*Embassy of the United States of America*

August 31, 2015

To: Prospective Offerors

SUBJECT: Solicitation Number **SEG30015Q0036** for Perimeter Walls Project

The Embassy of the United States of America invites you to submit a price quotation for a **Perimeter Walls Project** at 8 Kamal El-Din Salah Garden City, Cairo, Egypt.

If you would like to submit a quotation, you should thoroughly examine all documents contained in the Request for Quotation package, and submit your quotation according to section J.

**Your offer must be submitted by e-mail to CairoContracts@state.gov on or before September 15, 2015, at 2:00 PM.**

**The Site visit will be on September 2, 2015, at 10:00 a.m. at 14 Hindawi (Abdalla el Kateb) Street, Dokki, Giza and 1:00 pm at 39 Road 78, Maadi, Cairo, Egypt.**

The order price will be fixed, with no adjustment for any escalation in costs or prices of labor or materials. Each offeror will be responsible for determining the amount of labor and materials that will be required to complete the project, and for pricing his proposal accordingly.

The Contracting Officer reserves the right to reject any and all offers and to waive any informality in offers received. In addition, the Embassy reserves the right to establish a competitive range of one or more offerors, and to conduct further negotiations concerning price and other terms before awarding the order, or to award without discussions.

The U.S. Government intends to award an order to the lowest priced, technically acceptable offeror who is a responsible contractor.

In order for your company to do business with the US Federal Government, you need to register it in the below web site and provide us with the registration number.
https://www.sam.gov

The Completion of the entire work will be **60 calendar days from the notice to proceed for each location.** In the event of an unauthorized or unexcused delay in completing the project, liquidated damages in the amount of **LE500** per calendar day will be assessed until substantial completion of the project is achieved.

Sincerely,

Phillip de Souza
Contracting Officer

Enclosure

| **REQUEST FOR QUOTATION** *(THIS IS NOT AN ORDER)* | THIS RFQ _ IS **x** IS NOT A SMALL BUSINESS SET-ASIDE | Page 1 of 2 |
|---|---|---|

| 1. REQUEST NO. | 2. DATE ISSUED | 3. REQUISITION/PURCHASE REQUEST NO. | 4. CERT. FOR NAT. DEF. UNDER BDSA REG. 2 AND/OR DMS REG. 1 ▶ | RATING |
|---|---|---|---|---|
| SEG30015Q0036 | 08/31/2015 | PR4595820 | | |

5a. ISSUED BY
AMERICAN EMBASSY CAIRO
US EMBASSY CAIRO 8 KAMAL EL DIN SALAH, ATTN: PROCUREMENT/CONTRACTING OFFICE
CAIRO 11519

6. DELIVER BY *(Date)*
09/15/2015

5b. FOR INFORMATION CALL *(NO COLLECT CALLS)*

| NAME | TELEPHONE NUMBER |
|---|---|
| Hany Gerguis | 2797-3055 |

7. DELIVERY
**X** FOB DESTINATION _ OTHER *(See Schedule)*

9. DESTINATION
a. NAME OF CONSIGNEE
AMERICAN EMBASSY CAIRO

8. TO:

| a. NAME | b. COMPANY | b. STREET ADDRESS |
|---|---|---|
| N/A | NOVENDOR | US EMBASSY CAIRO 8 KAMAL EL DIN SALAH, ATTN: SPM RECEIVING OFFICE |

| c. STREET ADDRESS | c. CITY |
|---|---|
| | CAIRO |

| d. CITY | e. STATE | f. ZIP CODE | d. STATE | e. ZIP CODE |
|---|---|---|---|---|
| | | | | 11519 |

10. PLEASE FURNISH QUOTATIONS TO THE ISSUING OFFICE IN BLOCK 5A ON OR BEFORE CLOSE OF BUSINESS *(Date)*
09/15/2015

**IMPORTANT:** This is a request for information, and quotations furnished are not offers. If you are unable to quote, please so indicate on this form and return it to the address in Block 5A. This request does not commit the Government to pay any costs incurred in the preparation of the submission of this quotation or to contract for supplies or services. Supplies are of domestic origin unless otherwise indicated by quoter. Any representations and/or certifications attached to this Request for Quotations must be completed by the quoter.

11. SCHEDULE *(Include applicable Federal, State and local taxes)*

| ITEM NO. (a) | SUPPLIES/SERVICES (b) | QUANTITY (c) | UNIT (d) | UNIT PRICE (e) | AMOUNT (f) |
|---|---|---|---|---|---|
| | SEE LINE ITEMS | | | | |

| 12. DISCOUNT FOR PROMPT PAYMENT ▶ | a. 10 CALENDAR DAYS (%) | b. 20 CALENDAR DAYS (%) | c. 30 CALENDAR DAYS (%) | d. CALENDAR DAYS NUMBER | PERCENTAGE |
|---|---|---|---|---|---|
| | | | | | |

NOTE: Additional provisions and representations [ ] are [ ] are not attached.

| 13. NAME AND ADDRESS OF QUOTER | 14. SIGNATURE OF PERSON AUTHORIZED TO SIGN QUOTATION | 15. DATE OF QUOTATION |
|---|---|---|
| a. NAME OF QUOTER | | |
| STREET ADDRESS | 16. SIGNER | |
| | a. NAME *(Type or print)* | b. TELEPHONE |
| c. COUNTY | | AREA CODE |
| d. CITY / e. STATE / f. ZIP CODE | c. TITLE *(Type or print)* | NUMBER |

.

| 11. SCHEDULE<br>*(Include applicable Federal, State and local taxes)* | | | | | |
|---|---|---|---|---|---|
| ITEM NO.<br>(a) | SUPPLIES/SERVICES<br>(b) | QUANTITY<br>(c) | UNIT<br>(d) | UNIT PRICE<br>(e) | AMOUNT<br>(f) |
| 1 | Perimeter wall at Standalone Residence (#14 Hindawi Street)<br>Funding Information:<br>Total : 0.00<br>----------- 0.00 | 1.00 | LS | 0.00 | 0.00 |
| 2 | Perimeter Wall at Standalone Residence (39 Road 78)<br>Funding Information:<br>Total : 0.00<br>----------- 0.00 | 1.00 | LS | 0.00 | 0.00 |

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REQUEST FOR QUOTATIONS - CONSTRUCTION

## A. PRICE

The Contractor shall complete all work, including furnishing all labor, material, equipment and services required under this purchase order for the following firm fixed price and within the time specified. This price shall include all labor, materials, all insurances, overhead and profit.

| | |
|---|---|
| Total Price (including all labor, materials, overhead and profit) | |

### A.1 VALUE ADDED TAX

VALUE ADDED TAX (VAT). The Government will not reimburse the Contractor for VAT under this contract. The Contractor shall not include a line for VAT on invoices as the U.S. Embassy has a tax exemption certificate with the host government.

## B. SCOPE OF WORK

Project includes replacement and security upgrade for perimeter walls at two US. Government Owned residential villas at 14 Hindawi Street, Dokki, Giza and 39 Road 78, Maadi, Cairo as shown in details in the attached Specifications (Attachment #5) and Drawings that will be provided during the site visit (Attachment #6).

The character and scope of the work are set forth in the contract. The Contractor shall furnish and install all materials required by this contract.

In case of differences between small- and large-scale drawings, the latter will govern. Where a portion of the work is drawn in detail and the remainder of the work is indicated in outline, the parts drawn in detail shall apply also to all other portions of the work.

## C. PACKAGING AND MARKING

None

## D. INSPECTION AND ACCEPTANCE

The COR, or his/her authorized representatives, will inspect from time to time the services being performed and the supplies furnished to determine whether work is being performed in a satisfactory manner and that all supplies are of acceptable quality and standards.

The Contractor shall be responsible for any countermeasures or corrective action, within the scope of this contract, which may be required by the Contracting Officer as a result of such inspection.

### D.1 SUBSTANTIAL COMPLETION

(a) "*Substantial Completion*" means the stage in the progress of the work as determined and certified by the Contracting Officer in writing to the Contractor, on which the work (or a portion designated by the Government) is sufficiently complete and satisfactory. Substantial completion means that the property may be occupied or used for the purpose for which it is intended, and only minor items such as touch-up, adjustments, and minor replacements or installations remain to be completed or corrected which:

(1) do not interfere with the intended occupancy or utilization of the work, and
(2) can be completed or corrected within the time period required for final completion.

(b) The "date of substantial completion" means the date determined by the Contracting Officer or authorized Government representative as of which substantial completion of the work has been achieved.

Use and Possession upon Substantial Completion - The Government shall have the right to take possession of and use the work upon substantial completion. Upon notice by the Contractor that the work is substantially complete (a Request for Substantial Completion) and an inspection by the Contracting Officer or an authorized Government representative (including any required tests), the Contracting Officer shall furnish the Contractor a Certificate of Substantial Completion. The certificate will be accompanied by a Schedule of Defects listing items of work remaining to be performed, completed or corrected before final completion and acceptance. 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 Government's possession or use upon substantial completion shall not be deemed an acceptance of any work under the contract.

### D.2 FINAL COMPLETION AND ACCEPTANCE

D.2.1 "Final completion and acceptance" means the stage in the progress of the work as determined by the Contracting Officer and confirmed in writing to the Contractor, at which all work required under the contract has been completed in a satisfactory manner, subject to the discovery of defects after final completion, and except for items specifically excluded in the notice of final acceptance.

D.2.2 The "*date of final completion and acceptance*" means the date determined by the Contracting Officer when final completion of the work has been achieved, as indicated by written notice to the Contractor.

D.2.3 FINAL INSPECTION AND TESTS. The Contractor shall give the Contracting Officer at least five (5) days advance written notice of the date when the work will be fully completed and ready for final inspection and tests. Final inspection and tests will be started not later than the date specified in the notice unless the Contracting Officer determines that the work is not ready for final inspection and so informs the Contractor.

D.2.4 FINAL ACCEPTANCE. If the Contracting Officer is satisfied that the work under the contract is complete (with the exception of continuing obligations), the Contracting Officer shall issue to the Contractor a notice of final acceptance and make final payment upon:

- Satisfactory completion of all required tests,
- A final inspection that all items by the Contracting Officer listed in the Schedule of Defects have been completed or corrected and that the work is finally complete (subject to the discovery of defects after final completion), and
- Submittal by the Contractor of all documents and other items required upon completion of the work, including a final request for payment (Request for Final Acceptance).

E. DELIVERIES OR PERFORMANCE

52.211-10 COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK (APR 1984)

The Contractor shall be required to:

(a) commence work under this contract within **30 calendar days** from receiving the notice to proceed,
(b) prosecute the work diligently, and,
(c) complete the entire work ready for use not later than **60 calendar days from the notice to proceed for each location.**

The time stated for completion shall include final cleanup of the premises.

52.211-12 LIQUIDATED DAMAGES - CONSTRUCTION (SEPT 2000)

(a) If the Contractor fails to complete the work within the time specified in the contract, or any extension, the Contractor shall pay liquidated damages to the Government in the amount of **500 EGP** for each calendar day of delay until the work is completed or accepted.

(b) If the Government terminates the Contractor's right to proceed, liquidated damages will continue to accrue until the work is completed. These liquidated damages are in addition to excess costs of repurchase under the Default clause.

CONTRACTOR'S SUBMISSION OF CONSTRUCTION SCHEDULES

(a) The time for submission of the schedules referenced in FAR 52.236-15, "Schedules for Construction Contracts", paragraph (a), is hereby modified to reflect the due date for submission as "**15 calendar days** after receipt of an executed contract".

(b) These schedules shall include the time by which shop drawings, product data, samples and other submittals required by the contract will be submitted for approval.

(c) The Contractor shall revise such schedules (1) to account for the actual progress of the work, (2) to reflect approved adjustments in the performance schedule, and (3) as required by the Contracting Officer to achieve coordination with work by the Government and any separate contractors used by the Government. The Contractor shall submit a schedule, which sequences work so as to minimize disruption at the job site.

(d) All deliverables shall be in the English language and any system of dimensions (English or metric) shown shall be consistent with that used in the contract. No extension of time shall be allowed due to delay by the Government in approving such deliverables if the Contractor has failed to act promptly and responsively in submitting its deliverables. The Contractor shall identify each deliverable as required by the contract.

(e) Acceptance of Schedule: When the Government has accepted any time schedule; it shall be binding upon the Contractor. The completion date is fixed and may be extended only by a written contract modification signed by the Contracting Officer. Acceptance or approval of any schedule or revision thereof by the Government shall not:

(1) Extend the completion date or obligate the Government to do so,
(2) Constitute acceptance or approval of any delay, or
(3) Excuse the Contractor from or relieve the Contractor of its obligation to maintain the progress of the work and achieve final completion by the established completion date.

NOTICE OF DELAY

If the Contractor receives a notice of any change in the work, or if any other conditions arise which are likely to cause or are actually causing delays which the Contractor believes may result in late completion of the project, the Contractor shall notify the Contracting Officer. The Contractor's notice shall state the effect, if any, of such change or other conditions upon the approved schedule, and shall state in what respects, if any, the relevant schedule or the completion date should be revised. The Contractor shall give such notice promptly, not more than ten (10) days after the first event giving rise to the delay or prospective delay. Only the Contracting Officer may make revisions to the approved time schedule.

NOTICE TO PROCEED

(a) After receiving and accepting any bonds or evidence of insurance, the Contracting Officer will provide the Contractor a Notice to Proceed. The Contractor must then prosecute the work, commencing and completing performance not later than the time period established in the contract.

(b) It is possible that the Contracting Officer may elect to issue the Notice to Proceed before receipt and acceptance of any bonds or evidence of insurance. Issuance of a Notice to Proceed by the Government before receipt of the required bonds or insurance certificates or policies shall not be a waiver of the requirement to furnish these documents.

WORKING HOURS

All work shall be performed during working days **from Sunday through Thursday from 8:00 a.m. to 4:30 p.m.** Other hours, if requested by the Contractor, may be approved by the Contracting Officer's Representative (COR). The Contractor shall give notice **48 hours in advance** to the COR, who will consider any deviation from the hours identified above. Changes in work hours initiated by the Contractor, will not be a cause for a price increase.

PRECONSTRUCTION CONFERENCE

If needed, a preconstruction conference will be held **10 days** after contract award at the **U.S. Embassy in Cairo** to discuss the schedule, submittals, notice to proceed, mobilization and other important issues that affect construction progress. See FAR 52.236-26, Preconstruction Conference.

| DELIVERABLES - The following items shall be delivered under this contract: | | | |
|---|---|---|---|
| Description | Quantity | Deliver Date | Deliver To |
| Section G. Securities/Insurance | 1 | 5 days after award | CO |
| Section E. Construction Schedule | 1 | 15 days after award | COR |
| Section E. Preconstruction Conference | 1 | 10 days after award | COR |
| Section G. Personnel Biographies | 1 | 5 days after award | COR |
| Section F. Payment Request | 1 | Last calendar day of each month | COR |
| Section D. Request for Substantial Completion | 1 | 15 days before inspection | COR |
| Section D. Request for Final Acceptance | 1 | 5 days before inspection | COR |

F. ADMINISTRATIVE DATA

652.242-70 CONTRACTING OFFICER'S REPRESENTATIVE (COR) (AUG 1999)

(a) The Contracting Officer may designate in writing one or more Government employees, by name or position title, to take action for the Contracting Officer under this contract. Each designee shall be identified as a Contracting Officer's Representative (COR). Such designation(s) shall specify the scope and limitations of the authority so delegated; provided, that the designee shall not change the terms or conditions of the contract, unless the COR is a warranted Contracting Officer and this authority is delegated in the designation.

(b) The COR for this contract is the **U.S. Embassy Facilities Management Senior Engineer**

Payment: The Contractor's attention is directed to Section H, 52.232-5, "Payments Under Fixed-Price Construction Contracts". The following elaborates on the information contained in that clause.

Requests for payment, may be made no more frequently than monthly. Payment requests shall cover the value of labor and materials completed and in place, including a prorated portion of overhead and profit.

After receipt of the Contractor's request for payment, and on the basis of an inspection of the work, the Contracting Officer shall make a determination as to the amount, which is then due. If the Contracting Officer does not approve payment of the full amount applied for, less the retainage allowed by in 52.232-5, the Contracting Officer shall advise the Contractor as to the reasons.

Under the authority of 52.232-27(a), the 14 day period identified in FAR 52.232-27(a)(1)(i)(A) is hereby changed to 30 days.

**American Embassy Cairo**
**Financial Management Center/DBO**
**8 Kamal El Din Salah St.**
**Garden City, Cairo, Egypt**
CairoDBO@state.gov

G. SPECIAL REQUIREMENTS

G.1.0 PERFORMANCE/PAYMENT PROTECTION - The Contractor shall furnish some form of payment protection as described in 52.228-13 in the amount of **10% of the contract price through a check or a bank letter of guarantee.**

G.1.1 The Contractor shall provide the information required by the paragraph above within **five (5) calendar days after award.** Failure to timely submit the required security may result in rescinding or termination of the contract by the Government. If the contract is terminated, the Contractor will be liable for those costs as described in FAR 52.249-10, Default (Fixed-Price Construction), which is included in this purchase order.

G.1.2 The bonds or alternate performance security shall guarantee the Contractor's execution and completion of the work within the contract time. This security shall also guarantee the correction of any defects after completion, the payment of all wages and other amounts payable by the Contractor under its subcontracts or for labor and materials, and the satisfaction or removal of any liens or encumbrances placed on the work.

G.1.3 The required securities shall remain in effect in the full amount required until final acceptance of the project by the Government. Upon final acceptance, the penal sum of the performance security shall be reduced to 10% of the contract price. The security shall remain in effect for one year after the date of final completion and acceptance, and the Contractor shall pay any premium required for the entire period of coverage.

