

# **PHILIPPINE BIDDING DOCUMENTS**

Sixth Edition

# Procurement of INFRASTRUCTURE PROJECTS

Government of the Republic of the Philippines

**RETROFITTING OF LA UNION BUILDING** 

ITB-SSS-CIVIL No. 2023-013

**SEPTEMBER 2023** 

**G** Chairperson

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# Glossary of Terms, Abbreviations, and Acronyms

ABC – Approved Budget for the Contract.

ARCC – Allowable Range of Contract Cost.

BAC – Bids and Awards Committee.

**Bid** – A signed offer or proposal to undertake a contract submitted by a bidder in response to and in consonance with the requirements of the bidding documents. Also referred to as *Proposal* and *Tender*. (2016 revised IRR, Section 5[c])

**Bidder** – Refers to a contractor, manufacturer, supplier, distributor and/or consultant who submits a bid in response to the requirements of the Bidding Documents. (2016 revised IRR, Section 5[d])

**Bidding Documents** – The documents issued by the Procuring Entity as the bases for bids, furnishing all information necessary for a prospective bidder to prepare a bid for the Goods, Infrastructure Projects, and/or Consulting Services required by the Procuring Entity. (2016 revised IRR, Section 5[e])

**BIR** – Bureau of Internal Revenue.

**BSP** – Bangko Sentral ng Pilipinas.

**CDA** – Cooperative Development Authority.

**Consulting Services** – Refer to services for Infrastructure Projects and other types of projects or activities of the GOP requiring adequate external technical and professional expertise that are beyond the capability and/or capacity of the GOP to undertake such as, but not limited to: (i) advisory and review services; (ii) pre-investment or feasibility studies; (iii) design; (iv) construction supervision; (v) management and related services; and (vi) other technical services or special studies. (2016 revised IRR, Section 5[i])

**Contract** – Refers to the agreement entered into between the Procuring Entity and the Supplier or Manufacturer or Distributor or Service Provider for procurement of Goods and Services; Contractor for Procurement of Infrastructure Projects; or Consultant or Consulting Firm for Procurement of Consulting Services; as the case may be, as recorded in the Contract Form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.

**Contractor** – is a natural or juridical entity whose proposal was accepted by the Procuring Entity and to whom the Contract to execute the Work was awarded. Contractor as used in these Bidding Documents may likewise refer to a supplier, distributor, manufacturer, or consultant.

**CPI** – Consumer Price Index.

**DOLE** – Department of Labor and Employment.

**DTI** – Department of Trade and Industry.

**Foreign-funded Procurement or Foreign-Assisted Project** – Refers to procurement whose funding source is from a foreign government, foreign or international financing institution as specified in the Treaty or International or Executive Agreement. (2016 revised IRR, Section 5[b]).

**GFI** – Government Financial Institution.

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GOCC - Government-owned and/or -controlled corporation.

**Goods** – Refer to all items, supplies, materials and general support services, except Consulting Services and Infrastructure Projects, which may be needed in the transaction of public businesses or in the pursuit of any government undertaking, project or activity, whether in the nature of equipment, furniture, stationery, materials for construction, or personal property of any kind, including non-personal or contractual services such as the repair and maintenance of equipment and furniture, as well as trucking, hauling, janitorial, security, and related or analogous services, as well as procurement of materials and supplies provided by the Procuring Entity for such services. The term "related" or "analogous services" shall include, but is not limited to, lease or purchase of office space, media advertisements, health maintenance services, and other services essential to the operation of the Procuring Entity. (2016 revised IRR, Section 5[r])

**GOP** – Government of the Philippines.

**Infrastructure Projects** – Include the construction, improvement, rehabilitation, demolition, repair, restoration or maintenance of roads and bridges, railways, airports, seaports, communication facilities, civil works components of information technology projects, irrigation, flood control and drainage, water supply, sanitation, sewerage and solid waste management systems, shore protection, energy/power and electrification facilities, national buildings, school buildings, hospital buildings, and other related construction projects of the government. Also referred to as *civil works or works*. (2016 revised IRR, Section 5[u])

LGUs – Local Government Units.

**NFCC** – Net Financial Contracting Capacity.

NGA – National Government Agency.

**PCAB** – Philippine Contractors Accreditation Board.

PhilGEPS - Philippine Government Electronic Procurement System.

**Procurement Project** – refers to a specific or identified procurement covering goods, infrastructure project or consulting services. A Procurement Project shall be described, detailed, and scheduled in the Project Procurement Management Plan prepared by the agency which shall be consolidated in the procuring entity's Annual Procurement Plan. (GPPB Circular No. 06-2019 dated 17 July 2019)

**PSA** – Philippine Statistics Authority.

**SEC** – Securities and Exchange Commission.

**SLCC** – Single Largest Completed Contract.

SSS – Social Security System.

**Supplier** – refers to a citizen, or any corporate body or commercial company duly organized and registered under the laws where it is established, habitually established in business and engaged in the manufacture or sale of the merchandise or performance of the general services covered by his bid. (Item 3.8 of GPPB Resolution No. 13-2019, dated 23 May 2019). Supplier as used in these Bidding Documents may likewise refer to a distributor, manufacturer, contractor, or consultant.

**UN** – United Nations.

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Section I. Invitation to Bid



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#### REPUBLIC OF THE PHILIPPINES SOCIAL SECURITY SYSTEM East Avenue, Diliman, Quezon City Tel. Nos. (632)8709-7198\*(632)8920-6446 E-mail: <u>member relations@sss.gov.ph</u>\*Website http://www.sss.gov.ph

# Invitation to Bid ITB-SSS-Civil-2023-013

# **RETROFITTING OF LA UNION BUILDING**

		$\mathbf{D} : \mathbf{C} \mathbf{D} : 1$	G 1 1 1	
Approved Budget for the Contract	Delivery/	Price of Bid	Schedule	of Activities
(ABC)	Completion	Documents	Dat	e/Time
& Source of Fund	Period	(non- refundable)	Pre-bid Conference	Deadline of submission and receipt of bids
₽ 4,378,400.00	Within one	₱ 5,000.00	September 13, 2023	September 27, 2023
	hundred fifty		(Wednesday)	(Wednesday)
Approved 2023 Corporate	(150)		10:30 a.m.	2:00 p.m.
Operating Budget – Capital	calendar			_
Outlay with Code PAP 2023-	days from			
0183 of the Annual	receipt of			
Procurement Plan (APP)	Notice to			
	Proceed			
	(NTP) and			
	Signed			
	Contract			

- 1. The SOCIAL SECURITY SYSTEM (SSS) now invites bids for the above Procurement Project. Completion of the Works is required within one hundred fifty (150) calendar days from receipt of Notice to Proceed and Signed Contract. Bidders should have completed within five (5) years prior to the date of submission and receipt of bids, a contract similar to the Project. The description of an eligible bidder is contained in the Bidding Documents, particularly, in Section II (Instructions to Bidders).
- 2. Bids received in excess of the ABC shall be automatically rejected at Bid opening.
- 3. Bidding will be conducted through open competitive bidding procedures using non-discretionary "*pass/fail*" criterion as specified in the 2016 revised Implementing Rules and Regulations (IRR) of Republic Act (RA) No. 9184.
- 4. Interested bidders may obtain further information from *SSS* and inspect the Bidding Documents at the address in the last item of the ITB from Monday to Friday, 8:00 a.m. to 5:00 p.m.
- 5. A complete set of Bidding Documents may be acquired by interested Bidders starting 05 **September 2023 up to the scheduled submission & opening of bids** from the address stated in the last item of the ITB and upon payment of the applicable fee for the Bidding Documents, in the amount specified above.

The mode of payment will be on a cash basis payable at the SSS Cash Department, SSS Main Bldg., Ground floor, upon accomplishment of SSS Form R-6. The Bidding Documents shall be received personally by the prospective Bidder or his authorized representative.

It may also be **downloaded free of charge** from the website of the Philippine Government Electronic Procurement System (PhilGEPS) and the website of the SSS, provided that Bidders shall pay the applicable fee for the Bidding Documents not later than the submission of their bids.

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6. The SSS will hold a Pre-Bid Conference on the date and time specified above at the Bidding Room (formerly CDPRD Computer Room), 2nd Floor, SSS Main Bldg., East Avenue, Diliman, Quezon City which shall be open to prospective bidders, but attendance shall not be mandatory.

The Pre-Bid Conference will be conducted through online conference using Microsoft Teams. Kindly e-mail us on or before 12 September 2023, through e-mail address <u>bac@sss.gov.ph</u>, the following:

- a. Name of the representative and e-mail address; and
- b. Technical and administrative queries.
- 7. Bids must be duly received by the BAC Secretariat at the Bidding Room, 2nd Floor, SSS Main Building, East Avenue, Diliman, Quezon City on the deadline specified above. All Bids must be accompanied by a bid security in any of the acceptable forms and in the amount stated in the **ITB** Clause 14.

Bid opening shall be on the date and time specified above at the Bidding Room, 2nd Floor, SSS Main Building, East Avenue, Diliman, Quezon City. Bids will be opened in the presence of the Bidders' representatives who choose to attend at the address above. Late bids shall not be accepted.

- 8. References to the dates and times shall be based on Philippine Standard time. Should any of the above dates fall on a holiday, the deadline shall be extended to the same time on the immediately succeeding business day in Quezon City.
- 9. The SSS reserves the right to reject any and all bids, declare a failure of bidding, or not award the contract at any time prior to contract award in accordance with Section 36.5 and 41 of RA 9184 and its IRR, without thereby incurring any liability to the affected bidder or bidders.
- 10. The SSS assumes no obligation to compensate or indemnify parties for any expense or loss that they may incur as a result of their participation in the procurement process, nor does SSS BAC guarantees that an award will be made as a result of this invitation. Furthermore, the SSS reserves the right to waive any defects or formality in the responses to the eligibility requirements and to this invitation and reserves the right to accept the proposal most advantageous to the agency.
- 11. For further information, please refer to:

Bids & Awards Committee The Secretariat 2nd Flr., SSS Main Bldg., East Ave., Diliman, Q.C. Tel # (632) 8922-1070; 8709-7198 local 5492 & 6382 Email – bac@sss.gov.ph

12. Bidding documents may be downloaded from the PROCUREMENT tab at <u>www.sss.gov.ph</u> starting **05 September 2023**.

THE CHAIRPERSON **BIDS & AWARDS COMMITTEE** 

ref.: itb-sss-civil-2023-013- Retrofitting La Union Building

Section II. Instructions to Bidders



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# 1. Scope of Bid

The Procuring Entity, *Social Security System* wishes to receive Bids for the Retrofitting of La Union Building, with identification number *ITB-SSS-Civil-2023-013*.

The Procurement Project (referred to herein as "Project") is for the construction of Works, as described in Section VI (Specifications).

# 2. Funding Information

- 2.1. The GOP through the source of funding as indicated below for *CY 2023* in the amount of Four Million Three Hundred Seventy-Eight Thousand Four Hundred Pesos (₱ 4,378,400.00).
- 2.2. The source of funding is: Approved 2023 Corporate Operating Budget Capital Outlay with Code PAP 2023-0183 of the 2023 Annual Procurement Plan.

# **3. Bidding Requirements**

The Bidding for the Project shall be governed by all the provisions of RA No. 9184 and its 2016 revised IRR, including its Generic Procurement Manual and associated policies, rules and regulations as the primary source thereof, while the herein clauses shall serve as the secondary source thereof.

Any amendments made to the IRR and other GPPB issuances shall be applicable only to the ongoing posting, advertisement, or invitation to bid by the BAC through the issuance of a supplemental or bid bulletin.

The Bidder, by the act of submitting its Bid, shall be deemed to have inspected the site, determined the general characteristics of the contracted Works and the conditions for this Project, such as the location and the nature of the work; (b) climatic conditions; (c) transportation facilities; (c) nature and condition of the terrain, geological conditions at the site communication facilities, requirements, location and availability of construction aggregates and other materials, labor, water, electric power and access roads; and (d) other factors that may affect the cost, duration and execution or implementation of the contract, project, or work and examine all instructions, forms, terms, and project requirements in the Bidding Documents.

# 4. Corrupt, Fraudulent, Collusive, Coercive, and Obstructive Practices

The Procuring Entity, as well as the Bidders and Contractors, shall observe the highest standard of ethics during the procurement and execution of the contract. They or through an agent shall not engage in corrupt, fraudulent, collusive, coercive, and obstructive practices defined under Annex "I" of the 2016 revised IRR of RA No. 9184 or other integrity violations in competing for the Project.

# 5. Eligible Bidders

- 5.1. Only Bids of Bidders found to be legally, technically, and financially capable will be evaluated.
- 5.2. The Bidder must have an experience of having completed a Single Largest Completed Contract (SLCC) that is similar to this Project, equivalent to at least fifty percent (50%) of the ABC adjusted, if necessary, by the Bidder to current prices using the PSA's CPI, except under conditions provided for in Section 23.4.2.4 of the 2016 revised IRR of RA No. 9184.

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A contract is considered to be "similar" to the contract to be bid if it has the major categories of work stated in the **BDS**.

- 5.3. For Foreign-funded Procurement, the Procuring Entity and the foreign government/foreign or international financing institution may agree on another track record requirement, as specified in the Bidding Document prepared for this purpose.
- 5.4. The Bidders shall comply with the eligibility criteria under Section 23.4.2 of the 2016 IRR of RA No. 9184.

# 6. Origin of Associated Goods

There is no restriction on the origin of Goods other than those prohibited by a decision of the UN Security Council taken under Chapter VII of the Charter of the UN.

# 7. Subcontracts

7.1. The Procuring Entity has prescribed that: **Subcontracting is not allowed.** 

# 8. **Pre-Bid Conference**

The Procuring Entity will hold a pre-bid conference for this Project on the specified date and time and either at its physical address **Bidding Room**, **2nd Floor**, **SSS Main Bldg.**, **East Avenue**, **Diliman**, **Quezon City and/or through online conference using Microsoft Teams** as indicated in paragraph 6 of the **IB**.

# 9. Clarification and Amendment of Bidding Documents

Prospective bidders may request for clarification on and/or interpretation of any part of the Bidding Documents. Such requests must be in writing and received by the Procuring Entity, either at its given address or through electronic mail indicated in the **IB**, at least ten (10) calendar days before the deadline set for the submission and receipt of Bids.

# 10. Documents Comprising the Bid: Eligibility and Technical Components

- 10.1. The first envelope shall contain the eligibility and technical documents of the Bid as specified in Section IX. Checklist of Technical and Financial Documents.
- 10.2. If the eligibility requirements or statements, the bids, and all other documents for submission to the BAC are in foreign language other than English, it must be accompanied by a translation in English, which shall be authenticated by the appropriate Philippine foreign service establishment, post, or the equivalent office having jurisdiction over the foreign bidder's affairs in the Philippines. For Contracting Parties to the Apostille Convention, only the translated documents shall be authenticated through an apostille pursuant to GPPB Resolution No. 13-2019 dated 23 May 2019. The English translation shall govern, for purposes of interpretation of the bid.
- 10.3. A valid PCAB License is required, and in case of joint ventures, a valid special PCAB License, and registration for the type and cost of the contract for this Project. Any additional type of Contractor license or permit shall be indicated in the **BDS**.

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- 10.4. A List of Contractor's key personnel (e.g., Project Manager, Project Engineers, Materials Engineers, and Foremen) assigned to the contract to be bid, with their complete qualification and experience data shall be provided. These key personnel must meet the required minimum years of experience set in the **BDS**.
- 10.5. A List of Contractor's major equipment units, which are owned, leased, and/or under purchase agreements, supported by proof of ownership, certification of availability of equipment from the equipment lessor/vendor for the duration of the project, as the case may be, must meet the minimum requirements for the contract set in the **BDS**.

# 11. Documents Comprising the Bid: Financial Component

- 11.1. The second bid envelope shall contain the financial documents for the Bid as specified in **Section IX. Checklist of Technical and Financial Documents**.
- 11.2. Any bid exceeding the ABC indicated in paragraph 1 of the **IB** shall not be accepted.
- 11.3. For Foreign-funded procurement, a ceiling may be applied to bid prices provided the conditions are met under Section 31.2 of the 2016 revised IRR of RA No. 9184.

# **12.** Alternative Bids

Bidders shall submit offers that comply with the requirements of the Bidding Documents, including the basic technical design as indicated in the drawings and specifications. Unless there is a value engineering clause in the **BDS**, alternative Bids shall not be accepted.

# 13. Bid Prices

All bid prices for the given scope of work in the Project as awarded shall be considered as fixed prices, and therefore not subject to price escalation during contract implementation, except under extraordinary circumstances as determined by the NEDA and approved by the GPPB pursuant to the revised Guidelines for Contract Price Escalation guidelines.

# 14. Bid and Payment Currencies

- 14.1. Bid prices may be quoted in the local currency or tradeable currency accepted by the BSP at the discretion of the Bidder. However, for purposes of bid evaluation, Bids denominated in foreign currencies shall be converted to Philippine currency based on the exchange rate as published in the BSP reference rate bulletin on the day of the bid opening.
- 14.2. Payment of the contract price shall be made in Philippine Pesos.

# 15. Bid Security

15.1. The Bidder shall submit a Bid Securing Declaration or any form of Bid Security in the amount indicated in the **BDS**, which shall be not less than the percentage of the ABC in accordance with the schedule in the **BDS**.

15.2. The Bid and bid security shall be valid until <u>one hundred twenty (120)</u> calendar days reckoned from the date of the submission and opening of <u>bids</u>. Any bid not accompanied by an acceptable bid security shall be rejected by the Procuring Entity as non-responsive.

# 16. Sealing and Marking of Bids

Each Bidder shall submit one copy of the first and second components of its Bid.

The Procuring Entity may request additional hard copies and/or electronic copies of the Bid. However, failure of the Bidders to comply with the said request shall not be a ground for disqualification.

If the Procuring Entity allows the submission of bids through online submission to the given website or any other electronic means, the Bidder shall submit an electronic copy of its Bid, which must be digitally signed. An electronic copy that cannot be opened or is corrupted shall be considered non-responsive and, thus, automatically disqualified.

# 17. Deadline for Submission of Bids

The Bidders shall submit on the specified date and time and either at its physical address or through online submission as indicated in paragraph 7 of the **IB**.

# 18. Opening and Preliminary Examination of Bids

18.1. The BAC shall open the Bids in public at the time, on the date, and at the place specified in paragraph 9 of the **IB**. The Bidders' representatives who are present shall sign a register evidencing their attendance. In case videoconferencing, webcasting or other similar technologies will be used, attendance of participants shall likewise be recorded by the BAC Secretariat.

In case the Bids cannot be opened as scheduled due to justifiable reasons, the rescheduling requirements under Section 29 of the 2016 revised IRR of RA No. 9184 shall prevail.

18.2. The preliminary examination of Bids shall be governed by Section 30 of the 2016 revised IRR of RA No. 9184.

# **19.** Detailed Evaluation and Comparison of Bids

- 19.1. The Procuring Entity's BAC shall immediately conduct a detailed evaluation of all Bids rated "*passed*" using non-discretionary pass/fail criteria. The BAC shall consider the conditions in the evaluation of Bids under Section 32.2 of 2016 revised IRR of RA No. 9184.
- 19.2. If the Project allows partial bids, all Bids and combinations of Bids as indicated in the **BDS** shall be received by the same deadline and opened and evaluated simultaneously so as to determine the Bid or combination of Bids offering the lowest calculated cost to the Procuring Entity. Bid Security as required by **ITB** Clause 15 shall be submitted for each contract (lot) separately.
- 19.3. In all cases, the NFCC computation pursuant to Section 23.4.2.6 of the 2016 revised IRR of RA No. 9184 must be sufficient for the total of the ABCs for all the lots participated in by the prospective Bidder.

