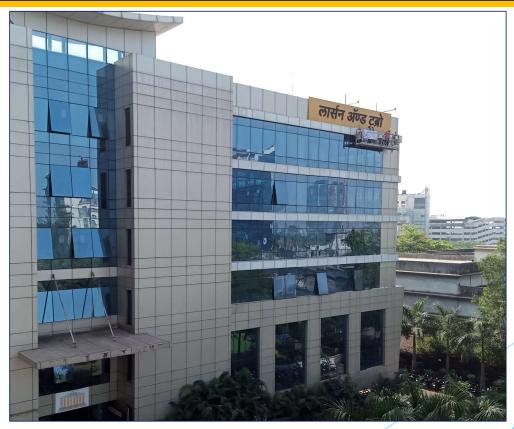
#### PROJECT REPORT



Façade Maintenance Work for Pragati Building at L&T Electrical & Automation Division, Mahape



**Duration:** 

18 November 2019

To

10 January 2020

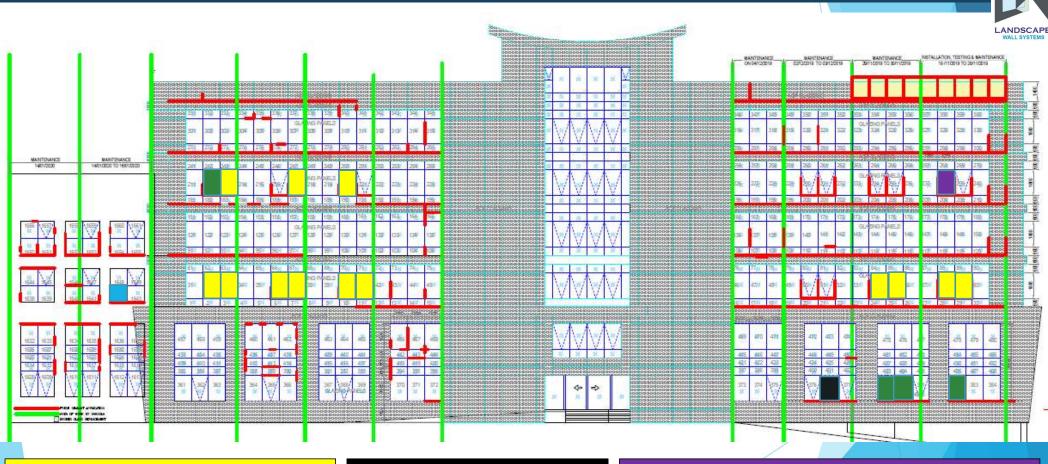
Report Made by:
Pankaj Ghare
(Landscape Wall Systems)

#### Index



- Detailed Data of Completed Scope of Work
  - Team Members Safety Compliances
    - Gondola Installation and Testing
      - Broken Glass Replacement for Top Hung Openable Window
        - Broken Glass Replacement for Fixed Glass Panel
          - Reasons of Windows Failure
            - Hardware Replacement for Top Hung Windows
              - Reasons of Leakage from Facade
                - Fresh Sealant Application Work in Glass Façade and ACP Facade
                  - Utilization of Gondola for work other than Facade
                    - Challenges while Doing Maintenance Work
                      - Precautions to be taken by L&T

#### Detailed Data for Completed Work-Front Elevation



Hinge and Arms Replacement: 13 Nos.

Only Hinge Replacement: 1 Nos.

Maintenance without Hardware Replacement: 1 No.

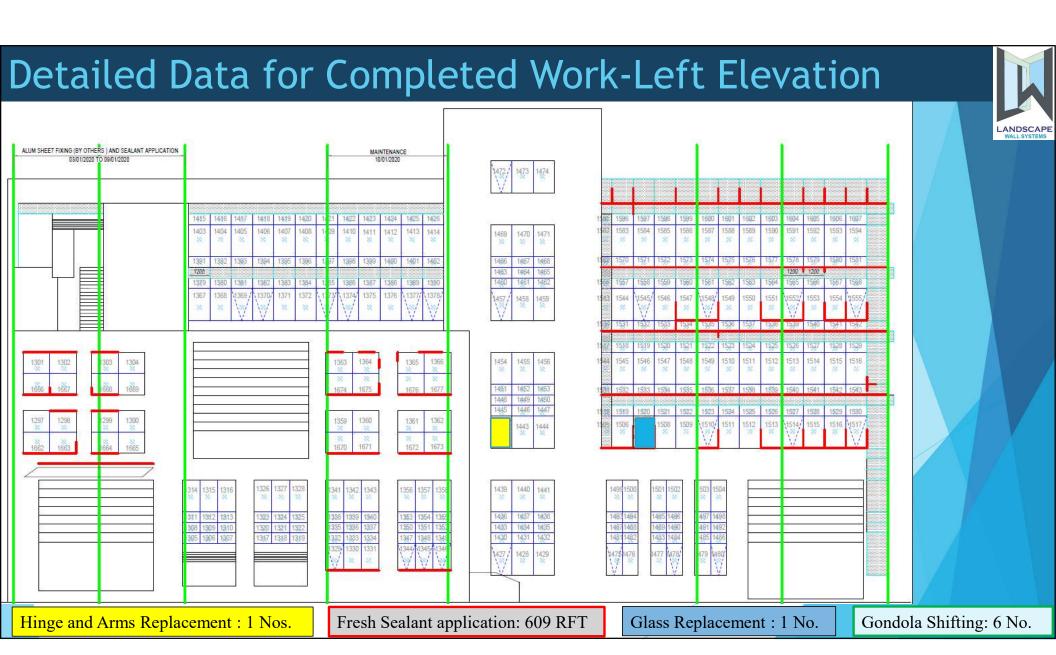
Gondola Shifting: 9 No.