G.2.0 INSURANCE - The Contractor is required by FAR 52.228-5, "Insurance - Work on a Government Installation" to provide whatever insurance is legally necessary. The Contractor shall at its own expense provide and maintain during the entire performance period the following insurance amounts:

G.2.1 GENERAL LIABILITY (includes premises/operations, collapse hazard, products, completed operations, contractual, independent contractors, broad form property damage, personal injury):

| (1) BODILY INJURY, ON OR OFF THE SITE, IN U.S. DOLLARS | |
|---|---|
| Per Occurrence | **$ 5,000** |
| Cumulative | **$ 15,000** |
| (2) PROPERTY DAMAGE, ON OR OFF THE SITE, IN U.S. DOLLARS | |
| Per Occurrence | **$ 10,000** |
| Cumulative | **$ 20,000** |

G.2.2 The foregoing types and amounts of insurance are the minimums required. The Contractor shall obtain any other types of insurance required by local law or that are ordinarily or

customarily obtained in the location of the work. The limit of such insurance shall be as provided by law or sufficient to meet normal and customary claims.

G.2.3 The Contractor agrees that the Government shall not be responsible for personal injuries or for damages to any property of the Contractor, its officers, agents, servants, and employees, or any other person, arising from an incident to the Contractor's performance of this contract. The Contractor shall hold harmless and indemnify the Government from any and all claims arising therefrom, except in the instance of gross negligence on the part of the Government.

G.2.4 The Contractor shall obtain adequate insurance for damage to, or theft of, materials and equipment in insurance coverage for loose transit to the site or in storage on or off the site.

G.2.5 The general liability policy required of the Contractor shall name "the United States of America, acting by and through the Department of State", as an additional insured with respect to operations performed under this contract.

G.3.0 DOCUMENT DESCRIPTIONS

G.3.1 SUPPLEMENTAL DOCUMENTS: The Contracting Officer shall furnish from time to time such detailed drawings and other information as is considered necessary, in the opinion of the Contracting Officer, to interpret, clarify, supplement, or correct inconsistencies, errors or omissions in the Contract documents, or to describe minor changes in the work not involving an increase in the contract price or extension of the contract time. The Contractor shall comply with the requirements of the supplemental documents, and unless prompt objection is made by the Contractor within 20 days, their issuance shall not provide for any claim for an increase in the Contract price or an extension of contract time.

G.3.1.1. RECORD DOCUMENTS. The Contractor shall maintain at the project site:

(1) a current marked set of Contract drawings and specifications indicating all interpretations and clarification, contract modifications, change orders, or any other departure from the contract requirements approved by the Contracting Officer; and,
(2) a complete set of record shop drawings, product data, samples and other submittals as approved by the Contracting Officer.

G.3.1.2. "As-Built" Documents: After final completion of the work, but before final acceptance thereof, the Contractor shall provide:

(1) a complete set of "as-built" drawings, based upon the record set of drawings, marked to show the details of construction as actually accomplished; and,

(2) record shop drawings and other submittals, in the number and form as required by the specifications.

G.4.0 LAWS AND REGULATIONS - The Contractor shall, without additional expense to the Government, be responsible for complying with all laws, codes, ordinances, and regulations applicable to the performance of the work, including those of the host country, and with the lawful orders of any governmental authority having jurisdiction. Host country authorities may not enter the construction site without the permission of the Contracting Officer. Unless otherwise directed by the Contracting Officer, the Contractor shall comply with the more stringent of the requirements of such laws, regulations and orders and of the contract. In the event of a conflict between the contract and such laws, regulations and orders, the Contractor shall promptly advise the Contracting Officer of the conflict and of the Contractor's proposed course of action for resolution for approval by the Contracting Officer.

G.4.1 The Contractor shall comply with all local labor laws, regulations, customs and practices pertaining to labor, safety, and similar matters, to the extent that such compliance is not inconsistent with the requirements of this contract.

G.4.2 The Contractor shall give written assurance to the Contracting Officer that all subcontractors and others performing work on or for the project have obtained all requisite licenses and permits.

G.4.3 The Contractor shall submit proper documentation and evidence satisfactory to the Contracting Officer of compliance with this clause.

G.5.0 CONSTRUCTION PERSONNEL - The Contractor shall maintain discipline at the site and at all times take all reasonable precautions to prevent any unlawful, riotous, or disorderly conduct by or among those employed at the site. The Contractor shall ensure the preservation of peace and protection of persons and property in the neighborhood of the project against such action. The Contracting Officer may require, in writing, that the Contractor remove from the work any employee that the Contracting Officer deems incompetent, careless, insubordinate or otherwise objectionable, or whose continued employment on the project is deemed by the Contracting Officer to be contrary to the Government's interests.

G.5.1 If the Contractor has knowledge that any actual or potential labor dispute is delaying or threatens to delay the timely performance of this contract, the Contractor shall immediately give notice, including all relevant information, to the Contracting Officer.

G.5.2 After award, the Contractor has **5 calendar days** to submit to the Contracting Officer a list of workers and supervisors assigned to this project for the Government to conduct all necessary security checks. It is anticipated that security checks might take up to **30 days** to perform. For each individual the list shall include:

Full Name
Place and Date of Birth

Current Address
Copy of the Egyptian ID
Fingerprints

Failure to provide any of the above information may be considered grounds for rejection and/or resubmittal of the application. All personnel must also complete a security interview with Embassy security staff and may be asked to complete additional paperwork as part of the security review. Once the Government has completed the security screening and approved the applicants, a badge will be provided to the individual for access to the site. This badge may be revoked at any time due to falsification of data, or misconduct on site.

G.5.3 The Contractor shall provide an English-speaking supervisor on site at all times. This position is considered as key personnel under this purchase order.

G.6.0 Materials and Equipment - All materials and equipment incorporated into the work shall be new and for the purpose intended, unless otherwise specified. All workmanship shall be of good quality and performed in a skillful manner that will withstand inspection by the Contracting Officer.

G.7.0 SPECIAL WARRANTIES

G.7.1 Any special warranties that may be required under the contract shall be subject to the stipulations set forth in 52.246-21, "Warranty of Construction", as long as they are not in conflict.

G.7.2 The Contractor shall obtain and furnish to the Government all information required to make any subcontractor's, manufacturer's, or supplier's guarantee or warranty legally binding and effective. The Contractor shall submit both the information and the guarantee or warranty to the Government in sufficient time to permit the Government to meet any time limit specified in the guarantee or warranty, but not later than completion and acceptance of all work under this contract.

G.8.0 EQUITABLE ADJUSTMENTS

Any circumstance for which the contract provides an equitable adjustment that causes a change within the meaning of paragraph (a) of the "Changes" clause shall be treated as a change under that clause; provided, that the Contractor gives the Contracting Officer prompt written notice (within 20 days) stating:

(a) the date, circumstances, and applicable contract clause authorizing an equitable adjustment and
(b) that the Contractor regards the event as a changed condition for which an equitable adjustment is allowed under the contract

The Contractor shall provide written notice of a differing site condition within 10 calendar days of occurrence following FAR 52.236-2, Differing Site Conditions.

## G.9.0 ZONING APPROVALS AND PERMITS

The Government shall be responsible for:

- Obtaining the approval of the Contracting Drawings and Specifications

The Contractor shall be responsible for:

- Obtaining and paying for the excavation permit of this project.

H. CLAUSES

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es): *http://www.acquisition.gov/far/* or *http://farsite.hill.af.mil/vffara.htm*. Please note these addresses are subject to change.

If the Federal Acquisition Regulation (FAR) is not available at the locations indicated above, use the Department of State Acquisition website at *http://www.statebuy.state.gov/* to access links to the FAR. You may also use an internet "search engine" (for example, Google, Yahoo, Excite) to obtain the latest location of the most current FAR.

The following Federal Acquisition Regulation clause(s) is/are incorporated by reference (48 CFR CH. 1):

| CLAUSE | TITLE AND DATE |
|---|---|
| 52.202-1 | DEFINITIONS (NOV 2013) |
| 52.204-9 | PERSONAL IDENTITY VERIFICATION OF CONTRACTOR PERSONNEL (JAN 2011) |
| 52.204-10 | REPORTING EXECUTIVE COMPENSATION AND FIRST-TIER SUBCONTRACT AWARDS (JULY 2013) |
| 52.204-12 | DATA UNIVERSAL NUMBERING SYSTEM NUMBER MAINTENANCE (DEC 2012) |
| 52.204-13 | SYSTEM FOR AWARD MANAGEMENT MAINTENANCE (JULY 2013) |
| 52.204-19 | INCORPORATION BY REFERENCE OF REPRESENTATIONS AND CERTIFICATIONS (DEC 2014) |
| 52.209-6 | PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED OR PROPOSED FOR DEBARMENT (AUG 2013) |
| 52.209-9 | UPDATES OF INFORMATION REGARDING RESPONSIBILITY MATTERS (JULY 2013) |
| 52.213-4 | TERMS AND CONDITIONS –SIMPLIFIED ACQUISITIONS (OTHER THAN COMMERCIAL ITEMS) (OCT 2014) |
| 52.216-7 | ALLOWABLE COST AND PAYMENT (JUN 2013) |

52.222-1 NOTICE TO THE GOVERNMENT OF LABOR DISPUTES (FEB 1997)

52.222-19 CHILD LABOR – COOPERATION WITH AUTHORITIES AND REMEDIES (JAN 2014)

52.222-50 COMBATING TRAFFICKING IN PERSONS (FEB 2009)

52.223-18 ENCOURAGING CONTRACTOR POLICIES TO BAN TEXT MESSAGING WHILE DRIVING (AUG 2011)

52.225-13 RESTRICTIONS ON CERTAIN FOREIGN PURCHASES (JUNE 2008)

52.225-14 INCONSISTENCY BETWEEN ENGLISH VERSION AND TRANSLATION OF CONTRACT (FEB 2000)

52.225-19 CONTRACTOR PERSONNEL IN A DESIGNATED OPERATIONAL AREA OR SUPPORTING A DIPLOMATIC MISSION OUTSIDE THE UNITED STATES (MAR 2008)

52.228-3 Workers' Compensation Insurance (Defense Base Act)

52.228-4 WORKERS' COMPENSATION AND WAR-HAZARD INSURANCE OVERSEAS (APR 1984)

52.228-5 INSURANCE - WORK ON A GOVERNMENT INSTALLATION (JAN 1997)

52.228-11 PLEDGES OF ASSETS (JAN 2012)

52.228-13 ALTERNATIVE PAYMENT PROTECTION (JULY 2000)

52.228-14 IRREVOCABLE LETTER OF CREDIT (NOV 2014)

52.229-6 TAXES - FOREIGN FIXED-PRICE CONTRACTS (FEB 2013)

52.229-7 TAXES- FIXED PRICE CONTRACTS WITH FOREIGN GOVERNMENTS (FEB 2013)

52.232-5 PAYMENTS UNDER FIXED-PRICE CONSTRUCTION CONTRACTS (MAY 2014)

52.232-8 DISCOUNTS FOR PROMPT PAYMENT (FEB 2002)

52.232-11 EXTRAS (APR 1984)

52.232-18 AVAILABILITY OF FUNDS (APR 1984)

52.232-22 LIMITATION OF FUNDS (APR 1984)

52.232-25 PROMPT PAYMENT (JULY 2013)

52.232-27 PROMPT PAYMENT FOR CONSTRUCTION CONTRACTS (MAY 2014)

52.232-33 PAYMENT BY ELECTRONIC FUNDS TRANSFER - SYSTEM FOR AWARD MANAGEMENT (JULY 2013)

52.232-34 PAYMENT BY ELECTRONIC FUNDS TRANSFER – OTHER THAN SYSTEM FOR AWARD MANAGEMENT (JULY 2013)

52.233-1 DISPUTES (MAY 2014) *Alternate I (DEC 1991)*

52.233-3 PROTEST AFTER AWARD (AUG 1996)

52.236-2 DIFFERING SITE CONDITIONS (APR 1984)

52.236-3 SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK (APR 1984)

52.236-5 MATERIAL AND WORKMANSHIP (APR 1984)

52.236-6 SUPERINTENDENCE BY THE CONTRACTOR (APR 1984)

52.236-7 PERMITS AND RESPONSIBILITIES (NOV 1991)

52.236-8 OTHER CONTRACTS (APR 1984)

52.236-9 PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS (APR 1984)

52.236-10 OPERATIONS AND STORAGE AREAS (APR 1984)

52.236-11 USE AND POSSESSION PRIOR TO COMPLETION (APR 1984)

52.236-12 CLEANING UP (APR 1984)

52.236-14 AVAILABILITY AND USE OF UTILITY SERVICES (APR 1984)

52.236-15 SCHEDULES FOR CONSTRUCTION CONTRACTS (APR 1984)

52.236-21 SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION (FEB 1997)

52.236-26 PRECONSTRUCTION CONFERENCE (FEB 1995)

52.242-14 SUSPENSION OF WORK (APR 1984)

52.243-4 CHANGES (JUN 2007)

52.243-5 CHANGES AND CHANGED CONDITIONS (APR 1984)

52.244-6 SUBCONTRACTS FOR COMMERCIAL ITEMS (JULY 2014)

52.245-2 GOVERNMENT PROPERTY INSTALLATION OPERATION SERVICES (APR 2012)

52.245-9 USE AND CHARGES (APR 2012)

52.246-12 INSPECTION OF CONSTRUCTION (AUG 1996)

52.246-17 WARRANTY OF SUPPLIES OF A NONCOMPLEX NATURE (JUN 2003)

52.246-21 WARRANTY OF CONSTRUCTION (MAR 1994)

52.249-2 TERMINATION FOR CONVENIENCE OF THE GOVERNMENT (FIXED-PRICE) (APR 2012) *Alternate I (SEPT 1996)*

52.249-10 DEFAULT (FIXED-PRICE CONSTRUCTION) (APR 1984)

52.249-14 EXCUSABLE DELAYS (APR 1984)

The following Department of State Acquisition Regulation (DOSAR) clause(s) is/are set forth in full text:

652.204-70 DEPARTMENT OF STATE PERSONAL IDENTIFICATION CARD ISSUANCE PROCEDURES (MAY 2011)

(a) The Contractor shall comply with the Department of State (DOS) Personal Identification Card Issuance Procedures for all employees performing under this contract who require frequent and continuing access to DOS facilities, or information systems. The Contractor shall insert this clause in all subcontracts when the subcontractor's employees will require frequent and continuing access to DOS facilities, or information systems.

(b) The DOS Personal Identification Card Issuance Procedures may be accessed at *http://www.state.gov/m/ds/rls/rpt/c21664.htm* .

(End of clause)

652.228-71 Worker's Compensation Insurance (Defense Base Act) - Services.

WORKER'S COMPENSATION INSURANCE (DEFENSE BASE ACT) - SERVICES (JUN 2006)

(a) This clause supplements FAR 52.228-3. For the purposes of this clause, "covered contractor employees" includes the following individuals:

(1) United States citizens or residents;
(2) Individuals hired in the United States or its possessions, regardless of citizenship; and
(3) Local nationals and third country nationals where contract performance takes place in a country where there are no local workers compensation laws.

(b) Reserved
(c) Reserved
(d) Reserved
(e) Reserved
(f) Reserved
(g)(1) Section 16 of the State Basic Authorities Act (22 U.S.C. 2680a), as amended, provides that the Defense Base Act shall not apply with respect to such contracts as the Secretary of State determines are contracts with persons employed to perform work for the Department of State on an intermittent basis for not more than 90 days in a calendar year. "Persons" includes individuals hired by companies under contract with the Department. The Procurement Executive has the authority to issue the waivers for Contractor employees who work on an intermittent or short-term basis.

(2) The Contractor shall submit waiver requests to the contracting officer. The request shall contain the following information:

(i) Contract number;

(ii) Name of Contractor;

(iii) Brief description of the services to be provided under the contract and country of performance;

(iv) Name and position title of individual(s);

(v) Nationality of individual(s) (must be U.S. citizen or U.S. resident);

(vi) Dates (or timeframe) of performance at the overseas location; and,

(vii) Evidence of alternative worker's compensation coverage for these employees (e.g., evidence that the State worker's compensation program covers workers on short-term foreign assignments).

(3) The contracting officer shall provide to the Contractor the original of the approved or disapproved document and maintain a copy in the contract file.

(End of clause)

652.229-71 PERSONAL PROPERTY DISPOSITION AT POSTS ABROAD (AUG 1999)

Regulations at 22 CFR Part 136 require that U.S. Government employees and their families do not profit personally from sales or other transactions with persons who are not themselves entitled to exemption from import restrictions, duties, or taxes. Should the Contractor

experience importation or tax privileges in a foreign country because of its contractual relationship to the United States Government, the Contractor shall observe the requirements of 22 CFR Part 136 and all policies, rules, and procedures issued by the chief of mission in that foreign country.
(End of clause)

CONTRACTOR IDENTIFICATION (JULY 2008)

Contract performance may require contractor personnel to attend meetings with government personnel and the public, work within government offices, and/or utilize government email.

Contractor personnel must take the following actions to identify themselves as non-federal employees:

1) Use an e-mail signature block that shows name, the office being supported and company affiliation (e.g. "John Smith, Office of Human Resources, ACME Corporation Support Contractor");
2) Clearly identify themselves and their contractor affiliation in meetings;
3) Identify their contractor affiliation in Departmental e-mail and phone listings whenever contractor personnel are included in those listings; and
4) Contractor personnel may not utilize Department of State logos or indicia on business cards.

(End of clause)

652.236-70 ACCIDENT PREVENTION (APR 2004)

(a) *General*. The Contractor shall provide and maintain work environments and procedures which will safeguard the public and Government personnel, property, materials, supplies, and equipment exposed to contractor operations and activities; avoid interruptions of Government operations and delays in project completion dates; and, control costs in the performance of this contract. For these purposes, the Contractor shall:

(1) Provide appropriate safety barricades, signs and signal lights;

(2) Comply with the standards issued by any local government authority having jurisdiction over occupational health and safety issues; and,

(3) Ensure that any additional measures the Contracting Officer determines to be reasonably necessary for this purpose are taken.

(4) For overseas construction projects, the Contracting Officer shall specify in writing additional requirements regarding safety if the work involves:

(i) Scaffolding;

(ii) Work at heights above two (2) meters;

(iii) Trenching or other excavation greater than one (1) meter in depth;

(iv) Earth moving equipment;

(v) Temporary wiring, use of portable electric tools, or other recognized electrical hazards. Temporary wiring and portable electric tools require the use of a ground fault circuit interrupter (GFCI) in the affected circuits; other electrical hazards may also require the use of a GFCI;

(vi) Work in confined spaces (limited exits, potential for oxygen less that 19.5 percent or combustible atmosphere, potential for solid or liquid engulfment, or other hazards considered to be immediately dangerous to life or health such as water tanks, transformer vaults, sewers, cisterns, etc.);

(vii) Hazardous materials – a material with a physical or health hazard including but not limited to, flammable, explosive, corrosive, toxic, reactive or unstable, or any operations which creates any kind of contamination inside an occupied building such as dust from demolition activities, paints, solvents, etc.; or

(viii) Hazardous noise levels.

