

ADDENDUM NO.: 1

DATE OF ADDENDUM: 12/9/2014

**Dutcher Hall N-1 Renovations  
Connecticut Valley Hospital  
Middletown, CT  
BI – MH – 948**

Original Bid Due Date / Time:

12/17/2014

1:00 P.M.

Previous Addendums: NONE

**TO: Prospective Bid Proposers:**

This Addendum forms part of the "Contract Documents" and modifies or clarifies the original "Contract Documents" for this Project dated 6/9/2014. Prospective Bid Proposers shall acknowledge receipt of the total number the Addenda issued for this Project on the space provided on Section 00 41 00 Bid Proposal Form. Failure to do may subject Bid Proposers to disqualification.

The following clarifications are applicable to drawings and specifications for the project referenced above.

**Item 1**

**Question:** Spec. 01 23 00 –D States that there are supplemental Bids (3) ea. Please confirm these do not apply to this project.

**Response:** There are no supplemental bids. Please replace Specification section 01 20 00 with the attached section 01 20 00.

**Item 2**

**Question:** Spec section 01 50 00 for temporary facilities and controls has numerous contradictions on example is shown on, 01 51 36 section C there are two subsections C both have opposite instructions.

**Response:** Please replace Specification section 01 50 00 with the attached section 01 50 00

**Item 3**

**Question:** Detail 8 on A-2 shows GWB extends to deck. Please give floor to deck height dimensions on first floor and basement levels.

**Response:** Basement level is 9' 11". First floor is 9"11"

**Item 4**

**Question:** Table 2 identified Asbestos Containing Materials list in the Specifications list rooms 107, 108, 122A, 122B, 122C, 124 and 125 as assumed Asbestos Containing grout/glue under ceramic floor tile. The floors for rooms 122B, 122C and 107 (note 7) are scheduled for floor removal on drawing D-1. Is this a mistake or should we carry the cost to abate these floors?

**Response:** It is a mistake the grout has tested negative for Asbestos Containing Materials. Any suspected Asbestos Containing Materials will be tested and abated by others.

**Item 5**

**Question:** Is there a specification for plastic laminate gypsum board shown on walls of the Nurses station on drawing A-2.

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**Item 6**

**Question:** Is there a specification for lockable access panels shown on reflected ceiling plan?

**Response:** Add attached Specification 10 83 00 Access Doors and Frames into the Project Manual.

**Item 7**

**Question:** On Drawing A-3 the plans call for a 1/8" pitch to drains. Since this is an existing slab on the second floor I not sure how you can achieve this and still keep the bathroom handicap accessible. If the idea was to install a mud bases in room 134 the drain is 9" away from the door and at 1/38" pitch the floor would be 1-1/8" higher at the door. This condition would also apply at room 138 where it would be 1" higher at the door.

**Response:** The 1/8" pitch shown in detail 5/A-3 was meant to depict just the section inside the shower stall and the immediate "dressing area" in rm 138. There is no pitch shown in room 134. The intent of the rest of the shower room floor (rm 138), was to pitch to the drain at the best pitch that can be achieved to prevent water from running out into the hallways. The indicator in Drawing 1/A-3 was mislabeled 4/A-3. See corrected Sketch A-3-1 rev01. Drawing 5/A-3 was wrong in showing what looked like a mud base. The shower bases are actually pre-cast, see note 14 dwg A-3. Both drawing sections are corrected, see Corrected drawing A-3-5 rev01.

**Item 8**

**Question:** Specifications Div 10 Hand Dryers. Is there a model number of the excel dryer that the specifications were written around?

**Response:** Excel Xlerator XL-SB Hand Dryer Brushed Stainless Steel, High Speed, Surface-Mounted.

**Item 9**

**Question:** Is there a specification for the Pro- Tec handrails shown on A-2 or at least a Model number?

**Response:** BR-530S Handrail with Continuous Security Bracket. Add attached Specification 10 26 00 Handrails to the Project Manual.

**Item 10**

**Question:** Is there a specification for the toilet partitions and toilet accessories shown on A-2.

**Response:** Add attached Specification 10 21 13 Toilet Compartments into the Project Manual. The only other toilet room accessories are the mirrors which are to be equivalent to Bradley Corp. Model #740 with Bright Stainless Steel Mirror Option. Sizes noted on drawings.

**Item 11**

**Question:** Who is Fire alarm contractor for building?

**Response:** Red Hawk Fire & Security, LLC, 55 Robinson Blvd, Orange CT 06477.

**Item 12**

**Question:** Drawing E-1 telcom notes call out fiber optics from closet B-26 to closet 105A. What is the type of fiber?

**Response:** Corning single mode.

**Question:** What is strand count?

**Response:** 12 Strand.

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**Question:** What type of connector is to be installed on the fiber?

**Response:** Corning 12F, LC UPC duplex CCH Pigtailed Splice Cassette CCH-CS12-A9-P00RE installed in Corning CCH02U Housing.

**Item 13**

**Question:** Drawing E-3 General electrical Note #12 states that receptacles need to be hospital grade. Does that apply to the MC cable also?

**Response:** No, it does not apply to MC cable.

**Item 14**

**Question:** Drawing a-4 calls out a door security alarm system. Who is responsible for purchasing and installation, GC or EC?

**Response:** The electrical contractor will be a sub of the General Contractor so that question is between the GC and his sub (EC).

**Item 15**

**Question:** What type and quantity of data racks and patch panels are required in new telecom closet?

**Response:** One Data rack for fiber and data: 2 Post, 45U, EIA-310 standard 19", 12-24 threaded holes, Aluminum, Black, at least 800lb rating, bolted to floor and secured to wall with ladder rack at top. Two patch panels: 1) Leviton eXtreme® CAT 6+ Flat 110-Style Patch, 2U, 48 port – use for Purple DATA lines with 2U Horizontal Slotted Duct (front and back) w/cover mounted under CCH housing. 2) Leviton eXtreme® CAT 6+ Flat 110-Style Patch, 2U, 48 port – use for Blue DATA lines with 2U Horizontal Slotted Duct (front and back) w/cover mounted under CCH housing.

**Item 16**

**Question:** Are all telecom electronics provided by others?

**Response:** Telephones are provided by others. Wiring, jacks switches panels etc. are provided by Contractor.

**Item 17**

**Question:** Drawing E-1 General Notes state to preserve and reinstall overhead speakers. Please provide count.

**Response:** Seven (7)

**Item 18**

**Question:** Drawing E-1 General Notes state to preserve card readers. Does this mean these items are not to be touched?

**Response:** Yes.

**Item 19**

**Question:** Drawing E-2 & E-3 show an Area of Refuge system and require installation of a cable to the Police Station Control Panel. What is the distance and location of the panel?

**Response:** The police station is located at the main front entrance of the building on the 1<sup>st</sup> floor (same floor as area being renovated) approximately 200' in distance from the Area of Refuge.

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**Item 20**

**Question:** Drawing E-3 calls for dimmers for light fixtures that do not have dimming ballasts. How should this be addressed?

**Response:** Dimmers are for the recessed down lights only (incandescent). See Lighting Fixture schedule DWG E-2 Fixture Type D.

**Item 21**

**Question:** There are two hot water coils shown on M-4 that have to be replaced and drawing states, "refer to M-1 for schedule" There is no schedule on M-1.

**Response:** There is a schedule on M-1 but it was missing one on the hot water coils. The schedule on M-1 was updated to add missing hot water coil on FCU # 2. Fan Coil Units are not numbered on M-4. M-4 notes have been clarified on the 2 fan coil units contain hot water coils specifying the FCU numbers. Additionally M-2 has the wrong FCU numbers, they do not match M-1 nor the schedule. Note has been added to M-2 to refer bidders to M-1 for correct FCU numbering.

There will be no more addendums following addendum 1.

End of Addendum 1



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Mellanee Walton, Associate Fiscal Administrative Officer  
Department of Administrative Services  
On Behalf of the Division of Construction Services

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**01 20 00 CONTRACT CONSIDERATIONS**

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**01 21 00 ALLOWANCES**

Not Used

**01 22 00 UNIT PRICES - GENERAL**

Not Used

**01 22 19 UNIT PRICE SCHEDULE - ALTERATIONS**

Not Used

**01 23 00 SUPPLEMENTAL BIDS**

Not Used

**01 25 00 SUBSTITUTION PROCEDURES**

A. **Related Documents:** Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

B. **Summary**

1. This Section includes administrative and procedural requirements for handling requests for equals and substitutions made after award of the Contract.
2. Related Sections: The following Sections contain requirements that relate to this Section:
  - 2.1 Division 01 Section 01 33 00 "Submittal Procedures" specifies requirements for submitting the Contractor's Construction Schedule and the Submittal Schedule.
  - 2.2 Division 01 Section 01 42 19 "Reference Standards" specifies the applicability of industry standards to products specified.
  - 2.3 Division 01 Section 01 60 00 "Product Requirements" specifies requirements governing the Contractor's selection of products and product options.

C. **Definitions**

1. Definitions in this Article do not change or modify the meaning of other terms used in the Contract Documents.
2. **Equals or Substitutions General:** Changes in products, materials, equipment, and methods of construction required by the Contract Documents proposed by the Contractor after award of the Contract.

D. **Submittals**

1. **Equals and Substitution Request Submittals:** The Owner will consider requests for equals or substitutions if made prior to the Receipt of the Competitive Bid. The information on all materials shall be consistent with the information herein. After the contract award, substitutions will be considered for materials or systems specified that are no longer available. It will not be considered if the product was not purchased in a reasonable time after award. The Contractor shall submit all equal and substitutions requests on the "**Equal or Substitute Product Request**" Form, an example is shown at the end of this Section and the Form is available from the Construction Representative (CA). See Article 15 in the General Conditions for further refinement and information.

- 1.1 The Contractor is required to prepare and submit three (3) copies of the required data for the first manufacturer listed or procedure listed in the specifications section with reference to all of the following areas: the substance and function considering quality, workmanship, economy of operation, durability and suitability for purposes intended including the size, rating and cost. All submissions must include all the required data for the first listed manufacturer or procedure as specified, as well as the required data for the proposed Equal or Substitution. This will enable the Owner and Architect to determine that the proposed Equal or Substitution is or is not substantially equal to the first listed manufacturer or procedure.
2. Identify the product or the fabrication or installation method to be replaced in each request. Include related Specification Section and Drawing numbers.
3. Provide complete documentation showing compliance with the requirements for equals or substitutions, and the following information, as appropriate:
  - 3.1 Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by the Owner and separate contractors that will be necessary to accommodate the proposed Equal or Substitution.
  - 3.2 A detailed comparison chart of significant qualities of the proposed substitution with those of the Work specified. Significant qualities may include elements, such as performance, weight, size, durability, and visual effect.
  - 3.3 Product Data, including Shop Drawings and descriptions of products and fabrication and installation procedures.
  - 3.4 Samples, where applicable or requested.
  - 3.5 A statement indicating the effect on the Contractor's Construction Schedule compared to the schedule without approval of the Equal or Substitution. Indicate the effect on overall Contract Time.
  - 3.6 Cost information, broken down, including a proposal of the net change, if any in the Contract Sum.
  - 3.7 The Contractor's certification that the proposed Equal or Substitution conforms to requirements in the Contract Documents in every respect and is appropriate for the applications indicated.
  - 2.8 The Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of the failure of the Equal or Substitution to perform adequately.
4. **Architect's Action:** If necessary, the Architect will request additional information or documentation for evaluation within **seven (7)** Calendar Days of receipt of the original request for equal or substitution request. The Architect will notify the Construction Administrator who will notify the Owner of recommended acceptance or rejection of the proposed equal or substitution, within **fourteen (14)** Calendar Days of receipt of the request, or **seven (7)** Calendar Days of receipt of additional information or documentation, whichever is later. The Construction Administrator will give final acceptance or rejection by the Owner not less than **seven (7)** Calendar Days after notification.
  - 1.1 Any request deemed an "Equal" and accepted by the Construction Administrator, Architect, Owner, and Agency will result in written notification to the Contractor and will not be in the form of a change order for an "Equal".
  - 1.2 Any request deemed a "Substitution" and rejected or approved by Construction Administrator, Architect, and Owner may result in written notification to the Contractor and may be in the form of a Change Order if the "Substitution" is approved.

**D. Equal Or Substitutions**

1. **Conditions:** The Architect will consider the Contractor's request for Equal or Substitution of a product or method of construction when one or more of the following

conditions are satisfied, as determined by the Architect. If the following conditions are not satisfied, the Architect will return the requests to the Construction Administrator without action except to record noncompliance with these requirements.

