



Division 01 General Requirements

01 10 00 Summary

01 10 10 Introduction

These Guidelines provide requirements and establish parameters related to the design and construction of facilities on the campus of the University of Wisconsin–Madison (UW-Madison). The requirements of these Guidelines pertain to all campus projects, whether administered/managed by the State’s Division of Facilities Development (DFDM) or administered/managed by UW-Madison.

The DFDM *Policy and Procedure Manual for Architects/Engineers and Consultants* establishes the general framework for architectural and engineering work on State of Wisconsin facilities and is also intended to provide the model for architecture/engineering (A/E) work on UW Managed Projects when DFDM is not involved. A Global Change Process synopsis for UW Managed projects can be found at the end of this Division. This establishes the change processes to be used on all projects administered/managed by UW Madison.

DFDM has additional technical guidelines and provides model specifications which address various building elements or trades. It is the intent that all projects on the UW-Madison campus incorporate those guidelines and specifications when applicable.

UW-Madison’s Facilities Planning & Management (FP&M) provides these *Guidelines for Planning and Design of UW Madison Facilities* to provide additional guidance with regard to particular requirements, standards, or preferences established by UW-Madison for facilities on campus. Where the requirements of these UW Guidelines differ from the DFDM guidelines and specifications, the UW Guidelines will take precedence, however, the A/E shall discuss each of these discrepancies or differences with the UW Project Manager & the DFDM Project Manager.

The latest version of the DFDM guidelines and specifications should always be used. The most recent versions are available from the DFDM website. Likewise, A/Es should regularly check FP&M’s Capital Planning & Development’s (CP&D) website at <https://cpd.fpm.wisc.edu/> to obtain the latest version of these Guidelines. The A/E shall include the requirements established in these Guidelines in the construction documents that are advertised for bid.

The goals and guiding principles of the UW-Madison Campus Master Plan (latest edition) shall be considered and referenced as part of the planning, design, detailing, and material section for every project.

01 13 00 Documentation Requirements

01 13 20 CAD/BIM

The University of Wisconsin-Madison requires that the A/E firm for each project provide the construction drawing set in either Computer Aided Design (CAD) format or Building Information Modeling (BIM) format in addition to the PDF and hardcopy drawing sets required by the State of Wisconsin Division of Facilities Development and Management (DFDM). CAD files shall be in AutoCAD format per DFDM’s standards for record drawing submittal. BIM files shall be in Revit format per the UW-Madison Physical Plant



Architecture & Engineering Group's BIM Standards, Revision 1.2, 2018. These drawings, in all three formats listed above, shall be submitted to the UW-Madison project manager shortly after a project enters into the construction phase. These drawings offer an opportunity for campus offices to plan and prepare for ownership and maintenance of the facilities within the project. This process often begins before construction takes place and well before the project is completed and record drawings are submitted. Bid drawing set submissions shall be designated as such, recognizing that changes are probable and will be superseded by record drawings.

01 13 40 Record Documents

Record documents are typically submitted to MFP&M by the contractor and serve as the permanent record of construction for the facilities and landscapes built. The University of Wisconsin-Madison requires that we receive final record documents in AutoCAD or Revit formats in addition to PDF format. The submittals in both formats shall include the UW-Madison building number, the UWSA Number, and the DFDM Project Number (when applicable) for reference as well as:

- Drawings which document what was built inclusive of all construction bulletins, field orders, known field changes, etc.
- Specifications inclusive of all construction bulletins, field orders, known field changes, etc.
- All test data, reports, air balance schedules, etc.

01 13 60 O&M Manuals

Operations and Maintenance (O&M) manuals must be organized to include a Table of Contents and be inclusive of all submittals, confirmed materials selected including finishes, list of contact numbers for all used materials, and dated warranty information. The format of O&M manuals can be electronic in searchable PDF format.

01 13 80 Drawing Check List

A Drawing Check List has been provided at the end of this division to assist A/Es and reviewers with checking requirements for the 35% and 100% drawing review packages.

01 14 00 Work Restrictions

01 14 11 Access Keys

The Lead Contractor shall fill out an Access Key form and return it to the UW-Madison Lock Shop to obtain keys needed to perform required work. The UW-Madison Lock Shop is located in the Service Building at 1217 University Avenue. All keys, under control of the lead contractor, shall be kept secure and shall not be duplicated or shared with other persons. Any loss of keys shall be reported to the UW-Madison Lock Shop immediately. See *Division 01 Details 1, 2, and 3* at the end of the division for an Access Key form.

01 14 12 Security Procedures

All workers shall at all times wear a visible identification badge with photo ID that contains their name and the name of their employer.

01 14 13 Site Access Restrictions

There may be restricted access to the site during resident move-in/move-out. Contractors may work normal hours, but construction access in or out of the site may be restricted and prohibited at times due to heavy pedestrian and vehicular traffic on all four move-in/out days. The specific days have yet to be determined, but will occur during the following approximate time periods (A/E shall insert appropriate dates in the format shown below):



- Fall Move-In: August XX through Sept. XX, 20XX.
- Spring Move-Out: May X-XX, 20XX.
- Fall Move-In: August XX through Sept. XX, 20XX.
- Spring Move-Out: May 20XX.
- Football Games – Fall of 20XX and 20XX
- Other Sporting Events

01 14 14 Work Hours

Contractor work hours shall comply with the City of Madison construction noise ordinance and the following:

City of Madison Noise Restrictions:

All contractor work hours shall be limited per Madison General Ordinance 24.08. In general, this ordinance does NOT allow the use of any equipment used in construction between the hours of 7:00 P.M. and 7:00 A.M. (Monday through Saturday) in such a manner as to unreasonably interfere with the peace, comfort and quality of life of the neighboring persons of ordinary sensibilities. On Sunday, no person shall operate or permit the operation of any equipment used in construction work before 10:00 A.M. and after 7:00 P.M. The intent here is to not allow the use of equipment, i.e. hammers, power saws, compressors, pneumatic tools, etc. during the hours when construction noise is regulated. Work outside of these times shall require prior approval from the DFDM Construction Representative and University as well as appropriate approvals by the Contractor from the City. Refer directly to the City's ordinances for the official language.