(b) *Records*. 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 or theft of property, materials, supplies, or equipment. The Contractor shall report this data in the manner prescribed by the Contracting Officer.

(c) *Subcontracts*. The Contractor shall be responsible for its subcontractors' compliance with this clause.

(d) *Written program.* Before commencing work, the Contractor shall:

(1) Submit a written plan to the Contracting Officer for implementing this clause. The plan shall include specific management or technical procedures for effectively controlling hazards associated with the project; and,

(2) Meet with the Contracting Officer to discuss and develop a mutual understanding relative to administration of the overall safety program.

(e) *Notification*. The Contracting Officer shall notify the Contractor of any non-compliance with these requirements and the corrective actions required. This notice, when delivered to the Contractor or the Contractor's representative on site, shall be deemed sufficient notice of the non-compliance and corrective action required. After receiving the notice, the Contractor shall immediately take corrective action. If the Contractor fails or refuses to promptly take corrective action, the Contracting Officer may issue an order suspending all or part of the work until satisfactory corrective action has been taken. The Contractor shall not be entitled to any equitable adjustment of the contract price or extension of the performance schedule on any suspension of work order issued under this clause.

(End of clause)

652.242-73 AUTHORIZATION AND PERFORMANCE (AUG 1999)

(a) The Contractor warrants the following:

(1) That is has obtained authorization to operate and do business in the country or countries in which this contract will be performed;

(2) That is has obtained all necessary licenses and permits required to perform this contract; and,

(3) That it shall comply fully with all laws, decrees, labor standards, and regulations of said country or countries during the performance of this contract.

(b) If the party actually performing the work will be a subcontractor or joint venture partner, then such subcontractor or joint venture partner agrees to the requirements of paragraph (a) of this clause.

(End of clause)

652.243-70 NOTICES (AUG 1999)

Any notice or request relating to this contract given by either party to the other shall be in writing. Said notice or request shall be mailed or delivered by hand to the other party at the address provided in the schedule of the contract. All modifications to the contract must be made in writing by the Contracting Officer.

(End of clause)

## I. LIST OF ATTACHMENTS

| ATTACHMENT NUMBER | DESCRIPTION OF ATTACHMENT | NUMBER OF PAGES |
|---|---|---|
| Attachment 1 | Standard Form 25, "Performance and Guaranty Bond” | 2 |
| Attachment 2 | Standard Form 25A, "Payment Bond" | 2 |
| Attachment 3 | Sample Bank Letter of Guaranty | 1 |
| Attachment 4 | Breakdown of Price by Divisions of Specifications | 2 |
| Attachment 5 | Specifications | 75 |
| Attachment 6 | Drawings (provided during site visits) | |

## J. QUOTATION INFORMATION

### A. QUALIFICATIONS OF OFFERORS

Offerors/quoters must be technically qualified and financially responsible to perform the work described in this solicitation. At a minimum, each Offeror/Quoter must meet the following requirements:

(1) Be able to understand written and spoken English;
(2) Have an established business with a permanent address and telephone listing;
(3) Be able to demonstrate prior construction experience with suitable references;
(4) Have the necessary personnel, equipment and financial resources available to perform the work;
(5) Have all licenses and permits required by local law;
(6) Meet all local insurance requirements;
(7) Have the ability to obtain or to post adequate performance security, such as bonds, irrevocable letters of credit or guarantees issued by a reputable financial institution;
(8) Have no adverse criminal record; and
(9) Have no political or business affiliation which could be considered contrary to the interests of the United States.

### B. SUBMISSION OF QUOTATIONS

This solicitation is for the performance of the construction services described in SCOPE OF WORK, and the Attachments which are a part of this request for quotation.

| Each quotation must consist of the following: | | |
|---|---|---|
| VOLUME | TITLE | NUMBER OF COPIES* |
| I | Standard Form 18 including a completed Attachment 4, "BREAKDOWN OF PRICE | 1 |
| II | Performance schedule in the form of a "bar chart" and Business Management/Technical Proposal | 1 |

Submit the complete quotation to the address indicated.

The Offeror/Quoter shall identify and explain/justify any deviations, exceptions, or conditional assumptions taken with respect to any of the instructions or requirements of this request for quotation in the appropriate volume of the offer.

Volume II: Performance schedule and Business Management/Technical Proposal.

(a) Present the performance schedule in the form of a "bar chart" indicating when the various portions of the work will be commenced and completed within the required schedule. This bar chart shall be in sufficient detail to clearly show each segregable portion of work and its planned commencement and completion date.

(b) The Business Management/Technical Proposal shall be in two parts, including the following information:

Proposed Work Information - Provide the following:

(1) A list of the names, addresses and telephone numbers of the owners, partners, and principal officers of the Offeror;

(2) The name and address of the Offeror's field superintendent for this project;

(3) A list of the names, addresses, and telephone numbers of subcontractors and principal materials suppliers to be used on the project, indicating what portions of the work will be performed by them; and,

Experience and Past Performance - List all contracts and subcontracts your company has held over the past three years for the same or similar work. Provide the following information for each contract and subcontract:

(1) Customer's name, address, and telephone numbers of customer's lead contract and technical personnel;

(2) Contract number and type;

(3) Date of the contract award place(s) of performance, and completion dates; Contract dollar value;

(4) Brief description of the work, including responsibilities; and

(5) Any litigation currently in process or occurring within last 5 years.

(c) The offerors shall submit, as part of their bids:

1. Qualification Data: For the contractor to demonstrate their capabilities and experience in similar projects in type and scale. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.
2. Qualification data for the project manager and site engineer.
3. The preliminary project schedule.
4. Special work procedures
5. Quality Control and Assurance program and plan

6. Safety Program and plan.
7. Technical data, manufacturer's catalog cuts and details for:
    a. Concrete blocks
    b. Paint materials
    c. Exterior light fixtures

C. 52.236-27 SITE VISIT (CONSTRUCTION) (FEB 1995)

(a) The clauses at 52.236-2, Differing Site Conditions, and 52.236-3, Site Investigations and Conditions Affecting the Work, will be included in any contract awarded as a result of this solicitation. Accordingly, offerors or quoters are urged and expected to inspect the site where the work will be performed.

(b) A site visit has been scheduled **on September 2, 2015 at 10:00 am and 01:00 pm.**

(c) Participants will meet at **14 Hindawi (Abdalla el Kateb) Street, Dokki, Giza and 39 Road 78, Maadi, Cairo, Egypt.**

C. MAGNITUDE OF CONSTRUCTION PROJECT

It is anticipated that the range in price of this contract will be: **Between $25,000 and $100,000**.

E. LATE QUOTATIONS. Late quotations shall be handled in accordance with FAR.

F. 52.252-1 SOLICITATION PROVISIONS INCORPORATED BY REFERENCE (FEB 1998)

This contract incorporates the following provisions by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. The offeror is cautioned that the listed provisions may include blocks that must be completed by the offeror and submitted with its quotation or offer. In lieu of submitting the full text of those provisions, the offeror may identify the provision by paragraph identifier and provide the appropriate information with its quotation or offer.

Also, the full text of a solicitation provision may be accessed electronically at: *http://acquisition.gov/far/index.html/* or *http://farsite.hill.af.mil/vffara.htm*. Please note these addresses are subject to change.

If the Federal Acquisition Regulation (FAR) is not available at the locations indicated above, use the Department of State Acquisition website at *http://www.statebuy.state.gov* to access the link to the FAR, or use of an Internet "search engine" (for example, Google, Yahoo or Excite) is suggested to obtain the latest location of the most current FAR.

The following Federal Acquisition Regulation provisions are incorporated by reference (48 CFR CH. 1):

| PROVISION | TITLE AND DATE |
|---|---|
| 52.204-6 | DATA UNIVERSAL NUMBERING SYSTEM (DUNS) NUMBER (JULY 2013) |
| 52.204-7 | SYSTEM FOR AWARD MANAGEMENT (JULY 2013) |

| | |
|---|---|
| 52.204-16 | COMMERCIAL AND GOVERNMENT ENTITY CODE REPORTING (NOV 2014) |
| 52.214-34 | SUBMISSION OF OFFERS IN THE ENGLISH LANGUAGE (APR 1991) |
| 52.215-1 | INSTRUCTIONS TO OFFERORS--COMPETITIVE ACQUISITION (JAN 2004) |

## K. EVALUATION CRITERIA

Award will be made to the lowest priced, acceptable, responsible quoter. The Government reserves the right to reject quotations that are unreasonably low or high in price.

The Government will determine acceptability by assessing the offeror's compliance with the terms of the RFQ. The Government will determine responsibility by analyzing whether the apparent successful quoter complies with the requirements of FAR 9.1, including:

- ability to comply with the required performance period, taking into consideration all existing commercial and governmental business commitments;
- satisfactory record of integrity and business ethics;
- necessary organization, experience, and skills or the ability to obtain them;
- necessary equipment and facilities or the ability to obtain them; and
- otherwise, qualified and eligible to receive an award under applicable laws and regulations.

The following DOSAR is provided in full text:

652.209-79 REPRESENTATION BY CORPORATION REGARDING AN UNPAID DELINQUENT TAX LIABILITY OR A FELONY CRIMINAL CONVICTION UNDER ANY FEDERAL LAW (SEPT 2014) (DEVIATION per PIB 2014-21)

(a) In accordance with section 7073 of Division K of the Consolidated Appropriations Act, 2014 (Public Law 113-76) none of the funds made available by that Act may be used to enter into a contract with any corporation that –

(1) Was convicted of a felony criminal violation under any Federal law within the preceding 24 months, where the awarding agency has direct knowledge of the conviction, unless the agency has considered, in accordance with its procedures, that this further action is not necessary to protect the interests of the Government; or

(2) Has any unpaid Federal tax liability that has been assessed for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability, where the awarding agency has direct knowledge of the unpaid tax liability, unless the Federal agency has considered, in accordance with its procedures, that this further action is not necessary to protect the interests of the Government.

For the purposes of section 7073, it is the Department of State's policy that no award may be made to any corporation covered by (1) or (2) above, unless the Procurement Executive has made a written determination that suspension or debarment is not necessary to protect the interests of the Government.

(b) Offeror represents that—

(1) It is [ ] is not [ ] a corporation that was convicted of a felony criminal violation under a Federal law within the preceding 24 months.

(2) It is [ ] is not [ ] a corporation that has any unpaid Federal tax liability that has been assessed for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

(End of provision)

## L. REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFERORS OR QUOTERS

### L.1 52.204-3 TAXPAYER IDENTIFICATION (OCT 1998)

(a) Definitions.

"Common parent", as used in this provision, means that corporate entity that owns or controls an affiliated group of corporations that files its Federal income tax returns on a consolidated basis, and of which the offeror is a member.

"Taxpayer Identification Number (TIN)", as used in this provision, means the number required by the IRS to be used by the offeror in reporting income tax and other returns. The TIN may be either a Social Security Number or an Employer Identification Number.

(b) All offerors must submit the information required in paragraphs (d) through (f) of this provision in order to comply with debt collection requirements of 31 U.S.C. 7701(c) and 3325 (d), reporting requirements of 26 USC 6041, 6041A, and 6050M and implementing regulations issued by the Internal Revenue Service (IRS). If the resulting contract is subject to the reporting requirements described in FAR 4.904, the failure or refusal by the offeror to furnish the information may result in a 31 percent reduction of payments

(c) otherwise due under the contract.

(d) The TIN may be used by the Government to collect and report on any delinquent amounts arising out of the offeror's relationship with the Government (3l USC 7701( c)(3)). If the resulting contract is subject to the payment reporting requirements described in FAR 4.904, the TIN provided hereunder may be matched with IRS records to verify the accuracy of the offeror's TIN.

(e) Taxpayer Identification Number (TIN).

TIN: _____

☐ TIN has been applied for.

☐ TIN is not required because:

☐ Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not have income effectively connected with the conduct of a trade or business in the U.S. and does not have an office or place of business or a fiscal paying agent in the U.S.;

☐ Offeror is an agency or instrumentality of a foreign government;

☐ Offeror is an agency or instrumentality of the Federal Government.

(e) Type of Organization.

☐ Sole Proprietorship;

☐ Partnership;

☐ Corporate Entity (not tax exempt);

☐ Corporate Entity (tax exempt);

☐ Government Entity (Federal, State or local);

☐ Foreign Government;

☐ International organization per 26 CFR 1.6049-4;
☐ Other _____.

(f) Common Parent.
☐ Offeror is not owned or controlled by a common parent as defined in paragraph (a) of this clause.
☐ Name and TIN of common parent:
Name _____
TIN_____

(End of provision)

**L.2** 52.204-8 ANNUAL REPRESENTATIONS AND CERTIFICATIONS (NOV 2014)

(a)(1) The North American Industry Classification System (NAICS) code(s) for this acquisition is/are:

**236118 - Construction Management, residential remodeling**
**236220 - Construction Management, commercial and institutional building or Warehouse construction**
**237110 - Construction Management, water and sewage line and related structures**
**237310 - Construction Management, highway road, street or bridge**
**237990 - Construction Management, outdoor recreation facility**

(2) The small business size standard is **$36.5 Million USD**.
(3) The small business size standard for a concern which submits an offer in its own name, other than on a construction or service contract, but which proposes to furnish a product which it did not itself manufacture, is 500 employees.
(b)(1) If the provision at 52.204-7, System for Award Management, is included in this solicitation, paragraph (d) of this provision applies.
(2) If the provision at 52.204-7 is not included in this solicitation, and the offeror is currently registered in the System for Award Management (SAM), and has completed the Representations and Certifications section of SAM electronically, the offeror may choose to use paragraph (d) of this provision instead of completing the corresponding individual representations and certifications in the solicitation. The offeror shall indicate which option applies by checking one of the following boxes:
[ ] (i) Paragraph (d) applies.
[ ] (ii) Paragraph (d) does not apply and the offeror has completed the individual representations and certifications in the solicitation.
(c)(1) The following representations or certifications in SAM are applicable to this solicitation as indicated:
(i) 52.203-2, Certificate of Independent Price Determination. This provision applies to solicitations when a firm-fixed-price contract or fixed-price contract with economic price adjustment is contemplated, unless—
(A) The acquisition is to be made under the simplified acquisition procedures in Part 13;
(B) The solicitation is a request for technical proposals under two-step sealed bidding procedures; or
(C) The solicitation is for utility services for which rates are set by law or regulation.

(ii) 52.203-11, Certification and Disclosure Regarding Payments to Influence Certain Federal Transactions. This provision applies to solicitations expected to exceed $150,000.
(iii) 52.204-3, Taxpayer Identification. This provision applies to solicitations that do not include the provision at 52.204-7, System for Award Management.
(iv) 52.204-5, Women-Owned Business (Other Than Small Business). This provision applies to solicitations that—
(A) Are not set aside for small business concerns;
(B) Exceed the simplified acquisition threshold; and
(C) Are for contracts that will be performed in the United States or its outlying areas.
(v) 52.209-2, Prohibition on Contracting with Inverted Domestic Corporations—Representation. This provision applies to solicitations using funds appropriated in fiscal years 2008, 2009, 2010, or 2012.
(vi) 52.209-5, Certification Regarding Responsibility Matters. This provision applies to solicitations where the contract value is expected to exceed the simplified acquisition threshold.
(vii) 52.214-14, Place of Performance—Sealed Bidding. This provision applies to invitations for bids except those in which the place of performance is specified by the Government.
(viii) 52.215-6, Place of Performance. This provision applies to solicitations unless the place of performance is specified by the Government.
(ix) 52.219-1, Small Business Program Representations (Basic & Alternate I). This provision applies to solicitations when the contract will be performed in the United States or its outlying areas.
(A) The basic provision applies when the solicitations are issued by other than DoD, NASA, and the Coast Guard.
(B) The provision with its Alternate I applies to solicitations issued by DoD, NASA, or the Coast Guard.
(x) 52.219-2, Equal Low Bids. This provision applies to solicitations when contracting by sealed bidding and the contract will be performed in the United States or its outlying areas.
(xi) 52.222-22, Previous Contracts and Compliance Reports. This provision applies to solicitations that include the clause at 52.222-26, Equal Opportunity.
(xii) 52.222-25, Affirmative Action Compliance. This provision applies to solicitations, other than those for construction, when the solicitation includes the clause at 52.222-26, Equal Opportunity.
(xiii) 52.222-38, Compliance with Veterans' Employment Reporting Requirements. This provision applies to solicitations when it is anticipated the contract award will exceed the simplified acquisition threshold and the contract is not for acquisition of commercial items.
(xiv) 52.223-1, Biobased Product Certification. This provision applies to solicitations that require the delivery or specify the use of USDA–designated items; or include the clause at 52.223-2, Affirmative Procurement of Biobased Products Under Service and Construction Contracts.
(xv) 52.223-4, Recovered Material Certification. This provision applies to solicitations that are for, or specify the use of, EPA–designated items.
(xvi) 52.225-2, Buy American Certificate. This provision applies to solicitations containing the clause at 52.225-1.
(xvii) 52.225-4, Buy American—Free Trade Agreements—Israeli Trade Act Certificate. (Basic, Alternates I, II, and III.) This provision applies to solicitations containing the clause at 52.225-3.
(A) If the acquisition value is less than $25,000, the basic provision applies.
(B) If the acquisition value is $25,000 or more but is less than $50,000, the provision with its

Alternate I applies.
(C) If the acquisition value is $50,000 or more but is less than $79,507, the provision with its Alternate II applies.
(D) If the acquisition value is $79,507 or more but is less than $100,000, the provision with its Alternate III applies.
(xviii) 52.225-6, Trade Agreements Certificate. This provision applies to solicitations containing the clause at 52.225-5.
(xix) 52.225-20, Prohibition on Conducting Restricted Business Operations in Sudan—Certification. This provision applies to all solicitations.
(xx) 52.225-25, Prohibition on Contracting with Entities Engaging in Certain Activities or Transactions Relating to Iran-Representation and Certifications. This provision applies to all solicitations.
(xxi) 52.226-2, Historically Black College or University and Minority Institution Representation. This provision applies to solicitations for research, studies, supplies, or services of the type normally acquired from higher educational institutions.
(2) The following certifications are applicable as indicated by the Contracting Officer:
__ (i) 52.204-17, Ownership or Control of Offeror.
__ (ii) 52.222-18, Certification Regarding Knowledge of Child Labor for Listed End Products.
__ (iii) 52.222-48, Exemption from Application of the Service Contract Labor Standards to Contracts for Maintenance, Calibration, or Repair of Certain Equipment- Certification.
__ (iv) 52.222-52, Exemption from Application of the Service Contract Labor Standards to Contracts for Certain Services-Certification.
__ (v) 52.223-9, with its Alternate I, Estimate of Percentage of Recovered Material Content for EPA–Designated Products (Alternate I only).
__ (vi) 52.227-6, Royalty Information.
__ (A) Basic.
__(B) Alternate I.
__ (vii) 52.227-15, Representation of Limited Rights Data and Restricted Computer Software.
(d) The offeror has completed the annual representations and certifications electronically via the SAM website accessed through https://www.acquisition.gov. After reviewing the SAM database information, the offeror verifies by submission of the offer that the representations and certifications currently posted electronically that apply to this solicitation as indicated in paragraph (c) of this provision have been entered or updated within the last 12 months, are current, accurate, complete, and applicable to this solicitation (including the business size standard applicable to the NAICS code referenced for this solicitation), as of the date of this offer and are incorporated in this offer by reference (see FAR 4.1201); except for the changes identified below [*offeror to insert changes, identifying change by clause number, title, date*]. These amended representation(s) and/or certification(s) are also incorporated in this offer and are current, accurate, and complete as of the date of this offer.

