

CONDITIONS, SPECIFICATIONS AND RELATED DOCUMENTS FOR  
UNIT F - PHARMACY AND NURSING FACILITY

UNIVERSITY OF MINNESOTA - MINNEAPOLIS CAMPUS  
HEALTH SCIENCES EXPANSION

PROJECT NOS: MINN. BHRD-HP-5C-063  
BHRD-NU-5C-077

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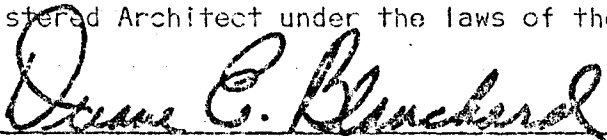
Paul J. Maupin  
Health Sciences Planning    University of Minnesota

THE ARCHITECTS COLLABORATIVE, INC.                                      Cambridge, Massachusetts

HEALTH SCIENCES ARCHITECTS & ENGINEERS, INC.  
University Park Plaza - Suite 704  
2829 University Avenue South East                                      Minneapolis, Minnesota  
(612) 378-3833    55414

As to Architecture:

I hereby certify that these plans, specifications or reports were prepared by me or under my direct supervision, and that I am a duly Registered Architect under the laws of the State of Minnesota.



Date: August 15, 1978

Reg. No. 8397

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ADVERTISEMENT FOR BIDS

UNIT F - PHARMACY AND NURSING FACILITY (P/N)  
HEALTH SCIENCES EXPANSION

UNIVERSITY OF MINNESOTA - MINNEAPOLIS CAMPUS

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APPROXIMATE COST: \$14,700,000  
BIDS CLOSE: 2:00 P.M. CDT, September 28, 1978  
BIDS RECEIVED AT: ST. PAUL, MINNESOTA

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UNIT P/N HEALTH SCIENCES EXPANSION  
PROJECT NUMBERS: BHRD-HP-5C-063  
                    BHRD-NU-5C-077  
DOCUMENTS DATED: AUGUST 15, 1978

THE ARCHITECTS COLLABORATIVE, INC.  
AND  
HEALTH SCIENCES ARCHITECTS AND ENGINEERS  
2829 UNIVERSITY AVENUE SOUTHEAST  
MINNEAPOLIS, MINNESOTA 55414

Sealed lump sum Bids will be received on behalf of the University of Minnesota Board of Regents, at the office of Robert James, Purchasing Agent, in the Administrative Services Building, 2610 University Avenue, St. Paul, Minnesota 55114 until 2:00 P.M., CDT, September 21, 1978. Bids received after this time will not be accepted nor opened. Immediately after closing time, Bids will be opened publicly and read aloud.

The Project is the Construction of Unit F - Pharmacy and Nursing Facility of the Health Sciences Expansion on the Minneapolis Campus of the University of Minnesota.

Bids will be received for separate contracts of:

General Construction (G)  
Mechanical Construction (M)  
Electrical Construction (E)

No bidder may withdraw his bid until 45 days after the date of opening of Bids.

The University reserves the right to reinstate any deductive alternate accepted by the University for Contract award at the sum proposed by the successful contractor, provided such reinstatement is made within 120 days after the bid opening.

Bidding requirements, bid and contract forms, drawings and specifications may be examined at:

Office of the Architect/Engineer, listed above.

Office of the Engineering and Construction Division, Folwell Hall,  
University of Minnesota, Minneapolis, Minnesota.

The Builders Exchanges of Minneapolis and Saint Paul, Minnesota.

F. W. Dodge Corporation Plan Room, Minneapolis, Minnesota.

One complete set of the documents for the Project may be obtained from the office of Health, Sciences Architects and Engineers, 2829 University Avenue Southeast, Minneapolis, Minnesota, 55414, in accordance with the Instructions to Bidders, upon making a deposit in the form of a check in the amount of \$350.00. Sets requested to be mailed will be forwarded C.O.D.

The full deposit will be returned to bidders who submit a bona fide prime contract bid to the University, upon the return of the complete set of documents in good condition to the Health Sciences Architects and Engineers, 2829 University Avenue Southeast, Minneapolis, Minnesota 55414, within 10 days after bid date. Deposits will be returned to others in accordance with the Instructions to Bidders, upon return of the complete set of documents under the same time and conditions.

A bid security in the amount of five percent (5%) of the maximum amount of the Bid, shall be submitted with each Bid in such form and subject to the conditions stated in the Instructions to Bidders.

The attention of all bidders is called to the Equal Employment Opportunity and the Affirmative Action requirements for contractors, subcontractors and suppliers, as stated in the Contract Documents.

The University reserves the right to reject any and all bids, accept any bid it deems to be in its best interest, to waive any informalities in bids submitted and waive minor discrepancies in bidding procedures.

REGENTS OF THE UNIVERSITY OF MINNESOTA

By: Robert James  
Purchasing Agent for the  
Regents of the University of Minnesota

## SECTION A2 - INSTRUCTIONS TO BIDDERS

### ARTICLE 1 - INVITATION FOR BIDS

#### 1.1 Invitation

1.1.1 The Regents of the University of Minnesota, referred to as the University, invite qualified bidders to submit lump sum bids for the Project Identified as:

UNIT F - PHARMACY AND NURSING FACILITY  
(P/N)  
UNIVERSITY OF MINNESOTA - MINNEAPOLIS CAMPUS  
PROJECT NOS: MINN. BHRD-HC-50-063, BHRD-NU-5C-077

as prepared by:

THE ARCHITECTS COLLABORATIVE, INC., CAMBRIDGE, MASS.  
and  
HEALTH SCIENCES ARCHITECTS & ENGINEERS, INC.  
University Park Plaza - Suite 704  
2829 University Avenue S.E.  
Minneapolis, Minnesota 55414

#### 1.2 Type of Bids

1.2.1 Bids will be received for a single lump sum Contract for the entire construction described in the Contract Documents.

### ARTICLE 2 - BIDDING PROCEDURES

#### 2.1 Bid Time and Place

2.1.1 Bids shall be submitted to the designated location indicated in the Advertisement for Bids, by the designated time or any extension thereof made by Addendum. Bids received after the time and date for receipt of bids will not be opened.

2.1.2 Bidder shall assume full responsibility for timely delivery at location designated for receipt of bids.

#### 2.2 Preparation of Bid

2.2.1 One copy of the bid shall be submitted in the form included in the specification. Forms are available from the Architect/Engineer.

2.2.2 All blank spaces on the Bid Form shall be filled in by typewriter or manually in ink, expressing the sums both in words and figures. In all cases the written and numerical figures must agree, otherwise it may be cause for rejection of the Bid.

2.2.3 Any interlineation, alteration or erasure must be initialed by the signer of the Bid.



2.2.4 In the event unit prices are called for, a Bid for each unit price shall be submitted.

2.2.5 The Bidder shall not make any additional stipulations or alternates, nor qualify his Bid in any other manner.

2.2.6 Bidder shall state all addenda received or considered in preparing his Bid.

2.2.7 Each copy of the Bid shall include the legal name of Bidder and a statement whether Bidder is a sole proprietor, a partnership, a corporation, or any other legal entity, and each copy shall be signed by the person or persons legally authorized to bind the Bidder to a contract. If the Bidder is a partnership, the names of all partners shall be stated. A Bid by a corporation shall further give the State of Incorporation and have the corporate seal affixed.

2.2.8 The signature on the Bid shall be in longhand, in ink.

### 2.3 Submission of Bids

2.3.1 The Bid, the bid security, and any other documents required to be submitted with the Bid shall be enclosed in a sealed opaque envelope.

2.3.2 The envelope shall be addressed to the party receiving the bids and shall be identified with the Project name, the Bidder's name and address, and the portion of the project or category of work for which the Bid is submitted. If the Bid is sent by mail the sealed envelope shall be enclosed in a separate mailing envelope with the notation "BID ENCLOSED" on the face thereof.

### 2.4 Modification or Withdrawal of Bid

2.4.1 A Bid may not be modified, withdrawn or canceled by the Bidder during the stipulated time period following the time and date designated for the receipt of bids, and Bidder so agrees in submitting his Bid.

2.4.2 Prior to the time and date designated for receipt of bids, bids submitted early may be modified only by notice to the party receiving bids at the place and prior to the time designated for receipt of bids.

.1 Such notice shall be in writing over the signature of the Bidder or be by telegram; if by telegram, written confirmation over the signature of the Bidder must have been mailed and postmarked on or before the date and time set for receipt of Bids; it shall be so worded as not to reveal the amount of the original Bid. If the written confirmation is not received by the party receiving bids within 24 hours after bid closing time, no consideration will be given the telegraphic modification.

2.4.3 Withdrawn bids may be resubmitted up to the time designated for the receipt of bids provided that they are then fully in conformance with these instructions to Bidders.

2.4.4 Bid security, shall be in an amount sufficient for the bid as modified or resubmitted.

### ARTICLE 3 - BID SECURITY

#### 3.1 Form of Security

3.1.1 The Bid shall be accompanied by a bid security in accordance with these requirements. The bid security shall pledge that the Bidder will enter into a contract with the University on the terms stated on his Bid, in accordance with the Contract Documents, and will furnish the required Performance Bond.

3.1.2 The bid security shall be in the form of a certified or cashier's check drawn on a solvent bank, or a bid bond, drawn to the order of the "Regents of the University of Minnesota".

3.1.3 Bid bonds shall be duly executed by the bidder as principal, issued by a corporate surety company authorized to do business in the State of Minnesota, with a current copy of Power of Attorney of the Attorney-in-Fact who executes the bond on behalf of the surety attached, as well as proper acknowledgements.

3.1.4 The amount of the bid security shall be as stated in the Advertisement for Bids, but in no event less than 5% of the maximum amount of the Bid, including additive alternates, if any.

#### 3.2 Retention of Bid Security

3.2.1 The University shall have the right to retain the bid security of all bidders until either (a) the Contract has been executed and bonds required, have been furnished or (b) the specified time has elapsed so that bids may be withdrawn, or (c) all bids have been rejected. Thereafter, bid security in the form of checks will be returned to bidders and bid bonds returned upon request of the Bidder.

#### 3.3 Forfeiture of Bid Security

3.3.1 Should the Bidder be awarded a contract and fail or refuse to execute and deliver the Contract and performance bonds required within 10 days after he has received notice of the acceptance of his bid, he shall forfeit to the Owner, as liquidated damages for such failure or refusal, the security deposited with his bid. In the event the Contract has not been prepared for signature within 10 days after notice of award, the bidders shall have three days after it is prepared and offered to execute the Contract and provide the performance bond.

### ARTICLE 4 - CONSIDERATION OF BIDS

#### 4.1 Opening of Bids

4.1.1 Bids will be opened publicly and read aloud immediately after the time for receipt of bids.

#### 4.2 Informalities

4.2.1 The University reserves the right to consider informal any Bid not prepared in strict accordance with requirements herein and to waive said informalities and to waive minor discrepancies in bidding procedures.

#### 4.3 Rejection of Bids

4.3.1 The University shall have the right to reject any or all bids and in particular to reject a Bid not accompanied by any data required by the Bidding Documents or a Bid in any way incomplete or irregular.

#### 4.4 Acceptance of Bid (Award Procedures)

4.4.1 In consideration of alternates, it is the intent of the University, if it accepts any alternates, to accept them in the order in which they are listed on the Bid Form. However, the University reserves the right to accept alternates in any order if such acceptance out of order does not change the low Bidder.

4.4.2 The low Bidder will be determined on the basis of the sum of the Base Bid and any alternates accepted.

4.4.3 In evaluating alternates which affect more than one contract, the University reserves the right to consider the total value of the alternate under all contracts and accept such alternates of the Bidders the University may deem in its best interest. In some instances it may result in additive amounts to some contracts and deductive amounts to others.

4.4.4 The University reserves the right to reject unit prices of a low Bidder if the unit prices are significantly out of balance with other bids, indicating a hardship may be imposed on the University. In such instances, the University may negotiate reasonable unit prices prior to award of the Contract.

4.4.5 The University reserves the right to award a contract if it deems in its best interest and consider all factors. Serviceability, maintenance costs, life cycle costs, energy conservation, interchangeability with other facilities, flexibility, uniformity of appearance and similar factors may be considered.

4.4.6 It is the intent of the University to award a contract to the lowest responsible Bidder, all factors considered, provided the Bid has been submitted in accordance with the requirements of the bidding requirements and Contract Documents, is judged to be reasonable, and does not exceed the funds available. However, the University shall not be obligated to award a contract in any event.

4.4.7 The University reserves the right to disqualify bids, before or after opening, upon evidence of collusion, intent to defraud or other illegal practices on the part of the Bidder.

#### 4.5 Execution of Contract

4.5.1 Upon award of a Contract, the successful Bidder shall execute the Agreement within 10 days after it is offered to him, and provide the required performance bond. In the event the Agreement is not prepared, ready for execution, within 10 days after award, the Contractor shall execute the Agreement within 3 days after its preparation.

#### ARTICLE 5 - DOCUMENTS FOR BIDDING

##### 5.1 Documents for Bidders for a Contract with the University

5.1.1 Prospective bidders may obtain one complete set of drawings, specifications and other Contract Documents from the Architect/Engineer by making a deposit in the form of a check in favor of the Architect/Engineer in the amount specified in the Advertisement for Bids.

5.1.2 Should Bidders wish to obtain additional sets of Contract Documents for their convenience in preparing their Bid, additional sets may be obtained from the Architect/Engineer in the same manner and amount as specified in Advertisement for Bids.

5.1.3 The full deposit for the first set of Contract Documents will be refunded to bidders who submit a bona fide bid to the University, upon the return of the complete set of documents in good condition to the Architect/Engineer, within 10 days after bid date. In the event of damaged or missing documents, the cost of replacement will be deducted from the deposits.

5.1.4 One half (1/2) the deposit for the second (and additional) sets issued to the Bidders will be returned to the Bidder, upon return of the documents as noted in 5.1.3.

5.1.5 In the event multiple sets are requested and issued to various firms for joint venture bids, the deposit on the second and additional sets will be returned in accordance with 5.1.4 above.

5.1.6 Any sets issued and subsequently returned prior to bid date shall have the deposit returned in the amount noted under 5.1.4 above.

5.1.7 Sets requested to be mailed to Bidders will be forwarded C.O.D.

##### 5.2 Documents for Subcontract Bidders, Suppliers, Manufacturers and Quantity Surveyors

5.2.1 One set of drawings, specifications and other Contract Documents may be obtained from the Architect/Engineer for the amount noted in Advertisement for Bids.

5.2.2 One half (1/2) the deposit for the set will be returned upon return of the documents in good condition within 10 days after bid date.

##### 5.3 Return of Documents

5.3.1 All documents remain the property of the Architect/Engineer and shall be returned to him promptly after bid date, except a Bidder receiving a

- Contract with the University may retain his set and his full deposit will be returned for the first full set and 1/2 deposit for the remaining sets.

#### 5.4 Complete Sets Used In Preparing Bids

5.4.1 Complete sets of drawings, specifications and other Contract Documents, shall be used in preparing bids. Neither the Owner nor the Architect assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Contract Documents.

#### 5.5 Partial Sets

5.5.1 Copies of individual drawings and pages of specifications may be purchased from the Architect/Engineer at the cost of \$1.50 per drawing and \$0.25 per page. The cost of these sheets will not be refunded.

5.5.2 Individual sheets or pages issued shall be used at the risk of the Bidder or subcontract bidders and shall not relieve the user from examining the complete set of drawings, specifications or other Contract Documents.

#### 5.6 Use of Documents for Bidding

5.6.1 The University and Architect/Engineer, in making copies of the drawings, specifications or other Contract Documents available on the above terms, do so only for the purpose of obtaining bids on the Project and do not confer a license or grant for any other purpose.

### ARTICLE 6 - INTERPRETATION OR CORRECTION OF DOCUMENTS

#### 6.1 Notice and Request for Interpretations and Clarifications

6.1.1 Bidder shall promptly notify the Architect/Engineer of any alleged ambiguity, inconsistency or error they may discover upon examination of the Contract Documents, Bidding Requirements, the site or local conditions.

6.1.2 Bidders requiring clarification or interpretation of the Documents shall make his request to the Architect/Engineer.

6.1.3 All notices of alleged ambiguities, inconsistencies or errors and requests for clarification or interpretation shall be made in writing and forwarded so it is received by the Architect/Engineer at least seven (7) days prior to bid date, unless longer periods are specified elsewhere for certain conditions.

#### 6.2 Response to Notices and Requests

6.2.1 Corrections, interpretations and clarifications involving or providing information which is not already a part of the Bidding Requirements or Contract Documents will be made only by written addenda and supplemental or revised drawings if required.

6.2.2 Corrections, interpretations and clarifications will not be made in any other manner than by addenda and unless they are included in addenda,

bidders shall not rely on information provided or received in any other manner. Neither the Architect/Engineer nor the University will be responsible for, nor honor any claims resulting from, or alleged to be the result of, misunderstanding by the Bidder (and subsequently the Contractor) of any discussion of the Project conditions prior to receiving bids. Any verbal communications during the bidding period are subject to inclusion in addenda; otherwise, they shall not be binding on the University nor the Architect. Any item not clarified by addenda shall be subject to interpretation by the Architect or University in accordance with the provisions of the General Conditions of the Contract or other Contract Documents.

## ARTICLE 7 - ADDENDA

### 7.1 Issuing Addenda

7.1.1 The Architect/Engineer will issue all required addenda, in writing, which may include supplemental or revised drawings.

7.1.2 Addenda will be mailed or delivered to all prospective bidders for a contract directly with the University, who have been issued a complete set of Documents are on record at the Architect/Engineer's office as a bidder. Bidders shall furnish the proper address for mailing of addenda.

7.1.3 Addenda will also be issued to the locations noted in the Advertisement for Bids where Contract Documents are on file for examination.

7.1.4 It is the intent that written addenda will not be issued less than 3 days prior to bid date.

### 7.2 Incorporating and Acknowledging Addenda

7.2.1 All addenda issued, and the information included therein, shall become part of the Contract Documents and shall be incorporated in all bids submitted.

7.2.2 All bidders, including those submitting subcontract or supply bids, shall be responsible to ascertain the addenda that have been issued prior to bid date, examining all of the addenda and determining the effect of addenda provisions on their bids and their work. Failure of any bidder to receive any such addendum or interpretation shall not relieve him from any obligation to complete the Work in accordance with the Contract Documents if awarded a Contract.

7.2.3 All bidders shall state on the Bid Form the number of addenda received and incorporated in their Bid.

## ARTICLE 8 - CONTRACTOR'S BOND

### 8.1 Bond for Performance and Payment

8.1.1 A bond for faithful performance and completion of the Project and for payment for all just claims in connection with the Project is required. The cost of said bond shall be included in all bids to the University.

8.1.2 The bond shall be in the form of the University's Contractor's Bond, as bound into the Documents or available from the University, and shall meet all requirements specified in the General Conditions of the Contract, paragraph 7.5. The properly executed Contractor's Bond shall be provided to the University at the time of execution of the Agreement with the University, and shall be accompanied by a certified and effectively dated copy of the Power of Attorney for the Attorney-in-Fact.

## ARTICLE 9 - QUALIFICATIONS OF BIDDERS

### 9.1 Qualifications

9.1.1 The University reserves the right to consider the competency and responsibility of a Bidder in making an award, which may include, but not be limited to: (1) Proof of financial responsibility, (2) quality of similar work, (3) amount of experience with similar projects, (4) facilities, personnel and equipment, (5) reputation for performance, including service after Substantial Completion, (6) capability to complete the work on time, and (7) integrity of the Bidder.

9.1.2 The University reserves the right to make any investigations necessary to satisfy itself that the Bidder is properly qualified to execute the work of the Project under the Contract. The University may make such investigations as it deems necessary to determine the ability of the Bidder to perform the work, and the Bidder shall furnish to the University all such information and data for this purpose as the University may request. The University reserves the right to reject any bid if the evidence submitted by, or investigation of, such Bidder fails to satisfy the University that such Bidder is properly qualified to carry out the obligations of the Contract and to complete the work contemplated therein.

## ARTICLE 10 - OBLIGATIONS OF BIDDER

### 10.1 Examination of Documents and Site

10.1.1 Each bidder is obligated to thoroughly examine and study all Contract Documents, Bid and Contract Forms and Bidding Requirements, and to visit the site, to fully inform himself as to all conditions, requirements and other factors which will affect his Bid or execution of the work under the Contract Documents. By submitting a Bid, the Bidder represents that he has made such examinations and study, that he understands the requirements of the Contract Documents and Bidding Requirements, that he is familiar with the site, site conditions and local conditions, and that his Bid is made in conformance with all requirements.

10.1.2 In examining the drawings, specifications and other Contract Documents, the Bidder shall study and examine the entire set of Contract Documents, including those drawings and specifications primarily intended to portray the work which may be under another Contract with the University or for trades not normally in the employ of the Bidder, so as to be totally familiar with the scope of the entire Project and all factors which will affect the Bid or accomplishment of the work under the Contract Documents.

10.1.3 The Bidder is obligated to obtain clarifications and interpretations, as well as to notify the Architect/Engineer of alleged errors, ambiguities or inconsistencies in accordance with Article 6 of the Instructions to Bidders.

10.1.4 No allowance or extras will be granted the Bidder who is awarded a Contract as a result of misunderstanding of the extent or scope of the work as a result of his failure to study all documents and conditions and record his own findings, or for neglecting any specified instructions in the preparation of his Bid.

## 10.2 Labor

10.2.1 Each Bidder shall investigate and fully inform himself as to the availability, local labor and union conditions and cost of the employment of labor for the Project, both skilled and unskilled, and shall consider such matters in the preparation of the Bid.

## 10.3 Materials, Equipment and Systems

10.3.1 By submitting a Bid, the Bidder represents that his Bid is based on the materials, equipment, systems and other similar items in full compliance with requirements and descriptions in the Contract Documents, without exception.

## 10.4 Sales Tax

10.4.1 Bidders shall include the cost of the Minnesota Excise and Use Tax, as applicable, in their Bids.

## ARTICLE 11 - SUBCONTRACTORS

### 11.1 Acceptance of Subcontractors

11.1.1 Bidders are advised that any person, firm or organization to whom an award of a subcontract is proposed under the Contract must be acceptable to the University and the Architect/Engineer as specified under Article 5 of the General Conditions of the Contract.

## ARTICLE 12 - PROPOSED ALTERNATE MATERIALS AND EQUIPMENT

### 12.1 Intent

12.1.1 The intent of this Article is to encourage and permit competition on qualified products by reputable and qualified contractors, subcontractors, suppliers and manufacturers, whose products, reputations and performance warrant acceptance for the conditions, intent of design and performance considerations required for this Project. For consideration of alternate products, the procedures, time requirements and other provisions of this Article must be complied with.

12.1.2 To avoid hardships resulting from non-acceptance of a proposed product that has been bid, and to provide the equitable condition for all bidders, subcontract bidders and suppliers by their having the same



knowledge of which products, in the opinion of the Architect/Engineer, will be acceptable as meeting the Project requirements, the evaluation period for proposed products shall be prior to the bid date, instead of after receipt of bids.

12.1.3 The word "product" herein means any material, equipment, system, assembly, manufacturer, brand, trade name, element, item or similar description as applicable.

12.1.4 Wherever a product is named on the drawings or in the specifications the phrase "or acceptable equal in the opinion of the Architect/Engineer" shall be implied throughout the specification, whether specifically noted or not.

## 12.2 Procedure

12.2.1 All requests for consideration of proposed alternate products in lieu of those specified shall be made in writing. Requests shall clearly define and describe the product for which acceptance is requested, and shall be accompanied by manufacturer's literature, specifications, drawings, cuts, performance data, list of references, model numbers, or other information necessary to completely describe and evaluate the item.

12.2.2 All requests shall be submitted to the Architect/Engineer so it is received a minimum of 14 days prior to bid date and hour, unless a longer period of time is specified in technical sections. Requests received after this time will not be reviewed nor evaluated.

12.2.3 Products which the Architect/Engineer deem basically acceptable for bidding purposes will be included in addenda. Information on acceptance will be provided in no other manner.

12.2.4 Acceptance of a product for bidding purposes shall not relieve the Bidder from complying with all requirements of the Contract Documents, including the criteria established in the Contract Documents and these Instructions to Bidders.

## 12.3 Criteria

12.3.1 Any product or manufacturer used as basis of the specifications shall generally set the basic criteria. It shall be expressly understood that any other product or manufacturer listed in the specification, or any addenda, as an acceptable alternate, will be acceptable provided they fully comply with the requirements and match the basic and essential criteria of the product used for base specification, including the level of workmanship quality, as determined by the Architect/Engineer. For final acceptance for use in the work, the Architect/Engineer shall have right to accept or reject proposed deviations. Should a proposed product be unable to meet the necessary requirements, the product shall not be used.

12.3.2 The use of references to standards, manufacturers, brands and similar designations is intended to establish the measure of quality as to minimum standards of design, function, appearance, type, strength, durability, construction, efficiency, sound level, finish, availability, service and similar characteristics, which have been determined as requisite for this Project.

12.3.3 Proposed alternate products shall also: be available in the same range of colors, textures, dimensions, gauges, types, and finishes as the material or article specified; must equal the specified item in strength, durability, efficiency, serviceability, ease and cost of maintenance; must be compatible with the building design and not necessitate design modifications, nor impose additional work or require changes in the work of any Contractor, or any other Subcontractor, vendor, or materials supplier, nor result in any additional cost to the University. The supplier or manufacturer providing any acceptable product shall bear the cost of any required modifications to spaces, services, utilities and other features as the result of the use of his product, including but not limited to larger capacity mechanical or electrical service, devices or utilities resulting from acceptance of the product for bidding purposes, as well as to pipes, conduits, ducts, and controls for conveying, distributing, and controlling those services or utilities; as well as insulation, wrappings, coatings, or other integral features of the lines or items conveying those lines.

12.3.4 For any same or like product for this Project, only one brand, manufacturer, source or type shall be used, as approved by Architect/Engineer and the University.

#### 12.4 Use of Products

12.4.1 Where two or more products are shown or specified, the Bidder (and Vendor) has his option of which to use, provided the product proposed will meet all requirements of the specifications and the design criteria. The right is reserved by the Architect/Engineer to accept or reject proposed deviations in design, function, construction or similar differences that will affect design intent or quality.

12.4.2 For products specified or shown by describing proprietary items, model numbers, catalog numbers, manufacturers, trade names or similar reference, the Bidder obligates himself to submit proposals and accept award of a Contract based upon the use of such products as specified or accepted in addenda.

### ARTICLE 13 - COMMENCEMENT AND COMPLETION OF THE WORK

#### 13.1 Commencement of Work

13.1.1 By submitting a bid, and execution of the Agreement, the Bidder (and Vendor) agrees to commence work in accordance with the General Conditions of the Contract, or as otherwise specified in Division I of the specifications.

#### 13.2 Completion of Work

13.2.1 By submitting a bid, and execution of the Agreement, the Bidder (and Contractor) to complete the Project within the time specified, including any separate phases, elements or areas of the entire Project which may be specified, and that time for completion is an essential condition of the Contract.

13.2.2 By submitting a Bid, and execution of the Agreement, the Bidder (and Contractor) expressly agrees the time (or times for various phases) for completion is reasonable, considering all factors. The Bidder (and Contractor) further represent he has: analyzed the Project, including the equipment, materials and methods; considered his own capabilities and work load; determined availability of qualified mechanics and unskilled labor; considered the time of year for commencement of work; made a reasonable allowance for weather variations and other potential delays encountered in the construction process; the condition of the site; considered the constraints specified; evaluated the effects of other contractors who may be on the site; and has taken these and other relevant factors bearing on the progress of the work into account.

#### ARTICLE 14 - LAWS AND REGULATIONS

##### 14.1 Compliance with Laws and Regulations

14.1.1 Applicable laws, rules, regulations and ordinances of the Federal Government, the State of Minnesota and municipalities, or other authorities, with jurisdiction over the construction of the Project shall be complied with.

#### ARTICLE 15 - WAGES

##### 15.1 Minimum Wage Rates

15.1.1 The attention of bidders is drawn to the Regents' policy on minimum wages, as specified under Article 16 of the General Conditions of the Contract.

#### ARTICLE 16 - EQUAL EMPLOYMENT OPPORTUNITY

##### 16.1 University Policy on Equal Employment Opportunities and Affirmative Action

16.1.1 It is the policy of the Regents of the University of Minnesota to promote equal opportunity of employment without discrimination based on race, creed, color, sex, or national origin. Henceforth, the Regents will require that all Contractors with the University, including suppliers supplying goods or services to it, regardless of where located or the form of the contractual relationship, be equal opportunity employers, whose business is guided by the principle that there shall be no difference in the treatment of persons because of race, creed, color, sex, or national origin. The Regents will also require that the Contractor take affirmative action to ensure implementation of this policy, such action to include but not to be limited to the following: employment, upgrading, demotion, or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training including apprenticeship.

16.1.2 The attention of bidders is drawn to the Equal Employment Opportunity Requirements under Article 15 of the General Conditions of the Contract.

16.1.3 Monthly reports will be required of the Contractor from the start of the Project until completion.

## 16.2 Affirmative Action Plan

16.2.1 The Affirmative Action Plan is required of successful Contractors only and shall follow the specified requirements and the guidelines required by the University's Affirmative Action Officer, the State of Minnesota's Equal Employment Opportunity Officer and interested Federal Agencies. If a bidder has a question or needs assistance they may contact the University's Office of Equal Opportunity, Room 419, Morrill Hall, on the Minneapolis Campus, 373-7969.

- - -

SECTION A3

BID FORM - FOR LUMP SUM CONTRACTS  
(Combined Form for all Contract Divisions)

TO THE: REGENTS OF THE  
UNIVERSITY OF MINNESOTA  
MINNEAPOLIS, MINNESOTA

PROPOSAL FOR \_\_\_\_\_  
(contract division)

ATTENTION: ROBERT JAMES  
PURCHASING AGENT  
2610 UNIVERSITY AVENUE  
ST. PAUL, MINNESOTA 55114

PROJECT: UNIT F OF THE  
HEALTH SCIENCES EXPANSION  
PHARMACY AND NURSING FACILITY  
LOCATION: MINNEAPOLIS, MINNESOTA

DATE: \_\_\_\_\_

(1) Bid of \_\_\_\_\_  
(Firm name - hereinafter referred to as the "Bidder")

(2) The Bidder, in compliance with Advertisement for Bids, hereby submits the following Bid for the Unit F-Pharmacy and Nursing Facility, HEALTH SCIENCES EXPANSION, MINNEAPOLIS, MINNESOTA, PROJECT NUMBERS MINN. BHRD-HP-5C-063 and BHRD-NU-5C-077.

(3) The Bidder agrees to accomplish the Work in strict compliance with the drawings, specifications and Contract Documents, dated August 15, 1978, prepared by The Architects Collaborative, Inc., and Health Sciences Architects and Engineers, Inc.

(4) The Bidder, having examined the drawings, specifications and related documents, visited and examined the site of the proposed work, and being familiar with all of the conditions surrounding the construction of the proposed Project including the availability of materials and labor, hereby proposes to furnish all labor, materials, services and supplies, and to accomplish the Work for which this Bid is submitted, in accordance with the Contract Documents, within the time set forth therein, and at the prices stated below. These prices are to cover all expenses incurred in performing the work required under the Contract Documents, of which this Bid is a part.

(5) Addenda: The Bidder hereby acknowledges that Addendum instructions numbered \_\_\_\_\_ have been received and/or the requirements therein have been incorporated in this Bid.

(6) Completion of Work: The Bidder hereby agrees to commence work under this Contract on or before the time stipulated in the written "Notice to Proceed" in accordance with the General Conditions, and to complete all Work under this Contract on or before the dates specified in Specification Section 01200 and other provisions of the Contract Documents.

(7) In completing this Bid, the Bidder shall complete the Bid in both words and figures. Should any Alternate Proposal result in no difference in cost, the Bidder shall write "NO CHANGE" for the Alternate. The Bidder shall submit a bid or "No Change" for each Alternate listed under his Contract Division. Refer to Section 01100 - Alternates.

(8) BIDDER NOTE: WITH THIS PAGE SUBMIT THE APPROPRIATE FOLLOWING PAGES OF THIS BID FORM AND PAGES A3-9 and A3-10.

(8G) GENERAL CONSTRUCTION BID (G)

BASE BID G: Bidder agrees to perform all of the General Construction Work for the  
sum of: \_\_\_\_\_

\_\_\_\_\_ \$ \_\_\_\_\_

ALTERNATE G-3: Omit one (1) passenger elevator, No. 4. DEDUCT \_\_\_\_\_

\_\_\_\_\_ \$ \_\_\_\_\_

ALTERNATE G-4: Omit rolling metal shelves, Equipment Item M891. DEDUCT \_\_\_\_\_

\_\_\_\_\_ \$ \_\_\_\_\_

ALTERNATE G-5: Omit oven/dryer/sterilizer, Equipment Item L286. DEDUCT \_\_\_\_\_

\_\_\_\_\_ \$ \_\_\_\_\_

ALTERNATE G-8: Omit seventeen (17) drying ovens, Equipment Item L291. DEDUCT \_\_\_\_\_

\_\_\_\_\_ \$ \_\_\_\_\_

ALTERNATE G-9: Omit certain laboratory fume hoods. DEDUCT \_\_\_\_\_

\_\_\_\_\_ \$ \_\_\_\_\_

ALTERNATE G-10: Omit laminar flow hood in Room 9-129. DEDUCT \_\_\_\_\_

\_\_\_\_\_ \$ \_\_\_\_\_

ALTERNATE G-12: Omit Environmental Room 9-111. DEDUCT \_\_\_\_\_

\_\_\_\_\_ \$ \_\_\_\_\_

ALTERNATE G-13: Omit all wall-mounted aneroids (sphygmomanometers), Equipment Item  
M427. DEDUCT \_\_\_\_\_

\_\_\_\_\_ \$ \_\_\_\_\_

ALTERNATE G-14: Omit certain folding partitions. DEDUCT \_\_\_\_\_

\_\_\_\_\_ \$ \_\_\_\_\_

ALTERNATE G-15: Omit interior brick pavers. Provide vinyl asbestos tile instead.

DEDUCT \_\_\_\_\_

\_\_\_\_\_ \$ \_\_\_\_\_

ALTERNATE G-16: Omit certain plastic laminate casework. DEDUCT \_\_\_\_\_  
\$ \_\_\_\_\_

ALTERNATE G-17: Omit all student lockers on Floor 1. DEDUCT \_\_\_\_\_  
\$ \_\_\_\_\_

ALTERNATE G-18: Omit certain metal laboratory casework. DEDUCT \_\_\_\_\_  
\$ \_\_\_\_\_

ALTERNATE G-19: Omit certain interior precast concrete panels. DEDUCT \_\_\_\_\_  
\$ \_\_\_\_\_

ALTERNATE G-20: Omit certain site work south of building. DEDUCT \_\_\_\_\_  
\$ \_\_\_\_\_

ALTERNATE G-21: Omit greenhouse, potting room and related equipment. DEDUCT \_\_\_\_\_  
\$ \_\_\_\_\_

ALTERNATE G-22: Omit casework, fume hoods and equipment from four (4) Pharmacy  
Graduate Laboratories. DEDUCT \_\_\_\_\_  
\$ \_\_\_\_\_

ALTERNATE G-23: Omit environmental Room 9-144. DEDUCT \_\_\_\_\_  
\$ \_\_\_\_\_

ALTERNATE G-24: Omit certain individual Nursing Offices on Floor 6. Complete area as  
an open office space. DEDUCT \_\_\_\_\_  
\$ \_\_\_\_\_

ALTERNATE G-25: Omit suite of rooms on Floor 9 for Nursing Research Laboratory. Complete  
as an open area for future use. DEDUCT \_\_\_\_\_  
\$ \_\_\_\_\_

ALTERNATE G-26: Omit suite of rooms on Floor 2 for Nursing Research. Complete as an open research office area. DEDUCT \_\_\_\_\_

\_\_\_\_\_ \$ \_\_\_\_\_

ALTERNATE G-27: Omit suite of rooms on Floor 5 for Pharmacy Educational Development, complete as an open office area. DEDUCT \_\_\_\_\_

\_\_\_\_\_ \$ \_\_\_\_\_

MATERIAL ALTERNATE A: Substitute Corbin locksets for specified locksets.

(DEDUCT)(ADD)(Strike one) \_\_\_\_\_

\_\_\_\_\_ \$ \_\_\_\_\_

MATERIAL ALTERNATE B: Substitute Russwin locksets for specified locksets.

(DEDUCT)(ADD)(Strike one) \_\_\_\_\_

\_\_\_\_\_ \$ \_\_\_\_\_

MATERIAL ALTERNATE C: Substitute recessed pulls for specified pulls on all metal laboratory casework. (DEDUCT)(ADD)(Strike one) \_\_\_\_\_

\_\_\_\_\_ \$ \_\_\_\_\_

-----



8M) MECHANICAL CONSTRUCTION BID (M)

BASE BID M: Bidder agrees to perform all of the Mechanical Construction Work for the  
sum of: \_\_\_\_\_  
\_\_\_\_\_ \$ \_\_\_\_\_

ALTERNATE M-1: Substitute low pressure chiller system for specified chiller system.  
DEDUCT: \_\_\_\_\_  
\_\_\_\_\_ \$ \_\_\_\_\_

ALTERNATE M-2: Omit heat recovery coil and control package. DEDUCT \_\_\_\_\_  
\_\_\_\_\_ \$ \_\_\_\_\_

ALTERNATE M-6: Omit Nursing Laboratory vacuum system. DEDUCT \_\_\_\_\_  
\_\_\_\_\_ \$ \_\_\_\_\_

ALTERNATE M-9: Omit mechanical work related to certain fume hoods. DEDUCT \_\_\_\_\_  
\_\_\_\_\_ \$ \_\_\_\_\_

ALTERNATE M-12: Omit mechanical work related to Environmental Room 9-111.  
DEDUCT: \_\_\_\_\_  
\_\_\_\_\_ \$ \_\_\_\_\_

ALTERNATE M-16: Omit mechanical work related to certain plastic laminate casework.  
DEDUCT \_\_\_\_\_  
\_\_\_\_\_ \$ \_\_\_\_\_

ALTERNATE M-18: Omit mechanical work related to certain metal laboratory casework.  
DEDUCT \_\_\_\_\_  
\_\_\_\_\_ \$ \_\_\_\_\_

ALTERNATE M-21: Omit mechanical work related to Greenhouse, Potting Room and related  
equipment. DEDUCT \_\_\_\_\_  
\_\_\_\_\_ \$ \_\_\_\_\_

ALTERNATE M-22: Omit mechanical work related to casework, fume hoods and equipment in four (4) graduate laboratories. DEDUCT \_\_\_\_\_  
\$ \_\_\_\_\_

ALTERNATE M-23: Omit mechanical work related to Environmental Room 9-144. DEDUCT \_\_\_\_\_  
\$ \_\_\_\_\_

ALTERNATE M-24: Omit mechanical work related to Nursing Offices on Floor 6.  
DEDUCT \_\_\_\_\_  
\$ \_\_\_\_\_

ALTERNATE M-25: Omit mechanical work related to Nursing Research Area on Floor 9.  
DEDUCT \_\_\_\_\_  
\$ \_\_\_\_\_

ALTERNATE M-26: Omit mechanical work related to Nursing Research Area on Floor 2.  
DEDUCT \_\_\_\_\_  
\$ \_\_\_\_\_

ALTERNATE M-27: Omit mechanical work related to Pharmacy Educational Development Area on Floor 5. DEDUCT \_\_\_\_\_  
\$ \_\_\_\_\_

(8E) ELECTRICAL CONSTRUCTION BID (E)

BASE BID E: Bidder agrees to perform all of the Electrical Construction Work for the sum of: \_\_\_\_\_

\_\_\_\_\_ \$ \_\_\_\_\_

ALTERNATE E-1: Add certain electrical work related to low pressure chiller and pumps.

ADD \_\_\_\_\_

\_\_\_\_\_ \$ \_\_\_\_\_

ALTERNATE E-2: Omit electrical work related to heat recovery coil control system.

DEDUCT \_\_\_\_\_

\_\_\_\_\_ \$ \_\_\_\_\_

ALTERNATE E-3: Omit electrical work related to passenger elevator No. 4. DEDUCT \_\_\_\_\_

\_\_\_\_\_ \$ \_\_\_\_\_

ALTERNATE E-5: Omit electrical work related to Equipment Item L286. DEDUCT \_\_\_\_\_

\_\_\_\_\_ \$ \_\_\_\_\_

ALTERNATE E-7: Omit nurses' call system. DEDUCT \_\_\_\_\_

\_\_\_\_\_ \$ \_\_\_\_\_

ALTERNATE E-9: Omit electrical work related to certain fume hoods. DEDUCT \_\_\_\_\_

\_\_\_\_\_ \$ \_\_\_\_\_

ALTERNATE E-11: Modify lighting system in certain nursing areas.

DEDUCT \_\_\_\_\_

\_\_\_\_\_ \$ \_\_\_\_\_

ALTERNATE E-12: Omit certain electrical work related to Environmental Room 9-111.

DEDUCT \_\_\_\_\_

\_\_\_\_\_ \$ \_\_\_\_\_

ALTERNATE E-16: Omit electrical work related to certain plastic laminate casework.

DEDUCT \_\_\_\_\_  
\_\_\_\_\_ \$

ALTERNATE E-18: Omit electrical work related to certain metal laboratory casework.

DEDUCT \_\_\_\_\_  
\_\_\_\_\_ \$

ALTERNATE E-20: Omit exterior lighting south of grid 10. DEDUCT \_\_\_\_\_

\_\_\_\_\_ \$

ALTERNATE E-21: Omit electrical work related to Greenhouse Potting Room and related equipment. DEDUCT \_\_\_\_\_

\_\_\_\_\_ \$

ALTERNATE E-22: Omit certain electrical work related to four (4) Graduate Laboratories.

DEDUCT \_\_\_\_\_  
\_\_\_\_\_ \$

ALTERNATE E-24: Omit certain electrical work related to Nursing Offices on Floor 6.

DEDUCT \_\_\_\_\_  
\_\_\_\_\_ \$

ALTERNATE E-25: Omit certain electrical work related to Nursing Research Area on Floor 9. DEDUCT \_\_\_\_\_

\_\_\_\_\_ \$

ALTERNATE E-26: Omit certain electrical work related to Nursing Research Area on Floor 2. DEDUCT \_\_\_\_\_

\_\_\_\_\_ \$

ALTERNATE E-27: Omit certain electrical work related to Pharmacy Educational Development Area on Floor 5. DEDUCT \_\_\_\_\_

\_\_\_\_\_ \$

(9) Bid Security: The Bidder submits the attached Bid Security in the form of a Certified Check, Cashier's Check or Bid Bond, in accordance with the instructions to Bidders, drawn to the order of the Regents of the University of Minnesota. The Bidder acknowledges the Bid Security may be retained by the University as specified in the Instructions to Bidders and agrees if the Bidder defaults in executing the Contract within the time set forth, or in furnishing the Performance Bond as specified, the check will become the property of the University (or the Surety will pay the University in the amount of the bond) as liquidated damages for the delay and additional expense to the Owner caused thereby.

(10) Holding of Bids: The Bidder agrees this Bid shall be good and may not be withdrawn for forty five (45) days after the scheduled time and date for receiving bids, except that Alternate Bids shall be good and the work omitted by any accepted alternate may be ordered reinstated by the University at any time up to one hundred twenty (120) days after the scheduled time and date for receipt of bids.

(11) Acceptance of Bids: An Award of Contract will be made to the responsible bidder, responsive to all bid conditions submitting the lowest acceptable bid, being the sum of a base bid plus any elected alternates. Upon receipt of notice of award of a Contract (acceptance of this Bid) the Bidder will execute the Agreement, in the specified form, within 10 days thereafter and to deliver a Contractor's Performance Bond, in the stipulated Form, in accordance with Article 8 of the Instructions to Bidders and Paragraph 7.5 of the General Conditions.

(12) Informalities: It is understood by the Bidder the University reserves the right to waive informalities in bids received and minor discrepancies in bidding procedure.

(13) Certification for Equal Opportunity  
and Affirmative Action:

(Must be Signed by Bidder)

The bidder hereby certifies that all of the specified requirements for Equal Opportunity and Affirmative Action, General Conditions Article 15, will be fully complied with, as stated, for this project.

\_\_\_\_\_  
(Signed) \_\_\_\_\_, Title

(14) Information about Bidder:

If a Corporation, incorporated in the State of \_\_\_\_\_

Qualified to conduct business in the State of Minnesota? \_\_\_\_\_

If a Partnership, full names of all Partners are \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

15) Respectfully submitted:

Correct and full name of Bidder

Name \_\_\_\_\_

Address \_\_\_\_\_

By \_\_\_\_\_ Title \_\_\_\_\_

By \_\_\_\_\_ Title \_\_\_\_\_

(Affix Corporate Seal if bid is by a corporation)

Date \_\_\_\_\_



AIA Document A310

**Bid Bond**

KNOW ALL MEN BY THESE PRESENTS, that we

as Principal, hereinafter called the Principal, and

a corporation duly organized under the laws of the State of  
as Surety, hereinafter called the Surety, are held and firmly bound unto

as Obligee, hereinafter called the Obligee, in the sum of

Dollars (\$ \_\_\_\_\_ ),

for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a bid for

NOW, THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a Contract with the Obligee in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such Contract and give such bond or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the Work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

Signed and sealed this \_\_\_\_\_ day of \_\_\_\_\_ 19\_\_\_\_

	}	(Principal)	(Seal)
(Witness)		(Title)	
	}	(Surety)	(Seal)
(Witness)		(Title)	

## PART 1: GENERAL

1.1 INFORMATION FOR BIDDERS

- A. This section provides information for the use of Bidders in evaluating the time requirements of the project as a convenience during the bidding period. Taken in total, the Preliminary Construction Schedule shall not be construed as placing any detailed time constraints on the Contractor(s) and shall not be interpreted as contractual except that events identified in the Schedule Report bound herein as "Milestone Dates", activities no. M1 through M7, are essential conditions of the Contract.
- B. Milestone dates are the only details of the Preliminary Construction Schedule which are Contractual, but they will be adjusted in cooperation with the University, other Contractors and the Schedule Manager as provided for in Section 01310.
- C. In preparing bids, each bidder should be guided by the entire Preliminary Construction Schedule and, within the general detail contained herein and on the PDM network bound with the drawings, should plan his construction strategy and manning tables so as to be able to reach the milestone events on the specified dates, considering such strategy and required manning in the Bid Amount.
- D. When Contractor(s)' planned schedules are used to develop the Preliminary Schedule into the Initial Schedule, then Contract Schedule, milestone dates specified herein will change or milestone event will be superseded by new milestone events according to changes in construction strategy or manning dictated by Contractor(s)', Schedule Manager's and University's cooperative scheduling effort as finalized in the Contract Schedule. Refer to Section 01310, Construction Schedule.
- E. Refer to Section 01200 Contract Time/Coordination for additional constraints to schedule and for substantial and final completion dates.

SEE FOLLOWING PAGES.

- - -



SELECTION-  
LAST OBSERVATION DATE 01NOV78

SCHEDULE REPORT  
UNIVERSITY OF MINNESOTA UNIT F  
MILESTONE DATES

SCRT-LVL2A

ES AES ATF A

PAGE 001

ACTIVITY NUMBER	LCC	DESCRIPTION	CLR	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT	SCHED START	SCHED FINISH	TARGET DATE	FLAG
M1	BSMT-3RD	STEEL & DECK COMPLETE	C	18DEC78	18DEC78			0				
M2	SITE	BACKFILL COMPLETE	0	21MAY79	21MAY79			0				
M4	BSMT-PAT	TEMP PASS ELEV COMPLETE	C	24AUG79	24AUG79	18SEP79	18SEP79	16				
M3	BSMT-PAT	TEMP FRGT ELEV COMPLETE	C	25AUG79	25AUG79	18SEP79	15SEP79	14				
M6	BSMT-RF	BUILDING ENCLCSEC	C	18SEP79	18SEP79			0				
M5	10TH-PNT	ROUGH-IN COMPLETE	C	26NOV79	26NOV79	07JAN80	07JAN80	28				
M7	PROJECT	USER OCCUPANCY	C	02SEP80	02SEP80			0	02SEP80			

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SELECTION-  
LAST OBSERVATION DATE 01NOV78

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UNIVERSITY OF MINNESOTA UNIT F

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SUMMARY ACTIVITIES

ACTIVITY NUMBER	LOC	DESCRIPTION	CLR	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT	SCHED START	SCHED FINISH	TARGET DATE	FLAG
7005	BSMT-3RD	ERECT STEEL & DECK	32	01NOV78	15DEC78			0				
7010	BSMT	UNDERSLAB ROUGH-IN	22	30NOV78	31DEC78	14DEC78	15JAN79	10				
7020	3RD-PNTH	ERECT STEEL & DECK	126	06DEC78	01JUN79			0				
7015	BSMT-3RD	PERIMETER CONC'R FND WALL	31	08DEC78	22JAN79	29DEC78	09FEB79	14				
7025	BSMT	SLAB ON GRADE & PITS	12	22DEC78	09JAN79	08JAN79	23JAN79	10				
7070	1ST FL	CAST IN PLACE SLAB	26	04JAN79	08FEB79	18JAN79	22FEB79	10				
7090	2ND FL	CONCRETE FILL SLAB	7	23JAN79	31JAN79	06FEB79	14FEB79	10				
7090	3RD FL	FILL,CIP,PLAZA FILL SLAB	12	29JAN79	13FEB79	12FEB79	27FEB79	10				
7075	1ST FL	ROUGH-IN GEN,ELEC,MECH	48	30JAN79	05APR79	16FEB79	24APR79	13				
7100	4TH FL	CONCRETE FILL SLAB	9	14FEB79	26FEB79	28FEB79	12MAR79	10				
7095	2ND FL	ROUGH-IN GEN,ELEC,MECH	48	15FEB79	23APR79	06MAR79	10MAY79	13				
7110	5TH FL	CONCRETE FILL SLAB	10	27FEB79	12MAR79	13MAR79	26MAR79	10				
7095	3RD FL	ROUGH-IN GEN,ELEC,MECH	65	05MAR79	04JUN79	22MAR79	21JUN79	13				
7120	6TH FL	CONCRETE FILL SLAB	12	13MAR79	28MAR79	27MAR79	11APR79	10				
7105	4TH FL	ROUGH-IN GEN,ELEC,MECH	60	23MAR79	15JUN79	11APR79	05JUL79	13				
7130	7TH FL	CONCRETE FILL SLAB	12	29MAR79	13APR79	12APR79	27APR79	10				
7030	SITE	BKFL FND & ENGR FILL	35	02APR79	19MAY79			0	02APR79			
7140	8TH FL	FILL/CAST IN PLACE SLAB	16	11APR79	02MAY79	25APR79	16MAY79	10				
7115	5TH FL	ROUGH-IN GEN,ELEC,MECH	55	12APR79	28JUN79	01MAY79	18JUL79	13				
7035	3RD-PNTH	ERECT EXT PRECAST PANELS	65	16APR79	17JUL79			0				
7065	BSMT	ROUGH-IN GEN,ELEC,MECH	145	16APR79	07NOV79	19JUN79	14JAN80	45	16APR79			
7150	5TH FL	FILL/CAST IN PLACE SLAB	18	27APR79	22MAY79	11MAY79	06JUN79	10				
7125	6TH FL	ROUGH-IN GEN,ELEC,MECH	55	02MAY79	19JUL79	21MAY79	07AUG79	13				
7160	10TH-PNT	FILL/CIP SLAB FL & RCCF	23	17MAY79	19JUN79	01JUN79	03JUL79	10				
7255	SITE	PROVIDE STAGING AREA	327	21MAY79	29AUG80			0				
7135	7TH FL	ROUGH-IN GEN,ELEC,MECH	55	22MAY79	08AUG79	11JUN79	27AUG79	13				
7060	3RD-10TH	EXT FRAMES & GLAZING	75	29MAY79	12SEP79	01JUN79	17SEP79	3				
7270	BLEC A	ROUGH-IN AUDITORIUM	40	06JUN79	01AUG79	28JUN79	23AUG79	16	06JUN79	23AUG79		
7275	BSMT-PNT	TEMP FREIGHT ELEVATOR	55	11JUN79	27AUG79	29JUN79	17SEP79	14				
7145	8TH FL	ROUGH-IN GEN,ELEC,MECH	65	12JUN79	12SEP79	29JUN79	01OCT79	13				
7250	BSMT-PNT	TEMP PASSENGER ELEVATOR	50	14JUN79	23AUG79	09JUL79	17SEP79	16				
7050	3RD-PNTH	EXTERIOR CAULKING	54	22JUN79	07SEP79	02JUL79	17SEP79	6				
7055	3RD-6TH	EXTERIOR METAL SCFFITS	30	26JUN79	07AUG79	06AUG79	17SEP79	28				
7175	RCCF	DUCT ENCL & GREENHOUSE	30	05JUL79	15AUG79			0				
7155	9TH FL	ROUGH-IN GEN,ELEC,MECH	70	27JUL79	02NOV79	15AUG79	21NOV79	13				
7180	RCCF	RCCFING & FLASHING	33	01AUG79	17SEP79			0				
7165	10TH-PNT	ROUGH-IN GEN,ELEC,MECH	50	14SEP79	23NOV79	24OCT79	04JAN80	28				
7195	1ST FL	FINISH GEN,ELEC,MECH	45	18SEP79	19NOV79			0				
7190	BSMT	FINISH GEN,ELEC,MECH	190	03OCT79	16JUN80	06DEC79	19AUG80	45				
7200	2ND FL	FINISH GEN,ELEC,MECH	45	05OCT79	07DEC79			0				
7205	9TH FL	FINISH GEN,ELEC,MECH	60	29OCT79	23JAN80			0				

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SELECTION-  
 LAST OBSERVATION DATE 01NCV78

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UNIVERSITY OF MINNESOTA UNIT F  
 SUMMARY ACTIVITIES

ACTIVITY NUMBER	LDC	DESCRIPTION	CLR	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT	SCHED START	SCHED FINISH	TARGET DATE	FLAG
7170	10TH-PNT	FINISH GEN,ELEC,MECH	16C	26NOV79	10JUL80	07JAN80	19AUG80	28				
7210	8TH FL	FINISH GEN,ELEC,MECH	6C	29NOV79	22FEB80			0				
7215	7TH FL	FINISH GEN,ELEC,MECH	5C	08JAN80	17MAR80			0				
7220	6TH FL	FINISH GEN,ELEC,MECH	5C	11FEB80	18APR80			0				
7040	SITE	PLAZA, WALKS & STAIRS	6C	14MAR80	06JUN80	24MAR80	16JUN80	6	15MAR80			
7225	5TH FL	FINISH GEN,ELEC,MECH	45	20MAR80	21MAY80			0				
7230	4TH FL	FINISH GEN,ELEC,MECH	5C	22APR80	01JUL80			0				
7235	3RD FL	FINISH GEN,ELEC,MECH	6C	27MAY80	19AUG80			0				
7045	SITE	LANDSCAPING BY OWNER	45	09JUN80	11AUG80	17JUN80	19AUG80	6				
7240	BSMT-PNT	PUNCH LIST	13	13AUG80	29AUG80			0				

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NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246).

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.

2. The goals and timetables for female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

Timetables	Goals for female participation in each trade (percent)
From April 1, 1978 until March 31, 1979	3.1

The goals and timetables for minority participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area are as follows:

Timetables	Goals for minority participation in each trade (percent)
From April 1, 1978 until March 31, 1979	3.1

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specified affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3 (a), and its efforts to meet the goals established for the geographical area where the contract resulting from this solicitation is to be performed. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the contract is to be performed.

This Agreement, made this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_,

by and between

(hereinafter designated the Contractor), and the Regents of the University of Minnesota (hereinafter designated the Owner),

Witnesseth, that the Contractor in consideration of the agreements herein made by the Owner, agrees with the said Owner as follows:

ARTICLE I. The Contractor shall and will provide all the materials and perform all the work for the

as shown on the drawings and described in the specifications prepared by the Owner's authorized representatives which drawings and specifications are a part of this contract.

ARTICLE II. It is understood and agreed by and between the parties hereto that the work included in this contract is to be done under the direction of the Owner's authorized representatives.

It is further understood and agreed by the parties hereto that any and all drawings and specifications prepared for the purposes of this contract are and remain the property of the Owner, and that all charges for the same and for all services in connection therewith are to be paid by said Owner.

ARTICLE III. No changes shall be made in the work except upon written order of the Owner through its authorized representatives; the amount to be paid by the Owner or allowed by the Contractor by virtue of such changes to be stated in said order.

ARTICLE IV. The Contractor shall provide sufficient, safe and proper facilities at all times for the inspection of the work by the authorized representatives of the Owner and shall, after receiving written notice to that effect, proceed to remove from the grounds or buildings all materials condemned by them, whether worked or unworked, and to take down all portions of the work which, by like written notice, condemn as unsound or improper, or as in any way failing to conform to the drawings and specifications, and shall make good all work damaged or destroyed thereby.

ARTICLE V. <sup>Refer to the General Conditions of the Contract, Paragraphs 3.5 and 14.</sup> ~~Should the Contractor at any time refuse or neglect to supply a sufficient number of skilled workmen, or sufficient material of proper quality, or fail in any respect to prosecute the work with promptness and diligence, or fail in the performance of any of the agreements herein contained, such refusal, neglect or failure being certified by the authorized representatives of the Owner, they shall be at liberty, after written notice to the Contractor, to provide any such labor or material, and to deduct the cost thereof from any money then due or thereafter to become due to the Contractor under this contract; and if the authorized representatives of the Owner shall certify that such refusal, neglect or failure is sufficient ground for such action, they shall also be at liberty to terminate the employment of the Contractor for the said work and to enter upon the premises and take possession for the purpose of completing the work included under this contract, of all material, tools, and appliances thereon, and to employ any other person or persons to finish the work, and to provide the material therefore; and in case of such discontinuance of the employment of the Contractor, he shall not be entitled to receive any further payment under this contract until the said work shall be wholly finished, at which time, if the unpaid balance of the amount to be paid under this contract shall exceed the expense incurred by the Owner in finishing the work, such excess shall be paid by the Owner to the Contractor; but if such expense shall exceed such unpaid balance, the Contractor shall pay the difference to the Owner. The expense incurred by the Owner, as herein provided either for furnishing material or for finishing the work, and any damage incurred through such default shall be audited and certified by the authorized representatives of the Owner, whose certificate thereof shall be conclusive upon the parties.~~

ARTICLE VI. The Contractor shall complete the several portions, and the whole of the work comprehended in this agreement by and at the time or times hereinafter stated, to-wit:

time being of the essence of this contract.

Subject to the conditions of Article 8 of the General Conditions,  
ARTICLE VII. /Should the Contractor be delayed in the prosecution or completion of the work by the act, neglect or default of the Owner, or of any other Contractor employed by the Owner upon the work, or by any damage caused by fire or other casualty for which the Contractor is not responsible, or by combined action of workmen in no wise caused by or resulting from default or collusion on the part of the Contractor, then the time herein fixed for the completion of the work shall be extended for a period equivalent to the time lost by reason of any or all the causes aforesaid, which extended period shall be determined and fixed by the authorized representatives of the Owner, but no such allowance shall be made unless a claim therefore is presented in writing to the authorized representatives of the Owner within the time specified of the occurrence of such delay.

ARTICLE VIII. It is hereby mutually agreed between the parties hereto that the sum to be paid by the Owner to the Contractor for said work and material shall be

subject to additions and deductions as herein provided, and that such sum shall be paid by the Owner to the Contractor in current funds and only upon certificates of the authorized representatives of the Owner as follows:

Except as otherwise specified in the Contract Documents, Ninety (90) percent of the actual cash value of all labor performed and material furnished in place each calendar month shall be paid on proper vouchers during the next succeeding calendar month, and the balance upon the full completion of the job. Except as otherwise specified in the contract documents.

If, at any time, there shall be evidence of any claim for which, if established, the Owner of the said premises might become liable, and which is an obligation chargeable to the Contractor, the Owner shall have the right to retain out of any payment then due or thereafter to become due an amount sufficient to completely indemnify it against such claim. Should there prove to be any such claim after all payments are made, the Contractor shall refund to the Owner all monies that the latter may be compelled to pay in discharging any claim in consequence of the Contractor's default.

It is further stipulated and agreed that out of any retained amounts, the Owner may at his option pay, in whole or in part, any just claim against the Contractor for labor or material furnished him by persons not parties hereto, where such labor or material has been expended in the carrying out of work covered by this agreement.

ARTICLE IX. It is further mutually agreed between the parties hereto that no certificate given or payment made under this contract, shall be conclusive evidence of the performance of this contract, either wholly or in part, and that no payment shall be construed to be an acceptance of defective work or improper materials.

ARTICLE X. The Owner, through its authorized representatives, has the power and duty to decide all questions as to the due performance of this contract.

The said parties, for themselves, their heirs, successors, executors, administrators and assigns, do hereby agree to the full performance of the covenants herein contained.