- 1.1 The proposed request does not require extensive revisions to the Contract Documents.
  - 1.2 The proposed request is in accordance with the general intent of the Contract Documents.
  - 1.3 The proposed request is timely, fully documented, and/or properly submitted.
  - 1.4 The proposed request can be provided within the Contract Time. However, the Architect will not consider the proposed request if it is a result of the Contractor's failure to pursue the Work promptly or coordinate activities properly.
  - 1.5 The proposed request will offer the Owner a substantial advantage, in cost, time, energy conservation, or other considerations, after deducting additional responsibilities the Owner must assume. However, if the proposed request requires the Owner to incur additional responsibilities, including but not limited to, additional compensation to the Architect for redesign and evaluation services, increased cost of other construction by the Owner or similar considerations, then the Owner will have just cause to reject the request for Equal or Substitution.
  - 1.6 The proposed request can receive the necessary approvals, in a timely manner, required by governing authorities having jurisdiction.
  - 1.7 The proposed request can be provided in a manner that is compatible with the Work as certified by the Contractor.
  - 1.8 The proposed request can be coordinated with the Work as certified by the Contractor.
  - 1.9 The proposed request can uphold the warranties required by the Contract Documents as certified by the Contractor.
2. The Contractor's submission and the Architect's review of Submittals, including but not limited to, Samples, Manufacturer's Data, Shop Drawings, or other such items, which are not clearly identified as a request for an Equal or Substitution, will not be considered or accepted as a valid request for an Equal or Substitution, nor does it constitute an approval.
  3. **Equal or Substitution Produce Request Form (Example):**



7001  
**Equal or Substitute  
 Product Request**

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Request Phase Pre-Bid  Post Bid  (See Article 15 Materials: Standards, General Conditions)  
 (If Pre-bid only) Current Bid Due Date: \_\_\_\_\_ Request No.: \_\_\_\_\_ Dated: \_\_\_\_\_  
 To: State of Connecticut CTDCS Project No.: \_\_\_\_\_  
 Department of Construction Services Project Name / Location: \_\_\_\_\_

<b>References:</b>	Specification(s): _____ Drawing(s): _____	Section(s): _____ Drawing(s) No(s): _____	Paragraph(s): _____ Detail(s) No(s): _____
<b>Contractually Specified Product:</b> _____			
<b>Contractor Proposed Product:</b> _____			
Proposed Product is: Equal: <input type="checkbox"/> Substitute: <input type="checkbox"/> Model No.: _____			
<i>See attached data for both specified and proposed products as required by Article 15 General Conditions.</i>			
<b>Data attached:</b>	Drawings: <input type="checkbox"/>	Product Data: <input type="checkbox"/>	Reports: <input type="checkbox"/> Samples: <input type="checkbox"/>
	Tests: <input type="checkbox"/>	Other: _____	
<b>Reason(s) for not providing the Specified Product:</b> _____ _____			
<b>Similar Installation:</b>		<b>Architect:</b>	
Project: _____		Owner: _____	
Address: _____		Date Installed: _____	

Will proposed substitution impact other parts of the Work? No  Yes  *If yes attach explanation.*  
 Will proposed substitution increase Contract Time? No  Yes  *by number of Days* \_\_\_\_\_

**Actual Dollar Savings to the State of Connecticut if substitution is accepted:** \$ \_\_\_\_\_

The Undersigned Certifies that the proposed Request for an Equal or Substitute Product conforms to all of the requirements of Division 01 General Requirements, Section 01 25 00 Substitution Procedures .

**Request Submitted By General Contractor / CMR:** \_\_\_\_\_  
 (Firm's Typed Name)

**By:** \_\_\_\_\_ (Typed Name) \_\_\_\_\_ (Title) \_\_\_\_\_ (Signature) \_\_\_\_\_ (Date)

**CONTRACTOR / CMR Send copies to:** DCS PM:  CA/OR:

**Consultant's Review – This Substitution Request is:** Request Received on (Date): \_\_\_\_\_

**Approved:** *(Submittals in accordance with Div. 01 General Requirements, Section 01 33 00 Submittal Procedures.)*  
 **Approved as Noted:** *(Submittals in accordance with Div. 01 General Requirements, Section 01 33 00 Submittal Procedures.)*  
 **Rejected:** **Use Specified Materials.**  
 **Rejected:** **Request Not Received Within Specified Time Period - Use Specified Materials.**

**Reviewed Issued By:** \_\_\_\_\_ (Typed Name) \_\_\_\_\_ (Signature) \_\_\_\_\_ (Date)

**CONSULTANT Send copies to:** DCS PM:  CA/OR:  Chief Architect  Chief Engineer

If Approved: As noted by Consultant,  
**DCS Director of Project Management:** \_\_\_\_\_ (Signature) \_\_\_\_\_ (Date)  
 Copies: Project File Red R2

01 26 00 CONTRACT MODIFICATION PROCEDURES

- A. **Related Documents:** Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.
- B. **Summary**
1. This Section specifies administrative and procedural requirements for handling and processing contract modifications.
- C. **Related Sections:** The following Sections contain requirements that relate to this Section:
1. Division 01 Section 01 25 00 "Substitution Procedures" for administrative procedures for handling requests for substitutions made after award of the Contract.
  2. Division 01 Section 01 29 76 "Progress Payment Procedures" for administrative procedures governing Applications for Payment.
  3. Division 01 Section 01 32 16 "Construction Progress Schedules" for requirements for construction scheduling and reporting progress of work.
  4. Division 01 Section 01 33 00 "Submittal Procedures" for requirements for submittal of the Construction Progress Schedule.
  5. Division 00 General Requirements "Article 13" "Change Orders".
- D. **Requests For Information**
1. In the event that the Contractor or subcontractor, at any tier, determines that some portion of the drawings, specifications, or other contract documents requires clarification or interpretation by the Architect, the Contractor shall submit a "Request for Information" in writing to the Architect via the Construction Administrator. "Requests for Information" may only be submitted by the Contractor and shall only be submitted on the "Request for Information" forms as required by the Owner.
    - 1.1 In the "Request for Information", the Contractor shall clearly and concisely set forth the issue for which clarification or interpretation is sought and why a response is needed from the Architect.
    - 1.1 In the "Request for Information", the Contractor shall set forth an interpretation or understanding of the requirement along with reasons why such an understanding was reached.
    - 1.2 The Owner acknowledges that this is a complex project. Based upon the owner's past experience with projects of similar complexity, the Owner anticipates that there will probably be some "Requests for Information" on this project.
    - 1.3 The Architect will review all "Requests for Information" to determine whether they are valid "Requests for Information". If it is determined that the document is not a valid "Request for Information", it will be returned to the Contractor, unreviewed as to content, for resubmittal on the proper form and in the proper manner.
    - 1.4 A "Requests for Information Response" shall be issued within **seven (7)** Calendar Days of receipt of the request from the Contractor unless the Owner determines that a longer time is necessary to provide an adequate response. If a longer time is determined necessary by the Owner, the Owner will, within **seven (7)** Calendar Days of receipt of the request, notify the Contractor of the anticipated response time. If the Contractor submits a "Request for Information" on an activity with **seven (7)** Calendar Days or less of float on the current project schedule, the Contractor shall not be entitled to any time extension due to the time it takes the Architect to respond to the request provided that the Architect responds within the **seven (7)** Calendar Days set forth above.
    - 1.5 A "Request for Information Response" from Architect will not change any requirement of the Contract Documents. In the event the Contractor

believes that the "Request for Information Response" will cause a change to the requirements of the Contract Documents, the Contractor shall within **seven (7)** Calendar Days give written notice to the Construction Administrator stating that the Contractor believes the "Request for Information Response" will result in a "Change Order" and the Contractor intends to submit a "Change Order Proposal" request. Failure to give such written notice **seven (7)** Calendar Days shall waive the Contractor's right to seek additional time or cost under the requirement these Requirements.

**E. Minor Changes In The Work**

1. The Architect, through the Construction Administrator, will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or Contract Time, on the "Supplemental Instructions" form as required by the Owner.

**F. Proposal Request**

1. **Architect/Owner-Initiated Requests For Proposals:** The Architect or Owner will issue a detailed description of proposed changes in the Work via the Construction Administrator that will require adjustment to the Contract Sum or Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications. Such requests shall be on a "Proposal Request" form as required by the Owner.
  - 1.1 "Proposal Request" is issued for information only. Do not consider them as an instruction either to stop work in progress or to execute the proposed change.
    - 1.1.1 Within **fourteen (14)** Calendar Days of receipt of a "Proposal Request", submit a "Change Order Proposal" with the required information necessary to execute the change to the Construction Administrator for the Architect's/Owner's review.
    - 1.1.2 Include a list of quantities of products required and unit costs, with the total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities.
    - 1.1.3 Indicate applicable delivery charges, equipment rental, and amounts of trade discounts.
    - 1.1.4 Include a statement indicating the effect the proposed change in the Work will have on the Contract Time.
    - 1.1.5 The Agency is tax exempt. All Contractor and Subcontractor services provided under your Contract with the State of Connecticut may not be exempt from taxes. The Department of Revenue Services can guide you as to which services are exempt and which are not. Please contact the State of Connecticut, Department of Revenue Services at 1-800-382-9463 or 860-541-3280.
    - 1.1.6 Dollar values shown on the Schedule of Values shall not be the governing (or deciding) final amounts for change orders involving either additional charges or deletions.

**F. Change Order Proposal:**

1. When either a "Request for Information" from the Contractor or a "Proposal Request" from the Architect or Owner results in conditions that may require modifications to the Contract, the Contractor may propose changes by submitting a request for a "Change Order Proposal" to the Architect via the Construction Administrator on forms as required by the Owner. These forms shall also include "Change Order Proposal Worksheets" as required by the Owner.
  - 1.1 Include statements outlining the reasons for the change and the effect of the change on the Work. Provide a complete description

of the proposed change. Indicate the effect of the proposed change on the Contract Sum and Contract Time.

- 1.2 Include a list of quantities of products required and unit costs, with the total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities as directed by Article 13 of the General Conditions of the Contract for Construction.
  - 1.3 Indicate applicable delivery charges, equipment rental, and amounts of trade discounts.
  - 1.4 Comply with requirements in Division 01 Section 01 25 00 "Substitution Procedures" if the proposed change requires an equal or substitution of one product or system for a product or system specified.
  - 1.5 The State of Connecticut construction contract has the following tax exemptions:
    - 1.5.1 Purchasing of materials which will be physically incorporated and become a permanent part of the project.
    - 1.5.2 Tools, supplies and equipment used in fulfilling the construction contract are not exempt.
    - 1.5.3 Services that are resold by the contractor are exempt, i.e. if a General Contractor hires a plumber, carpenter or electrician, a resale certificate may be issued to the subcontractor because these services are considered to be integral and inseparable component parts of the building contract.
2. **"Change Order Request" Forms:** Use "Change Order Proposal" and "Change Order Proposal Worksheets" forms as required by Owner.
  3. A "Change Order Proposal" cannot be submitted without either prior submission of a "Request for Information" from the Contractor or as a response to a "Proposal Request" submitted by the Architect or Owner.
  4. Any "Change Order Request" submitted without a prior submittal of a "Request for Information" or as a response to a "Proposal Request" will be immediately rejected and returned to the Contractor.

**G. Construction Change Directive:**

1. **"Construction Change Directive":** When the Owner and the Contractor disagree on the terms of a "Change Order Proposal" resulting from either a "Request for Information" or "Proposal Request", then the Architect through the Construction Administrator may issue a "Construction Change Directive" on a "Construction Change Directive" form as authorized by the Owner. The "Construction Change Directive" instructs the Contractor to proceed with a change in the Work, for subsequent inclusion in a "Change Order".
  - 1.1 The "Construction Change Directive" contains a complete description of the change in the Work. It also designates the method to be followed to determine change in the Contract Sum or Contract Time.
  - 1.2 Contractor must proceed with the Work once a "Construction Change Directive" is issued.
  - 1.3 The change in the Contract Sum and Contract Time resulting from the issuance of a "Construction Change Directive" will be based on "Time & Material" or "Unit Prices".
  - 1.4 Issuance of "Construction Change Directive" does not guarantee payment for the Work described in the "Construction Change Directive".

2. **Documentation:** The Contractor shall maintain detailed records on a time and material basis of work required by the "Construction Change Directive".
  - 2.1 After completion of the change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.
  - 2.2 The final value shall be negotiated based on the supporting data to determine the value of the work.
3. **Change Order Procedures:**
  - 3.1 Upon the Owner's approval of a Contractor's "Change Order Proposal", the Construction Administrator will issue a "Change Order" for signatures of the Architect, Owner and the Contractor on a "Change Order" form as required by the Owner.

