

## REQUIREMENTS FOR SECURITY PROTECTION PLAN (SPP)

### 1 General Requirements

1.1 The SPP shall be a self-contained document of all security measures that are to be implemented. This section describes the minimum details required in the SPP, as well as other required information. Should the SPP contain additional items or security measures, the Competent Person (CP) shall furnish appropriate details to meet the above purpose.

### 2 SPP

#### 2.1 Basic building information

Item	Details Required
Building layout	Plans for each level
Assets	Mark out asset locations on architectural drawings
Utilities	Key utilities that support the continued function of the security measures, emergency response protocols or are susceptible for exploitation are to be marked out on architectural drawings.

#### 2.2 Zoning

2.2.1 The CP may apply the zoning concept to control human movement within the building. Zoning allows employers, visitors, vendors, and others to reach their destinations without hindrance, and at the same time prevents their access to areas where they have no business. Controlling of access to each department inside a building will screen out undesirable visitors, reduce congestion, and help employee spot unauthorised persons.

2.2.2 The CP may illustrate how zoning design goals are accomplished through the use of unrestricted zones, controlled zones, and restricted zones. Some areas of the building may be completely unrestricted to persons entering the area during the hours of designated use. The design of unrestricted zones should encourage persons to conduct their business and leave the building without entering controlled or restricted zones. Examples of unrestricted zones might include lobbies, reception area, snack bars, and public meeting rooms. Examples of controlled zones might include administrative offices, staff dinner rooms, security offices, office working areas, and loading/unloading docks. Restricted zones are essentially limited to designated staff. Particularly sensitive areas within restricted zones typically require additional access control as these might contain, for example classified records, hazardous materials and cash.

Measure	Details Required
Structural components (e.g. columns, beams, walls, and slabs)	<ul style="list-style-type: none"> <li>a. Mark out the locations of the critical assets on architectural/structural drawings, the structural components which require hardening, and the proposed structural hardening measures</li> <li>b. Physical dimensions and mechanical properties (e.g. elastic modulus, compressive and tensile yield and ultimate strengths, etc.) of component and its reinforcement (e.g. reinforcement steel, steel jacket, etc.), connection design and details, pre- and post- hardening</li> </ul> <p>Details of analysis relating to the structural hardening design are explained in <a href="#">Annex D</a>.</p>
Glazing and Building Fabric	<ul style="list-style-type: none"> <li>a. Mark out identified glazing and building fabric for strengthening on architectural drawings</li> <li>b. Designs of the glazing/fabric system including framing details, anchoring details and structural support required</li> </ul>
Vehicle Perimeter Line	<ul style="list-style-type: none"> <li>a. Mark out on architectural drawings the location of the vehicle perimeter line</li> <li>b. Description of the actual measures at each point of the perimeter line e.g. wall, planter, bollard, gate etc.</li> <li>c. Performance specifications of the elements within the vehicle perimeter line</li> <li>d. For active systems, the operating conditions (such as number of cycles per day, life Mean-Time-To-Failure etc.) and operational specifications (such as cycle time etc.) that the systems need to meet. These specifications are to be based on the security needs of the building.</li> <li>e. If a low wall design or any similar structure is to be designed as a barrier, the CP shall provide structural drawings of the barrier, showing dimension, the details of the reinforcement and the connection details. This design work shall not be outsourced to the construction vendor to carry out.</li> <li>f. All Vehicle Security Barrier (VSB) shall be minimally crashed tested to IWA 14-1 V 7200/48/90:1 or ASTM F2656 M/30/P1 or PAS 68 7500-48/1/A. All VSB shall be independent and not integrated with any other objects (e.g. fence post, fence, structures to host IDS, etc.), unless otherwise crash tested by its proprietary owner. This is to maintain the crash rating for the crashed tested hostile vehicle measures.</li> </ul>
Fence line	<ul style="list-style-type: none"> <li>a. Mark out on architectural drawings the location of the fence line</li> <li>b. Design specifications of the fence line</li> </ul>

Measure	Details Required
CCTV	<ul style="list-style-type: none"> <li>a. Mark out locations of cameras on architectural drawings</li> <li>b. System specifications of the CCTV system<sup>1</sup></li> <li>c. Explain the recommended features of the CCTVs, e.g. the kinds of Video Content Analysis to be incorporated</li> </ul>
Access Controls	<ul style="list-style-type: none"> <li>a. Type of identity pass systems deployed and methods of authenticity verification</li> <li>b. Mark out public vs access-controlled areas on architectural drawings</li> <li>c. Mark out locations with special access control requirements (such as utility rooms, server rooms etc.)</li> <li>d. Mark out access control methods (e.g. card reader controlled doors/gates, mechanically locked doors/gates, EM locked doors/gates etc.) on architectural drawings</li> </ul>
Lighting	<ul style="list-style-type: none"> <li>a. Lighting performance specifications at required locations to facilitate surveillance, CCTV monitoring/recording etc.</li> </ul>
Detection and Alarm Systems	<ul style="list-style-type: none"> <li>a. Nature of detection systems deployed and location of deployment</li> <li>b. Operating environment in which the systems have to operate as well as the system specifications that the systems would have to meet</li> </ul>

