

APPENDICES

APPENDIX A: NSCR Alignment (Plan and Profile)

*APPENDIX B: Design Guideline for the North South
Commuter Railway (NSCR) Tutuban Station*

APPENDIX A

NSCR Alignment (Plan and Profile)

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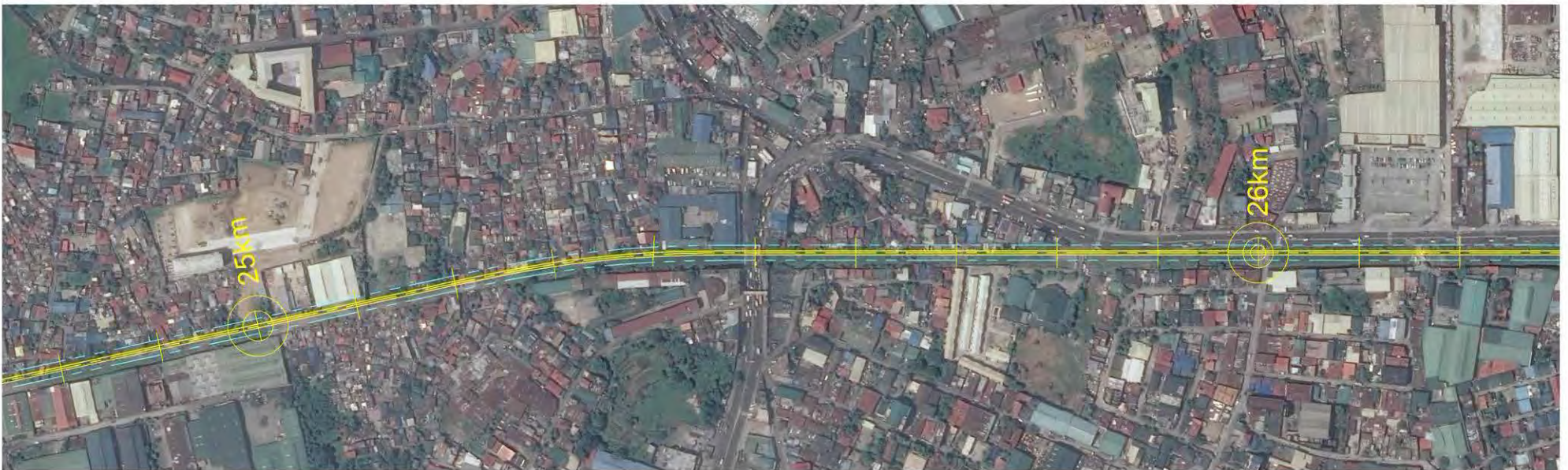


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PREPARATORY SURVEY ON THE CLARK AIRPORT EXPRESS RAILWAY (COMMUTER SECTION) IN THE REPUBLIC OF THE PHILIPPINES	5 MAR 2015	(A3 size) S: 1/4000	TUTUBAN TO MALOLOS ALIGNMENT	2/15



