



**MODIFICATION AND RENOVATION AT CONSULATE  
OFFICE BUILDING TO INCORPORATE MSGQ OFFICE  
SPACES, CHENNAI, INDIA  
STATEMENT OF WORK  
NOVEMBER 2018**

**Scope of work for Renovation / Modifications at Consulate Office Building**  
**Consulate General of The United States of America, Chennai, India**

**1.0 Brief Description of the Project**

Consulate General of The United States of America, Chennai has a requirement of hiring services of a civil contractor to carry out renovation and modifications in consulate office building. Work involved demolition, erection of dry wall partition, electrical – new light fixtures and outlets etc. per below Scope of Work.

Contractor is responsible to provide and install all the material on site (except which are termed as GFCI – Government Furnished Contractor Installed) in accordance with the local rules and regulations for installation, environment and safety, proper disposal of materials etc.

Indicative drawings (A-01 to A-07 and E01-E02) are attached below to, details and indicative technical specifications are attached herewith.

**2.0 Site Visit**

A site visit will be arranged for all the prospective bidders for this project to obtain an overview of the project and to understand the existing site conditions to prepare them for proper planning and facilitate them for bidding.

Contractors are advised to thoroughly go through the solicitation and come prepared with possible queries, if so required during the site visit. The prospective bidders are also to provide in writing possible queries to the Contracting Officer.

Contractors are advised to reconfirm the quantities and dimensions mentioned in the bidding package during contractors walk through. Any major difference in the measurement will not be entertained later during the project.

**3.0 Scope of Services**

Below is a brief description of works involved in the scope followed by detail of these items.

**Civil Work –**

- i. Demolition of the existing dry wall partition.
- ii. Demolition of the existing exterior wall to accommodate proposed door.
- iii. Erection of 6” thick dry wall partition.
- iv. False ceiling installation.
- v. Provide and Install wooden fire rated doors.
- vi. Modular Furniture.
- vii. Carpet Tiles
- viii. Office Furniture.
- ix. HVAC

- x. Painting.

**Electrical Work – Rewiring, LED fixture installation (refer drg. E-01)**

- i. To provide and install electrical wires of standard size for the proposed outlets.
- ii. To provide and install new LED light fixtures.
- iii. To provide and install electrical outlets in the proposed office spaces per locations shown in drawing E-01.

**Structural Retrofit**

- i Contractor shall refer below documents attached with the SOW to understand the work required for structural retrofitting in order to distribute the load on the floor. Please co-relate the structural retrofitting drawing with layout drawings of the package for a better understanding of the location and work involved.
  - a. SOW for Retrofitting.
  - b. Strengthening details

**a. Project Schedule:**

Contractor shall submit a baseline schedule followed by weekly schedule which take into account the practical reality of the site, one-week look ahead linked to the original/ monthly schedule to the COR for the purpose of review and approval before commencement of any work.

**b. Codes:**

Contractor shall follow IBC and applicable Indian local codes for any reference during work.

**4.0 Scope of Work**

The scope of this work is to make modifications in the existing set up to accommodate three new offices. Contractor shall be providing all the material and labor required for Civil, Electrical, Mechanical, Structural Works and other associated works.

- 4.1 Dismantling: Contractor has to demolish the existing dry wall partition along with the door in it and another door leading for office space from hallway (refer drawing A-03). Contractor shall secure the demolished doors with frames and hardware to be reinstalled later in the proposed locations (refer drawing A-04) Contractor shall clear the area for all the trash and restore the flooring matching to existing. Contractor shall store the trash in the designated area for this purpose.

- 4.2 Demotion:

It is proposed to have a new opening in one of the proposed office area from courtyard. Please refer Annexure IV, attached with this SOW.

Contractor has to use big concrete cutter in order to make a deep cut in the existing concrete wall. Intent is not to disturb the other part of the wall while demoing the area for proposed new door from courtyard.

#### 4.3 New 6” Thick Gypsum Board Wall.

Construct double gypsum dry wall partition. The completed wall shall be 150 mm thick. The metal studs to form the support system for the new dry wall shall extend from floor to the concrete slab above. The metal frame shall be of 2x50mm. The void space between the frames and gypsum board shall be filled with fiber glass rock wool insulation with a density not less than 50kg/cum. Two sets of 12mm Gypsum board shall be placed on either side of the frame, making the total wall thickness to 150mm. Contractor shall do same dry wall against the ventilators / windows in the react room to make them opaque from outside.