# 20. Post Qualification

Within a non-extendible period of five (5) calendar days from receipt by the Bidder of the notice from the BAC that it submitted the Lowest Calculated Bid, the Bidder shall submit its latest income and business tax returns filed and paid through the BIR Electronic Filing and Payment System (eFPS), and other appropriate licenses and permits required by law and stated in the **BDS**.

# 21. Signing of the Contract

The documents required in Section 37.2 of the 2016 revised IRR of RA No. 9184 shall form part of the Contract. Additional Contract documents are indicated in the **BDS**.

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Section III. Bid Data Sheet

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# **Bid Data Sheet**

ITB Clause				
5.2	For this purpose, contracts similar to the Project refer to contracts which have the same major categories of work, which shall involve structural retrofitting of buildings, bridges and similar structures using fiber-reinforced polymer (FRP) system as the primary retrofitting methodology and materials used within five (5) years prior to the date of submission and receipt of bids.			
7.1	Subcontracting is not allow	wed.		
10.3	PCAB License and Regist	ration		
	License Category	: C & D		
	Size Range	: Small A		
	Classification	: General Buildin	ıg	
	The bidder shall have at structural retrofitting work	least five (5) years of the second se	of ex	perience in construction/
10.4	The key personnel must below:	meet the required min	imur	n years of experience set
	Kay Parsonnal	General Experience		Palavant Experience
	Droiget Manager (Civil	General Experience	D.,	ilding construction on d/on
	Engineer)	10 years	Вu	structural retrofitting
	Project Engineer (Civil Engineer)	5 years	Bu	ilding construction and/or structural retrofitting
	Materials Engineer	DPWH Accredi	ited N	Aaterials Engineer I
	Foreman	5 years	Bu	ilding construction and/or structural retrofitting
	Construction Safety and Health Officer	40 hrs. semina	ar on	Health and Safety
Except for the Foreman, all key personnel engineers / architects in good standing.			sho	ould be PRC-registered
10.5	The minimum major equip	pment requirements are	e the	following:
	Constructio	n Equipment		Required No. of Units
	Portable Jack Hammer			1 unit
	Motorized Fiber Epoxy (	Saturated Machine)		1 unit
	Power Cutter for FRP			1 unit
	Air Compressor (all mod	els)		1 unit
	Pressurized Epoxy Inject	or		1 unit
	Must be supported by docu agreements. For lease agr availability of equipment.	uments like proof of ow reements, such proof r	ners nust	hip, lease and/or purchase include a certification of
12	Alternative bids shall not be accepted.			
15.1	The bid security shall be in the form of a Bid Securing Declaration or any of the following forms and amounts:			

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	a. The amount of not less than ₱ 87,568.00, if bid security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit;
	b. The amount of not less than ₱ 218,920.00 if bid security is in Surety Bond.
19.2	Partial bid is not allowed. The infrastructure project is packaged into 1 lot and the lot shall not be divided into sub-lots for the purpose of bidding, evaluation, and contract award.
20	The Lowest Calculated Bidder shall submit the following:
	1. Registration certificate from Securities and Exchange Commission (SEC) for corporation including Articles of Incorporation and General Information Sheet (GIS), Department of Trade and Industry (DTI) for sole proprietorship, or Cooperative Development Authority (CDA) for cooperatives or its equivalent document
	2. Mayor's or Business permit issued by the city or municipality where the principal place of business of the prospective bidder is located, or the equivalent document for Exclusive Economic Zones or Areas;
	3. Tax clearance per E.O. No. 398, s. 2005, as finally reviewed and approved by the Bureau of Internal Revenue (BIR)
	4. Latest Audited Financial Statements
	5. Latest income tax return corresponding to the Audited Financial Statements submitted, filed electronically (EFPS);
	6. Quarterly VAT (business tax returns) per Revenue Regulations 3-2005 for the last six (6) months prior to the submission and opening of bids filed electronically (EFPS);
21	No further instruction.

Section IV. General Conditions of Contract

# 1. Scope of Contract

This Contract shall include all such items, although not specifically mentioned, that can be reasonably inferred as being required for its completion as if such items were expressly mentioned herein. All the provisions of RA No. 9184 and its 2016 revised IRR, including the Generic Procurement Manual, and associated issuances, constitute the primary source for the terms and conditions of the Contract, and thus, applicable in contract implementation. Herein clauses shall serve as the secondary source for the terms and conditions of the Contract.

This is without prejudice to Sections 74.1 and 74.2 of the 2016 revised IRR of RA No. 9184 allowing the GPPB to amend the IRR, which shall be applied to all procurement activities, the advertisement, posting, or invitation of which were issued after the effectivity of the said amendment.

# 2. Sectional Completion of Works

If sectional completion is specified in the **Special Conditions of Contract (SCC)**, references in the Conditions of Contract to the Works, the Completion Date, and the Intended Completion Date shall apply to any Section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works).

# **3. Possession of Site**

- 3.1 The Procuring Entity shall give possession of all or parts of the Site to the Contractor based on the schedule of delivery indicated in the SCC, which corresponds to the execution of the Works. If the Contractor suffers delay or incurs cost from failure on the part of the Procuring Entity to give possession in accordance with the terms of this clause, the Procuring Entity's Representative shall give the Contractor a Contract Time Extension and certify such sum as fair to cover the cost incurred, which sum shall be paid by Procuring Entity.
  - 3.2 If possession of a portion is not given by the above date, the Procuring Entity will be deemed to have delayed the start of the relevant activities. The resulting adjustments in contract time to address such delay may be addressed through contract extension provided under Annex "E" of the 2016 revised IRR of RA No. 9184.

# 4. The Contractor's Obligations

The Contractor shall employ the key personnel named in the Schedule of Key Personnel indicating their designation, in accordance with **ITB** Clause 10.3 and specified in the **BDS**, to carry out the supervision of the Works.

The Procuring Entity will approve any proposed replacement of key personnel only if their relevant qualifications and abilities are equal to or better than those of the personnel listed in the Schedule.

# 5. **Performance Security**

5.1. Within ten (10) calendar days from receipt of the Notice of Award from the Procuring Entity but in no case later than the signing of the contract by both parties, the successful Bidder shall furnish the performance security in any of the forms prescribed in Section 39 of the 2016 revised IRR.

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5.2. The Contractor, by entering into the Contract with the Procuring Entity, acknowledges the right of the Procuring Entity to institute action pursuant to RA No. 3688 against any subcontractor be they an individual, firm, partnership, corporation, or association supplying the Contractor with labor, materials and/or equipment for the performance of this Contract.

# 6. Site Investigation Reports

The Contractor, in preparing the Bid, shall rely on any Site Investigation Reports referred to in the **SCC** supplemented by any information obtained by the Contractor.

# 7. Warranty

- 7.1. In case the Contractor fails to undertake the repair works under Section 62.2.2 of the 2016 revised IRR, the Procuring Entity shall forfeit its performance security, subject its property(ies) to attachment or garnishment proceedings, and perpetually disqualify it from participating in any public bidding. All payables of the GOP in his favor shall be offset to recover the costs.
- 7.2. The warranty against Structural Defects/Failures, except that occasioned-on force majeure, shall cover the period from the date of issuance of the Certificate of Final Acceptance by the Procuring Entity. Specific duration of the warranty is found in the **SCC**.

# 8. Liability of the Contractor

Subject to additional provisions, if any, set forth in the **SCC**, the Contractor's liability under this Contract shall be as provided by the laws of the Republic of the Philippines.

If the Contractor is a joint venture, all partners to the joint venture shall be jointly and severally liable to the Procuring Entity.

# 9. Termination for Other Causes

Contract termination shall be initiated in case it is determined *prima facie* by the Procuring Entity that the Contractor has engaged, before, or during the implementation of the contract, in unlawful deeds and behaviors relative to contract acquisition and implementation, such as, but not limited to corrupt, fraudulent, collusive, coercive, and obstructive practices as stated in **ITB** Clause 4.

# 10. Dayworks

Subject to the guidelines on Variation Order in Annex "E" of the 2016 revised IRR of RA No. 9184, and if applicable as indicated in the **SCC**, the Dayworks rates in the Contractor's Bid shall be used for small additional amounts of work only when the Procuring Entity's Representative has given written instructions in advance for additional work to be paid for in that way.

# 11. Program of Work

11.1. The Contractor shall submit to the Procuring Entity's Representative for approval the said Program of Work showing the general methods, arrangements, order, and timing for all the activities in the Works. The submissions of the Program of Work are indicated in the **SCC**.

11.2. The Contractor shall submit to the Procuring Entity's Representative for approval an updated Program of Work at intervals no longer than the period stated in the **SCC**. If the Contractor does not submit an updated Program of Work within this period, the Procuring Entity's Representative may withhold the amount stated in the **SCC** from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Program of Work has been submitted.

# 12. Instructions, Inspections and Audits

The Contractor shall permit the GOP or the Procuring Entity to inspect the Contractor's accounts and records relating to the performance of the Contractor and to have them audited by auditors of the GOP or the Procuring Entity, as may be required.

# 13. Advance Payment

The Procuring Entity shall, upon a written request of the Contractor which shall be submitted as a Contract document, make an advance payment to the Contractor in an amount not exceeding fifteen percent (15%) of the total contract price, to be made in lump sum, or at the most two installments according to a schedule specified in the **SCC**, subject to the requirements in Annex "E" of the 2016 revised IRR of RA No. 9184.

# 14. Progress Payments

The Contractor may submit a request for payment for Work accomplished. Such requests for payment shall be verified and certified by the Procuring Entity's Representative/Project Engineer. Except as otherwise stipulated in the **SCC**, materials and equipment delivered on the site but not completely put in place shall not be included for payment.

# **15.** Operating and Maintenance Manuals

- 15.1. If required, the Contractor will provide "as built" Drawings and/or operating and maintenance manuals as specified in the **SCC**.
- 15.2. If the Contractor does not provide the Drawings and/or manuals by the dates stated above, or they do not receive the Procuring Entity's Representative's approval, the Procuring Entity's Representative may withhold the amount stated in the **SCC** from payments due to the Contractor.

Section V. Special Conditions of Contract

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# **Special Conditions of Contract**

GCC Clause	
2	No sectional completion dates.
3.1	The <b>SOCIAL SECURITY SYSTEM</b> shall give possession of all parts of the Site to the Contractor for the duration of the contract which shall commence upon receipt of the Notice to Proceed and Contract/Job Order.
6	Not Applicable
7.2	Fifteen (15) years from issuance of Certificate of Final Acceptance by the Branch Support Services Department
8	Liability of the Contractor
	1. CONFIDENTIALITY. Neither party shall, without the prior written consent of the other, disclose or make available to any person, make public, or use directly or indirectly, except for the performance and implementation of the works, any confidential information, acquired from an information holder in connection with the performance of this Contract, unless: (i) the information is known to the disclosing party, as evidenced by its written records, prior to obtaining the same from the information holder and is not otherwise subject to disclosure restrictions on the disclosing party, (ii) the information is disclosed to the disclosing party by a third party who did not receive the same, directly or indirectly, from an information holder, and who has no obligation of secrecy with respect thereto, or (iii) required to be disclosed by law.
	The obligation of confidentiality by both parties, as provided herein, shall survive the termination of the Agreement.
	2. MERGER AND CONSOLIDATION. In case of merger, consolidation or change of ownership of the CONTRACTOR with other company, it is the responsibility of the surviving company/consolidated company/acquiring entity to inform SSS of the change in corporate structure/ownership. Failure to do so shall translate in such company assuming all liabilities of the acquired/merged company under the Agreement.
	3. FORCE MAJEURE. SUPPLIER shall not be liable for forfeiture of its performance security, liquidated damages, or termination for default if and to the extent that CONTRACTOR's delay in performance or other failure to perform its obligations under this Agreement is the result of a force majeure.
	For purposes of this Agreement the terms "force majeure" and "fortuitous event" may be used interchangeably. In this regard, a fortuitous event or force majeure shall be interpreted to mean an event which CONTRACTOR could not have foreseen, or which though foreseen, was inevitable. It shall not include ordinary unfavorable weather conditions; and any other cause the effects of which could have been avoided with the exercise of reasonable diligence by CONTRACTOR. Such events may include, but not limited to, acts of SSS in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.
	If a force majeure situation arises, CONTRACTOR shall promptly notify SSS in writing of such condition and the cause thereof. Unless otherwise directed by SSS in writing, CONTRACTOR shall continue to perform its obligations under this Agreement as far as is reasonably practical and shall seek all reasonable alternative means for performance not prevented by the force majeure.

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4. NON-ASSIGNMENT. CONTRACTOR shall not assign its rights or obligations under this Agreement, in whole or in part, except with SSS's prior written consent. CONTRACTOR shall not subcontract in whole or in part the PROJECT and deliverables subject of this Agreement without the written consent of SSS.
5. WAIVER. Failure by either party to insist upon the other strict performance of any of the terms and conditions hereof shall not be deemed a relinquishment or waiver of any subsequent breach or default of the terms and conditions hereof, which can only be deemed made if expressed in writing and signed by its duly authorized representative. No such waiver shall be construed as modification of any of the provisions of the Agreement or as a waiver of any past or future default or breach hereof, except as expressly stated in such waiver.
6. CUMULATIVE REMEDIES. Any and all remedies granted to the parties under the applicable laws and the Contract shall be deemed cumulative and may therefore, at the sole option and discretion, be availed of by the aggrieved party simultaneously, successively, or independently.
7. NO EMPLOYER-EMPLOYEE RELATIONSHIP. It is expressly and manifestly understood and agreed upon that the employees of CONTRACTOR assigned to perform the PROJECT are not employees of SSS. Neither is there an employer-employee relationship between SSS and CONTRACTOR.
The Agreement does not create an employer-employee relationship between SSS and the CONTRACTOR including its personnel; that the services rendered by the personnel assigned by CONTRACTOR to SSS in the performance of its obligation under the contract do not represent government service and will not be credited as such; that its personnel assigned to SSS are not entitled to benefits enjoyed by SSS' officials and employees such as Personal Economic Relief Allowance (PERA), Representation and Transportation Allowance (RATA), ACA, etc.; that these personnel are not related within the third degree of consanguinity or affinity to the contracting officer and appointing authority of SSS; that they have not been previously dismissed from the government service by reason of an administrative case; that they have not reached the compulsory retirement age of sixty-five (65); and that they possess the education, experience and skills required to perform the job. The CONTRACTOR hereby acknowledges that no authority has been given by SSS or any of its personnel to CONTRACTOR's employees are to be construed merely as a measure taken by the former to ensure and enhance the quality of project performed hereunder. The CONTRACTOR shall, at all times, exercise supervision and control over its employees in the performance of its obligations under the contract.
8. PARTNERSHIP. Nothing in the contract shall constitute a partnership between the parties. No party or its agents or employees shall be deemed to be the agent, employee or representative of any other party.
9. COMPLIANCE WITH SS LAW. CONTRACTOR shall report all its employees to SSS for coverage and their contributions, as well as, all amortizations for salary/education/calamity and other SSS loans shall be updated. Should CONTRACTOR fail to comply with its obligations under the provisions of the SS Law and Employees' Compensation Act, SSS shall have the authority to deduct any unpaid SS and EC contributions, salary, educational, emergency and/or calamity loan amortizations, employer's liability for damages, including interests and penalties from CONTRACTOR's receivables under this Agreement.

24 Angin Further, prescription does not run against SSS for its failure to demand SS contributions or payments from CONTRACTOR. Moreover, CONTRACTOR shall forever hold in trust SS contributions or payments of its employees until the same is fully remitted to SSS.

10. COMPLIANCE WITH LABOR LAWS. CONTRACTOR, as employer of the personnel assigned to undertake the PROJECT, shall comply with all its obligations under existing laws and their implementing rules and regulations on the payment of minimum wage, overtime pay, and other labor-related benefits as well as remittances or payment of the appropriate amount or contributions/payment (SSS, EC, Pag-IBIG, PhilHealth and taxes) with concerned government agencies/offices.

It is agreed further, that prior to the release of any payment by SSS to SUPPLIER, its President or its duly authorized representative, shall submit a sworn statement that all monies due to all its employees assigned to the PROJECT as well as benefits by law and other related labor legislation have been paid by CONTRACTOR and that he/she assumed full responsibility thereof.

11. COMPLIANCE WITH TAX LAWS. CONTRACTOR shall, in compliance with tax laws, pay the applicable taxes in full and on time and shall regularly present to SSS within the duration of the Contract, tax clearance from the Bureau of Internal Revenue (BIR) as well as copy of its income and business tax returns duly stamped by the BIR and duly validated with the tax payments made thereon. Failure by CONTRACTOR to comply with the foregoing shall entitle SSS to suspend payment of the Contract Price.

As required under Executive Order (EO) 398, s. 2005, CONTRACTOR shall submit income and business tax returns duly stamped and received by the BIR, before entering and during the duration of this Agreement. CONTRACTOR, through its responsible officer, shall also certify under oath that it is free and clear of all tax liabilities to the government. CONTRACTOR shall pay taxes in full and on time and that failure to do so will entitle SSS to suspend or terminate this Agreement.

- 12. LIQUIDATED DAMAGES. If CONTRACTOR fails to satisfactorily deliver any or all of the Goods and/or to perform the Services within the period(s) specified in the PBD inclusive of duly granted time extensions if any, SSS shall, without prejudice to its other remedies under this Agreement and under the applicable law, deduct from the Contract Price, as liquidated damages, the applicable rate of one tenth (1/10) of one (1) percent of the cost of the unperformed portion for every day of delay until actual delivery or performance. Once the amount of liquidated damages reaches ten percent (10%), SSS may rescind or terminate this Agreement, without prejudice to other courses of action and remedies open to it.
- 13. HOLD FREE and HARMLESS. SUPPLIER agrees to defend, indemnify, and hold SSS free and harmless from any and all claims, damages, expenses, fines, penalties and/or liabilities of whatever nature and kind, whether in law or equity, that may arise by reason of the implementation of the Agreement. In addition, CONTRACTOR agrees to indemnify SSS for any damage as a result of said implementation.

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	SUPPLIER hereby assumes full responsibility for any injury, including death, loss or damage which may be caused to SSS' employees or property or third person due to CONTRACTOR's employees' fault or negligence, and further binds itself to hold SSS free and harmless from any of such injury or damage. SSS shall not be responsible for any injury, loss or damage which CONTRACTOR or any of its employees may sustain in the performance of CONTRACTOR's obligations under this Agreement.
	14. SETTLEMENT OF DISPUTES. If any dispute or difference of any kind whatsoever shall arise between SSS and CONTRACTOR in connection with or arising out of this Agreement, the Parties shall make every effort to resolve amicably such dispute or difference by mutual consultation.
	If after thirty (30) days, the Parties have failed to resolve their dispute or difference by such mutual consultation, then either SSS or CONTRACTOR may give notice to the other Party of its intention to commence arbitration, in accordance with RA No. 876, otherwise known as the "Arbitration Law" and RA No. 9285, otherwise known as the "Alternative Dispute Resolution Act of 2004," in order to settle their disputes.
	No arbitration in respect of this matter may be commenced unless such notice is given.
	Notwithstanding any reference to arbitration herein, the Parties shall continue to perform their respective obligations under this Agreement unless they otherwise agree.
	15. VENUE OF ACTIONS. In the event court action is necessary in order to promote Arbitration, such action shall be filed only before the proper courts of Quezon City, to the exclusion of all other venues.
	16. GOVERNING LAW. The Agreement shall be governed by and interpreted according to the laws of the Republic of the Philippines.
	17. AMENDMENTS. This Agreement may be amended only in writing and executed by the parties or their duly authorized representatives.
	18. SEPARABILITY. If any one or more of the provisions contained in the contract or any document executed in connection herewith shall be invalid, illegal or unenforceable in any respect under any applicable law, then: (i) the validity, legality and enforceability of the remaining provisions contained herein or therein shall not in any way be affected or impaired and shall remain in full force and effect; and (ii) the invalid, illegal or unenforceable provision shall be replaced by the parties immediately with a term or provision that is valid, legal and enforceable and that comes closest to expressing the intention of such invalid illegal or unenforceable term of provision.
	19. BINDING EFFECT. The Agreement shall be binding upon the Parties hereto, their assignee/s and successor/s-in-interest.
10	Dayworks are applicable at the rate shown in the Contractor's original Bid.
11.1	The Contractor shall submit the Program of Work to the Procuring Entity's Representative within <b>five (5) calendar days</b> after the conduct of pre-construction meeting.

