



Reference: 12.415L01v01

12th December 2012

Hansen Yuncken
Level 6, 15 Bourke Road
Mascot NSW 2020

Attention: Mr Chris Lykoudis

Re: Roche Warehouse; Access and Internal Design Assessment

Dear Chris,

We refer to the subject application and recent correspondence concerning the proposed warehouse and ancillary office development and note that we have been commissioned to undertake an access and internal design assessment of the Roche development located in Precinct C within the Greystanes Industrial Estate. In this regard, we have reviewed all relevant plans (provided in **Attachment 1**) and documentation provided to us and now advise as follows:

Access

Hardstand Access

Truck access is provided via a combined entry/exit driveway from the internal access road and an 8.8m access driveway. The truck access has been designed in accordance with AS 2890.1 (2004). Figure 3.1 of AS 2890.2 (2002) requires a 12.5m access driveway however the standard specifically states that "larger vehicles may be able to use narrower driveways depending on the width of the public road". In this regard, the driveway has been assessed in accordance with the swept path analysis undertaken (provided in **Attachment 2**) and direct access via the turning head allows two way flow to the development. The swept path analysis demonstrates satisfactory operation by the largest design vehicle being a 19 metre articulated vehicle. It is noted that infrequent access to the site will be required by B-Double vehicles and the proposed access arrangements also allow this vehicle to enter and exit in a forward direction.

Car Park Access Driveway

The car park nominally requires a Category 1 Driveway under AS 2890.1 (2004), being a combined entry-exit driveway of width 3.0 to 5.5 metres. In response, the development provides a combined entry-exit driveway of width 6.2 metres onto the internal access road and therefore exceeds (is superior to) the requirements of AS 2890.1 (2004) and is satisfactory.

Reference should also be made to the swept path analysis included in Attachment 2

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📍 Internal Design

Hardstand Access

The loading area has been assessed in accordance AS 2890.2 (2002) and following characteristics are considered noteworthy:

- Access to the three ground level docks and the recessed docks can be achieved by a 19m Articulated Vehicle. The recessed loading dock splay has been amended to allow access to the northern ground level loading dock.
- Access to the two recessed docks can be achieved by a 19m Articulated Vehicle.
- B-Double access has been assessed using swept path analysis. A 25m B-Double vehicle can enter and exit the site in a forward direction. It is noted that in order for the B-Double to turn around on-site the two most southern loading docks will be required to be unoccupied. This would be satisfactory subject only to proper management.

It is evident from the analysis undertaken that the loading area is constrained in nature however a Loading Dock Management Plan (LDMP) will ensure the development will operate in an efficient and safe manner. All critical movements are provided in Attachment 2 which demonstrates compliance with the relevant standards. In summary, the internal design aspects of the loading area are considered satisfactory in principle, subject to the adoption of an LDMP.

Car Park

The car park complies with the requirements of AS 2890.1 (2004) with the following characteristics considered noteworthy:

- Parking modules are required to be provided in accordance with the requirements for a User Class 1A, which requires bay and aisle widths of 2.4 metres and 5.8 metres respectively. In response, the development provides bay and aisle widths of 2.5 metres and 6.2 metres which exceeds (is superior to) the requirements of AS 2890.1 (2004) and will operate satisfactorily.
- A 1.0 metre aisle extension has been provided beyond the last space at end of blind aisles, in accordance with AS 2890.1 (2004).
- All spaces located adjacent to obstructions of greater than 150mm in height will require an additional width of 300mm.

📍 Conclusions

The proposed access and internal design arrangements are considered satisfactory and will ensure safe and efficient manoeuvring of vehicles throughout the car parks and loading dock circulation areas associated with the proposed development.



Please contact the undersigned should you have any queries or require any further information regarding the above.