Fresh Sealant application: 1834 RFT

Glass Replacement: 1 No

Installation of Restrictor Arms: 4 Nos.

# Detailed Data for Completed Work-Right Elevation Fresh Sealant application: 2577 RFT Hinge and Arm's Replacement: 4 Nos Installation of Restrictor Arms: 9 Nos Gondola Shifting: 7 No.



#### Detailed Data for Completed Work-Rear Elevation



Maintenance of Openable / Fixed Window by replacing Hardware: 3 Nos.

Fresh Sealant application at Terrace (Can't be shown in drawing): 349 RFT

#### Detailed Data for Completed Work-All Elevations

| LANDSCAPE<br>WALL SYSTEMS |
|---------------------------|
|                           |

| Sr<br>no | Description   | Actual Work<br>Done | Unit |
|----------|---|---------------------|------|
| 1        | Installation of openable window by replacing Broken DGU,<br>Aluminium Frame, Structure Sealant, Space Tape, Hardware<br>(Friction Stay and Restrictor Arm),etc. | 2                   | Nos  |
| 2        | Installation of openable window by replacing Hardware (Friction Stay and Restrictor Arm)  | 33                  | Nos  |
|          | Maintenance Work for Top Hung / Fixed Windows at Rear Elevation having Single glass   | 3                   | Nos  |
| 4        | Work of Removal of Existing Sealant & applying fresh Weather sealant (DC789)  | 5369                | RFT  |
| 5        | Supply of only Restrictor Arms  | 10                  | Nos  |
| 7        | Supply Restrictor Arm and Hinges  | 25                  | Nos  |
| 8        | Shifting of Gondola   | 26                  | Nos  |
| 9        | Third party Testing of Gondola  | 1                   | Nos  |

#### 'WE' The Team

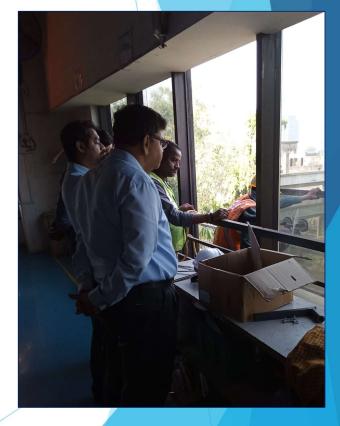




LWS Labour and Supervisor equipped with Personal Protective Equipment







L&T Representatives; including Safety Officer, Security, Site In-Charge Witnessing Façade Maintenance Work