In Witness Whereof, the parties have hereunto set their hands and seals the day and year first above written, and caused these presents to be executed in their behalf by the Vice President for Finance and Development of the University of Minnesota and the Contractor by its \_\_\_\_\_

In the presence of:

_____	Witness	_____	Contractor
_____	Witness	_____	Contractor

REGENTS OF THE UNIVERSITY OF MINNESOTA

By \_\_\_\_\_  
Vice President for Finance and Development

Recommended by:

_____	Date
Assistant Vice President, Physical Planning	
_____	Date
Director of Purchasing and Stores	
_____	Date
University Attorney	

# AGREEMENT

BETWEEN

Co:

AND

FOR

AMOUNT OF CONTRACT

\$



KNOW ALL MEN BY THESE PRESENTS, That we, the undersigned

(Corporate or firm name of contractor)

of

(Address of contractor)

a corporation,° organized and existing under the laws of the State of \_\_\_\_\_, partnership,° individual,° duly authorized by law to do business as a construction contractor in the State of Minnesota, hereinafter called the "Principal," and \_\_\_\_\_

(Corporate name of surety)

of

(Address of surety)

a corporation organized and existing under the laws of the State of \_\_\_\_\_, and duly authorized to do a surety business under the laws of the State of Minnesota, hereinafter called the "Surety," are held and firmly bound unto *Regents of the University of Minnesota*, hereinafter called the "Obligee," in the penal sum of

(Amount of contract price)

Dollars (\$ \_\_\_\_\_),

lawful money of the United States, for the payment of which well and truly to be made unto said Obligee, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents, as follows:

The conditions of this obligation are such that, whereas on the \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, the said Principal entered into a written Contract with said Obligee for the construction of \_\_\_\_\_

(Brief description of work to be done)

located at \_\_\_\_\_ as set forth in detail in the advertisement for bids, general conditions, information for bidders, proposal, plans and specifications, and other related contract documents referred to in said Contract, all of which are hereby made a part hereof, and by reference incorporated herein.

Now, THEREFORE, If the said Principal shall well and truly perform and complete said project in strict accordance with said Contract, advertisement for bids, general conditions, information for bidders, proposal, plans, specifications and related documents; shall comply with all the requirements of the Laws of the State of Minnesota; shall pay as they become due all just claims for work, tools, machinery, skill materials, insurance premiums, equipment and supplies, for the completion of the Contract in accordance with its terms; and shall defend, indemnify and save harmless said Obligee against any and all liens, encumbrances, damages, claims, demands, expenses, costs and charges of every kind, including patent infringement claims, except as otherwise provided in said specifications and other contract documents, arising out of or in relation to the performance of said work and the provisions of said Contract, then this Bond shall be void, otherwise it shall remain in full force and effect.

This obligation is made for the use of the Obligee and of all persons doing work or furnishing skill, tools, machinery or materials, or insurance premiums, or equipment, or supplies for any camp maintained for the feeding or keeping of men or animals, or any combination thereof, engaged under or for the purpose of the execution of said Contract and may be sued on thereby.

The said Surety, for value received, hereby stipulates and agrees that no assignment, modification or change, extension of time for completion, alteration or addition to the terms of said Contract or to the work to be performed thereunder or the specifications accompanying the same, shall in any wise affect its obligations on this Bond or release the Surety, and it does hereby waive notice of any such change, extension of time for completion, alteration or addition to the terms of the Contract as to the work or to the specifications.

IN TESTIMONY WHEREOF, the parties hereunto have caused the execution hereof in \_\_\_\_\_ original counterparts as of the \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_.

(Seal, if any)

Attest (or countersigned):

(Name of contractor)

Principal

By

(Title)

(Title)

(Seal)

Attest (or countersigned):

(Name of surety)

Surety

By

(Title)

(Title)

\* Omit inapplicable terms.

County of \_\_\_\_\_ } ss.

On this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, before me personally appeared \_\_\_\_\_ to me known to be the person—described in and who executed the foregoing instrument, and acknowledged that \_\_\_\_\_ executed the same as \_\_\_\_\_ free act and deed.

My Commission expires \_\_\_\_\_

(Acknowledgment by Corporation)

STATE OF MINNESOTA, } ss.  
County of \_\_\_\_\_

On this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, before me appeared \_\_\_\_\_ to me personally known, who, being by me duly sworn, did say that he is the \_\_\_\_\_ of \_\_\_\_\_, corporation, and that the seal affixed to the foregoing bond is the corporate seal of said corporation, and that said bond was executed in behalf of said corporation by authority of its Board of Directors, and said \_\_\_\_\_ acknowledged said instrument to be the free act and deed of said corporation.

My Commission expires \_\_\_\_\_

(Justification by Sureties)

STATE OF MINNESOTA, } ss.  
County of \_\_\_\_\_

being each duly sworn, did each for himself depose and say that he is a resident and freeholder of the State of Minnesota and one of the sureties on the foregoing bond, and that he is worth the sum hereinafter set opposite his name over and above his debts and liabilities, and property exempt from execution.

Sworn to and subscribed before me }  
this \_\_\_\_\_ day of }  
\_\_\_\_\_ 19\_\_\_\_ }

\_\_\_\_\_  
\$ \_\_\_\_\_  
\_\_\_\_\_  
\$ \_\_\_\_\_  
\_\_\_\_\_  
\$ \_\_\_\_\_  
\_\_\_\_\_  
\$ \_\_\_\_\_

BOND OF

Contractor,

FOR WORK AT

The within Bond and sureties thereon approved and Bond filed \_\_\_\_\_, 19\_\_\_\_

Regents of the University of Minnesota

## DIVISION C - GENERAL CONDITIONS OF THE CONTRACT

Where any Article, Paragraph, Subparagraph or Clause of the General Conditions is modified, supplemented or deleted by other provisions of the Contract Documents, the unaltered provisions of that Article, Paragraph, Subparagraph or Clause shall remain in effect. Where provisions of the General Conditions are modified elsewhere in the Contract Documents, any references to those General Conditions provisions shall be read as referring also to the same subject matter contained elsewhere in the Contract Documents.

### ARTICLE I - THE CONTRACT DOCUMENTS

#### 1.1 Definitions

##### 1.1.1 The Contract Documents

The Contract Documents consist of the University-Contractor Agreement, the Performance Bond, the Instructions to Bidders, the Conditions of the Contract (General, Supplementary and other Conditions), the Drawings, the Specifications, all Addenda issued prior to execution of the Contract, and all Modifications thereto. A Modification is (1) a written order or amendment to the Contract signed by both parties, (2) a Change Order, (3) a written interpretation issued by the University or Architect pursuant to Subparagraph 1.2.5, or (4) a written order for a minor change in the Work issued by the University or Architect pursuant to Paragraph 12.4.

##### 1.1.2 The Contract

The Contract Documents form the Contract. The Contract represents the entire and integrated agreement between the parties hereto and supersedes all prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification as defined in Subparagraph 1.1.1, except that changes to the Contract involving the Contract Sum or Contract Time, may be made only by Change Order.

##### 1.1.3 The Work

The term Work includes all labor and services necessary to produce and fully complete the construction required by the Contract Documents, and all materials and equipment incorporated in such construction.

##### 1.1.4 The Project

The Project is the total construction designed by the Architect, or designed by others in consultation or collaboration with the Architect and included in the Contract Documents, of which the Work performed under the Contract Documents may be the whole or a part.

##### 1.1.5 The Specifications

The Specifications include all Sections of Division I, General Requirements, and all Sections of the Technical Divisions for the Project.

## 1.2 Execution, Correlation, Intent and Interpretations

1.2.1 The Agreement shall be signed in not less than triplicate by the University and Contractor. To the extent necessary, the Architect shall identify the Drawings and Specifications of the Contract Documents.

1.2.2 By executing the Contract, the Contractor represents that he has visited the site, familiarized himself with the local conditions under which the Work is to be performed, and correlated his observations with the requirements of the Contract Documents and Bidding Requirements. However, he does not represent having examined conditions that are not exposed without demolition unless the necessary demolition is specified or authorized by the University. The Contractor also represents he has examined all Contract Documents for the Project, including those intended for work or trades not normally performed by the Contractor's own forces, and has become thoroughly familiar with all conditions which may pertain to or affect the Work, and its costs, under this Contract.

1.2.3 The Contract Documents are complementary, and what is required by any one shall be as binding as if required by all. The intention of the Documents is to include all labor, materials, equipment and other items as provided in Subparagraph 4.4.1 necessary for the proper execution and satisfactory completion of the Work, including proper operating condition. For any of the Work that is shown, indicated, noted or referred to in any of the Contract Documents, or is reasonably inferable therefrom as being necessary to produce the intended results, and which is not covered under any heading, section, branch, class or trade of the specifications, shall be provided in accordance with the Architect's instructions without additional cost to the University or Architect. Should there be an inconsistency in the quality or quantity of Work required under the Contract Documents, it shall be interpreted that the greater quality or quantity of Work is required under the Contract, without increase in the Contract Sum. Words which have well-known technical or trade meanings are used herein in accordance with such recognized meanings. The Contract Documents generally do not set forth the basis and analysis of design and the Contractor shall obtain such information as may be necessary to satisfactorily perform and complete the Work.

1.2.4 The organization of the Specifications into Divisions, Sections and Articles, and the arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade, unless it is specified that a subcontract include specific phases or elements to complete a certain part of the Work for reasons of coordination or responsibility. Where the Specification has been divided into Sections, it is or convenience in use. The Architect and the University assume no responsibility for the placement of materials, equipment or other phases of the Work into the proper Division or Section of the Specifications, nor for the arrangement of Work shown on the Drawings. Neither the Architect nor the University shall be obligated to enter into any jurisdictional or other dispute as a result of the organization, arrangement or location of parts of the Work in the Specifications or Drawings, nor serve as an arbitrator to establish subcontract limits between the Contractor and any Subcontractor.

1.2.5 Written interpretations necessary for the proper execution of the Work, in the form of drawings or otherwise, will be issued with reasonable

promptness by the Architect or the University and in accordance with any schedule agreed upon. In general, requests for interpretation of design intent shall be directed to the Architect. Either party to the Contract may make written requests to the Architect for such interpretations. Other requests for interpretation shall be directed to the University, who may consult with the Architect at its discretion. Interpretations shall be consistent with and reasonably inferable from the Contract Documents. The Contractor is responsible to request interpretations and clarifications for those matters which appear to be inconsistencies, ambiguities or omissions in the Contract Documents. The Contractor shall execute the Work in accordance with the decision, clarification or interpretation provided to him.

1.2.6 Where a reference in the Contract Documents to an American Society for Testing and Materials standard, American National Standards Institute standard, Federal Specification or other recognized standard does not include the date of the standard, the edition current as of the date of the Contract Documents shall apply.

1.2.7 The general character and scope of the Work is called for by the Contract Documents. Where a portion of the Work is fully drawn and the remainder is merely indicated, the portion fully drawn shall apply to all same parts of the Work. Drawings intended primarily as information for one trade may not necessarily show the work of other trades, but this shall not be construed as indicating there are no other related materials or adjacent work.

1.2.8 Figured dimensions shall be followed in preference to measurement by scale. In the event of discrepancies between dimensions, or between drawings, the intent shall be interpreted by the Architect, which shall be binding on the Contractor. Where a dimension may be missing, the Work shall be accomplished in accordance with the directions and dimensions provided by the University or the Architect. Dimensions on drawings, as well as detail drawings themselves are subject in every case to measurements of existing, adjacent, incorporated and completed work which shall be taken by the Contractor before undertaking any work depending upon such data. Dimensions pertaining to the Work or its installation shall be verified at site by the Contractor.

1.2.9 Where the Specifications are of the abbreviated or "streamlined" type, they shall be construed as complete sentences, as shall notes on the drawings. Omission of words such as "the", "the Contractor shall", and "as shown on the drawings" is intentional. The words "shall" or "shall be" are to be supplied by inference. Imperative or directive instructions, directions or the Specifications apply to and refer to the Contractor. The words "symmetrical" and "similar" are used in the general sense and need not mean "identical." Where a number is specified (as for gauges, weights, temperatures, an amount of time, and similar references), and the specified number cannot be obtained, the number shall be interpreted as the next better, as available.

1.2.10 The Contractor shall examine all Contract Documents and use all specifications and drawings for the Project, including those that may primarily pertain to other work the Contractor normally does not perform with his own forces. The Contractor shall use all of the Project drawings and specifications: for a complete understanding of the Project and his Work; to determine the type of construction and systems; for coordination; to

to determine what other work may be involved throughout; to anticipate and notify others when their coordinated efforts will be required; and all other relevant matters related to the Project and the Contractor's Work. The Contractor shall also be bound by all the requirements to complete his Work, that are applicable to, pertain to, or affect his Work, as may be shown or reasonably inferable from the entire set of drawings and specifications.

### 1.3 Copies Furnished and Ownership

1.3.1 Unless otherwise provided in the Contract Documents, the Contractor will be furnished, free of charge, a reasonable number of copies of Drawings and Specifications, as necessary for the execution of the Work.

1.3.2 The copies of all drawings and Specifications furnished to the Contractor are and shall remain the property of the University. They are not to be used on any other project, and, with the exception of two contract sets, are to be returned to the University on request at the completion of the Work.

## ARTICLE 2 - THE ARCHITECT/ENGINEER

### 2.1 Definition

2.1.1 The Architect or Engineer is the design professional or organization whose name appears on the Contract Documents as singular in number and masculine in gender. The term Architect, or Engineer, means the Architect, or Engineer, and his authorized representatives.

2.1.2 For reference ease, the term Architect is used in the General Conditions. For Contract Documents developed by the engineering disciplines, the term Engineer shall be substituted for Architect.

2.1.3 A Consultant is any person or firm who has provided specialized design services for the Project, in consultation or collaboration with the Architect or the University and whose design services are represented in the Contract Documents. The Consultant, or his representative, shall have the authority to make decisions on his design to the extent authorized by the Architect or the University.

2.1.4 Nothing contained in the Contract Documents shall create any contractual relationship between the Architect and the Contractor.

### 2.2 Administration of the Contract

2.2.1 During construction the Architect will advise, and consult with, the University in the general administration of the Contract, to the extent required by the University, acting on behalf of the University to the extent provided by the Contract Documents or otherwise authorized by the University.

2.2.2 The Architect, and the University, shall at all times have access to the Work wherever it is in preparation and progress. The Contractor shall provide safe and convenient facilities for such access.

2.2.3 Periodically the Architect will visit the site to assist the University in the administration of the Construction Contract, to generally familiarize himself with the progress and quality of Work and to consult and advise the University on questionable matters in need of interpretation or modification.

The Architect will not be required to make continuous, detailed or exhaustive on-site observations to check the quality or quantity of the Work.

2.2.4 The Architect and the University will not be responsible for construction means, methods, techniques, progress, sequences or procedures, or for safety precautions and programs in connection with the Work, and they will not be responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents.

2.2.5 The Architect does not approve the Contractor's Request for Payment, but upon request may advise the University regarding the sums requested.

2.2.6 The Architect will, in the first instance, interpret the requirements of the Contract Documents and judge the Contractor's performance thereunder, when required by the University or the Contractor. The Architect will, within a reasonable time, render such interpretations as he may deem necessary for the proper execution or progress of the Work.

2.2.7 Claims, disputes and other matters in question between the Contractor and the University relating to the execution or progress of the Work or the interpretation of the Contract Documents shall be referred to the Architect in writing for decision, which he will render within a reasonable time.

2.2.8 All interpretations and decisions of the Architect shall be consistent with the intent of the Contract Documents. In his capacity as interpreter and judge, he will exercise his best efforts to insure faithful performance by both the University and the Contractor as required by the Contract Documents.

2.2.9 The Architect's decision in matters relating to artistic effect will be final if consistent with the intent of the Contract Documents.

2.2.10 Any written decision by the Architect on a claim, dispute or other matter covered by such decision shall become final and binding on the Contractor and the University, without further appeal or recourse, thirty days after the decision is received by the parties unless written notice is served within the thirty days to the Architect and other party of the intent of further appeal or action.

2.2.11 The Architect, as well as the University, will have authority to reject Work which does not conform to the Contract Documents. Rejected Work shall be immediately removed from the premises. Whenever, in the reasonable opinion of the Architect or the University, it is considered necessary or advisable to insure the proper implementation of the intent of the Contract Documents, they shall have authority to require special inspection or testing of the Work in accordance with Subparagraph 7.8.2 whether or not such Work be then fabricated, installed or completed. However, neither the Architect's or University's authority to act under this Subparagraph 2.2.11, nor any decision made by them in good faith either to exercise or not to exercise such authority, shall give rise to any duty or responsibility of the Architect or the University to the Contractor, any Subcontractor, any of their agents or employees, or any other person performing any of the Work.

2.2.12 The Architect will review Shop Drawings and Samples as required in Subparagraph 4.13.1. Additionally, certain shop drawings and samples, as determined by the University, are also reviewed by the University.

2.2.13 The Architect will prepare Change Orders in accordance with Article 12, and will have authority to order minor changes in the Work as provided in Subparagraph 12.4.1.

2.2.14 The duties and limitations of authority of the Architect during construction as set forth in these General Conditions will not be modified or extended without written consent of the University and the Architect.

2.2.15 The Architect will not be responsible for the acts, procedures, programs, or omissions of the Contractor, any Subcontractors, or any of their agents or employees, or any other persons performing any of the Work.

2.2.16 In case of the termination of the employment of the Architect, the University shall appoint an architect whose status under the Contract Documents shall be that of the former architect.

### ARTICLE 3 - THE OWNER

#### 3.1 Definition

3.1.1 The Owner is the Regents of the University of Minnesota, a State of Minnesota Constitutional and Educational Corporation, herein referred to as the University.

3.1.2 The University acts through Clinton Hewitt, Assistant Vice President for Physical Planning, or his authorized representatives, except for certain functions which are the responsibility of the University's Purchasing Agent. Unless otherwise indicated, all papers and formal written notice required to be delivered to the University shall be delivered to Clinton Hewitt, Assistant Vice President, Room 340, Morrill Hall, University of Minnesota, Minneapolis, Minnesota 55455.

3.1.3 The University Purchasing Agent functions to receive bids for construction contracts and issues the Notice to Proceed to the successful Contractor.

3.1.4 The administration of the construction contract is performed by the Director of the Engineering and Construction Division of the University of Minnesota, or his authorized representatives.

3.1.5 At the commencement of the Work, the representatives of the University will be identified to the Contractor by name, function and authority.

#### 3.2 Information and Services Provided by the University

3.2.1 Except as may otherwise be required by the Contract Documents, the University shall furnish all surveys describing the physical characteristics, legal limits and utility locations for the site of the Project.

3.2.2 The University shall secure and pay for easements for permanent structures or permanent changes in existing facilities.



3.2.3 For building projects, the University will establish a point locating one corner of the building on the site and furnish the location and elevation of a bench mark, all of which shall be verified by the Contractor.

3.2.4 The University shall select the appropriate testing agencies for the required tests, unless otherwise specified.

3.2.5 Information or services under the University's control shall be furnished by the University with reasonable promptness to minimize delay in the orderly progress of the Work.

3.2.6 During progress of the Work, the University will generally issue instructions to the Contractor, except for those instructions the University delegates to the Architect.

3.2.7 The foregoing are in addition to other duties and responsibilities of the University enumerated in the Contract Documents and especially those in respect to Payment and Insurance in Articles 9 and 11 respectively.

### 3.3 Administration of the Construction Contract

3.3.1 The University through its authorized representative will provide the general administration of the Construction Contract, functioning through a general, routine review and examination of the work to (1) judge the Contractor's performance of the Work under the Contract; (2) assist in avoiding defects, deficiencies and omission in the Work; (3) assist the Contractor in interpreting the Contract Documents, when necessary; (4) make determinations on questionable or ambiguous matters relating to the Work; (5) determine amounts due the Contractor for periodic payments; (6) make other judgments and determinations as may be necessary for the satisfactory completion of the Work to fulfill the intent of the Contract Documents.

3.3.2 The University will consult with the Architect at its discretion for interpretations, decisions on the quality of materials and workmanship, intent of the Contract Documents, progress of the Work and similar Contract matters, when necessary.

3.3.3 The University will receive and review the Contractor's submittals of the Performance Bond and insurance evidence.

3.3.4 The University will review the Contractor's progress schedule and reserves the right to question the schedule, comment on the schedule and require changes in the schedule to help assure proper scheduling to complete the Work on time or benefit the overall progress of the Project. The University will provide the general coordination of schedules of separate contractors to assist in resolving possible conflicts of activities or priorities, but will assume no responsibility for the progress and completion of the Work by the Contractor.

3.3.5 The University will review certain shop drawings submitted to the Architect by the Contractor, prior to their being returned to the Contractor and the Contractor's timing of shop drawing submissions shall allow for the University review.

3.3.6 The University shall at all times have access to the Work, as provided in Subparagraph 2.2.2.

3.3.7 The University will be continuously represented at the site or, at its option, will visit the site and review the Work at such times and frequency it deems necessary to be familiar with the general progress and to generally determine if the Work is in accordance with the Contract Documents. The University will not be responsible to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work, which shall be the Contractor's responsibility.

3.3.8 The University, in consultation with the Architect when appropriate, will decide on proposed Changes in the Work.

3.3.9 The University will review the Contractor's Request for Payment and determine the amounts due the Contractor, based on the Contract requirements and the University's evaluation of the progress of the Work.

3.3.10 Requests for required interpretations, clarifications and similar matters arising out of the Contract Documents or the construction shall first be made to the University, who will consult with the Architect when necessary or advisable. The University's Interpretation and decisions shall be consistent with the intent of the Contract Documents.

3.3.11 The University shall have the right and authority to reject any of the Work and to order special inspections or testing, in accordance with Subparagraph 2.2.11.

3.3.12 The University will conduct inspections to determine the dates of Substantial Completion and final completion, will receive and review written guarantees and related documents required by the Contract and assembled by the Contractor.

3.3.13 The University shall not be responsible for the Contractor's activities as specified under Subparagraph 2.2.4. Neither the titles nor functions of the University, or the Architect, and their representatives shall be construed as (1) assuming or imposing any of the Contractor's responsibilities on the University or Architect; (2) supervising the Work under the Contract Documents; (3) being responsible in any way for the performance, acts, omissions or inaction of the Contractor, his Sub-contractors, anyone employed directly or indirectly by any of them or any one for whose acts they may be liable.

#### 3.4 University's Right to Stop the Work

3.4.1 If the Contractor fails to correct defective Work or persistently fails to supply materials or equipment in accordance with the Contract Documents, does not allow others sufficient time to perform their work or otherwise is in substantial violation of the Contract, the University may order the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated.

#### 3.5 University's Right to Carry Out the Work

3.5.1 If the Contractor defaults or neglects to carry out the Work in accord-

ance with the Contract Documents or fails to perform any provision of the Contract, the University may, after seven days' written notice to the Contractor and his Surety, require the Surety to assume the obligations of the Contractor to complete the Work under the terms of the Contract. Should the Surety fail to assume the obligations within ten days after receipt of the written notice, the University, without prejudice to any other remedy it may have, may make good such deficiencies. In such case an appropriate Change Order shall be issued deducting from the payments then or thereafter due the Contractor, or the Surety, the cost of correcting such deficiencies, including the cost of the Architect's additional services made necessary by such default, neglect or failure. The Architect shall approve both such action and the amount charged to the Contractor. If the payments then or thereafter due the Contractor, or the Surety, are not sufficient to cover such amount, the Contractor or his Surety shall pay the difference to the University.

#### ARTICLE 4 - THE CONTRACTOR

##### 4.1 Definition

4.1.1 The Contractor is the person or organization identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number and masculine in gender. The term Contractor means the Contractor or his authorized representative.

##### 4.2 Review of Contract Documents

4.2.1 The Contractor shall carefully study and compare the Contract Documents and shall at once report to the University any error, or alleged error, inconsistency or omission he may discover. The Contractor shall obtain necessary drawings, specifications or instructions when required to satisfactorily complete any of the Work which is questionable.

##### 4.3 Supervision and Construction Procedures

4.3.1 The Contractor shall supervise and direct the Work, using his best skill and attention. He shall be solely responsible for all construction means, methods, techniques, sequences, programs, safety and procedures and for coordinating all portions of the Work under the Contract.

##### 4.4 Labor and Materials

4.4.1 Unless otherwise specifically noted, the Contractor shall provide all labor, material, equipment, facilities, systems, tools, temporary facilities, services and related items to properly execute and satisfactorily complete the Work.

4.4.2 The Contractor shall employ and assign labor that is skilled and competent in the assigned tasks and shall maintain order and discipline among his employees

4.4.3 The Contractor shall provide and perform all Work to comply with the requirements of the Contract Documents.

#### 4.5 Warranty

4.5.1 The Contractor warrants to the University and the Architect that all materials and equipment furnished under the Contract as a permanent part of the project, will be new unless otherwise specified, and that all Work will be of first quality as acceptable to the University and Architect, free from faults and defects and in conformance with the Contract Documents. All Work not so conforming to these standards may be considered defective. If required by the University or the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

#### 4.6 Taxes

4.6.1 The Contractor shall pay all sales, excise, consumer, use and other similar taxes required by law.

#### 4.7 Permits, Fees and Notices

4.7.1 The Contractor shall obtain and pay for all permits, fees, licenses or other charges required or bearing on the conduct of the Work, where property other than University property is involved (i.e. municipalities, other governmental unit, utilities) including connections to water, sewer or other utilities, or where sidewalks, streets and alleys not on University property must be disturbed or used. Other required permits and licenses applicable to University property will be obtained or provided by the University without cost to the Contractor.

4.7.2 The Contractor shall give all notices and comply with all codes, laws, ordinances, rules and regulations of any public authority having jurisdiction which bears on the performance of the Work.

#### 4.8 Cash Allowances

4.8.1 By executing the Agreement, the Contractor represents the Contract Sum includes all cash allowances stated in the Contract Documents.

#### 4.9 Superintendent

4.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during the progress of the Work. The Superintendent shall be satisfactory to the University and Architect, and shall not be changed except with the consent of the University, unless the Superintendent proves to be unsatisfactory to the Contractor and ceases to be in his employ. The Superintendent shall be the executive representative of the Contractor and all communications given to the Superintendent shall be as binding as if given to the Contractor. When requested by the Contractor, important communications will be confirmed in writing.

4.9.2 Unless specifically approved by the University, the Contractor's superintendent shall be constantly present during all working hours from start to completion of the Work, including those times when only Sub-contractors are performing work at the site or minor activity is in progress. During the final stages of completion of the Work, the superintendent shall continue to be constantly present at the site during all working hours to expedite, coordinate and direct the Work to final completion.

#### 4.10 Responsibility for Those Performing the Work

4.10.1 The Contractor shall be responsible to the University for the acts and omissions of all his employees and all Subcontractors, their agents and employees, and all other persons performing any of the Work under a contract with the Contractor.

#### 4.11 Progress Schedule

4.11.1 The Contractor shall prepare and submit for University approval, the progress schedule required by the Contract Documents.

#### 4.12 Drawings and Specifications at The Site

4.12.1 The Contractor shall maintain at the site for his use and that of the University one copy of all Drawings, Specifications, Addenda, approved Shop Drawings, Change Orders and other Modifications, in good order and marked to record all changes made during construction. These shall be available to the University and the Architect.

#### 4.13 Shop Drawings and Samples

4.13.1 The Contractor shall provide and submit all shop drawings and samples required by the Contract Documents.

#### 4.14 Use of Site

4.14.1 The Contractor shall confine operations at the site to areas permitted by law, ordinances, permits, the Contract Documents or the University's directions and shall not unreasonably encumber the site with any materials, equipment or debris.

#### 4.15 Cutting and Patching of Work

4.15.1 The Contractor shall do all cutting, fitting or patching of his Work that may be required to make its several parts fit together properly, and shall not endanger any Work by cutting, excavating or otherwise altering the Work or any part of it.

#### 4.16 Cleaning Up

4.16.1 The Contractor at all times shall keep the premises free from accumulation of waste materials or rubbish caused by his operations. At the completion of the Work he shall remove all his waste materials and rubbish from and about the Project as well as all his tools, construction equipment, machinery and surplus materials.

4.16.2 At the completion of the Project, the Contractor shall perform all cleaning to leave the Work "thoroughly clean" as required by the Contract Documents, unless otherwise specified.

4.16.3 If the Contractor fails to maintain the premises or clean up as specified, the University may do so after two days notice, with the cost paid for by the Contractor.

#### 4.17 Communications

4.17.1 The Contractor shall provide to the Architect a copy of all communications to the University.

#### 4.18 Indemnification

4.18.1 The Contractor shall indemnify and hold harmless the University and the Architect and their agents and employees from and against all claims, damages, losses, and expenses including attorney's fees arising out of or resulting from the performance of the Work, provided that any such claim, damage, loss or expense (1) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including the loss of use resulting therefrom, and (2) is caused in whole or in part by any negligent act or omission of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder.

4.18.2 In any and all claims against the University or the Architect or any of their agents or employees by any employee of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under this Paragraph 4.18 shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any Subcontractor under workmen's compensation acts, disability benefit acts or other employee benefit acts.

4.18.3 The obligations of the Contractor under this Paragraph 4.18 shall not extend to the liability of the Architect, his agents or employees arising out of (1) the preparation or approval of maps, drawings, opinions, reports, surveys, Change Orders, designs or specifications, or (2) the giving of or the failure to give directions or instructions by the University or the Architect, their agents or employees provided such giving or failure to give is the primary cause of the injury or damage.

### ARTICLE 5 - SUBCONTRACTORS

#### 5.1 Definition

5.1.1 A Subcontractor is a person or organization who has a direct contract with the Contractor to perform any of the Work at the site, or to furnish materials, equipment or systems specifically fabricated for the Work. The term Subcontractor is referred to throughout the Contract Documents as if singular in number and masculine in gender and means a Subcontractor or his authorized representative.

5.1.2 A Sub-subcontractor is a person or organization who has a direct or indirect contract with a Subcontractor to perform any of the Work at the site or to furnish materials, equipment or systems specifically fabricated for the Work. The term Sub-subcontractor is referred to throughout the Contract Documents as if singular in number and masculine in gender and means a Sub-subcontractor or an authorized representative thereof.

5.1.3 Nothing contained in the Contract Documents shall create any contractual relation between the University or the Architect and any Subcontractor or Sub-subcontractor.

## 5.2 Award of Subcontracts and Other Contracts for Portions of the Work

5.2.1 Unless another time is specified in the Contract Documents, within 14 days after notice of award of the Contract, letter of intent to award, Notice to Proceed, or execution of the Contract, whichever occurs first, the Contractor shall furnish to the Architect in writing, for acceptance by the University and the Architect, a list of the names of all Subcontractors, and their Sub-subcontractors where appropriate, he proposes to use for the Work. No subcontracts shall be finally executed until the list has been reviewed by the University and Architect and the Contractor notified of the acceptance or non-acceptance of those listed. The Architect shall, with reasonable promptness, notify the Contractor if either the University or the Architect does not accept any Subcontractor or Sub-subcontractor on the list. At the request of the University or the Architect, the Contractor shall submit the names of proposed Subcontractors or Sub-subcontractors for portions of the Work not on the list. The listed Subcontractors or Sub-subcontractors will be deemed acceptable unless the Contractor is notified of the University's or Architect's objection or non-acceptance within a reasonable time established by the Contractor and the Architect.

5.2.2 The proposed Subcontractors or Sub-subcontractors shall be established, reputable firms of recognized standing with a record of successful and satisfactory past performance with the type work and/or items proposed to be provided or furnished by them. Where specifically named Subcontractors may be specified for certain portions of the Work, only the specified Subcontractors will be acceptable for those parts of the Work.

5.2.3 The right to reject any Subcontractor or Sub-subcontractor will be exercised by the University or the Architect when, in their opinion, it is believed the proposed Subcontractor or Sub-subcontractor: (1) cannot provide, or proposes deviations in, materials, equipment, systems, methods, facilities or other Work as required by the Contract Documents; (2) cannot provide labor and skill necessary to accomplish the part of the work for which he is proposed, including but not limited to quality of workmanship; (3) lacks experience appropriate to the proper execution and completion for that part of the Work for which he is proposed; (4) has previously failed to perform satisfactorily, including cooperation and necessary services after project completion; (5) cannot satisfactorily perform the part of the Work for which he is proposed within the time schedule, due to financial status, size of organization, existing work load, or other considerations; (6) cannot demonstrate his ability, through examples of representative work, to perform the part of the Work for which he is being considered; (7) is of questionable integrity; or (8) there are other considerations bearing on the probability of unsatisfactory performance.

5.2.4 The Contractor shall not contract with any Subcontractor, nor use any Sub-subcontractor or any person or any organization (including those who are to furnish materials, equipment, systems or other items fabricated specially for the Work) who has been rejected by the University or the

Architect. Except whereby the submission of the bid by the Contractor under the conditions of the Contract Documents indicates or implies he has accepted the use of a particular specified Subcontractor, the Contractor will not be required to contract with any Subcontractor or person or organization against whom he has a reasonable objection.

5.2.5 If the University or Architect refuses to accept any Subcontractor or person or organization on a list submitted by the Contractor in response to the requirements of the Contract Documents or the Instructions to Bidders, the Contractor shall submit an acceptable alternative.

5.2.6 If the University or the Architect requires a change of any proposed Subcontractor, Sub-subcontractor or person or organization previously accepted by them, the Contract Sum shall be increased or decreased by the difference in cost occasioned by such change and an appropriate Change Order shall be issued. No increase in the Contract Sum will be allowed where the change is a result of subsequent evidence of any of the reasons for rejection under 5.2.3.

5.2.7 The Contractor shall not make any substitution for any Subcontractor, Sub-subcontractor or person or organization who has been accepted by the University and the Architect, except for just cause acceptable to the University and the Architect, and unless the substitute is acceptable to the University and the Architect. In the event of a proposed change, the Contractor shall submit, in writing, the reasons for the change and the proposed substitutions. No change will be allowed for the improvement of the schedule where the Contractor, or his Subcontractors, have failed to properly order or schedule delivery or installation of materials and equipment. The proposed change is subject to all conditions of Paragraph 5.2.

### 5.3 Subcontractual Relations

5.3.1 All work performed for the Contractor by a Subcontractor shall be pursuant to an appropriate agreement between the Contractor and Subcontractor (and where appropriate between Subcontractors and Sub-subcontractors) which shall contain provisions that:

- .1 Preserve and protect the rights of the University and the Architect under the Contract with respect to the Work to be performed under the subcontract so that the subcontracting thereof will not prejudice such rights;
- .2 Require that such Work be performed and guaranteed in accordance with the requirements of the Contract Documents.
- .3 Require submission to the Contractor of applications for payment under each subcontract to which the Contractor is a party, in reasonable time to enable the Contractor to apply for payment in accordance with Article 9;
- .4 Require that all claims for additional costs, extensions of time, damages for delays or otherwise with respect to subcontracted portions of the Work shall be submitted in writing to the Contractor (via any Subcontractor or Sub-subcontractor where appropriate) in sufficient time so that the Contractor may comply in the manner provided in the Contract Documents for like claims by the Contractor upon the University;



- .5 Waive all rights the contracting parties may have against one another for damages caused by fire or other perils covered by the property insurance described in Paragraph 11.2, except such rights as they may have to the proceeds of such insurance held by the Trustee for the insurance proceeds, and
- .6 Obligate each Subcontractor specifically to consent to the provisions of this Paragraph 5.3.

#### 5.4 Payments to Subcontractors

5.4.1 The Contractor shall pay each Subcontractor, upon receipt of payment from the University an amount equal to the percentage of completion allowed to the Contractor on account of such Subcontractor's Work, less the percentage retained from payments to the Contractor. The Contractor shall also require each Subcontractor to make similar payments to his subcontractors.

5.4.2 If the University fails to make payment for any cause which is the fault of the Contractor and not the fault of a particular Subcontractor, the Contractor shall pay that Subcontractor on demand, made at any time after the payment should otherwise have been made, for his Work to the extent completed, less the retained percentage.

5.4.3 The Contractor shall pay each Subcontractor a just share of any insurance moneys received by the Contractor under Article 11, and he shall require each Subcontractor to make similar payments to his subcontractors.

5.4.4 The University may, on request and at its discretion, furnish to any Subcontractor, if practicable, information regarding percentages of completion certified to the Contractor on account of Work done by such Subcontractors.

5.4.5 Neither the University nor the Architect shall have any obligation to pay or to see to the payment of any moneys to any Subcontractor.

#### ARTICLE 6 - SEPARATE CONTRACTS

##### 6.1 University's Right to Award Separate Contracts

6.1.1 The University reserves the right to award other contracts in connection with other portions of the Project under these or similar Conditions of the Contract.

6.1.2 When separate contracts are awarded for different portions of the Project, "the Contractor" in the Contract Documents in each case shall be the Contractor who signed each separate contract.

##### 6.2 Mutual Responsibility of Contractors

6.2.1 The Contractor, and his Subcontractors, shall cooperate with and coordinate their work with each other and all other contractors and the University to facilitate general progress of the Project and to prevent delaying the progress of other contractors. The Contractor shall give reasonable notice and afford other contractors reasonable opportunity for

the introduction and storage of their materials and equipment and the installation or execution of their work, and shall properly connect and coordinate his Work with theirs. The Contractor, and his Subcontractors, shall obtain layout drawings, roughing-in detail sheets and other pertinent information directly from the other contractors to coordinate all phases of the Work, and all contractors shall within a reasonable time provide such necessary information. For coordination with the University's equipment or materials, information shall be obtained from the University. After timely notification by the Contractor of the need to accomplish a particular phase or element of the Work, the other contractors shall, within a reasonable time, perform their work so as not to delay or impede the Contractor.

6.2.2 If any part of the Contractor's Work depends for proper execution or results upon the work of any other separate contractor, the Contractor shall inspect, including measurements and inspection of work already in place, and shall promptly report to the University any apparent or alleged or defects in such work that render it unsuitable for such proper execution and results. Failure of the Contractor so to inspect and report shall constitute an acceptance of the other contractor's work as fit and proper to receive his Work, except as to defects which may develop in the other separate contractor's work after the execution of the Contractor's Work.

6.2.3 Should the Contractor cause delay or damage to the work or property of any separate contractor on the Project, the Contractor shall, upon due notice, settle with such other contractor by agreement or arbitration, if he will so settle. If such separate contractor sues the University on account of any delay or damage alleged to have been so sustained, the University shall notify the Contractor who shall defend such proceedings at the Contractor's expense, and if any judgment or award against the University arises therefrom the Contractor shall pay or satisfy it and shall reimburse the University for all attorney's fees and court costs which the University has incurred.

### 6.3 Cutting and Patching Under Separate Contracts

6.3.1 The Contractor shall be responsible for any cutting, fitting and patching that may be required to complete his Work except as otherwise specifically provided in the Contract Documents. The Contractor shall not endanger any work of any other contractors by cutting, excavating or otherwise altering any work and shall not cut or alter the work of any other contractor except with the written consent of the Architect or the University.

6.3.2 Any costs caused by defective or ill-timed work shall be borne by the party responsible therefor.

### 6.4 University's Right to Clean Up

6.4.1 If a dispute arises between the separate contractors as to their responsibility for cleaning up as required by Paragraph 4.16, or elsewhere in the Contract Documents, the University may clean up and equitably charge the cost thereof to the several contractors.

## ARTICLE 7 - MISCELLANEOUS PROVISIONS

### 7.1 Governing Law

7.1.1 The Contract shall be governed by the laws of the State of Minnesota.

### 7.2 Successors and Assigns

7.2.1 The University and the Contractor each binds himself, his partners, successors, assigns and legal representatives to the other party hereto and to the partners, successors, assigns and legal representatives of such other party in respect to all covenants, agreements and obligations contained in the Contract Documents. Neither party to the Contract shall assign the Contract or sublet it as a whole without the written consent of the other, nor shall the Contractor assign any moneys due or to become due to him hereunder, without the previous written consent of the University.

### 7.3 Written Notice

7.3.1 Written notice shall be deemed to have been duly served if delivered in person to the individual or member of the firm or to an officer of the corporation for whom it was intended, or if delivered at or sent by registered mail to the last business address known to him who gives the notice. Written notice to the University shall be addressed as noted under Subparagraph 3.1.2.

### 7.4 Claims for Damages

7.4.1 Should either party to the Contract suffer injury or damage to person or property because of any act or omission of the other party or of any of his employees, agents or others for whose acts he is legally liable, claim shall be made in writing to such other party within a reasonable time after the first observance of such injury or damage.

### 7.5 Performance/Guaranty Bond

7.5.1 At the time of execution of the Agreement between the University and the Contractor, the Contractor shall furnish a Bond in the full amount of the Contract Sum, signed by the Contractor and a Corporate Surety authorized to provide bonds in the State of Minnesota and approved by the University. A valid and enforceable bond shall be maintained by the Contractor throughout the life of the Contract and its Guarantee Periods.

7.5.2 The minimum requirements for University approval of the Surety shall be that the Surety is listed by the United States Treasury Department as acceptable for bonding Federal projects and that the bond amount is within the limit set by the Treasury Department as the net limit on any single risk. There shall be no affiliation between the Contractor and the Bonding Agent or Agency.

7.5.3 The Bond shall guarantee the Contractor will perform each and every part of the Contract, cover all guarantees called for and insure prompt payment to all persons furnishing material or labor required in prosecution of the work under the Contract. In the event of additions to the Contract, the University reserves the right to require evidence of additional bond.

7.5.4 The Bond shall provide: (1) for additions or deductions from the Work in any amount, (2) that completion time shall not be extended by reason of such changes, unless agreed to at time of change, (3) that no notice of aforesaid alterations, additions or omissions need be given the Surety, and (4) permit occupancy by the University at any time.

7.5.5 Unless otherwise stipulated in the Contract Documents or Bidding Requirements, the form of bond shall be provided by the University. (Contractor's Bond, Business Administration Form 204).

7.5.6 If it shall at any time appear that the Contractor has unlawfully, fraudulently or through collusion with any representative of University, supplied inferior materials or workmanship or has departed from the terms of the Contract, or should the University make a claim under the Guarantee provisions, the final inspection and acceptance of the Work shall not be binding on the University and the University shall have the right to cause the Work to be properly performed and satisfactory material supplied to the extent the University may deem necessary, all at expense of Contractor or his Surety. The University shall have right to recover against the Contractor, or his Surety, such damages as may be incurred by the University therefrom.

7.5.7 Final acceptance of the Work shall not relieve the Contractor nor his Surety from their obligations under this Contract, including guarantees of materials, equipment, installation or service.

#### 7.6 Rights and Remedies

7.6.1 The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law.

#### 7.7 Royalties and Patents

7.7.1 The Contractor shall pay all royalties and license fees and shall secure to the University for all times the free and undisputed right to the use of any and all patented design, process, method or product used in performance of the Work. The Contractor shall defend all suits or claims for infringement of any patent rights and shall save the University harmless from loss on account thereof.

#### 7.8 Tests

7.8.1 If the Contract Documents, laws, ordinances, rules, regulations, or orders of any public authority having jurisdiction, or instructions of the University or Architect requires any of the Work to be inspected, tested or approved, the Contractor shall make all arrangements for the tests, inspections or approvals and notify all appropriate parties in ample time to make the inspections, tests or approvals. The Contractor shall give the University and Architect timely notice of readiness for testing and inspection and the dates set for tests, inspections and approvals by public authorities so they may observe such tests and inspections if they choose. The Contractor shall bear all costs of such inspections, tests or approvals except as otherwise specified in the Contract Documents. Any of the Work

requiring testing, inspection or approval which is covered or otherwise made inaccessible without the consent of those requiring or making the inspection or test, shall be uncovered or made accessible by and at the expense of the Contractor.

7.8.2 If after the commencement of the Work the University or the Architect determines that any Work requires special inspection, testing, or approval which Subparagraph 7.8.1 does not include, the University may instruct the Contractor to order such special inspection, testing or approval, and the Contractor shall give notice as in Subparagraph 7.8.1. If such special inspection or testing reveals a failure of the Work to comply (1) with the requirements of the Contract Documents, or (2) with respect to the performance of the Work, with laws, ordinances, rules, regulations or orders of any public authority having jurisdiction, the Contractor shall bear all costs thereof, including the Architect's additional services made necessary by such failure; otherwise the University shall bear such costs, and an appropriate Change Order shall be issued.

7.8.3 Certificates of required inspection, testing or approval shall be secured by the Contractor and promptly delivered by him to the University and the Architect.

7.8.4 Neither the observations by the University or the Architect, nor inspections, tests or approvals by persons other than the Contractor shall relieve the Contractor from his obligations to perform the Work in accordance with the Contract Documents.

#### 7.9 Use of University Personnel and Property

7.9.1 Unless the Contract Documents call for University property to be supplied to the Contractor, or installed or connected by the Contractor under the Contract, no property, supplies, equipment or personnel of the University shall be used by the Contractor in the performance of the Contract.

#### 7.10 University Use or Occupancy of the Premises

7.10.1 The University reserves the right to jointly use the premises with the Contractor in the performance of his duties and functions. The University reserves the right to: (1) enter into the project and premises at all times; (2) make installations of materials and equipment at appropriate times as the Work progresses; (3) store property in essentially completed areas; (4) install furniture and furnishings when spaces are at appropriate stages of completion; (5) and use the premises for other similar activities. The Contractor shall coordinate the Work with the work of the University or other contractors and shall cooperate with them, to minimize undue interferences. Such activities shall not be construed as occupancy.

7.10.2 If any part, unit or the entire Work or Project is Substantially Complete or ready for occupancy, the University may, upon notice to the Contractor, enter into and make use of the Work that is Substantially Complete or otherwise suitable for the University's purposes.

7.10.3 If the Work is not complete at the time included in the Contract, but the Work is to a state of readiness to permit partial or full use or

occupancy by the University, the University reserves the right, upon notice to the Contractor, to enter into and make use of those parts that are suitable for his needs. The Contractor shall cooperate with and coordinate his operations in completing the Work with the University to minimize disturbance of the University's programs and functions.

7.10.4 The University's beneficial use or occupancy, as provided for in 7.10.1 through 7.10.3 shall not be construed as acceptance of the Work or any of its materials and equipment. Such use and occupancy shall be subject to any corrections or deficiencies, damage or omissions noted. Damage occurring after occupancy, not caused by the Contractor, will be the responsibility of the University or other contractors causing the damage.

7.10.5 To the extent applicable to the Work, as determined by the University, the Contractor shall conform to the provisions of this Subparagraph. Upon occupancy by the University, complete and usable facilities of light, power, exits, heat, ventilation, air conditioning, utilities, toilets and similar facilities necessary for safety, comfort and University's functions shall be available at all times, so the Work can be used without hazards, discomfort or inconvenience. After occupancy by the University, its program, functions or normal use shall not be unnecessarily interrupted nor interfered with and unnecessary inconvenience will not be permitted. The Contractor shall schedule and arrange the Work with the University to accomplish this objective. If the Work is not complete by the time in the Contract, and if necessary, work shall be scheduled on weekends, or other times when the Work is not in use, without additional cost to the University. The Contractor will be allowed reasonable access to the areas as necessary to complete the Work. All operations or activities relating to electrical, heating, air conditioning, ventilation, plumbing services and phases shall be accomplished in accordance with a sequence schedule planned with the University so that complete facilities are maintained.

## 7.11 Additional Definitions

7.11.1 The term "provide" shall mean to furnish and install complete, including as applicable all connections to utilities or service, complete anchorage and suspension, fastening or anchor devices, controls, trim, supports, standard accessories, finishes, adjustments for proper operation and other related items or labor, unless specifically specified otherwise.

7.11.2 The terms "Approved," "Satisfactory," "Equal to," "Proper," and similar terms shall mean the decision is vested in the Architect and the University, which shall be binding upon the Contractor and Subcontractors. For decisions relating to artistic effect or interpretation and intent of the Contract Documents, the Architect's decision will be final.

7.11.3 The terms "Project," "Work," "Job", as may be used in the technical sections of the Specifications or on the drawings, may be used interchangeably and are synonymous. They shall mean the facility, construction and/or improvement within the intent or scope of the Contract Documents. The terms shall mean the entire facility, or separable parts as appropriate to the use of the term.

7.11.4 The term "Notice to Proceed" shall mean written notice by the University to the Contractor to commence his work of the Contract, issued either before or after execution of the Contract. In issuing the Notice, stipulations may be included in the Notice, or in the Contract Documents, as to time and other requirements that may condition commencement of the Work at the site. In the absence of a specific Notice to Proceed, the execution of the Agreement shall be deemed as such Notice, conditional upon the submission of a proper Performance Bond and proper insurance evidence.

7.11.5 The term "Substantial Completion" shall mean the Work of the Contract (or separable units or phases as provided in the Contract Documents or otherwise determined by the University) is essentially and satisfactorily complete in accordance with the Contract Documents, as modified by approved Change Orders or other written orders, ready for full occupancy or use by the University in the manner intended without inconvenience or discomfort. The determination by the University on the status of Substantial Completion shall be final. As may be applicable to this Project and Work of this Contract, it is the intent that Substantial Completion shall generally mean: all materials, equipment, systems, controls, features, facilities, accessories and similar elements are installed in the proper manner and in operating condition; spaces and surfaces (except minor areas or spaces) have been painted or otherwise finished throughout; masonry and concrete cleaned with any sealer or other finish applied; casework installed, complete with tops, sinks, fittings and other related items installed and services connected; utilities and systems connected and functioning; sitework essentially complete; permanent heating, ventilating, air conditioning and other systems properly operating with proper controls; lighting and electrical systems installed, operable and controlled; and other work to a similar state of essential and satisfactory completion. A minor amount of work, as determined by and at the discretion of the University, such as installation of minor accessories or items, a minor amount of painting, minor replacements of defective work, minor adjustment of controls, completion or correction of minor exterior work that cannot be completed due to weather conditions, will not delay determination of Substantial Completion. For the purposes of Substantial Completion, specified areas of the entire Work or Project (or as otherwise determined by the University) may be individually judged as Substantially Complete.

7.11.6 The terms "Complete", "Completion" or "Final Completion" shall mean when all of the Work of the Contract fulfills all of the terms of the Contract Documents in all respects.

#### 7.12 Or Equal

7.12.1 Wherever materials, products, articles, equipment, systems or similar items are identified by reference to proprietary terms, model numbers, catalog numbers, trade names, manufacturers or similar reference, it is intended to establish the minimum standard or measure of quality that has been determined as requisite or intended for the Work. During bidding competition is encouraged from contractors, subcontractors, suppliers, manufacturers and producers whose products, systems, reputation, performance and service warrant acceptance for the conditions, intent of

design, requirements and other considerations of the Work under the conditions specified in the Instructions to Bidders. Where not specifically stated, the phrase "or acceptable equal as determined by the Architect" shall be implied throughout. The Architect consults with the University in the determination of products to be used and their acceptable equals.

7.12.2 The determination of products for use may be based on the construction, design, function, type, size, capacity, performance, strength, durability, efficiency, sound level, finish, aesthetic quality, service, matching existing work, the University's standards for repair, replacement and maintenance or other characteristics and criteria. Acceptance or rejection of proposed alternate or similar products, equipment or system may be based on any of the factors and criteria. The final decision on acceptance or rejection of proposed alternate or similar products, equipment or system shall be vested in the Architect and his determination may or may not express the reason for the decision, at his option.

7.12.3 The product, equipment, system, or manufacturer used as the basis for the design or specification shall generally set the criteria. It shall be expressly understood that any product, equipment, system or manufacturer listed in the Contract Documents as acceptable shall meet and be in full compliance with the requirements and criteria, including those established by the product, equipment, system or manufacturer used as the basis for the specification. The Architect and the University shall have the right to reject any proposed deviations from specified criteria or characteristics, or deviations from the criteria and characteristics of the product, system or manufacturer used as the basis of the Contract Documents.

## ARTICLE 8 - TIME

### 8.1 Definition

8.1.1 The Contract Time is the period of time allotted in the Contract Documents for completion of the Work.

8.1.2 The date of the commencement of the Contract Time is the date of the University's Notice to Proceed or the date of the Agreement, whichever is first. In the absence of a time or date established in the Notice to Proceed or in the Contract Documents, work at the site shall commence within 21 days after the Notice to Proceed or Contract execution, whichever occurs first, unless a later time is agreed to or directed by the University.

8.1.3 The date of Substantial Completion of the Work or designated portion thereof is the date determined by the University when construction is sufficiently complete, in accordance with the Contract Documents, so the University may occupy the Work or designated portion thereof for the use for which it is intended and the Work meets the requirements of Subparagraph 7.12.5. The date of Final Completion shall be determined by the University when the Work meets the requirements of Subparagraph 7.12.6.

8.1.4 The term day as used in the Contract Documents shall mean calendar day.

### 8.2 Progress and Completion

8.2.1 All time limits or dates stated in the Contract Documents are essential conditions of the Contract. In executing the Contract, the Contractor agrees the Contract Time is reasonable for the Work.



8.2.2 The Contractor shall begin the Work in accordance with Subparagraph 8.1.2. No work at the site shall be commenced until proper evidence of the required insurance has been submitted to the University. The Contractor shall carry the Work forward expeditiously with adequate forces to maintain progress in accordance with the Progress Schedule and to complete the Work within the Contract Time.

8.2.3 Except for constraints which may be specified for certain parts of the Work or otherwise imposed by the University, the Work shall not be suspended or shut down, but shall progress continuously and expeditiously, unless otherwise approved by the University. The Contractor shall assemble materials and equipment in advance of the need and, as may be appropriate to the progress, shall prefabricate assemblies which will comply with the Contract Documents, as may be specified, or if not specified, as may be permitted by labor agreements, to expedite the Work and insure completion on time.

8.2.4 If completion dates or times are specified or otherwise included in the Contract, it shall mean the date of Final Completion as defined under Subparagraph 7.12.6., unless otherwise specified in the Contract Documents.

8.2.5 If the Contractor shall neglect, fail or refuse to complete the Work within the time specified, or any proper extensions thereof granted by the University, unless liquidated damages are specified, the Contractor will be subject to paying actual damages suffered by the University resulting from non-completion on time and default under the Contract.

### 8.3 Delays and Extensions of Time

8.3.1 If the Contractor is delayed at any time in the progress of the Work by any act or neglect of the University or the Architect, or by any employee of either, or by any separate contractor employed by the University, or by changes ordered in the Work, or by labor disputes, fire, unusual delay in transportation, unavoidable casualties or any causes beyond the Contractor's control, or by any other cause which the University determines may justify a delay, the Contract Time may be extended by Change Order for such reasonable time as the University may determine. Claims for extensions of time will be considered valid only under the following conditions:

- .1 Only those enumerated conditions over which the Contractor has no control will be considered. The burden of proof to substantiate the claim for an extension of time shall rest with the Contractor, including evidence that the cause was beyond his control. It shall be deemed the Contractor has control over the supply of labor, materials, equipment, methods, techniques and over his Subcontractors.
- .2 A delay in the progress of the Work actually occurred as a result of one of the valid causes for time extension.
- .3 Any unusual delay in transportation is solely due to transportation. An extension of time will not be granted for delays in deliveries where said delivery was not properly scheduled or when orders were not promptly and properly placed.
- .4 With respect to a claim for an extension of time as result of climatic conditions, the Contractor shall consider the location of the site and recognize the existence, as normal, of variations from "average" conditions. Foul weather in itself will not be a

valid reason for time extension. Requests for time extension because of delay resulting from weather extremes will not be considered unless a substantial variation from usual weather conditions occurs for a significant period of time and operations necessarily were suspended to a significant degree when they would otherwise have been in progress. In considering the time extension, the weather conditions both before and after the period in which the delay is claimed will be evaluated.

- .5 For Changes in the Work which significantly affects the time and progress of the entire Work, any time extension shall be made no later than when the Change is authorized by the University. Any claim shall be made at the time the Change is requested. For changes in the Work which do not affect the progress of the entire Work, the University reserves the right to grant a time extension only for the area, phase or element of the entire Work affected by the Change.
- .6 Delays resulting from a labor dispute will result in a time extension no longer than the dispute period, in addition to a reasonable mobilization period that is unavoidable, and may be less depending on the actual affect the dispute had on the overall progress and the operations that were actually curtailed or suspended. Lockouts, over which the Contractor has control, will not be a valid rason for a time extention.
- .7 No time extension will be granted as a result of improper scheduling or for failure to have shop drawings or samples submitted in ample time for review under a reasonable schedule.
- .8 Delays caused by Subcontractors will be valid reasons for time extension only under the same conditions as Paragraph 8.3.

8.3.2 Except for Changes in the Work, all claims for extension of time shall be made in writing to the University no more than ten days after the beginning of the occurrence of the delay; otherwise they shall be waived. In the case of a continuing cause of delay only one claim is necessary.

8.3.3 If no schedule or agreement is made stating the dates upon which written interpretations as set forth in Subparagraph 1.2.5 shall be furnished, then no claim for delay shall be allowed on account of failure to furnish such interpretations until fifteen days after demand stating a delay will result is made for them, and not then unless such claim is reasonable.

8.3.4 All extensions of time shall be determined by the University, in consultation with the Architect when necessary, and its decisions shall be final and binding.

8.3.5 In the event of separate contractors for the Work, if a time extension is granted to one or more contractors for a valid delay, a time extention may also be granted other contractors if, in the opinion of the University, their progress or work schedule is materially affected by the time extension granted. If no time extension is allowed to the Contractor, or should the Contractor decline a time extension offer, the Contractor shall make no claim against the University for damages alleged to be the result of any time extension granted to others.

8.3.6 This Paragraph 8.3 does not exclude the recovery of damages for delay by either party under other provisions of the Contract Documents.

## ARTICLE 9 - PAYMENTS AND COMPLETION

### 9.1 Contract Sum

9.1.1 The Contract Sum is stated in the Agreement and is the total amount payable by the University to the Contractor for the performance of the Work under the Contract Documents.

### 9.2 Schedule of Values and Cash Flow Schedule

9.2.1 Unless otherwise specified, the Contractor shall submit a Schedule of Values (cost breakdown) at least 14 days prior to the first Request for Payment, in such form and detail as required by the Contract Documents and as directed by the University.

9.2.2 Upon request of the University, the Contractor shall prepare and provide a schedule of estimated periodic requests for payment for the University's guidance in its financial planning to have funds available. The schedule shall indicate the anticipated amount that will be requested each month, taking into consideration the work schedule, expected deliveries and the retained amount. The Contractor will not be bound to the estimated amounts, but should the actual requested amounts tend to vary substantially from the estimates, the Contractor shall revise the schedule, at the request of the University.

### 9.3 Progress Payments

9.3.1 As the Work progresses, after a bona-fide start at the site, the Contractor may make periodic Requests for Payment, but no more often than monthly, for work satisfactorily completed or materials suitably stored and protected at Project site, or as otherwise provided under Subparagraph 9.3.5. With the Request for Payment, the Contractor shall provide such supporting data as may be required by the University to substantiate the Contractor's right to payment.

9.3.2 Requests for Payment shall be submitted to the University in five copies on forms provided by the University. Each periodic payment request shall be in itemized detail form, following the Schedule of Values accepted by the University and as directed by the University. The processing procedures and time for submitting Requests for Payment shall be as directed by the University.

9.3.3 Payment will be made only for the Work that has been satisfactorily executed or accomplished and, except as provided for under Subparagraph 9.3.5, only for materials and equipment that are on the job site and adequately protected from the elements, pilferage, vandals or other damage. Requests for Payment which are incorrect, incomplete or are based on anticipated progress and deliveries will be rejected.

9.3.4 For payments that are to be made on account of materials or equipment not incorporated in the Work but delivered and suitably stored at the site, such payments shall be conditioned upon submission by the Contractor of bills of sale or such other procedures satisfactory to the University to establish

the University's title to such materials or equipment or otherwise protect the University's interest, including applicable insurance. No payment will be made for materials until a bona fide and substantial on-site start has actually been made.

9.3.5 Where there is limited storage areas on the site of the Work of this Contract, and it will improve the schedule or benefit the progress of the Work, the University will consider making payment for certain materials and equipment which are stored off the site. The University shall be the sole judge as to the types of materials and equipment it will pay for while in off-site storage and the conditions for the payment. The University will not pay for items in off-site storage which are: (1) damaged or otherwise defective; (2) off-the-shelf type materials; (3) held at the producer's plant; (4) produced over a period of time and normally would be installed to a schedule over a period of time as they are delivered, unless the University has caused a significant change in the schedule. For consideration of payment for items stored offsite, at the start of the Work the Contractor shall submit a proposed list to the University for review and concurrence, provide the reasons for each, the proposed storage locations and the anticipated delivery time. The list shall include: (1) the item; (2) proposed storage location; (3) anticipated delivery time to the off-site storage. To qualify for consideration, the material or equipment shall be:

- .1 A major item.
- .2 Specially fabricated or produced for the Work of this Contract and shall be in accordance with the Contract Documents.
- .3 A critical material which is in short supply or which has an uncertain long lead time delivery schedule.
- .4 Properly stored and protected as approved by the University, including marking with the Project name.
- .5 Paid for in full by the Contractor (or by the Subcontractor purchasing the item) with the evidence of a paid receipt submitted with the Request for Payment. The Contractor (or Sub-contractor) shall also certify the item is in storage and will be immediately available when required.
- .6 Examined by the University at the place of storage.
- .7 Properly insured, with insurance coverage (as a minimum) equal to the Property Insurance for the Project, as specified under Paragraph 11.2, and insurance evidence provided to the University. The Contractor shall also provide a Consent of the Surety to allow payment for the item.
- .8 Furnished at no additional cost or expense to the University except the time required to examine the items.

9.3.6 The Contractor warrants and guarantees that title to all Work, materials and equipment covered by a Request for Payment, whether incorporated in the Project or not, will pass to the Owner upon the receipt of such payment by the Contractor, free and clear of all liens, claims, security interests or encumbrances, hereinafter referred to in this Article 9 as "liens"; and that no

Work, materials, or equipment covered by a Request for Payment will have been acquired by the Contractor, or by any other person performing the work at the site or furnishing materials and equipment for the Project, subject to an agreement under which an interest therein or an encumbrance thereon is retained by the Seller or otherwise imposed by the Contractor or such other person.

