

**Specification
for the**

Sinajana Arts Center Concrete Sidewalk

**OWNER
Guam Housing and Urban Renewal Authority**

BY: _____
Elizabeth F. Napoli, EXECUTIVE DIRECTOR

Contractor: _____

By: _____
Signature and Title

Date: _____

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IFB Number: GHURA-23-19		Submit bid to: GHURA 117 Bien Venida Ave. Sinajana, Guam 96910 Contact: Sonny Perez, 475-1404 or email sperez@ghura.org Andrew Manglona, 475-1315 or email amanglona@ghura.org
Bid Opening Date: August 10, 2023	Bid Opening Time: 2:00 pm	
Project Title: Sinajana Arts Center Concrete Sidewalk		
Project Description: Construction of Sinajana Arts Center concrete sidewalk		

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GHURA

Guahan Housing and Urban Renewal Authority
Aturidat Ginima' Yan Rinueban Siudat Guahan
117 Bien Venida Avenue, Sinajana, GU 96910
Phone: (671) 477-9851 · Fax: (671) 300-7565 · TTY: (671) 472-3701



Lourdes A. Leon Guerrero
Governor of Guam

Joshua F. Tenorio
Lt. Governor of Guam

Invitation for Bid
IFB#GHURA-23-19
Sinajana Arts Center Concrete Sidewalks
This ad is paid with HUD Funds by GHURA

Guam Housing and Urban Renewal Authority (GHURA) will receive sealed proposals to construct Sinajana Arts Center's Concrete Sidewalks in Sinajana until **2:00 PM ChST on Thursday, August 10, 2023** at GHURA's Main office in Sinajana.

Bid packets are available for view on GHURA's website: <https://www.ghura.org/doing-business-us/bidsproposalsrelease-funds/invitation-bids> beginning **Thursday, July 20, 2023**. **Interested parties must register at GHURA main Office in Sinajana to receive access to a downloadable bid packet file; for a non-refundable fee of \$50.00 (exact cash amount, money order, or company check). Registration schedule is: Monday through Friday, 8:30 am – 4:00 pm ChST; with the exception of GovGu holidays.** A pre-bid conference will be held on **Monday, July 24, 2023 at 2:00 PM ChST** in the GHURA Main Office Conference Room in Sinajana. A site visit will be conducted by GHURA staff on **Tuesday, July 25, 2023**. Attendance at pre-bid conference is non-mandatory but highly encouraged. Any questions regarding the project or requirements must be submitted in writing or via email to Antonio C. Camacho at accamacho@ghura.org no later than **Wednesday, August 2, 2023**. **Bid closing date and time is Thursday, August 10, 2023 at 2:00 PM ChST.** All bid submittals will be opened publicly at **GHURA's Main Office Conference Room, Sinajana.**

Pursuant to 5GCA, Chapter 5, §5212, bid guarantees in the amount of 15% of the total base bid shall accompany each bid. Bid guarantee shall be a Bid Bond secured by a surety company authorized to do business in Guam and listed in the latest Department of Treasury Circular 570 published in the Federal Register; or as permitted by state law, a certified check, bank draft, or U.S. Government Bond at par value. All Bid Guarantees must be made payable to GHURA. **Personal checks will not be accepted.** GHURA reserves the right to waive irregularities and to reject any or all bids. Failure to submit a bid properly shall result in rejection of the bid.

For all contracts which exceed \$100,000, the successful bidder will be required to furnish and pay for satisfactory Performance and Payment bond for 100% of the contract price. GHURA will retain the bid guarantee until the performance bond is received and will release it soon thereafter. The Contractor must not discriminate on the basis of race, color, religion, sex, national origin, age, disability, or genetic information in employment or the provision of services. There is a Restriction Against Contractors Employing Convicted Sex Offenders from Working at Government of Guam Venues. (§5253 of Title 5 Guam Code Annotated).

The successful bidder will be required to accomplish the following to the best possible and greatest extent feasible:

1. A goal of awarding at least 50 percent of the dollar value of construction contracts to Minority and/or Women Business Enterprises (MBE/WBE) or General Contractors with MBE/WBE participation.
2. In accordance with Section 3 of the U.S. Department of Housing and Urban Development Act of 1968, all construction contractors, to the maximum extent feasible, shall provide training, contracting, and employment opportunities to low income residents residing in GHURA.

GHURA intends to award a contract on the basis of the lowest and most responsible bid for the work described in the bid documents. No bid shall be withdrawn for a period of sixty (60) days subsequent to the opening of bids without the prior written consent of GHURA.

GHURA is an Equal Opportunity Employer


Elizabeth F. Napoli
Executive Director

**U.S. Department of Housing and
Urban Development**
Office of Public and Indian Housing

**Instructions to Bidders for Contracts
Public and Indian Housing Programs**

Instructions to Bidders for Contracts

Public and Indian Housing Programs

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1. Bid Preparation and Submission

(a) Bidders are expected to examine the specifications, drawings, all instructions, and, if applicable, the construction site (see also the contract clause entitled **Site Investigation and Conditions Affecting the Work** of the *General Conditions of the Contract for Construction*). Failure to do so will be at the bidders' risk.

(b) All bids must be submitted on the forms provided by the Public Housing Agency/Indian Housing Authority (PHA/IHA). Bidders shall furnish all the information required by the solicitation. Bids must be signed and the bidder's name typed or printed on the bid sheet and each continuation sheet which requires the entry of information by the bidder. Erasures or other changes must be initialed by the person signing the bid. Bids signed by an agent shall be accompanied by evidence of that agent's authority. (Bidders should retain a copy of their bid for their records.)

(c) Bidders must submit as part of their bid a completed form HUD-5369-A, "Representations, Certifications, and Other Statements of Bidders."

(d) All bid documents shall be sealed in an envelope which shall be clearly marked with the words "Bid Documents," the Invitation for Bids (IFB) number, any project or other identifying number, the bidder's name, and the date and time for receipt of bids.

(e) If this solicitation requires bidding on all items, failure to do so will disqualify the bid. If bidding on all items is not required, bidders should insert the words "No Bid" in the space provided for any item on which no price is submitted.

(f) Unless expressly authorized elsewhere in this solicitation, alternate bids will not be considered.

(g) Unless expressly authorized elsewhere in this solicitation, bids submitted by telegraph or facsimile (fax) machines will not be considered.

(h) If the proposed contract is for a Mutual Help project (as described in 24 CFR Part 905, Subpart E) that involves Mutual Help contributions of work, material, or equipment, supplemental information regarding the bid advertisement is provided as an attachment to this solicitation.

2. Explanations and Interpretations to Prospective Bidders

(a) Any prospective bidder desiring an explanation or interpretation of the solicitation, specifications, drawings, etc., must request it at least 7 days before the scheduled time for bid opening. Requests may be oral or written. Oral requests must be confirmed in writing. The only oral clarifications that will be provided will be those clearly related to solicitation procedures, i.e., not substantive technical information. No other oral explanation or interpretation will be provided. Any information given a prospective bidder concerning this solicitation will be furnished promptly to all other prospective bidders as a written amendment to the solicitation, if that information is necessary in submitting bids, or if the lack of it would be prejudicial to other prospective bidders.

(b) Any information obtained by, or provided to, a bidder other than by formal amendment to the solicitation shall not constitute a change to the solicitation.

3. Amendments to Invitations for Bids

(a) If this solicitation is amended, then all terms and conditions which are not modified remain unchanged.

(b) Bidders shall acknowledge receipt of any amendment to this solicitation (1) by signing and returning the amendment, (2) by identifying the amendment number and date on the bid form, or (3) by letter, telegram, or facsimile, if those methods are authorized in the solicitation. The PHA/IHA must receive acknowledgement by the time and at the place specified for receipt of bids. Bids which fail to acknowledge the bidder's receipt of any amendment will result in the rejection of the bid if the amendment(s) contained information which substantively changed the PHA's/IHA's requirements.

(c) Amendments will be on file in the offices of the PHA/IHA and the Architect at least 7 days before bid opening.

4. Responsibility of Prospective Contractor

(a) The PHA/IHA will award contracts only to responsible prospective contractors who have the ability to perform successfully under the terms and conditions of the proposed contract. In determining the responsibility of a bidder, the PHA/IHA will consider such matters as the bidder's:

- (1) Integrity;
- (2) Compliance with public policy;
- (3) Record of past performance; and
- (4) Financial and technical resources (including construction and technical equipment).

(b) Before a bid is considered for award, the bidder may be requested by the PHA/IHA to submit a statement or other documentation regarding any of the items in paragraph (a) above. Failure by the bidder to provide such additional information shall render the bidder nonresponsible and ineligible for award.

5. Late Submissions, Modifications, and Withdrawal of Bids

(a) Any bid received at the place designated in the solicitation after the exact time specified for receipt will not be considered unless it is received before award is made and it:

(1) Was sent by registered or certified mail not later than the fifth calendar day before the date specified for receipt of offers (e.g., an offer submitted in response to a solicitation requiring receipt of offers by the 20th of the month must have been mailed by the 15th);

(2) Was sent by mail, or if authorized by the solicitation, was sent by telegram or via facsimile, and it is determined by the PHA/IHA that the late receipt was due solely to mishandling by the PHA/IHA after receipt at the PHA/IHA; or

(3) Was sent by U.S. Postal Service Express Mail Next Day Service - Post Office to Addressee, not later than 5:00 p.m. at the place of mailing two working days prior to the date specified for receipt of proposals. The term "working days" excludes weekends and observed holidays.

(b) Any modification or withdrawal of a bid is subject to the same conditions as in paragraph (a) of this provision.

(c) The only acceptable evidence to establish the date of mailing of a late bid, modification, or withdrawal sent either by registered or certified mail is the U.S. or Canadian Postal Service postmark both on the envelope or wrapper and on the original receipt from the U.S. or Canadian Postal Service. Both postmarks must show a legible date or the bid, modification, or withdrawal shall be processed as if mailed late. "Postmark" means a printed, stamped, or otherwise placed impression (exclusive of a postage meter machine impression) that is readily identifiable without further action as having been supplied and affixed by employees of the U.S. or Canadian Postal Service on the date of mailing. Therefore, bidders should request the postal clerk to place a hand cancellation bull's-eye postmark on both the receipt and the envelope or wrapper.

(d) The only acceptable evidence to establish the time of receipt at the PHA/IHA is the time/date stamp of PHA/IHA on the proposal wrapper or other documentary evidence of receipt maintained by the PHA/IHA.

(e) The only acceptable evidence to establish the date of mailing of a late bid, modification, or withdrawal sent by Express Mail Next Day Service-Post Office to Addressee is the date entered by the post office receiving clerk on the "Express Mail Next Day Service-Post Office to Addressee" label and the postmark on both the envelope or wrapper and on the original receipt from the U.S. Postal Service. "Postmark" has the same meaning as defined in paragraph (c) of this provision, excluding postmarks of the Canadian Postal Service. Therefore, bidders should request the postal clerk to place a legible hand cancellation bull's eye postmark on both the receipt and Failure by a bidder to acknowledge receipt of the envelope or wrapper.

(f) Notwithstanding paragraph (a) of this provision, a late modification of an otherwise successful bid that makes its terms more favorable to the PHA/IHA will be considered at any time it is received and may be accepted.

(g) Bids may be withdrawn by written notice, or if authorized by this solicitation, by telegram (including mailgram) or facsimile machine transmission received at any time before the exact time set for opening of bids; provided that written confirmation of telegraphic or facsimile withdrawals over the signature of the bidder is mailed and postmarked prior to the specified bid opening time. A bid may be withdrawn in person by a bidder or its authorized representative if, before the exact time set for opening of bids, the identity of the person requesting withdrawal is established and the person signs a receipt for the bid.

6. Bid Opening

All bids received by the date and time of receipt specified in the solicitation will be publicly opened and read. The time and place of opening will be as specified in the solicitation. Bidders and other interested persons may be present.

7. Service of Protest

(a) Definitions. As used in this provision:

"Interested party" means an actual or prospective bidder whose direct economic interest would be affected by the award of the contract.

"Protest" means a written objection by an interested party to this solicitation or to a proposed or actual award of a contract pursuant to this solicitation.

(b) Protests shall be served on the Contracting Officer by obtaining written and dated acknowledgement from —

[Contracting Officer designate the official or location where a protest may be served on the Contracting Officer]

(c) All protests shall be resolved in accordance with the PHA's/IHA's protest policy and procedures, copies of which are maintained at the PHA/IHA.

8. Contract Award

(a) The PHA/IHA will evaluate bids in response to this solicitation without discussions and will award a contract to the responsible bidder whose bid, conforming to the solicitation, will be most advantageous to the PHA/IHA considering only price and any price-related factors specified in the solicitation.

(b) If the apparent low bid received in response to this solicitation exceeds the PHA's/IHA's available funding for the proposed contract work, the PHA/IHA may either accept separately priced items (see 8(e) below) or use the following procedure to determine contract award. The PHA/IHA shall apply in turn to each bid (proceeding in order from the apparent low bid to the high bid) each of the separately priced bid deductible items, if any, in their priority order set forth in this solicitation. If upon the application of the first deductible item to all initial bids, a new low bid is within the PHA's/IHA's available funding, then award shall be made to that bidder. If no bid is within the available funding amount, then the PHA/IHA shall apply the second deductible item. The PHA/IHA shall continue this process until an evaluated low bid, if any, is within the PHA's/IHA's available funding. If upon the application of all deductibles, no bid is within the PHA's/IHA's available funding, or if the solicitation does not request separately priced deductibles, the PHA/IHA shall follow its written policy and procedures in making any award under this solicitation.

(c) In the case of tie low bids, award shall be made in accordance with the PHA's/IHA's written policy and procedures.

(d) The PHA/IHA may reject any and all bids, accept other than the lowest bid (e.g., the apparent low bid is unreasonably low), and waive informalities or minor irregularities in bids received, in accordance with the PHA's/IHA's written policy and procedures.

(e) Unless precluded elsewhere in the solicitation, the PHA/IHA may accept any item or combination of items bid.

(f) The PHA/IHA may reject any bid as nonresponsive if it is materially unbalanced as to the prices for the various items of work to be performed. A bid is materially unbalanced when it is based on prices significantly less than cost for some work and prices which are significantly overstated for other work.

(g) A written award shall be furnished to the successful bidder within the period for acceptance specified in the bid and shall result in a binding contract without further action by either party.

9. Bid Guarantee (applicable to construction and equipment contracts exceeding \$25,000)

All bids must be accompanied by a negotiable bid guarantee which shall not be less than five percent (5%) of the amount of the bid. The bid guarantee may be a certified check, bank draft, U.S. Government Bonds at par value, or a bid bond secured by a surety company acceptable to the U.S. Government and authorized to do business in the state where the work is to be performed. In the case where the work under the contract will be performed on an Indian reservation area, the bid guarantee may also be an irrevocable Letter of Credit (see provision 10, Assurance of Completion, below). Certified checks and bank drafts must be made payable to the order of the PHA/IHA. The bid guarantee shall insure the execution of the contract and the furnishing of a method of assurance of completion by the successful bidder as required by the solicitation. Failure to submit a bid guarantee with the bid shall result in the rejection of the bid. Bid guarantees submitted by unsuccessful bidders will be returned as soon as practicable after bid opening.

10. Assurance of Completion

(a) Unless otherwise provided in State law, the successful bidder shall furnish an assurance of completion prior to the execution of any contract under this solicitation. This assurance may be [Contracting Officer check applicable items] —

[] (1) a performance and payment bond in a penal sum of 100 percent of the contract price; or, as may be required or permitted by State law;

[] (2) separate performance and payment bonds, each for 50 percent or more of the contract price;

[] (3) a 20 percent cash escrow;

[] (4) a 25 percent irrevocable letter of credit; or,

[] (5) an irrevocable letter of credit for 10 percent of the total contract price with a monitoring and disbursements agreement with the IHA (applicable only to contracts awarded by an IHA under the Indian Housing Program).

(b) Bonds must be obtained from guarantee or surety companies acceptable to the U.S. Government and authorized to do business in the state where the work is to be performed. Individual sureties will not be considered. U.S. Treasury Circular Number 570, published annually in the Federal Register, lists companies approved to act as sureties on bonds securing Government contracts, the maximum underwriting limits on each contract bonded, and the States in which the company is licensed to do business. Use of companies listed in this circular is mandatory. Copies of the circular may be downloaded on the U.S. Department of Treasury website <http://www.fms.treas.gov/c570/index.html>, or ordered for a minimum fee by contacting the Government Printing Office at (202) 512-2168.

(c) Each bond shall clearly state the rate of premium and the total amount of premium charged. The current power of attorney for the person who signs for the surety company must be attached to the bond. The effective date of the power of attorney shall not precede the date of the bond. The effective date of the bond shall be on or after the execution date of the contract.

(d) Failure by the successful bidder to obtain the required assurance of completion within the time specified, or within such extended period as the PHA/IHA may grant based upon reasons determined adequate by the PHA/IHA, shall render the bidder ineligible for award. The PHA/IHA may then either award the contract to the next lowest responsible bidder or solicit new bids. The PHA/IHA may retain the ineligible bidder's bid guarantee.

11. Preconstruction Conference (applicable to construction contracts)

After award of a contract under this solicitation and prior to the start of work, the successful bidder will be required to attend a preconstruction conference with representatives of the PHA/IHA and its architect/engineer, and other interested parties convened by the PHA/IHA. The conference will serve to acquaint the participants with the general plan of the construction operation and all other requirements of the contract (e.g., Equal Employment Opportunity, Labor Standards). The PHA/IHA will provide the successful bidder with the date, time, and place of the conference.

12. Indian Preference Requirements (applicable only if this solicitation is for a contract to be performed on a project for an Indian Housing Authority)

(a) HUD has determined that the contract awarded under this solicitation is subject to the requirements of section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e(b)). Section 7(b) requires that any contract or subcontract entered into for the benefit of Indians shall require that, to the greatest extent feasible

(1) Preferences and opportunities for training and employment (other than core crew positions; see paragraph (h) below) in connection with the administration of such contracts or subcontracts be given to qualified "Indians." The Act defines "Indians" to mean persons who are members of an Indian tribe and defines "Indian tribe" to mean any Indian tribe, band, nation, or other organized group or community, including any Alaska Native village or regional or village corporation as defined in or established pursuant to the Alaska Native Claims Settlement Act, which is recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians; and,

(2) Preference in the award of contracts or subcontracts in connection with the administration of contracts be given to Indian organizations and to Indian-owned economic enterprises, as defined in section 3 of the Indian Financing Act of 1974 (25 U.S.C. 1452). That Act defines "economic enterprise" to mean any Indian-owned commercial, industrial, or business activity established or organized for the purpose of profit, except that the Indian ownership must constitute not less than 51 percent of the enterprise; "Indian organization" to mean the governing body of any Indian tribe or entity established or recognized by such governing body; "Indian" to mean any person who is a member of any tribe, band, group, pueblo, or community which is recognized by the Federal Government as eligible for services from the Bureau of Indian Affairs and any "Native" as defined in the Alaska Native Claims Settlement Act; and Indian "tribe" to mean any Indian tribe, band, group, pueblo, or community including Native villages and Native groups (including

corporations organized by Kenai, Juneau, Sitka, and Kodiak) as defined in the Alaska Native Claims Settlement Act, which is recognized by the Federal Government as eligible for services from the Bureau of Indian Affairs.

(b) (1) The successful Contractor under this solicitation shall comply with the requirements of this provision in awarding all subcontracts under the contract and in providing training and employment opportunities.

(2) A finding by the IHA that the contractor, either (i) awarded a subcontract without using the procedure required by the IHA, (ii) falsely represented that subcontracts would be awarded to Indian enterprises or organizations; or, (iii) failed to comply with the contractor's employment and training preference bid statement shall be grounds for termination of the contract or for the assessment of penalties or other remedies.

(c) If specified elsewhere in this solicitation, the IHA may restrict the solicitation to qualified Indian-owned enterprises and Indian organizations. If two or more (or a greater number as specified elsewhere in the solicitation) qualified Indian-owned enterprises or organizations submit responsive bids, award shall be made to the qualified enterprise or organization with the lowest responsive bid. If fewer than the minimum required number of qualified Indian-owned enterprises or organizations submit responsive bids, the IHA shall reject all bids and readvertise the solicitation in accordance with paragraph (d) below.

(d) If the IHA prefers not to restrict the solicitation as described in paragraph (c) above, or if after having restricted a solicitation an insufficient number of qualified Indian enterprises or organizations submit bids, the IHA may advertise for bids from non-Indian as well as Indian-owned enterprises and Indian organizations. Award shall be made to the qualified Indian enterprise or organization with the lowest responsive bid if that bid is -

(1) Within the maximum HUD-approved budget amount established for the specific project or activity for which bids are being solicited; and

(2) No more than the percentage specified in 24 CFR 905.175(c) higher than the total bid price of the lowest responsive bid from any qualified bidder. If no responsive bid by a qualified Indian-owned economic enterprise or organization is within the stated range of the total bid price of the lowest responsive bid from any qualified enterprise, award shall be made to the bidder with the lowest bid.

(e) Bidders seeking to qualify for preference in contracting or subcontracting shall submit proof of Indian ownership with their bids. Proof of Indian ownership shall include but not be limited to:

(1) Certification by a tribe or other evidence that the bidder is an Indian. The IHA shall accept the certification of a tribe that an individual is a member.

(2) Evidence such as stock ownership, structure, management, control, financing and salary or profit sharing arrangements of the enterprise.

(f) (1) All bidders must submit with their bids a statement describing how they will provide Indian preference in the award of subcontracts. The specific requirements of that statement and the factors to be used by the IHA in determining the statement's adequacy are included as an attachment to this solicitation. Any bid that fails to include the required statement shall be rejected as nonresponsive. The IHA may require that comparable statements be provided by subcontractors to the successful Contractor, and may require the Contractor to reject any bid or proposal by a subcontractor that fails to include the statement.

(2) Bidders and prospective subcontractors shall submit a certification (supported by credible evidence) to the IHA in any instance where the bidder or subcontractor believes it is infeasible to provide Indian preference in subcontracting. The acceptance or rejection by the IHA of the certification shall be final. Rejection shall disqualify the bid from further consideration.

(g) All bidders must submit with their bids a statement detailing their employment and training opportunities and their plans to provide preference to Indians in implementing the contract; and the number or percentage of Indians anticipated to be employed and trained. Comparable statements from all proposed subcontractors must be submitted. The criteria to be used by the IHA in determining the statement(s)'s adequacy are included as an attachment to this solicitation. Any bid that fails to include the required statement(s), or that includes a statement that does not meet minimum standards required by the IHA shall be rejected as nonresponsive.

(h) Core crew employees. A core crew employee is an individual who is a bona fide employee of the contractor at the time the bid is submitted; or an individual who was not employed by the bidder at the time the bid was submitted, but who is regularly employed by the bidder in a supervisory or other key skilled position when work is available. Bidders shall submit with their bids a list of all core crew employees.

(i) Preference in contracting, subcontracting, employment, and training shall apply not only on-site, on the reservation, or within the IHA's jurisdiction, but also to contracts with firms that operate outside these areas (e.g., employment in modular or manufactured housing construction facilities).

(j) Bidders should contact the IHA to determine if any additional local preference requirements are applicable to this solicitation.

(k) The IHA [] does [] does not [Contracting Officer check applicable box] maintain lists of Indian-owned economic enterprises and Indian organizations by specialty (e.g., plumbing, electrical, foundations), which are available to bidders to assist them in meeting their responsibility to provide preference in connection with the administration of contracts and subcontracts.

**U.S. Department of Housing
and Urban Development**
Office of Public and Indian Housing

**Representations, Certifications,
and Other Statements of Bidders**
Public and Indian Housing Programs

Representations, Certifications, and Other Statements of Bidders

Public and Indian Housing Programs

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1. Certificate of Independent Price Determination

(a) The bidder certifies that--

(1) The prices in this bid have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other bidder or competitor relating to (i) those prices, (ii) the intention to submit a bid, or (iii) the methods or factors used to calculate the prices offered;

(2) The prices in this bid have not been and will not be knowingly disclosed by the bidder, directly or indirectly, to any other bidder or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a competitive proposal solicitation) unless otherwise required by law; and

(3) No attempt has been made or will be made by the bidder to induce any other concern to submit or not to submit a bid for the purpose of restricting competition.

(b) Each signature on the bid is considered to be a certification by the signatory that the signatory--

(1) Is the person in the bidder's organization responsible for determining the prices being offered in this bid or proposal, and that the signatory has not participated and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) above; or

(2) (i) Has been authorized, in writing, to act as agent for the following principals in certifying that those principals have not participated, and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) above.

_____ [insert full name of person(s) in the bidder's organization responsible for determining the prices offered in this bid or proposal, and the title of his or her position in the bidder's organization];

(ii) As an authorized agent, does certify that the principals named in subdivision (b)(2)(i) above have not participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above; and

(iii) As an agent, has not personally participated, and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) above.

(c) If the bidder deletes or modifies subparagraph (a)2 above, the bidder must furnish with its bid a signed statement setting forth in detail the circumstances of the disclosure.

[] [Contracting Officer check if following paragraph is applicable]

(d) Non-collusive affidavit. (applicable to contracts for construction and equipment exceeding \$50,000)

(1) Each bidder shall execute, in the form provided by the PHA/IHA, an affidavit to the effect that he/she has not colluded with any other person, firm or corporation in regard to any bid submitted in response to this solicitation. If the successful bidder did not submit the affidavit with his/her bid, he/she must submit it within three (3) working days of bid opening. Failure to submit the affidavit by that date may render the bid nonresponsive. No contract award will be made without a properly executed affidavit.

(2) A fully executed "Non-collusive Affidavit" [] is, [] is not included with the bid.

2. Contingent Fee Representation and Agreement

(a) Definitions. As used in this provision:

"Bona fide employee" means a person, employed by a bidder and subject to the bidder's supervision and control as to time, place, and manner of performance, who neither exerts, nor proposes to exert improper influence to solicit or obtain contracts nor holds out as being able to obtain any contract(s) through improper influence.

"Improper influence" means any influence that induces or tends to induce a PHA/IHA employee or officer to give consideration or to act regarding a PHA/IHA contract on any basis other than the merits of the matter.

(b) The bidder represents and certifies as part of its bid that, except for full-time bona fide employees working solely for the bidder, the bidder:

(1) [] has, [] has not employed or retained any person or company to solicit or obtain this contract; and

(2) [] has, [] has not paid or agreed to pay to any person or company employed or retained to solicit or obtain this contract any commission, percentage, brokerage, or other fee contingent upon or resulting from the award of this contract.

(c) If the answer to either (a)(1) or (a)(2) above is affirmative, the bidder shall make an immediate and full written disclosure to the PHA/IHA Contracting Officer.

(d) Any misrepresentation by the bidder shall give the PHA/IHA the right to (1) terminate the contract; (2) at its discretion, deduct from contract payments the amount of any commission, percentage, brokerage, or other contingent fee; or (3) take other remedy pursuant to the contract.

3. Certification and Disclosure Regarding Payments to Influence Certain Federal Transactions (applicable to contracts exceeding \$100,000)

(a) The definitions and prohibitions contained in Section 1352 of title 31, United States Code, are hereby incorporated by reference in paragraph (b) of this certification.

(b) The bidder, by signing its bid, hereby certifies to the best of his or her knowledge and belief as of December 23, 1989 that:

(1) No Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with the awarding of a contract resulting from this solicitation;

(2) If any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with this solicitation, the bidder shall complete and submit, with its bid, OMB standard form LLL, "Disclosure of Lobbying Activities;" and

(3) He or she will include the language of this certification in all subcontracts at any tier and require that all recipients of subcontract awards in excess of \$100,000 shall certify and disclose accordingly.

(c) Submission of this certification and disclosure is a prerequisite for making or entering into this contract imposed by section 1352, title 31, United States Code. Any person who makes an expenditure prohibited under this provision or who fails to file or amend the disclosure form to be filed or amended by this provision, shall be subject to a civil penalty of not less than \$10,000, and not more than \$100,000, for each such failure.

(d) Indian tribes (except those chartered by States) and Indian organizations as defined in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450B) are exempt from the requirements of this provision.

4. Organizational Conflicts of Interest Certification

The bidder certifies that to the best of its knowledge and belief and except as otherwise disclosed, he or she does not have any organizational conflict of interest which is defined as a situation in which the nature of work to be performed under this proposed contract and the bidder's organizational, financial, contractual, or other interests may, without some restriction on future activities:

- (a) Result in an unfair competitive advantage to the bidder; or,
- (b) Impair the bidder's objectivity in performing the contract work.

[] In the absence of any actual or apparent conflict, I hereby certify that to the best of my knowledge and belief, no actual or apparent conflict of interest exists with regard to my possible performance of this procurement.

5. Bidder's Certification of Eligibility

(a) By the submission of this bid, the bidder certifies that to the best of its knowledge and belief, neither it, nor any person or firm which has an interest in the bidder's firm, nor any of the bidder's subcontractors, is ineligible to:

(1) Be awarded contracts by any agency of the United States Government, HUD, or the State in which this contract is to be performed; or,

(2) Participate in HUD programs pursuant to 24 CFR Part 24.

(b) The certification in paragraph (a) above is a material representation of fact upon which reliance was placed when making award. If it is later determined that the bidder knowingly rendered an erroneous certification, the contract may be terminated for default, and the bidder may be debarred or suspended from participation in HUD programs and other Federal contract programs.

6. Minimum Bid Acceptance Period

(a) "Acceptance period," as used in this provision, means the number of calendar days available to the PHA/IHA for awarding a contract from the date specified in this solicitation for receipt of bids.

(b) This provision supersedes any language pertaining to the acceptance period that may appear elsewhere in this solicitation.

(c) The PHA/IHA requires a minimum acceptance period of [Contracting Officer insert time period] calendar days.

(d) In the space provided immediately below, bidders may specify a longer acceptance period than the PHA's/IHA's minimum requirement. The bidder allows the following acceptance period: calendar days.

(e) A bid allowing less than the PHA's/IHA's minimum acceptance period will be rejected.

(f) The bidder agrees to execute all that it has undertaken to do, in compliance with its bid, if that bid is accepted in writing within (1) the acceptance period stated in paragraph (c) above or (2) any longer acceptance period stated in paragraph (d) above.

7. Small, Minority, Women-Owned Business Concern Representation

The bidder represents and certifies as part of its bid/ offer that it --

(a) [] is, [] is not a small business concern. "Small business concern," as used in this provision, means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding, and qualified as a small business under the criteria and size standards in 13 CFR 121.

(b) [] is, [] is not a women-owned business enterprise. "Women-owned business enterprise," as used in this provision, means a business that is at least 51 percent owned by a woman or women who are U.S. citizens and who also control and operate the business.

(c) [] is, [] is not a minority business enterprise. "Minority business enterprise," as used in this provision, means a business which is at least 51 percent owned or controlled by one or more minority group members or, in the case of a publicly owned business, at least 51 percent of its voting stock is owned by one or more minority group members, and whose management and daily operations are controlled by one or more such individuals. For the purpose of this definition, minority group members are:

(Check the block applicable to you)

- [] Black Americans
- [] Asian Pacific Americans
- [] Hispanic Americans
- [] Asian Indian Americans
- [] Native Americans
- [] Hasidic Jewish Americans

8. Indian-Owned Economic Enterprise and Indian Organization Representation (applicable only if this solicitation is for a contract to be performed on a project for an Indian Housing Authority)

The bidder represents and certifies that it:

(a) [] is, [] is not an Indian-owned economic enterprise. "Economic enterprise," as used in this provision, means any commercial, industrial, or business activity established or organized for the purpose of profit, which is at least 51 percent Indian owned. "Indian," as used in this provision, means any person who is a member of any tribe, band, group, pueblo, or community which is recognized by the Federal Government as eligible for services from the Bureau of Indian Affairs and any "Native" as defined in the Alaska Native Claims Settlement Act.

(b) [] is, [] is not an Indian organization. "Indian organization," as used in this provision, means the governing body of any Indian tribe or entity established or recognized by such governing body. Indian "tribe" means any Indian tribe, band, group, pueblo, or

community including Native villages and Native groups (including corporations organized by Kenai, Juneau, Sitka, and Kodiak) as defined in the Alaska Native Claims Settlement Act, which is recognized by the Federal Government as eligible for services from the Bureau of Indian Affairs.

9. Certification of Eligibility Under the Davis-Bacon Act (applicable to construction contracts exceeding \$2,000)

(a) By the submission of this bid, the bidder certifies that neither it nor any person or firm who has an interest in the bidder's firm is a person or firm ineligible to be awarded contracts by the United States Government by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(b) No part of the contract resulting from this solicitation shall be subcontracted to any person or firm ineligible to be awarded contracts by the United States Government by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(c) The penalty for making false statements is prescribed in the U. S. Criminal Code, 18 U.S.C. 1001.

10. Certification of Nonsegregated Facilities (applicable to contracts exceeding \$10,000)

(a) The bidder's attention is called to the clause entitled **Equal Employment Opportunity** of the General Conditions of the Contract for Construction.

(b) "Segregated facilities," as used in this provision, means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees, that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, or national origin because of habit, local custom, or otherwise.

(c) By the submission of this bid, the bidder certifies that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The bidder agrees that a breach of this certification is a violation of the Equal Employment Opportunity clause in the contract.

(d) The bidder further agrees that (except where it has obtained identical certifications from proposed subcontractors for specific time periods) prior to entering into subcontracts which exceed \$10,000 and are not exempt from the requirements of the Equal Employment Opportunity clause, it will:

- (1) Obtain identical certifications from the proposed subcontractors;
- (2) Retain the certifications in its files; and
- (3) Forward the following notice to the proposed subcontractors (except if the proposed subcontractors have submitted identical certifications for specific time periods):

Notice to Prospective Subcontractors of Requirement for Certifications of Nonsegregated Facilities

A Certification of Nonsegregated Facilities must be submitted before the award of a subcontract exceeding \$10,000 which is not exempt from the provisions of the Equal Employment Opportunity clause of the prime contract. The certification may be submitted either for each subcontract or for all subcontracts during a period (i.e., quarterly, semiannually, or annually).

Note: The penalty for making false statements in bids is prescribed in 18 U.S.C. 1001.

11. Clean Air and Water Certification (applicable to contracts exceeding \$100,000)

The bidder certifies that:

(a) Any facility to be used in the performance of this contract [] is, [] is not listed on the Environmental Protection Agency List of Violating Facilities:

(b) The bidder will immediately notify the PHA/IHA Contracting Officer, before award, of the receipt of any communication from the Administrator, or a designee, of the Environmental Protection Agency, indicating that any facility that the bidder proposes to use for the performance of the contract is under consideration to be listed on the EPA List of Violating Facilities; and,

(c) The bidder will include a certification substantially the same as this certification, including this paragraph (c), in every nonexempt subcontract.

12. Previous Participation Certificate (applicable to construction and equipment contracts exceeding \$50,000)

(a) The bidder shall complete and submit with his/her bid the Form HUD-2530, "Previous Participation Certificate." If the successful bidder does not submit the certificate with his/her bid, he/she must submit it within three (3) working days of bid opening. Failure to submit the certificate by that date may render the bid nonresponsive. No contract award will be made without a properly executed certificate.

(b) A fully executed "Previous Participation Certificate" [] is, [] is not included with the bid.

13. Bidder's Signature

The bidder hereby certifies that the information contained in these certifications and representations is accurate, complete, and current.

(Signature and Date)

(Typed or Printed Name)

(Title)

(Company Name)

(Company Address)

**AFFIDAVIT DISCLOSING OWNERSHIP, INFLUENCE, COMMISSIONS AND
CONFLICTS OF INTEREST**

(Required by 5 GCA § 5233 as amended by P.L. 36-13 (4/9/2021))

CITY OF _____)
) ss.
 ISLAND OF GUAM)

Preface. As a condition of submitting a Bid/Offer/Proposal or responding to any method of source selection under Guam’s Procurement Law for the purpose of entering into a contract with the government of Guam, this Affidavit requires all Bidders/Offerors/Prospective Contractors to make disclosures of ownership, influence, commissions, gratuities, kickbacks, and conflicts of interest occurring **during the 365 calendar days preceding the publication of this solicitation and until award of a contract**. This includes the duty to disclose **any changes** to the facts disclosed herein throughout the solicitation process; and if the entity submitting this Affidavit is awarded a contract, the duty to disclose **any changes** to the facts disclosed herein **continues throughout the life of the contract, including any extensions or renewals**.

A. I, the undersigned, being first duly sworn, depose and say that I am an authorized representative of the Bidder/Offeror/Prospective Contractor and that (please check and fill out all that apply):

The Bidder/Offeror/Prospective Contractor is an individual with a business license, and all decisions are by, and all profit is for, that same individual, with principal place of business street address being: _____

The Bidder/Offeror/Prospective Contractor is a business or artificial person (as defined in 1 GCA § 715 or 5 GCA §§ 5030(n) or 5233(b)), and is a sole proprietorship owned entirely (100%) by _____, with principal place of business street address being: _____

The Bidder/Offeror/Prospective Contractor is a business or artificial person (as defined in 1 GCA § 715 or 5 GCA §§ 5030(n) or 5233(b)), and is owned by the following multiple individuals. Note: owners of more than 10% are statutorily required to be listed below, but other owners of smaller percentage are encouraged to be listed as well.

Name of Owner	Principal Place of Business Street Address	% of Interest
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

[] One or more of the more-than-10% owners listed above is a business or artificial person. Any more-than-25% owners of such a business or artificial person are listed below per 5 GCA § 5233. Note: any less-than-25% owners of such a business or artificial person is encouraged to also be listed below.

Name of >10% Owner Business or Artificial Person:

--

Names of owners of the >10% Owner Business or Artificial Person (“Second Tier Owner”)	Owner’s Principal Place of Business Street Address	% of Interest

Name of other >10% Owner Business or Artificial Person:

--

Names of owners of the >10% Owner Business or Artificial Person (“Second Tier Owner”)	Owner’s Principal Place of Business Street Address	% of Interest

B. If any Second Tier Owner identified above is an artificial person, the natural or artificial owners of such Second Tier Owner who have held more than 49% of the shares or interest in the Bidder/Offeror/Prospective Contractor (Third Tier Owners) are as follows [if none, please so state]:

Second Tier Owner Name _____

Name of Third Tier Owner	Principal Place of Business Street Address	% of Interest
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

C. If the name of no natural person has been identified as an owner, or a Second or Third Tier Owner of the Bidder/Offeror/Prospective Contractor, please identify the name, position, address, and contact information of the natural person having the authority and responsibility for the Bid/Offer/Proposal/Prospective Contract, and the name of any natural person who has the authority and power to remove and replace the designated responsible person:

Name of Natural Person	Position	Street Address of Principal Place of Business	Phone Number, Email Address, and other Contact Information

D. Further, I say that the persons who have received or are entitled to receive a commission, gratuity, contingent fee or other compensation to solicit, secure, or assist in obtaining business related to the Bid/Offer/Proposal/Prospective Contract for which this Affidavit is submitted are as follows (if none, please so state):

Name	Principal Place of Business Street Address	Amount of Compensation
_____	_____	_____
_____	_____	_____

E. Further, I say that the persons who have directly or indirectly participated in this solicitation and who are also employees of the government of Guam or the government of the United States, if federal funds are to be used in the payment of the contract related to the Bid/Offer/Proposal/Prospective Contract for which this Affidavit is submitted, are as follows (if none, please so state):

Name	Principal Place of Business Street Address
_____	_____
_____	_____

F. Regardless of any ownership interest, the following individuals have the power to control the performance of the contract or to control the Bidder/Offeror/Prospective Contractor, directly or indirectly:

Name	Principal Place of Business Street Address
_____	_____
_____	_____

///

///

- G. Until award of the contract, and throughout the term of any contract awarded to the Bidder/Offeror/Prospective Contractor represented herein, I agree to promptly make any disclosures not made previously and update changes in ownership, identities of owners and other required information, interests, compensation or conflicts of the persons required to be disclosed. I understand that failure to comply with this requirement shall constitute a material breach of contract.
- H. I hereby declare under penalty of perjury under the laws of Guam that the foregoing is true and correct.

Executed on: _____
(date)

Signature of one of the following:
Bidder/Offeror/Prospective Contractor, if a licensed individual
Owner of sole proprietorship Bidder/Offeror/Prospective
Contractor
Partner, if the Bidder/Offeror/Prospective Contractor is a
partnership
Officer, if the Bidder/Offeror/Prospective Contractor is a
corporation

Subscribed and sworn to before me

This ____ day of _____, 20 ____.

NOTARY PUBLIC

My commission expires: _____

Requirements for Compliance with Requirements of Section 3 of the Housing and Urban Development Act of 1968 (12 U.S.C. 1701u) (Section 3) Provisions of 24CFR 75

Overview of Section 3 Requirements

Section 3 is a provision of the Housing and Urban Development Act of 1968 (12 U.S.C. 1701u) that is regulated by the provisions of 24 CFR 75. Section 3 regulations ensure that employment and other economic opportunities generated by certain HUD financial assistance shall, to the greatest extent feasible, and consistent with existing Federal, State and local laws and regulations, be directed to low- and very low-income persons, particularly those who are recipients of government assistance for housing, and to business concerns which provide economic opportunities to low- and very low-income persons.

General Policy Statement:

It is the declared policy of GHURA that Equal Employment Opportunities shall be provided for every employee and applicant for employment regardless of race, color, religion, sex, national origin, handicap, or economic status; and, that through the award of contracts to contractors, vendors, and suppliers, that employment and business opportunities be created for residents of GHURA properties and other qualified low- and very low-income persons residing on the island of Guam. This policy does not end with the mere prohibition of discriminatory practices by programs receiving HUD financial assistance or contractors, subcontractors, and vendors contracting with GHURA. GHURA recognizes its obligation as well as the obligation of potential contractors, subcontractors, and vendors, to develop practical steps to achieve the goal of providing meaningful, full-time permanent employment opportunities, as well as business opportunities to GHURA Residents and other Section 3 eligible persons.

Such obligation shall be demonstrated not merely through inclusion of positive or “best effort” steps, but shall result in a reasonable level of success in the recruitment, employment, and utilization of GHURA Residents and other Section 3 eligible persons and businesses in the workforce and subcontracting of work resulting out of the expenditure of HUD funding. GHURA’s Board of Commission, through official resolution, shall examine and consider a contractor/vendor’s success in providing employment and business opportunities to Authority Residents prior to acting on any proposed contract award.

Eligibility:

Individuals and businesses that meet Section 3 criteria may seek Section 3 preference from GHURA or its contractors/subcontractors for training, employment, or contracting opportunities generated by [public housing financial assistance or housing and community development financial assistance]. To qualify as a Section 3 worker, Targeted Section 3 worker or a Section 3 business concern, each must self-certify that they meet the applicable criteria.

Businesses who *misrepresent* themselves as Section 3 business concerns and *report false* information to GHURA may have their contracts terminated as default and be barred from ongoing and future considerations for contracting opportunities.

Applicability:

For public housing financial assistance, all funding is covered, regardless of the amount of expenditure or size of a contract. This plan applies to development assistance, operating funds, capital funds, and all mixed-finance development. For housing and community development financial assistance, this plan applies to housing rehabilitation, housing construction, and other public construction projects that exceed \$200,000 or more of housing and community development financial assistance from one or more HUD programs. Applicability is determined at the project level.

For projects funded with Lead and Hazard Control and Healthy Homes Programs, this plan applies to projects that exceed \$100,000.

This plan also applies to projects that include multiple funding sources. Multiple funding source projects include projects that include public housing financial assistance, housing and community development financial assistance for single or multiple recipients, and the Lead Hazard Control and Healthy Homes Program.

Section 3 requirements do not apply to: 1) Material Supply Contracts - § 75.3(b), 2) Indian and Tribal Preferences - § 75.3(c), and 3) Other HUD assistance and other Federal assistance not subject to Section 3 §75.3 (d). However, for financial assistance that is not subject to Section 3, recipients are encouraged to consider ways to support the purpose of Section 3.

Purpose of this Policy and Compliance Plan:

The purposes of this Policy are to create sustained employment and other opportunities for Section 3 Beneficiaries and to assist Contractors in understanding their Section 3 obligations so that they can be successful in meeting the responsibilities of the Section 3 requirements. These purposes are accomplished through the guidance provided by GHURA and assistance provided by GHURA’s Section 3 coordinator. This policy shall remain in effect for so long as it remains consistent with federal regulations or amended by GHURA’s Board of Commissioners.

Numerical Goals for Section 3 Compliance:

Recipients and Contractors may demonstrate compliance with the “greatest extent feasible” requirement of Section 3 by meeting the numerical goals set forth in this Section 3 Program for providing training, employment, and contracting opportunities to Section 3 Residents and Section Business Concerns. Efforts to employ Section 3 Residents to the greatest extent feasible should be made at all job levels.

GHURA, in its own operations, shall endeavor to achieve the goals of Section 3 and shall provide equal responsibility to its contractors, vendors, and suppliers to implement progressive efforts to also attain compliance. In doing so, GHURA shall evaluate contractors’ compliance towards achieving the goals of Section 3 and ensure a system of leveling sanctions against contractor, vendor, or supplier for non-compliance and endeavor to take appropriate steps to ensure any such concern is not permitted to participate in future GHURA procurement activities.

Section 3 Final Rule Benchmark Notice:

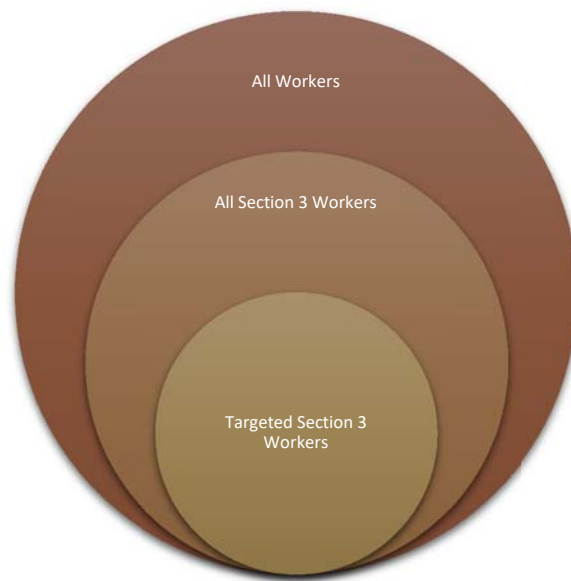
- 25% of all labor hours must be performed by a Section 3 worker.
- 5% of all labor hours must be performed by Targeted Section 3 workers

The numerical goals established above represent minimum numerical targets and all prospective contractors shall be advised and encouraged to seek Section 3 participation to the greatest extent feasible. Any contractor that meets the minimum numerical goals set forth above will be considered to have complied with the Section 3 requirements. Any contractor that does not meet the numerical goals set forth above has the burden of demonstrating why it was not feasible to meet the numerical goals. In the event no competing contractors were successful in meeting the minimum goals set forth above, GHURA shall consider documentation provided by the contractor evidencing impediments encountered despite actions taken to comply with the Section 3 Requirements. Such evidence shall be subject to the satisfaction of GHURA. Any contractor found to be in non-compliance with Section 3 shall be considered ineligible for award.

All contractors submitting bids/proposals to the GHURA shall be required to complete certifications, as appropriate, as acknowledgment of the Section 3 contracting and employment provisions as required by this section. Such certifications shall be supported with adequate evidence to support representations made. The certifications required to be submitted with the bid/proposal consist of the following:

- Certification for business concerns seeking Section 3 preference.
- Contractor certification of efforts to fully comply with employment and training provisions of Section 3.

Prior to the award of any contract the contractor shall enter into negotiations with GHURA for the purpose of incorporating into the contract a provision for a specific number of Public Housing residents or other Section 3 residents to be trained or employed on the contract. Such resulting provision shall obligate the contractor toward achieving not less than the numerical goals listed above and shall be based on a detailed workforce analysis to be compiled by the contractor and submitted to GHURA prior to award of contract.



Section 3 Worker and Targeted Section 3 Worker:

A Section 3 worker seeking certification shall submit self-certification documentation to the recipient contractor or subcontractor, that the person is a Section 3 worker or Targeted Section 3 worker as defined in 24 CFR Part 75. For the purposes of Section 3 worker eligibility, GHURA will use individual income rather than family/household income to determine eligibility.

Individual Income Limits		
FY2021 Income Limit Area	Income Limit Category	FY 2021 Income Limits
GUAM	Extremely Low Income Limits 30%	\$14,350
	Very Low Income Limits 50%	\$23,900
	Low Income Limits 80%	\$38,200

Persons seeking the Section 3 worker preference shall demonstrate that it meets one or more of the following criteria currently or when hired within the past five years, as documented:

- 1) A low or very low-income resident (the worker’s income for the previous or annualized calendar year is below the income limit established by HUD); or
- 2) Employed by a Section 3 business concern; or
- 3) A YouthBuild participant.

Persons seeking the Targeted Section 3 worker preference shall demonstrate that it meets one or more of the following criteria:

(For public housing financial assistance)

- 1) Employed by a Section 3 business concern or
- 2) Currently meets or when hired met at least one of the following categories as documented within the past five years:
 - a) A resident of public housing; or
 - b) A resident of other public housing projects or Section 8-assisted housing; or

c) A YouthBuild participant.

(For housing and community development assistance)

1) Employed by a Section 3 business concern or

2) Currently meets or when hired met at least one of the following categories as documented within the past five years: a) Living within the service area or the neighborhood of the project, as defined in 24 CFR Part 75.5; or b) A YouthBuild participant.

Section 3 workers and Targeted Section 3 workers who are seeking preference in training and employment must submit the Section 3 Worker and Targeted Section 3 Worker Certification Form from the GHURA office.

Example of the Section 3 Worker and Targeted Section Worker form is as follows:

Exhibit 1

Section 3 Worker and Targeted Section 3 Worker Self-Certification Form

The purpose of HUD's Section 3 program is to provide employment, training and contracting opportunities to low-income individuals, particularly those who are recipients of government assistance for housing or other public assistance programs. Your response is voluntary, confidential, and has no effect on your employment.

Eligibility for Section 3 Worker or Targeted Section 3 Worker Status:
A Section 3 worker seeking certification shall self-certify and submit this form to the recipient contractor or subcontractor, that the person is a Section 3 worker or Targeted Section 3 Worker as defined in 24 CFR Part 75.

Instructions: Enter/select the appropriate information to confirm your Section 3 worker or Targeted Section 3 Worker status.

Employee Name: _____

1. Are you a resident of public housing or a Housing Choice Voucher Holder (Section 8)? Yes No

2. Are you a resident of GUAM? Yes No

In the field below, select the amount of individual income you believe you earn on an annual basis.

Less than \$10,000 \$10,001 - \$20,000 \$20,001 - \$30,000
 \$30,001 - \$40,001 \$40,001 - \$50,000 \$50,001 - \$60,000

Select from ONE of the following two options below:

I qualify as a:

Section 3 Worker (as defined on page 3 of Section 3 Worker Certification Form)

Targeted Section 3 Worker (as defined on page 3 of Section 3 Worker Certification Form)

GHURA SECTION 3 FORM-01A
10/11

Employee Affirmation

I affirm that the above statements on this form are true, complete, and correct to the best of my knowledge and belief. I hereby certify, under penalty of law, that the following information is correct to the best of my knowledge.

Employee Address: _____

Print Name: _____ **Date Hired:** _____

Signature: _____ **Date:** _____

FOR ADMINISTRATIVE USE ONLY

Is the employee a Section 3 worker based upon their self-certification? Yes No

Is the employee a Targeted Section 3 worker based upon their self-certification? Yes No

Was this an applicant who was hired as a result of the Section 3 project? Yes No

If Yes, what is the name of the company? _____

What was the date of hire? _____

EMPLOYERS MUST RETAIN THIS FORM IN THEIR SECTION 3 COMPLIANCE FILE FOR FIVE YEARS.

GHURA SECTION 3 FORM-01A
10/11

Section 3 Program Participant Certification Procedure:

GHURA will certify Section 3 program participants who reside in GUAM or near the project site and who are seeking preference in training and employment by completing and attaching adequate proof of Section 3 eligibility as required (see Exhibit 1- Section 3 Participant Eligibility for Preference Form).

1. All persons living in GUAM or within the required radius of the project site who meet the Section 3 eligibility guidelines.
2. Once this assessment is complete, the Section 3 Coordinator will determine if the individual needs the eligibility requirements and is job ready.
3. If the individual is deemed eligible for Section 3 participation and deemed not ready for employment, a referral will be made to other agencies that are better equipped to address the individual's needs, ie., substance abuse providers, etc.
4. The Section 3 readiness component is a part of GHURA's commitment to provide economic opportunities and training to residents/eligible participants to become gainfully employed.

Section 3 Business Concern Certification:

Businesses that believe they meet the Section 3 Business requirements can may self-register in the HUD Business registry, here: <http://www.hud.gov/Sec3Biz>. Businesses may seek Section 3 Business Concern preference by

demonstrating that it meets one or more of the following criteria:

- 1) At least 51 percent of the business is owned and controlled by low- or very low-income persons; or
- 2) At least 51 percent of the business is owned and controlled by current public housing residents or residents who currently live in Section 8-assisted housing; or
- 3) Over 75 percent of the labor hours performed for the business over the prior three-month period are performed by Section 3 workers.

Businesses that seek Section 3 preference shall certify, or demonstrate to GHURA contractors or subcontractors, that they meet the definitions provided in the above. Businesses may demonstrate eligibility by submitting the Section 3 Business Concern Certification Form, located at the GHURA office.

Section 3 Business Concern Certification Forms must be submitted at the time of bid/proposal. If GHURA previously approved the business concern to be Section 3 certified, then the certification can be submitted along with the bid, as long as the form is submitted within the prescribed expiration date. The Section 3 Business Concern Certification Form will expire after **12 months**. Establishing a **12 month certification** of eligibility period allows GHURA the ability to assess contractor performance to ensure the business is striving to meet the required goals.

Note: While registering as a Section 3 Business Concern may give a business certain preferences, such registration is not a guarantee of such preferences that the business will be awarded any contractors or subcontracts by GHURA or its contractors/vendors.

Example of a Certification for Business Concerns Seeking Section 3 Preference form is located below:

Exhibit 2

Certification for Business Concerns Seeking Section 3 Preference in Contracting and Demonstration of Capability

Business Information	
Name of Business:	
Address of Business:	
Name of Business Owner:	
Phone Number of Business Owner:	
Email Address of Business Owner:	

Preferred Contact Information	
Same as above:	<input type="checkbox"/>
Name of Preferred Contact:	
Phone Number of Preferred Contact:	

Type of Business (select from the following options):

Corporation
 Partnership
 Sole Proprietorship
 Joint Venture

Select from ONE of the following three options below that applies:

At least 51 percent of the business is owned and controlled by low- or very low-income persons (Refer to income guidelines on page 3)

At least 51 percent of the business is owned and controlled by current public housing residents or residents who currently live in Section 8-assisted housing.

Over 75 percent of the labor hours performed for the business over the prior three-month period are performed by Section 3 workers (Refer to definition on page 3).

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Business Concern Affirmation

I affirm that the above statements on this form are true, complete, and correct to the best of my knowledge and belief. I understand that businesses who misrepresent themselves as Section 3 business concerns and report false information to [insert name of recipient/grantee] may have their contracts terminated as default and be barred from ongoing and future considerations for contracting opportunities. I hereby certify, under penalty of law, that the following information is correct to the best of my knowledge.

Print Name: _____

Signature: _____ Date: _____

*Certification expires within six months of the date of signature. Information regarding Section 3 Business Concerns can be found at 24 CFR 75.5

FOR ADMINISTRATIVE USE ONLY

Is the business a Section 3 business concern based upon their certification?

Yes
 No

EMPLOYERS MUST RETAIN THIS FORM IN THEIR SECTION 3 COMPLIANCE FILE FOR FIVE YEARS.

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Section 3 Recruitment and New hires:

Contractors are expected to make best efforts to achieve the benchmarks and Section 3 Worker priorities outlined in this Policy and at 24 CFR Part 75. This section provides guidance for the recruitment of New Hires who are Section 3 Workers and Targeted Section 3 Workers to assist Contractors in meeting their benchmarks and obligations.

A. Recruitment Efforts:

1. GHURA maintains a database of employment-ready Section 3 Workers/Targeted Section 3 Workers who meet certain minimum qualifications for various categories of employment. Upon receipt of a completed Section 3 Job Order Form from Contractor/Subcontractor, GHURA will provide referrals of qualified candidates from the database. Contractors are expected to provide GHURA with the Section 3 Job Order Form in sufficient time to identify prospective candidates, prepare and refer them for interviews and secure employment in advance project commencement.
2. Contractors/Subcontractors are also to advertise Job Announcements within the project site area. Please see Exhibit 3.
3. Upon receipt of a Section 3 Job Order Form, GHURA will refer qualified candidates for interview for each available position. Contractors are expected to give each referred candidate full consideration for available positions.
4. Independent of GHURA's efforts and referrals, Contractors shall engage in independent employment recruitment efforts and follow the Section 3 Worker and Targeted Section 3 Worker order in of hiring priority as identified in this policy.
5. Contractors shall submit to GHURA their interview notes, including reasons for denial of employment or training opportunity in the future, as applicable.

B. Section 3 Worker and Targeted Section 3 Worker New Hires:

1. All Section 3 Worker and Targeted Section 3 Worker New Hires shall be employees of the Contractor and shall have all the protections afforded to employees under state, federal and local laws. Contractors are expected to impose the same hiring requirements and personnel rules and policies upon Section 3 Worker New Hires as are imposed upon their other employment candidates and employees. GHURA expects and requires Contractors to abide by equal pay for equal work principles.
2. Contractors are required to report to GHURA within five (5) business days of hiring Section 3 Workers and Targeted Section 3 Workers and shall provide to GHURA a completed Section 3 Worker and Targeted Section 3 Worker form.

C. Apprenticeship Programs:

1. Contractors who employ apprentices are required to utilize apprenticeship programs approved by the Federal Department of Labor (DOL)
2. Contractors who employ apprentices on construction projects that are subject to the Davis-Bacon Wage Act are required to adhere to all legal requirements for wage rates and ratios of apprentices to journeymen set forth.

D. Limitations:

Contractors retain the sole discretion and control over any hiring and personnel decisions. GHURA cannot and will not exercise any control over any of the Contractor's employees, including New Hires, regardless of whether they were referred by GHURA or are Section 3 Workers/Targeted Section 3 Workers recruited through other means.

Safe Harbor Compliance: 25% of total hours or 5% of hours contracted to targeted workers:

It is the responsibility of contractors to implement efforts to achieve Section 3 compliance. Any contractor that does not meet the Section 3 benchmarks must demonstrate why meeting the benchmarks were not feasible. All contractors submitting bids or proposals to GHURA are required to certify that they will comply with the requirements of Section 3.

Good Faith and Qualitative Efforts:

Qualitative efforts to satisfy its benchmark goals, which may include, but are not limited to the following:

1. Engaging in outreach efforts to generate job applicants who are Targeted Section 3 Workers, including notifying GHURA's Section 3 Coordinator, posting job openings at the job site, HUD Opportunity Portal, social media pages, contacting Resident Advisory Councils, and other platforms;
2. Contacting agencies administering Department of Labor YouthBuild Programs, and requesting their assistance in recruiting Department of Labor YouthBuild Program participants for training opportunities and employment positions;
3. Consulting with state and local agencies administering training programs, such as those funded through Workforce Investment Act, unemployment compensation programs, community organizations and other officials or organizations to assist with training and recruiting Section 3 Workers and Targeted Section 3 Workers;
4. Holding job fairs;
5. Providing or connecting Section 3 Workers and Targeted Section 3 Workers with assistance in seeking employment, including: drafting resumes, preparing for interviews, and finding job opportunities connecting residents to job placement services;
6. Providing or referring Section 3 Workers to services supporting work readiness and retention (e.g., work readiness activities, interview clothing, test fees, transportation, child care);
7. Assisting Section 3 Workers to obtain financial literacy training and/or coaching;
8. Engaging in outreach efforts to identify and secure bids from Section 3 Business Concerns.
9. Providing technical assistance to help Section 3 Business Concerns understand and bid on contracts;
10. Dividing contracts into smaller jobs to facilitate participation by Section 3 Business Concerns;
11. Providing bonding assistance, guaranties, or other efforts to support viable bids from Section 3 Business Concerns;
12. Promoting use of Section 3 Business Registries designed to create opportunities for Section 3, disadvantaged and small businesses

Documented Efforts:

Contractors shall document efforts taken to recruit and interview Section 3 Workers/Targeted Section 3 Workers for hire and shall, upon reasonable request, provide GHURA with documentation that demonstrates such efforts, including interview notes, which shall include reasons for denial of employment or other actions as applicable.

Lack of Compliance:

A Contractor's failure to satisfy the requirements of this section may result in GHURA's determination that the Contractor has failed to demonstrate good faith and qualitative efforts to comply with the requirements of Section 3 and this Policy, and may subject Contractor to the penalties for default.

Reporting Requirements:

For Section 3 covered contracts, contractors must submit the Section 3 Performance and Summary Report to GHURA's Section 3 Coordinator on a monthly basis, and the annual reporting requirement set forth in that form's instructions.

1) Monthly Reporting -

- i) Contractors are required to submit monthly activity reports to GHURA's Section 3 Coordinator alicej@ghura.org by the 30th day of each month

2) Annual Reporting -

- i) Once a project is completed, contractors must submit a final Section 3 cumulative report for the program year.
- ii) Upon the completion of a project, GHURA's Section 3 Coordinator will conduct a final review of the project's overall performance and compliance.
- iii) GHURA's Section 3 Coordinator will submit the Section 3 data into required reporting system to HUD at the respective reporting period.

Internal Section 3 Complaint Procedure:

In an effort to resolve complaints generated due to non-compliance through an internal process, GHURA encourages submittal of such complaints to its Section 3 Coordinator as follows:

- 1) Complaints of non-compliance should be filed in writing and must contain the name of the complainant and brief description of the alleged violation of 24 CFR Part 75.
- 2) Complaints must be filed within 14 calendar days after the complainant becomes aware of the alleged violation.
- 3) An investigation will be conducted if complaint is found to be valid. GHURA will conduct an informal, but thorough investigation affording all interested parties, if any, an opportunity to submit testimony and/or evidence pertinent to the complaint.
- 4) GHURA will provide written documentation detailing the findings of the investigation. GHURA will review the findings for accuracy and completeness before it is released to complainants. The findings will be made available no later than 30 days after the filing of complaint. If complainants wish to have their concerns considered outside of GHURA a complaint may be filed with:

The HUD program office responsible for the public housing financial assistance or the Section 3 project, or to the local HUD field office. These offices can be found through the HUD website, www.hud.gov/.

Appendices A: Definitions

The terms **HUD, Public housing, and Public Housing Agency (PHA)** are defined in 24 CFR part 5.

The following definitions also apply to 24 CFR Part 75 HUD's Economic Opportunities for Low-and Very Low-Income Persons:

1937 Act means the United States Housing Act of 1937, 42 U.S.C. 1437 et seq. activities related to Public Housing

Contractor means any entity entering into a contract with:

- (1) A recipient to perform work in connection with the expenditure of public housing financial assistance or for work in connection with a Section 3 project; or
- (2) A sub recipient for work in connection with a Section 3 project.

Labor hours means the number of paid hours worked by persons on a Section 3 project or by persons employed with funds that include public housing financial assistance.

Low-income person means a person as defined in Section 3(b)(2) of the 1937 Act, at or below 80% AMI. Note that Section 3 worker eligibility uses individual income rather than family/household income.

Material supply contracts means contracts for the purchase of products and materials, including, but not limited to, lumber, drywall, wiring, concrete, pipes, toilets, sinks, carpets, and office supplies.

Professional services means non-construction services that require an advanced degree or professional licensing, including, but not limited to, contracts for legal services, financial consulting, accounting services, environmental assessment, architectural services, and civil engineering services.

Public housing financial assistance means assistance as defined in 24 CFR Part 75.3(a)(1).

Public housing project is defined in 24 CFR 905.108.

Recipient means any entity that receives directly from HUD public housing financial assistance or housing and community development assistance that funds Section 3 projects, including, but not limited to, any State, local government, instrumentality, PHA, or other public agency, public or private nonprofit organization.

Section 3 means Section 3 of the Housing and Urban Development Act of 1968, as amended (12 U.S.C. 1701u).
Section 3 business concern means:

- (1) A business concern meeting at least one of the following criteria, documented within the last six-month period:
 - (i) It is at least 51 percent owned and controlled by low- or very low-income persons;
 - (ii) Over 75 percent of the labor hours performed for the business over the prior three-month period are performed by Section 3 workers; or
 - (iii) It is a business at least 51 percent owned and controlled by current public housing residents or residents who currently live in Section 8-assisted housing.
- (2) The status of a Section 3 business concern shall not be negatively affected by a prior arrest or conviction of its owner(s) or employees.
- (3) Nothing in this part shall be construed to require the contracting or subcontracting of a Section 3 business concern. Section 3 business concerns are not exempt from meeting the specifications of the contract.

Section 8-assisted housing refers to housing receiving project-based rental assistance or tenant-based assistance under Section 8 of the 1937 Act.

Service area or the neighborhood of the project means an area within one mile of the Section 3 project or, if fewer than 5,000 people live within one mile of a Section 3 project, within a circle centered on the Section 3 project that is sufficient to encompass a population of 5,000 people according to the most recent U.S. Census.

Subcontractor means any entity that has a contract with a contractor to undertake a portion of the contractor's obligation to perform work in connection with the expenditure of public housing financial assistance or for a Section 3 project.

Subrecipient has the meaning provided in the applicable program regulations or in 2 CFR 200.93.

Targeted Section 3 worker has the meanings provided in 24 CFR Part 75.11, 75.21, or 75.29, and does not exclude an individual that has a prior arrest or conviction.

Very low-income person means the definition for this term set forth in section 3(b) (2) of the 1937 Act (at or below 50% AMI)

YouthBuild programs refers to YouthBuild programs receiving assistance under the Workforce Innovation and Opportunity Act (29 U.S.C. 3226).

Section 3 Worker and Targeted Section 3 Worker Self-Certification Form

The purpose of HUD's Section 3 program is to provide employment, training and contracting opportunities to low-income individuals, particularly those who are recipients of government assistance for housing or other public assistance programs. **Your response is voluntary, confidential, and has no effect on your employment.**

Eligibility for Section 3 Worker or Targeted Section 3 Worker Status

A Section 3 worker seeking certification shall self-certify and submit this form to the recipient contractor or subcontractor, that the person is a Section 3 worker or Targeted Section 3 Worker as defined in 24 CFR Part 75.

Instructions: Enter/select the appropriate information to confirm your Section 3 worker or Targeted Section 3 Worker status.

Employee Name: _____

1. Are you a resident of public housing or a Housing Choice Voucher Holder (Section 8) Yes No
2. Are you a resident of GUAM)? Yes No

In the field below, select the amount of individual income you believe you earn on an annual basis.