FAR Clause
# Title Date Change
_____ _____ _____
_____

Any changes provided by the offeror are applicable to this solicitation only, and do not result in

an update to the representations and certifications posted on SAM.

(End of provision)

L.3. 52.225-18 PLACE OF MANUFACTURE (SEPT 2006)

(a) *Definitions*. As used in this clause—

" Manufactured end product" means any end product in Federal Supply Classes (FSC) 1000-9999, except—

(1) FSC 5510, Lumber and Related Basic Wood Materials;
(2) Federal Supply Group (FSG) 87, Agricultural Supplies;
(3) FSG 88, Live Animals;
(4) FSG 89, Food and Related Consumables;
(5) FSC 9410, Crude Grades of Plant Materials;
(6) FSC 9430, Miscellaneous Crude Animal Products, Inedible;
(7) FSC 9440, Miscellaneous Crude Agricultural and Forestry Products;
(8) FSC 9610, Ores;
(9) FSC 9620, Minerals, Natural and Synthetic; and
(10) FSC 9630, Additive Metal Materials.

"Place of manufacture" means the place where an end product is assembled out of components, or otherwise made or processed from raw materials into the finished product that is to be provided to the Government. If a product is disassembled and reassembled, the place of reassembly is not the place of manufacture.

(b) For statistical purposes only, the offeror shall indicate whether the place of manufacture of the end products it expects to provide in response to this solicitation is predominantly—

(1) [ ] In the United States (Check this box if the total anticipated price of offered end products manufactured in the United States exceeds the total anticipated price of offered end products manufactured outside the United States); or
(2) [ ] Outside the United States.

(End of provision)

L.4 AUTHORIZED CONTRACTOR ADMINISTRATOR

If the offeror does not fill-in the blanks below, the official who signed the offer will be deemed to be the offeror's representative for Contract Administration, which includes all matters pertaining to payments.

| |
|---|
| Name: |
| Telephone Number: |
| Address: |
| |

**[Proposal Note: If the bidder/offeror has indicated "yes" in blocks (a)(1), (2), or (3) of the following provision, the bidder/offeror shall include Defense Base Act insurance costs covering those employees in their proposed prices. The bidder/offeror may obtain DBA insurance directly from any Department of Labor approved providers at the DOL website at *http://www.dol.gov/owcp/dlhwc/lscarrier.htm*.**]

L.5 652.228-70 DEFENSE BASE ACT – COVERED CONTRACTOR EMPLOYEES (JUN 2006)

(a) Bidders/offerors shall indicate below whether or not any of the following categories of employees will be employed on the resultant contract, and, if so, the number of such employees:

| Category | Yes/No | Number | |
|---|---|---|---|
| (1) United States citizens or residents | | | |
| (2) Individuals hired in the United States, regardless of citizenship | | | |
| (3) Local nationals or third country nationals where contract performance takes place in a country where there are no local workers' compensation laws | | local nationals: | |
| | | third-country nationals: | |
| (4) Local nationals or third country nationals where contract performance takes place in a country where there are local workers' compensation laws | | local nationals: | |
| | | third-country nationals: | |

(b) The Contracting Officer has determined that for performance in the country of **Egypt**

☑Workers' compensation laws exist that will cover local nationals and third country nationals.

☐ Workers' compensation laws do not exist that will cover local nationals and third country nationals.

(c) If the bidder/offeror has indicated "yes" in block (a)(4) of this provision, the bidder/offeror shall not purchase Defense Base Act insurance for those employees. However, the bidder/offeror shall assume liability toward the employees and their beneficiaries for war-hazard injury, death, capture, or detention, in accordance with the clause at FAR 52.228-4.

(d) RESERVED

(End of provision)

ATTACHMENT #1

STANDARD FORM 25, "PERFORMANCE AND GUARANTY BOND”

ATTACHMENT #2

STANDARD FORM 25A, "PAYMENT BOND"

ATTACHMENT #3 - SAMPLE LETTER OF BANK GUARANTY

Place [ ]
Date [ ]

Contracting Officer
U.S. Embassy, **[*Note to CO: insert Post name*]**
**[*Note to CO: insert mailing address*]**

Letter of Guaranty No. _____

SUBJECT: Performance and Guaranty

The Undersigned, acting as the duly authorized representative of the bank, declares that the bank hereby guarantees to make payment to the Contracting Officer by check made payable to the Treasurer of the United States, immediately upon notice, after receipt of a simple written request from the Contracting Officer, immediately and entirely without any need for the Contracting Officer to protest or take any legal action or obtain the prior consent of the Contractor to show any other proof, action, or decision by an other authority, up to the sum of **[*amount equal to 20% of the contract price in U.S. dollars during the period ending with the date of final acceptance and 10% of the contract price during contract guaranty period*]**, which represents the deposit required of the Contractor to guarantee fulfillment of his obligations for the satisfactory, complete, and timely performance of the said contract **[*contract number*]** for **[*description of work*]** at **[*location of work*]** in strict compliance with the terms, conditions and specifications of said contract, entered into between the Government and **[*name of contractor*]** of **[*address of contractor*]** on **[*contract date*],** plus legal charges of 10% per annum on the amount called due, calculated on the sixth day following receipt of the Contracting Officer's written request until the date of payment.

The undersigned agrees and consents that said contract may be modified by Change Order or Supplemental Agreement affecting the validity of the guaranty provided, however, that the amount of this guaranty shall remain unchanged.

The undersigned agrees and consents that the Contracting Officer may make repeated partial demands on the guaranty up to the total amount of this guaranty, and the bank will promptly honor each individual demand.

This letter of guaranty shall remain in effect until 3 months after completion of the guaranty period of Contract requirement.

Depository Institution: **[*name*]**
Address: _____
Representatives: _____
_____
_____

Location: _____
State of Inc.: _____
Corporate Seal:

Certificate of Authority is attached evidencing authority of the signer to bind the bank to this document.

**Breakdown of Proposal Prices**

**Perimeter Walls at residential villas #14 Hindawi, Dokki & #39 RD 78, Maadi**

| | | | 39 Rd 78 | | 14 Hindawi | | Total Project | |
|---|---|---|---|---|---|---|---|---|
| **Description** | **Unit** | **Unit Cost EGP** | **Qty** | **Cost EGP** | **Qty** | **Cost EGP** | Total Qty | Total Cost EGP |
| **1- General** | | | | | | | | |
| Mobilization and complying with safety | l.s | | | | | | | |
| Permit | l.s | | | | | | | |
| Garden restoration | l.s | | | | | | | |
| **2- Demolition, Removal and Disposal** | | | | | | | | |
| Existing perimeter wall as shown on drawings | l.m | | 70 | | 45 | | 115 | |
| Existing paver tiles installed on cement mortar. | m2 | | 500 | | 20 | | 520 | |
| **3- Cast in Place Concrete** | | | | | | | | |
| Plain concrete for footings of thickness 10cm | m2 | | 130 | | 60 | | 190 | |
| Reinforced concrete for fottings | m3 | | 65 | | 30 | | 95 | |
| Reinorced concrete for columns and beams | m3 | | 7 | | 5 | | 12 | |
| **4- Masonry** | | | | | | | | |
| CMU blocks for perimeter walls | m2 | | 150 | | 100 | | 250 | |
| **5- Metal fabrications** | | | | | | | | |
| Steel spikes 30 cm height on top of perimeter wall | l.m | | 80 | | 60 | | 140 | |
| **7- Cold applied waterproofing** | | | | | | | | |
| 2 coats of cold applied bituminous paint | m2 | | 165 | | 230 | | 395 | |
| **9- Finishes** | | | | | | | | |
| Cement Plastering | m2 | | 600 | | 500 | | 1100 | |
| Exterior Painting of concrete and plastered walls. | m2 | | 600 | | 500 | | 1100 | |
| Garden curb tiles | l.m | | 60 | | 50 | | 110 | |
| Interlocking tiles, 8-10 cm thick on compacted sand layer | m2 | | 30 | | 25 | | 55 | |
| **22- Domestic water piping** | | | | | | | | |
| Waterpiping network for garden irrigat | l.m | | 60 | | 50 | | 110 | |
| **26- Electric** | | | | | | | | |

| Description | Unit | Unit Cost EGP | Qty | Cost EGP | Qty | Cost EGP | Total Qty | Total Cost EGP |
|---|---|---|---|---|---|---|---|---|
| Conduits for perieter wall lighting | l.s | | | | | | | |
| Wiring for lighting | l.s | | | | | | | |
| Exterior lighting fixtures (Gov Furnished) | ea | | 10 | | 18 | | 28 | |
| **31- Earth moving** | | | | | | | | |
| Excavation for foundation | m3 | | 140 | | 125 | | 265 | |
| Backfill and compaction | m3 | | 80 | | 65 | | 145 | |
| **Total Price L.E** | | | | | | | | |
| **Add /Alternate #1 Replace Paver tiles on the street with interlocking tiles** | m2 | | 500 | | | | | |
| 1. The above prices includes all required labor , material, overhead, and profit for the completion of all works | | | | | | | | |
| 2. The total price shall be the total lump- | | | | | | | | |
| 3. l.s: lump sum, l.m : linear meter | | | | | | | | |

# Attachment #5

# Perimeter Walls Replacement at

# Villa #14 Hindawi, Dokki and

# Villa #39 Rd 78, Maadi

# Specifications

**August 2015**

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SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 SUMMARY

1. Project information.
2. Work covered by Contract Documents.
3. Phased construction.
4. Work under separate contracts.
5. Access to site.
6. Coordination with occupants.
7. Work restrictions.

1.2 PROJECT INFORMATION

A. Project Identification: **Perimeter Walls, USG Owned Standalone Homes, Dokki and Maadi**

1. Project Location: Work is required at two US. Government owned standalone homes;
   a. Standalone home at #14 Hindawi (Abdalla el Kateb), Dokki
   b. Standalone home at #39 Road 78, Maadi

1.3 WORK COVERED BY CONTRACT DOCUMENTS

A. Work of this Contract consists of replacement and security upgrade for perimeter walls at two US. Government Owned residential standalone homes:

1. Perimeter wall at standalone home #14 Hindawi street Dokki, as shown on the drawings, work can be summarized as follows:
   a. Demolish part of the wall separating the property and the back street neighbor.
      1. Install temporary partition of corrugated metal sheets, chain link or plywood, as approved by the COR, to separate the demolition and work area.
      2. Install temporary lighting fixtures/bulbs to provide sufficient illumination
   b. Construction of a new retaining wall and perimeter wall where the existing wall was removed.
   c. Raise the height of the existing wall, separating the property and the front street neighbor by 50 cm.
   d. Install spikes, 30 cm height for the entire length of the wall, total of 80.0 meter
   e. Finishing work to include plaster, paint, replace pavers and marble as shown on the drawings.
   f. Install new water pipe with a shut off valve and hose bib for garden irrigation.
   g. Install exterior lighting for the perimeter wall as shown on the drawings.
   h. Restore the side walk and planted areas that was damaged by the construction operation to the original condition on both sides of the wall.

2. Perimeter wall at standalone home #39 Rd 78, Maadi, as shown on the drawings, work can be summarized as follows:
   a. Demolish the south perimeter wall on the back street as shown.
      1) Install temporary partition of corrugated metal sheets, chain link or plywood, as approved by the COR, to separate the demolition and work area.
      2) Install temporary lighting fixtures/bulbs to provide sufficient illumination
   b. Construction of a new wall for a total length of 65.0 meter
   c. Installation of metal spikes 30 cm height for the entire length of the wall.
   d. Finishing work to include plaster, paint, replace pavers and marble as shown on drawings.
   e. Restore the side walk and planted areas that was damaged by the construction operation to the original condition on both sides of the wall.

3. For both locations and projects, the contractor shall be responsible for obtaining the necessary permits from the local authorities for the excavation and construction. The Embassy will provide the contractor with a letter to authorize the contractor to act in the name of the Embassy with regards to all the required

B. Type of Award.

1. Solicitation Section A provides information about award type.

## 1.4 PHASED CONSTRUCTION

A. The Work shall be conducted in two phases, with each phase substantially complete as indicated:

1. Phase one: Work of this phase shall include the standalone home at #14 Hindawi and shall commence **within 30 days after the Notice to Proceed** and be substantially complete **within 60 days after commencement of construction of this phase.**

2. Phase two: Work of this phase shall include the standalone home at #39 Road 78, and shall commence **within 30 days after the Notice to Proceed** and be substantially complete **within 60 days after commencement of construction of this phase.**

3. The Notice to Proceed (NTP) for both locations shall be issued one week after contract award.

B. The contractor shall receive a letter of authorization to represent the Embassy throughout the process of the local city permit and shall start in the permit process immediately after receiving the NTP and the letter of authorization.

C. Before commencing Work of each phase, the Contractor will submit an updated copy of Contractor's construction schedule showing the sequence, commencement and completion dates.

## 1.5 ACCESS TO SITE

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

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

1. Limits: Confine construction operations to areas around the perimeter walls as assigned by the COR.

2. Driveways, Walkways and Entrances: Keep driveways and entrances serving premises clear and available to occupants and limit the work and staging areas as assigned by the COR.
   a. Schedule deliveries to minimize use of driveways and entrances by construction operations.

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

## 1.6 COORDINATION WITH OCCUPANTS

A. Full Occupancy: the standalone homes will be occupied during entire construction period. The contractor shall coordinate with the COR during construction operations to minimize conflicts and facilitate Occupant usage. Perform the Work so as not to interfere with Occupants day-to-day operations. Maintain existing exits unless otherwise indicated.

1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from the COR.
2. Notify the COR not less than 24 hours in advance of activities that will affect Occupant's operations.

## 1.7 WORK RESTRICTIONS

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

1. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.

B. On-Site Work Hours: See Solicitation Section E for information regarding Working Hours.

C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied unless permitted by the COR. Notify the COR not less than two work days in advance of proposed utility interruptions.

D. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and or other disruption to occupants with the COR.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

SECTION 012300 - ALTERNATES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for alternates.

1.2 DEFINITIONS

A. Alternate: An amount proposed by bidders and stated on the Breakdown of Price by Divisions of Specifications (Attachment #4) for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.

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

1.3 PROCEDURES

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

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

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

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

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

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

A. Alternate No. 1, Replace Paver tiles, back street.

1. Base Bid: replacement and security upgrade for perimeter walls at two US. Government Owned residential villas as shown on the drawings and specified herein**.**
2. Alternate No 1: Replace Paver tiles of the back street, quantity of 500 square meter using interlocking tiles.

END OF SECTION 012300

# SECTION 013200 - CONSTRUCTION PROGRESS DOCUMENTATION

## PART 1 - GENERAL

### 1.1 SUMMARY

A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:

1. Contractor's construction schedule.
2. Construction schedule updating reports.
3. Daily construction reports.
4. Site condition reports.

### 1.2 DEFINITIONS

A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.

1. Critical Activity: An activity on the critical path that must start and finish on the planned early start and finish times.
2. Predecessor Activity: An activity that precedes another activity in the network.
3. Successor Activity: An activity that follows another activity in the network.

B. CPM: Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine when activities can be performed and the critical path of Project.

C. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.

### 1.3 INFORMATIONAL SUBMITTALS

A. Format for Submittals: Submit required submittals in the following format:

1. Working electronic copy of schedule file, where indicated.
2. PDF electronic file.

B. Startup Network Diagram: Of size required to display entire network for entire construction period. Show logic ties for activities.

C. Contractor's Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period.

D. Construction Schedule Updating Reports: Submit with Applications for Payment.

E. Daily Construction Reports: Submit at **weekly** intervals.

F. Site Condition Reports: Submit at time of discovery of differing conditions.

1.4 COORDINATION

A. Coordinate Contractor's construction schedule with the submittal schedule, progress reports, payment requests, and other required schedules and reports.

PART 2 - PRODUCTS

2.1 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

A. Time Frame: Extend schedule from date established for **commencement of the Work** to date of **Final Completion**.

1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.

B. Activities: Treat each separate area as a separate numbered activity for each main element of the Work. Comply with the following:

1. Activity Duration: Define activities so no activity is longer than **10** days, unless specifically allowed by the COR.

2. Submittal Review Time: Include review and resubmittal times indicated in Section 013300 "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's construction schedule with submittal schedule.

3. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for inspection and acceptance by the COR.