Yours faithfully,

traffic

Andrew Johnson
Associate Engineer

Attachment 1: Reduced Plans
Attachment 2: Swept Path Analysis



Attachment 1



PROPOSED DEVELOPMENT	
AREA SCHEDULE	
OFFICE	215m ²
WAREHOUSE	6,299m ²
TOTAL	10,116m ²
SITE AREA	1,797H ₆
% DEVELOPABLE AREA	55%
% LANDSCAPED	13.3%

PARKING SCHEDULE	
OFFICE REQUIRED	13
WAREHOUSE REQUIRED	34
TOTAL REQUIRED	47
TOTAL PROVIDED	47

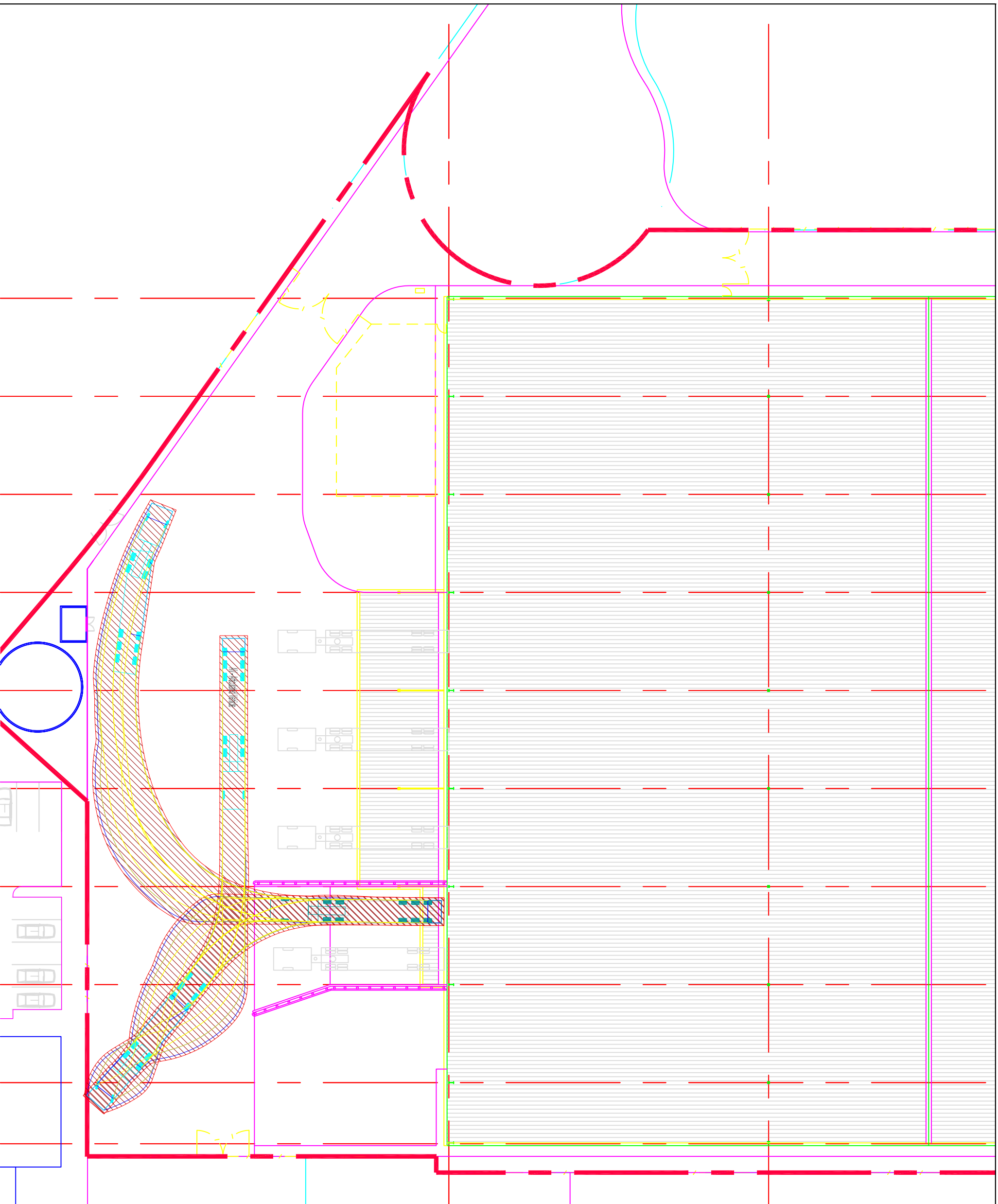
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Attachment 2

notes
This drawing is prepared for information purposes only. It is not to be used for construction.