9.3.7 Unless otherwise specified in the Contract Documents, progress payments will be made for ninety percent (90%) of the value of the Work satisfactorily executed, or for materials and equipment furnished, installed or suitably stored in an approved manner, including all additions or deductions to the Contract Sum approved by Change Order, and less any previous payments made to Contractor or payments made for his account. No payment for engineering, shop drawings or other similar costs will be made until materials are delivered and satisfactorily stored or incorporated in the Work.

9.3.8 By submitting any Request for Payment the Contractor attests to the accuracy of the amounts requested, represents that the Work has been satisfactorily executed in compliance with the Contract Documents and he is entitled to the amount shown. By submitting the second or any subsequent Request for Payment, the Contractor attests that he has paid all just claims for labor, materials, equipment, subcontracts or other expenses represented by all previous Requests for Payment.

9.3.9 No progress payment, nor partial or full use or occupancy of the Project, shall be construed as acceptance of any Work not in accordance with the Contract Documents. All Work is subject to an evaluation for conformance with the Contract Documents upon Completion, to the results of any subsequent tests required by the Contract Documents, to minor deviations from the Contract Documents correctable prior to Completion, and to any specific qualifications stated by the University or Architect. The making of a payment by the University shall not thereby be deemed to represent that it has made exhaustive or continuous on-site inspections to check the quality or quantity of the Work or that it has reviewed the construction means, methods, techniques, sequences or procedures, or that it has made any examination to ascertain how or for what purpose the Contractor has used the moneys previously paid on account of the Contract Sum.

9.3.10 Full or partial payment on the Contract Sum, or in reducing the retained amount (percentage) shall not relieve the Contractor or his Surety from fulfilling all obligations of this Contract, including guarantee of the Work. Under the conditions of the Contract, the Contractor and his Surety agree that they waive any actual or alleged rights of subrogation or action against the University and Architect as a result of such payments being made. The Surety at any time may examine the status of the Work, as well as any payments and may request the University withhold additional sums as they consider appropriate to protect their interests.

9.3.11 In the event the University is unable to approve payment in the full amount requested, due to work not satisfactorily complete in the amount represented by the Request for Payment, it may revise the amount indicated as due, process for payment and advise the Contractor of the change.

9.3.12 At the time any request is made to make full payment on a periodic Request for Payment or to reduce the retained percentage, the Contractor shall submit a written "Consent of Surety" to said reduction, without

Invalidating any obligation under the Bond.

#### 9.4 Payments Withheld

9.4.1 The University may decline to approve a Request for payment in whole or in part, to the extent necessary to reasonably protect its interests. The University may also decline to approve any Request for Payment or, because of subsequently discovered evidence or subsequent inspections, it may nullify the whole or any part of any Request for Payment previously issued, to such extent as may be necessary in its opinion to protect the University from loss because of:

- .1 Defective work not remedied,
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims,
- .3 failure of the Contractor to make payments properly to Sub-contractors for labor, materials or equipment,
- .4 reasonable doubt that the Work can be completed for the unpaid balance of the Contract Sum,
- .5 damage to another contractor,
- .6 reasonable indication that the Work will not be completed within the Contract Time, or
- .7 unsatisfactory prosecution of the Work by the Contractor.

#### 9.5 Substantial and Final Completion

9.5.1 As applicable to the Work of this Contract, Substantial and Final Completion shall be as defined under Subparagraph 7.12.5 and 7.12.6.

9.5.2 When the Contractor determines that the entire Work, or a specified or designated area or part thereof as established by the University, is Substantially Complete, the Contractor shall submit to the University and Architect a written statement that the Work meets the requirements for Substantial Completion. At the same time, the Contractor shall submit to the University and the Architect a list of all items and Work to be completed or corrected. The failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents. Based on observations at the site, if the University agrees to the status of the Work, it will schedule and make an inspection of the Work and provide the Contractor with a list of any additional items to be completed, replaced or corrected. If the Work is not Substantially Complete, in the University's opinion, the Contractor will be advised and a subsequent date set for the inspection. In the absence of any other date established by the University, the day on which the University completed its inspection of the Work, or part, and determined the Work, or part, as Substantially Complete, will be the Substantial Completion date.

9.5.3 When the entire Work, or specified or designated area or part thereof as established by the University, is determined as Substantially Complete, or upon the University's full occupancy of the entire Work or established area or part thereof, the Contractor and the University shall review and agree on necessary changes in responsibilities as may be provided in the Contract Documents which are related to the Work, such as insurance, cost of services and utilities, heating and air conditioning, maintenance and similar matters. In no case shall Substantial Completion or occupancy relieve the Contractor from his obligations under the Contract. Unless otherwise specified, the change in responsibilities shall be effective the day after the Work is determined as Substantially Complete, or if full occupancy occurs earlier, on the first day of full occupancy.

9.5.4 The Contractor shall recognize the need for proper procedures and diligence to complete the Work and shall continuously prosecute it to completion, including the period after Substantial Completion. The Contractor shall organize and methodically prosecute all phases of completing the Work according to a schedule acceptable to the University.

9.5.5 Upon receipt of written notice from the Contractor that the Work is complete, all corrections made, all reports and other data filed, all equipment and systems tested and there is no other unfinished Work, the University will make one final inspection on the items previously noted to be completed or remedied. Final payment will not be made until the University has been fully and properly instructed in use and operation of all of the Work, equipment and systems under the Contract and all manuals, bonds and similar items have been provided.

## 9.6 Final Payment

9.6.1 Final payment, including any retained amount on the Contract Sum, will not become due until the Contractor provides any submittals the University may require to substantiate the Contractor's right to payment, such as: (1) affidavit that all payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the University or his property might in any way be responsible, have been paid or otherwise satisfied; (2) consent of surety, if necessary to final payment and (3) other data establishing payment or satisfaction of all obligations, such as receipts, releases and waivers of liens arising out of the Contract, to the extent and in such form as may be designed by the University. If any Subcontractor refuses to furnish a release or waiver as may be required by the University, the Contractor may furnish a bond satisfactory to the University to indemnify it against any such lien. If any such lien remains unsatisfied after all payments are made, the Contractor shall refund to the University all moneys that the latter may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

9.6.2 Prior to final payment, the Contractor shall file with the University the certificate, Form 134, "Affidavit for Obtaining Final Settlement of Contract with the State of Minnesota", showing he has complied with M.S.A. 290.92 requiring withholding of income tax on wages at the source.

9.6.3 If after Substantial Completion of the Work, Final Completion thereof is materially delayed through causes not under the control of the Contractor, or a very minor amount of the Work remains incomplete or

uncorrected due to weather, unsuitable conditions for testing or other circumstances, and the Architect so confirms, the University may, without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. In such case, the University will retain at least 3 times the value of the incomplete or uncorrected parts of the Work. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims, nor termination of the Contract.

9.6.4 The making of final payment shall constitute a waiver of all claims by the University except those arising from:

- .1 Unsettled liens;
- .2 faulty, defective, missing, substandard or improperly installed work previously noted or appearing or found after Substantial Completion;
- .3 failure of any of the Work to comply with the requirements of the Contract Documents; or
- .4 terms of any standard of special guarantees required by the Contract Documents.

9.6.5 The acceptance of final payment shall constitute a waiver of all claims by the Contractor except those previously made in writing and still unsettled.

#### ARTICLE 10 - PROTECTION OF PERSONS AND PROPERTY

##### 10.1 Safety Precautions and Programs

10.1.1 The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. All of the Work shall be performed in a safe manner.

##### 10.2 Safety of Persons and Property

10.2.1 The Contractor shall take all reasonable precautions for the safety of, and shall provide all reasonable protection to prevent damage, injury or loss to:

- .1 All employees on the Work and all other persons who may be affected thereby;
- .2 the public, including University staff and employees.
- .3 all the Work and all materials and equipment to be incorporated therein, whether in storage on or off the site, under the care, custody or control of the Contractor or any of his Subcontractors or Sub-subcontractors;
- .4 materials, equipment, supplies or construction of other contractors, and;
- .5 other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other



Improvements and utilities not designated for removal, relocation or replacement in the course of construction.

10.2.2 The Contractor shall comply with all applicable codes, laws, ordinances, rules, regulations and lawful orders of any public authority, including the University's Environmental Health and Safety Division, having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss. He shall erect and maintain, as required by existing conditions and progress of the Work, all reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent utilities.

10.2.3 The Contractor shall designate a responsible member of his organization at the site whose duty shall be the prevention of accidents and other safety or protection measures. This person shall be the Contractor's superintendent unless otherwise designated in writing by the Contractor to the University.

10.2.4 When the use or storage of explosives or other hazardous materials or equipment is necessary for the execution of the Work, the Contractor shall exercise the utmost care and shall carry on such activities under the supervision of properly qualified personnel. No explosives shall be used without the permission of the University.

10.2.5 The Contractor shall provide and maintain adequate fire extinguishers or other fire fighting systems or devices in and around the construction area, available to all workmen, but shall not use extinguishers that are to be installed in the Work.

10.2.6 The Contractor shall not load or permit any loading which will endanger the safety of or in any way damage the Project, the Work, or any existing or adjacent facilities.

10.2.7 All damages or loss to any property referred to in Clauses 10.2.1.3 through 10.2.1.5, caused in whole or in part by the Contractor, any Sub-contractor, any Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable, shall be remedied and paid for by the Contractor, except damage or loss solely attributable to faulty Drawings or Specifications, or to the acts or omissions of the University, or Architect or anyone employed by either of them or for whose acts either of them may be liable, and not attributable to the fault, acts, operations, methods or negligence of the Contractor.

### 10.3 Emergencies

10.3.1 In any emergency affecting the safety of persons or property, the Contractor shall act, at his discretion, to prevent threatened damage, injury or loss and shall immediately notify the University. Any additional compensation or extension of time claimed by the Contractor on account of emergency work shall be determined as provided in Article 12 for Changes in the Work.

## ARTICLE 11 - INSURANCE

### 11.1 Contractor's Liability Insurance

11.1.1 The Contractor shall purchase and maintain such insurance as will protect him from claims which may arise out of or result from the Contractor's operations under the Contract, whether such operations be by himself or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable; such insurance shall, as a minimum, cover:

- .1 claims under workmen's compensation, disability benefit and other similar employee benefit acts;
- .2 claims for damages because of bodily injury, occupational sickness or disease, or death of his employees;
- .3 claims for damages because of bodily injury, sickness or disease, or death of any person other than his employees;
- .4 claims for damages insured by usual personal injury liability coverage which are sustained (1) by any person as a result of an offense directly or indirectly related to the employment of such person by the Contractor, or (2) by any other person; and
- .5 claims for damages because of injury to or destruction of tangible property, including loss of use resulting therefrom.

11.1.2 The insurance required by Paragraph 11.1 shall be written for not less than the limits of liability specified in Subparagraph 11.1.10, other requirements of the Contract Documents, or required by law, whichever is greater. The Contractor is solely responsible to purchase and provide adequate and additional insurance for work under the Contract, subject to the specified minimum requirements. The insurance shall be written on a Combination Comprehensive Liability Form with Broad Form Property Damage coverage.

11.1.3 Unless otherwise specified in the Contract Documents, as a minimum the liability coverage shall include:

- .1 General Public Liability.
- .2 Workmen's Compensation, with All States or Universal endorsement.
- .3 Employee's Liability, with All States or Universal endorsement.
- .4 Premises and Operations.
- .5 Contractor's Protective Contingent Liability.
- .6 Elevators (if any under this Contract).
- .7 Personal Injury, Groups A, B and C.
- .8 Explosion, Collapse and Underground Property (The University will consider the exclusion of one or more of these hazards only if the Contractor provides a sworn statement which certifies no work

involving these hazards will be performed under the Contract by the Contractor, any Subcontractor or anyone employed by them.)

- .9 Contractual Liability
- .10 Completed Operations, which shall be maintained a minimum of one year after final completion.
- .11 Automobile, including owned, non-owned and hired vehicle coverage.

11.1.4 The Contractor's Contractual Liability insurance shall cover the Contractor's obligations under Paragraph 4.18. Insurance for said agreement shall, as a minimum, provide limits as specified for any claim arising out of the hold harmless agreement and said limits shall not be reduced as the result of any claim made under the Public Liability Insurance.

11.1.5 If any insurance policy is written to cover more than one exposure, the minimum limit specified for each exposure shall be available for claims under each of the exposures.

11.1.6 The insurance companies for all policies shall waive the right to assert immunity of the University as a defense to any claim made, and endorsements to policies or the certificate shall indicate the waiver.

11.1.7 Within 14 days after receipt of the Notice to Proceed or Contract execution, whichever occurs first, and prior to commencing the Work at the site, the Contractor shall submit to the University three copies, with one copy to the Architect, of a certificate of Liability Insurance indicating all coverages. The certificates shall be one Minnesota CICC Form 701, latest edition.

11.1.8 The Contractor shall not allow insurance to be cancelled, lapse, change by decrease in limits or coverage during the life of the Contract, including guarantee periods. In event of any such change or termination, 15 days prior written notice shall be given the University, the Architect, and all insured parties. Certificates shall bear acknowledgement of the notice requirement.

11.1.9 The Contractor's Surety for the Bond specified under Paragraph 7.5 shall be held until all claims against the insurance (including claims under Paragraph 4.18) have been settled and suitable evidence of the settlement has been provided to the University.

11.1.10 Unless otherwise specified in the Contract Documents, the minimum limits for liability insurance shall be as follows, unless higher limits are required by law:

- .1 Workmen's Compensation: As required by law
- .2 Employee's Liability: \$100,000
- .3 Bodily Injury - For \$300,000 each person  
each of Public Liability \$500,000 each occurrence  
and Automobile \$500,000 aggregate

- .4 Property Damage - \$250,000 each occurrence  
Public Liability \$500,000 aggregate
- .5 Property Damage - \$100,000 each occurrence  
Automobile
- .6 Personal Injury \$300,000 each person  
\$500,000 each occurrence
- .7 Contractual Liability Same limits as .3 and .4 above
- .8 Umbrella Excess Liability: If such policy is used to supplement the underlying limits, it shall be written for not less than \$1,000,000 and both the underlying policy and the umbrella policy shall provide for X-C-U coverage.

## 11.2 Property Insurance

11.2.1 Unless otherwise provided in the Contract Documents, the Contractor shall purchase and maintain Property Insurance in the amount of 100% of the insurable value of work under the Contract plus 1/4 of 1% of the Contract Sum for Architectural fees which may be required as a result of a loss. This insurance shall include the interests of, and name or designate as joint insureds, the University, the Architect, the Architect's Consultants, and all other agents, the Contractor, his Subcontractors and Sub-subcontractors on the Work and shall, as a minimum, insure against the perils of Fire, Extended Coverage, Vandalism, Malicious Mischief and Multiple Perils, and shall cover debris removal. (Builder's Risk with Multiple Peril Form), with coverage equal to an Inaidn Marine Form).

11.2.2 The Property Insurance shall be placed into effect and two copies of the policy provided to the University prior to starting any work at the site, the delivery of any materials to the site or exposure to any loss may occur. The policy shall provide that in the event of cancellation or expiration, a minimum of 15 days written notice shall be provided the University and the Architect. In addition to providing copies of the policy to the University, the Contractor shall submit one copy of the policy to the Architect.

11.2.3 Property Insurance shall be maintained by the Contractor until completion of the Work under the Contract, or full occupancy by the University, whichever occurs first, as determined by the University. Prior to termination of the insurance, at a time approved by the University, 15 days written notice of the proposed termination shall be provided to the University and Architect.

11.2.4 At the time the policy is issued, an endorsement shall be attached to the policy granting "permission for partial occupancy," to prevent the insurance from becoming invalid for partial occupancy by the University.

11.2.5 The University, the Architect, the Contractor, any other separate contractor on the Project performing work under these General Conditions, and all their Subcontractors, upon execution of construction agreements in connection with the Project automatically waive all rights, each against all others, for damages caused by fire or other perils to the extent covered by Insurance under this Paragraph 11.2, except such rights as they may have to proceeds of such insurance held by the Trustee. Any policy issued with a

clause negating this waiver shall have the clause voided by endorsement or the policy will be unacceptable. The Contractor shall arrange for, and require, similar waivers by Subcontractors and Sub-subcontractors in accordance with Clause 5.3.1.5., if necessary.

11.2.6 The Property Insurance policy may include a deductible amount as specified, but not to exceed \$1,000 per occurrence, which shall not apply to the coverages of fire, windstorm, hail, lightning, smoke, explosion, riot, civil commotion, aircraft, vehicles or the upset, overturning or collision of a transporting conveyance. The Contractor shall be responsible for any damage to his Work not covered (including damage subject to the deductible) by the insurance and he may self-insure or obtain insurance to cover any losses, at his option.

11.2.7 Any other property not covered by insurance provided under this Paragraph 11.2 (such as Contractor's tools, machinery or equipment and property of similar nature not destined to become a part of the Project) shall be Contractor's responsibility and Contractor may self-insure or provide other insurance at his option.

11.2.8 Any insured loss is to be adjusted with the University and made payable to the Contractor as Trustee for the insureds, as their interests may appear. The Contractor as Trustee shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within five days after the occurrence of loss to the exercise of this power. If such an objection is made, settlement with the insurers shall be made by the Contractor, the University and a third insured selected by them.

11.2.9 If required in writing by any party in interest, the Contractor as Trustee shall, upon the occurrence of an insured loss, give bond for the proper performance of his duties. He shall deposit in a separate account any money so received, and he shall distribute it in accordance with such agreement as the parties in interest may reach, or in accordance with an award by arbitration.

11.2.10 In the event of an insured loss, with University agreement, the Contractor shall immediately arrange with his insurance carrier to allow the Contractor to replace, repair, rebuild or remedy the loss so the work is accomplished as quickly as possible and to prevent (or minimize) any delay in job progress. Any claim for time extension as a result of a loss shall be approved by the University.

11.2.11 Upon termination of the Contractor's Property Insurance, the University hereby waives any claim against the Architect, Contractor and his Subcontractors and Sub-subcontractors for damage to its property from the perils covered under the terminated Contractor's Property Insurance which may occur during the completion of the Work and the guarantee period.

11.2.12 For work involving additions, remodeling or repair to existing property, the University hereby waives any claim for damage to his existing properties against the Architect, and any claim against the Contractor and his Subcontractors and Sub-subcontractors for damage to its existing properties from fire or other peril insured by the Contractor's property insurance or the cost of such damage which is in excess of the specified minimum limit for the Contractor's Public Liability Property Damage coverage.

### 1.3 Steam Boiler and Machinery Insurance

11.3.1. Should the Work under the Contract include such equipment as steam boilers, other pressure vessels, hot water boilers, fired storage water heaters, fired coil water heaters and similar equipment or objects, the Contractor shall effect and maintain appropriate broad coverage steam boiler and machinery insurance as required by law or the Contract Documents. Such coverage shall, as a minimum insure against loss or damage, including death or bodily injury, from explosion, rupture or bursting of the equipment, piping and normally covered appurtenances.

11.3.2 The policy shall name, as insureds, the Contractor, the University, the Architect, other contractors for the Work, Subcontractors and Sub-subcontractors.

11.3.3 The insurance shall be placed into effect prior to the start up and testing of the equipment and have a policy period of at least one year but in any event shall be maintained until Final Completion of the Work.

11.3.4 The policy shall cover, as a minimum (1) loss to property of the insured, including extra costs of temporary repair, (2) death or bodily injury liability, including defense, settlement and supplementary payments, and (3) property damage liability including defense, settlement and supplementary payments.

11.3.5 Unless otherwise specified in the Contract Documents, the minimum limits shall be \$500,000 per occurrence.

### 11.4 Loss of Use Insurance

11.4.1 The University at its option, may purchase and maintain such insurance as will insure it against loss of use of its property due to fire or other hazards, however caused, except delay caused by the Contractor.

### 11.5 Other Insurance

11.5.1 If other insurance is required by the University or the Contractor to insure against particular hazards not specified under Article 11 or elsewhere in the Contract Documents, they shall effect and pay for such special coverage as they may individually require or wish to carry.

11.5.2 If construction or any of the Work entails special hazards, the Contractor shall provide a rider or riders to be attached to the appropriate policies specified to cover such special hazards.

11.5.3 If any government agency requires special coverage for work on or adjacent to public streets or property, the Contractor shall comply with and provide such insurance, endorsements or extensions as may be required by the agency.

## ARTICLE 12 - CHANGES IN THE WORK

### 12.1 Change Orders

12.1.1 The University, without invalidating the Contract may order Changes in the Work consisting of additions, omissions or other revisions, the

Contract Sum and the Contract Time being adjusted accordingly. All such Changes in the Work shall be authorized by Change Order, or other established written procedures, and shall be executed under the applicable conditions of the Contract Documents. Such Changes in the Work may be made without notice to the Surety on the Bond given under the Contract. The University reserves the right to require additional security when additions are made if, in its judgment, such security is necessary to protect its interests.

12.1.2 A Change Order is a written order to the Contractor signed by the University, issued after the execution of the Contract, authorizing a Change in the Work or an adjustment in the Contract Sum or the Contract Time. A Change Order may also be signed by the Contractor if he agrees to the adjustment in the Contract Sum or the Contract Time. The Contract Sum and the Contract Time may be changed only by Change Order.

12.1.3 The cost or credit to the University shall be determined in one of the following ways and, unless otherwise approved or directed by the University, in the precedence of the order listed:

- .1 By an accepted Unit Price proposed in the Contractor's original bid and incorporated in the Contract or a Unit Price comparable to unit costs in the Contractor's Schedule of Values.
- .2 By a lump sum cost acceptable to the University, based on the Contractor's detailed, itemized breakdown of the actual basic cost, with allowance for the Contractor's profit and overhead, as provided for under Subparagraph 12.1.5.
- .3 By mutually agreeable Unit Prices for the actual cost, with allowance for the Contractor's profit and overhead, computed in a similar manner as provided for in Subparagraph 12.1.5.
- .4 On the actual basic cost of the Change, as determined by payroll records and paid receipts, plus allowance for the Contractor's profit and overhead as provided for in Subparagraph 12.1.5, subject to a pre-determined maximum amount.

12.1.4 The Contractor shall provide or perform additional work, make other Changes in the Work and comply with the provisions of a Change Order, the same as though the Changes had been a part of the original Contract Documents, when and as ordered in writing by the University.

12.1.5 Except for Unit Prices included in the Contract, and unless otherwise approved by the University, for proposed Changes in the Work, the Contractor shall submit an itemized list of quantities with the applicable unit cost and extended price for each, in such form and detail as required by the University or Architect.

- .1 As a minimum the detailed breakdown shall include and indicate the items enumerated below. Items (a) and (b) constitute the cost of labor and items (a), (b), (c) and (d) constitute the actual "basic costs" referred to under this Article 12.

(a) Actual labor costs, itemized by each trade involved showing the hourly rates for each. Labor rates shall be the same for extra and credit computations.

(b) Burden on labor, which shall be the actual costs of mandatory fringe benefits, taxes on labor, workmen's compensation, insurance on labor as affected by payroll, unemployment taxes, including FICA and FUTA.

(c) Actual quantities of material and equipment, with their actual unit costs.

(d) The cost of subcontracted work, computed in the same way as provided for under this Subparagraph 12.1.5.

(e) Overhead, profit or commission.

(f) Applicable sales tax on materials.

.2 The maximum that will be allowed for overhead, profit or commission shall be as follows, expressed as a percentage of the actual basic cost of the change. The percentages for profit, overhead and commission allowed by the University may be less, depending on the nature, extent or complexity of the change, where the percentage is not commensurate with the responsibility and administration involved (such as the Contractor merely processing a substantial Change Order to a Subcontractor) but in no event shall they exceed the following:

	<u>Overhead</u>	<u>Profit</u>	<u>Commission</u>
(a) To the Contractor and/or his Subcontractor for work performed with his own forces	10%	10%	---
(b) To the Contractor for work performed by other than his own forces	---	---	10%

.3 The burden on labor may be indicated as a dollar/cents addition to the hourly rate or may be expressed as a percentage of the extended hourly rate costs. If required by the University or Architect, the Contractor shall provide a detailed breakdown to justify the labor burden. The University reserves the right to reject any labor burden which is inconsistent with other similar contractors.

.4 Material costs shall be at the actual cost to the Contractor, or Subcontractor. Upon request, the Contractor (or Subcontractor) shall submit evidence to substantiate the costs. Materials shall be quoted at trade discount prices, with quantity discounts also applied where the quantities warrant. Cash or prompt payment discounts need not be credited. In any proposal with material credits, the credit shall be based on the actual Contract cost of the material (including trade and quantity discounts) less any charges actually incurred for handling or returning a material which has been delivered. No "cancellation" charge will be allowed when material has not been shipped.



- .5 The percentages allowed for overhead, profit or commission under Clause 12.1.5.2 shall be deemed to include: (1) field and office supervision and administration, including the field superintendent and administrative foremen; (2) general insurance, except that listed as the labor burden; (3) use of small tools, (4) shop burden; (5) equipment rental (other than required additional hoisting equipment or required excavating equipment necessary solely as a result of the Change); (6) engineering and estimating costs; (7) performance (guaranty) bond; (8) cost of safety measures (including those imposed by OSHA); (9) shipping, drayage and demurrage; (10) and all other costs except those enumerated under Clause 12.1.5.1.
- .6 Except for changes based on Unit Prices included in the Contract, cost changes shall be computed by determining the actual basic costs enumerated under Clause 12.1.5.1, to which the overhead may be added, then the profit figure may be added and finally adding the sales tax on materials.
- .7 Subcontractors shall compute their costs in the same way and are subject to the same maximum percentages for overhead and profit. To the Subcontractor's price, the Contractor may add up to 10% commission.
- .8 Not more than three percentages for overhead, profit and commission will be allowed. The mark-up on any part of the Work a Subcontractor subcontracts will be limited to one overhead figure and one profit figure, in addition to the Contractor's commission. The Subcontractor and Sub-subcontractor may divide the overhead and profit amount as they agree upon.
- .9 For Changes involving extra cost by a Subcontractor and the Contractor, the commission shall be applied directly to the Subcontractor's price, with the overhead and profit figure applied only to the Work the Contractor performs with his own forces.
- .10 For Changes involving both extra and credit amounts, the overhead and profit, or commission, shall be applied only to net difference where the extra exceeds the credit.
- .11 For Changes resulting in a credit in the basic costs, a reasonable allowance for overhead, profit or commission shall be credited the Owner, as determined by the University. In general no credit for overhead, profit or commission will be required where the net charge credit is minor or where the Change In Work indicates it is reasonable for no credit be allowed to the University. In the event of substantial subcontract credits, or for Work performed by the Contractor, a reasonable overhead, profit or commission credit shall be allowed to the University, in an amount acceptable to the University.

12.1.6 On Changes where the value or extent of Work cannot be reasonably pre-determined or agreed upon, the University, at its sole discretion, may

authorize Work to proceed on an agreed upon cost plus basis, not to exceed a pre-determined maximum amount. In such cases, the basic costs and mark-up for overhead, profit and commission will be in accordance with this Paragraph 12.1.

12.1.7 Unit Prices proposed on the bid form and included in the Contract are not subject to further profit, overhead or commission adjustments, nor the conditions of Subparagraph 12.1.5. The Contract Sum will be adjusted by the direct extension of the number of units and the Unit Prices.

12.1.8 The University may, at its discretion, initiate procedures for Modifications for Changes in the Work involving the Contract Sum, prior to preparation of a formal Change Order. Such Modifications shall be signed by authorized representatives of the University, shall be subject to the same conditions and cost proposals as Change Orders, shall order and authorize the Contractor to proceed with the Changes in the Work and shall have the same effect as a Change Order, except the Contract Sum or Contract Time will not be changed until the Modification has been incorporated in a subsequent Change Order.

12.1.9 Except in an emergency endangering life or property, the Contractor shall make no Changes in the Work affecting the Contract Sum or Contract Time unless in pursuance of a Change Order or other written order from the University, or from the Architect and approved by the University, whereby the scope of the change and the cost, or basis of payment, is agreed upon.

12.1.10 Should Contractor find during progress of the work that, in his judgment, existing conditions or requirements make desirable, or beneficial, a Modification in the Contract requirements, he shall promptly report such matters to University and Architect, in writing, for decision and instruction.

12.1.11 If Unit Prices are stated in the Contract Documents or subsequently agreed upon, and if the quantities originally contemplated are so changed that application of the agreed unit prices to the quantities of Work proposed will create a hardship on the University or the Contractor, the applicable unit prices shall be equitably adjusted to prevent such hardship.

12.1.12 Should concealed or subsurface conditions encountered in the performance of the Work be at significant variance with the conditions indicated by the Contract Documents, or in other information available to the Contractor including his own investigations, or should a significant variance from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in this Contract, be encountered, the University and the Architect shall be notified immediately before the conditions are disturbed. Upon the determination that a significant difference exists, such changes shall be made as determined to be necessary and the Contract Sum shall be equitably adjusted by Change Order upon claim by either party made within fourteen days after the first observance of the conditions.

## 12.2 University's Right to Perform Changes in the Work

12.2.1 If the University does not accept proposals of the Contractor for

additional Work or Changes in the Work and no agreement is reached, or if it does not seem advisable or expedient to proceed on the basis of the Contractor's proposal, the University reserves the right to perform additional Work or Changes in the Work with its own personnel or to employ others for Changes in the Work.

### 12.3 Claims for Additional Cost

12.3.1 If the Contractor wishes to make a claim for an increase in the Contract Sum, he shall give the University and the Architect written notice thereof within fourteen days after the occurrence of the event giving rise to such claim. This notice shall be given by the Contractor and approval to proceed issued prior to the Contractor proceeding to execute the Work, except in an emergency endangering life or property in which case the Contractor shall proceed in accordance with Subparagraph 10.3.1. No such claim shall be valid unless so made. Any change in the Contract Sum resulting from such claim shall be authorized by Change Order.

12.3.2 If the Contractor claims that additional cost is involved because of (1) any written interpretation issued pursuant to Subparagraph 1.2.5, (2) any written order for a minor change in the Work issued pursuant to Paragraph 12.4, the Contractor shall make such claims as provided in Subparagraph 12.3.1.

### 12.4 Minor Changes In the Work

12.4.1 The Architect and the University shall have authority to order minor changes in the Work not involving an adjustment in the Contract Sum or an extension of the Contract Time and not inconsistent with the intent of the Contract Documents. The University and Architect also reserve right to make minor changes in dimensions, locations, arrangements, or details to accommodate changes in other materials and equipment, improve the Work or prevent unforeseen interference with structural or other features. Such changes shall be made without change in the Contract Sum.

## ARTICLE 13 - UNCOVERING AND CORRECTIONS OF WORK

### 13.1 Uncovering of Work

13.1.1 If any Work should be installed or covered contrary to the provisions of the Contract Documents or request of the University or Architect, it must, if required by the University or Architect, be removed or uncovered for observation and replaced at the Contractor's expense. The Contractor shall give timely notice to the University and Architect of the readiness of work for observation.

13.1.2 If any other Work has been covered which the Contract Documents, University or Architect has not specifically requested to observe prior to being covered, the University or Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work be found in accordance with the Contract Documents, the cost of uncovering and replacement shall, by appropriate Change Order, be paid by the University. If such Work be found not in accordance with the Contract Documents, the Contractor shall pay such costs unless it be found that this condition was caused by a separate contractor employed as provided in Article 6, and in that event the separate contractor shall be responsible for the payment of such costs.

## 13.2 Correction of Work

13.2.1 The Contractor, all Subcontractors, and Sub-subcontractors shall be bound by the conditions of this Paragraph 13.2. The Contractor shall promptly correct all Work rejected by the Architect or the University as defective or as failing to conform to the Contract Documents whether observed before or after Completion and whether or not fabricated, installed or completed, unless the University elects to accept the Work as provided for under 13.3. The Contractor shall bear all costs of correcting such rejected Work, including the cost of the Architect's additional services thereby made necessary. Work rejected before Final Completion shall be corrected prior to final payment.

13.2.2 If, within one year after Date of Substantial Completion, or within such longer period of time as may be prescribed by law or by the terms of any applicable special guarantee required by the Contract Documents, any of the Work is found to be defective or not in accordance with the Contract Documents, the Contractor shall correct it promptly after receipt of notice from the University to do so unless the University has previously given the Contractor a written acceptance of such condition. The University shall give such notice promptly after discovery of the condition.

13.2.3 Except as provided under Subparagraph 13.2.5 the commencement of the specified guaranty or correction of Work periods covered by this Article, or any other special specified period, shall be the date of the inspection for Substantial Completion of the last unit, part or phase of the Work, except for work then noted as incomplete or unsatisfactory. The guarantee period for said incomplete or unsatisfactory work shall start on the date of final correction or remedy and the acceptance of these features by the University. In the absence of specifically noted dates of inspection for Substantial Completion (or of acceptance, in writing, by the University of corrected work), the date of the final payment on the entire Contract will be the start of the guarantee period. Occupancy or use of the Work shall not be construed as commencing guarantee periods at any earlier date.

13.2.4 The specified correction of Work or general guarantee periods, or other special guarantees specified for other periods of time, or by law, shall not be limited by any warranty of a manufacturer, producer, supplier or Subcontractor or other source. The specified guarantees shall be provided by the Contractor, who shall make his own arrangements with the manufacturer, producer, supplier, Subcontractor or other source as he may choose. Where a manufacturer, producer, supplier or Subcontractor guarantees or provides warranties in excess of the general guarantees, the extended guarantees and warranties shall be passed to the University, the same as though they were specified under this Article 13.

13.2.5 Should special circumstances indicate an earlier commencement of guarantee or correction of Work periods than on Substantial Completion is reasonable for certain parts of the Work, in the opinion of the Architect or University, the University may consider such earlier start provided suitable credit is given the University. An earlier start of the periods shall be only with the University's written approval of the time and acceptance of the credit by Change Order.

13.2.6 The expiration of any guarantee or correction of Work period shall not relieve the Contractor of the obligation to correct, at his own expense,

any latent defect in the Work or deficiencies which are not readily ascertained, including but not limited to defective materials and workmanship, defects attributable to substitutions for specified materials, substandard performance or any of the Work otherwise not in compliance with the Contract Documents. Such latent defects or deficiencies shall be corrected as provided in this Paragraph 13.2. Following the correction or replacement of any of the Work, as above specified, the Contractor shall correct any defects or deficiencies in the corrected or replaced materials and workmanship, which is found within one year after the date of correction or replacement.

13.2.7 All such defective or non-conforming Work under Subparagraphs 13.2.1 and 13.2.2 shall be removed from the site if necessary, and the Work shall be corrected to comply with the Contract Documents without cost to the University or Architect.

13.2.8 The Contractor shall bear the cost of making good all work of separate contractors destroyed or damaged by such removal or correction.

13.2.9 If the Contractor does not remove such defective or non-conforming Work within a reasonable time fixed by written notice from the University or the Architect, the University may remove it and may store the materials or equipment at the expense of the Contractor. If the Contractor does not pay the cost of such removal and storage within ten days thereafter, the University may upon ten additional days' written notice sell such Work at auction or at a private sale and shall account for the net proceeds thereof, after deducting all the costs that should have been borne by the Contractor, including compensation for additional architectural services. If such proceeds of sale do not cover all costs which the Contractor should have borne, the difference shall be charged to the Contractor and an appropriate Change Order shall be issued. If the payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the University.

13.2.10 If the Contractor fails to correct such defective or non-conforming Work, the University may correct it in accordance with Paragraph 3.5.

### 13.3 Acceptance of Defective or Non-Conforming Work

13.3.1 If, in the opinion of the University, it is expedient, in its best interest, or should the University choose to accept defective or non-conforming Work, for convenience, it may do so instead of requiring the removal and correction, in which case a Change Order will be issued to reflect an appropriate reduction in the Contract Sum for the difference in value together with an allowance for damage or loss of quality. If the amount is determined after final payment, it shall be paid by the Contractor or his Surety. The amount shall be determined by the University.

## ARTICLE 14 - TERMINATION OF THE CONTRACT

### 14.1 Termination by the Contractor

14.1.1 If the Work is stopped for a period of thirty days under an order of any court or other public authority having jurisdiction, or as a result

of an act of government, such as a declaration of a national emergency making materials unavailable, through no act or fault of the Contractor or a Subcontractor or their agents or employees or any other persons performing any of the Work under a contract with the Contractor, or if the Work should be stopped for a period of thirty days by the Contractor for University's failure to make payment within 30 days after payment is due then the Contractor may, upon ten days' written notice to the University and the Architect, terminate the Contract and recover from the University payment for all Work executed and for any proven loss sustained upon any materials, equipment, tools, construction equipment and machinery, including reasonable profit. Such right to termination, however, shall not extend to material shortages as a result of market conditions, diminishing resources or other causes except a formally declared emergency specifically restricting or preventing the use of materials.

#### 14.2 Termination by the University

14.2.1 If the Contractor is adjudged a bankrupt, or if he makes a general assignment for the benefit of his creditors, or if a receiver is appointed on account of his insolvency, or if he refuses or fails, except in cases for which extension of time is provided, to supply enough properly skilled workmen or proper materials to satisfactorily prosecute and complete the Work according to schedule and within the Contract Time, or if he fails to make prompt payment to Subcontractors or for materials or labor, or disregards laws, ordinances, rules, regulations or orders of any public authority having jurisdiction, or otherwise is guilty of a substantial violation of a provision of the Contract Documents, then the University, with the advice of the Architect, may, without prejudice to any right or remedy and after giving the Contractor and his Surety seven days' written notice, require the Surety to promptly take over and complete the Work under the terms of the Contract. Should the Surety fail to assume the obligations of completing the Work within ten days after receipt of the written notice, the University may, upon seven days' additional notice, terminate the Contract (except the obligations under the Bond) and take possession of the site and of all materials, equipment, tools, construction equipment and machinery thereon owned by the Contractor and may finish the Work by whatever method it may deem expedient. In such case the Contractor or his Surety shall not be entitled to receive any further payment until the Work is finished.

14.2.2 If the University completes the Work and the unpaid balance of the Contract Sum exceeds the costs of finishing the Work, including the University's additional costs, attorneys' costs and compensation for the Architect's additional services, an amount shall be paid to the Contractor only to the extent as will compensate him for the Work the Contractor actually performed, based on the actual basic costs as defined under Clause 12.1.5.1. If such cost for the University to complete the Work exceeds such unpaid balance, the Contractor or his Surety shall pay the difference to the University. The costs incurred by the University as herein provided shall be certified by the University.

#### ARTICLE 15 - EQUAL EMPLOYMENT OPPORTUNITY

##### 15.1 Non-Discrimination, Equal Employment Opportunity

15.1.1 Unless other Equal Employment Opportunity provisions are included

in the Contract Documents, the Contractor shall comply with the University of Minnesota Construction Contract Non-Discrimination requirements of Subparagraphs 15.1.2 through 15.1.12 throughout the life of the Contract.

15.1.2 The Contractor shall not discriminate against any employee or applicant for employment because of race, creed, color, national origin, or sex. The Contractor shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, creed, color, national origin, or sex. Such action shall include, but not be limited to, the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

15.1.3 The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the University of Minnesota setting forth the provisions of this non-discrimination clause.

15.1.4 The Contractor shall designate an Equal Employment Opportunity Officer, who shall have authority and responsibility for the implementation of equal employment opportunity and affirmative action programs under this Contract. The Contractor shall submit for approval a written copy of its program within fifteen (15) days after receipt of notice from the University of Minnesota.

15.1.5 The Contractor shall, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, national origin, or sex.

15.1.6 The Contractor shall send to each labor union or representative of workers with which he has a collective bargaining agreement or other contracts or understanding, a notice to be provided by the University of Minnesota advising the labor union or workers' representatives of the Contractor's commitments under this policy and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

15.1.7 The Contractor shall be required to give evidence of persistent and prolonged efforts to increase the number of minority group employees. The Contractor shall make maximum use of apprentices to develop qualified minority personnel. The Contractor shall seek to fill labor shortages for apprentices and skilled journeymen by upgrading present employees including qualified minority employees.

15.1.8 The Contractor shall furnish to the University of Minnesota information and periodic reports necessary to substantiate his compliance with the requirements of this policy during the duration of the Contract. These reports shall include an appraisal of the effectiveness of the Contractor's equal employment opportunity and affirmative action programs, and shall list any factors and conditions which impede, restrict, or account for less than complete success of the program. The Contractor shall permit access to his books, records, and accounts by the University of Minnesota for purposes of investigation to ascertain compliance with these provisions.

15.1.9 Non-compliance with any requirements of these provisions shall be a breach of a condition of the Contract and will afford the University any and all rights otherwise described under the terms of the contract as applying to the breach of condition.

15.1.10 The Contractor shall include the provisions of Subparagraphs 15.1.2 through 15.1.10 in every subcontract, unless exempted by the provisions of this policy, so that provisions will be binding on each Subcontractor. The Contractor shall take such action as may be required to enforce such provisions.

15.1.11 Contracts and subcontracts not exceeding \$10,000 are exempt from the reporting requirements of this Article.

15.1.12 Except in the case of subcontracts for the performance of construction work at the site of construction, provisions of Subparagraphs 15.1.2 through 15.1.10 shall not be required to be inserted in subcontracts below the second tier.

## ARTICLE 16 - WAGE RATES

### 16.1 Minimum Wage Rates

16.1.1 Unless other Wage Rates are included in the Contract Documents, the Contractor shall comply with the provisions of Subparagraph 15.1.2. If other Wage Rates are included in the Contract Documents, such other rates that are higher than required under Subparagraph 16.1.2 and 16.1.3 shall be paid by the Contractor for labor on the Work.

16.1.2 For any Contract for construction, alteration, or repair of University buildings or other major structures, financed in whole or in part by State appropriation and which exceeds \$2,500 in total cost, the Contractor and his Subcontractors shall pay to their respective laborers and mechanics employed directly on the Work at the site at least the wage rates as determined by the Minnesota Department of Labor and Industry and issued by the Department in their Wage Rate Determination schedules. The Contractor shall comply with the requirements of the Minnesota Department of Labor and Industry's Wage Determinations with respect to any Contract which exceeds \$2,500, in lieu of the Contract Amount Conditions stated in Minnesota Statute 177-43 (1974) as amended (Chapter 191 Laws of Minnesota for 1975). Subdivision 7.

16.1.3 A copy of the Wage Rate Determinations provided by the Minnesota Department of Labor and Industry, applicable to the County in which the Project is located, is hereinafter bound in the specifications for reference. The Contractor shall examine any wage rate schedule included in the Contract Documents for completeness or accuracy. If any trade which will be used for the Work is omitted, or any wage rate shown is incorrect from prevailing wages of the area, such omission and discrepancies shall be reported to the University. If the only applicable wage rate schedule is that of the Minnesota Department of Labor and Industry, and any rate is missing or appears incorrect, the Contractor shall obtain the proper rate from the Department of Labor and Industry. If necessary, the Contractor shall assist in obtaining decisions on incorrect or missing rates.

16.1.4 By requiring the Contractor to pay the wages under Subparagraph 16.1.2 and 16.1.3, or to pay any other minimum wage rates, neither the University nor



the Architect represent that labor may be employed at the minimum hourly wage called for. The Contractor shall investigate and verify the conditions at the location of the Work, to satisfy himself as to the availability and cost of labor required to perform the Work.

16.1.5 The Contractor shall post and maintain the Wage Rate Schedule in a conspicuous place accessible to all employees working on the Project.

## ARTICLE 17 - DHEW REQUIREMENTS FOR FEDERALLY ASSISTED CONSTRUCTION CONTRACTS

### 17.1 Equal Opportunity

17.1.1 During the performance of this contract the Contractor agrees as follows:

- .1 The Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex or national origin. The Contractor will take affirmative action to insure that applicants are employed and that employees are treated during employment without regard to their race, religion, color, sex or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by an appropriate agency of the Federal Government setting forth the requirements of these non-discrimination provisions.
- .2 The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, religion, color, sex or national origin.
- .3 The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding a notice to be provided advising the labor union or workers' representative of the Contractor's commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- .4 The Contractor will comply with all provisions of Executive Order No. 11246 of September 24, 1965 and of the rules, regulations and relevant orders of the Secretary of Labor.
- .5 The Contractor will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by an appropriate agency of the Federal Government and by the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations and orders.
- .6 In the event of the contractor's noncompliance with the equal opportunity conditions of this contract or with any of such rules, regulations or orders, this contract may be cancelled, terminated or suspended in whole or in part, and the Contractor may be declared ineligible for further Government contracts,

or Federally Assisted Contracts, in accordance with procedures authorized in Executive Order No. 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in said Executive Order, or by rule, regulation or order of the Secretary of Labor, or as otherwise provided by law.

- .7 The Contractor will include all of clauses of 17.1.1.1 through 17.1.1.7 inclusive in every subcontract or purchase order, unless exempt by rules, regulations or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontractor or vendor as the appropriate agency of the Federal Government may direct as a means of enforcing such provisions, including sanctions for noncompliance: provided, however, that in the event the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the appropriate agency of the Federal Government, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

17.1.2 Exemptions to the requirements of the above Equal Opportunity conditions are contracts and subcontracts not exceeding \$10,000, and contracts and subcontracts with regard to work performed outside the United States by employees who were not recruited in the United States.

17.1.3 Unless otherwise provided, the above Equal Opportunity provisions are not required to be inserted in subcontracts except for subcontracts involving the performance of construction work at the site of construction, in which case the provisions must be inserted in all such subcontracts.

## 17.2 Prevailing Wages

17.2.1 All mechanics and laborers employed or working directly upon the site of the work shall be paid unconditionally, and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by the Copeland Regulations [29 Code of Federal Regulations, Part 3]), the full amounts due at time of payment computed at wage rates not less than the aggregate of the basic hourly rates and the rates of payments, contributions, or costs for any fringe benefits contained in the wage determination decision of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the Contractor or Subcontractor and such laborers and mechanics, and the wage determination decision shall be posted by the Contractor at the site of the work in a prominent place where it can easily be seen by the workers.

17.2.2 The Contractor may discharge his obligation under subparagraph 17.2.1 to workers in any classification for which the wage determination decision contains:

- .1 Only a basic hourly rate of pay, by making payment not less than such basic hourly rate, except as otherwise provided in the Copeland Regulations (29 CFR, Part 3); or

- .2 Both a basic hourly rate of pay and fringe benefit payments, by making payment in cash, by irrevocably making contributions pursuant to a fund, plan or program for and/or by assuming an enforceable commitment to bear the cost of bona fide fringe benefits contemplated by the Davis-Bacon Act, or by any combination thereof. These fringe benefit payments can be discharged only by making contributions to the same type or types of fringe benefits listed in the applicable determination. Contributions made, or costs assumed, on other than a weekly basis shall be considered as having been constructively made or assumed during a weekly period to the extent that they apply to such period. Where a fringe benefit is expressed in a wage determination in any manner other than as an hourly rate and the contractor pays a cash equivalent or provided an alternative fringe benefit, he shall furnish information with his payrolls showing how he determined that the cost incurred to make the cash payment or to provide the alternative fringe benefit is equal to the cost of the wage determination fringe benefit. In the event of disagreement between or among the interested parties as to an equivalent of any fringe benefit, the owner shall submit the question together with his recommendation through the appropriate Federal agency to the Secretary of Labor for final determination.

17.2.3 The assumption of an enforceable commitment to bear the cost of fringe benefits listed in the wage determination decision forming a part of the contract may be considered as payment of wages only with the approval of the Secretary of Labor pursuant to a written request by the Contractor. The Secretary of Labor may require the Contractor to set aside assets, in a separate account, to meet his obligations under any unfunded plan or program.

17.2.4 The owner shall require that any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified or reclassified conformably to the wage determination and a report of the action taken shall be sent to the appropriate Federal agency. If the interested parties cannot agree on the proper classification or reclassification of a particular class of laborers or mechanics to be used, the owner shall submit the question together with his recommendations through the appropriate Federal agency to the Secretary of Labor for final determination.

17.2.5 In the event it is found by the owner that any laborer or mechanic employed by the Contractor or any Subcontractor directly on the site of the work has been or is being paid at a rate of wages less than the rate of wages required by subparagraph 17.2.1, the owner may (a) by written notice to the prime contractor terminate his right to proceed with the work, or such part of the work as to which there has been a failure to pay said required wages, and (b) prosecute the work to completion by contract or otherwise, whereupon such Contractor and his sureties shall be liable to the owner for any excess costs occasioned the owner thereby.

17.3 Contract Work Hours and Safety Standards Act - Overtime Compensation  
(40 United States Code 327-330)

17.3.1 The Contractor shall not require or permit any laborer or mechanic in any work-week in which he is employed on any work under this contract to work in excess of 8 hours in any calendar day or in excess of 40 hours in such work-week on work subject to the provisions of the Contract Work Hours and Safety Standards Act unless such laborer or mechanic receives compensation at a rate not less than one and one-half times his basic rate of pay for all such hours worked in excess of 8 hours in any calendar day or in excess of 40 hours in such work-week, whichever is the greater number of overtime hours. The "basic rate of pay" as used in this provision shall be the amount paid per hour, exclusive of the Contractor's contribution or cost for fringe benefits, and any cash payment made in lieu of providing fringe benefits, or the basic hourly rate contained in the wage determination, whichever is greater.

17.3.2 In the event of any violation of the provisions of subparagraph 17.3.1, the Contractor shall be liable to any affected employee for any amounts due and to the United States for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic employed in violation of the provisions of subparagraph 17.3.1, in the sum of \$10 for each calendar day on which such employee was required or permitted to be employed on such work in excess of 8 hours or in excess of the standard work-week of 40 hours without payment of the overtime wages required by subparagraph 17.3.1.

17.3.3 The Contractor shall not require or permit any laborer or mechanic employed in the performance of this contract to work in surroundings or under conditions which are unsanitary, hazardous, or dangerous to his health as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation (29 CFR Part 1518, 36 F.R. 7340, April 17, 1971) pursuant to Section 107 of the Contract Work Hours and Safety Standards Act.

17.4 Apprentices

17.4.1 Apprentices shall be permitted to work as such only when they are registered individually under a bona fide apprenticeship program registered with a State apprenticeship agency which is recognized by the Bureau of Apprenticeship and Training, U. S. Department of Labor or, if no such recognized agency exists in a State, under a program registered with the aforesaid Bureau of Apprenticeship and Training. The allowable ratio of apprentices to journeymen in any craft classification shall not be greater than the ratio permitted to the Contractor as to his entire work force under the registered program. Any employee listed on a payroll at any apprentice wage rate, who is not registered as above, shall be paid the wage rate determined by the Secretary of Labor for the classification of work he actually performed.

17.4.2 The Contractor shall furnish written evidence of the registration of his program and apprentices, the ratios allowed and the wage rates required to be paid thereunder for the area of construction prior to using any apprentice in the contract work.

## 17.5 Payrolls and Basic Records

17.5.1 The Contractor shall maintain payrolls and basic records relating thereto during the course of the work and shall preserve for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name and address of each employee, his correct classification, rate of pay (including rates of contributions for, or costs assumed to provide, fringe benefits), daily and weekly number of hours worked, deductions, made and actual wages paid. Whenever the Contractor has obtained approval from the Secretary of Labor as provided in subparagraph 17.2.3, he shall maintain records which show the commitment, its approval, written communication of the plan or program to the laborers or mechanics affected, and the costs anticipated or incurred under the plan or program.

17.5.2 The Contractor shall submit weekly a copy of all payrolls to the Owner. The Prime Contractor shall be responsible for the submission of copies of payrolls of all subcontractors. Each such copy shall be accompanied by a statement signed by the Contractor indicating that the payrolls are correct and complete, that the wage rates contained therein are not less than those determined by the Secretary of Labor, and that the classifications set forth for each laborer or mechanic conform with the work he performed. Submission of the "Weekly Statement of Compliance" required under this contract and the Copeland Regulations of the Secretary of Labor (29 CFR, Part 3) shall satisfy the requirement for submission of the above statement. The Contractor shall submit also a copy of any approval by the Secretary of Labor with respect to fringe benefits.

17.5.3 The Contractor shall make the records required under subparagraphs 17.5.1 and 17.5.2 available for inspection by authorized representatives of the owner, the State, the appropriate Federal agency and the U. S. Department of Labor, and shall permit such representatives to interview employees during working hours on the job.

## 17.6 Compliance With Copeland Regulations

17.6.1 The Contractor shall comply with the Copeland Regulations of the Secretary of Labor (29 CFR, Part 3) which are incorporated herein by reference. In addition, the Weekly Statement of Compliance required by these regulations shall also contain a statement that the fringe benefits paid are equal to or greater than those set forth in the minimum wage decision.

## 17.7 Withholding of Funds

17.7.1 The Owner may withhold or cause to be withheld from the Prime Contractor so much of the accrued payments or advances as may be considered necessary (a) to pay the laborers and mechanics employed by the Contractor or any Subcontractor on the work the full amount of wages required by the contract, and (b) to satisfy any liability of any Contractor for liquidated damages under paragraph 17.3 hereof entitled "Contract Work Hours and Safety Standards Act - Overtime Compensation (40 USC 327-330)".

17.7.2 If the Contractor or any Subcontractor fails to pay any laborer or mechanic employed or working on the site of the work, all or part of the wages required by the Contract, the owner may, after written notice to the Prime Contractor, take such action as may be necessary to cause suspension of any further payments or advances until such violations have ceased.

#### 17.8 Subcontracts

17.8.1 The Contractor will insert in all subcontracts paragraph 17.2 through 17.9 inclusive, respectively entitled "Prevailing Wages", "Contract Work Hours and Safety Standards Act - Overtime Compensation (40 USC 327-330)", "Apprentices", "Payrolls and Basic Records", "Compliance with Copeland Regulations", "Withholding of Funds", "Subcontracts" and "Contract Termination - Debarment", and shall further require all subcontractors to incorporate physically these same paragraphs in all subcontracts.

17.8.2 The term "Contractor" as used in such paragraphs in any subcontract shall be deemed to refer to the subcontractor except when the phrase "Prime Contractor" is used.

#### 17.9 Contract Termination - Debarment

17.9.1 A breach of paragraphs 17.2 through 17.8 inclusive, respectively entitled "Prevailing Wages", "Contract Work Hours and Safety Standards Act - Overtime Compensation (40 USC 327-330)", "Apprentices", "Payrolls and Basic Records", "Compliance with Copeland Regulations", "Withholding of Funds" and "Subcontracts", may be grounds for termination of the contract and for debarment as provided in 29 CFR 5.6.

#### 17.10 Certification of Nonsegregated Facilities

(Applicable to contracts and subcontracts exceeding \$10,000 which are not exempt from the provisions of Paragraph 17.1 "Equal Opportunity" of this Article.)

17.10.1 By entering an agreement related to the work described in the Contract Documents the Contractor or Subcontractor certifies that he does not maintain or provide for his employees any segregated facilities at any of his establishments, and that he does not permit his employees to perform their services at any location under his control where segregated facilities are maintained. The Contractor and Subcontractor further certifies that he will not maintain or provide for his employees any segregated facilities at any of his establishments and that he will not permit his employees to perform their services at any location under his control where segregated facilities are maintained. The Contractor or Subcontractor agrees that a breach of this certification is a violation of paragraph 17.1 "Equal Opportunity". As used herein, the term "segregated facilities" means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation and housing facilities, provided for employees on the basis of race, creed, color, or national origin, because of habit, local custom or otherwise. The Contractor further agrees that (except where he has obtained identical certifications from proposed subcontractors

for specific time periods) he will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000 which are not exempt from this provisions of paragraph 17.1 "Equal Opportunity"; that he will retain such certifications in his files; and that he will forward the following notice to such proposed subcontractors (except where the proposed subcontractors have submitted identical certifications for specific time periods):

**"NOTICE TO PROSPECTIVE SUBCONTRACTORS  
OF REQUIREMENT FOR CERTIFICATIONS OF  
NONSEGREGATED FACILITIES"**

A certification of nonsegregated facilities, as required by the May 9, 1967, order (32 Federal Register 7439, May 19, 1967) on elimination of segregated facilities, by the Secretary of Labor, must be submitted prior to the award of a subcontract exceeding \$10,000 which is not exempt from the provisions of paragraph 17.1 "Equal Opportunity". This certification may be submitted either for each subcontract or for all subcontracts during a period, i.e. quarterly, semi-annually or annually.

17.10.2 The penalty for making false statements in certifications required by subparagraph 17.10.1 is prescribed in 18 USC 1001.

17.11 Disqualified Subcontractors

17.11.1 The Contractor may utilize the services of only those Subcontractors who have not been disqualified under existing Federal laws and regulations from participating in Federally assisted construction projects.

17.12 Federal Inspection

17.12.1 The authorized representatives and agents of the Federal Government shall be permitted to inspect all Work, materials, payrolls, records of personnel, invoices of materials, and other relevant data and records.



STATE OF MINNESOTA/DEPARTMENT OF LABOR AND INDUSTRY

CERTIFICATION OF PREVAILING HOURS OF LABOR  
AND WAGE RATES IN ALL AREAS OF THE STATE  
FOR ALL CLASSES OF LABOR AND MECHANICS  
COMMONLY EMPLOYED IN STATE PROJECTS

CERTIFIED PURSUANT TO MINNESOTA STATUTES SECTION 177.42-44 (1974) AS AMENDED

TO: DEPARTMENT OF ADMINISTRATION  
DEPARTMENT OF AERONAUTICS  
DEPARTMENT OF NATURAL RESOURCES  
HISTORICAL SOCIETY  
STATE UNIVERSITY SYSTEM  
STATE ZOOLOGICAL BOARD  
UNIVERSITY OF MINNESOTA

FROM: MINNESOTA DEPARTMENT OF LABOR AND INDUSTRY

CERTIFIED BY:



E. I. MALONE, COMMISSIONER

DATE: April 1, 1977

DEPARTMENT OF LABOR AND INDUSTRY WAGE RATE DETERMINATION  
Laws 1973 - Chapter 724  
4/1/77

County	Anoka	Hennepin	Scott
	Carver	Isanti	Sherburne
	Chisago	Pine	Washington
	Dakota	Ramsey	Wright

Building Construction

	BASIC WAGE				
	RATE PER HOUR	H & W	VAC.	PENSION	TRNG.
<u>Laborers</u>					
<u>Classification 1</u>					
Common Laborer	7.80	.45	.40	.45	-
Steel Joist Handler (erection)	7.80	.45	.40	.45	-
Power Buggy Operator	7.80	.45	.40	.45	-
Carpenter Tender	7.80	.45	.40	.45	-
Earth Dumpman	7.80	.45	.40	.45	-
Flagman	7.80	.45	.40	.45	-
<u>Classification 2</u>					
Reinforced Steel Handler	7.85	.45	.40	.45	-
<u>Classification 3</u>					
Men Handling Cement 2 hours per day (bulk or sack, excluding Mortar Mixer)	7.90	.45	.40	.45	-
Mason Tender	7.90	.45	.40	.45	-
Concrete Joint Saw Operator	7.90	.45	.40	.45	-
Laborer, Demolition and Wrecking (not including remodeling)	7.90	.45	.40	.45	-
<u>Classification 4</u>					
Hot Tar Caulker and Corker	7.95	.45	.40	.45	-
Laborers on Swing Stage Line Scaffold (not including "Patent" scaffolding)	7.95	.45	.40	.45	-
Automatic Tamper Operator	7.95	.45	.40	.45	-
Chipping Hammer Operator	7.95	.45	.40	.45	-
Paving Buster	7.95	.45	.40	.45	-
Mortar Mixer, Cement or any other substitute materials or composition	7.95	.45	.40	.45	-
Concrete Vibrator Operator	7.95	.45	.40	.45	-
Sheeting Setters and Drivers or Heavy Building Excavation	7.95	.45	.40	.45	-

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County	Anoka	Hennepin	Scott
	Carver	Isanti	Sherburne
	Chisago	Pine	Washington
	Dakota	Ramsey	Wright

Building Construction

	BASIC WAGE			
	RATE PER HOUR	H & W	VAC.	PENSION
<u>Laborers (cont.)</u>				
<u>Classification 5</u>				
Underground Work	8.05	.45	.40	.45
<u>Classification 6</u>				
Pipe Layer	8.10	.45	.40	.45
<u>Classification 7</u>				
Caisson Work	8.15	.45	.40	.45
Underpinning	8.15	.45	.40	.45
<u>Classification 8</u>				
Nonzelman	8.20	.45	.40	.45
<u>Classification 9</u>				
Foreman	8.30	.45	.40	.45

DEPARTMENT OF LABOR AND INDUSTRY WAGE RATE DETERMINATION  
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County	Anoka	Hennepin	Scott
	Carver	Isanti	Sherburne
	Chisago	Pine	Washington
	Dakota	Ramsey	Wright

Building Construction

	BASIC WAGE				TR
	RATE PER HOUR	H & W	VAC.	PENSION	
<u>Laborers (cont.)</u>					
<u>Classification 10</u>					
Dynamite Men	8.505	.45	.40	.45	-
Power Drillers for Blasting Purposes	8.505	.45	.40	.45	-
<u>Classification 11</u>					
Watchman	6.80	.45	.40	.45	-

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County	Aitkin	Dodge	Kanabec	Nicollet	Sibley
	Anoka	Faribault	Koochiching	Nobles	Stearns
	Benton	Fillmore	Lake	Olmsted	Steele
	Blue Earth	Freeborn	LeSueur	Pine	Wabasha
	Carlton	Goodhue	Martin	Ramsey	Waseca
	Carver	Hennepin	McLeod	Rice	Washington
	Chisago	Houston	Meeker	Rock	Winona
	Cook	Isanti	Mille Lacs	St. Louis	Wright
	Crow Wing	Itasca	Morrison	Scott	
	Dakota	Jackson	Mower	Sherburne	

Building Construction

BASIC WAGE RATE PER HOUR	H & W	VAC.	PENSION	TRNG.
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Power Equipment Operators

Classifications

Air Compressor Operator, 375 CFM or over, Pump and/or Conveyor Operator, Fireman, Temporary Heat	9.50	.45	-	.40	-
Air Compressor Operator, 375 CFM or over, Pump Operator and/or Conveyor Operator, 2 or more machines	10.13	.45	-	.40	-
Boom Truck Operator	10.05	.45	-	.40	-
Brakeman	9.50	.45	-	.40	-
Concrete Batch Plant Operator	9.78	.45	-	.40	-
Concrete Mixer Operator	10.05	.45	-	.40	-
Derrick (Guy & Stiff Leg)	10.25	.45	-	.40	-
Drill Rigs-Heavy Rotary or Churn when used for caisson drilling for elevator cylinder on building construction	10.05	.45	-	.40	-
Fireman, Chief License	10.35	.45	-	.40	-
Fireman, 1st Class License	9.78	.45	-	.40	-
Fork Lift Operator	10.13	.45	-	.40	-
Front End Loader Operator	10.05	.45	-	.40	-
Gunite Operator	9.78	.45	-	.40	-

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County	Aitkin	Crow Wing	Houston	Martin	Olmsted	Sibley
	Anoka	Dakota	Isanti	McLeod	Pine	Stearns
	Benton	Dodge	Itasca	Meeker	Ramsey	Steele
	Blue Earth	Faribault	Jackson	Mille Lacs	Rice	Wabasha
	Carlton	Fillmore	Kanabec	Morrison	Rock	Waseca
	Carver	Freeborn	Koochiching	Mower	St. Louis	Washington
	Chisago	Goodhue	Lake	Nicollet	Scott	Winona
	Cook	Hennepin	LeSueur	Nobles	Sherburne	Wright

Building Construction

BASIC WAGE RATE PER HOUR	H & W	VAC.	PENSION
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Power Equipment Operators (cont.)