Contractor shall provide and install two nos. 3” studs placed @ 12” c/c vertically. Over the studs provide and install 12.5mm thick cement board (two on each side) on both sides. Provide and install 6” thick fiberglass insulation between the boards of 50 kg/sq. m density. Provide provision for electrical conduit as per proposed work requirement during erection of the new partition wall. Make for the material for above said work is GYP INDIA.

#### Gypsum Board Wall in React Room

This partition shall be made in front of the existing masonry wall. Contractor shall provide and install Gyp India studs (2mm X 50 mm) from floor to ceiling level at 200mm c/c. These vertical channels shall be supported horizontally by additional hat channels within this partition.

Contractor has to coordinate the location (height) of hat channels to receive toggle bolts. Contractor shall install plywood board – 18mm thick on the new strengthen studs frame work.

Contractor shall install dry wall partition wall against each of the ventilators to restrict vision from courtyard side.

#### 4.4 **False Ceiling works**

New

New False ceiling shall be done in all the three locations. Contractor shall use prima fine fissured board tiles (24” X 24”) from Armstrong or equivalent with manufacturer recommended grid work. Entire installation shall be as per manufacturer recommendations.

### Modification

Contractors shall modify the existing false ceiling disturbed due to demolition of the dry wall partition or any other disturbances. Contractor shall use matching to existing materials to restore the false ceiling.

#### 4.5 New Wooden Solid Core Doors – Two Hours Fire Rated.

Contractor shall provide and install **three** each new (D1) two hour fire rated wooden doors per below specifications. Doors at D1 shall be equipped with SHW-11A hardware and a door closer. This hardware shall be GFCI – Government Furnished Contractor Installed.

Door D2 shall be reinstalled at locations shown in drawing A-04. Doors D2 shall be equipped with Simplex LL1021M looks as GFCI.

#### Door Frame:

Wooden door frame made of hard wood of section 140X70 mm with heat activated intumescent fire seal strip of section 12X5 mm.

- Finished with two coats of fire retardant primer.
- Final finish with 1mm thick laminate.

#### Door shutter:

- 55mm thick asbestos free composite Fire/Smoke check wooden shutters of 120 minutes fire resistance rating confirming to BS: 476 Part-22 & IS: 3614 Part-II comprising of two 12mm thick non-combustible boards sandwiching 25mm thick fire resistance insulation material faced with 3mm commercial ply on both sides with heat activated intumescent fire seal strip of size 12X5mm mounted on grooves of hardwood leaping on three sides except bottom. Size of shutter 7'X3'6".
- Finished with 2 coats of fire retardant primer.
- Final finish with 1mm thick laminate.

#### Accessories:

- a. 304 grade SS ball bearing hinges (100X75X3mm). Make: Garg / equivalent.
- b. Fire rated door closer. Make: Geze / Briton / equivalent.
- c. 304 grade SS door handle (250mm). Make: Hardwyn / equivalent.
- d. Mortise lock with lever handles with 70mm cylinder. Make Hardwyn / equivalent.
- e. Dead lock with 80mm cylinder. Make: Hardwyn / equivalent.
- f. 304 grade SS tower bolt (12")

#### 4.6 Modular Furniture

- a. L' shaped Executive work table made of 25mm thick post-formed table top with modesty front panel and side panel with post-formed side support legs.  
Dimensions: 1500/1650mm l x 750/450mm w x 750mm h

- b. Wooden storage unit made of 18mm thick pre-laminated board with post-formed top and one shelf making 2 compartments, swing open shutters with locking arrangement. Dimensions: 1125mm l x 450mm w x 975mm h  
Quantity – 2 sets.

#### 4.7 Floor carpets fixing

Contractor has to reinstall the carpet tiles which were removed from the area and kept in safe custody of the contractor. Any new tiles if at all required shall be supplied by USG and installed by the contractor.