- | | | |
|--|---|---|
| <input type="checkbox"/> Less than \$10,000 | <input type="checkbox"/> \$30,001- \$40,001 | <input type="checkbox"/> More than \$60,000 |
| <input type="checkbox"/> \$10,001 - \$20,000 | <input type="checkbox"/> \$40,001- \$50,000 | |
| <input type="checkbox"/> \$20,001 - \$30,000 | <input type="checkbox"/> \$50,001- \$60,000 | |

Select from ONE of the following two options below:

I qualify as a:

- Section 3 Worker (as defined on page 3 of Section 3 Worker Certification Form)
- Targeted Section 3 Worker (as defined on page 3 of Section 3 Worker Certification Form)

Employee Affirmation

I affirm that the above statements on this form are true, complete, and correct to the best of my knowledge and belief. I hereby certify, under penalty of law, that the following information is correct to the best of my knowledge.

Employee Address: _____

Print Name: _____

Date Hired: _____

Signature: _____

Date: _____

FOR ADMINISTRATIVE USE ONLY

Is the employee a Section 3 worker based upon their self-certification? Yes No

Is the employee a Targeted Section 3 worker based upon their self-certification? Yes No

Was this an applicant who was hired as a result of the Section 3 project? Yes No

If Yes, what is the name of the company? _____

What was the date of hire? _____

EMPLOYERS MUST RETAIN THIS FORM IN THEIR SECTION 3 COMPLIANCE FILE FOR FIVE YEARS.

Certification for Business Concerns Seeking Section 3 Preference in Contracting and Demonstration of Capability

Business Information	
Name of Business:	
Address of Business:	
Name of Business Owner :	
Phone Number of Business Owner:	
Email Address of Business Owner :	

Preferred Contact Information	
Same as above: <input type="checkbox"/>	
Name of Preferred Contact:	
Phone Number of Preferred Contact:	

Type of Business (select from the following options):

- Corporation
 Partnership
 Sole Proprietorship
 Joint Venture

Select from ONE of the following three options below that applies:

- At least 51 percent of the business is owned and controlled by low- or very low-income persons (Refer to income guidelines on page 3)
- At least 51 percent of the business is owned and controlled by current public housing residents or residents who currently live in Section 8-assisted housing.
- Over 75 percent of the labor hours performed for the business over the prior three-month period are performed by Section 3 workers (Refer to definition on page 3).

Business Concern Affirmation

I affirm that the above statements on this form are true, complete, and correct to the best of my knowledge and belief. I understand that businesses who misrepresent themselves as Section 3 business concerns and report false information to GHURA may have their contracts terminated as default and be barred from ongoing and future considerations for contracting opportunities. I hereby certify, under penalty of law, that the following information is correct to the best of my knowledge.

Print Name:

Signature:

Date:

**Certification expires within six months of the date of signature Information regarding Section 3 Business Concerns can be found at [24 CFR 75.5](#)*

FOR ADMINISTRATIVE USE ONLY

Is the business a Section 3 business concern based upon their certification?

Yes No

EMPLOYERS MUST RETAIN THIS FORM IN THEIR SECTION 3 COMPLIANCE FILE FOR FIVE YEARS.

JOB POSTING

We're looking for:

Laborer

Carpenter

Mason

Certified Mechanics

Email your resume and apply at example@mail.com

Inquire at:

(Phone number)

(Address here)

Exhibit 4

Contractor Certification to Efforts to Fully Comply with Employment and Training Provisions of Section 3 Provisions of 24CFR 75

The bidder represents and certifies as part of its bid/offer the following:

Section 3 Business concern and has submitted the required certification with the bid. A Section 3 Business concern means a business concern:

- 1) At least 51 percent of the business is owned and controlled by low- or very low-income persons; or
- 2) At least 51 percent of the business is owned and controlled by current public housing residents or residents who currently live in Section 8-assisted housing; or
- 3) Over 75 percent of the labor hours performed for the business over the prior three-month period are performed by Section 3 workers.

I am not a Section 3 Business concern but who has and will continue to seek compliance with Section 3 by certifying to the following efforts to be undertaken.

Efforts to award subcontractor to Section 3 concerns (*Check all that apply*)

Contacting business assistance agencies, minority contractors associations and community organizations to inform them of the contracting opportunities and requesting their assistance in identifying Section 3 businesses which may solicit bids for a portion of the work.

Advertising contracting opportunities by posting notices, which provide general information about the work to be contracted and where to obtain additional information, in the common areas of the applicable development(s) owned and managed by the Housing Authority.

Providing written notice to all known Section 3 business concerns of contracting opportunities. This notice should be in sufficient time to allow the Section 3 business concerns to respond to bid invitations

Following up with Section 3 business concerns that have expressed interest in the contracting opportunities

Coordinating meetings at which Section 3 business concerns could be informed of specific elements of the work for which subcontract bids are being sought

Conducting workshops on contracting procedures and specific contracting opportunities in a timely manner so that Section 3 business concerns can take advantage of contracting opportunities

Advising Section 3 business concerns as to where they may seek assistance to overcome barriers such as inability to obtain bonding, lines of credit, financing, or insurance, and aiding Section 3 businesses in qualifying for such bonding, financing, insurance, etc.

Where appropriate, by breaking out contract work into economically feasible units to facilitate participation by Section 3 businesses

Entering into a "first source" hiring agreements with organizations representing Section 3 residents

Exhibit 4

- Establishing training programs, which are consistent with the requirements of the Department of Labor, specifically for Section 3 residents in the building trades
- Advertising employment and training positions to dwelling units
- Contacting resident councils and other resident organizations in the affected housing development to request assistance in notifying residents of the training and employment positions to be filled
- Undertaking such continued job training efforts as may be necessary to ensure the continued employment of Section 3 residents previously hired for employment opportunities.

Section 3 Efforts to comply affirmation

I affirm that the above statements on this form are true, complete, and correct to the best of my knowledge and belief. I understand that businesses who misrepresent themselves as Section 3 business concerns and report false information to GHURA may have their contracts terminated as default and be barred from ongoing and future considerations for contracting opportunities. I hereby certify, under penalty of law, that the following information is correct to the best of my knowledge.

Print Name & Title:

Signature:

Date:

Bidder/offeror, if the Bidder/offeror is an Individual Partner, if the Bidder/offeror is a Partnership Officer, if the Bidder/offeror is a Corporation

Print Name & Title:

Signature:

Date:

Bidder/offeror, if the Bidder/offeror is an Individual Partner, if the Bidder/offeror is a Partnership Officer, if the Bidder/offeror is a Corporation

**Certification expires within six months of the date of signature Information regarding Section 3 can be found at [24 CFR 75.5](#)*

FOR ADMINISTRATIVE USE ONLY

Is the business a Section 3 compliance based upon their certification?

Yes No

EMPLOYERS MUST RETAIN THIS FORM IN THEIR SECTION 3 COMPLIANCE FILE FOR FIVE YEARS.

GHURA Section 3 Job Order Form

The following job order shall be completed by vendors to request assistance in recruiting Section 3 Workers when they have new hire needs. The form should be submitted to the Section 3 Compliance Coordinator (ccabral@ghura.org) as soon as the contractor is aware of the hiring need. GHURA will use the form to identify and recruit candidates to fill the position. A separate job order must be completed for each position title.

This job order is not a substitute for recruitment efforts by the contractor/subcontractor. You are encouraged to engage in independent outreach efforts, including posting this job opening at the job site and posting at HUD Opportunity Portal. For hiring priorities, refer to your contract, or inquire with the Section 3 Compliance Administrator.

PART I: CONTRACTOR INFORMATION:

Contractor Name:	Project Description:	GHURA Contract Number
Point of Contact Title :	Telephone:	Email:
Work/Project Start Date	Work/Project End Date:	Notes:

PART II: JOB DETAILS:

Job Title:	Job Start Date:	Job End Date:
Job Location:	Pay Rate:	Required Skills/Experience:
Required Licenses/Certifications:	Work Hours/Days:	

PART III: CONTRACTOR EFFORTS:

Would your business be able to provide training or refer the Section 3 Worker to a local agency administering training programs?	<input type="checkbox"/> Yes <input type="checkbox"/> No
--	--

This form was completed by:

Name :
Date :
Signature:

Contractor Certification to Efforts to Fully Comply with Employment and Training Provisions of Section 3 Provisions of 24CFR 75

The bidder represents and certifies as part of its bid/offer the following:

Section 3 Business concern and has submitted the required certification with the bid. A Section 3 Business concern means a business concern:

- 1) At least 51 percent of the business is owned and controlled by low- or very low-income persons; or
- 2) At least 51 percent of the business is owned and controlled by current public housing residents or residents who currently live in Section 8-assisted housing; or
- 3) Over 75 percent of the labor hours performed for the business over the prior three-month period are performed by Section 3 workers.

I am not a Section 3 Business concern but who has and will continue to seek compliance with Section 3 by certifying to the following efforts to be undertaken.

Efforts to award subcontractor to Section 3 concerns (*Check a minimum of two items*)

Contacting business assistance agencies, minority contractors associations and community organizations to inform them of the contracting opportunities and requesting their assistance in identifying Section 3 businesses which may solicit bids for a portion of the work.

Advertising contracting opportunities by posting notices, which provide general information about the work to be contracted and where to obtain additional information, in the common areas of the applicable development(s) owned and managed by the Housing Authority.

Providing written notice to all known Section 3 business concerns of contracting opportunities. This notice should be in sufficient time to allow the Section 3 business concerns to respond to bid invitations

Following up with Section 3 business concerns that have expressed interest in the contracting opportunities

Coordinating meetings at which Section 3 business concerns could be informed of specific elements of the work for which subcontract bids are being sought

Conducting workshops on contracting procedures and specific contracting opportunities in a timely manner so that Section 3 business concerns can take advantage of contracting opportunities

Advising Section 3 business concerns as to where they may seek assistance to overcome barriers such as inability to obtain bonding, lines of credit, financing, or insurance, and aiding Section 3 businesses in qualifying for such bonding, financing, insurance, etc.

Where appropriate, by breaking out contract work into economically feasible units to facilitate participation by Section 3 businesses

Entering into a "first source" hiring agreements with organizations representing Section 3 residents

- Establishing training programs, which are consistent with the requirements of the Department of Labor, specifically for Section 3 residents in the building trades
- Advertising employment and training positions to dwelling units
- Contacting resident councils and other resident organizations in the affected housing development to request assistance in notifying residents of the training and employment positions to be filled
- Undertaking such continued job training efforts as may be necessary to ensure the continued employment of Section 3 residents previously hired for employment opportunities.

Section 3 Efforts to comply affirmation

I affirm that the above statements on this form are true, complete, and correct to the best of my knowledge and belief. I understand that businesses who misrepresent themselves as Section 3 business concerns and report false information to GHURA may have their contracts terminated as default and be barred from ongoing and future considerations for contracting opportunities. I hereby certify, under penalty of law, that the following information is correct to the best of my knowledge.

Print Name & Title:

Signature:

Date:

Bidder/offeror, if the Bidder/offeror is an Individual Partner, if the Bidder/offeror is a Partnership Officer, if the Bidder/offeror is a Corporation

Print Name & Title:

Signature:

Date:

Bidder/offeror, if the Bidder/offeror is an Individual Partner, if the Bidder/offeror is a Partnership Officer, if the Bidder/offeror is a Corporation

**Certification expires within six months of the date of signature Information regarding Section 3 can be found at [24 CFR 75.5](#)*

FOR ADMINISTRATIVE USE ONLY

Is the business a Section 3 compliance based upon their certification?

- Yes No

EMPLOYERS MUST RETAIN THIS FORM IN THEIR SECTION 3 COMPLIANCE FILE FOR FIVE YEARS.

Certification for Business Concerns Seeking Section 3 Preference in Contracting and Demonstration of Capability

Business Information	
Name of Business:	
Address of Business:	
Name of Business Owner :	
Phone Number of Business Owner:	
Email Address of Business Owner :	

Preferred Contact Information	
Same as above:	<input type="checkbox"/>
Name of Preferred Contact:	
Phone Number of Preferred Contact:	

Type of Business (select from the following options):

- Corporation
 Partnership
 Sole Proprietorship
 Joint Venture

Select from ONE of the following three options below that applies:

- At least 51 percent of the business is owned and controlled by low- or very low-income persons (Refer to income guidelines on page 3)
- At least 51 percent of the business is owned and controlled by current public housing residents or residents who currently live in Section 8-assisted housing.
- Over 75 percent of the labor hours performed for the business over the prior three-month period are performed by Section 3 workers (Refer to definition on page 3).
- N/A if the bidder is not claiming Section 3 preference.

Business Concern Affirmation

I affirm that the above statements on this form are true, complete, and correct to the best of my knowledge and belief. I understand that businesses who misrepresent themselves as Section 3 business concerns and report false information to GHURA may have their contracts terminated as default and be barred from ongoing and future considerations for contracting opportunities. I hereby certify, under penalty of law, that the following information is correct to the best of my knowledge.

Print Name:

Signature:

Date:

**Certification expires within six months of the date of signature Information regarding Section 3 Business Concerns can be found at [24 CFR 75.5](#)*

FOR ADMINISTRATIVE USE ONLY

Is the business a Section 3 business concern based upon their certification?

Yes No

EMPLOYERS MUST RETAIN THIS FORM IN THEIR SECTION 3 COMPLIANCE FILE FOR FIVE YEARS.

The Guam Housing and Urban Renewal Authority Section 3 Income Limits

Eligibility Guidelines

The workers income must be at or below the amount provided below for an individual (household of 1) regardless of actual household size.

Individual Income Limits		
FY20__ Income Limit Area	Income Limits Category	FY20__ Income Limits
GUAM	Extremely Low Income Limits 30%	\$14,350
	Very Low Income Limits 50%	\$23,900
	Low Income Limits 80%	\$38,200

Section 3 Worker Definition:

- A low or very low-income resident (the worker's income for the previous or annualized calendar year is below the income limit established by HUD); or
- Employed by a Section 3 business concern; or
- A Youth Build participant

Targeted Section 3 Worker Definition:

- Employed by a Section 3 business concern or
- Currently meets or when hired met at least one of the following categories as documented within the past five years:
 - A resident of public housing; or
 - A resident of other public housing projects or Section 8-assisted housing; or
 - A YouthBuild participant.

Law to be Observed

1. The Proposer is to be familiar with federal and local laws, codes, ordinances, and regulations which, in any manner, affect those engaged or employed in the work or the material or equipment used in or upon the site, or in any way affect the conduct of the work. No place of misunderstanding or ignorance on the part of the Arbitrator will in any way serve to modify the provision of the contract.

2. Restriction Against Contractors Employing Convicted Sex Offenders from Working at Government of Guam Venues. (§5253 of Title 5 Guam Code Annotated).

(a) No person convicted of a sex offense under the provisions of Chapter 25 of Title 9 Guam Code Annotated, or an offense as defined in Article 2 of Chapter 28, Title 9 GCA in Guam, or an offense in any jurisdiction which includes, at a minimum all of the elements of said offenses, or who is listed on the Sex Offender Registry, and who is employed by a business contracted to perform services for an agency or instrumentality of the Government of Guam other than a public highway;

By submission of this bid or offer, each Vendor and each person signing on behalf of any Vendor certifies, and in the case of a joint bids or offers each party thereto certifies as to its own organization, under penalty of perjury, that to the best of his knowledge and belief will be in compliance:

Print Name:

Print Name:

Signature:

Signature:

Title: _____
Bidder/offeror, if the Bidder/offeror is an Individual
Partner, if the Bidder/offeror is a Partnership
Officer, if the Bidder/offeror is a Corporation

Title: _____
Bidder/offeror, if the Bidder/offeror is an Individual
Partner, if the Bidder/offeror is a Partnership
Officer, if the Bidder/offeror is a Corporation

Company Name: _____

Company Name: _____

Date: _____

Date: _____

Bidder's Qualifications

All questions must be answered and the data given must be clear and comprehensive. This statement must be notarized. If necessary, add separate sheets for items requiring additional explanation. This information may be submitted in a separate sealed envelope marked **CONFIDENTIAL** "Bidder's Qualifications and Financial Statement". In the event your bid is not selected for award, this envelope will be returned to the Contractor unopened.

1. Name of Bidder	2. Date organized
3. Permanent main office address	4. State incorporated
	5. How many years have you been engaged in the contracting business under your present firm name?

6. Listing of current contracts: (Schedule these, showing nature of the work, gross amount of each contract, anticipated dates for completion, name and telephone number of owner's representative).

7. General character of work usually performed by your company.

--

8. Have you ever failed to complete any work awarded to you? If so, where and why?

--

9. Have you ever defaulted on a contract?

--

10. List the three (3) most important structures recently completed by your company, stating approximate cost of each, month and year completed, name and telephone number of owner's representative.

11. List your major equipment available for use on this contract.

12. Experience in construction work similar in importance to this project.

13. Background and experience of the principal members of your firm, including the officers and proposed construction superintendent.

--

14. Credit available for administration of this contract, furnish written evidence.

--

15. Financial report not more than three (3) months old and containing a balance sheet providing at least the following information.

Balance Sheet

ASSETS

CURRENT ASSETS:

- Cash
- Joint Venture Accounts
- Accounts Receivable
- Notes Receivable
- Accrued Interest on Notes
- Deposits
- Material and Prepaid Expense
- Total Current Assets

FIXED ASSETS - NET

OTHER ASSETS

TOTAL ASSETS:

LIABILITIES AND CAPITAL

CURRENT LIABILITIES

- Accounts Payable
- Notes Payable
- Accrued Interest on Notes
- Provision for Income Taxes
- Advances Received from Owners
- Accrued Salaries
- Accrued Payroll Taxes
- Other
- Total Current Liabilities

OTHER LIABILITIES

CAPITAL

- Capital Stock
- Authorized and Outstanding Shares,
Par Value
- Earned Surplus

TOTAL LIABILITIES AND CAPITAL

The undersigned hereby authorizes and requests any person, firm, or corporation to furnish any information requested by the Guam Housing and Urban Renewal Authority in verification of the recitals comprising this Statement of Bidder's Qualifications.

Signature of Bidder	Name of Bidder
Date	Title of Bidder

Sworn to before me this ____ day of _____, 20 ____

Notary Public
My Commission Expires _____

General Conditions for Construction Contracts - Public Housing Programs

U.S. Department of Housing and Urban
Development
Office of Public and Indian Housing
OMB Approval No. 2577-0157 (exp. 11/30/2023)

**Applicability. This form is applicable to any
construction/development contract greater than \$250,000.**

Public reporting burden for this collection of information is estimated to average 1 hour. This includes the time for collecting, reviewing, and reporting the data. The information requested is required to obtain a benefit. This form includes those clauses required by OMB's common rule on grantee procurement, implemented at HUD in 2 CFR 200, and those requirements set forth in Section 3 of the Housing and Urban Development Act of 1968 and its amendment by the Housing and Community Development Act of 1992, implemented by HUD at 24 CFR Part 75. The form is required for construction contracts awarded by Public Housing Agencies (PHAs). The form is used by Housing Authorities in solicitations to provide necessary contract clauses. If the form were not used, PHAs would be unable to enforce their contracts. There are no assurances of confidentiality. HUD may not conduct or sponsor, and an applicant is not required to respond to a collection of information unless it displays a currently valid OMB control number.

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1. Definitions

- (a) "Architect" means the person or other entity engaged by the PHA to perform architectural, engineering, design, and other services related to the work as provided for in the contract. When a PHA uses an engineer to act in this capacity, the terms "architect" and "engineer" shall be synonymous. The Architect shall serve as a technical representative of the Contracting Officer. The Architect's authority is as set forth elsewhere in this contract.
- (b) "Contract" means the contract entered into between the PHA and the Contractor. It includes the forms of Bid, the Bid Bond, the Performance and Payment Bond or Bonds or other assurance of completion, the Certifications, Representations, and Other Statements of Bidders (form HUD-5370), these General Conditions of the Contract for Construction (form HUD-5370), the applicable wage rate determinations from the U.S. Department of Labor, any special conditions included elsewhere in the contract, the specifications, and drawings. It includes all formal changes to any of those documents by addendum, change order, or other modification.
- (c) "Contracting Officer" means the person delegated the authority by the PHA to enter into, administer, and/or terminate this contract and designated as such in writing to the Contractor. The term includes any successor Contracting Officer and any duly authorized representative of the Contracting Officer also designated in writing. The Contracting Officer shall be deemed the authorized agent of the PHA in all dealings with the Contractor.
- (d) "Contractor" means the person or other entity entering into the contract with the PHA to perform all of the work required under the contract.
- (e) "Drawings" means the drawings enumerated in the schedule of drawings contained in the Specifications and as described in the contract clause entitled Specifications and Drawings for Construction herein.
- (f) "HUD" means the United States of America acting through the Department of Housing and Urban Development including the Secretary, or any other person designated to act on its behalf. HUD has agreed, subject to the provisions of an Annual Contributions Terms and Conditions (ACC), to provide financial assistance to the PHA, which includes assistance in financing the work to be performed under this contract. As defined elsewhere in these General Conditions or the contract documents, the determination of HUD may be required to authorize changes in the work or for release of funds to the PHA for payment to the Contractor. Notwithstanding HUD's role, nothing in this contract shall be construed to create any contractual relationship between the Contractor and HUD.
- (g) "Project" means the entire project, whether construction or rehabilitation, the work for which is provided for in whole or in part under this contract.
- (h) "PHA" means the Public Housing Agency organized under applicable state laws which is a party to this contract.
- (j) "Specifications" means the written description of the technical requirements for construction and includes the criteria and tests for determining whether the requirements are met.
- (l) "Work" means materials, workmanship, and manufacture and fabrication of components.

2. Contractor's Responsibility for Work

- (a) The Contractor shall furnish all necessary labor, materials, tools, equipment, and transportation necessary for performance of the work. The Contractor shall also furnish all necessary water, heat, light, and power not made available to the Contractor by the PHA pursuant to the clause entitled Availability and Use of Utility Services herein.
- (b) The Contractor shall perform on the site, and with its own organization, work equivalent to at least [] (12 percent unless otherwise indicated) of the total amount of work to be performed under the order. This percentage may be reduced by a supplemental agreement to this order if, during performing the work, the Contractor requests a reduction and the Contracting Officer determines that the reduction would be to the advantage of the PHA.
- (c) At all times during performance of this contract and until the work is completed and accepted, the Contractor shall directly superintend the work or assign and have on the work site a competent superintendent who is satisfactory to the Contracting Officer and has authority to act for the Contractor.
- (d) The Contractor shall be responsible for all damages to persons or property that occur as a result of the Contractor's fault or negligence, and shall take proper safety and health precautions to protect the work, the workers, the public, and the property of others. The Contractor shall hold and save the PHA, its officers and agents, free and harmless from liability of any nature occasioned by the Contractor's performance. The Contractor shall also be responsible for all materials delivered and work performed until completion and acceptance of the entire work, except for any completed unit of work which may have been accepted under the contract.
- (e) The Contractor shall lay out the work from base lines and bench marks indicated on the drawings and be responsible for all lines, levels, and measurements of all work executed under the contract. The Contractor shall verify the figures before laying out the work and will be held responsible for any error resulting from its failure to do so.
- (f) The Contractor shall confine all operations (including storage of materials) on PHA premises to areas authorized or approved by the Contracting Officer.
- (g) The Contractor shall at all times keep the work area, including storage areas, free from accumulations of waste materials. After completing the work and before final inspection, the Contractor shall (1) remove from the premises all scaffolding, equipment, tools, and materials (including rejected materials) that are not the property of the PHA and all rubbish caused by its work; (2) leave the work area in a clean, neat, and orderly condition satisfactory to the Contracting Officer; (3) perform all specified tests; and, (4) deliver the installation in complete and operating condition.
- (h) The Contractor's responsibility will terminate when all work has been completed, the final inspection made, and the work accepted by the Contracting Officer. The Contractor will then be released from further obligation except as required by the warranties specified elsewhere in the contract.

3. Architect's Duties, Responsibilities, and Authority

- (a) The Architect for this contract, and any successor, shall be designated in writing by the Contracting Officer.

- (b) The Architect shall serve as the Contracting Officer's technical representative with respect to architectural, **Schedule** engineering, and design matters related to the work performed under the contract. The Architect may provide direction on contract performance. Such direction shall be within the scope of the contract and may not be of a nature which: (1) institutes additional work outside the scope of the contract; (2) constitutes a change as defined in the Changes clause herein; (3) causes an increase or decrease in the cost of the contract; (4) alters the Construction Progress Schedule; or (5) changes any of the other express terms or conditions of the contract.
- (c) The Architect's duties and responsibilities may include but shall not be limited to:
- (1) Making periodic visits to the work site, and on the basis of his/her on-site inspections, issuing written reports to the PHA which shall include all observed deficiencies. The Architect shall file a copy of the report with the Contractor's designated representative at the site;
 - (2) Making modifications in drawings and technical specifications and assisting the Contracting Officer in the preparation of change orders and other contract modifications for issuance by the Contracting Officer;
 - (3) Reviewing and making recommendations with respect to - (i) the Contractor's construction progress schedules; (ii) the Contractor's shop and detailed drawings; (iii) the machinery, mechanical and other equipment and materials or other articles proposed for use by the Contractor; and, (iv) the Contractor's price breakdown and progress payment estimates; and,
 - (4) Assisting in inspections, signing Certificates of Completion, and making recommendations with respect to acceptance of work completed under the contract.

4. Other Contracts

The PHA may undertake or award other contracts for additional work at or near the site of the work under this contract. The Contractor shall fully cooperate with the other contractors and with PHA employees and shall carefully adapt scheduling and performing the work under this contract to accommodate the additional work, heeding any direction that may be provided by the Contracting Officer. The Contractor shall not commit or permit any act that will interfere with the performance of work by any other contractor or by PHA employees

Construction Requirements

5. Pre-construction Conference and Notice to Proceed

of the work, and that it has investigated and satisfied itself

- (a) Within ten calendar days of contract execution, and prior to the commencement of work, the Contractor shall attend a preconstruction conference with representatives of the PHA, its Architect, and other interested parties convened by the PHA. The conference will serve to acquaint the participants with the general plan of the construction operation and all other requirements of the contract. The PHA will provide the Contractor with the date, time, and place of the conference.
- (b) The contractor shall begin work upon receipt of a written Notice to Proceed from the Contracting Officer or designee. The Contractor shall not begin work prior to receiving such notice.

6. Construction Progress

- (a) The Contractor shall, within five days after the work commences on the contract or another period of time determined by the Contracting Officer, prepare and submit to the Contracting Officer for approval three copies of a practicable schedule showing the order in which the Contractor proposes to perform the work, and the dates on which the Contractor contemplates starting and completing the several salient features of the work (including acquiring labor, materials, and equipment). The schedule shall be in the form of a progress chart of suitable scale to indicate appropriately the percentage of work scheduled for completion by any given date during the period. If the Contractor fails to submit a schedule within the time prescribed, the Contracting Officer may withhold approval of progress payments or take other remedies under the contract until the Contractor submits the required schedule.
- (b) The Contractor shall enter the actual progress on the chart as required by the Contracting Officer, and immediately deliver three copies of the annotated schedule to the Contracting Officer. If the Contracting Officer determines, upon the basis of inspection conducted pursuant to the clause entitled Inspection and Acceptance of Construction, herein that the Contractor is not meeting the approved schedule, the Contractor shall take steps necessary to improve its progress, including those that may be required by the Contracting Officer, without additional cost to the PHA. In this circumstance, the Contracting Officer may require the Contractor to increase the number of shifts, overtime operations, days of work, and/or the amount of construction plant, and to submit for approval any supplementary schedule or schedules in chart form as the Contracting Officer deems necessary to demonstrate how the approved rate of progress will be regained.
- (c) Failure of the Contractor to comply with the requirements of the Contracting Officer under this clause shall be grounds for a determination by the Contracting Officer that the Contractor is not prosecuting the work with sufficient diligence to ensure completion within the time specified in the Contract. Upon making this determination, the Contracting Officer may terminate the Contractor's right to proceed with the work, or any separable part of it, in accordance with the Default clause of this contract.

7. Site Investigation and Conditions Affecting the Work

- (a) The Contractor acknowledges that it has taken steps reasonably necessary to ascertain the nature and location as to the general and local conditions which can affect the work or its cost, including but not limited to, (1) conditions bearing upon transportation, disposal, handling, and storage of materials; (2) the availability of labor, water, electric power, and roads; (3) uncertainties of weather, river stages, tides, or similar physical conditions at the site; (4) the conformation and conditions of the ground; and (5) the character of equipment and facilities needed preliminary to and during work performance. The Contractor also acknowledges that it has satisfied itself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is

reasonably ascertainable from an inspection of the site, including all exploratory work done by the PHA, as well as from the drawings and specifications made a part of this contract. Any failure of the Contractor to take the actions described and acknowledged in this paragraph will not relieve the Contractor from responsibility for estimating properly the difficulty and cost of successfully performing the work, or for proceeding to successfully perform the work without additional expense to the PHA.

- (b) The PHA assumes no responsibility for any conclusions or interpretations made by the Contractor based on the information made available by the PHA. Nor does the PHA assume responsibility for any understanding reached or representation made concerning conditions which can affect the work by any of its officers or agents before the execution of this contract, unless that understanding or representation is expressly stated in this contract.

8. Differing Site Conditions

(a) The Contractor shall promptly, and before the conditions are disturbed, give a written notice to the Contracting Officer of (1) subsurface or latent physical conditions at the site which differ materially from those indicated in this contract, or (2) unknown physical conditions at the site(s), of an unusual nature, which differ materially from those ordinarily encountered and generally recognized as inhering in work of the character provided for in the contract.

(b) The Contracting Officer shall investigate the site conditions promptly after receiving the notice. Work shall not proceed at the affected site, except at the

Contractor's risk, until the Contracting Officer has provided written instructions to the Contractor. If the conditions do materially so differ and cause an increase or decrease in the Contractor's cost of, or the time required for, performing any part of the work under this contract, whether or not changed as a result of the conditions, the Contractor shall file a claim in writing to the PHA within ten days after receipt of such instructions and, in any event, before proceeding with the work. An equitable adjustment in the contract price, the delivery schedule, or both shall be made under this clause and the contract modified in writing accordingly.

(c) No request by the Contractor for an equitable adjustment to the contract under this clause shall be allowed, unless the Contractor has given the written notice required; provided, that the time prescribed in (a) above for giving written notice may be extended by the Contracting Officer.

(d) No request by the Contractor for an equitable adjustment to the contract for differing site conditions shall be allowed if made after final payment under this contract.

9. Specifications and Drawings for Construction

(a) The Contractor shall keep on the work site a copy of the drawings and specifications and shall at all times give the Contracting Officer access thereto. Anything mentioned in the specifications and not shown on the drawings, or shown on the drawings and not mentioned in the specifications, shall be of like effect as if shown or mentioned in both. In case of difference between drawings and specifications, the specifications shall govern. In case of discrepancy in the figures, in the drawings, or in the specifications, the matter shall be

promptly submitted to the Contracting Officer, who shall promptly make a determination in writing. Any adjustment by the Contractor without such a determination shall be at its own risk and expense. The Contracting Officer shall furnish from time to time such detailed drawings and other information as considered necessary, unless otherwise provided.

(b) Wherever in the specifications or upon the drawings the words "directed", "required", "ordered", "designated", "prescribed", or words of like import are used, it shall be understood that the "direction", "requirement", "order", "designation", or "prescription", of the Contracting Officer is intended and similarly the words "approved", "acceptable", "satisfactory", or words of like import shall mean "approved by", or "acceptable to", or "satisfactory to" the Contracting Officer, unless otherwise expressly stated.

(c) Where "as shown" "as indicated", "as detailed", or words of similar import are used, it shall be understood that the reference is made to the drawings accompanying this contract unless stated otherwise. The word "provided" as used herein shall be understood to mean "provide complete in place" that is "furnished and installed".

(d) "Shop drawings" means drawings, submitted to the PHA by the Contractor, subcontractor, or any lower tier subcontractor, showing in detail (1) the proposed fabrication and assembly of structural elements and (2) the installation (i.e., form, fit, and attachment details) of materials of equipment. It includes drawings, diagrams, layouts, schematics, descriptive literature, illustrations, schedules, performance and test data, and similar materials furnished by the Contractor to explain in detail specific portions of the work required by the contract. The PHA may duplicate, use, and disclose in any manner and for any purpose shop drawings delivered under this contract.

(e) If this contract requires shop drawings, the Contractor shall coordinate all such drawings, and review them for accuracy, completeness, and compliance with other contract requirements and shall indicate its approval thereon as evidence of such coordination and review. Shop drawings submitted to the Contracting Officer without evidence of the Contractor's approval may be returned for resubmission. The Contracting Officer will indicate an approval or disapproval of the shop drawings and if not approved as submitted shall indicate the PHA's reasons therefore. Any work done before such approval shall be at the Contractor's risk. Approval by the Contracting Officer shall not relieve the Contractor from responsibility for any errors or omissions in such drawings, nor from responsibility for complying with the requirements of this contract, except with respect to variations described and approved in accordance with (f) below.

(f) If shop drawings show variations from the contract requirements, the Contractor shall describe such variations in writing, separate from the drawings, at the time of submission. If the Architect approves any such variation and the Contracting Officer concurs, the Contracting Officer shall issue an appropriate modification to the contract, except that, if the variation is minor or does not involve a change in price or in time of performance, a modification need not be issued.

(g) It shall be the responsibility of the Contractor to make timely requests of the PHA for such large scale and full size drawings, color schemes, and other additional information, not already in his possession, which shall be

required in the planning and production of the work. Such requests may be submitted as the need arises, but each such request shall be filed in ample time to permit appropriate action to be taken by all parties involved so as to avoid delay.

- (h) The Contractor shall submit to the Contracting Officer for approval four copies (unless otherwise indicated) of all shop drawings as called for under the various headings of these specifications. Three sets (unless otherwise indicated) of all shop drawings, will be retained by the PHA and one set will be returned to the Contractor. As required by the Contracting Officer, the Contractor, upon completing the work under this contract, shall furnish a complete set of all shop drawings as finally approved. These drawings shall show all changes and revisions made up to the time the work is completed and accepted.
- (i) This clause shall be included in all subcontracts at any tier. It shall be the responsibility of the Contractor to ensure that all shop drawings prepared by subcontractors are submitted to the Contracting Officer.

10. As-Built Drawings

- (a) "As-built drawings," as used in this clause, means drawings submitted by the Contractor or subcontractor at any tier to show the construction of a particular structure or work as actually completed under the contract. "As-built drawings" shall be synonymous with "Record drawings."
- (b) As required by the Contracting Officer, the Contractor shall provide the Contracting Officer accurate information to be used in the preparation of permanent as-built drawings. For this purpose, the Contractor shall record on one set of contract drawings all changes from the installations originally indicated, and record final locations of underground lines by depth from finish grade and by accurate horizontal offset distances to permanent surface improvements such as buildings, curbs, or edges of walks.
- (c) This clause shall be included in all subcontracts at any tier. It shall be the responsibility of the Contractor to ensure that all as-built drawings prepared by subcontractors are submitted to the Contracting Officer.

11. Material and Workmanship

- (a) All equipment, material, and articles furnished under this contract shall be new and of the most suitable grade for the purpose intended, unless otherwise specifically provided in this contract. References in the contract to equipment, material, articles, or patented processes by trade name, make, or catalog number, shall be regarded as establishing a standard of quality and shall not be construed as limiting competition. The Contractor may, at its option, use any equipment, material, article, or process that, in the judgment of, and as approved by the Contracting Officer, is equal to that named in the specifications, unless otherwise specifically provided in this contract.
- (b) Approval of equipment and materials.
- (1) The Contractor shall obtain the Contracting Officer's approval of the machinery and mechanical and other equipment to be incorporated into the work. When requesting approval, the Contractor shall furnish to the Contracting Officer the name of the manufacturer, the model number, and other information concerning the performance, capacity, nature, and rating of the

machinery and mechanical and other equipment. When required by this contract or by the Contracting Officer, the Contractor shall also obtain the Contracting Officer's approval of the material or articles which the Contractor contemplates incorporating into the work. When requesting approval, the Contractor shall provide full information concerning the material or articles. Machinery, equipment, material, and articles that do not have the required approval shall be installed or used at the risk of subsequent rejection.

- (2) When required by the specifications or the Contracting Officer, the Contractor shall submit appropriately marked samples (and certificates related to them) for approval at the Contractor's expense, with all shipping charges prepaid. The Contractor shall label, or otherwise properly mark on the container, the material or product represented, its place of origin, the name of the producer, the Contractor's name, and the identification of the construction project for which the material or product is intended to be used.
- (3) Certificates shall be submitted in triplicate, describing each sample submitted for approval and certifying that the material, equipment or accessory complies with contract requirements. The certificates shall include the name and brand of the product, name of manufacturer, and the location where produced.
- (4) Approval of a sample shall not constitute a waiver of the PHA right to demand full compliance with contract requirements. Materials, equipment and accessories may be rejected for cause even though samples have been approved.
- (5) Wherever materials are required to comply with recognized standards or specifications, such specifications shall be accepted as establishing the technical qualities and testing methods, but shall not govern the number of tests required to be made nor modify other contract requirements. The Contracting Officer may require laboratory test reports on items submitted for approval or may approve materials on the basis of data submitted in certificates with samples. Check tests will be made on materials delivered for use only as frequently as the Contracting Officer determines necessary to insure compliance of materials with the specifications. The Contractor will assume all costs of retesting materials which fail to meet contract requirements and/or testing materials offered in substitution for those found deficient.
- (6) After approval, samples will be kept in the Project office until completion of work. They may be built into the work after a substantial quantity of the materials they represent has been built in and accepted.
- (c) Requirements concerning lead-based paint. The Contractor shall comply with the requirements concerning lead-based paint contained in the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. 4821-4846) as implemented by 24 CFR Part 35.

12. Permits and Codes

- (a) The Contractor shall give all notices and comply with all applicable laws, ordinances, codes, rules and regulations. Notwithstanding the requirement of the Contractor to comply with the drawings and specifications in the contract, all work installed shall comply with all applicable codes and regulations as amended by any

waivers. Before installing the work, the Contractor shall examine the drawings and the specifications for compliance with applicable codes and regulations bearing on the work and shall immediately report any discrepancy it may discover to the Contracting Officer.

Where the requirements of the drawings and specifications fail to comply with the applicable code or regulation, the Contracting Officer shall modify the contract by change order pursuant to the clause entitled Changes herein to conform to the code or regulation.

- (b) The Contractor shall secure and pay for all permits, fees, and licenses necessary for the proper execution and completion of the work. Where the PHA can arrange for the issuance of all or part of these permits, fees and licenses, without cost to the Contractor, the contract amount shall be reduced accordingly.

13. Health, Safety, and Accident Prevention

(a) In performing this contract, the Contractor shall:

- (1) Ensure that no laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his/her health and/or safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation;
- (2) Protect the lives, health, and safety of other persons;
- (3) Prevent damage to property, materials, supplies, and equipment; and,
- (4) Avoid work interruptions.

(b) For these purposes, the Contractor shall:

- (1) Comply with regulations and standards issued by the Secretary of Labor at 29 CFR Part 1926. Failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act (Public Law 91-54, 83 Stat. 96), 40 U.S.C. 3701 et seq.; and
- (2) Include the terms of this clause in every subcontract so that such terms will be binding on each subcontractor.

(c) The Contractor shall maintain an accurate record of exposure data on all accidents incident to work performed under this contract resulting in death, traumatic injury, occupational disease, or damage to property, materials, supplies, or equipment, and shall report this data in the manner prescribed by 29 CFR Part 1904.

(d) The Contracting Officer shall notify the Contractor of any noncompliance with these requirements and of the corrective action required. This notice, when delivered to the Contractor or the Contractor's representative at the site of the work, shall be deemed sufficient notice of the noncompliance and corrective action required. After receiving the notice, the Contractor shall immediately take corrective action. If the Contractor fails or refuses to take corrective action promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. The Contractor shall not base any claim or request for equitable adjustment for additional time or money on any stop order issued under these circumstances.

(e) The Contractor shall be responsible for its subcontractors' compliance with the provisions of this clause. The Contractor shall take such action with respect to any subcontract as the PHA, the Secretary of Housing and Urban Development, or the Secretary of Labor shall direct as a means of enforcing such provisions.

14. Temporary Heating

The Contractor shall provide and pay for temporary heating, covering, and enclosures necessary to properly protect all work and materials against damage by dampness and cold, to dry out the work, and to facilitate the completion of the work. Any permanent heating equipment used shall be turned over to the PHA in the condition and at the time required by the specifications.

15. Availability and Use of Utility Services

(a) The PHA shall make all reasonably required amounts of utilities available to the Contractor from existing outlets and supplies, as specified in the contract. Unless otherwise provided in the contract, the amount of each utility service consumed shall be charged to or paid for by the Contractor at prevailing rates charged to the PHA or, where the utility is produced by the PHA, at reasonable rates determined by the Contracting Officer. The Contractor shall carefully conserve any utilities furnished without charge.

(b) The Contractor, at its expense and in a manner satisfactory to the Contracting Officer, shall install and maintain all necessary temporary connections and distribution lines, and all meters required to measure the amount of each utility used for the purpose of determining charges. Before final acceptance of the work by the PHA, the Contractor shall remove all the temporary connections, distribution lines, meters, and associated paraphernalia.

16. Protection of Existing Vegetation, Structures, Equipment, Utilities, and Improvements

(a) The Contractor shall preserve and protect all structures, equipment, and vegetation (such as trees, shrubs, and grass) on or adjacent to the work site, which are not to be removed under this contract, and which do not unreasonably interfere with the work required under this contract.

(b) The Contractor shall only remove trees when specifically authorized to do so, and shall avoid damaging vegetation that will remain in place. If any limbs or branches of trees are broken during performance of this contract, or by the careless operation of equipment, or by workmen, the Contractor shall trim those limbs or branches with a clean cut and paint the cut with a tree-pruning compound as directed by the Contracting Officer.

(c) The Contractor shall protect from damage all existing improvements and utilities (1) at or near the work site and (2) on adjacent property of a third party, the locations of which are made known to or should be known by the Contractor. Prior to disturbing the ground at the construction site, the Contractor shall ensure that all underground utility lines are clearly marked.

(d) The Contractor shall shore up, brace, underpin, secure, and protect as necessary all foundations and other parts of existing structures adjacent to, adjoining, and in the vicinity of the site, which may be affected by the excavations or other operations connected with the construction of the project.

(e) Any equipment temporarily removed as a result of work under this contract shall be protected, cleaned, and replaced in the same condition as at the time of award of this contract.

- (f) New work which connects to existing work shall correspond in all respects with that to which it connects and/or be similar to existing work unless otherwise required by the specifications.
- (g) No structural members shall be altered or in any way weakened without the written authorization of the Contracting Officer, unless such work is clearly specified in the plans or specifications.
- (h) If the removal of the existing work exposes discolored or unfinished surfaces, or work out of alignment, such surfaces shall be refinished, or the material replaced as necessary to make the continuous work uniform and harmonious. This, however, shall not be construed to require the refinishing or reconstruction of dissimilar finishes previously exposed, or finished surfaces in good condition, but in different planes or on different levels **Construction** when brought together by the removal of intervening work, unless such refinishing or reconstruction is specified in the plans or specifications.
- (i) The Contractor shall give all required notices to any adjoining or adjacent property owner or other party before the commencement of any work.
- (j) The Contractor shall indemnify and save harmless the PHA from any damages on account of settlement or the loss of lateral support of adjoining property, any damages from changes in topography affecting drainage, and from all loss or expense and all damages for which the PHA may become liable in consequence of such injury or damage to adjoining and adjacent structures and their premises.
- (k) The Contractor shall repair any damage to vegetation, structures, equipment, utilities, or improvements, including those that are the property of a third party, resulting from failure to comply with the requirements of this contract or failure to exercise reasonable care in performing the work. If the Contractor fails or refuses to repair the damage promptly, the Contracting Officer may have the necessary work performed and charge the cost to the Contractor.

17. Temporary Buildings and Transportation of Materials

- (a) Temporary buildings (e.g., storage sheds, shops, offices, sanitary facilities) and utilities may be erected by the Contractor only with the approval of the Contracting Officer and shall be built with labor and materials furnished by the Contractor without expense to the PHA. The temporary buildings and utilities shall remain the property of the Contractor and shall be removed by the Contractor at its expense upon completion of the work. With the written consent of the Contracting Officer, the buildings and utilities may be abandoned and need not be removed.
- (b) The Contractor shall, as directed by the Contracting Officer, use only established roadways, or use temporary roadways constructed by the Contractor when and as authorized by the Contracting Officer. When materials are transported in prosecuting the work, vehicles shall not be loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by any federal, state, or local law or regulation. When it is necessary to cross curbs or sidewalks, the Contractor shall protect them from damage. The Contractor shall repair or pay for the repair of any damaged curbs, sidewalks, or roads.

18. Clean Air and Water

The contractor shall comply with the Clean Air Act, as amended, 42 USC 7401 et seq., the Federal Water Pollution Control Water Act, as amended, 33 U.S.C. 1251 et seq., and standards issued pursuant thereto in the facilities in which this contract is to be performed.

19. Energy Efficiency

The Contractor shall comply with mandatory standards and policies relating to energy efficiency which are contained in the energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub.L. 94-163) for the State in which the work under the contract is performed.

20. Inspection and Acceptance of

- (a) Definitions. As used in this clause -
- (1) "Acceptance" means the act of an authorized representative of the PHA by which the PHA approves and assumes ownership of the work performed under this contract. Acceptance may be partial or complete.
- (2) "Inspection" means examining and testing the work performed under the contract (including, when appropriate, raw materials, equipment, components, and intermediate assemblies) to determine whether it conforms to contract requirements.
- (3) "Testing" means that element of inspection that determines the properties or elements, including functional operation of materials, equipment, or their components, by the application of established scientific principles and procedures.
- (b) The Contractor shall maintain an adequate inspection system and perform such inspections as will ensure that the work performed under the contract conforms to contract requirements. All work is subject to PHA inspection and test at all places and at all reasonable times before acceptance to ensure strict compliance with the terms of the contract.
- (c) PHA inspections and tests are for the sole benefit of the PHA and do not: (1) relieve the Contractor of responsibility for providing adequate quality control measures; (2) relieve the Contractor of responsibility for loss or damage of the material before acceptance; (3) constitute or imply acceptance; or, (4) affect the continuing rights of the PHA after acceptance of the completed work under paragraph (j) below.
- (d) The presence or absence of the PHA inspector does not relieve the Contractor from any contract requirement, nor is the inspector authorized to change any term or condition of the specifications without the Contracting Officer's written authorization. All instructions and approvals with respect to the work shall be given to the Contractor by the Contracting Officer.
- (e) The Contractor shall promptly furnish, without additional charge, all facilities, labor, and material reasonably needed for performing such safe and convenient inspections and tests as may be required by the Contracting Officer. The PHA may charge to the Contractor any additional cost of inspection or test when work is not ready at the time specified by the Contractor for inspection or test, or when prior rejection makes reinspection or retest necessary. The PHA shall perform all inspections and tests in a manner that will not unnecessarily delay the work. Special, full size, and performance tests shall be performed as described in the contract.

- (f) The PHA may conduct routine inspections of the construction site on a daily basis.
- (g) The Contractor shall, without charge, replace or correct work found by the PHA not to conform to contract requirements, unless the PHA decides that it is in its interest to accept the work with an appropriate adjustment in contract price. The Contractor shall promptly segregate and remove rejected material from the premises.
- (h) If the Contractor does not promptly replace or correct rejected work, the PHA may (1) by contract or otherwise, replace or correct the work and charge the cost to the Contractor, or (2) terminate for default the Contractor's right to proceed.
- (i) If any work requiring inspection is covered up without approval of the PHA, it must, if requested by the Contracting Officer, be uncovered at the expense of the Contractor. If at any time before final acceptance of the entire work, the **Construction PHA** considers it necessary or advisable, to examine work already completed by removing or tearing it out, the Contractor, shall on request, promptly furnish all necessary facilities, labor, and material. If such work is found to be defective or nonconforming in any material respect due to the fault of the Contractor or its subcontractors, the Contractor shall defray all the expenses of the examination and of satisfactory reconstruction. If, however, such work is found to meet the requirements of the contract, the Contracting Officer shall make an equitable adjustment to cover the cost of the examination and reconstruction, including, if completion of the work was thereby delayed, an extension of time.
- (j) The Contractor shall notify the Contracting Officer, in writing, as to the date when in its opinion all or a designated portion of the work will be substantially completed and ready for inspection. If the Architect determines that the state of preparedness is as represented, the PHA will promptly arrange for the inspection. Unless otherwise specified in the contract, the PHA shall accept, as soon as practicable after completion and inspection, all work required by the contract or that portion of the work the Contracting Officer determines and designates can be accepted separately. Acceptance shall be final and conclusive except for latent defects, fraud, gross mistakes amounting to fraud, or the PHA's right under any warranty or guarantee.

21. Use and Possession Prior to Completion

- (a) The PHA shall have the right to take possession of or use any completed or partially completed part of the work. Before taking possession of or using any work, the Contracting Officer shall furnish the Contractor a list of items of work remaining to be performed or corrected on those portions of the work that the PHA intends to take possession of or use. However, failure of the Contracting Officer to list any item of work shall not relieve the Contractor of responsibility for complying with the terms of the contract. The PHA's possession or use shall not be deemed an acceptance of any work under the contract.
- (b) While the PHA has such possession or use, the Contractor shall be relieved of the responsibility for (1) the loss of or damage to the work resulting from the PHA's possession or use, notwithstanding the terms of the clause entitled Permits and Codes herein; (2) all maintenance costs on the areas occupied; and, (3) furnishing heat, light, power, and water used in the areas

occupied without proper remuneration therefore. If prior possession or use by the PHA delays the progress of the work or causes additional expense to the Contractor, an equitable adjustment shall be made in the contract price or the time of completion, and the contract shall be modified in writing accordingly.

22. Warranty of Title

The Contractor warrants good title to all materials, supplies, and equipment incorporated in the work and agrees to deliver the premises together with all improvements thereon free from any claims, liens or charges, and agrees further that neither it nor any other person, firm or corporation shall have any right to a lien upon the premises or anything appurtenant thereto.

23. Warranty of

- (a) In addition to any other warranties in this contract, the Contractor warrants, except as provided in paragraph (j) of this clause, that work performed under this contract conforms to the contract requirements and is free of any defect in equipment, material, or workmanship performed by the Contractor or any subcontractor or supplier at any tier. This warranty shall continue for a period of _____ (one year unless otherwise indicated) from the date of final acceptance of the work. If the PHA takes possession of any part of the work before final acceptance, this warranty shall continue for a period of (one year unless otherwise indicated) from the date that the PHA takes possession.
- (b) The Contractor shall remedy, at the Contractor's expense, any failure to conform, or any defect. In addition, the Contractor shall remedy, at the Contractor's expense, any damage to PHA-owned or controlled real or personal property when the damage is the result of—
 - (1) The Contractor's failure to conform to contract requirements; or
 - (2) Any defects of equipment, material, workmanship or design furnished by the Contractor.
- (c) The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for (one year unless otherwise indicated) from the date of repair or replacement.
- (d) The Contracting Officer shall notify the Contractor, in writing, within a reasonable time after the discovery of any failure, defect or damage.
- (e) If the Contractor fails to remedy any failure, defect, or damage within a reasonable time after receipt of notice, the PHA shall have the right to replace, repair or otherwise remedy the failure, defect, or damage at the Contractor's expense.
- (f) With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this contract, the Contractor shall:
 - (1) Obtain all warranties that would be given in normal commercial practice;
 - (2) Require all warranties to be executed in writing, for the benefit of the PHA; and,
 - (3) Enforce all warranties for the benefit of the PHA.
- (g) In the event the Contractor's warranty under paragraph (a) of this clause has expired, the PHA may bring suit at its own expense to enforce a subcontractor's, manufacturer's or supplier's warranty.

- (h) Unless a defect is caused by the negligence of the Contractor or subcontractor or supplier at any tier, the Contractor shall not be liable for the repair of any defect of material or design furnished by the PHA nor for the repair of any damage that results from any defect in PHA furnished material or design.
- (i) Notwithstanding any provisions herein to the contrary, the establishment of the time periods in paragraphs (a) and (c) above relate only to the specific obligation of the Contractor to correct the work, and have no relationship to the time within which its obligation to comply with the contract may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to its obligation other than specifically to correct the work.
- (j) This warranty shall not limit the PHA's rights under the Inspection and Acceptance of Construction clause of this contract with respect to latent defects, gross mistakes or fraud.

24. Prohibition Against Liens

The Contractor is prohibited from placing a lien on the PHA's property. This prohibition shall apply to all subcontractors at any tier and all materials suppliers.

Administrative Requirements

25. Contract Period

this contract within _____ calendar days of the effective date of the contract, or within the time schedule established in the notice to proceed issued by the Contracting Officer.

26. Order of Provisions

accordance with the terms and conditions of the

In the event of a conflict between these General Conditions and the Specifications, the General Conditions shall prevail. In the event of a conflict between the contract and any applicable state or local law or regulation, the state or local law or regulation shall prevail; provided that such state or local law or regulation does not conflict with, or is less restrictive than applicable federal law, regulation, or Executive Order. In the event of such a conflict, applicable federal law, regulation, and Executive Order shall prevail.

27. Payments

retain ten (10) percent of the amount of progress

- (a) The PHA shall pay the Contractor the price as provided in this contract.
- (b) The PHA shall make progress payments approximately every 30 days as the work proceeds, on estimates of work accomplished which meets the standards of quality established under the contract, as approved by the Contracting Officer. The PHA may, subject to written determination and approval of the Contracting Officer, make more frequent payments to contractors which are qualified small businesses.
- (c) Before the first progress payment under this contract, the Contractor shall furnish, in such detail as requested by the Contracting Officer, a breakdown of the total contract price showing the amount included therein for each principal category of the work, which shall substantiate the payment amount requested in order to provide a

basis for determining progress payments. The breakdown shall be approved by the Contracting Officer and must be acceptable to HUD. If the contract covers more than one project, the Contractor shall furnish a separate breakdown for each. The values and quantities employed in making up this breakdown are for determining the amount of progress payments and shall not be construed as a basis for additions to or deductions from the contract price. The Contractor shall prorate its overhead and profit over the construction period of the contract.

- (d) The Contractor shall submit, on forms provided by the PHA, periodic estimates showing the value of the work performed during each period based upon the approved submitted not later than _____ days in advance of the date set for payment and are subject to correction and revision as required. The estimates must be approved by the Contracting Officer with the concurrence of the Architect prior to payment. If the contract covers more than one project, the Contractor shall furnish a separate progress payment estimate for each.
- (e) Along with each request for progress payments and the required estimates, the Contractor shall furnish the following certification, or payment shall not be made: I hereby certify, to the best of my knowledge and belief, that:

- (1) The amounts requested are only for performance in accordance with the specifications, terms, and conditions of the contract;
- (2) Payments to subcontractors and suppliers have been made from previous payments received under the contract, and timely payments will be made from the proceeds of the payment covered by this certification, in accordance with subcontract agreements; and,
- (3) This request for progress payments does not include any amounts which the prime contractor intends to withhold or retain from a subcontractor or supplier in subcontract.

Name:

Title:

Date:

- (f) Except as otherwise provided in State law, the PHA shall payments until completion and acceptance of all work under the contract; except, that if upon completion of 50 percent of the work, the Contracting Officer, after consulting with the Architect, determines that the Contractor's performance and progress are satisfactory, the PHA may make the remaining payments in full for the work subsequently completed. If the Contracting Officer subsequently determines that the Contractor's performance and progress are unsatisfactory, the PHA shall reinstate the ten (10) percent (or other percentage as provided in State law) retainage until such time as the Contracting Officer determines that performance and progress are satisfactory.
- (g) The Contracting Officer may authorize material delivered on the site and preparatory work done to be taken into consideration when computing progress payments.

Material delivered to the Contractor at locations other than the site may also be taken into consideration if the Contractor furnishes satisfactory evidence that (1) it has acquired title to such material; (2) the material is properly stored in a bonded warehouse, storage yard, or similar suitable place as may be approved by the Contracting Officer; (3) the material is insured to cover its full value; and (4) the material will be used to perform this contract. Before any progress payment which includes delivered material is made, the Contractor shall furnish such documentation as the Contracting Officer may require to assure the protection of the PHA's interest in such materials. The Contractor shall remain responsible for such stored material notwithstanding the transfer of title to the PHA.

- (h) All material and work covered by progress payments made shall, at the time of payment become the sole property of the PHA, but this shall not be construed as (1) relieving the Contractor from the sole responsibility for all material and work upon which payments have been made or the restoration of any damaged work; or, (2) waiving the right of the PHA to require the fulfillment of all of the terms of the contract. In the event the work of the Contractor has been damaged by other contractors or persons other than employees of the PHA in the course of their employment, the Contractor shall restore such damaged work without cost to the PHA and to seek redress for its damage only from those who directly caused it.
- (i) The PHA shall make the final payment due the Contractor under this contract after (1) completion and final acceptance of all work; and (2) presentation of release of all claims against the PHA arising by virtue of this contract, other than claims, in stated amounts, that the Contractor has specifically excepted from the operation of the release. Each such exception shall embrace no more than one claim, the basis and scope of which shall be clearly defined. The amounts for such excepted claims shall not be included in the request for final payment. A release may also be required of the assignee if the Contractor's claim to amounts payable under this contract has been assigned.
- (j) Prior to making any payment, the Contracting Officer may require the Contractor to furnish receipts or other evidence of payment from all persons performing work and supplying material to the Contractor, if the Contracting Officer determines such evidence is necessary to substantiate claimed costs.
- (k) The PHA shall not; (1) determine or adjust any claims for payment or disputes arising there under between the Contractor and its subcontractors or material suppliers; or, (2) withhold any moneys for the protection of the subcontractors or material suppliers. The failure or refusal of the PHA to withhold moneys from the Contractor shall in no wise impair the obligations of any surety or sureties under any bonds furnished under this contract.

28. Contract Modifications

- (a) Only the Contracting Officer has authority to modify any term or condition of this contract. Any contract modification shall be authorized in writing.
- (b) The Contracting Officer may modify the contract unilaterally (1) pursuant to a specific authorization stated in a contract clause (e.g., Changes); or (2) for administrative matters which do not change the rights or

responsibilities of the parties (e.g., change in the PHA address). All other contract modifications shall be in the form of supplemental agreements signed by the Contractor and the Contracting Officer.

- (c) When a proposed modification requires the approval of HUD prior to its issuance (e.g., a change order that exceeds the PHA's approved threshold), such modification shall not be effective until the required approval is received by the PHA.

29. Changes

- (a) The Contracting Officer may, at any time, without notice to the sureties, by written order designated or indicated to be a change order, make changes in the work within the general scope of the contract including changes:
 - (1) In the specifications (including drawings and designs);
 - (2) In the method or manner of performance of the work;
 - (3) PHA-furnished facilities, equipment, materials, services, or site; or,
 - (4) Directing the acceleration in the performance of the work.
- (b) Any other written order or oral order (which, as used in this paragraph (b), includes direction, instruction, interpretation, or determination) from the Contracting Officer that causes a change shall be treated as a change order under this clause; provided, that the Contractor gives the Contracting Officer written notice stating (1) the date, circumstances and source of the order and (2) that the Contractor regards the order as a change order.
- (c) Except as provided in this clause, no order, statement or conduct of the Contracting Officer shall be treated as a change under this clause or entitle the Contractor to an equitable adjustment.
- (d) If any change under this clause causes an increase or decrease in the Contractor's cost of, or the time required for the performance of any part of the work under this contract, whether or not changed by any such order, the Contracting Officer shall make an equitable adjustment and modify the contract in writing. However, except for an adjustment based on defective specifications, no proposal for any change under paragraph (b) above shall be allowed for any costs incurred more than 20 days (5 days for oral orders) before the Contractor gives written notice as required. In the case of defective specifications for which the PHA is responsible, the equitable adjustment shall include any increased cost reasonably incurred by the Contractor in attempting to comply with the defective specifications.
- (e) The Contractor must assert its right to an adjustment under this clause within 30 days after (1) receipt of a written change order under paragraph (a) of this clause, or (2) the furnishing of a written notice under paragraph (b) of this clause, by submitting a written statement describing the general nature and the amount of the proposal. If the facts justify it, the Contracting Officer may extend the period for submission. The proposal may be included in the notice required under paragraph (b) above. No proposal by the Contractor for an equitable adjustment shall be allowed if asserted after final payment under this contract.
- (f) The Contractor's written proposal for equitable adjustment shall be submitted in the form of a lump sum proposal supported with an itemized breakdown of all increases and decreases in the contract in at least the following details:

- (1) Direct Costs. Materials (list individual items, the quantity and unit cost of each, and the aggregate cost); Transportation and delivery costs associated with materials; Labor breakdowns by hours or unit costs (identified with specific work to be performed); Construction equipment exclusively necessary for the change; Costs of preparation and/ or revision to shop drawings resulting from the change; Worker's Compensation and Public Liability Insurance; Employment taxes under FICA and FUTA; and, Bond Costs when size of change warrants revision.
- (2) Indirect Costs. Indirect costs may include overhead, general and administrative expenses, and fringe benefits not normally treated as direct costs.
- (3) Profit. The amount of profit shall be negotiated and may vary according to the nature, extent, and complexity of the work required by the change. The allowability of the direct and indirect costs shall be determined in accordance with the Contract Cost Principles and Procedures for Commercial Firms in Part 31 of the Federal Acquisition Regulation (48 CFR 1-31), as implemented by HUD Handbook 2210.18, in effect on the date of this contract. The Contractor shall not be allowed a profit on the profit received by any subcontractor. Equitable adjustments for deleted work shall include a credit for profit and may include a credit for indirect costs. On proposals covering both increases and decreases in the amount of the contract, the application of indirect costs and profit shall be on the net-change in direct costs for the Contractor or subcontractor performing the work.
- (g) The Contractor shall include in the proposal its request for time extension (if any), and shall include sufficient information and dates to demonstrate whether and to what extent the change will delay the completion of the contract in its entirety.
- (h) The Contracting Officer shall act on proposals within 30 days after their receipt, or notify the Contractor of the date when such action will be taken.
- (i) Failure to reach an agreement on any proposal shall be a dispute under the clause entitled Disputes herein. Nothing in this clause, however, shall excuse the Contractor from proceeding with the contract as changed.
- (j) Except in an emergency endangering life or property, no change shall be made by the Contractor without a prior order from the Contracting Officer.

30. Suspension of Work

- (a) The Contracting Officer may order the Contractor in writing to suspend, delay, or interrupt all or any part of the work of this contract for the period of time that the Contracting Officer determines appropriate for the convenience of the PHA.
- (b) If the performance of all or any part of the work is, for an unreasonable period of time, suspended, delayed, or interrupted (1) by an act of the Contracting Officer in the administration of this contract, or (2) by the Contracting Officer's failure to act within the time specified (or within a reasonable time if not specified) in this contract an adjustment shall be made for any increase in the cost of performance of the contract (excluding profit) necessarily caused by such unreasonable suspension, delay, or interruption and the contract modified in writing accordingly. However, no adjustment shall be made under this clause for any suspension, delay, or interruption to the extent that performance would have

- been so suspended, delayed, or interrupted by any other cause, including the fault or negligence of the Contractor or for which any equitable adjustment is provided for or excluded under any other provision of this contract.
- (c) A claim under this clause shall not be allowed (1) for any costs incurred more than 20 days before the Contractor shall have notified the Contracting Officer in writing of the act or failure to act involved (but this requirement shall not apply as to a claim resulting from a suspension order); and, (2) unless the claim, in an amount stated, is asserted in writing as soon as practicable after the termination of the suspension, delay, or interruption, but not later than the date of final payment under the contract.

31. Disputes

- (a) "Claim," as used in this clause, means a written demand or written assertion by one of the contracting parties seeking, as a matter of right, the payment of money in a sum certain, the adjustment or interpretation of contract terms, or other relief arising under or relating to the contract. A claim arising under the contract, unlike a claim relating to the contract, is a claim that can be resolved under a contract clause that provides for the relief sought by the claimant. A voucher, invoice, or other routine request for payment that is not in dispute when submitted is not a claim. The submission may be converted to a claim by complying with the requirements of this clause, if it is disputed either as to liability or amount or is not acted upon in a reasonable time.
- (b) Except for disputes arising under the clauses entitled Labor Standards - Davis Bacon and Related Acts, herein, all disputes arising under or relating to this contract, including any claims for damages for the alleged breach thereof which are not disposed of by agreement, shall be resolved under this clause.
- (c) All claims by the Contractor shall be made in writing and submitted to the Contracting Officer for a written decision. A claim by the PHA against the Contractor shall be subject to a written decision by the Contracting Officer.
- (d) The Contracting Officer shall, within 60 (unless otherwise indicated) days after receipt of the request, decide the claim or notify the Contractor of the date by which the decision will be made.
- (e) The Contracting Officer's decision shall be final unless the Contractor (1) appeals in writing to a higher level in the PHA in accordance with the PHA's policy and procedures, (2) refers the appeal to an independent mediator or arbitrator, or (3) files suit in a court of competent jurisdiction. Such appeal must be made within (30 unless otherwise indicated) days after receipt of the Contracting Officer's decision.
- (f) The Contractor shall proceed diligently with performance of this contract, pending final resolution of any request for relief, claim, appeal, or action arising under or relating to the contract, and comply with any decision of the Contracting Officer.

32. Default

- (a) If the Contractor refuses or fails to prosecute the work, or any separable part thereof, with the diligence that will insure its completion within the time specified in this contract, or any extension thereof, or fails to complete said work within this time, the Contracting Officer may, by written notice to the Contractor, terminate the right to

proceed with the work (or separable part of the work) that has been delayed. In this event, the PHA may take over the work and complete it, by contract or otherwise, and may take possession of and use any materials, equipment, and plant on the work site necessary for completing the work. The Contractor and its sureties shall be liable for any damage to the PHA resulting from the **Convenience** Contractor's refusal or failure to complete the work within the specified time, whether or not the Contractor's right to proceed with the work is terminated. This liability includes any increased costs incurred by the PHA in completing the work.

- (b) The Contractor's right to proceed shall not be terminated or the Contractor charged with damages under this clause if—
- (1) The delay in completing the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor. Examples of such causes include (i) acts of God, or of the public enemy, (ii) acts of the PHA or other governmental entity in either its sovereign or contractual capacity, (iii) acts of another contractor in the performance of a contract with the PHA, (iv) fires, (v) floods, (vi) epidemics, (vii) quarantine restrictions, (viii) strikes, (ix) freight embargoes, (x) unusually severe weather, or (xi) delays of subcontractors or suppliers at any tier arising from unforeseeable causes beyond the control and without the fault or negligence of both the Contractor and the subcontractors or suppliers; and
- (2) The Contractor, within days (10 days unless otherwise indicated) from the beginning of such delay (unless extended by the Contracting Officer) notifies the Contracting Officer in writing of the causes of delay. The Contracting Officer shall ascertain the facts and the extent of the delay. If, in the judgment of the Contracting Officer, the findings of fact warrant such action, time for completing the work shall be extended by written modification to the contract. The findings of the Contracting Officer shall be reduced to a written decision which shall be subject to the provisions of the Disputes clause of this contract.
- (c) If, after termination of the Contractor's right to proceed, it is determined that the Contractor was not in default, or that the delay was excusable, the rights and obligations of the parties will be the same as if the termination had been for convenience of the PHA.