Noise Restrictions During Final Exams – the contractor may have noise restrictions imposed during various periods throughout the academic year. These times may include but are not limited to (A/E shall insert appropriate dates in the format shown below):

- Final Exams and Study – Dec XX, thru XX, 20XX
- Final Exams and Study – May X thru 8, 20XX
- Final Exams and Study – Dec XX thru XX, 20XX

01 14 15 Shutdowns

The A/E shall include the following procedure regarding shutdowns:

1. Design Phase

- a. The UW-Madison Project Manager, Building Manager and Users are to be informed by the A/E of potential shutdowns.
- b. The A/E is to incorporate a list of potential major shutdowns in the front end of the Construction Documents.
- c. Environmental Health and Safety (EH&S) is to be informed of anticipated shutdowns during design reviews.

2. Construction Phase

- a. The UW-Madison Project Manager requests the GC to provide the shutdown list to be identified and coordinated with users.
- b. The GC shall incorporate the shutdowns in the project schedule.
- c. The UW-Madison Project Manager informs the appropriate Campus Shops supervisor and EH&S of the proposed scheduled shutdowns.
- d. The appropriate Campus Shops supervisor coordinates the shutdown with the GC and UW-Madison Project Manager
- e. The GC shall set up pre-installation meetings.-Madison-Madison-Madison



01 14 16 Work by Owner

1. Access Control System
 - a. Card readers are provided by the Owner and installed by the Prime Contractor (wiring and installation of units and the equipment)
2. Security cameras
3. DoIT switches and network gear
4. Door hardware lock cylinders
5. Fire extinguishers
6. Any operational accessories
7. UW-Madison Shops involvement
 - a. Obtain quote / estimate for the anticipated work
 - b. Labor
 - c. Meetings
 - d. Design
 - e. CA (inspection, reviews, commissioning, submittals)
 - f. Shutdowns
 - g. Equipment
 - h. Schedule coordination
8. UW-Madison Digital Controls Group (DCG) of the Electrical Shop
 - a. Specifications for Direct Digital Controls (DDC) shall be based upon the DFDM Master Specifications sections for automated control systems.
 - b. Any deviations from the DFDM Master Specifications must be approved by the UW-Madison Project Manager.
 - c. In preliminary design, engage the UW-Madison DCG group to determine if they have the capacity to perform the programming of the project.
 - d. If the DCG group has the capacity to perform the programming of the digital controls for the project, a general scope should be explained and if there are stringent controls required, the DCG group should be engaged early in the process
 - e. If the DCG group doesn't have the capacity, then Johnson Controls International (JCI) will need to perform the programming for the project. A Class 1 notice will need to be issued for this work.
 - f. In either scenario above, the DCG group should be involved in the review and commissioning of the project.
 - g. UW-Madison DCG group and JCI should only be providing the tie-in panel and the programming of the controls via specification. Controls should be furnished and installed by the mechanical sub-contractor.
 - h. All DDC equipment shall be compatible with Johnson Controls and comply with DFDM standard specifications.
 - i. DCG group / JCI will not be providing the DDC equipment, however, their review of these specifications is crucial.
 - j. DDC Group / JCI should be aware and attend periodic construction meetings throughout construction.

01 50 00 Temporary Facilities and Controls

01 55 00 Vehicular Access and Parking

01 55 05 Operations Confinement

Confine all operations, equipment, apparatus and storage of materials to the immediate area of work to the greatest possible extent and within the assigned project limits. Contractor shall



ascertain, observe and comply with all rules and regulations in effect on the project site, including but not limited to parking and traffic regulations, use of walks, security restrictions and hours of allowable ingress and egress. Any special traffic control during construction involving lane closures shall be in accordance with the federal standard, Manual of Uniform Traffic Control Devices (MUTCD).

01 55 19 Construction Parking

All contractors and others involved with the project shall comply with the parking policies of UW-Madison Transportation Services. See www.transportation.wisc.edu/rates-and-policies/.

In general, construction staging areas shall be used only for equipment and vehicles involved directly in the construction project. Personal vehicles used for commuting to the worksite are not permitted in staging areas. Parking permits in campus parking lots may be purchased from any UW-Madison Transportation Services customer service office, subject to availability and compliance with stated policies.

See www.transportation.wisc.edu.

All personal vehicles used for commuting to campus (including the construction project site) must display a valid UW-Madison Transportation Services parking permit and park in a designated lot/ramp.

1. A personal vehicle is defined as any vehicle not owned by a licensed construction company.
2. Personal vehicles displaying a temporary company sign or logo do not qualify as a construction vehicle.
3. Personal vehicles used for commuting may not park at the construction site or inside the staging area.
4. Temporary permits for workers commuting to a project site are available for sale in various locations across campus based on available space.
5. All vehicles must follow UW - Madison Transportation Services parking policies.