## 2.5 Operational and Human Measures

2.5.1 The CP shall provide a list of the security and contingency measures required during times of normalcy and if deemed necessary, times of heightened security. For each measure or plan, the CP shall provide a generic workflow of the measure/plan that describes the necessary general actions required and how any necessary supporting equipment and infrastructure provisions are to be incorporated into the workflow. The CP shall also explain the rationale for the operational measures and how it reduces the risks faced.

## 3 Summary Table of Measures (SMM)

3.1 The CP shall provide a summary table of all the physical, operational/human and technological measures that have to be implemented so as to allow MHA to easily track the implementation of the various measures.

<sup>1</sup> Preferably in compliance with SPF's Video Surveillance Standards.

## 4 Maintenance Plan

4.1 The CP shall also formulate a set of maintenance plans for all structural/physical protective solutions selected for implementation. The maintenance plans are to be provided to the RP for long-term maintenance of the physical protective solutions implemented.

## 5 Articulation of Final Residual Risk

5.1 The CP shall include in the SPP, an articulation of the likely residual risk faced by the assets within the building after the implementation of the security measures.

The Security Protection Plan (SPP) details the protective measures to be put in place to mitigate the vulnerabilities of identified critical assets of a building corresponding to threats identified in the TVRA (Threat, Vulnerability, and Risk Assessments) report.

2. In the SPP, the following key elements are generally considered:
  - a. Executive summary
  - b. Introduction
    - Objective of SPP
    - General information of the building
      - Brief description of the building
      - Location map/site layout
      - Building footprint including perimeter line, vehicular/ staff/ public accesses, staff/public carpark, loading & unloading accesses/bays, security control rooms, restricted areas within building, locations of critical assets, areas of mass congregation, et
    - Concept of protection  
(This section refers to the multi-layered protection concept of Prevent, Deter, Delay, Detect and Reaction)
      - Approach/ Underlying parameters for risk assessment
      - Protection criteria
      - Security zoning
      - Assumptions
  - c. Description of Protective Measures
    - Physical/ Structural measures for *[Type of Threats]*
      - Existing situation, vulnerabilities, impacts and consequences
      - Recommended measures
      - Layout, installations and specifications
    - Operational measures for *[Type of Threats]*
      - Existing situation, vulnerabilities, impacts and consequences
      - Recommended measures
      - Deployment plans and security communication
      - Operational plans
      - Standard Operating Procedures
    - Technological measures for *[Type of Threats]*
      - Existing situation, vulnerabilities, impacts and consequences
      - Recommended measures
      - Deployment plans and system specifications
  - d. Plans for additional measures during heightened threat
    - Scenarios/ times of heightened threat
    - Recommended measures
    - Deployment plans
    - Operational plans

- e. Summary table of Mitigation Measures (SMM)
    - Threat specification and payloads (if applicable)
    - Modus operandi
    - Location of critical assets
    - Consultant's assessment
    - Recommended measures
    - Limitations, if any
  - f. Residual Risk
    - Articulation of the likely residual risk faced by the assets within the building after the implementation of the security measures
3. The report generated should comprise, but not limited to, the above key items in separate chapters and should generally follow the order listed.
4. For each measure, the CP shall provide a generic workflow of the measure that describes the necessary general actions required and how any necessary supporting equipment and infrastructure provisions are to be incorporated into the workflow. The CP shall also explain the rationale for the measure and how it reduces the risks faced.
5. The CP shall provide a summary list of all the measures so as to allow MHA to easily track the implementation of the various measures. This list should summarise all measures. A sample is shown on page 7.
6. All recommendations proposed by the CP have to be reviewed and accepted by the RP as the RP is presumed to be implementing all of the recommendations stated in the final SPP submitted to MHA.

Summary List of Protective Measures														
Protective Measures	Threat Definitions											Baseline Design (Y/N)	To be implemented (Y/N/A)	Reference to SPP (Para X.xx)
	VBIED	IED	Attack by Armed	Sniper attack	Unauthorised entry	Arson	Chemical & Biological & Radiological attack	Water-Borne Hazard	Air-Borne Hazard	Public Order Incidents	Crime			
Physical/ Structural measures														
<i>Example</i>	•				•							N	Y	2.3
Operational measures														
Technological measures														
Additional measures during heightened threat														