**01 29 76 PROGRESS PAYMENT PROCEDURES**

- A. **Related Documents:** Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.
- B. **Summary:**
  1. This Section specifies procedures for preparation and submittal of the Contractor's Applications for Payment.
  2. **Related Sections:** The following Sections contain requirements that relate to this Section.
    - 2.1 **Division 00 Notice to Bidders:** Article 10.
    - 2.2 **General Conditions:** Articles: 27 "Schedule of Values, Application for Payment"; 28 "Partial Payments"; 31 "Final Payment"; and 32 "Owner's Right to Withhold Payments".
    - 2.3 Division 01 Section 01 32 16 "Construction Progress Schedules" for requirements for construction scheduling and reporting progress of work.
    - 2.4 Division 01 Section 01 33 00 "Submittal Procedures".
    - 2.5 Division 01 Section 01 77 00 "Closeout Procedures" for requirements for Final Payment.
- C. **Schedule Of Values:**
  1. **Coordination:** Coordinate preparation of the "Schedule of Values" with preparation of the Construction Schedule. Use "Schedule of Values" form as required by the Owner.
    - 1.1 Submit the "Schedule of Values" to the Construction Administrator at the earliest possible date but no later than **twenty-one (21)** Calendar Days after Contract Start Date.
    - 1.2 **Sub-schedules:** Where Work is separated into phases requiring separately phased payments, provide sub-schedules showing values correlated with each phase of payment.
  2. **Format and Content:** Use the Project Manual Table of Contents as a guide to establish the format for the "Schedule of Values". Provide at least one line item for each Specification Section on electronic media printout.
    - 2.1 Identification: Project identification on the Schedule of Values shall include, but not be limited to, the following:
      - 2.1.1 **Owner;**
      - 2.1.2 **Project Number;**
      - 2.1.3 **Project Name;**
      - 2.1.4 **Project Location;**
      - 2.1.5 **Contractor's name and address.**

- 2.2 Arrange the "Schedule of Values" in tabular format as required by the Owner, containing separate columns including, but not limited to, the following Items:
- 2.2.1 *Item Number;*
  - 2.2.2 *Description of Work with Related Specification Section or Division Number;*
  - 2.2.3 *Scheduled Values broken down by description number, type material, units of each material.*
    - .1 *Include break down of General Condition requirements, i.e. bonds, insurance premiums, taxes, job mobilization, temporary facilities, field supervision and layout, operation and maintenance manuals, punch list activities, project record documents, demonstration and training, overhead, and profit as separate line items.*
  - 2.2.4 *Name of subcontractor;*
  - 2.2.5 *Name of manufacturer or fabricator;*
  - 2.2.6 *Name of supplier;*
  - 2.2.7 *Retainage;*
  - 2.2.8 *Contract sum in sufficient detail.*
3. Percentage of Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent.
4. Provide a breakdown of the Contract Sum in sufficient detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual Table of Contents. Break principal subcontract amounts down into several line items. In addition, the following items listed below must be included.
- 4.1 Project Coordination (01 31 13) a lump sum of this cost for payment at the submittal of this product a minimum cost of 1/10<sup>th</sup> of one percent of the base bid total project cost or \$5,000 whichever is greater.
  - 4.3 Photographic Documentation (01 32 33) a monthly cost of \$1,000 per month to be paid each month upon receipt of the photographs or forfeit of that month's payment.
  - 4.4 Submittal Schedule (01 33 00) a lump sum payment calculated at 1/20<sup>th</sup> of 1% of the base bid total project cost upon receipt of the schedule.
  - 4.5 As-Built Updates (01 31 00) a monthly cost, a minimum payment of \$1,000 with forfeit of that monthly payment if not done.
  - 4.7 Progress Cleaning (01 74 13) a monthly cost. A minimum payment of \$1,000 to \$3,000 (based on size & complexity of the project) with forfeit of that monthly payment if not done.
  - 4.8 Start-up and Adjusting (01 75 00) a lump sum cost upon completion. (to be determined by PM with A/E & CA/CM advice).
  - 4.9 Schedule (01 32 16) For the Base Schedule a lump sum payment or 40% of the total schedule budget, with the remainder paid on an even payment over the duration of the project.
5. Round amounts to nearest whole dollar; the total shall equal the Contract Sum.
6. **Unit-Cost Allowances:** Show the line-item value of unit-cost allowances, as a product of the unit cost, multiplied by the measured quantity. Estimate quantities from the best indication in the Contract Documents.
7. **General Conditions:** Show line items for indirect costs and margins on actual costs only when such items are listed individually in Applications for Payment. Each item in the Schedule of Values and Applications for Payment shall be complete. Include the total cost and proportionate share of general overhead and profit margin for each item.

- 7.1 Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the Schedule of Values or distributed as general overhead expense, at the Contractor's option.

**D. Applications For Payment:**

1. Each Application for Payment shall be consistent with previous applications and payments as certified by the Architect and Construction Administrator and paid for by the Owner.
  - 1.1 The initial "Application for Payment", the "Application for Payment" at time of "Substantial Completion", and the final "Application for Payment", involve additional requirements.
2. **Payment-Application Terms:** The Owner will process monthly progress payments. The Contractor may submit applications for payment on a monthly basis.
3. **Payment-Application Forms:** Use the "Application for Payment" form as required by the Owner. Present the required information on electronic media printout or Owner approved form; multiple pages should be used if required.
  - 3.1 For each item, provide a column including but not limited to the following items:
    - 3.2 Item Number.
    - 3.4 Description of Work and Related Specification Section or Division.
    - 3.5 Scheduled Value, break down by units of material and units of labor.
    - 3.6 Work Completed from previous application.
    - 3.7 Work Completed this period.
      - 3.7.1 Materials presently stored.
      - 3.7.2 Total Completed and stored to date of application.
      - 3.7.3 Percentage of Completion.
      - 3.7.4 Balance to Finish.
      - 3.7.5 Retainage.

**E. Application Preparation:** Complete every entry on the Application form. At the time of Final Payment only, include an executed Application form by a person authorized to sign legal documents on behalf of the Contractor. The Construction Administrator will return incomplete Applications without action.

1. Entries shall match data on the "Schedule of Values".
2. Include amounts of Change Orders issued prior to the last day of the construction period covered by the application.

**F. Transmittal:** Except for final payment, submit to the Construction Administrator by a method ensuring receipt within **forty-eight (48)** hours. **One (1)** complete, signed and notarized original of each Application for Payment, including lien waivers and similar attachments when required, along with **six (6)** copies. For Final Payment, **six (6)** complete, signed and notarized copies shall be submitted.

1. Transmit each copy with a transmittal form listing attachments and recording appropriate information related to the application, in a manner acceptable to the Architect.

**G. Applications for Payment:** Administrative actions and submittals, that must precede or coincide with submittal of the first Application for Payment and all subsequent Application for Payments including, but not limited to, the following items:

1. **Subcontractor Evaluations:**

Pursuant to C.G.S. Sec. 4a-101, the General Contractor shall compile evaluation information during the performance of the contract on each of its subcontractors who are performing work with a value in excess of five hundred thousand dollars (\$500,000.00). The General Contractor shall complete and submit to the State of

Connecticut Department of Construction Services (CT DCS) evaluations of each such subcontractor **upon fifty percent (50%) completion of the project and upon Substantial Completion of the project.** The General Contractor acknowledges that its failure to complete and submit these evaluations in a timely manner may, by statute; result in a delay in project funding and, consequently, payment to the General Contractor. The General Contractor agrees to indemnify and hold the State harmless from any loss, damage, or expense that results from or is caused by the General Contractor's failure to complete and submit the evaluations to CT DCS in accordance with this provision.

2. List of subcontractors and suppliers' name, FEIN/Social Security numbers, and Connecticut Tax Registration Numbers;
3. List of principal suppliers and fabricators;
4. Schedule of Values;
5. Contractor's Construction Schedule (preliminary if not final);
6. Schedule of principal products;
7. Submittal Schedule (preliminary if not final);
8. List of Contractor's staff assignments;
9. List of Contractor's principal consultants;
10. Copies of all applicable permits;
11. Copies of authorizations and licenses from governing authorities for performance of the Work;
12. Proof that subcontractors have been paid amounts included on the Contractor's Application for Payment within thirty (30) days after the Owner has paid the Contractor for the particular Application for Payment in accordance with Connecticut General Statute § 49-41a (a)(1).
13. Releases of Lien from subcontractors with amounts included on the Contractor's Application for Payment when Contractor has been paid by the Owner for the particular Application for Payment but the subcontractors have not been paid.
14. Proof that as-built documents are updated as required by Section 01 77 00 "Closeout Procedures."
15. Initial as-built survey and damage report, if required.
15. Update the "Contractor's Master Subcontract Agreement List" and submit copies all recently executed Subcontract Agreements in accordance with CGS § 4b-96.
  - 15.1 The "Contractor's Master Subcontract Agreement List" shall list all Subcontract Agreements in order of Contract Sum magnitude (from high to low) in the following format:

Contractor's Master Subcontract Agreement List				
Subcontractor Name	Minority Or Small Business Designation	Trade	Address	Contract Sum

16. In accordance with 42-158j (b):  
 Each payment requisition submitted shall include a statement showing the status of all pending construction change orders, other pending change directives and approved changes to the original contract or subcontract. Such statement shall identify the pending construction change orders and other pending change directives, and shall include the date such change orders and directives were initiated, the costs associated with their performance and a description of any work completed. As used in this section, "pending construction change order" or "other pending change directive" **means an authorized directive for extra work that has been issued to a contractor or a subcontractor and identified by an official Change Order Number or Construction Change Directive Number assigned by the State of Connecticut.**

H. **Application for Payment at Substantial Completion:** Following issuance of the Certificate of Substantial Completion submit an Application for Payment form; use the form as required by the Owner. Present the required information on electronic media printout as applicable that include, but are not limited, to the following:

1. **Subcontractor Evaluations:**  
 Pursuant to C.G.S. Sec. 4a-101, the General Contractor shall compile evaluation information during the performance of the contract on each of its subcontractors who are performing work with a value in excess of five hundred thousand dollars (\$500,000.00). **The General Contractor shall complete and submit to the State of Connecticut Department of Construction Services (CT DCS) evaluations of each such subcontractor upon fifty percent (50%) completion of the project and upon Substantial Completion of the project.** The General Contractor acknowledges that its failure to complete and submit these evaluations in a timely manner may, by statute; result in a delay in project funding and, consequently, payment to the General Contractor. The General Contractor agrees to indemnify and hold the State harmless from any loss, damage, or expense that results from or is caused by the General Contractor's failure to complete and submit the evaluations to CT DCS in accordance with this provision.
2. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
3. Administrative actions and submittals that shall precede or coincide with this application include, but are not limited to, the following:
  - 3.1 **Occupancy permits and similar approvals;**
  - 3.2 **Warranties (guarantees) and maintenance agreements;**
  - 3.3 **Test/adjust/balance records;**
  - 3.4 **Maintenance instructions;**
  - 3.5 **Meter readings;**
  - 3.6 **Startup performance reports;**
  - 2.7 **Changeover information related to Owner's occupancy, use, operation, and maintenance;**
  - 3.8 **Final cleaning;**
  - 3.9 **Application for reduction of retainage and consent of surety;**
  - 3.10 **Advice on shifting insurance coverage;**
  - 3.11 **Final progress photographs;**

**3.12 List of incomplete Work, recognized as exceptions to Architect's Certificate of Substantial Completion.**

- I. **Final Payment Application:** Administrative actions and submittals that must precede or coincide with submittal of the final Application for Payment include, but are not limited, to the following:
1. Completion of Project Closeout requirements.
  2. Completion of list of items remaining to be completed as indicated on the attachment to the Certificate of Substantial Completion.
  3. Ensure that unsettled claims will be settled.
  4. Ensure that incomplete Work is not accepted and will be completed in accordance with a schedule prepared by the Contractor which is acceptable to the Owner.
  5. Transmittal of required Project construction records to the Owner (including as-built documents specified in Section 01 77 00 "Closeout Procedures").
  6. Certified property survey.
  7. Proof that taxes, fees, and similar obligations were paid.
  8. Removal of temporary facilities and services.
  9. Removal of surplus materials, rubbish, and similar elements (Reference Section 01 74 19 "Construction Waste Management & Disposal").
  10. Change of door locks to Owner's access.
  11. The requirements of the General Conditions and Supplementary Conditions for Final Acceptance, Final Completion, Final Inspection, and Final Payment.
  12. Asbestos, lead or other hazardous material manifests.
  13. Completion of "Building Contractor Reporting Form" as supplied by Department of Construction Services, for all Contractors, Subcontractors, Vendors, Suppliers, etc. who work on the Contract. The form includes the following information:
    - 14.1 Contractor/Subcontractor name.
    - 14.2 FEIN/Social Security Numbers
    - 14.3 Connecticut Tax Registration Numbers
    - 14.4 Type of work
    - 14.5 Name of business and address
    - 14.6 Remittance address.