33. Liquidated Damages

- (a) If the Contractor fails to complete the work within the time specified in the contract, or any extension, as specified in the clause entitled Default of this contract, the Contractor shall pay to the PHA as liquidated damages, the sum of \$ _____ [Contracting Officer insert amount] for each day of delay. If different completion dates are specified in the contract for separate parts or stages of the work, the amount of liquidated damages shall be assessed on those parts or stages which are delayed. To the extent that the Contractor's delay or nonperformance is excused under another clause in this contract, liquidated damages shall not be due the PHA. The Contractor remains liable for damages caused other than by delay.
- (b) If the PHA terminates the Contractor's right to proceed, the resulting damage will consist of liquidated damages until such reasonable time as may be required for final

completion of the work together with any increased costs occasioned the PHA in completing the work.

- (c) If the PHA does not terminate the Contractor's right to proceed, the resulting damage will consist of liquidated damages until the work is completed or accepted.

34. Termination for

- (a) The Contracting Officer may terminate this contract in whole, or in part, whenever the Contracting Officer determines that such termination is in the best interest of the PHA. Any such termination shall be effected by delivery to the Contractor of a Notice of Termination specifying the extent to which the performance of the work under the contract is terminated, and the date upon which such termination becomes effective.
- (b) If the performance of the work is terminated, either in whole or in part, the PHA shall be liable to the Contractor for reasonable and proper costs resulting from such termination upon the receipt by the PHA of a properly presented claim setting out in detail: (1) the total cost of the work performed to date of termination less the total amount of contract payments made to the Contractor; (2) the cost (including reasonable profit) of settling and paying claims under subcontracts and material orders for work performed and materials and supplies delivered to the site, payment for which has not been made by the PHA to the Contractor or by the Contractor to the subcontractor or supplier; (3) the cost of preserving and protecting the work already performed until the PHA or assignee takes possession thereof or assumes responsibility therefore; (4) the actual or estimated cost of legal and accounting services reasonably necessary to prepare and present the termination claim to the PHA; and (5) an amount constituting a reasonable profit on the value of the work performed by the Contractor.
- (c) The Contracting Officer will act on the Contractor's claim within days (60 days unless otherwise indicated) of receipt of the Contractor's claim.
- (d) Any disputes with regard to this clause are expressly made subject to the provisions of the Disputes clause of this contract.

35. Assignment of Contract

The Contractor shall not assign or transfer any interest in this contract; except that claims for monies due or to become due from the PHA under the contract may be assigned to a bank, trust company, or other financial institution. Such assignments of claims shall only be made with the written concurrence of the Contracting Officer. If the Contractor is a partnership, this contract shall inure to the benefit of the surviving or remaining member(s) of such partnership as approved by the Contracting Officer.

36. Insurance

- (a) Before commencing work, the Contractor and each subcontractor shall furnish the PHA with certificates of insurance showing the following insurance is in force and will insure all operations under the Contract:
- (1) Workers' Compensation, in accordance with state or Territorial Workers' Compensation laws.
- (2) Commercial General Liability with a combined single limit for bodily injury and property damage of not less than \$ _____ [Contracting Officer insert amount]

per occurrence to protect the Contractor and each subcontractor against claims for bodily injury or death and damage to the property of others. This shall cover the use of all equipment, hoists, and vehicles on the site(s) not covered by Automobile Liability under (3) below. If the Contractor has a "claims made" policy, then the following additional requirements apply: the policy must provide a "retroactive date" which must be on or before the execution date of the Contract; and the extended reporting period may not be less than five years following the completion date of the Contract.

(3) Automobile Liability on owned and non-owned motor vehicles used on the site(s) or in connection therewith for a combined single limit for bodily injury and property damage of not less than \$ _____

[Contracting Officer insert amount] per occurrence.

(b) Before commencing work, the Contractor shall furnish the PHA with a certificate of insurance evidencing that Builder's Risk (fire and extended coverage) Insurance on all work in place and/or materials stored at the building site(s), including foundations and building equipment, is in force. The Builder's Risk Insurance shall be for the benefit of the Contractor and the PHA as their interests may appear and each shall be named in the policy or policies as an insured. The Contractor in installing equipment supplied by the PHA shall carry insurance on such equipment from the time the Contractor takes possession thereof until the Contract work is accepted by the PHA. The Builder's Risk Insurance need not be carried on excavations, piers, footings, or foundations until such time as work on the superstructure is started. It need not be carried on landscape work. Policies shall furnish coverage at all times for the full cash value of all completed construction, as well as materials in place and/or stored at the site(s), whether or not partial payment has been made by the PHA. The Contractor may terminate this insurance on buildings as of the date taken over for occupancy by the PHA. The Contractor is not required to carry Builder's Risk Insurance for modernization work which does not involve structural alterations or additions and where the PHA's existing fire and extended coverage policy can be endorsed to include such work.

(c) All insurance shall be carried with companies which are financially responsible and admitted to do business in the State in which the project is located. If any such insurance is due to expire during the construction period, the Contractor (including subcontractors, as applicable) shall not permit the coverage to lapse and shall furnish evidence of coverage to the Contracting Officer. All certificates of insurance, as evidence of coverage, shall provide that no coverage may be canceled or non-renewed by the insurance company until at least 30 days prior written notice has been given to the Contracting Officer.

37. Subcontracts

(a) Definitions. As used in this contract -

(1) "Subcontract" means any contract, purchase order, or other purchase agreement, including modifications and change orders to the foregoing, entered into by a subcontractor to furnish supplies, materials, equipment, and services for the performance of the prime contract or a subcontract.

(2) "Subcontractor" means any supplier, vendor, or firm that furnishes supplies, materials, equipment, or services to or for the Contractor or another subcontractor.

(b) The Contractor shall not enter into any subcontract with any subcontractor who has been temporarily denied participation in a HUD program or who has been suspended or debarred from participating in contracting programs by any agency of the United States Government or of the state in which the work under this contract is to be performed.

(c) The Contractor shall be as fully responsible for the acts or omissions of its subcontractors, and of persons either directly or indirectly employed by them as for the acts or omissions of persons directly employed by the Contractor.

(d) The Contractor shall insert appropriate clauses in all subcontracts to bind subcontractors to the terms and conditions of this contract insofar as they are applicable to the work of subcontractors.

(e) Nothing contained in this contract shall create any contractual relationship between any subcontractor and the PHA or between the subcontractor and HUD.

38. Subcontracting with Small and Minority Firms, Women's Business Enterprise, and Labor Surplus Area Firms

The Contractor shall take the following steps to ensure that, whenever possible, subcontracts are awarded to small business firms, minority firms, women's business enterprises, and labor surplus area firms:

- (a) Placing qualified small and minority businesses and women's business enterprises on solicitation lists;
- (b) Ensuring that small and minority businesses and women's business enterprises are solicited whenever they are potential sources;
- (c) Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses and women's business enterprises;
- (d) Establishing delivery schedules, where the requirements of the contract permit, which encourage participation by small and minority businesses and women's business enterprises; and
- (e) Using the services and assistance of the U.S. Small Business Administration, the Minority Business Development Agency of the U.S. Department of Commerce, and State and local governmental small business agencies.

39. Equal Employment Opportunity

During the performance of this contract, the Contractor/Seller agrees as follows:

(a) The Contractor/Seller shall not discriminate against any employee or applicant for employment because of race color, religion, sex, sexual orientation, gender identity, disability, or national origin.

(b) The Contractor/Seller shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, disability, or national origin. Such action shall include, but not be limited to, (1) employment, (2) upgrading demotion, (4) transfer, (5) recruitment or recruitment advertising, (6) layoff or termination, (7) rates of pay or other forms of compensation, and (8) selection for training, including apprenticeship

(c) The Contractor/Seller agrees to post in conspicuous places available to employees and applicants for employment the notices to be provided by the Contracting Officer setting forth the provisions of this nondiscrimination clause.

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

(e) The Contractor/Seller shall send, to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, the notice to be provided by the Contracting Officer advising the labor union or workers' representative of the Contractor's commitments under this clause, and post copies of the notice in conspicuous places available to employees and applicants for employment.

(f) The Contractor/Seller shall comply with Executive Order 11246, as amended, and the rules, regulations, and orders of the Secretary of Labor.

(g) The Contractor/Seller shall furnish all information and reports required by Executive Order 11246, as amended, Section 503 of the Rehabilitation Act of 1973, as amended, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto. The Contractor/Seller shall permit

access to its books, records, and accounts by the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(h) In the event of a that the Contractor/Seller is in noncompliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be canceled, terminated or suspended in whole or in part and the contractor/seller may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(i) The contractor/seller will include the provisions of paragraphs (a) through (h) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each sub[contractor/seller] or vendor. The [contractor/seller] will take such action with respect to any subcontract or purchase order as may be directed by the Secretary of Labor as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that in the event the [contractor/seller] becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the [contractor/seller] may request the United States to enter into such litigation to protect the interests of the United States.

(j) Compliance with the requirements of this clause shall be to the maximum extent consistent with, but not in derogation of, compliance with section 7(b) of the Indian Self-Determination and Education Assistance Act and the Indian Preference clause of this contract.

40. Employment, Training, and Contracting Opportunities for Low-Income Persons, Section 3 of the Housing and Urban Development Act of 1968.

(a) The work to be performed under this contract is subject to the requirements of Section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (section 3). The purpose of section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by Section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.

(b) The parties to this contract agree to comply with HUD's regulations in 24 CFR Part 75, which implement Section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the Part 75 regulations.

(c) The contractor agrees to send to each labor organization or representative of workers with which the contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the contractor's commitments under this section 3 clause and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the Section 3 prioritization requirements and shall state the minimum percentages of labor hour requirements established in the Benchmark Notice (FR-6085-N-04).

(d) The contractor agrees to include this section 3 clause in every subcontract subject to compliance with regulations in 24 CFR Part 75, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR Part 75. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR Part 75.

(e) Noncompliance with HUD's regulations in 24 CFR Part 75 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.

(f) Contracts, subcontracts, grants, or subgrants subject to Section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 5307(b)) or subject to tribal preference requirements as authorized under 101(k) of the Native American Housing Assistance and Self-Determination Act (25 U.S.C. 4111(k)) must provide preferences in employment, training, and business opportunities to Indians and Indian organizations, and are therefore not subject to the requirements of 24 CFR Part 75.

41. Interest of Members of Congress

No member of or delegate to the Congress of the United States of America shall be admitted to any share or part of this contract or to any benefit that may arise therefrom.

42. Interest of Members, Officers, or Employees and Former Members, Officers, or Employees

No member, officer, or employee of the PHA, no member of the governing body of the locality in which the project is situated, no member of the governing body of the locality in which the PHA was activated, and no other public official of such locality or localities who exercises any functions or responsibilities with respect to the project, shall, during his or her tenure, or for one year thereafter, have any interest, direct or indirect, in this contract or the proceeds thereof.

43. Limitations on Payments made to Influence Certain Federal Financial Transactions

- (a) The Contractor agrees to comply with Section 1352 of Title 31, United States Code which prohibits the use of **Acts** Federal appropriated funds to pay any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, and officer or employee of Congress, or an employee of a Member of Congress in connection with any of the following covered Federal actions: the awarding of any Federal contract; the making of any Federal grant; the making of any Federal loan; the entering into of any cooperative agreement; or the modification of any Federal contract, grant, loan, or cooperative agreement.
- (b) The Contractor further agrees to comply with the requirement of the Act to furnish a disclosure (OMB Standard Form LLL, Disclosure of Lobbying Activities) if any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a Federal contract, grant, loan, or cooperative agreement.

44. Royalties and Patents

The Contractor shall pay all royalties and license fees. It shall defend all suits or claims for infringement of any patent rights and shall save the PHA harmless from loss on account thereof; except that the PHA shall be responsible for all such loss when a particular design, process or the product of a particular manufacturer or manufacturers is specified and the Contractor has no reason to believe that the specified design, process, or product is an infringement. If, however, the Contractor has reason to believe that any design, process or product specified is an infringement of a patent, the Contractor shall promptly notify the Contracting Officer. Failure to give such notice shall make the Contractor responsible for resultant loss.

45. Examination and Retention of Contractor's Records

- (a) The PHA, HUD, or Comptroller General of the United States, or any of their duly authorized representatives shall, until 3 years after final payment under this contract, have access to and the right to examine any of the Contractor's directly pertinent books, documents, papers, or other records involving transactions related to this contract for the purpose of making audit, examination, excerpts, and transcriptions.
- (b) The Contractor agrees to include in first-tier subcontracts under this contract a clause substantially the same as paragraph (a) above. "Subcontract," as used in this clause, excludes purchase orders not exceeding \$10,000.
- (c) The periods of access and examination in paragraphs (a) and (b) above for records relating to (1) appeals under the Disputes clause of this contract, (2) litigation or settlement of claims arising from the performance of this contract, or (3) costs and expenses of this contract to which the PHA, HUD, or Comptroller General or any of their duly authorized representatives has taken exception shall continue until disposition of such appeals, litigation, claims, or exceptions.

46. Labor Standards - Davis-Bacon and Related

If the total amount of this contract exceeds \$2,000, the Federal labor standards set forth in the clause below shall apply to the development or construction work to be performed under the contract.

- (a) Minimum Wages.
 - (1) All laborers and mechanics employed under this contract in the development or construction of the project(s) involved will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 CFR 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the regular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits in the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein; provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under 29 CFR 5.5(a)(1)(ii) and the Davis-Bacon poster (WH-1321) shall

be posted at all times by the Contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

(2) (i) Any class of laborers or mechanics, including

helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. HUD shall approve an additional classification and wage rate and fringe benefits therefor only when all the following criteria have been met: (A) The work to be performed by the classification requested is not performed by a classification in the wage determination; and (B) The classification is utilized in the area by the construction industry; and (C) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

- (ii) If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and HUD or its designee agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by HUD or its designee to the Administrator of the Wage and Hour Division, Employee Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary.
- (iii) In the event the Contractor, the laborers or mechanics to be employed in the classification or their representatives, and HUD or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee, to the Administrator of the Wage and Hour Division for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary.
- (iv) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (a)(2)(ii) or (iii) of this clause shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in classification.
- (3) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the Contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.
- (4) If the Contractor does not make payments to a trustee or other third person, the Contractor may consider as part of the wages of any laborer or mechanic the

amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program; provided, that the Secretary of Labor has found, upon the written request of the Contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the Contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

- (b) Withholding of funds. HUD or its designee shall, upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the Contractor under this contract or any other Federal contract with the same prime Contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime Contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the Contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working in the construction or development of the project, all or part of the wages required by the contract, HUD or its designee may, after written notice to the Contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased. HUD or its designee may, after written notice to the Contractor, disburse such amounts withheld for and on account of the Contractor or subcontractor to the respective employees to whom they are due.
- (c) Payrolls and basic records.
- (1) Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working in the construction or development of the project. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made, and actual wages paid. Whenever the Secretary of Labor has found, under 29 CFR 5.5(a)(1)(iv), that the wages of any laborer or mechanic include the amount of costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the Contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(2) (i) The Contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Contracting Officer for transmission to HUD or its designee. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under subparagraph (c)(1) of this clause. This information may be submitted in any form desired. Optional Form WH-347 (Federal Stock Number 029-005-00014-1) is available for this purpose and may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. The Contractor is responsible for the submission of copies of payrolls by all subcontractors. (Approved by the Office of Management and Budget under OMB Control Number 1214-0149.)

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

- (A) That the payroll for the payroll period contains the information required to be maintained under paragraph (c) (1) of this clause and that such information is correct and complete;
 - (B) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR Part 3; and
 - (C) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.
- (iii) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirements for submission of the "Statement of Compliance" required by subparagraph (c)(2)(ii) of this clause.
- (iv) The falsification of any of the above certifications may subject the Contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 3729 of Title 31 of the United States Code.

(3) The Contractor or subcontractor shall make the records required under subparagraph (c)(1) available for inspection, copying, or transcription by authorized representatives of HUD or its designee, the Contracting Officer, or the Department of Labor and shall permit such representatives to interview employees during working hours on the job. If the Contractor or subcontractor fails to submit the required records or to make them available, HUD or its designee may, after written notice to the Contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to

make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

- (d) (1) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship and Training, Employer and Labor Services (OATELS), or with a State Apprenticeship Agency recognized by OATELS, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by OATELS or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the Contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in this paragraph, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the Contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator of the Wage and Hour Division determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event OATELS, or a State Apprenticeship Agency recognized by OATELS, withdraws approval of an apprenticeship program, the Contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.
- (2) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under

the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed in the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate in the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate in the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate in the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the Contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

- (3) Equal employment opportunity. The utilization of apprentices, trainees, and journeymen under this clause shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.
- (e) Compliance with Copeland Act requirements. The Contractor shall comply with the requirements of 29 CFR Part 3, which are hereby incorporated by reference in this contract.
- (f) Contract termination; debarment. A breach of this contract clause may be grounds for termination of the contract and for debarment as a Contractor and a subcontractor as provided in 29 CFR 5.12.
- (g) Compliance with Davis-Bacon and related Act requirements. All rulings and interpretations of the Davis-Bacon and related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract.
- (h) Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this clause shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the Contractor (or any of its subcontractors) and the PHA, HUD, the U.S. Department of Labor, or the employees or their representatives.
- (i) Certification of eligibility.
 - (1) By entering into this contract, the Contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the Contractor's firm is a person or firm ineligible to be awarded contracts by the United States Government by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

- (2) No part of this contract shall be subcontracted to any person or firm ineligible for award of a United States Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
 - (3) The penalty for making false statements is prescribed in the U. S. Criminal Code, 18 U.S.C. 1001.
- (j) Contract Work Hours and Safety Standards Act. As used in this paragraph, the terms "laborers" and "mechanics" include watchmen and guards.
 - (1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics, including watchmen and guards, shall require or permit any such laborer or mechanic in any workweek in which the individual is employed on such work to work in excess of 40 hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of 40 hours in such workweek.
 - (2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the provisions set forth in subparagraph (j)(1) of this clause, the Contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such Contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic (including watchmen and guards) employed in violation of the provisions set forth in subparagraph (j)(1) of this clause, in the sum of \$27 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by provisions set forth in subparagraph (j)(1) of this clause. DOL posts current fines at: <https://www.dol.gov/whd/govcontracts/cwhssa.htm#cmp>
 - (3) Withholding for unpaid wages and liquidated damages. HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the Contractor or subcontractor under any such contract or any Federal contract with the same prime Contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime Contractor, such sums as may be determined to be necessary to satisfy any liabilities of such Contractor or subcontractor for unpaid wages and liquidated damages as provided in the provisions set forth in subparagraph (j)(2) of this clause.
 - (k) Subcontracts. The Contractor or subcontractor shall insert in any subcontracts all the provisions contained in this clause, and such other clauses as HUD or its designee may by appropriate instructions require, and also a clause requiring the subcontractors to include these provisions in any lower tier subcontracts. The prime Contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all these provisions.

47. Non-Federal Prevailing Wage Rates

(a) Any prevailing wage rate (including basic hourly rate and any fringe benefits), determined under State or tribal law to be prevailing, with respect to any employee in any trade or position employed under the contract, is inapplicable to the contract and shall not be enforced against the Contractor or any subcontractor, with respect to employees engaged under the contract whenever such non-Federal prevailing wage rate exceeds:

(1) The applicable wage rate determined by the Secretary of Labor pursuant to the Davis-Bacon Act (40 U.S.C. 3141 et seq.) to be prevailing in the locality with respect to such trade;

(b) An applicable apprentice wage rate based thereon specified in an apprenticeship program registered with the U.S. Department of Labor (DOL) or a DOL-recognized State Apprenticeship Agency; or

(c) An applicable trainee wage rate based thereon specified in a DOL-certified trainee program.

48. Procurement of Recovered Materials.

(a) In accordance with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, the Contractor shall procure items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR Part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition. The Contractor shall procure items designated in the EPA guidelines that contain the highest percentage of recovered materials practicable unless the Contractor determines that such items: (1) are not reasonably available in a reasonable period of time; (2) fail to meet reasonable performance standards, which shall be determined on the basis of the guidelines of the National Institute of Standards and Technology, if applicable to the item; or (3) are only available at an unreasonable price.

() Paragraph (a) of this clause shall apply to items purchased under this contract where: (1) the Contractor purchases in excess of \$10,000 of the item under this contract; or (2) during the preceding Federal fiscal year, the Contractor: (i) purchased any amount of the items for use under a contract that was funded with Federal appropriations and was with a Federal agency or a State agency or agency of a political subdivision of a State; and (ii) purchased a total of in excess of \$10,000 of the item both under and outside that contract.

"General Decision Number: GU20230001 01/06/2023

Superseded General Decision Number: GU20220001

State: Guam

Construction Types: Building, Heavy, Highway and Residential

Excludes any projects funded under the National Defense Authorization Act 2010 - Guam Realignment Fund - Defense Policy Review

County: Guam Statewide.

BUILDING, HEAVY, HIGHWAY AND RESIDENTIAL

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026. Please note that this Executive Order applies to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	. Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least \$16.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2023.
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The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which

these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION"

A. APPLICABILITY

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

(1) MINIMUM WAGES

- (i) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment, computed at rates not less than those contained in the wage determination of the Secretary of Labor (which is attached hereto and made a part hereof), regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 CFR 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period.

Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under 29 CFR 5.5(a)(1)(ii) and the Davis-Bacon poster (WH1321)) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place, where it can be easily seen by the workers.

(ii) Additional Classifications.

- (A) Any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. HUD shall approve an additional classification and wage rate and fringe benefits therefor only when the following criteria have been met:
- (1) The work to be performed by the classification requested is not performed by a classification in the wage determination;
 - (2) The classification is utilized in the area by the construction industry; and
 - (3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.
- (B) If the contractor, the laborers and mechanics to be employed in the classification (if known), or their representatives, and HUD or its designee agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), a report of the action taken shall be sent by HUD or its designee to the Administrator of the Wage and Hour Division ("Administrator"), Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget ("OMB") under OMB control number 1235-0023.)
- (C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, or HUD or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB Control Number 1235-0023.)

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

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

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, that the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program. (Approved by the Office of Management and Budget under OMB Control Number 1235-0023.)

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

(3) Payrolls and basic records.

(i) Maintaining Payroll Records. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification(s), hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in Section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made, and actual wages paid.

Whenever the Secretary of Labor has found, under 29 CFR 5.5(a)(1)(iv), that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits.

Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs. (Approved by the Office of Management and Budget under OMB Control Numbers 1235-0023 and 1215-0018)

(ii) Certified Payroll Reports.

(A) The contractor shall submit weekly, for each week in which any contract work is performed, a copy of all payrolls to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead, the payrolls only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <https://www.dol.gov/agencies/whd/forms> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.

Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee, the contractor, or the Wage and Hour Division of the U.S. Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this subparagraph for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to HUD or its designee. (Approved by the Office of Management and Budget under OMB Control Number 1235-0008.)

- (B)** Each payroll submitted shall be accompanied by a “Statement of Compliance,” signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:
- (1)** That the payroll for the payroll period contains the information required to be provided under 29 CFR 5.5(a)(3)(ii), the appropriate information is being maintained under 29 CFR 5.5(a)(3)(i), and that such information is correct and complete;
 - (2)** That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR Part 3;
 - (3)** That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract; and
- (C)** The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the “Statement of Compliance” required by subparagraph (a)(3)(ii)(b).
- (D)** The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 3729 of Title 31 of the United States Code.

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

(4) Apprentices and Trainees.

(i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency (where appropriate), to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman’s hourly rate) specified in the contractor’s or subcontractor’s registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice’s level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination.

Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program.

If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringe benefits shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

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

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

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

- (5) **Compliance with Copeland Act requirements.** The contractor shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this Contract.
- (6) **Subcontracts.** The contractor or subcontractor will insert in any subcontracts the clauses contained in subparagraphs (1) through (11) in this paragraph (a) and such other clauses as HUD or its designee may, by appropriate instructions, require, and a copy of the applicable prevailing wage decision, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this paragraph.
- (7) **Contract termination; debarment.** A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.
- (8) **Compliance with Davis-Bacon and Related Act Requirements.** All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this Contract.
- (9) **Disputes concerning labor standards.** Disputes arising out of the labor standards provisions of this Contract shall not be subject to the general disputes clause of this Contract. Such disputes shall be resolved in accordance with the procedures of the U.S. Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and HUD or its designee, the U.S. Department of Labor, or the employees or their representatives.
- (10) **Certification of Eligibility.**
- (i) By entering into this Contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

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

(iii) Anyone who knowingly makes, presents, or submits a false, fictitious, or fraudulent statement, representation or certification is subject to criminal, civil and/or administrative sanctions, including fines, penalties, and imprisonment (e.g., 18 U.S.C. §§ 287, 1001, 1010, 1012; 31 U.S.C. §§ 3729, 3802).

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

B. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The provisions of this paragraph (b) are applicable where the amount of the prime contract exceeds **\$100,000**. As used in this paragraph, the terms “laborers” and “mechanics” include watchmen and guards.

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

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in subparagraph B(1) of this paragraph, the contractor, and any subcontractor responsible therefor, shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory) for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in subparagraph B(1) of this paragraph, **in the sum set by the U.S. Department of Labor at 29 CFR 5.5(b)(2)** for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by the clause set forth in subparagraph B(1) of this paragraph. In accordance with the Federal Civil Penalties Inflation Adjustment Act of 1990 (28 U.S.C. § 2461 Note), the DOL adjusts this civil monetary penalty for inflation no later than January 15 each year.

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

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

C. HEALTH AND SAFETY

The provisions of this paragraph (c) are applicable where the amount of the prime contract exceeds **\$100,000**.

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

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

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

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we the undersigned _____

(Name of Principal)

as PRINCIPAL, and

SURETY

are held and firmly bound unto Guam Housing and Urban Renewal Authority, hereinafter called "GHURA", in the penal sum of _____

Dollars, (_____), lawful money of the United States, for the payment of which sum will and truly be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas, the Principal has submitted the accompanying bid, dated the _____, 20____, for the _____

NOW THEREFORE, if the principal shall not withdraw said bond within the period specified therein after the opening of the same, or, if no period be specified, within sixty (60) days after the said opening, and shall within ten (10) days after the prescribed forms are presented to him for signature, enter into a written contract with Guam Housing and Urban Renewal Authority in accordance with the bid as accepted, and give bond with good and sufficient surety or sureties, as may be required, for the faithful performance and proper fulfillment of such contract; or in the event of the withdrawal of said bid within the period specified, or time specified, if the principal shall pay Guam Housing and Urban Renewal Authority, the difference between the amount specified in said bid and the amount for which Guam Housing and Urban Renewal Authority may procure the required work or supplies, or both, if the latter amount be in excess of the former, then the above obligation shall be void and of no effect, otherwise to remain in full force and virtue.

IN WITNESS WHEREOF, the above bounden parties have executed this instrument under their several seals this _____ day of _____ 20____, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representatives, pursuant to authority of its governing body.

ATTEST:

Sole Proprietorship

(Individual Principal Signature)

(Business Address)

(Name of Individual Principal Above)

(Seal)

ATTESTED:

Corporation

(Corporate Principal Signature)

(Business Address)

(Name of Corporate Principal Above)

(Title)

Affix Corporate Seal

ATTEST:

Surety Company

(Corporate Surety Signature)

Corporate Surety Signature)

(Business Address)

Name of Corporate Surety)

(Title)

Affix Corporate Seal

(Power of Attorney for person signing for Surety Company must be attached to the Bond)

CERTIFICATE AS TO CORPORATE PRINCIPAL

I, _____, certify that I am the _____

Secretary of the Corporation names as Principal in the within the bond; that
_____ " who signed the said bond on behalf of the

Principal was then _____ of said corporation; that I know his

signature, and his signature thereto is genuine; and that said bond was duly signed,

sealed, and attested to, for and *in* behalf of said corporation by authority of its governing

body.

(Corporate Seal)

THIS AGREEMENT MADE THIS _____ day of _____ in the year _____ by and between _____, A Corporation, Partnership or Sole Proprietorship existing under the laws of the State of _____ Guam hereinafter called the "Contractor," and the Guam Housing and Urban Renewal Authority, herein called the "GHURA."

WITNESSETH, that the Contractor and GHURA for the consideration stated herein, mutually agree as follows:

ARTICLE I

Statement of Work. The Contractor shall furnish all labor, material, equipment, and services and perform and complete all work required for the construction of Project No. GHURA-23-19 in strict accordance with "Specifications" for the ,which includes all items listed in the Tale of Contents and Addenda thereto, Numbered and the drawings referred to herein, all as prepared by Architect, which said Specifications, Addenda and Drawings are incorporated herein by reference and made a part hereof.

ARTICLE II

Contract Price. GHURA shall pay the Contractor for the performance of the Contract, in current funds, subject to additions and deductions as provided in the specifications for completed work meeting the requirements of the Contract Documents, the sum of _____.

ARTICLE III

Contractor agrees that time is of the essence in the completion of the work in the time required by this contract and hereby waives any notice of putting in default for failure to complete on time.

ARTICLE IV

Contract Documents. The contract shall consist of the following component parts:

- (a) This Instrument
- (b) General Conditions
 - (HUD-5370EZ or HUD-5370)
 - Wage Determination
- (c) Special/supplemental Conditions
- (d) Technical Specifications
- (e) Drawings
- (f) IFB # GHURA-23-19; Sinajana Arts Center Concrete Sidewalk
- (g) Forms
 - (AG-002) Affidavit Disclosing Ownership and Commissions
 - (AG-003) - Affidavit re Non-Collusion
 - (AG-004) - Affidavit re No Gratuities or Kickbacks
 - (AG- 005) - Affidavit re Ethical Standards
 - (AG-007) - Affidavit re Contingent Fees
 - (GHURA-13) - Mandatory Compliance for Section 3
 - (GHURA-01B) - Section 3 Business Preference
 - (HUD-4010) - Federal Labor Standards
 - (HUD-5369) – Instructions to Bidders Offerors
 - (HUD-5369-a) - Representations, Certifications, and Other Statements of Bidders
- (h) Proposal
- (i) Addendum(s)

This instrument, together with the other documents enumerated in this ARTICLE IV, which said other documents are as fully a part of the Contract as if hereto attached or herein repeated, form the Contract. In the event that any provision of any other component part of this Contract conflicts with any provision of any other component part, the provision of the component part first enumerated in the ARTICLE IV shall govern, except as otherwise specially stated. The various provisions in Addenda shall be construed in the order of the preference of the component part of the Contract which each modifies. IN WITNESS WHEREOF, the parties hereto have caused this Instrument to be executed in three (3) original counterparts as of the day _____ and _____ year _____ first _____ above _____ written

Form of Contract

Name:

Executed by: **Elizabeth F. Napoli**
Executive Director for the Guam Housing Urban
Renewal Authority

Signature:

Signature:

Title:

Date:

Company Name:

Date:

Contractor's Certification

I, _____, certify that I am the
_____, of the Corporation, Partnership or Sole
(Title)
Proprietorship named as Contractor herein, and that _____, who signed
(Name of Signatory)
the Contract on behalf of the Contractor, was then the
of said Corporation, Partnership or Sole Proprietorship; that said contract was duly signed for and in behalf of
said Corporation, Partnership or Sole Proprietorship by authority of its governing body, and is within the scope of
its corporate powers.

(Corporate Seal) Signature of person affixing the Corporate Seal

Funds Certified By: _____ Date: _____
Controller

Grant No.	Project Number	Amount	

Bid Information

IFB Number GHURA-23-19		Submit bid to: GHURA 117 Bien Venida Ave. Sinajana, Guam 96926 Contract: Sonny Perez, 475-1404 or email sperez@ghura.org Andrew Manglona, 475-1315 or email amanglona@ghura.org
Bid Opening Date: August 10, 2023	Bid Opening Time: 2:00pm	
Project Title: Sinajana Arts Center Concrete Sidewalk		
Project Description: Construct Sinajana Arts Center Sidewalk		
Contract Completion Time: See Special Conditions		
Amount of Liquidated Damages: \$150.00 per calendar day		

Bidder's Information

Name of Company	FEIN
	Bidder's Telephone Number
Bidder's Address	Bidder's Fax Number
	Name of Person Submitting the Bid
	Title of Person Submitting the Bid

Bidder's Acknowledgments

This is to acknowledge that an authorized representative(s) of the above named company has familiarized himself/herself/themselves with the local conditions affecting the cost of the work, all instructions, General and Supplemental Conditions, Contractor's compliance and reporting requirements, the specifications, drawings, and addenda.

GHURA requires a minimum acceptance period of 60 calendar days "Acceptance period," as used in this provision, means the number of calendar days available to GHURA for awarding a contract from the date specified in this solicitation for receipt of bids. **GHURA reserves the option, depending on the availability of funds to award a contract to the lowest responsible responsive bidders submitting the lowest bid on Base Bid Item No. 1, 2 & 3 . A bid may be submitted for either or both bid items**

By the submission of this bid, the bidder certifies that neither it nor any person or firm who has an interest in the bidder's firm is a person or firm ineligible to be awarded contracts by the United States Government by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
 In submitting this bid, it is understood that the right is reserved by GHURA to reject any and all bids.

Acknowledgment of Addenda The bidder acknowledges the following addenda: (Failure to acknowledge may cause bid rejection.)

Addenda No.	Addenda Date	Addenda No.	Addenda Date

Required Submissions

To be responsive, the bidder must submit the following documents in a sealed envelope marked on its face with the correct bidding information with his/her bid:

Form HUD-5369-a , Representations, Certifications, and Other Statements of Bidders AG form 002 , Disclosing ownership & Commission AG form 003 , Affidavit re Non-Collusion AG form 004 , Affidavit re No Gratuities or Kickbacks AG form 005 , Affidavit re Ethical Standards AG form 007 -Affidavit re Contingent Fees Form GHURA 01B , Section 3 Preference Certification completed and certified OR marked NA if the bidder is not claiming Section 3 preference.	Form GHURA 09 , Law to be observed GHURA 010 , Bidder's Qualifications including a Financial Statement and a certificate of authority to do business in Guam Form GHURA 013 , Bidder's Section 3 Commitment Form GHURA 014 , Bid Form Form GHURA 016 , Bid Bond and Certificates Contractor's License Acknowledged copies of any and all Addenda
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GHURA shall reject a bid as non-responsive and bid that does not include each of the above documents, fully completed and properly executed.

A breakdown is required for each item description as noted below

Base Bid Item No. 1

The bidder hereby proposes to furnish all labor, materials, equipment and services required to complete the construction contract as per the requirements of the specification documents for the construction of Sinajana Arts Center Concrete Sidewalk all in accordance therewith, for the sum of:

(\$ _____ DOLLARS)

Item #	Item Description	Estimated Quantity	Unit		Unit Bid Price
			Measure	Price	
					\$
					\$
					\$
					\$
					\$
					\$
					\$
					\$
					\$
					\$
					\$
The bidder may continue by copying and attaching this section to the Bid Form.					
Sum of all cost extensions are included in the base bid					\$

Additive Bid Items

GHURA does not require an additive bid for this proposal. To offer a bid the bidder is requested to breakout the following items from the base bid. Each item shall include all labor, materials, equipment and services required to complete

Item #	Item Description	Item Bid

Individual Bidder

<p>Trading and doing business as</p> <p>If fictitious trade name is employed in the conduct of business, insert such name and complete, as appropriate. This foregoing fictitious or trade name <input type="checkbox"/> is <input type="checkbox"/> is not a been registered under Guam Law.</p>	<p>Bidder's Signature _____</p> <p>Date _____</p>
<p>Name of person submitting the bid</p>	<p>Witness</p> <p>Witness Name _____</p>
<p>Business address</p>	<p>Witness Signature _____</p> <p>Date _____</p>

Partnership Bidder

<p>Name of Partnership</p> <p>If fictitious trade name is employed in the conduct of business, insert such name and complete, as appropriate. This foregoing fictitious or trade name <input type="checkbox"/> is <input type="checkbox"/> is not a been registered under Guam Law.</p>	<p>Bidder's Signature _____</p> <p>Date _____</p>
<p>Name of person submitting the bid</p>	<p>Witness</p> <p>Witness Name _____</p>
<p>Business address</p>	<p>Witness Signature _____</p> <p>Date _____</p>

Corporate Bidder

Name of Corporation	Corporate's Signature _____ Title _____ Date _____
Name of person submitting the bid	Certificate as to Corporate Principle I, _____,
Business address	certify that I am the Secretary of the corporation named as Principal in the within bond: That _____ _____ , who signed the bond on behalf of the Principal , was then of said corporation; that I know his signature, and his signature thereto is genuine; and that said bond was duly signed, sealed, and attested to for and I behalf of said corporation by authority of its governing body. _____ (Corporate Seal)



GHURA

Guahan Housing and Urban Renewal Authority
Aturidat Ginima' Yan Rinueban Siudat Guahan
117 Bien Venida Avenue, Sinajana, GU 96910
Phone: (671)477-9851 Fax: (671) 300-7565 TTY: (671) 472-3701



SINAJANA ARTS CENTER CONCRETE SIDEWALKS

Sinajana, Guam

PREPARED BY:
A/E DIVISION

APPROVED BY:

SONNY M. PEREZ
A/E MANAGER

SPECIAL CONDITIONS

1.0 PROJECT DESCRIPTION

1.1 OVERVIEW:

The project is located within Sinajana Arts Center additional covered concrete walkway. See permit drawing for exact location. The intent of the project is to provide new covered walkway for Sinajana Arts Center.

Contractor shall minimize interruption to the on-going operations. Contractor shall coordinate for interruption of utility services. All other actions not involving interruption of services can be conducted during regular working hours. In the event work/project activities other than what is indicated during regular program is to occur simultaneously, contractor shall verify, coordinate and may be required to phase such work/project activities.

1.2 LOCATION WORK

The project is located on Sinajana Art Center beside Mayors Office, Sinajana, Guam. See attached Key Map.

2.0 PROJECT OBJECTIVES

2.1 SCOPE OF WORK: The contractor shall provide all labor, materials, equipment, permit and clearances, architectural and engineering services, transportation, supervision, and other incidental work required for the project. Other incidental work required includes any and all items and considerations necessary to ensure a complete and usable final product, including, but not limited to, the necessary design and construction considerations not specifically stated elsewhere in this statement of work. Complete and usable final product means that the completed final product is finished throughout and can be used to fully satisfy the requirements and the intended purpose of the project. Contractor shall turnover the project to the owner occupancy ready.

The work includes, but is not limited to, the following:

2.2 Administrative Works:

- Mobilization and demobilization
- Preparation of Miscellaneous contract Submittal
- Application of permits and required clearances
- Other administrative work not mentioned above but required by the basic contract
- Complete Engineering Design services, signed/stamped by a professional engineer.

3.0 TIME OF COMPLETION

The work shall commence at the time stipulated in the Notice to Proceed and shall be full completed within the time frame indicated below:

- a. Construction Contract Period: **120 consecutive calendar days** after building permit is issued and signed off by DPW and other government agencies.
- b. Liquidated Damages: In case of failure on part of the Contractor to complete the work within the time fixed in the Contract, or within any time extensions given thereof, the Contractor and his sureties shall be liable for and shall pay to GHURA the sum of **\$150.00** liquidated damages per calendar days of delay until the work is completed or accepted.

B. Site Inspection:

Verify the existing utilities and obstructions within the project area, to include existing primary and secondary power distribution lines, any existing utilities (water, drainage, and communications) and other obstruction that may affect the repair/replace work.

3.0 DESIGN AND CONSTRUCTION CRITERIA

3.1 SCOPE OF WORK:

DEMOLITION AND REMOVAL WORK.

1. Removed existing catch basin and existing drainage pipe. See construction set of drawings.
2. Replace all damaged concrete curb and slab to match existing.

CIVIL, ARCHITECTURAL AND STRUCTURAL

A. New Work

1. Construct new covered concrete walkway with 5" thick concrete pavement with #4 @ 12" o.c.e.w over 6" compacted basecourse @ 95% density. The total area of new sidewalk is approximately A=1,910 sf±. See attached floor plan for the location of concrete columns and and concrete roof. Roof has approximate area is A= 3,078 sf ±. See attached Permit set of drawing.
2. Provide 2.5-inches thick of AC pavement over 6" thick compacted basecourse. Provide smooth transition between new to existing.
3. Demolish existing slab-on-grade on preparation for the new column footing along existing slab-on-grade.
4. Install new catch basins, trench drain and drainage pipe and connect to existing drainage.
5. Exterior wall painting shall be acrylic semi-gloss entire walkway, ceiling, column and beams. See specification for painting.
6. Demolished existing catch basin and existing drainage pipe and connect existing downspout 2 location to new catch basin , trench drain and 6" drainage pipe.
7. Provide new roof drain and downspout and connect to new drainage system.
8. Install new aluminum stair and awning at exist door on mezzanine area.
9. Provide CMU wall railing beside the aluminum stair. See attached Permit Set of drawings.
10. Provide new light fixture for concrete walkway and connect to existing panel. The contractor

shall provide GHURA certification from the master Electrician stating all new work was under his/her direct supervision.

3.1 DESIGN AND CONTRACT REQUIREMENTS:

The project shall conform to latest International Building Code (IBC), CNMI and Guam Stormwater Management Manual 2006 other related applicable codes and regulations for building construction and safety to be used where applicable. Modern construction techniques maybe incorporated in the project design to obtain both quality and economy and to provide a functional, complete and usable facility.

The contractor shall obtain a Work Clearance Request Form prior to the start of work as well as other applicable permits required being accomplished.

The contractor operation shall be limited to providing minimum disruption to facility operation and mission requirements. Applicable work contingencies plans shall be available in the event of natural disaster and other related emergencies.

The contractor operation shall be confined to the immediate vicinity of the work and shall not in any way to interfere or obstruct the ingress or egress to and from adjacent property. All existing improvements shall be protected from damage.

Progress Design Submittal Schedule:

- Final Design: 10 calendar days following receipt of Government review comments on the 100% Design and notice to proceed (NTP) with Final documents. The Final documents include all documents required for the Pre-Final submission finalized. Submit two (2) hard copies (22" x 34") ANSI D size format drawing sets, specifications (included in the drawings), preliminary construction schedule, basis of design; also provide electronic pdf copies on two (2) CDROMs.

3.2 DESIGN REFERENCES:

In addition to the references included under the basic Design-Build contract, the publications listed below form a part of this work request to the extent referenced. The publications are referred to within the text by the basic designation only.

- Building Law, Title XXXII, Government Code of Guam
- International Building Code (IBC), Latest Edition
- American Concrete Institute, ACI Code, Latest Edition
- Minimum Design Loads for Building and Other Structures, ASCE-10
- National Electric Code (NEC), Latest Edition
- International Mechanical Code (IMC), Latest Edition
- International Fire Code (IFC), Latest Edition
- ASHRAE Standards and Handbook
- NFPA 72, National Fire Alarm Code, Latest Edition
- Life Safety Code, NFPA 101, Latest Edition
- Illuminating Engineering Society (IES)
- American Disability Act (ADA)
- GEPA, USEPA, CFR29
- Guam Energy Code
- Army Corp of Engineers
- 2006 CNMI/Guam Stormwater Management Manual
- All other codes, regulations, technical publications and design manuals applicable in the performance of this RFP

GOVERNMENT REVIEWING AND APPROVING AGENCIES:

1. Department of Public Works
2. Guam Environment Protection Agency
3. Department of land Management
4. Guam Power Authority
5. Guam Waterworks Authority
6. Guam Historic Preservation
7. Guam Department of Agriculture
- 8.

4.0 SUBMITTALS:

In addition to the submittals required under the basic contract, submit the following:

Proposal requirements:

- Narrative of the proposal, indicating, in detail, materials considered significant for this project for technical evaluation purposes.
- Preliminary construction schedule and utility outages.
- Catalog cuts for materials considered significant for technical evaluation purposes

- Detailed cost estimate.

Submittal requirements (after award and before start of construction):

- Construction Schedule
- Activity Hazard Analysis
- Accident Prevention Plan
- Construction Quality Control Plan
- Environmental Protection Plan
- Confirmation of all environmental clearances, permits, and/or concurrence of work.
- Final construction plans and specifications

GENERAL NOTES:

- Drawing provided are preliminary drawings for Bid purpose only and shall not be use or construction document. Contractor shall obtain Registered Engineer to provide construction documents to comply with Guam Design Codes and Guides References for building permit.
- Contractor shall field verify existing site condition, dimension and scope of work prior to bidding. Contractor to notify contacting officer/engineer for any discrepancies between scope of work, actual field conditions and project intent which may interfere with this project.
- Miscellaneous items of work not indicated but which are necessary to implement the project intent of which are customarily performed shall be provided by the Contract Bidder as if fully and correctly described in the scope of work and/or drawings.
- The contractor shall coordinate and obtain all necessary clearance from all Government agencies prior to any work activity within government utility side. Damaged done by the contractor to any existing GOVGUAM utility lines shall be repaired by the contractor at no cost to the government. Repair work shall be per GOVGUAM standards and approval.
- The Contractor shall obtain and pay for the Building Permit and other permit and Governmental fees, License and Inspections necessary for property execution and completion of the work.
- Protection: Provide temporary fences, barricades, coverings, or other protection to preserve existing items indicated to remain and to prevent injury or damage to persons or property. Provide protection for adjacent properties: restore damaged work to condition existing prior to start of work.
- Cleaning up: The Contractor shall, at all times, keep the premises free from accumulations of waste materials or rubbish caused by his operations. At the completion of the work, he shall remove from site all construction materials, waste materials and rubbish from and about the sites as well.

5.0 DISPOSAL:

1. Removal and Disposal fee shall be paid by the contractor.

1. DESIGN AND CONTRACT REQUIREMENTS:

The project shall conform to latest International Building Code (IBC), other related applicable codes and regulations for building construction and safety to be used where applicable. Modern construction techniques maybe incorporated in the project design to obtain both quality and economy and to provide a functional, complete and usable facility.

The contractor shall obtain a Work Clearance Request Form prior to the start of work as well as other applicable permits required being accomplished.

The contractor operation shall be limited to providing minimum disruption to facility operation and mission requirements. Applicable work contingencies plans shall be available in the event of natural disaster and other related emergencies.

The contractor operation shall be confined to the immediate vicinity of the work and shall not in any way to interfere or obstruct the ingress or egress to and from adjacent property. All existing improvements shall be protected from damage.

Design Submittal Schedule:

- 60% Design Submittal: No later than 45 calendar days following construction award date. Submit five (2) hard copies of (11" x 17") size format, specifications, and preliminary construction schedule and basis of design, and electronic pdf copies on two (2) CD-ROMs. Allow 7 calendar days for Government review.
- 100% Design Submittal: 15 calendar days following receipt of Government review comments on the 60% design submittal. Submit five (2) hard copies (22" x 34") ANSI D size format drawing sets, calculations, specifications , preliminary construction schedule, basis of design also submit electronic pdf copies on two (2) CD-ROMs. Allow 7 calendar days for Government review.
- Construction Drawings: 10 calendar days following receipt of Government review comments on the 100% Design and notice to proceed (NTP) with Construction drawings documents. Submit three (2) hard copies (22" x 34") ANSI D size format drawing sets, specifications (included in the drawings), preliminary construction schedule, basis of design; also provide electronic pdf copies on two (2) CDROMs.

Close-out Submittal Requirements

- Submit as-built drawings to A/E Engineering in ANSI D (22"x 34") size Mylar sheets and two (2) sets of CD-ROMs containing native CADD files, PDF of drawings and specifications, calculations, basis of design, submittal register, and other documentation (photos, support files, etc.), as applicable.

6.0 SITE SAFETY AND HEALTH OFFICER (SSHO) QUALIFICATIONS:

The SSHO for this task order shall meet the requirements in accordance with EM 385-1-1

Section 01.A17.b.

7.0 QUALITY CONTROL (QC) MANAGER QUALIFICATIONS:

The QC Manager for this task order shall meet the requirements in accordance with the basic contract.



GHURA

**Guam Housing and Urban Renewal Authority
Aturidat Ginima' Yan Rinueban Siudat Guahan**

TECHNICAL SPECIFICATIONS

For

**Covered Walkway for the
Central Community Arts Hall, Sinajana**

November, 2022

Prepared by:



E. M. CHEN & ASSOCIATES, INC.

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SECTION 01 12 00

CUTTING, INFILL, AND PATCHING

PART 1 -- GENERAL

1.1 SECTION INCLUDES

This Section specifies administrative and procedural requirements for cutting infill and patching.

1.2 RELATED SECTIONS

- (a) Section 01 05 00: Schedule of Values
- (b) Section 01 10 00: Coordination
- (c) Section 01 20 00: Project Meetings
- (d) Section 01 33 00: Submittal Procedures
- (e) Section 01 74 00: Warranties

PART 2 -- PRODUCTS

2.1 MATERIALS

Patching materials must match item being patched in material, color, texture and thickness.

PART 3 -- EXECUTION

3.1 SUBMITTALS

The word "cutting" as used in the Contract Documents includes, but is not limited to, cutting, drilling, chopping, and other similar operations and the word "patching" includes, but is not limited to, patching, rebuilding, reinforcing, repairing, refurbishing, restoring, replacing, or other similar operations. Infill includes but is not limited to framed openings, or holes requiring framing.

3.2 QUALITY ASSURANCE

(a) Requirements for structural Work: Do not cut and patch structural elements in a manner that would change their load-carrying capacity or load-deflection ratio.

Obtain permission from ARCHITECT and for cutting or drilling before altering the following structural elements:

- (1)** Foundation construction
- (2)** Bearing and retaining walls
- (3)** Structural concrete
- (4)** Lintels
- (5)** Timber and primary wood framing
- (6)** Structural decking
- (7)** Miscellaneous structural metals
- (8)** Equipment supports

(b) Operational Limitations: Do not cut operating elements or related components in a manner that would result in reducing their capacity to perform as intended or in a manner that would result in increased maintenance or decreased operational life or safety.

(c) Visual Requirements: Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in the opinion of ARCHITECT, reduce the building's aesthetic qualities. Do not cut and patch construction in a manner that would result in visual evidence of cutting and patching. Remove and replace Work cut and patched in a visually unsatisfactory manner.

If possible, retain the original installer or fabricator to cut and patch the exposed Work listed below. If it is impossible to engage the original installer or fabricator, engage another recognized experienced and specialized firm.

- (1)** Ceramic and quarry tile
- (2)** Masonry (exterior and interior where exposed)
- (3)** Finish carpentry

3.3 WARRANTY

Existing Warranties: Replace, patch, and repair material and surfaces cut or damaged by methods and with materials in such a manner as not to void any warranties required or existing.

3.4 INSPECTION

Examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed before cutting. If unsafe or unsatisfactory conditions are encountered, take corrective action before proceeding.

Before proceeding, meet at the Project site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

3.5 PREPARATION

(a) Temporary support: Provide adequate temporary support of existing improvements or Work to be cut.

(b) Protection: Protect existing improvements and Work during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of existing improvements or Work that might be exposed during cutting and patching operations.

(c) Avoid interference with operation of adjoining areas or interruption of free passage to adjoining areas.

(d) Completely seal of area to avoid spreading dust and debris.

3.6 PERFORMANCE

(a) General: Employ skilled workmen to perform cutting and patching. Carefully remove existing Work to be salvaged. Protect and store for reuse into the Work. Verify compatibility and suitability of existing substrates before starting the Work.

(b) Cutting: Cut existing construction using methods least likely to damage elements retained or adjoining Work. Where possible, review proposed procedures with the original installer; comply with the original installer's recommendations.

(1) Use power tools designed for sawing or grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.

(2) Cut or drill from the exposed or finished side into concealed surfaces.

(3) Cut through concrete and masonry using a cutting machine, such as a carborundum saw or a diamond-core drill. Saw cut reinforcing bars and paint ends with bituminous paint except where bonded into new concrete or masonry.

(4) Comply with requirements of applicable Division 2 Sections where cutting and patching requires excavating, backfill, or re-compaction.

(5) Woodwork: Remove entire panels. Do not cut through plywood panels.

(6) Sheet Metal: Remove to joint, lap, or connection. Secure loose or unfastened ends or edges and seal watertight.

(7) Glass: Remove cracked, broken, or damaged glass and clean rabbets and stops of setting materials.

(8) Plaster: Cut back to sound plaster on straight lines, and back bevel edges of remaining plaster. Trim existing lath and prepare for new lath. Install scrim reinforcing over joint and apply finish coat over both planes.

(9) Gypsum Wallboard: Cut back on straight lines to undamaged surfaces with at least two opposite cut edges centered on supports.

(10) Acoustical ceilings: Remove hanger wires and related appurtenances.

(11) Ceramic Tile: Cut back to sound tile and backing on joint lines. Remove tile in even squares or rectangles. Confirm extent of removal with architect.

(12) Flooring: Completely remove flooring and clean surface of adhesive.

(c) Patching: Patch with durable seams that are invisible. Comply with required tolerances.

- (1)** Inspect and test patched areas to demonstrate integrity of the installation. Verify conditions of existing substrates prior to executing Work.
- (2)** Restore exposed finishes of patched areas and extend finish restoration into retaining adjoining construction in a manner that will eliminate evidence of patching and refinishing.
- (3)** Concrete: Maintain cut edges in a moist condition for twenty four (24) hours prior to the placement of new concrete. In lieu of this an epoxy adhesive may be provided. Finish placed concrete to match existing unless noted otherwise. Concrete shall provide a compressive strength 2500 PSI where installed to repair existing concrete, unless noted otherwise.
- (4)** Metal Fabrications: Items to remain exposed shall have their edges cut and ground smooth and rounded.
- (5)** Sheet Metal: Replace removed or damaged sheet metal items as required for new Work.
- (6)** Lath and Plaster: Install new lath materials to match existing and fasten to supports at 6 inch centers. Provide a 6 inch lap where new lath to adjoins existing lath. Fasten new lath as required for new Work. Restore paper backings as required. Apply a bonding agent on cut edges of existing plaster. Apply three coat plasters of the type, thickness, finish, texture, and color to match existing.
- (7)** Gypsum Wallboard: Fasten cut edges of wallboard. Install patches with at least two opposite edges centered on supports and secure at 6 inch centers. Tape and finish joints and fastener heads. Patching shall be invisible when painted and finished.
- (8)** Resilient Flooring: Completely remove flooring and prepare substrate for new material. Remove adhesive from substrate.
- (9)** Painting: Prepare areas to be patched, patch and paint as specified under related sections of the Contract Documents.

3.7 INFILL

- (a)** At openings over two feet in any direction, install framing to support infill materials.

(b) Framing must match existing framing in width and type.

(c) Make positive, mechanical attachments to the framing using appropriate connectors. Remove finishes when necessary and then repair to make attachments.

(d) Final infill shall be flush and seamless to the eye.

3.8 CLEANING

Clean areas and spaces where cutting, infill and patching are performed. Completely remove paint, mortar, oils, putty, and similar items. Clean piping, conduit, and similar features before applying paint or other finishing materials. Restore damaged coverings to their original condition.

-- End of Section 01 12 00 --

SECTION 01 20 00
PROJECT MEETINGS

PART 1 -- GENERAL

1.1 SECTION INCLUDES

This Section specifies administrative and procedural requirements for Project meetings, including but not limited to, the following:

- (a) Job start meeting.
- (b) Pre-installation conferences.
- (c) Progress meetings.
- (d) Meetings as required by the CM.

1.2 RELATED SECTIONS

- (a) Section 01 02 00: Project Forms
- (b) Section 01 10 00: Coordination
- (c) Section 01 33 00: Submittal Procedures

PART 2 -- PRODUCTS (Not Used)

PART 3 -- EXECUTION

3.1 JOB START MEETING

- (a) In accordance with General Condition Article 2.6, OAR will schedule a job start meeting before starting the Work, at a time and date determined by CM. Meeting shall be held at the Project site or another location as determined by CM. Meeting will be held in order to review responsibilities, procedures, and other administrative requirements contained within the Contract Documents.

(b) Authorized representatives of OWNER, IOR, ARCHITECT, CONTRACTOR and other parties shall attend the meeting. All participants at the meeting shall be familiar with the Project and authorized to conclude matters relating to the Work.

(c) Agenda items shall include significant items which could affect progress of the Work, including, but not limited to the following:

- (1)** Preliminary Construction Schedule
- (2)** Critical work sequencing
- (3)** Designation of responsible personnel
- (4)** Identification of CM
- (5)** Procedures for processing field decisions
- (6)** Request for Proposal
- (7)** Construction Directive and Change Order
- (8)** Procedures for processing Applications for Payment
- (9)** Labor Compliance and Prevailing wages
- (10)** Submittal of Shop Drawings, Product Data, material lists, and Samples
- (11)** Preparation of project record documents
- (12)** Use of the Project site and/or premises
- (13)** Parking availability
- (14)** Office, work, and storage areas
- (15)** Equipment deliveries and priorities
- (16)** Security
- (17)** Housekeeping
- (18)** Working hours
- (19)** Contract Compliance Officer
- (20)** Insurance Services including OCIP
- (21)** Environmental Health & Safety

(d) CM shall prepare and issue meeting minutes to attendees and interested parties.

3.2 PRE-INSTALLATION CONFERENCES

(a) CONTRACTOR shall coordinate and conduct pre-installation conferences at the Project site as required by related Sections of the Contract Documents.

(b) CONTRACTOR, manufacturers, and fabricators involved in or affected by the installation and its coordination or integration with other, preceding or subsequent, installations of Work shall attend the meeting. CONTRACTOR shall advise CM, IOR, and ARCHITECT of scheduled meeting dates in order to secure their attendance.

(1) CONTRACTOR shall review the progress of construction activities and preparations for the activity under consideration at each pre-installation conference, including requirements for the following:

- (a)* Contract Documents
- (b)* Options
- (c)* Related Construction Directives and Change Orders
- (d)* Purchases
- (e)* Deliveries
- (f)* Shop Drawings, Product Data, and quality-control samples
- (g)* Review of mockups
- (h)* Possible conflicts
- (i)* Compatibility problems
- (j)* Time schedules
- (k)* Weather limitations
- (l)* Manufacturer's recommendations
- (m)* Warranty requirements
- (n)* Compatibility of materials
- (o)* Acceptability of substrates
- (p)* Temporary facilities
- (q)* Space and access limitations
- (r)* Governing regulations
- (s)* Inspecting and testing requirements
- (t)* Required performance results
- (u)* Recording requirements
- (v)* Protection

(2) CONTRACTOR shall record significant discussions and directives received from each conference. CONTRACTOR shall, within five (5) calendar days after the meeting date,

distribute the minutes of the meeting to all concerned parties, including but not limited to, CM, IOR, and ARCHITECT.

3.3 PROGRESS MEETINGS

(a) Progress meetings will be held at the Project site at regular intervals, typically weekly, as determined by the CM.

(b) In addition to representatives of CONTRACTOR, OWNER, and ARCHITECT, each Subcontractor, supplier, or other entity concerned with current progress or involved in planning, coordination, or performance of the Work shall, if requested by CM, be represented at these meetings. All participants at the conference shall be familiar with the Project and authorized to conclude all matters relating to the Work.

(c) Failure of the CONTRACTOR to be so represented at any progress meeting which is held at a mutually agreed time or for which a written notice is given, shall not relieve CONTRACTOR from abiding by any and all CM or ARCHITECT determinations or directives issued at such meeting.

(d) CM will review and correct or approve minutes of the previous progress meeting and will review other significant items affecting progress. Topics for discussion as appropriate to the status of the Project include but are not limited to:

- (1)** Interface requirements
- (2)** Construction Schedule
- (3)** Sequence and coordination
- (4)** Status of submittals / RFC's
- (5)** Deliveries
- (6)** Off-site fabrication
- (7)** Access
- (8)** Site utilization
- (9)** Temporary Construction Facilities and Controls
- (10)** Hours of work
- (11)** Housekeeping
- (12)** Quality and workmanship
- (13)** Unforeseen conditions
- (14)** Testing and Inspection

- (15)** Defective Work
- (16)** Construction Directives
- (17)** Request for Proposals
- (18)** Change Order Proposals and Change Orders
- (19)** Documentation of information for payment requests
- (20)** Application for Payment
- (21)** Other items as required or as brought forth.

(e) No later than five (5) working days after each progress meeting, CM will prepare and distribute minutes of the meeting to each present and absent party. Include a brief summary, in narrative form, of progress, decisions, directives, actions taken, and all other issues since the previous meeting and report.

Schedule Updating: If required, CONTRACTOR shall revise the Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue the revised schedule concurrently with the next scheduled progress meeting.

(f) Project meetings are held for the benefit of the District. The District retains the right to control the agenda and limit or add participants.

3.4 ADDITIONAL MEETINGS

CM, upon giving notice to the intended parties and without further obligation, may require additional meetings to discuss Work and/or Project related activities.

-- End of Section 01 20 00 --

SECTION 01 33 00

SUBMITTAL PROCEDURES

PART 1 -- GENERAL

1.1 DEFINITIONS

1.1.1 Submittal Descriptions (SD)

Submittals requirements are specified in the technical sections, and are identified by SD numbers and titles as follows.

SD-01 Preconstruction Submittals

List of proposed products.

Construction Progress Schedule.

Submittal register.

Schedule of values.

Quality control plan.

Environmental protection plan.

SD-02 Shop Drawings

Drawings, diagrams, and schedules specifically prepared to illustrate some portion of the work.

Diagrams and instructions from a manufacturer or fabricator for use in producing the product and as aids to the Contractor for integrating the product or system into the project.

Drawings prepared by or for the Contractor to show how multiple systems and interdisciplinary work will be coordinated.

SD-03 Product Data

Catalog cuts, illustrations, schedules, diagrams, performance charts, instructions and brochures illustrating size, physical appearance and other characteristics of materials or equipment for some portion of the work.

Samples of warranty language when the contract requires extended product warranties.

SD-04 Samples

Physical examples of materials, equipment or workmanship that illustrate functional and aesthetic characteristics of a material or product and establish standards by which the work can be judged.

Color samples from the manufacturer's standard line (or custom color samples if specified) to be used in selecting or approving colors for the project.

Field samples and mock-ups constructed on the project site establish standards by which the ensuring work can be judged. Includes assemblies or portions of assemblies which are to be incorporated into the project and those which will be removed at conclusion of the work.

SD-05 Design Data

Calculations, mix designs, analyses or other data pertaining to a part of work.

SD-06 Test Reports

Report signed by authorized official of testing laboratory that a material, product or system identical to the material, product or system to be provided has been tested in accord with specified requirements. Testing must have been within three years of date of contract award for the project.

Report which includes findings of a test required to be performed by the Contractor on an actual portion of the work or prototype prepared for the project before shipment to job site.

Report which includes finding of a test made at the job site or on sample taken from the job site, on portion of work during or after installation.

Investigation reports.
Daily checklists.

Final acceptance test and operational test procedure.

SD-07 Certificates

Statements printed on the manufacturer's letterhead and signed by responsible officials of manufacturer of product, system or material attesting that product, system or material meets specification requirements. Must be dated after award of project contract and clearly name the project.

Document required of Contractor, or of a supplier, installer or subcontractor through Contractor, the purpose of which is to further quality of orderly progression of a portion of the work by documenting procedures, acceptability of methods or personnel qualifications.

Confined space entry permits.

Text of posted operating instructions.

SD-08 Manufacturer's Instructions

Preprinted material describing installation of a product, system or material, including special notices and Material Safety Data sheets concerning impedances, hazards and safety precautions.

SD-10 Operation and Maintenance Data

Data that is furnished by the manufacturer, or the system provider, to the equipment operating and maintenance personnel. This data is needed by operating and maintenance personnel for the safe and efficient operation, maintenance and repair of the item.

SD-11 Closeout Submittals

Documentation to record compliance with technical or administrative requirements or to establish an administrative mechanism.

1.1.2 Approving Authority

Office authorized to approve submittal shall be the Contracting Office and its representatives.

1.1.3 Work

As used in this section, on- and off-site construction required by contract documents, including labor necessary to produce submittals, construction, materials, products, equipment, and systems incorporated or to be incorporated in such construction.

1.2 SUBMITTALS

1.2.1 Submittal Register

Submit submittal register using submittals management program approved by the Contracting Officer. Verify that all submittals required for project are listed and add missing submittals.

1.2.2 Contractor's Responsibilities

- (a)** Determine and verify field measurements, materials, field construction criteria; review each submittal; and check and coordinate each submittal with requirements of the work and contract documents.
- (b)** Correct and resubmit submittal as directed by the Contracting Officer. When resubmitting disapproved transmittals or transmittals noted for resubmittal, the Contractor shall provide copy of that previously submitted transmittal including all reviewer comments for use by the Contracting Officer. Direct specific attention in writing or on resubmitted submittal, to revisions not requested by the Contracting Officer.
- (c)** Furnish additional copies of submittal when requested by the Contracting Officer, to a limit of 6 copies per submittal.
- (d)** Complete work which must be accomplished as basis of a submittal in time to allow submittal to occur as scheduled.
- (e)** Ensure no work has begun until submittals for that work have been returned as "approved," or "approved as noted", except to the extent that a portion of work must be accomplished as basis of submittal.

1.3 FORMAT OF SUBMITTALS

1.3.1 Transmittal Form

Transmit each submittal, except sample installations and sample panels, to office of the Engineer. Transmit submittals with transmittal form prescribed by Contracting Officer and standard for project. The transmittal form shall identify Contractor, indicate date of submittal, and include information prescribed by transmittal form and required in paragraph entitled "Identifying Submittals." Process transmittal forms to record actions regarding sample panels and sample installations.

1.3.2 Identifying Submittals

Identify submittals, except sample panel and sample installation, with the following information permanently adhered to or noted on each separate component of each submittal and noted on transmittal form. Mark each copy of each submittal identically, with the following:

- (a) Project title and location.
- (b) Construction contract number.
- (c) Section number of the specification section by which submittal is required.
- (d) Submittal description (SD) number of each component of submittal.
- (e) When a resubmission, add alphabetic suffix on submittal description, for example, SD-10A, to indicate resubmission.
- (f) Name, address, and telephone number of subcontractor, supplier, manufacturer and any other second tier Contractor associated with submittal.
- (g) Product identification and location in project.

1.3.3 Format for SD-02 Shop Drawings

- (a) Shop drawings shall not be less than 8 1/2 by 11 inches nor more than 22 by 34 inches.
- (b) Present 8 1/2 by 11 inches sized shop drawings as part of the bound volume for submittals required by section. Present larger drawings in sets.

(c) Include on each drawing the drawing title, number, date, and revision numbers and dates, in addition to information required in paragraph entitled "Identifying Submittals."

(d) Dimension drawings, except diagrams and schematic drawings; prepare drawings demonstrating interface with other trades to scale. Shop drawing dimensions shall be the same unit of measure as indicated on the contract drawings. Identify materials and products for work shown.

(e) Drawings shall include the nameplate data, size and capacity. Also include applicable federal, military, industry and technical society publication references.

1.3.4 Format of SD-03 Product Data and SD-08 Manufacturer's Instruction's

(a) Present product data submittals for each section as a complete, bound volume. Include table of contents, listing page and catalog item numbers for product data.

(b) Indicate, by prominent notation, each product which is being submitted; indicate specification section number and paragraph number to which it pertains.

