UNIVERSITY MEDICAL CENTER OF SOUTHERN NEVADA

CONTRACT DOCUMENTS & CONSTRUCTION SPECIFICATIONS

BID NO. 2014-08
LABOR AND DELIVERY RENNOVATIONS

University Medical Center Of Southern Nevada

CONFIRMATION FORM
for
RECEIPT OF BID 2014-08
Labor and Delivery Renovations

If you are interested in this invitation, immediately upon receipt please fax this confirmation form to the fax number provided at the bottom of this page.

Failure to do so means you are not interested in the project and do not want any associated addenda mailed to you.

VENDOR ACKNOWLEDGES RECEIVING THE FOLLOWING BID DOCUMENT:

PROJECT NO. Bid 2014-08

DESCRIPTION: Labor and Delivery Renovations

VENDOR MUST COMPLETE THE FOLLOWING INFORMATION:

Company Name:_____

Company Address:_____

City / State / Zip:_____

Name / Title:_____

Area Code/Phone Number:_____

Area Code/Fax Number:_____

Email Address:_____

FAX THIS CONFIRMATION FORM TO: (702) 383-2609
Or EMAIL TO: larry.silver@umcsn.com
TYPE or PRINT CLEARLY

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UNIVERSITY MEDICAL CENTER OF SOUTHERN NEVADA

INVITATION TO BID

BID NO. 2014-08
LABOR AND DELIVERY RENNOVATIONS

NEVADA STATE LABOR COMMISSION PWP NUMBER: CL-2014-270

NOTE: This is a Federally Funded Project governed by Davis Bacon Wage provisions.

SCOPE OF WORK: Renovations of the seventh floor tower labor and delivery including rooms and common areas located at UMC. The scope includes; VCT mastic ACM abatement, VCT replacement, bathroom fixtures removal, installation of new bathroom fixtures, headwall replacement, procedure light installation, ceiling grid and panel removal and replacement, painting, and other finishing work.

ESTIMATED COST: $1 Million dollars.

A Pre-bid Conference will be held on **June 20, 2014** at **10:00 am**, in Conference Room G on the Fourth Floor of the UMC Trauma Building, at the address shown below. Bids will be accepted at the UMC Trauma at 800 Rose Street, Purchasing and Contracts Division, Fourth Floor Suite 409, Las Vegas, Nevada 89102, on or before **June 26, 2014** at **3:00 p.m.,** based on the time clock at the UMC Purchasing and Contracts front desk, and will be opened immediately thereafter. Bidders and other interested parties are invited to attend the Bid opening.

Specifications and drawings will be available both online or on Compact Disc (CD) on **June 16, 2014**, at the above address or visit the Clark County website at www.clarkcountynv.gov/purchasing. Click on "Contracting Opportunities", scroll to bottom for UMC's Opportunities and locate appropriate document in the list of current solicitations. The CD will be provided at no charge. If the CD is to be mailed, there is a non-refundable charge of $5.00. All checks are to be made payable to the University Medical Center of Southern Nevada. Hearing impaired customers may obtain information by calling TT/TDD: Relay Nevada toll free (800) 326-6868. By Electronic Mail or Mail – Please email a request to Contracts Management at larry.silver@umcsn.com specifying project number and description. Be sure to include company address, phone and fax numbers, email address or call (702) 207-8291.

PUBLISHED:
Las Vegas Review-Journal
June 15, 2014

INSTRUCTIONS TO BIDDERS

BID NO. 2014-08
ASK PROJECT DESCRIPTION

1. PROJECT SCOPE OF WORK

Renovations of the seventh floor tower labor and delivery including rooms and common areas located at UMC. The scope includes; ACM abatement, tile replacement, bathroom fixtures removal, installation of new bathroom fixtures, headwall replacement, procedure light installation, ceiling grid and panel removal and replacement, painting, and other finishing work.

2. PRE-BID AND BID OPENING DATES

Pre-Bid, Friday June 20, 2014 at 10:00 am

Bid Opening, Thursday June 26, 2014 at 3:00 pm

3. DESIGNATED CONTACTS

DESIGNATED CONTACTS FOR QUESTIONS	ENTITY/COMPANY	CONTACT NAME	WORK REFERENCE #	TELEPHONE NUMBER	FAX NUMBER
Special provisions, technical specifications, or drawings	Univ. Medical Center of Southern Nevada	Michael Knuckles michael.knuckles@umcsn.com	Bid 2014-08	(702) 383-1867	(702) 383-2609
Arrangements for site visit	Univ. Medical Center of Southern Nevada	Michael Knuckles michael.knuckles@umcsn.com	Bid 2014-08	(702) 383-1867	(702) 383-2609
Invitation to Bid, Bonds, insurance requirements (Purchasing Analyst)	Univ. Medical Center of Southern Nevada	Larry Silver larry.silver@umcsn.com	Bid 2014-08	(702) 207-8291	(702) 383-2609
Special provisions, technical specifications or drawings (Consulting Engineering)	HKS, Inc,	Irene Clark, HKS Inc iclark@hksinc.com	Bid 2014-08	(602) 462-0966	
Special provisions, technical specifications or drawings (Consulting Architect)	HKS, Inc,	Irene Clark, HKS Inc iclark@hksinc.com	Bid 2014-08	(602) 462-0966	
Building Permits and Fees Clark County	Clark County Department of Development Services			(702) 455-3020	(702) 455-5685
Building Permits and Fees City of Las Vegas	City of Las Vegas Building Department			(702) 229-6251	(702) 229-6202
Management of construction project after award	Univ. Medical Center of Southern Nevada	Michael Knuckles michael.knuckles@umcsn.com	Bid 2014-08	(702) 383-1867	(702) 383-2609

4. CONTACT WITH OWNER DURING BIDDING PROCESS

Communication between a Bidder and a member of the Board of Trustees (BOT) or between a Bidder and a non-designated Owner contact, regarding this Bid is prohibited from the time the Bid is advertised until the time it is posted on an agenda for award of the contract. Questions pertaining to this Invitation to Bid shall be addressed to the designated contact(s) specified above. Failure of a Bidder, or any of its representatives, to comply with this paragraph may result in its Bid being rejected by UMC.

5. DEFINITIONS

A. **Architect**: Owner's representative or other person designated by the Governing Body, acting directly or through their duly authorized representative.

B. **Addendum**: A written document issued by the Owner, via the Purchasing and Contracts Division, prior to the submission of Bids which modifies or clarifies the Bid Documents by additions, deletions, clarifications, and/or corrections.

C. **Additive/Deductive Bid Items:** An amount stated in the Bid to be added to or deducted from the contract amount for the corresponding change in the work, as described in the Bid Documents. The unit price (s) quoted shall remain firm throughout the contract term. Funding for the item(s) is provided in the Bid Form under the description of "Construction Conflicts and Additional Work," or shall be funded through the issuance of a formal change order as described herein. Bidder must quote all item(s) to be responsive and considered for award.

D. **Additive Alternate Bid Item**: An amount stated in the Bid to be added to the amount of the Base Bid if the corresponding change in the work, as described in the Bid Documents, is accepted by Owner. Additive Alternate Items may be exercised by the Owner with the award of the project, in sequential order only subject to the availability of funds. Bidder must quote all items to be responsive and considered for award.

E. **Authorized Representative**: A person designated by the Governing Body to be responsible for the development and award of the Contract for the public work.

F. **Bidder(s)**: A Prime Contractor who submits a Bid to the Owner for a project.

G. **Bid Form(s)**: The Bid Form pages, Bid Security, and any attachments

H. **Bid Option Item:** An amount stated in the Bid to be added to the amount of the Base Bid if the corresponding change in the work, as described in the Bid Documents, is accepted by Owner. Bid Option Items may be exercised by the Owner with the award of the project, in sequential order only subject to the availability of funds. Bidder must quote all items to be responsive and considered for award.

I. **Bid Documents**: Include but are not limited to, the Invitation to Bid, Instructions to Bidders, General Conditions, Special Conditions, Contract Requirements and Forms, Bid Forms/Attachments, Exhibits, Specifications/Special Provisions and Drawings, and any Addenda issued prior to the date designated for receipt of Bids, as applicable.

J. **Consulting Architect/Engineer**: A licensed and registered professional contracted by the Owner to design the project's special provisions and drawings.

K. **Consulting Construction Manager**: The Construction Management firm contracted by the Owner to manage the construction of the project.

L. **Consulting Engineer**: A professional engineering firm contracted by the Owner to design the project's specifications, special provisions and drawings.

M. **Contract**: Contract documents include the Bid Documents, Contractor's Bid Form, all Addenda, Contractor's Bonds and Insurance, Subcontractor Notification letters and Notice of Award.

N. **Contractor**: The person or entity identified as such in the Contract and is referred to throughout the Contract documents as Contractor or successful Bidder. Contractor shall mean the Prime Contractor or its authorized representative as defined by Nevada Revised Statute 616A.285.

O. **Engineer**: Owner's representative or other person designated by the Governing Body, acting directly or through their duly authorized representative.

P. **Governing Body**: Used throughout these documents will mean the Clark County Board of Trustees

Q. **Lot**: A separate portion of work as defined in Bid Document as identified in the Special Provisions and Drawings. Each Lot may require separate bonds and insurance documents. The Contractor may bid any single Lot or multiple Lots with a single Bid security as specified within the Instructions to Bidders.

R. **Owner**: The term used throughout these documents will mean University Medical Center of Southern Nevada.

S. **Planholders**: Prospective Bidder(s) who have purchased the specifications and drawings for a project.

T. **Subcontractor/Independent Contractor**: Any individual, agent, firm, sole proprietor, or corporation to whom the Prime Contractor subcontracts any part of the project. There is no contractual relationship between the Owner and the above-mentioned Subcontractor who perform work or services for the Prime Contractor.

U. **Successful Bidder**: Bidder who is the lowest responsive, responsible and/or best bidder, to whom the Governing Body or the authorized representative has authorized the award of the contract.

V. **Traffic Engineer**: The Traffic Manager from the Traffic Management Division as designated by the Director of Public Works acting directly or through their duly authorized representative.

6. BIDDER'S REPRESENTATION

A. **Each Bidder by submitting their Bid represents that:**

1. Bidder has read and understands the Bid Documents and asserts that its Bid is made in accordance therewith and shall be considered a firm offer for a period of 120 calendar days following the opening of bids. The Bidder's offer may expire at the end of the 120 calendar day's period.

2. Bidder has visited the project site and is familiar with the local conditions under which the work is to be performed.

3. Prior to submission of the Bid, the Bidder shall ascertain that it has received all Addenda issued. The Bidder shall acknowledge receipt of each Addendum by completing the acknowledgment space provided on the Bid Form.

B. **Nevada State Contractors' Board Licensing**

1. Bidders for this work must be qualified and properly licensed to perform the particular work pursuant to the provisions of the Nevada Revised Statutes Chapter 624. Failure to comply shall result in rejection of the Bidder. Nevada Contractor's License number and dollar limit must be indicated on the Bid Form page. Should there be a protest regarding the applicability of the low Bidder's Contractor's license to the scope of the project, it shall be the low Bidder's responsibility to obtain an opinion from the State Contractor's Board at its next meeting. **Bidders are reminded that, per NRS 624.3015, bidding on a contract for work in excess of its limits or beyond the scope of its license is grounds for disciplinary action by the State Contractors Board.**

2. The Bidder(s), and the successful Contractor(s), and their Subcontractor/Independent Contractors, shall comply with all provisions of Nevada Revised Statutes, Chapter 624, during the bidding phase and Nevada Administrative Code, Chapter 624, through completion of the project.

C. **Journeyman and Master Electrician and Plumbing Examination Program**

1. All electricians providing supervision of electrical work on this project are required to possess a valid Clark County Development Services card appropriate to the scope of work being performed. The categories are Master Electrician and Journeyman Electrician, which have passed the International Code Council (ICC) Contractor Examination Services testing at www2.ICCSAFE.org or by calling 1-888-422-7233.

2. All plumbers providing supervision of the plumbing work on this project are required to possess a valid Clark County Development Services card for the appropriate scope of work being performed. The categories are Master Plumber and Journeyman Plumber. Tests are administered by the Southern Nevada Board of Plumbing Examiners (SNBOPE) at www.NBOPE.org or by calling 1-877-457-6482.

3. The general Contractor or specialty Contractor submitting a Bid to the Owner shall validate that their employee(s) or their Subcontractor's employee(s) providing supervision for the scope performed maintain current valid cards throughout the term of this Contract. The Bidder(s) and subsequent awarded Contractor(s) agree to provide within twenty-four (24) hours of a request by the Owner, proof of current and valid cards for individuals planned or performing the supervision identified herein. Should any of these supervising employee's cards expire, that employee shall be replaced immediately with another qualified valid cardholder without any additional cost to the Owner.

4. UMC staff will perform unscheduled site visits to validate that the workers performing the electrical and plumbing work are in compliance with these requirements. Employees found performing work without the proper proof of compliance (valid card) shall be immediately replaced as specified above without any additional cost or associated impacts to the Owner.

D. **Traffic Signal Systems**

The Bidder shall investigate prior to the submission of their Bid that the electrical Contractor/subcontractor responsible for the installation of the traffic signal systems has technicians or electricians currently certified by IMSA for Level II Traffic Signals as required in the Uniform Standards Specifications for Public Works Construction Off-Site Improvements, latest revisions, 623 G.01.02, Regulations and Code. The Bidder may submit proof of certification(s) with the Bid proposal and agrees to provide such proof within two (2) working days of the request of the Owner by facsimile to the purchasing analyst specified herein at (702) 386-4914. Failure to provide proof of current certification may result in the rejection of the Bidder.

E. **Addenda and Interpretations**

1. If it becomes necessary to revise any part of this Bid, a written Addendum will be provided to all known Planholders. Owner is not bound by any oral representations, clarifications, or changes made to the written specifications by Owner's employees, unless such clarification or change is provided to Planholders in written Addendum form from the Purchasing and Contracts Division.

2. Bidders shall take no advantage of any apparent error or omission in the Bid Documents. In the event the Bidders discover such an error or omission, they shall immediately notify the Owner. The Owner will then make such corrections and interpretations as may be deemed necessary for fulfilling the intent of the Bid Documents through the issuance of an Addendum.

3. Addenda shall be sent via mail, certified mail, or fax, and will be made available for pick up to all known Planholders.

4. Copies of Bid Documents, including any Addenda, will be made available for inspection at the Purchasing and Contracts Division.

5. Bidders shall verify receipt of all addenda issued by Owner prior to submission of their Bid.

7. SUBMITTAL OF BID – REQUIRED DOCUMENTS

The following documents, together, comprise a Bid: The Bid Form, all Stipulated Bid Attachments, and the Bid Security, shall be included in the envelope containing the bid. Omission of, or failure by a Bidder to complete any portion of the required documents, or fail to include them in the Bid envelope at the time of Bid Opening, may be cause to reject the Bid.

A. **Bid Form**

1. Bidder shall complete and include all Bid Form pages, and all stipulated Bid Attachments, all of which have a black bar on the right margin, as part of its Bid submittal.

2. **Subcontractors/Independent Contractors Information**

a) The Bidder shall be bound by and comply with Nevada Revised Statute 338.141 to limit the practice of shopping for Bids and shall provide within its Bid proposal, the name of each Subcontractor which will be paid an amount exceeding five percent (5%) of the total base Bid amount. Bidder must verify prior to submitting its Bid that all Subcontractors listed are properly licensed. **A Bidder (Prime Contractor) shall include its name on the required list if it will perform any of the labor or portions of the public work**.

Within two (2) hours after the completion of the opening of Bids, the Bidders who submitted the three (3) lowest Bids must submit a list on the form provided, the name of each Subcontractor who will provide labor, or a portion of the work on the public work, to the Prime Contractor for which the Subcontractor will be paid an amount exceeding one percent (1%) of the Prime Contractor's total Bid or $50,000, whichever is greater, and the number of the license issued to the Subcontractor pursuant to Chapter 624 of Nevada Revised Statutes. Bidder must verify prior to submitting its list that all Subcontractors listed are properly licensed. **A Bidder (Prime Contractor) shall include its name on the required list if it will perform any of the labor or portions of the public work.**

(1) Projects UNDER $5,000,000

The Bidders shall list only those Subcontractors that will provide labor/improvements **exceeding $50,000.00.**

Following are detailed delivery instructions for **1% Subcontractors List**:

***Note: Subject line of the e-mail must provide the Bid No., Project Description, and Name of Attachment**

Hand Delivery	U.S. Mail Delivery	Express Delivery *(Preferred)*
University Medical Center	University Medical Center	University Medical Center
Materials Management	Materials Management	Materials Management
Trauma Center Building	1800 West Charleston Blvd	800 Rose Street, Suite 409
800 Rose Street, Suite 409	Las Vegas, Nevada 89102	Las Vegas, Nevada 89102
Las Vegas, Nevada 89102		
Bid 2014-08	Bid 2014-08	Bid 2014-08
Labor and Delivery Renovations	Labor and Delivery Renovations	Labor and Delivery Renovations

a) The Bidder shall be bound by and comply with Nevada Revised Statute 338.141 to limit the practice of shopping for Bids. The Owner will provide on the Bid Form pages a list of the labor or portions of the public work, which are estimated by the Owner to exceed three percent (3%) of the estimated cost of the public work. Each Bidder shall include the name of each Subcontractor who will provide such labor or portion of the public work on that required list and submit it as part of its Bid proposal. **A Bidder (Prime Contractor) shall include its name on the required list if it will perform any of the labor or portions of the public work.**

b) The list(s) required above must include a description of the labor or portion of the work which each Subcontractor named in the list will provide to the Bidder (Prime Contractor), **and when the Bidder (Prime Contractor) will perform any of the labor or portions of the public work.**

c) If a Prime Contractor does not submit the list(s) required above, its Bid may be deemed not responsive.

d) Owner shall verify through the Nevada State Contractors' Board only that information required pursuant to NRS 338.141 as provided by the Bidders. Any Bidder or Subcontractor questioning licensing or utilization of any Subcontractor(s) shall direct their inquiries to the Nevada State Contractors' Board with a copy of all correspondence to the Owner. The Owner will not conduct any investigations regarding the Bidders' (Prime Contractor) relationships with Subcontractors.

e) Pursuant to NRS 338.13895 and 338.145, a Subcontractor who is named in the Bid for the Contract as a Subcontractor who will provide a portion of the work on the public work pursuant to NRS 338.141, and is not properly licensed for that portion of the work shall be deemed unacceptable, and the contractor shall provide an acceptable Subcontractor.

f) Contractor shall not substitute any person for itself or a Subcontractor who is named on the required list(s) except as provided pursuant to NRS 338.141.

g) If a Contractor substitutes a Subcontractor for any Subcontractor who is named in the Bid without complying with the provisions of NRS 338.141; the Contractor shall forfeit, as a penalty to the Owner, an amount equal to one percent (1%) of the total amount of the contract.

h) If a Contractor indicated pursuant to NRS 338.141 that he or she would perform a portion of work on the public work and, after the submission of the Bid, substitutes a Subcontractor to perform such work; the Contractor shall forfeit as a penalty to the Owner, the lesser of, and excluding any amount of the contract attributable to change orders the following:

(1) An amount equal to 2.5 percent of the total amount of the contract; or

(2) An amount equal to 35 percent of the estimate by the engineer of the cost of the work the contractor indicated pursuant to NRS 338.141 that he or she would perform on the public work.

i) Contractor agrees that it will assume responsibility for acts or omissions of its subcontractors and of persons either directly or indirectly employed by them, as they are responsible for the acts or omissions of persons directly employed by the Contractor. Nothing contained in the contract documents shall create any contractual relation between Subcontractor and the Owner.

j) Per NRS 338.140.1.d, the Contractor agrees to provide, upon the Owner's request, copies of any or all contracts that it may have with its Subcontractor(s), to be used to determine the price of additional work performed pursuant to change orders, to evaluate claims for costs incurred for the performance of additional work, and/or to prepare for potential mediation or litigation.

3. **Non-Discrimination and Fair Employment Practices**

a) Discrimination:

The Board of Trustees is committed to promoting full and equal business opportunity for all persons doing business in Clark County. The SUCCESSFUL BIDDER acknowledges that UMC has an obligation to ensure that public funds are not used to subsidize private discrimination. SUCCESSFUL BIDDER recognizes that if the Contractor or their Subcontractors are found guilty by an appropriate authority of refusing to hire or do business with an individual or company due to reasons of race, color, religion, sex, sexual orientation, gender identity or expression, age, disability, national origin, or any other protected status; UMC may declare SUCCESSFUL BIDDER in breach of CONTRACT, terminate CONTRACT, and designate SUCCESSFUL BIDDER as non-responsible.

b) Fair Employment Practices:

In connection with the performance of work under this contract, the Contractor agrees not to discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex, sexual orientation, gender identity or expression, age, disability, national origin, or any other protected status. Such agreement 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 further agrees to insert this provision in all subcontracts hereunder. Any violation of such provision by a Contractor shall constitute a material breach of this Contract.

c) Close-out Documentation

As a part of the required contract close-out documentation, Contractor shall submit a Summary Report of Material Suppliers and Subcontractors listing the name of the Subcontractor, Bid item or work performed, the Business Enterprise Group (BEG), Ethnicity Status, and Value of the contracts. The close-out document shall be submitted in a manner that substantially meets the format and content of the form attached hereto as **Close-out Documentation Summary Report of Subcontractors**.

d) The Bid form requests information regarding the Prime Contractor's, Subcontractor's, and Material Supplier's Business Enterprise Groups (BEG) and Ethnicity Status. The Business Enterprise Categories are defined as follows:

(1) MINORITY OWNED BUSINESS ENTERPRISE (MBE):

An independent and continuing business for profit, which performs a commercially useful function and is at least 51 percent owned and controlled by one or more minority persons of African-American (AA), Hispanic American (HA), Asian-Pacific American (AX) or Native American (NA) ethnicity.

(2) WOMEN OWNED BUSINESS ENTERPRISE (WBE):

An independent and continuing business for profit, which performs a commercially useful function and is at least 51 percent owned and controlled by one or more women.

(3) PHYSICALLY-CHALLENGED BUSINESS ENTERPRISE (PBE):

An independent and continuing business for profit, which performs a commercially useful function and is at least 51 percent owned and controlled by one or more disabled individuals pursuant to the federal Americans with Disabilities Act.

(4) SMALL BUSINESS ENTERPRISE (SBE):

An independent and continuing business for profit which performs a commercially useful function, is not owned and controlled by individuals designated as minority,

women, or physically-challenged, and where gross annual sales does not exceed $2,000,000.

(5) NEVADA BUSINESS ENTERPRISE (NBE):

Any Nevada business, which has the resources necessary to sufficiently perform identified County projects, and is owned or controlled by individuals that are not designated as socially or economically disadvantaged.

(6) BUSINESSES IN OTHER STATES - LARGE BUSINESS ENTERPRISE (LBE):

An independent and continuing business for profit that performs a commercially useful function and is not located in Nevada.

(7) VETERAN OWNED ENTERPRISE (VET):

A Nevada business at least 51% owned/controlled by a veteran.

(8) DISABLED VETERAN OWNED ENTERPRISE (DVET):

A Nevada business at least 51% owned/controlled by a disabled veteran.

The information provided by the Bidder is for the Owner's information only, as requested by the Board of Trustees.

If there are any questions regarding these business categories, their utilization, and local small business development program, please contact Adleen Stidhum at telephone number (702) 455-7155.

4. Bids submitted shall be on the forms provided by Owner. All figures must be written in ink or typewritten. Figures written in pencil or erasures are not acceptable. Any interlineation or alteration must be initialed by a person authorized to bind the Bidder to a contract. If the person making said interlineation, alteration or erasure is not the same person who signs the Bid Form, such person must be authorized by the person who signs the Bid Form.

5. **Construction Conflicts and Additional Work**

$90,000.00 has been entered into the Bid Schedule on the Bid Form as "Construction Conflict and Additional Work."

This work may consist of repairing, rebuilding, relocating, replacing, constructing or reconstruction which cannot be performed by extending Bid items and which are not shown on the plans, or not otherwise covered in the Technical Specifications. Contractor shall submit in writing a cost breakdown to include labor, materials required and time to complete to the Construction Manager for review with the architect.

This work shall not be performed until the Contractor is instructed to proceed by the Construction Manager in writing. The Contractor and the Construction Management Inspector will keep strict account of all costs involved with this item of work.

6. **Permits and Fees Bid Allowance**

The Contract contains a reimbursement allowance for payment of all the permits and fees. The Contractor is responsible for obtaining all permits and fees and shall provide proof of payment for each with its progress payment requests. These items shall be a direct pass through to the Owner with no added overhead or profit. Should the costs exceed the allowance amount, the Contractor shall notify the Construction Manager for issuance of a change order. Permits and fees paid through the issuance of a change order are not subject to the change order percentage for overhead and profit.

B. **Bid Security**

1. Each Bid shall be accompanied by a Bid security (in the form of, at Bidder's option, a Cashier's Check, Certified Check, Money Order, or Bid Bond in favor of the Owner) in the amount of five percent (5%) of the base Bid amount, pledging that the Bidder will within seven (7) business days after Notice of Intent to Award, furnish the bonds and insurance as required herein, covering the faithful performance of the Contractor and the payment of all obligations arising hereunder. Bonds issued by a surety, who is an individual surety, are not acceptable to UMC. Should the Bidder refuse to or fail to furnish such bonds and insurance, the amount of the Bid security may be forfeited to the Owner. All checks and money orders must indicate the Payee as University Medical Center of Southern Nevada and reflect the complete Bid number.

2. Surety companies executing bonds must be licensed to issue surety by the State of Nevada Insurance Division pursuant to Nevada Revised Statute Chapter 683A and bonds must be issued by an appointed producer of insurance pursuant to Nevada Revised Statute Chapter 683A.

3. If submitting a Bid Bond it shall be written on either a standard Bid Bond form or the enclosed form (Bid Attachment 1), and the attorney-in-fact who executes the Bond on behalf of the surety shall affix to the Bond a certified and current copy of his/her power of attorney.

4. The Owner will have the right to retain the Bid security of Bidders to whom an award is being considered until either (a) the bonds and insurance have been furnished, or (b) the specified time has elapsed so that Bids may be withdrawn, or (c) all Bids have been rejected.

5. Should this Bid contain Lots, the Bidder may choose to provide a Bid security in the form of a Cashier's Check, Certified Check or Money Order, a separate check or Money Order for EACH LOT submitted. If the Bidder elects to provide a Bid security in the form of a Bid Bond, it may be issued for five percent (5%) of the aggregate amount of all Lots submitted.

8. SUBMISSION OF BIDS

All bids must be submitted in a sealed envelope plainly marked with the name and address of the Bidder, the Bid Number, and the Project Title in the upper left-hand corner. No responsibility will attach to the Owner, or any official or employee thereof, for the pre-opening of, post-opening of, or the failure to open a bid which is not properly addressed and identified

The following are detailed delivery instructions for bids:

Hand Delivery	U.S. Mail Delivery	Express Delivery *(Preferred)*
University Medical Center	University Medical Center	University Medical Center
Materials Management	Materials Management	Materials Management
Trauma Center Building	1800 West Charleston Blvd	800 Rose Street, Suite 409
800 Rose Street, Suite 409	Las Vegas, Nevada 89102	Las Vegas, Nevada 89106
Las Vegas, Nevada 89106		
Bid 2014-08	Bid 2014-08	Bid 2014-08
Labor and Delivery Renovations	Labor and Delivery Renovations	Labor and Delivery Renovations

Regardless of the method used for delivery, the Bidder shall be wholly responsible for the timely delivery of its bid. FAXED OR ELECTRONICALLY SUBMITTED BIDS ARE NOT ALLOWED AND WILL NOT BE CONSIDERED.

Bids are time-stamped upon receipt. Bids submitted must be time-stamped no later than 3:00:00 p.m. on the bid opening date. Bids time-stamped after 3:00:00 p.m., based on the time clock at the UMC Purchasing and Contracts front desk will be recorded as late, remain unopened and be formally rejected. Overnight Mail must use the 89102 zip code. Bidders and other interested parties are invited to attend the bid opening.

9. WITHDRAWAL OF BID

A. **Before Bid Opening:**

Bidders may request withdrawal of a submitted, sealed bid prior to the scheduled bid opening time provided the request for withdrawal is submitted in writing to the Purchasing Analyst.

B. **After Bid Opening:**

The Owner may allow a Bidder intended for award to withdraw its bid during the firm offer period due to a mistake of fact on the part of the Bidder or its employee(s) in preparing its bid. Such Bidder, upon discovery of the mistake, must immediately notify the Owner in writing of such mistake. The notice to the Owner must include: (1) a request to withdraw its bid, (2) a detailed description of the exact nature of the mistake, (3) an explanation of exactly how and why the mistake occurred, (4) and an explanation of the corrective action that was, or will be implemented by the Bidder to eliminate the possibility of future mistakes. If the above requested information is not adequately provided to the Owner's satisfaction, the Bidder shall be prepared to meet with the Owner within 24 hours of notification by the Owner to further review the Bidder's request for withdrawal of its bid. In any case of a withdrawal, Owner may require that Bidder forfeit its bid security to the Owner.

10. TIE-BIDS

A tie-bid is defined as an instance where bids are received from two or more Bidders who are the low Bidders, and their offers are identical. Bids must be identical in all evaluation areas; e.g., price, quality, delivery, terms, and ability to supply, etc. If any of these areas are not identical, it is not considered a tie-bid, and Owner can justify awarding to the Bidder with the lowest responsive and responsible bid.

The procedure for tie-bids is to hold a public drawing and award the bid to the winner of the draw in accordance with the Method of Award clause in the Instructions to Bidders. When a drawing is necessary, the Bidders involved will be contacted with the time and place of the drawing. Attendance is not mandatory for the drawing. An impartial witness will be present at the drawing.

11. EVALUATION OF BIDS AND AWARD

A. **Line Item Total Prices/Evaluation**

The Bidder shall quote a total price for each line item; low bid will be defined as the lowest sum of these total prices. Mathematical errors in the line item Bid Schedule shall be corrected by Owner. For purposes of progress payments and change orders, the Owner will divide the item total by the estimated quantity contained in the Bid Form to arrive at a unit price (rounded down to the truncated cent). If there is no cost for a line item, the Bidder will enter a “0" or write the words “NO COST.” A Bidder who fails to quote a total price for each line item or modifies/changes any elements within its Bid Form may be deemed non-responsive and their bid rejected.

B. **Intent to Award**

The Owner will issue a formal letter of Intent to Award to the low responsive responsible and/or best Bidder. The Bidder shall utilize this letter to obtain the bonds required by NRS 339.025. This statute requires that before any Public Works contract is awarded and becomes binding, the Contractor shall furnish bonds and insurance.

C. **Award Determination**

All responsive and responsible bids received are considered firm offers for 90 calendar days after the date of bid opening and may be considered for award. Award shall be made to the lowest responsive, responsible and/or best bidder, based upon the Total Base Bid, depending on funding availability of additive Alternate(s) One, Two, Three, etc. Bidders must quote all items and agree to provide the bonds and insurance specified herein to be responsive and considered for award.

The determination of award may involve all or some of the following factors: price; bidder preference, if applicable; conformity to specifications; financial ability to meet the contract; previous performance; facilities and equipment; experience; and other objective and accountable factors which are reasonable and in accordance with the requirements of the Nevada Revised Statutes and/or any federal requirements as specified herein.

Rejection of bid(s) may be recommended to the Governing Body for any of (but not limited to) the following causes:

1. Failure to use the Bid Form(s) furnished by the Owner.
2. Lack of signature by an authorized representative on the Bid Form(s).
3. Failure to properly complete the Bid Form(s).
4. Evidence of collusion among Bidders.
5. Omission of Bid Security, in an acceptable form.
6. Unauthorized alteration of Bid Form(s).
7. Failure to fill out the Disclosure of Ownership/Principals form.
8. Reports of prior County required contracts.

Owner reserves the right to waive any minor informality or irregularity.

D. **Disclosure of Ownership/Principals**

Any bidder recommended for award of a contract by the Board of Trustees is required to provide the information on the attached “Disclosure of Ownership/Principals” form. The form must be submitted to the Owner within 24 hours after request. Failure to fill out the subject form by the Bidder shall be cause for rejection of the bid.

E. **Award of Contract**

This bid will not be awarded or considered entered into, until the Governing Body or its authorized representative has authorized the award and the Successful Bidder has properly executed and submitted the required proof of insurance, the required bonds, and any other required submittals. Upon receipt of these required documents, in acceptable form, the Contract is considered binding, and the Purchasing Administrator or her designee will issue an Award Letter. The bid will then become a binding contract.

12. ADDITIVE ALTERNATE ITEM(S)

This document contains an Additive Alternate item(s) that is/are shown in the specifications and drawings under the appropriate sections, but is/are not to be included in the Total Base Bid amount. The item(s) is/are identified by a number designation and description. It is the responsibility of each Bidder to determine to its own satisfaction the

limits and extent of the work for the item and quote a unit price and/or lump sum on the Bid Form pages. The(se) item(s) may be exercised by the Owner in sequential order depending on funding availability.

13. SCHEDULE OF VALUES

By 12:00 Noon the next working day after the bid opening, the three (3) lowest Bidders for the Total Base Bid amount must submit a Schedule of Values on the attached form specified as Bid Attachment 4, of the various portions of the work, aggregating the base bid amount, shall be divided so as to facilitate payments in accordance with the contract documents. Each item in the Schedule of Values shall be identified with the Specification Section number that applies.

Following are detailed delivery instructions for **Schedule of Values:**

***Note: Subject line of the E-Mail must provide the Bid No., Project Description, and Name of Attachment**

HAND DELIVERY	**E-Mail DELIVERY**
University Medical Center of Southern Nevada	larry.silver@umcsn.com
800 Rose St Suite 409	***reference above note**
Purchasing and Contracts, 4th Floor	
Las Vegas, Nevada 89102	

14. BONDS AND INSURANCE REQUIREMENTS

The successful Bidder shall obtain the bonds and maintain through the contract term the insurance coverage required in Exhibit A, incorporated herein by this reference. The successful Bidder shall comply with the terms and conditions set forth in Exhibit A. The cost of the insurance coverage shall be included in the bid amount.

Bidders are strongly urged to fax the bonds, insurance, and insurance certificate to their respective agents before the bid opening. The Successful Bidder must provide these within seven (7) business days from date of faxed letter of Intent to Award. Owner will assess the liquidated damages for submission of incorrect documents that are not corrected and returned by the seventh business day.

A. Insurance and surety companies issuing certificates of insurance and bonds must be licensed by the State of Nevada Insurance Division and certificates of insurance and bonds must be issued by an appointed producer of insurance pursuant to Nevada Revised Statute Chapter 683A.

B. The Successful Bidder shall provide all submittals requested in this section within seven (7) business days. If the Successful Bidder does not provide the submittals on or before the seventh business day, or fails to keep the bonds or insurance policies in effect or allows them to lapse, the Successful Bidder will pay to the Owner the amount of **$500.00** per day as liquidated damages.

15. PROTESTS

Any Bidder who bids on a contract may file a written protest regarding the awarding of contract with the Purchasing Analyst within five (5) business days after the recommendation to award a contract is issued by the Owner or authorized representative. The protest must include a written statement setting forth the specific reasons the Bidder submitting the protest believes the applicable provisions of the law were violated. The Bidder filing the protest shall be required, at the time the protest is filed, to post a bond with a good and solvent surety authorized to do business in this state, or submit other security, defined as a cashiers check, money order or certified check, to the Owner who shall hold the bond or other security until a determination is made on the protest. A bond posted or other security submitted with the protest must be in an amount equal to the lesser of:

A. 25% of the total value of the base bid submitted by the Bidder filing the protest; or

B. $250,000.

The protest filed in accordance with these provisions operates as a stay of action in relation to the award of this contract until a determination is made by the Governing Body on the protest.

An unsuccessful Bidder may not seek any type of judicial intervention until the Governing Body has made a determination on the protest and awarded the Contract.

Neither the Governing Body nor the authorized representative is liable for any costs, expenses, attorney's fees, loss of income or other damages sustained by a Bidder, whether or not the person files the protest pursuant to this clause.

If the protest is upheld, the bond posted or other security submitted with the protest must be returned to the Bidder who submitted the protest. If the protest is rejected a claim may be made against the bond or other security by the Owner in an amount equal to the expenses incurred by the Owner because of the unsuccessful protest. Any money remaining after the claim has been satisfied must be returned to the Bidder who posted the bond or submitted the security.

16. REJECTION OF BID

The Governing Body reserves the right to waive any informality or irregularity in any bid received, to reject any and/or all bids, and to rebid.

17. FEDERAL, STATE, LOCAL LAWS

All Bidders, the successful Contractor, Subcontractors and any other person(s) who provides labor, equipment, materials, supplies or services for the public work, shall comply with the requirements of all applicable federal, state, and local laws relative to conducting business in Las Vegas including, without limitation, any applicable licensing requirements, labor and health laws, requirements for the payment of sales and use taxes on equipment, materials and supplies provided for the public work, and including NRS 338 as amended, if applicable. The laws of the State of Nevada will govern as to the interpretation, validity, and effect of this bid, its award, and any contract entered into.

18. COLLUSION AND ADVANCE DISCLOSURES

Pursuant to 332.820 evidence of agreement or collusion among Bidders and prospective Bidders acting to illegally restrain freedom of competition by agreement to bid a fixed price, or otherwise, shall render the bids of such Bidders void.

Advance disclosures of any information to any particular Bidder which gives that particular Bidder any advantage over any other interested Bidders, in advance of the bid opening, whether in response to advertising or an informal request for bids, made or permitted by a member of the governing body or an employee or representative thereof, shall operate to void all bids received in response to that particular request for bids.

19. RESPONSIBILITY OF CONTRACTOR

A. It is understood that in the performance of the services herein provided for, Contractor shall be, and is, an independent Contractor, and is not an agent, representative or employee of Owner and shall furnish such services in its own manner and method except as required by this Contract. Further, Contractor has and shall retain the right to exercise full control over the employment, direction, compensation and discharge of all persons employed by Contractor in the performance of the services hereunder. Contractor shall be solely responsible for, and shall indemnify, defend and hold Owner harmless from all matters relating to the payment of its employees, including compliance with social security, withholding and all other wages, salaries, benefits, taxes, demands, and regulations of any nature whatsoever.

B. Contractor shall be fully and solely responsible for safety and health conditions for conducting all operations under this contract and at all times in such a manner as to avoid the risk of endangerment to health, bodily harm to persons, and damage to property. Contractor shall continually and diligently inspect all equipment, materials and work to discover any conditions which might involve such risks and shall be solely responsible for discovery and correction of any such conditions Contractor shall furnish all safety equipment, supplies and instructions required for the work and enforce the proper use of such by its employees, agents, subcontractors and any and all sub-tier levels and suppliers. Contractor shall notify the Owner in writing of the name of their assign employee responsible for safety and health including a twenty-four hour telephone number prior to commencement of work. Contractor shall comply with all requirements of Nevada Revised Statute Chapter 618, Occupational Safety and Health, Nevada Administrative Code Chapter 618 and have established an **active** Safety Program in accordance therewith.

C. Contractor acknowledges that the Owner has an obligation to ensure that public funds are not used to subsidize private discrimination. Contractor recognizes that if they or their subcontractors are found guilty by an appropriate authority of refusing to hire or do business with an individual or company due to reasons of race, color, religion, sex, sexual orientation, gender identity or expression, age, disability, national origin, or any other protected status; the Owner may declare the Contractor in breach of the Contract, terminate the Contract, and designate the Contractor as non-responsible.

D. Contractor acknowledges that Contractor and any Subcontractors, agents or employees employed by Contractor shall not, under any circumstances, be considered employees of the Owner, and that they shall not be entitled to any of the benefits or rights afforded employees of Owner, including, but not limited to, sick leave, vacation leave, holiday pay, Public Employees Retirement System benefits, or health, life, dental, long-term disability or workers' compensation insurance benefits. Owner will not provide or pay for any liability or medical insurance, retirement contributions or any other benefits for or on behalf of Contractor or any of its officers, employees or other agents.

E. The Contractor shall be responsible for the professional quality, technical accuracy, timely completion, and coordination of all services furnished by the Contractor, their principals, officers, employees, agents,

Subcontractors and suppliers required to complete this Contract. In performing the specified services, Contractor shall follow practices consistent with generally accepted professional and technical standards.

F. It shall be the duty of the Contractor to assure that all products of its effort are technically sound and in conformance with all pertinent Federal, State and Local statutes, codes, ordinances, resolutions and other regulations. Contractor will not produce a work product that violates or infringes on any copyright or patent rights. The Contractor shall, without additional compensation, correct or revise any errors or omissions in its work products. Permitted or required approval by the Owner of any products or services furnished by Contractor shall not in any way relieve the Contractor of responsibility for the professional quality and technical accuracy and adequacy of its work. Owner's review, approval, acceptance, or payment for any of Contractor's services herein shall not be construed to operate as a waiver of any rights under this Contract or of any cause of action arising out of the performance of this Contract, and Contractor shall be and remain liable in accordance with the terms of this Contract and applicable law for all damages to Owner caused by Contractor's performance or failures to perform under this Contract.

G. Contractor shall appoint a qualified employee who will manage the performance of services, should this employee be unable to complete his or her responsibility for any reason, the Contractor will immediately replace him or her with a qualified person and inform the Owner in writing.

H. As built drawings and related specifications shall become and remain the property of the Owner. Copies of the drawings and specifications retained by the Owner may be utilized only for its use and for occupying and maintaining the project for which they were prepared, and not for construction of any other project. A copy of all materials, information and documents, whether finished, unfinished, or draft, developed, prepared, completed, or acquired by Contractor during the performance of services for which it has been compensated under this Contract, shall be delivered to Owner's representative upon completion or termination of this Contract, whichever occurs first. Owner shall have the right to reproduce all non-copy write protected documentation supplied pursuant to this Contract.

I. The Contractor agrees that its officers, employees, Subcontractors and suppliers will cooperate with the Owner in the performance of services under this Contract and will be available for consultation with Owner at such reasonable times with advance notice as to not conflict with their other responsibilities.

J. The Contractor agrees to provide the information on the attached "Disclosure of Ownership/Principals" form prior to any contract award by the Board of Trustees.

K. The rights and remedies of the Owner provided for under this section are in addition to any other rights and remedies provided by law or under other sections of this Contract.

20. RESPONSIBILITY OF OWNER

A. The Owner agrees that its officers, employees, and contracted firms will cooperate with Contractor in the performance of services under this Contract and will be available for consultation with Contractor at such reasonable times with advance notice as to not conflict with their other responsibilities and in accordance with the communication methodology defined by the Owner.

B. Owner's Departmental Responsibilities:

1. The Owner's Department of Administrative Services, Purchasing and Contracts Division will administer the bid solicitation, pre-bid conference, issue addenda, bid opening, bid protest, evaluation, Nevada State Contractors Board license compliance, bonds and insurance, Notice of Award of contract, prevailing wage rate compliance, and obtainment of governing body approval of fully executed change order(s), subcontractor substitutions, assignment of contractual rights, and any Notice to Remedy and Contract Termination. The Owner's departmental representative assigned to administer the contract with the design professional (Architect/Engineer) shall review and approve all documents prior to presenting them to the Purchasing and Contracts Division for advertising a notice to bid and prior to release of a formal addenda.

2. Upon the issuance of a written Notice of Award, the services performed by Contractor under this Contract shall be subject to contract administration for compliance with the terms of this Contract by Owner's departmental representative assigned at the preconstruction meeting and/or as instructed in the written Notice to Proceed. Owner's departmental representative shall provide all contract administration including issuance of the written Notice to Proceed for commencement of work/services, substitutions ("or equal"), coordination with design professional and construction management firm, progress payment evaluation(s), invoice approval, payments and retainage, surety performance inquirers, negotiations and signature authority for change order(s), punch list(s), Notice of Substantial Completion, warranty inspections, corrective action notices, project conflicts, disputes, mediation demands. Additionally shall administer and coordinate the Owner's design professional, construction management firm or other Owner contracted firm(s). Owner's

departmental representative responsibilities under this Contract may be delegated to appropriate staff members or a third party firm, and shall notify the Contractor in writing before the effective date of each such delegation.

C. The review comments of Owner's representative may be reported in writing as needed to Contractor. It is understood that Owner's representative's review and oral comments do not relieve Contractor from the responsibility for the timely completion, professional quality and technical accuracy of all work delivered under this Contract unless modified through a formal written change order(s) approved by the governing body.

21. DISCLAIMER

The prospective Bidder is responsible for obtaining all addenda, correspondence, CD data, and any other documentation issued by UMC. UMC is not responsible for the accuracy or completeness of any documentation the Bidder receives from **any source** other than UMC or Clark County Purchasing and Contracts Division.

GENERAL CONDITIONS

BID NO. 2014-08
LABOR AND DELIVERY RENOVATIONS

SECTION 1: GENERAL

1.1 NOTICE(S) TO PROCEED

A. **Notice to Proceed (for Work)**

After receipt of all required post-bid bonds and proof of insurance, and any other required post-bid submittals, the Purchasing and Contracts Division will issue a Notice of Award which authorizes the Contractor to immediately execute the required contracts with equipment and material supplier(s), required Subcontractors, and apply for and obtain any necessary permits. The UMC Facilities and Engineering Department shall issue a Notice to Proceed to commence the work.

1.2 TIME: COMPLETION OF PROJECT

A. Time is of the essence and failure to meet the specified time to complete the work to be performed shall constitute a breach of the Contract and may result in termination of the Contract.

B. The Successful Bidder, upon becoming the awarded Contractor, shall commence the work to be performed on the date set by the Owner's departmental representative in the written Notice to Proceed, continuing the work in accordance with the approved schedule and shall complete the entire work within **150 calendar days** from the date specified in the Notice to Proceed. Further, separable portions of the work may be subject to milestone or specific dates as established in this document. The Contractor shall complete all work or separable portions of work in accordance with specified milestones or specific dates and in accordance with these specifications. Any costs associated with the overtime, which may be required to complete the project in time, and/or milestones specified shall be solely the responsibility of the Contractor and shall have been included in the bid amount(s).

1. The time specified above represents no overtime requirement. The scheduling of overtime for this project is solely the responsibility of the Contractor. The Owner is not responsible for any additional costs related to overtime work performed.

C. **Contractor's Performance of Work**

The Contractor shall perform all work as may be necessary to complete the contract in a satisfactory and acceptable manner, and unless otherwise provided, shall furnish all transportation, materials, equipment, tools, labor or incidentals necessary to complete the work in the best possible and most expeditious manner.

D. **Liquidated Damages**

1. In case of failure on the part of the Contractor to complete the work within the time(s) specified in the Contract, or with such additional time(s) as may be granted by formal change order, or if the Contractor fails to perform the work, or any separable part thereof, with such diligence as will insure its completion within the time(s) specified in the contract or any extensions thereof, the Contractor shall pay to the Owner, as liquidated damages, the sum of **$500.00** for each calendar day of delay until the work is complete, together with any increased costs incurred by the Owner in completing the work.

2. **Owner's Recovery of Bidder's Preference Liquidated Damages**

If the Owner determines that the Contractor has failed to comply with a requirement certified in its Public Works Bidder's Preference Affidavit, the Owner may seek to recover by civil action Liquidated Damages for material breach of the contract in the amount of one percent (1%) of the contract price.

1.3 PERMITS AND FEES

The Contractor shall determine and secure and pay for all fees and permits which may include, but not be limited to the following: building permit; plan check fee; dust control permit; sanitation/sewer; storm water pollution, water; tortoise; and other permits, connection and governmental fees; licenses; and all special inspections necessary for proper execution and completion of the work, unless otherwise specified. Contractors shall direct questions to the designated contacts specified in the Instructions to Bidders.

1.4 UTILITIES

The Contractor shall, at its expense, arrange for, develop and maintain all utilities in work areas to meet the requirements of the Contract. Such utilities shall be furnished by Contractor at no additional cost to the Owner, unless otherwise specified in this bid document.

1.5 STANDARDS AND CODES

A. Wherever references are made in the Contract to standards or codes in accordance with which work is to be performed or tested, the edition or revision of the standards or codes current on the effective date of this Contract shall apply to the work of the project, unless otherwise expressly set forth. Unless otherwise specified, reference to such standards or codes is solely for implementation of the technical portions of such standards and codes.

B. Where applicable, reference to the Uniform Standard Specifications shall mean the Uniform Standard Specifications for Public Works Construction, Off-Site Improvements, Clark County Area, Nevada, Third Edition and revisions thereof, excluding Sections 102 and 103 of Division One, and/or the latest adopted Editions of the Uniform Building Code, Plumbing Code, Electrical Code, Fire Code, and Mechanical Code.

C. In case of conflict among any of the above referenced Specifications standards and codes, or between any referenced standards and codes and the Specifications reference is made to Section 105, Subsection 105.04 of the Uniform Standard Specifications for Public Works Construction, Off-Site Improvements, Clark County Area, Nevada, Current Edition, and revisions thereto, unless otherwise specified in the General Conditions.

1.6 TAXES

Contractor shall pay all taxes, levies, duties and assessments of any nature that may be applicable to any work under this Contract. The contract amount and any approved change orders amounts shall include all taxes imposed by law. Contractor shall make any and all payroll deductions required by law. Contractor herein indemnifies and holds the Owner harmless from any liability regarding any and all such taxes, levies, duties, assessments and deductions.

1.7 ASSIGNMENT OF CONTRACTUAL RIGHTS

It is agreed that the Contractor will not assign, transfer, convey or otherwise dispose of the contract or its right, title or interest in or to the same, or any part thereof, without prior written consent of Owner and any sureties.

1.8 GOVERNING ORDER OF BIDDING AND CONTRACT DOCUMENTS

A. The bidding and contract documents include various divisions, sections, and conditions, which are essential parts for the work to be provided by the Contractor. A requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete work. In case of a discrepancy, the following precedence will govern:

1. Permits required by law from other agencies, and/or the County, issued to the Contractor, and/or the County.
2. Change orders, supplemental contracts and amended contracts.
3. Instructions to Bidders, including any addenda.
4. General Conditions, including any addenda.
5. Special Provisions, including any addenda.
6. Contract Drawings, including any addenda.
7. Uniform Standard Specifications for Public Works Construction Off-Site Improvements, Clark County Area, Nevada, Third Edition, and all revisions through date of advertisement.
8. Uniform Standard Drawings for Public Works Construction Off-Site Improvements, Clark County Area, Nevada, and all revisions through date of advertisement.

B. Notwithstanding the above, if a permit provision conflicts with a provision in items 2-8, above, the more stringent provision controls.

C. Notwithstanding the above, a change order, supplemental agreement or amended agreement takes precedence over a more stringent permit if the permitting agency approves in writing.

D. Notwithstanding the above, in the event of a conflict between addenda, the more recent addenda controls.

E. Notwithstanding the above, approved revisions to contract drawings, specifications and drawings will take precedence over items 5, 6, 7 and 8 respectively. Detailed contract drawings shall have precedence over general plans.

F. The Contractor shall not take advantage of any apparent error or omission in the contract drawings or specifications. In the event the Contractor discovers such an error or omission, the Contractor shall immediately notify the Engineer/Architect. The Engineer/Architect will then make such corrections and interpretations as may be deemed necessary for fulfilling the intent of the plans and specifications.

1.9 INDEMNITY

A. Notwithstanding the insurance coverage required herein, Contractor hereby indemnifies and shall defend and hold harmless Owner, its officers, employees, agents and, if applicable, its construction manager, its officers and employees, from and against any and all suits, actions, legal or administrative proceedings, claims, demands, damages, liabilities, interest, attorney's fees, costs and expenses whatsoever of any kind or nature whether arising before or after completion of the work hereunder and in any manner directly and indirectly caused, occasioned or contributed to in whole or in part, by reason of any act, omission, fault or negligence whether active or passive by Contractor, or anyone contracted with or acting under its direction or control, or in its behalf in connection with or incident to the performance of this Contract.

Contractor's aforesaid indemnity and hold harmless obligations, or portions or applications thereof, shall apply even in the event of the fault or negligence, whether active or passive, of the parties indemnified or held harmless to the fullest extent permitted by law, but in no event shall they apply to liability caused by the willful misconduct of the parties indemnified or held harmless.

B. Contractor agrees to indemnify, defend, and hold harmless the Owner, its officers and employees, from any and all claims by Contractor's employees or its subcontractors' employees, for work-related injuries arising out of the performance of the contract.

1.10 ADA REQUIREMENTS

All work performed or services rendered by the successful Contractor must comply with the Americans with Disabilities Act standards adopted by Clark County. All facilities built prior to January 26, 1992 must comply with the Uniform Federal Accessibility Standards; and all facilities completed after January 26, 1992 must comply with the Americans with Disabilities Act Accessibility Guidelines. It shall be the responsibility of the successful Contractor to advise the Owner should the Owner’s requirements not meet the appropriate accessibility standards.

1.11 AUDITS

The performance of this contract by the Contractor is subject to review by the Owner to insure contract compliance. The Contractor agrees to provide the Owner any and all information requested that relates to the performance of this contract. All requests for information shall be in writing to the Contractor. Time is of the essence during the audit process. Failure to provide the information requested within the timeline provided in the written information request may be considered a material breach of contract and be cause for suspension and/or termination of the contract.

SECTION 2: MATERIALS:

2.1 PATENT INDEMNITY

A. Contractor hereby indemnifies and shall defend and hold harmless Owner, its officers, employees, agents and, if applicable, its construction manager, its officers, and employees, respectively, from and against all claims, losses, costs, damages, and expenses, including attorney's fees, incurred by Owner and its construction manager, respectively, as a result of or in connection with any claims or actions based upon infringement or alleged infringement of any patent and arising out of the use of the equipment or materials furnished under the contract by Contractor, or out of the processes or actions employed by, or on behalf of Contractor in connection with the performance of the contract. Contractor shall, at its sole expense, promptly defend against any such claim or action unless directed otherwise by Owner or its construction manager; provided that Owner or its construction manager shall have notified Contractor upon becoming aware of such claims or actions, and provided further that Contractor's aforementioned obligations shall not apply to equipment, materials, or processes furnished or specified by Owner or its construction manager.

B. Contractor shall have the right, in order to avoid such claims or actions, to substitute at its expense non infringing equipment, materials, or processes, or to modify such infringing equipment, materials and processes so they become non infringing, or obtain the necessary licenses to use the infringing equipment, material or processes, provided that such substituted and modified equipment, materials and processes shall meet all the requirements and be subject to all the provisions of this Contract.

2.2 SUBSTITUTIONS ("OR EQUAL")

A. **Policy**

1. Prior to proposing any substitute material, product, or service, Contractor shall satisfy itself that the material, product, or service proposed is, in fact, equal to that specified. Contractor may only request a substitution if a material or product will fit into the space allocated, affords comparable ease of operations, maintenance and service, that the appearance, and longevity is equal to or better than the material or product specified; or that the substitution of such material, product, or service by reason of cost savings, reduced construction time, or similar demonstrable benefit will be in Owner's interest.

2. The burden of proof of equality of a proposed substitution for a specified material, product, or service shall be upon Contractor. Contractor shall support its request with sufficient test data and other means to permit Owner to make a fair and equitable decision on the merits of the proposal. Contractor shall submit drawings, samples, data and certificates for proposed substitute materials. Any material, product, or service by a manufacturer other than those specified or of brand name or model number or of generic species other than those specified will be considered a substitution. Owner will be the sole judge of whether or not the substitution is equal in quality, utility and economy to that specified.

3. Approval of a substitution shall not relieve the Contractor from responsibility for compliance with all requirements of the Contract. Contractor shall bear the expense for any changes in other parts of the work caused by any substitutions.

4. Materials, products or service proposed as substitutions for specified items shall be supported by certification of their approval for use by any or all governmental agencies having jurisdiction over use of the specific material, product or service.

5. Substitutions will not be permitted in those instances where the product is intended to accommodate artistic design, specific function or economy of maintenance.

B. **Procedure**

Should the Contractor wish to use any material, product, or service other than those specified by brand or trade name, it shall, within **10 calendar days** after award of the contract, submit to the Architect or Engineer, a written request for substitution accompanied by all data necessary for the Architect or Engineer to determine whether the requested substitution is equal to the specified material, product, or service. If the Contractor fails to submit written requests within **10 calendar days** after the award of the contract, no substitutions will be allowed. The submission of a request to substitute a material, product, or service gives rise to no obligation on the part of the Owner to accept such substitute, or on the part of the Architect or Engineer to determine such substitute to be the equal of that specified.

The Architect or Engineer will have a reasonable amount of time to review requests for substitution and make a recommendation to the Owner. Should the substitute be acceptable to the Owner, an authorization will be written allowing the provision of the substitute material, product, or service. No substitution will be allowed which will increase the Contract amount.

2.3 DELIVERY, UNLOADING AND STORAGE

Contractor shall receive, unload, store in a secure place, and deliver from storage to the construction site all materials and equipment required for the performance of the Contract. The storage facilities and methods of storing shall meet Owner's approval. Materials and equipment subject to degradation by exposure shall be stored in a suitable enclosure provided by Contractor.

2.4 PAYMENT OF MATERIAL

A. At the discretion of the Owner, payment for materials on hand may be made when a paid invoice is presented to the Architect/Engineer for inclusion with the estimate, provided the materials meet the requirements of the plans and specifications, and are stored under acceptable storage conditions. Payment for materials on hand does not alter the responsibility of the Contractor for all materials until final acceptance of the work.

B. If materials are not specifically purchased for the work, but are taken from the Contractor's stock, then in lieu of invoices, there shall be submitted to the Owner statements accompanied by an affidavit of the Contractor, certifying such materials were taken from its stock and the price and transportation claimed represent the actual cost to the Contractor.

C. It is understood and agreed that the transfer of title to and the Owner's payment of such stored or stockpiled material shall in no way relieve the Contractor of its responsibility for furnishing and placing such materials in accordance with the requirements of the Contract, plans, and specifications.

2.5 WARRANTY

A. Unless otherwise provided elsewhere in the Contract, all materials and equipment incorporated into any work covered by the contract shall be new, and where grade is not specified, shall be of the most suitable grade of their respective kinds for their intended use, and all workmanship shall be in accordance with construction practices acceptable to Owner. Unless otherwise provided in the contract, Contractor warrants all equipment, materials, and labor furnished or performed under this contract against defects in design, materials (unless furnished by Owner), and workmanship for a period of **12 months** (unless longer guarantees or warranties are provided for in the contract in which case the longer periods of time shall prevail) from the date of Substantial Completion, regardless of whether the same were furnished or performed by Contractor or by any of its subcontractors of any tier. Upon receipt of written notice from Owner of any defect in any such equipment, materials, or labor during the applicable warranty period, due to defective design, materials or workmanship, the affected item or parts thereof shall be redesigned, repaired or replaced by Contractor at a time acceptable to Owner.

B. Contractor shall perform such tests as Owner may require verifying that such redesign, repairs and replacements comply with the requirements of this Contract. All costs incidental to such redesign, repair, replacement and testing, including the removal of any barrier, necessary to gain access, shall be borne by Contractor.

C. Contractor warrants such redesigned, repaired or replaced work against defective design, materials and workmanship for a period of 12 months from and after date of acceptance thereof. Should Contractor fail to promptly make the necessary redesign, repair, replacement, and tests, Owner may perform or cause to be performed the same at Contractor's expense. Contractor and its surety or sureties shall be liable for the satisfaction and full performance of the warranties as set forth herein.

SECTION 3: LABOR

3.1 LABOR

A. Wages paid under this contract shall conform with Davis-Bacon Act of March 3, 1931 as amended (46 Stat.1494, as amended, 40 U.S.C. 276a) as supplemented by Department of Labor Regulations (29-CFR, Part 1, 3 & 5). Where Nevada State Wage Rates and General Wage Rates are not equal, the Contractor will be required to pay the higher prevailing rate. Bidders are responsible to identify and use the correct prevailing wage rates, including any addenda, as specified in the General Wage Decision included in this bid document and as specified on the State of Nevada Labor Commissioner's web site: http://www.laborcommissioner.com or by calling (702) 486-2795. Per NAC 338.040, after a contract has been awarded, the prevailing rates of wages in effect at the time of the opening of bids remains in effect for the duration of the project.

B. The Contractor and Subcontractors shall be bound by and comply with all federal, state and local laws with regard to minimum wages, overtime work, hiring and discrimination, including NRS 338.

C. The Contractor shall comply with the requirements of NRS 338.020 and post it in a generally visible place to the workmen, the applicable State/Federal wage decision.

D. The Contractor hereby agrees to forfeit as a penalty to the Owner, an amount as specified by the Nevada State Labor Commissioner for each workman employed, for each calendar day or portion thereof, that such workman is paid less than the designated rate for any works done under the contract, by their or any subcontractor under them, pursuant to NRS 338.060.

E. The Contractor and each subcontractor are required to submit a copy of their certified payroll reports weekly to the Owner for the purposes of public inspection. The Contractor and each subcontractor shall submit the Owner's copy of their certified payroll reports to the following:

University Medical Center of Southern Nevada
Michael Knuckles, Director of Facilities and Engineering
1800 W. Charleston Blvd.
Las Vegas, Nevada 89102

3.2 WORKING HOURS/OVERTIME

The normal working day for Owner's employees is 7:00 a.m. to 3:30 p.m., Monday through Friday, except legal holidays, as specified below. At the Owner's discretion, seasonal adjustments in the hours of the normal working day may be made.

The normal jobsite hours of access are 6:30 a.m. to 3:00 p.m., Monday through Friday. At the Owner's discretion, seasonal adjustments in the hours of the normal working day may be made.

All work necessary to be performed after regular working hours, on weekends or legal holidays, shall be performed without additional expense to the Owner.

The Contractor shall pay for the overtime of all Owner's agents and employees who, as a result of the Contractor's operation, are required to perform inspection, surveying or testing beyond the normal hours, as specified above, and during legal holidays of the Owner, as specified above. Should the Contractor elect to work on a holiday, and needs the County to inspect, the Contractor shall prearrange inspection by written request at least 48 hours in advance.

The Contractor shall not be required to pay for the overtime of the Owner's agents and employees if such hours are required by the work of the Contract.

3.3 STATE OF NEVADA LEGAL HOLIDAYS

The Contractor is advised that below there are 10 firm legal holidays and 11 when December 31st falls on Friday.

Martin Luther King's Birthday
Presidents' Day
Memorial Day
Independence Day
Labor Day
Nevada Admission Day
Veteran's Day
Thanksgiving Day and the Friday After
Christmas Day
New Year's Day

Contractor is required to verify dates with Owner's representative prior to commencement of the Project.

3.4 COPELAND ANTI-KICK BACK ACT

The Contractor shall comply with the Copeland Anti-Kick Back Act (18 U.S.C. 874) as supplemented in the Department of Labor Regulations (29 CFR Part 3). This act provides that each Contractor or Subcontractor shall be prohibited from inducing by any means, any person employed in the construction, completion or repair of public work, to give up any part of the compensation to which it is otherwise entitled.

3.5 EMPLOYMENT OF UNAUTHORIZED ALIENS

In accordance with the Immigration Reform and Control Act of 1986, the successful Bidder agrees that it will not employ unauthorized aliens in the performance of this contract.

3.6 NON-DISCRIMINATION / FAIR EMPLOYMENT PRACTICES

A. Discrimination:

The BOT is committed to promoting full and equal business opportunity for all persons doing business in Clark County. The successful Bidder acknowledges that the Owner has an obligation to ensure that public funds are not used to subsidize private discrimination. The successful Bidder recognizes that if they or their subcontractors are found guilty by an appropriate authority of refusing to hire or do business with an individual or company due to reasons of race, color, religion, sex, sexual orientation, gender identity or expression, age, disability, national origin, or any other protected status, the Owner may declare the successful Bidder in breach of the contract, terminate the contract, and designate the successful Bidder as non-responsible.

B. Fair Employment Practices:

In connection with the performance of work under this contract, the Contractor agrees not to discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex or age. Such agreement 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 further agrees to insert this provision in all subcontracts hereunder, except subcontracts for standard commercial supplies or raw materials. Any violation of such provision by a Contractor shall constitute a material breach of this Contract.

3.7 PREFERENTIAL EMPLOYMENT

All contractors shall comply with the preferential employment provisions of NRS 338.130 for public works contracts. This law requires that, when the qualifications of applicants are equal, that preference be given: First, to honorably discharged soldiers, sailors, and marines of the United States who are citizens of the State of Nevada; second, to other citizens of the State of Nevada. If the provisions of NRS 338.130 are not complied with by the Contractor, this contract is void, and any failure or refusal to comply with any of the provisions of NRS 338.130 renders this contract void.

3.8 SUBCONTRACTOR/INDEPENDENT CONTRACTOR

A. Contractor represents that it is fully experienced and properly qualified to perform the class of work provided for herein, and that it is properly licensed, equipped, organized and financed to perform such work. Contractor shall act as an independent Contractor and not as the agent of Owner in performing the Contract. The Contractor shall maintain complete control over its employees and all of its Subcontractors. Nothing contained in this Contract or any subcontract awarded by Contractor shall create any contractual relationship between any such Subcontractor and Owner. Contractor shall perform all work in accordance with its own methods subject to compliance with the Contract.

B. Any subcontract entered into by the Contractor and its Subcontractor or Material Supplier shall not create any contractual relationship between the Owner and Subcontractor or Material Supplier. It is the Contractor's responsibility to ensure all subcontract agreements and material supply contracts comply with the terms and conditions set forth in this Contract and applicable Statutes. If the Contractor submitted with its Bid a signed and notarized Affidavit, the Contractor must include in each contract between the Contractor and Subcontractor the apportionment of Bidder's Preference Liquidated Damages assessed (General Conditions Section 1,1.2(D).

The Contractor shall not substitute a subcontractor for any portion of the Work which was previously indicated would be performed by the Contractor unless such substitution meets the requirements of NRS Chapter 338.

3.9 REPORTING OF ALLEGED VIOLATIONS OF THE LAW

The Contractor should have a written policy that protects employees from retaliation for reporting alleged violations of the law.

3.10 LABOR STRIFE

The Contractor shall not cause or condone labor strife that may jeopardize the timely and efficient completion of public construction projects.

3.11 ELIGIBILITY FOR PREFERENCE IN BIDDING

The OWNER shall award the Contract to the Bidder who submits the best Bid as defined by NRS 338.147 and, in doing so will consider the Bidder's eligibility for a bidding preference as defined by NRS 338.147. Eligibility for the preference will be established if the Bidder, at the time of Bid: 1) submits a valid certificate of eligibility from the State Contractor's Board; and 2) submits the "Affidavit Pertaining to Preference Eligibility" form, attached hereto as Attachment No. 3, within 2 hours after the completion of the opening of the Bid by the OWNER, included as part of the Bid Documents and hereafter incorporated into the Contract. A person who submitted a bid on the public work or an entity who believes that the contractor who was awarded the contract for the public work is not entitled to receive preference in bidding on public works under Nevada Law may: 1) challenge the validity of the certificate of eligibility by filing a written objection with the Owner in compliance with NRS 338.147 (13) within three (3) business days after the Bid opening; or 2) file a written objection with the Owner setting forth proof or substantiating evidence to support the belief that the Contractor has failed to comply with NRS 338.147. In evaluating an objection to the certificate of eligibility, the Owner shall comply with the requirements of NRS 338.147 (14).

3.12 BIDDERS RECEIVING PREFERENCE

A. If the Contractor submitted, within 2 hours after the completion of the opening of the Bid, a signed and notarized "Affidavit Pertaining to Preference Eligibility" form, and fails to comply with any of the requirements certified in the Affidavit, such failure is a material breach of the Contract and entitles the Owner to liquidated damages in the amount of one percent (1%) of the Contract Price.

B. A person who submitted a Bid who believes that the Contractor that obtained a preference bidding by submitting within 2 hours after the completion of the opening of the bids a signed and notarized Affidavit has failed to comply with a requirement certified in the Affidavit, may file a "written objection" with the Owner that sets forth proof or substantiating evidence to support the belief of the person or entity that the Contractor has failed to comply.

C. If the Owner receives a written objection from a person who submitted a Bid a Contractor who submitted an Affidavit within 2 hours after the completion of the opening of the bids has failed to comply with a requirement certified in the Affidavit, the Owner shall determine whether the objection is accompanied by the required proof or substantiating evidence. If the Owner determines that the objection is not accompanied by the required proof or substantiating evidence, the Owner shall dismiss the objection. If the Owner determines that the objection is accompanied by the required proof or substantiating evidence or if the Owner on its own initiative determines that the required proof or substantiating evidence exists, the Owner shall determine that the Contractor has failed to comply with a requirement certified in his or her Affidavit, the Owner may seek to recover by civil action liquidated damages for material breach of the Contract in the amount of one percent (1%) of the Contract Price.

D. If the Contractor submitted within 2 hours after the completion of the bid opening of the Bid, a signed and notarized Affidavit, the Contractor must:

1. Each Contract between the Contractor and a Subcontractor must provide for the apportionment of liquidated damages to be assessed if a person other than the Contractor is responsible for a breach of the Affidavit. The apportionment of liquidated damages must be in proportion to the responsibility of each party for the breach.

2. Submit copies of the vehicle registration for all vehicles used primarily for the public work. For vehicles that are not registered in the State of Nevada, submit documentation confirming that the vehicle is registered and partially apportioned to Nevada pursuant to the International Registration Plan, as adopted by the DMV pursuant to NRS 706.826. The documentation required by this subparagraph shall be provided no later than 30 calendar days following the first use of a vehicle on the Site and shall be supplemented as necessary during the course of the work to comply with the requirements certified by the Affidavit. Attached is a sample form that may be used to submit the documentation.

3. Submit a monthly report of all Suppliers of materials used for the Project with company name and address. Report shall be submitted no later than 15 calendar days following the end of each month during the course of the Work. A report showing the information in cumulative summary form shall be provided as a condition of Final Completion.

SECTION 4: SITE SAFETY AND SECURITY

4.1 RESPONSIBILITY FOR WORK SECURITY

A. Contractor shall at all times conduct all operations under the Contract in a manner to avoid the risk of loss, theft, or damage by vandalism, sabotage or damage of other means to any property. Contractor shall promptly take all reasonable precautions which are necessary and adequate against any conditions which involve a risk of loss, theft or damage to its property, the Owner's property, and the work site. Contractor shall continuously inspect all its work, materials, equipment, and facilities to discover and determine any such conditions and shall be solely responsible for discovery, determination, and correction of any such conditions.

B. Contractor shall comply with all applicable laws and regulations. Contractor shall cooperate with Owner on all security matters and shall promptly comply with any project security requirements established by Owner. Such compliance with these security requirements shall not relieve Contractor of its responsibility for maintaining proper security for the above-noted items, nor shall it be construed as limiting in any manner Contractor's obligation to undertake reasonable action as required to establish and maintain secure conditions at the site.

C. Contractor shall prepare and maintain accurate reports of incidents of loss, theft or vandalism and shall furnish these reports to Owner in a timely manner.

4.2 CONTRACTOR SITE RESPONSIBILITIES

A. Unless otherwise specifically provided in the Contract, Contractor shall not do any work that would disrupt or otherwise interfere with the operation of any pipeline, telephone, electric transmission line, ditch or other structure, nor enter upon lands in their natural state until approved by Owner. Before Contractor begins such work, it shall give due notice to Owner of its intention to start such work. Contractor shall not be entitled to any extension of time, or any extra compensation on account of any postponement, interference or delay caused by any such line, ditch or structure on or adjacent to the site of work.

B. Contractor shall preserve and protect all cultivated and planted areas, and vegetation such as trees, plants, shrubs and grass on or adjacent to the premises, which, as determined by Owner, do not unreasonably interfere with the performance of its work through operation of equipment or stockpiling of materials. All costs in connection with any repairs or restoration necessary or required by reason of any such damage shall be borne by Contractor.

C. Owner reserves the right to permit access to the site by other contractors if necessary. Contractor shall cooperate and coordinate with Owner as needed.

4.3 CONSTRUCTION SAFETY

Neither the Owner nor its employees, agents, Architect/Engineer or construction management firm shall be responsible for safety on the project site, including but not limited to, providing or assuring a safe place for the performance of construction, methods of construction employed by any Contractor, subcontractor, supplier or other entity, or their partners, officers, agents, employees or volunteers or access, visits, use work, travel or occupancy by any person.

A. General

1. The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. The Contractor shall comply with all applicable laws, ordinances, rules, regulations and lawful orders of any public authority bearing on the safety of persons or property or their protection from damage, injury or loss.

2. In an emergency affecting the safety of life or of the Work or of adjoining property, the Contractor shall follow the instructions of the Owner or Consulting Architect or Engineer and, in the absence of such instruction, shall act at its discretion to prevent such threatened loss or injury.

B. Protection of Persons

1. The Contractor shall take all reasonable precautions for the safety of all employees on the Work and all other persons who may be affected thereby. The Contractor shall designate a responsible member of its organization at the Project site whose duty shall be prevention of accidents.

2. Except as otherwise stated in the Contract Documents, if the Contractor encounters on the Project site material reasonably believed to be asbestos, lead, or polychlorinated biphenyl (PCB), that Contractor shall immediately stop work in the area affected and give notice to Owner and any other appropriate entity of the condition. Work in the affected area shall not be resumed without written direction by the Owner.

C. State of Nevada Division of Industrial Relations

1. A recent regulatory addition to the Regulations for the Nevada Occupational Safety and Health Administration Program, Chapter 618, requires that the general contractor, give written notice to the Nevada Occupational Safety and Health Administration Program (OSHA) before commencing construction on the project.

2. This written notice must be provided to the chief of the OSHA. The notice must include at least the following information: height, square footage, type of construction, total cost of construction, and the location of the project. The Contractor must provide this notice for each construction project that meets at least one of the following criteria:

   a) A new or renovated building or structure that has a ground floor which is more than 30 feet above or below ground level;

   b) A new building or structure which has an initial construction cost of $10,000,000 or more;

   c) A new building or structure which, when completed, will be 50,000 square feet or more; or

   d) A new building or structure which, when completed, will be more than 60 feet above the ground, excluding any antenna, smokestack, flagpole, or similar attachment.

   Failure to notify OSHA of construction projects meeting one or more of the above criteria will result in a citation, with a monetary penalty, being issued.

3. Owner has attached as Exhibit B, the “Regulated Construction Projects Notification Form” (3 pages) for the successful Bidder to use in notifying OSHA of this project. This form contains space for more information than what is required by Nevada Administrative Code 618.505; however, OSHA uses this information to determine whether an in-person preconstruction conference is necessary. **Mail the completed form to OSHA at the address shown on the form.**

4. In order to preclude adverse enforcement actions, please complete the attached form and return it to the address shown on the form. Upon receipt of your notification form, OSHA may contact the Contractor to schedule a preconstruction meeting. **If you need any additional information regarding**

this notification requirement you can contact the Las Vegas OSHA office at (702) 486-9020 or the Reno OSHA office at (775) 688-1380.

4.4 CLEANING UP

A. Contractor shall, at all times, keep the work area in a neat, clean, and safe condition. Upon completion of any portion of the work, Contractor shall promptly remove all of its equipment, construction plant, temporary structures and surplus materials not to be used at or near the same location during later stages of work. Upon completion of the work and before final payment is made, Contractor shall, at its expense, satisfactorily dispose of all plant, buildings, rubbish, unused materials, and other equipment and materials belonging to it or used in the performance of the work, and Contractor shall leave the premises and work site in a neat, clean, and safe condition. In the event of Contractor's failure to comply with the above requirements may be accomplished by Owner at the Contractor's expense.

B. In the case of Public Works Off-Site Construction Reference to use of completed portions of the work, shall conform to Section 107 of the Uniform Standard Specifications for Public Works Construction, Off-Site Improvements, Clark County Area, Nevada, Third Edition, and revisions thereto.

4.5 FIRE PREVENTION

A. Contractor shall comply with all Federal, State, and local laws and regulations pertaining to burning, fire prevention, and control within or adjacent to the project. Necessary precautions to avoid and eliminate fire hazards shall be the responsibility of the Contractor.

B. All tarpaulins used for any purpose during construction of any work shall be made of material resistant to fire, water, and weather and shall bear UL labels. Lighting of any fires on premises is strictly forbidden.

C. Contractor shall provide portable fire extinguishers compatible with the hazard of each work area and shall instruct its personnel in their location and use. Wherever welding and burning are conducted, inflammable materials shall be protected and a fire watch shall be provided by Contractor to be present during the burning and welding operation to ensure that protective measures are taken and no fires result from such operation. The fire watch shall have fire extinguisher equipment readily available and must be knowledgeable regarding proper use.

SECTION 5: PROJECT COSTS AND WAGES

5.1 CHANGE ORDERS

The Contractor shall comply with all provisions and conditions which are required by the Contract for change order(s) which increase the Contract amount. Contractor represents that change order(s) will include all related costs prior to presentation to the Owner for consideration. Retroactive change order(s) will be rejected. Work which is specifically required by the Owner or its representative, and which is in addition to work required by the Contract, will be charged against a formal change order executed by both parties. Then the work defined shall commence as directed by the Owner's representative. Change order(s) may not exceed 10 percent of the original Contract amount without prior approval by the Governing Body, with the following conditions:

A. The Contractor shall submit proposals and/or billings for materials and/or labor for all additional work requested on the following basis, and in all cases the Contractor shall conform to the following requirements, and costs shall be limited to those set forth below:

1. Products and Materials

a. The costs of products and materials to the Contractor or Subcontractor, less any applicable trade discounts.

b. Where the Prime Contractor supplies products and materials to the Owner directly, the Prime Contractor will be allowed to add a maximum of 10 percent overhead and profit in its billing to the Owner.

c. Where the Subcontractor supplies products or materials to the Owner, through the Prime Contractor, the Prime Contractor will be allowed to add a maximum of 10 percent overhead and profit for the Subcontractor, and above that, five percent (5%) overhead and profit for itself in its billing to the Owner.

d. The Owner reserves the right to request copies of any invoice(s), including those from the originating supplier(s), Subcontractor(s), or manufacturer(s).

e. No overhead and profit will be allowed on any applicable taxes.

2. Labor

a. Where the Prime Contractor supplies labor to the Owner directly, the Prime Contractor will be allowed to add a maximum of 15 percent overhead and profit in its billing to the Owner.

   Labor costs shall be in compliance with the prevailing wage rates as specified above in Section 3, Labor, Item A.1.

b. Where the Subcontractor supplies labor to the Owner, through the Prime Contractor, the Prime Contractor will be allowed to add a maximum of 15 percent overhead and profit for the subcontractor; and above that, a maximum of 10 percent overhead and profit for itself in its billing to the Owner.

   Labor costs shall be in compliance with the prevailing wage rates as specified above in Section 3, Labor, Item A.1.

c. The Owner reserves the right to request copies of any invoice(s) or time sheet(s) relevant to labor charged.

d. Should a contract originally awarded for less than $100,000 be increased over that amount through the issuance of change order(s), the Contractor shall then comply with all provisions and requirements of the Prevailing Wage Rates and represents that change order(s) will include labor and all related costs prior to presentation to the Owner for consideration. Retroactive change order(s) will be rejected.

5.2 RELEASE OF RETENTION

Not more than 95 percent of the amount of any progress payment may be paid until 50 percent of the work required by the CONTRACTOR has been performed. The amount of retention with respect to progress payments shall be five percent (5%) until the work is 50 percent complete. After the work is 50 percent complete, no further amount shall be retained from future progress payments, provided CONTRACTOR is making satisfactory progress. In the event of unsatisfactory progress, OWNER shall retain five percent (5%) from any progress payments. OWNER, or OWNER representative shall determine when the work is 50 percent complete.

The specified retention amount will be released following the Owner's issuance/approval of the Notice of Completion, provided that the following conditions are met:

1. All punch list items have been completed.
2. A Certificate of Occupancy has been received (if applicable).
3. Final record drawings and specifications have been submitted (if applicable).
4. No known premium delinquency exists with the Contractor's workers' compensation insurer.
5. All required documentation has been submitted to the Owner and no request has been made to the Owner by the Labor Commissioner, to hold retention.

The Owner may at its discretion, withhold only the estimated portion of the retention monies needed to finish any of the five uncompleted conditions as specified above, and only with written notice to the Contractor. The difference of the retention may then be paid.

SECTION 6: PROJECT COMPLETION

6.1 USE OF COMPLETED PORTIONS OF WORK

A. Whenever, as determined by Owner, any portion of work performed by Contractor is in a condition suitable for use, Owner may initiate a certificate of substantial completion for that portion and take possession of, or use such portion.

B. Such use by Owner shall in no case be construed as constituting final acceptance, and shall neither relieve Contractor of any of its responsibilities under the Contract, nor act as a waiver by Owner of any of the conditions thereof, provided that Contractor shall not be liable for the cost of repairs, rework or renewals which may be required due to ordinary wear and tear resulting from such use. However, if such use increases the cost, or delays the completion of remaining portions of work, Contractor shall be entitled to an equitable adjustment mutually agreed upon prior to Owner taking possession.

C. If, as a result of Contractor's failure to comply with the provisions of the Contract, such use proves to be unsatisfactory to Owner, Owner shall have the right to continue such use until such portion of work can,

without injury to Owner, be taken out of service for correction of defects, errors, omissions, or replacement of unsatisfactory materials or equipment, as necessary for such work to comply with contract; provided that the period of such operation or use pending completion of appropriate remedial action shall not exceed 12 months, unless otherwise mutually agreed upon in writing between the parties.

D. Contractor shall not use any permanently installed equipment unless such use is approved by Owner in writing. Where Contractor's written request is granted for the use of certain equipment, Contractor shall properly use and maintain, and upon completion of its use, and at its expense, recondition such equipment to the satisfaction of Owner.

E. If Owner furnished an operator for such equipment, such operator's services shall be performed under the complete direction and control of Contractor and shall be considered Contractor's employee for all purposes other than the payment of such operator's wages, workers' compensation or other benefits paid directly or indirectly by Owner.

F. Use of completed portions of off-site improvements shall be done in accordance with Section 107 of the Uniform Standard Specifications for Public Works Construction, Off-Site Improvements, Clark County Area, Nevada, Third Edition, and revisions thereto.

6.2 RECORD DRAWINGS AND SPECIFICATIONS

A. Progress Records: During construction, Contractor shall keep a marked-up, up-to-date set of drawings showing as-built conditions on the site as an accurate record of all deviations between work as shown and work as installed.

B. Final Records: When specified or required upon completion of work, Contractor shall furnish to Owner a complete set of marked-up as-builts with “RECORD” clearly printed on each sheet. Owner, at its expense, will furnish Contractor with drawings for mark-up by Contractor. Contractor shall accurately and neatly transfer all deviations from progress as-builts, to final as-builts.

6.3 TESTING, INSPECTIONS, AND FINAL ACCEPTANCE

A. When Contractor considers that all work under the Contract is complete, Contractor shall inform Owner in writing. When the results of inspection and testing satisfy Owner that all work under the Contract is completed and in accordance with the requirements of this Contract, Owner shall initiate the Notice of Completion process.

B. The date of final acceptance of the project shall be the date upon which the Owner accepts and issues a Notice of Completion for the project.

C. All warranties, guarantees and other applicable requirements designated in the Contract documents shall commence on the date of final acceptance of the project by the Owner as defined herein except that Owner, upon written request, may approve earlier commencement dates for system, equipment, or other specific items of work.

6.4 CONTRACT TERMINATION

A. Termination by the Owner for Cause

1. The Owner may terminate the Contract for Construction if the Contractor:

a) Fails to maintain Bonding, Nevada State Contractor's Board License, Worker’s Compensation Insurance, insurance coverage for limits as defined in the contract documents; or

b) Persistently or repeatedly refuses or fails to supply enough properly skilled workers or proper materials; or

c) Persistently disregards laws, ordinances, or rules, regulations or order of a public authority having jurisdiction; or

d) Has otherwise materially breached the Contract.

2. When any of the above reasons exist, the Owner may without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's Surety, if any, **7 business days** advance written notice, terminate the contract with Contractor and may, subject to any prior rights of the Surety:

a) Take possession of the site and of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;

b) Accept assignment of Subcontractors pursuant to this Contract (contingent assignment of subcontracts to Owner if Contract is terminated); and,

c) Finish the work by whatever reasonable method the Owner may deem expedient.

3. When the Owner terminates the Contract for one of the reasons stated in this section "Termination by the Owner for Cause," the Contractor shall be entitled to receive payment only on work completed and accepted by Owner as of that termination date.

4. If the costs of finishing the work, including expenses made necessary thereby, exceed the Contract amount, the Contractor shall pay the difference to the Owner. The amount to be paid to the Owner shall survive Termination of the Contract.

B. Suspension by the Owner for Convenience

1. The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the work in whole or in part for such period of time as the Owner may determine.

2. An adjustment shall be made for increase in the cost of performance of the requirements of the Contract documents, including profit on the increased cost of performance, caused by suspension, delay or interruption. No adjustment shall be made to the extent:

a) That performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is responsible; or

b) That an equitable adjustment is made or denied under another provision of the Contract.

3. Adjustments made in the cost of performance must have a mutually agreed fixed price.

C. Termination for Convenience by Owner

Prior to, or during the performance of the work, the Owner reserves the right to terminate the contract for its convenience. Upon such an occurrence, the following procedures will be adhered to:

1. The Owner will immediately notify the Architect/Engineer and the Contractor in writing specifying the effective termination date of the Contract.

2. After receipt of the Notice of Termination, the Contractor shall immediately proceed with the following obligations, regardless of any delay in determining or adjusting any amounts due at the point in the Contract.

a) Stop all work.

b) Place no further subcontracts or orders for materials or services.

c) Terminate all subcontracts.

d) Cancel all material and equipment orders as applicable.

e) Take action that is necessary to protect and preserve all property related to this Contract which is in the possession of the Contractor.

3. Within 180 days of the date of the Notice of Termination, the Contractor shall submit a final termination settlement proposal to the Owner based upon costs incurred up to the date of termination, reasonable profit on work done only, and reasonable demobilization costs. If the Contractor fails to submit the proposal within the time allowed, the Owner may determine the amount due to the Contractor because of the termination and shall pay the determined amount to the Contractor.

SECTION 7: PROJECT CONFLICTS

7.1 DISPUTES

All claims, disputes or other controversy that may arise between the Owner and Contractor relating to any provisions of this Contract, or its performance, which have not been waived by the making and acceptance of final payment or any progress payment, must be attempted to be resolved by the parties by informal negotiations prior to the initiation of mediation. In the event such claim, dispute or controversy can not be resolved by informal negotiations within forty-five (45) calendar days after either party made a written request for such informal negotiations, the parties shall, pursuant to NRS 338.150, attempt to resolve the claim, dispute or controversy by non-binding mediation prior to initiating judicial action.

In the event the Contractor files a claim in District Court, pursuant to one or more provisions of NRS 338.640, and the Owner prevails in the Court's decision, then the Contractor shall pay the Owner's attorneys' fees. Further, Contractor acknowledges that NRS 338.640 is contained within Nevada's Prompt Pay Act and, thus, fee-shifting provisions apply only to actions involving ordinary progress payments, and not claims for additional compensation or additional days beyond this contract.

The Owner and Contractor, in any legal proceeding, including this mediation, an arbitration or Court action, shall bear their own fees and costs. This specifically extends to any pass-through claims asserted by or on behalf of subcontractor. UMC shall not be liable for fees or costs as an element of consequential damages.

7.2 NOTICE OF NON-BINDING MEDIATION

After the expiration of the forty-five days for informal negotiations, as set forth in Item 7.1 above; either the Owner or the Contractor may initiate mediation by providing written notice to the other party against whom a claim, dispute or controversy is being made by submitting the following:

A. A written demand by the party initiating the mediation that the claim, dispute, or other controversy be referred to a mediator;

B. The names, addresses and telephone numbers of the parties;

C. A reference to any contract provisions from which the claim, dispute or controversy arises;

D. A complete description and a specific statement of the claim(s), dispute(s) or controversy(ies) and a showing of entitlement to relief;

E. The relief or remedy sought and the amount of money claimed;

F. If the Contractor is the initiating party, a copy of the Contractor's documents generated in preparation or determination of prices included in the bid as required by NRS 338.140(1)(d);

G. If the Contractor is the initiating party and if the claim, dispute or controversy is made by a subcontractor, a written statement by the Contractor that it agrees with the merits and the amount of the claim;

H. If the Contractor submits a total cost or modified cost claim, dispute or controversy then the Contractor must submit documents showing: 1) that the nature of the particular losses make it impossible or highly impractical to determine the losses with a reasonable degree of accuracy; 2) that the bid was realistic; 3) that the actual costs are reasonable; 4) that the Contractor was not responsible for the added expenses; and 5) that UMC, and not anyone else, is responsible for the additional cost; and

I. If the Contractor is the initiating party, it must submit the written demand of mediation to Owner in the time period set forth in the claims presentment statute of NRS 244.250.

J. If the Contractor is the initiating party of the claim, dispute or controversy, the Contractor shall certify in writing that the claim is made in good faith, that the supporting data is accurate and complete to the best of the Contractor's knowledge and belief, and that the amount requested accurately reflects the Contract adjustment for which the Contractor believes the Owner is liable.

7.3 SELECTION OF MEDIATOR

The mediator shall be chosen by mutual agreement of the parties.

7.4 COST OF THE MEDIATION

The fees and expenses of the independent private mediator shall be shared equally by the Owner and Contractor. Owner and Contractor shall each pay their own costs and expenses, including, but not limited to, expert and attorney fees incurred in the mediation of any claim, dispute or controversy, including, but not limited to, their own costs of preparation of and presentation of all claims prior to and through the mediation period. Neither the Owner nor Contractor shall be entitled to an award of interest.

7.5 LOCATION OF THE MEDIATION

The mediation shall take place at a location designated by the Owner at an Owner-owned facility.

7.6 MEDIATOR AGREEMENT

The parties shall enter into an agreement with the mediator that will include, among other provisions, the mediator's fees and costs, the mediator's responsibilities, and the mediator's model standards of conduct. The parties agree to propose that the mediator enter into an agreement in substantial form as that attached hereto as **Exhibit C**, prior to serving in any capacity as a mediator.

7.7 MEDIATION PROCEEDING

A. The parties and the mediator shall agree on the date of the mediation and time of the mediation. Unless the parties and the mediators mutually agree otherwise, the mediation shall take place within ninety (90) days after execution of the mediator agreement.

B. Either party may be represented by an attorney. Representation is not required. Parties are expected to have present at the mediation an officer, partner, employee or other person authorized to make decisions regarding the resolution of the dispute, claim or controversy. Contractor acknowledges that Owner is a public body and any settlement agreed to by its authorized representatives is subject to approval by the Board of Trustees.

C. The mediation shall consist of one or more sessions totaling no more than sixteen (16) hours, unless otherwise mutually agreed to by the parties and the mediator. Unless the parties otherwise mutually agree, it shall be an irrebuttable presumption that efforts beyond sixteen (16) hours would be futile.

D. Prior to the mediation session, on a date mutually agreed upon by the mediator and the parties, as set forth in section 7.7(a), above, each party shall provide the mediator with a written memoranda addressing the facts, issues, legal arguments and damages related to the claim, dispute or controversy. In addition to the written statement, the parties shall produce all relevant information reasonably required by the mediator to understand the issues and positions presented. Each party will provide the written statement and supporting documents to the mediator only. The parties will not exchange the written statement and supporting documents. The written statement shall be double spaced, no smaller than 12 characters per inch and not to exceed 30 (thirty) pages, unless mutually agreed to otherwise by the mediator and the parties. The party initiating the mediation shall provide the mediator with the information set forth in Item 7.2 of this section.

E. The mediation shall be confidential and, as a condition of the nonbinding mediation, the parties shall enter into a confidentiality agreement, attached hereto as **Exhibit C** prior to the commencement of the mediation proceeding.

F. The mediation session will be private. Persons other than the parties and their representatives may attend only with the permission of both parties and the consent of the mediator. Unless mutually agreed to by the parties, the Owner and Contractor, along with its authorized representatives, shall be the only participants in the mediation. There shall be no stenographic record of the mediation process.

G. The parties agree to assert all claims, disputes and controversies known to the parties in their respective written statements submitted to the mediator.

H. The parties agree that opinions, recommendations, proposals, suggestions made or written, or views expressed, by the mediator will not be introduced, used or relied upon in any arbitral, judicial or other proceedings.

7.8 TERMINATION OF MEDIATION

The mediation shall be terminated:

A. by the execution and approval of a settlement agreement by the parties;

B. by declaration of the mediator that further efforts at the mediation are no longer worthwhile;

C. after the completion of the mediation session if the parties do not settle, by a written declaration of a party or parties to the effect that the mediation proceedings are terminated;

D. a party gives written notice of withdrawal; or

E. when there has been no communication between the mediator and a party or a party's representative for 14 days, at no fault of the mediator, following the conclusion of the mediation session.

7.9 WORK IN PROGRESS

At all times while the informal negotiations or mediation action is pending, the Contractor shall carry on with the work set forth in this Contract and maintain its progress schedule in accordance with the requirements of the Contract, unless UMC exercises its right to terminate, pursuant to Section 6 of this Contract, or otherwise mutually agreed upon in writing by the parties.

SPECIAL CONDITIONS

BID NO. 2014-08
LABOR AND DELIVERY RENOVIATIONS

1. PRE-CONSTRUCTION CONFERENCE

A. A Pre-Construction Conference shall be held after the award of the contract and the successful bidder has submitted all post award submittals. The Owner's representative shall schedule this meeting.

B. The Successful Bidder and all subcontractors are required to attend the Pre-Construction Conference to discuss this project, requirements, and all associated required documents. The Notice to Proceed will not be issued until all parties involved in the project have completed and returned the required forms. The Successful Bidder is responsible for attendance of all subcontractors at the Pre-Construction Conference and their submission of the required forms.

C. The Contractor shall provide all work plans, safety plans and submittals requested within **fifteen (15) calendar days** from the date of the Pre-Construction Conference. If the Contractor does not provide submittals on or before the15th calendar day, it will pay over to the Owner the amount of **$500.00** per day as liquidated damages.

2. SPECIAL WORK CONSTRAINTS

A. The Successful Bidder shall be able to provide the Owner evidence of at least five (5) years of successful experience in project work of similar size and complexity required in this Contract. The Successful Bidder shall provide to provide the Owner evidence of previous experience working in an active Healthcare setting.

B. All work to be performed within the scope of this Contract will be completed in Phases as described in Phasing Plan I (attached). Contractor is to perform work in only one (1) phase at any one time. The Successful Bidder can request in writing to work in more than one (1) phase at a given time, but only at the Owners discretion. Approval must be provided in writing by the Owner prior to any multiple-phase work to be performed.

C. All work to be performed under the Contract will only be allowed under OWNER approved work and safety plans.

D. The Successful Bidder is required to attend weekly progress meeting as well as any required Safety meetings, at time(s) to be mutually determined at the Pre-Construction Conference.

E. Owner will coordinate Interim Life Safety Measures (ILSM) with the Successful Bidder. All work being performed in the scope will take place in an active Hospital setting adjacent to patient care rooms in an active patient care area.

F. The Successful Bidder is to follow all Infection Control measures in the work areas; negative pressure, dust control, and constant housekeeping to prevent the spread of dust.

G. ACM abatement to be addressed in the scope of this Contract is identified as on the attachment labeled "ACM Exhibit" map. Bidders are to reference the attached Ninyo and Moore "Limited Asbestos Survey Report", dated May 20, 2013.

H. The Successful Bidder is to coordinate with the Owner's prime contractor for life, fire and safety systems, Honeywell, Inc., for all removal and reinstallation of life, fire and safety devices. The Successful Bidder will not be responsible to perform this scope of work.

I. Off-Site staging, lay-down, and parking will be provided for the Successful Bidder and Subcontractor(s) as per the attached "Staging and Parking Exhibit" map. The Successful Bidder and Subcontractor(s) will not be allowed to park any vehicles on site. Additionally, the Successful Bidder is to store all materials, equipment, etc. in the assigned area. The location for staging, lay-down and parking is 625 Shadow Lane, 89102 (Clark County Health District Facility).

J. Site Access will be restricted to badged Successful Bidder and Subcontractor employees ONLY. UMC will provide badges based upon a continually updated list to be provided to UMC by the Successful Bidder.

UNIVERSITY MEDICAL CENTER OF SOUTHERN NEVADA

BID FORM

BID NO. 2014-08
LABOR AND DELIVERY RENOVATIONS
PWP NUMBER: CL-2017-270

_____
(NAME)

_____
(ADDRESS)

I, THE UNDERSIGNED BIDDER:

1. Agree, if awarded this Contract, I will complete all work for which a Contract may be awarded and to furnish any and all labor, equipment, materials, transportation, and other facilities required for the services as set forth in the Bidding and Contract Documents.

2. Have examined the Contract Documents and the site(s) for the proposed work and satisfied themselves as to the character, quality of work to be performed, materials to be furnished and as to the requirements of the specifications.

3. Have completed all information in the blanks provided and have submitted the following within this Bid:

   a) Have listed the name of each Subcontractor which will be paid an amount exceeding five percent (5%) of the Total Base Bid amount.

   b) Attached a bid security (in the form of, at my option, a Cashiers Check, Certified Check, Money Order, or Bid Bond in favor of the Owner in the amount of five percent (5%) of the Total Base Bid amount.

   c) If claiming the preference eligibility, I have submitted a valid Certificate of Eligibility with this Bid.

4. I acknowledge that if I am one of the three apparent low bidders at the bid opening, and if I have listed Subcontractor(s) pursuant to NRS 338.141, I must submit Bid Attachment 2 within two-hours after completion of the bid opening pursuant to the Instructions to Bidders, forms must be submitted via hand delivery or email to larry.silver@umcsn.com and I understand that hand delivery is recommended, and Owner shall not be responsible for lists received after the two-hour time limit, regardless of the reason. I understand that submission after the two-hour time limit is not allowed and will be returned to me and the bid will be deemed non-responsive. I acknowledge that for:

   a) Projects **UNDER** $5,000,000

      I need to list **only those Subcontractors** that will provide labor/improvements **exceeding $50,000.00**.

5. I acknowledge that if I am one of the three apparent low bidders at bid opening, Affidavit pertaining to preference eligibility, within two-hours after completion of the bid opening pursuant to the General Conditions. The forms must be submitted via hand delivery or email to larry.silver@umcsn.com and I understand hand delivery is recommended. Owner shall not be responsible for lists received after the two-hour time limit, regardless of the reason. I understand that submission after the two-hour time limit is not allowed and will be returned to me and the bid will be deemed non-responsive.

6. I acknowledge that if notified that I am the low bidder, I must submit the Disclosure of Ownership/Principals form within 24-hours of request.

7. I acknowledge that if I am one of the three apparent low bidder(s) for the base bid at the bid opening, I must submit the Bid Attachment 4, Schedule of Values, by 12:00 Noon of the next business day.

8. I acknowledge that my bid is based on the current State of Nevada prevailing wages and/or the current Davis-Bacon wage rates, whichever is greater.

9. I acknowledge that I have not breached a public work contract for which the cost exceeds $25,000,000, within the preceding year, for failing to comply with NRS 338.147 and the requirements of a contract in which I have submitted within 2 hours of the bid opening an Affidavit pertaining to preference eligibility.

10. Upon faxed or mailed receipt of a Notice of Intent to Award the Contract, I will provide the following submittals within seven business days from receipt of the Notice:

    a) Performance Bond, Labor and Material Payment Bond and a Guaranty Bond, for 100% of the Contract amount as required.

    b) Certificates of insurance for Commercial General Liability in the amount of $1,000,000, Automobile Liability in the amount of $1,000,000, and Workers' Compensation insurance issued by an insurer qualified to underwrite Workers' Compensation insurance in the State of Nevada, as required by law.

11. I acknowledge that if I do not provide the above submittals on or before the seventh business day after receipt of the Notice of Intent to Award; or do not keep the bonds or insurance policies in effect, or allow them to lapse during the performance of the Contract; I will pay over to the Owner the amount of **$500.00** per day as liquidated damages.

12. I confirm this bid is genuine and is not a sham or collusive, or made in the interest of, or on behalf of any person not herein named, nor that the Bidder in any manner sought to secure for themselves an advantage over any bidders.

13. I further propose and agree that if my bid is accepted, I will commence to perform the work called for by the contract documents on the date specified in the Notice to Proceed and I will complete all work within the calendar days **specified in the General Conditions.**

14. I further propose and agree that I will accept as full compensation for the work to be performed the price written in the Bid Schedule below.

15. I have carefully checked the figures below and the Owner will not be responsible for any error or omissions in the preparation or submission of this Bid.

16. I agree no verbal agreement or conversation with an officer, agent or employee of the owner, either before or after the execution of the contract, shall affect or modify any of the terms or obligations of this Bid.

17. I am responsible to ascertain the number of addenda issued, and I hereby acknowledge receipt of the following addenda:

    Addendum No. _____ dated, _____ Addendum No. _____ dated, _____
    Addendum No. _____ dated, _____ Addendum No. _____ dated, _____
    Addendum No. _____ dated, _____ Addendum No. _____ dated, _____
    Addendum No. _____ dated, _____ Addendum No. _____ dated, _____
    Addendum No. _____ dated, _____ Addendum No. _____ dated, _____

18. I agree to perform all work described in the drawings, specifications, and other documents for the amounts quoted below:

ITEM NUMBER	ITEM DESCRIPTION	LUMP SUM
1.	LABOR AND DELIVERY RENOVATIONS, AS SPECIFIED	$
2.	PERMITS AND FEES BID ALLOWANCE	$ 8,000.00
3.	CONSTRUCTION CONFLICTS AND ADDITIONAL WORK ALLOWANCE	$ 90,000.00
4.	DUST CONTROL, AS SPECIFIED	$ 0.00
5.	STORMWATER POLLUTION, AS SPECIFIED	$ 0.00
	TOTAL BID AMOUNT	$

ADDITIVE ALTERNATES

THE OWNER MAY EXERCISE THE FOLLOWING ITEMS IN SEQUENTIAL ORDER ONLY SUBJECT TO THE AVAILABILITY OF FUNDS. THE ADDITIVE ALTERNATE PRICES QUOTED SHALL REMAIN FIRM FOR THE PERIOD OF 90 CALENDAR DAYS, AS DETAILED IN THE INSTRUCTIONS TO BIDDERS.

WHERE AN ADDITIVE ALTERNATE REQUIRES DELETING ALL OR A PORTION OF THE SPECIFIED ITEM AND ADDING OR SUBSTITUTING AN OPTIONAL ITEM, THE BID AMOUNT SUBMITTED FOR THE ADDITIVE ALTERNATE SHALL BE THE NET COST DIFFERENCE BETWEEN WHAT IS ADDED AND WHAT IS DELETED.

ALTERNATE	ITEM DESCRIPTION	TOTAL
1.	SCOPE AS IDENTIFIED AS ALTERNATE NO. 1 ON DRAWINGS	$
2.	SCOPE AS IDENTIFIED AS ALTERNATE NO. 1A ON DRAWINGS	$
3.	SCOPE AS IDENTIFIED AS ALTERNATE NO. 2 ON DRAWINGS	$
4.	SCOPE AS IDENTIFIED AS ALTERNATE NO. 2A ON DRAWINGS	$
5.	SCOPE AS IDENTIFIED AS ALTERNATE NO. 3 ON DRAWINGS	$

SUBCONTRACTORS EXCEEDING 5% OF BASE BID AMOUNT

PRIME CONTRACTOR MUST INCLUDE ITS NAME ON THIS LIST IF HE OR SHE INTENDS TO PERFORM ANY OF THE LABOR OR PORTIONS OF THE PUBLIC WORK.
THE CONTRACTOR SHALL NOT SUBSTITUTE A SUBCONTRACTOR WHO IS NAMED IN THIS BID, PURSUANT TO NEVADA REVISED STATUTE 338.141. THE FOLLOWING SUBCONTRACTORS SHALL BE UTILIZED. A BIDDER, WHICH FAILS TO LIST A SUBCONTRACTOR (S), REPRESENTS THAT NO SUBCONTRACTOR(S) MEET THE STATUTORY REQUIREMENTS.

DESCRIPTION OF WORK	SUBCONTRACTORS' FIRM NAME(S)	*BEG	*ETHNICITY

Legal Name of Firm as it Would Appear in Contract

Signature of Bidder (Authorized Representative)

Today's Date

**Reference Instructions to Bidders for Definitions (Section 7.3(d)).*

19. BUSINESS ENTERPRISE INFORMATION:

The Prime Contractor submitting this Bid is a ☐ MBE ☐ WBE ☐ PBE ☐ SBE ☐ NBE ☐ LBE as defined in the Instructions to Bidders.

20. BUSINESS ETHNICITY INFORMATION:

The Prime Contractor submitting the Bid Ethnicity is ☐ Caucasian (CX) ☐ African American (AA) ☐ Hispanic American (HA) ☐ Asian Pacific American (AX) ☐ Native American (NA) ☐ Other as defined in the Instructions to Bidders.

21. BIDDERS' PREFERENCE Is the Bidder claiming Bidders' Preference?

☐ Yes If yes, the Bidder acknowledges that he/she is required to follow the requirements set forth in the Affidavit (Bid Attachment 3).

☐ No **I do not have a Certificate of Eligibility to receive preference in bidding**.

22. _____

LEGAL NAME OF FIRM AS IT WOULD APPEAR IN CONTRACT

_____

ADDRESS OF FIRM

_____

CITY, STATE, ZIP CODE

_____ _____

TELEPHONE NUMBER FAX NUMBER

NEVADA STATE CONTRACTORS' BOARD LICENSE INFORMATION:

I certify that the license(s) listed below will be the license(s) used to perform the majority of the work on this project.

LICENSE NUMBER: _____

LICENSE CLASS: _____

LICENSE LIMIT: _____

ONE TIME LICENSE LIMIT INCREASE $_____ IF YES, DATE REQUESTED _____

DUN & BRADSTREET NUMBER _____

CLARK COUNTY BUSINESS LICENSE NO. _____

STATE OF NEVADA BUSINESS LICENSE NO. _____

_____ _____

AUTHORIZED REPRESENTATIVE (PRINT OR TYPE) E-MAIL ADDRESS

_____ _____

SIGNATURE OF AUTHORIZED REPRESENTATIVE TODAY'S DATE

BID ATTACHMENT 1
BID BOND

IMPORTANT: SURETY COMPANIES EXECUTING BONDS MUST BE LICENSED TO ISSUE SURETY BY THE STATE OF NEVADA INSURANCE DIVISION PURSUANT TO NEVADA REVISED STATUTE 683A AND ISSUED BY AN APPOINTED PRODUCER OF INSURANCE PURSUANT TO NEVADA REVISED STATUTE 683A. INDIVIDUAL SURETY BONDS ARE NOT ACCEPTABLE.

KNOW ALL MEN BY THESE PRESENTS,

That we, the undersigned, _____ as Principal Contractor, and _____ as Surety, are hereby held and firmly bound unto UNIVERSITY MEDICAL CENTER OF SOUTHERN NEVADA as OWNER in the penal sum of five (5) percent of the base bid amount for the payment of which, well and truly to be made, were hereby jointly and severally bind ourselves, successors and assigns.

Signed this _____ day of _____, 2014.

The condition of the above obligation is such that whereas the Principal has submitted to UNIVERSITY MEDICAL CENTER OF SOUTHERN NEVADA a certain BID attached hereto and hereby made a part hereof to enter into a contract in writing, for **BID NO. 2014-08, LABOR AND DELIVERY RENOVATIONS**.

NOW, THEREFORE,

a) If said BID shall be rejected; or

b) If said BID shall be accepted and the Principal Contractor shall deliver an insurance certificate and bonds pursuant to the forms attached hereto properly completed in accordance with said BID, and shall furnish a BOND for their faithful performance of said Contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the Agreement created by the acceptance of said BID;

then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its BOND shall be in no way impaired or affected by any extension of the time within which the OWNER may accept such BID; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and the Surety has caused their seal to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

Bond must be acceptable to University Medical Center.

(SEAL AND NOTARIAL ACKNOWLEDGMENT OF SURETY)

_____

Surety: _____

_____
(Principal Contractor)

_____
(State of Nevada, License Number)

_____
(Authorized Representative and Title)

_____
(Appointed Agent Name)

By: _____
(Signature)

By: _____
(Signature)

Address: _____

_____

Telephone: _____

BID ATTACHMENT 2
DESIGNATION OF SUBCONTRACTORS

SUBCONTRACTORS EXCEEDING 1% OF BASE BID AMOUNT

PRIME CONTRACTOR MUST INCLUDE ITS NAME ON THIS LIST IF HE OR SHE INTENDS TO PERFORM ANY OF THE LABOR OR PORTIONS OF THE PUBLIC WORK.

THE THREE (3) LOW BIDDERS, MUST SUBMIT THIS FORM VIA HAND DELIVERY OR EMAIL TO **LARRY.SILVER@UMCSN.COM** IF THEY HAVE SUBCONTRACTOR(S) MEETING THE REQUIREMENTS OF NEVADA REVISED STATUTE 338.141, AND HAVE IT TIME STAMPED WITHIN TWO (2) HOURS AFTER COMPLETION OF THE OPENING OF THE BIDS. SUBMISSIONS AFTER THE TWO (2) HOURS WILL BE REJECTED AND/OR RETURNED UNOPENED. A BIDDER THAT FAILS TO SUBMIT THE LIST WITHIN THE REQUIRED TIME REPRESENTS THAT NO SUBCONTRACTOR(S) MEET THE STATUTORY REQUIREMENTS. THE CONTRACTOR SHALL NOT SUBSTITUTE ANY PERSON FOR A SUBCONTRACTOR WHO IS NAMED IN THIS BID, PURSUANT TO NEVADA REVISED STATUTE 338.141. IF A CONTRACTOR DOES NOT SUBMIT THIS LIST AND HAS SUBCONTRACTOR(S) THAT MEET THE STATUTORY REQUIREMENTS, ITS BID SHALL BE DEEMED NOT RESPONSIVE.

DESCRIPTION OF WORK	SUBCONTRACTOR'S FIRM NAME(S)	NV STATE CONTRACTORS' LICENSE NUMBER	*BEG	*ETHNICITY

Legal Name of Firm as it would appear in Contract

Telephone Number

Address including City, State and Zip Code

Signature of Bidder (Authorized Representative)

* *Reference Instructions to Bidders for Definitions (Section 7.3(d))*

BID ATTACHMENT 3
AFFIDAVIT PERTAINING TO PREFERENCE ELIGIBILITY

THE LOW OR BEST BIDDER MUST SUBMIT THIS FORM VIA HAND DELIVERY OR EMAIL TO **LARRY.SILVER@UMCSN.COM** IF THEY HAVE MET THE REQUIREMENTS OF NEVADA REVISED STATUTE 338.141 AND 338.0117, AND HAVE IT TIME STAMPED WITHIN TWO (2) HOURS AFTER COMPLETION OF THE OPENING OF THE BIDS TO BE ELIGIBLE TO RECEIVE A PREFERENCE IN BIDDING. SUBMISSIONS AFTER THE TWO (2) HOURS WILL BE REJECTED. A BIDDER THAT FAILS TO SUBMIT THE AFFIDAVIT WITHIN THE REQUIRED TIME REPRESENTS THAT THEY WILL FOREGO RECEIVING THE PREFERENCE.

I, _____ ("Affiant"), on behalf of the _____ ("Contractor"), swear and affirm that in order to be in compliance with NRS 338.147, and NRS 338.0117, and be eligible to receive a preference in bidding for **Project No. 2014-08, Labor and Delivery Renovations** ("Project"); certify that for the duration of the Project, collectively, and not on any specific day;

(a) At least 50 percent of the workers employed on the Project including, without limitation, any employees of the Bidder, and of any Subcontractor engaged on the Project, will hold a valid driver's license or identification card issued by the State of Nevada Department of Motor Vehicles ("DMV");

(b) All vehicles used primarily for the Project will be:

  (1) Registered and partially apportioned to Nevada pursuant to the International Registration Plan, as adopted by the DMV pursuant to NRS 707.826; or

  (2) Registered in the State of Nevada;

(c) If applying to receive a preference in bidding pursuant to subsection 3 of NRS 338.1727 or subsection 2 of NRS 408.3886, at least 50 percent of the design professionals working on the Project, including, without limitation, employees of the design-build team, and of any subcontractor or consultant engaged in the design of the Project, will have a valid driver's license or identification card issued by the DMV;

(d) The Contractor, applicant or design-build team, and any Subcontractor engaged on the Project will maintain and make available for the inspection within this State his or her records concerning payroll relating to the Project.

Upon submission, of the State Contractors' Board certificate of eligibility to receive a preference in bidding on public works and this Affidavit. Contractor recognizes and accepts that if a contract is awarded as a result of receiving a preference in bidding, failure to comply with the requirements herein, including all record keeping obligations detailed in the General Conditions, entitles UMC to a penalty as defined by statute.

BID ATTACHMENT 3
AFFIDAVIT PERTAINING TO PREFERENCE ELIGIBILITY
Page 2 of 2

By: _____ Title: _____
Printed Name of Affiant

Signature of Affiant: _____ Date: _____

Signed and sworn to (or affirmed) before me on this _____ day of _____, 2014,

by_____ (name of Affiant)

State of _____) _____
ss) Notary Signature

County of: _____) STAMP AND SEAL

Proof of Authorization to Sign Affidavit

The person must establish his/her actual authority to act on behalf of the business organization. The individual must be the person indicated in the table below and provide written documentation clearly indicating the person's position within that business organization. If the individual signing the Affidavit is an employee of the business organization, written documentation on organization letterhead must be provided; clearly indicating the person's authority to act on behalf of the business organization. The authorized person identified in the table must sign the written documentation.

If the individual making application for the business organization is not one of the persons identified in the table or an authorized employee, a valid power of attorney executed by an authorized person on behalf of the business organization must be provided. The power of attorney must be made not more than 90 calendar days before the Affidavit is signed.

BUSINESS ENTITY	PERSON WHO HAS AUTHORITY TO COMPLETE AFFIDAVIT
Sole Proprietorship	Name of Sole Proprietor
Partnership	Name of Partner
Corporation	1. Director, if Authorized 2. Executive Officer (as indicated in the Article of Incorporation)
Limited Liability Company	1. Member, if Member-Managed LLC 2. Manager, if Manager-Managed LLC

BID ATTACHMENT 4
SCHEDULE OF VALUES

THE THREE (3) APPARENT LOWEST BIDDERS FOR THE TOTAL BASE BID AMOUNT SHALL SUBMIT THIS FORM INTO THE PURCHASING AND CONTRACTS DIVISION VIA HAND DELIVERY OR BY EMAIL TO **LARRY.SILVER@UMCSN.COM** BY 12:00 P.M., OF THE NEXT BUSINESS DAY.

THE BIDDER SHALL INDICATE THE TOTAL BASE BID AMOUNT FOR THE ITEMS SPECIFIED BELOW. THIS LIST SHALL NOT BE CONSIDERED ENTIRELY INCLUSIVE. BIDDER(S) AGREES TO PROVIDE, UPON REQUEST, ADDITIONAL INFORMATION THAT MAY INCLUDE BUT NOT BE LIMITED TO DETAILED BREAKDOWN OF AMOUNTS, MANUFACTURER'S PRODUCTS, LITERATURE, EQUIPMENT MODEL NUMBERS, OR AS INFORMATION IS REQUIRED TO SUPPORT AND/OR SUBSTANTIATE THE WORK, IN ACCORDANCE WITH NRS 338.

BASE BID ONLY

DIVISION / ITEMS	DESCRIPTION	DOLLAR AMOUNTS
01	GENERAL REQUIREMENTS	$
02	EXISTING CONDITIONS	$
03	CONCRETE	$
04	MASONRY	$
05	METALS	$
06	WOOD AND PLASTICS	$
07	THERMAL AND MOISTURE PROTECTION	$
08	OPENINGS	$
09	FINISHES	$
10	SPECIALTIES	$
11	EQUIPMENT	$
12	FURNISHINGS	$
13	SPECIAL CONSTRUCTION	$
14	CONVEYING EQUIPMENT	$
21	FIRE SUPPRESSION	$
22	PLUMBING	$
23	HVAC	$
25	INTEGRATED AUTOMATION	$
26	ELECTRICAL	$
27	COMMUNICATIONS	$
28	ELECTRONIC SAFETY & SECURITY	$
29 - 30	NOT USED	
31	EARTHWORK	$
32	EXTERIOR IMPROVEMENTS	$
33	UTILITIES	$
34	TRANSPORTATION	$
35	MARINE AND WATERWAYS	$
	BID TOTAL	$

PLEASE PHOTOCOPY THIS FORM SHOULD ADDITIONAL SPACES BE REQUIRED

This Schedule of Values for the various portions of the work, aggregating the total contract Amount, shall be divided to facilitate payments to the Contractor in accordance with the Contract Documents.

Legal Name of Firm as it would appear on Contract

Nevada State Contractor's License Number

Address including City, State and Zip Code

Authorized Signature

EXHIBIT A

BONDS AND INSURANCE REQUIREMENTS AND FORMS

1. BONDS

A. The Contractor shall furnish bonds covering the faithful performance of the Contract, payment of all obligations arising thereunder and a Guaranty Bond to take effect upon substantial completion of the project, utilizing the bond forms. Bonds may be secured through the Contractor's usual sources, provided that the surety is authorized and licensed to do business in the State of Nevada. All bonds specified shall indicate the State of Nevada Insurance Division license number, the surety company name, address, telephone number, and include the appointed agent of record who issued the bond. Surety Bonds issued by an individual are not acceptable to UMC.

B. Not later than **seven business days** after Notification of Award, the Contractor shall furnish contract bonds to the Purchasing and Contracts Division as follows:

1. Labor and Material Payment Bond in the amount of 100% of the Contract price.

2. Performance Bond in the amount of 100% of the Contract price.

3. Guaranty Bond in the amount of 100% of the Contract price. The Guaranty Bond will go into effect from the date of Notice of Substantial Completion.

Award will become final after the Governing Body has authorized the award and the Contractor has submitted its required bonds utilizing the Owner's Bond forms.

C. Form of Bonds

1. The bonds referred to herein **shall be written on the Performance Bond, Labor and Material Payment Bond, and Guaranty Bond forms provided by Owner.**

2. The Contractor shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of his power of attorney.

3. **Any Performance Bond, Labor and Material Payment Bond, or Guaranty Bond prepared by an appointed agent must provide their license number and the issuing state.**

4. The bonds specified in this section must be issued by a certified surety which is listed in the Department of the Treasury, Fiscal Service, (Department Circular 570; Current Revision) companies holding certificates of authority as acceptable sureties on Federal Bonds and as acceptable reinsuring companies.