Helicopter Operator (hoisting material)	13.45	.45	-	.40
Hoist Engineer (One Drum)	10.05	.45	-	.40
Hoist Engineer (Two Drums)	10.13	.45	-	.40
Hoist Engineer (Three Drums or more)	10.25	.45	-	.40
Locomotive Operator	10.25	.45	-	.40
Master Mechanic	10.50	.45	-	.40
Mechanic or Welder	10.13	.45	-	.40
Mechanical Space Heater (Temporary Heat)	9.05	.45	-	.40
Oilier or Greaser	9.05	.45	-	.40
Overhead Crane Operator (inside building perimeter)	10.25	.45	-	.40
Pick-up Sweeper (1 cu. yd. and over Hopper capacity)	9.50	.45	-	.40
Power Plant Engineer (100 KW and over on multiples equal to 100 KW and over)	10.05	.45	-	.40
Pumpcrete and Concrete Pumping Machine Operator	10.13	.45	-	.40
Straddle Carrier Operator	10.05	.45	-	.40
Tower Cranes - Stationary	10.25	.45	-	.40
Tractor Operator, D-2 or similar size and Front End Loader Operator up to 1 cu. yd.	9.78	.45	-	.40
Tractor Operator, Over D-2	10.05	.45	-	.40
Tractor Operator with Boom	10.25	.45	-	.40

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	Anoka	Dakota	Isanti	McLeod	Pine	Stearns
	Benton	Dodge	Itasca	Wicker	Ramsey	Steele
	Blue Earth	Faribault	Jackson	Millie Lacs	Rice	Wabasha
	Carlton	Fillmore	Kanabec	Morrison	Rock	Waseca
	Carver	Freeborn	Koochiching	Mower	St. Louis	Washington
	Chisago	Goodhue	Lake	Nicollet	Scott	Winona
	Cook	Hennepin	LaSueur	Nobles	Sherburne	Wright

Building Construction

	BASIC WAGE					TR.
	RATE PER HOUR	H & W	VAC.	PENSION		
<u>Power Equipment Operators (cont.)</u>						
Traveling Tower Cranes	10.60	.45	-	.40	-	
Truck Crane Oiler	9.50	.45	-	.40	-	
Truck and Crawler Cranes up to and not including 150 ft. of boom including jib	10.25	.45	-	.40	-	
Truck and Crawler Cranes with 150 ft. of boom up to and not including 200 ft. of boom including jib	10.70	.45	-	.40	-	
Truck and Crawler Cranes with 200 ft. of boom and over including jib	11.05	.45	-	.40	-	
Welding Machine Operator	9.50	.45	-	.40	-	
Well Point Pump Operator	10.05	.45	-	.40	-	

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Building Construction

		BASIC WAGE RATE PER HOUR	H & W	VAC.	PENSION	TRNG.
Bricklayer/Stonemason (cont.)						
County:	Itasca St. Louis (North Part)	9.775	.30	.50	-	-
	Mecker      McLeod	9.65	-	.35	.25	-
	Jackson      Nobles Martin      Rock	10.00	-	-	.25	-
	Houston      Winona	9.50	.35	.50	.25	-

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Building Construction

		BASIC WAGE RATE PER HOUR	H & W	VAC.	PENSION
Bricklayer/Stonemason					
County:	Anoka      Isanti Carver      Ramsey Chisago      Scott Dakota      Washington Hennepin      Wright	9.66	.55½	.56	.35
	Faribault      Steel Freeborn (West Part)      Waseca	9.73	.42	-	.25
	Aitkin      Koochiching (West Part)      Mille Lacs Crow Wing	9.75	.40	.30	.15
	Aitkin      Lake (East Part)      Pine Carlton      St. Louis Cook      (South Part) Kanabec	9.82	.30	.50	.25
	Goodhue (West Part) Rice Steel	9.675	.42	.53	.25
	Blue Earth      Nicollet Le Sueur      Sibley	9.255	.50	.61	.51
	Morrison	9.80	-	-	.15
	Goodhue (East Part) Wabasha	10.05	.42	-	.25
	Dodge      Nowar Fillmore      Olusted Freeborn (East Part)	9.625	.35	.50	.25
	Denton      Stearns Sherburne	9.75	-	.35	.25

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Building Construction

BASIC WAGE  
RATE PER  
HOUR

H & W VAC. PENSION TRNG.

Boilermakers

County:					
Aitkin	Martin				
Anoka	McLeod				
Benton	Meeker				
Blue Earth	Mille Lacs				
Carlton	Morrison				
Carver	Mower				
Chisago	Nicollet				
Cook	Nobles				
Crow Wing	Olsted				
Dakota	Pine				
Dodge	Ramsey				
Faribault	Rice				
Fillmore	Rock				
Freeborn	St. Louis				
Goodhue	Scott				
Hennepin	Sherburne				
Houston	Sibley				
Isanti	Stearns				
Itaska	Steele				
Jackson	Wabasha				
Kanabec	Waseca				
Koochiching	Washington				
Lake	Winona				
Le Sueur	Wright	10.30	.85	-	1.00 .02

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BASIC WAGE  
RATE PER  
HOUR

H & W VAC. PENSION TRNG.

Asbestos Worker

County:

Anoka	Isanti	Ramsey			
Benton	Jackson	Rice			
Blue Earth	Kanabec	Rock			
Carver	Le Sueur	Scott			
Chisago	Martin	Sherburne			
Dakota	McLeod	Sibley			
Dodge	Meeker	Stearns			
Faribault	Mille Lacs	Steele			
Fillmore	Morrison	Wabasha			
Freeborn	Mower	Waseca			
Goodhue	Nicollet	Washington			
Hennepin	Nobles	Winona			
Houston	Olsted	Wright	9.27	.60	1.21 .65

Aitkin	Koochiching				
Carlton	Lake				
Cook	Pine				
Crow Wing	St. Louis				
Itaska		10.95	.30	-	-

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Building Construction

BASIC WAGE  
 RATE PER  
 HOUR      H & W    VAC.    PENSION    TRNG.

Carpenters

County:

Cook Lake (South Part)	St. Louis (South Part)	9.25	.30	.30	.40	-
Dodge Fillmore (West Part)	Olmsted Wabasha (South Part)	9.25	.40	-	.30	-
Koochiching St. Louis (Northwest Part)		9.00	.40	-	.30	-
Jackson Nicollet (West Part) Nobles	Rock Sibley (West Part)	9.00	-	-	-	-
Blue Earth Le Sueur (West Part) Martin	Nicollet (East Part) Sibley (East Part)	9.85	.30	-	-	.02
Faribault Freeborn Mower	Waseca (South Part)	9.57	-	-	-	-
Le Sueur (East Part) Rice	Steele Waseca	8.40	.40	.50	.30	-
Fillmore (East Part) Houston Winona		9.27	-	-	.30	-
Goodhue	Wabasha (North Part)	9.35	-	-	-	-

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BASIC WAGE  
 RATE PER  
 HOUR      H & W    VAC.    PENSION

Carpenter (cont.)

County:

Aitkin (North Part)	Itaska (West Part)	8.79	.30	.30	.40
Itasca (East Part)	St. Louis (W. Cen. Part)	9.19	.30	.30	-
Lake (North Part)	St. Louis (Northeast Part)	9.19	.30	.30	-
Carlton	Pine (North Part)	9.05	.30	.30	.40
Aitkin (South Part)	Crow Wing	9.45	-	-	-
Kanabec (North Part) Mille Lacs (North Part)	Morrison	8.80	-	-	-
Denton Mille Lacs (Southwest Part)	Sherburne (West Part) Stearns	10.18	-	-	-
McLeod (West Part)	Necker	8.65	.30	-	-



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Building Construction

BASIC WAGE

RATE PER

HOURLY

H & W

VAC.

PENSION

TRNG.

Carpenter (cont.)

County:

Anoka	Pine (South Part)
Carver	Part)
Chisago	Ramsey
Dakota	Scott
Hennepin	Sherburne
Isanti	(East Part)
Kanabec (South Part)	Washington
McLeod (South Part)	Wright
Mille Lac	
(Southeast Part)	

9.21

.50

.50

.50

.02

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Building Construction

		BASIC WAGE RATE PER HOUR	H & W	VAC.	PENSION	TRNG.
Carpet/Linoleum Layer (cont.)						
County:	Fillmore (East Part) Houston	9.27	-	-	.30	-
	Winona					
	Goodhue Wabasha (North Part)	8.85	-	-	-	-
	Aitkin (North Part) Itaska (West Part)	8.79	.30	.30	.40	-
	Itaska (East Part) Lake (North Part)	9.19	.30	.30	-	-
	St. Louis (W. Central Part) St. Louis (Northeast Part)					
	Carlton	9.05	.30	.30	.40	-
	Aitkin (South part) Crow Wing	9.45	-	-	-	-
	Morrison	8.80	-	-	-	-
	Benton	10.18	-	-	-	-
	Stearns					

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Building Construction

			BASIC WAGE RATE PER HOUR	H & W	VAC.	PENSION	TRNG.
Carpet/Linoleum Layer							
County:	Anoka Carver Chisago Dakota Hennepin Isanti	Kanabec McLeod Meeker Mille Lacs Pine Ramsey	8.95	.51	.45	.34	
	Scott Sherburne Sibley Washington Wright						
	Cook Lake (South Part) St. Louis (South Part)		9.25	.30	.30	.40	
	Dodge Fillmore (West Part)	Olmsted Wabasha (South Part)	9.25	.40	-	.30	
	Koochiching St. Louis (Northwest Part)		9.00	.30	-	-	
	Jackson Nicollet (West Part)	Nobles Rock	9.00	-	-	-	
	Blue Earth Le Sueur (West Part)	Martin Nicollet (East Part)	9.95	.30	-	-	
	Paribault Freeborn (West Part)	Waseca (South Part)	9.57	-	-	-	
	Le Sueur (East Part) Rice	Steele Waseca (North Part)	8.40	.40	.50	.30	
	Freeborn (East Part) Mower		9.57	-	-	-	

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	BASIC WAGE RATE PER HOUR	H & W	VAC.	PENSION	TRNG.
Cement Mason (cont.)					
County:					
Maribault Freeborn (West Part)	8.85	.42	-	.25	-
Freeborn Mower (East Part)	8.40	.35	.50	.25	-
Houston Nobles Jackson Rock Marvin Winona (East Part)	-	-	-	-	-

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Cement Mason					
County:					
Anoka Isanti Sherburne Carver Kanabec Sibley Chisago McLeod Scott Dakota Mille Lacs Washington Hennepin Ramsey Wright Pine (South Part)	9.68	.50	-	.50	-
Aitkin Lake Carlton Pine Cook St. Louis (South Part)	9.895	.30	-	-	-
Itaska St. Louis (North Part)	9.50	.30	-	-	-
Blue Earth Nicollet Dodge (West Part) Rice Fillmore (East Part) Waseca Le Sueur Winona	9.50	-	-	-	-
Dodge (East Part) Fillmore Olmsted	9.75	-	-	-	-
Crow Wing Koochiching	9.40	.40	.30	.15	-
Benton Stearns	8.95	-	.35	.25	-
Morrison	9.45	-	-	.15	-
Meeker	8.45	-	.35	.25	-
Goodhue Wabasha	9.75	.42	-	.25	-

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		BASIC WAGE RATE PER HOUR	H & W	VAC.	PENSION	TRNG.
<u>Electrical Worker (cont.)</u>						
County:						
Dodge Fillmore Goodhue (East Part)	Olmsted Wabasha	9.34	4%	6%	1%	.25%
Houston	Winona	10.40	.55	7%	1%	-
Nobles	Rock	9.52	.40	6%	1%	1 1/2%

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		BASIC WAGE RATE PER HOUR	H & W	VAC.	PENSION	TRNG.
<u>Electrical Worker</u>						
County:						
Itaska Koochiching	St. Louis (North Part)	10.00	4%	11%	4%	1
Aitkin Carlton Cook Crow Wing Kanabec (North Part)	Lake Mille Lacs (North Part) Morrison Pine (North Part) St. Louis (South Part)	10.16	4%	11%	6%	1
Anoka (East Part) Chisago Dakota Goodhue (West Part) Kanabec (South Part) Isanti Le Sueur (East Part)	Mille Lacs (South Part) Pine (South Part) Ramsey Rice Sherburne (East Part) Washington	10.13	5.75%	7.5%	4%	1
Anoka (West Part) Benton Blue Earth Carver Faribault Hennepin Jackson Le Sueur (West Part) Martin	McLeod Meeke Nicollet Scott Sherburne (West Part) Sibley Stearns Waseca Wright	10.03	7%	10%	4%	1.5
Freeborn Nower	Steele	9.15	4%	6%	1%	.25%

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Building Construction

		BASIC WAGE RATE PER HOUR	H & W	VAC.	PENSION	TRNG.
<u>Elevator Constructor</u>						
County:	Aitkin	Martin				
	Anoka	McLeod				
	Benton	Meeker				
	Blue Earth	Mille Lacs				
	Carlton	Morrison				
	Carver	Mower				
	Chisago	Nicollet				
	Cook	Nobles				
	Crow Wing	Olmsted				
	Dakota	Pine				
	Dodge	Ramsey				
	Faribault	Rice				
	Fillmore	Rock				
	Freeborn	St. Louis				
	Goodhue	Scott				
	Hennepin	Sherburne				
	Houston	Sibley				
	Isanti	Stearns				
	Itaska	Steele				
	Jackson	Wabasha				
	Kanabec	Waseca				
	Koochiching	Washington				
	Lake	Winona				
	Le Sueur	Wright	10.345	.545	8%	.35

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	BASIC WAGE RATE PER HOUR	H & W	VAC.	PENSION	TRNG.
<u>Glazier (cont.)</u>					
Dodge (Northeast Part) Fillmore Goodhue (Southeast Part) Houston	9.26	-	.30	-	-
Olmsted Wabasha Winona					
Meeker	8.33	.40	-	-	-
Carlton Cook Itasca Koochiching	9.25	.30	-	.40	-
Lake Pine (North Part) St. Louis					
Aitkin Crow Wing	8.33	.40	-	-	-
Morrison (North Part)					

NOTICE TO BIDDERS, WAGE DETERMINATIONS

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	BASIC WAGE RATE PER HOUR	H & W	VAC.	PENSION
<u>Glazier</u>				
County:				
Blue Earth Jackson Le Sueur (West Part) Martin	7.70	-	-	-
Nicollet Nobles Rock Sibley				
Anoka Carver Chisago Dodge (Northwest Part) Dakota Goodhue Hennepin Isanti Le Sueur (East Part) McLeod Pine (South Part)	9.10	.40	.35	.50
Ramsey Rice Sherburne (East Part) Scott Steele (North Part) Wabasha (North Part) Waseca (North Part) Washington Wright (South Part)				
Dodge (South Part) Freeborn (East Part)	9.09	-	.13	.28
Nowar Steele (Southeast Part)				
Benton Kanabec Mille Lacs Morrison	8.33	.40	-	-
Sherburne (West Part) Stearns Wright (North Part)				
Faribault Freeborn	8.65	-	.50	-
Steele (South Part) Waseca (South Part)				

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	BASIC WAGE RATE PER HOUR	H & W	VAC.	PENSION	TRNG.
<u>Iron Worker (cont.)</u>					
County:					
Aitkin					
Carlton					
Cook					
Crow Wing					
Itasca					
Kanabec (North Part)					
Koochiching					
Lake					
Pine (North Part)					
St. Louis	10.30	.30	.10	.55	.02

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	BASIC WAGE RATE PER HOUR	H & W	VAC.	PENSION	TRNG.
<u>Iron Worker</u>					
County:					
Anoka					
Benton					
Blue Earth					
Carver					
Chisago					
Dakota					
Dodge					
Faribault					
Fillmore					
Freeborn					
Goodhue					
Hennepin					
Houston					
Isanti					
Kanabec (South Part)					
Le Sueur					
Martin					
McLeod					
Meeker					
Mille Lac					
Morrison					
Mower					
Nicollet					
Olmsted					
Pine (South Part)					
Ramsey					
Rice					
Scott					
Sherburne					
Sibley					
Stearns					
Steele					
Wabasha					
Waseca					
Washington					
Winona					
Wright	10.35	.55	-	.55	

Jackson	Rock	9.085	.30	.50	.25
Nobles					

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BASIC WAGE RATE PER HOUR	H & W	VAC.	PENSION	TRNG.
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Lather (Cont.)

County:

Jackson	Nobles
Martin	Rock
(West Part)	

8.91	-	-	-	-
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BASIC WAGE RATE PER HOUR	H & W	VAC.	PENSION	TRNG.
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Lather

County:

Anoka	Le Sueur
Benton	McLeod
Blue Earth	Meeker
(North Part)	Mille Lacs
Carver	Morrison
Chisago	Nicollet
(West Part)	Rice
Dakota	Scott
(West Part)	Sherburne
Hennepin	Sibley
Isanti	Stearns
Kanabec	Wright

9.08	.45	.70	.35	.00
------	-----	-----	-----	-----

Blue Earth	Martin (East Part)
(South Part)	Mower
Dodge	Olsted,
Faribault	Steele
Fillmore	Wabasha
Freeborn	Waseca
Houston	Winona

8.79	-	1.00	-	-
------	---	------	---	---

Aitkin	Koochiching
Carlton	Lake
Cook	Pine
Crow Wing	St. Louis
Itasca	

9.45	.30	.55	-	-
------	-----	-----	---	---

Chisago	Goodhue
(East Part)	Ramsey
Dakota	Washington
(East Part)	

8.93	.50	.91	.50	.00
------	-----	-----	-----	-----



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Building Construction

	BASIC WAGE RATE PER HOUR				
	H & W	VAC.	PENSION	TRNG.	
able Setter					
County:					
Aitkin	Martin				
Anoka	McLeod				
Carlton	Meeker				
Chippewa	Millie Laas				
Clayton	Morrison				
Goodhue	Mower				
Hennepin	Nicollet				
Isanti	Nobles				
Itasca	Olmsted				
Jackson	Pine				
Kanabec	Ramsey				
Koochiching	Rice				
Lake	Rock				
Le Sueur	St. Louis				
	Scott				
	Sherburne				
	Sibley				
	Stearns				
	Steele				
	Wabasha				
	Waseca				
	Washington				
	Winona				
	Wright				
	9.875	.555	.33	-	

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	BASIC WAGE RATE PER HOUR				
	H & W	VAC.	PENSION	TRNG.	
Millwright					
County:					
Aitkin	Millie Laas				
(South Part)	Morrison				
Anoka	Mower				
Benton	Nicollet				
Blue Earth	Nobles				
Carver	Olmsted				
Chisago	Pine				
Crow Wing	Ramsey				
Dakota	Rice				
Dodge	Rock				
Faribault	Scott				
Fillmore	Sherburne				
Freeborn	Sibley				
Goodhue	Stearns				
Hennepin	Steele				
Houston	Wabasha				
Isanti	Waseca				
Jackson	Washington				
Kanabec	Winona				
Le Sueur	Wright				
Martin					
McLeod					
Meeker					
	9.21	.50	.50	.50	.02
Aitkin	Koochiching				
(North Part)	Lake				
Carlton	St. Louis				
Cook					
Itasca					
	9.47	.50	.50	.40	-

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	BASIC WAGE RATE PER HOUR	H & W	VAC.	PENSION	TRNG.
<u>Painter con't</u>					
County:					
Blue Earth		Rice			
Jackson		Rock			
Le Sueur		Steele			
Martin		Sibley			
Nicollet		Waseca			
Nobles					
Brush	8.80	.40	-	.10	.07
Structural Steel	9.30	.40	-	.10	.07
Spray	9.30	.40	-	.10	.07
Swing Stage	9.30	.40	-	.10	.07

Benton Morrison (So. Part)  
 Meeker Stearns  
 Mille Lacs Sherburne  
 (So. Part)

Brush	6.90	-	3%	-	-
Structural Steel	7.40	-	3%	-	-
Spray	7.90	-	3%	-	-
Swing Stage	7.40	-	3%	-	-

Dodge Houston  
 Faribault Mower  
 Fillmore Olmsted  
 Freeborn Wabasha  
 Goodhue Winona

Brush	8.90	.37	-	.25	.08
Structural Steel	8.90	.37	-	.25	.08
Spray	8.90	.37	-	.25	.08
Swing Stage	8.90	.37	-	.25	.08

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	BASIC WAGE RATE PER HOUR	H & W	VAC.	PENSION
<u>Painter</u>				
County:				
Chicago		Ramsey		
Dakota		Washington		
Pine				
(South Part)				
Brush	9.05	.45	.50	.25
Structural Steel	9.55	.45	.50	.25
Spray	9.55	.45	.50	.25
Swing Stage	9.55	.45	.50	.25

Anoka Kanabec  
 Carver Scott  
 Hennepin Sherburne (So. Part)  
 Isanti Wright  
 McLeod

Brush	9.23	.35	.40	.25
Structural Steel	9.73	.35	.40	.25
Spray	9.73	.35	.40	.25
Swing Stage	9.73	.35	.40	.25

Carlton St. Louis  
 Cook Koochiching  
 Lake Itasca  
 Pine  
 (North Part)

Brush	9.43	.30	-	.40
Structural Steel	9.93	.30	-	.40
Spray	9.93	.30	-	.40
Swing Stage	9.93	.30	-	.40

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	BASIC WAGE RATE PER HOUR	H & W	VAC.	PENSION	TRNG.
<u>Painter (con't)</u>					
County:					
Aitkin					
Crow Wing					
Brush	9.10	-	-	-	.08
Structural Steel	9.10	-	-	-	.08
Spray	9.10	-	-	-	.08
Swing Stage	9.10	-	-	-	.08

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Building Construction

		BASIC WAGE RATE PER HOUR	H & W	VAC.	PENSION	TRNG.
<u>Pipefitter/Steamfitter (cont.)</u>						
County:						
Aitkin	Crow Wing	9.85	.48	.50	.50	.09

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Building Construction

		BASIC WAGE RATE PER HOUR	H & W	VAC.	PENSION
<u>Pipefitter/Steamfitter</u>					
County:					
Benton Meeker Morrison	Sherburne (West Part) Stearns	9.85	.48	.50	.50
Anoka Carver Hennepin Isanti McLeod	Mille Lacs Scott Sherburne (East Part) Wright	9.54	.48	1.25	.50
Blue Earth Jackson Le Sueur Martin	Nicollet Nobles Rock Sibley	10.80	-	.50	-
Cook (North Part) Itasca	Lake (North Part) St. Louis (North Part)	9.90	.56	1.00	.59
Carlton Cook (South Part) Kanabec	Lake (South Part) Pine St. Louis (South Part)	9.51	.50	1.00	.75
Koochiching		12.05	-	.25	-
Dodge Faribault Fillmore Freeborn Goodhue Houston Mower	Olmsted Rice Steele Wabasha Waseca Winona	9.41	.50	1.30	.20

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		BASIC WAGE RATE PER HOUR	H & W	VAC.	PENSION	TRNG.
<u>Plasterer (cont.)</u>						
County:						
Itasca	St. Louis (North Part)	9.50	.30	-	-	-
Aitkin Carlton Cook	Lake Fine (North Part) St. Louis (South Part)	9.895	.30	-	-	-
Nenton	Stearns	8.95	-	.35	.25	-
Crow Wing	Koochiching	9.40	.40	.30	.15	-
Dodge (West Part) Rice	Steele Waseca (East Part)	9.50	-	-	-	-
Fillmore (East Part)	Winona	9.50	-	-	-	-
Goodhue	Wabasha	9.73	.42	-	.25	-
Morrison		9.45	-	-	.15	-

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		BASIC WAGE RATE PER HOUR	H & W	VAC.	PENSION	TRNG.
<u>Plasterer</u>						
County:						
Jackson Martin	Nobles Rock	-	-	-	-	-
Houston		8.23	-	.20	.55	-
Anoka Carver Hennepin Isanti Kanabec McLeod	Mille Lacs Scott Sherburne Sibley Wright	9.50	.45	.70	.20	.01
Chisago Dakota Pine (South Part)	Ramsey Washington	9.24	.70	.65	.25	.01
Blue Earth Le Sueur	Nicollet Waseca (West Part)	9.50	-	-	-	-
Necker		8.45	-	.35	.25	-
Faribault Freeborn	Mower	8.83	.42	-	.25	-
Dodge (East Part) Fillmore (West Part)	Olmsted	9.75	-	-	-	-

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		BASIC WAGE RATE PER HOUR	H & W	VAC.	PENSION	TRNG.
<u>Plumber (cont.)</u>						
County:						
Aitkin	Crow Wing	9.85	.48	.50	.50	.08
Chisago Dakota	Ramsey Washington	9.37	.48	1.52	.50	.06

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<u>Plumber</u>						
County:						
Benton Meeker Morrison	Sherburne (West Part) Stearns	9.85	.48	.50	.50	
Anoka Carver Hennepin Isanti McLeod	Mille Lacs Scott Sherburne (East Part) Wright	9.54	.48	1.25	.50	
Blue Earth Jackson Le Sueur Martin	Nicollet Nobles Rock Sibley	10.80	-	.50	-	
Cook (North Part) Itasca	Lake (North Part) St. Louis (North Part)	9.90	.56	1.00	.59	
Carlton Cook (South Part) Kanabec	Lake (South Part) Pine St. Louis (South Part)	9.51	.50	1.00	.75	
Koochiching		12.05	-	.25	-	
Dodge Faribault Fillmore Freeborn Goodhue Houston Mower	Olmsted Rice Steele Wabasha Waseca Winona	9.41	.50	1.50	.20	.0

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		BASIC WAGE RATE PER HOUR	H & W	VAC.	PENSION	TRNC
<u>Roofers</u>						
County:						
Blue Earth	Freeborn	7.70	-	.75	.20	-
Faribault	Waseca					
Carleton	Lake					
Cook	Pine					
Itasca	St. Louis	9.23	.30	1.00	.25	-
Koochiching						
Aitkin	Meeker					
Ancker	Mill Lake					
Benton	Morrison					
Carver	Nicollet					
Chisago	Nobles					
Crow Wing	Ramsey					
Dakota	Rice					
Goodhue	Rock					
Hennepin	Scott					
Isanti	Sherburne					
Jackson	Sibley					
Kanabec	Stearns					
Le Sueur	Wabasha					
Martin	Washington					
McLeod	Wright	9.81	.64	.75	.25	.03
Dodge	Olmsted					
Fillmore	Steele					
Houston	Winona					
Mower		8.62	-	-	.20	-

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	BASIC WAGE RATE PER HOUR	H & W	VAC.	PENSION	TRNG.
<u>Sandblaster (con't)</u>					
County:					
Aitkin Morrison Crow Wing (North Part)	9.10	-	-	-	.08

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	BASIC WAGE RATE PER HOUR	H & W	VAC.	PENSION	T
<u>Sandblaster</u>					
County:					
Chisago Ramsey Dakota Washington Pine (South Part)	9.55	.45	.50	.25	.1
Anoka Kanabec Carver Scott Hennepin Sherburne Isanti (South Part) McLeod Wright	9.73	.35	.40	.25	.1
Carlton St. Louis Cook Koochiching Lake Itasca Pine (No. Part)	9.93	.30	-	.40	.1
Blue Earth Rice Jackson Rock Le Sueur Steele Martin Sibley Niccollet Waseca Nobles	9.30	.40	-	.10	.1
Benton Morrison (So. Part) Mecker Stearns Mille Lacs Sherburne (North Part)	7.90	-	3%	-	-
Dodge Houston Faribault Mower Fillmore Clusted Freeborn Wabasha Goodhue Winona	8.90	.37	-	.25	.0



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	BASIC WAGE RATE PER HOUR	H & W	VAC.	PENSION	TRNG.
Sheetmetal Worker (cont.)					
County:					
St. Louis (North Part)	10.09	.52	.85	.55	-

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	BASIC WAGE RATE PER HOUR	H & W	VAC.	PENSION	TRNG.
Sheetmetal Worker					
County:					
Benton Mills Norrison	9.92	.52	.30	.20	.02
Sherburne Stearns					
Blue Earth Dodge Faribault Freeborn Goodhue Jackson Le Sueur Martin	10.17	.42	-	.30	.02
Mower Nicollet Nobles Olmsted Rock Steele Wabasha Waseca					
Meeker (West Part)	8.26	.30	.75	.30	.02
Crow Wing	9.58	.52	.40	-	-
Anoka Chisago Dakota Isanti	9.71	.59	1.05	.65	.06
Kanabec Pine Ramsey Rice Washington					
Aitkin Carlton Fillmore Houston	9.37	.25	.50	.25	.03
Cook Lake St. Louis (South Part) Winona					
Carver Hennepin McLeod Meeker (East Part)	9.98	.52	1.00	.50	.04
Scott Sibley Wright					

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Building Construction

BASIC WAGE  
RATE PER  
HOUR

H & W

VAC.

PENSION

TRNG.

Tile Setter/Layer

County:

Dodge Olmsted 10.72 - - - -

Aitkin (East Part Lake  
Carlton St. Louis  
Cook (South Part) 9.95 .30 .50 - -

Aitkin (West Part)	Mc Leod				
Anoka	Meeker				
Benton	Mille Lacs				
Blue Earth	Morrison				
Carver	Mower				
Chisago	Nicollet				
Crow Wing	Nobles				
Dakota	Pine				
Faribault	Ramsey				
Fillmore	Rice				
Freeborn	Rock				
Goodhue	St. Louis (North Part)				
Hennepin	Scott				
Houston	Sherburne				
Isanti	Sibley				
Itasca	Stearns				
Jackson	Steele				
Kansbee	Wabasha				
Koochiching	Waseca				
Le Sueur	Washington				
Martin	Winona				
	Wright	9.21	.37	.56	.50 -

NOTICE TO BIDDERS, WAGE DETERMINATIONS

The wage determinations include classifications which the Commissioner of the Department of Labor and Industry has determined to be the classes of labor and mechanics commonly employed in building construction work. Additional classifications may develop between certifications by the Commissioner. Therefore, no inference may be drawn from the omission of classifications which have local usage. Further, the state will not be liable for increase labor costs if and when additional classifications are subsequently required or wage rates increase prior to the awarding of contracts.

PREVAILING HOURS OF LABOR

The "prevailing hours of labor" for all classes of laborers and mechanics to be employed on State contract building construction work are eight hours per day and forty hours per calendar week.

DEPARTMENT OF LABOR AND INDUSTRY WAGE RATE DETERMINATION  
Laws 1973 - Chapter 724  
4/1/77

Building Construction

BASIC WAGE  
RATE PER  
HOUR

H & W

VAC.

PENSION

T

Terrazzo Worker

Terrazzo Worker Helper

County:

Aitkin	Martin				
Anoka	Mc Leod				
Benton	Meeker				
Blue Earth	Mille Lacs				
Carlton	Morrison				
Carver	Mower				
Chisago	Nicollet				
Cook	Nobles				
Crow Wing	Olmsted				
Dakota	Pine				
Dodge	Ramsey				
Faribault	Rice				
Fillmore	Rock				
Freeborn	St. Louis				
Goodhue	Scott				
Hennepin	Sherburne				
Houston	Stearns				
Isanti	Sibley				
Itasca	Steele				
Jackson	Wabasha				
Kanabec	Waseca				
Koochiching	Washington				
Lake	Winona				
Le Sueur	Wright				

Terrazzo Worker 10.19 .37 - .25

Terrazzo Worker Helper 9.79 .37 .34 -

NOTICE TO BIDDERS, WAGE DETERMINATIONS

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DEPARTMENT OF LABOR AND INDUSTRY WAGE RATE DETERMINATION  
 Laws 1973 - Chapter 724  
 4/1/77

Building Construction

		BASIC WAGE RATE PER HOUR	H & W	VAC.	PENSION	TRN
<u>Sprinklerfitter</u>						
County:						
Anoka	Ramsay					
Dakota	Scott					
Hennepin	Washington	10.48	.60	-	.90	.00
Aitkin	Martin					
Benton	McLeod					
Blue Earth	Meeker					
Carlton	Mill Lake					
Carver	Morrison					
Chisago	Mower					
Cook	Nicollet					
Crow Wing	Nobles					
Dodge	Olmsted					
Faribault	Pine					
Fillmore	Rice					
Freeborn	Rock					
Goodhue	St. Louis					
Houston	Sherburne					
Isanti	Sibley					
Itasca	Stearns					
Jackson	Steele					
Kanabec	Wabasha					
Koochiching	Waseca					
Lake	Winona					
Le Sueur	Wright	11.25	.60	-	.90	.00

NOTICE TO BIDDERS, WAGE DETERMINATIONS

The wage determinations include classifications which the Commissioner of the Department of Labor and Industry has determined to be the classes of labor and mechanics commonly employed in building construction work. Additional classifications may develop between certifications by the Commissioner. Therefore, no inferences may be drawn from the omission of classifications which have local usage. Further, the state will not be liable for increase in labor costs if and when additional classifications are subsequently required or wage rates increase prior to the awarding of contracts.

PREVAILING HOURS OF LABOR

The "prevailing hours of labor" for all classes of laborers and mechanics to be employed on State contract building construction work are eight hours per day and forty hours per calendar week.

STATE: Minnesota  
 DECISION NUMBER: MN77-2043  
 Supersedes Decision No. MN76-2001, dated January 16, 1976 in 41 FR 2551  
 DESCRIPTION OF WORK: Building (including Residential), Construction

COUNTIES: See Below

DATE: Date of Publication

COUNTIES: Anoka, Carver, Hennepin,  
 Scott, Dakota, Ramsey & Washington

	Basic Hourly Rates	Fringe Benefits Payments			
		H & W	Pensions	Vacation	Education and/or Appr. Tr.
ASBESTOS WORKERS	\$ 10.48	.60	.65		.02
BOILERMAKERS	10.30	.05	1.00		.02
BRICKLAYERS & STONEMASONS	10.31	.555	.33	.56	
CARPENTERS: Building					
S.W. Portion of Scott Co. Remainder of Cos. & Scott Co. Carpenters, Millwrights & Piledriversmen	10.30	.40			.02
Soft Floor Layers	9.86	.50	.50	.50	.02
Site Preparation, Excavation & Incidental Paving	9.70	.51	.34	.45	.02
Carpenters & Piledriversmen	8.21	.40	.30	.50	.02
CEMENT MASONS: Building, Site Preparation, Excavation & Incidental Paving	10.33	.50	.50		
ELECTRICIANS: Building					
Hennepin & Scott Cos. & Twp. of Anoka & Fridley in Anoka County	10.03	7%	4%	10%	1 1/2%
Remainder of Anoka County & Remaining Counties	10.05	5 3/4%	4%	11 1/4%	1%
Residential Carver, Hennepin & Scott cos; Twp. of Anoka, Fridley, Crow & Ramsey in Anoka County; Construction of all new family dwellings up to & including 4-plexes; and to all resi- dential remodeling, rewiring & repairing in apartment buildings up to & including a 400 ampere service. This is limited to 3 floor occupied as living quarters floors, & non-elevator apartment buildings.	6.73	.48	1%	.27	1%

DECISION NO. MN77-2043

ELECTRICIANS (CONT'D)

Dakota, Ramsey, Washington  
 Cos. & Remainder of Anoka Co.;  
 Construction of all new family  
 dwellings up to & including  
 4-plexes, townhouses of 4 or  
 less contiguous units; and  
 to all residential remodeling,  
 rewiring & repairing except  
 that any single apartment  
 project including a change  
 of main service entrance  
 shall not exceed 8 living  
 units or 400 amps.

ELEVATOR CONSTRUCTORS:  
 Constructors  
 Helpers  
 Helpers (Prob.)

IRONWORKERS

LATHERS:  
 Anoka, Carver & Hennepin Cos.  
 Washington, Dakota & Ramsey Cos.

MARBLE SETTERS

TERAZZO WORKERS

TILE SETTERS

MARBLE & TILE HELPERS

PAINTERS:  
 Dakota, Ramsey & Washington Cos;  
 Brush  
 Structural Steel & Spray  
 Remaining Counties:  
 Brush  
 Structural Steel & Spray

PLASTERERS:  
 Dakota, Ramsey & Washington Cos.  
 Remaining Counties

Basic Hourly Rates	Fringe Benefits Payments			
	H & W	Pensions	Vacation	Education and/or Appr. Tr.
7.00	.48	1%	.29%	1/20%
10.345	.545	.35	4 1/2%	.02
70%JR	.545	.35	4 1/2%	.02
50%JR				
11.10	.55	.55		.02
9.08	.45	.35		.01
8.51	.50	.40	.81	.01
10.355	.555	.33		
8.46	.30	.25		
10.25	.37	.50		
9.35	.37	.50		
9.55	.45	.25		.07
10.05	.45	.25		.07
9.53	.45	.24		.09
10.03	.45	.25		.09
8.82	.50	.25	.65	.01
9.50	.45	.20	.70	.01

DECISION NO. MN77-2043

	Basic Hourly Rates	Fringe Benefits Payments			
		H & W	Pensions	Vacation	Education and/or Appr. Tr.
<b>PLUMBERS:</b>					
Plumbers, Steamfitters & Pipefitters: Dakota, Ramsey & Washington Cos.	8.67	.38	.50	1.52	.06
Plumbers & Steamfitters & P/P Remaining Counties: Plumbers Steamfitter & Pipefitters	9.64 9.64 9.81	.38 .38 .64	.50 .50 .25	1.35 1.25	.05 .05 .03
<b>ROOFERS</b>					
<b>SHEET METAL WORKERS:</b>					
Dakota, Ramsey & Washington Cos.	11.51	.59	.65		.02
Remaining Counties	10.97	.52	.51		.06
<b>SPRINKLER FITTERS</b>	10.48	.50	.90		.02

Welders - receive rate prescribed for craft performing operation to which welding is incidental.

PAID HOLIDAYS:

A-New Year's Day; B-Memorial Day; C-Independence Day; D-Labor Day;  
E-Thanksgiving Day; F-Christmas Day.

FOOTNOTE:

a. Employer contributes 4% Basic Hourly Rate for over 5 years service, 2% Basic Hourly Rate for 6 months, to 5 years as Vacation Pay Credit; 6 Paid Holidays A through F.

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MINN-27-LAB-1

LABORERS:  
BUILDING CONSTRUCTION

CLASS 1  
CLASS 2  
CLASS 3  
CLASS 4  
CLASS 5  
CLASS 6  
CLASS 7  
CLASS 8  
CLASS 9

Basic Hourly Rates	Fringe Benefits Payments			
	H & W	Pensions	Vacation	Education and/or Appr. Tr.
8.30	.45	.45	.40	
8.35	.45	.45	.40	
8.40	.45	.45	.40	
8.45	.45	.45	.40	
3.55	.45	.45	.40	
8.60	.45	.45	.40	
8.65	.45	.45	.40	
9.70	.45	.45	.40	
9.005	.45	.45	.40	

CLASS 1 - Common Laborer, Steel hoist handler (erection); Power Buggy Operator, Carpenter Tender, Earth Dumpman, Flagman  
CLASS 2 - Reinforced Steel Handler  
CLASS 3 - Men handling cement 2 hours per day (Bulk or Sack, excluding Mortar Mixer, Mason Tender, Concrete Joint Saw Operator, Demolition & Wrecking Laborer  
CLASS 4 - Hot tar caulker & corker; Laborers on eriging stage line scaffold (excl. "patent" scaffolding); Automatic Tamper Operator; chipping Hammer Setter & Driver on Heavy Building, Excavation, Jackhammer Men  
CLASS 5 - Underground Work  
CLASS 6 - Pipelayer  
CLASS 7 - Caisson Work, Underpinning  
CLASS 8 - Nozzlemen  
CLASS 9 - Dynamite Men, Power for Blasting purposes

DECISION NO. MN77-2043

SITE PREPARATION, EXCAVATION &  
INCIDENTAL PAVING

## LABORERS

CLASS 1  
CLASS 2  
CLASS 3  
CLASS 4  
CLASS 5  
CLASS 6  
CLASS 7  
CLASS 8  
CLASS 9  
CLASS 10  
CLASS 11

Basic Hourly Rates	FRINGE BENEFITS PAYMENTS			
	H & W	Pensions	Vacation	Education and/or Appr. Tr.
\$ 9.25	.45	.45	.40	
8.35	.45	.45	.40	
8.40	.45	.45	.40	
8.50	.45	.45	.40	
8.55	.45	.45	.40	
8.60	.45	.45	.40	
8.65	.45	.45	.40	
8.68	.45	.45	.40	
8.70	.45	.45	.40	
8.80	.45	.45	.40	
8.93	.45	.45	.40	

CLASS 1 Unskilled Laborer, Drill Runner Helper, Landscape Gardener, Sod Layer & Nurseryman, Powder Monkey, Rein. Steel Lab., Rein. Steel Setter Salamander Heater & Blower Tender Carpenter Tender; Winch Handler

CLASS 2 Laborer, wrecking & Demolition; Bit. Batchermen (Stationary Plant); Bricklayer Tender; Cement Handler; Cement Coverman (Batch trucks); Compaction Equip. Shoveler, batchermen Conc., Conc. Vibrator Tamper & Puddler (Paving) Conc. Longitudinal Floatman; Conduit Layer (w.o. wiring); Chipping Hammer, Sub Setter (Stone or Precast Conc.) Kettleman (BIT. or lead); Service connection maker; Power Buggy; Joint Saver; Squeeze man. (Bit. Brick or Block); Stabilizing batchermen (Stationary Plant); Stonemasons tender; Drill Runner (Heavy, including Churn Drill)

CLASS 3 Chainsaw Man, Conc. Mixer (1 bag); Jackhammer Man & Paving Duster; Mortar Mixer; Pipe Handler; Pipe Derrickman (Tripod, manual)

CLASS 4 Bottom Man (Sewer, Water or Gas trench, more than 8' below starting level of manual work); Tunnel Laborer (Atmospheric pressure) Underpinning Work, Caisson Work, Other work more than 8' below level of manual work Open ditch Work

DECISION NO. MN77-2043

## LABORERS: (CONT'D)

CLASS 5 - Bituminous Tamper; Pipelayers; Sand Cushion & Bedmaker  
CLASS 6 - Cement Gun (1 1/2 & over); Leadman  
CLASS 7 - Nozzlemen (Gunite)  
CLASS 8 - Brick or Block Paving Setter  
CLASS 9 - Bituminous Raker, Floater & Utility Man  
CLASS 10 - Tunnel Man (Air pressure); Tunnel Miner  
CLASS 11 - Powderman

## TRUCK DRIVERS:

BUILDING, SITE PREPARATION,  
EXCAVATION & INCIDENTAL  
PAVING

GROUP 1  
GROUP 2  
GROUP 3  
GROUP 4

Basic Hourly Rates	FRINGE BENEFITS PAYMENTS			
	H & W	Pensions	Vacation	Education and/or Appr. Tr.
9.20	.40	.50		
8.90	.40	.50		
8.80	.40	.50		
8.60	.40	.50		

GROUP 1 - Driver (Hauling machinery for employer's own use, including operation of hand & power operated winches); Truck train Mechanic, Welder; Tractor-Trailer; Off-Road Truck

GROUP 2 - Tri-axle (including 4-Axles); Dump Dry Batch Hauler; Tank Truck (Gas, Oil, Road Oil & Water); Boom & "A" Frame; Ready Mix Concrete; Slurry Driver.

GROUP 3 - Bituminous Distributor; Bituminous Distributor (1-Man Operation); Tandem Axle.

GROUP 4 - Bituminous Distributor Spray (rear-end roller); Dumpmen; Greaser & truck Servicemen; Tank Truck Helper (Gas, Oil, Road Oil & Water) Teamster and Stableman. Tractor Operator (Wheel Type used for any purpose) Pilot car Driver, self-Propelled Packer; Slurry Operator; Single Axle Trucks.

DECISION NO. MN77-2043

POWER EQUIPMENT OPERATORS:  
BUILDING

Basic Hourly Rates	FRINGE BENEFITS PAYMENTS			
	H & W	Pensions	Vacation	Education and/or Appr. Tr.
\$ 14.10	.45	.40		
11.70	.45	.40		
11.35	.45	.40		
11.25	.45	.40		
11.15	.45	.40		
10.90	.45	.40		
10.79	.45	.40		
10.70	.45	.40		
10.43	.45	.40		
10.15	.45	.40		
9.70	.45	.40		

- CLASS 1 - Helicopter Operators (Hoisting Material).  
 CLASS 2 - Truck & crawler Cranes with 200' of Boom & over including Jib  
 CLASS 3 - Truck & crawler Cranes with 150' of Boom up to & not including 200' of Boom including jib.  
 CLASS 4 - Traveling Tower Crane  
 CLASS 5 - Master Mechanic  
 CLASS 6 - derrick (Guy & Stiff Leg); Hoist engineer (3 drums, or more); Locomotive Operator; Overhead Crane Operator, (inside Building Perimeter); Truck & Crawler Cranes up to 150' of Boom including jib.  
 CLASS 7 - Air compressor Operator; Pump & or Conveyor; 2 or more Mechanics; Hoist engineer (2 drum); Mechanic or welder; Pumpcrete or Complico type Machine Operator; Fork Lift Operator  
 CLASS 8 - Boom truck Operator; concrete Mixer Operator; Drill Rigs (Heavy Duty Rotary or Churn Drill when used for caisson drilling or when drilling for elevator cylinder or Building Construction); Front End Loader Opr., Hoist Engineer (1 drum); Power Plant Engineer (100 KWH & over); Straddle carrier Operator; Tractor Operator (over D-2); Well Point Pump Operator  
 CLASS 9 - Concrete Batch Plant Operator; gunnite Operator; Tractor Operator (D-2 or similar size 7 front End Loader Operator-up to 4 cu. yd.)  
 CLASS 10 - Air Compressor Operator; Pump & or Conveyor Operator; Fireman-Temporary Heat; Brakemen; Pick Up Sweeper (combustion engine operated); Truck Crane Oiler  
 CLASS 11 - Mechanic Space Heater (Temporary Heat) Oiler or Greaser

DECISION NO. MN77-2043

SITE PREPARATION, EXCAVATION &  
INCIDENTAL PAVING

## POWER EQUIPMENT OPERATORS:

- GROUP 1  
 GROUP 2  
 GROUP 3  
 GROUP 4  
 GROUP 5  
 GROUP 6  
 GROUP 7

Basic Hourly Rates	FRINGE BENEFITS PAYMENTS			
	H & W	Pensions	Vacation	Education and/or Appr. Tr.
\$ 14.20	.45	.40		
10.91	.45	.40		
10.65	.45	.40		
10.52	.45	.40		
10.43	.45	.40		
9.75	.45	.40		
9.45	.45	.40		

- GROUP 1 - Helicopter Pilot  
 GROUP 2 - Crane with over 135' Boom, excluding jib, Dragline and/or other similar equipment w/shovel type controls 3 cu. yds. & over Hfg. rates capacity  
 GROUP 3 - Cableway Op., concrete Mixer, Stationary Plant over 34E, Derrick, Dragline and/or similar equipment with shovel type control up to 3 cu. yds. Hfg. rates capacity, Dredge Operator or Engineer, dredge Oper. (power) & Yds. & over, Grader or Motor Patrol Finishing earth & bituminous, Locomotive crane Operator, Master Mechanic, Mixer (paving) Concrete Paving Op., Road Mole., Op., incl. power supply, Mucking Mach., incl. mucking operations Convey or similar type, Refrigeration Plant Engineer, Tandem Scraper, Tractor Op. (Boom Type), Truck Crane Op., Tugboat Op. 100 HP & over  
 GROUP 4 - Dual Tractor Op., Elevating Grader Op., Pumpcrete Op., Scraper Op., Struck Capacity 32 cu. yds. & over, Self-Propelled. Traveling Soil Stabilizer  
 GROUP 5 - Air track Rock Drill, Asphalt Bituminous Stabilizer Plant Op., Crushing Plant Op., or Gravel Washing, Crushing and Screening Plant Op., Dope Machine Op., Drill Rigs, Heavy Rotary or Churn or Cable Drill, Engineer in charge of Plant requiring First Class License, fork Lift or Lumber Stacker, Front End Loader Op., Loader Op., over 1 cu. yds., Hoist Engineer, Hydraulic Tree Planter, Launcher, Locomotive, all types, Mechanic or welder, Multiple machines, such as air compressors, welding machines, generators, pumps or crane oilers, paving breaker or tamping machines op., (power-driven - Mighty might or similar type, Pick-up sweeper, 1 cu. yd. & over Hopper capacity, Pipeline wrapping, cleaning or bending machine Op. Power Plant Engineer, Power actuated horizontal boring mach., over 6" op., pugmill op., roller, 8 tons & over, Rubber tired farm tractor, backhoe att., sheep foot op., tie tamper & ballast mach. Op., Tractor op., over D2, T96 or similar HP with power take-off, tractor Op., over 50 HP without power take-off, trenching machine Op., (sewer, water, gas) turnapull op., (or similar type) well point installation, dismatling or repair mechanic

DECISION NO. MN77-2043

POWER EQUIPMENT OPERATORS: (CONT'D)

GROUP 6 - Air compressor Op. 375 CFR or over, bituminous spreader and bituminous finishing machine op., Concrete dist. & Spreader op., finishing machine longitudinal float op., joint mach. op., spray., concrete mixer op. 14S and under, concrete op. (Mult. Blade), curb mach. op., Fine grade Op., form trench digger, front end loader op. (up to & incl. 1 cu. yd.), grader op. (motor patrol), gunite op. gunall, lead greader on truck or rack, loader op., power actuated Augers and boring mach. op. power actuated jacks op., pump op., roller op., self-propelled chip Spreader, shouldering mach. Op., stump chipper op., tractor op. (D2, TD6 or similar HP with power take-off)

GROUP 7 - Brakeman, switchman, conveyor op., deckhand, Fireman, Tank Car Heater op., Gravel screening plant op., greaser leverman, mech. helper, mech. space heater, oiler, self-prop. vib. packer op., sheep foot roller, tractor op. 50 HP or less w/o power take-off, truck crane oiler



DECISION 58477-2043 - Mod. 01

(41 FR 13350 - May 6, 1977)  
Anoka, Carver, Hennepin, Scott  
Dakota, Ramsey & Washington  
Counties, Minnesota

CHANGE:

Electricians:  
Buildings

Hennepin & Scott Cos; Typs.  
of Anoka & Fridley in Anoka  
County

Basic Hourly Rates	Fringe Benefits Payments			
	H & W	Pensions	Vacation	Education and/or Appr. Tr.
\$10.60	7½%	4%	10%	1½%
10.65	3¼%	6%	11½%	1%
10.12	.48	.50	1.52	.06
10.29	.38	.50	1.35	.05
10.39	.28	.50	1.25	.05
10.31	.69	.35		.03
10.12	.48	.50	1.52	.06

Remainder of Anoka County &  
Remaining Counties

Plumbers:

Plumbers, Steamfitters &  
Pipefitters:

Dakota, Ramsey & Washing-  
ton Counties

Remainder Counties:

Plumbers  
Steamfitters & Pipe-  
fitters

Roofers

Plumbers:

Plumbers, Steamfitters &  
Pipefitters:

Dakota, Ramsey &  
Washington Counties

DECISION 58477-2044 - Mod. 02

(42 FR 13395 - May 6, 1977)  
Blue Earth, Fairbault, Free-  
born & Mower Counties,  
Minnesota

CHANGE:

Bricklayers:

Mower County & that part of  
Freeborn Co., east of a  
line running north & south  
from Geneva to Gordon & the  
City of Blooming Prairie:

Bricklayers, Stonemasons,  
Cement Blocklayers,  
Painters, Caulkers &  
Cleaners

Fairbault Co., & Remainder  
of Freeborn County:

Bricklayers, Stonemasons,  
Tuckpointers & Block-  
layers

Cement Masons & Plasterers:  
Building:

Mower County & that part of  
Freeborn County, east of  
a line running north &  
south from Geneva to  
Gordon:

Cement Masons & Plasterers  
Fairbault Co., & Remainder  
of Freeborn County

Cement Masons & Plasterers

Electricians:

Blue Earth & Fairbault Cos;  
Jobs outside the Mankato  
city area less than  
\$50,000

Jobs within a 5 mile radius  
of Mankato \$50,000 & over

Basic Hourly Rates	Fringe Benefits Payments			
	H & W	Pensions	Vacation	Education and/or Appr. Tr.
\$10.575	.50	.25		
10.18	.57	.25		
9.35	.50	.25		
9.35	.50	.25		
8.45	7½%	4%	10%	1%
10.12	7½%	4%	10%	1%

MODIFICATIONS P. 15

	Basic Hourly Rates	Fringe Benefits Payments			
		H & W	Pensions	Vacation	Education and/or Appr. Tr.
<p>DECISION #MO77-4162 - Mod. #1 (42 FR - July 15, 1977) Description of Work and Locations: Heavy and Highway Construction, Missouri</p> <p>Change: Ironworkers Zone 4</p>					
	\$10.10	.45	.65		.12
<p>DECISION #MO77-2043 - Mod. #2 (42 FR 23360 - May 6, 1977) Anoka, Carver, Hennepin, Scott, Dakota, Ramsey &amp; Washington Counties, Minnesota</p> <p>CHANGE: Bricklayers &amp; Stonemasons Boilermakers Cement Masons: Building, Site Preparation, Excavation &amp; Incidental Paving Ironworkers Lathers: Anoka, Carver &amp; Hennepin Counties Sprinkler Fitters</p>					
	\$10.01 11.30 10.13 10.85 9.71 11.38	.655 .85 .60 .75 .45 .65	.53 1.00 .60 .60 .35 .95	.36	.05 .02 .02 .01 .08

MODIFICATIONS P. 16

	Basic Hourly Rates	Fringe Benefits Payments			
		H & W	Pensions	Vacation	Education and/or Appr. Tr.
<p>DECISION #NV77-5061 - Mod. #2 (42 FR 31074 - June 17, 1977) Clark County (does not include the Nevada Test Site), Nevada</p> <p>Change: Cement Masons: Cement Masons Cement Floor Finishing Machine Color Work Add: Plasterer Tenders Change: Plasterers</p>					
	\$11.40 11.65 11.12 11.68	\$1.00 1.00 .66 1.00	.70 .70 1.35 .70		.08 .08 .08 .08
<p>DECISION #NV77-5146 - Mod. #4 (42 FR 23082 - April 29, 1977) Statewide (does not include the Nevada Test Site and Tonopah Test Range, and does not in- clude highway construction in Douglas County), Nevada</p> <p>Change: Bricklayers; Stonemasons: Remaining Counties and Nye County (north of Hwy. #6) Carpenters: Clark, Esmeralda County (south of Hwy. #6), Lincoln, Nye County (south of Hwy. #6, including City of Tonopah); Zone 1: Area within the city limits of Henderson, Nevada, and Boulder City, Nevada; area within a 10-mile radius of Las Vegas, Nevada; area within a 5-mile radius of Tonopah, Nevada; present fenced area of Nellis Air Force Base, as well as that adjacent to Nellis Air Force base bounded on the north by the Nellis spur track and on the west by the train line of the Union Pacific Railroad: Carpenters Floor layers; Patent scaf- fold erectors; Power saw operators Piledrivermen Millwrights</p>					
	\$11.45 11.36 11.51 11.56 12.06	.50 .65 .65 .65	.60 .90 .90 .90	1.00 1.00	.01 .10 .10 .10 .10

NOTICES

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MODIFICATIONS P. 7  
TRUCK DRIVERS

- Group 1: Warehouseman and Teamster
- Group 2: Driver of vehicle or combination of vehicles of 2 axles (including all vehicles less than six tons); Traffic control pilot car, excluding moving heavy equipment permit load
- Group 3: Truck mounted power broom
- Group 4: Drivers of vehicles or combination of vehicles of 3 axles
- Group 5: Bootman; Cement distributor; Fuel truck; Road oil spreader truck; Water truck, 2 axle
- Group 6: Dump, of less than 16 yards; Erosion control driver
- Group 7: Transit-mix, under 3 yards; Dumpcrete, less than 6 1/2 yds.
- Group 8: Truck repairman helper
- Group 9: Water truck, 3 or more axles
- Group 10: PB and similar type truck when performing within the Teamsters' jurisdiction; Pipeline and utility working truck including winch, but limited to truck applicable to pipeline and utility work, where a composite crew is used; Slurry driver; Truck greaser and tireman (50¢ per hour additional for tireman)
- Group 11: Transit-mix, 3 yards or more; Dumpcrete, 6 1/2 yds. and over
- Group 12: Driver of vehicle or combination of vehicles of 4 or more axles
- Group 13: Dump, 16 yards but less than 25 yards
- Group 14: A-frame or Swedish crane, or similar type of equipment driver; Fork lift driver; Hoop carrier, highway
- Group 15: All-off-highway equipment within Teamster jurisdiction (off highway combination of vehicles or equipment with multiple power sources, \$1.00 per hour additional); Dump, 25 yds. or more; Truck repairman; Water pull, single engine
- Group 16: Truck repairman-welder
- Group 17: Low bed driver, 3 axle or over
- Group 18: Water pull, single engine with attachments
- Group 19: Water pull, twin engine with attachment

MODIFICATIONS P. 8

Decision NO. DE-7-1114- Mod. #5  
(42 FR - 52990 - September 30, 1977)  
State of Delaware

	Basic Hourly Rates	Fringe Benefits Payments			
		H & W	Pensions	Vacation	Education and/or Appr. Tr.
<u>CHANGE:</u>					
Bricklayers	\$10.10	.95	.85		
Stonemasons	10.10	.95	.85		
<u>DECISION #N77-2043 - Mod. #3</u> (42 FR 23390 - May 6, 1977) Anoka, Carver, Hennepin, Scott Dakota, Ramsey & Washington Counties, Minnesota					
<u>Change:</u>					
Asbestos Workers	\$11.13	.70	.65		.02
Electricians:					
<u>Building</u>					
Hennepin & Scott Cos. Twns. of Anoka & Fridley in Anoka County	10.60	7%	6%	10%	1 1/2%
Remainder of Anoka County & Remaining Counties	10.65	5 3/4%	6%	11 1/2%	3/8%
<u>Residential</u>					
Carver, Hennepin & Scott Cos; Twns. of Anoka, Fridley, Crow & Ramsey in Anoka Co.	6.93	.48	3%	.27	1%
Dakota, Ramsey, Washington Cos; & Remainder of Anoka Co.	7.35	.48	3%	.29	1/2 of 1%
Elevator Constructors:					
Constructors	10.87	.745	.56	8% + a	.025
Helpers	70ZJR	.745	.56	8% + a	.025
Helpers (Prob.)	50ZJR				
Painters:					
Dakota, Ramsey & Washington Cos:					
Brush	10.10	.55	.25		.10
Structural Steel & Spray	10.70	.55	.25		.10
Remaining Counties:					
Brush	10.08	.55	.25		.09
Structural Steel & Spray	10.68	.55	.25		.09
Plasterers:					
Dakota, Ramsey & Washington Cos:	9.89	.70	.25	.55	.01
Sheet Metal Workers:					
Remaining Counties	11.52	.52	.71		.05

NOTICES

- Group 1: Warehouseman and Teamster
- Group 2: Driver of vehicle or combination of vehicles of 2 axles (including all vehicles less than six tons); Traffic control pilot car, excluding moving heavy equipment permit load
- Group 3: Truck mounted power broom
- Group 4: Drivers of vehicles or combination of vehicles of 3 axles
- Group 5: Bootman; Cement distributor; Fuel truck; Road oil spreader truck; Water truck, 2 axle
- Group 6: Dump, of less than 16 yards; Erosion control driver
- Group 7: Transit-mix, under 3 yards; Dumpcrete, less than 6 1/2 yds.
- Group 8: Truck repairman helper
- Group 9: Water truck, 3 or more axles
- Group 10: PS and similar type truck when performing within the Teamsters' jurisdiction; Pipeline and utility working truck including winch, but limited to truck applicable to pipeline and utility work, where a composite crew is used; Slurry driver; Truck greaser and tireman (\$06 per hour additional for tireman)
- Group 11: Transit-mix, 3 yards or more; Dumpcrete, 6 1/2 yds. and over
- Group 12: Driver of vehicle or combination of vehicles of 4 or more axles
- Group 13: Dump, 16 yards but less than 25 yards
- Group 14: A-frame or Swedish crane, or similar type of equipment driver; Fork lift driver; Ross carrier, highway
- Group 15: All-off-highway equipment within Teamster jurisdiction (off highway combination of vehicles or equipment with multiple power sources, \$1.00 per hour additional); Dump, 25 yds. or more; Truck repairman; Water pull, single engine
- Group 16: Truck repairman-welder
- Group 17: Low bed driver, 9 axle or over
- Group 18: Water pull, single engine with attachments
- Group 19: Water pull, twin engine with attachment

Decision NO. DE 77-1134- Mod. #5  
(42 FR - 52990 - September 30, 1977)  
State of Delaware

	Basic Hourly Rates	Fringe Benefits Payments			
		H & W	Pensions	Vacation	Education and/or Appr. Tr.
<u>CHANGE:</u>					
Bricklayers	\$10.10	.95	.85		
Stonemasons	10.10	.95	.85		
<u>DECISION 68N77-2042 - Mod. #3</u> (42 FR 23390 - May 6, 1977) Anoka, Carver, Hennepin, Scott Dakota, Ramsey & Washington Counties, Minnesota					
<u>Change:</u>					
Asbestos Workers	\$11.13	.70	.65		.02
Electricians:					
<u>Building</u>					
Hennepin & Scott Cos. Twp. of Anoka & Fridley in Anoka County	10.60	7%	6%	10%	1 1/2%
Remainder of Anoka County & Remaining Counties	10.65	5 3/4%	6%	11 1/2%	3/8%
<u>Residential</u>					
Carver, Hennepin & Scott Cos; Twp. of Anoka, Fridley, Crow & Ramsey in Anoka Co.	6.93	.48	3%	.27	1%
Dakota, Ramsey, Washington Cos; & Remainder of Anoka Co.	7.35	.48	3%	.29	1/2 of 1%
Elevator Constructors:					
Constructors	10.87	.745	.56	8% + a	.025
Helpers	70%JR	.745	.56	8% + a	.025
Helpers (Prob.)	50%JK				
Painters:					
Dakota, Ramsey & Washington Cos:					
Brush	10.10	.55	.25		.10
Structural Steel & Spray	10.70	.55	.25		.10
Remaining Counties:					
Brush	10.08	.55	.25		.09
Structural Steel & Spray	10.68	.55	.25		.09
Plasterers:					
Dakota, Ramsey & Washington Cos:	9.89	.70	.25	.65	.01
Sheet Metal Workers:					
Remaining Counties	12.52	.52	.71		.06

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MODIFICATIONS P. 15

DECISION #MC77-4162 - Mod. #1  
(42 FR - July 15, 1977)  
Description of Work and Locations:  
Heavy and Highway Construction,  
Missouri

Change:  
Ironworkers  
Zone 4

Basic Hourly Rates	Fringe Benefits Payments				
	H & W	Pensions	Vacation	Education and/or Appr. Tr.	
\$10.10	.45	.65		.12	
DECISION #MV77-2041 - Mod. #2 (42 FR 20390 - May 6, 1977) Anoka, Carver, Hennepin, Scott, Dakota, Ramsey & Washington Counties, Minnesota					
CHANGE:					
Bricklayers & Stonemasons	\$10.01	.655	.53	.56	.05
Millwrights	11.30	.65	1.00		.02
Cement Masons: Building, Site Preparation, Excavation & Incidental Paving	10.13	.60	.60		
Ironworkers	10.85	.75	.60		.02
Lathers: Anoka, Carver & Hennepin Counties	9.71	.45	.35		.01
Sprinkler Fitters	11.38	.65	.95		.08

MODIFICATIONS P. 16

DECISION #NV77-5061 - Mod. #2  
(42 FR 51074 - June 17, 1977)  
Clark County (does not include  
the Nevada Test Site), Nevada

Change:  
Cement Masons:  
Cement Masons  
Cement Floor Finishing Machine;  
Color Work  
Add:  
Plasterer Tenders  
Change:  
Plasterers

DECISION #NV77-5146 - Mod. #4  
(42 FR 22082 - April 29, 1977)  
Statewide (does not include the  
Nevada Test Site and Tonopah  
Test Range, and does not in-  
clude highway construction in  
Douglas County), Nevada

Change:  
Bricklayers; Stonemasons:  
Remaining Counties and Nye  
County (north of Hwy. #6)  
Carpenters:  
Clark, Esmeralda County (south  
of Hwy. #6), Lincoln, Nye  
County (south of Hwy. #6,  
including City of Tonopah);  
Zone 1: Area within the city  
limits of Henderson, Nevada,  
and Boulder City, Nevada;  
area within a 10-mile radius  
of Las Vegas, Nevada; area  
within a 5-mile radius of  
Tonopah, Nevada; present  
fenced area of Nellis Air  
Force Base, as well as that  
adjacent to Nellis Air  
Force base bounded on the  
north by the Nellis spur  
track and on the west by the  
train line of the Union  
Pacific Railroad:  
Carpenters  
Floor layers; Patent scaf-  
fold erectors; Power saw  
operators  
Piledrivermen  
Millwrights

Basic Hourly Rates	Fringe Benefits Payments			
	H & W	Pensions	Vacation	Education and/or Appr. Tr.
\$11.40	\$1.00	.70		.08
11.65	1.00	.70		.08
11.12	.66	1.35		
11.68	1.00	.70		.08
DECISION #NV77-5146 - Mod. #4 (42 FR 22082 - April 29, 1977) Statewide (does not include the Nevada Test Site and Tonopah Test Range, and does not in- clude highway construction in Douglas County), Nevada				
Change: Bricklayers; Stonemasons: Remaining Counties and Nye County (north of Hwy. #6)				
\$11.45	.50	.60		.01
Carpenters: Clark, Esmeralda County (south of Hwy. #6), Lincoln, Nye County (south of Hwy. #6, including City of Tonopah); Zone 1: Area within the city limits of Henderson, Nevada, and Boulder City, Nevada; area within a 10-mile radius of Las Vegas, Nevada; area within a 5-mile radius of Tonopah, Nevada; present fenced area of Nellis Air Force Base, as well as that adjacent to Nellis Air Force base bounded on the north by the Nellis spur track and on the west by the train line of the Union Pacific Railroad: Carpenters Floor layers; Patent scaf- fold erectors; Power saw operators Piledrivermen Millwrights				
11.36	.55	.90	1.00	.10
11.51	.65	.90	1.00	.10
11.56	.65	.90	1.00	.10
12.06	.65	.90	1.00	.10

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DECISION #LA78-4052 (CONT'D)

	Basic Hourly Rates	Fringe Benefits Payments			
		H & W	Pensions	Vacation	Education and/or Appr. Tr.
Laborers (Bldg. Const.) (Cont'd)					
Zone 10 - Group 1	\$ 6.25	.20	.10		.05
Group 2	6.35	.20	.10		.05
Group 3	6.50	.20	.10		.05
Painters - Zone 3 - Group 1	8.965	.425	.40		.06
Group 2	9.34	.425	.40		.06
Group 3	10.215	.425	.40		.06
Plumbers & pipefitters - Zone 4	10.14	.50	.60	.95	.09

DECISION #MN77-2043 - Mod. 04

(42 FR 23390 - May 6, 1977)  
Anoka, Carver, Hennepin, Scott, Dakota, Ramsey & Washington Counties, Minnesota

CHANGE:

POWER EQUIPMENT OPERATORS:

SITE PREPARATION, EXCAVATION & INCIDENTAL PAVING

GROUP 1	\$14.75	.55	.50		
GROUP 2	11.40	.55	.50		
GROUP 3	11.15	.55	.50		
GROUP 4	11.02	.55	.50		
GROUP 5	10.93	.55	.50		
GROUP 6	10.15	.55	.50		
GROUP 7	9.75	.55	.50		

DECISION #MN77-2043 - (CONT'D.)