(c) Supplement product data with material prepared for project to satisfy submittal requirements for which product data does not exist. Identify this material as developed specifically for project, with information and format as required for submission of SD-07 Certificates.

(d) Product data shall include the manufacturer's name, trade name, place of manufacture, and catalog model or number. Submittals shall also include applicable federal, military, industry and technical society publication references. Should manufacturer's data require supplemental information for clarification, the supplemental information shall be submitted as specified for SD-07 Certificates.

(e) Where equipment or materials are specified to conform to industry and technical society reference standards of the organizations such as American National Standards Institute (ANSI), ASTM International (ASTM), National Electrical Manufacturer's Association (NEMA), Underwriters Laboratories (UL), and Association of Edison Illuminating Companies (AEIC), submit proof of such compliance. The label or listing by the specified organization will be acceptable evidence of compliance. In lieu of the label or listing, submit a certificate from an independent testing organization, competent to perform testing, and approved by the Contracting Officer. The certificate shall state that the item has been tested in accordance with the specified organization's test methods and that the item complies with

the specified organization's reference standard.

(f) Submit manufacturer's instruction prior to installation.

1.3.5 Format of SD-04 Samples

(a) Furnish samples in sizes below, unless otherwise specified or unless the manufacturer has prepackaged samples of approximately same size as specified:

(1) Sample of Equipment or Device: Full size.

(2) Sample of Materials Less Than 2 by 3 inches: Built up to 8 1/2 by 11 inches.

(3) Sample of Materials Exceeding 8 1/2 by 11 inches: Cut down to 8 1/2 by 11 inches and adequate to indicate color, texture, and material variations.

(4) Sample of Linear Devices or Materials: 10 inch length or length to be supplied, if less than 10 inches. Examples of linear devices or materials are conduit and handrails.

(5) Sample of Non-Solid Materials: Pint. Examples of non-solid materials are sand and paint.

(6) Color Selection Samples: 2 by 4 inches.

(7) Sample Panel: 4 by 4 feet.

(8) Sample Installation: 100 square feet.

(b) Samples Showing Range of Variation: Where variations are unavoidable due to nature of the materials, submit sets of samples of not less than three units showing extremes and middle of range.

(c) Reusable Samples: Incorporate returned samples into work only if so specified or indicated. Incorporated samples shall be in undamaged condition at time of use.

(d) Recording of Sample Installation: Note and preserve the notation of area constituting sample installation but remove notation at final clean up of project.

(e) When color, texture or pattern is specified by naming a particular manufacturer and

style, include one sample of that manufacturer and style, for comparison.

1.3.5 Format of SD-05 Design Data and SD-07 Certificates

(a) Provide design data and certificates on 8 1/2 by 11 inches paper. Provide a bound volume for submittals containing numerous pages.

1.3.7 Format of SD-06 Test Reports and SD-09 Manufacturer's Field Reports

(a) Provide reports on 8 1/2 by 11 inches paper in a complete bound volume.

(b) Indicate by prominent notation, each report in the submittal. Indicate specification number and paragraph number to which it pertains.

1.3.8 Format of SD-10 Operation and Maintenance (O&M) Data

(a) O&M Data format shall comply with the requirements specified in SECTION 01 78 23 - OPERATION AND MAINTENANCE DATA.

1.3.9 Format of SD-01 Preconstruction Submittals and SD-11 Closeout Submittals

(a) When submittal includes a document which is to be used in project or become part of project record, other than as a submittal, do not apply Contractor's approval stamp to document, but to a separate sheet accompanying document.

1.4 QUANTITY OF SUBMITTALS

1.4.1 Number of Copies of SD-02 Shop Drawings

(a) Submit five copies of submittals of shop drawings requiring review and approval only by QC organization and five copies of shop drawings requiring review and approval by Contracting Officer.

1.4.2 Number of Copies of SD-03 Product Data and SD-08 Manufacturer's Instructions

Submit in compliance with quantity requirements specified for shop drawings.

1.4.3 SD-04 Number of Samples

(a) Submit two samples, or two sets of samples showing range of variation, of each required item. One approved sample or set of samples will be retained by approving authority and one will be returned to Contractor.

(b) Submit one sample panel. Include components listed in technical section or as directed.

(c) Submit one sample installation, where directed.

(d) Submit one sample of non-solid materials.

1.4.4 Number of Copies SD-05 Design Data and SD-07 Certificates

(a) Submit in compliance with quantity requirements specified for shop drawings.

1.4.5 Number of Copies SD-06 Test Reports and SD-09 Manufacturer's Field Reports

(a) Submit in compliance with quantity with quality requirements specified for shop drawings.

1.4.6 Number of Copies of SD-10 Operation and Maintenance Data

Submit five (5) copies of O&M Data to the Contracting Officer for review and approval

1.4.7 Number of Copies of SD-01 Preconstruction Submittals and SD-11 Closeout Submittals

(a) Unless otherwise specified, submit administrative submittals compliance with quantity requirements specified for shop drawings.

1.5 FORWARDING SUBMITTALS

1.5.1 Submittals Required from the Contractor

As soon as practicable after award of contract, and before procurement of fabrication, forward to the Engineer, submittals required in the technical sections of this specification, including shop drawings, product data and samples. One copy of the transmittal form for all submittals shall be forwarded to the Contracting Officer, Contracting Officer's Representative or other appropriate person in Charge of Construction.

The Engineer for this project will review and approve for the Contracting Officer those submittals reserved for Contracting Officer approval to verify submittals comply with the contract requirements.

1.5.1.1 O&M Data

The Engineer for this project will review and approve for the Contracting Officer O&M Data to verify the submittals comply with the contract requirements.; submit data specified for a given item within 30 calendar days after the item is delivered to the contract site.

(a) In the event the Contractor fails to deliver O&M Data within the time limits specified, the Contracting Officer may withhold from progress payments 50 percent of the price of the item with which such O&M Data are applicable.

1.6 APPROVED SUBMITTALS

The Contracting Officer's approval of submittals shall not be construed as a complete check, but will indicate only that the general method of construction, materials, detailing and other information are satisfactory design, general method of construction, materials, detailing and other information appear to meet the Solicitation and Accepted Proposal. Approval will not relieve the Contractor of the responsibility for any error which may exist. After submittals have been approved by the Contracting Officer, no resubmittal for the purpose of substituting materials or equipment will be considered unless accompanied by an explanation of why a substitution is necessary.

1.7 DISAPPROVED SUBMITTALS

The Contractor shall make all corrections required by the Contracting Officer and promptly furnish a corrected submittal in the form and number of copies specified for the initial submittal. The Contractor shall make all corrections required by the Contracting Officer, obtain the Designer of Record's approval when applicable, and promptly furnish a corrected submittal in the form and number of copies specified for the initial submittal. Any "information only" submittal found to contain errors or unapproved deviations from the Solicitation or Accepted Proposal shall be resubmitted as one requiring "approval" action, requiring both Designer of Record and Government approval. If the Contractor considers any correction indicated on the submittals to constitute a change to the contract, a notice in accordance with the Contract documents shall be given promptly to the Contracting Officer.

1.8 WITHHOLDING OF PAYMENT

Payment for materials incorporated in the work will not be made if required approvals have not been obtained. No payment will be made for any materials incorporated into the work for any conformance review submittals or information only submittals found to contain errors or deviations from the Solicitation or Accepted Proposal.

1.9 GENERAL

The Contractor shall make submittals as required by the specifications. The Contracting Officer may request submittals in addition to those specified when deemed necessary to adequately describe the work covered in the respective sections. Units of weights and measures used on all submittals shall be the same as those used in the contract drawings. Each submittal shall be complete and in sufficient detail to allow ready determination of compliance with contract requirements. Proposed deviations from the contract requirements shall be clearly identified. Submittals shall include items such as: Contractor's, manufacturer's, or fabricator's drawings; descriptive literature including but not limited to catalog cuts, diagrams, operating charts or curves; test reports; test cylinders; samples; O&M manuals including parts list; certifications; warranties; and other such required submittals. Submittals requiring Government approval shall be scheduled and made prior to the acquisition of the material or equipment covered thereby. Samples remaining upon completion of the work shall be picked up and disposed of in accordance with manufacturer's Material Safety Data Sheets (MSDS) and in compliance with existing laws and regulations.

PART 2 – PRODUCTS (Not used)

PART 3 -- EXECUTION (Not used)

-- End of Section 01 33 00 --

SECTION 01 45 00.00 10

QUALITY CONTROL (QC)

PART 1 -- GENERAL

1.1 SUBMITTALS

The following shall be submitted in accordance with SECTION 01 33 00 - SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

QC Plan

Submit a QC plan within 30 calendar days after receipt of Notice of Award.

1.2 INFORMATION FOR THE CONTRACTING OFFICER

Deliver the following to the Contracting Officer:

- (a)** Contractors Quality Control (CQC) Report: Original and one copy, by 10:00 AM the next working day after each day that work is performed;
- (b)** Contractor Production Report: Original and one copy by 10:00 AM the next working day after each day that work is performed;
- (c)** Preparatory Phase Checklist: Original attached to the original CQC Report and one copy attached to each copy;
- (d)** Initial Phase Checklist: Original attached to the original CQC Report and one copy attached to each copy;
- (e)** Field Test Reports: One copy, within two working days after the test is performed, attached to the CQC Report;
- (f)** QC Meeting Minutes: One copy, within two working days after the meeting; and

(g) QC Certifications: As required by the paragraph entitled "QC Certifications."

1.3 QC PROGRAM REQUIREMENTS

Establish and maintain a QC program as described in this section. The QC program consists of a QC Manager, a QC plan, a Coordination and Mutual Understanding Meeting, QC meetings, three phases of control, submittal review and approval, testing, and QC certifications and documentation necessary to provide materials, equipment, workmanship, fabrication, construction and operations which comply with the requirements of this contract. The QC program shall cover on-site and off-site work and shall be keyed to the work sequence. No work or testing may be performed unless the QC Manager is on the work site.

1.3.1 Preliminary Work Authorized Prior to Acceptance

The only work that is authorized to proceed prior to the acceptance of the QC plan is mobilization of storage and office trailers, temporary utilities, and surveying.

1.3.2 Acceptance

Acceptance of the QC plan is required prior to the start of construction. The Contracting Officer reserves the right to require changes in the QC plan and operations as necessary, including removal of personnel, to ensure the specified quality of work. The Contracting Officer reserves the right to interview any member of the QC organization at any time in order to verify the submitted qualifications.

1.3.3 Notification of Changes

Notify the Contracting Officer, in writing, of any proposed change, including changes in the QC organization personnel, a minimum of seven calendar days prior to a proposed change. Proposed changes shall be subject to the acceptance by the Contracting Officer.

1.4 QC ORGANIZATION

1.4.1 QC Manager

1.4.1.1 Duties

Provide a QC Manager at the work site to implement and manage the QC program. In addition to implementing and managing the QC program, the QC Manager may perform the duties of

project superintendent. The QC Manager is required to attend the Coordination and Mutual Understanding Meeting, conduct the QC meetings, perform the three phases of control, perform submittal review and approval, ensure testing is performed and provide QC certifications and documentation required in this contract. The QC Manager is responsible for managing and coordinating the three phases of control and documentation performed by others.

1.4.1.2 Qualifications

An individual with a minimum of 5 years combined experience as a superintendent, inspector, QC Manager, project manager, or construction manager on similar size and type construction contracts which included the major trades that are part of this contract. The individual must be familiar with the requirements of the EM-385-1-1 and have experience in the areas of hazard identification and safety compliance.

1.4.1.3 Construction Quality Management Training

In addition to the above experience and education requirements, the QC Manager shall have completed the course Construction Quality Management for Contractors and will have a current certificate.

1.4.2 Alternate QC Manager Duties and Qualifications

Designate an alternate for the QC Manager to serve in the event of the designated QC Manager's absence. The period of absence may not exceed two weeks at one time, and not more than 30 workdays during the contract period. The qualification requirements for the Alternate QC Manager shall be the same as for the QC Manager.

1.5 QC PLAN

1.5.1 Requirements

Provide, for acceptance by the Contracting Officer, a QC plan submitted in a three-ring binder that covers both on-site and off-site work and includes the following with a table of contents listing the major sections identified with tabs.

- (a) QC ORGANIZATION: A chart showing the QC organizational structure and its relationship to the production side of the organization.

(b) NAMES AND QUALIFICATIONS: In resume format, for each person in the QC organization. Include the CQM for Contractors course certification required by the paragraph entitled "Construction Quality Management Training".

(c) DUTIES, RESPONSIBILITY AND AUTHORITY OF QC PERSONEL: Of each person in the QC organization.

(d) OUTSIDE ORGANIZATIONS: A listing of outside organizations such as architectural and consulting engineering firms that will be employed by the Contractor and a description of the services these firms will provide.

(e) APPOINTMENT LETTERS: Letters signed by an officer of the firm appointing the QC Manager and Alternate QC Manager and stating that they are responsible for managing and implementing the QC program as described in this contract. Include in this letter the QC Manager's authority to direct the removal and replacement of non-conforming work.

(f) SUBMITTAL PROCEDURES AND INITIAL SUBMITTAL REGISTER: Procedures for reviewing, approving and managing submittals. Provide the name(s) of the person(s) in the QC organization authorized to review and certify submittals prior to approval.

(g) TESTING LABORATORY INFORMATION: Testing laboratory information required by the paragraphs "Accredited Laboratories" or "Testing Laboratory Requirements", as applicable.

(h) TESTING PLAN AND LOG: A Testing Plan and Log that includes the tests required, referenced by the specification paragraph number requiring the test, the frequency, and the person responsible for each test.

(i) PROCEDURES TO COMPLETE REWORK ITEMS: Procedures to identify, record, track and complete rework items.

(j) DOCUMENTATION PROCEDURES: Use Government formats.

(k) LIST OF DEFINABLE FEATURES: A Definable Feature of Work (DFOW) is a task, which is separate and distinct from other tasks, has the same control requirements and work crews. The list shall be cross-referenced to the Contractor's Construction Schedule and the specification sections. For projects requiring a Progress Chart, the list of definable features of work shall include but not be limited to all items of work on the schedule. For projects requiring a Network Analysis Schedule, the list of definable features of work shall include but not be limited to all critical path activities.

(l) PROCEDURES FOR PERFORMING THREE PHASES OF CONTROL: For each DFOW provide Preparatory and Initial Phase Checklists. Each list shall include a breakdown of quality checks that will be used when performing the quality control functions, inspections, and tests required by the contract documents. The preparatory and initial phases shall be conducted with a view towards obtaining quality construction by planning ahead and identifying potential problems.

(m) PERSONNEL MATRIX: Not Applicable.

(n) PROCEDURES FOR COMPLETION INSPECTION: See the paragraph entitled "COMPLETION INSPECTIONS".

(o) TRAINING PROCEDURES AND TRAINING LOG: Not Applicable.

1.6 COORDINATION AND MUTUAL UNDERSTANDING MEETING

The coordination and mutual understanding meeting can be combined with Pre-Construction meeting. The purpose of this is to develop a mutual understanding of the QC details, including documentation, administration for on-site and off-site work, and the coordination of the Contractor's management, production and the QC personnel. At the meeting, the Contractor will be required to explain how three phases of control will be implemented for each DFOW. Contractor's personnel required to attend shall include the QC Manager, project manager, and superintendent. Minutes of the meeting will be prepared by the QC Manager and signed by both the Contractor and the Contracting Officer. The Contractor shall provide a copy of the signed minutes to all attendees. Repeat the coordination and mutual understanding meeting when a new QC Manager is appointed.

1.7 QC MEETINGS

After the start of construction, the QC Manager shall conduct QC meetings once every two weeks at the work site with the superintendent and the foreman responsible for the ongoing and upcoming work. The QC Manager shall prepare the minutes of the meeting and provide a copy to the Contracting Officer within two working days after the meeting. As a minimum, the following shall be accomplished at each meeting:

(a) Review the minutes of the previous meeting;

(b) Review the schedule and the status of work and rework;

- (c) Review the status of submittals;
- (d) Review the work to be accomplished in the next two weeks and documentation required;
- (e) Resolve QC and production problems (RFIs, etc.);
- (f) Address items that may require revising the QC plan; and
- (g) Review Accident Prevention Plan (APP).

1.8 THREE PHASES OF CONTROL

The three phases of control shall adequately cover both on-site and off-site work and shall include the following for each DFOW.

1.8.1 Preparatory Phase

Notify the Contracting Officer at least two work days in advance of each preparatory phase. Conduct the preparatory phase with the superintendent and the foreman responsible for the definable feature of work. Document the results of the preparatory phase actions in the daily CQC Report and in the QC checklist. Perform the following prior to beginning work on each definable feature of work:

- (a) Review each paragraph of the applicable specification sections;
- (b) Review the contract drawings;
- (c) Verify that appropriate shop drawings and submittals for materials and equipment have been submitted and approved. Verify receipt of approved factory test results, when required;
- (d) Review the testing plan and ensure that provisions have been made to provide the required QC testing;
- (e) Examine the work area to ensure that the required preliminary work has been completed;
- (f) Examine the required materials, equipment and sample work to ensure that they are on

hand and conform to the approved shop drawings and submitted data;

(g) Review the APP and appropriate Activity Hazard Analysis (AHA) to ensure that applicable safety requirements are met, and that required Material Safety Data Sheets (MSDS) are submitted; and

(h) Discuss construction methods and the approach that will be used to provide quality construction by planning ahead and identifying potential problems for each DFOW.

1.8.2 Initial Phase

Notify the Contracting Officer at least two work days in advance of each initial phase. When construction crews are ready to start work on a DFOW, conduct the Initial Phase with the foreman responsible for that DFOW. Observe the initial segment of the work to ensure that it complies with contract requirements. Document the results of the Initial Phase in the daily CQC Report and in the QC checklist. Perform the following for each DFOW:

(a) Establish the quality of workmanship required;

(b) Resolve conflicts;

(c) Ensure that testing is performed by the approved laboratory; and

(d) Check work procedures for compliance with the APP and the appropriate AHA to ensure that applicable safety requirements are met.

1.8.3 Follow-Up Phase

Perform the following for on-going work daily, or more frequently as necessary, until the completion of each DFOW and document in the daily CQC Report and in the QC checklist:

(a) Ensure the work is in compliance with contract requirements;

(b) Maintain the quality of workmanship required;

(c) Ensure that testing is performed by the approved laboratory;

(d) Ensure that rework items are being corrected; and

(e) Perform safety inspections.

1.8.4. Additional Preparatory and Initial Phases

Additional preparatory and initial phases shall be conducted on the same DFOW if the quality of on-going work is unacceptable, if there are changes in the applicable QC organization, if there are changes in the on-site production supervision or work crew, if work on a DFOW is resumed after substantial period of inactivity, or if other problems develop.

1.8.5 Notification of Three Phases of Control for Off-Site Work

Notify the Contracting Officer at least two weeks prior to the start of the preparatory and initial phases.

1.9 SUBMITTAL REVIEW AND APPROVAL

Procedures for submission, review, and approval of submittals are described in the submittal section of the specification.

1.10 TESTING

Except as stated otherwise in the specification sections, perform sampling and testing required under this contract.

1.10.1 Accreditation Requirements

Construction materials testing laboratories must be accredited by a laboratory accreditation authority and will be required to submit a copy of the Certificate of Accreditation and Scope of Accreditation. The laboratory's scope of accreditation must include the appropriate ASTM standards (**i.e.**; E 329, C 1077, D 3666, D 3740, A 880, E 543) listed in the technical sections of the specifications. Laboratories engaged in Hazardous Materials Testing shall meet the requirements of OSHA and EPA. The policy applies to the specific laboratory performing the actual testing, not just the "Corporate Office."

1.10.2 Laboratory Accreditation Authorities

Laboratory Accreditation Authorities include the National Voluntary Laboratory Accreditation Program (NVLAP) administered by the National Institute of Standards and Technology, the American Association of State Highway and Transportation Officials (AASHTO), International

Accreditation Services, Inc. (IAS), U. S. Army Corps of Engineers Materials Testing Center (MTC), the American Association for Laboratory Accreditation (A2LA), the Washington Association of Building Officials (WABO) (Approval authority for WABO is limited to projects within Washington State), and the Washington Area Council of Engineering Laboratories (WACEL) (Approval authority by WACEL is limited to projects within the EFA Chesapeake and Public Works Center Washington geographical area).

1.10.3 Capability Check

The Contracting Officer retains the right to check laboratory equipment in the proposed laboratory and the laboratory technician's testing procedures, techniques, and other items pertinent to testing, for compliance with the standards set forth in this contract.

1.10.4 Test Results

Cite applicable Contract requirements, tests or analytical procedures used. Provide actual results and include a statement that the item tested or analyzed conforms or fails to conform to specified requirements. If the item fails to conform, notify the Contracting Officer immediately. Conspicuously stamp the cover sheet for each report in large red letters "CONFORMS" or "DOES NOT CONFORM" to the specification requirements, whichever is applicable. Test results shall be signed by a testing laboratory representative authorized to sign certified test reports. Furnish the signed reports, certifications, and other documentation to the Contracting Officer via the QC Manager.

1.11 QC CERTIFICATIONS

1.11.1 Contractor Quality Control Report Certification

Each CQC Report shall contain the following statement: "On behalf of the Contractor, I certify that this report is complete and correct and equipment and material used and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge except as noted in this report."

1.11.2 Invoice Certification

Furnish a certificate to the Contracting Officer with each payment request, signed by the QC Manager, attesting that as-built drawings are current and attesting that the work for which payment is requested, including stored material, is in compliance with contract requirements.

1.11.3 Completion Certification

Upon completion of work under this contract, the QC Manager shall furnish a certificate to the Contracting Officer attesting that "the work has been completed, inspected, tested and is in compliance with the contract."

1.12 COMPLETION INSPECTIONS

1.12.1 Punch-Out Inspection

Near the completion of all work or any increment thereof established by a completion time stated in the Contract clause "Commencement, Prosecution, and Completion of Work," or stated elsewhere in the specifications, the QC Manager shall conduct an inspection of the work and develop a punch list of items which do not conform to the approved drawings and specifications. Include in the punch list any remaining items of the "Rework Items List", which were not corrected prior to the Punch-Out inspection. The punch list shall include the estimated date by which the deficiencies will be corrected. A copy of the punch list shall be provided to the Contracting Officer. The QC Manager or staff shall make follow-on inspections to ascertain that all deficiencies have been corrected. Once this is accomplished, the Contractor shall notify the Government that the facility is ready for the Government "Pre-Final Inspection".

1.12.2 Pre-Final Inspection

The Government will perform this inspection to verify that the facility is complete and ready to be occupied. A Government pre-final punch list may be developed as a result of this inspection. The QC Manager shall ensure that all items on this list are corrected prior to notifying the Government that a "Final" inspection with the customer can be scheduled. Any items noted on the "Pre-Final" inspection shall be corrected in a timely manner and shall be accomplished before the contract completion date for the work or any particular increment thereof if the project is divided into increments by separate completion dates.

1.12.3 Final Acceptance Inspection

The QC Manager, the superintendent, or other Contractor management personnel and the Contracting Officer will be in attendance at this inspection. Additional Government personnel may be in attendance. The final acceptance inspection will be formally scheduled by the Contracting Officer based upon results of the "Pre-Final Inspection". Notice shall be given to the Contracting Officer at least 14 days prior to the final inspection. The notice shall state that all specific items previously identified to the Contractor as being unacceptable will be complete by

the date scheduled for the final acceptance inspection. Failure of the Contractor to have all contract work acceptably complete for this inspection will be cause for the Contracting Officer to bill the Contractor for the Government's additional inspection cost in accordance with the contract clause "Inspection of Construction".

1.13 DOCUMENTATION

Maintain current and complete records of on-site and off-site QC program operations and activities. The forms identified under the paragraph "INFORMATION FOR THE CONTRACTING OFFICER" shall be used. Reports are required for each day work is performed. Account for each calendar day throughout the life of the contract. Every space on the forms must be filled in. Use N/A if nothing can be reported in one of the spaces. The superintendent and the QC Manager must prepare and sign the Contractor Production and CQC Reports, respectively. The reporting of work shall be identified by terminology consistent with the construction schedule. In the "remarks" section in this report which will contain pertinent information including directions received, problems encountered during construction, work progress and delays, conflicts or errors in the drawings or specifications, field changes, safety hazards encountered, instructions given and corrective actions taken, delays encountered and a record of visitors to the work site. For each remark given, identify the Schedule Activity No. that is associated with the remark.

1.13.1 Quality Control Validation

Establish and maintain the following in a series of three ring binders. Binders shall be divided and tabbed as shown below. These binders shall be readily available to the Government's Quality Assurance Team during all business hours.

- (a)** All completed Preparatory and Initial Phase Checklists, arranged by specification section.
- (b)** All milestone inspections, arranged by Activity/Event Number.
- (c)** A current up-to-date copy of the Testing and Plan Log with supporting field test reports, arranged by specification section.
- (d)** Copies of all contract modifications, arranged in numerical order. Also include documentation that modified work was accomplished.
- (e)** A current up-to-date copy of the Rework Items List.
- (f)** Maintain up-to-date copies of all punch lists issued by the QC Staff on the Contractor

and Sub-Contractors and all punch lists issued by the Government.

1.13.2 As-Built Drawings

The QC Manager is required to review the as-built drawings. As-built drawings shall be current on a daily basis and marked to show deviation, which have been made from the Contract drawings. Ensure each deviation has been identified with the appropriate modifying documentation, e.g. PC number, modification number, RFI number, etc. The QC Manager shall initial each deviation or revision. Upon completion of work, the QC Manager shall submit a certificate attesting to the accuracy of the as-built drawings prior to submission to the Contracting Officer.

1.14 NOTIFICATION ON NON-COMPLIANCE

The Contracting Officer will notify the Contractor of any detected non-compliance with the foregoing requirements. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, shall be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. The Contractor shall make no part of the time lost due to such stop orders the subject of claim for extension of time, for excess costs, or damages.

PART 2 -- PRODUCTS (Not Used)

PART 3 -- EXECUTION (Not Used)

-- End of Section 01 45 00.00 10 --

SECTION 01 74 00

WARRANTIES

PART 1 -- GENERAL

1.1 SECTION INCLUDES

(a) This Section includes administrative and procedural requirements for warranties required by the Contract Documents, including manufacturers and installer's standard warranties on products and special product warranties.

(b) Refer to the General Conditions for terms of the guarantee period for the Work.

1.2 RELATED SECTIONS

(a) Section 01 12 00: Cutting, Infill and Patching

(b) Section 01 60 00: Materials and Equipment

(c) Section 01 70 00: Contract Closeout

PART 2 -- PRODUCTS (Not Used)

PART 3 -- EXECUTION

3.1 WARRANTY REQUIREMENTS

(a) Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties shall not relieve CONTRACTOR of the warranty of the Work incorporating such materials, products, and equipment. Manufacturer's disclaimers and limitations on warranties do not relieve suppliers, manufacturers, installers, and Subcontractors of the requirement to countersign special warranties with CONTRACTOR.

(b) Standard warranties are preprinted written warranties published by individual manufacturers for particular products and are specifically endorsed by the manufacturer to OWNER.

(c) Special warranties are written warranties required by or incorporated in the Contract Documents, either to extend time limits provided by standard warranties or to provide greater rights for OWNER.

(d) Related Damages and Losses: When correcting failed or defective warranted Work, remove and replace Work that has been damaged as a result of such failure or which must be removed and replaced to provide access for correction of warranted Work.

(e) Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement with the reinstated warranty equal to the original warranty.

(f) Replacement Cost: Upon determination the Work covered by a warranty has failed or is defective, replace or rebuild the Work to an acceptable condition complying with requirements of the Contract Documents. CONTRACTOR is responsible for the cost of replacing or rebuilding defective Work regardless of whether OWNER has benefited from use of the Work through a portion of its anticipated useful service life.

(g) OWNER Recourse: Expressed warranties made to OWNER are in addition to implied warranties and shall not limit the duties, obligations, rights, and remedies otherwise available under the law. Expressed warranty periods shall not be interpreted as limitations on the time in which OWNER can enforce such other duties, obligations, rights, or remedies.

(h) Rejection of Warranties: OAR reserves the right to reject warranties and to limit selection to products with warranties not in conflict with requirements of the Contract Documents.

(i) Where the Contract Documents require a special warranty, or similar commitment on the Work or part of the Work, OAR reserves the right to refuse to accept the Work until CONTRACTOR presents evidence the entities required to countersign such commitments have done so.

(j) When a product is replaced under warranty, the original warranty time period will be restarted for the replaced item.

3.2 SUBMITTALS

(a) Submit written warranties to ARCHITECT prior to Final Completion of the Work. If the certificate of Substantial Completion designates a commencement date for warranties other

than the date of Substantial Completion for the Work, submit written warranties as set forth in the certificate of Substantial Completion.

When a designated portion of the Work is partially used or occupied by OWNER, submit properly executed warranties to ARCHITECT within fifteen (15) days of the Partial Use or Occupancy of the designated portion of the Work.

(b) When the Contract Documents require CONTRACTOR, or CONTRACTOR and a Subcontractor, installer, supplier or manufacturer to execute a special warranty, prepare a written document containing appropriate terms and identification, ready for execution by the required parties. Submit a draft to OAR, through the ARCHITECT, for approval prior to final execution.

Refer to Divisions 02 through 16 for specific content requirements and particular requirements for submitting special warranties.

(c) Form of Submittal: Prior to Final Completion of the Work, compile two copies of each required warranty properly executed by CONTRACTOR, or by CONTRACTOR and Subcontractor, installer, supplier, or manufacturer. Organize the warranty documents into an orderly sequence based on the Specifications.

(d) Bind warranties and bonds in heavy-duty, commercial-quality, durable 3-ring, vinyl-covered loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8½ by 11” (115 by 280 mm) paper.

(1) Provide heavy paper dividers with celluloid covered tabs for each separate warranty. Mark the tab to identify the item or installation. Provide a typed description of the product or installation, including the name of the product, and the name, address, and telephone number of the installer.

(2) Identify each binder on the front and spine with the typed or printed title “WARRANTIES,” Project title and/or name, and name of CONTRACTOR.

(3) When warranted Work requires operation and maintenance manuals, provide additional copies of each required warranty, as necessary, for inclusion in each required manual.

-- End of Section 01 74 00 --

DIVISION 2 – EXISTING CONDITIONS

SECTION 02 41 00

DEMOLITION AND DECONSTRUCTION

PART 1 -- GENERAL

1.1 REFERENCES (Not used)

1.2 GENERAL REQUIREMENTS

Do not begin demolition until authorization is received from the Contracting Officer. The work includes demolition, salvage of identified items and materials, and removal of resulting rubbish and debris. Rubbish and debris shall be removed from Government property daily, to avoid accumulation at the demolition site. Materials that cannot be removed daily shall be stored in areas specified by the Contracting Officer.

1.3 REGULATORY AND SAFETY REQUIREMENTS

Comply with the Government of Guam regulations.

1.4 DUST AND DEBRIS CONTROL

Prevent the spread of dust and debris and avoid the creation of a nuisance in the surrounding area.

1.5 PROTECTION

1.5.1 Traffic Control Signs

Where pedestrian and driver safety is endangered in the area of removal work, use traffic barricades. Notify the Contracting Officer prior to beginning such work.

1.5.2 Existing Work

Before beginning any demolition work, the Contractor shall survey the site and examine the drawings and specifications to determine the extent of the work. The Contractor shall take necessary precautions to avoid damage to existing items to remain in place, to be reused, or to

remain the property of the Government; any damaged items shall be repaired or replaced as approved by the Contracting Officer. The Contractor shall coordinate the work of this section with all other work and shall construct and maintain shoring, bracing, and supports as required.

1.5.3 Facilities

Protect existing electrical and mechanical services and utilities. Where removal of existing utilities and pavement is specified or indicated, provide barricades, temporary covering of exposed areas, and temporary services or connections for electrical and mechanical utilities. The Contractor shall ensure that no elements determined to be unstable are left unsupported and shall be responsible for placing and securing bracing, shoring, or lateral supports as may be required as a result of any cutting, removal, or demolition work performed under this contract.

1.5.4 Protection of Personnel

During the demolition work, the Contractor shall continuously evaluate the condition of the structure being demolished and take immediate action to protect all personnel working in and around the demolition site. No area, section, or component of floors, roofs, walls, columns, pilasters, or other structural element will be allowed to be left standing without sufficient bracing, shoring, or lateral support to prevent collapse or failure while workmen remove debris or perform other work in the immediate area.

1.6 FOREIGN OBJECT DAMAGE (FOD)

Aircraft and aircraft engines are subject to FOD from debris and waste material lying on airfield pavements. Remove all such materials that may appear on operational aircraft pavements due to the Contractor's operations. If necessary, the Contracting Officer may require the Contractor to install a temporary barricade at the Contractor's expense to control the spread of FOD potential debris. The barricade shall consist of a fence covered with a fabric designed to stop the spread of debris; anchor the fence and fabric to prevent displacement by winds or jet/prop blasts. Remove barricade when no longer required.

1.7 ENVIRONMENTAL PROTECTION

The work shall comply with the requirements of local ENVIRONMENTAL PROTECTION requirements.

1.8 USE OF EXPLOSIVES

Use of explosives will not be permitted.

PART 2 -- PRODUCT (Not Used)

PART 3 -- EXECUTION

3.1 EXISTING WOOD ROOF TO BE REMOVED

3.1.1 Structures

Existing structures indicated shall be removed carefully as to protect existing walls and interior building components.

3.1.2 Utilities and Related Equipment

Remove existing utilities and terminate in a manner conforming to the recognized code covering the specific utility and approved by the Contracting Officer. When utility lines are encountered that are not indicated on the drawings, the Contracting Officer shall be notified prior to further work in that area. Remove meters and related equipment and deliver to a location in accordance with instructions of the Contracting Officer. If utility lines are encountered that are not shown on drawings, contact the Contracting Officer for further instructions.

3.2 CLEANUP

Debris shall be removed and transported in a manner that prevents spillage on streets or adjacent areas. Local regulations regarding hauling and disposal shall apply.

-- End of Section 02 41 00 --

DIVISION 3 - CONCRETE

SECTION 03 30 00

CAST-IN-PLACE CONCRETE

PART 1 -- GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ACI INTERNATIONAL (ACI)

ACI 11 7	(1990) Standard Tolerances for Concrete Construction and Materials & Commentary
ACI 211.1	(1991) Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete
ACI 301	(1999) Specifications for Structural Concrete for Buildings
ACI 302.1R	(1996) Guide for Concrete Floor and Slab Construction
ACI 304.2R	(1996) Placing Concrete by Pumping Methods
ACI 304R	(2000) Guide for Measuring, Mixing, Transporting, and Placing Concrete
ACI 305R	(1999) Hot Weather Concreting
ACI 318M/318RM	(2002) Metric Building Code Requirements for Structural Concrete and Commentary
ACI 347R	(2001) Guide to Formwork for Concrete
ACI SP-66	(1994) ACI Detailing Manual

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO)

AASHTO M 182 (1991; R 2000) Burlap Cloth Made from Jute or Kenaf

AMERICAN HARDBOARD ASSOCIATION (AHA)

AHA A135.4 (1995) Basic Hardboard

AMERICAN WELDING SOCIETY (AWS)

AWS D1. 4 (1998) Structural Welding Code Reinforcing Steel

ASTM INTERNATIONAL (ASTM)

ASTM A 185 (2002) Steel Welded Wire Reinforcement, Plain, for Concrete

ASTM A 496 (2002) Steel Wire, Deformed, for Concrete Reinforcement

ASTM A 497 (2002) Steel Welded Wire Reinforcement, Deformed, for Concrete

ASTM A 615/A 615M (2003a) Deformed and Plain Billet-Steel Bars for Concrete Reinforcement

ASTM A 617/A 617M (1996a) Axle-Steel Deformed and Plain Bars for Concrete Reinforcement

ASTM A 82 (2002) Steel Wire, Plain, for Concrete Reinforcement

ASTM C 1107 (2002) Packaged Dry, Hydraulic-Cement Grout (Nonshrink)

ASTM C 143/C 143M (2003) Slump of Hydraulic Cement Concrete

ASTM C 150 (2002ael) Portland Cement

ASTM C 171 (2003) Sheet Materials for Curing Concrete

ASTM C 172 (1999) Sampling Freshly Mixed Concrete

ASTM C 192/C 192M	(2002) Making and Curing Concrete Test Specimens in the Laboratory
ASTM C 227	(2003) Potential Alkali Reactivity of Cement-Aggregate Combinations (Mortar-Bar Method)
ASTM C 260	(2001) Air-Entraining Admixtures for Concrete
ASTM C 295	(2003) Petrographic Examination of Aggregates for Concrete
ASTM C 309	(2003) Liquid Membrane-Forming Compounds for Curing Concrete
ASTM C 31/C 31M	(2003a) Making and Curing Concrete Test Specimens in the Field
ASTM C 33	(2003) Concrete Aggregates
ASTM C 39	(1993a) Compressive Strength of Cylindrical Concrete Specimens
ASTM C 42/C 42M	(2003) Obtaining and Testing Drilled Cores and Sawed Beams of Concrete
ASTM C 494/C 494M	(1999ael) Chemical Admixtures for Concrete
ASTM C 59/C 59M5	(2000; Rev A) Blended Hydraulic Cements
ASTM C 881	(1999) Epoxy-Resin-Base Bonding Systems for Concrete
ASTM C 920	(2002) Elastomeric Joint Sealants
ASTM C 94/C 94M	(2003a) Ready-Mixed Concrete
ASTM D 1190	(1997) Concrete Joint Sealer, Hot-Applied Elastic Type
ASTM D 1751	(1999) Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types)

ASTM D 1752 (1984; R 1996e1) Preformed Sponge Rubber and Cork Expansion Joint Fillers for Concrete Paving and Structural Construction

ASTM D 4397 (2002) Polyethylene Sheeting for Construction, Industrial, and Agricultural Applications

U.S. ARMY CORPS OF ENGINEERS (USACE)

COE CRD-C 572 (1974) Specifications for Polyvinyl chloride Waterstops

U.S. DEPARTMENT OF COMMERCE (DOC)

PS1 (1995) Construction and Industrial Plywood (APA V995)

1.2 DEFINITIONS

(a) "Cementitious material" as used herein shall include all portland cement, pozzolan, fly ash, ground iron blast-furnace slag, and silica fume.

(b) "Exposed to public view" means situated so that it can be seen from eye level from a public location after completion of the building. A public location is accessible to persons not responsible for operation or maintenance of the building.

1.3 SUBMITTALS

Government approval is required for submittals with a designation; submittals not having a designation are for information only. When used, a designation following the designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with SECTION 01 33 00 - SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Reinforcing steel;

Reproductions of contract drawings are unacceptable.

SD-03 Product Data

Materials for curing concrete

Joint sealants

Joint filler
Vapor barrier

Epoxy bonding compound

Waterstops

SD-05 Design Data

Concrete mix design;

Thirty days minimum prior to concrete placement, submit a mix design for each strength and type of concrete. Submit a complete list of materials including type; brand; source and amount of cement, fly ash, pozzolans, and admixtures; and applicable reference specifications. Provide mix proportion data using at least three different water-cement ratios for each type of mixture, which will produce a range of strength encompassing those required for each class and type of concrete required. If source material changes, resubmit mix proportion data using revised source material. No material shall be provided unless proven by trial mix studies to meet the requirements of this specification, unless otherwise approved in writing by the Contracting Officer. The submittal shall clearly indicate where each mix design will be used when more than one mix design is submitted. Submit additional data regarding concrete aggregates if the source of aggregate changes. Obtain acknowledgement of receipt prior to concrete placement.

SD-06 Test Reports

Concrete mix design

Aggregates

Compressive strength tests

1.4 MODIFICATION OF REFERENCES

Accomplish work in accordance with ACI publications except as modified herein. Consider the advisory or recommended provisions to be mandatory, as though the word "shall" had been substituted for the words "should" or "could" or "may," wherever they appear. Interpret reference to the "Building Official," the "Structural Engineer," and the "Architect/Engineer" to mean the Contracting Officer.

1.5 DELIVERY, STORAGE, AND HANDLING

Do not deliver concrete until vapor barrier, forms, reinforcement, embedded items, and chamfer strips are in place and ready for concrete placement. ACI 301 for job site storage of materials. Protect materials from contaminants such as grease, oil, and dirt. Ensure materials can be accurately identified after bundles are broken and tags removed.

1.5.1 Reinforcement

Store reinforcement of different sizes and shapes in separate piles or racks raised above the ground to avoid excessive rusting. Protect from contaminants such as grease, oil, and dirt. Ensure bar sizes can be accurately identified after bundles are broken and tags removed.

1.6 Quality Assurance

1.6.1 Drawings

1.6.1.1 Reinforcing Steel

ACI SP-66. Indicate bending diagrams, assembly diagrams, splicing and laps of bars, shapes, dimensions, and details of bar reinforcing, accessories, and concrete cover. Do not scale dimensions from structural drawings to determine lengths of reinforcing bars.

1.6.2 Control Submittals

1.6.2.1 Curing Concrete Elements

Submit proposed materials and methods for curing concrete elements.

1.6.2.2 Pumping Concrete

Submit proposed materials and methods for pumping concrete. Submittal shall include mix designs, pumping equipment including type of pump and size and material for pipe, and maximum length and height concrete will be pumped.

1.6.3 Test Reports

1.6.3.1 Concrete Mix Design

Submit copies of laboratory test reports showing that the mix has been successfully tested to produce concrete with the properties specified and that mix will be suitable for the job conditions. The laboratory test reports shall include mill test and all other test for cement, aggregates, and admixtures. Provide maximum nominal aggregate size, gradation analysis, percentage retained and passing sieve, and a graph of percentage retained verses sieve size. Test reports shall be submitted along with the concrete mix design. Obtain approval before concrete placement.

1.6.3.2 Aggregates

ASTM C 227 for potential alkali-silica reactions, ASTM C 295 for petrographic analysis.

PART 2 -- PRODUCTS

2.1 MATERIALS FOR FORMS

Provide wood, plywood, or steel. Use plywood or steel forms where a smooth form finish is required. Lumber shall be square edged or tongue-and-groove boards, free of raised grain, knotholes, or other surface defects. Plywood: PS1, B-B concrete form panels or better or AHA A135.4, hardboard for smooth form lining. Steel form surfaces shall not contain irregularities, dents, or sags.

2.2 FORM TIES AND ACCESSORIES

The use of wire alone is prohibited. Form ties and accessories shall not reduce the effective cover of the reinforcement.

2.2.1 Polyvinyl chloride Waterstops

COE CRD-C 572.

2.3 CONCRETE

2.3.1 Contractor-Furnished Mix Design

ACI 211.1, ACI 301, and ACI 318M/318RM except as otherwise specified. The compressive strength ($f'c$) of the concrete for each portion of the structure(s) shall be as indicated and as specified below:

Location	$f'c$ Min. 28 days Comp. Strength (psi)	ASTM C 33 Maximum Nominal Aggregate (Size No.)	Rang of Slump (inches)	Maximum Water-Cement Ratio) (by weight)	Air Entr. (percent)
Footing/Slab on Grade	3,000	57	1-4	0-5	3.5-6.5
Beam, Column Roof & Floor Slab	3,000	57	1-4	0-5	3.5-6.5
Concrete topping	4,000	57	1-4	0-5	3.5-6.5

Maximum slump shown above may be increased 1 inch for methods of consolidation other than vibration. Slump may be increased to 8 inches when superplasticizers are used

2.3.1.1 Mix Proportions for Normal Weight Concrete

Trial design batches, mixture proportioning studies, and testing requirements for various classes and types of concrete specified shall be the responsibility of the Contractor. Mixture proportions shall be based on compressive strength as determined by test specimens fabricated in accordance with ASTM C 192/C 192M and tested in accordance with ASTM C 39. Samples of all materials used in mixture proportioning studies shall be representative of those proposed for use in the project and shall be accompanied by the manufacturer's or producer's test report indicating compliance with these specifications. Trial mixtures having proportions, consistencies, and air content suitable for the work shall be made based on methodology described in ACI 211.1. The trial mixture shall use at least three different water-cement ratios for each type of mixture, which will produce a range of strength encompassing those required for each class and type of concrete required on the project. The maximum water-cement ratio required will be based on equivalent water-cement ratio calculations as determined by the conversion from the weight ratio of water to cement plus pozzolan, and ground granulated blast-furnace slag by weight equivalency method. Laboratory trial mixture shall be designed for maximum permitted slump and air content. Each combination of material proposed for use shall have separate trial mixture, except for accelerator or retarder use can be provided without separate trial mixture. The temperature of concrete in each trial batch shall be reported. For each water-cement ratio, at least three test cylinders for each test age shall be made and cured in accordance with ASTM C 192/C 192M and tested in accordance with ASTM C 39 for 7 and 28 days. From these results, a curve shall be plotted showing the relationship between water-cement ratio and strength for

each set of trial mix studies. In addition a curve shall be plotted showing the relationship between 7 and 28 day strengths.

2.3.1.2 Required Average Strength of Mix Design

The selected mixture shall produce an average compressive strength exceeding the specified strength by the amount indicated in ACI 301. When a concrete production facility has a record of at least 15 consecutive tests, the standard deviation shall be calculated and the required average compressive strength shall be determined in accordance with ACI 301. When a concrete production facility does not have a suitable record of tests to establish a standard deviation, the required average strength shall be as follows:

- (a) For $f'c$ less than 3,000 psi, 1,000 psi plus $f'c$.
- (b) For $f'c$ between 3,000 and 5,000 psi, 1200 psi plus $f'c$.

2.4 MATERIALS

2.4.1 Cement

ASTM C 150, Type I or II or ASTM C 59/C 59M5, Type IP(MS) or IS(MS) blended cement except as modified herein. For exposed concrete, use one manufacturer for each type of cement.

2.4.2 Water

Water shall be fresh, clean, and potable; free from injurious amounts of oils, acids, alkalis, salts, organic materials, or other substances deleterious to concrete.

2.4.3 Aggregates

ASTM C 33, except as modified herein. Furnish aggregates for exposed concrete surfaces from one source. Aggregates shall not contain any substance which may be deleteriously reactive with the alkalis in the cement. Aggregates shall show expansions less than 0.10 percent at 6 months when tested in accordance with ASTM C 227 using a cement with an alkali content above 0.8 percent (expressed as sodium oxide), and shall not possess properties or constituents that are known to have specific unfavorable effects in concrete when tested in accordance with ASTM C 295.

2.4.4 Non-shrink Grout

ASTM C 1107.

2.4.5 Admixtures

ASTM C 494/C 494M: Type A, water reducing; Type B, retarding; Type C, accelerating; Type D, water-reducing and retarding; and Type E, water-reducing and accelerating admixture. Do not use calcium chloride admixtures.

2.4.5.1 Air-Entraining

ASTM C 260.

2.4.6 Vapor Barrier

ASTM D 4397 polyethylene sheeting, minimum 6 mil thickness.

2.4.7 Materials for Curing Concrete

2.4.7.1 Impervious Sheeting

ASTM C 171; waterproof paper, clear or white polyethylene sheeting, or polyethylene-coated burlap.

2.4.7.2 Pervious Sheeting

AASHTO M 182.

2.4.7.3 Liquid Membrane-Forming Compound

ASTM C 309, white-pigmented, Type 2, Class B.

2.4.8 Expansion/Contraction Joint Filler

ASTM D 1751, ASTM D 1752, or 100% recycled material meeting ASTM D 1752 (subparagraphs 5.1 to 5.4). Material shall be 1/2 inch thick, unless otherwise indicated.

2.4.9 Joint Sealants

2.4.9.1 Horizontal Surfaces, 3 Percent Slope, Maximum

ASTM D 1190 or ASTM C 920, Type M, Class 25, Use T.

2.4.10 Epoxy Bonding Compound

ASTM C 881. Provide Type I for bonding hardened concrete to hardened concrete; Type II for bonding freshly mixed concrete to hardened concrete; and Type III as a binder in epoxy mortar. Provide Grade 1 or 2 for horizontal surfaces and Grade 3 for vertical surfaces. Provide Class C if placement temperature is above 60 degrees F.

2.4.11 Biodegradable Form Release Agent

Form release agent shall be biodegradable with a maximum of 350 grams/liter (g/l) volatile organic compounds (VOCs). Product shall not bond with, stain, or adversely affect concrete surfaces and shall not impair subsequent treatments of concrete surfaces. The form release agent shall not contain diesel fuel, petroleum-based lubricating oils, waxes, or kerosene.

2.5 REINFORCEMENT

2.5.1 Reinforcing Bars

ACI 301 unless otherwise specified. ASTM A 615/A 615M and ASTM A 617/A 617M with the bars marked A, Grade 60.

2.5.2 Mechanical Reinforcing Bar Connectors

ACI 301. Provide 125 percent minimum yield strength of the reinforcement bar.

2.5.3 Welded Wire Fabric

ASTM A 185 or ASTM A 497. Provide flat sheets of welded wire fabric for slabs and toppings.

2.5.4 Wire

ASTM A 82 or ASTM A 496.

2.5.5 Reinforcing Bar Supports

Provide bar ties and supports of coated or non corrodible material.

PART 3 -- EXECUTION

3.1 FORMS

ACI 301. Provide forms, shoring, and scaffolding for concrete placement. Set forms mortar-tight and true to line and grade. Chamfer above grade exposed joints, edges, and external corners of concrete 0.75 inch unless otherwise indicated. Provide formwork with clean-out openings to permit inspection and removal of debris. Forms submerged in water shall be watertight.

3.1.1 Coating

Before concrete placement, coat the contact surfaces of forms with a non-staining mineral oil, non-staining form coating compound, or two coats of nitrocellulose lacquer. Do not use mineral oil on forms for surfaces to which adhesive, paint, or other finish material is to be applied.

3.1.2 Removal of Forms and Supports

After placing concrete, forms shall remain in place for the time periods specified in ACI 347R. Prevent concrete damage during form removal.

3.1.2.1 Special Requirements for Reduced Time Period

Forms may be removed earlier than specified if ASTM C 39 test results of field-cured samples from a representative portion of the structure indicate that the concrete has reached a minimum of 85 percent of the design strength.

3.1.3 Re-shoring

Re-shore concrete elements where forms are removed prior to the specified time period. Do not permit elements to deflect or accept loads during form stripping or re-shoring. Forms on columns, walls, or other load-bearing members may be stripped after 2 days if loads are not applied to the members. After forms are removed, slabs and beams over 10 feet in span and cantilevers over 4 feet shall be re-shored for the remainder of the specified time period in accordance with paragraph entitled "Removal of Forms." Perform re-shoring operations to

prevent subjecting concrete members to overloads, eccentric loading, or reverse bending. Re-shoring elements shall have the same load-carrying capabilities as original shoring and shall be spaced similar to original shoring. Firmly secure and brace re-shoring elements to provide solid bearing and support.

3.2 Waterstop Splices

Fusion weld in the field.

3.3 Formed Surfaces

3.3.1 Tolerances

ACI 347R and as indicated.

3.4 PLACING REINFORCEMENT AND MISCELLANEOUS MATERIALS

ACI 301. Provide bars, wire fabric, wire ties, supports, and other devices necessary to install and secure reinforcement. Reinforcement shall not have rust, scale, oil, grease, clay, or foreign substances that would reduce the bond. Rusting of reinforcement is a basis of rejection if the effective cross-sectional area or the nominal weight per unit length has been reduced. Remove loose rust prior to placing steel. Tack welding is prohibited.

3.4.1 Vapor Barrier

Provide beneath the on-grade concrete floor slab. Use the greatest widths and lengths practicable to eliminate joints wherever possible. Lap joints a minimum of 12 inches. Remove torn, punctured, or damaged vapor barrier material and provide with new vapor barrier prior to placing concrete. Concrete placement shall not damage vapor barrier material.

3.4.2 Reinforcement Supports

Place reinforcement and secure with galvanized or non corrodible chairs, spacers, or metal hangers. For supporting reinforcement on the ground, use concrete or other non corrodible material, having a compressive strength equal to or greater than the concrete being placed.

3.4.3 Splicing

As indicated. For splices not indicated ACI 301. Do not splice at points of maximum stress.

Overlap welded wire fabric the spacing of the cross wires, plus 2 inches. AWS D1.4. Welded splices shall be approved prior to use.

3.4.4 Future Bonding

Plug exposed, threaded, mechanical reinforcement bar connectors with a greased bolt. Bolt threads shall match the connector. Countersink the connector in the concrete. Calk the depression after the bolt is installed.

3.4.5 Cover

ACI 301 for minimum coverage, unless otherwise indicated.

3.4.6 Setting Miscellaneous Material

Place and secure anchors and bolts, pipe sleeves, conduits, and other such items in position before concrete placement. Plumb anchor bolts and check location and elevation. Temporarily fill voids in sleeves with readily removable material to prevent the entry of concrete.

3.4.7 Construction Joints

Locate joints to least impair strength. Continue reinforcement across joints unless otherwise indicated.

3.4.8 Expansion Joints and Contraction Joints

Provide expansion joint at edges of interior floor slabs on grade abutting vertical surfaces, and as indicated. Make expansion joints 1/2 inch wide unless indicated otherwise. Fill expansion joints not exposed to weather with preformed joint filler material. Completely fill joints exposed to weather with joint filler material and joint sealant. Do not extend reinforcement or other embedded metal items bonded to the concrete through any expansion joint unless an expansion sleeve is used. Provide contraction joints, either formed or saw cut or cut with a jointing tool, to the indicated depth after the surface has been finished. Sawed joints shall be completed within 4 to 12 hours after concrete placement. Protect joints from intrusion of foreign matter.

3.5 BATCHING, MEASURING, MIXING, AND TRANSPORTING CONCRETE

ASTM C 94/C 94M, ACI 301, ACI 302.1R, and ACI 304R, except as modified herein. Batching

equipment shall be such that the concrete ingredients are consistently measured within the following tolerances: 1 percent for cement and water, 2 percent for aggregate, and 3 percent for admixtures. Furnish mandatory batch ticket information for each load of ready mix concrete.

3.5.1 Measuring

Make measurements at intervals as specified in paragraphs entitled "Sampling" and "Testing."

3.5.2 Mixing

ASTM C 94/C 94M and ACI 301. Machine mix concrete. Begin mixing within 30 minutes after the cement has been added to the aggregates. Reduce mixing time and place concrete within 60 minutes if the air temperature is greater than 85 degrees F except as follows: if set retarding admixture is used and slump requirements can be met, limit for placing concrete may remain at 90 minutes. Additional water may be added, provided that both the specified maximum slump and water-cement ratio are not exceeded. When additional water is added, an additional 30 revolutions of the mixer at mixing speed is required. Dissolve admixtures in the mixing water and mix in the drum to uniformly distribute the admixture throughout the batch.

3.5.3 Transporting

Transport concrete from the mixer to the forms as rapidly as practicable. Prevent segregation or loss of ingredients. Clean transporting equipment thoroughly before each batch. Do not use aluminum pipe or chutes. Remove concrete which has segregated in transporting and dispose of as directed.

3.6 PLACING CONCRETE

Place concrete as soon as practicable after the forms and the reinforcement have been inspected and approved. Do not place concrete when weather conditions prevent proper placement and consolidation; in uncovered areas during periods of precipitation; or in standing water. Prior to placing concrete, remove dirt, construction debris, and water from within the forms. Deposit concrete as close as practicable to the final position in the forms. Do not exceed a free vertical drop of 3 feet from the point of discharge. Place concrete in one continuous operation from one end of the structure towards the other. Position grade stakes on 10 foot centers maximum in each direction when pouring interior slabs and on 20 foot centers maximum for exterior slabs.

3.6.1 Vibration

ACI 301. Furnish a spare, working, vibrator on the job site whenever concrete is placed. Consolidate concrete slabs greater than 4 inches in depth with high frequency mechanical vibrating equipment supplemented by hand spading and tamping. Consolidate concrete slabs 4 inches or less in depth by wood tampers, spading, and settling with a heavy leveling straightedge. Operate internal vibrators with vibratory element submerged in the concrete, with a minimum frequency of not less than 6000 impulses per minute when submerged. Do not use vibrators to transport the concrete in the forms. Insert and withdraw vibrators approximately 18 inches apart. Penetrate the previously placed lift with the vibrator when more than one lift is required. Place concrete in 18 inch maximum vertical lifts. External vibrators shall be used on the exterior surface of the forms when internal vibrators do not provide adequate consolidation of the concrete.

3.6.2 Application of Epoxy Bonding Compound

Apply a thin coat of compound to dry, clean surfaces. Scrub compound into the surface with a stiff-bristle brush. Place concrete while compound is stringy. Do not permit compound to harden prior to concrete placement. Follow manufacturer's instructions regarding safety and health precautions when working with epoxy resins.

3.6.3 Pumping

ACI 304R and ACI 304.2R. Pumping shall not result in separation or loss of materials nor cause interruptions sufficient to permit loss of plasticity between successive increments. Loss of slump in pumping equipment shall not exceed 2 inches. Concrete shall not be conveyed through pipe made of aluminum or aluminum alloy. Rapid changes in pipe sizes shall be avoided. Maximum size of coarse aggregate shall be limited to 33 percent of the diameter of the pipe. Maximum size of well rounded aggregate shall be limited to 40 percent of the pipe diameter. Samples for testing shall be taken at both the point of delivery to the pump and at the discharge end.

3.7 SURFACE FINISHES EXCEPT FLOOR, SLAB, AND PAVEMENT FINISHES

3.7.1 Defects

Repair formed surfaces by removing minor honeycombs, pits greater than 1 square inch surface area or 0.25 inch maximum depth, or otherwise defective areas. Provide edges perpendicular to the surface and patch with non-shrink grout. Patch tie holes and defects when the forms are

removed. Concrete with extensive honeycomb including exposed steel reinforcement, cold joints, entrapped debris, separated aggregate, or other defects which affect the serviceability or structural strength will be rejected, unless correction of defects is approved. Obtain approval of corrective action prior to repair. The surface of the concrete shall not vary more than the allowable tolerances of ACI 347R. Exposed surfaces shall be uniform in appearance and finished to a smooth form finish unless otherwise specified.

3.7.2 Formed Surfaces

3.7.2.1 Tolerances

ACI 117 and as indicated.

3.8 FLOOR, SLAB, AND PAVEMENT FINISHES AND MISCELLANEOUS CONSTRUCTION

ACI 302.1R, unless otherwise specified. Slope floors uniformly to drains where drains are provided. Depress the concrete base slab where quarry tile, ceramic tile, are indicated. Where straightedge measurements are specified, Contractor shall provide straightedge.

3.8.1 Finish.

Place, consolidate, and immediately strike off concrete to obtain proper contour, grade, and elevation before bleedwater appears. Permit concrete to attain a set sufficient for floating and supporting the weight of the finisher and equipment. If bleedwater is present prior to floating the surface, drag the excess water off or remove by absorption with porous materials. Do not use dry cement to absorb bleedwater.

3.8.1.1 Scratched

Use for surfaces intended to receive bonded applied cementitious applications. After the concrete has been placed, consolidated, struck off, and leveled to a Class C tolerance as defined below, the surface shall be roughened with stiff brushes or rakes before final set.

3.8.1.2 Floated

Use for roofing, and exterior slabs where not otherwise specified. After the concrete has been placed, consolidated, struck off, and leveled, do not work the concrete further, until ready for floating. Whether floating with a wood, magnesium, or composite hand float, with a bladed power trowel equipped with float shoes, or with a powered disc, float shall begin when the

surface has stiffened sufficiently to permit the operation. During or after the first floating, surface shall be checked with a 10 foot straightedge applied at no less than two different angles, one of which is perpendicular to the direction of strike off. High spots shall be cut down and low spots filled during this procedure to produce a surface level within 1/4 inch in 10 feet.

3.9 CURING AND PROTECTION

ACI 301 unless otherwise specified. Begin curing immediately following form removal. Avoid damage to concrete from vibration created by blasting, pile driving, movement of equipment in the vicinity, disturbance of formwork or protruding reinforcement, and any other activity resulting in ground vibrations. Protect concrete from injurious action by sun, rain, flowing water, frost, mechanical injury, tire marks, and oil stains. Do not allow concrete to dry out from time of placement until the expiration of the specified curing period. Do not use membrane-forming compound on surfaces where appearance would be objectionable, on any surface to be painted, where coverings are to be bonded to the concrete, or on concrete to which other concrete is to be bonded. If forms are removed prior to the expiration of the curing period, provide another curing procedure specified herein for the remaining portion of the curing period. Provide moist curing for those areas receiving liquid chemical sealer-hardener or epoxy coating.

3.9.1 Moist Curing

Remove water without erosion or damage to the structure.

3.9.1.1 Ponding or Immersion

Continually immerse the concrete throughout the curing period. Water shall not be more than 20 degrees F less than the temperature of the concrete. For temperatures between 40 and 50 degrees F, increase the curing period by 50 percent.

3.9.1.2 Pervious Sheeting

Completely cover surface and edges of the concrete with two thicknesses of wet sheeting. Overlap sheeting 6 inches over adjacent sheeting. Sheeting shall be at least as long as the width of the surface to be cured. During application, do not drag the sheeting over the finished concrete nor over sheeting already placed. Wet sheeting thoroughly and keep continuously wet throughout the curing period.

3.9.1.3 Impervious Sheeting

Wet the entire exposed surface of the concrete thoroughly with a fine spray of water and cover with impervious sheeting throughout the curing period. Lay sheeting directly on the concrete surface and overlap edges 12 inches minimum. Provide sheeting not less than 18 inches wider than the concrete surface to be cured. Secure edges and transverse laps to form closed joints. Repair torn or damaged sheeting or provide new sheeting. Cover or wrap columns, walls, and other vertical structural elements from the top down with impervious sheeting; overlap and continuously tape sheeting joints; and introduce sufficient water to soak the entire surface prior to completely enclosing.

3.9.2 Liquid Membrane-Forming Curing Compound

Seal or cover joint openings prior to application of curing compound. Prevent curing compound from entering the joint. Apply in accordance with the recommendations of the manufacturer immediately after any water sheen which may develop after finishing has disappeared from the concrete surface. Provide and maintain compound on the concrete surface throughout the curing period. Do not use this method of curing where the use of Figure 2.1.5 in ACI 305R indicates that hot weather conditions will cause an evaporation rate exceeding 0.2 pound of water per square foot per hour.

3.9.2.1 Application

Unless the manufacturer recommends otherwise, apply compound immediately after the surface loses its water sheen and has a dull appearance, and before joints are sawed. Mechanically agitate curing compound thoroughly during use. Use approved power-spraying equipment to uniformly apply two coats of compound in a continuous operation. The total coverage for the two coats shall be 200 square feet maximum per gallon of undiluted compound unless otherwise recommended by the manufacturer's written instructions. The compound shall form a uniform, continuous, coherent film that will not check, crack, or peel. Immediately apply an additional coat of compound to areas where the film is defective. Re-spray concrete surfaces subjected to rainfall within 3 hours after the curing compound application.

3.9.2.2 Protection of Treated Surfaces

Prohibit pedestrian and vehicular traffic and other sources of abrasion at least 72 hours after compound application. Maintain continuity of the coating for the entire curing period and immediately repair any damage.

3.9.3 Curing Periods

ACI 301 except 10 days for retaining walls, pavement or chimneys, 21 days for concrete that will be in full-time or intermittent contact with seawater, salt spray, alkali soil or waters. Begin curing immediately after placement. Protect concrete from premature drying, excessively hot temperatures, and mechanical injury; and maintain minimal moisture loss at a relatively constant temperature for the period necessary for hydration of the cement and hardening of the concrete. The materials and methods of curing shall be subject to approval by the Contracting Officer.

3.10 FIELD QUALITY CONTROL

3.10.1 Sampling

ASTM C 172. Collect samples of fresh concrete to perform tests specified. ASTM C 31/C 31M for making test specimens.

3.10.2 Testing

3.10.2.1 Slump Tests

ASTM C 143/C 143M. Take concrete samples during concrete placement. The maximum slump may be increased as specified with the addition of an approved admixture provided that the water-cement ratio is not exceeded. Perform tests at commencement of concrete placement, when test cylinders are made, and for each batch (minimum) or every 20 cubic yards (maximum) of concrete.

3.10.2.2 Compressive Strength Tests

ASTM C 39. Make five test cylinders for each set of tests in accordance with ASTM C 31/C 31M. Precautions shall be taken to prevent evaporation and loss of water from the specimen. Test two cylinders at 7 days, two cylinders at 28 days, and hold one cylinder in reserve. Samples for strength tests of each mix design of concrete placed each day shall be taken not less than once a day, nor less than once for each 100 cubic yards of concrete, nor less than once for each 5000 square feet of surface area for slabs or walls. For the entire project, take no less than five sets of samples and perform strength tests for each mix design of concrete placed. Each strength test result shall be the average of two cylinders from the same concrete sample tested at 28 days. If the average of any three consecutive strength test results is less than f'c or if any strength test result falls below f'c by more than 500 psi, take a minimum of three ASTM C 42/C

42M core samples from the in-place work represented by the low test cylinder results and test. Concrete represented by core test shall be considered structurally adequate if the average of three cores is equal to at least 85 percent of f'c and if no single core is less than 75 percent of f'c. Locations represented by erratic core strengths shall be retested. Remove concrete not meeting strength criteria and provide new acceptable concrete. Repair core holes with non-shrink grout. Match color and finish of adjacent concrete.

-- End of Section 03 30 00 --

DIVISION 5 – METALS

SECTION 05 50 13

MISCELLANEOUS METAL FABRICATIONS

PART 1 -- GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ALUMINUM ASSOCIATION (AA)

AA DAF-45 (2003) Designation System for Aluminum Finishes

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI A14.3 (2002) Standard for Fixed Ladders and Safety Requirements

ANSI MH28.1 (1997) Design, Testing, Utilization, and Application of Industrial Grade Steel Shelving

AMERICAN WELDING SOCIETY (AWS)

AWS DI.I/DI.IM (2002) Structural Welding Code - Steel

ASTM INTERNATIONAL (ASTM)

ASTM A 123/A 123M (2002) Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products

ASTM A 53/A 53M (2002) Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless

ASTM A 653/A 653M (2003) Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron

Alloy-Coated (Galvannealed) by the Hot-Dip Process

ASTM A 924/A 924M (1999) General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 211 (2003) Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances

U.S. GENERAL SERVICES ADMINISTRATION (GSA)

CID A-A-344 (Rev B) Lacquer (Clear Gloss)

1.2 SUBMITTALS

The following shall be submitted in accordance with SECTION 01 33 00 - SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Miscellaneous Metal Items.

Detail drawings indicating material thickness, type, grade, and class; dimensions; and construction details. Drawings shall include catalog cuts, erection details, manufacturer's descriptive data and installation instructions, and templates.

1.3 GENERAL REQUIREMENTS

The Contractor shall verify all measurements and shall take all field measurements necessary before fabrication. Welding to or on structural steel shall be in accordance with AWS D1.1/D1.1M. Items specified to be galvanized, when practicable and not indicated otherwise, shall be hot-dip galvanized after fabrication. Galvanizing shall be in accordance with ASTM A 123/A 123M, ASTM A 653/A 653M, or ASTM A 924/A 924M, as applicable. Exposed fastenings shall be compatible materials, shall generally match in color and finish, and shall harmonize with the material to which fastenings are applied. Materials and parts necessary to complete each item, even though such work is not definitely shown or specified, shall be included. Poor matching of holes for fasteners shall be cause for rejection. Fastenings shall be concealed where practicable. Thickness of metal and details of assembly and supports shall provide

strength and stiffness. Joints exposed to the weather shall be formed to exclude water.