End  
Section 01 20 00  
Contract Considerations

**01 50 00 TEMPORARY FACILITIES AND CONTROLS**

- A. **Summary:** Section 01 50 00 Temporary Facilities And Controls contains the following subsections:

01 51 13	Temporary Electricity And Lighting
01 51 16	Temporary Fire Protection
01 51 23	Temporary Heating, Cooling And Ventilating
01 51 33	Temporary Telecommunications
01 51 36	Temporary Water
01 52 19	Temporary Sanitary Facilities
01 54 00	Construction Aids
01 56 00	Temporary Barriers And Enclosures
01 56 43	Temporary Protection
01 57 19	Temporary Environmental Controls
01 57 21	Environmental Management
01 57 30	Indoor Environmental Control
01 57 40	Construction Indoor Air Quality Management Plan

**01 51 13 TEMPORARY ELECTRICITY AND LIGHTING**

- A. **Related Documents:** Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.
- B. Power and lighting may be taken from the power company's nearest pole with temporary poles, if needed, to extend the line to project. If permanent power lines have been installed before beginning project, then temporary lines can be brought in from the last pole.
- C. Provide service required for construction with branch wiring and distribution boxes located to provide power and lighting by construction-type extension cords. Meter shall be provided and installed by the Contractor.
- D. Connect to existing service, provide branch wiring and distribution boxes located to provide power and lighting by construction-grade extension cords. Owner will pay cost of energy used. Take measures to conserve energy. Provide lighting for construction operations. At the termination of construction, return the facilities to their original condition.
- E. **Power Distribution System:** Install wiring overhead and rise vertically where least exposed to damage. Where permitted, wiring circuits not exceeding 125 Volts, ac 20 Ampere rating, and lighting circuits may be nonmetallic sheathed cable where overhead and exposed for surveillance.
- F. **Temporary Lighting:** When overhead floor or roof deck has been installed, provide temporary lighting with local switching. Install and operate temporary lighting that will fulfill security and protection requirements without operating the entire system. Provide temporary lighting that will provide adequate illumination for construction operations and traffic conditions.

**01 51 16 TEMPORARY FIRE PROTECTION**

- A. **Related Documents:** Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.
- B. The Contractor, during construction, shall be responsible for loss or damage by fire to the work of the until Acceptance of the Work. Any fire used within the structure for working purposes shall be extinguished when not in use. Bitumen or tar shall be melted on the ground only. No flammable material shall be stored in the structure in excess of amounts allowed by the

authorities. No gasoline shall be stored in or close to the building at any time. The Contractor shall assign a responsible employee to be in charge of fire protection measures.

- C. If an EPDM or other single-ply roof is included in the work that requires cleaning of mating surfaces of laps with gasoline, limit amount of gasoline on roof to 2 gallons which shall be in U.L. listed containers. Also provide one 30 B:C fire extinguisher within 75 feet of any point on the roof.

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**01 51 23 TEMPORARY HEATING, COOLING, AND VENTILATING**

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- A. **Related Documents:** Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.
- B. **Existing Heating System:**
1. The Contractor may use the existing heating system with temporary extensions, radiators or unit heaters, but such use is subject to the Owner's approval. Coordinate use of existing facilities with Owner. Provide additional, temporary extensions and units to satisfy the criteria given in the preceding paragraph. Owner will pay cost of energy used. Take measures to conserve energy. At the termination of construction, return the facilities to their original condition. Before operation of permanent facilities, verify that installation is approved for operation and that filters are in place.

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**01 51 33 TEMPORARY TELECOMMUNICATIONS**

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- A. **Related Documents:** Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.
- B. **Temporary Telephone Service and Data:** The General Contractor Provide temporary telephone service throughout the construction period for all personnel engaged in the construction activities. Install telephone on a separate line for each temporary office and first aid station. The Contractor shall provide telephone service in their offices and a separate telephone service in the Owner and CA's Office. It is preferred the Contractor use a cellular phone. Basic service and local calls will be paid for by the Contractor. Toll calls will be paid for by the respective users.
1. **Separate Telephone Lines:** Provide additional telephone lines as required:
    - 1.1 Where an office has more than **two (2)** occupants, install a telephone for each additional occupant.
    - 1.2 Provide dedicated telephone lines for a separate fax machine in both the Contractor's office and the CT DCS / CA office.
  2. At each telephone, post a list of important telephone numbers, including but not limited to the following:
    - 2.1 Local police and fire departments;
    - 2.2 Ambulance service;
    - 2.3 Construction Administrator;
    - 2.4 Contractor;
    - 2.5 Architect & Engineers offices;
    - 2.6 Subcontractors;
    - 2.7 Suppliers
    - 2.8 CT DCS PM;
    - 2.9 Construction Administrator;
    - 2.11 User Agency representative.

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**01 51 36 TEMPORARY WATER**

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- A. **Related Documents:** Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.
- B. **Existing Water Service:** Water for construction purposes may be taken from the existing service. The Contractor shall provide connections, approved backflow prevention device, meter and pipe to the water main or nearest hydrant, subject to the approval of the Department of Construction Services. Upon completion of work, the Contractor shall remove the temporary connections and backfill if necessary. If new water service is installed before construction is

complete, the new system may be used provided it is returned to the Owner in as-new condition. The Contractor shall pay for the water used, as metered.

**01 52 19 TEMPORARY SANITARY FACILITIES**

- A. **Related Documents:** Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.
- B. **General Contractor's Construction Work:** Provide toilet facilities for General Contractor's and subcontractor's employees engaged on the Project, including employees of other contractors in accordance with the OSHA Table D-1 (29CFR CH.XVII, OSHA Standard 1926.51) below. Locate toilets where directed and maintain them in a sanitary condition.

Number Of Employees	Minimum Number Of Facilities*
20 or less	1 toilet
20 or more	1 toilet and 1 urinal per 40 employees
200 or more	1 toilet and 1 urinal per 50 employees
*Toilet/Urinal Combinations shall count as only one facility.	

- 1. Job sites, not provided with a sanitary sewer, shall be provided with one of the following toilet facilities unless prohibited by State Codes:
  - 1.1 Chemical toilets;
  - 1.3 Recirculating toilets;
  - 1.4 Combustion toilets.
- 2. Inside buildings, locate toilet facilities no more than 4 stories or 60 feet above or below, nor more than 500 feet travel on the same level from the work location of any person.
- 3. Locate toilet facilities no more than 1000 feet from any work location.
- C. The General Contractor shall provide, where directed, chemical toilets with toilet tissue, plus wash basins with water, soap and paper towels. The General Contractor shall maintain the facilities in a sanitary condition.
- D. If women are employed in the work, provide separate, designated facilities for them of the same kind. Provide an adequate number of each kind of facility for each gender.

**01 54 00 CONSTRUCTION AIDS**

- A. **Related Documents:** Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.
- B. The General Contractor shall furnish tools, apparatus and appliances, hoists and/or cranes and power for same, scaffolding, runways, ladders, temporary supports and bracing and similar work or material necessary to insure convenience and safety in the execution of the Contract Documents except where this is otherwise specified in any Technical Specification Section. All such items shall meet the approval of the Department of Construction Services but responsibility for design, strength, and safety shall remain with the General Contractor. All such items shall comply with Federal OSHA regulations and applicable codes, statutes, rules and regulations, including compliance with the requirements of the current edition of the "Manual of Accident Prevention in Construction" published by the A.G.C. (Associated General Contractors of America) and the standards of the Connecticut Department of Labor (DOL).
- C. Staging/laydown areas, exterior, and interior, required for the execution of the Contract Documents, shall be furnished, erected, relocated if necessary, and removed by the general Contractor. Staging/laydown shall be maintained in a safe condition without charge to the Owner and for the use of all trades as needed.

**01 56 00 TEMPORARY BARRIERS AND ENCLOSURES**

- A. **Related Documents:** Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.
- B. Provide barriers to prevent public entry into construction areas and to protect existing facilities from damage by construction operations.
- C. Before excavation begins, install an enclosure fence with lockable entrance gates. Locate where indicated on the Construction Documents, or enclose the entire construction site or the portion determined sufficient to accommodate construction operations. Install in a manner that will prevent people, dogs, and other animals from easily entering the site, except by the entrance gates.
  - 1. **Chain Link Fence:** Provide chain link construction fencing with posts set in a compacted mixture of gravel and earth. Use a **six (6)** foot-high (minimum) chain link fence with top rail and filter fabric screening. At completion of the project, the Contractor must remove the construction fence completely, including all portions of below-ground footings. Fence posts must be removed, not sawn off flush with the soil line.
  - 2. **Security Enclosure and Lockup:** Install substantial temporary enclosure of partially completed areas of construction. Provide locking entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Provide keys to the Construction Administrator.
  - 3. **Storage/laydown areas:** Where materials and equipment must be stored, and are of value or attractive for theft, provide a secure lockup. Enforce discipline in connection with the installation and release of material to minimize the opportunity for theft and vandalism.
- D. Provide covered walkways as required by governing authorities for public rights-of-way and for public access to existing buildings.
- E. Provide barriers around **all** trees and plants designated to remain. Protect against vehicular traffic, materials' dumping, chemically injurious materials, puddles, or running water.
- F. Provide temporary, insulated, weathertight closures at openings to the exterior to provide acceptable working conditions and protection for materials, to allow for temporary heating and to prevent entry of unauthorized persons. Provide doors with self-closing hardware and locks.
- G. Barriers and enclosures shall be in conformance with code requirements. Do not block egress from occupied buildings unless necessary to further the work of the Contract. In this case, secure the Department's approval of an alternate egress plan.

**01 56 43 TEMPORARY PROTECTION**

- A. **Related Documents:** Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.
- B. Protect buildings, equipment, furnishings, grounds, and plantings from damage. Any damage shall be repaired or otherwise made good at no expense to the State.
- C. Provide protective coverings and barricades to prevent damage. The General Contractor shall be held responsible for, and must make good at his own expense, any water, or other type of damage due to improper coverings. Protect the public and building personnel from injury.
- D. Provide temporary protection for installed products. Control traffic in immediate area to minimize damage.
- E. Provide protective coverings for walls, projections, jambs, sills and soffits of openings. Protect finished floors and stairs from traffic, movement of heavy objects and storage. Prohibit traffic and storage on waterproofed and roofed surfaces and on lawn and landscaped areas.

**01 57 30 INDOOR ENVIRONMENTAL CONTROL**

- A. **Related Documents:** Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.
- B. **Summary:**
1. This Section includes the following:
    - 1.1 Indoor air quality and pollution control.
    - 1.2 Heating, ventilating, and air conditioning.
- C. **Heating, Ventilating, and Air Conditioning (HVAC)**
1. Do not run permanent HVAC system during course of construction. Seal ductwork intake and exhaust vents.
  2. Heat, dehumidify, and ventilate building during course of Work as necessary to maintain environmental conditions suitable for drying and curing materials and for prevention of conditions suitable for mold and mildew growth.
    - 2.1 Ventilate building to remove moisture, dust, fumes, and odors.
    - 2.2 Temper and dehumidify air as needed to remove excess moisture.
    - 2.3 Do not use propane heaters and other moisture generating heating systems.
  3. Flush out building prior to commissioning. Refer to **Section 01 45 23 Testing For Indoor Air Quality, Baseline IAQ, & Materials** for procedure.
  4. Inspect ductwork for refuse, contaminants, moisture and other foreign contamination prior to commissioning. Notify Commissioning Authority (CxA) of satisfactory inspection prior to beginning of Commissioning.
  5. Clean underfloor plenum at access flooring acting as supply air duct, prior to occupancy.

**01 57 40 CONSTRUCTION INDOOR AIR QUALITY MANAGEMENT PLAN**

- A. **Related Documents:** Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 specification sections, apply to this section.
- B. **Summary:**
1. This Section includes:
    - 1.1 Description of a Construction Indoor Air Quality (IAQ) Management Plan.
    - 1.2 IAQ construction requirements.
- C. **References:**
1. **American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. (ASHRAE):**
    - 1.1 ASHRAE Standard 52.1 INT1-2007, Gravimetric and Dust Spot Procedures for Testing Air Cleaning Devices in General Ventilation for Removing Particulate Matter.
  2. **ASTM International, Inc. (ASTM):**
    - 2.1 ASTM D5116-2006, Standard Guide for Small-Scale Environmental Chamber Determinations of Organic Emissions From Indoor Materials/Products.
  3. **Sheet Metal and Air Conditioning National Contractors' National Association (SMACNA):**
    - 3.1 IAQ Guidelines for Occupied Buildings Under Construction ANSI/SMACNA 008-2008.

**D. Indoor Air Quality:**

1. **Goals:** The Owner has set the following indoor air quality goals for jobsite operations on the project, within the limits of the construction schedule, Contract Sum, and available materials, equipment, products and services. Goals include:
  - 1.1 Protect workers on the site from undue health risks during construction.
  - 1.2 Prevent residual problems with indoor air quality in the completed building.