POWER EQUIPMENT OPERATORS:  
Building Construction

- CLASS 1
- CLASS 2
- CLASS 3
- CLASS 4
- CLASS 5
- CLASS 6
- CLASS 7
- CLASS 8
- CLASS 9
- CLASS 10
- CLASS 11
- CLASS 12

- CLASS 1 - Helicopter Operator
- CLASS 2 - Truck & Crawler Cranes with 300' of Boom and over, including jib
- CLASS 3 - Truck & Crawler Cranes w/200' of Boom, up to and not including 300' of Boom, including jib
- CLASS 4 - Truck & Crawler Cranes with 150' of Boom, up to and not including 200' of Boom, including jib
- CLASS 5 - Traveling Tower Crane
- CLASS 6 - Mastar Mechanic; Pile Driving Operator
- CLASS 7 - Truck & Crawler Cranes up to 150' of Boom, including jib; Derrick (Guy & Stiffleg); Hoist Engineer (3 drums or more); Locomotive Operator; Overhead Crane Operator (Inside Building Perimeter); Tower Cranes - Stationary Tractor Operator with Boom; All Terrain Vehicle Cranes; Fireman, Chief License
- CLASS 8 - Air Compressor Operator, 375 CFM or over; Pump Operator and/or Conveyor Opr., (2 or more machines); Hoist Engineer (two drum); Mechanic or Welder; Pumpcrete or Complaco-type Machine Operator; Forklift
- CLASS 9 - Boom Truck Operator; Concrete Mixer Operator; Drill Rigs - Heavy Rotary or Churn when used for caisson drilling for Elevator Cylinder or Building Construction; Front End loader Operator; Hoist Engineer (one drum); Straddle Carrier Operator; Power Plant Engineer (100 KW and over on multiples equal to 100 KW and over); Tractor Operator over L2; Well Point Pump Operator
- CLASS 10 - Concrete Batch Plant Operator; Fireman, First Class License; Gunite Operator; Tractor Operator D-2 or similar size; Front End Loader Operator, up to 1 cu. yd.
- CLASS 11 - Air Compressor Opr., 375 CFM or over; Pump and/or Conveyor Opr.; Fireman, Temporary Heat; Brakeman; Pick-up Sweeper (1 cu. yd. and over hopper capacity); Truck Crane Oiler; Welding Machine Opr. (see Schedule 16 on Air Comp., Pumps, Conveyors, Welding Mach.
- CLASS 12 - Mechanical Space Heater (Temporary Heat); Oiler or Greaser; Elevator Operator

MINN-1-PEO-1

Basic Hourly Rates	Fringe Benefits Payments			
	H & W	Pensions	Vacation	Education and/or Appr. Tr.
\$14.60	.55	.50		
12.95	.55	.50		
12.70	.55	.50		
12.10	.55	.50		
11.75	.55	.50		
11.65	.55	.50		
11.40	.55	.50		
11.28	.55	.50		
11.20	.55	.50		
10.93	.55	.50		
10.45	.55	.50		
10.00	.55	.50		

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DECISION #M177-2043 - Mod. 01  
 (42 FR 23575 - May 6, 1977)  
 Anoka, Carver, Hennepin, Scott,  
 Dakota, Ramsey & Washington  
 Counties, Minnesota

CHANGE:

Electricians:

Building

Hennepin & Scott Cos; Typo  
 of Anoka & Fridley in Anoka  
 County

Remainder of Anoka County &  
 Remaining Counties

Plumbers:

Plumbers, Steamfitters &  
 Pipefitters:

Dakota, Ramsey & Washing-  
 ton Counties

Remaining Counties:

Plumbers  
 Steamfitters & Pipe-  
 fitters

Roofers

Plumbers:

Plumbers, Steamfitters &  
 Pipefitters:

Dakota, Ramsey &  
 Washington Counties

Basic Hourly Rates	Fringe Benefits Payments			
	H & W	Pensions	Vacation	Education and/or Appr. Tr.
\$10.60	7 1/2%	4%	10%	1 1/2%
10.65	3 1/4%	4%	11 1/2%	1%
10.12	.48	.50	1.52	.06
10.39	.38	.50	1.35	.05
10.39	.38	.50	1.25	.05
10.31	.30	.35		.03
10.12	.48	.50	1.52	.06

DECISION #M177-2044 - Mod. 02  
 (42 FR 23575 - May 6, 1977)  
 Blue Earth, Fairbault, Free-  
 born & Mower Counties,  
 Minnesota

CHANGE:

Bricklayers:

Mower County & that part of  
 Freeborn Co., east of a  
 line running north & south  
 from Geneva to Cordon & the  
 City of Blooming Prairie:

Bricklayers, Stonemasons,  
 Cement Blocklayers,  
 Pointers, Caulkers &  
 Cleaners

Fairbault Co., & Remainder  
 of Freeborn County:

Bricklayers, Stonemasons,  
 Tuckpointers & Block-  
 layers

Cement Masons & Plasterers:  
 Building:

Mower County & that part of  
 Freeborn County, east of  
 a line running north &  
 south from Geneva to  
 Cordon:

Cement Masons & Plasterers

Fairbault Co., & Remainder  
 of Freeborn County

Cement Masons & Plasterers

Electricians:

Blue Earth & Fairbault Cos:

Jobs outside the Mankato  
 city area less than  
 \$50,000

Jobs within a 5 mile radius  
 of Mankato \$50,000 & over

Basic Hourly Rates	Fringe Benefits Payments			
	H & W	Pensions	Vacation	Education and/or Appr. Tr.
\$10.575	.50	.25		
10.18	.57	.25		
9.35	.50	.25		
9.35	.50	.25		
8.45	7 1/2%	4%	10%	1%
10.12	7 1/2%	4%	10%	1%

NOTICES

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS  
(EXECUTIVE ORDER 11246)

## 1. As used in these specifications:

a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;

b. "Director" means Director, Office of Federal Contract-Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;

c. "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.

## d. "Minority" includes:

(i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);

(ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or original, regardless of race);

(iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and

(iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.



4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. The Contractor is expected to make substantially uniform progress toward its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.

6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:

a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, super-intendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referred from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefore, along with whatever additional actions the Contractor may have taken.

d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including up-grading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.

f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with onsite supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.

i. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

j. Encourage present minority and female employees to recruit other minority persons and woman and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's workforce.

k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.

l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

m. Ensure that seniority practices, job classifications work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

n. Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

o. Document and maintain a record of all solicitations of offers for sub-contracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

p. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these Specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).

10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g.; mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or toehr area residents (e.d., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

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1.1 DIVISION ONE

A. The requirements of all Sections of Division I apply to and shall govern each Contractor and all Subcontractors for this Project. Where provisions and requirements are referred to as the responsibility of a particular Contractor, or a Subcontractor, he shall have the primary responsibility to accomplish, provide, assume, and enforce, but all Contractors and all Subcontractors shall be governed by the requirements and cooperate fully in fulfilling the requirements.

1.2 GENERAL SUMMARY OF WORK UNDER THE CONTRACT DOCUMENTS

A. Location: The Project site is located on the Minneapolis Campus of the University of Minnesota, on Washington Avenue Southeast, bounded generally on the east by Harvard Street, on the south and west by Unit A of the Health Sciences Complex, and on the north by Washington Avenue Southeast.

B. General Scope: The Project under these Contract Documents consists of the general completion of Unit F of the Health Sciences Complex within the scope of the Contract Documents. Singular notations and specifications shall be considered plural where plural application is reasonably inferable. Mention or indication of extent of work under any work Division or specification Section is done only for the convenience of Contractor and shall not be construed as describing all work required under that Division or Section.

C. Separate Contracts under these Documents: The construction will be accomplished under three (3) Prime Contracts.

1. The index to Architectural, Mechanical, Electrical, Structural and Vertical Transportation drawings is on the first sheet of the Architectural drawings; the index to Mechanical drawings is also on the first sheet of Mechanical drawings; the index to Electrical drawings is also on the first sheet of the Electrical drawings. The Mechanical and Electrical drawings primarily apply to those Contracts and the remainder of the drawings to the General Construction Contract; however, all Contractors shall be bound by the information and requirements provided by the complete set of drawings.

2. The Division and Sections of the Technical Specifications which primarily apply to the various Contracts are listed below, but all Contractors shall be bound by the information and requirements of the complete set of specifications.

All Contracts - Division I

General Construction - All Sections of Divisions 2 through 14.

Mechanical - All Sections of Division 15.

Electrical - All Sections of Division 16.

### 1.3 RELATED WORK NOT UNDER THESE CONTRACT DOCUMENTS

A. In addition to the Prime Contracts under these Contract Documents, and the previously awarded P/N-ECX Contract, P/N ECF Contract and P/N-ECS Contract, the Owner has, and will continue to award contracts for work to complete this Unit F Project, for work that is related to this Project or related to the progress of the entire Health Sciences Complex. A listing of anticipated work is provided for the general information of the Contractors; do not construe the list as complete, nor affecting the Owner's rights in any way. Items marked with an asterisk (\*) indicates work in progress, or anticipated to be in progress prior to the on-site commencement of work under this Contract.

#### 1. By University

a. Maintenance of exit ways from adjacent buildings, except for temporary walkways at the construction area where temporary walkways must be provided to maintain the exits, as specified under Section 01500.

b. Piping, utility and electrical removals or relocations as noted on drawings or specified as by the University.

c. University's field office and utilities for same.

#### 2. By Utility Companies or Other Contractors

a. Deactivating and capping of utilities abandoned or to be abandoned (by utility companies), which shall be arranged for by the Unit F Contractors.

b. Installation of telephone equipment, in building.

c. Installation of audio-visual, intercom and TV systems, in buildings.

d. Installation of graphics work, for building and site.

e. Test and Balance service on the air and hydronic and other systems of the Mechanical Contract for Unit F.

f. Remodeling of the Jackson-Owre-Millard-Lyon complex, west of Unit A. (Work in progress)

j. Completion of "shell" spaces in Unit B/C. (Work in Progress)

### 1.4 SEPARATE CONTRACT FOR EXCAVATION (B/C-ECX)

A. The University has awarded a Unit F Early Contract for Excavation (P/N-ECX) for the majority of bulk excavation, and related work to the excavation, for the Unit F Project. Except as noted under "C" below as work to be completed by the P/N-ECX Contractor, the remaining earthwork for the Project shall be accomplished by the Contractors for the completion of Unit F under these Contract Documents. The work of the P/N-ECS Contract is under basically the same General Conditions as these Contract Documents.

B. The general scope of the P/N-ECX Contract included general excavation and related work to the extent called for under separate contract documents. Sheet A2-1 of the set of drawings indicates the status of the excavation at the completion of the P/N-ECX Contract, but the P/N Contractors shall verify

all conditions and be guided by their own investigations. The P/N-ECX Contract included such work as: Removal of site features as necessary for the required excavation; installation of earth support walls, including tie-backs, and the maintenance of the walls; fencing of the site; shoring and bracing as required; installation of thermal insulation at adjacent buildings where surfaces were exposed; site management until assumed by Unit F General Contractors; temporary 200 amp electric service, which is to be left by the P/N-ECX Contractor for use of the Unit F Contractors.

C. Under Phase 3 of the P/N-ECX Contract, which commences when the Unit F Contractors start work and site management, the following are requirements under the P/N-ECX Contract:

1. Maintenance of excavation support walls, including walls installed subsequent to the assumption of site management by the P/N General Contractor.

2. Removal of all excavation support walls of the P/N-ECX Contract, in phases to the schedule and direction of the Unit F General Contractor, as construction of Unit F permits. (Removal is anticipated to be required during January 1979.

3. Temporary facilities as required to accomplish his own work.

D. A complete set of P/N-ECX contract documents may be examined at the University's field office or at the office of the Architect/Engineer, by appointment.

#### 1.5 SEPARATE CONTRACT FOR FOUNDATION CONSTRUCTION (P/N-ECF)

The University has awarded one Unit F Early Contract for Foundation (P/N-ECF) under basically the same General Conditions as applicable as these Contract Documents.

B. The following are requirements and responsibilities of the P/N-ECF Contract relating to the completion of Unit F under these Contract Documents.

1. Rock excavation to unweathered portion of Platteville Limestone to accommodate bottom of footing elevations.

2. Protection of existing adjacent buildings and appurtenances.

3. Construction of footings.

4. Setting of anchor bolts furnished under the ECS (Early Contract Steel) Contract.

5. Setting of dowels furnished under the ECF (Early Contract Footings) Contract.

6. Dewatering of footing excavations onto area of mass excavation.

7. All temporary facilities required to accomplish the work of the ECF Contract.

## 1.6 SEPARATE CONTRACT TO PURCHASE STEEL (P/N-ECS)

A. The University has awarded one Unit F Early Contract for Steel (P/N-ECS) for the structural steel and metal decking. The structural steel and metal decking under P/N-ECS Contract shall be unloaded and erected by the Unit F General Contractor. The P/N-ECS Contract is under basically the same General Conditions, as applicable, as these Contract Documents.

B. The following are requirements and responsibilities of the P/N-ECS Contract relating to the completion of Unit F under these Contract Documents:

1. Furnish, fabricate and deliver to the site the structural steel, metal decking and required fastening devices and accessories, in accordance with the P/N-ECS contract documents.

2. Correct or replace materials damaged prior to unloading at the site.

3. Correct or replace materials which are found to be defective, missing, incapable of proper erection, or are incorrect for attachment of other materials, whether found before or after erection.

4. Provide four complete sets of shop drawings and six sets of erection drawings to the General Contractor.

5. The P/N-ECS Contractor is to anticipate deliveries may commence as early as 31 October, 1978 and is contractually obligated to complete delivery on April 27, 1979, provided the General Contractor is prepared to receive and erect.

6. After award of the General Contract for Unit F construction, the P/N-ECS contractor shall confirm the erection sequence with the Unit F General Contractor and shall adjust fabrication and delivery schedules as required to conform to the erection schedule acceptable to the General Contractor.

7. Plan deliveries of material to provide for erection directly from the trucks. Except for minor items and packaged items such as anchor bolts, bolts, tab hangers, and other bulk packaged accessory items, the ECS contractor are to assume there will be no on-site storage for material furnished under the P/N-ECS contract. Trucks for unloading are to be spotted where directed by the General Contractor.

8. Furnish a bill of materials, tabulating the tonnage of steel and metal decking of the various types being furnished by ECS contract, for the use of bidders estimating the erection of the General Contract.

C. Upon delivery to the site, ownership of the structural steel and metal decking shall be with the University, not the Contractor, throughout the construction period. The University is also responsible for the following:

1. Assume risk of loss, except for losses covered under the Project's Property Insurance policy, in which the University is a joint insured.

2. See that shop and erection drawings are provided to the General Contractor.



3. Make claims for damage occurring prior to delivery to the site, to the P/N-ECS contractor.

4. Make claims for defective, incorrect or missing materials to the P/N-ECS contractor.

5. Reject unsatisfactory materials of the P/N-ECS contract.

6. Make payment for the materials directly to the P/M-ECS Contractor.

D. The General Contractor shall:

1. Provide or confirm the detailed delivery and erection schedule, consistent with Section 01310 and the terms of the P/N-ECS requirements.

2. Provide labor and equipment to unload and erect or install at the site.

3. Provide labor to protect materials from damage and labor to repair or replace items damaged as the result of the Contractor's work or operations.

4. Notify University of any defective, missing, improper, misfitting or otherwise unsuitable materials.

E. A complete set of P/N-ECS contract documents may be examined at the University's field office or at the office of the Architect/Engineer, by appointment.

#### 1.7 ADDITIONAL DEFINITIONS

A. P/N-ECX Contractor: Carl Bolander and Sons Co., Minneapolis, Minnesota, who is under a separate contract with the University.

B. P/N-ECS Contractor: Crown Iron Works, Inc., Minneapolis, Minnesota, who is under a separate contract with the University.

C. P/N-ECF Contractor: Arkay Construction Company, Minneapolis, Minnesota who is under a separate contract with the University.

D. Schedule Manager: Cost Planning Management International, Inc., Des Moines, Iowa. Refer to Section 01310 for definition of responsibilities.

E. Test and Balance Consultant: An independent firm specializing in testing and balancing services of air and hydronic systems in building construction, which will be retained by the University to perform the services outlined in Section 15010.

F. Owner: Where used, the term is synonymous with the University.

G. Site: In general, the term refers to the actual site within the construction limits indicated, adjacent areas outside the construction limits where work must be performed to complete the Contract, the nearby adjacent areas indicated as staging/storage areas and the access to these areas.

H. Construction Site Limits: The area within the limits indicated on the drawings, which are the ultimate or maximum limits, except for related isolated work which must be accomplished outside the limits to complete the

Contract. The construction limits are variable, up to the indicated maximum. The specified requirements to maintain access, constraints as to when certain phases or areas of the Work can be accomplished or other restrictions shall mean the construction limits will be necessarily otherwise located, or restricted to other locations, resulting in staged construction limits. The Construction limits and site fencing shall not infringe on access to adjacent buildings, existing streets or pedestrian traffic until work in the specific area is scheduled to commence. At various times during construction, the University reserves the right, in consultation with the Contractors, to designate other actual construction limits to accommodate the phases and areas of work in progress.

#### 1.8 STRUCTURAL DRAWINGS AND EXISTING SITE DRAWING

A. The set of drawings for these Contract Documents contains drawings which were issued for P/N-ECS bids and contracts. The drawings have been updated to include additional information and requirements which apply to these Unit F Contract Documents. The complete drawings are furnished to provide the Contractors with all pertinent information and requirements. The Contractor for the completion of Unit F shall be guided by, comply with and provide all work required to complete the Project except for the actual furnishing of structural steel and metal decking which are under the scope of the P/N-ECS contract.

#### 1.9 PRECONSTRUCTION CONFERENCE AND SITE MEETINGS

A. After award of contracts, at time designated by the University, the Contractors shall attend a Pre-construction Conference at a location in the Metropolitan Twin City area. Government requirements, procedures to be followed, coordination efforts and similar matters will be reviewed.

B. During construction, periodic site meetings will be held under the supervision of the University at times directed by the University. These meetings will be held weekly (unless job conditions do not warrant) and may be held more frequently if job progress and needs indicate. Except when excused as being not necessary due to the status of work, all Contractors shall have one or more responsible representatives in attendance. The General Contractor shall be responsible for recording "minutes" of the meeting and distributing them to all interested parties. A separate monthly meeting may be held after the periodic up date (of the Contract Schedule - refer to Section 01310). In addition to the above meetings, the General, Mechanical and Electrical Contractors and their subcontractors when appropriate, shall hold their own coordination meetings, involving Vertical Transportation Sub-contractor when appropriate.

#### 1.10 CONSTRUCTION LOGIC AND SEQUENCE

A. The University's Schedule Manager has developed the Preliminary Construction Schedule, integrated with certain established constraint dates and constraints which are critical to the University. Refer to Section 01200. The P/N-ECS Contractor will also be guided by this Schedule.

B. The Preliminary PDM Network is bound with the drawings and the Preliminary Construction Schedule is published as Section A-5.

C. It is the intent to generally finish the Project from the top down, except where established constraint dates, other constraints and the University's requirements for particular spaces require a deviation from this general procedure. The Contractors shall schedule their deliveries, subcontractor's work and other operations to meet this general intent and in accordance with the final construction Schedule.

#### 1.11 PERMITS AND FEES

A. Refer to Paragraph 4.7 of the General Conditions. The University will obtain and pay for all permits and connection charges of the State, City of Minneapolis and utility companies, at no cost to the Contractors, except as noted in C. following.

B. The University will pay all fees to the State, as may be required for review and inspection services.

C. The Contractors shall make their own arrangements, and pay any charges including parking costs and bonds, for use of public streets or roads in transporting, loading/unloading or use of construction equipment on the streets.

#### 1.12 INSURANCE

A. Contractor's Liability Insurance: Refer to General Conditions, Sub-paragraph 11.1.10, Clause .8. Each Contractor shall provide Umbrella Excess Liability Coverage to supplement the Specified underlying limits of all required coverages. The minimum excess liability amounts of the umbrella policy of each Contractor shall be:

General, Mechanical and Electrical Contractors	\$ 5,000,000.
Vertical Transportation Contractor	\$ 1,000,000.

B. Property Insurance: Refer to General Conditions, Paragraph 11.2. In as much as the University is a joint insured under the Property Insurance for the Project, under the General Contract the General Contractor shall include and pay for insurance coverage in the amount of \$1,393,000 as the value of the University's structural steel and metal decking which the University has purchased separate from this Contract. This amount shall be added to the Insurable value of the Work under the General Contract.

#### 1.13 SITE MANAGEMENT - SUMMARY OF SITE RESPONSIBILITIES UNDER THIS AND OTHER CONTRACTS

A. Refer to Division C, General Conditions for general requirements; in particular Articles: 4.3 and 4.9 for superintendence on the site; 4.14 and 7.11 for use of site and premises; 10 for protection safety and storage; 3,4,5 and 6 for coordination and cooperation in general, 4.16 for condition and care of site; and other Articles of this Section 01010 for more specific requirements.

B. The Unit F General Contractor shall assume site management within seven days after award of Contract and shall carry responsibility for the site management until final completion of his contract.

C. Site management and maintenance shall include, but not be limited to: maintenance of fences in good condition; providing and maintaining site and safety lighting; providing and maintaining temporary facilities as specified; dewatering the existing excavations (as well as all other excavations made in the General Contractor), except water in trenches below the basement floor within the general building excavation, made by other Contractors, as specified in Section 01500; protection of adjacent structures as may be caused by water in the existing excavations (as well as in excavations made by the General Contractor); overall fire safety management, as specified in Articles 1.31 and 1.32 of this Section; general security of the Project; general site drainage; snow removal; and similar overall or general management of the site and adjacent public and other property to fulfill the obligations of this Contract, except maintenance of the excavation support walls provided under the ECX Contract. (This exception does not include support walls installed under P/N Contracts.)

D. Maintenance of the existing and new or relocated excavation support walls will remain the responsibility of the P/N-ECX Contractor and he shall be afforded every reasonable opportunity and time to perform his work without undue interference and without extra cost to the P/N-ECX Contractor. Any damage to the support walls shall be paid for by the responsible Contractor.

E. The General Contractor has the primary site management and maintenance responsibility. However, each Contractor shall share in site maintenance as it affects, or is affected by, their own work and they shall not cause undue expense to the General Contractor's overall management. Any damage shall be paid by the responsible Contractor.

F. Site management shall include all areas of the site, including storage/staging areas.

1.14 CONTRACT DOCUMENTS PROVIDED TO THE CONTRACTORS

A. The Contractors will be provided, free of charge, the number of sets of drawings and specifications as scheduled below. Additional sets may be obtained at the cost listed in the Instructions to Bidders as the "Deposit" amount. (No refunds will be given). Subcontractor's shall obtain sets from the Prime Contractors; free sets will not be issued to Subcontractors, by the Architect/Engineer or University.

B. Schedule of sets:

<u>Contract</u>	<u>Complete Sets Including All Other Contracts</u>	<u>Sets Which are Primarily for Work of Individual Contracts.</u>	
		<u>Drawings</u>	<u>Specs</u>
General Construction	6	19	19
Mechanical Work	3	12	12
Electrical Work	3	12	12

1.15 PHOTOGRAPHS OF PROJECT

A. The General Contractor shall provide the University and Architect with progress photographs of the Project, taken monthly, as specified under Section 01300. If copies are wanted by other contractors or subcontractors, they may make their own arrangements with the General Contractor.

## 1.16 TEST AND BALANCE SERVICE

A. Under a separate contract, the University will retain a qualified consultant to provide test and balance services of the HVAC and piped/pumped systems of the Project, as further specified under Article 1.20 of Section 15010.

B. All Contractors shall coordinate and cooperate with the test and balance consultant, including permitting access to the Work as necessary to properly test and balance all systems.

C. In addition to the Work under the Mechanical Contract, all Contractors shall provide the test and balance consultant with any required shop drawings (ie: fume hoods) other data and characteristics the consultant may require to complete the services.

## 1.17 STORAGE AND AREAS FOR STORAGE/STAGING

A. The restricted site provides very limited area for storage, offices, sheds and operating beyond the actual building area. The following areas may be used for such purposes, as construction operations and phases permit:

1. The areas indicated on drawing A2-1 as staging area for Unit F construction on the block bounded by Delaware, Harvard, Washington and Walnut.

2. The area within the construction fence.

B. The very restricted site and extremely limited on-site storage shall be taken into consideration by all Contractors in the scheduling of their Work and their deliveries. All Contractors shall cooperate and coordinate to use the available areas most effectively and be concerned with the sequences of the work of all Contracts, which will best benefit the overall job progress.

C. To the extent of available site, each Contractor will be allocated some space, with consideration given for the stage of the Project, the priorities necessary to maintain the overall construction schedule and the required operations of the Contractors. The assignment of site space may be used as the Contractor determines and any parking of the Contractor's (or his sub-contractors and visitors) cars shall be limited to his space allocation.

D. In the event of potential conflict over the use of the available site between the Contractors, or the Unit F Contractors and other Contractors, the University, in consultation with the Contractors, will establish priorities, determine sequences and assign areas which will best benefit the overall progress of the Project. The Contractor shall comply with such determinations.

E. The erection of structural steel for the structure shall be accomplished by unloading from trucks as it is delivered, except for such steel the General Contractor may choose to stockpile in the excavation.

F. The Contractor (or subcontractor) shall provide coverings and enclosures to protect and preserve all materials stored at the site, which may be damaged or soiled, by exposure to the elements, as approved by the University. Materials such as wood, precast panels, cement, masonry materials, finish

materials, metal subject to rust or stains, equipment of any type, conduit and similar materials, shall not be piled directly on ground, but placed on platforms. Coverings shall be durable, watertight, fully cover sides as well as top, substantial and well anchored to prevent blowing away. Shed type of enclosures shall be provided for easily damaged and small items. Any protection which becomes damaged shall be replaced immediately.

F. Without exception, fan units and all other equipment with bearings or similar working parts shall be set on supports above the ground and snow and shall be enclosed with substantial well secured waterproof protection to prevent any damage from moisture or otherwise.

#### 1.18 CONDITION AND CARE OF SITE AND PROJECT

A. Refer to Article 4.14 of General Conditions. From the time the Contractors for this Project commence work at the site until their Contracts are completed, each Contractor is responsible for the care of the site and Project to the extent his work, acts, operations or use of the site affects the site and Project, subject to the rights of the University and the University's workmen thereon.

B. The Contractor shall confine his apparatus, materials, equipment, shacks and operations of workmen to the site and construction limits indicated on drawings or otherwise imposed by law or ordinance. The site and Project shall not be unreasonably encumbered with materials and equipment. Neat and orderly stockpiling and other operations shall be maintained and debris shall be regularly removed from the site. Before any work is started, Contractors shall meet with the University and agree to the use of available areas for storage. The Contractors shall then confine their storage and operations to said agreed limits and to University directions.

C. All improvements on or about the site and adjacent property which are not shown to be altered, removed or otherwise changed shall be restored to the conditions which existed previous to starting work. All existing buildings, structures, or other features shall be protected from damage by any operation in connection with the Project. Each Contractor shall replace or repair, at his own expense (and to the satisfaction of the University), all damage to existing buildings, sidewalks, curbs, drives, lawns, plants, trees, shrubbery, and other property resulting from work of his Contract, from whatever cause.

D. The General Contractor shall protect existing trees and features of adjacent buildings (including Unit A) which are to remain and are susceptible to damage from ordinary operations of the Contractors, trucking, or other activity. Tree trunks shall be boxed and barricades set up at sufficient distance to prevent damage to major tree branches, unless such protection remains from earlier contracts.

E. The General Contractor shall install and maintain temporary board or plank protection at all sides of openings in finished or exposed construction where materials may be moved, including (but not limited to) sills and jambs of door, window or similar openings through which material may be passed. Any damaged surfaces shall be removed and replaced as directed.

F. Utilities or other services which are shown, or not shown but encountered or otherwise found, shall be protected by the Contractor from any damage from excavation or other work and operations of this Contract, unless or until they are abandoned. If the utilities or services are not abandoned, or to

be abandoned, the Contractor shall immediately restore any damage from his work or operations to place the utilities and service in an equal or better condition to that which existed. Where utilities or services are shown to be abandoned or moved, they shall remain in service, and be protected by the Contractor, until new utilities and services have been provided, tested and are ready for use.

G. The normal functions of the University and Campus shall not be disturbed, except within the construction limits and storage/staging areas of this Contract. Except when work is in progress at areas indicated for Work to be performed, or as otherwise necessary to complete the Contract, all walks, driveways, park areas, and entrances shall be kept clear and free of all Contractor's equipment, material and debris at all times. Remove debris promptly.

H. The University will continue to occupy the surrounding buildings and continue the normal functions, including parking and delivery. The University's employees and staff shall have full access to surrounding areas and shall be allowed to perform their duties therein without any restriction.

I. The University reserves the right to let other contracts in connection with this Project, the Health Sciences Complex, or in connection with existing buildings. This Contractor shall afford other Contractors reasonable opportunity for the introduction and storage of their materials and execution of their work, and shall properly connect and coordinate his work with theirs.

#### 1.19 WORK IN AND AT EXISTING AND OCCUPIED BUILDINGS

A. Refer to Section 01200 for constraints, schedule and timing requirements and 01500 for temporary closures for work in and around existing buildings.

B. In addition to the commencement and completion of work at various areas being scheduled in the Contractors' Construction Schedule, the Contractors shall verify the timing and advise the University in advance of work in existing and occupied spaces, to permit the spaces to be vacated and related arrangements to be made. Occupied spaces will require longer notice periods.

C. Materials and equipment shall be assembled, including that of subcontracts, and subcontractors committed to a firm schedule, prior to commencing work to accomplish the work as expeditiously as possible. After work commences in any existing space it shall be continued without interruption to completion, except where work phases require otherwise.

D. All work shall be accomplished to cause a minimum of disruption of the University's activities, uses, functions and programs in the building, as approved by the University.

#### 20. LAYOUT OF THE WORK

A. The General Contractor shall locate and layout the Project with relation to Unit A and other reference points. The General Contractor shall consult with the University and demonstrate to the University's satisfaction the significant points and elevations are correctly established.

B. The General Contractor shall employ qualified registered engineers to: lay out and locate all grids and column center lines, in relation to Unit A and other references; layout and locate all other building and site features and confirm the relationship to existing structures and features; establish bench marks and other reference points, relating to adjacent structures; verify elevations of adjacent structures at elevations where connections will be made; layout site features, including roads and walks; establish final levels and elevations at plaza areas, streets, walks stairs and similar; and establish suitable reference points and bench marks, which the Contractor shall preserve, as a guide to all trades.

C. Each Contractor shall correctly locate his work in relation to the building and site features, to all requirements imposed by the drawings and good construction practice. Each Contractor shall verify the locations of all existing work to which his Work must fit and all grades, lines, levels and dimensions shown on the drawings and report any errors or inconsistencies in above to University before commencing work.

D. As the Work progresses, the General Contractor shall lay out the exact location of grids, partitions and similar features, as guide to all trades. Partitions shall be laid out (marked) by using permanent color paint, immediately after concrete has hardened, prior to application of the first coat of seal (not including curing agent) and before any materials are stored on the floors. Grids shall be laid out as may be required, using temporary marking methods unless floor covering will be installed.

E. The Contractor shall recognize that the drawings necessarily are diagrammatic, in many instances. All work and in particular exposed piping, ducts, conduit and similar items shall be neatly and carefully laid out to provide the most useful space utilization and the most orderly appearance. Piping and similar work shall be installed as close to ceilings and walls as conditions permit, located to prevent interference with other work or with the use of the spaces in the manner required by the functions of the room and staff. Valves shall be located in inconspicuous places. Before proceeding with any work, particularly where exposed, the Contractor shall carefully plan the layout and review it with the University for acceptability of location.

#### 1.21 REFERENCES TO STANDARDS AND CODES

A. If the Contractor observes that the drawings and specifications are at variance with any applicable code or regulation of a governmental unit having authority, he shall promptly notify the University and Architect in writing, and any necessary changes shall be adjusted as provided in the Contract for Changes in the Work. If the Contractor performs any work knowing it to be contrary to such laws, ordinances, rules and regulations, and without such notice to the University, he shall bear all costs and damages arising therefrom.

B. The standards referred to, such as ASTM, Federal Specifications and similar standards, shall have full force and effect as though printed in the specifications, except as modified in the specification. These standards are not furnished to bidders and the Contractor as it is assumed that manufacturers and trades involved are familiar with their requirements.



C. Any material specified by reference to the number, symbol or title of a specific standard, such as ASTM, Commercial Standard, a Federal Specification, a trade association standard, or other similar standard, shall comply with the requirements in the latest revision thereof and any amendment or supplement thereto in effect on the date of The Contract Documents, unless otherwise noted.

D. For products specified in accordance with a Federal Specification, ASTM Standard, American National Standards Institute or similar association standards, upon request the Contractor shall provide an acceptable affidavit by independent testing laboratory, or other source approved by the University and Architect, certifying that product furnished for this Project complies with particular standard specifications. Where necessary, requested or specified, supporting test data shall be submitted to substantiate compliance. The manufacturer is subject to Architect's acceptance.

#### 1.22 PREFABRICATED STRUCTURES AND MANUFACTURED COMPONENTS

A. A part of the Minnesota State Building Code (SBC) requires that prefabricated structures, manufactured buildings and components be approved by the State Building Inspector.

B. It is the responsibility of the Contractor and his subcontractors to ascertain if any prefabricated structure or component proposed by them is subject to approval of the State Building Inspector and, if so to obtain such approval. For final acceptance of any such structure or component by the University and Architect, which requires approval of the State, the Contractor or subcontractor shall provide evidence of such approval at the time the Contractor's lists of proposed materials and subcontractors are submitted.

C. In the event a proposed structure or component does not receive approval by the State, the Contractor shall provide an alternate structure or component which is approved.

#### 1.23 SITE FENCING

A. The site fencing installed under the p/N-ECX contract, and other earlier contracts, will remain and shall become the responsibility of the General Contractor when he assumes site management. When the General Contractor assumes site management, he shall maintain the fencing, moving or providing additional fencing as may be required and remove at the appropriate time during the progress of the Project. The fencing shall be provided and maintained as specified under Section 01500.

B. The General Contractor shall maintain the construction area and storage areas fenced in. As the construction area (construction limits) change during the progress of construction, the fencing shall be altered and expanded as required to enclose the work areas, as approved by the University.

#### 1.24 SITE ACCESS, USE OF STREETS AND ALLEYS, ACCESS TO BUILDINGS

A. Refer to Section 01500 for parking and loading/unloading restrictions.

B. Prior to closing any street or alley, permanently or temporarily, the General Contractor shall schedule the closing with the University. The

General Contractor shall also notify the Minneapolis Police Department, the University Police Department, the Minneapolis Fire Department and any affected adjacent property occupants.

C. Access to the building site shall be only from Harvard Street.

D. There shall be no trucking or deliveries through the adjacent alleys and drives, across plaza areas or through existing buildings. The use of existing loading docks shall not be restricted by the Contractor's operations.

E. The existing stairway exit on the north side of Unit A, shall be maintained as an emergency exit at all times, including working hour periods when work is actually in process, as approved by the University. A temporary covered and protected walk way shall be provided by the General Contractor. When work is not in progress, including after working hours, safe emergency exit through the opening must be available.

F. The alley east of Unit A shall be kept open and unencumbered at all times for access to the Unit A loading dock and church. The church property will remain occupied throughout construction of this Project. Pedestrian traffic in the alley will be allowed.

#### 1.25 PROTECTION IN GENERAL

A. Refer to Article 10 of the General Conditions, Section 01500 and other Articles of this Section 01010 for more specific requirements. The University may require the Contractor to provide additional protection, where protective measures appear inadequate, but assumes no obligation to do so nor any responsibility of the Contractor to provide all protection required for persons or property.

B. When it is noted or specified for a particular Contractor to provide protection, it is the intent that Contractor provides the basic routine or normal protection, but shall not be construed to establish the total responsibility, as each Contractor shall have the protection responsibility as affected by his Work, labor, operations, materials, equipment spaces and similar conditions.

C. Each Contractor shall provide protection for all his own equipment, hoists, and other facilities, used in the prosecution of the work to prevent operation by unauthorized personnel.

D. The General Contractor shall provide visual barriers at installed glass which conceivably could be walked into, or otherwise damaged by construction operations, using boards or similar protection, not by tape or marks on glass. At any level where the General Contractor is performing work and other Contractors may also perform work, the General Contractor shall provide protection around shafts, holes through floors for stairs and elevators and other holes through floors, as well as at the open sides of the building.

E. Any work on the roof or other membranes, after membrane has been installed, shall be done over planking, plywood or other suitable protection, to spread loads under walkways and at all work areas, including around ventilating bases, with the protection provided by the Contractor whose work is being done over the membrane. There shall be no exceptions to this requirement and the

General Contractor shall advise the University of any violations by other Contractors.

#### 1.26 SECURITY AND FIRE SAFETY SURVEILLANCE

A. The General Contractor shall provide and pay for surveillance services during construction, commencing at the time the General Contractor assumes site management responsibilities. The service shall continue until the University accepts the Project or starts to occupy the Project. As areas are occupied, the University will provide surveillance at the occupied areas, and the Contractor shall continue the service at unoccupied parts and storage areas of the Contractors, until final completion.

B. The surveillance service shall guard against fire and similar disasters, within and about the building, as well as vandalism and pilferage within and about the building and at all storage, staging and work areas of the site, including such areas which are separated from the building site but used by the Contractors. Fire safety (detection) surveillance within the building shall be provided as any area becomes "enclosed", as approved by the University.

C. The general surveillance service provided by the General Contractor is intended to guard against pilferage and vandalism for all Contractors. However, the General Contractor shall not be held responsible for losses of other Contractors, should they occur under the surveillance service of the General Contractor. Should other Contractor's want increased surveillance, such as to their individual offices or fabrication work areas, they shall provide their own surveillance or arrange for additional service thru the General Contractor.

D. The surveillance service shall be in force, operational and on guard at all times when work is not in progress, including nites, weekends and holidays. The service shall be coordinated with and be in cooperation with the normal activities of the University's police force.

E. The service shall be acceptable, in type and extent, to the University. As a minimum, surveillance shall be provided:

1. At each storage, staging or work area of the site.

2. At each level of the "enclosed" portions of the building, of such frequency to cover all general areas.

3. On the "Unit F side" of penetrations, with temporary enclosures, to adjacent buildings as the penetrations are made which might allow passage to Unit F.

F. As the building becomes enclosed, fire safety is of a primary concern and the surveillance shall be provided for prompt and early detection of fire.

G. The surveillance service may be electronic sensor types or by watchmen, or a combination. Within the building, any electronic surveillance shall be capable of sensing smoke as well as sound. If watchmen are used, they shall be "roving" watchmen (not office bound) for surveillance within the building and site. Within the building, the watchmen's rounds shall be frequent enough to detect fire early.

H. At 30 day intervals, Contractor shall arrange for and pay for complete test of surveillance system to prove its proper operation and shall submit written reports of satisfactory performance.

I. In addition, Contractor shall test and report within 2 days after any modification is made to the system except that only that portion modified need be tested.

J. The University will, at its option, provide any surveillance it deems necessary on the opposite side from the Work of this Project at temporary or permanent enclosures and doors to adjacent buildings.

#### 1.27 FIRE SAFETY DIRECTOR

A. The General Contractor shall appoint a responsible member of his organization to act as Fire Safety Director, whose duty it shall be to minimize fire hazards and to enforce fire safety precautions. The Fire Safety Director shall develop procedures and regulations acceptable to the University, to guide all Contractors.

B. All Contractors and Subcontractors shall conform to and abide by all reasonable requirements of recommendations of the Fire Safety Director and the University. The Fire Safety Director shall consult and coordinate with the Fire Department of the City of Minneapolis in the development of the fire protection planning.

C. After enclosure of the building, or floors thereof, the Fire Safety Director shall periodically inspect all spaces and list hazards to be removed or corrected. These shall be reported to the University and the responsible Contractors. The Contractors shall promptly remove or correct the hazards. In the event the hazards are not promptly removed or corrected, the University may take such action as it deems necessary to insure compliance, including removal or correction at the expense of the offending Contractor.

#### 1.28 FIRE SAFETY PRECAUTIONS

A. The Contractors shall exercise extreme care to maintain and exercise adequate fire safety precautions throughout the work. This shall include providing sufficient fire fighting devices, watchmen, standby helpers or other precautions during construction, in use of temporary heat, welding, brazing, sweating, testing or other phases of work. Refer to Section 01500 for temporary fire fighting devices to be provided under the Contract.

B. All welding, brazing, cutting and sweating operations performed in vicinity of or accessible to combustible materials shall be adequately protected to make certain that sparks or hot slag does not reach the combustible material and start a fire.

C. Materials shall be protected from sparks, hot slag or hot splatter. All glass, glazed materials and other finishes, in the vicinity of welding, brazing and cutting, shall be masked by the Contractor performing the welding work.

D. When necessary to do cutting, welding, brazing, sweating and similar work in vicinity of wood, in shafts, or vicinity of any combustible material (and the combustible material cannot be removed), the materials shall be adequately protected with asbestos blankets or similar approved coverings. In addition, a helper shall be stationed nearby with proper fire extinguishers (provided by the Contractor performing the work) to guard against sparks and fire.

E. Whenever combustible materials have been exposed to sparks, molten metal, hot slag or splatter, a man shall be kept at the place of work for at least two hours after completion to make sure that smoldering fires have not been started.

F. Whenever cutting or welding operations are carried on in a vertical pipe shaft a man to act as a fire guard shall be employed to examine all floors below the point of cutting or welding. This fire guard shall be kept on duty at least two hours after completion of work to guard against fires and he shall examine each level after this time, prior to leaving. There shall be no exceptions to this requirement and failure to comply will be construed as negligence.

G. Before starting work involving cutting, welding, brazing or sweating operations, consult with the Fire Safety Director and the University as to particular precautions to be employed.

#### 1.29 PROTECTION OF SPRAY-ON THERMAL BUILDING INSULATION

A. The spray-on building insulation, such as at the backs of precast panels shall be protected from moisture and damage, whether the building is fully enclosed or not. In general, the insulation and its vapor barrier shall not be applied until the precast panel joints have been caulked and the possibility of moisture penetration or leakage from other areas is nil. All wet, damp or damaged insulation (and damaged vapor barrier) shall be removed and replaced.

B. Spray-on building insulation shall not be applied at temperatures below that specified or recommended by the manufacturer, nor applied to surfaces whose temperature is below that recommended by the manufacturer. The insulation shall not be allowed to freeze until excess moisture has dissipated or is removed. Should the progress schedule require the application of insulation when temperatures are below that specified, the surfaces shall be warmed and temporary heat (and enclosures if required) shall be provided.

C. The application of building insulation shall be coordinated with the fire proofing, particularly at fireproofed areas at exterior walls, to insure insulation is installed so the structural steel is on the warm side of the insulation.

#### 1.30 PROTECTION OF SPRAY-ON FIREPROOFING

A. Refer to Section 01500 for temporary heat and Section 01200 for anticipated sequence of work. At all times, the sprayed-on fireproofing shall be protected from damage. The General Contractor shall protect the fireproofing from water or weather damage, whether the building is temporarily or permanently enclosed or not, except for the top covering at the cores until the roof is on. At the cores the fire proofing subcontractor shall provide and relocate a top enclosure as fireproofing proceeds up the cores to prevent any damage from the elements.

B. All Contractors shall exercise extreme care to prevent damage and to avoid removal of the fireproofing, including accidental knocking-off of the fireproofing. The General Contractor shall remove and replace any damaged fireproofing and if the damage was caused by another Contractor, said other Contractor shall pay for the replacement of fireproofing damaged by him.

C. Attachments to fireproofed framing (i.e.: brackets and hangers for piping, and similar items) shall be installed prior to the fireproofing to avoid fireproofing being removed. Where fireproofing is removed to make an attachment, or where fireproofing is removed from attachments to make connections, the General Contractor shall reapply the fireproofing as required to maintain full thickness and fire rating, with the cost of such re-application paid for by the Contractor responsible for the attachment.

D. The General Contractor shall provide the schedule, well in advance of fireproofing operations and for the Contractors' Construction Schedule, for the guidance other Contractors and shall allow time for installation of attachments to minimize later removal of fireproofing for the attachments. The other contractors shall install their attachments to the schedule, as far as practicable, to avoid re-fireproofing and the cost thereof. Particular attention shall be given to the service cores, in scheduling and installing attachments, to avoid the difficulty in properly re-fireproofing these areas.

E. Refer to Section 09841 for other protection requirements, including for workmen. In so far as possible, workmen from other trades shall be kept from areas of mixing and spraying.

### 1.31 INSTALLATION OF OWNER'S EQUIPMENT

A. Refer to drawings. On the schedule on Sheet A12-1, the equipment under the column "Group II by Owner", where an "X" occurs, as well as equipment shown on other sheets as being "by Owner", "Not in Contract" (N.I.C.) or merely dotted in, is to be provided by the University and final connections made by the University. Some equipment will be new, others will be relocated from other areas of the campus.

B. As the building progresses, an area mutually agreed upon between the Contractors and University shall be made available to the University to receive and assemble equipment prior to its being located in the room of installation.

C. The University will deliver the equipment to the Project, uncrate or unpack, assemble, clean and otherwise make the equipment ready for installation and connection. The University will deliver the equipment to the particular room in which it is to be installed, set in its final place and make any necessary connections.

D. The University will assume responsibility for damage found during unpacking and for damage which may occur in moving the equipment. The University will assume responsibility for caring for accessories or other loose items.

E. The University will remove any debris from the unpacking, uncrating or assembly work.

F. The University and Contractors shall jointly prepare a schedule of when each item of equipment should be delivered. The schedule shall establish priorities of deliveries. In general, the schedule shall indicate the earliest time when the equipment can be installed, dependent upon the stage of completion for the space, and the latest time for delivery to prevent delay of the Contractor's completion schedule.

### 1.32 EQUIPMENT LAYOUTS AND ROUGH-IN

A. It is the intent that for equipment for Unit F, full layout and rough-in data is to be provided by the Contractor or subcontractor supplying the equipment, to the Contractors requiring the data, in sufficient time to facilitate proper and accurate rough-in, in so far as practicable. For existing equipment of the University, the University will provide the rough-in data. For equipment to be purchased by the University, the University will arrange to have the data furnished to the appropriate Contractors.

B. When rough-in details are not available at the time service systems are being installed (either from the University or from other Contractors) the final rough-in shall be postponed until the data is available. At all times, prior to roughing-in for Group II equipment (by University) the Contractors shall consult with the University to verify the status of rough-in data.

C. When equipment rough-in data is not available at the time the service systems are being installed, the services shall be run to the approximate locations and temporarily capped, for later extension. For down-feed services in service chases or service columns, the services may be stubbed down below the ceiling line, for later completion even after walls and ceilings are installed. The face panels of service chases or service columns shall temporarily be left off, if the service work is incomplete, when the remainder of the wall surfaces are installed, to permit later completion of the rough-in. The panel faces shall be installed when the rough-in is complete.

D. When a horizontal run of services may be necessary between a service chase and the equipment, with the permission of the University, the service may be run exposed along the wall. The exposed piping will be permitted, however, only: if job progress requires the wall finish to be applied prior to the piping; if the piping will be concealed behind equipment; the equipment installation allows for such exposed work; and the necessary final rough-in data is not available.

E. For waste and other services passing through the floor, if rough-in data is available, it is the intent that generally the rough-in sleeves be installed prior to pouring the floors. With the permission of the University, core drilling for other holes (even if data is available) may be done to facilitate job progress or to more accurately locate the holes, with such core drilling done without additional cost to the Owner.

F. If layout information for rough-in sleeving for Group I equipment (provided under the construction contracts) is not available at the time sleeving through the floor must be accomplished, core drilling later shall be employed. The Contractor responsible for providing the rough-in data shall reimburse the Contractor performing the core-drilling for the cost of the core drilling.

G. If layout information for Group II equipment (by University) is not available at the time required for sleeving, core drilling shall be employed as above. The University will pay the extra core drilling cost.

H. At core drilled holes, the specified sleeves will generally be required, except where the omission is specifically approved by the University. Refer to Section 01600.

### 1.33 FIELD DIMENSIONS FOR CASEWORK AND EQUIPMENT

A. The need to obtain accurate field dimensions in ample time to permit fabrication of casework and equipment, for delivery and installation in accordance with the schedule, shall be recognized. Each Contractor shall cooperate in completing work phases to accommodate the schedule for obtaining dimensions and to prevent fabrication delay. In the event it is impractical to have work in place to permit field dimensions, the Contractors shall guarantee necessary dimensions, before construction, to the various fabricators and be responsible to insure the dimensions.

### 1.34 SPECIAL REQUIREMENTS AND CAUTIONS

A. Refer to Sections 01200 - Contract Time, 01300 - Submittals, 01500 - Temporary Facilities 01910 - Cutting, Removal and Patching, other articles of this Section and technical sections for other special requirements. Refer to Article 1.46 this article for restricted work area.

B. The Contractors shall exercise special precautions to prevent damage to the excavation support walls and consult with the P/N-ECX Contractor regarding work and load activities adjacent to the walls. Any damage as a result of work under these Contracts shall be paid for by the responsible Contractor.

C. Underground parts of structures such as buildings, garage and tunnels, exist as generally indicated on the drawings. The Contractor shall exercise special care to prevent damage to any structure and membranes. In the event any waterproof membrane is damaged as a result of work under this Contract, the membrane will be repaired/replaced by the University and the cost by the Contractor.

D. Existing buildings, streets and other features or structures shall be protected from all work under the Contracts, including from underpinning, shoring, sheathing, excavations, water (including water in excavations) and other potential hazards. In the event sheathing is driven in the location of existing building, the building face shall be covered to prevent oil stains from the driving unit.

E. In deference to the welfare of patients, no operations creating loud noises will be allowed between the hours of 8:00 P.M. and 7:00 A.M. This shall include such operations as pile driving, jack hammering and other noisy operations and equipment.

F. The General Contractor shall provide the sand or gravel cushion and fill under the basement floor at the earliest practical time, after under floor services or other work is done and after coordinating the placement with work being, or to be performed by other Contractors. The General Contractor shall place the Basement Floor slab as soon as possible, as this is critical to the progress of Mechanical and Electrical work.

G. It is the intent that spaces are generally complete prior to the installation of casework and similar equipment, except for the final coat of wall paint, floor tile and base, final connections to equipment and installation of electrical outlet plates. The Contractors shall accomplish their work to have spaces generally complete to reduce potential damage to equipment and casework thru a minimum amount of work over and around casework and equipment.

H. After the installation of casework and equipment, care must be exercised to prevent marring of surfaces of other damage. Work over and around casework equipment is to be minimized by completing as much work (except necessary finishing of painting, floor covering and final connections) as possible prior to casework and equipment installation. During any subsequent work, protect the casework and equipment, including from paint spatters or other spatters or other soil. During work around or over the casework or equipment, provide hardboard covers on tops and cover the casework and equipment to extent necessary to insure prevention of scratches, dents or other damage. The Contractor performing the follow-up work shall provide the protections.



I. Where work is performed over finished floors (ie: ceramic tile, terrazzo, concrete, VAT) or where the area is used as a passage, provide hardboard or plywood cover to protect against damage or stains. Covering at passages to be provided by General Contractor. At other locations, covering shall be provided by the Contractor performing the work.

J. Certain finishing operations may occur over installed carpeted areas. The General Contractor shall protect carpet from damage during these operations by covering (as a minimum) with heavy duty, non-staining reinforced covering and maintain free from holes or gaps. At hard use areas, such as passages, also provide hardboard or plywood surfacing to prevent damage. All Contractors shall use extreme care in working over carpeting, and its covering, and any damage or stains caused shall be paid for by the responsible Contractor.

K. Safety and site lighting shall be on during all hours of darkness, whether work is in progress or not at the site.

L. Warning signals on barricades and other hazards shall operate 24 hours per day.

M. Whenever the University assumes beneficial occupancy or use of any space prior to acceptance or occupancy of the entire Project, except for minor storage areas all life safety and comfort systems shall be complete and useable as may be appropriate to the space. This shall include exits, stairs, elevator service if necessary, sprinklers, alarm systems, dependable heat and air conditioning, toilets and similar functions and systems required for the particular use of the space.

#### 1.35 JOINT USE OF SCAFFOLDING

A. Refer to Section 01500 - Temporary Facilities, Articles 5.1 and 5.2 for high ceiling and soffit scaffolding to be used jointly by all Contractors and trades.

#### 1.36 CLEANING UP

A. Refer to Paragraphs 4.16 and 6.4 of the General Conditions and Section 01700, Project Closeout. It is the intent the site and building areas be maintained in clean, neat and free of debris at all times.

B. In addition to removing rubbish, waste materials, packing materials and other debris as it is generated, the job site shall be cleaned up by noon each Friday. Each Contractor shall assign sufficient labor to accomplish the cleanup. In the event the Contractors fail to maintain the building clean and free of debris, the University will have it done by others and assess the cost to the Contractors.

