CONTRACT DOCUMENTS and SPECIFICATIONS

for

Spinnaker Fieldhouse Locker Rooms Renovation

BID #05-21

Bid Proposal

Karen S. Conard, City Manager
City of Portsmouth, New Hampshire

Prepared by: Public Works Department 680 Peverly Hill Rd., Portsmouth NH

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INVITATION TO BID

Sealed bid proposals, plainly marked, SPINNAKER FIELDHOUSE LOCKER ROOMS RENOVATION Bid Proposal #05-21 on the outside of the mailing envelope as well as the sealed bid envelope, addressed to the Finance/Purchasing Department, City Hall, 1 Junkins Avenue, Portsmouth, New Hampshire, 03801, will be accepted until 2:00 p.m. on August 18, 2020 at which time all bids will be publicly opened and read aloud. Only those firms that have been prequalified for this project are eligible to bid.

There will be a mandatory pre-bid walkthrough **11:00 a.m. August 6, 2020** at the Spinnaker Fieldhouse, 130 Spinnaker Way, Portsmouth. The work consists of new finishes for the men's and women's locker rooms.

Specifications may be obtained from the City's web site: https://www.cityofportsmouth.com/finance/purchasing-bids-and-proposals. Questions may be addressed by calling the Purchasing Coordinator at (603) 610-7227 or by email purchashing@cityofportsmouth.com

The City of Portsmouth reserves the right to reject any or all bids, to waive technical or legal deficiencies, to re-bid, and to accept any bid that it may deem to be in the best interest of the City.

Each Bidder shall furnish a bid security in the amount of ten percent (10%) of the bid.

INSTRUCTIONS TO BIDDERS

COVID-19 – PANDEMIC SPECIAL ATTENTION

Attendees of any pre-bid meeting, bid opening or other meeting will be required to <u>wear masks</u> and socially distance themselves while in any municipal building. Bidders are requested to send only a single representative to any public bid opening.

BIDDING REQUIREMENTS AND CONDITIONS

1. Special Notice to Bidders

Appended to these instructions is a complete set of bidding and general contract forms. These forms may be detached and executed for the submittal of bids. The plans, specifications, and other documents designated in the proposal form will be considered as part of the proposal, whether attached or not.

Addenda to this proposal, if any, including written answers to questions, will be posted on the City of Portsmouth website at http://www.cityofportsmouth.com/finance/purchasing.htm under the project heading. Addenda and updates will NOT be sent directly to firms. Contractors submitting a proposal should check the web site daily for addenda and updates after the release date. Firms should print out, sign and return addenda with the proposal. Failure to do so may result in disqualification.

2. Interpretation of Quantities in Bid Schedules

The quantities appearing in the bid schedule are approximate only and are prepared for the comparison of bids. Payment to the contractor will be made only for actual work performed and accepted in accordance with the contract. Any scheduled item of work to be done and materials to be furnished may be increased, decreased or omitted as hereinafter provided, and no claim for loss, anticipated profits or costs incurred in anticipation of work not ultimately performed will be allowed due to such increase or decrease.

3. Examination of Plans, Specifications and Site Work

The Bidder is expected to examine carefully the site of the proposed work, the plans, standard specifications, supplemental specifications, special provisions and contract forms before submitting a proposal. The submission of a bid shall be considered conclusive evidence that the Bidder has made such examination and is satisfied as to the conditions to be encountered in performing the work and as to the requirements of the contract. It will be conclusive evidence that the Bidder has also investigated and is satisfied with the sources of supply for all materials.

Plans, surveys, measurements, dimensions, calculations, estimates and statements as to the condition under which the work is to be performed are believed to be correct, but the contractors must examine for themselves, as no allowance will be made for any errors or inaccuracies that maybe found therein.

4. Familiarity with Laws

The Bidder is assumed to have made himself or herself familiar with all federal and state laws and all local by-laws, ordinances and regulations which in any manner affect those engaged or employed on the work or affect the materials or equipment used in the work or affect the conduct of the work, and the Bidder, if awarded the contract, shall be obligated to perform the work in conformity with said laws, by-laws, ordinances and regulations notwithstanding its ignorance thereof. If the Bidder shall discover any provision in the plans or specifications which is in conflict with any such law, by-law, ordinance or regulation the Bidder shall forthwith report it to the engineer in writing.

5. Preparation of Proposal

a) The Bidder shall submit its proposal upon the forms furnished by the Owner. The Bidder shall specify a lump sum price in figures, for each pay item for which a quantity is given and shall also

show the products of the respective prices and quantities written in figures in the column provided for that purpose and the total amount of the proposal obtained by adding the amount of the several items. All words and figures shall be in ink or typed. If a unit price or a lump sum bid already entered by the Bidder on the proposal form is to be altered it should be crossed out with ink, the new unit price or lump sum bid entered above or below it and initialed by the Bidder, also with ink.

b) The Bidder's proposal must be signed with ink by the individual, by one or more general partners of a partnership, by one or more members or officers of each firm representing a joint venture; by one or more officers of a corporation, by one or more members (if member- managed) or managers (if manager-managed) of a limited liability company, or by an agent of the contractor legally qualified and acceptable to the Owner. If the proposal is made by an individual, his or her name and post office address must be shown, by a partnership the name and post office address of each general and limited partner must be shown; as a joint venture, the name and post office address of each venturer must be shown; by a corporation, the name of the corporation and its business address must be shown, together with the name of the state in which it is incorporated, and the names, titles and business addresses of the president, secretary and treasurer.

6. Nonconforming Proposals

Proposals will be considered nonconforming and may be rejected in the Owner's sole discretion for any of the following reasons:

- a.) If the proposal is on a form other than that furnished by the Owner, or if the form is altered or any portion thereof is detached;
- b.) If there are unauthorized additions, conditional or altered bids, or irregularities of any kind which may tend to make the proposal or any portion thereof incomplete, indefinite or ambiguous as to its meaning;
- c.) If the Bidder adds any provisions reserving the right to accept or reject an award, or to enter into a contract pursuant to an award; or
- d.) If the proposal does not contain a unit price for each pay item listed except in the case of authorized alter pay items.

8. Proposal Guaranty

No proposal will be considered unless accompanied by a bid bond, surety, or similar guaranty of the types and in an amount not less than 5%. All sureties shall be made payable to the "City of Portsmouth". If a bid bond is used by the Bidder it shall be:

- a.) In a form satisfactory to the Owner;
- b.) With a surety company licensed, authorized to do business in, and subject to the jurisdiction of the courts of the State of New Hampshire; and
- c.) Conditioned upon the faithful performance by the principal of the agreements contained in the sub-bid or the general bid.

In the event any irregularities are contained in the proposal guaranty, the Bidder will have four business days (not counting the day of opening) to correct any irregularities. The corrected guaranty must be received by 4:00 p.m. If irregularities are not corrected to the satisfaction of the Owner, the Owner, in its sole discretion, may rejected the bid.

9. Delivery of Proposals

When sent by mail, the sealed proposal shall be addressed to the Owner at the address and in the care of the official in whose office the bids are to be received. All proposals shall be filed prior to the time and at the place specified in the invitation for bids. Proposals received after the time for opening of the bids will be returned to the Bidder, unopened.

10. Withdrawal of Proposals

A Bidder will be permitted to withdraw his or her proposal unopened after it has been submitted if the Owner receives a request for withdrawal in writing prior to the time specified for opening the proposals.

11. Public Opening of Proposals

Proposals will be opened and read publicly at the time and place indicated in the invitation for bids. Bidders, their authorized agents, and other interested parties are invited to be present.

12. Disqualification of Bidders

Any or all of the following reasons may be deemed by Owner in its sole discretion as being sufficient for the disqualification of a Bidder and the rejection of his proposal:

- a.) More than one proposal for the same work from an individual, firm, or corporation under the same or different name:
- b.) Evidence of collusion among Bidders;
- c.) Failure to submit all required information requested in the bid specifications;
- d.) Material change of Bidder's conditions from the date of qualification for this project and bid submission that calls into question Bidder's ability to complete the work timely and to specification; or e.) Such disqualification would be in the best interests of the Owner.

13. Material Guaranty and Samples

Before any contract is awarded, the Bidder may be required to furnish a complete statement of the origin, composition and manufacture of any or all materials to be used in the construction of the work, and the Owner may, in its sole discretion, reject the bid based on the contents of the statement or as a result of the failure of the Bidder to submit the statement.

AWARD AND EXECUTION OF CONTRACT

1. Consideration of Proposals

After the proposals are opened and read, they will be compared on the basis of the total price for all sections of work to be charged to perform the work and any such additional considerations as may be identified in the bid documents. The results of such comparisons will be immediately available to the public. In case of a discrepancy between the prices written in words and those written figures, the prices written in words shall govern. In case of a discrepancy between the total shown in the proposal and that obtained by adding the products of the quantities of items and unit bid prices, the latter shall govern.

2. Award of Contract

If a contract is to be awarded, the award will be made to the lowest responsible and qualified Bidder whose proposal complies with all the requirements prescribed. The successful Bidder will be notified, in writing, mailed to the address on his or her proposal, that his or her bid has been accepted and that the Bidder has been awarded the contract.

The award shall not be considered official until such time that a Purchase Order, fully executed contract or an award letter has been issued by the Finance Director. No presumption of award shall be made by the Bidder until such documents are in hand. Verbal notification of award is not considered official. Any action by the Bidder to assume otherwise is done so at his/her own risk and the City will not be held liable for any expense incurred by a Bidder that has not received an official award.

3. Cancellation of Award

The Owner reserves the right to cancel the award of any contract at any time before the execution of such contract by all parties without any liability of the Owner.

4. Return of Proposal Guaranty

All proposal guaranties, except those of the three lowest Bidders, will be returned upon request following the opening and checking of the proposals. The proposal guaranties of the three lowest Bidders will be returned within ten days following the award of the contract if requested.

5. Contract Bonds

At the time of the execution of the contract, the successful Bidder shall furnish:

- Labor and materials payment bond in the sum equal to 100 percent of the contract amount.
- Performance bond in the sum equal to 100 percent of the contract amount.

At the time of project completion, the Owner may, in its sole discretion, permit the Contractor to substitute a maintenance bond in lieu of holding retainage for the entire guaranty period. If a bond is furnished it shall meet the following criteria:

- A. The bond shall be in an amount equal to 20 percent of the contract amount. Such bond shall guarantee the repair of all damage due to faulty materials or workmanship provided or done by the contractor. The guarantee shall remain in effect for a period of one year after the date of final acceptance of the job by the Owner.
- B. Each bond shall be:

- (1) in a form satisfactory to the Owner;
- (2) with a surety company licensed and authorized to do business and with a resident agent designated for services of process in the State of New Hampshire; and
- (3) conditioned upon the faithful performance by the principal of the agreements contained in the original bid. All premiums for the contract bonds are to be paid by the contractor.

6. Execution and Approval of Contract

The successful Bidder is required to present all contract bonds, to provide proof of insurance, and to execute the contract within 10 days following receipt of the City's notification of acceptance of the bid. No contract shall be considered as in effect until it has been fully executed by all parties.

7. Failure to Execute Contract

Failure to execute the contract and file an acceptable bond within 10 days after notification of acceptance of bid shall be just cause for the cancellation of the award and the forfeiture of the proposal guarantee which shall become the property of the Owner, not as a penalty, but in liquidation of damages sustained. Award may then be made to the next lowest responsible Bidder, or the work may be re-advertised as the Owner may determine in its sole discretion.

8. Additional Information

Requests for additional information or questions should be to Lori MacGinnis, at purchasing@cityofportsmouth.com or 603-610-7227.

9. Reservation of Rights

The City of Portsmouth reserves the right to reject any or all bids, to waive technical or legal deficiencies, to re-bid, and to accept any bid that it may deem to be in the best interest of the City.

PROPOSAL FORM

Spinnaker Fieldhouse Locker Rooms Renovation

CITY OF PORTSMOUTH, N.H.

To the City of Portsmouth, New Hampshire, herein called the Owner.

The undersigned, as Bidder, herein referred to as singular and masculine declares as follows:

- 1. All interested in the Bid as Principals are named herein;
- 2. This bid is not made jointly, or in conjunction, cooperation or collusion with any other person, firm, corporation, or other legal entity;
- 3. No officer, agent or employee of the Owner is directly or indirectly interested in this Bid;
- 4. Bidder shall identify the subcontractor intended to perform the asbestos abatement work and affirm that the subcontractor has the requisite qualifications.
- 5. The bidder understands that the quantities of work calculated in the Bid or indicated on the Drawings or in the Specifications or other Contract Documents are approximate and are subject to increase or decrease or deletion as deemed necessary by the Portsmouth City Engineer. Any such changes will not result in or be justification for any penalty or increase in contract prices; and agrees that, if the Bid is accepted the bidder will contract with the Owner, as provided in the Contract Documents, this Bid Form being part of said Contract Documents, and that the bidder will supply or perform all labor, services, machinery, apparatus, tools, supplies and all other activities required by the Contract Documents in the manner and within the time therein set forth, and that the bidder will take in full payment therefore the following item prices, to wit.

THIS PROJECT SHALL BE BID BY LUMP SUM

PROPOSAL FORM

1)	Remove all ceramic wall tile and backer in Men's and Women's shower and toilet rooms. Insulate between common walls, and Replace with new ceramic wall tile.	
2)	Remove and replace floor tile in Men's and Women's shower rooms. Replace with 2"x 2" ceramic tile	
3)	Remove and replace floor tile in Men's and Women's toilets. Remove carpet tiles in both locker rooms. Replace all with 12" x 12" ceramic floor tile.	
4)	Remove all acoustical ceiling tile (ACT) and grid in Men's and Women's toilet and locker rooms. Replace with new 2' x 4' vinyl faced ACT system.	
5)	Remove and replace three Countertops; at Men's Locker, Women's Toilet and Women's Grooming Rooms.	

6) Remove two metal door frames at pool entrances. Provide blocking and PVC trim cased opening. Paint two coats latex.	
7) Remove and replace toilet partitions in Men's and Women's toilets. Install new floor mounted overhead braced, solid plastic toilet partitions.	
8) Remove and replace hardware in Women's shower partitions, Replace with stainless steel.	
9) Remove and replace sinks and faucets in in Men's locker and Women's toilet rooms.	
10) Remove and replace toilets in Men's and Women's toilet rooms.	
11) Remove and replace shower valves in Men's and Women's shower rooms.	
12) Install new 2x2 LED edge lit panels, EBU's, occupancy switching and sensors;	
13) Remove and reset fire alarm devices	
Items 1 to 13 BASIS OF AWARD TOTAL BID PRICE	\$

BASE BID Furnish and install all labor materials equipment and furnishing to renovate Men's and Women's locker, shower and toilet rooms <i>tems 1 - 13</i>		
Price in Words \$Price in Figures \$		
The Bidder has received and acknowledged Addenda No through		
All Bids are to be submitted on this form and in a sealed envelope, plainly marked on the outside with the Bidder's name and address and the Project name as it appears at the top of the Proposal Form.		

of the Contract	Documents, the Bio	dder will accept compensa	tion as stipu	lated therein.	-
Date _		Company	By:	Signature	
Title:					
Proposal #05-2	21 Spinnaker Fieldho	ouse Locker Rooms Renov	ation		
12					
		Business Address			
	City, State, Zip	Code			
Telephone:					
electronically.	Please provide an en	nability practices, future by mail address as to where the pe. Thank you in advance	ne City could	l email future bid	be sent

The undersigned agrees that for extra work, if any, performed in accordance with the terms and provisions

BID SECURITY BOND

(This format provided for convenience, actual Bid	Bond is acceptable in	lieu of, if compatible.)
KNOW ALL MEN BY THESE PRESENTS, that	we the undersigned	
	_, as Principal, and	
	, as Surety, are hereb	ру
held and firmly bound unto		
IN THE SUM OF		as liquidated damages for
payment of which, well and truly to be made we he executors, administrators, successors and assigns.		
The condition of this obligation is such that wherea	•	mitted to the CERTAIN Bid attached hereto
and hereby made a part hereof to enter into a contra "AGREEMENT" and or "CONTRACT", for		

NOW THEREFORE,

- (a) If said Bid shall be rejected or withdrawn as provided in the INFORMATION FOR BIDDERS attached hereto or, in the alternative,
- (b) If said Bid shall be accepted and the Principal shall duly execute and deliver the form of AGREEMENT attached hereto and shall furnish the specified bonds for the faithful performance of the AGREEMENT and/or CONTRACT and for the payment for labor and materials furnished for the performance of the AGREEMENT and or CONTRACT, then this obligation shall be void, otherwise it shall remain in full force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder in no event shall exceed the amount of this obligation.

