

# RIVERWALK



ASTON MARTIN  
RESIDENCES  
MIAMI

## January 2022 Update Schedule Review Report

Project Name: Aston Martin Residence  
300 BISCAYNE BOULEVARD WAY  
MIAMI

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Schedule Type: Update

Data Date: 01/31/2022

## Contents

1	Introduction.....	3
2	Project Time Line .....	4
3	Variance analysis: .....	5
	3.1 Comparison between the current and the previous update.....	5
4	Schedule changes: .....	5
	4.1 Added and deleted activities: .....	5
	4.2 Changes in activities relationships: .....	5
5	Critical path Analysis .....	6
6	Schedule critique .....	7
	6.1 Out of sequence activities and its impact on the project completion .....	7
	6.2 Negative Lags.....	7
	6.3 High Float.....	7
	6.4 Level of Effort Activities:.....	7
	6.5 Dangling Activities: .....	7
	6.6 Activities with Actual Dates > Data Date .....	7
7	General Comments & Recommendations.....	9

## 1 Introduction

HSE conducted a full schedule review for schedule January update, for Aston Martin Residence project. The updated schedule's data date is January 31<sup>st</sup>, 2022.

The current schedule is forecasting a **Contract TCO on June 16<sup>th</sup>, 2023** and a project final completion on September 18<sup>th</sup>, 2023 which when compared with the October 2021 update represents 24 calendar days recovered.

Critical Path: The TCO completion date has been pushed from March 15<sup>th</sup>, 2023 to June 16<sup>th</sup>, 2023 which represents **93 Calendar days** which is not acceptable. The criticality ratio is **50.7 %** which is well above the 5-10% standard acceptable range.

Added new activities and Changes in activities relationships: which is not acceptable as these changes affected the baseline Logic and sequence of work. The contractor shall submit justifications for these changes.

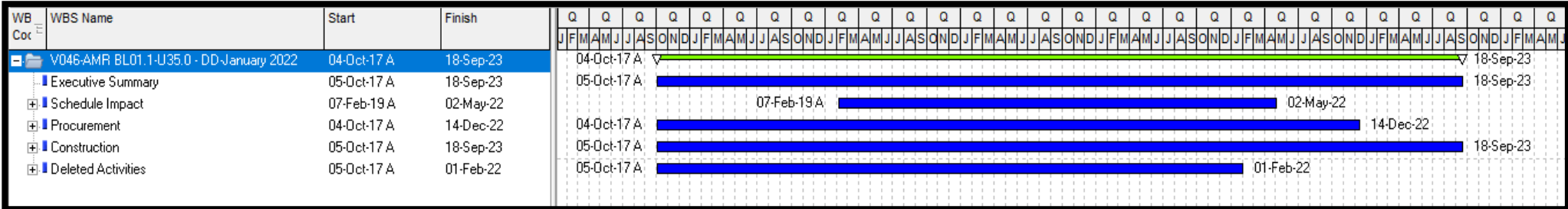
Generic Activity Durations: Original should be reduced due to the following; (1) durations are typical across all floors despite the variance in Gross Floor Areas, with smaller areas in upper floors, and (2) the contractor is not making use of the learning curve over time.

Incorrect Use of Calendars: The Procurement section should be assigned a 7-Day calendar which is a standard scheduling practice. This is because weekends and holidays would not affect the completion of the procurement activities. The contractor has assigned a 5-Day calendar for procurement, thus pushing the completion of the Procurement section by 29%.

HSE checked the schedule quality and highlighted the major areas of improvement in the schedule which should lead to a better schedule with more accurate dates and sequence. Many of these schedule deficiencies are carried from the previous schedule versions.

## 2 Project Time Line

The below figure represents the WBS over the project time line, each line item represents the start and finish dates for each work package according to the January 2022 update.



### 3 Variance analysis:

#### 3.1 Comparison between the current and the previous update

- The project completion date is now September 18<sup>th</sup>, 2023 which is 22 calendar days ahead of the finish date of last update. A comparison was made between the current and the previous schedule update "October Update" to track the float consumption and progress rate.

Activity ID	Actual/Forecasted Completion Date	Actual/Forecasted Completion Date	Variance (Calendar days)
	October Update	January 2022 update	
Executive Summary	10-Oct-23	18-Sep-23	22
Schedule Impact	10-Mar-22	02-May-22	-53
Procurement	15-Sep-22	14-Dec-22	-90
Residential Tower	19-Jul-23	07-Sep-23	-50
Garage	16-Mar-23	31-Oct-22	136
Final Inspections-Overall	11-Oct-23	18-Sep-23	23

- The West Lobby Windows & storefront procurement activities are driving the longest critical path for the project and as per the January 2022 Update, they should be delivered on May 27<sup>th</sup>, 2022.
- As mentioned above the procurement is still showing delays.
- The Garage did not start yet.