C. At least monthly, the General Contractor shall sweep or vacuum the floors of the building after enclosure, except for mechanical spaces. The General Contractor shall sweep or vacuum the major access areas (entrances, elevator lobby, major traffic corridors, and similar areas) as often as necessary to keep them reasonably free from dirt and debris, as approved by the University. The Mechanical Contractor shall keep the mechanical spaces clean, sweeping or vacuuming as necessary and as approved by the University.

D. During finishing operations in particular, care shall be taken by each Contractor to remove his debris after working in a partially finished space. The General Contractor shall continue to sweep or vacuum the areas as specified under C above, but he will not be required to remove stacks or piles of cartons, rubbish or debris of others.

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## PART 1: GENERAL

1.1 SCOPE

- A. Conditions of Contract and Division 1 General Requirements apply to all work of this Section. Refer to Article 12 of the Instructions to Bidders, Article 7 of the General Conditions and Section 01010, Summary of Work and Special Requirements, for requirements on pre-bid and post-bid evaluation of proposed substitute products, methods and other conditions.
- B. Refer to Sections 01010, 01200, 01250 and 01500 for special requirements, protection, constraints, timing of work, scheduling of work, enclosures and similar requirements relating to this Section.
- C. This Section covers cutting, demolition, removal work, patching and restoration of work as necessary to accomplish and complete all work under the Contract, including and relocation or reuse of existing materials, equipment, systems or other work, as well as the disposition of salvaged materials or debris. This Section governs all Contracts.
- D. It is the intent that, unless otherwise specifically shown on the drawings or specified, each Contractor (i.e.: General, Mechanical, Electrical, Vertical Transportation) shall be responsible for all cutting, demolition, removal, patching or restoration as may be required to complete his work.
- E. Except for general demolition of entire areas (ie: existing animal quarters at Mayo) it is the intent that at each area, or space, each Contractor shall make the removals, perform demolition and accomplish relocations of work normal to his Contract (ie: Mechanical Contractor removes or relocates piping, ductwork and similar; Electrical Contractor removes or relocates panelboards, conduit, lighting and similar). At areas of general demolition of the entire spaces, the Mechanical and Electrical shall make removals of work normal to their Contract or may be called for, for reuse or relocation, make any necessary relocations and cut-off, terminate, cap or otherwise discontinue services that will be abandoned or removed in the space. The General Contractor shall then demolish or remove all abandoned or unwanted electrical or mechanical materials, items or elements in the area.
- F. For certain areas of work in or at existing buildings, existing conditions plans have been included in the set of drawings. These existing condition drawings indicate the general existing features, the general limits of work and general indications of removals to be made. These drawings shall not be construed as indicating all conditions and details which may be encountered or required work. The Contractor shall examine the spaces themselves to determine the actual conditions and requirements. All removals, demolition, cutting, restoration, new installations and other work shall be accomplished to transform the existing spaces to the new conditions required under the Contract.
- G. All work under this section shall be coordinated with the other Contractors and the University and shall be accomplished at times acceptable to the University.

## PART 2: DISPOSITION OF MATERIALS

### 2.1 UNSALVABLE MATERIALS

A. All unsalvable materials shall be removed in a manner that will avoid damage to materials or equipment to remain and shall be completely removed and legally disposed away from the site.

### 2.2 SALVABLE MATERIALS TO BE RE-USED IN THE WORK

A. Salvable materials designated for re-use or relocation shall be removed by the applicable trades stored (off site if required) and protected from damage until they are incorporated into the new work.

B. Carefully remove, salvage, clean and preserve materials and equipment indicated to be reused or needed for reuse to match existing work. Exercise extreme care in removals to prevent damage or to make materials unsuitable to reuse. For materials shown or called for to be reused and which are damaged, replace with equivalent and matching work.

C. Exercise extreme care in removing brick or stone from existing building to preserve for reuse. Do not reuse broken brick. After removal clean all mortar from all sides of brick, carefully stockpile and protect to insure brick is available for reuse. Stockpile off site, if space is not available at site, and cover and otherwise protect from soil or damage. Stockpile on suitable platforms (not on earth).

### 2.3 SALVABLE MATERIALS TO BE STORED FOR THE UNIVERSITY

A. Salvable materials designated to remain the property of the University shall be carefully removed by the applicable trades, protected from damage and stored as directed on the site until removed by the University.

B. Consult the University for any salvage the University may wish to retain and the salvagability of all items, including removed face brick. Carefully remove and salvage any materials the University wishes to retain. Remove finish hardware from the item or material taken out of the building and turn over to University. Cleaning or restoration of the University's salvage materials is not required.

C. It shall be assumed the University will wish to retain all serviceable ceiling units, diffusers, lighting fixtures, doors and frames and similar items removed from Unit A, which are not to be re-used. It shall also be assumed the University will wish to retain all casework and cabinets removed. However, any materials not wanted by the University shall be removed from the site by the Contractor, without additional cost to the University.

D. Removal from the site storage to University storage will be by the University.

## PART 3: EXECUTION

### 3.1 TEMPORARY PROTECTION

A. Provide temporary bracing, shoring, needling and support during demolition, cutting, remodeling and related new construction as necessary for the execution

of the Work and the protection of persons and property. Perform all work with appropriate supports, protection and methods to prevent collapse, settling or damage to property or persons. Provide adequate supports for the loads to be carried, with loads properly distributed including to lower levels, if necessary.

B. Provide protective coverings and enclosures necessary to prevent damage to existing spaces and materials to remain. Protect openings in exterior walls and roofs so as to prevent damage from water and the elements and prevent excessive heat loss from the existing buildings.

C. Refer to Article 6.6 of Section 01500. Provide dust-proof temporary enclosures separating areas under demolition and remodeling from the remainder of the building. Provide temporary hinged doors in temporary enclosures where necessary. Temporary and permanent doors shall be completely sealed with tape or other suitable material during demolition work and shall remain sealed until dust has settled.

### 3.2 GENERAL REQUIREMENTS

A. Accomplish all work of cutting, removal, demolition, patching or other restoration using only mechanics skilled in the trade. If necessary, sublet the work to skilled contractors or subcontractors.

### 3.3 DEMOLITION AND CUTTING

A. Demolish and remove existing construction as shown, indicated or required to be removed. Where new Work is to be installed in or adjacent to existing construction or existing work is to be replaced, remove or cut the existing construction as necessary to complete the Work of the Project.

B. Execute work with care. Existing construction that is to remain which is loosened, cracked, or otherwise damaged or defaced as a result of the Work and is unsuitable for use intended shall be removed and replaced at no additional cost to the University.

C. Clean demolition areas and remove debris, waste and rubbish from the building at the conclusion of each day's work. Transport debris and rubbish in such a manner so as to prevent spread of dust.

D. Debris from upper levels shall be transported to ground in covered chute or other approved means. No free-fall debris removal is permitted. Moisten debris with spray where practical. Take all precautions to minimize dust. Promptly remove debris from site as demolition progresses and debris accumulates. Do not store or permit debris storage at site. Do not burn debris, rubbish or waste at the site. Keep adjacent areas unencumbered and clean. Keep walks and similar areas broom clean.

### 3.4 PATCHING, REMODELING AND RESTORATION

A. Patch or otherwise restore disturbed existing construction as indicated on the drawings, or as otherwise required to restore the work and surfaces. Patching or restoration shall be carried to natural breaks (ie: corners) wherever reasonable. Where existing construction is removed, cut, exposed or otherwise disturbed by Work of the Project, patch defective and incomplete

surfaces. Repair any damage to existing construction which is to remain.

B. Patching work shall be done by skilled mechanics experienced in the particular type of work involved. Patching work shall conform to the standards of the Specifications where applicable, and where not specified, work shall conform to the highest standards of the trade.

C. Patch existing construction to match existing work (unless otherwise called for) except provide new materials and accomplish as for new work. Examine existing surfaces to be patched before proceeding with the work. Report all conditions where existing materials, colors and finishes cannot be matched to the University, and do not proceed until the University has issued instructions.

D. Existing construction that has been damaged as a result of the Work shall be repaired to an extent and as required to match adjacent existing undamaged construction.

E. Thoroughly clean and prepare all surfaces to receive new finish or covering. Completely remove dirt, dust, grease, oil, paint, loose materials and soil. Clean, etch where necessary, and place surfaces in most suitable condition for the finish, as approved by University.

### 3.5 MECHANICAL AND ELECTRICAL WORK EXPOSED

A. Where unknown mechanical piping or electrical conduit is exposed during removal of partitions or walls, removal or rerouting shall be accomplished by the Mechanical or Electrical Contractor as applicable. Rerouted piping shall be located where directed and shall be connected to maintain all functions in proper operation. Abandoned piping may be left in place where it is concealed in floors or walls, providing that it is disconnected from its source. There shall be no "dead end" water, sewer, or vent piping existing in the completed work.

B. Removals, capping or otherwise terminating services which are abandoned shall be accomplished without additional cost to the University. Relocations and rerouting of services that were unknown shall be paid for as Changes in the Work.

### 3.6 EXISTING INSULATION

A. Refer to Section 01010. The General Contractor shall remove the existing rigid thermal insulation which was installed under the B/C-ECX Contract (ie: at exposed foundation of Unit A and other surfaces exposed by the ECX Contract). In so far as possible as not interfering with the Work under these Contract Documents, the insulation shall be left in place until the surface will not be exposed to cold weather.

### 3.7 WORK OF EACH CONTRACT

A. Each Contractor shall carefully review the Contract Documents including for other Contracts, with respect to the coordination of the demolition, removal and remodeling work and perform such removals normal to their Contract as may be shown, noted or otherwise required. Cutting and patching incidental

to demolition, removal and or remodeling of general construction work shall be construed as the work of another Contract (other than the General Contract) when specifically noted or called for on documents primarily for another Contract, or the cutting and patching is done solely to accomplish work of another Contract. Mechanical, Electrical and Vertical Transportation Contractors shall perform their own cutting and patching to accomplish their work unless indicated on Architectural drawings as being done by the General Contractor.

### 3.8 PAINTING

A. Each Contractor shall be responsible for painting or repainting of patched or remodeled areas where he has performed work, except for those areas shown are required to be remodeled under the General Contract, in which case the new, patched and remodeled paintable surfaces shall be repainted by the General Contractor. It is the intent the Mechanical, Electrical and Elevator Contractors paint or repaint surfaces at locations where demolition, cutting and patching is accomplished only for their work.

B. Painting, including preparation, materials, workmanship and number of coats shall comply with Section 09900. Painting of surfaces patched shall extend to natural breaks, such as corners, as approved by the University.

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## PART 1: GENERAL

1.1 GENERAL INFORMATION AND REQUIREMENTS

- A. Each bidder shall submit a proposal for each Alternate that applies to the Contract division on which he is bidding.
- B. Each Alternate Bid shall be submitted as an individual cost for the particular Alternate (not accumulative) and shall be proposed under the premise all previous Alternates, in the listed order, have been accepted. Should the work of an Alternate called for by the Bid Form, not affect the cost of the work, "No Change" shall be stated.
- C. Alternates are numbered and listed for the entire project in the order in which they will be accepted, whether or not they affect each Contract division. Each numbered Alternate as a whole, will be deductive, resulting in a reduction of the Project cost, even though an Alternate for one of the Contract divisions involved may be additive. In the listing of Alternates, it is assumed the cost under each Contract division will be Deductive (credit) from the Base Bid, unless otherwise noted. The Contract division that is primarily affected is specified first under each Alternate, with correlated Alternates following.
- D. Each Bid under an Alternate shall include the work of all trades as they may be affected and all adjustments to accommodate the change shall be made. All work shall meet all the requirements of the Contract Documents, including drawings and specifications.
- E. In submitting the Bid and in accomplishing the Work, provisions for future work or future completion shall be made, unless otherwise stated. All work shall be provided in accordance with appropriate details and specification Sections, and provided (or omitted as appropriate) by the subcontractor for that Section.
- F. Deductive Alternates accepted by the Owner will be used to determine the low bidder.
- G. The University reserves the right to selectively reinstate the work of any accepted deductive alternate by written order at the deductive price at any time up to one hundred twenty (120) days after receipt of bids.
- H. In addition, certain materials alternates are described in Part 3 herein. These alternates are intended only to allow the Owner to evaluate options and may be accepted in any order, without regard to the election of any deductive alternates. Materials alternates are lettered and shall not be used to determine low bidder.

1.2 IDENTIFICATION

In the following description and on the Proposal Form, letters will be used to denote the contract division and numbers the sequence of alternates (i.e. G-1, E-3, etc.). The letters shall mean:



- G General Construction Contract
- M Mechanical Contract
- E Electrical Contract

PART 2: DEDUCTIVE ALTERNATES

✓ 2.1 DESCRIPTION OF ALTERNATES *Warren Goodberg will not buy back per Paul K Dec 1, 1978*

DEDUCTIVE ALTERNATE NO. 1 - SUBSTITUTE LOW PRESSURE CHILLER SYSTEM FOR SPECIFIED CHILLER SYSTEM.

General Description: Acceptance of this alternate substitutes a low pressure chiller system for the specified system and adds certain electrical work required only with the low pressure system. There is no change in general construction under this alternate.

Mechanical Construction M-1:

Refer to Section 15900.

In lieu of the high pressure absorption chiller system specified in Section 15900, provide a low pressure absorption chiller system as hereinafter specified, including all required chilled water, condenser water, steam and condensate piping and all other components accessories and incidentals required.

LOW PRESSURE ABSORPTION REFRIGERATION MACHINE

A. Provide a compact absorption refrigeration machine. Trane, Carrier, York or equal and approved, to be located in the basement equipment room as shown on plan.

B. Capacity

1. Refrigeration Capacity tons 1100
2. Chilled water passes 3
  - (a) GPM 2940
  - (b) Entering water temperature 49°
  - (c) Leaving water temperature 40°F
  - (d) Maximum pressure drop in feet 36'
3. Condenser Water
  - (a) GPM 4200
  - (b) Entering water temperature 85°F
  - (c) Leaving water temperature 101°F
  - (d) Maximum pressure drop in feet 25 feet

4. Steam

- (a) Valve inlet, psig 15
- (b) Concentrator flange, psig 12
- (c) Full load maximum steam rate lbs./hr. each 20,650

5. Capacity based on .0005 fouling factor

C. Machine

1. The machine shall be of hermetic design, complete factory assembled and leak tested. Exposed refrigerant circuit piping shall be factory insulated.

2. Absorber and second stage concentrator tubes shall be of seamless cupra-nickel material and shall be individually replaceable from either end of the machine. Headers shall be designed for a working pressure of 300 PSIG on the evaporator, condenser and absorber headers. The first stage concentrator tubes shall be stainless steel and its header shall be designed for 150 PSIG working pressure. The second stage concentrator shall be designed for 50 PSIG working pressure. All headers shall be tested at 1 1/2 times their design pressure. Evaporator, condenser and absorber headers shall be removable.

3. The machine shall be equipped with a hermetic pump-motor assembly which is cooled and lubricated without the use of external cooling water during normal operation. A mechanical-magnetic strainer assembly shall be installed in the pump motor circuit. Pump motor to be factory piped and wired. The pump motor shall be removable without removing the solution or allowing air to enter the machine. The pump motor shall be a 30 HP 460/60/3,

4. Noncondensable gases shall be removed from the machine through a purge system consisting of an electric motor driven vacuum pump requiring no external water supply. The machine shall be automatically protected against air re-entry in the event of a power failure. It shall be impossible for the purge unit to eject solution from the machine. The pump motor shall be a 1/2 HP 460/60/3.

5. The machines shall provide for automatic decrystallization. The machine shall be installed on a level surface. The contractor shall provide all flanged pipe connections to provide for access to tubes for inspection and cleaning or removal.

D. Accessories

1. Each unit shall be provided with a factory installed and wired control panel which shall include the following:

- (a) Terminal Block
- (b) Control transformer and separately fused 115 volt control circuit
- (c) High and low temperature cutouts
- (d) Time delay for delution cycle
- (e) Motor starter
- (f) Purge motor fuse
- (g) External lights to indicate machine operation, pump and purge system
- (h) Lapse time meters to indicate chiller running time.

2. The panel shall be supplied with 460 volt, 3 phase, 60 cycle power. The Electrical contractor shall furnish and install, external to the panel, a separately fused disconnect.

3. The contractor shall furnish and install a two (2) condensate trap assembly for the refrigeration machine. Assemblies shall be made up of dirt pocket, gate valves, strainers, traps, air vents, unions. Assemblies shall be arranged so that it is possible to remove a trap from service without shutting down the machine. Furnish and install for each machine a minimum of two (2) bucket or F & T traps with a 5 psig pressure differential.

4. Provide isolation pads and plates and setting plan for machine base. Units shall be mounted on concrete pads.

5. Provide a swing check valve in the equalizer line from the concentrator as shown on the drawings.

6. All vents and drains on the machine shall be piped to floor drains. Provide a valve on vent and drain piping. Valves shall be located such that they are accessible from equipment room floor.

7. All assembly accessories shall be as specified elsewhere in the specifications and as shown on the drawings.

8. This contractor shall vent absorption unit in each pass of the absorber, condenser and evaporator water boxes. Extend vents above insulation.

9. A bourdon type vacuum gauge shall be provided on the machine to determine tightness during winter months. Gauge shall have a range of 1 1/2 times the lowest operating vacuum and be accurate to 1% of scale range.

#### E. Controls

1. The refrigeration unit shall be provided with a pneumatic control system provided by the Mechanical Contractor and connection which automatically controls leaving chilled water temperature at 40 degrees F. Control shall be accomplished by modulating the amount of steam supplied to the machine with a steam valve supplied by the equipment manufacturer. The machines shall be equipped with a part load economizer which operates over full range of control activated at 50% load. The necessary factory installed controls shall be provided to prevent steam inrush on start-up from exceeding 10% of full load steam consumption rate. The location of the chilled water controls shall be on the common chilled water main so that the chillers can be operated on a load-lag basis. Provide a low leaving water temperature cut out for each machine.

2. The primary chilled water pump, condenser water pump and cooling tower sequencing panel shall be electrically interlocked with the refrigeration machine such that the automatic operation of the chillers shall be as follows:

(a) First the primary chilled water pump shall be started. A motorized butterfly valve on the chilled water inlet to the absorption machine shall open. When this valve is proven open, the chilled water pump will be allowed to run. Interlocked with the chilled water pump starter and chilled water flow switch through a set of auxiliary motor start contacts, are the Heat Source Pneumatic-Electric

switch and the condenser water pump starter. A motorized butterfly valve on the condenser water inlet to the absorption machine shall open. When this valve is proven open, the condenser pump will be allowed to run.

1. Secondary chilled water pumps (2) shall be energized by water flow switch in the primary loop. Provide flow switch and contacts for each secondary chilled water pump. Flow switches shall be provided with paddle sized as per manufacturer's requirements for size pipe installed.

(b) On a need for cooling, as indicated by the temperature of the chilled water shall cause the branch line pressure of the pneumatic chilled water temperature control to rise. The rising branch line pressure shall close the contacts of the P-E switch starting the condenser water pump, which in turn shall energize the cooling tower fan through the cooling tower sequencing panel.

(c) Turning the system switch to the ON position shall energize the time delay relay. This shall supply control voltage to the evaporator pump starter through the normally closed contacts of the time delay relay and contacts of the flow switch starting the pump. The time delay relay shall allow the absorption cold generator to start when the temperature of the refrigerant is above the setting of the high temperature control.

(d) When the evaporator pump has started, the concentrator and absorber pumps shall start in sequence, through the closing interlocking contacts of the evaporator pump starter. The energized air valve shall supply thermostat branch line pressure to the pneumatic steam valve and allow the valve to function. Variations in branch line pressure shall operate the pneumatic valve, controlling the flow of steam to the concentrator.

(e) When lowering chilled water temperature, as sensed by a controller, indicates that cooling is no longer needed, the reduced branch line pressure shall allow the contacts of the P-E switch to open. This in turn de-energizes the time delay relay, the solenoid air valve and the cooling tower fan through the cooling tower sequencing panel, de-energizing the solenoid air valve to close, stopping the flow of steam to the concentrator. The evaporator, concentrator and absorber pumps and chilled water pump shall continue to function for approximately seven (7) minutes, under control of the time delay bringing about a mixing of the dilute and concentrated solutions, contained in the absorber and concentrator, prior to complete shutdown.

(f) Furnish and install time delay relays to provide 10 second minimum time delay between each motor start. Furnish time delay relays for interlocked chilled water pump, condenser water pump and cooling tower fan through cooling tower sequencing panel.

(g) This contractor shall provide and install McDonnell and Miller Model No. FS7 standard construction flow switches with brass wetted parts suitable for 150 psi operating pressure. Paddle shall be of proper size for pipe size being served. Condenser water flow switches and chilled water flow switches shall be wired into the machine control panel circuit. Flow switches shall be installed in the condenser and chilled water piping to allow the refrigeration machine to start only when proper water flow is provided. If machine is in operation and the condenser or chilled water flow is not normal the refrigeration machine shall stop immediately and shall remain out of operation until proper flow is provided. Whenever machine is shutdown, the control panel shall provide for seven (7) minutes dilution cycle.

(h) Butterfly valves referred to under item (a) above are existing manual type. These valves shall have series 29000 actuators supplied and installed by Mechanical Contractor. The actuator shall be designed for 80 psi air and be complete with limit switch, solenoid valve, and position indicator. Actuator shall be Trunion mounted.

(i) Provide adjustable 20 second time delay relays in conjunction with each temperature controller. Magnetic relays shall protect the sensing elements.

(j) Provide separate sockets for sensing elements.

F. Service and Guarantees

The manufacturer shall provide the following service:

- (a) Meet with and advise contractor on rigging and installation.
- (b) Advise on and assist with wiring and control problems.
- (c) Pressure test, evacuate and charge machines.
- (d) Start-up machines and supervise start-up on system.
- (e) Train operators and provide re-training as required during first year.
- (f) Provide written report to owner, architect, engineer and contractor upon completion of 1-5 above.
- (g) Provide monthly operating inspections during first operating season.
- (h) Handle emergency service calls on machiens during first operating season.
- (i) Supervise shut-down of system at end of first season.
- (j) Supervise start-up of system at beginning of second season.

PRESSURE REDUCING STATION

Provide a Steam Pressure Reducing Station similar to type called for in base specifications and detailed on drawings, sized according to the following schedule:

Press. Range PSIG	Cap Lb./Hr.	First PRU Quan. Size	Trip Value Quan. Size	Second PRU Quan. Size	Multi-Hole Plate
125-15	21,000	2 4"	2 5"	2 5"	2-10"

Station to be located in Unit B/C side of chiller pit along Grid S-25, where Unit B/C and Unit A join. Pressure reducing station to be piped from existing high pressure chiller connection (as shown on Base Bid) with a 5" H.P. main to pressure reducing station and a 10" L.P. main to chiller.

CONDENSATE PUMP

Provide a duplex condensate pump and receiver, located approximately at grids S20 and E16, for low pressure chiller condensate. Pump and receiver to be as follows:

A. Furnish high temperature (210°) duplex pump and receiver, Domestic 250CB2-2 or equal and approved. Pumps shall be vertical submerged centrifugal type mounted outside the receiver with bronze impeller and liners and with stainless steel shaft.

Other approved manufacturers are Weil and Domestic.

B. Motors shall be 2 HP, 3500 RPM, 480 volt all-angle dripproof construction, mounted above the highwater level. Motors shall be non-overloading at any working pressure below design pressure.

C. The receiver shall be 250 gal cast iron provided with vent, overflow drain connections in all cases.

D. Pump discharge shall be provided with a pressure gauge, non-slam check valve and gate valve. Provide vent piping to ceiling and back down to floor drain.

E. Provide float switches in receiver and electric cable from switches and pumps to a wall mounted control panel. Panel shall contain low level switch, high level switch, high water alarm, electric alternator and magnetic starters with thermal overload. The Electrical Contractor will provide power wiring to the control panel. All other wiring required shall be provided by the Mechanical Contractor. Controls shall allow both pumps to operate in event of high capacity return. Each pump shall be capable of discharging 90 GPM with 20 PSIG discharge pressure through a 3" pipe and tee at 8" flange at the existing condensate receiver in Unit B/C. Mechanical seals shall be suitable for 250°F operation.

CHILLED WATER AND CONDENSER WATER PUMPS

Primary chilled water pump P-6C and condenser water pump P-3C shall be as originally specified with the following changed capacities:

	GPM	Design HD	50% HD	Shut Off HD	120% HD	Suction Size	Disch. Size	HP
P-3C	4200	140'	165'	175'	122'	12"	10"	200
P-6C	2940	104'	128'	140'	91'	10"	8"	100

ELECTRICAL CONSTRUCTION E-1:

Refer to Sheet E13, Detail 3.

1. Furnish and install a 30A-3P fused disconnect switch in existing motor control center #MCCB-4 located in Unit "A" basement near grids S20/E12.
2. Furnish and install a 30A-3P nonfused disconnect switch at new duplex pump located near grids S20/E16.
3. Furnish and install a 3/4" - 3 #12 branch circuit between the two (2) new disconnect switches and make connection to control panel furnished with new duplex pump located near grids S20/E16.

DEDUCTIVE ALTERNATE NO. 2 - OMIT HEAT RECOVERY COIL AND CONTROL PACKAGE

General Description: Acceptance of this alternate omits the specified heat recovery coil and control package. Under this alternate, there is no change in general construction.

Mechanical Construction M-2:

Refer to Sheet M-55 and Section 15800.

Omit heat recovery coil and control package. Substitute straight section of ductwork to allow future installation.

Electrical Construction E-2:

Refer to Sheet E-23.

Omit Connection, wiring and Junction box to heat recovery coil control located near grids S2/E21.

✓ DEDUCTIVE ALTERNATE NO. 3 - OMIT ONE (1) PASSENGER ELEVATOR, NO. 4.

General Description: Acceptance of this alternate omits Passenger Elevator No. 4 and related electrical work. Under this alternate, mechanical construction remains unchanged.

General Construction G-3:

Refer to Division 14 and Section 09100.

Omit Passenger Elevator no. 4, including but not limited to the elevator car and platform assembly, entrances, hoistway beams, elevator machine, motor generator set, sheaves, controller, pit bumpers, etc. but providing for its future installation. Retain machine room floor slab openings and install temporary steel plates for closure.

In lieu of hoistway entrances, provide corewall construction continuous across hoistway opening locations and finish same as adjacent corewall.

Electrical Construction E-3:

Refer to Sheet E-23.

Omit wiring and connection to elevator No. 4. Fused switch and empty conduit to remain. Omit installation of fire management speaker and firemans telephone jack in elevator cab.

✓ DEDUCTIVE ALTERNATE NO. 4 - OMIT ROLLING METAL SHELVES, EQUIPMENT ITEM M891.

General Description: Acceptance of this alternate omits all rolling metal shelves Equipment Item M891. Under this alternate, mechanical and electrical construction remain unchanged.

General Construction G-4:

Refer to Section 11600 and Sheet A12-1.

Omit rolling metal shelves, Equipment Items M891 in Rooms 3-108 and 9-143.

✓ DEDUCTIVE ALTERNATE NO. 5 - OMIT OVEN/DRYER/STERILIZER, EQUIPMENT ITEM L286.

General Description: Acceptance of this alternate omits Oven Dryer Sterilizer Equipment Item L286. Under this alternate, mechanical construction remains unchanged.

General Construction G-5:

Refer to Section 11600 and Sheet A12-1.

Omit Oven/Dryer/Sterilizer, Equipment Item L286 in Room 1-117. Cap exhaust duct above ceiling.

Electrical Construction E-5:

Refer to Sheet E-14.

Room 1-117 - Omit wiring from flush mounted circuit breaker serving equipment item #L286 to flush mounted junction box.

Omit final sealtite connection to equipment item #L286.

Empty conduit from flush mounted circuit breaker to flush mounted junction box to remain.

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DEDUCTIVE ALTERNATE NO. 6 - OMIT NURSING LABORATORY VACUUM SYSTEM.

General Description: Acceptance of this alternate omits Nursing Laboratory Vacuum System. Under this alternate, general and electrical construction remain unchanged.

Mechanical Construction M-6:

Refer to Sheet M-7.

Omit all vacuum piping to Room 4-101. Cap and valve vacuum main at Core F-7.

General Construction (no change):

Refer to Section 11600 and Sheets A12-A and A12-5.

Install vacuum outlet portions of Nurses Service Consoles, Equipment Items M440 as "mock-ups", with no piping.

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DEDUCTIVE ALTERNATE NO. 7 - OMIT NURSES' CALL SYSTEM.

General Description: Acceptance of this alternate omits the nurse call system. Under this alternate, general and mechanical construction remain unchanged.

Electrical Construction E-6: Refer to Sheet E-17.

Rooms #4-107 through 4-116 - Omit nurses' call system including 120/24V transformer and 120 volt connection to transformer located in Core F3.

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✓ DEDUCTIVE ALTERNATE NO. 8 - OMIT SEVENTEEN (17) DRYING OVENS, EQUIPMENT ITEMS L291.

General Description: Acceptance of this alternate omits seventeen (17) drying ovens, Equipment Items L291. Under this alternate, mechanical and electrical construction remain unchanged.

General Construction G-8:

Refer to Section 11600 and Sheet A12-1.

Omit seventeen (17) drying ovens, Equipment Items L291.



✓ DEDUCTIVE ALTERNATE NO. 9 - OMIT CERTAIN LABORATORY FUME HOODS.

General Description: Acceptance of this alternate omits certain fume hoods and related services and fixtures as follows:

<u>Qty</u>	<u>Type</u>	<u>Rooms</u>
1	36" L234	8-124
4	72" L223	3-103(2) and 3-112(2) -
1	60" L222	9-119
2	48" L221	8-110 and 9-117

General Construction G-9:

Refer to Section 11614.

Omit the above listed fume hoods.

Mechanical Construction M-9:

Delete plumbing fixtures at fume hoods and cap all piping concealed in walls. All fume hood fans and ductwork shall remain in operation. To maintain air balance in rooms, ducts for deleted fume hoods shall connect to 24" x 24" x 12" high sheet metal plenums behind 24" x 24" type 'L' registers in ceiling. Registers to be located by Architects over deleted fume hood spaces.

Electrical Construction E-9:

Refer to Sheets E-16, E-21 and E-22.

Room #3-103 - Omit all final connections to two (2) equipment item L223. Tape wire leads and coil up in junction boxes.

Room #3-112 - Omit all final connections to two (2) Equipment Items L223. Tape wire leads and coil up in junctions boxes.

Room #8-124 - Omit all final connections to one (1) Equipment Item L234. Tape wire leads and coil up in junction boxes.

Room #9-119 - Omit all final connections to one (1) Equipment Item L222. Tape wire leads and coil up in junction boxes.

Room 8-110 and 9-117 - Omit all final connections to two (2) Equipment Items L221. Tape wire leads and coil up in junction boxes.

✓ DEDUCTIVE ALTERNATE NO. 10 - OMIT LAMINAR FLOW HOOD IN ROOM 9-129.

General Description: Acceptance of this alternate omits laminar flow hood, Equipment Item Li31 in Room 9-129. Under this alternate, mechanical and electrical construction remain unchanged.

General Construction G-10:

Refer to Section 11600.

Omit laminar flow hood described above.

DEDUCTIVE ALTERNATE NO. 11 - MODIFY LIGHTING SYSTEM IN CERTAIN NURSING AREAS.

General Description: Acceptance of this alternate changes the incandescent lighting with dimming to multiple level fluorescent lighting in all nursing conference rooms and Floor 2 research areas. Under this alternate, general and mechanical construction remain unchanged.

Electrical Construction E-11:

Refer to Sheets E6, E7 and E8.

Rooms #4-117, 4-118, 4-130:

Omit complete dimmer system including control wiring, controllers and dimmers, and dimmer panels #DP4-1, DP4-2 located in Core #F3. Branch circuit wiring shall be installed directly from panelboard to incandescent fixtures.

Furnish and install 1 pole toggle switches in lieu of dimmer controllers for control of incandescent fixtures.

Gang 1 pole switches with other 1 pole switches shown in common plate.

Rooms #5-148, 5-155:

Omit complete dimmer system including control wiring, controllers and dimmer located in Core F3.

Branch circuit wiring shall be installed directly from panelboard to incandescent fixtures.

Furnish and install 1 pole toggle switches in lieu of dimmer controllers for control of incandescent fixtures.

Gang 1 pole switches with other 1 pole switches shown in common plate.

Rooms #6-128, 6-173, 6-174:

Omit complete dimmer system including control wiring, controllers and dimmers, and dimmer panel DP6-1. located in Core #F3.

Branch circuit wiring shall be installed directly from panelboard to incandescent fixtures.

Furnish and install 1 pole toggle switches in lieu of dimmer controllers for control of incandescent fixtures. Gang 1 pole switches with other 1 pole switches shown in common plate.

✓ DEDUCTIVE ALTERNATE NO. 12 - OMIT ENVIRONMENTAL ROOM 9-111.

General Description:

Acceptance of this alternate omits environmental Room 9-111 and related services and fixtures and casework.

General Construction G-12:

Refer to Sections 11611, 11613, 13713 and Sheets A3-10 and A12-3.

Omit environmental Room 9-111, and all casework and laboratory tops within the room. Finish surrounding partitions and extend acoustical ceiling and resilient flooring into space.

Mechanical Construction M-12:

Refer to Sheets M-12, M-32 and M-42.

Omit fixtures and cap all plumbing services to room in ceiling spaces above and below room for future use. Cap duct connections above room for future. Install sprinkler in new ceiling.

Electrical Construction E-12:

Refer to Sheet E-22.

Add two (2) type A1 light fixtures located as directed by Architect. Connect to circuit#9

Omit electrical devices and connections in room. Tape wire leads and coil up in junction boxes above ceiling.

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DEDUCTIVE ALTERNATE NO. 13 - OMIT ALL WALL-MOUNTED ANEROIDS (SPHYGMOMANOMETERS), EQUIPMENT ITEM M427.

General Description: Acceptance of this alternate omits all wall-mounted aneroids. Under this alternate, mechanical and electrical construction remains unchanged.

General Construction G-13:

Refer to Section 11600.

Omit all required wall mounted aneroids, Equipment Item M427.

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DEDUCTIVE ALTERNATE NO. 14 - OMIT CERTAIN FOLDING PARTITIONS

General Description: Acceptance of this alternate omits three (3) Type A folding partitions and three (3) Type B folding partitions. Under this alternate, mechanical and electrical construction remain unchanged.

General Construction G-14:

Refer to Sheets A3-3, A3-5 and A4-4.

Omit folding partitions Type A from Rooms 2-102, 4-122 and 4-123. Retain support structure. Extend acoustical ceiling through under support structure. Retain plenum barriers. Provide for future installation.

Omit folding partitions Type B from rooms 4-108, 4-119 and 4-120. Retain support structure. Extend acoustical ceiling through under support structure. Retain plenum barrier. Provide for future installation.

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DEDUCTIVE ALTERNATE NO. 15 - OMIT INTERIOR BRICK PAVERS.

General Description: Acceptance of this alternate omits all interior brick pavers and substitutes vinyl asbestos tile. Under this alternate, mechanical and electrical construction remain unchanged.

General Construction G-15:

Omit all interior brick pavers. Provide instead a troweled slab at elevation required to bring vinyl asbestos tile flush with surrounding floors. Provide vinyl asbestos tile flooring. Adjust stair details to replace pavers with concrete with vinyl asbestos tile, vinyl base and appropriate non-slip nosings. See detail 26/A11-1.

✓ DEDUCTIVE ALTERNATE NO. 16 - OMIT CERTAIN PLASTIC LAMINATE CASEWORK.

General Description: Acceptance of this alternate omits certain plastic laminate casework and related services and fixtures.

General Construction G-16:

Omit 3 kitchenette casework units (Rooms 2-112, 5-114, 5-140), shown in elevations 11/12-2, 5/A12-5, 8/A12-5.

*W RESEARCH 2-112  
P KITCHEN  
N 5/14 KITCHEN*

Omit pharmacy tool cabinets in Room 10-101, shown in elevation 24/A12-5.

Omit twenty (20) student desk units from below listed locations in Pharmacy Graduate Laboratories (does not include any omitted under Alternate No. 22). Provide finished end panel on casework exposed by omission:

<u>Room</u>	<u>Omitted Quantity</u>	<u>Remarks</u>
8-104 ✓	3	1 wall unit 1 back to back unit
8-109 ✓	2	Wall units
8-110 ✓	1	Wall unit
8-106 ✓	4	2 back to back units
8-126 ✓	2	Wall units
9-101 ✓	2	1 back to back unit
9-103 ✓	2	Wall units
9-110 ✓	1	Wall unit
9-119 ✓	2	Wall units
9-120 ✓	1	Wall unit

Mechanical Construction M-16:

Refer to Sheets M-5 and M-8.

Delete plumbing fixtures at kitchenettes and cap all piping concealed in walls for future.

Electrical Construction E-16:

Refer to Sheet E-15.

Room #211 - Omit all power requirements in this room including receptacles, branch circuit wiring and conduit.

Furnish and install one (1) duplex receptacle centered on south wall at 12" above floor. Connect to circuit #11.

Room #5-114 - Omit all power requirements in this room including receptacles, branch circuit wiring and conduit.

Furnish and install one (1) duplex receptacle centered on east wall at 12" above floor. Connect to circuit #24.

Room #5-141 - Omit all power requirements in this room including receptacles, branch circuit wiring and conduit.

Furnish and install one (1) duplex receptacle centered on west wall at 12" above floor. Connect to circuit #22.

8th & 9th Floors: Omit all power requirements to a total of twenty (20) desk units including light fixtures, switches, receptacles, and branch circuit wiring and conduit from feed point to desk unit.

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✓ DEDUCTIVE ALTERNATE NO. 17 - OMIT ALL STUDENT LOCKERS ON FLOOR 1.

General Description: Acceptance of this alterante omits all student lockers on Floor 1. The plastic laminate enclosures and lighting supports remain. Under this alternate, mechanical and electrical construction remains unchanged.

General Construction G-17:

Refer to Sheets A3-2 and A12-5.

Omit student lockers from Floor 1. Retain plastic laminate panels, partition recesses and wood base for future installation of lockers. Retain indirect lighting.

✓ DEDUCTIVE ALTERNATE NO. 18 - OMIT CERTAIN METAL LABORATORY CASEWORK.

General Description: Acceptance of this alternate omits the below listed metal laboratory casework and related services and fixtures.

General Construction G-18:

Refer to Sheets A12-1 through A12-5.

Omit wet bench and related cabinetry in center of Room 9-152, including related services and fixtures. Omit all metal wall cabinets and all metal full-height storage cabinets throughout Project.

NEW CENTER ISLAND

Omit the below listed base cabinet components. Retain laboratory work tops. Add closure panels for pipe space behind omitted cabinets.

<u>Reference Elevation</u>	<u>Component</u>	<u>Location</u>	<u>Omit Quantity</u>		
✓12/A12-3	HB24D5	9-101	4		
		9-103	3		
		9-119	2	11x2	22
		9-120	1		
		9-146	1		
✓12/A12-3 Rev.	HB24C7	9-101	3	9x2	18
		9-103	3		
		9-119	2		
		9-146	1		
✓16/A12-3	HB24C7	9-104	1	4x2	8
		9-105	1		
		9-112	1		
		9-117	1		
✓16/A12-3 Rev.	HB24C7	9-104	1	4x2	8
		9-105	1		
		9-112	1		
		9-117	1		
✓14/A12-3	HB48C5	9-103	2	2x4	8
✓14/A12-3 Rev.		9-101	2	2x4	8
✓33/A12-2	HB24DS	8-104	1	4x2	8
		8-109	1		
		8-118	1		
		8-126	1		
✓33/A12-2 Rev.	HB24C7	8-109	1	3x2	6
		8-118	1		
		8-126	1		
✓34/A12-2	HB24D1	8-104	2	5x2	10
		8-109	1		
		8-118	2		
✓34/A12-2 Rev.	HB48C5	8-104	1	3x4	12
		8-109	1		
		8-118	1		
✓35/A12-2	HB48C3	8-104	2	7x4	28
		8-109	1		
		8-118	2		
		8-126	2		
✓35/A12-2 Rev.	HB24D1	8-104	1	5x2	10
		8-109	1		
		8-118	1		
		8-126	2		

232 L.F. \$33,581 = 145 LF WITH CUT TOPS

<u>Reference Elevation</u>	<u>Component</u>	<u>Location</u>	<u>Omit Quantity</u>	
✓37/A12-2	HB48C5 HB24D5		2 2	1x4 16
✓37/A12-2 Rev.	HB48C5 HB24D5		2 1	2x4 1/2 8 2
✓38/A12-2	HB24D5	8-109	1	1/2 2
✓39/A12-2	HB48C5	8-109	1	1x4 4
✓40/A12-2	HB48C3	8-110	1	1x4 4
✓40/A12-2 Rev.	HB24D4	8-110	1	1/2 2
✓41/A12-2	HB48C3 HB24D4	8-110	3	3x4 12
✓42/A12-2	HB48C5	8-110	1	1x4 4
✓46/A12-2	HB48C5	8-113	1	1x4 4
✓47/A12-2	HB48C5	8-113	1	1x4 4
✓48/A12-2	HB48C5	8-113	2	2x4 8
✓30/A12-2	HB48C3	3-101	2	2x4 8
✓30/A12-2	HB48C3	3-114	2	2x4 8

Mechanical Construction M-18:

Refer to Sheet M-12.

Delete plumbing fixtures and cap all piping for future in ceiling spaces above and below Island Bench in room 9-152.

Electrical Construction E-18:

Refer to Sheet E-22.

Room #9-152 - Omit all power requirements to center island bench including branch circuit wiring and conduit.

DEDUCTIVE ALTERNATE NO. 19 - OMIT INTERIOR PRECAST CONCRETE PANELS.

General Description: Acceptance of this alternate omits certain interior precast concrete panels. Under this alternate, mechanical and electrical construction remains unchanged.

General Construction G-19:

Omit precast concrete panels on second floor at cores F6, F7, F9 and F10. Substitute corewall panels with veneer plaster finish at plane of omitted panels.

✓ DEDUCTIVE ALTERNATE NO. 20 - OMIT CERTAIN SITE WORK SOUTH OF BUILDING.

General Description: Acceptance of this alternate omits all site work south of Grid S10, west of the Harvard Street sidewalk and east of Grid E18 (Unit A).

General Construction G-20:

Refer to Sheet A2-2.

Omit all general construction work in the above defined area. Leave site in rough graded condition.

Mechanical Construction M-20:

Refer to Sheets M-2, M-6 and A2-1.

Omit all new area drains, catch basin and storm drain lines shown on Sheet A2-1 in this area. Extend capped 5" storm line as shown on Sheet M-2 and cap outside Unit F after rising up outside wall to 836' invert. Cap 1" irrigation line in P.V.C. sleeve at grid S10 and delete line south of grid S10.

Electrical Construction E-20:

Refer to Sheet E-5, Detail 2.

Omit all lighting requirements including light fixtures, branch circuit wiring and conduit south of grid S10. Light fixtures located on and north of grid S10 shall remain.

✓ DEDUCTIVE ALTERNATE NO. 21 - OMIT GREENHOUSE, POTTING ROOM AND RELATED EQUIPMENT.

General Description: Acceptance of this alternate omits construction of greenhouse (10-102, 10-103, 10-104), omits finishing of potting room (10-101) and all equipment related to the omitted spaces.

General Construction G-21:

Refer to Sheet A3-11.

Omit entire greenhouse and corridor construction. Provide roof construction according to alternate plan 2/A3-10. Retain door 10-102A as exterior door similar to door 10-98B. Omit finishes in Room 10-101. Omit all equipment and casework for Rooms 10-101, 10-102, 10-103 and 10-104.

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Mechanical Construction M-21:

Refer to Sheets M-13, M-52 and M-55.

Delete all plumbing fixtures and services to greenhouse and potting room. Cap all piping for future in ceiling space below greenhouse and potting room and in mechanical room adjacent to potting room. Omit all heating and ventilation in greenhouse, link and potting room. Cap all piping runouts in ceiling space below for future use. Cap and valve 2½" CHS and CHR at main at north side of 10th floor mechanical room. Delete supply and return ductwork and VAV box at potting room and cap runouts at mains for future. Delete condensate and steam piping and pressure reducing valve to potting room and cap runouts in ceiling below for future use. Change floor drains to roof drains.

Electrical Construction E-21:

Refer to Sheets E-12, E-23 and E-34, Rooms 10-101, 10-102, 10-103, 10-104:

Omit all power requirements in these rooms including receptacles, surface raceway, branch circuit wiring, conduit, motor connections, etc.

Omit panelboard #LF10-2 including feeder back to panelboard #LF10-1 located in core F3.

Omit all lighting requirements in these rooms including light fixtures, switches, branch circuit wiring and conduit.

Omit all fire management requirements in these rooms including speaker, manual station, wiring and conduit.

DEDUCTIVE ALTERNATE NO. 22 -- OMIT CASEWORK AND EQUIPMENT FROM FOUR (4) PHARMACY GRADUATE LABORATORIES.

General Description: Acceptance of this alternate omits all casework, fume hoods, equipment, accessories and related mechanical and electrical work from Rooms 8-117, 8-125, 9-118 and 9-125.

General Construction G-22:

Refer to Sheets A3-9 and A3-10, and A-12-1 through A12-5.

Omit all casework, fume hoods and other equipment and accessories in rooms 8-117, 8-125, 9-118 and 9-125.

Finish each space as open, finished area, extending finish flooring throughout (not interrupted for casework.)

Mechanical Construction M-22:

Refer to Sheets M-11, M-41, M-12 and M-42.

Delete all plumbing fixtures in these rooms and cap all piping in ceiling spaces above and below rooms for future use, fume hood fans and ductwork shall remain in operation on low speed. To maintain air balance in rooms, ducts for deleted fume hoods shall connect to 24" x 24" x 12" high sheet metal plenums behind 24" x 24" Type 'L' registers in ceiling. Registers to be located by architect over deleted fume hood space.

Electrical Construction E-22:

Refer to Sheets E-21 and E-22.

Rooms #8-117 - Omit all power requirements in this room including receptacles, surface raceway, desk unit light fixture and switches and receptacles, clock, telephone outlet, branch circuit wiring and conduit, etc. Omit all branch circuit wiring, conduit and final connections to equipment item #L227..

Room #8-125 - Omit all power requirements in this room including receptacles, surface raceway, desk unit light fixtures and switches and receptacles, clock, telephone outlet, branch circuit wiring and conduit, etc.

Omit all branch circuit wiring and conduit and final connections to equipment item #L227(2). Control wiring to motor #52 shall remain and be terminated in junction box above finished ceiling.

Room #9-118 - Omit all power requirements in this room including receptacles, surface raceway, telephone outlets, clock, branch circuit wiring, conduit, etc.

Room \*9-125 - Omit all power requirements in this room including receptacles, surface raceway, telephone outlet, clock, branch circuit wiring and conduit, etc.

Omit all branch circuit wiring and conduit and final connections to equipment item #L222 (2). Control wiring to motor #47 shall remain and be terminated in junction box above finished ceiling.

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DEDUCTIVE ALTERNATE NO. 23 - OMIT PHARMACY ENVIRONMENTAL ROOM 9-144.

General Description: Acceptance of this alternate omits environmental Room 9-144 and related mechanical work.

General Construction G-23:

Refer to Sheet A3-10.

Omit environmental Room 9-144 and all related equipment. Finish walls as open space and extend acoustical ceiling and floor sealer into space.

Mechanical Construction M-23:

Refer to Sheets M-12, M-32, M-41 and M-42.

Cap all plumbing, steam and condensate services to room in ceiling spaces above and below room for future use. Cap duct connections above room for future. Install sprinkler in new ceiling.

Electrical Construction E-23:

Refer to Sheet E-11.

Add two (2) Type A2 light fixtures located as directed by Architect. Connect to circuit 2.

DEDUCTIVE ALTERNATE NO. 24 - OMIT CERTAIN INDIVIDUAL NURSING OFFICES ON FLOOR 6. COMPLETE AN AS OPEN OFFICE SPACE.

General Description: Acceptance of this alternate changes private office area corridors 6-81 and -82 and offices 6-142 through 6-159 to open office space.

General Construction G-24: Omit all partitions, doors, coat hooks in area bounded by grids S2-½, S6, E22 and E26 - ½ except retain doors 81A, 81B and 32. Retain south wall of corridor 6-80 (with doors 154 through 159 omitted and closed with 1-hour partition Type !), and retain west wall of corridor Room 6-83.

Retain acoustical ceiling and finish flooring throughout, and finish entire resulting space as open office space.

Mechanical Construction M-24:

Refer to Sheet M-39.

One thermostat to be located in space to serve all 10 VAV boxes.

Electrical Construction E-24:

Refer to Sheets E-8 and E-19.

Omit all light switches between grids S2½ through S6/E22 through E26½. Omit all branch circuit wiring as shown. Furnish and install two (2) 3 way switches on wall at grids S4½ E22. Furnish and install two (2) 3 way switches on wall at door near grids S4½/E26. These 3 way switches shall control the fixtures connected on circuit #2 and the fixtures connected on circuit #3.

Furnish and install necessary branch circuit wiring for control of lighting fixtures as described above.

Omit all power requirements between grids 2½ through 6/E22 through E26½ including receptacles, telephone outlets, branch circuit wiring and conduit. -----

DEDUCTIVE ALTERNATE NO. 25 - OMIT SUITE OF ROOMS ON FLOOR 9 FOR NURSING RESEARCH LABORATORY. COMPLETE AS OPEN AREA FOR FUTURE LABORATORY USE.

General Description: Change Rooms 9-149 through 9-152 to open laboratory space.

General Construction G-25:

Omit all partitions, doors, frames, casework, fume hoods, and equipment from the area on Floor 9 bounded by grids S9, S11, E23 and E27. Retain south wall of corridor 9-93 and doors 149 and 152B (omit and close off doors 150A and 152A.)

Retain acoustical ceiling and finish flooring throughout to provide finished open area for future laboratory use.

Mechanical Construction M-25:

Refer to Sheets M-12 and M-42.

Delete all plumbing fixtures in these rooms and cap all piping in ceiling spaces above and below rooms for future use. Fume hood fan and ductwork shall remain in operation on low speed. To maintain air balance in room, duct for deleted fume hood shall connect to 24" x 24" x 12" high sheet metal plenum behind 24" x 24" Type 'L' register in ceiling. Register to be located by Architect over deleted fume hood space. One thermostat to be located in space to serve 2 VAV boxes and 2 reheat VAV boxes as follows: On a temperature fall, all VAV boxes shall modulate to minimum then the reheat coil valves shall modulate open.

#### Electrical Construction E-25

Refer to Sheets E-11 and E-22.

Omit all light switches between grids S9 through S11/E23 through E27.

Omit all branch circuit wiring as shown. Furnish and install one (1) 3 way switch on wall near grids S9/E23½. Furnish and install one (1) 3 way switch on wall near grids S9/E26½. These 3 way switches shall control the fixtures connected on circuit #1. Furnish and install necessary branch circuit wiring for control of lighting fixtures as described above.

Omit all power requirements between grids S9 through S11/E23 through E27 including receptacles, surface raceway, telephone outlets, clocks, branch circuit wiring, conduit, etc., not omitted by deduct alternate #18.

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DEDUCTIVE ALTERNATE NO. 26 - OMIT THE SUITE OF ROOMS ON FLOOR 2 FOR NURSING RESEARCH. COMPLETE AS AN OPEN RESEARCH OFFICE AREA.

General Description: Change the area on Floor 2 bounded by grids S2-½, S6, E22 and E25 to open research office area.

#### General Construction G-26:

Refer to Sheet A3-3.

Omit all partitions, doors, frames, ECR Room 2-107, toilet rooms and equipment for Rooms 2-105 through 2-113. Retain the south wall of corridor 2-95, retain the east wall of corridor 2-96, retain the west wall of Room 2-118 and the wall on grid S6 between grids S22 and S25. Retain doors 105B and 108B. Retain and extend acoustical ceiling and finish flooring throughout the space to complete as open research office area. Acoustical ceiling pattern shall be changed as directed by Architect to accommodate mechanical and electrical changes. Omit change plaster ceilings with acoustical ceilings.

Mechanical Construction M-26:

Refer to Sheets M-5 and M-35.

Delete plumbing fixtures at toilet room 2-111 and kitchenette 2-112 and cap all piping in ceiling spaces above and below for future use. Cap steam and condensate piping to environmental room 2-107 in ceiling space below for future use. Cap toilet room exhaust duct in ceiling space above room and delete exhaust and transfer grilles and ducts in toilet room ceiling. Cap ductwork for environmental room in ceiling space above room. Install 2-107 sprinkler head, kitchenette supply diffuser and exhaust register in new lay-in ceiling. One thermostat to be located in space to serve all 7 VAV boxes.

Electrical Construction E-26:

Refer to Sheets E-4 and E-15.

Omit all electrical materials, equipment and installation between grids S2½ through S6/E22 through E25 including light fixtures, switches, dimmers and dimmer controllers, branch circuit wiring and conduit.

Furnish and install sixteen (16) type "A2" light fixtures. Locate where directed by architect. Furnish and install two (2) 1 pole switches on wall at door near grids S5½/E22 for control of the sixteen (16) type 'A2' fixtures. Furnish and install necessary branch circuit wiring for control of lighting fixtures as described above. Connect to circuit #1.

Omit all electrical materials, equipment and installation between grids S2½ through S6/E22 through E25 including receptacles, telephone outlets, clocks, branch circuit wiring, conduit, all communications systems, etc.

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DEDUCTIVE ALTERNATE NO. 27 - OMIT THE SUITE OF ROOMS ON FLOOR 5 FOR PHARMACY EDUCATIONAL DEVELOPMENT. COMPLETE AS AN OPEN OFFICE AREA.

General Description: Acceptance of this alternate changes Room 5-124 through 5-131 to open office space.

General Construction G-27:

Refer to Sheet A3-6.

Omit all partitions, doors, frames and equipment in area bounded by grids S2-½, S6, E18-½ and E21-½. Retain west wall of corridor 5-96 (including door 129), retain south wall of corridor 5-98 (omitting door 124) and retain east wall of corridor 5-97 (including door 131B but omitting door 128B). Retain acoustical ceiling and finish flooring throughout and complete as open office space.

Mechanical Construction M-27:

Refer to Sheet M-38.

One thermostat to be located in space to serve all five VAV boxes. See Sheet M-38.

Electrical Construction E-27:

Refer to Sheets E-7 and E-18.

Omit all electrical materials, equipment, and installation between grids S2- $\frac{1}{2}$  through S6/E18- $\frac{1}{2}$  through E21- $\frac{1}{2}$  including light fixtures, switches, dimmer, dimmer controller, branch circuit wiring, conduit etc. Furnish and install sixteen (16) Type "A2" fixtures and locate as directed by architect. Furnish and install one (1) 3 way switch on wall near grids S6/E18- $\frac{1}{2}$  and one (1) 3 way switch on wall near grids S4/E21- $\frac{1}{2}$  for control of the sixteen (16) fixtures. Furnish and install necessary branch circuit wiring for control of lighting fixtures as described above. Connect to circuit #3.

Omit all power requirements between grids S2- $\frac{1}{2}$  through S6/E18- $\frac{1}{2}$  through E21- $\frac{1}{2}$  including receptacles, telephone outlets, branch circuit wiring and conduit.

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PART 3: MATERIALS ALTERNATES

3.1 DESCRIPTION OF MATERIALS ALTERNATES

MATERIAL ALTERNATE A - SUBSTITUTE CORBIN LOCKSETS FOR SPECIFIED LOCKSETS.

General Construction A:

Refer to Section 08700 Article 2.3.

Acceptance of this alternate substitutes Corbin locksets identified as Alternate A for the specified locksets.

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MATERIAL ALTERNATE B - SUBSTITUTE RUSSWIN LOCKSETS FOR SPECIFIED LOCKSETS.

General Construction B:

Refer to Section 08700 Article 2.3.

Acceptance of this alternate substitutes Russwin locksets identified as Alternate B, for the specified locksets.

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MATERIAL ALTERNATE C - SUBSTITUTE RECESSED PULLS FOR SPECIFIED PULLS ON ALL METAL LABORATORY CASEWORK.

Refer to Section 11611, Article 2.5.

Acceptance of this alternate substitutes the recessed pulls specified below for the standard pulls specified in Section 1611.

Door and Drawer Pulls: Drawer and hinged door pulls shall be anodized aluminum with No. 4 finish on all surfaces exposed to view. Pulls shall be nominal 5 $\frac{1}{2}$ " wide by 1 $\frac{1}{2}$ " high. Pulls shall be recessed flush with drawer and hinged door fronts. Locate pulls as generally as shown on drawings. The locations of pulls may vary slightly, from drawings and specifications, subject to Architect's approval in appearance and function. Confirm final locations when final samples of casework are submitted.

## PART I: GENERAL

1.1 BASIS FOR PAYMENT

- A. Refer to the Bid Form and General Conditions Article 9.
- B. The basis for payment is a lump sum for all work under the Contract, to be paid in increments as the progress of the Work permits. Adjustments in the lump Contract Sum will be made only pursuant to, and upon approval of Change Orders in accordance with Article 12 of the General Conditions.
- C. The University will make payment directly to the Contractor in accordance with the General Conditions and the conditions specified herein.

1.2 SCHEDULE OF VALUES

- A. Refer to the General Conditions, Paragraph 9.2 and Section 01310.
- B. The form and detail of the Schedule of Values (cost breakdown) shall be acceptable to the University and shall provide the means for simple and ready monitoring of the Work satisfactorily completed and eligible for payment. The Schedule shall provide the means for evaluating the extent of completion of each line item and the quantities of products, equipment or materials, all whether the Contractor's storage or delivered to the Project site, as well as determining the state of completion of other costs incorporated into the Contract Sum.
- C. The Contractor shall develop a Schedule of Values for review and acceptance by the University and revise as may be required by the University. Schedule of Values shall represent a true and accurate allocation of costs of the Contract Sum and each item shall include its proper share of overhead and profit.
- D. The costs of General Conditions and Division I items (i.e.: bond, insurance, temporary facilities, etc.) and similar non-material costs shall be listed individually, with unit or increment quantities and their prices where acceptable.

1.3 PROGRESS PAYMENTS

- A. Refer to Section 01310.
- B. On the first Request for Payment, the University will make payment for the value of the Performance Bond and similar lump sum cost items which must be paid in full by the Contractor at the start of the Work. Thereafter, no further payments will be made until a bona-fide and substantial on-site start has been made.

B. Progress billings (Requests for Payment) shall indicate the detailed and itemized costs of the Work for which the current Request for Payment is made and a summary total of costs previously billed and payments made.

#### 1.4 RETAINAGE

A. Refer to General Conditions Subparagraphs 9.3.7 through 9.3.12.

B. Ten percent (10%) of the satisfactorily completed work of all line items of the Schedule of Values, as approved by the University on Requests for Payment, will be retained until 50% of the work of that line item is satisfactorily completed. Thereafter, no additional sums will be retained for that line item provided the following criteria are met:

1. The portion of the line item of the work completed is satisfactory to the University.

2. All remedies of known defective work related to the line item have been completed.

3. There are no claims by any party against the line item work completed.

4. The Contractor shall make payments to his Subcontractors and suppliers in the same proportion, including amounts retained, as allowed to the Contractor on the line item, and there is no evidence of failure of the Contractor to make timely payment to Subcontractors or for labor, materials or equipment for which payment has previously been received from the University.

5. The University is satisfied that the line item work can be completed for the unpaid balance of the line item.

6. There is no evidence of damage or delay to another contractor or subcontractor, or to the further progress of the Work of the Contract.

7. The University is satisfied that the Contractor and his Subcontractors have prosecuted and will continue to prosecute the Work satisfactorily and on schedule.

8. There are no unsettled liens against the Project.

C. If at any time after the reduction in any retained percentage, there appears reasonable evidence that any of the above requirements are not being met, the University may again retain such amounts as it deems necessary to protect its interest until such time as all requirements for reducing or eliminating further retainage are again satisfied. In the event the above criteria is not continually met by a Subcontractor, the University reserves the right to again withhold 10% of any line item affecting the Subcontractor. In addition, should the Contractor's general performance and progress, not specifically related to subcontract work only, be unsatisfactory, the University reserves the right to withhold on the aggregate amount requested such sum as will equal 10% of the completed work without changing the amount



allowed on any line item. In event of the latter retained amount, the Contractor shall continue to pay his Subcontractors and suppliers the proportionate share allowed on the line items.

D. Final payment of retained amounts will be made after final completion of the Work of the Contract except as provided in Paragraph 9.7.5 of the General Conditions.

#### 1.5 UNIVERSITY EXAMINATION

A. Refer to General Conditions, Subparagraph 9.3.5. Any materials or equipment the University agrees to pay for in off-site storage, shall be stored in the Metropolitan Twin City Area. Upon submittal of a Request for Payment for materials in the Contractor's off-site storage, the University will examine the materials, with travel cost, any subsistence and time of University personnel paid by the University. The Contractor shall provide access, facilities and assistance to verify the accuracy of the materials claimed as complete, relating to the Schedule of Values.

## PART 1: GENERAL

1.1 GENERAL REQUIREMENTS

A. Refer to General Conditions, Article 8, for general requirements and conditions relating to the contract time, commencement of the Work, progress, completion and delays. Refer to Section A5 - Preliminary Construction Schedule Requirements, Section 01010 - Summary of Work and Special Requirements, Section 01300 - Submittals, Section 01310 - Construction Schedule, Section 01500 - Temporary Facilities, Section 01700 - Project Closeout and Articles of this Section which relate to the commencement, schedule, progress and completion of the Work.