2. INSURANCE

A. Contractor further agrees, as a precondition to the performance of any work under this contract and as a precondition to any obligation of the Owner to make any payment under this contract, to provide the Owner with a work certificate and/or a certificate issued by an insurer qualified to underwrite workers' compensation insurance in the state of Nevada in accordance with Nevada Revised Statutes Chapters §616A through 616D, inclusive, whether or not the Contractor has employees.

B. Contractor agrees to maintain required workers' compensation coverage throughout the entire term of the contract. If Contractor does not maintain coverage throughout the entire term of the contract, Contractor agrees that Owner may, at any time the coverage is not maintained by Contractor, order the Contractor to stop work, assess liquidated damages as defined herein, suspend the contract, or terminate the contract.

C. The Contractor shall furnish not later than **seven business days** after notification of Intent to Award, the insurance as indicated below. The certificates for each insurance policy shall be signed by a person authorized by that insurer and licensed by the State of Nevada.

D. As a condition precedent to receiving payments, Contractor shall have on file with Owner current certificates of insurance evidencing the required coverage. Insurance certificates for the Owner should contain the information shown on the sample certificates attached.

E. Each insurance company's rating as shown in the latest Best's Key Rating Guide shall be fully disclosed and entered on the required certificate of insurance. Owner requires insurance carriers to maintain a Best's Key Rating of A.VII or higher (i.e., A.VII, A.VIII, A.IX, A.X, etc.). The adequacy of the insurance supplied by the Contractor, including the rating and financial health of each insurance company providing coverage, is subject to the approval of the Owner.

F. Contractor shall furnish renewal certificates to the Owner for the required insurance during the period of coverage required by the contract. Contractor will furnish renewal certificates for the same minimum coverage as required in this Contract. The request for updated renewal certificates will be sent by the Owner to the Contractor 30 calendar days in advance of the expiration date shown on the certificate of insurance. A second request will be sent if the renewal certificate is not received from within **seven business days**. If within 20 calendar days from the date of the request for an updated renewal certificate, the updated certificate has still not been provided, the Owner may declare the Contractor in default of its obligation under this paragraph.

G. Owner, its officers, employees, agents, and volunteers, must be expressly covered as insured's with respect to liability arising out of the activities by or on behalf of the named insured in connection with this project.

i. The Contractor's insurance shall be primary as respects Owner, its officers, employees, agents, and volunteers, Any other coverage (insurance or otherwise) available to Owner, its officers, employees and volunteers shall be excess over the insurance required of the Contractor and shall not contribute with it.

H. The Contractor's commercial general liability and automobile liability insurance policy shall be endorsed to recognize specifically the Contractor's contractual obligation of additional insured to Owner. All policies must note that the Owner will be given 30-calendar days advance notice by certified mail "return receipt requested" of any policy changes, cancellations, or any erosion of insurance limits. Either a copy of the additional insured endorsement, or a copy of the policy language that gives UMC automatic additional insured status must be attached to any certificate of insurance.

I. All deductibles and self-insured retentions shall be fully disclosed in the Certificate of Insurance. No deductible or self-insured retention may exceed $25,000.

J. If aggregate limits are imposed on the insurance coverage, then the amount of such limits must not be less than **$2,000,000** per occurrence or per accident. All aggregates must be fully disclosed and the amount entered on the required certificate of insurance. Contractor's insurer must notify the Owner of any erosion of the aggregate limits. The "per occurrence" limits of insurance required herein must be maintained in full, irrespective of any erosion of aggregate.

K. The Contractor shall obtain and maintain, for the duration of the Contract or longer period if specified herein, insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the Contractor, it agents, representatives, employees or subcontractors of any tier. The cost of such insurance shall be included in Contractor's Bid. The Contractor is required to obtain and maintain the following coverage:

1. Commercial General Liability: Commercial General Liability, including Asbestos Abatement Liability coverage shall be on "occurrence" basis only and not "claims made." The coverage must be provided on either an ISO Commercial General Liability form or an ISO Broad Form Comprehensive General Liability (including a Broad Form CGL Endorsement) insurance form. Policies must contain a primary and non-contributory clause and must contain a waiver of subrogation endorsement. Any exceptions to coverage must be fully disclosed on the required certificates. If other than these forms are submitted as evidence of compliance, complete copies of such policy forms must be submitted to Owner within **seven business days** after notice of award. Policies must include, but need not be limited to, coverage for bodily injury, property damage, personal injury, Broad Form property damage, premises and operations, severability of interest, products and completed operations, contractual and independent contractors, whether the insurance for Asbestos Abatement Liability Coverage is supplied as an endorsement, or under a separate policy of insurance, the coverage must be evidenced on the Certificate of Insurance required in the contract. Contractor shall maintain limits of no less than **$1,000,000** combined single limit per occurrence for bodily injury (including death), personal injury and property damages.

2. Auto Liability: Auto Liability must provide coverage for claims for damage due to bodily injury or death of any person, or property damage arising out of the ownership, maintenance or use of **any motor vehicles whether owned, hired or non-owned**. Contractor shall maintain limits of no less than **$1,000,000** combined single limit "per accident" for bodily injury and property damage.

L. If the Contractor fails to maintain any of the insurance coverage required herein, then the Owner will have the option to declare the Contractor in breach, or may purchase replacement insurance or pay the premiums

that are due on existing policies in order that the required coverage may be maintained. The Contractor is responsible for any expenses paid by the Owner to maintain such insurance and the Owner may collect the same from the Contractor or deduct the amount paid from any sums due the Contractor under the contract.

M. The insurance requirements specified herein do not relieve the Contractor of its responsibility or limit the amount of their liability to the Owner or other persons and the Contractor is encouraged to purchase such additional insurance, as it deems necessary.

N. Contractor is responsible for and must remedy all damage or loss to any property, including property of Owner, caused in whole or in part by the Contractor, any subcontractor or anyone employed, directed or supervised by Contractor. The Contractor is responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the work.

O. The Contractor shall pay all premiums and costs of insurance.

P. Regardless of the coverage provided by any insurance policy, the Contractor shall indemnify, defend and hold Owner, harmless from any and all claims, demands, actions, attorneys' fees, costs, and expenses based upon or arising out of any acts, errors, omissions, fault or negligence of Contractor or its principals, employees, subcontractors or other agents while performing services under this Contract. Contractor shall indemnify, defend and hold harmless the Owner and others specified from any attorney's fees or other costs of defense, even if the allegations of the claim are groundless, false or fraudulent.

ACORD®

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: **If the certificate holder is an ADDITIONAL INSURED, the policy (ies) must be endorsed.** If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER INSURANCE BROKER'S NAME ADDRESS	CONTACT NAME:		
	PHONE (A/C No. Ext): BROKER'S PHONE NUMBER	FAX (A/C No.) BROKER'S FAX NUMBER	
	E-MAIL ADDRESS: BROKER'S EMAIL ADDRESS		
	INSURER(S) AFFORDING COVERAGE		NAIC #
INSURED CONTRACTOR'S NAME ADDRESS PHONE & FAX NUMBERS	INSURER A:		
	INSURER B:		COMPANY'S
	INSURER C:		
	INSURER D:		BEST KEY
	INSURER E:		
	INSURER F:		RATING

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADD'L INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YY)	POLICY EXP (MM/DD/YY)	LIMITS	
	GENERAL LIABILITY	X					EACH OCCURRENCE	$ 1,000,000
	X COMMERCIAL GENERAL LIABILITY						DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 50,000
	CLAIMS-MADE X OCCUR.						MED EXP (Any one person)	$ 5,000
	X ASBESTOS ABATEMENT LIABILITY						PERSONAL & ADV INJURY	$ 1,000,000
							GENERAL AGGREGATE	$ 2,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						PRODUCTS – COMP/OP AGG	$ 2,000,000
	POLICY X PROJECT LOC						**DEDUCTIBLE MAXIMUM**	**$ 25,000**
	AUTOMOBILE LIABILITY	X					COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
	X ANY AUTO						BODILY INJURY (Per person)	$
	ALL OWNED AUTOS						BODILY INJURY (Per accident)	$
	SCHEDULED AUTOS						PROPERTY DAMAGE (Per accident)	$
	HIRED AUTOS							$
	NON-OWNED AUTOS						**DEDUCTIBLE MAXIMUM**	**$ 25,000**
	WORKER'S COMPENSATION AND EMPLOYERS' LIABILITY Y/N	N/A					WC STATU-TORY LIMITS / OTHER	$
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)						E.L. EACH ACCIDENT	$
	describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE – E.A. EMPLOYEE	$
							E.L. DISEASE – POLICY LIMIT	$

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

BID NO. ASK PROJECT NUMBER2014-08; LABOR AND DELIEVERY RENOVATIONS. UNIVERSITY MEDICAL CENTER OF SOUTHERN NEVADA, ITS OFFICERS, EMPLOYEES AND VOLUNTEERS, ARE INSUREDS WITH RESPECT TO LIABILITY ARISING OUT OF THE ACTIVITIES BY OR ON BEHALF OF THE NAMED INSURED IN CONNECTION WITH THIS PROJECT.

CERTIFICATE HOLDER	CANCELLATION
UNIVERSTIY MEDICAL CENTER OF SOUTHERN NEVADA C/O PURCHASING & CONTRACTS DIVISION 800 ROSE STREET SUITE 409 LAS VEGAS, NV 89102	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE

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ACORD 25 (2010/05)

SAMPLE

POLICY NUMBER: _____ COMMERCIAL GENERAL AND AUTOMOBILE LIABILITY

BID NUMBER AND PROJECT NAME: _____

THIS ENDORSEMENT CHANGED THE POLICY. PLEASE READ IT CAREFULLY

ADDITIONAL INSURED – DESIGNATED PERSON OR ORGANIZATION

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY AND AUTOMOBILE LIABILITY COVERAGE PART.

SCHEDULE

Name of Person or Organization:

UNIVERSTIY MEDICAL CENTER OF SOUTHERN NEVADA
C/O PURCHASING & CONTRACTS DIVISION
800 ROSE STREET
SUITE 409
LAS VEGAS, NV 89102

(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to this endorsement.)

WHO IS AN INSURED (Section II) is amended to include as an insured the person or organization shown in the Schedule as an insured but only with respect to liability arising out of your operations or premises owned by or rented to you.

UMC, CLARK COUNTY, ITS OFFICERS, EMPLOYEES AND VOLUNTEERS, ARE INSUREDS WITH RESPECT TO LIABILITY ARISING OUT OF THE ACTIVITIES BY OR ON BEHALF OF THE NAMED INSURED IN CONNECTION WITH THIS PROJECT.

SAMPLE

PERFORMANCE BOND

IMPORTANT: SURETY COMPANIES EXECUTING BONDS MUST BE LICENSED TO ISSUE SURETY BY THE STATE OF NEVADA INSURANCE DIVISION PURSUANT TO NEVADA REVISED STATUTE 683A AND ISSUED BY AN APPOINTED PRODUCER OF INSURANCE PURSUANT TO NEVADA REVISED STATUTE 683A. INDIVIDUAL SURETY BONDS ARE NOT ACCEPTABLE.

KNOW ALL MEN BY THESE PRESENTS,

That _____, as Principal Contractor, and _____, as Surety, are held and firmly bound unto University Medical Center of Southern Nevada, hereinafter called Owner, in the sum of _____ dollars, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, said Contractor has been recommended for award and shall enter into the contract with said Owner to perform all work required under the Bidding Schedule(s) **BID NO. 2014-08** of the Owner's specifications, entitled **Labor and Delivery Renovations.**

NOW THEREFORE, if said Contractor shall perform all the requirements of said contract required to be performed on their part, at the times and in the manner specified therein, then this obligation shall be null and void, otherwise it shall remain in full force and effect.

PROVIDED, that any change order(s), alterations in the work to be done or the materials to be furnished, which may be made pursuant to the terms of said contract, shall not in any way release said Contractor or said Surety thereunder, nor shall any extensions of time granted under the provisions of said contract release either said Contractor or said Surety, and notice of such change order(s), alterations or extensions of the contract is hereby waived by said Surety.

SIGNED this _____ day of _____, 20____

(SEAL AND NOTARIAL ACKNOWLEDGMENT OF SURETY)

_____
(Principal Contractor)

_____
(Authorized Representative and Title)

By: _____
(Signature)

Surety: _____

_____
(Appointed Agent Name)

_____
(State of Nevada, License Number)

By: _____
(Signature)

_____
(Appointed Agent Name)

_____
(License Number and Issuing State)

By: _____
(Signature)

Address: _____

_____

Address: _____

_____

Telephone: _____

Telephone: _____

ISSUING COMPANY MUST HOLD CERTIFICATES OF AUTHORITY AS ACCEPTABLE SURETY ON FEDERAL BONDS AND AS ACCEPTABLE REINSURING COMPANY WITH LISTING IN THE DEPARTMENT OF TREASURY, FISCAL SERVICE, (DEPARTMENT OF CIRCULAR "570," CURRENT REVISIONS).

LABOR AND MATERIAL PAYMENT BOND

IMPORTANT: SURETY COMPANIES EXECUTING BONDS MUST BE LICENSED TO ISSUE SURETY BY THE STATE OF NEVADA INSURANCE DIVISION PURSUANT TO NEVADA REVISED STATUTE 683A AND ISSUED BY AN APPOINTED PRODUCER OF INSURANCE PURSUANT TO NEVADA REVISED STATUTE 683A. INDIVIDUAL SURETY BONDS ARE NOT ACCEPTABLE.

KNOW ALL MEN BY THESE PRESENTS,

That _____, as Contractor, and _____, as Surety, are held and firmly bound unto University Medical Center of Southern Nevada, hereinafter called Owner, in the sum of ___ dollars, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, said Contractor has been recommended for award and shall enter into the contract with said Owner to perform all work required under the Bid Schedule(s), **BID NO.2014-08, Labor and Delivery Renovations**.

NOW THEREFORE, if said Contractor, or subcontractors, fails to pay for any materials, equipment, or other supplies, or for rental of same, used in connection with the performance of work contracted to be done, or for amounts due under applicable State law for any work or labor thereon, said Surety will pay for the same in an amount not exceeding the sum specified above and, in the event suit is brought upon this bond, a reasonable attorney's fee to be fixed by the court. This bond shall insure to the benefit of any persons, companies or corporations entitled to file claims under applicable State law.

PROVIDED, that any change order(s), alterations in the work to be done or the materials to be furnished, which may be made pursuant to the terms of said Contract, shall not in any way release either said Contractor or said Surety thereunder, nor shall any extensions of time granted under the provisions of said Contract release either said Contractor or said Surety, and notice of such change order(s), alterations or extensions of the Contract is hereby waived by said Surety.

SIGNED this _____ day of _____, 20____

(SEAL AND NOTARIAL ACKNOWLEDGMENT OF SURETY)

_____
(Principal Contractor)

_____
(Authorized Representative and Title)

By: _____
(Signature)

Surety: _____

_____
(Appointed Agent Name)

By: _____
(Signature)

_____
(License Number and Issuing State)

Address: _____

_____

Telephone: _____

_____
(State of Nevada, License Number)

_____
(Appointed Agent Name)

By: _____
(Signature)

Address: _____

_____

Telephone: _____

ISSUING COMPANY MUST HOLD CERTIFICATES OF AUTHORITY AS ACCEPTABLE SURETY ON FEDERAL BONDS AND AS ACCEPTABLE REINSURING COMPANY WITH LISTING IN THE DEPARTMENT OF TREASURY, FISCAL SERVICE, (DEPARTMENT OF CIRCULAR "570," CURRENT REVISIONS).

GUARANTY BOND

IMPORTANT: SURETY COMPANIES EXECUTING BONDS MUST BE LICENSED TO ISSUE SURETY BY THE STATE OF NEVADA INSURANCE DIVISION PURSUANT TO NEVADA REVISED STATUTE 683A AND ISSUED BY AN APPOINTED PRODUCER OF INSURANCE PURSUANT TO NEVADA REVISED STATUTE 683A. INDIVIDUAL SURETY BONDS ARE NOT ACCEPTABLE.

GUARANTEE for _____

_____
(Name and Address of Prime Contractor)

We hereby guarantee that the **BID NO.2014-08, Labor and Delivery Renovations**, which we have constructed, has been done in accordance with the plans and specifications; that the work as constructed will fulfill the requirements of the guaranties included in the Contract Documents. We agree to repair or replace any or all of our work together with any other adjacent work which may be damaged in so doing, that may prove to be defective in workmanship or materials within a period of one year from the date of the Notice of Substantial Completion of the above named work by University Medical Center of Southern Nevada, without any expense whatsoever to said University Medical Center of Southern Nevada, ordinary wear and unusual abuse or neglect excepted.

In the event of our failure to comply with the above mentioned conditions within 14 calendar days after being notified in writing by University Medical Center of Southern Nevada, we collectively or separately, do hereby authorize University Medical Center of Southern Nevada to proceed to have said defects repaired and made good at our expense and we will honor and pay the costs and charges therefore upon demand. When correction work is started, it shall be carried through to completion.

SIGNED this _____ day of _____, 20____

(SEAL AND NOTARIAL ACKNOWLEDGMENT OF SURETY)

_____
(Principal Contractor)

_____
(Authorized Representative and Title)

By: _____
(Signature)

Surety: _____

_____
(Appointed Agent Name)

_____
(State of Nevada, License Number)

By: _____
(Signature)

_____
(Appointed Agent Name)

_____
(License Number and Issuing State)

By: _____
(Signature)

Address: _____

_____

Address: _____

_____

Telephone: _____

Telephone: _____

ISSUING COMPANY MUST HOLD CERTIFICATES OF AUTHORITY AS ACCEPTABLE SURETY ON FEDERAL BONDS AND AS ACCEPTABLE REINSURING COMPANY WITH LISTING IN THE DEPARTMENT OF TREASURY, FISCAL SERVICE, (DEPARTMENT OF CIRCULAR "570," CURRENT REVISIONS).

EXHIBIT C
MEDIATOR AGREEMENT

This Agreement ("Agreement") is made and entered into this _____ day of _____, by and between the County of Clark ("County"), _____ ("Contractor") and _____ ("Mediator"). County and _____ are collectively referred to as "Parties".

WHEREAS, _____was awarded the Bid No. _____ for the _____ Project, and the County and _____ entered into a contract entitled _____ ("Contract");

WHEREAS, a claim, dispute or controversy relating to the Contract has arisen between the Parties;

WHEREAS, the Parties have haven been unsuccessful in resolving the claim, dispute or controversy by informal negotiations as required in section _____ of the Contract,

WHEREAS, _____ has submitted a demand to _____ for non-binding informal mediation of the claim, dispute or controversy, pursuant to section _____ of the Contract;

WHEREAS, the Contract requires the Parties to mutually agree upon a private independent mediator to mediate the claim, dispute or controversy;

WHEREAS, the Parties have mutually agreed to hire Mediator in this matter;

WHEREAS, Mediator is willing to accept this appointment;

NOW THEREFORE, the County, Contractor and Mediator agree as follows:

1. Scope of Services

The Parties hereby retain and appoint Mediator to mediate the above-referenced claim, dispute or controversy arising out of the Contract. Mediator agrees to conduct a mediation in accordance with section 7 of the General Conditions of the Contract and consistent with the most current version of "The Model Standards of Conduct for Mediators" as approved by the American Arbitration Association. Additionally, Mediator agrees to conduct the mediation consistent with sections addressing "Mediator's Impartiality and Duty to Disclose", "Duties and Responsibilities of the Mediator" and "Confidentiality" of the current version of the "Construction Industry Mediation Procedures" as approved by the American Arbitration Association.

2. Mediator's Fees and Expenses

Mediator will charge an hourly rate of $_____ for his services as a mediator. The Parties are equally responsible for the cost of the Mediator. UMC is responsible for fifty-percent (50%) of the fees of Mediator and Contractor is responsible for fifty-percent (50%) of the cost of Mediator.

UMC and Contractor agree to reimburse Mediator for reasonable expenses including, but not limited to, long distance telephone calls, photocopying and mailing fees.

3. Billing

Mediator will provide, on a monthly basis, invoices to the UMC and Contractor itemizing all services provided. Mediator agrees to bill the UMC for its fifty-percent (50%) share and Mediator agrees to bill the Contractor for its fifty-percent (50%) share. Mediator understands and agrees that the Parties are only responsible for their respective fifty-percent (50%) shares. If the Contractor does not pay Mediator its fifty-percent (50%) share of the fees, then UMC is not responsible. Likewise, if UMC does not pay Mediator its fifty-percent (50%) share of the fees, then the Contractor is not responsible.

UMC and Contractor agree to make payment for Mediator's fees and expenses within sixty (60) days after receipt of such billings.

4. Term

The term of this Agreement shall commence on the date of this Agreement and shall continue until Mediator concludes the above-referenced matters on which he is serving as the Parties' Mediator.

5. Amendment and Modification

No provision of this Agreement will be deemed waived, amended or modified by either party unless such waiver, amendment or modification is in writing and signed by the authorized agents of both parties.

6. Applicable Law

This Agreement shall be governed by and interpreted according to the laws of the State of Nevada.

7. Exclusive Benefit of the Parties

Except as specifically provided in this section, this Agreement is not intended to create any rights, powers or interests in any third party and this Agreement is entered into for the exclusive benefit of UMC, Contractor and Mediator.

8. Notices

Any notice required or permitted to be given under this Agreement shall be deemed to have been given when received by the party to whom it is directed by personal service, hand delivery or United States Mail at the following addresses:

To UMC: _____
_____
_____
_____

To Contractor: _____
_____
_____
_____

To Mediator: _____
_____
_____
_____

Either party may, at any time and from time to time, change its address by written notice to the other party.

9. Entire Agreement

This Agreement constitutes the entire agreement between the parties and may only be modified, supplemented or amended by a written agreement signed by both parties.

(SIGNATURE ON NEXT PAGE)

IN WITNESS WHEREOF, the parties have caused this contract to be signed and intend to be legally bound thereby.

University Medical Center of Southern Nevada, a publicly owned and operated hospital created by virtue of Chapter 450 of the Nevada Revised Statutes,

ATTEST:

By:_____
Lawrence Barnard, CEO

_____
DIANA ALBA, County Clerk

By:_____ ____

Name: _____ ____

Its: _____ ____
CONTRACTOR

STATE OF NEVADA)
) ss.
COUNTY OF CLARK)

On this _____ day of _____, 20__, before me the undersigned, a Notary Public, in and for said County and State, personally appeared _____, who acknowledged to me that _____ executed the above instrument for the purposes herein stated.

WITNESS my hand and official seal.

_____ ____
NOTARY PUBLIC
In and for said County and State

By:_____ ____

Name: _____ ____

Its: _____ ____
MEDIATOR

STATE OF NEVADA)
) ss.
COUNTY OF CLARK)

On this _____ day of _____, 2014, before me the undersigned, a Notary Public, in and for said County and State, personally appeared _____, who acknowledged to me that _____ executed the above instrument for the purposes herein stated.

WITNESS my hand and official seal.

_____
NOTARY PUBLIC
In and for said County and State

Approved as to form:

_____
Lisa Logsdon
Deputy District Attorney

EXHIBIT C

CONFIDENTIALITY AGREEMENT

THIS CONFIDENTIALITY AGREEMENT (hereinafter referred to as ("Confidentiality Agreement") is made and entered into this ____ day of _____, 2014 by and between University Medical Center of Southern Nevada, a publicly owned and operated hospital created by virtue of Chapter 450 of the Nevada Revised Statutes, ("UMC"), and _____ ("_____"). UMC and _____ are collectively referred to as "Parties".

RECITALS

WHEREAS, _____ was awarded Bid No. ASK Project Number for the Labor and Delivery Renovations Project, and UMC and _____entered into a contract entitled Labor and Delivery Renovations ("Contract");

WHEREAS, a claim, dispute or controversy relating to the Contract has arisen between the Parties;

WHEREAS, the Parties have haven been unsuccessful in resolving the claim, dispute or controversy by informal negotiations as required in section _____ of the Contract,

WHEREAS, _____ has submitted a demand to _____ for non-binding informal mediation of the claim, dispute or controversy, pursuant to section _____ of the Contract;

WHEREAS, pursuant to section _____ of the Contract, the Parties are required to enter into this Confidentiality Agreement as a condition of the informal nonbinding mediation prior to the commencement of the mediation;

NOW THEREFORE, in consideration of the premises and covenants herein contained, it is mutually agreed by and between the parties hereto as follows:

AGREEMENT

IT IS HEREBY AGREED by and between the Parties, their directors, officers, representatives and employees to maintain the confidentiality of the mediation and not disclose any statements, documents or information of merit or substance relating to the mediation. The Parties agree not to rely upon or introduce as evidence in any arbitral, judicial or other proceedings the following:

a) views expressed or suggestions or offers made by another party or the mediator in the course of the mediation proceedings, with respect to a possible settlement of a dispute, and with respect to negotiations that preceded the mediation;

b) admissions made by another party in the course of the mediation proceedings and negotiations that preceded the mediation relating to the merits of the dispute;

c) written and oral statements made or documents exchanged;

d) proposals made or views expressed by the mediator; or

e) the fact that another party had or had not indicated willingness to a proposal for settlement made by another party or the mediator.

The confidentiality of this provision is waived in the event the disclosure constitutes probative evidence in a pending action alleging negligence or willful misconduct of the mediator.

IT IS FURTHER AGREED by and between the Parties, their directors, officers, representatives and employees that no cause of action may be asserted based upon the manner in which the mediation is conducted or what transpires during the mediation proceeding.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

University Medical Center of Southern Nevada, a publicly owned and operated hospital created by virtue of Chapter 450 of the Nevada Revised Statutes,

ATTEST:

By: _____
Lawrence Barnard,
Chief Executive Officer

_____
DIANA ALBA, County Clerk

By: _____

Name: _____

Its: _____

STATE OF NEVADA)
) ss.
COUNTY OF CLARK)

On this _____ day of _____, 2014, before me the undersigned, a Notary Public, in and for said County and State, personally appeared _____, who acknowledged to me that ____he ____, executed the above instrument for the purposes herein stated.

WITNESS my hand and official seal.

_____
NOTARY PUBLIC

Approved as to form:

_____
Deputy District Attorney
Lisa Logsdon

INSTRUCTIONS FOR COMPLETING THE
DISCLOSURE OF OWNERSHIP/PRINCIPALS FORM

Purpose of the Form

The purpose of the Disclosure of Ownership/Principals Form is to gather ownership information pertaining to the business entity for use by the Board of County Commissioners ("BCC") in determining whether members of the BCC should exclude themselves from voting on agenda items where they have, or may be perceived as having a conflict of interest, and to determine compliance with Nevada Revised Statute 281A.430, contracts in which a public officer or employee has interest is prohibited.

General Instructions

Completion and submission of this Form is a condition of approval or renewal of a contract or lease and/or release of monetary funding between the disclosing entity and the appropriate Clark County government entity. Failure to submit the requested information may result in a refusal by the BCC to enter into an agreement/contract and/or release monetary funding to such disclosing entity.

Detailed Instructions

All sections of the Disclosure of Ownership form must be completed. If not applicable, write in N/A.

Business Entity Type – Indicate if the entity is an Individual, Partnership, Limited Liability Company, Corporation, Trust, Non-profit Organization, or Other. When selecting 'Other', provide a description of the legal entity.

Non-Profit Organization (NPO) - Any non-profit corporation, group, association, or corporation duly filed and registered as required by state law.

Business Designation Group – Indicate if the entity is a Minority Owned Business Enterprise (MBE), Women-Owned Business Enterprise (WBE), Small Business Enterprise (SBE), or Physically-Challenged Business Enterprise (PBE). This is needed in order to provide utilization statistics to the Legislative Council Bureau, and will be used only for such purpose.

Minority Owned Business Enterprise (MBE):
An independent and continuing business for profit that performs a commercially useful function and is at least 51% owned and controlled by one or more minority persons of Black American, Hispanic American, Asian-Pacific American or Native American ethnicity.

Women Owned Business Enterprise (WBE):
An independent and continuing business for profit that performs a commercially useful function and is at least 51% owned and controlled by one or more women.

Physically Challenged Business Enterprise (PBE):
An independent and continuing business for profit that performs a commercially useful function and is at least 51% owned and controlled by one or more disabled individuals pursuant to the federal Americans with Disabilities Act.

Small Business Enterprise (SBE):
An independent and continuing business for profit which performs a commercially useful function, is not owned and controlled by individuals designated as minority, women, or physically-challenged, and where gross annual sales does not exceed $2,000,000.

Veteran Owned Enterprise (VET):
A Nevada business at least 51% owned/controlled by a veteran.

Disabled Veteran Owned Enterprise (DVET):
A Nevada business at least 51% owned/controlled by a disabled veteran.

Business Name (include d.b.a., if applicable) – Enter the legal name of the business entity and enter the "Doing Business As" (d.b.a.) name, if applicable.

Corporate/Business Address, Business Telephone, Business Fax, and Email – Enter the street address, telephone and fax numbers, and email of the named business entity.

Local Business Address, Local Business Telephone, Local Business Fax, and Email – If business entity is out-of-state, but operates the business from a location in Nevada, enter the Nevada street address, telephone and fax numbers, point of contact and email of the local office. Please note that the local address must be an address from which the business is operating from that location. Please do not include a P.O. Box number, unless required by the U.S. Postal Service, or a business license hanging address.

Number of Clark County Nevada Residents employed by this firm.

List of Owners/Officers – Include the full name, title and percentage of ownership of each person who has ownership or financial interest in the business entity. If the business is a publicly traded corporation or non-profit organization, list all Corporate Officers and Directors only.

For All Contracts – **(Not required for publicly-traded corporations)**

1) Indicate if any individual members, partners, owners or principals involved in the business entity are a Clark County full-time employee(s), or appointed/elected official(s). If yes, the following paragraph applies.

   In accordance with NRS 281A.430.1, a public officer or employee shall not bid on or enter into a contract between a government agency and any private business in which he has a significant financial interest, except as provided for in subsections 2, 3, and 4.

2) Indicate if any individual members, partners, owners or principals involved in the business entity have a second degree of consanguinity or affinity relation to a Clark County full-time employee(s), or appointed/elected official(s) (reference form on Page 2 for definition). If **YES**, complete the Disclosure of Relationship Form. Clark County is comprised of the following government entities: Clark County, University Medical Center of Southern Nevada, Department of Aviation (McCarran Airport), and Clark County Water Reclamation District. Note: The Department of Aviation includes all of the General Aviation Airports (Henderson, North Las Vegas, and Jean).

A professional service is defined as a business entity that offers business/financial consulting, legal, physician, architect, engineer or other professional services.

Signature and Print Name – Requires signature of an authorized representative and the date signed.

Disclosure of Relationship Form – If any individual members, partners, owners or principals of the business entity is presently a Clark County employee, public officer or official, or has a second degree of consanguinity or affinity relationship to a Clark County employee, public officer or official, this section must be completed in its entirety.

DISCLOSURE OF OWNERSHIP/PRINCIPALS

Business Entity Type						
☐ Sole Proprietorship	☐ Partnership	☐ Limited Liability Company	☐ Corporation	☐ Trust	☐ Non-Profit Organization	☐ Other

Business Designation Group			
☐ MBE	☐ WBE	☐ SBE	☐ PBE
Minority Business Enterprise	Women-Owned Business Enterprise	Small Business Enterprise	Physically Challenged Business Enterprise

Corporate/Business Entity Name:			
(Include d.b.a., if applicable)			
Street Address:		**Website:**	
City, State and Zip Code:		**POC Name and Email:**	
Telephone No:		**Fax No:**	
Local Street Address:		**Website:**	
City, State and Zip Code:		**Local Fax No:**	
Local Telephone No:		**Local POC Name Email:**	
Number of Clark County Nevada Residents Employed:			

All entities, with the exception of publicly traded and non-profit organizations**,** must list the names of individuals holding more than five percent (5%) ownership or financial interest in the business entity appearing before the Board.

Publicly traded entities and non-profit organizations shall list all Corporate Officers and Directors in lieu of disclosing the names of individuals with ownership or financial interest. The disclosure requirement, as applied to land-use applications, extends to the applicant and the landowner(s).

Entities include all business associations organized under or governed by Title 7 of the Nevada Revised Statutes, including but not limited to private corporations, close corporations, foreign corporations, limited liability companies, partnerships, limited partnerships, and professional corporations.

Full Name	Title	% Owned (Not required for Publicly Traded Corporations/Non-profit organizations)

This section is not required for publicly traded corporations.

1. Are any individual members, partners, owners or principals, involved in the business entity, a Clark County, University Medical Center, Department of Aviation, or Clark County Water Reclamation District full-time employee(s), or appointed/elected official(s)?

   ☐ Yes ☐ No (If yes, please note that County employee(s), or appointed/elected official(s) may not perform any work on professional service contracts, or other contracts, which are not subject to competitive bid.)

2. Do any individual members, partners, owners or principals have a spouse, registered domestic partner, child, parent, in-law or brother/sister, half-brother/half-sister, grandchild, grandparent, related to a Clark County, University Medical Center, Department of Aviation, or Clark County Water Reclamation District full-time employee(s), or appointed/elected official(s)?

   ☐ Yes ☐ No (If yes, please complete the Disclosure of Relationship form on Page 2. If no, please print N/A on Page 2.)

I certify under penalty of perjury, that all of the information provided herein is current, complete, and accurate. I also understand that the Board will not take action on land-use approvals, contract approvals, land sales, leases or exchanges without the completed disclosure form.

Signature	Print Name
Title	Date

DISCLOSURE OF RELATIONSHIP

List any disclosures below:
(Mark N/A, if not applicable.)

NAME OF BUSINESS OWNER/PRINCIPAL	NAME OF COUNTY* EMPLOYEE/OFFICIAL AND JOB TITLE	RELATIONSHIP TO COUNTY* EMPLOYEE/OFFICIAL	COUNTY* EMPLOYEE'S/OFFICIAL'S DEPARTMENT

* County employee means Clark County, University Medical Center, Department of Aviation, or Clark County Water Reclamation District.

"Consanguinity" is a relationship by blood. "Affinity" is a relationship by marriage.

"To the second degree of consanguinity" applies to the candidate's first and second degree of blood relatives as follows:

- Spouse – Registered Domestic Partners – Children – Parents – In-laws (first degree)
- Brothers/Sisters – Half-Brothers/Half-Sisters – Grandchildren – Grandparents – In-laws (second degree)

For County Use Only:

If any Disclosure of Relationship is noted above, please complete the following:

☐ Yes ☐ No Is the County employee(s) noted above involved in the contracting/selection process for this particular agenda item?

☐ Yes ☐ No Is the County employee(s) noted above involved in anyway with the business in performance of the contract?

Notes/Comments:

_____
Signature

_____
Print Name
Authorized Department Representative

DISCLOSURE OF RELATIONSHIP

For County Use Only:

If any Disclosure of Relationship is noted above, please complete the following:

☐ Yes ☐ No Is the County employee(s) noted above involved in the contracting/selection process for this particular agenda item?

☐ Yes ☐ No Is the County employee(s) noted above involved in anyway with the business in performance of the contract?

Notes/Comments:

_____
Signature

_____
Print Name
Authorized Department Representative

For County Use Only:

If any Disclosure of Relationship is noted above, please complete the following:

☐ Yes ☐ No Is the County employee(s) noted above involved in the contracting/selection process for this particular agenda item?

☐ Yes ☐ No Is the County employee(s) noted above involved in anyway with the business in performance of the contract?

Notes/Comments:

_____
Signature

_____
Print Name
Authorized Department Representative

For County Use Only:

If any Disclosure of Relationship is noted above, please complete the following:

☐ Yes ☐ No Is the County employee(s) noted above involved in the contracting/selection process for this particular agenda item?

☐ Yes ☐ No Is the County employee(s) noted above involved in anyway with the business in performance of the contract?

Notes/Comments:

_____
Signature

_____
Print Name
Authorized Department Representative

WORKERS EMPLOYED REPORT (A) (PER N.R.S. 338.070)

Project Number: _____ **Date:** _____

Project Name: _____ **PWP Number:** _____

General Contractor: _____ **Subcontractor:** _____

Prepared by: _____ **Contact Number:** _____

Email Address: _____

	Worker Name	Workers Occupation	Has a Drivers License or Identification Card	State Issued	Wages	Per Diem	Benefits
1			☐YES or ☐NO				
2			☐YES or ☐NO				
3			☐YES or ☐NO				
4			☐YES or ☐NO				
5			☐YES or ☐NO				
6			☐YES or ☐NO				
7			☐YES or ☐NO				
8			☐YES or ☐NO				
9			☐YES or ☐NO				
10			☐YES or ☐NO				
11			☐YES or ☐NO				
12			☐YES or ☐NO				
13			☐YES or ☐NO				
14			☐YES or ☐NO				
15			☐YES or ☐NO				
16			☐YES or ☐NO				
17			☐YES or ☐NO				
18			☐YES or ☐NO				
19			☐YES or ☐NO				
20			☐YES or ☐NO				

DO NOT INCLUDE ANY LICENSE OR I.D. NUMBERS

WORKERS EMPLOYED REPORT (B) (PER N.R.S. 338.070)

Project Number: _____ **Date:** _____

Project Name: _____ **PWP Number:** _____

General Contractor: _____ **Subcontractor:** _____

Prepared by: _____ **Contact Number:** _____

Email Address: _____

	Worker Name	Driver's License No. or Identification No.	State Issued	First day on Project	Last day on Project
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

CONFIDENTIAL

NON-APPORTIONED VEHICLE REPORT

Project Number: _____ **Date:** _____

Project Name: _____ **PWP Number:** _____

General Contractor: _____ **Subcontractor:** _____

Prepared by: _____ **Contact Number:** _____

Email Address: _____

	Owner Name	Vehicle Description	License No. and State
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			

MATERIALS PURCHASED REPORT

Project Number: _____ **Date:** _____

Project Name: _____ **PWP Number:** _____

General Contractor: _____ **Subcontractor:** _____

Prepared by: _____ **Contact Number:** _____

Email Address: _____

	Material Supplier Name	Address	Materials Purchased
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			

CLOSEOUT DOCUMENTATION SUMMARY REPORT OF SUBCONTRACTORS

Project Number: _____ **Date:** _____

Project Name: _____ **PWP Number:** _____

General Contractor: _____ **Subcontractor:** _____

Prepared by: _____ **Contact Number:** _____

Email Address: _____

	Subcontractor Name	*BEG	Ethnicity	Address	Bid Item or Work Performed	Value of Contract
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

**Reference Instruction to Bidders for definitions.*

FEDERAL LABOR STANDARDS PROVISIONS

Applicability

The Project or Program to which the construction work covered by this contract pertains is being assisted by the United States of America and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

A. 1. (i) Minimum Wages. All laborers and mechanics employed or working upon the site of the work, will 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 regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination 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 and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section l(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 CFR 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period.

Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under 29 CFR 5.5(a)(1)(ii) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible, place where it can be easily seen by the workers.

(ii) (a) 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 in conformance with the wage determination. HUD shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(b) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and HUD or its designee agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by HUD or its designee to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB control number 1215-0140.)

(c) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and HUD or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

(d) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1) (ii) (b) or (c) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit that is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

If the contractor does not make payments to a trustee or other third person, the contractor may consider as part

of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

2. Withholding. HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract In the event of failure to pay any laborer or mechanic, including any apprentice, trainee or helper, employed or working on the site of the work, all or part of the wages required by the contract, HUD or its designee may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased. HUD or its designee may, after written notice to the contractor, disburse such amounts withheld for and on account of the contractor or subcontractor to the respective employees to whom they are due. The Comptroller General shall make such disbursements in the case of direct Davis-Bacon Act contracts.

3. (i) Payrolls and basic records. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work preserved 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, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in Section l (b) (2) (B) of the Davis-bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5 (a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section l(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs. (Approved by the Office of Management and Budget under OMB Control Numbers 1215-0140 and 1215-0017.)

(ii) (a) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i) except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead, the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at *http://www.dol.gov/esa/whd/forms/wh347instr.htm* or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this subparagraph for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to HUD or its designee. (Approved by the Office of Management and Budget under OMB Control Number 1215-0149.)

(b) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be provided under 29 CFR 5.5 (a) (3) (ii), the appropriate information is being maintained under 29 CFR 5.5(a) (3) (i), and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR Part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by subparagraph A. 3. (ii)(b).

(c) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under subparagraph A.3.(i) available for inspection, copying, or transcription by authorized representatives of HUD or its designee or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, HUD or its designee may, after written notice to the contractor, sponsor, applicant or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and Trainees.

(i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant ',to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by

the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal employment opportunity. The utilization of apprentices, trainees and journeymen under 29 CFR Part 5 shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended and 29 CFR Part 30.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this contract

6. Subcontracts. The contractor or subcontractor will insert in any subcontracts the clauses contained in subparagraphs 1 through 11 in this paragraph A and such other clauses as HUD or its designee may by appropriate instructions require, and a copy of the applicable prevailing wage decision, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this paragraph.

7. Contract termination; debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act Requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and HUD or its designee, the U.S. Department of Labor, or the employees or their representatives.

10. (i) Certification of Eligibility. By entering into this contract the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001. Additionally, U.S. Criminal Code, Section 1 01 0, Title 18, U.S.C., "Federal Housing Administration transactions", provides in part: "Whoever, for the purpose of . . . influencing in any way the action of such Administration.... makes, utters or publishes any statement knowing the same to be false..... shall be fined not more than $5,000 or imprisoned not more than two years, or both."

11. Complaints, Proceedings, or Testimony by Employees. No laborer or mechanic to whom the wage, salary, or other labor standards provisions of this Contract are applicable shall be discharged or in any other manner discriminated against by the Contractor or any subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceeding or has testified or is about to testify in any proceeding under or relating to the labor standards applicable under this Contract to his employer.

B. Contract Work Hours and Safety Standards Act. The provisions of this paragraph B are applicable where the amount of the prime contract exceeds $100,000. As used in this paragraph, the terms "laborers" and "mechanics" include watchmen and guards.

(3) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which the individual is employed on such work to work in excess of 40 hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of 40 hours in such workweek.

(4) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in subparagraph (1) of this paragraph, the contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in subparagraph (1) of this paragraph, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by the clause set forth in sub paragraph (1) of this paragraph.

(3) **Withholding for unpaid wages and liquidated damages.** HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contract, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act which is held by the same prime contractor such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in subparagraph (2) of this paragraph.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in subparagraph (1) through (4) of this paragraph and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in subparagraphs (1) through (4) of this paragraph.

C. Health and Safety. The provisions of this paragraph C are applicable where the amount of the prime contract exceeds $100,000.

(1) No laborer or mechanic shall be required to work in surroundings or under working conditions that are unsanitary, hazardous, or dangerous to his health and safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.

(2) The Contractor shall comply with all regulations issued by the Secretary of Labor pursuant to Title 29 Part 1926 and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act, (Public Law 91-54, 83 Stat 96). 40 USC 3701 et seq.

(3) The contractor shall include the provisions of this paragraph in every subcontract so that such provisions will be binding on each subcontractor. The contractor shall take such action with respect to any subcontractor as the Secretary of Housing and Urban Development or the Secretary of Labor shall direct as a means of enforcing such provisions.

Ninyo & Moore
Geotechnical and Environmental Sciences Consultants

LIMITED ASBESTOS SURVEY REPORT
UNIVERSITY MEDICAL CENTER
OF SOUTHERN NEVADA
SEVEN STORY TOWER – 7TH FLOOR
1800 WEST CHARLESTON BOULEVARD
LAS VEGAS, NEVADA

PREPARED FOR:
University Medical Center of Southern Nevada
1800 West Charleston Boulevard
Las Vegas, Nevada 89102

PREPARED BY:
Ninyo & Moore
Geotechnical and Environmental Sciences Consultants
6700 Paradise Road, Suite E
Las Vegas, Nevada 89119

May 20, 2013
Project No. 302988012

May 20, 2013
Project No. 302988012

Mr. David Brice
University Medical Center of Southern Nevada
1800 West Charleston Boulevard
Las Vegas, Nevada 89102

Subject: Limited Asbestos Survey Report
University Medical Center of Southern Nevada
Seven Story Tower – 7th Floor
1800 West Charleston Boulevard
Las Vegas, Nevada

Dear Mr. Brice:

In accordance with your authorization, Ninyo & Moore has conducted sampling of suspect asbestos-containing materials present on the 7th Floor of the Seven Story Tower at the University Medical Center of Southern Nevada in Las Vegas, Nevada. The attached report presents our methodology, findings, conclusions, and recommendations regarding our sampling. We appreciate the opportunity to be of service to you on this important project.

Sincerely,
NINYO & MOORE

Duane Matters, CEM
Senior Geologist/Operations Manager
Nevada Asbestos License IJPM 1066

Robert M. Troisi, CEM
Managing Principal
Environmental Sciences Division
Nevada Asbestos License IJ 0886

DHM/RMT/pac

Distribution: (2) Addressee (1 hard copy, 1 via e-mail)

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1. INTRODUCTION

In accordance with your authorization to proceed, Ninyo & Moore has conducted sampling of suspect asbestos-containing materials present on the 7th Floor of the Seven Story Tower at the University Medical Center (UMC) of Southern Nevada in Las Vegas, Nevada. Due to the presence of wallpaper with an unknown fire rating on wall surfaces, a renovation may be required to meet industry standards.

Ninyo & Moore previously conducted a limited sampling on the floor associated with the Innerwireless installation and a floor tile investigation to potentially install tile to delineate an exclusion zone for infection control and/or replace existing flooring in common areas consistent with that installed in the Northeast Building. During the sampling associated with the Innerwireless installation, samples of drywall ceilings and fireproofing were collected from the 7th floor. As part of the Operations & Maintenance Program for fiscal year 2011/2012, samples 12-inch by 12-inch floor tiles were collected from common areas (e.g., hallways and lobbies). Asbestos was not detected the samples collected as part of the Innerwireless installation. Asbestos was detected in the mastic underlying floor tiles collected from the common areas. A summary of the results from the analysis of the previously collected samples are summarized in Table 1.

This report is based upon conditions at the site at the time of the sampling activities and has been performed in accordance with generally accepted practices for asbestos surveys.

2. PURPOSE AND SCOPE OF SERVICES

The purpose of the survey was to evaluate the flooring systems in the two rooms at the site for the presence of asbestos-containing material (ACM). The objective of the survey was to gain information regarding site conditions to assist in planning for proposed equipment installation. Ninyo & Moore performed the following services:

- Performance of a visual reconnaissance of the readily accessible areas of the site to evaluate the areas for the possible presence of ACM.
- The collection of 33 building material samples and submittal to a certified laboratory for analysis by polarized light microscopy (PLM). The sampling was conducted according to

Environmental Protection Agency (EPA) protocol described in the Asbestos Hazard Emergency Response Act (Code of Federal Regulations, Section 40, Part 763).

- Preparation of this report summarizing our field activities, laboratory test results, conclusions, and recommendations.

3. SITE DESCRIPTION

The subject site is comprised of a multi-building medical center with an assigned address of 1800 West Charleston Boulevard in Las Vegas, Nevada. The project area is limited to the interior areas of the 7th floor of the Seven Story Tower and materials that would be impacted by potential renovation activities. Thermal system insulation (TSI) noted during the sampling was determined to be fiberglass; however, due to high ceiling decks and utilities above suspended ceilings, insulation could not be assessed in all areas where sampling was conducted.

4. PHYSICAL LIMITATIONS

Physical limitations, such as locked rooms and fenced areas, were encountered during survey activities. Additionally, active patient areas were not accessed due to patient privacy issues. There is a possibility that during renovation activities, additional ACM may be encountered in areas that were not assessed during our survey (e.g. interstitial wall or ceiling spaces). Possible overspray may also be encountered on wall studs or at the top of door frames. In addition, TSI may be present within wall cavities. Suspect materials encountered during demolition activities that have not been assessed previously may either be assumed to be ACM and handled accordingly, or may be sampled and analyzed at that time to determine whether they are asbestos containing.

5. SAMPLE COLLECTION

On May 14, 2013, Mr. Duane Matters, a Nevada-certified asbestos consultant conducted a limited asbestos sampling event that consisted of collecting samples of materials that would be impacted by the a renovation may be required to remove or encase wall surfaces with wallpaper with an unknown fire rating. The renovation would be necessary to meet industry standards for

hospitals and existing fire codes. The sampling followed EPA guidelines, within the limitations of the scope of this sampling event. A preliminary visual assessment of suspect ACM was performed. Representative samples of these suspect ACMs were collected after designating homogeneous sampling areas (areas in which the materials are uniform in color, texture, construction or application date, and general appearance). Each homogeneous area was observed for material type, location, condition, and friability. Representative samples were collected from each area, except areas that were inaccessible, or areas of assumed ACM, within the limitations of the assessment. Samples were collected using EPA-recommended sampling procedures. Building materials sampled and analyzed for the presence of asbestos are summarized in Table 2.

6. LABORATORY ANALYSES AND RESULTS

Previously conducted sampling events collected samples of floor tile and mastic, drywall ceiling systems, and fireproofing. Samples collected during this sampling event were submitted to EMLab P&K/Test America of Las Vegas, Nevada (Test America). Test America is an accredited laboratory in the National Voluntary Laboratory Accreditation Program (NVLAP) for bulk asbestos fiber analysis. Due to material layering of the 33 samples collected, 70 separate analyses were performed. The samples were analyzed using PLM with dispersion staining, for the presence and quantification of asbestos fibers, in general accordance with EPA Method 600/R-93/116. The lower limit of reliable detection for asbestos using the PLM method is approximately 1% by volume. Materials containing asbestos in amounts less than 1% are defined as containing "trace" amounts.

Copies of the laboratory analytical report and chain-of-custody record are presented in Appendix A. Certifications of Ninyo & Moore personnel and the analytical laboratory are presented in Appendix B.

7. FINDINGS AND OPINIONS

The findings of this survey are based on our visual observations and analysis of suspect building materials for the presence of asbestos. Based on the analytical results of bulk samples collected during this survey, the following materials sampled had an asbestos content in excess of 1%.

- Approximately 3,500 square feet (SF) of non-friable 12" x 12" mastic (black) containing 3% chrysotile asbestos is present underlying floor tile common areas (e.g., Elevator Lobby and Waiting Area) and hallways on the northern end of the 7th floor. The material is in good condition.

- An estimated 400 SF of non-friable 12" x 12" mastic (black) containing 3% chrysotile asbestos is present underlying floor tile in the Staff Lounge, Locker Room, and Soiled Utility Room at the southern end of the 7th floor. The material was not present in all samples collected and is likely a remnant of a previously installed flooring system that was removed. The material is in good condition.

- An estimated 450 SF of non-friable 12" x 12" mastic (black) containing 3% chrysotile asbestos is present underlying sheet flooring in the patient rooms. The material was not present in all samples collected and is likely a remnant of a previously installed flooring system that was removed. The material is in good condition.

- Vermiculite was detected in each of the three samples of fireproofing collected during this assessment at a concentration of 5%. Vermiculite itself does not contain asbestos, although some products made with vermiculite up until the early 1990s were identified to contain asbestos. The former vermiculite mine in Libby, Montana, did have tremolite asbestos as well as winchite and richterite (both fibrous amphiboles). Vermiculite mines currently test for vermiculite for the presence of the regulated asbestiform minerals. However, based on the early to mid-1970's construction date of the subject structure, there is a potential that the sprayed-on fireproofing present within the structure may contain tremolite asbestos in concentrations below 1% or the resolution of standard PLM methodology.

- Ninyo & Moore recommends conducting further analysis to determine if the fireproofing contains tremolite or other asbestiform minerals.

- Floor tile consistent with that sampled and determined to be asbestos-containing was identified in the Electrical Room and EVS Closet adjacent to the southwest stairwell. The floor tile has been identified in Histology, Laboratory, Stairwells, and Closets across the UMC campus. Results from previously analysis indicate that the floor tile contains between 3% chrysotile asbestos to 5% chrysotile asbestos with asbestos-containing mastic (black) containing between 3% chrysotile asbestos and 5% chrysotile asbestos.

8. RECOMMENDATIONS

There is a possibility that additional suspect ACM may be found during demolition. Ninyo & Moore recommends that should additional suspect materials, not sampled or assessed in this report, be uncovered during renovation or demolition; (a) samples of suspect materials should be collected for laboratory analysis, and all activities which may impact the materials should cease until laboratory analysis is completed, or; (b) the materials should be assumed to be hazardous and handled as such.

The Occupational Safety and Health Administration standard requires building owners to identify TSI and sprayed- or troweled-on surfacing materials in buildings as asbestos containing, unless they are determined to be non-asbestos containing. Asphalt and vinyl flooring material installed no later than 1980 must also be considered as asbestos containing unless the employer establishes that the material is not asbestos containing. When communicating information to employees pursuant to this standard, owners and employers shall report materials not sampled as presumed asbestos-containing material.

Ninyo & Moore recommends the inclusion of the data into the facility Operation and Maintenance Plan, which is currently in "draft", so that daily activities that have the potential to impact ACM are done safely. The submitted plan sets forth the training requirements for maintenance personnel that conduct small-scale short duration activities and establishes a protocol for responding to uncontrolled or unintentional disturbances of friable ACM.

The elements of an O&M Plan include:

- Worker protection program (training requirements).
- Cleaning program.
- O&M Activities (small-scale short-duration).
- Maintenance activities other than small-scale short-duration.
- Fiber release episodes.

9. LIMITATIONS

Ninyo & Moore's opinions and recommendations regarding environmental conditions, as presented in this report, are based on limited sampling and analysis. Further assessment of potential adverse environmental impacts may be accomplished by a more comprehensive assessment. The samples collected and used for testing, and the observations made, are believed to be representative of the area(s) evaluated. However, if additional suspect ACM is encountered during renovation or demolition activities, these materials should be sampled by qualified personnel, and analyzed for asbestos content prior to further disturbance. In addition, please note that quantities of ACM are approximate. These numbers should be confirmed prior to removal or repair activities.

The environmental services described in this report have been conducted in general accordance with current regulatory guidelines and the standard-of-care exercised by environmental consultants performing similar work in the project area. No other warranty, expressed or implied, is made regarding the professional opinions presented in this report. Variations in site conditions may exist and conditions not observed or described in this report may be encountered during subsequent activities. Please also note that this study did not include an evaluation of geotechnical conditions or potential geologic hazards.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Ninyo & Moore should be contacted if the reader requires any additional information, or has questions regarding content, interpretations presented, or completeness of this document.

The environmental interpretations and opinions contained in this report are based on the results of laboratory tests and analyses intended to detect the presence of ACM in samples collected from the subject site. The testing and analyses have been conducted by an independent laboratory which is accredited by NVLAP for bulk asbestos fiber analysis. Ninyo & Moore has no involvement in, or control over, such testing and analysis. Ninyo & Moore, therefore, disclaims responsibility for any inaccuracy in such laboratory results.

Our conclusions, recommendations, and opinions are based on an analysis of the observed site conditions. It should be understood that the conditions of a site can change with time as a result of natural processes or the activities of man at the subject site or nearby sites. In addition, changes to the applicable laws, regulations, codes, and standards of practice may occur due to government action or the broadening of knowledge. The findings of this report may, therefore, be invalidated over time, in part or in whole, by changes over which Ninyo & Moore has no control.

TABLES

Table 1 - Previous Limited Asbestos Sampling Results

Sample No.	Layer	Sample Location	Sample Description	Approximate Quantity (SF)	Friable (Y/N)	Condition	Asbestos Content
B-730	1	7th Floor, Above Hard Ceiling Adjacent to Delivery Room 712	Drywall (White/Brown)	NM	Y	Good	ND
	2		Texture (White)		Y		ND
B-731	1	7th Floor, Above Hard Ceiling Adjacent to Delivery Room 712	Drywall (White/Brown)		Y	Good	ND
	2		Texture (White)		Y		ND
B-732	1	7th Floor, Above Hard Ceiling Adjacent to Delivery Room 712	Fireproofing (Beige)	NM	Y	Good	ND
B-967	1	**7th Floor, Elevator Lobby, Adjacent to Window/Heater**	1' x 1' Floor Tile (White)	N/M	N	Good	
	2		Glue (Yellow)	N/M	N		ND
	3		**Mastic (Black)**	N/M	**N**		**3% Chrysotile**
B-968	1	**7th Floor, Hallway, Northwest Corner**	1' x 1' Floor Tile (White)	N/M	N	Good	
	2		Glue (Yellow)	N/M	N		ND
	3		**Mastic (Black)**	N/M	**N**		**3% Chrysotile**
B-969	1	**7th Floor, Hallway, Adjacent to Recovery Room**	1' x 1' Floor Tile (White)	N/M	N	Good	
	2		Glue (Yellow)	N/M	N		ND
	3		**Mastic (Black)**	N/M	**N**		**3% Chrysotile**

Table 2 - Asbestos Sampling Results

Sample No.	Layer	Sample Location	Sample Description	Approximate Quantity (SF)	Friable (Y/N)	Condition	Asbestos Content
B-1023	1	**Hallway, Adjacent to Staff Restroom**	Floor Tile (White)	3,500 SF	N	Good	ND
	2		Mastic (Yellow)		N	Good	ND
	3		**Mastic (Black)**		**N**	**Good**	**3% Chrysotile**
B-1024	1	Hallway, Adjacent to Patient Room 708	Floor Tile (White)		N	Good	ND
	2		Mastic (Yellow)		N	Good	ND
	3		**Mastic (Black)**		**N**	**Good**	**3% Chrysotile**
B-1025	1	Hallway, Adjacent to Convenience Stairwell	Floor Tile (White)		N	Good	ND
	2		Mastic (Yellow)		N	Good	ND
	3		Mastic (Black)		N	Good	ND
B-1026	1	Hallway, Adjacent to On-call Anesthesiologist	Floor Tile (White)	N/M	N	Good	ND
	2		Mastic (Yellow)		N	Good	ND
B-1027	1	Hallway, Adjacent to Patient Room 724	Floor Tile (White)		N	Good	ND
	2		Mastic (Yellow)		N	Good	ND
B-1028	1	Hallway, Adjacent to Patient Room 721	Floor Tile (White)		N	Good	ND
	2		Mastic (Yellow)		N	Good	ND
	3		Leveling Compound (White)		N	Good	ND
B-1029	1	Staff Lounge, Locker Room	Floor Tile (Tan)	400 SF[1]	N	Good	ND
	2		Mastic (Black)		N	Good	ND
B-1030	1	**Soiled Utility Room**	Floor Tile (Tan)		N	Good	ND
	2		**Mastic (Black)**		**N**	**Good**	**3% Chrysotile**
B-1031	1	Staff Lounge	Floor Tile (Tan)		N	Good	ND
	2		Mastic (Yellow)		N	Good	ND
B-1032	1	Patient Room 708	Sheet Flooring (Blue)	450 SF[1]	N	Good	ND
	2		Mastic (Yellow)		N	Good	ND
B-1033	1	Patient Room 706	Sheet Flooring (Blue)		N	Good	ND
	2		**Mastic (Black)**		**N**	**Good**	**3% Chrysotile**
B-1034	1	Patient Room 722	Sheet Flooring (Blue)		N	Good	ND
	2		Mastic (Yellow)		N	Good	ND
	3		Sheet Flooring Backing (Beige)		Y	Good	ND

Table 2 - Asbestos Sampling Results

Sample No.	Layer	Sample Location	Sample Description	Approximate Quantity (SF)	Friable (Y/N)	Condition	Asbestos Content
B-1035	1	Hallway Adjacent to Patient Room 705	Fireproofing (Brown)	N/M	Y	Good	ND
B-1036	1	Hallway, Adjacent to Neonatal	Fireproofing (Brown)		Y	Good	ND
B-1037	1	Hallway, Adjacent to Patient Room 731	Fireproofing (Brown)		Y	Good	ND
B-1038	1	Hallway Adjacent to Patient Room 705	2' x 4' Ceiling Tile (Off-white) with Paint	N/M	Y	Good	ND
B-1039	1	Hallway, Adjacent to Neonatal	2' x 4' Ceiling Tile (Off-white) with Paint		Y	Good	ND
B-1040	1	Hallway, Adjacent to Patient Room 731	2' x 4' Ceiling Tile (Off-white) with Paint		Y	Good	ND
B-1041	1	Hallway, Adjacent to Patient Room 731	Texture (White) with Paint	N/M	Y	Good	ND
	2		Tape (White)		Y	Good	ND
	3		Joint Compound (White)		N	Good	ND
	4		Drywall (White)		N	Good	ND
B-1042	1	Hallway, Adjacent to Patient Room 721	Texture (White) with Paint		Y	Good	ND
	2		Tape (White)		Y	Good	ND
	3		Joint Compound (White)		N	Good	ND
	4		Drywall (White)		N	Good	ND
B-1043	1	Hallway, Adjacent to Patient Room 710	Texture (White) with Paint		Y	Good	ND
	2		Tape (White)		Y	Good	ND
	3		Joint Compound (White)		N	Good	ND
	4		Drywall (White)		N	Good	ND
B-1044	1	Hallway, Adjacent to Patient Room 731	Fire Block Caulk (Red)	N/M	N	Good	ND
B-1045	1	Hallway, Adjacent to Patient Room 721	Fire Block Caulk (Red)		N	Good	ND
B-1046	1	Hallway, Adjacent to Patient Room 710	Fire Block Caulk (Red)		N	Good	ND
B-1047	1	Hallway, Adjacent to Patient Room 710	Texture (White) with Paint	N/M	Y	Good	ND
	2		Drywall (White)		N	Good	ND
B-1048	1	Hallway, Adjacent to Triage	Texture (White) with Paint		Y	Good	ND
	2		Drywall (White)		N	Good	ND
B-1049	1	Patient Room 708	Texture (White) with Paint		Y	Good	ND
	2		Drywall (White)		N	Good	ND

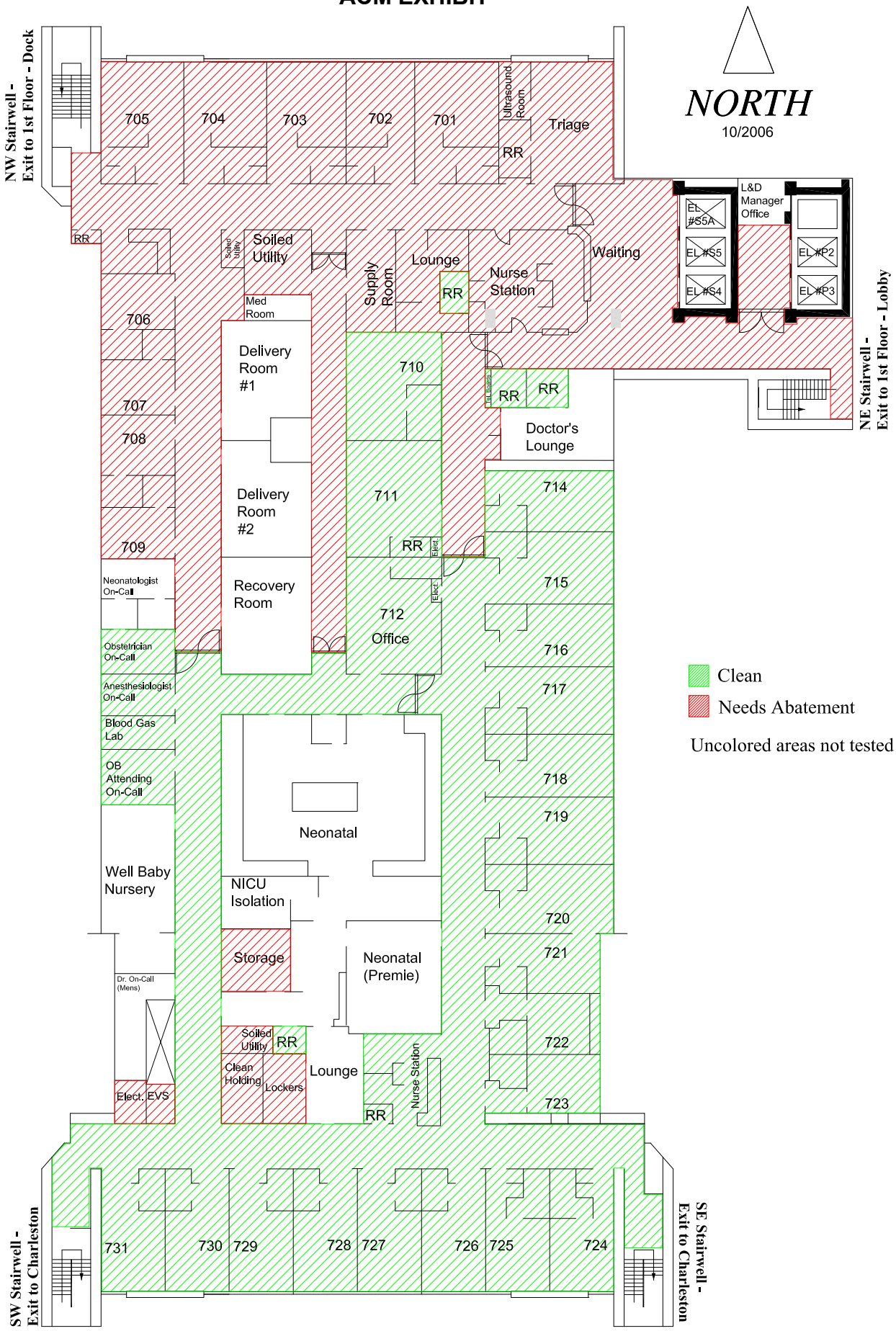
Table 2 - Asbestos Sampling Results

Sample No.	Layer	Sample Location	Sample Description	Approximate Quantity (SF)	Friable (Y/N)	Condition	Asbestos Content
B-1050	1	Hallway, Adjacent to Stairwell	Wallpaper (Blue) with Glue	N/M	Y	Good	ND
	2		Drywall (White)		N	Good	ND
B-1051	1	Hallway , Across from Anesthesiologist Office	Wallpaper (Blue) with Glue		Y	Good	ND
	2		Wallpaper (Pink) with Glue		Y	Good	ND
	3		Compound (White)		Y	Good	ND
	4		Drywall (White)		N	Good	ND
B-1052	1	Hallway, Across from Patient Room 717	Wallpaper (Blue) with Glue		Y	Good	ND
	2		Drywall (White)		N	Good	ND
B-1053	1	Hallway, Across from Patient Room 717	Wallpaper (Blue) with Glue	N/M	Y	Good	ND
	2		Joint Compound (White)		N	Good	ND
B-1054	1	Patient Room 708	Wallpaper (Blue) with Glue		Y	Good	ND
	2		Joint Compound (White)		N	Good	ND
B-1055	1	Hallway, Adjacent to Patient Room 724	Wallpaper (Blue) with Glue		Y	Good	ND
	2		Joint Compound (White)		N	Good	ND

NOTES:
SF - square feet
ND - Not detected
1 - Quantity estimated. Material is a likely a remnant of a previously installed flooring system that was removed.

University Medical Center of Southern Nevada Bid 2014-08
Labor and Delivery Renovations

ACM EXHIBIT



University Medical Center of Southern Nevada Bid 2014-08
Labor and Delivery Renovations

PHASING PLAN I

University Medical Center of Southern Nevada Bid 2014-08
Labor and Delivery Renovations

Staging and Parking Exhibit

UMC
UNIVERSITY MEDICAL CENTER

7th Floor Renovation

HKS

OWNER

UNIVERSITY MEDICAL CENTER OF SOUTHERN NEVADA
1800 W. CHARLESTON BLVD.
LAS VEGAS, NEVADA 89102

ARCHITECT

HKS, INC.
2500 ANTHEM VILLAGE DR.
HENDERSON, NV 89052

MECHANICAL, ELECTRICAL, AND PLUMBING ENGINEER

HARRIS CONSULTING ENGINEERS, LLC
6630 SURREY ST., SUITE 100
LAS VEGAS, NEVADA 89119

REGISTERED PROFESSIONAL ARCHITECT
CERTIFICATE NO.
27915
IRENE M.
CLARK
Date Signed 06/04/2014
ARIZONA, U.S.A.
EXPIRES: 06/30/2015

CONSTRUCTION DOCUMENTS

PROJECT NO. 16922.000

ISSUED FOR BID DATE: JUNE 15, 2014

University Medical Center of Southern Nevada

7th Floor Renovation

HKS PROJECT NO. 16922.000

ISSUED FOR BID

Bid 2014-08 - Labor and Delivery Renovations
PWP# CL-2014-270

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HKS

HKS Project No. 16922.000

Project Manual

University Medical Center of Southern Nevada
1800 W. Charleston Blvd.
7th Floor Renovation
Las Vegas, Nevada

Issued for Bid

Bid 2014-08 – Labor and Delivery Renovations

PWP# CL-2014-270

June 15, 2014

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UNIVERSITY MEDICAL CENTER
7TH FLOOR RENOVATION
LAS VEGAS, NEVADA

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Registered Architect
CERTIFICATE NO.
27915
IRENE M.
CLARK
Date Signed 06/12/2014
ARIZONA, U.S.A.

EXPIRES: 06/30/2015

LEGEND

FIRST COLUMN: DATE OF LATEST SECTION

SECOND COLUMN: SHADED INDICATES SECTION IS INCLUDED IN CURRENT PRINTING

THIRD COLUMN: REVISION NUMBER ("O" INDICATES ORIGINAL, REVISIONS ARE NUMBERED CONSECUTIVELY)

FOURTH COLUMN: SPECIFICATION SECTION NUMBER

FIFTH COLUMN: SPECIFICATION SECTION TITLE

NOTE FOR REVISED SPECIFICATION SECTIONS

1. DELETED INFORMATION IS INDICATED BY A STRIKETHROUGH (IE, ~~THIS IS DELETED~~).
2. NEW INFORMATION IS INDICATED BY A DOUBLE UNDERLINE (IE, THIS IS ADDED).
3. ALL REVISED INFORMATION IS FURTHER IDENTIFIED BY A HEAVY VERTICAL LINE TO THE RIGHT OF ALL REVISIONS IN EACH INDIVIDUAL SPECIFICATION SECTION (REFER TO HEAVY BOLD LINE TO THE RIGHT FOR AN EXAMPLE).

ISSUES OF SPECIFICATIONS SECTIONS

Date	Description
2014-06-15	Issued for Bid

DIVISION 00 - PROCUREMENT AND CONTRACT REQUIREMENTS

2014-06-15	☒	0	00 3100	Available Project Information
2014-06-15	☒	0	00 7200	General Conditions
2014-06-15	☒	0	00 7300	Supplementary Conditions

DIVISION 01 - GENERAL REQUIREMENTS

2014-06-15	☒	0	01 1000	Summary
2014-06-15	☒	0	01 2300	Alternates
2014-06-15	☒	0	01 2500	Substitution Procedures
2014-06-15	☒	0	01 2600	Contract Modification Procedures
2014-06-15	☒	0	01 2900	Payment Procedures
2014-06-15	☒	0	01 3100	Project Management and Coordination
2014-06-15	☒	0	01 3200	Construction Progress Documentation
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2014-06-15	☒	0	01 4000	Quality Requirements
2014-06-15	☒	0	01 4200	References
2014-06-15	☒	0	01 5000	Temporary Facilities and Controls
2014-06-15	☒	0	01 6000	Product Requirements
2014-06-15	☒	0	01 7300	Execution
2014-06-15	☒	0	01 7419	Construction Waste Management and Disposal
2014-06-15	☒	0	01 7700	Closeout Procedures
2014-06-15	☒	0	01 7823	Operations and Maintenance Data
2014-06-15	☒	0	01 7839	Project Record Documents
2014-06-15	☒	0	01 7900	Demonstration and Training

DIVISION 02 - EXISTING CONDITIONS

2014-06-15	☒	0	02 4119	Selective Demolition

DIVISION 03 - CONCRETE

2014-06-15	☒	0	03 0150	Concrete Patching

DIVISION 04 - MASONRY

NO SECTIONS

DIVISION 05 - METALS

2014-06-15	☒	0	05 5000	Metal Fabrications

DIVISION 06 - WOOD, PLASTICS, AND COMPOSITES

2014-06-15	☒	0	06 4023	Interior Architectural Woodwork
2014-06-15	☒	0	06 6100	Simulated Stone Fabrications
2014-06-15	☒	0	06 6410	Fiber Reinforced Laminate (FRL) Panels
2014-06-15	☒	0	06 6413	Translucent Resin Panel Fabrications

DIVISION 07 - THERMAL AND MOISTURE PROTECTION

2014-06-15	☒	0	07 8413	Penetration Firestopping
2014-06-15	☒	0	07 9200	Joint Sealants

DIVISION 08 - OPENINGS

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2014-06-15	☒	0	08 3113	Access Doors and Frames
2014-06-15	☒	0	08 7100	Door Hardware
2014-06-15	☒	0	08 8130	Glazing Accessories

DIVISION 09 - FINISHES

2014-06-15	☒	0	09 2900	Gypsum Board Assemblies
2014-06-15	☒	0	09 3000	Tiling
2014-06-15	☒	0	09 5113	Acoustical Panel Ceilings
2014-06-15	☒	0	09 6500	Resilient Flooring
2014-06-15	☒	0	09 6513	Resilient Base and Accessories
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2014-06-15	☒	0	10 2613	Wall and Corner Guards
2014-06-15	☒	0	10 2813	Toilet Accessories

DIVISION 11 - EQUIPMENT

2014-06-15	☒	0	11 7000	Medical Equipment

DIVISION 12 - FURNISHINGS

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2014-06-15	☒	0	12 3661	Simulated Stone Countertops

DIVISION 13 - SPECIAL CONSTRUCTION

NO SECTIONS

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NO SECTIONS

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DIVISION 22 – PLUMBING

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DIVISION 23 - HEATING, VENTILATING, AND AIR-CONDITIONING (HVAC)

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DIVISION 26 – ELECTRICAL

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2014-06-15	☒	0	26 0533	Raceway and Boxes for Electrical Systems
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LAS VEGAS, NEVADA

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PROFESSIONAL ENGINEER STATE OF NEVADA
KENT T. BELL
6/12/2014
MECHANICAL
NO. 14222
EXP 12/31/2014

PROFESSIONAL ENGINEER STATE OF NEVADA
PHILLIP A. WHISENHUNT
12 JUN 2014
ELECTRICAL
No.015391
EXP 30 JUN 2016

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2014-06-15

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UNIVERSITY MEDICAL CENTER
7TH FLOOR RENOVATION
LAS VEGAS, NEVADA

SECTION 00 3100

AVAILABLE PROJECT INFORMATION

PART 1 - GENERAL

1.1 SUMMARY

A. This Section references other information relevant to the construction of this Project that is available project information.

B. At the request of the Owner, the information identified below represents services that have been provided by others, not as an Architect's Consultant, regarding conditions that affect this Project that are beyond the responsibilities of the Architect and Architect's Consultants. Reference to such information herein is solely for the convenience of the Owner. Architect makes no representation, express or implied, as to the accuracy or validity of the information.

C. Bidders are expected to examine the site and the information available from the Owner to determine for themselves the conditions to be encountered.

D. If conditions other than those indicated in the information available from the Owner are encountered before or during construction, notify the Owner before work continues.

1.2 INFECTION CONTROL RISK ASSESSMENT REPORT

A. The Owner's Risk Assessment Consultant has assessed the environmental impact of the work on the existing, adjacent healthcare functions, and has prepared an Infection Control Risk Assessment (ICRA) report that includes specific requirements of the Contractor.

B. Copies will be provided by the Owner.

C. The IRCA establishes strategic infection control provisions and requirements for the purpose of controlling the dissemination of airborne micro-organism contaminants encountered or generated during the construction process through the use of containment protocols and environmental monitoring.

1.3 TAX EXEMPTION STATUS INFORMATION

A. This Project qualifies for exemption from taxes. The Owner will provide additional information.

1.4 CONTRACTOR SAFETY TRAINING

A. The selected General Contractor will be required to attend a mandatory Owner safety training session. The facilities rules and construction operating procedures will be explained.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

UNIVERSITY MEDICAL CENTER
7TH FLOOR RENOVATION
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SECTION 00 7200

GENERAL CONDITIONS

PART 1 - GENERAL

1.1 GENERAL

A. The General Conditions of this Contract are that which is referenced in the Owner-Contractor Agreement and hereinafter is referred to as the "General Conditions."

B. The General Conditions shall apply to each and every Section of the Work as though written in full therein and are made a part of the Contract Documents by reference.

PART 2 - (NOT USED)

PART 3 - (NOT USED)

END OF SECTION

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UNIVERSITY MEDICAL CENTER
7TH FLOOR RENOVATION
LAS VEGAS, NEVADA

SECTION 00 7300

SUPPLEMENTARY CONDITIONS

PART 1 - GENERAL

1.1 GENERAL

A. The Supplementary Conditions modify, change, delete from or add to the General Conditions and shall apply to each and every Section of the Work as though written in full therein.

B. The following paragraphs and subparagraphs take precedence over the General Conditions. Where any part of the General Conditions is modified or deleted by the Supplementary Conditions, the unaltered provisions remain in effect.

C. Correlation and Intent of the Contract Documents:

1. Sections of Division 01 - General Requirements govern the execution of all sections of the specifications.
2. Summary paragraphs placed at the beginning of the Sections present a brief indication of the principal Work included in that Section, but do not limit Work to subject mentioned nor purport to itemize Work that may be included.
3. The Relation of Specifications and Drawings shall be equal authority and priority. Should they disagree in themselves, or with each other, bids shall be based on the most expensive combination of quality and quantity of work indicated. The appropriate Work, in the event of the above mentioned disagreements, shall be determined by the Architect.
4. Should the Drawings disagree themselves, figures shall govern over scaled measurements, large scaled Drawings shall govern over small scale Drawings, the greater quantity of work or materials shall be furnished and performed; the descriptive writings shall govern over legends indicating material or conditions and the Agreement takes precedence over all other Contract Documents.
5. Failure to report a conflict in the Contract Documents shall be deemed evidence that the Contractor has elected to proceed in the more expensive manner.
6. Instructions, directions and requirements as specified shall be considered to be followed by the phrase "unless otherwise specified or indicated".

1.2 INTERPRETATION

A. In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

1.3 INFORMATIONAL SUBMITTALS

A. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents.

1.4 PROFESSIONAL CERTIFICATION

A. When professional certification of performance criteria of materials, systems or equipment is required by the Contract Documents, the Architect shall be entitled to rely upon the accuracy and completeness of such calculations and certifications.

PART 2 - (NOT USED)

PART 3 - (NOT USED)

END OF SECTION

SECTION 01 1000

SUMMARY

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Phased construction.
2. Owner-furnished, Owner-Installed (OFOI) products.
3. Owner-furnished, Contractor-installed (OFCI) products.
4. Worker conduct and appearance - work rules.
5. Healthcare facility renovation work.
6. Access to site.
7. Specification and drawing conventions.

1.2 PHASED CONSTRUCTION

A. The Work shall be conducted in multiple phases as indicated on the drawings, with each phase substantially complete substantially complete and ready for occupancy before commencement of subsequent phases.

B. Before commencing Work of each phase, submit an updated copy of Contractor's construction schedule showing the sequence, commencement and completion dates, and move-out and -in dates of Owner's personnel for all phases of the Work.

1.3 OWNER-FURNISHED, OWNER-INSTALLED (OFOI) PRODUCT

A. The specific product is not in this contract, and actual installation of the product will be made by the Owner.

B. Products will be indicated as follows:

1. Product prefixed with "Space for"
2. N.I.C.
3. Owner Furnished - Owner Installed
4. Product noted as "Future"

C. Roughing-in for Owner Furnished, Owner Installed Product is provided by applicable Sections governing the type of work. Obtain rough-in requirements from Owner.

1.4 OWNER-FURNISHED, CONTRACTOR-INSTALLED (OFCI) PRODUCT

A. Install products indicated as follows:

1. Owner Furnished, Contractor Installed".
2. “Reuse”.
3. “Relocate.”

B. Provide labor, transportation, materials, tools, appliances and utilities necessary for the following:

1. Relocated Products:

   a. Removing installed product from the Owner's existing facility, as required.
   b. Transportation of product from Owner's facility to the job site.

2. Receiving and storage of Owner furnished, Contractor installed product, as required.
3. Providing materials and components for the product as necessary to install in an operating condition, but not including repairing of existing damages to the product.
4. Modification of product only as specified under the particular item.
5. Installation of product in this project, complete and in operating condition, including the adjusting and calibration of the product as necessary for proper operation.
6. Testing of product.
7. Paying of fees, licenses, and taxes in conjunction with the installation of the product.
8. Roughing-in and final utility connections for the Owner furnished, Contractor installed product remains the work of Sections governing the specific utility.

1.5 WORKER CONDUCT AND APPEARANCE - WORK RULES

A. General: The conduct and appearance of each worker at the jobsite is of paramount importance. The Owner reserves the right to require any worker to be reassigned to work outside the Owner's property.

1. Privacy: Where applicable, conduct work of the Contract with the maximum effort to maintain the privacy of the Owner’s operations, staff, and clientele. Do not permit workers to peer into other areas of the building visible from the work area. Invasion of privacy is a major infraction of the work rules.
2. Conduct and Demeanor: Construction workers shall treat other construction workers, Owner's staff, clientele, and visitors (as applicable) professionally with respect and courtesy.
3. Physical Appearance: Require each worker to dress appropriately in a clean, neat, and professional manner.
4. Radios and Television: The use of entertainment devices including personal devices with headphones or earphones is prohibited at all times. Control the volume of communication radios and loudspeakers to avoid creating a nuisance.
5. Tobacco Products: The use of tobacco products is prohibited.
6. Language: The use of foul language is prohibited.
7. Loud Conduct: Screaming, yelling, and unnecessary loud conduct is prohibited.
8. Physical Actions: Running, horseplay, fighting, and other unprofessional conduct is prohibited. Fighting is a major infraction of the work rules.
9. Stealing: Stealing of any material, objects, furnishings, equipment, fixtures, supplies, clothing, or other items is prohibited and a major infraction.
10. Sexual Harassment: All forms of physical and verbal sexual harassment including, without limitation: touching; whistling; sexually explicit stories, jokes, drawings, photos, and representations; exhibitionism; and all other sexually oriented offensive behavior is prohibited.
11. Roaming: Construction personnel shall not be allowed to roam, or wander about, the existing facilities.
12. Parking: Construction personnel shall only park in designated areas reserved for construction parking.
13. Penalties: First infraction of the work rules shall result in a verbal warning from the Owner. Second infractions shall result in being requested to leave the Owner’s property. Owner’s decision in such matters shall be final with no exceptions.

B. Warnings and Dismissal: For minor infraction of the rules, the Owner may issue a warning. Only one warning will be allowed per worker, and a second infraction shall result in immediate dismissal of the worker from the Owner's property. For major infractions such as invasion of privacy, the worker shall be dismissed immediately without warning and possibly subject to criminal prosecution.

C. Notification of Workers: Clearly notify and educate each worker about these Work Rules and the requirements for worker conduct and appearance.

1.6 HEALTHCARE FACILITY RENOVATION WORK

A. Interim Life Safety Measures (ILSM): The following Interim Life Safety Measures (ILSM) as established by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) shall be implemented, documented and enforced in and adjacent to all construction areas:

1. Ensure that exits provide free and unobstructed egress. Personnel shall receive training, and the Hospital shall be notified if alternative exits must be designated. Buildings/areas under construction must maintain escape facilities for construction workers at all times. Means of egress in construction areas must be inspected daily.
2. Ensure free and unobstructed access to emergency department/service and for emergency forces.
3. Ensure that fire alarm, detection, and suppression systems are not impaired. A temporary, but equivalent, system shall be provided, and the Hospital shall be notified, when any fire system is impaired. Temporary systems must be inspected and tested monthly.
4. Ensure temporary construction partitions are smoke tight and built of non-combustible or limited combustible materials that will not contribute to the development or spread of fire.
5. Provide additional fire-fighting equipment and use training for personnel.
6. Prohibit smoking in or adjacent to all construction areas.
7. Develop and enforce storage, housekeeping, and debris-removal practices that reduce the flammable and combustible fire load of the building to lowest level necessary for daily operations.
8. Conduct a minimum of two fire drills per shift per quarter.
9. Increase hazard surveillance of buildings, grounds, and equipment with special attention to excavations, construction areas, construction storage, and field offices.
10. Train personnel, and notify the Hospital, when structural or compartmentation features of fire safety are compromised.
11. Conduct organization wide safety education programs to assure awareness of deficiencies, construction hazards, and these ILSM.

1.7 ACCESS TO SITE

A. General: Contractor shall have limited use of Project site for construction operations as indicated on Drawings by the Contract limits and as indicated by requirements of this Section.

B. Use of Site: Limit use of Project site to work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.

1. Confine constructions operations to work in areas indicated on drawings.
2. Allow for Owner occupancy of site and use by the public.
3. Keep driveways and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times.
4. Do not use drives and entrances for parking or storage of materials.
5. Schedule deliveries to minimize use of driveways and entrances.

6. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
7. Coordinate use of premises under direction of Owner.
8. Assume full responsibility for the protection and safekeeping of Products under this Contract, stored on the site.
9. Move any stored Products, under Contractor's control, which interfere with operations of the Owner or separate contractor.
10. Obtain and pay for the use of additional storage or work areas needed for operations.

C. Condition of Existing Building: Maintain portions of existing building affected by construction operations in a weathertight condition throughout construction period. Repair damage caused by construction operations.

1.8 COORDINATION WITH OCCUPANTS

A. Partial Owner Occupancy: Owner will occupy the premises during entire construction period, with the exception of areas under construction. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's operations. Maintain existing exits unless otherwise indicated.

1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.
2. Provide not less than 5 days notice to Owner of activities that will affect Owner's operations.

B. Owner Limited Occupancy of Completed Areas of Construction: Owner reserves the right to occupy and to place and install equipment in completed portions of the Work, prior to Substantial Completion of the Work, provided such occupancy does not interfere with completion of the Work. Such placement of equipment and limited occupancy shall not constitute acceptance of the total Work.

1. Architect will prepare a Certificate of Substantial Completion for each specific portion of the Work to be occupied prior to Owner acceptance of the completed Work.
2. Obtain a Certificate of Occupancy from authorities having jurisdiction before limited Owner occupancy.
3. Before limited Owner occupancy, mechanical and electrical systems shall be fully operational, and required tests and inspections shall be successfully completed. On occupancy, Owner will operate and maintain mechanical and electrical systems serving occupied portions of Work.
4. On occupancy, Owner will assume responsibility for maintenance and custodial service for occupied portions of Work.

1.9 WORK RESTRICTIONS

A. Work Restrictions, General: Comply with Owners restrictions on construction operations.

B. Existing Utility Interruptions: Refer to Division 01 Section "Execution" for requirements.

C. On-Site Work Hours: Limit work in the existing building to normal business working hours of 6:30 a.m. to 3:00 p.m., Monday through Friday, unless otherwise indicated.

D. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to Owner occupancy with Owner.

1. Notify Owner not less than two days in advance of proposed disruptive operations.
2. Obtain Owner's written permission before proceeding with disruptive operations.

1.10 SPECIFICATION AND DRAWING CONVENTIONS

A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

1. Abbreviated Language: Language used in Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be interpolated as the sense requires. Singular words will be interpreted as plural and plural words interpreted as singular where applicable as the context of the Contract Documents indicates.
2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by the Contractor. At certain locations in the Text, subjective language is used for clarity to describe responsibilities that must be fulfilled indirectly by the Contractor, or by others when so noted.
3. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
4. Specification requirements are to be performed by Contractor unless specifically stated otherwise.

B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.

C. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:

1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
2. Abbreviations: Materials and products are identified by abbreviations scheduled on Drawings.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

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SECTION 01 2300

ALTERNATES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for alternates.

1.2 DEFINITIONS

A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.

1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.3 PROCEDURES

A. Documentation: Show compliance with requirements for accepted alternates and the following, as applicable:

1. Coordination information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate accepted alternates.
2. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
3. Samples, where applicable or requested.
4. Certificates and qualification data, where applicable or requested.
5. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
6. Research reports evidencing compliance with building code in effect for Project, from ICC-ES.
7. Detailed comparison of Contractor's construction schedule using accepted alternates with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
8. Cost information, including change in the Contract Sum.

B. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.

1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.

C. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated revisions to alternates.

D. Execute accepted alternates under the same conditions as other work of the Contract.

E. Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

A. ALTERNATE NO. 1:

1. Scope of project identified as Alternate no. 1, on drawings, shall include new finishes in all of the patient corridors and in the Nurse/Physician stations as identified on drawings. new finishes scope shall include:
   - Flooring, paint/ wall finish, ceiling tile (repaint grid).
   - Clean, re-lamp and re-ballast light fixtures; Clean and repaint mechanical grilles and diffusers.
   - Wall protection (handrails, crash rails, corner guards) replacement.
   - Replace all existing doors and door hardware located within the corridors. Existing door frames shall remain and be repainted. (Excludes patient room doors which were part of base bid scope).
   - Existing Nurse/Physician stations shall receive new transaction tops and re-facing on corridor side only.

B. ALTERNATE NO. 1A:

1. Ceilings shall be ACT01, in lieu of ACT02.

C. ALTERNATE NO. 2:

1. Scope of project identified as Alternate no. 2, on drawings, shall include new finishes in the main LDR nurse station, waiting area, and elevator lobby. new finishes scope shall include:
   - Flooring, paint/ wall finish, ceiling tile (repaint grid).
   - Clean, re-lamp and re-ballast light fixtures; Clean and repaint mechanical grilles and diffusers.
   - Wall protection (handrails, crash rails, corner guards) replacement.
   - New layout and millwork/ casework at nurse station.

- New layout, millwork and furniture at Nurse station.
- New accent lighting in waiting area and at Nurse station.
- At main Nurse station:
    - Re-facing existing cabinet, waiting area side.
    - New transaction top.
    - New layout within Nurse station –furniture.
    - (Removal of existing perimeter glass and frame by Owner, N.I.C.).

D. ALTERNATE NO. 2A:

1. Ceilings shall be ACT01, in lieu of ACT02.

E. ALTERNATE NO. 3:

1. Remove noted water closets, and replace with new per Plumbing Fixture Schedule on Sheet P5.01.

END OF SECTION

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UNIVERSITY MEDICAL CENTER
7TH FLOOR RENOVATION
LAS VEGAS, NEVADA

SECTION 01 2500

SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for substitutions.

1.2 DEFINITIONS

A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.

1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
2. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required in order to meet other Project requirements but may offer advantage to Contractor or Owner.
3. The Owner shall be copied on all requests for substitution and will make the final decision.

1.3 SUBMITTALS

A. Substitution Requests: Submit electronic copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

1. Substitution Request Form: Use scanned PDF electronic file of form provided at end of this section or annotated PDF electronic file of electronic form received from Architect matching form provided at end of this section.
2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:

a. Statement indicating why specified product or fabrication or installation cannot be provided, if applicable.
b. Coordination information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.
c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
e. Samples, where applicable or requested.
f. Certificates and qualification data, where applicable or requested.

g. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
i. Research reports evidencing compliance with building code in effect for Project, from ICC-ES.
j. Detailed comparison of Contractor's construction schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
k. Cost information, including a proposal of change, if any, in the Contract Sum.
l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.

3. Architect's Action: If necessary, with reasonable promptness, Architect will request additional information or documentation for evaluation. Architect will notify Contractor of acceptance or rejection of proposed substitution with reasonable promptness. Acceptance of proposed substitution does not constitute approval or inclusion in Contract Documents. Pay applications certification, change orders, and certificate of substantial completion will contain such qualification.

1.4 QUALITY ASSURANCE

A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers.

1.5 PROCEDURES

A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitutions.

PART 2 - PRODUCTS

2.1 SUBSTITUTIONS

A. Prior to starting Substitution Process, review proposed recommendations with Architect.

B. Contractor's submittal and Architect's acceptance of Shop Drawings, Product Data or Samples for construction activities not complying with Contract Documents does not constitute acceptable or valid request for substitution, nor does it constitute approval.

C. Contractor Representations: By making substitution request, Contractor:

1. Recognizes burden of proof of equality for requested substitution rests with Contractor.
2. Represents and warrants that Contractor has personally investigated requested substitution and determined that it is equal to or superior in all respects to specified Work.

3. Represents and warrants that Contractor will provide same warranties for requested substitution that Contractor would for specified Work.
4. Certifies that cost data presented is complete and includes all related costs under this Contract except for Architect's redesign cost, and waives all claims for additional costs related to requested substitution which may subsequently become apparent.
5. Will coordinate installation of accepted substitution, making such other changes as may be required to make Work complete in all respects.
6. Represents and warrants that accepted substitution will perform same as specified Work would have performed. Should accepted substitution fail to perform as required, Contractor shall replace accepted substitution with specified Work at no additional cost to Owner.

D. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change.

1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:

a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
b. Requested substitution provides sustainable design characteristics that specified product provided.
c. Substitution request is fully documented and properly submitted.
d. Requested substitution will not adversely affect Contractor's construction schedule.
e. Requested substitution has received necessary approvals of authorities having jurisdiction.
f. Requested substitution is compatible with other portions of the Work.
g. Requested substitution has been coordinated with other portions of the Work.
h. Requested substitution provides specified warranty.

E. Substitutions for Convenience:

1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:

a. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
b. Requested substitution does not require extensive revisions to the Contract Documents.
c. Requested substitution is consistent with the Contract Documents and will produce indicated results.
d. Requested substitution provides sustainable design characteristics that specified product provided.
e. Substitution request is fully documented and properly submitted.
f. Requested substitution will not adversely affect Contractor's construction schedule.
g. Requested substitution has received necessary approvals of authorities having jurisdiction.
h. Requested substitution is compatible with other portions of the Work.

i. Requested substitution has been coordinated with other portions of the Work.
j. Requested substitution provides specified warranty.

PART 3 - EXECUTION (Not Used)

END OF SECTION

HKS

Substitution Request Form 01 2500

To HKS Contract Manager _____

HKS Project No. _____ Project Name _____

Specified Item

Section	Page	Paragraph	Description

The undersigned General Contractor requests consideration of the following:

Proposed Substitution _____

(Include all product data as indicated in Specification Section 01 2500 and any supplemental information as requested by the Architect.)

The undersigned General Contractor warrants to the Architect and Owner that the following paragraphs, unless modified on attachments, are correct.

1. The Proposed Substitution does not affect dimensions shown on Drawings.
2. The cost reduction/increase indicated in item 5 below includes costs for changes to the building design, including engineering, design, detailing and construction costs caused by the requested Substitution. Any additional costs resulting from this substitution will be reimbursed from the cost savings in item 5 or, in it's absence, funded as a project cost.
3. The Proposed Substitution will have no adverse affect on other trades, the construction schedule, or specified warranty requirements.
4. Maintenance and service parts will be locally available for the Proposed Substitution.

   The General Contractor further warrants to the Architect and Owner that the function and quality of the Proposed Substitution are equivalent or superior to the Specified Item. The General Contractor further warrants that the intent of specification section 01 2500, paragraph 2.1.C has been met.

5. Total Cost Savings/Increase to the Owner: $_____
6. Compensation to the Architect / Consultant for related Additional Service fee: $_____

Manufacturer's Certification of Equal Quality

I _____ represent the manufacturer of the Proposed Substitution item and hereby certify and warrant to the Architect and Owner that the function and quality of the Proposed Substitution are equivalent or superior to the Specified Item.

Manufacturer's Representative	Date	Company

Acceptances

1.

General Contractor Acceptance	Date	Company

2.

Owner Acceptance	Date	Company

3.

Architect Acceptance	Date	Company

4.

Consultant Acceptance	Date	Company

Recommend Acceptance: ☐***Yes*** ☐***No***

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SECTION 01 2600

CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for handling and processing Contract modifications.

1.2 MINOR CHANGES IN THE WORK

A. Architect will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on Architect's Form HKS-710 "Architect's Supplemental Instructions"; copy attached at the end of this Section.

1.3 PROPOSAL REQUESTS

A. Owner-Initiated Proposed Change: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time using Architect's Form HKS-709 "Proposed Change"; copy attached at the end of this Section. If necessary, the description will include supplemental or revised Drawings and Specifications.

1. Proposed Changes issued by Architect are not instructions either to stop work in progress or to execute the proposed change.
2. Within time specified in Proposed Change or with reasonable promptness, when not otherwise specified, after receipt of Proposed Change, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.

a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
b. Indicate applicable delivery charges, equipment rental, and amounts of trade discounts.
c. Include costs of labor and supervision directly attributable to the change.
d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
e. Include updated Submittal Schedule showing effect of the change.

B. Contractor-Initiated Proposed Change: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Architect using Contractor's Standard Form.

1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.

2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
3. Indicate applicable delivery charges, equipment rental, and amounts of trade discounts.
4. Include costs of labor and supervision directly attributable to the change.
5. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
6. Include updated Submittal Schedule showing effect of the change.
7. Comply with requirements in Division 01 Section "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.

1.4 ADMINISTRATIVE CHANGE ORDERS

A. Allowance Adjustment: If applicable, see Division 01 Section "Allowances" for administrative procedures for preparation of Proposed Change for adjusting the Contract Sum to reflect actual costs of allowances.

1.5 CHANGE ORDER PROCEDURES

A. On Owner's approval of a Proposed Change, Architect will issue a Change Order for signatures of Owner and Contractor on Architects Form HKS-701 "Change Order"; copy attached at the end of this Section.

1.6 CONSTRUCTION CHANGE DIRECTIVE

A. Construction Change Directive: Architect may issue a Construction Change Directive on Architects Form HKS-714 "Construction Change Directive"; copy attached at the end of this Section. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.

1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.

B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.

1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

HKS

Change Order

Project
(Name, Address)

Change Order No.
Initiation Date
Architect's Project No.
Contract For
Contract Date

To
(Contractor)

The Contract is changed as follows:

This Change Order is not in effect and will not be included in the Contract Documents until signed by the Owner, Architect and Contractor. Changes included herein are subject to all conditions affecting them under the substitution specification section.

SUMMARY

The original (Contract Sum)(Guaranteed Maximum Cost) was .....$
Net change by previously authorized Change Orders .....$
The (Contract Sum)(Guaranteed Maximum Cost) prior to this Change Order was .....$
The (Contract Sum)(Guaranteed Maximum Cost) will be (increased)(decreased)
(unchanged) by this Change Order .....$
The new (Contract Sum)(Guaranteed Maximum Cost) including this Change Order will be .....$
The Contract Time will be (increased)(decreased)(unchanged) by ( )Days
The Date of Substantial Completion as of the date of this Change Order therefore is

Changes included in the summary above (do)(do not) include modifications which have been authorized by Construction Change Directive(s).

Authorized:

Architect	Contractor	Owner
Address	Address	Address
By	By	By
Date	Date	Date

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Proposed Change

Proposed Change No. Issue Date

Project Project No.

Owner

To

This is not a change order. Do not proceed with this work until authorized by Owner in writing below. Submit an itemized breakdown of labor and materials, and perform all work described herein in accordance with applicable Contract Documents.

Contractor pricing is due _____ days after the issue date listed above.

Description

Submitted By _____

Contractor's Proposal

By _____ Date _____

Change in Contract Time _____

Cost _____

Recommended

By _____ Date _____

Owner's Authorization to Proceed

By _____ Date _____

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HKS

Architect's Supplemental Instructions

Project Name
Project No.

ASI No.
Date Issued
Contract For

To
(Contractor)

The work is to be executed in accordance with the supplemental instructions contained herein without change in Contract Time or Contract Sum. Before proceeding with these instructions return a copy to the architect indicating your acceptance of these instructions for minor change(s) to the work as consistent with the Contract Documents.

Description

ISSUED

Architect

Date

ACCEPTED

Contractor

Date

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HKS

Construction Change Directive

Project
(name, address)

Directive No.
Initiation Date
Architect's Project No.
Contract For
Contract Date

To
(Contractor)

You are directed to make the following change(s) in this Contract. Please respond with your pricing basis, amount and modification to the contract time within _____calendar days from the initiation date listed above.

PROPOSED MODIFICATIONS

The proposed basis of modification to the Contract Sum or Guaranteed Maximum Price is:

- ☐ Guaranteed Maximum not to exceed $ _____
- ☐ Lump Sum (increase)(decrease) of $ _____
- ☐ Unit Price of $ _____
- ☐ As provided in sub-paragraph 7.3.7 of AIA Document A201, 2007 edition.
- ☐ As follows: _____

The Contract time is proposed to (be modified)(remain unchanged). The proposed modification, if any, is (an increase of _____days) (a decrease of ___days).

This document shall become effective immediately upon execution by the Owner and Architect. The Contractor shall proceed with the changes described herein immediately upon receipt.

Execution by the Contractor is an indication of agreement with the modification in the Contract Sum and Contract Time indicated herein.

Architect	Owner	Contractor
Address	Address	Address
By	By	By
Date	Date	Date

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UNIVERSITY MEDICAL CENTER
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SECTION 01 2900

PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements necessary to prepare and process Applications for Payment.

1.2 SCHEDULE OF VALUES

A. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule.

1. Coordinate line items in the schedule of values with other required administrative forms and schedules, including the following:

a. Application for Payment forms with continuation sheets.
b. Submittal schedule.
c. Accepted Alternates.

2. Submit the schedule of values to Architect at earliest possible date, but no later than seven days before the date scheduled for submittal of initial Applications for Payment.
3. Subschedules for Phased Work: Where the Work is separated into phases requiring separately phased payments; provide subschedules showing values coordinated with each phase of payment.
4. Subschedules for Separate Elements of Work: Where the Contractor's construction schedule defines separate elements of the Work; provide subschedules showing values coordinated with each element.
5. Subschedules for Separate Design Contracts: Where the Owner has retained design professionals under separate contracts who will each provide certification of payment requests, provide subschedules showing values coordinated with the scope of each design services contract as described in Division 01 Section "Summary."

B. Format and Content: Use Project Manual table of contents as a guide to establish line items for the schedule of values. Provide at least one line item for each Specification Section.

1. Identification: Include the following Project identification on the schedule of values:

a. Project name and location.
b. Name of Architect.
c. Architect's project number.
d. Contractor's name and address.
e. Date of submittal.

2. Arrange the schedule of values in tabular form, in format accepted by Architect, with separate columns to indicate the following for each item listed:

a. Related Specification Section or Division.

b. Description of the Work.
c. Name of subcontractor.
d. Name of manufacturer or fabricator.
e. Name of supplier.
f. Change Orders.
g. Dollar value of the following, as a percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent.

1) Labor.
2) Materials.
3) Equipment.

3. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with Project Manual table of contents. Provide multiple line items for principal subcontract amounts, where appropriate.
4. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
5. Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.

a. Differentiate between items stored on-site and items stored off-site. If required, include evidence of insurance or bonded warehousing.

6. Provide separate line items in the schedule of values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
7. Allowances (If Applicable): Provide a separate line item in the schedule of values for each allowance. Show line-item value of unit-cost allowances (if applicable), as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
8. Alternates (If Applicable): Provide a separate line item in the schedule of values for each accepted alternate.
9. Change Orders: Provide a separate line item in the schedule of values for each change order.
10. Separate Owner-Consultant Contracts: Provide a separate line item in the schedule of values for each separate Owner-Consultant related Work item.
11. Purchase Contracts: When applicable, provide a separate line item in the schedule of values for each purchase contract. Show line-item value of purchase contract. Indicate owner payments or deposits, if any, and balance to be paid by Contractor.
12. Each item in the schedule of values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.

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

13. Schedule Updating: Update and resubmit the schedule of values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.3 ARCHITECTS COST DATA

A. In addition to the Schedule of Values, submit itemized cost data reporting on Architect's Form HKS-757 "Project Cost Summary"; copy attached at the end of this Section. Initial submission shall be included with contractors first Application for Payment. Final updated submission shall be included with contractors final Application for Payment.

1.4 APPLICATIONS FOR PAYMENT

A. Each Application for Payment following the initial Application for Payment shall be consistent with previous applications and payments as certified by Architect and paid for by Owner.

1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.

B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction work covered by each Application for Payment is the period indicated in the Agreement.

1. If the Agreement does not state payment dates, establish dates at preconstruction conference.
2. Submit draft, or pencil, copy of Application for Payment seven days prior to due date for review by Architect.

C. Application for Payment Forms: Unless directed otherwise by Owner, use AIA Document G702 and AIA Document G703 as form for Applications for Payment.

D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.

1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
2. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.

E. Stored Materials: If accepted by Owner, include in Application for Payment amounts applied for materials or equipment purchased or fabricated and stored, but not yet installed. Differentiate between items stored on-site and items stored off-site.

1. Provide certificate of insurance, evidence of transfer of title to Owner, and consent of surety to payment, for stored materials.
2. Provide supporting documentation that verifies amount requested, such as paid invoices. Match amount requested with amounts indicated on documentation; do not include overhead and profit on stored materials.
3. Provide summary documentation for stored materials indicating the following:

a. Value of materials previously stored and remaining stored as of date of previous Applications for Payment.
b. Value of previously stored materials put in place after date of previous Application for Payment and on or before date of current Application for Payment.
c. Value of materials stored since date of previous Application for Payment and remaining stored as of date of current Application for Payment.

F. Transmittal: Submit 3 signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt within 24 hours. One copy shall include waivers of lien and similar attachments if required.

1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.

G. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's liens from General Contractor, subcontractors, sub-subcontractors, and suppliers for construction period covered by the previous application.

1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
2. When an application shows completion of an item, submit conditional final or full waivers.
3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
4. Waiver Delays: Submit each Application for Payment with Contractor's waiver of mechanic's lien for construction period covered by the application.

   a. Submit final Application for Payment with or preceded by conditional final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.

5. Waiver Forms: Submit executed waivers of lien on forms, acceptable to Owner.

H. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:

1. List of subcontractors.
2. Schedule of values.
3. Contractor's construction schedule (preliminary if not final).
4. Products list (preliminary if not final).
5. Schedule of unit prices.
6. Submittal schedule (preliminary if not final).
7. List of Contractor's staff assignments.
8. List of Contractor's principal consultants.
9. Copies of building permits.
10. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
11. Initial progress report.
12. Report of preconstruction conference.
13. Certificates of insurance and insurance policies.
14. Performance and payment bonds.

I. Application for Payment at Substantial Completion: After Architect issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.

1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
2. When applicable, this application shall reflect Certificate(s) of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.

J. Final Payment Application: Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:

1. Evidence of completion of Project closeout requirements.
2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
3. Updated final statement, accounting for final changes to the Contract Sum.
4. AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims."
5. AIA Document G706A, "Contractor's Affidavit of Release of Liens."
6. AIA Document G707, "Consent of Surety to Final Payment."
7. Evidence that claims have been settled.
8. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.
9. If applicable, final liquidated damages settlement statement.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

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Project Cost Summary

Project Name _____ Project No. _____ Latest Update _____

Start Construction Date _____ Substantial Completion Date _____

Submitted By _____

Building Type: (Select One Only)

☐ Assembly/Entertainment ☐ Aviation ☐ Commercial ☐ Education ☐ Government/Justice
☐ Healthcare ☐ Hospitality ☐ Religion ☐ Residential ☐ Sports

Structure Type: (Select One Only) ☐ Concrete ☐ Steel

SITEWORK CATEGORY	SF FOR EACH AREA	COSTS			
		BLDG. NEW CONST	GARAGE	SITEWORK	BLDG. RENOVATION
1. Sitework/Excavation					
2. Paving/Walks/Curbs					
3. Hardscape					
TOTAL SITEWORK		$	$	$	$

BUILDING/GARAGE CATEGORY	SF FOR EACH AREA	COSTS			
		BLDG. NEW CONST.	GARAGE	SITEWORK	BLDG. RENOVATION
4. Masonry					
5. Stucco/Plaster					
6. Waterproofing					
7. Insulation/Roofing					
8. Glass Curtain Wall					
9. Stone Exterior					
10. Precast Concrete					
11. Lobby Finish					
12. Pavers					
13. Toilet Partitions					
14. Toilet Accessories					
15. Elevators & Escalators					
16. Specialties					
17. Resilient/Carpet					
TOTAL EACH AREA		$	$	$	$

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BUILDING/GARAGE CATEGORY	REMARKS	COSTS			
		BLDG. NEW CONST. BLDG. NEW CONST. AREA _____SF	GARAGE GARAGE AREA _____SF	SITEWORK SITEWORK AREA _____ SF	BLDG. RENOVATION BLDG. RENOV. AREA _____SF
18. Overhead/General Conditions					
19. General Contractor Fees					
20. Demolition					
21. Utilities					
22. Foundations					
23. Structural Frame					
24. Fireproofing					
25. Misc. Metals					
26. Carpentry/Millwork					
27. Doors and Frames					
28. Finish Hardware					
29. Gyp. Wallboard					
30. Painting					
31. Ceramic Tile					
32. Acoustical Ceiling					
33. Plumbing					
34. Fire Sprinklers					
35. Electrical					
36. Energy Management					
37. HVAC/Equipment					
38. Security System					
39. Kitchen Equipment					
40.					
41.					
42.					
43.					
44.					
45. Change Order Total					
TOTAL EACH AREA		**$**	**$**	**$**	**$**

TOTAL PROJECT COST $ _____

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UNIVERSITY MEDICAL CENTER
7TH FLOOR RENOVATION
LAS VEGAS, NEVADA

SECTION 01 3100

PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:

1. General coordination procedures.
2. Coordination drawings.
3. Requests for Information (RFIs).
4. Project Web site.
5. Project meetings.

1.2 DEFINITIONS

A. Project communications documents shall be defined as the following:

1. Letters.
2. Memoranda.
3. E-Mail Communications/Internet Communications/Project Management Software Communications.
4. RFI (Request for Information - Contractor).
5. RFI-A (Request for Information - Architect).

1.3 FORMAT

A. Letters and Memoranda: Submit in formats acceptable to the Architect.

B. E–Mail Communications/Internet Communications/Project Management Software Communications: Submit in forms and formats acceptable to and as approved by the Architect.

C. RFI (Request for Information - Contractor): Submit on forms furnished by the Architect, or on other forms as approved by the Architect. Unless otherwise approved use Architect's Form HKS-750, "Request for Information"; copy attached at the end of this Section.

D. RFI-A (Request for Information - Architect), will be submitted by Architect to Contractor on Architects standard form.

1.4 PROJECT COMMUNICATIONS DOCUMENTS

A. Letters and Memoranda documents shall be submitted in a timely manner so as to facilitate project delivery and coordination. Routing of communications shall be as established in the Contract, the Contract Documents and the Pre-Construction Conference. Communications documents shall be transmitted or forwarded in a manner consistent with the schedule and progress of the work.

B. E–Mail Communications, Internet Communications, and Project Management Software programs must be compatible with the Architect's and Owner's computer systems and equipment. The responsibility for all costs for management of these systems, including, but not limited to, licensing, on site training or other training necessary for the proper operation of such systems, shall be by the Contractor. The Contractor shall keep written records and hard file copies of all electronic communications. Failure of the Contractor to keep such records shall waive the Contractor's right to rely on such communications and such communications shall be deemed to have not taken place.

C. RFI (Request for Information - Contractor) shall be defined and limited to a request from the Contractor seeking interpretation or clarification of the requirements of the Contract Documents. Such requests shall comply with the following requirements:

1. RFI requests shall be submitted in a timely manner, well in advance of related work, and allow sufficient time for the resolution of issues relating to the request for interpretation or clarification. Contractor shall schedule the submission of RFI's so as to moderate and manage the flow of RFI requests. RFI's shall be submitted in a manner consistent with the schedule and progress of the work, and shall not be submitted in a sporadic and/or excessive manner.
2. RFI requests shall be numbered in a sequential manner and contain a detailed description of the areas of work requiring interpretation or clarification. Include drawing and specification references, sketches, technical data, brochures, or other supporting data as deemed necessary by the Architect, for the Architect to provide the interpretations and clarifications requested.

    a. The Contractor shall include a "Proposed Solution" to the issue requiring interpretation or clarification.

3. RFI's submitted to the Contractor by Sub-Contractors, vendors, suppliers, or other parties to the work shall be reviewed by the Contractor prior to submission to the Architect. If the Architect deems that such RFI requests have not been adequately reviewed by the Contractor, such requests will be returned to the Contractor for further action. Sub-Contractor's RFI shall contain a "Proposed Solution".
4. RFI requests shall not contain submittals, substitutions requests, routine communications, correspondence, memos, claims, or any information required by other areas of the Contract Documents. RFI requests containing such information will be returned to the Contractor without action by the Architect.
5. RFI requests are limited to a request for interpretation or clarification of the requirements of the Contract Documents. Interpretations provided by the Architect shall not change the requirements of the Contract or the Contract Documents. If the Contractor determines that the Architect's response to an RFI gives cause for a change in the Contract or the Contract Documents, the Contractor shall promptly, within 5 working days, give written notice to the Architect of request for adjustments. Requests for adjustments to the Contract shall be submitted in a manner consistent with the terms and conditions of the Contract Documents.
6. If the Architect, after review, determines that any RFI has been submitted in an incomplete manner, is unnecessary, or does not otherwise comply with the requirements of this Section, the RFI will be returned without action to the Contractor. The Contractor shall delete the original submittal date from the RFI log and enter a new submittal date at the time of re-submittal.

7. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log weekly. Use software log that is part of Project Web site. Software log with not less than the following:

    a. Project name.
    b. Name and address of Contractor.
    c. Name and address of Architect.
    d. RFI number including RFIs that were returned without action or withdrawn.
    e. RFI description.
    f. Date the RFI was submitted.
    g. Date Architect's response was received.

8. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within seven days if Contractor disagrees with response.

    a. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.

D. RFI-A (Request for Information - Architect) shall be defined as a request by the Architect for information relating to the obligations of the Contractor under the Contract.

1. After receipt of an RFI-A the Contractor shall provide a written response to the Architect within 5 working days. Responses shall be thorough, complete and shall contain all information requested by the Architect.
2. An RFI-A shall be limited to a request by the Architect for information related to the project. The RFI-A shall not be construed as authorizing or directing a change in the Contract or the Contract Documents.

1.5 INFORMATIONAL SUBMITTALS

A. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:

1. Name, address, and telephone number of entity performing subcontract or supplying products.
2. Number and title of related Specification Section(s) covered by subcontract.
3. Drawing number and detail references, as appropriate, covered by subcontract.

B. Key Personnel Names: Within 15 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home, office, and cellular telephone numbers and e-mail addresses. Provide names, addresses, and telephone numbers of individuals assigned as alternates in the absence of individuals assigned to Project.

1. Post copies of list in project meeting room, in temporary field office, and Project Web site. Keep list current at all times.

1.6 GENERAL COORDINATION PROCEDURES

A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate

construction operations, included in different Sections, that depend on each other for proper installation, connection, and operation.

1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
3. Make adequate provisions to accommodate items scheduled for later installation.

B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.

1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.

C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

1. Preparation of Contractor's construction schedule.
2. Preparation of the schedule of values.
3. Installation and removal of temporary facilities and controls.
4. Delivery and processing of submittals.
5. Progress meetings.
6. Preinstallation conferences.
7. Project closeout activities.
8. Startup and adjustment of systems.

D. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials.

1.7 COORDINATION DRAWINGS

A. Coordination Drawings, General: Prepare coordination drawings according to requirements in individual Sections, and additionally where installation is not completely shown on Shop Drawings, where limited space availability necessitates coordination, or if coordination is required to facilitate integration of products and materials fabricated or installed by more than one entity.

1. Content: Project-specific information, drawn accurately to a scale large enough to indicate and resolve conflicts. Do not base coordination drawings on standard printed data. Include the following information, as applicable:

a. Use applicable Drawings as a basis for preparation of coordination drawings. Prepare sections, elevations, and details as needed to describe relationship of various systems and components.
b. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
c. Indicate space requirements for routine maintenance and for anticipated replacement of components during the life of the installation.
d. Show location and size of access doors required for access to concealed dampers, valves, and other controls.
e. Indicate required installation sequences.

f. Indicate dimensions shown on the Drawings. Specifically note dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternate sketches to Architect indicating proposed resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.

B. Coordination Digital Data Files: Prepare coordination digital data files according to the following requirements:

1. File Preparation Format: Same digital data software program, version, and operating system as original Drawings.
2. File Submittal Format: Submit or post coordination drawing files using Portable Data File (PDF) format.
3. BIM File Incorporation: When applicable, develop coordination drawing files from Building Information Model (BIM) established for Project.

   a. Perform three-dimensional component conflict analysis as part of preparation of coordination drawings. Resolve component conflicts prior to submittal. Indicate where conflict resolution requires modification of design requirements by Architect.

4. Architect will furnish Contractor one set of digital data files of Drawings for use in preparing coordination digital data files.

   a. Architect makes no representations as to the accuracy or completeness of digital data files as they relate to Drawings.
   b. Digital Data Software Program: Drawings are available in Autodesk Revit and/or Autocad; and compatible with Microsoft Windows operating system.
   c. Contractor shall execute a data licensing agreement in the form of AIA Document C106.

1.8 PROJECT WEB SITE

A. Use Architect's Project Web site implementing Architect’s electronic project management software system for purposes of managing project communication and documentation until Final Completion.

B. Contractor, subcontractors, and other parties granted access to Project Web site shall execute a data licensing agreement in the form of AIA Document C106.

1.9 PROJECT MEETINGS

A. General: Schedule and conduct meetings and conferences at Project site unless otherwise indicated.

1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.
2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
3. Minutes: Record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Architect, within 3 days of the meeting.
4. Attendance: Document attendance of all participants.

B. Preconstruction Conference: Architect will schedule and conduct a preconstruction conference before starting construction.

1. Conduct the conference to review responsibilities and personnel assignments.
2. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.

C. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity that requires coordination with other construction.

1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect of scheduled meeting dates.
2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, and coordination with adjacent activities. Prepare agenda appropriate to Work.
3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
4. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.
5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.

D. Project Closeout Conference: Schedule and conduct a project closeout conference, at a time convenient to Owner and Architect, at a time to be decided prior to the scheduled date of Substantial Completion.

1. Conduct the conference to review requirements and responsibilities related to Project closeout.
2. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the meeting. Participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
3. Agenda: Discuss items of significance that could affect or delay Project closeout, including the following:

    a. Preparation of record documents.
    b. Procedures required prior to inspection for Substantial Completion and for final inspection for acceptance.
    c. Submittal of written warranties.
    d. If applicable, requirements for completing sustainable design documentation.
    e. Requirements for preparing operations and maintenance data.
    f. Requirements for delivery of material samples, attic stock, and spare parts.
    g. Requirements for demonstration and training.
    h. Preparation of Contractor's punch list.
    i. Procedures for processing Applications for Payment at Substantial Completion and for final payment.
    j. Submittal procedures.
    k. If applicable, coordination of separate contracts.
    l. If applicable, Owner's partial occupancy requirements.
    m. Installation of Owner's furniture, fixtures, and equipment.
    n. Responsibility for removing temporary facilities and controls.