1.4 DISSIMILAR MATERIALS

Where dissimilar metals are in contact, or where aluminum is in contact with concrete, mortar, masonry, wet or pressure-treated wood, or absorptive materials subject to wetting, the surfaces shall be protected with a coat of bituminous paint or asphalt varnish.

1.5 WORKMANSHIP

Miscellaneous metalwork shall be well formed to shape and size, with sharp lines and angles and true curves. Drilling and punching shall produce clean true lines and surfaces. Welding shall be continuous along the entire area of contact except where tack welding is permitted. Exposed connections of work in place shall not be tack welded. Exposed welds shall be ground smooth. Exposed surfaces of work in place shall have a smooth finish, and unless otherwise approved, exposed riveting shall be flush. Where tight fits are required, joints shall be milled. Corner joints shall be coped or mitered, well formed, and in true alignment. Work shall be accurately set to established lines and elevations and securely fastened in place. Installation shall be in accordance with manufacturer's installation instructions and approved drawings, cuts, and details.

1.6 ANCHORAGE

Anchorage shall be provided where necessary for fastening miscellaneous metal items securely in place. Anchorage not otherwise specified or indicated shall include slotted inserts made to engage with the anchors, expansion shields, and power-driven fasteners when approved for concrete; toggle bolts and through bolts for masonry; machine and carriage bolts for steel; and lag bolts and screws for wood.

1.7 ALUMINUM FINISHES

Unless otherwise specified, aluminum items shall have standard mill finish. The thickness of the coating shall be not less than that specified for protective and decorative type finishes for items used in interior locations or architectural Class I type finish for items used in exterior locations in AA DAF-45. Items to be anodized shall receive a polished satin finish. Aluminum surfaces to be in contact with plaster or concrete during construction shall be protected with a field coat conforming to CID A-A-344.

1.8 SHOP PAINTING

Surfaces of ferrous metal except galvanized surfaces, shall be cleaned and shop coated with the manufacturer's standard protective coating unless otherwise specified. Surfaces of items to be embedded in concrete shall not be painted. Items to be finish painted shall be prepared according to manufacturer's recommendations or as specified.

PART 2 -- PRODUCTS

2.1 Aluminum Sheet Closure

6061 t-651 1/8" Aluminum sheet shall conform to ASTM B206, QQ-A-250/11.

2.2 Roof Drains and Downspouts

2.7 MISCELLANEOUS

Miscellaneous plates and shapes for items that do not form a part of the structural steel framework, such as lintels, sill angles, miscellaneous mountings, and frames, shall be provided to complete the work.

PART 3 -- EXECUTION

3.1 GENERAL INSTALLATION REQUIREMENTS

All items shall be installed at the locations shown and according to the manufacturer's recommendations. Items listed below require additional procedures as specified.

-- End of Section 05 50 13 --

SECTION 07 57 20

ELASTOMERIC ROOF COATING

PART 1 -- GENERAL

1.1 DESCRIPTION

The publications listed below form a part of this specification to the extent referenced. The publications listed are referred to within the text by the basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

C-794-01	Adhesion-in-Peel of Elastomeric Joint Sealants
D412-98 (R2002)	Vulcanized Rubber and Thermoplastic Elastomers-tension
D2240-04	Rubber-Property-Durometer Hardness
E96-00	Water Vapor Transmission of Materials

1.2 SUBMITTALS

The following shall be submitted in accordance with SECTION 01 33 00 - SUBMITTAL PROCEDURES:

Samples of specified materials may be taken and tested for compliance with specification requirements.

SD-03 Product Data

Elastomeric Roof Coating

SD-04 Samples

Samples; Each sample on 5 x 7 inch substrate. Layered to show each coat and thickness.

SD-08

Manufacturer's instructions

Application instructions

Mixing

Detailed mixing instructions, minimum and maximum application temperature and humidity, pot life, and curing and drying times between coats.

1.3 RELATED WORK

Metal flashing, SECTION 07 60 00 - FLASHING AND SHEET METAL, SECTION 03 30 00 - CAST-IN-PLACE CONCRETE

1.4 PACKAGING, LABELING, AND STORAGE

(a) Deliver elastomeric coating to the site in sealed containers than legibly show the contract specification number, designation name, formula or specification number, designation name, formula or specification number, quantity, brand date of manufacture, manufacturer's directions including any warnings and special precautions, and name and address of manufacturer.

(b) Store materials in weather tight and dry storage facility. Protect from damage involving handling, weather and construction operations before, during and after installation. Store materials at temperatures and under conditions recommended by the manufacturer.

1.5 SAFETY AND HEALTH

(a) Apply coating materials using safety methods and equipment in accordance with applicable Federal, State, local laws and regulations.

(b) Keep products away from heat, sparks, and flame. Do not permit use of spark-producing equipment during application of flammable products or where explosive fumes are present.

1.6 ENVIRONMENTAL CONDITIONS

Do not proceed with application of materials when ambient temperature is less or greater than that recommended by the coating material manufacturer.

1.7 PRE-ROOFING

Prior to starting installation of work of this section, conduct a meeting at the project site attending by the Architect, Owner, Contractor, roofing material installer, and a technical representative of the roofing material manufacturer. Manufacturer's Representative shall provide installation procedures.

1.8 WARRANTY

(a) Upon completion of the roofing coating system, the Manufacturer's of the roofing material, the Owners representative, Architect, and roofing material installer shall make a final inspection to determine the dry film thickness of the fluid applied acrylic membrane and to verify that the system meets the Manufacturers requirements for warranty. The contractor shall notify all interested parties in advance of said inspection.

(b) As a condition of the projects completion and acceptance, deliver to the Owner a copy of the fully executed, specified warranty from the Coating Manufacturer, following individual warranty guidelines.

(c) Warranty shall be for a period of ten years.

1.9 QUALITY ASSURANCE

(a) The Contractor shall have a minimum of three years experience in the application of elastomeric roof coatings.

(b) The Contractor shall provide a list of project references similar to the one proposed, including contact names.

PART 2 – PRODUCTS

2.1 PRIMER

Type required by the Elastomeric coating manufacturer.

2.2 ELASTOMERIC BASE AND TOP COAT

Elastomeric base and top coat materials shall meet or exceed the following requirements:

Property	Test Method	Base Coat	Top Coat
Tensile Strength	ASTM D412	300 pounds per square inch	600 pounds per square inch
Elongation	ASTM D412	550 percent	200 percent
Hardness, Shore A	ASTM D2240	20	45
Peel Strength (on concrete)	ASTM C794	30 pounds, 100 percent cohesion	100 percent cohesion to base coat
Permeability	ASTM E96	12 metric perms	.06 metric perms

PART 3 -- EXECUTION

3.1 SURFACE PREPARATION

- (a) Surfaces to be coated shall be clean and dry. Smooth rough spots and tool marks.
- (b) Fill holes, depressions and cracks with fillers compatible with the coating material and recommended by the coating manufacturer.
- (c) Subsurface imperfections that telegraph through the coating surface will not be accepted.

3.2 WORK COORDINATION

To provide a watertight installation, coordinate this work with flashing and drains required to be installed before the coating work begins and be completed after the coating is in place.

3.3 APPLICATION

- (a)** Prime all surfaces to receive elastomeric waterproofing materials as recommended by the products manufacturers.
- (b)** Where horizontal surfaces intersect vertical surfaces, provide a sealant type fillet as recommended by the manufacturers.
- (c)** Apply elastomeric base coat at a rate that will ensure a dry film thickness of not less than 35 mils.
- (d)** Apply elastomeric topcoat at a rate which will ensure a dry fill thickness of not less than 50 mils.
- (e)** Complete the base to a uniform established line as shown.

3.4 CLEANING

Remove smears of elastic material from other work.

3.5 PROTECTION

Protect the finished coating from traffic until the coating cures.

-- End of Section 07 57 20 --

SECTION 07 60 00

FLASHING AND SHEET METAL

PART 1 -- GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

SHEET METAL AND AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION (SMACNA)

SMACNA Arch. Manual (2003, 6th Ed) Architectural Sheet Metal Manual

1.2 General Requirements

Sheet metalwork shall be accomplished to form weather tight construction without waves, warps, buckles, fastening stresses or distortion, and shall allow for expansion and contraction. Cutting, fitting, drilling, and other operations in connection with sheet metal required to accommodate the work of other trades shall be performed by sheet metal mechanics. Installation of sheet metal items used in conjunction with roofing shall be coordinated with roofing work to permit continuous roofing operations.

1.3 SUBMITTALS

The following shall be submitted in accordance with SECTION 01 33 00 - SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Downspouts

Base flashing
Counter flashing

Flashing at roof penetrations
Drip edge

Indicate thicknesses, dimensions, fastenings and anchoring methods, expansion joints, and other provisions necessary for thermal expansion and contraction. Scaled manufacturer's catalog data may be submitted for factory fabricated items.

SD-11 Closeout Submittals

Quality Control Plan

Submit for sheet metal work in accordance with paragraph entitled "Field Quality Control."

1.4 DELIVERY, HANDLING, AND STORAGE

Package and protect materials during shipment. Uncrate and inspect materials for damage, dampness, and wet-storage stains upon delivery to the job site. Remove from the site and replace damaged materials that cannot be restored to like-new condition. Handle sheet metal items to avoid damage to surfaces, edges, and ends. Store materials in dry, weather-tight, ventilated areas until immediately before installation.

PART 2 -- PRODUCTS

2.1 MATERIALS

Materials shall conform to the requirements specified below and to the thicknesses and configurations established in SMACNA Arch. Manual.

Furnish sheet metal items in 8 to 10 foot lengths. Single pieces less than 8 feet long may be used to connect to factory-fabricated inside and outside corners, and at ends of runs. Factory fabricate corner pieces with minimum 12 inch legs. Provide accessories and other items essential to complete the sheet metal installation. These accessories shall be made of the same materials as the items to which they are applied. Fabricate sheet metal items of the materials specified below and to the gage, thickness, or weight shown in Table I at the end of this section. Sheet metal items shall have mill finish unless specified otherwise. Where more than one material is listed for a particular item in Table I, each is acceptable and may be used except as follows:

2.1.1 Exposed Sheet Metal Items

Shall be of the same material. The following items shall be considered as exposed sheet metal: gutters, including hangers; downspouts; gravel stops; base, and related accessories.

2.1.2 Steel Sheet, Zinc-Coated Galvanized.

ASTM A 653/A 653M.

2.1.2.1 Finish

Exposed exterior items of zinc-coated steel sheet shall have a baked-on, factory-applied color coating of polyvinylidene fluoride or other equivalent fluorocarbon coating applied after metal substrates have been cleaned and pretreated. Finish coating dry-film thickness shall be 0.8 to 1.3 mils.

2.1.3 Fasteners

Use the same metal or a metal compatible with the item fastened. Use stainless steel fasteners to fasten dissimilar materials.

PART 3 -- EXECUTION

3.1 INSTALLATION

3.1.1 Workmanship

Make lines, arises, and angles sharp and true. Free exposed surfaces from visible wave, warp, and buckle, and tool marks. Fold back exposed edges neatly to form a 1/2 inch hem on the concealed side. Make sheet metal exposed to the weather watertight with provisions for expansion and contraction.

Make surfaces to receive sheet metal plumb and true, clean, even, smooth, dry, and free of defects and projections which might affect the application. For installation of items not shown in detail or not covered by specifications conform to the applicable requirements of SMACNA Arch. Manual, Architectural Sheet Metal Manual. Provide sheet metal flashing in the angles formed where roof decks abut walls, curbs, ventilators, pipes, or other vertical surfaces and wherever indicated and necessary to make the work watertight. Join sheet metal items together as shown in Table II.

3.1.2 Cleats

Provide cleats for sheet metal 18 inches and over in width. Space cleats evenly not over 12 inches on centers unless otherwise specified or indicated. Unless otherwise specified, cleats shall be not less than 2 inches wide by 3 inches long and of the same material and thickness as the sheet metal being installed. Secure one end of the cleat with two screws and the cleat folded back over the screwheads. Lock the other end into the seam. Concrete, screws shall be used and shall be driven in expansion shields set in concrete.

3.1.3 Bolts, Rivets, and Screws

Install bolts, rivets, and screws where indicated or required. Provide compatible washers where required to protect surface of sheet metal and to provide a watertight connection. Joints in aluminum sheets 0.040 inch or less in thickness shall be mechanically made.

3.1.4 Seams

Straight and uniform in width and height with no solder showing on the face.

3.1.4.1 Lap Seams

Finish soldered seams not less than one inch wide. Overlap seams not soldered, not less than 3 inches.

3.1.4.2 Loose-Lock Expansion Seams

Not less than 3 inches wide; provide minimum one inch movement within the joint. Completely fill the joints with the specified sealant, applied at not less than 1/8 inch thick bed. Sealants are specified in SECTION 07 92 00 - JOINT SEALANTS.

3.1.5 Soldering

Edges of sheet metal shall be pretinned before soldering is begun.

3.1.5.1 Edges

Treat with soldering acid flux the edges of stainless steel to be pretinned.

3.1.6 Protection from Contact with Dissimilar Materials

3.1.7 Expansion and Contraction

Provide expansion and contraction joints at not more than 32 foot intervals for aluminum and at not more than 40 foot intervals for other metals. Where the distance between the last expansion joint and the end of the continuous run is more than half the required interval, an additional joint shall be provided. Space joints evenly. Join extruded aluminum gravel stops and fascias by expansion and contraction joints spaced not more than 12 feet apart.

3.1.8 Base Flashing

Lay the base flashings with each course of the roof covering, shingle fashion, where practicable, where sloped roofs abut chimneys, curbs, walls, or other vertical surfaces. Extend up vertical surfaces of the flashing not less than 8 inches and not less than 4 inches under the roof covering. Where finish wall coverings form a counter flashing, extend the vertical leg of the flashing up behind the applied wall covering not less than 6 inches.

Overlap the flashing strips with the previously laid flashing not less than 3 inches. Fasten the strips at their upper edge to the deck. Horizontal flashing at vertical surfaces must extend vertically above the roof surface and fastened at their upper edge to the deck a minimum of 6 inches o.c. with a minimum of 2-inch lap of any surface. Solder end laps and provide for expansion and contraction. Extend the metal flashing over crickets at the up-slope side of curbs, Install and fit the flashings so as to be completely weather tight. Base flashing for interior and exterior corners shall be factory-fabricated.

3.1.9 Counter Flashing

Extend down vertical surfaces over upturned vertical leg of base flashings not less than 3 inches. Fold the exposed edges of counter flashings 1/2 inch. Provide end laps in counter flashings not less than 3 inches and make it weather tight with plastic cement. Do not make lengths of metal counter flashings exceed 10 feet. Form the flashings to the required shapes before installation. Factory-form the corners not less than 12 inches from the angle. Turn up the concealed edge of counter flashings built into masonry or concrete walls not less than 1/4 inch and extend not less than 2 inches into the walls. Install counter flashing to provide a spring action against base flashing. Counter flashing shall be factory formed to provide spring action against the base flashing.

3.1.10 Gravel Stops and Fascias

Prefabricate in the shapes and sizes indicated and in lengths not less than 8 feet. Extend flange at least 4 inches onto roofing. Provide prefabricated, mitered corners internal and external corners.

3.1.10.1 Edge Strip

Hook the lower edge of fascias at least 3/4 inch over a continuous strip of the same material bent outward at an angle not more than 45 degrees to form a drip. Use screws spaced 12 inches on centers driven in expansion shields set in the concrete or masonry. Where necessary, install strips over 1/16 inch thick compatible spacer or washers.

3.1.10.2 Joints

Leave open the section ends of gravel stops and fascias 1/4 inch and backed with a formed flashing plate, mechanically fastened in place and lapping each section end a minimum of 4 inches set laps in plastic cement. Face nailing will not be permitted.

3.1.11 Metal Drip Edge

Provide a metal drip, designed to allow water run-off to drip free of underlying construction, at eaves and rakes prior to the application of roofing shingles. Apply directly on the wood deck at the eaves and over the underlay along the rakes. Extend back from the edge of the deck not more than 3 inches and secure with compatible nails spaced not more than 10 inches on center along upper edge.

3.1.12 Gutters

The hung type of shape indicated and supported on underside by brackets that permit free thermal movement of the gutter. Provide gutters in sizes indicated complete with mitered corners, end caps, outlets, brackets, and other accessories necessary for installation. Bead with hemmed edge or reinforce the outer edge of gutter with a stiffening bar not less than 3/4 by 3/16 inch of material compatible with gutter. Fabricate gutters in sections not less than 8 feet. Lap the sections a minimum of one inch in the direction of flow or provide with concealed splice plate 6 inches minimum. Join the gutters, other than aluminum, by riveted and soldered joints. Aluminum gutters shall be joined with riveted sealed joints. Provide expansion-type slip joints midway between outlets. Install gutters below slope line of the roof. Support gutters on adjustable hangers spaced not more than 30 inches on center. Adjust gutters to slope uniformly to outlets, with high points occurring midway between outlets. Fabricate hangers and fastenings from metals compatible with the gutters.

3.1.13 Downspouts

Supports for downspouts shall be spaced according to the manufacturer's recommendation for the substrate. Types, shapes and sizes are indicated. Provide complete including elbows and

offsets. Provide downspouts in approximately 10 foot lengths. Provide end joints to telescope not less than 1/2 inch and lock longitudinal joints. Provide gutter outlets with wire ball strainers for each outlet. Provide strainers to fit tightly into outlets and be of the same material used for gutters. Keep downspouts not less than one inch away from walls. Fasten to the walls at top, bottom, and at an intermediate point not to exceed 5 feet on centers with leader straps or concealed rack-and-pin type fasteners. Form straps and fasteners of metal compatible with the downspouts.

3.1.13.1 Terminations

Neatly fit into the drainage connection the downspouts terminating in drainage lines and fill the joints with a Portland cement mortar cap sloped away from the downspout. Provide downspouts terminating in plastic storage water containers.

3.1.14 Flashing at Roof Penetrations and Equipment Supports

Provide metal flashing for all pipes, ducts, and conduits projecting through the roof surface and for equipment supports, guy wire anchors, and similar items supported by or attached to the roof deck.

3.1.15 Single Pipe Vents

Set flange of sleeve in bituminous plastic cement and nail 3 inches on centers. Bend the top of sleeve over and extend down into the vent pipe a minimum of 2 inches. For long runs or long rises above the deck, where it is impractical to cover the vent pipe with lead, use a two-piece formed metal housing. Set metal housing with a metal sleeve having a 4 inch roof flange in bituminous plastic cement and nailed 3 inches on centers. Extend sleeve a minimum of 8 inches above the roof deck and lapped a minimum of 3 inches by a metal hood secured to the vent pipe by a draw band. Seal the area of hood in contact with vent pipe with an approved sealant. Sealants are covered under SECTION 07 92 00 - JOINT SEALANTS.

3.2 CLEANING

Clean exposed sheet metal work at completion of installation. Remove grease and oil films, handling marks, contamination from steel wool, fittings and drilling debris, and scrub-clean. Free the exposed metal surfaces of dents, creases, waves, scratch marks, and solder or weld marks.

3.3 REPAIRS TO FINISH

Scratches, abrasions, and minor surface defects of finish may be repaired in accordance with the manufacturer's printed instructions and as approved. Repair damaged surfaces caused by scratches, blemishes, and variations of color and surface texture. Replace items which cannot be repaired.

3.4 FIELD QUALITY CONTROL

Establish and maintain a Quality Control Plan for sheet metal used in conjunction with roofing to assure compliance of the installed sheet metalwork with the contract requirements. Work not in compliance with the contract shall be promptly removed and replaced or corrected. Quality control shall include, but not be limited to, the following:

- (a)** Observation of environmental conditions; number and skill level of sheet metal workers; condition of substrate.

- (b)** Verification that specified material is provided and installed.

- (c)** Inspection of sheet metalwork, for proper size(s) and thickness(es), fastening and joining, and proper installation.

-- End of Section 07 60 00 --

SECTION 07 92 00

JOINT SEALANTS

PART 1 -- GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM INTERNATIONAL (ASTM)

ASTM C 509	(2000) Elastomeric Cellular Preformed Gasket and Sealing Material
ASTM C 734	(2001) Low-Temperature Flexibility of Latex Sealants After Artificial Weathering
ASTM C 919	(2002) Use of Sealants in Acoustical Applications
ASTM C 920	(2002) Elastomeric Joint Sealants
ASTM D 1056	(2000) Flexible Cellular Materials Sponge or Expanded Rubber
ASTM D 217	(2002) Cone Penetration of Lubricating Grease
ASTM E 84	(2003) Surface Burning Characteristics of Building Materials

1.2 SUBMITTALS

The following shall be submitted in accordance with SECTION 01 33 00 - SUBMITTAL PROCEDURES:

SD-03 Product Data

Sealants

Primers
Bond breakers

Backstops

Manufacturer's descriptive data including storage requirements, shelf life, curing time, instructions for mixing and application, and primer data (if required). A copy of the Material Safety Data Sheet shall be provided for each solvent, primer or sealant material.

SD-07 Certificates

Sealant

Certificates of compliance stating that the materials conform to the specified requirements.

1.3 ENVIRONMENTAL CONDITIONS

The ambient temperature shall be within the limits of 40 and 90 degrees F when sealant is applied.

1.4 DELIVERY AND STORAGE

Deliver materials to the job site in unopened manufacturers' external shipping containers, with brand names, date of manufacture, color, and material designation clearly marked thereon. Elastomeric sealant containers shall be labeled to identify type, class, grade, and use. Carefully handle and store materials to prevent inclusion of foreign materials or subjection to sustained temperatures exceeding 90 degrees F or less than 0 degrees F.

PART 2 -- PRODUCTS

2.1 SEALANTS

Provide sealant that has been tested and found suitable for the substrates to which it will be applied.

2.1.1 Interior Sealant

ASTM C 920, Type S or M, Grade NS, Class 12.5, Use NT. color(s) of sealant shall be as follows:

LOCATION	COLOR
(a) Small voids between walls or partitions and adjacent lockers, casework, shelving, door frames, built-in or surface-mounted equipment and fixtures, and similar items.	As selected
(b) Perimeter of frames at doors, windows, and access panels which adjoin exposed interior concrete and masonry surfaces.	Match Frame
(c) Joints of interior masonry walls and partitions which adjoin columns, pilasters, concrete walls, and exterior walls unless otherwise detailed.	White
(d) Joints between edge members for acoustical tile and adjoining vertical surfaces.	White
(e) Interior locations, not otherwise indicated or specified, where small voids exist between materials specified to be painted.	White
(f) Joints between bathtubs and ceramic tile; joints between shower receptors and ceramic tile; joints formed where nonplaner tile surfaces meet.	Match Grout
(g) Joints formed between tile floors and tile base cove; joints between tile and dissimilar materials; joints occurring where substrates change.	White
(h) Behind escutcheon plates at valve pipe penetrations and showerheads in showers.	White

2.1.2 Exterior Sealant

For joints in vertical surfaces, provide ASTM C 920, Type S or M, Grade NS, Class 25, Use NT. For joints in horizontal surfaces, provide ASTM C 920, Type S or M, Grade P, Class 25, Use T. Color shall match adjacent surface color or shall be as selected. Locations shall be as follows:

LOCATION

- (a) Joints and recesses formed where frames and subsills of windows, doors, louvers, and vents adjoin masonry, concrete, or metal frames. Use sealant at both exterior and interior surfaces of exterior wall penetrations.
- (b) Joints between precast concrete double tee. Use sealant at both exterior and interior surfaces. Refer to detail for locations.
- (c) Joints between new and existing exterior masonry walls.
- (d) Masonry joints where shelf angles occur.
- (e) Joints in wash surfaces of stonework.
- (f) Expansion and control joints.
- (g) Interior face of expansion joints in exterior concrete or masonry walls where metal expansion joint covers are not required.
- (h) Voids where items pass through exterior walls.
- (i) Metal reglets, where flashing is inserted into masonry joints, and where flashing is penetrated by coping dowels.
- (j) Metal-to-metal joints where sealant is indicated or specified.

- (k) Joints between ends of gravel stops, fascias, copings, and adjacent walls.

2.1.3 Floor Joint Sealant

ASTM C 920, Type S or M, Grade P, Class 25, Use T. Location(s) and color(s) of sealant shall be as follows:

LOCATION	COLOR
(a) Seats of metal thresholds for exterior doors.	Gray
(b) Control and expansion joints in floors, slabs, ceramic tile, and walkways.	Match Adjacent Surface

2.1.4 Acoustical Sealant

Rubber or polymer-based acoustical sealant conforming to ASTM C 919 shall have a flame spread of 25 or less and a smoke developed rating of 50 or less when tested in accordance with ASTM E 84. Acoustical sealant shall have a consistency of 250 to 310 when tested in accordance with ASTM D 217, and shall remain flexible and adhesive after 500 hours of accelerated weathering as specified in ASTM C 734, and shall be non-staining.

2.1.5 Preformed Sealant

Preformed sealant shall be polybutylene or isoprene-butylene based pressure sensitive weather resistant tape or bead sealant capable of sealing out moisture, air and dust when installed as recommended by the manufacturer. At temperatures from minus 30 to plus 160 degrees F, the sealant shall be non-bleeding and shall have no loss of adhesion.

2.2 PRIMERS

Provide a nonstaining, quick-drying type and consistency recommended by the sealant manufacturer for the particular application.

2.3 BOND BREAKERS

Provide the type and consistency recommended by the sealant manufacturer to prevent adhesion of the sealant to backing or to bottom of the joint.

2.4 BACKSTOPS

Provide glass fiber roving or neoprene, butyl, polyurethane, or polyethylene foams free from oil or other staining elements as recommended by sealant manufacturer. Backing shall be 25 to 33 percent oversize for closed cell and 40 to 50 percent oversize for open cell material, unless otherwise indicated. Backstop material shall be compatible with sealant. Do not use oakum and other types of absorptive materials as backstops.

2.4.1 Rubber

Cellular rubber sponge backing shall be ASTM D 1056, Type 2, closed cell, Class A, Grade, round cross section.

2.4.2 Synthetic Rubber

Synthetic rubber backing shall be ASTM C 509, Option I, Type I rods or tubes.

2.4.3 Neoprene

Neoprene backing shall be ASTM D 1056, closed cell expanded neoprene cord Type 2, Class C, Grade 2C2.

2.5 CLEANING SOLVENTS

Provide type(s) recommended by the sealant manufacturer except for aluminum and bronze surfaces that will be in contact with sealant.

PART 3 -- EXECUTION

3.1 SURFACE PREPARATION

Surfaces shall be clean, dry to the touch, and free from dirt frost, moisture, grease, oil, wax, lacquer, paint, or other foreign matter that would tend to destroy or impair adhesion. Oil and grease shall be removed with solvent and surfaces shall be wiped dry with clean cloths. When resealing an existing joint, remove existing calk or sealant prior to applying new sealant. For surface types not listed below, the sealant manufacturer shall be contacted for specific recommendations.

3.1.1 Steel Surfaces

Remove loose mill scale by sandblasting or, if sandblasting is impractical or would damage finish work, scraping and wire brushing. Remove protective coatings by sandblasting or using a residue-free solvent.

3.1.2 Aluminum or Bronze Surfaces

Remove temporary protective coatings from surfaces that will be in contact with sealant. When masking tape is used as a protective coating, remove tape and any residual adhesive just prior to sealant application. For removing protective coatings and final cleaning, use nonstaining solvents recommended by the manufacturer of the item(s) containing aluminum or bronze surfaces.

3.1.3 Concrete and Masonry Surfaces

Where surfaces have been treated with curing compounds, oil, or other such materials, the materials shall be removed by sandblasting or wire brushing. Laitance, efflorescence and loose mortar shall be removed from the joint cavity.

3.1.4 Wood Surfaces

Wood surfaces to be in contact with sealants shall be free of splinters and sawdust or other loose particles.

3.2 SEALANT PREPARATION

Do not add liquids, solvents, or powders to the sealant. Mix multicomponent elastomeric sealants in accordance with manufacturer's instructions.

3.3 APPLICATION

3.3.1 Joint Width-To-Depth Ratios

(a) Acceptable Ratios:

JOINT WIDTH

JOINT DEPTH

For metal, glass, or other

Minimum

Maximum

nonporous surfaces:

1/4 inch (minimum) over 1/4 inch	1/4 inch 1/2 of width	1/4 inch Equal to width
For concrete, 1/4 inch (minimum) Over 1/4 inch to 1/2 inch	1/4 inch 1/4 inch	1/4 inch Equal to Width
Over 1/2 inch to 2 inches Over 2 inches	1/2 inch (As recommended by sealant Manufacturer)	5/8 inch

(b) Unacceptable Ratios: Where joints of acceptable width-to-depth ratios have not been provided, clean out joints to acceptable depths and grind or cut to acceptable widths without damage to the adjoining work. Grinding shall not be required on metal surfaces.

3.3.2 Masking Tape

Masking tape shall be placed on the finish surface on one or both sides of a joint cavity to protect adjacent finish surfaces from primer or sealant smears. Masking tape shall be removed within 10 minutes after joint has been filled and tooled.

3.3.3 Backstops

Install backstops dry and free of tears or holes. Tightly pack the back or bottom of joint cavities with backstop material to provide a joint of the depth specified. Install backstops in the following locations:

(a) Where indicated.

(b) Where backstop is not indicated but joint cavities exceed the acceptable maximum depths specified in paragraph entitled, "Joint Width-to-Depth Ratios."

3.3.4 Primer

Immediately prior to application of the sealant, clean out loose particles from joints. Where recommended by sealant manufacturer, apply primer to joints in concrete masonry units, wood, and other porous surfaces in accordance with sealant manufacturer's instructions. Do

not apply primer to exposed finish surfaces.

3.3.5 Bond Breaker

Provide bond breakers to the back or bottom of joint cavities, as recommended by the sealant manufacturer for each type of joint and sealant used, to prevent sealant from adhering to these surfaces. Carefully apply the bond breaker to avoid contamination of adjoining surfaces or breaking bond with surfaces other than those covered by the bond breaker.

3.3.6 Sealants

Provide a sealant compatible with the material(s) to which it is applied. Do not use a sealant that has exceeded shelf life or has jelled and can not be discharged in a continuous flow from the gun. Apply the sealant in accordance with the manufacturer's instructions with a gun having a nozzle that fits the joint width. Force sealant into joints to fill the joints solidly without air pockets. Tool sealant after application to ensure adhesion. Sealant shall be uniformly smooth and free of wrinkles. Upon completion of sealant application, roughen partially filled or unfilled joints, apply sealant, and tool smooth as specified. Sealer shall be applied over the sealant when and as specified by the sealant manufacturer.

3.4 PROTECTION AND CLEANING

3.4.1 Protection

Protect areas adjacent to joints from sealant smears. Masking tape may be used for this purpose if removed 5 to 10 minutes after the joint is filled.

3.4.2 Final Cleaning

Upon completion of sealant application, remove remaining smears and stains and leave the work in a clean and neat condition.

(a) Masonry and Other Porous Surfaces: Immediately scrape off fresh sealant that has been smeared on masonry and rub clean with a solvent as recommended by the sealant manufacturer. Allow excess sealant to cure for 24 hour then remove by wire brushing or sanding.

(b) Metal and Other Non-Porous Surfaces: Remove excess sealant with a solvent-moistened cloth.

End of Section 07 92 00 --

SECTION 09 31 00

CERAMIC TILE, QUARRY TILE, AND PAVER TILE

PART 1 -- GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI A108.1	(1999) Installation of Ceramic Tile; including A108.1A-C, 108.4-.13, 118.1-.10, A136.1
ANSI A137.1	(1988) Ceramic Tile

ASTM INTERNATIONAL (ASTM)

ASTM A 185	(2002) Steel Welded Wire Reinforcement, Plain, for Concrete
ASTM C 1027	(1999) Determining Visible Abrasion Resistance of Glazed Ceramic Tile
ASTM C 1028	(1996) Determining the Static Coefficient of Friction of Ceramic Tile and Other Like Surfaces by the Horizontal Dynamometer Pull-Meter Method
ASTM C 1178/C 1178M	(2001) Glass Mat Water-Resistant Gypsum Backing Panel
ASTM C 241	(1990; R 1997e1) Abrasion Resistance of Stone Subjected to Foot Traffic
ASTM C 373	(1988; R 1999) Water Absorption, Bulk Density, Apparent Porosity, and Apparent Specific Gravity

	of Fired Whiteware Products
ASTM C 482	(2002) Bond Strength of Ceramic Tile to Portland Cement
ASTM C 501	(1984; R 2002) Relative Resistance to Wear of Unglazed Ceramic Tile by the Taber Abraser
ASTM C 648	(1998) Breaking Strength of Ceramic Tile
ASTM C 847	(1995; R 2000) Metal Lath

MARBLE INSTITUTE OF AMERICA (MIA)

MIA Design Manual	(2003) Dimension Stone Design Manual
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TILE COUNCIL OF AMERICA (TCA)

TCA Hdbk	(2003-2004) Handbook for Ceramic Tile Installation
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U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

36 CFR 1191	Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities
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1.2 SUBMITTALS

The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-03 Product Data

Tile

Setting-Bed

Mortar, Grout, and Adhesive

Manufacturer's catalog data and preprinted installation and cleaning instructions.

SD-04 Samples

Tile

Accessories Marble

Thresholds

Samples of sufficient size to show color range, pattern, type and joints.

SD-06 Test Reports

Testing

Copy of results for electrical resistance tests.

SD-07 Certificates

Tile

Mortar, Grout, and Adhesive

Certificates indicating conformance with specified requirements.
A master grade certificate shall be furnished for tile.

1.3 DELIVERY AND STORAGE

Materials shall be delivered to the project site in manufacturer's original unopened containers with seals unbroken and labels and hallmarks intact. Materials shall be kept dry, protected from weather, and stored under cover in accordance with manufacturer's instructions.

1.4 ENVIRONMENTAL REQUIREMENTS

Ceramic tile work shall not be performed unless the substrate and ambient temperature is at least 50 degrees F and rising. Temperature shall be maintained above 50 degrees F while the work is being performed and for at least 7 days after completion of the work. When temporary heaters are used they shall be vented to the outside to avoid carbon dioxide damage to new

tilework.

1.5 WARRANTY

Manufacturer's standard performance guarantees or warranties that extend beyond a 1-year period shall be provided.

1.6 EXTRA STOCK

Supply an extra two percent of each type tile used in clean and marked cartons.

PART 2 -- PRODUCTS

2.1 TILE

Tile shall be standard grade conforming to ANSI A137.1. Containers shall be grade sealed. Seals shall be marked to correspond with the marks on the signed master grade certificate. Tile shall be impact resistant with a minimum breaking strength for wall tile of 90 lbs and 250 lbs for floor tile in accordance with ASTM C 648. Water absorption shall be 0.50 maximum percent in accordance with ASTM C 373. Floor tile shall have a minimum coefficient of friction of 0.60wet and dry in accordance with ASTM C 1028. Floor tile shall be Class III-Medium Heavy Traffic, durability classification as rated by the manufacturer when tested in accordance with ASTM C 1027for abrasion resistance as related to foot traffic.

2.1.1 Ceramic Tile (Wall tile)

Provide glazed ceramic wall tile that has square edges and trim with lead-free finish. Provide nominal tile size(s) of 12 by 12 inch. Provide glazed ceramic wall tile materials that contain a minimum of 3 percent recycled content. Provide data identifying percentage of recycled content for glazed ceramic wall tile.

2.1.2 Ceramic Tile (Floor tile)

Ceramic floor tile and trim shall be glazed with a 0.42 dynamic C.O.F. (Wet). Tile size shall be nominal 12 by 12 inches by 5/16 thick. Tile shall meet or exceed the following criteria: Abrasive wear in accordance with ASTM C 1027 and bonding strength in accordance with ASTM C 648. Tile. Provide in Lobby Area and Booths.

2.2 SETTING-BED

The setting-bed shall be composed of the following:

2.2.1 Water Membrane to be thin, cold applied, single component liquid and load bearing. Reinforcing fabric to be non-woven rot-proof specifically intended for waterproofing membrane. Waterproofing Membrane to be non-toxic, non-flammable, and non-hazardous during storage, mixing, application and when cured.

2.2.2 Crack Suppression Membrane to be thin, cold applied, single component liquid and load bearing. Reinforcing fabric to be non-woven rot-proof specifically intended for crack suppression membrane. Materials to be non-toxic, non-flammable, and non-hazardous during storage, mixing, application and when cure.

2.2.3 Cleavage membrane: 15 pound asphalt saturated, non-perforated roofing felt complying with ASTM D226, 15 pound coal tar saturated, non-perforated roofing felt complying with ASTM D227 or 4.0 mils (0.1 mm thick polyethylene plastic film complying with ASTM D4397.

2.2.4 Portland Cement

Cement shall conform to ASTM C 150, Type I, white for wall mortar and gray for other use.

2.2.5 Sand

Sand shall conform to AST C 144.

2.2.6 Metal Lath

Metal lath shall be flat expanded type conforming to ASTM C 847, and weighing not less than 2.5 pounds per square yard.

2.2.7 Reinforcing Wire Fabric

Wire fabric shall conform to ASTM A 185. Wire shall be either 2 x 2 inch mesh.

2.3 WATER

Water shall be potable.

2.4 MORTAR, GROUT, AND ADHESIVE

Mortar, grout, and adhesive shall conform to the following:

2.4.1 Dry-Set Portland Cement Mortar

ANSI A108.1.

2.4.2 Conductive Dry-Set Mortar

ANSI A108.1.

2.4.3 Ceramic Tile Grout

ANSI A108.1; latex-portland cement grout.

2.4.4 Glass Mat Gypsum Backer Panel

Glass mat water-resistant gypsum backer board, for use as tile substrate, shall be in accordance with ASTM C 1178/C 1178M. Glass mat gypsum backer board shall be 5/8 inch thick.

2.5 MARBLE THRESHOLDS

Marble thresholds shall be of size required by drawings or conditions. Marble shall be Group A as classified by MIA Design Manual. Marble shall have a fine sand-rubbed finish and shall be white in color as approved by the Contracting Officer. Marble abrasion shall be not less than 12.0 when tested in accordance with ASTM C 241.

2.6 Colors

Provide full range of colors including all price groups for selection. Allow for use of multiple colors within all tiled areas.

PART 3 -- EXECUTION

3.1 PREPARATORY WORK AND WORKMANSHIP

Surface to receive tile shall be inspected and shall conform to the requirements of ANSI A108.1 for surface conditions for the type setting bed specified and for workmanship. Variations of

surface to be tiled shall fall within maximum values shown below:

TYPE	WALLS	FLOORS
Dry-Set Mortar	1/8 inch in 8 ft.	1/8 inch in 10 ft.
Latex portland cement mortar	1/8 inch in 8 ft.	1/8 inch in 10 ft.

3.2 GENERAL INSTALLATION REQUIREMENTS

Tile work shall not be started until roughing in for mechanical and electrical work has been completed and tested, and built-in items requiring membrane waterproofing have been installed and tested. Floor tile installation shall not be started in spaces requiring wall tile until after wall tile has been installed. Tile in colors and patterns indicated shall be applied in the area shown on the drawings. Tile shall be installed with the respective surfaces in true even planes to the elevations and grades shown. Special shapes shall be provided as required for sills, jambs, recesses, offsets, external corners, and other conditions to provide a complete and neatly finished installation. Tile bases and coves shall be solidly backed with mortar.

3.3 INSTALLATION OF WALL TILE

Wall tile shall be installed in accordance with the TCA Hdbk, method W243-01.

3.3.1 Workable or Cured Mortar Bed

Tile shall be installed over a workable mortar bed or a cured mortar bed at the option of the Contractor. A 4 mil polyethylene membrane, metal lath, and scratch coat shall also be installed. Workable mortar bed, materials, and installation of tile shall conform to ANSI A108.1. Cured mortar bed and materials shall conform to ANSI A108.1.

3.3.2 Dry-Set Mortar and Latex-Portland Cement Mortar

Dry-set or Latex-portland cement shall be used to install tile in accordance with ANSI A108.1. Latex portland cement shall be used when installing porcelain ceramic tile.

3.4 INSTALLATION OF FLOOR TILE

Floor tile shall be installed in accordance with TCA Hdbk, method F111-01.

3.4.1 Workable or Cured Mortar Bed

Floor tile shall be installed over a workable mortar bed or a cured mortar bed at the option of

the Contractor. Workable mortar bed materials and installation shall conform to ANSI A108.1. Cured mortar bed and materials shall conform to ANSI A108.1. Joints between quarry tile shall be between 1/4 inch and 3/8 inch in width and shall be uniform in width.

3.4.2 Dry-Set and Latex-Portland Cement

Dry-set or Latex-portland cement mortar shall be used to install tile directly over properly cured, plane, clean concrete slabs in accordance with ANSI A108.1. Latex portland cement shall be used when installing porcelain ceramic tile.

3.4.3 Ceramic Tile Grout

Ceramic Tile grout shall be prepared and installed in accordance with ANSI A108.1.

3.5 INSTALLATION OF WALL TILE

Install wall tile in accordance with the TCNA Hdbk, method w-series and with grout joints as recommended by the manufacturer for the type of tile. Install thinner wall tile flush with thicker wall tile applied on same wall and provide installation materials as recommended by the tile and setting materials manufacturer's.

3.6 INSTALLATION OF MARBLE THRESHOLDS

Thresholds shall be installed where indicated in a manner similar to that of the ceramic tile floor. Thresholds shall be the full width of the opening. Head joints at ends shall not exceed 1/4 inch in width and shall be grouted full as specified for ceramic tile.

3.7 EXPANSION JOINTS

Joints shall be formed as indicated and sealed as specified in Section 07920 JOINT SEALANTS.

3.7.1 Walls

Expansion joints shall be provided at control joints in backing material. Wherever backing material changes, an expansion joint shall be installed to separate the different materials.

3.7.2 Floors

Expansion joints shall be provided over construction joints, control joints, and expansion joints in concrete slabs. Expansion joints shall be provided where tile abuts restraining surfaces such as

perimeter walls, curbs and columns and at intervals of 24 to 36 feet each way in large interior floor areas and 12 to 16 feet each way in large exterior areas or areas exposed to direct sunlight or moisture. Expansion joints shall extend through setting-beds and fill.

3.8 CLEANING AND PROTECTING

Upon completion, tile surfaces shall be thoroughly cleaned in accordance with manufacturer's approved cleaning instructions. Acid shall not be used for cleaning glazed tile. Floor tile with resinous grout or with factory mixed grout shall be cleaned in accordance with instructions of the grout manufacturer. After the grout has set, tile wall surfaces shall be given a protective coat of a noncorrosive soap or other approved method of protection. Tiled floor areas shall be covered with building paper before foot traffic is permitted over the finished tile floors. Board walkways shall be laid on tiled floors that are to be continuously used as passageways by workmen. Damaged or defective tiles shall be replaced.

-- End of Section 09 31 00 --

SECTION 09 90 00

PAINTS AND COATINGS

PART 1 -- GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

MASTER PAINTERS INSTITUTE (MPI)

MPI 10	(Jan 2004) Exterior Latex, Flat, MPI Gloss Level 1
MPI 101	(2004) Epoxy Anti-Corrosive Metal Primer
MPI 107	(Jan 2004) Rust Inhibitive Primer (Water-Based)
MPI 108	(Jan 2004) High Build Epoxy Coating, Low Gloss
MPI 110	(Jan 2004) Water Based Light Industrial Coating, G6, G5, G3
MPI 113	(Jan 2004) Exterior Pigmented Elastomeric Coating (Water Based)
MPI 134	(Jan 2004) Galvanized Primer (Waterbased)
MPI 44	(Jan 2004) Interior Latex, MPI Gloss Level 2
MPI 47	(Jan 2004) Interior Alkyd, Semi-Gloss, MPI Gloss Level 5
MPI 50	(Jan 2004) Interior Latex Primer Sealer
MPI 79	(Jan 2004) Alkyd Anti-Corrosive Metal Primer

THE SOCIETY FOR PROTECTIVE COATINGS (SSPC)

SSPC PA 1	(2000) Shop, Field, and Maintenance Painting
SSPC SP 1	(1982; R 2000) Solvent Cleaning
SSPC SP 10	(2000) Near-White Blast Cleaning
SSPC SP 12	(2002) Surface Preparation and Cleaning of Metals by Waterjetting Prior to Recoating
SSPC SP 2	(1982; R 2000) Hand Tool Cleaning
SSPC SP 3	(1982; R 2000) Power Tool Cleaning
SSPC SP 6	(2000) Commercial Blast Cleaning
SSPC SP 7	(2000) Brush-Off Blast Cleaning

1.2 SUBMITTALS

The following shall be submitted in accordance with SECTION 01 33 00 - SUBMITTAL PROCEDURES:

The current MPI, "Approved Product List" which lists paint by brand, label, product name and product code as of the date of contract award, will be used to determine compliance with the submittal requirements of this specification. The Contractor may choose to use a subsequent MPI "Approved Product List", however, only one list may be used for the entire contract and each coating system is to be from a single manufacturer. All coats on a particular substrate must be from a single manufacturer. No variation from the MPI Approved Products List is acceptable.

Samples of specified materials may be taken and tested for compliance with specification requirements.

SD-02
Manufacturer's Technical Data Sheets

SD-03 Samples

Color;

Submit manufacturer's samples of paint colors. Cross reference color samples to color scheme as indicated.

SD-04 Manufacturer's Instructions

Application instructions

Mixing

Detailed mixing instructions, minimum and maximum application temperature and humidity, potlife, and curing and drying times between coats.

1.3 REGULATORY REQUIREMENTS

1.3.1 Environmental Protection

In addition to requirements specified elsewhere for environmental protection, provide coating materials that conform to the restrictions of the local Air Pollution Control District and regional jurisdiction. Notify Contracting Officer of any paint specified herein which fails to conform.

1.3.2 Lead Content

Do not use coatings having a lead content over 0.06 percent by weight of nonvolatile content.

1.3.3 Chromate Content

Do not use coatings containing zinc-chromate or strontium-chromate.

1.3.4 Asbestos Content

Materials shall not contain asbestos.

1.3.5 Mercury Content

Materials shall not contain mercury or mercury compounds.

1.3.6 Silica

Abrasive blast media shall not contain free crystalline silica.

1.4 PACKAGING, LABELING, AND STORAGE

Paints shall be in sealed containers that legibly show the contract specification number, designation name, formula or specification number, batch number, color, quantity, date of manufacture, manufacturer's formulation number, manufacturer's directions including any warnings and special precautions, and name and address of manufacturer. Pigmented paints shall be furnished in containers not larger than 5 gallons. Paints and thinners shall be stored in accordance with the manufacturer's written directions, and as a minimum, stored off the ground, under cover, with sufficient ventilation to prevent the buildup of flammable vapors, and at temperatures between 40 to 95 degrees F.

1.5 SAFETY AND HEALTH

Apply coating materials using safety methods and equipment in accordance with applicable Federal, State, and local laws and regulations.

1.6 ENVIRONMENTAL CONDITIONS

1.6.1 Coatings

Do not apply coating when air or substrate conditions are:

- (a) Less than 5 degrees F above dew point;
- (b) Below 50 degrees F or over 95 degrees F, unless specifically pre-approved by the Contracting Officer and the product manufacturer. Under no circumstances shall application conditions exceed manufacturer recommendations.

1.7 COLOR SELECTION

Colors of finish coats shall be as indicated or specified. Where not indicated or specified, colors shall be selected by the Contracting Officer. Manufacturers' names and color identification are used for the purpose of color identification only. Named products are acceptable for use only if they conform to specified requirements. Products of other manufacturers are acceptable if the colors approximate colors indicated and the product conforms to specified requirements.

Tint each coat progressively darker to enable confirmation of the number of coats.

1.8 LOCATION AND SURFACE TYPE TO BE PAINTED

1.8.1 Painting Included

Where a space or surface is indicated to be painted, include the following unless indicated otherwise.

- (a) Faces behind portable objects and surface mounted articles readily detachable by removal of fasteners, such as screws and bolts.
- (b) New factory finished surfaces that require identification or color coding and factory finished surfaces that are damaged during performance of the work.
- (c) Existing coated surfaces that are damaged during performance of the work.

1.8.1.1 Exterior Painting

Includes new surfaces of the building and appurtenances.

1.8.1.2 Interior Painting

Includes new surfaces of the building] and appurtenances as indicated. Where a space or surface is indicated to be painted, include the following items, unless indicated otherwise.

- (a) Exposed columns, girders, beams, joists, and
- (b) Other contiguous surfaces.

1.8.2 Painting Excluded

Do not paint the following unless indicated otherwise.

- (a) Surfaces concealed and made inaccessible by panelboards, fixed ductwork, machinery, and equipment fixed in place.
- (b) Surfaces in concealed spaces. Concealed spaces are defined as enclosed spaces above

suspended ceilings, furred spaces, attic spaces, crawl spaces, elevator shafts and chases.

(c) Steel to be embedded in concrete.

(d) Copper, stainless steel, aluminum, brass, and lead except existing coated surfaces.

(e) Hardware, fittings, and other factory finished items.

1.8.3 Mechanical and Electrical Painting

Includes field coating of interior and exterior new surfaces.

(a) Where a space or surface is indicated to be painted, include the following items unless indicated otherwise.

- (1) Exposed piping, conduit, and ductwork;
- (2) Supports, hangers, air grilles, and registers;
- (3) Miscellaneous metalwork and insulation coverings.

(b) Do not paint the following, unless indicated otherwise:

- (1) New zinc-coated, aluminum, and copper surfaces under insulation.

PART 2 -- PRODUCTS

2.1 MATERIALS

Conform to the coating specifications and standards referenced in PART 3. Submit manufacturer's technical data sheets for specified coatings and solvents.

PART 3 -- EXECUTION

3.1 PROTECTION OF AREAS AND SPACES NOT TO BE PAINTED

Prior to surface preparation and coating applications, remove, mask, or otherwise protect, hardware, hardware accessories, machined surfaces, radiator covers, plates, lighting fixtures, public and private property, and other such items not to be coated that are in contact with

surfaces to be coated. Following completion of painting, workmen skilled in the trades involved shall reinstall removed items. Restore surfaces contaminated by coating materials, to original condition and repair damaged items.

3.2 SURFACE PREPARATION

Remove dirt, splinters, loose particles, grease, oil, and other foreign matter and substances deleterious to coating performance as specified for each substrate before application of paint or surface treatments. Oil and grease shall be removed prior to mechanical cleaning. Cleaning shall be programmed so that dust and other contaminants will not fall on wet, newly painted surfaces. Exposed ferrous metals such as nail heads on or in contact with surfaces to be painted with water-thinned paints, shall be spot-primed with a suitable corrosion-inhibitive primer capable of preventing flash rusting and compatible with the coating specified for the adjacent areas.

3.3 PREPARATION OF METAL SURFACES

3.3.1 New Ferrous Surfaces

(a) Ferrous Surfaces including Shop-coated Surfaces and Small Areas That Contain Rust, Mill Scale and Other Foreign Substances:

Solvent clean or detergent wash in accordance with SSPC SP 1 to remove oil and grease. Where shop coat is missing or damaged, clean according to SSPC SP 2, SSPC SP 3, SSPC SP 6, or SSPC SP 10.

Brush-off blast remaining surface in accordance with SSPC SP 7; Shop-coated ferrous surfaces shall be protected from corrosion by treating and touching up corroded areas immediately upon detection.

(b) Surfaces with more than 20 Percent Rust, Mill Scale, and Other Foreign Substances: Clean entire surface in accordance with SSPC SP 6/SSPC SP 10.

3.3.2 Galvanized Surfaces

Galvanized with Slight Coating Deterioration or with Little or No Rusting: Water jetting to SSPC SP 12 WJ3 to remove loose coating from surfaces with less than 20 percent coating deterioration and no blistering, peeling, or cracking. Use inhibitor as recommended by the coating manufacturer to prevent rusting.

(a) Galvanized with Severe Deteriorated Coating or Severe Rusting: Spot abrasive blast rusted areas as described for steel in SSPC SP 6, and waterjet to SSPC SP 12, WJ3 to remove existing coating.

3.3.3 Non-Ferrous Metallic Surfaces

Aluminum and aluminum-alloy, lead, copper, and other nonferrous metal surfaces.

(a) Surface Cleaning: Solvent clean in accordance with SSPC SP 1 and wash with mild non-alkaline detergent to remove dirt and water soluble contaminants.

3.4 PREPARATION OF CONCRETE AND CEMENTITIOUS SURFACE

3.4.1 Concrete and Masonry

(a) Curing: Concrete, stucco and masonry surfaces shall be allowed to cure at least 30 days before painting, except concrete slab on grade, which shall be allowed to cure 90 days before painting.

(b) Surface Cleaning: Remove the following deleterious substances.

(c) Dirt, Grease, and Oil: Wash new surfaces with a solution composed of 1/2 cup trisodium phosphate, 1/4 cup household detergent, and 4 quarts of warm water. Then rinse thoroughly with fresh water.

(d) Fungus and Mold: Wash new surfaces with a solution composed of 1/2 cup trisodium phosphate, 1/4 cup household detergent, 1 quart 5 percent sodium hypochlorite solution and 3 quarts of warm water. Rinse thoroughly with fresh water.

(e) Paint and Loose Particles: Remove by wire brushing.

(f) Efflorescence: Remove by scraping or wire brushing followed by washing with a 5 to 10 percent by weight aqueous solution of hydrochloric (muriatic) acid. Do not allow acid to remain on the surface for more than five minutes before rinsing with fresh water. Do not acid clean more than 4 square feet of surface, per workman, at one time.

(1) Cosmetic Repair of Minor Defects: Repair or fill mortar joints and minor defects, including but not limited to spalls, in accordance with manufacturer's recommendations and prior to coating application.

(2) Allowable Moisture Content: Latex coatings may be applied to damp surfaces, but not to surfaces with droplets of water. In all cases follow manufacturers recommendations. Allow surfaces to cure a minimum of 30 days before painting.

3.4.2 Gypsum Board

(a) Surface Cleaning: Gypsum board shall be dry. Remove loose dirt and dust by brushing with a soft brush, rubbing with a dry cloth, or vacuum-cleaning prior to application of the first coat material. A damp cloth or sponge may be used if paint will be water-based.

(b) Repair of Minor Defects: Prior to painting, repair joints, cracks, holes, surface irregularities, and other minor defects with patching plaster or spackling compound and sand smooth.

(c) Allowable Moisture Content: Latex coatings may be applied to damp surfaces, but not surfaces with droplets of water.

3.5 APPLICATION

3.5.1 Coating Application

Painting practices shall comply with applicable federal, state and local laws enacted to insure compliance with Federal Clean Air Standards. Apply coating materials in accordance with SSPC PA 1. SSPC PA 1 methods are applicable to all substrates, except as modified herein.

At the time of application, paint shall show no signs of deterioration. Uniform suspension of pigments shall be maintained during application.

Unless otherwise specified or recommended by the paint manufacturer, paint may be applied by brush, roller, or spray. Rollers for applying paints and enamels shall be of a type designed for the coating to be applied and the surface to be coated.

Paints, except water-thinned types, shall be applied only to surfaces that are completely free of moisture as determined by sight or touch.

Thoroughly work coating materials into joints, crevices, and open spaces. Special attention shall be given to insure that all edges, corners, crevices, welds, and rivets receive a film thickness equal to that of adjacent painted surfaces.

Each coat of paint shall be applied so dry film shall be of uniform thickness and free from runs, drops, ridges, waves, pinholes or other voids, laps, brush marks, and variations in color, texture, and finish. Hiding shall be complete.

Touch up damaged coatings before applying subsequent coats.

3.5.2 Mixing and Thinning of Paints

Reduce paints to proper consistency by adding fresh paint, except when thinning is mandatory to suit surface, temperature, weather conditions, application methods, or for the type of paint being used. Obtain written permission from the Contracting Officer to use thinners. The written permission shall include quantities and types of thinners to use.

When thinning is allowed, paints shall be thinned immediately prior to application with not more than 1 pint of suitable thinner per gallon. The use of thinner shall not relieve the Contractor from obtaining complete hiding, full film thickness, or required gloss. Thinning shall not cause the paint to exceed limits on volatile organic compounds. Paints of different manufacturers shall not be mixed.

3.5.3 Two-Component Systems

Two-component systems shall be mixed in accordance with manufacturer's instructions. Any thinning of the first coat to ensure proper penetration and sealing shall be as recommended by the manufacturer for each type of substrate.

3.5.4 Coating Systems

(a) Systems by Substrates: Apply coatings that conform to the respective specifications listed in the following Tables:

Table

Section	03300	Exterior concrete Paint Table
Section	05500	Exterior Metal, Ferrous and Non-Ferrous Paint Table
Section	03300	Interior Concrete Paint Table
Section	05500	Interior Metal, Ferrous and Non-Ferrous Paint Table
Section	09250	Gypsum Board Paint Table

(b) Minimum Dry Film Thickness (DFT): Apply paints, primers, varnishes, enamels, undercoats, and other coatings to a minimum dry film thickness of 1.5 mil each coat unless specified otherwise in the Tables. Coating thickness where specified, refers to the minimum dry film thickness.

(c) Coatings for Surfaces Not Specified Otherwise: Coat surfaces which have not been specified, the same as surfaces having similar conditions of exposure.

(d) Existing Surfaces Damaged During Performance of the Work, Including New Patches In Existing Surfaces: the following: Coat surfaces with the following:

- (1)** One coat of primer.
- (2)** One coat of undercoat or intermediate coat.
- (3)** One topcoat to match adjacent surfaces.

3.6 COATING SYSTEMS FOR METAL

Apply coatings of Tables in Section 05500 Exterior and Interior.

(a) Apply specified ferrous metal primer on the same day that surface is cleaned, to surfaces that meet all specified surface preparation requirements at time of application.

(b) Inaccessible Surfaces: Prior to erection, use one coat of specified primer on metal surfaces that will be inaccessible after erection.

(c) Shop-primed Surfaces: Touch up exposed substrates and damaged coatings to protect from rusting prior to applying field primer.

(d) Pipes and Tubing: The semitransparent film applied to some pipes and tubing at the mill is not to be considered a shop coat, but shall be overcoated with the specified ferrous-metal primer prior to application of finish coats.

(e) Exposed Nails, Screws, Fasteners, and Miscellaneous Ferrous Surfaces. On surfaces to be coated with water thinned coatings, spot prime exposed nails and other ferrous metal with latex primer MPI 107.

3.7 COATING SYSTEMS FOR CONCRETE AND CEMENTITIOUS SUBSTRATES

Apply coatings of Tables in Sections 03300, 05500 and 9 for Exterior and Interior.

3.8 PAINT TABLES

All DFT's are minimum values.

3.8.1 EXTERIOR PAINT TABLES

Section 03300: EXTERIOR CONCRETE PAINT TABLE

- A. New and uncoated existing concrete; vertical surfaces, including undersides of balconies and soffits but excluding tops of slabs:

1. Latex

New; MPI EXT 3.1A-G2 (Flat) / Existing; MPI REX 3.1A-G2(Flat)

Primer:	Intermediate:	Topcoat:
MPI 10	MPI 10	MPI 10

System DFT: 3.5 mils

Primer as recommended by manufacturer. Topcoat: Coating to match adjacent surfaces.

Section 05500: EXTERIOR METAL, FERROUS AND NON-FERROUS PAINT TABLE

EXTERIOR GALVANIZED SURFACES

- A. Galvanized surfaces with slight coating deterioration; little or rusting:

1. Waterborne Light Industrial Coating

MPI REX 5.3J-G5 (Semigloss)

Primer:	Intermediate:	Topcoat:
MPI 134	N/A	MPI 110-G5

System DFT: 4.5 mils

- B. Galvanized surfaces with severely deteriorated coating or rusting:

1. Waterborne Light Industrial Coating

MPI REX 5.3L-G5 (Semigloss)

Primer:	Intermediate:	Topcoat:
MPI 101	MPI 108	MPI 110-G5
System DFT: 8.5 mils		

3.8.2 INTERIOR PAINT TABLES

Section 03300: INTERIOR CONCRETE PAINT TABLE

A. New Concrete:

1. Latex

New; MPI INT 3.1A-G2 (Flat) / Existing; MPI RIN 3.1A-G2 (Flat)

Primer:	Intermediate:	Topcoat:
MPI 50	MPI 44	MPI 44

System DFT: 4 mils

B. New and Concrete in toilets, laundry areas, shower areas, and other high-humidity areas not otherwise specified:

1. MPI INT 3.1D-G5 Primer: (Semigloss) / Existing; RIN 3.1D-G5 (Semigloss)

Primer:	Intermediate:	Topcoat:
MPI 50	MPI 47	MPI 47

System DFT: 4.5 mils

Section 05500: INTERIOR METAL, FERROUS AND NON-FERROUS PAINT TABLE

INTERIOR STEEL / FERROUS SURFACES

A. Metal, Mechanical, Electrical, systems including valves, conduit, hangers, supports, Surfaces adjacent to painted surfaces (Match surrounding finish), and miscellaneous metal items not otherwise specified, and new prefinished equipment:

INTERIOR STEEL / FERROUS SURFACES

1. Alkyd, MPI Primer: INT 5.1E-G5 (Semigloss)

Primer:	Intermediate:	Topcoat:
MPI 79	MPI 47	MPI 47

System DFT: 5.25 mils

Section 092590: GYPSUM BOARD PAINT TABLE

A. New Gypsum Board Surfaces:

1. Latex

New; MPI INT 9.2A-G2 (Flat) / Existing; RIN 9.2A-G2 (Flat)

Primer:	Intermediate:	Topcoat:
MPI 50	MPI 44	MPI 44

System DFT: 4 mils

B. New Gypsum board in toilets, and laundry areas, not otherwise specified.:

1. Alkyd

New; MPI INT 9.2C-G5 (Semigloss) / Existing; MPI RIN 9.2C-G5 (Semigloss)

Primer:	Intermediate:	Topcoat:
MPI 50	MPI 47	MPI 47

System DFT: 4 mils

-- End of Section 09 90 00 --

SECTION 26 00 00.00 20

ELECTRICAL WORK

PART 1 -- GENERAL

1.1 GENERAL CONDITIONS

As specified in Section 00700.

1.2 DESCRIPTION OF WORK

Work specified in this section shall include, but not be limited to the following:

- (a)** Incoming secondary service and signal system ductlines.
- (b)** Distribution system, including metering equipment, manual transfer switch, panelboards, overcurrent protection devices, and feeders.
- (c)** Complete electrical system wiring including branch circuits, luminaires, switches, receptacles, outlets and control devices.
- (d)** Complete night light control system, including time switches and lighting contactors.
- (e)** Empty raceways for telephone distribution systems.
- (f)** Power wiring for electrically-operated equipment and appliances.
- (g)** Complete fire alarm system.
- (h)** Empty raceways for CATV/public address (PA)/dimming control and data distribution system.
- (i)** Include in the bid and pay for the charges levied by the utility companies. Include both the refundable and non-refundable portions of customer charges levied by the electric utility. Include CATV utility cable pre-wiring charges.
- (j)** Include in the bid and pay for the permits, inspection fees and deliver the certificate of final inspection to Owner.

(k) Electrical Equipment and Apparatus Labels. Include voltage, amperes, phase, arc flash hazard warnings, respective available short circuit MVA/current, AIC ratings, among others required by NEC.

(l) Testing.

(m) As-built drawings on reproducible mylar.

(n) Demolition work.

1.3 REFERENCES

Comply with the applicable requirements of the following standards unless otherwise indicated:

(a) Comply with local ordinances; National Electrical Code; applicable regulations of the National Board of Fire Underwriters; specifications of ANSI, NEMA, UL, EEL, and IPCEA; and regulations of the Department of Public Works.

(b) Comply with requirements and regulations of electric, telephone and CATV utilities.

(c) In the event of conflict between pertinent codes and regulations, and the requirements of the referenced standards, or those indicated in Specifications and on drawings, the provisions of the more stringent shall govern.

1.4 SUBMITTALS

Submit shop drawings and catalog cuts of the following equipment for approval in accordance with SUBMITTALS section. Each submittal shall be prepared with a summary sheet attached to each copy identifying all items included in the submittal. Incomplete submittals and those without summary sheets will be returned without review.

(a) Panelboards

(b) Overcurrent protection devices.

(c) Metering equipment.

(d) Safety switches.

- (e) Luminaires and lamps.
- (f) Devices (light switches, receptacles) and device plates.
- (g) Cable connectors.
- (h) Large boxes and cabinets.
- (i) Fire alarm system equipment and devices, including point-to-point wiring diagrams.
- (j) Manual automatic transfer switch.
- (k) Automatic control devices. (Time switches and lighting contactors in cabinets, relays, etc.)
- (l) Electrical room layout drawn to scale showing all electrical equipment, apparatus and connections.

1.5 DELIVERY, HANDLING AND STORAGE

- (a) Deliver all materials of this Section in manufacturer's original unopened packages or containers with label intact and legible.
- (b) Use means necessary to protect the materials of this section before, during and after installation; to protect the installed work and materials of all other trades; and to protect the original structure, work and materials of the Owner.
- (c) In the event of damage, immediately make all repairs and replacements necessary to the approval of the Engineer and at no additional cost to the Owner.

1.6 WARRANTY

- (a) Installation shall be complete in every detail as specified and ready for use. Any items supplied by Contractor developing defects of design, construction, or quality within one (1) year of final acceptance by Engineer shall be replaced by such new materials, apparatus or parts to make such defective portion of the complete system conform to the true intent and meaning of the Drawings and Specifications at no additional cost to the Owner. Lamps shall be warranted for fifty (50) percent of rated lamp life.

(b) The warranty shall be countersigned by the General Contractor.

1.7 TESTING

(a) Electrical Distribution System. After installation and/or repairs, and prior to acceptance, all equipment shall be tested to ensure that the entire electrical distribution system including components, system function and installation and repairs are correct. Tests shall include tripping of circuit breakers, and a complete infrared thermal scan of all feeder connections and switchboard bussing connections. Document all test reports and include in maintenance manuals. Submit a sample test report with the shop drawings. Owner's representative shall have the option to witness all testing.

(b) Fire Alarm System. Furnish the services of a qualified fire alarm system manufacturer's representative or technician, experienced in the installation and operation of the type of system being provided, to supervise the testing, including formal testing, adjustment of the system, and instruction to Owner's maintenance personnel.

PART 2 -- PRODUCTS

2.1 MATERIALS

(a) Asbestos Prohibition: No asbestos containing materials shall be used under this section. The Contractor shall insure that all materials incorporated in the project are asbestos-free unless specifically approved in writing by the Engineer.

2.2 GENERAL

(a) Materials shall be new and those items listed by the Underwriters' Laboratories shall bear "UL" label of approval.

(b) Brand names, manufacturer's names and catalog numbers indicate standard of design and quality required. Acceptable manufacturers for electrical apparatus include General Electric, Gould/ITE, Square D, and Cuttler Hammer. All apparatus supplied shall bear the name of the approved manufacturer on its nameplates. Substitute materials may be used if pre-qualified prior to bidding by the Engineer.