BID BOND (co	nt.)			
way impaired or		ensions of the time	-	d surety and its bond shall be in no D may be accepted, and said Surety
IN WITNESS	WHEREOF, the part	ies hereto have duly	executed	
this bond on the	;	_ day of	_, 20	
		L.S.		(Name of Principal)
(SEAL)				
I	3Y		_	
-			_	(Name of Surety)

CONTRACT AGREEMENT

SPINNAKER FIELDHOUSE LOCKER ROOMS RENOVATION

THIS AGREEMENT made as of the	in the year 2020, by and between the
City of Portsmouth, New Hampshire (herei	nafter call the Owner) and
	(hereinafter called the Contractor),

WITNESSETH; that the Owner and Contractor, in consideration of the mutual covenants hereinafter set forth, agree as follows:

ARTICLE I- **WORK** - The Contractor shall perform all work as specified or indicated in the Contract Documents for Spinnaker Fieldhouse Locker Rooms Renovation (the "Project"). The Contractor shall provide, at his expense, all labor, materials, equipment and incidentals as may be necessary for the expeditious and proper execution of the Project.

ARTICLE II - **ENGINEER** - The Director of Public Works or his authorized representative will act as City Engineer in connection with completion of the Project in accordance with the Contract Documents.

ARTICLE III - **CONTRACT TIME** - The work shall commence in accordance with the Notice to Proceed. All work shall be completed 90 days from the date of the Notice To Proceed.

ARTICLE IV - **CONTRACT PRICE** Owner shall pay Contractor for performance of the work in accordance with the Contract Documents as shown under item prices in the Bid Proposal.

ARTICLE V - **PAYMENT** - Partial payments will be made in accordance with the Contract Documents. Upon final acceptance of the work and settlement of all claims, Owner shall pay the Contractor the unpaid balance of the Contract Price, subject to additions and deductions provided for in the Contract Documents.

ARTICLE VI - **RETAINAGE** – To ensure the proper performance of this Contract, the Owner shall retain ten percent (10%) of the full contract amount until final acceptance. Upon Final Acceptance the City will retain 2% of the Contract amount for the duration of the Warranty period. At the discretion of the City, a maintenance bond may be substituted for the final retainage.

ARTICLE VII - **LIQUIDATED DAMAGES** - In event the Contractor fails to successfully execute the work within the specified contract time the Owner shall assess the Contractor liquidated damages in the amount of **TWO HUNDRED DOLLARS** (\$100) for each calendar day beyond the specified completion date. Liquidated damages shall be deducted from the Contract Price prior to final payment of the Contractor.

ARTICLE VIII – **CONTRACT DOCUMENTS** – The Contract Documents which comprise the contract between Owner and Contractor are attached hereto and made a part hereof and consist of the following:

- 8.1 Contractor's Bid and Bonds
- 8.2 Contract Agreement
- 8.3 Notice of Award, Notice to Proceed
- 8.4 General Requirements, Control of Work, Temporary Facilities, Insurance Requirements, Measurement and Payment
- 8.5 Standard and Technical Specifications
- 8.6 Contract Drawings
- 8.7 Special Provisions
- 8.8 Any modifications, including change orders, duly delivered after execution of this Agreement.

ARTICLE IX – **TERMINATION FOR DEFAULT** – Should contractor at any time refuse, neglect, or otherwise fail to supply a sufficient number or amount of properly skilled workers, materials, or equipment, or fail in any respect to prosecute the work with promptness and diligence, or fail to perform any of its obligations set forth in the Contract, Owner may, at its election, terminate the employment of Contractor, giving notice to Contractor in writing of such election, and enter on the premises and take possession, for the purpose of completing the work included under this Agreement, of all the materials, tools and appliances belonging to Contractor, and to employ any other persons to finish the work and to provide the materials therefore at the expense of the Contractor.

ARTICLE X – **INDEMNIFICATION OF OWNER** – Contractor shall defend, indemnify and hold harmless Owner and its officials and employees from and against all suits, claims, judgments, awards, losses, costs or expenses (including without limitation attorneys' fees) to the extent arising out of or relating to Contractor's alleged negligence or breach of its obligations or warranties under this Contract. Contractor shall defend all such actions with counsel satisfactory to Owner at its own expense, including attorney's fees, and will satisfy any judgment rendered against Owner in such action.

ARTICLE XI – **PERMITS** – The Contractor shall secure at its own expense, all permits and consents required by law as necessary to perform the work and shall give all notices and pay all fees and otherwise comply with all applicable City, State, and Federal laws, ordinances, rules and regulations. City of Portsmouth permit fees will not be required or will be the responsibility of the Owner. All other fees to be the responsibility of the Contractor.

ARTICLE XII – **INSURANCE** – The Contractor shall secure and maintain, until acceptance of the work, insurance with limits not less than those specified in the Contract.

ARTICLE XIII - MISCELLANEOUS -

- A. Neither Owner nor Contractor shall, without the prior written consent of the other, assign, sublet or delegate, in whole or in part, any of its rights or obligations under any of the Contract Documents; and, specifically not assign any monies due, or to become due, without the prior written consent of Owner.
- B. Owner and Contractor each binds himself, his partners, successors, assigns and legal representatives, to the other party hereto in respect to all covenants, agreements and obligations contained in the Contract Documents.
- C. The Contract Documents constitute the entire Agreement between Owner and Contractor and may only be altered amended or repealed by a duly executed written instrument.

D. The laws of the State of New Hampshire law principles thereof.	e shall govern this Contract without reference to the conflict of
E. Venue for any dispute shall be the Rocki agree.	ngham County Superior Court unless the parties otherwise
IN WITNESS WHEREOF, the parties herewaritten.	anto executed this AGREEMENT the day and year first above
BIDDER:	
BY:	_
TITLE:	
CITY OF PORTSMOUTH, N.H.	
BY: TITLE: City Manager	Karen S. Conard

NOTICE OF INTENT TO AWARD

Date:
To:
IN AS MUCH as you were the low responsible Bidder for work entitled:
SPINNAKER FIELDHOUSE LOCKER ROOMS RENOVATION
You are hereby notified that the City intends to award the aforesaid project to you.
Immediately take the necessary steps to execute the Contract and to provide required bonds and proof of insurance within ten (10) calendar days from the date of this Notice.
The City reserves the right to revoke this Notice if you fail to take the necessary steps to execute this Contract.
City of Portsmouth Portsmouth, New Hampshire
Judie Belanger, Finance Director

NOTICE TO PROCEED

	NOTICE TO TROCEED
DATE:	
PROJECT:	SPINNAKER FIELDHOUSE LOCKER ROOMS RENOVATION
TO:	
	EREBY NOTIFIED TO COMMENCE WORK IN ACCORDANCE WITH TH
AGREEMEN	VT DATED,
ALL WORK	SHALL BE COMPLETED BY
CITY OF PO	ORTSMOUTH, N.H.
BY: Peter H.	
TITLE: Publi	ic Works Director
	ACCEPTANCE OF NOTICE
	TREEST THREE OF THE FIELD
RECEIPT OI	F THE ABOVE NOTICE TO PROCEED IS HEREBY ACKNOWLEDGED BY
This the	day of20
Bv:	
J	
Title	

CHANGE ORDER

BID # 05-21 Spinnaker Fieldhouse Locker Rooms Renovation

CHANGE ORDER #		
Date of Issuance:		
Owner: CITY OF PORTSMOUTH, N.H		
Contractor:		
You are directed to make the following chan	iges in the Con	tract Documents:
Description:		
Purpose of Change Order:		
Attachments:		
CHANGE IN CONTRACT PRICE	C	HANGE IN CONTRACT TIME
Original Contract Price: \$		riginal Completion Date:
Contract Price prior	C	ontract Time
to this Change Order: \$	p	rior to this Change Order:
Net Increase or Decrease	N	let Time Increase or Decrease
of this Change Order: \$	th	nis Change Order:
Contract Price with all	C	ontract Time with all
approved Change Orders: \$	aj	pproved Change Orders:
RECOMMENDED:	APPROVED:	
RECOMMENDED.	HIIKOVED.	
hv. hv.	by	by
by by	_ оу	by

PERFORMANCE BOND

(This format provided for convenience, actual Performance Bond is acceptable in lieu, if compatible)				
Bond Number				
KNOW ALL MEN BY THESE PRESENTS				
that	and authorized to do business in the curety, are held and firmly bound unto the City of a the amount of Dollars or and Surety bind themselves, their heirs, by and severally, firmly by these presents. I entered into a contract e with drawings and specifications prepared by the smouth, N.H. 03801, which contract is by			
NOW, THEREFORE, THE CONDITION OF THIS OF well and faithfully do and perform the things agreed by terms of said Contract and such alterations as may be mean shall further indemnify and save harmless the said Own remedy without cost to the Owner any defect which may completion and acceptance of the work.	him to be done and performed, according to the nade in said Contract during progress work, and her in accordance with the Contract and shall			
The Surety hereby waives notice of any alteration in wo of its agents or representatives.	ork or extension of time made by the Owner or any			
Whenever Contractor shall be, and declared by Owner having performed Owner's obligations thereunder, the Spromptly:				
(1) Complete the Contract in accordance with its terms	and conditions, or			
(2) Obtain a bid or bids for submission to the Owner for terms and conditions, and upon determination by Owner arrange for a contract between such Bidder and Owner though there should be a default or a succession of defaunder this paragraph) sufficient funds to pay the cost of but not exceeding, including other costs and damages for amount set forth in the first paragraph hereof. The term paragraph, shall mean the total amount payable by the Camendments thereto, less the amount paid by Owner to	er and Surety of the lowest responsible Bidder, and make available as work progresses (even aults under the contract of completion arranged completion less the balance of the contract price; or which the Surety may be liable hereunder, the "balance of the contract price", as used in this Owner to Contractor under the Contract and any			

PERFORMANCE BOND (continued)

Any suit under this bond must be instituted before the expiration of (2) years from the date on which final payment under the contract falls due.

No right of action shall accrue on this bond to or for the use of any person or corporation other than the Owner named herein or the heirs, executors, administrators or successors of Owner.

Signed and sealed this	day of		
A.D., 20			
In the presence of:(Principal) (Seal)	B	Y:	(Witness)
_		(Surety Com	npany)
(Seal)	BY:	(Witness)	(Title)
Note: If the Principal (Contractor) is a partnership, the Bo	nd should be signed by each	n of the partners.
If the Principal (Contra its duly authorized Offi	actor) is a corporation, the Bond should be corporation of the Bond should be corporation.	ould be signed in its correct	corporate name by
•	n behalf of the Surety by an attorne ower of Attorney showing his author	-	tached to it a duly
There should be execut of counterparts of the A	ted an appropriate number of counte Agreement.	erparts of the bond correspo	onding to the number

LABOR AND MATERIALS PAYMENT BOND

(This format provided for convenience, actual Labor and Material Bond is accept compatible)	able in lieu, if
Bond Number	
KNOW ALL MEN BY THESE PRESENTS:	
that	
as Principal, hereinafter called Contractor, and	(Surety
and authorized to do business in the State of New localled Surety, are held and firmly bound unto the City of Portsmouth, N.H. Oblige Owner, for the use and benefit of claimants as herein below defined, in the	_
amount of Dollars (\$ whereof Principal and Surety bind themselves, their heirs, executors, administrato assigns, jointly and severally, firmly by these presents.	
WHEREAS, Principal has by written agreement dated	entered into a
contract with Owner for in drawings and specifications prepared by the Public Works Department, 680 Pever Portsmouth, N.H. 03801, which contract is by reference made a part hereof, and is as the Contract.	ly Hill Road,
NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that the	•

- NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that the Principal shall promptly make payment to all claimants as hereinafter defined, for all labor and material used or reasonably required for use in the performance of the Contract and for the hire of all equipment, tools, and all other things contracted for or used in connection therewith, then this obligation shall be void, otherwise it shall remain in full force and effect, subject however, to the following conditions:
- (1) A claimant is defined as one having a direct contract with the Principal or, with a subcontractor of the Principal for labor, material, equipment, or other things used or reasonably required for use in the performance of the Contract. "Labor and material" shall include but not be limited to that part of water, gas, power, light, heat, oil and gasoline, telephone service or rental of equipment applicable to the Contract.
- (2) The above named Principal and Surety hereby jointly and severally agree with the Owner that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished by such a claimant, may sue on this bond for the use of such claimant, prosecute the suit by final judgment for such sum or sums as may be justly due claimant, and have execution thereon. The Owner shall not be liable for the payment of any such suit or any costs or expenses of any such suit, and principal and surety shall jointly and severally indemnify, defend and hold the Owner harmless for any such suit, costs or expenses.

LABOR AND MATERIAL PAYMENT BOND (continued)

- (3) No suit or action shall be commenced hereunder by any claimant:
- (a) Unless Claimant, other than one having a direct contract with the Principal, shall have given notice to all the following:

The Principal, the Owner and the Surety above named, within six (6) calendar months after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the Principal, Owner, and Surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the State of New Hampshire save that such service need not be made by a public officer.

- (b) After the expiration of one (1) year following the date on which Principal ceased all work on said contract, it being understood, however, that if any limitation embodied in this bond is prohibited by any law controlling the construction hereof, such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.
- (c) Other than in a State court of competent jurisdiction in and for the county or other political subdivision of the State in which the project, or any part thereof, is situated, or in the United States District Court for the district in which the project, or any part thereof, is situated, and not elsewhere. (4) The amount of this bond may be reduced by and to the extent of any payment of payments made in good faith hereunder, inclusive of the payment by Surety of mechanics' liens which may be filed on record against said improvement, whether or not claim for the amount of such lien by presented under and against this bond.

Signed and sealed this	day of	
(Principal) (Seal)	BY:	(Witness)
		(Surety Company)
	BY:	(Witness) (Title)
(Seal)		

LABOR AND MATERIALS PAYMENT BOND (continued)

Note: If the Principal (Contractor) is a partnership, the Bond should be signed by each of the partners.

If the Principal (Contractor) is a corporation, the Bond should be signed in its correct corporate name by its duly authorized Officer or Officers.

If this bond is signed on behalf of the Surety by an attorney-in-fact, there should be attached to it a duly certified copy of his Power of Attorney showing his authority to sign such Bonds.

There should be executed an appropriate number of counterparts of the bond corresponding to the number of counterparts of the Agreement.