4. Minutes: Entity conducting meeting will record and distribute meeting minutes.

E. Progress Meetings: Conduct progress meetings at regular intervals.

1. Coordinate dates of meetings with preparation of payment requests.
2. Attendees: In addition to representatives of Owner and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
3. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.

    a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.

        1) Review schedule for next period.

    b. Review present and future needs of each entity present, including the following or as needed:

        1) Interface requirements.
        2) Sequence of operations.
        3) If applicable, resolution of BIM component conflicts.
        4) Status of submittals.
        5) If applicable, status of sustainable design documentation.
        6) Deliveries.
        7) Off-site fabrication.
        8) Access.
        9) Site utilization.
        10) Temporary facilities and controls.
        11) Work hours.
        12) Hazards and risks.
        13) Progress cleaning.
        14) Quality and work standards.
        15) Status of correction of deficient items.
        16) Field observations.
        17) Status of RFIs.
        18) Status of proposal requests.
        19) Pending changes.
        20) Status of Change Orders.
        21) Documentation of information for payment requests.

4. Minutes: Entity responsible for conducting the meeting will record and distribute the meeting minutes to each party present and to parties requiring information.

    a. Schedule Updating: Revise Contractor's construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

F. Coordination Meetings: Conduct Project coordination meetings on an as-needed basis. Project coordination meetings are in addition to specific meetings held for other purposes, such as progress meetings and preinstallation conferences.

1. Attendees: Each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meetings shall be familiar with Project and authorized to conclude matters relating to the Work.
2. Agenda: Review items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.

a. Review present and future needs of each contractor present, including the following:

1) Interface requirements.
2) Sequence of operations.
3) If applicable, resolution of BIM component conflicts.
4) Status of submittals.
5) Deliveries.
6) Off-site fabrication.
7) Access.
8) Site utilization.
9) Temporary facilities and controls.
10) Work hours.
11) Hazards and risks.
12) Progress cleaning.
13) Quality and work standards.
14) Change Orders.

PART 2 - PRODUCTS

2.1 ELECTRONIC PROJECT MANAGEMENT SOFTWARE

A. This project will be set up to use the project management system Newforma Project Cloud (formerly called AEC-Sync/Attolist).

B. Newforma Project Cloud, a web based construction administration software by Newforma, Inc. The Contractor's key personnel and the project construction team members will be required to utilize this system.

C. Newforma Project Cloud is a collaborative web environment which expedites and organizes the review process and saves substantial resources by minimizing administration, printing, shipping and courier costs. Contractor shall allocate the appropriate amount of money per month for use of Newforma Project Cloud within the contract sum. The fee shall be calculated from the start of construction through the Date of Final Completion. There is no separate user license as the monthly project fee covers unlimited users per project.

D. A web-based tutorial will be provided to the Contractor and project construction team members who are awarded the contract. This training will take place no later than one week from the "Notice to Proceed" date.

E. PDF mark-up software is included with the Newforma Project Cloud software for all users. No other PDF markup software is required.

F. Newforma Project Cloud shall provide the project an independent electronic archive of all data at the end of the project via FTP or DVD(s). Utilize this system for preparation and transmission of electronic files of Project Record Documents as required in Division 01 Section "Closeout Procedures".

G. Refer to use of electronic project management software for project communications and submittal procedures as required in other Division 01 Sections.

H. Visit www.newforma.com for additional information on Newforma Project Cloud.

PART 3 - EXECUTION (Not Used)

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HKS

Request for Information

Project _____ RFI No. _____

Project No. _____ Receiver _____

Sender _____

Date Sent _____ Date Initiated _____

Copies To _____ Date Response Requested _____

Subject _____

Request _____

Senders Proposed Answer/Solution _____

THE PROPOSED ANSWER/SOLUTION [ ] IS, [ ] IS NOT, INCLUDED IN THE CONTRACT.

Receivers Response _____

Response By _____ Company _____ Date _____

Distribution

©HKS750-1998

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SECTION 01 3200

CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work.

1.2 DEFINITIONS

A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.

1. Critical Activity: An activity on the critical path that must start and finish on the planned early start and finish times.
2. Predecessor Activity: An activity that precedes another activity in the network.
3. Successor Activity: An activity that follows another activity in the network.

B. Major Area: A story of construction, a separate building, or a similar significant construction element.

C. Milestone: A key or critical point in time for reference or measurement.

1.3 SUBMITTALS

A. Format for Submittals: Submit required submittals in the following format:

1. PDF electronic file.

B. Startup construction schedule.

C. Contractor's Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period.

D. Construction Schedule Updating Reports: Submit with Applications for Payment.

E. Daily Construction Reports: Submit at weekly intervals.

F. Material Location Reports: Submit at monthly intervals.

G. Site Condition Reports: Submit at time of discovery of differing conditions.

H. Special Reports: Submit at time of unusual event.

1.4 COORDINATION

A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.

B. Coordinate Contractor's construction schedule with the schedule of values, list of subcontracts, submittal schedule, progress reports, payment requests, and other required schedules and reports.

1. Secure time commitments for performing critical elements of the Work from entities involved.
2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

PART 2 - PRODUCTS

2.1 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

A. Time Frame: Extend schedule from date established for the Notice to Proceed to date of final completion.

1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.

B. Activities: Treat each story or separate area as a separate numbered activity for each main element of the Work. Comply with the following:

1. Procurement Activities: Include procurement process activities for the following long lead items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
2. Submittal Review Time: Include review and resubmittal times indicated in Division 01 Section "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's construction schedule with submittal schedule.
3. Startup and Testing Time: Include no fewer than 7 days for startup and testing.
4. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Architect's administrative procedures necessary for certification of Substantial Completion.
5. Punch List and Final Completion: Include not more than 30 days for completion of punch list items and final completion.

C. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule (where applicable), and show how the sequence of the Work is affected.

1. Phasing: Arrange list of activities on schedule by phase.
2. Work by Owner: Include a separate activity for each portion of the Work performed by Owner.
3. Products Ordered in Advance: Include a separate activity for each product.
4. Owner-Furnished Products: Include a separate activity for each product.
5. Work Restrictions: Show the effect of the following items on the schedule:

a. Coordination with existing construction.
b. Limitations of continued occupancies.
c. Uninterruptible services.

d. Partial occupancy before Substantial Completion.
e. Use of premises restrictions.
f. Provisions for future construction.
g. Seasonal variations.
h. Environmental control.

6. Work Stages: Indicate important stages of construction for each major portion of the Work, including, but not limited to, the following:

a. Subcontract awards.
b. Submittals.
c. Purchases.
d. Mockups.
e. Fabrication.
f. Sample testing.
g. Deliveries.
h. Installation.
i. Tests and inspections.
j. Adjusting.
k. Curing.
l. Building flush-out.
m. Startup and placement into final use and operation.

7. Construction Areas: Identify each major area of construction for each major portion of the Work. Indicate where each construction activity within a major area must be sequenced or integrated with other construction activities to provide for the following:

a. Structural completion.
b. Temporary enclosure and space conditioning.
c. Permanent space enclosure.
d. Completion of mechanical installation.
e. Completion of electrical installation.
f. Substantial Completion.

8. Other Constraints include but are not limited to the following:

a. Roads.
b. Parking.
c. Landscape.

D. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, punch list activities, Substantial Completion, and final completion.

E. Recovery Schedule: When periodic update indicates the Work is 14 or more calendar days behind the current approved schedule, submit a separate recovery schedule indicating means by which Contractor intends to regain compliance with the schedule. Indicate changes to working hours, working days, crew sizes, and equipment required to achieve compliance, and date by which recovery will be accomplished.

F. Computer Scheduling Software: Prepare schedules using current version of a program that has been developed specifically to manage construction schedules.

2.2 STARTUP CONSTRUCTION SCHEDULE

A. Bar-Chart Schedule: Submit startup, horizontal, bar-chart-type construction schedule within 14 days of date established for the Notice of Award.

B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line. Outline significant construction activities for first 60 days of construction. Include skeleton diagram for the remainder of the Work and a cash requirement prediction based on indicated activities.

2.3 CONTRACTOR'S CONSTRUCTION SCHEDULE (BAR CHART/GANTT CHART)

A. Bar Chart/Gantt Chart Schedule: Submit a comprehensive, fully developed, horizontal, Gantt-chart-type, Contractor's construction schedule within 30 days of date established for the Notice to Proceed. Base schedule on the startup construction schedule and additional information received since the start of Project.

B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.

1. For construction activities that require three months or longer to complete, indicate an estimated completion percentage in 10 percent increments within time bar.

2.4 REPORTS

A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:

1. List of subcontractors at Project site.
2. List of separate contractors at Project site.
3. Approximate count of personnel at Project site.
4. High and low temperatures and general weather conditions, including presence of rain or snow.
5. Accidents.
6. Meetings and significant decisions.
7. Unusual events (see special reports).
8. Stoppages, delays, shortages, and losses.
9. Meter readings and similar recordings.
10. Emergency procedures.
11. Orders and requests of authorities having jurisdiction.
12. Change Orders received and implemented.
13. Construction Change Directives received and implemented.
14. Services connected and disconnected.
15. Equipment or system tests and startups.
16. Partial completions and occupancies.
17. Substantial Completions authorized.

B. Material Location Reports: At monthly intervals, prepare and submit a comprehensive list of materials delivered to and stored at Project site. List shall be cumulative, showing materials previously reported plus items recently delivered. Include with list a statement of progress on and delivery dates for materials or items of equipment fabricated or stored away from Project site.

C. Site Condition Reports: Immediately on discovery of a difference between site conditions and the Contract Documents, prepare and submit a detailed report. Submit with a Request for

Information. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

2.5 SPECIAL REPORTS

A. General: Submit special reports directly to Owner within one day of an occurrence. Distribute copies of report to parties affected by the occurrence.

B. Reporting Unusual Events: When an event of an unusual and significant nature occurs at Project site, whether or not related directly to the Work, prepare and submit a special report. List chain of events, persons participating, response by Contractor's personnel, evaluation of results or effects, and similar pertinent information. Advise Owner in advance when these events are known or predictable.

PART 3 - EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

A. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one week before each regularly scheduled progress meeting.

1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
3. As the Work progresses, indicate final completion percentage for each activity.

B. Distribution: Distribute copies of approved schedule to Architect-Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.

1. Post copies in Project meeting rooms and temporary field offices.
2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

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UNIVERSITY MEDICAL CENTER
7TH FLOOR RENOVATION
LAS VEGAS, NEVADA

SECTION 01 3300

SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.

1.2 DEFINITIONS

A. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action.

B. Digital Signature: A digital signature or digital signature scheme is a mathematical scheme for demonstrating the authenticity of a digital message or document.

C. Electronic Signature: An electronic signature is any legally recognized electronic means that indicates that a person adopts the contents of an electronic message.

D. Informational Submittals: Written and graphic information and physical samples that do not require Architect's responsive action.

E. Portable Document Format (PDF): An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.

1.3 SUBMITTALS

A. Submittal Schedule: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect and additional time for handling and reviewing submittals required by those corrections.

1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.
2. Initial Submittal: Submit concurrently with startup construction schedule. Include submittals required during the first 60 days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's construction schedule.

a. Submit revised submittal schedule to reflect changes in current status and timing for submittals.

4. Format: Arrange the following information in a tabular format:

    a. Scheduled date for first submittal.
    b. Specification Section number and title.
    c. Submittal category: Action; informational.
    d. Name of subcontractor.
    e. Description of the Work covered.
    f. Scheduled date for Architect's final release or approval.

1.4 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

A. Architect's Digital Data Files: Electronic digital data files of the Contract Drawings will not be provided by Architect for Contractor's use in preparing submittals.

B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.

1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
3. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.

    a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

C. Processing Time: Allow sufficient and reasonable time for submittal review, including time for resubmittals. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.

1. The Architect’s action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect’s professional judgment to permit adequate review.

D. Paper Submittals: Architect reserves the right to require paper submittals.

E. Electronic Submittals: Identify and incorporate information in each electronic submittal file as follows:

1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
2. Name file with submittal number, including revision identifier.

    a. File Naming Convention (separate by dashes - or underscores _):

        1) Specification Number / Revision Number / Submittal Sequence (A, B, C, etc.).pdf

3. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Architect.

4. Transmittal Form for Electronic Submittals: Use software-generated form from electronic project management software or electronic form acceptable to Owner**,** containing the following information:

    a. Project name.
    b. Date.
    c. Name and address of Architect.
    d. Name of Contractor.
    e. Name of firm or entity that prepared submittal.
    f. Names of subcontractor, manufacturer, and supplier.
    g. Category and type of submittal.
    h. Submittal purpose and description.
    i. Specification Section number and title.
    j. Specification paragraph number or drawing designation and generic name for each of multiple items.
    k. Drawing number and detail references, as appropriate.
    l. Location(s) where product is to be installed, as appropriate.
    m. Related physical samples submitted directly.
    n. Indication of full or partial submittal.
    o. Transmittal number, numbered consecutively.
    p. Submittal and transmittal distribution record.
    q. Other necessary identification.
    r. Remarks.

5. Metadata: Include the following information as keywords in the electronic submittal file metadata:

    a. HKS Job Number and Add Service Number (e.g. 14424.000)
    b. Project name.
    c. Number and title of appropriate Specification Section.
    d. Manufacturer name.
    e. Product name.
    f. Submittal revision number.

6. Utilize electronic project management software program to process submittals when feasible with the type and extent of submittals. Refer to Division 01 Section "Project Management and Coordination" for description of electronic project management software.

F. Options: Identify options requiring selection by Architect.

G. Deviations and Additional Information: On page, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same identification information as related submittal.

H. Resubmittals: Make resubmittals in same form as initial submittal.

    1. Note date and content of previous submittal.
    2. Note date and content of revision in file name and clearly indicate extent of revision.
    3. Resubmit submittals until they are marked with notation from Architect's action stamp not requiring additional submittals.

I. Distribution: Furnish electronic copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.

J. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with appropriate notation from Architect's action stamp indicating for construction. Retain a separate copy for Owner to be delivered to Owner with Project Closeout documents.

PART 2 - PRODUCTS

2.1 SUBMITTAL PROCEDURES

A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.

1. Submit electronic submittals as PDF electronic files directly to Architect’s Project Web site specifically established for Project.

a. Architect will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.
b. Provide PDF electronic files from scanned paper originals at 300 dpi, minimum.

2. Certificates and Certifications Submittals: Provide a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.

a. Provide a digital signature with digital certificate on electronically submitted certificates and certifications where indicated.
b. When one or more individual Specification Sections includes requirements for notarized signature on certificates and certifications, provide a notarized statement on original paper copy certificates and certifications where indicated.

B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.

1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as Shop Drawings, not as Product Data.
2. Mark each copy of each submittal to show which products and options are applicable.
3. Include the following information, as applicable:

a. Manufacturer's written recommendations.
b. Manufacturer's installation instructions.
c. Mill reports.
d. Standard product operating and maintenance manuals.
e. Certification that products are appropriate for installation indicated.
f. Manufacturer's catalog cuts.
g. Manufacturer's product specifications.
h. Standard color charts.
i. Statement of compliance with specified referenced standards.
j. Testing by recognized testing agency.

k. Application of testing agency labels and seals.
l. Notation of coordination requirements.
m. Availability and delivery time information.

4. For equipment, include the following in addition to the above, as applicable:

a. Wiring diagrams showing factory-installed wiring.
b. Printed performance curves.
c. Operational range diagrams.
d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.

5. Submit Product Data before or concurrent with Samples.
6. Submit Product Data in the following format:

a. PDF electronic file.

C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.

1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:

a. Identification of products.
b. Dimensions.
c. Fabrication and installation drawings.
d. Roughing-in and setting diagrams.
e. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
f. Shopwork manufacturing instructions.
g. Templates and patterns.
h. Design calculations.
i. Schedules.
j. Compliance with specified standards.
k. Notation of coordination requirements.
l. Notation of dimensions established by field measurement.
m. Relationship and attachment to adjoining construction clearly indicated.
n. Seal and signature of professional engineer.

2. Wiring Diagrams: Differentiate between manufacturer-installed and field-installed wiring.
3. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches (212 by 275 mm), but no larger than 30 by 42 inches (750 by 1050 mm).
4. Submit Shop Drawings in the following format:

a. PDF electronic file.

5. BIM File Incorporation: When applicable, develop and incorporate Shop Drawing files into Building Information Model established for Project.

a. Prepare Shop Drawings in the following format: Same digital data software program, version, and operating system as the original Drawings.
b. Refer to Division 01 Section "Project Management and Coordination" for requirements for coordination drawings.

D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.

1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
2. Identification: Attach label on unexposed side of Samples that includes the following:

    a. Generic description of Sample.
    b. Product name and name of manufacturer.
    c. Sample source.
    d. Number and title of applicable Specification Section.
    e. Specification paragraph number and generic name of each item.

3. For projects where electronic submittals are required, provide corresponding electronic submittal of Sample transmittal, digital image file illustrating Sample characteristics, and identification information for record. This is in addition to physical samples.
4. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.

    a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
    b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.

5. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.

    a. Number of Samples: Submit 4 full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.

6. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.

    a. Number of Samples: Submit 4 sets of Samples. Architect will retain 2 Sample sets; remainder will be returned. Mark up and retain one returned Sample set as a project record sample.

        1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
        2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least 4 sets of paired units that show approximate limits of variations.

E. Coordination Drawing Submittals: Comply with requirements specified in Division 01 Section "Project Management and Coordination."

F. Contractor's Construction Schedule: Comply with requirements specified in Division 01 Section "Construction Progress Documentation."

G. Application for Payment and Schedule of Values: Comply with requirements specified in Division 01 Section "Payment Procedures."

H. Test and Inspection Reports and Schedule of Tests and Inspections Submittals: Comply with requirements specified in Division 01 Section "Quality Requirements."

I. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Division 01 Section "Closeout Procedures."

J. Maintenance Data: Comply with requirements specified in Division 01 Section "Operation and Maintenance Data."

K. Sustainable Construction Submittals: Where applicable, comply with requirements specified in Division 01 sustainable construction requirements Section.

L. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.

M. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on AWS forms. Include names of firms and personnel certified.

N. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.

O. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.

P. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.

Q. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.

R. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.

S. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.

T. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:

1. Name of evaluation organization.
2. Date of evaluation.
3. Time period when report is in effect.
4. Product and manufacturers' names.
5. Description of product.
6. Test procedures and results.
7. Limitations of use.

U. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.

V. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.

W. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.

X. Design Data: Prepare and submit written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.

2.2 DELEGATED-ENGINEERING SERVICES

A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.

1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.

B. Delegated-Engineering Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit digitally signed PDF electronic file and three paper copies of certificate, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.

1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

C. BIM File Incorporation: Where applicable, incorporate delegated-design drawing and data files into Building Information Model established for Project.

1. Prepare delegated-design drawings in the following format: Same digital data software program, version, and operating system as the original Drawings.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.

B. Project Closeout and Maintenance Material Submittals: See requirements in Division 01 Section "Closeout Procedures."

C. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 ARCHITECT'S ACTIONS AND OWNERS APPROVALS

A. Action Submittals: Architect will review each submittal, make marks to indicate corrections or revisions required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action, as follows:

1. Final but Restricted Release: When submittals are marked "Accepted as Noted," the Work covered by the submittal may proceed provided it complies with both the Architect's notations and corrections on the submittal and requirements of the Contract Documents. Final acceptance will depend on that compliance.
2. Returned for Resubmittal: When submittal is marked "Not Accepted" or "Revise Resubmit," do not proceed with the Work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise or prepare a new submittal in accordance with the Architect's notations. Resubmit without delay. Repeat if necessary to obtain a different action mark.

   a. Do not permit submittals marked "Not Accepted or Revise Resubmit" to be used at the Project site, or elsewhere where construction is in progress.

3. Other Action: Where a submittal is primarily for information or record purposes, or for special processing or other Contractor activity, the submittal will be returned, marked "Not Reviewed" or "Not Reviewed; submittal not required by Contract Documents".

B. Architect's acceptance of Shop Drawings, Samples or Product Data which deviates from the Contract Documents does not authorize changes to the Contract Sum. Submit in writing at the time of submission any changes to the Contract Sum affected by such Shop Drawings, Samples or Product Data, otherwise, claim for extras will not be considered.

C. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.

D. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Architect. Review shall not be final until complete submittal has been reviewed by Architect.

E. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.

F. Submittals not required by the Contract Documents may be returned by the Architect without action.

G. Electronic File of Submittal Documents: Provide Architect with an independent electronic archive of project submittal documents using electronic project management software as defined in Division 01 Section "Project Management and Coordination".

END OF SECTION

SECTION 01 4000

QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for quality assurance and quality control.

B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.

1. Specific quality-assurance and -control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
3. Requirements for Contractor to provide quality-assurance and -control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.

1.2 DEFINITIONS

A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.

B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect.

C. Mockups: Full-size physical assemblies that are constructed on-site. Mockups are constructed to verify selections made under Sample submittals; to demonstrate aesthetic effects and, where indicated, qualities of materials and execution; to review coordination, testing, or operation; to show interface between dissimilar materials; and to demonstrate compliance with specified installation tolerances. Mockups are not Samples. Mockups establish the standard by which the Work will be judged.

1. Laboratory Mockups: Full-size physical assemblies constructed at testing facility to verify performance characteristics.
2. Integrated Exterior Mockups: Mockups of the exterior envelope erected separately from the building but on Project site, consisting of multiple products, assemblies, and subassemblies.
3. Room Mockups: Mockups of typical interior spaces complete with wall, floor, and ceiling finishes, doors, windows, millwork, casework, specialties, furnishings and equipment, and lighting.

D. Preconstruction Testing: Tests and inspections performed specifically for Project before products and materials are incorporated into the Work, to verify performance or compliance with specified criteria.

E. Product Testing: Tests and inspections that are performed by an NRTL (Nationally Recognized Testing Laboratories), an NVLAP (National Voluntary Laboratory Accreditation Program), or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.

F. Source Quality-Control Testing: Tests and inspections that are performed at the source, e.g., plant, mill, factory, or shop.

G. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.

H. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.

I. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.

1. Use of trade-specific terminology in referring to a trade or entity does not require that certain construction activities be performed by accredited or unionized individuals, or that requirements specified apply exclusively to specific trade(s).

A. Experienced: When used with an entity or individual, "experienced" means having successfully completed a minimum of five previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction and with the qualification requirements of individual specification section governing their work.

1.3 CONFLICTING REQUIREMENTS

A. Referenced Standards: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer conflicting requirements to Architect for a decision before proceeding.

B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

1.4 CONTRACTOR'S QUALITY-CONTROL PLAN

A. Quality-Control Plan, General: Submit quality-control plan prior to preconstruction conference. Submit in format acceptable to Architect. Identify personnel, procedures, controls, instructions, tests, records, and forms to be used to carry out Contractor's quality-assurance and quality-control responsibilities. Coordinate with Contractor's construction schedule.

B. Quality-Control Personnel Qualifications: Engage qualified full-time personnel trained and experienced in managing and executing quality-assurance and quality-control procedures similar in nature and extent to those required for Project.

1. Project quality-control manager may be the Project superintendent or be an individual with no other Project responsibilities, as accepted by the Architect.

C. Submittal Procedure: Describe procedures for ensuring compliance with requirements through review and management of submittal process. Indicate qualifications of personnel responsible for submittal review.

D. Testing and Inspection: In quality-control plan, include a comprehensive schedule of Work requiring testing or inspection, including the following:

1. Contractor-performed tests and inspections including subcontractor-performed tests and inspections. Include required tests and inspections and Contractor-elected tests and inspections.
2. Special inspections required by authorities having jurisdiction and indicated on the "Statement of Special Inspections."
3. Owner-performed tests and inspections indicated in the Contract Documents, including tests and inspections indicated to be performed by the Commissioning Authority when Commissioning is included in the Project.

E. Continuous Inspection of Workmanship: Describe process for continuous inspection during construction to identify and correct deficiencies in workmanship in addition to testing and inspection specified. Indicate types of corrective actions to be required to bring work into compliance with standards of workmanship established by Contract requirements and approved mockups.

F. Monitoring and Documentation: Maintain testing and inspection reports including log of approved and rejected results, including Owner acceptance of nonconforming work. Include work Architect has indicated as nonconforming or defective. Indicate corrective actions taken to bring nonconforming work into compliance with requirements. Comply with requirements of authorities having jurisdiction.

1.5 REPORTS AND DOCUMENTS

A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:

1. Date of issue.
2. Project title and number.
3. Name, address, and telephone number of testing agency.
4. Dates and locations of samples and tests or inspections.
5. Names of individuals making tests and inspections.
6. Description of the Work and test and inspection method.
7. Identification of product and Specification Section.
8. Complete test or inspection data.
9. Test and inspection results and an interpretation of test results.
10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
12. Name and signature of laboratory inspector.
13. Recommendations on retesting and reinspecting.

B. Manufacturer's Technical Representative's Field Reports: Prepare written information documenting manufacturer's technical representative's tests and inspections specified in other Sections. Include the following:

1. Name, address, and telephone number of technical representative making report.
2. Statement on condition of substrates and their acceptability for installation of product.
3. Statement that products at Project site comply with requirements.
4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
6. Statement whether conditions, products, and installation will affect warranty.
7. Statement whether conditions, products, and installation exceed manufacturer’s statements.
8. Other required items indicated in individual Specification Sections.

C. Factory-Authorized Service Representative's Reports: Prepare written information documenting manufacturer's factory-authorized service representative's tests and inspections specified in other Sections. Include the following:

1. Name, address, and telephone number of factory-authorized service representative making report.
2. Statement that equipment complies with requirements.
3. Results of operational and other tests and a statement of whether observed performance complies with requirements.
4. Statement whether conditions, products, and installation will affect warranty.
5. Other required items indicated in individual Specification Sections.

D. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.6 QUALITY ASSURANCE

A. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.

B. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

C. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

D. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.

E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that is similar in material, design, and extent to those indicated for this Project.

F. Specialists: Certain Specification Sections require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.

1. Requirements of authorities having jurisdiction shall supersede requirements for specialists.

G. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 329; and with additional qualifications specified in individual Sections; and, where required by authorities having jurisdiction, that is acceptable to authorities.

1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.

H. Manufacturer's Technical Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

I. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

J. Preconstruction Testing: Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following:

1. Contractor responsibilities include the following:

a. Provide test specimens representative of proposed products and construction.
b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
c. Provide sizes and configurations of test assemblies, mockups, and laboratory mockups to adequately demonstrate capability of products to comply with performance requirements.
d. Build site-assembled test assemblies and mockups using installers who will perform same tasks for Project.
e. Build laboratory mockups at testing facility using personnel, products, and methods of construction indicated for the completed Work.
f. When testing is complete, remove test specimens, assemblies, mockups, and laboratory mockups; do not reuse products on Project.

2. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect, with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.

K. Mock-ups: Prior to fabrication and installation, build mock-up for each form of construction and finish required to verify selections made under sample Submittals and to demonstrate aesthetic effects and qualities of materials and execution. Build mock-up to comply with the following requirements, using materials indicated for the completed Work:

1. Build mock-up in the location and of the size indicated or, if not indicated, as directed by Architect. Contractor shall provide structural support framework.

   a. Show typical components, attachments to building structure, and requirements of installation.

2. Clean exposed faces of mock-up.
3. Notify Architect seven days in advance of the dates and times when mock-up will be installed.
4. Demonstrate the proposed range of aesthetic effects and workmanship.
5. Protect accepted mock-up from the elements with weather-resistant membrane.
6. Obtain Architect's acceptance of mock-ups before starting fabrication.
7. Maintain mock-ups during construction in an undisturbed condition as a standard for review of the completed Work.
8. Acceptance of mock-ups does not constitute acceptance of deviations from the Contract Documents contained in mock-ups unless such deviations are specifically noted by Contractor, submitted to Architect in writing, and accepted by Architect in writing.
9. Demolish and remove mock-ups when directed by Architect unless accepted to become part of the completed Work.

1.7 QUALITY CONTROL

A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.

1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
2. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor.

B. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities required to verify that the Work complies with requirements, whether specified or not.

1. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
2. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.

   a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.

3. Notify testing agencies at least 48 hours in advance of time when Work that requires testing or inspecting will be performed.
4. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
5. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.

6. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.

C. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Division 01 Section "Submittal Procedures."

D. Manufacturer's Technical Services: Where indicated, engage a manufacturer's technical representative to observe and inspect the Work. Manufacturer's technical representative's services include participation in preinstallation conferences, examination of substrates and conditions, verification of materials, observation of Installer activities, inspection of completed portions of the Work, and submittal of written reports.

E. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.

F. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.

1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
2. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
3. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
4. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
5. Do not perform any duties of Contractor.

G. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:

1. Access to the Work.
2. Incidental labor and facilities necessary to facilitate tests and inspections.
3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
4. Facilities for storage and field curing of test samples.
5. Delivery of samples to testing agencies.
6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
7. Security and protection for samples and for testing and inspecting equipment at Project site.

H. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.

1. Schedule times for tests, inspections, obtaining samples, and similar activities.

I. Schedule of Tests and Inspections: Prepare a schedule of tests, inspections, and similar quality-control services required by the Contract Documents. Coordinate and submit concurrently with Contractor's construction schedule.

1. Distribution: Distribute schedule to Owner, Architect, testing agencies, and each party involved in performance of portions of the Work where tests and inspections are required.

a. Prepare in tabular form and include the following:

1) Specification Section number and title.
2) Entity responsible for performing tests and inspections.
3) Description of test and inspection.
4) Identification of applicable standards.
5) Identification of test and inspection methods.
6) Number of tests and inspections required.
7) Time schedule or time span for tests and inspections.
8) Requirements for obtaining samples.
9) Unique characteristics of each quality-control service.

1.8 SPECIAL TESTS AND INSPECTIONS

A. Special Tests and Inspections: Owner may engage a qualified to conduct special tests and inspections required by authorities having jurisdiction as the responsibility of Owner, and as follows:

1. Notifying Architect and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
2. Submitting a certified written report of each test, inspection, and similar quality-control service to Architect with copy to Contractor and to authorities having jurisdiction.
3. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
4. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
5. Retesting and reinspecting corrected work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 TEST AND INSPECTION LOG

A. Test and Inspection Log: Prepare a record of tests and inspections. Include the following:

1. Date test or inspection was conducted.
2. Description of the Work tested or inspected.
3. Date test or inspection results were transmitted to Architect.
4. Identification of testing agency or special inspector conducting test or inspection.

B. Maintain log at Project site. Post changes and revisions as they occur. Provide access to test and inspection log for Architect's reference during normal working hours.

3.2 REPAIR AND PROTECTION

A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.

1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas in a manner that eliminates evidence of patching. Comply with the Contract Document requirements for cutting and patching in Division 01 Section "Execution."

B. Protect construction exposed by or for quality-control service activities.

C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION

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UNIVERSITY MEDICAL CENTER
7TH FLOOR RENOVATION
LAS VEGAS, NEVADA

SECTION 01 4200

REFERENCES

PART 1 - GENERAL

1.1 DEFINITIONS

A. General: Basic Contract definitions are included in the Conditions of the Contract.

B. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.

C. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "required," and "permitted" have the same meaning as "directed."

D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."

E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.

F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.

G. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.

H. "Provide": Furnish and install, complete and ready for the intended use.

I. Submitted: The terms “submitted”, “reported”, “satisfactory” and similar words and phrases means submitted to Architect, reported to Architect and similar phrases.

J. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.2 INDUSTRY STANDARDS

A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.

B. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.

C. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.

1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.

1.3 ABBREVIATIONS AND ACRONYMS

A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities indicated in Thomson Gale's "Encyclopedia of Associations" or in Columbia Books' "National Trade & Professional Associations of the U.S."

B. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

IAPMO	International Association of Plumbing and Mechanical Officials www.iapmo.org	(909) 472-4100
ICC	International Code Council www.iccsafe.org	(888) 422-7233
ICC-ES	ICC Evaluation Service, Inc. www.icc-es.org	(800) 423-6587 (562) 699-0543
UBC	Uniform Building Code (See ICC)	

C. Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

CE	Army Corps of Engineers www.usace.army.mil	(202) 761-0011
CPSC	Consumer Product Safety Commission www.cpsc.gov	(800) 638-2772 (301) 504-7923
DOC	Department of Commerce www.commerce.gov	(202) 482-2000
DOD	Department of Defense http://.dodssp.daps.dla.mil	(215) 697-6257
DOE	Department of Energy www.energy.gov	(202) 586-9220
EPA	Environmental Protection Agency www.epa.gov	(202) 272-0167
FAA	Federal Aviation Administration	(866) 835-5322

	www.faa.gov	
FCC	Federal Communications Commission www.fcc.gov	(888) 225-5322
FDA	Food and Drug Administration www.fda.gov	(888) 463-6332
GSA	General Services Administration www.gsa.gov	(800) 488-3111
HUD	Department of Housing and Urban Development www.hud.gov	(202) 708-1112
LBL	Lawrence Berkeley National Laboratory www.lbl.gov	(510) 486-4000
NCHRP	National Cooperative Highway Research Program (See TRB)	
NIST	National Institute of Standards and Technology www.nist.gov	(301) 975-6478
OSHA	Occupational Safety & Health Administration www.osha.gov	(800) 321-6742 (202) 693-1999
PBS	Public Buildings Service (See GSA)	
PHS	Office of Public Health and Science www.osophs.dhhs.gov/ophs	(202) 690-7694
RUS	Rural Utilities Service (See USDA)	(202) 720-9540
SD	State Department www.state.gov	(202) 647-4000
TRB	Transportation Research Board http://gulliver.trb.org	(202) 334-2934
USDA	Department of Agriculture www.usda.gov	(202) 720-2791
USPS	Postal Service www.usps.com	(202) 268-2000

D. Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and regulations in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

ADAAG	Americans with Disabilities Act (ADA) Architectural Barriers Act (ABA) Accessibility Guidelines for Buildings and Facilities Available from U.S. Access Board www.access-board.gov	(800) 872-2253 (202) 272-0080
CFR	Code of Federal Regulations Available from Government Printing Office www.gpoaccess.gov/cfr/index.html	(866) 512-1800 (202) 512-1800
DOD	Department of Defense Military Specifications and Standards Available from Department of Defense Single Stock Point http://dodssp.daps.dla.mil	(215) 697-2664
DSCC	Defense Supply Center Columbus (See FS)	
FED-STD	Federal Standard (See FS)	
FS	Federal Specification Available from Department of Defense Single Stock Point http://dodssp.daps.dla.mil	(215) 697-2664
	Available from Defense Standardization Program www.dps.dla.mil	
	Available from General Services Administration www.gsa.gov	(202) 619-8925
	Available from National Institute of Building Sciences www.wbdg.org/ccb	(202) 289-7800
FTMS	Federal Test Method Standard (See FS)	
MIL	(See MILSPEC)	
MIL-STD	(See MILSPEC)	
MILSPEC	Military Specification and Standards Available from Department of Defense Single Stock Point http://dodssp.daps.dla.mil	(215) 697-2664
UFAS	Uniform Federal Accessibility Standards Available from Access Board www.access-board.gov	(800) 872-2253 (202) 272-0080

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

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SECTION 01 5000

TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.

1.2 USE CHARGES

A. General: Installation and removal of and use charges for temporary facilities shall be included in the Contract Sum. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Owner's construction forces, Architect, occupants of Project, testing agencies, and authorities having jurisdiction.

1. Cost or use charges for temporary facilities are not chargeable to Owner or Architect.

1.3 INFORMATIONAL SUBMITTALS

A. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.

B. Moisture-Protection Plan: Describe procedures and controls for protecting materials and construction from water absorption and damage.

1. Describe delivery, handling, and storage provisions for materials subject to water absorption or water damage.
2. Indicate procedures for discarding water-damaged materials, protocols for mitigating water intrusion into completed Work, and replacing water-damaged Work.
3. Indicate sequencing of work that requires water, such as sprayed fire-resistive materials, plastering, and terrazzo grinding, and describe plans for dealing with water from these operations. Show procedures for verifying that wet construction has dried sufficiently to permit installation of finish materials.

C. Dust- and HVAC-Control Plan at Renovation Work: Submit coordination drawing and narrative that indicates the dust- and HVAC-control measures proposed for use, proposed locations, and proposed time frame for their operation. Identify further options if proposed measures are later determined to be inadequate. Include the following:

1. Locations of dust-control partitions at each phase of work.
2. HVAC system isolation schematic drawing.
3. Location of proposed air-filtration system discharge.
4. Waste handling procedures.
5. Other dust-control measures.

D. Temporary Utility Reports: Make available on request, reports of tests, inspections, meter readings, and similar procedures performed on temporary utilities.

E. Implementation and Termination Schedule: Make available on request a schedule indicating implementation and termination of each temporary utility.

1.4 QUALITY ASSURANCE

A. Standards: Comply with ANSI A10.6 "Requirements for Demolition Operations", NECA's "Temporary Electrical Facilities," and NFPA 241 "Standard for Safeguarding Construction, Alteration, and Demolition Operations".

1. Trade Jurisdictions: Assigned responsibilities for installation and operation of temporary utilities are not intended to interfere with trade regulations and union jurisdictions.

B. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.

C. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

D. Accessible Temporary Egress at Renovation Work: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines and ICC/ANSI A117.1.

E. Regulations: Comply with industry standards and applicable laws and regulations of authorities having jurisdiction, including but not limited to, the following:

1. Building Code requirements.
2. Health and safety regulations.
3. Utility company regulations.
4. Police, Fire Department and Rescue Squad rules.
5. Environmental protection regulations.
6. City ordinances and regulations.

1.5 PROJECT CONDITIONS

A. Temporary Use of Permanent Facilities: Engage Installer of each permanent service to assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

PART 2 - PRODUCTS

2.1 MATERIALS

A. General: Provide new materials. Undamaged, previously used materials in serviceable condition may be used if approved by Architect. Provide materials suitable for use intended.

B. Materials and equipment may be new or used, but must be adequate in capacity for the required usage, must not create unsafe conditions, and must not violate requirements of applicable codes and standards.

C. Portable Chain-Link Fencing: Minimum 2 inch (50 mm), 0.148 inch (3.8 mm) thick, galvanized-steel, chain-link fabric fencing; minimum 6 feet (1.8 m) high with galvanized-steel pipe posts; minimum 2-3/8 inch (60 mm) OD line posts and 2-7/8 inch (73 mm) OD corner and pull posts,

with 1-5/8 inch (40 mm) OD top and bottom rails. Provide concrete or galvanized-steel bases for supporting posts.

D. Polyethylene Sheet: Reinforced, fire-resistive sheet, 10 mil (0.25 mm) minimum thickness, with flame-spread rating of 15 or less per ASTM E 84 and passing NFPA 701 Test Method 2.

E. Dust-Control Adhesive-Surface Walk-off Mats: Provide mats minimum 36 by 60 inches (900 by 1500 mm).

F. Insulation: Unfaced mineral-fiber blanket, manufactured from glass, slag wool, or rock wool; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively.

2.2 TEMPORARY FACILITIES

A. Field Offices, General: Prefabricated or mobile units with serviceable finishes, temperature controls, and foundations adequate for normal loading.

B. Common-Use Field Office: Of sufficient size to accommodate needs of Owner, Architect, and construction personnel office activities and to accommodate Project meetings specified in other Division 01 Sections. Keep office clean and orderly. Furnish and equip offices as follows:

1. Furniture required for Project-site.
2. Conference room of sufficient size to accommodate. Provide electrical power service and 120-V ac duplex receptacles. Furnish room with conference table, chairs, and tack and marker boards.
3. Drinking water and private toilet.
4. Heating and cooling equipment necessary to maintain a uniform indoor.
5. Lighting fixtures capable of maintaining average illumination at desk height.

C. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.

1. Store combustible materials apart from building.

2.3 EQUIPMENT

A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.

1. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent, and size required by location and class of fire exposure.

B. Self-Contained Toilet Units: Single-occupant units of chemical, aerated recirculation, or combustion type; vented; fully enclosed with a glass-fiber-reinforced polyester shell or similar nonabsorbent material.

C. Drinking-Water Fixtures: Containerized, tap-dispenser, bottled-water drinking-water units, including paper cup supply.

D. HVAC Equipment: Unless Owner authorizes use of permanent HVAC system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.

1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.

2. Heating Units: Listed and labeled for type of fuel being consumed, by a qualified testing agency acceptable to authorities having jurisdiction, and marked for intended location and application.

E. Air-Filtration Units for Renovation Work: Primary and secondary HEPA-filter-equipped portable units with four-stage filtration. Provide single switch for emergency shutoff. Configure to run continuously.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.

B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

A. Locate temporary utilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify utilities as required.

B. Provide each utility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until utilities are no longer needed or are replaced by authorized use of completed permanent utilities.

C. Water Service: Install water service and distribution piping in sizes and pressures adequate for construction. Sterilize temporary water piping before use in accordance with requirements of authorities having jurisdiction.

D. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.

1. Existing Toilets in Occupied Facilities: Use of Owner's existing toilet facilities will not be permitted or allowed.

E. Heating and Cooling: Provide temporary heating and cooling required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed.

F. Isolation of Work Areas in Occupied Facilities: Prevent dust, fumes, and odors from entering occupied areas.

1. Prior to commencing work, isolate the HVAC system in area where work is to be performed according to coordination drawings.

a. Disconnect supply and return ductwork in work area from HVAC systems servicing occupied areas.

b. Maintain negative air pressure within work area using HEPA-equipped air-filtration units, starting with commencement of temporary partition construction, and continuing until removal of temporary partitions is complete.

2. Maintain dust partitions during the Work. Use vacuum collection attachments on dust-producing equipment. Isolate limited work within occupied areas using portable dust-containment devices.
3. Perform daily construction cleanup and final cleanup using approved, HEPA-filter-equipped vacuum equipment.

G. Ventilation and Humidity Control: Provide temporary ventilation required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce ambient condition required and minimize energy consumption.

1. Provide dehumidification systems when required to reduce substrate moisture levels to level required to allow installation or application of finishes.

H. Electric Power Service: Provide electric power service and distribution system of sufficient size, capacity, and power characteristics required for construction operations.

I. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.

J. Telephone Service: Provide temporary telephone service in common-use facilities for use by all construction personnel. Provide telephone line(s) for each field office.

K. Electronic Communication Service: Provide internet access of not less than 15-Mbps download and 5-Mbps upload speed for use by Architect and Owner to access Project electronic documents and maintain electronic communications

3.3 SUPPORT FACILITIES INSTALLATION

A. General: Comply with the following:

1. Locate field offices, storage sheds, sanitary facilities, and other temporary construction and support facilities for easy access.
2. Maintain support facilities until Architect schedules Substantial Completion inspection. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.

B. Project Signs: Coordinated signs with Owner’s requirements and requirements of authorities having jurisdiction.

C. Waste Disposal Facilities: Comply with requirements specified in Division 01 Section "Construction Waste Management and Disposal."

D. Comply with progress cleaning requirements in Division 01 Section "Execution."

E. Existing Elevator Use in Occupied Facilities: Use of Owner's existing elevators will be permitted, provided elevators are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore elevators to condition existing before initial use, including replacing worn cables, guide shoes, and similar items of limited life.

1. Do not load elevators beyond their rated weight capacity.
2. Provide protective coverings, barriers, devices, signs, or other procedures to protect elevator car and entrance doors and frame. If, despite such protection, elevators become damaged, engage elevator Installer to restore damaged work so no evidence remains of correction work. Return items that cannot be refinished in field to the shop, make required repairs and refinish entire unit, or provide new units as required.

F. Existing Stair Usage in Occupied Facilities: Use of Owner's existing stairs will be permitted, provided stairs are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore stairs to condition existing before initial use.

1. Provide protective coverings, barriers, devices, signs, or other procedures to protect stairs and to maintain means of egress. If stairs become damaged, restore damaged areas so no evidence remains of correction work.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.

B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.

1. Comply with work restrictions specified in Division 01 Section "Summary."

C. Temporary Egress: Maintain temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction.

D. Temporary Enclosures: Provide temporary, weathertight, enclosures for protection of construction, in progress and completed, including, but not limited to, vertical and horizontal openings, from exposure, foul weather, other construction operations, and similar activities.

E. Temporary Partitions: Provide floor-to-ceiling dustproof partitions to limit dust and dirt migration and to separate areas from fumes and noise.

1. Construct dustproof partitions with gypsum wallboard with joints taped on occupied side, and fire-retardant-treated plywood on construction operations side.
2. Construct dustproof partitions with two layers of 6 mil (0.14 mm) polyethylene sheet on each side. Cover floor with two layers of 6 mil (0.14 mm) polyethylene sheet, extending sheets 18 inches (450 mm) up the sidewalls. Overlap and tape full length of joints. Cover floor with fire-retardant-treated plywood.

   a. Construct vestibule and airlock at each entrance through temporary partition with not less than 48 inches (1200 mm) between doors. Maintain walk-off mats in vestibule, for dust control.

3. Where fire-resistance-rated temporary partitions are indicated or are required by authorities having jurisdiction, construct partitions according to the rated assemblies.
4. Seal joints and perimeter. Equip partitions with gasketed dustproof doors and security locks where openings are required.
5. Protect air-handling equipment.
6. Provide walk-off mats at each entrance through temporary partition.

F. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241 and authorities having jurisdiction; manage fire-prevention program.

3.5 MOISTURE CONTROL

A. Contractor's Moisture-Protection Plan: Avoid trapping water in finished work. Document visible signs of discoloration that may appear during construction.

B. Exposed Construction Phase: Before installation of weather barriers, when materials are subject to wetting and exposure, protect as follows:

1. Protect porous materials from water damage.
2. Protect stored and installed material from flowing or standing water.
3. Keep porous and organic materials from coming into prolonged contact with concrete.
4. Remove standing water from decks.
5. Keep deck openings covered or dammed.

C. Partially Enclosed Construction Phase: After installation of weather barriers but before full enclosure and conditioning of building, when installed materials are still subject to infiltration of moisture, protect as follows:

1. Do not load or install drywall or other porous materials or components, or items with high organic content, into partially enclosed building.
2. Keep interior spaces reasonably clean and protected from water damage.
3. Periodically collect and remove waste containing cellulose or other organic matter.
4. Discard or replace water-damaged material.
5. Do not install material that is wet.
6. Discard, replace, or clean stored or installed material that begins to show discoloration.
7. Perform work in a sequence that allows any wet materials adequate time to dry before enclosing the material in drywall or other interior finishes.

D. Controlled Construction Phase of Construction: After completing and sealing of the building enclosure but prior to the full operation of permanent HVAC systems, maintain as follows:

1. Control moisture and humidity inside building by maintaining effective dry-in conditions.
2. Use permanent HVAC system to control humidity.
3. Comply with manufacturer's written instructions for temperature, relative humidity, and exposure to water limits. Refer to technical specification sections for additional and more stringent criteria.

3.6 OPERATION, TERMINATION, AND REMOVAL

A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.

B. Maintenance: Maintain facilities in good operating condition until removal.

1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
2. Maintain markers for underground lines. Protect from damage during excavation operations.

C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.

D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.

1. Materials and facilities that constitute temporary facilities are property of Contractor.
2. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Division 01 Section "Closeout Procedures."

END OF SECTION

SECTION 01 6000

PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.

1.2 DEFINITIONS

A. Products: Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.

1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.
2. New Products: Items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects are not considered new products.
3. Comparable Product: Product that is demonstrated and approved through submittal process to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.

B. Substitutions: Changes in products, materials, and equipment from those required by the Contract Documents and proposed by Contractor. Refer to Division 01 Section “Substitution Procedures”.

C. Basis-of-Design Product Specification: Where a specific manufacturer's product is named and accompanied by the words "Product Standard," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of other manufacturers

D. Hazardous Substances Prohibited by Law: Including, but not limited to, any product, material, element, constituent, chemical, substance, compound, or mixture, which is defined in, included under, or regulated by any environmental laws.

E. Environmental Laws: Applicable local, state, and federal laws, rules, ordinances, codes, regulations, and requirements in effect at the time Contractor's services are rendered, any amendments for Contractor's services rendered after the effective date of any such amendments.

1.3 SUBMITTALS

A. Comparable Product: Comply with requirements in Division 01 Section "Submittal Procedures." Show compliance with requirements. Submit request for consideration of each comparable product. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

B. Basis-of-Design Product Specification Submittal: Comply with requirements in Division 01 Section "Submittal Procedures." Show compliance with requirements.

C. Contractor shall submit an affidavit on construction company letterhead signed by an officer of the company, notarized by a notary public, which certifies compliance with the environmental laws controlling hazardous substances for the construction of this Project.

1.4 QUALITY ASSURANCE

A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, select product compatible with products previously selected, even if previously selected products were also options.

B. Compliance: Contractor shall take whatever measures deemed necessary to insure that all employees, suppliers, vendors, fabricators, subcontractors, or their assigns, to comply with hazardous substance requirements.

1.5 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.

B. Delivery and Handling:

1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
4. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.

C. Storage:

1. Store products to allow for inspection and measurement of quantity or counting of units.
2. Store materials in a manner that will not endanger Project structure.
3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.

4. Protect foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
5. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
6. Protect stored products from damage and liquids from freezing.

1.6 PRODUCT WARRANTIES

A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.

1. Manufacturer's Warranty: Written warranty furnished by individual manufacturer for a particular product, required by the Contract Documents to provide specific rights for Owner, and specifically endorsed by manufacturer to Owner.
2. Warranties: Prepare a written document, on manufacturer’s standard form, modified to include Project-specific information, that contains appropriate terms and identification, properly executed.

B. Submittal Time: Comply with requirements in Division 01 Section "Closeout Procedures."

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.

1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
4. Where products are accompanied by the term "as selected," Architect will make selection.
5. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.
6. Products and materials brought onto the Project Site, and products and materials incorporated into the Work, shall comply with environmental laws.

B. Product Selection Procedures:

1. Product: Where Specifications name a single manufacturer and product, provide the named product that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
2. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.

3. Products:

   a. Restricted List (Acceptable Manufacturers/Fabricators and Products): Where Specifications include a list of names of both manufacturers and products, provide one of the products listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will be considered unless otherwise indicated.
   b. Nonrestricted List (Available Manufacturers/Fabricators and Products): Where Specifications include a list of names of both available manufacturers and products, provide one of the products listed, or an unnamed product, that complies with requirements. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product.

4. Manufacturers:

   a. Restricted List (Acceptable Manufacturers/Fabricators): Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will be considered unless otherwise indicated.
   b. Nonrestricted List (Available Manufacturers/Fabricators): Where Specifications include a list of available manufacturers, provide a product by one of the manufacturers listed, or a product by an unnamed manufacturer, that complies with requirements. Comply with requirements in "Comparable Products" Article for consideration of an unnamed manufacturer's product.

5. Basis-of-Design Product (Product Standard): Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product by one of the other named manufacturers, or unnamed manufacturer's product.

C. Descriptive Specification Requirements: Where Specifications describe a product, or assembly, listing exact characteristics required, without use of a brand or trade name, provide a product, material or assembly that provides the characteristics and otherwise complies with Contract requirements.

D. Performance Specification Requirements: Where Specifications require compliance with performance requirements, provide products that comply with these requirements, and are recommended by the manufacturer for the application indicated. General overall performance of a product is implied where the product or material is specified for a specific application.

   1. Manufacturer's recommendations may be contained in published product literature, or by the manufacturer's certification of performance.

E. Compliance with Standards, Codes and Regulations: Where Specifications only require compliance with imposed code, standard or regulation, select product that complies with standards, codes or regulations specified.

F. Visual Matching Specification: Where Specifications require "match Architect's sample", provide a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.

1. If no product available within specified category matches and complies with other specified requirements, comply with requirements in Division 01 Section "Substitution Procedures" for proposal of product.

G. Visual Selection Specification: Where Specifications include the phrase "as selected by Architect from manufacturer's color, gloss, pattern, density, or texture" or similar phrase, select a product (and manufacturer) that complies with other specified requirements.

1. Standard Range: Where Specifications include the phrase "standard range of colors, patterns, textures" or similar phrase, Architect will select color, pattern, or texture from manufacturer's product line that does not include premium items.
2. Custom Range: Where Specifications include the phrase "custom range of colors, patterns, textures" or similar phrase, Architect will select color, pattern, or texture from manufacturer's product line that includes both standard and premium items.
3. Special Custom Range: Where Specifications include the phrase “special custom range of colors patterns, textures” or similar phrase, Architect will select a new color, pattern, or texture different from those normally produced by the manufacturer.

A. Allowances (If Applicable): Refer to provisions of individual Specification Sections and of Division 01 Section "Allowance" for allowances that control product selection and for procedures required for processing such selections.

2.2 COMPARABLE PRODUCTS

A. Conditions for Consideration: Architect will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect may return requests without action, except to record noncompliance with these requirements:

1. Evidence that the proposed product does not require revisions to the Contract Documents; that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
3. Evidence that proposed product provides specified warranty.
4. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
5. Samples, if requested.

PART 3 - EXECUTION

3.1 RESTRICTION OF HAZARDOUS SUBSTANCES

A. Contractor agrees that it shall not knowingly after reasonable diligence and effort, incorporate into the Work any hazardous substance other than as may be lawfully contained within products, except in accordance with applicable environmental laws. Further, in performing any of its obligations hereunder, Contractor shall not cause any release of hazardous substances into, or contamination of, the environment, including soil, the atmosphere, any watercourse or ground water, except in accordance with applicable environmental laws. In the event that Contractor engages in any of the activities prohibited in this paragraph, to the fullest extent permitted by law, Contractor hereby indemnifies and holds harmless Owner and its partners, members, officers, directors, agents, employees and consultants from and against any and all claims, damages, losses, causes of action, suits and liabilities of every kind, including, but not limited to, expenses of litigation, court costs, punitive damages and attorney's fees, arising out of, incidental to or resulting from the activities prohibited.

B. In the event Contractor observes on the Project Site any substance which Contractor reasonably believes to be a hazardous substance, and which is being introduced into the Work, or exists on the Project Site, in a manner violative of any applicable environmental laws, Contractor shall immediately notify Owner and report the condition to Owner in writing. The Work in the affected area shall not thereafter be resumed except by written authorization of Owner if in fact a hazardous substance has been encountered and has not been rendered harmless. In the event that Contractor fails to give Owner proper notification hereunder, upon knowingly observing a hazardous substance at the Project Site, to the fullest extent permitted by the law, Contractor hereby indemnifies and holds harmless Owner, and all of its partners, members, officers, directors, agents, employees and consultants from and against all claims, damages, losses, causes of action, suits and liabilities of every kind, including, but not limited to, expenses of litigation, court costs, punitive damages and attorneys' fees, arising out of, incidental to, or resulting from Contractor's failure to stop the Work.

C. If Owner believes that hazardous substances may have been located, generated, manufactured, used or disposed of on or about the Project Site by Contractor or any of its employees, agents, subcontractors, suppliers, or invitees, Owner may have environmental studies of the Project Site conducted as it deems appropriate, and Contractor shall be responsible for the cost of such studies to the extent that Contractor or any of its employees, agents, subcontractors, suppliers or invitees are responsible for the presence of any hazardous substances.

END OF SECTION

UNIVERSITY MEDICAL CENTER
7TH FLOOR RENOVATION
LAS VEGAS, NEVADA

SECTION 01 7300

EXECUTION

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:

1. Installation of the Work.
2. Cutting and patching.
3. Coordination of Owner-installed products.
4. Progress cleaning.
5. Starting and adjusting.
6. Protection of installed construction.
7. Correction of the Work.

1.2 DEFINITIONS

A. Cutting: Removal of in-place construction necessary to permit installation or performance of other work.

B. Patching: Fitting and repair work required to restore construction to original conditions after installation of other work.

1.3 SUBMITTALS

A. Cutting and Patching Plan: Submit plan describing procedures at least 10 days prior to the time cutting and patching will be performed, requesting approval to proceed. Include the following information:

1. Extent: Describe reason for and extent of each occurrence of cutting and patching.
2. Changes to In-Place Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in building appearance and other significant visual elements.
3. Products: List products to be used for patching and firms or entities that will perform patching work.
4. Dates: Indicate when cutting and patching will be performed.
5. Utilities and Mechanical and Electrical Systems: List services and systems that cutting and patching procedures will disturb or affect. List services and systems that will be relocated and those that will be temporarily out of service. Indicate length of time permanent services and systems will be disrupted.

   a. Include description of provisions for temporary services and systems during interruption of permanent services and systems.

6. Structural Elements: Where cutting and patching involve adding reinforcement to structural elements, submit details and engineering calculations showing integration of reinforcement with original structure.

7. Architect's Approval: Obtain approval of cutting and patching proposal before cutting and patching. Approval does not waive right to later require removal and replacement of unsatisfactory work.

1.4 QUALITY ASSURANCE

A. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.

1. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or increase deflection
2. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.
3. Miscellaneous Elements: Do not cut and patch other construction elements or components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety.
4. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction on the exterior or in occupied spaces in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

a. If possible, retain original Installer or fabricator to cut and patch exposed Work listed below. If it is impossible to engage original Installer or fabricator, engage another recognized, experienced, and specialized firm.

B. Cutting and Patching Conference: Before proceeding, meet at Project site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

C. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of products and equipment.

1.5 WARRANTY

A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during cutting and patching operations, by methods and with materials so as not to void existing warranties.

PART 2 - PRODUCTS

2.1 MATERIALS

A. General: Comply with requirements specified in other Sections.

1. For projects requiring compliance with sustainable design and construction practices and procedures, use products for patching that comply with requirements in Division 01 sustainable construction requirements Section.

B. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.

1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to Architect for the visual and functional performance of in-place materials.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities~~,~~ and other construction affecting the Work.

1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; underground electrical services, and other utilities.
2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.

B. Acceptance of Surfaces and Conditions: Examine substrates to receive products and systems and associated work for compliance with requirements and other conditions affecting performance. Proceed only when unsatisfactory conditions have been corrected in a manner complying with Contract Documents. Starting work within a particular area will be construed as acceptance of surface conditions. Record observations.

1. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
2. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
3. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.

3.2 INSTALLATION, GENERAL

A. Installation Quality Standards: In addition to standards listed elsewhere, perform Work according to following, unless otherwise specified:

1. Respective manufacturer/fabricator's written installation instructions.
2. Accepted submittals.
3. Contract Documents.

B. Control of Corrosion: Prevent galvanic action and other forms of corrosion by isolating metals and other materials from direct contact with incompatible materials.

3.3 PREPARATION

A. General: Comply with manufacturer's instructions, recommendations, and specifications for cleaning and surface preparation. Surfaces shall have no defects, contaminants, or errors which would result in poor or potentially defective installation or would cause latent defects in Work.

A. Existing Utility Interruptions at Renovation Work: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:

1. Notify Owner not less than 5 days in advance of proposed utility interruptions.
2. Do not proceed with utility interruptions without Owner's written permission.

B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.

D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of Contractor, submit a request for information to Architect according to requirements in Division 01 Section "Project Management and Coordination."

3.4 INSTALLATION

A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.

1. Make vertical work plumb and make horizontal work level.
2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
3. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.

B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated, unless indicated otherwise in the Contract Documents.

C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.

D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.

E. Sequence the Work and allow adequate clearances to accommodate movement of construction items on site and placement in permanent locations.

F. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.

G. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.

H. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located, aligned, and coordinated with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions.

1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
2. Allow for building movement, including thermal expansion and contraction.
3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

I. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.

J. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.5 CUTTING AND PATCHING

A. Cutting and Patching, General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.

1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.

B. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during installation or cutting and patching operations, by methods and with materials so as not to void existing warranties.

C. Temporary Support: Provide temporary support of work to be cut.

D. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.

E. Adjacent Occupied Areas: Where interference with use of adjoining areas or interruption of free passage to adjoining areas is unavoidable, coordinate cutting and patching according to requirements in Division 01 Section "Summary."

F. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to prevent interruption to occupied areas.

G. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.

1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
4. Excavating and Backfilling: Comply with requirements in applicable Division 31 Sections where required by cutting and patching operations.

5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
6. Proceed with patching after construction operations requiring cutting are complete.

H. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other work. Patch with durable seams that are as invisible as practicable. Provide materials and comply with installation requirements specified in other Sections, where applicable.

1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical integrity of installation.
2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will minimize evidence of patching and refinishing.

   a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
   b. Restore damaged pipe covering to its original condition.

3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.

   a. Where patching occurs in a painted surface, prepare substrate and apply primer and intermediate paint coats appropriate for substrate over the patch, and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.
   b. Patch fire rated assemblies with materials to match existing and maintain assembly fire rating.

4. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition and ensures thermal and moisture integrity of building enclosure.

I. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

3.6 OWNER-INSTALLED PRODUCTS

A. Site Access: As applicable, provide access to Project site for Owner's construction personnel.

B. Coordination: Coordinate construction and operations of the Work with work performed by Owner's construction personnel.

1. Construction Schedule: Inform Owner of Contractor's preferred construction schedule for Owner's portion of the Work. Adjust construction schedule based on a mutually agreeable timetable. Notify Owner if changes to schedule are required due to differences in actual construction progress.
2. Preinstallation Conferences: Include Owner's construction personnel at preinstallation conferences covering portions of the Work that are to receive Owner's work. Attend

preinstallation conferences conducted by Owner's construction personnel if portions of the Work depend on Owner's construction.

3.7 PROGRESS CLEANING

A. General: Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.

1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
2. Do not hold waste materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 deg F (27 deg C).
3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.

a. Use containers specifically intended for holding types of waste materials indentified where applicable, e.g. blue colored containers with labeling and symbols for bio-waste.

B. Site: Maintain Project site free of waste materials and debris.

C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.

1. Remove liquid spills immediately.
2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.

D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.

E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.

F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

G. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways. Comply with waste disposal requirements in Division 01 Section "Temporary Facilities and Controls." and Division 01 Section "Construction Waste Management and Disposal", whichever is the more restrictive.

H. Remove construction markings not required and graffiti immediately, repairing or replacing damaged material.

I. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

J. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

K. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.8 STARTING AND ADJUSTING

A. As applicable, coordinate startup and adjusting of equipment and operating components with commissioning requirements in Division 01 specification sections.

B. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.

C. Adjust equipment for proper operation. Adjust operating components for proper operation without binding.

D. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

E. Manufacturer's Field Service: Comply with qualification requirements in Division 01 Section "Quality Requirements."

3.9 PROTECTION OF INSTALLED CONSTRUCTION

A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.

B. Comply with manufacturer's written instructions for temperature and relative humidity.

END OF SECTION

UNIVERSITY MEDICAL CENTER
7TH FLOOR RENOVATION
LAS VEGAS, NEVADA

SECTION 01 7419

CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for the following:

1. Salvaging and/or recycling nonhazardous demolition and construction waste.
2. Disposing of nonhazardous construction waste.

1.2 DEFINITIONS

A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.

B. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.

C. Salvage / Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.

1.3 PERFORMANCE REQUIREMENTS

A. General: Achieve end-of-Project rates for salvage/recycling of 50 percent by weight of total non-hazardous solid waste generated by the Work. Practice efficient waste management in the use of materials in the course of the Work. Use all reasonable means to divert construction and demolition waste from landfills and incinerators. Facilitate recycling and salvage of materials.

1.4 SUBMITTALS

A. Waste Management Plan: Submit plan within 30 days of date established for commencement of the Work.

B. Waste Reduction Progress Reports: Concurrent with each Application for Payment, submit report. Include the following information:

1. Material category.
2. Generation point of waste.
3. Total quantity of waste in tons (tonnes).
4. Total quantity of waste recovered (salvaged plus recycled) in tons (tonnes).
5. Total quantity of waste recovered (salvaged plus recycled) as a percentage of total waste.

C. Waste Reduction Calculations: Before request for Substantial Completion, submit calculated end-of-Project rates for salvage, recycling, and disposal as a percentage of total waste generated by the Work.

D. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

E. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

F. Submittal: Letter signed by Contractor, tabulating total waste material, quantities diverted and means by which it is diverted, and statement that requirements have been met.

1.5 QUALITY ASSURANCE

A. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.

B. Waste Management Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination." Review methods and procedures related to waste management including, but not limited to, the following:

1. Review and discuss waste management plan.
2. Review requirements for documenting quantities of each type of waste and its disposition.
3. Review and finalize procedures for materials separation and verify availability of containers and bins needed to avoid delays.
4. Review procedures for periodic waste collection and transportation to recycling and disposal facilities.
5. Review waste management requirements for each trade.
6. The Owner will outline acceptable locations for waste collection and routes for removal.

C. Vehicles removing waste materials from the site shall be covered.

1.6 WASTE MANAGEMENT PLAN

A. General: Develop a waste management plan according to ASTM E 1609 and requirements of this Section. Plan shall consist of waste identification, waste reduction work plan, and cost/revenue analysis. Indicate quantities by weight or volume, but use same units of measure throughout waste management plan.

B. Waste Identification: Indicate anticipated types and quantities of site-clearing and construction waste generated by the Work. Include estimated quantities and assumptions for estimates.

C. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged, recycled, or disposed of in landfill or incinerator. Include points of waste generation, total quantity of each type of waste, quantity for each means of recovery, and handling and transportation procedures.

1. Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.
2. Disposed Materials: Indicate how and where materials will be disposed of. Include name, address, and telephone number of each landfill and incinerator facility.
3. Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location on Project site where materials separation will be located.

D. Cost/Revenue Analysis: Indicate total cost of waste disposal as if there was no waste management plan and net additional cost or net savings resulting from implementing waste management plan. Include the following:

1. Total quantity of waste.
2. Estimated cost of disposal (cost per unit). Include hauling and tipping fees and cost of collection containers for each type of waste.
3. Total cost of disposal (with no waste management).
4. Revenue from salvaged / recycled materials.
5. Savings in hauling and tipping fees that are avoided.
6. Handling and transportation costs. Include cost of collection containers for each type of waste.
7. Net additional cost or net savings from waste management plan.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

A. General: Implement approved waste management plan. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.

1. Comply with Division 01 Section "Temporary Facilities and Controls" for operation, termination, and removal requirements.

B. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

1. Designate and label specific areas on Project site necessary for separating materials that are to be salvaged, recycled, reused, donated, and sold.
2. Comply with Division 01 Section "Temporary Facilities and Controls" for controlling dust and dirt, environmental protection, and noise control.

3.2 RECYCLING CONSTRUCTION WASTE

A. Preparation of Waste: Prepare and maintain recyclable waste materials according to recycling or reuse facility requirements. Maintain materials free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to the recycling process.

3.3 DISPOSAL OF WASTE

A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.

1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. Burning: Do not burn waste materials.

C. Disposal: Transport waste materials off Owner's property and legally dispose of them.

END OF SECTION

UNIVERSITY MEDICAL CENTER
7TH FLOOR RENOVATION
LAS VEGAS, NEVADA

SECTION 01 7700

CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:

1. Substantial Completion procedures.
2. Final completion procedures.
3. Warranties.
4. Final cleaning.
5. Repair of the Work.

1.2 SUBMITTALS

A. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.

B. Certified List of Incomplete Items: Final submittal at Final Completion.

C. Certificates of Release: From authorities having jurisdiction.

D. Certificate of Insurance: For continuing coverage.

E. Schedule of Maintenance Material Items: For maintenance material submittal items specified in other Sections.

1.3 SUBSTANTIAL COMPLETION PROCEDURES

A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's punch list), indicating the value of each item on the list and reasons why the Work is incomplete.

B. Submittals Prior to Substantial Completion: Complete the following prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.

1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
2. Submit closeout submittals specified in other Division 01 Sections, including project record documents, operation and maintenance manuals, final completion construction photographic documentation, damage or settlement surveys, property surveys, and similar final record information.
3. Submit closeout submittals specified in individual Divisions 02 through 33 Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.

4. Submit maintenance material submittals specified in individual Divisions 02 through 33 Sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by Architect. Label with manufacturer's name and model number where applicable.

   a. Schedule of Maintenance Material Items: Prepare and submit schedule of maintenance material submittal items, including name and quantity of each item and name and number of related Specification Section. Obtain Owner’s signature for receipt of submittals.

5. Submit test/adjust/balance records.

C. Procedures Prior to Substantial Completion: Complete the following prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.

1. Advise Owner of pending insurance changeover requirements.
2. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
3. Complete startup and testing of systems and equipment.
4. Perform preventive maintenance on equipment used prior to Substantial Completion.
5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems. Submit demonstration and training video recordings specified in Division 01 Section "Demonstration and Training."
6. Advise Owner of changeover in heat and other utilities.
7. Participate with Owner in conducting inspection and walkthrough with local emergency responders.
8. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
9. Complete final cleaning requirements, including touchup painting.
10. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

D. Inspection: Submit a written request for inspection to determine Substantial. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.

1. Reinspection: Request, in writing, reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
2. Results of completed inspection will form the basis of requirements for final completion.

E. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

1.4 FINAL COMPLETION PROCEDURES

A. Submittals Prior to Final Completion: Before requesting final inspection for determining final completion, complete the following:

1. Submit a final Application for Payment according to Division 01 Section "Payment Procedures."

2. Certified List of Incomplete Items: Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list). Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
3. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.
4. Submit pest-control final inspection report.

B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.5 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction

1. Organize list of spaces in sequential order, starting with exterior areas first and proceeding from lowest floor to highest floor.
2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
3. Include the following information at the top of each page:

a. Project name.
b. Date.
c. Name of Architect.
d. Name of Contractor.
e. Page number.

4. Submit list of incomplete items in the format agreed upon by the Owner and Architect.

1.6 SUBMITTAL OF PROJECT WARRANTIES

A. Time of Submittal: Submit written warranties for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated, or when delay in submittal of warranties might limit Owner's rights under warranty.

B. Partial Occupancy: Submit properly executed warranties within minimum number days, as required by the Contract, of completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.

C. Organize warranty documents into an orderly sequence based on the table of contents of Project Manual.

1. Warranty Electronic File: Scan warranties and bonds and assemble complete warranty and bond submittal package into a single indexed electronic PDF file with links enabling navigation to each item. Provide bookmarked table of contents at beginning of document.

D. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

1. Use cleaning products that comply with Green Seal's GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.

PART 3 - EXECUTION

3.1 FINAL CLEANING

A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.

B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.

1. Complete the following cleaning operations, as applicable, before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:

a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
d. Remove tools, construction equipment, machinery, and surplus material from Project site.
e. Remove snow and ice to provide safe access to building.
f. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
g. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
h. Sweep concrete floors broom clean in unoccupied spaces.
i. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean according to manufacturer's recommendations if visible soil or stains remain.
j. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Polish mirrors and glass, taking care not to scratch surfaces.
k. Remove labels that are not permanent.
l. Remove all graffiti and construction writing.

m. Wipe surfaces of mechanical and electrical equipment and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
n. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
o. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
p. Clean ducts, blowers, and coils if units were operated without filters during construction or that display contamination with particulate matter on inspection.
q. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency.
r. Leave Project clean and ready for occupancy.

C. Construction Waste Disposal: Comply with waste disposal requirements in Division 01 Section "Temporary Facilities and Controls." and Division 01 Section "Construction Waste Management and Disposal", whichever is the more restrictive and as follows:

1. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

3.2 REPAIR OF THE WORK

A. Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.

B. Repair or remove and replace defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.

1. Remove and replace chipped, scratched, and broken glass, reflective surfaces, and other damaged transparent materials.
2. Touch up and otherwise repair and restore marred or exposed finishes and surfaces. Replace finishes and surfaces that that already show evidence of repair or restoration.

a. Do not paint over "UL" and other required labels and identification, including mechanical and electrical nameplates. Remove paint applied to required labels and identification.

3. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.
4. Replace all lamps and starters to comply with requirements for new fixtures.

C. All Warranties remain in effect.

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SECTION 01 7823

OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:

1. Operation and maintenance documentation directory.
2. Emergency manuals.
3. Operation manuals for systems, subsystems, and equipment.
4. Product maintenance manuals.
5. Systems and equipment maintenance manuals.

1.2 DEFINITIONS

A. System: An organized collection of parts, equipment, or subsystems united by regular interaction.

B. Subsystem: A portion of a system with characteristics similar to a system.

1.3 CLOSEOUT SUBMITTALS

A. Manual Content: Operations and maintenance manual content is specified in individual Specification Sections to be reviewed at the time of Section submittals. Submit reviewed manual content formatted and organized as required by this Section.

B. Format: Submit operations and maintenance manuals in the following format:

1. PDF electronic file. Assemble each manual into a composite electronically indexed file. Submit on digital media acceptable to Owner.

   a. Name each indexed document file in composite electronic index with applicable item name. Include a complete electronically linked operation and maintenance directory.
   b. Enable inserted reviewer comments on draft submittals.

C. Initial Manual Submittal: Submit draft copy of each manual at least 30 days before commencing demonstration and training. Architect will comment on whether general scope and content of manual are acceptable.

D. Final Manual Submittal: Submit each manual in final form prior to requesting inspection for Substantial Completion and before commencing demonstration and training. Architect will return copy with comments.

1. Correct or revise each manual to comply with Architect's comments. Submit copies of each corrected manual prior to commencing demonstration and training.

PART 2 - PRODUCTS

2.1 OPERATION AND MAINTENANCE DOCUMENTATION DIRECTORY

A. Directory: Prepare a single, comprehensive directory of emergency, operation, and maintenance data and materials, listing items and their location to facilitate ready access to desired information. Include a section in the directory for each of the following:

1. List of documents.
2. List of systems.
3. List of equipment.
4. Table of contents.

B. List of Systems and Subsystems: List systems alphabetically. Include references to operation and maintenance manuals that contain information about each system.

C. List of Equipment: List equipment for each system, organized alphabetically by system. For pieces of equipment not part of system, list alphabetically in separate list.

D. Tables of Contents: Include a table of contents for each emergency, operation, and maintenance manual.

E. Identification: In the documentation directory and in each operation and maintenance manual, identify each system, subsystem, and piece of equipment with same designation used in the Contract Documents. If no designation exists, assign a designation according to ASHRAE Guideline 4, "Preparation of Operating and Maintenance Documentation for Building Systems."

2.2 REQUIREMENTS FOR EMERGENCY, OPERATION, AND MAINTENANCE MANUALS

A. Organization: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:

1. Title page.
2. Table of contents.
3. Manual contents.

B. Title Page: Include the following information:

1. Subject matter included in manual.
2. Name and address of Project.
3. Name and address of Owner.
4. Date of submittal.
5. Name and contact information for Contractor.
6. Name and contact information for Architect.
7. Names and contact information for major consultants to the Architect that designed the systems contained in the manuals.
8. Cross-reference to related systems in other operation and maintenance manuals.

C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.

1. If operation or maintenance documentation requires more than one volume to accommodate data, include comprehensive table of contents for all volumes in each volume of the set.

D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.

E. Manuals, Electronic Files: Submit manuals in the form of a multiple file composite electronic PDF file for each manual type required.

1. Electronic Files: Use electronic files prepared by manufacturer where available. Where scanning of paper documents is required, configure scanned file for minimum readable file size.
2. File Names and Bookmarks: Enable bookmarking of individual documents based on file names. Name document files to correspond to system, subsystem, and equipment names used in manual directory and table of contents. Group documents for each system and subsystem into individual composite bookmarked files, then create composite manual, so that resulting bookmarks reflect the system, subsystem, and equipment names in a readily navigated file tree. Configure electronic manual to display bookmark panel on opening file.

2.3 EMERGENCY MANUALS

A. Content: Organize manual into a separate section for each of the following:

1. Type of emergency.
2. Emergency instructions.
3. Emergency procedures.

B. Type of Emergency: Where applicable for each type of emergency indicated below, include instructions and procedures for each system, subsystem, piece of equipment, and component:

1. Fire.
2. Flood.
3. Gas leak.
4. Water leak.
5. Power failure.
6. Water outage.
7. System, subsystem, or equipment failure.
8. Chemical release or spill.

C. Emergency Instructions: Describe and explain warnings, trouble indications, error messages, and similar codes and signals. Include responsibilities of Owner's operating personnel for notification of Installer, supplier, and manufacturer to maintain warranties.

D. Emergency Procedures: Include the following, as applicable:

1. Instructions on stopping.
2. Shutdown instructions for each type of emergency.
3. Operating instructions for conditions outside normal operating limits.
4. Required sequences for electric or electronic systems.
5. Special operating instructions and procedures.

2.4 OPERATION MANUALS

A. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and the following information:

1. System, subsystem, and equipment descriptions. Use designations for systems and equipment indicated on Contract Documents.
2. Performance and design criteria if Contractor has delegated design responsibility.
3. Operating standards.
4. Operating procedures.
5. Operating logs.
6. Wiring diagrams.
7. Control diagrams.
8. Piped system diagrams.
9. Precautions against improper use.
10. License requirements including inspection and renewal dates.

B. Descriptions: Include the following:

1. Product name and model number. Use designations for products indicated on Contract Documents.
2. Manufacturer's name.
3. Equipment identification with serial number of each component.
4. Equipment function.
5. Operating characteristics.
6. Limiting conditions.
7. Performance curves.
8. Engineering data and tests.
9. Complete nomenclature and number of replacement parts.

C. Operating Procedures: Include the following, as applicable:

1. Startup procedures.
2. Equipment or system break-in procedures.
3. Routine and normal operating instructions.
4. Regulation and control procedures.
5. Instructions on stopping.
6. Normal shutdown instructions.
7. Seasonal and weekend operating instructions.
8. Required sequences for electric or electronic systems.
9. Special operating instructions and procedures.

D. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.

E. Piped Systems: Diagram piping as installed, and identify color-coding where required for identification.

2.5 PRODUCT MAINTENANCE MANUALS

A. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.

B. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.

C. Product Information: Include the following, as applicable:

1. Product name and model number.
2. Manufacturer's name.
3. Color, pattern, and texture.
4. Material and chemical composition.
5. Reordering information for specially manufactured products.

D. Maintenance Procedures: Include manufacturer's written recommendations and the following:

1. Inspection procedures.
2. Types of cleaning agents to be used and methods of cleaning.
3. List of cleaning agents and methods of cleaning detrimental to product.
4. Schedule for routine cleaning and maintenance.
5. Repair instructions.

E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.

F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

1. Include procedures to follow and required notifications for warranty claims.

2.6 SYSTEMS AND EQUIPMENT MAINTENANCE MANUALS

A. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranty and bond information, as described below.

B. Source Information: List each system, subsystem, and piece of equipment included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.

C. Manufacturers' Maintenance Documentation: Manufacturers' maintenance documentation including the following information for each component part or piece of equipment:

1. Standard maintenance instructions and bulletins.
2. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
3. Identification and nomenclature of parts and components.
4. List of items recommended to be stocked as spare parts.

D. Maintenance Procedures: Include the following information and items that detail essential maintenance procedures:

1. Test and inspection instructions.
2. Troubleshooting guide.
3. Precautions against improper maintenance.
4. Disassembly; component removal, repair, and replacement; and reassembly instructions.
5. Aligning, adjusting, and checking instructions.
6. Demonstration and training video recording, if available.

E. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.

1. Scheduled Maintenance and Service: Tabulate actions for daily, weekly, monthly, quarterly, semiannual, and annual frequencies.
2. Maintenance and Service Record: Include manufacturers' forms for recording maintenance.

F. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.

G. Maintenance Service Contracts: Include copies of maintenance agreements with name and telephone number of service agent.

H. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

1. Include procedures to follow and required notifications for warranty claims.

PART 3 - EXECUTION

3.1 MANUAL PREPARATION

A. Emergency Manual: Assemble a complete set of emergency information indicating procedures for use by emergency personnel and by Owner's operating personnel for types of emergencies indicated.

B. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.

C. Operation and Maintenance Manuals: Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.

1. Engage a factory-authorized service representative to assemble and prepare information for each system, subsystem, and piece of equipment not part of a system.
2. Prepare a separate manual for each system and subsystem, in the form of an instructional manual for use by Owner's operating personnel.

D. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.

1. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.

E. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in record Drawings to ensure correct illustration of completed installation.

1. Do not use original project record documents as part of operation and maintenance manuals.
2. Comply with requirements of newly prepared record Drawings in Division 01 Section "Project Record Documents."

F. Comply with Division 01 Section "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

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SECTION 01 7839

PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for project record documents, including the following:

1. Record Drawings.
2. Record Specifications.
3. Record Product Data.
4. Miscellaneous record submittals.

1.2 SUBMITTALS

A. Record Drawings: Comply with the following:

1. Number of Copies: Submit copies of record Drawings as follows:

a. Initial Submittal:

1) Submit PDF electronic files of scanned record.
2) Architect will indicate whether general scope of changes, additional information recorded, and quality of drafting are acceptable.

b. Final Submittal:

1) Submit PDF electronic files of scanned record.

B. Record Specifications: Submit annotated PDF electronic files of Project's Specifications, including addenda and contract modifications.

C. Record Product Data: Submit annotated PDF electronic files and directories of each submittal.

D. Miscellaneous Record Submittals: See other Specification Sections for miscellaneous record-keeping requirements and submittals in connection with various construction activities. Submit annotated PDF electronic files and directories of each submittal.

PART 2 - PRODUCTS

2.1 ELECTRONIC PROJECT MANAGEMENT SOFTWARE

A. Electronic File of Project Record Documents: Provide Architect with an independent electronic archive of accepted project record documents using electronic project management software as defined in Division 01 Section "Project Management and Coordination", in addition to the printed documents described elsewhere in this Section.

2.2 RECORD DRAWINGS

A. Record Prints: Maintain one set of marked-up paper copies of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued.

1. Preparation: Mark record prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to provide information for preparation of corresponding marked-up record prints.

    a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
    b. Accurately record information in an acceptable drawing technique.
    c. Record data as soon as possible after obtaining it.
    d. Record and check the markup before enclosing concealed installations.
    e. Cross-reference record prints to corresponding archive photographic documentation.

2. Content: Types of items requiring marking include, but are not limited to, the following:

    a. Dimensional changes to Drawings.
    b. Revisions to details shown on Drawings.
    c. Depths of foundations below first floor.
    d. Locations and depths of underground utilities.
    e. Revisions to routing of piping and conduits.
    f. Revisions to electrical circuitry.
    g. Actual equipment locations.
    h. Duct size and routing.
    i. Locations of concealed internal utilities.
    j. Changes made by Change Order or Construction Change Directive.
    k. Changes made following Architect's written orders.
    l. Details not on the original Contract Drawings.
    m. Field records for variable and concealed conditions.
    n. Record information on the Work that is shown only schematically.

3. Mark the Contract Drawings and Shop Drawings completely and accurately. Use personnel proficient at recording graphic information in production of marked-up record prints.
4. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
5. Mark important additional information that was either shown schematically or omitted from original Drawings.
6. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.

2.3 RECORD SPECIFICATIONS

A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.

1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.

3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.
4. Note related Change Orders, record Product Data, and record Drawings where applicable.

B. Format: Submit record Specifications as scanned PDF electronic file(s) of marked-up paper copy of Specifications.

2.4 RECORD PRODUCT DATA

A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.

1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
3. Note related Change Orders, record Specifications, and record Drawings where applicable.

B. Format: Submit record Product Data as scanned PDF electronic file(s) of marked-up paper copy of Product Data.

1. Include record Product Data directory organized by Specification Section number and title, electronically linked to each item of record Product Data.

2.5 MISCELLANEOUS RECORD SUBMITTALS

A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

B. Format: Submit miscellaneous record submittals as scanned PDF electronic file(s) of marked-up miscellaneous record submittals.

1. Include miscellaneous record submittals directory organized by Specification Section number and title, electronically linked to each item of miscellaneous record submittals.

PART 3 - EXECUTION

3.1 RECORDING AND MAINTENANCE

A. Recording: Maintain one copy of each submittal during the construction period for project record document purposes. Post changes and revisions to project record documents as they occur; do not wait until end of Project.

B. Maintenance of Record Documents and Samples: Store record documents and Samples in the field office apart from the Contract Documents used for construction. Do not use project record documents for construction purposes. Maintain record documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to project record documents for Architect's reference during normal working hours.

END OF SECTION

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SECTION 01 7900

DEMONSTRATION AND TRAINING

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for instructing Owner's personnel, including the following:

1. Demonstration of operation of systems, subsystems, and equipment.
2. Training in operation and maintenance of systems, subsystems, and equipment.

1.2 SUBMITTALS

A. Instruction Program: Submit outline of instructional program for demonstration and training, including a list of training modules and a schedule of proposed dates, times, length of instruction time, and instructors' names for each training module. Include learning objective and outline for each training module.

1. Indicate proposed training modules using manufacturer-produced demonstration and training video recordings for systems, equipment, and products.

B. Qualification Data: For instructor.

C. Attendance Record: For each training module, submit list of participants and length of instruction time.

D. Evaluations: For each participant and for each training module, submit results and documentation of performance-based test.

1.3 QUALITY ASSURANCE

A. Instructor Qualifications: A factory-authorized service representative, complying with requirements in Division 01 Section "Quality Requirements," experienced in operation and maintenance procedures and training.

B. Preinstruction Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination." Review methods and procedures related to demonstration and training including, but not limited to, the following:

1. Inspect and discuss locations and other facilities required for instruction.
2. Review and finalize instruction schedule and verify availability of educational materials, instructors' personnel, audiovisual equipment, and facilities needed to avoid delays.
3. Review required content of instruction.
4. For instruction that must occur outside, review weather and forecasted weather conditions and procedures to follow if conditions are unfavorable.

1.4 COORDINATION

A. Coordinate instruction schedule with Owner's operations. Adjust schedule as required to minimize disrupting Owner's operations and to ensure availability of Owner's personnel.

B. Coordinate instructors, including providing notification of dates, times, length of instruction time, and course content.

C. Coordinate content of training modules with content of approved emergency, operation, and maintenance manuals.

PART 2 - PRODUCTS

2.1 INSTRUCTION PROGRAM

A. Program Structure: Develop an instruction program that includes individual training modules for each system and for equipment not part of a system, as required by individual Specification Sections.

B. Training Modules: Develop a learning objective and teaching outline for each module. Include a description of specific skills and knowledge that participant is expected to master. For each module, include instruction for the following as applicable to the system, equipment, or component:

1. Basis of System Design, Operational Requirements, and Criteria: Include the following:

   a. System, subsystem, and equipment descriptions.
   b. Performance and design criteria if Contractor is delegated design responsibility.
   c. Operating standards.
   d. Regulatory requirements.
   e. Equipment function.
   f. Operating characteristics.
   g. Limiting conditions.
   h. Performance curves.

2. Documentation: Review the following items in detail:

   a. Emergency manuals.
   b. Operations manuals.
   c. Maintenance manuals.
   d. Project record documents.
   e. Identification systems.
   f. Warranties and bonds.
   g. Maintenance service agreements and similar continuing commitments.

3. Emergencies: Include the following, as applicable:

   a. Instructions on meaning of warnings, trouble indications, and error messages.
   b. Instructions on stopping.
   c. Shutdown instructions for each type of emergency.
   d. Operating instructions for conditions outside of normal operating limits.
   e. Sequences for electric or electronic systems.
   f. Special operating instructions and procedures.

4. Operations: Include the following, as applicable:

   a. Startup procedures.
   b. Equipment or system break-in procedures.
   c. Routine and normal operating instructions.
   d. Regulation and control procedures.
   e. Control sequences.
   f. Safety procedures.
   g. Instructions on stopping.
   h. Normal shutdown instructions.
   i. Operating procedures for emergencies.
   j. Operating procedures for system, subsystem, or equipment failure.
   k. Seasonal and weekend operating instructions.
   l. Required sequences for electric or electronic systems.
   m. Special operating instructions and procedures.

5. Adjustments: Include the following:

   a. Alignments.
   b. Checking adjustments.
   c. Noise and vibration adjustments.
   d. Economy and efficiency adjustments.

6. Troubleshooting: Include the following:

   a. Diagnostic instructions.
   b. Test and inspection procedures.

7. Maintenance: Include the following:

   a. Inspection procedures.
   b. Types of cleaning agents to be used and methods of cleaning.
   c. List of cleaning agents and methods of cleaning detrimental to product.
   d. Procedures for routine cleaning
   e. Procedures for preventive maintenance.
   f. Procedures for routine maintenance.
   g. Instruction on use of special tools.

8. Repairs: Include the following:

   a. Diagnosis instructions.
   b. Repair instructions.
   c. Disassembly; component removal, repair, and replacement; and reassembly instructions.
   d. Instructions for identifying parts and components.
   e. Review of spare parts needed for operation and maintenance.

PART 3 - EXECUTION

3.1 PREPARATION

A. Assemble educational materials necessary for instruction, including documentation and training module. Assemble training modules into a training manual organized in coordination with requirements in Division 01 Section "Operations and Maintenance Data."

B. Set up instructional equipment at instruction location.

3.2 INSTRUCTION

A. Engage qualified instructors to instruct Owner's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.

1. Owner will furnish Contractor with names and positions of participants.

B. Scheduling: Provide instruction at mutually agreed on times. For equipment that requires seasonal operation, provide similar instruction at start of each season.

1. Schedule training with Owner with at least seven days' advance notice.

C. Training Location and Reference Material: Conduct training on-site in the completed and fully operational facility using the actual equipment in-place. Conduct training using final operation and maintenance data submittals.

D. Evaluation: At conclusion of each training module, assess and document each participant's mastery of module by use of a demonstration performance-based test.

E. Cleanup: Collect used and leftover educational materials and remove from Project site. Remove instructional equipment. Restore systems and equipment to condition existing before initial training use.

END OF SECTION

UNIVERSITY MEDICAL CENTER
7TH FLOOR RENOVATION
LAS VEGAS, NEVADA

SECTION 02 4119

SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes selective removal and subsequent offsite disposal of portions of existing building indicated on drawings and as required to accommodate new construction.

1.2 DEFINITIONS

A. Remove: Detach items from existing construction and legally dispose of them off-site, unless indicated to be removed and salvaged or removed and reinstalled.

B. Remove and Salvage: Detach items from existing construction and deliver them to Owner's designated storage area.

C. Remove and Reinstall: Detach items from existing construction, prepare them for reuse, and reinstall them where indicated.

D. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.3 MATERIALS OWNERSHIP

A. Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, demolished materials shall become Contractor's property and shall be removed from Project site.

1.4 SUBMITTALS

A. Qualification Data: For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.

B. Proposed Dust-Control and Noise-Control Measures: Submit statement or drawing that indicates the measures proposed for use, proposed locations, and proposed time frame for their operation. Identify options if proposed measures are later determined to be inadequate.

C. Schedule of Selective Demolition Activities: Indicate the following:

1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Owner's on-site operations are uninterrupted.
2. Interruption of utility services.
3. Coordination for shutoff, capping, and continuation of utility services.
4. Use of elevator and stairs.
5. Locations of temporary partitions and means of egress.

6. Coordination of Owner's continuing occupancy of portions of existing building and of Owner's partial occupancy of completed Work.

D. Inventory: After selective demolition is complete, submit a list of items that have been removed and salvaged.

E. Predemolition Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including finish surfaces, that might be misconstrued as damage caused by selective demolition operations. Submit before Work begins.

1.5 QUALITY ASSURANCE

A. Demolition Firm Qualifications: An experienced firm that has specialized in demolition work similar in material and extent to that indicated for this Project.

B. Professional Engineer Qualifications: Comply with Division 01 Section "Quality Requirements."

C. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction. Comply with applicable regulations, codes and ordinances.

D. Standards: Comply with ANSI A10.6 and NFPA 241.

E. Predemolition Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination." Review methods and procedures related to selective demolition including, but not limited to, the following:

1. Inspect and discuss condition of construction to be selectively demolished.
2. Review structural load limitations of existing structure.
3. Review and finalize selective demolition schedule.
4. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.

1.6 PROJECT CONDITIONS

A. Occupied Buildings:

1. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted. Provide not less than 5 days notice to Owner of activities that will affect Owner's operations.
2. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities.

B. Owner assumes no responsibility for condition of areas to be selectively demolished. Conditions existing at time of inspection for bidding will be maintained by Owner as far as practical.

C. Hazardous Materials: Hazardous materials are suspected (specifically existing floor covering adhesives), do not disturb until a removal plan is in place. Hazardous materials shall be removed by Owner in accordance with all regulatory requirements. Contractor will be required to monitor air during construction.

D. Storage or sale of removed items or materials on-site will not be permitted.

E. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.

1. Maintain fire-protection facilities in service during selective demolition operations.

1.7 WARRANTY

A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials so as not to void existing warranties.

PART 2 - PRODUCTS

2.1 REPAIR MATERIALS

A. Use repair materials identical to existing materials.

1. If identical materials are unavailable or cannot be used for exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.
2. Use materials whose installed performance equals or surpasses that of existing materials.

B. Comply with material and installation requirements specified in individual Specification Sections.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that utilities have been disconnected and capped.

B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.

C. Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.

D. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.

E. Engage a professional engineer to survey condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective demolition operations.

F. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.

3.2 UTILITY SERVICES

A. Existing Utilities: Maintain services indicated to remain and protect them against damage during selective demolition operations.

B. Occupied Buildings: Do not interrupt existing utilities serving occupied or operating facilities unless authorized in writing by Owner and authorities having jurisdiction. Provide temporary services during interruptions to existing utilities, as acceptable to Owner and to authorities having jurisdiction.

1. Provide at least 5 days notice to Owner if shutdown of service is required during changeover.

3.3 PREPARATION

A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

1. Do not close or obstruct streets, walks, walkways, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.
2. Erect temporary protection, such as walks, fences, railings, canopies, and covered passageways, where required by authorities having jurisdiction.
3. Protect existing site improvements, appurtenances, and landscaping to remain.

B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.

1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
4. Cover and protect furnishings, and equipment that have not been removed.

C. Temporary Enclosures: Provide temporary enclosures for protection of existing building and construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.

1. Where heating or cooling is needed and permanent enclosure is not complete, provide insulated temporary enclosures. Coordinate enclosure with ventilating and material drying or curing requirements to avoid dangerous conditions and effects.

D. Temporary Partitions: Erect and maintain dustproof partitions and temporary enclosures to limit dust and dirt migration and to separate areas from fumes and noise.

E. Temporary Shoring: Provide and maintain shoring, bracing, or structural support to preserve stability and prevent movement, settlement, or collapse of construction to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished. Strengthen or add new supports when required during progress of selective demolition.

3.4 POLLUTION CONTROLS

A. Dust Control: Use water mist, temporary enclosures, and other suitable methods to limit spread of dust and dirt. Comply with governing environmental-protection regulations.

1. Do not use water when it may damage existing construction or create hazardous or objectionable conditions, such as ice, flooding, and pollution.
2. Wet mop floors to eliminate trackable dirt and wipe down walls and doors of demolition enclosure. Vacuum carpeted areas.
3. Monitor air quality during entire construction period.

B. Disposal: Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

1. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.

C. Cleaning: Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

3.5 SELECTIVE DEMOLITION

A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:

1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction.
3. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
4. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
5. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, verify condition and contents before starting flame-cutting operations.
6. Maintain portable fire-suppression devices during flame-cutting operations.
7. Maintain adequate ventilation when using cutting torches.
8. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
9. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
10. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
11. Dispose of demolished items and materials promptly.
12. Return elements of construction and surfaces that are to remain to condition existing before selective demolition operations began.

B. Existing Facilities: Comply with building manager's requirements for using and protecting elevators, stairs, walkways, loading docks, building entries, and other building facilities during selective demolition operations.

C. Removed and Salvaged Items: Comply with the following:

1. Clean salvaged items.
2. Pack or crate items after cleaning. Identify contents of containers.
3. Store items in a secure area until delivery to Owner.
4. Transport items to Owner's storage area designated by Owner.
5. Protect items from damage during transport and storage.

D. Removed and Reinstalled Items: Comply with the following:

1. Clean and repair items to functional condition adequate for intended reuse. Paint equipment to match new equipment.
2. Pack or crate items after cleaning and repairing. Identify contents of containers.
3. Protect items from damage during transport and storage.
4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

E. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and reinstalled in their original locations after selective demolition operations are complete.

3.6 PATCHING AND REPAIRS

A. General: Promptly repair damage to adjacent construction caused by selective demolition operations.

B. Repairs: Where repairs to existing surfaces are required, patch to produce surfaces suitable for new materials.

1. Completely fill holes and depressions in existing concrete or masonry that are to remain with an approved masonry patching material applied according to manufacturer's written recommendations.

3.7 DISPOSAL OF DEMOLISHED MATERIALS

A. General: Promptly dispose of demolished materials. Do not allow demolished materials to accumulate on-site.

B. Burning: Do not burn demolished materials.

C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

3.8 SELECTIVE DEMOLITION SCHEDULE

A. Refer to the drawings.

END OF SECTION

UNIVERSITY MEDICAL CENTER
7TH FLOOR RENOVATION
LAS VEGAS, NEVADA

SECTION 03 0150

CONCRETE PATCHING

PART 1 - GENERAL

1.1 SUMMARY

A. Work required for this section includes non-structural concrete patching and supplementary items necessary to complete their installation.

1.2 SUBMITTALS

A. Product Data: Submit copies of manufacturers' technical literature for specified products. Submittal(s) shall identify location(s) of Contractor's intended application of product(s).

1. Include manufacturer's specifications for materials, finishes, construction details, installation instructions, and recommendations for maintenance.

B. Product Test Reports: Written reports based on evaluation of comprehensive tests performed by qualified testing agency indicating that each product complies with requirements.

C. Manufacturer(s) Project Acceptance Document: Certification by the manufacturer that its product(s) are approved, acceptable, suitable for use in specific locations, for specific details, and for applications indicated, specified, or required, and that a warranty will be issued.

D. Qualification Data: For manufacturer and installer.

1. For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of Architects and Owners, and other information specified.

1.3 QUALITY ASSURANCE

A. Manufacturer Qualifications: Manufacturer with not less than 5 years experience with successful production of products and systems similar to scope of this Project, with a record of successful in-service performance and completion of projects for a period of not less than 5 years and with sufficient production capability, facilities, and personnel to produce required Work.

B. Installer Qualifications:

1. Experience: Installer with not less than 5 years experience in performing specified Work similar to scope of this Project, with a record of successful in-service performance and completion of projects for a period of not less than 5 years and with sufficient production capability, facilities, and personnel to produce required Work.
2. Supervision: Installer shall maintain a competent supervisor who is at Project site during times specified Work is in progress that is experienced in installing systems similar to type and scope required for Project.
3. Manufacturer Acceptance: Installer shall be certified, approved, licensed, or acceptable to manufacturer to install products.

C. Manufacturer's Technical Representative Qualifications: Direct employee of technical services department of manufacturer with minimum of 5 years experience in providing recommendations, observations, evaluations, and problem diagnostics. Sales representatives are not acceptable.

D. Fire Rated Assemblies: Perform patching of fire rated assemblies using materials and procedures to maintain fire rating of existing assembly.

1.4 PROJECT CONDITIONS

A. Environmental Limitations: Do not apply patching and repair material when air and substrate temperatures are outside limits permitted by manufacturer.

B. Hot-Weather Requirements: Protect repair work when temperature and humidity conditions produce excessive evaporation of water from patching materials. Provide artificial shade and wind breaks, and use cooled materials as recommended by manufacturer.

PART 2 - PRODUCTS

2.1 MANUFACTURERS AND PRODUCTS

A. Available Manufacturers and Products: Subject to compliance with requirements of Contract Documents as judged by the Architect, manufacturers offering products that may be incorporated into Work include but are not limited to those listed.

2.2 MATERIALS, GENERAL

A. Source Limitations: Obtain each type of cement of the same brand from the same manufacturer's plant, each aggregate from one source, and each admixture from the same manufacturer.

2.3 MATERIAL

A. Epoxy-Resin Bonding Adhesives: ASTM C 881, Type II.

1. Suitable for use on dry or damp surfaces.
2. Epoxy Adhesive for Bonding Plastic Concrete to Hardened Concrete: Conform to requirements of ACI 503.2-92 (R97), unless modified herein.
3. Epoxy Adhesive for Bonding Hardened Concrete, Steel, Wood, Brick, and other Materials to Hardened Concrete: Conform to requirements of ACI 503.1-92 (R97), unless modified herein.
4. Manufacturers:

a. BASF
b. Euclid Chemical Company
c. Sika Corporation
d. W.R. Meadows

B. Latex Bonding Agents, Admixtures, and Adhesives: ASTM C 1059, Type II.

1. Acceptable at non-structural and structural bonding applications, interior or exterior, unless noted otherwise in Contract Documents.
2. Use only acrylic or styrene butadiene latex based adhesives.
3. Manufacturers and Products:

a. Euclid Chemical Company; SBR Latex
b. L & M Construction Chemicals; Everbond

c. W.R. Meadows, Inc.; ACRY-LOK

C. Patching Mortar: Packaged, dry mix polymer-modified, cementitious patching mortar complying with ASTM C 928 that contains a non-redispersible latex additive as either a dry powder or a separate liquid that is added during mixing.

D. Coarse Aggregate: Washed aggregate complying with ASTM C 33, Size No. 8, Class 5S. Add only as permitted by patching mortar manufacturer.

E. Epoxy Joint Filler: Two-component, semirigid, 100 percent solids, epoxy resin with a Shore A hardness of 80 per ASTM D 2240.

F. Self-Leveling Concrete Underlayment: Non-traffic-bearing, cement-based, polymer-modified, self-leveling product that can be applied in thicknesses from 1/4 in (6 mm).

1. Description: Cement-based, polymer-modified, self-leveling product that can be applied in thicknesses from 1/8 in (3 mm) to 1 in (25 mm) and that can be feathered at edges to match adjacent floor elevations. Interior use only, unless exterior application recommended by manufacturer within written literature.
2. Cement Binder: ASTM C 150, portland cement or hydraulic or blended hydraulic cement as defined in ASTM C 219.
3. Primer: Product of underlayment manufacturer recommended for substrate, conditions, and application.
4. Aggregate: Well-graded, washed sand as recommended by underlayment manufacturer.
5. Compressive Strength: 4,000 psi minimum at 28 days when tested according to ASTM C 109.
6. Substrate Preparation: As recommended by product manufacturer.
7. Manufacturers: (Consult manufacturer for specific product and compatibility with substrate conditions. Subject to Architect's and Engineer's review and approval.)

   a. Ardex, Inc.
   b. BASF
   c. Euclid Chemical Co.

G. Self-Leveling Concrete Topping: Traffic-bearing, cement-based, polymer-modified, self-leveling product that can be applied in thicknesses from 1/4 in (6 mm).

1. Description: Cement-based, polymer-modified, self-leveling product that can be applied in thicknesses from 1/2 in (12 mm) to 2 in (50 mm). Consult manufacturer for thickness exceeding 2 in (50 mm). Interior use only, unless exterior application recommended by manufacturer within written literature.
2. Cement Binder: ASTM C 150, portland cement or hydraulic or blended hydraulic cement as defined in ASTM C 219.
3. Primer: Product of topping manufacturer recommended for substrate, conditions, and application.
4. Aggregate: Well-graded, washed gravel, 1/8 in (3 mm) to 3/8 in (10 mm) or coarse sand as recommended by topping manufacturer for specific application thickness. No coarse aggregate permitted for thicknesses of 1 in (25 mm) or less.
5. Compressive Strength: 5,000 psi minimum at 28 days when tested according to ASTM C 109.
6. Substrate Preparation: As recommended by product manufacturer.
7. Manufacturers: (Consult manufacturer for specific product and compatibility with substrate conditions. Subject to Architect's and Engineer's review and approval.)

   a. Ardex, Inc.

b. BASF
c. Euclid Chemical Co.
d. Sika Corp.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Acceptance of Surfaces and Conditions: Examine substrates to receive products and systems and associated work for compliance with requirements and other conditions affecting performance. Proceed only when unsatisfactory conditions have been corrected in a manner complying with Contract Documents. Starting work within a particular area will be construed as acceptance of surface conditions.

3.2 INSTALLATION, GENERAL

A. Installation Quality Standards: In addition to standards listed elsewhere, perform Work according to following, unless otherwise specified:

1. Respective manufacturer/fabricator's written installation instructions.
2. Accepted submittals.
3. Contract Documents.

3.3 PREPARATION

A. General: Comply with manufacturer's instructions, recommendations, and specifications for cleaning and surface preparation. Surfaces shall have no defects, contaminants, or errors which would result in poor or potentially defective installation or would cause latent defects in Work.

B. Concrete Removal: Saw-cut perimeter of areas indicated for removal to a depth of at least 1/2 in (12 mm). Make cuts perpendicular to concrete surfaces and no deeper than cover on reinforcing. Remove loose and deteriorated concrete.

C. Preparation of Floor Joints: Saw-cut joints full width to edges of spalls and to a depth of at least 3/4 in (19 mm). Clean out debris and loose concrete; vacuum or blow clear with compressed air.

D. Surface Preparation for Patching Mortar: Clean concrete by scarifying or sand blasting to remove dirt, oils, films, and other materials detrimental to patching application. Allow surface to dry before applying mortar.

E. Surface Preparation for Toppings: Remove delaminated material and deteriorated concrete surface material. Roughen surface of concrete by shot blasting, to produce a surface profile recommended by manufacturer. Sweep and vacuum roughened surface to remove debris followed by low-pressure water cleaning.

3.4 APPLICATION

A. Epoxy Bonding Agent: Apply to reinforcing bars and concrete by brush, roller, or spray according to manufacturer's written instructions, leaving no pinholes or other uncoated areas. Apply to reinforcing bars in at least two coats, allowing first coat to dry before applying second coat. Apply patching mortar or concrete while epoxy is still tacky. If bonding agent dries, recoat before placing patching mortar or concrete.

B. Latex Bonding Agent, Type II: Mix with Portland cement and scrub into concrete surface according to manufacturer's written instructions. If bonding agent dries, recoat before placing patching mortar or concrete.

C. Latex Bonding Agent, Type I: Apply to concrete by brush roller or spray. Allow to dry before placing patching mortar or concrete.

D. Patching Mortar: Unless otherwise recommended by manufacturer, apply as follows:

1. Wet substrate thoroughly and then remove standing water. Scrub slurry of neat patching mortar into substrate, filling pores and voids.
2. Place patching mortar by troweling toward edges of patch to force intimate contact with edge surfaces. For large patches, fill edges first and then work toward center, always troweling toward edges of patch. At fully exposed reinforcing bars, force patching mortar to fill space behind bars by compacting with trowel from sides of bars.
3. For vertical patching, place material in lifts of not more than 1 in (25 mm) or less than 1/4 in (6 mm). Do not feather edge.
4. For overhead patching, place material in lifts of not more than 1/2 in (12 mm) or less than 1/8 in (3 mm). Do not feather edge.
5. After each lift is placed, consolidate material and screed surface.
6. Where multiple lifts are used, score surface of lifts to provide a rough surface for application of subsequent lifts. Allow each lift to reach final set before placing subsequent lifts.
7. Allow surfaces of lifts that are to remain exposed to become firm and then finish to match adjacent surface.
8. Wet-cure cementitious patching materials, including polymer-modified, cementitious patching materials, for not less than seven days by water-fog spray or water-saturated absorptive cover.

E. Epoxy Joint Filler: Install in nonmoving floor joints where indicated.

1. Install filler to a depth of at least 1 in (25 mm). Use fine silica sand no more than 1/4 in (6 mm) deep to close base of joint. Do not use sealant backer rods or compressible fillers below joint filler.
2. Install filler so that when cured, it is flush at top surface of adjacent concrete. If necessary, overfill joint and remove excess when filler has cured.

F. Topping or Underlayment: Mix and apply self leveling components according to manufacturer's written instructions.

1. Apply primer over prepared substrate at manufacturer's recommended spreading rate.
2. Apply to produce uniform, level surface.
3. Add aggregate for thicker areas as recommended by manufacturer.
4. Apply a final layer without aggregate if required to produce smooth surface.
5. Feather edges to match adjacent floor elevations.
6. Cure according to manufacturer's written instructions.
7. Prevent contamination during application and curing processes.
8. For areas which are to have finish flooring, use self-leveling concrete underlayment.

9. For areas which will be exposed as wearing surface, use self-leveling concrete topping.

3.5 FIELD QUALITY CONTROL

A. Manufacturer's Field Service: Manufacturer's qualified technical representative shall inspect first day's Work and periodically inspect Work to ensure installation is proceeding in accordance with manufacturer's designs, recommendations, instructions, and warranty requirements. Representative shall submit written reports of each visit indicating observations, findings, and conclusions of inspection.

END OF SECTION

SECTION 05 5000

METAL FABRICATIONS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: Metal fabrications and supplementary items necessary for installation.

1.2 DEFINITIONS

A. Interior: Areas located in conditioned spaces.

1.3 SUBMITTALS

A. Product Data: Manufacturer/fabricator's technical literature for each product and system indicated.

1. Include manufacturer/fabricator's specifications for materials, finishes, construction details, installation instructions, and recommendations for maintenance.

B. Shop Drawings: Show details of fabrication and installation, including plans, elevations, sections, details of components and attachments to other work. Distinguish between shop and field-assembled work.

C. Welding Certifications: Certificates for welding procedures and personnel.

D. Product Test Reports: Written reports based on evaluation of comprehensive tests performed by qualified testing agency indicating that each product complies with requirements.

E. Field Quality Control Reports: Written report of testing and inspection required by "Field Quality Control".

F. Manufacturer/Fabricator's Project Acceptance Document: Certification that products are approved, acceptable, suitable for use in specific locations, for specific details, and for applications indicated, specified, or required.

G. Qualification Data: For manufacturer/fabricator and installer.

1. For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of Architects and Owners, and other information specified.

1.4 QUALITY ASSURANCE

A. Manufacturer/Fabricator Qualifications: Manufacturer/fabricator with not less than 5 years experience with successful production of products and systems similar to scope of this Project, with a record of successful in-service performance and completion of projects for a period of not less than 5 years, and with sufficient production capability, facilities and personnel, to produce required Work.

B. Installer Qualifications:

1. Experience: Installer with not less than 5 years experience in performing specified Work similar to scope of this Project, with a record of successful in-service performance and completion of projects for a period of not less than 5 years, and with sufficient production capability, facilities and personnel, to produce required Work.
2. Supervision: Installer shall maintain a competent supervisor who is at Project during times specified Work is in progress, and, who is experienced in installing systems similar to type and scope required for Project.

C. Manufacturer/Fabricator's Technical Representative Qualifications: Direct employee of technical services department of manufacturer/fabricator with minimum of 5 years experience in providing recommendations, observations, evaluations, and problem diagnostics. Sales representatives are not acceptable.

D. Welding Qualifications: Qualify procedures and personnel according to following:

1. AWS D1.1/D1.1M, "Structural Welding Code - Steel".
2. AWS D1.3/D1.3M, "Structural Welding Code - Sheet Steel".
3. AWS D1.6/D1.6M, "Structural Welding Code - Stainless Steel".
4. AWS D1.2/D1.2M, "Structural Welding Code - Aluminum".

1.5 PRE-INSTALLATION CONFERENCE

A. Pre-Installation Conference: Before Work begins, conduct conference at Project site to comply with requirements of applicable Division 01 Sections.

1. Required Attendees:

a. Owner.
b. Architect.
c. Contractor, including superintendent.
d. Installer, including project manager and supervisor.
e. Manufacturer/fabricator’s qualified technical representative.
f. Installers of other construction interfaced with Work.

2. Minimum Agenda: Installer shall demonstrate understanding of the Work required by describing detailed procedures for preparing, installing, and cleaning the Work. Demonstration shall include, but not be limited to, following topics:

a. Tour representative areas of Work, inspect and discuss condition of substrate, and other preparatory work performed by other trades.
b. Review Work requirements (Drawings, Specifications, and other Contract Documents).
c. Review required submittals, both completed and yet to be completed.

d. Review and finalize construction schedule related to Work and verify availability of materials, installer's personnel, equipment, and facilities needed to make progress and avoid delays.
e. Review required inspection, testing, certifying, and material usage accounting procedures.
f. Review environmental conditions and procedures for coping with unfavorable conditions.
g. Resolve deviations or differences between Contract Documents and the manufacturer/fabricator's specifications.

3. Contractor shall record discussions of conference, including decisions and agreements reached, and furnish copy of record to each party attending. If substantial disagreements exist at conclusion of conference, determine how disagreements will be resolved and set date for reconvening conference.

1.6 PROJECT CONDITIONS

A. Field Measurements: Where products and systems are indicated to fit walls and other construction, verify dimensions by field measurements before fabrication and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

1.7 COORDINATION

A. Coordinate installation of products and systems with interfacing and adjoining construction to provide a successful installation without failure.

B. Coordinate installation of anchorages for metal fabrications. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

PART 2 - PRODUCTS

2.1 MANUFACTURER/FABRICATORS AND PRODUCTS

A. Available Manufacturers/Fabricators and Products: Subject to compliance with requirements of Contract Documents as judged by the Architect, manufacturers/fabricators offering products that may be incorporated into the Work include but are not limited to those listed.

B. Basis of Design (Product Standard): Contract Documents are based on products and systems specified to establish a standard of quality. Other available manufacturers/fabricators offering products having equivalent characteristics may be considered, provided deviations are minor and comply with requirements of Contract Documents as judged by the Architect.

2.2 MATERIALS, GENERAL

A. Single Source Responsibility: Furnish each type of product from single manufacturer/fabricator. Provide secondary materials only as recommended by manufacturer/fabricator of primary materials.

2.3 FERROUS METAL MATERIALS

A. Metal Surfaces, General: Provide materials with smooth surfaces, without seam marks, roller marks, rolled trade names, stains, discolorations, blemishes, or other imperfections where exposed to view on finished units. Do not use steel sheet with variations in flatness exceeding those permitted by referenced standards for stretcher-leveled sheet.

1. Provide uncoated ferrous metal at interior exposures.
2. Provide galvanized metal where indicated on drawings or if not indicated, then at unconditioned spaces and at exterior exposures.

B. Cold-Formed Hollow Structural Sections (Indicated by HSS designation for Square, Rectangular, or Round shapes): ASTM A 500, Grade B structural tubing.

C. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.

D. Steel Tubing: ASTM A 500, cold-formed steel tubing.

E. Steel Pipe: ASTM A 53/A 53M, standard weight (Schedule 40) unless another weight is indicated or required by structural loads.

F. Stainless Steel:

1. Stainless-Steel Sheet, Strip, and Plate: ASTM A 240/A 240M or ASTM A 666, Type 316L.
2. Stainless-Steel Bars and Shapes: ASTM A 276, Type 316L.
3. Rolled-Stainless-Steel Floor Plate: ASTM A 793.

2.4 NON-FERROUS METAL MATERIALS

A. Aluminum Plate and Sheet: ASTM B 209/B 209M, Alloy 6061-T6.

B. Aluminum Extrusions: ASTM B 221/B 221M, Alloy 6063-T6.

2.5 FASTENERS

A. Fastener Type and Material: Select fasteners for type, grade, and class required to produce connections suitable for anchoring fabrications to other types of construction indicated.

B. Steel Bolts and Nuts: Regular hexagon-head bolts, ASTM A 307/F 568M, Grade A/ ASTM F 568M, Property Class 4.6; with hex nuts, ASTM A 563/A 563M; and, where indicated, flat washers.

C. Stainless Steel Bolts and Nuts: Regular hexagon-head annealed stainless-steel bolts, ASTM F 593/F 738M; with hex nuts, ASTM F 594/F 836M; and, where indicated, flat washers; Alloy Group 1 (A1) for Type 304.

D. Anchor Bolts: ASTM F 1554, Grade 36, of dimensions indicated; with nuts, ASTM A 563/ A 563M; and, where indicated, flat washers. Hot-dip galvanize or provide mechanically deposited, zinc coating where item being fastened is indicated to be galvanized.

E. Plain Washers: Round carbon steel, ASME B18.22.1/ASME B18.22M.

F. Lock Washers: Helical, spring type carbon steel, ASME B18.21.1/ASME B18.21.2M.

G. Eyebolts: ASTM A 489.

H. Machine Screws: ASME B18.6.3/B18.6.7M.

I. Lag Screws: ASME B18.2.1/B18.2.3.8M.

J. Wood Screws: ASME B18.6.1, flat head, carbon steel.

2.6 ANCHORS

A. General: Provide anchors capable of sustaining, without failure, a load equal to 6 times load imposed when installed in unit masonry and 4 times load imposed when installed in concrete, as determined by testing according to ASTM E 488, conducted by a qualified independent testing agency.

B. Cast-in-Place Anchors in Concrete: Bolts, washers, and shims as needed, either threaded type or wedge type unless otherwise indicated; galvanized ferrous castings, either ASTM A 47/A 47M malleable iron or ASTM A 27/A 27M cast steel; hot-dip galvanized according to ASTM F 2329.

C. Post-Installed Anchors: Torque-controlled expansion anchors or chemical anchors.

1. Material for Interior Locations: Carbon steel components zinc plated to comply with ASTM B 633 or ASTM F 1941/F 1941M, Class Fe/Zn 5, unless otherwise indicated.
2. Material for Exterior Locations: Alloy Group 1 (A1) for Type 304 stainless steel bolts, ASTM F 593/F 738M, and nuts, ASTM F 594/F 836M.
3. Post-Tensioned Concrete Locations: Anchors shall not exceed 1 in (25 mm) embedment. Obtain Structural Engineer’s written approval for all proposed anchors in post-tensioned concrete prior to installation.

2.7 PAINT MATERIALS

A. Paint for Ferrous Metal Fabrications at Interior: For metal fabrications within building interiors not subject to rain, snow, ice, and variations in temperature and humidity.

1. Shop Primer for Exposed Interior Locations: As specified in Division 09 Section "Painting".

2.8 ACCESSORY ITEMS

A. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.

B. Concrete Materials and Properties: Comply with requirements in Division 3 Section "Cast-in-Place Concrete" for normal-weight, air-entrained, ready-mix concrete with minimum 28 day compressive strength of 3000 psi (210.92 k/cm), unless otherwise indicated.

C. Non-shrink, Non-metallic Grout: Factory-packaged, non-staining, non-corrosive, non-gaseous grout complying with ASTM C 1107. Provide grout specifically recommended by manufacturer/fabricator for interior and exterior applications.

2.9 FABRICATION, GENERAL

A. General: Fabricate metal fabrications, including clips, brackets, and other components necessary to support and anchor fabrications to supporting structure, and to comply with requirements indicated for design, dimensions, member sizes and spacing, details, finish, and anchorage.

1. Join components by welding unless otherwise indicated.

B. Shop Assembly: Assemble items in shop to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Use connections that maintain structural value of joined pieces.

C. Fabrication Requirements:

1. Shear and punch metals cleanly and accurately. Remove burrs and ease exposed edges to a radius of approximately 1/32 in (0.8 mm) unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.
2. Cut, reinforce, drill, and tap metal fabrications as indicated to receive finish hardware, screws, and similar items.
3. Form work true to line and level with accurate angles and surfaces and straight sharp edges.
4. Form bent-metal corners to smallest radius possible without causing grain separation or otherwise impairing work.