### 4 Schedule changes:

#### 4.1 Added and deleted activities:

- The contractor has Added 534 new activities and deleted 3 activities from the schedule as shown in Appendix A.

All the added and deleted activities must be approved before making any schedule logic changes. This is important in order to avoid an artificial CPM completion date.

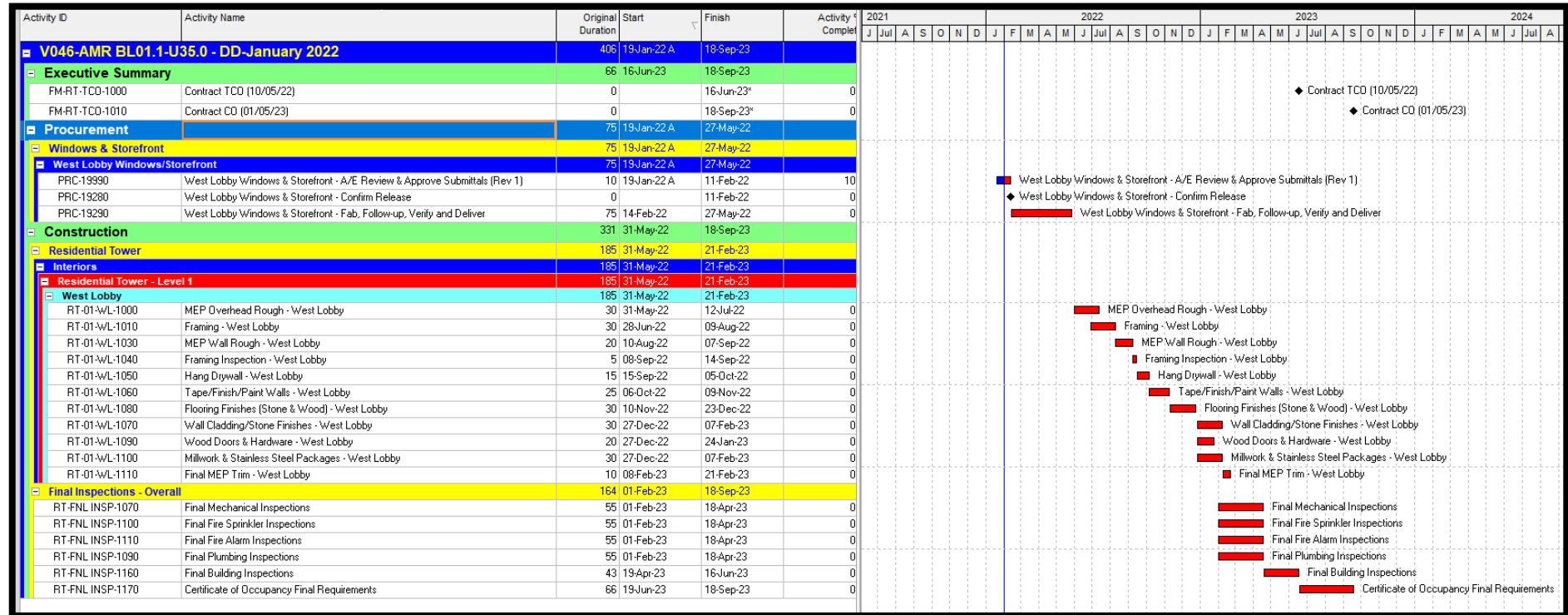
#### 4.2 Changes in activities relationships:

The updated schedule contains 3,679 logic changes in activity relationships as shown in Appendix A, which is not acceptable as these changes affected the baseline Logic and sequence of work.

- Added Activity Relationships = 2,320.
- Deleted Activity Relationships =1,359.

## 5 Critical path Analysis

- The current schedule shows a large number of critical activities which is well above the acceptable range of 5-10%, the current criticality ratio is **50.7%**.
- The below figure represents the detailed project Longest critical path as per the current update.
- The West Lobby Windows & storefront procurement activities are driving the longest critical path for the project



***The Longest Critical Path***

## 6 Schedule critique

### 6.1 Out of sequence activities and their impact on project completion

- An out-of-sequence activity is an activity which is in-progress or has completed before one or more of its predecessor's completions.
- Having out of sequence activities means either the logic was incorrect in the first place, or it was implemented in a different order on site.
- Out of sequence may give a wrong indication about the total float amount and the finish date of the project.
- All of these out sequences are removed during the current schedule.