MAINTENANCE BOND

At the Owner's election, a maintenance bond may be substituted for retainage at the completion of the project. If the Owner permits a maintenance bond, it shall be in the amount of Twenty Percent (20%) of the contract price with a corporate surety approved by the Owner. Such bond shall be provided at the time of Contract completion and shall guarantee the repair of all damage due to faulty materials or workmanship provided or done by the Contractor. This guarantee shall remain in effect for a period of one year after the date of final acceptance of the job by the Owner.

CONTRACTOR'S AFFIDAVIT

STATE OF:
COUNTY OF:
Before me, the undersigned, a Notary Public, Justice of the Peace)
n and for said County and State personally appeared, Individual, Partner, or duly authorized representative of Corporate)
who, being duly sworn, according to law deposes and says that the cost of labor, material, and equipment and outstanding claims and indebtedness of whatever nature arising out of the performance of the Contract between
CITY OF PORTSMOUTH, NEW HAMPSHIRE
and (Contractor)
of
Dated:
has been paid in full for Construction of:
SPINNAKER FIELDHOUSE LOCKER ROOMS RENOVATION
(Individual, Partner, or duly authorized representative of Corporate Contractor)
Sworn to and subscribed before me thisday of20

CONTRACTOR'S RELEASE

KNOW ALL MEN BY THESE PRESENTS

that	(Contractor) of	
, County of	·	and State of
	does hereby ack	nowledge
that	(Contractor)) has on this day had, and
received from the CITY OF PORTSMOUTI	H NEW HAMPSHIRE, final and cor	npleted payment for the
Construction of: SPINNAKER FIELDHOU		ON NOW
THEREFORE, the said	(Contr	ractor) for myself, my
heirs, executors, and administrators) (for itse	elf, its successors and assigns) do/doo	es by these presents
remise, release, quit-claim and forever disch	narge the City of Portsmouth, New H	ampshire, its successors
and assigns, of and from all claims and dema	ands arising from or in connection w	ith the said Contract
dated, and of and from	all, and all manners of action and act	ions, cause and causes of
action and actions, suits, debts, dues, duties,	•	•
specifications, covenants, contracts, agreeme		•
executions, claims and demand, whatsoever		•
Portsmouth, New Hampshire, its successors		
(it, its successors and assigns) ever had, now	•	
its successors and assigns) hereafter can shall		•
thing whatsoever; from the beginning of rec	ord time to the date of these presents	. IN WITNESS
WHEREOF,	Contractor:	
	By:	print
name of witness:	Its Duly Authorized	
Dated:		

GENERAL REQUIREMENTS

1. INTENT OF CONTRACT

The intent of the Contract is to provide for the construction and completion in every detail of the work described. The Contractor shall furnish all labor, materials, equipment, tools, transportation and supplies required to complete the work in accordance with the terms of the Contract. The Contractor shall be required to conform to the intent of the plans and specifications. No extra claims shall be allowed for portions of the work not specifically addressed in the plans and specifications but required to produce a whole and complete project, such work will be considered subsidiary to the bid items.

2. INCIDENTAL WORK

Incidental work items for which separate payment is not measured includes, but is not limited to, the following items:

- a. Mobilization & Demobilization
- b. Clean up
- c. Temporary Facilities
- d. Transportation and disposal of demolition debris and waste materials
- e. Restoration of property
- f. Cooperation with other contractors, abutters and utilities.
- g. Accessories and fasteners or components required to make items paid for under unit prices or lump sum items complete and functional.

3. ALTERATION OF PLANS OR OF CHARACTER OF WORK

The Owner reserves the right, without notice to Surety, to make such alterations of the plans or of the character of the work as may be necessary or desirable to complete fully and acceptably the proposed construction; provided that such alterations do not increase or decrease the contract cost. Within these cost limits, the alterations authorized in writing by the Owner shall not impair or affect any provisions of the Contract or bond and such increases or decreases of the quantities as a result from these alterations or deletions of certain items, shall not be the basis of claim for loss or for anticipated profits by the contractor. The contractor shall perform the work as altered at the contract unit price or prices.

4. EXTRA WORK ITEMS

Extra work shall be performed by the Contractor in accordance with the specifications and as directed, and will be paid for at a price as provided in the Contract documents or if such pay items are not applicable than at a price negotiated between the contractor and the Owner or at the unit bid price. If the Owner determines that extra work is to be performed, a change order will be issued.

5. CHANGE ORDERS

The Owner reserves the right to issue a formal change order for any increase, decrease, deletion, or addition of work or any increase in contract time or price. The contractor shall be required to sign the change order and it shall be considered as part of the Contract documents.

6. FINAL CLEANING UP

Before acceptance of the work, the contractor shall remove from the site all machinery, equipment, surplus materials, rubbish, temporary buildings, barricades and signs. All parts of the work shall be left in a neat and presentable condition. On all areas used or occupied by the contractor, regardless of the contract limits, the Bidder shall clean-up all sites and storage grounds.

The items prescribed herein will not be paid for separately, but shall be paid for as part of the total contract price.

7. ERRORS AND INCONSISTENCY IN CONTRACT DOCUMENTS

Any provisions in any of the Contract Documents that may be in conflict with the paragraphs in these General Requirements shall be subject to the following order of precedence for interpretation.

- 1. Technical Specifications will govern General Requirements.
- 2. Special Provisions will govern Technical Specifications.
- 3. Plans will govern Special Provisions, Technical Specifications, and General Requirements.

CONTROL OF WORK

1. AUTHORITY OF ENGINEER

- (a) All work shall be done under supervision of the City Engineer and to his satisfaction. The City Engineer will decide all questions which may arise as to the quality and acceptability of materials furnished and work performed and as to the rate of progress of the work; all questions that may arise as to the interpretation of the plans and specifications; and all questions as to the acceptable fulfillment of the Contract by the Contractor.
- (b) The City Engineer will have the authority to suspend the work wholly or in part for such periods as he may deem necessary due to the failure of the Contractor to correct conditions unsafe for workers or the general public; for failure to carry out provisions of the Contract; for failure to carry out orders; for conditions considered unsuitable for the prosecution of the work, including unfit weather; or for any other condition or reason deemed to be in the public interest. The Contractor shall not be entitled any additional payments arising out of any such suspensions.
- (c) The Owner reserves the right to demand a certificate of compliance for a material or product used on the project. When the certificate of compliance is determined to be unacceptable to the City Engineer the Contractor may be required to provide engineering and testing services to guarantee that the material or product is suitable for use in the project, at its expense (see Sample of Certificate of Compliance).

2. PROTECTION AND RESTORATION OF PROPERTY AND LANDSCAPES

- (a) The Contractor shall use every precaution to prevent injury or damage to buildings, pavement, wires, poles, or other property of public utilities; trees, shrubbery, crops, and fences along and adjacent to the right-of-way, all underground structures such as pipes and conduits, within or outside of the right-of-way; and the Contractor shall protect and carefully preserve all property marks until an authorized agent has witnessed or otherwise referenced their location.
- (b) The Contractor shall be responsible for all damage or injury to property of any character, during the prosecution of the work, resulting from any act, omission, neglect, or misconduct in his manner or method of executing the work, or at any time due to defective work or materials, and said responsibility will not be released until the project shall have been completed and accepted.
- (c) When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work, or as a result of the failure to perform work by the Contractor, the Contractor shall restore, at its own expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing rebuilding, or otherwise restoring as may be directed, or the Contractor shall make good such damage or injury in an acceptable manner.
- (d) If the Contractor fails to repair, rebuild or otherwise restore such property as may be deemed necessary, the Owner, after 48 hours notice, may proceed to do so, and the cost thereof may be deducted from any money due or which may become due the Contractor under the contract.
- (e) It is the intent of the Parties that the Contractor preserve, to as great an extent as possible, the natural features of the site. (f) All facilities, infrastructure and features shall be protected and preserved during construction. Any damaged items shall be repaired or replaced by the contractor at no cost to the Owner.

3. MAINTENANCE DURING CONSTRUCTION

The Contractor shall maintain the work during construction and until the project is accepted. This maintenance shall constitute continuous and effective work prosecuted day by day, with adequate equipment and workers to ensure that the structure is kept in satisfactory conditions at all times.

4. SAFETY PRECAUTIONS

Upon commencement of work, the Contractor shall be responsible for initiating, maintaining and supervising all safety precautions necessary to ensure the safety of employees on the site, other persons who may be affected thereby, including the public, and other property at the site or adjacent thereto.

5. PERMITS

It will be the responsibility of the Contractor to obtain all permits required for the operation of equipment in, or on, all city streets and public ways.

6. BARRICADES, WARNING SIGNS AND TRAFFIC OFFICERS

- (a) The Contractor shall provide, erect and maintain all necessary barricades, suitable and sufficient lights, danger signals, signs and other traffic control devices, and shall take all necessary precautions for the protection of the work and safety of the public. Roadway closed to traffic shall be protected by effective barricades. Obstructions shall be illuminated during hours of darkness. Suitable warning signs shall be provided to control and direct traffic in a proper manner, as approved by the engineer.
- (b) The Contractor will be held responsible for all damage to the work from traffic, pedestrians, animals or any other cause due to lack of adequate controlling devices.
- (c) The Contractor shall provide such police officers as the City Engineer deems necessary for the direction and control of traffic within the site of project.

The work prescribed herein will not be paid for separately but will be paid for as part of the Contract Price unless specifically appearing as a bid item.

TEMPORARY FACILITIES

1. STORAGE FACILITIES

- (a) The Contractor shall not store materials or equipment in a public right-of-way beyond the needs of one working day. Equipment and materials shall be stored in an approved location.
- (b) The Contractor shall protect all stored materials from damage by weather or accident and shall ensure adequate drainage at and about the storage location.
- (c) Prior to final acceptance of the work all temporary storage facilities and surplus stored materials shall be removed from the site.

2. SANITARY FACILITIES

- (a) The Contractor shall provide for toilet facilities for the use of the workers employed on the work.
- (b) Temporary toilet facilities may be installed provided that the installation and maintenance conform with all State and local laws, codes, regulations and ordinances governing such work. They shall be properly lit and ventilated, and shall be kept clean at all times.
- (c) Prior to final acceptance of the work all temporary toilet facilities shall be removed from the site.

3. CONSTRUCTION STAGING

Contractor may utilize parking area adjacent to the fieldhouse. Street parking is not allowed.

INSURANCE REQUIREMENTS

Insurance shall be in such form as will protect the Contractor from all claims and liabilities for damages for bodily injury, including accidental death, and for property damage, which may arise from operations under this contract whether such operation by himself or by anyone directly or indirectly employed by him.

- 1. AMOUNT OF INSURANCE A) Comprehensive General Liability: Bodily injury or Property Damage \$2,000,000 Per occurrence and general aggregate B) Automobile and Truck Liability: Bodily Injury or Property Damage \$2,000,000 Per occurrence and general aggregate Additionally, the Contractor shall purchase and maintain the following types of insurance:
- A) Workers Comprehensive Insurance coverage sufficient to meet statutory requirements for all people employed by the Contractor to perform work on this project.
- B) Contractual Liability Insurance coverage in the amounts specified above under Comprehensive General Liability.
- C) Product and Completed Operations coverage to be included in the amounts specified above under Comprehensive General Liability.
- D) Pollution Liability coverage of at least \$1,000,000 sufficient to cover the work described in this contract. ADDITIONAL INSURED

All liability policies (including any excess policies used to meet coverage requirements) shall include the City of Portsmouth, New Hampshire as named Additional Insured.

1) The contractor's insurance shall be primary in the event of a loss. 2) The Additional Insured endorsement must include language specifically stating that the entity is to be covered for all activities performed by, or on behalf of, the contractor, including the City of Portsmouth's general supervision of the contractor. 3) City of Portsmouth shall be listed as a Certificate Holder and Additional Insured. The City shall be identified as follows:

City of Portsmouth Attn: Legal Department 1 Junkins Avenue Portsmouth, NH 03801

MEASUREMENT AND PAYMENT

1. MEASUREMENT OF QUANTITIES

- (a) All work completed under the contract will be measured according to the United States standard measure.
- (b) The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the contract will be those methods generally recognized as conforming to good engineering practice. Unless otherwise stated all quantities measured for payment shall be computed or adjusted for "in place" conditions.
- (c) The term "lump sum" when used as an item of payment will mean complete payment for the work described in the item.
- (d) When a complete structure or structural unit (in effect, "lump sum" work) is specified as the unit of measurement, the unit will be construed to include all necessary fittings and accessories, so as to provide the item complete and functional. Except as may be otherwise provided, partial payments for lump sum items will be made approximately in proportion to the amount of the work completed on those items.
- (e) Material wasted without authority will not be included in the final estimate.

2. SCOPE OF PAYMENT

- (a) The Contractor shall receive and accept compensation provided for in the contract as full payment for furnishing all materials and for performing all work under the contract in a complete and acceptable manner and for all risk, loss, damage or expense of whatever character arising out of the nature of the work or the prosecution thereof.
- (b) The Contractor shall be liable to the Owner for failure to repair, correct, renew or replace, at his own expense, all damage due or attributable to defects or imperfections in the construction which defects or imperfections may be discovered before or at the time of the final inspection and acceptance of the work.
- (c) No monies, payable under the contract or any part thereof, except the first estimate, shall become due or payable if the Owner so elects, until the Contractor shall satisfy the Owner that the Contractor has fully settled or paid all labor performed or furnished for all equipment hired, including trucks, for all materials used, and for fuels, lubricants, power tools, hardware and supplies purchased by the Contractor and used in carrying out said contract and for labor and parts furnished upon the order of said Contractor for the repair of equipment used in carrying out said contract; and the Owner, if he so elects, may pay any and all such bills, in whole or in part, and deduct the amount of amounts so paid from any partial or final estimate, excepting the first estimate.

3. COMPENSATION FOR ALTERED QUANTITIES

(a) Except as provided for under the particular contract item, when the accepted quantities of work vary from the quantities in the bid schedule the Contractor shall accept as payment in full, so far as contract items are concerned, at the original contract unit prices for the accepted quantities of work done. No allowance will be made for any increased expense, loss of expected reimbursement, or loss of anticipated profits suffered or claimed by the Contractor resulting either directly from such alterations or indirectly from unbalanced allocation among the contract items of overhead expense on the part of the Bidder and subsequent loss of expected reimbursements therefore or from any other cause. (b) Extra work performed will be paid for at the contract bid prices or at the price negotiated between the Owner and the Contractor

if the item was not bid upon. If no agreement can be negotiated, the Contractor will accept as payment for extra work, cost plus 15% (overhead and profit). Costs shall be substantiated by invoices and certified payroll.

4. PARTIAL PAYMENTS

Partial payments will be made on a monthly basis during the contract period. From the total amount ascertained as payable, an amount equivalent to ten percent (10%) of the whole will be deducted and retained by the Owner until such time as the work receives final acceptance.

5. SUBSTANTIAL COMPLETION AND FINAL COMPLETION

- A. Before requesting Substantial Completion inspection, Contract shall complete the following:
 - 1. Submit specific warranties, maintenance agreements, and similar documents.
 - 2. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities.
 - 3. Submit Record Drawings and Specifications, operation and maintenance manuals and similar final record information.
 - 4. Deliver tools, spare parts, extra materials, and similar items.
 - 5. Remove temporary facilities and controls.
 - 6. Advise Owner of changeover information related to Owner's occupancy, operation, and maintenance.
 - 7. Complete final cleaning requirements, including touchup painting.
 - 8. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- B. On receipt of Contractor's request for inspection for Substantial Completion, the City Engineer will proceed with inspection and advise Contractor of unfulfilled requirements. Owner will advise Contractor of items that must be completed or corrected before the certificate will be issued.
- C. Contractor may request inspection for certification of Final Completion, once the following are complete:
 - 1. Submit a copy of Substantial Completion inspection list stating that each item has been completed or otherwise resolved for acceptance.
 - 2. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems as may be applicable.
- D. City Engineer will reinspect the work on receipt of notice that the Work has been completed. On completion of a reinspection, Owner will prepare a final Certificate for Payment if the work is completed satisfactorily. If the work is incomplete, Owner will advise Contractor of the Work that is incomplete or obligations that have not yet been fulfilled.