01 55 26 Traffic Control Plan

The A/E consultants shall provide a complete traffic control and mitigation plan for the construction period that includes motor vehicles, bicycles, and pedestrians as part of the 35% review documents. The University experiences unusually large numbers and concentrations of both pedestrians and bicyclists nearly every day when classes are in session and these must be accommodated. Questions about this plan should be directed to the campus transportation planner, and the plan should include the following:

1. Construction Detours:
 - 1.1. Two-way traffic for motor vehicles shall be maintained unless otherwise approved after consultation with the University transportation planner.
 - 1.2. Accommodations shall be made for bicyclists and pedestrians just as they are for motor vehicles, including bike parking and safe, well-marked detours when needed if sidewalks, bicycle lanes, or bicycle paths must be temporarily blocked. Any blockages of sidewalks, bicycle lanes, or multi-use paths should be minimized in extent and in time.
 - 1.3. Pedestrian accommodations shall comply with Americans with Disabilities Act Accessibility Guidelines (ADAAG) and ANSI 117.1 standards.
 - 1.4. Temporary paths for bicyclists, pedestrians, and wheelchair users shall be paved smoothly and designed to accommodate bicycle and wheelchair tires.



2. Construction Traffic Signs/Visibility:
 - 2.1. Existing signs, posts, meters, bike racks, and any other transportation equipment belonging to the University that must be removed shall be returned to Transportation Services via the campus transportation planner or stored carefully by arrangement to be re-installed. The contractor assumes responsibility for any lost or damaged devices and equipment.
 - 2.2. Provide plans indicating a complete system of the correct transportation related signs, in accordance with the Manual on Uniform Traffic Control Devices (MUTCD), shall be identified and provided equally for motor vehicles, bicyclists, and pedestrians.
 - 2.3. Signs shall be placed so as to not block pedestrian and bicycle routes unless the intention is to take the route out of service.
 - 2.4. Warnings shall be placed a sufficient distance from a blockage or problem to allow a motorist, bicyclist, or pedestrian time to react safely. If a bicycle lane or path must be blocked temporarily or narrowed, signs indicating “End Bike Lane,” “Share the Road/Sidewalk,” or “Sidewalk Closed – Use Other Side,” etc., must be provided.
 - 2.5. Sufficient lighting shall be provided along detours and roadways, bicycle paths, and sidewalks near construction sites to allow for the safe travel of all persons during night-time hours.
 - 2.6. Signing shall otherwise follow the guidance of Wisconsin Department of Transportation (WisDOT), American Association of State Highway and Transportation Officials (AASHTO), and City of Madison standards. When guidance of the proper response to a specific condition during the construction period is not clear, the University transportation planner should be consulted.
3. Accessible Route Signage around Construction Areas Policy:
 - 3.1. Ensure that proper notification is given relating to any disruptions and/or routing/access revisions or closures especially around construction sites. If routing/access for people with disabilities in and through the construction area is closed, provide a temporary new fully accessible route with appropriate directional signage to available accessible routes.
 - 3.2. New construction area signs addressing construction and parking, traffic revisions, road closures, pedestrian detours, and accessible route detours must be made in accordance with ADAAG, ANSI, and UW-Madison signage standards and in adequate quantity to address the obvious need. The sign for accessible routing shall be 12 inches wide by 18 inches high, made of metal, with white international disability symbol. The symbol shall have a minimum dimension of 8 inches wide by 8 inches high, on blue background. One acceptable example is Tapco sign model DA-13. The sign may also have wording such as “Accessible Route” or other short relevant messages (Note: message might be location specific and should be verified by FP&M Facilities Access Specialist). The sign shall have appropriate directional arrow (8 inches long by 1 inch wide) to indicate the direction of the route. All new construction-type signage shall be installed in logical, safe and strategic locations, in accordance with existing directives and signage manuals.
For More Information: contact the FP&M Facilities Access Specialist.



01 55 29 Staging Areas

The A/E consultants shall provide a complete site plan identifying the construction limits and staging area boundaries proposed for construction as part of the 35% review documents for all projects, including those where the proposed work is all interior. Any parking proposed to be lost during construction shall be approved by UW-Madison Transportation Services. Also noted in a detail on the documents shall be phasing or specific sequencing of construction that will be required. Staging areas may not be used for parking personal vehicles used for commuting to the worksite. Equipment or vehicles which will be exhausting fumes in the staging area shall not be positioned near intakes or other building openings.

01 55 30 Snow Removal

The contractor shall remove snow as needed in a timely fashion within and around any staging area or as needed to allow for access to University properties, including parking lots, loading docks, egress routes, and entrances to other facilities. Snow removal must also include the outside perimeter of staging area fences where UW-Madison Grounds equipment might otherwise be able to clear snow. Contractors should consult with UW-Madison Grounds about snow removal to ensure good coordination of removal activities around project sites and their staging areas.

01 56 00 Temporary Barriers

01 56 26 Temporary Fencing

1. Contractors shall employ 8 foot high chain link fencing for construction perimeters. All openings shall be gated so that they can be secured after hours. During demolition, dust control fabric may be added to the interior of the fencing to reduce the spread of dust and to assist with safety and security.
2. The construction fences shall provide enough setback between the fence and surrounding sidewalks to allow the maneuvering of snow removal equipment.
3. When emergency egress paths from adjacent buildings extend through the construction limits, additional fencing shall be provided to direct and safeguard occupants exiting in an emergency. The egress path is to remain unobstructed and clearly marked throughout construction.

01 56 39 Temporary Tree and Plant Protection

1. Contractors shall take steps to prevent damage to existing tree root systems, trunks, and branches prior to entering the site. Existing trees that are to be preserved may need to be pruned, watered, and fertilized by a licensed arborist prior to any construction. All such work shall be coordinated with UW-Madison Grounds.
2. Trees, shrubs and other plants to be protected during construction shall be fenced with chain link fence sections. No trenching or digging shall be done within the critical root radius of the vegetation to be saved. All protection material shall be specified on the plans. Wood snow-fence may be used when approved by the UW-Madison Project Manager. Plastic fencing is not acceptable.
3. The area to be fenced around existing trees shall be determined by the Critical Root Radius (CRR) or the tree canopy drip line, whichever is greater. CRR is calculated at 1.5 feet x DBH (Trunk Diameter at Breast Height of 4.5 feet) of the tree. Example: a tree that has a 2 inch DBH, $2 \times 1.5 \text{ feet} = 3 \text{ feet}$, this tree will be fenced 3 feet out in all directions from the base of the tree trunk, unless the drip line is a greater distance.