(c) Electrical equipment and luminaires shall be supplied through the manufacturer's designated representative by a local distributor.

(d) Proof of compliance shall be furnished when shop drawings are submitted.

(e) Where two or more similar type items are furnished, all shall be of the same manufacture, e.g., safety switches shall be of the same manufacturer unless otherwise noted.

2.3 RACEWAYS

(a) Rigid Conduit: Rigid steel, zinc-coated inside and outside, or aluminum, for use with threaded fittings.

(b) Intermediate Metal Conduit (IMC): Rigid steel, zinc- and chromate-coated inside and outside, for use with threaded fittings.

(c) Electrical Metal Tubing (EMT): Thin walled steel tubing, zinc-coated.

(d) Flexible Metal Conduit: Flexible steel conduit; zinc-coated inside and outside, smooth inside walls, liquid-tight with factory fittings for liquid-tight installation. Provide bushings with bonding jumper lugs for flexible conduit in excess of six feet in length.

(e) Plastic Conduit: Polyvinyl chloride, Schedule 40. Provide a separate green equipment grounding conductor.

2.4 BOXES

(a) Outlet and Small Junction Boxes: Nominal 4 inches square, 2-1/8 inches minimum depth exclusive of plaster ring, pressed steel, galvanized for corrosion protection. Exposed boxes and boxes exposed to the weather shall be cast steel, type FD.

(b) Extension Rings for Outlet Boxes: Pressed steel, zinc-coated for corrosion protection.

(c) Boxes Larger Than 4 Inches Square: Fabricated from NEC grade steel, hot-dip galvanized, prime painted and finished to match adjacent architectural elements.

(d) Floor Outlet Boxes: Boxes shall be adjustable and concrete-tight. Each outlet shall consist of a cast-metal body with threaded openings for conduits, adjustable ring, brass trim ring and cover plate. Provide gaskets where necessary to insure watertight installation. Provide carpet ring where required to match finished flooring.

(1) Telephone outlets shall consist of a flush housing with two-piece concentric ring type top opening.

(2) Receptacle outlets shall consist of flush housing with a duplex receptacle as specified in this section of the specifications. Cover plate shall be provided with two flip lids.

2.5 CABINETS

(a) Fabricated from NEC grade steel with hinged door and lockable latch, galvanized for corrosion protection, finished to match panelboards for surface of flush mounting and size as shown on Drawings.

(b) Signal cabinets shall be equipped with 3/4-inch thick termite treated plywood backboards.

(c) All cabinets for power systems (i.e., panelboards, relay cabinets, etc.) shall be keyed alike. All cabinets for signal systems shall be keyed alike, but differently than power system cabinets.

2.6 CONDUCTORS

(a) Solid or stranded copper, sizes according to American Wire Gauge Wire, as shown on Drawings and #12 AWG minimum unless otherwise indicated. Stranded conductors only for #8 AWG and larger. All wiring shall be color coded.

(b) Branch Circuits: Type TW, THW and THWN.

(c) Luminaire Wires: Per NEC.

(d) Conductors Larger than #8 AWG: THW, THWN or XHHW.

(e) Conductors for Equipment Connection: Stranded flexible type.

(f) Conductors for gas pumps and dispensers shall be type "TW Geotrol", gasoline and oil resistant.

2.7 WIRING DEVICES

(a) Switches: Ivory, 20A, 120/277V, non-mercury quiet type specification grade.

(b) Duplex Convenience Receptacles: Ivory, 15A, 125V, specification grade, grounding type, unless otherwise noted. Provide weather resistant and ground fault circuit interrupter type receptacles for outdoor applications. Provide tamper resistant in offices, corridors, waiting rooms in business, clinics, medical, dental and outpatient facilities including 15A, 20A 120 or 250V receptacles.

(c) Safety receptacles shall be similar to those specified for duplex convenience receptacles above except that the receptacle slots shall be equipped with a built-in, spring loaded sliding shutter fitted directly behind polarized blade slots requiring simultaneous insertion of both blades of the plug cap to energize the plug cord. Provide in all areas indicated.

(d) Other Receptacles: Specification grade, ratings and NEMA configurations as indicated.

(e) Ground Fault Circuit Interrupters:

(1) Receptacle Type: Similar to duplex convenience receptacle except UL listed per UL 943 with 5 milliampere ground fault sensing circuit. Feed-through type with test and reset buttons.

(2) Water Feature Lighting Type: Mounted on wiring device type strap, 20A, 120V, ivory with 5 milliampere ground fault sensing circuit and test and reset buttons. Pass & Seymour 2081-FI.

(3) Provide in for all 50A or less, single phase and 100A or less 3-phase receptacles including but not limited to areas as follows:

(a) Bathrooms

(b) Kitchens

2.8 DEVICE PLATES

(a) Specification grade Ivory plastic, smooth face.

(b) Stainless steel (302) plate for all public areas (corridors and lobbies).

(c) For Exterior Use: Flip-open covers, high-grain non-metallic, plastic or fiberglass. Color to match adjacent finish.

2.9 CONTROL EQUIPMENT

(a) Time Switch: Shall be equipped with a self-starting synchronous drive motor, an astronomic dial calibrated for 21 degrees north latitude, an electrically wound carry-over spring mechanism providing a minimum of 10 hours of operation during periods of power outages. Time switch shall be 2-pole with 120 and/or 277 volt timing motor and contact ratings as required to match lighting circuit, 60 cycles, with 40 ampere contacts. Time switch shall be equipped with manual type bypass switch and shall be housed in a NEMA 1 enclosure.

(b) Photocell Switch. UL 773 or UL 773A, hermetically sealed cadmium-sulfide or silicon diode type cell rated 277 volts ac, 60 Hz with single-throw contacts designed to fail to the ON position. Switch shall turn on at or below 32 lux and off at 43 to 107 lux. A time delay shall prevent accidental switching from transient light sources. Provide a directional lens in front of the cell to prevent fixed light sources from creating a turnoff condition. Provide switch:

(1) In a high-impact-resistant, noncorroding and nonconductive molded plastic housing with a locking-type receptacle conforming to NEMA C136.10 and rated 1800 VA, minimum.

(c) Lighting Contactors: 30 contacts, coil voltage to match lighting circuit voltage, NEMA 1 enclosure, number of poles as required. Electrically held, Square D Class 8903.

2.10 METERING EQUIPMENT

(a) Meter Sockets: Sockets according to NEMA, EUSERC Specifications and utility company requirements, gray enamel finished steel enclosure, NEMA 3R for units exposed to rain.

2.11 PANELBOARDS

(a) Mounting, voltage rating, main bus capacity, breaker complement and lugs as specified on drawings, complete with housing, door, trim, lock and typewritten circuit directory. Loadcenters shall be provided with flat door and trim and directory. Provide ground bus for all panels. Provide isolated ground bus where indicated.

(b) Panelboards should have copper bussing with bolt-on, molded case circuit breakers. Provide 1-inch-per-pole breakers, half-size breakers not allowed. Circuit breaker complement short circuit ratings shall be fully rated. Use of series rated equipment will not

be permitted.

(c) All locks shall be common-key type. Furnish 10 sets of keys to Owner.

(d) Panel housing and entire circuit breaker complement shall be of the same manufacture.

(e) Surge Protective Devices

Provide parallel type surge protective devices which comply with UL 1449 at the service entrance, load centers, panelboards. Provide surge protectors in a NEMA 1 enclosure per NEMA ICS 6. Provide the following modes of protection:

(1) FOR SINGLE PHASE AND THREE PHASE WYE CONNECTED SYSTEMS-

(a) Each phase to neutral (L-N)

(b) Neutral to ground (N-G)

(c) Phase to ground (L-G)

(2) FOR DELTA CONNECTIONS-

(a) Phase to phase (L-L)

(b) Phase to ground (L-G)

Surge protective devices at the service entrance shall have a minimum surge current rating of 80,000 amperes per mode minimum and downstream protectors shall be rated 40,000 amperes per mode minimum. The maximum line to neutral (L-N) Suppressed Voltage Rating (SVR) shall be:

(a) 500V for 120V, single phase system

(b) 500V for 208Y/120V, three phase system

(c) 900V for 480Y/277V, three phase system

The minimum MCOV (Maximum Continuous Operating Voltage) rating shall be:

(a) 150V for 120V, single phase system

(b) 300/150V for 208Y/120V, three phase system

(c) 600/320V for 480Y/277V, three phase system

EMI/RFI filtering shall be provided for each mode with the capability to attenuate high frequency noise. Minimum attenuation shall be 20db.

2.12 CIRCUIT BREAKERS AND SAFETY SWITCHES

(a) Circuit breakers, unless otherwise shown, shall be molded case, toggle mechanism operated, with no-fuse ambient-compensated thermal-magnetic overload automatic trip units for overcurrent and short-circuit protection, interchangeable trip units when available and contacts rated to interrupt short-circuit currents as specified on Drawings. Non-automatic breakers shall have short circuit withstand ratings as specified on Drawings. Provide shunt trip and key interlocking accessories where indicated. Multi-pole breakers shall have single, common operating handle for all poles.

(b) Safety switches shall be heavy-duty grade, horsepower rated and sized as indicated or as to match branch circuit overcurrent device rating. Fused switches shall have rejection clips for the type of current limiting fuses utilized.

(c) Enclosures for breakers and switches to be NEMA 1, for interior locations and NEMA 3R for exterior locations.

2.13 LUMINAIRES

(a) Luminaires, lamps and mounting accessories shall be provided as indicated on the drawings. Provide earthquake clips for recessed luminaires in seismic zones 2 and up.

(b) LED Luminaires ballasts shall be "A" sound rated, Class P and ETL-CBM certified. All ballasts shall be high power factor energy saving electronic type with automatic thermal overload reset producing full lamp lumen output.

2.14 HARDWER, SUPPORT, BAKING, ETC.

(a) Provide all hardware, supports, backing and other accessories necessary to install electrical equipment. Wood materials shall be treated against termite, iron or steel

materials shall be galvanized for corrosion protection, and non-ferrous materials shall be brass or bronze.

(b) Bolts, nuts, washers, and screws used for outside shall be high quality stainless steel or brass.

(c) Ground Rods: Ground rods shall be copper clad steel type, 3/4-inch diameter, 10 feet long, and conform to UL 467.

PART 3 -- EXECUTION

3.1 GENERAL

(a) Install all electrical materials and equipment in accordance with manufacturer's recommendations and as approved by the Engineer for the seismic zone classification at the project site.

(b) Cut, break, drill and patch as required to install electrical system. Repair any surface damage or marred by notching, drilling or any other process necessary for installation of electrical work. Patch any damaged surfaces to match the existing surface.

(c) All equipment raceways, wiring and devices located in or passing through areas classified as hazardous by NEC shall comply with NEC Article 500.

(d) All wiring and overcurrent devices for equipment furnished by other trades are sized for a contemplated equipment size. If equipment other than contemplated and indicated on the plan is provided, the Contractor shall be responsible for providing the required wiring, switches, and overcurrent devices at no cost to the Owner. The Contractor shall submit the proposed revisions to the electrical design to the Engineer for approval.

(e) The Electrical Contractor shall coordinate his work with other trades to avoid conflicts with mechanical, structural and architectural elements of this project.

(f) The Electrical Contractor shall coordinate all wiring and installation of electrical equipment and luminaires for the walk-in cooler with the walk-in cooler Contractor.

(g) The Electrical Contractor shall coordinate all work relating to utility services with the respective utility companies. Contractor shall obtain utility company service drawings from

the respective utilities and construct utility company services in accordance with those service drawings.

(h) Contractor shall follow installation and service instructions for all equipment furnished by Owner for installation by the Contractor.

(i) Contractor shall visit project site prior to bidding to determine nature and extent of demolition work required. Maintain existing circuiting to lights, outlets and equipment outside of project area and not otherwise shown.

3.2 JOBSITE CONDITIONS

(a) These specifications are accompanied by construction drawings including building and site plans of all trades showing locations of all outlet, switches, service runs, feeder runs, devices, and other electrical equipment. The locations are approximate and before installing, study adjacent architectural details and make installation in most logical manner. Any device may be relocated within 10'-0" before installation at direction of Engineer without additional cost to Owner.

(b) Before installing, verify all dimensions and sizes of equipment.

(c) Verify that electrical system may be installed in strict accordance with the original design, the Drawings and Specifications and the manufacturer's recommendations.

(d) In the event of discrepancy, immediately notify the Engineer. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

3.3 RACEWAYS

(a) Use conduits with approved coupling and connectors. All cuts square, using saw. Ream the ends. Bends made with approved tools. Reject flattened or crushed conduit. No running thread. Bushing and two locknuts at connection to boxes and enclosures.

(b) Seal against water during construction. Risers must be closed, except when pulling conductors.

(c) Exposed conduit runs to be parallel and/or perpendicular to architectural and structural elements. Galvanized rigid steel conduit or IMC up to 7'-0" above finished floor. EMT permitted for exposed installation above 7'-0". EMT also permitted for exposed installation

throughout dedicated electrical rooms, except where routed up through grade slab.

(d) Electrical Metallic Tubing (EMT): Use only in dry furred spaces and walls above ground level except as noted above. Provide factory-made transition between rigid conduit and EMT. Use only compression type couplings or concrete tight couplings. Field-paint exposed tubing with corrosion-resistant paint.

(e) Non-metallic conduits only permitted for exterior ductlines and beneath grade slab at building and within walls up to height of first outlet box or device. Exposed installation of non-metallic conduit not permitted. Installation of non-metallic conduits beneath areas with hazardous classifications not permitted.

(f) Galvanized rigid steel conduit or IMC installed below grade shall be field wrapped with 0.01-inch thick pipe-wrapping plastic tape with a 50 percent overlay.

(g) Minimum conduit diameter shall be 3/4-inch trade size except that 1/2-inch conduit will be permitted for branch circuit (non-signal) raceways with a maximum of two current carrying conductors #10 AWG and smaller.

(h) Provide nylon pullstring of 200 pound minimum tensile strength in all empty conduits in excess of 15 feet in length.

(i) Conceal all raceways unless otherwise noted on the drawings.

(j) Conduits embedded in cast-in-place concrete slabs above grade shall be limited to 3/4-inch trade size, 9-inches on center for paralleled runs in 6 and 6-1/2-inch thick slabs. Conduit size can be increased in size to one-inch trade size maximum for slabs thicker than 6-1/2 inches.

(k) Conduits crossing expansion joints shall be provided with appropriate couplings or flexible conduit jumpers as required to accommodate a 1-inch movement between structural elements in all horizontal directions from the static, design position.

3.4 BOXES

(a) Plumb and securely fasten. Flush boxes - exactly flush; apply form oil so that stray concrete can be removed readily. Remove all debris from interior.

(b) Install boxes serving opposite sides of walls a minimum of 6 inches apart to minimize

noise transmission.

3.5 CONDUCTORS

(a) Lubricants used for pulling of conductors shall be chemically neutral to insulation and sheath. Use powdered soapstone. Mechanical means for pulling to be torque- limiting type and not be used to #2 AWG and smaller wires.

(b) Form neatly in enclosures for minimum of cross-overs. No-solder pressure connectors or crimp connections for #8 AWG and larger wires. Remove all sharp points that can pierce tape. Reinsulate according to wire manufacturer's directions. Use of wirenuts are permitted only for the connections to luminaire wires and in junction boxes used exclusively for splicing.

(c) Clean all raceways, boxes, and enclosures before pulling wires and cables.

(d) Cables used for fire alarm and other electronic equipment shall be clearly and permanently tagged to show junction and destination. Cables shall be pulled and fastened securely so as to avoid sharp bends and prevent rubbing against sharp corners and shall be fastened to suitable hardware in a manner to prevent injury or physical distortion of cable. Splices, fittings, and connectors shall be indicated on the system layout to facilitate system servicing.

3.6 LUMINAIRES

Receive, store and protect against loss or damage. Install as directed by the Engineer. Provide all supports and wiring required.

3.7 CONNECTIONS TO MECHANICAL AND REFRIGERATION, AND ALL EQUIPMENT PROVIDED BY OTHER TRADES

(a) Electrical Contractor shall provide conduit, wiring and all electric connections from building wiring to motors for heating, ventilating, air conditioning, elevator, and refrigeration equipment and other equipment, including all switches, motor protection devices, specified by other trades.

(b) Electrical Contractor shall ascertain from other trades furnishing motor-driven equipment, the exact size and type of all motors, the exact locations of such equipment and the proper point where electrical connections should be brought through the floors or

walls, as the case may be. Locations shown are diagrammatic only; correct locations shall be the full responsibility of the Electrical Contractor.

(c) Examine Mechanical, and other Drawings and Specifications for information concerning motors and control apparatus and diagrams, and for exact location of kitchen equipment outlets.

(d) Install individually mounted starters furnished for motors under other Divisions or Separate Contracts. Provide and install safety switches as necessary for each such motor.

(e) All control devices and control wiring shall be provided as described in the installation manuals of equipment and/or the Drawings and Specifications of other trades and disciplines.

3.8 MISCELLANEOUS DETAILS

(a) Provide necessary foundations, supports, backing, etc., for all raceways and equipment. Attach to wood and steel by screws or bolts. Attach to concrete by expansion anchors. Powder charge driven studs and anchors shall not be used.

(b) Clean all surfaces of enclosures and equipment.

(c) Close all unused knockout holes.

3.9 PAINTING

(a) Wipe clean of dirt, oil, grease, etc., with rag and solvent, prime and finish to match surrounding finish. Do not paint over nameplate. Paint as specified in PAINTING section.

(b) All surface-mounted boxes, enclosures, and exposed raceways shall be enamel painted to match the color of surrounding.

(c) Do not field-paint metering equipment, circuit breakers, panelboards, and safety switches.

(d) Paint apartment loadcenter cover and trim to match adjacent wall finish.

3.10 IDENTIFICATION

(a) All overcurrent protection devices, enclosures, and cabinets shall be provided with plastic plate identifying itself and its use.

(1) Identify all breakers, metering devices, and safety switches.

(2) Cabinets. i.e. RELAY '2A'

(b) Plastic plate shall be laminated black and white, engraved 1/4-inch high lettering to expose white layer. Identification plates for emergency system shall be laminated red and white plastic plate. Plate shall be riveted to the cover and located directly below device handle, or top side of door.

(c) CAUTION SIGNS shall be provided as required by Ordinances and/or by OSHA.

3.11 TESTING

(a) Owner, make all required tests and secure all required approval from agencies having jurisdiction. Any deficiencies found shall be rectified and work affected by such deficiencies shall be completely retested at Contractor's expense. Written notification of all proposed tests shall be provided to the Engineer a minimum of 14 days prior to the date of the test.

(b) Perform an operational test after completion of the installation in the presence of the Engineer, to assure proper operation of all items of work. Remove all grounds and shorts. Balance feeder loads.

(c) Measure resistance of grounding system at service and furnish 3 copies of results to the Engineer.

3.12 OPERATIONS AND MAINTENANCE MANUALS

(a) Furnish to Owner, as part of equipment, 3 copies, unless otherwise indicated, of complete installation, operating and maintenance instructions, including schematic and wiring diagrams, engineering data sheets on each major component and complete servicing data, including part numbers of all replaceable components. The delivery of the equipment shall not be considered complete until those instructions have been received.

(b) Manuals are required for the following systems:

(1) Fire Alarm System

-- End of Section 26 00 00.00 20 --

SECTION 31 00 01

SITE PREPARATION

PART 1 -- GENERAL

1.1 WORK OF THIS SECTION

(a) The Contractor shall furnish all labor, materials, and equipment required and shall perform all site preparation, complete, in accordance with the Contract Documents.

(b) The Contractor shall clear, grub, and strip areas actually needed for waste disposal, borrow, or Site improvements within limits shown or specified. The areas to be cleared, grubbed, and stripped within public rights-of-way and utility easements shall be minimized to the extent possible for the Work and in consideration of the actual means and methods of construction used. No unnecessary site preparation within these areas shall be performed.

(c) Site preparation shall be conducted only after adequate erosion and sediment controls are in place. The Contractor shall limit areas exposed uncontrolled to erosion during installation of temporary erosion and sediment controls to maximum of one acre.

(d) Temporary Chain Link Fence: The Contractor shall erect temporary chain link fencing to secure the project site from trespass or unintentional entrance by unauthorized personnel. All disturbed ground stockpiles, staging and on-site transport routes shall be fully enclosed by a perimeter security fence. Areas either under construction or completed but not specifically accepted by a GHURA representative as substantially complete shall be completely enclosed. Areas included in the Contract but not yet under construction may be left open to public access at the discretion of a GHURA representative.

1.2 SITE INSPECTION

(a) Prior to moving onto the Site, the Contractor shall inspect the Site conditions and review maps of the Site and off-Site pipeline routes and facilities delineating the GHURA's and utility company's property and right-of-way lines, and clearing, stripping and grubbing limits.

1.3 PERMITS

(a) The Contractor shall obtain all permits required for the site preparation Work prior to proceeding with the Work

(b) Temporary surface, storm water, and erosion control in accordance with the storm water pollution prevention plan (SWPPP) complying with the NPDES construction general permit shall be implemented prior to and concurrent with the clearing, stripping, and grubbing operations.

1.4 SUBMITTALS

(a) Submittals shall be furnished in accordance with SECTION 01 33 00 – SUBMITTAL PROCEDURES

(b) Copies of all permits required prior to clearing, grubbing, and stripping work.

(c) A complete site access, staging, and stockpiling plan using a copy of the basic site layout, identifying all areas to be used for access, staging, and stockpiling throughout various phases of the construction sequence.

(d) Shop drawings:

(1) Temporary chain link fencing: Manufacturer's technical data, product specifications, standard details, installation instructions of the temporary fencing panels and connection hardware.

(2) Signs: List of material, product data of items proposed to be provided under this section.

(e) Samples of proposed signage.

PART 2 -- PRODUCTS

2.1 TEMPORARY CHAIN LINK FENCING

(a) Pre-fabricated portable galvanized chain link fence panels including fabric, posts, top and bottom rails, and driven posts with rolled fabric & wire ties for areas of uneven terrain.

(1) Pre-fabricated portable temporary fence panels shall be constructed to industry standards for fixed chain link fencing. Pre-fabricated portable fence panels shall be a minimum of 6 feet high by maximum 10 feet wide. Post bases shall be minimum 16 inches by 8 inches by 8 inches high concrete pier with sleeve for post, or as approved.

(a) Posts - minimum 1½ inches outside diameter Schedule 40 galvanized steel pipe.

(b) Fabric - minimum 11 gauge galvanized two-inch diamond mesh steel wire interwoven. Knuckled or twisted selvage is acceptable.

(2) Bracing: Provide additional panels or outriggers as necessary to provide a rigid, stable run of fence.

(3) Driven Post Fencing:

(a) Posts - Schedule 40 galvanized steel pipe.

(b) Fabric - minimum 11 gauge galvanized two-inch diamond mesh steel wire interwoven. Knuckled or twisted selvage is acceptable.

(c) Wire Ties – minimum 9 gauge aluminum wire.

(4) Gates shall be equipped with double padlocks to allow Contractor and GHURA forces entry. Hinged sides of each operating panel shall include double bracketing. GHURA will provide one (1) lock keyed for GHURA personnel for each entry. Contractor shall provide a lock keyed for Contractor and Subcontractors for each entry.

(5) Barbed wire will not be allowed.

(b) Signage: Provide corrugated polypropylene warning signage every 50 feet of running fence line. Signage shall be a minimum of 18 inches (H) by 24 inches (W), brightly colored (Black/Red on White) with contrasting lettering as follows or as directed by a GHURA representative.

**“WARNING
CONSTRUCTION SITE
NO TRESPASSING”**

PART 3 -- EXECUTION

3.1 PRIMARY SITE ACCESS

(a) The Contractor shall develop any necessary access to the Site, including access barriers to prohibit entry of unauthorized persons.

(b) Utility Interference: Where existing utilities interfere with the Work, notify the utility owner and a GHURA representative before proceeding with the Work.

3.2 PRESERVATION OF EXISTING CONDITIONS

(a) Existing trees, shrubbery, other vegetation, structures, pavements, or utilities designated to remain in place shall be protected from damage resulting from the Work.

(b) Natural vegetation outside the actual lines of construction shall be protected from damage during construction.

3.3 CLEARING, GRUBBING, AND STRIPPING

(a) General

(1) Clearing, grubbing, and stripping shall extend to 5.0 feet beyond the limits of excavations and fill slopes, but not to extend beyond project limits. Areas within the limits of excavation, embankment, building areas, roadways, sidewalks, and other facilities shall be cleared, grubbed, and stripped before earthwork begins. All rubbish, trash, and junk from entire area within project limits shall be removed.

(2) Clearing, grubbing, and stripping shall be completed as a separate item of Work before the beginning of excavation, stockpiling, trenching, or fill operations. The completed cleared areas must be approved by a GHURA representative before the Contractor begins subsequent earthwork items.

(3) Areas to be used for stockpiling of material shall be cleared, grubbed, and stripped prior to stockpiling.

(4) Waste-disposal areas shall be cleared, grubbed, and stripped only as necessary for the disposal of waste material.

(5) Areas that have been cleared, grubbed, and stripped shall be maintained free of objectionable growth until the work has been completed.

(6) Clearing, grubbing, and stripping of the length of trench to be excavated each day shall be completed, and material from these operations shall be stockpiled away from the trench area, before the start of trenching.

(7) The removal of any trees, shrubs, fences, or other improvements outside of limits of the Work, if necessary for the Contractor's choice of means and methods, shall be arranged with GHURA and shall be removed and replaced, as part of the Work at no additional cost to GHURA.

(b) Clearing

(1) Clearing shall consist of cutting, removing, and disposing of objectionable material from the ground surface, such as trash, trees, brush, logs, stumps, weeds, grasses, fences, structures, and natural or artificial obstructions of any kind.

(2) Construction areas shall be cleared of grass and weeds to a depth that removes all organic laden soil and cleared of structures, pavement, sidewalks, concrete or masonry debris, trees, logs, upturned stumps, loose boulders, and any other objectionable material of any kind which would interfere with the performance or completion of the Work, create a hazard to safety, or impair the subsequent usefulness of the Work, or obstruct its operation.

(3) Clearing shall also include the removal and disposal from the Site of trash piles and rubbish created prior to and during the Work.

(c) Grubbing

(1) Within the limits of clearing, the areas below the natural ground surface shall be grubbed to a depth necessary to remove any stumps, roots, buried logs, and other objectionable material. Grubbing shall consist of digging up, removing, and disposing of objectionable material found at or below the ground surface such as trash, trees, brush, logs, stumps, roots, and natural or artificial obstructions of any kind that will interfere with the required excavations and construction. Underground structures, debris or waste shall be removed if found on the Site.

(2) Unless otherwise indicated, stumps, roots over 1.0 inch in diameter, buried logs, and all other objectionable materials shall be removed to a depth of 12 inches below the existing ground surface or the structure subgrade or pipeline subgrade, whichever is deeper.

(3) All grubbing holes and depressions excavated below the original ground surface shall be refilled with suitable materials and compacted to a density conforming to the surrounding ground surface in accordance with SECTION 31 00 00 – EARTHWORK.

(d) Stripping

(1) Areas to receive fill shall be stripped of any vegetation, debris, animal burrows, or other deleterious material. Stripping shall consist of the removal of organic materials, sod, topsoil, grass, and grass roots from the areas designated to be stripped.

(2) Except under previously existing paving or structures, or when otherwise shown on or specified, existing soil materials shall be stripped to a depth of 8 inches below the original ground surface and from area within 5 feet outside foundation walls. Any undesirable topsoil and colluviums shall be removed to the level designated by a GHURA representative.

(3) The stripped material not used for backfill as a part of this project shall be disposed of at an off-site location selected by the Contractor and at the Contractor's expense.

(e) Stripped topsoil shall not be mixed with borrow materials. The Contractor shall ensure that stripped and stockpiled topsoil is identified and marked so that it is not incorporated into fill or embankment, except for placement in the top 12 inches of fill in the areas to be landscaped and the top 6 inches of fill on embankment fills around hydraulic structures, and other embankment fills in accordance with SECTION 31 00 00 - EARTHWORK.

3.4 TEMPORARY SECURITY FENCE

(a) Temporary chain link fence panels shall be connected mechanically by means of pre-fabricated, bolted bracket manufactured specifically for the purpose. Fencing shall not be wired together.

(b) Where long straight runs result in an unstable condition, sufficient out-rigging shall be incorporated to maintain fencing upright. Use only pre-manufactured outriggers or additional fence panels. Out-riggers shall be placed on the interior side of the fence unless approved by a GHURA representative. Alternatively, and where appropriate, a "zig-zag" arrangement of panels for stability may be used.

(c) Uneven Terrain: Where uneven terrain will not allow the use of pre-manufactured portable fence panels, or where otherwise directed by a GHURA representative, drive posts directly into the earth plumb and 8 feet on center along the approved alignment. It is the Contractors responsibility to perform a complete locates for underground utilities in any area to receive driven posts. Posts shall be driven to sufficient depth to assure stability and durability for the life of the installation, maintain a minimum of 6 feet above grade. Reset loose posts at the direction of a GHURA representative. Chain link fabric shall be secured to

posts using approved wire ties within 6 inches of the top and bottom of each post, and a minimum of 18 inches on center between ties. Posts shall be provided at each end of each driven post installation at a point that is sufficiently level to clamp prefabricated portable fence panels directly to the driven post installation.

3.5 REMOVAL

(a) Removal of temporary security fencing shall be performed within two weeks of establishment of the Work as substantially complete.

(b) All removal shall include complete site restoration as directed by a GHURA representative.

-- End of Section 31 00 01 --

SECTION 31 23 00.00 20

EXCAVATION AND FILL

PART 1 -- GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

AMERICAN WATER WORKS ASSOCIATION (AWWA)

AWWA C600 (2010) Installation of Ductile-Iron Water Mains and Their Appurtenances

AMERICAN WOOD PROTECTION ASSOCIATION (AWPA)

AWPA C2 (2003) Lumber, Timber, Bridge Ties and Mine Ties - Preservative Treatment by Pressure Processes

AWPA P5 (2015) Standard for Waterborne Preservatives

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM C136/C136M (2014) Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates

ASTM C33/C33M (2016) Standard Specification for Concrete Aggregates

ASTM D1140 (2014) Amount of Material in Soils Finer than the No. 200 (75-micrometer) Sieve

ASTM D1556/D1556M (2015; E 2016) Standard Test Method for Density and Unit Weight of Soil in Place by Sand-Cone Method

ASTM D1557	(2012; E 2015) Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft ³) (2700 kN-m/m ³)
ASTM D1883	(2016) CBR (California Bearing Ratio) of Laboratory-Compacted Soils
ASTM D2321	(2014; E 2014) Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications
ASTM D2487	(2011) Soils for Engineering Purposes (Unified Soil Classification System)
ASTM D4318	(2010; E 2014) Liquid Limit, Plastic Limit, and Plasticity Index of Soils
ASTM D6938	(2015) Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)
ASTM D698	(2012; E 2014; E 2015) Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/cu. ft. (600 kN-m/cu. m.))

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1	(2014) Safety and Health Requirements Manual
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U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)

EPA SW-846.3-3	(1999, Third Edition, Update III-A) Test Methods for Evaluating Solid Waste: Physical/Chemical Methods
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1.2 DEFINITIONS

1.2.1 Capillary Water Barrier

A layer of clean, poorly graded crushed rock, stone, or natural sand or gravel having a high porosity which is placed beneath a building slab with or without a vapor barrier to cut off the capillary flow of pore water to the area immediately below a slab.

1.2.2 Degree of Compaction

Degree of compaction is expressed as a percentage of the maximum density obtained by the test procedure presented in ASTM D698 and ASTM D1557, for general soil types, abbreviated as percent laboratory maximum density.

1.2.3 Hard Materials

Weathered rock, dense consolidated deposits, or conglomerate materials which are not included in the definition of "rock" but which usually require the use of heavy excavation equipment, ripper teeth, or jack hammers for removal.

1.2.4 Rock

Solid homogeneous interlocking crystalline material with firmly cemented, laminated, or foliated masses or conglomerate deposits, neither of which can be removed without systematic drilling and blasting, drilling and the use of expansion jacks or feather wedges, or the use of backhoe-mounted pneumatic hole punchers or rock breakers; also large boulders, buried masonry, or concrete other than pavement exceeding 1/2 cubic yard in volume. Removal of hard material will not be considered rock excavation because of intermittent drilling and blasting that is performed merely to increase production.

1.3 SUBMITTALS

Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

(a) Preconstruction Submittals

Dewatering work plan

Submit 15 days prior to starting work.

(b) Test Reports

Borrow Site Testing

Fill and backfill test

Select material test

Density tests

Copies of all laboratory and field test reports within 24 hours of the completion of the test.

1.4 DELIVERY, STORAGE, AND HANDLING

Perform in a manner to prevent contamination or segregation of materials.

1.6 REQUIREMENTS FOR OFF SITE SOIL

Soils brought in from off site for use as backfill shall be tested for petroleum hydrocarbons, BTEX, PCBs and HW characteristics (including toxicity, ignitability, corrosivity, and reactivity). Backfill shall not contain concentrations of these analytes above the appropriate State and/or EPA criteria, and shall pass the tests for HW characteristics. Determine petroleum hydrocarbon concentrations by using appropriate State protocols. Determine BTEX concentrations by using EPA SW-846.3-3 Method 5035/8260B. Perform complete TCLP in accordance with EPA SW-846.3-3 Method 1311. Perform HW characteristic tests for ignitability, corrosivity, and reactivity in accordance with accepted standard methods. Perform PCB testing in accordance with accepted standard methods for sampling and analysis of bulk solid samples. Provide borrow site testing for petroleum hydrocarbons and BTEX from a grab sample of material from the area most likely to be contaminated at the borrow site (as indicated by visual or olfactory evidence), with at least one test from each borrow site. For each borrow site, provide borrow site testing for HW characteristics from a composite sample of material, collected in accordance with standard soil sampling techniques. Do not bring material onsite until tests results have been received and approved by the Contracting Officer.

1.7 QUALITY ASSURANCE

1.7.1 Dewatering Work Plan

Submit procedures for accomplishing dewatering work.

1.7.2 Utilities

Movement of construction machinery and equipment over pipes and utilities during construction shall be at the Contractor's risk. For work immediately adjacent to or for excavations exposing a utility or other buried obstruction, excavate by hand. Start hand excavation on each side of the indicated obstruction and continue until the obstruction is uncovered or until clearance for the new grade is assured. Support uncovered lines or other existing work affected by the contract excavation until approval for backfill is granted by the Contracting Officer. Report damage to utility lines or subsurface construction immediately to the Contracting Officer.

PART 2 -- PRODUCTS

2.1 SOIL MATERIALS

2.1.1 Satisfactory Materials

Any materials classified by ASTM D2487 as GW, GP, GM, GP-GM, GW-GM, GC, GP-GC, GM-GC, SW, SP, SM, SW-SM, SC, SW-SC, SP-SM, SP-SC, free of debris, roots, wood, scrap material, vegetation, refuse, soft unsound particles, deleterious, or objectionable materials. Unless specified otherwise, the maximum particle diameter shall be one-half the lift thickness at the intended location.

2.1.2 Unsatisfactory Materials

Materials which do not comply with the requirements for satisfactory materials. Unsatisfactory materials also include man-made fills, trash, refuse, or backfills from previous construction. Unsatisfactory material also includes material classified as satisfactory which contains root and other organic matter, and stones larger than 6 inches. The Contracting Officer shall be notified of any contaminated materials.

2.1.3 Cohesionless and Cohesive Materials

Cohesionless materials include materials classified in ASTM D2487 as GW, GP, SW, and SP. Cohesive materials include materials classified as GC, SC, ML, CL, MH, and CH. Materials classified as GM, GP-GM, GW-GM, SW-SM, SP-SM, and SM shall be identified as cohesionless only when the fines are nonplastic (plasticity index equals zero). Materials classified as GM and SM will be identified as cohesive only when the fines have a plasticity index greater than zero.

2.1.4 Backfill and Fill Material

ASTM D2487, classification GW, GP, GM, GC, SW, SP, SM, SC with a maximum ASTM D4318 liquid limit of 35, maximum ASTM D4318 plasticity index of 12, and a maximum of 25 percent by weight passing ASTM D1140, No. 200 sieve.

2.1.5 Select Material

Provide materials classified as GW, GP, SW, SP, by ASTM D2487 where indicated. The liquid limit of such material shall not exceed 35 percent when tested in accordance with ASTM D4318. The plasticity index shall not be greater than 12 percent when tested in accordance with ASTM D4318, and not more than 25 percent by weight shall be finer than No. 200 sieve when tested in accordance with ASTM D1140.

The combined material shall conform to the following sieve analysis:

Sieve Size	Percent Passing by Weight
2 inches	100
No. 4	40 - 85
No. 10	20 - 80
No. 40	10 - 60
No. 200	5 - 25

2.1.6 Topsoil

Natural, friable soil representative of productive, well-drained soils in the area, free of subsoil, stumps, rocks larger than one inch diameter, brush, weeds, toxic substances, and other material detrimental to plant growth. Amend topsoil pH range to obtain a pH of 5.5 to 7.

2.2 POROUS FILL FOR CAPILLARY WATER BARRIER

ASTM C33/C33M fine aggregate grading with a maximum of 3 percent by weight passing ASTM D1140, No. 200 sieve, or 1-1/2 inches and no more than 2 percent by weight passing the No. 4 size sieve and conforming to the general soil material requirements specified in Subparagraph 2.2.1 entitled "Satisfactory Materials."

2.3 UTILITY BEDDING MATERIAL

Except as specified otherwise in the individual piping section, provide bedding for buried piping in accordance with AWWA C600, Type 4, except as specified herein. Backfill to top of pipe shall be compacted to 95 percent of ASTM D698 maximum density. Plastic piping shall have bedding to spring line of pipe. Provide ASTM D2321 materials as follows:

(a) Class I: Angular, 0.25 to 1.5 inches, graded stone, including a number of fill materials that have regional significance such as coral, slag, cinders, crushed stone, and crushed shells.

(b) Class II: Coarse sands and gravels with maximum particle size of 1.5 inches, including various graded sands and gravels containing small percentages of fines, generally granular and noncohesive, either wet or dry. Soil Types GW, GP, SW, and SP are included in this class as specified in ASTM D2487.

2.4 BORROW

Obtain borrow materials required in excess of those furnished from excavations from sources outside of Government property.

Obtain borrow materials required in excess of those furnished from excavations from sources outside of Government property, except that borrow materials conforming to fill and backfill material may be obtained from the Government borrow pit. If the Government borrow pit is used, the Contractor shall perform clearing, grubbing, and stripping required for providing access to suitable borrow material. Strip top 12 inches of soil material from borrow area and stockpile. After removal of borrow material, regrade borrow pit using stockpiled soil material to contours which will blend in with adjacent topography. Maximum side slopes shall be two horizontal to one vertical. Excavation and backfilling of borrow pit shall ensure proper drainage.

2.5 BURIED WARNING AND IDENTIFICATION TAPE

Polyethylene plastic and metallic core or metallic-faced, acid- and alkali-resistant, polyethylene plastic warning tape manufactured specifically for warning and identification of buried utility lines. Provide tape on rolls, 3 inch minimum width, color coded as specified below for the intended utility with warning and identification imprinted in bold black letters continuously over the entire tape length. Warning and identification to read, "CAUTION, BURIED (intended

service) LINE BELOW" or similar wording. Color and printing shall be permanent, unaffected by moisture or soil.

Warning Tape Color Codes	
Red	Electric
Yellow	Gas, Oil; Dangerous Materials
Orange	Telephone and Other Communications
Blue	Potable Water Systems
Green	Sewer Systems
White	Steam Systems
Gray	Compressed Air
Purple	Non Potable, Reclaimed Water, Irrigation and Slurry lines

2.5.1 Warning Tape for Metallic Piping

Acid and alkali-resistant polyethylene plastic tape conforming to the width, color, and printing requirements specified above. Minimum thickness of tape shall be 0.003 inch. Tape shall have a minimum strength of 1500 psi lengthwise, and 1250 psi crosswise, with a maximum 350 percent elongation.

2.5.2 Detectable Warning Tape for Non-Metallic Piping

Polyethylene plastic tape conforming to the width, color, and printing requirements specified above. Minimum thickness of the tape shall be 0.004 inch. Tape shall have a minimum strength of 1500 psi lengthwise and 1250 psi crosswise. Tape shall be manufactured with integral wires, foil backing, or other means of enabling detection by a metal detector when tape is buried up to 3 feet deep. Encase metallic element of the tape in a protective jacket or provide with other means of corrosion protection.

2.6 DETECTION WIRE FOR NON-METALLIC PIPING

Detection wire shall be insulated single strand, solid copper with a minimum of 12 AWG.

PART 3 -- EXECUTION

3.1 PROTECTION

3.1.1 Shoring

Provide shoring and bracing where necessary. In addition to Section 25 A and B of EM 385-1-1 and other requirements set forth in this contract, include provisions in the shoring and sheeting plan that will accomplish the following:

- (a) Prevent undermining of pavements, foundations and slabs.
- (b) Prevent slippage or movement in banks or slopes adjacent to the excavation.

3.1.2 Drainage and Dewatering

Provide for the collection and disposal of surface and subsurface water encountered during construction.

3.1.2.1 Drainage

So that construction operations progress successfully, completely drain construction site during periods of construction to keep soil materials sufficiently dry. The Contractor shall establish/construct storm drainage features (ponds/basins) at the earliest stages of site development, and throughout construction grade the construction area to provide positive surface water runoff away from the construction activity and/or provide temporary ditches, swales, earth berm and other drainage features and equipment as required to maintain dry soils, prevent erosion and undermining of foundations. When unsuitable working platforms for equipment operation and unsuitable soil support for subsequent construction features develop, remove unsuitable material and provide new soil material as specified herein. It is the responsibility of the Contractor to assess the soil and ground water conditions presented by the plans and specifications and to employ necessary measures to permit construction to proceed. Excavated slopes and backfill surfaces shall be protected to prevent erosion and sloughing. Excavation shall be performed so that the site, the area immediately surrounding the site, and the area affecting operations at the site shall be continually and effectively drained.

3.1.2.2 Dewatering

Groundwater flowing toward or into excavations shall be controlled to prevent sloughing of excavation slopes and walls, boils, uplift and heave in the excavation and to eliminate interference with orderly progress of construction. French drains, sumps, ditches or trenches will not be permitted within 3 feet of the foundation of any structure, except with specific written approval, and after specific contractual provisions for restoration of the foundation area have been made. Control measures shall be taken by the time the excavation reaches the water level in order to maintain the integrity of the in situ material.

3.1.3 Underground Utilities

Location of the existing utilities indicated is approximate. The Contractor shall physically verify the location and elevation of the existing utilities indicated prior to starting construction. The Contractor shall contact the using agency (GPA, GWA, GTA and Docomo) for assistance in locating existing utilities. The Contractor shall mark the surface of the ground where existing underground utilities are discovered.

3.1.4 Machinery and Equipment

Movement of construction machinery and equipment over pipes during construction shall be at the Contractor's risk. Repair, or remove and provide new pipe for existing or newly installed pipe that has been displaced or damaged.

3.2 SURFACE PREPARATION

3.2.1 Clearing and Grubbing

Unless indicated otherwise, remove trees, stumps, logs, shrubs, brush and vegetation and other items that would interfere with construction operations within the clearing limits. Remove stumps entirely. Grub out matted roots and roots over 2 inches in diameter to at least 18 inches below existing surface.

3.2.2 Stripping

Strip suitable soil from the site where excavation or grading is indicated and stockpile separately from other excavated material. Material unsuitable for use as topsoil shall be stockpiled and used for backfilling. Locate topsoil so that the material can be used readily for the finished grading. Protect topsoil and keep in segregated piles until needed.

3.2.3 Unsuitable Material

Remove vegetation, debris, decayed vegetable matter, sod, mulch, and rubbish underneath paved areas or concrete slabs.

3.3 EXCAVATION

Excavate to contours, elevation, and dimensions indicated. Reuse excavated materials that meet the specified requirements for the material type required at the intended location. Keep excavations free from water. Excavate soil disturbed or weakened by Contractor's operations, soils softened or made unsuitable for subsequent construction due to exposure to weather. Excavations below indicated depths will not be permitted except to remove unsatisfactory material. Unsatisfactory material encountered below the grades shown shall be removed. Refill with backfill and fill material and compact to 95 percent of ASTM D698 and ASTM D1557 maximum density. Satisfactory material removed below the depths indicated, without specific direction of the Contracting Officer, shall be replaced with satisfactory materials to the indicated excavation grade; except as specified for spread footings. Determination of elevations and measurements of approved overdepth excavation of unsatisfactory material below grades indicated shall be done under the direction of the Contracting Officer.

3.3.1 Structures with Spread Footings

Ensure that footing subgrades have been inspected and approved by the Contracting Officer prior to concrete placement. Fill over excavations with concrete during foundation placement.

3.3.2 Pipe Trenches

Excavate to the dimension indicated. Grade bottom of trenches to provide uniform support for each section of pipe after pipe bedding placement. Tamp if necessary to provide a firm pipe bed. Recesses shall be excavated to accommodate bells and joints so that pipe will be uniformly supported for the entire length. Rock, where encountered, shall be excavated to a depth of at least 6 inches below the bottom of the pipe.

3.3.3 Hard Material and Rock Excavation

Remove hard material and rock to elevations indicated in a manner that will leave foundation material in an unshattered and solid condition. Roughen level surfaces and cut sloped surfaces into benches for bond with concrete. Protect shale from conditions causing decomposition along joints or cleavage planes and other types of erosion. Removal of hard material and rock

beyond lines and grades indicated will not be grounds for a claim for additional payment unless previously authorized by the Contracting Officer. Excavation of the material claimed as rock shall not be performed until the material has been cross sectioned by the Contractor and approved by the Contracting Officer. Common excavation shall consist of all excavation not classified as rock excavation.

3.3.4 Excavated Materials

Satisfactory excavated material required for fill or backfill shall be placed in the proper section of the permanent work required or shall be separately stockpiled if it cannot be readily placed. Satisfactory material in excess of that required for the permanent work and all unsatisfactory material shall be disposed of as specified in Paragraph 3.13 "DISPOSITION OF SURPLUS MATERIAL."

3.3.5 Final Grade of Surfaces to Support Concrete

Excavation to final grade shall not be made until just before concrete is to be placed. Only excavation methods that will leave the foundation rock in a solid and unshattered condition shall be used. Approximately level surfaces shall be roughened, and sloped surfaces shall be cut as indicated into rough steps or benches to provide a satisfactory bond. Shales shall be protected from slaking and all surfaces shall be protected from erosion resulting from ponding or flow of water.

3.4 SUBGRADE PREPARATION

Unsatisfactory material in surfaces to receive fill or in excavated areas shall be removed and replaced with satisfactory materials as directed by the Contracting Officer. The surface shall be scarified to a depth of 6 inches before the fill is started. Sloped surfaces steeper than 1 vertical to 4 horizontal shall be plowed, stepped, benched, or broken up so that the fill material will bond with the existing material. When subgrades are less than the specified density, the ground surface shall be broken up to a minimum depth of 6 inches, pulverized, and compacted to the specified density. When the subgrade is part fill and part excavation or natural ground, the excavated or natural ground portion shall be scarified to a depth of 12 inches and compacted as specified for the adjacent fill. Material shall not be placed on surfaces that are muddy. Compaction shall be accomplished by sheepsfoot rollers, pneumatic-tired rollers, steel-wheeled rollers, or other approved equipment well suited to the soil being compacted.

3.5 FILLING AND BACKFILLING

Fill and backfill to contours, elevations, and dimensions indicated. Compact each lift before placing overlaying lift.

3.6.1 Backfill and Fill Material Placement

Provide for paved areas and under concrete slabs, except where select material is provided. Place in 8 inch in loose lifts. Do not place over wet areas. Place backfill material adjacent to structures as the structural elements are completed and accepted. Backfill against concrete only when approved. Place and compact material to avoid loading upon or against the structure.

3.6.2 Backfill and Fill Material Placement over Pipes and at Walls

Backfilling shall not begin until construction below finish grade has been approved, underground utilities systems have been inspected, tested and approved, forms removed, and the excavation cleaned of trash and debris. Backfill shall be brought to indicated finish grade. Where pipe is coated or wrapped for protection against corrosion, the backfill material up to an elevation 2 feet above sewer lines and 1 foot above other utility lines shall be free from stones larger than 1 inch in any dimension. Heavy equipment for spreading and compacting backfill shall not be operated closer to foundation or retaining walls than a distance equal to the height of backfill above the top of footing; the area remaining shall be compacted in layers not more than 4 inches in compacted thickness with power-driven hand tampers suitable for the material being compacted. Backfill shall be placed carefully around pipes or tanks to avoid damage to coatings, wrappings, or tanks. Backfill shall not be placed against foundation walls prior to 7 days after completion of the walls. As far as practicable, backfill shall be brought up evenly on each side of the wall and sloped to drain away from the wall.

3.6.3 Trench Backfilling

Backfill as rapidly as construction, testing, and acceptance of work permits. Place and compact backfill under structures and paved areas in 8 inch in loose lifts to top of trench and in 8 inch loose lifts to one foot over pipe outside structures and paved areas.

3.7 BORROW

Where satisfactory materials are not available in sufficient quantity from required excavations, approved borrow materials shall be obtained as specified herein.

3.8 BURIED WARNING AND IDENTIFICATION TAPE

Provide buried utility lines with utility identification tape. Bury tape 12 inches below finished grade; under pavements and slabs, bury tape 6 inches below top of subgrade.

3.9 BURIED DETECTION WIRE

Bury detection wire directly above non-metallic piping as indicated or at a distance not to exceed 12 inches above the top of pipe. The wire shall extend continuously and unbroken, from manhole to manhole. The ends of the wire shall terminate inside the manholes at each end of the pipe, with a minimum of 3 feet of wire, coiled, remaining accessible in each manhole. The wire shall remain insulated over its entire length. The wire shall enter manholes between the top of the corbel and the frame, and extend up through the chimney seal between the frame and the chimney seal. For force mains, the wire shall terminate in the valve pit at the pump station end of the pipe.

3.10 COMPACTION

Determine in-place density of existing subgrade; if required density exists, no compaction of existing subgrade will be required. Density requirements specified herein are for cohesionless materials. When cohesive materials are encountered or used, density requirements may be reduced by 5 percent.

3.10.1 General Site

Compact underneath areas designated for vegetation and areas outside the 5 foot line of the paved area or structure to 90 percent of ASTM D698 and ASTM D1557.

3.10.2 Structures, Spread Footings, and Concrete Slabs

Compact top 12 inches of subgrades to 95 percent of ASTM D698 and ASTM D1557. Compact fill and backfill material to 95 percent of ASTM D698 and ASTM D1557.

3.10.3 Paved Areas

Compact top 12 inches of subgrades to 98 percent of ASTM D698 and ASTM D1557. Compact fill and backfill materials to 95 percent of ASTM D698 and ASTM D1557.

3.11 SPECIAL EARTHWORK REQUIREMENTS FOR SUBSURFACE DRAINS

Excavate to dimensions indicated. Provide a bedding surface of no more than one inch of gravel Type I subdrain backfill material and place on compacted impermeable material as indicated. Backfill drains around and over the pipes after pipe installation has been approved. Place special granular filter material in 6 inch lifts and compact with mechanical, vibrating plate tampers or rammers until no further consolidation can be achieved. Compact backfill overlying the special granular filter material as specified for adjacent or overlying work.

3.12 FINISH OPERATIONS

3.12.1 Grading

Finish grades as indicated within one-tenth of one foot. Grade areas to drain water away from structures. Maintain areas free of trash and debris. For existing grades that will remain but which were disturbed by Contractor's operations, grade as directed.

3.12.2 Protection of Surfaces

Protect newly backfilled, graded, and topsoiled areas from traffic, erosion, and settlements that may occur. Repair or reestablish damaged grades, elevations, or slopes.

3.13 DISPOSITION OF SURPLUS MATERIAL

Remove from Government property surplus or other soil material not required or suitable for filling or backfilling, and brush, refuse, stumps, roots, and timber. Dispose in an approved dump site.

3.14 FIELD QUALITY CONTROL

3.14.1 Sampling

Take the number and size of samples required to perform the following tests.

3.14.2 Testing

Perform one of each of the following tests for each material used. Provide additional tests for each source change.

3.14.2.1 Fill and Backfill Material Testing

Test fill and backfill material in accordance with ASTM C136/C136M for conformance to ASTM D2487 gradation limits; ASTM D1140 for material finer than the No. 200 sieve; ASTM D4318 for liquid limit and for plastic limit; ASTM D698 or ASTM D1557 for moisture density relations, as applicable.

3.14.2.2 Density Tests

Test density in accordance with ASTM D1556/D1556M, or ASTM D6938. When ASTM D6938 density tests are used, verify density test results by performing an ASTM D1556/D1556M density test at a location already ASTM D6938 tested as specified herein. Perform an ASTM D1556/D1556M density test at the start of the job. Include density test results in daily report.

-- End of Section 31 23 00.00 20 --

DIVISION 32 – EXTERIOR IMPROVEMENTS

SECTION 32 12 16.16

ROAD-MIX ASPHALT PAVING

PART 1 -- GENERAL

1.1 PERCENT PAYMENT

1.1.1 Method of Measurement

The amount paid for will be the number of tons of hot-mix asphalt pavement mixture used in the accepted work. Weigh the hot-mix asphalt pavement mixture after mixing. No separate payment will be made for weight of asphalt cement material incorporated herein.

1.1.2 Basis of Payment

Quantities of hot-mix asphalt pavement, determined as specified above, will be paid for at respective contract unit prices or at reduced prices adjusted in accordance with paragraphs PERCENT PAYMENT and ACCEPTANCE. Payment will constitute full compensation for furnishing all materials, equipment, plant, and tools; and for all labor and other incidentals necessary to complete work required by this section of the specification.

1.2 PAYMENT

1.2.1 Method of Measurement

The amount paid for will be the number of tons of hot-mix asphalt pavement mixture used in the accepted work. Weigh the hot-mix asphalt pavement mixture after mixing. No separate payment will be made for weight of asphalt cement material incorporated herein.

1.2.2 Basis of Payment

Quantities of hot-mix warm-mix asphalt pavement, determined as specified above, will be paid for at respective contract unit prices. Payment will constitute full compensation for furnishing all materials, equipment, plant, and tools; and for all labor and other incidentals necessary to complete work required by this section of the specification.

1.3 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO)

AASHTO M 156	(2013; R 2017) Standard Specification for Requirements for Mixing Plants for Hot-Mixed, Hot-Laid Bituminous Paving Mixtures
AASHTO T 304	(2011; R 2015) Standard Method of Test for Uncompacted Void Content of Fine Aggregate
AASHTO T 329	(2015) Standard Test Method for Moisture Content of Hot Mix Asphalt (HMA) by Oven Method

ASPHALT INSTITUTE (AI)

AI MS-2	(2015) Asphalt Mix Design Methods
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ASTM INTERNATIONAL (ASTM)

ASTM C29/C29M	(2017a) Standard Test Method for Bulk Density ("Unit Weight") and Voids in Aggregate
ASTM C117	(2017) Standard Test Method for Materials Finer than 75-um (No. 200) Sieve in Mineral Aggregates by Washing
ASTM C127	(2015) Standard Test Method for Density, Relative Density (Specific Gravity), and Absorption of Coarse Aggregate
ASTM C128	(2015) Standard Test Method for Density, Relative Density (Specific Gravity), and Absorption of Fine Aggregate

ASTM C131/C131M	(2020) Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
ASTM C136/C136M	(2019) Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
ASTM C142/C142M	(2017) Standard Test Method for Clay Lumps and Friable Particles in Aggregates
ASTM C566	(2013) Standard Test Method for Total Evaporable Moisture Content of Aggregate by Drying
ASTM D140/D140M	(2016) Standard Practice for Sampling Asphalt Materials
ASTM D242/D242M	(2009; R 2014) Mineral Filler for Bituminous Paving Mixtures
ASTM D2172/D2172M	(2017; E 2018) Standard Test Methods for Quantitative Extraction of Asphalt Binder from Asphalt Mixtures
ASTM D2419	(2014) Sand Equivalent Value of Soils and Fine Aggregate
ASTM D4791	(2019) Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate
ASTM D5444	(2015) Mechanical Size Analysis of Extracted Aggregate
ASTM D5821	(2013; R 2017) Standard Test Method for Determining the Percentage of Fractured Particles in Coarse Aggregate
ASTM D6307	(2019) Standard Test Method for Asphalt Content of Asphalt Mixture by Ignition Method
ASTM D6373	(2016) Standard Specification for Performance Graded Asphalt Binder

ASTM D6925

(2014) Standard Test Method for Preparation and Determination of the Relative Density of Hot Mix Asphalt (HMA) Specimens by Means of the Superpave Gyratory Compactor

1.4 SUBMITTALS

Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-03 Product Data

Mix Design

SD-06 Test Reports

Aggregates

SD-07 Certificates

Asphalt Cement Binder

1.5 ACCEPTANCE

1.5.1 Acceptability of Work

Acquire the services of an independent commercial laboratory to perform acceptance testing. Acceptance of the plant produced mix and in-place requirements will be on a lot to lot basis. The materials and the pavement itself will be accepted on the basis of production testing. The Government may make check tests from split samples to validate the results of the production testing. Testing performed by the Government does not reduce the required testing of the independent commercial laboratory. Split samples will be taken for Government testing to reduce the variability between the independent commercial laboratory and the Government's test results. When the difference between the independent commercial laboratory and the Government's test results for split samples exceed the acceptable range of two results for multilaboratory precision for the appropriate test method (i.e. ASTM) then at least one of the laboratories is determined to be in error. An evaluation of procedures and equipment in both laboratories will be made to determine the cause(s) for the differences. Develop steps to correct procedures and equipment to bring multilaboratory precision to within acceptable limits.

1.5.2 Acceptance Requirements

Provide all sampling and testing required for acceptance and payment adjustment. Where appropriate, adjustments in percent payment acceptance for individual lots of asphalt pavement will be made based on laboratory air voids, in-place density, smoothness, and grade in accordance with the following paragraphs. Surface smoothness and grade determinations will be made on the lot as a whole. Exceptions or adjustments to this will be made in situations where the mix within one lot is placed as part of both the intermediate and surface courses, thus smoothness and grade measurements for the entire lot cannot be made.

1.5.3 Surface Smoothness

Use a straightedge and profilograph for measuring surface smoothness. Use the profilograph method for all longitudinal testing, except for paving lanes less than 0.25 miles in length. Use the straightedge method for transverse testing, for longitudinal testing where the length of each pavement lane is less than 0.25 miles, and at the ends of the paving limits for the project. Smoothness requirements do not apply over crowns or grade breaks. Maintain detailed notes of the testing results and provide a copy to the Government immediately after each day's testing.

1.6 ENVIRONMENTAL REQUIREMENTS

Do not place the asphalt mixture upon a wet surface or when the surface temperature of the underlying course is less than specified in Table 3 Table 1. The temperature requirements may be waived by the Government, if requested; however, meet all other requirements including compaction.

PART 2 PRODUCTS

2.1 SYSTEM DESCRIPTION

Perform the work consisting of pavement courses composed of mineral aggregate and asphalt material heated and mixed in a central mixing plant and placed on a prepared course. Provide asphalt pavement designed and constructed in accordance with this section conforming to the lines, grades, thicknesses, and typical cross sections shown on the drawings. Construct each course to the depth, section, or elevation required by the drawings and rolled, finished, and approved before the placement of the next course.

2.1.1 Asphalt Mixing Plant

Provide plants used for the preparation of asphalt mixture conforming to the requirements of AASHTO M 156 with the following changes:

2.1.1.1 Truck Scales

Weigh the asphalt mixture on approved scales, or on certified public scales at no additional expense to the Government. Inspect and seal scales at least annually by an approved calibration laboratory.

2.1.1.2 Inspection of Plant

Provide access to the Government at all times, to all areas of the plant for checking adequacy of equipment; inspecting operation of the plant; verifying weights, proportions, and material properties; checking the temperatures maintained in the preparation of the mixtures and for taking samples. Provide assistance as requested, for the Government to procure any desired samples.

2.1.1.3 Storage bins

The asphalt mixture can be stored in non-insulated storage bins for a period of time not exceeding 3 hours. The asphalt mixture can be stored in insulated storage bins for a period of time not exceeding 8 hours. Provide the mix drawn from bins that meets the same requirements as mix loaded directly into trucks.

2.1.2 Hauling Equipment

Provide trucks used for hauling asphalt mixture that have tight, clean, and smooth metal beds. To prevent the mixture from adhering to them, lightly coat the truck beds with a minimum amount of paraffin oil, lime solution, or other approved material. Do not use petroleum based products as a release agent. Provide each truck with a suitable cover to protect the mixture from adverse weather, contamination, and loss of material during hauling. When necessary due to long haul distance and cold weather, provide insulated truck beds with covers (tarps) that are securely fastened.

2.1.3 Asphalt Pavers

Provide mechanical spreading and finishing equipment consisting of a self-powered paver, capable of spreading and finishing the mixture to the specified line, grade, and cross section. Provide paver screed capable of laying a uniform mixture to meet the specified thickness, smoothness, and grade without physical or temperature segregation, the full width of the material being placed. Provide a paver with a vibrating screed to be used during all placement.

2.1.3.1 Receiving Hopper

Provide paver with a receiving hopper of sufficient capacity to permit a uniform spreading operation and a distribution system to place the mixture uniformly in front of the screed without segregation. Provide a screed that effectively produces a finished surface of the required evenness and texture without tearing, shoving, or gouging the mixture.

2.1.4 Rollers

Provide rollers in good condition and operate at slow speeds to avoid displacement of the asphalt mixture. Provide sufficient number, type, and weight of rollers to compact the mixture to the required density while it is still in a workable condition. Do not use equipment which causes excessive crushing of the aggregate.

2.2 AGGREGATES

Provide aggregates consisting of crushed stone, crushed gravel, crushed slag, screenings, natural sand, and mineral filler as required. The portion of material retained on the No. 4 sieve is coarse aggregate. The portion of material passing the No. 4 sieve and retained on the No. 200 sieve is fine aggregate. The portion passing the No. 200 sieve is defined as mineral filler. Submit sufficient materials to produce 200 pounds of blended mixture for mix design verification. Submit all aggregate test results and samples to the Government at least 14 days prior to start of construction.

2.2.1 Coarse Aggregate

Provide coarse aggregate consisting of sound, tough, durable particles, free from films of material that would prevent thorough coating and bonding with the asphalt material and free from organic matter and other deleterious substances. Provide coarse aggregate particles meeting the following requirements:

- a. The percentage of loss not greater than 40 percent after 500 revolutions when tested in accordance with ASTM C131/C131M.
- b. At least 75 percent by weight of coarse aggregate containing two or more fractured faces when tested in accordance with ASTM D5821 with fractured faces produced by crushing.
- c. The particle shape essentially cubical and the aggregate containing not more than 10 percent, by weight, of flat and elongated particles (3:1 ratio of length to thickness) when tested in accordance with ASTM D4791, Method B.
- d. Slag consisting of air-cooled, blast furnace slag with a compacted weight of not less than 75 lb/cu ft when tested in accordance with ASTM C29/C29M.
- e. Clay lumps and friable particles not exceeding 0.3 percent, by weight, when tested in accordance with ASTM C142/C142M.

2.2.2 Fine Aggregate

Provide fine aggregate consisting of clean, sound, tough, durable particles. Provide aggregate particles that are free from coatings of clay, silt, or any objectionable material, contain no clay balls, and meet the following requirements:

- a. Quantity of natural sand (noncrushed material) added to the aggregate blend not exceeding 15 percent by weight of total aggregate.
- b. Individual fine aggregate sources with a sand equivalent value greater than 45 when tested in accordance with ASTM D2419.
- c. Fine aggregate portion of the blended aggregate with an uncompacted void content greater than 45.0 percent when tested in accordance with AASHTO T 304 Method A.
- d. Clay lumps and friable particles not exceeding 0.3 percent, by weight, when tested in accordance with ASTM C142/C142M.

2.2.3 Mineral Filler

Provide mineral filler consisting of a nonplastic material meeting the requirements of ASTM D242/D242M.

2.2.4 Aggregate Gradation

Provide a combined aggregate gradation that conforms to gradations specified in Table 4 Table 2, when tested in accordance with ASTM C136/C136M and ASTM C117, and does not vary from the low limit on one sieve to the high limit on the adjacent sieve or vice versa, but grades uniformly from coarse to fine. Provide a JMF within the specification limits; however, the gradation can exceed the limits when the allowable deviation from the JMF shown in Tables 6 and 7 Tables 4 and 5 are applied.

Table 3. Table 1. Surface Temperature Limitations of Underlying Course	
Mat Thickness, inches	Degrees F
3 or greater	40
Less than 3	45

2.3 ASPHALT CEMENT BINDER

Provide asphalt cement binder that conforms to ASTM D6373 Performance Grade (PG) PG 70-10 or AR 16000.

2.4 MIX DESIGN

Develop the mix design. Perform Job Mix formula (JMF) and aggregates testing no earlier than 6 months before contract award. Provide asphalt mixture composed of well-graded aggregate, mineral filler if required, and asphalt material. Provide aggregate fractions sized, handled in separate size groups, and combined in such proportions that the resulting mixture meets the grading requirements of Table 4 Table 2. Do not produce asphalt pavement for payment acceptance until a JMF has been approved. Design the asphalt mixture using 50 or 75 blows with the Marshall hand-held hammer procedures contained in AI MS-2 and the criteria shown in Table 5 Table 3. Prepare samples at various asphalt contents and compacted in accordance with ASTM D6925.

2.4.1 JMF Requirements

Submit the proposed JMF in writing, for approval, at least 14 days prior to the start of the test section including, as a minimum:

- a. Percent passing each sieve size.
- b. Percent of asphalt cement.
- c. Percent of each aggregate and mineral filler to be used.
- d. Asphalt performance grade or penetration grade.
- e. Number of blows of hammer per side of molded specimen.
- f. Laboratory mixing temperature.
- g. Laboratory compaction temperature.
- h. Temperature-viscosity relationship of the asphalt cement
- i. Plot of the combined gradation on the 0.45 power gradation chart, stating the nominal maximum size.
- j. Graphical plots and summary tabulation of air voids, voids in the mineral aggregate, and unit weight versus asphalt content as shown in AI MS-2. Include summary tabulation that includes individual specimen data for each specimen tested.
- k. Specific gravity and absorption of each aggregate.
- l. Percent natural sand.
- m. Percent particles with two or more fractured faces (in coarse aggregate).
- n. Fine aggregate angularity.
- o. Percent flat or elongated particles in coarse aggregate.
- p. Tensile Strength Ratio and wet/dry specimen test results.
- q. Antistrip agent (if required).
- r. List of all modifiers.
- s. Warm-mix additive or process.