D. Assembly Requirements:

1. Provide for anchorage of type indicated; coordinate with supporting structure. Fabricate and space anchoring devices to secure metal fabrications rigidly in place and to support indicated loads.
2. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners where possible. Where exposed fasteners are required, use Phillips flat-head (countersunk) screws or bolts unless otherwise indicated. Locate joints where least conspicuous.
3. Where units are indicated to be cast into concrete or built into masonry, equip with integrally welded steel strap anchors, 1/4 in by 1-1/4 in (6 mm by 31 mm), with a minimum 6 in (150 mm) embedment and 2 in (50 mm) hook, not less than 8 in (200 mm) from ends and corners of units and 24 in (600 mm) on center, unless otherwise indicated.
4. Complete fabrication prior to shop painting or hot-dip galvanizing.

E. Shop-Welded Connections: Cope components at connections to provide close fit, or use fittings designed for this purpose. Weld all around at connections, including at fittings. Weld corners and seams continuously to develop full strength of member to comply with following:

1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
2. Obtain fusion without undercut or overlap.
3. Remove welding flux immediately.
4. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.

2.10 MISCELLANEOUS FRAMING AND SUPPORTS

A. General: Provide steel framing and supports that are not a part of structural framework as necessary to complete the Work.

B. Fabricate units from structural-steel shapes, plates, and bars of welded construction, unless otherwise indicated. Fabricate to sizes, shapes, and profiles indicated and as necessary to receive adjacent construction retained by framing and supports. Cut, drill, and tap units to receive hardware, hangers, and similar items.

2.11 MISCELLANEOUS STEEL TRIM

A. Unless otherwise indicated, fabricate units from structural-steel shapes, plates, and bars of profiles shown with continuously welded joints, and smooth exposed edges. Miter corners and use concealed field splices where possible.

B. Provide cutouts, fittings, and anchorages as needed to coordinate assembly and installation with other work. Provide anchors, welded to trim, for embedding in concrete or masonry construction, spaced not more than 6 in (150 mm) from each end, 6 in (150 mm) from corners, and 24 in (600 mm) on center, unless otherwise indicated.

2.12 FINISHES, GENERAL

A. Finish Quality Standard: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

1. Finish metal fabrications after assembly.
2. Finish exposed surfaces to remove tool and die marks and stretch lines, and to blend into surrounding surface.

2.13 STEEL AND IRON FINISHES

A. Interior Fabrications:

1. Shop Priming for Concealed Interior Locations:

a. Preparation of Uncoated Surfaces: Prepare uncoated surfaces to comply with requirements of coating product to be used, but not less than minimum requirements of SSPC-SP 6/NACE No. 3 surface preparation specifications and environmental exposure conditions of installed fabrications.
b. Application: SSPC-PA 1; apply shop primer to uncoated surfaces, except those with galvanized finishes and those to be embedded in concrete, sprayed-on fireproofing, or masonry, unless otherwise indicated. Stripe paint corners, crevices, bolts, welds, and sharp edges.

2. Shop Priming for Exposed Interior Locations: Coordinate with Division 09 Section “Painting”.

a. Preparation of Uncoated Surfaces: Prepare uncoated surfaces to comply with requirements of coating product to be used, but not less than minimum requirements of SSPC-SP 6/NACE No. 3 surface preparation specifications and environmental exposure conditions of installed fabrications.
b. Application: SSPC-PA 1; apply shop primer to uncoated surfaces. Stripe paint corners, crevices, bolts, welds, and sharp edges.

2.14 STAINLESS-STEEL FINISHES

A. Surface Preparation: Remove tool and die marks and stretch lines, or blend into finish.

B. Polished Finishes: Grind and polish surfaces to produce uniform finish, free of cross scratches.

1. Directional Finishes: Run grain of directional finishes with long dimension of each piece.

C. Directional Satin Finish: No. 4.

2.15 ALUMINUM FINISHES

A. Finish designations prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.

B. Clear Anodic Finish for Interior Units: AAMA 611, AA-M12C22A31, Class II, 0.010 mm or thicker.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Acceptance of Surfaces and Conditions: Examine substrates to receive metal fabrications and associated Work for compliance with requirements and other conditions affecting performance. Proceed only when unsatisfactory conditions have been corrected in a manner complying with Contract Documents. Starting Work within a particular area will be construed as acceptance of surface conditions.

3.2 INSTALLATION, GENERAL

A. Installation Quality Standards: In addition to standards listed elsewhere, perform Work according to following, unless otherwise specified:

1. Respective manufacturer/fabricator's written installation instructions.
2. Accepted submittals.
3. Contract Documents.

B. Control of Corrosion: Prevent galvanic action and other forms of corrosion by isolating metals and other materials from direct contact with incompatible materials.

3.3 PREPARATION

A. General: Comply with manufacturer/fabricator's instructions, recommendations, and specifications for cleaning and surface preparation. Surfaces shall have no defects, contaminants, or errors which would result in poor or potentially defective installation or would cause latent defects in Work.

3.4 INSTALLATION OF METAL FABRICATIONS

A. Fastening to In-Place Construction: Provide anchorage devices and fasteners where necessary for securing metal fabrications to in-place construction. Include threaded fasteners for concrete and masonry inserts, through bolts, lag bolts, and other connectors.

B. Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installing metal fabrications. Set accurately in location, alignment, and elevation; with edges and surfaces level, plumb, true, and free of rack; and measured from established lines and levels.

C. Connections: Fit exposed connections accurately together to form hairline joints. Weld connections that are not to be left as exposed joints but cannot be shop welded because of shipping size limitations. Do not weld, cut, or abrade surfaces of exterior units that have been coated or finished after fabrication and are intended for bolted or screwed field connections or other means without further cutting or fitting.

D. Field Welding: Weld connections continuously to develop full strength of member to comply with following requirements:

1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
2. Obtain fusion without undercut or overlap.
3. Remove flux immediately.
4. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.

3.5 INSTALLATION OF MISCELLANEOUS ITEMS

A. General: Install framing and supports to comply with requirements of items being supported, including manufacturer/fabricators' written instructions and requirements indicated on Shop Drawings.

3.6 FIELD QUALITY CONTROL

A. Manufacturer/Fabricator’s Field Service: Manufacturer/fabricator’s qualified technical representative shall inspect first day’s Work and periodically inspect Work to ensure installation is proceeding in accordance with manufacturer/fabricator’s designs, recommendations, instructions, and warranty requirements. Representative shall submit written reports of each visit indicating observations, findings, and conclusions of inspection.

3.7 ADJUSTING AND CLEANING

A. Touch-Up Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas. Paint uncoated and abraded areas with same material as used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces. Apply by brush or spray to provide a minimum 2.0 mil (0.05 mm) dry film thickness.

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UNIVERSITY MEDICAL CENTER
7TH FLOOR RENOVATION
LAS VEGAS, NEVADA

SECTION 06 4023

INTERIOR ARCHITECTURAL WOODWORK

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: Shop-finished interior architectural woodwork and supplementary items necessary for installation.

B. Simulated Stone Countertops: Refer to Division 12 Section "Simulated Stone Countertops" for solid surfacing, quartz agglomerate, or cultured marble countertops incorporated into work specified in this Section. Simulated stone trim is specified in this Section.

1.2 DEFINITIONS

A. Interior architectural woodwork includes wood furring, blocking, shims, and hanging strips for installing woodwork items unless concealed within other construction before woodwork installation.

B. Exposed Surfaces, Semi-Exposed Surfaces, Concealed Surfaces, Types of Cabinet Construction, and other related terms are defined in referenced quality standards.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: Show location of each item, dimensioned plans and elevations, large-scale details, attachment devices, and other components.

1. Show details full size.
2. Show locations and sizes of furring, blocking, and hanging strips, including concealed blocking and reinforcement specified in other Sections.
3. Show locations and sizes of cutouts and holes for plumbing fixtures, faucets, soap dispensers, and other items installed in architectural woodwork.

C. Samples for Verification:

1. Items with Plastic Laminate Finish:

a. Plastic laminates, 8 in by 10 in (200 mm by 250 mm), for each type, color, pattern, and surface finish, with 1 sample applied to core material and specified edge material applied to 1 edge.

2. Simulated Stone Trim: 6 in (150 mm) long.
3. Cabinets:

a. Corner Piece: Cabinet-front frame joints between stiles and rails, as well as exposed end pieces, 18 in (450 mm) high by 18 in (450 mm) wide by 6 in (150 mm) deep.

b. Cabinet Hardware and Accessories: Exposed cabinet hardware and accessories, one unit for each type and finish.
c. Countertops: Section of countertop showing top, front edge, and backsplash construction.

D. Product Certificates: For each type of product, signed by manufacturers certifying that products furnished comply with requirements.

E. Qualification Data: For manufacturer/fabricator and installer.

1. For firms and persons specified in "Quality Assurance" to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of Architects and Owners, and other information specified.

1.4 QUALITY ASSURANCE

A. Manufacturer/Fabricator Qualifications: Manufacturer/fabricator with not less than 5 years experience with successful production of products and systems similar to scope of this Project, with a record of successful in-service performance and completion of projects for a period of not less than 5 years, and with sufficient production capability, facilities, and personnel to produce required Work.

1. Woodwork Fabricator Certification: Certified participant in AWI's Quality Certification Program or licensee of WI's Certified Compliance Program.

B. Installer Qualifications:

1. Experience: Installer with minimum of 5 years specialized experience in performing specified work similar in design, material and extent to scope of Project, and with a record of successful in-service performance.
2. Supervision: Installer shall maintain a competent supervisor who is on job site during times specified work is in progress, and, who is experienced in installing systems similar to type and scope required for Project.
3. Certification: Certified participant in AWI's Quality Certification Program or licensee of WI's Certified Compliance Program.

C. Quality Standard: Unless otherwise indicated, comply with one of the following for standards of interior architectural woodwork indicated and other requirements:

1. AWI's "Architectural Woodwork Quality Standards" for grades of interior architectural woodwork indicated for construction, finishes, installation, and other requirements.

a. Provide manufacturer certification indicating that woodwork complies with requirements of referenced quality standards.

2. WI's "Manual of Millwork" for grades of interior architectural woodwork indicated for construction, finishes, installation, and other requirements.

a. Provide manufacturer certification indicating that woodwork complies with requirements of referenced quality standards.

3. The Contract Documents contain selections chosen from options in the quality standard and additional requirements beyond those of the quality standard. Comply with such selections and requirements in addition to the quality standard.

D. Fire-Test-Response Characteristics: Where fire-retardant materials or products are indicated or required, provide materials and products with specified fire-test-response characteristics as determined by testing identical products per test method indicated by UL, ITS, or another testing and inspecting agency acceptable to authorities having jurisdiction. Identify with appropriate markings of applicable testing and inspecting agency in the form of separable paper label or, where required by authorities having jurisdiction, imprint on surfaces of materials that will be concealed from view after installation.

E. Mock-ups, General: Prior to fabrication and installation, build mock-up for each form of construction and finish required to verify selections made under sample Submittals and to demonstrate aesthetic effects and qualities of materials and execution. Build mock-up to comply with the following requirements, using materials indicated for the completed Work:

1. Build mock-up in the location and of the size indicated or, if not indicated, as directed by Architect.
2. Clean exposed faces of mock-up.
3. Notify Architect seven days in advance of dates and times when mock-ups will be installed.
4. Demonstrate the proposed range of aesthetic effects and workmanship.
5. Obtain Architect's acceptance of mock-ups before starting fabrication.
6. Maintain mock-ups during construction in an undisturbed condition as a standard for judging the completed Work.
7. Acceptance of mock-ups does not constitute acceptance of deviations from the Contract Documents contained in mock-ups unless such deviations are specifically accepted by Architect in writing.
8. Demolish and remove mock-ups when directed unless accepted to become part of the completed Work.

F. Pre-Installation Conference: Before work begins, conduct conference at Project site to comply with requirements of applicable Division 01 Sections.

1. Required Attendees:

   a. Owner.
   b. Architect.
   c. Contractor, including superintendent.
   d. Installer, including project manager and supervisor.
   e. Installers of other construction interfaced with the work.

2. Minimum Agenda: Installer shall demonstrate understanding of work required by describing detailed procedures for preparing, erecting, and cleaning the work. Demonstration shall include, but not be limited to, following topics:

   a. Tour representative areas of the work, inspect and discuss condition of substrate, and other preparatory work performed by other trades.
   b. Review the work requirements (Drawings, Specifications, and other Contract Documents).
   c. Review required submittals, both completed and yet to be completed.
   d. Review and finalize construction schedule related to the work and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
   e. Review required inspection, testing, certifying, and material usage accounting procedures.
   f. Review environmental conditions and procedures for coping with unfavorable conditions.

g. Resolve deviations or differences between Contract Documents and the manufacturer's specifications.

3. Contractor shall record discussions of conference, including decisions and agreements reached, and furnish copy of record to each party attending. If substantial disagreements exist at conclusion of conference, determine how disagreements will be resolved and set date for reconvening conference.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Do not deliver woodwork until painting and similar operations that could damage woodwork have been completed in installation areas. If woodwork must be stored in other than installation areas, store only in areas where environmental conditions comply with requirements specified in "Project Conditions" Article.

1.6 PROJECT CONDITIONS

A. Environmental Limitations: Do not deliver or install woodwork until building is enclosed, wet work is complete, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.

B. Field Measurements: Where woodwork is indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication, and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

1. Locate concealed framing, blocking, and reinforcements that support woodwork by field measurements before being enclosed, and indicate measurements on Shop Drawings.

1.7 COORDINATION

A. Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of Work specified in other Sections to ensure that interior architectural woodwork can be supported and installed as indicated.

B. Coordinate Shop Drawings and fabrication with hardware requirements.

PART 2 - PRODUCTS

2.1 MANUFACTURERS AND PRODUCTS

A. Acceptable Manufacturers/Fabricators and Products: Subject to compliance with requirements of Contract Documents as judged by the Architect, provide product by one of manufacturers/fabricators listed. If not listed, submit as substitution according to the Conditions of the Contract and Division 01 Section "Substitution Procedures".

B. Basis of Design (Product Standard): Contract Documents are based on products and systems specified to establish a standard of quality. Other manufacturers offering products having equivalent characteristics may be considered, provided deviations are minor and comply with requirements of Contract Documents as judged by the Architect.

2.2 MATERIALS

A. General: Provide materials that comply with requirements of AWI's or WI's quality standard for each type of woodwork and quality grade specified, unless otherwise indicated.

B. Wood Products for Cabinets:

1. Hardboard for Vertical Dividers Only: AHA A135.4, tempered, smooth two sides, 1/4 in (6 mm) minimum thickness unless indicated otherwise.
1. Veneer-Faced Panel Products (Hardwood Plywood): HPVA HP-1, made with adhesive containing no added urea formaldehyde.
2. Softwood Plywood: DOC PS 1.

C. High-Pressure Decorative Laminate: NEMA LD 3, grades as indicated or, if not indicated, as required by woodwork quality standard.

1. Fire-Rated Laminates: Where indicated or scheduled; NEMA LD 3, grades as follows:

a. Vertical Surfaces: General Purpose Type 604 (VGF), 0.032 in (0.79 mm)thick.
b. Horizontal Surfaces: General Purpose Type 605 (HGF) 0.048 in (1.2 mm) thick.

2. Colors, Patterns, and Finishes:

a. Selections: As indicated in Design Selections.

3. Colors, Patterns, and Finishes:

D. Fire Retardant Wood Products for Paneling:

1. Medium-Density Fiberboard: ANSI A208.2, Grade MD Exterior Glue, made with binder containing no added urea formaldehyde.
2. Particleboard: ANSI A208.1, Industrial Grade M-2 Exterior Glue, made with binder containing no added urea formaldehyde, 43 pcf (753kgm^3) Density.

E. Simulated Stone Trim:

1. Solid Surface Material: Homogeneous solid pieces of filled plastic resin complying with ANSI SS1.
2. Colors, Patterns, and Finishes:

a. Selections: As indicated in Design Selections.

F. Decorative Simulated Wood Film: 3M Di-Noc self-adhering film.

2.3 FIRE-RETARDANT-TREATED MATERIALS

A. General: Where fire-retardant-treated materials are indicated or required, use materials complying with requirements in this Article, that are acceptable to authorities having jurisdiction, and with fire-test-response characteristics specified.

1. Do not use treated materials that do not comply with requirements of referenced woodworking standard or that are warped, discolored, or otherwise defective.
2. Use fire-retardant-treatment formulations that do not bleed through or otherwise adversely affect finishes. Do not use colorants to distinguish treated materials from untreated materials.
3. Identify fire-retardant-treated materials with appropriate classification marking of UL, U.S. Testing, Timber Products Inspection, or another testing and inspecting agency acceptable to authorities having jurisdiction.

B. Fire-Retardant-Treated Lumber and Plywood by Pressure Process: Comply with performance requirements of AWPA C20 (lumber) and AWPA C27 (plywood). Use the following treatment types:

1. Exterior Type: Organic-resin-based formulation thermally set in wood by kiln drying.
2. Interior Type A: Low-hygroscopic formulation.
3. Mill lumber before treatment and implement special procedures during treatment and drying processes that prevent lumber from warping and developing discolorations from drying sticks or other causes, marring, and other defects affecting appearance of treated woodwork.
4. Kiln-dry materials before and after treatment to levels required for untreated materials.

C. Fire-Retardant Particleboard: Panels complying with the following requirements, made from softwood particles and fire-retardant chemicals mixed together at time of panel manufacture to achieve flame-spread index of 25 or less and smoke-developed index of 25 or less per ASTM E 84.

D. Fire-Retardant Fiberboard: Medium-density fiberboard panels complying with ANSI A208.2, made from softwood fibers, synthetic resins, and fire-retardant chemicals mixed together at time of panel manufacture to achieve flame-spread index of 25 or less and smoke-developed index of 200 or less per ASTM E 84.

2.4 CABINET HARDWARE AND ACCESSORIES

A. General: Provide cabinet hardware and accessory materials associated with architectural cabinets, except for items specified in Division 08 Section "Door Hardware (Scheduled by Describing Products)."

B. Hinges: Provide number of hinges recommended by hinge manufacturer for size and weight of door.

C. Butt Hinges for 1-3/8 in (35 mm) or 1-3/4 in (45 mm) Doors: Provide hinges as specified in Division 08 Section “Door Hardware”.

D. Butt Hinges for 1 in (25 mm) to 1-1/4 in (32 mm) Doors and 3/4 in (19 mm) Doors More Than 20 in (600 mm) in Width: 2-3/4 in (70 mm), 5-knuckle steel hinges made from 0.095 in (2.4 mm) thick metal, and as follows:

1. Semi-concealed Hinges for Flush Doors: BHMA A156.9, B01361.
2. Semi-concealed Hinges for Overlay Doors: BHMA A156.9, B01521.

E. Frameless Concealed Hinges (European Type) For 3/4 in (19 mm) Doors 20 in (600 mm) or Less in Width: BHMA A156.9, B01602,

1. Product Standard: Grass 3000 Series, No. 3803, 120 degree swing, self-closing from 10 deg.

F. Back-Mounted Pulls: BHMA A156.9, B02011.

G. Wire Pulls: Back mounted, solid metal, 4 in (100 mm) long, 5/16 in (8 mm) in diameter.

1. Product Standard: EPCO-MC-402-4, 4 in (100 mm) center to center of screws, 1-5/16 in (34 mm) projection, 5/16 in (8 mm) diameter. Stainless steel

H. Catches: Magnetic catches, BHMA A156.9, B03141.

I. Adjustable Shelf Standards and Supports: BHMA A156.9, B04071; with shelf rests, B04081.

J. Shelf Rests: BHMA A156.9, B04013; metal.

1. Product Standard: K & V No. 345, nickel plated.

K. Drawer Slides: BHMA A156.9, B05091.

1. Heavy Duty (Grade 1HD-100 and Grade 1HD-200): Side mounted; full-extension type; zinc-plated steel ball-bearing slides.
2. Box Drawer Slides: Grade 1HD-100; for drawers not more than 6 in (150 mm) high and 24 in (600 mm) wide.

   a. Product Standard for 24 in (600 mm) Wide and Less: Full extension; Accuride “7434”.
   b. Product Standard for Wider than 24 in (600 mm): Full extension; Accuride “7432”.

3. File Drawer Slides: Grade 1HD-200; for drawers more than 6 in (150 mm) high or 24 in (600 mm) wide.

   a. Product Standard for 42 in (1050 mm) Wide and Less: Full extension with 1 in (25 mm) over travel; Accuride “3640”.

4. Pencil Drawer Slides: Grade 1; for drawers not more than 3 in (75 mm) high and 24 in (600 mm) wide.

   a. Product Standard for 16 in (400 mm) Wide and Less: Low profile, 75 lb (34 kg) load rating (at 2/3 travel), full extension; Accuride “2632”.

5. Trash Bin Slides: Grade 1HD-200; for trash bins not more than 20 in (500 mm) high and 16 in (400 mm) wide.

L. Door Locks: BHMA A156.11, E07121.

1. Product Standard: K & V No. 984, nickel plated.

M. Drawer Locks: BHMA A156.11, E07041.

1. Product Standard: K & V No. 986, nickel plated.

N. Grommets for Cable Passage through Countertops: Molded-plastic grommets and matching plastic caps with slot for wire passage.

1. Size: 1-1/4 in (32-mm) or 2 in (50 mm) OD as indicated.
2. Color: Brown or black as indicated.

3. Product Standards: Doug Mockett & Company, Inc "OG or SG Series" or Hafele 429.93.

O. Concealed Pocket Door Slides (Vertical Swing/Slide/Retract):

1. Description: Side mounted flipper door slide assembly suitable for recessed full overlay door, 42 in (1050 mm) high and less, 30 lb (14 kg) load rating, into concealed pocket within cabinet, painted steel slides with all steel ball bearings.
2. Product Standard: Accuride – “1321”.

P. Exposed Hardware Finishes: For exposed hardware, provide finish that complies with BHMA A156.18 for BHMA finish number indicated.

1. Satin Stainless Steel: BHMA 630, unless otherwise indicated.

Q. For concealed hardware, provide manufacturer's standard finish that complies with product class requirements in BHMA A156.9.

R. Manufacturers:

1. Accuride
2. Julius Blum, Inc.
3. The Engineered Products Company
4. Grass America, Inc.
5. Hafele America Company
6. Hettich America Corporation
7. Knape & Vogt Manufacturing Company (K & V)
8. Stanley Hardware, Division of the Stanley Works

S. Cabinet Accessories:

1. Counter Support Brackets: Unless noted otherwise, provide brackets factory-primed for field painting.

   a. Manufacturers and Products:

      1) A&M Hardware, Inc.; Work Hybrid Brackets
      2) Rakks/Rangine Corporation; Counter Support Brackets, EH Series.
      3) Rakks/Rangine Corporation; Counter Support Brackets, Eclipse Series, at 18 inch deep tops.

2. Sliding Hanger Holder: Spectrum Diversified; Model 35170.

T. Tackable Wall Surface:

1. Fabric Wall Coverings: Provide wall coverings with following surface burning characteristics as determined by testing identical products per ASTM E 84/NFPA 255/UL 723. Identify wall coverings with appropriate markings of applicable testing and inspecting organization.

   a. Flame Spread: 25 or less; Smoke Developed: 450 or less.
   b. Selections: As indicated in Division 01 Section "Design Selections".

2. Substrate Material: Fiberglass board, ASTM C 612, Class 1 and 2; 6 pcf (96 kgm^3) density, compressible, unfaced, with chemically hardened edges.

3. Panel Fabrication: Fabricate panels to sizes and configurations indicated; attach facing materials to core (substrate material) to produce installed panels with visible surfaces fully covered and free from waves in fabric weave, wrinkles, sags, blisters, seams, adhesive, or other foreign matter.

2.5 MISCELLANEOUS MATERIALS

A. Furring, Blocking, Shims, and Hanging Strips: Fire-retardant-treated softwood lumber, kiln dried to less than 15 percent moisture content.

B. Anchors: Select material, type, size, and finish required for each substrate for secure anchorage. Provide nonferrous-metal or hot-dip galvanized anchors and inserts on inside face of exterior walls and elsewhere as required for corrosion resistance. Provide toothed-steel or lead expansion sleeves for drilled-in-place anchors.

C. Adhesives:

1. General: As recommended by woodwork fabricator to suit application.
2. VOC Limits for Installation Adhesives and Glues: Use installation adhesives that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24) unless indicated otherwise:

a. Wood Glues: 30 g/L.
b. Contact Adhesive: 250 g/L.

3. Adhesive for Bonding Plastic Laminate Faces and Edges: PVA as recommended by woodwork fabricator to suit application.

D. Hanging Clips: Provide manufacturer's standard nonferrous-metal or hot-dip galvanized zee hanging clips.

2.6 FLUSH PLASTIC-LAMINATE PANELING

A. Grade: Premium.

B. Laminate Cladding for Exposed Surfaces: High-pressure decorative laminate complying with the following requirements:

1. Faces: Grade HGS, 1.0 mm thick.
2. Edges: Same as faces.

C. Concealed Backs of Panels with Exposed Plastic Laminate Surfaces: High-pressure decorative laminate, Grade BKH, 1.0 mm thick.

D. Fire-Retardant-Treated Paneling: Provide panels consisting of fire-retardant plastic laminate and fire-retardant particleboard or fire-retardant medium-density fiberboard. Panels shall have a flame-spread rating of 75 or less and a smoke-developed rating of 450 or less per ASTM E 84.

2.7 FABRICATION, GENERAL

A. Interior Woodwork Grade: Unless otherwise indicated, provide Premium Grade interior woodwork complying with referenced quality standard.

B. Wood Moisture Content: Comply with requirements of referenced quality standard for wood moisture content in relation to ambient relative humidity during fabrication and in installation areas.

C. Fabricate woodwork to dimensions, profiles, and details indicated. Ease edges to radius indicated for the following:

1. Corners of Cabinets and Edges of Solid-Wood (Lumber) Members 3/4 in (19 mm) Thick or Less: 1/16 in (1.5 mm).
2. Edges of Rails and Similar Members More Than 3/4 in (19 mm) Thick: 1/8 in (3 mm).

D. Complete fabrication, including assembly, finishing, and hardware application, to maximum extent possible before shipment to Project site. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting.

1. Notify Architect seven days in advance of the dates and times woodwork fabrication will be complete.
2. Trial fit assemblies at fabrication shop that cannot be shipped completely assembled. Install dowels, screws, bolted connectors, and other fastening devices that can be removed after trial fitting. Verify that various parts fit as intended and check measurements of assemblies against field measurements indicated on Shop Drawings before disassembling for shipment.

E. Shop-cut openings to maximum extent possible to receive hardware, appliances, plumbing fixtures, electrical work, and similar items. Locate openings accurately and use templates or roughing-in diagrams to produce accurately sized and shaped openings. Sand edges of cutouts to remove splinters and burrs.

1. Countertops: Seal edges of openings in countertops.

F. Install glass to comply with applicable requirements in Division 08 Section "Glazing" and in GANA's "Glazing Manual". For glass in wood frames, secure glass with removable stops.

2.8 PLASTIC-LAMINATE CABINETS

A. Grade: Premium.

B. AWI Type of Cabinet Construction: Flush overlay unless indicated otherwise.

C. Laminate Cladding for Exposed Surfaces: High-pressure decorative laminate complying with the following requirements:

1. Horizontal Surfaces Other Than Tops: Grade HGP, .038 in (1 mm) thick.
2. Postformed Surfaces: Grade HGP, .038 in (1 mm) thick.
3. Doors and Vertical Surfaces: Grade VGS, .028 in (0.7 mm) thick.
4. Edges: PVC Edge Banding, 0.12 in (3 mm) thick, matching laminate in color, pattern, and finish.

D. Semi-exposed Surfaces: Provide surface materials indicated below:

1. Surfaces Other Than Drawer Bodies: High-pressure decorative laminate, Grade CLS, .020 in (0.5 mm) thick.

2. Edges: PVC Edge Banding, .038 in (1 mm) thick, matching laminate in color, pattern, and finish.
3. Drawer Sides, Backs and Sub-Fronts: 1/2 in (13 mm) minimum thickness, as indicated.

    a. Solid-hardwood lumber.

4. Drawer Bottoms: 1/4 in (6 mm) minimum thickness, as indicated.

    a. Hardwood plywood with veneer core.

5. Drawer Box Construction: One of the following:

    a. Glued multiple dovetail.
    b. Glued French dovetail.
    c. Glued and doweled.

6. Interior Drawer Box Finish, as indicated:

    a. Clear catalyzed polyurethane

E. Body Members (Ends, Divisions, Bottoms and Sub-Tops): Hardwood plywood, 3/4 in (19 mm) minimum thickness.

F. Face Frames, Rails, Kicks and Bases: Solid-hardwood lumber or hardwood plywood, 3/4 in (19 mm) thick minimum thickness.

G. Shelves: Hardwood plywood with veneer core with the following thickness:

1. For Spans Up To 32 in (800 mm): 3/4 in (19 mm).
2. For Spans Up To 42 in (1050 mm): 1 in (25 mm).

H. Drawer Fronts: Hardwood plywood, 3/4 in (19 mm) thick minimum thickness.

I. Doors:

1. Hinged Flush Type: Hardwood plywood with the following thickness:

    a. For Width up to 30 in (750 mm) and Height Up To 60 in (1500 mm): 3/4 in (19 mm) doors.
    b. For Width up to 36 in (900 mm) and Height Up To 72 in (1800 mm): 1 in (25 mm) to 1-1/4 in (32 mm) doors.
    c. For Doors Larger than Sizes Above: 1-3/8 in (35 mm) or 1-3/4 in (45 mm) doors; refer to Division 08 Section “Flush Wood Doors”.
    d. If hinge screws enter only edge of door, provide 3/4 in (19 mm) lumber edges glued to core prior to laminating.

J. Concealed Backs of Panels with Exposed Plastic Laminate Surfaces: High-pressure decorative laminate, Grade BKL, .020 in (0.5 mm) thick.

K. Concealed Edges of Base Cabinet Panels: Including but not limited to floors, vertical edges, splashes and countertops; Clear Catalyzed Polyurethane.

2.9 PLASTIC-LAMINATE COUNTERTOPS

A. Grade: Premium.

B. High-Pressure Decorative Laminate Grade:

1. High-Pressure Decorative Laminate Grade for Flat Countertops: Grade HGS, .048 in (1.2 mm) thick.
2. High-Pressure Decorative Laminate Grade for Post-formed Countertops: Grade HGP, .038 in (1.0 mm) thick.

C. Grain Direction for Wood Grain Laminates: Parallel to cabinet fronts.

D. Edges: PVC Edge T-molding, 0.12 in (3 mm) thick, basis of design: Charter Industries #4542, color as selected by Architect.

E. Core Material for Countertops: Hardwood plywood, 3/4 in (19 mm) thick minimum thickness.

F. Core Material for Side and Back Splashes: Hardwood plywood Medium-density fiberboard made with exterior glue, binder containing no added urea formaldehyde, 1/2 in (13 mm) thick minimum thickness.

G. Backer Sheet: Provide plastic-laminate backer sheet, Grade BKL, .020 in (0.5 mm) thick, on underside of countertop substrate.

H. Concealed Backs and Edges at Side and Back Splashes: High-pressure decorative laminate, Grade BKL, .020 in (0.5 mm) thick.

2.10 SOLID SURFACING COUNTERTOPS

A. Refer to Division 12 Section "Simulated Stone Countertops".

PART 3 - EXECUTION

3.1 EXAMINATION

A. Acceptance of Surfaces and Conditions: Examine substrates to receive interior architectural woodwork and associated work to which interior architectural woodwork will be applied for compliance with requirements and other conditions affecting performance. Proceed only when unsatisfactory conditions have been corrected in a manner complying with Contract Documents. Starting work within a particular area will be construed as acceptance of surface conditions.

3.2 INSTALLATION, GENERAL

A. Installation Quality Standards: In addition to standards listed elsewhere, perform Work according to following, unless otherwise specified:

1. Quality standards. (The Contract Documents contain selections chosen from options in the quality standard and additional requirements beyond those of the quality standard. Comply with such selections and requirements in addition to the quality standard.)
2. Respective manufacturer/fabricator’s written installation instructions.
3. Accepted submittals.
4. Contract Documents.

3.3 PREPARATION

A. Before installation, condition woodwork to average prevailing humidity conditions in installation areas.

B. Before installing architectural woodwork, examine shop-fabricated work for completion and complete work as required, including removal of packing and backpriming.

3.4 INSTALLATION

A. Assemble woodwork and complete fabrication at Project site to comply with requirements for fabrication, to extent that it was not completed in the shop.

B. Install woodwork level, plumb, true, and straight. Shim as required with concealed shims. Install level and plumb (including tops) to a tolerance of 1/8 in per 96 in (3 mm per 2400 mm).

C. Scribe and cut woodwork to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.

D. Fire-Retardant-Treated Wood: Handle, store, and install fire-retardant-treated wood to comply with chemical treatment manufacturer's written instructions, including those for adhesives used to install woodwork.

E. Anchor woodwork to anchors or blocking built in or directly attached to substrates. Secure with countersunk, concealed fasteners and blind nailing as required for complete installation. Use fine finishing nails or finishing screws for exposed fastening, countersunk and filled flush with woodwork and matching final finish if transparent finish is indicated.

F. Paneling: Anchor paneling to supporting substrate with concealed panel-hanger clips. Do not use face fastening, unless covered by trim or otherwise indicated.

1. Install flush paneling with no more than 1/16 in per 96 in (1.5 mm per 2400 mm) vertical cup or bow and 1/8 in per 96 in (3 mm per 2400 mm) horizontal variation from a true plane.
2. Flush Paneling with Revealed Joints: Install with variations in reveal width, alignment of top and bottom edges, and flushness between adjacent panels not exceeding 1/32 in (0.75 mm).

G. Cabinets, General: Install without distortion so doors and drawers fit openings properly and are accurately aligned. Adjust hardware to center doors and drawers in openings and to provide unencumbered operation. Complete installation of hardware and accessory items as indicated.

1. Install cabinets with no more than 1/8 in per 96 in (3 mm per 2400 mm) sag, bow, or other variation from a straight line.

H. Base and Wall Cabinets: Set base cabinets straight, level, and plumb. Adjust subtops within 1/16 in (1.5 mm) of a single plane. Fasten base cabinets to partition framing, or reinforcements in partitions with fasteners spaced 24 in (600 mm) on center. Bolt adjacent cabinets together with joints flush, tight, and uniform.

1. Where base cabinets are not installed adjacent to walls, fasten to floor at toe space with fasteners spaced 24 in (600 mm) on center. Secure sides of cabinets to floor, where they do not adjoin other cabinets, with not less than two fasteners.
2. Wall Cabinets: Fasten wall cabinets through back, near top and bottom, at ends and not more than 16 in (400 mm) on center with No. 10 wafer-head sheet metal screws through

metal backing or metal framing behind wall finish or toggle bolts through metal backing or metal framing behind wall finish.

I. Countertops: Anchor securely by screwing through corner blocks of base cabinets or other supports into underside of countertop.

1. Where possible make field jointing in the same manner as shop jointing, using dowels, splines, adhesives, and fasteners recommended by manufacturer. Prepare edges to be joined in shop so Project-site processing of top and edge surfaces is not required. Locate field joints where shown on Shop Drawings.
2. Plastic Laminate Countertops: Secure field joints in plastic-laminate countertops with concealed clamping devices located within 6 in (150 mm) of front and back edges and at intervals not exceeding 24 in (600 mm). Tighten according to manufacturer's written instructions to exert a constant, heavy-clamping pressure at joints.
3. Abut top and edge surfaces in one true plane, with internal supports placed to prevent deflection.
4. Simulated Stone Countertops: Refer to Division 12 Section "Simulated Stone Countertops".
5. Install countertops with no more than 1/8 in per 96 in (3 mm per 2400 mm) sag, bow, or other variation from a straight line.
6. Secure backsplashes to tops with concealed metal brackets at 16 in (400 mm) on center and to walls with adhesive.
7. Calk space between backsplash and wall with sealant specified in Division 07 Section "Joint Sealants".

J. Touch up finishing work specified in this Section after installation of woodwork. Fill nail holes with matching filler where exposed.

3.5 ADJUSTING AND CLEANING

A. Repair damaged and defective woodwork, where possible, to eliminate functional and visual defects; where not possible to repair, replace woodwork. Adjust joinery for uniform appearance.

B. Clean, lubricate, and adjust hardware.

C. Clean woodwork on exposed and semi-exposed surfaces. Touch up shop-applied finishes to restore damaged or soiled areas.

END OF SECTION

SECTION 06 6100

SIMULATED STONE FABRICATIONS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: The following simulated stone fabrications along with supplementary items necessary for installation:

1. Solid surfacing fabrications.

1.2 SUBMITTALS

A. Product Data: Manufacturer’s technical literature for each product and system indicated.

1. Include manufacturer's specifications for materials, finishes, construction details, installation instructions, and recommendations for maintenance.

B. Shop Drawings: Show details of fabrication and installation, including plans, elevations, sections, details of components and attachments to other work. Distinguish between shop and field-assembled work. Show locations and sizes of cutouts and holes for plumbing fixtures, accessories and other items installed in fabrications.

C. Samples for Initial Selection: Manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available for simulated stone materials.

D. Samples for Verification Purposes: For simulated stone panel material, 6 in (150 mm) square, showing color and pattern selected. Trim piece samples to be 6 in (150 mm) long.

E. Manufacturer’s Project Acceptance Document: Certification by the manufacturer that its product(s) are approved, acceptable, suitable for use in specific locations, for specific details, and for applications indicated, specified, or required, and that a warranty will be issued.

F. Qualification Data: For installer.

1. For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of Architects and Owners, and other information specified.

G. Warranty: Sample of warranty.

1. Provide manufacturer’s written warranty covering materials and installation (labor) stating obligations, remedies, limitations and exclusions.

1.3 QUALITY ASSURANCE

A. Installer Qualifications:

1. Experience: Installer with not less than 5 years experience in performing specified Work similar to scope of this Project, with a record of successful in-service performance and completion of projects for a period of not less than 5 years, and with sufficient production capability, facilities, and personnel to produce required Work.
2. Supervision: Installer shall maintain a competent supervisor who is at Project during times specified Work is in progress, and, who is experienced in installing systems similar to type and scope required for Project.

B. Fire-Test-Response Characteristics: Provide materials and products with specified fire-test-response characteristics as determined by testing identical products per test method indicated by UL, ITS, or another testing and inspecting agency acceptable to authorities having jurisdiction.

1.4 PRE-INSTALLATION CONFERENCE

A. Pre-Installation Conference: Before Work begins, conduct conference at Project site to comply with requirements of applicable Division 01 Sections.

1. Required Attendees:

a. Owner.
b. Architect.
c. Contractor, including superintendent.
d. Installer, including project manager and supervisor.
e. Installers of other construction interfaced with Work.

2. Minimum Agenda: Installer shall demonstrate understanding of the Work required by describing detailed procedures for preparing, installing, and cleaning the Work. Demonstration shall include, but not be limited to, following topics:

a. Tour representative areas of Work, inspect and discuss condition of substrate, and other preparatory work performed by other trades.
b. Review Work requirements (Drawings, Specifications, and other Contract Documents).
c. Review required submittals, both completed and yet to be completed.
d. Review and finalize construction schedule related to Work and verify availability of materials, installer's personnel, equipment, and facilities needed to make progress and avoid delays.
e. Review required inspection, testing, certifying, and material usage accounting procedures.
f. Review environmental conditions and procedures for coping with unfavorable conditions.
g. Resolve deviations or differences between Contract Documents and the manufacturer/fabricator’s specifications.

3. Record discussions of conference, including decisions and agreements reached, and furnish copy of record to each party attending. If substantial disagreements exist at conclusion of conference, determine how disagreements will be resolved and set date for reconvening conference.

1.5 PROJECT CONDITIONS

A. Environmental Limitations: Do not deliver or install fabrications until building is enclosed, wet work is complete, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.

B. Field Measurements: Where products and systems are indicated to fit walls and other construction, verify dimensions by field measurements before fabrication and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

1.6 COORDINATION

A. Coordinate installation of products and systems with interfacing and adjoining construction to provide a successful installation without failure.

1.7 WARRANTY

A. Manufacturer's Warranty: Furnish manufacturer's written material and labor warranty signed by an authorized representative using manufacturer's standard form agreeing to furnish materials and labor required to repair or replace work which exhibits material defects caused by manufacture or design and installation of product. "Defects" is defined to include but not limited to deterioration or failure to perform as required.

1. Warranty Period: Manufacturer shall warrant the products to be free from material and labor Defects for a period of 10 years from date of Substantial Completion

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

A. Single Source Responsibility: Furnish each type of product from single manufacturer/fabricator. Provide secondary materials only as recommended by manufacturer/fabricator of primary materials.

2.2 SIMULATED STONE FABRICATION MATERIALS

A. Solid Surface Material: Homogeneous solid sheets of filled plastic resin complying with ANSI SS1.

1. Panel Thickness: Minimum 1/2 in (12 mm) or as indicated on drawings or as recommended by simulated stone manufacturer/fabricator.
2. Trim Piece Thickness: As recommended by simulated stone manufacturer/fabricator.

2.3 ACCESSORIES

A. Adhesives: Manufacturers recommended adhesive.

1. Use adhesives that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):

a. Not more than 250 g/L.

B. Accessories: Provide joint seam adhesives and other items required for a complete installation as recommended in writing by simulated stone manufacturer.

C. Sealant: Mildew resistant silicone sealant as specified in Division 07 Section “Joint Sealants”.

2.4 SOLID SURFACE SHOWER COMPARTMENT

A. General: Manufacturer’s standard solid surface shower system including shower base, wall panels, and corner trim for field assembly. Shower base shall include a strategically positioned, built in trench drain with water evacuation channels on a slip-resistant surface.

1. Product: Watermark Solid Surface, Inc.; Shower Units.
2. Components:

a. Shower Pan (Type SH-1): 36-by-36 in (915-by-915 mm) pan
b. Shower Pan (Type SH2): Neo-Angle, custom size.
c. Shower wall panel kit.
d. Recessed soap/shampoo holder.
e. Shower drain assembly installed in receptor.
f. L-shape grab bar (E17).
g. Shower rod.
h. Toiletry shelf (M4).

3. Color: As selected from manufacturer’s standard colors.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Acceptance of Surfaces and Conditions: Examine substrates to receive products and systems and associated work for compliance with requirements and other conditions affecting performance. Proceed only when unsatisfactory conditions have been corrected in a manner complying with Contract Documents. Starting work within a particular area will be construed as acceptance of surface conditions.

3.2 INSTALLATION, GENERAL

A. Installation Quality Standards: In addition to standards listed elsewhere, perform Work according to following, unless otherwise specified:

1. Respective manufacturer’s written installation instructions.
2. Accepted submittals.
3. Contract Documents.

3.3 PREPARATION

A. General: Comply with manufacturer’s instructions, recommendations, and specifications for cleaning and surface preparation. Surfaces shall have no defects, contaminants, or errors which would result in poor or potentially defective installation or would cause latent defects in Work.

3.4 CONSTRUCTION TOLERANCES

A. Variation from Plumb: For vertical lines and surfaces, do not exceed 1/16 in per 48 in (1.5 mm per 1200 mm).

B. Variation from Level: Do not exceed 1/8 in per 96 in (3 mm per 2400 mm), 1/4 in (6 mm) maximum.

C. Variation in Joint Width: Do not vary joint thickness more than 1/4 of nominal joint width.

D. Variation in Plane at Joints (Lipping): Do not exceed 1/64 in (0.4 mm) difference between planes of adjacent units.

E. Variation in Line of Edge at Joints (Lipping): Do not exceed 1/64 in (0.4 mm) difference between edges of adjacent units, where edge line continues across joint.

3.5 INSTALLATION OF SIMULATED STONE FABRICATIONS

A. Set fabrications to comply with requirements indicated on Drawings and Shop Drawings. Shim and adjust to locations indicated, with uniform joints of widths indicated and with edges and faces aligned according to established relationships and indicated tolerances.

B. Align adjacent fabrications and form seams to comply with manufacturer’s written recommendations using adhesive in color to match fabrication.

C. Carefully dress joints smooth, remove surface scratches, and clean entire surface.

D. Prepare ends and edges of simulated stone pieces to be joined according to the manufacturer’s/fabricator's recommendations for position and angle of butted joint. Lightly sand and thoroughly clean to remove dirt and grease. Join pieces with adhesive clamped until fully cured. Buff and sand to produce a smooth uniform seamless surface.

E. Apply sealant and compress to form bond with simulated stone material and adjacent surfaces and tool sealant surface to clean, straight lines.

3.6 CLEANING

A. Promptly clean simulated stone as work progresses to minimize final cleaning. Do not leave adhesive or sealant to dry on simulated stone faces.

B. Final clean and protect installed fabrications in accordance with manufacturer's instructions.

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SECTION 06 6410

FIBER REINFORCED LAMINATE (FRL) PANELS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes fiber reinforced laminate (FRL) wall paneling and trim accessories.

1.2 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Samples for Verification: For plastic paneling and trim accessories, in manufacturer's standard sizes.

1.3 QUALITY ASSURANCE

A. Source Limitations: Obtain plastic paneling and trim accessories from single manufacturer.

B. Surface-Burning Characteristics: As determined by testing identical products according to ASTM E 84 by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1. Flame-Spread Index: 25 or less.
2. Smoke-Developed Index: 450 or less.
3. Testing Agency: Acceptable to authorities having jurisdiction.
4. Manufacturer Acceptance: Installer shall be certified, approved, licensed, or acceptable to manufacturer/fabricator to install products.

1.4 PROJECT CONDITIONS

A. Environmental Limitations: Do not deliver or install plastic paneling until spaces are enclosed and weathertight and temporary HVAC system is operating and maintaining ambient temperature and humidity conditions at occupancy levels during the remainder of the construction period.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturers: Subject to compliance with requirements of Contract Documents as judged by the Architect, provide product by one of manufacturers listed. If not listed, submit as substitution according to Conditions of the Contract and Division 01 Section "Substitution Procedures".

2.2 PLASTIC SHEET PANELING

A. Fiberglass Reinforced Laminate -Properties:

1. Product: Thermofused melamine overlay, decorative paper and Fire Rated phenolic paper with fiber reinforcing inner layers.
2. Nominal Thickness: 0.088 inch.
3. Panel net size: 36” X, 48” X and 60” X , 96” and 120”
4. Surface Burning Characteristics: Rating of 25, or less, as tested to ASTM E84.
5. Smoke Developed: 55, tested to ASTM E84.
6. Wear Resistance: 3500, tested to NEMA3.13.
7. Flexural Strength: 20,148 psi, tested to ASTM D790.

B. Manufacturer:

1. Panolam Industries International, Inc.
2. Color and Texture: Refer to Interior Design Selections on drawings.

2.3 ACCESSORIES

A. Trim Accessories: As detailed.

B. Adhesive: As recommended by plastic paneling manufacturer.

1. VOC Content: 50 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

C. Sealant: Single-component, mildew-resistant, neutral-curing silicone sealant recommended by plastic paneling manufacturer and complying with requirements in Division 07 Section "Joint Sealants."

1. VOC Content: 250 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Clean substrates of substances that could impair bond of adhesive, including oil, grease, dirt, and dust.

B. Condition panels by unpacking and placing in installation space before installation according to manufacturer's written recommendations.

C. Lay out paneling before installing. Locate panel joints so that trimmed panels at corners are not less than 12 in (300 mm) wide.

1. Mark plumb lines on substrate at trim accessory locations for accurate installation.

2. Locate trim accessories to allow clearance at panel edges according to manufacturer's written instructions.

3.3 INSTALLATION

A. Install plastic paneling according to manufacturer's written instructions.

B. Install panels in a full spread of adhesive.

C. Install trim accessories with adhesive.

D. Fill grooves in trim accessories with sealant before installing panels and bed inside corner trim in a bead of sealant.

E. Maintain uniform space between panels and wall fixtures. Fill space with sealant.

F. Remove excess sealant and smears as paneling is installed. Clean with solvent recommended by sealant manufacturer and then wipe with clean dry cloths until no residue remains.

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SECTION 06 6413

TRANSLUSCENT RESIN PANEL FABRICATIONS

PART 1 - GENERAL

1.1 SUMMARY

A. Work required for this Section includes translucent resin or glass panel fabrications and supplementary items necessary to complete their installation.

1.2 SUBMITTALS

A. Product Data: Manufacturer's technical literature for each product and system indicated.

1. Include manufacturer's specifications for materials, finishes, construction details, installation instructions, and recommendations for maintenance.

B. Shop Drawings: Show details of fabrication and installation, including plans, elevations, sections, details of components and attachments to other work. Distinguish between shop and field-assembled work.

C. Samples for Verification: 8 by 10 inches (200 by 250 mm), for each type, color, pattern, and surface finish of translucent resin panel products.

D. Qualification Data: For manufacturer/fabricator and installer.

1. For firms and persons specified in "Quality Assurance" to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of Architects and Owners, and other information specified.

1.3 QUALITY ASSURANCE

A. Manufacturer/Fabricator Qualifications: Manufacturer/fabricator with not less than 5 years experience with successful production of products and systems similar to scope of this Project, with a record of successful in-service performance and completion of projects for a period of not less than 5 years, and with sufficient production capability, facilities, and personnel to produce required Work.

B. Installer Qualifications:

1. Experience: Installer with not less than 3 years experience in performing specified Work similar to scope of this Project, with a record of successful in-service performance and completion of projects for a period of not less than 3 years, and with sufficient production capability, facilities, and personnel to produce required Work.
2. Supervision: Installer shall maintain a competent supervisor who is at Project during times specified Work is in progress, and, who is experienced in installing systems similar to type and scope required for Project.
3. Manufacturer/Fabricator Acceptance: Installer shall be certified, approved, licensed, or acceptable to manufacturer/fabricator to install products.

C. Fire-Test-Response Characteristics: Provide panels with the following surface-burning characteristics as determined by testing identical products per ASTM E 84 by UL or another testing and inspecting agency acceptable to authorities having jurisdiction.

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

D. Mock-ups: Prior to fabrication and installation, build mock-up for each form of construction and finish required to verify selections made under sample Submittals and to demonstrate aesthetic effects and qualities of materials and execution. Build mock-up to comply with the following requirements, using materials indicated for the completed Work:

1. Build mock-up in the location and of the size indicated or, if not indicated, as directed by Architect. Contractor shall provide structural support framework.

   a. Show typical components, attachments to building structure, and requirements of installation.

2. Clean exposed faces of mock-up.
3. Notify Architect seven days in advance of the dates and times when mock-up will be installed.
4. Demonstrate the proposed range of aesthetic effects and workmanship.
5. Protect accepted mock-up from the elements with weather-resistant membrane.
6. Obtain Architect's acceptance of mock-ups before starting fabrication.
7. Maintain mock-ups during construction in an undisturbed condition as a standard for review of the completed Work.
8. Acceptance of mock-ups does not constitute acceptance of deviations from the Contract Documents contained in mock-ups unless such deviations are specifically noted by Contractor, submitted to Architect in writing, and accepted by Architect in writing.
9. Demolish and remove mock-ups when directed by Architect unless accepted to become part of the completed Work.

1.4 PROJECT CONDITIONS

A. Field Measurements: Where products and systems are indicated to fit walls and other construction, verify dimensions by field measurements before fabrication and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

1.5 COORDINATION

A. Coordinate installation of products and systems with interfacing and adjoining construction to provide a successful installation without failure.

PART 2 - PRODUCTS

2.1 MANUFACTURERS AND PRODUCTS

A. Available Manufacturers/Fabricators and Products: Subject to compliance with requirements of Contract Documents as judged by the Architect, manufacturers/fabricators offering products that may be incorporated into the Work include, but are not limited to, those listed.

1. MDC.

B. Basis of Design (Product Standard): Contract Documents are based on products and systems specified to establish a standard of quality. Other manufacturers/fabricators offering products having equivalent characteristics may be considered, provided deviations are minor and comply with requirements of Contract Documents as judged by the Architect.

1. Selections: As indicated in Design Selections on drawings.

2.2 FABRICATION

A. Comply with manufacturer's written recommendations for fabrication.

B. Machining: Acceptable means of machining are listed below. Ensure that material is not chipped or warped by machining operations.

1. Sawing: Select equipment and blades suitable for type of cut required.
2. Drilling: Drills specifically designed for use with plastic products.
3. Milling: Climb cut where possible.
4. Routing.
5. Tapping.

C. Forming: Form products to shapes indicated using the appropriate method listed below. Comply with manufacturer's written instructions.

1. Cold Bending.
2. Hot Bending.
3. Thermoforming: Acceptable only on uncoated material.
4. Drape Forming.
5. Matched Mold Forming.
6. Mechanical Forming.

D. Laminating: Laminate to substrates indicated using adhesives and techniques recommended by manufacturer.

2.3 MISCELLANEOUS MATERIALS

A. General: Provide products of material, size, and shape required for application indicated, and with a proven record of compatibility with surfaces contacted in installation.

B. Cleaner: Type recommended by manufacturer.

C. Fasteners: Use screws designed specifically for plastics. Self-threading screws are acceptable for permanent installations. Provide threaded metal inserts for applications requiring frequent disassembly such as light fixtures.

D. Bonding Cements: Manufacturer's recommended bonding adhesive.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Acceptance of Surfaces and Conditions: Examine substrates to receive products and systems and associated work for compliance with requirements and other conditions affecting performance. Proceed only when unsatisfactory conditions have been corrected in a manner complying with Contract Documents. Starting work within a particular area will be construed as acceptance of surface conditions.

3.2 INSTALLATION

A. Installation Quality Standards: In addition to standards listed elsewhere, perform Work according to following, unless otherwise specified:

1. Respective manufacturer/fabricator's written installation instructions.
2. Approved submittals.
3. Contract Documents.

B. General: Comply with manufacturer's written instructions for the installation of Plastic Fabrications.

C. Manufacturer's shop to fabricate items to the greatest degree possible.

D. Utilize fasteners, adhesives and bonding agents recommended by manufacturer for type of installation indicated. Material that is chipped, warped, hazed or discolored as a result of installation or fabrication methods will be rejected.

E. Install components plumb, level and rigid, scribed to adjacent finishes, in accordance with approved shop drawings and product data.

F. Form field joints using manufacturer's recommended procedures. Locate seams in panels so that they are not directly in line with seams in substrates.

3.3 CLEANING AND PROTECTION

A. Protect surfaces from damage until date of substantial completion. Repair work or replace damaged work, which cannot be repaired to Architect's satisfaction.

END OF SECTION

SECTION 07 8413

PENETRATION FIRESTOPPING

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes penetration firestopping systems for openings and penetrations through smoke and fire-resistance-rated assemblies, and supplementary items necessary to complete their installation.

1.2 PERFORMANCE REQUIREMENTS

A. General: Provide firestopping systems that are produced and installed to resist spread of fire according to requirements indicated, resist passage of smoke and other gases, and maintain original fire-resistance rating of assembly penetrated.

B. F-Rated Systems: Provide penetration firestopping systems with F-ratings determined per ASTM E 814, equaling or exceeding fire-resistance rating of constructions penetrated.

C. T-Rated Systems: For the following conditions, provide penetration firestopping systems with T-ratings, as well as F-ratings, determined per ASTM E 814, where systems protect penetrating items exposed to potential contact with adjacent materials in occupiable floor areas:

1. Penetrations located outside wall cavities.
2. Penetrations located outside fire-resistive shaft enclosures.
3. Penetrations located in construction containing fire-protection-rated openings.
4. Penetrating items larger than 4-inch diameter nominal pipe or 16 sq. in. in overall cross-sectional area.

D. For penetration firestopping systems exposed to view, provide products with flame-spread ratings of less than 25 and smoke-developed ratings of less than 450, as determined per ASTM E 84.

1.3 SUBMITTALS

A. Product Data: For each type of firestopping system product indicated.

B. Shop Drawings: For each firestopping system, show each kind of construction condition penetrated, relationships to adjoining construction, and kind of penetrating item. Include firestopping design designation of testing and inspecting agency acceptable to authorities having jurisdiction that evidences compliance with requirements for each condition indicated.

1. Submit documentation, including illustrations, from a qualified testing and inspecting agency that is applicable to each firestopping system configuration for construction and penetrating items.
2. Where Project conditions require modification of qualified testing and inspecting agency's illustration to suit a particular firestopping condition, submit illustration, with modifications marked, approved by firestopping system manufacturer's fire-protection engineer.

C. Product Certificates: Signed by manufacturers of firestopping system products certifying that products furnished comply with requirements.

D. Product Test Reports: From a qualified testing agency indicating firestopping system complies with requirements, based on comprehensive testing of current products.

E. Qualification Data: For installer.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who has completed firestopping systems similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

B. Source Limitations: Obtain penetration firestopping systems, for each kind of penetration and construction condition required, from a single manufacturer.

C. Fire-Test-Response Characteristics: Provide firestopping systems that comply with the following requirements and those specified in "Performance Requirements" Article:

1. Firestopping tests are performed by a qualified testing and inspecting agency performing testing and follow-up inspection services for firestopping systems acceptable to authorities having jurisdiction.
2. Penetration firestopping systems: Provide materials that are identical to those tested per ASTM E 814. Provide rated firestopping system products that bear classification marking of qualified testing and inspecting agency.

D. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination".

1.5 PROJECT CONDITIONS

A. Environmental Limitations: Do not install firestopping systems when ambient or substrate temperatures are outside limits permitted by firestopping system manufacturers or when substrates are wet due to rain, frost, condensation, or other causes.

B. Ventilate firestopping systems per manufacturer's written instructions by natural means or, where this is inadequate, forced-air circulation.

1.6 COORDINATION

A. Coordinate construction of openings and penetrating items to ensure that firestopping systems are installed according to specified requirements.

B. Coordinate sizing of sleeves, openings, core-drilled holes, or cut openings to accommodate firestopping systems.

C. Notify Owner's inspecting agency at least seven days in advance of firestopping system installations; confirm dates and times on days preceding each series of installations.

D. Do not cover up firestopping system installations that will become concealed behind other construction until Owner's inspecting agency and building inspector, if required by authorities having jurisdiction, have examined each installation.

PART 2 - PRODUCTS

2.1 FIRESTOPPING, GENERAL

A. Acceptable Manufacturers: Manufacturer is “acceptable” if firestopping system has been tested and listed by UL or other testing and inspection agency acceptable to authorities having jurisdiction and manufacturer can evidence product compliance with requirements of the Contract Documents.

B. Compatibility: Provide firestopping systems that are compatible with one another, with the substrates forming openings, and with the items, if any, penetrating firestopping systems, under conditions of service and application, as demonstrated by firestopping system manufacturer based on testing and field experience.

C. Accessories: Provide components for each firestopping system that are needed to install fill materials and to comply with “Performance Requirements” Article. Use only components specified by firestopping system manufacturer and approved by the qualified testing and inspecting agency for firestopping systems indicated.

2.2 PENETRATION FIRESTOP SYSTEMS

A. Description: Classified in Underwriters Laboratories (UL) Fire Resistance Directory, "Section XHEZ - Penetration Firestop Systems", and/or "Section XHHW - Fill Void or Cavity Materials" for specific project conditions.

B. Application Considerations:

1. Firestops exposed to view and/or are scheduled to receive finishes shall be paintable or capable of receiving finish materials.
2. Firestops exposed to traffic, moisture, and physical damage shall be products that do not deteriorate when exposed to these conditions.
3. Firestops for water piping penetrations, of any type, shall be moisture-resistant products.
4. Firestops for floor penetrations with annular spaces exceeding 4 inches or more in width and exposed to possible loading and traffic shall be products capable of supporting the floor loads involved either by installing floor plates or by other means.
5. Firestops for penetrations involving insulated piping shall be products that do not require removal of insulation.
6. Firestops for cable trays and future penetrations shall be reusable pillows or bags.

C. Provide firestops within fire resistive walls and partitions containing flush mounted devices such as outlet boxes, electrical cabinets and mechanical cabinets mounted back to back and spaced less than 24 inches on center in accordance with UL Fire Resistance Directory “Wall Opening Protective Materials”, Category CLIV.

D. For those products requiring mixing before application, comply with penetration firestopping system manufacturer's written instructions for accurate proportioning of materials, water (if required), type of mixing equipment, selection of mixer speeds, mixing containers, mixing time, and other items or procedures needed to produce products of uniform quality with optimum performance characteristics for application indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrate surfaces to receive firestopping systems and associated work and conditions under which work will be installed. Do not proceed until unsatisfactory conditions have been corrected in a manner acceptable to the Installer. Starting of work within a particular area will be construed as installer's acceptance of surface conditions.

3.2 PREPARATION

A. Surface Cleaning: Clean out openings and joints immediately prior to installing firestopping to comply with recommendations of firestopping manufacturer and the following requirements:

1. Remove foreign materials from surfaces of openings, joints and penetrating items that could interfere with adhesion of firestopping.
2. Clean opening and joint substrates and penetrating items to produce clean, sound surfaces capable of developing optimum bond with firestopping. Remove loose particles remaining from cleaning operation.
3. Remove laitance and form release agents from concrete.

B. Priming: Prime substrates where recommended by firestopping manufacturer using that manufacturer's recommended products and methods. Confine primers to areas of bond; do not allow spillage and migration onto exposed surfaces.

C. Masking Tape: Use masking tape to prevent firestopping from contacting adjoining surfaces that will remain exposed upon completion of Work and that would otherwise be permanently stained or damaged by such contact or by cleaning methods used to remove smears from firestopping materials. Remove tape as soon as it is possible to do so without disturbing firestopping's seal with substrates.

3.3 INSTALLATION OF PENETRATION FIRESTOPS

A. General: Comply with the "System Performance Requirements" article and the penetration firestop manufacturer's installation instructions and drawings pertaining to products and applications indicated.

B. Install forming/damming materials and other accessories of types required to support fill materials during their application and in the position needed to produce the cross-sectional shapes and depths required to achieve fire ratings of designated penetration firestop systems. After installing fill materials, remove combustible forming materials and other accessories not indicated as permanent components of firestop systems.

C. Install fill materials for penetration firestop systems by proven techniques to produce the following results:

1. Completely fill voids and cavities formed by openings, forming materials, accessories, and penetrating items.
2. Apply materials so they contact and adhere to substrates formed by openings and penetrating items.

3. For fill materials that will remain exposed after completing Work, finish to produce smooth, uniform surfaces that are flush with adjoining finishes.

3.4 IDENTIFICATION

A. Identify penetration firestopping with preprinted metal or plastic labels. Attach labels permanently to surfaces adjacent to and within 6 inches (150 mm) of firestopping edge so labels will be visible to anyone seeking to remove penetrating items or firestopping. Use mechanical fasteners or self-adhering-type labels with adhesives capable of permanently bonding labels to surfaces on which labels are placed. Include the following information on labels:

1. The words "Warning - Penetration Firestopping - Do Not Disturb. Notify Building Management of Any Damage."
2. Contractor's name, address, and phone number.
3. Designation of applicable testing and inspecting agency.
4. Date of installation.
5. Manufacturer's name.
6. Installer's name.

3.5 FIELD QUALITY CONTROL

A. Inspection:

1. Owner may employ and pay an independent Inspecting agency to examine firestopping system installations through the course of construction to determine, in general, if it is being installed in compliance with specified requirements. Inspections shall include the following verifications:

   a. Verify that proper specified firestopping system products and materials are used.
   b. Verify installer's credentials and certification.
   c. Verify that each firestopping system is installed in accordance with product manufacturer's latest published requirements.
   d. Verify that firestopping system materials and installation comply with appropriate rating authorities' requirements.
   e. Verify that firestopping system is installed in specified and/or indicated locations in rated assemblies.

2. Do not proceed to enclose firestopping system installations with other construction until reports of examinations are issued.
3. Where deficiencies are found, repair or replace firestopping system materials and products to bring deficient installation into compliance with specified requirements.

3.6 CLEANING

A. Clean off excess fill materials and sealants adjacent to openings and joints as work progresses by methods and with cleaning materials approved by manufacturers of firestopping system products and of products in which opening and joints occur.

B. Protect firestopping system components during and after curing period from contact with contaminating substances or from damage resulting from construction operations or other causes so that they are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated firestopping immediately and install new materials to produce firestopping complying with specified requirements.

END OF SECTION

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SECTION 07 9200

JOINT SEALANTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: Joint sealants, backing materials, and supplementary items necessary for installation.

1.2 SUBMITTALS

A. Product Data: Manufacturer's technical literature for each product and system indicated.

1. Include manufacturer's specifications for materials, finishes, construction details, installation instructions, and recommendations for maintenance.

B. Samples for Initial Selection: Where specified to provide sealant colors from manufacturer's standard and custom selections, provide manufacturer's color charts consisting of strips of cured sealants showing full range of colors available for each product exposed to view.

C. Samples for Verification Purposes: Samples for each kind and color of joint sealants in 1/2 in (12 mm) wide joints formed between two 6 in (150 mm) long strips of material matching appearance of exposed surfaces adjacent to joint sealants.

D. Qualification Data: For installer.

1. For firms and persons specified in "Quality Assurance" to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of Architects and Owners, and other information specified.

1.3 QUALITY ASSURANCE

A. Installer Qualifications:

1. Experience: Installer with not less than 10 years experience in performing specified Work similar to scope of this Project, with a record of successful in-service performance and completion of projects for a period of not less than 10 years, and with sufficient production capability, facilities and personnel, to produce required Work.
2. Supervision: Installer shall maintain a competent supervisor who is at Project site during times specified Work is in progress that is experienced in installing systems similar to type and scope required.
3. Manufacturer Acceptance: Installer shall be certified, approved, licensed, or acceptable to manufacturer to install products.

1.4 PROJECT CONDITIONS

A. Ambient Conditions: Install joint sealants within range of ambient and substrate temperatures and moisture conditions as recommended by manufacturer. Protect substrates from environmental conditions that affect performance.

1.5 COORDINATION

A. Coordinate installation of products and systems with interfacing and adjoining construction to provide a successful installation without failure.

PART 2 - PRODUCTS

2.1 MANUFACTURERS AND PRODUCTS

A. Acceptable Manufacturers and Products: Subject to compliance with requirements of Contract Documents as judged by the Architect, provide product by one of manufacturers listed. If not listed, submit as substitution according to Conditions of the Contract and Division 01 Section "Substitution Procedures".

2.2 MATERIALS, GENERAL

A. Single Source Responsibility: Furnish each type of product from single manufacturer. Provide secondary materials only as recommended by manufacturer of primary materials.

B. Compatibility: Joint sealants, backings, and other related materials shall be compatible with one another and with joint substrates under conditions of service and application, as demonstrated by joint sealant manufacturer based on testing and field experience.

C. Volatile Organic Compounds (VOC) Content of Interior Sealants: Sealants and primers for use inside weatherproofing system shall comply with following limits for VOC content when calculated according to 40 CFR 59, Part 59, Subpart D (EPA Method 24):

1. Elastomeric Sealants: 250 g/L.
2. Primers for Non-Porous Substrates: 250 g/L.
3. Primers for Porous Substrates: 775 g/L.

D. Suitability for Contact with Food: Comply with authorities having jurisdiction for joints in repeated contact with food.

2.3 INTERIOR ELASTOMERIC SEALANTS

A. Interior Non-sag Silicone Sealant:

1. Product Quality Standard: ASTM C 920, Type S, Grade NS, Class 25.
2. Description: Single component, non-sag, moisture curing, silicone sealant specially formulated with fungicide for use in sanitary non-porous applications.
3. Manufacturers and Products:

a. BASF; Omniplus.
b. Dow Corning; 786 Silicone Sealant.
c. Momentive Performance Materials, GE Silicones; Sanitary SCS1700.
d. Pecora Corp.; 898.
e. Tremco Commercial Sealants & Waterproofing; Tremsil 200.

4. Color: As selected by Architect from manufacturer’s standard and custom colors.

B. Interior Non-sag Urethane Sealant:

1. Product Quality Standard: ASTM C 920, Type S, Grade NS, Class 25 or 35.
2. Description: Single component, non-sag, moisture curing, non-staining as determined by pre-construction stain testing if exposed, polyurethane sealant.
3. Joint Movement Capability: Plus 25 percent, minus 25 percent, or plus 35 percent, minus 35 percent.
4. Primers: Product provided by sealant manufacturer if required by conditions.
5. Manufacturers and Products:

    a. BASF; Sonolastic NP 1.
    b. Pecora Corp.; Dynatrol I-XL.
    c. Tremco Commercial Sealants & Waterproofing; Dymonic or Vulkem 116.

6. Color: As selected by Architect from manufacturer's standard colors.

C. Interior Non-sag Acrylic Latex Sealant:

1. Product Quality Standard: ASTM C 834, Type and Grade as required by conditions.
2. Description: Single component, non-sag, moisture curing, general purpose, paintable, siliconized acrylic latex sealant.
3. Joint Movement Capability: Plus 7.5 percent, minus 7.5 percent
4. Manufacturers and Products:

    a. BASF; Sonolac.
    b. Pecora Corp.; AC 20+.
    c. Tremco Commercial Sealants & Waterproofing; Tremflex 834.

5. Color: As selected by Architect from manufacturer’s standard colors.

D. Sprayed Foam Insulating Gap Filler:

1. Description: Low pressure, one-component, expanding, closed-cell polyurethane insulating foam gap filler; applied with professional hand-held dispensing gun; CFC and HCFC free.
2. Performance Requirements: Class 1 Fire-Retardant per ASTM E 84.
3. Manufacturers and Products:

    a. Convenience Products; Touch ‘n Seal.
    b. Dow Chemical Co.; Great Stuff Pro.
    c. Fomo Products, Inc.; Handi-Foam.
    d. RHH Foam Systems, Inc.; Versi-Tite

E. Acoustical Sealants: As specified in Division 09 Section “Gypsum Board Assemblies”.

F. Fire Resistive Sealants: As specified in Division 07 Section “Fire Resistive Joint Firestopping”.

2.4 JOINT SEALANT BACKING

A. Foam Backer Rods:

1. Product Quality Standard: ASTM C 1330, Type C, Type O, Type B.
2. Description: Extruded polyethylene, polyurethane, or polyolefin in either closed cell structure (Type C), open cell structure (Type O), or bicellular structure with surface skin (Type B) as defined by ASTM Terminology C 717.
3. Size: Diameter approximately 25 percent larger than joint width, unless otherwise directed by manufacturer.

4. Manufacturers and Products:

a. Type C:

1) BASF; Sonneborn, Closed-Cell Backer Rod.
2) Nomaco Inc.; Green Rod or HBR.

b. Type O:

1) Backer Rod Mfg. Inc.; Denver Foam.
2) Nomaco Inc.; Foam-Pak II.

c. Type B:

1) BASF; Sonneborn, Soft Backer Rod.
2) Nomaco Inc.; Dual-Rod or Sof-Rod.

B. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials, or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.

2.5 ACCESSORIES

A. Cleaners for Non-porous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent non-porous surfaces in any way, and formulated to promote optimum adhesion of sealants to joint substrates.

B. Masking Tape: Non-staining, non-absorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Acceptance of Surfaces and Conditions: Examine substrate surfaces to receive products and systems and associated Work for compliance with requirements and other conditions affecting performance. Proceed only when unsatisfactory conditions have been corrected in a manner complying with Contract Documents. Starting Work within a particular area will be construed as acceptance of surface conditions.

3.2 INSTALLATION, GENERAL

A. Installation Quality Standards: In addition to standards listed elsewhere, perform Work according to following, unless otherwise specified:

1. Respective manufacturer’s written installation instructions.
2. Accepted submittals.
3. Contract Documents.

3.3 PREPARATION

A. General: Comply with manufacturer's instructions, recommendations, and specifications for cleaning and surface preparation. Surfaces shall have no defects, contaminants, or errors which would result in poor or potentially defective installation or would cause latent defects in Work.

B. Cleaning of Joints: Clean out joints immediately before installing joint backings and sealants to comply with joint sealant manufacturer's written instructions and following requirements:

1. Remove foreign material that could interfere with adhesion of joint sealant, including, but not limited to, dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
2. Clean porous joint substrate surfaces by brushing, grinding, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air.
3. Remove laitance and form-release agents from concrete.
4. Clean non-porous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.
5. Substrate material allowed by sealant's ASTM C 920 Use Classification.

C. Joint Priming: Prime joint substrates where recommended by joint sealant manufacturer, or as indicated by prior experience, or as required by pre-construction compatibility and adhesion testing. Apply primer to comply with joint sealant manufacturer's written instructions. Confine primers to areas of joint sealant bond; do not allow spillage or migration onto adjoining surfaces.

D. Masking Tape: Use masking tape where required to prevent contact of sealant or primer with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.4 INSTALLATION

A. Joint Sealant Backings: Install type indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.

1. Do not leave gaps between ends of sealant backings.
2. Do not stretch, twist, puncture, or tear backings.
3. Remove absorbent sealant backings that have become wet or damaged before sealant application and replace with dry materials.
4. Install bond-breaker tape behind sealants where backings are not used between sealants and backs of joints.

B. Joint Sealants: Install at same time as backings using proven techniques that comply with following:

1. Place sealants so they directly contact and fully wet joint substrates.
2. Completely fill recesses in each joint configuration.

3. Produce uniform, cross sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
4. Use open cell backer rod at interior line of sealant for double sealed condition.
5. Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified in subparagraphs below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.

    a. Remove excess sealant from surfaces adjacent to joints.
    b. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
    c. Use masking tape to protect surfaces adjacent to recessed tooled joints.

6. Install joint sealants in accordance with ASTM C 1193 as applicable to materials, applications, conditions indicated, and with the following profile configurations:

    a. Fillet: Figure 5.
    b. Bridge: Figure 6.
    c. Butt: Figure 8A (concave tooling), generally hour-glass shape with 2:1 width-to-depth ratio.

C. Sprayed Foam Insulating Gap Filler: Apply sprayed foam insulating gap filler within exterior wall assemblies using professional hand-held dispensing gun in accordance with manufacturer's written instructions.

1. Prior to installation of wall finish systems, apply sprayed foam insulating gap filler to gaps, cracks, cavities, openings, and voids in exterior wall back-up, including annular space around piping, ducts, conduits, wiring, and electrical outlets to seal off potential air drafts.
2. After sprayed foam sealant is applied, make flush with face of adjacent wall by using method recommended by manufacturer.

3.5 CLEANING

A. In-Progress Cleaning: Remove excess sealant or sealant smears adjacent to joints as Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

3.6 PROTECTION

A. General Requirements: Protect during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original Work.

3.7 JOINT SEALANT SCHEDULE

A. Interior Elastomeric Sealant Applications:

1. Interior Non-sag Silicone Sealant:

    a. Non-moving joints in moist or damp areas which are susceptible to mildew.

2. Interior Non-sag Urethane Sealant:

a. Building joints on interior side of exterior walls where joint movement is anticipated.

3. Interior Non-sag Acrylic Latex Sealant:

a. Non-moving joints where another type of sealant is not otherwise specified or scheduled.
b. Minimal moving joints due to temperature change.

B. Sprayed Foam Insulating Gap Filler Applications:

1. Exterior non-moving gaps around windows, glazed aluminum walls, doors, and penetrations beneath weather-resistant coverings.
2. Interior non-moving gaps around windows, glazed aluminum walls, doors, and penetrations.

END OF SECTION

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SECTION 08 1416

PREFINISHED FLUSH WOOD DOORS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: Owner furnished prefinished Acrovyn flush wood doors and supplementary items necessary for installation.

1.2 PRE-INSTALLATION CONFERENCE

A. Pre-Installation Conference: Before Work begins, conduct conference at Project site to comply with requirements of applicable Division 01 Sections.

1. Required Attendees:

a. Owner.
b. Architect.
c. Contractor, including superintendent.
d. Installer, including project manager and supervisor.
e. Installers of other construction interfaced with Work.

2. Minimum Agenda: Installer shall demonstrate understanding of the Work required by describing detailed procedures for preparing, installing, and cleaning the Work. Demonstration shall include, but not be limited to, following topics:

a. Tour representative areas of Work, inspect and discuss condition of substrate, and other preparatory work performed by other trades.
b. Review Work requirements (Drawings, Specifications, and other Contract Documents).
c. Review required submittals, both completed and yet to be completed.
d. Review and finalize construction schedule related to Work and verify availability of materials, installer's personnel, equipment, and facilities needed to make progress and avoid delays.
e. Review required inspection, testing, certifying, and material usage accounting procedures.
f. Review environmental conditions and procedures for coping with unfavorable conditions.
g. Resolve deviations or differences between Contract Documents and the manufacturer’s specifications.

3. Contractor shall record discussions of conference, including decisions and agreements reached, and furnish copy of record to each party attending. If substantial disagreements exist at conclusion of conference, determine how disagreements will be resolved and set date for reconvening conference.

1.3 DELIVERY, STORAGE, AND HANDLING

A. General: Comply with requirements of referenced quality standards and manufacturer's written instructions.

1. Protect doors during storage and handling to prevent damage, soiling and deterioration.

1.4 PROJECT CONDITIONS

A. Environmental Limitations: Deliver and install doors only when spaces are enclosed and weathertight, wet work in spaces is complete and dry, and HVAC system is operating and maintaining ambient temperature and humidity conditions at occupancy levels during remainder of construction period.

1.5 COORDINATION

A. Coordinate installation of products and systems with interfacing and adjoining construction to provide a successful installation without failure.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturers: Subject to compliance with requirements of Contract Documents as judged by the Architect, provide product by one of manufacturers listed. If not listed, submit as substitution according to the Conditions of the Contract and Division 01 Section “Substitution Procedures”.

1. Construction Specialties, Inc. (C/S Group). Doors to be furnished by Owner.

2.2 LIGHT FRAMES

A. Metal Frames for Light Openings in Fire-Rated Doors:

1. Description: Manufacturer's standard frame formed of 0.048 in (1.2 mm) thick, cold-rolled steel sheet; and approved for use in doors of fire protection rating indicated.
2. Finish: Baked-enamel or powder-coated factory finish.
3. Color Selection: Match sample accepted by Architect.
4. Glass: As specified in Division 08 Section “Glazing”.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Acceptance of Surfaces and Conditions: Examine substrates to receive products and systems and associated work for compliance with requirements and other conditions affecting performance. Proceed only when unsatisfactory conditions have been corrected in a manner complying with Contract Documents. Starting work within a particular area will be construed as acceptance of surface conditions.

1. Verify that frames comply with indicated requirements for type, size, location, and swing characteristics and have been installed with level heads and plumb jambs.

2. Reject doors with defects.

3.2 INSTALLATION, GENERAL

A. Installation Quality Standards: In addition to standards listed elsewhere, perform Work according to following, unless otherwise specified:

1. NFPA 80 for fire-rated doors.
2. NFPA 105 for smoke control doors.
3. Respective manufacturer's written installation instructions.
4. Contract Documents.

3.3 PREPARATION

A. General: Comply with manufacturer's instructions, recommendations, and specifications for cleaning and surface preparation. Surfaces shall have no defects, contaminants, or errors which would result in poor or potentially defective installation or would cause latent defects in Work.

3.4 INSTALLATION OF FLUSH WOOD DOORS

A. Factory-Fitted Door Clearances: Fit accurately in frames, within following clearances for all doors (smoke control, fire-rated, and non-fire-rated):

1. Jambs and Head: 1/8 in (3 mm) plus or minus 1/16 in (1.5 mm).
2. Between Edges of Pairs of Doors: 1/8 in (3 mm) plus or minus 1/16 in (1.5 mm).
3. Between Bottom of Door and Top of Threshold: Maximum 3/8 in (10 mm).
4. Between Bottom of Door and Top of Finish Floor (No Threshold): Maximum 3/4 inch (20 mm).

B. Hardware: As specified in Division 08 Section "Door Hardware".

C. Factory-Finished Doors: Restore finish before installation if fitting or machining is required at Project site.

3.5 ADJUSTING

A. Operation: Rehang or replace doors that do not swing or operate freely.

B. Finished Doors: Replace doors that are damaged or that do not comply with requirements. Doors may be repaired or refinished if Work complies with requirements and shows no evidence of repair or refinishing.

END OF SECTION

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SECTION 08 3113

ACCESS DOORS AND FRAMES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: Access doors and frames and supplementary items necessary for installation.

1.2 SUBMITTALS

A. Product Data: Manufacturer's technical literature for each product and system indicated.

1. Include manufacturer's specifications for materials, finishes, construction details, installation instructions, and recommendations for maintenance.

B. Shop Drawings: Show details of fabrication and installation, including plans, elevations, sections, details of components and attachments to other work. Distinguish between shop and field-assembled work.

C. Samples for Verification Purposes: For each door face material, at least 3 in by 5 in (75 mm by 125 mm) in size, in specified finish.

D. Access Door and Frame Schedule: Provide complete access door and frame schedule, including types, locations, sizes, latching or locking provisions, and other data pertinent to installation.

E. Product Test Reports: Written reports based on evaluation of comprehensive tests performed by qualified testing agency indicating that each product complies with requirements.

F. Maintenance Data: To include in maintenance manuals.

1.3 QUALITY ASSURANCE

A. Fire-Rated Access Doors and Frames: Units complying with NFPA 80 that are identical to access door and frame assemblies tested for fire-test-response characteristics per the following test method and that are listed and labeled by UL or another testing and inspecting agency acceptable to authorities having jurisdiction:

1. NFPA 252 or UL 10B for vertical access doors and frames.
2. ASTM E 119 or UL 263 for horizontal access doors and frames.

B. Size Variations: Obtain Architect's acceptance of manufacturer's standard-size units, which may vary slightly from sizes indicated.

1.4 COORDINATION

A. Coordinate installation of products and systems with interfacing and adjoining construction to provide a successful installation without failure.

B. Verification: Determine specific locations and sizes for access doors needed to gain access to concealed plumbing, mechanical, or other concealed work, and indicate in the schedule specified in "Submittals" Article.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturers: Subject to compliance with requirements of Contract Documents as judged by the Architect, provide product by one of manufacturers listed. If not listed, submit as substitution according to the Conditions of the Contract and Division 01 Section “Substitution Procedures”.

1. Metal Doors and Frames:

a. Acudor Products, Inc.
b. Babcock-Davis.
c. Dur-Red Products.
d. J. L. Industries, Inc.
e. Karp Associates, Inc.
f. Larsen's Manufacturing Company.
g. Maxam Metal Products, Ltd.
h. Milcor Inc.
i. Nystrom, Inc.
j. Williams Brothers Corporation of America.

B. Basis of Design (Product Standard): Contract Documents are based on products and systems specified to establish a standard of quality. Other manufacturers offering products having equivalent characteristics may be considered, provided deviations are minor and comply with requirements of Contract Documents as judged by the Architect.

2.2 MATERIALS, GENERAL

A. Single Source Responsibility: Furnish each type of product from single manufacturer. Provide secondary materials only as recommended by manufacturer of primary materials.

2.3 STEEL MATERIALS

A. Steel Plates, Shapes, and Bars: ASTM A 36 / A 36M.

1. ASTM A 123 / A 123M, for galvanizing steel and iron products.
2. ASTM A 153 / A 153M, for galvanizing steel and iron hardware.

B. Steel Sheet: Uncoated cold-rolled steel sheet substrate complying with ASTM A 1008 / A 1008M, Commercial Steel (CS), exposed.

C. Steel Finishes: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

1. Surface Preparation for Steel Sheet: Clean surfaces to comply with SSPC-SP 1, "Solvent Cleaning", to remove dirt, oil, grease, or other contaminants that could impair paint bond. Remove mill scale and rust, if present, from uncoated steel, complying with SSPC-SP 5/NACE No. 1, "White Metal Blast Cleaning", or SSPC-SP 8, "Pickling".

2. Factory-Primed Finish: Apply shop primer immediately after cleaning and pretreating.

D. Drywall Beads: Edge trim formed from 0.0299 in (0.7 mm) zinc-coated steel sheet formed to receive joint compound and in size to suit thickness of gypsum board.

2.4 STAINLESS-STEEL MATERIALS

A. Stainless-Steel Sheet, Strip, Plate, and Flat Bars: ASTM A 666, Type 316. Remove tool and die marks and stretch lines or blend into finish.

1. Finish: Directional No. 4 Satin Finish.

2.5 ACCESS DOORS AND FRAMES FOR WALLS AND CEILINGS

A. Non-rated Flush Access Doors and Frames with Exposed Trim:

1. Locations:

a. Ceramic tile wall surfaces.

2. Fabricated from one of the following as scheduled at the end of this Section.

a. Stainless-steel sheet.

3. Door: Minimum 0.075 in (1.9 mm) thick sheet metal, set flush with exposed face flange of frame.
4. Frame: Minimum 0.060 in (1.5 mm) thick sheet metal with 1-1/4 in (32 mm) wide, surface-mounted trim.
5. Hinges: Continuous piano.
6. Lock: Key-operated cylinder.
7. Size: 12 in by 12 in (300 mm by 300 mm); unless otherwise indicated.
8. Basis of Design: Nystrom Building Products, Model NT.

B. Non-rated Flush Access Doors and Trimless Frames:

1. Locations: Wall and ceiling surfaces as scheduled.

a. Gypsum board wall and ceiling surfaces.

2. Fabricated from one of the following as scheduled at the end of this Section.

a. Steel sheet

3. Door: Minimum 0.075 in (1.9 mm) thick sheet metal, set flush with surrounding finish surfaces.
4. Frame: Minimum 0.060 in (1.5 mm) thick sheet metal with drywall bead flange.
5. Hinges: Continuous piano.
6. Lock: Key-operated cylinder.
7. Size: 12 in by 12 in (300 mm by 300 mm); unless otherwise indicated.
8. Basis of Design: Nystrom Building Products, Model NW or NP as applicable.

C. Fire-Rated, Insulated, Flush Access Doors and Frames with Exposed Trim:

1. Locations:

a. Ceramic tile wall surfaces.

2. Fabricated from one of the following as scheduled at the end of this Section.

a. Metallic-coated (galvanized) steel sheet.
b. Stainless-steel sheet.

3. Fire-Resistance Rating: Not less than 1-1/2 hours.
4. Temperature Rise Rating: 250 deg F (139 deg C) at the end of 30 minutes.
5. Door: Flush panel with a core of mineral-fiber insulation enclosed in sheet metal with a minimum thickness of 0.036 in (0.9 mm).
6. Frame: Minimum 0.060 in (1.5 mm) thick sheet metal with 1 in (25 mm) wide, surface-mounted trim.
7. Hinges: Continuous piano.
8. Automatic Closer: Spring type.
9. Latch: Self-latching device operated by flush key with interior release.
10. Size: 12 in by 12 in (300 mm by 300 mm); unless otherwise indicated.
11. Basis of Design: Nystrom Building Products, Model IT.

D. Fire-Rated, Insulated, Flush Access Doors and Trimless Frames:

1. Locations:

a. Gypsum board wall and ceiling surfaces.

2. Fabricated from one of the following as scheduled at the end of this Section.

a. Steel sheet

3. Fire-Resistance Rating: Not less than 1-1/2 hours.
4. Temperature Rise Rating: 250 deg F (139 deg C) at the end of 30 minutes.
5. Door: Flush panel with a core of mineral-fiber insulation enclosed in sheet metal with a minimum thickness of 0.036 in (0.9 mm).
6. Frame: Minimum 0.060 in (1.5 mm) thick sheet metal with drywall bead.
7. Hinges: Continuous piano.
8. Automatic Closer: Spring type.
9. Latch: Self-latching device operated by flush key with interior release.
10. Size: 12 in by 12 in (300 mm by 300 mm); unless otherwise indicated.
11. Basis of Design:

a. Gypsum Board: Nystrom Building Products, Model IW.

2.6 FABRICATION

A. General: Provide access door and frame assemblies manufactured as integral units ready for installation.

B. Metal Surfaces: For metal surfaces exposed to view in the completed Work, provide materials with smooth, flat surfaces without blemishes. Do not use materials with exposed pitting, seam marks, roller marks, rolled trade names, or roughness.

C. Doors and Frames: Grind exposed welds smooth and flush with adjacent surfaces. Furnish attachment devices and fasteners of type required to secure access panels to types of supports indicated.

1. Gypsum Board Locations: For trimless frames with drywall bead, provide edge trim for gypsum board securely attached to perimeter of frames.
2. Provide mounting holes in frames for attachment of units to metal framing.

D. Latching Mechanisms: Furnish number required to hold doors in flush, smooth plane when closed.

1. For cylinder lock, furnish two keys per lock and key all locks alike.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Acceptance of Surfaces and Conditions: Examine substrates to receive products and systems and associated work for compliance with requirements and other conditions affecting performance. Proceed only when unsatisfactory conditions have been corrected in a manner complying with Contract Documents. Starting work within a particular area will be construed as acceptance of surface conditions.

3.2 INSTALLATION, GENERAL

A. Installation Quality Standards: In addition to standards listed elsewhere, perform Work according to following, unless otherwise specified:

1. Respective manufacturer's written installation instructions.
2. Accepted submittals.
3. Contract Documents.

3.3 PREPARATION

A. General: Comply with manufacturer's instructions, recommendations, and specifications for cleaning and surface preparation. Surfaces shall have no defects or errors which would result in poor or potentially defective installation or would cause latent defects in Work.

B. Advise installers of other work about specific requirements relating to access door and floor door installation, including sizes of openings to receive access door and frame, as well as locations of supports, inserts, and anchoring devices.

3.4 INSTALLATION OF ACCESS DOORS AND FRAMES

A. Install doors flush with adjacent finish surfaces or recessed to receive finish material.

3.5 ADJUSTING AND CLEANING

A. Adjust doors and hardware after installation for proper operation.

B. Remove and replace doors and frames that are warped, bowed, or otherwise damaged.

3.6 ACCESS DOOR SCHEDULE

A. Provide access doors where indicated on the drawings and as follows:

1. Steel Access Doors:

    a. Concealed valves and controls for plumbing and HVAC.
    b. Fire dampers above non-accessible ceilings.
    c. Motor operated doors and grilles above non-accessible ceilings.

2. Fire-Rated Steel Access Doors:

    a. Rated walls and ceilings.

3. Stainless Steel Access Doors:

    a. Ceramic tile and other damp locations.

END OF SECTION

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SECTION 08 7100

DOOR HARDWARE

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: Items commercially known as finish or door hardware required for operation of doors, and accessories necessary to complete installation.

B. Hardware will be furnished by Owner and installed by Contractor.

1.2 QUALITY ASSURANCE

A. Installer Qualifications:

1. Experience: Company with not less than 10 years experience in performing specified Work similar to scope of this Project; with a record of successful in-service performance; and sufficient capability, facilities and personnel, to produce required Work.
2. Supervision: Installer shall maintain a competent supervisor who is at Project during times specified Work is in progress, and, who is experienced in installing systems similar to type and scope required for Project.
3. Manufacturer Training: Technical representatives of manufacturer of locksets, exit devices and closers shall train Installer's installation personnel (supervisor and installers), either at Project or at manufacturers facility, on following:

a. Proper installation of products.
b. Proper sequence of installation of Work.
c. Situations that require special attention or care during installation.
d. Situations and conditions that should be avoided.
e. Other topics relevant to installation.

PART 2 - PRODUCTS

2.1 FURNISHED BY OWNER

PART 3 - EXECUTION

3.1 EXAMINATION

A. Acceptance of Surfaces and Conditions: Examine doors and frames to receive door hardware and associated Work for compliance with requirements and other conditions affecting performance. Proceed only when unsatisfactory conditions have been corrected in a manner complying with Contract Documents. Starting Work within a particular area will be construed as acceptance of surface conditions.

3.2 PREPARATION

A. Surface-Applied Door Hardware: Drill and tap doors and frames according to ANSI A 250.6.

B. Wood Doors: Comply with DHI A115-W Series.

3.3 INSTALLATION

A. Installation Quality Standards: In addition to standards listed elsewhere, perform Work according to following, unless otherwise specified:

1. Respective manufacturer's installation instructions.
2. ANSI/DHI A 115.IG.
3. Contract Documents.

B. Mounting Heights: Mount door hardware units at heights indicated as follows unless otherwise indicated or required to comply with governing regulations.

1. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."

C. Hardware Installation:

1. Set hardware items level, plumb, and true to line and location. Adjust and reinforce attachment substrates as necessary for proper installation and operation.
2. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.
3. Do not install surface-mounted hardware items until finishes have been completed on substrates involved.

3.4 HARDWARE SCHEDULE

A. Refer to schedule on drawings.

END OF SECTION

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SECTION 08 8130

GLAZING ACCESSORIES

PART 1 - GENERAL

1.1 SUMMARY

A. Work of this Section includes glazing accessories, installation materials and supplementary items necessary to complete the work required for their installation.

1.2 SUBMITTALS

A. General: Submit each item in this Article according to the Conditions of the Contract and Division 1 Specification Sections.

B. Product Data for each product and glazing material specified.

C. Verification Samples: For each finish product specified, two samples representing actual

D. Maintenance data for glazing accessories to include in the operation and maintenance manual specified in Division 1.

1.3 QUALITY ASSURANCE

A. Installer Qualifications: Engage an experienced installer who has completed glazing similar in material, design, and extent to that indicated for this Project and with a record of successful in-service performance.

B. Single-Source Responsibility: Obtain each type of glazing accessories from one source and by a single manufacturer for each product and installation method indicated.

1.4 PERFORMANCE REQUIREMENTS

A. Fire Performance: Surface burning characteristics when tested in accordance ASTM E 84:

1. Flame Spread: 25, maximum.
2. Smoke Developed: 450, maximum.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Protect glazing accessories to comply with manufacturer's directions and as needed to prevent damage to materials.

1.6 PROJECT CONDITIONS

A. Space Enclosure and Environmental Limitations: Do not install glazing accessories until space is enclosed and weatherproof, wet-work in space is completed and nominally dry, work above ceilings is complete, and ambient temperature and humidity conditions are and will be continuously maintained at values near those indicated for final occupancy.

1.7 WARRANTY

A. General Warranty: Special warranties specified in this Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by the Contractor under requirements of the Contract Documents.

B. Special Warranty: Submit a written warranty signed by manufacturer and Installer agreeing to replace decorative glass units that do not meet requirements or that deteriorate as defined in this Section within the specified warranty period. Warranty covers only deterioration due to normal conditions of use and not to handling, installing, and cleaning practices contrary to manufacturer's published instructions.

1. Warranty Period: 5 years after date of Substantial Completion.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Following manufacturers listed are "acceptable" only if manufacturer can evidence product compliance with requirements of Contract Documents.

1. Glazing Film:

MDC.

B. For manufacturers not listed, submit as substitution according to the Conditions of the Contract and Division 1 Specification Sections.

2.2 GLAZING ACCESSORY PRODUCTS

A. Glass Film: Material of type indicated with a proven record of no tendency to bubble, discolor, or lose physical and mechanical properties after installation.

1. Ultraviolet Rejected (ASTM E 903): Not less than 99 percent.
2. Film Material Color or Pattern: Where manufacturer's standard products are indicated, provide interlayer material complying with the following requirements:

a. Colors, textures, and patterns indicated by referencing manufacturer's standard designations for these characteristics.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Cut film edges neatly and square at a uniform distance of 1/8 inch (3 mm) to 1/16 inch (1.5 mm) of window sealant. Use new blade tips after 3 to 4 cuts.

C. Spray the slip solution, composed of one capful of baby shampoo or dishwashing liquid to 1 gallon of water, on window glass and adhesive to facilitate proper positioning of film.

D. Apply film to glass and lightly spray film with slip solution.

E. Squeegee from top to bottom of window. Spray slip solution to film and squeegee a second time.

F. Bump film edge with lint-free towel wrapped around edge of a 5-way tool.

G. Upon completion of film application, allow 30 days for moisture from film installation to dry thoroughly, and to allow film to dry flat with no moisture dimples when viewed under normal viewing conditions.

3.4 CLEANING AND PROTECTION

A. Remove left over material and debris from Work area. Use necessary means to protect film before, during, and after installation.

B. Touch-up, repair or replace damaged products before Substantial Completion.

C. After application of film, wash film using common window cleaning solutions, including ammonia solutions, 30 days after application. Do not use abrasive type cleaning agents and bristle brushes to avoid scratching film. Use synthetic sponges or soft cloths.

END OF SECTION

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SECTION 09 2900

GYPSUM BOARD ASSEMBLIES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: Metal framing systems, interior gypsum board faced walls, partitions, and ceiling assemblies, and supplementary items necessary for installation.

1.2 DEFINITIONS

A. Gypsum Board Construction Terminology: Refer to ASTM C 11 for definitions of terms not defined in this Section or in other referenced quality standards.

B. Damage: Stored or installed paper-faced gypsum board materials not specifically manufactured as “moisture-resistant products” shall be classified as defective and nonconforming Work if they have been exposed to wetness or dampness at any time prior to Substantial Completion or if they exhibit evidence of active or dormant mold or mildew.

1.3 SUBMITTALS

A. Product Data: Manufacturer’s technical literature for each product and system indicated.

1. Include manufacturer's specifications for materials, finishes, construction details, installation instructions, and recommendations for maintenance.

B. Shop Drawings: Show details of fabrication and installation, including plans, elevations, sections, details of components and attachments to other work. Include scaled and dimensioned drawings showing locations of control joints.

1. Gypsum Board Location Schedule: Provide detailed schedule in format similar to “Gypsum Board Schedule” at end of this Section indicating gypsum board products to be installed and their respective locations.

C. Samples for Verification of Aluminum Trim Accessories: 12 in (300 mm) long samples indicating specified profile and finish.

D. Product Test Reports: Written reports based on evaluation of comprehensive tests performed by qualified testing agency indicating that each product complies with requirements.

E. Field Quality Control Reports: Written report of testing and inspection required by “Field Quality Control”.

F. Manufacturer’s Project Acceptance Document: Certification by the manufacturer that its product(s) are approved, acceptable, suitable for use in specific locations, for specific details, and for applications indicated, specified, or required.

G. Qualification Data: For manufacturer and installer.

1. For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of Architects and Owners, and other information specified.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: Manufacturer with not less than 5 years experience with successful production of products and systems similar to scope of this Project, with a record of successful in-service performance and completion of projects for a period of not less than 5 years, and with sufficient production capability, facilities, and personnel to produce required Work.

B. Installer Qualifications:

1. Experience: Installer with not less than 5 years experience in performing specified Work similar to scope of this Project, with a record of successful in-service performance and completion of projects for a period of not less than 5 years and with sufficient production capability, facilities, and personnel to produce required Work.
2. Supervision: Installer shall maintain a competent supervisor who is at Project site during times specified Work is in progress that is experienced in installing systems similar to type and scope required for Project.

C. Manufacturer’s Technical Representative Qualifications: Direct employee of technical services department of manufacturer with minimum of 5 years experience in providing recommendations, observations, evaluations, and problem diagnostics. Sales representatives are not acceptable.

D. Fire Resistance Rated Assembly Characteristics: Provide materials and construction identical to those tested according to ASTM E 119/NFPA 251/UL 263 by one of following independent testing and inspecting agency as evidenced by design designation included in their associated approval manual:

1. UL - “Fire Resistance Directory”, Category BXUV.
2. GA 600 - “Fire Resistance Design Manual”.
3. Other agency acceptable to authorities having jurisdiction.

E. Smoke Resistance Rated Assembly Characteristics: Provide materials and construction identical to those tested according to indicated fire resistance rated assemblies by independent testing and inspecting agency acceptable to authorities having jurisdiction.

F. Sound (STC) Resistance Rated Assembly Characteristics: Provide materials and construction identical to those tested according to ASTM E 90 and classified according to ASTM E 413 by independent and testing agency acceptable to authorities having jurisdiction.

1.5 PRE-INSTALLATION CONFERENCE

A. Pre-Installation Conference: Before Work begins, conduct conference at Project site to comply with requirements of applicable Division 01 Sections.

1. Required Attendees:

a. Owner.
b. Architect.
c. Contractor, including superintendent.
d. Installer, including project manager and supervisor.
e. Manufacturer's qualified technical representative.
f. Installers of other construction interfaced with Work.

2. Minimum Agenda: Installer shall demonstrate understanding of the Work required by describing detailed procedures for preparing, installing, and cleaning the Work. Demonstration shall include, but not be limited to, following topics:

a. Tour representative areas of Work, inspect and discuss condition of substrate, and other preparatory work performed by other trades.
b. Review Work requirements (Drawings, Specifications, and other Contract Documents).
c. Review required submittals, both completed and yet to be completed.
d. Review and finalize construction schedule related to Work and verify availability of materials, installer's personnel, equipment, and facilities needed to make progress and avoid delays.
e. Review required inspection, testing, certifying, and material usage accounting procedures.
f. Review environmental conditions and procedures for coping with unfavorable conditions.
g. Resolve deviations or differences between Contract Documents and the manufacturer's specifications.

3. Contractor shall record discussions of conference, including decisions and agreements reached, and furnish copy of record to each party attending. If substantial disagreements exist at conclusion of conference, determine how disagreements will be resolved and set date for reconvening conference.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Store materials inside under cover and keep them dry and protected against weather, condensation, direct sunlight, construction traffic, and other potential causes of damage. Stack panels flat and supported on risers on a flat platform to prevent sagging.

1.7 PROJECT CONDITIONS

A. Environmental Conditions: Comply with ASTM C 840 requirements or respective gypsum board manufacturer's written recommendations, whichever are more stringent.

1.8 COORDINATION

A. Coordinate installation of products and systems with interfacing and adjoining construction to provide a successful installation without failure.

PART 2 - PRODUCTS

2.1 MANUFACTURERS AND PRODUCTS

A. Available Manufacturers and Products: Subject to compliance with requirements of Contract Documents as judged by the Architect, manufacturers offering products that may be incorporated into the Work include, but are not limited to, those listed.

B. Basis of Design (Product Standard): Contract Documents are based on products and systems specified to establish a standard of quality. Other available manufacturers offering products having equivalent characteristics may be considered, provided deviations are minor and comply with requirements of Contract Documents as judged by the Architect.

2.2 MATERIALS, GENERAL

A. Single Source Responsibility: Furnish each type of product from single manufacturer. Provide secondary materials only as recommended by manufacturer of primary materials.

2.3 PERFORMANCE REQUIREMENTS

A. General Performance: Engineer products and systems to withstand loads within limits of allowable working stresses of the materials involved under conditions indicated and without permanent deformation or failure of materials.

B. Design Loads: Engineer to withstand design loads including but not limited to gravity, wind, seismic, and erection design loads established by authorities having jurisdiction, applicable local building codes, and as indicated.

1. Structural Movement: Engineer to withstand movements of structure including, but not limited to, drift, twist, column shortening, long-term creep and deflection from uniformly distributed and concentrated live loads. Contractor shall obtain required design data and identify movements accommodated on submittal drawings.

a. Accommodate plus or minus 3/8 in (10 mm) differential vertical deflection of floors.

C. Dimensional Tolerances: Engineer products and systems to accommodate dimensional tolerances of framing members and adjacent construction.

2.4 METAL FRAMING COMPONENTS

A. Material Quality Standard: Provide components of sizes indicated but not less than that required to comply with ASTM C 754 for conditions indicated.

1. Sheet Steel: ASTM C 645 for metal.
2. Protective Coating - Standard Applications: ASTM A 653/A 653M, not less than G40 (Z120), hot-dip galvanized coating, unless otherwise indicated.

B. Metal Studs and Floor Track (Runners):

1. Standard Metal Framing Components for Typical Partitions:

a. Stud Description: C-shaped members formed from galvanized sheet steel with 1 1/4 in (32 mm) flange edges bent back 90 degrees and doubled over to form 13/64 in (5 mm) wide minimum return lip; of web depth indicated on Drawings and

uncoated base metal thickness indicated in “Metal Framing Schedule” at end of this Section; with web punchouts.

1) Alternative Jamb Stud Members - Contractor’s Option: “Heavy Duty” or “King” studs; C-shaped members formed from galvanized sheet steel with 3 in (75 mm) flange width; of web depth indicated on Drawings and uncoated base metal thickness indicated in “Metal Framing Schedule” at end of this Section.

b. Track (Runner) Description: U-shaped members formed from galvanized sheet steel with depth compatible with studs and flange dimension indicated to hold studs by friction; of same web size and uncoated base metal thickness as studs.

1) Floor Track (Runner): 1-1/4in (32 mm).
2) Top of Wall Track (Runner): 3 in (75 mm).

2. Metal Framing for Shaftwall Partitions:

a. Stud Description: C-H, double E, C-T, or I-shaped members formed from galvanized sheet steel; of web depth indicated on Drawings and uncoated base metal thickness indicated in “Metal Framing Schedule” at end of this Section; with web punchouts.
b. Track (Runner) and Jamb Description: J-shaped track or jamb members formed from galvanized sheet steel with depth compatible with studs and flange dimension indicated to hold studs by friction; of same web size and uncoated base metal thickness as studs.

3. Conversion of Gage to Minimum Thickness for Metal Framing: When metal framing is indicated to be of a specific gage thickness, following shall be uncoated base metal thickness according to SSMAs “Product Technical Information”, 2000 :

a. 25 Gage: 0.0188 in (0.48 mm) design thickness; 18 mils minimum thickness.
b. 22 Gage: 0.0283 in (0.72 mm) design thickness; 27 mils minimum thickness.
c. 20 Gage Drywall: 0.0312 in (0.79 mm) design thickness; 30 mils minimum thickness.
d. 20 Gage Structural: 0.0346 in (0.88 mm) design thickness; 33 mils minimum thickness.
e. 18 Gage: 0.0451 in (1.15 mm) design thickness; 43 mils minimum thickness.
f. 16 Gage: 0.0566 in (1.44 mm) design thickness; 54 mils minimum thickness.
g. 14 Gage: 0.0713 in (1.81 mm) design thickness; 68 mils minimum thickness.
h. 12 Gage: 0.1017 in (2.58 mm) design thickness; 97 mils minimum thickness.
i. Optional Equivalent Products: Thickness as required for meeting specified criteria for deformed metal studs and tracks (runners) specified elsewhere in this Article.

4. Minimum thickness represents 95 percent of design thickness and is minimum acceptable thickness of material for Work.
5. Optional Equivalent Products - Deformed Metal Studs and Tracks (Runners):

a. Evaluation Criteria: Product test reports and certifications from independent testing agency indicating products comply with requirements and are acceptable to authorities having jurisdiction.
b. Material Quality Standard: ASTM A 1003 / A 1003M sheet steel with galvanized coating.
c. Stud Description: C-shaped members formed from deformed surface galvanized sheet steel with 1-1/4 in (32 mm) flange edges bent back 90 degrees and bent again to form 3/16 in (5 mm) wide minimum return lip; of web depth indicated on Drawings and uncoated base metal thickness indicated in “Metal Framing Schedule” at end of this Section; with web punchouts.

d. Track (Runner) Description: U-shaped members formed from deformed surface galvanized sheet steel with depth compatible with studs and flange dimension indicated to hold studs by friction; of same web size and uncoated base metal thickness as studs.
e. Manufacturer and Product: ClarkDietrich Building Systems; ProSTUD.

C. Flat Straps and Back-Up Plates: Galvanized sheet steel for blocking and bracing in length and width indicated, of same uncoated base metal thickness as adjacent metal studs.

D. Bridging:

1. Channel: U-shaped members formed from galvanized sheet steel not less than 0.0566 in (16 gage) (1.44 mm) minimum uncoated base metal thickness, with 1/2 in (12 mm) flanges and depth fitting stud punchouts.
2. Clip Angle: 1-1/2 in by 1-1/2 in (38 mm by 38 mm) L-shaped members formed from galvanized sheet steel not less than 0.0713 in (14 gage) (1.81 mm) uncoated base metal thickness.

E. Rigid Furring Channels: Hat-shaped members formed from galvanized sheet steel not less than 0.0312 in (20 gage) (0.78 mm) minimum uncoated base metal thickness; 7/8 in (21 mm) depth and minimum 1-3/8 in (35 mm) wide knurled mounting flange.

F. Resilient Furring Channels: 1/2 in (12 mm) deep members formed from galvanized sheet steel not less than 0.0283 in (22 gage) (0.72 mm) minimum bare-metal thickness, designed to reduce sound transmission.

1. Configuration: Asymmetrical or hat shaped.

G. Manufacturers:

1. Building Products Division of Consolidated Fabricators Corp.
2. California Expanded Metal Products Co. (CEMCO).
3. ClarkDietrich Building Systems
4. Marino Ware; Division of Ware Industries.
5. Scafco Corp.

2.5 PRE-ENGINEERED METAL FRAMING COMPONENTS

A. Deflection and Firestop Track (Runner):

1. Description: Proprietary track (runner) formed from galvanized sheet steel manufactured to accommodate movement of building structure without transferring stress to partition (to prevent cracking of gypsum board resulting from deflection of building structure above) while maintaining continuity of fire resistance rated assembly indicated; in thickness not less than indicated for studs and in width to accommodate depth of studs.
2. Manufacturers:

a. Metal Stud Framing Manufacturer.
b. Fire Trak Corp.
c. The Steel Network.

B. Flexible Track (Runner):

1. Description: Proprietary track (runner) formed from galvanized sheet steel manufactured to be flexible and adjustable to fit design requirements; in thickness not less than indicated for studs and in width to accommodate depth of studs.
2. Manufacturers:

   a. Metal Stud Framing Manufacturer.
   b. Accu-Arc Curved Wall Products.
   c. Flex-Ability Concepts.
   d. Radius Track Corp.

C. Headers:

1. Description: Proprietary header assembly formed from galvanized sheet steel manufactured to bear partition load above openings without transferring stress to partition (to prevent cracking of gypsum board); in thickness not less than indicated for studs and in width to accommodate depth of studs.
2. Manufacturers:

   a. Metal Stud Framing Manufacturer.
   b. Brady Construction Innovations, Inc.

2.6 GYPSUM BOARD PRODUCTS

A. Sizes: Maximum lengths and widths available that will minimize short edge-to-short edge butt joints and to correspond to support system indicated.

B. Typical Paper-Faced Gypsum Board Products:

1. Paper-Faced Type X Gypsum Board:

   a. Material Quality Standard: ASTM C 1396 / C 1396M, Type X.
   b. Description: Noncombustible fire resistant gypsum core with paper surfacing on face, back, and long edges; tapered long edges; 5/8 in (15 mm) thick.
   c. Manufacturers and Products:

      1) CertainTeed Corporation; ProRoc Type X Gypsum Board.
      2) Georgia-Pacific Gypsum LLC; ToughRock Fireguard Gypsum Board.
      3) National Gypsum Properties, LLC; Gold Bond Fire-Shield Gypsum board.
      4) Temple-Inland; GypsumBoard Fire-Resistant Panels.
      5) United States Gypsum Company (USG); Sheetrock Firecode Core.

C. Moisture-Resistant Gypsum Board Products:

1. Moisture-Resistant Paper-Faced Gypsum Board:

   a. Material Quality Standard: ASTM C 1396 / C 1396M, Type X.
   b. Description: Enhanced moisture-resistant, noncombustible gypsum core, with moisture-resistant paper surfacing on face, back and long edges; tapered long edges; score of 10 according to ASTM D 3273; 5/8 in (15 mm) thick.
   c. Manufacturers and Products:

      1) CertainTeed Corporation; ProRoc Moisture and Mold Resistant Type X Gypsum Board.

2) National Gypsum Properties LLC; Gold Bond XP Gypsum Board.
3) Temple-Inland; ComfortGuard Water- and Mold-Resistant Gypsum Board.
4) United States Gypsum Company (USG); Sheetrock Mold Tough Firecode Gypsum Board.

2. Moisture-Resistant Paperless Glass-Mat Gypsum Board:

a. Material Quality Standard: ASTM C 1177 / C 1177M.
b. Description: Enhanced moisture-resistant, noncombustible gypsum core with inorganic, embedded fiberglass mat on both faces; square edges; score or 10 according to ASTM D 3273; 5/8 in (15 mm) thick.
c. Manufacturers and Products:

1) Georgia-Pacific Gypsum LLC; DensArmor Plus Fireguard Interior Guard.
2) Temple-Inland; GreenGlass Interior Gypsum Board

3. Moisture-Resistant Paper-Faced Shaft-Liner Gypsum Board:

a. Material Quality Standard: ASTM C 1396/C 1396M, Type X.
b. Description: Enhanced moisture-resistant, noncombustible gypsum core with moisture-resistant paper surfacing on face, back and long edges; tapered long edges; score of 10 according to ASTM D 3273; 1 in (25 mm) thick.
c. Manufacturers and Products:

1) National Gypsum Co.; Gold Bond 1” Fire-Shield Shaftliner XP.
2) USG Corp.; SHEETROCK Mold Tough Gypsum Liner Panels.

4. Moisture-Resistant Paperless Glass-Mat Shaft-Liner Gypsum Board:

a. Material Quality Standard: ASTM C 1396 / C 1396M.
b. Description: Enhanced moisture-resistant, noncombustible gypsum core with inorganic, embedded fiberglass mat on both faces, double bevel long edges; score of 10 according to ASTM D 3273; 1 in (25 mm) thick.
c. Manufacturers and Products:

1) Georgia-Pacific Gypsum LLC; DensGlass Shaftliner.
2) Temple-Inland; GreenGlass Shaftliner.
3) USG Corp.; SHEETROCK Glass-Mat Liner Panels.

5. Moisture-Resistant Coated Glass-Mat Gypsum Board Products:

a. Material Quality Standard: ASTM C 1178 / C 1178M.
b. Description: Enhanced moisture-resistant, noncombustible, gypsum core with inorganic, embedded fiberglass mat on both sides; outside face coated with heat-cured copolymer water-resistant coating; square edges; score or 10 according to ASTM D 3273; 5/8 in (15 mm) thick.
c. Manufacturers and Products:

1) Georgia-Pacific Gypsum LLC; DensShield Tile Backer.
2) Temple-Inland; GreenGlass Tile Backer.

2.7 TRIM ACCESSORIES

A. Typical Drywall Trim Accessories:

1. Material Quality Standard: ASTM C 1047.
2. Description: Trim profile fabricated of galvanized steel sheet; of size suitable for gypsum board thickness; with recessed, perforated flange formed to receive joint compound.
3. Trim Products:

   a. Cornerbead:

      1) Purpose: For protecting outside (external) corners.
      2) Basis of Design: United States Gypsum Company (USG); Dur-A-Bead Corner Bead, 103.

   b. LC-Bead (J-Bead):

      1) Purpose: For protecting exposed edges of gypsum board where back flange can be used.
      2) Basis of Design: United States Gypsum Company (USG); J-Trim, 200-A.

   c. L-Bead:

      1) Purpose: For protecting exposed edges of gypsum board where back flange cannot be used.
      2) Basis of Design: United States Gypsum Company (USG); L-Trim, 200-B.

   d. J-Stop:

      1) Purpose: For protecting edges of gypsum board that does not require finishing.
      2) Basis of Design: United States Gypsum Company (USG); J-Stop, 402.

   e. Control Joint:

      1) Description: One-piece trim formed with V-shaped slot, with removable strip covering slot opening.
      2) Purpose: For conditions requiring expansion and contraction stresses of large areas of gypsum board to be relieved.
      3) Basis of Design: United States Gypsum Company (USG); Control Joint, 093.

   f. Other Trim or Special Shapes: Products as required by condition.

4. Manufacturers:

   a. Dietrich Industries, Inc.; Unimast.
   b. Fry Reglet Architectural Metals.
   c. Marino Ware; Division of Ware Industries.
   d. Niles Building Products Co.
   e. Superior Metal Trim; Division of Delta Star, Inc.
   f. United States Gypsum Company (USG)

B. Accent Trim Accessories:

1. Description: Extruded aluminum accessories of profiles and dimensions indicated of alloy and temper with not less than strength and durability properties of ASTM B 221, alloy 6063-T5.
2. Manufacturers:

   a. Fry Reglet Architectural Metals.
   b. Gordon, Inc.
   c. Pittcon Industries.

2.8 FASTENERS

A. Limitations: Nails and staples are not permitted.

B. Fasteners for Attaching Metal Framing to Concrete Structure:

1. Anchors: Fabricated from corrosion-resistant materials with holes or loops for attaching hanger wires and capable of sustaining, without failure, a load equal to 5 times that imposed by construction as determined by testing according to ASTM E 488 by a qualified independent testing agency.

   a. Cast-in-place anchor, designed for attachment to concrete.
   b. Post-installed chemical anchor.
   c. Post-installed expansion anchor.

2. Powder-Actuated Fasteners: Suitable for application indicated, ANSI A 10.3; low velocity, powder-actuated fasteners; drive pins and clip angles fabricated from corrosion-resistant materials, with clips or other devices for attaching hangers of type indicated, and capable of sustaining, without failure, an ultimate load capacity not less than 10 times that imposed by construction as determined by testing according to ASTM E 1190 by a qualified independent testing agency.
3. Manufacturers:

   a. Construction Materials, Inc.
   b. Heckman Building Products, Inc.
   c. Hilti Corp.
   d. ITW Ramset/Red Head.
   e. Powers Fasteners.
   f. Simpson Strong Tie Anchor Systems.

4. For post-tensioned concrete, anchors shall not exceed 1 in (25 mm) embedment. Obtain Structural Engineer's written approval for all proposed anchors in post-tensioned concrete prior to installation.

C. Metal Framing Screws: Screw fasteners of type, material, size, corrosion resistance, holding power, and other properties required to fasten metal framing and furring members securely to substrates involved; complying with recommendations of gypsum board manufacturers for applications indicated.

D. Gypsum Board Screws:

1. Material Quality Standards:

   a. Metal Framing Members less than 0.03 in (0.75 mm) Thick: ASTM C 1002, Type S.

b. Metal Framing Members from 0.033 in to 0.112 in (0.79 mm to 2.9 mm) Thick: ASTM C 954, Type S-12.

2. Product Description - Standard Applications: Bugle head, self-drilling, self-tapping, steel screws with Phillips-head recess of size, holding power, and other properties recommended by respective gypsum board manufacturer; minimum 1 in (25 mm) long; with corrosion-protective coating having a salt-spray resistance of more than 800 hours according to ASTM B 117.

E. Miscellaneous Fasteners: For conditions not indicated, fasteners shall be type, finish, size, and holding power recommended by respective gypsum board manufacturer and conditions.

2.9 JOINT TREATMENT MATERIALS

A. Material Quality Standard: ASTM C 475 / C 475M.

B. Joint Tape:

1. Paper Tape: Nominal 2 in (50 mm) wide cross-fibered paper tape with finish suitable for bonding, creased in center for easy folding, and compatible with joint compound.
2. Mesh Tape: Nominal 2 in (50 mm) wide self-adhering 10-by-10 fiberglass mesh tape.

C. Joint Compound:

1. Setting-Type: Job-mixed powder for mixing with water, chemical-hardening compound; includes taping types.
2. Drying-Type: Ready-mixed or job-mixed powder for mixing with water, air-drying, vinyl based compounds; includes taping, topping, and all-purpose types.

