t abbreviate it.)

**[Recommend to use acronyms only where they are used often and help to make it read easier. Don’t use acronyms that are never used, or are not fairly self-evident.**]

1. **RESPONSIBILITIES AND AUTHORITIES [This section can be included in your Quality Plan. Then just reference to it as opposed to recreating it for each WM.]**

**4.1 Site Supervisor (or Superintendent)**

-must work well with people and have good organizing skills.

• Overseeing the construction schedule at one site, start to finish.

• Overseeing the Quality Management Plan.

• Scheduling each workday with appropriately sized crews.

• Serving as the primary contact with staff, specifically the construction manager/coordinator.

• Attending construction committee meetings during the building of the project.

• Maintaining a site log.

• Ensuring the safety of crews and ensuring that safety practices are followed.

**4.2 [Crew Leaders or] Foreman**

. Crew leaders have the following responsibilities:

• Providing on-the-job training and supervision for semi-skilled and new hire employees.

• Ensuring necessary tools are on the site for specific tasks.

• Maintaining safety—use of equipment, protective measures for workers, conducting safety-quality toolbox meetings, Safe Work Procedures (or coordinate their production with the safety officer) etc.

• Maintaining quality—the crew leaders should perform tasks that require a high level of skill. Crew leaders also should be able to quickly assess the abilities of new hires. He/she must be able to instruct crew members in proper construction techniques, answer their questions and show patience.

 **4.3** **The Site Safety Officer**

• Ensures that the Company safety policy is being followed on site at all times.

• Ensures that all those working at the site have completed the required safety training.

• Inspects the build site for any possible safety hazards and instructs crews to do the same through Job Hazzard Analysis (JHA).

• Has the authority to shut down the site, if necessary for safety reasons.

**4.x Other [edit or add items that are specific to your crew.]**

1. **SAFETY**

**Safety is of the utmost concern on any build site, so it is important to have someone monitoring the safety conditions at all times. Employees shall be trained on safety requirements on the job site and informed that their safety on the job-site is the Company’s first priority. Ultimately, it is individuals using safe methods and making safe choices that contribute greatly to individual safety. Individuals remain personally responsible for their own safety at all times.**

All work practices and job procedures are to conform with the authority having jurisdiction and to:

* 1. The Company Safety Program.
	2. All applicable instructions, codes, regulations and acts.
	3. Worksafe [BC] OHS regulations and best practices.
	4. [ **Add yours**]
1. **ENVIRONMENTAL REQUIREMENTS**
	1. Care should be exercised to [FOR EXAMPLE: prevent the release of excess airborne particulate into the air or solid or liquid contaminants to local waterways so that health risks may be minimized. Consider also water pollution mitigation issues depending on your activity. **USE YOUR OWN WORDS FOR YOUR ENVIRONMENTAL REQUIREMENTS]**
2. **INSPECTION AND TESTING**
	1. Please refer to the attached inspection and testing plan (ITP) or inspection checklist (ICL).
3. **SUBMITTALS**

**Discuss in this section how your organization requires submittals as a way to improve quality – who, when, how**.

**8.1 Material Submittals (Contractor or Sub)**

[Submittals are the cheap and easy way to express contractor or subcontractor intent of what they plan to provide (in terms of equipment, materials, shop drawings,) before anything has been purchased or brought to site. Everything is 10 times more expensive to remedy if purchased and brought to site and it is not per spec.]

**8.2 Quality Management Submittals [often required by GC if the Owner’s Rep does not require]**

These submittals are written in response to GC or Owner’s Rep requirements for subcontractors to provide inspection checklists (always) and work methods (for scope that has medium to high risk of not getting it “right the first time”). This is how Company prevents or minimizes “rework”.

1. **SPECIFICATIONS**

Specificationswill typically be provided by the Owner’s Rep and from them to the GC.

Building Code will be the standard unless they are specifically provided by the Owner’s Rep.