6. ACCEPTANCE AND FINAL PAYMENT

(a) When the project has been accepted and upon submission by the Contractor of all required reports, completed forms and certifications, the Owner will review the final estimate of the quantities of the

various classes of work performed. The Contractor may be required to certify that all bills for labor and material used under this contract have been paid.

- (b) The Contractor shall file with the Owner any claim that the Contractor may have regarding the final estimate at the same time the Contractor submits the final estimate. Failure to do so shall be a waiver of all such claims and shall be considered as acceptance of the final estimate. From the total amount ascertained as payable, an amount equivalent to ten percent (5%) of the whole will be deducted and retained by the Owner until such time as the work receives final acceptance. This retainage may be waived, at the discretion of the City, provided the required Maintenance Bond has been posted. After approval of the final estimate by the Owner, the Contractor will be paid the entire sum found to be due after deducting all previous payments and all amounts to be retained or deducted under the provisions of the contract.
- (c) All prior partial estimates and payments shall be subject to correction in the final estimate and payment.

7. GENERAL GUARANTY AND WARRANTY OF TITLE

- (a) Neither the final certification of payment nor any provision in the contract nor partial or entire use of the improvements embraced in this Contract by the Owner or the public shall constitute an acceptance of work not done in accordance with the Contract or relieve the Contractor of liability in respect to any express or implied warranties or responsibility for faulty materials or workmanship. The Contractor shall promptly remedy any defects in the work and pay for any damage to other work resulting therefrom which shall appear within a period of twelve (12) months from the date of final acceptance of the work. The Owner will give notice of defective materials and work with reasonable promptness.
- (b) No material, supplies or equipment to be installed or furnished under this Contract shall be purchased subject to any chattel mortgage or under a conditional sale, lease purchase or other agreement by which an interest therein or in any part thereof is retained by the Seller or supplier. The Contractor shall warrant good title to all materials, supplies and equipment installed or incorporated in the work and upon completion of all work, shall deliver the same together with all improvements and appurtenances constructed or placed thereon by him to the Owner free from any claims, liens or charges. Neither the Contractor nor any person, firm or corporation furnishing any material or labor for any work covered by

Nothing contained in this paragraph, however, shall defeat or impair the right of persons furnishing materials or labor to recover under any bond given by the Contractor for their protection or any rights under any law permitting such persons to look to funds due the Contractor in the hands of the Owner. The provisions of this paragraph shall be inserted in all subcontractors and material contracts and notice of its provisions shall be given to all persons furnishing materials for the work when no formal contract is entered into for such materials.

8. NO WAIVER OF LEGAL RIGHTS

(a) Upon completion of the work, the Owner will expeditiously make final inspection and notify the Contractor of acceptance. Such final acceptance, however, shall not preclude or stop the Owner from correcting any measurement, estimate, or certificate made before or after completion of the work, nor shall the Owner be precluded or be stopped from recovering from the Contractor or his Surety, or both, such overpayment as it may sustain by failure on the part of the Contractor to fulfill his obligations under the contract. A waiver on the part of the Owner of any breach of any part of the contract shall not be held to be a waiver of any other or subsequent breach.

(b) The Contractor, without prejudice to the Contract shall be liable to the terms of the Contract, shall be liable to the Owner for latent defects, fraud or such gross mistakes as may amount to fraud, and as regards the Owner's right under any warranty or guaranty.

9. TERMINATION OF CONTRACTOR'S RESPONSIBILITY

Whenever the improvement provided for by the Contract shall have been completely performed on the part of the Contractor and all parts of the work have been released from further obligations except as set forth in his bond and as provided in Section 8 above.

TECHNICAL SPECIFICATIONS

024119 -	SELECTIVE STRUCTURE DEMOLITION
061000 -	ROUGH CARPENTRY
062000 -	FINISH CARPENTRY
066300 -	PVC TRIMBOARDS
079200 -	JOINT SEALANTS
093000 -	TILING
095100 -	ACOUSTICAL CEILINGS
096513 -	RESILIENT BASE AND ACCESSORIES
099123 -	PAINTING
102116 -	SOLID PLASTIC TOILET COMPARTMENTS
102800 -	TOILET ACCESSORIES
123623-	PLASTIC-LAMINATE-CLAD COUNTERTOPS
224000 -	PLUMBING FIXTURES
260500-	COMMON WORK RESULTS FOR ELECTRICAL
262726 -	GENERAL ELECTRICAL REQUIREMENTS
265000 -	LIGHTING

024119 - SELECTIVE STRUCTURE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

- A. Remove and dispose of the following:
 - 1. Ceiling tiles and grid throughout
 - 2. Carpet and tile flooring, Selected ceramic tile wall
 - 3. toilet partitions,
 - 4. countertops
 - 5. plumbing fixtures

1.2 SECTION REQUIREMENTS

- A. Items indicated to be removed and salvaged remain Owner's property. Remove, clean, and deliver to Owner's designated storage area.
- B. Comply with EPA regulations and hauling and disposal regulations of authorities having jurisdiction.
- C. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.
- D. It is not expected that hazardous materials will be encountered in the Work. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Owner will remove hazardous materials under a separate contract.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 DEMOLITION

- A. Maintain services/systems indicated to remain and protect them against damage during selective demolition operations. Before proceeding with demolition, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of the building.
- B. Locate, identify, shut off, disconnect, and cap off utility services and mechanical/electrical systems serving areas to be selectively demolished.
- C. Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
- D. Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain or construction being demolished.
- E. Protect walls, ceilings, floors, and other existing finish work that are to remain. Erect and maintain dustproof partitions. Cover and protect furniture, furnishings, and equipment that have not been removed.
- F. 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.
- G. Promptly remove demolished materials from Owner's property and legally dispose of them.

061000 ROUGH CARPENTRY

PART 1 GENERAL

1.01 WORK INCLUDES

A. Provide all rough carpentry work, as indicated on the Drawings and as specified herein. Rough Carpentry shall include but not be limited to:

- 1. Concealed blocking.
- 4. Pressure treated wood materials.

1.02 RELATED WORK

A. Examine Contract Documents for requirements that affect work of this Section. Other Specification Sections that directly relate to work of this Section include, but are not limited to:

1.03 QUALITY ASSURANCE

- A. Materials and workmanship shall conform to governing laws and applicable building code.
- B. Provide lumber and plywood bearing the grade-trademark of the association under the rules or standards of which it was produced. Grade-trademarks shall conform to the rule or standard under which the material is produced, including requirements for qualifications and authority of the inspection organization, usage of authorized identification, and information included in the identification.
 - 1. ASTM D 245 Lumber grades shall be determined in accordance. Grades specified are the minimum acceptable.
 - 2. USDC PS 20 Lumber shall bear the grade mark of an American Lumber Standards Committee, Board of Review-approved agency.
 - 3. Lumber shall bear a mark of mill identification.
 - 4. USDC PS 1 and ANSI A199.1 Plywood shall comply with APA Design/Construction Guide, Residential and Commercial, grading requirements.
 - 5. APA PRP-108 Non-plywood type performance-rated construction panels shall conform.
 - 6. CABO NER-272 Fasteners shall comply.
 - 7. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials; 2010b.
 - 8. AWPA U1 Use Category System: User Specification for Treated Wood; American Wood Protection Association; 2010.
 - 9. SPIB (GR) Grading Rules; Southern Pine Inspection Bureau, Inc.; 2002.

1.04 SUBMITTALS

A. Shop Drawings: Submit shop drawings of wood blocking installation and other rough carpentry work in conformance with Factory Mutual wind uplift rated systems. Describe proposed methods of installation and anchorage to structure showing sizes, types, thicknesses, connections of wood blocking and related items including adjoining work by other trades.

- B. Samples: Submit representative samples of all materials for use under this Section.
- C. Product Data: Submit manufacturer's printed product data for each material used. Provide certifications that materials and systems comply with specified requirements.
- D. Certificates: Submit certificates of grading, treatment and conformance to specified standards. Certifications shall state date of treatment, conformance with specifications and agency grading of wood.

1.05 COORDINATION

- A. Coordinate the work of this Section with the work of other Sections to assure the steady progress of all the work of the Contract.
- B. Field Measurements: Take field measurements before preparation of shop drawings and fabrication. Do not delay progress of the job. If field measurements are not possible prior to fabrication, allow for field cutting and fitting.

1.06 PRODUCT DELIVERY AND STORAGE

- A. Materials when delivered to site shall be stacked and stored above the ground under protective coverings or indoors in such manner as to insure proper drainage, ventilation, and protection.
- B. Rough carpentry materials shall be stored on elevated piles to allow for air circulation below and tipped in one direction to effectively drain moisture. Lumber shall be wrapped completely, including bottoms, in waterproof tarps. Tarps shall be tied down to protect against wind blow-off. Should delays in Project be anticipated, lumber shall be stored in covered storage trailers.
- C. Do not leave any newly installed wood blocking exposed. Cover and protect all new wood daily with the new roof systems or other suitable covering approved by the Architect.

PART 2 PRODUCTS

2.01 LUMBER

- A. Provide lumber for miscellaneous wood framing, blocking, cant strips, nailers, etc. for all work of the Project, including, but not limiting to, temporary railings, roofing, flashing, sheet metal work, and the like.
- B. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.
 - 1. Factory mark each piece of lumber with grade stamp of grading agency.
 - 2. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.
 - 3. Lumber shall be surfaced four sides (S4S) and shall bear the grade and trademark of the association under whose rules it is produced, and a mark of mill identification.
- C. Provide new lumber of consistent size, free of stains and mildew, kiln dried to a maximum moisture content of not more than 19% by weight.

- D. Where exposed or semi-exposed, provide wood members selected for best possible appearance from the grade of stock specified.
- E. Lumber shall be furnished in longest practical lengths with respect to each intended use, and single length pieces shall be used wherever possible.

2.02 PRESSURE TREATED LUMBER

A. Pressure treat lumber above ground and in contact with roofing, flashing, sheet metal, masonry, concrete, dampproofing, and waterproofing in conformance with AWPA U1. Provide pressure preservative treated lumber with a minimum net retention of 0.25 pcf. Dry lumber to maximum moisture content of 19% after treatment. Use only waterborne preservatives which conform to AWPA P5. Creosote preservatives are not acceptable. 1. Preservative-Treated Wood: Provide lumber and plywood marked or stamped by an ALSCaccredited testing agency, certifying level and type of treatment in accordance with AWPA standards.

2.03 MISCELLANEOUS MATERIALS

A. Inserts, Anchors, and Fasteners: Provide inserts, anchors, anchor bolts, lag bolts, screws, washers, nuts, nails, and other rough hardware. Assist other trades as necessary in the placement of inserts and anchor bolts in concrete and masonry. Furnish full instructions regarding locations, sizes, and other requirements to ensure proper preparation. Provide rough hardware which complies with requirements of the governing laws and codes.

- 1. Metal and Finish: Stainless steel for high humidity and preservative-treated wood locations, unfinished steel elsewhere.
- B. Rough Hardware: Provide rough hardware items for use at roof and other exterior uses hot-dip galvanized in accordance with ASTM A 153. Provide other concealed items cadmium plated or zinc chromate plated.
- C. Provide hammer drive anchors and fasteners for securing wood framing, blocking or plywood into masonry of sufficient length to penetrate the receiving member a minimum of 1-1/2 in.
- D. Adhesives for Gluing Wood Members to Concrete or Masonry: Formulation complying with ASTM D 3498 that is approved for use indicated by adhesive manufacturer.

PART 3 EXECUTION

3.01 ROUGH CARPENTRY WORK - GENERAL

- A. No attempt is made in this Specification to list the various elements of rough carpentry work, as the major part of the work to be done is clearly shown on or reasonably inferred from the Drawings. The rough carpentry work required shall include all such work, regardless of whether or not each and every item is specifically called for. Refer to Drawings to determine the major extent of the rough carpentry work required.
- B. The Contractor shall be responsible for structural integrity, connections, and anchorage of rough carpentry work. All nailing shall be in accordance with the applicable building code.
- C. Discard units of material which are unsound, warped, bowed, twisted, improperly treated, not adequately seasoned, or too small to fabricate with minimum number of joint or optimum jointing arrangements, or which are of defective quality with respect to surfaces or sizes.

- D. Unless indicated otherwise, blockings, nailers, etc., of 2 in. nominal thickness or greater shall be bolted to back-up material with 1/2 in. bolts (galvanized at exterior locations and at roofs) located 4 in. from ends and splices, and spaced not greater than 32 in. on center along lengths of the members. Provide nails of sufficient length to penetrate receiving member a minimum of 1-1/2 in.
- E. Unless indicated otherwise, secure 2 in. thick or smaller wood framing, nailers, furring, etc., to back-up material by use of appropriate fasteners located 4 in. from ends and spaced not greater than 16 in. on center along lengths of the members. Provide type and length of fastening devices to develop positive and secure anchorage to the back-up material.
- F. Refer to FM Data Sheet 1-49 concerning anchorage spacing and size requirements for perimeter blocking. Spacings shall be halved in the zone from building corner to eight feet from corner, both directions from corner.
- G. Butt joints in wood shall be flush to provide a smooth, uniform line with no irregularities. Built-up blocking shall have butt joints staggered 4 in. minimum layer to layer. The minimum length of any individual piece of woodwork shall be 12 in. All lengths of woodwork shall have a minimum of four fasteners.
- H. Construct all rough carpentry work plumb, level, and true with tight, close fitting joints, securely attached and braced to surrounding construction, all in a first class workmanlike manner. Counterbore for bolt heads, nuts, and washers where required to avoid interference with other materials.
- I. Wood blockings, nailers, edgings, etc., shall be installed as indicated or specified and shall be furnished in lengths not less than 12 ft., except where shorter lengths are required. Select material sizes to minimize waste.
- J. All connections, nailing, and fastening of rough carpentry work shall conform to requirements of the governing laws and codes.
- K. Reuse scrap to the greatest extent possible; clearly separate scrap for use on site as accessory components, including: shims, bracing, and blocking.
- L. Where treated wood is used on interior, provide temporary ventilation during and immediately after installation sufficient to remove indoor air contaminants.
- M. Attach to substrates as required to support applied loading. Countersink bolts and nuts flush with surfaces.
- N. Repair all damage caused by puncturing of conduits, pipes, ducts, etc. when nailing, drilling or powder driving into concrete or masonry.

3.02 FASTENING OF WOODWORK

- A. Wood to masonry connections shall be completed using non-impact drilled anchors through predrilled holes spaced 8 in. on center maximum. Predrill the hole, insert fastener sleeve, and secure in place with nail.
- B. Install plywood on masonry surfaces hammer driven anchors through predrilled holes spaced 12 in. on center along the top and bottom edges. Keep fasteners 3 in. minimum from the board edge. Drive fastener heads flush with surface. Secure plywood to wood substrate with nails at

same spacing as hammer driven anchors. Secure plywood to metal studs with screws approved by metal stud manufacturer.