Table 4. Table 2. Aggregate Gradations			
Sieve Size, inch	Gradation 1 Percent Passing by Mass	Gradation 2 Percent Passing by Mass	
1	100	---	
3/4	90-100	100	
1/2	68-88	90-100	
3/8	60-82	69-89	
No. 4	45-67	53-73	
No. 8	32-54	38-60	
No. 16	22-44	26-48	
No. 30	15-35	18-38	
No. 50	9-25	11-27	
No. 100	6-18	6-18	
No. 200	3-6	3-6	

2.4.2 Adjustments to JMF

The JMF for each mixture is in effect until a new formula is approved in writing by the Government. Should a change in sources of any materials be made, perform a new mix design and a new JMF approved before the new material is used. Make minor adjustments within the specification limits to the JMF to optimize mix volumetric properties. Adjustments to the original JMF are limited to plus or minus 4 percent on the No. 4 and coarser sieves; plus or minus 3 percent on the No. 8 to No. 50 sieves; and plus or minus 1 percent on the No. 100 sieve and No. 200 sieve. Asphalt content adjustments are limited to plus or minus 0.40 from the original JMF. If adjustments are needed that exceed these limits, develop a new mix design.

2.5 RECYCLED HOT MIX ASPHALT

Not Used.

PART 3 EXECUTION

3.1 CONTRACTOR QUALITY CONTROL

3.1.1 General Quality Control Requirements

In the quality control plan, address all elements which affect the quality of the pavement including, but not limited to:

- a. Mix Design and unique JMF identification code
- b. Aggregate Grading
- c. Quality of Materials
- d. Stockpile Management and procedures to prevent contamination
- e. Proportioning including percent of warm-mix additive
- f. Mixing and Transportation
- g. Mixture Volumetrics
- h. Moisture Content of Mixtures
- i. Placing and Compaction
- j. Joints
- k. Surface Smoothness
- l. Truck bed release agent

3.1.2 Testing Laboratory

Provide a fully equipped asphalt laboratory located at the plant or job site that is equipped with heating and air conditioning units to maintain a temperature of 75 plus or minus 5 degrees F. Provide laboratory facilities that are kept clean and all equipment maintained in proper working condition. Provide the Government with unrestricted access to inspect the laboratory facility, to

witness quality control activities, and to perform any check testing desired. The Government will advise in writing of any noted deficiencies concerning the laboratory facility, equipment, supplies, or testing personnel and procedures. When the deficiencies are serious enough to adversely affect test results, immediately suspend the incorporation of the materials into the work. Incorporation of the materials into the work will not be permitted to resume until the deficiencies are corrected.

3.1.3 Quality Control Testing

Perform all quality control tests applicable to these specifications and as set forth in the Quality Control Program. Use the independent commercial laboratory for acceptance testing in paragraph ACCEPTANCE. Use in-house capabilities or the independent commercial laboratory for quality control testing. Required elements of the testing program include, but are not limited to tests for the control of asphalt content, aggregate gradation, aggregate moisture, moisture in the asphalt mixture, temperatures, VMA, and in-place density. Develop a Quality Control Testing Plan as part of the Quality Control Program.

3.1.3.1 Asphalt Content

Determine asphalt content a minimum of twice per lot (a lot is defined in paragraph PAVEMENT LOTS) using the ignition method in accordance with ASTM D6307. Use the extraction method in accordance with ASTM D2172/D2172M if the correction factor for the ignition method in ASTM D6307 is greater than 1.0. The asphalt content for the lot will be determined by averaging the test results.

3.1.3.2 Aggregate Properties

Determine aggregate gradations a minimum of twice per lot from mechanical analysis of extracted aggregate in accordance with ASTM D5444, ASTM C136/C136M, and ASTM C117. Determine the specific gravity of each aggregate size grouping for each 20,000 tons in accordance with ASTM C127 or ASTM C128. Determine fractured faces for gravel sources for each 20,000 tons in accordance with ASTM D5821. Determine the uncompacted void content of natural sand, manufactured sand, and blended aggregate for each 20,000 tons in accordance with AASHTO T 304 Method A.

3.1.3.3 Moisture Content of Aggregate

Determine the moisture content of aggregate used for production a minimum of once per lot in accordance with ASTM C566.

3.1.3.4 Moisture Content of Asphalt Mixture

Determine the moisture content of the asphalt mixture at least once per lot in accordance with AASHTO T 329.

3.1.3.5 Temperatures

Check temperatures at least four times per lot, at necessary locations to determine the temperature at the dryer, the asphalt cement binder in the storage tank, the asphalt mixture at the plant, and the asphalt mixture at the job site.

3.1.3.6 VMA

Provide VMA within the limits of Table 5 Table 3.

3.1.3.7 In-Place Density

Conduct any necessary testing to ensure the specified density is achieved. A nuclear gauge or other non-destructive testing device can be used to monitor pavement density.

3.1.3.8 Additional Testing

Perform any additional testing deemed necessary to control the process.

3.1.3.9 QC Monitoring

Submit all QC test results to the Government on a daily basis as the tests are performed. The Government reserves the right to monitor any of the Contractor's quality control testing and to perform duplicate testing as a check to the Contractor's quality control testing.

3.1.4 Sampling

When directed by the Government, sample and test any material which appears to not meet specification requirements unless such material is voluntarily removed and replaced or deficiencies corrected. Perform all sampling in accordance with standard procedures specified.

Table 5. Table 3. Mix Design Criteria			
Test Property	Marshall (50 Blows)	Marshall (75 Blows)	
Stability, pounds, minimum (NA for Superpave)	1000(1)	1800(1)	
Flow, 0.01 inch, (NA for Superpave)	8-18	8-16	
Air voids, percent	3-5	3-5	
Minimum Percent Voids in Mineral Aggregate (VMA)(2)			
Gradation 1	13.0	13.0	
Gradation 2	14.0	14.0	
Gradation 3	15.0	15.0	
TSR, minimum percent	75	75	
(1) This is a minimum requirement. Provide significantly higher average during construction to ensure compliance with the specifications.			
(2) Calculate VMA in accordance with AI MS-2, based on ASTM C127 and ASTM C128 bulk specific gravity for the aggregate.			

3.2 PREPARATION OF ASPHALT BINDER MATERIAL

Heat the asphalt cement material while avoiding local overheating. Provide a continuous supply of the asphalt material to the mixer at a uniform temperature. Maintain the temperature of the asphalt delivered to the mixer to provide a suitable viscosity for adequate coating of the aggregate particles. For hot-mix, do not heat unmodified asphalt to a temperature exceeding 325 degrees F when added to the aggregate. Do not heat modified asphalt to a temperature exceeding 350 degrees F when added to the aggregate. For warm-mix, do not heat asphalt binder to a temperature exceeding 270 degrees F when added to the aggregate.

3.3 PREPARATION OF MINERAL AGGREGATE

Heat and dry the aggregate prior to mixing. Provide a rate of heating and a maximum temperature that does not damage the aggregates. Do not heat the aggregate to a temperature exceeding 350 degrees F when the asphalt binder is added. Maintain the temperature no lower than is required to obtain complete coating and uniform distribution on the aggregate particles and to provide a mixture of satisfactory workability.

3.4 PREPARATION OF ASPHALT MIXTURE

Weigh or meter the aggregates and the asphalt cement and introduce into the mixer the amount specified by the JMF. Mix the combined materials until the aggregate obtains a uniform coating of asphalt binder and is thoroughly distributed throughout the mixture. The moisture content of all asphalt mixture upon discharge from the plant is not to exceed 0.5 percent by total weight of mixture as measured by AASHTO T 329.

3.5 PREPARATION OF THE UNDERLYING SURFACE

Immediately before placing the asphalt mixture, clean the underlying course of dust and debris

3.6 TEST SECTION

Not Used.

3.7 TRANSPORTING AND PLACING

3.7.1 Transporting

Transport asphalt mixture from the mixing plant to the site in clean, tight vehicles. Schedule deliveries so that placing and compacting of mixture is uniform with minimum stopping and starting of the paver. Provide adequate artificial lighting for night placements. Hauling over freshly placed material will not be permitted until the material has been compacted as specified, and allowed to cool to 140 degrees F.

3.7.2 Placing

Place the mix in lifts of adequate thickness and compact at a temperature suitable for obtaining density, surface smoothness, and other specified requirements. Upon arrival, place the mixture

to the full width by an asphalt paver; strike off in a uniform layer of such depth that, when the work is completed, the required thickness is obtained and the surface conforms to the grade and contour indicated. Do not broadcast waste mixture onto the mat or recycle into the paver hopper. Collect waste mixture and dispose off site. Regulate the speed of the paver to eliminate pulling and tearing of the asphalt mat. Begin placement of the mixture along the centerline of a crowned section or on the high side of areas with a one-way slope. Place the mixture in consecutive adjacent strips having a minimum width of 10 feet. Offset the longitudinal joint in one course from the longitudinal joint in the course immediately below by at least 1 foot; however, locate the joint in the surface course at the centerline of the pavement. Offset transverse joints in one course by at least 10 feet from transverse joints in the previous course. Offset transverse joints in adjacent lanes a minimum of 10 feet. On isolated areas where irregularities or unavoidable obstacles make the use of mechanical spreading and finishing equipment impractical, the mixture can be spread and luted by hand tools.

3.8 COMPACTION OF MIXTURE

3.8.1 General

- a. After placing, thoroughly and uniformly compact the mixture by rolling. Compact the surface as soon as possible without causing displacement, cracking, or shoving. Determine the sequence of rolling operations and the type of rollers used with the exception that application of more than three passes with a vibratory roller in the vibrating mode is prohibited. Maintain the speed of the roller, at all times, sufficiently slow to avoid displacement of the asphalt mixture and to be effective in compaction. Correct at once any displacement occurring as a result of reversing the direction of the roller, or from any other cause.

- b. Furnish sufficient rollers to handle the output of the plant. Continue rolling until the surface is of uniform texture, true to grade and cross section, and the required field density is obtained. To prevent adhesion of the mixture to the roller, keep the wheels properly moistened, but excessive water is not permitted. In areas not accessible to the roller, thoroughly compact the mixture with hand tampers or small compactors. Remove the full depth of any mixture that becomes loose and broken, mixed with dirt, contains check-cracking, or is in any way defective. Replace with fresh asphalt mixture and immediately compact to conform to the surrounding area. Perform this work at no expense to the Government. Skin patching is not allowed.

3.9 JOINTS

Construct joints to ensure a continuous bond between the courses and to obtain the required density. Provide all joints with the same texture as other sections of the course and meet the requirements for smoothness and grade.

-- End of Section 32 12 16.16 --



GUAM HOUSING AND URBAN RENEWAL AUTHORITY

(ATURIDAT GINIMA' YAN RINUEBAN SIUDAT GUAHAN)

PROJECT TITLE :

COVERED WALKWAY AT CENTRAL COMMUNITY ARTS HALL, SINAJANA

REVISION	DATE	DESCRIPTION

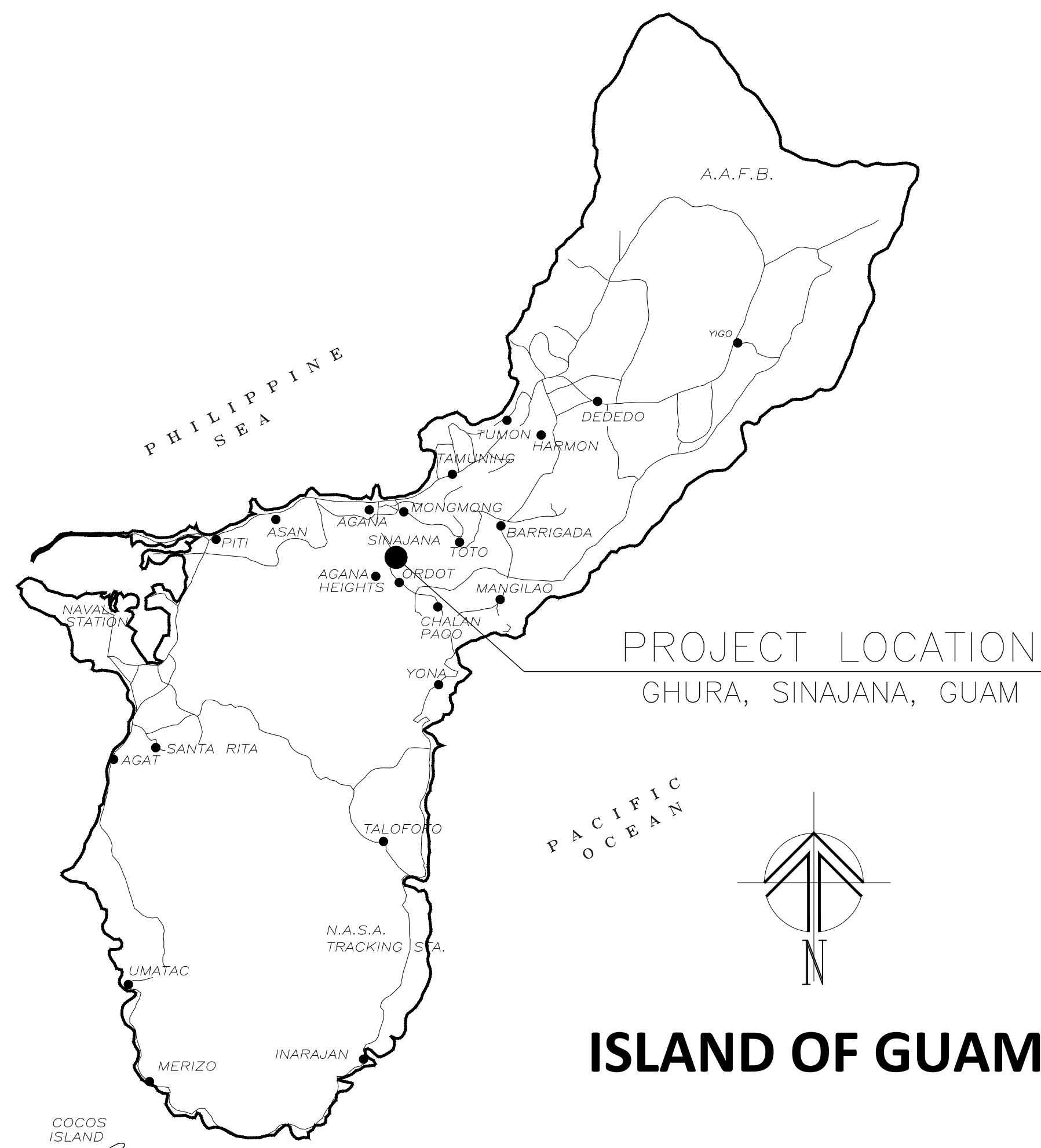
E. M. CHEN & ASSOCIATES, INC.
 ARCHITECTURE • ENGINEERING • PLANNING • CONSTRUCTION MANAGEMENT
 E.M. CHEN EDCO 1001 Army Drive, Suite 201, Barrigada Heights, Guam 96913
 Tel. No. (671) 633-2881/Fax No. (671) 633-2883
 Email: emchen@emchen.com

LOCATION MAP

INDEX OF DRAWINGS

ABBREVIATIONS

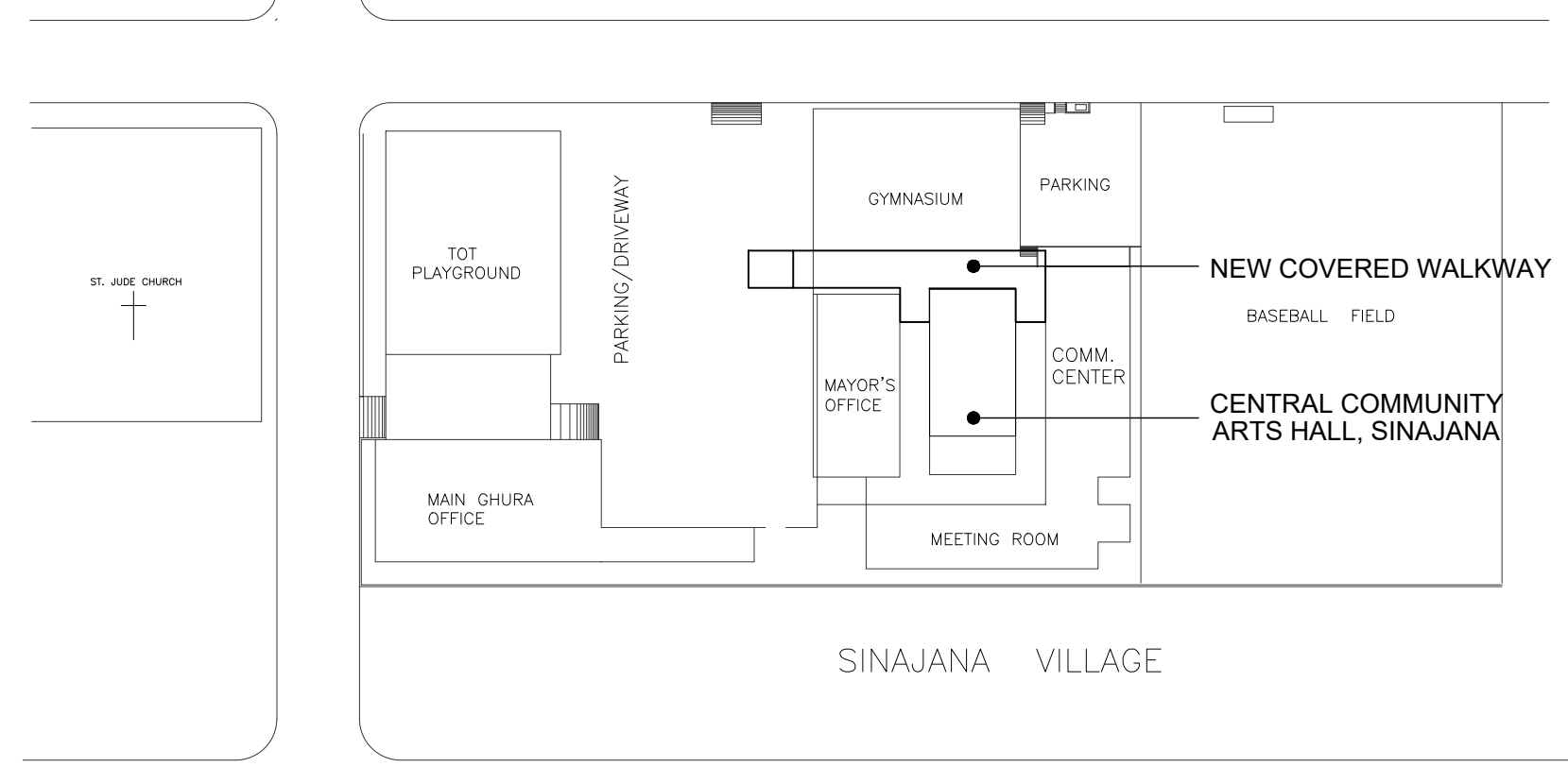
GENERAL NOTES :



DRWG. NO.	DESCRIPTIONS
T1-1	TITLE SHEET, ABBREVIATIONS, LOCATION & VICINITY MAP, INDEX OF DRAWINGS AND GENERAL NOTES
C-1.0	DEMOLITION AND REMOVAL PLAN
C-2.0	SITE DEVELOPMENT PLAN CATCH BASIN AND TRENCH DETAIL
A1-1	SITE PLAN
A2-1	COVERED WALKWAY ROOF PLAN AND CEILING PLAN
A3-1	COVERED WALKWAY ELEVATIONS AND SECTIONS
A4-1	COVERED WALKWAY SECTIONS
A5-1	MISCELLANEOUS DETAILS
S-1.0	STRUCTURAL NOTES, STANDARD HOOKS, EXPANSION AND CONTRACTION JOINTS
S-2.0	FOUNDATION PLAN AND FOOTING DETAILS FOOTING AND COLUMN SCHEDULE MISCELLANEOUS DETAIL
S-3.0	ROOF FRAMING PLAN AND SECTION DETAILS
S-4.0	BEAM SCHEDULE BEAM ELEVATION AND TYPE

©	AT
EA.	EACH
SIM.	SIMILAR
ALUM.	ALUMINUM
CONC.	CONCRETE
EXIST.	EXISTING
HT.	HEIGHT
MIN.	MINIMUM
FLR.	FLOOR
OPEN'G.	OPENING
STO.	STORAGE
DET.	DETAIL
SHT.	SHEET
COL.	COLUMN
TYP.	TYPICAL
STD.	STANDARD
BOTT.	BOTTOM
FIN.	FINISH
GRD.	GRADE
GRND.	GROUND
JT.	JOINT
THK.	THICKNESS
NTS	NOT TO SCALE
SCHED.	SCHEDULE
BLK.	BLOCK
ELECT'L.	ELECTRICAL
CONTS.	CONTINUOUS
GA.	GAUGE
O.C.	ON CENTER
SQ.	SQUARE
APPROX.	APPROXIMATE
BLDG.	BUILDING
FT.	FEET
PT.	POINT
REQ'T'S.	REQUIREMENTS
REQ'D.	REQUIRED
CAP.	CAPACITY
QTY.	QUANTITY
NO.	NUMBER
MISC.	MISCELLANEOUS
DRWG.	DRAWING
CONST.	CONSTRUCTION
N.I.C.	NOT IN CONTRACT
FFL	FIN. FLR. LINE
GALV.	GALVANIZED
W/	WITH
ø DIA.	DIAMETER
W.O.	WINDOW OPENING
D.O.	DOOR OPENING
S	SLOPE
F.R.	FIRE RATED
H.C.	HOLLOW CORE
S.C.	SOLID CORE
WD.	WOOD
HDWD.	HARDWOOD

1. CONTRACTOR SHALL INSPECT AND VERIFY EXISTING CONDITION OF BUILDING INCLUDING ALL UTILITY LINES BEFORE WORK START.
2. THE CONTRACTOR IS RESPONSIBLE FOR ALL WORKS INDICATED OR INFERRED ON THESE CONSTRUCTION DOCUMENTS UNLESS SPECIFICALLY NOTED "BY OTHERS" AND/OR "N.I.C." AND MUST BE COORDINATED WITH OTHER RESPONSIBLE CONTRACTORS.
3. THE CONTRACTOR SHALL VERIFY THE DIMENSIONS OF ALL WORKS TO BE DONE BEFORE ANY WORK IS PERFORMED. AND SHALL BE RESPONSIBLE FOR CORRECTING ANY OF THE DISCREPANCIES FOUND AFTER THE WORK IS PERFORMED.
4. IF CHANGES ARE REQUIRED, NOTIFY THE OWNER IMMEDIATELY AND PRIOR TO PERFORMING ANY OF THE WORK IN THIS AREA. CHANGES THAT ALTER OTHER THAN SCOPE OF WORKS MUST HAVE WRITTEN AUTHORIZATION PRIOR TO THE COMMENCEMENT OF SUCH WORK.
5. ALL WORKS SHALL BE DONE IN ACCORDANCE WITH APPLICABLE CODES AND TO THE HIGHEST STANDARDS OF TRADE PRACTICE.
6. THE CONTRACTOR SHALL COORDINATE WORK OF VARIOUS TRADES IN INSTALLATION OF INTERRELATED WORK BEFORE INSTALLATION & MAKE PROPER PROVISIONS TO AVOID INTERFERENCES. CHANGES REQUIRED IN WORK CAUSED BY NEGLIGENCE TO DO SO SHALL BE MADE AT NO COST TO THE OWNER.
7. THE CONTRACTOR SHALL REMEDY WITHOUT COST TO THE OWNER REJECTED WORK DUE TO FAULTY WORKMANSHIP.
8. THE CONTRACTOR SHALL ADHERE TO ALL DESIGN CRITERIA INCLUDED IN THESE CONSTRUCTION DOCUMENTS UNLESS SPECIFICALLY MODIFIED BY ANY ADDENDUM OR MODIFICATIONS ISSUED PRIOR TO EXECUTION OF A CONTRACT FOR CONSTRUCTION.



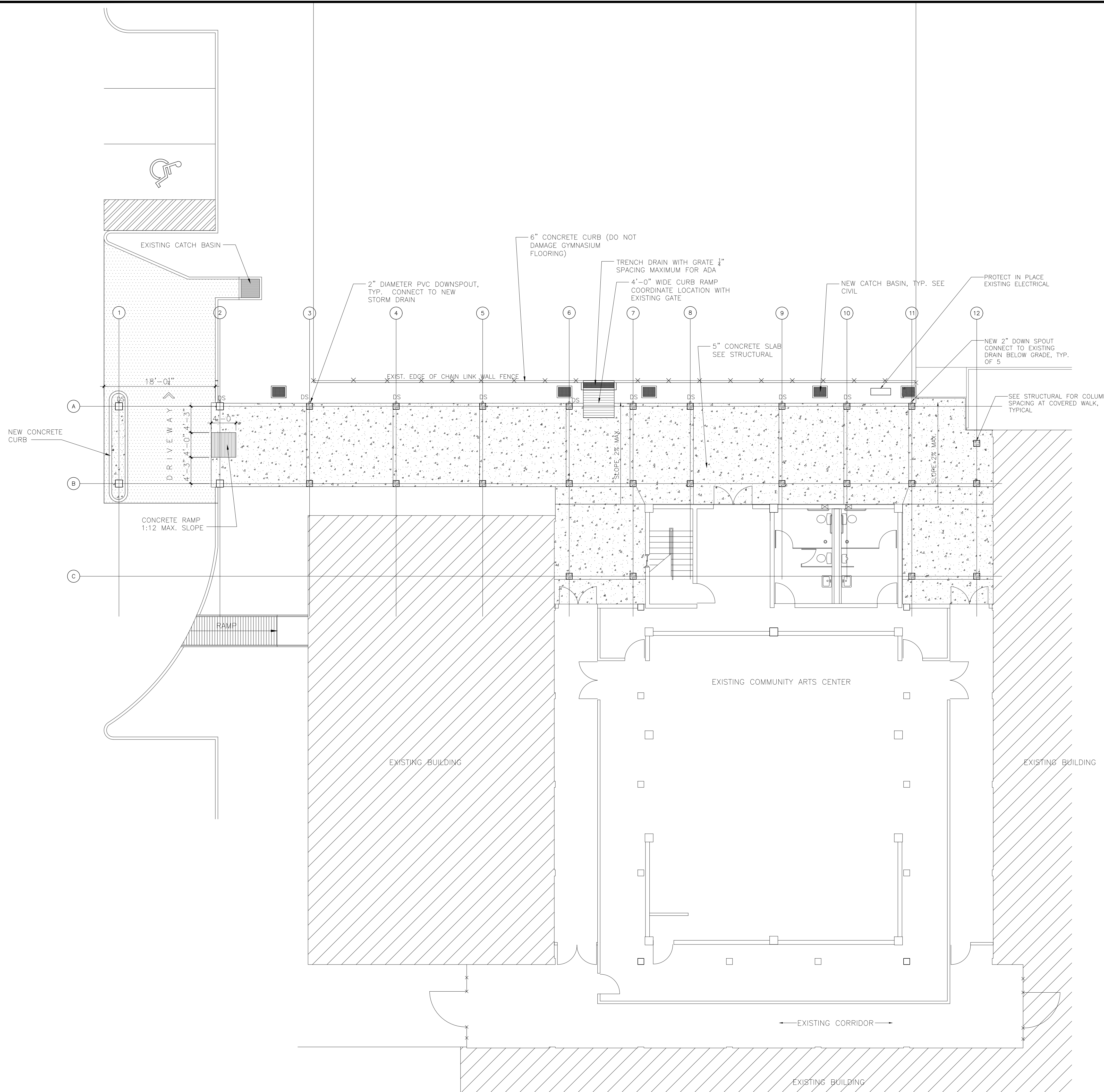
VICINITY PLAN 1
N.T.S. T1-1

GUAM HOUSING AND URBAN RENEWAL AUTHORITY
 (ATURIDAT GINIMA' YAN RINUEBAN SIUDAT GUAHAN)
 PROPOSED GHURA COMMUNITY ARTS CENTER
 SHEET CONTENTS:
TITLE SHEET
LOCATION MAP, SHEET INDEX AND
GENERAL NOTES

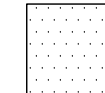
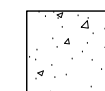

This work was prepared by me or under my responsible control.
 DATE: _____

DESIGNED BY: ACC
 DRAWN BY: NGM
 CHECKED BY: ACC
 DATE: 01-10-2023

DWG. NO.
T1-1



- NOTES:
1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS BEFORE THE START OF HIS/HER CONSTRUCTION WORKS. ANY DISCREPANCIES ON THE DIMENSIONS SHALL BE REPORTED TO THE ENGINEER FOR IMMEDIATE RESOLUTION.
 2. EXISTING UTILITY LINES TO REMAIN SHALL BE PROTECTED AT ALL TIMES.
 3. THE CONTRACTOR SHALL CUT AND REPLACE 6" DRAIN PIPE. LENGTH SHALL BE DETERMINED ON SITE.
 4. SAW CUT AND REMOVE EXISTING AC PAVEMENT. THICKNESS OF NEW AC PAVEMENT SHALL MATCH EXISTING. EXISTING BASE COURSE SHALL BE REUSED AND SCARIFIED AND RE-COMPACT TO 95%.
 5. PROVIDE NEW OR RESTORE CONCRETE CURB, SIZE THE SAME AS EXISTING. LENGTH OF NEW CURB VARIES.
 6. THE CONTRACTOR SHALL RE-GRADE THE NEW AC PAVEMENT SO THAT THE LOWEST POINT IS AT THE VICINITY OF THE EXISTING CATCH BASIN.
 7. EXISTING ACCU, ELECTRICAL PANELS AND ALL ACCESSORIES SHALL BE RELOCATED IF AFFECTED BY THE CONSTRUCTION OF THE NEW CONCRETE WALKWAY.
 8. ASSUMED SPOT ELEVATIONS ARE IN FEET.
 9. SIZE OF DRAIN PIPE FROM THE COMMUNITY ARTS CENTER SHALL BE THE SAME SIZE AS THE EXISTING DOWNSPOUT.
 10. THE CONTRACTOR SHALL CONNECT DOWNSPOUT OR DRAIN PIPES FROM THE GYMNASIUM INTO THE NEW 6"Ø PVC DRAIN PIPE.
 11. IN CASE THE EXISTING DRAIN PIPE IS HIGHER THAN THE NEW DRAIN PIPE AT THE CONNECTION POINT, THE CONTRACTOR SHALL INSTALL A NEW 6"Ø PVC DRAIN PIPE TO CONNECT TO THE EXISTING CATCH BASIN. PROVIDE A MINIMUM 1.5% PIPE SLOPE.

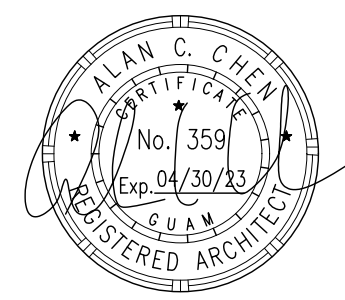
-  ASPHALT CONCRETE PAVEMENT
-  CONCRETE SLAB
-  CONCRETE COLUMN (SEE STRUCTURAL)

REVISION	DATE	DESCRIPTION

E. M. CHEN & ASSOCIATES, INC.
 ARCHITECTURE • ENGINEERING • PLANNING • CONSTRUCTION MANAGEMENT
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 Email: emchen@emchen.com

GUAM HOUSING AND URBAN RENEWAL AUTHORITY
 (ATURIDAT GINMA'YAN RINUEBAN SIUDAT GUAHAN)
PROPOSED GHURA COMMUNITY ARTS CENTER

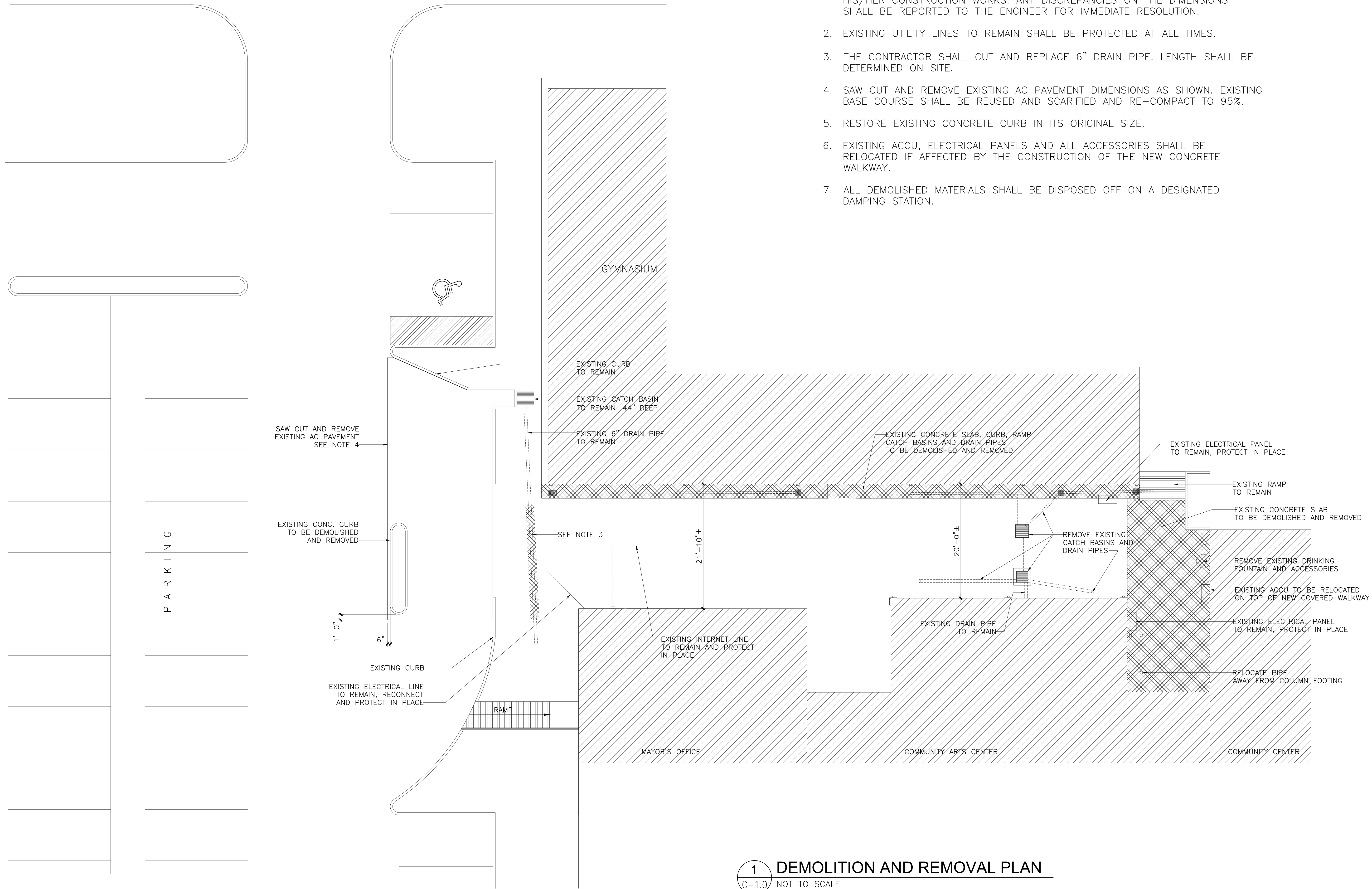
SHEET CONTENTS:
SITE PLAN


 This work was prepared by me or under my responsible control.
 DATE: _____

DESIGNED BY: ACC
 DRAWN BY: NGM
 CHECKED BY: ACC
 DATE: 01-10-2023

DWG. NO. **A1-1**

SITE PLAN
 1/8" = 1'-0" 1
A1-1



NOTES:

1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS BEFORE THE START OF HIS/HER CONSTRUCTION WORKS. ANY DISCREPANCIES ON THE DIMENSIONS SHALL BE REPORTED TO THE ENGINEER FOR IMMEDIATE RESOLUTION.
2. EXISTING UTILITY LINES TO REMAIN SHALL BE PROTECTED AT ALL TIMES.
3. THE CONTRACTOR SHALL CUT AND REPLACE 6" DRAIN PIPE. LENGTH SHALL BE DETERMINED ON SITE.
4. SAW CUT AND REMOVE EXISTING AC PAVEMENT DIMENSIONS AS SHOWN. EXISTING BASE COURSE SHALL BE REUSED AND SCARIFIED AND RE-COMPACT TO 95%.
5. RESTORE EXISTING CONCRETE CURB IN ITS ORIGINAL SIZE.
6. EXISTING ACCU, ELECTRICAL PANELS AND ALL ACCESSORIES SHALL BE RELOCATED IF AFFECTED BY THE CONSTRUCTION OF THE NEW CONCRETE WALKWAY.
7. ALL DEMOLISHED MATERIALS SHALL BE DISPOSED OFF ON A DESIGNATED DAMPING STATION.

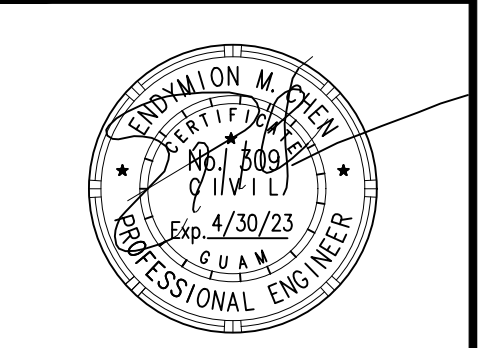
1 DEMOLITION AND REMOVAL PLAN
C-1.0 NOT TO SCALE

REVISION	DATE	DESCRIPTION

E. M. CHEN & ASSOCIATES, INC.
 ARCHITECTURE, INTERIOR DESIGN, ENGINEERING, CONSTRUCTION MANAGEMENT
 E.M. CHEN BUILDING DESIGN INC. 1001 Tamuning Drive, Suite 100, Tamuning, Guam 96913
 Tel: No. (P) 671-535-2001 Fax: No. (P) 671-535-2002
 E-MAIL: emchen@emchen.com

GUAM HOUSING AND URBAN RENEWAL AUTHORITY
 (TARUDAT GUMA' YAN FINEBAN SUDAT GUAHAN)
 PROPOSED GHURA COMMUNITY ARTS CENTER
 COVERED WALKWAY

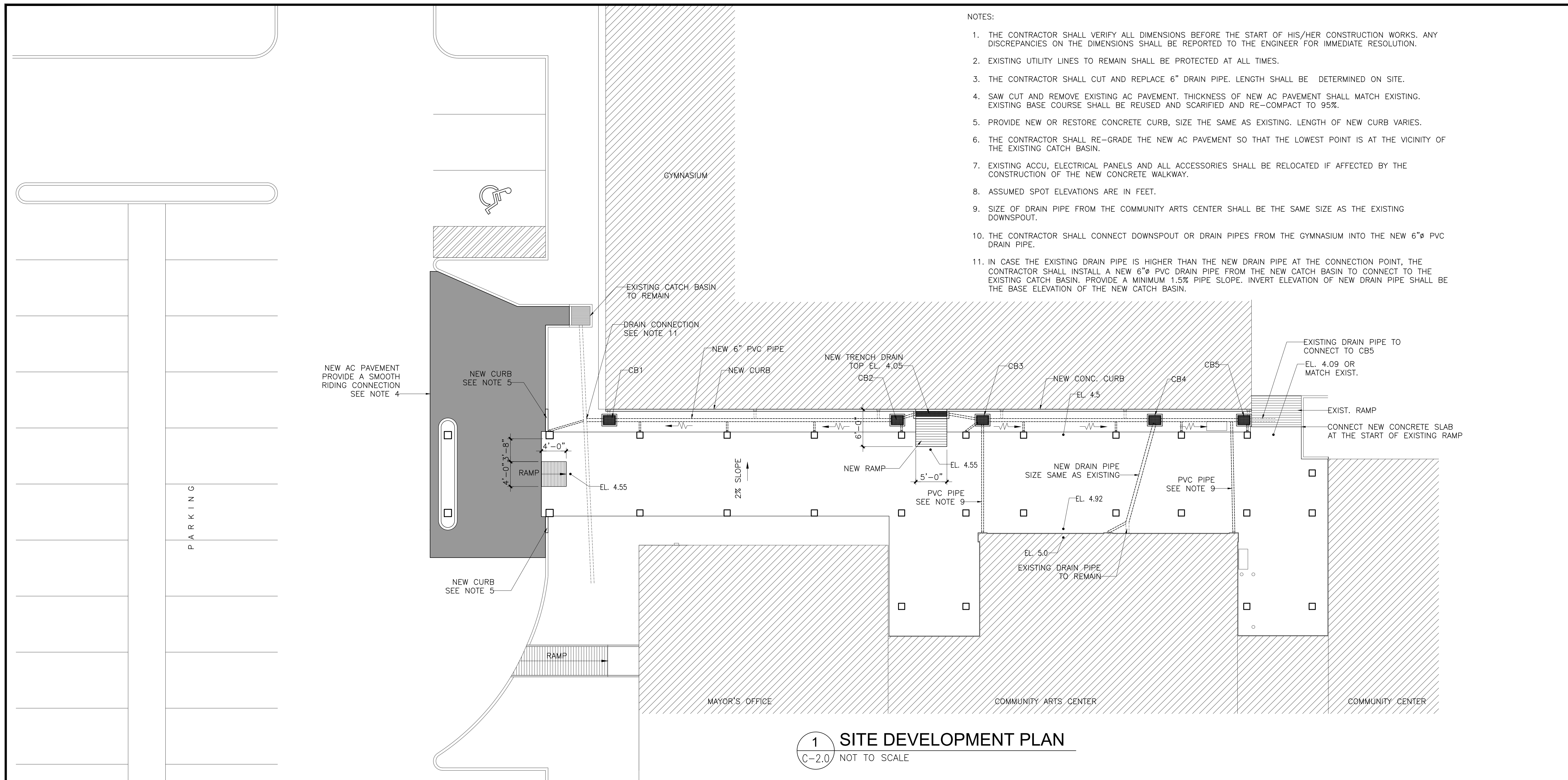
SHEET CONTENTS:
DEMOLITION AND REMOVAL PLAN



This work was prepared by me or under my responsible control
 DATE: _____

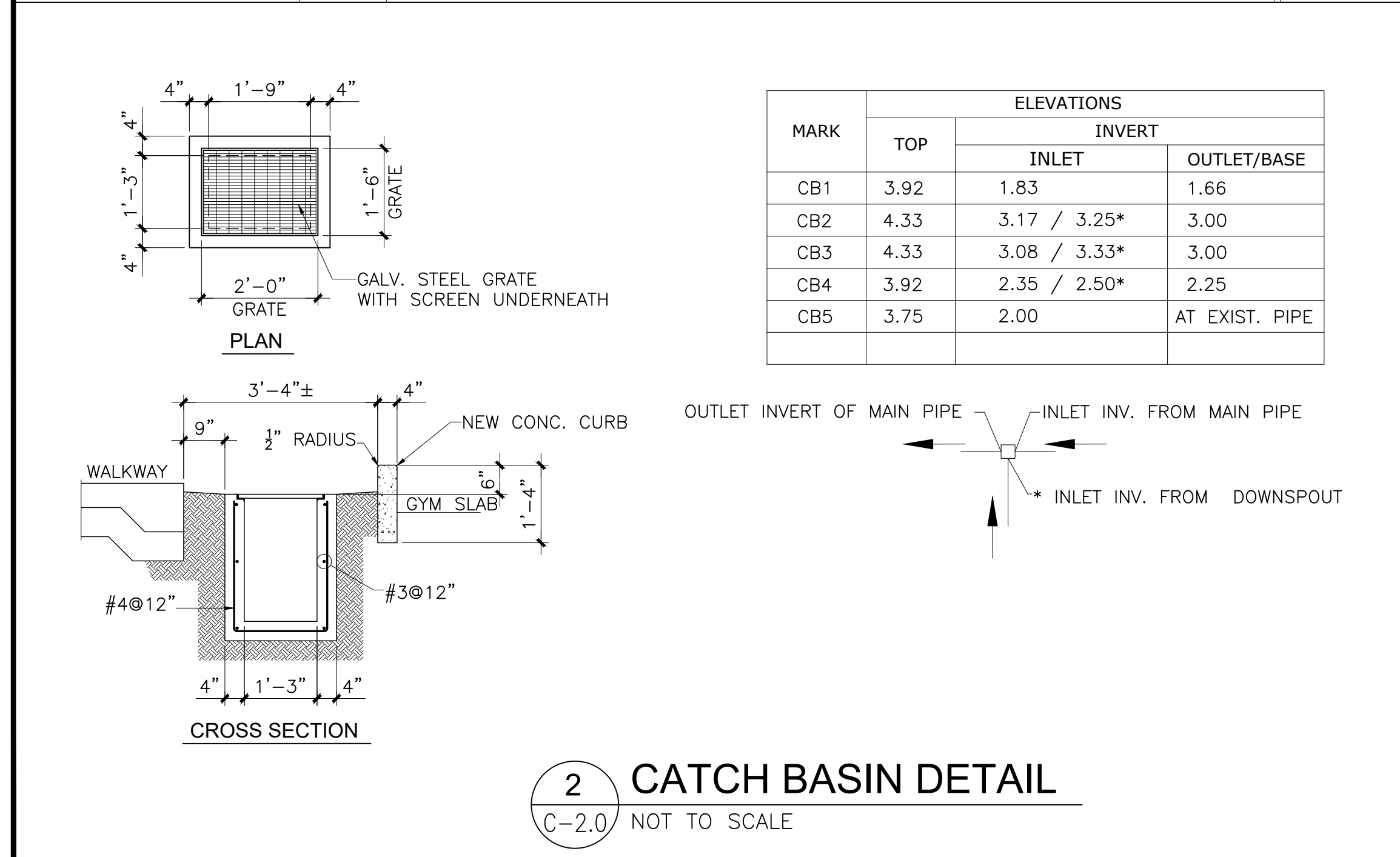
DESIGNED BY: EMC
 DRAWN BY: Edd
 CHECKED BY: ACC/EMC
 DATE: _____

DWG. NO.
C-1.0

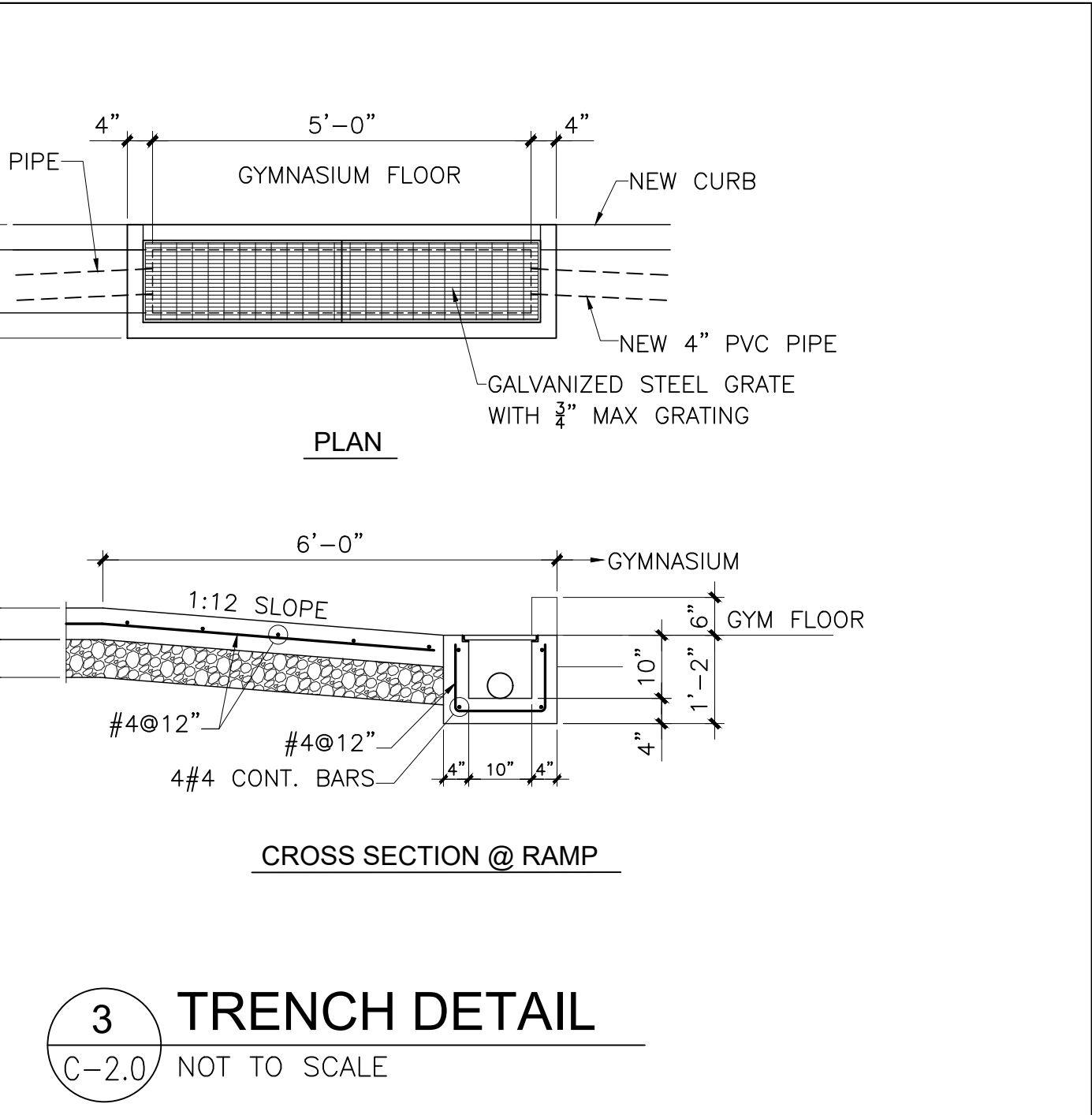


- NOTES:
1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS BEFORE THE START OF HIS/HER CONSTRUCTION WORKS. ANY DISCREPANCIES ON THE DIMENSIONS SHALL BE REPORTED TO THE ENGINEER FOR IMMEDIATE RESOLUTION.
 2. EXISTING UTILITY LINES TO REMAIN SHALL BE PROTECTED AT ALL TIMES.
 3. THE CONTRACTOR SHALL CUT AND REPLACE 6" DRAIN PIPE. LENGTH SHALL BE DETERMINED ON SITE.
 4. SAW CUT AND REMOVE EXISTING AC PAVEMENT. THICKNESS OF NEW AC PAVEMENT SHALL MATCH EXISTING. EXISTING BASE COURSE SHALL BE REUSED AND SCARIFIED AND RE-COMPACT TO 95%.
 5. PROVIDE NEW OR RESTORE CONCRETE CURB, SIZE THE SAME AS EXISTING. LENGTH OF NEW CURB VARIES.
 6. THE CONTRACTOR SHALL RE-GRADE THE NEW AC PAVEMENT SO THAT THE LOWEST POINT IS AT THE VICINITY OF THE EXISTING CATCH BASIN.
 7. EXISTING ACCU, ELECTRICAL PANELS AND ALL ACCESSORIES SHALL BE RELOCATED IF AFFECTED BY THE CONSTRUCTION OF THE NEW CONCRETE WALKWAY.
 8. ASSUMED SPOT ELEVATIONS ARE IN FEET.
 9. SIZE OF DRAIN PIPE FROM THE COMMUNITY ARTS CENTER SHALL BE THE SAME SIZE AS THE EXISTING DOWNSPOUT.
 10. THE CONTRACTOR SHALL CONNECT DOWNSPOUT OR DRAIN PIPES FROM THE GYMNASIUM INTO THE NEW 6" PVC DRAIN PIPE.
 11. IN CASE THE EXISTING DRAIN PIPE IS HIGHER THAN THE NEW DRAIN PIPE AT THE CONNECTION POINT, THE CONTRACTOR SHALL INSTALL A NEW 6" PVC DRAIN PIPE FROM THE NEW CATCH BASIN TO CONNECT TO THE EXISTING CATCH BASIN. PROVIDE A MINIMUM 1.5% PIPE SLOPE. INVERT ELEVATION OF NEW DRAIN PIPE SHALL BE THE BASE ELEVATION OF THE NEW CATCH BASIN.

1 SITE DEVELOPMENT PLAN
C-2.0 NOT TO SCALE

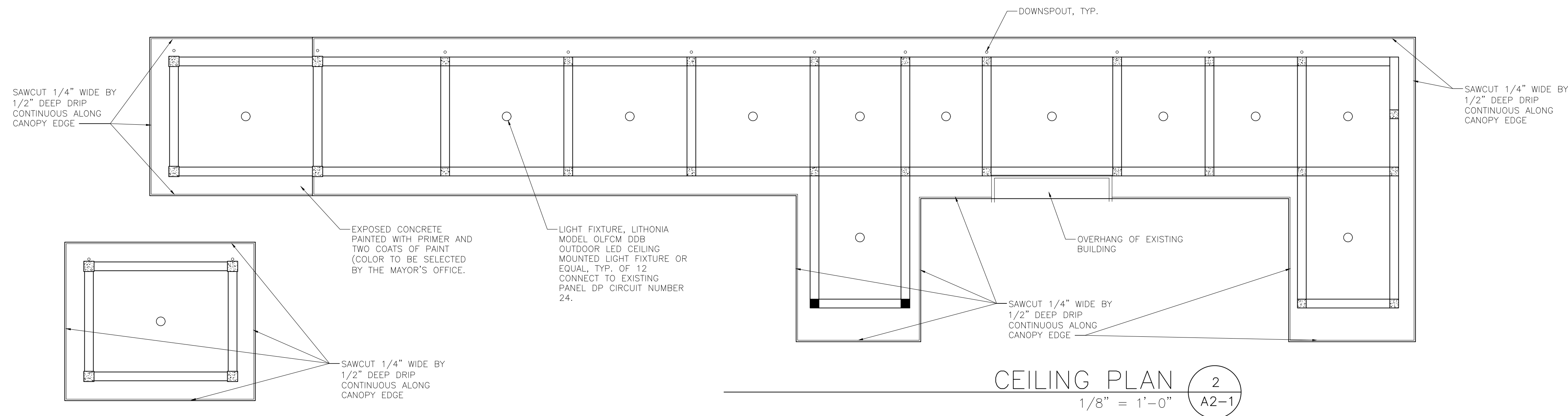


MARK	ELEVATIONS		
	TOP	INVERT	
		INLET	OUTLET/BASE
CB1	3.92	1.83	1.66
CB2	4.33	3.17 / 3.25*	3.00
CB3	4.33	3.08 / 3.33*	3.00
CB4	3.92	2.35 / 2.50*	2.25
CB5	3.75	2.00	AT EXIST. PIPE

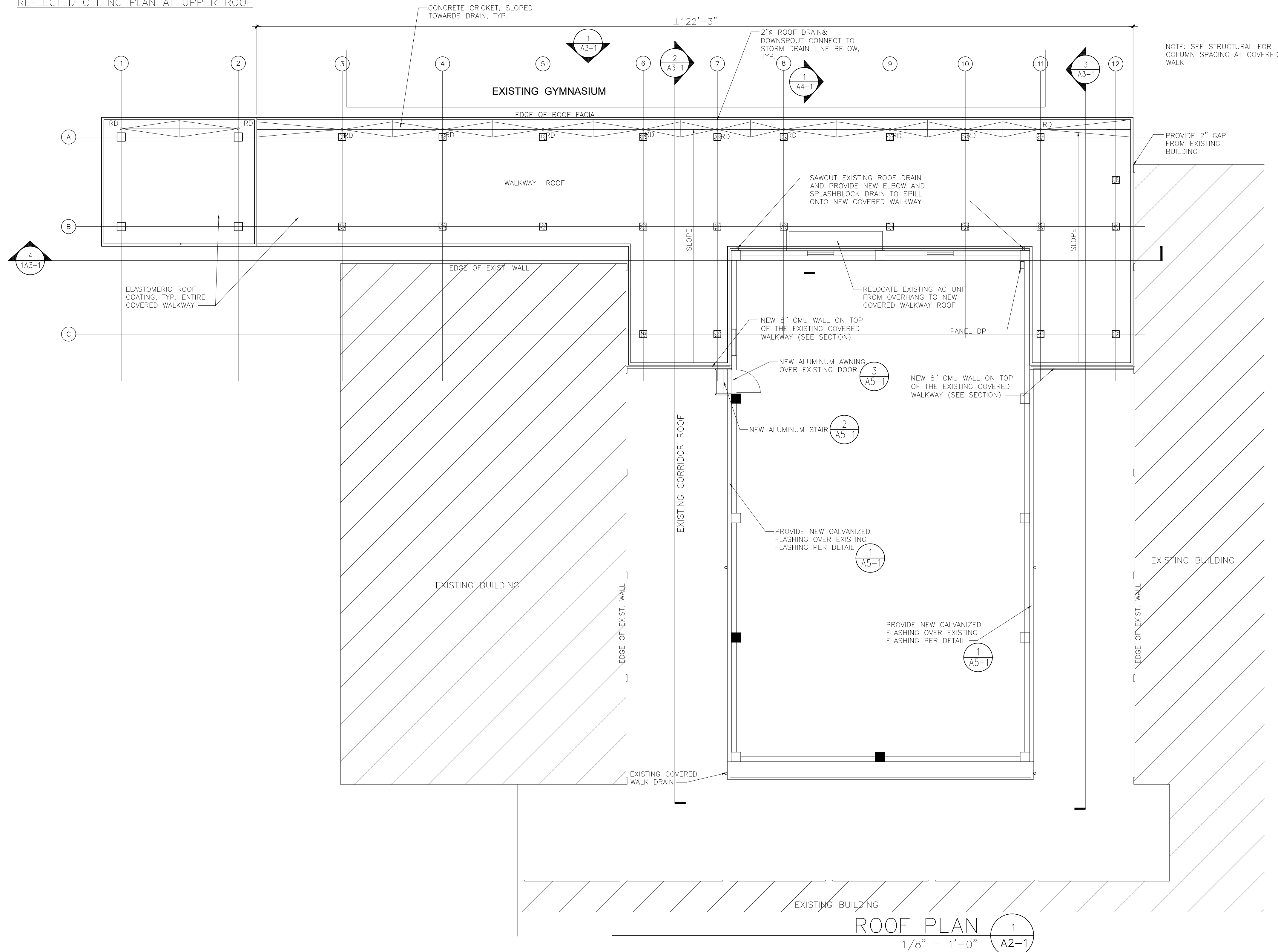


3 TRENCH DETAIL
C-2.0 NOT TO SCALE

REVISED BY	
DESCRIPTION	
DATE	
REVISION	
E. M. CHEN & ASSOCIATES, INC. ARCHITECTURE, INTERIOR DESIGN, ENGINEERING, CONSTRUCTION ADMINISTRATION E. M. CHEN, RUCS 1007 Army Drive, Suite 201, San Juan, P.R. 00906, Guam 96913 Tel No. (P) 671-535-0201 Fax No. (P) 671-535-0201 E-MAIL: emchen@emchen.com	
GUAM HOUSING AND URBAN RENEWAL AUTHORITY (ATURDAT GNMA: YAN PINEBAN SUDAT GUAHAN) PROPOSED GH-URA COMMUNITY ARTS CENTER COVERED WALKWAY	
SITE DEVELOPMENT PLAN CATCH BASIN AND TRENCH DETAILS	
SHEET CONTENTS:	
This work was prepared by me or under my responsible control.	
DATE: _____	
DESIGNED BY: EMC	
DRAWN BY: Edd	
CHECKED BY: ACC/EMC	
DATE:	
DWG. NO.	C-2.0



REFLECTED CEILING PLAN AT UPPER ROOF

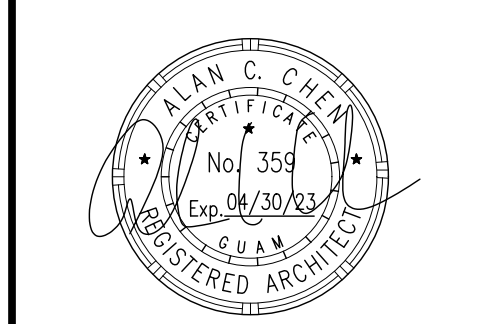


ROOF PLAN 1
1/8" = 1'-0" A2-1

REVISION	DATE	DESCRIPTION
A	2/2/22	REVISED COVERED WALKWAY, WALL & WINDOWS

E. M. CHEN & ASSOCIATES, INC.
 ARCHITECTURE • ENGINEERING • PLANNING • CONSTRUCTION MANAGEMENT
 E.M. CHEN ELDC 1001 Army Drive, Suite 201, San Roque Heights, Guam 96913
 Tel. No. (671) 632-2887, Fax No. (671) 632-2883
 Email: emc@emcarch.com

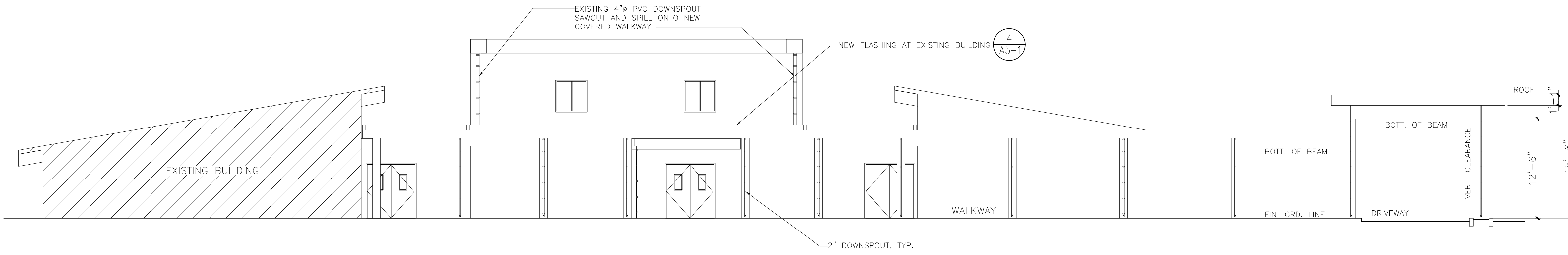
GUAM HOUSING AND URBAN RENEWAL AUTHORITY
 (ATURIDAT GINMA'YAN RINUEBAN SIUDAT GUAHAN)
PROPOSED GHURA COMMUNITY ARTS CENTER
COVERED WALKWAY ROOF PLAN AND CEILING PLAN



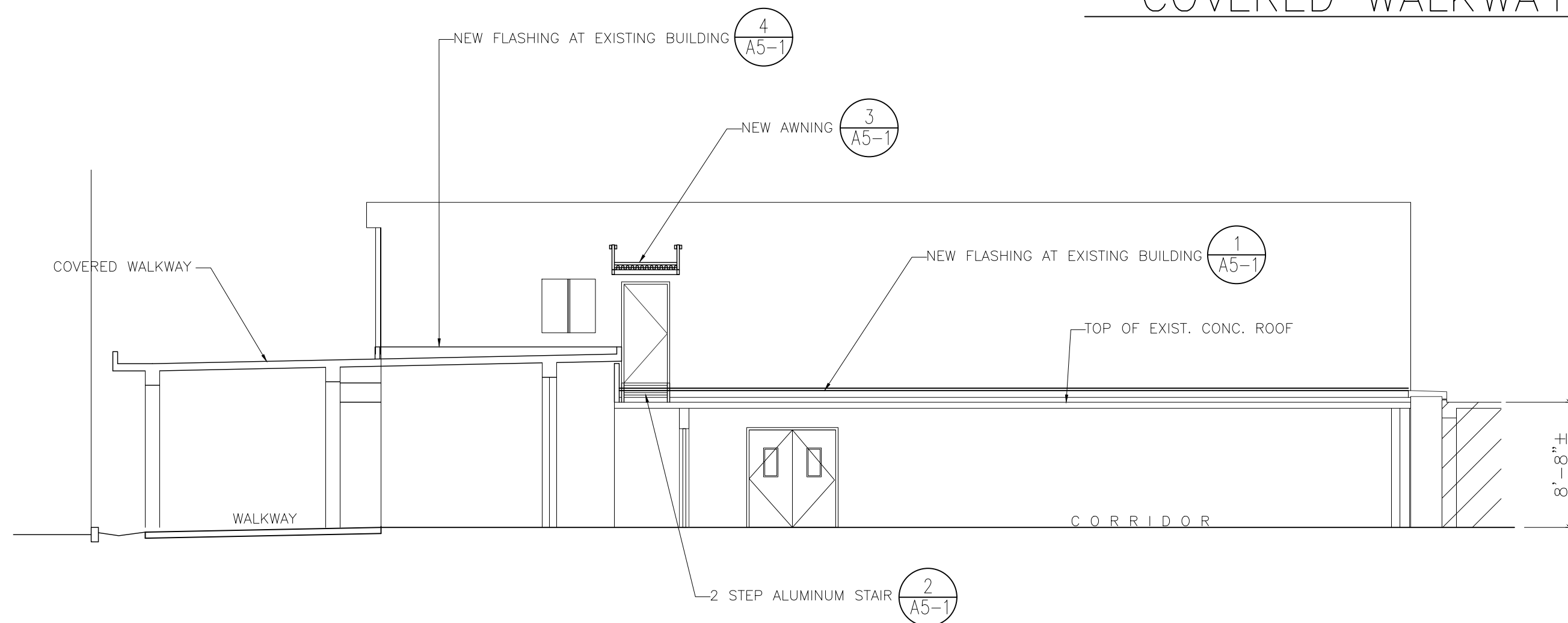
This work was prepared by me or under my responsible control.
 DATE: _____

DESIGNED BY: ACC
 DRAWN BY: NGM
 CHECKED BY: ACC
 DATE: 01-10-2023

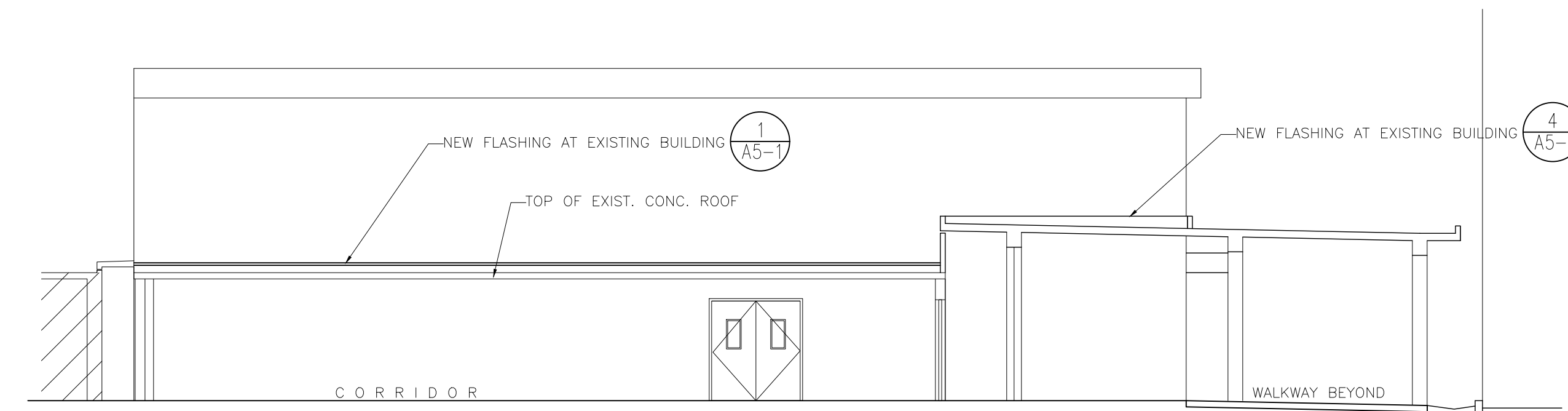
DWG. NO. **A2-1**



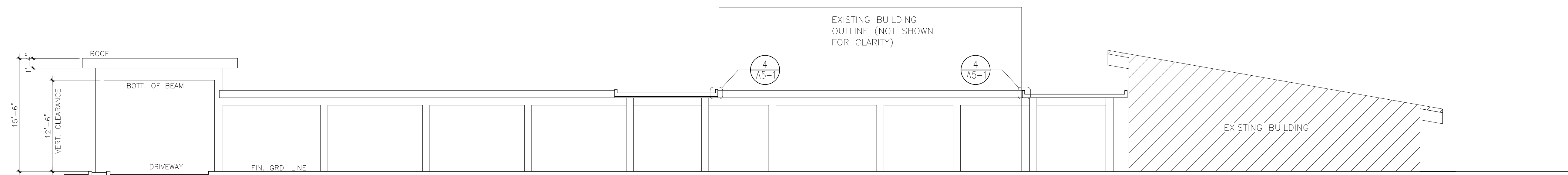
COVERED WALKWAY ELEVATION 1
1/8" = 1'-0" A3-1