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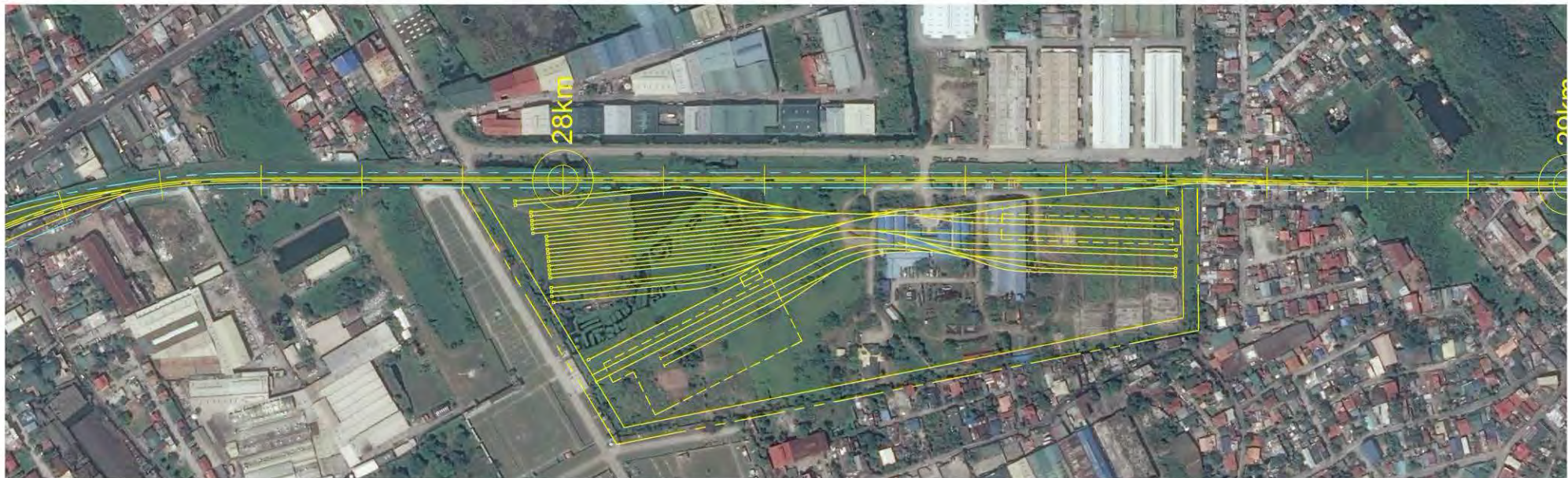