**C. Quality Assurance:**

1. Perform material tests and report results in accordance with ASTM D5116.

**E. Materials:**

1. Low emitting products have been specified in appropriate sections.

**F. Construction IAQ Management Plan:**

1. Meet or exceed the minimum requirements of the **SMACNA "IAQ Guidelines for Occupied Buildings Under Construction ANSI/SMACNA 008-2008."**
2. During installation of carpet, paints, furnishings, and other VOC-emitting products, provide supplemental (spot) ventilation for at least **seventy-two (72)** hours after work is completed. Preferred HVAC system operation uses supply air fans and ducts only; exhaust provided through windows. Use exhaust fans to pull exhaust air from deep interior locations. Stair towers and other paths to exterior can be useful during this process.
3. Conduct regular inspection and maintenance of indoor air quality measures including ventilation system protection, and ventilation rate.
4. Require VOC-safe masks for workers installing VOC-emitting products (interior and exterior) defined as products that emit 150 gpl or more UNLESS local jurisdiction's requirements are stricter, in which case the strictest requirements shall be followed for use of VOC-safe masks.
5. Use low-toxic cleaning supplies for surfaces, equipment, and worker's personal use. Options include several domestically produced biobased, soybean-based solvents cleaning products options, and citrus-based cleaners.
6. Use wet sanding for gypsum board assemblies. Exception: Dry sanding allowed subject to Architect's approval of the following measures:
  - 6.1 Full isolation of space undergoing finishing.
  - 6.2 Plastic protection sheeting is installed to provide air sealing during sanding.
  - 6.3 Closure of all air system devices and ductwork.
  - 6.4 Sequencing of construction precludes the possibility of contamination of other spaces with gypsum dust.
  - 6.5 Worker protection is provided.
7. Use safety meetings, signage, and Contractor agreements to communicate the goals of the construction indoor air quality plan.

End  
Section 01 50 00  
Temporary Facilities And Controls

SECTION 08 31 00  
ACCESS DOORS and FRAMES

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract apply to work in this section.

1.2 SECTION INCLUDES

- A. Access doors and frames.

1.3 QUALITY ASSURANCE

- A. Perform work in accordance with UL Design requirements.

1.4 SUBMITTALS

- A. Product Data: Provide data on unit construction, size, configuration, scheduled locations, and attachment method.
- B. Manufacturer's installation instructions: Indicate any special installation criteria requiring an interface with adjacent components.
- C. Contractor shall provide information so the Architect can record actual location of all access units on as-built drawings.

1.5 REFERENCES

- A. UL-Fire Resistance Directory
- B. Warnock Hersey-Certification Listings
- C. IBC - International Building Code

1.6 REGULATORY REQUIREMENTS

- A. Conform to applicable Code for UL and FM requirements for fire rated access doors.

PART 2 PRODUCTS

2.1 ACCESS DOORS / HATCHES

- A. Walls/Ceilings - Non-Fire Rated Door and Frame Unit: Formed steel, prime painted.

2.2 Acceptable manufactures:

- A. Milcor (hart & Cooley)
- B. Best Access Doors
- C. Nystrom

### 2.3 FABRICATION WALL / CEILING UNITS

- A. Fabricate frames and flanges of 16-gauge steel.
- B. Fabricate door panels of 14-gauge single thickness steel sheet or double sheet with integral non-combustible insulation filler.
- C. Weld, fill, and grind joints to assure flush and square unit.
- D. Hardware:
  - 1. Hinge shall be 175° steel piano hinge with removable pin.
  - 2. Lock shall have screwdriver slot for quarter turn cam-lock on 2 sides of panels 18 in sq. or larger in addition to flush key operated lock. Access panels smaller than 18 in sq. shall have one flush key operated lock. All panes shall be keyed alike.

### 2.4 FINISHES

- A. Steel finish shall be two coats, baked enamel, and color as selected by the Architect.

## PART 3 EXECUTION

### 3.1 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Coordinate with work of other trades.
- C. Verify sizes of openings prior to installation.
- D. Install frames plumb and level in opening, and secure rigidly in place.
- E. Position the door to provide convenient access to the concealed work-requiring access.
- F. Provide minimum clear access opening of 24" X 24" with 180° swing on the door to access mechanical devices.

### 3.2 PROTECTION OF FINISHED WORK

- A. Protect adjacent surfaces from damage by material installation.
- B. Protect installation during construction activities.
- C. Adjust unit for a smooth operation.

END OF SECTION

PART 1 - SECTION 10 21 13 – TOILET COMPARTMENTS

PART 2 - GENERAL

2.1 SUMMARY

A. Section Includes:

Plastic toilet compartment partitions for following applications:

- a. Toilet enclosures.
- b. Sight screens.
- c. Urinal screens.

2.2 REFERENCES

A. ASTM International (ASTM):

ASTM A 240 - Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications.

ASTM A 666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.

ASTM A 743/A 743M - Standard Specification for Castings, Iron-Chromium, Iron-Chromium-Nickel, Corrosion Resistant, for General Application.

ASTM B 86 - Standard Specification for Zinc and Zinc-Aluminum (ZA) Alloy Foundry and Die Castings.

ASTM B 221 - Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.

ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.

B. International Code Council (ICC)/American National Standards Institute (ANSI):

ICC/ANSI A117.1 - Accessible and Usable Buildings and Facilities, as applicable to toilet compartments designated as accessible.

C. United States Department of Justice:

ADA - Americans with Disabilities Act, Excerpt from 28 CFR Part 36 - ADA Standards for Accessible Design.

2.3 SUBMITTALS

A. Product Data: Manufacturer's data sheets for each type of product indicated. Include fabrication details, description of materials and finishes.

Product Test Reports: When requested by Architect, submit documentation by qualified independent testing agency indicating compliance of products with requirements.

B. Shop Drawings: Include overall product dimensions, floor plan, elevations, sections, details, and attachments to other work. Include choice of options with details.

- C. Samples for Selection: Furnish samples of manufacturer's full range of colors for initial selection.
  - D. Samples for Verification: Furnish physical sample of material in selected color.  
Size: 2 by 2 inch (52 by 52 mm) minimum, in type of finish specified.
- 2.4 INFORMATIONAL SUBMITTALS
- A. Warranty: Sample of special warranty.
- 2.5 CLOSEOUT SUBMITTALS
- A. Maintenance and cleaning instructions.
- 2.6 QUALITY ASSURANCE
- A. Manufacturer Qualifications: Approved manufacturer listed in this section, with minimum [5] years experience in the manufacture of toilet compartments.
  - B. Source Limitations: Obtain toilet compartment components and accessories from single manufacturer.
  - C. Accessibility Requirements: Comply with requirements of ICC/ANSI 117.1, and with requirements of authorities having jurisdiction.
  - D. Surface-Burning Characteristics: As determined by testing identical products according to ASTM E 84 by qualified testing agency. Identify products with appropriate markings of applicable testing agency.  
Flame-Spread Index: Not greater than 75.  
Smoke-Developed Index: 450.
- 2.7 DELIVERY, STORAGE, AND HANDLING
- A. Do not deliver toilet compartments to site until building is enclosed and HVAC systems are in operation.  
Deliver toilet compartments in manufacturer's original packaging.  
Store in an upright condition.
- 2.8 WARRANTY
- A. Special Manufacturer's Warranty: Provide manufacturer's standard form in which manufacturer agrees to repair or replace products that fail in materials or workmanship during the following period after substantial completion:  
Plastic Toilet Partitions: Against corrosion, breakage, and delamination: 15 years.

**PART 3 - PRODUCTS**

- 3.1 MANUFACTURERS
- A. Bradley Corporation
  - B. Scranton products Inc.
  - C. Bobrick

3.2 MATERIALS

- A. Plastic Panels: High density polyethylene (HDPE) suitable for exposed applications, waterproof, non-absorbent, and graffiti-resistant textured surface.
- B. Zinc Aluminum Magnesium and Copper Alloy (Zamac): ASTM B 86.
- C. Stainless Steel Sheet: ASTM A 240 or A 666, 300 series.
- D. Stainless Steel Castings: ASTM A 743/A 743M.
- E. Aluminum: ASTM B 221.

3.3 PLASTIC TOILET COMPARTMENTS

- A. Toilet Compartment Type:

Floor and ceiling anchored.

- a. Basis of Design Product: Bradley, Mills Partitions, Floor to Ceiling, Series 700.

- B. Urinal Screen Style:

Wall hung with brackets:

- a. Basis of Design Product: Bradley, Mills Partitions, Model No. 4.

- C. Door, Panel, and Pilaster Construction, General: HDPE, with a 3/16" (4.8mm) radiused edge.

Provide exposed surfaces free of pitting, visible seams and fabrication marks, stains, or other imperfections.

Provide aluminum heat sink at bottom edge of panels and doors.

Provide no-sightline system.

- D. Door Construction: 1 inch (25 mm) thick.

- E. Panel Construction: 1 inch (25 mm) thick.

- F. Pilaster Construction: 1 inch (25 mm) thick.

- G. Headrail: Extruded anodized aluminum headrail with anti-grip profile. Clamps around pilaster and is secured to the wall with stainless steel brackets.

- H. Shoes: 4 inches (76 mm) high minimum, 300 series stainless steel with No. 4 satin brushed finish.

- I. Urinal-Screen Construction: Matching toilet compartment panel construction

- J. Brackets (Fittings):

Full-Height (Continuous) Type: Manufacturer's standard design; aluminum.

- K. Plastic Panel Finish: Manufacturer's standard impregnated finish, with one color in each room.

Color: As selected by Agency from manufacturer's full range.

3.4      **HARDWARE**

- A.      Hardware, Standard Duty: Manufacturer's standard 6463-T-5 aluminum, including stainless steel tamper-resistant fasteners:

Hinges: Self-closing adjustable to hold doors open at any angle up to 90 degrees, with emergency access by lifting door.

Latch and Keeper: To be chosen by Agency during project from manufacturer's standard selection.

Door Pull: To be chosen by Agency during project from manufacturer's standard selection.

3.5      **FABRICATION**

- A.      Floor-and-Ceiling-Anchored Units: Provide manufacturer's standard corrosion-resistant anchoring assemblies with leveling adjustment at tops and bottoms of pilasters. Provide shoes and sleeves (caps) at pilasters to conceal anchorage.
- B.      Urinal-Screen Posts: Provide manufacturer's standard corrosion-resistant anchoring assemblies with leveling adjustment at bottoms of posts. Provide caps, shoes, and covers at posts to conceal anchorage.
- C.      Door Size and Swings: Unless otherwise indicated, provide 24-inch- (610-mm-) wide, in-swinging doors for standard toilet compartments and 36-inch- (914-mm-) wide, out-swinging doors with a minimum 32-inch- (813-mm-) wide clear opening for compartments designated as accessible.

**PART 4 - EXECUTION**

4.1      **EXAMINATION**

- A.      Examine work area to verify that measurements, substrates, supports, and environmental conditions are in accordance with manufacturer's requirements to allow installation.

Proceed with installation once conditions meet manufacturer's requirements.

4.2      **INSTALLATION**

- A.      General: Comply with manufacturer's written installation instructions. Install units rigid, straight, level, and plumb. Secure units in position with manufacturer's recommended anchoring devices.
- B.      Install toilet partitions and screens in spaces with operating, temperature controlled HVAC systems. Shield partitions and screens from direct sunlight.

4.3      **ADJUSTING**

- A.      Hardware Adjustment: Adjust and lubricate hardware according to hardware manufacturer's written instructions for proper operation. Set hinges on in-swinging doors to hold doors open approximately 15 degrees from closed position when unlatched. Set hinges on out-swinging doors to return doors to fully closed position.

4.4      **FINAL CLEANING**

- A.      Remove packaging and construction debris and legally dispose of off-site.
- B.      Clean partition and screen surfaces with materials and cleansers in accordance with manufacturer's recommendations.

END OF SECTION

**1.1 SECTION INCLUDES**

- A. Aluminum and vinyl handrail systems.
- B. Mounting hardware, accessories, and trim.

**1.2 RELATED SECTIONS**

NONE

**1.3 REFERENCES**

- A. ANSI/CABO A117.1 - American National Standard for Buildings and Facilities; Providing Accessible and Usable Buildings and Facilities; Council of American Building Officials.
- B. ASTM B 221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Shapes, and Tubes.
- C. ASTM D 256 - Standard Test Method for Determining the Pendulum Impact Resistance of Notched Specimens of Plastic.
- D. ASTM D 543 - Standard Test Methods for Resistance of Plastics to Chemical Reagents.
- E. ASTM D 635 - Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Self-Supporting Plastics in a Horizontal Position.
- F. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
- G. CAN/ULC S102.2 - Standard Method of Test for Surface Burning Characteristics of Building Materials.
- H. SAE J-1545 - Recommended Practice; Society of Automotive Engineers.
- I. UL 94 - Tests for Flammability of Plastic Materials for Parts in Devices and Appliances.

**1.4 SUBMITTALS**

- A. Submit under provisions of Section 01300.
- B. Product Data: Provide manufacturer's current product data for each product required, including detail drawings and installation and maintenance instructions.
- C. Shop Drawings: Show locations of each item and installation details. Provide elevations of non-standard conditions.

D. Selection Samples: Color charts demonstrating full range of available colors for initial color selection.

E. Verification Samples: 12 inch (305 mm) long assemblies, including one wall return, in color specified.

## 1.5 QUALITY ASSURANCE

A. Manufacturer: Shall have no less than five years experience in the production and supply of specified products with a record of successful performance.

B. Installer: Shall have no less than three years experience in the installation of specified products or of products having a similar level of complexity.