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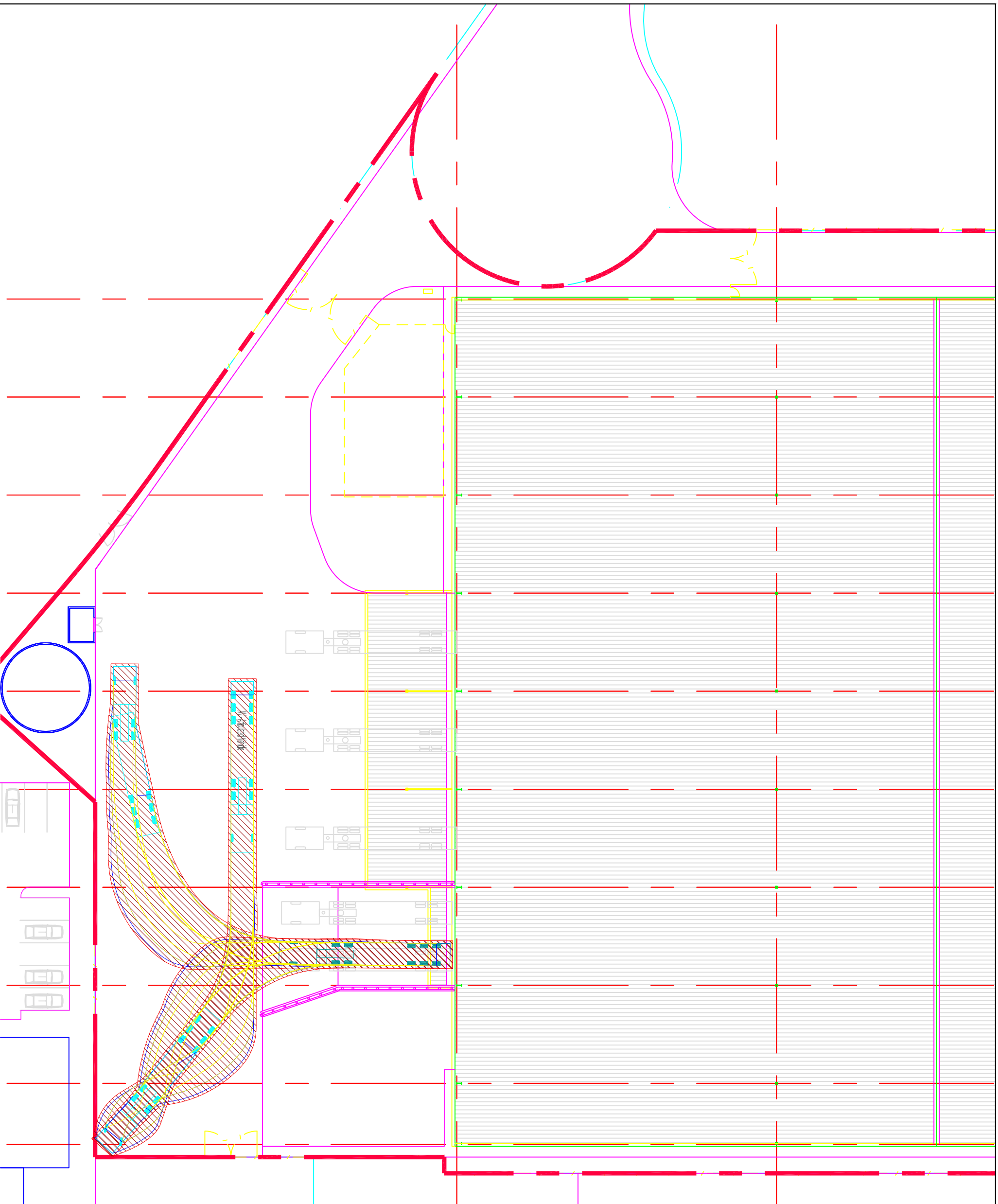
drawing title
Swept Paths - Recessed Loading Dock 1