4. No vehicles, heavy equipment, construction material, tools or equipment shall be parked, stored, or used within the tree's CRR at any time.
5. All trees shall obtain adequate water during the construction process. The construction company shall allow UW-Madison Grounds access into the site to water trees either by hose or by water truck.
6. Tree protection shall be required whenever there will be activity that could result in compaction within the critical root radius and drip line of a tree that is to be saved or whenever there is potential for damage to branches/limbs of plants that are to be saved and protected during construction.
7. If existing trees on site must be worked around or under, precautions shall be taken to prevent root, trunk and branch damage as well as soil degradation within the CRR and drip line. All such work shall be coordinated with UW-Madison Grounds.
8. If heavy equipment must be driven within the CRR of the tree, wooden bridging, or 12 inches of shredded hardwood mulch shall be placed under trees with the CRR to prevent compaction and root damage. All such work shall be coordinated with UW-Madison Grounds and approved by UW-Madison Campus Planning & Landscape Architecture
9. Soil compaction or chemical contamination of soil is not acceptable.
10. All roots over ½ inch in diameter that need to be removed shall be cut with a sharp, clean hand pruner or pruning saw. Roots torn by construction equipment shall not be left without a clean cut.
11. If utilities are to go under tree root systems, an auger shall be used to bore under the roots rather than trenching through the root system.
12. Silt fence shall not be trenched within the CCR and drip line of any tree. Use silt socks as an alternative.
13. Contractors shall be responsible for setting up tree maintenance programs to maintain trees within construction boundaries. This includes watering, preconstruction pruning, and clearance pruning during construction. Coordinate work with UW-Madison Grounds.
14. 8' Chain link fence shall be used for tree and vegetation protection. Establish criteria for protection of branches versus removal of limbs for vegetation with high potential for damage during work. All such work shall be coordinated with UW-Madison Grounds.
15. Trees damaged during construction shall be attended to and/or pruned. Contact the UW-Madison Project Manager when damage occurs and coordinate remediation work with UW-Madison Grounds.

01 57 00 Temporary Controls

01 57 23 Temporary Storm Water Pollution Controls

1. Riprap stone at stormwater outflow points is required wherever concentrated flow is leaving the site.



2. Existing stormwater drainage paths shall be diverted around the work site.
3. The water from these diverted paths, as well as water from the disturbed work site, will result in increased water volume in some drainage ways, or may mandate creation of new drainage ways; this has such effects as increased flow velocity and larger flow area subject to erosion—these effects shall be mitigated with check dams, straw bales, etc.
4. Filter sediments from drainage water before it reaches the sewer system or the lake. This can be done with silt fence, inlet protection, and other best management practices used by City of Madison, WI DNR, and/or approved by UW-Madison project manager.

01 70 00 Execution and Closeout Requirements

01 74 00 Cleaning and Waste Management

01 74 19 Construction Waste Management and Disposal

This Section specifies requirements for salvaging, recycling and disposing of construction waste.

1. Preconstruction and Pre-bid Meetings: The Pre-bid and Preconstruction Meetings will include discussion of construction waste management requirements. Prior to the commencement of the work, the Lead Contractor should schedule and conduct a meeting with the A/E, DFDM, and the UW-Madison Project Manager to discuss the proposed Construction Waste Management Plan to develop a mutual understanding regarding details of construction waste management implementation.
2. Specifications for waste management should be based upon the DFDM Master Specification Section 01 74 19 Construction Waste Management
3. Waste Management Goals: The recycling goal to be achieved at Substantial Completion of the Project shall be at least 50 percent by weight or volume of total waste generated by the Project and includes reuse.
 - 3.1. Reduce: The project shall generate the least amount of waste and methods shall be used that minimize waste due to error, poor planning, breakage, mishandling, contamination, or similar factors. The project shall promote the resourceful use of materials to the greatest extent possible.
 - 3.2. Reuse: All Prime Contractors and Subcontractors shall reuse materials to the greatest extent possible. Salvage reusable materials for resale, for reuse on this Project, or for storage for use on future projects. Return reusable items (e.g., pallets or unused products) to the material suppliers.
 - 3.3. Recycle: Waste materials not able to be eliminated in the first place or salvaged for reuse shall be recycled. Waste disposal in landfills shall be minimized to the greatest extent possible.



01 80 00 Performance Requirements

01 74 00 Facility Performance Requirements

01 81 13 Sustainable Design Requirements

1. The UW-Madison Office of Sustainability is developing its Green Building Standards & Guidelines for use in designing sustainable facilities. Consult the Office of Sustainability to see if the Standards & Guidelines are available.

01 81 22 Crime Prevention

1. Crime Prevention Through Environmental Design (CPTED) is a multi-disciplinary approach for reducing crime through urban and environmental design and the management and use of built environments. UW-Madison promotes and encourages the use of CPTED principles to create safer communities and environments. The International CPTED website can be found at <http://www.cpted.net/>.