C. Wood shall be secured to wood substrates and other wood to wood connection with nails spaced 12 in. on center maximum staggered along the centerline of the member being installed. All nail heads must be flush with the top surface.

3.03 CLEANING

A. Upon completion of rough carpentry work in any given area, remove all rubbish and debris from the work area and leave in broom clean condition.

062000 - FINISH CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY

- A. Trim pool entrance openings with PVC trim boards
- B. Furnish and install new plastic laminate countertops

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

- A. Lumber: DOC PS 20 and grading rules of inspection agencies certified by American Lumber Standards Committee Board of Review.
- B. Softwood Plywood: DOC PS 1.
- C. Hardwood Plywood: HPVA HP-1.
- D. MDF: ANSI A208.2, Grade 130, made with binder containing no urea-formaldehyde resin].
- E. Particleboard: ANSI A208.1, Grade M-2, made with binder containing no urea-formaldehyde resin.
- F. Cellular PVC Exterior Trim:

2.2 INTERIOR STANDING AND RUNNING TRIM

A. PVC- Moldings: WMMPA WM 2 and made to patterns included in WMMPA WM 12.

2.3 MISCELLANEOUS MATERIALS

- A. Glue: Aliphatic-resin, polyurethane, or resorcinol wood glue recommended by manufacturer.
- B. Adhesive for Cellular PVC Trim: Product recommended by trim manufacturer.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Condition finish carpentry in installation areas for 24 hours before installing.
- B. Prime and backprime lumber for painted finish exposed on the exterior.
- C. Install finish carpentry level, plumb, true, and aligned with adjacent materials. Scribe and cut to fit adjoining work. Refinish and seal cuts.
- D. Install standing and running trim with minimum number of joints practical, using full-length pieces from maximum lengths of lumber available. Stagger joints in adjacent and related trim. Cope at returns and miter at corners.

066300 PVC TRIMBOARDS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. PVC trim for cased openings.

1.2 RELATED SECTIONS

- A. Section 062000 Finish Carpentry.
- B. Section 099000 Paints and Coatings.

1.3 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Certification: Certify products meet or exceed specified requirements.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Storage: Store products in manufacturer's unopened packaging until ready for installation.
- B. Protection: Coordinate work with other operations and installation of trim to avoid damage to installed materials.

1.5 PROJECT CONDITIONS

- A. Maintain environmental conditions within limits recommended by manufacturer for optimum results.
- B. Comply with manufacturer's written installation guidelines to accommodate thermal expansion and contraction.

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. Acceptable Manufacturer: Kleer Lumber or approved equal.
- B. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 MATERIAL

- A. General: Expanded, rigid, cellular, white PVC material produced from PVC resin. Material is not a composite.
- B. Physical Properties: PVC material with a small-cell microstructure density similar to white pine.
 - 1. Paintable: Allowed with 100 percent acrylic paint and primer, if required by paint manufacturer; or coatings designed specifically for use on exterior vinyl products.
 - 2. Non-Yellowing.
 - 3. Variation in Component Width: Plus or minus 1/32 inch.
 - 4. Variation in Component Thickness: Plus or minus 1/32 inch.
 - 5. Variation in Density: Minus 0 percent, plus 10 percent.

- 6. Products: Cellular PVC
- 7. Thickness: 3/4 inch (19.05 mm).

2.3 ADHESIVES AND FILLERS

A. Adhesive:

- 1.STRUCTURAL adhesive/filler.
- a. Sandable and paintable.
- b. Fast Cure (5 to 8 minutes).
- B. PVC cement.
- C. Adhesive Caulk: Acrylic based, as approved by PVC trim manufacturer
- D. Adhesive Caulk: Urethane based, as approved by PVC trim manufacturer
- E. Filler: Provide exterior grade, flexible filler to fill nail holes and dents in PVC trimboard.

2.4 FASTENERS

A. Type: Nails with smooth, thin shanks, blunt tips and full round heads (e.g.: wood siding nails, box nails) long enough to penetrate the substrate a minimum of 1-1/2 inches.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. Prior to installation, verify governing dimensions of and condition of substrate.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Examine, clean, and repair as necessary any substrate conditions that would be detrimental to proper installation.
- C. Prepare surfaces using the methods recommended by manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions. Comply with Installation Guidelines recommended techniques.
 - 1. Comply with all terms necessary to maintain warranty coverage.
 - 2. Use trim details indicated on drawings.
 - 3. Drilling: Do not use bits made for rigid PVC.
 - 4. Avoid frictional build-up and remove shavings from the drill hole frequently as necessary.
 - 5. Drill with standard woodworking drill bits.
 - 6. Edge Finishing: Edges will be finish sanded.
- B. Thermal Expansion and Contraction:

- 1. Expansion and contraction of trim material will occur with changes in temperature. Using the appropriate quantity of the proper fasteners along the entire length of Kleer is essential to help minimize expansion and contraction.
- 2. Follow manufacturer's guidelines for required gap width between trim pieces.

C. Fastening:

- 1. Fasteners shall be hand nailed, power nailed, or screwed.
 - a. Power Nailing: Adjust nail gun to prevent excessive nailing pressure or overdriving the nail. Adjust for ambient and material temperatures.
- 2. Pre-drill material when installing in low temperatures.
- 3. Do not use ring shank nails.
- 4. Fasteners should be long enough to penetrate a 1-1/2 inch (38 mm) solid wood substrate a minimum of 1-1/2 inch (38 mm).
- 5. Staples, small brads and wire nails must not be used as fastening members.
- 6. Fasten trim into a flat, solid wood substrate that is a minimum 1-1/2 inches (38 mm) thick. Do not fasten trim into hollow or uneven substrates.

D. Fastener Schedule:

- 1. Along Length of Board: Fasten at 16 inches (406.4 mm) on center, maximum.
- 2. Within Width of Board: 4 inches (101.6 mm) on center, maximum.
- 3. Distance from End of Each Board: Not more than 2 inches (50.8 mm).

E. Finishing:

- 1. Correct dents and gouges before applying final coating.
- 2. Provide paint materials and prepare surfaces as recommended by manufacturer. Paint as specified in Section 09900.
- 3. Clean material with a light detergent and warm water. Stubborn stains may be removed with denatured alcohol.

3.4 PROTECTION

A. Protect installed materials until completion of project.

079200 JOINT SEALANTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Nonsag gunnable joint sealants.
- B. Self-leveling pourable joint sealants.

1.02 RELATED REQUIREMENTS

- A. Section 01 6116 Volatile Organic Compound (VOC) Content Restrictions: Additional requirements for sealants and primers.
- B. Section 07 1300 Sheet Waterproofing: Sealing cracks and joints in waterproofing substrate surfaces using materials specified in this section.
- C. Section 07 2500 Weather Barriers: Sealants required in conjunction with air barriers and vapor retarders.
- D. Section 07 8400 Firestopping: Firestopping sealants.
- E. Section 08 7100 Door Hardware: Refer to Drawings- Sheet A601: Setting exterior door thresholds in sealant.
- F. Section 08 8000 Glazing: Glazing sealants and accessories.
- G. Section 09 2116 Gypsum Board Assemblies: Sealing acoustical and sound-rated walls and ceilings.
- H. Section 09 3000 Tiling: Sealant between tile and plumbing fixtures and at junctions with other materials and changes in plane.

1.03 REFERENCE STANDARDS

- A. ASTM C661 Standard Test Method for Indentation Hardness of Elastomeric-Type Sealants by Means of a Durometer; 2006 (Reapproved 2011).
- B. ASTM C834 Standard Specification for Latex Sealants; 2014.
- C. ASTM C919 Standard Practice for Use of Sealants in Acoustical Applications; 2012.
- D. ASTM C920 Standard Specification for Elastomeric Joint Sealants; 2014.
- E. ASTM C1193 Standard Guide for Use of Joint Sealants; 2013.
- F. ASTM C1248 Standard Test Method for Staining of Porous Substrate by Joint Sealants; 2008 (Reapproved 2012).
- G. ASTM C1311 Standard Specification for Solvent Release Sealants; 2014.
- H. ASTM D2240 Standard Test Method for Rubber Property--Durometer Hardness; 2005 (Reapproved 2010).

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

- B. Product Data for Sealants: Submit manufacturer's technical data sheets for each product to be used, that includes the following.
 - 1. Physical characteristics, including movement capability, VOC content, hardness, cure time, and color availability.
 - 2. List of backing materials approved for use with the specific product.
 - 3. Substrates that product is known to satisfactorily adhere to and with which it is compatible.
 - 4. Substrates the product should not be used on. C. Color Cards for Selection: Where sealant color is not specified, submit manufacturer's color cards showing standard colors available for selection.

PART 2 PRODUCTS

2.01 JOINT SEALANT APPLICATIONS

A. Scope:

- 1. Exterior Joints: Seal open joints, whether or not the joint is indicated on drawings, unless specifically indicated not to be sealed. Exterior joints to be sealed include, but are not limited to, the following items.
 - a. Wall expansion and control joints.
 - b. Joints between door, window, and other frames and adjacent construction.
 - c. Joints between different exposed materials.
 - d. Openings below ledge angles in masonry.
 - e. Other joints indicated below.
- 2. Interior Joints: Do not seal interior joints unless specifically indicated to be sealed. Interior joints to be sealed include, but are not limited to, the following items.
 - a. Joints between door, window, and other frames and adjacent construction.
 - b. In sound-rated wall and ceiling assemblies, gaps at electrical outlets, wiring devices, piping, and other openings; between wall/ceiling and other construction; and other flanking sound paths.
 - c. Other joints indicated below.
- 3. Do not seal the following types of joints.
 - a. Intentional weepholes in masonry.
 - b. Joints indicated to be treated with manufactured expansion joint cover or some other type of sealing device.
 - c. Joints where sealant is specified to be provided by manufacturer of product to be sealed.
 - d. Joints where installation of sealant is specified in another section.
 - e. Joints between suspended panel ceilings/grid and walls.
- B. Exterior Joints: Use nonsag non-staining silicone sealant, Type 1, unless otherwise indicated.
 - 1. Lap Joints in Sheet Metal Fabrications: Butyl rubber, non-curing; Type 10.
- C. Interior Joints: Use nonsag polyurethane sealant, Type 2, unless otherwise indicated.
 - 1. Wall and Ceiling Joints in Non-Wet Areas: Acrylic emulsion latex sealant; Type 4.

- 2. Wall and Ceiling Joints in Wet Areas: Nonsag polyurethane sealant for continuous liquid immersion; Type 8.
- 3. Floor Joints in Wet Areas: Nonsag polyurethane "nontraffic-grade" sealant suitable for continuous liquid immersion; Type 5.
- 4. Joints between Fixtures in Wet Areas and Floors, Walls, and Ceilings: Mildew-resistant silicone sealant; white; Type 2.
- 5. In Sound-Rated Assemblies: Acrylic emulsion latex sealant; Type 6.
- 6. Narrow Control Joints in Interior Concrete Slabs: Self-leveling epoxy sealant; Type 9.
- 7. Other Floor Joints: Self-leveling polyurethane "traffic-grade" sealant; Type 7.
- D. Interior Wet Areas: Bathrooms, restrooms, kitchens, food service areas, and food processing areas; fixtures in wet areas include plumbing fixtures, food service equipment, countertops, cabinets, and other similar items.

2.02 JOINT SEALANTS - GENERAL

A. Sealants and Primers: Provide products with levels of volatile organic compound (VOC) content as indicated in Section 01 6116.

2.03 NONSAG JOINT SEALANTS

- A. Type 1 Non-Staining Silicone Sealant: ASTM C920, Grade NS, Uses M and A; not expected to withstand continuous water immersion or traffic.
 - 1. Movement Capability: Plus and minus _____ percent, minimum.
 - 2. Non-Staining To Porous Stone: Non-staining to light-colored natural stone when tested in accordance with ASTM C1248.
 - 3. Dirt Pick-Up: Reduced dirt pick-up compared to other silicone sealants.
 - 4. Manufacturers:
 - a. Dow Chemical Company; DOWSIL 756 SMS Building Sealant: consumer.dow.com/en-us/industry/ind-building-construction.html/#sle.
 - b. Pecora Corporation; Pecora 864 NST (Non-Staining Technology): www.pecora.com/#sle.
- B. Type 2 Mildew-Resistant Silicone Sealant: ASTM C920, Grade NS, Uses M and A; single component, mildew resistant; not expected to withstand continuous water immersion or traffic.
 - 1. Color: White.
- C. Type 3 Polyurethane Sealant: ASTM C920, Grade NS, Uses M and A; single or multicomponent; not expected to withstand continuous water immersion or traffic.
 - 1. Movement Capability: Plus and minus _____ percent, minimum.
 - 2. Color: To be selected by Architect from manufacturer's standard range.
 - 3. Service Temperature Range: Minus 40 to 180 degrees F.
 - 4. Manufacturers:
 - a. Pecora Corporation; DynaTrol II: www.pecora.com/#sle.
 - b. The QUIKRETE Companies; QUIKRETE® Polyurethane Non-Sag Sealant: www.quikrete.com/#sle.

- c. Sherwin-Williams Company; Stampede-1/-TX Polyurethane Sealant: www.sherwinwilliams.com/#sle.
- D. Type 4 Polyurethane Sealant for Continuous Water Immersion: ASTM C920, Grade NS, Uses M and A; single or multicomponent; explicitly approved by manufacturer for continuous water immersion; suitable for traffic exposure when recessed below traffic surface.
 - 1. Movement Capability: Plus and minus 35 percent, minimum.
- E. Type 5 Nonsag "Traffic-Grade" Polyurethane Sealant: ASTM C920, Grade NS, Uses M and A; single or multicomponent; explicitly approved by manufacturer for continuous water immersion and traffic without the necessity to recess sealant below traffic surface.
 - 1. Movement Capability: Plus and minus 25 percent, minimum.
 - 2. Hardness Range: 40 to 50, Shore A, when tested in accordance with ASTM C661.
- F. Type 6 Acrylic Emulsion Latex: Water-based; ASTM C834, single component, non-staining, non-bleeding, non-sagging; not intended for exterior use.
 - 1. Color: Standard colors matching finished surfaces, Type OP (opaque).
 - 2. Manufacturers:
 - a. Pecora Corporation; AC-20 +Silicone: www.pecora.com/#sle.
 - b. Pecora Corporation; AC-20 FTR Acoustical and Insulation Sealant: www.pecora.com.
 - c. Substitutions: See Section 01 6000 Product Requirements.
- G. Type 10 Non-Curing Butyl Sealant: Solvent-based; ASTM C1311; single component, nonsag, non-skinning, non-hardening, non-bleeding; vapor-impermeable; intended for fully concealed applications.

2.04 SELF-LEVELING SEALANTS

- A. Type 7 Self-Leveling Polyurethane Sealant: ASTM C920, Grade P, Uses M and A; single or multicomponent; explicitly approved by manufacturer for traffic exposure; not expected to withstand continuous water immersion .
 - 1. Movement Capability: Plus and minus 25 percent, minimum.
 - 2. Hardness Range: 35 to 55, Shore A, when tested in accordance with ASTM C661.
 - 3. Color: To be selected by Architect from manufacturer's standard range.
 - 4. Service Temperature Range: Minus 40 to 180 degrees F. 5. Manufacturers:
 - a. Pecora Corporation; ____: www.pecora.com/#sle.
 - b. The QUIKRETE Companies; QUIKRETE® Polyurethane Self-Leveling Sealant: www.quikrete.com/#sle.
 - c. Sherwin-Williams Company; Stampede 1SL Polyurethane Sealant: www.sherwinwilliams.com/#sle.
 - d. Sika Corporation; Sikaflex-1c SL: www.usa-sika.com/#sle.
- B. Type 8 Self-Leveling Polyurethane Sealant for Continuous Water Immersion: Polyurethane; ASTM C920, Grade P, Uses M and A; single or multicomponent; explicitly approved by manufacturer for traffic exposure and continuous water immersion.
 - 1. Movement Capability: Plus and minus 25 percent, minimum.