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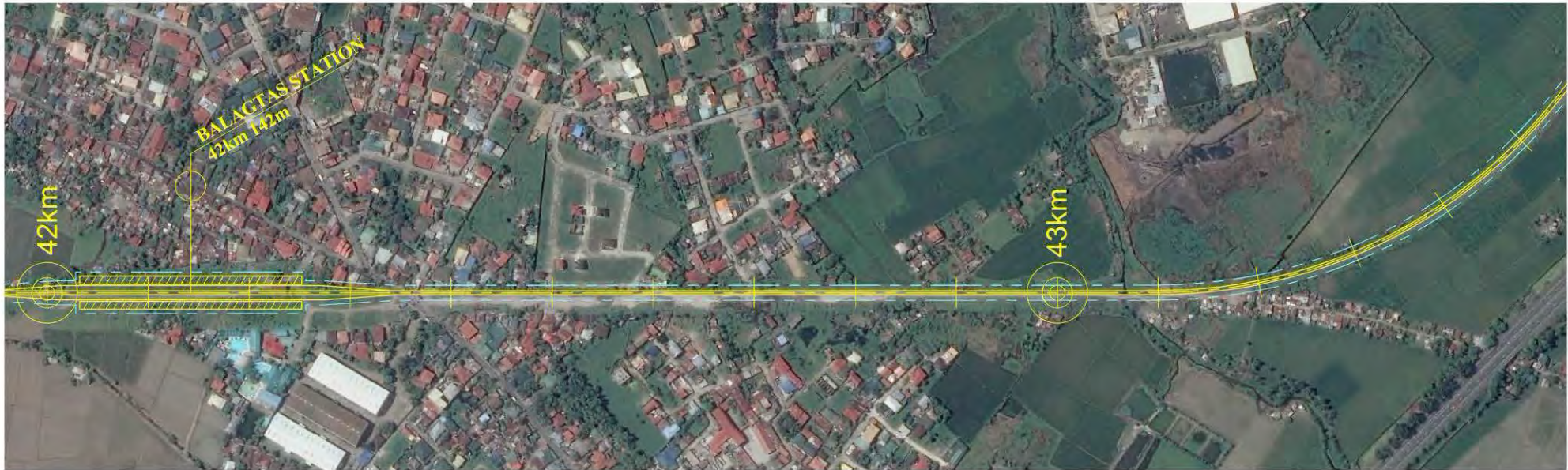
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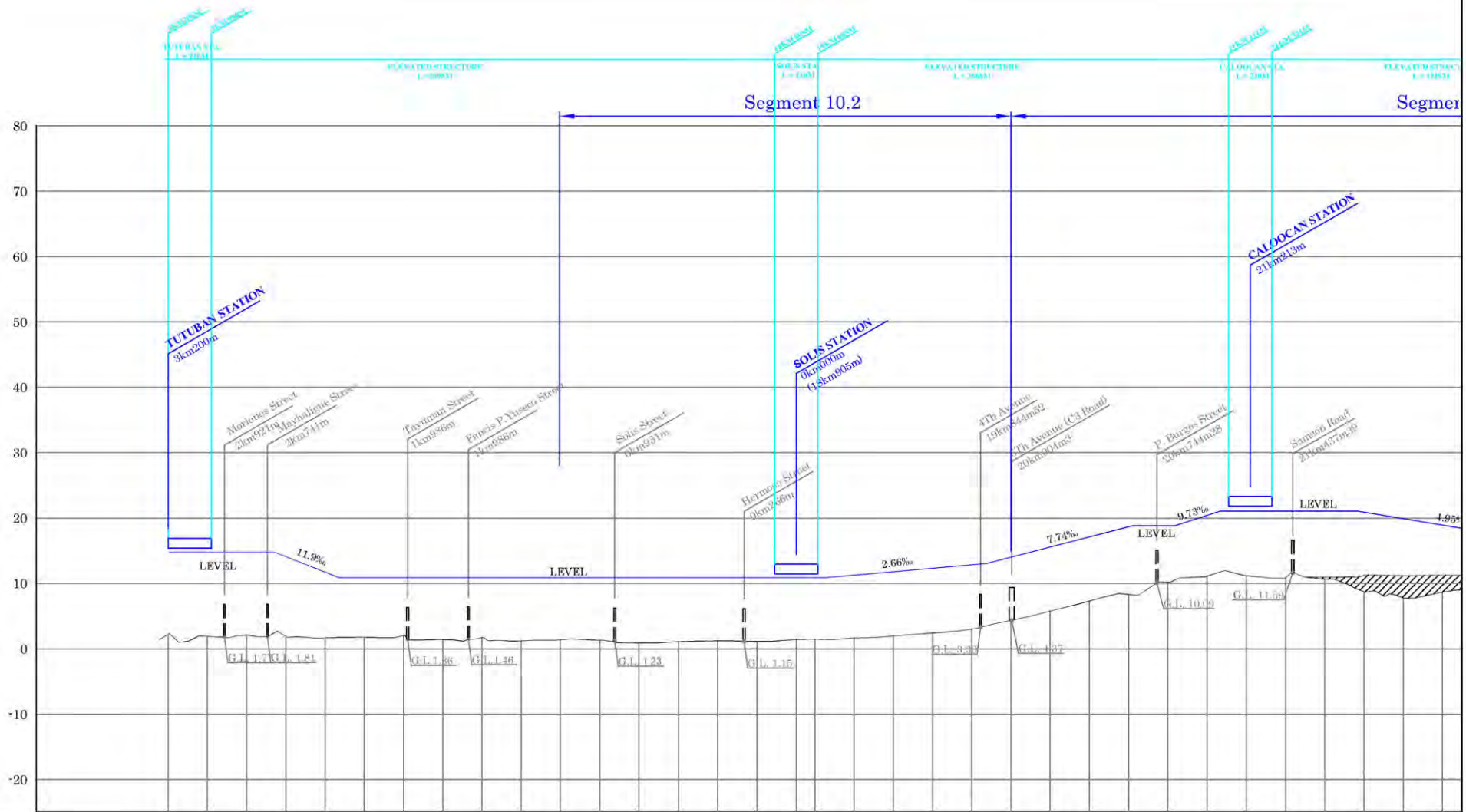