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11.2	The Program of Work update must be submitted within seven (7) calendar days from notice of change in the general methods, arrangements, order, and timing for all the activities, if any.				
	Ten percent (10%) of the progress billing will be withheld on top of applicable ten percent (10%) retention money for late submission of an updated Program of Work.				
13	Advance payment is not	allowed.			
14	Progress payment shall be made in four (4) billings and upon written request by the Contractor, following the matrix below:				
	PROGRESS PAYMENT	BASIS OF PAYMENT			
	1 <sup>st</sup> Billing	20% or more work accomplishments			
	2 <sup>nd</sup> Billing 50% or more work accomplishments				
	3 <sup>rd</sup> Billing 75% or more work accomplishments				
4 <sup>th</sup> or Final Billing One Hundred percent (100%) completion of the project and upon issuance of Certificate of Completion as certified by the Procuring Entity's Representative/s					
	Materials and equipment delivered on the site but not completely put in place sh not be included for payment.				
	The retention money and the cumulative value of the work previously certified and paid for shall be deducted from the progress payments as prescribed in item 5 of Annex E of the Revised IRR of RA 9184.				
15.1	The contractor must submit the "as built" drawings within fourteen (14) calendar days from the completion of the project.				
15.2	SSS shall withhold ten submit "as built" drawin the project.	percent (10%) of the amount of Final Billing for gs within fourteen (14) calendar days from the co	or failing to ompletion of		

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Section VI. Specifications

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#### **PROJECT : RETROFITTING OF LA UNION BUILDING**

#### **SPECIFICATIONS**

#### A. GENERAL REQUIREMENTS

- A.1. Scope of Work
  - a. The work contemplated under this Contract shall consist of furnishing of all materials, labor, plant, tools and equipment, permits including the satisfactory performance of all work necessary for the complete execution of all work as shown on the plans, specifications and other contract documents. The following are the scope of work:

Retrofitting Works (refer to "Annex A" for details)

- 1. Surface preparation/repair prior to application of FRP and/or enlargement of structural beams/girders and columns.
- 2. Application of FRP system including provision of plastering or topcoat for composite fibers and enlarged beams/girders and columns.
- 3. Restoration of all affected areas, surfaces, finishes, fixtures/equipment, utilities that are affected during retrofitting works.

The General Contractor is required to submit material testing results, detailed methodologies and drawings as required per Technical Specifications.

Miscellaneous Works

- 1. Provision/ installation of safety signage, dust barriers, board-ups, floor coverings and other safety requirements for the protection of SSS personnel and clients, properties, Contractor's personnel, etc. at the work site and other affected areas.
- 2. Removal of existing ceiling covers, joists, etc. to provide access during installation works.
- 3. Repair/ restoration of affected ceiling, wall surfaces, floor finishes, fixtures and other affected components of electro-mechanical system, and structured cabling/ datacom.
- 4. Temporary relocation/ transfer of employee workstations and office equipment that will be affected by the retrofitting works.

Provide temporary power and datacom outlets at the relocation space. Return all affected workstations and office equipment to its original location immediately after restoration works were deemed complete and accepted by the Implementing Unit. Ensure that all power and datacom outlets are properly working and/or energized.

As-built Plan and Electronic File

- 1. Preparation and submission of three (3) sets as-built plans in 20" x 30" blueprint format duly signed and sealed by the Contractor's Structural Engineer upon checking/review by the Structural Design Consultant of the retrofitting project.
- 2. The Contractor shall likewise submit electronic file copy of as-built plan in CAD format (should be compatible with earlier versions of AutoCAD software).
- b. Materials and work deemed necessary to complete the project but not specifically mentioned in the Specifications, working drawings or in the other contract documents are inferred and shall be supplied, installed and rendered by the Contractor without extra cost to the Owner. Such material shall be of the highest quality available, installed and applied in workmanlike manner at prescribed or appropriate locations.

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#### A.2 Workmanship

All required phases of work shall be done by skilled and competent men who regularly engaged or specialized in the type of work specified. Workmanship shall be the very best trade practice.

#### A.3 Site Examination

Examine the site premises and all conditions apparent and visible therein. Consider all such conditions that may affect work. Measure every existing work/structure at site. Verify all given dimensions and deviations in the plans/ drawings and Bill of Quantities. It shall be understood that the work covers all exposed external surfaces regardless of measurements made.

#### A.4 Protection of Work and Property

Provide adequate protection on the existing furniture, equipment, and other areas not affected by the work specified. Place warning signs where work is being undertaken. Remove work materials damaged by failure to provide protection. Replace with new work materials at no extra cost to the Owner.

Any damages incurred during the activity shall be restored/ repaired by the Contractor at his own expense and shall be dine in as satisfactory and approved manner.

Submit Construction Safety and Health Program (CSHP) approved by the Department of Labor and Employment to ensure the protection and welfare of all employed construction workers and general public.

#### A.5 Submittals

The Contractor shall submit sample finishes and contractor-furnished materials for approval of the SSS Implementing Unit and/or the Structural Design Consultant.

#### A.6 Cleaning

Leave premises clean, neat and orderly. Remove all stains, spots, blemishes, soil dirt from all finished work. Remove all excess materials and supplies, rubbish, trash, construction debris and soil, used containers, and unusable tools/equipment out of the SSS premises during the progress of work and upon completion of work.

#### A.7 Insurance

Within fifteen (15) days from the execution of the Contract Agreement, the Contactor shall, at its own expense, obtain the following insurance from company/ies duly accredited by the Office of the Insurance Commissioner and likewise acceptable to the Client and maintain the same for the duration of the Contract Agreement or any extension thereof or until the Final Acceptance of the Project:

- a. All-risk Insurance Contractor's All-Risk Insurance Policy in the amount equivalent to the total Contract Price;
- b. Transportation Insurance Insurance for the Equipment, Machinery and supplies owned by the Contractor and transported to the Site;
- c. Personal Insurance Personal Injury and Death Insurance for the employee of the Contractor; and
- d. Third Party Liability Insurance Comprehensive Insurance for Third Party Liability to Contractor's direct or indirect act or omission causing damage to third persons.

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#### **DIVISION 1 – SITEWORK**

### PART 1 - WORKING DRAWINGS

- **1.1** In the interpretation of Structural Plans, indicated dimensions shall govern and distances or sizes shall not be scaled for construction purposes.
- **1.2** In cases of conflict in details or dimensions between the Architectural and Structural plans, verify with the Structural Engineer or his authorized representative for decision.
- **1.3** In case of conflict between the Structural Plans and Structural Specifications, the Plans shall govern.

#### PART 2 - EQUIPMENT LOADING

- **2.1** Equipment not indicated in the plans shall not be installed without the approval of the Structural Engineer.
- **2.2** The Manufacturer shall submit equipment data specifying the service weight, its reaction at the base, and its vibration characteristics.

#### PART 3 - REINFORCED CONCRETE BEAMS

- **3.1** Unless otherwise noted in the plans or specifications, camber all reinforced concrete beams at least 10 mm for every 4000 mm of clear span and for cantilever beams shall be 50 mm for every 3000 mm of clear span.
- **3.2** When a beam crosses a girder, rest beam bars on top of the girder bars. At column intersection girder bars shall be on top of beam bars.

#### **PART 4 - REINFORCED CONCRETE SLABS**

- **4.1** Unless otherwise noted in plans or specifications, camber all reinforced concrete slabs 8 mm per 3000 mm of shorter span and 14 mm for every 2000 mm of cantilever span.
- **4.2** If bars are reinforced both ways, bar along the shorter span shall be placed below those along the long span at the center and over the longer span bars near the supports.

#### **PART 5 - STRUCTURAL TOLERANCES**

Unless otherwise specified by the Structural Engineer, the following are the acceptable tolerances for cast-in-place concrete construction. All dimensions not within the required tolerances shall be corrected prior to pouring of concrete.

5.1 Cross sectional dimensions and location of reinforcement

	Dimension less than 200 mm 200 mm to 600 mm Over 600 mm	- + 6 mm - + 9 mm - + 12 mm
5.2	Deviation from straight line (Sweep and/or plumbness)	- + 6 mm per 3000 mm
5.3	Locations of bar cut-off or bonds	- + 50 mm

#### PART 6 - CONCRETE PROTECTION FOR BUNDLED REINFORCEMENT

**6.1** For bundled bars, the minimum concrete cover shall be equal to the equivalent diameter of the bundled bars, but need not be greater than 50 mm.

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#### PART 7 - STANDARD HOOKS

- 7.1 "Standard hook" for rebars shall mean either of the following:
  - **7.1.1** A semi-circular turn plus an extension of at least 4 bar diameter but not less than 65 mm at free end of bar.
  - 7.1.2 A 90-degree turn plus an extension of at least 12 bar diameter at the free end of bar.
- 7.2 Minimum diameter of bend measured on the inside of the bar shall be as follows:

10 mm Ø to 25 mm Ø	- 6 bar diameter
28 mm Ø to 32 mm Ø	- 8 bar diameter
No. 11 to No. 18	- 10 bar diameter

#### **PART 8 - WELDED SPLICES**

- **8.1** The Contractor shall submit details of all welded splices for approval by the Structural Engineer.
- 8.2 Only Certified welders shall be allowed to perform welding operations.
- 8.3 Connection of crossing bars by tack welding is not allowed.

#### **PART 9 - CONSTRUCTION JOINT**

**9.1** Where a joint is to be made, the surface of the concrete shall be thoroughly cleaned and all laitance and standing water removed. Vertical joint also shall be thoroughly wetted and coated with rich cement grout immediately before pour of new concrete.

#### PART 10 - PIPES EMBEDDED IN CONCRETE

- **10.1** Conduits and pipes, with their fittings, embedded within a concrete column shall not displace more than 4 percent of the cross-sectional area where strength is calculated or required for fire protection.
- 10.2 Vertical pipes are not allowed to punch through beams or girders.
- **10.3** Aluminum pipes shall not be embedded in concrete.

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#### PART 1 – GENERAL

#### 1.1 SCOPE

The work shall consist of the removal of all superficial obstructions including trees, shrubs and the like on the site in the way of or otherwise affected by the work as shown on the drawings. The Contractor shall clear each part of the site at times and to the extent required or approved by the Engineer.

#### **PART 2 - PRODUCTS**

#### 2.1 MATERIALS

All materials and equipment required for the proper execution of the work of this section shall be selected by the Contractor subject for approval of the Engineer.

#### **PART 3 - EXECUTION**

#### 3.1 CLEARING AND GRUBBING

- a. Where shown on the Drawings or directed by the Engineer trees shall be unprotected or cut down as near as possible to ground level. Any individual tree as the Engineer may mark in white paint shall be left standing. When necessary to prevent injury to structures, other trees shall be cut in sections from the top downward.
- b. Stumps, tree roots, undergrowth, bushes, vegetations, logs, branches and the like and rubbish and other objectionable material shall, unless otherwise directed by the Engineer, be grubbed up or clear and disposed off in accordance with Item 3.2 of this section.
- c. Holes left by stumps or roots shall, within one week, be filled with suitable material and compacted in accordance with Section 02200 Earthwork.

#### 3.2 DISPOSAL OF MATERIALS

All cleared materials shall be burnt or disposed off the site dumps to be provided by the Contractor in a manner approved by the Engineer.

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#### PART 1 – GENERAL

- 1.1 SCOPE
  - 1. Work Included:
    - a. Furnish equipment and perform labor required to complete demolition of reinforced concrete floor slab removal of rubbish and debris
    - b. See drawings for area coverage of work involved

#### **1.2 DUST CONTROL**

1. Take appropriate action to check the spread of dust at occupied portions of the building and to avoid the creation of nuisance in the surrounding area. Do not use water if it results in hazardous or objectionable conditions, such as flooding or pollution.

#### **1.3 PROTECTION**

- 1. Protect existing work which is to remain in place, that is to be reused, or which is to remain the property of the owner by temporary covers, shoring, bracing and supports. Items which are to remain damaged during performance of the work shall be repaired to their original condition and replace with new. Do not overload structural elements. Provide new supports and reinforcement for existing construction weekend by demolition or removal.
- 2. Protect all electrical and mechanical services and utilities.

#### PART 2 – PRODUCTS

#### 2.1 DISPOSAL MATERIALS

- 1. All salvageable materials shall remain the property of the Owner. Salvaged materials shall be hauled by the Contractor to the Owner's storage within 300 meters radius without additional cost to the Owner.
- 2. All debris and other materials resulting from the demolition work shall be immediately removed from the premises.

#### PART 3 – EXECUTION

#### 3.1 CLEAN UP

1. Remove and transport debris and rubbish in a manner that will prevent spillage on adjacent areas. Clean up spillage from adjacent areas.

#### 3.2 EQUIPMENT

- 1. Compressor type and other high vibratory equipment are not to be used for areas with precast construction. Submit methodology for evaluation and approval.
- 2. Rebars are to be mechanically/manually cut but in no instance by acetylene.

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#### **DIVISION 2 – CONCRETE**

#### PART 1 - GENERAL

- **1.1 APPLICABLE PUBLICATIONS:** The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only. The latest edition shall be applicable.
  - 1.1.1 U.S. Army Corps of Engineers (COE) Waterways Experiment Station Publications:

CRD-C-572	Specifications for Polyvinylchloride Waterstop
CRD-C-621	Handbook for Concrete and Cement, Specification for Nonshrink
	Grout, Volume II
PS 1	Construction and Industrial Plywood

1.1.2 American Concrete Institute (ACI) Publications:

117	Standard Tolerances Of Construction for Concrete Construction and
	Materials.
211.1	Standard Practice for Selecting Proportions for Normal,

- Heavyweight and Mass Concrete
- 301 Specifications for Structural Concrete for Buildings
- 302 Guide for Concrete Floor and Slab Construction
- 304Recommended Practice for Measuring, Mixing, Transporting and<br/>Placing Concrete
- 315 Details and Detailing of Concrete Reinforcement
- 347 Recommended Practice for Concrete Formwork

#### 1.1.3 American Society for Testing and Materials (ASTM) Publications:

A 82	Cold-Drawn Steel Wire for Concrete Reinforcement
A 185	Welded Steel Wire Fabric for Concrete Reinforcement
A 615	Deformed & Plain Billet-Steel Bars for Concrete Reinforcement
C 31	Making and Curing Concrete Test Specimens in the Field
C 33	Concrete Aggregates
C 39	Compressive Strength of Cylindrical Concrete Specimens
C 42	Obtaining and Testing Drilled Cores and Sawed Beams of Concrete
C 94	Ready-Mixed Concrete
C 143	Slump of Portland Cement Concrete
C 150	Portland Cement
C 171	Sheet Materials for Curing Concrete
C 172	Sampling Freshly Mixed Concrete
C 309	Liquid Membrane-Forming Compounds for Curing Concrete
C 494	Chemical Admixtures for Concrete
C 881	Epoxy-Resin-Base bonding Systems for Concrete
C 920	Elastomeric Joint Sealants
D 1190	Concrete Joint Sealer, Hot-Poured Elastic Type
D 1751	Preformed Expansion Joint Filler for Concrete Paving and
	Structural Construction (Non-extruding and Resilient Bituminous
	types)
D 1752	Preformed Sponge Rubber and Cork Expansion Joint Filler for
	Concrete Paving and Structural Construction
D 1850	Concrete Joint Sealer, Cold Application Type

1.1.4 American Welding Society (AWS) Publication:

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D1.4 Structural Welding Code-Reinforcing Steel
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**1.2 DESCRIPTION OF WORK:** The work includes the provision of cast-in place concrete. In the ACI publications referred to herein, the advisory provisions shall be considered to be mandatory, as though the word "shall" has been substituted for "should" wherever it appears.

#### **1.3 SUBMITTALS:**

- **1.3.1** Shop Drawings: Reproductions of contract drawings are unacceptable.
  - 1. Shop Drawings for Reinforcing Steel: ACI 315. Unless otherwise waived by the Engineer, the Contractor shall submit three (3) sets of shop drawings for review and approval by the Engineer prior to any steel reinforcing bar fabrication and installations. Shop drawings shall be drawn on either 20" x 30" or 30" x 40" sheets. Indicated bending diagrams, assembly diagrams, splicing and laps of bars, shapes, dimensions, and details of bar reinforcing, accessories and concrete cover. Do not scale dimensions from structural drawings to determine lengths of reinforcing bars.
- **1.3.2 Contractor Mix Design:** Thirty days minimum prior to concrete placement, submit a mix design for each strength and type of concrete. Furnish a complete list of materials including type, brand, source and amount of cement, and admixtures; applicable reference specifications; and copies of test reports showing that the mix has been successfully tested to produce concrete with the properties specified and will be suitable for the job conditions. Provide fly ash and pozzolan test results performed within 6 months of submittal date. Obtain approval before concrete placement. Submit additional data regarding concrete aggregates if the source of aggregate changes.

### **1.3.3** Certificates of Compliance:

- a. Aggregates
- b. Admixtures
- c. Reinforcement
- d. Cement

#### 1.3.4 Catalog Data:

- a. Waterstops
- b. Materials for Curing Concrete
- c. Joint Sealant
- d. Joint Filler
- e. Vapor Barrier
- f. Epoxy Bonding Agents
- **1.4 DELIVERY:** Do not deliver concrete until vapor barrier, forms, reinforcement, embedded items, and chamfer strips are in place and ready for concrete placement.

# PART 2 - PRODUCTS

#### 2.1 CONCRETE

2.1.1 Contractor-Furnished Mix Design: ACI 211.1 and ACI 301. Concrete shall have a 28-day compressive strengths as specified or indicated on the drawings. Provide ASTM C 33 aggregate size no. 57 and 67. The maximum chloride content shall not exceed one percent.

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2.1.1.1 Slump Requirements:

The allowable slump shall be as follows:

EI EMENIT	SLUMP (mm)						
ELEWIEINI	MINIMUM	MAXIMUM					
Walls, columns, and grade beams	50	130					
Floors, exterior slabs, and other	25	100					
building construction							

#### 2.2 MATERIALS

- **2.2.1** Cement: ASTM C 150, Type I for general use in construction; Type II where concrete is exposed to moderate sulfate action or where moderate heat of hydration is required.
- 2.2.2 Water: Water shall be fresh, clean and potable.
- **2.2.3** Aggregates: ASTM C 33, Class 1N or 2N, except as modified herein. Obtain aggregates for exposed concrete surfaces from one source. Aggregates shall not contain any substance which may be deleteriously reactive with the alkalies in the cement. Aggregates shall consist of gravel, crushed gravel, or crushed stone conforming to the requirements of ASTM C 33. Submit test results as required in ASTM C 33.
  - 1. Aggregates for Lightweight Concrete: ASTM C330.1

#### 2.2.4 Non-shrink Grout: COE CRD-C-621.

- **2.2.5** Admixtures: Water-reducing retarders shall be used in proportions recommended by the manufacturer. Trial mixes shall be made with the admixture and job materials at temperatures and humidities anticipated on the project. Sampling and testing shall be performed at no cost to the Owner, and with the supervision of the Project Inspector.
  - 1. Water Reducing: ASTM C 474, Type A or F.