C. Flammability: Provide wall protection products with established listing label indicating materials have been tested in accordance with ASTM E84 (CAN/ULC S102.2) and conform to NFPA 101 Life Safety guidelines for Class A materials.

1. Flame Spread: 25 or less
2. Smoke developed: 450 or less

D. Accessibility and Safety: Products shall conform to ADA and ANSI accessibility, and NFPA Life safety Guidelines.

E. Color Control: Manufacturer shall control color to calibrated color standards. Color of all components shall be verified to these standards by visual and colorimetric means. A Delta E difference of 1.0 or less shall be maintained except where visual evaluation allows a greater range of numerical acceptability. Visual and spectrophotometer evaluation shall be performed under cool white fluorescent lighting.

F. Single Source: To ensure compatibility of fit and function and to maintain color and finish texture consistency, all handrail system components shall be supplied by a single source.

## PART 2 PRODUCTS

### 2.1 MANUFACTURERS

A. Provide Pro-Tek® BR-530S Handrails With Continuous Security Bracket as manufactured by Pawling Corporation, Architectural Products Division; 32 Nelson Hill Road, P.O. Box 200, Wassaic NY 12592

- B. Engineer approved equal: To be approved by Department of Mental Health and Addiction Services engineering.

## 2.2 MATERIALS

- A. Vinyl: Provide handrail covers extruded or molded of fire retardant, high impact polyvinyl chloride (PVC) with an embossed matte finish.

- 1. Minimum thickness: 0.080 inch.
- 2. Vinyl Properties
  - a. Vinyl cell classification in accordance with ASTM D 1784: 16354.
  - b. Specific gravity, tested in accordance with ASTM D 792: 1.33, minimum.
  - c. Tensile strength at yield, tested in accordance with ASTM D 638: 6500 psi, minimum.
  - d. Modulus of elasticity, tested in accordance with ASTM D 638: 400,000 psi.
  - e. Tensile impact energy, tested in accordance with ASTM D 1822: 75 ft lb/sq inch.
  - f. Flexural strength, tested in accordance with ASTM D 790: 12,500 psi.
  - g. Modulus of rupture, tested in accordance with ASTM D 790: 400,000 psi.
  - h. Izod impact strength, tested in accordance with ASTM D 256: 23.0 ft lb/inch of notch, minimum, 1/8-inch notch.
  - i. Hardness, Shore D, tested in accordance with ASTM D 2240: 79, minimum.
  - j. Hardness, Rockwell, tested in accordance with ASTM D 785: 108, minimum.
  - k. Deflection temperature at 264 psi, tested in accordance with ASTM D 648: 162 degrees F (72 degrees C).
  - l. Flammability, tested in accordance with ASTM D 635: Self-extinguishing.
  - m. Flammability, tested in accordance with UL 94: V-O.

- C. Aluminum for Handrail Retainers and Continuous Security Brackets: Alloy 6063-T5, in accordance with ASTM B 221 or FS QQ-A-200; anodized finish complying with AAMA 611, Class II minimum.

## 2.3 HANDRAILS

- I. BR-530S: Provide 5-1/2-inch (140 mm) aluminum and vinyl handrail system with 1-1/2-inch (38 mm) gripping area, contoured back, locking vinyl cover, impact cushion, aluminum reinforced wall return and corner accessories, continuous security bracket, and return plates. Select vinyl handrail color from Manufacturer's standards. Color to be specified by agency.

## 2.4 ACCESSORIES

- A. Provide appropriate returns, return plates, end plates, and continuous security mounting brackets as required to properly finish handrail system and to support it in conformance with Uniform Federal Accessibility Standards.

## PART 3 EXECUTION

### 3.1 EXAMINATION

A. Verify that wall surfaces are properly prepared to receive installation of handrails. Verify that required blocking and bracing is in place for stud walls before beginning installation.

### 3.2 INSTALLATION

A. Install handrail systems in full compliance with manufacturer's installation instructions.

B. Mount handrails at height specified by the Construction Administrator.

C. Allow materials to acclimate to building temperature (65°F to 75°F) for at least 24 hours prior to installation. Do not store materials in direct sunlight, exposed to the elements, or in extreme heat.

### 3.3 PROTECTION

A. Protect handrail material during storage and upon completion of installation from damage by other trades.

### 3.4 CLEANING

A. Upon completion of installation, clean handrail covers and accessories in accordance with manufacturer's cleaning and maintenance instructions.

B. Clean areas of installation and packaging debris caused by installation.

END OF SECTION

SECTION 12 32 00 PLASTIC LAMINATE CASEWORK

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This section specifies plastic laminate casework as detailed on the drawings, including related components and accessories required to form integral units. Casework items shown on the drawings, but not specified below shall be included as part of the work under this section, and applicable portions of the specification shall apply to these items. Each like item of casework shall be of the same design and by one manufacturer.
  
- B. Where shown, provide plastic laminate casework items as follows:
  - 1. Base and wall cabinets in Nurse's station, Med Room and Treatment Room.
  - 2. Plastic laminate covered countertops for casework.

1.2 SUBMITTALS

- A. Submit in accordance with Section `01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
  
- B. Manufacturer's Literature and Data:
  - Sinks, trim and fittings.
  - Locks for doors and drawers
  - Adhesive cements
  
- C. Samples:
  - Counter top, plastic laminate, 150 mm (six inch) square
  
- D. Shop Drawings (1/2 full size):
  - 1. All casework, showing details of construction, including materials, hardware and accessories.
  - 2. Cabinets and counters showing faucets in connection with sink bowls, and electrical fixtures and receptacles which are mounted on cabinets and counters.
  - 3. Fastenings and method of installation.

1.5 APPLICABLE PUBLICATIONS

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by basic designation only.
  
- B. American Society for Testing and Materials (ASTM):
  - A167-99 (R2009).....Stainless and Heat-Resisting chromium-Nickel Steel Plate, Sheet and Strip



D. Backing sheet on bottom of plastic laminate covered wood tops. Backer Type BKL.

### 2.3 PLYWOOD, SOFTWOOD

Prod. Std. PS1, five ply construction from 13 mm to 28 mm (1/2 inch to 1-1/8 inch) thickness, and seven ply for 31 mm (1 1/4 inch) thickness.

### 2.4 PARTICLEBOARD

CPA A208.1, Type 1, Grade 1-M-3.

### 2.5 RUBBER OR VINYL BASE

Straight (for carpet), cove (for resilient floor); 100 mm (4 inch) high, 3 mm (1/8 inch) thick, flexible to conform to irregularities in walls, partitions and floors.

### 2.6 HARDWARE

A. Where pin tumbler locks are specified, disc tumbler lock "Duo A", with brass working parts and case, as manufactured by the Illinois Lock Company will be an acceptable substitute. Locks for each type casework, shall be keyed differently and shall be master-keyed for each type service, such as Nurses, Psychiatric, and Administration. Provide two keys for each lock. Exposed hardware, except as otherwise specified, shall be satin finished chromium plated brass or nickel plated brass.

B. Marking of Locks and Keys:

1. The name of the manufacturer, or trademark by which manufacturer can readily be identified, legibly marked on each lock.
2. The key change number marked on the exposed face of lock, and also stamped on each key.
3. Key change numbers shall provide sufficient information for replacement of the key by the manufacturer.

C. Hinged Doors:

1. Doors 900 mm (36 inches) and more in height shall have three hinges and doors less than 900 mm (36 inches) in height shall have two hinges. Each door shall close against two rubber bumpers.
2. Hinges: Fabricate hinges with minimum 2 mm (0.072 inch) thick chromium plated steel leaves, and with minimum 3.5 mm (0.139 inch) diameter stainless steel pin. Hinges shall be five knuckle design with 63 mm (2-1/2 inch) high leaves and hospital type tips.
3. Fasteners: Provide full thread wood screws to fasten hinge leaves to door and cabinet frame. Finish screws to match finish of hinges.

D. Door Catches:

1. Friction or Magnetic type, fabricated with metal housing.

2. Provide one catch for cabinet doors 1200 mm (48 inches) high and under, and two for doors over 1200 mm (48 inches) high.

E. Locks:

1. Cylinder type pin tumbler.
2. Equip doors and drawers where shown with locks.

F. Drawer and Door Pulls:

Doors and drawers shall have flush pulls, fabricated of either chromium plated brass, chromium plated steel, stainless steel, or anodized aluminum.

G. Drawer Slides:

1. Full extension steel slides with nylon ball-bearing rollers.
2. Slides shall have positive stop.
3. Equip drawers with rubber bumpers.

H. Sliding Doors:

1. Each door shall be supported by two ball bearing bronze or nylon rollers, or sheaves riding on a stainless steel track at top or bottom, and shall be restrained by a nylon or stainless steel guide at the opposite end.
2. Plastic guides are not acceptable.
3. Each door shall have rubber silencers set near top and bottom of each jamb.

I. Shelf Standards (Except For Fixed Shelves):

Bright zinc-plated steel for recessed mounting with screws, 16 mm (5/8 inch) wide by 5 mm (3/16 inch) high providing 13 mm (1/2 inch) adjustment, complete with shelf supports.

## 2.12 FABRICATION

- A. Casework shall be of the flush overlay design and, except as otherwise specified, be of premium grade construction and of component thickness in conformance with AWI Quality Standards.
- B. Fabricate casework of plastic laminated covered plywood or particleboard.
- C. Base:
  1. Provide rubber or vinyl base with close, flush joints; set with adhesive.
  2. Remove adhesive from exposed surfaces.
  3. Install base at floor line after casework has been accurately leveled.
  4. Rub base to glossy finish.
- F. Countertops:

1. Countertops, splashbacks shall be plastic laminate factory glued to either a plywood (PS1), or particleboard (CPA A208.1) core.
2. Countertops shall be 3/4 inch thick.
3. Splashbacks shall be finished 19 mm (3/4 inch) thick and be secured to countertops with concealed metal fastenings and with contact surfaces set in waterproof adhesive.
4. Provide cut-outs for plumbing trim where shown.
5. Cover exposed edges of countertops, splashbacks with plastic.

G. Sink bowls:

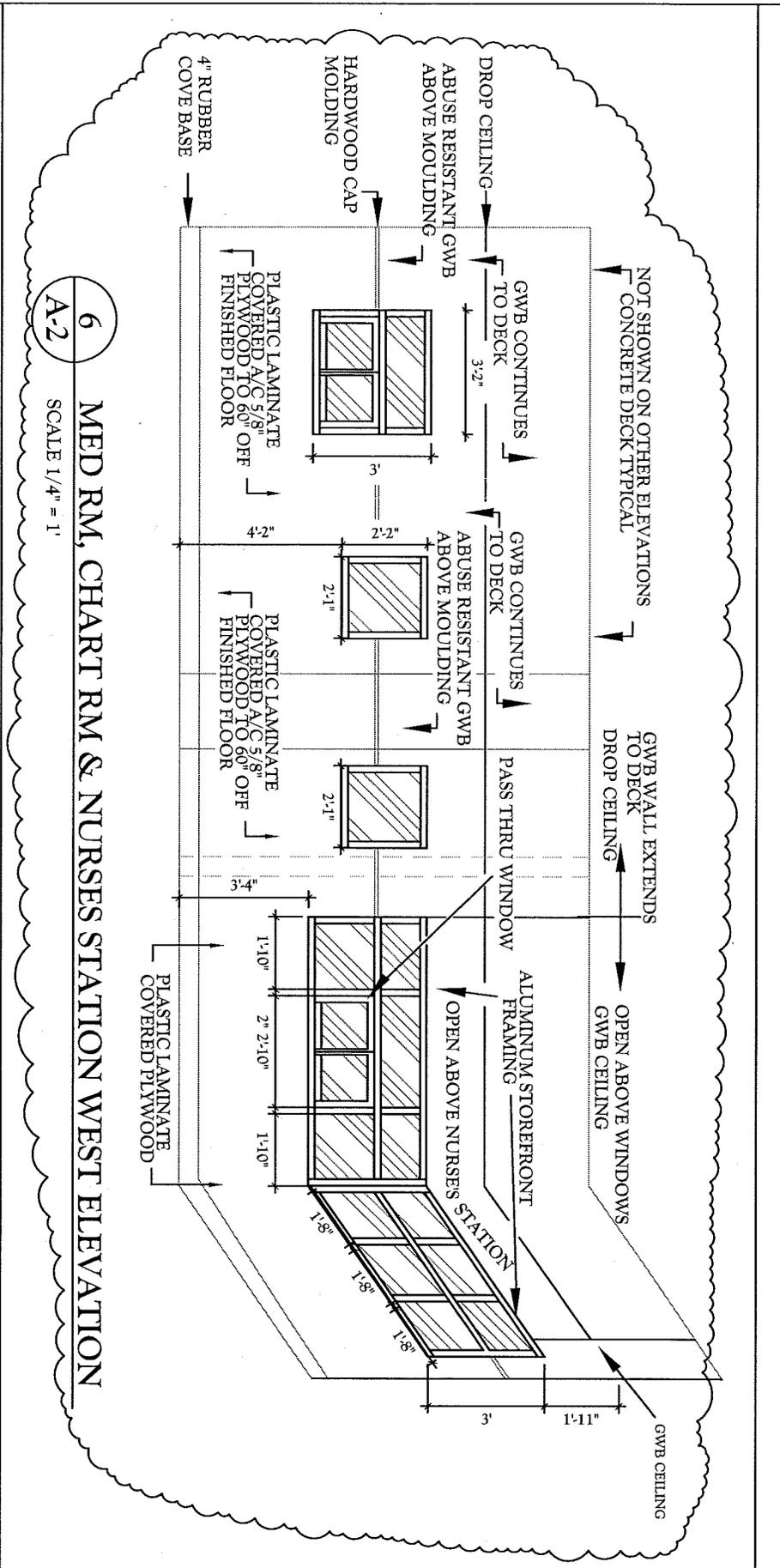
1. 18 gage stainless steel, of size and design shown.
2. All interior corners of bowls shall be formed to manufacturer's standard radii.
3. Sinks shall have rims with flanged edges overlapping tops to provide tight joints.
4. Secure sink bowls with concealed fastenings.
5. For service lines from service fixtures, see other sections of specifications.