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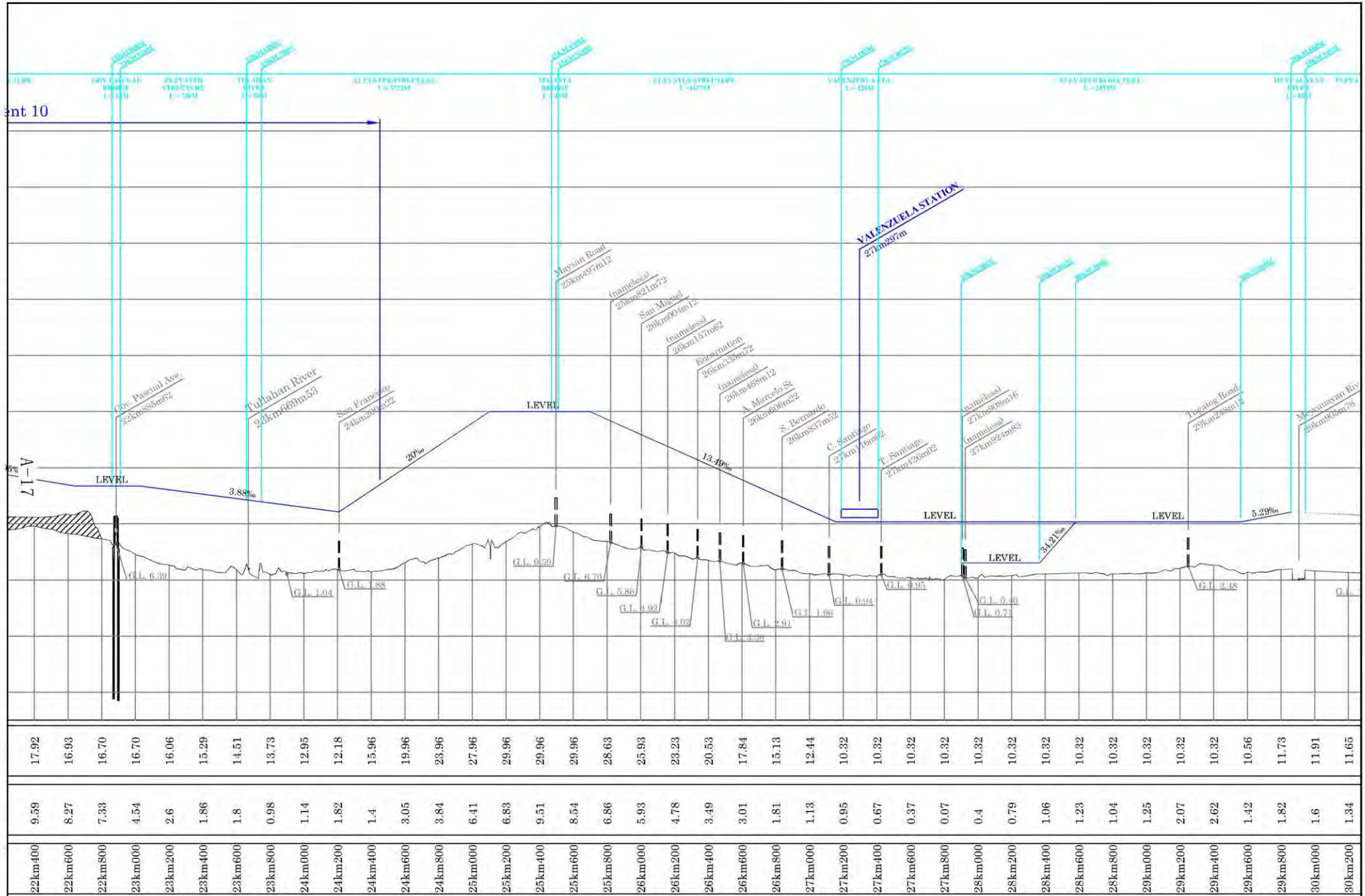