#### 2.2.6 Reinforcement:

- 2.2.6.1 Reinforcing Bars: ACI 301 unless otherwise specified. ASTM A 706, Grade 60 (see notes on drawings.) ASTM 615, Grade 40 and 60 may be used provided it meets the requirement s of NSCP with regards to their strengths.
- 2.2.6.2 Welded Wire Fabric: ASTM A 185 or ASTM A 497.
- 2.2.6.3 Wire: ASTM A 82 or ASTM A 496.
- 2.2.7 Vapor Barrier: ASTM C 171 polyethylene sheeting, minimum 6 mil thickness.
- **2.2.8 Polyvinylchloride Waterstops:** COE CRD-C-572.

#### 2.2.9 Materials for Curing Concrete:

- 1. Impervious Sheeting: ASTM C 171; waterproof paper, clear or white polyethylene sheeting, or polyethylene coated burlap.
- 2. Pervious Sheeting: AASHTO M 182.
- 3. Liquid Membrane-Forming Compound: ASTM C 309, white-pigmented, Type 2 Class B, free of paraffin or petroleum.
- 4. Liquid Chemical Sealer-Hardener Compound: Compound shall not contain petroleum resins or waxes. Compound shall not reduce the adhesion of

resilient flooring, tile, paint, roofing waterproofing, or other material applied to concrete.

**2.2.10 Expansion/Contraction Joint Filler:** ASTM D 1751 or ASTM D 1752, 1/2-inch thick, unless otherwise indicated.

#### 2.2.11 Joint Sealants

- 1. Horizontal Surfaces (3 percent slope, maximum):
  - a. Outside Buildings: ASTM D 1190.
  - b. Inside Buildings: ASTM D 1190 or ASTM D 1850.
- 2. Vertical Surfaces (greater than 3 percent slope): ASTM C 920, Type M, Grade NS, Class 25, Use T.
- **2.2.12 Epoxy Bonding Compound:** ASTM C 881, Type I, for bonding hardened concrete to hardened concrete; Type II for bonding freshly mixed concrete to hardened concrete; Type III as a binder in epoxy mortar or concrete, or for use in bonding skid-resistant materials to hardened concrete.

#### **PART 3 - EXECUTION**

- **3.1 FORMS:** ACI 301. Provide forms, shoring, and scaffolding for concrete placement unless indicated or specified otherwise. Concrete for footings may be placed in excavations without forms upon inspection and approval by the Engineer. Set forms mortar-tight and true to line and grade. Chamfer above grade exposed joints, edges, and external corners or concrete 0.75 inch unless otherwise indicated. Provide formwork with clean-out openings to permit inspection and removal of debris. Forms submerged in water shall be watertight.
  - **3.1.1 Coating:** Before concrete placement, coat the contact surfaces of forms with a nonstaining mineral oil, non-staining form coating compound, or two coats of nitrocellulose lacquer. Do not use mineral oil on forms of surfaces to which adhesive, paint, or other finish material is to be applied.
  - **3.1.2 Removal of Forms:** Prevent concrete damage during form removal. After placing concrete, forms shall remain in place for the following minimum time period, not necessarily consecutive, where minimum temperatures specified in paragraph entitled "Curing Period and Minimum Temperatures" are maintained adjacent to the concrete and formwork. The minimum time period for removal of forms shall govern where it exceeds the minimum specified curing period. Where the formwork for one element supports the formwork for another element, the greater time period shall apply to both elements.

#### TIME PERIOD

#### ELEMENT

# (Days Minimum)

Walls, columns, sides of beams girders	
and slabs on grade	
Pan joist forms (sides only):	
30 inches wide or less 3 Over 30 inches wide 4	
Joist, beam, or girder soffits:	
Clear span between structural supports	
Under 10 feet	7
10 to 20 feet	14
Over 20 feet	21

One-way floor slabs: Clear span between structural supports

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Under 10 feet	4
10 to 20 feet	7
Over 20 feet	10

**3.1.3 Reshoring:** Re-shore concrete elements where forms are removed prior to the specified time period. Do not permit elements to deflect or accept loads during form stripping or reshoring. Where columns, walls, or other load-bearing concrete members are placed in advance of other framing and forms are needed for future use, forms may be stripped after 2 days if loads are not applied to load-bearing members, and if members are cured as specified in paragraph entitled "Curing and Protection". After forms are removed, slabs and beams over 10 feet in span and cantilevers over 4 feet shall be re-shored for the remainder of the specified time period in paragraph entitled "Removal of Forms." Perform reshoring operations to prevent subjecting concrete members to overloads, eccentric loading, or reverse bending. Reshoring elements shall have the same load-carrying capabilities as original shoring and shall be spaced similar to original shoring. Firmly secure and brace reshoring elements to provide solid bearing and support.

#### 3.2 PLACING REINFORCEMENT AND MISCELLANEOUS MATERIALS

ACI 301. Provide bars, wire, fabric, wire ties, supports, and other devices necessary to install and secure reinforcement. Reinforcement shall not contain rust, scale, oil, grease, clay, and foreign substances that would reduce the bond. Rusting of reinforcement is a basis of rejection if the effective cross-sectional area or the nominal weight per foot of the reinforcement has been reduced to less than specified in paragraph entitled "Reinforcing Bars". Remove loose rust prior to placing steel. Tack welding is prohibited.

#### 3.3 MEASURING, MIXING, TRANSPORTING, AND PLACING CONCRETE

ASTM C 94, ACI 301, ACI 302.1R, and ACI 304, except as modified herein. ASTM C 94

Provide mandatory batch ticket information for each load of ready mix concrete.

- **3.3.1 Measuring:** Make moisture, weight, and air determination of intervals as specified in paragraph entitled "Sampling and Testing." Allowable tolerances for measuring cement and water shall be 1 percent; for aggregates, 2 percent; and for admixtures, 3 percent.
- **3.3.2 Mixing:** ASTM C 94. Machine mix concrete. Begin mixing within 30 minutes after the cement has been added to the aggregates. Place concrete within 90 minutes of either addition of mixing water to cement and aggregates or addition of cement to aggregates if the air temperature is less than 85 degrees F. Reduce mixing time and place concrete within 60 minutes if the air temperature is greater than 85 degrees F unless it can be proven by test results that the time can be increased with the addition of admixtures. Additional water may be added, provided that both the specified maximum slump and water-cement ratio are not exceeded. Dissolve admixtures in the mixing water and mix in the drum to uniformly distribute the admixture throughout the batch.
- **3.3.3 Transporting:** Transport concrete from the mixer to the forms as rapidly as practicable. Prevent segregation or loss of ingredients. Clean transporting equipment thoroughly before each batch. Do not use aluminum pipe or chutes. Remove concrete which has segregated in transporting and dispose of as directed.
- **3.3.4 Placing:** Place concrete as soon as practicable after the forms and the reinforcement have been inspected and approved. Do not place concrete when weather conditions prevent proper placement and consolidation; in uncovered areas during periods of precipitation; or in standing water. Prior to placing concrete, remove dirt, construction debris and water from within the forms. Deposit concrete as close as practicable to the final position in the forms. Place concrete in one continuous operation from one

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end of the structure towards the other. Position grade stakes on 10-foot centers maximum in each direction when pouring interior slabs and on 20-foot centers maximum for exterior slabs.

- 3.3.4.1 Vibration: ACI 301. Furnish a spare vibrator at the jobsite whenever concrete is placed. Consolidate concrete slabs greater than 4 inches in depth with high frequency internal, mechanical vibrating equipment supplemented by hand spading and tamping. Consolidate concrete slabs 4 inches or less in depth by wood tampers, spading, and settling with a heavy leveling straight edge. Operate vibrators with vibratory element submerged in the concrete, with a minimum frequency of not less than 6000 impulses per minute when submerged. Do not use vibrators to transport the concrete in the forms. Insert and withdraw vibrators approximately 18 inches apart. Penetrate the previously placed lift with the vibrator when more than one lift is required. Place concrete in 18-inch maximum vertical lifts. External vibrators do not provide adequate consolidation of the concrete.
- 3.3.4.2 Application of Epoxy Bonding Compound: Apply a thin coat of compound to dry, clean surfaces where indicated. Scrub compound into the surface with a stiff-bristle brush. Place concrete while compound is stringy. Do not permit compound to harden prior to concrete placement. Follow manufacturer's instructions regarding safety and health precautions when working with epoxy-resins.

#### 3.4 SURFACE FINISHES (EXCEPT FLOOR, SLAB AND PAVEMENT FINISHES)

- **3.4.1 Defects:** Repair formed surfaces by removing minor honeycombs, pits greater than one square inch surface area or 0.25 inch maximum depth, or otherwise defective areas. Provide edges perpendicular to the surface and patch with non-shrink grout. Patch tie holes and defects when the forms are removed. Concrete with extensive honeycomb (including exposed steel reinforcement, cold joints, entrapped debris, separated aggregate or other defects) which affect the serviceability or structural strength will be rejected, unless correction of defects is approved. Obtain approval of corrective action prior to repair. The surface of the concrete shall not vary more than the allowable tolerances of ACI 347. Exposed surfaces shall be uniform in appearance and finished to a smooth form finish unless otherwise specified.
- **3.4.2.** Not Against Forms (Top of Walls): Surfaces not otherwise specified shall be finished with wood floats to even surfaces. Finish shall match adjacent finishes.

### 3.4.3 Formed Surfaces:

- 3.4.3.1 As-Cast Rough Form (For Surfaces Not Exposed to Public View): Remove fins and other projections exceeding 0.25 inch is height; level abrupt irregularities.
- 3.4.3.2 As-Cast Smooth Form (For Surfaces Exposed to Public View): Form facing material shall produce a smooth, hard, uniform texture on the concrete. Remove fins and other projections.
- **3.4.4 Rubbed Finish:** Provide concrete with a smooth form finish. Finish as follows:
  - a. Smooth Rubbed: Provide a newly hardened concrete within 24 hours following form removal. Wet surfaces and rub with an abrasive tool to produce uniform color and texture. Use only the cement paste drawn from the concrete rubbing process.

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- b. Grout Cleaned: Finishing operations shall not begin until adjacent surfaces to be cleaned are completed and accessible. Cleaning as the work progresses shall not be permitted. Mix one part cement and 1.5 parts fine sand with sufficient water to produce a grout with the consistency of thick paint. Substitute white cement for a part of the gray cement in order to produce a color matching the color of the surrounding concrete, determined by a trial patch. Wet the surface of the concrete sufficiently to prevent absorption of water from the grout. Apply the grout uniformly with brushes or spray gun. Immediately after applying the grout, scrub the surface vigorously with cork float or stone to coat the surface and fill air bubbles and holes. Remove excess grout while still plastic by working the surface with a rubber float, sack, or other approved method. When dry, rub the surface vigorously with clean burlap. Keep damp for 36 hours minimum after final rubbing.
- **3.4.5** Surface Finish Samples: Provide a minimum of three samples concrete panels for each finish for each mix design, 3 feet by 3 feet, 3 inches thick. Use the approved concrete mix design(s). Provide sample panel on-site at locations directed. Once approved, each set of panels shall be representative of each of the finishes specified and shall be representative of the workmanship and finish/es required. Do not remove or destroy samples until directed by the Architect.
- **3.5** FLOOR, SLAB AND PAVEMENT FINISHES AND MISCELLANEOUS CONSTRUCTION. ACI 302.1R, unless otherwise specified. Slope floors uniformly to drains where drains are provided. Depress the concrete base slab where quarry tile, ceramic tile, or marble tile are indicated. Provide interior floor slabs with a steel troweled finish or power float finish, as required. After troweling is completed, apply a liquid chemical sealer-hardener compound on interior floor slabs that do not receive floor covering.
  - **3.5.1** Finish: Place, consolidate, and immediately strike off concrete to obtain proper contour, grade, and elevation before bleedwater appears. Permit concrete to attain a set sufficient for floating and supporting the weight of the finisher and equipment. If bleedwater is present prior to floating the surface, drag the excess water off or remove by absorption with porous materials. Do not use dry cement to absorb bleedwater.
    - 3.5.1.1 Floated: Provide for machinery pads and other exterior slabs where not otherwise specified. Float the surface by hand with a wood or magnesium float, or use a power-driven float. Floating or any one area shall be the minimum necessary to produce an even finish, level within 1/4 inch in 10 feet for exterior work and level within 1/8 inch in 10 feet for interior work where floor drains are not provided.
    - 3.5.1.2 Steel Troweled: First, provide a floated finish. When slab attains a proper set, trowel to a smooth, hard, dense finish. Finished surfaces shall be free of troweled marks, uniform in texture, and a true plane, flat within 0.01 foot (Approximately 1/8 inch) in 10 feet. Hand finish portions of the slab not accessible to power-finishing equipment (e.g., edges, corners) to match the remainder of the slab. Power trowel once and finally hand trowel where a finished floor covering (e.g., tile, carpet) is specified. Power trowel twice and finally hand trowel for exposed concrete floors.
    - 3.5.1.3 Broomed: Provide for exterior walks, platforms, patios, and ramps unless otherwise indicated. Provide a floated finish, then finish with a flexible bristle broom. Permit surface to harden sufficiently to retain the scoring or ridges. Broom transverse to traffic or at right angles to the slope of the slab.
    - 3.5.1.4 Pavement: Screed the concrete with a template advanced with a combined longitudinal and crosswise motion. Maintain a slight surplus of concrete ahead of the template. After screeding, float the concrete longitudinally. Use a straight edge to check slope and flatness; correct and refloat as necessary. Obtain final finish by belting. Lay belt flat on the concrete surface and

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advance with a sawing motion; continue until a uniform but gritty non-slip surface is obtained. Round edges and joints with an edger having a radius of 1/8 inch.

- **3.5.2** Concrete Walks: Provide 4 inches thick minimum. Provide contraction joints spaced every 5 linear feet unless otherwise indicated. Cut contraction joints <sup>3</sup>/<sub>4</sub> inch deep with a jointing tool after the surface has been finished. Provide 0.5 inch thick transverse expansion joints at changes in direction where sidewalk abuts curb, steps, rigid pavement, or other similar structures; spac expansion joints every 50 feet maximum apart. Provide walks with a broomed finish. Provide a transverse slope of 1/4 inch per foot. Limit variation in cross section to 1/4 inch in 5 feet.
- **3.5.3 Pits and Trenches:** Place bottoms and walls monolithically or provide waterstops and keys.
- **3.5.4 Curbs and Gutters:** Provide contraction joints spaced every 10 feet maximum unless otherwise indicated. Cut contraction joints <sup>3</sup>/<sub>4</sub> inch deep with a jointing tool after the surface has been finished. Provide expansion joints <sup>1</sup>/<sub>2</sub> inch thick and spaced every 100 feet maximum unless otherwise indicated. Provide a pavement finish.
- **3.6 CURING AND PROTECTION:** ACI 301 unless otherwise specified. Begin curing immediately following form removal. Protect concrete from injurious action by sun, rain, flowing water, mechanical injury, tire marks, and oil stains. Do not allow concrete to dry out from time of placement until the expiration of the specified curing period. Do not use membrane-forming compound on surfaces where appearance would be objectionable, on any surface to be painted, where coverings are to be bonded to the concrete, or on concrete to which other concrete is to be bonded. If forms are removed prior to the expiration of the curing period, provide another curing procedure specified herein for the remaining portion of the curing period.
  - **3.6.1** Moist Curing: Provide for the removal of water without erosion or damage to the structure.
  - **3.6.2** Liquid Membrane-Forming Compound Curing: Seal or cover joint openings prior to application of curing compound. Prevent curing compound from entering the joint. Provide and maintain compound on the concrete surface throughout the curing period. Do not use this method of curing where the use of Figure 2.1.5 in ACI 305R indicates that hot weather conditions will cause an evaporation rate exceeding 0.2 pounds of water per square foot per hour.
  - 3.6.3 Curing Period:

TIME PERIOD	CONCRETE STRUCTURE
(Days Minimum)	OR CEMENT TYPE
7	ASTM C 150, Type I or II, either with or without fly ash, pozzolan or ground slag; and ASTM C 595 cement for concrete not specified otherwise.
10	Retaining walls that will be subjected to deteriorating conditions; pavement not under a roof, chimneys.
14	Water tanks for potable and non-potable water; structures that will be in contact with water; decks and similar parts of water front structures over seawater that will not ordinarily be wetted by sea-water.

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3.6.3.1 Additional Curing: Double the required curing period if either one or the average of both 7-day test cylinders indicate less than 90 percent of the strength specified (f<sup>\*</sup>c).

### 3.7 SAMPLING AND TESTING:

**3.7.1** Sampling: ASTM C 172. Collect samples of fresh concrete to perform tests specified. ASTM C 31 for making test specimens. Samples shall be collected at final discharge point.

#### **3.7.2** Testing:

- 3.7.2.1 Slump Tests: ASTM C 143. Take concrete samples during concrete placement. The maximum slump may be increased as specified with the addition of an approved admixture provided that the water-cement ratio is not exceeded. Perform tests at commencement of concrete placement, when test cylinders are made, and for each batch (minimum) or every 10 cubic yards (maximum) of concrete.
- 3.7.2.2 Temperature Tests: Test the concrete delivered and the concrete in the forms. Perform tests for each batch (minimum) or every 10 cubic yards (maximum) of concrete, until the specified temperatures obtained, and whenever test cylinders and slump tests are made.
- **3.7.3. Compressive Strength Tests:** ASTM C39. Sampling shall be in accordance with ASTM C 31. Obtain cylinder samples for compressive strength tests at the rate of three (3) sets of five (5) samples per set for each day's pour or for every 150 cubic meters of concrete poured or for every 500 square meters of area for slabs or walls, whichever is greater. Test two (2) cylinders at 7 days, one (1) cylinder at 14 days and one (1) cylinder at 28 days, and hold one (1) cylinder in reserve. If the average strength of the 28-day test cylinders is less than the specified f'c and a maximum of one single cylinder is less than f'c minus 500 psi, obtain core samples for compressive strength tests in accordance with ASTM C 42 at the rate recommended in ACI 318. Concrete represented by core tests shall be considered structurally adequate if the average of three cores is equal to at least 85 percent of f'c and if no single core is less than 75 percent of f'c. Locations represented by erratic core strengths shall be re-tested. Remove concrete not meeting strength criteria and provide new, acceptable concrete.
- 3.7.4. Cost of Tests: All costs of initial tests for compressive strength of concrete and test for reinforcing bars shall be at the Contractor's expense. Cost of re-tests, core tests, load tests and other tests performed as a result of initial test failing to meet all specified requirements shall likewise be at the Contractor's expense.

#### 3.8 SAMPLING AND TESTING OF STEEL REINFORCEMENT

- **3.8.1** The Contractor shall satisfy the Engineer that steel reinforcement delivered to the site has had sufficient routine inspection and testing carried out by the manufacturer. In addition the following routine testing shall be carried out on steel reinforcement delivered to the site.
- **3.8.2.** Hot –Rolled Steel Reinforcing Bars
  - a. Every batch of steel bars delivered to the site shall be tested to verify the mass and tensile properties for every shipment of 5,000 kg or fraction thereof.
  - b. The test shall consist of 5 specimens. Abbreviated testing may be considered on a particular batch at the discretion of the Engineer. If the bar pattern of the specific diameter is acceptable for abbreviated testing the test shall consist of 3 specimens.