### 6.2 Negative Lags

- The use of negative lags (leads) is not considered a good scheduling practice and is prohibited in most of the scheduling guidelines and specs. Using negative lag breaks the whole idea of using the logic. Logic is specifically designed to allow a forward and backward path calculation in order to determine early and late dates followed by subsequent free and total float.
- The current Schedule has Zero negative float.

### 6.3 High Float

- Large number of activities with high amounts of float typically indicates missing relationships in the schedule.
- Unless high float is legitimate, it is recommended to have less than 5% of the overall activities with float value greater than 40 days. The current schedule has 20 activity with high float
- Recommendation:  
It is recommended to review the logic of these activities and tie them with their related construction activities to reduce the float and maintain the project near critical paths.

### 6.4 Level of Effort Activities:

N/A

### 6.5 Dangling Activities:

- Dangling activities are activities in the schedule with no start predecessor or no finish successor, this means that they do not have any constraints on their start / finish, so delays on it will not affect the project completion.
- Dangling activities are activities in the schedule with logic relationships that cause a slippage to the activity not to drive the schedule. This means a dangling activity could continue to slip with no indication of delay in the project schedule.

N/A

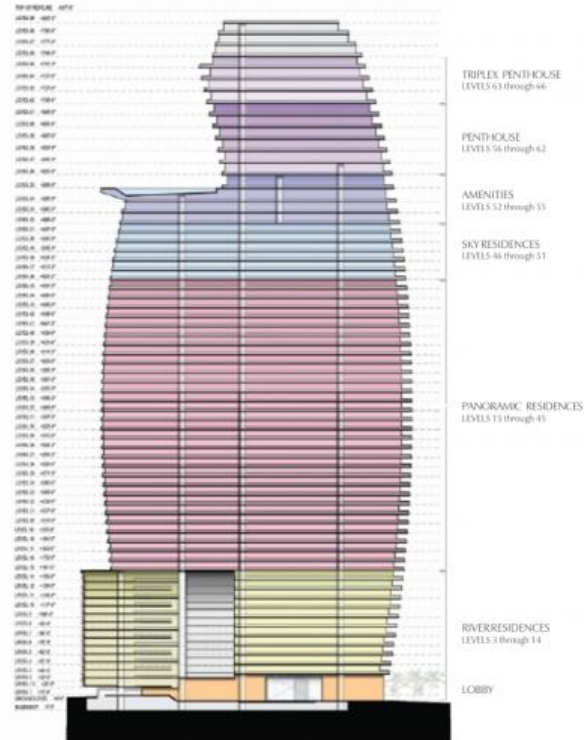
### 6.6 Activities with Actual Dates > Data Date

N/A

- **Activity Durations:**

1. The finishing Works at the penthouse levels (level 56 till level 65) have the same durations as on the lower levels however, the penthouse levels have smaller area than Sky Residences, PANORAMIC Residences and River Residences as shown below.

## BUILDING





## 7 General Comments & Recommendations

- The current update reflects **Contract TCO** finish date on **June 10<sup>th</sup>, 2023**.
- **Criticality Ratio**
  - The criticality Ratio = **50.7%** which is too high as most of the relations puts the sequence of work on very tight frame which caused the spike of the criticality ratio.
    - Critical activities = 4,265
    - Total number of activities = 8,401

The last month's criticality ratio was 55%.

The longest critical path is driven by the **West Lobby windows and store front procurement** activities sequence of work.

- **Added New activities and Changes on Activity Relationships:**
  - The contractor added **534** new activities to the schedule such as:
    - Penthouse Units - Re-generate Submittals (Rev 1).
    - Install Irrigation & Landscaping (Big Trees) (Phase 3B).
    - Buildout Service Elevator #5.
    - Exterior Lighting (Ground Floor) - A/E Review & Approve Submittals.
  - The contractor added **2,320** new relationship in the schedule.
  - The contractor deleted **1,359** of the pervious relationships.

Those changes affected the schedule so the contractor should submit justifications for these changes.

- **The Procurement process** still shows delays without any recovery or an acceptable progress which continues to cause schedule delays such as:
  - West Lobby Windows & Storefront (-180 days).
  - Common Area Kitchen & Vanity Tops (-175 days).
  - Amenities Wood Flooring (-175 days).
  - Pool Tile for Level 55 (-166 days).
- **Construction progress**
  - The contractor had recovered 23 calendar days from the last update by changing relationships.
  - The contractor should accelerate the productivity and recover the delays as soon as possible to avoid any additional delay.