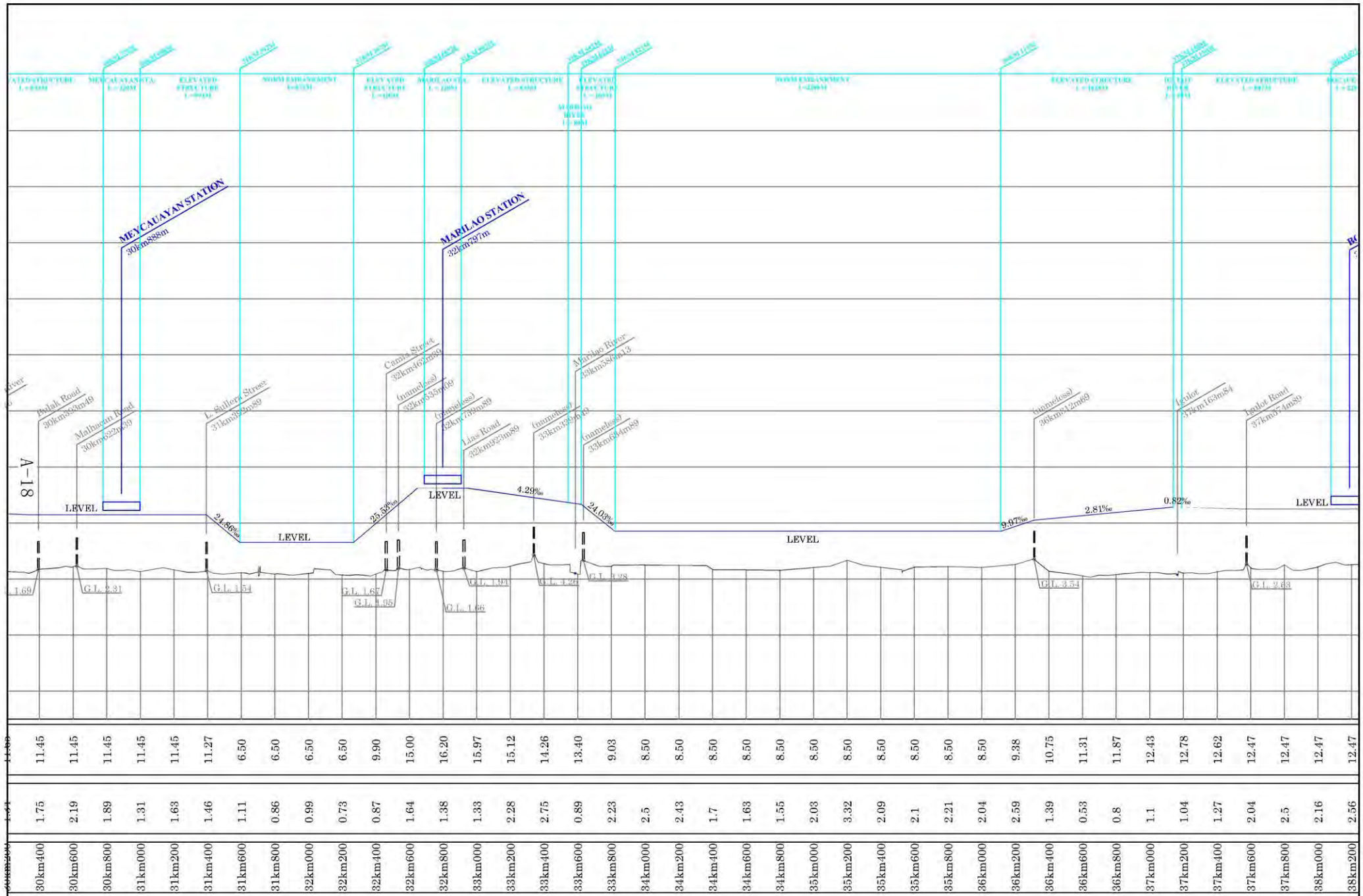
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