4. Punch List and Final Completion: Include not more than **5** days for completion of punch list items and final completion.

C. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.

D. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and final completion.

E. Upcoming Work Summary: Prepare summary report indicating activities scheduled to occur or commence prior to submittal of next schedule update. Summarize the following issues:

1. Unresolved issues.
2. Unanswered Requests for Information.
3. Rejected or unreturned submittals.
4. Notations on returned submittals.
5. Pending modifications affecting the Work and Contract Time.

F. Recovery Schedule: When periodic update indicates the Work is **5** or more calendar days behind the current approved schedule, submit a separate recovery schedule indicating means by which Contractor intends to regain compliance with the schedule.

G. Computer Scheduling Software: Prepare schedules using current version of **Microsoft Project.**

H. Contract Modifications: For each proposed contract modification and concurrent with its submission, prepare a time-impact analysis using a network fragment to demonstrate the effect of the proposed change on the overall project schedule.

## 2.2 REPORTS

A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:
   1. Approximate count of personnel at Project site.
   2. Material deliveries.
   3. General weather conditions.
   4. Accidents.
   5. Meetings and significant decisions.
   6. Unusual events.
   7. Stoppages, delays, shortages, and losses.
   8. Emergency procedures.
   9. Change Orders received and implemented.
   10. **Construction Work** Change Directives received and implemented.
   11. Services connected and disconnected.

B. Site Condition Reports: Immediately on discovery of a difference between site conditions and the Contract Documents, prepare and submit a detailed report. Submit with a Request for Information. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

# PART 3 - EXECUTION

## 3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

A. Contractor's Construction Schedule Updating: At bi-weekly intervals, update schedule to reflect actual construction progress and activities. Issue schedule 2 days before each regularly scheduled progress meeting.

   1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
   2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
   3. As the Work progresses, indicate final completion percentage for each activity.

END OF SECTION 013200

SECTION 013300 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.

B. Related Requirements:

1. Section 013200 "Construction Progress Documentation" for submitting schedules and reports, including Contractor's construction schedule.

1.2 DEFINITIONS

A. Action Submittals: Written and graphic information and physical samples that require COR’s responsive action.

B. Informational Submittals: Written and graphic information and physical samples that do not require COR’s responsive action. Submittals may be rejected for not complying with requirements.

1.3 ACTION SUBMITTALS

A. Submittal Schedule: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by COR’ and additional time for handling and reviewing submittals required by those corrections.

1.4 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

A. Electronic copies of digital data files of the Contract Drawings may be provided for Contractor's use in preparing submittals.

B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.

C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on COR’s receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.

1. Initial Review: Allow **10** days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. COR will advise Contractor when a submittal being processed must be delayed for coordination.
2. Resubmittal Review: Allow 10 days for review of each resubmittal.

D. Paper Submittals: Place a permanent label or title block on each submittal item for identification.

E. Electronic Submittals: Identify and incorporate information in each electronic submittal file as follows:

1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
2. Name file with submittal number or other unique identifier, including revision identifier.

F. Options: Identify options requiring selection by COR.

G. Deviations: Identify deviations from the Contract Documents on submittals.

H. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.

I. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from COR's action stamp.

## PART 2 - PRODUCTS

### 2.1 SUBMITTAL PROCEDURES

A. General Submittal Procedure Requirements:

1. Submit electronic submittals via email as PDF electronic files.

   a. COR will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.

2. Action Submittals: Submit two paper copies of each submittal unless otherwise indicated. COR will return one copy.
3. Informational Submittals: Submit one paper copy of each submittal unless otherwise indicated. COR will not return copies.
4. Certificates and Certifications Submittals: Provide a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
   a. Provide a notarized statement on original paper copy for the local permit.

B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.

1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as Shop Drawings, not as Product Data.
2. Mark each copy of each submittal to show which products and options are applicable.
3. Include the following information, as applicable:

4. Submit Product Data before or concurrent with Samples.

C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.

1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:

   a. Identification of products.
   b. Schedules.
   c. Compliance with specified standards.
   d. Notation of coordination requirements.
   e. Notation of dimensions established by field measurement.
   f. Relationship and attachment to adjoining construction clearly indicated.
   g. Seal and signature of professional engineer if specified.
2. Submit Shop Drawings in the following format:
   a. **Two** opaque (bond) copies of each submittal. COR will return **one** copy.

D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.

1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
2. Identification: Attach label on unexposed side of Samples that includes the following:

   a. Generic description of Sample.
   b. Product name and name of manufacturer.
   c. Sample source.
   d. Number and title of applicable Specification Section.

3. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.

4. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.

E. Contractor's Construction Schedule: Comply with requirements specified in Section 013200 "Construction Progress Documentation."

F. Test and Inspection Reports and Schedule of Tests and Inspections Submittals: Comply with requirements specified in Section 014000 "Quality Requirements."

G. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Section 017700 "Closeout Procedures."

H. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.

I. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.

## PART 3 - EXECUTION

### 3.1 CONTRACTOR'S REVIEW

A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to COR.

B. Project Closeout: See requirements in Section 017700 "Closeout Procedures."

### 3.2 COR’s ACTION

A. General: COR will not review submittals that do not bear Contractor's approval stamp and will return them without action.

B. Action Submittals: COR will review each submittal, make marks to indicate corrections or revisions required, and return it. COR will stamp each submittal with an action stamp.

C. Informational Submittals: COR will review each submittal and will not return it, or will return it if it does not comply with requirements..

D. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.

E. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

F. The contractor shall submit **after contract award** submittals as included in specification sections

END OF SECTION 013300

SECTION 014000 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for quality assurance and quality control.

B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.

1. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
2. Specific test and inspection requirements are not specified in this Section.

1.2 DEFINITIONS

A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.

B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect[ **or Construction Manager**].

C. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.

D. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.

1.3 REPORTS AND DOCUMENTS

A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:

1. Date of issue.
2. Project title and number.
3. Name, address, and telephone number of testing agency.
4. Dates and locations of samples and tests or inspections.
5. Names of individuals making tests and inspections.
6. Description of the Work and test and inspection method.
7. Identification of product and Specification Section.

8. Complete test or inspection data.
9. Test and inspection results and an interpretation of test results.
10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
11. Name and signature of laboratory inspector.
12. Recommendations on retesting and reinspecting.

B. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

## 1.4 QUALITY ASSURANCE

A. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.

B. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

C. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

D. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.

E. Testing Agency Qualifications: an independent agency with the experience and capability to conduct testing and inspecting indicated.

F. Manufacturer's Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

## 1.5 QUALITY CONTROL

A. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities required to verify that the Work complies with requirements, whether specified or not.

1. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
2. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
3. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.

B. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.

C. Testing Agency Responsibilities: Cooperate with COR in performance of duties. Provide qualified personnel to perform required tests and inspections.
   1. Facilities for storage and field curing of test samples.

D. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 REPAIR AND PROTECTION

A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.

   1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Comply with the Contract Document requirements for cutting and patching in Section 017300 "Execution."

B. Protect construction exposed by or for quality-control service activities.

C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 014000

# SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

## PART 1 - GENERAL

### 1.1 SUMMARY

A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.

B. Related Requirements:

1. Section 011000 "Summary" for work restrictions and limitations on utility interruptions.

### 1.2 USE CHARGES

A. Water and Sewer Service from Existing System: Water from existing water system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.

B. Electric Power Service from Existing System: Electric power from existing system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.

### 1.3 QUALITY ASSURANCE

A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

A. Wood Enclosure Fence, corrugated sheets or portable chain link fence around construction area.

### 2.2 TEMPORARY FACILITIES

A. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations if required.

PART 3 - EXECUTION

3.1 TEMPORARY UTILITY INSTALLATION

A. General: Install temporary service or connect to existing service.

B. Water Service: Connect to existing water service facilities. Clean and maintain water service facilities in a condition acceptable to Owner. At Substantial Completion, restore these facilities to condition existing before initial use.

C. Electric Power Service: Connect to existing electric power service. Maintain equipment in a condition acceptable to Occupant.

D. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.

E. Telephone Service: Provide superintendent with cellular telephone.

3.2 SUPPORT FACILITIES INSTALLATION

A. Project Signs: Provide Project signs as indicated. Unauthorized signs are not permitted.

1. Identification Signs: Provide Project identification signs.

2. Temporary Signs: Provide other signs as indicated and as required to inform public and individuals seeking entrance to Project. Provide temporary, directional signs for construction personnel and visitors.

3.3 SECURITY AND PROTECTION FACILITIES INSTALLATION

A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.

B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.

C. Tree and Plant Protection: Comply with requirements of the COR on the protection of trees and plants.

D. Site Enclosure Fence: **Before construction operations begin,** furnish and install site enclosure fence in a manner that will prevent people and animals from easily entering site except by entrance gates.

E. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241; manage fire prevention program.

1. Prohibit smoking in construction areas.
2. Supervise welding operations.
3. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Post warnings and information.

## 3.4 OPERATION, TERMINATION, AND REMOVAL

A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.

B. Maintenance: Maintain facilities in good operating condition until removal.

C. Termination and Removal: Remove each temporary facility when need for its service has ended.

## 3.5 DISPOSAL OF WASTE

A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill acceptable to authorities having jurisdiction.

1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site. Remove construction debris on a daily basis and not on outside sidewalk of across the road.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. Burning: Do not burn waste materials.

END OF SECTION 015000

# SECTION 017300 - EXECUTION

## PART 1 - GENERAL

### 1.1 SUMMARY

A. Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:

1. Construction layout.
2. Installation of the Work.
3. Cutting and patching.
4. Progress cleaning.
5. Starting and adjusting.

B. Related Requirements:

1. Section 011000 "Summary" for limits on use of Project site.
2. Section 017700 "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, and final cleaning.

### 1.2 QUALITY ASSURANCE

A. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.

1. Do not cut and patch construction elements or components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

A. General: Comply with requirements specified in other Sections.

B. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Existing Conditions: Before beginning sitework, investigate and verify the existence and location of underground utilities, **mechanical and electrical systems,** and other construction affecting the Work.

B. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.

C. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Existing Utility Information: Furnish information to the COR that is necessary to adjust, move, or relocate existing utility lines, services, or other utility appurtenances located in or affected by construction.

B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.

D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of Contractor, submit a request for information to Architect according to requirements in Section 013100 "Project Management and Coordination."

3.3 CONSTRUCTION LAYOUT

A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey. If discrepancies are discovered, notify the COR promptly.

B. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and rim and invert elevations.

C. Building Lines and Levels: Locate and lay out control lines and levels for column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations from two or more locations.

## 3.4 INSTALLATION

A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.

1. Make vertical work plumb and make horizontal work level.
2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
3. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.

B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.

C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.

D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.

E. Sequence the Work and allow adequate clearances to accommodate movement of construction items on site and placement in permanent locations.

F. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.

G. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.

H. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions.

I. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.

J. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

## 3.5 CUTTING AND PATCHING

A. Cutting and Patching, General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.

1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.

B. Temporary Support: Provide temporary support of work to be cut.

C. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.

D. Adjacent Occupied Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

E. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction.

F. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other work. Patch with durable seams that are as invisible as practicable. Provide materials and comply with installation requirements specified in other Sections, where applicable.

G. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

## 3.6 PROGRESS CLEANING

A. General: Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.

1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
2. Do not hold waste materials more than two days.

B. Site: Maintain Project site free of waste materials and debris.

C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.

1. Remove liquid spills promptly.
2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.

D. Installed Work: Keep installed work clean. Clean installed surfaces using only cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.

E. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways.

## 3.7 SECURITY AND SITE ACCESS PROCEDURES

A. All contractors' personnel shall be subject to all the security procedures required for clearance of personnel working inside U.S. Embassy Compounds. These requirements shall include:

1. Compliance with the personnel screening requirements outlined in section G.5.2 of the Solicitation.

2. Access for trucks shall be granted on a 48 hours (two working days) advance notice showing: 1) Drivers name, 2) Copy of driver's ID, 3) Truck description and plate number, and 4) date and time access required.

3. Access for daily laborers can be given for three days, with a 48 hours advance notice showing the name of the persons, ID #, date and place of issue, and a copy of the ID. Access will be given for one time only (three days) for day laborers.

4. All contractor personnel shall be subject to a daily check (in and out) by the US government guard personnel.

5. Failure of the contractor to fulfill any security requirement in a timely manner shall not be constructed as a base for any time and money extension.

6. Delay or suspension of work due to the U.S. government security regulations or requirements shall not be a base for claims

## 3.8 SAFETY

A. The contractor must comply to the following:
   1. DOSAR Accident Prevention Clause 652-236-70, included below in full text.
   2. SAFETY AND HEALTH REQUIREMENTS of the US Army Corps of Engineers - EM 385-1-1.

      http://www.usace.army.mil/SafetyandOccupationalHealth/SafetyandHealthRequirementsManual.aspx

   3. Accident Prevention clause (Apr 2004) included in full text in section I

   4. Safety requirements that is specific to the job and will be addressed and documented during the pre-construction meeting.

## 3.9 PROTECTION OF INSTALLED CONSTRUCTION

A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.

END OF SECTION 017300

SECTION 017700 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:

1. Substantial Completion procedures.
2. Final completion procedures.
3. Warranties.
4. Final cleaning.
5. Repair of the Work.

B. Related Requirements:

1.2 SUBSTANTIAL COMPLETION PROCEDURES

A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's punch list), indicating the value of each item on the list and reasons why the Work is incomplete.

B. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of **5** days prior to date the work will be completed and ready for final inspection.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
2. Results of completed inspection will form the basis of requirements for final completion.

1.3 FINAL COMPLETION PROCEDURES

A. Inspection: Submit a written request for final inspection to determine acceptance. On receipt of request, COR will either proceed with inspection or notify Contractor of unfulfilled requirements.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.4 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

A. Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned.

## PART 3 - EXECUTION

### 3.1 FINAL CLEANING

A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.

### 3.2 REPAIR OF THE WORK

A. Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.

B. Repair or remove and replace defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.

1. Remove and replace chipped, scratched, and broken glass, reflective surfaces, and other damaged transparent materials.
2. Touch up and otherwise repair and restore marred or exposed finishes and surfaces. Replace finishes and surfaces that that already show evidence of repair or restoration.

END OF SECTION 017700

# SECTION 024119 - SELECTIVE DEMOLITION

## PART 1 - GENERAL

### 1.1 SUMMARY

A. Section Includes:

1. Demolition and removal of selected portions of building or structure.
2. Demolition and removal of selected site elements.

### 1.2 MATERIALS OWNERSHIP

A. Unless otherwise indicated, demolition waste becomes property of Contractor.

### 1.3 FIELD CONDITIONS

A. Villas will be occupied during perimeter wall demolition. Conduct selective demolition so Occupant's operations will not be disrupted.

B. Notify COR of discrepancies between existing conditions and Drawings before proceeding with selective demolition.

C. Storage or sale of removed items or materials on-site is not permitted.

D. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.

## PART 2 - PRODUCTS

### 2.1 PERFORMANCE REQUIREMENTS

A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

A. Verify that utilities have been disconnected and capped before starting selective demolition operations.

## 3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.

B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off utility services and mechanical/electrical systems serving areas to be selectively demolished.
   1. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.

## 3.3 PROTECTION

A. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.

B. Temporary Shoring: Design, provide, and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.

C. Remove temporary barricades and protections where hazards no longer exist.

## 3.4 SELECTIVE DEMOLITION

A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:

B. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

## 3.5 CLEANING

A. Remove demolition waste materials from Project site [**and dispose of them in an approved construction and demolition waste landfill acceptable to authorities having jurisdiction.**]

   1. Do not allow demolished materials to accumulate on-site.
   2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 024119

SECTION 033000 - CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes cast-in-place concrete, including formwork, reinforcement, concrete materials, mixture design, placement procedures, and finishes.

B. Related Requirements:

1. Section 312000 "Earth Moving".

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Design Mixtures: For each concrete mixture.

C. Steel Reinforcement Shop Drawings: Placing Drawings that detail fabrication, bending, and placement.

1.3 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who has completed concrete work similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

B. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products complying with ASTM C 94 requirements for production facilities and equipment.

C. Source Limitations: Obtain each type of cement of the same brand from the same manufacturer's plant, each aggregate from one source, and each admixture from the same manufacturer.

D. Comply with ACI 301, "Specification for Structural Concrete," unless modified by the requirements of the Contract Documents.

1.4 TESTING

A. Preconstruction Testing Service: Engage a qualified testing agency to perform preconstruction testing on concrete mixtures.

1.5 FIELD CONDITIONS

A. Hot-Weather Placement: Comply with ACI 301 (ACI 301M).

PART 2 - PRODUCTS

2.1 CONCRETE, GENERAL

A. ACI Publications: Comply with the following unless modified by requirements in the Contract Documents:

1. ACI 301 (ACI 301M).
2. ACI 117 (ACI 117M).

2.2 FORM-FACING MATERIALS

A. Smooth-Formed Finished Concrete: Form-facing panels that provide continuous, true, and smooth concrete surfaces. Furnish in largest practicable sizes to minimize number of joints.

B. Rough-Formed Finished Concrete: Plywood, lumber, metal, or another approved material. Provide lumber dressed on at least two edges and one side for tight fit.

2.3 STEEL REINFORCEMENT

A. Reinforcing Bars: ASTM A 615/A 615M, (Grade 420), deformed.

B. Plain-Steel Welded-Wire Reinforcement: ASTM A 1064/A 1064M, plain, fabricated from as-drawn steel wire into flat sheets.

C. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded-wire reinforcement in place. Manufacture bar supports from steel wire, plastic, or precast concrete according to CRSI's "Manual of Standard Practice."

2.4 CONCRETE MATERIALS

A. Portland Cement: ASTM C 150, Type I.

B. Normal-Weight Aggregate: ASTM C 33, uniformly graded, not exceeding (38-mm) nominal size.

C. Lightweight Aggregate: ASTM C 330.

D. Water: Potable and complying with ASTM C 94.

E. Synthetic Fiber: Fibrillated or monofilament polypropylene fibers engineered and designed for use in concrete, complying with ASTM C 1116, Type III, (13 to 38 mm) long.

F. Chemical Admixtures: Certified by manufacturer to be compatible with other admixtures and that do not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.