- C. Type 9 Semi-Rigid Self-Leveling Epoxy Joint Filler: Epoxy or epoxy/polyurethane copolymer; intended for filling cracks and control joints not subject to significant movement; rigid enough to support concrete edges under traffic.
 - 1. Composition: Multi-component, 100 percent solids by weight.
 - 2. Durometer Hardness: Minimum of 85 for Type A or 35 for Type D, after seven days when tested in accordance with ASTM D2240.
 - 3. Joint Width, Minimum: 1/8 inch.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that joints are ready to receive work.
- B. Verify that backing materials are compatible with sealants.

3.02 PREPARATION

- A. Remove loose materials and foreign matter that could impair adhesion of sealant.
- B. Clean joints, and prime as necessary, in accordance with manufacturer's instructions.
- C. Perform preparation in accordance with manufacturer's instructions and ASTM C1193.
- D. Mask elements and surfaces adjacent to joints from damage and disfigurement due to sealant work; be aware that sealant drips and smears may not be completely removable.

3.03 INSTALLATION

- A. Perform work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.
- B. Perform installation in accordance with ASTM C1193.
- C. Perform acoustical sealant application work in accordance with ASTM C919.
- D. Install bond breaker backing tape where backer rod cannot be used.
- E. Install sealant free of air pockets, foreign embedded matter, ridges, and sags, and without getting sealant on adjacent surfaces.
- F. Do not install sealant when ambient temperature is outside manufacturer's recommended temperature range, or will be outside that range during the entire curing period, unless manufacturer's approval is obtained and instructions are followed.
- G. Nonsag Sealants: Tool surface concave, unless otherwise indicated; remove masking tape immediately after tooling sealant surface.
- H. Concrete Floor Joint Filler: After full cure, shave joint filler flush with top of concrete slab.

093000 TILING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Tile for floor applications.
- B. Tile for wall applications.
- C. Coated glass mat backer board as tile substrate.
- D. Ceramic accessories.
- E. Ceramic trim.
- F. Non-ceramic trim.

1.02 RELATED REQUIREMENTS

A. Section 07 9200 - Joint Sealants: Sealing joints between tile work and adjacent construction and fixtures.

1.03 REFERENCE STANDARDS

- A. ANSI A108.1a American National Standard Specifications for Installation of Ceramic Tile in the Wet-Set Method, with Portland Cement Mortar; 2014.
- B. ANSI A108.1b American National Standard Specifications for Installation of Ceramic Tile on a Cured Portland Cement Mortar Setting Bed with Dry-Set or Latex-Portland Cement Mortar; 1999 (Reaffirmed 2010).
- C. ANSI A108.1c Specifications for Contractors Option: Installation of Ceramic Tile in the WetSet Method with Portland Cement Mortar or Installation of Ceramic Tile on a Cured Portland Cement Mortar Bed with Dry-Set or Latex-Portland Cement; 1999 (Reaffirmed 2010).
- D. ANSI A108.4 American National Standard Specifications for Installation of Ceramic Tile with Organic Adhesives or Water Cleanable Tile-Setting Epoxy Adhesive; 2009 (Revised).
- E. ANSI A108.5 American National Standard Specifications for Installation of Ceramic Tile with Dry-Set Portland Cement Mortar or Latex-Portland Cement Mortar; 1999 (Reaffirmed 2010).
- F. ANSI A108.6 American National Standard Specifications for Installation of Ceramic Tile with Chemical Resistant, Water Cleanable Tile-Setting and -Grouting Epoxy; 1999 (Reaffirmed 2010).
- G. ANSI A108.8 American National Standard Specifications for Installation of Ceramic Tile with Chemical Resistant Furan Resin Mortar and Grout; 1999 (Reaffirmed 2010).
- H. ANSI A108.9 American National Standard Specifications for Installation of Ceramic Tile with Modified Epoxy Emulsion Mortar/Grout; 1999 (Reaffirmed 2010).
- I. ANSI A108.10 American National Standard Specifications for Installation of Grout in Tilework; 1999 (Reaffirmed 2010).

- J. ANSI A108.11-SystemDeleted American National Standard for Interior Installation of Cementitious Backer Units; 2010 (Revised).
- K. ANSI A108.12 American National Standard for Installation of Ceramic Tile with EGP (Exterior glue plywood) Latex-Portland Cement Mortar; 1999 (Reaffirmed 2010).
- L. ANSI A108.13 American National Standard for Installation of Load Bearing, Bonded, Waterproof Membranes for Thin-Set Ceramic Tile and Dimension Stone; 2005 (Reaffirmed 2010).
- M. ANSI A118.4 American National Standard Specifications for Modified Dry-Set Cement Mortar; 2012 (Revised).
- N. ANSI A118.7 American National Standard Specifications for High Performance Cement Grouts for Tile Installation; 2010 (Revised).
- O. ANSI A137.1 American National Standard Specifications for Ceramic Tile; 2013.1.
- P. ASTM C373 Standard Test Method for Water Absorption, Bulk Density, Apparent Porosity, and Apparent Specific Gravity of Fired Whiteware Products, Ceramic Tiles, and Glass Tiles; 2014a.
- Q. ASTM F710 Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring; 2011.
- R. ASTM F1869 Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride; 2011.
- S. TCNA (HB) Handbook for Ceramic, Glass, and Stone Tile Installation; 2015.

1.04 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements, for submittal procedures.
- B. Product Data: Provide manufacturers' data sheets on tile, mortar, grout, and accessories. Include instructions for using grouts and adhesives.
- C. Samples: Mount tile and apply grout on two plywood panels, minimum 18 by 18 inches in size illustrating pattern, color variations, and grout joint size variations.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Protect adhesives from freezing or overheating in accordance with manufacturer's instructions.

1.06 FIELD CONDITIONS

- A. Do not install solvent-based products in an unventilated environment.
- B. Maintain ambient and substrate temperature above 50 degrees F and below 100 degrees F during installation and curing of setting materials.

PART 2 PRODUCTS

2.01 TILE

A. Manufacturers: All products by the same manufacturer.

- 1. Dal-Tile Corporation: www.daltile.com/#sle.
- B. Glazed Wall Tile: ANSI A137.1, standard grade.
 - 1. Moisture Absorption: 7.0 to 20.0 percent as tested in accordance with ASTM C373.
 - 2. Size: 4 by 4 inch, nominal.
 - 3. Edges: Cushioned.
 - 4. Surface Finish: Matte glaze.
 - 5. Color(s): To be selected by Owner from manufacturer's standard range.
 - 6. Products: Daltile Glazed Wall: Semi-Gloss or approved equal..
- C. Porcelain Floor Tile, ANSI A137.1, standard grade.
 - 1. Size: 12"by 12", nominal.
 - 2. Products: **Dal-tile Linden Pointe** or approved equal.

2.02 TRIM AND ACCESSORIES

A. Non-Ceramic Trim: Satin natural anodized extruded aluminum, style and dimensions to suit application, for setting using tile mortar or adhesive.

- 1. Applications:
 - a. Open edges of wall tile.
 - b. Open edges of floor tile.
 - c. Wall corners, outside and inside.
 - d. Transition between floor finishes of different heights.
 - e. Thresholds at door openings.
- 2. Manufacturers:
 - a. Schluter-Systems: www.schluter.com/#sle.
 - b. Substitutions: See Section 01 6000 Product Requirements.

2.03 SETTING MATERIALS

- A. Latex-Portland Cement Mortar Bond Coat: ANSI A118.4 or ANSI A118.15.
 - 1. Applications: Use this type of bond coat where indicated and where no other type of bond coat is indicated.
 - 2. Products:
 - a. ARDEX Engineered Cements; ARDEX X 77 MICROTEC: www.ardexamericas.com.
 - b. LATICRETE International, Inc; LATICRETE 254 Platinum: www.laticrete.com.
 - c. Merkrete, by Parex USA, Inc; Merkrete 735 Premium Flex: www.merkrete.com/sle.
- B. Mortar Bed Materials: Pre-packaged mix of Portland cement, sand, latex additive, and water.
 - 1. Products:

- a. LATICRETE International, Inc; LATICRETE 3701 Fortified Mortar Bed: www.laticrete.com/#sle.
- b. Merkrete, by Parex USA, Inc; Merkrete Underlay
- c: www.merkrete.com/#sle.

2.04 GROUTS

- A. High Performance Polymer Modified Grout: ANSI A118.7 polymer modified cement grout.
 - 1. Applications: Use this type of grout where indicated and where no other type of grout is indicated.
 - 2. Use sanded grout for joints 1/8 inch wide and larger; use unsanded grout for joints less than 1/8 inch wide.
 - 3. Color(s): As selected by Owner from manufacturer's full line.
 - 4. Products:
 - a. ARDEX Engineered Cements; ARDEX FG-C MICROTEC: www.ardexamericas.com.
 - b. LATICRETE International, Inc; LATICRETE PERMACOLOR Grout: www.laticrete.com/#sle.
 - c. Merkrete, by Parex USA, Inc; Merkrete Pro Grout: www.merkrete.com/#sle.

2.05 MAINTENANCE MATERIALS

- A. Tile Sealant: Gunnable, silicone, siliconized acrylic, or urethane sealant; moisture and mildew resistant type.
 - 1. Applications: Between tile and plumbing fixtures.
 - 2. Color(s): As selected by Architect from manufacturer's full line.
 - 3. Products:
 - a. ARDEX Engineered Cements; ARDEX SX: www.ardexamericas.com/#sle.
 - b. LATICRETE International, Inc; LATICRETE LATASIL: www.laticrete.com/#sle.
 - c. Merkrete, by Parex USA, Inc; Merkrete Colored Caulking: www.merkrete.com/#sle.
- B. Grout Sealer: Liquid-applied, moisture and stain protection for existing or new Portland cement grout.
 - 1. Composition: Water-based colorless silicone.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that sub-floor surfaces are smooth and flat within the tolerances specified for that type of work and are ready to receive tile.
- B. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive tile.

- C. Verify that sub-floor surfaces are dust-free and free of substances that could impair bonding of setting materials to sub-floor surfaces.
- D. Verify that concrete sub-floor surfaces are ready for tile installation by testing for moisture emission rate and alkalinity; obtain instructions if test results are not within the following limits:
 - 1. Moisture Emission Rate: Not greater than 3 lb per 1000 sq ft per 24 hours, test in accordance with ASTM F1869.
 - 2. Alkalinity (pH): Verify pH range of 5 to 9, test in accordance with ASTM F710. E. Verify that required floor-mounted utilities are in correct location.

3.02 PREPARATION

- A. Protect surrounding work from damage.
- B. Vacuum clean surfaces and damp clean.
- C. Seal substrate surface cracks with filler. Level existing substrate surfaces to acceptable flatness tolerances.

3.03 INSTALLATION - GENERAL

- A. Install tile and stair treads and grout in accordance with applicable requirements of ANSI A108.1A thru A108.13, manufacturer's instructions, and TCNA (HB) recommendations.
- B. Lay tile to pattern indicated. Do not interrupt tile pattern through openings.
- C. Cut and fit tile to penetrations through tile, leaving sealant joint space. Form corners and bases neatly. Align floor joints.
- D. Place tile joints uniform in width, subject to variance in tolerance allowed in tile size. Make grout joints without voids, cracks, excess mortar or excess grout, or too little grout.
- E. Form internal angles square and external angles bullnosed.
- F. Install non-ceramic trim in accordance with manufacturer's instructions.
- G. Sound tile after setting. Replace hollow sounding units.
- H. Keep control and expansion joints free of mortar, grout, and adhesive.
- I. Prior to grouting, allow installation to completely cure; minimum of 48 hours.
- J. Grout tile joints unless otherwise indicated. Use standard grout unless otherwise indicated.
- K. At changes in plane and tile-to-tile control joints, use tile sealant instead of grout, with either bond breaker tape or backer rod as appropriate to prevent three-sided bonding.

3.04 INSTALLATION - FLOORS - THIN-SET METHODS

- A. Over interior concrete substrates, install in accordance with TCNA (HB) Method F113, dry-set or latex-Portland cement bond coat, with standard grout, unless otherwise indicated.
 - 1. Use uncoupling membrane under all tile unless other underlayment is indicated.

3.05 CLEANING

A. Clean tile and grout surfaces.

3.06 PROTECTION

A. Do not permit traffic over finished floor surface for 4 days after installation.

095100 ACOUSTICAL CEILINGS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. 2' x 2' Suspended metal grid ceiling system.
- B. Acoustical units.

1.02 RELATED REQUIREMENTS

- A. Section 26 5100 Interior Lighting: Light fixtures in ceiling system.
- B. Section 28 4600 Fire Detection and Alarm: Fire alarm components in ceiling system.

1.03 REFERENCE STANDARDS

- A. ASTM C635/C635M Standard Specification for the Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings; 2013a.
- B. ASTM E1264 Standard Classification for Acoustical Ceiling Products; 2014.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Sequence work to ensure acoustical ceilings are not installed until building is enclosed, sufficient heat is provided, dust generating activities have terminated, and overhead work is completed, tested, and approved.
- B. Do not install acoustical units until after interior wet work is dry.

1.05 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on suspension system components and acoustical units.
- C. Samples: Submit two samples 6 by 6 inch in size illustrating material and finish of acoustical units.
- D. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 01 6000 Product Requirements, for additional provisions.
 - 2. Extra Acoustical Units: Quantity equal to 1 percent of total installed.

1.06 FIELD CONDITIONS

A. Maintain uniform temperature of minimum 60 degrees F, and maximum humidity of 40 percent prior to, during, and after acoustical unit installation.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Acoustic Tiles/Panels:
 - 1. Armstrong World Industries, Inc; Ultima: www.armstrong.com.

- 2. Substitutions: See Section 01 6000 Product Requirements.
- B. Suspension Systems: Same as for acoustical units.

2.02 ACOUSTICAL UNITS

- A. Acoustical Units General: ASTM E1264, Class A.
- B. Glass Fiber Acoustical Panels: Vinyl faced glass fiber, ASTM E1264 Type XII, with the following characteristics:
 - 1. Size: 24 by 24 inches.
 - 2. Thickness: 1 inches.
 - 3. Light Reflectance: 0.90 percent, determined in accordance with ASTM E1264.
 - 4. NRC Range: 0.90 to 0.95, determined in accordance with ASTM E1264.
 - 5. Articulation Class (AC): 190, determined in accordance with ASTM E1264.
 - 6. Ceiling Attenuation Class (CAC): N/A, determined in accordance with ASTM E1264.
 - 7. Edge: Square.
 - 8. Surface Color: White.
 - 9. Surface Pattern: Non-directional.
 - 10. Suspension System: Exposed 15/16 inch grid.
 - 11. Products:
 - a. Armstrong Pebble High NRC Perforated #2988.
 - b. Substitutions: See Section 01 6000 Product Requirements.