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- c. The specimens should be selected from different bars in the batch. A batch is defined as any quantity of bars of one size and grade, manufactured by the same mill, covered by the same mill certificate, and delivered to the site at any one time. Steel bars in more than one delivery to the site within a short period may be considered as part of the same batch provided that the deliveries belong to one single consignment from the manufacturer and are covered by the same mill certificate.
- d. If one of more valid test results is less than 93% of the specified characteristics strength, the batch shall be deemed not complying with the characteristic strength requirements.
- e. If one of more valid test results fail to meet the mass, tensile strength, elongation or bend test requirements, two additional specimens for each failure shall be taken from different bars for the same batch and subjected to the test, or tests in which the original specimen failed. If any of the additional specimens fail, the batch shall be deemed not complying.
- f. The test report should contain the following information:
  - 1. Full description of test specimens including names of steel manufacturer, country of origin, grade and size as stated by the person submitting them for testing;
  - 2. Sketch of pattern deformation or mill marks;
  - 3. Mill Certificate;
  - 4. Identification of the batch and date of delivery to the site to which the test specimens relate;
  - 5. Measured mass and calculated effective cross-sectional area of test specimens;
  - 6. Results of yield stress tensile strength, elongation and bond tests if required.

#### **3.9 COST OF TESTS**

**3.9.1** All costs of initial tests for compressive strength of concrete and test for reinforcing bars shall be at the Owner's expense, except costs of retests, core tests, load tests and other tests performed as a result of initial tests failing to meet all specified requirements, in which case costs shall be at the Contractor's expense.

#### 3.10 TOLERANCES

**3.10.1** Tolerances of formwork, reinforcements, finished concrete work shall be in accordance with ACI Standard 117.

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#### PART 1 - GENERAL

- 1. SUMMARY
  - **1.1** Structural steel framing and shoring system, complete with base plates, bracing, anchorage including the following:
    - a. Erection and connecting structural steel frame and temporary structural steel framework.
    - b. Baseplate grouting.
  - **1.2 APPLICABLE PUBLICATIONS:** The publications listed below form part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only. The latest edition shall be applicable.
    - 1.2.1 American Institute of Steel Construction (AISC):
      - 1. "Code of Standard Practice for Steel Buildings and Bridges," except Paragraph 4.2.1 is modified by deletion of the following sentence: This approval constitutes the owner's acceptance of all the responsibility for the design adequacy of any connections designed by the fabricator as a part of his preparation of these shop drawings."
      - 2. Manual of Steel Construction, Allowable Stress Design, 9th Edition, 1989.
      - 3. "Specifications of the Design, Fabrication and Erection of Structural Steel for Buildings."
      - 4. Specification for Structural Joints Using ASTM A325 or A490 Bolts.
    - 1.2.2 American Society of Testing and Materials (ASTM):
      - A6 General Requirements for Rolled Steel Plates, Shapes, Sheet Piling and Bars for Structural Use.
      - A36 Structural Steel.
      - A53 Pipe.
      - A123 Zinc (Hot-Dip Galvanized) Coatings on Products Fabricated from Rolled, Pressed, and Forged Steel Shapes, Plates, Bars and Strip.
      - A153 Zinc Coating (Hot-Dip) on Iron and Steel Hardware
      - A307 Carbon Steel Externally and Internally Threaded Standard Fasteners.
      - A325 High Strength Bolts for Structural Steel Joints.
      - A441 High Strength, low Alloy Structural Manganese Vanadium Steel.
      - A490 Quenched and Tempered Alloy Steel Bolts for Structural Steel Joint.
      - A500 Grade B Cold-Formed Welded and Seamless Carbon Steel Structuring Tubing.
      - A501 Hot-Formed Welded and Seamless Carbon Steel Structural Pipe.
      - A572 High Strength Low-Alloy Columbium-Vanadium Steels of Structural Quality.
      - A588 High Strength Low-Alloy Structural Steel with 50,000 PSI Minimum Yield Point to 4-inch Thickness.
    - 1.2.3 American Welding Society (AWS):
      - A2.4 Welding Symbols
      - A3-0 Terms and Definitions
      - A5.1 Specifications for Mild Steel Electrodes for Flux Cored Arc Welding.
      - A5.20 Specification for Low-Alloy Steel Covered Arc-Welding Electrodes.
      - A5-5 Specification for Low-Alloy Steel Covered Arc-Welding Electrodes.

- A5.17 Specification for Carbon Steel Electrodes and Fluxes for Submerged Arc Welding.
- A5-23 Specification for Low-Alloy Steel Electrodes and Fluxes for Submerged Arc Welding.
- D1.1 Structural Welding Code-Steel.
- D1-4 Reinforcing Steel Welding Code, including Metal Inserts and Connections in Reinforced Concrete.
- F959 Compressible-Washer-Type Direct Tension Indicators for Use with Structural Fasteners.
- 1.2.4 Federal Specifications (Fed. Spec.):

TT-C-490	Cleaning Method and Pretreatment of Ferrous Surfaces for
	Organic Coatings
TT-P-645	Primer Paint, Zinc Chromate, Alkyd Type

1.2.5 Military Specifications (Mil. Specs):

DOD-P-15328 Primer (wash,) Pretreatment (Formula No. 117 for Metals) DOD-P21035A Paint, High Zinc Dust Content, Galvanizing repair

1.2.6 Steel Structures Painting Council (SSPC) Publications:

- SP3 Power tool Cleaning
- SP6 Commercial Blast Cleaning

#### **1.3 QUALITY ASSURANCE**

- **1.3.1** Fabricator/Erector: Must have plant, facilities and personnel qualified and sufficient to fabricate and/or erect structural metal framing as indicated on drawings. Must have minimum of 5 years experience and to be able, upon request, to show framing of size, materials and scope similar to work of this contract.
- **1.3.2 Material:** Provide only structural steel certificate as conforming with specified requirements and fabricate especially to the requirements of this contract. Material which, does not conform to the requirements of this contract, may be rejected at any time prior to final acceptance.
- **1.3.3. Allowable Tolerances:** Unless otherwise specified or noted on drawing, provide structural steel work in accordance with the following minimum tolerances:
  - a. Fabrication Tolerances: In accordance with requirements of AISC specification unless noted otherwise and as required to maintain the erection tolerances specified herein.
  - b. Erection Tolerances: In accordance with requirements of AISC. The contractor alone shall be responsible for the correct fitting of all structural members including the elevations and alignments. Refer to the drawings for additional requirements.
- **1.3.4 Connection Identification:** Each person installing connections shall be assigned an identifying symbol or mark and all shop and field connections shall be so identified so that the Owners Testing Lab can refer to the person making the connection.
- **1.3.5. Test and Inspection:** Work is subject to special testing and inspection. The fabricator/erector shall provide the Owners Testing Lab and Architect/Engineer access to places where material is being fabricated/erected. Notice shall be given for joints requiring inspection for proper end preparation, root opening, etc., prior to welding.

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#### **1.3.6** Connections Designed on the Structural Drawings:

- a. Contractor shall not deviate from these designs unless approved by the Architect/Engineer.
- b. Connections shown on the drawings may eliminate certain methods of erection.
- c. If contractor elects a method of erection that required a change of some of the connections, it must be approved by Architect/Engineer.
- **1.3.7** Engineering by Contractor: Design and calculations shall be prepared by a Contractor's Structural Engineer, for the support of hoisting equipment, welding machines and other superimposed loads, for the stacking of materials such as metal decking, etc., and where required for temporary bracing, shoring and other safety related construction procedures.
  - a. It is Contractor's responsibility to obtain and pay for such engineering services.

#### **1.3.8** Welder Qualifications:

- a. Each welder performing work on this project shall be qualified in accordance with the American Welding Society. AWS D1.1.
- b. He shall have been qualified a minimum of six (6) months before commencement of welding on this project.
- c. Copies of each welder's qualification records shall be made available to the Engineer for inspection.
- **1.3.9 Inspections:** Shop welding is to be done in ICBO approved licensed shops. Field welds shall be continuously inspected by a qualified inspector per UBC Section 306.
- **1.3.10** Vendor Quality Assurance: The fastener supplier shall visit the project site during the bolting start-up to demonstrate proper installation procedures and verify inspection procedure with the Owners Testing Lab. The fastener supplier must provide documentation of quality assurance including mill reports and description of bolt origin. Submit performance records from two prior projects of similar size. Records should include percentage of bolt failure during erection and rate of replacement required during inspection. Supplier quality assurance program shall also be outlined. Program must include assurance that bolts from only one heat will be included in a keg.
- **1.3.11** Shop Testing by Contractor: The Contractor shall perform ultrasonic testing and visual inspection of all plate material and rolled sections greater than 1-1/2 inches in thickness and located at welded connections for discontinuities prior to fabrication. The test area is defined as a cone up to 6 inches away from the weld in the connection. These tests shall be in additional to the ultrasonic testing of all full-penetration welds which will be performed by the Owners Testing Lab. The contractor's testing shall be approved by the Architect/Engineer and Owners Testing Lab. All costs associated with this testing shall be borne by the Contractor.
  - a. Ultrasonic Testing: Conduct in accordance with ASTM A435 with the following modifications and supplementary requirements:
    - i. Supplementary Requirement S1, requiring 100 percent scanning of the test are to be included.
    - ii. Section 5.2, Acceptance Standards, is supplemented with the following provision: "The fabricator, insofar as practical,



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may reposition a rejected plate so that rejected defects are not located in a test area."

**1.3.12** Use adequate number of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this section.

#### 1.4 SUBMITTALS

- **1.4.1 Shop Drawings:** Submit shop drawings for review prior to commencing any fabrication of structural steel.
  - a. Before shop drawings are submitted, fabricator shall back check drawings to discover obvious drafting and detailing errors.
  - b. Show framing layout, dimensions, connections with adjoining materials and construction, finishes, welds, bolts and fasteners, anchoring and all fabrication or erection accessories required.
  - c. Show field welds, cuts, holes and fasteners.
  - d. Verify all dimensions and correlate with adjoining construction and materials.
  - e. Indicate size, type and grade of all members.
  - f. Include with each detail shown on the top shop drawings a reference to the Architect's and Engineer's drawings and details, where applicable.
- 1.4.2 Submit fabricator's quality assurance procedures to the architect, engineer, owner and Owners Testing Lab.
- 1.4.3 Indicate welded connections on shop drawings using standard AWS welding symbols. Show all welded connections with details showing size, length, location and type of welds.
- 1.4.4 Mill Reports: Submit certified copies of mill reports indicating heat and melt numbers of steel.
  - a. If test reports are not submitted or test reports cannot be identified with material proposed for use in the work, then secure and perform structural test on 5 percent of all such identified steel.
  - b. Contractor shall furnish all such material for testing and pay for all such tests.
  - c. Furnish Owner, Architect and Structural Engineer certified copies of all test reports.
- 1.4.5. Inspection Test Reports: Upon request, submit to Engineer copies of ultrasonic testing reports.
- 1.4.6 Placement Plans: Submit placement plans and details as required for the satisfactory placing, connection and anchorage of all structural members.
- 1.4.7 Survey Reports: Upon request, promptly submit an accurate survey of actual elevations and location of base plates and anchor bolts and alignments as well as elevations of all steel as noted on the drawings.

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- 1.4.8 Certification: Submit manufacturer's certified test reports on load indicator washers and/or tension control bolts on at least three samples from each heat supplied to conform to tolerance range.
- 1.4.9 Welding Procedures: For welded joints pre-qualified and non pre-qualified by AWS D1.1, submit detailed description of welding procedures proposed for use on structural metals. Obtain approval prior to any welding operation. Furnish joint welding procedure qualification tests as required by AWS D1.1 for non prequalified welded joints.
- 1.4.10 Manufacturer's Certification: Required as follows:
  - Bolts, Nuts and Washers: Furnish complete manufacturer's mill test reports conforming to ASTM A325, Type 1, or ASTM A490. Markings and chemistry must also comply to specification. Certification numbers must appear on product containers and correspond to certification numbers on mill test report to be accepted. Mill test report must be supplied to both purchaser and Owners Testing Lab.
  - b. Filler material welding.

#### 1.5 DELIVERY, STORAGE, HANDLING

- **1.5.1** Comply with the requirements of the general conditions and of ASTM A6, including the following.
- **1.5.2** Store materials to permit easy access for inspection and identification.
  - a. Keep steel members off the ground, using pallets, platforms or other supports.
  - b. Protect steel members and packaged materials from erosion and deterioration.
- **1.5.3** Do not store materials on the structure in a manner that might cause distortion or damage to the members of the supporting structures. Repair or replace damaged materials or structures at no additional

expense to owner.

- 1.5.4 Columns, beams, girders and other members, which are to receive sprayedon fireproofing, shall be free of loose rust, heavy mill scale, oil, dirt or other foreign substances prior to application of fireproofing materials.
- **1.5.5** All fasteners shall be stored and protected in accordance with the current requirements of the "Specification for Structural Joints using ASTM A325 or A490 Bolts."

## **1.6 JOB CONDITIONS**

- **1. Coordination:** Coordinate exact locations of beam penetrations with mechanical and/or electrical contractor. Exact locations of all penetrations must be submitted to the Engineer for review.
- 2. **Temporary Bracing:** Temporary bracing and guylines shall be provided to adequately protect all persons and property and to ensure proper alignment.
- **3. Temporary Floors:** All temporary flooring, planking and scaffolding necessary in connection with the erection of the structural steel or support of erection machinery shall be provided. The temporary floors or use of steel decking shall be as required by law and governing safety regulations. The reduced load capacity of members and assembly, especially the floor and roof

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beams and girders, due to their untraced connection prior to welding of metal deck and completion of concrete slabs is hereby noted.

4. Holding and Protection: In assembling and during welding, the component parts shall be held with sufficient clamps or other adequate means to keep parts straight and in close contact. In welding, precautions shall be taken to minimize "lock-up" stress and distortion due to heat. During high winds, welding shall be done only after adequate wind protection is furnished and set up.

#### **PART 2 - PRODUCTS**

#### 2.1 MATERIALS AND COMPONENTS

- **2.1.1** Carbon Steel and High Strength Low-Alloy Steel: Provide steel shapes, plates and bars of structural quality, sizes and types noted on drawings for use in welded and bolted construction. Steel manufactured by the acid Bessemer process shall not be used for structural purposes. Steel, which in the opinion of the inspector is badly corroded or physically damaged, shall not be incorporated in the work.
- **2.1.2 Coating:** Provide steel unprimed where steel is to be fireproofed. Metal Shop Finish for required primer and painting of non-proofed steel.
- **2.1.3 Standard Fasteners:** Low-carbon steel externally and internally threaded fasteners conforming to requirements of ASTM A307, Grade A. Provide hexagonal heads and nuts for all connections. Include lock washers under nuts or self-locking nuts.
- **2.1.4 High-Strength Fasteners:** Quenched and tempered steel bolts and nuts conforming to requirements of ASTM A325 or AST A490.
  - a. Provide heavy hexagonal head bolts and nuts, and hardened steel washers.
  - b. Load indicator washers conforming to ASTM F959 or tension control bolts shall be used.
  - c. Any proposed substitutions must have documentation submitted for review and approval of the structural engineer prior to construction.
  - d. Acceptable tension control bolt suppliers shall be Lejuene Bolt Company/Lakeview, Minn. And Bristol Industries/Brea, Calif.

#### 2.1.5 Welded Electrodes:

- a. For base metal conforming with ASTM A36, A53 and A500, shielded metal arc, fluxcored arc and submerged arc welding use E70XX, E7XT-X and F7X-EXXX electrodes in accordance with AWS A5.1, AWS a5.20, AWS A5.20 or AWS 23.
- **2.1.6 Steel Stud Anchors:** All steel stud anchors welded to steel beams or plates for concrete anchorage shall be "tru-weld studs," Division of Tru-Fit Screw Products Corporation, Cleveland, Ohio, "Nelson Stud," Division of Gregory Industries, Inc., Lorain, Ohio or approved equal. All stud anchors shall be automatically end-welded in shop or field with equipment recommended by manufacturer of studs.

#### 2.1.7 Drilled-in-Concrete Anchors: Refer to structural drawings.

#### 2.1.8 Shop Painting:

- a. Pre-Treatment: Mil. Specs DOD-P-15328 or Fed. Specs. TT-C-490, Type I, II or IV.
- b. Primer: Fed. Specs TT-P-645

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- 2.1.9 Galvanizing: ASTM A123 or A153, as applicable, unless specified otherwise.
  - a. Galvanizing Repair Paint: Mil. Specs. DOD-P-21035
- **2.1.10 Other Materials:** Provide all incidental and accessory materials, tools, methods and equipment required for fabrication and erection of structural steel framing as indicated on drawings.
- **2.1.11 General:** Miscellaneous materials or accessories not listed above shall be provided as specified hereinafter under the various items of work and as indicated on the drawings or required for good construction practice.
- **2.1.12** Provide additional structural steel support framing for metal deck where normal deck bearing is precluded by column flange plates or other framing members.
- **2.1.13** Provide other materials, not specifically described but required for a complete and proper installation, as selected by the contractor subject to the approval of the Engineer.

#### 2.2 FABRICATION

- 2.2.1 Fabricate all steel in accordance with requirements of AISC specifications and in accordance with details indicated on the drawings or as approved on shop drawings.
  - a. Identify all steel at mill showing grade and yield points.
  - b. Identify each piece with an erection mark corresponding to identifications noted on erection drawings.
- 2.2.2 Cutting: All holes and openings must be approved by the owner's Structural Engineer.
  - a. No flame cutting by hand for openings greater than one half the depth of the member shall be allowed, unless approved by engineer.
  - b. All flame-cut holes shall be smoothed by chipping, planning or grinding members to required AISC tolerances.
  - c. Sharp bends or kinks will not be allowed.
  - d. Flame cutting by hand will not be allowed for holes at connections.
- 2.2.3 Materials shall be properly marked and matched-marked where field assembly requires. The sequence of shipments shall be such as to expedite erection and minimize the field handling of material.
- 2.2.4 Milled surfaces shall be completely assembled or welded before milling. Milled surfaces to provide full bearing over the cross section.
- 2.2.5 Beams and girders shall be upward cambered where indicated on the drawings. For beams and girders without specified cambers, fabricate members so that after erection, any minor camber due to rolling or fabrication is upward.
- 2.2.6 Beam connections shall be as shown or noted on the drawings.
  - a. Unless noted otherwise, standard connections shall be used in accordance with AISC standards.
  - b. Steel requiring adjustment shall be provided with slotted holes, as indicated on the drawings.
- 2.2.7 Combination of bolts and welds techniques and procedures shall conform to the requirements of UBC Standard No. 27-6.