B. The Work shall be prosecuted regularly, diligently, without interruption or shutdown at such rate of progress as will insure Substantial and Final Completion within the Contract Time. By execution of the Contract, the Contractor represents he has analyzed the Project, the materials and methods involved, the systems of the building, availability of qualified mechanics and unskilled labor, restrictions of the site, constraints imposed, his own work load and capacity to perform the Work and indicates his agreement that the specified completion times are reasonable considering the Project conditions, usual industrial conditions, climatic conditions prevailing in the locality of the Project, and other factors, with reasonable allowance for variations from average, typical or Ideal conditions.

1.2 COORDINATION REQUIREMENTS

A. Refer to Paragraph 6.2 of the General Conditions, Section A5 - Preliminary Construction Schedule, Section 01310 - Construction Schedule, Section 01500 - Temporary Facilities and other articles of this Section.

B. The nature of the Project makes it imperative that each Contractor and all subcontractors coordinate their work and cooperate with each other and the University and other contractors from the start of the Project to completion. The General Contractor shall be responsible for directing compliance with the schedule for the Project and shall have authority to establish the general overall schedule for the progress of the Project, the sequence of completion and general use of the site, subject to the Contract Schedule developed as specified under Section 01310. Each other Contractor is subject to the General Contractor's authority in scheduling of work and directing compliance with the Contract Schedule.

C. The Contractor shall cooperate and coordinate their work with the P/N-ECX and P/N-ECF contractors; in particular to permit the extension and eventual removal of earth support walls at the appropriate time when construction permits or requires.

D. With the restricted site, the Contractors are encouraged to utilize off-site fabrication as much as possible and schedule deliveries so materials and equipment can be installed immediately after delivery. The Contractors shall alert and advise subcontractors and suppliers of the need to hold deliveries until they are notified the materials are required.

E. All Contractors shall cooperate with each other with due respect for the methods and schedules of the other and shall work in close coordinated effort to the benefit of the completion of the Project and so as not to delay or impede the work of other Contractors. In the event of conflict or need to

establish priority, the University shall make the determination of the precedence or other required decision to the benefit of the overall Project and its progress, which shall be binding on all Contractors.

F. The General Contractor shall give adequate and timely notice of various work phases and operations which will affect the work of other Contractors or will require installations or other action by other Contractors. After timely notification by any Contractor of the need to accomplish a particular phase or element of the Work, the other Contractors shall, within a reasonable time, perform their work as not to delay or impede any Contractor or the progress of the Project.

G. Special coordination and cooperation efforts are required for certain inter-related phases of the work, such as: removals and relocations of existing services and facilities; the integrated ceiling work; connecting the Owner's equipment; installation of equipment under the Contracts, which receive connections by others; installation of and connections to new utilities being installed under other Contracts; connections to existing buildings; providing and maintaining temporary heat and other temporary facilities; and similar work.

H. At all phases of the Project, recesses, holes, sleeves, curbs, anchors, openings, inserts, built-in items, and other features shall be cast-in or built-in to minimize cutting and patching. Connections and attachments to fireproofed elements shall also be installed prior to fireproofing to minimize damage. Adequate sized openings shall be left in the construction as work progresses to introduce or install large equipment or other materials that necessarily must be placed later.

I. The General Contractor shall be responsible for removing accumulated snow or ice from spaces after they are enclosed, in the general excavation where work is to be performed and at other areas where snow and ice may cause damage or cause a hazard. Any snow or ice at enclosed spaces shall be hauled out, not melted, except for very minor amounts as approved by the University.

J. The General Contractor shall be responsible for maintaining any enclosed spaces of the Project in dry condition. However, each Contractor shall be responsible for closing or covering any holes he has cut or built through walls, floors or roof which will admit water to enclosed spaces during construction. The General Contractor is responsible for the water integrity of the Project and particularly the roof.

K. All necessary information required for coordination and proper execution of the work shall be provided by the appropriate Contractor or Subcontractor. Shop drawings, layout drawings, rough-in details, service requirements, product data, equipment details and similar information shall be provided to all Contractors (or Subcontractor) who have an interest in, and need for, the data or have other material or equipment that attaches to, or otherwise involved in, the particular item or layout. Such information shall be provided free of charge to the interested party. It shall be the responsibility of each Contractor or Subcontractor to request, obtain or exchange shop drawings and other pertinent data directly from or with each other (not from the University or Architect) to properly coordinate the Work. Such data shall be requested in sufficient time to allow reasonable time for preparation of the data and to prevent any delay to a Contractor or Subcontractor. For coordination with the University's equipment or materials, the information shall be obtained from the University.

L. With respect to mechanical and electrical features of equipment of other Contracts, complete data must be exchanged directly between Contractors as the progress of the Project requires. The persons requesting the information shall advise when it will be required. The Contractors or Subcontractors for casework and equipment are expressly required to provide large scale layout drawings showing the required rough-in locations of all services (dimensioned from building features) service characteristics, and locations of studs where the location is critical to mounting or otherwise installing equipment and casework. Mechanical and Electrical Contractors are expressly required to furnish sizes and spacing required for cutouts, and a complete brochure of fittings, sinks, outlets, or other information to provide complete data on the items and accessories being furnished. In the event of incorrect, incomplete, delayed or improperly identified information, the Contractor (or Subcontractor) causing the delay or error shall be responsible and pay for any modifications or replacements necessary to provide a correct, proper and new installation, including relocations required.

## PART 2: COMMENCEMENT AND COMPLETION OF PROJECT.

### 2.1 COMMENCEMENT OF WORK

A. The Contractor shall commence the Work at the site as soon as possible after required and proper insurance evidence has been submitted to the University. All submittals shall be prepared and submitted by the specified times and the schedule data provided as specified under Section 01250.

B. The General Contractor shall assume the site management within 7 days after the University's Notice to Proceed or execution of the Contract, whichever occurs first. The General Contractor shall also commence construction Work at the site within 21 days after Notice to Proceed or execution of the Contract.

C. The Mechanical and Electrical Contractors shall commence the Work within 21 days after Notice to Proceed or execution of the Contract, whichever occurs first. The installation of temporary facilities at the site by the Mechanical and Electrical Contractors will be deemed commencement of the Work, if other construction work or installations cannot proceed due to the progress of the General Contractor or unavailability of materials required to start.

### 2.2 COMPLETION OF THE PROJECT

A. Refer to General Conditions, Subparagraphs 7.1.5 and 7.1.6 for definitions of Substantial Completion and Completion. Within the framework of the general definitions, the University shall be the judge of the status of completion. The definitions shall apply to the Project as a whole as well as separable spaces or areas where the University may assume beneficial occupancy or use of the facilities.

B. At any space or area specified, or later scheduled, to be occupied or used by the University before the entire Project is complete, all elements and systems of the Work shall be substantially complete in these areas by the scheduled time. Systems shall be tested, balanced or otherwise placed in full and proper operating condition.

C. Substantial Completion of the entire Project shall be accomplished on or before August 19, 1980.

D. University intends to occupy the building commencing September 1, 1980.

E. Final Completion of the entire Project shall be accomplished within 45 days after Substantial Completion.

### 2.3 EXTENSION OF TIME

A. Refer to General Conditions, Paragraph 8.3, for requirements for time extensions. Time extensions will be allowed only for the portions, phases or elements of the Work affected by the enumerated conditions for valid delay. Extension of the time for completion of the entire Project will be allowed only for such valid delays as will affect all Work of the Contract.

## PART 3: TIMING OF WORK

### 3.1 UNIVERSITY ESTABLISHED CONSTRUCTION CONSTRAINTS AND COMPLETION TIMES

A. The constraints and completion times specified under this article which have been established by the University, shall be essential conditions of the Contract and must be met in developing and establishing the Construction Schedule of the Contractors.

B. The P/N-ECS Structural Steel Contractor is obligated to the delivery of fabricated structural steel and metal decking between 1 November 1978 and 1 June 1979.

C. The Unit A loading dock area south of Unit F shall remain in operation until March 31, 1980.

D. The north stair tower exit from Unit A to plaza shall remain in use (under proper protection) throughout the construction.

E. New work on Harvard Street sidewalk east of site shall be delayed until March 31, 1980.

F. All work in existing Unit A Auditorium on Floor 2 shall be accomplished between June 15 and September 15, 1979.

### 3.2 OTHER CONSTRAINTS AND TIMING OF WORK

A. The constraints, completion and timing of work specified under this article, as well as others which are specified under other Sections, do not have specific dates or time imposed by the University but shall be considered and incorporated as established dates in the final Construction Schedule of the Contractors. Where the activity affects the University or functions of the campus activity, the time or dates established in the Construction Schedule shall be maintained as the University will plan its activities accordingly.

B. The mechanical and electrical work in the basement is critical to the overall completion of the Project. Underfloor work shall be completed as soon as possible and the floor slab placed promptly thereafter. The Construction Schedule shall indicate the sequence of completion of sections or areas.

C. Demolition and removals at existing buildings shall not proceed until adequate dust, weather and security protection is provided, as applicable to the location.

D. All interruptions of existing services, whether the service is to be abandoned or relocated (by the Contractors or the University) shall be scheduled with the University in advance. As far as practicable, such interruptions shall be scheduled when work on the Project commences. Service interruptions shall be scheduled for times when the use of the facilities or services can be curtailed under the programs and functions of the University, as directed by the University. For all relocated services, the Contractors shall complete the relocated service work, except for final connections, prior to the interruption to minimize the interruption time.

E. Except as may be required to meet the conditions specified for certain areas as specified in Article 3.1 of this Section, or other constraints, the Project shall be finished from the top down and the Contractors shall schedule their work to follow this sequencing. Finishing commences with the installation of the ceiling grid.

### 3.3 PRELIMINARY CONSTRUCTION SCHEDULE

A. Refer to Section A5 - Preliminary Construction Schedule. The University's Schedule Manager has developed a preliminary schedule showing broad general timing for the Work of the Project, indicating activities, sequence, logic and time durations used in arriving at the established constraint dates. The preliminary schedule is a guide to arrive at one sequence of operation and is not a part of the Contract Documents. Other sequences or reworking of the logic is possible and will be considered with the General Contractor establishing the primary sequencing which will provide a logic and schedule mutually satisfactory to all Contractors. However, the construction logic and preliminary schedule shall form the basis of the Contractor's Construction Schedule unless the Contractors can improve the overall progress and completion by revised logic and schedule. Refer to Section 01310 for scheduling procedures and requirements.

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## PART 1: GENERAL

1.1 SCOPE

A. This section defines procedures for the following submittals required of the Contractor.

## PART 2: REQUIRED SUBMITTALS

2.1 SHOP DRAWINGS, EQUIPMENT BROCHURES AND PRODUCT DATA

A. Required submittals of shop, fabrication, or erection drawings, equipment brochures and/or products data, composite systems (including those by one or more Subcontractors or suppliers) and similar information shall be submitted in accord with this Article:

B. "Shop Drawings" shall mean all similar types of product data, including specially prepared drawings, standard prints, brochures and other descriptive data.

C. Drawings submitted, including transparencies, shall be marked with name of project, Contractor, Architect, whether "preliminary" or "final" in nature, and shall bear stamp of approval of the Contractor, as evidence that drawings have been checked (including field dimensions) by the Contractor. The Contractor shall field verify or otherwise determine interferences or conflicts between various materials and resolve dimensions or methods resulting therefrom as approved by the Architect and University. Any drawings submitted without the Contractor's approval will not be considered or reviewed and will be returned to the Contractor. It is not intended that field verified dimensions are required prior to the Architect's acceptance of shop drawings. If, however, field dimensions require changes in the shop drawings in size, detail and similar considerations, a revised shop drawing shall be submitted for review and acceptance.

D. The Contractor shall submit shop drawings to the Architect with such promptness as to cause no delay in his work or the work of any other contractor or subcontractor on the project. Adequate time shall be allowed for checking by the Architect and University.

E. Prepared shop drawings shall be submitted in the form of clear, sharp, reproducible transparencies until acceptable to the Architect. Each drawing shall have a clear space of not less than 20 square inches for Architect's stamps and be transmitted in mailing tubes. After the drawings have been checked, the Architect will obtain prints of the transparency for his records and the University's records and return the transparency to the Contractor. Transparencies returned "Accepted" or "Accepted as Noted" shall be printed by the Contractor in quantity required for his use. When drawing transparencies are returned "Not Accepted" or "Resubmit", the Contractor shall correct the drawing and resubmit a new transparency of the corrected original until final acceptance is obtained. The final shop drawings shall show field verified dimensions, where possible; see paragraph C above.

F. Transparencies will not be required for catalogue cuts, equipment brochures or similar items; however layout drawings shall be prepared where necessary or required by the Architect. Such items shall be submitted in a minimum of 7 copies

unless otherwise specified. If acceptable, the copies will be so stamped and 3 copies returned to the Contractor. If notations indicate revision of data is required resubmit as directed. The Contractor shall not furnish, fabricate, proceed with, or install work until shop drawings receive final acceptance.

G. Checking and acceptance of Shop Drawings by the Architect is for general conformance with design intent and Contract requirements and does not relieve the Contractor of responsibility to verify accuracy of dimensions, obtain field dimensions, coordinate dimensions with work of others, and prevent interference with other equipment and other features of the Work. If a drawing as submitted is in accordance with Contract requirements, or specifically indicated deviation from Contract requirements which Architect finds to be in interest of the University and to be so minor as not to involve a change in contract price or time for performance, Architect will accept drawings.

H. Acceptance of shop drawings and setting drawings will be general and, except as otherwise provided in preceding paragraph, shall not be construed as: (1) permitting any departure from contract requirements, (2) relieving Contractor of responsibility from errors in details, dimensions or otherwise that may exist, (3) accepting departures from additional details or instructions previously furnished by Architect and, (4) confirming clearances or lack of interference.

I. Checking and acceptance by Architect shall not relieve Contractor of responsibility for deviations from drawings and specifications unless such deviation is specifically called to Architect's attention by a specific indication of "note deviation" or similar clear and bold indication at time of submission, nor shall it relieve him of responsibility for errors or omissions in shop drawings.

J. Refer to Article 6 of General Conditions and to Section 01010 for coordination and cooperation of contractors. The Contractor shall cooperate with all other contractors as may be required to coordinate the work with all contractors and their subcontractors. Shop drawings shall be provided or exchanged as necessary or beneficial to the coordination effort, with the exchange directly by the contractors involved, not through the University or Architect.

K. To prevent delay to casework final shop drawings and fabrication, the Mechanical and Electrical Contractors shall expedite information on services at casework as quickly as possible and to meet the progress schedule for the Project. Submit fixture lists, cuts of fixtures and other shop drawing items of mechanical and electrical work to the Architect within 90 days after contract award and prior to providing copies to casework Subcontractor. Upon acceptance of the lists, fixture cuts and shop drawing work by the Architect, the Mechanical and Electrical Subcontractors shall provide all required data of fixture lists and cuts, sizes and spacing of holes, and similar data required by the Casework Subcontractor within 45 days after Architect's acceptance. At the same time, provide all pertinent drawings and information regarding rough-in, which Casework Contractor requires for coordination.

L. The Casework Subcontractor and other equipment suppliers as necessary shall provide large scale layout drawings of the casework and equipment to facilitate and expedite mechanical and electrical service rough-in. These layout drawings shall be submitted promptly so as not to delay rough-in work and, if necessary to provide the rough-in data, shall be prepared and submitted prior to other



shop drawings for the casework or equipment. Where required, dimensions shall be given to locate features, including dimensions from column centerlines, grid lines or other building features to adequately locate the work.

## 2.2 SAMPLES

A. Deliver samples of materials, equipment, assemblies and components as required by specifications to Architect (or other designated location) with delivery costs prepaid. At Architect's direction, remove samples after approval. Samples shall be of like kind to the product to be provided for building and shall have finish and other characteristics required by work. Samples shall indicate type of construction and quality proposed for installation in the Project.

B. Where the Contractor requires approved samples to be returned, submit the number of samples required by the Contractor plus two which shall be retained by the Architect and University. Submit all other samples in duplicate.

## 2.3 LIST OF MATERIALS

A. Within 30 days after the award of the Contract (notice to proceed or letter of intent), the Contractor shall submit 5 copies of a complete list of all materials, products, and equipment proposed to be used in construction to the Architect for acceptance. Materials shall not be ordered until the proposed listed materials are accepted.

B. Where two or more makes or kinds of items are named in the specifications (or additional names are called for in an addendum), the Contractor shall state which particular make or kind of each item he proposed to provide. If the Contractor fails to state a preference, the University shall have the right to select any of the makes or kinds named without change in price.

C. This list shall be submitted in the form prescribed by the Architect and arranged in order of specification sections. The items listed shall fully conform to project requirements and specifications. All materials are subject to the Architect's and University's acceptance. After acceptance, there shall be no changes or substitutions, except as provided in Article 7 of the General Conditions and Article 1.23 of Section 01010.

D. The list shall clearly identify the material, product or equipment by manufacturer and brand by listing the names for all items, including those where only one material or product is specified. Each and all materials, products and equipments shall be specifically named, not listed "as specified."

## 2.4 LIST OF SUBCONTRACTORS

A. Within 30 days after the award of the Contract (notice to proceed or letter of intent), the Contractor shall submit 5 copies of a complete list of all subcontractors (and major material suppliers) he proposes to use in performance of the Contract to the Architect for review and acceptance by the Architect and University. The list shall be in the form prescribed by the Architect. When appropriate, or when requested by the Architect, the list shall include proposed Sub-subcontractors. No subcontracts shall be executed until the proposed listed subcontractors are accepted.

B. The proposed subcontractors or sub-subcontractors shall be established, reputable firms of recognized standing with a record of successful and

satisfactory past performance with the type work and/or items proposed to be provided or installed by them. Only those subcontractors (and sub-subcontractors when appropriate) who are acceptable to the Architect and the University shall be used on the Work.

C. The right to reject any subcontractor or sub-subcontractor, is reserved by the Architect and University. The right to reject will be exercised by the Architect or University as specified under sub-paragraph 5.2.3 of the General Conditions.

## 2.5 PHOTOGRAPHS OF PROJECT

A. The General Contractor shall provide progress photographs at the same time and with each monthly request for payment. Photographs to be 8" x 10" glossy finish, enlarged from a minimum sized negative of 2-1/4 x 2-1/4.

B. Photographs shall be taken by an acceptable professional photographer from viewpoints as directed by the University. Submit two (2) prints of each of a minimum of three (3) photographs to the University with the estimate and forward two (2) prints of each photograph separately to the Architect.

C. Upon completion of the Project, the General Contractor shall provide ten (10) photographs of the interior and exterior. Photographs shall be taken at times and at locations as directed by the University. Three prints shall be submitted to the University and 2 prints to the Architect.

D. The name of the project, Contractor's name, and the date of the photograph shall be permanently printed on the back of the photograph.

E. The photographer shall retain the negatives in a permanent file. Should the photographer wish to discard the negatives, go out of business or otherwise cause the negatives to become unavailable, the photographer shall notify the University and release the negatives to the University.

## 2.6 RECORD SET OF DRAWINGS

A. Contractor shall provide a record set of drawings to the University at the completion of his Contract.

B. During construction, the Contractor shall maintain a clean set of drawings for the sole purpose of recording changes and actual "as installed" information.

C. Marking of the record set shall be done methodically as work progresses, clearly and neatly, in color.

D. As a general guide, the type of information to be recorded on the record set includes: (1) revisions made except minor or non-critical dimensions; (2) omissions, including work omitted by accepted alternates; (3) dimensioned locations of major or main utility lines, such as main conduit runs, piping mains and similar work; (4) locations of control valves; (5) additions to the work; (6) changes in significant details (i.e. for water protection); and (7) other similar data.

2.7 OTHER SUBMITTALS

- A. Provide other required submittals as specified. In particular, refer to:
- |  |   |
|--|---|
| Progress Schedule                                | Paragraph 4.11 of General Conditions, and Sections 01200, 01250.              |
| Performance Bond                                 | Paragraph 7.5 of General Conditions   |
| Schedule of Values                               | Paragraph 9.2 of General Conditions and Article 1.2 of Section 01150.         |
| Payment Requests                                 | Paragraph 9.3 of General Conditions and Articles 1.3 and 1.4 of Section 01150 |
| Liability Insurance                              | Paragraph 11.1 of General Conditions and Article 1.11 of Section 01010.       |
| Equal Employment and Prevailing Wages            | Articles 15 and 17 of General Conditions                                      |
| Testings and Inspection                          | Section 01400 and Technical Sections  |
| Form 134 Affidavit                               | Subparagraph 9.7.2 of General Conditions                                      |
| Reports<br>Certificates<br>Samples<br>Guarantees | Technical Sections  |

2.8 FABRICATION NOTICE

The Contractor shall give the University a minimum of 10 days notice prior to commencing fabrication of the list of products specified under Section 01400. The University may elect to examine and inspect the plant and materials prior to and during fabrication and the Contractor (producer) shall permit and cooperate in the inspection.

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## PART 1: GENERAL

1.1 SCOPE

- A. This section specified procedures for planning, coordinating, monitoring and managing the schedules of all work of all Contractors on the Project, and complements the General Conditions requirements regarding schedules.
- B. Refer to Section 01200 for a general description of the anticipated construction logic and for established "construction constraints". The dates indicated for starting and/or completing the activity or area of work are critical to the orderly prosecution of Work and to the University's functions and use of existing facilities of this Project. The established constraints are supplementary to other specified constraints, phasing requirements or work timing included in the Contract Documents.
- C. Starting and/or completing specified work on the established constraint dates on time, as well as other constraints, phasing and timing of work specified, are essential conditions of the contracts. Each Contractor shall plan and manage his own work so as to satisfy these conditions.

1.2 RESPONSIBILITIES

- A. The University has retained Cost Planning Management International, Inc. (CPMI) as Scheduling Manager for this project. CPMI will employ the Precedence Diagram Method (PDM) to coordinate and monitor all scheduling work on the project. The resulting Contract Schedule will guide the orderly and expeditious prosecution of the construction work, assist the Contractor(s) in coordinating the work, provide the means to evaluate progress and status at various stages of the project and to process partial payment requests in a systematic manner. CPMI shall prepare and computerize Precedence Diagram Schedules, working jointly with the Contractor(s) to coordinate, schedule and reschedule all work of the Contractor(s) and all Sub-contractors. While the Contractor(s) will be allowed to choose his own methods and procedures for the performance of the work consistent with good practice, all scheduling by the Contractor(s) shall be performed jointly with CPMI and expressed as the Precedence Diagram comprising the Contract Schedule.
- B. The Contractors shall be responsible to provide all data to develop and update the schedule, manage the schedule and manage all work activities to maintain progress in accordance with the schedule.
- C. Field Coordination: General Contractor has primary responsibility for directing compliance with Contract Schedule. Each other Contractor shall be subject to the authority granted hereby to the General Contractor to direct schedule compliance.

1.3 PHASES OF THE CONSTRUCTION SCHEDULE

- A. The schedules referred to in this section are defined as follows:
1. Preliminary Schedule: Schedule Manager has produced a preliminary PDM network and computer reports. Refer to Section A5.
  2. Initial Schedule - Schedule Manager will prepare, with the Contractor(s) a detailed PDM network and computer reports of the Contractor(s)' planned schedule, conforming to information supplied by the Contractor(s).

3. Contract Schedule - The Initial Schedule will become the Contract Schedule when approved by the University.

B. Phase I - Preliminary Schedule:

1. Schedule Manager has prepared a Preliminary Schedule with the assistance of the Architect/Engineer; refer to Section A5. This Preliminary Schedule is non-contractual and is intended only as a guide to the Contractor(s). Only the contract completion date and milestone dates are contractual.

2. The Preliminary Schedule is in the form of a precedence diagram depicting a logical sequence, relationship and interrelationship of summary activities which form the total construction phase of the project. Schedule Manager has computer-produced a tabulation of these summary activities. This report indicates an estimated duration of each summary activity plus earliest and latest starting and finishing dates to allow project completion within the specified contract time. The Preliminary Schedule is an unbiased practical evaluation of one sequence and times for various activities. The activities displayed in the Summary Report and the logic displayed in the diagram are intended only as a guide to bidders; the Owner makes no warranty, expressed or implied, regarding the feasibility of the Preliminary Schedule. The Preliminary Schedule may not list the work completely, and may vary from the drawings and specifications. Only the drawings and specifications describe the work to be bid and executed; the Contractor(s) shall give prompt notice to the Owner of any variances between activities shown in the schedule and the work as shown in the plans and specifications.

3. No verbal clarifications regarding the schedule, established constraint dates, other timing considerations or other matters will be recognized by the University, Architect/Engineer or Schedule Manager as changes, except those included by published addenda.

C. Phase II - Initial Construction Schedule:

1. All Contractors and their appropriate subcontractors shall, within 30 days after award of Contract, provide their own data to the Schedule Manager as schedule input, as hereinafter specified, such that the schedule shall reflect the actual plan of operation for the Project by the Contractors.

2. The Contractor(s) shall prepare a comprehensive list of all activities of the construction phase of the project, including construction activities as well as procurement of material, equipment, plant, shop drawing submittals, submittal of samples, templates, etc. Working with Schedule Manager, the Contractor(s) shall assign durations and sequences to these activities. Construction activities shall have a maximum duration of twenty(20) working days except as approved by Schedule Manager. Schedule Manager will prepare and computerize a PDM network using this information and submit it to the Contractor(s). Neither Schedule Manager nor the University warrants the information supplied by the Contractor(s) is accurate or correct or that the project can be performed as scheduled based upon the data supplied by the Contractor(s).

3. Subject to the required data from all Contractors being provided within 30 days, the Schedule Manager will, within 60 days after award of Contract, prepare and distribute an initial construction schedule to the Contractors, University

and Architect/Engineer. The detailed schedule will contain specific dates. The Contractors shall promptly review the schedule with the Schedule Manager, advising of any required modifications and confirming the schedule.

C. Phase III - Contract Schedule

1. When the Contractor(s) has accepted the Initial Schedule and returned it to CPPI, CPPI will meet with the Contractor(s) to discuss the schedule and resolve conflicts. CPPI will revise the network as required, to indicate compliance with the specified contract time. The revised PDM network and schedule will then be issued as the approved Contract Schedule and shall be binding upon the Contractor(s). The second and subsequent progress payment shall not be made until the Contract Schedule has been approved.

2. The Schedule Manager will monitor progress of the Project, periodically update and otherwise modify the Contract Schedule and distribute updated printouts, network diagrams and reports to the Contractors. The Contractors and subcontractors shall supply all data and other information required for input to these updates. The Contractors also shall cooperate with one another, with the Schedule Manager and with the University to evaluating this information.

1.4 FIELD MONITORING

A. The Contractor(s) and all Subcontractors shall be obligated to perform in accordance with the Contract Schedule and to participate in updating the schedule. The Contractor(s) shall include the provisions in all subcontracts binding Subcontractors to provide data to establish the schedule, participate in such revisions of the schedule as are necessary, and to supply update data throughout the project.

B. Schedule Manager will furnish to the Contractor(s), each month, a Field Observation Report. The Contractor(s) shall review each week the Field Observation Report with the University's Representative. The Contractor(s) shall report actual start and finish dates for all activities in progress, percentages of completion, and activities he plans to start the following week. The Contractor(s) shall supply the Schedule Manager with minutes of these weekly meetings.

[REDACTED]

A. At the end of the first month, following issuance of the Contract Schedule (and every month thereafter or at lesser intervals if required or requested by the University), the University's Representative, and Schedule Manager will meet with the Contractor(s) and those Subcontractors whose presence has been requested by the University, Schedule Manager or Contractor(s) at the job site to review and update the schedule.

[REDACTED] nt

[REDACTED] They shall assist the University's Representative and Schedule Manager in every manner to determine the actual status of the project and make such decisions as may be required to maintain the project on schedule.

B. Monthly, the Contractor(s) shall post the following information on the Field Observation Report to indicate the month-end status of each activity: actual start

and finish dates, remaining duration and completion percentage of all PDM activities in progress. Prior to the PDM updating meeting, the Contractor(s) shall meet with the Owner's Representative to agree upon the completion percentages for each on-site PDM activity and dollar values for procurement, mobilization, etc. activities. These percentages, along with the remaining durations and actual start and finish dates posted on the Field Observation Report, shall be approved by the Owner's Representative and submitted to CPMI at the regularly scheduled monthly update meeting.

C. This information will be reviewed at the meeting and then will be incorporated in the network. Revisions or changes to the original Contract Schedule, if approved, will be made. This information will provide the basis for generating the updated Contract Schedule, as well as the Progress Payment Request referred to in Paragraph A. Within one week following this meeting, Schedule Manager will generate updated reports of the Contract Schedule, Progress Payment Request and a narrative report analyzing project progress and identifying problem areas. Schedule Manager will submit these documents to the Owner's Representative for distribution to the Owner, Architect/Engineer, Contractor(s) and major Subcontractors at the monthly progress meeting. Reports distributed to Subcontractors can be sorted to display only their work.

#### 1.6 GENERAL REQUIREMENTS AND INFORMATION

A. The work of the construction contracts represented by these Contract Documents for Unit F (General, Mechanical, Electrical, and Vertical Transportation) shall be accomplished under the schedule and reporting or monitoring system. The previous P/N - ECX Contract is not subject to the schedule, except for the completion work of the maintaining and removing earth support walls. The previous P/N-ECS Contract is subject to the PDM schedule inasmuch as their delivery relate to the erection schedule.

B. As a minimum, each Contractor, and appropriate subcontractors, where subcontractor data and information is necessary for the schedule, shall:

1. Provide all required basic and detailed information for the preparation of the initial CPM construction schedule and the detailed network;

2. Work with the Schedule Manager in an efficient and conscientious manner, according to the predetermined schedule;

3. Provide the dollar value of the various cost impacting activities, as later specified;

4. Provide proper and accurate periodic data for updating the schedule;

5. Attend periodic meetings to develop, analyze and update the schedule.

C. Each Contractor and his subcontractors shall comply with the schedule, and periodic updated revisions of the schedule.

D. Sufficient copies of schedules, network diagrams, printouts and reports, will be distributed to all parties, and as a minimum will be:

Owner - 3  
Architect - 2  
Each Prime Contractor - 2  
Affected Separate Contractors (ie: P/N-ECX)-1

## 1.7 SCHEDULE CONSIDERATIONS

A. In addition to the final completion time the schedule shall be developed to accommodate various other constraints, including, but not limited to: lead time required to accommodate the University moving into the Project by the specified established constraint dates; timing of various elements of work specified in the General Conditions, Section 01010 and 01200; requirements of Temporary Facilities, Section 01500; installation time required for casework and equipment, including Group 2 equipment provided by Owner; the work of separate Contractors for work of this Project; and all other specified constraints.

B. As required, alternate construction sequences, alternate sized crews and other methods to improve the schedule shall be projected into the schedule until all established constraint dates and other timing constraints have been achieved and maintained.

## PART 2: SCHEDULE AND UPDATING

### 2.1 DETAILED COST BREAKDOWNS

A. The Contractor(s) shall incorporate into the PDM Schedule, the dollar value of all activities indicated on the PDM network. Within fifteen (15) calendar days following contract award, the Contractor(s) shall provide dollar values for activities scheduled to begin within the first sixty (60) days of the contract. These dollar values will provide the basis for payment for the first progress payment. Upon approval of the Contract Schedule, CPMI will furnish the Contractor(s) with a list of all activities. The Contractor(s) shall, within one calendar week, assign dollar values to each PDM activity. The sum of the values of the activities must equal the total Contract amount. The Contractor(s) shall develop fair and reasonable dollar values for his reimbursement to be paid upon completion, or partial completion, of each PDM activity. Upon approval by the Owner's Representative of the detailed cost breakdowns, CPMI will make these dollar values a part of the PDM Schedule. Payment of the third and subsequent Progress Payments shall not be made until these detailed breakdowns are approved.

### 2.2 PROGRESS PAYMENTS

A. CPMI will computer process the percentages approved by the Owner's Representative in Paragraph H to produce monthly Progress Payment Requests. Payment for work performed will be made in accordance with the resulting computer report.

### 2.3 COMPLIANCE WITH THE SCHEDULE

A. If the Contractor(s) shall fail to adhere to the Contract Schedule or to the said schedule as revised, he must promptly adopt such other or additional means and methods of construction as will make up for the time lost and will assume completion of the work in accordance with said Contract Schedule at no additional cost to the Owner, except in accordance with the provisions of the contract governing.



such costs. If the Owner notifies the Contractor(s) of any change in the contract or any extra work to be performed, or if any other conditions arise which are likely to cause or are actually causing delays, the Contractor(s) shall notify the Owner's Representative in writing within five (5) days of the receipt of such notice, or the occurrence of such condition. This notice shall document the effect, if any, of such change, or extra work, or suspension or other condition upon the Contract Schedule should be revised with the reasons therefore. No time extensions will be granted due to a delay in any activity unless the Owner deems the length of the delay exceeds the float time associated with the activity at the time the delay occurs.

#### 2.4 FLOAT TIME

\* A. The General Contractor, in directing the compliance with contract schedule shall cooperate with University and Schedule Manager in utilizing float time. Full control over use of total float time in the Contract Schedule rests with the University and will be utilized by him in any necessary rescheduling of the Contract Schedule occasioned by design changes, subsurface or field conditions, strikes, Acts of God, or unavoidable equipment and material delays. If rescheduling of any activity adversely affects the Contractor(s)' operation, he shall advise the Owner's Representative in writing no later than five (5) days after receipt of the revised schedule or notice of intent to revise the schedule.

#### 2.5 PAYMENT

A. The cost for the preparation of the Preliminary Schedule, Initial and Contract Schedules will be borne by the University. However, the Contractor(s) agrees to bear the cost of furnishing as much support by his personnel as may be necessary or required by the Owner for the purpose of working with CPMI to satisfy the requirements of this specification. Subcontractors agree to bear the cost of furnishing the support of their personnel for the same purpose.

#### 2.6 REPORTS AND WORK COORDINATION

A. The Contractor(s) shall submit to the Owner's Representative his purchase order list showing his various suppliers, purchase order number and date, a description of the material involved and the job site delivery date specified. Such information shall be submitted at regularly monthly intervals so that the Owner or the Owner's Representative will be aware of the progress being made by the Contractor in the placing of orders and status of material. The Contractor(s) shall be solely responsible for expediting the delivery of all material to be furnished by him so that construction progress shall be maintained according to the schedule in effect.

B. During the course of the work, the Contractor(s) and his principal Subcontractors shall meet weekly on a regularly scheduled basis with the Owner's Representative for the purpose of monitoring the Schedule and formulating the detailed work in accordance with the Schedule. The Contractor(s) shall conform to the Contract Schedule to achieve the rapid completion of the project as a whole and within the limits of the schedule in effect. When the Contractor(s) is required to place, install or connect material or equipment furnished by others, the Contractor(s) shall immediately notify the Owner's Representative, in writing, when it becomes evident that such equipment or material will be needed at any time other than

that shown in the Contract Schedule.

C. The Contractor shall cooperate with the Owner's Representative in arriving at the best workable overall scheduling of such work and shall cooperate in making such schedule adjustments as may be required to accomodate actual equipment delivery dates.

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## PART I: GENERAL

1.1 TESTING

A. Refer to the technical specifications for specific testing requirements and methods.

B. Unless otherwise provided in the specifications, the Contractor shall provide all materials, samples, mock-ups or assemblies for all tests specified in various sections of specifications or as directed by Architect or University and pay shipping costs of such samples to laboratory or other testing location and facility. Unless specifically specified otherwise, all tests shall be made by an approved independent testing laboratory and reports shall be provided to Architect and University.

C. Tests shall be provided and accomplished in accordance with the standard used as the reference for the particular material or product, unless other test methods or criterion are specified. In the absence of a referenced standard, tests shall be accomplished in accordance with applicable ASTM Standards or Test Methods.

1.2 QUALIFICATIONS OF TESTING AGENCY

A. "Approved independent testing laboratory" shall mean an independent testing agency acceptable to the University and the Architect and possessing the professional qualifications and equipment to perform the specified tests and to evaluate and report the results.

1.3 PAYMENT FOR TESTS

A. Where specifically specified, the University will pay for the costs of tests (field or laboratory), directly to the laboratory. The University will also select the testing agency and advise the Contractor.

B. The cost of all other tests shall be paid by the Contractor, including any retesting required when initial tests indicate non-compliance.

1.4 TESTS TO DEMONSTRATE QUALIFICATION

A. In addition to tests specified, should the Contractor propose a product, material, method or assembly that is of unknown or questionable quality to Architect, the Architect or the University, may require and order suitable tests to establish a basis for acceptance or rejection. Such tests will be paid for by the Contractor, or by the Subcontractor requesting approval. "Standard" test reports or reports on "similar" material will not be accepted.

B. The University and Architect reserve the right to require certification or other proof that the material, assembly, equipment or other product furnished, or proposed to be furnished, for this Project is in compliance with any test or standard called for. The certificate shall be signed by a representative of the independent testing laboratory.

C. Any tests required to qualify the Contractor or any of his workmen for any phase of the work, and any test of a method, system or equipment that may be required by specification or law to qualify the item for use, shall be made or taken without cost to the University or Architect.

#### 1.5 INSPECTIONS

A. Should the specifications, Architect's instruction, laws, ordinances or any public authority require any work to be inspected or approved, the Contractor shall give timely notice of its readiness for inspection and a reasonable date fixed for such inspection. If any work requiring inspection should be covered up without approval or consent of the approving agency or the University's representatives, it must be uncovered for examination at Contractor's expense.

#### 1.6 OWNER'S INSPECTION OF FABRICATION

A. The University reserves the right to inspect the fabrication facilities and the fabrication of products for this Project. The producer shall permit such inspections and cooperate with the University to facilitate the inspections. At least 10 days prior to commencing fabrication on the following products, or others the University advises the Contractor of, the University shall be notified of the scheduled date for commencing production:

1. Architectural and structural precast concrete.
2. Miscellaneous and ornamental metals, as designated by the Owner
3. Millwork
4. Hollow metal
5. Curtainwall systems
6. Metal laboratory casework
7. Elevators and Escalators
8. Switchgear (electrical)
9. Prefabricated Rooms

B. For such inspections of fabrication and fabrication facilities, the University will pay for its own travel and subsistence. The Contractor and producer shall cooperate in such inspections and make the facilities and products available on time so the University does not incur any other costs.

C. The University's right to inspect fabrication and fabrication facilities shall not be limited to the products listed. After notice, University may inspect any and all facilities and product fabrication.

#### 1.7 CERTIFICATES

A. Except for test reports provided and signed by approved independent testing laboratories, all certificates required by the specifications shall be signed by an authorized official of the firm providing the certificate, with the signature notarized, when such certificates by the producer are acceptable to the University.

#### 1.8 TESTING OF SPECIAL ROOMS AND AREAS

A. For acceptance of the Work under the Contracts, except as otherwise specified, special rooms and installations will be tested by the University or such agencies as the University may select, using qualified authorities. In the case of

radiation protection, government recognized authorities will be used. The costs of the tests will be paid by the University, except that in the event of failure, non-compliance, or non-performance, all re-testing shall be paid by the Contractor.

B. Testing of completed installations by the University shall not relieve the Contractor from fully monitoring his construction and installation, including tests as work progresses, to insure the installation will provide the required performance at the time of the final tests.

C. At rooms or areas intended to provide radiation protection, in addition to the general shielded areas (ie: walls, floors, ceilings as applicable) all openings, cracks and penetrations will be carefully tested by the University. The Contractor shall exercise care to insure there are no "leaks" in the shield.

D. At rooms such as the radio frequency shielded rooms, audiometric rooms (including combinations), the University will perform the final tests on the construction provided by the Contractor, to determine performance and compliance. Refer to Sections 01600 and 13100 for additional testing information.

E. At special rooms with various systems and variable condition requirements (ie: environmental rooms, if any) the Contractor shall fully demonstrate the room and its performance, under conditions approved by the University and witnessed by the University, with the Contractor providing all testing apparatus and recording equipment.

F. In the event the University is not satisfied with the adequacy of any tests made by the Contractor or performance of the space, the University reserves the right to retain others to make impartial tests. The results of the tests and performance data provided by the Consultant or agency retained by the University shall be conclusive as to meeting the requirements of the Contract.

G. Any deficiencies found by tests performed by the University, or its consultants, shall be promptly corrected to the University's satisfaction by whatever means required, including reconstruction or replacement.

#### 1.9 INSPECTION OF ADJACENT FACILITIES

A. The University has employed an independent agency to inspect adjacent facilities and construction prior to the commencement of the P/N-ECX Contract, to inspect existing buildings surrounding the site for damage and to re-inspect the facilities near completion of the P/N-EXC Contract, as well as at the end of this Project. The independent agency recorded existing damage found prior to commencement of work.

B. Reports are filed and maintained by the University.

C. As work progresses, particularly during demolition, underpinning and excavation work, the General Contractor shall periodically check the adjacent structures to record and report to the University any cracks or other damage, settlement or changes of any kind. The General Contractor shall take elevations as often as necessary to keep an accurate record of any changes.

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## PART 1 CONSTRUCTION HEAT, LIGHT AND POWER, WATER, TELEPHONE

1.1 TEMPORARY (CONSTRUCTION) HEAT

A. Temporary Heat: As used in this specification, temporary heat shall mean all heat required and provided during construction, whether by temporary heating units and devices, or the permanent heating system and devices, until the Project is occupied or accepted by the Owner.

B. Heating Periods: Four work periods are established for temporary heat:

Period A - From start of construction under this Contract until satisfactory enclosure of the Project with the permanent envelope and installation of permanent systems; heating by temporary units or systems.

Period B - After installation of permanent systems; steam is from the University's plant.

Period C - From start of finish operations until substantial completion, ready for Owner's occupancy.

Period D - Partial occupancy by Owner.

C. Building and Units: As used herein, "building" means the entire Project, "units" mean any separable area that may be enclosed for temporary heat, whether a floor, several floors, a particular part or area of the floor. Any "unit" shall be subject to the temporary heat requirements and periods.

D. Plant and System: In following paragraphs "plant" shall mean service to the building from Owners' central plant or central mains; "system" shall mean pumps and other equipment, radiation, convectors, piping, ducts, unit heaters, fan systems, similar and related items; "controls" shall mean thermostats, valves, dampers and similar units to regulate heat and air.

E. Electrical Energy: Cost of energy for using systems will be paid as specified under Article 1.2 of this Section. Electric heaters will not be permitted for temporary heat, except those which may be part of permanent heating system. Electrical lines furnishing temporary current to pumps and other equipment of heating system shall be adequately sized to deliver the required rate voltages and amperage to equipment.

F. Enclosure: For the purpose of temporary heat by means of using steam from the University's plant and temporary or permanent systems, enclosure shall mean when the building (or unit) is satisfactorily enclosed, suitable for use of steam from the plant, as approved by the University.

1. Generally, enclosure shall mean when the project or unit is to the stage of completion of: framing complete; permanent exterior enclosure "skin" (walls, wall panels, windows, curtain walls, entrance walls and units and other enclosure elements, or approved equivalent) are in place; protection for water penetration at roofs and membrane areas is sufficient to maintain water penetration at an approved minimum; and self-closing doors are installed at the exterior. Doors shall be equivalent to permanent doors, well fitted

and equipped with door closers. It is the intent that heat retention shall be substantially equivalent to the completed building. A few temporary exterior enclosures, as approved by the University, will be permitted where necessary to provide for future installations or for the passage of materials.

2. After the start of the heating season, if window or glazing installations are delayed after the remainder of the "skin" is generally installed, the General Contractor shall provide and install approved temporary closures at the openings. Closures shall be substantially constructed, well fitted and maintained to prevent damage to the heating system, or other vulnerable work, which may be damaged by penetration of cold.

3. The permanent heating system of the building or unit shall not be used until the permanent enclosure skin has been installed.

G. Steam from Owner's Plant: When steam is used from the University's plant, whether for temporary or permanent systems, it will be provided free of charge during the construction period. The Mechanical Contractor shall make the connections to the steam source and provide and install approved and suitable condensate meters to provide an accurate basis for determining the steam used, for the University's inter-department records. When steam from plant is being used, enclosure of building shall be such that steam is conserved, with consideration for adequate ventilation, as approved by the University.

H. Condensate: When steam from the plant is being used, all condensate must be piped back to the plant with none wasted. Installations by the Mechanical Contractor shall be made to achieve the condensate return.

I. Temporary Heating Units or Devices: All units or devices used in or adjacent to new construction, or existing buildings, are subject to approval of the University. Portable units must be vented and provide smokeless units at times and locations necessary to prevent smoke and toxic fume damage or stains to building or materials. Replace damage as directed. Temporary devices used inside the building when fully or partially enclosed shall be acceptable (smokeless and vented if oil or gas fired portable unit heaters) with motor driven fan.

J. Ventilation: During construction and particularly during tile work, plaster and similar finishing operations, adequate ventilation and dehumidification shall be provided, including spaces without windows. Use power exhausts where necessary. Frosting or sweating of glass and metal will be an indication of excess humidity to be corrected. Give special attention to adequate ventilation immediately after building enclosure as well as during roofing operations (particularly in or after cold weather) to remove moisture from building. Prevent condensation in building and prevent moisture from being driven up to roofing. General Contractor shall be responsible for the ventilation, except at spaces without windows where a ventilation system is to be provided, the Mechanical Contractor shall install the system as soon as practicable.

K. Supply and Return Air Fans and Exhaust Fans: In general, it is the intent to avoid the use of permanent supply and return air units, and exhaust fans, for heating and ventilation as far as possible during construction, by utilizing convectors, radiators and natural ventilation as much as possible. Fan systems will not be available, nor shall be used, for heating in shell spaces. The use of

fan systems may be used as herein specified under conditions approved by the University, in consultation with the Architect/Engineer.

1. Fan systems will be permitted to be used when: (1) other heating devices are unable to maintain temperatures or there is no other system for the area; (2) it is impossible or impractical to install other systems; (3) such use will provide heat to the enclosed building at an earlier date than otherwise possible; (4) the systems will not be damaged by cold or other causes; (5) the systems are protected by filters and are cleaned as specified. The use of fan systems shall not relieve the Mechanical Contractor of his obligation to install other systems, when spaces and surfaces are ready for the installations, as specified under Heating Period A.

2. In general, supply fans are to be used with and the outside damper closed.

3. The use of return air fans shall be avoided, unless it is necessary to provide adequate return air from upper floors. Instead, air shall be returned to the ventilation unit unducted through the building, (rather than by ductwork) through access doors or openings which are located up-stream from the filters for the supply fans.

4. Exhaust fans may be used only as approved by the University, and as may be required to exhaust areas when no other means is possible.

5. When used, fan units shall at all times be provided with temporary filters by the Mechanical Contractor. The Mechanical Contractor shall maintain the filters in a clean and effective condition and install new filters at the time of occupancy by the University.

L. Equipment Acceptance: The University will conditionally accept fan units and other operating equipment used for temporary heat during construction, for the purposes of commencing the guarantee period. However, the equipment shall remain in the care, custody and control of the Mechanical Contractor who shall maintain and service the equipment. The conditional acceptance shall be noted in writing, after start up and testing has demonstrated the Unit is operating properly and is free from defects or deficiencies. Such acceptance shall be conditional upon the equipment guarantee extending for a full year of operating service or until the project is fully occupied (except for "shell" spaces under the original Contract) by the University, whichever occurs last. Full acceptance of the work under the Contract, even though the University has not occupied, will be the same as occupancy.

M. Filters: The Mechanical Contractor shall be responsible for providing, maintaining, cleaning and replacing all filters, both temporary and permanent. Temporary filters shall be installed and maintained during construction period, after enclosure, so that at all times the equipment duct systems are protected from an accumulation of dirt, or dust. Filters shall be installed by Mechanical Contractor in temporary or permanent locations. New final filters shall be installed just before the University occupies or accepts the Project.

N. Cleaning: At substantial completion of building, or unit which is to be occupied or used by the University prior to completion of the entire Project, and at least one week prior to final inspection date, the complete heating systems installed under the Contract shall be thoroughly inspected and cleaned



as required by the Mechanical Contractor and turned over to the University in new and clean condition. The Mechanical Contractor shall clean all units and devices (including vacuuming of insides) adjust all equipment and controls (except for the balancing under the separate test and balance Contract) and repair or replace damaged units.

O. Responsibility in General: Until the building is accepted by the University, all devices, controls, system and related items shall remain in care, custody and control of the installing Contractor and his Subcontractors. Clean and properly operating systems, devices and controls shall be turned over to the University. Paragraphs of this Article I.1 generally outline the intent of division of responsibility regarding temporary heat, but may not specifically mention all details. The University and Architect will not enter into disputes between the Contractors regarding details and schedules of temporary heat as it shall be the joint responsibility of the Contractors to cooperatively provide temporary heat within the intent specified, until the Work is accepted by the University. Necessary variations in schedule and problems relating to work phases and heat shall be resolved by the Contractors. The University and its Schedule Consultant will assist in the coordination and make necessary determinations in the best interest of the Project and progress.

1. Nothing in this Article shall relieve any Contractor from his responsibility for providing adequate enclosures, proper heat, devices, controls, service or supervision to furnish adequate heat protection specified, to responsibilities outlined. All Contractors shall cooperate and coordinate their work to insure proper heat and protection. After partial occupancy by the University, it shall be the Mechanical Contractor's responsibility to maintain dependable systems and to maintain comfort conditions (assumed 68 degrees heating season, 78° cooling) at all times and adjustments shall promptly be made to insure this performance.

2. The General Contractor shall provide, mount and maintain thermometers at each level of the Project, in sufficient numbers and strategic locations, to monitor that adequate temperatures are being maintained. The number and locations shall be subject to University approval and the University may direct additional thermometers if it deems there are insufficient units.

P. Dehumidification: The General Contractor shall be responsible for dehumidification when required and when humidity levels are detrimental to materials, work and installations in progress. In particular dehumidification shall be accomplished during finishing operations or when the humidity is higher than that recommended by the producer or manufacturer of products.

1. Dehumidification shall be accomplished by natural ventilation and normal heating as far as practicable and such heating/ventilating measures will be accepted under the conservation of heat requirements, to the extent approved by the University. If natural ventilation is inadequate to dehumidify, including at interior spaces, the General Contractor shall provide and maintain portable fans to assist air circulation, or dehumidifiers if required, to accomplish the dehumidification.

Q. Miscellaneous Requirements: Provide temporary heat such that no damage results to building, materials or installed work as may be caused by dampness, cold, thermal shock, smoke or similar damage related to heat. Maintain adequate and continuous temperatures to prevent any such damage. Keep workmen or watchmen present constantly when open fires are burning. After roof deck has been

placed, or an area otherwise covered in a manner which will generally prevent snowfall in the area, the General Contractor shall immediately remove snow or ice which has accumulated within the building or unit and take closure measures to prevent further snow accumulation. Except for minor quantities and with University's approval, haul (not melt) snow and ice out of spaces.

R. Heating Period A: Unless otherwise specified, from start of construction until after enclosure, each Contractor (and Subcontractor) shall provide all necessary covering, protective devices and heating units, fuel, attendants and related heating equipment and work to completely protect his work and materials. Cost of all such protection and heating shall be borne by individual Contractors, or their subcontractors.

1. This period continues after roofing and membrane work are installed over the building or unit, until heat from the University's plant (mains) can be utilized through the permanent systems. During the heating season, or when it is approaching, Mechanical and Electrical Contractors shall be allowed the time, as specified, to install the systems, ready for use.

2. After enclosure, temporary heat within the building, or unit, shall be maintained at a minimum temperature of 45 degrees, in a reasonably uniform range, 24 hours per day, seven days per week, with heat uniformly distributed to prevent thermal shock and freezing. Provide a sufficient number of heating units at various levels, well distributed, to provide reasonably uniform temperatures.

3. The General Contractor shall provide the enclosures, with either permanent or temporary enclosures (or using both), for the spray-on fireproofing work, except for the top closure at cores (shafts) which shall be provided, maintained and relocated by the fireproofing subcontractor. The enclosure by both the General Contractor and fireproofing subcontractor shall not only provide the means of keeping the area warm in cold weather, but shall also protect the fireproofing from the elements, including rain. The General Contractor shall provide the heat in the enclosure, using portable units unless the entire enclosure is achieved by the permanent construction.

4. Except as otherwise specified herein as a result of delays of other Contractors, the General Contractor shall provide and pay for portable heating devices, or temporary systems, as well as fuel and attendants to provide the temporary heat, after temporary or permanent enclosure until the permanent systems are ready for use and steam is available from the University's plant (mains).

5. When building is framed, roof deck installed and ready for any roofing fill, insulation and membrane, the General Contractor shall provide temporary heating units, fuel and attendants within building to prevent frost on deck and to drive moisture out of and from deck. Keep building well ventilated at this time and provide sufficient heat to remove or prevent any frost on the deck (and inside building if building is enclosed). Other Contractors shall continue to protect their own work and materials as previously specified.

6. The General Contractor shall enclose the building, or unit, with the permanent construction as soon as possible. The General Contractor shall then provide temporary systems, heating units (ie: Unit heaters) and controls in the

satisfactorily enclosed areas to utilize steam from the University's plant. The Mechanical Contractor shall install all permanent mains, valves, equipment which is possible by the progress of the Project so steam from the University's plant may be used.

7. In enclosing the building or unit, the General Contractor shall accomplish other work necessary for the installation of the heating system in ample time to permit the Mechanical and Electrical Contractors to perform their work in connection with the installation of the systems. In particular: such spaces as equipment rooms, shafts, tunnels, vaults and similar shall be constructed and ready for installations; floor slabs and bases poured for equipment; walls to receive mechanical and electrical items erected; surfaces and finishes behind radiation completed; and similar work accomplished to permit installations of heating systems within a reasonable schedule.

8. The Contractor's Construction Schedule, prepared at the start of the Project, shall indicate with reasonable accuracy the anticipated enclosure of various units and the entire Project. In addition, at least 60 days prior to the expected actual enclosure, the General Contractor shall advise the Schedule Consultant, other Contractors and the University, in writing, of the actual dates. At this time the General Contractor shall also advise of the completion schedule for surfaces which are necessary for mechanical and electrical installation. At the beginning of the Project, the Mechanical and Electrical Contractors shall advise of the reasonable lead time required to complete installations of the permanent systems and the General Contractor shall complete his work to conform to such reasonable time schedules.

9. If enclosure occurs during the heating season, within 30 days after actual satisfactory enclosure (90 days after notice), the Mechanical and Electrical Contractors shall have the permanent system for the unit, and service from the plant, ready for operation; provided however, that the General Contractor has the spaces and surfaces ready for the installations within the reasonable lead time requested by the Mechanical and Electrical Contractors. The system shall include connections to the supply and return mains, suitable piping and ductwork, convectors and radiation, necessary equipment and controls to utilize the system.

10. If the actual enclosure date is between 1 April and 1 September, the permanent system shall be installed and ready for use by 1 October, under similar conditions specified in the preceding paragraph.

11. Installation and use of the permanent system is subject to spaces and surfaces being in proper condition for installation of the system. Permanent heaters, convectors, radiation or similar units shall not be used for temporary heat unless they are properly installed. Install permanent heaters, convectors, radiation and similar units after plastering or other finishing of surfaces behind the unit is complete.

12. If the mounting surface behind (or elsewhere) is incomplete, preventing installation of the permanent system, the General Contractor shall continue to provide heat by temporary systems (ie: unit heaters) as necessary to maintain the temperatures and conditions specified.

13. If the surface behind is complete, as well as supporting spaces for equipment and the remainder of the system, and the Mechanical Contractor (or

Electrical Contractor), has not completed his installation within the reasonable lead time schedule, he shall be responsible for continuing cost of the temporary heating system or portable units of the General Contractor, as a result of the delay.

14. Until the permanent systems are ready for use, with steam from the University's plant and mains, the General Contractor shall continue to provide the heat through temporary systems, including at shell spaces.

S. Heating Period B : This period commences with the use of the permanent system, with steam provided by the University, and continues until finishing operations.

1. During this period, provide heat to maintain reasonably uniform temperature throughout in 50-60 degree range, 24 hours per day, seven days per week, uniformly maintained at sufficient temperatures to prevent thermal shock, or freezing, and to equalize temperatures of the materials and structure.

2. Generally during this period, insofar as possible avoid the use of permanent fan systems and ducts except as previously specified. When use of fan and duct systems is necessary and permitted, use only to the extent necessary to maintain the 50 degree temperature. At ductwork and fan systems install temporary filters, as previously specified. Ducts or units which become dirty will be an indication that the Mechanical Contractor has not fulfilled his obligation to adequately provide and change filters. In such case, ducts shall be completely cleaned throughout by the Mechanical Contractor. The Mechanical Contractor shall provide filter covers at duct inlets and outlets to prevent dirt accumulation when systems are not in use.

3. When the permanent heating system is being used for temporary heat, the service from the plant, systems and their controls shall remain in care, custody and control of the Mechanical Contractor, who shall be responsible for maintenance, care and operation until Project acceptance by the University, and for repairing or replacing any damage, including from freezing or leaks in system.

T. Heating Period C: After start of finish operations, generally meaning the start of the ceiling grid installation, the permanent plant and system shall continue to be used, with steam provided by the University. Finish work is defined as installation of: doors and millwork; integrated ceiling; floor covering and seamless flooring; finishing operations of casework; acoustics materials; painting and similar finishes; equipment, including University's equipment; and similar operations.

1. Heating during this period shall be maintained at reasonably uniform 60-70 degrees. Heat must be reasonably uniform throughout to prevent cracks by overheating, by colder temperatures or excessive inequality of heat within any space. A 65 degree temperature shall be maintained for at least ten days prior to painting, floor laying, installation of millwork and ceramic tile. The General Contractor shall maintain the thermometers as a check on temperature.

2. During finishing work, care shall be taken to prevent damage to system and to keep all units and ducts clean. Air systems shall have temporary

filters installed at all units and outlets. Mechanical Contractor shall maintain close check and shall be responsible for proper and efficient operation of systems and equipment.

U. Heating Period D: When the University accepts or occupies the building, or unit, except for miscellaneous storage or at minor spaces, the University will take over and assume operations or maintenance of the part of the system and any equipment specifically for the unit that is occupied. However, the Mechanical Contractor shall maintain close check on systems in occupied parts and promptly make all necessary adjustments and corrections to keep system functioning properly and efficiently until acceptance of the entire Project.

## 1.2 CONSTRUCTION LIGHT AND POWER

A. Reference: Refer to Section 16010 for additional details.

B. Energy Costs; Until permanent service is installed, General Contractor shall pay all electrical energy costs.

C. Prior Temporary Service: A 200 amp, 120/240 volt, single phase, 3 wire service was installed under the earlier contract for excavation (P/N-ECX), connected to utility company service, and metered. Until the new temporary non-building construction service, specified under "E" below, is installed, the existing service may be used. When the General Contractor assumes site management, he shall assume responsibility for the service and the energy costs of this service, making payments directly to the utility company, until the service is removed.

1. When the new temporary service, specified under "E" is installed, the Electrical Contractor shall connect the existing service to the new, removing meters and discontinuing service directly from the utility. Existing equipment and wiring which is suitable may be re-used, relocating as required or desirable for service to this Project.

D. General: Until the service specified under "E" is available, should additional capacity be needed which exceeds the existing service of P/N-ECX Contract, each Contractor or Subcontractor shall provide his own energy source as he requires.

1. Except as otherwise specified, throughout construction each Contractor and Subcontractor shall provide his own temporary wiring, cords, outlets, lamps, devices and connections as required. Installation, service, wiring and devices shall be safe, substantially supported and adequately connected and meet all codes. Demand shall not exceed the service and any damage resulting from misuse, faulty equipment or overloading shall be paid for by responsible persons.

2. Except as otherwise specified, wiring, devices and lamps for job offices or storage structures shall be the responsibility of each Contractor. After enclosure of the Project, should the University choose to relocate its offices in the B/C building, the Electrical Contractor shall provide service, wire, provide lighting and outlets in the University offices, as directed. Refer to Article 3.1, this Section for service for offices in existing house.

3. Electric heaters shall not be used for heating unless approved by the University as the only reasonable solution.

4. Within the capacity of the temporary construction service, electrical service for cranes, welders, temporary elevators and similar equipment may be taken from the temporary construction service. Each Contractor shall provide his own connections, wiring, safety switches and other devices to utilize the service. However, lighting, power tools and similar loads shall have priority. In the event the loads on the temporary service approaches its capacity, indicating limited use for lighting and power tools, the University shall allocate the use among the Contractors and if required, each Contractor shall provide and pay for such other additional service and energy they may require.

5. When no longer required, at a time approved by the University and other using Contractors, the Electrical Contractor shall remove all temporary installations made by him and provided under the P/N-ECX contract. The General Contractor shall remove the temporary safety lighting he is responsible for as work progress and it is no longer required, as approved by the University. The materials and equipment shall remain the property of the Contractor removing the temporary installations.

E. Temporary Non-Building Construction Service: The service shall be obtained from the power company as described in Section 16010.

1. As soon as possible after award of Contract, the Electrical Contractor shall install the service. The location of the service and distribution panels shall be at convenient locations, which will not interfere with construction progress, as agreed upon by the Contractors and the University. Sub-service panels on each floor shall be installed by the Electrical Contractor as soon as possible after construction permits. At the superstructure, service extensions and sub-service panels shall be installed as soon as the erection of structural steel and metal decking permits.