drawn: JM checked: GP date: 03-12-12

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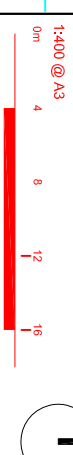
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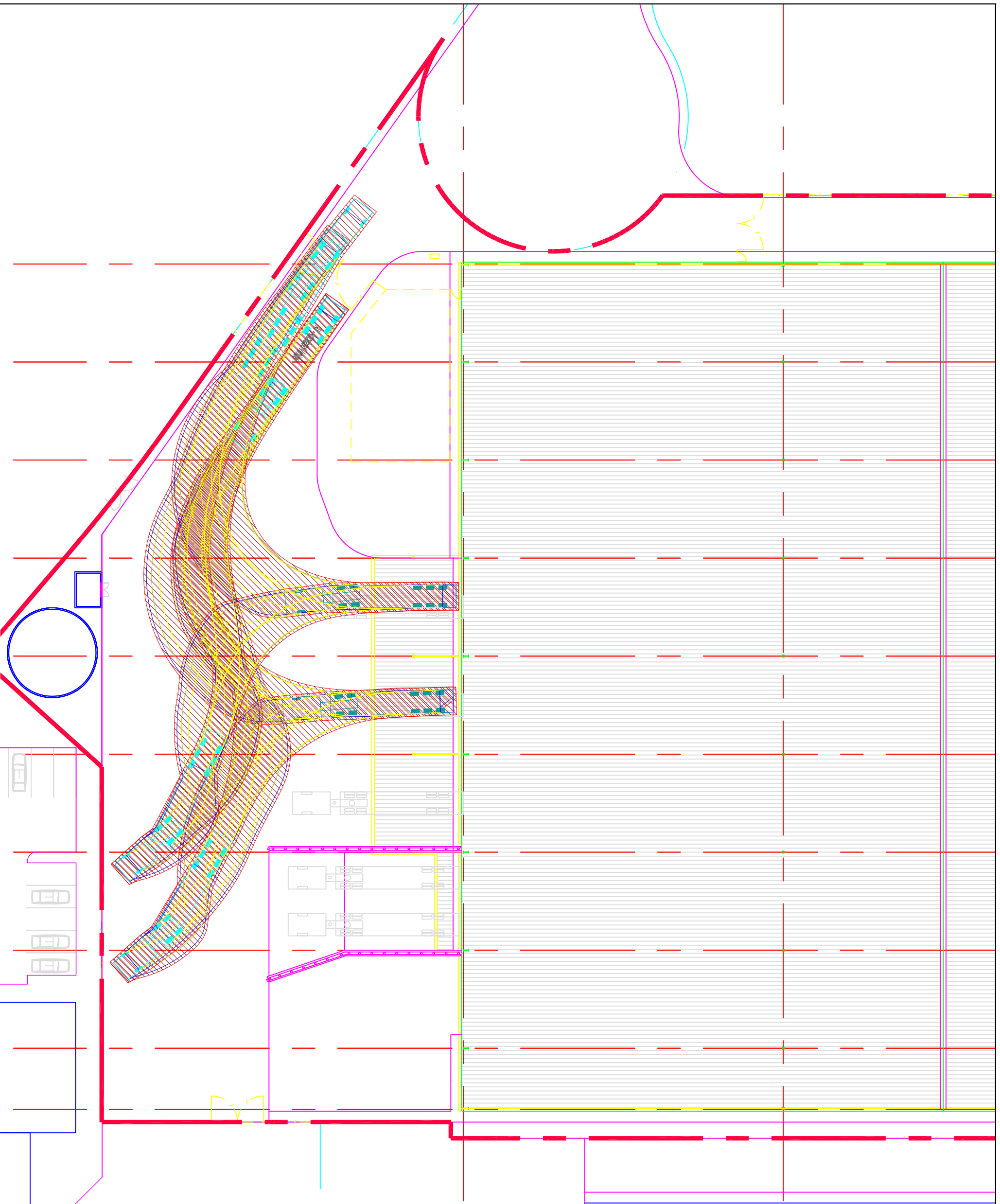
drawing title
Swept Paths - Recessed Loading Dock 2