2.10 INTERIOR SURFACING COMPOUNDS

A. Level 5 Primer and Surfacer: Latex based compound containing polyvinyl acetate (PVA) polymer that can be spray or roller applied to change a Level 4 finish to a Level 5 finish.

1. Manufacturers and Products:

a. CertainTeed Corporation; ProRoc Level V Wall and Ceiling Primer/Surfacer.
b. United States Gypsum Company (USG); Sheetrock Brand Tuff-Hide Primer-Surfacer.

2.11 RELATED MATERIALS

A. General: Provide auxiliary materials for gypsum board construction that comply with referenced quality standards and recommendations of gypsum board manufacturer.

B. Firestopping Products at Penetrations: As specified in Division 07 Section “Penetration Firestopping”.

C. Fiberglass Sound Attenuation Blankets:

1. Material Quality Standard: ASTM C 665, Type I.
2. Description: Unfaced blankets produced by bonding inorganic glass fibers with a thermosetting binder; free of formaldehyde.
3. Surface Burning Characteristics: According to ASTM E 84/NFPA 255/UL 723:

a. Flame Spread: Class A - no greater than 25.

b. Smoke Developed: No greater than 50.

4. Thickness: Not less than 2-1/2 in (62 mm), unless otherwise indicated.
5. Basis of Design: Johns Manville; Sound Control Batts, Formaldehyde Free.

D. Mineral Wool Sound Attenuation Blankets:

1. Material Quality Standard: ASTM C 665, Type I.
2. Description: Unfaced mineral-fiber blanket insulation produced by combining mineral fibers of rock or slag with thermosetting resins.
3. Surface Burning Characteristics: According to ASTM E 84/NFPA 255/UL 723:

a. Flame Spread: Class A - no greater than 25.
b. Smoke Developed: No greater than 50.

4. Thickness: Not less than 3 in (75 mm), unless otherwise indicated.
5. Density: Not less than nominal 2.5 pounds per cubic foot.
6. Manufacturers:

a. Fibrex Insulations, Inc.
b. Rock Wool Manufacturing Co.
c. Roxul.
d. Thermafiber LLC.

E. Acoustical Sealant for Non-Fire Resistance Rated Joints:

1. Description: Nonsag, paintable, nonstaining latex sealant complying with ASTM C 834 that is effective in reducing airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies per ASTM E 90.
2. Manufacturers and Products:

a. Hilti Inc.; CP 506 Acoustical Sealant and CP 572 Acoustical Spray.
b. Pecora Corp.; AC-20 FTR Acoustical and Insulation Sealant.
c. United States Gypsum Company (USG); Sheetrock Acoustical Sealant.

F. Fire-Resistance Rated and Acoustical Putty Pads:

1. Product Quality Standard: UL 1479.
2. Description: Fire-rated, non-hardening, moldable, intumescent compound formed into sheets designed to seal penetrations, construction gaps, and around electrical boxes against spread of fire, smoke, and toxic gases.
3. Manufacturers and Products:

a. Grace Construction Products; Flamesafe FSP 1077 Putty Pads.
b. Hilti; CP 617 Intumescent Acoustic Putty Pads.
c. KnaufDrywall; Putty Pads.
d. Specified Technologies, Inc; Series SSP Putty Pads.
e. Tremco; TREMstop Electrical Box Insert.
f. 3M; Fire Barrier Moldable Putty+Pads.

G. Fire Resistive Sealants: Intumescent elastomeric sealant as specified in Division 07 Section “Fire-Resistive Joint Firestopping”.

H. Sealants: Sealant as specified in Division 07 Section “Joint Sealants”.

I. Isolation Strips: Adhesive-backed, closed cell neoprene or vinyl foam strips that allow fastener penetration with foam displacement, size as indicated, compressed 50 percent.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Acceptance of Surfaces and Conditions: Examine substrates to receive products and systems and associated work for compliance with requirements and other conditions affecting performance. Proceed only when unsatisfactory conditions have been corrected in a manner complying with Contract Documents. Starting work within a particular area will be construed as acceptance of surface conditions.

3.2 INSTALLATION, GENERAL

A. Installation Quality Standards: In addition to standards listed elsewhere, perform Work according to following, unless otherwise specified:

1. Respective Manufacturer's written installation instructions.
2. Accepted submittals.
3. Contract Documents.
4. Gypsum Association GA 216.
5. United States Gypsum Company (USG); Gypsum Construction Handbook, if no other installation quality standard applies to condition.

B. Control of Corrosion: Prevent galvanic action and other forms of corrosion by isolating metals and other materials from direct contact with incompatible materials.

3.3 PREPARATION

A. General: Comply with manufacturer's instructions, recommendations, and specifications for cleaning and surface preparation. Surfaces shall have no defects, contaminants, or errors which would result in poor or potentially defective installation or would cause latent defects in Work.

3.4 INSTALLATION OF GYPSUM BOARD ASSEMBLIES

A. Resistance Rated Partitions: Construct fire resistance rated, smoke resistance rated, and sound resistance rated partitions according to respective assembly test reports. Ensure every material used within an assembly shall comply with manufacturers listed and product qualities indicated in respective assembly test report.

B. Penetrations and Openings: Construct within gypsum board assemblies work as required to properly form penetration or opening to receive firestopping materials specified in following Sections:

1. Division 07 Section "Penetration Firestopping".
2. Division 07 Section "Fire-Resistive Joint Firestopping".

C. Control Joints: Install control joints at locations indicated on Drawings, in specific locations approved by Architect for visual effect and according to the following:

1. Spaced not more than 30 feet in either direction for uninterrupted straight planes of ceilings and walls.
2. Where different substrates occur at ceilings and walls.
3. Where control joints occur in substrates at ceilings and walls.
4. Where ceilings and walls abut inside face of exterior walls.
5. Where L, U, or T shaped ceiling configurations are joined.
6. Where less-than-ceiling-height door frames occur on walls more than 30 feet in length; extend control joints from top of frame up to ceiling at corner of hinge side of door.
7. Where less-than-ceiling-height borrowed lites occur on walls more than 30 feet in length; extend control joints from top of frame up to ceiling and from bottom of frame to floor at both corners.

D. Isolation from Building Structure: Isolate gypsum board assemblies from building structure to prevent transfer of loading imposed by structural movement.

1. Provide isolation joints as indicated or required by installation quality standards.
2. Isolate ceiling assemblies abutting or penetrated by building structure.
3. Isolate partition framing and wall furring abutting or penetrated by building structure, except at floor.

E. Fire-Resistance Rated and Acoustical Putty Pads: Hand apply pads to surfaces indicated, packing tightly into gaps and openings, in such a manner that pad will remain secured to surface; pinch pleat excess material together to close gaps.

F. Supplemental Accessories: Install supplementary framing, blocking, reinforcing, and bracing in gypsum board assemblies to support fixtures, equipment services, heavy trim, grab bars, toilet accessories, hand rails, furnishings, or similar construction. Comply with details indicated and recommendations of installation quality standards or manufacturer.

3.5 INSTALLING METAL FRAMING COMPONENTS

A. Priority: Assemble various assemblies giving priority to partitions with higher rating; extend partition with higher rating intact through partition with lower rating.

B. Joinery and Connections: Install various metal framing components according to details indicated; for situations and conditions not indicated, comply with installation quality standards and with respective manufacturer's recommendations.

C. General Requirements: Construct partition framing of studs, tracks, and headers using screws of number and spacing required.

1. Install studs of uncoated base metal thickness as determined by Metal Framing Schedule at end of this Section.
2. Extend partition framing full height to underside of structure above, except where partitions are indicated to terminate at, or immediately above, suspended ceilings.
3. Continue framing over door frames and openings to provide support for gypsum board.
4. Space studs as indicated on Metal Framing Schedule at end of this section.
5. Cut studs 1 in (25 mm) short of full height to provide deflection relief at head of wall conditions.
6. Install studs so that flanges point in same direction.
7. Attach with screws through each stud flange and track (runner) flange, except top deflection track assemblies.

8. For fire resistance rated, smoke resistance rated, and sound resistance rated assemblies that are required to extend to underside of structure above to obtain ratings, install framing around structural and other members extending below floor slabs or roof decks, as needed to support gypsum board closures and make partitions continuous from floor to underside of structure above.
9. Do not lap studs.
10. At intersections and corners, locate studs no more than 2 in (50 mm) from partition intersections and corners and secure with screws through both flanges of studs and tracks.

D. Metal Track (Runner) Requirements:

1. Floors: Install tracks (runners) using appropriate fasteners spaced not more than 16 in (400 mm) on centers.
2. Head of Wall: Install deep leg deflection tracks using appropriate fasteners to laterally support assembly, and to avoid axial loading of assembly by deflection from building structure above.

E. Support for Wall Mounted Accessories or Equipment: Install back-up plate or track (runner) turned on its side, using screws as indicated or as required, to studs to properly transfer accessory or equipment load to metal framing.

F. Openings: Frame single door, double door, above ceiling openings, and below ceiling openings using studs, tracks (runners), clip angles, and headers.

1. Install 2 studs on each side of each opening in configuration indicated, including strap plates; extend from floor to underside of structure above; do not cut these studs under any circumstances.
2. Construct header of appropriate configuration for type of opening to be spanned and secure with clip angles; include sound attenuation blankets within cavity when partition is scheduled to have a sound resistance rating.
3. Install short intermediate studs 16 in (400 mm) on center between top track and header.
4. At partitions indicated to terminate immediately above ceiling, install diagonal bracing at not less than spacing as indicated.

G. Supplementary Framing: Install around openings and as required for blocking, bracing, and support of gravity and pullout loads of fixtures, equipment, services, heavy trim, furnishings, and similar items that cannot be supported directly by metal framing.

H. Penetrations: Maintain fire-resistance rating of assembly by installing supplementary steel framing around perimeter of penetration and fire protection behind boxes containing wiring devices, elevator call buttons, elevator floor indicators, and similar items.

I. Chase Partitions:

1. Position double row of studs vertically in tracks (runners), opposite each other in pairs with flanges pointing in same direction.
2. Attach with screws through each stud flange and track (runner) flange.
3. Cross brace between rows of studs with one of following at 48 in (1200 mm) on center maximum vertically, attached to stud webs with screws:

    a. Coated glass-mat gypsum board, 12 in (300 mm) high by chase width.
    b. Metal studs turned on side, webs back-to-back.

J. Furred Walls:

1. Erect furring channels vertically, spaced 16 in (400 mm) on centers maximum, unless otherwise indicated.
2. Attach with appropriate fasteners, staggered on flanges.
3. Splice ends by nesting channels 8 in (200 mm) and securely anchoring to surface.
4. Miter 24 in (600 mm) long horizontal furring channels at corners and space 24 in (600 mm) on centers vertically.
5. Locate furring channels around perimeter of openings and secure to surfaces.

K. Control Joints:

1. Construct metal framing as indicated by installation quality standard to allow gypsum board control joints to function as intended.
2. For control joints located in fire resistance rated walls and partitions, construct of metal studs and mineral wool, full height of partition, according to assembly fire test reports.

L. Isolation Strips: At inside face of exterior walls, install between end of partition perpendicular to exterior wall and vertical aluminum mullions.

M. Installation Tolerances: Install each metal stud metal framing and furring member so that fastening surfaces do not vary more than 1/8 in (3 mm) from plane formed by faces of framing members.

3.6 INSTALLING GYPSUM BOARD PRODUCTS

A. General Requirements:

1. Install type of gypsum board at location indicated by gypsum board schedule at end of this Section.
2. Do not install damaged gypsum boards.
3. Install gypsum boards with finishable face side out.
4. Butt gypsum boards together for a light contact at edges and ends with not more than 1/16 in (1.5 mm) of open space between panels.
5. Do not force gypsum boards into place.
6. Do not place tapered edges against cut edges or ends.

B. Isolation from Building Structure:

1. Isolate perimeter of walls and partitions at structural abutments, except floors.
2. Provide 1/4 in to 1/2 in (6 mm in 12 mm) wide spaces at these locations and trim edges with edge trim where edges of gypsum boards are exposed.
3. Seal joints between edges and abutting structural surfaces with acoustical sealant.

C. Single-Layer Board Assemblies:

1. At typical conditions, install gypsum board vertically (long dimension parallel to metal framing), to minimize short end-to-short end joints unless otherwise indicated or required by assembly fire test reports.
2. At interior of stairwells and other high walls, install gypsum boards horizontally, unless otherwise indicated or required by assembly fire test reports. Stagger abutting end joints not less than one framing member in alternate courses of gypsum boards.

D. Multi-Layer Board Assemblies: Apply base layers and face layers vertically (long dimension parallel to metal framing) with joints of base layers located over stud or furring member and face layer joints

offset at least one stud space from base layer joints, unless otherwise indicated or required by assembly fire test reports. Stagger joints on opposite sides of partitions.

E. Typical Wall Applications:

1. Attach gypsum boards to metal studs so that leading edge or end of each board is attached to open (unsupported) edges of stud flanges first.
2. Stagger vertical joints on opposite sides of partitions.
3. Do not make joints other than control joints at corners of framed openings.
4. Attach gypsum boards to framing provided at doors, openings and cutouts. Install gypsum boards over door heads and extend to not less than one stud space - 16 in (400 mm) at each side of door or opening.
5. Cover both faces of metal framing with gypsum boards as indicated, except in chase walls that are braced internally.
6. Cut and fit gypsum boards around ducts, pipes, conduits, and other penetrations to form proper annular joint to receive firestopping.
7. Where partitions intersect open building structure members projecting below underside of floor slabs and roof decks, cut to fit profile formed by coffers, joists, beams, and other structural members; form proper annular joint to receive firestopping.
8. Support both edge and end joints of gypsum boards over metal framing.

F. Screw Attachments:

1. Attach gypsum board to metal framing with screw fasteners of type appropriate for gypsum board materials and installation conditions:

   a. Length shall be as required by condition and penetrating metal framing not less than 3/8 in (10 mm).
   b. Spacing shall be as recommended by installation quality standard, gypsum board manufacturer, or respective assembly test report.
   c. Use properly adjusted, positive-clutch electric power tool equipped with adjustable screw-depth head and a Phillips bit. Nails and staples are not permitted.

2. Drive screws to slightly dimple surface without breaking face paper, fracturing core, or stripping metal framing member around screw shank.
3. Space screws for non-fire resistance rated partitions and ceilings as recommended by installation quality standards.
4. Space screws for fire resistance rated partitions as required by assembly fire test reports.
5. Start field screwing near center and work towards edges.
6. Space screws not less than 3/8 in (10 mm) from gypsum boards edges.
7. Do not attach gypsum boards to top runner where wall or partition extends to building structure unless required by fire test reports.

G. Control Joints: Form control joints and expansion joints at locations indicated with required space between edges of adjoining gypsum boards.

H. Sound Attenuation Blankets: Install blankets within stud cavities set so that they are held in place by friction with metal studs; ensure blankets are secure within cavity and will not become displaced when second gypsum board side is closed.

I. Sealant:

1. Comply with ASTM C 919 and manufacturers written recommendations for closing off sound-flanking paths around or through gypsum board assemblies, including sealing partitions above acoustical ceilings.

2. Seal wall assemblies at perimeters, behind control joints, and at openings and penetrations with a continuous bead of sealant material according to following:

   a. Fire Resistance Sealant: Joints within fire resistance rated assemblies.
   b. Water Resistance Sealant: Joints within non-fire resistance rated assemblies exposed to possible water infiltration.
   c. Acoustical Sealant: All other joints.

3.7 INSTALLING TRIM ACCESSORIES

A. General: Fasten trim accessories continuously according to accessory manufacturer's instructions using gypsum board screws; installation by clinch-on tool and staples not permitted.

B. Typical Trim Accessories:

1. Corner Beads: Install trim at external corners; use screws at each flange at 9 in (225 mm) on centers, opposite each other.
2. Edge Trim: Install trim where gypsum boards abut dissimilar material, and where edge of gypsum boards would otherwise be exposed; use screws at flange at 9 in (225 mm) on centers.

   a. LC-Bead (J-Bead): Install trim at exposed conditions where back flange can be attached to framing or supporting substrate before gypsum board installation.
   b. L-Bead: Install trim at exposed conditions where trim can only be installed after gypsum board installation.
   c. J-Stop: Install trim at concealed conditions where trim can only be installed after gypsum board installation.

3. Control Joints: Install trim at appropriate locations, ensuring gypsum board is not continuous over joint; use screws at each flange at 6 in (150 mm) on centers.

C. Accent Trim Accessories: Install at locations indicated, mitering corners and intersections to form tight, flush and uniform joints; use screws at each flange at 9 in (225 mm) on centers.

3.8 FINISHING GYPSUM BOARD PRODUCTS

A. General: Treat board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare surfaces for decoration.

B. Joint Tape: Finish joints according to following:

1. Typical Paper-Faced Gypsum Board: Paper.
2. Moisture-Resistant Paper-Faced Gypsum Board: Mesh tape.

C. Finishing: Finish boards and units to achieve specified level of finish as indicated in schedule at end of Section:

1. Typical Paper-Faced Gypsum Board: Either or combination of the following as recommended by manufacturer:

   a. Setting-type joint compounds.
   b. Drying-type joint compounds.

2. Moisture-Resistant Paper-Faced Gypsum Board: Setting-type joint compounds.

3.9 INTERIOR SURFACING COMPOUNDS

A. Skim Coat Finishing with Joint Compound:

1. Prepare concrete surfaces for applied finishes.

a. Grind ridges, fins, and high areas.
b. Remove form oil, efflorescence and greasy deposits.
c. Fill offsets, voids, bugholes, rock pockets level with surrounding surfaces with joint compound.
d. Apply as many coats of joint compound as necessary to eliminate cracks.
e. Verify that resulting concrete surface is uniformly smooth and free of irregularities.

2. Apply setting-type joint compound or Level 5 Primer and Surfacer over entire surface in thickness recommended by manufacturer.

3.10 FIELD QUALITY CONTROL

A. Manufacturer's Field Service: Manufacturer's qualified technical representative shall inspect first day's Work and periodically inspect Work to ensure installation is proceeding in accordance with manufacturer's designs, recommendations, and instructions. Representative shall submit written reports of each visit indicating observations, findings, and conclusions of inspection.

3.11 ADJUSTMENTS

A. Damaged Materials: Stored or installed paper-faced gypsum board materials not specifically manufactured as "moisture-resistant products" shall be classified as damaged, defective, and nonconforming Work if they have been exposed to wetness or dampness at any time prior to Substantial Completion or if they exhibit evidence of active or dormant mold or mildew. Damaged materials and assemblies shall be replaced with new and dry materials and assemblies.

3.12 PROTECTION

A. Procedures: Protect products and systems from damage during installation and remainder of construction period according to manufacturer's instructions.

3.13 METAL FRAMING SCHEDULE

A. Metal Stud Framing Schedule:

1. Stud Depth: As indicated on Drawings.
2. Spacing: Maximum 16 in (400 mm) on centers, unless otherwise indicated, or as required to comply with respective assembly test report.
3. Minimum Performance Requirements - unless otherwise indicated:

a. Typical Partitions: L/240 at 5 lb/sq ft (239 Pa) lateral load.
b. Partitions with Tile Facing: L/360 at 7.5 lb/sq ft (359 Pa) lateral load.

4. Minimum Uncoated Base Metal Thickness:

a. Typical Gypsum Board Assemblies: As determined by manufacturer's limiting height engineering data unless otherwise indicated.

1) 25 and 22 Gage or 25 and 22 Gage Equivalent Studs: Not acceptable.

2) 20 Gage or 20 Gage Equivalent Studs: Typical partitions unless otherwise indicated.

3.14 GYPSUM BOARD SCHEDULE

A. Gypsum Board Schedule, General: Install the designated gypsum board product based on exposure classification to water and / or moisture and applied finish system as follows, unless otherwise indicated or scheduled on the Drawings.

B. No Exposure: Surfaces not normally exposed to water and / or moisture sources including but not limited to the following:

1. Typical walls and ceilings.

a. Paint and Wall Coverings Only: Typical paper-faced gypsum board.
b. Tile and Adhered Sheet/Panel Coverings: Moisture-resistant coated-glass-mat gypsum board.

2. Shaft-Side Face of Shaft-Liner Assemblies:

a. No Finish Required: Moisture-resistant paper-faced shaft-liner gypsum board or moisture resistant paperless glass mat shaft-liner gypsum board.

C. Incidental Exposure: Surfaces immediately adjacent to water and / or moisture sources including, but not limited to, the following locations:

1. Top of walls above ceilings adjacent to mechanical equipment in corridors.
2. Walls and ceilings in mechanical equipment rooms and janitor closets.
3. Walls within 24 inches of centerline of drinking fountains, isolated wall-hung lavatories, and countertop sinks and other similar water sources.
4. Interior face of exterior walls.
5. Acceptable gypsum board products for the above listed conditions:

a. Paint and Wall Coverings: Moisture-resistant paper-faced or moisture-resistant paperless glass-mat gypsum board.
b. Tile and Adhered Sheet/Panel Coverings: Moisture-resistant coated-glass-mat gypsum board.

D. Direct Exposure: Surfaces normally soaked, saturated, or regularly and frequently exposed to water and / or moisture including, but not limited to, the following locations:

1. Walls and ceilings in toilet rooms and bathrooms:

a. Paint and Wall Coverings: Moisture-resistant paper-faced or moisture-resistant paperless glass-mat gypsum board.
b. Tile and Adhered Sheet/Panel Coverings: Moisture-resistant coated-glass-mat gypsum board.

3.15 GYPSUM BOARD FINISHING SCHEDULE

A. Gypsum Board Finishing Schedule, General: Finish panels to Levels of Finish indicated below. Apply joint tape over panel joints, except those with trim having flanges not intended for tape. Sand between coats and after last coat to produce a surface free of defects and ready for applied finish system.

B. Preparation: Apply joint compound at open joints, panel edges, and damaged surface areas.

C. Level 1: At following locations, embed tape at joints in joint compound unless a higher level of finish is required for fire resistance rated assemblies:

1. Ceiling plenum areas above ceilings.
2. Concealed areas.

D. Level 2: At following locations, embed tape and apply separate first coat of joint compound to tape, fasteners, and trim flanges:

1. Substrate for tiling.

E. Level 3: At following locations, embed tape and apply separate first and second coats of joint compound to tape, fasteners, and trim flanges:

1. Areas to receive paint with flat sheen or medium/heavy texture.

F. Level 4: At following locations, embed tape and apply separate first, fill, and finish coats of joint compound to tape, fasteners, and trim flanges:

1. Areas to receive paint with eggshell/satin sheen or light texture.

G. Level 5: At following locations, embed tape and apply separate first, fill, and finish coats of joint compound to tape, fasteners, and trim flanges, and apply skim coat of joint compound or Level 5 Primer and Surfacer over entire surface:

1. Areas to receive paint with semi-gloss or gloss sheen.
2. Areas where critical lighting conditions occur.
3. Other areas as indicated on the Drawings.

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UNIVERSITY MEDICAL CENTER
7TH FLOOR RENOVATION
LAS VEGAS, NEVADA

SECTION 09 3000

TILING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: Modular tiles, membrane underlayments, setting materials, grouting materials, accessories, and supplementary items necessary for installation.

1.2 DEFINITIONS

A. General: Definitions in the ANSI A108 series of tile installation standards and in ANSI A137.1 apply to Work of this Section unless otherwise specified.

B. Module Size: Actual tile size plus joint width indicated.

C. Face Size: Actual tile size, excluding spacer lugs.

D. Ceramic (Mosaic) Tile: Tile formed by either the dust-pressed or plastic method, usually 1/4 in to 3/8 in (6 mm to 10 mm) thick, and having a facial area of less than 6 sq in (3900 mm²). Ceramic mosaic tile may be of either porcelain or natural clay composition and they may be either plain or with an abrasive mixture throughout.

E. Paver Tile: Glazed or unglazed porcelain or natural clay tile formed by dust-pressed method having a facial area of 6 sq in (3900 mm²) or more.

F. Porcelain Tile: A ceramic tile or paver tile that is generally made by the dust-pressed method of a composition resulting in a tile that is dense, impervious, fine grained, and smooth with sharply formed face.

G. Wall Tile: A glazed tile with a body that is suitable for interior use and which is usually non-vitreous and is not required nor expected to withstand excessive impact or be subject to freezing and thawing conditions.

1.3 SUBMITTALS

A. Product Data: Manufacturer’s technical literature for each product and system indicated.

1. Include manufacturer's specifications for materials, finishes, construction details, installation instructions, and recommendations for maintenance.

B. Shop Drawings: Show details of fabrication and installation, including plans, elevations, sections, details of components and attachments to other work. Distinguish between shop and field-assembled work.

1. Include plans of rooms and elevations of walls showing tile and patterns; include sections showing underlayments, setting materials, and grouting materials.
2. Include details showing widths and locations of expansion, contraction, control, and isolation joints in tile substrates and finished tile surfaces.

C. Samples for Verification Purposes: Submit samples for each item listed below of size and construction indicated. Where products involve normal color and texture variations, include sample sets showing the full range of variations expected.

1. Tile: Each type and composition of tile and for each color and finish required, at least 12 in (300 mm) square, mounted on rigid panel, and with grouted joints using product complying with specified requirements and in color approved for completed work.
2. Tile Trim and Accessories: Full-size units of each type and for each color required.
3. Metal Edge Strips: 6 in (150 mm) lengths of specified profile.
4. Simulated Stone (Solid Surfacing) Thresholds: 6 in (150 mm) lengths of specified profile.

D. Master Grade Certificates: Submit for each shipment, type, and composition of tile, signed by tile manufacturer and installer.

E. Product Test Reports: Written reports based on evaluation of comprehensive tests performed by qualified testing agency indicating that each product complies with requirements.

F. Field Quality Control Reports: Written report of testing and inspection required by “Field Quality Control”.

G. Manufacturer’s Project Acceptance Document: Certification by the manufacturer that its product(s) are approved, acceptable, suitable for use in specific locations, for specific details, and for applications indicated, specified, or required, and that a warranty will be issued.

H. Qualification Data: For installer.

1. For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of Architects and Owners, and other information specified.

I. Maintenance Instructions: Include in operation and maintenance manual required by Division 01 Section “Closeout Requirements”. Submit manufacturer’s instructions for maintenance of installed work, including methods and frequency for maintaining optimum condition under anticipated use. Include precautions against cleaning materials and methods which may be detrimental to finishes and performance.

J. Warranty: Sample of warranty.

1. Provide manufacturer’s written warranty covering materials and installation (labor) stating obligations, remedies, limitations, and exclusions.

1.4 QUALITY ASSURANCE

A. Installer Qualifications:

1. Experience: Installer with not less than 5 years experience in performing specified Work similar to scope of this Project, with a record of successful in-service performance and completion of projects for a period of not less than 5 years and with sufficient production capability, facilities, and personnel to produce required Work.
2. Supervision: Installer shall maintain a competent supervisor who is at Project site during times specified Work is in progress that is experienced in installing systems similar to type and scope required for Project.
3. Manufacturer Acceptance: Installer shall be certified, approved, licensed, or acceptable to manufacturer to install products.

B. Manufacturer's Technical Representative Qualifications: Direct employee of technical services department of manufacturer with minimum of 5 years experience in providing recommendations, observations, evaluations, and problem diagnostics. Sales representatives are not acceptable.

C. Mock-ups: Prior to fabrication and installation, build mock-up for each form of construction and finish required to verify selections made under sample Submittals and to demonstrate aesthetic effects and qualities of materials and execution. Build mock-up to comply with the following requirements, using materials indicated for the completed Work:

1. Build mock-up in the location and of the size indicated or, if not indicated, as directed by Architect. Contractor shall provide structural support framework.

    a. Show typical components, attachments to building structure, and requirements of installation.
    b. Build mock-ups in a layered fashion omitting tile in particular areas to reveal underlayment membranes and setting bed installation including but not limited to the following:

        1) Tiled floor conditions at thin-set setting beds.
        2) Movement joints at tiled floor conditions.
        3) Tiled wall conditions, including one interior corner.

2. Clean exposed faces of mock-up.
3. Notify Architect seven days in advance of the dates and times when mock-up will be installed.
4. Demonstrate the proposed range of aesthetic effects and workmanship.
5. Protect accepted mock-up from the elements with weather-resistant membrane.
6. Obtain Architect's acceptance of mock-ups before starting fabrication.
7. Maintain mock-ups during construction in an undisturbed condition as a standard for review of the completed Work.
8. Acceptance of mock-ups does not constitute acceptance of deviations from the Contract Documents contained in mock-ups unless such deviations are specifically noted by Contractor, submitted to Architect in writing, and accepted by Architect in writing.
9. Demolish and remove mock-ups when directed by Architect unless accepted to become part of the completed Work.

1.5 PRE-INSTALLATION CONFERENCE

A. Pre-Installation Conference: Before Work begins, conduct conference at Project site to comply with requirements of applicable Division 01 Sections.

1. Required Attendees:

    a. Owner.
    b. Architect.
    c. Contractor, including superintendent.
    d. Installer, including project manager and supervisor.
    e. Manufacturer's qualified Technical Representative.
    f. Installers of other construction interfaced with Work.

2. Minimum Agenda: Installer shall demonstrate understanding of the Work required by describing detailed procedures for preparing, installing, and cleaning the Work. Demonstration shall include, but not be limited to, following topics:

   a. Tour representative areas of Work, inspect and discuss condition of substrate, and other preparatory work performed by other trades.
   b. Review Work requirements (Drawings, Specifications, and other Contract Documents).
   c. Review required submittals, both completed and yet to be completed.
   d. Review and finalize construction schedule related to Work and verify availability of materials, installer's personnel, equipment, and facilities needed to make progress and avoid delays.
   e. Review required inspection, testing, certifying, and material usage accounting procedures.
   f. Review environmental conditions and procedures for coping with unfavorable conditions.
   g. Resolve deviations or differences between Contract Documents and the manufacturer’s specifications.

3. Contractor shall record discussions of conference, including decisions and agreements reached, and furnish copy of record to each party attending. If substantial disagreements exist at conclusion of conference, determine how disagreements will be resolved and set date for reconvening conference.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store packaged materials in original containers with seals unbroken and labels intact until time of use. Comply with requirements in ANSI A137.1 for labeling tile packages.

B. Store tile and cementitious materials on elevated platforms, under cover, and in a dry location.

C. Store aggregates where grading and other required characteristics can be maintained and contamination can be avoided.

D. Store liquid materials in unopened containers and protected from freezing.

E. Handle tile that has temporary protective coating on exposed surfaces to prevent coated surfaces from contacting backs or edges of other units. If coating does contact bonding surfaces of tile, remove coating from bonding surfaces before setting tile.

1.7 PROJECT CONDITIONS

A. Environmental Limitations: Install tile only when construction in room is completed and ambient temperature and humidity conditions are being maintained to comply with referenced standards and manufacturer’s written instructions.

1.8 COORDINATION

A. Coordinate installation of products and systems with interfacing and adjoining construction to provide a successful installation without failure.

1.9 WARRANTY

A. Installer's Warranty: Furnish installer's written workmanship warranty signed by an authorized representative using installer's standard form agreeing to provide labor required to repair or replace work which exhibits workmanship defects. "Defects" is defined to include but not limited to deterioration or failure to perform as required.

1. Warranty Period: Installer shall warrant the installation to be free from workmanship Defects for a period of 2 years from date of Substantial Completion.

1.10 MAINTENANCE

A. Extra Materials: Furnish the following extra materials that match and are from same production runs as products installed, packaged with protective covering for storage and identified with labels describing contents:

1. Furnish quantity of full-size tile and trim units equal to 2 percent of amount installed, for each type, composition, color, pattern, and size.
2. Furnish quantity of grout equal to 2 percent of amount installed for each type, composition, and color indicated.

PART 2 - PRODUCTS

2.1 MANUFACTURERS AND PRODUCTS

A. Acceptable Manufacturers: Subject to compliance with requirements of Contract Documents as judged by the Architect, provide product by one of manufacturers listed. If not listed, submit as substitution according to the Conditions of the Contract and Division 01 Section "Substitution Procedures".

B. Basis of Design (Product Standard): Contract Documents are based on products and systems specified to establish a standard of quality. Other available manufacturers offering products having equivalent characteristics may be considered, provided deviations are minor and comply with requirements of Contract Documents as judged by the Architect.

1. Selections: As indicated in Design Selections on drawings.

2.2 MATERIALS, GENERAL

A. Single Source Responsibility: Furnish each type of product from single manufacturer. Provide secondary materials only as recommended by manufacturer of primary materials.

1. Tile: For each tile, obtain of same color, finish, composition, and type, from same source and production run.
2. Setting and Grouting Materials: Obtain ingredients of uniform quality for each mortar and grout component from single manufacturer.

2.3 PERFORMANCE REQUIREMENTS

A. Accessibility Requirements for Floor Tile:

1. Standards: Products and installation shall comply with Americans with Disabilities Act (ADA), ANSI A117.1, and state and local accessibility standards.

2. Floor Tile Slip Resistance: Products and installation shall result in a static coefficient of friction according to ASTM C 1028, without use of abrasive grain, as follows:

   a. Level Floor Surface: Minimum 0.6.
   b. Ramps: Minimum 0.8.
   c. Steps: Minimum 0.6.

2.4 CERAMIC TILE PRODUCTS

A. Material Quality Standard: ANSI A137.1 “Specifications for Ceramic Tiling” for types, compositions, and grades of tiling indicated.

   1. Furnish tiling complying with “Standard Grade” requirements, unless otherwise indicated.

B. Ceramic Tile, General: Thin ceramic surfacing unit made from clay, porcelain, or mixture of ceramic materials, glazed or unglazed, fired above red heat to temperature sufficient to produce specific physical properties and characteristics specified.

C. Factory Blending: For tile exhibiting color variations, blend tile in factory and package so that tile units taken from one package show the same range in colors as those taken from other packages and match approved samples.

D. Mounting: Where factory-mounted tile is used, provide back- or edge-mounted tile assemblies as standard with manufacturer. Where tile is intended for installation in wet exposure areas, do not use factory mounted tile assemblies unless tile manufacturer states that this type of mounting is suitable for installation indicated.

E. Factory-Applied Temporary Protective Coating for Epoxy Grout Installations: Where recommended by tile and grout manufacturer, protect exposed surfaces of tile against adherence of mortar and grout by pre-coating tile face surfaces with a continuous protective film that is easily removable without damaging tile or grout. Do not coat unexposed tile surfaces.

2.5 WATERPROOF MEMBRANE UNDERLAYMENTS FOR INTERIOR APPLICATIONS

A. General: Manufacturer's standard product that complies with ANSI A118.10 and is acceptable to authorities having jurisdiction for use as shower pan waterproofing, as selected from one of the following available options. Include primer, pre-fabricated corners, seaming cement, detail tape, sealant, and other standard accessory products required for application provided by membrane manufacturer.

B. Faced Plastic Waterproof Membrane Underlayments (General Toilet Room floors on upper floors, and walls):

   1. Faced Chlorinated Polyethylene (CPE):

      a. Description: Non-plasticized, chlorinated polyethylene faced on both sides with high-strength, nonwoven polyester fabric; minimum 0.030 in (0.75 mm) nominal thickness.
      b. Manufacturer and Product: The Noble Company; Nobleseal TS.

   2. Faced Polyvinyl Chloride (PVC):

      a. Description: ASTM D 4551, multiple layers of polyvinyl chloride sheet heat-fused together and to facings of bondable nonwoven polyester; minimum 0.040 in (1.0 mm) nominal thickness.
      b. Manufacturer and Product: Compotite Corporation; Composeal Gold.

2.6 CRACK ISOLATION MEMBRANE UNDERLAYMENTS

A. General: Manufacturer's standard product that complies with ANSI A118.12 as selected from one of the following available options. Include primer, pre-fabricated corners, seaming cement, detail tape, sealant, and other standard accessory products required for application provided by membrane manufacturer.

B. Fluid-Applied Crack Isolation Membrane Underlayment: Not permitted or allowed within shower and bathtub areas.

1. Description: Manufacturer’s proprietary system consisting of liquid applied component and synthetic fabric sheet reinforcement.
2. Manufacturers and Products:

a. Custom Building Products; Redgard.
b. Laticrete International Inc.; Laticrete 9235 Waterproof Membrane.
c. Laticrete International Inc.; Blue 92 Anti-Fracture Membrane.
d. Mapei Corp.; Mapelastic HPG.
e. H. B. Fuller Construction Products: TEC Hydraflex Waterproofing Crack Isolation Membrane.

C. Faced Chlorinated Polyethylene (CPE) Crack Isolation Membrane Underlayment:

1. Description: Non-plasticized, chlorinated polyethylene faced on both sides with high-strength, nonwoven polyester fabric; minimum 0.030 in (0.75 mm) nominal thickness.
2. Manufacturer and Product: The Noble Company; NobleSeal CIS.

2.7 SETTING (MORTAR AND GROUT) MATERIALS

A. Material Quality Standards: ANSI A118 Series as indicated.

B. Medium-Set Latex-Portland Cement Mortar:

1. Material Quality Standard: ANSI A118.4, with the following physical properties:

a. Manufacturer’s premium polymer modified Medium-set product; gray color. Use white color with light colored stone, translucent marble or light color grout as recommended by manufacturer.
b. Integral antimicrobial product added during manufacturing to resist mold and mildew growth.
c. Non-sag capability.
d. Suitable for use in medium set mortar beds up to 3/4 in (19 mm) thick.

2. Manufacturers and Products - Floor Tiling:

a. Custom Building Products; Medium Bed Mortar.
b. Laticrete International, Inc.; Laticrete 255 MultiMax.
c. Mapei Corp.; Ultraflex LFT Mortar.
d. H. B. Fuller Construction Products; TEC Ultimate Large Tile Mortar.

C. Thin-Set Latex-Portland Cement Mortar (For All Tile Types Except Glass):

1. Material Quality Standard: ANSI A118.4, with the following physical properties:

   a. Manufacturer's premium polymer modified thin-set product; gray color. Use white color with light colored stone, translucent marble or light color grout as recommended by manufacturer.
   b. Integral antimicrobial product added during manufacturing to resist mold and mildew growth.
   c. Non-sag capability.
   d. Suitable for use in thin set mortar beds up to 1/4 in (6 mm) thick.

2. Manufacturers and Products - Floor Tiling:

   a. Custom Building Products; Flexbond Fortified Thin-Set Mortar.
   b. Laticrete International, Inc.; Laticrete 254 Platinum Thin-Set Mortar.
   c. Mapei Corp.; Ultraflex 3 Mortar.

3. Manufacturers and Products - Wall Tiling:

   a. Custom Building Products; MagaLite Crack Prevention Mortar.
   b. Laticrete International, Inc.; Laticrete 255 MultiMax Multipurpose Thin-Set Mortar.
   c. Mapei Corp.; Ultralite Mortar.

D. Thin-Set Mortar for Glass Tile:

1. Material Quality Standard: ANSI A118.4, manufacturer's premium, 2 component system for mixing at time of installation, composed of following:

   a. Dry-set mortar complying with ANSI A118.1.
   b. Acrylic latex additive.
   c. Color: White.
   d. Suitable for use with glass tile up to 3 in by 3 in (75 mm by 75 mm); otherwise use mortar as specifically recommended by glass tile manufacturer.

2. Manufacturers and Products:

   a. Custom Building Products; CreteMix Mortar with Customcrete Latex Admix.
   b. Laticrete International, Inc.; Laticrete 211 Powder Mixed with 4237 Latex Additive.
   c. Mapei Corp.; Kerabond mortar with Keralastic Additive.

E. Epoxy Grout:

1. Material Quality Standard: ANSI A118.3, with following physical properties:

   a. 100 percent solids.
   b. Chemical-resistant, water-cleanable, multiple component product.
   c. Resistant to intermittent exposure to temperatures of up to 212 deg F. (100 deg C.).
   d. Mold and mildew resistant.

2. Manufacturers and Products:

   a. Custom Building Products; 100% Solids Epoxy Grout with Polyblend Sanded Grout.
   b. Laticrete International, Inc.; Latapoxy 2000 Industrial Grout.
   c. Mapei Corp.; Kerapoxy IEG.

F. Latex-Portland Cement Unsanded Grout for Tile Joints Less than 1/8 in (3 mm) Wide::

1. Material Quality Standard: ANSI A118.7, with following physical properties:

   a. Manufacturer's premium polymer modified unsanded grout product.
   b. Integral antimicrobial product added during manufacturing to resist mold and mildew growth.

2. Manufacturers and Products:

   a. Custom Building Products; Prism Surecolor Grout.
   b. Laticrete International, Inc.; 1600 Unsanded Grout with 1776 Grout Enhancer.
   c. Mapei Corp.; Keracolor U.

2.8 ELASTOMERIC SEALANTS

A. Sealant Colors: Match color of adjacent grout unless otherwise indicated.

B. Mildew-Resistant Floor or Wall Joint Sealant:

1. Material Quality Standard: ASTM C 920, Type S, Grade NS, Class 25, with following physical properties:

   a. Integral antimicrobial product added during manufacturing to resist mold and mildew growth.
   b. Intended for sealing interior ceramic tile joints and other nonporous substrates.
   c. Resistant to in-service exposures of high humidity and temperature extremes.

2. Description: One-part mildew-resistant silicone sealant.
3. Manufacturers and Products:

   a. BASF Construction Chemicals; Sonneborn OmniPlus.
   b. Dow Corning Corp.; 786.
   c. Laticrete International, Inc.; Latasil.
   d. Pecora Corp.; 898.
   e. Tremco Inc.; Tremsil 200.

C. Chemical Resistant Floor Joint Sealant:

1. Description: Two-part self-leveling epoxy sealant.
2. Manufacturers and Products:

   a. BASF Construction Chemicals; Sonneborn Epolith-P.
   b. Euclid Chemical Co.; Euco 800.
   c. L&M Construction Chemical Inc.; Epoflex SL.

D. Backer Rods:

1. Material Quality Standard: ASTM C 1330, Type B.
2. Description: Non-gassing (when punctured), bi-cellular polyethylene or polyolefin foam rod with a surface skin, of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.

3. Manufacturers and Products:

   a. BASF Construction Chemicals; Sonneborn Soft Backer Rod.
   b. Nomaco Inc.; Sof Rod.

E. Backer Tape: Bond-breaking polyethylene or other plastic tape, self-adhesive where applicable, recommended by sealant manufacturer for preventing sealant from adhering to back of joint where such adhesion would result in sealant failure.

2.9 RELATED MATERIALS

A. Cementitious Underlayments: Trowelable or self-leveling as required by conditions; pre-mixed, latex-modified, Portland cement based formulation provided by or specifically approved by setting material manufacturer; include primers if required for concrete substrate condition.

B. Patching Compounds: Trowelable pre-mixed, latex-modified, Portland cement based formulation provided by or specifically approved by setting material manufacturer; include primers if required for concrete substrate condition.

C. Metal Transition Strips (Tile to Adjacent Flooring Material): Schluter Systems LP; Schiene, stainless steel.

D. Simulated Stone (Solid Surfacing) Threshold:

   1. Fabrication: Of shape and width to allow top at no more than 1/2 in (12 mm) above adjoining finished floor surface and both edges beveled on a slope no greater than 1:2 and as indicated in the Drawings.
   2. Color: As indicated in Design Selections on drawings.

E. Glass-Fiber Tape: Self-adhering, alkali-resistant, glass-fiber tape, 10 by 10 or 10 by 20 threads per 1 in (25 mm).; minimum 2 in (50 mm) wide.

F. Tile Cleaner: Neutral cleaner capable of removing soil and residue without harming tile and grout surfaces, provided by or specifically approved by tile and grout manufacturers.

G. Grout Sealer: Manufacturer's standard silicone product for sealing grout joints and that does not change color or appearance of grout.

2.10 MIXING MORTARS AND GROUT

A. General Procedures:

   1. Mix to comply with referenced quality standards and manufacturers' written instructions.
   2. Add materials, water, and additives in accurate proportions.
   3. Use type of mixing equipment, speeds, containers, time, and other procedures to produce uniform quality with optimum performance characteristics for installations indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Acceptance of Surfaces and Conditions: Examine substrate surfaces to which tile will be installed for compliance with requirements, installation tolerances, and other conditions affecting performance. Proceed only when unsatisfactory conditions have been corrected in a manner

complying with the Contract Documents. Starting work within a particular area will be construed as acceptance.

1. Verify that installation of grounds, anchors, recessed frames, electrical and mechanical units of work, and similar items located in or behind tile has been completed.
2. Verify that joints and cracks in tile substrates are coordinated with tile joint locations; if not coordinated, adjust joint locations in consultation with Architect.

3.2 INSTALLATION, GENERAL

A. Installation Quality Standard: In addition to standards listed elsewhere, perform tile work according to following, unless otherwise specified:

1. Respective manufacturer's written installation instructions.
2. Accepted submittals.
3. Contract Documents.
4. ANSI A108 installation method indicated.
5. TCNA installation method indicated.

B. General Requirements:

1. Extend tile into recesses and under or behind equipment and fixtures to form a complete covering without interruptions unless otherwise indicated.
2. Terminate work neatly at obstructions, edges, and corners without disrupting pattern or joint alignments.
3. Accurately form intersections and returns.
4. Perform cutting and drilling of tile without marring visible surfaces.
5. Grind cut edges of tile abutting trim, finish, or built-in items for straight aligned joints, to form smooth edges.
6. Fit tile closely to electrical outlets, piping, fixtures, and other penetrations so that plates, collars, or covers overlap tile by not less than 1/8 in (3 mm).

C. Jointing Pattern:

1. Unless otherwise indicated, lay tile in grid pattern.
2. Align joints when adjoining tiles on floor, base, walls, and trim are same size.
3. Lay out tile work and center tile fields in both directions in each space or on each wall area. Adjust to minimize tile cutting.
4. Provide uniform joint widths of size recommended by tile and grout manufacturer unless otherwise indicated.
5. For tile mounted in sheets, make joints between tile sheets same width as joints within tile sheets so that extent of each sheet is not apparent in finished work.

D. Wainscots: Lay out tile to next full tile beyond dimensions indicated, and finish with bullnose shape.

3.3 PREPARATION

A. General: Comply with manufacturer's instructions, recommendations, and specifications for cleaning and surface preparation. Surfaces shall have no defects, contaminants, or errors which would result in poor or potentially defective installation or would cause latent defects in Work.

B. Substrate Cleaning: Remove curing compounds, coatings, laitance, efflorescence, concrete dust, dirt, oil, gypsum board dust, paint, and other residue that would adversely affect or reduce bonding.

C. Concrete Floor Preparation:

1. Prepare concrete floor substrates to comply with flatness tolerance of 1/4 in in 10 ft (6 mm in 3 m) as follows:

   a. Fill cracks, holes and depressions with trowelable cementitious underlayments and patching compounds.
   b. Remove concrete protrusions, bumps, and ridges by sanding or grinding.

2. If substrate does not have fine broom finish, mechanically scarify concrete substrates to not less than ICRI CSP 4 finish.
3. Where indicated, prepare substrates to receive waterproofing by applying a reinforced mortar bed that complies with ANSI A108.1A and is sloped 1/4 in per foot (1:50) toward drains.

D. Substrate Joints, Gaps, Penetrations, and Different Substrates within Shower and Tub Enclosures: Prior to installing tile, seal the following joints, gaps, and spaces between differing materials as follows:

1. Base of Wall Joints within Shower and Tub Enclosures: Apply wall joint sealant at joint between Coated Glass-Mat Water Resistant Board (specified in Division 09 Section “Gypsum Board Assemblies”) and Tub Enclosure or Prefabricated Shower Receptor, Thick-set Mortar Bed, or floor slab to create water resistant barrier in accordance with TCNA Installation B420.
2. Penetrations: Apply wall joint sealant at penetrations through wall substrates to create water resistant barrier; especially at piping and valve penetrations.
3. Toilet Accessories: Apply wall joint sealant at fastener penetrations and around perimeter of backing plates to create water resistant barrier.
4. Joints and Corners: Apply glass-fiber tape to joints and corners of substrates within Showers and Tub Enclosures with thin-set mortar.

E. Blending: Verify tile has been factory blended and packaged as specified; if not, either return to manufacturer or blend tiles at site before installing.

F. Field-Applied Temporary Protective Coating: Where needed to prevent grout from staining or adhering to exposed tile surfaces, pre-coat with continuous film of temporary protective coating, taking care not to coat unexposed tile surfaces.

3.4 WATERPROOF MEMBRANE UNDERLAYMENT INSTALLATION

A. Installation Quality Standard: ANSI A108.13 and manufacturer's written instructions to produce waterproof membrane of uniform thickness and bonded securely to substrate.

B. General Requirements:

1. If required by manufacturer, prime concrete substrate.
2. Install to produce a continuous waterproof membrane of uniform thickness bonded securely to substrate, without wrinkles, bubbles, buckles or kinks.
3. For sheets, overlap and seal seams.
4. Turn membrane up wall at locations where tile is scheduled for wall or base.
5. Roll installed sheet if required by manufacturer.
6. Install tile after waterproofing has cured and been tested determined it is watertight. Test method shall be a 24 hour flood test.

3.5 CRACK ISOLATION MEMBRANE UNDERLAYMENT INSTALLATION

A. General Requirements:

1. If required by manufacturer, prime concrete substrate.
2. Install to produce a continuous crack isolation membrane of uniform thickness bonded securely to substrate, without wrinkles, bubbles, buckles, or kinks.
3. For sheets, overlap and seal seams.
4. For liquid applied products, brush or roll liquid uniformly over area in number of coats required and install reinforcing fabric.
5. Roll installed sheet if required by manufacturer.
6. After installation of tile, install floor joint sealant in tile joints recommended by manufacturer to coordinate with membrane strips.

3.6 TILE INSTALLATION

A. Comply with TCNA's "Handbook for Ceramic Tile Installation" for TCNA installation methods specified in tile installation schedules. Comply with parts of the ANSI A108 Series "Specifications for Installation of Ceramic Tile" that are referenced in TCNA installation methods, specified in tile installation schedules, and apply to types of setting and grouting materials used.

B. Installation Quality Standard: Install tile according to following standards:

1. Medium-set Mortar: ANSI A108.5; for floor tiles 8 in by 8 in (200 mm by 200 mm) and larger, where subfloor is not recessed.
2. Thin-set Latex-Portland Cement Mortar: ANSI A108.5; for floor tiles less than 8 in by 8 in (200 mm by 200 mm) and smaller where subfloor is not recessed and for interior wall tiles.
3. Latex-Portland Grout: ANSI A108.10.
4. Epoxy Grout: ANSI A108.9, where indicated.

C. Back Buttering: For following installations, obtain minimum 95 percent mortar coverage as in referenced ANSI A108 series of installation standards:

1. Tile floors in wet and limited water exposures.
2. Tile floors composed of tiles 12 in by 12 in (300 mm by 300 mm) or larger.
3. Tile floors composed of rib-backed tiles.

D. Grout Joint Widths: Install the respective types of tile with the following grout joint widths, unless otherwise recommended by tiling and grout manufacturers.

1. Ceramic Mosaic Tile - Less than 6 sq in (3900 mm²): 1/16 in (1.5 mm).
2. Paver Tile - 6 sq in (3900 mm²) or More: 1/4 in (6 mm).

E. Metal Trim: Install at locations indicated and where exposed edge of tile flooring meets carpet, wood, or other flooring that finishes flush with top of tile.

F. Grout Sealer: Apply grout sealer to grout joints in tile floors according to grout-sealer manufacturer's written instructions. As soon as grout sealer has penetrated grout joints, remove excess sealer and sealer from tile faces by wiping with soft cloth.

3.7 MOVEMENT JOINTS

A. Movement Joints, General: Installation Quality Standard: In accordance with TCNA Movement Joint Design Essentials EJ171 and as specified below.

B. Wall Joints: The following conditions shall not be grouted; install wall joint sealant and backer rod or backer tape:

1. Gypsum board assembly control joints.
2. Building expansion joints, unless scheduled for expansion joint cover.
3. Interior corners of tiled walls, including shower and bathtub walls.
4. Around substrates and tile at penetrations through tiled substrates.
5. At one side of changes in direction or plane of wall.
6. At joint closest and parallel to changes in substrates supporting tile between wall and floor.
7. Mix small amount of dry grout mix into sealant to blend with grouted joints.

C. Floor Joints:

1. General Requirements:

a. Continue construction, contraction (control), and expansion joints in building structure through tile work.
b. Isolate tile work that abuts a restraining structure or assembly.
c. When metal trim or sealant/backer is used for joint, width shall not be less than width of joint in building structure.
d. Tile shall not be placed over building expansion joints.

2. Schedule of Sealant Products and Locations:

a. Latex-Portland Cement Grouted Floors: Install floor joint sealant with backer rod at horizontal joints in mortar and grout setting conditions.
b. Epoxy Grouted Floors: Install chemical resistant floor joint sealant full depth without backer rod at horizontal joints in epoxy grout setting conditions.

3. Interior Movement Joint Spacing: As indicated on Drawings and as specified below:

a. Tile Exposed to Direct Sunlight or Moisture: 8 ft to 12 ft (2.4 m to 3.6 m) on center each way.
b. Tile Not Exposed to Sunlight: 20 ft to 25 ft (6 m to 7.5 m) on center each way.

D. Interior Floor Joint Installation Schedule: Seal interior floor movement joints, as defined by TCNA, according to following schedule:

1. Construction Joints: Floor joint sealant and backer rod.
2. Contraction (Control) Joints: Floor joint sealant and backer rod.
3. Isolation Joints: Floor joint sealant and backer rod.
4. Tile Expansion Joints: Floor joint sealant and backer rod.
5. Perimeter Joints between Wall and Floors: Floor joint sealant with backer tape.

3.8 FIELD QUALITY CONTROL

A. Manufacturer's Field Service: Manufacturer's qualified technical representative shall inspect first day's Work and periodically inspect Work to ensure installation is proceeding in accordance with manufacturer's designs, recommendations, instructions, and warranty requirements. Representative shall submit written reports of each visit indicating observations, findings, and conclusions of inspection.

3.9 CLEANING

A. Cleaning:

1. Acids are not permitted, nor will they be allowed.
2. Clean tile surfaces so they are free of foreign matter.
3. Remove grout residue from tile as soon as possible.
4. No sooner than 10 days after installation, clean grout smears and haze from tile according to tile and grout manufacturer's written instructions. Use only cleaners recommended by tile and grout manufacturers and only after determining that cleaners are safe to use by testing on samples of tile and other surfaces to be cleaned.
5. Protect metal surfaces and plumbing fixtures from effects of cleaning.
6. Flush surfaces with clean water before and after cleaning.
7. Remove temporary protective coating by method recommended by coating manufacturer that is acceptable to tile and grout manufacturer. Trap and remove coating to prevent it from clogging drains.

3.10 DEMONSTRATION

A. Cleaning and Maintenance Training: Provide instruction to Owner's personnel for cleaning and maintenance of installed work, including methods and frequency for maintaining optimum condition under anticipated use; include precautions against cleaning materials and methods which may be detrimental to finishes and performance.

3.11 PROTECTION

A. Coverings: When recommended by tile manufacturer, apply coat of neutral protective cleaner to completed tile walls and floors. Protect installed tile work with kraft paper or other heavy covering during construction period to prevent staining, damage, and wear. Before final inspection, remove protective coverings and rinse neutral cleaner from tile surfaces.

B. Traffic Restrictions: Prohibit foot and wheel traffic from tiled floors for at least 7 days after grouting is completed.

3.12 INTERIOR TILE INSTALLATION SCHEDULE

A. Floors, Concrete Substrate:

1. TCNA Installation Method F122 (Waterproof Membrane): Thin-set Latex-Portland cement mortar over waterproof membrane over concrete subfloor; Epoxy Grout.

2. TCNA Installation Method F125A (Crack Isolation Membrane; full coverage) at Slabs-on-Grade: Thin-set Latex-Portland cement mortar over crack isolation membrane over concrete subfloor; Epoxy Grout.

B. Walls, Gypsum Board Substrate:

1. TCNA Installation Method W243: Thin-set Latex-Portland cement mortar over coated-glass-mat gypsum board; Latex-Portland Cement Grout.

C. Walls, Gypsum Board Substrate, Bathtub / Shower Surfaces:

1. Walls, Including Tub Unit or Pre-Fabricated Shower Receptors: TCNA Installation Method B419 (Waterproof Membrane): Thin-set Latex-Portland cement mortar over waterproof membrane over coated-glass-mat gypsum board; Latex-Portland Cement Grout.

END OF SECTION

UNIVERSITY MEDICAL CENTER
7TH FLOOR RENOVATION
LAS VEGAS, NEVADA

SECTION 09 5113

ACOUSTICAL PANEL CEILINGS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: Acoustical lay-in ceiling panels, exposed metal suspension systems, and supplementary items necessary for installation.

1.2 SUBMITTALS

A. Product Data: Manufacturer’s technical literature for each product and system indicated.

1. Include manufacturer's specifications for materials, finishes, construction details, installation instructions, and recommendations for maintenance.

B. Product Schedule: Use same designations indicated on the Finish Schedule and Drawings.

C. Samples for Verification Purposes: Full-size units of each type of ceiling assembly indicated; in sets for each color, texture, and pattern specified, showing the full range of variations expected in these characteristics.

1. Acoustical Panels: Set of 6 in (150 mm) square samples of each type, color, pattern, and texture.
2. Exposed Suspension-System Members, Moldings, and Trim: Set of 12 in (300 mm) long samples of each type, finish, and color.

D. Product Test Reports: Written reports based on evaluation of comprehensive tests performed by qualified testing agency indicating that each product complies with requirements.

E. Qualification Data: For installer.

1. For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of Architects and Owners, and other information specified.

F. Maintenance Data: To include in maintenance manuals.

1.3 QUALITY ASSURANCE

A. Installer Qualifications:

1. Experience: Installer with not less than 5 years experience in performing specified Work similar to scope of this Project, with a record of successful in-service performance and completion of projects for a period of not less than 5 years and with sufficient production capability, facilities, and personnel to produce required Work.
2. Supervision: Installer shall maintain a competent supervisor who is at Project site during times specified Work is in progress that is experienced in installing systems similar to type and scope required for Project.

3. Manufacturer Acceptance: Installer shall be certified, approved, licensed, or acceptable to manufacturer to install products.

1.4 PRE-INSTALLATION CONFERENCE

A. Pre-Installation Conference: Before Work begins, conduct conference at Project site to comply with requirements of applicable Division 01 Sections.

1. Required Attendees:

a. Owner.
b. Architect.
c. Contractor, including superintendent.
d. Installer, including project manager and supervisor.
e. Installers of other construction interfaced with Work.

2. Minimum Agenda: Installer shall demonstrate understanding of the Work required by describing detailed procedures for preparing, installing, and cleaning the Work. Demonstration shall include, but not be limited to, following topics:

a. Tour representative areas of Work, inspect and discuss condition of substrate, and other preparatory work performed by other trades.
b. Review Work requirements (Drawings, Specifications, and other Contract Documents).
c. Review required submittals, both completed and yet to be completed.
d. Review and finalize construction schedule related to Work and verify availability of materials, installer's personnel, equipment, and facilities needed to make progress and avoid delays.
e. Review required inspection, testing, certifying, and material usage accounting procedures.
f. Review environmental conditions and procedures for coping with unfavorable conditions.
g. Resolve deviations or differences between Contract Documents and the manufacturer’s specifications.

3. Contractor shall record discussions of conference, including decisions and agreements reached, and furnish copy of record to each party attending. If substantial disagreements exist at conclusion of conference, determine how disagreements will be resolved and set date for reconvening conference.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver acoustical panels, suspension-system components, and accessories to Project site in original, unopened packages and store them in a fully enclosed, conditioned space where they will be protected against damage from moisture, humidity, temperature extremes, direct sunlight, surface contamination, and other causes.

B. Before installing acoustical panels, permit them to reach room temperature and stabilized moisture content.

C. Handle acoustical panels carefully to avoid chipping edges or damaging units in any way.

1.6 PROJECT CONDITIONS

A. Environmental Limitations: Do not install acoustical panel ceilings until spaces are enclosed and weatherproof, wet-work in spaces is complete and dry, work above ceilings is complete, and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.

1.7 COORDINATION

A. Coordinate installation of products and systems with interfacing and adjoining construction to provide a successful installation without failure.

1.8 MAINTENANCE

A. Extra Materials: Furnish the following extra materials that match and are from same production runs as products installed, packaged with protective covering for storage and identified with labels describing contents:

1. Acoustical Ceiling Panels: Full-size units equal to 2 percent of amount installed.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturers: Subject to compliance with requirements of Contract Documents as judged by the Architect, provide product by one of manufacturers listed. If not listed, submit as substitution according to the Conditions of the Contract and Division 01 Section “Substitution Procedures”.

1. Armstrong World Industries, Inc.
2. CertainTeed Corporation.
3. Chicago Metallic Corporation.
4. USG Interiors, Inc.; Subsidiary of USG Corporation.

B. Basis of Design (Product Standard): Contract Documents are based on products and systems specified to establish a standard of quality. Other available manufacturers offering products having equivalent characteristics may be considered, provided deviations are minor and comply with requirements of Contract Documents as judged by the Architect.

2.2 MATERIALS, GENERAL

A. Single Source Responsibility: Furnish each type of product from single manufacturer. Provide secondary materials only as recommended by manufacturer of primary materials.

1. Obtain both acoustical ceiling panels and suspension system from the same manufacturer if both are offered by the manufacturer.

2.3 PERFORMANCE REQUIREMENTS

A. General Performance: Products and systems shall be engineered to withstand loads within limits of allowable working stresses of the materials involved under conditions indicated and without permanent deformation or failure of materials.

B. Surface-Burning Characteristics: Comply with ASTM E 84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1. Flame-Spread Index: Comply with ASTM E 1264 for Class A materials.
2. Smoke-Developed Index: 450 or less.

C. Fire-Resistance Ratings: Comply with ASTM E 119; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1. Indicate design designations from UL's "Fire Resistance Directory" or from the listings of another qualified testing agency.

D. Seismic Standards: Provide acoustical panel ceilings designed and installed to withstand the effects of earthquake motions according to the following:

1. Standard for Ceiling Suspension Systems Requiring Seismic Restraint: Comply with ASTM E 580.
2. CISCA's Recommendations for Acoustical Ceilings: Comply with CISCA's "Recommendations for Direct-Hung Acoustical Tile and Lay-in Panel Ceilings-Seismic Zones 0-2".
3. ASCE 7, "Minimum Design Loads for Buildings and Other Structures": Section 9, "Earthquake Loads".

2.4 ACOUSTICAL PANELS, GENERAL

A. Acoustical Panel Standard: Provide manufacturer's standard panels of configuration indicated that comply with ASTM E 1264 classifications as designated by types, patterns, acoustical ratings, and light reflectance's, unless otherwise indicated.

1. Selections: As indicated in Design Selections on drawings.

2.5 METAL SUSPENSION SYSTEMS, GENERAL

A. Metal Suspension System Standard: Provide manufacturer's standard direct-hung metal suspension systems of types, structural classifications, and finishes indicated that comply with applicable requirements in ASTM C 635.

B. Finishes and Colors, General: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes. Provide manufacturer's standard factory-applied finish for type of system indicated.

C. Attachment Devices: Size for five times design load indicated in ASTM C 635, Table 1, “Direct Hung”, unless otherwise indicated.

1. Comply with seismic design requirements.
2. Anchors in Concrete: Anchors of type and material indicated below, with holes or loops for attaching hangers and with capability to sustain, without failure, a load equal to five times that imposed by ceiling construction, as determined by testing per ASTM E 488 or ASTM E 1512 as applicable, conducted by a qualified testing and inspecting agency.

a. Cast-in-place anchors, designed for attachment to concrete.
b. Post-installed expansion anchors.
c. Corrosion Protection: Carbon-steel components zinc plated to comply with ASTM B 633, Class Fe/Zn 5 for Class SC1 service condition.

3. Powder-Actuated Anchors: Suitable for application indicated, ANSI A10.3; low velocity, powder-actuated fasteners; drive pins and clip angles fabricated from corrosion-resistant materials, with clips or other devices for attaching hangers of type indicated, and capable of sustaining, without failure, an ultimate load capacity not less than 10 times that imposed by construction as determined by testing according to ASTM E 1190 by a qualified independent testing agency.

    a. Manufacturers:

        1) Construction Materials, Inc.
        2) Heckman Building Products, Inc.
        3) Hilti Corp.
        4) ITW Ramset/Red Head.
        5) Powers Fasteners.
        6) Simpson Strong Tie Anchor Systems.

4. For post-tensioned concrete, anchors shall not exceed 1 in (25 mm) embedment. Obtain Structural Engineer's written approval for all proposed anchors in post-tensioned concrete prior to installation.

D. Wire Hangers, Braces, and Ties: Provide wires complying with the following requirements:

1. Zinc-Coated Carbon-Steel Wire: ASTM A 641 / A 641M, Class 1 zinc coating, soft temper.
2. Size: Select wire diameter so its stress at 3 times hanger design load (ASTM C 635, Table 1, "Direct Hung") will be less than yield stress of wire, but provide not less than 0.106 in (2.69 mm) diameter wire.

E. Stabilizer Bars: Manufacturer's standard perimeter stabilizers designed to accommodate seismic forces and complying with requirements of authorities having jurisdiction or as recommended by manufacturer.

F. Seismic Struts: Manufacturer's standard compression struts designed to accommodate seismic forces and complying with requirements of authorities having jurisdiction.

G. Edge Moldings and Trim: Manufacturer's standard moldings for edges and penetrations that fit acoustical panel edge details and suspension systems indicated; formed from sheet metal of same material and finish as that used for exposed flanges of suspension system runners.

1. For lay-in panels with reveal edge details, provide stepped edge molding that forms reveal of same depth and width as that formed between edge of panel and flange at exposed suspension member.
2. For circular penetrations of ceiling, provide edge moldings fabricated to diameter required to fit penetration exactly.
3. For narrow-face suspension systems, provide suspension system and manufacturer's standard edge moldings that match width and configuration of exposed runners.
4. Where required by Code or authorities having jurisdiction, provide 2 in (50 mm) wide wall angle around the ceiling perimeter.
5. Round Column Angle Molding:

    a. Basis of Design: Fry Reglet Corporation; "Column Collar", extruded aluminum with PVC spacer, size as required for column diameter, finish to match suspension system.

2.6 METAL SUSPENSION SYSTEM FOR ACOUSTICAL PANEL CEILINGS

A. Wide-Face, Capped, Double-Web, Steel Suspension System: Main and cross runners roll formed from cold-rolled steel sheet, prepainted, electrolytically zinc coated, or hot-dip galvanized according to ASTM A 653 / A 653M, not less than G30 (Z90) coating designation, with prefinished 15/16 in (24 mm) wide metal caps on flanges.

1. Structural Classification: Heavy-duty system.
2. End Condition of Cross Runners: Override (stepped) type.
3. Face Design: Flush face.
4. Cap Material: Steel sheet.
5. Cap Finish: Painted white, unless indicated otherwise.
6. Manufacturers and Products:

a. Armstrong World Industries, Inc.; Prelude XL Fire Guard; fire-rated
b. CertainTeed Corporation; Protectone Classic Fire-Rated
c. Chicago Metallic Corporation; 1250 Fire-Front System; fire-rated
d. USG Interiors, Inc.; Donn DXL; fire-rated

PART 3 - EXECUTION

3.1 EXAMINATION

A. Acceptance of Surfaces and Conditions: Examine substrates to receive products and systems and associated work for compliance with requirements and other conditions affecting performance. Proceed only when unsatisfactory conditions have been corrected in a manner complying with Contract Documents. Starting work within a particular area will be construed as acceptance of surface conditions.

3.2 INSTALLATION, GENERAL

A. Installation Quality Standards: In addition to standards listed elsewhere, perform Work according to following, unless otherwise specified:

1. ASTM C635 and ASTM C 636 / C 636M.
2. Respective manufacturer’s written installation instructions.
3. Accepted submittals.
4. Contract Documents.

B. Control of Corrosion: Prevent galvanic action and other forms of corrosion by isolating metals and other materials from direct contact with incompatible materials.

3.3 PREPARATION

A. General: Comply with manufacturer’s instructions, recommendations, and specifications for cleaning and surface preparation. Surfaces shall have no defects, contaminants, or errors which would result in poor or potentially defective installation or would cause latent defects in Work.

B. Coordination: Furnish layouts for cast-in-place anchors, clips, and other ceiling anchors. Furnish cast-in-place anchors and similar devices to other trades for installation well in advance of time needed for coordinating other work.

C. Measure each ceiling area and establish layout of acoustical panels to balance border widths at opposite edges of each ceiling. Avoid using less-than-half-width panels at borders, and comply with layout shown on reflected ceiling plans.

3.4 INSTALLATION OF ACOUSTICAL PANEL CEILINGS

A. Suspend ceiling hangers from building's structural members and as follows:

1. Install hangers plumb and free from contact with mechanical and electrical equipment, insulation, or other objects within ceiling plenum that are not part of supporting structural frame or ceiling suspension system. Within limitations allowed by installation quality standards, splay hangers only where required to miss obstructions and offset resulting horizontal forces by bracing, countersplaying, or other equally effective means.
2. Where width of ducts and other construction within ceiling plenum produces hanger spacings that interfere with location of hangers at spacings required to support standard suspension system members, install supplemental suspension members and hangers in form of trapezes or equivalent devices. Size supplemental suspension members and hangers to support ceiling loads within performance limits established by installation quality standards.
3. Secure wire hangers to ceiling suspension members and to supports above with a minimum of three tight turns. Connect hangers directly either to structures or to inserts, eye screws, or other devices that are secure and appropriate for substrate and that will not deteriorate or otherwise fail due to age, corrosion, or elevated temperatures.
4. Do not support ceilings directly from permanent metal forms. Fasten hangers to cast-in-place hanger inserts, power-actuated fasteners, or drilled-in anchors that extend through forms into concrete.
5. Do not attach hangers to steel deck tabs.
6. Do not attach hangers to steel roof deck. Attach hangers to structural members.
7. Space hangers not more than 48 in (1200 mm) on center along each member supported directly from hangers, unless otherwise indicated; and provide hangers not more than 8 in (200 mm) from ends of each member.
8. Do not connect or suspend any ceiling components from ducts, pipes or conduit.
9. Do not make local kinks or bends in hanger wires as a means of leveling.

B. Concentrated Load Conditions: Provide additional hanger wires at each corner of recessed light fixtures and other concentrated load conditions to prevent excess deflection.

C. Install edge moldings and trim at perimeter of acoustical ceiling area and where necessary to conceal edges of acoustical panels.

1. Screw attach moldings to substrate at intervals not more than 16 in (400 mm) on center and not more than 3 in (75 mm) from ends, leveling with ceiling suspension system to a tolerance of 1/8 in per 12 ft (3 mm per 3.6 m). Miter corners accurately and connect securely.
2. Do not use exposed fasteners, including pop rivets, on moldings and trim.
3. Provide control joints where joints occur in abutting surfaces.
4. Hold tees in place with concealed clips.

D. Install suspension system runners so they are square and securely interlocked with one another. Remove and replace dented, bent, or kinked members.

1. Space steel main runners at 48 in (1200 mm) on center.

E. Install acoustical panels with undamaged edges and fitted accurately into suspension system runners and edge moldings. Scribe and cut panels at borders and penetrations to provide a neat, precise fit.

1. Arrange directionally patterned acoustical panels with pattern running in one direction parallel to long axis of space.
2. For square-edged panels, install panels with edges fully hidden from view by flanges of suspension system runners and moldings.
3. For reveal-edged panels on suspension system runners, install panels with bottom of reveal in firm contact with top surface of runner flanges.
4. For reveal-edged panels on suspension system members with box-shaped flanges, install panels with reveal surfaces in firm contact with suspension system surfaces and panel faces flush with bottom face of runners.
5. Paint cut panel edges remaining exposed after installation; match color of exposed panel surfaces using coating recommended in writing for this purpose by acoustical panel manufacturer.

3.5 PROTECTION

A. Protect products and systems from damage during installation and remainder of construction period according to manufacturer's instructions.

3.6 CLEANING

A. Clean exposed surfaces of acoustical panel ceilings, including trim, edge moldings, and suspension system members. Comply with manufacturer's written instructions for cleaning and touchup of minor finish damage. Remove and replace ceiling components that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.

END OF SECTION

UNIVERSITY MEDICAL CENTER
7TH FLOOR RENOVATION
LAS VEGAS, NEVADA

SECTION 09 6500

RESILIENT FLOORING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: Resilient flooring products and systems and supplementary items necessary for installation.

B. Related Section:

1. Resilient wall base, reducer strips, and other accessories installed with resilient flooring are specified in Division 09 Section "Resilient Base and Accessories".

1.2 SUBMITTALS

A. Product Data: Manufacturer’s technical literature for each product and system indicated.

1. Include manufacturer's specifications for materials, finishes, construction details, installation instructions, and recommendations for maintenance.

B. Shop Drawings for Special Patterns: Show layout and details of special patterns for resilient flooring.

C. Product Schedule: Use same designations indicated on the Finish Schedule and Drawings.

D. Samples for Verification Purposes: In manufacturer's standard size, but not less than 6 in by 9 in (150 mm by 230 mm) sample of each different color and pattern of resilient flooring product specified, showing the full range of variations expected in these characteristics. Label each sample with manufacturer's name, material description, color, pattern, and designation indicated on Drawings and in Schedules.

1. Heat-Welded Sheet Flooring: For heat-welding bead, manufacturer's standard-size samples, but not less than 9 in (230 mm) long, of each color specified.
2. Seam Samples for Sheet Flooring: For each color and pattern of resilient sheet flooring product required; with seam running lengthwise and in center of 6 in by 9 in (150 mm by 230 mm) sample applied to a rigid backing and prepared by installer for this Project.

E. Product Test Reports: Written reports based on evaluation of comprehensive tests performed by qualified testing agency indicating that each product complies with requirements.

F. Manufacturer’s Project Acceptance Document: Certification by the manufacturer that its product(s) are approved, acceptable, suitable for use in specific locations, for specific details, and for applications indicated, specified, or required.

G. Qualification Data: For installer.

1. For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of Architects and Owners, and other information specified.

H. Maintenance Instructions: Include in operation and maintenance manual as required by Division 01 Section “Closeout Procedures”. Submit manufacturer’s instructions for maintenance of installed work, including methods and frequency for maintaining optimum condition under anticipated use. Include precautions against cleaning materials and methods which may be detrimental to finishes and performance.

1.3 QUALITY ASSURANCE

A. Installer Qualifications:

1. Experience: Installer with not less than 5 years experience in performing specified Work similar to scope of this Project, with a record of successful in-service performance and completion of projects for a period of not less than 5 years and with sufficient production capability, facilities, and personnel to produce required Work.
2. Supervision: Installer shall maintain a competent supervisor who is at Project site during times specified Work is in progress that is experienced in installing systems similar to type and scope required for Project.
3. Manufacturer Acceptance: Installer shall be certified, approved, licensed, or acceptable to manufacturer to install products.

B. Slip Resistance: Provide products identical to those tested for slip resistance per ASTM D 2047 with a static coefficient of friction not less than 0.6 for level surfaces and 0.8 for ramped surfaces.

C. Fire-Test-Response Characteristics: Provide products with the following fire-test-response characteristics as determined by testing identical products per test method indicated below by a testing and inspecting agency acceptable to authorities having jurisdiction.

1. Critical Radiant Flux: Class I, 0.45 W/sq. cm or greater when tested per ASTM E 648.
2. Smoke Density: Maximum specific optical density of 450 or less when tested per ASTM E 662.

1.4 PRE-INSTALLATION CONFERENCE

A. Pre-Installation Conference: Before Work begins, conduct conference at Project site to comply with requirements of applicable Division 01 Sections.

1. Required Attendees:

a. Owner.
b. Architect.
c. Contractor, including superintendent.
d. Installer, including project manager and supervisor.
e. Installers of other construction interfaced with Work.

2. Minimum Agenda: Installer shall demonstrate understanding of the Work required by describing detailed procedures for preparing, installing, and cleaning the Work. Demonstration shall include, but not be limited to, following topics:

a. Tour representative areas of Work, inspect and discuss condition of substrate, and other preparatory work performed by other trades.
b. Review Work requirements (Drawings, Specifications, and other Contract Documents).
c. Review required submittals, both completed and yet to be completed.

d. Review and finalize construction schedule related to Work and verify availability of materials, installer's personnel, equipment, and facilities needed to make progress and avoid delays.
e. Review required inspection, testing, certifying, and material usage accounting procedures.
f. Review environmental conditions and procedures for coping with unfavorable conditions.
g. Resolve deviations or differences between Contract Documents and the manufacturer’s specifications.

3. Contractor shall record discussions of conference, including decisions and agreements reached, and furnish copy of record to each party attending. If substantial disagreements exist at conclusion of conference, determine how disagreements will be resolved and set date for reconvening conference.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Store flooring products and installation materials in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by manufacturer, but not less than 50 deg F (10 deg C) or more than 90 deg F (32 deg C).

1. Resilient Sheet Flooring: Store sheet flooring rolls upright.
2. Resilient Tile Flooring: Store floor tiles on flat surfaces.

1.6 PROJECT CONDITIONS

A. Maintain a temperature of not less than 70 deg F (21 deg C) or more than 85 deg F (29 deg C) in spaces to receive products for at least 48 hours before installation, during installation, and for at least 48 hours after installation, unless otherwise recommended by manufacturer.

B. Maintain flooring products prior to installation at the same temperature as the space where they are to be installed.

C. Close spaces to traffic during flooring installation and for time period after installation recommended by manufacturer.

D. Install flooring products after other finishing operations, including painting, have been completed.

E. Do not install flooring over concrete substrates until slabs have cured and are sufficiently dry to bond with adhesive, as determined by flooring manufacturer's recommended tests. Refer to “Preparation” Article for requirements.

1.7 COORDINATION

A. Coordinate installation of products and systems with interfacing and adjoining construction to provide a successful installation without failure.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis of Design (Product Standard): Contract Documents are based on products and systems specified to establish a standard of quality. Other available manufacturers offering products having equivalent characteristics may be considered, provided deviations are minor and comply with requirements of Contract Documents as judged by the Architect.

1. Selections: Refer to schedule on drawings.

2.2 MATERIALS, GENERAL

A. Single Source Responsibility: Furnish each type of product from single manufacturer. Provide secondary materials only as recommended by manufacturer of primary materials.

2.3 RESILIENT TILE FLOORING MATERIALS

A. Vinyl Composition Floor Tile Standard: ASTM F 1066, Class 2, through-pattern tile, unless otherwise indicated.

1. Size: 12 in by 12 in by 0.125 in (300 mm by 300 mm by 3 mm).

2.4 RESILIENT SHEET FLOORING MATERIALS

A. Vinyl Sheet Floor Coverings: ASTM F 1303, Type I or II, Grade 1, Class A (fibrous) or B (nonfoamed plastic) backing or ASTM F 1913 unbacked as required by product selection.

B. Sheet Flooring Thickness: 0.125 in (3 mm).

C. Heat-Welding Seam Bead: Solid-strand product of floor covering manufacturer for heat welding seams.

1. Selections: Match field color of sheet floor covering, unless otherwise noted.

2.5 ACCESSORY MATERIALS

A. Concrete Slab Primer: Non-staining type as recommended by flooring manufacturer.

B. Trowelable Leveling and Patching Compounds: Latex-modified, Portland-cement-based formulation provided or approved by flooring manufacturer for products and applications indicated.

C. Adhesives: Water-resistant type recommended by flooring manufacturer suitable for products, applications, and substrate conditions indicated.

1. Use adhesives that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):

a. Typical Flooring: Not more than 50 g/L.

D. Epoxy-Based Moisture Floor Treatment: High-performance, non-flammable, rapid drying, water based, low odor, low VOC (not more than 250 g/L), two-component, penetrating epoxy; formulated to reduce moisture vapor transmission and surface alkalinity from concrete substrates, including aged or freshly placed ("green") concrete, prior to installation of impervious glued-down finish flooring.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Acceptance of Surfaces and Conditions: Examine substrates to receive products and systems and associated work for compliance with requirements and other conditions affecting performance. Proceed only when unsatisfactory conditions have been corrected in a manner complying with Contract Documents. Starting work within a particular area will be construed as acceptance of surface conditions.

3.2 INSTALLATION, GENERAL

A. Installation Quality Standards: In addition to standards listed elsewhere, perform Work according to following, unless otherwise specified:

1. Respective manufacturer’s written installation instructions.
2. Accepted submittals.
3. Contract Documents.

3.3 PREPARATION

A. General: Comply with manufacturer’s instructions, recommendations, and specifications for cleaning and surface preparation. Surfaces shall have no defects, contaminants, or errors which would result in poor or potentially defective installation or would cause latent defects in Work.

B. Concrete Substrates: Prepare according to ASTM F 710.

1. Verify that concrete substrate finishes comply with requirements specified in Division 03 Section "Concrete Finishing" for concrete substrates receiving resilient flooring.
2. Verify that concrete substrates are free of cracks, ridges, depressions, scale, and foreign deposits.
3. Verify that concrete substrates are dry and free of curing compounds, sealers, hardeners, and other materials that may interfere with adhesive bond. Unless concrete has been water-cured, then proceed with the following:

    a. Shot-blast concrete substrate with an apparatus that abrades the surface, contains the dispensed shot within the apparatus, and recirculates the shot by vacuum pickup.
    b. Repair damaged and deteriorated concrete according to flooring manufacturer's written recommendations.

4. Determine adhesion and dryness characteristics by performing the following tests as recommended by flooring manufacturer.
5. Alkalinity and Adhesion Testing: Perform tests recommended by flooring manufacturer. A pH range of 5 to 9 is required when substrate is wetted with distilled water and pHydrion paper is applied. Proceed with installation only after concrete substrates pass testing.

6. Moisture Testing: Perform one or both of the following tests as recommended by flooring manufacturer. Perform 3 moisture tests for first 1000 sf (92.9 sm) of concrete substrate scheduled to receive flooring and 1 test for each additional 1000 sf (92.9 sm) or fraction thereof. Proceed with installation only after concrete substrates pass testing.

    a. Perform anhydrous calcium chloride test in accordance with ASTM F 1869. Proceed with installation only after concrete substrates have maximum moisture-vapor-emission rate of 3 lbs of water/1000 sf (1.36 kg of water/92.9 sm) in 24 hours.
    b. Perform relative humidity test using in situ probes in accordance with ASTM F 2170. Proceed with installation only after concrete substrates have a maximum 75 percent relative humidity level measurement.

7. Epoxy-Based Moisture Floor Treatment: For concrete substrates not meeting moisture test standards specified above, apply epoxy-based moisture floor treatment to concrete substrate in accordance with manufacturer's written instructions.

C. Use trowelable leveling and patching compounds, according to manufacturer's written instructions, to fill cracks, holes, and depressions in substrates.

D. Broom and vacuum clean substrates to be covered immediately before flooring product installation. After cleaning, reexamine substrates for moisture, alkaline salts, carbonation, or dust. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.4 INSTALLATION OF RESILIENT FLOORING, GENERAL

A. Apply concrete slab primer, if recommended by flooring manufacturer, prior to applying adhesive. Apply according to manufacturer's directions.

B. Scribe, cut, and fit flooring to butt neatly and tightly to vertical surfaces and permanent fixtures, including built-in furniture, cabinets, pipes, outlets, edgings, door frames, thresholds, and nosings.

C. Extend flooring into toe spaces, door reveals, closets, and similar openings. Extend flooring to center of door openings.

D. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on finish flooring as marked on substrate. Use chalk or other nonpermanent, non-staining marking device.

E. Adhere flooring to substrates using a full spread of adhesive applied to substrate to comply with flooring manufacturer's written instructions, including those for trowel notching, adhesive mixing, and adhesive open and working times.

    1. Provide completed installation without open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, and other surface imperfections.

F. Hand-roll flooring in both directions from center out to embed flooring in adhesive and eliminate trapped air according to manufacturer's written instructions. At walls, door casings, and other locations where access by roller is impractical, press flooring firmly in place with flat-bladed instrument.

3.5 INSTALLATION OF RESILIENT TILE FLOORING

A. Lay out tiles from center marks established with principal walls, discounting minor offsets, so tiles at opposite edges of room are of equal width. Adjust as necessary to avoid using cut widths that equal less than one-half of a tile at perimeter.

B. Match tiles for color and pattern by selecting tiles from cartons in the same sequence as manufactured and packaged, if so numbered. Cut tiles neatly around all fixtures. Discard broken, cracked, chipped, or deformed tiles.

1. Lay tiles square with room axis, unless otherwise indicated.
2. Lay tiles with grain running in one direction, unless otherwise indicated.

3.6 INSTALLATION OF RESILIENT SHEET FLOORING

A. Unroll sheet flooring and allow it to stabilize before cutting and fitting, if recommended in writing by manufacturer.

B. Lay out sheet flooring to comply with the following requirements:

1. Maintain uniformity of sheet flooring direction.
2. Arrange for a minimum number of seams and place them in inconspicuous and low-traffic areas, and not less than 6 in (150 mm) away from parallel joints in flooring substrates.
3. Match edges of sheet flooring for color shading and pattern at seams according to manufacturer's written recommendations.
4. Avoid cross seams.

C. Heat-Welded Seams: Rout joints and heat weld with welding bead, permanently fusing sections into seamless flooring. Prepare, weld, and finish seams according to manufacturer's written instructions and ASTM F 1516 to produce surfaces flush with adjoining flooring surfaces.

3.7 CLEANING AND PROTECTING

A. Perform the following operations immediately after installing flooring products:

1. Remove adhesive and other surface blemishes from exposed surfaces using cleaner recommended by flooring manufacturer.
2. Sweep or vacuum floor thoroughly.
3. Do not wash floor until after time period recommended by flooring manufacturer.
4. Damp-mop floor to remove marks and soil.

B. Protect flooring against mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during the remainder of construction period. Use protection methods recommended in writing by flooring manufacturer.

1. Cover products installed on floor surfaces with undyed, untreated building paper until just prior to Substantial Completion.
2. Do not move heavy and sharp objects directly over floor surfaces. Place plywood or hardboard panels over flooring and under objects while they are being moved. Slide or roll objects over panels without moving panels.

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LAS VEGAS, NEVADA

SECTION 09 6513

RESILIENT BASE AND ACCESSORIES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: Resilient wall base, resilient flooring accessories, and supplementary items necessary for installation.

1.2 SUBMITTALS

A. Product Data: Manufacturer's technical literature for each product and system indicated.

1. Include manufacturer's specifications for materials, finishes, construction details, installation instructions, and recommendations for maintenance.

B. Product Schedule: Use same designations indicated on the Finish Schedule and Drawings.

C. Samples for Verification Purposes: In manufacturer's standard size, but not less than 12 in (300 mm) sample of each different color and pattern of resilient product specified, showing the full range of variations expected in these characteristics.

D. Qualification Data: For installer.

1. For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of Architects and Owners, and other information specified.

E. Product Test Reports: Written reports based on evaluation of comprehensive tests performed by qualified testing agency indicating that each product complies with requirements.

F. Maintenance Data: To include in maintenance manuals.

1.3 QUALITY ASSURANCE

A. Installer Qualifications:

1. Experience: Installer with not less than 5 years experience in performing specified Work similar to scope of this Project, with a record of successful in-service performance and completion of projects for a period of not less than 5 years and with sufficient production capability, facilities, and personnel to produce required Work.
2. Supervision: Installer shall maintain a competent supervisor who is at Project site during times specified Work is in progress that is experienced in installing systems similar to type and scope required for Project.
3. Manufacturer Acceptance: Installer shall be certified, approved, licensed, or acceptable to manufacturer to install products.

B. Fire-Test-Response Characteristics: Provide products with the following fire-test-response characteristics as determined by testing identical products per test method indicated below by a testing and inspecting agency acceptable to authorities having jurisdiction.

1. Critical Radiant Flux: Class I, 0.45 W/sq. cm or greater when tested per ASTM E 648.
2. Smoke Density: Maximum specific optical density of 450 or less when tested per ASTM E 662.

1.4 PRE-INSTALLATION CONFERENCE

A. Pre-Installation Conference: Before Work begins, conduct conference at Project site to comply with requirements of applicable Division 01 Sections.

1. Required Attendees:

a. Owner.
b. Architect.
c. Contractor, including superintendent.
d. Installer, including project manager and supervisor.
e. Installers of other construction interfaced with Work.

2. Minimum Agenda: Installer shall demonstrate understanding of the Work required by describing detailed procedures for preparing, installing, and cleaning the Work. Demonstration shall include, but not be limited to, following topics:

a. Tour representative areas of Work, inspect and discuss condition of substrate, and other preparatory work performed by other trades.
b. Review Work requirements (Drawings, Specifications, and other Contract Documents).
c. Review required submittals, both completed and yet to be completed.
d. Review and finalize construction schedule related to Work and verify availability of materials, installer's personnel, equipment, and facilities needed to make progress and avoid delays.
e. Review required inspection, testing, certifying, and material usage accounting procedures.
f. Review environmental conditions and procedures for coping with unfavorable conditions.
g. Resolve deviations or differences between Contract Documents and the manufacturer’s specifications.

3. Contractor shall record discussions of conference, including decisions and agreements reached, and furnish copy of record to each party attending. If substantial disagreements exist at conclusion of conference, determine how disagreements will be resolved and set date for reconvening conference.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Store resilient products and installation materials in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by product manufacturer, but not less than 50 deg F (10 deg C) or more than 90 deg F (32 deg C).

1.6 PROJECT CONDITIONS

A. Maintain a temperature of not less than 70 deg F (21 deg C) or more than 85 deg F (29 deg C) in spaces to receive resilient products for at least 48 hours before installation, during installation, and for at least 48 hours after installation, unless otherwise recommended by product manufacturer.

B. Maintain resilient products prior to installation at the same temperature as the space where they are to be installed.

C. Close spaces to traffic during installation and for time period after installation recommended by manufacturer.

D. Install resilient products after other finishing operations, including painting, have been completed.

1.7 COORDINATION

A. Coordinate installation of products and systems with interfacing and adjoining construction to provide a successful installation without failure.

1.8 MAINTENANCE

A. Extra Materials: Furnish the following extra materials that match and are from same production runs as products installed, packaged with protective covering for storage and identified with labels describing contents:

1. Furnish not less than 10 linear ft (3 linear m) for each 500 linear ft (150 linear m) or fraction thereof, of each different type, color, pattern, and size of resilient product installed.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturers: Subject to compliance with requirements of Contract Documents as judged by the Architect, provide product by one of manufacturers listed. If not listed, submit as substitution according to the Conditions of the Contract and Division 01 Section “Substitution Procedures”.

1. Armstrong World Industries, Inc.
2. Burke Mercer Flooring Products; Division of Burke Industries, Inc.
3. Endura Rubber Flooring; Division of Burke Industries, Inc.
4. Flexco, Inc.
5. Johnsonite.
6. Mondo Rubber International, Inc.
7. Musson, R. C. Rubber Co.
8. Nora Rubber Flooring; Freudenberg Building Systems, Inc.
9. Roppe Corporation, USA.

B. Basis of Design (Product Standard): Contract Documents are based on products and systems specified to establish a standard of quality. Other available manufacturers offering products having equivalent characteristics may be considered, provided deviations are minor and comply with requirements of Contract Documents as judged by the Architect.

1. Selections: As indicated in Design Selections on drawings.

2.2 MATERIALS, GENERAL

A. Single Source Responsibility: Furnish each type of product from single manufacturer. Provide secondary materials only as recommended by manufacturer of primary materials.

2.3 RESILIENT MATERIALS

A. Rubber Wall Base:

1. Standard: ASTM F 1861, Type TS (rubber, vulcanized thermoset) or TP (rubber, thermoplastic), Group 1 and 2.
2. Thickness: Nominal 1/8 in (3 mm).
3. Outside and Inside Corners:

a. Job-formed.

B. Resilient Molding Accessories:

1. Resilient Flooring Accessories: Reducer strip and others as required.
2. Material: Rubber.
3. Color and finish as selected by Architect from manufacturer's standard colors.

2.4 ACCESSORY MATERIALS

A. Adhesives: Water-resistant type recommended by product manufacturer suitable for products, applications, and substrate conditions indicated.

1. Use adhesives that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):

a. Wall Base: Not more than 50 g/L.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Acceptance of Surfaces and Conditions: Examine substrates to receive products and systems and associated work for compliance with requirements and other conditions affecting performance. Proceed only when unsatisfactory conditions have been corrected in a manner complying with Contract Documents. Starting work within a particular area will be construed as acceptance of surface conditions.

3.2 INSTALLATION, GENERAL

A. Installation Quality Standards: In addition to standards listed elsewhere, perform Work according to following, unless otherwise specified:

1. Respective manufacturer's written installation instructions.
2. Accepted submittals.
3. Contract Documents.

3.3 PREPARATION

A. General: Comply with manufacturer's instructions, recommendations, and specifications for cleaning and surface preparation. Surfaces shall have no defects, contaminants, or errors which would result in poor or potentially defective installation or would cause latent defects in Work.

3.4 INSTALLATION OF RESILIENT WALL BASE

A. Apply wall base to walls, columns, pilasters, casework and cabinets in toe spaces, and other permanent fixtures in rooms and areas where base is required.

B. Install wall base in lengths as long as practicable without gaps at seams and with tops of adjacent pieces aligned.

C. Tightly adhere wall base to substrate throughout length of each piece, with base in continuous contact with horizontal and vertical substrates.

D. Do not stretch wall base during installation.

E. Masonry Wall Surfaces: On masonry surfaces or other similar irregular substrates, fill voids along top edge of wall base with manufacturer's recommended adhesive filler material.

F. Job-Formed Corners: Use straight pieces of maximum lengths possible.

1. Outside Corners: Form without producing discoloration (whitening) at bends. Shave back of base at points where bends occur and remove strips perpendicular to length of base that are only deep enough to produce a snug fit without removing more than half the wall base thickness.
2. Inside Corners: Form by cutting an inverted V-shaped notch in toe of wall base at the point where corner is formed. Shave back of base where necessary to produce a snug fit to substrate.

3.5 INSTALLATION OF RESILIENT FLOORING ACCESSORIES

A. Resilient Molding Accessories: Butt to adjacent materials and tightly adhere to substrates throughout length of each piece. Install reducer strips at edges of floor coverings that would otherwise be exposed.

3.6 CLEANING AND PROTECTING

A. Perform the following operations immediately after installing resilient products:

1. Remove adhesive and other surface blemishes from exposed surfaces using cleaner recommended by manufacturer.
2. Sweep or vacuum horizontal surfaces thoroughly.

3. Do not wash resilient products until after time period recommended by manufacturer.
4. Damp-mop surfaces to remove marks and soil.

B. Protect resilient products against mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during the remainder of construction period. Use protection methods indicated or recommended in writing by resilient product manufacturer.

END OF SECTION

UNIVERSITY MEDICAL CENTER
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LAS VEGAS, NEVADA

SECTION 09 7200

WALL COVERINGS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: Wall coverings and supplementary items necessary for installation.

1.2 SUBMITTALS

A. Product Data: Manufacturer's technical literature for each product and system indicated.

1. Include manufacturer's specifications for materials, finishes, installation instructions, and recommendations for maintenance.
2. Include data on physical characteristics, durability, fade resistance, and flame resistance characteristics.

B. Shop Drawings: Show location and extent of each wall covering type. Indicate seams and termination points.

C. Samples for Verification Purposes: Sets for each color, texture, and pattern specified, showing the full range of variations expected in these characteristics.

1. Full-width sample, not less than 36 in (900 mm) long, from dye lot used for the Work.
2. Submit sample with specified treatments applied for products specified.
3. Show complete pattern repeat where applicable.
4. Trim sample.

D. Product Schedule: Use same designations indicated on the Finish Schedule and Drawings.

E. Product Test Reports: Written reports based on evaluation of comprehensive tests performed by qualified testing agency indicating that each product complies with requirements.

F. Qualification Data: For installer.

1. For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of Architects and Owners, and other information specified.

G. Maintenance Data: To include in maintenance manuals.

1.3 QUALITY ASSURANCE

A. Installer Qualifications:

1. Experience: Installer with not less than 5 years experience in performing specified Work similar to scope of this Project, with a record of successful in-service performance and completion of projects for a period of not less than 5 years, and with sufficient production capability, facilities, and personnel to produce required Work.

2. Supervision: Installer shall maintain a competent supervisor who is at Project during times specified Work is in progress, and, who is experienced in installing systems similar to type and scope required for Project.

B. Fire-Test-Response Characteristics: As determined by testing identical wall coverings applied with identical adhesives to substrates according to test method indicated below by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1. Surface-Burning Characteristics: As follows, per ASTM E 84:

a. Flame-Spread Index: 25 or less.
b. Smoke-Developed Index: 50 or less.

C. Mock-ups: Prior to fabrication and installation, build mock-up for each form of construction and finish required to verify selections made under sample Submittals and to demonstrate aesthetic effects and qualities of materials and execution. Build mock-up to comply with the following requirements, using materials indicated for the completed Work:

1. Build mock-up in the location and of the size indicated or, if not indicated, as directed by Architect. Contractor shall provide structural support framework.

a. Show typical components and requirements of installation.

2. Clean exposed faces of mock-up.
3. Notify Architect seven days in advance of the dates and times when mock-up will be installed.
4. Demonstrate the proposed range of aesthetic effects and workmanship.
5. Protect accepted mock-up from the elements with weather-resistant membrane.
6. Obtain Architect's acceptance of mock-ups before starting fabrication.
7. Maintain mock-ups during construction in an undisturbed condition as a standard for review of the completed Work.
8. Acceptance of mock-ups does not constitute acceptance of deviations from the Contract Documents contained in mock-ups unless such deviations are specifically noted by Contractor, submitted to Architect in writing, and accepted by Architect in writing.
9. Demolish and remove mock-ups when directed by Architect unless accepted to become part of the completed Work.

1.4 PRE-INSTALLATION CONFERENCE

A. Pre-Installation Conference: Before Work begins, conduct conference at Project site to comply with requirements of applicable Division 01 Sections.

1. Required Attendees:

a. Owner.
b. Architect.
c. Contractor, including superintendent.
d. Installer, including project manager and supervisor.
e. Installers of other construction interfaced with Work.

2. Minimum Agenda: Installer shall demonstrate understanding of the Work required by describing detailed procedures for preparing, installing, and cleaning the Work. Demonstration shall include, but not be limited to, following topics:

a. Tour representative areas of Work, inspect and discuss condition of substrate, and other preparatory work performed by other trades.

b. Review Work requirements (Drawings, Specifications, and other Contract Documents).
c. Review required submittals, both completed and yet to be completed.
d. Review and finalize construction schedule related to Work and verify availability of materials, installer's personnel, equipment, and facilities needed to make progress and avoid delays.
e. Review required inspection, testing, certifying, and material usage accounting procedures.
f. Review environmental conditions and procedures for coping with unfavorable conditions.
g. Resolve deviations or differences between Contract Documents and the manufacturer's specifications.

3. Contractor shall record discussions of conference, including decisions and agreements reached, and furnish copy of record to each party attending. If substantial disagreements exist at conclusion of conference, determine how disagreements will be resolved and set date for reconvening conference.

1.5 PROJECT CONDITIONS

A. Do not install wall coverings until space is enclosed and weatherproof, wet-work in space is completed and nominally dry, work above ceilings is complete, and ambient temperature and humidity conditions are and will be continuously maintained at values near those indicated for final occupancy.

B. Environmental Limitations: Do not deliver or install wall coverings until spaces are enclosed and weathertight, wet work in spaces is complete and dry, work above ceilings is complete, and temporary HVAC system is operating and maintaining ambient temperature and humidity conditions at occupancy levels during the remainder of the construction period.

C. Lighting: Do not install wall covering until a lighting level of not less than 15 foot-candles (160 lux) is provided on the surfaces to receive wall covering.

D. Ventilation: Provide continuous ventilation during installation and for not less than the time recommended by the wall covering manufacturer for full drying or curing.

1.6 COORDINATION

A. Coordinate installation of products and systems with interfacing and adjoining construction to provide a successful installation without failure.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis of Design (Product Standard): Contract Documents are based on product and systems specified to establish a standard of quality. Other manufacturers offering products having equivalent characteristics may be considered, provided deviations are minor and comply with requirements of Contract Documents as judged by the Architect.

1. Selections: Manufacturer and Product: As indicated in Design Selections on drawings.

2.2 MATERIALS, GENERAL

A. Single Source Responsibility: Furnish each type of product from single manufacturer. Provide secondary materials only as recommended by manufacturer of primary materials.

2.3 WALL COVERING MATERIALS

A. Vinyl Wall Covering: Provide integrally pigmented, opaque virgin vinyl calendared film vinyl wall covering material treated with mildew and antimicrobial additives and laminated to suitable backing. Comply with FS CCC-W-408D, Type II (except where Type I is specifically scheduled), Class 1, and CFFA W-101-D.

1. Stain-Resistant: Provide material for toilet rooms wet walls with delustered clear polyvinyl fluoride film not less than 0.0005 in (1/2 mil) thick as top coating complying with FS L-P-1040, Type I, Grade B, Class 2 (DuPont "Tedlar"). Do not include weight of stain-resistant coating as part of required vinyl coating weight or total fabric weight.

2.4 ACCESSORY ITEMS

A. Adhesive: Mildew-resistant, nonstaining, strippable adhesive, for use with specific wall covering and substrate application; as recommended in writing by wall-covering manufacturer.

1. Adhesive shall have VOC content of 50 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

B. Wall Liner: Nonwoven, synthetic underlayment and adhesive as recommended by wall covering manufacturer.

C. Edge Trim: As scheduled on drawings.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Acceptance of Surfaces and Conditions: Examine substrates to receive products and systems and associated work for compliance with requirements and other conditions affecting performance. Proceed only when unsatisfactory conditions have been corrected in a manner complying with Contract Documents. Starting work within a particular area will be construed as acceptance of surface conditions.

3.2 INSTALLATION, GENERAL

A. Installation Quality Standards: In addition to standards listed elsewhere, perform Work according to following, unless otherwise specified:

1. Respective manufacturer/fabricator’s written installation instructions.
2. Accepted submittals.
3. Contract Documents.

3.3 PREPARATION

A. General: Comply with manufacturer’s instructions, recommendations, and specifications for cleaning and surface preparation. Surfaces shall have no defects, contaminants, or errors which would result in poor or potentially defective installation or would cause latent defects in Work.

B. Acclimatize wall covering materials by removing them from packaging in the installation areas not less than 24 hours before installation.

C. Comply with manufacturer's written instructions for surface preparation.

D. Clean substrates of substances that could impair wall covering's bond, including mold, mildew, oil, grease, incompatible primers, and dirt. Prepare substrates to achieve a smooth, dry, clean surface free of flaking, unsound coatings, cracks, and defects.

1. Prime new gypsum board with primer recommended by wall covering manufacturer.

E. Remove hardware and hardware accessories, electrical plates and covers, light fixture trims, and similar items.

F. Wall Liner: Where recommended by wall covering manufacturer install wall liner to form smooth wrinkle-free surface for finished installation. Do not begin wall covering installation until wall liner has dried.

3.4 INSTALLATION OF WALL COVERINGS

A. Comply with wall coverings manufacturers' written installation instructions applicable to products and applications indicated, except where more stringent requirements apply.

B. Cut wall covering panels in roll number sequence. Change run numbers at partition breaks and corners only.

C. Install wall covering with no gaps or overlaps, no lifted or curling edges, and no visible shrinkage. Install seams vertical and plumb at least 6 in (150 mm) from outside corners and 3 in (75 mm) from inside corners. No horizontal seams are permitted.

D. Fully bond wall covering to substrate. Remove air bubbles, wrinkles, blisters, and other defects.

E. Trim edges for color uniformity, pattern match, and tight closure at seams and edges. Butt seams without any overlay or spacing between strips.

F. Install edge trim where indicated.

3.5 CLEANING

A. Remove excess adhesive at finished seams, perimeter edges, and adjacent surfaces. Use cleaning methods recommended by the wall covering manufacturer.

B. Replace strips that cannot be cleaned.

C. Reinstall hardware and hardware accessories, electrical plates and covers, light fixture trims, and similar items.

END OF SECTION

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UNIVERSITY MEDICAL CENTER
7TH FLOOR RENOVATION
LAS VEGAS, NEVADA

SECTION 09 7700

PREFINISHED PANEL SYSTEM

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Decorative pre-finished wall surfacing systems and trim.

1.2 RELATED SECTIONS

A. Division 9 Section – “Gypsum Board Assemblies”.

1.3 REFERENCES

A. AWI Quality Standards (Architectural Woodwork Institute).

B. ASTM E-84 (Method of test for surface burning characteristics of building materials).

C. BHMA (Builder's Hardware Manufacturers Associations).

1.4 SUBMITTAL

A. Provide manufacturers product data sheets for approval.

B. Provide manufacturers recommended maintenance procedures to the owner.

1.5 DELIVERY, STORAGE AND HANDLING

A. All products are to be packaged at the factory in heavy cardboard cartons. All shipments to the job site shall be made on wooden pallets.

1.6 WARRANTY

A. All products shall be warranted to be free from defects for a period of 30 days after installation.

1.7 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who has completed work similar in material, design, and extent to that indicated for this Project and whose work has resulted in installation with a record of successful in-service performance.

B. Mockup: Before installing panels, install mockup for each form of panel and finish required to verify selections made under sample Submittals and to demonstrate aesthetic effects and qualities of materials and execution. Install mockup to comply with the following requirements, using materials indicated for the completed Work:

1. Install mockup of typical wall area to include a minimum of four panels.
2. Notify Architect seven days in advance of dates and times when mockups will be installed.
3. Demonstrate the proposed range of aesthetic effects and workmanship.
4. Obtain Architect's approval of mockups before starting installation of panels.

5. Maintain mockups during installation in an undisturbed condition as a standard for judging the completed Work.
6. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURER

A. Acceptable Manufacturers: Subject to compliance with requirements of Contract Documents as judged by the Architect, manufacturers offering products that may be incorporated into the Work include but are not limited to those listed below.

1. Marlite.
2. Panel Specialists Inc.

B. Basis of Design (Product Standard): Contract Documents are based on products and systems specified to establish a standard of quality. Other available manufacturers offering products having equivalent characteristics may be considered, provided deviations are minor and comply with requirements of Contract Documents as judged by the Architect.

C. Basis of Design: Decorative interior wall surfacing system and trim shall be manufactured by Marlite, 202 Harger St., Dover, OH 44622; PH: (330) 343-6621.

2.2 MATERIALS

A. All decorative interior wall surface systems shall be "SURFACE SYSTEMS", designated as MAP System 40.

1. MAP System 40. Shall consist of panels with square cut edges, installed utilizing an exposed Horizontal Narrow Main Rail and exposed Vertical Narrow Cross Splines, for proper panel alignment.
2. All exposed application hardware shall be provided in**:**

a. Anodized Aluminum, color as selected.

B. All decorative interior wall surfaces shall be “SURFACE SYSTEMS" with panel construction and finish as follows.

1. High Pressure Laminate
High Pressure Laminate panels have a "vertical grade” decorative laminate face on a wood fiber substrate. Specifier to choose decorative face, see interior finishes. Panels are 3/4" thick, square cut. All edges are sealed black.

C. Grain direction (if any) shall be manufacturer’s standard (typically vertical), except as requested by specifier.

D. All panel sizes shall be:

1. Nominal 24" wide x 24" high (actual panel size varies dependent upon system).

2.3 ACCESSORIES

A. All trim specified shall be heavy weight extruded aluminum 6063-T5 alloy prefinished at the factory.

1. Trim Profiles for 3/4" thick panels

   a. Narrow Line - Outside Corner trim shall be Marlite's part #NL-760 Outside Corner, provided in 10' lengths.
   b. Narrow Line - Edge/Inside Corner trim shall be Marlite's part #NL-770 Edge/Inside Corner, provided in 10' lengths.

2. Trim Finishes

   a. Anodized Aluminum, color as selected.

2.4 FABRICATION

A. All Surface Systems panels, hardware and accessories shall be factory finished and ready to install. Field fabrication will be required at perimeter conditions.

B. Panel edges must be refinished per manufacturer's instruction after field cutting, before installation.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Many Surface Systems panels are man made wood fiber products and are subject to the effects of humidity and temperature. Do not use in high humidity areas.

B. Open cartons and carefully inspect all panels.

C. Due to textures, woodgrain patterns, materials and manufacturing techniques, some panels may vary in color consistency, tone and pattern. These variations are not to be considered as defects. For the most pleasing appearance, arrange panels on each wall to achieve the best combination of color, texture and grain, before installing.

3.2 PREPARATION

A. Structural walls should be finished, with building completely closed. Walls shall be thoroughly dry before starting installation. A vapor barrier should be used on exterior walls behind backing to discourage warping.

B. Panels must be applied over a smooth, solid, flat backing such as plywood or drywall. All drywall joints should be taped and finished. Walls should be primed before installation begins.

C. Protect existing surfaces with drop cloths.

3.3 CONDITIONING

A. All panels shall be allowed to equalize to the moisture and temperature in the room environment prior to installation. To ensure product performance, a temperature range of 60°-80°F and a humidity range of 35-55% must be maintained during storage, installation and product life cycle.

3.4 INSTALLATION

A. Install all materials in strict accordance with the manufacturer's installation instructions.

B. C-702 Marlite Construction adhesive is the adhesive recommended for installation of Surface Systems. C-702 adhesive is a solvent based material and local code restrictions may require substitution. Any adhesive substitution must have the manufacturer's approval.

a. It is the responsibility of the specifier and/or contractor to determine conformance of Marlite's, or any other adhesive, with local code restrictions.

C. Avoid contamination of the panel faces with adhesives, solvents or cleaners during installation.

3.5 CLEANING

A. Clean panels, trim and hardware according to the manufacturer's recommendations.

END OF SECTION

UNIVERSITY MEDICAL CENTER
7TH FLOOR RENOVATION
LAS VEGAS, NEVADA

SECTION 09 9100

PAINTING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: Surface preparation and field painting of exposed exterior and interior items and surfaces.

1. Surface preparation, priming, and finish coats specified in this Section are in addition to shop priming and surface treatment specified in other Sections.

B. Paint exposed surfaces, except where indicated that the surface or material is not to be painted or is to remain natural. If an item or a surface is not specifically mentioned, paint the item or surface the same as similar adjacent materials or surfaces. If a color of finish is not indicated, Architect will select from standard colors and finishes available.

1. Painting includes field painting of exposed bare and covered pipes and ducts, hangers, exposed steel and iron supports, and surfaces of mechanical and electrical equipment that do not have a factory-applied final finish.

C. Do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels, unless indicated otherwise.

1. Prefinished items include the following factory-finished components:

a. Prefinished wood doors.
b. Acoustical materials.
c. Prefinished Architectural woodwork and cabinets.
d. Elevator equipment.
e. Finished mechanical and electrical equipment.
f. Light fixtures.
g. Distribution cabinets.
h. Baked enamel coated items.
i. Fluorocarbon coated items.
j. Integral colored plaster.
k. Integral colored PVC.

2. Concealed surfaces include walls or ceilings in the following generally inaccessible spaces:

a. Foundation spaces.
b. Furred areas.
c. Ceiling plenums.
d. Utility tunnels.
e. Pipe spaces.
f. Duct shafts.
g. Elevator shafts.

3. Finished metal surfaces include the following:

   a. Anodized aluminum.
   b. Stainless steel.
   c. Chromium plate.
   d. Copper and copper alloys.
   e. Bronze and brass.

4. Operating parts include moving parts of operating equipment and the following:

   a. Valve and damper operators.
   b. Linkages.
   c. Sensing devices.
   d. Motor and fan shafts.

5. Labels: Do not paint over UL, FMG, or other code-required labels or equipment name, identification, performance rating, or nomenclature plates.

   a. Embossed UL labels may be used and painted where acceptable to authority having jurisdiction

D. Related Sections:

1. Division 09 Section "Gypsum Board Assemblies" for surface preparation of gypsum board assemblies.

1.2 SPECIAL PAINTING REQUIREMENTS

A. Access panels shall be field painted in place after installation with panels in open position and allowed to completely dry

1. Sheen at Ceilings: Flat unless indicated otherwise.
2. Sheen at Walls: Eggshell unless indicated otherwise.
3. Sheen at Wall Trim: Semi-gloss unless indicated otherwise.

1.3 DEFINITIONS

A. MPI Gloss Levels: MPI Gloss and Sheen Standard values are measured per ASTM D523, Method D and are as follows:

1. Gloss Level 1: Not more than 5 units at 60 degrees and 10 units at 85 degrees.
2. Gloss Level 2: Not more than 10 units at 60 degrees and 10 to 35 units at 85 degrees.
3. Gloss Level 3: 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees.
4. Gloss Level 4: 20 to 35 units at 60 degrees and not less than 35 units at 85 degrees.
5. Gloss Level 5: 35 to 70 units at 60 degrees.
6. Gloss Level 6: 70 to 85 units at 60 degrees.
7. Gloss Level 7: More than 85 units at 60 degrees.

B. Exterior Painting: Generally includes surfaces located in unconditioned spaces.

C. Interior Painting: Generally includes surfaces located in conditioned spaces.

1.4 SUBMITTALS

A. Product Data: Manufacturer's technical literature for each product and system indicated.

1. Include manufacturer's specifications for materials, finishes, installation instructions, and recommendations for maintenance.

B. Product List: For each product indicated, include the following:

1. Cross-reference to paint system and locations of application areas. Use same designations indicated on Drawings and in schedules.
2. Printout of current "MPI Approved Products List" for each product category specified, with the proposed product highlighted.

C. Samples for Verification: For each type of paint system and each color and gloss of topcoat indicated.

1. Submit Samples on rigid backing, 8 in (200 mm) square.
2. Step coats on Samples to show each coat required for system.
3. Label each coat of each Sample.
4. Label each Sample for location and application area.

D. Field Quality Control Test Reports: Written report of testing and inspection required by "Field Quality Control" Article below.

E. Manufacturers Project Acceptance Document: Certification that products are approved, acceptable, suitable for use in specific locations, for specific details, and for applications indicated, specified, or required, and that warranty will be issued.

1. Certifications by manufacturer that products supplied comply with local regulations controlling use of volatile organic compounds (VOCs).

F. Qualification Data: For installer.

1. For firms and persons specified in "Quality Assurance" to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of Architects and Owners, and other information specified.

1.5 QUALITY ASSURANCE

A. Installer Qualifications:

1. Experience: Installer with not less than 5 years experience in performing specified Work similar to scope of this Project, with a record of successful in-service performance and completion of projects for a period of not less than 5 years, and with sufficient production capability, facilities and personnel, to produce required Work.
2. Supervision: Installer shall maintain a competent supervisor who is at Project during times specified Work is in progress, and, who is experienced in installing systems similar to type and scope required for Project.
3. Manufacturer Acceptance: Installer shall be certified, approved, licensed or acceptable to manufacturer to install products.

B. Manufacturers Technical Representative Qualifications: Direct employee of technical services department of manufacturer with minimum of 5 years experience in providing recommendations, observations, evaluations, and problem diagnostics.

C. MPI Standards:

1. Products: Complying with MPI standards indicated and listed in "MPI Approved Products List."
2. Preparation and Workmanship: Comply with requirements in "MPI Architectural Painting Specification Manual" and "MPI Maintenance Repainting Manual" for products and paint systems indicated.

D. Mockups: Apply benchmark samples of each paint system indicated and each color and finish selected to verify preliminary selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.

1. Install mockup in the location and of the size indicated or, if not indicated, as directed by Architect.

a. Architect will select one surface to represent surfaces and conditions for application of each paint system.

1) Vertical and Horizontal Surfaces: Provide samples of at least 100 sq. ft. (9 sq. m).
2) Other Items: Architect will designate items or areas required.
3) Demonstrate repair procedures for damaged surfaces.

b. Apply samples, according to requirements for the completed Work, after permanent lighting and other environmental services have been activated. Provide required sheen, color, and texture on each surface.
c. Final approval of color selections will be based on benchmark samples.

1) If preliminary color selections are not approved, apply additional benchmark samples of additional colors selected by Architect at no added cost to Owner.

2. Clean exposed faces of mock-up.
3. Notify Architect seven days in advance of the dates and times when mock-up will be installed.
4. Demonstrate the proposed range of aesthetic effects and workmanship.
5. Protect approved mock-up from the elements with weather-resistant membrane.
6. Obtain Architect's approval of mockups before starting fabrication.
7. Maintain mockups during construction in an undisturbed condition as a standard for review of the completed Work.
8. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless such deviations are specifically noted by Contractor, submitted to Architect in writing, and approved by Architect in writing.
9. Demolish and remove mockups when directed by Architect unless approved to become part of the completed Work.

1.6 PRE-INSTALLATION CONFERENCE

A. Pre-Installation Conference: Before Work begins, conduct conference at Project site to comply with requirements of applicable Division 01 Sections.

1. Required Attendees:

   a. Owner.
   b. Architect.
   c. Contractor, including superintendent.
   d. Installer, including project manager and superintendent.
   e. Manufacturer's qualified technical representative.
   f. Installers of other construction interfaced with Work.

2. Minimum Agenda: Installer shall demonstrate understanding of the Work required by describing detailed procedures for preparing, installing, and cleaning the Work. Demonstration shall include, but not be limited to, following topics:

   a. Tour representative areas of Work, inspect and discuss condition of substrate, and other preparatory work performed by other trades.
   b. Review Work requirements (drawings, specifications, and other Contract Documents).
   c. Review required submittals, both completed and yet to be completed.
   d. Review and finalize construction schedule related to Work and verify availability of materials, installer's personnel, equipment, and facilities needed to make progress and avoid delays.
   e. Review required inspection, testing, certifying, and material usage accounting procedures.
   f. Review environmental conditions and procedures for coping with unfavorable conditions.
   g. Resolve deviations or differences between Contract Documents and the manufacturer's specifications.

3. Contractor shall record discussions of conference, including decisions and agreements reached, and furnish copy of record to each party attending. If substantial disagreements exist at conclusion of conference, determine how disagreements will be resolved and set date for reconvening conference.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F (7 deg C).

   1. Maintain containers in clean condition, free of foreign materials and residue.
   2. Remove rags and waste from storage areas daily.

1.8 PROJECT CONDITIONS

A. Apply paints only when temperatures of surfaces to be painted and surrounding air are between minimum and maximum range recommended by manufacturer.

B. Do not apply paints in snow, rain, fog, or mist; when relative humidity exceeds 85 percent; at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.

1.9 COORDINATION

A. Coordinate installation of products and systems with interfacing and adjoining construction to provide a successful installation without failure.

1.10 EXTRA MATERIALS

A. Furnish extra materials described below that are from same production run (batch mix) as materials applied and that are packaged for storage and identified with labels describing contents.