#### Gondola Installation & Third Party Inspection







Gandola Members Assembly at Terrace Having 1000 Kg Counterweight



Gandola-Cradle at Ground



Third Party Inspection

#### FORM 11 (See Rules 62 and 64) (Report of Examination of Hoist, Lift, Lifting Machine, Chains, Ropes, & Lifting Tackles ) Certificate No. SDK/VES/2019/2665 M/s.: Landscape Wall Systems. At Site: Pragati Building, A-600, L & T Electrical & Automation, TTC MIDC Area, Shilphata Road, Mahape, Navi Mumbai, M.S. Name of the Occupier Name and address of the factory (A) Type identification number and description of hoist, lift, lifting machine, chains, ropes and lifting tackles. 'SUSPENDED BOOM CRADLE' Sr No.: Cradle No.: 1 , Capacity : 800 Kgs., Height : @ 15 Mtrs.(Gr. To Terrace) , C/Wt.: 1000 Kgs., Make : New Age Rope Dia.: 8.6 mm , Trolley : 5 Mtrs. Location : North-East Corner. (B) Date of construction or reconstruction and the date November-2019. when the hoist, lift, lifting machine, chains, ropes and lifting tackles were first taken into use in the Factory. Date of last examination made under section 28(1) (a) : First Time Tested By Mr. S. D. Kale (ii) and 29(1) (a) (iii) and by whom it was carried out. (A) Maintance: (List of parts, if any, which were inaccessible) Are the following parts of the Hoist of lift properly maintained and in good working order? If not, state what defects have been found. Not Applicable. Not Applicable. Enclosure of hoistway or lift way Landing gates and cage gate (s) Interlockes on the landing gates and cage gate(s) Not Applicable. Other gates fastenings. Not Applicable. Cage and platform and fittings, cage guides, buffers, interior of the hoistway or liftway. Overrunning devices. Suspension ropes or chains and their attachment. Found Satisfactory Safety gear, i.e. arrangements for preventing fall of platform or cage breaks. Safety Device Tested & Found Satisfactory. Found Satisfactory. Breaks. Work of spur gearing Enclosed in Gear Box Other Electrical equipment. Found Satisfactory. Found Satisfactory. Other Parts. Date and number of the certificate relating to any On 22.11.2019. By Mr. S. D. Kale. test and examination made under sub-rule (1) of rule 64 together with the name of the person who issued the certificate Date of annealing or their heat treatment of the chain and lifting tackle carried out under sub-rule (5) of rule 64 and by whom it was carried out. Particulars of any defect found at any such Not Applicable examination or after annealing and affecting the safe working load and of the steps taken to remedy such defect. Repairs, renewals or alternations (if any) required and The Cradle was Visually Inspected, Load Tested & the period within which they should be executed and maximum safe working load subject to repairs, renewals Found Satisfactory , No Defect Affecting The Safe Working Load , Keep All Safety Interlocks in or alternations (if any). Good Working Condition., Provide Fall Arrester with Life Line For All Operators . I/We certify that on 22.11.2019. I/We thoroughly examined the Hoist, Lift, Lifting Machine, Ropes, Chains and g Tackles and details of examinations / test of the conclused herewith that the above is a correct report of the Lifting Tackles and details of examinations / Next Due Date : 05.05.2020. MR. S. D. KALE. Safety Consultant

Third Party Inspection-Test Report

Competent Person C.P.C. NO.: K-048

#### Broken Glass Replacement Of Openable Panels





Broken Glass of Window 1507 ( Before )



Window 1507 (After Glass Replacement)





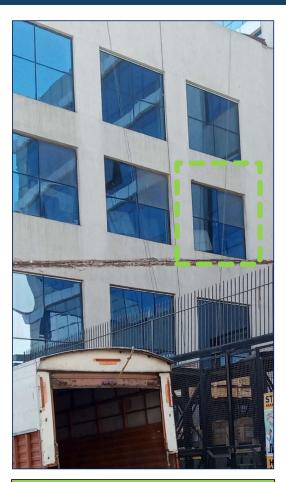
Panel Making for Broken Glass

#### Broken Glass Replacement Of Fixed Panels





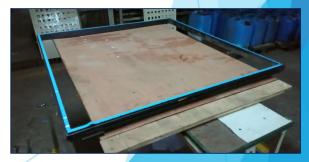
Broken Glass of Fixed Panel 380 (Before)



Fixed Panel 380(After Glass Replacement)

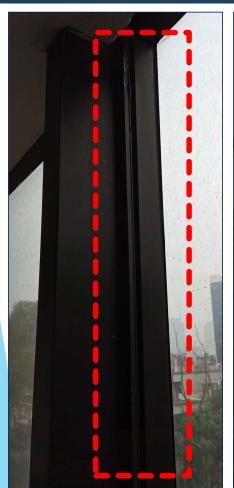






Panel Making for Broken Glass

#### Reason Of Windows Failure











Broken Hinge Window 377



Misalignment of Existing Panels

Missing Screws

#### MAINTENANCE OF TOP HUNG OPENABLE WINDOWS



**AFTER** 





Window 59: Tied With Ropes due to Broken Hinges.

Hinges replaced and Restrictor Arms installed.





Window 382 : Frame Dislodged.

Window-Reinstalled and Restrictor Arms installed.



Window 238 at Office: Re-installed. Panel was shifted Down by 5mm approx.

#### MAINTENANCE OF TOP HUNG OPENABLE WINDOWS



**AFTER** 





Window 380: Restrictor Arms Installed

**AFTER** 





Window 41: Open Window was difficult to pull back for locking.