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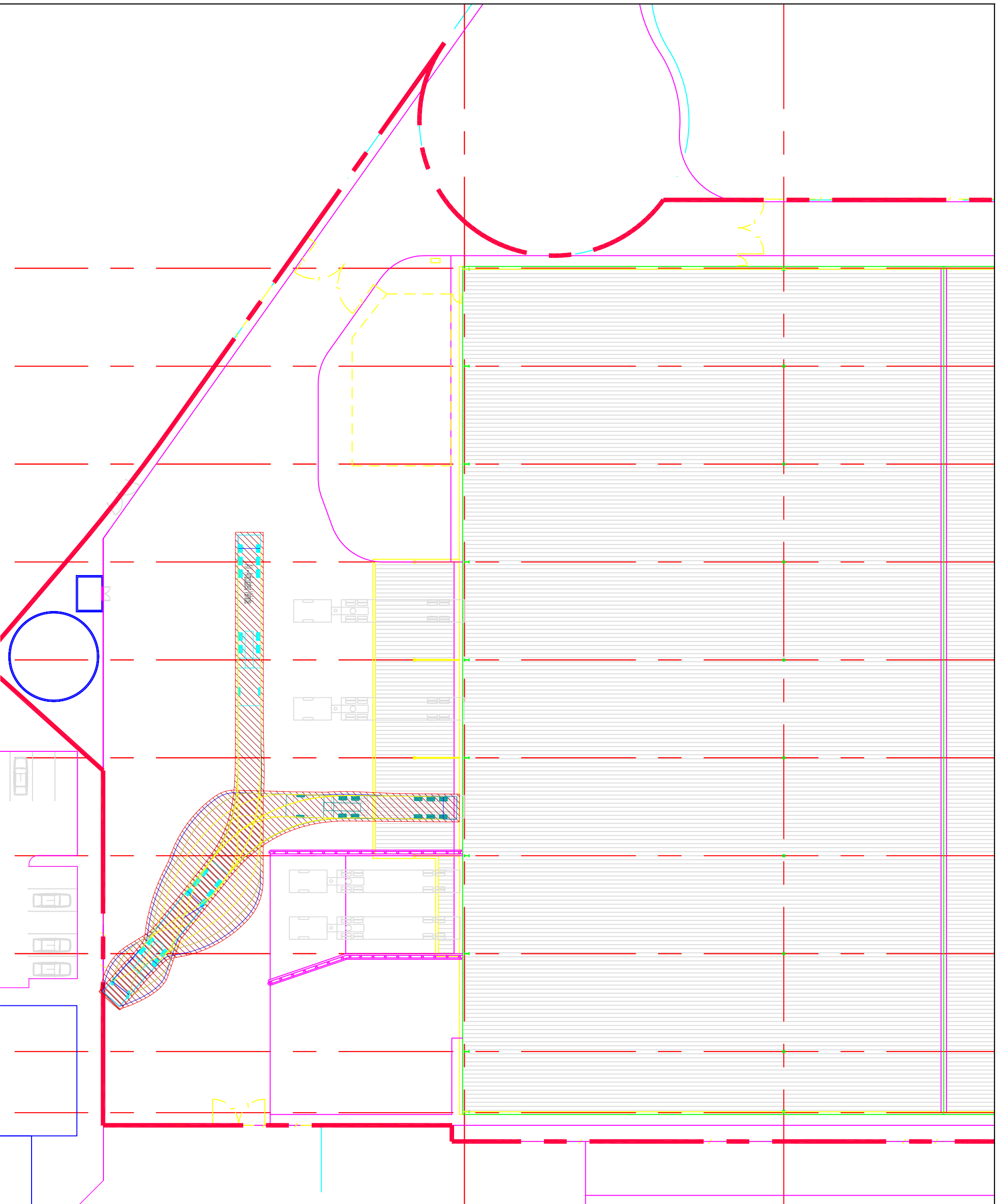
drawing title
Swept Paths - Ground Loading Docks 1 & 2