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- a. Welding, AISC specification for the "Design, Fabrication and Erection of Structural Steel for Buildings," and AWS "Structural Welding Code," and "Filler Metal Specifications."
- 2.2.8 For stud anchor and deformed bar anchor welding, the area where the anchor is to be attached shall be made free of all foreign material such as rust, oil, grease, paint, etc.
  - a. When the mill scale is sufficiently thick to cause difficulty in obtaining proper welds, it shall be removed by grinding or sandblasting.
  - b. Use automatic end welding of headed stud shear connections in accordance with manufacturer's printed instructions.
- 2.2.9 Welding processes other than shielded metal arc, flux core arc, and submerged arc may be used provided procedure qualification tests in accordance with the American Welding Society are made for the intended application of all such processes.
- 2.2.10 Built-up sections assembled by welding shall be free or warpage and all faces shall be true alignment.
- 2.2.11 Welds not specified shall be continuous fillet welds, using not less than the minimum fillet as specified by AWS.
- 2.2.12 Welding sequences, preheat methods, and detailing of joints shall be such as to reduce the residual stresses to a minimum.
  - a. Structural Engineer may authorize suitable testing to determine magnitude of residual stresses due to welding on several initial fabricated production units. Such testing will be performed in a timely manner coordinated with the fabricator's production schedule.
  - b. Types of Welds: Required weld types are indicated by symbols on drawings; characteristics of welds in accordance with standard specifications or codes as applicable; each welder shall mark his identification symbol on his work.
  - c. Welding: Shape edges to be joined as indicated on drawings; prepare and clean edges of all oil, grease, scale and rust in accordance with AWS D1.1.
  - d. Reinforcing Steel: Welding or tack welding or reinforcing bars to other bars or plates, angles and similar shapes is prohibited, except where specifically shown on plans or approved by structural engineer, where required, use electrodes in accordance with requirements of AWS D1.4/12.1, and the structural general notes.
- 2.2.13 The toughness and notch sensitivity of the steel shall be considered in the formation of all welding procedures to prevent brittle and premature fracture during fabrication and erection.
- 2.2.14 Detailing of connections, welding sequences and preheat methods shall be such as to minimize the accumulation and concentration of through thickness strains due to weld shrinkage.
- 2.2.15 Cleaning: Clean all surfaces of oil, grease, loose rust, loose mill scale and other foreign matter present in sufficient quantities to impair bond of spray fireproofing.
  - a. Remove all slag or flux remaining on any bean before proceeding; remove any cracks or blow holes that appear on any bead by chipping, grinding or gas gouging before proceeding.
- 2.2.16 Fabrication Tolerances: In accordance with AISC specifications, except as required to maintain the erection tolerances specified herein. Maximum tolerances for camber of steel beams/girders shall be plus or minus <sup>1</sup>/<sub>4</sub> inch.

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- 2.2.17 Steel Stud and Deformed Bar Anchors:
  - a. All anchors shall be automatically end-welded in the shop or field with equipment recommended by the manufacturer of the studs and by qualified welders. Steel stud material, welding and inspection shall be in accordance with AWS D1.1. End-weld in such a manner as to provide complete fusion between the end of the stud and the plate. There shall be no porosity or evidence of lack of fusion between the welded end of the stud and the plate.
  - b. Tests and Inspections: At the beginning of each day's work, a minimum of two test stud welds shall be made, with the equipment to be used, to metal which is the same as the actual work pieces. The test studs shall be subjected to a 90-degree bend test by striking them with a heavy hammer. After the above test, the weld section shall not exhibit any tearing out or cracking.

#### PART 3 – EXECUTION

# 3.1 SURFACE CONDITIONS

- 3.1.1 Examine the areas and conditions under which work of this section will be performed. Correct conditions detrimental to timely and proper completion of the work. Do not proceed until unsatisfactory conditions are corrected.
- 3.1.2 Shop Painting: Shop paint structural steel, except as modified herein. Do not paint steel surfaces embedded in concrete, galvanized surfaces, bearing surfaces, or surfaces within ½ inch of the toe of the welds prior to welding except surfaces on which metal decking or shear studs are to be welded. Prior to assembly, paint surfaces which will be concealed or inaccessible after assembly. Do not apply paint in foggy or rainy weather; when the ambient temperature is below 45°F or over 95°F; or when paint may be exposed to temperatures below 40°F within 48 hours after application, unless approved otherwise.
  - 3.1.2.1 Cleaning: SSPC SP6, except as modified herein. SSPC SP3 or SP6 for steel surfaces exposed in spaces above ceilings, attic spaces, crawl spaces, furred spaces, and chases. In addition, maintain steel surfaces free from rust, dirt, oil, grease and other contaminants through final assembly.
  - 3.1.2.2 Pretreatment: Immediately after cleaning, provide the metal surfaces with one coat of Mil. Spec. DOD-P-15328 pretreatment to a dry film thickness of 0.3 to 0.5 mil. Fed. Spec. TT-C-490 pretreatment may be applied to SSPC SP 6 cleaned surfaces, in accordance with Fed. Spec. TT-C-490.
  - 3.1.2.3 Priming: Immediately after the pretreatment coating has dried, apply primer to a minimum dry film thickness 0f 2.0 mil. Repair damaged primed surfaces with an additional coat of primer.
  - 3.1.2.4 Galvanizing: Provide as indicated or specified. Galvanize after fabrication where practicable.
    - 3.1.2.4.1 Galvanizing Repair: ASTM A780, using galvanizing repair paint for galvanizing damaged by handling, transporting, cutting, welding or bolting. Do not heat surfaces that repair paint has been applied to.
  - 3.1.2.5 Bearing Surfaces and Friction Type Joints: In the shop, coat with a temporary rust preventive. Remove coating, as recommended by the coating manufacturer, immediately prior to field erection.

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#### 3.2 ERECTION

- 3.2.1 General: Erect structural steel framing in accordance with governing codes and specifications. Conform with configurations and connections as approved on shop and erection drawings.
- 3.2.2 Bracing: Provide temporary shoring and bracing members as necessary.
- 3.2.3 Column Base and Bearing Plates: Align attached column bases and bearing plates for beams and similar structural members. Set loose column bases and bearing plates. Grout solid with non-shrink grout as specified.
- 3.2.4 Field Assembly: Accurately assemble structural framing to lines and elevations indicated within specified or noted tolerances.
  - a. Align and adjust various members of framing system prior to fastening.
  - b. Prior to assembly, clean bearing surfaces and surfaces, which will be in permanent contact.
  - c. Splice structural members only where indicated or where approved.
  - d. Cut holes by drilling only.
  - e. Fasten splices of compression members after bringing abutting surfaces completely into contact.
  - f. Make all field connections by high strength bolting or welding unless otherwise noted.
  - g. Tighten and leave erection bolts in place after welding. Where high strength bolts is required, provide identified and marked bolts; install using procedure as hereinafter specified; mark tightened bolts.
- 3.2.5 Do not use gas cutting torches in the field, unless approved by Architect/Engineer for correcting fabrication errors in the structural framing.
- 3.2.6 Furnish shim plates or develop fills where required to obtain proper fit and alignment.
- 3.2.7 Composite Construction: This building utilizes composite (concrete and structural steel) construction for various beams, careful sequencing of steel erection and concrete placement is recommended.
- 3.2.8 Connections: No welding or bolting shall be done until as much of the structure as will be stiffened by the welding or bolting has been properly aligned.
- 3.2.9 Drift pins shall not be used to enlarge unfair holes in main material. Holes that must be enlarged shall be reamed up to a maximum of 1/16th of an inch larger to admit bolts. Burning, drifting and reaming may be used to align unfair holes, in members only after approval by the Owner's Structural Engineer.
- 3.2.10 When high-strength friction or high-strength bearing bolts are used, the installation shall be by use of direct tension indicator washers or tension control bolts as specified.
  - a. All bolts shall have threads extended not less than <sup>1</sup>/<sub>4</sub> inch beyond nuts. Provide a minimum of one washer per bolt.
- 3.2.11 Mutilate threads or use lock nuts for unfinished bolts to prevent nuts from backing off. Draw unfinished bolt heads and nuts tight against the work.
- 3.2.12 Establish required leveling and plumbing measurements on the mean operating temperature of the structure.

- a. Make allowances for differences between temperature at time of erection and mean temperature at which the structure will be maintained when completed and in service.
- 3.2.13 The steel erector shall leave the steel clean of oil or other contaminants as outlined under Part 2 of this specification.

## 3.3 HIGH STRENGTH BOLT INSTALLATION AND INSPECTION

- 3.3.1 General: All high-strength bolts, nuts and washers, as well as their installation and inspection, shall conform to requirements of current edition of "Specification for Structural Joint using ASTM A325 of A490 Bolts," except that the installation of "turn-of-nut tightening" will not be accepted.
  - a. All high-strength bolts, both friction and bearing type, shall be installed in accordance with Paragraph 5D, "tightening by use of direct tension indicator," unless, noted otherwise on the drawings.
  - b. Load-indicator washers (LIW) or tension bolts (TCB) shall be used as the authorized direct tension indicator.
- 3.3.2 Load Indicator Washers (LIW): LIW shall be supplied, providing tensions at gaps specified no less than the minimum and no more than 20 percent above the minimum bolt tensions per Table 3, "Structural Joints Using ASTM A325 or A490 Bolts," (-0, +20%)
  - a. The manufacturer shall provide certified test reports of at least three load indicators from each heat supplied to confirm the tolerance range (-0, +20%).
  - b. Hardened washers shall be used under elements turned on all high –strength bolts to reduce galling of components
  - c. Prior to the final tightening of all high-strength bolts in multi-bolt connections, draw together all the piles of steel by partially compressing LIX protrusions during "snug tight" operation. This will show that each bolt has been partially tensioned, allowing for plat compression so that there will be no subsequent loosening of the bolts when they are finally tightened. The tensioning shall progress systematically from the most rigid past of the joint to its free edges until the protrusions of all LIW's are closed to the required gap.
  - d. The Inspection Testing Laboratory (ITL) need not be present during the entire installation and tightening operation, provided that it has done the following:
    - i. Inspected the surfaces and bolt type for conformance to plans and specifications as proof to start bolting.
    - ii. Will, upon completion of all bolting, verify the minimum specified bolt tensions visually and by using the feeler gauge as "no go" inspection on a few bolts in each connection (10 percent or two bolts, whichever is greater.)
  - e. All LIW's shall be of the same surface condition, either "weathered" or "bright."
- 3.3.3 Tension Control Bolts (TCB): TCB shall be supplied providing shearing of the bolt tip at no less than the minimum and no more than 20 percent above the minimum bolt tension per Table 3, "Structural Joints Using ASTM A325 or A490 Bolts," (-0, + 20%.) To ensure quality control, test a minimum of three bolts for each grade, diameter and type for each heat, tests shall be performed at weekly intervals on three bolts for each grade, diameter and type taken from the supply of bolts on the floor

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actually being installed at the time. Tighten each bolt in the SWBTC until the torqueoff spline has sheared and observe the tensions values obtained. The values obtained on the SWBTC shall be no less than the minimum and no more than 20 percent above the minimum bolt tension per Table 3 (-0, +20%.)

- a. Prior to the final tightening of all high-strength bolts in a multi-bolt joint, draw together all the plies of steel to a "snug-tight" condition by partially tightening the bolts without shearing the torque-off spline. After a "snug-tight" condition has been accomplished, tension the bolts until the torque-off spline shears, progressing systematically from the most rigid part of the joint to its free edge.
- b. The ITL need not be present during the entire installation and tightening operation, provided the ITL has:
  - i. Prior to the start of bolting, inspected all surfaces and bolt types for conformance with plans and specifications.
  - ii. Performed the quality control bolt tests specified above.
  - iii. Visually inspected 100 percent of the high-strength bolts for proper installed tension. Except as noted below, it will be assumed that properly installed bolt tensions have been achieved if the spline has twisted off.
- 3.3.4 Other Inspections: In both LIW and TCB installation, the ITL shall further examine large, multibolt, multirow connections for possible loss of bolt tensions due to fit-up problems.
  - a. In the case of a dispute regarding final installed bolt tensions in a specific joint, a calibrated torque wrench shall be used to verify the installation as outlined in Section 6 (D) 4 of "Structural Joints Using ASTM A325 or A490 Bolts."

#### 3.4 CUTTING

- 3.4.1 Do not field cut or alter structural member without the written approval of the Structural Engineer.
- 3.4.2 Do not use gas cutting torches for correcting fabrication errors in structural framing.
- 3.4.3 Finish Gas-cut sections equal to a sheared performance.

#### 3.5 ERECTION TOLERANCES AND SURVEY

- 3.5.1 Plumb, level and align individual pieces in accordance with the requirements of the "AISC Code of Standard Practice for Steel Buildings and Bridges."
- 3.5.2 Field Survey: Make an accurate survey of alignments and elevations of all steel members as noted on the drawings.
  - a. Should locations vary beyond the allowable tolerances, notify Architect/Engineer and take necessary corrective measures and modify details and/or procedures as required and approved.
  - b. Permanent benchmarks shall be established by a registered Professional Engineer employed by Contractor in accordance with the requirements of contract documents.

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#### PART 1 - GENERAL

#### 1.1 SCOPE

These specifications are intended for use in the construction of bonded repair and retrofit of concrete structures using fiber reinforced polymer (FRP) composites. These specifications cover construction of FRP systems used as externally bonded or near surface mounted reinforcement to enhance axial, shear, or flexural strength or ductility of a concrete member, such as column, beam, slab, or wall.

#### **PART 2 - DEFINITION OF TERMS**

- 2.1 Composite FRP—A polymer matrix, either thermosetting or thermoplastic, reinforced with a fiber or other material with a sufficient aspect ratio (length to thickness) to provide a discernible reinforcing function in one or more directions.
- 2.2 Development Length—The bonded distance required for transfer of stresses from concrete to the FRP to develop tensile capacity of FRP.
- 2.3 Epoxy—A polymerizable thermosetting polymer containing one or more epoxide groups, cured by reaction with phenols, anhydrides, polyfunctional amines, carboxylic acids, or mercaptans. An important matrix resin in FRP; also used as structural adhesive.
- 2.4 Fiber Reinforced Polymer (FRP) System— Composite material consisting of a polymer matrix reinforced with cloth, mat, strands, or any other fiber form. See composite.
- 2.5 Structural Adhesive—A resinous bonding agent used for transferring required loads between adherents.

#### **PART 3 - MATERIALS**

#### 3.1 CARBON FIBER STRUCTURAL STRENGTHENING SYSTEM

MAXICARB 600G is a high-strength uni-directional carbon fiber sheet for structural reinforcement, manual wraps lamination, and tensile strength reinforcement to structural members.

Fiber Material	High Strength Carbon
Color	Black
Nominal Thickness	0.331mm
Tensile strength	4,900 MPa
Tensile Modulus	252 GPa
Elongation at Break	> 2.0%
Density	1.82 g/cm3

# 3.2 UNIDIRECTIONAL CARBON FIBER STRIP

MAXICARB PLATE is a high-strength unidirectional pultruded strip construed with carbon fibers. The CFRP strips are bonded to the substrate using compatible epoxy resin. The strips are ideal for the strengthening concrete, wood and steel structures.

	US Units	SI Units
Density	0.047 lb/ in3	1.3 g/cm3
Tensile strength	348ksi	2,400MPa
Tensile modulus	24msi	165GPa
Ultimate Elongation	1.5%	1.5%
Ply thickness	0.047in	1.2mm

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#### 3.3 STRUCTURAL PRESSURE INJECTION EPOXY

SEALBOND EPOXY UNDERWATER (385-UE) is a 100% Epoxy-Amine type curing agent especially formulated for use to cure at high humidity, low temperature (down to 5°C) and underwater. It has excellent chemical resistance and low water miscibility. It renders excellent adhesion and bonding capabilities designed for the all-around remedy of structural concrete defects and flaws through pressurized injection and grouting and for other marine applications. It may be applied even on damp surfaces or even during cold conditions.

Colors	Component A	Light Straw
	Component B	Amber
Viscosity	Component A	4900 cps
At 27°C	Component B	1200 cps
Tensile Stren	gth	3000 – 5000 psi
ASTM D638	-91	At 7 days full curing
Flexural Strength		6000 – 9000 psi
A STM D700	02	At 7 days full suring
ASTM D790	-92	At / days full curing
Bond Strengt	h (slant Shear	3000 – 5000 psi at 7 days
Test) AASH7	TO T-237	full curing
Compressive	Strength	11000 – 12500 psi at 7
ASTM c109-	95/D695	days full curing

#### 3.4 LAMINATING EPOXY FOR COMPOSITE FIBER

SEALBOND NUVOXIBOND Clear C65 Laminating Epoxy for Composite Fiber is a twocomponent epoxy formulation primarily designed for structural retrofitting works particularly for cured in place application such as laminating composite E-Glass and Carbon Reinforcement Fabrics.

Color	Clear
Odor	Slightly Aromatic
Viscosity at 25°C	1500-3500 cps
Appearance	Straw
Flashpoint	150°C
Density	8.58 lbs/gal
(Admixture)	
Solid by volume	100%
Compressive	9,100 psi (63
Strength	MPa)
(ASTM C-39)	
Bond Strength	> 1.5 MPa
(ASTM D-7234)	

#### **PART 4 - EXECUTION**

4.1 Surface Preparation: All surfaces must be thoroughly cleaned to remove dirt, grease, mill scale, loose rust, chalk, and any other contaminants that can reduce adhesion. Use abrasive blasting, pressure wash, shotblast, grind, or other approved mechanical means to achieve an open-pore texture. In certain applications and at the engineer's discretion, the bond between the substrate and fabric may be determined to be non-critical (such as in column confinement applications). Smoothen the surfaces by mechanical grinding. All corners must be rounded up to 20mm diameter radius the surface must be clean and free from fins, sharp edges and protrusions.

#### 4.2 Application of Materials:

4.2.1 Application of Carbon Fiber: Installation of MAXICARB CARBON FIBER strengthening system should be performed only by a specially trained, approved contractor. Note the specified number of plies, ply widths and fiber orientation.

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Saturate the MAXICARB CARBON FIBER with Sealbond Nuvoxibond Laminating Epoxy both sides and apply it to the surface of the member by hand. Use an aluminum roller to remove all air pockets and ensure the intimate contact with the surface. Exerting a uniform tensile force that will distributes across the entire width of the MAXICARB fiber will squeeze out all air bubbles or air pockets.

Apply Sealbond Nuvoxibond Laminating Epoxy to MAXICARB CARBON FIBER for final lamination. Let it be cure for 24 to 48 hours. The cured composite wrap shall have proper bond with the substrate and between the layers to ensure the uniform thickness and density with no porosity.

The finished composite wraps maybe painted over with acrylic paint, a two component urethane coating, any desired surface finish or protective fireproofing coating may be applied on the cured composite surface.

4.2.2 Application of Carbon Plate: Installation of MAXICARB strengthening system should be performed only by a specially trained, approved contractor. Saturate the plate and fiber with Sealbond Nuvoxibond Laminating Epoxy both sides and apply it to the surface of the member by hand. Exerting a uniform tensile force that will distributes across the entire width. All the air bubbles or air pockets shall be squeeze out. Apply Sealbond Nuvoxibond to MAXICARB for final lamination of carbon plate/ strip. Let it be cure for 24 to 48 hours. The cured composite wrap shall have proper bond with the substrate and between the layers to ensure the uniform thickness and density with no porosity. The finished composite wraps maybe painted over with acrylic paint, a two component urethane coating, any desired surface finish or protective fireproofing coating may be applied on the cured composite surface.

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#### PART 1 - GENERAL

#### 1.1 SCOPE

- a. Furnish materials and equipment and perform labor required to complete.
  - 1. Waterproofing of water reservoir and roof decks. See drawings and details for location and extent of requirements.
  - 2. Submit to Architect/Engineer samples of materials to be used and secure approval.

#### **PART 2 - PRODUCTS**

#### 2.1 WATERPROOFING

LABIRIT TORCHED –ON WATER PROOFING MEMBRANE is a prefabricated membrane made of bitumen distillate modified with elastomeric and plastomeric polymers.

#### 2.2 Non Shrink Cementitious Grout

SEALPROOF NON-SHRINK CEMENTITIOUS GROUT 8008 is a non-shrink, cement based, high strength developing grout, which is specially formulated for use in critical grouting operations where positive expansion and non-staining characteristics are required.