UW MADISON LOCK SHOP

REQUEST FORM FOR SINGLE KEY
 ACCESS TO ROOMS - SUPPLIED BY UW
 LOCK SHOP

1	DATE	
2	NAME (PLEASE PRINT) - INDIVIDUAL RECEIVING KEY	
3	SIGNATURE	
4	CONTACT INFORMATION / PHONE NUMBER	
5	DEPARTMENT OR COMPANY NAME FOR NON-FP&M PERSONAL	
6	SUPERVISOR'S NAME (PLEASE PRINT)	
7	SUPERVISOR'S SIGNATURE	
8	PURPOSE FOR ISSUING KEY PROJECT NAME / NUMBER	/
9	BUILDING NAME / NUMBER	/
10	BUILDING ROOM OR AREA OF ACCESS	
11	NOTES :	
12	SCHEDULE OF DATES THAT KEY IS NEEDED,	FROM - TO -
13	ATTENTION- Any keys issued by this document are for the sole purpose of completing assigned work. These keys will be kept secure and shall NOT BE DUPLICATED OR SHARED with other persons. Any loss of keys will be reported to the UW Key Shop immediately.	
14	FP&M - AUTHORIZING SUPERVISOR	
15	SIGNATURE	
16	DATE	
17	COMMENTS:	
18	ESCORT REQUIRED	YES - NO -
19	APPROVAL	YES - NO -
20	KEY CODE -	MFG- NUMBER-
21	LOCK SHOP EMPLOYEE PROCESSING REQUEST	
22	DATE RETURNED	



UW MADISON LOCK SHOP

REQUEST FORM FOR MULTIPLE KEYS
 ACCESS TO ROOMS - SUPPLIED BY UW
 LOCK SHOP

1	DATE	
2	NAME (PLEASE PRINT) - INDIVIDUAL RECEIVING KEY	
3	SIGNATURE	
4	CONTACT INFORMATION / PHONE NUMBER	
5	DEPARTMENT OR COMPANY NAME FOR NON-FP&M PERSONAL	
6	SUPERVISOR'S NAME (PLEASE PRINT)	
7	SUPERVISOR'S SIGNATURE	
8	PURPOSE FOR ISSUING KEYS PROJECT NAME / NUMBER	/
9	BUILDING NAME / NUMBER	/
10	BUILDING ROOM OR AREA OF ACCESS	
11	NOTES :	
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14	FP&M - AUTHORIZING SUPERVISOR	
15	SIGNATURE	
16	DATE	
17	KEY CODE -	MFG- NUMBER-
18	KEY CODE -	MFG- NUMBER-
19	KEY CODE -	MFG- NUMBER-
20	KEY CODE -	MFG- NUMBER-
21	KEY CODE -	MFG- NUMBER-
22	KEY CODE -	MFG- NUMBER-
23	KEY CODE -	MFG- NUMBER-
24	LOCK SHOP EMPLOYEE PROCESSING REQUEST	
25	DATE RETURNED	



UW MANAGED – GLOBAL CHANGE PROCESS

- 1. Identify The need**
 - a. RFI
 - b. Observation/Field Report
 - c. Directions from the Owner
- 2. Identify the scope**
 - a. PM or A/E issuing written instructions to GC (e.g. CB, CCD, Sketch, Directives, etc.)
 - b. PM to copy the SP
- 3. COST**
 - a. GC provides cost/schedule impacts
 - b. A/E Input
- 4. Vetting the Change (internal agreement by Owner group)**
 - a. Go/No GO
 - b. Revise, go back to (2)
- 5. Processing the Change**
 - a. CO Process
- 6. Executing the Change**
 - a. GC executing the change
 - b. A/E recording the change (paperwork, CB, etc.)



Identify the Need Process

General process for identifying an issue or a need to pursue a change in the contract documents.

People involved:

- Project Manager (PM)
- General Contractor (GC)
- Architect/Engineer (A/E)
- System Planner (SP)
- System Program Administrator (PA)

1	2	3	4	5	6
IDENTIFY THE NEED	IDENTIFY SCOPE	COST	VETTING THE CHANGE	PROCESSING THE CHANGE	EXECUTING THE CHANGE
RFI / OR / FR / MTG / EMAIL	CCD / CB	GC Proposal	No Forms	CO	GC Work

1A - Proposed change Identified through RFI

1. GC issues RFI
2. A/E responses to RFI
 - a. IF A/E identifies possible change, A/E notifies PM
3. GC identifies possible change from A/E response
 - a. GC notifies A/E and PM of possible change
4. PM, A/E & GC review and determine most appropriate route. (CCD or CB)
 - a. PM notifies and confirm need with SP, PA & (FPM SM if over 25K)

1B - Proposed change Identified through observation/field report

1. A/E, others identifies possible change
2. A/E notifies PM
3. PM, A/E & GC review and determine most appropriate route. (CCD or CB)
 - a. PM notifies and confirm need with SP, PA & (FPM SM if over 25K)

1B - Proposed change Identified through Owner Request

1. PM notifies A/E, SP & SPA of change
 - a. If reserve funds or additional funding is required
 - i. FPM SM approval required
 - ii. User Group SM approval required
2. PM & A/E identifies if addition services are required
 - a. A/E submits proposal to prepare scope documents
 - b. PM, SP & PA review proposal
3. PA issues amendment and A/E proceeds with scoping documents



Identify Scope and Cost Process (CCD & CB)

General process is to confirm the scope and cost of the proposed change.