2.03 SUSPENSION SYSTEM(S)

- A. Metal Suspension Systems General: Complying with ASTM C635/C635M; die cut and interlocking components, with perimeter moldings, hold down clips, stabilizer bars, clips, and splices as required.
- B. Exposed Aluminum Suspension System: Extruded aluminum; intermediate-duty.
 - 1. Profile: Tee; 9/16 inch wide face. 15/16 inch wide face where noted.
 - 2. Finish: Painted white.
 - 3. Products:
 - a. Armstrong 9/16 inch Suprafine XL..
 - b. Armstrong 15/16 for Square Lay-in where noted on drawings

2.04 ACCESSORIES

- A. Support Channels and Hangers: Galvanized steel; size and type to suit application, seismic requirements, and ceiling system flatness requirement specified.
- B. Hanger Wire: 12-gage 0.08 inch galvanized steel wire.
- C. Perimeter Moldings: Same metal and finish as grid.
 - 1. At Exposed Grid: Provide L-shaped molding for mounting at same elevation as face of grid with shadow molding profile.
- D. Touch-up Paint: Type and color to match acoustical and grid units.

PART 3 EXECUTION

3.01 INSTALLATION - SUSPENSION SYSTEM

- A. Rigidly secure system, including integral mechanical and electrical components, for maximum deflection of 1:360.
- B. Perimeter Molding: Install at intersection of ceiling and vertical surfaces and at junctions with other interruptions. 1. Use longest practical lengths.
- C. Install after major above-ceiling work is complete. Coordinate the location of hangers with other work.
- D. Suspension System, Non-Seismic: Hang suspension system independent of walls, columns, ducts, pipes and conduit. Where carrying members are spliced, avoid visible displacement of face plane of adjacent members.
- E. Where ducts or other equipment prevent the regular spacing of hangers, reinforce the nearest affected hangers and related carrying channels to span the extra distance.
- F. Do not support components on main runners or cross runners if weight causes total dead load to exceed deflection capability.
- G. Support fixture loads using supplementary hangers located within 6 inches of each corner, or support components independently.
- H. Do not eccentrically load system or induce rotation of runners.
- I. Perimeter Molding: Install at intersection of ceiling and vertical surfaces and at junctions with other interruptions.
 - 1. Use longest practical lengths.
 - 2. Overlap and rivet corners.

3.02 INSTALLATION - ACOUSTICAL UNITS

- A. Install acoustical units in accordance with manufacturer's instructions.
- B. Fit acoustical units in place, free from damaged edges or other defects detrimental to appearance and function.
- C. Fit border trim neatly against abutting surfaces.
- D. Install units after above-ceiling work is complete.
- E. Install acoustical units level, in uniform plane, and free from twist, warp, and dents.
- F. Cutting Acoustical Units:
 - 1. Make field cut edges of same profile as factory edges.
 - 2. Double cut and field paint exposed reveal edges.

096513 - RESILIENT BASE AND ACCESSORIES

PART 1 GENERAL

2.1 SECTION REQUIREMENTS

- A. Submittals: Product Data and Samples.
- B. Extra Materials: Deliver to Owner at least 20 linear feet of each type and color of resilient wall base installed.

PART 2 - PRODUCTS

2.1 RESILIENT BASE

- A. Vinyl Base: ASTM F 1861, Type TV (vinyl, thermoplastic), Group I (solid, homogeneous)].
 - 1. Tarkett Traditional Wall Base or approved equal
- B. Style: Cove (base with toe).
- C. Minimum Thickness: 0.080 inch
- D. Height: 4 inches
- E. Lengths: Cut lengths 48 inches long or coils in manufacturer's standard lengths.
- F. Outside Corners: Job formed]
- G. Inside Corners: Job formed

2.2 INSTALLATION ACCESSORIES

A. Adhesives: Water-resistant type recommended by manufacturer to suit floor covering and substrate conditions indicated.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Prepare horizontal surfaces according to ASTM F 710. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.
- B. Adhesively install resilient wall base and accessories.
- C. Install wall base in maximum lengths possible. Apply to walls, columns, pilasters, casework, and other permanent fixtures in rooms or areas where base is required.
- D. Install stair-tread-nose filler to nosing substrates that do not conform to tread contours.
- E. Install reducer strips at edges of floor coverings that would otherwise be exposed.

099123 PAINTING

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Summary:
 - 1. Prime and paint 2 coats latex paint on PVC cased openings
- B. Submittals:
 - 1. Product Data
 - 2. Samples.

PART 2 - PRODUCTS

2.1 PAINT

- A. MPI Standards: Provide materials that comply with MPI standards indicated and listed in its "MPI Approved Products List."
- B. Material Compatibility: Provide materials that are compatible with one another and with substrates.
 - 1. 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.
- C. Paints and coatings shall comply with the following limits for VOC content:
 - 1. Flat Paints and Coatings: **50**
 - 2. Nonflat Paints, Coatings: 150
 - 3. Primers, Sealers, and Undercoaters: 200
 - 4. Anticorrosive and Antirust Paints Applied to Ferrous Metals: 250
- D. Colors: As selected by Owner

PART 3 - EXECUTION

3.1 PREPARATION

- A. Comply with recommendations in MPI's "MPI Architectural Painting Specification Manual" applicable to substrates indicated.
- B. Remove hardware, lighting fixtures, and similar items that are not to be painted. Mask items that cannot be removed. Reinstall items in each area after painting is complete.
- C. Clean and prepare surfaces in an area before beginning painting in that area. Schedule painting so cleaning operations will not damage newly painted surfaces.

3.2 APPLICATION

- A. Comply with recommendations in MPI's "MPI Architectural Painting Specification Manual" applicable to substrates indicated.
- B. Paint exposed surfaces disturbed by construction.
- C. Apply paints according to manufacturer's written instructions.
 - 1. Use brushes only where the use of other applicators is not practical.

- 2. Use rollers for finish coat on interior walls and ceilings.
- 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.
 - 1. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.

3.3 INTERIOR PAINT APPLICATION SCHEDULE

- A. Wood
 - 1. **Semigloss** Latex **Two coats** over latex primer for wood: MPI INT 6.3T.
- B. Fiberglass and Plastic:
 - 1. **Semigloss** Alkyd: **Two coats** over bonding primer: MPI INT 6.7B.
- C. Gypsum Board and Plaster:
 - 1. **Flat** Alkyd: **Two coats** over latex primer/sealer: MPI INT 9.2C.

102116 SOLID PLASTIC TOILET COMPARTMENTS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

1.02 SUMMARY

A. Section Includes:

1. Solid-plastic toilet compartments configured as toilet enclosures and urinal screens.

B. Related Requirements:

- 1. Division 05 Section "Auxiliary Structural Support System" for supports that attach ceiling hung compartments to overhead structural system.
- 2. Division 06 Section "Rough Carpentry" for concealed wood blocking.
- 3. Division 10 Section "Toilet Accessories" for toilet tissue dispensers, grab bars, and similar accessories mounted on toilet compartments.

1.03 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 toilet compartments.
- B. Shop Drawings: For toilet compartments.
 - 1. Include plans, elevations, sections, details, and attachment details.
 - 2. Show locations of centerlines of toilet fixtures.
 - 3. Show locations of floor drains.
 - 4. Show overhead support or bracing locations.
- C. Samples: Submit 6-inch square samples of same thickness and material indicated for manufacturer's complete range of color and pattern options.

1.04 PROJECT CONDITIONS

A. Field Measurements: Verify actual locations of toilet fixtures, walls, columns, ceilings, and other construction contiguous with toilet compartments by field measurements before fabrication and indicate measurements on Shop Drawings.

PART 2 - PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

A. Regulatory Requirements: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines for Buildings and Facilities and ICC A117.1 for toilet compartments designated as accessible.

2.02 SOLID-PLASTIC TOILET COMPARTMENTS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following
 - 1. Basis of Design: Scranton Products
 - 2. Acceptable Manufacturers:
 - a. Global Steel Products Corp.
 - b. Hadrian Manufacturing Inc.
- B. Toilet-Enclosure Style: Floor Mounted. 55" Height
- C. Urinal-Screen Style: Wall hung.
- D. Door, Panel, and Pilaster Construction: Solid, high-density polyethylene (HDPE) or polypropylene (PP) panel material, not less than 1 inch thick, seamless, with eased edges, and with homogenous color and pattern throughout thickness of material.
 - 1. Heat-Sink Strip: Manufacturer's standard continuous, extruded-aluminum or stainless- steel strip fastened to exposed bottom edges of solid-plastic components to hinder malicious combustion.
 - 2. Color and Pattern: One color and pattern in each room as selected by Architect from manufacturer's full range.
- E. Pilaster Sleeves (Caps): Manufacturer's standard design; stainless steel.
- F. Brackets (Fittings):
 - 1. Full-Height (Continuous) Type: Manufacturer's heavy-duty design; stainless steel.
- G . Overhead Cross Bracing for Floor Mounted Units: As recommended by manufacturer and fabricated from solid polymer.

2.03 HARDWARE AND ACCESSORIES

- A. Hardware and Accessories: Manufacturer's heavy-duty operating hardware and accessories.
 - 1. Hinges: Manufacturer's continuous stainless-steel hinge or extruded aluminum wrap- around hinge. Mount with through-bolts.
 - 2. Latch and Keeper: Manufacturer's heavy-duty surface-mounted cast-stainless-steel latch unit designed to resist damage due to slamming, with combination rubber-faced door strike and keeper, and with provision for emergency access. Provide units that comply with regulatory requirements for accessibility at compartments designated as accessible. Mount with throughbolts.
 - 3. Coat Hook: Surface mounted hook with concealed fasteners and projecting 2 inches or less; satin stainless steel finish; Bobrick Washroom Equipment, Inc.; Model B-6717.

- a. Install hook at ADA mounting height as indicated on the drawings in ADA stalls, typ.
- 4. Door Pull: Manufacturer's heavy-duty cast-stainless-steel pull at out-swinging doors that complies with regulatory requirements for accessibility. Provide units on both sides of doors at compartments designated as accessible. Mount with through-bolts.
- B. Anchorages and Fasteners: Manufacturer's standard exposed fasteners of stainless steel, finished to match the items they are securing, with theft-resistant-type heads. Provide hex-type bolts for through-bolt applications. For concealed anchors, use stainless-steel, hot-dip galvanized-steel, or other rust-resistant, protective-coated steel compatible with related materials.

2.04 MATERIALS

- A. Aluminum Castings: ASTM B 26/B 26M.
- B. Aluminum Extrusions: ASTM B 221.
- C. Stainless-Steel Sheet: ASTM A 666, Type 304, stretcher-leveled standard of flatness.
- D. Stainless-Steel Castings: ASTM A 743/A 743M.

2.05 FABRICATION

- A. Fabrication, General: Fabricate toilet compartment components to sizes indicated. Coordinate requirements and provide cutouts for through-partition toilet accessories where required for attachment of toilet accessories.
- B. Ceiling-Hung Units: Provide manufacturer's standard corrosion-resistant anchoring assemblies with leveling adjustment nuts at pilasters for connection to structural support above finished ceiling. Provide assemblies that support pilasters from structure without transmitting load to finished ceiling. Provide sleeves (caps) at tops of pilasters to conceal anchorage.
- C. Door Size and Swings: Unless otherwise indicated, provide 24-inch- wide, in-swinging doors for standard toilet compartments and 36-inch- wide, out-swinging doors with a minimum 32- inch- wide, clear opening for compartments designated as accessible.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine areas and conditions, with Installer present, for compliance with requirements for support, fastening, alignment, operating clearances, and other conditions affecting performance of the Work.
 - 1. Confirm location and adequacy of blocking and supports required for installation.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION

A. General: Comply with manufacturer's written installation instructions. Install units rigid, straight, level, and plumb. Secure units in position with manufacturer's recommended anchoring devices.

- 1. Maximum Clearances: a. Pilasters and Panels: 1/2 inch. b. Panels and Walls: 1 inch.
- 2. Full-Height (Continuous) Brackets: Secure panels to walls and to pilasters with full-height brackets.
 - a. Align brackets at pilasters with brackets at walls.
- B. Ceiling-Hung Units: Secure pilasters to supporting structure and level, plumb, and tighten. Hang doors and adjust so bottoms of doors are level with bottoms of pilasters when doors are in closed position.
- C. Urinal Screens: Attach with anchoring devices to suit supporting structure. Set units level and plumb, rigid, and secured to resist lateral impact.

3.03 ADJUSTING

A. Hardware Adjustment: Adjust and lubricate hardware according to hardware manufacturer's written instructions for proper operation. Set hinges on in-swinging doors to hold doors open approximately 30 degrees from closed position when unlatched. Set hinges on out-swinging doors to return doors to fully closed position.

SECTION 10 28 00 TOILET ACCESSORIES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

1.02 SUMMARY

- A. This Section includes the following:
 - 1. Toilet accessories.
 - 2. Installation of toilet accessories.
- B. Related Sections include the following:
 - 1. Division 06 Section "Rough Carpentry" for concealed wood blocking to support accessories.
 - 2. Division 08 Section "Mirrors" for frameless mirrors.

1.03 SUBMITTALS

- A. General: Submit in accordance with Division 01 Section "General Requirements."
- B. Product Data: Include construction details, material descriptions and thicknesses, dimensions, profiles, fastening and mounting methods, specified options, and finishes for each type of accessory specified.
- C. Shop Drawings: Include blocking locations and mounting heights identified.
- D. Product Schedule: Indicating types, quantities, sizes, and installation locations by room of each accessory required. Use room and accessory designations indicated in the Toilet Accessory Schedule in Part 3 and room and accessory designations indicated on Drawings.

1.04 QUALITY ASSURANCE

- A. Source Limitations: Provide products of same manufacturer for each type of accessory unit and for units exposed to view in same areas, unless otherwise approved by Architect.
- B. Insofar as possible, fitting, construction and fabrication of the work shall be executed at shop, ready for delivery and erection at building.
- C. Provide all holes, connections, and fastenings for and to work of other trades abutting, adjoining or intersecting work of this Section.

1.05 COORDINATION

A. Coordinate accessory locations with other work to prevent interference with clearances required for access by disabled persons, proper installation, adjustment, operation, cleaning, and servicing of accessories.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Stainless Steel: ASTM A 666, Type 304, with No. 4 finish (satin), in 0.0312-inch minimum nominal thickness, unless otherwise indicated.
- B. Sheet Steel: ASTM A 366/A 366M, cold rolled, commercial quality, 0.0359-inch minimum nominal thickness; surface preparation and metal pretreatment as required for applied finish.
- C. Galvanized Steel Sheet: ASTM A 653/A 653M, G60.
- D. Chromium Plating: ASTM B 456, Service Condition Number SC 2 (moderate service), nickel plus chromium electrodeposited on base metal.
- E. Galvanized Steel Mounting Devices: ASTM A 153/A 153M, hot-dip galvanized after fabrication.
- F. Fasteners: Screws, bolts, and other devices of same material as accessory unit, tamper and theft resistant when exposed, and of galvanized steel when concealed.
- G. Epoxy Anchors: Red Head Umbrella Anchor, Model HBU-38, size as required for fasteners.

2.02 TOILET ACCESSORIES

- A. Toilet Tissue Dispenser: Surface Mounted Multi-Roll 1. Bobrick B-2888, stainless steel, satin finish, 22-gauge
- B. Sanitary Napkin Disposal: Surface Monted 1. Bobrick B-5270 Matrix Series, ABS Plastic, grey color.
- C. Paper Towel Dispenser and Waste Receptacle: Surface mounted 1. Bobrick B-542, Classic Series heavy gauge stainless steel, satin finish, welded construction. Provide Liner Mate, Bobrick 3944-134, typ.
- D. Hook: Surface-Mounted 1. Bobrick B-677 "towel pin", stainless steel satin finish 2. Provide in 24" lengths where indicated on the drawings. Provide 18" where 24" not feasible; verify all dimensions in field.