#### 4.8 Office Furniture

Contractor shall refer attached Annexure – II and III to understand the specifications of the hanger / Shelf and Lockers to be provided for the proposed storage space.

Hangers can be custom made but lockers are to be procured as a company made item off the shelf. The contractor should buy off the shelf lockers locally based on specifications provided. It is a single tier 381mm wide X 1830 mm high lockers. Lockers shall be standing on floor with bases made out of structural channels as described in Annexure.

Contractor shall submit a shop drawing of the locker indicating relationship to adjoining surfaces and anchorage, for approval from COR before actually procuring the material.

Contractor shall also refer drawing A-05 in the attached package to understand the quantity required for these items and the location where these needs to be placed. Contractor has to provide and install below furniture's in the proposed react room:

- a. Looking Mirror  
Contractor shall provide and install 18” X 60” high safety glass with stainless steel channel frame.  
Contractor shall use 6mm thick Saint Gobain or equivalent looking mirror for the purpose.
- b. White Board  
Contractor shall provide and install 48” X 48” white marker board with brushed aluminum frame.
- c. Equipment Hanger Shelf  
Contractor shall refer Annexure II to look for specifications to be followed to provide and install hanger shelf in the react room as shown in the drawing A-05.
- d. Locker:  
Contractor shall provide and install factory made lockers per specifications provided in Annexure III, attached here with this scope of work. Contractor shall provide shop drawing indicating relationship to adjoining surfaces and anchorages.
- e. Movable Bench

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Contractor shall provide 12”X 78” moveable bench with adjustable steel construction and hardwood seating (40mm thick teak wood).

- f. Wall mounted clock: Round 315mm diameter minimum, battery operated, easy to read Arabic numerals, black hours and minute hands, red seconds hand, black perimeter.

### **5. HVAC**

Contractor shall provide and install 5” dia. insulated flexible duct to be attached to the existing fresh air system in hallway for the proposed Collateral Office space.

Contractor shall also provide 12” X12” square diffuser with powder coated fins to be installed in the collateral office.

### **6. Painting works**

- a. Paint the entire wall areas with two coats of premium emulsion paint of approved color with roller finish. Total area –
- b. Clean the window frames, apply metal paste to smoothen the. Apply two coats of enamel paint of approved color and final finishing. Quantity – LS.

#### **Procedure for painting:**

##### **Masonry Walls Surface:**

1. Remove all the nails.
2. Cover all the switch boards, light fittings, fan and AC using plastic sheet/ paper with masking tape.
3. Cover all the floors using plastic sheet.
4. Close the air cracks using crack sill material.
5. Apply siakgard67 to the dampness wall before painting.
6. Apply putty as required.
7. Apply first coat of paint. Apply putty as required.
8. Apply second coat of paint – Finish with roller.

#### **Dry Wall Partition**

##### **Preparation of gypsum board wall surface before painting:**

1. Provide and install joint tape with joint compound (approximately 3 layers) on all joints between Gypsum boards. Also use joint compound to fill the gaps.
2. Sand paper the wall and make the surface smooth.

##### **Painting on the joinery of masonry and gypsum board wall:**

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1. Fix joint tape over the junction where gypsum wall and masonry wall are meeting in such a fashion so that half of the tape shall be on gypsum wall and other on the masonry wall.
2. Apply joint compound on the tape and leave it for one day.
3. After setting properly sand paper the filling and edges of tape with sandpaper and provide a coat of topcoat, than paint the area

### **Electrical**

1. Contractor shall pull new electrical circuits through existing conduits from Existing Distribution Board to the Point of Use.
2. All branch circuits shall be single conductor with full neutral and separate grounding conductor in conduits.
3. Operating voltage is 440V – 240 V.
4. All the associated breakers for these new circuits shall be 20 A (Havel's or equivalent).
5. All the new electrical wires for the new circuits shall be 4 sq. mm (FRLS Cables – Fire Retardant Low Smoke – Finolex or equivalent).
6. Contractor shall provide and install new electrical outlets (multi pin socket with option of flat pin plug tops and 15 – 20 A). Sockets can be of Anchor Roma or equivalent make.
7. UPS /Data: UPS / Data circuits are already available in all the proposed locations. Any changes in the location of the outlets per location of the furniture shall be done by in-house staff.