A basic source of GC or subtrade inspection checklists is [QMP a11.1](https://d.docs.live.net/fbbed2c0aab51d7f/BCIT%20%5E0%20ACI%20JT/QMPs/QMP%20a11.1%20-%20Inspection%20Checklist%20Forms.docx). Because they are entry-level, generic and not very sophisticated, an organization needs to add content and **edit the content consistent with drawings and specifications** **for the project at hand**. For first-time inspection checklist writers, there is a template inspection checklist at the end of QMP a11.1

1. **PROCEDURE**

All types of construction organizations will require the ability to write inspection checklists for checking of activities deemed important, and to implement documented, inspection checklists leading to successful outcomes.

Following the writing of inspection checklists, the next step is to create procedures that will identify how to what criteria, at what frequency, and by what position the inspections are to be performed. Typically these are called the Work Methods (WMs).

The types of WMs that we are able to create at this time with this WM template are:

10.1 Developer work methods: Note: previously for Developer work methods, we identified Subtrade Management WMs as a topic. We have decided that in order to keep the quality management and work method topic simple, we will address only WM topics on field activity processes. So this Developer section has been deleted.

**10.2. Designer WMs:**

[Note - For Designers, QMPs 6.2 and 6.3 provide references for the checking process and can produce useful Work Methods.]

**10.3 Construction field activity WMs (Trade Specific)**

**Field activity** **examples:** concrete [form, reinforce, place]; glazing, etc.

**Field Activity WMs for contractors who self-perform or for subcontractors hired directly.**

**QMP 11.1** - Inspection Checklist Forms – many trades (This is a starter kit for contractors or subs that have no checklist), a useful starting place. These Checklist Forms are quite basic, and certainly need to be reviewed against drawings and specifications and updated so that the crew is reminded about the important items involved in getting it “right the first time”.

With the inspection checklist, (the fundamental item), written from QMP a11.1 or selecting an existing inspection checklist from our library of inspection checklists and Work Methods, a procedure or a WM is written.

Following that exercise, this WM template can be utilized.

We are also providing the ability and template to write digital checklists for those tasks that are quite repetitious and will benefit from a digital process accessible in the field by your phone and providing the ability to analyze and follow-up on your computer back at your office.

**10.3.1 Field Activity - typically executed by subcontractors, or contractors that self-perform field activities.**

The following Field Activity WM items for Contractor or Subcontractor preconstruction activities are recommended to be reviewed, included in this template, and performed at the beginning of this WM initiation.  Examples:

10.3.01 Permits obtained by the party named ...

10.3.02 Material submittals submitted to level above (typically GC or Owner’s Rep) and approval received.

10.3.03 Previous subcontractor has completed their work and work is per plans and specs, or if not, Superintendent or Project Manager has been contacted and the situation rectified.

10.3.04 This WM and inspection checklist have been submitted, and approved prior to use.

10.3.05 Survey is in place and/or the basis for layout to be provided by a tradesman is documented and clear.

10.3.06 Superintendent has been notified that work is commencing, start date is scheduled.

10.3.07 QMP 4.1a Pre-Mobilization Meeting Requirements and agenda - one sub at a time has been held.

10.3.08 Inspection Checklist has been written, WM has been written, and WM Review Meeting per QMP 4.2 has been held and any revisions to the ICL or WM from that meeting are made.

10.3.09 Initial Inspection per QMP 4.3 is ready to be performed at the first instance of this WM and inspection checklist.]

Note: for Field Activity WMs, the attention to detail provided by the mix of photo and written procedures is useful. You are advised that you can and should remove this example section 10.3.1 through 10.3.9 and create your own as these activities are not your activities.

**10.3. [Wood Selection (for example)] These are the titles and numbers are to match to your Inspection Checklist items.**

|  |
| --- |
| Field Activity WM items to be reviewed or performed at the beginning of this WM initiation.  |
| **10.3.01,** Permits obtained by the party named ...10.3.02 Material submittals submitted to level above (GC) and approval received.10.3.03 Previous subcontractor has completed their work and work is per plans and specs, or …10.3.04 This WM and inspection checklist have been written, submitted to the level above or authority having jurisdiction, and approved prior to use.10.3.05 Survey is in place and/or the basis for layout to be provided by a tradesman is documented and clear.10.3.06 Superintendent has been notified that work is commencing, start date is scheduled. 10.3.07 QMP 4.1a Pre-Mobilization Meeting Requirements and agenda - one sub at a time has been held.10.3.08 Inspection Checklist has been written, WM has been written, and WM Review Meeting per QMP 4.2 has been held and any revisions to the ICL or WM from that meeting are made.  10.3.09 Initial Inspection per QMP 4.3 is ready to be performed at the first instance of this WM and inspection checklist.] |
| **10.3.1 Wood Selection [This is an example of an item of a Work Method (WM). Change this to reflect the items needed for your work activity and WM.** |
| Cut sheets will specify the species, type and grade of material used …**10.3.2 Cutting:** Plates, Studs and Sub-Components … |
|  |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 41[Add captions to all photos]013 |