**PART 3 - EXECUTION**

**3.1 INSTALLATION**

- A. Set casework in place; level, plumb and accurately scribe and secure to walls, and/or floors.
- B. The installation shall be complete including all trim and hardware. Leave the casework clean and free from defects.

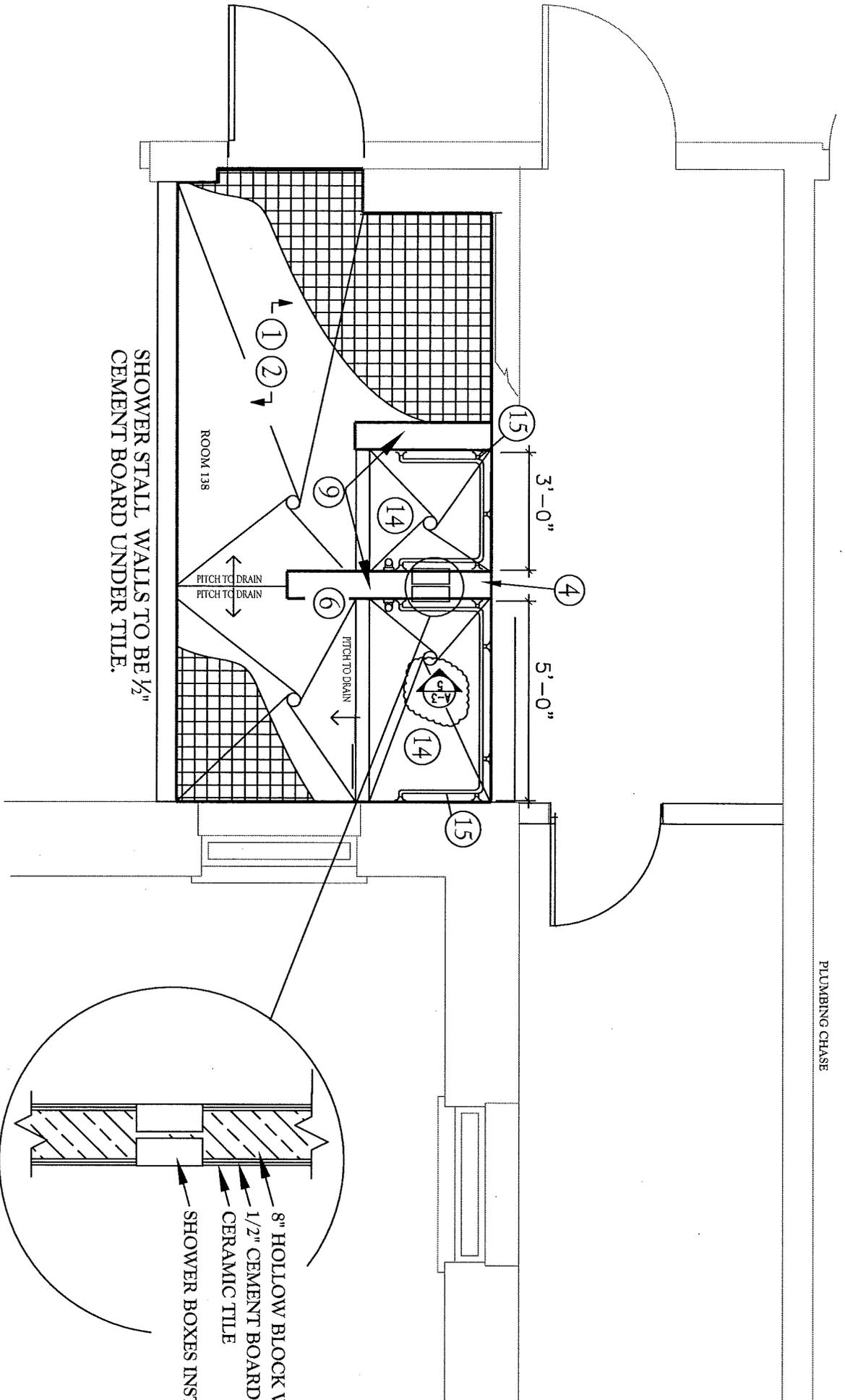
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6  
A-2

6 MED RM, CHART RM & NURSES STATION WEST ELEVATION  
SCALE 1/4" = 1'

PLUMBING CHASE



SHOWER STALL WALLS TO BE 1/2" CEMENT BOARD UNDER TILE.

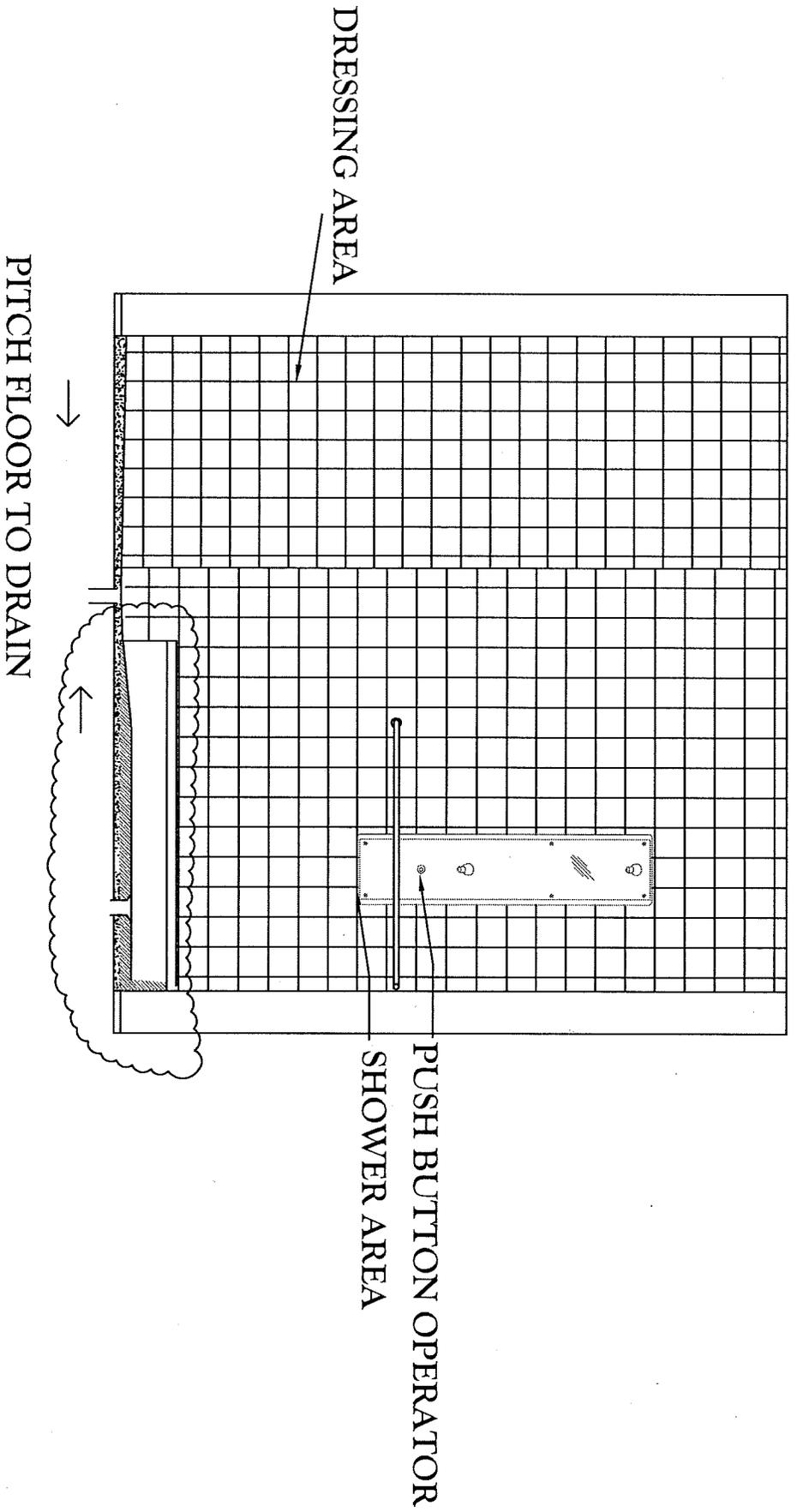
ROOM 138

8" HOLLOW BLOCK  
1/2" CEMENT BOARD  
CERAMIC TILE  
SHOWER BOXES INS.

# 1 TOILET AND SHOWER ROOMS

A-3

SCALE: 1/4"=1'



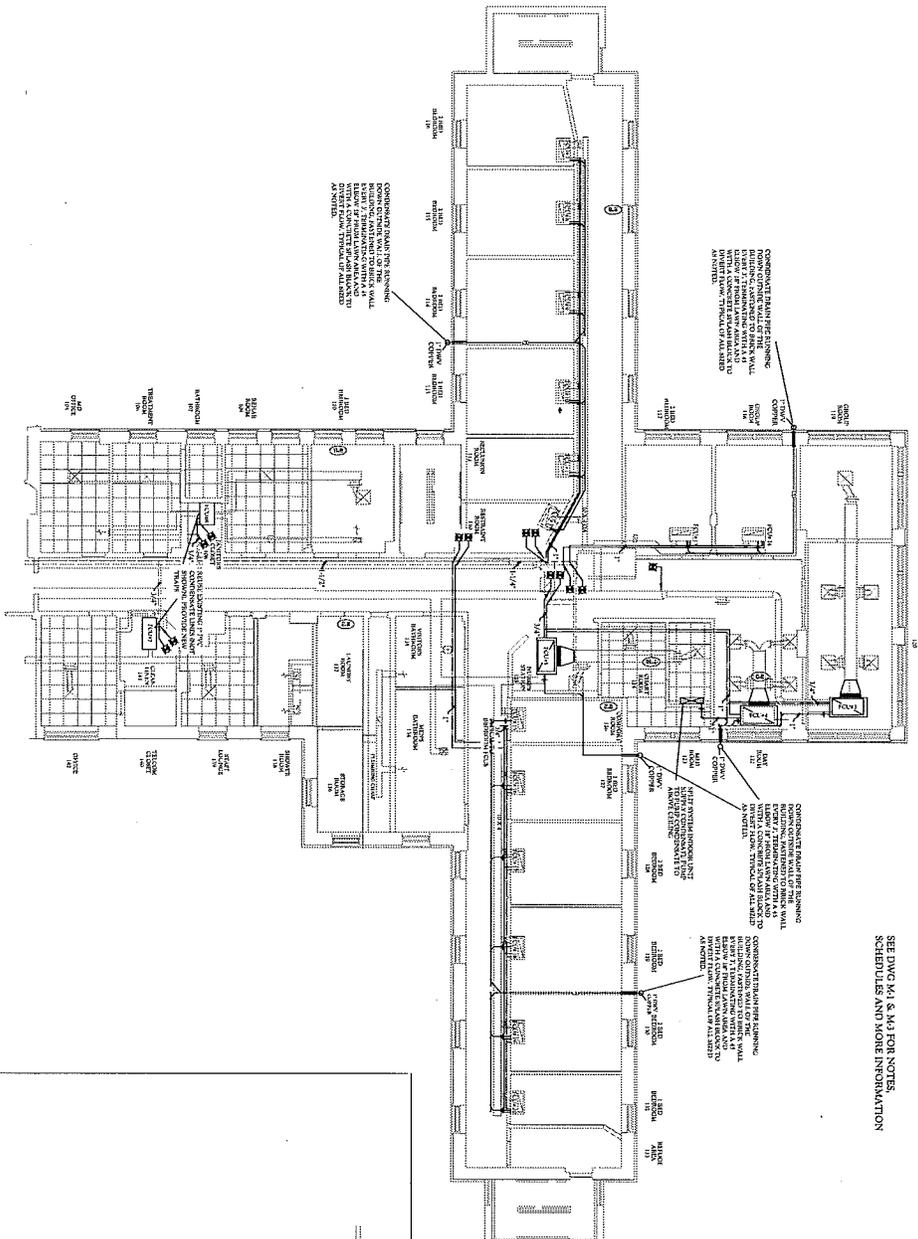
5

SHOWER WALL ELEVATION

A-3

SCALE: 1/4"=1'





COMPENSATE DRAIN PIPE SCHEDULING  
 POINTS TO BE EQUIPPED WITH COMPENSATE  
 POINTS, INSTALLED TO EACH WALL  
 POINT, WITH A MINIMUM OF 1/2" CLEARANCE  
 FROM THE WALL. THE COMPENSATE POINTS  
 SHALL BE INSTALLED WITH A 1/2" CLEARANCE  
 FROM THE WALL. THE COMPENSATE POINTS  
 SHALL BE INSTALLED WITH A 1/2" CLEARANCE  
 FROM THE WALL.