2.03 FABRICATION

- A. General: One, maximum 1-1/2-inch- diameter, unobtrusive stamped manufacturer logo, as approved by Architect, is permitted on exposed face of accessories. On interior surface not exposed to view or back surface of each accessory, provide printed, waterproof label or stamped nameplate indicating manufacturer's name and product model number.
- B. Sections and shapes shall be rolled, formed, drawn, or extruded as required for respective functions. C. Fastenings, exposed metal fastenings, and accessories, unless Underwriters prohibit for safety, shall be of same materials, texture, color and finish as the base metal to which applied.
- D. Surface-Mounted Toilet Accessories: Unless otherwise indicated, fabricate units with tight seams and joints, and exposed edges rolled. Hang doors and access panels with continuous stainless-steel hinge. Provide concealed anchorage where possible.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Install accessories according to manufacturers' written instructions, using fasteners appropriate to substrate indicated and recommended by unit manufacturer. Install units level, plumb, and firmly anchored in locations and at heights indicated.
- B. Secure mirrors to walls in concealed, tamper-resistant manner with special hangers, toggle bolts, or screws. Set units level, plumb, and square at locations indicated, according to manufacturer's written instructions for substrate indicated.
- C. Install grab bars to withstand a downward load of at least 250 lbf, when tested according to method in ASTM F 446.
- D. Install all items in accordance with manufacturer's instruction and as located on Drawings.

3.02 TOILET ACCESSORIES SCHEDULE

- A. Toilet Accessories in Single Person Toilet Rooms: 1. Install one paper towel dispenser and waste receptacle. 2. Install one toilet tissue dispenser. 3. Install one baby changing station. 4. Provide grab bars in configurations shown as indicated; screwed to solid wood blocking in stud partitions.
- B. Toilet Accessories in Multi-Person Toilet Rooms: 1. Install one toilet tissue dispenser for each water closet. 2. Install paper towel dispensers and waste receptacle where indicated. 3. Install one sanitary napkin disposal at each Women's water closet. 4. Install grab bars in configurations shown at designated water closets screwed; to solid wood blocking in stud partitions.
- C. Toilet Accessories in Shower Rooms: 1. Install two surface mounted hooks, typ.; mounting heights

3.03 ADJUSTING AND CLEANING

- A. Adjust accessories for unencumbered, smooth operation and verify that mechanisms function properly. Replace damaged or defective items.
- B. Remove temporary labels and protective coatings.
- C. Clean and polish exposed surfaces according to manufacturer's written recommendations.

123623 PLASTIC-LAMINATE-CLAD COUNTERTOPS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals: Samples
- B. Fabricator Qualifications: Certified participant in AWI's Quality Certification Program.
- C. Installer Qualifications: Fabricator of products.
- D. Environmental Limitations: Do not deliver or install countertops until building is enclosed, wet work is completed, and HVAC system is operating.

PART 2 - PRODUCTS

2.1 PLASTIC-LAMINATE COUNTERTOPS

- A. Quality Standard: AWI, AWMAC, and WI's "Architectural Woodwork Standards."
- B. Plastic-Laminate Countertops: Custom grade.
 - 1. Laminate Grade: HGS for flat countertops, HGP for post-formed countertops.
 - 2. Grain Direction: Parallel to cabinet fronts.
 - 3. Edge Treatment: Same as laminate cladding on horizontal surfaces.

2.2 MATERIALS

- A. Wood Moisture Content: 5 to 10 percent.
- B. Medium-Density Fiberboard: ANSI A208.2, Grade 130, made with binder containing no urea formaldehyde.
- C. Particleboard: ANSI A208.1, Grade M-2, made with binder containing no urea formaldehyde.
- D. Softwood Plywood: DOC PS 1.
- E. High-Pressure Decorative Laminate: NEMA LD 3.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install countertops to comply with referenced quality standard for grade specified.
- B. Install countertops level, plumb, true, and straight. Shim as required with concealed shims. Install level and plumb to a tolerance of 1/8 inch in 96 inches.
- C. Scribe and cut countertops to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.
- D. Anchor countertops securely to base units. Seal space between backsplash and wall.

END OF SECTION 123623.13

SECTION 224000 - PLUMBING FIXTURES

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals: Product Data for each type of plumbing fixture, including trim, fittings, accessories, appliances, appurtenances, equipment, and supports.
- B. Regulatory Requirements: Comply with requirements in Public Law 102-486, "Energy Policy Act," about water flow and consumption rates for plumbing fixtures.
- C. NSF Standard: Comply with NSF 61, "Drinking Water System Components Health Effects," for fixture materials that will be in contact with potable water.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Regulatory Requirements: Comply with requirements in ICC A117.1, "Accessible and Usable Buildings and Facilities"[; Public Law 90-480, "Architectural Barriers Act"; and Public Law 101-336, "Americans with Disabilities Act";] for plumbing fixtures for people with disabilities.
- B. Regulatory Requirements: Comply with requirements in Public Law 102-486, "Energy Policy Act," about water flow and consumption rates for plumbing fixtures.
- C. NSF Standard: Comply with NSF 61, "Drinking Water System Components Health Effects," for fixture materials that will be in contact with potable water.

2.2 WATER CLOSET

- A. Basis-of-Design Product: American Standard MADERA FloWise
 - 1. Design Consumption: 1.1 to 1.6 gal./flush.
 - 2. $16\frac{1}{2}$ " floor mount flushometer valve toilet
 - 3. Elongated toilet seat: **American Standard # 5901**
- B. Flush valve
 - 1. Basis of design product: American Standard Selectronic Model 6065.121.002
 - 2. Sensor operated
 - 3. 1.28 gpf

2.3 URINAL

- A. Basis of design product: American Standard ALLBROOK Flo Wise
 - 1. Flushing rim
 - 2. Siphon jet flush
- B. Flush Valve
 - 1. Basis of design product: American Standard Selectronic Model #6063.051.002

- 2. Sensor operated
- 3. 0.5 to 1.0 gpf

2.4 LAVATORY

- A. Basis of design product: American Standard Aqualyn Drop In Sink Model #0475.047
 - 1. Self rimming
 - 2. Front overflow

2.4 LAVATORY FAUCET

- A. Basis of design product: American Standard Paradigm Selectronic #702B.105
 - 3. Sensor operated
 - 4. 0.5 gpf

2.5 SHOWER VALVE

- B. Basis of design product: American Standard Colony Pro TU075508XH Trim with cartridge
 - 5. One piece double ceramic pressure balance cartridge
 - 6. Adjustable hot limi

PART 3 EXECUTION

2.5 INSTALLATIONS

- A. Install fixtures with flanges and gasket seals.
- B. Fasten floor-mounted fixtures to substrate. Fasten fixtures having holes for securing fixture to wall construction, to reinforcement built into walls.
- C. Fasten wall-mounted fittings to reinforcement built into walls.
- D. Secure supplies to supports or substrate within pipe space behind fixture.
- E. Install individual supply inlets, supply stops, supply risers, and tubular brass traps with cleanouts at fixture.
- F. Install water-supply stop valves in accessible locations.
- G. Install traps on fixture outlets. Omit traps on fixtures having integral traps. Omit traps on indirect wastes unless otherwise indicated.
- H. Seal joints between fixtures and walls, floors, and counters using sanitary-type, one-part, mildew-resistant, silicone sealant. Match sealant color to fixture color.
- I. Ground equipment.

260500 COMMON WORK RESULTS FOR ELECTRICAL

PART 1 GENERAL

1.01 WORK INCLUDES

- A. The work included under this Section consists of providing all labor, materials, supervision, and construction procedures necessary for the installation of the complete electrical systems required by these specifications and/or shown on the drawings of the contract.
- B. The Contract Drawings are shown in part diagrammatic intended to convey the scope of work, indicating the intended general arrangement of equipment, conduit, and outlets. Follow the drawings in laying out the work and verify spaces for the installation of the materials and equipment based on the dimensions of actual equipment furnished. Whenever a question exists as to the exact intended location of outlets or equipment, obtain instructions from the Architect/Engineer before proceeding with the work.

1.02 RELATED WORK

A. Contractor will examine Contract Documents for requirements that affect work of this Section.

1.03 QUALITY ASSURANCE

A. Provide in accordance with Contract Documents and Specifications, Control of Work section.

1.04 SUBMITTALS

- A. Furnish manufacturer's product data, test reports, and materials certifications as required.
- C. As-built copies of all Drawings shall be submitted to the Engineer.

1.05 COORDINATION

- A. Coordination, Sequencing, and Scheduling: per Contract Documents and Specifications.
- B. The electrical work shall be coordinated with the Work of other trades to prevent interferences and so that the progress in construction of the building will in no way be retarded.
- C. Coordinate with all local utility companies and make all installations for their services in accordance with all utility company requirements.
- D. Where lighting fixtures and other electrical items are shown in conflict with locations of structural members and mechanical or other equipment, furnish and install all required supports and wiring to clear the encroachment for a complete installation.
- E. Any Work installed contrary to or without acceptance by the Engineer shall be subject to change as directed by the Engineer, and no extra compensation will be allowed to the Contractor for making these changes

1.06 PRODUCT DELIVERY AND STORAGE

- A. Use all means necessary to protect electrical system materials before, during and after installation and to protect the installed Work and materials of all other trades.
- B. In the event of damage, immediately make all repairs and replacements necessary to the acceptance of the Engineer and at no additional cost to the Owner. If any apparatus has been subject to possible injury by water, it shall be thoroughly dried out and put through such special tests as directed by the Engineer, at the cost and expense of the Contractor, or shall be replaced by the Contractor at his own expenses.
- C. Protect the Work of other trades. Restore any damage caused to other trades to the condition existing prior to damage at no additional cost to the Owner.
- D. Investigate each space in the building through which equipment must pass to reach its final location. If necessary, the manufacture shall be required to ship his material in sections sized to permit passing through such restricted areas in the building.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Materials and equipment shall be listed by UL unless it can be demonstrated that no UL standards exist for a specific item or class of equipment.
- B. All other materials, not specifically described but required for a complete and operable electrical installation, shall be new, first quality of their respective kinds, Specification grade or better, and as selected by the Contractor subject to the acceptance by the Engineer.
- C. All materials and equipment furnished and installed on this Project shall meet the most stringent efficiency standards of the local utility to qualify for the maximum rebate.

2.02 MATERIAL AND CONSTRUCTION REQUIREMENTS

A. Unless otherwise shown or specified, all enclosures, motors, wiring and other materials and all construction methods shall conform to NEMA 1, Indoor Enclosures

2.03 MISCELLANEOUS MATERIALS

A. Inserts, Anchors, Fasteners, and Hooks: Provide inserts, anchors, anchor bolts, lag bolts, screws, washers, nuts, hooks, and other rough hardware. Assist other trades as necessary in the placement of inserts and anchor bolts in concrete and masonry. Furnish full instructions regarding locations, sizes, and other requirements to ensure proper preparation. Provide rough hardware which complies with requirements of the governing laws and codes.

PART 3 EXECUTION

3.01 COORDINATION

- A. Prior to all Work of this section, carefully inspect the installed Work of all other trades and verify that all such Work is complete to the point where this installation may properly commence.
- B. Field verify all locations and dimensions to ensure that the equipment will be properly located, readily accessible, and installed in accordance with all pertinent codes and Regulations, the Contract Documents, and the referenced standards.

- C. The Work shall be carefully laid out in advance, and where cutting, drilling, etc., of floors, walls, ceilings, or other surfaces is necessary for the proper installation, this Work shall be carefully done, and any damage to building, piping, or equipment shall be repaired by mechanics of the trades involved at no additional cost to the Owner.
- D. In the event any discrepancies are discovered, immediately notify the Owner's Representative in writing. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

3.02 INSTALLATION

- A. Install all equipment and fixtures in complete accordance with the manufacturer's recommendations and all pertinent codes and Regulations.
- B. Thoroughly inspect all items of equipment and any items dented, scratched, or otherwise damaged in any manner shall be replaced or repaired and painted to match original finish. All items so repaired and refinished shall be brought to the attention of the Engineer for inspection and acceptance.
- C. Coordinate the installation of required supporting devices and sleeves to be set in poured-inplace concrete or supported from or on other structural components, as they are constructed.
- D. Sequence, coordinate, and integrate installations of electrical materials and equipment for efficient flow of the Work. Give particular attention to large equipment requiring positioning prior to closing in the building and equipment which must be placed in service before further construction can take place.
- E. Where mounting heights are not detailed or dimensioned, install systems, materials, and equipment to provide the maximum headroom possible.
- F. The final routing of raceways shall be determined by structural conditions, interferences with other trades and by terminal locations on apparatus. The Engineer reserves the right of a reasonable amount of shifting at no extra cost up until time of roughing in the Work.
- G. Where circuits are shown as "home-runs" all necessary fittings and boxes shall be provided for a complete raceway installation.
- H. In general, wiring and raceway systems for security alarm, fire alarm, telephone, and intercommunications systems are not indicated on the Drawings but shall be furnished and installed under this section.
- I. Each lighting and each receptacle circuit shall have its own neutral, dedicated to that circuit. A common neutral for more than one signal phase circuit is not allowed.
- J. The Electrical Contractor shall be responsible for all cutting and patching of holes in building construction which are required for the passage of electrical work. Cutting and patching shall conform to the requirements of Division 08 and, if applicable, Division 09 of these specifications.
- K. Cutting of structural framing, walls, floors, decks and other members intended to withstand stress is not permitted.
- L. Surface mounted panel boxed, junction boxes, conduits, etc., shall be supported by spacers to provide a clearance between wall and equipment.

M. Upon completion of all installation, lamping, and testing, thoroughly inspect all exposed portions of the electrical installation and completely remove all exposed labels, soils, markings and foreign material.

3.03 CLEANING

A. Upon completion of rough electrical work in any given area, remove all rubbish and debris from the work area and leave in broom clean condition.

265000 - LIGHTING

PART 1- GENERAL

1.1 SECTION REQUIREMENTS

- J. Summary: Remove existing recessed ceiling lighting and replace with new 2'x2' fixtures.
 - 1. Sufficient replacement fixtures will be installed to provide room light levels equal to the existing 2x4 troffers.
 - 2. Provide occupant sensor controls for new lighting.
- K. Submittals: Product Data for each luminaire and occupant sensor.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Fixtures, Emergency Lighting Units, 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.

2.2 LIGHTING FIXTURES AND COMPONENTS, GENERAL REQUIREMENTS

- A. Recessed Fixtures: Comply with NEMA LE 4 for ceiling compatibility for recessed fixtures.
- B. Comply with IESNA RP-8 for parameters of lateral light distribution patterns indicated for luminaires.
- C. Plastic Parts: High resistance to yellowing and other changes due to aging, exposure to heat, and UV radiation.

2.3 FIXTURES

- A. Basis of Design: **Lithonia CPANL 2X2** or approved equal.
 - 1. Decription: 2x2 Flat Panel
 - 2. Lumens: 4400
 - 3. Color Temperature: 40

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Coordinate ceiling-mounted luminaires with ceiling construction, mechanical work, and security and fire-prevention features mounted in ceiling space and on ceiling.
- B. Lighting Fixtures: Set level, plumb, and square with ceilings and walls. Install lamps in each fixture.
- C. Comply with NFPA 70 for minimum fixture supports.
- D. Seismic Protection: Luminaire attachments to building walls and ceilings shall comply with seismic criteria in Section 260500 "Common Work Results for Electrical."