COVERED WALKWAY SECTION 2
1/8" = 1'-0" A3-1



COVERED WALKWAY SECTION 3
1/8" = 1'-0" A3-1



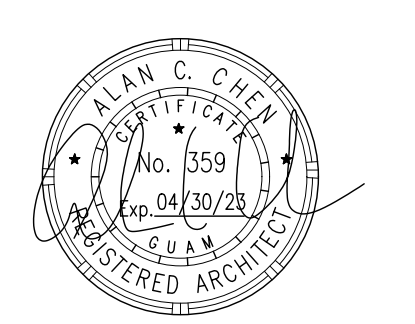
COVERED WALKWAY SECTION/ELEVATION 4
1/8" = 1'-0" A3-1

REVISION	DATE	DESCRIPTION

E. M. CHEN & ASSOCIATES, INC.
 ARCHITECTURE • ENGINEERING • PLANNING • CONSTRUCTION MANAGEMENT
 E.M. CHEN ELDIC 1001 Army Drive, Suite 201, San Roque Heights, Guam 96913
 Tel. No. (671) 632-2807 Fax No. (671) 632-2883
 Email: emchen@emchen.com

GUAM HOUSING AND URBAN RENEWAL AUTHORITY
 (ATURIDAT GINMA'YAN RINUEBAN SIUDAT GUAHAN)
PROPOSED GHURA COMMUNITY ARTS CENTER

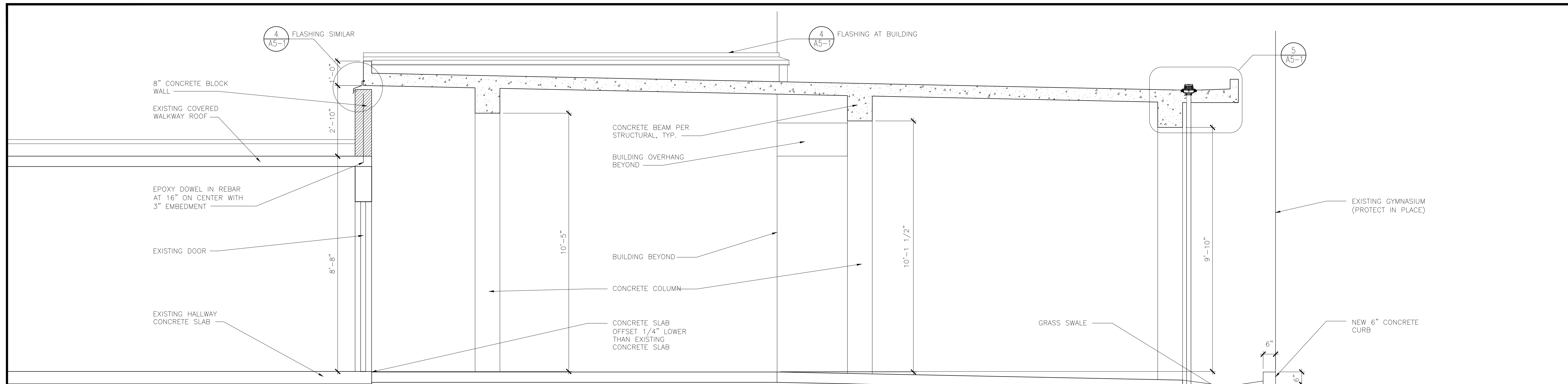
SHEET CONTENTS:
COVERED WALKWAY ELEVATIONS AND SECTIONS



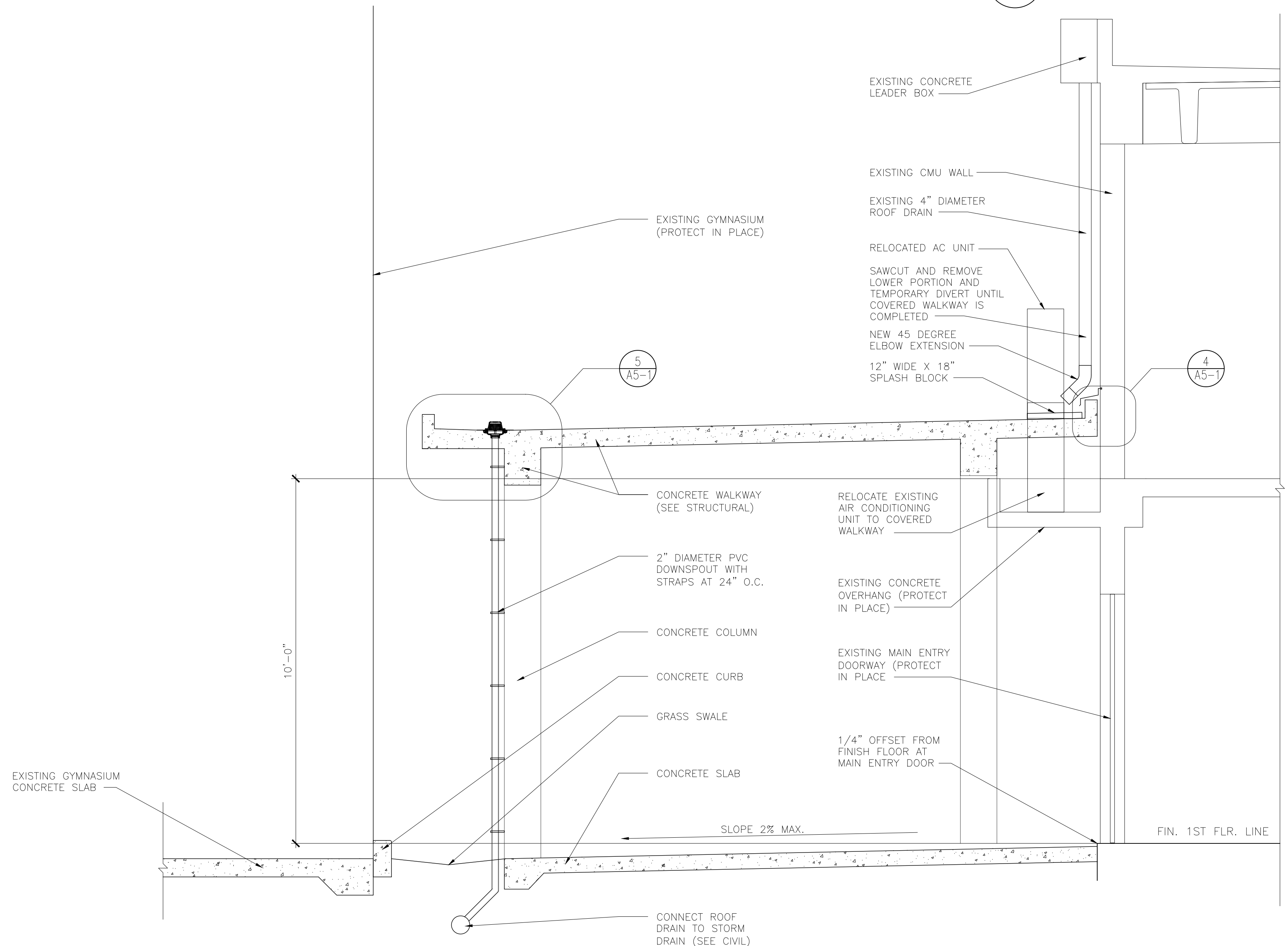
This work was prepared by me or under my responsible control.
 DATE: _____

DESIGNED BY: ACC
 DRAWN BY: NGM
 CHECKED BY: ACC
 DATE: 01-10-2023

DWG. NO.
A3-1



COVERED WALKWAY SECTION 2
1/2" = 1'-0" A4-1



COVERED WALKWAY SECTION 1
1/2" = 1'-0" A4-1

REVISION	DATE	DESCRIPTION

E. M. CHEN & ASSOCIATES, INC.
ARCHITECTURE • ENGINEERING • PLANNING • CONSTRUCTION MANAGEMENT
E.M. CHEN BLDG 1001 Army Drive, Suite 201, Sanigahan Heights, Guam 96913
Tel No: (671) 632-2817 Fax No: (671) 632-2883
E-MAIL: emc@emcinc.com

GUAM HOUSING AND URBAN RENEWAL AUTHORITY
(ATURIDAT GINMA'YAN RINUEBAN SIUDAT GUAHAN)
PROPOSED GHURA COMMUNITY ARTS CENTER

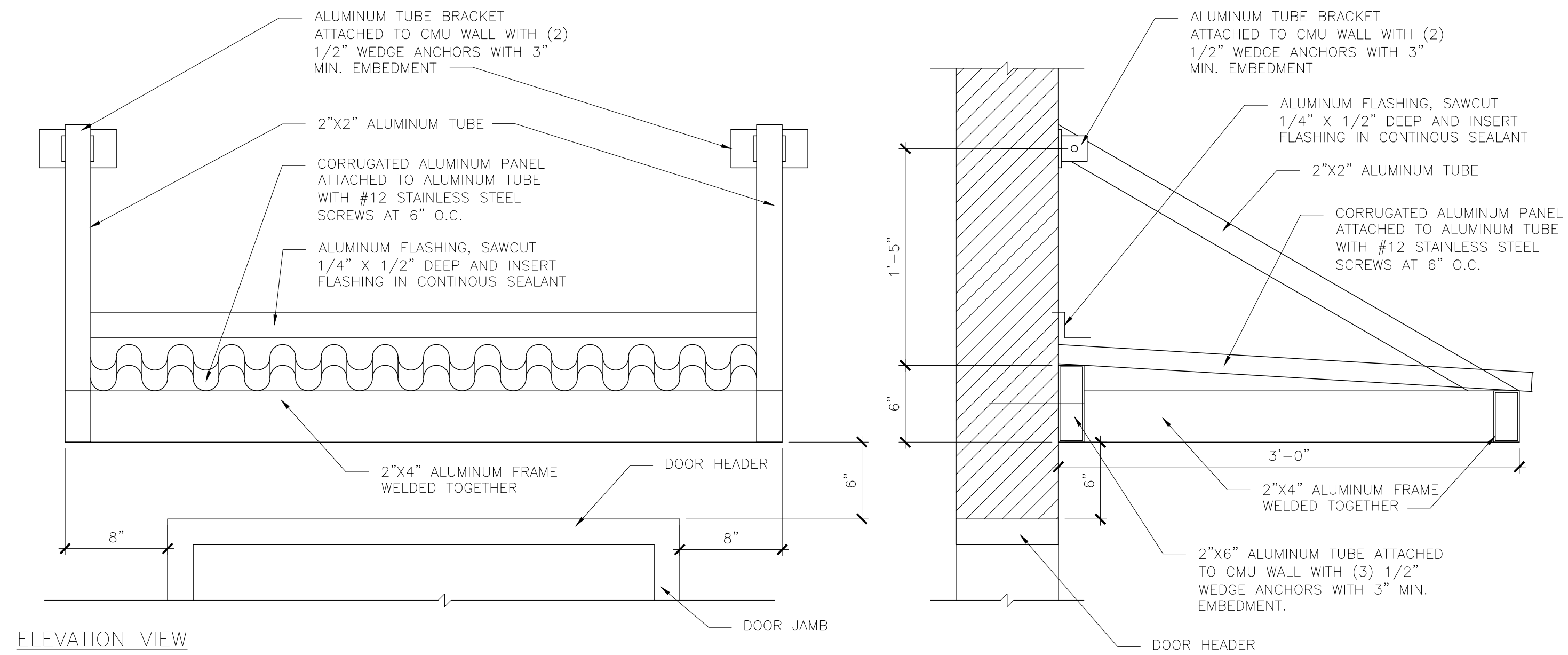
SHEET CONTENTS:
COVERED WALKWAY SECTIONS

PLAN C. CHEN
No. 359
EX. 04/30/22
REGISTERED ARCHITECT

This work was prepared by me or under my responsible control

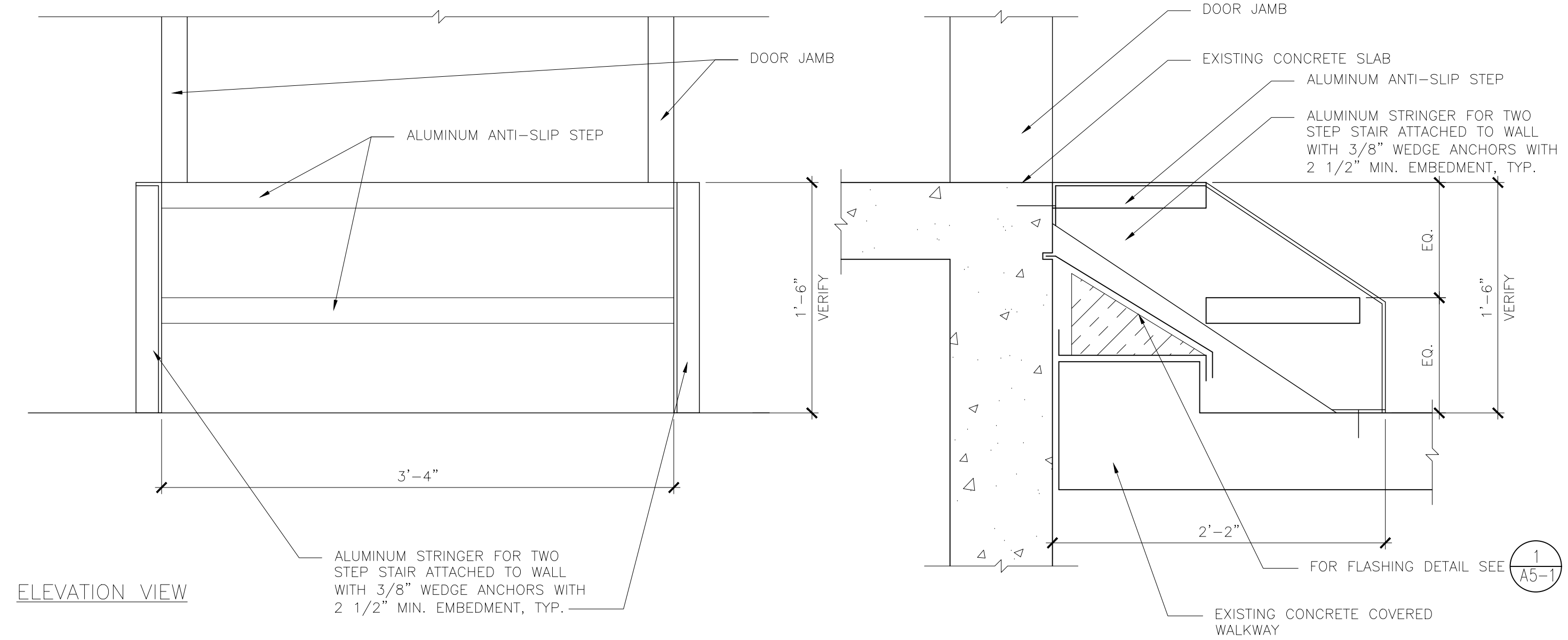
DATE: _____

DESIGNED BY: ACC
DRAWN BY: NGM
CHECKED BY: ACC
DATE: 01-10-2023
DWG. NO. **A4-1**



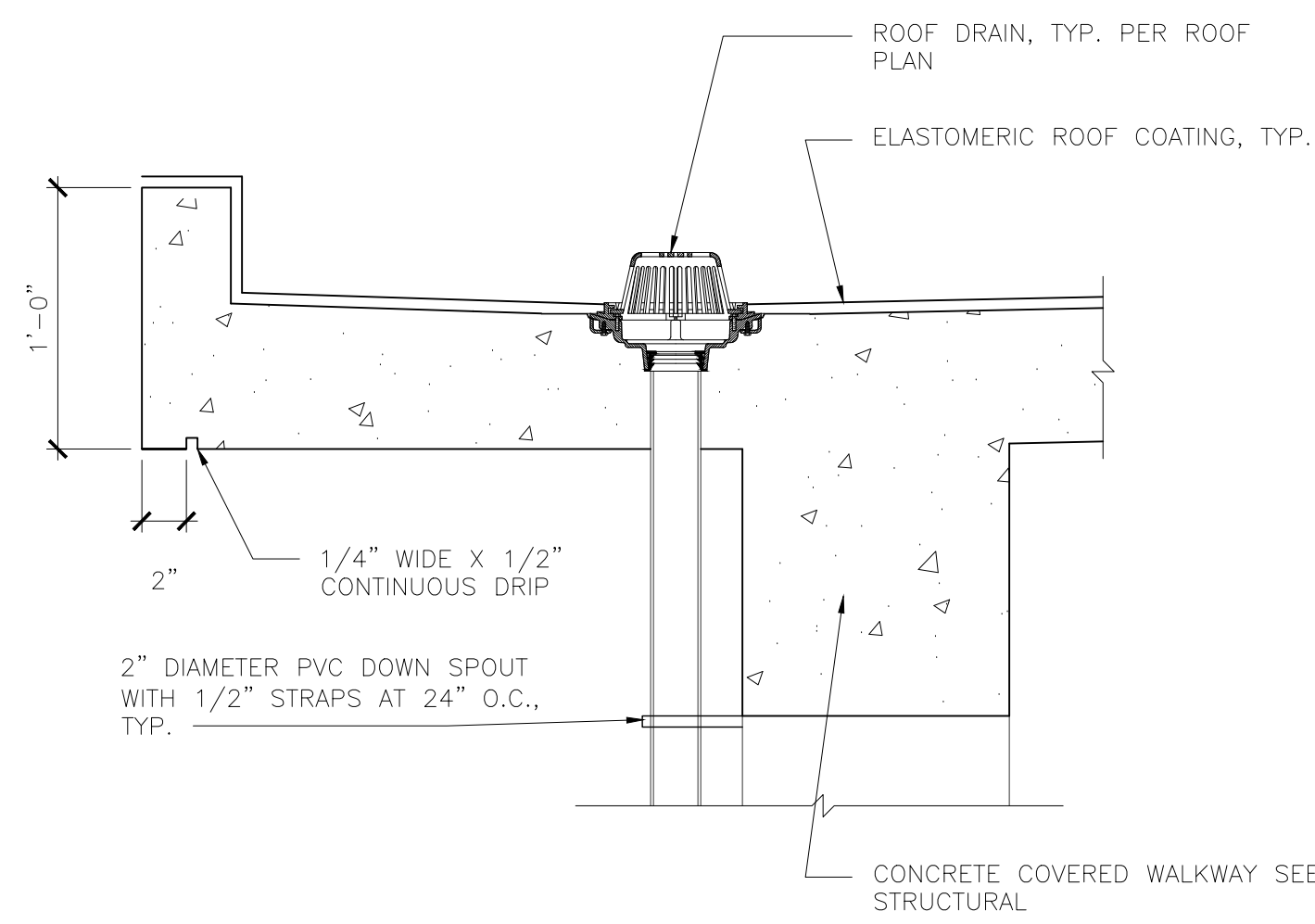
ELEVATION VIEW

ALUMINUM AWNING OVER EXISTING DOOR 1
1 1/2" = 1'-0" A5-1

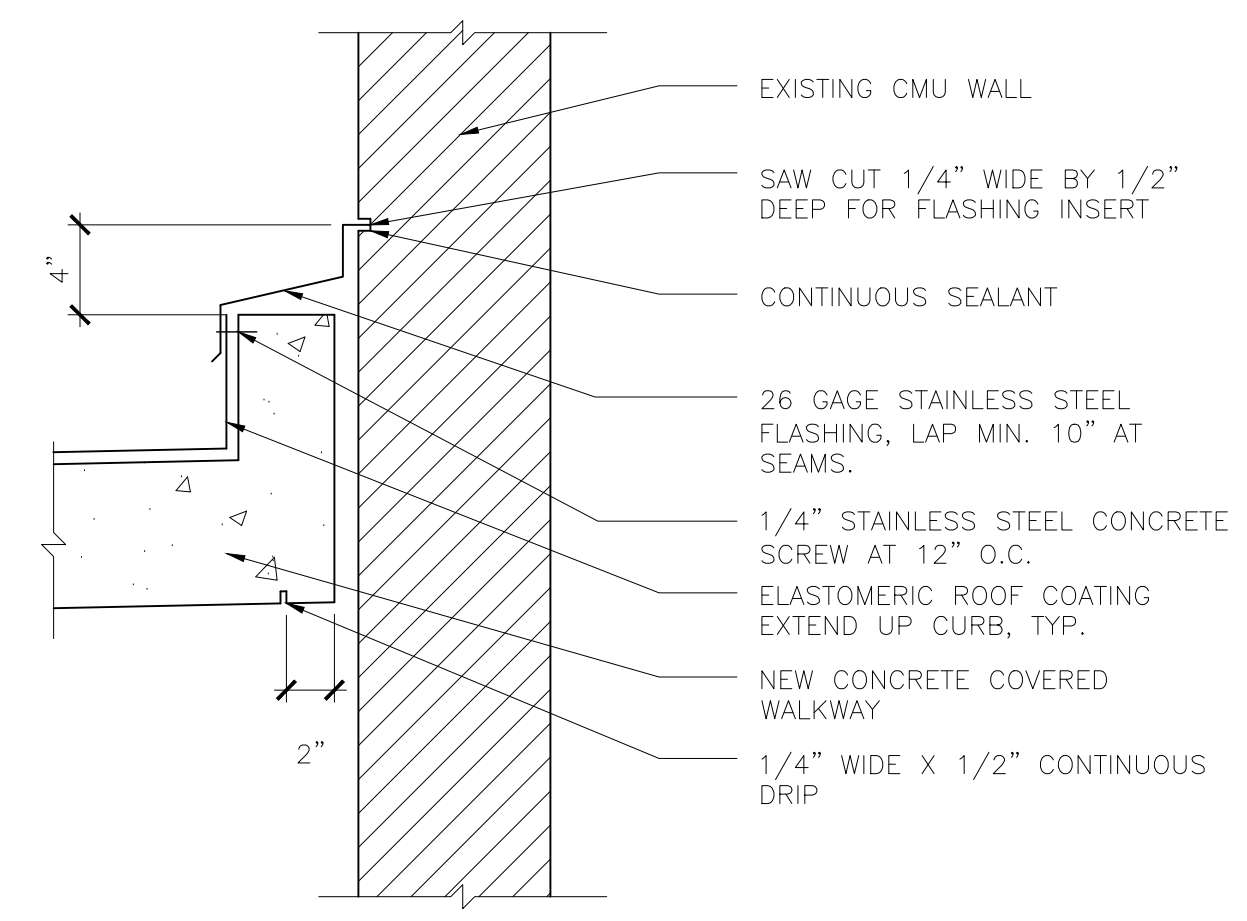


ELEVATION VIEW

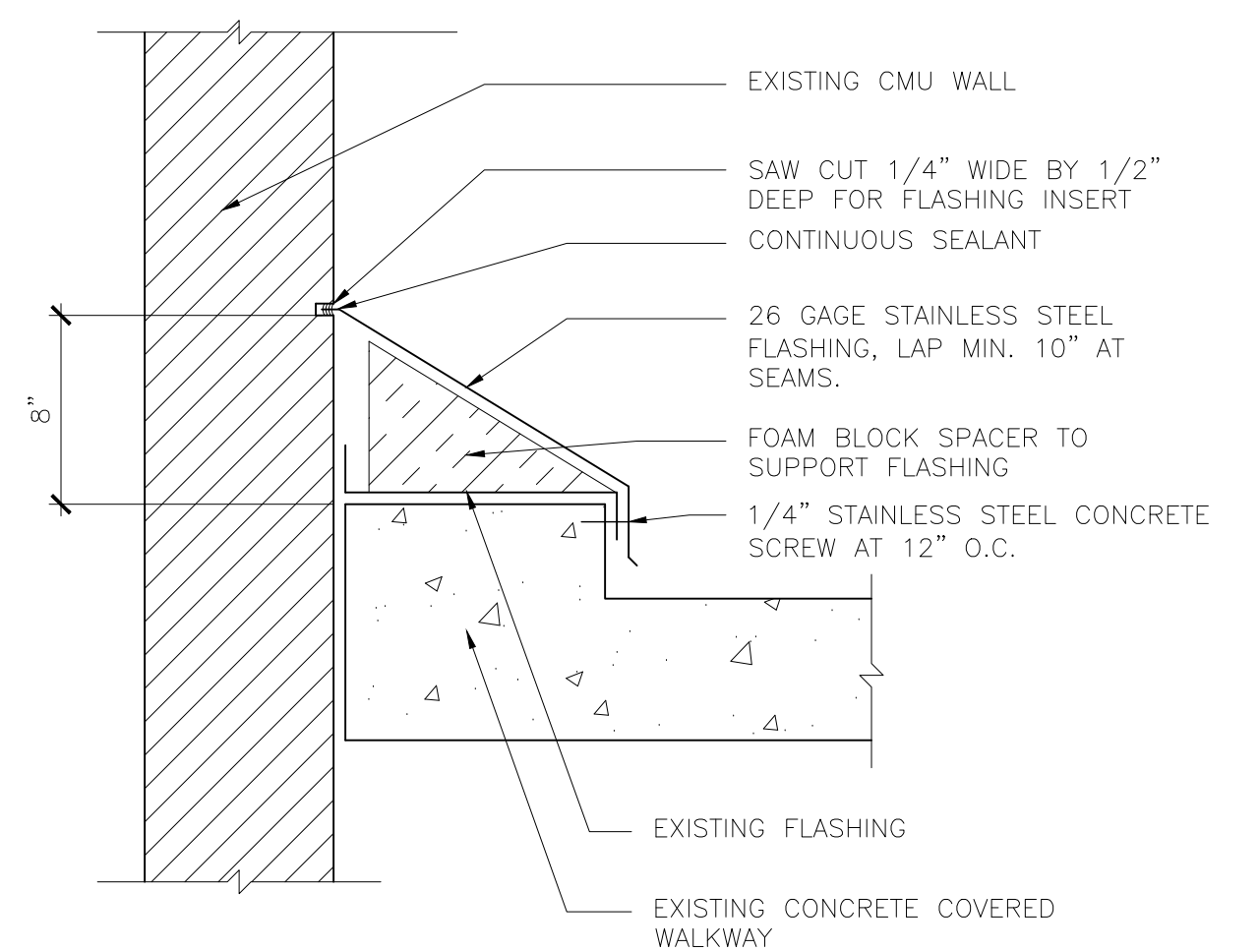
ALUMINUM STAIR 2
1 1/2" = 1'-0" A5-1



ROOF DRAIN DETAIL 5
1 1/2" = 1'-0" A5-1



FLASHING DETAIL 4
1 1/2" = 1'-0" A5-1



FLASHING DETAIL 1
1 1/2" = 1'-0" A5-1

REVISION	DATE	DESCRIPTION

E. M. CHEN & ASSOCIATES, INC.
 ARCHITECTURE • ENGINEERING • PLANNING • CONSTRUCTION MANAGEMENT
 E.M. CHEN ELOC 1001 Army Drive, Suite 201, Sanigahan Heights, Guam 96913
 Tel. No. (671) 632-2887 Fax No. (671) 632-2883
 Email: emc@emcarch.com

GUAM HOUSING AND URBAN RENEWAL AUTHORITY
 (ATURIDAT GINMA'YAN RINUEBAN SUDAT GUAHAN)
 PROPOSED GHURA COMMUNITY ARTS CENTER

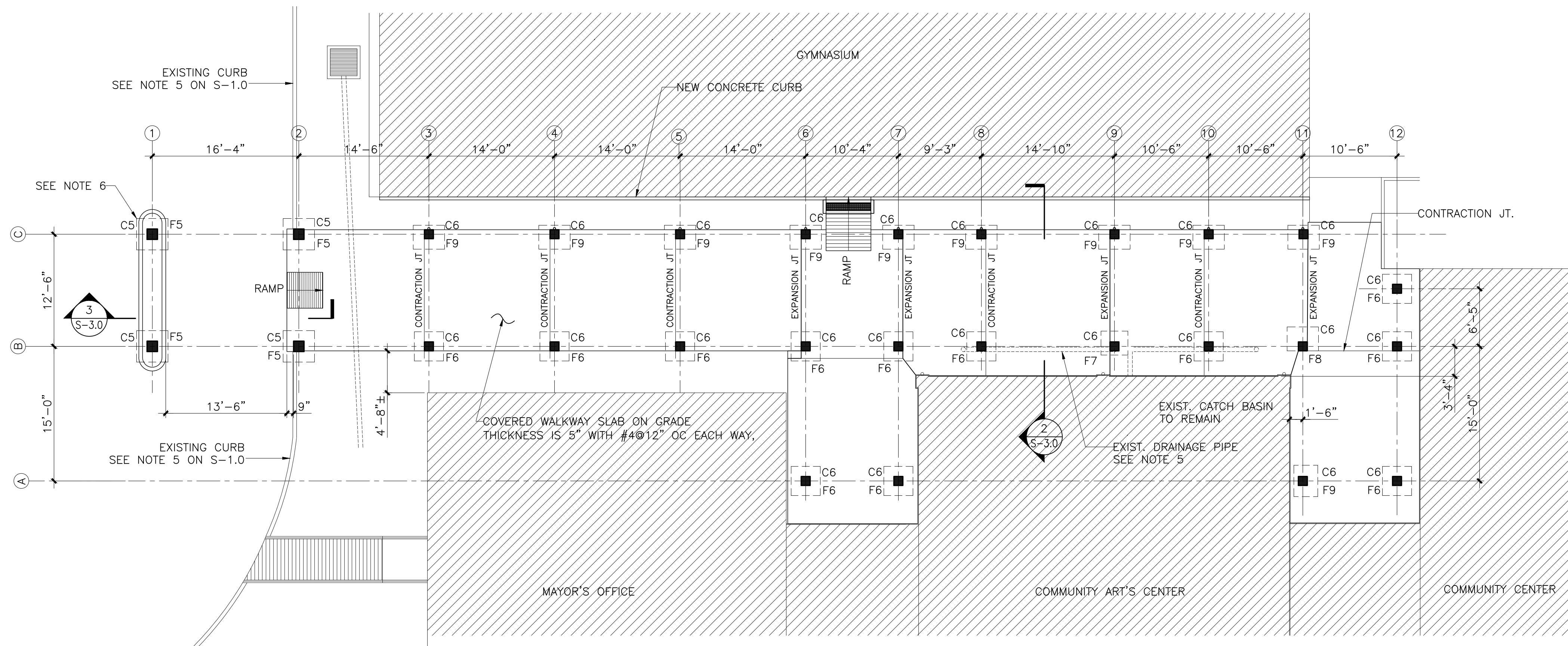
SHEET CONTENTS:
 MISCELLANEOUS DETAILS

PLAN C. CHEN
 No. 659
 04/30/23
 REGISTERED ARCHITECT

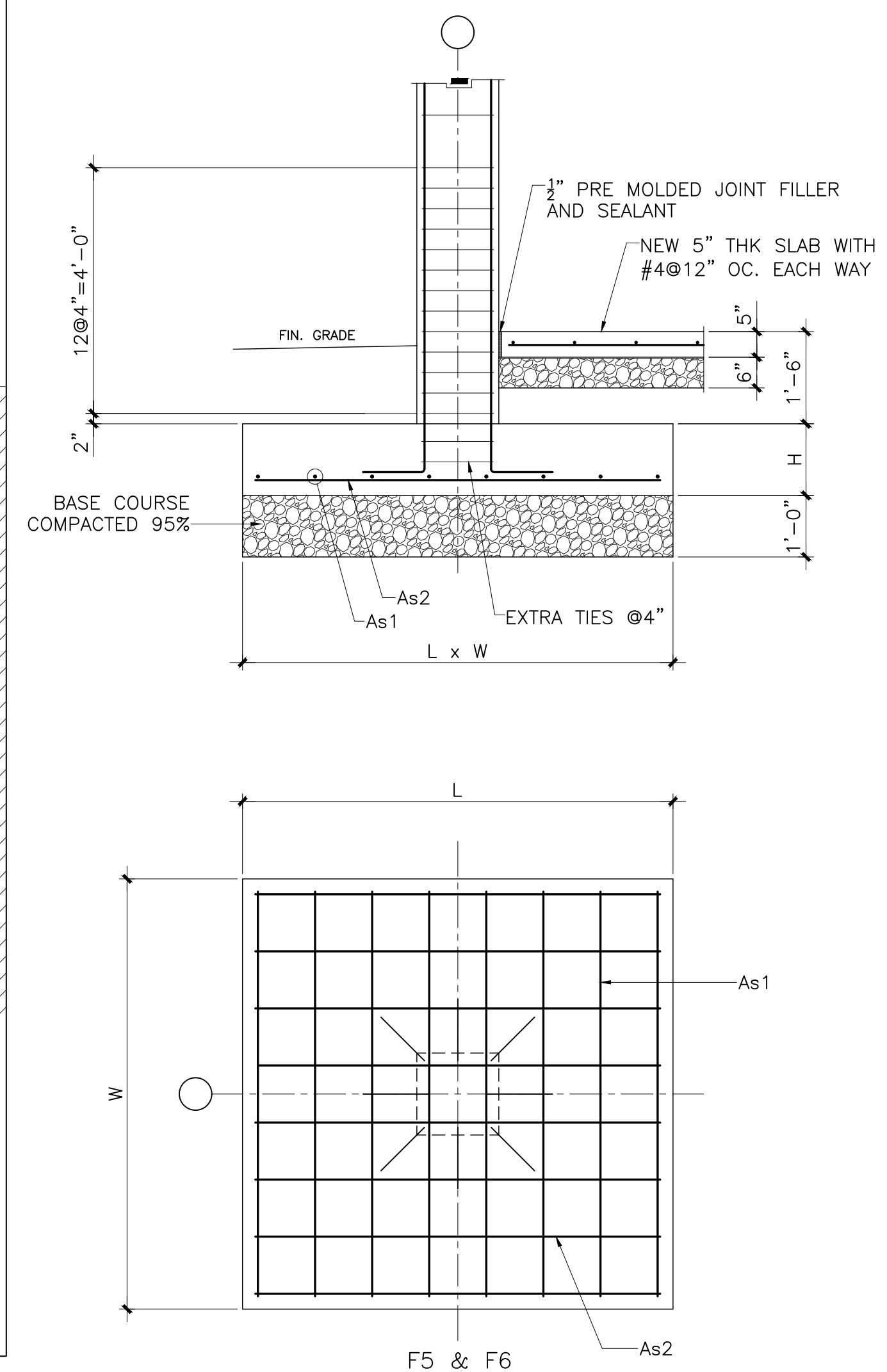
This work was prepared by me or under my responsible control
 DATE: _____

DESIGNED BY: ACC
 DRAWN BY: NGM
 CHECKED BY: ACC
 DATE: 01-10-2023

DWG. NO. A5-1



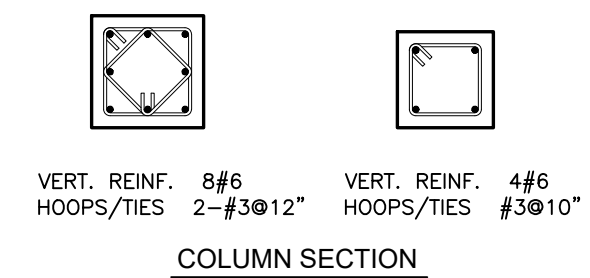
1 COVERED WALKWAY-FOUNDATION PLAN
S-2.0 SCALE: 1/8"=1'-0"



2 FOOTING DETAILS AND SCHEDULE
S-2.0 SCALE: 1/2"=1'-0"

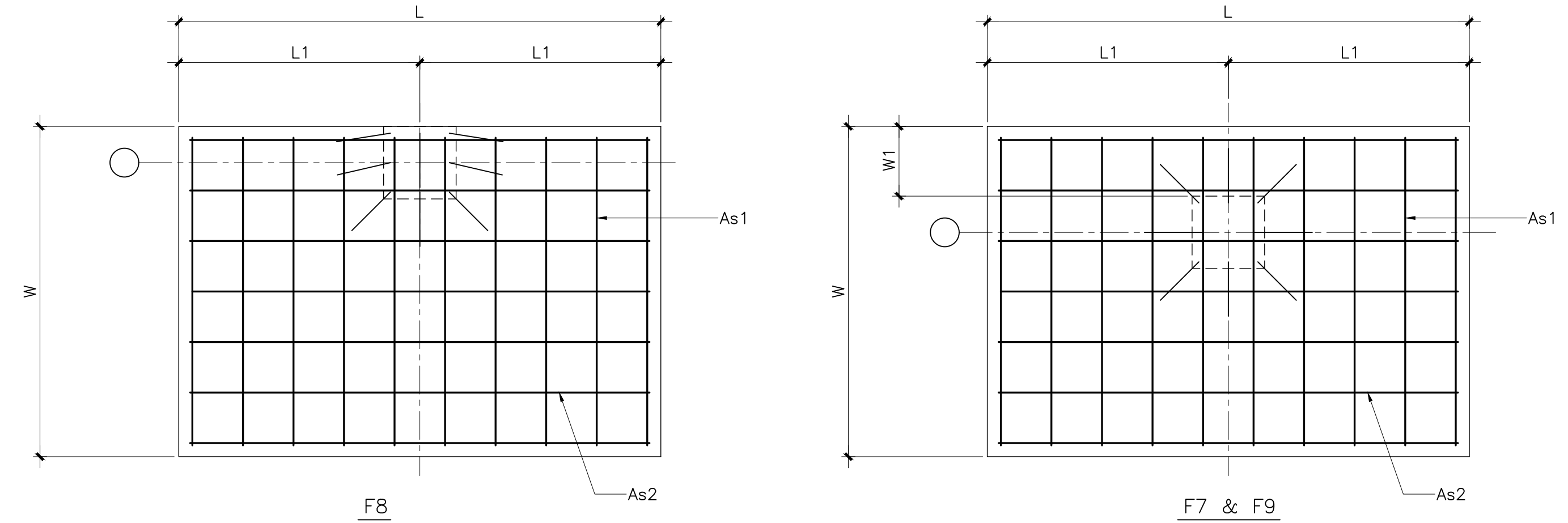
NOTES:

1. THE CONTRACTOR SHALL PROTECT EXISTING STRUCTURES INDICATED TO REMAIN AND SHALL PROVIDE ADEQUATE SHORING AND BRACING OF THE STRUCTURE FOR ALL LOADS THAT MAY BE IMPOSED DURING CONSTRUCTION.
2. THE CONTRACTOR SHALL DEMOLISH EXISTING SLAB ON GRADE AND FOOTINGS. DEMOLISHED CONCRETE AND REINFORCING BARS SHALL BE DISPOSED OFF TO A DESIGNATED DISPOSAL AREA.
3. THE CONTRACTOR SHALL VERIFY EXACT SIZE AND LOCATIONS OF EXISTING CATCH BASINS AND DRAINAGE PIPES.
4. THE CONTRACTOR SHALL CONNECT NEW DRAINAGE PIPES/DOWNSPOUT FROM THE NEW COVERED WALKWAY TO THE EXISTING DRAINAGE PIPES OR CATCH BASINS. SEE ARCHITECTURE DRAWINGS FOR SIZES AND LOCATIONS OF DOWNSPOUTS.
5. LOCATIONS OF EXISTING DRAINAGE PIPES ARE ASSUMED AND APPROXIMATE AND ANY EXISTING DRAINAGE PIPES NOT SHOWN AND ARE AFFECTED BY THE CONSTRUCTION OF THE FOOTINGS SHALL BE REMOVED OR RELOCATED.
6. SAW CUT BEFORE DEMOLISHING EXISTING AC PAVEMENT AT THE LOCATION SHOWN ON DWG S-1.0. THICKNESS OF NEW AC PAVEMENT SHOULD MATCH EXISTING AC PAVEMENT THICKNESS. EXISTING BASE COURSE SHALL BE SCARIFIED AND RE-COMPACTED.

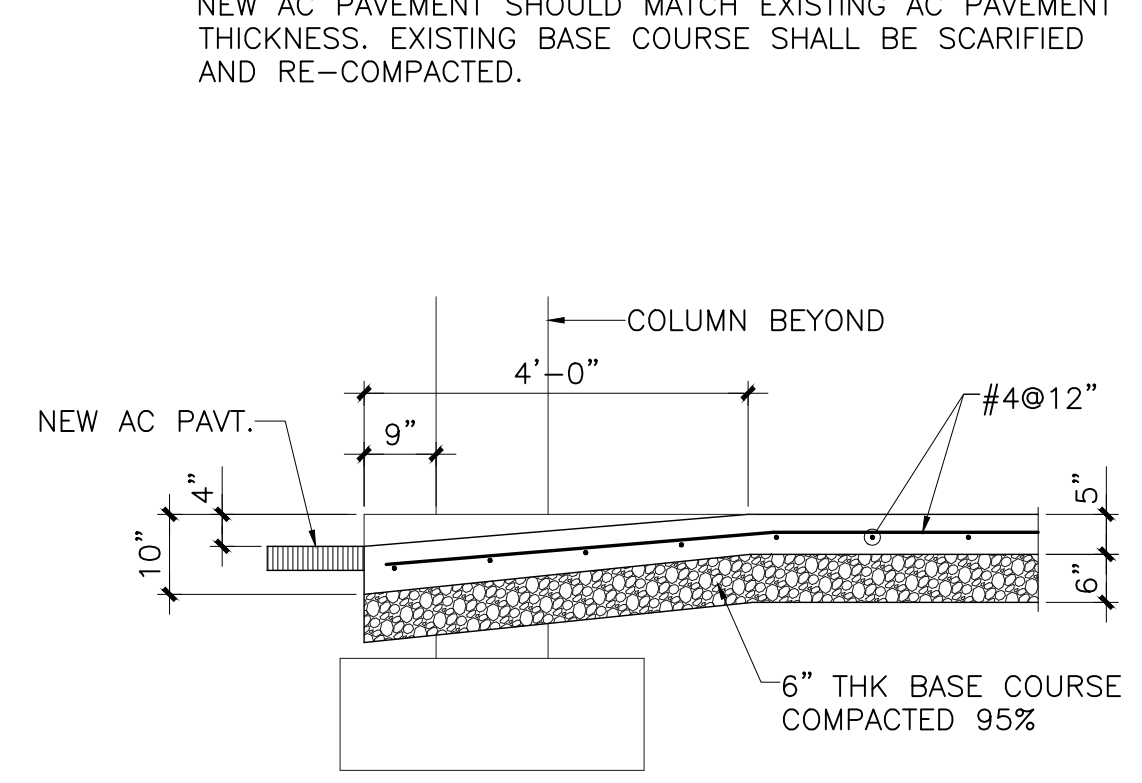


FLOOR LEVEL	DESIGNATION	C5	C6
GROUND FLOOR	SIZE	14"x14"	12"x12"
	VERTICAL REINF.	#6	#6
	TIES	2-#3@12"	#3@10"

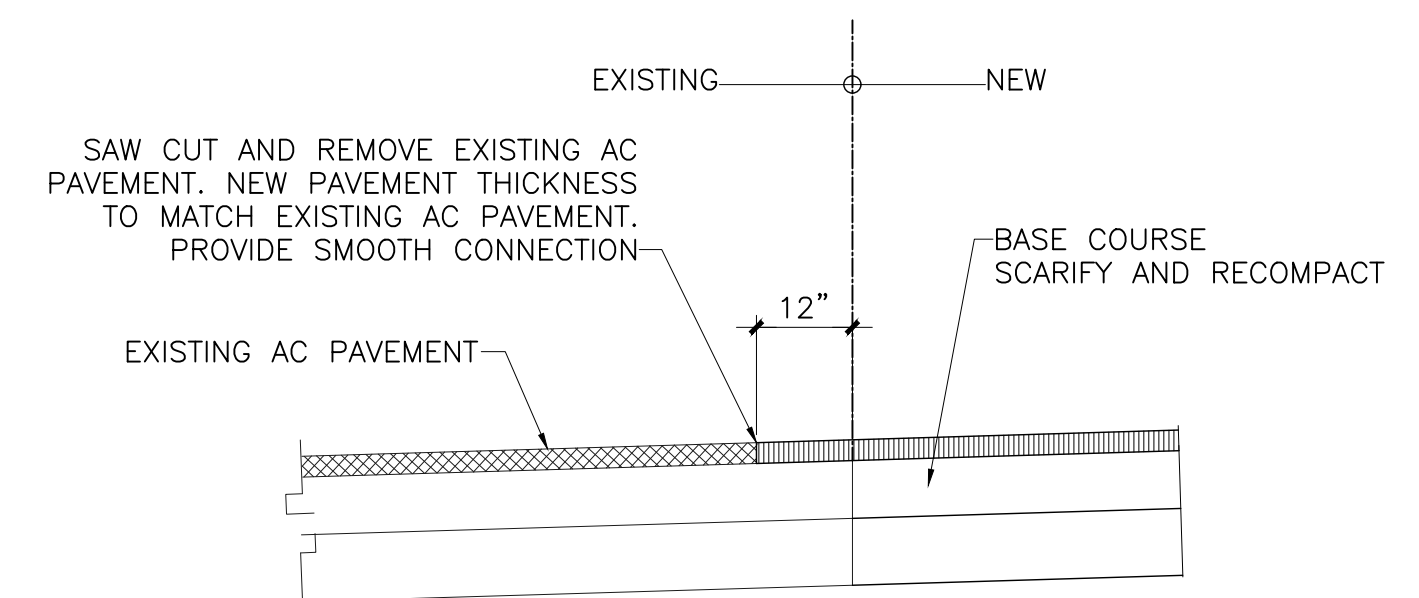
3 COLUMN SCHEDULE
S-2.0 SCALE: 1/2"=1'-0"



4 NEW TO EXISTING AC CONNECTION
S-2.0 SCALE: 1/2"=1'-0"



5 RAMP DETAIL
S-2.0 SCALE: 1/2"=1'-0"



REVISIONS:

NO.	DATE	DESCRIPTION

DESIGNED BY: EMC
DRAWN BY: Edd
CHECKED BY: ACC/EMC
DATE: _____
DWG. NO. **S-2.0**

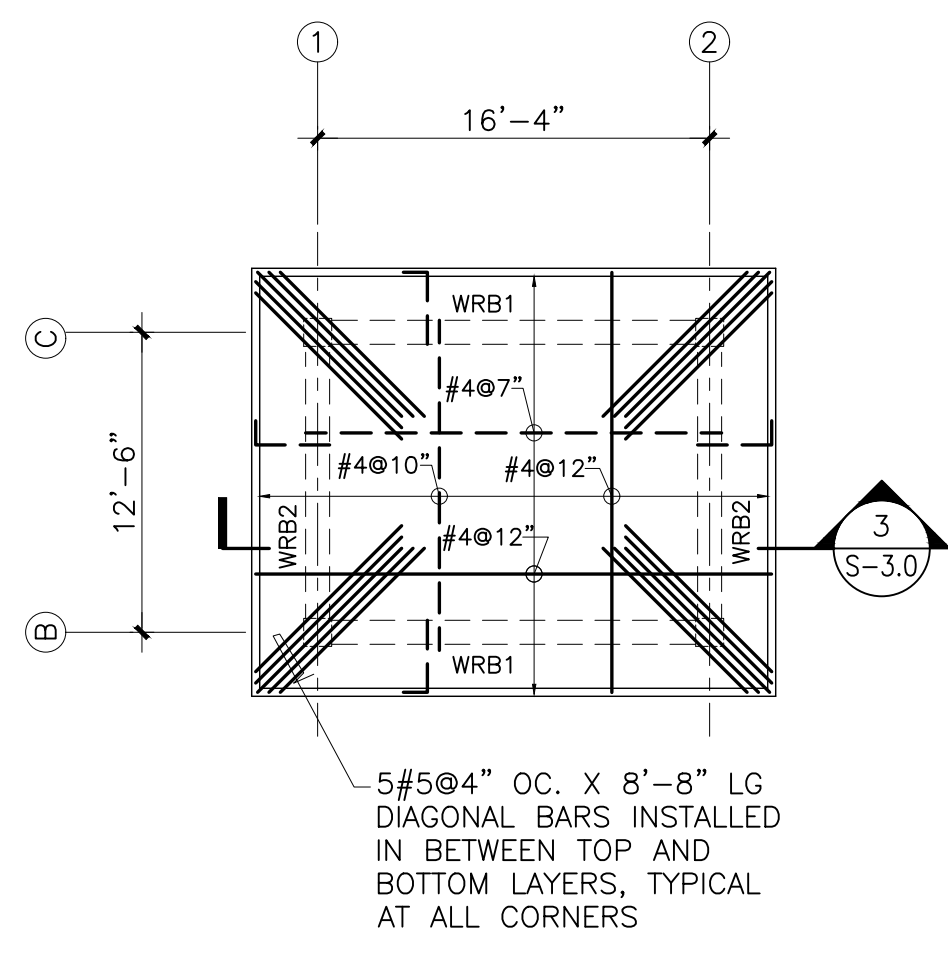
E. M. CHEN & ASSOCIATES, INC.
ARCHITECTURE, ENGINEERING, PLANNING AND INTERIOR DESIGN
E. M. CHEN (BOE) 1007 Army Ave., Suite 100, San Juan, P.R. 00901
Tel: (787) 763-1111 Fax: (787) 763-1112
E-MAIL: emchen@emchen.com

GUAM HOUSING AND URBAN RENEWAL AUTHORITY
(AUTORIDAD GUINEA YAN PINEBAM SUDAT GUAHAN)
PROPOSED GUARA COMMUNITY ARTS CENTER
COVERED WALKWAY

**FOUNDATION & FOOTING DETAILS
FOOTING AND COLUMN SCHEDULE
MISCELLANEOUS DETAILS**

PROFESSIONAL ENGINEER
Exp. 4/30/23
E. M. CHEN

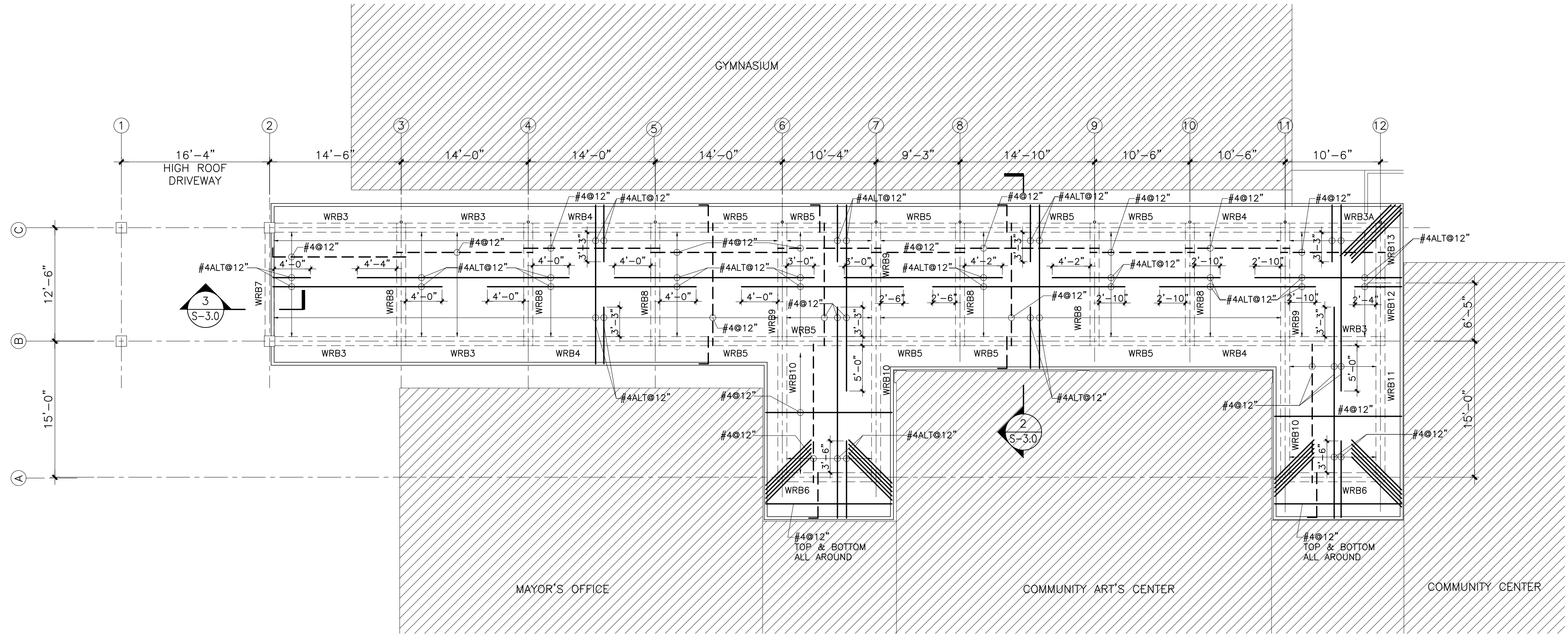
This work was prepared by me or under my responsible control.



HIGH ROOF @ DRIVEWAY

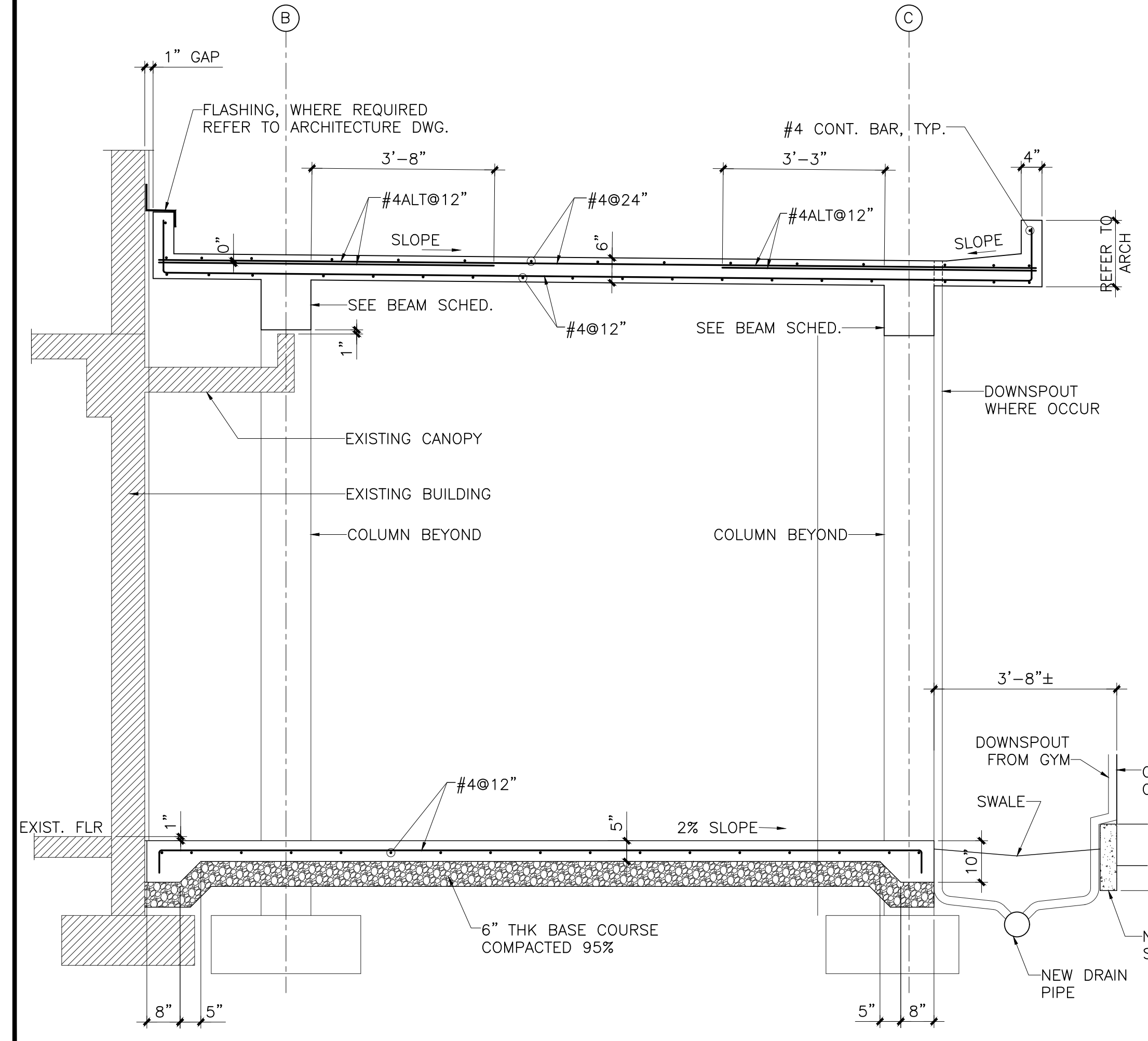
- NOTES:
1. ALL BARS ALONG THE WEST-EAST DIRECTION SHALL BE INSTALLED AT OUTER LAYERS.
 2. PROVIDE #4@16" SPACER OR TIE BARS NOT SHOWN ON THE PLANS.

LEGEND:
 ——— INDICATES TOP BARS
 - - - INDICATES BOTTOM BARS

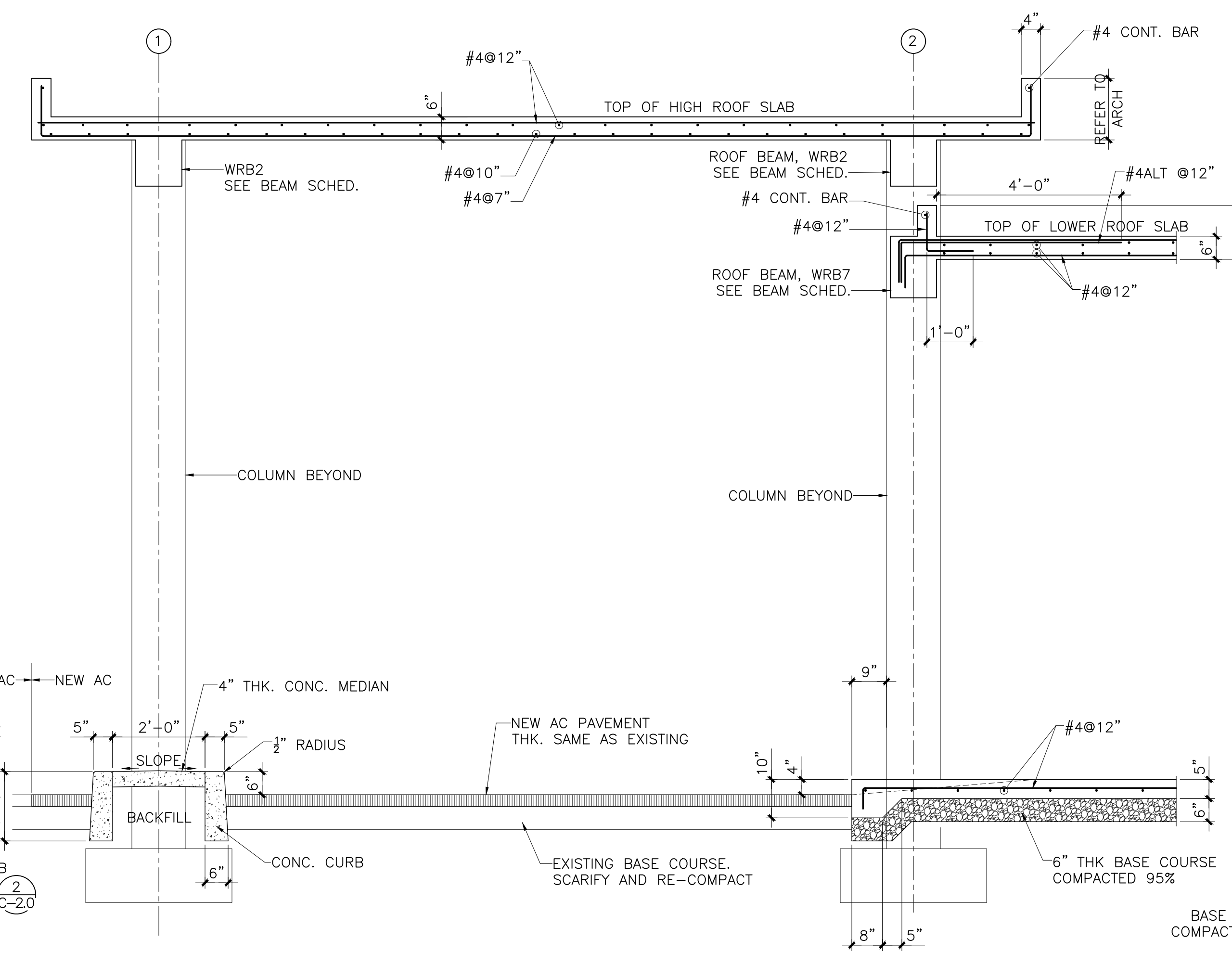


LOWER ROOF

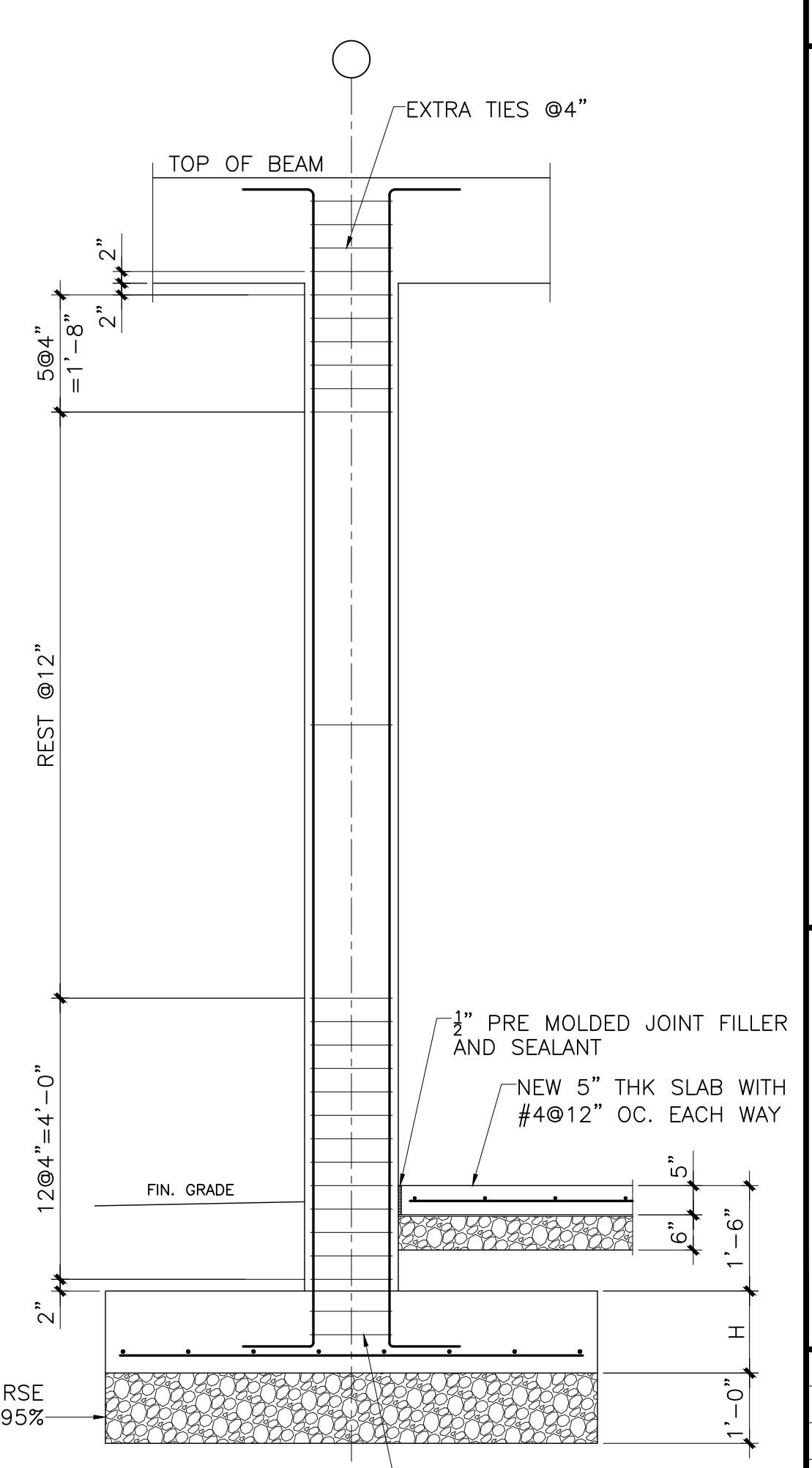
1 COVERED WALKWAY-ROOF FRAMING PLANS
 S-3.0 SCALE: 1/8"=1'-0"



2 COVERED WALKWAY- SECTION
 S-3.0 SCALE: 1/2"=1'-0"



3 HIGH AND LOWER ROOF SECTION
 S-3.0 SCALE: 1/2"=1'-0"



4 COLUMN AND FOOTING DETAIL
 S-3.0 SCALE: 1/2"=1'-0"

REVISION	DATE	DESCRIPTION

E. M. CHEN & ASSOCIATES, INC.
 ARCHITECTURE, ENGINEERING, PLANNING AND INTERIOR DESIGN
 E. M. CHEN, P.E., ARCHITECT, LEED AP
 1001 Tamuning Drive, Suite 200, Tamuning, Guam 96913
 Tel: (671) 535-2001
 Fax: (671) 535-2002
 E-MAIL: emchen@emchen.com

GUAM HOUSING AND URBAN RENEWAL AUTHORITY
 (TAURIDAT GINMA' YAN PINEBAN SUDAT GUAHAN)
 PROPOSED GHURA COMMUNITY ARTS CENTER
 COVERED WALKWAY



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DATE: _____

DESIGNED BY: EMC
 DRAWN BY: Edd
 CHECKED BY: ACC/EMC

DWG. NO. **S-3.0**

ROOF FRAMING PLANS
 SECTIONS AND DETAILS

SHEET CONTENTS:

**Specification
for the**

Sinajana Arts Center Concrete Sidewalk

**OWNER
Guam Housing and Urban Renewal Authority**

BY: _____
Elizabeth F. Napoli, EXECUTIVE DIRECTOR

Contractor: _____

By: _____
Signature and Title

Date: _____

END OF SPECIFICATION