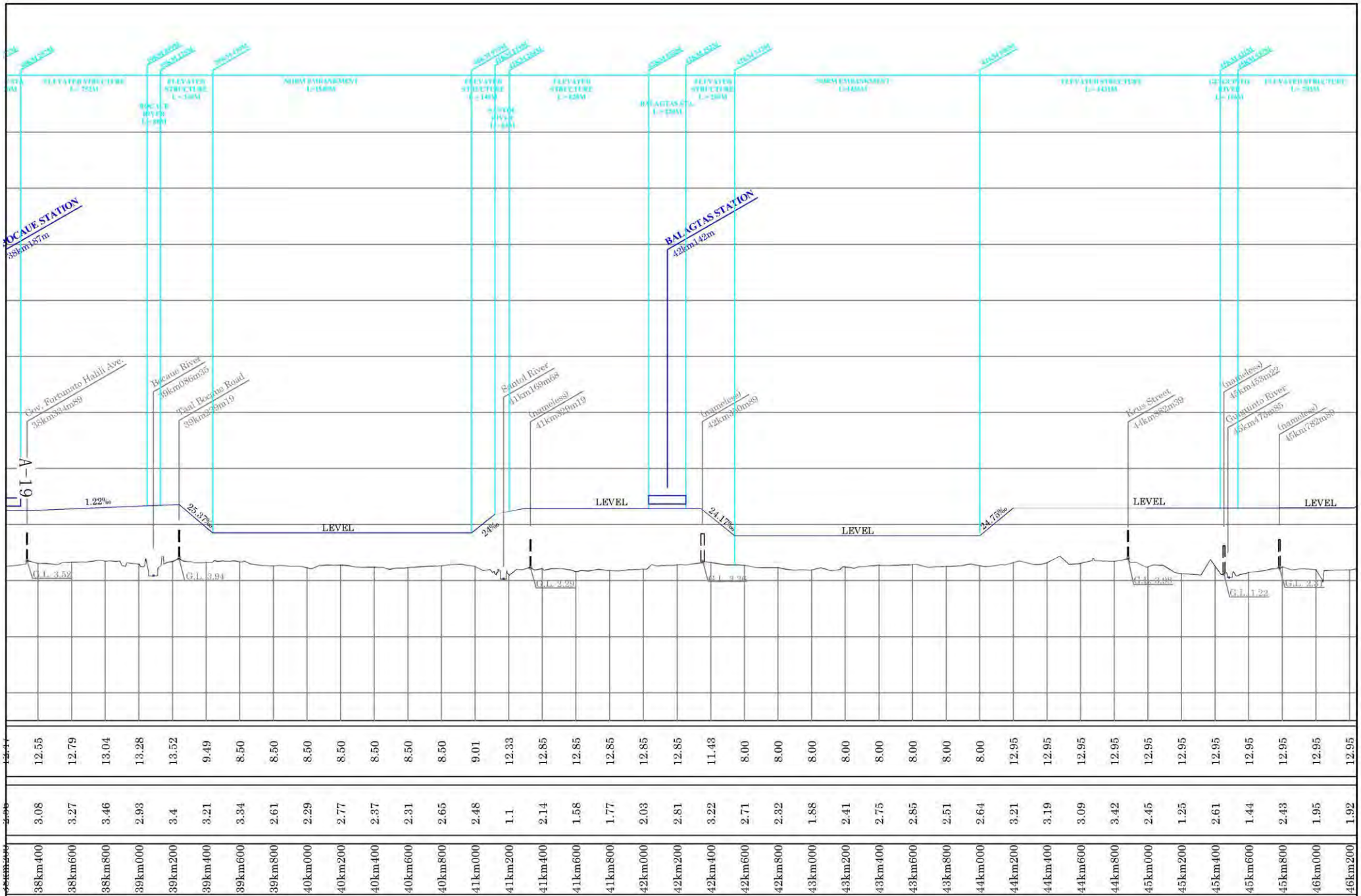