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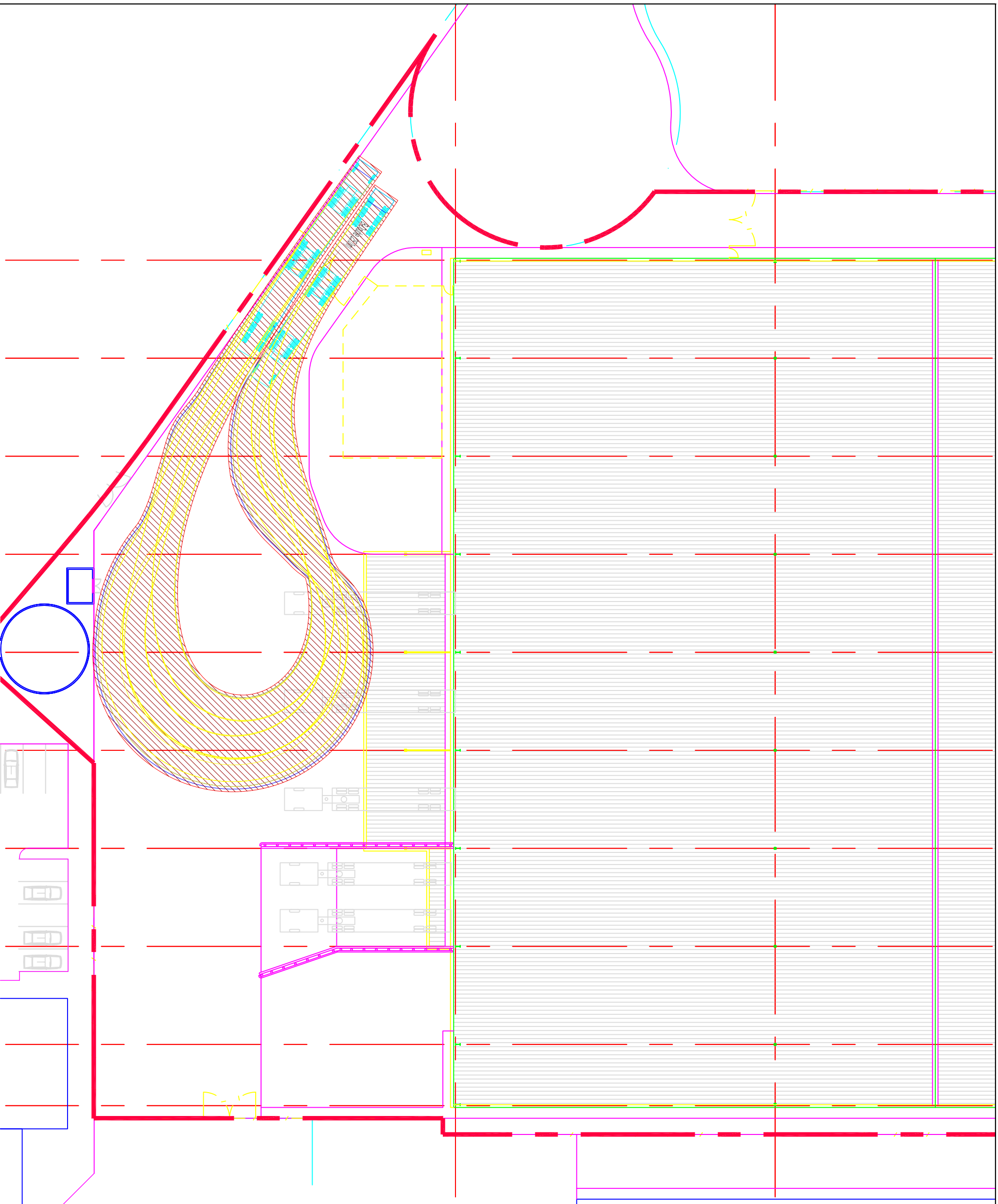
drawing title
Swept Paths - Ground Loading Dock 3

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drawing title
Swept Paths - B-Double Turning on-site

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