2. The main service shall be a nominal 800 amp, 277/480 volt, 3 phase, 4 wire service, The Electrical Contractor shall provide all equipment, as specified under Section 16010. The General Contractor shall pay the energy costs, as previously specified.

3. Within the building, panelboards shall be provided by the Electrical Contractor on each floor. There shall be two (2) 100 amp panel boards on each floor for floors 1 through 9 and one (1) 100 amp panel board on each floor for floors B and 10. Panel boards shall provide 120/208 volt, 3 phase service. Panelboards shall have 120 and 240 volt receptacles, as described under Section 16010. Each Contractor shall provide his own cords, outlets, sockets, lamps and outlets for home tools and lighting for the sub-service locations, except as otherwise specified.

4. As work progresses, the Electrical Contractor shall install temporary rubber covered lamp sockets for general lighting (minimum 1000 lamp sockets in building uniformly spaced so that in general 200 watt lamps will provide satisfactory lighting) for all trades and temporary outlets for use of hand tools as specified in Section 16010. Additional lighting as may be required, including for work in the cores, shall be provided by the Contractor or Sub-contractor requiring the lighting. Sufficient lighting shall be used to perform work under adequate conditions for high quality workmanship.

5. Removal of temporary electrical installations made by the Electrical Contractor, as well as the temporary service installed under the B/C-ECX contract

(including the power poles), shall be removed by the Electrical Contractor when no longer required, at a time approved by the University and other using Contractors.

F. Temporary Building Service: After satisfactory enclosure of the building, or unit, the Electrical Contractor shall install the permanent service and energize the permanent secondary electrical system as soon as practicable and when approved by the University. Permanent service characteristics are 120/208 volt, 3 phase, 4 wire and 277/480 volt, 3 phase, 4 wire. At this time University will commence paying for energy costs.

1. The Electrical Contractor shall continue to provide temporary wiring, sockets and outlets for lighting and hand tools, as specified above and in Section 16010.

2. Permanent convenience outlets shall not be used, and permanent fixtures shall not be installed until finish operations are in process but fixtures shall be installed prior to casework installation. Other temporary wiring and devices shall be provided by each contractor as required, safe, substantially supported and adequately connected. Electrical Contractor shall install the permanent convenience outlets when approved by the University, just prior to occupancy.

3. For use of the heating plant, system and its equipment, the Electrical Contractor shall install all services, panels, devices and connections necessary to use the plant and system.

4. Service for elevators shall be provided by the Electrical Contractor as required by the schedule of elevator installation, including elevators to be used during construction whether the installation is under this phase or the phase under E above.

G. Lamps, Incandescent Bulbs and Fluorescent Tubes: Throughout the construction period, lamps in temporary lighting systems (under paragraphs E and F above, or if the existing P/N-ECX service is being used) shall be provided, including replacements, by the General Contractor and installed by the Electrical Contractor. In general, lamps shall not be over 200 watts, except where necessary. The Electrical Contractor shall also remove and replace burned out lamps as they occur, except for site lighting.

1. As work progresses and permanent incandescent light fixtures are used for lighting, the General Contractor shall provide the bulbs and the Electrical Contractor shall install and replace as specified in preceding paragraph. Just prior to final inspection the Electrical Contractor shall remove all construction bulbs and install proper new bulbs. The University shall be advised when this replacement is being made so they may verify the installation of new bulbs.

2. In permanent fluorescent fixtures, the Electrical Contractor shall install new tubes as the fixtures are installed. The Electrical Contractor shall replace tubes as they burn out during construction and replace all burned out tubes just prior to final inspection so all tubes are good at the time of inspection.

H. Site and Safety/Security Lighting: The General Contractor shall be responsible for the installation of site and safety/security lighting systems and the maintenance of same, including lamps and replacement of lamps.

1. Under the previous P/N -ECX contract, a site safety lighting system has been installed. After award of a Contract, when the General Contractor assumes site management, the General Contractor shall assume responsibility for the system, upgrading and modifying as required. The General Contractor shall verify the adequacy of the system and improve it as required. The Electrical Contractor shall connect to the new temporary non-building construction service.

2. In addition to assuming responsibility for the previous P/N-ECX system, the General Contractor shall provide all additional lighting for the site and building for safety and security, including at the building superstructure. Safety lighting shall adequately illuminate the entire site within the construction limits, and storage lots, as approved by the University and provide safe lighting conditions on or about the Project, as well as meeting safety codes. The Electrical Contractor shall consult with the General Contractor in installing general lighting at the building so the temporary light systems provided by the Electrical Contractor may also serve as safety and security lighting.

3. As work progress and site conditions change, including extension of work areas, the General Contractor shall modify, relocate, extend and maintain the site and safety and security lighting systems, providing all required materials and equipment.

4. The General Contractor shall provide lighting at temporary walkways or temporary lighting at permanent walkways, constructed under this Project, until permanent lighting is installed.

5. The site and safety lighting systems shall be lit during all hours of darkness, whether work is in progress or not. Warning lites on barricades and other hazards shall operate 24 hours per day.

6. When temporary site and safety lighting is no longer required, the General Contractor shall remove the temporary facilities, at a time approved by the University.

1. Aircraft Warning Lights: Not required.

### 1.3 CONSTRUCTION WATER

A. General: Each Contractor, and subcontractors where appropriate, shall provide their own hoses (or piping), connections and other equipment to use water, and protect their own equipment. Needless and wasteful running of water, when provided through the General Contractor's or the University's service, will not be permitted. When water is being used, the service shall be protected from freezing and damage at all times.

B. Temporary Service: Until permanent service is installed and available at the Unit F site, the General Contractor shall arrange for a source of water from hydrants or other municipal services, arrange for meter, have all connections made to provide water for use of all trades. The University will pay for water used (but not cost of meter) and the General Contractor shall consult with the University, and follow its direction, on arrangements for payment, whether directly to the City or through the Contractor. The General Contractor shall provide all connections and valves to utilize the water service, which shall include outlet connections to which other contractors may connect piping or hoses. General Contractor shall be responsible for preventing any damage to water service, including damage from freezing.



C. Construction Water from Permanent Main: As soon as possible, the Mechanical Contractor shall make the installation and connections to utilize water from the new main. Such installation shall be made no later than when the erection of steel and metal decking of Unit F reaches Floor 6 (or any portion of Floor 6). Until such time as the new booster pump is installed, the Mechanical Contractor shall provide a temporary booster pump.

1. When service is available, the Mechanical Contractor shall as soon as possible make all connections, extend branches for convenient use around the site, provide valves, connections and other appurtenances for use of water and protect the service from freezing and other damage. As the Project progresses, the Mechanical Contractor shall extend service to upper floors of the enclosure, when the service will not be subject to freezing, providing all related equipment for the water service. The Mechanical Contractor shall provide and install a meter to meter the water used at Unit F.

2. The Owner will allow free use of water, provided the privilege is not abused and unnecessary running of water is prevented.

#### 1.4 TELEPHONES

A. Contractor's Phones: Each Contractor (and subcontractors who require regular phone service) shall arrange and pay for their own phone service to their office, or elsewhere. They shall not be connected thru University service. Costs of long distance calls on the Contractor's phones shall be paid for by the person incurring the expense.

### PART 2 FIRE SAFETY

#### 2.1 FIRE SAFETY DEVICES AND SYSTEM

A. General: Refer to Section 01010 for general requirements and for Fire Safety Director. All Contractors shall be alert to fire hazards and remove or protect against their own hazards and shall comply with directions of the Fire Safety Director or the University on hazards and fire safety.

B. Fire Extinguishers: Except for units in individual Contractors offices, the General Contractor shall provide and maintain adequate and proper fire extinguishing devices in and about the construction area, available for use by all workmen. The devices shall not be the units to be later installed in the Project. Appropriate devices shall be provided for the class of the potential hazard (ie. oil, electrical) at those areas where unusual hazards may exist, including in mechanical rooms. Fire hoses shall be connected to adequate sized water lines. As construction proceeds, or materials which create a hazard are moved onto various floors, extinguishing devices shall be available on each floor. The number and distribution of devices shall be adequate for effective fire control, to the satisfaction of the Fire Safety Director and the University.

C. Standpipe Systems: The Project's standpipe systems are to be installed as the building progresses, in accordance with codes and as specified herein. Until the building is enclosed and the systems protected from freezing the systems shall be "dry" systems.

1. As the erection of steel and installations of metal decking progresses, the Mechanical Contractor shall install the 4 standpipe systems, with temporary inlet connections for fire department use at accessible locations and according to code and Minneapolis fire department directions. If necessary, provide temporary piping so inlets are accessible. At each floor, provide valved outlets for fire department use. The installation must be made when construction is not more than 50 feet above grade and extended regularly as construction progresses to within one floor of the highest point of construction with secured decking.

2. As soon as practicable after building enclosure (with heat during cold weather) and adequate water service is available, the Mechanical Contractor shall convert the standpipes to wet systems. At this time, one system shall remain a "dry" system, with fire department connections, until final connections are made to the permanent building standpipe-sprinkler system.

D. Fire Hydrants: The area fire hydrants must be accessible at all times. Fences and construction work must be arranged and accomplished to provide immediate access to hydrants.

### PART 3 OFFICE, TOILETS, STORAGE ENCLOSURES

#### 3.1 CONSTRUCTION OFFICES AND CONFERENCE SPACE

A. University's Offices: The University personnel associated with field activities will maintain an office at:

611 Delaware Street S. E.  
Minneapolis, Minnesota 55414

1. After enclosure of Unit "F", the University reserves the right to temporarily relocate its offices and conference spaces (all or part) into Unit "F", on Floor 2 or 3 at a location mutually agreed upon with the Contractors. If the University does relocate in Unit "F", final finishing of the space shall be delayed until near the end of the Project. Relocation by the University will be done by the University without cost to the Contractors, except for temporary lighting specified under Article 1.2, this Section.

2. Furnishings and equipment for University offices will be provided by the University.

B. Contractor's Offices: The very limited site prevents the use of space for Contractor's or Subcontractor's offices, until space is available in the Project. Space will be made available for an office for each of the General, Mechanical and Electrical Contractors at:

611 Delaware Street S. E.  
Minneapolis, Minnesota 55414

It is anticipated the Elevator Contractor will not require an office located on the site, but will have use of space of the General Contractor.

1. The Contractor's office at the site, shall be used for storing of records and for small conferences with his subcontractors and workmen. Each Contractor shall maintain a copy of the Contract Documents, shop drawings, correspondence, Architect's directions. Maintain neat housekeeping. Keep separate bound files, kept neat and up-to-date. Only shop drawings accepted (with stamp thereon) by Architect/Engineer shall be kept on file.

2. When the Contractor's offices are in the existing house, heating and lighting will be from the existing heating plant and electric service. The University will maintain the heating plant, pay for fuel and provide reasonable heat free of charge to the Contractors. Care shall be taken to conserve heat, keeping doors and windows closed in cold weather. Within the capacity of the existing service, the University will provide electric service (energy) free of charge to the Contractors. The Contractors shall provide their own fixtures and lamps, as required. In the event of potential overload of the service, the University will allocate use of the existing facilities as equitably as possible and if any Contractor wishes additional service, he shall pay for the service and additional energy.

3. Each Contractor and the University shall provide and install their own doors (if necessary) and locks to their individual offices. The General Contractor shall install heavy duty locks on exterior doors and provide two keys each to other Contractors and the University. The house shall be for administrative office use only; not for storage.

4. As work progresses, after building enclosure, the Contractors and major subcontractors may utilize space within the Project for offices and storage, at locations approved by the University. In general it is intended these be on floors 2 and 3 or in "shell" spaces, particularly during latter stages of construction. Each Contractor shall be responsible for enclosing (if necessary) the space, providing his own facilities, maintaining spaces clean and neat, and restoring any damage. If necessary, office locations shall be relocated as directed to allow completion of work.

### 3.2 SANITARY FACILITIES

A. Non-building Toilets: The General Contractor shall: Provide an adequate number of toilets for the use of all trades and Contractors on this Project; maintain them in sanitary condition; provide tissue. Adjacent existing building facilities shall not be used. Toilets shall be either self-contained Satellite Service type units or flushing water closet installation, as approved by the University; they shall not create a nuisance and shall be screened from view. The number of units shall be increased as the on-site number of workmen increase. In general, provide one unit for each 25 workmen.

B. Building Facilities: As soon as possible after enclosure of the building, when the areas will not be subject to freezing, the Mechanical Contractor shall install temporary water closets and lavatories at toilet rooms, at various locations, on different levels, accessible to all trades. At least twelve water closets, 12 urinals, and eight lavatories shall be installed, over at least 4 levels. General Contractor shall maintain these rooms clean and provide tissue and paper towels. Mechanical Contractor shall remove the temporary fixtures and install the permanent fixtures just prior to completion of work and the General Contractor shall restore room to "like new" condition before acceptance by the University.

### 3.3 STORAGE ENCLOSURES

A. General: Refer to Section 01010 for areas of storage. The Contractor (and each subcontractor) shall provide adequate enclosures and coverings to protect and preserve all materials stored at the site. Materials such as wood, finished metal, cement, masonry materials, equipment of any type, conduit and similar materials, shall not be piled directly on ground. Any material subject to damage, deterioration or weathering when exposed shall be covered or in protective enclosures. The University reserves the right to direct such protection, which shall be complied with by the Contractor. Coverings shall be durable, watertight, fully cover sides as well as top, substantial and well anchored to prevent blowing away. Shed type of enclosures shall be provided for easily damaged and small items, shall be neatly constructed, well maintained and subject to University approval. Any protection which becomes damaged shall be replaced immediately.

1. Without exception, fan units and all other equipment with bearings or similar working parts shall be set on supports above the ground and snow and shall be enclosed with substantial well secured waterproof protection to prevent any damage from moisture or otherwise.

2. When no longer required, the Contractor shall remove the storage enclosures.

B. Limited Area: With the extremely limited storage area, the Contractor shall carefully schedule material deliveries for immediate installation to minimize the need for storage area. Any storage structures required shall be located on the Contractor's allocation of site space.

## PART 4 VERTICAL TRANSPORTATION

### 4.1 STAIRS

A. Temporary Stairs: Upon starting work on the site, the General Contractor shall erect adequate, safe and rigid stairs for the use of all workmen and others authorized to be on the site, complete with railings, at all locations where stairs are necessary for convenient movement of personnel.

B. Permanent Stair Systems of Building: As soon as practicable, the permanent stair systems shall be erected by the General Contractor. When the permanent stair systems are installed, adequate precautions shall be taken to prevent defacement of the stairs, particularly the steel pans with the vertical riser projecting above the tread. In-fill treads shall be provided for the permanent stairs, of safe, stable and anchored material. When the permanent stairs are used during construction, prior to required field painting the stairs shall be cleaned and bare metal re-primed. Any damaged, dented, chipped or bent steel pans, railings, tread in-fill, nosings, or other work shall be replaced.

### 4.2 HOISTING FACILITIES

A. General Until the construction elevator as specified under Article 4.3 of this Section, is operative, each Contractor shall provide, or arrange for, all hoisting facilities required to accomplish the Work of his Contract. After the construction elevators #1 and #2 are operational, each Contractor shall provide, or arrange for, all other hoisting that he may require which can not be accomplished with elevators 1 and 2.

### 4.3 BUILDING ELEVATORS

A. General: This Article is concerned with the elevators to be installed in the Project under Division 14. It is the intent to provide, and place into service, two (2) of the building's permanent elevators for the use during construction by the Contractors and University, as specified herein. The use of the elevators shall be cooperative and no Contractor shall monopolize the elevators, for an extended time, except for periods scheduled with the General Contractor, University, and other Contractors. After hours use must be scheduled in advance with the General Contractor, as well as the University, to allow University representatives to be present. No Contractor shall monopolize an elevator more than 2 hours at a time without the express agreement of other users. At times the need for use of the freight elevator #1 may exceed the available time during the day which may required after hours or weekend use.

B. Elevators: The elevators to be placed in early service for construction use are elevators number 1 and 2, with number 1 operational first. It is intended elevator #1 will be primarily for freight and elevator #2 primarily for passengers. No other elevators shall be used during the construction period without the express written approval of the University and the Vertical Transportation Contractor.

C. Responsibility: For use of any elevator during construction, (including the 2 specified herein), responsibility shall be assumed by a specified party for: any damage resulting from the use; systematic (weekly) examination, adjustment and lubrication; malfunctioning of the equipment; service calls; and the costs resulting therefrom. The General Contractor shall assume the responsibility for the two temporary construction elevators specified herein. However, prior to placing in use, the elevators shall be carefully tested adjusted and otherwise placed in "full-use" proper operating condition, by the Vertical Transportation Contractor. The General Contractor shall manage the construction elevator service.

D. Project Conditions and Equipment Installation: To allow for construction use, elevator equipment shall be installed in its final position, including the permanent rails. Shafts shall be properly constructed and plumb to receive the installation. Equipment spaces shall be properly constructed and enclosed, to allow equipment to be installed under and in satisfactory conditions. Shafts and equipment spaces shall have permanent roof or other approved waterproof protection installed.

E. Controls: The elevators shall be equipped with manual controls, and a call system, provided and installed by the Vertical Transportation Contractor, during construction period. At the end of the Project, at a time approved by the University, the permanent controls shall be installed by the Vertical Transportation Contractor.

F. Temporary Cab: At elevator #1, the Vertical Transportation Contractor shall provide a temporary cab enclosure on the permanent sling and platform (or temporary platform at Contractor's option). Cab enclosure shall be sturdy of not less than 1/2" plywood or other approved material. The floor shall be temporary, of plywood or other durable surface. Cab height shall be 14 feet, or maximum height possible if 14 feet cannot be provided.

G. Temporary Entrances: At elevator #1, the General Contractor shall provide and install suitable temporary wood swinging doors and frames at the entrances, minimum 4 feet wide. The Vertical Transportation Contractor shall provide and

install door interlock devices. The shaft enclosure shall be provided by the General Contractor and may be the permanent enclosure, temporary enclosure or a combination. The entire installation shall be adequate and safe for use by passengers and freight during construction. At the end of the construction period at a time approved by the University and Vertical Transportation Contractor, the temporary doors and frames (and shaft enclosure, if temporary) shall be removed by the General Contractor one floor at a time, coordinated with the Vertical Transportation Contractor, to permit installation of the permanent frames. The permanent cab and controls shall also be installed during this period. Elevator #2 shall be equipped with protected permanent entrances and cab as previously specified.

H. Other Equipment and Installation: Other equipment and elements of the elevator installations shall be the permanent equipment, except the finish ceiling and lite fixtures which are optional, but a lite shall be provided. Complete installation shall meet all code requirements.

I. Protection: All permanent elements, subject to damage, shall be protected from damage or defacement during construction use. The General Contractor shall provide and install the protection. Walls, floors and ceilings shall be lined with not less than 1/2" plywood, with a cushion board between the plywood lining and car enclosure at the walls. Lining shall not be fastened to the permanent enclosure. The protection shall be in addition to any pads used. Opening frames shall be protected similar to walls. Protective sheet material shall be applied to door faces. The General Contractor shall maintain the protection, replacing as required.

J. Use: Care shall be exercised to avoid damage to the elevators and elements. In no case shall the elevators be loaded to the rated capacity and the capacity shall be stenciled on the temporary cab lining.

K. Elevator Operators: The General Contractor shall provide the operators for each elevator used, throughout the construction period until they are restored for final acceptance.

L. Electrical Power: To place the elevators in use, the Electrical Contractor shall install the permanent service, or adequate temporary service, and all other equipment, devices and connections required under his Contract for the service to elevators. The University will pay for the energy for elevator use, as specified under Article 1.2 of this Section.

M. Installation Time: The first elevator #1 shall be ready for service on or before the milestone date specified in Section \_\_\_\_\_ and elevator #2 within 3 weeks thereafter, provided construction has progressed to permit the installations, with reasonable time for the elevator installation.

N. Variations: Minor variations in the requirements specified may be permitted, if agreed upon by the affected Contractors and University, provided the intent of the requirements are met.

O. Restoration for Final Acceptance: At the end of the construction of the Project, after other elevators have been placed in use and when approved by the University, the construction elevators shall be restored and converted for general use by the Vertical Transportation Contractor. All temporary elements and services shall be removed, any damage repaired or replaced and the permanent features and services installed. All work shall be restored

to "like-new" condition, adjustments made, lubrication performed, testing accomplished and other work completed to place complete elevators in "new" condition for final inspection. Any damage, including to doors, frames and cabs shall be replaced or repaired by the Vertical Transportation Contractor and paid for by the contractor causing (or whose workmen caused) the damage.

P. Warranty and Maintenance Period: Construction use of elevators shall not reduce the warranty period, nor the required maintenance period after the final acceptance of all the elevators. Service and warranty periods shall start on the date of final acceptance by the University.

Q. Exclusive Passenger Use: As required by the size of the labor force at the site, during periods in the morning, at lunch time and at quitting time, both elevators will be exclusively for passengers if necessary. Generally these periods will be for 30-45 minutes in the morning and evening and one hour at lunch. The time periods are to be as agreed upon by the Contractors.

R. Normal Time of Elevator Service: Unless other time is arranged for by a Contractor or other party, as a minimum normal elevator service shall be available commencing 1/2 hour before normal starting time and until 1/2 hour after normal quitting time. If required at other times, arrangements shall be made with the General Contractor in advance. The University shall also be consulted for after hours work to arrange for and allow University representation at the site.

S. Charges for use of Elevator Service: Except for passenger service, the General Contractor will charge for the use of the construction elevator service during the normal day time of the services, based on \$20.00 per hour. For other than the normal work day (after hours, Saturdays and similar) the charge for both passenger and freight use will be based on \$20.00 per hour plus the additional premium time cost for the operator. Passenger service during the normal day time shall be free.

1. A unit of time shall be 15 minutes, or fraction thereof, with a cost of \$5.00 per unit of time.

2. Free passenger service shall include the person and any small items the one individual is carrying. If one (or more) passenger carries a large bulky item, or moves an item onto the elevator floor or sets an item down on the floor in the elevator, it will be considered as freight use and the passenger charged for the time.

3. Any and all use of elevators for transporting materials, equipment, tools and other freight will be considered freight use. Charges will be based on the units of time the elevator is tied up for the load, including loading and unloading time. There will be no charge for passengers riding with the freight. Multiple freight users on the same load will each be charged for their unit(s) of time.

4. Unless another system is agreed upon by the Contractors, a "chip" system shall be used to determine and tally the elevator use of each Contractor. Each Contractor shall be assigned a color for chips for his use and the use of his subcontractors. Each Contractor shall provide his own chips. Each chip will be worth one unit of time. At the time an elevator is used for freight, the operator will collect a chip for each unit of time (or fraction thereof) from the Contractor or his workmen who use the elevator.

5. Should a Contractor have an agreement under which a subcontractor (or subcontractors) is responsible for the cost of their own elevator use, the Contractor shall imprint a distinctive mark on chips of his color, for the Contractor's use in obtaining repayment.

6. For elevator service at other than the normal working hours, the Contractor (or subcontractor) shall make arrangements in advance with the General Contractor, and University. The chip system or some other method of recording, as agreed upon by the Contractors, may be used. However, the Contractor (or subcontractor) will be charged for the entire time period he has exclusive use of the elevator, whether it is in continuous service or not.

7. The General Contractor will bill each other Contractor (and his own subcontractors responsible for their own service) each month for the units of time used by the other Contractors and their subcontractors. Payment shall be made promptly to the General Contractor. The General Contractor is not responsible for billing subcontractors of other Contractors, which shall be the responsibility of the other Contractors.

8. Periodically, generally on a weekly basis, the General Contractor shall tabulate the units of time used by each Contractor (and their subcontractors) and return the chips collected by the operator to the Contractor, along with a copy of the General Contractor's tabulation. These tabulations, along with any recorded time of off-hour service shall be the basis of the billings.

9. The Contractors are solely responsible for the control and issuing of their own chips to their own workmen and subcontractors, as well as instructions for use. The operator will keep track of time, during normal work time hours, only by the collection of chips and will not move freight without collecting the required chips.

10. Elevator use by the University, the Architect/Engineer and their representatives shall be without charge. It is the intent of the University to move its materials, equipment and furnishings by way of elevators in Unit A as far as possible to minimize the use of the B/C construction elevators. However, as the Project nears completion, B/C elevators will necessarily be used to transport freight to levels in B/C which are not served by a direct level interconnection with Unit A.

## PART 5 SCAFFOLDING

### 5.1 HIGH CEILING SCAFFOLDING

A. The General Contractor shall furnish, erect, maintain and remove adequate and safe scaffolding at high ceiling areas for the use of all Contractors and trades, without charge. This requirement applies only to areas and spaces as follows:

1. Areas and spaces with a finished ceiling, such as plaster, wood, metal, plaster, ceiling panels, acoustical units and similar finishes. Finish of paint on the concrete or metal structure does not qualify as of finished ceiling.



2. The ceiling height to the finished ceiling is 14 feet or more above the finished floor. Any space shall be considered a high ceiling area if any part of the ceiling is 14 feet or more above the ceiling. Where a ceiling height varies but any part is more than 14 feet above the floor, the General Contractor shall provide all required scaffolding for the entire space.

3. Scaffolding required for work at and above existing auditorium ceiling (floor features, such as equipment or seating, are existing).

B. The requirement for scaffolding by the General Contractor does not apply to the following, and in these cases, the Contractor requiring scaffolding shall provide it.

1. Mechanical rooms or spaces.
2. For spray-on fireproofing of the structure.

C. The Mechanical Contractor shall furnish, erect, maintain and remove scaffolding in mechanical and equipment rooms, except for such rooms where he does not require scaffolding for his own work. Such scaffolding shall include the scaffolding as required at the mechanical room heat shield locations, as specified under Section 01010.

D. Other Contractors shall be permitted reasonable access and time in the use of the scaffolding, provided under Paragraphs A and B above. At start of finishing operations the General Contractor shall initiate realistic work schedule for use of scaffolding provided by him. Other Contractors and Sub-contractors shall abide by such schedule if utilization of General Contractor's scaffolding is desired.

## 5.2 SOFFIT SCAFFOLDING

A. The General Contractor shall furnish, install, maintain, relocate and remove safe and adequate scaffolding for work at the exterior soffits of the building and its overhangs, for the use of all Contractors and trades, without charge. Power operated swing scaffolding shall be suspended from the floor above, through sleeves provided under Section 05500. The use by all trades of the soffit scaffolding by the General Contractor shall include use by the spray-on fireproofing subcontractor.

B. Scaffolding shall be provided at areas as follows:

1. All exterior soffits at Floor 7 of Unit F, (shown on Floor 5 ceiling plan) between grids NS and S11.

C. The General Contractor shall schedule and coordinate the work of his subcontractors and other Contractors to provide the orderly, and logical sequencing of the work of various trades and allow each a reasonable time to accomplish their work. The General Contractor shall relocate scaffolding at various areas as required.

## PART 6 MISCELLANEOUS PROVISIONS

### 6.1 SIGNS

A. Project Identification Signs The University will provide the project signs, which will include the project identification, Architect and Engineers and

prime Contractors. The General Contractor shall erect the signs (2 signs) where directed on stable, sturdy and neat supports.

B. Contractor's Office Signs: Each Contractor may provide a small neat sign to identify his job office.

C. Other Signs: No other signs will be permitted, including signs on the building or painted legends on the structure.

## 6.2 WALKWAYS

A. General Except where specifically called for otherwise, or where necessary for the sole benefit of another Contractor, the General Contractor shall provide safe, durable temporary walkways for the public and workmen, including but not limited to: protected walkways on public streets along construction fences; walkways across general excavations to reach the building or other features of the Project; across large openings in the floors of the Project; at entrances or exits at existing buildings where the entrance or exit must be maintained during excavation and other construction operations; and similar conditions necessitated by construction.

B. Where walkways are placed on public streets, General Contractor shall arrange and pay for use of street permits if required.

## 6.3 PARKING AND LOADING - UNLOADING

A. General; All campus regulations, signs and directions regarding parking and loading - unloading shall be followed. The Contractor is responsible to instruct his workmen. For unusual conditions, the Contractor shall consult with the University on proposed procedures and locations, should a temporary variance be required, and follow the instructions issued.

B. Absolute Zones: All zones which are marked NO PARKING - NO STOPPING ANY TIME, must be strictly adhered to. All deliveries and pickups by contractors, subcontractors and suppliers must be made on side streets, alleys, or on University driveways and loading zones.

C. Restricted Zones: There shall be no loading or unloading from Washington Avenue.

D. Parking: Space for parking two cars shall be reserved on adjacent areas for storage under this Contract for vehicles of the Architect. The General Contractor shall provide signs designating the spaces. Parking for the Contractor's supervisory personnel and workmen working on campus is available in University parking lots and ramps on "as available" basis, at regular parking rates. The University will not reserve spaces for the Contractor's use in its ramps and lots.

E. Contractor shall provide a uniformed traffic director who shall be present whenever materials are delivered to the sites. The Traffic Director is to insure that Washington Avenue and Harvard and Delaware Streets are open at all times. The Traffic Director is to insure that the Mayo Courtyard is accessible to the Fire Department at all times.

## 6.4 DEWATERING

A. General: The General Contractor shall be responsible for dewatering the general building excavation providing pumping, piping and other equipment as required. Such dewatering shall include to the general level of excavation and the excavations made below this level for work (ie: footings, pads, pits, and similar) of the General Contractor. The Mechanical and Electrical Contractors shall be responsible for dewatering their own excavations and trenches, including trenches within the general building area below the general level of building excavation.

## 6.5 FENCING AND BARRICADES

A. General Fencing: Except as otherwise specifically noted or specified, each Contractor is responsible to provide and maintain fencing around his own excavations and hazards, or to protect adjacent features from damage from his operations. Fencing shall be adequate to prevent accidents and safeguard the public and workmen. Fencing shall be neat and well maintained.

B. Barricades: Except as otherwise specifically noted or specified, each Contractor is responsible to provide and maintain barricades where required to warn of a hazard and to stop the public and workmen. Barricades shall have properly operating warning lights, illuminated or flashing at all times.

C. Site Fencing: The site fencing installed under the P/N-ECX Contract is to be turned over to, and become the responsibility of, the General Contractor when he assumes site management. The General Contractor shall maintain all site fencing throughout construction, relocating when required and providing new fencing for additional areas as required. At the completion of the Project, the General Contractor shall remove the site fencing at a time approved by the University (unless directed by the University to leave the fencing). All reusable site fencing, as designated by the University, shall be rolled and delivered and unloaded by the Contractor, at University's storage area on Como Avenue S.E., Minneapolis, including posts and fittings. Fencing the University does not want shall be removed from the site by the General Contractor at no additional cost. Site fencing shall be maintained and provided as follows:

1. The General Contractor shall provide and maintain fencing around the construction limits and all storage staging areas. Refer to Section 01010 for these areas. The fencing shall be removed and/or relocated as the construction limits change during the construction period and existing fencing in good condition may be reused. Conveniently located gates shall be provided and maintained for normal pedestrian passage and for deliveries by truck.

2. New fencing shall also be provided where required to increase the fencing at the varying construction limits. As a minimum, fencing shall be:

a) As made by USS (Cyclone), Page, Continental Steel or Crowley Fence, with quality as a minimum equal to existing.

b) Height as suitable for the location and application, minimum 7'-0" above grade.

c) Galvanized fabric, 9 gauge wire, 2" woven wire fabric.

d) Galvanized line posts, terminal posts, gate posts, rails and other items, with all necessary fittings, braces, tension wires, gate fittings, torsion bars, hinges, truss rods, latching devices for padlocking, catch to secure gates in open position and other accessories. Line posts not less than 2.70 lbs. per foot, not over 10'-0" o.c.; terminal posts of 2-1/2" - 3" pipe columns, 3.65 lbs. per foot.

e) Constructed and erected to provide straight and plumb installation, rigid and sturdy, with adequately spaced posts and to proper and level height and with fabric stretched tightly on frame.

f) With chain link fabric securely fastened to all terminal posts with 1/4" x 3/4" tension bar with 11 gauge pressed steel bands spaced 14" o.c. to line posts with 6 gauge wire clips, 14" o.c. and to horizontal rails with 9 gauge tie wires, 24" o.c.

g) Complete with special wall mounted brackets to receive the fence posts, where indicated or required to complete the enclosure, of approved design. Bolt securely to wall at locations as approved or directed (not into pre-cast facing) with bolts that do not penetrate through wall.

h) Installed in a manner to prevent damage to the structure or membranes over the structure at areas of existing or new underground structures. No plates, posts, wire mesh or concrete shall be in contact with the membrane. Provide pedestals of sufficient size to spread loads and to provide a stable fence, with protective separator between the pedestal and membrane.

3. All fencing, new or existing shall be maintained in good condition, with plumb posts and fencing, operating gates and fabric that is well stretched and free from holes.

#### 6.6 TEMPORARY CLOSURES AT EXISTING BUILDINGS

A. The General Contractor shall provide neat and approved temporary closures wherever work of this Project interfaces with existing buildings or spaces. In general, closures shall be partition types (not canvas or similar material), with doors or access between the spaces only as required. Surfaces facing adjacent finished or occupied spaces shall have equivalent of gypsum surface, smooth and undamaged. Temporary closures shall be located as approved by the University, with minimum encroachment on the existing spaces. Closures shall not block required exits nor unduly restrict circulation or activities in the adjacent space. The Contractor shall provide a schedule to the University, on a floor-by-floor and location-by-location basis when areas need to be vacated to install closures, or when areas will be closed off.

B. Temporary closures shall provide security from passage between the spaces (new and existing), as well as provide protection from weather and from the transfer of dust. When any closure will be exposed to weather from November to April, it shall be insulated with 3" minimum blanket insulation. Perimeters and penetrations shall be sealed with masking tape, caulk or other appropriate seal to eliminate passage of air and dust. Closures shall be well maintained to protect against weather, dust and to provide security.

C. At the above grade interface openings between Unit F and Unit A, closures shall be partition type, with minimum 1/2" plywood "exterior" face and gypboard interior surface. Necessary access through the partitions (i.e. access to precast panel connections and similar work) shall be lockable access panels or doors, kept locked at all times by the Contractor, except for those periods when workmen must have access to the B/C side of the closures. When access from the Unit A side is no longer required, the access openings shall be permanently closed by the Contractor to prevent passage from A to F or the reverse.

D. At Unit A interface, where removal of precast panels and new wall installations require temporary closures at stairs, the closures shall not interfere with the stairs as required exits. Work at these areas may restrict the use of the stairs as normal passage ways during working hours, in which case the Contractor shall post signs of "Construction Work in Progress - Use Other Stairs or Elevators."

E. Where partition type closures are set back from the outside building face, and water may enter the area of the set back, water shedding closures shall be installed at the building face to prevent entry of rain water. These closures shall be substantial, well maintained, secured to prevent displacement in the wind and adequate to prevent moisture penetration.

F. Temporary closures shall be provided where construction under the Contract creates an access to or from Unit F to adjacent buildings, to provide security between the buildings and limit access between the buildings.

G. Painting of surfaces facing adjacent finished or occupied spaces will be done by the University, if required.

H. At a time agreed upon by the University and Contractor, temporary closures shall be removed and all permanent surfaces cleaned and restored by the Contractor.

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1.1 CHARACTER OF WORK, MATERIALS AND INSTALLATION

A. The Work shall conform in all respects with requirements of all Contract Documents, and workmanship shall be first quality, the best obtainable at the present state of the crafts. Incompetent or careless workmanship shall not be permitted by the Contractor and will not be accepted by the University.

B. Except where reusing of existing materials or equipment is required or permitted by the Contract Documents, all equipment and material shall be new, undamaged, in proper operating condition, serviced and ready for full use of the Owner after installation.

C. If, in opinion of the Contractor (or any subcontractor) any Work is indicated on drawings or specified in such manner as to make it impossible to produce work of highest quality, within space shown, or which may be considered improper for use and conditions, including the effects of expansion and contraction, or should discrepancies appear between drawings, or drawings and specifications, the Contractor shall refer same to University for interpretation before proceeding. If the Contractor does not request such interpretation, no excuse will be entertained thereafter for failure to carry out and guarantee the Work in a satisfactory manner. Elements of the Work intended to protect against weather shall be guaranteed weather and water tight.

D. Proper performance of the Contract shall imply, among other things, correct and proper placement and fitting of all elements of the Work, proper or published results for products and equipment, correct fitting and operation of fixed or movable and operating parts of the Work, including doors, windows, hardware and all systems and equipment. All materials and equipment shall be complete in every respect, with all parts, connections, anchors, devices, backing, fittings and other necessary items, and shall be completely installed, anchored, fitted and placed in operating condition. Before buying, constructing or installing work, the Contractor shall notify the University of any requirements which may exist in the Contract Documents which will adversely affect proper operation or first quality installation.

E. Equipment and devices shall be provided and installed to "fail safe" in all circumstances and it shall be Contractor's obligation to provide and install work in such manner.

1.2 GENERAL MATERIALS, EQUIPMENT, INSTALLATION AND APPLICATION REQUIREMENTS

A. General: Satisfactory installation or application shall mean, among other things: structural adequacy; tolerances, elevations and plumbness within required limits; connections and devices complete and properly secured; welding properly done; and all other items and services completed as shown or required.

B. Coordination: Throughout the Project, various systems, materials, equipment and finishes will be applied, attached, secured, integrated or otherwise related. Each manufacturer, Contractor and subcontractor shall take all reasonable precautions to insure his materials, devices, items, equipment or other products or systems are complete to provide best operation or to be satisfactorily applied or installed to each other and he shall make necessary adjustments during preparation of shop drawings or in advance of

field or shop work to accommodate other work to prevent unsatisfactory material or installation. Where necessary to accommodate other materials on work in the manner shown or specified, the tolerances allowed by the Contract Documents shall be reduced to insure completion of the Work in the manner detailed or otherwise called for.

C. Installation Standards: Except where specified requirements exceed manufacturer's recommendation, materials or equipment shall be applied and installed according to directions of the manufacturer or recommendations of recognized authoritative data of an association dealing primarily with the material or system, unless specifically designated otherwise. In no case shall installation, including any temporary work necessary (i.e. shoring), be below the standard recommended by manufacturer. Fabrication (including reinforcing and accessories) and installation shall be provided to insure proper placement and use of the item or material under location, use, condition and available space to serve intended function and to meet code requirements. Where specified requirements exceed the manufacturer's standards, the specifications shall govern.

### 1.3 PROPOSED MATERIALS AND EQUIPMENT

A. Refer to Article 12 of the Instructions to Bidders, Paragraph 7.13 of the General Conditions and Article 2.3 of Section 01300, Submittals. The Contractor shall provide materials, articles, equipment, systems and other items (products) that have been specified, or listed in addenda, under the specified conditions and criteria. Requests for the use of alternate products after bids have been received will not be considered, nor changes allowed in the accepted list of products, except when the specified or accepted product subsequently is determined as not meeting the requirements of the Contract Documents or the product becomes unavailable, and then only under the following conditions:

1. The Contractor (or subcontractor) has placed orders for the specified materials and equipment (products) promptly upon award of contract and acceptance of list. No excuse or proposed substitution will be considered for products due to unavailability unless proof is submitted that firm orders were placed immediately.

2. The reason for unavailability is beyond the control of the Contractor. Unavailability will be construed as being due to prolonged strikes or lockouts which will seriously delay the entire Project to an extent the University finds unacceptable, bankruptcy, discontinuance of manufacture of a product or Acts of God.

3. The request for the use of an alternate product is submitted in writing within 10 days after the date the Contractor has ascertained the product does not comply with the specifications or has become unavailable, accompanied by supporting evidence.

4. The Contractor proposes to use an alternate product that was specified or listed in an addendum, along with complete data on the product.

5. There is no extra cost to the University.

6. The alternate product is acceptable to the University and Architect.

B. If, after acceptance of the Contractors proposed list of materials, required under Section 01300, by subsequent evidence or investigation the University or Architect determines a product has been misrepresented and will not comply with, or perform in accordance with, the Contract Documents, they shall have the right to require a change to a complying product without increase in cost to the University.

#### 1.4 REFERENCES TO STANDARDS AND CODES

A. If the Contractor observes that the drawings and specifications are at variance with any applicable code or regulation of a governmental unit having authority, he shall promptly notify the University, in writing, and any necessary changes shall be adjusted as provided in the Contract for Changes in the Work. If the Contractor performs any work knowing it to be contrary to such laws, ordinances, rules and regulations, and without such notice to the University, he shall bear all costs for damages arising therefrom.

B. The standards referred to, such as ASTM, Federal Specifications and similar standards, shall have full force and effect as though printed in the specifications, except as modified in the specification. These standards are not furnished to bidders and the Contractor as it is assumed that manufacturers and trades involved are familiar with their requirements. The Engineer reserves the right to require copies of each standard be placed on site by the Contractor.

C. Any material specified by reference to the number, symbol or title of a specific standard, such as ASTM, Commercial Standard, Federal Specification, trade association standard, or other similar standard, shall comply with the requirements in the latest revision thereof and any amendment or supplement thereto in effect on the date of The Contract Documents, unless otherwise noted.

D. For products specified in accordance with a Federal Specification, ASTM Standard, American National Standards Institute or similar association standards, upon request the Contractor shall provide an acceptable affidavit by independent testing laboratory, or other source approved by the University, certifying that product furnished for this Project complies with particular standard specifications. Where necessary, requested or specified, supporting test data shall be submitted to substantiate compliance. The manufacturer is subject to University's acceptance.

#### 1.5 GUARANTEES

A. In addition to the general one year guarantee on all Work under this Contract, any extended guarantee of the manufacturer on any item shall be provided to the University as a part of this Contract, and shall remain in force and effect for the University.

B. The Contractor shall complete all manufacturer's warranty registrations for all items, components and units so warranted, and shall file copies of the warranties with the University. Manufacturer's standard warranties for periods shorter than one year shall not reduce the one year guarantee period by the Contractor as required under the Contract.



## PART 2: ANCHORAGE, SUPPORTS, SLEEVING, PENETRATIONS

### 2.1 GENERAL

A. The requirements of technical Sections of the specifications or requirements of the drawings, which are more specific or in excess of the general requirements herein shall take precedence over these general requirements. Contractor and all subcontractors shall furnish and install proper anchorage devices to securely, and in the best manner, fasten, hang, mount, anchor, and support all their work in a neat and substantial way. Unless otherwise specified, subcontractors shall furnish all devices for fastening their work together and for fastening their work to the structure.

B. Each to Provide Own Devices: Except for quantity indicated and as noted above, Contractor and all subcontractors shall furnish and install their own sleeves, anchors, inserts and other devices as work progresses to accommodate their own materials and their Work. Methods and devices, as well as location, may be subject to the Engineer's approval and shall not impair, violate or alter structure, water tightness or aesthetic value of the Work.

### 2.2 ANCHORAGE AND SUPPORTS

A. Types: In general, provide bolts and shields for anchorage to solid materials, toggle bolts into hollow masonry construction or through-bolts and washers where necessary, unless otherwise shown or specified. Wood plugs into solid materials, toggle bolting to lath and plaster, or bolting into shields at hollow units will not be acceptable. Contractors shall provide adequate backing for all fastenings and supports to prevent deflection or undue stresses. For concrete, anchorage devices shall generally be cast in, not drilled in later, unless otherwise specified.

B. Shot and Drilled Anchors: At concrete, shot or drilled-in anchor devices will be permitted where casting in may be difficult to coordinate or cast-in devices can not be set in time, provided they will not damage the concrete or cause any spalling around the anchor. Shot anchors will not be permitted in slabs 4" or less in thickness nor where spalling may result. A representative number of anchors shall be field loaded above anticipated loads to insure their adequacy. Drilled in expansion anchors, which have the same hole size as the bolt size, such as Thunderstud by Universal Fastenings will be permitted provided there is no spalling around the holes, the holes are neatly drilled and approved test reports indicate adequate shear and pullout strength with ample safety factor.

### 2.3 SLEEVES

A. Sleeves Required: Sleeves shall be provided for all pipes, conduit, ducts and similar features that pass through walls, slabs, concrete beams or girders, concrete columns or concrete bridging, except sleeves are not required for conduit through walls or partitions provided any space around the conduit is effectively sealed to maintain the integrity of wall or partition. Sleeves through structural members shall be located as detailed or as directed by the University. Except as otherwise specified, sleeves shall be provided by the Contractor or the Subcontractor requiring the hole for his work. In addition, the Contractor shall provide sleeves specifically noted on the drawings and shall set all sleeves and inserts.

B. Sleeve Requirements: At all exposed or concealed concrete and masonry penetrations, sleeves shall be uncoated or galvanized pipe or steel plate, not less than Schedule 40 steel pipe. Unless otherwise called for, sleeves passing through walls, slabs, beams, bridging, columns, shall be 1" greater in inside diameter than external diameter of pipe (and insulation, if any) passing through sleeves. Pipe insulation shall be continuous through the sleeves. All sleeves shall be of new material, cut square, and reamed. Sheet metal sleeves may be used only where specified or specifically approved. Unless otherwise called for, sleeves through walls, including exterior walls above and below grade, and other vertical elements shall extend full thickness of wall and be cut flush with finished surface. Sleeves through beams and floor slab shall extend 1-1/2" above and below finished floor except as otherwise detailed or required by code.

C. Sleeve Spacing: Where sleeves occur in rows or clusters, a minimum of 4" of concrete shall be left between sleeves and if the normal spacing of reinforcing bars cannot be maintained, or are interrupted because of sleeve size or cluster location, extra reinforcing shall be provided by the Contractor providing the sleeves, as directed by the Engineer. In no case shall sleeves impair the structural capability of the Work.

D. Core Drilled Holes: Sleeves shall be provided at core drilled holes and shall conform in dimension, material and height to the requirements of paragraph B above. The sleeves shall provide a good fit to core drilled hole and shall be set in place with a full coating of epoxy adhesive to insure remaining in place and maintaining a good seal between the hole and the sleeve.

E. Sleeves for glass or plastic piping: Where glass or plastic piping over 1" in diameter (o.d.) pass through roof and floor slabs, fire and smoke rated walls or partitions and shaft or core enclosing walls, the steel sleeve shall extend one foot below the slab, one foot beyond the shaft or core wall into the adjacent space or one foot beyond each side of a fire or smoke wall dividing a space. The extension of the sleeve shall be insulated with 1" Fiberglas sectional type pipe insulation, with Owens-Corning ASJ all service jacket.

F. Sealing of Sleeves (by installer of pipe conduit or feature): As pipe, conduit or other feature is installed through a sleeve, it shall be wedged to keep in the center of the sleeve, with wedges held 1" back from end of sleeve. Pipe, conduit or other features through floors and roofs shall be caulked at the top in all cases, and at the bottom where exposed in a finished space. An approved rod-stock backing for sealant shall be inserted around the pipe, conduit or other feature, held back 1/2 inch from end of sleeve. Sealant shall then be applied, sloped up about 20 degrees to the pipe to form a watershed. The sealant shall be G. E. Silpruf Sealant, or approved equal, primeless, with service temperature up to 250 degrees F., color as selected by Architect. All sealant work shall be provided by the Contractor installing the pipe or conduit and shall be installed in accordance with the workmanship provisions, including clean surfaces, of Section 07900 of these specifications. At all penetrations through roof and floor slabs, fire and smoke rated walls or partitions and shaft or core enclosing walls, the space between the sleeve and pipe shall be provided with an approved fire stop. Prior to placing the rod stock backing and sealant, insert Johns-Manville, Cerablanket-FS ceramic fibre blanket insulation filling the entire space between sleeve and pipe or conduit, a minimum of 1-1/2" in depth. Hold back from edge of sleeve to allow for rod stock backing and sealant. Installation shall be made to maintain an effective fire stop.

## 2.4 PENETRATION OF METAL DECK

A. The requirements apply to non-cellular and cellular floor decking. At openings shown on the structural drawings, any additional reinforcing required shall be provided by the General Contractor; for other openings any additional reinforcing shall be provided by the General Contractor and paid for by the Contractor requiring the opening for his work. Except for holes shown on the structural drawings, forming, sleeving and cutting of the deck shall be provided and accomplished by the Contractor requiring the opening for his work. Sleeves shall be provided as specified.

### 1. Openings through metal deck:

a. Openings up to and including six inches wide, measured at right angles to the deck span, may be cut through the deck and sleeves installed for the opening prior to placing concrete. No additional reinforcement is required at the openings.

b. Openings greater than six inches and up to ten inches wide, measured at right angles to the deck span may be formed prior to placing concrete. When the concrete has attained 75% of its design strength, the deck can be cut out for the opening. By following this method no additional reinforcement of the deck is required at the openings.

c. For openings ten inches to 30 inches, reinforce the deck prior to the concrete pour, with reinforcing bars or small angles or channels, welded to the deck around the perimeter of the opening, to distribute the loads to the adjacent panels. Weld the reinforcing on the bottom of the deck with the welds made through the valleys of the deck units. No typical sizes of reinforcing can be given; they must be designed for each situation. Consult the Architect/Engineer.

d. For openings greater than 30 inches, provide supplemental structural steel framing around the openings as directed by Architect/Engineer.

e. For all cases under notes a, b, and c the openings must be adequately spaced to avoid a weakening of the floor in the vicinity of the openings. In general no more than one opening is to be cut in a 24 inch wide deck unit and the adjacent 24 inch wide units straddling the opening shall remain free of openings for proper load distribution.

### 2. Openings at cellular floor deck:

a. Comply with requirements above for metal deck.

b. In all cases where penetrations are anticipated or desirable at cellular floor deck, the Contractor shall coordinate with work with the Electrical Contractor and the University. Where penetrating the deck is permitted, sleeving shall be done in a manner that the penetrated cells are sealed when sleeving is complete. Penetrating cellular deck shall be avoided as far as possible.

c. Only one (1) cell of a given three (3) cell deck panel run (trench header to trench header) may be cut and sleeved, generally.

Two (2) cells of a given three (3) cell deck panel run may be cut and sleeved if permission is granted by the University.

Three (3) cells of a given three (3) cell deck panel run can be cut and sleeved if permission is granted by the University.

Three (3) cells of a given three (3) cell deck panel run can be cut and sleeved only if written permission is secured from the University, and Architect/Engineer.

d. Any cell run which has been penetrated must be identified by the Contractor making the penetration by marking the trench header cell in an approved manner. Marking methods shall be determined and coordinated by the Electrical Contractor and University.

e. Any cell run which has been penetrated will be abandoned for electrical use, except as authorized by the University.

f. Deck penetrations shall be located so as to minimize cell penetrations. Use offsets where necessary to adhere to these requirements. Exposed offsets will not be acceptable unless no other alternative is available and approved by the University.

g. Conditions not covered by these requirements shall be brought to the attention of the University for decision.

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## PART 1: GENERAL

1.1 GENERAL REQUIREMENTS

A. The nature of the Project, the schedule of substantial completion and final completion as specified in Section 01200, the time necessary for the University to move in and occupy the Project and the urgent need for the University to commence the programs scheduled for the Project requires careful and efficient planning to facilitate an orderly completion process within a short period of time. The Contractor shall organize and schedule a coordinated completion process and prosecute the work efficiently and diligently. The Contractor shall organize and schedule the work of subcontractors, as well as his own work, obtain firm commitments from subcontractors on completion of their work and coordinate his effort with all others and the University to achieve completion on time.

B. As applicable, the specified requirements shall apply to substantial completion specified in Section 01200. Where appropriate or possible, the specified requirements shall be accomplished at the date of substantial completion.

C. After substantial completion, the Contractor shall continue to diligently prosecute all remaining work in an organized, efficient manner.

D. As may be appropriate, the requirements of this section applies to, and shall be accomplished for any individual area, floors, spaces or other parts of the total Project the University may take over and assume beneficial occupancy or use.

## PART 2: PROJECT CLOSE OUT

2.1 REQUIREMENTS SPECIFIED ELSEWHERE

A. Insurance: Refer to General Conditions, Article II.

1. Upon completion of last phase of the work and final payment, provide a certificate of insurance that indicates the specified Completed Operations will be provided a minimum of one year after the University's acceptance of the entire Project.

2. The specified Property Insurance (Multiple Peril Builder's Risk) may be cancelled at a time approved by the University after occupancy of the entire project by the University, or upon final completion and final acceptance by the University of the entire Project, whichever occurs first.

B. Change Orders: All Change Orders shall be resolved prior to final payment, including the adjustment of any allowances.

C. Consent of Surety: Refer to General Conditions, Sub-Paragraph 9.7.1. The consent of the Surety must be obtained prior to any reduction in retained percentage and prior to final payment.

D. State Income Tax Withholding Certificate: Refer to General Conditions, Sub-Paragraph 9.7.2.

E. Guarantees - Warranties: Refer to General Conditions, Sub-Paragraph 13.2.2 for the general guarantee requirements.

1. In addition to the general guarantee, provide all written guarantees specified in the technical Sections of the specifications. Where the guarantee terms are included in the specifications (i.e.: Section 07510) or a specific guarantee is referenced, submit guarantee in the specified form. Submit guarantees prior to final payment. The Contractor shall provide a check list of required guarantees, by Section numbers.

F. Test Reports and Certificates: Provide all test reports and certificates required in the technical Sections, prior to final payment. The Contractor shall provide a check list of required reports and certificates, by specification Sections.

G. Retention of Records: Retain all records as required by law and good business practice.

H. Project Photographs: Refer to Section 01300, Article 2.5.

1. Record Set of Drawings: Refer to Section 01300, Article 2.6. Deliver the record set to the University upon final completion of the Project. Review the set with designated personnel of the University, to clarify or explain changes that may be necessary. Obtain a receipt for the set.

J. Temporary Utilities: Refer to Section 01500.

1. Remove all temporary facilities and utilities as the job progress permits. Read all meters at the times specified for the transfer of services cost from the Contractor to the University, as applicable.

2. The Contractor shall pay the University for all charges for utilities (except those paid directly to the utility company) he is responsible for, prior to final payment on the Contract to the University.

K. Sanitary Facilities: Refer to Section 01500, Article 3.2. Remove temporary fixtures and restore the rooms as specified, prior to substantial completion of any phase.

L. Elevators: Refer to Section 01500, Part 4.

M. Temporary Facilities:

1. As the job progresses and facilities are no longer needed, they shall be removed by the Contractors, at a time approved by the University.

2. Prior to final payment, the Contractors shall remove all temporary sheds, offices, fences, barricades, surplus materials, debris and other materials or items not part of the Project, except on floors 3 and 8 where such materials are designated to remain in place. Reusable site fencing (including posts and fittings as directed by the University) shall be delivered to the University's storage on Como Avenue, S.E., Minneapolis, unloaded and stock-piled by the Contractor.

N. Extra Materials: Prior to final completion, deliver all extra materials specified in the various technical sections. These materials shall not be allowed to "collect" in various parts of the Project, but shall be delivered to the designated representatives of the University, as directed. Obtain receipt for the specified extra materials and without such evidence of delivery, no credit will be given for fulfilling the specified requirements. The Contractor shall provide a check list of the specified extra materials.

O. Construction Cores and Keys: At the time of substantial completion, just prior to occupancy, the University will replace the construction cores and install the permanent cores in the locks. Thereafter, access to the spaces will be by having the University open the doors.

P. Identification of Equipment: Prior to substantial completion, the Contractor shall provide the identification tags or plates, or other identification means, as specified under the technical Sections of the specifications, such as at valves, panelboards and similar items. Plates with directions, circuit data and similar information shall also be affixed.

## 2.2 INSTRUCTIONS TO THE UNIVERSITY

A. Requirements herein supplement any specific requirements provided under individual specifications sections. The intent is the Contractor thoroughly and properly instruct the University in the use, operation, care and maintenance of the Project, especially the various systems and equipment installed under the Contract. The instructions shall be methodically given, cover the various phases of the work and be in sufficient detail so the University fully understands.

B. As construction progresses, and particularly in the later stages, the Contractor shall permit and shall assist designated representatives of the University to become familiar with the locations, methods, materials, uses and intended operation of the systems and equipment, as well as any specialized materials installations installed under his Contract. The explanations and instructions shall be provided by qualified representatives of the Contractor or his specialty subcontractors.

C. As work nears completion, the contractor shall instruct (and demonstrate to) designated representatives of the University in the full use, operation, sequence or function and similar information to fully acquaint the University in the proper use, care and control of all equipment, systems and devices under his Contract. Precautionary measures and dangers of misuse shall specifically be explained. To qualify as completion this phase of instructions, specific and agreed upon periods of time shall be established with the University and the University will record length of time and number of days spent in the instructions.

D. When the foregoing specified instructions are being provided, the Contractor shall provide two copies of neatly edited and typed manuals of instructions, organized by classes or types of equipment and systems, to explain the use, function and control of equipment and systems. Printed information shall cover all instructions and explanations and shall enumerate common errors not to do as they will "abuse" the equipment or system. Contractor shall keep and turn over to University, clean installation data and pamphlets, which are not to be left at the equipment, but collected and put in the manuals. Manuals shall also include maintenance instructions, noting the recommended frequency and type of the various maintenance procedures.

E. Instructions specified herein shall be provided before acceptance of project and before final payment is made. The Contractor shall be alert to collect information and data in advance of completion so that complete manuals are provided in sufficient time to permit review prior to the time for final payment.

F. No manuals are required for normal matters of routine as: cleaning of normal floor and wall finishes; maintenance of light fixtures; cleaning of radiation; hardware maintenance; and similar housekeeping matters.

### 2.3 SYSTEMS AND EQUIPMENT TESTING

A. The Contractors are responsible for testing all equipment and systems of their contract and demonstrating they are correctly installed and operating properly, in the intended and planned manner. The Contractors shall operate and test each system and provide a written record of the tests and the results. (Note: The Owner will employ a separate service to balance air and hydronic systems of the mechanical contract. See Section 01010, Article 1.20).

B. The operation and testing of the systems may be concurrent with instructing the University's representatives, specified in 2.2 above, provided a representative of the University is present.

### 2.4 CLEAN-UP

A. Refer to General Conditions, Article 4.16, and Section 01010, for general requirements of cleaning during construction. Unless otherwise specified, each subcontractor shall be responsible for cleaning the materials and equipment of his work, as well as the removal (hauling away) of all his own debris, cartons, crates, surplus materials and maintaining his work neat and orderly.

B. It is intended the general "final" cleaning be accomplished just prior to the inspection for substantial completion and occupancy, typically within the week prior to the inspection. Cleaning shall be a planned, organized effort to avoid working in spaces after they have been cleaned. The General Contractor shall schedule the cleaning sequence, in cooperation with all trades, and each shall schedule their operations to conform to the cleaning plan. In general, the Mechanical and Electrical (sub) Contractors shall perform their cleaning and debris removal from the spaces first, with the General Contractor last.

C. The following requirements are a general guide to the required cleaning; do not construe as a complete description of all the cleaning required, as

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the work of the entire Project shall be thoroughly cleaned, including any specific cleaning required under other sections. As an area is cleaned, each Contractor shall remove the accumulated dust, dirt and debris.

D. Contractor shall thoroughly clean the materials, equipment or other items of his Contract. Cleaning shall be done by appropriate methods (scrubbing, washing, damp mopping, dusting, vacuuming) to leave surfaces, areas, spaces and interiors free from stains, discolorations, oil, grease, dirt, dust or other soil to leave the work in a clean and streak-free condition, except for floors and walls where "broom clean" is later specified. All labels shall be removed, except those labels, plates or tags that are necessary to leave for the proper use of the equipment or item, or have data and characteristics that are necessary to leave.

E. Just prior to substantial completion, at a time approved by the University, the Contractor shall wash all glass (except glass in work provided under other Contracts) both inside and out of all glass panes, and mirrors. Other Contractors shall wash the glass in the items provided by them, as in doors, shelves and similar items.

F. The casework Subcontractor shall vacuum or otherwise clean the interiors of cabinets and clean all surfaces of cabinets and equipment provided under the General Contract, including washing of glass.

G. The Electrical Subcontractor shall clean the interiors of cabinets, panelboards and other equipment provided under his Contract, and clean light fixtures which have become dusty and lenses which are dirty.

H. The Mechanical Subcontractor shall: replace filters that have been used during construction and install the permanent filters so filter efficiency is that of new filters; clean any ductwork that has become dirty or dusty; clean all fixtures and fittings; clean the insides of convectors, unit heaters or similar units; clean any dirty or dusty radiation; dust and clean piping and equipment in equipment rooms; and clean other work.

I. Tunnels, shafts, air shafts, air plenums that are not constructed of ductwork, and similar areas shall be free of dust and dirt. General Contractor shall clean these areas to "broom clean" condition.

J. At equipment rooms (including rooms such as electrical equipment rooms) the General Contractor shall clean the spaces to "broom clean" condition, except that floors shall be washed and be given the final coat of seal specified under Section 03300.

K. At normally occupied areas, service areas, passages and corridors and similar spaces, the Contractor shall: clean all his work to the "thoroughly clean" condition previously specified; provide floors (including concrete) that are free of stains and discoloration; adjust hardware and polish any that has become discolored; and perform such other cleaning as required to turn the Project and its spaces over to the University in a new, well maintained building condition, ready for full use and occupancy.

L. At spaces with vinyl asbestos floor tile, the floors shall be thoroughly cleaned and given the final waxing, specified under Section 09650, just prior to final inspection of the space.

M. At spaces with bare concrete floors, the floors shall be washed and be given the final coat of seal, specified under Section 03300, just prior to final inspection or occupancy of the space.

N. After cleaning for inspection for substantial completion and occupancy, any subsequent work in any space shall likewise be cleaned upon the completion of the work by the Contractor.

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