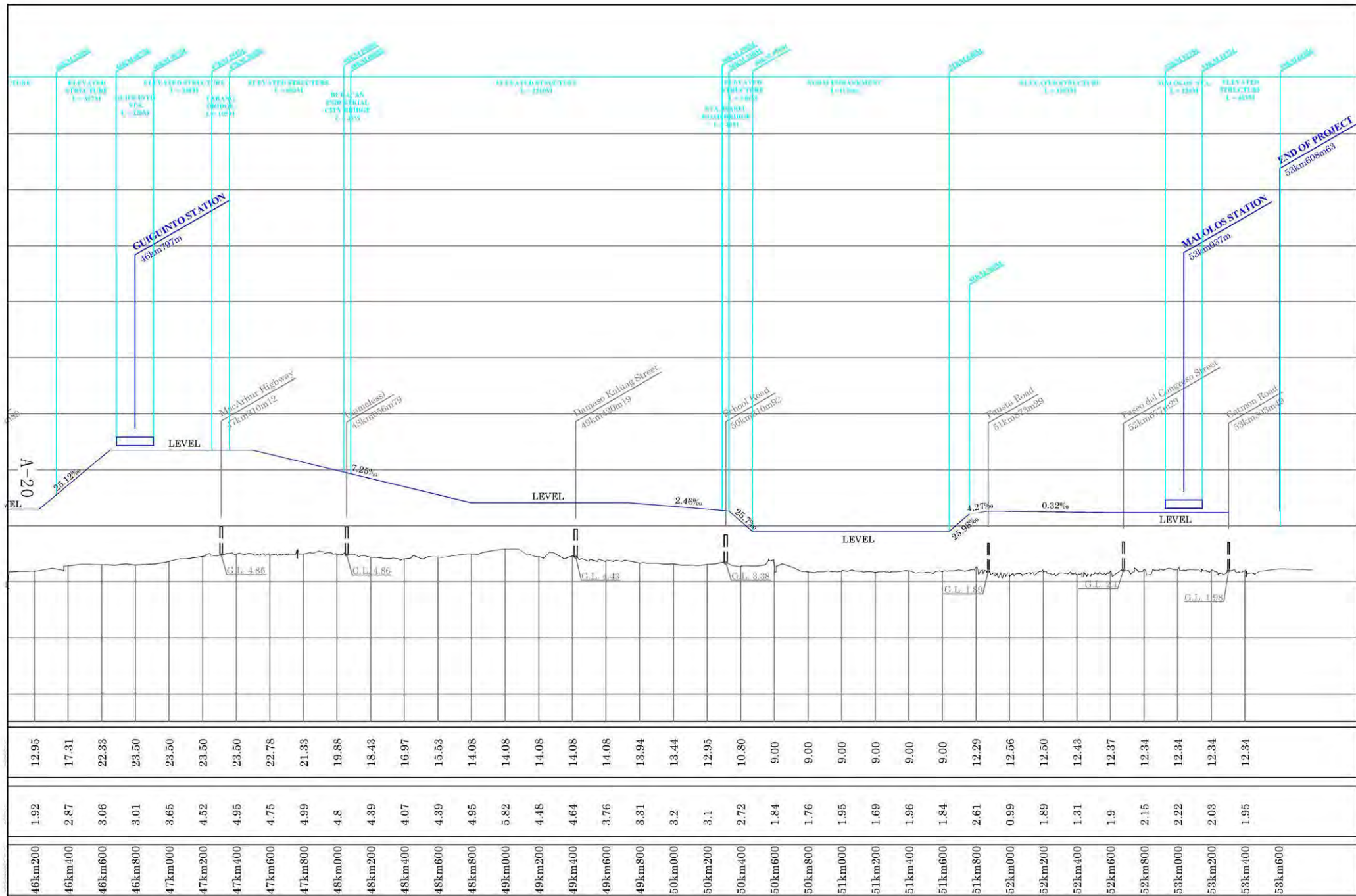
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14.78	1.89	3km000
14.09	2.10	2km800
15.58	1.87	2km600
11.72	1.65	2km400
10.86	1.75	2km200
10.86	2.01	2km000
10.86	1.38	1km800
10.86	1.70	1km600
10.86	1.21	1km400
10.86	1.36	1km200
10.85	1.29	1km000
10.85	0.87	0km800
10.85	1.09	0km600
10.85	1.21	0km400
10.85	1.12	0km200
10.85	1.40	0km000
10.85	1.47	18km905
10.85	1.47	19km000
11.26	1.65	19km200
11.79	1.95	19km400
12.33	2.40	19km600
12.86	3.03	19km800
14.04	4.34	20km000
15.58	5.77	20km200
17.13	7.32	20km400
18.68	8.31	20km600
18.81	10.15	20km800
20.43	11.12	21km000
21.02	11.17	21km200
21.02	10.78	21km400
21.02	10.65	21km600
20.89	8.72	21km800
19.90	7.78	22km000
18.91	8.66	22km200