## **GENERAL**

### **A. ELECTRICAL WORKS:**

1. Re-do the electrical wiring for the three locations as shown in drawing E-01 and E-02 with requisite sized wires (4 sq.mm as per OBO standards).

### **B Site Preparation**

Before work is initiated, the crew shall identify the limits of work, establish work zones, and install appropriate safety fencing, temporary chain link fencing, barricades, and signage, if needed. Work zones shall be clearly demarcated and areas for staging and stockpiling contaminated and non-contaminated soil shall be identified.

This being a green field project, there is no space for storage of any material or otherwise. Contractor has to make his own arrangements for storage of the material on site or for its security. USG, under no circumstances will be responsible for any misplacement or steeling of the material / tools from the site.

### **C Working Hours**

Normal working hours at the site are 8 hours per day between the hours of 08:30 – 17:00 hrs. Monday through Friday. Actual construction work hours shall be coordinated with the COR. The COR may, upon request and if circumstances permit, approve other hours and/or work on weekends and holidays provided that it is not noisy work, and that no additional costs will arise to the U.S. Government as a result thereof. A minimum of 24 hours advance notice of intent to request other hours shall be given to the COR.

(b) In addition to the recognized public holidays, the Department of State observes the following American holidays, and/or any other day designated by Federal law, Executive Order or Presidential Proclamation.

### **D Quality Assurance and Quality Control**

Introduction. A principal factor of performance on a project is the Contractor's control of the quality of workmanship. The Contractor shall establish and maintain a project-specific Quality Management Program (QMP) which defines and implements a quality system. The quality system is a documented organizational process which describes responsibilities, procedures, and resources for providing quality control and quality assurance on a project. Effectiveness of the QMP is achieved through adequate planning, forceful direction, and checking in the sense of measurement and evaluation. The QMP applies to the control of quality throughout all areas of contract performance.

Quality Management Program the Contractor's QMP shall be Facility Management Office (COR)-approved to provide employees, consultants, and/or joint-venture partners

with established, uniform procedures for production of project data and documents throughout the construction process. Principal functions of the QMP are the following:

The Contractor shall be responsible for all materials delivered and work performed until final completion and acceptance of the entire work, except for any completed unit of work, which may have been accepted in writing under the contract.

**E Final Completion and Acceptance**

**Definitions**

(a) "Final completion and acceptance" means the stage in the progress of the work as determined by the COR and confirmed in writing to the Contractor, on which all work required under the contract has been completed in a satisfactory manner in accordance with the requirements thereof, subject to the discovery of defects after final completion, and except for items specifically excluded in the notice of final acceptance.

(b) The "date of final completion and acceptance" means the date determined by the COR as of which final completion of the work has been achieved, as indicated by written notice to the Contractor.

(c) **Request for Final Inspection and Tests**

The Contractor shall give the COR at least 15 days advance written notice of the date the work will be fully completed and ready for final inspection and tests. Final inspection and tests will be started not later than the date specified in the aforesaid notice unless the COR determines that the work is not ready for final inspection and so informs the Contractor.

(d) **Final Acceptance**

Upon (a) satisfactory completion of all required tests, (b) verification by the COR on the basis of a final inspection that all items listed in the Schedule of Defects have been completed or corrected and that the work is finally complete, subject to the discovery of defects after final completion, and (c) submittal by the Contractor of all documents including contractor close-out documents, and other items required upon completion of the work, including a final request for payment, and if the COR is satisfied that the work under the contract is complete and the contract has been fully performed, with the exception of continuing obligations there under, the COR shall issue to the Contractor a notice of final acceptance and process final payment as required by the contract.

**F General Notes:**

Contractor should follow the following specifications wherever required:

- a. Contractor shall use Mechanical Mixer to mix the concrete or use RMC (Ready Mix Concrete) for all purposes along with needle vibrator.