|  |
| --- |
| Select board lengths that minimize waste prior to cutting.  Each piece of lumber (in every unit) is inspected for quality prior to being cut.  Our Inspection Form (IF #100) lists 8 common wood defects, included are: |
| Knots Wane Incorrect Dimension Crown  | Bow Twist Dry Rot Splitting  |
| Tolerances for cutting wall panel parts are within 1/16”.  Check measuring devices (tape measures, stops, guides, automatic nailing bridges, fences, etc.) a minimum of 2 times per shift.016 |

 |

 |
|  |
|  10.3.3 – 10.3.x, WM steps or elements until complete.Just provided some photos that you might contemplate for your WM as visuals and schematics are useful in telling the story.…10.3.10 Inspection Checklist  |

|  |
| --- |
| **10.4.1 Inspection and Test Plan (ITP) for Field Work Methods**[Note 1: If you do include the two columns at the right, (date and initials) you are effectively making this ITP into a checklist as well. Do not submit two checklists, this one and 13.2. Use only one.]**Note 2: This ITP is not operating properly, the first 4 lines on 2nd page don’t belong and somehow can’t be removed??? Use Inspection Checklist 10.4.2***Item Numbers and titles should correspond to the same line item numbers and titles as found on the* ***checklist and procedures.*** |
|  | Revision [ ] | Date: [ ] |
| Prepared By: [ ]Reviewed By: [ ] | [Habitat for Humanity - example] |

 Self-check really should not be optional – please incorporate self check!!! Our motto: Measure twice, cut once

| **Item No.** | **Work to be Inspected or Tested** | **Method** | **Acceptance Criteria, can also reference spec item or spec #** | **Frequency Inspection/Test** | **Self-check** | **QC by** | **[Optional]****QA Frequency**  | **[Optional]****QA by** | **\*Verification****H = Hold-point** **W = Witness****D = Document** | **Checklist****Req’d** | **Date checked** | **Initials** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10.4.01 | Permits obtained by the party named ... |  |  |  |  |  |  |  |  |  |  |  |
| 10.4.02 | Material submittals submitted to level above and approval received. |  |  |  |  |  |  |  |  |  |  |  |
| 10.4.03 | Previous crew has completed their work and work is per plans and specs, |  |  |  |  |  |  |  |  |  |  |  |
| 10.3.04 | WM and inspection checklist have been submitted, responded. |  |  |  |  |  |  |  |  |  |  |  |
| 10.4.0510.4.0510.4.0610.4.0710.4.08 | **10.3.01,** Survey is in place and/or the basis for layout to be provided by a tradesman is documented and clear. 10.3.02 10.3.03 10.3.05 10.3.06 Superintendent has been notified that work is commencing, start date is scheduled. 10.3.07 QMP 4.1a Pre-Mobilization Meeting Requirements and agenda - one sub at a time has been held.10.3.08 WM Review Meeting per QMP 4.2 has been held and any revisions to the WM from that meeting are made.  10.3.09 Initial Inspection per QMP 4.3 is ready to be performed at the first instance of this WM and inspection checklist.] |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 | Wood Selection | Visual | No Significant Defects (Refer to WM ) | Prior to wood use | [Personnel doing task] | Crew Leader  | Spot Check | Site Super |  | D | IF #01 |  |  |
| 2 | Cutting: Plates, Studs, Sub Components | Measure | Within Tolerance (Refer to spec and WM ) | Prior to Plate Layout and Component Assembly | [Personnel doing task] | Crew Leader  | Spot Check | Site Super |  | D | Inspection checklist #**?**Typically all items will be numbered #01 |  |  |
| 3 | Plate Layout | Visual & Measure | Matches shop drawings (Refer to Spec and WM) | Prior to Framing and Blocking | [Personnel doing task] | Crew Leader  | Spot Check | Site Super | H | D | Inspection checklist # |  |  |
| 4 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |  |  |  |  |  |  |  |

