

Modification of existing Davit Arm system to enhance risk control management for maintenance staff

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Introduction

 The roof planter at Level 5 Integrated Building needs to be accessed for maintenance and landscape works weekly.
Permit to work and PPE (*safety harness*) risk control is used for every access.



Objectives

- To eliminate risk from Work at Height
- To streamline process of gaining access to roof planter area for maintenance purposes
- To maintain exquisite landscape and lovely environment for patients and staff



Results

 The implementation increased the effectiveness of risk controls from the administrative controls and PPE to Engineering control.



Methodology

- Existing area is also used for davit arm and gondola set up for building façade maintenance.
- Space and site constraint to ensure no blockage to the existing Davit arm system is a challenge.
- *Plan, Do, Check & Act* methodology was adopted to brainstorm possible methods and value engineering introduced.
- The project makes use of the existing Davit arm structure with new detectable railings to enhance safe work environment.
- No installation of new railing structure is required.
- The existing structure of Davit arm is already certified by the Professional Engineer and hence, the design calculations of the railing structure can be omitted.
- The new integrated Davit arm system allows flexibility in the use of Davit arm system and at the

- 3 hours for each access and a total of 156 man-hours can be saved per annual for site safety harness preparation, site checks and permit approval.
- Estimated cost avoidance of *\$3464 per annual* can be achieved from reduction of frequent need for engaging certified WAH assessor, supervisor or manager for the require site check.
- Protect and reduce risk of fatal falls .

Activities	Man-hours saved	Est. cost avoidance (per annual)
Site preparation	30mins each access (26 hours per annual)	\$ 442
Administrative work (Applying for PTW, certification & documentation)	30mins each access (26 hours per annual)	\$ 442
Engaging WAH accessors, Supervisor & Manager for necessary site checks	2 hours each access (104 hours per annual)	\$ 2600
Total:	3 hours each access (156 hours per annual)	\$ 3464

same time securing the area from work at height



Conclusion

- Increase risk controls and safer work environment
- Streamline work process and reduce of time spent on site preparation such as harness checks and frequent professional personal to review and approval of permit etc
- Achieving a more efficient and productive maintenance work process