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- b. Contractor shall provide warrantee certificate for at least 5 years against the material performance and work performance. In case of any such event contractor is liable to replace and install the same at his own cost.
- c. Following are the common specifications for the project
  - All brick work should be done in 1:4 cement mortar (1 cement: 3 stone dust)
  - P C C should be in the ratio 1: 4: 8 (1 cement: 4 stone dust: 8 stone aggregate)
  - R C C should be in the ratio 1: 1 ½: 3 (1 cement: 1 ½ stone dust: 3 stone aggregate (½” size)).
  - Plastering where ever required should be done with cement, stone dust mortar (in the ratio 1:3).
- d. Contractor will arrange for a dedicated full time engineer/supervisor for the entire duration of the project failing which leads to termination of the project.
- e. Contractor will provide test certificate for the concrete used in casting the RCC enclosure around tank and for trench work. Test shall be done at reputed test lab locally.
- f. Contractor will inform the COR of the project regarding delivery of any material to the site for at least two days prior to delivery, so as to get security approval and inspection of the same can be arranged.
- g. Contractor should always keep the site clean from any kind of debris or malba. At the end of the day the site should be a completely protected/barricaded. Reflective signs shall be installed after end of each day around entire site.
- h. Contractor will transfer all guarantee cards provide by the manufacturer for the material installed in the name of American Consulate General, Chennai.
- i. Contractor shall inform COR immediately in case some deviation is there from the actual scope or any time delay is there from the actual schedule submitted at the time of commencement of the project. In such case contractor shall submit in writing cause of delay to COR and after approval of the same revised schedule shall be submitted with COR.
- j. Contractor shall provide all shuttering and other necessary material to complete the job in Satisfactory manner.
- k. Contractor will refer IS 456 (latest) for all the RCC work and shuttering etc.

### **G Inspection of Construction**

Definition: "Work" includes, but is not limited to, materials, workmanship, and manufacture and fabrication of components.

- a. The Contractor shall maintain an adequate inspection system and perform such inspections as will ensure that the work performed under the contract conforms to contract requirements. The Contractor shall maintain complete inspection records and make them available to the Government. All work shall be conducted under the general direction of the Contracting Officer and is subject to Government inspection and test at all places and at all

- reasonable times before acceptance to ensure strict compliance with the terms of the contract.
- b. Government inspections and tests are for the sole benefit of the Government and do not
    - o Relieve the Contractor of responsibility for providing adequate quality control measures;
    - o (b) Relieve the Contractor of responsibility for damage to or loss of the material before acceptance.
    - o (c) Constitute or imply acceptance; or
    - o (d) Affect the continuing rights of the Government after acceptance of the completed work under paragraph (i) of this section.
  - c. The presence or absence of a Government inspector does not relieve the Contractor from any contract requirement, nor is the inspector authorized to change any term or condition of the specification without the Contracting Officer's written authorization.
  - d. The Contractor shall promptly furnish, at no increase in contract price, all facilities, labor, and material reasonably needed for performing such safe and convenient inspections and tests as may be required by the Contracting Officer. The Government may charge to the Contractor any additional cost of inspection or test when work is not ready at the time specified by the Contractor for inspection or test, or when prior rejection makes re-inspection or retest necessary. The Government shall perform all inspections and tests in a manner that will not unnecessarily delay the work. Special, full size, and performance tests shall be performed as described in the contract.
  - e. The Contractor shall, without charge, replace or correct work found by the Government not to conform to contract requirements, unless in the public interest the Government consents to accept the work with an appropriate adjustment in contract price. The Contractor shall promptly segregate and remove rejected material from the premises.
  - f. If the Contractor does not promptly replace or correct rejected work, the Government may -  
By contract or otherwise, replace or correct the work and charge the cost to the Contractor; or  
Terminate for default the Contractor's right to proceed.
  - g. If, before acceptance of the entire work, the Government decides to examine already completed work by removing it or tearing it out, the Contractor, on request, shall promptly furnish all necessary facilities, labor, and material. If the work is found to be defective or non-conforming in any material respect due to the fault of the Contractor or its subcontractors, the Contractor shall defray the expenses of the examination and of satisfactory reconstruction. However, if the work is found to meet contract requirements, the Contracting Officer shall make an equitable adjustment for the additional services involved in the examination and reconstruction, including, if completion of the work was thereby delayed, an extension of time.
  - h. Unless otherwise specified in the contract, the Government shall accept, as promptly as practicable after completion and inspection, all work required by the contract or that portion of the work the Contracting Officer determines can be accepted separately. Acceptance shall be final and conclusive except for latent defects, fraud, gross mistakes amounting to fraud, or the Government's rights under any warranty or guarantee.