Typical result of Compressive Strength at a flowable consistency (0.18 water/powder ratio):

Time	Flowable	Trowellable
24 hours	2,500-3,000 psi	2,800- 3,000psi
7 days	5,500-6,000psi	5,500- 6,000psi
28 days	6,500 psi	7,000 psi

Flowable Yield Grout: 25 kg SEALPROOF 8008 ~ 13.5L grout when mixed with 4.5L of water

Trowellable Yield Grout: 25 kg SEALPROOF 8008 ~ 12.5L grout when mixed with 3.5L of water

#### **PART 3 - EXECUTION**

#### **Application of Waterproofing Membrane:**

- 3.1 Two layer of 3mm thick shall be laid fully torched on blinding concrete with minimum of 10mm end laps and 150mm side laps.
- 3.2 The blinding surface shall be primed with EUROPRIMER to placing the membrane.
- 3.3 Prior to succeeding works the applied primer shall be inspected by the engineer 24 hours after the placement.
- 3.4 It shall be performed using cylinder fed propane gas torch, trowel to seal the seams of the membrane and knife for cutting. It is then unrolled again and torched on pressing the melted area against the substrate.
- 3.5 Repeat till the entire length of the membrane is bonded firmly onto the surface then the second membrane is laid in the same way with an overlap of 150mm at the end 100mm at the side.

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3.6 Provide an upstand waterproofing membrane vertically with 200mm along the perimeter wall. Use same application on torched-on method.

#### **Application of Non Shrink Cementitious Grout**

#### FORMWORK

The formwork should be constructed to be leak-proof to contain the material until it has hardened ie around base plates. In order to prevent leakage or seepage, all of these formers must be sealed, by using Optimastic PU Sealant to seal gaps between formwork & concrete.

#### PLACING

Pour grout within 15-20mins after mixing to gain full advantage of the expansion process. Grouting of base plate should be carried out continuously. Ensure to have enough material in place prior placing. Star placing the mixed grout from one side of the formwork to prevent entrapment of air. During application ensure entrapped air is able to escape through relief holes. Check for any loss in the material through the formwork or between any unsealed joints.

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Section VII. Drawings

#### GENERAL RETROFITTING NOTES

#### A. GENERAL

- CONSTRUCTION NOTES AND TYPICAL DETAILS APPLY TO ALL DRAWINGS UNLESS OTHERWISE SHOWN OR NOTED, NODIFY TYPICAL DETAILS AS DIRECTED TO MEET SPECIAL CONSTRONS.
- SHOP DRAWINGS WITH EFECTION AND PLACING DEGRAMS OF ALL STRUCTURAL STEEL, MISCELLANEOUS IRON, PRE-CAST CONCRETE ETC. SHALL BE SUBMITED FOR DUCINEER'S APPROVEL BEFORE FABRICATION.
- CONTRACTOR SHALL VERFY ALL DIVENSIONS BEFORE ALL WORK IS TO BECIN, CHECK WITH VECHNICAL AND ELECTRICAL CONTRACTORS FOR CONDUCTS, PPE SLEEVES, ETC. TO BE EMBEDDED IN THE CONCRETE.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ACEDUATE SHORINGS AND BRACINGS OF THE STRUCTURE FOR ALL LOADS THAT WAY BE IMPOSED DURING CONSTRUCTION.
- ALL INDUSIONS ARE EXPRESSED IN MILLINETERS (WM) UNLESS NOTED OTHERWISE ELEVATIONS ARE EXPRESSED IN METER (W). THE ELEVATION SYSTEM USED IS "ELEVICX:".
- B. RETROFITING NOTES
- CHACKS, RUEDCOMS AND WALL VERTICAL SERVICEMENTS ALL CHACKS AND HAVECOMES IN MASSIVE WALL AND STRUCTURAL ELEMENTS SHALL IS FULLED. AND REARIEMENT METSTANDERS SHALL BE INFORMATION FOR APPROVED IN EXCHACTS SHALL BE INFORMATION FOR AN AND SEALED.
- Reproprints of calcade and replected stars calcade and depleted stars shall be plued and select with structural proof, warden it to express of scalar improved in the structural change, support shall be installed to predent purples deplection.
- WATERPROOFING APPLICATION OF WATERPROOFING FOR DECKS. SEALING OFF OF ALL EXISTING CRACKS.
- 4. ALL EXPOSED STEEL MEMBERS SHALL BE PROPERLY MAINTAINED BY RUST PROOFING MATERIAL
- PRIOR TO APPLICATION OF CERP FIBER & PLATES, CONCRETE SURFACE MUST BE PROPERLY PREPARED.
- C. MATERIAL SPECIFICATION
- 1. CARBON REER MANCARE 6006 OR ANY APPROVED EQUAL SEALBOND NUVOXIBOND Clear C6
- 2. CARBON PLATES MAXICARB PLATE 1.2 THICKNESS OR ANY APPROVED EDUAL
- STRUCTURAL EPOXY SE4LBOND EPOXY UNDERWATER (385-UE)
- HOT APPLIED WATERPROOFING LARGET TORCH-ON APPLIED WATERPROOFING MEMBRANE OR ANY APPROVED EQUAL SEALPROOF NON-SHRINK CENENTITIOUS GROUT 8008





	ADAMA CONSUL Engine
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	PROJECT OWNER:		PROJECT ENGINEER	ROLET EVONER PROJET THE SHE		SHEET CONTENTS		DESIGN BY:	GWBP			REVISIO	) N S		ORAWN	G NO.	
MANTEM	SOCIAL SECU		JULIE ANNE B. CA	MOL MASER, MIRICE	SSS LA UNION BR	RANCH	GENERAL RETROFITTING NOTES RETROFITTING DETAILS		DRAWN BY: CHECKED BY: APPROVED BY: BLENAVE:	GWBP JABC JABC	-	1646K	DESCRIPTION	0.4TE DR 04,923,921	KUN 47790	RP	-1
	-	-	PTR NO.: 8104491	DATE: JANUARY 6, 2022	LOCATION: BROY, SEMILLA, SAN FERNANDO, LA UN	4 GN					N NAME					SHEET	NO.
		-	Pho Not Not Oldood	N 300-012-012	· · · · · · · · · · · · · · · · · · ·		1	1	1.01 3.040	As ano						<u>v</u>	



Section VIII. Bill of Quantities

#### PROJECT: STRUCTURAL RETROFITTING OF \$\$\$ LA UNION BUILDING

SUBJECT : Government Center, Barangay Sevilla, San Fernando City, La Union

# **BILL OF QUANTITIES**

ITEM	DESCRIPTION	QTY	UNIT	MATERIALS		LABOR AND EQUIPMENT		TOTAL	MOB. /		VAT	TOTAL COST
NO				Unit Cost	AMOUNT	Unit Cost	AMOUNT	DIRECT COST	DEMOB.	MARK UP	VAI	IOTAL COST
(	(	101	(D)	( 5 )	(F)	10)	(H)	(1)	(J)	(K)	(L)	(M)
(A)	(A) (B)		(0)	(=)	CXE	(G)	CXG	F + H	% * (F+H)	% * (I+J)	12% * (I+J+K)	I + J + K + L
A. STRUCTURAL RETROFITTING												
- I.	I. GENERAL REQUIREMENTS											
	<ol> <li>Permits and Licenses including signed-and-sealed</li> </ol>											
	construction plans for retrofitting permit, and signed-and-	1.00	lot		-		-	-			- 1	-
	sealed as-built retrofitting plans											
<u> </u>	2 Temporary Eacilities/ Barracks	1.00	lot		-		-	-			-	-
	3 Safety and Health equipment/requirements											
	(dust barrier/board-up safety devices/signages PPFs	1.00										
	floor/furniture cover. etc.)	1.00	IOT		-		-	-				-
	<ol> <li>Layout/ Hauling and Disposal of Debris and Unusable</li> </ol>	1.00	lot		_		-	-				_
	Materials	1.00	101									
	TOTAL (ITEM I)											₽ -
- 11.	CIVILWORKS											
	Removal of concrete plaster											
	1. Grinding Works	1.00	lot		-		-	-			-	-
	2. Others, Chipping	1.00	lot		-		-	-			-	-
	TOTAL (ITEM II											₽.
- 111.	CFRP WRAP 600g/sqm (Beams)											
	CFRP Wrap 600g/sqm - Second Floor	146.94	sqm		-		-	-			-	-
	TOTAL (ITEM III											₽ -
IV.	CFRP PLATE 100x1.2mm THK											
	CFRP plate 100x1.2mm THK - Beam	321.33	Im		-		-	-			-	-
	TOTAL (ITEM IV)											P -
٧.	V. STRUCTURAL EPOXY (Cracks)											
	Structural Epoxy for Cracks	20.00	gals		-		-	-			-	-
	TOTAL (ITEM V)											₽ -
VI.	RESTORATION AND PAINTING WORKS											
	1. Restoration of Plastering	1.00	lot		-		-	-			-	-
	2. Restoration of Paints	200.00	sqm		-		-	-			-	-
	3. Restoration of Existing Ceiling	132.00	sqm		-		-	-			-	-
	4.	1.00	let									
	Walls/partitions, floor/floor finishes and other affected areas	1.00	101		-		-	-				-
	TOTAL (ITEM VI)											₽.
									TOTAL A	- Structural Retrof	itting (ITEMS I-VI)	P -

Retrofitting of La Union Building 66

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ITEM	DESCRIPTION		UNIT	MATERIALS		LABOR AND EQUIPMENT		TOTAL	MOB. /		VAT	
NO				Unit Cost	AMOUNT	Unit Cost	AMOUNT	DIRECT COST	DEMOB.	MARK UP	VAI	IOTAL COST
( ^ )	(8)	101	(D)	( = )	(F)	(0)	(H)	(1)	(J)	(K)	(L)	(M)
	(5)		(0)	(=)	CXE	(6)	CXG	F + H	% * (F+H)	% * (I+J)	12% * (I+J+K)	+ J + K + L
Β.	RELOCATION OF AFFECTED WORKSTATIONS AND OFFICE EQUIPMENT											
	1. Dismantling & temporary relocation of employee	40.00	units		-		-	-			-	-
	<ol><li>Provision of electrical power outlets</li></ol>	40.00	sets		-		-	-			-	-
	<ol><li>Provision of Data &amp; Voice outlets</li></ol>		sets		-		-	-			-	-
	TOTAL COST – OTHER WORKS											P -
TOTAL B - Relocation of Affected Workstations and Office Equipment P								₽ -				
	TOTAL AMOUNT (ITEMS A & B)											P -

#### Ceiling amount is 🕈 4,378,400.00. Any bid with financial component exceeding this amount shall be considered non-responsive.

GENERAL CONDITIONS:

1. For uniformity and evaluation purposes, a bidder shall adhere to the herein prescribed format of BOQ, specifically in the formula for computation, given quantity and exclusive pay items. Any deviation from the format shall be a ground for disqualification of bid.

Fill up all required items/field in the BOQ form. Failure to indicate any of the following shall mean outright disqualification since bid is considered Non-responsive: a) if item is given for free, indicate dash (-), zero (0) or free

- Each bidder shall be provided with hard copy of the BOQ Form (attached in the PBD) and an electronic copy for faster and easier encoding. The hard copy shall serve as the bidder's reference as to completeness
  of work items, quantity, formula, format, etc. in the BOQ Form considering that the electronic copy is prone to alterations during encoding. Any discrepancy on the contents (specially on the quantity and inclusive
  pay items) between the hard copy and electronic, the contents of the hard copy shall prevail.
- 3. Bidder are not allowed to include any pay items that were not indicated in the form supplied Bill of Quantities. In instances where necessary work items are inadvertently left out in BOQ Form, a bidder should make a written query to the Bids and Awards Committee so that the same shall be addressed in the Bid Bulletin which will be issued to all participating bidders.
- 4. Bidders shall include in the detailed estimate the breakdown of materials & labor for quantities specified in lot (unit of measure) in BOQ.
- 5. All documents must be signed, and each and every page thereof must be initialed by the duly authorized representative/s of the Bidder.
- 6. Mark-up shall include the following:

a) Overhead expenses such as office expenses, supervision, transportation allowances, and financing costs (Premium on CARI, Bid Security, Performance Security, Surety for advance payment, Warranty bond)

- b) Contingencies, Miscellaneous Expenses and Contractor's Profit margin
- 7. It is the responsibility of the Bidder to check the arithmetical computation provided herein.

Submitted by: \_\_\_\_\_

(Name of Bidder / Company Name)

Prepared by:

(Company Representative - Signature over printed name)

Address: \_\_\_\_\_\_

Telephone #:

Date:

Section IX. Checklist of Technical and Financial Documents

# Checklist of Technical and Financial Documents

# I. TECHNICAL COMPONENT ENVELOPE

### Class "A" Documents

### Legal Documents

Valid PhilGEPS Certificate of Platinum Registration and Membership (a) (Platinum Membership) (all pages);

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Tech	писа	<u>l Documents</u>
	(b)	Statement of the prospective bidder of all its ongoing government and private contracts, including contracts awarded but not yet started, if any, whether
_		similar or not similar in nature and complexity to the contract to be bid; and
	(c)	Statement of the bidder's Single Largest Completed Contract (SLCC) similar
		to the contract to be bid, except under conditions provided for in Sections
		23.4.1.3 and 23.4.2.4 of the 2016 revised IRR of RA No. 9184, within five (5)
		years period prior to the submission and opening of Bids; and
	(d)	Philippine Contractors Accreditation Board (PCAB) License;
		<u>or</u>
		Special PCAB License in case of Joint Ventures;
		and registration for the type and cost of the contract to be bid; and
	(e)	Original copy of Bid Security. If in the form of a Surety Bond, submit also a
		certification issued by the Insurance Commission;
		or
		Original copy of Notarized Bid Securing Declaration; and
	(f)	Project Requirements, which shall include the following:
		a. Organizational chart for the contract to be bid:
		b List of contractor's key personnel (e.g. Project Manager Project
		Engineers Materials Engineers and Earemen) to be assigned to the
		contract to be bid, with their complete qualification and experience
		dotor
		c. List of contractor's major equipment units, which are owned, leased,
		and/or under purchase agreements, supported by proof of ownership or
		certification of availability of equipment from the equipment
		lessor/vendor for the duration of the project, as the case may be; <u>and</u>
	(g)	Original duly signed Omnibus Sworn Statement (OSS);
		and if applicable, Original Notarized Secretary's Certificate in case of a
		corporation, partnership, or cooperative; or Original Special Power of
		Attorney of all members of the joint venture giving full power and authority

## Financial Documents

The prospective bidder's audited financial statements, showing, among others, (h) the prospective bidder's total and current assets and liabilities, stamped "received" by the BIR or its duly accredited and authorized institutions, for the preceding calendar year which should not be earlier than two (2) years from the date of bid submission; and

to its officer to sign the OSS and do acts to represent the Bidder.

The prospective bidder's computation of Net Financial Contracting Capacity (i) (NFCC).

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- Class "B" Documents
- (j) If applicable, duly signed joint venture agreement (JVA) in accordance with RA No. 4566 and its IRR in case the joint venture is already in existence; or

duly notarized statements from all the potential joint venture partners stating that they will enter into and abide by the provisions of the JVA in the instance that the bid is successful.

# II. FINANCIAL COMPONENT ENVELOPE

(k) Original of duly signed and accomplished Financial Bid Form; **and** 

Other documentary requirements under RA No. 9184

- (1) Original of duly signed Bid Prices in the Bill of Quantities; <u>and</u>
- (m) Duly accomplished Detailed Estimates Form, including a summary sheet indicating the unit prices of construction materials, labor rates, and equipment rentals used in coming up with the Bid; <u>and</u>
- (n) Cash Flow by Quarter.

# IMPORTANT REMINDERS

- A) Each and every page of the Bid Forms, under Section VIII: Checklist of Technical and Financial Documents hereof, shall be signed by the duly authorized representative/s of the Bidder. Failure to do so shall be a ground for the rejection of the bid.
- B) Any interlineations, erasures, or overwriting shall be valid only if they are signed or initialed by the duly authorized representative/s of the Bidder.
- C) Bid documents shall be compiled in a folder/binder with the Annexes properly labeled with tabs/separators.
- D) Bidders shall submit their bids through their duly authorized representative enclosed in separate sealed envelopes, which shall be submitted simultaneously:
  - a) The first three individually sealed envelopes shall contain the folder/binder of the Eligibility Requirements and Technical Component of the bid; prepared in three copies labeled as follows:

Envelop (1): ORIGINAL – Eligibility Requirements and Technical Component Envelop (2): COPY1 – Eligibility Requirements and Technical Component Envelop (3): COPY2 – Eligibility Requirements and Technical Component

b) The next three individually sealed envelopes shall contain the folder/binder of the Financial Component of the bid; prepared in three copies labeled as follows:

Envelop (4): ORIGINAL – Financial Component Envelop (5): COPY1 – Financial Component Envelop (6): COPY2 – Financial Component

c) Bidders shall enclose, seal and mark the following:

Envelop (7): Envelope (1) and Envelope (4) enclosed in one sealed envelope marked "ORIGINAL-BID"

Envelop (8): Envelope (2) and Envelope (5) enclosed in one sealed envelope marked "COPY1-BID"

Δ

Envelop (9): Envelope (3) and Envelope (6) enclosed in one sealed envelope marked "COPY2-BID"

- d) Envelopes (7) to (9) shall then be enclosed in a single sealed, signed final/outer envelope/package/box
- e) All envelopes (Envelopes (1) to (9) and the final/outer envelope/package/box) shall indicate the following:
  - addressed to the Procuring Entity's BAC
  - name and address of the Bidder in capital letters
  - name of the contract/project to be bid in capital letters
  - bear the specific identification/reference code of this bidding process
  - bear a warning "DO NOT OPEN BEFORE..." the date and time for the opening of bids

THE CHAIRPERSON						
BIDS AND AWARDS COMMITTEE						
2 <sup>ND</sup> FLOOR, SSS MAIN BUILDING						
EAST AVENUE, DILIMAN, QUEZON CITY						
NAME OF BIDDER :						
ADDRESS :						

- E) Bids submitted after the deadline shall only be marked for recording purpose, shall not be included in the opening of bids, and shall be returned to the bidder unopened.
- F) Bidders shall submit a copy of the Authority to Notarize issued by the Regional Trial Court to the Notarial Public.

# FORMS
## **Bid Form for the Procurement of Infrastructure Projects**

## **BID FORM**

## RETROFITTING OF LA UNION BUILDING

Date:\_\_\_\_\_ Project Identification No.: \_\_\_\_\_

## To: SOCIAL SECURITY SYSTEM

East Avenue, Diliman, Quezon City

Having examined the Philippine Bidding Documents (PBDs) including the Supplemental or Bid Bulletin Numbers [insert numbers], the receipt of which is hereby duly acknowledged, we, the undersigned, declare that:

- a. We have no reservation to the PBDs, including the Supplemental or Bid Bulletins, for the Procurement Project: (Insert name of contract);
- b. We offer to execute the Works for this Contract in accordance with the PBDs;
- c. The total price of our Bid in words and figures, excluding any discounts offered below is: (insert information);
- d. The discounts offered and the methodology for their application are: (insert information);
- e. The total bid price includes the cost of all taxes, such as, but not limited to: [specify the applicable taxes, e.g. (i) value added tax (VAT), (ii) income tax, (iii) local taxes, and (iv) other fiscal levies and duties], which are itemized herein and reflected in the detailed estimates,
- f. Our Bid shall be valid within the period stated in the PBDs, and it shall remain binding upon us at any time before the expiration of that period;
- g. If our Bid is accepted, we commit to obtain a Performance Security in the amount of [insert percentage amount] percent of the Contract Price for the due performance of the Contract, or a Performance Securing Declaration in lieu of the allowable forms of Performance Security, subject to the terms and conditions of issued GPPB guidelines for this purpose;
- h. We are not participating, as Bidders, in more than one Bid in this bidding process, other than alternative offers in accordance with the Bidding Documents;
- i. We understand that this Bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal Contract is prepared and executed; and
- j. We understand that you are not bound to accept the Lowest Calculated Bid or any other Bid that you may receive.