1. Quantity: Furnish an additional 5 percent, but not less than 1 gal. (3.8 L) of each material and color applied.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturers and Products: Subject to compliance with requirements of Contract Documents as judged by the Architect, provide product by one of manufacturers listed. If not listed, submit as substitution according to the Conditions of the Contract and Division 01 Section "Substitution Procedures".

1. Comex Group, including regional brands Color Wheel Paint, Frazee Paint, Kwal Paint, and Parker Paint
2. Dunn-Edwards Corporation

B. Color and Gloss: Match Architects sample.

2.2 PAINT, GENERAL

A. Source Limitations: Obtain block fillers and field applied primers for each coating system from the same manufacturer as the finish coats.

B. Material Compatibility:

1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.

2.3 INTERIOR PRIMERS/SEALERS

A. Rust-Inhibitive Primer (Water Based): For interior ferrous metal.

1. C309 UltraTech Universal WB Metal Primer.

2.4 LATEX PAINTS, INTERIOR

A. Interior Acrylic (Low Sheen): (Gloss Level 3); for interior surfaces unless otherwise indicated.

1. Dunn-Edwards; Spartasheen.

B. Institutional Low-Odor/VOC Latex (Semigloss): MPI #147 (Gloss Level 5); for interior surfaces unless otherwise indicated.

1. VOC Content: E Range of E3 less than 11 g/l.

2. Environmental Performance Rating: EPR5.5.

C. Water-Based Urethane Modified Alkyd Enamel (Semigloss): (Gloss Level 5); for interior surfaces unless otherwise indicated.

1. Frazee; Aro-Thane.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Acceptance of Surfaces and Conditions: Examine substrates to receive products and systems and associated work for compliance with requirements and other conditions affecting performance. Proceed only when unsatisfactory conditions have been corrected in a manner complying with Contract Documents. Starting work within a particular area will be construed as acceptance of surface conditions.

B. Coordination of Work: Review other Sections in which primers are provided to ensure compatibility of the total system for various substrates. On request, furnish information on characteristics of finish materials to shop applicators to ensure use of compatible primers.

3.2 INSTALLATION

A. Installation Quality Standards: In addition to standards listed elsewhere, perform work according to the following, unless otherwise specified in this Section:

1. Respective manufacturer's written installation instructions.
2. Approved submittals.
3. Contract Documents.
4. "MPI Architectural Painting Specification Manual" and "MPI Maintenance Repainting Manual", as applicable.

3.3 PREPARATION

A. General: Comply with manufacturer's instructions, recommendations and specifications for cleaning and surface preparation. Surfaces shall have no defects or errors which would result in poor or potentially defective installation or would cause latent defects in Work.

B. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" and "MPI Maintenance Repainting Manual" applicable to substrates and paint systems indicated.

C. Remove plates, machined surfaces, and similar items already in place that are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.

1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.
2. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates, unless expressly permitted by authorities having jurisdiction for labels intended to be painted.

D. Clean substrates of substances that could impair bond of paints, including dirt, oil, grease, and incompatible paints and encapsulants.

1. Remove incompatible primers and reprime substrate with compatible primers as required to produce paint systems indicated.

E. Steel Substrates: Remove rust and loose mill scale. Clean using methods recommended in writing by paint manufacturer.

1. Touch up bare areas and shop-applied prime coats that have been damaged. Wire-brush, clean with solvents recommended by paint manufacturer, and touch up with same primer as the shop coat.

F. Gypsum Board Substrates: Do not begin paint application until finishing compound is dry and sanded smooth.

3.4 APPLICATION

A. Apply paints according to manufacturer's written instructions.

1. Use applicators and techniques suited for paint and substrate indicated.
2. Paint surfaces behind movable items, equipment, and furniture same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed items, equipment, or furniture with prime coat only.
3. Paint front and backsides of access panels, removable or hinged covers, and similar hinged items to match exposed surfaces.
4. Paint interior surfaces of non-ducted return air penums with a flat, nonspecular black paint where visible through registers or grilles.
5. Finish exterior doors on tops, bottoms, and side edges the same as exterior faces.
6. The number of coats and film thickness required are the same regardless of application method.
7. If sanding is required to produce a smooth, even surface according to manufacturer's written instructions, sand between applications.
8. Omit primer over metal surfaces that have been shop primed and touchup painted.
9. Allow sufficient time between successive coats to permit proper drying.

B. Tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Tint undercoats to match color of topcoat, but provide sufficient difference in shade of undercoats to distinguish each separate coat.

C. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.

D. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

E. Minimum Coating Thickness: Apply paint materials no thinner than manufacturer's recommended spreading rate to achieve total dry film thickness of the entire system as recommended by manufacturer.

F. Painting Mechanical and Electrical Work: Paint items exposed in equipment rooms and occupied spaces, exterior walls and on roofs including, but not limited to, the following:

1. Mechanical Work:

a. Visible portions of internal surfaces of metal ducts, without liner, behind air inlets and outlets with a flat, nonspecular black paint.
b. Mechanical equipment that is indicated to have a factory-primed finish for field painting.

2. Electrical Work:

a. Electrical equipment that is indicated to have a factory-primed finish for field painting.

3.5 CLEANING AND PROTECTION

A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.

B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.

C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.

D. Provide "Wet Paint" signs to protect newly painted finishes. Remove temporary protective wrappings provided by others to protect their work after completing painting operations.

E. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces to match approved samples.

3.6 FIRE AND SMOKE BARRIER IDENTIFICATION

A. Corridor partitions, smokestop partitions, horizontal exit partitions, exit enclosures and fire walls shall be effectively and permanently identified with signs, labels or stencils in a manner acceptable to authority having jurisdiction.

1. Identification shall be above decorative ceiling and in concealed spaces.

3.7 INTERIOR PAINTING SCHEDULE

A. Steel Substrates:

1. Water-Based Urethane Modified Enamel (Shop Primed).

a. Prime Coat: Quick-drying alkyd metal primer (shop primed).
b. Intermediate Coat: Urethane modified alkyd enamel matching topcoat.
c. Topcoat: Urethane modified alkyd enamel.
d. Gloss and Sheen: Semi-Gloss.

2. Water-Based Urethane Modified Enamel.

a. Prime Coat: Rust-inhibitive primer (water based).
b. Intermediate Coat: Urethane modified alkyd enamel matching topcoat.
c. Topcoat: Urethane modified alkyd enamel.
d. Gloss and Sheen: Semi-Gloss.

B. Gypsum Board Substrates:

1. .Acrylic.

a. Prime Coat: Not required, self-priming.
b. Intermediate Coat: Acrylic matching topcoat.
c. Topcoat: Acrylic.
d. Gloss and Sheen: Refer to Painting Finish Schedule.

END OF SECTION

UNIVERSITY MEDICAL CENTER
7TH FLOOR RENOVATION
LAS VEGAS, NEVADA

SECTION 10 2115

CUBICLE SPECIALTIES

PART 1 - GENERAL

1.1 SUMMARY

A. Work required for this section includes cubicle specialties and supplementary items necessary to complete their installation.

1.2 SUBMITTALS

A. Product Data: Submit manufacturer's specifications to evidence compliance with these specifications.

B. Shop Drawings:

1. Show details of the system, related construction and reflected layout of ceiling areas showing location of tracks in relation to other ceiling mounted items.
2. Indicate materials, finishes, dimensions, thicknesses and/or gages of parts, reinforcement, where applicable, and anchorage including items of hardware and accessories necessary for complete installation.

C. Samples for Verification: Full-size units of each type of the following products:

1. Curtain Track: Not less than 4 inches long.
2. Curtain Carrier: Full-size unit.

D. Cubicle Schedule: Use same room designations as indicated on Drawings.

E. Maintenance Data: For each product if specified to include in maintenance manuals specified in Division 01.

1.3 PROJECT CONDITIONS

A. Environmental Limitations: Do not install cubicle specialties until spaces are enclosed and weatherproof, wet work in spaces is complete and dry, work above ceilings is complete, and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.

B. Field Measurements: Where cubicle specialties are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

PART 2 - PRODUCTS

2.1 MANUFACTURERS AND PRODUCTS

A. Basis of Design (Product Standard): Contract Documents are based on products and systems specified to establish a standard of quality. Other manufacturers offering products having equivalent characteristics may be considered, provided deviations are minor and comply with requirements of Contract Documents as judged by the Architect.

1. C/S General Cubicle: Snap Lock System.

2.2 CURTAIN TRACKS

A. Extruded-Aluminum Track: Not less than 1-1/4 inches wide by 3/4 inch high, with minimum wall thickness of 0.058 inch.

1. Curved Track: Factory fabricated 12-inch-radius bends.
2. Finish: Match existing standard.

B. Track Accessories: Fabricate splices, end caps, connectors, end stops, coupling and joining sleeves, wall flanges, brackets, ceiling clips, and other accessories from same material and with same finish as track.

C. Curtain Carriers: Two nylon rollers and nylon axle with chrome-plated steel, stainless steel, or aluminum hook with nickel plated steel beaded chain curtain drop.

D. Exposed Fasteners: Stainless steel.

E. Concealed Fasteners: Hot-dip galvanized.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Installer present, for compliance with requirements for installation tolerances, and other conditions affecting performance of work.

1. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. General: Install tracks level and plumb, according to manufacturer's written instructions. Provide track fabricated from one continuous length up to 16 feet.

1. Track Mounting:

a. Ceilings Heights 9'-0" and Less: Surface.
b. Ceilings Heights Greater than 9'-0": Suspended.

B. Surface Track Mounting: Fasten surface-mounted tracks at intervals of not less than 24 inches. Fasten support at each splice and tangent point of each corner. Center fasteners in track to ensure unencumbered carrier operation. Mechanically fasten to suspended ceiling grid with screws.

C. Suspended Track Mounting for High Ceilings: At ceiling heights greater than 9'-0" Install track with suspended supports at intervals of not more than 48 inches. Fasten support at each splice and tangent point of each corner. Secure ends of track to wall with flanged fittings or brackets.

D. Track Accessories: Install splices, end caps, connectors, end stops, coupling and joining sleeves, and other accessories as required for a secure and operational installation.

E. Curtain Carriers: Provide curtain carriers adequate for 6-inch spacing along the full length of the curtain plus an additional carrier.

F. Curtains: Hang curtains on each curtain track. Secure with curtain tieback.

1. Install number of curtain panel units necessary for length of track to ensure that the total length is not less than 10 percent longer than length of track.
2. Top corners of each curtain panel is to share one curtain carrier so that when leading curtain panel is pulled, then all panels are interlocked and move as one continuous curtain.

END OF SECTION

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UNIVERSITY MEDICAL CENTER
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LAS VEGAS, NEVADA

SECTION 10 2600

WALL AND CORNER GUARDS

PART 1 - GENERAL

1.1 SUMMARY

A. Work required for this section includes Owner furnished impact-resistant wall protection systems and supplementary items necessary to complete their installation.

1.2 PROJECT CONDITIONS

A. Environmental Limitations: Do not deliver, store or install wall surface-protection system components until the space is enclosed and weatherproof and ambient temperature within the building is maintained at not less than 70 deg F for not less than 72 hours before beginning installation. Do not install rigid plastic wall surface-protection systems until that temperature has been attained and is stabilized.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Construction Specialties, Inc. Material to be Owner furnished.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrate surfaces to receive impact-resistant wall protection and associated work and conditions under which work will be installed. Do not proceed with work until unsatisfactory conditions have been corrected in a manner acceptable to installer. Starting work within a particular area will be construed as applicator's acceptance of surface conditions.

3.2 INSTALLATION

A. Install impact-resistant wall protection system components level, plumb, and true to line without distortions.

1. Do not use materials with chips, cracks, voids, stains, or other defects that might be visible in the finished Work.

B. Install aluminum retainers, mounting brackets, and other accessories according to the manufacturer's written instructions.

1. Where splices occur in horizontal runs of more than 20 feet, splice aluminum retainers and plastic covers at different locations along the run.

3.3 CLEANING

A. General: Immediately on completion of installation, clean plastic covers and accessories using a standard ammonia-based household cleaning agent. Clean metal components according to the manufacturer's written instructions.

B. Remove surplus materials, rubbish, and debris, resulting from installation, on completion of work and leave installation areas in neat, clean condition.

END OF SECTION

UNIVERSITY MEDICAL CENTER
7TH FLOOR RENOVATION
LAS VEGAS, NEVADA

SECTION 10 2813

TOILET ACCESSORIES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: Toilet accessories and supplementary items necessary for installation.

B. Refer to Division 06 Section “Simulated Stone Fabrications” for accessories included with shower units.

1.2 SUBMITTALS

A. Product Data: Manufacturer's technical literature for each product indicated.

1. Include manufacturer's specifications for materials, finishes, construction details, installation instructions, dimensions, and profiles of individual components.
2. Include details for cutouts required in other Work; include templates, substrate preparation instructions, and directions for preparing cutouts and installing anchoring devices.

B. Qualification Data: For installer.

1. For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of Architects and Owners, and other information specified.

C. Warranty: Sample of special warranty.

1. Provide manufacturer's written warranty covering materials and installation (labor) stating obligations, remedies, limitations and exclusions.

D. Maintenance Data: For inclusion in operation and maintenance manual as required by Division 01 Section "Operation and Maintenance Data". Include manufacturer's instructions for maintenance of installed Work, including methods and frequency for maintaining optimum condition under anticipated use. Include precautions against cleaning products and methods which may be detrimental to finishes and performance.

1.3 QUALITY ASSURANCE

A. Installer Qualifications:

1. Experience: Installer with not less than 5 years experience in performing specified Work similar to scope of this Project, with a record of successful in-service performance and completion of projects for a period of not less than 5 years and with sufficient production capability, facilities, and personnel to produce required Work.

2. Supervision: Installer shall maintain a competent supervisor who is at Project site during times specified Work is in progress that is experienced in installing systems similar to type and scope required for Project.
3. Manufacturer Acceptance: Installer shall be certified, approved, licensed, or acceptable to manufacturer to install products.

1.4 PRE-INSTALLATION CONFERENCE

A. Pre-Installation Conference: Before Work begins, conduct conference at Project site to comply with requirements of applicable Division 01 Sections.

1. Required Attendees:

   a. Owner.
   b. Architect.
   c. Contractor, including superintendent.
   d. Installer, including project manager and supervisor.
   e. Installers of other construction interfaced with Work.

2. Minimum Agenda: Installer shall demonstrate understanding of the Work required by describing detailed procedures for preparing, installing, and cleaning the Work. Demonstration shall include, but not be limited to, following topics:

   a. Tour representative areas of Work, inspect and discuss condition of substrate and other preparatory work performed by other trades.
   b. Review Work requirements (Drawings, Specifications, and other Contract Documents).
   c. Review required submittals, both completed and yet to be completed.
   d. Review and finalize construction schedule related to Work and verify availability of materials, installer's personnel, equipment, and facilities needed to make progress and avoid delays.
   e. Resolve deviations or differences between Contract Documents and the manufacturer's specifications.

3. Contractor shall record discussions of conference, including decisions and agreements reached, and furnish copy of record to each party attending. If substantial disagreements exist at conclusion of conference, determine how disagreements will be resolved and set date for reconvening conference.

1.5 COORDINATION

A. Coordinate installation of products with interfacing and adjoining construction to provide a successful installation without failure.

1.6 WARRANTY

A. Mirror Manufacturer's Warranty: Furnish warranty for a period of 15 years from date of Substantial Completion agreeing to replace mirrors that develop visible silver spoilage defects, signed by an authorized representative using manufacturer's standard form.

PART 2 - PRODUCTS

2.1 MANUFACTURERS AND PRODUCTS

A. Available Manufacturers and Products: Subject to compliance with requirements of Contract Documents as judged by the Architect, manufacturers offering products that may be incorporated into Work include, but are not limited to, those listed.

1. A & J Washroom Accessories, Inc.
2. American Specialties, Inc.
3. Bobrick Washroom Equipment, Inc.
4. Bradley Corp.
5. Brey Krause Manufacturing
6. Electric Mirror, LLC.
7. GAMCO - General Accessory Manufacturing Co.

B. Basis of Design: Contract Documents are based on products specified to establish a standard of quality. Other available manufacturers with products having equivalent characteristics may be considered, provided deviations are minor and do not change intended aesthetic, functional and performance requirements as judged by Architect.

2.2 MATERIALS, GENERAL

A. Single Source Responsibility: Furnish each type of product from single manufacturer. Provide secondary materials only as recommended by manufacturer of primary materials.

B. General Requirements:

1. Unless otherwise indicated, fabricate units of all-welded construction, with corners and returns as indicated, tight seams and joints, and exposed edges rolled.
2. Fabricate frames drawn and leveled, one-piece seamless construction.
3. Hang doors and access panels with full-length, stainless-steel hinges.
4. Equip units for concealed anchorage and with corrosion-resistant backing plates.

C. Manufacturer Names or Labels: Not permitted on exposed faces of accessories. Provide printed label or stamped metal nameplate indicating manufacturer's name and product model number on an easily noticeable interior surface or on back surface of each accessory.

D. Keys: Provide minimum of 6 universal keys for internal access to accessories for servicing and resupplying.

E. Accessibility Requirements: Products and installation shall comply with Americans with Disabilities Act (ADA), ANSI A 117.1, and state and local accessibility standards.

F. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

2.3 MATERIALS

A. Stainless Steel: ASTM A 666, Type 304, with No. 4 satin finish; minimum 0.0312 in (0.8 mm) (22 gage) nominal thickness unless otherwise indicated.

B. Mirror Glass: ASTM C 1036, Type I, Class 1, Quality q2, nominal 1/4 in (6 mm) thick, with silvering, electroplated copper coating, and protective organic coating.

C. Chrome Plating: ASTM B 456, Service Condition Number SC 2 (moderate service).

D. ABS Plastic: Moldable acrylonitrile-butadiene-styrene resin formulation.

E. HDPE Plastic: Moldable high-density polyethylene resin formulation.

F. Galvanized Steel Mounting Devices: ASTM A 153, hot-dip galvanized after fabrication.

G. Fasteners: Screws, bolts, and other devices of same material as accessory unit, tamper and theft resistant when exposed, and of non-corrosive metal when concealed.

H. Sealant: Silicone mildew resistant sealant specified in Division 07 Section "Joint Sealants".

2.4 PAPER TOWEL DISPENSERS

A. Drawing Designation A1 - Owner Furnished Paper Towel Dispenser: Refer to Division 01 Sections "Summary" and "Execution" for general requirements.

2.5 SOAP DISPENSERS

A. Drawing Designation J1 - Owner Furnished Soap Dispenser: Refer to Division 01 Sections "Summary" and "Execution" for general requirements.

2.6 TOILET SEAT COVER DISPENSERS

A. Drawing Designation K1 - Owner Furnished Toilet Seat Cover Dispenser: Refer to Division 01 Sections "Summary" and "Execution" for general requirements.

2.7 SHOWER CURTAIN ROD, HOOKS, AND CURTAIN

A. Drawing Designation L1 - Shower Curtain Hooks, and Curtain:

1. Hooks: As specified below:

a. Description: Fabricated of stainless steel; 0.09 in (2 mm) diameter spring wire curtain hooks with snap fasteners, sized to accommodate specified curtain rod size; one hook per curtain grommet.
b. Basis of Design: Bobrick Washroom Equipment, Inc. Part 204-1

2. Curtain: As specified below:

a. Description: Custom fabricated of white nylon with sides and bottom hemmed, with hemmed reinforced top header containing corrosion-resistant grommets; containing anti-static, anti-bacterial and flame-retardant agents, minimum 10 mils (0.25 mm) thick, bottom weighted.
b. Manufacturers:

1) Barjan Manufacturing Ltd.
2) Brite Inc.
3) Gary Manufacturing

2.8 MIRRORS

A. Drawing Designation R1 - Surface-Mounted Lighted Mirror:

1. Description: Rust resistant powder coated metal construction, HardCoat anti-corrosion mirror treatment, low-mercury T5HO warm fluorescent lamp, stainless steel hanger.
2. Basis of Design: Electric Mirror, LLC; “Silhouette” Lighted Mirror, size as indicated.

2.9 TOWEL BARS AND PINS

A. Drawing Designation T1 - Surface-Mounted Extra-Heavy-Duty Towel Bar:

1. Description: Fabricated of stainless steel tube; with minimum 0.050 in (1.25 mm) (18 gage) wall thickness and 1 in (25 mm) outside diameter, with 1-1/2 in (38 mm) clearance between wall surface and inside face of bar; concealed flanged steel plate welded to end of bar, as required by mounting condition, with cover anchored with set-screws; engineered to support minimum 300 lbs (136 kg).
2. Basis of Design: Bobrick Washroom Equipment, Inc. Model B-530 X 36

2.10 ROBE HOOKS

A. Drawing Designation V1 - Surface-Mounted Single Robe Hook:

1. Description: Fabricated of stainless steel; rectangular profiled pin welded to backplate, with cover anchored with set-screws; project nominal 1-1/2 in (38 mm) from wall surface.
2. Basis of Design: Bobrick Washroom Equipment, Inc. Model B-76717

B. Drawing Designation V2 - Surface-Mounted Double Robe Hook:

1. Description: Fabricated of stainless steel; rectangular profiled pin welded to backplate, with cover anchored with set-screws; project nominal 2 in (50 mm) from wall surface.
2. Basis of Design: Bobrick Washroom Equipment, Inc. Model B-76727

2.11 MISCELLANEOUS ACCESSORIES

A. Drawing Designation W1 - Owner Furnished Glove Dispenser: Refer to Division 01 Sections "Summary" and "Execution" for general requirements.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Acceptance of Surfaces and Conditions: Examine substrates to receive products and associated work for compliance with requirements and other conditions affecting performance. Proceed only when unsatisfactory conditions have been corrected in a manner complying with Contract Documents. Starting work within a particular area will be construed as acceptance of surface conditions.

3.2 INSTALLATION, GENERAL

A. Installation Quality Standards: In addition to standards listed elsewhere, install toilet accessories according to the following, unless otherwise specified in this Section:

1. Respective manufacturer's written installation instructions.
2. Accepted submittals.
3. Contract Documents.

3.3 PREPARATION

A. General: Comply with manufacturer's instructions, recommendations, and specifications for cleaning and surface preparation. Surfaces shall have no defects, contaminants, or errors which would result in poor or potentially defective installation or would cause latent defects in Work.

3.4 INSTALLATION

A. General Requirements: Install toilet accessories level, plumb, and firmly anchored in locations and at heights indicated. Use fasteners that are appropriate to substrate indicated and as recommended by respective product manufacturer.

B. Mirrors: Secure to walls in concealed, tamper-resistant manner with special hangers, toggle bolts, or screws.

END OF SECTION

UNIVERSITY MEDICAL CENTER
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LAS VEGAS, NEVADA

SECTION 11 7000

MEDICAL EQUIPMENT

PART 1 - GENERAL

1.1 SUMMARY

A. Work of this Section includes related wall support, mechanical and electrical connections for medical equipment provided by Owner.

B. Medical equipment information at the end of this Section is for reference only.

1.2 SUBMITTALS

A. Product Data: Furnished by Owner.

B. Shop Drawings: Contractor shall furnish shop drawings of equipment installation when necessary to ensure coordination of the Work.

PART 2 - PRODUCTS

2.1 OWNER FURNISHED / OWNER INSTALLED EQUIPMENT

A. Products: Identified as “OFOI”. Product is provided by Owner and installed by Owner.

B. Contractor Responsibilities: Limited to interface, surface preparations and utilities indicated on the Drawings or specified in the Specifications.

2.2 OWNER FURNISHED / CONTRACTOR INSTALLED EQUIPMENT

A. Products: Identified as “OFCI”. Product is provided by Owner and installed by the Contractor.

B. Contractor Responsibilities: Provide labor, transportation, materials, tools, appliances and utilities necessary for the following:

1. Transportation of product from Owner's facility to the job site.
2. Receiving and storage of product.
3. Installation of product, complete and in operating condition, including adjusting and calibration of product as necessary for proper operation.
4. Testing of product.
5. Paying of fees, licenses, and taxes in conjunction with installation of the product.
6. Roughing-in and final utility connections for product remain the work of specification sections governing the specific utility.

2.3 CONTRACTOR FURNISHED / CONTRACTOR INSTALLED EQUIPMENT

A. Products: Identified as “CFCI”. Product is provided by Contractor and installed by Contractor.

B. Contractor Responsibilities: Furnish equipment and installation as indicated in other specification sections.

2.4 OWNER FURNISHED / VENDOR INSTALLED EQUIPMENT

A. Products: Identified as “OFVI”. Product provided by Owner, and installed by Owner's vendor.

B. Contractor Responsibilities: Limited to interface, surface preparations and utilities indicated on the Drawings or specified in the Specifications.

2.5 FUTURE EQUIPMENT

A. Products: Identified as “Future”. Product provided by Owner and installed by others in the future.

B. Contractor Responsibilities: Limited to interface, surface preparations and utilities indicated on the Drawings or specified in the Specifications.

PART 3 - EXECUTION

3.1 EXAMINATION

A. For Contractor installed medical equipment, examine substrate surfaces to receive medical equipment and associated work and conditions under which work will be installed. Do not proceed until unsatisfactory conditions have been corrected in a manner acceptable to the Installer. Starting of work within a particular area will be construed as installer's acceptance of surface conditions.

3.2 PREPARATION

A. Coordinate work of this Section with related work of other Sections to obtain proper installation of items. Become acquainted with the work of other Sections whose work abut, adjoin or are in any way affected by or related to work under this Section.

B. Carefully examine the drawings and directions and be responsible for proper installation of materials and product without substantial changes.

C. Indication of pipe connection sizes on the plans shall in no way relieve Contractor of the responsibility of checking and verifying their sizes and locations from the actual product to be installed and any available roughing-in diagrams.

3.3 SCOPE OF WORK

A. Back-up Support: Provide wall reinforcing, backing and bracing for wall mounted equipment.

B. Concrete: Provide work indicated or required including, but not limited to, the following:

1. Housekeeping pads.
2. Trenches.
3. Anchor bolts.
4. Vibration isolation devices.
5. Core drilling.
6. Sleeves.

C. Heating, Ventilating, and Air Conditioning (HVAC): Provide work indicated or required including, but not limited to, exhaust ducts from connection point of equipment to building exhaust system.

D. Plumbing: Provide work indicated or required, including, but not limited to, the following:

1. Devices such as vacuum breakers, pressure reducing valves, shut-off valves, trim, traps, filters, etc.
2. Water, waste, gas, air, and steam connections to equipment.

E. Electrical: Provide work indicated or required including, but not limited to, the following:

1. Wiring and devices.
2. Power and lighting service.
3. Connections to equipment.

3.4 SCHEDULE OF MEDICAL EQUIPMENT

A. Refer to separately bound document.

END OF SECTION

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UNIVERSITY MEDICAL CENTER
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LAS VEGAS, NEVADA

SECTION 12 2413

ROLLER WINDOW SHADES

PART 1 - GENERAL

1.1 SUMMARY

A. Work required for this section includes roller window shades and supplementary items necessary to complete their installation.

1.2 SUBMITTALS

A. Product Data: For each type of product indicated. Include styles, material descriptions, construction details, dimensions of individual components and profiles, features, finishes, and operating instructions.

B. Shop Drawings: Show location and extent of roller window shades. Include elevations, sections, details, and dimensions not shown in Product Data. Show installation details, mountings, attachments to other Work, operational clearances, and relationship to adjoining work.

C. Samples for Verification:

1. Shade Material: Not less than 6 inches (150 mm) square, with specified treatments applied. Mark face of material.
2. Valance: Full-size unit, not less than 12 inches (300 mm) long.

D. Window Treatment Schedule: Include roller window shades in schedule using same room designations indicated on Drawings.

E. Qualification Data: For installer.

1. For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of Architects and Owners, and other information specified.

F. Maintenance Data: For roller window shades to include in maintenance manuals. Include the following:

1. Methods for maintaining roller window shades and finishes.
2. Precautions about cleaning materials and methods that could be detrimental to fabrics, finishes, and performance.
3. Operating hardware.

1.3 QUALITY ASSURANCE

A. Installer Qualifications:

1. Experience: Installer with not less than 5 years experience in performing specified Work similar to scope of this Project, with a record of successful in-service performance and completion of projects for a period of not less than 5 years and with sufficient production capability, facilities, and personnel to produce required Work.

2. Supervision: Installer shall maintain a competent supervisor who is at Project site during times specified Work is in progress that is experienced in installing systems similar to type and scope required for Project.
3. Manufacturer Acceptance: Installer shall be certified, approved, licensed, or acceptable to manufacturer to install products.

B. Source Limitations: Obtain roller window shades through one source from a single manufacturer.

C. Fire-Test-Response Characteristics: Provide roller shade band materials with the fire-test-response characteristics indicated, as determined by testing identical products per test method indicated below by UL or another testing and inspecting agency acceptable to authorities having jurisdiction:

1. Flame-Resistance Ratings: Passes NFPA 701.

D. Mockups: Build mockups to verify selections made under sample Submittals and to demonstrate aesthetic effects and qualities of materials and execution.

1. Build mockups of the size indicated or, if not indicated, one typical window shade of each type.
2. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Deliver shades in factory packages, marked with manufacturer and product name, fire-test-response characteristics, and location of installation using same room designations indicated on Drawings and in a window treatment schedule.

1.5 PROJECT CONDITIONS

A. Environmental Limitations: Do not install roller window shades until construction and wet and dirty finish work in spaces, including painting, is complete and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.

B. Field Measurements: Where roller window shades are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication and indicate measurements on Shop Drawings. Allow clearances for operable glazed units' operation hardware throughout the entire operating range. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

1.6 EXTRA MATERIALS

A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Rollers Shades: Before installation begins, for each size, color, texture, and pattern indicated, full-size units equal to 5 percent of amount installed, but not fewer than 2 units.

1.7 WARRANTY

A. Special Warranty: Provide manufacturer’s standard written warranty agreeing to repair or replace components of the roller window shades that fail in material or workmanship within specified warranty period. Fabric failure includes deterioration, sag, warp, fade or will not remain fit for use.

1. Manual operating components: 10 years.

2. Shade Cloth: 10 years.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturers: Subject to compliance with requirements of Contract Documents as judged by the Architect, provide product by one of manufacturers listed. If not listed, submit as substitution according to the Conditions of the Contract and Division 01 Section “Substitution Procedures”.

1. Draper Inc.
2. Hunter Douglas Contract.
3. Lutron Electronics Co., Inc.
4. MechoShade Systems, Inc.

B. Basis of Design (Product Standard): Contract Documents are based on products and systems specified to establish a standard of quality. Other listed manufacturers/fabricators offering products having equivalent characteristics may be considered, provided deviations are minor and comply with requirements of Contract Documents as judged by the Architect.

1. Manufacturer: MechoShade Systems, Inc.

2.2 ROLLER WINDOW SHADES

A. Shade Band Material: PVC-coated polyester blend.

B. Rollers: Electrogalvanized or epoxy primed steel or extruded-aluminum tube of diameter and wall thickness required to support and fit internal components of operating system and the weight and width of shade band material without sagging; designed to be easily removable from support brackets; with manufacturer's standard method for attaching shade material.

C. Direction of Roll: Regular, from back of roller.

D. Mounting Brackets: Galvanized or zinc-plated steel.

E. Provide one or more of the following, as indicated on the drawings or as directed by Architect:

1. Fascia: L-shaped, extruded aluminum; continuous panel concealing front and bottom of shade roller, brackets, and operating hardware and operators; removable design for access.
2. Exposed Pocket-Style Headbox: U-shaped, extruded aluminum; with a bottom cover consisting of slot opening of minimum dimension to allow lowering and raising of shade and a removable or openable, continuous access panel concealing shade roller, brackets, and operating hardware and operators within.
3. Concealed Pocket Above Ceiling: Six-sided box units for recessed installation; fabricated from formed-steel sheet or extruded aluminum, with a bottom consisting of slot opening of minimum dimension to allow lowering and raising of shade and a removable or openable, continuous extruded aluminum access panel concealing rollers, brackets, and operating hardware and operators within.

F. Bottom Bar: Steel or extruded aluminum, with plastic or metal capped ends. Provide exposed-to-view, external-type bottom bar with concealed weight bar as required for smooth, properly balanced shade operation.

G. Audiovisual Light-Blocking Shades: Designed for eliminating all visible light gaps when shades are fully closed; fabricated from blackout shade band material with bottom bar extended and formed for light-tight joints among shade components and between shade components and adjacent construction.

1. Sill Channel or Angle, and Perimeter Seals: Manufacturer's standard design for eliminating light gaps when shades are closed.
2. Shade Band Retention System: Manufacturer's standard design for guiding shade band material through range of travel and holding shade band flat with edges of material within side channels.
3. Combine shade roller in same pocket or behind fascia of standard window shade.

H. Shade Operation:

1. Manual. Provide with continuous loop bead chain lift operator.

a. Clutch: Capacity to lift size and weight of shade; sized to fit roller or provide adaptor.
b. Loop Length: Length required to make operation convenient from floor level.
c. Bead Chain: Stainless steel.
d. Operating Function: Stop and hold shade at any position in ascending or descending travel.

2.3 ROLLER SHADE FABRICATION

A. Product Description: Roller shade consisting of a roller, a means of supporting the roller, a flexible sheet or band of material carried by the roller, a means of attaching the material to the roller, a bottom bar, and an operating mechanism that lifts and lowers the shade.

B. Concealed Components: Non-corrodible or corrosion-resistant-coated materials.

1. Lifting Mechanism: With permanently lubricated moving parts.

C. Unit Sizes: Obtain units fabricated in sizes to fill window and other openings as follows, measured at 74 deg F (24 deg C).

1. Shade Units Installed Between (Inside) Jambs: Edge of shade not more than 1/2 inch (12 mm) from face of jamb. Length equal to head to sill dimension of opening in which each shade is installed.
2. Shade Units Installed Outside Jambs: Width equal to 1 inch (25 mm) more than opening width, with terminations between shades of end-to-end installations at centerlines of mullion or other defined vertical separations between openings.

D. Installation Brackets: Designed for easy removal and reinstallation of shade, for supporting fascia or headbox, roller, and operating hardware and for hardware position and shade mounting method indicated.

E. Installation Fasteners: Not fewer than two fasteners per bracket, fabricated from metal noncorrosive to shade hardware and adjoining construction; type designed for securing to supporting substrate; and supporting shades and accessories under conditions of normal use.

F. Color-Coated Finish: For metal components exposed to view, apply manufacturer's standard baked finish complying with manufacturer's written instructions for surface preparation including pretreatment, application, baking, and minimum dry film thickness. Color as selected.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, operational clearances and other conditions affecting performance.

B. Do not proceed with work until unsatisfactory conditions have been corrected in a manner acceptable to installer. Starting work within a particular area will be construed as applicator's acceptance of surface conditions.

3.2 ROLLER SHADE INSTALLATION

A. Install roller window shades level, plumb, square, and true according to manufacturer's written instructions, and located so shade band is not closer than 2 inches (50 mm) to interior face of glass. Set shades to stop 1-1/2 inches (38 mm) above sill.

3.3 ADJUSTING

A. Adjust and balance roller window shades to operate smoothly, easily, safely, and free from binding or malfunction throughout entire operational range.

3.4 CLEANING AND PROTECTION

A. Clean roller shade surfaces after installation, according to manufacturer's written instructions.

B. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and Installer, that ensure that roller window shades are without damage or deterioration at time of Substantial Completion.

C. Replace damaged roller window shades that cannot be repaired, in a manner approved by Architect, before time of Substantial Completion.

END OF SECTION

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SECTION 12 3661

SIMULATED STONE COUNTERTOPS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: The following simulated stone countertops along with supplementary items necessary for installation:

1. Solid surfacing countertops.

1.2 SUBMITTALS

A. Product Data: Manufacturer's technical literature for each product and system indicated.

1. Include manufacturer's specifications for materials, finishes, construction details, installation instructions, and recommendations for maintenance.

B. Shop Drawings: Show details of fabrication and installation, including plans, elevations, sections, details of components and attachments to other work. Distinguish between shop and field-assembled work. Show locations and sizes of cutouts and holes for plumbing fixtures, accessories and other items installed in countertops.

C. Samples for Verification Purposes: For simulated stone material, 6 in (150 mm) square, showing color and pattern selected.

D. Manufacturer's Project Acceptance Document: Certification by the manufacturer that its product(s) are approved, acceptable, suitable for use in specific locations, for specific details, and for applications indicated, specified, or required, and that a warranty will be issued.

E. Qualification Data: For installer.

1. For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of Architects and Owners, and other information specified.

F. Warranty: Sample of warranty.

1. Provide manufacturer's written warranty covering materials and installation (labor) stating obligations, remedies, limitations and exclusions.

1.3 QUALITY ASSURANCE

A. Installer Qualifications:

1. Experience: Installer with not less than 5 years experience in performing specified Work similar to scope of this Project, with a record of successful in-service performance and completion of projects for a period of not less than 5 years, and with sufficient production capability, facilities, and personnel to produce required Work.

2. Supervision: Installer shall maintain a competent supervisor who is at Project during times specified Work is in progress, and, who is experienced in installing systems similar to type and scope required for Project.

B. Fire-Test-Response Characteristics: Provide materials and products with specified fire-test-response characteristics as determined by testing identical products per test method indicated by UL, ITS, or another testing and inspecting agency acceptable to authorities having jurisdiction.

1.4 PRE-INSTALLATION CONFERENCE

A. Pre-Installation Conference: Before Work begins, conduct conference at Project site to comply with requirements of applicable Division 01 Sections.

1. Required Attendees:

a. Owner.
b. Architect.
c. Contractor, including superintendent.
d. Installer, including project manager and supervisor.
e. Installers of other construction interfaced with Work.

2. Minimum Agenda: Installer shall demonstrate understanding of the Work required by describing detailed procedures for preparing, installing, and cleaning the Work. Demonstration shall include, but not be limited to, following topics:

a. Tour representative areas of Work, inspect and discuss condition of substrate, and other preparatory work performed by other trades.
b. Review Work requirements (Drawings, Specifications, and other Contract Documents).
c. Review required submittals, both completed and yet to be completed.
d. Review and finalize construction schedule related to Work and verify availability of materials, installer's personnel, equipment, and facilities needed to make progress and avoid delays.
e. Review required inspection, testing, certifying, and material usage accounting procedures.
f. Review environmental conditions and procedures for coping with unfavorable conditions.
g. Resolve deviations or differences between Contract Documents and the manufacturer/fabricator’s specifications.

3. Contractor shall record discussions of conference, including decisions and agreements reached, and furnish copy of record to each party attending. If substantial disagreements exist at conclusion of conference, determine how disagreements will be resolved and set date for reconvening conference.

1.5 PROJECT CONDITIONS

A. Environmental Limitations: Do not deliver or install countertops until building is enclosed, wet work is complete, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.

B. Field Measurements: Where products and systems are indicated to fit walls and other construction, verify dimensions by field measurements before fabrication and indicate

measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

1.6 COORDINATION

A. Coordinate installation of products and systems with interfacing and adjoining construction to provide a successful installation without failure.

1.7 WARRANTY

A. Manufacturer's Warranty: Furnish manufacturer's written material and labor warranty signed by an authorized representative using manufacturer's standard form agreeing to furnish materials and labor required to repair or replace work which exhibits material defects caused by manufacture or design and installation of product. "Defects" is defined to include but not limited to deterioration or failure to perform as required.

1. Warranty Period: Manufacturer shall warrant the products to be free from material and labor Defects for a period of 10 years from date of Substantial Completion

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Basis of Design (Product Standard): Contract Documents are based on products and systems specified to establish a standard of quality. Other manufacturers/fabricators offering products having equivalent characteristics may be considered, provided deviations are minor and comply with requirements of Contract Documents as judged by the Architect.

1. Color(s): As indicated in the Design Selections on drawings.

2.2 MATERIALS, GENERAL

A. Single Source Responsibility: Furnish each type of product from single manufacturer/fabricator. Provide secondary materials only as recommended by manufacturer/fabricator of primary materials.

2.3 SIMULATED STONE COUNTERTOP MATERIALS

A. Solid Surface Material: Homogeneous solid sheets of filled plastic resin complying with ANSI SS1.

1. Panel Thickness: Minimum 1/2 in (12 mm) or as indicated on drawings.

2.4 ACCESSORIES

A. Plywood: Exterior softwood plywood complying with DOC PS 1, Grade C-C Plugged, touch sanded and other requirements as specified in Division 06 Section "Miscellaneous Rough Carpentry".

B. Adhesives: Manufacturers recommended adhesive.

1. Use adhesives that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):

a. Not more than 250 g/L.

C. Integral Sinks: Provide type below, as indicated on drawings:

1. Manufacturer: Wilsonart, model below:.

a. S1 = BV1613, all LDR patient rooms at nurse care area
b. S2 = BV11C, in all AP/ PP / SP patient room at nurse care area
c. S3 = BV1410, all patient toilet rooms except room 701 toilet room
d. S4 = BV1512, in Room701 patient toilet room (ADA)

D. Backsplash: Preformed 4 in (100 mm) high coved backsplash, to match countertop.

E. Front Edge Trim: Preformed 1-1/2 in (38 mm), to match countertops.

F. Accessories: Provide joint seam adhesives and other items required for a complete installation as recommended in writing by simulated stone manufacturer.

G. Sealant: Mildew resistant silicone sealant as specified in Division 07 Section “Joint Sealants”.

2.5 FABRICATION OF SIMULATED STONE COUNTERTOPS

A. Accurately cut holes and drill countertop panels to receive plumbing, fixtures, soap dispensers and other accessories. Obtain field measurements prior to fabrication and maintain minimum clearance at walls.

B. Fabricate tops in one piece with shop-applied backsplashes and edges, unless otherwise indicated. Comply with simulated stone manufacturer’s written recommendations for adhesives, sealers, fabrication, and finishing.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Acceptance of Surfaces and Conditions: Examine substrates to receive products and systems and associated work for compliance with requirements and other conditions affecting performance. Proceed only when unsatisfactory conditions have been corrected in a manner complying with Contract Documents. Starting work within a particular area will be construed as acceptance of surface conditions.

3.2 INSTALLATION, GENERAL

A. Installation Quality Standards: In addition to standards listed elsewhere, perform Work according to following, unless otherwise specified:

1. Respective manufacturer’s written installation instructions.
2. Accepted submittals.
3. Contract Documents.

3.3 PREPARATION

A. General: Comply with manufacturer's instructions, recommendations, and specifications for cleaning and surface preparation. Surfaces shall have no defects, contaminants, or errors which would result in poor or potentially defective installation or would cause latent defects in Work.

3.4 CONSTRUCTION TOLERANCES

A. Variation from Plumb: For vertical lines and surfaces, do not exceed 1/16 in per 48 in (1.5 mm per 1200 mm).

B. Variation from Level: Do not exceed 1/8 in per 96 in (3 mm per 2400 mm), 1/4 in (6 mm) maximum.

C. Variation in Joint Width: Do not vary joint thickness more than 1/4 of nominal joint width.

D. Variation in Plane at Joints (Lipping): Do not exceed 1/64 in (0.4 mm) difference between planes of adjacent units.

E. Variation in Line of Edge at Joints (Lipping): Do not exceed 1/64 in (0.4 mm) difference between edges of adjacent units, where edge line continues across joint.

3.5 INSTALLATION OF SIMULATED STONE COUNTERTOPS

A. Install countertops over plywood sub-tops secured to sub-framing supports with full spread of silicone adhesive in accordance with manufacturer's recommendations.

B. Set countertops to comply with requirements indicated on Drawings and Shop Drawings. Shim and adjust to locations indicated, with uniform joints of widths indicated and with edges and faces aligned according to established relationships and indicated tolerances.

C. Align adjacent countertops and form seams to comply with manufacturer's written recommendations using adhesive in color to match countertop.

D. Carefully dress joints smooth, remove surface scratches, and clean entire surface.

E. Secure backsplashes to tops and walls with adhesive.

F. Caulk space between backsplash and wall with sealant specified in Division 07 Section "Joint Sealants".

G. Prepare ends and edges of simulated stone pieces to be joined according to the manufacturer's/fabricator's recommendations for position and angle of butted joint. Lightly sand and thoroughly clean to remove dirt and grease. Join pieces with adhesive clamped until fully cured. Buff and sand to produce a smooth uniform seamless surface.

H. Apply sealant and compress to form bond with simulated stone material and adjacent surfaces and tool sealant surface to clean, straight lines.

3.6 CLEANING

A. Promptly clean simulated stone as work progresses to minimize final cleaning. Do not leave adhesive or sealant to dry on simulated stone faces.

B. Final clean and protect installed countertops in accordance with manufacturer's instructions.

END OF SECTION

SECTION 22 0518

ESCUTCHEONS FOR PLUMBING PIPING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Escutcheons.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product indicated.

PART 2 - PRODUCTS

2.1 ESCUTCHEONS

A. One-Piece, Cast-Brass Type: With polished, chrome-plated finish and setscrew fastener.

B. One-Piece, Stamped-Steel Type: With chrome-plated finish and spring-clip fasteners.

C. Split-Casting Brass Type: With polished, chrome-plated finish and with concealed hinge and setscrew.

D. Split-Plate, Stamped-Steel Type: With chrome-plated finish, concealed hinge, and spring-clip fasteners.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install escutcheons for piping penetrations of walls, ceilings, and finished floors.

B. Install escutcheons with ID to closely fit around pipe, tube, and insulation of insulated piping and with OD that completely covers opening.

1. Escutcheons for New Piping:
   a. Chrome-Plated Piping: One-piece, cast-brass or split-casting brass type with polished, chrome-plated finish.
   b. Insulated Piping: One-piece, stamped-steel type or split-plate, stamped-steel type with concealed hinge.
   c. Bare Piping at Wall and Floor Penetrations in Finished Spaces: One-piece, cast-brass or split-casting brass type with polished, chrome-plated finish.
   d. Bare Piping at Wall and Floor Penetrations in Finished Spaces: One-piece, stamped-steel type or split-plate, stamped-steel type with concealed hinge.

2. Escutcheons for Existing Piping:

   a. Chrome-Plated Piping: Split-casting brass type with polished, chrome-plated finish.
   b. Insulated Piping: Split-plate, stamped-steel type with concealed hinge.
   c. Bare Piping at Wall and Floor Penetrations in Finished Spaces: Split-casting brass type with polished, chrome-plated finish.
   d. Bare Piping at Wall and Floor Penetrations in Finished Spaces: Split-plate, stamped-steel type with concealed hinge.

3.2 FIELD QUALITY CONTROL

A. Replace broken and damaged escutcheons and floor plates using new materials.

END OF SECTION

SECTION 22 1116

DOMESTIC WATER PIPING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Abovegound domestic water pipes, tubes, and fittings inside buildings.

1.3 ACTION SUBMITTALS

A. Product Data: For transition fittings and dielectric fittings.

1.4 INFORMATIONAL SUBMITTALS

A. System purging and disinfecting activities report.

B. Field quality-control reports.

1.5 FIELD CONDITIONS

A. Interruption of Existing Water Service: Do not interrupt water service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary water service according to requirements indicated:

1. Notify Owner no fewer than two days in advance of proposed interruption of water service.
2. Do not interrupt water service without Owner's written permission.

PART 2 - PRODUCTS

2.1 PIPING MATERIALS

A. Comply with requirements in "Piping Schedule" Article for applications of pipe, tube, fitting materials, and joining methods for specific services, service locations, and pipe sizes.

B. Potable-water piping and components shall comply with NSF 14 and NSF 61 Annex G. COPPER TUBE AND FITTINGS

C. Hard Copper Tube: ASTM B 88, Type L water tube, drawn temper.

D. Cast-Copper, Solder-Joint Fittings: ASME B16.18, pressure fittings.

E. Wrought-Copper, Solder-Joint Fittings: ASME B16.22, wrought-copper pressure fittings.

F. Copper Unions:

1. MSS SP-123.
2. Cast-copper-alloy, hexagonal-stock body.
3. Ball-and-socket, metal-to-metal seating surfaces.
4. Solder-joint or threaded ends.

G. Copper Pressure-Seal-Joint Fittings:

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

   a. Elkhart Products Corporation.
   b. NIBCO INC.
   c. Viega LLC.

2. Fittings for NPS 2 and Smaller: Wrought-copper fitting with EPDM-rubber, O-ring seal in each end.
3. Fittings for NPS 2-1/2 to NPS 4: Cast-bronze or wrought-copper fitting with EPDM-rubber, O-ring seal in each end.

H. Copper Push-on-Joint Fittings:

1. Manufacturers: Subject to compliance with requirements, provide products by the following:

   a. Victaulic Company.

2. Description:

   a. Cast-copper fitting complying with ASME B16.18 or wrought-copper fitting complying with ASME B 16.22.
   b. Stainless-steel teeth and EPDM-rubber, O-ring seal in each end instead of solder-joint ends.

2.2 PIPING JOINING MATERIALS

A. Brazing Filler Metals: AWS A5.8/A5.8M, BCuP Series, copper-phosphorus alloys for general-duty brazing unless otherwise indicated.

PART 3 - EXECUTION

3.1 PIPING INSTALLATION

A. Drawing plans, schematics, and diagrams indicate general location and arrangement of domestic water piping. Indicated locations and arrangements are used to size pipe and calculate friction loss, expansion, and other design considerations. Install piping as indicated unless deviations to layout are approved on coordination drawings.

B. Install copper tubing under building slab according to CDA's "Copper Tube Handbook."

C. Install domestic water piping level without pitch and plumb.

D. Install piping concealed from view and protected from physical contact by building occupants unless otherwise indicated and except in equipment rooms and service areas.

E. Install piping indicated to be exposed and piping in equipment rooms and service areas at right angles or parallel to building walls. Diagonal runs are prohibited unless specifically indicated otherwise.

F. Install piping above accessible ceilings to allow sufficient space for ceiling panel removal, and coordinate with other services occupying that space.

G. Install piping to permit valve servicing.

H. Install piping free of sags and bends.

I. Install fittings for changes in direction and branch connections.

J. Install unions in copper tubing at final connection to each piece of equipment, machine, and specialty.

K. Install escutcheons for piping penetrations of walls, ceilings, and floors. Comply with requirements for escutcheons specified in Section 220518 "Escutcheons for Plumbing Piping."

3.2 JOINT CONSTRUCTION

A. Ream ends of pipes and tubes and remove burrs. Bevel plain ends of steel pipe.

B. Remove scale, slag, dirt, and debris from inside and outside of pipes, tubes, and fittings before assembly.

C. Threaded Joints: Thread pipe with tapered pipe threads according to ASME B1.20.1. Cut threads full and clean using sharp dies. Ream threaded pipe ends to remove burrs and restore full ID. Join pipe fittings and valves as follows:

1. Apply appropriate tape or thread compound to external pipe threads.
2. Damaged Threads: Do not use pipe or pipe fittings with threads that are corroded or damaged.

D. Brazed Joints for Copper Tubing: Comply with CDA's "Copper Tube Handbook," "Brazed Joints" chapter.

E. Soldered Joints for Copper Tubing: Apply ASTM B 813, water-flushable flux to end of tube. Join copper tube and fittings according to ASTM B 828 or CDA's "Copper Tube Handbook."

F. Pressure-Sealed Joints for Copper Tubing: Join copper tube and pressure-seal fittings with tools recommended by fitting manufacturer.

G. Push-on Joints for Copper Tubing: Clean end of tube. Measure insertion depth with manufacturer's depth gage. Join copper tube and push-on-joint fittings by inserting tube to measured depth.

3.3 HANGER AND SUPPORT INSTALLATION

A. Install hangers for copper tubing with the following maximum horizontal spacing and minimum rod diameters:

1. NPS 3/4 and Smaller: 60 inches with 3/8-inch rod.
2. NPS 1 and NPS 1-1/4: 72 inches with 3/8-inch rod.

3.4 CONNECTIONS

A. Drawings indicate general arrangement of piping, fittings, and specialties.

B. When installing piping adjacent to equipment and machines, allow space for service and maintenance.

1. Plumbing Fixtures: Cold- and hot-water-supply piping in sizes indicated, but not smaller than that required by plumbing code.

3.5 FIELD QUALITY CONTROL

A. Perform the following tests and inspections:

1. Piping Inspections:

a. Do not enclose, cover, or put piping into operation until it has been inspected and approved by authorities having jurisdiction.
b. During installation, notify authorities having jurisdiction at least one day before inspection must be made. Perform tests specified below in presence of authorities having jurisdiction:

1) Roughing-in Inspection: Arrange for inspection of piping before concealing or closing in after roughing in and before setting fixtures.
2) Final Inspection: Arrange for authorities having jurisdiction to observe tests specified in "Piping Tests" Subparagraph below and to ensure compliance with requirements.

c. Reinspection: If authorities having jurisdiction find that piping will not pass tests or inspections, make required corrections and arrange for reinspection.
d. Reports: Prepare inspection reports and have them signed by authorities having jurisdiction.

2. Piping Tests:

   a. Fill domestic water piping. Check components to determine that they are not air bound and that piping is full of water.
   b. Test for leaks and defects in new piping and parts of existing piping that have been altered, extended, or repaired. If testing is performed in segments, submit a separate report for each test, complete with diagram of portion of piping tested.
   c. Leave new, altered, extended, or replaced domestic water piping uncovered and unconcealed until it has been tested and approved. Expose work that was covered or concealed before it was tested.
   d. Cap and subject piping to static water pressure of 50 psig above operating pressure, without exceeding pressure rating of piping system materials. Isolate test source and allow it to stand for four hours. Leaks and loss in test pressure constitute defects that must be repaired.
   e. Repair leaks and defects with new materials, and retest piping or portion thereof until satisfactory results are obtained.
   f. Prepare reports for tests and for corrective action required.

B. Domestic water piping will be considered defective if it does not pass tests and inspections.

C. Prepare test and inspection reports.

3.6 ADJUSTING

A. Perform the following adjustments before operation:

1. Close drain valves, hydrants, and hose bibbs.
2. Open shutoff valves to fully open position.
3. Open throttling valves to proper setting.
4. Remove and clean strainer screens. Close drain valves and replace drain plugs.
5. Check plumbing specialties and verify proper settings, adjustments, and operation.

3.7 CLEANING

A. Clean and disinfect potable domestic water piping as follows:

1. Purge new piping and parts of existing piping that have been altered, extended, or repaired before using.
2. Use purging and disinfecting procedures prescribed by authorities having jurisdiction; if methods are not prescribed, use procedures described in either AWWA C651 or AWWA C652 or follow procedures described below:

   a. Flush piping system with clean, potable water until dirty water does not appear at outlets.
   b. Fill and isolate system according to either of the following:

      1) Fill system or part thereof with water/chlorine solution with at least 50 ppm of chlorine. Isolate with valves and allow to stand for 24 hours.
      2) Fill system or part thereof with water/chlorine solution with at least 200 ppm of chlorine. Isolate and allow to stand for three hours.

c. Flush system with clean, potable water until no chlorine is in water coming from system after the standing time.
d. Repeat procedures if biological examination shows contamination.
e. Submit water samples in sterile bottles to authorities having jurisdiction.

B. Prepare and submit reports of purging and disinfecting activities. Include copies of water-sample approvals from authorities having jurisdiction.

C. Clean interior of domestic water piping system. Remove dirt and debris as work progresses.

3.8 PIPING SCHEDULE

A. Transition and special fittings with pressure ratings at least equal to piping rating may be used in applications below unless otherwise indicated.

B. Aboveground domestic water piping, NPS 2 and smaller , shall be one of the following:
1. Hard copper tube, ASTM B 88, Type L; cast- or wrought-copper, solder-joint fittings; and brazed joints.
2. Hard copper tube, ASTM B 88, Type L; copper pressure-seal-joint fittings; and pressure-sealed joints.
3. Hard copper tube, ASTM B 88, Type L; copper push-on-joint fittings; and push-on joints.

3.9 VALVE SCHEDULE

A. Drawings indicate valve types to be used. Where specific valve types are not indicated, the following requirements apply:

1. Shutoff Duty: Use ball or gate valves for piping NPS 2 (DN 50) and smaller.
2. Throttling Duty: Use ball or globe valves for piping NPS 2 (DN 50) and smaller.

B. Use check valves to maintain correct direction of domestic water flow to and from equipment.

END OF SECTION

SECTION 22 1316

SANITARY WASTE AND VENT PIPING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:
   1. Pipe, tube, and fittings.
   2. Specialty pipe fittings.

1.3 PERFORMANCE REQUIREMENTS

A. Components and installation shall be capable of withstanding the following minimum working pressure unless otherwise indicated:
   1. Soil, Waste, and Vent Piping: 10-foot head of water.

B. Seismic Performance: Soil, waste, and vent piping and support and installation shall withstand the effects of earthquake motions determined according to ASCE/SEI 7.

1.4 INFORMATIONAL SUBMITTALS

A. Seismic Qualification Certificates: For waste and vent piping, accessories, and components, from manufacturer.
   1. Basis for Certification: Indicate whether withstand certification is based on actual test of assembled components or on calculation.
   2. Detailed description of piping anchorage devices on which the certification is based and their installation requirements.

B. Field quality-control reports.

1.5 PROJECT CONDITIONS

A. Interruption of Existing Sanitary Waste Service: Do not interrupt service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary service according to requirements indicated:
   1. Notify Owner no fewer than two 2 days in advance of proposed interruption of sanitary waste service.
   2. Do not proceed with interruption of sanitary waste service without Owner's written permission.

PART 2 - PRODUCTS

2.1 PIPING MATERIALS

A. Comply with requirements in "Piping Schedule" Article for applications of pipe, tube, fitting materials, and joining methods for specific services, service locations, and pipe sizes.

2.2 HUB-AND-SPIGOT, CAST-IRON SOIL PIPE AND FITTINGS

A. Pipe and Fittings: ASTM A 74, Service class.

B. Gaskets: ASTM C 564, rubber.

C. Calking Materials: ASTM B 29, pure lead and oakum or hemp fiber.

2.3 HUBLESS, CAST-IRON SOIL PIPE AND FITTINGS

A. Pipe and Fittings: ASTM A 888 or CISPI 301.

B. CISPI, Hubless-Piping Couplings:
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   a. ANACO-Husky.
   b. Dallas Specialty & Mfg. Co.
   c. Fernco Inc.
   d. Matco-Norca.
   e. MIFAB, Inc.
   f. Mission Rubber Company, LLC; a division of MCP Industries.
   g. Stant.
   h. Tyler Pipe; a subsidiary of McWane Inc.
2. Standards: ASTM C 1277 and CISPI 310.
3. Description: Stainless-steel corrugated shield with stainless-steel bands and tightening devices; and ASTM C 564, rubber sleeve with integral, center pipe stop.

C. Cast-Iron, Hubless-Piping Couplings:
1. Manufacturers: Subject to compliance with requirements, provide products by the following:
   a. MG Piping Products Company.
2. Standard: ASTM C 1277.
3. Description: Two-piece ASTM A 48/A 48M, cast-iron housing; stainless-steel bolts and nuts; and ASTM C 564, rubber sleeve with integral, center pipe stop.

2.4 SPECIALTY PIPE FITTINGS

A. Transition Couplings:
1. General Requirements: Fitting or device for joining piping with small differences in OD's or of different materials. Include end connections same size as and compatible with pipes to be joined.
2. Fitting-Type Transition Couplings: Manufactured piping coupling or specified piping system fitting.

3. Unshielded, Nonpressure Transition Couplings:
   a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
      1) Dallas Specialty & Mfg. Co.
      2) Fernco Inc.
      3) Froet Industries LLC.
      4) Mission Rubber Company, LLC; a division of MCP Industries.
      5) Plastic Oddities.
   b. Standard: ASTM C 1173.
   c. Description: Elastomeric, sleeve-type, reducing or transition pattern. Include shear ring and corrosion-resistant-metal tension band and tightening mechanism on each end.
   d. Sleeve Materials:
      1) For Cast-Iron Soil Pipes: ASTM C 564, rubber.
4. Shielded, Nonpressure Transition Couplings:
   a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
      1) Cascade Waterworks Mfg. Co.
      2) Mission Rubber Company, LLC; a division of MCP Industries.
   b. Standard: ASTM C 1460.
   c. Description: Elastomeric or rubber sleeve with full-length, corrosion-resistant outer shield and corrosion-resistant-metal tension band and tightening mechanism on each end.

PART 3 - EXECUTION

3.1 PIPING INSTALLATION

A. Drawing plans, schematics, and diagrams indicate general location and arrangement of piping systems. Indicated locations and arrangements were used to size pipe and calculate friction loss, expansion, pump sizing, and other design considerations. Install piping as indicated unless deviations to layout are approved on coordination drawings.

B. Install piping in concealed locations unless otherwise indicated and except in equipment rooms and service areas.

C. Install piping indicated to be exposed and piping in equipment rooms and service areas at right angles or parallel to building walls. Diagonal runs are prohibited unless specifically indicated otherwise.

D. Install piping above accessible ceilings to allow sufficient space for ceiling panel removal.

E. Install piping to permit valve servicing.

F. Install piping at indicated slopes.

G. Install piping free of sags and bends.

H. Install fittings for changes in direction and branch connections.

I. Install piping to allow application of insulation.

J. Make changes in direction for soil and waste drainage and vent piping using appropriate branches, bends, and long-sweep bends. Sanitary tees and short-sweep 1/4 bends may be used on vertical stacks if change in direction of flow is from horizontal to vertical. Use long-turn, double Y-branch and 1/8-bend fittings if two fixtures are installed back to back or side by side with common drain pipe. Straight tees, elbows, and crosses may be used on vent lines. Do not change direction of flow more than 90 degrees. Use proper size of standard increasers and reducers if pipes of different sizes are connected. Reducing size of drainage piping in direction of flow is prohibited.

K. Install soil and waste drainage and vent piping at the following minimum slopes unless otherwise indicated:
   1. Building Sanitary Drain: 2 percent downward in direction of flow for piping NPS 3 and smaller; 2 percent downward in direction of flow for piping NPS 4 and larger.
   2. Horizontal Sanitary Drainage Piping: 2 percent downward in direction of flow.
   3. Vent Piping: 1 percent down toward vertical fixture vent or toward vent stack.

L. Install cast-iron soil piping according to CISPI's "Cast Iron Soil Pipe and Fittings Handbook," Chapter IV, "Installation of Cast Iron Soil Pipe and Fittings."

M. Do not enclose, cover, or put piping into operation until it is inspected and approved by authorities having jurisdiction.

N. Install escutcheons for piping penetrations of walls, ceilings, and floors. Comply with requirements for escutcheons specified in Section 220518 "Escutcheons for Plumbing Piping."

3.2 JOINT CONSTRUCTION

A. Join hub-and-spigot, cast-iron soil piping with gasket joints according to CISPI's "Cast Iron Soil Pipe and Fittings Handbook" for compression joints.

B. Join hub-and-spigot, cast-iron soil piping with calked joints according to CISPI's "Cast Iron Soil Pipe and Fittings Handbook" for lead-and-oakum calked joints.

C. Join hubless, cast-iron soil piping according to CISPI 310 and CISPI's "Cast Iron Soil Pipe and Fittings Handbook" for hubless-piping coupling joints.

D. Threaded Joints: Thread pipe with tapered pipe threads according to ASME B1.20.1. Cut threads full and clean using sharp dies. Ream threaded pipe ends to remove burrs and restore full ID. Join pipe fittings and valves as follows:
   1. Apply appropriate tape or thread compound to external pipe threads unless dry seal threading is specified.
   2. Damaged Threads: Do not use pipe or pipe fittings with threads that are corroded or damaged. Do not use pipe sections that have cracked or open welds.

3.3 HANGER AND SUPPORT INSTALLATION

A. Support horizontal piping and tubing within 12 inches of each fitting and coupling.

B. Rod diameter may be reduced one size for double-rod hangers, with 3/8-inch minimum rods.

C. Install hangers for cast-iron soil piping with the following maximum horizontal spacing and minimum rod diameters:

1. NPS 1-1/2 and NPS 2: 60 inches with 3/8-inch rod.
2. NPS 3: 60 inches with 1/2-inch rod.
3. NPS 4 and NPS 5: 60 inches with 5/8-inch rod.

D. Install supports for vertical cast-iron soil piping every 15 feet.

3.4 CONNECTIONS

A. Drawings indicate general arrangement of piping, fittings, and specialties.

B. Connect drainage and vent piping to the following:
1. Plumbing Fixtures: Connect drainage piping in sizes indicated, but not smaller than required by plumbing code.
2. Plumbing Fixtures and Equipment: Connect atmospheric vent piping in sizes indicated, but not smaller than required by authorities having jurisdiction.
3. Plumbing Specialties: Connect drainage and vent piping in sizes indicated, but not smaller than required by plumbing code.

C. Where installing piping adjacent to equipment, allow space for service and maintenance of equipment.

3.5 FIELD QUALITY CONTROL

A. During installation, notify authorities having jurisdiction at least 24 hours before inspection must be made. Perform tests specified below in presence of authorities having jurisdiction.
1. Roughing-in Inspection: Arrange for inspection of piping before concealing or closing-in after roughing-in and before setting fixtures.
2. Final Inspection: Arrange for final inspection by authorities having jurisdiction to observe tests specified below and to ensure compliance with requirements.

B. Reinspection: If authorities having jurisdiction find that piping will not pass test or inspection, make required corrections and arrange for reinspection.

C. Reports: Prepare inspection reports and have them signed by authorities having jurisdiction.

D. Test sanitary drainage and vent piping according to procedures of authorities having jurisdiction or, in absence of published procedures, as follows:
1. Test for leaks and defects in new piping and parts of existing piping that have been altered, extended, or repaired. If testing is performed in segments, submit separate report for each test, complete with diagram of portion of piping tested.
2. Leave uncovered and unconcealed new, altered, extended, or replaced drainage and vent piping until it has been tested and approved. Expose work that was covered or concealed before it was tested.
3. Roughing-in Plumbing Test Procedure: Test drainage and vent piping except outside leaders on completion of roughing-in. Close openings in piping system and fill with water to point of overflow, but not less than 10-foot head of water. From 15 minutes before inspection starts to completion of inspection, water level must not drop. Inspect joints for leaks.
4. Finished Plumbing Test Procedure: After plumbing fixtures have been set and traps filled with water, test connections and prove they are gastight and watertight. Plug vent-stack openings on roof and building drains where they leave building. Introduce air into piping system equal to pressure of 1-inch wg. Use U-tube or manometer inserted in trap of

water closet to measure this pressure. Air pressure must remain constant without introducing additional air throughout period of inspection. Inspect plumbing fixture connections for gas and water leaks.

5. Repair leaks and defects with new materials and retest piping, or portion thereof, until satisfactory results are obtained.
6. Prepare reports for tests and required corrective action.

3.6 CLEANING AND PROTECTION

A. Clean interior of piping. Remove dirt and debris as work progresses.

B. Protect drains during remainder of construction period to avoid clogging with dirt and debris and to prevent damage from traffic and construction work.

C. Place plugs in ends of uncompleted piping at end of day and when work stops.

3.7 PIPING SCHEDULE

A. Flanges and unions may be used on aboveground pressure piping unless otherwise indicated.

B. Aboveground, soil and waste piping NPS 4 and smaller shall be any of the following:
   1. Service class, cast-iron soil pipe and fittings; gaskets; and gasketed joints.
   2. Hubless, cast-iron soil pipe and fittings; CISPI hubless-piping couplings; and coupled joints.

C. Aboveground, vent piping NPS 4 and smaller shall be any of the following:
   1. Service class, cast-iron soil pipe and fittings; gaskets; and gasketed joints.
   2. Hubless, cast-iron soil pipe and fittings; CISPI hubless-piping couplings; and coupled joints.

END OF SECTION

SECTION 22 1319

SANITARY WASTE PIPING SPECIALTIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Cleanouts.
2. Floor drains.

1.3 DEFINITIONS

A. ABS: Acrylonitrile-butadiene-styrene plastic.

B. HDPE: High-density polyethylene plastic.

C. PE: Polyethylene plastic.

D. PP: Polypropylene plastic.

E. PVC: Polyvinyl chloride plastic.

1.4 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For drainage piping specialties to include in emergency, operation, and maintenance manuals.

1.5 QUALITY ASSURANCE

A. Drainage piping specialties shall bear label, stamp, or other markings of specified testing agency.

B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

PART 2 - PRODUCTS

2.1 CLEANOUTS

A. Exposed Metal Cleanouts:

1. ASME A112.36.2M, Cast-Iron Cleanouts:

   a. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

      1) Josam Company.
      2) MIFAB, Inc.
      3) Smith, Jay R. Mfg. Co.
      4) Tyler Pipe; a subsidiary of McWane Inc.
      5) Watts; a Watts Water Technologies company.
      6) Zurn Industries, LLC.

2. Size: Same as connected drainage Body Material: Hub-and-spigot, cast-iron soil pipe T-branch as required to match connected piping.
3. Closure: Countersunk plug.
4. Closure Plug Size: Same as or not more than one size smaller than cleanout size.
5. Closure: Stainless-steel plug with seal.

B. Cast-Iron Wall Cleanouts:

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

   a. Josam Company.
   b. MIFAB, Inc.
   c. Smith, Jay R. Mfg. Co.
   d. Tyler Pipe; a subsidiary of McWane Inc.
   e. Watts; a Watts Water Technologies company.
   f. Zurn Industries, LLC.

2. Standard: ASME A112.36.2M. Include wall access.
3. Size: Same as connected drainage piping.
4. Body: Hub-and-spigot, cast-iron soil pipe T-branch Hubless, cast-iron soil pipe test tee as required to match connected piping.
5. Closure: Countersunk, cast-iron plug.
6. Closure Plug Size: Same as or not more than one size smaller than cleanout size.
7. Wall Access: Round, flat, chrome-plated brass or stainless-steel cover plate with screw.
8. Wall Access: Round, stainless-steel wall-installation frame and cover.

2.2 FLOOR DRAINS

A. Cast-Iron Floor Drains:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

    a. Commercial Enameling Company.
    b. Josam Company.
    c. MIFAB, Inc.
    d. Prier Products, Inc.
    e. Smith, Jay R. Mfg. Co.
    f. Tyler Pipe; a subsidiary of McWane Inc.
    g. Watts; a Watts Water Technologies company.
    h. Zurn Industries, LLC.

2. Pattern: Floor drain.
3. Body Material: Gray iron.
4. Seepage Flange: Required.
5. Anchor Flange: Required.
6. Clamping Device: Not required.
7. Outlet: Bottom.
8. Top or Strainer Material: Nickel bronze.
9. Top of Body and Strainer Finish: Nickel bronze.
10. Top Shape: Round.
11. Trap Material: Cast iron.
12. Trap Pattern: Standard P-trap.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install cleanouts in aboveground piping and building drain piping according to the following, unless otherwise indicated:

    1. Size same as drainage piping up to NPS 4. Use NPS 4 for larger drainage piping unless larger cleanout is indicated.
    2. Locate at each change in direction of piping greater than 45 degrees.
    3. Locate at minimum intervals of 50 feet for piping NPS 4 and smaller and 100 feet for larger piping.
    4. Locate at base of each vertical soil and waste stack.

B. For floor cleanouts for piping below floors, install cleanout deck plates with top flush with finished floor.

C. For cleanouts located in concealed piping, install cleanout wall access covers, of types indicated, with frame and cover flush with finished wall.

D. Install floor drains at low points of surface areas to be drained. Set grates of drains flush with finished floor, unless otherwise indicated.

    1. Position floor drains for easy access and maintenance.
    2. Set floor drains below elevation of surrounding finished floor to allow floor drainage. Set with grates depressed according to the following drainage area radii:

a. Radius, 30 Inches or Less: Equivalent to 1 percent slope, but not less than 1/4-inch total depression.
b. Radius, 30 to 60 Inches: Equivalent to 1 percent slope.
c. Radius, 60 Inches or Larger: Equivalent to 1 percent slope, but not greater than 1-inch total depression.

3. Install floor-drain flashing collar or flange so no leakage occurs between drain and adjoining flooring. Maintain integrity of waterproof membranes where penetrated.
4. Install individual traps for floor drains connected to sanitary building drain, unless otherwise indicated.

3.2 CONNECTIONS

A. Comply with requirements in Section 221316 "Sanitary Waste and Vent Piping" for piping installation requirements. Drawings indicate general arrangement of piping, fittings, and specialties.

B. Install piping adjacent to equipment to allow service and maintenance.

3.3 FIELD QUALITY CONTROL

A. Tests and Inspections:

1. Leak Test: After installation, charge system and test for leaks. Repair leaks and retest until no leaks exist.
2. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

3.4 PROTECTION

A. Protect drains during remainder of construction period to avoid clogging with dirt or debris and to prevent damage from traffic or construction work.

B. Place plugs in ends of uncompleted piping at end of each day or when work stops.

END OF SECTION

UNIVERSITY MEDICAL CENTER
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LAS VEGAS, NEVADA

SECTION 22 4213.13

COMMERCIAL WATER CLOSETS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Water closets.
2. Flushometer valves.
3. Toilet seats.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for water closets.
2. Include rated capacities, operating characteristics, electrical characteristics, and furnished specialties and accessories.

1.4 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For flushometer valves to include in operation and maintenance manuals.

1.5 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials that are packaged with protective covering for storage and identified with labels describing contents.

1. Flushometer-Valve Repair Kits: Equal to 10 10 percent of amount of each type installed, but no fewer than six 6 of each type.

PART 2 - PRODUCTS

2.1 FLOOR-MOUNTED, BOTTOM-OUTLET WATER CLOSETS

A. Water Closets: Floor mounted, bottom outlet, top spud.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

   a. American Standard America.
   b. Briggs Plumbing Products, Inc.
   c. Capizzi.
   d. Crane Plumbing, L.L.C.
   e. FNW; Ferguson Enterprises, Inc.
   f. Gerber Plumbing Fixtures LLC.
   g. Kohler Co.
   h. Mansfield Plumbing Products LLC.
   i. Peerless Pottery Sales, Inc.
   j. Sloan Valve Company.
   k. St. Thomas Creations.
   l. TOTO USA, INC.
   m. Zurn Industries, LLC.

2. Bowl:

   a. Standards: ASME A112.19.2/CSA B45.1 and ASME A112.19.5.
   b. Material: Vitreous china.
   c. Type: Siphon jet.
   d. Style: Flushometer valve.
   e. Height: See Schedule of Drawings.
   f. Rim Contour: Elongated.
   g. Water Consumption: 1.6 gal. per flush.
   h. Spud Size and Location: NPS 1-1/2; top.
   i. Color: White.

3. Bowl-to-Drain Connecting Fitting: ASTM A 1045.
4. Flushometer Valve: .See Schedule of Drawings.
5. Toilet Seat: See Schedule of Drawings.

2.2 FLUSHOMETER VALVES

A. Lever-Handle, Diaphragm Flushometer Valves:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

   a. Coyne & Delany Co.
   b. Gerber Plumbing Fixtures LLC.
   c. Sloan Valve Company.
   d. Zurn Industries, LLC.

2. Standard: ASSE 1037.
3. Minimum Pressure Rating: 125 psig.
4. Features: Include integral check stop and backflow-prevention device.
5. Material: Brass body with corrosion-resistant components.
6. Exposed Flushometer-Valve Finish: Chrome plated.
7. Panel Finish: Chrome plated or stainless steel.
8. Style: Exposed.
9. Consumption: 1.6 gal. per flush.
10. Minimum Inlet: NPS 1.
11. Minimum Outlet: NPS 1-1/4.

2.3 TOILET SEATS

A. Toilet Seats:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

   a. American Standard America.
   b. Bemis Manufacturing Company.
   c. Centoco Manufacturing Corporation.
   d. Church Seats; Bemis Manufacturing Company.
   e. Jones Stephens Corp.
   f. Kohler Co.
   g. Olsonite Seat Co.
   h. Sanderson Plumbing Products, Inc.
   i. Sperzel of Lexington.
   j. TOTO USA, INC.
   k. Zurn Industries, LLC.

2. Standard: IAPMO/ANSI Z124.5.
3. Material: Plastic.
4. Type: Commercial (Heavy duty).
5. Shape: Elongated rim, open front.
6. Hinge: Self-sustaining.
7. Hinge Material: Noncorroding metal.
8. Color: White.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine roughing-in of water supply and sanitary drainage and vent piping systems to verify actual locations of piping connections before water-closet installation.

B. Examine walls and floors for suitable conditions where water closets will be installed.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Water-Closet Installation:

1. Install level and plumb according to roughing-in drawings.
2. Install floor-mounted water closets on bowl-to-drain connecting fitting attachments to piping or building substrate.

B. Flushometer-Valve Installation:

1. Install flushometer-valve, water-supply fitting on each supply to each water closet.
2. Attach supply piping to supports or substrate within pipe spaces behind fixtures.
3. Install lever-handle flushometer valves for accessible water closets with handle mounted on open side of water closet.

C. Install toilet seats on water closets.

D. Wall Flange and Escutcheon Installation:

1. Install wall flanges or escutcheons at piping wall penetrations in exposed, finished locations and within cabinets and millwork.
2. Install deep-pattern escutcheons if required to conceal protruding fittings.
3. Comply with escutcheon requirements specified in Section 220518 "Escutcheons for Plumbing Piping."

E. Joint Sealing:

1. Seal joints between water closets and walls and floors using sanitary-type, one-part, mildew-resistant silicone sealant.
2. Match sealant color to water-closet color.

3.3 CONNECTIONS

A. Connect water closets with water supplies and soil, waste, and vent piping. Use size fittings required to match water closets.

B. Comply with water piping requirements specified in Section 221116 "Domestic Water Piping."

C. Comply with soil and waste piping requirements specified in Section 221316 "Sanitary Waste and Vent Piping."

D. Where installing piping adjacent to water closets, allow space for service and maintenance.

3.4 ADJUSTING

A. Operate and adjust water closets and controls. Replace damaged and malfunctioning water closets, fittings, and controls.

B. Adjust water pressure at flushometer valves to produce proper flow.

3.5 CLEANING AND PROTECTION

A. Clean water closets and fittings with manufacturers' recommended cleaning methods and materials.

B. Install protective covering for installed water closets and fittings.

C. Do not allow use of water closets for temporary facilities unless approved in writing by Owner.

END OF SECTION

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SECTION 22 4216.13

COMMERCIAL LAVATORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Lavatories.
2. Faucets.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for lavatories.
2. Include rated capacities, operating characteristics, electrical characteristics, and furnished specialties and accessories.

1.4 INFORMATIONAL SUBMITTALS

A. Coordination Drawings: Counter cutout templates for mounting of counter-mounted lavatories.

1.5 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Faucet Washers and O-Rings: Equal to 10 percent of amount of each type and size installed.
2. Faucet Cartridges and O-Rings: Equal to 5 percent of amount of each type and size installed.

PART 2 - PRODUCTS

2.1 LAVATORY (L-1, L-2, L-3, L-4)

A. Lavatory: Integral with countertop, provided by others.

1. Faucet: See Schedule on Drawings.

2.2 SOLID-BRASS, MANUALLY OPERATED FAUCETS

A. NSF Standard: Comply with NSF/ANSI 61 Annex G, "Drinking Water System Components - Health Effects," for faucet materials that will be in contact with potable water.

B. Lavatory Faucets: Manual-type, single-control mixing , commercial , solid-brass valve.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. American Standard America.
b. Bradley Corporation.
c. CHG; Component Hardware Group, Inc.
d. Chicago Faucets; Geberit Company.
e. Delta Faucet Company.
f. Elkay Manufacturing Co.
g. Gerber Plumbing Fixtures LLC.
h. GROHE America, Inc.
i. Just Manufacturing.
j. Moen Incorporated.
k. Speakman Company.
l. T & S Brass and Bronze Works, Inc.
m. Zurn Industries, LLC.

2. Standard: ASME A112.18.1/CSA B125.1.
3. General: Include hot- and cold-water indicators; coordinate faucet inlets with supplies and fixture hole punchings; coordinate outlet with spout and fixture receptor.
4. Body Type: Single hole.
5. Body Material: Commercial, solid brass.
6. Finish: Polished chrome plate.
7. Mounting Type: Deck, exposed.
8. Valve Handle(s): Single lever.
9. Spout: Rigid type.
10. Spout Outlet: Aerator.

2.3 SUPPLY FITTINGS

A. NSF Standard: Comply with NSF/ANSI 61 Annex G, "Drinking Water System Components - Health Effects," for supply-fitting materials that will be in contact with potable water.

B. Standard: ASME A112.18.1/CSA B125.1.

C. Supply Piping: Chrome-plated-brass pipe or chrome-plated copper tube matching water-supply piping size. Include chrome-plated-brass or stainless-steel wall flange.

D. Supply Stops: Chrome-plated-brass, one-quarter-turn, ball-type or compression valve with inlet connection matching supply piping.

E. Operation: Loose key.

F. Risers:

1. NPS 3/8.

2.4 WASTE FITTINGS

A. Standard: ASME A112.18.2/CSA B125.2.

B. Drain: Grid type with NPS 1-1/4 offset and straight tailpiece.

C. Trap:

1. Size: NPS 1-1/2 by NPS 1-1/4.
2. Material: Chrome-plated, two-piece, cast-brass trap and swivel elbow with 0.032-inch-thick brass tube to wall; and chrome-plated, brass or steel wall flange.
3. Material: Stainless-steel, two-piece trap and swivel elbow with 0.012-inch- thick stainless-steel tube to wall; and stainless-steel wall flange.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine roughing-in of water supply and sanitary drainage and vent piping systems to verify actual locations of piping connections before lavatory installation.

B. Examine counters and walls for suitable conditions where lavatories will be installed.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Install lavatories level and plumb according to roughing-in drawings.

B. Install supports, affixed to building substrate, for wall-mounted lavatories.

C. Install accessible wall-mounted lavatories at handicapped/elderly mounting height for people with disabilities or the elderly, according to ICC/ANSI A117.1.

D. Install wall flanges or escutcheons at piping wall penetrations in exposed, finished locations. Use deep-pattern escutcheons if required to conceal protruding fittings. Comply with escutcheon requirements specified in Section 220518 "Escutcheons for Plumbing Piping."

E. Seal joints between lavatories, counters, and walls using sanitary-type, one-part, mildew-resistant silicone sealant. Match sealant color to fixture color. Install protective shielding pipe covers and enclosures on exposed supplies and waste piping of accessible lavatories. Comply with requirements in Section 220719 "Plumbing Piping Insulation."

3.3 CONNECTIONS

A. Connect fixtures with water supplies, stops, and risers, and with traps, soil, waste, and vent piping. Use size fittings required to match fixtures.

B. Comply with water piping requirements specified in Section 221116 "Domestic Water Piping."

C. Comply with soil and waste piping requirements specified in Section 221316 "Sanitary Waste and Vent Piping."

3.4 ADJUSTING

A. Operate and adjust lavatories and controls. Replace damaged and malfunctioning lavatories, fittings, and controls.

B. Adjust water pressure at faucets to produce proper flow.

3.5 CLEANING AND PROTECTION

A. After completing installation of lavatories, inspect and repair damaged finishes.

B. Clean lavatories, faucets, and other fittings with manufacturers' recommended cleaning methods and materials.

C. Provide protective covering for installed lavatories and fittings.

D. Do not allow use of lavatories for temporary facilities unless approved in writing by Owner.

END OF SECTION

SECTION 22 4223

COMMERCIAL SHOWERS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Individual shower receptors.
2. Shower faucets.

1.3 CLOSEOUT SUBMITTALS

A. Maintenance Data: For shower faucets to include in maintenance manuals.

1.4 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Faucet Washers and O-Rings: Equal to 10 percent of amount of each type and size installed.
2. Faucet Cartridges and O-Rings: Equal to 5 percent of amount of each type and size installed.

PART 2 - PRODUCTS

2.1 INDIVIDUAL SHOWERS

A. Shower enclosure provided by others.

2.2 SHOWER FAUCETS

A. Shower Faucets:

1. Manufacturers: See schedule on drawings. Subject to compliance with requirements, provide products by one of the following:

    a. Chicago Faucets; Geberit Company.
    b. Lawler Manufacturing Company, Inc.
    c. Leonard Valve Company.
    d. Powers.

2. Description: Single-handle, thermostatic mixing valve with hot- and cold-water indicators; check stops; and shower head.
3. Faucet:

    a. Standards: ASME A112.18.1/CSA B125.1 and ASSE 1016.
    b. Body Material: Solid brass.
    c. Finish: Polished chrome plate.
    d. Maximum Flow Rate: 2.5 gpm unless otherwise indicated.
    e. Mounting: Exposed.
    f. Operation: Single-handle, push-pull or twist or rotate control.
    g. Check Stops: Check-valve type, integral with or attached to body; on hot- and cold-water supply connections.

4. Supply Connections: NPS 1/2.
5. Shower Head:

    a. Standard: ASME A112.18.1/CSA B125.1.
    b. Type: Ball joint with arm and flange.
    c. Shower Head Material: Metallic with chrome-plated finish.
    d. Spray Pattern: Adjustable.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine roughing-in of water-supply and sanitary drainage and vent piping systems to verify actual locations of piping connections before shower installation.

3.2 INSTALLATION

A. Install water-supply piping with stop on each supply to each shower faucet.

    1. Exception: Use ball or gate valves if supply stops are not specified with shower. Comply with valve requirements specified in Section 220523.12 "Ball Valves for Plumbing Piping" and Section 220523.15 "Gate Valves for Plumbing Piping."
    2. Install stops in locations where they can be easily reached for operation.

B. Install shower flow-control fittings with specified maximum flow rates in shower arms.

C. Install wall flanges or escutcheons at piping wall penetrations in exposed, finished locations. Use deep-pattern escutcheons if required to conceal protruding fittings. Comply with escutcheons requirements specified in Section 220518 "Escutcheons for Plumbing Piping."

D. Seal joints between showers and floors and walls using sanitary-type, one-part, mildew-resistant silicone sealant. Match sealant color to fixture color. Comply with sealant requirements specified in Section 079200 "Joint Sealants."

3.3 CONNECTIONS

A. Connect fixtures with water supplies, stops, and risers, and with traps, soil, waste, and vent piping. Use size fittings required to match fixtures.

B. Comply with water piping requirements specified in Section 221116 "Domestic Water Piping."

C. Comply with traps and soil and waste piping requirements specified in Section 221316 "Sanitary Waste and Vent Piping."

3.4 ADJUSTING

A. Operate and adjust showers and controls. Replace damaged and malfunctioning showers, fittings, and controls.

B. Adjust water pressure at faucets to produce proper flow.

3.5 CLEANING AND PROTECTION

A. After completing installation of showers and basins, inspect and repair damaged finishes.

B. Clean showers and basins, faucets, and other fittings with manufacturers' recommended cleaning methods and materials.

C. Provide protective covering for installed fixtures and fittings.

D. Do not allow use of showers and basins for temporary facilities unless approved in writing by Owner.

END OF SECTION

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SECTION 26 0519

LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Building wires and cables rated 600 V and less.
2. Connectors, splices, and terminations rated 600 V and less.

PART 2 - PRODUCTS

2.1 CONDUCTORS AND CABLES

A. Copper Conductors: Comply with NEMA WC 70/ICEA S-95-658.

B. Conductor Insulation: Comply with NEMA WC 70/ICEA S-95-658 for Type THHN/THWN-2.

C. Multiconductor Cable: Comply with NEMA WC 70/ICEA S-95-658 for hospital grade metal-clad cable, Type MC with ground wire.

2.2 CONNECTORS AND SPLICES

A. Description: Factory-fabricated connectors and splices of size, ampacity rating, material, type, and class for application and service indicated.

2.3 SYSTEM DESCRIPTION

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Comply with NFPA 70.

PART 3 - EXECUTION

3.1 CONDUCTOR MATERIAL APPLICATIONS

A. Branch Circuits: Copper. Solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger, except VFC cable, which shall be extra flexible stranded.

3.2 CONDUCTOR INSULATION AND MULTICONDUCTOR CABLE APPLICATIONS AND WIRING METHODS

A. Branch Circuits Concealed in Ceilings, Walls, and Partitions: Type THHN/THWN-2, single conductors in raceway Hospital Grade Metal-clad cable, Type MC.

3.3 INSTALLATION OF CONDUCTORS AND CABLES

A. Conceal cables in finished walls, ceilings, and floors unless otherwise indicated.

B. Complete raceway installation between conductor and cable termination points according to Section 260533 "Raceways and Boxes for Electrical Systems" prior to pulling conductors and cables.

C. Use manufacturer-approved pulling compound or lubricant where necessary; compound used must not deteriorate conductor or insulation. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.

D. Use pulling means, including fish tape, cable, rope, and basket-weave wire/cable grips that will not damage cables or raceway.

3.4 CONNECTIONS

A. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A-486B.

B. Make splices, terminations, and taps that are compatible with conductor material and that possess equivalent or better mechanical strength and insulation ratings than unspliced conductors.

1. Use oxide inhibitor in each splice, termination, and tap for aluminum conductors.

C. Wiring at Outlets: Install conductor at each outlet, with at least 6 inches of slack.

3.5 IDENTIFICATION

A. Identify each spare conductor at each end with identity number and location of other end of conductor, and identify as spare conductor.

END OF SECTION

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SECTION 26 0533

RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Metal conduits, tubing, and fittings.
2. Boxes, enclosures, and cabinets.

PART 2 - PRODUCTS

2.1 METAL CONDUITS, TUBING, AND FITTINGS

A. Listing and Labeling: Metal conduits, tubing, and fittings shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. EMT: Comply with ANSI C80.3 and UL 797.

C. FMC: Comply with UL 1; zinc-coated steel.

D. LFMC: Flexible steel conduit with PVC jacket and complying with UL 360.

E. Fittings for Metal Conduit: Comply with NEMA FB 1 and UL 514B.
1. Fittings for EMT:

a. Material: Steel.
b. Type: compression.

2.2 BOXES, ENCLOSURES, AND CABINETS

A. General Requirements for Boxes, Enclosures, and Cabinets: Boxes, enclosures, and cabinets installed in wet locations shall be listed for use in wet locations.

B. Sheet Metal Outlet and Device Boxes: Comply with NEMA OS 1 and UL 514A.

C. Small Sheet Metal Pull and Junction Boxes: NEMA OS 1.

PART 3 - EXECUTION

3.1 RACEWAY APPLICATION

A. Indoors: Apply raceway products as specified below unless otherwise indicated:

1. Concealed in Ceilings and Interior Walls and Partitions: EMT.
2. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): FMC, except use LFMC in damp or wet locations.
3. Boxes and Enclosures: NEMA 250, Type 1, except use NEMA 250, Type 4 in institutional and commercial kitchens and damp or wet locations.

B. Minimum Raceway Size: 3/4-inch trade size.

C. Raceway Fittings: Compatible with raceways and suitable for use and location.
1. EMT: Use compression, steel fittings. Comply with NEMA FB 2.10.
2. Flexible Conduit: Use only fittings listed for use with flexible conduit. Comply with NEMA FB 2.20.

D. Install surface raceways only where indicated on Drawings.

3.2 INSTALLATION

A. Comply with NECA 1 and NECA 101 for installation requirements except where requirements on Drawings or in this article are stricter. Keep raceways at least 6 inches away from parallel runs of flues and steam or hot-water pipes. Install horizontal raceway runs above water and steam piping.

B. Complete raceway installation before starting conductor installation.

C. Install no more than the equivalent of three 90-degree bends in any conduit run except for control wiring conduits, for which fewer bends are allowed. Support within 12 inches of changes in direction.

D. Conceal conduit and EMT within finished walls, ceilings, and floors unless otherwise indicated. Install conduits parallel or perpendicular to building lines.

E. Support conduit within 12 inches of enclosures to which attached.

F. Stub-ups to Above Recessed Ceilings:

1. Use EMT, IMC, or RMC for raceways.
2. Use a conduit bushing or insulated fitting to terminate stub-ups not terminated in hubs or in an enclosure.

G. Raceway Terminations at Locations Subject to Moisture or Vibration: Use insulating bushings to protect conductors including conductors smaller than No. 4 AWG.

H. Install raceways square to the enclosure and terminate at enclosures with locknuts. Install locknuts hand tight plus 1/4 turn more.

I. Do not rely on locknuts to penetrate nonconductive coatings on enclosures. Remove coatings in the locknut area prior to assembling conduit to enclosure to assure a continuous ground path.

J. Cut conduit perpendicular to the length. For conduits 2-inch trade size and larger, use roll cutter or a guide to make cut straight and perpendicular to the length.

K. Flexible Conduit Connections: Comply with NEMA RV 3. Use a maximum of 72 inches of flexible conduit for recessed and semirecessed luminaires, equipment subject to vibration, noise transmission, or movement; and for transformers and motors.

L. Mount boxes at heights indicated on Drawings. If mounting heights of boxes are not individually indicated, give priority to ADA requirements. Install boxes with height measured to center of box unless otherwise indicated.

M. Horizontally separate boxes mounted on opposite sides of walls so they are not in the same vertical channel.

N. Locate boxes so that cover or plate will not span different building finishes.

O. Support boxes of three gangs or more from more than one side by spanning two framing members or mounting on brackets specifically designed for the purpose.

P. Fasten junction and pull boxes to or support from building structure. Do not support boxes by conduits.

3.3 PROTECTION

A. Protect coatings, finishes, and cabinets from damage and deterioration.

1. Repair damage to galvanized finishes with zinc-rich paint recommended by manufacturer.

END OF SECTION

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SECTION 26 2726

WIRING DEVICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Receptacles, receptacles with integral GFCI, and associated device plates.
2. Hospital-grade receptacles.
3. Snap switches.

1.3 DEFINITIONS

A. GFCI: Ground-fault circuit interrupter.

B. Pigtail: Short lead used to connect a device to a branch-circuit conductor.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.

1.5 INFORMATIONAL SUBMITTALS

A. Field quality-control reports.

1.6 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For wiring devices to include in all manufacturers' packing-label warnings and instruction manuals that include labeling conditions.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Source Limitations: Obtain each type of wiring device and associated wall plate from single source from single manufacturer.

2.2 GENERAL WIRING-DEVICE REQUIREMENTS

A. Wiring Devices, Components, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Comply with NFPA 70.

C. Devices that are manufactured for use with modular plug-in connectors may be substituted under the following conditions:

1. Connectors shall comply with UL 2459 and shall be made with stranding building wire.
2. Devices shall comply with the requirements in this Section.

2.3 STRAIGHT-BLADE RECEPTACLES

A. Hospital-Grade, Duplex Convenience Receptacles, 125 V, 20 A: Comply with NEMA WD 1, NEMA WD 6 Configuration 5-20R, UL 498 Supplement sd, and FS W-C-596.
1. Description: Single-piece, rivetless, nickel-plated, all-brass grounding system. Nickel-plated, brass mounting strap.

2.4 GFCI RECEPTACLES

A. Hospital-Grade, Duplex GFCI Convenience Receptacles, 125 V, 20 A: Comply with NEMA WD 1, NEMA WD 6 Configuration 5-20R, UL 498 Supplement sd, and FS W-C-596.

2.5 TOGGLE SWITCHES

A. Comply with NEMA WD 1, UL 20, and FS W-S-896.

B. Switches, 120/277 V, 20 A:

1. Single Pole:

2.6 WALL PLATES

A. Single and combination types shall match corresponding wiring devices.

1. Plate-Securing Screws: Metal with head color to match plate finish.
2. Material for Finished Spaces: Smooth, high-impact thermoplastic.

2.7 FINISHES

A. Device Color:

1. Wiring Devices Connected to Normal Power System: As selected by Architect unless otherwise indicated or required by NFPA 70 or device listing.
2. Wiring Devices Connected to Emergency Power System: Red.

B. Wall Plate Color: For plastic covers, match device color.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Comply with NECA 1, including mounting heights listed in that standard, unless otherwise indicated.

B. Coordination with Other Trades:

1. Protect installed devices and their boxes. Do not place wall finish materials over device boxes and do not cut holes for boxes with routers that are guided by riding against outside of boxes.
2. Keep outlet boxes free of plaster, drywall joint compound, mortar, cement, concrete, dust, paint, and other material that may contaminate the raceway system, conductors, and cables.
3. Install wiring devices after all wall preparation, including painting, is complete.

C. Conductors:

1. Do not strip insulation from conductors until right before they are spliced or terminated on devices.
2. Strip insulation evenly around the conductor using tools designed for the purpose. Avoid scoring or nicking of solid wire or cutting strands from stranded wire.
3. The length of free conductors at outlets for devices shall meet provisions of NFPA 70, Article 300, without pigtails.
4. Existing Conductors:

   a. Cut back and pigtail, or replace all damaged conductors.
   b. Straighten conductors that remain and remove corrosion and foreign matter.
   c. Pigtailing existing conductors is permitted, provided the outlet box is large enough.

D. Device Installation:

1. Keep each wiring device in its package or otherwise protected until it is time to connect conductors.
2. Do not remove surface protection, such as plastic film and smudge covers, until the last possible moment.
3. Connect devices to branch circuits using pigtails that are not less than 6 inches in length.
4. When there is a choice, use side wiring with binding-head screw terminals. Wrap solid conductor tightly clockwise, two-thirds to three-fourths of the way around terminal screw.
5. Use a torque screwdriver when a torque is recommended or required by manufacturer.

6. When conductors larger than No. 12 AWG are installed on 15- or 20-A circuits, splice No. 12 AWG pigtails for device connections.
7. Tighten unused terminal screws on the device.
8. When mounting into metal boxes, remove the fiber or plastic washers used to hold device-mounting screws in yokes, allowing metal-to-metal contact.

E. Receptacle Orientation:
1. Install hospital-grade receptacles in patient-care areas with the ground pin or neutral blade at the top.

F. Device Plates: Do not use oversized or extra-deep plates. Repair wall finishes and remount outlet boxes when standard device plates do not fit flush or do not cover rough wall opening.

G. Arrangement of Devices: Unless otherwise indicated, mount flush, with long dimension vertical and with grounding terminal of receptacles on top. Group adjacent switches under single, multigang wall plates.

3.2 GFCI RECEPTACLES

A. Install non-feed-through-type GFCI receptacles where protection of downstream receptacles is not required.

3.3 IDENTIFICATION

A. Identify each receptacle with panelboard identification and circuit number. Use hot, stamped, or engraved machine printing with black-filled lettering on face of plate, and durable wire markers or tags inside outlet boxes.

3.4 FIELD QUALITY CONTROL

A. Perform the following tests and inspections:

1. In healthcare facilities, prepare reports that comply with recommendations in NFPA 99.
2. Test Instruments: Use instruments that comply with UL 1436.
3. Test Instrument for Convenience Receptacles: Digital wiring analyzer with digital readout or illuminated digital-display indicators of measurement.

B. Tests for Convenience Receptacles:

1. Line Voltage: Acceptable range is 105 to 132 V.
2. Percent Voltage Drop under 15-A Load: A value of 6 percent or higher is unacceptable.
3. Ground Impedance: Values of up to 2 ohms are acceptable.
4. GFCI Trip: Test for tripping values specified in UL 1436 and UL 943.
5. Using the test plug, verify that the device and its outlet box are securely mounted.
6. Tests shall be diagnostic, indicating damaged conductors, high resistance at the circuit breaker, poor connections, inadequate fault current path, defective devices, or similar problems. Correct circuit conditions, remove malfunctioning units and replace with new ones, and retest as specified above.

C. Test straight-blade hospital-grade convenience outlets for the retention force of the grounding blade according to NFPA 99. Retention force shall be not less than 4 oz.

D. Wiring device will be considered defective if it does not pass tests and inspections.

E. Prepare test and inspection reports.

END OF SECTION

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7TH FLOOR RENOVATION
LAS VEGAS, NEVADA

SECTION 26 5116

FLUORESCENT INTERIOR LIGHTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:
   1. Interior fluorescent luminaires, lamps, and ballasts.
   2. Luminaire supports.

1.3 DEFINITIONS

A. CCT: Correlated color temperature.

B. CRI: Color Rendering Index.

C. Fixture: See "Luminaire."

D. Lumen: Measured output of lamp and luminaire, or both.

E. Luminaire: Complete lighting unit, including lamp, reflector, and housing.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.
   1. Arrange in order of luminaire designation.
   2. Include data on features, accessories, and finishes.
   3. Include physical description and dimensions of luminaires.
   4. Ballast, including BF.
   5. Include life, output (lumens, CCT, and CRI), and energy efficiency data.
   6. Include photometric data and adjustment factors based on laboratory tests, complying with IESNA Lighting Measurements Testing and Calculation Guides, of each luminaire type. The adjustment factors shall be for lamps, ballasts, and accessories identical to those indicated for the luminaire as applied in this Project.
      a. Retain or "Manufacturers' Certified Data" or "Testing Agency Certified Data" Subparagraph below. Retain first subparagraph if photometric data, based on testing by accredited manufacturers' laboratories, is considered adequate for luminaires in this Project. Retain second subparagraph if photometric data for one or more luminaires are based on independent laboratory tests; coordinate with the Interior Lighting Fixture Schedule on Drawings to indicate which units shall meet this requirement. See the Evaluations. Manufacturers' Certified Data: Photometric

data certified by manufacturer's laboratory with a current accreditation under the National Voluntary Laboratory Accreditation Program (NVLAP) for Energy Efficient Lighting Products.

b. Testing Agency Certified Data: For indicated luminaires, photometric data certified by a qualified independent testing agency. Photometric data for remaining luminaires shall be certified by manufacturer.

1.5 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For luminaires and lighting systems to include in maintenance manuals.
   1. Provide a list of all lamp types used on Project; use ANSI and manufacturers' codes.

1.6 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
   1. Lamps: Ten for every 100 of each type and rating installed. Furnish at least one of each type.
   2. Diffusers and Lenses: One for every 100 of each type and rating installed. Furnish at least one of each type.

1.7 QUALITY ASSURANCE

A. Luminaire Photometric Data Testing Laboratory Qualifications: Luminaire manufacturer's laboratory is accredited under the NVLAP for Energy Efficient Lighting Products.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Protect finishes of exposed surfaces by applying a strippable, temporary protective covering before shipping.

1.9 WARRANTY

A. Warranty: Manufacturer and Installer agree to repair or replace components of luminaires that fail in materials or workmanship within specified warranty period.
   1. Warranty Period: Two year(s) from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

2.2 LUMINAIRE REQUIREMENTS

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. UL Compliance: Comply with UL 1598.

C. Lamp base complying with ANSI C81.61.

D. Nominal Operating Voltage: As indicated on the drawings.

E. Recessed Luminaires: Comply with NEMA LE 4.

2.3 BALLASTS FOR LINEAR FLUORESCENT LAMPS

A. General Requirements for Electronic Ballasts:
1. Comply with UL 935 and with ANSI C82.11.
2. Designed for type and quantity of lamps served.
3. Ballasts shall be designed for full light output unless another BF, dimmer, or bi-level control is indicated.
4. Sound Rating: Class A.
5. THD Rating: Less than 10 percent.
6. Transient Voltage Protection: IEEE C62.41.1 and IEEE C62.41.2, Category A or better.
7. Operating Frequency: 42 kHz or higher.
8. Lamp Current Crest Factor: 1.7 or less.
9. BF: 0.88 or higher.
10. Power Factor: 0.95 or higher.
11. Parallel Lamp Circuits: Multiple lamp ballasts shall comply with ANSI C82.11 and shall be connected to maintain full light output on surviving lamps if one or more lamps fail.

B. Electronic Programmed-Start Ballasts for T5 T8 Lamps: Comply with ANSI C82.11 and the following:
1. Lamp end-of-life detection and shutdown circuit for T5 diameter lamps.
2. Automatic lamp starting after lamp replacement.

2.4 FLUORESCENT LAMPS

A. T8 rapid-start lamps, rated 32-W maximum, nominal length of 48 inches, 2800 initial lumens (minimum), CRI of 75 (minimum), color temperature of 3500 K, and average rated life of 20,000 hours unless otherwise indicated.

B. T5 rapid-start lamps, rated 28-W maximum, nominal length of 45.2 inches, 2900 initial lumens (minimum), CRI of 85 (minimum), color temperature of 3000 K, and average rated life of 20,000 hours unless otherwise indicated.

2.5 RECESSED LINEAR

A. Integral junction box with conduit fittings.

2.6 MATERIALS

A. Metal Parts:
   1. Free of burrs and sharp corners and edges.
   2. Sheet metal components shall be steel unless otherwise indicated.
   3. Form and support to prevent warping and sagging.

B. Doors, Frames, and Other Internal Access: Smooth operating, free of light leakage under operating conditions, and designed to permit relamping without use of tools. Designed to prevent doors, frames, lenses, diffusers, and other components from falling accidentally during relamping and when secured in operating position.

C. Diffusers and Globes:
   1. Prismatic acrylic.
   2. Acrylic Diffusers: One hundred percent virgin acrylic plastic, with high resistance to yellowing and other changes due to aging, exposure to heat, and UV radiation.
   3. Lens Thickness: At least 0.125 inch minimum unless otherwise indicated.

D. Factory-Applied Labels: Comply with UL 1598. Include recommended lamps. Locate labels where they will be readily visible to service personnel, but not seen from normal viewing angles when lamps are in place.
   1. Label shall include the following lamp characteristics:
      a. "USE ONLY" and include specific lamp type.
      b. Lamp diameter, shape, size, wattage, and coating.
      c. CCT and CRI for all luminaires.

2.7 METAL FINISHES

A. Variations in finishes are unacceptable in the same piece. Variations in finishes of adjoining components are acceptable if they are within the range of approved Samples and if they can be and are assembled or installed to minimize contrast.

2.8 LUMINAIRE SUPPORT COMPONENTS

A. Comply with requirements in Section 260529 "Hangers and Supports for Electrical Systems" for channel and angle iron supports and nonmetallic channel and angle supports.

B. Wires: ASTM A 641/A 641M, Class 3, soft temper, zinc-coated steel, 12 gage.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Examine roughing-in for luminaire to verify actual locations of luminaire and electrical connections before fixture installation.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Comply with NECA 1.

B. Install luminaires level, plumb, and square with ceilings and walls unless otherwise indicated.

C. Install lamps in each luminaire.

D. Coordinate layout and installation of luminaires and suspension system with other construction that penetrates ceilings or is supported by them.

E. Supports:
   1. Sized and rated for luminaire weight.
   2. Able to maintain luminaire position after cleaning and relamping.
   3. Provide support for luminaire without causing deflection of ceiling or wall.
   4. Luminaire mounting devices shall be capable of supporting a horizontal force of 100 percent of luminaire weight and vertical force of 400 percent of luminaire weight.

F. Ceiling-Grid-Mounted Luminaire Supports: Use grid as a support element.
   1. Install ceiling support system rods or wires, independent of the ceiling suspension devices, for each luminaire. Locate not more than 6 inches from luminaire corners.
   2. Support Clips: Fasten to luminaires and to ceiling grid members at or near each luminaire corner with clips that are UL listed for the application.
   3. Install at least one independent support rod or wire from structure to a tab on luminaire. Wire or rod shall have breaking strength of the luminaire weight at a safety factor of 3.

G. Flush-Mounted Luminaire Support:
   1. Secured to outlet box.
   2. Attached to ceiling structural members at four points equally spaced around circumference of luminaire.
   3. Trim ring flush with finished surface.

H. Wall-Mounted Luminaire Support:
   1. Attached to structural members in walls.
   2. Do not attach luminaires directly to gypsum board.

I. Comply with requirements in Section 260519 "Low-Voltage Electrical Power Conductors and Cables" and Section 260533 "Raceways and Boxes for Electrical Systems" for wiring connections and wiring methods.

3.3 IDENTIFICATION

A. Identify system components, wiring, cabling, and terminals. Comply with requirements for identification specified in Section 260553 "Identification for Electrical Systems."

END OF SECTION

SECTION 26 5119

LED INTERIOR LIGHTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Interior solid-state luminaires that use LED technology.
2. Lighting fixture supports.

1.3 DEFINITIONS

A. CCT: Correlated color temperature.

B. CRI: Color Rendering Index.

C. Fixture: See "Luminaire."

D. LED: Light-emitting diode.

E. Lumen: Measured output of lamp and luminaire, or both.

F. Luminaire: Complete lighting unit, including lamp, reflector, and housing.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Arrange in order of luminaire designation.
2. Include data on features, accessories, and finishes.
3. Include physical description and dimensions of luminaires.
4. Include emergency lighting units, including batteries and chargers.
5. Include life, output (lumens, CCT, and CRI), and energy efficiency data.
6. Photometric data and adjustment factors based on laboratory tests, complying with IESNA Lighting Measurements Testing and Calculation Guides, of each lighting fixture type. The adjustment factors shall be for lamps and accessories identical to those indicated for the lighting fixture as applied in this Project IES LM-79 and IES LM-80.

a. Manufacturers' Certified Data: Photometric data certified by manufacturer's laboratory with a current accreditation under the National Voluntary Laboratory Accreditation Program for Energy Efficient Lighting Products.
b. Testing Agency Certified Data: For indicated luminaires, photometric data certified by a qualified independent testing agency. Photometric data for remaining luminaires shall be certified by manufacturer.

1.5 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For luminaires and lighting systems to include in operation and maintenance manuals.

1. Provide a list of all lamp types used on Project; use ANSI and manufacturers' codes.

1.6 QUALITY ASSURANCE

A. Luminaire Photometric Data Testing Laboratory Qualifications: Luminaire manufacturer's laboratory that is accredited under the NVLAP for Energy Efficient Lighting Products.

B. Luminaire Photometric Data Testing Laboratory Qualifications: Provided by an independent agency, with the experience and capability to conduct the testing indicated, that is an NRTL as defined by OSHA in 29 CFR 1910.7, accredited under the NVLAP for Energy Efficient Lighting Products, and complying with the applicable IES testing standards.

C. Provide luminaires from a single manufacturer for each luminaire type.

D. Each luminaire type shall be binned within a three-step MacAdam Ellipse to ensure color consistency among luminaires.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Protect finishes of exposed surfaces by applying a strippable, temporary protective covering before shipping.

1.8 WARRANTY

A. Warranty: Manufacturer and Installer agree to repair or replace components of luminaires that fail in materials or workmanship within specified warranty period.

B. Warranty Period: Five year(s) from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 LUMINAIRE REQUIREMENTS

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Recessed Fixtures: Comply with NEMA LE 4.

C. Bulb shape complying with ANSI C79.1.

D. Lamp base complying with ANSI C81.61.

E. CRI of minimum 80. CCT of 3000 K.

F. Rated lamp life of 50,000 hours.

G. Lamps dimmable from 100 percent to 0 percent of maximum light output.

H. Internal driver.

I. Nominal Operating Voltage: As indicated in the drawings.

2.2 DOWNLIGHT

A. Minimum 900 lumens. Minimum allowable efficacy of 80 lumens per watt.

B. Universal mounting bracket.

C. Integral junction box with conduit fittings.

2.3 MATERIALS

A. Metal Parts:

1. Free of burrs and sharp corners and edges.
2. Sheet metal components shall be steel unless otherwise indicated.
3. Form and support to prevent warping and sagging.

B. Doors, Frames, and Other Internal Access: Smooth operating, free of light leakage under operating conditions, and designed to permit relamping without use of tools. Designed to prevent doors, frames, lenses, diffusers, and other components from falling accidentally during relamping and when secured in operating position.

C. Diffusers and Globes:

1. prismatic acrylic
2. Acrylic Diffusers: One hundred percent virgin acrylic plastic, with high resistance to yellowing and other changes due to aging, exposure to heat, and UV radiation.
3. Glass: Annealed crystal glass unless otherwise indicated.
4. Lens Thickness: At least 0.125 inch minimum unless otherwise indicated.

D. Factory-Applied Labels: Comply with UL 1598. Include recommended lamps. Locate labels where they will be readily visible to service personnel, but not seen from normal viewing angles when lamps are in place.

1. Label shall include the following lamp characteristics:

a. "USE ONLY" and include specific lamp type.
b. Lamp diameter, shape, size, wattage, and coating.
c. CCT and CRI for all luminaires.

2.4 METAL FINISHES

A. Variations in finishes are unacceptable in the same piece. Variations in finishes of adjoining components are acceptable if they are within the range of approved Samples and if they can be and are assembled or installed to minimize contrast.

2.5 LUMINAIRE FIXTURE SUPPORT COMPONENTS

A. Wires: ASTM A 641/A 641 M, Class 3, soft temper, zinc-coated steel, 12 gage .

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Examine roughing-in for luminaire to verify actual locations of luminaire and electrical connections before fixture installation. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Comply with NECA 1.

B. Install luminaires level, plumb, and square with ceilings and walls unless otherwise indicated.

C. Install lamps in each luminaire.

D. Supports:

1. Sized and rated for luminaire weight.
2. Able to maintain luminaire position after cleaning and relamping.
3. Provide support for luminaire without causing deflection of ceiling or wall.
4. Luminaire mounting devices shall be capable of supporting a horizontal force of 100 percent of luminaire weight and vertical force of 400 percent of luminaire weight.

E. Flush-Mounted Luminaire Support:

1. Secured to outlet box.
2. Attached to ceiling structural members at four points equally spaced around circumference of luminaire.
3. Trim ring flush with finished surface.

F. Ceiling-Grid-Mounted Luminaires:

1. Secure to any required outlet box.
2. Secure luminaire to the luminaire opening using approved fasteners in a minimum of four locations, spaced near corners of luminaire.
3. Use approved devices and support components to connect luminaire to ceiling grid and building structure in a minimum of four locations, spaced near corners of luminaire.

G. Comply with requirements in Section 260519 "Low-Voltage Electrical Power Conductors and Cables" for wiring connections.

3.3 FIELD QUALITY CONTROL

A. Perform the following tests and inspections:

1. Operational Test: After installing luminaires, switches, and accessories, and after electrical circuitry has been energized, test units to confirm proper operation.
2. Test for Emergency Lighting: Interrupt power supply to demonstrate proper operation. Verify transfer from normal power to battery power and retransfer to normal.