People involved:

- Project Manager (PM)
- General Contractor (GC)
- Architect/Engineer (A/E)
- System Planner (SP)
- System Program Administrator (PA)

1	2	3	4	5	6
IDENTIFY THE NEED	IDENTIFY SCOPE	COST	VETTING THE CHANGE	PROCESSING THE CHANGE	EXECUTING THE CHANGE
RFI / OR / FR / MTG / EMAIL	CCD / CB	GC Proposal	No Forms	CO	GC Work

2&3A - Identifying Scope through CCD process

1. Need has been Identified (see previous processes)
 - a. PM confirmed with PA
 - i. Limited scope that does not require written direction form A/E
 - ii. Time restraints that will negatively impact schedule
2. PM directs A/E to draft CCD and GC to provide an estimate
3. GC provides a T&M not to exceed estimate
4. A/E drafts, signs and emails CCD to GC and CC's PM, SP & PA
5. GC signs and reply's all
6. PM reply's all with their approval
7. UWSA executes the CCD and reply to ALL
8. GC performs the change
9. GC maintains the required back-up
10. Next step, (5) processing the change

2&3B - Identifying Scope through CB process

1. Need has been Identified (see previous processes)
2. PM directions A/E to provide scope documents
3. A/E issues CB to GC for pricing.
 - a. CC's PM and provides PM with ROM estimate.
4. GC Signs CB and replays all with pricing and scope understanding
5. A/E reviews and makes recommendations.
 - a. Return to GC if cost and scope do not align
 - b. A/E signs and forward CB to PM when acceptable
6. Next step (4) PM Vets CB with SP, PA & (FPM SM if over 25K)



Vetting the Change Process (No Forms)

General process for UW-Madison and UW System to review proposed change.

The CO process utilizes AIA’s 2017 G701 document.

People involved:

- Project Manager (PM)
 - o Sr = licensed professional
 - o As = Associate PM non-licensed
- General Contractor (GC)
- Architect/Engineer (A/E)
- System Planner (SP)
- System Program Administrator (PA)

1	2	3	4	5	6
IDENTIFY THE NEED	IDENTIFY SCOPE	COST	NETTING THE CHANGE	PROCESSING THE CHANGE	EXECUTING THE CHANGE
RFI / OR / FR / MTG / EMAIL	CCD / CB	GC Proposal	No Forms	CO	GC Work

4 – Vetting the change process

1. CB pricing received after A/E review and recommendations. (see previous processes)
2. PM review CB with SP, PA & (FPM SM if over 25K)
 - a. All PMs review with FPM SM for approval if over 25K
 - b. Sr PMs review with SP & PA only up to 25K
 - c. As PMs review with SP, PA & Team Leader from 5k to 25k
 - d. As PMs review with SP & PA only up to 5K
3. PM signs CB
4. Next step (5) PM directs A/E to draft CO



Change Order Process (CO)

General process for when a General Contractor contract needs to change from a cost or timing perspective. While a Change Order (CO) changes the contract between the GC and UW, it also changes the work product of the Architect/Engineer and thus they need to endorse/sign it also. There is only a CO if the GC’s cost or time change.

The CO process utilizes AIA’s 2017 G701 document.

People involved:

- Project Manager (PM)
- General Contractor (GC)
- Architect/Engineer (A/E)
- System Planner (SP)
- System Program Administrator (PA)

1	2	3	4	5	6
IDENTIFY THE NEED	IDENTIFY SCOPE	COST	VETTING THE CHANGE	PROCESSING THE CHANGE	EXECUTING THE CHANGE
RFI / OR / FR / MTG / EMAIL	CCD / CB	GC Proposal	No Forms	CO	GC Work

5 - Change Order Process

1. Change has been vetted (see previous processes)
2. A/E Produces the Draft of the CO per PM directions
 - a. Documents(AIA G701, GC backup documents)
 - b. Insert CB Log (from the tracking log)
 - c. Actual Vetted CO&CB Log
 - d. Back-up: RFI / OR / FR / MTG / EMAIL
3. PM emails project budget summary sheet to PA & SP
4. A/E emails CO DRAFT to Owner’s Group (PM, SP, PA)
5. PM collects and compile feedback
6. PM obtains approval from FPM SM (above \$ 25K)
7. PM authorizes A/E to publish the CO for signatures (cc. Owner’s Group)
8. A/E signs and emails to Owner’s Group and GC for signatures
9. GC signs and reply to ALL
10. UWSA executes the CO and reply to ALL
11. Next step (6) GC performs the change

Notes:

- 1) Multiple CBs, and such, can be grouped into 1 CO, if they have the same reason code. Reason codes: Owner Request, Unforeseen Condition, A/E Error or Omission



Executing the Change Process

General process for performing the change and documenting it.

The CO process utilizes AIA’s 2017 G701 document.

People involved:

- Project Manager (PM)
- General Contractor (GC)
- Architect/Engineer (A/E)
- System Planner (SP)
- System Program Administrator (PA)

1	2	3	4	5	6
IDENTIFY THE NEED	IDENTIFY SCOPE	COST	VETTING THE CHANGE	PROCESSING THE CHANGE	EXECUTING THE CHANGE
RFI / OR / FR / MTG / EMAIL	CCD / CB	GC Proposal	No Forms	CO	GC Work

6 - Executing the change process

1. UWSA executes the CO (see previous processes)
2. GC performs the change
 - a) Maintain as-built drawings
3. A/E documents the executed change
 - a) Record drawings

Drawings Check List

All numbers to the right of each checklist item indicate the latest drawing review stage at which the item should be coordinated.
 35% = Design Development Review 100% = Construction Document Review