## **H Accident Prevention**

## MODIFICATION & RENOVATION OF OFFICE SPACE – MSG Office Space – 1<sup>st</sup> Floor

- a. General - The Contractor shall provide and maintain work environments and procedures which will (1) safeguard the public, Government personnel, property, materials, supplies, and equipment exposed to Contractor operations and activities; (2) avoid interruptions of Government operation and delays in project completion dates; and (3) control costs in the performance of this contract. For these purposes, the Contractor shall -
- Provide appropriate safety barricades, signs and signal lights;
  - Comply with the standards issued by any local government authority having jurisdiction over occupational health and safety issues; and
  - Ensure that any additional measures the Contracting Officer determines to be reasonably necessary for this purpose are taken.
- b. Safety Manager - (1) The Contractor shall designate a safety manager for this contract. The safety manager shall be responsible for coordination of safety procedures, and monitoring of those aspects of the work that pose the greatest safety risks. (2) If, during the performance of this contract, the contractor encounters hazardous materials (including asbestos-containing materials, etc), the contractor shall immediately report the situation to the COR.
- (c) Records - The Contractor shall maintain an accurate record of exposure data on all accidents incident to work performed under this contract resulting in death, traumatic injury, occupational disease, or damage to or theft or loss of property, materials, supplies, or equipment. The Contractor shall report this data in the manner prescribed by the COR.
- (d) Subcontracts - The Contractor shall be responsible for its subcontractors' compliance with this clause.
- (e) Written Program - Before commencing work, the Contractor shall --
- (1) Submit a written proposal for implementing this clause; and
  - (2) Meet with the COR to discuss and develop a mutual understanding relative to administration of the overall safety program.
- (f) Notification - The COR will notify the Contractor of any non-compliance with these requirements and the corrective actions required. This notice, when delivered to the Contractor or the Contractor's representative at site, shall be deemed sufficient notice of the non-compliance and corrective action required. After receiving the notice, the Contractor shall immediately take corrective action. If the Contractor fails or refuses to promptly take corrective action, the Contracting Officer may issue an order suspending all or part of the work until satisfactory corrective action has been taken. The Contractor shall not be entitled to any equitable adjustment of the contract price or extension of the performance schedule on any suspension of work issued under this clause.

### I Substitutions

Contractor is supposed to confirm the availability of all the material required in the project initially and get them approved by COR.

Any material which is not available or discontinued by the manufacturer shall be brought in to notice of the COR ASAP.

The Contractor must receive approval in writing from the COR. Any substitution request shall be accompanied by sufficient information to permit evaluation by the Government, including but not limited to the reasons for the proposed substitution and data concerning the design, appearance, performance, composition, and relative cost of the proposed substitute.

Contractor shall not bring or use any product without prior approval from COR on the site.

Requests for substitutions shall be made in a timely manner to permit adequate evaluation by the Government. If, in the COR's opinion, the use of such substitute items is not in the best interests of the Government, the Contractor shall obtain the items originally specified with no adjustment in the contract price or completion date.

Final approval on delivery - Acceptance or approval of proposed substitutions under the contract is conditioned upon approval of items delivered at the site or approval by sample. Approval by sample shall not limit the Government's right to reject material after delivery to the site if the material does not conform to the approved sample in all material respects.

**J "Or-Equal Clause"**

References in the specifications and drawings, to materials, products or equipment by trade name, make, or catalog number, or to specific processes, shall be regarded as establishing a standard of quality and shall not be construed as limiting competition. The Contractor may propose for approval or rejection by the COR the substitution of any material, product, equipment or process that the Contractor believes to be equal to or better than that named in the specifications and drawings, unless otherwise specifically provided in this contract.

**K Material Specifications for reference**

**Bricks –** All bricks shall be well baked and of 1<sup>st</sup> class quality.

**Cement –** OPC 53 grade Cement of reputed company.

**Coarse sand –** Good quality stone dust - Fine aggregates generally consist of natural sand or crushed stone with most particles smaller than 5 mm (0.2 in.).