B. Luminaire will be considered defective if it does not pass operation tests and inspections.

C. Prepare test and inspection reports.

END OF SECTION

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ROOM NAME ABBREVIATIONS

A

ACSNG	ACCESSIONING (LAB)
ACTV	ACTIVITY
ADMIN RCPT	ADMINISTRATIVE RECEPTION
ADMIT	ADMITTING STATION
ADL BDRM	ADULT BEDROOM
ADL KIT	ADULT KITCHEN
AEROB	AEROBICS AREA
AC	AIR CONDITIONING
ALC	ALCOVE
ANESTH	ANESTHESIA
ANIM STOR	ANIMAL STORAGE
ANTE	ANTE ROOM
AV	AUDIO VISUAL
AUDLGY	AUDIOLOGY
ATM	AUTOMATED TELLER
AUTOP	AUTOPSY

B

BARM KIT	BARIUM KITCHEN
BED RM	BEDROOM
BIO HAZ	BIO-HAZARD
BIO EQUIP	BIOLOGY EQUIPMENT
BIO MED	BIO-MEDICAL
BIO MED ENG	BIO-MEDICAL ENGINEERING
BIO MED LAB	BIO-MEDICAL LABORATORY
BIO MED SAT	BIO-MEDICAL SATELLITE
BIO WST	BIO-MEDICAL WASTE
BLD BNK	BLOOD BANK
BLD DNR	BLOOD DONER AREA
BLD DWG	BLOOD DRAWING
BLD GAS	BLOOD GAS LABORATORY
BRD RM	BOARD ROOM
BLR RM	BOILER ROOM
BNE DNSTY	BONE DENSITY
BKPG	BOOK KEEPING
BTQUE	BOUTIQUE
BRKDN	BREAK DOWN
BRK RM	BREAK ROOM
BRKDNEQ	BREAKDOWN EQUIPMENT
BREST FD	BREAST FEEDING
BRST ULT	BREAST ULTRASOUND
BULK STR	BULK STORAGE

C

CG WSH	CAGE WASH
CNTEN	CANTEEN
CARD GYM	CARDIAC CATH GYM
CARD CATH	CARDIAC CATHETERIZATION
CARD CIRCUIT	CARDIAC CIRCUIT
CARD REHAB	CARDIAC REHABILITATION
CARD RM	CARDIAC ROOM
C/V COND	CARDIOVASCULAR CONDITIONING
C/V EXAM	CARDIOVASCULAR EXAM
C/V STRESS TEST	CARDIOVASCULAR STRESS TESTING
CAST	CAST ROOM/ORTHO/FRACTURE
CATH PROC	CATHETERIZATION PROCEDURE
CHNG (M-MALE, F-FEMALE, H/C-HANDICAPPED)	CHANGING ROOM
CHRT RD	CHART READING
CHRT/HLD	CHART HOLDING
CHRT/DCT	CHARTING/DICTATION
CHEM COLD ST	CHEMICAL COLD STORAGE
CHEM ST	CHEMICAL STORAGE
CHEM	CHEMISTRY
CHEMO	CHEMOTHERAPY
CHILD BIRTH ED	CHILD BIRTH EDUCATION
CHILD WTG	CHILD BIRTH WAITING
CLSRM	CLASSROOM
CLSRM/CONF	CLASSROOM CONFERENCE
CLSRM/CNSLT	CLASSROOM CONSULT
CLN EQPCP	CLEAN EQUIPMENT
CLN HOLD	CLEAN HOLDING
CLN LINEN	CLEAN LINEN
CLN MED	CLEAN MEDICATION
CLN ST	CLEAN STORAGE
CLN SPLY	CLEAN SUPPLY
CLN SPLY/ST	CLEAN SUPPLY STORAGE
CLN UTIL	CLEAN UTILITY
CLERCL/FLS	CLERICAL/FILES
CLIN CONS	CLINICAL CONSULT
CLIN WK	CLINICAL WORKSTATION
CL	CLOSET
CLD RM	COLD ROOM
COMM	COMMUNICATION
COMM EQ	COMMUNICATION EQUIPMENT
COMMUNITY	COMMUNITY ASSEMBLY
CT	COMPUTED TOMOGRAPHY
CT CNTRL	COMPUTED TOMOGRAPHY CONTROL
CT IMAG	COMPUTED TOMOGRAPHY IMAGING
CT PREP	COMPUTED TOMOGRAPHY PREPARATION
CT READ	COMPUTED TOMOGRAPHY READING
CT SCAN	COMPUTED TOMOGRAPHY SCAN
CT SIM	COMPUTED TOMOGRAPHY SIMULATOR
COMP	COMPUTER
COMP SERVER	COMPUTER SERVER
COMP ST	COMPUTER STATION
CNCSN	CONCESSION AREA
CNCRG	CONCIERGE
CONF/CNSLT	CONFERENCE/CONSULT
CONF	CONFERENCE
CONF/EDU	CONFERENCE/EDUCATION
CONF/GRP/THERAPY	CONFERENCE/GROUP/THERAPY
CONF/LIB	CONFERENCE/LIBRARY
CONF/LNG	CONFERENCE/LOUNGE
CONF/OFF	CONFERENCE/OFFICE
CONF/TEACH	CONFERENCE/TEACHING
COUNSEL	COUNSELING
CNSLT	COUSULT
CNSLT/CONF	CONSULT/CONFERENCE
COPY	COPY AREA
CORR	CORRIDOR
CT/RD	COURTYARD
CCU	CRITICAL CARE UNIT
C-SECT	C-SECTION DELIVERY
CYSTOL LAB	CYSTOLOGY LABORATORY
CYSTOL	CYSTOSCOPY

D

DKRM	DARKROOM
DAYRM	DAY ROOM
DECON	DECONTAMINATION
DECON SHWR	DECONTAMINATION SHOWER
DENTAL LAB	DENTAL LABORATORY
DIAL	DIALYSIS
DICT	DICTATION
DICT WK	DICTATION WORKROOM
DIET	DIETICIAN
DGTL IMAG	DIGITAL IMAGING
DIN	DINING
DIN/ACT	DINING/ACTIVITY
DISH	DISHROOM
DSPTCH	DISPATCH
DISTRIB	DISTRIBUTION
DSMTRY	DOSIMETRY

E

ECHO	ECHOCARDIOGRAM
ECHO READ	ECHOCARDIOGRAM READING
EDUC	EDUCATION ROOM
ELEC	ELECTRICAL
ELEC CL	ELECTRICAL CLOSET
EKG READ	ELECTROCARDIAGRAM READING
EKG	ELECTROCARDIAGRAM TESTING
EEG	ELECTROENCEPHALOGRAM TESTING
EP LAB	ELECTROPHYSIOLOGY LABORATORY
ERCG LAB	ELECTRORETINOGRAPHY
EMER ELEC	EMERGENCY ELETRICITY
EMER GEN	EMERGENCY GENERATOR ROOM
EMP HEALTH	EMPLOYEE HEALTH
ENDO	ENDOSCOPY PROCEDURE
ENV SERV	EVNIRONMENTAL SERVICES
EQPM	EQUIPMENT
EQPM ALC	EQUIPMENT ALCOVE
EXAM	EXAM ROOM
EXAM/CNSLT	EXAM/CONSULT
EXAM/TREAT	EXAM/TREATMENT
EXERC	EXERCISE
EXIST	EXISTING

F

FAM RM	FAMILY ROOM
FEED	FEEDING ROOM
FF	FINISH FLOOR
FILE	FILE STORAGE
FILES/ADMIN	FILES ADMINISTRATION
FILM PROC	FILM PROCESSING ROOM
FILM READ	FILM READING
FIN	FINANCE
FIN COUN FITNESS CTR AUTOCL	FINANCIAL COUNSEL FITNESS CENTER AUTOCLAVE/FLASH STERILIZER
FLUORO	FLUOROSCOPY
FOOD ST	FOOD STORAGE
FORM PREP	FORMULA PREPARATION
FREE WGT	FREE WEIGHT AREA
FR SECT	FROZEN SECTION
FNCTN RM	FUNCTION ROOM
FUT EXP	FUTURE EXPANSION

G

GAR	GARAGE
GEN STORES	GENERAL STORES
GEN	GENERATOR
GIFT	GIFT SHOP
GLAUCOMA CTR	GLAUCOMA CENTER
GWN WTG	GOWN WAITING
GWN WTG F	GOWN WAITING FEMALE
GWN WTG M	GOWN WAITING MALE
GREEVING	GREEVING ROOM
GROSS	GROSSING

H

PRIV H/C	HANDICAP PRIVACY BEDROOM
SHWR H/C	HANDICAP SHOWERS
TLT H/C STAFF	HANDICAP STAFF TOILET
TLT H/C	HANDICAP TOILET
TLT SH H/C	HANDICAP TOILET/SHOWER
TUB H/C	HANDICAP TUB
HEM	HEMATOLOGY
HISTO	HISTOLOGY
HOLD	HOLDING
HOOD	HOOD AREA
HOT LAB	HOT LABORATORY
HSKPG	HOUSEKEEPING
HVF	HUMPHREYS VISUAL FIELD
HYDRO	HYDROTHERAPY TANKS

I

ICE	ICE MACHINE
INF RESUS	INFANT RESUSCITATION
INFEC CTRL	INFECTION CONTROL
INFO	INFORMATION DESK
INFO SYSTEM	INFORMATION SYSTEM
INFUS	INFUSION AREA
INT	INTERVIEW
INV	INVENTORY
ISOL	ISOLATION ROOM
IV PREP	IV PREPARATION
IV ST	IV STORAGE

K

KIT	KITCHEN
KIT/SAT	KITCHEN SATELLITE

L

LDR	LABOR/DELIVERY/RECOVERY
LDRP	LABOR/DELIVERY/RECOVERY/POST PARDUM
LAB	LABORATORY
LAB/SAT	LABORATORY/SATELLITE
LDRY	LAUNDRY
LIB	LIBRARY
LIB/CONF	LIBRARY/CONFERENCE
LIB/MEDIT	LIBRARY/MEDITATION
LIGHT ADAPT	LIGHT ADAPTATION
LINR ACD	LINEAR ACCELERATOR
LIN CH	LINEN CHUTE
LIN STR	LINEN STORAGE
LR	LIVING ROOM
DOCK	LOADING DOCK
LKRS	LOCKERS
LKRS F	LOCKERS FEMALE
LKRS M	LOCKERS MALE
LKRS/CHNG	LOCKER/CHANGING
LONG EX	LONG EXAM ROOM

M

MACH RM	MACHINE ROOM
MRI	MAGNETIC RESONANCE IMAGING
MAIL	MAIL ROOM
MAINT	MAINTENANCE
MAMMO/STERO	MAMMOGRAPHY/STEROTACTIC
MGMT	MANAGEMENT
MANIFOLD	MANIFOLD ROOM
MRKTG	MARKETING
MATL MGMT	MATERIALS MANAGEMENT
MECH	MECHANICAL
MECH/ELEC	MECHANICAL/ELECTRICAL
MED REC	MEDICAL RECORDS
MEDS	MEDICATION ROOM
MEDIT	MEDITATION
MTG	MEETING ROOM
MEZZ	MEZZANINE
MICRO BIO LAB	MICROBIOLOGY LABORATORY
MOB DK	MOBILE DOCK

N

NARC CLO	NARCOTICS CLOSET
NICU	NEONATAL INTENSIVE CARE UNIT
NEW NUR	NEWBORN NURSERY
NIGHT PHARM	NIGHT PHARMACY
NITROGEN ST	NITROGEN STORAGE
NOISY ACTIV	NOISY ACTIVITY
NOUR	NOURISHMENT
NUC MED	NUCLEAR MEDICINE
NRS STA	NURSE STATION

O

OBSERV	OBSERVATION
OBSERV/EXAM	OBSERVATION EXAM
OBSERV/TREAT	OBSERVATION TREATMENT
OB/GYN	OBSTETRICS/VNECOLOGY
OT	OCCUPATIONAL THERAPY
OFF	OFFICE
OFF SHRD	OFFICE SHARED
OFF/CONF	OFFICE/CONFERENCE
OFF/CONS	OFFICE CONSULT
OFF/EXAM	OFFICE/EXAM
ON-CALL LNG	ON-CALL LOUNGE
OR	OPERATING ROOM
OR CARDIAC	OR CARDIOTHORACIC
OR EQ ST	OR EQUIPMENT STORAGE
OR ORTHO	OR ORTHOPEDIC
ORTHO	ORTHOPEDIC ROOM
ORTHO ST	ORTHOPEDIC STORAGE
OSTOMY ST	OSTOMY STORAGE
OXYGEN ST	OXYGEN STORAGE

P

PNTR	PANTRY
PARENT LKRS	PARENT LOCKERS
PASS	PASSAGE
PATH LAB	PATHOLOGY LABORATORY
PAT BAY	PATIENT BAY
PAT EDUC	PATIENT EDUCATION
PAT HOLD	PATIENT HOLDING
PAT INTAKE	PATIENT INTAKE
PAT LKRS	PATIENT LOCKERS
PAT LNG	PATIENT LOUNGE
PAT PREP	PATIENT PREPARATION
PAT REG	PATIENT REGISTRATION
PED	PEDIATRIC
PED BAY	PEDIATRIC BAY
PED BLOOD DWG	PEDIATRIC BLOOD DRAWING
PED OBSERV	PEDIATRIC OBSERVATION
PED PLAY	PEDIATRIC PLAY
PHARM	PHARMACY
PHARM ST	PHARMACY STORAGE
PHLEB	PHLEBOTOMY
PT	PHYSICAL THERAPY
PT GYM	PHYSICAL THERAPY GYM
PT TRT	PHYSICAL THERAPY TREATMENT/ MODALITY ROOM
PT/OT	PHYSICAL THERAPY/OCCUPATIONAL THERAPY
PT/OT GYM	PHYSICAL THERAPY/OCCUPATIONAL THERAPY GYM
PET	POSITION EMISSION TOMOGRAPHY
PACU	POST ANESTHESIA CARE UNIT
PREP	PREPARATION AREA
PREP/RECOV	PREPARATION/RECOVERY
PRIV	PRIVATE
PRIV BAY	PRIVATE BAY
PRIV BDRM	PRIVATE BEDROOM
PRIV RM	PRIVATE ROOM
PROC	PROCEDURE ROOM
PROC/ASSESS	PROCEDURE/ASSESSMENT
PSYCH	PSYCHIATRY
PSYCHOL	PSYCHOLOGY
PUMP AM	PUMPING ROOM

Q

QUIET ACTV	QUIET ACTIVITY
QUIET RM	QUIET ROOM

R

RAD	RADIOLOGY
READ	READING ROOM
RCPT/CSHR	RECEPTION/CASHIER
REC ARC	RECORD ARCHIVE
REC ST	RECORD STORAGE
RECOV	RECOVERY
RECOV BAY	RECOVERY BAY
RECOVOBS	RECOVERY OBSERVATION
RECYC	RECYCLING
REFR	REFRIGERATOR
REGIST	REGISTRATION
REGIST/FIN	REGISTRATION/FINANCIAL
REHAB GYM	REHABILITATION GYM
RESRCH	RESEARCH
RES RM	RESIDENT ROOM
RESRCE	RESOURCE
RESRCE LIB	RESOURCE LIBRARY
RESP	RESPIRATORY
RT	RESPIRATORY THERAPY
REST	RESTAURANT
RETHERM	RETHERM PANTRY
RETINA CTR	RETINA CENTER

S

SCHED	SCHEDULING
SCOP CLN	SCOPE CLEANING
SCOP ST	SCOPE STORAGE
SCRUB ALC	SCRUB ALCOVE
SCRUB	SCRUB AREA
SECL	SECLUSION ROOM
SECUR	SECURITY
SEMI PRIV RM	SEMI PRIVATE ROOM
SERO	SEROLOGY
SERV	SERVERY
SVC	SERVICE
SERV ENTRY	SERVICE ENTRY
SHELL	SHELL SPACE
SHWR (M-MALE, F-FEMALE, H/C - HANDICAP)	SHOWER
SIM	SIMULATOR
SINK ALC	SIND ALCOVE
SITZ	SITZ BATH
SLP LAB	SLEEP LABORATORY
SLP STUDY	SLEEP STUDY ROOM
SOIL HOLD	SOILED HOLDING
SOIL LN	SOILED LINEN
SOIL UTL	SOILED UTILITY
SOL	SOLARIUM
SORT	SORTING AREA
SP CARE NUR	SPECIAL CARE NURSING
SPEC PROC	SPECIAL PROCEDURES
SP SERV	SPECIAL SERVICES
SP STUD	SPECIAL STUDIES
SP TEST	SPECIAL TESTING
SPEC	SPECIMEN
STAGE I	STAGE I - PACU
STAGE I ISOL	STAGE I ISOLATION - PACU
STAGE II	STAGE II - RECOVERY
STAGE II ISOL	STAGE II ISOLATION - RECOVERY

DRAWING ABBREVIATIONS

A

AB	ANCHOR BOLT
AD	AREA DRAIN
AC	AIR CONDITIONING
ACT	ACOUSTICAL CEILING TILE
ADD	ADDENDUM
ADD'L	ADDITIONAL
ADJ	ADJACENT
AFF	ABOVE FINISHED FLOOR
AGGR	AGGREGATE
AL ALUM	ALUMINUM
ALT	ALTERNATE
ANOD	ANODIZED
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL

B

B.M.	BENCH MARK
BD	BOARD
BETW	BETWEEN
BF	BACKFACE
BG	BUMPER GUARD
BL	BED LOCATOR
BL	BUILDING LINE
BLDG	BUILDING
BLKG	BLOCKING
BM	BEAM
BOT	BOTTOM
BR	BUMPER RAIL
BRG	BEARING
BSMT	BASEMENT
BU ROD	BACK-UP ROD
BUR	BUILT-UP ROOF
BW	BEARING WALL

C

C	COMPACT PARKING SPACE
CDR	CARD READER
CEM	CEMENT
CER	CERAMIC
CG	CORNER GUARD
CIP	CAST IN PLACE
CJ	CONTROL JOINT
CJ	CONSTRUCTION JOINT
CL	CENTER LINE
CLG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
COMM	COMMUNICATIONS
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
COORD	COORDINATE
CPE	CHLORINATED POLYETHYLENE
COOR	CORRIDOR
CR	COLD ROLLED
CR	CRASH RAIL
CSK	COUNTERSUNK
CT	CERAMIC TILE
CTD	CENTERED
CTR	CENTER
CW	CURTAIN WALL

D

D	DEPTH
DBA	DEFORMED BAR ANCHOR
DET	DETAIL
DIA	DIAMETER
DIAPH	DIAPHRAGM
DIM	DIMENSION
DJ	DEFLECTION JOINT
DL	DEAD LOAD
DN	DOWN
DRG	DRAWING
DS	DOWN SPOUT
DWGS	DRAWINGS
DWLS	DOWELS

E

EA	EACH
EF	EACH FACE
EIFS	EXTERIOR INSULATION AND FINISH SYSTEM
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRIC
ELEV	ELEVATOR
EOS	EDGE OF SLAB
EQ	EQUAL
EQUIP	EQUIPMENT
ESC	ESCALATOR
EW	EACH WAY
EWC	ELECTRIC WATER COOLER
EXIST	EXISTING
EXP BLT	EXPANSION BOLT
EXT	EXTERIOR

F

FD	FLOOR DRAIN
FDN	FOUNDATION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISH FLOOR
FHC	FIRE HOSE CABINET
FIB	FIBERGLASS
FIN	FINISH
FLR	FLOOR
FS	FAR SIDE
FT	FOOT
FTG	FOOTING
FV	FIELD VERIFY
FVC	FIRE VALVE CABINET

G

GA	GAUGE
GALV	GALVANIZED
GB	GRADE BEAM
GEN	GENERAL
GFRC	GLASS-FIBER REINFORCED CONCRETE
GI	GALVANIZED IRON
GL	GLASS
GM	GLAZED MASONRY UNIT
GND	GROUND
GR	GRADE
GRG	GLASS-REINFORCED GYPSUM
GYP BD	GYPSUM BOARD

H

HB	HOSE BIB
HDW	HARDWARE
HDWD	HARDWOOD
HK	HOOK
HM	HOLLOW METAL
HOR	HORIZONTAL
HP	HIGH POINT
HR	HOUR
HS	HEADED STUD
HSKP	HOUSEKEEPING
HT	HEIGHT
HW	HAND WASH
HW	HEAD OF WALL

I

IBC	INTERNATIONAL BUILDING CODE
ID	INSIDE DIAMETER
INSUL	INSULATION
INT	INTERIOR

J

K

K	KIPS (1000 LB)
KO	KNOCK-OUT
KP	KICKPLATE
KPD	KEYPAD
KSF	KIPS PER SQUARE FOOT

L

L	ANGLE
LAV	LAVATORY
LG	LONG
LKB	LOCKABLE
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LOC	LOCATION
LP	LOW POINT
LT	LIGHT
LWC	LIGHTWEIGHT CONCRETE

M

MAS	MASONRY
MAT'L	MATERIAL
MAX	MAXIMUM
MECH	MECHANICAL
MEMB	MEMBRANE
MEP	MECHANICAL, ELECTRICAL AND PLUMBING
MFG	MANUFACTURER
MGO	MEDICAL GAS OUTLET
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MOB	MEDICAL OFFICE BUILDING
MOD BIT	MODIFIED BITUMEN
MOD	MODIFIED
MSL	MEAN SEA LEVEL
MTL	METAL

N

NA	NOT AVAILABLE
NIC	NOT IN CONTRACT
NOA	NOTICE OF ACCEPTANCE
BY	FLORIDA GOVERNING AUTHORITY
NOM	NOMINAL
NS	NEAR SIDE
NTS	NOT TO SCALE
NWC	NORMAL WEIGHT CONCRETE

O

OA	OVER ALL
OC	ON CENTER
OD	OUTSIDE DIAMETER
OD	OVERFLOW DRAIN
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
OH	OPPOSITE HAND
OPNG	OPENING
OPP	OPPOSITE
OSF	OUTSIDE FACE

P

P-LAM	PLASTIC LAMINATE
PC	PRECAST CONCRETE
PCF	POUNDS PER CUBIC FOOT
PCP	PORTLAND CEMENT PLASTER
PENT	PENTHOUSE
PL	PROPERTY LINE
PL	PLATE
PLUMB	PLUMBING
PLWD	PLYWOOD
PP	PUSH PLATE
POL	POLISHED
PORT CEM	PORTLAND CEMENT
PR	PAIR
PREFAB	PREFABRICATED
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POINT
PT	PNEUMATIC TUBE
PTD	PAINTED

R

R	RISER
RAD	RADIUS
RAF	RUBBERIZED ASPHALT FLASHING
RAM	RUBBERIZED ASPHALT MEMBRANE
RAU	RUBBERIZED ASPHALT UNDERLAYMENT
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
REBAR	REINFORCING BAR
RECP	RECEPTACLE
REF	REFER ON REFERENCE
REINF	REINFORCING
RELOC	RELOCATE/RELOCATED
REQD	REQUIRED
RFVC	RECESSED FIRE VALVE CABINET
RM	ROOM
RO	ROUGH OPENING

S

SAB	SOUND ATTENUATION BLANKET
SBC	STANDARD BUILDING CODE
SCHED	SCHEDULE
SDL	SUPERIMPOSED DEAD LOAD
SECT	SECTION
S/H	SINGLE HUNG
SHWR	SHOWER
SIM	SIMILAR
SO	STRUCTURAL OPENING
SOG	SLAB ON GRADE
SP	STAND PIPE
SPA	SPACE, SPACING
SPEC	SPECIFICATION
SQ	SQUARE
SS	STAINLESS STEEL
SSF	SOLID SURFACE
STA	STATION
STC	SOUND TRANSMISSION CLASS
STD	STANDARD
STIFF	STIFFENER
STIR	STIRRUP
STL	STEEL
STRUC	STRUCTURAL
SYM	SYMMETRICAL
SYS	SYSTEM

T

T	TREAD
T&B	TOP AND BOTTOM
TC	TOP OF CURB
TEL	TELEPHONE
TEMP	TEMPERATURE
THK	THICK
TLT	TOILET
TO	TOP OF
TOB	TOP OF BEAM
TOC	TOP OF CONCRETE
TOF	TOP OF FOOTING
TOP	TOP OF PARAPET
TOS	TOP OF SLAB
TOSTL	TOP OF STEEL
TRSH CH	TRASH CHUTE
TW	TOP OF WALL
TYP	TYPICAL

U

U/C	UNDER COUNTER
U/G	UNDERGROUND
UNO	UNLESS NOTED OTHERWISE

V

VAR	VARIES
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VEST	VESTIBULE
VWC	VINYL WALL COVERING

W

W/	WITH
W/C	WHEEL CHAIR
W/O	WITHOUT
W	WIDTH
WP	WATERPROOF(ING)
WD	WOOD
WF	WIDE FLANGE
WL	WIND LOAD
WP	WORK POINT
WPO	WORK POINT - POINT OF ORIGIN
WP1	WORK POINT - NUMBERED
WWF	WELDED WIRE FABRIC

LEGEND

MATERIALS

CONCRETE/ PRECAST CONCRETE	GYPSUM BOARD
SOIL	EXTERIOR GYPSUM SHEATHING
SAND, EIFS FINISH COAT, OR CEMENT PLASTER	EXTERIOR CEMENT BOARD
BRICK	COATED GLASS MAT WATER RESISTANT GYP BD
CMU	PLYWOOD
STONE	COVER BOARD
FIBERGLASS BATT INSULATION	
FIBERGLASS SEMI RIGID INSULATION	
MINERAL WOOL SEMI RIGID INSULATION	
EXPANDED POLYSTYRENE RIGID INSULATION	
EXTRUDED POLYSTYRENE RIGID INSULATION	
POLYISOCYANURATE RIGID INSULATION	

DRAWING SYMBOLS

ROOM NAME XXXXX	ROOM NAME/NUMBER
X	EXISTING COLUMN CENTERLINE
X	COLUMN CENTERLINE
X	ACCESSORY
1	DEMOLITION NUMBERED NOTES
01 A0.XX	BUILDING WALL SECTION
A0.XX	ELEVATION
01 A0.XX	SECTION DETAIL
01 A0.XX	PLAN, BLOW-UP DETAIL
	INTERIOR ELEVATION INDICATOR
	DIRECTION INDICATOR
	EDGE OF SLAB
	FACE OF BUILDING
+9'-0"	CEILING HEIGHT
	MEDICAL GAS
001	MEDICAL EQUIPMENT
	CORNER GUARDS
CR - 3	CRASH RAIL
BG	BUMPER RAIL
HR	HAND RAIL
BL	BED LOCATOR
	WALL PROTECTION
	IV TRACK
	CUBICLE CURTAIN TRACK
A3 / AAA 3	PARTITION TYPE WITH NO SOUND ATTENUATION
A3 / AAA 3	PARTITION TYPE WITH SOUND ATTENUATION
	BUILDING EXPANSION JOINT
	CMU WALL
	NEW WALL
	EXISTING WALL
	DEMO WALL
	1 HOUR FIRE WALL
	2 HOUR FIRE WALL
	3 HOUR FIRE WALL
	4 HOUR FIRE WALL
	NON-RATED SMOKE WALL
	1 HOUR SMOKE WALL
	2 HOUR SMOKE WALL
	1 HOUR SHAFT WALL
	2 HOUR SHAFT WALL

CEILING SYMBOLS

GYP BD CEILING	EXIT SIGNS - HATCH INDICATES EXIT TEXT AND ARROW INDICATES DIRECTION
SUPPLY AIR	SMOKE DETECTOR
RETURN AIR	SPEAKER
EXHAUST AIR	WALL MOUNTED LIGHT FIXTURE
ACCESS PANEL	NEW WALL MOUNTED LIGHT FIXTURE
	DOWNLIGHT
FLUORESCENT LIGHT	PENDANT

GENERAL NOTES

1. THE PLANS PRESENTED HEREIN ARE TO BE REFERENCED AS "TYPICAL" PER ROOM TYPE AN ARE NOTED TO DEPICT INTENT OF THE PROJECT SCOPE AND DESIGN. EACH ROOM MAY BE DIFFERENT IN ACTUAL LAYOUT, DESIGN, LOCATIONS, AND MAY BE MIRRORED FROM THE DEPICTED "TYPICAL" ROOM TYPE AND FROM EACH OTHER. CONTRACTOR SHALL SURVEY EACH ROOM, AND IDENTIFY AND NOTIFY ARCHITECT OF DEVIATIONS FROM THE "TYPICAL" PLAN THAT AFFECT HEADWALL OR MILLWORK LAYOUT OR REQUIRED CLEARANCES.

2. THE FOLLOWING EQUIPMENT SHALL BE OWNER FURNISHED/ CONTRACTOR INSTALLED (OF/CI):
   - SKYTRON BIRTHING LIGHTS; CONTRACTOR SHALL COORDINATE INSTALLATION AND COMMISSIONING WITH MANUFACTURER AND THEIR REQUIREMENTS.

3. THE FOLLOWING EQUIPMENT SHALL BE REMOVED BY OWNER, OWNER FURNISHED/ OWNER INSTALLED (OF/OI):
   - T.V. AND MOUNTING BRACKETS (NEW BACKING WHERE REQUIRED SHALL BE PROVIDED AND INSTALLED BY CONTRACTOR)
   - PATIENT WHITE BOARDS

4. THE FOLLOWING SPECIFIED ITEMS SHALL BE REMOVED BY CONTRACTOR, OWNER FURNISHED/ CONTRACTOR INSTALLED (OF/CI):
   - NEW DOORS (ACROVYN)
   - NEW DOOR HARDWARE (ACROVYN)
   - WALL AND DOOR FRAME PROTECTION PRODUCTS:
     - HANDRAIL
     - CRASHRAIL
     - SHEET WALL PROTECTION
     - CORNER GUARDS
     - DOOR FRAME GUARDS

5. THE FOLLOWING ACCESSORIES SHALL BE REMOVED BY CONTRACTOR, OWNER FURNISHED/ CONTRACTOR INSTALLED (OF/CI):
   - PAPER TOWEL DISPENSER
   - TOILET PAPER DISPENSER
   - SOAP DISPENSER
   - SHARPS CONTAINERS
   - GLOVE BOX
   - HAND SANITIZERS
   - CLOCKS

BUILDING SUMMARY

PROJECT INFORMATION

PROJECT NAME: UMC 7TH FLOOR RENOVATION

ADDRESS: 1800 W. CHARLESTON BLVD. LAS VEGAS, NEVADA 89102

PROPOSED USE: LABOR AND DELIVERY UNIT

OWNER-CONTACT PERSON: LARRY SILVER (UMC)

PHONE: 702.207.8291

APPLICABLE CODES

- BUILDING CODE: 2009 IBC
- MECHANICAL: 2009 UMC
- PLUMBING: 2009 UPC
- ELECTRICAL: 2008 NEC
- FIRE CODE: 2009 IFC
- STATE/CITY AMENDMENTS: SOUTHERN NEVADA AMENDMENTS TO THE 2009 IBC
- LIFE SAFETY CODE: NFPA 101
- ACCESSIBILITY CODE: 2009 ICC / ANSI A117.1
- ENERGY CODE: 2009 IBC ADP NEVADA REVISED STATUTES, TITLE 28, CHAPTER 388.180
- SIGN CODE: 2009 IBC

BUILDING PLANNING

OCCUPANCY: I-2

MIXED OCCUPANCY: NO

REQUIRED FIRE SEPARATION: NO

TYPE OF CONSTRUCTION

CONSTRUCTION TYPE: 1A

ESSENTIAL FACILITY (CHAPTER 16, IBC)

ESSENTIAL FACILITY: YES

INDEX OF DRAWINGS

NUMBERING SYSTEM:

DISCIPLINE:
C - CIVIL
L - LANDSCAPE
A - ARCHITECTURE
M - MECHANICAL
E - ELECTRICAL
P - PLUMBING
S - STRUCTURAL
K - FOOD SERVICE

SERIES NUMBER
SHEET NUMBER WITHIN SERIES
NUMBER OF PLAN, DETAIL, ETC. ON SHEET

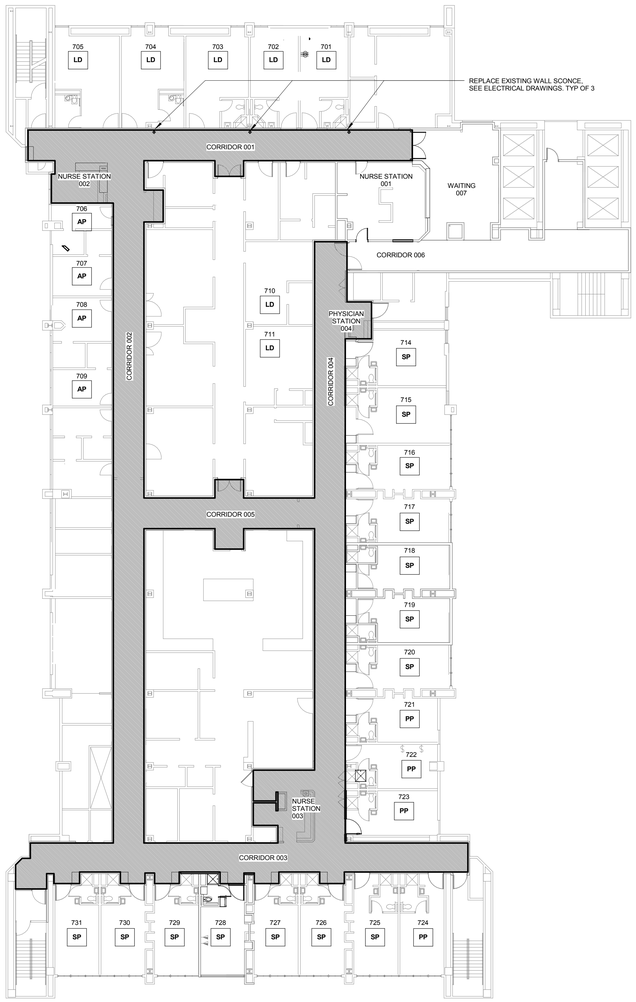
A2.10/01

INDEX OF DRAWINGS

SHEET NUMBER	SHEET NAME	65% CD ISSUE 03/14/2014	95% CD ISSUE 05/13/2014 - ISSUED FOR BID
ARCHITECTURE			
A0.00	COVER SHEET		
A0.01	PROJECT INFORMATION		
A2.00	PROJECT SCOPE PLANS		
A2.01	INTERIOR FINISH PLANS - TYPICAL		
A2.02	INTERIOR FINISH PLANS - TYPICAL		
A2.03	ALTERNATE 1 - CORRIDOR REFINISH		
A2.04	ALTERNATE 2 - LOBBY/ WAITING REFINISH		
A3.40	ACCESSORIES INFORMATION AND DETAILS		
A3.41	INTERIOR FINISH LIST AND DOOR INFORMATION		
A3.50	CASEWORK		
A3.51	CASEWORK		
A3.52	HEADWALL AND FOOTWALL DETAILS		
ELECTRICAL			

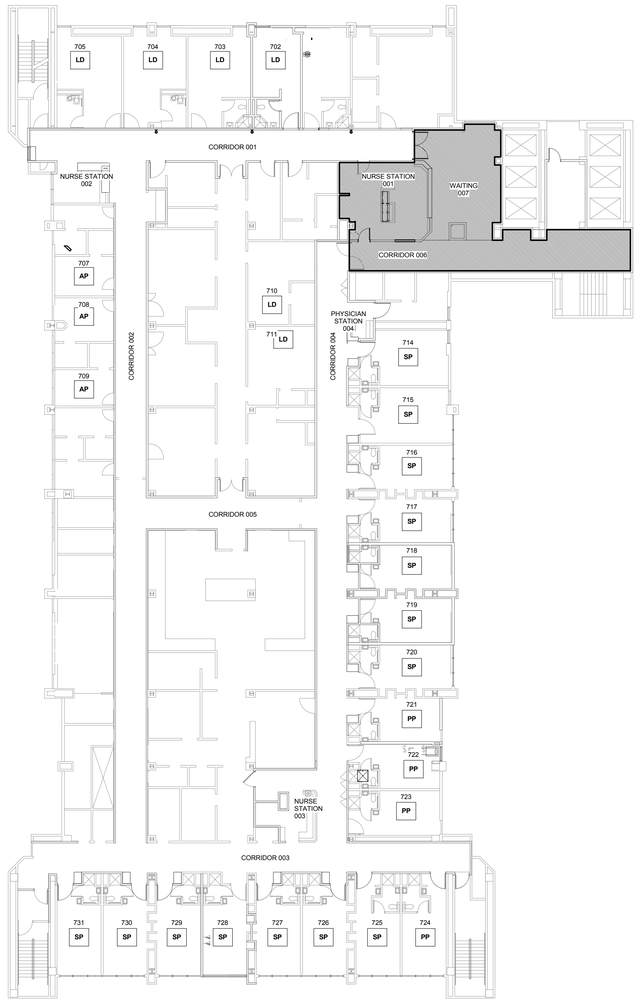
03 BASE BID PLAN

1/16" = 1'-0"



02 SCOPE--ALTERNATE 1 PLAN

1/16" = 1'-0"



01 SCOPE--ALTERNATE 2 PLAN

1/16" = 1'-0"

BASE BID PLAN

SCOPE OF PROJECT IDENTIFIED AS BASE BID SHALL INCLUDE NEW FINISHES IN ALL OF THE PATIENT ROOMS AND PATIENT TOILET ROOMS. NEW FINISHES SCOPE SHALL INCLUDE:

PATIENT ROOMS:
- PATIENT HEADWALLS, CASEWORK/ MILLWORK, AND SINK
- FLOORING, PAINT/ WALL FINISH, CEILING TILE AND GRID (REPAINT GRID WHERE NOTED), CUBICLE CURTAINS, WALL PROTECTION, AND WINDOWCOVERING
- DOOR AND DOOR HARDWARE, ONLY (EXISTING FRAME SHALL REMAIN)
- LIGHT FIXTURES (REPLACEMENT); CLEAN AND REPAINT MECHANICAL GRILLES AND DIFFUSERS.

PATIENT TOILET ROOMS:
- WALL TILE, FLOOR TILE, PAINT
- ACCESSORIES REPLACEMENT
- PLUMBING FIXTURES, INCLUDING SHOWER UNITS
- LIGHT FIXTURES (REPLACEMENT)

AP	ANTEPARTUM
LD	LABOR/ DELIVERY/ RECOVERY
SP	SEMI-PRIVATE POSTPARTUM
PP	PRIVATE POSTPARTUM

SCOPE – ALTERNATE NO. 1 PLAN

SCOPE OF PROJECT IDENTIFIED AS ALTERNATE NO. 1 SHALL INCLUDE NEW FINISHES IN ALL OF THE PATIENT CORRIDORS, AND IN THE NURSE/ PHYSICIAN STATIONS AS IDENTIFIED IN THE SCOPE PLAN.
NEW FINISHES SCOPE SHALL INCLUDE:
- FLOORING, PAINT/ WALL FINISH, CEILING TILE (REPAINT GRID)
- CLEAN, RELAMP AND RE-BALLAST LIGHT FIXTURES; CLEAN AND REPAINT MECHANICAL GRILLES AND DIFFUSERS.
- WALL PROTECTION (HANDRAILS, CRASHRAILS, CORNER GUARDS) REPLACEMENT
- REPLACE ALL EXISTING DOORS AND DOOR HARDWARE LOCATED WITHIN THE CORRIDORS; EXISTING DOOR FRAMES SHALL REMAIN AND BE RE-PAINTED. (EXCLUDES PATIENT ROOMS DOORS WHICH WERE PART OF BASE BID SCOPE).
- EXISTING NURSE/ PHYSICIAN STATIONS SHALL RECEIVE NEW TRANSACTION TOPS, AND RE-FACING EXISTING STATION, CORRIDOR SIDE ONLY.
- ALTERNATE 1.A:
  - CEILINGS SHALL BE ACT01 IN LIEU OF ACT02.

SCOPE – ALTERNATE NO. 2 PLAN

SCOPE OF PROJECT IDENTIFIED AS ALTERNATE NO. 2 SHALL INCLUDE NEW FINISHES IN THE MAIN LDR NURSE STATION, WAITING AREA, AND ELEVATOR LOBBY. NEW FINISHES SCOPE SHALL INCLUDE:
- FLOORING, PAINT/ WALL FINISH, CEILING TILE (RE-PAINT GRID)
- CLEAN, RELAMP AND RE-BALLAST LIGHT FIXTURES; CLEAN AND REPAINT MECHANICAL GRILLES AND DIFFUSERS.
- WALL PROTECTION (HANDRAILS, CRASHRAILS, CORNER GUARDS) REPLACEMENT
- NEW LAYOUT, MILLWORK, AND FURNITURE AT NURSE STATION
- NEW ACCENT LIGHTING IN WAITING AREA AND AT NURSE STATION
- AT MAIN NURSE STATION:
  - RE-FACE EXISTING CABINET, WAITING AREA SIDE
  - NEW TRANSACTION TOP
  - NEW LAYOUT WITHIN NURSE STATION - FURNITURE
  - REMOVAL OF EXISTING PERIMETER GLASS AND FRAME BY OWNER, N.I.C.
- ALTERNATE 2.A:
  - CEILINGS SHALL BE ACT01 UN LIEU OF ACT02.

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HKS

ARCHITECT
HKS, INC.
2500 ANTHEM VILLAGE DR.
HENDERSON, NV 89052

MEP CONSULTANT
HARRIS CONSULTING ENGINEERS, LLC
6630 SURREY ST., SUITE 100
LAS VEGAS, NEVADA 89119

UMC UNIVERSITY MEDICAL CENTER
7th Floor Renovation

OWNER
UNIVERSITY MEDICAL CENTER OF SOUTHERN NEVADA
1800 W. CHARLESTON BLVD.
LAS VEGAS, NEVADA 89102

Bid 2014–08 - Labor and Delivery Renovations
PWP# CL-2014 – 270

REGISTERED ARCHITECT
CERTIFICATE NO.
27915
IRENE M. CLARK
Date Signed 06/15/2014
ARIZONA, U.S.A.
EXPIRES: 06/30/2015

KEY PLAN

REVISION

NO.	DESCRIPTION	DATE

HKS PROJECT NUMBER
16922.000

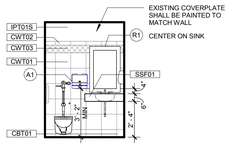
DATE
06/15/2014

ISSUE
ISSUED FOR BID

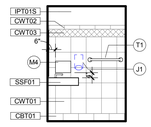
SHEET TITLE
PROJECT SCOPE PLANS

SHEET NO.
A2.00

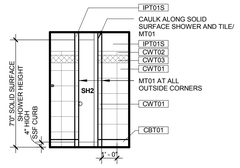
PLOT DATE: 6/11/2014 5:04:22 PM TEMPLATE VERSION: 2.6.4.20130621



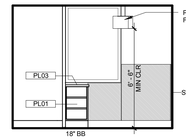
20 ANTEPARTUM TOILET ELEVATION
1/4" = 1'-0"



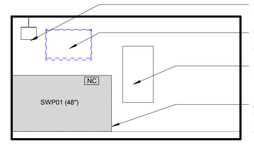
19 ANTEPARTUM SINK/SHOWER ELEVATION
1/4" = 1'-0"



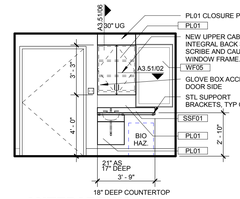
18 ANTEPARTUM SHOWER ELEVATION
1/4" = 1'-0"



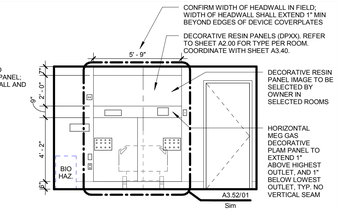
17 ANTEPARTUM WINDOW ELEVATION
1/4" = 1'-0"



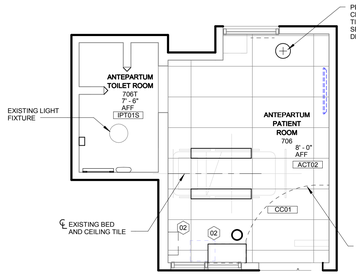
16 ANTEPARTUM FOOTWALL ELEVATION
1/4" = 1'-0"



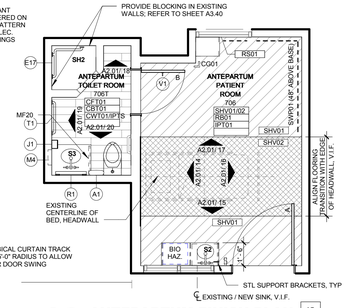
15 ANTEPARTUM NURSE CARE ELEVATION
1/4" = 1'-0"



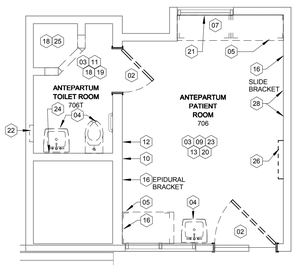
14 ANTEPARTUM HEADWALL ELEVATION
1/4" = 1'-0"



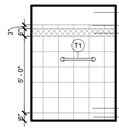
13 ANTE-PARTUM REFLECTED CEILING PLAN AP
1/4" = 1'-0"
FOR REFERENCE FOR ROOMS 706-709. (NO SHOWER IN ROOMS 707,709)



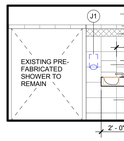
12 ANTEPARTUM FINISH PLAN AP
1/4" = 1'-0"
FOR REFERENCE FOR ROOMS 706-709. (NO SHOWER IN ROOMS 707,709)



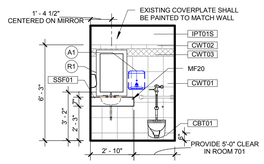
11 ANTEPARTUM DEMO PLAN AP
1/4" = 1'-0"
FOR REFERENCE FOR ROOMS 706-709. (NO SHOWER IN ROOMS 706,709)



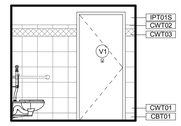
10 LDR TOILET ROOM NORTH ELEVATION
1/4" = 1'-0"



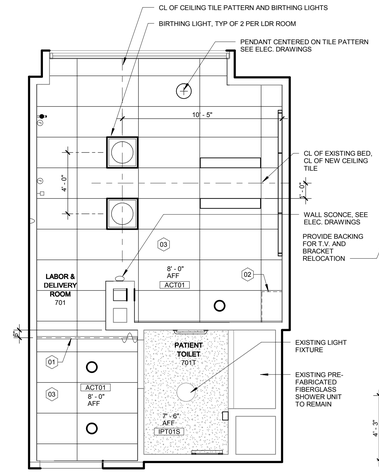
09 LDR TOILET ROOM EAST ELEVATION
1/4" = 1'-0"



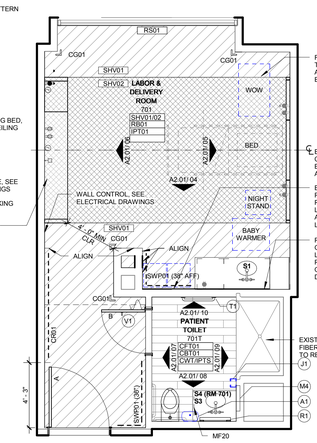
08 LDR TOILET ROOM SOUTH ELEVATION
1/4" = 1'-0"



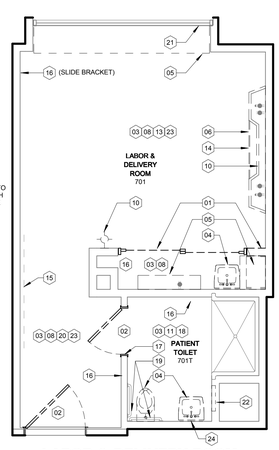
07 LDR TOILET ROOM WEST ELEVATION
1/4" = 1'-0"



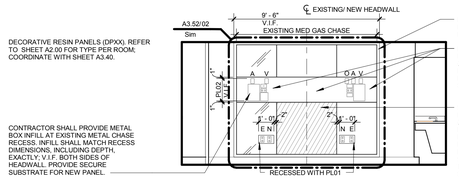
03 LABOR & DELIVER ROOM REFLECTED CEILING PLAN LD
1/4" = 1'-0"
FOR REFERENCE FOR ROOMS SEE 701-705, 710, 711



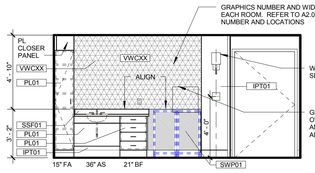
02 LABOR & DELIVERY ROOM FINISH PLAN LD
1/4" = 1'-0"
FOR REFERENCE FOR ROOMS SEE 701-705, 710, 711



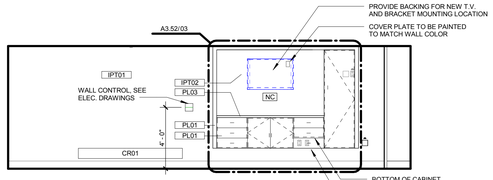
01 LABOR & DELIVERY ROOM DEMO PLAN LD
1/4" = 1'-0"
FOR REFERENCE FOR ROOMS SEE 701-705, 710, 711



05 LABOR & DELIVERY ROOM HEADWALL ELEVATION
1/4" = 1'-0"



04 LABOR & DELIVERY ROOM NURSE CARE ELEVATION
1/4" = 1'-0" NOTE: THE LAYOUT OF MILLWORK COMPONENTS MAY DIFFER DEPENDING ON LOCATION OF EXISTING ACCESS PANEL. CONTRACTOR SHALL VERIFY IN EACH ROOM PRIOR TO SUBMITTING MILLWORK SHOP DRAWINGS, AND SHALL NOTIFY ARCHITECT OF POTENTIAL DEVIATION FROM ELEVATION PRESENTED.



06 LABOR & DELIVERY ROOM FOOTWALL ELEVATION
1/4" = 1'-0"

CEILING SYMBOLS

- GYP BD CEILING
- SUPPLY AIR
- RETURN AIR
- EXHAUST AIR
- ACCESS PANEL
- FLUORESCENT LIGHT
- EXIT SIGNS - HATCH INDICATES EXIT TEXT AND ARROW INDICATES DIRECTION
- SMOKE DETECTOR
- SPEAKER
- WALL MOUNTED LIGHT FIXTURE
- NEW WALL MOUNTED LIGHT FIXTURE
- DOWNLIGHT
- PENDANT

REFLECTED CEILING PLAN GENERAL NOTES

1. THE ROOMS IDENTIFIED ON PLANS AS "TYPICAL" ARE NOTED TO DEPICT INTENT OF PROJECT SCOPE AND DESIGN. EACH ROOM MAY BE DIFFERENT IN ACTUAL LAYOUT, DESIGN, LOCATION, AND MAY BE MIRRORED. CONTRACTOR SHALL SURVEY EACH ROOM, AND IDENTIFY AND NOTIFY ARCHITECT OF DEVIATIONS FROM THE "TYPICAL" PLAN THAT AFFECT CEILING HEADWALL OR MILLWORK LAYOUT OR REQUIRED CLEARANCES.
2. IN THE CASE OF MINOR DISCREPANCIES BETWEEN MEP AND ARCHITECTURAL DOCUMENTS REGARDING THE LOCATION OF CEILING MOUNTED COMPONENTS, THE ARCHITECTURAL REFLECTED CEILING PLAN SHALL GOVERN. IN THE CASE OF MAJOR DISCREPANCIES, THE ARCHITECT SHALL BE NOTIFIED AS SOON AS THE DISCREPANCY IS DISCOVERED PRIOR TO PROCEEDING WITH THE WORK.
3. REFERENCE MECHANICAL AND ELECTRICAL DRAWINGS FOR MOUNTING LOCATIONS OF ITEMS WHERE NO CEILING IS REQUIRED OR INDICATED.
4. LIGHTS, DIFFUSERS, EXIT SIGNS, SMOKE DETECTORS, SPEAKERS, STROBES AND MISCELLANEOUS DEVICES SHALL BE CENTERED IN THE CEILING TILE PATTERN IN WHICH THEY OCCUR, U.N.O.
5. DIMENSIONS AT CUBICLE CURTAIN TRACKS ARE TO CENTER OF TRACK, TYP.
6. ALL CUBICLE CURTAIN TRACKS MUST CLEAR DOOR SWINGS BY 3' MINIMUM.
7. CLEAN, PAINT, AND REPLACE ALL MECHANICAL DIFFUSERS GRILLES, REGISTERS; CLEAN AND REPLACE ALL LIGHT FIXTURES AND DEVICE COVERPLATES TO REMAIN OR TO BE RE-USED.
8. ALL GYP. BD. CEILINGS IN PATIENT TOILET ROOMS SHALL REMAIN. REPAIR AS REQUIRED (I.E. VOID AROUND SPRINKLERHEAD ESCUTCHEON, ETC.) AND PAINT.
9. REPLACE ALL EXISTING APPURTENCES IN CEILING AFTER CEILING FINISHES UPGRADE (I.E. SMOKE DETECTOR, MECHANICAL DIFFUSER/ REGISTERS/ GRILLS, SPRINKLERHEADS AND ESCUTCHEONS, ANTENNAE, OCCUPANCY SENSORS, ETC.) U.N.O.

REFLECTED CEILING PLAN KEYNOTES

01 REPLACE CUBICLE CURTAIN TRACK. THOROUGHLY CLEAN PRIOR TO REINSTALLATION IN PLACE.

02 CLOSURE PANEL CONTINUES TO CEILING.

03 NEW SUSPENDED CEILING TILE AND GRID SYSTEM. REFER TO FINISH LIST ON SHEET A3.40.

04 EXISTING SUSPENDED CEILING GRID SHALL BE REPAIRED (WHERE REQUIRED) AND PAINTED WHITE. INSTALL NEW CEILING TILE. (2 X 4). REFER TO FINISH LIST ON SHEET A3.40.

FINISH FLOOR HATCH PATTERN LEGEND

- VCT01
- VCT02
- VCT03
- VCT04
- CFT01
- SHV01
- SHV02

FINISH TAG LEGEND

- XXX## — FLOORING
- XXX## — BASE
- XXX## — WALL
- XXX## — CEILING

FLOOR PLAN GENERAL NOTES

1. THE ROOMS IDENTIFIED ON PLANS AS "TYPICAL" ARE NOTED TO DEPICT INTENT OF PROJECT SCOPE AND DESIGN. EACH ROOM MAY BE DIFFERENT IN ACTUAL LAYOUT, DESIGN, LOCATION, AND MAY BE MIRRORED. CONTRACTOR SHALL SURVEY EACH ROOM, AND IDENTIFY AND NOTIFY ARCHITECT OF DEVIATIONS FROM THE "TYPICAL" PLAN THAT AFFECT HEADWALL OR MILLWORK LAYOUT OR REQUIRED CLEARANCES.
2. REFER TO SHEET A3.40 FOR TYPICAL ACCESSORY MOUNTING AND EQUIPMENT DIAGRAMS.
3. REFER TO SHEET A3.40 FOR WALL PROTECTION TYPES AND DETAILS.
4. REFER TO SHEET A3.40 FOR DOOR INFORMATION, SCHEDULES AND DETAILS.
5. REFER TO SHEET A3.40 FOR FINISH INFORMATION.
6. ALL NEW DOORS SHALL RECEIVE NEW FLOORING TRANSITIONS.
7. PROTECT ALL EXTERIOR CORNERS WITH CORNER GUARDS.
8. COMPLETELY CLEAN AND SMOOTH ALL HOLLOW METAL DOORS FRAMES. PREP AND PRIME AS REQUIRED; PAINT PER FINISH LIST ON SHEET A3.40.
9. EXTERIOR VERTICAL TILE CORNERS SHALL USE SCHLUTER RONDEC WITH TOP CAP AT TILE BULLNOSE (MT01).
10. IN ALL PATIENT TOILET ROOMS, INSTALL TILEBACKER WALLBOARD TO EXISTING FRAMING TO ALL WALLS RECEIVING TILE.
11. IN ANTEPARTUM AND POSTPARTUM PATIENT ROOMS, INSTALL GLASS MAT WATER RESISTANT WALLBOARD TO EXISTING FRAMING OF ALL SHOWER WALLS TO RECEIVE SOLID SURFACE PANELS.
12. IN NEW SOLID SURFACE SHOWER UNITS, PROVIDE BLOCKING IN EXISTING WALLS PER SHOWER MANUFACTURER'S RECOMMENDATIONS FOR SHOWER CURTAIN ROD, AND SPRAY WAND SLIDE BAR, ETC.; FOR GRAB BARS, REFER TO SHEET A3.40.
13. REINSTALL EXISTING OR NEW WALL-MOUNTED ITEMS. CONTRACTOR SHALL PROVIDE BACKING IN NEW LOCATION. REFER TO SHEET A3.40.

DEMOLITION GENERAL NOTES

1. THE PLANS PRESENTED HEREIN ARE TO BE REFERENCED AS "TYPICAL" PER ROOM TYPE, AND ARE NOTED TO DEPICT INTENT OF PROJECT SCOPE AND DESIGN. EACH ROOM MAY BE DIFFERENT IN ACTUAL LAYOUT, DESIGN, LOCATION, AND MAY BE MIRRORED FROM THE DEPICTED "TYPICAL" ROOM TYPE AND FROM EACH OTHER. CONTRACTOR SHALL SURVEY EACH ROOM, AND IDENTIFY AND NOTIFY ARCHITECT OF DEVIATIONS FROM THE "TYPICAL" PLAN THAT AFFECT HEADWALL OR MILLWORK LAYOUT OR REQUIRED CLEARANCES.
2. ALL PATIENT SHOWERS THAT DO NOT INCLUDE A FIBERGLASS UNIT SHALL HAVE ALL WALL TILE (AND WALLBOARD SUBSTRATE) AND SHOWER PANS REMOVED. (NO SHOWER EXISTS IN ROOMS 707,709, AND 710.)
3. ALL FLOOR FINISHES (INCLUDING BASE) IN PATIENT ROOMS AND TOILET ROOMS SHALL BE REMOVED.
4. PARTIAL DEMOLITION OF EXISTING GYP WALLBOARD WHERE REQUIRED FOR INSTALLATION OF NEW MF20. CONFIRM LOCATIONS AND QUANTITIES IN FIELD.

DEMOLITION KEYNOTES (DK)

01 REMOVE WALL(S) (SHOWN DASHED), FULL HEIGHT, INCLUDING CLOSET HEADER; REMOVE EXISTING MIRRORED SLIDING DOOR, FRAME, AND FLOOR TRACK.

02 REMOVE DOOR AND HARDWARE; DOOR FRAME SHALL REMAIN. REMOVE MAGNETIC HOLD-OPEN FROM WALL, WHERE APPLICABLE. REPAIR WALL, MATCH EXISTING TEXTURE.

03 REMOVE FLOORING AND BASE IN IT'S ENTIRETY, INCLUDING FLOORING TRANSITION AT DOOR (WHERE APPLICABLE).

04 REMOVE PLUMBING FIXTURES. REFER TO PLUMBING DRAWINGS.

05 REMOVE ALL CASEWORK IN IT'S ENTIRETY.

06 REMOVE HEADWALL CASEWORK, ONLY. METAL CHASE FOR UTILITIES SHALL REMAIN IN PLACE AND OPERATIONAL. TEMPORARILY REMOVE AND RETAIN FOR REPLACEMENT ALL COVERPLATES (MED GAS, ELEC., DATA, ETC.) MED GAS QUALITY SHALL NOT BE COMPROMISED.

07 REMOVE WINDOW SILL

08 REMOVE CEILINGS IN ITS ENTIRETY. SALVAGE DIFFUSERS, LIGHTS, SMOKE DETECTORS, ETC. AND RETAIN FOR RE-USE PER DRAWINGS OR RETURN TO OWNER.

09 REMOVE CEILING TILES, ONLY, AND REPLACE WITH NEW PER FINISH LIST. RETAIN EXISTING GRID AND REPAIR AS REQUIRED (I.E., BENDS, KINKS, BREAKAGE, SAFETY ISSUES, ETC.). PAINT GRID WHITE USING SPRAY METHOD.

10 REMOVE LIGHT FIXTURE; REPLACE WITH NEW WHERE NOTED, SEE ELEC. DRAWINGS.

11 REMOVE ALL TOILET ACCESSORIES (SOAP DISPENSERS, PAPER TOWEL DISPENSERS, TOILET PAPER DISPENSER, SEAT COVER DISPENSER, ETC.)

12 EXISTING WALL PROTECTION TO REMAIN. HEADWALLS OR NEW WALL PROTECTION TO BE PLACED OVER EXISTING PROVIDING TOTAL CONCEALMENT. REMOVE ANY MATERIAL THAT REMAINS VISIBLE .

13 REMOVE EXISTING CORNER GUARD(S) FOR REPLACEMENT.

14 REMOVE BED LOCATOR.

15 REMOVE CRASH RAIL AND/OR HANDRAIL FOR REPLACEMENT.

16 REMOVE ACCESSORIES, I.E. ROBE HOOKS, SLIDE BRACKET.

17 REMOVE DOOR FRAME GUARD; PREPARE FRAME FOR REPLACEMENT.

18 REMOVE WALL TILE AND/OR WALLBOARD TO FACE OF STUDS.

19 REMOVE GRAB BARS AND RETAIN FOR REUSE. THOROUGHLY CLEAN PRIOR TO REATTACHMENT IN PLACE.

20 REMOVE CUBICLE CURTAIN TRACK AND I.V. TRACK. RETAIN CUBICLE CURTAIN TRACK FOR REUSE AND RE-ATTACHMENT IN PLACE.

21 REMOVE WINDOW COVERING, INCLUDING TRACK, VALANCE, ETC.

22 REMOVE PORTION OF EXISTING GYP BD AND STUD FOR NEW TOILETRY RECESS.

23 REMOVE WALLPAPER BORDER.

24 REMOVE MIRROR.

25 REMOVE TERRAZZO SHOWER PAN IN IT'S ENTIRETY.

26 ISOLATION/ GROUNDING PANEL, TO REMAIN.

27 REMOVE LAMINATED PANEL.

28 REMOVE ABANDONED VIDEO OUTLET AND ABANDONED J-BOX WITH COVERPLATE. REPAIR WALL, TEXTURE TO MATCH EXISTING.

29 REMOVE PATIENT CHARTING STATION, AND RETAIN FOR REPLACEMENT

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HKS

ARCHITECT
HKS, INC.
2500 ANTHEM VILLAGE DR.
HENDERSON, NV 89052

MEP CONSULTANT
HARRIS CONSULTING ENGINEERS, LLC
6630 SURREY ST., SUITE 100
LAS VEGAS, NEVADA 89119

OWNER
UNIVERSITY MEDICAL CENTER OF SOUTHERN NEVADA
1800 W. CHARLESTON BLVD.
LAS VEGAS, NEVADA 89102

Bid 2014-08 - Labor and Delivery Renovations
PWP# CL-2014 – 270

REGISTERED PROFESSIONAL ARCHITECT
27915
IRENE M. CLARK
Date Signed 06/05/2014
ARIZONA, U.S.A.
EXPIRES: 06/30/2015

KEY PLAN

UMC UNIVERSITY MEDICAL CENTER
7th Floor Renovation

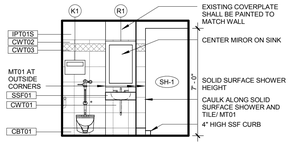
REVISION NO.	DESCRIPTION	DATE

HKS PROJECT NUMBER
16922.000
DATE
06/15/2014
ISSUE
ISSUED FOR BID

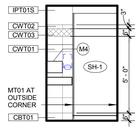
SHEET TITLE
INTERIOR FINISH PLANS - TYPICAL

SHEET NO.
A2.01

PLOT DATE: 6/11/2014 4:21:33 PM TEMPLATE VERSION: 2.0.4.20130021



18 SEMI-PRIVATE POSTPARTUM TOILET/SINK ELEVATION
1/4" = 1'-0"



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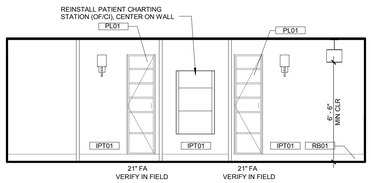
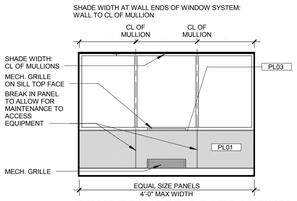
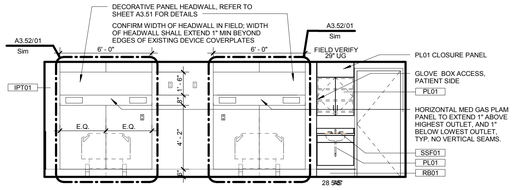
1/4" = 1'-0"



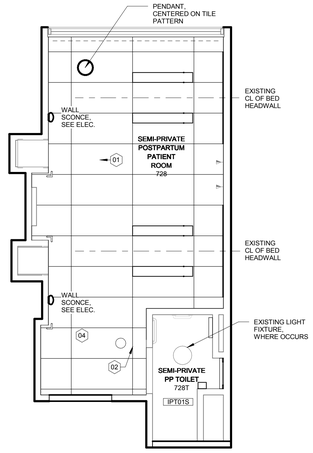
15 SEMI-PRIVATE POSTPARTUM FOOTWALL ELEVATION
1/4" = 1'-0"



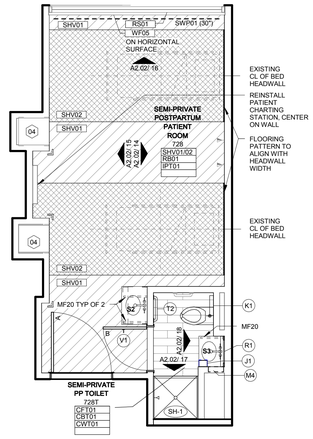
16 SEMI-PRIVATE POSTPARTUM WINDOW ELEVATION
1/4" = 1'-0"



14 SEMI-PRIVATE POSTPARTUM HEADWALL ELEVATION
1/4" = 1'-0"



13 SEMI-PRIVATE POSTPARTUM REFLECTED CEILING PLAN SP
1/4" = 1'-0"



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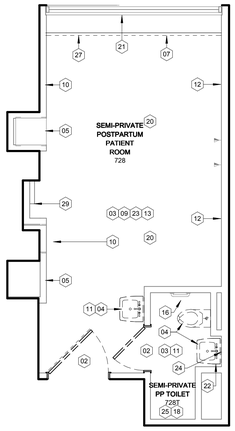
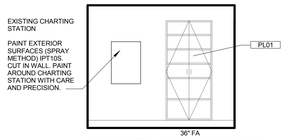
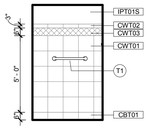


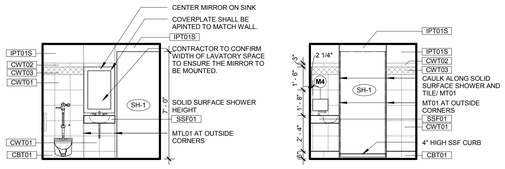
11 SEMI-PRIVATE POSTPARTUM DEMO PLAN SP
1/4" = 1'-0"



10 PRIVATE POSTPARTUM NURSE CARE CABINET
1/4" = 1'-0"

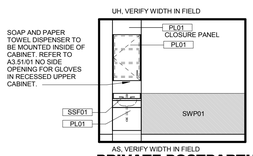


09 PRIVATE POSTPARTUM BACK WALL
1/4" = 1'-0"

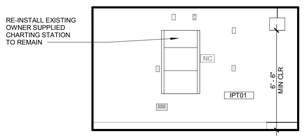


08 PRIVATE POSTPARTUM TOILET/SINK ELEVATION
1/4" = 1'-0"

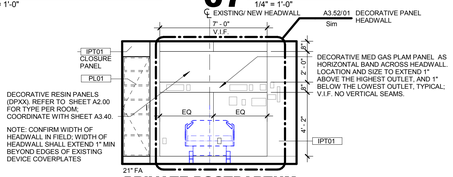
07 PRIVATE POSTPARTUM SHOWER ELEVATION
1/4" = 1'-0"



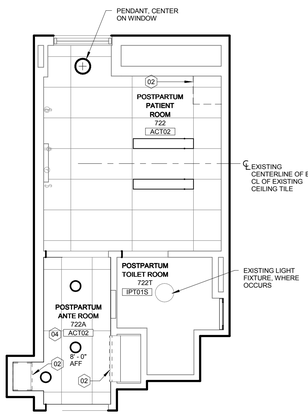
06 PRIVATE POSTPARTUM NURSE CARE ELEVATION
1/4" = 1'-0"



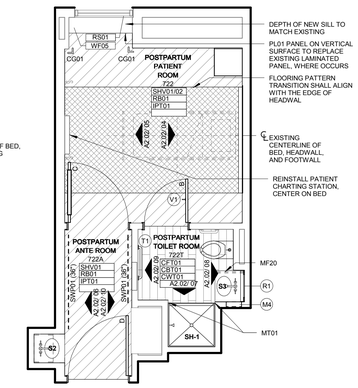
05 PRIVATE POSTPARTUM FOOTWALL ELEVATION
1/4" = 1'-0"



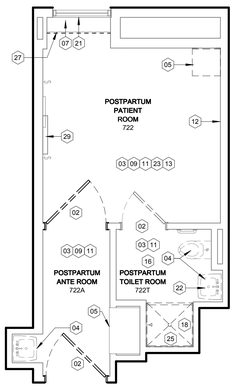
04 PRIVATE POSTPARTUM HEADWALL ELEVATION
1/4" = 1'-0"



03 PRIVATE POSTPARTUM REFLECTED CEILING PLAN PP
1/4" = 1'-0"



02 PRIVATE POSTPARTUM FINISH PLAN PP
1/4" = 1'-0"



01 PRIVATE POSTPARTUM DEMO PLAN PP
1/4" = 1'-0"

REFLECTED CEILING PLAN GENERAL NOTES

1. THE ROOMS IDENTIFIED ON PLANS AS "TYPICAL" ARE NOTED TO DEPICT INTENT OF PROJECT SCOPE AND DESIGN. EACH ROOM MAY BE DIFFERENT IN ACTUAL LAYOUT, DESIGN, LOCATION, AND MAY BE MIRRORED. CONTRACTOR SHALL SURVEY EACH ROOM, AND IDENTIFY AND NOTIFY ARCHITECT OF DEVIATIONS FROM THE "TYPICAL" PLAN THAT AFFECT CEILING HEADWALL OR MILLWORK LAYOUT OR REQUIRED CLEARANCES.
2. IN THE CASE OF MINOR DISCREPANCIES BETWEEN MEP AND ARCHITECTURAL DOCUMENTS REGARDING THE LOCATION OF CEILING MOUNTED COMPONENTS, THE ARCHITECTURAL REFLECTED CEILING PLAN SHALL GOVERN. IN THE CASE OF MAJOR DISCREPANCIES, THE ARCHITECT SHALL BE NOTIFIED AS SOON AS THE DISCREPANCY IS DISCOVERED PRIOR TO PROCEEDING WITH THE WORK.
3. REFERENCE MECHANICAL AND ELECTRICAL DRAWINGS FOR MOUNTING LOCATIONS OF ITEMS WHERE NO CEILING IS REQUIRED OR INDICATED.
4. LIGHTS, DIFFUSERS, EXIT SIGNS, SMOKE DETECTORS, SPEAKERS, STROBES AND MISCELLANEOUS DEVICES SHALL BE CENTERED IN THE CEILING TILE PATTERN IN WHICH THEY OCCUR, U.N.O.
5. DIMENSIONS AT CUBICLE CURTAIN TRACKS ARE TO CENTER OF TRACK, TYP.
6. ALL CUBICLE CURTAIN TRACKS MUST CLEAR DOOR SWINGS BY 3' MINIMUM.
7. CLEAN, PAINT, AND REPLACE ALL MECHANICAL DIFFUSERS GRILLES, REGISTERS; CLEAN AND REPLACE ALL LIGHT FIXTURES AND DEVICE COVERPLATES TO REMAIN OR TO BE RE-USED.
8. ALL GYP. BD. CEILINGS IN PATIENT TOILET ROOMS SHALL REMAIN. REPAIR AS REQUIRED (I.E. VOID AROUND SPRINKLERHEAD ESCUTCHEON, ETC.) AND PAINT.
9. REPLACE ALL EXISTING APPURTENCES IN CEILING AFTER CEILING FINISHES UPGRADE (I.E. SMOKE DETECTOR, MECHANICAL DIFFUSER/ REGISTERS/ GRILLS, SPRINKLERHEADS AND ESCUTCHEONS, ANTENNAE, OCCUPANCY SENSORS, ETC.) U.N.O.

REFLECTED CEILING PLAN KEYNOTES

01. REPLACE CUBICLE CURTAIN TRACK. THOROUGHLY CLEAN PRIOR TO REINSTALLATION IN PLACE.
02. CLOSURE PANEL CONTINUES TO CEILING.
03. NEW SUSPENDED CEILING TILE AND GRID SYSTEM. REFER TO FINISH LIST ON SHEET A3.40.
04. EXISTING SUSPENDED CEILING GRID SHALL BE REPAIRED (WHERE REQUIRED) AND PAINTED WHITE. INSTALL NEW CEILING TILE. (2 X 4). REFER TO FINISH LIST ON SHEET A3.40.

FINISH FLOOR HATCH PATTERN LEGEND

VCT01, VCT02, VCT03, VCT04, CFT01, SHV01, SHV02

FINISH TAG LEGEND

XXX## ← FLOORING
XXX## ← BASE
XXX## ← WALL
XXX## ← CEILING

FLOOR PLAN GENERAL NOTES

1. THE ROOMS IDENTIFIED ON PLANS AS "TYPICAL" ARE NOTED TO DEPICT INTENT OF PROJECT SCOPE AND DESIGN. EACH ROOM MAY BE DIFFERENT IN ACTUAL LAYOUT, DESIGN, LOCATION, AND MAY BE MIRRORED. CONTRACTOR SHALL SURVEY EACH ROOM, AND IDENTIFY AND NOTIFY ARCHITECT OF DEVIATIONS FROM THE "TYPICAL" PLAN THAT AFFECT HEADWALL OR MILLWORK LAYOUT OR REQUIRED CLEARANCES.
2. REFER TO SHEET A3.40 FOR TYPICAL ACCESSORY MOUNTING AND EQUIPMENT DIAGRAMS.
3. REFER TO SHEET A3.40 FOR WALL PROTECTION TYPES AND DETAILS.
4. REFER TO SHEET A3.40 FOR DOOR INFORMATION, SCHEDULES AND DETAILS.
5. REFER TO SHEET A3.40 FOR FINISH INFORMATION.
6. ALL NEW DOORS SHALL RECEIVE NEW FLOORING TRANSITIONS.
7. PROTECT ALL EXTERIOR CORNERS WITH CORNER GUARDS.
8. COMPLETELY CLEAN AND SAND SMOOTH ALL HOLLOW METAL DOORS FRAMES. PREP AND PRIME AS REQUIRED; PAINT PER FINISH LIST ON SHEET A3.40.
9. EXTERIOR VERTICAL TILE CORNERS SHALL USE SCHLUTER RONDEC WITH TOP CAP AT TILE BULLNOSE (MT01).
10. IN ALL PATIENT TOILET ROOMS, INSTALL TILEBACKER WALLBOARD TO EXISTING FRAMING TO ALL WALLS RECEIVING TILE.
11. IN ANTEPARTUM AND POSTPARTUM PATIENT ROOMS, INSTALL GLASS MAT WATER RESISTANT WALLBOARD TO EXISTING FRAMING OF ALL SHOWER WALLS TO RECEIVE SOLID SURFACE PANELS.
12. IN NEW SOLID SURFACE SHOWER UNITS, PROVIDE BLOCKING IN EXISTING WALLS PER SHOWER MANUFACTURER'S RECOMMENDATIONS FOR SHOWER CURTAIN ROD, AND SPRAY WAND SLIDE BAR, ETC., FOR GRAB BARS, REFER TO SHEET A3.40.
13. REINSTALL EXISTING OR NEW WALL-MOUNTED ITEMS; CONTRACTOR SHALL PROVIDE BACKING IN NEW LOCATION. REFER TO SHEET A3.40.

DEMOLITION GENERAL NOTES

1. THE PLANS PRESENTED HEREIN ARE TO BE REFERENCED AS "TYPICAL" PER ROOM TYPE, AND ARE NOTED TO DEPICT INTENT OF PROJECT SCOPE AND DESIGN. EACH ROOM MAY BE DIFFERENT IN ACTUAL LAYOUT, DESIGN, LOCATION, AND MAY BE MIRRORED FROM THE DEPICTED "TYPICAL" ROOM TYPE AND FROM EACH OTHER. CONTRACTOR SHALL SURVEY EACH ROOM, AND IDENTIFY AND NOTIFY ARCHITECT OF DEVIATIONS FROM THE "TYPICAL" PLAN THAT AFFECT HEADWALL OR MILLWORK LAYOUT OR REQUIRED CLEARANCES.
2. ALL PATIENT SHOWERS THAT DO NOT INCLUDE A FIBERGLASS UNIT SHALL HAVE ALL WALL TILE (AND WALLBOARD SUBSTRATE) AND SHOWER PANS REMOVED. (NO SHOWER EXISTS IN ROOMS 707,709, AND 710.).
3. ALL FLOOR FINISHES (INCLUDING BASE) IN PATIENT ROOMS AND TOILET ROOMS SHALL BE REMOVED.
4. PARTIAL DEMOLITION OF EXISTING GYP WALLBOARD WHERE REQUIRED FOR INSTALLATION OF NEW MF20. CONFIRM LOCATIONS AND QUANTITIES IN FIELD.

DEMOLITION KEYNOTES (XX)

01. REMOVE WALL(S) (SHOWN DASHED), FULL HEIGHT, INCLUDING CLOSET HEADER; REMOVE EXISTING MIRRORED SLIDING DOOR, FRAME, AND FLOOR TRACK.
02. REMOVE DOOR AND HARDWARE; DOOR FRAME SHALL REMAIN. REMOVE MAGNETIC HOLD-OPEN FROM WALL, WHERE APPLICABLE. REPAIR WALL, MATCH EXISTING TEXTURE.
03. REMOVE FLOORING AND BASE IN IT'S ENTIRETY, INCLUDING FLOORING TRANSITION AT DOOR (WHERE APPLICABLE).
04. REMOVE PLUMBING FIXTURES. REFER TO PLUMBING DRAWINGS.
05. REMOVE ALL CASEWORK IN IT'S ENTIRETY.
06. REMOVE HEADWALL CASEWORK, ONLY. METAL CHASE FOR UTILITIES SHALL REMAIN IN PLACE AND OPERATIONAL. TEMPORARILY REMOVE AND RETAIN FOR REPLACEMENT ALL COVERPLATES (MED GAS, ELEC., DATA, ETC.) MED GAS QUALITY SHALL NOT BE COMPROMISED.
07. REMOVE WINDOW SILL.
08. REMOVE CEILINGS IN ITS ENTIRETY. SALVAGE DIFFUSERS, LIGHTS, SMOKE DETECTORS, ETC. AND RETAIN FOR RE-USE PER DRAWINGS OR RETURN TO OWNER.
09. REMOVE CEILING TILES, ONLY, AND REPLACE WITH NEW PER FINISH LIST. RETAIN EXISTING GRID AND REPAIR AS REQUIRED (I.E., BENDS, KINKS, BREAKAGE, SAFETY ISSUES, ETC.). PAINT GRID WHITE USING SPRAY METHOD.
10. REMOVE LIGHT FIXTURE; REPLACE WITH NEW WHERE NOTED, SEE ELEC. DRAWINGS.
11. REMOVE ALL TOILET ACCESSORIES (SOAP DISPENSERS, PAPER TOWEL DISPENSERS, TOILET PAPER DISPENSER, SEAT COVER DISPENSER, ETC.)
12. EXISTING WALL PROTECTION TO REMAIN. HEADWALLS OR NEW WALL PROTECTION TO BE PLACED OVER EXISTING PROVIDING TOTAL CONCEALMENT. REMOVE ANY MATERIAL THAT REMAINS VISIBLE .
13. REMOVE EXISTING CORNER GUARD(S) FOR REPLACEMENT.
14. REMOVE BED LOCATOR.
15. REMOVE CRASH RAIL AND/OR HANDRAIL FOR REPLACEMENT.
16. REMOVE ACCESSORIES, I.E. ROBE HOOKS, SLIDE BRACKET.
17. REMOVE DOOR FRAME GUARD; PREPARE FRAME FOR REPLACEMENT.
18. REMOVE WALL TILE AND/OR WALLBOARD TO FACE OF STUDS.
19. REMOVE GRAB BARS AND RETAIN FOR REUSE. THOROUGHLY CLEAN PRIOR TO REATTACHMENT IN PLACE.
20. REMOVE CUBICLE CURTAIN TRACK AND I.V. TRACK. RETAIN CUBICLE CURTAIN TRACK FOR REUSE AND RE-ATTACHMENT IN PLACE.
21. REMOVE WINDOW COVERING, INCLUDING TRACK, VALANCE, ETC.
22. REMOVE PORTION OF EXISTING GYP BD AND STUD FOR NEW TOILETRY RECESS.
23. REMOVE WALLPAPER BORDER.
24. REMOVE MIRROR.
25. REMOVE TERRAZZO SHOWER PAN IN IT'S ENTIRETY.
26. ISOLATION/ GROUNDING PANEL, TO REMAIN.
27. REMOVE LAMINATED PANEL.
28. REMOVE ABANDONED VIDEO OUTLET AND ABANDONED J-BOX WITH COVERPLATE. REPAIR WALL, TEXTURE TO MATCH EXISTING.
29. REMOVE PATIENT CHARTING STATION, AND RETAIN FOR REPLACEMENT

HKS

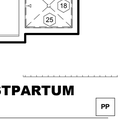
ARCHITECT
HKS, INC.
2500 ANTHEM VILLAGE DR.
HENDERSON, NV 89052

MEP CONSULTANT
HARRIS CONSULTING ENGINEERS, LLC
6630 SURREY ST., SUITE 100
LAS VEGAS, NEVADA 89119

UMC UNIVERSITY MEDICAL CENTER
7th Floor Renovation

OWNER
UNIVERSITY MEDICAL CENTER OF SOUTHERN NEVADA
1800 W. CHARLESTON BLVD.
LAS VEGAS, NEVADA 89102

Bid 2014-08 - Labor and Delivery Renovations
PWP# CL-2014 – 270



EXPIRES: 06/30/2015

KEY PLAN

REVISION

NO.	DESCRIPTION	DATE

HKS PROJECT NUMBER
16922.000

DATE
06/15/2014

ISSUE
ISSUED FOR BID

SHEET TITLE
INTERIOR FINISH PLANS - TYPICAL

SHEET NO.
A2.02

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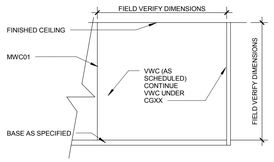
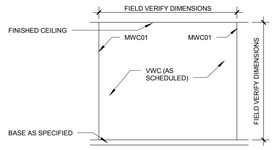
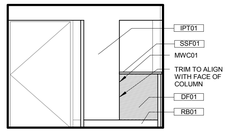
PLOT DATE: 6/11/2014 4:22:17 PM TEMPLATE VERSION 2.0 4.20130621



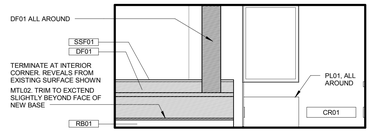
08 VINYL WALLCOVERING ELEVATION
1/4" = 1'-0"



07 TYPICAL VINYL WALLCOVERING ELEVATION
1/4" = 1'-0"



06 PHYSICIANS STATION
1/4" = 1'-0"



LDR NURSE STATION WEST ELEVATION
05
1/4" = 1'-0"

DEMOLITION KEYNOTES (KK)

01 REPLACE EXISTING WALL SCONCE WITH NEW WALL SCONCE; SEE ELEC. DRAWING.

02 RE-LAMINATE OVER EXISTING HVAC COVER (PL01), ALL SIDES.

03 REMOVE EXISTING TRANSACTION TOP, AND REPLACE WITH NEW TRANSACTION TOP; REFER TO DETAIL A3.50/05.

04 REMOVE EXISTING CORNER GUARD ALONG VERTICAL EDGE OF MILLWORK, AND REPLACE WITH CG01 TO UNDERSIDE OF TRANSACTION TOP.

05 ADHERE DF01 ONTO VERTICAL SURFACES OF EXISTING CABINET, CORRIDOR SIDE. TERMINATE NEW FINISH MATERIAL AT INTERIOR CORNER, WRAPPING CORNERS AND EDGES AS REQUIRED. REMOVE ALL SUB-SURFACE BUBBLES, COMPLETELY. ASSURE STRAIGHT, CRISP CUTS; SPLICES SHALL MATCH UP EXACTLY.

06 ADHERE DF01 ONTO VERTICAL END PANEL OF EXISTING CABINET. TERMINATE MATERIAL UNDER NEW CORNER GUARD.

07 REMOVE EXISTING CORNER GUARD ALONG VERTICAL EDGE OF CABINET AND REPLACE WITH CG01, FULL HEIGHT OF CABINET.

08 PAINT EXTERIOR SURFACES OF NURSE SERVER (SPRAY METHOD). IPTX10S. CUT-IN WALL PAINT AROUND NURSE SERVER WITH CARE AND PRECISION.

09 ADHERE LARGE WALL GRAPHIC TO WALL, AND PROVIDE FINISHING EDGE MWC01. REFER TO SHEET A2.00 FOR GRAPHIC NUMBER.

10 EXISTING UTILITY DOOR TO REMAIN. PAINT DOOR AND FRAME IPT10S.

11 REMOVE AND REPLACE DOOR AND DOOR HARDWARE WITH NEW PRODUCT. DOOR SHALL BE ACROVYN TYPE; MATCH EXISTING DOOR RATING AND LITES. MATCH EXISTING DOOR HARDWARE SPECIFICATIONS (FACILITY STANDARDS), FUNCTION AND OPERATION, U.N.O. BY OWNER, AND RATING ASSEMBLY REQUIREMENT. DOOR AND HARDWARE SHALL BE OF/ CI.

FINISH FLOOR HATCH PATTERN LEGEND

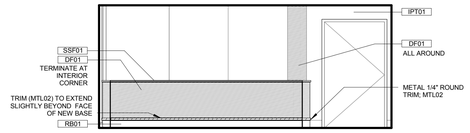
VCT01, VCT02, VCT03, VCT04, CFT01, SHV01, SHV02

FINISH TAG LEGEND

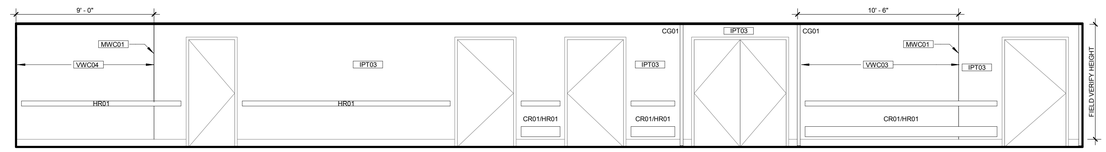
XXX## ← FLOORING
XXX## ← BASE
XXX## ← WALL
XXX## ← CEILING

FLOOR PLAN GENERAL NOTES

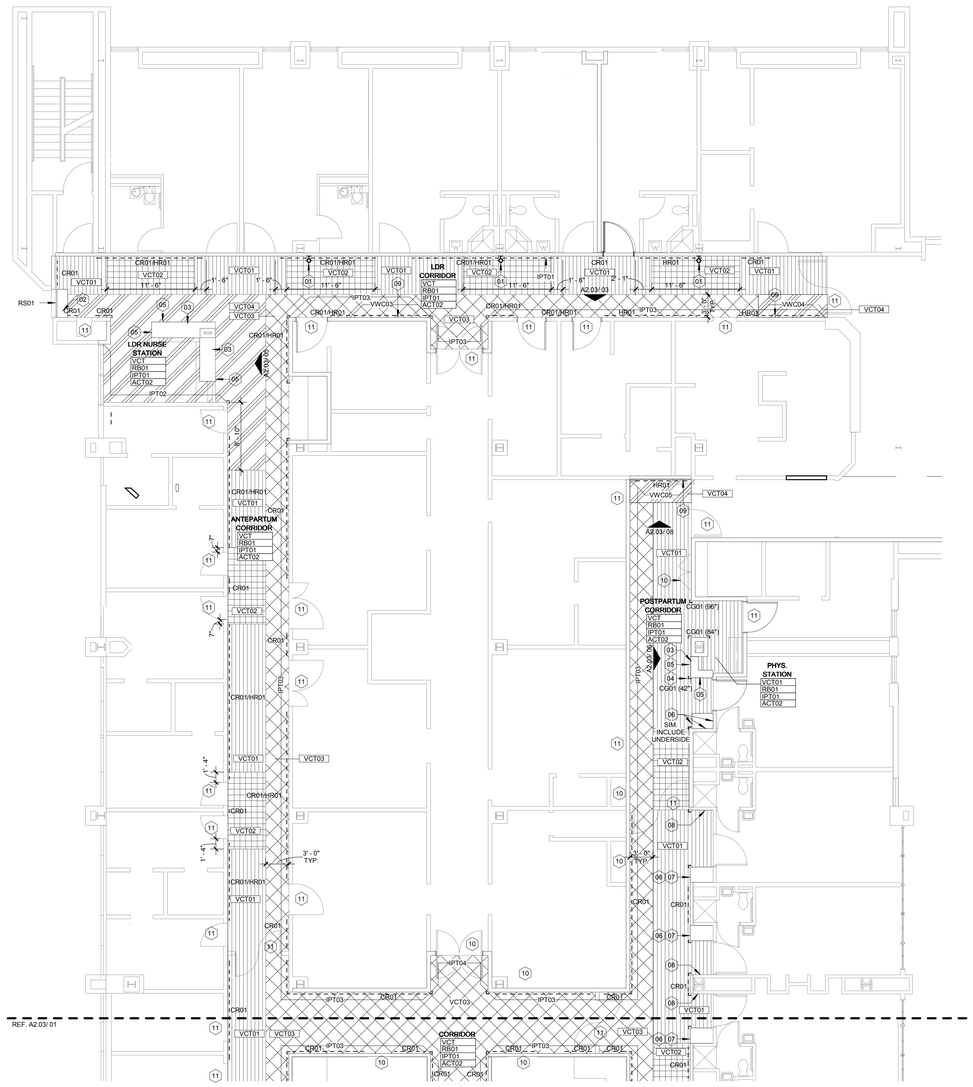
1. REMOVE ALL EXISTING HANDRAIL, CRASHRAIL, CORNER GUARDS AND SHEET WALL PROTECTION FOR REPLACEMENT. CONTRACTOR SHALL VERIFY FULL EXTENT OF REPLACEMENT PRIOR TO BID AND EXECUTION OF WORK; VERIFY IN FIELD.
2. REMOVE ALL EXISTING FLOORING AND WALL BASE WITHIN SCOPE AREA FOR REPLACEMENT. PATCH AND PREPARE AS REQUIRED. NEW FLOORING SHALL EXTEND TO THE CENTERLINE OF DOOR, U.N.O. CAULK BOTTOM OF DOOR FRAME TO NEW FLOORING.
3. REMOVE EXISTING CEILING TILE FOR REPLACMEENT IN EXISTING GRID, PER ACT02. REPLACE DAMAGED, BENT, DISCOLORED GRID AS REQUIRED. PAINT ALL GRID WHITE (SPRAY METHOD) PRIOR TO TILE REPLACEMENT. REMOVE, CLEAN, AND REPLACE ALL LIGHT FIXTURES, MECHANICAL GRILLES/ DIFFUSERS, ETC. RELAMP ALL LIGHT FIXTURES TO BE REUSED; PAINT (SPRAY METHOD) ALL EXISTING MECHANICAL GRILLES/ DIFFUSERS TO BE REUSED.
   - ALTERNATE 1.A: INCLUDE REMOVAL AND REPLACEMENT OF ALL CEILING GRID, PER ACT01.
5. SET BOTTOM OF NEW CORNER GUARDS THAT EXTEND TO FLOOR ONTO A BEAD OF CLEAR SEALANT. CAULK ALL NEW CORNER GUARDS TO FLOORING.
6. SAND AND PREPARE ALL EXISTING HOLLOW METAL DOOR AND WINDOW FRAMES FOR RE-PAINTING. AVOID VISIBLE BRUSHSTROKES. PAINT ALL WINDOW AND DOOR FRAMES IPT10S, CORRIDOR SIDE.
7. CORNER GUARDS ARE SHOWN GRAPHICALLY AS "L", ONLY. THE "CGXX" IS NOT INCLUDED IN THIS PLAN.



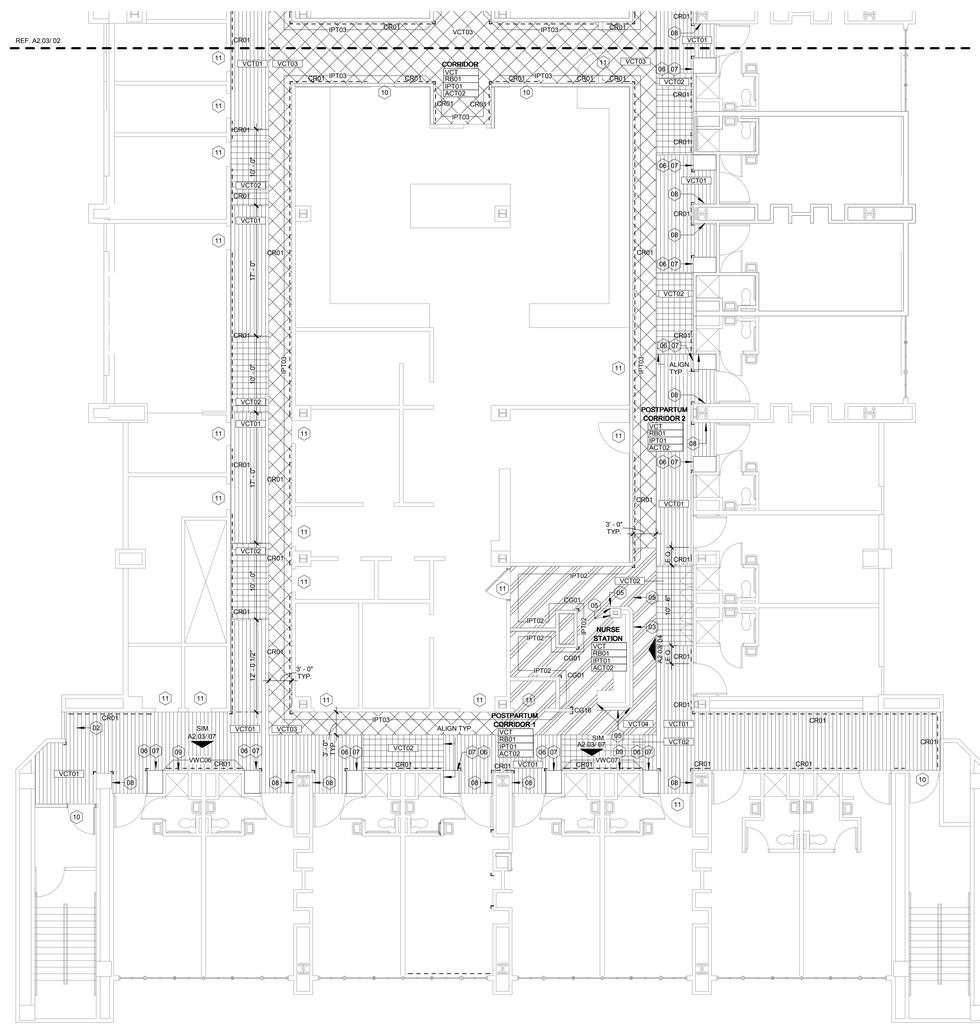
POSTPARTUM NURSE STATION WEST ELEVATION
04
1/4" = 1'-0"



03 TYPICAL CORRIDOR (CORE SIDE) ELEVATION
1/4" = 1'-0"



02 ALTERNATE 1 FINISH PLAN - NORTH
1/8" = 1'-0"



01 ALTERNATE 1 FINISH PLAN - SOUTH
1/8" = 1'-0"

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ARCHITECT
HKS, INC.
2500 ANTHEM VILLAGE DR.
HENDERSON, NV 89052

MEP CONSULTANT
HARRIS CONSULTING ENGINEERS, LLC
6630 SURREY ST., SUITE 100
LAS VEGAS, NEVADA 89119

UMC UNIVERSITY MEDICAL CENTER
7th Floor Renovation

OWNER
UNIVERSITY MEDICAL CENTER OF SOUTHERN NEVADA
1800 W. CHARLESTON BLVD.
LAS VEGAS, NEVADA 89102

Bid 2014–08 - Labor and Delivery Renovations
PWI# CL-2014 – 270

Registered Architect
CERTIFICATE NO.
27915
IRENE M. CLARK
Date Signed 06/15/14
ARIZONA, U.S.A.
EXPIRES: 06/30/2015

KEY PLAN

REVISION

NO.	DESCRIPTION	DATE

HKS PROJECT NUMBER
16922.000

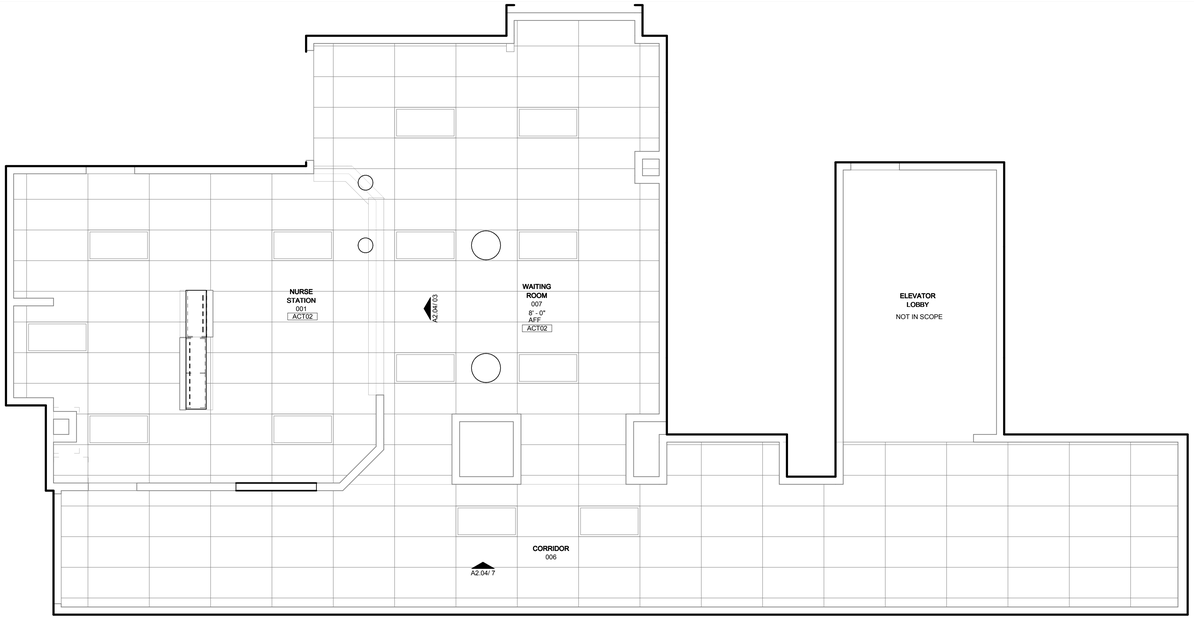
DATE
06/15/2014

ISSUE
ISSUED FOR BID

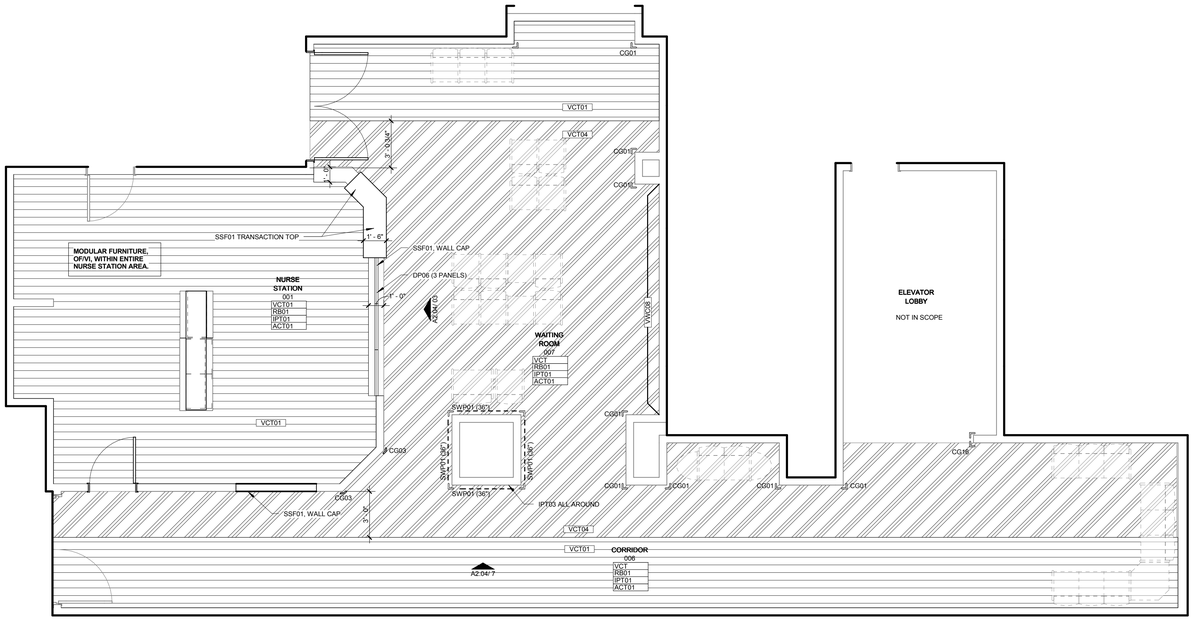
SHEET TITLE
ALTERNATE 1 - CORRIDOR REFINISH

SHEET NO.
A2.03

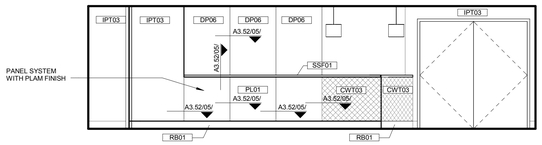
PLOT DATE: 6/17/2014 4:22:54 PM TEMPLATE VERSION: 2.6.4 20130620



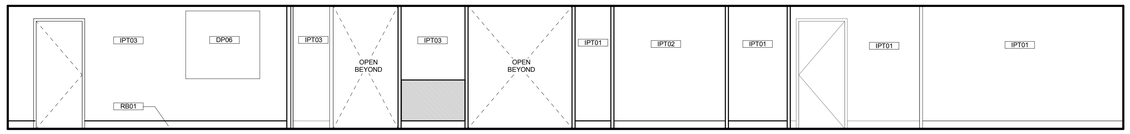
02 LOBBY/WAITING REFLECTED CEILING PLAN
1/4" = 1'-0"



01 LOBBY FINISH PLAN
1/4" = 1'-0"



03 NURSE STATION AT WAITING ELEVATION
1/4" = 1'-0"



7 LOBBY NORTH
1/4" = 1'-0"

REFLECTED CEILING PLAN GENERAL NOTES

1. THE ROOMS IDENTIFIED ON PLANS AS "TYPICAL" ARE NOTED TO DEPICT INTENT OF PROJECT SCOPE AND DESIGN. EACH ROOM MAY BE DIFFERENT IN ACTUAL LAYOUT, DESIGN, LOCATION, AND MAY BE MIRRORED. CONTRACTOR SHALL SURVEY EACH ROOM, AND IDENTIFY AND NOTIFY ARCHITECT OF DEVIATIONS FROM THE "TYPICAL" PLAN THAT AFFECT CEILING HEADWALL OR MILLWORK LAYOUT OR REQUIRED CLEARANCES.
2. IN THE CASE OF MINOR DISCREPANCIES BETWEEN MEP AND ARCHITECTURAL DOCUMENTS REGARDING THE LOCATION OF CEILING MOUNTED COMPONENTS, THE ARCHITECTURAL REFLECTED CEILING PLAN SHALL GOVERN. IN THE CASE OF MAJOR DISCREPANCIES, THE ARCHITECT SHALL BE NOTIFIED AS SOON AS THE DISCREPANCY IS DISCOVERED PRIOR TO PROCEEDING WITH THE WORK.
3. REFERENCE MECHANICAL AND ELECTRICAL DRAWINGS FOR MOUNTING LOCATIONS OF ITEMS WHERE NO CEILING IS REQUIRED OR INDICATED.
4. LIGHTS, DIFFUSERS, EXIT SIGNS, SMOKE DETECTORS, SPEAKERS, STROBES AND MISCELLANEOUS DEVICES SHALL BE CENTERED IN THE CEILING TILE PATTERN IN WHICH THEY OCCUR, U.N.O.
5. DIMENSIONS AT CUBICLE CURTAIN TRACKS ARE TO CENTER OF TRACK, TYP.
6. ALL CUBICLE CURTAIN TRACKS MUST CLEAR DOOR SWINGS BY 3' MINIMUM.
7. CLEAN, PAINT, AND REPLACE ALL MECHANICAL DIFFUSERS GRILLES, REGISTERS; CLEAN AND REPLACE ALL LIGHT FIXTURES AND DEVICE COVERPLATES TO REMAIN OR TO BE RE-USED.
8. ALL GYP. BD. CEILINGS IN PATIENT TOILET ROOMS SHALL REMAIN. REPAIR AS REQUIRED (I.E. VOID AROUND SPRINKLERHEAD ESCUTCHEON, ETC.) AND PAINT.
9. REPLACE ALL EXISTING APPURTENCES IN CEILING AFTER CEILING FINISHES UPGRADE (I.E. SMOKE DETECTOR, MECHANICAL DIFFUSER/ REGISTERS/ GRILLS, SPRINKLERHEADS AND ESCUTCHEONS, ANTENNAE, OCCUPANCY SENSORS, ETC.) U.N.O.

REFLECTED CEILING PLAN KEYNOTES

01 REPLACE CUBICLE CURTAIN TRACK. THOROUGHLY CLEAN PRIOR TO REINSTALLATION IN PLACE.

02 CLOSURE PANEL CONTINUES TO CEILING.

03 NEW SUSPENDED CEILING TILE AND GRID SYSTEM. REFER TO FINISH LIST ON SHEET A3.40.

04 EXISTING SUSPENDED CEILING GRID SHALL BE REPAIRED (WHERE REQUIRED) AND PAINTED WHITE. INSTALL NEW CEILING TILE (2 X 4). REFER TO FINISH LIST ON SHEET A3.40.

FINISH FLOOR HATCH PATTERN LEGEND

VCT01, CFT01, VCT02, VCT03, SHV01, VCT04, SHV02

FINISH TAG LEGEND

XX/##
XX/##
XX/##
XX/##

FLOORING
BASE
WALL
CEILING

FLOOR PLAN GENERAL NOTES

1. THE ROOMS IDENTIFIED ON PLANS AS "TYPICAL" ARE NOTED TO DEPICT INTENT OF PROJECT SCOPE AND DESIGN. EACH ROOM MAY BE DIFFERENT IN ACTUAL LAYOUT, DESIGN, LOCATION, AND MAY BE MIRRORED. CONTRACTOR SHALL SURVEY EACH ROOM, AND IDENTIFY AND NOTIFY ARCHITECT OF DEVIATIONS FROM THE "TYPICAL" PLAN THAT AFFECT HEADWALL OR MILLWORK LAYOUT OR REQUIRED CLEARANCES.
2. REFER TO SHEET A3.40 FOR TYPICAL ACCESSORY MOUNTING AND EQUIPMENT DIAGRAMS.
3. REFER TO SHEET A3.40 FOR WALL PROTECTION TYPES AND DETAILS.
4. REFER TO SHEET A3.40 FOR DOOR INFORMATION, SCHEDULES AND DETAILS.
5. REFER TO SHEET A3.40 FOR FINISH INFORMATION.
6. ALL NEW DOORS SHALL RECEIVE NEW FLOORING TRANSITIONS.
7. PROTECT ALL EXTERIOR CORNERS WITH CORNER GUARDS.
8. COMPLETELY CLEAN AND SAND SMOOTH ALL HOLLOW METAL DOORS FRAMES. PREP AND PRIME AS REQUIRED; PAINT PER FINISH LIST ON SHEET A3.40.
9. EXTERIOR VERTICAL TILE CORNERS SHALL USE SCHLUTER RONDEC WITH TOP CAP AT TILE BULLNOSE (MT01).
10. IN ALL PATIENT TOILET ROOMS, INSTALL TILEBACKER WALLBOARD TO EXISTING FRAMING TO ALL WALLS RECEIVING TILE.
11. IN ANTEPARTUM AND POSTPARTUM PATIENT ROOMS, INSTALL GLASS MAT WATER RESISTANT WALLBOARD TO EXISTING FRAMING OF ALL SHOWER WALLS TO RECEIVE SOLID SURFACE PANELS.
12. IN NEW SOLID SURFACE SHOWER UNITS, PROVIDE BLOCKING IN EXISTING WALLS PER SHOWER MANUFACTURER'S RECOMMENDATIONS FOR SHOWER CURTAIN ROD, AND SPRAY WAND SLIDE BAR, ETC.; FOR GRAB BARS, REFER TO SHEET A3.40.
13. REINSTALL EXISTING OR NEW WALL-MOUNTED ITEMS; CONTRACTOR SHALL PROVIDE BACKING IN NEW LOCATION. REFER TO SHEET A3.40.

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7th Floor Renovation

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Bid 2014-09 - Labor and Delivery Renovations
PWP# CL-2014 – 270

REGISTERED ARCHITECT
CERTIFICATE NO.
27915
IRENE M. CLARK
Date Signed 06/15/14
ARIZONA, U.S.A.
EXPIRES: 06/30/2015

KEY PLAN

REVISION

NO.	DESCRIPTION	DATE

HKS PROJECT NUMBER
16922.000

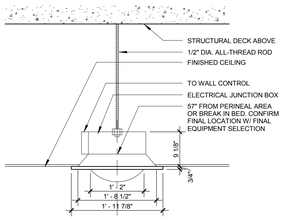
DATE
06/15/2014

ISSUE
ISSUED FOR BID

SHEET TITLE
ALTERNATE 2 - LOBBY/ WAITING REFINISH

SHEET NO.
A2.04

PLOT DATE: 6/11/2014 4:23:33 PM TEMPLATE VERSION: 2.0 4.2013/0621



NOTES:

1. 1/2" DIAMETER SUPPORT ROD CENTERED IN FIXTURE OPENING FOR TOTAL SUPPORT OF LIGHT. 1/2" NUTS AND WASHERS (2 EACH REQUIRED) FOR FIXTURE ATTACHMENT. CONTRACTOR SUPPLIED.

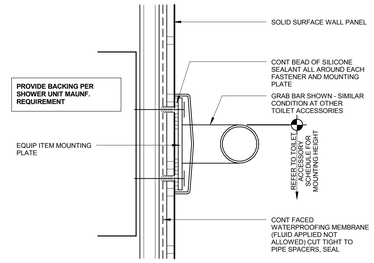
2. ALL WIRING, CONDUIT AND OTHER ELECTRICAL MATERIALS AS WELL AS INSTALLATION LABOR FOR THE SKYTRON LIGHT FIXTURE TO BE PROVIDED BY ELECTRICAL CONTRACTOR. ALL INSTALLATIONS OF SKYTRON LIGHTING FIXTURES SHOULD BE UNDER THE DIRECT SUPERVISION OF A SKYTRON SERVICE REPRESENTATIVE.

3. ALL WIRING TO BE IN ACCORDANCE WITH LOCAL CODES. 120V AC, 20A.

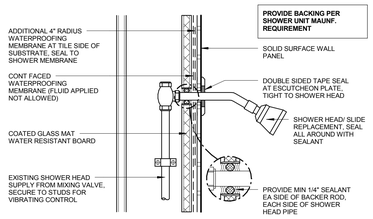
4. WALL CONTROL MEASURES 4-1.2" DEEP, 7-3/4" X 7-3/4".

5. WALL CONTROL TO LIGHT HEAD REQUIRES 5 COLOR CODED 14 AWG WIRES.

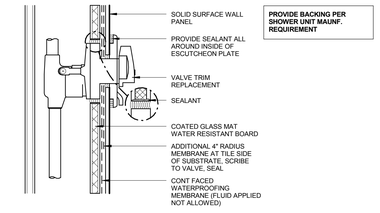
07 SKYTRON LIGHT
3/4" = 1'-0"



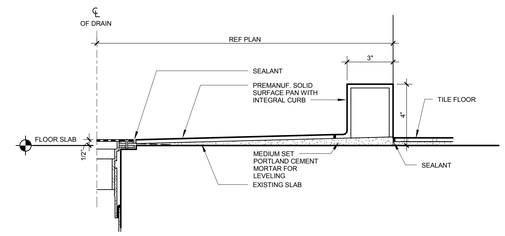
06 TOILET ACCESSORIES PENETRATION DETAIL AT TILED WALL
6" = 1'-0"



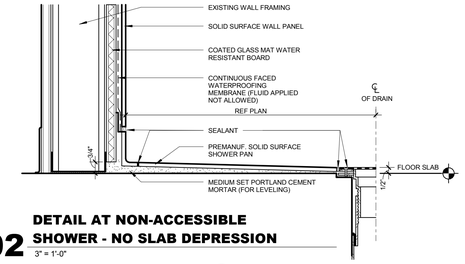
05 SHOWER HEAD PENETRATION DETAIL
3" = 1'-0"



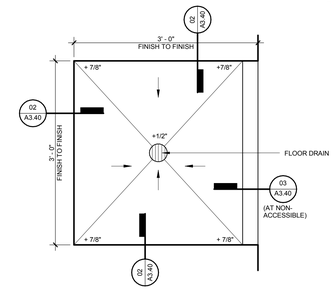
04 SHOWER CONTROL VALVE PENETRATION DETAIL
3" = 1'-0"



03 DETAIL AT NON-ACCESSIBLE SHOWER WITHOUT SLAB DEPRESSION
3" = 1'-0"



02 DETAIL AT NON-ACCESSIBLE SHOWER - NO SLAB DEPRESSION
3" = 1'-0"

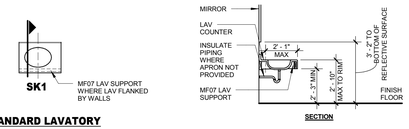


01 SHOWER REFERENCE PLAN WITHOUT SLAB DEPRESSION WITH CURB AND/OR THRESHOLD
1" = 1'-0"

EQUIPMENT/ ACCESSORIES RESPONSIBILITY MATRIX

DESIGNATION IN DRAWINGS	ITEM DESCRIPTION	FURNISHED BY	INSTALLED BY	NOTES
BIO HAZ	BIOHAZARDOUS WASTE BIN	O	O	
BABY WARMER	BABY WARMER	O	O	
NIGHT STAND	NIGHT STAND	O	O	
WOW	WORKSTATION ON WHEELS	O	O	
SKYTRON BIRTHING LIGHT	SKYTRON BIRTHING LIGHT	O	C	CONTRACTOR SHALL PROVIDE REQUIRED SUPPORT. ROOM RECEIVES PAIR.
BED	PATIENT BED	O	O	
PATIENT CHARTING STATION	PATIENT CHARTING STATION, WITHIN PATIENT ROOM	O	C	
	WHITE BOARD	O	O	
SHAPRS DISPENSING CONTAINER	SHAPRS DISPENSING CONTAINER	O	C	CONTRACTOR SHALL PROVIDE BACKING
GLOVE DISPENSER	GLOVE DISPENSER	O	C	
T.V., MOUNTING BRACKET	T.V., MOUNTING BRACKET	O	C (BRACKET)	CONTRACTOR SHALL PROVIDE BACKING; OWNER SHALL INSTALL T.V. ON BRACKET
	CUBICLE CURTAINS	O	O	TRACK AND HANGERS INSTALLED BY CONTRACTOR
	MAIN NURSE STATION FURNITURE	O	V	
A1	PAPER TOWLE DISPENSER	O	C	
J1	SOAP DISPENSER	O	C	
K1	SEAT COVER DISPENSER	O	C	
B1	TOILET PAPER DISPENSER	O	C	

STANDARD LAYOUTS - ADAAG/ANSI
SCALE: 1/4" = 1' - 0"



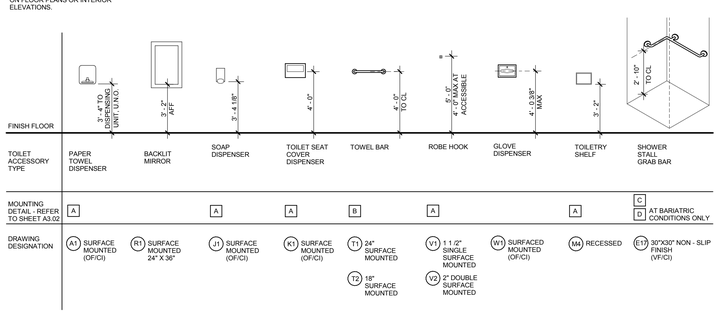
STANDARD LAVATORY
PLAN DESIGNATION

TOILET ACCESSORY MOUNTING DIAGRAM
SCALE: 1/4" = 1' - 0"

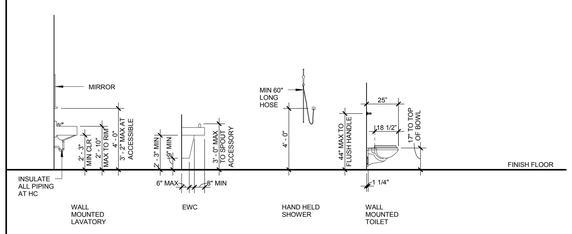
NOTE:

1. ACCESSORIES LISTED MAY HAVE GAPS IN ALPHABETICAL LISTING.

2. ACCESSORIES CAN APPEAR ON FLOOR PLANS OR INTERIOR ELEVATIONS.

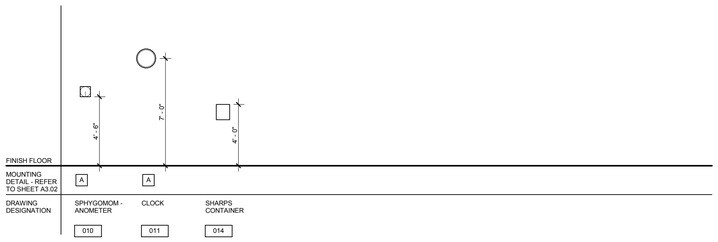


FIXTURE AND PARTITION MOUNTING DIAGRAM

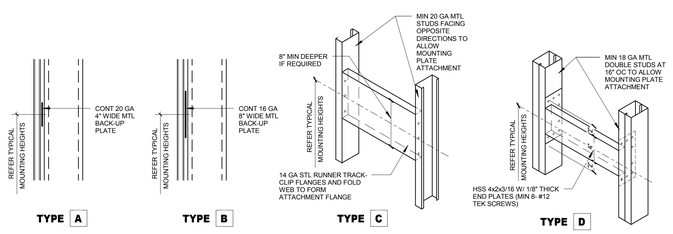


MEDICAL EQUIPMENT MOUNTING DIAGRAM
SCALE: 1/4" = 1' - 0"

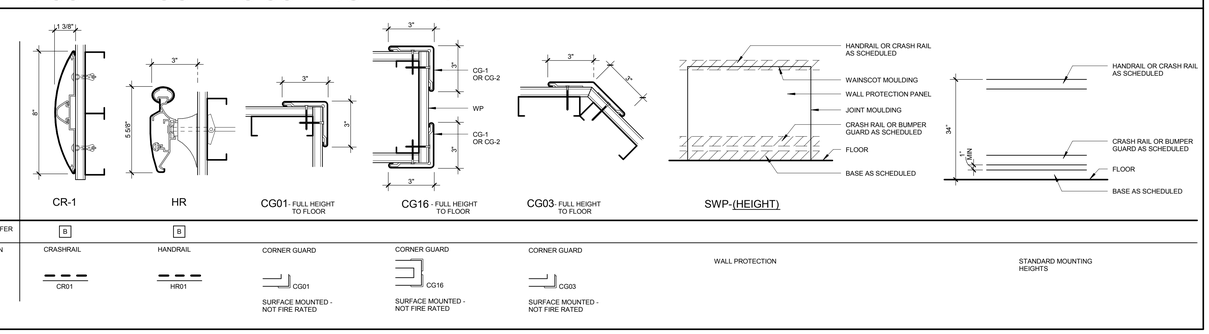
DRAWING DESIGNATION 009



ACCESSORY/ EQUIPMENT MOUNTING DETAILS



WALL AND CORNER GUARDS SCHEDULE
SCALE: 3" = 1' - 0"



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EXPIRES: 06/30/2015

KEY PLAN

REVISION

NO.	DESCRIPTION	DATE

HKS PROJECT NUMBER
16922.000
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ISSUE
ISSUED FOR PRICING
SHEET TITLE
ACCESSORIES INFORMATION AND DETAILS
SHEET NO.
A3.40

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PLOT DATE: 6/11/2014 4:24:14 PM TEMPLATE VERSION: 2.9.4.20130621

FINISH MATERIALS LEGEND

ACT	ACOUSTICAL CEILING TILE
AF	ACCESS FLOORING
AFA	ANODIZED FINISHED ALUMINUM
AMC	ACOUSTICAL METAL PAN CEILING PANEL
AMF	ARCHITECTURAL METAL FINISH
AMU	ADHERED MASONRY VENEER
AP	ACOUSTICAL WALL PANEL
BP	BRICK PAVING
CF	CONCRETE FINISH
CMU	CONCRETE MASONRY UNIT
CP	CARPET
CPT	CARPET TILE
CRPL	CHEMICAL RESISTANT PLASTIC LAMINATE
CSM	CAST STONE MASONRY
DEFS	DIRECT APPLIED EXTERIOR FINISH SYSTEM
EC	ELASTOMERIC COATING
EIFS	EXTERIOR INSULATION AND FINISH SYSTEM
FP	FABRIC WRAPPED PANEL
FRP	FIBERGLASS REINFORCED PANEL
FWC	FABRIC WALL COVERING
GL	GLAZING
GMU	GLASS MASONRY UNIT
GRC	GLASS-FIBER REINFORCED CONCRETE PANELS

FINISH MATERIALS LEGEND

GRG	GLASS-FIBER REINFORCED GYPSUM
GRP	GLASS-FIBER REINFORCED PLASTIC
GVP	GYPSUM VENEER PLASTER
GYP	GYPSUM WALL BOARD
HB	HORIZONTAL BLIND
HPC	HIGH PERFORMANCE COATING
ICP	INTERLOCKING PRECAST CONCRETE PAVING
IPT	INTERIOR PAINT
ITF	INTERLOCKING RUBBER TILE FLOORING
LT	LINOLEUM FLOOR TILE
MCP	METAL CEILING PANEL
MIC	MULTICOLORED INTERIOR COATINGS
ML	METAL LAMINATE
ORR	ORNAMENTAL HANDRAIL/RAILINGS
OM	ORNAMENTAL METALS
PC	ARCHITECTURAL PRECAST CONCRETE
PCP	PORTLAND CEMENT PLASTER
PL	PLASTIC LAMINATE
PT	PAINT
RB	RESILIENT BASE
RF	RESINOUS FLOORING
RS	ROLLER SHADE
RSF	RESILIENT SHEET FLOORING
RT	RUBBER FLOOR TILE

FINISH MATERIALS LEGEND

RTF	RESILIENT TILE FLOORING
SC	SEALED CONCRETE
SDG	SUSPENDED DECORATIVE GRID
SHL	SHEET LINOLEUM FLOORING
SHR	SHEET RUBBER FLOORING
SHV	SHEET VINYL FLOORING
SMC	SNAP-IN METAL PAN CEILINGS
SMU	CALCIUM SILICATE MASONRY UNIT
SS	STAINLESS STEEL
ST	STONE
T	TILE
TAC	TEXTURED ACRYLIC COATING
TC	TEXTURE COATING
TER	TERRAZZO
TIC	TEXTURED INTERIOR COATING
VCT	VINYL COMPOSITION TILE
VT	SOLID VINYL TILE
VWC	VINYL WALL COVERING
WC	WALL COVERING
WD	WOOD CEILING PANEL
WD	WOODWORK
WF	WOOD FLOORING
WP	WALL PROTECTION
XPT	EXTERIOR PAINT

FINISH REMARKS

1	ALL CEILING GRIDS WITHIN SCOPE OF WORK THAT WILL REMAIN AS EXISTING SHALL BE PAINTED IPTXX, U.N.O.
2	CONTRACTOR TO BUILD HEADWALLS FROM CENTERLINE OF BED.