Project Title _____

Reviewer's Name _____

		Coordinated?			
		YES	NO	N/A	%
CIVIL					
	New underground utilities (power, telephone, water, sewer, gas, storm drainage, fuel lines, grease traps, fuel tanks) have no interferences.				35
	Existing power/telephone poles, pole guys, street signs, drainage inlets, valve boxes, manhole covers, etc., do not interfere with new driveways, sidewalks, or other site improvements.				35
	Limits of construction, clearing, grading, sodding, grass or mulch are shown and are consistent in other disciplines.				100
	Fire hydrants and street light poles do not conflict with other above ground items.				100
	Proposed grades match proposed ground floor/ first floor elevations.				100
	Verify locations of gas meters, water meters, electrical transformers, substations are acceptable with owner, utility and designer.				35
	All existing and proposed grades are shown.				35
LIFE SAFETY PLANS					
	Verify location of perimeter fire lane and 150' fire department access requirement.				35
	Review construction classification and allowable area.				35
	Review sprinkler and fire lane floor area increase worksheet.				35
	Locate Fire proofing & Fire Rated Walls				35
	Review NFPA 13 vs. 13R requirements (if applicable – 13R will be rare on campus).				35
	Review fire apparatus worksheet.				35
	Review Pre-design Report (if any).				35
SITE PLAN					
	Building Footprint with primary access points (including docks, overhead doors, exit doors, etc.).				35
	Existing power/telephone poles, pole guys, street signs, drainage inlets, valve boxes, manhole covers, etc., do not interfere with new driveways, sidewalks, or other site improvements.				35
	Limits of construction, clearing, grading, sodding, grass or mulch are shown and consistent with other disciplines.				35
	Site utilities (water, chilled water, steam, electrical, sanitary sewer, storm sewer) with basement or ground floor utility room location.				35
	Fire hydrants and street light poles do not conflict with other above ground items.				35
	The locations of flag poles, dumpster pads, and landscaping have been coordinated with other discipline site plans.				35
	Specialty paving/surfaces, and curbs & gutters are located.				35
	Dumpster locations / enclosures.				35
	Signage locations with Transportation.				35
	Property line dimensions on survey or civil site plans match architectural.				35
	Building is located behind setback lines and outside easements.				35
	Limits of construction, clearing, grading, sodding, grass or mulch are shown and are consistent with other disciplines.				35
	Fire hydrants and street light poles do not conflict with other above ground items.				35
	Distinction shown between asphalt and concrete paved areas.				35
	Existing contours / proposed contours, and establish floor elevation (from civil).				35
	Site utilities (from civil) and drainage system concept.				35
	Verify locations of gas, water, electrical, substations are shown.				35
	Existing and new work is clearly identified.				35

ARCHITECTURAL - GENERAL				
	Property line dimensions on survey or civil site plans match architectural.			35
	Building is located behind set-back lines.			35
	Locations of columns and bearing walls, and overall building dimensions match structural.			35
	Existing and new work is clearly identified on site plans.			35
	Building elevations match floor plans. In particular, check roof lines, window and door openings, louver openings, exterior light fixtures, and expansion joints.			35
	Building sections match elevations and plans.			35
	Wall sections match architectural and structural building sections.			35
	Size of openings for windows and doors matches structural. Verify window glass types with specifications.			35
	Expansion joints are continuous throughout the building.			100
	Large scale partial floor plans match small scale floor plans.			100
	Reflected ceiling plans match architectural floor plans to ensure no variance with wall locations. Location of electrical fixtures and mechanical registers/diffusers on electrical and mechanical plans does not conflict with location on reflected ceiling plans.			100
	Room finish schedule information matches plan and elevation information; including room numbers, names of rooms, finishes, and ceiling heights. look for omissions and inconsistencies.			100
	Door schedule information matches plan, and elevation information; including sizes, types, labels, etc. Look for omissions and inconsistencies.			100
	The location of fire rated walls matches the location of fire and/or smoke dampers on mechanical plans.			100
	Cabinets will fit in available space and electrical outlets on cabinet walls are at the correct height.			100
	Flashing material, gauges and construction methods match drawings and specifications.			100
	Verify edge condition at wall/roof is adequate to contain tapered insulation thickness.			100
	The locations of flag poles, dumpster pads, and landscaping have been coordinated with other discipline site plans.			100
	Walls required to extend to deck above do not interfere with joists above.			35
FLOOR PLAN(S)				
	Structural grid and column locations, with typical bay dimensions indicated.			35
	Exterior wall articulation with window openings, doors, overhead doors, and important design elements.			35
	Building elevations match floor plans (roof lines, window and door openings, louvers, exterior light fixtures, and expansion joints).			35
	Door and window opening sizes match structural.			35
	Enlarged unit plans match overall floor plans.			35
	Millwork indicated.			35
	Door schedule information matches plan and elevation information; including sizes, types, labels, etc.			35
	Reflected ceiling plans match floor plans.			35
	Door and window opening sizes match structural.			35
	All plans have generic wall type or poche' wall for Revit projects.			35
	Enlarged unit plans match overall floor plans.			35
	Interior partitions with doors, borrowed lights, and important design elements.			
	Rated enclosures and fireproofing indicated.			35
	Stairs, elevators, and access ladders accurately depicted.			35
	Toilet rooms indicated.			35
	Electrical and Mechanical rooms and chases, data and telecom closets indicated.			35
	Millwork indicated.			35
	Specialty construction or design elements and explanatory notes.			35
	Indicate special ceiling elements on Reflected Ceiling Plan.			35
	Indicate special finishes on Room Finishes Schedule.			35
	Building section mark.			35
	Room finish schedule information matches plan and elevation information; including room numbers, room names, finishes, and ceiling heights.			35
	Door schedule information matches plan and elevation information; including sizes, types, labels, etc.			35