**Stone Aggregate:** Per IS 456 – 1978 for reinforced concrete works, aggregates having a nominal size of 20mm are generally considered satisfactory.

**Fine Sand –** Salt free washed fine sand

**Electrical Wire** Finolex or equivalent.

Professional workers and certified welders in good workmanship and neat manner are required on the site and shall carry the work to the highest standard in the industry. Contractor shall take every measure for fire and life safety matters.

**Note: All welding wherever required shall be done as per Indian Standards by professional certified welders, by edge cutting, preparation of ‘V’ grooves at the ends with the help of grinders, keeping 2.5 mm gap for weld filling between two pipes, welding first root run with ISI approved quality welding electrodes (recommended make is ESAB), grinding root run, clean welded surface, dye penetration test butt joints and final finish weld run with 3.15 mm 6013 welding electrodes.**

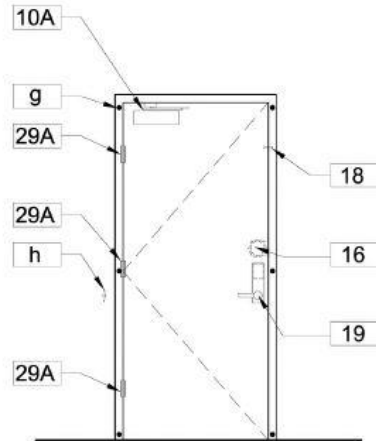
All metal support work to be painted with one coat of anti-rust metal primer and two coats of synthetic enamel paint. Only stainless steel nut bolts and washers are to be used.

**Warranty: The entire installation work will be warranted for the defect liability for a minimum period of 1 year from the date of final commissioning.**



**Annexure - I**

<b>Application</b>	This hardware set is used in areas where both daytime and night time access control is desired. While this hardware is acceptable for some DOS CAA applications, it is recommended that a door with an electromechanical spin dial (CDX-10) be specified for uniformity in NOB applications and to avoid a common misapplication of the S&G 3 position spin dial. See hardware set SHW-11 and all SHW-12sets for electromechanical spin dial spin dial lock applications.
<b>Additional Information</b>	This hardware is also used in existing office buildings for unclassified computer rooms, cashier offices, MSG react rooms, pharmacies and mail rooms. Pharmacies and mail rooms may also use hardware set SHW-15A. MSG react rooms may also use SHW-15C.
<b>Functions</b>	CAA Suite



Standard Hardware Set					
Item#	Qty.	Item Name	Manufacturer	Model Number	Notes
29A	3 ea.	Hinge – NRP (non-removable pin)	Hager	BB1199-32D NRP 4-1/2 inch x 4-1/2 inch	
19	1 ea.	Mechanical Pushbutton Combination Lock Interchangeable Core	Kaba ilco	Simplex LL1021M-26D-41	
15A	1 ea.	Combination Lock with Deadbolt Extension	Sargent & Greenleaf	8555-101	2
10A	1 ea.	Closer	LCN	4040XP x regular arm – AL	1
18	1 ea.	Magnetic Switch	Magnasphere	MSS-312C	
g	3 ea.	Silencers	Ives	SR 64	3
h	1 ea.	Wall Stop	Ives	407CVX	

Note 1: For regular bevel doors.

Note 2: For in-swing doors.

Note 3: At interior doors.

Approved Substitutions					
Use:	Item 29	3 ea.	Hinge – NRP (non-removable pin)	McKinney	T4A3386-32D NRP 4½ inch x 4½ inch
Note:	McKinney hinge is also acceptable.				
Use:	Item 15C	1 ea.	Combination Lock with Deadbolt Extension	Sargent & Greenleaf	8555-102
Note:	For exterior outswing doors.				
Use:	Item 10	1 ea.	Closer	LCN	4041-SRI x Cush-n-Stop – AL
Note:	For exterior outswing doors. May use Item 10 in lieu of Item 10A and Item h.				
Use:	Item 10	1 ea.	Closer	LCN	4041 x Cush-n-Stop – AL
Note:	For interior outswing doors. May use Item 10 in lieu of Item 10A and Item h.				