1. Water-Reducing Admixture: ASTM C 494/C 494M, Type A.

G. Water: ASTM C 94/C 94M[ **and potable**].

## 2.5 VAPOR RETARDERS

A. Sheet Vapor Retarder: Polyethylene sheet, ASTM D 4397, not less than 10 mils (0.25 mm) thick.

## 2.6 CURING MATERIALS

A. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.

B. Water: Potable.

## 2.7 RELATED MATERIALS

A. Expansion- and Isolation-Joint-Filler Strips: [**ASTM D 1751, asphalt-saturated cellulosic fiber**].

## 2.8 CONCRETE MIXTURES FOR BUILDING ELEMENTS

A. Comply with ACI 301 requirements for concrete mixtures.

B. Prepare design mixes, proportioned according to ACI 301, for normal-weight concrete determined by either laboratory trial mix or field test data bases, as follows:

1. Compressive Strength (28 Days): 300 kg.cm2 for reinforced concrete
2. Compressive Strength (28 Days): 250 kg.cm2 for plain concrete
3. Slump: (100 mm).

C. Synthetic Fiber: For slab on grade plain concrete, uniformly disperse in concrete mix at manufacturer's recommended rate, but not less than. (0.60 kg/cu. m).

## 2.9 CONCRETE MIXING

A. Project-Site Mixing: Measure, batch, and mix concrete materials and concrete according to ASTM C 94. Mix concrete materials in appropriate drum-type batch machine mixer.

B. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94/C 94M[ **and ASTM C 1116/C 1116M**], and furnish batch ticket information.

1. When air temperature is between 85 and 90 deg F (30 and 32 deg C), reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F (32 deg C), reduce mixing and delivery time to 60 minutes.

## PART 3 - EXECUTION

### 3.1 FORMWORK INSTALLATION

A. Design, erect, shore, brace, and maintain formwork, according to ACI 301 (ACI 301M), to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until structure can support such loads.

B. Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117 (ACI 117M).

### 3.2 EMBEDDED ITEM INSTALLATION

A. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.

### 3.3 VAPOR-RETARDER INSTALLATION

A. Sheet Vapor Retarders: Place, protect, and repair sheet vapor retarder according to ASTM E 1643 and manufacturer's written instructions.

1. Lap joints 6 inches (150 mm) and seal with manufacturer's recommended tape.

### 3.4 STEEL REINFORCEMENT INSTALLATION

A. General: Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.

1. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.

### 3.5 CONCRETE PLACEMENT

A. Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections are completed.

B. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete is placed on concrete that has hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as indicated. Deposit concrete to avoid segregation.

1. Consolidate placed concrete with mechanical vibrating equipment according to ACI 301 (ACI 301M).

## 3.6 FINISHING FORMED SURFACES

A. Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and defects repaired and patched. Remove fins and other projections that exceed specified limits on formed-surface irregularities.

## 3.7 CONCRETE PROTECTING AND CURING

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 301 (ACI 301M) for hot-weather protection during curing.

B. Cure concrete according to ACI 308.1, by keeping surfaces continuously moist for not less than seven days.

## 3.8 CONCRETE SURFACE REPAIRS

A. Defective Concrete: Repair and patch defective areas when approved by Architect. Remove and replace concrete that cannot be repaired and patched to Architect's approval.

## 3.9 FIELD QUALITY CONTROL

A. Testing Agency: Engage a qualified independent testing and inspecting agency to sample materials, perform tests, and submit test reports during concrete placement according to requirements specified in this Article. Perform tests according to ACI 301.

END OF SECTION 033000

**SECTION 04810 - UNIT MASONRY ASSEMBLIES**

## PART 1 - GENERAL

### 1.1 SECTION INCLUDES

A. Hollow Concrete Blocks.

B. Mortar and Grout.

### 1.2 RELATED SECTIONS

A. Section 09220 - Plastering

### 1.3 SUBMITTALS

A. Submit Manufacturer's product data for each type including design mix and admixture limitations.

B. Samples: Submit two samples of each type and size of block units, obtain approval before placing orders with suppliers.

### 1.4 QUALITY ASSURANCE

A. Perform Work in accordance with ES 1292.

B. Testing: independent testing laboratory in accordance with ES 1292 & ES 1349.

### 1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, protect, and handle products to site.

B. Maintain packaged materials clean, dry, and protected against dampness, and foreign matter.

C. Storing: stack blocks so that they are stable and clear of the ground. Protect from inclement weather and keep dry.

D. Cement: deliver in sealed bags bearing the manufacturer's name and store in piles not more than ten bags high in perfectly dry weatherproof sheds clear from ground on planks or other damp-proofing supports.

E. Sand: aggregates shall be stored in separate stockpiles and to be free from all foreign materials which may become mixed with them.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering accessories that may be incorporated into the Work include, but are not limited to, the following:

1. Tooblat
   Cairo Alexandria Desert Road, Kilo 26
   Tel: 5390719 – 20 – 21 –22 – 23 –24
   Fax: 5390725

2. Arab Brick
   3 Ahmed Oraby Street, Mohandessin
   Tel: 5010926 - 25

3. Misr Brick
   15 May City, Helwan
   Tel: 5500812 – 5501385
   Fax: 5506528

## 2.2 BLOCKS

A. Mortar and grout: Mortar aggregate, natural color ES 1108.

B. Concrete Blocks, unless otherwise specified, are to be to ES 1292, manufactured from ordinary Portland cement to ES 373 and natural aggregates to ES 1109.

1. Hollow Concrete Blocks shall be:
   - Density: 1500 kg/$m^3$
   - Total volume of holes shall not exceed 50% of the unit volume
   - Shell and membrane thickness of the solid portion shall not be less than 20mm

C. Testing Hollow Concrete Blocks: ten blocks from each batch are to be selected by the COR for testing for compressive strength. Results are to be as follows:

- Individual block: not less than 25 kg/cm2 of gross area

- Average of 10 blocks: not less than 30 kg/cm2 of gross area.

## 2.3 MORTAR AND GROUT MATERIALS

A. Ingredients for mortar shall be measured in proper clean gauge boxes.

B. Cement: Ordinary Portland cement to ES 373. Do not use cementitious materials that have become damp.

C. Aggregates: Comply to ES 1108. Except for the joints less than 6mm, use aggregates graded with 100% passing sieve no. 16.

D. Water: Clean and potable.

## 2.4 ACCESSORIES

A. Joint reinforcing: Welded wire with deformed side rods

1. Steel Wire: 9 gauge (4.8 mm) galvanized steel.
2. Type: Ladder or truss type.

B. Ties and Anchors:

1. Bent Wire Ties: Galvanized Steel
2. Rigid Anchors: Galvanized steel straps.
3. Masonry to concrete frame: Two pieces galvanized steel anchor.
4. Unit type masonry inserts in concrete: Malleable iron.
5. Anchor Bolts: ASTM A307, grade A, galvanized.

C. Masonry Accessories:

1. Non metallic expansion joint strips.
2. Preformed control joint gaskets.
3. Bond breaker strips.

## 2.5 MORTAR

A. Mortar: shall be cement-sand mortar.

1. Consisting of 350 kgs Portland Cement, $1m^3$ sand and a minimum amount of water to produce a workable consistency.
2. Mixed mortar components dry and then add water until the correct consistency is obtained.
3. Use mortar within 1 hour of the addition of water.
4. Limit cemintitious materials in mortar to Portland cement and lime.

B. Grout: shall be fine grout of 1 part ordinary Portland cement to 2 or 3 parts of fine aggregates by volume. Fine aggregate to be measured in damp loose condition.

# PART 3 - EXECUTION

## 3.1 GENERAL

A. Comply with referenced unit masonry Egyptian standard and other requirements.

B. Construct walls with all materials fully bonded or tied together to ensure compliance with design requirements for stability, strength, fire resistance, thermal and sound insulation as relevant.

## 3.2 LAYING

A. Concrete Blocks: do not use non-autoclaved concrete blocks until four weeks after casting. Do not wet concrete blocks. Use approved water-retaining admixture in mortar to suit suction.

B. Uniformity: carry up work including both leaves of cavity work, with no portion more than 1.2 m above another at any time, racking back between levels. Do not carry up work higher than 1.5 m in one day.

C. Lay Blocks on full bed of mortar with joints filled to consistent thickness of not more than 12 mm.

D. Lay Hollow Blocks with cavity downward. Do not fill hollows in hollow blocks. Use cut or special shape blocks to make up courses and piece-in.

E. Accuracy: keep courses level, true to line and evenly spaced. Accurately plumb all faces, angles and features. Set out carefully to ensure satisfactory junctions and joints with adjoining or built-in elements and components.

F. Stopping and resuming work: rack back a distance of ½ unit length or 200 mm in each course. Clean exposed surfaces of set masonry, wet units lightly and remove loose masonry units and mortar prior to laying fresh masonry.

G. Curing: all walls and partitions shall be properly cured by sprinkling water twice a day for a period of not less than five (5) days after completion of laying the course.

## 3.3 BONDING AND JOINTING

A. Block work Bond, unless otherwise specified, is to be stretching half lap.

B. Lintel Bearings: carefully predetermine setting out so those full blocks occur beneath ends of lintels.

C. Joints not visible in finished work are to be struck off with the trowel as work proceeds.

D. Joints for Plaster: strike off and leave rough joints in block work to be plastered or rendered.

## 3.4 MORTAR BEDDING AND JONTING

A. Bedding: lay concrete masonry units with full mortar coverage on horizontal and vertical face shells. Bed webs in mortar in starting course on footings and foundation walls and in all

courses of piers, and columns and where adjacent to cells or cavities to be filled with mortar. For starting courses on footings where cells are not grouted, spread out full mortar bed including areas under cells.

B. Joints: if not other wise indicated lay masonry walls with 10mm joints. Maintain joint widths shown, except for minor variations required to maintain bond alignment. Cut joints flush for masonry walls, which are to be concealed or to be covered by other materials.

C. Walls to be plastered shall have joints racked out to a depth of 12 mm to form a key.

D. Remove concrete masonry units disturbed after laying, clean and lay in fresh mortar. Do not pound corners at jambs to fit stretcher units, which have been set in position. If adjustments are required, remove units clean off mortar and set in fresh mortar.

## 3.5 REINFORCED MASONRY JAMB

A. Build masonry jamb with hollow concrete blocks with dimensions as shown on the drawings

B. Both sides of openings to be filled with cement grout as specified herein.

## 3.6 TOLERANCE

A. Comply with construction tolerances of referenced Egyptian code of practice.

END OF SECTION 04810

**SECTION 05500 - METAL FABRICATIONS**

## PART 1 - GENERAL

### 1.1 SECTION INCLUDES

A. Ornamental steel security grilles

### 1.2 RELATED SECTIONS

A. Section 09910 - Painting: Paint finish.

### 1.3 REFERENCES

A. ASTM A123 - Zinc (Hot-Galvanized) Coatings on Products Fabricated From Rolled, Pressed and Forged Steel Shapes, Plates, Bars, and Strip.

B. ASTM A153 - Zinc Coating (Hot-Dip) on Iron and Steel Hardware.

C. ASTM A283 - Carbon Steel Plates, Shapes, and Bars.

D. ASTM A307 - Carbon Steel Externally Threaded Standard Fasteners.

E. ASTM A386 - Zinc-Coating (Hot-Dip) on Assembled Steel Products.

F. AWS A2.0 - Standard Welding Symbols.

G. AWS D1.1 - Structural Welding Code.

H. SSPC - Steel Structures Painting Council.

### 1.4 SUBMITTALS

A. Shop Drawings: Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories. Include erection drawings, elevations, and details where applicable.

B. Indicate welded connections using standard AWS A2.0 welding symbols. Indicate net weld lengths.

### 1.5 QUALIFICATIONS

A. Welders Certificates: certifying welders employed on the Work, verifying AWS qualification within the previous 12 months.

## PART 2 - PRODUCTS

### 2.1 FERROUS MATERIALS

A. Steel Plates, shapes and bars: ASTM A36.

B. Steel Tubing: ASTM A-500 or A501.

C. Steel pipe, black finish: ASTM A533.

D. Bolts, Nuts, and Washers: ASTM A307, galvanized to ASTM A153 for galvanized components.

E. Concrete Inserts: threaded or wedge type.

F. Welding Materials: AWS D1.1; type required for materials being welded.

G. Zinc coating: Hot dip galvanized coating for materials in exterior assemblies or exterior walls.

### 2.2 FASTENERS

A. Bolts and nuts: Hexagon head type, ASTM A307, grade A.

B. Lag Bolts: Square head, FS FF-B-561.

C. Machine Screws: calcium plated steel, FS FF S92.

D. Wood Screws: Flat head carbon steel, FS FF S111.

E. Plain Washers: Round carbon steel, FS FF W92.

F. Drilled in expansion anchors: FS FF S325.

G. Toggle Bolts: Tumble-wing type, FS FF B588.

H. Lock Washers: Spring type carbon steel, FS FF W84.

I. Zinc coating: Fasteners in exterior assemblies or exterior walls.

### 2.3 AUXILLIARY MATERIALS

A. Nonshrink Metallic Grout: Pre-mixed, factory packed, comply with ASTM C1107.

B. Ordinary Grout: Ordinary Portland cement and natural sand, mixed at a ratio of 1 part cement to 2½ parts sand by volume, with minimum water required for mixing, placement and hydration.

C. Interior Anchoring Cement: Hydraulic expansion cement.

D. Exterior/Interior Anchoring Cement: Erosion resistant hydraulic expansion cement.

E. Shop primer: Alkyd primer, FS TT P645.

F. Galvanizing repair paint: SSPC Paint 20.

G. Bituminous Paint: Asphalt mastic, SSPC Paint 12.

H. Zinc chromate Primer: FS TT P645.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

A. Verify that field conditions are acceptable and are ready to receive work.

B. Beginning of installation means erector accepts existing conditions.

### 3.2 PREPARATION

A. Clean and strip primed steel items to bare metal where site welding is required.

B. Supply items required to be cast into concrete or embedded in masonry with setting templates, to appropriate sections.

### 3.3 INSTALLATION

A. Install items plumb and level, accurately fitted, free from distortion or defects.

B. Allow for erection loads, and for sufficient temporary bracing to maintain true alignment until completion of erection and installation of permanent attachments.

C. Field weld components indicated on shop drawings.

D. Perform field welding in accordance with AWS D1.1.

E. Obtain COR's approval prior to site cutting or making adjustments not scheduled.

F. After erection, prime welds, abrasions, and surfaces not shop primed, galvanized, except surfaces to be in contact with concrete.

### 3.4 ERECTION TOLERANCES

A. Maximum Variation From Plumb: 6 mm per story, non-cumulative.

B. Maximum Offset From True Alignment: 6 mm.

END OF SECTION 05500

## SECTION 092400 - CEMENT PLASTERING

## PART 1 - GENERAL

### 1.1 SECTION INCLUDES

A. This Section includes the following:

1. Portland cement plaster.

B. Related Sections: The following Sections contain requirements that relate to this Section:

1. Section 04810 – Unit Masonry Assemblies.

2. Section 07320 Clay Roofing Tiles

### 1.2 SUBMITTALS

A. Material Certificates: Submit certificate signed by manufacturer for each kind of plaster aggregate certifying that materials comply with requirements.

B. Design mix for each type of plaster

### 1.3 QUALITY ASSURANCE

A. Mockups: Prior to installing plaster work, construct panels for each type of finish and application required to verify selections made under sample submittals and to demonstrate aesthetic effects as well as qualities of materials and execution. Build mockups, using materials indicated for final unit of Work. Locate mockups on-site in the location and of the size indicated or, if not indicated, as directed by the COR. Obtain the COR's approval of mockups before start of plaster work.

### 1.4 DELIVERY, STORAGE, AND HANDLING

A. Deliver cementitious materials to Project site in original packages, containers, or bundles, labeled with manufacturer's name, product brand name, and lot number.

B. Store materials inside, under cover, and dry, protected from weather, direct sunlight, surface contamination, aging, corrosion, and damage from construction traffic and other causes.

### 1.5 PROJECT CONDITIONS

A. Protect plaster against uneven and excessive evaporation and from strong flows of dry air, both natural and artificial. Apply and cure plaster as required by climatic and job conditions to

prevent dry out during cure period. Provide suitable coverings, moist curing, barriers to deflect sunlight and wind, or combinations of these, as required.

B. Ventilation: Provide natural or mechanical means of ventilation to properly dry interior spaces after Portland Cement Plaster has cured.

C. Protect contiguous work from soiling and moisture deterioration caused by plastering. Provide temporary covering and other provisions necessary to minimize harmful spattering of plaster on other work.

## PART 2 - PRODUCTS

### 2.1 ACCESSORIES

A. Cornerbeads: Small nose cornerbeads fabricated from the following metal, with expanded flanges of large-mesh diamond-metal lath allowing full plaster encasement.

1. PVC Plastic: Minimum (0.89 mm) thick.
2. Aluminum: Minimum (1.2 mm) thick.

B. Casing Beads: Square-edged style, with expanded flanges of the following material:

1. PVC Plastic: Minimum (0.89 mm) thick.
2. Aluminum: Minimum (1.2 mm) thick.

C. Curved Casing Beads: Square-edged style, fabricated from aluminum coated with clear plastic, preformed into curve of radius indicated.

D. Control Joints: Prefabricated, of material and type indicated below:

1. PVC Plastic: Minimum 0.035 inch (0.89 mm) thick.
2. Aluminum: Minimum 0.050 inch (1.2 mm) thick.

### 2.2 PLASTER MATERIALS

A. Base-Coat Cements: Type as indicated below:

1. Portland cement, ASTM C 150, Type I.

B. Job-Mixed Finish-Coat Cement: Material and color as indicated below:

1. Portland cement, ASTM C 150, Type I.

C. Cement Color: Gray.

D. Sand Aggregate for Base Coats and finish coats: ASTM C 897.

### 2.3 MISCELLANEOUS MATERIALS

A. Water for Mixing and Finishing Plaster: Potable.

B. Bonding Agent: ASTM C 932.

C. Acid-Etching Solution: Muriatic acid (10 percent solution of commercial hydrochloric acid) mixed 1 part to not less than 6 nor more than 10 parts water.