- k. We likewise certify/conform that the undersigned, is the duly authorized representative of the bidder, and granted full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for the (Name of Project) of the [Name of the Procuring Entity].
- 1. We acknowledge that failure to sign each and every page of this Bid Form, including the Bill of Quantities, shall be a ground for the rejection of our bid.

Name:	
Legal capacity:	
Signature:	
Duly authorized to sign the Bid for and behalf of:	

Date: \_\_\_\_\_

GPPB Resolution No. 16-2020, dated 16 September 2020

REPUBLIC OF THE PHILIPPINES) CITY OF

\_\_\_\_\_) S.S.

## **BID SECURING DECLARATION**

#### Project Identification No.: [Insert number]

To: [Insert name and address of the Procuring Entity]

I/We, the undersigned, declare that:

- 1. I/We understand that, according to your conditions, bids must be supported by a Bid Security, which may be in the form of a Bid Securing Declaration.
- 2. I/We accept that: (a) I/we will be automatically disqualified from bidding for any procurement contract with any procuring entity for a period of two (2) years upon receipt of your Blacklisting Order; and, (b) I/we will pay the applicable fine provided under Section 6 of the Guidelines on the Use of Bid Securing Declaration, within fifteen (15) days from receipt of the written demand by the procuring entity for the commission of acts resulting to the enforcement of the bid securing declaration under Sections 23.1(b), 34.2, 40.1 and 69.1, except 69.1(f),of the IRR of RA No. 9184; without prejudice to other legal action the government may undertake.
- 3. I/We understand that this Bid Securing Declaration shall cease to be valid on the following circumstances:
  - a. Upon expiration of the bid validity period, or any extension thereof pursuant to your request;
  - b. I am/we are declared ineligible or post-disqualified upon receipt of your notice to such effect, and (i) I/we failed to timely file a request for reconsideration or (ii) I/we filed a waiver to avail of said right; and
  - c. I am/we are declared the bidder with the Lowest Calculated Responsive Bid, and I/we have furnished the performance security and signed the Contract.

IN WITNESS WHEREOF, I/We have hereunto set my/our hand/s this \_\_\_\_\_ day of [month] [year] at [place of execution].

[Insert NAME OF BIDDER OR ITS AUTHORIZED REPRESENTATIVE] [Insert signatory's legal capacity] Affiant

## [Jurat]

[Format shall be based on the latest Rules on Notarial Practice]

GPPB Resolution No. 16-2020, dated 16 September 2020

FORM-03

## **Contract Agreement Form for the**

## **Procurement of Infrastructure Projects (Revised)**

[not required to be submitted with the Bid, but it shall be submitted within ten (10) days after receiving the Notice of Award]

## CONTRACT AGREEMENT

## **RETROFITTING OF LA UNION BUILDING**

ITB-SSS-CIVIL-2023-\_\_\_\_

THIS AGREEMENT made between:

SOCIAL SECURITY SYSTEM, a government-owned and controlled corporation created pursuant to Republic Act No. 11199, with principal office address at SSS Building, East Avenue, Diliman, Quezon City, represented herein by its Approving Authority and (Position of Approving Authority), (Name of Approving Authority) and (Position of Signatory), (Name of signatory), duly authorized pursuant to Administrative Order \_\_\_\_\_,

\_\_\_\_\_ (pertaining to Approving Authority) (Annex "A") and Office Order \_\_\_\_\_, \_\_\_\_ (Annex "B") (pertaining to signatories), hereinafter referred to as the "SSS";

#### - a n d -

(NAME OF CONTRACTOR), of legal age, Filipino, single/married, with principal address at \_\_\_\_\_\_, hereinafter referred to as the "Contractor". If corporation (NAME OF CONTRACTOR), a corporation duly created and existing pursuant to the laws of the Republic of the Philippines, with principal office address at \_\_\_\_\_\_, represented herein by its (Position of Signatory), (Name of Signatory), duly authorized pursuant to \_\_\_\_\_\_, , hereinafter referred to as the "Contractor".

WHEREAS, the Entity is desirous that the Contractor execute [name and identification number of contract] (hereinafter called "the Works") and the Entity has accepted the Bid for [contract price in words and figures in specified currency] by the Contractor for the execution and completion of such Works and the remedying of any defects therein.

## NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

- 1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.
- 2. The following documents as required by the 2016 revised Implementing Rules and Regulations of Republic Act No. 9184 shall be deemed to form and be read and construed as integral part of this Agreement, *viz.*:

a. Philippine Bidding Documents (PBDs);

- i. Drawings/Plans;
- ii. Specifications;
- iii. Bill of Quantities;
- iv. General and Special Conditions of Contract;
- v. Supplemental or Bid Bulletins, if any
- b. Contractor's bidder's bid, including the Eligibility requirements, Technical and Financial Proposals, and all other documents or statements submitted;

Bid form, including all the documents/statements contained in the Bidder's bidding envelopes, as annexes, and all other documents submitted (*e.g.*, Bidder's response to request for clarifications on the bid), including corrections to the bid, if any, resulting from the Procuring Entity's bid evaluation;

- c. Performance Security;
- d. Notice of Award of Contract; and the Bidder's conforme thereto; and
- e. Other contract documents that may be required by existing laws and/or the Procuring Entity concerned in the PBDs. <u>Winning bidder agrees thatadditional contract</u> <u>documents or information prescribed by the GPPBthat are subsequently</u> <u>required for submission after the contractexecution, such as the Notice to</u> <u>Proceed, Variation Orders, andWarranty Security, shall likewise form part of</u> <u>the Contract.</u>
- **3.** In consideration for the sum of *[totalcontract price in words and figures]* or such other sums as may be ascertained, *[Named of the bidder]* agrees to *[state the object of the contract]* in accordance with his/her/its Bid.
- 4. The *SSS* agrees to pay the above-mentioned sum in accordance with the terms of the Bidding.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of the Republic of the Philippines on the day and year first above written.

[Insert Name and Signature]	[Insert Name and Signature]				
[Insert Signatory's Legal Capacity]	[Insert Capacity]	Signatory's	Legal		
for:		for:			

*j*en

SSS

[Insert Name of Supplier]

(In case of double acknowledgment)

## SIGNED IN THE PRESENCE OF:

(Name of Certifying officer as to availability of funds)(Position of Certifying Officer)(Department/Office of Certifying Officer)

## **FUNDS AVAILABLE:**

APP No.: \_\_\_\_\_

## FIRST ACKNOWLEDGMENT

Republic of the Philippines )

BEFORE ME, a Notary Public for and in \_\_\_\_\_, Philippines, on this \_\_\_\_\_ day of \_\_\_\_\_ personally appeared:

Name	Competent Evidence of Identity	Date/Place of Issue

known to me to be the same person who executed the foregoing Agreement, consisting of \_\_\_\_\_\_ (\_\_\_) pages, including this page and excluding annexes, and he/she/they acknowledged to me that the same is his/her/their free and voluntary act and deed as well as the free and voluntary act and deed of the principal he/she /they represent/s in this instance.

WITNESS MY HAND AND SEAL on the date and place first above written.

Doc. No. \_\_\_\_; Page No. \_\_\_\_; Book No. \_\_\_\_; Series of 20\_\_.

*Retrofitting of La Union Building* 78

Rigi

## SIGNED IN THE PRESENCE OF:

## SECOND ACKNOWLEDGMENT

Republic of the Philippines )

BEFORE ME, a Notary Public for and in \_\_\_\_\_, Philippines, on this \_\_\_\_\_ day of \_\_\_\_\_ personally appeared:

Name	Competent Evidence of Identity	Date/Place of Issue

known to me to be the same person who executed the foregoing Agreement, consisting of \_\_\_\_\_\_ (\_\_\_) pages, including this page and excluding annexes, and he/she/they acknowledged to me that the same is his/her/their free and voluntary act and deed (if corporation to include succeeding phrase) as well as the free and voluntary act and deed of the principal he/she /they represent/s in this instance.

WITNESS MY HAND AND SEAL on the date and place first above written.

Doc. No. \_\_\_\_; Page No. \_\_\_\_; Book No. \_\_\_\_; Series of 20\_\_.

GPPB Resolution No. 16-2020, dated 16 September 2020

Rigi

#### REPUBLIC OF THE PHILIPPINES) CITY/MUNICIPALITY OF \_\_\_\_\_) S.S.

## AFFIDAVIT

I, [*Name of Affiant*], of legal age, [*Civil Status*], [*Nationality*], and residing at [*Address of Affiant*], after having been duly sworn in accordance with law, do hereby depose and state that:

#### 1. Select one, delete the other:

[If a sole proprietorship:] I am the sole proprietor or authorized representative of [Name of Bidder] with office address at [address of Bidder];

[If a partnership, corporation, cooperative, or joint venture:] I am the duly authorized and designated representative of [Name of Bidder] with office address at [address of Bidder];

#### 2. Select one, delete the other:

[If a sole proprietorship:] As the owner and sole proprietor, or authorized representative of [Name of Bidder], I have full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for [Name of the Project] of the [Name of the Procuring Entity] as shown in the attached duly notarized Special Power of Attorney;

[If a partnership, corporation, cooperative, or joint venture:] I am granted full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for [Name of the Project] of the [Name of the Procuring Entity], as shown in the attached [state title of attached documents showing proof of authorization (e.g., duly notarized Secretary's Certificate, Board/Partnership Resolution, or Special Power of Attorney, whichever is applicable;)];

- 3. [Name of Bidder] is not "blacklisted" or barred from bidding by the Government of the Philippines or any of its agencies, offices, corporations, or Local Government Units, foreign government/foreign or international financing institution whose blacklisting rules have been recognized by the Government Procurement Policy Board, <u>by itself or by relation, membership, association, affiliation, or controlling interest with another blacklisted person or entity as defined and provided for in the Uniform Guidelines on Blacklisting;</u>
- 4. Each of the documents submitted in satisfaction of the bidding requirements is an authentic copy of the original, complete, and all statements and information provided therein are true and correct;
- 5. *[Name of Bidder]* is authorizing the Head of the Procuring Entity or its duly authorized representative(s) to verify all the documents submitted;

#### 6. Select one, delete the rest:

[*If a sole proprietorship:*] The owner or sole proprietor is not related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

[If a partnership or cooperative:] None of the officers and members of [Name of Bidder] is related to the Head of the Procuring Entity, members of the Bids and Awards Committee

,

(BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

[If a corporation or joint venture:] None of the officers, directors, and controlling stockholders of [Name of Bidder] is related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

- 7. [Name of Bidder] complies with existing labor laws and standards; and
- 8. *[Name of Bidder]* is aware of and has undertaken the responsibilities as a Bidder in compliance with the Philippine Bidding Documents, which includes:
  - a) Carefully examining all of the Bidding Documents;
  - b) Acknowledging all conditions, local or otherwise, affecting the implementation of the Contract;
  - c) Making an estimate of the facilities available and needed for the contract to be bid, if any; and
  - d) Inquiring or securing Supplemental/Bid Bulletin(s) issued for the [Name of the Project].
- 9. *[Contractor]* did not give or pay directly or indirectly, any commission, amount, fee, or any form of consideration, pecuniary or otherwise, to any person or official, personnel or representative of the government in relation to any procurement project or activity.
- 10. In case advance payment was made or given, failure to perform or deliver any of the obligations and undertakings in the contract shall be sufficient grounds to constitute criminal liability for Swindling (Estafa) or the commission of fraud with unfaithfulness or abuse of confidence through misappropriating or converting any payment received by a person or entity under an obligation involving the duly to deliver certain goods or services, to the prejudice of the public and the government of the Philippines pursuant to Article 315 of Act No. 3815 s.1930, as amended, or the Revised Penal Code.

IN WITNESS WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_ at \_\_\_\_\_, Philippines.

#### [Insert NAME OF BIDDER OR ITS AUTHORIZED REPRESENTATIVE] [Insert signatory's legal capacity] Affiant

## [Jurat]

[Format shall be based on the latest Rules on Notarial Practice]

GPPB Resolution No. 16-2020, dated 16 September 2020

## REPUBLIC OF THE PHILIPPINES] NAME OF CITY] S.S

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## **SECRETARY'S CERTIFICATE**

I, **<NAME OF CORPORATE SECRETARY>**, of legal age, **<Civil Status>**, Filipino citizen and with business at **<Company Address>**, after being duly sworn, hereby depose and state that:

- 1. I am the Corporate Secretary of **<COMPANY NAME>**, a Corporation duly organized and existing under and by virtue of the laws of the Philippines, with principal office at **<Office Address>**.
- 2. As the Corporate Secretary, I have custody and access to the records of the Corporation.
- 3. I am familiar with the facts herein certified and duly authorized to certify the same.
- 4. I hereby certify that during a regular meeting of the Board of Directors of the Corporation held on **<Date of Meeting>**, at which meeting a quorum was present, the following Resolution/s was/were unanimously passed, approved and adopted:
  - a) RESOLVED that **<COMPANY NAME>**, authorized and empowered the following to participate in the bidding for the **<PROJECT NAME>** of the **SOCIAL SECURITY SYSTEM:**

NAME	<b>POSITION/DESIGNATION</b>	SIGNATURE

- b) **RESOLVED FURTHER that**, if awarded the Contract, the following **is/are** granted full power and authority to enter into contract with the **SOCIAL SECURITY SYSTEM:** 
  - NAME POSITION/DESIGNATION SIGNATURE
- c) **RESOLVED FURTHERMORE** that, the designated representative/s of the Corporation has/have the full power to perform any and all acts necessary and/or to represent the Corporation as fully and effectively as the Corporation might do if personally present, and hereby satisfying and confirming all the said representative/s shall lawfully do or cause to be done by virtue hereof.

IN WITNESS WHEREOF, I have hereunto set my hand this \_\_\_\_\_ day of \_\_\_\_\_\_ at <CITY>.

NAME & SIGNATURE of Corporate Secretary

SUBSCRIBE AND SWORN to before me this \_\_\_\_ day of \_\_\_\_\_ at <u><CITY></u>, affiant having exhibited to me his/her <Government Issued ID and details [issued by, date and place issued if applicable]).

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## **Performance Securing Declaration (Revised)**

[if used as an alternative performance security but it is not required to be submitted with the Bid, as it shall be submitted within ten (10) days after receiving the Notice of Award]

REPUBLIC OF THE PHILIPPINES)

CITY OF \_\_\_\_\_\_) S.S.

#### PERFORMANCE SECURING DECLARATION

Invitation to Bid: [Insert Reference Number indicated in the Bidding Documents] To: [Insert name and address of the Procuring Entity]

I/We, the undersigned, declare that:

- 1. I/We understand that, according to your conditions, to guarantee the faithful performance by the supplier/distributor/manufacturer/contractor/consultant of its obligations under the Contract, I/we shall submit a Performance Securing Declaration within a maximum period of ten (10) calendar days from the receipt of the Notice of Award prior to the signing of the Contract.
- I/We accept that: I/we will be automatically disqualified from bidding for any procurement contract with any procuring entity for a period of one (1) year for the first offense, or two (2) years for the second offense, upon receipt of your Blacklisting Order if I/We have violated my/our obligations under the Contract;
- 3. I/We understand that this Performance Securing Declaration shall cease to be valid upon:
  - a. issuance by the Procuring Entity of the Certificate of Final Acceptance, subject to the following conditions:
    - i. Procuring Entity has no claims filed against the contract awardee;
    - ii. It has no claims for labor and materials filed against the contractor; and
    - iii. Other terms of the contract; or
  - b. replacement by the winning bidder of the submitted PSD with a performance security in any of the prescribed forms under Section 39.2 of the 2016 revised IRR of RA No. 9184 as required by the end-user.

**IN WITNESS WHEREOF,** I/We have hereunto set my/our hand/s this \_\_\_\_\_ day of [month] [year] at [place of execution].

[Insert NAME OF BIDDER OR ITS

#### AUTHORIZED REPRESENTATIVE]

[Insert signatory's legal capacity] Affiant

#### [Jurat]

[Format shall be based on the latest Rules on Notarial Practice]

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# FORM-06

# STATEMENT OF ALL ITS ON-GOING GOVERNMENT AND PRIVATE CONTRACTS, INCLUDING CONTRACTS AWARDED BUT NOT YET STARTED

NAME OF CONTRACT	DATE OF CONTRACT	CONTRACT DURATION	CONTACT PERSON, CONTACT NO., ADDRESS, AND EMAIL ADDRESS	KINDS OF GOODS	AMOUNT OF CONTRACT	VALUE OF OUTSTANDING CONTRACT

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## FORM-07

## STATEMENT OF SINGLE LARGEST COMPLETED CONTRACT SIMILAR TO THE PROJECT TO BE BID EQUIVALENT TO AT LEAST 50% OF THE ABC WITH ATTACHED SUPPORTING DOCUMENTS (i.e. P.O/CONTRACTS)

NAME OF CONTRACT	KINDS OF GOODS	AMOUNT OF CONTRACT	CONTACT PERSON, CONTACT NO., ADDRESS, AND EMAIL ADDRESS

)

## Formula in the Computation of NFCC

## NAME OF PROJECT

NAME OF COMPANY NFCC = 15 (Current Assets – Current Liabilities) – Value of All Outstanding Works under On-going Contracts including Awarded Contracts yet to be started)

YEAR	CURRENT ASSETS			CURRENT L	IABILITIES
TOTAL					
Value of Outsta	nding Wo	rks under On-going	Contr	acts:	
CONTRA DESCRIPT	ACT FION	TOTAL CONTRACT AMOUNT AT AWARD	PEF PI ACC	RCENTAGE OF LANNED AND ACTUAL OMPLISHMENT	ESTIMATED COMPLETION TIME
TOTA	L				

Use additional sheet/s, if necessary

## FORMULA:

15	(	—	)	_		=	
	Current Assets	minus	Current Liabilities	minus	Total Outstanding Works		NFCC



Prepared and Submitted by:

Signature over Printed Name

(Name of Bank)

#### COMMITTED LINE OF CREDIT CERTIFICATE

Date: \_\_\_\_\_

**Social Security System (SSS)** SSS Main Building, East Avenue Diliman, Quezon City

CONTRACT PROJECT	:	
COMPANY/FIRM	:	
ADDRESS	:	
BANK/FINANCING		
INSTITUTION	:	
ADDRESS	:	
AMOUNT	:	

This is to certify that the above Bank/Financing Institution with business address indicated above, commits to provide the (Supplier/Distributor/Manufacturer/Contractor), if awarded the above-mentioned Contract, a credit line in the amount specified above which shall be exclusively used to finance the performance of the above-mentioned contract subject to our terms, conditions and requirements.

The credit line shall be available within fifteen (15) calendar days after receipt by the (Supplier/Distributor/Manufacturer/Contractor) of the Notice of Award and such line of credit shall be maintained until issuance of Certificate of Acceptance by the Social Security System.

This Certification is being issued in favor of said (Supplier/Distributor/Manufacturer/Contractor) in connection with the bidding requirement of (Name of Procuring Entity) for the above-mentioned Contract. We are aware that any false statements issued by us make us liable for perjury.

The committed line of credit cannot be terminated or cancelled without the prior written approval of Social Security System.

Name and Signature of Authorized Financing Institution Office

Office Designation

Concurred by:

Represe		ve			
Donrocc	ntati				
Name	&	Signature	of	(Supplier/Distributor/Manufacturer/Contractor)	Authorized

Official Designation

SUBSCRIBED AND SWORN TO BEFORE ME this \_\_\_\_\_ day of \_\_\_\_\_ at \_\_\_\_\_ Philippines, Affiant exhibited to me his/her competent Evidence of Identity (as defines by the 2004 Rules on Notarial Practice \_\_\_\_\_\_ issued on \_\_\_\_\_ at \_\_\_\_\_, Philippines.

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(Note: The amount committed should be machine validated in the Certificate itself)