Hinges Replaced & Restrictor Arms Installed

## MAINTENANCE OF TOP HUNG OPENABLE WINDOWS (from Inside)

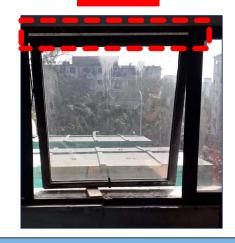




#### MAINTENANCE OF TOP HUNG OPENABLE WINDOWS

LANDSCAPE WALL SYSTEMS

BEFORE



Window 1071 Misaligned and dislodged supported by wooden packing



Window 1070 converted from Fixed Glass to Openable



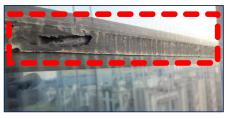
Maintenance of Window 1070, 1071, 1072.



Window 1072 Installation of Glass to convert Panel from Openable to Fixed.

## Reason of Leakage -Worn Out Sealant / Removal of Existing Sealant by Birds



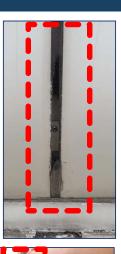






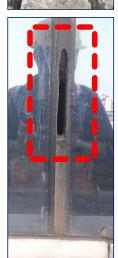














Dry sealant removed out from Grooves causing leakage inside.

Gaps noted between ACP sheet joints.

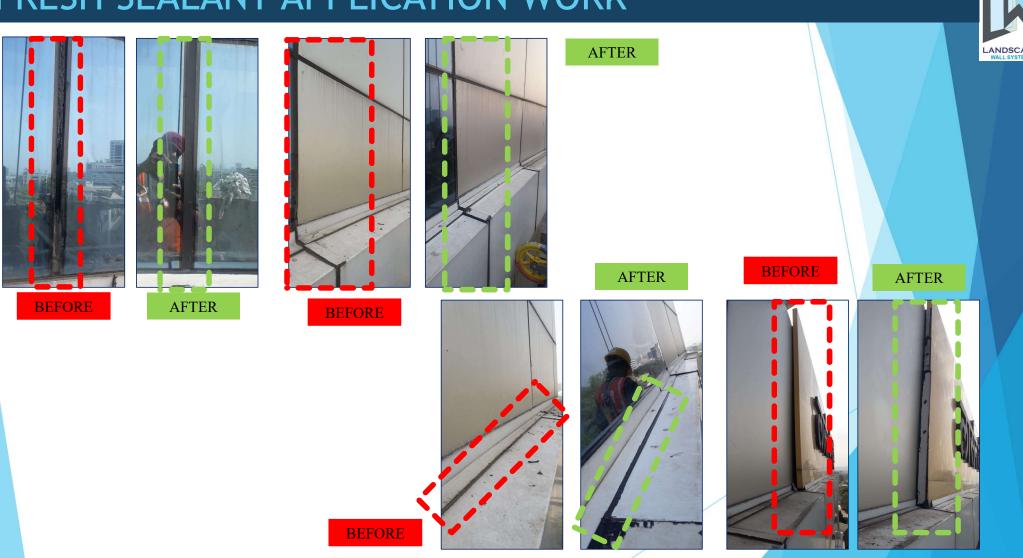
Cracks noted at bends of ACP cladding





AFTER
Fresh Sealant application

#### FRESH SEALANT APPLICATION WORK



#### FRESH SEALANT APPLICATION WORK PROCESS











1. Removal of Existing Sealant by Blade, Wire Brush & Cleaning the debris









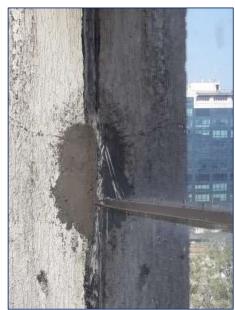


7. Applying Sealant in a groove by Silicone Gun

### Utilisation of Gondola for Other Work by L&T







Identifying Leakages in RCC and Filling Cracks (By others)



AFTER





Fabrication and Installation of Aluminium Sheet above Shutter (By others)

### Challenges While Doing Maintenance Work





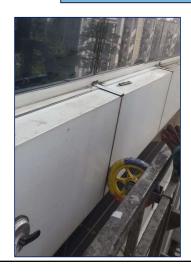
Counterweight at Different Height (for Front Elevation at Right Side)



Pulling Cradle to Jump to required Level to avoid Clash with Structure



Pulling Cradle to Jump to required Level to Save Trees





Inadequate Space to Work

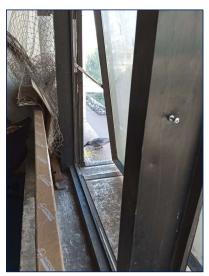
Keeping a sufficient Gap between Façade and Cradle to avoid scratches / damage

#### Precautions to be Taken by L&T











#### AVOID KEEPING FOOD OUTSIDE WINDOWS.

Keeping food for birds causes their repetitive presence at ACP Band and it is observed that Birds are digging the sealant by their Peak.