D. Dash-Coat Material: 2 parts portland cement to 3 parts fine sand, mixed with water to a mushy-paste consistency.

## 2.4 PLASTER MIXES AND COMPOSITIONS

A. General: Comply with ASTM C 926 for base- and finish-coat mixes as applicable to plaster bases, materials, and other requirements indicated.

B. Base-Coat Mixes and Compositions: Proportion materials for respective base coats in parts by volume per sum of cementitious materials for aggregates to comply with the following requirements for each method of application and plaster base indicated. Adjust mix proportions below within limits specified to attain workability.

C. Three-Coat Work over Metal Lath: Base-coat proportions as indicated below:

1. Scratch Coat: 1 part Portland Cement, 1 to 2 parts masonry cement, 2-1/2 to 4 parts aggregate.

2. Brown Coat: 1 part Portland Cement, 1 to 2 parts masonry cement, 3 to 5 parts aggregate.

D. Two-Coat Work over Concrete Unit Masonry: Base-coat proportions as indicated below:
1. Base Coat: 1 part masonry cement, 3 to 4 parts aggregate.

E. Job-Mixed Finish Coats: Proportion materials for finish coats in parts by volume for cementitious materials and parts by volume per sum of cementitious materials to comply with the following requirements:

1. Proportions using sand aggregates: 1 part portland cement, 1 part masonry cement, 3 parts sand.

## 2.5 MIXING

A. Mechanically mix cementitious and aggregate materials for plasters to comply with applicable referenced application standard and with recommendations of plaster manufacturer.

# PART 3 - EXECUTION

## 3.1 PREPARATIONS FOR PLASTERING

A. Clean plaster bases and substrates for direct application of plaster, removing loose material and substances that may impair the Work.

B. Etch concrete and concrete unit masonry surfaces indicated for direct plaster application. Scrub with acid-etching solution on previously wetted surface and rinse thoroughly with clean water. Repeat application, if necessary, to obtain adequate suction and mechanical bond of plaster (where dash coat, bonding agent, or additive is not used).

C. Apply bonding agent on concrete and concrete unit masonry surfaces indicated for direct plaster application; comply with manufacturer's written instructions for application.

D. Apply dash coat on concrete surfaces indicated for direct plaster application. Moist-cure dash coat for at least 24 hours after application and before plastering.

E. Install temporary grounds and screeds to ensure accurate rodding of plaster to true surfaces; coordinate with scratch-coat work.

F. Flashing: Refer to Division 7 Sections for installing flashing as indicated.

G. Surface Conditioning: Immediately before plastering, dampen concrete and concrete unit masonry surfaces that are indicated for direct plaster application, except where a bonding agent has been applied. Determine and apply amount of moisture and degree of saturation that will result in optimum suction for plastering.

## 3.2 INSTALLATION OF PLASTERING ACCESSORIES

A. General: Comply with referenced lathing and furring installation standards for provision and location of plaster accessories of type indicated. Miter or cope accessories at corners; install with tight joints and in alignment. Attach accessories securely to plaster bases to hold accessories in place and in alignment during plastering. Install accessories of type indicated at following locations:

1. External Corners: Install corner reinforcement at external corners.
2. External Corners: Bend lath around external angles without using cornerbeads or reinforcement.
3. Terminations of Plaster: Install casing beads, unless otherwise indicated.
4. Control Joints: Install at locations indicated or, if not indicated, at locations complying with the following criteria and approved by the COR:
   a. Where an expansion or contraction joint occurs in surface of construction directly behind plaster membrane.
   b. Distance between Control Joints: Not to exceed (5.4 m) in either direction or a length-to-width ratio of 2-1/2 to 1.
   c. Wall Areas: Not more than. (13 sq. m).
   d. Horizontal Surfaces: Not more than. (9 sq. m) in area.
   e. Where plaster panel sizes or dimensions change, extend joints full width or height of plaster membrane.

## 3.3 PLASTER APPLICATION

A. Plaster Application Standard: Apply plaster materials, composition, and mixes to comply with ASTM C 926.

B. Do not use excessive water in mixing and applying plaster materials.

C. Flat Surface Tolerances: Do not deviate more than plus or minus (3 mm in 3 m) from a true plane in finished plaster surfaces, as measured by a (3-m) straightedge placed at any location on surface.

D. Grout hollow-metal frames, bases, and similar work occurring in plastered areas, with base-coat plaster material, and before lathing where necessary.

E. Sequence plaster application with installation and protection of other work so that neither will be damaged by installation of other.

F. Plaster flush with metal frames and other built-in metal items or accessories that act as a plaster ground, unless otherwise indicated. Where interior plaster is not terminated at metal frame by casing beads, cut base coat free from metal frame before plaster sets and groove finish coat at junctures with metal.

G. Corners: Make internal corners and angles square; finish external corners flush with cornerbeads on interior work, square and true with plaster faces on exterior work.

H. Number of Coats: Apply plaster of composition indicated, to comply with the following requirements:

1. Three Coats: Over Metal lath.

2. Two Coats: Over the following plaster bases:

a. Concrete unit masonry.

b. Concrete, cast-in-place or precast when surface condition complies with ASTM C 926 for plaster bonded to solid base.

I. Finish Coats: Apply finish coats to comply with the following requirements:

1. Float Finish: Apply finish coat to a minimum thickness of (3 mm) to completely cover base coat, uniformly floated to a true even plane with fine-textured finish matching the approved sample.

2. Trowel-Textured Finish: Apply finish coat with hand-troweled-textured finish matching Architect's sample.

J. Moist-cure plaster base and finish coats to comply with ASTM C 926.

## 3.4 CUTTING AND PATCHING

A. Cut, patch, replace, repair, and point up plaster as necessary to accommodate other work. Repair cracks and indented surfaces. Point-up finish plaster surfaces around items that are built into or penetrate plaster surfaces. Repair or replace work to eliminate blisters, buckles, check cracking, dry outs, efflorescence, excessive pinholes, and similar defects. Repair or replace work as necessary to comply with required visual effects.

## 3.5 CLEANING AND PROTECTING

A. Remove temporary covering and other provisions made to minimize spattering of plaster on other work. Promptly remove plaster from door frames, windows, and other surfaces not to be plastered. Repair surfaces stained, marred or otherwise damaged during plastering work. When plastering work is completed, remove unused materials, containers, equipment, and plaster debris.

B. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and Installer, that ensure plaster work is without damage or deterioration at the time of Substantial Completion.

END OF SECTION 09220

## SECTION 096340 - STONE TILE and FLOORS

## PART 1 - GENERAL

### 1.1 SECTION INCLUDES

A. Marble parapet coping for roof parapet and for exterior stairs
B. Marble base stone cladding.
C. Stair treads and risers
D. Roof parapet coping and exterior stairs coping..

### 1.2 RELATED SECTIONS

A. Section 07920 - Joint Sealants.

### 1.3 REFERENCES

A. ANSI A118.1 - Dry-Set Portland Cement Mortar.

B. ASTM C144 - Aggregate for Masonry Mortar.

C. ASTM C150 - Portland Cement.

D. ASTM C503 - Marble Dimension Stone (Exterior).

E. TCA (Tile Council of America) - Handbook for Ceramic Tile Installation.

### 1.4 SUBMITTALS

A. Shop Drawings: Indicate stone layout, patterns, color arrangement, perimeter conditions, junctions with dissimilar materials, control and expansion joints, thresholds, and setting details.

B. Product Data: Provide instructions for using grout.

C. Samples: Mount stone and apply grout on two plywood panels, 1000 x 1000 mm in size illustrating pattern, color variations, and grout joint size variations.

D. Submit sample of colored grout.

### 1.5 QUALITY ASSURANCE

A. Installer Qualifications: An installer who employs experienced stone fitters who are skilled in installing stone paving and flooring similar in material, design, and extent to those

indicated for this Project and whose projects have a record of successful in-service performance.

B. Source Limitations for Stone: Obtain each variety of stone, regardless of finish, from a single quarry with resources to provide materials of consistent quality in appearance and physical properties.

C. Source Limitations for Other Materials: Obtain each type of cementitious material, grout, admixture, stone accessory, sealant, and other material from a single manufacturer.

## 1.6 DELIVERY, STORAGE, AND HANDLING

A. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.

## 1.7 EXTRA MATERIALS

A. Provide 5% of each size, color, and surface finish of stone flooring specified.

# PART 2 - PRODUCTS

## 2.1 MANUFACTURERS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering accessories that may be incorporated into the Work include, but are not limited to, the following:

1. Marmonil
2. Wadi El Nil
3. Egymarble

## 2.2 MATERIALS

A. Marble: ASTM C503 free of defects detrimental to appearance or durability.

B. Unit Size, thickness, color and finish: as shown on drawings and approved by the COR or designated representative.

C. Base: Match flooring for surface finish and color as shown on drawings and approved by the COR or designated representative.

## 2.3 STONE TYPES

A. Italian Carrara for stair treads and rises.

B. Italian Carrara for balcony flooring

C. Italian Carrara and black border tiles for entrance pavement

D. local Teriesta for parapet coping of roof and exterior stair

E. Local Teriesta for base stone on all facaded

## 2.4 MORTAR MATERIALS

A. Portland Cement: ASTM C150, Type I; grey color.

B. Sand: ASTM C144, coarse, clean, screened sand, free from deleterious materials.

C. Water: Potable.

A. Mix proportions shall be 450 kg cement to 1 m3 sand or as per stone manufacturer's recommendations.

## 2.5 GROUT MATERIALS

A. Commercial Portland Cement Grout (Sanded Grout): ANSI A118.6, color as directed by the COR or designated representative and to match with tiles.

1. Factory-Prepared, Dry-Grout Mixture: Factory-prepared mixture of portland cement; dry, redispersible, ethylene vinyl acetate additive; and other ingredients to produce the following:

2. Non-sanded grout mixture for joints 3 mm and narrower.

3. Sanded grout mixture for joints 3 mm and wider.

## 2.5 ACCESSORIES

A. Thresholds: Same stone type, color and finish as flooring; size by full width of wall or frame opening, as shown on drawings.

B. Cleaner: Recommended by stone producer and grout manufacturer which will not harm stone, joint materials, or adjacent surfaces.

C. Sealer: Colorless, slip and stain resistant which will not detrimentally affect stone and adjacent work.

# PART 3 - EXECUTION

## 3.1 EXAMINATION

A. Verify that surfaces are ready to receive work.

## 3.2 PREPARATION

A. Vacuum clean substrate surfaces; damp clean stone.

B. Seal substrate surface cracks with filler. Level existing substrate surfaces to acceptable flatness tolerances.

C. Clean stone prior to installation, with edges and surfaces free of dirt or foreign material.

D. Do not use wire brushes or implements which mark or damage exposed surfaces.

## 3.3 INSTALLATION - MORTAR BED METHOD

A. Install mortar bed, tile, threshold, stair treads, and grout in accordance with manufacturer's instructions.

B. Apply mortar bed over surfaces to a thickness of 30 mm.

C. Lay stone units to pattern indicated. Do not interrupt tile pattern through openings.

D. Set stone in full mortar bed to support stone over full bearing surface.

E. Place thresholds at door frame openings, notching stone for door stop.

F. Cut and fit stone units tight to penetrations through unit. Ensure finish trim will cover cut edges. Align floor and base joints.

G. Maintain uniform joint width subject to variance in tolerance allowed in stone unit size. Make joints watertight, without voids, cracks, excess mortar or excess grout.

H. Maintain joint width of 6 mm where abutting vertical surfaces or protrusions.

I. Keep expansion control joints free of mortar or grout.

J. Allow units to set for a minimum of 48 hours prior to grouting.

K. Apply sealant to junction of stone and dissimilar materials and junction of dissimilar planes.

## 3.4 POLISHING AND CLEANING

A. Polished Finish; for cladding and parapets: Finish tile faces to produce sharp reflections where reflected images of overhead fluorescent tubes have straight lines without visible distortion when viewed at arm's length.
B. Honed finish; for floor tiles
C. Rough finish; for base stone cladding
D. Clean stone and grout surfaces with cleaner; seal with sealer.

END OF SECTION 09385

SECTION 099113 - EXTERIOR PAINTING

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes surface preparation and the application of paint systems on [**the following exterior substrates:**]

1. Concrete.
2. Steel and iron.
3. Portland cement plaster (stucco).

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product. Include preparation requirements and application instructions.

B. Samples: For each type of paint system and each color and gloss of topcoat.

1.3 QUALITY ASSURANCE

A. Mockups: Apply mockups of each paint system indicated and each color and finish selected to verify preliminary selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Products: certified as lead-free, subject to compliance with requirements, “ Gotashield, product of Jotun, or equal approved.

2.2 PAINT, GENERAL

A. Material Compatibility:

1. Materials for use within each paint system shall be compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
2. For each coat in a paint system, products shall be recommended in writing by topcoat manufacturers for use in paint system and on substrate indicated.

B. Colors: **As selected by the COR from manufacturer's full range**]

## PART 3 - EXECUTION

### 3.1 EXAMINATION

A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.

B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:

C. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.

D. Proceed with coating application only after unsatisfactory conditions have been corrected.

1. Application of coating indicates acceptance of surfaces and conditions.

### 3.2 PREPARATION

A. Comply with manufacturer's written instructions applicable to substrates and paint systems indicated.

### 3.3 APPLICATION

A. Apply paints according to manufacturer's written instructions

B. Apply paints to produce surface films without cloudiness, spotting, laps, brush marks, roller tracking, runs, sags, or other surface imperfections. Cut in sharp lines and color breaks.

### 3.4 CLEANING AND PROTECTION

A. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.

B. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

### 3.5 EXTERIOR PAINTING SCHEDULE

A. Concrete, Portland Cement Plaser, and CMU Substrates, Nontraffic Surfaces:

1. Latex System

a. Prime Coat: Latex, exterior, matching topcoat.
b. Intermediate Coat: Latex, exterior, matching topcoat.

c. Topcoat: Latex, exterior, low shee].

1) Jotun Jotashield, or equal approved>.

B. Steel and Iron Substrates:

1. Alkyd System

a. Prime Coat: Primer, alkyd, anticorrosive, for metal.

b. Intermediate Coat: Exterior, alkyd enamel, matching topcoat.

c. Topcoat: Alkyd, exterior, semi-gloss.

END OF SECTION 099113

SECTION 221116 - DOMESTIC WATER PIPING

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes underground and aboveground domestic water pipes, tubes, and fittings inside buildings.

1.2 ACTION SUBMITTALS

A. Product Data: For transition fittings and dielectric fittings.

1.3 INFORMATIONAL SUBMITTALS

A. System purging and disinfecting activities report.

B. Field quality-control reports.

PART 2 - PRODUCTS

2.1 PIPING MATERIALS

A. Comply with requirements in "Piping Schedule" Article for applications of pipe, tube, fitting materials, and joining methods for specific services, service locations, and pipe sizes.

2.2 GALVANIZED-STEEL PIPE AND FITTINGS

A. Galvanized-Steel Pipe:

1. ASTM A 53/A 53M, [**Type E**], [**Grade B**], Standard Weight.
2. Include ends matching joining method.

B. Galvanized-Steel Pipe Nipples: ASTM A 733, made of ASTM A 53/A 53M or ASTM A 106/A 106M, Standard Weight, seamless steel pipe with threaded ends.

2.3 PPR PIPING

A. PPR Pipe: ASTM F 441/F 441M, [**Schedule 40**].

## 2.4 TRANSITION FITTINGS

A. General Requirements:

1. Same size as pipes to be joined.
2. Pressure rating at least equal to pipes to be joined.
3. End connections compatible with pipes to be joined.

B. Fitting-Type Transition Couplings: Manufactured piping coupling or specified piping system fitting.

C. PPR-to-Metal Transition Fittings:
1. Aquatherm or approved equal.
2. Description:

a. **PPR** one-piece fitting with manufacturer's Schedule 40 equivalent dimensions.
b. One end with threaded brass insert and one threaded end.

# PART 3 - EXECUTION

## 3.1 EARTHWORK

A. Comply with requirements in Section 312000 "Earth Moving" for excavating, trenching, and backfilling.

## 3.2 PIPING INSTALLATION

A. Drawing plans, schematics, and diagrams indicate general location and arrangement of domestic water piping. Indicated locations and arrangements are used to size pipe and calculate friction loss, expansion, and other design considerations. Install piping as indicated unless deviations to layout are approved on coordination drawings.

B. For above ground installation use Galvanized pipes according to the standard detail shown on drawings.

C. Install shutoff valve, hose-bib.

D. Install shutoff valve.

E. Rough-in domestic water piping for water-meter installation according to utility company's requirements.

F. Install piping concealed from view and protected from physical contact by building occupants unless otherwise indicated and except in equipment rooms and service areas.

G. Install piping to permit valve servicing.

H. Install piping free of sags and bends.

I. Install fittings for changes in direction and branch connections.

## 3.3 TRANSITION FITTING INSTALLATION

A. Install transition couplings at joints of dissimilar piping.

B. Transition Fittings in Underground Domestic Water Piping:

1. Fittings for NPS 1-1/2 (DN 40) and Smaller: Fitting-type coupling.

C. Transition Fittings in Aboveground Domestic Water Piping NPS 2 (DN 50) and Smaller: Plastic-to-metal transition **fittings**.

## 3.4 FIELD QUALITY CONTROL

A. Perform the following tests and inspections:

1. Piping Inspections:

a. Do not enclose, cover, or put piping into operation until it has been inspected and approved by authorities having jurisdiction.
b. During installation, notify authorities having jurisdiction at least one day before inspection must be made. Perform tests specified below in presence of authorities having jurisdiction:

1) Roughing-in Inspection: Arrange for inspection of piping before concealing or closing in after roughing in and before setting fixtures.

B. Prepare test and inspection reports.

## 3.5 PIPING SCHEDULE

A. Transition and special fittings with pressure ratings at least equal to piping rating may be used in applications below unless otherwise indicated.

B. Fitting Option: Extruded-tee connections and brazed joints may be used on aboveground copper tubing.

C. Under-building-slab, domestic water piping, **NPS 2 (DN 50) and smaller**, shall be the following:
1. PPR, [**Schedule 40**]; socket fittings; and solvent-cemented joints.