DOOR SCHEDULE

DOOR NUMBER	WIDTH (")	HEIGHT (")	DOOR TYPE	FRAME TYPE	MATERIALS AND FINISHES: DOOR MATERIAL	DOOR FINISH	FRAME MATERIAL	FRAME FINISH	DOOR RATING	DETAILS: HEAD	JAMB	SILL	GLAZING TYPE	"X" (INCHES)	"Y" (INCHES)	VISION PANEL & LOUVER TYPE	CONTROLS: POWER OPERATOR	HOLD OPEN	HARDWARE	SECURITY RATING	COMMENTS	DOOR NUMBER
Level 1																						
A	3' - 11"	6' - 11"	A1	EX	ACRYLIC CLAD	FAC	EX HM	IPT10S	S	EX	EX	FT-7	-	-	-	-	-	-	HW-01		MAIN PATIENT ROOM ENTRY DOOR OFF CORRIDOR, U.N.O.	A
B	2' - 10"	6' - 11"	A1	EX	ACRYLIC CLAD	FAC	EX HM	IPT10S	-	EX	EX	FT-18	-	-	-	-	-	-	HW-02		PATIENT TOILET ROOM DOOR	B
C	3' - 11"	6' - 11"	A1	EX	ACRYLIC CLAD	FAC	EX HM	IPT10S	S	EX	EX	FT-18	TEMPERED	24	24	3	-	-	HW-03		VESTIBULE DOOR INTO PATIENT ROOM (ROOMS 722, 723)	C
D	3' - 11"	6' - 11"	A1	EX	ACRYLIC CLAD	FAC	EX HM	IPT10S	S	EX	EX	FT-7	TEMPERED	6	24	2	-	-	HW-01		MAIN PATIENT ROOM ENTRY DOOR OFF CORRIDOR, ROOMS 722, 723.	D

NOTES:

1. EXISTING DOORS AND HARDWARE, ONLY, ARE BEING REPLACED WITHIN EXISTING FRAME. (*) DENOTES DIMENSION THAT HAVE NOT BEEN VERIFIED. OWNER'S CONTRACTOR SHALL FIELD-VERIFY EACH DOOR TO BE REPLACED FOR ACCURATE SIZE PRIOR TO ORDER.
2. ALL NEW DOORS AND DOOR HARDWARE SHALL BE OWNER-FURNISHED / CONTRACTOR-INSTALLED (OF/CI).
3. S - DENOTES DOOR ASSEMBLY THAT IS CAPABLE OF RESISTING THE PASSAGE OF SMOKE. DOOR SHALL BEAR AN 'S' LABEL. DOOR SHALL COMPLY WITH IBC SECTION 407.3.1.
4. ALTERNATE #1: REPLACE ALL REMAINING EXISTING DOOR AND DOOR HARDWARE LOCATED WITHIN THE CORRIDORS. EXISTING FRAMES SHALL REMAIN AND BE RE-PAINTED. MATCH EXISTING DOOR ASSEMBLY RATING, LITES, HARDWARE SPECIFICATIONS (FACILITY STANDARDS), FUNCTION AND OPERATION, U.N.O. BY OWNER AND CURRENT RATING ASSEMBLY REQUIREMENT. DOOR AND HARDWARE SHALL BE OF/CI.

GENERIC DOOR HARDWARE LIST

HW-01

CONTINUOUS HINGE
PUSH/PULL PASSAGE SET
WALL STOP
SMOKE SEAL

HW-02

BUTT HINGES (3)
PRIVACY LOCKSET WITH EMERGENCY STAFF RELEASE
WALL STOP (OVERHEAD STOP WHERE REQUIRED)
SMOKE SEAL

HW-03

CONTINUOUS HINGE
PUSH/PULL PASSAGE SET
WALL STOP
SMOKE SEAL

ALTERNATE #1: DOOR AND DOOR HARDWARE SCHEDULE (PERFORMANCE-BASED, ONLY)

NOTE: ALL DOORS AND DOOR HARDWARE SHALL BE OWNER FURNISHED/ CONTRACTOR INSTALLED. ALL DOOR FRAMES SHALL BE EXISTING TO REMAIN. OWNER/DOOR AND HARDWARE CONSULTANT SHALL CONFIRM NEW DOORS, DOOR FRAMES AND HARDWARE TO COMPLY WITH WALL ASSEMBLY RATING REQUIREMENTS PER 2009 IBC.

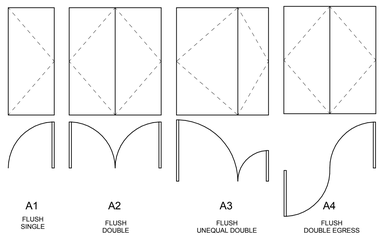
WALL TYPE	WALL FIRE RESISTANCE RAITING	DOOR ASSEMBLY TYPE/RATING	DOOR HARDWARE REQUIREMENTS: CLOSER (TIED TO AUTO-SMOKE DETECTOR)	SMOKE SEAL	POSITIVE LATCHING	GLAZING (WHERE PROVIDED) (SIZE LIMITATION BASED ON MANUFACTURER AND SIZE TESTED)	LOUVERS
SMOKE PARTITION - (711) • CORRIDOR • SUITE PERIMETER	0 HR (SMOKE RESISTANT)	"S" LABEL	• I-2 CORRIDOR DOORS NOT REQ'D TO BE SELF-CLOSING (407.3.1) • OTHER DOORS - CLOSER TIED TO SMOKE DETECTOR (SEC. 715.4.5.3) 508.2.5	REQUIRED	REQUIRED	SEALED TO RESIST SMOKE	NOT ALLOWED
SMOKE BARRIER (710) (SMOKE COMPARTIMENT)	1HR	20 MIN.	REQUIRED	REQUIRED	REQUIRED	20 MIN FOR DOOR LITE (45 MIN RATING FOR DOOR SIDELITES, TRANSOMS)	NOT ALLOWED
1-HR FIRE BARRIER (707): INCIDENTAL USE AREAS (508): • STORAGE > 50 S.F. • SOILED HOLDS/UTIL	1HR	45 MIN.	REQUIRED	REQUIRED	REQUIRED	45 MIN.	
SHAFT ENCLOSURE (708) • STAIR	2HR	90 MIN.	REQUIRED	REQUIRED	REQUIRED	90 MIN. FIRE RATED	
NON-RATED PARTITION	0 HR	-	NONE	NONE (INSTALL SILENCERS)	NONE	NON RESTRICTED	ALLOWED

DOOR LEGEND

DOOR NOTES

1. CONTRACTORS TO USE THE ARCHITECT'S FLOOR PLAN DESIGNATION DOOR NUMBER IN ADDITION TO THE ROOM NUMBER ON ALL SHOP DRAWING SCHEDULE SUBMITTALS.

DOOR TYPES

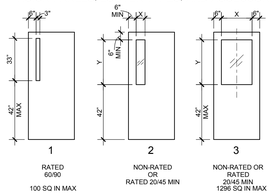


DOOR LEGEND

DOOR NOTES

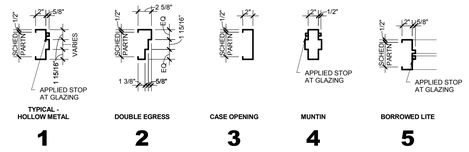
1. CONTRACTORS TO USE THE ARCHITECT'S FLOOR PLAN DESIGNATION DOOR NUMBER IN ADDITION TO THE ROOM NUMBER ON ALL SHOP DRAWING SCHEDULE SUBMITTALS.

VISION PANELS, LOUVER TYPES, AND ACCESSORIES



DOOR AND BORROWED LITE FRAME TYPES

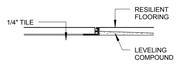
SCALE: 1" = 1' - 0"



FLOOR TRANSITIONS

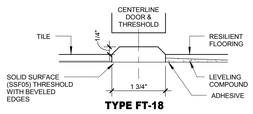
SCALE: HALF

METAL STRIPS



TYPE FT-16
(SCHLUTER SCHIENE)

RESILIENT FLOORING TO TILE



TYPE FT-18

INTERIOR FINISH SELECTION

ACOUSTICAL CEILING TILE

ACT01:
MANUFACTURER: ARMSTRONG
STYLE: CORTEGA SECONDLOOK
COLOR: WHITE
FINISH: MODEL 2758, FIREGUARD
SIZE: 2' X 4' WITH 15/16" FIREGUARD GRID, WHITE

ACT02:
MANUFACTURER: ARMSTRONG
NUMBER: CORTEGA SECONDLOOK
COLOR: WHITE
FINISH: MODEL 2758, FIREGUARD
SIZE: 2' X 4', IN EXISTING CEILING GRID, PAINTED WHITE

CUBICLE CURTAINS

CC01:
MANUFACTURER: KNOLL TEXTILES
STYLE: BLOOM
COLOR: NIGHT FLOWER C1462-6
NOTE: CURTAIN SHALL BE OF/CI; TRACK AND HANGERS ARE CF/CI

CORNER GUARD

CG01:
MANUFACTURER: ACROVYN
COLOR: EGGSHELL
TYPE: SM SERIES – 3"
SIZE: FULL HEIGHT CONTINUOUS TO FLOOR

CERAMIC BASE TILE

CBT01:
MANUFACTURER: AMERICAN OLEAN
STYLE NAME: SHADOW BAY
COLOR: BEACH SAND SH51
SIZE: 6" X 12" COVE BASE
GROUT MANUFACTURER:
GROUT COLOR: CONTRACTOR SHALL SUBMIT FULL COLOR CHART FOR ARCHITECT SELECTION.
GROUT SIZE: 1/8"
NOTE: MODIFIED POLYMER

CERAMIC FLOOR TILE

CFT01:
MANUFACTURER: DALTILE
STYLE NAME: FOREST PARK
COLOR: WHITE OAK FP94
SIZE: 6" X 36"
INSTALL: BRICK-JOINT, 1/3 OFFSET
GROUT MANUFACTURER:
GROUT COLOR: CONTRACTOR SHALL SUBMIT FULL COLOR CHART FOR ARCHITECT SELECTION.
GROUT SIZE: 1/8"
NOTE: EPOXY

CERAMIC WALL TILE

CWT01:
MANUFACTURER: AMERICAN OLEAN
STYLE NAME: SHADOW BAY
COLOR: MORNING MIST SH50
SIZE: 12" X 12"
PATTERN: GRID
GROUT MANUFACTURER:
GROUT COLOR: CONTRACTOR SHALL SUBMIT FULL COLOR CHART FOR ARCHITECT SELECTION.
GROUT SIZE: 1/8"
NOTE: COORDINATE WITH SCHLUTER "RONDEC" TRIM AND CAPS AT EXTERIOR TILE CORNERS.
NOTE: MODIFIED POLYMER

CWT02:
MANUFACTURER: AMERICAN OLEAN
STYLE NAME: SHADOW BAY
COLOR: BEACH SAND SH51
SIZE: 3" X 12" (BULLNOSE)
GROUT MANUFACTURER:
GROUT COLOR: CONTRACTOR SHALL SUBMIT FULL COLOR CHART FOR ARCHITECT SELECTION.
GROUT SIZE: 1/8"
NOTE: COORDINATE WITH SCHLUTER "RONDEC" TRIM AND CAPS AT EXTERIOR TILE CORNERS.
NOTE: MODIFIED POLYMER

CWT03:
MANUFACTURER: OCEANSIDE GLASS
STYLE NAME: MUSE BLEND
COLOR: SOUL MATE (CANE IRIDESCENT #006; ECLIPSE TWILIGHT #289, SHADOW IRIDESCENT #051, TRUFFLE MATTE #352
SIZE: 12" X 12" (TO BE CUT TO 6" X 12" PRIOR TO INSTALLATION)
PATTERN: CRESCENDO
NOTE: CONTRACTOR SHALL SUBMIT FULL COLOR CHART FOR ARCHITECT SELECTION. WHITE MASTIC; CONTRACTOR TO ENSURE THAT SPACING BETWEEN GLASS TILE TO BE TIGHT AND CONSISTENT AT 1/16", AND TILES ARE SET STRAIGHT AND SQUARE. GLASS TILE IS SUBJECT TO SCRATCHING WITH GROUT INSTALLATION. CONTRACTOR TO ENSURE A CLEAN GROUT INSTALLATION FREE OF SCRATCHING.
NOTE: MODIFIED POLYMER

CRASH RAIL

CR01:
MANUFACTURER: ACROVYN
COLOR: EGGSHELL
TYPE: SCR-50
SIZE: 5"

DECORATIVE FILM

DF01:
MANUFACTURER: DI-NOC
STYLE: ARCHITECTURAL FILMS
COLOR: SILK SERIES; SI - 1232
NOTE: WHERE NOTED ON PLANS IN ALTERNATE #1 CORRIDORS.

DOOR FRAME GUARDS

DFG01:
MANUFACTURER: ACROVYN
COLOR: EGGSHELL
SERIES: A2
SIZE: 1-3/4"
NOTE: TO BE INSTALLED ON ALL THE STRIKE SIDE OF DOOR ON NEW DOORS, U.N.O.

DECORATIVE PANELS

NOTE: CONTRACTOR TO FIELD VERIFY AND PROVIDE EXACT DIMENSIONS PRIOR TO GRAPHIC LAYOUT FOR ORDER PLACEMENT.

DP01:
MANUFACTURER: MDC
STYLE: GRAPHIC CUSTOM ACRYLIC PANEL
COLOR: GRAPHIC PROVIDED BY DESIGNER
SIZE: 1/4" GUAGE
LOCATION: LDR ROOM HEADWALLS;
REFERENCE SHEET A2.00 FOR SPECIFIC IMAGE LOCATION. CONTACT DAWN IVES 490.235.1907. FOR MATIERIAL PRICING PER SF, EXACT IMAGES WILL BE PROVIDED POST BID.

DP02:
MANUFACTURER: MDC
STYLE: GRAPHIC CUSTOM ACRYLIC PANEL
COLOR: GRAPHIC PROVIDED BY DESIGNER
SIZE: 1/4" GUAGE
LOCATION: LDR ROOM HEADWALLS;
REFERENCE SHEET A2.00 FOR SPECIFIC IMAGE LOCATION. CONTACT DAWN IVES 480.235.1907. FOR MATIERIAL PRICING PER SF, EXACT IMAGES WILL BE PROVIDED POST BID.

DP03:
MANUFACTURER: MDC
STYLE: GRAPHIC CUSTOM ACRYLIC PANEL
COLOR: GRAPHIC PROVIDED BY DESIGNER
SIZE: 1/4" GUAGE
LOCATION: ANTEPARTUM ROOM
HEADWALLS REFERENCE SHEET A2.00 FOR SPECIFIC IMAGE LOCATION. CONTACT DAWN IVES 480.235.1907. FOR MATIERIAL PRICING PER SF, EXACT IMAGES WILL BE PROVIDED POST BID.

DP04:
MANUFACTURER: MDC
STYLE: GRAPHIC CUSTOM ACRYLIC PANEL
COLOR: GRPAHIC PROVIDED BY DESIGNER
SIZE: 1/4" GUAGE
LOCATION: POSTPARTUM ROOM
HEADWALLS REFERENCE SHEET A2.00 FOR SPECIFIC IMAGE LOCATION. CONTACT DAWN IVES 480.235.1907. FOR MATIERIAL PRICING PER SF, EXACT IMAGES WILL BE PROVIDED POST BID.

DP05:
MANUFACTURER: MDC
STYLE: GRAPHIC CUSTOM ACRYLIC PANEL
COLOR: GRAPHIC PROVIDED BY DESIGNER
TYPE: 1/4" GUAGE
LOCATION: POSTPARTUM ROOM
HEADWALLS REFERENCE SHEET A2.00 FOR SPECIFIC IMAGE LOCATION. CONTACT DAWN IVES 4810.235.1907. FOR MATIERIAL PRICING PER SF, EXACT IMAGES WILL BE PROVIDED POST BID.

DP06:
MANUFACTURER: LUMICOR
STYLE: 1/4" THICK
COLOR: IVORY TAPEI
NOTE: INCLUDE CHANNELS ALONG TOP AND BOTTOM EDGES.
LOCATION: ALTERNATE #2 - NURSE STATION 001

DOOR

DR01:
MANUFACTURER: ACROVYN
COLOR: CLASSIC MAPLE
SIZE: V.I.F.

HAND RAIL

HR01:
MANUFACTURER: ACROVYN
COLOR: EGGSHELL
TYPE: HRB-20N
SIZE: 5-5/8"

INTERIOR PAINT

IPT01:
MANUFACTURER: DUNN EDWARDS
COLOR: TO MATCH SHERWIN WILLIAMS DIVINE WHITE SW6105
SHEEN: EGGSHELL
NOTE: TYPICAL WALL PAINT COLOR AND FINISH U.N.O.

IPT01S:
MANUFACTURER: DUNN EDWARDS
COLOR: TO MATCH SHERWIN WILLIAMS DIVINE WHITE SW6105
SHEEN: SEMI-GLOSS
NOTE: PATIENT TOILET ROOM WALLS AND CEILINGS, U.N.O.

IPT02:
MANUFACTURER: DUNN EDWARDS
COLOR: TO MATCH SHERWIN WILLIAMS LOBELIA SW8809
SHEEN: EGGSHELL
NOTE: ACCENT

IPT03:
MANUFACTURER: DUNN EDWARDS
COLOR: TO MATCH SHERWIN WILLIAMS UNIVERSAL KHAKI SW6150
SHEEN: EGGSHELL
NOTE: ACCENT

IPT10S:
MANUFACTURER: FRAZEE
COLOR: TO MATCH SHERWIN WILLIAMS DIVINE WHITE SW6105
SHEEN: SEMI-GLOSS
NOTE: CEILING GRID; MECHANICAL DIFFUSERS, GRILLS, REGISTERS; LOUVERED NIGHT LIGHT.

METAL TILE TRIM

MT01:
MANUFACTURER: SCHLUTER
STYLE: RONDEC
COLOR: ANODIZED ALUMINUM - SATIN
NOTE: OUTSIDE OF TILE CORNERS

METAL WALLCOVERING TRIM

MWC01:
MANUFACTURER: MDC
STYLE: EDGE J TRIM
NUMBER: MIVEJT03
COLOR: SILVER
LOCATION: EXPOSED EDGE(S) OF VWC

PLASTIC LAMINATES

PL01:
MANUFACTURER: FORMICA
COLOR: NATURAL ASH 8843-WR
FINISH: WOODBRUSH FINISH
NOTE: WOOD GRAIN SHALL RUN IN VERTICAL DIRECTION, ONLY.

PL02:
MANUFACTURER: WILSONART
COLOR: NATURAL ALUMINUM #6257
FINISH: SATIN BRUSHED
NOTE: MED GAS PANEL, U.N.O.

PL03:
MANUFACTURER: PIONITE
COLOR: BEIGE LINEN AT301
FINISH: SUEDE
T.MOLDING: INDIAN SMOKE F913
NOTE: HORIZONTAL SURFACES WHERE NOTED. 1" MIN RADIUS AT COUNTERTOPS

RESILIENT BASE

RB01:
MANUFACTURER: JOHNSONITE
COLOR: BEIGE 49
SIZE: 6" HIGH

ROLLER SHADE

RS01:
MANUFACTURER: MECHOSHADE
STYLE: THERMOVEL VERTICAL PRIVACY WEAVE 0900 SERIES
OPENNESS: 0-1%
COLOR: PORCELAIN 0911

SHEET VINYL FLOORING

SHV01:
MANUFACTURER: MANNINGTON COMMERCIAL
PRODUCT: VIVENDI
TYPE: WOVEN VIV114
COLOR: OAT STRAW
NOTE: SHV01 AND SHV02 PRODUCTS MUST COME FROM THE SAME DYE LOT TO ENSURE COLOR MATCH

SHV02:
MANUFACTURER: MANNINGTON COMMERCIAL
PRODUCT: VIVENDI VIV014
TYPE: PERENNIAL
COLOR: OAT STRAW

SOLID SURFACING FABRICATIONS

SSF01:
MANUFACTURER: CORIAN
COLOR: FAWN
NOTE: AT SINK COUNTERTOPS, U.N.O. (I.E. COUNTERTOP, FASICA, BACKSPLASH)

SSF02:
MANUFACTURER: WILSONART
MODEL:
COLOR: LINEN WHITE
NOTE: SINKS (INTEGRAL WITH COUNTERTOP)

SSF03:
MANUFACTURER: WATERMARK
MODEL:
COLOR:
NOTE:SOLID SURFACE SHOWERS (SH-1 & SH-2) WHERE NOTED ON PLAN

SSF04:
MANUFACTURER: CORIAN
MODEL:
COLOR: BONE
NOTE:SOLID SURFACE TOILETRY RECESS (M4)

SSF05:
MANUFACTURER: CORIAN
MODEL:
COLOR: WHISPER
NOTE: SOLID SURFACE THRESHOLDS AT PATIENT TOILET DOOR FRAME

SHEET WALL PROTECTION

SWP01:
MANUFACTURER: ACROVYN
COLOR: EGGSHELL

VINYL COMPOSITION TILE

VCT01:
MANUFACTURER: MANNINGTON
STYLE: PROGRESSIONS
COLOR: ALMOND BUFF 9167
SIZE: 12" X 12"

VCT02:
MANUFACTURER: MANNINGTON
STYLE: PROGRESSIONS
COLOR: FLAX 55143
SIZE: 12" X 12"

VCT03:
MANUFACTURER: MANNINGTON
STYLE: PROGRESSIONS
COLOR: HORIZON 55220
SIZE: 12" X 12"

VCT04:
MANUFACTURER: MANNINGTON
STYLE: PROGRESSIONS
COLOR: TOFFEE 55219
SIZE: 12" X 12"

VINYL WALL COVERING

NOTE: CONTRACTOR TO FIELD VERIFY AND PROVIDE EXACT DIMENSIONS PRIOR TO GRAPHIC LAYOUT FOR ORDER PLACEMENT.

VWC01:
MANUFACTURER: MDC
STYLE: CUSTOM DIGITAL WC
TYPE: TYPE II
COLOR: GRAPHIC ARTWORK PROVIDED BY DESIGNER.
NOTE: LDR ROOM WALL GRAPHIC; REFERENCE A2.00/03 FOR GRAPHIC LOCATIONS
NOTE: CUSTOM GRAPHIC VINYL WALL COVERING. CONTACT DAWN IVES 480.235.1907.

VWC02:
MANUFACTURER: MDC
STYLE: CUSTOM DIGITAL WC
TYPE: TYPE II
COLOR: GRAPHIC ARTWORK PROVIDED BY DESIGNER.
LOCATION: LDR ROOM WALL GRAPHIC;
REFERENCE: A2.00/03 FOR GRAPHIC LOCATIONS.
NOTE: CUSTOM GRAPHIC VINYL WALL COVERING. CONTACT DAWN IVES 489.235.1907.

VWC03:
MANUFACTURER: MDC
STYLE: CUSTOM DIGITAL WC
TYPE: TYPE II
COLOR: GRAPHIC ARTWORK PROVIDED BY DESIGNER.
NOTE: ADD ALTERNATE #1 - CONTACT DAWN IVES 489.235.1907.

VWC04:
MANUFACTURER: MDC
COLOR: CUSTOM DIGITAL WC
TYPE: TYPE II
COLOR: GRAPHIC ARTWORK PROVIDED BY DESIGNER.
NOTE: ADD ALTERNATE #1 - CONTACT DAWN IVES 489.235.1907.

VWC05:
MANUFACTURER: MDC
STYLE: CUSTOM DIGITAL WC
TYPE: TYPE II
COLOR: GRAPHIC ARTWORK PROVIDED BY DESIGNER.
NOTE: ADD ALTERNATE #1 - CONTACT DAWN IVES 489.235.1907.

VWC06:
MANUFACTURER: MDC
STYLE: CUSTOM DIGITAL WC
TYPE: TYPE II
COLOR: GRAPHIC ARTWORK PROVIDED BY DESIGNER.
NOTE: ADD ALTERNATE #1 - CONTACT DAWN IVES 489.235.1907.

VWC07:
MANUFACTURER: MDC
STYLE: CUSTOM DIGITAL WC
TYPE: TYPE II
COLOR: GRAPHIC ARTWORK PROVIDED BY DESIGNER.
NOTE: ADD ALTERNATE #1 - CONTACT DAWN IVES 489.235.1907.

VWC08:
MANUFACTURER: KNOLL
STYLE: GUILD WC1441
COLOR: PERLA
NUMBER: WC 144/14
LOCATION: ELEVATOR LOBBY

WINDOW FILM

NOTE: WFXX.A AND WFXX.B ARE A CONTINUOUS IMAGE THAT SHOULD BE PLACED SIDE-BY-SIDE ON THE WINDOW TO MAKE A COMPLETE IMAGE SEEN FROM THE CORRIDOR SIDE OF THE WINDOWS. FROM THE CORRIDOR SIDE, WFXX.A WILL BE INSTALLED ON THE LEFT WINDOW, AND WFXX.B WILL BE INSTALLED ON THE RIGHT WINDOW. THE FILM SHALL BE APPLIED TO THE CORRIDOR SIDE OF WINDOWS.

NOTE: CONTRACTOR TO FIELD VERIFY AND PROVIDE EXACT DIMENSIONS PRIOR TO GRAPHIC LAYOUT FOR ORDER PLACEMENT.

WF01.A & WF01.B:
MANUFACTURER: MDC
COLOR: CUSTOM DIGITAL IMAGE
TYPE: BLOCK OUT WINDOW FILM
NOTE: DIGITAL IMAGE TO BE PROVIDED BY ARCHITECT
LOCATED: ANTEPARTUM ROOM; APPLIED TO CORRIDOR SIDE OF WINDOWS

WF02.A & WF02.B:
MANUFACTURER: MDC
COLOR: CUSTOM DIGITAL IMAGE
TYPE: BLOCK OUT WINDOW FILM
NOTE: DIGITAL IMAGE TO BE PROVIDED BY ARCHITECT
LOCATED: ANTEPARTUM ROOM; APPLIED TO CORRIDOR SIDE OF WINDOWS

WF03.A & WF03.B:
MANUFACTURER: MDC
COLOR: CUSTOM DIGITAL IMAGE
TYPE: BLOCK OUT WINDOW FILM
NOTE: DIGITAL IMAGE TO BE PROVIDED BY ARCHITECT
LOCATED: ANTEPARTUM ROOM; APPLIED TO CORRIDOR SIDE OF WINDOWS

WF04.A & WF04.B:
MANUFACTURER: MDC
COLOR: CUSTOM DIGITAL IMAGE
TYPE: BLOCK OUT WINDOW FILM
NOTE: DIGITAL IMAGE TO BE PROVIDED BY ARCHITECT
LOCATED: ANTEPARTUM ROOM; APPLIED TO PATIENT ROOM SIDE OF WINDOWS

WF05:
MANUFACTURER: MDC
COLOR: CUSTOM DIGITAL IMAGE
TYPE: WINDOW FILM
NOTE: DIGITAL IMAGE TO BE PROVIDED BY ARCHITECT
LOCATED: ANTEPARTUM ROOM; APPLIED TO PATIENT ROOM SIDE OF WINDOWS

HKS

ARCHITECT
HKS, INC.
2500 ANTHEM VILLAGE DR.
HENDERSON, NV 89052

MEP CONSULTANT
HARRIS CONSULTING ENGINEERS, LLC
6630 SURREY ST., SUITE 100
LAS VEGAS, NEVADA 89119

UMC UNIVERSITY MEDICAL CENTER
7th Floor Renovation

OWNER
UNIVERSITY MEDICAL CENTER OF SOUTHERN NEVADA
1800 W. CHARLESTON BLVD.
LAS VEGAS, NEVADA 89102

Bid 2014–08 - Labor and Delivery Renovations
PWP# CL-2014 – 270

Registered Architect
CERTIFICATE NO.
27915
IRENE M. CLARK
Date Signed 06/15/2014
ARIZONA, U.S.A.
EXPIRES: 06/30/2015

KEY PLAN

REVISION

NO.	DESCRIPTION	DATE

HKS PROJECT NUMBER
16922.000

DATE
06/15/2014

ISSUE
ISSUED FOR BID

SHEET TITLE
INTERIOR FINISH LIST AND DOOR INFORMATION

SHEET NO.
A3.41

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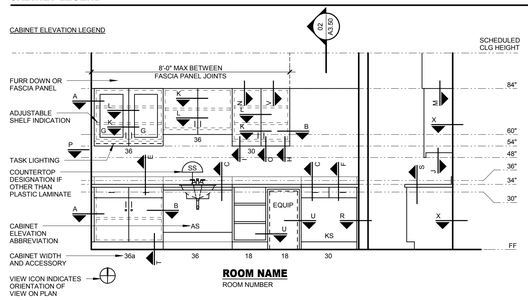
PLOT DATE: 6/15/2014 4:24:46 PM TEMPLATE VERSION: 2.6.4.20130621

CABINET LEGEND

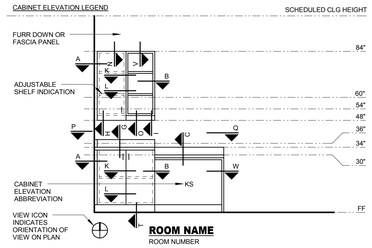


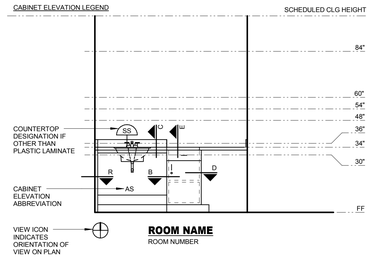
ACCESSORY LEGEND (LOWER CASE LETTERS ONLY)

a - DRAWER / CABINET LOCK
b - WASTE CHUTE - 8" DIA HOLE IN COUNTERTOP
c - SLIDING WRITING SHELF
d - GROMMET
e - P-LAM CLAD PANEL, INSERT TO MATCH CABINET DOOR / DRAWERS

ELEVATION ABBREVIATION LEGEND

AS - ACCESSIBLE SINK
F - FILE DRAWER
FS - FIXED SHELF
KB - KEYBOARD DRAWER
KS - KNEE SPACE
G - GLASS FRONT
TL - TASK LIGHTING

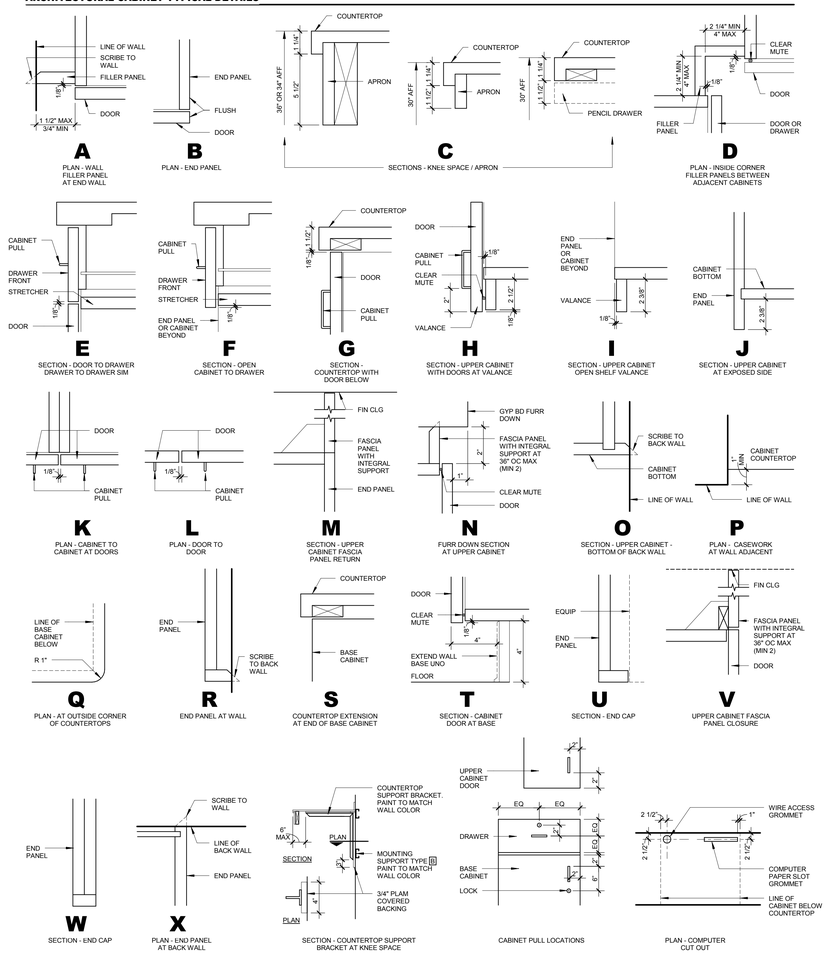




CABINET GENERAL NOTES

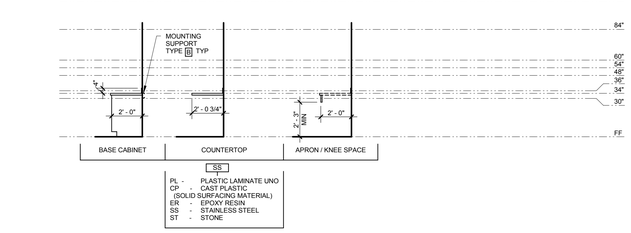
1. CABINET WIDTHS TO BE BASED ON MODULE INCREMENTS OF 3" UNO.
2. PROVIDE FILLER PANELS TO FINISH OUT TO SCRIBE CABINETS TO WALL.
3. PROVIDE FILLER PANELS AND TRIM WHERE EQUIPMENT IS LOCATED WITHIN CABINETS.
4. PROVIDE FINISHED END PANELS END RETURNS AT OPEN ENDED CABINETS, KNEE SPACES, AND ACCESSIBLE SINKS.
5. PROVIDE 1 1/2" THICK FINISHED END PANEL AT FREE STANDING END OF ACCESSIBLE SINKS AND KNEE SPACES.
6. WHEN FILLER PANELS ARE REQUIRED AT BOTH ENDS OF CASEWORK TERMINATION, BOTH FILLER PANELS SHALL BE EQUAL WIDTH.
7. PROVIDE WALL BRACKET SUPPORTS AT 36" OC MAX TO SUPPORT COUNTERTOP AT CONTINUOUS KNEE SPACE.
8. PROVIDE END SPLASH WHEN COUNTERTOP IS ADJACENT TO WALL AT SIDES.
9. PROVIDE HOLES FOR GROMMETS IN COUNTERTOPS AND AT THE FOLLOWING LOCATIONS:
   - 1 EACH WIRE ACCESS HOLE WITH GROMMET AT KNEE SPACE.
   - WIRE ACCESS HOLES WITH GROMMETS AT 38" OC FOR CONTINUOUS RUNS OF KNEE SPACE.
   - 1 WIRE ACCESS GROMMET BEHIND EACH KEYBOARD DRAWER.
   - 1 COMPUTER PAPER SLOT GROMMET BEHIND EACH PRINTER.
10. PROVIDE ADJUSTABLEENT SHELVES IN CABINETS AT THE FOLLOWING LOCATIONS UNO ON ELEVATIONS:
   - BASE CABINET - 1 SHELF
   - FULL HEIGHT CABINET - 5 SHELVES, 1 FIXED.
   - WALL CABINET - 1 SHELF AT 24" HIGH, 2 SHELVES AT TALLER CABINETS
   NOTE: SHELVES TO BE 3/4" THICK FOR SPANS UP TO 32" AND 1" THICK FOR SPANS UP TO 36".
11. GLASS FRONTS TO BE 1/4" THICK CLEAR TEMPERED GLASS UNO.
12. PROVIDE AN APRON AT ALL KNEE SPACES 30" OR HIGHER UNO.
13. RADIUS EXTERIOR CORNERS OF ALL COUNTERTOPS 2" MINIMUM U.N.O.

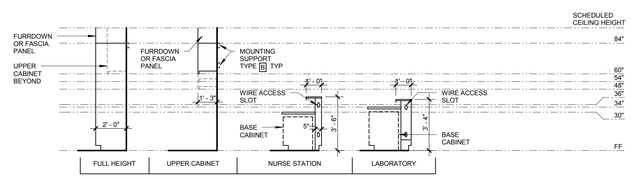
ARCHITECTURAL CABINET TYPICAL DETAILS



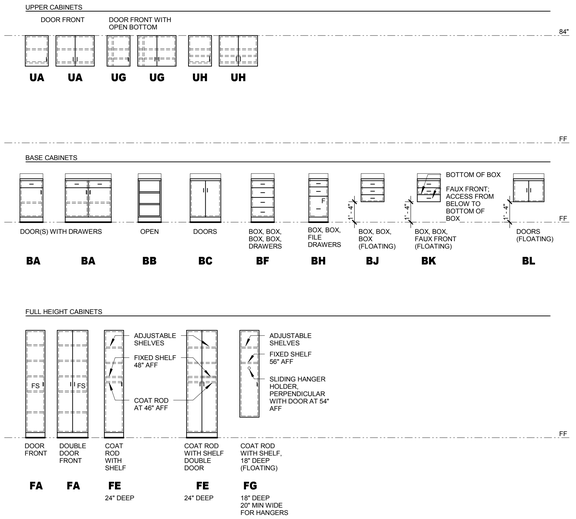
TYPICAL CABINET DIMENSIONS

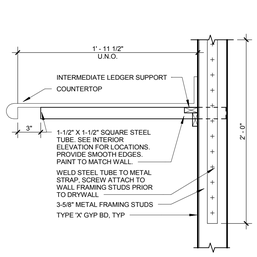
NOTE: ALL CABINET DIMENSIONS GIVEN ARE NOMINAL.



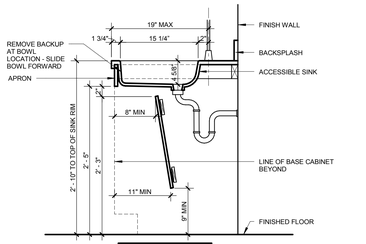


CABINET TYPES

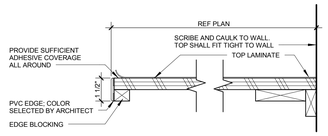




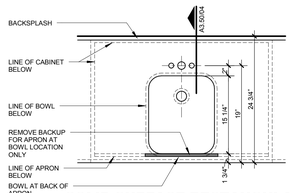
08 MF20 - STEEL COUNTERTOP SUPPORT DETAIL
1 1/2" = 1'-0"



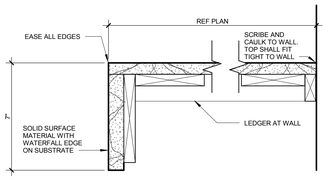
04 SOLID SURFACE RECTANGULAR INTEGRAL BOWL SECTION
1" = 1'-0"



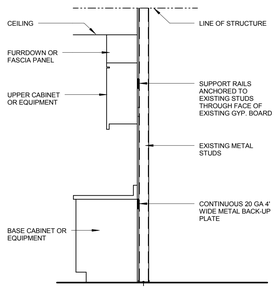
07 PLASTIC LAMINATE COUNTER WITH T-MOULDING
3" = 1'-0"



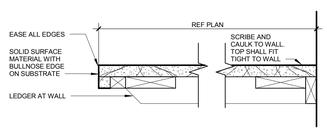
03 SOLID SURFACE RECTANGULAR INTEGRAL BOWL DETAIL
1" = 1'-0"



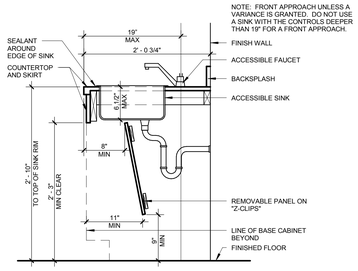
06 SOLID SURFACE AT TOILET ROOMS
3" = 1'-0"



02 TYPICAL STUD WALL SUPPORTING EQUIPMENT AND CABINETRY
NTS



05 SOLID SURFACE COUNTERTOP EDGE
3" = 1'-0"



01 ACCESSIBLE FRONT APPROACH SINK SECTION
1" = 1'-0"

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ARCHITECT
HKS, INC.
2500 ANTHEM VILLAGE DR.
HENDERSON, NV 89052

MEP CONSULTANT
HARRIS CONSULTING ENGINEERS, LLC
6630 SURREY ST., SUITE 100
LAS VEGAS, NEVADA 89119

UMC UNIVERSITY MEDICAL CENTER
7th Floor Renovation

OWNER
UNIVERSITY MEDICAL CENTER OF SOUTHERN NEVADA
1800 W. CHARLESTON BLVD.
LAS VEGAS, NEVADA 89102

Bid 2014-08 - Labor and Delivery Renovations
PWI# CL-2014 – 270

Registered Architect
CERTIFICATE NO. 27915
IRENE M. CLARK
Date Signed 3/20/2014
ARIZONA, U.S.A.
EXPIRES: 06/30/2015

KEY PLAN

REVISION

NO.	DESCRIPTION	DATE

HKS PROJECT NUMBER
16922.000

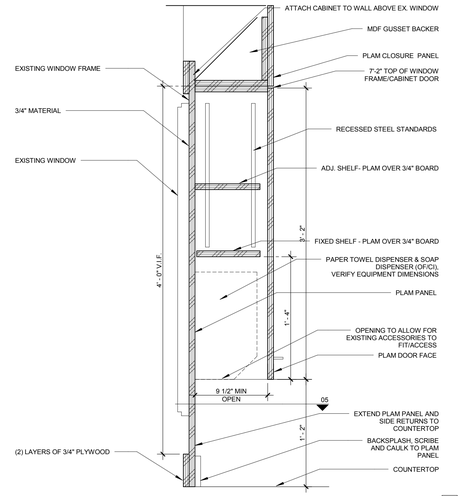
DATE
06/15/2014

ISSUE
ISSUED FOR BID

SHEET TITLE
CASEWORK

SHEET NO.
A3.50

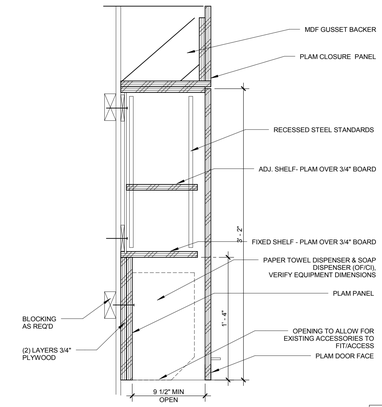
PLOT DATE:
6/11/2014 4:25:17 PM TEMPLATE VERSION: 2.0.4.20130621



06 WALL CABINET - PAPER TOWEL, SOAP - SECTION

AP

1 1/2" = 1'-0"

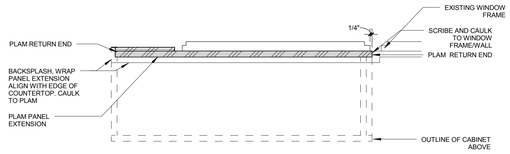


WALL CABINET - PAPER TOWEL, SOAP - SECTION (UG, UH)

PP SP AP SIM.

03

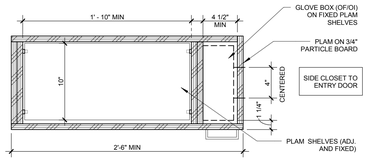
1 1/2" = 1'-0"



05 PLAM PANEL OVER WINDOW PLAN

AP

1 1/2" = 1'-0"



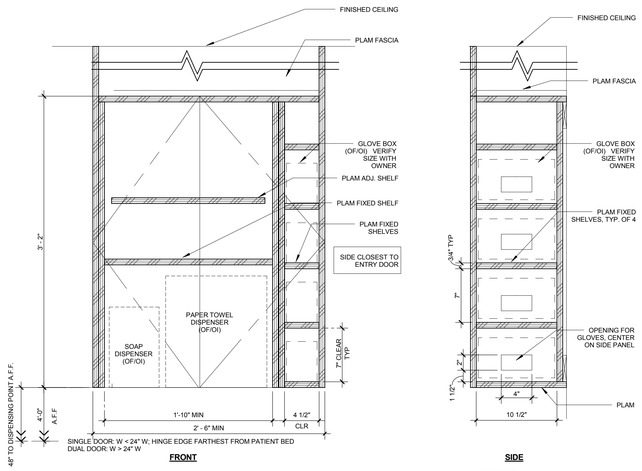
WALL CABINET - PAPER TOWEL, SOAP, GLOVES - PLAN DETAILS (UG, UH)

SP AP

02

1 1/2" = 1'-0"

MIRROR AS REQUIRED



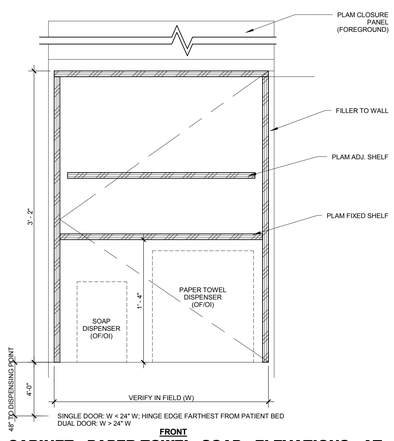
WALL CABINET - PAPER TOWEL, SOAP, GLOVES (UG)

SP AP SIM

04

1 1/2" = 1'-0"

MIRROR AS REQUIRED



WALL CABINET - PAPER TOWEL, SOAP - ELEVATIONS - AT SINK ALCOVE (UH)

PP

01

1 1/2" = 1'-0"

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ARCHITECT
HKS, INC.
2500 ANTHEM VILLAGE DR.
HENDERSON, NV 89052

MEP CONSULTANT
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HKS PROJECT NUMBER
16922.000

DATE
06/15/2014

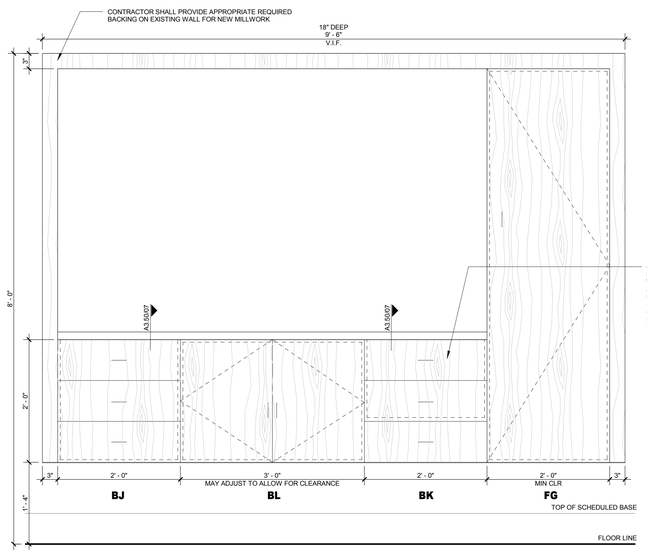
ISSUE
ISSUED FOR BID

SHEET TITLE
CASEWORK

SHEET NO.
A3.51

PLOT DATE:
6/11/2014 4:29:49 PM TEMPLATE VERSION: 2.0.4.20130621

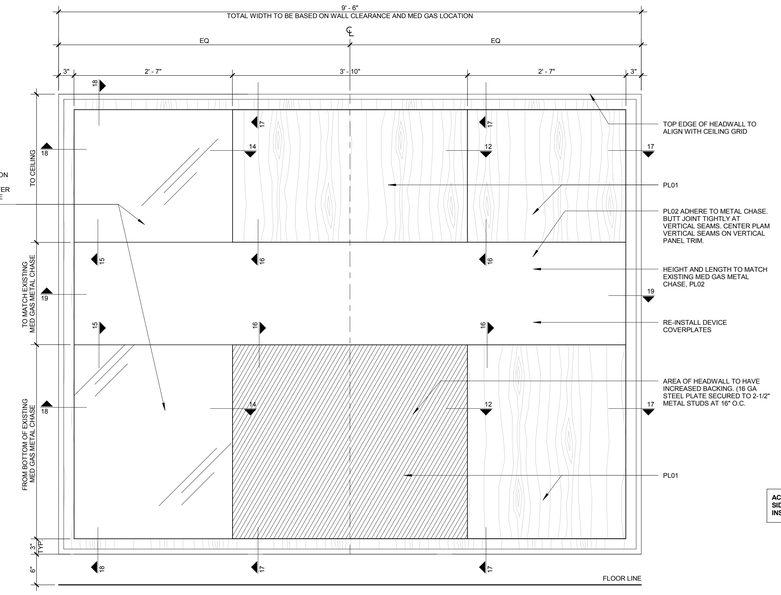
04 HEADWALL TRIM DETAILS
6" = 1'-0"



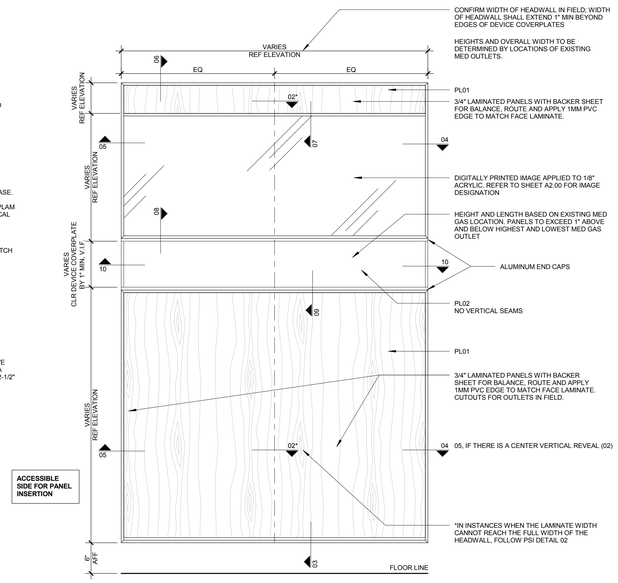
DECORATIVE PANEL TO BE PLACED ON SIDE CLOSEST TO THE WINDOW. ARCHITECT TO SELECT IMAGES. REFER TO SHEET A2.00 FOR GRAPHIC IMAGE INFORMATION AND LOCATION.

CABINET BOX SHALL CLEAR EXISTING DEVICE COVERPLATES, WHERE OCCURS. CONTRACTOR SHALL CONFIRM REQUIREMENT AND LOCATION IN EACH ROOM PRIOR TO SUBMITTING SHOP DRAWINGS, AND SHALL NOTIFY ARCHITECT OF POTENTIAL DEVIATION FROM ELEVATION PRESENTED.

03 LABOR/ DELIVERY/ RECOVERY FOOTWALL ELEVATION DETAIL
1" = 1'-0"



02 LABOR/ DELIVERY/ RECOVERY HEADWALL ELEVATION DETAIL
1" = 1'-0"



ACCESSIBLE SIDE FOR PANEL INSERTION

01 ANTEPARTUM/POSTPARTUM HEADWALL ELEVATION DETAIL
1" = 1'-0"

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ARCHITECT
HKS, INC.
2500 ANTHEM VILLAGE DR.
HENDERSON, NV 89052

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KEY PLAN

REVISION

NO.	DESCRIPTION	DATE

HKS PROJECT NUMBER
16922.000

DATE
06/15/2014

ISSUE
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SHEET TITLE
HEADWALL AND FOOTWALL DETAILS

SHEET NO.
A3.52

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ELECTRICAL LEGEND

GENERAL

- JUNCTION BOX
- PULLBOX – INTERIOR
- PULLBOX – EXTERIOR
- FLOOR BOX – INTERIOR
- CIRCUIT BREAKER IN SINGLE ENCLOSURE
- RELAY
- TIME CLOCK
- MOTION DETECTOR
- DOOR SWITCH
- DOOR CONTACT
- CONTACTOR
- BUZZER
- PUSHBUTTON
- TRANSFORMER
- POWER METER
- PC PHOTOCELL
- HORN
- MOTOR
- SOLENOID VALVE
- DISCONNECT SWITCH
- FUSED DISCONNECT SWITCH
- MOTOR CONTROLLER OR STARTER
- MOTOR CONTROLLER OR STARTER FURNISHED BY OTHERS
- COMBINATION CONTROLLER/DISCONNECT SWITCH
- LC LIGHTING CONTACTOR
- START/STOP SWITCH

WIRES AND RACEWAYS

- CONDUIT
- CONDUIT BELOW FLOOR/ GRADE
- CONDUIT OR RACEWAY TURNED UP
- CONDUIT OR RACEWAY TURNED DOWN
- (3) 1-1/2"c 3 SETS OF ONE AND ONE HALF INCH CONDUITS
- HOMERUN CONDUIT LONG STROKES INDICATE NEUTRAL CONDUCTOR SHORT STROKES INDICATE PHASE OR SWITCHED WIRES LONG STROKES WITH DOT INDICATES GROUNDING CONDUCTOR
- CAP–OFF

COMMUNICATIONS

- TELEPHONE OUTLET
- W WALL TELEPHONE OUTLET
- DATA OUTLET
- COMBINATION TELE/DATA OUTLET
- FLOOR MOUNTED COMBO TELE/DATA OUTLET (PT DESIGNATES A POKE THROUGH DEVICE)
- M MICROPHONE OUTLET
- IC INTERCOM UNIT
- IC M INTERCOM MASTER UNIT
- V VOLUME CONTROL
- TV TELEVISION OUTLET
- TELEVISION CAMERA (CCTV)
- S SPEAKER
- TELEPHONE TERMINAL CABINET
- TELEPHONE TERMINAL BACKBOARD

SWITCHES

- S SINGLE POLE SWITCH
- S^3 THREE–WAY SWITCH
- S^4 FOUR–WAY SWITCH
- S^P SWITCH & PILOT LIGHT
- S^K KEY OPERATED SWITCH
- S^D DIMMER SWITCH
- S^M THERMAL OVERLOAD SWITCH
- S^T TIMER SWITCH
- S^o LOWER CASE LETTER INDICATES SWITCHING

SINGLE LINE DIAGRAM

- ARRESTOR PLUS GROUND (SURGE ARRESTOR)
- CABLE TERMINATION (OVER 600 VOLTS)
- CAPACITOR
- CIRCUIT BREAKER
- BREAKER WITH DRAWOUT FEATURE
- MV BREAKER WITH DRAWOUT FEATURE
- CONTACT (NORMALLY OPEN)
- CONTACT (NORMALLY CLOSED)
- C OPERATING COIL
- FUSE
- FUSED DISCONNECT SWITCH (UNDER 600 VOLTS)
- SWITCH
- POWER TRANSFORMER
- CURRENT TRANSFORMER
- POTENTIAL TRANSFORMER
- DM DIGITAL METER
- R PILOT LIGHT
- G GENERATOR
- GROUND
- AUTOMATIC TRANSFER SWITCH

RECEPTACLES

- SIMPLEX RECEPTACLE
- DUPLEX RECEPTACLE
- CTR DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER
- GFI GFI RECEPTACLE
- IG ISOLATED GROUND (ORANGE) TYPE RECEPTACLE
- DOUBLE DUPLEX RECEPTACLE
- SWITCHED DUPLEX RECEPTACLE
- SPECIAL PURPOSE OUTLET (TYPE AS NOTED)
- POWER COMMUNICATIONS POLE
- MULTIOUTLET ASSEMBLY
- FLOOR MOUNTED DUPLEX RECEPTACLE (PT DESIGNATES A POKE THROUGH DEVICE)
- FLOOR MOUNTED DOUBLE DUPLEX RECEPTACLE (PT DESIGNATES A POKE THROUGH DEVICE)

FIRE ALARM SYSTEM

- FACP FIRE ALARM CONTROL PANEL
- FAA FIRE ALARM ANNUNCIATOR
- F MANUAL FIRE ALARM PULL STATION
- FIRE ALARM HORN
- FIRE ALARM HORN AND STROBE
- FIRE ALARM BELL AND LIGHT
- FIRE ALARM STROBE
- DH DOOR HOLDER
- FS FLOW SWITCH
- TS TAMPER SWITCH
- S SMOKE DETECTOR
- H HEAT DETECTOR
- S JUNCTION BOX FOR DUCT MOUNTED SMOKE DETECTOR
- S SELF CONTAINED 120 VOLT SMOKE DETECTOR
- SFD SMOKE FIRE DAMPER
- CM CONTROL MODULE
- MM MONITOR MODULE
- BELL

LIGHTING FIXTURES

- CEILING FIXTURE
- WALL MOUNTED LIGHT FIXTURE
- FLUORESCENT LIGHT FIXTURE
- FLUORESCENT STRIP LIGHT FIXTURE
- POLE AND POLE MOUNTED LIGHT FIXTURES NUMBER OF HEADS AS SHOWN
- BOLLARD LIGHT
- TRACK LIGHT
- FLOOD LIGHT
- WALL WASHER
- EXIT SIGN, SHADING INDICATES FACE, ARROWS AS INDICATED
- BATTERY PACK, NUMBER OF HEADS AS SHOWN
- EMERGENCY FIXTURE SWITCHED
- EMERGENCY CEILING FIXTURE
- NL NL = NIGHT LIGHT (CONNECT TO UNSWITCHED LEG OF CIRCUIT)
- OS OCCUPANCY SENSOR

BUS DUCT AND WIREWAY

- P UNDERFLOOR DUCT (P=POWER, T=TEL, C=COMP)
- HEADER DUCT
- TRENCH DUCT
- BUS DUCT
- CT CABLE TRAY

PANELS AND RELATED ITEMS

- PANELBOARD – SURFACE
- PANELBOARD – RECESSED
- SWITCHBOARD OR DISTRIBUTION BOARD QUANTITY OF SECTIONS REQUIRED SHOWN

ANNOTATION TAGS AND NOMENCLATURE

- # SHEET NOTE SYMBOL
- # REVISION DELTA
- # ## DETAIL CALLOUT TAG. # DESIGNATES DETAIL NUMBER, ## DESIGNATES SHEET ON WHICH DETAIL IS LOCATED
- EXTENT OF DEMOLITION FROM EXISTING
- POINT OF CONNECTION TO EXISTING

DEVICE MOUNTING HEIGHTS

REFER TO ELECTRICAL SPECIFICATIONS FOR DEVICES MOUNTING HEIGHTS. DIMENSIONAL NUMBERS SHOWN ADJACENT TO SYMBOLS INDICATE THE CENTERLINE OF DEVICE MOUNTING HEIGHTS.

NOTE: NOT ALL SYMBOLS ARE USED ON THIS PROJECT.

ABBREVIATIONS

A,AMP	AMPERE(S)
AC	ALTERNATING CURRENT
AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISHED GRADE
AL	ALUMINUM
ALT	ALTERNATE
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BC	BARE COPPER
BLDG	BUILDING
C	CONDUIT
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CKT	CIRCUIT
CLG	CEILING
CT	CURRENT TRANSFORMER
CTR	COUNTER
CU	COPPER
CW	COLD WATER
(D)	DEMO, EXISTING TO BE REMOVED
DISC	DISCONNECT
DN	DOWN
DP	DOUBLE POLE
DT	DOUBLE THROW
DWG	DRAWING
(E)	EXISTING TO REMAIN
EC	ELECTRICAL CONTRACTOR
EA	EACH
EC	EMPTY CONDUIT
EIA	ELECTRONIC INDUSTRIES ASSOCIATION
ELEC	ELECTRICAL OR ELECTRIC
ELEV	ELEVATOR
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
EOL	END OF LINE RESISTOR
EWC	ELECTRICAL WATER COOLER
F	FUSE
FAA	FIRE ALARM REMOTE ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FBO	FURNISHED BY OTHERS
FC	FOOT CANDLE
FLR	FLOOR
FT	FOOT OR FEET
GC	GENERAL CONTRACTOR
GEN	GENERATOR
GFI	GROUND FAULT INTERRUPTER
GND, G	GROUND
HID	HIGH INTENSITY DISCHARGE
HP	HORSEPOWER
HZ	FREQUENCY CYCLES PER SECOND
IC	INTERCOM
IG	ISOLATED GROUND CONDUCTOR
IMC	INTERMEDIATE METALLIC CONDUIT
IN	INCH
J–BOX	JUNCTION BOX
K	KIRK KEY INTERLOCKED
KCM	THOUSAND CIRCULAR MIL(S)
KV	KILOVOLT
KVA	KILOVOLT AMPERE(S)
KVAR	KILOVAR(S)
KW	KILOWATT(S)
KWHR	KILOWATT HOUR
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
MH	MANHOLE
MIN	MINIMUM
MTD	MOUNTED
MTR	MOTOR
MTS	MANUAL TRANSFER SWITCH
N.C.	NORMALLY CLOSED
N.O.	NORMALLY OPEN
NF	NON FUSED
NEC	NATIONAL ELECTRICAL CODE
#	NUMBER
NTS	NOT TO SCALE
NIC	NOT IN CONTRACT
OC	ON CENTER
OL	OVERLOAD ELEMENT
PB	PUSH BUTTON
PF	POWER FACTOR
PH, ø	PHASE
PNL	PANEL
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE
(R)	EXISTING TO BE RELOCATED
RMS	ROOT MEAN SQUARE
SHT	SHEET
SMR	SURFACE METAL RACEWAY
SP	SINGLE POLE
SPEC	SPECIFICATIONS
ST	SINGLE THROW
SW	SWITCH
SWBD	SWITCHBOARD
TEL	TELEPHONE
TEMP	TEMPORARY
TIA	TELECOMMUNICATIONS INDUSTRY ASSOCIATION
TSTAT	THERMOSTAT
TTB	TELEPHONE TERMINAL BOARD
TTC	TELEPHONE TERMINAL CABINET
TV	TELEVISION
TYP	TYPICAL
UG	UNDERGROUND
UH	UNIT HEATER
UPS	UNINTERRUPTED POWER SUPPLY
V	VOLT(S)
VA	VOLT AMP(S)
VAR	REACTIVE VOLT AMPERES
VP	VAPOR PROOF
W/	WITH
W/O	WITHOUT
W	WATT(S)
WP	WEATHERPROOF
XFMR	TRANSFORMER
XP	EXPLOSION PROOF

ELECTRICAL SHEET INDEX

SHEET NO.	TITLE	SUBMITTAL CODE OR REVISION DELTA # PCH 2014-05-12	
E0.01	ELECTRICAL LEGEND, ABBREVIATIONS AND SHEET INDEX	●	
E2.01	ELECTRICAL OVERALL PLAN	●	
E2.02	ELECTRICAL PLANS	●	

LIGHTING FIXTURE SCHEDULE

TAG	MANUFACTURER & MODEL NUMBER	LAMPS PER FIXTURE NO.	LAMPS PER FIXTURE TYPE	TOTAL VA	VOLTAGE	MOUNTING	DESCRIPTION AND OPTIONS
A	LITHONIA DOM6 LED	-	LED	25	277	RECESSED	6" LED RECESSED DOWNLIGHT WITH WHITE TRIM.
B	FOCAL POIINT APOLLO 8 FMA8D-84-RA-11-T8T5HO-2C	1 1	F32T8 F54T5HO	93	277	RECESSED	8" WIDE RECESSED PATIENT BED LIGHT WITH T8 LAMP FOR AMBIENT LIGHTING AND T5HO LAMP FOR EXAM LIGHTING. INCLUDE LOW VOLTAGE CONTROL (LVC) OPTION. CONTRACTOR TO MAKE FINAL LOW VOLTAGE CONNECTION TO PATIENT BED CONTROLLER. CONTRACTOR TO FIELD VERIFY VOLTAGE.
C	OXYGEN ECHO 2-6206-24	1	23W(GU24)	26	120	PENDANT	DECORATIVE PENDANT DRUM. MOUNT FIXTURE AT 6'-6" TO BOTTOM OF SHADE.
D	OWNER FURNISHED CONTRACTOR INSTALLED	---	---	150	120	RECESSED	OWNER FURNISHED, CONTRACTOR INSTALLED BIRTHING LIGHT.
F	OXYGEN LIGHTING 2-597-2-XX	1	26W QUAD	28	UNIV	WALL	WALL SCONCE WITH ACRYLIC SHADE. ARCHITECT TO VERIFY METAL FINISH.
G	OXYGEN LIGHTING 6207-24	3	23W(GU24)	79	120	PENDANT	DECORATIVE PENDANT DRUM. MOUNT FIXTURE AT 6'-11" TO BOTTOM OF SHADE.

LIGHTING FIXTURE SCHEDULE NOTES

1. FIXTURES INDICATED ABOVE SHALL BE USED AS BASIS FOR ALL BIDDING. ANY ALTERNATE LIGHT FIXTURE PACKAGES SHALL BE SUBMITTED AT TIME OF BID WITH ASSOCIATED LINE ITEM COST SAVINGS FOR EACH FIXTURE AND APPROVED BY OWNER. IF ALTERNATE FIXTURE PACKAGE IS NOT SUBMITTED OR APPROVED, ADDITIONAL SUBSTITUTIONS WILL ONLY BE ACCEPTED AT THE ARCHITECT/ENGINEERS REQUEST.
2. MANUFACTURER'S SERIES SHOWN INDICATE BASIC FIXTURE TYPES REQUIRED FOR THIS PROJECT. VERIFY WITH MANUFACTURER TO INCLUDE ALL ACCESSORIES REQUIRED FOR ACTUAL INSTALLATION.
3. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING FIXTURE LOCATIONS, MOUNTING REQUIREMENTS AND U.L. LABELING OF FIXTURES PRIOR TO ORDERING. INCLUDE MOUNTING CLIPS, HARDWARE, ETC. AS REQUIRED FOR A COMPLETE INSTALLATION.

COM*check* Software Version 3.9.3

Interior Lighting Compliance Certificate

2009 IECC

Section 1: Project Information

Project Type: **Alteration**
Project Title : UMC 7th Floor Remodel

Construction Site: Owner/Agent: Designer/Contractor:
Philip A. Whisenhunt
Harris Consulting Engineers
6630 Surrey St.
Las Vegas, NV 89119
702-269-1575

Section 2: Interior Lighting and Power Calculation

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts (B x C)
Hospital	15872	1.2	19046
		Total Allowed Watts =	19046

Section 3: Interior Lighting Fixture Schedule

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Hospital (15872 sq.ft.)				
LED 1: A: LED Downlight: LED Other Fixture Unit 26W:	1	57	25	1425
Linear Fluorescent 1: B - T8: Overhead Patient Light: 48" T8 32W: Electronic:	1	70	36	2520
Linear Fluorescent 2: B- T5HO: Overhead Patient Light: 46" T5 HO 54W: Electronic:	1	70	57	3990
Compact Fluorescent 1: C: Pendant: Reflector 23W: Electronic:	1	7	26	182
Compact Fluorescent 2: F: Sconce: Quad 2-pin 26W: Electronic:	1	3	28	84
Compact Fluorescent 3: G: Pendant: Reflector 23W: Electronic:	3	19	79	1501
Linear Fluorescent 3: Existing: Clean, Relamp: 48" T8 32W (Super T8): Electronic:	3	64	96	6144
		Total Proposed Watts =		15846

Section 4: Requirements Checklist

Interior Lighting PASSES

Lighting Wattage:

☐ 1. Total proposed watts must be less than or equal to total allowed watts.

Allowed Watts	Proposed Watts	Complies
19046	15846	Passes

Controls, Switching, and Wiring:

☐ 2. Daylight zones under skylights more than 15 feet from the perimeter have lighting controls separate from daylight zones adjacent to vertical fenestration.
☐ 3. Daylight zones have individual lighting controls independent from that of the general area lighting.

Exceptions:

☐ Contiguous daylight zones spanning no more than two orientations are allowed to be controlled by a single controlling device.
☐ Daylight spaces enclosed by walls or ceiling height partitions and containing two or fewer light fixtures are not required to have a separate switch for general area lighting.

☐ 4. Independent controls for each space (switch/occupancy sensor).

Exceptions:

☐ Areas designated as security or emergency areas that must be continuously illuminated.
☐ Lighting in stairways or corridors that are elements of the means of egress.

☐ 5. Master switch at entry to hotel/motel guest room.
☐ 6. Individual dwelling units separately metered.
☐ 7. Medical task lighting or art/history display lighting claimed to be exempt from compliance has a control device independent of the control of the nonexempt lighting.
☐ 8. Each space required to have a manual control also allows for reducing the connected lighting load by at least 50 percent by either controlling all luminaires, dual switching of alternate rows of luminaires, alternate luminaires, or alternate lamps, switching the middle lamp luminaires independently of other lamps, or switching each luminaire or each lamp.

Exceptions:

☐ Only one luminaire in space.
☐ An occupant-sensing device controls the area.
☐ The area is a corridor, storeroom, restroom, public lobby or sleeping unit.
☐ Areas that use less than 0.6 Watts/sq.ft.

☐ 9. Automatic lighting shutoff control in buildings larger than 5,000 sq.ft.

Exceptions:

☐ Sleeping units; patient care areas; and spaces where automatic shutoff would endanger safety or security.

☐ 10. Photocell/astronomical time switch on exterior lights.

Exceptions:

☐ Lighting intended for 24 hour use.

☐ 11. Tandem wired one-lamp and three-lamp ballasted luminaires (No single-lamp ballasts).

Exceptions:

☐ Electronic high-frequency ballasts; Luminaires on emergency circuits or with no available pair.

Section 5: Compliance Statement

Compliance Statement: The proposed lighting alteration project represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed lighting alteration project has been designed to meet the 2009 IECC, Chapter 8, requirements in COMcheck Version 3.9.3 and to comply with the mandatory requirements in the Requirements Checklist.

Name - Title _____ Signature _____ Date _____

Project Title: UMC 7th Floor Remodel Report date: 06/12/14
Data filename: N:\2013\2013200 UMC 7th Floor Remodel\Calculations\Electrical\UMC 7th Floor Remodel ComCheck.cck Page 1 of 2

Project Title: UMC 7th Floor Remodel Report date: 06/12/14
Data filename: N:\2013\2013200 UMC 7th Floor Remodel\Calculations\Electrical\UMC 7th Floor Remodel ComCheck.cck Page 2 of 2

HKS

ARCHITECT
HKS, INC.
821 N. CENTRAL AVE.
PHOENIX, ARIZONA 85004

MEP CONSULTANT
HARRIS CONSULTING ENGINEERS, LLC
6630 SURREY ST., SUITE 100
LAS VEGAS, NEVADA 89119

UMC UNIVERSITY MEDICAL CENTER
7th Floor Renovation

OWNER
UNIVERSITY MEDICAL CENTER OF SOUTHERN NEVADA
1800 W. CHARLESTON BLVD.
LAS VEGAS, NEVADA 89102

PROFESSIONAL ENGINEER PHILIP A. WHISENHUNT ELECTRICAL EXP. JUN 30 2014 No. 015391 STATE OF NEVADA
June 12, 2014

KEY PLAN

REVISION

HKS PROJECT NUMBER
16922.000

DATE
06/15/2014

ISSUE
ISSUED FOR BID

SHEET TITLE
ELECTRICAL LEGEND, ABBREVIATIONS AND SHEET INDEX

SHEET NO.
E0.01

HARRIS CONSULTING ENGINEERS
6630 Surrey St., Suite 100, Las Vegas, Nevada 89119
Tel (702) 269-1575 Fax (702) 269-1574
www.harriseng.com

PROJECT NO: 2013200
DESIGNED BY: P. WHISENHUNT
CHECKED BY: P. WHISENHUNT
DRAWN BY: M. ROSALES
PM: J. HEAL

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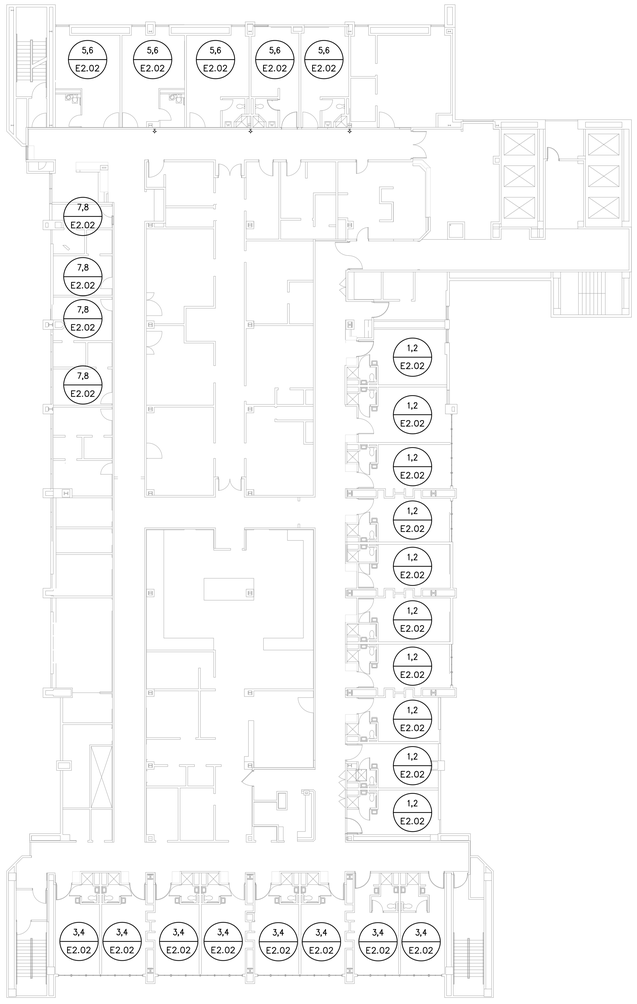
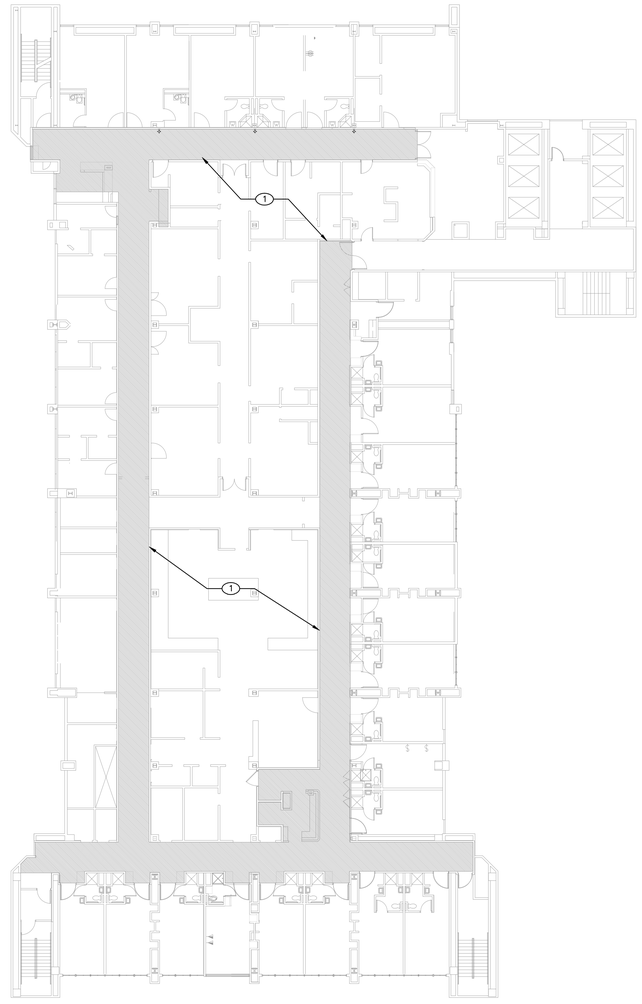
TEMPLATE VERSION:
PLOT DATE:



ELECTRICAL OVERALL PLAN - BASE BID (1)

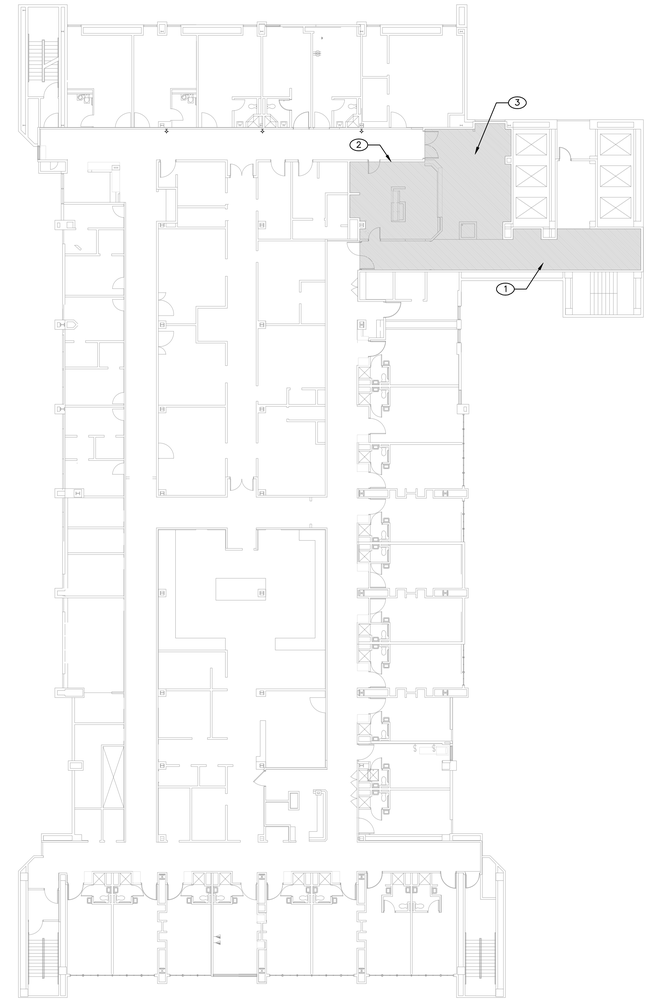
SCALE: 1/16" = 1'-0"

NOTE: SEE SHEETS E2.01 AND E2.02 FOR BASE BID WORK.



ELECTRICAL OVERALL PLAN - ALT. 1 (2)

SCALE: 1/16" = 1'-0"



ELECTRICAL OVERALL PLAN - ALT. 2 (3)

SCALE: 1/16" = 1'-0"

KEYED NOTES ' ⬭ '

1. ALL EXISTING CORRIDOR 2X4 FLUORESCENT LIGHTING FIXTURES TO HAVE LAMPS, BALLASTS, AND TOMBSTONES REPLACED WITH T8 LAMPS, BALLASTS, AND TOMBSTONES LISTED FOR USE WITH T8 LAMPS. LAMP CONFIGURATION SHALL MATCH EXISTING CONDITIONS. FIXTURE TO BE CLEANED TO LIKE NEW CONDITION. ALL WALL MOUNTED SCONCES IN CORRIDORS TO BE REPLACED WITH FIXTURE 'F'. CONTRACTOR SHALL FIELD VERIFY QUANTITIES PRIOR TO BID.
2. NURSE STATIONS TO HAVE NEW PENDANT LIGHT FIXTURES. FIXTURE TO BE TYPE 'C'. SEE ARCHITECTURAL RCP FOR FIXTURE LOCATIONS AND QUANTITIES.
3. WAITING ROOM AREA TO HAVE ACCENT LIGHTING. LIGHT FIXTURE TO BE TYPE 'G'. SEE ARCHITECTURAL RCP FOR LOCATION AND QUANTITIES.

HARRIS CONSULTING ENGINEERS
6630 Surrey St., Suite 100, Las Vegas, Nevada 89119
Tel:(702) 269-1575 Fax:(702) 269-1574
www.harrisengineers.com

PROJECT NO: 2013200
DESIGNED BY: P. WHISENHUNT
CHECKED BY: P. WHISENHUNT
DRAWN BY: M. ROSALES
PM: J. HEAL

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HKS

ARCHITECT
HKS, INC.
821 N. CENTRAL AVE.
PHOENIX, ARIZONA 85004

MEP CONSULTANT
HARRIS CONSULTING ENGINEERS, LLC
6630 SURREY ST., SUITE 100
LAS VEGAS, NEVADA 89119

UMC UNIVERSITY MEDICAL CENTER

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OWNER
UNIVERSITY MEDICAL CENTER
OF SOUTHERN NEVADA
1800 W. CHARLESTON BLVD.
LAS VEGAS, NEVADA 89102

PROFESSIONAL ENGINEER
PHILLIP S. WHISENHUNT
EXP. JUN 30 2014
ELECTRICAL
No. 015391
NEVADA
June 12, 2014

KEY PLAN

REVISION

HKS PROJECT NUMBER
16922.000

DATE
06/15/2014

ISSUE
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SHEET TITLE
ELECTRICAL OVERALL PLAN

SHEET NO.
E2.01

TEMPLATE VERSION:

PLOT DATE:

GENERAL NOTES

A. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS, SECTIONS, ELEVATIONS, ETC. FOR EXACT LOCATION OF LIGHTING FIXTURES.

B. WHERE MULTIPLE LIGHT SWITCHES ARE INDICATED AT A SINGLE LOCATION, MOUNT SWITCHES UNDER COMMON GANGED FACEPLATE. MULTIPLE SINGLE GANG FACEPLATES ARE NOT ACCEPTABLE.

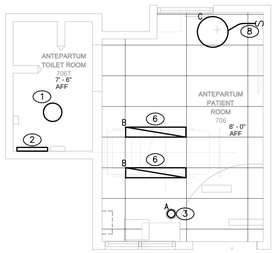
C. FIXTURES RECESSED IN "T-BAR" CEILING SHALL BE SUPPORTED INDEPENDENTLY OF CEILING SYSTEM WITH TWO NO. 12 HANGER WIRES UP TO STRUCTURE. SECURE HANGER WIRES TO OPPOSITE CORNERS OF FIXTURE. CLIP FIXTURE TO GRID ON TWO SIDES WITH FACTORY-FURNISHED CLIPS. FINAL CONNECTION TO FIXTURE SHALL BE MADE WITH A FLEXIBLE U.L. APPROVED ASSEMBLY.

D. ALTERNATE #1: CLEAN, RE-LAMP, AND RE-BALLAST EXISTING FIXTURES IN THE CORRIDORS. REFER TO A2.03 FOR ADDITIONAL INFORMATION. CONTRACTOR TO FIELD VERIFY QUANTITIES.

E. ALTERNATE #2": CLEAN, RE-LAMP, AND RE-BALLAST EXISTING FIXTURES IN THE ELEVATOR LOBBY, WAITING ROOM, AND NURSES STATION. REFER TO A2.04 FOR ADDITIONAL INFORMATION. CONTRACTOR TO FIELD VERIFY QUANTITIES.

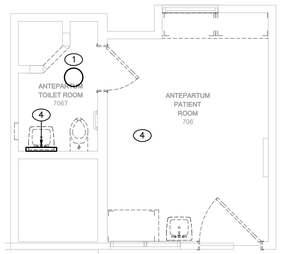
KEYED NOTES ' ⬭ '

1. REMOVE EXISTING FIXTURE, CLEAN, RELAMP, AND RE-INSTALL EXISTING FIXTURE.
2. NEW MIRROR IS BACK LIT AND REQUIRES POWER. CONNECT NEW MIRROR TO EXISTING VANITY LIGHT CIRCUIT.
3. CONNECT NEW LIGHTING FIXTURE TO EXISTING LIGHT SWITCH ADJACENT TO THE SINK.
4. REMOVE AND DISCARD EXISTING LIGHTING FIXTURE.
5. INSTALL NEW LIGHTING FIXTURE IN THE SAME LOCATION AS THE EXITING FIXTURE THAT HAS BEEN REMOVED.
6. CONNECT NEW LIGHTING FIXTURE TO EXISTING CRITICAL BRANCH CIRCUIT. MAKE THE FINAL CONNECTIONS THROUGH THE LIGHTING FIXTURE "LOW VOLTAGE CONTROL" DEVICE TO THE PATIENT BED CONTROL UNIT.
7. DISCONNECT EXISTING POWER AND PHONE CONNECTIONS FROM EXISTING HEADWALL. RECONNECT EXISTING POWER AND PHONE TO THE NEW HEADWALL.
8. PROVIDE NEW LIGHT SWITCH AS SHOWN FOR TYPE 'G' LIGHTING FIXTURE. CONNECT LIGHTING FIXTURE TO THE "NORMAL" CIRCUIT FEEDING THIS ROOM.
9. PROVIDE NEW LIGHT SWITCH AS SHOWN FOR TYPE 'D' BIRTHING LIGHTS.
10. CONNECT NEW LIGHTING FIXTURE TO EXISTING CIRCUIT.



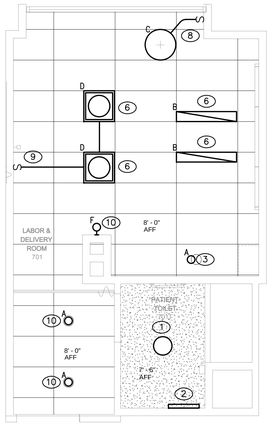
ELECTRICAL LIGHTING PLAN - ANTEPARTUM (8)

SCALE: 1/4" = 1'-0"



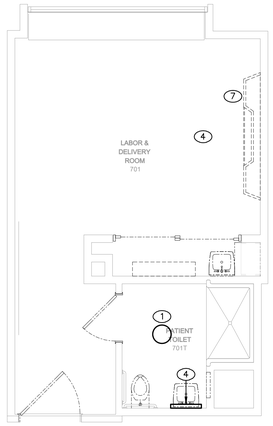
ELECTRICAL DEMO PLAN - ANTEPARTUM (7)

SCALE: 1/4" = 1'-0"



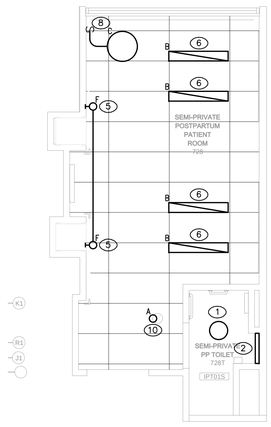
ELECTRICAL LIGHTING PLAN - LABOR AND DELIVERY (6)

SCALE: 1/4" = 1'-0"



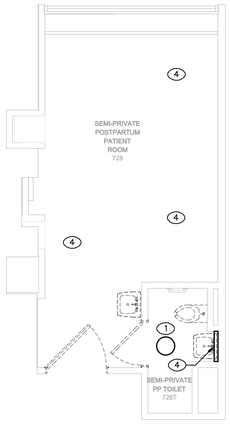
ELECTRICAL DEMO PLAN - LABOR AND DELIVERY (5)

SCALE: 1/4" = 1'-0"



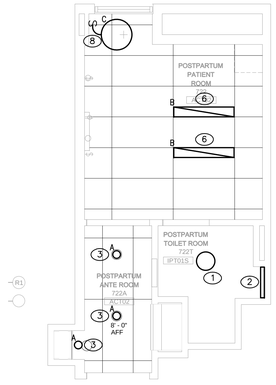
ELECTRICAL LIGHTING PLAN - SEMI-PRIVATE POSTPARTUM (4)

SCALE: 1/4" = 1'-0"



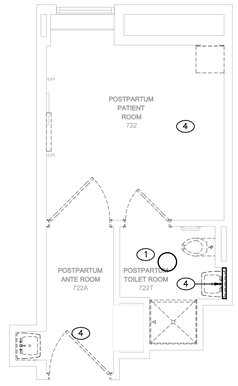
ELECTRICAL DEMO PLAN - SEMI-PRIVATE POSTPARTUM (3)

SCALE: 1/4" = 1'-0"



ELECTRICAL LIGHTING PLAN - PRIVATE POSTPARTUM (2)

SCALE: 1/4" = 1'-0"



ELECTRICAL DEMO PLAN - PRIVATE POSTPARTUM (1)

SCALE: 1/4" = 1'-0"

HKS

ARCHITECT
HKS, INC.
821 N. CENTRAL AVE.
PHOENIX, ARIZONA 85004

MEP CONSULTANT
HARRIS CONSULTING ENGINEERS, LLC
6630 SURREY ST., SUITE 100
LAS VEGAS, NEVADA 89119

UMC UNIVERSITY MEDICAL CENTER

7th Floor Renovation

OWNER
UNIVERSITY MEDICAL CENTER OF SOUTHERN NEVADA
1800 W. CHARLESTON BLVD.
LAS VEGAS, NEVADA 89102

PROFESSIONAL ENGINEER — PHILLIP J. WHISENHUNT — EXP. JUN 30 2014 — ELECTRICAL — No. 015391 — STATE OF NEVADA

June 12, 2014

KEY PLAN

REVISION

HKS PROJECT NUMBER
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SHEET TITLE
ELECTRICAL PLANS

SHEET NO.
E2.02

HARRIS CONSULTING ENGINEERS
4630 Surrey St., Suite 100, Las Vegas, Nevada 89119
Tel:(702) 269-1575 Fax:(702) 269-1574
www.harrisengineers.com

PROJECT NO: 2013200
DESIGNED BY: P. WHISENHUNT
CHECKED BY: P. WHISENHUNT
DRAWN BY: M. ROSALES
PM: J. HEAL

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TEMPLATE VERSION
PLOT DATE:

PLUMBING LEGEND

PIPE

— —W— —	SOIL, WASTE, or SEWER BELOW GRADE
— —W— —	EXISTING SOIL, WASTE, or SEWER BELOW GRADE
— —CWV— —	COMBINATION WASTE AND VENT BELOW GRADE
——W——	SOIL, WASTE, or SEWER ABOVE GRADE
——W——	EXISTING SOIL, WASTE, or SEWER ABOVE GRADE
——CWV——	COMBINATION WASTE AND VENT ABOVE GRADE
----------	VENT
----------	EXISTING VENT
——SD——	STORM DRAIN BELOW GRADE
——SD——	EXISTING STORM DRAIN BELOW GRADE
——SD——	STORM DRAIN ABOVE GRADE
——SD——	EXISTING STORM DRAIN ABOVE GRADE
——OSD——	OVERFLOW STORM DRAIN BELOW GRADE
——OSD——	EXISTING OVERFLOW STORM DRAIN BELOW GRADE
——OSD——	OVERFLOW STORM DRAIN ABOVE GRADE
——OSD——	EXISTING OVERFLOW STORM DRAIN ABOVE GRADE
——SCW——	NON POTABLE WATER
—— - ——	COLD WATER
—— - ——	EXISTING COLD WATER
—— - ——	SOFT COLD WATER
— - - —	HOT WATER
— - - —	EXISTING HOT WATER
— - - - —	HOT WATER RETURN
— - - - —	EXISTING HOT WATER RETURN
——T——	TEMPERED WATER
——TR——	TEMPERED WATER RETURN
——G——	GAS–LOW PRESSURE
——G——	EXISTING GAS–LOW PRESSURE
——MG——	GAS–MEDIUM PRESSURE
——MG——	EXISTING GAS–MEDIUM PRESSURE
——D——	DRAIN
——D——	EXISTING DRAIN OR CONDENSATE DRAIN
——WSP——	WET STANDPIPE
——DSP——	DRY STANDPIPE
— —AW— —	ACID WASTE BELOW GRADE
——AW——	ACID WASTE ABOVE GRADE
— —GW— —	GREASE WASTE BELOW GRADE
——GW——	GREASE WASTE ABOVE GRADE
— —AV— —	ACID VENT
— —GV— —	GREASE VENT
——A——	COMPRESSED AIR
——V——	VACUUM
——MA——	MEDICAL COMPRESSED AIR
——MV——	MEDICAL VACUUM
——O2——	OXYGEN
——N2O——	NITROUS OXIDE
——F——	FIRE PROTECTION WATER SUPPLY
	PITCH DOWN IN DIRECTION OF ARROW
	FLOW IN DIRECTION OF ARROW
	HEAT TRACING ON PIPE
	PIPE ELBOW (UP & DN)
	TEMPERING VALVE
	FIRE DEPARTMENT CONNECTION
	TRANSFORMER

NOTE: NOT ALL SYMBOLS ARE USED ON THIS PROJECT.

EQUIPMENT

	BACKFLOW PREVENTER
	REDUCER
	UNION
	DIELECTRIC WATERWAY
S	SOLENOID VALVE
	VALVE ON RISER
	TAKEOFF FROM TOP OF MAIN PIPE
	TAKEOFF FROM BOTTOM OF MAIN PIPE
	CAPPED END OF PIPE
	BALL VALVE MANUAL
M	BALL VALVE MOTORIZED
	BUTTERFLY VALVE
M	BUTTERFLY VALVE MOTOR ACTUATED
	CHECK VALVE
	GAS COCK
	GAS PRESSURE REGULATOR
	GATE VALVE MANUAL
	GLOBE VALVE MANUAL
	GLOBE VALVE PNUEMATIC
M	GLOBE VALVE MOTOR ACTUATED
	PRESSURE REDUCING VALVE (WATER)
	PRESSURE REDUCING VALVE (GAS AND AIR)
	PRESSURE RELIEF VALVE
	PRESSURE TEMPERATURE/ RELIEF VALVE
	STRAINER
	WATER HAMMER ARRESTOR
	FLOOR DRAIN (ROUND OR SQUARE STRAINER)
	DECK DRAIN
	FLOOR SINK
	TRENCH DRAIN
	FLOOR & GRADE CLEANOUT
	WALL CLEANOUT
	HOSE BIBB
	VENT THRU ROOF
	ROOF DRAIN & OVERFLOW ROOF DRAIN
	DOWNSPOUT NOZZLE
	PUMP
	FLEXIBLE CONNECTOR
	BALANCING VALVE
	AUTOMATIC FLOW CONTROL VALVE
	PIPE ANCHOR
	PIPE GUIDE
	TRAP PRIMER

ANNOTATION TAGS AND NOMENCLATURE

1	NOTE SYMBOL
1	REVISION SYMBOL
# / XX.XX	# DESIGNATES DETAIL NUMBER AND XX.XX DESIGNATES SHEET DETAIL IS LOCATED
X # / XX.XX	# DESIGNATES DETAIL NUMBER, X DESIGNATES THE DETAIL TYPE, AND XX.XX DESIGNATES SHEET DETAIL IS LOCATED
# / XX.XX	# DESIGNATES SECTION NUMBER AND XX.XX DESIGNATES SHEET SECTION IS LOCATED
	EXTENT OF DEMOLITION FROM EXISTING
	POINT OF CONNECTION TO EXISTING

ABBREVIATIONS

A	COMPRESSED AIR	MA	MEDICAL COMPRESSED AIR
AD	ACCESS DOOR	MAX	MAXIMUM
AFF	ABOVE FINISHED FLOOR	MIN	MINIMUM
AV	ACID VENT	MG	GAS–MEDIUM PRESSURE
AW	ACID WASTE	MV	MEDICAL VACUUM
BFF	BELOW FINISHED FLOOR	N2O	NITROUS OXIDE
BFP	BACKFLOW PREVENTER	NA	NOT APPLICABLE
BFV	BUTTERFLY VALVE	NIC	NOT IN CONTRACT
BT	BATH TUB	NC	NORMALLY CLOSED
BTU/H	BRITISH THERMAL UNIT/HOUR	NO	NORMALLY OPEN
BV	BALL VALVE	NPW	NON POTABLE WATER
		NTS	NOT TO SCALE
CP	CONDENSATE PUMP		
CFH	CUBIC FEET PER HOUR	O2	OXYGEN
CFM	CUBIC FEET PER MINUTE	ORD	OVERFLOW ROOF DRAIN
CV	CHECK VALVE	OSD	OVERFLOW STORM DRAIN
CW	COLD WATER		
CWV	COMBINATION WASTE AND VENT	PA	PIPE ANCHOR
		PG	PIPE GUIDE
(D)	DEMO, EXISTING TO BE REMOVED	POC	POINT OF CONNECTION
D	DRAIN	PRV	PRESSURE REGULATOR OR REDUCER VALVE
DFU	DRAINAGE FIXTURE UNITS		
DS	DRY STANDPIPE	PSI	POUNDS/SQUARE INCH
DSN	DOWNSPOUT NOZZLE	PTRV	PRESSURE TEMPERATURE/ RELIEF VALVE
DW	DIELECTRIC WATERWAY		
(E)	EXISTING TO REMAIN	(R)	EXISTING TO BE RELOCATED
EA	EACH	R	REDUCER
EOD	EXTENT OF DEMOLITION	RD	ROOF DRAIN
		RO	REVERSE OSMOSIS
F	FAHRENHEIT		
FCO	FLOOR CLEANOUT	SCW	SOFT COLD WATER
FD	FLOOR DRAIN	SD	STORM DRAIN
FDC	FIRE DEPARTMENT CONNECTION	SS	SERVICE SINK
FS	FLOOR SINK	S	SINK
FT	FOOT	SQ	SQUARE
FU	FIXTURE UNITS	STR	STRAINER
G	GAS–LOW PRESSURE	T	TEMPERED WATER
GAL	GALLONS	TD	TRENCH DRAIN
GC	GAS COCK	TDH	TOTAL DEVELOPED HEAD
GCO	GRADE CLEANOUT	TR	TEMPERED WATER RETURN
GLV	GLOBE VALVE	TSP	TOTAL STATIC PRESSURE
GPM	GALLONS PER MINUTE		
GPF	GALLONS PER FLUSH	U	URINAL
GPH	GALLONS PER HOUR	UN	UNION
GV	GATE VALVE		
GW	GREASE WASTE	V	VENT OR VACUUM
		VTR	VENT THRU ROOF
HB	HOSE BIBB		
HX	HEAT EXCHANGER	W	WASTE
HP	HORSEPOWER	WC	WATER CLOSET
HW	HOT WATER	W.A.	WATER COLUMN
HWR	HOT WATER RETURN	WCO	WALL CLEANOUT
		WHA	WATER HAMMER ARRESTOR
IE	INVERT ELEVATION	WSP	WET STANDPIPE
IN	INCHES		
KW	KILOWATT		
L	LAVATORY		

PLUMBING SHEET INDEX

SHEET NO.	TITLE	SUBMITTAL CODE OR REVISION DELTA # 2014-06-12	PCH
P0.01	PLUMBING LEGEND, ABBREVIATIONS AND SHEET INDEX	●	
P2.01	PLUMBING OVERALL PLAN	●	
P2.02	PLUMBING PLANS	●	
P5.01	PLUMBING DETAILS AND SCHEDULES	●	

HKS

ARCHITECT
HKS, INC.
821 N. CENTRAL AVE.
PHOENIX, ARIZONA 85004

MEP CONSULTANT
HARRIS CONSULTING ENGINEERS, LLC
6630 SURREY ST., SUITE 100
LAS VEGAS, NEVADA 89119

UMC UNIVERSITY MEDICAL CENTER

7th Floor Renovation

OWNER
UNIVERSITY MEDICAL CENTER
OF SOUTHERN NEVADA
1800 W. CHARLESTON BLVD.
LAS VEGAS, NEVADA 89102

PROFESSIONAL ENGINEER — KENT J. DRUE — EXP. DEC 31 2014 — MECHANICAL — No. 14222 — NEVADA

June 12, 2014

KEY PLAN

REVISION

HKS PROJECT NUMBER
16922.000

DATE
06/15/2014

ISSUE
ISSUED FOR BID

SHEET TITLE
PLUMBING LEGEND, ABBREVIATIONS AND SHEET INDEX

SHEET NO.
P0.01

HARRIS CONSULTING ENGINEERS
6630 Surrey St., Suite 100, Las Vegas, Nevada 89119
Tel (702) 369-1575 Fax (702) 369-1574
www.harriseng.com

PROJECT NO: 2013200
DESIGNED BY: J. HEAL
CHECKED BY: J. HEAL
DRAWN BY: A. MUNOZ
PM: J. HEAL

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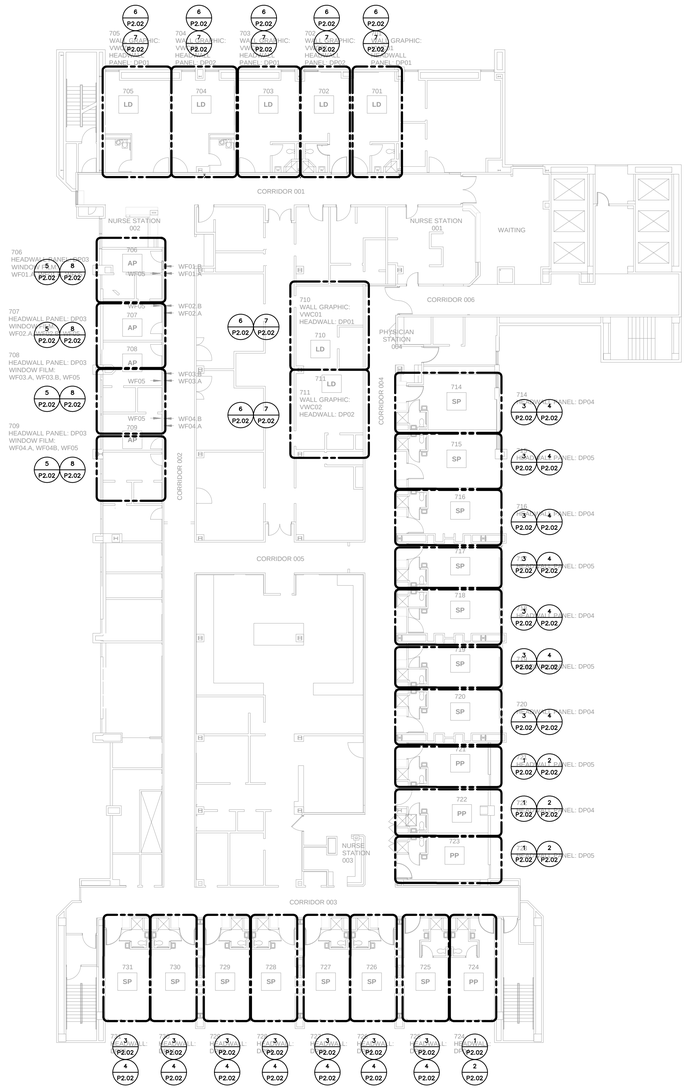
TEMPLATE VERSION:

PLOT DATE:



PLUMBING OVERALL PLAN

SCALE: 3/32" = 1'-0"

1

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ARCHITECT
HKS, INC.
821 N. CENTRAL AVE.
PHOENIX, ARIZONA 85004

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HARRIS CONSULTING ENGINEERS, LLC
6630 SURREY ST., SUITE 100
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P2.01

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Tel (702) 369-1575 Fax (702) 369-1574
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DRAWN BY:	A. MUNOZ
PM:	J. HEAL

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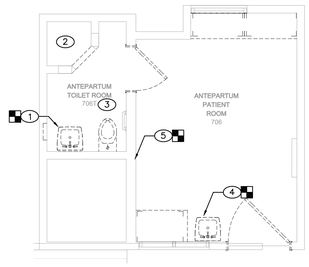
TEMPLATE VERSION:
PLOT DATE:

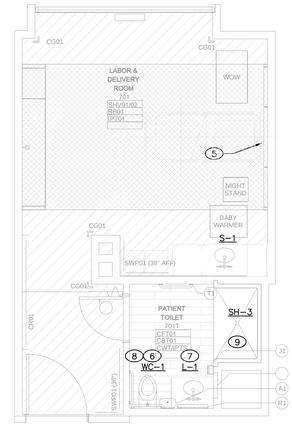
KEYED NOTES

1. REMOVE EXISTING LAVATORY, FAUCET AND P-TRAP.
2. EXISTING SHOWER, PAN AND TRIM TO BE REMOVED.
3. ALT. BID 3. REMOVE EXISTING WATER CLOSET AND FLUSH VALVE ASSEMBLY. REPLACE WITH NEW. SEE PLUMBING FIXTURE SCHEDULE.
4. REMOVE EXISTING SINK, FAUCET AND P-TRAP.
5. REMOVE MEDICAL GAS WALL PLATES AT HEAD WALLS IN PREPARATION FOR WALL REFINISH. RE-INSTALL FACE PLATES WHEN WALL FINISHES ARE COMPLETE.
6. NEW WATER CLOSET AND TRIM. SEE SCHEDULE ON SHEET P5.01 PLUMBING ALTERNATE NO. 1.
7. LAVATORY IN ROOM 701 TO BE AN L-2. SEE PLUMBING FIXTURE SCHEDULE.
8. BASE BID: REMOVE AND REINSTALL EXISTING WATER CLOSET. REPLACE EXISTING FLUSH VALVE ASSEMBLY WITH NEW. PROVIDE NEW WAX RING KIT INCLUDING FLOOR BOLTS, WASHER, NUTS, AND BOLT CAPS. CLEAN UNIT TO LIKE NEW CONDITION AFTER REINSTALLATION.
9. EXISTING SHOWER ENCLOSURE TO REMAIN. SOME OF THE SHOWERS (S-3) TRIM IS IN GOOD CONDITION AND WILL REMAIN. CONFIRM WITH OWNER SPECIFIC SHOWER-TRIM (30"x60") REQUIRING REPLACEMENT ON THE BASIS OF CONDITION. PROVIDE A SHOWER UNIT COST BASED UPON THE PLUMBING FIXTURE SCHEDULE.



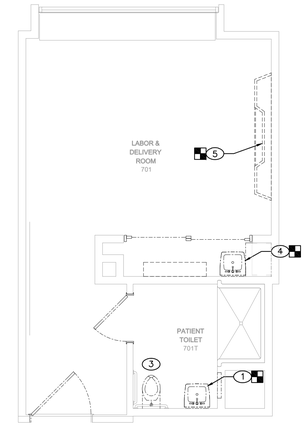
PLUMBING ENLARGED DEMO ANTEPARTUM 8

SCALE: 1/4" = 1'-0"



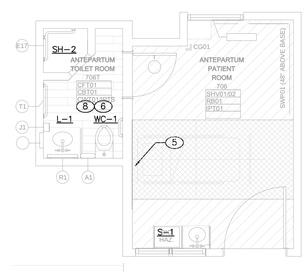
PLUMBING ENLARGED LABOR & DELIVERY 7

SCALE: 1/4" = 1'-0"



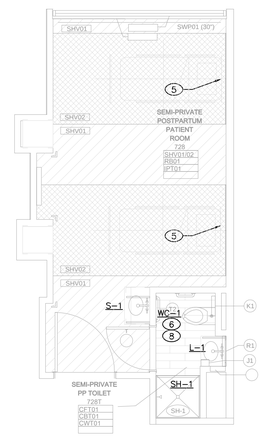
PLUMBING ENLARGED DEMO LABOR & DELIVERY 6

SCALE: 1/4" = 1'-0"



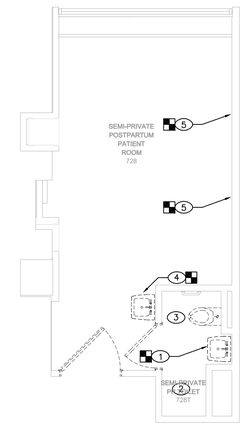
PLUMBING ENLARGED ANTEPARTUM 5

SCALE: 1/4" = 1'-0"



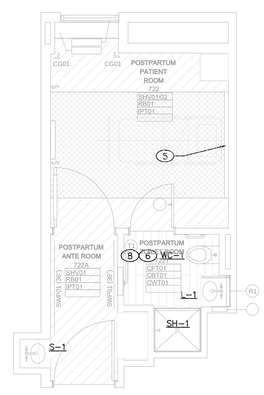
PLUMBING ENLARGED SEMI-PRIVATE POSTPARTUM 4

SCALE: 1/4" = 1'-0"



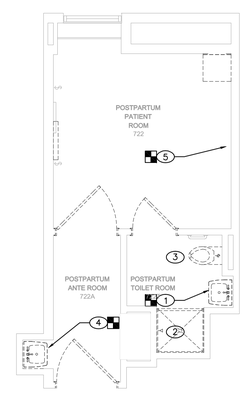
PLUMBING ENLARGED DEMO SEMI-PRIVATE POSTPARTUM 3

SCALE: 1/4" = 1'-0"



PLUMBING ENLARGED PRIVATE POSTPARTUM 2

SCALE: 1/4" = 1'-0"



PLUMBING ENLARGED DEMO PRIVATE POSTPARTUM 1

SCALE: 1/4" = 1'-0"

HARRIS CONSULTING ENGINEERS
8630 Surrey St. Las Vegas, Nevada 89119
Tel (702) 369-1676 Fax (702) 369-1674
www.harrisengineers.com

PROJECT NO:	201320
DESIGNED BY:	J. HEAL
CHECKED BY:	J. HEAL
DRAWN BY:	A. MUNOZ
PM:	J. HEAL

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HKS

ARCHITECT
HKS, INC.
821 N. CENTRAL AVE.
PHOENIX, ARIZONA 85004

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HARRIS CONSULTING ENGINEERS, LLC
6630 SURREY ST., SUITE 100
LAS VEGAS, NEVADA 89119

OWNER
UNIVERSITY MEDICAL CENTER OF SOUTHERN NEVADA
1800 W. CHARLESTON BLVD.
LAS VEGAS, NEVADA 89102

PROFESSIONAL ENGINEER — KENT HEAL — STATE OF NEVADA — EXP. DEC 31 2014 — MECHANICAL — No. 14222

June 12, 2014

KEY PLAN

UMC UNIVERSITY MEDICAL CENTER

7th Floor Renovation

REVISION

HKS PROJECT NUMBER
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DATE
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SHEET TITLE
PLUMBING PLANS

SHEET NO.
P2.02

TEMPLATE VERSION:

PLOT DATE:

PLUMBING FIXTURE SCHEDULE

TAG	TYPE OF FIXTURE	ADA	WASTE	VENT	CW	HW 120	TW 110	FLOW	MODEL # FIXTURE	MANUFACTURER	IAPMO or THIRD PARTY TESTING	MOUNTED	MATERIAL	MODEL # SUPPLY	BATTERY/POWER/ MANUAL/METERING	MANUFACTURER	IAPMO or THIRD PARTY TESTING	MOUNTED	MATERIAL	ACCESSORIES
WC-1	WATER CLOSET **ALTERNATE 3**	YES	4	2	1	-	-	1.6 GPF	3043.102	AMERICAN STANDARD	677	FLOOR	-	BPW-1000	MANUAL	SLOAN	-	TOP SPUD	CHROME PLATED BRASS	1,2
L-1	LAVATORY	YES	2	2	1/2	-	1/2	0.5 GPM	-	-	-	INTEGRAL	-	S41707	MANUAL	MOEN	3366	COUNTER	CHROME PLATED BRASS	2,3,4,26
L-2	LAVATORY	YES	2	2	1/2	-	1/2	0.5 GPM	-	-	-	INTEGRAL	-	S41707	MANUAL	MOEN	3366	COUNTER	CHROME PLATED BRASS	2,3,4,26 - McGUIRE PRO-WRAP PIPE COVERING KIT NO. 2125 WC
S-1	SINK (TRIM)	YES	2	2	1/2	-	1/2	1.5 GPM	-	-	-	INTEGRAL	-	S41701	MANUAL	MOEN	3366	COUNTER	CHROME PLATED BRASS	2,3,10,26,31
S-2	SINK (TRIM)	YES	2	2	1/2	-	1/2	1.5 GPM	-	-	-	INTEGRAL	-	S41701	MANUAL	MOEN	3366	COUNTER	CHROME PLATED BRASS	2,3,10,26,31
S-3	SINK (TRIM)	YES	2	2	1/2	-	1/2	1.5 GPM	-	-	-	INTEGRAL	-	S41701	MANUAL	MOEN	3366	COUNTER	CHROME PLATED BRASS	2,3,10,26,31
S-4	SINK (TRIM)	YES	2	2	1/2	-	1/2	1.5 GPM	-	-	-	INTEGRAL	-	S41701	MANUAL	MOEN	3366	COUNTER	CHROME PLATED BRASS	2,3,10,26,31
SH-1	SHOWER (TRIM)	YES	2	2	1/2	-	1/2	2.5 GPM	-	WATERMARK	-		SOLID SURFACE SEE ARCH. DWGS	ACXYM1001 VALVE AND HAND HELD	MANUAL	SELECTED BY ARCHITECT	-	WALL	CHROME PLATED BRASS	28,29
SH-2	SHOWER (TRIM)	YES	2	2	1/2	-	1/2	2.5 GPM	- -	WATERMARK	-		SOLID SURFACE SEE ARCH. DWGS	ACXYM1001 VALVE AND HAND HELD	MANUAL	SELECTED BY ARCHITECT	-	WALL	CHROME PLATED BRASS	28,29
SH-3	SHOWER (TRIM ONLY)	-	-	-	-	-	-	2.5 GPM			-			ACXYM1001 VALVE AND HAND HELD	MANUAL	SELECTED BY ARCHITECT	-	WALL	CHROME PLATED BRASS	30

ACCESSORIES:

1. ELONGATED BOWL OPEN FRON SEAT COVER
2. ANGLE STOP
3. GRID STRAINER ASSEMBLY
4. 17 GAUGE BRASS CHROME PLATED P-TRAP
5. SUPPLY INSULATED JACKET
6. SIZE AS INDICATED ON PLUMBING DRAWINGS
7. REFER TO ARCHITECTURAL PLANS FOR MOUNTING HEIGHT
8. ADJUSTABLE WALL BRACE/PAIL HOOK
9. VANDAL RESISTANT NON-AREATED SPRAY
10. BASKET GRID STAINER
11. CARRIER SUPPORT
12. BASKET STRAINER
13. TRAP PRIMER REQUIRED
14. TRAP GUARD
15. ACCESS PANEL
16. FLASHING COLLAR
17. AUTOMATIC DRAINING
18. NON-FREEZE
19. BACKFLOW PREVENTER
20. PACKAGE SYSTEM
21. SUMP RECIEVER
22. GRAVEL STOP
23. EXTENSIONS WHERE REQUIRED
24. CONCEALED ARMS SUPPORT
25. 4" WRIST BLADE
26. REFER TO ARCHITECTRUAL DRAWINGS FOR LAVATORY
27. REFER TO ARCHITECTURAL DRAWINGS FOR SINK
28. HANDHELD BAR DELTA MODEL NO. 55041-PK
29. SOLID SURFACE SYSTEM (PANEL WALLS AND SHOWER PAN) BY ARCHITECT
30. EXISTING SHOWER ENCLOSE TO REMAIN. REPLACE TRIM ONLY
31. SINK IS INTEGRAL WITH COUNTERTOP. SEE ARCHITECTURAL DRAWINGS

PLUMBING GENERAL NOTES

1. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ALL PLUMBING ROUGH-IN LOCATIONS.
2. THE PHRASE "CONNECT TO" AS USED IN THE DRAWING SHEET NOTES IS TO INSTRUCT THE PLUMBING CONTRACTOR TO PROVIDE ROUGH-IN AND FINAL CONNECTION TO THE FIXTURE, EQUIPMENT OR APPLIANCE.
3. THESE DRAWINGS ARE BASED UPON INFORMATION FURNISHED TO THE ENGINEER BY THE OWNER. THE PLUMBING CONTRACTOR SHALL CONSIDER ALL INFORMATION PRESENTED ON THESE DRAWINGS AND SHALL BE RESPONSIBLE FOR REPORTING ANY DISCREPANCIES PRIOR TO SUBMITTING HIS PROPOSAL. FAILURE TO DO SO WILL INDICATE A COMPLETE ACCEPTANCE OF ALL INFORMATION CONTAINED HEREIN.
4. PLUMBING CONTRACTOR SHALL VERIFY ALL PRESENT CONDITIONS INCLUDING BUT NOT LIMITED TO, PIPE SIZE, LOCATION, INVERT, PRESSURE, TEMPERATURE, ETC. PRIOR TO START OF CONSTRUCTION AND MAKE MODIFICATIONS AS REQUIRED TO ACCOMMODATE PRESENT OR NEW CONSTRUCTION, ALL AT NO ADDITIONAL COST TO THE CONTRACT PRICE.

PIPING MATERIALS SCHEDULE

SYSTEM	LOCATION	SIZES	MATERIAL	JOINTS	FITTINGS	NOTES
SANITARY SEWER	ABOVE GRADE	ALL	CAST IRON	HUBLESS COUPLINGS	MATCH PIPE	
HOT & COLD WATER	ABOVE GRADE	1/2" TO 2"	COPPER TYPE L	LEAD FREE SOLDER	WROUGHT COPPER	
HOT & COLD WATER	ABOVE GRADE	1/2" TO 2"	COPPER TYPE L	BRAZED	T-DRILL	

1. PROVIDE POLYETHYLENE PIPE WRAP.
2. NONWOVEN GEOTEXTILE FILTER FABRIC MADE OF PP.

PLUMBING PIPING INSULATION SCHEDULE

SYSTEM/LOCATION	TYPE	JACKET	THICKNESS (IN) <2" PIPE	THICKNESS (IN) 2"+ PIPE	COVER	NOTE
DOMESTIC COLD WATER						
Indoor/Concealed	MFP	ASJ	0.5	0.5	-	
Indoor/Exposed	MFP	ASJ	0.5	0.5	-	
Buried	-	-	-	-	PVC,PE	
DOMESTIC HOT, RECIRC, TEMPERED AND TEPID WATER						
Indoor/Concealed	MFP	ASJ	1	1	-	
Indoor/Exposed	MFP	ASJ	1	1	PVC	1
Buried	FE	-	1	2	PVC,PE	
ADA FIXTURE PIPING						
Indoor/Exposed	RI	-	3/16	3/16	VF, PVC	
ENGINE EXHAUST						
Indoor/Concealed	CS,MFH	ASJ	3	4	-	
Indoor/Exposed	CS,MFH	ASJ	3	4	-	
Outdoor/Concealed	CS,MFH	ASJ	3	4	-	
Outdoor/Exposed	CS,MFH	ASJ	3	4	CA	

ABBREVIATIONS

ADL: Acoustical Duct Liner	ASJ: All Service Jacket
CG: Cellular Glass	CA: Corrugated Aluminum
CS: Calcium Silicate	CSS: Corrugated Stainless Steel
FE: Flexible Elastomeric or Polyolefin	EA: Embossed Aluminum
FRW: Fire Rated Duct Wrap	FSK: Foil Scrim Kraft
MFB: Mineral Fiber Board	PE: Polyethylene
MFH: Mineral Fiber 1200 F	PVC: Polyvinyl Chloride
MFP: Mineral Fiber Pipe & Tank	VF: Vinyl Faced
MFW: Mineral Fiber Wrap	
PI: Pre-Insulated Pipe System	
PS: Polystyrene	
RI: Removable Insulation System	

NOTES

1. Provide cover for exposed piping in finished areas. Provide cover as noted on drawings in unfinished areas and equipment rooms.

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