	Cabinets will fit in available space and electrical outlets on cabinet walls are at the correct height.				35
	Flashing material, gauges and construction methods match drawings and specifications.				35
	Verify edge condition at wall/roof is adequate to contain tapered insulation thickness.				35
	Walls required to extend to deck above do not interfere with joists above.				35
	Owner-supplied equipment (vending, appliances, etc.).				35
ROOF PLAN(S)					
	Building Footprint with major roof materials indicated.				35
	Intended roof pitch and drainage systems (located gutters and downspouts).				35
	Skylights located.				35
	Mechanical screens indicated.				35
	Mechanical RTU locations.				35
EXTERIOR ELEVATIONS					
	Minimum all principal elevations depicted.				35
	Exterior wall materials indicated.				35
	Windows and doors indicated.				35
	Floor elevations indicated.				35
	Building response to site contours.				35
	Column grids indicated.				35
	Special design elements and explanatory notes.				35
	Building-mounted lighting and signage.				35
	Mechanical screening.				35
BUILDING SECTIONS					
	Indicate major materials and systems.				35
	Column grid indicated.				35
	Floor elevations indicated.				35
	Roof pitch.				35
	Fire proofing (if required).				35
	Special design elements and explanatory notes.				35
STRUCTURAL					
	Column grid lines on structural and architectural match.				35
	Column locations are the same on structural and architectural.				35
	Perimeter slab on structural matches architectural.				35
	Depressed or raised slabs are indicated and match architectural.				35
	Slab elevations match architectural.				35
	Foundation <i>piers</i> are identified and sized on a schedule or plan.				100
	Foundation <i>beams</i> are identified and sized on a schedule or plan.				100
	Locations of roof framing plan column lines and columns match foundation plan column lines and columns.				35
	Structural perimeter roof line matches architectural roof plan.				35
	Columns, floor beams, and roof beams are listed in column and beam schedules.				100
	Verify columns drawn match column profile as scheduled- (i.e. if a W 15x24 is scheduled, a W 15x24 should be shown)				35
	Sections are properly labeled.				100
	Expansion joint locations match other disciplines.				35
	Dimensions match architectural.				35
	Drawing notes do not conflict with specifications.				100
	Roof drain locations and roof slopes match architectural roof plan and plumbing plan.				35
PLUMBING & MECHANICAL					
	Plumbing / Mechanical floor plans match architectural floor plans.				35
	New gas, water, sewer, etc. lines connect to existing or new utilities on civil drawings.				35
	Plumbing fixtures match plumbing schedules and architectural locations.				35
	Roof drain locations and roof slopes match architectural roof plan.				35
	Pipes and drains are connected and do not interfere with foundations.				35
	Wall chases are provided on architectural to conceal vertical piping.				35
	Sanitary drain system pipes are sized and all fixtures are connected.				100
	HVAC floor plans match architectural.				35
	Sprinkler heads are in appropriate rooms and do not interfere with other ceiling items.				35
	Mechanical/plumbing ducts and pipes do not conflict with architectural features or structural members.				35

	Adequate ceiling height exists at worst case duct intersection or largest beam.				100
	Structural supports required for mechanical equipment are indicated on structural drawings.				100
	Dampers are indicated at smoke and fire walls.				100
	Diffuser locations match architectural reflected ceiling plans.				100
	Openings for roof penetrations (ducts, fans, etc.) are indicated on structural roof plans.				100
	Ductwork and piping does not interfere with walls required to extend to structure above				100
	Notes are referenced.				100
	Air conditioning units, heaters, and exhaust fans match architectural roof plan locations.				100
	Mechanical equipment will fit in spaces allocated and that there is room for maintenance such as removing filters or tubes.				100
	Horsepower ratings, phases, and voltages of major items of equipment on mechanical and electrical drawings and specifications match.				100
	Thermostat locations have been coordinated with architectural drawings.				35
	Waste and supply line diagrams with sizes.				35
	Air handling unit location, size, and type indicated.				35
	Chiller location, size, and type indicated.				35
	Boiler, heat exchanger and pumps location, and size indicated.				35
	Other gas and fluids location, size, and type indicated.				35
	Distribution Systems (HVAC ductwork, Plumbing, Fire Protection, etc.) line diagrams with sizing and flow requirements.				35
ELECTRICAL					
	Electrical floor plans match architectural and mechanical. Check that the location of floor mounted equipment is consistent between disciplines.				35
	The location of light fixtures matches architectural reflected ceiling plan and that light fixtures do not conflict with the structure or mechanical HVAC system.				100
	Major pieces of equipment have electrical connections and that horsepower ratings, Phases, and voltages are consistent with other discipline schedules.				100
	Locations of panel boards are consistent with architectural, mechanical, and plumbing floor plans and that the panel boards are indicated on the electrical riser diagram.				35
	Notes are referenced.				100
	There is sufficient space for electrical panels to fit.				35
	Electrical panels are not recessed in fire rated walls.				35
	Exterior electrical equipment locations are coordinated with site paving, grading, and landscaping.				100
	Locations of electrical conduit runs, floor trenches, and openings are coordinated with structural plans.				35
	Equipment Plan indicating switch gear, transformers, and generators location and size indicated.				35
	One line power distribution plan.				100
	Lighting Plan with fixture cut sheets or quality/performance requirements.				35
	Light fixture locations match architectural reflected ceiling plan.				35
	Typical power plan with special requirements.				35
	Typical communications plan with special requirements and equipment locations.				35
FOOD SERVICE – verify that:					
	The equipment layout matches other discipline floor plans and that there are no conflicts with columns.				35
	Equipment is connected to utility systems.				35
SPECIFICATIONS					
	Check that bid items explicitly state what is intended.				35
	Check specifications for phasing of construction.				100
	Compare architectural finish schedule to specification index.				35
	Check major items of equipment and verify that they are coordinated with contract drawings.				100
	Verify that the items specified “as indicated” or “where Indicated” in the specifications are in fact indicated on contract drawings.				100
	Verify that all specification sections are in the index and that cross referenced specifications sections exist.				100
	Verify that thickness of materials or quantities of materials ARE NOT in specifications.				100