D. Aboveground domestic water piping, **NPS 2 (DN 50) and smaller**, shall be the following:

1. Galvanized-steel pipe and nipples; galvanized, gray-iron threaded fittings; and threaded joints.

END OF SECTION 221116

# SECTION 260519 - LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

## PART 1 - GENERAL

### 1.1 SUMMARY

A. Section Includes:

1. Building wires and cables rated 600 V and less.
2. Connectors, splices, and terminations rated 600 V and less.

## PART 2 - PRODUCTS

### 2.1 CONDUCTORS AND CABLES

A. **Copper** Conductors: Comply with NEMA WC 70/ICEA S-95-658.

B. Conductor Insulation: Comply with IEC for XLPE/PVC or PVC/PVC.

C. Multiconductor Cable: Comply with IEC for XLPE/PVC or PVC/PVC with ground wire.

### 2.2 SYSTEM DESCRIPTION

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Comply with NFPA 70.

## PART 3 - EXECUTION

### 3.1 CONDUCTOR MATERIAL APPLICATIONS

A. Feeders: **Copper for all feeders.** Solid for No. 10 AWG (6 mm) and smaller; stranded for No. 8 AWG (10 mm) and larger.

B. Branch Circuits: Copper. Solid for **No. 12** AWG (4 mm) and smaller; stranded for **No. 10** AWG (6 mm) and larger.

### 3.2 INSTALLATION OF CONDUCTORS AND CABLES

A. Use pulling means, including fish tape, cable, rope, and basket-weave wire/cable grips, that will not damage cables or raceway.

## 3.3 CONNECTIONS

A. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A-486B.

B. Wiring at Outlets: Install conductor at each outlet, with at least **12 inches (300 mm)**] of slack at the lighting fixtures.

## 3.4 FIELD QUALITY CONTROL

A. Perform the following tests and inspections:

1. Perform each visual and mechanical inspection and electrical Megger test for 1000V stated in NETA Acceptance Testing Specification. Certify compliance with test parameters.

B. Test and Inspection Reports: Prepare a written report to record the following:

1. Procedures used.
2. Results that comply with requirements.
3. Results that do not comply with requirements and corrective action taken to achieve compliance with requirements.

C. Cables will be considered defective if they do not pass tests and inspections.

END OF SECTION 260519

SECTION 260533 - RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Metal conduits, tubing, and fittings.
2. Nonmetal conduits, tubing, and fittings.
3. Boxes, enclosures, and cabinets.

1.2 ACTION SUBMITTALS

A. Product Data: For surface raceways, wireways and fittings, hinged-cover enclosures, and cabinets.

B. Shop Drawings: For custom enclosures and cabinets. Include plans, elevations, sections, and attachment details.

PART 2 - PRODUCTS

2.1 METAL CONDUITS, TUBING, AND FITTINGS

A. Listing and Labeling: Metal conduits, tubing, and fittings shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. IMC: Comply with ANSI C80.6 and UL 1242.

C. LFMC: Flexible steel conduit with PVC jacket and complying with UL 360.

D. Fittings for Metal Conduit: Comply with NEMA FB 1 and UL 514B.

1. Conduit Fittings for Hazardous (Classified) Locations: Comply with UL 886 and NFPA 70.
2. Fittings for EMT:

a. Material: **Steel**.
b. Type: **Compression**.

3. Coating for Fittings for PVC-Coated Conduit: Minimum thickness of 0.040 inch (1 mm), with overlapping sleeves protecting threaded joints.

## 2.2 NONMETALLIC CONDUITS, TUBING, AND FITTINGS

A. Listing and Labeling: Nonmetallic conduits, tubing, and fittings shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. RNC: **Type schedule 40-RPVC**, complying with NEMA TC 2 and UL 651 unless otherwise indicated.

C. Solvent cements and adhesive primers shall have a VOC content of 510 and 550 g/L or less, respectively, when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

D. Solvent cements and adhesive primers shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

## 2.3 METAL WIREWAYS AND AUXILIARY GUTTERS

A. Description: Sheet metal, complying with UL 870 and NEMA 250, **Type 3R** (IP54) unless otherwise indicated, and sized according to NFPA 70.

1. Metal wireways installed outdoors shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Fittings and Accessories: Include covers, couplings, offsets, elbows, expansion joints, adapters, hold-down straps, end caps, and other fittings to match and mate with wireways as required for complete system.

## 2.4 NONMETALLIC WIREWAYS AND AUXILIARY GUTTERS

A. Listing and Labeling: Nonmetallic wireways and auxiliary gutters shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Description: PVC, extruded and fabricated to required size and shape, and having snap-on cover, mechanically coupled connections, and plastic fasteners.

C. Fittings and Accessories: Couplings, offsets, elbows, expansion joints, adapters, hold-down straps, end caps, and other fittings shall match and mate with wireways as required for complete system.

# PART 3 - EXECUTION

## 3.1 RACEWAY APPLICATION

A. Outdoors: Apply raceway products as specified below unless otherwise indicated:

1. Exposed Conduit: RPVC.

2. Underground Conduit: RNC, [**Type EPC-40-PVC**, **direct buried**.
3. Boxes and Enclosures, Aboveground: NEMA 250, **Type 3R** (IP54)**.**

B. Raceway Fittings: Compatible with raceways and suitable for use and location.
1. PVC Externally Coated, Rigid Steel Conduits: Use only fittings listed for use with this type of conduit. Patch and seal all joints, nicks, and scrapes in PVC coating after installing conduits and fittings.
2. Flexible Conduit: Use only fittings listed for use with flexible conduit. Comply with NEMA FB 2.20.

## 3.2 INSTALLATION

A. Comply with NECA 1 and NECA 101 for installation requirements except where requirements on Drawings or in this article are stricter. Comply with NFPA 70 limitations for types of raceways allowed in specific occupancies and number of floors.

B. Arrange stub-ups so curved portions of bends are not visible above finished slab.

C. Install no more than the equivalent of three 90-degree bends in any conduit run except for control wiring conduits, for which fewer bends are allowed. Support within 12 inches (300 mm) of changes in direction.

D. Support conduit within 12 inches (300 mm)of enclosures to which attached.

E. Raceways Embedded in Slabs:

1. Run conduit larger than 1-inch (27-mm) trade size, parallel or at right angles to main reinforcement. Where at right angles to reinforcement, place conduit close to slab support. Secure raceways to reinforcement at maximum 10-foot (3-m) intervals.
2. Change from RPVC to [**IMC**] before rising above floor.

F. Threaded Conduit Joints, Exposed to Outdoor Conditions: Apply listed compound to threads of raceway and fittings before making up joints. Follow compound manufacturer's written instructions.

G. Raceway Terminations at Locations Subject to Moisture or Vibration: Use insulating bushings to protect conductors including conductors smaller than No. 4 AWG (35mm).

H. Terminate threaded conduits into threaded hubs or with locknuts on inside and outside of boxes or cabinets. Install bushings on conduits up to 1-1/4-inch (35-mm) trade size and insulated throat metal bushings on 1-1/2-inch (41-mm) trade size and larger conduits terminated with locknuts. Install insulated throat metal grounding bushings on service conduits.

I. Install raceway sealing fittings at accessible locations according to NFPA 70 and fill them with listed sealing compound. For concealed raceways, install each fitting in a flush steel box with a blank cover plate having a finish similar to that of adjacent plates or surfaces.

## 3.3 INSTALLATION OF UNDERGROUND CONDUIT

A. Direct-Buried Conduit:

1. Excavate trench bottom to provide firm and uniform support for conduit. Prepare trench bottom for pipe less than 6 inches (150 mm) in nominal diameter.
2. Install backfill.
3. After installing conduit, backfill and compact. Start at tie-in point, and work toward end of conduit run, leaving conduit at end of run free to move with expansion and contraction as temperature changes during this process. Firmly hand tamp backfill around conduit to provide maximum supporting strength. After placing controlled backfill to within 12 inches (300 mm) of finished grade, make final conduit connection at end of run and complete backfilling with normal compaction.
4. Install manufactured duct elbows for stub-up at poles and equipment and at building entrances through floor unless otherwise indicated. Encase elbows for stub-up ducts throughout length of elbow.
5. Install manufactured rigid steel conduit elbows for stub-ups at poles and equipment and at building entrances through floor.

    a. Couple steel conduits to ducts with adapters designed for this purpose, and encase coupling with 3 inches (75 mm) of concrete for a minimum of 12 inches (300 mm) on each side of the coupling.
    b. For stub-ups at equipment mounted on outdoor concrete bases and where conduits penetrate building foundations, extend steel conduit horizontally a minimum of 60 inches (1500 mm) from edge of foundation or equipment base. Install insulated grounding bushings on terminations at equipment.
    c. Seal conduits per NEC

## 3.4 PROTECTION

A. Protect coatings, finishes, and cabinets from damage and deterioration.

1. Repair damage to galvanized finishes with zinc-rich paint recommended by manufacturer.
2. Repair damage to PVC coatings or paint finishes with matching touchup coating recommended by manufacturer.

END OF SECTION 260533

# SECTION 265619 - LED EXTERIOR LIGHTING

## PART 1 - GENERAL

### 1.1 SUMMARY

A. Section Includes:

1. Exterior solid-state luminaires that are designed for and exclusively use LED lamp technology.
2. Luminaire supports.

### 1.2 DEFINITIONS

A. CCT: Correlated color temperature.

B. CRI: Color rendering index.

C. Fixture: See "Luminaire."

D. IP: International Protection or Ingress Protection Rating

E. Lumen: Measured output of lamp and luminaire, or both.

F. Luminaire: Complete lighting unit, including lamp, reflector, and housing.

### 1.3 ACTION SUBMITTALS

A. Product Data: For each type of luminaire.

### 1.4 INFORMATIONAL SUBMITTALS

A. Coordination Drawings: Plans, drawn to scale and coordinated.

B. Product Certificates: For each type of the following:

1. Luminaire.

### 1.5 WARRANTY

A. Warranty: Manufacturer and Installer agree to repair or replace components of luminaires that fail in materials or workmanship within specified warranty period.

1. Warranty Period: one year from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 LUMINAIRE REQUIREMENTS

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Lamp base complying with **IEC 60061-1**.

C. CRI of **minimum 70**. CCT of **3000 K**.

D. L70 lamp life of 4**0,000** hours.

E. Nominal Operating Voltage: **240 V ac**.

F. Lamp Rating: Lamp marked for **outdoor use**.

G. Source Limitations: Obtain luminaires from single source from a single manufacturer.

H. Source Limitations: For luminaires, obtain each color, grade, finish, type, and variety of luminaire from single source with resources to provide products of consistent quality in appearance and physical properties.

2.2 LUMINAIRE TYPES

A. Decorative Post Top:
   1. Manufacturer: 3-Brothers or approved equal.
   2. Luminaire-Mounting Height: 1800mm **height of luminaire from finished grade**.

2.3 MATERIALS

A. Metal Parts: Free of burrs and sharp corners and edges.

B. Sheet Metal Components: **Corrosion-resistant aluminum**. Form and support to prevent warping and sagging.

C. Diffusers and Globes:
   1. Glass: Annealed crystal glass unless otherwise indicated.

D. Lens and Refractor Gaskets: Use heat- and aging-resistant resilient gaskets to seal and cushion lenses and refractors in luminaire doors.

E. Reflecting surfaces shall have minimum reflectance as follows unless otherwise indicated:
   1. Diffusing Specular Surfaces: 75 percent.

F. Housings:

   1. Rigidly formed, weather- and light-tight enclosure that will not warp, sag, or deform in use.

## 2.4 FINISHES

A. Luminaire Finish: Manufacturer's standard paint applied to factory-assembled and -tested luminaire before shipping. Where indicated, match finish process and support materials.

B. Factory-Applied Finish for Aluminum Luminaires: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

1. Finish designations prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.

a. Color: Black.

# PART 3 - EXECUTION

## 3.1 GENERAL INSTALLATION REQUIREMENTS

A. Comply with NECA 1.

B. Fasten luminaire to structural support.

C. Wall-Mounted Luminaire Support:

1. **Attached to structural members in walls**.

D. Wiring Method: Install cables in raceways. Conceal raceways and cables.

E. **Install luminaires level, plumb, and square with finished grade**

F. Coordinate layout and installation of luminaires with other construction.

## 3.2 FIELD QUALITY CONTROL

A. Inspect each installed luminaire for damage. Replace damaged luminaires and components.

1. Operational Test: After installing luminaires, switches, and accessories, and after electrical circuitry has been energized, test units to confirm proper operation.

B. Luminaire will be considered defective if it does not pass tests and inspections.

C. Prepare a written report of tests, inspections, observations, and verifications indicating and interpreting results. If adjustments are made to lighting system, retest to demonstrate compliance with standards.

END OF SECTION 265619

SECTION 312000 - EARTH MOVING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Preparing subgrades for **slabs-on-grade, walks and pavements**
   2. Excavating and backfilling for buildings and structures.
   3. Sub-base course for concrete [**walks and pavements**].
   4. Excavating and backfilling trenches for utilities and pits for buried utility structures.

1.2 DEFINITIONS

A. Backfill: Soil material used to fill an excavation.

   1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.
   2. Final Backfill: Backfill placed over initial backfill to fill a trench.

B. Bedding Course: Aggregate layer placed over the excavated subgrade in a trench before laying pipe.

C. Borrow Soil: Satisfactory soil imported from off-site for use as fill or backfill.

D. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.

   1. Authorized Additional Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions as directed by Architect. Authorized additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.
   2. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions without direction by Architect. Unauthorized excavation, as well as remedial work directed by Architect, shall be without additional compensation.

E. Fill: Soil materials used to raise existing grades.

F. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.

G. Sub-base Course: Aggregate layer placed between the subgrade and base course for hot-mix asphalt pavement, or aggregate layer placed between the subgrade and a cement concrete pavement or a cement concrete or hot-mix asphalt walk.

H. Subgrade: Uppermost surface of an excavation or the top surface of a fill or backfill immediately below sub-base, drainage fill, drainage course, or topsoil materials.

I. Utilities: On-site underground pipes, conduits, ducts, and cables as well as underground services within buildings.

1.3 FIELD CONDITIONS

A. Do not commence earth-moving operations until plant-protection measures specified in Section 015639 "Temporary Tree and Plant Protection" are in place.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.

B. Satisfactory Soils: free of rock or gravel larger than **75 mm.**

C. Terms, descriptions, and gradations of granular soil materials in remaining paragraphs are examples only. Revise to comply with local practices and to suit Project. For example, granular materials may be referenced by state or local highway designations rather than by ASTM classifications.

D. Sub-base Material, base material and Engineering fill: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940/D 2940M; with at least 90 percent passing a 37.5-mm sieve and not more than 12 percent passing a 0.075-mm sieve.

E. Bedding Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940/D 2940M; except with 100 percent passing a 25-mm sieve and not more than 8 percent passing a 0.075-mm sieve.

2.2 ACCESSORIES

A. Warning Tape: Acid- and alkali-resistant, polyethylene film warning tape manufactured for marking and identifying underground utilities, 6 inches (150 mm) wide and 4 mils (0.1 mm) thick, continuously inscribed with a description of the utility; colored to comply with local practice or requirements of authorities having jurisdiction.

PART 3 - EXECUTION

3.1 PREPARATION

A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earth-moving operations.

B. Protect and maintain erosion and sedimentation controls during earth-moving operations.

## 3.2 EXCAVATION FOR STRUCTURES

A. Excavate to indicated elevations and dimensions within a tolerance of plus or minus 25 mm. If applicable, extend excavations a sufficient distance from structures for placing and removing concrete formwork, for installing services and other construction, and for inspections.

1. Excavations for Footings and Foundations: Do not disturb bottom of excavation. Excavate by hand to final grade just before placing concrete reinforcement. Trim bottoms to required lines and grades to leave solid base to receive other work.

B. Excavations at Edges of Tree- and Plant-Protection Zones:

1. Excavate by hand or with an air spade to indicated lines, cross sections, elevations, and subgrades. If excavating by hand, use narrow-tine spading forks to comb soil and expose roots. Do not break, tear, or chop exposed roots. Do not use mechanical equipment that rips, tears, or pulls roots.

## 3.3 EXCAVATION FOR WALKS AND PAVEMENTS

A. Excavate surfaces under walks and pavements to indicated lines, cross sections, elevations, and subgrades.

## 3.4 SOIL FILL

A. Place and compact fill material in layers to required elevations as follows:

1. Under grass and planted areas, use satisfactory soil material.
2. Under walks and pavements, use satisfactory soil material.
3. Under steps and ramps, use engineered fill.
4. Under footings and foundations, use engineered fill.

## 3.5 COMPACTION OF SOIL BACKFILLS AND FILLS

A. Place backfill and fill soil materials in layers not more than **200 mm** in loose depth for material compacted by heavy compaction equipment and not more than 100 mm in loose depth for material compacted by hand-operated tampers.

B. Place backfill and fill soil materials evenly on all sides of structures to required elevations and uniformly along the full length of each structure.

## 3.6 SUBBASE AND BASE COURSES UNDER PAVEMENTS AND WALKS

A. On prepared subgrade, place sub-base course[ **and base course**] under pavements and walks as follows:

1. Place sub-base course[ **and base course**] that exceeds 150 mm in compacted thickness in layers of equal thickness, with no compacted layer more than 150 mm thick or less than 3 75 mm thick.
2. Compact sub-base course[ **and base course**] at optimum moisture content to required grades, lines, cross sections, and thickness to not less than [**95**] <**Insert number**> percent of maximum dry unit weight according to [**ASTM D 698**] [**ASTM D 1557**].

## 3.7 FIELD QUALITY CONTROL

A. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earth moving only after test results for previously completed work comply with requirements.

B. Footing Subgrade: At footing subgrades, at least one test of each soil stratum will be performed to verify design bearing capacities. Subsequent verification and approval of other footing subgrades may be based on a visual comparison of subgrade with tested subgrade when approved by the COR.

C. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil materials to depth required; re-compact and retest until specified compaction is obtained.

## 3.8 PROTECTION

A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.

B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.

## 3.9 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Remove surplus satisfactory soil and waste materials, including unsatisfactory soil, trash, and debris, and legally dispose of them off Owner's property.

END OF SECTION 312000