COMPENSATE DRAIN PIPE SCHEDULING  
 POINTS TO BE EQUIPPED WITH COMPENSATE  
 POINTS, INSTALLED TO EACH WALL  
 POINT, WITH A MINIMUM OF 1/2" CLEARANCE  
 FROM THE WALL. THE COMPENSATE POINTS  
 SHALL BE INSTALLED WITH A 1/2" CLEARANCE  
 FROM THE WALL. THE COMPENSATE POINTS  
 SHALL BE INSTALLED WITH A 1/2" CLEARANCE  
 FROM THE WALL.

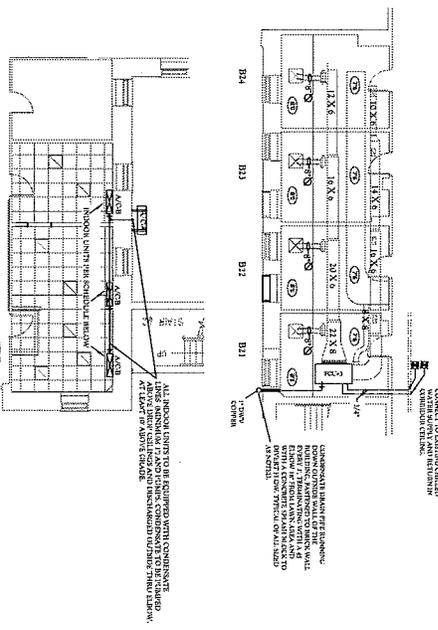
COMPENSATE DRAIN PIPE SCHEDULING  
 POINTS TO BE EQUIPPED WITH COMPENSATE  
 POINTS, INSTALLED TO EACH WALL  
 POINT, WITH A MINIMUM OF 1/2" CLEARANCE  
 FROM THE WALL. THE COMPENSATE POINTS  
 SHALL BE INSTALLED WITH A 1/2" CLEARANCE  
 FROM THE WALL. THE COMPENSATE POINTS  
 SHALL BE INSTALLED WITH A 1/2" CLEARANCE  
 FROM THE WALL.

SEE DWG. M1 & M1 FOR NOTES  
 SCHEDULES AND MORE INFORMATION

PIPING LEGEND	
—————	CHILLER WATER SUPPLY
—————	CHILLED WATER RETURN
—————	CONDENSATE RETURN

NOTE: IGNORE FCU NUMBERING ON THIS SHEET REFER TO M1 FOR FCU NUMBERING AND SCHEDULE

**1** DIN PIPING PLAN  
 SCALE 1/8" = 1'



COMPENSATE DRAIN PIPE SCHEDULING  
 POINTS TO BE EQUIPPED WITH COMPENSATE  
 POINTS, INSTALLED TO EACH WALL  
 POINT, WITH A MINIMUM OF 1/2" CLEARANCE  
 FROM THE WALL. THE COMPENSATE POINTS  
 SHALL BE INSTALLED WITH A 1/2" CLEARANCE  
 FROM THE WALL. THE COMPENSATE POINTS  
 SHALL BE INSTALLED WITH A 1/2" CLEARANCE  
 FROM THE WALL.

**2** BASEMENT PIPING PLAN  
 SCALE 1/8" = 1'

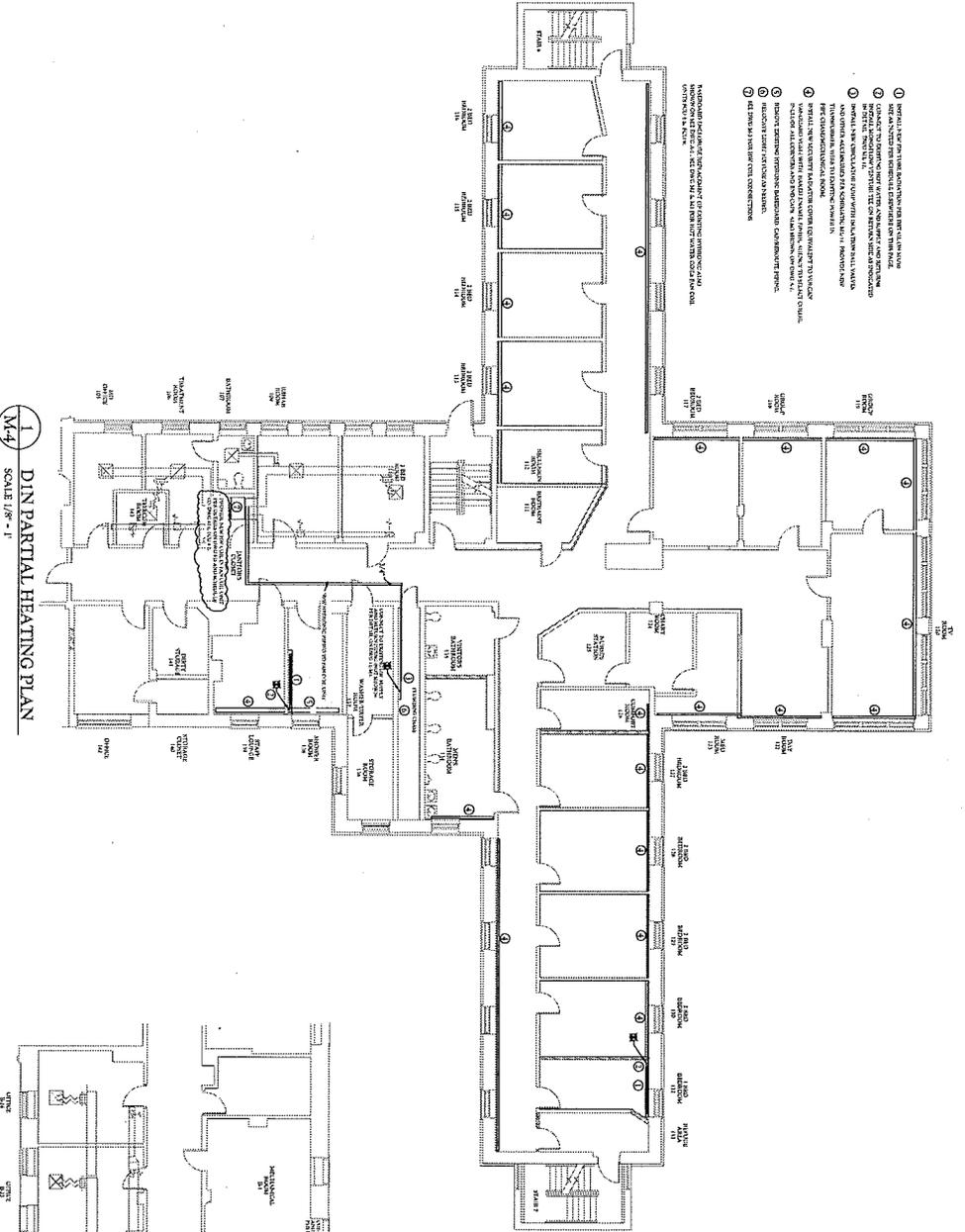
**CONSTRUCTION PHASE 1**

REVISIONS		
NO.	DATE	DESCRIPTION

DRAWINGS PREPARED BY <b>CHENG OF THE CONSULTANTS</b> ENGINEERING SERVICES 1	PROJECT <b>ENTREPRENEUR M</b> MEADOWS CT
DATE <b>04/04/04</b>	DRAWING NO. <b>M-2</b>

dimnas  
 1111 F STREET, N.W.  
 WASHINGTON, DC 20004  
 A RECORD DRAWING FOR THE PROJECT

1. INSTALL PER THE MANUFACTURER'S RECOMMENDATION.
2. VERIFY ALL SYSTEMS ARE PROPERLY INSTALLED AND OPERATING.
3. VERIFY ALL SYSTEMS ARE PROPERLY INSTALLED AND OPERATING.
4. VERIFY ALL SYSTEMS ARE PROPERLY INSTALLED AND OPERATING.
5. VERIFY ALL SYSTEMS ARE PROPERLY INSTALLED AND OPERATING.
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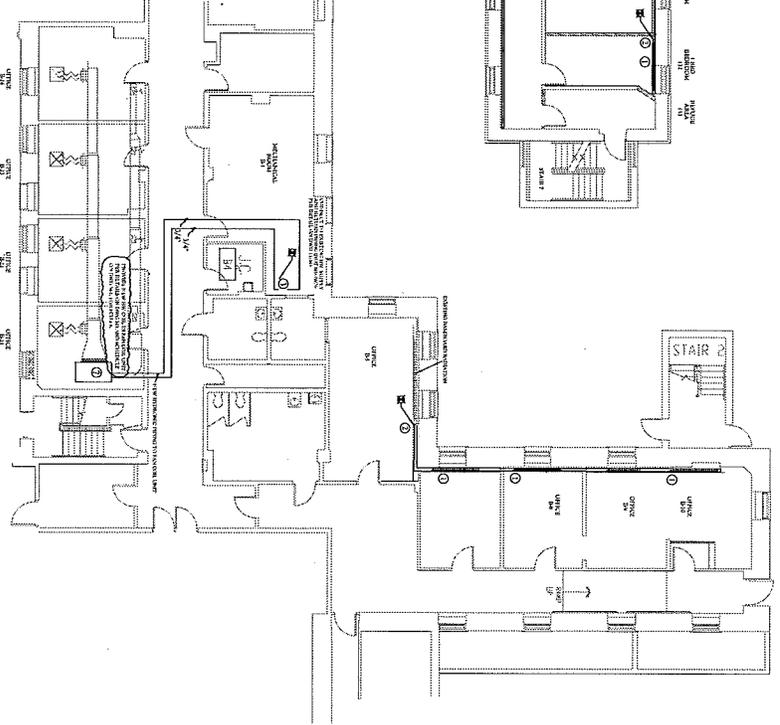
M-4  
SCALE 1/8" = 1'

HYDRONIC BASEBOARD RADIATORS SCHEDULE

ROOM #	TUBE SIZE	MANUFACTURER	CATALOG NUMBER	FIN SIZE	FIN LENGTH	FIN THICKNESS	FINCLOSURE CAT #	BTU/DWG	
B18	3/4"	WOLSON	VC97434	3 1/4 SCS"	6'	40	0.020"	VC8P	4800
B17	3/4"	WOLSON	VC97434	3 1/4 SCS"	6'	40	0.020"	VC8P	4800
B16	3/4"	WOLSON	VC97434	3 1/4 SCS"	6'	40	0.020"	VC8P	4800
B15	3/4"	WOLSON	VC97434	3 1/4 SCS"	6'	40	0.020"	VC8P	4800
B14	3/4"	WOLSON	VC97434	3 1/4 SCS"	6'	40	0.020"	VC8P	4800

PIPING SCHEDULE

ROOM #	MANUFACTURER	CAT #	HP	PIPE FLANGE SIZE	AMPS	VOLTS
PIPELINE	TYCO	QW45	1/25 HP	1"	7.4AMP	115 VOLTS
B5	TYCO	QW45	1/25 HP	1"	7.4AMP	115 VOLTS



M-4  
SCALE 1/8" = 1'

CONSTRUCTION PHASE 1

<p>DATE: 01/11/2011</p> <p>PROJECT: 1111 E. COLLETT BLVD</p> <p>PROJECT NO.: 1111-01</p>	<p>DRAWING PROVIDED BY:</p> <p>OFFICE OF THE COMMISSIONER</p> <p>ENGINEERING SERVICES I</p> <p>DITCHER &amp; ASSOCIATES</p> <p>1111 E. COLLETT BLVD</p> <p>ANN ARBOR, MI 48106</p>	<p>DATE: 01/11/2011</p> <p>PROJECT: 1111 E. COLLETT BLVD</p> <p>PROJECT NO.: 1111-01</p>	<p>DATE: 01/11/2011</p> <p>PROJECT: 1111 E. COLLETT BLVD</p> <p>PROJECT NO.: 1111-01</p>
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dimnas  
ENGINEERING SERVICES I