**10.4.2** **Inspection Form IF # xx-xx-01 [same # as the WM # ]**

|  |
| --- |
| **[Note to users: An inspection form can also be achieved by adding a date column and an initials column on to the ITP (already provided above) and using that document as a combine ITP and checklist, your choice. But only provide one checklist, not two. Do not include both 13.2 and 13.1]** |
|  | Revision [ ] | Date: [ ] |
|  | Prepared By: [ ]Reviewed By:  | [Habitat for Humanity Greater Vancouver ] |

**Self-check is expected to be performed by the person doing the task. Recording the self-check is optional, may not be required.**

| **Item No.** | **Item of Work to be Inspected or Tested. Add your field activity processes.** | **By QC****P = Pass****F = Fail** | **Acceptance Criteria, Notes** | **QC checked by Crew chief**  | **QA spot check (approx 10%) by****Site Supervisor:****(optional)** | **Comments:** |
| --- | --- | --- | --- | --- | --- | --- |
| **10.3.01** | Permits obtained by the party named ... |  |  |  |  |  |
| **10.3.02**  | Material submittals submitted to level above and approval received. |  |  |  |  |  |
| **10.3.03**  | Previous crew has completed their work and work is per plans and specs, or … |  |  |  |  |  |
| **10.3.04** | This WM and inspection checklist have been written, submitted to the level above or authority having jurisdiction, and approved prior to use. |  |  |  |  |  |
| **10.3.05** | Survey is in place and/or the basis for layout to be provided by a tradesman is documented and clear. |  |  |  |  |  |
| **10.3.06** | Superintendent has been notified that work is commencing, start date is scheduled. |  |  |  |  |  |
| **10.3.07** | QMP 4.1a Pre-Mobilization Meeting Requirements and agenda - one sub at a time has been held. |  |  |  |  |  |
| **10.3.08** | WM Review Meeting per QMP 4.2 has been held and any revisions to the WM from that meeting are made.  |  |  |  |  |  |
| **10.3.09** | Initial Inspection per QMP 4.3 is ready to be performed at the first instance of this WM and inspection checklist.] |  |  |  |  |  |
| **10.3.1** | Wood Selection [example][Enter the first activity or process in your WM.] | [ ]  P [ ]  F | Knots, Bow, Wane, Twist, Dims, Dry Rot, Crown, Splitting | Date:Initial: | Date:Initial: |  |
| **10.3.2** | Cutting (example): Plates, Studs, Sub Components [Example 2nd activity] | [ ]  P [ ]  F | Tolerance = 1/16” | Date:Initial: | Date:Initial: |  |
| **10.3.3** | Plate Layout (example) | [ ]  P [ ]  F | Tolerance = 1/16” | Date:Initial: | Date:Initial: |  |
| etc |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

**Digital checklist for your phone**

**Please view the linked video on the use of Google Forms to produce a digital checklist for your phone.** [**https://www.youtube.com/watch?v=N5o2MhW939k**](https://www.youtube.com/watch?v=N5o2MhW939k)

**It is recommended to try it out, as it is a powerful tool to manage construction events, such as deficiencies, nonconformances, field observations, or to prove that items are completed, inspected and conform to specifications.**

**11 Org Chart [Blank Template – add to it as needed.]**

Show subs, show significant members of your team.

Good Org charts have only one boss for each position. Linkage and communication can be identified by dotted lines.

Delineate the interface person(s) from your organization **to customer** or designer, **and include subs.**

**[The flow chart is now optional. If your flow chart is just a long list, it has little value.]**

**12 REFERENCES**

12.1 Specification: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

12.2 Schematics, and photos: \_\_\_\_\_\_\_\_\_\_\_\_\_

Remember to Cite your references.

**13 ATTACHMENTS**

13.1 Inspection and Test Plan (ITP) # [use the same # as the WM] or

13.2 Inspection Checklist ICL #[use the same # as the WM]

13.3 Organization Chart

13 4 Flow Chart

**End of Work Method**