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VERTICAL ALIGNMENT PREPARATORY SURVEY ON THE CLARK AIRPORT EXPRESS RAILWAY (COMMUTER SECTION) IN THE REPUBLIC OF THE PHILIPPINES	DATE PRINTED: 5 MAR 2015	SCALE: (A3 size) H: 1/20000 V: 1/600	DRAWING NAME: TUTUBAN TO MALOLOS ALIGNMENT	PAGE No. 5/5
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APPENDIX B

*Design Guideline for the North South
Commuter Railway (NSCR) Tutuban Station*

Appendix B:

Design Guideline for the North South Commuter Railway (NSCR) Tutuban Station

1. Introduction

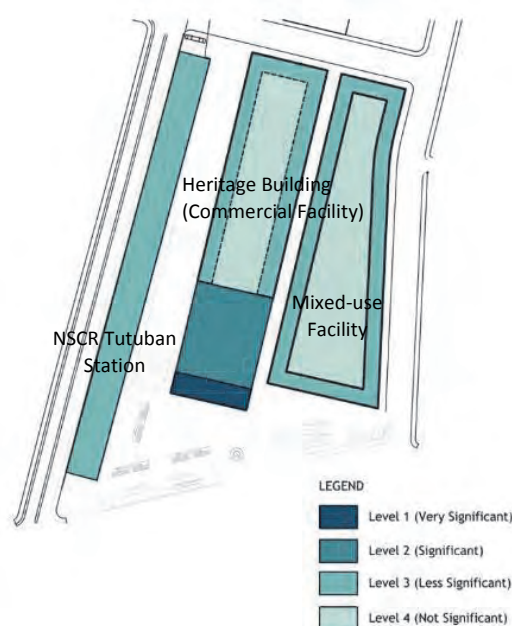
This Design Guideline is consistent with the Design Guideline for the redevelopment of Tutuban PNR property prepared by the Preparatory Survey on Promotion of TOD for Urban Railway in the Republic of the Philippines (hereafter “TOD Study”). This Design Guideline focuses on the NSCR Tutuban station and aims to maximize the attractiveness of the station area as a gateway of the entire redevelopment site. Hence, amplification of the significance of historic context by the integration of design with the adjacent buildings is highly considered in the Design Guideline.

The Design Guideline will be elaborated by the Design Guideline Committee proposed by the TOD Study with the necessary consultancy support commissioned by DOTC. The Design Guideline Committee will involve major stakeholders such as DOTC, PNR, and City of Manila. Therefore, the design of NSCR Tutuban station will be subject to further review and approve by the Design Guideline Committee.

2. General Design Guideline

2.1 Approach for Historic Preservation

Cultural Heritage Impact Assessment conducted by the TOD study categorized Tutuban station area in 4 zones according to the level of the historic significance as shown in Figure 1. Level 1 (most significant) applies to the frontage of the Heritage Building with the façade of the original Tutuban station. Level 2 (significant) area covers the first 10 bay of the original columns, beams, and roof trusses in the Heritage Building. Although level 3 is considered less significant comparing to the level 1 and 2, the area still needs to be in harmonious with the structures and façade of the original Tutuban station. The appearance of the structure will evoke, but not duplicate or mimic the original architecture in a sympathetic, contemporary manner. Level 3 applies to NSCR Tutuban station as well as to the lower levels of the commercial and mixed-use facilities as shown in Figure 1. Level 4 is not very significant in terms of heritage value. The areas of level 4 are the upper levels of the commercial and mixed-use facilities open for the options to adopt the historic style and/or electric style with modern materials such as glass and steel.



Source: JICA TOD Study Team

Figure 1 Level of Historic Significance

2.2 Color

Colors should be selected to harmonize with the warm, earth-tone, masonry color of the existing historic structure (see Figure 2).



Source: JICA TOD Study Team

Figure 2 Prospective Color Palettes for the Proposed Buildings/Structures

2.2 Pedestrian Access

To secure a safe and convenient access for the passengers, visitors, and residents in the community, pedestrian deck needs to connect not only NSCR and LRT-Line 2 stations but also the Heritage Building and public transportation facilities located at the ground floor. The pedestrian deck should be partially covered by the roof of the NSCR station to provide a sheltered space as shown in Figure 3.

Pedestrian decks and walkways require accessible surfaces that are firm, stable and slip-resistant in both wet and dry conditions since uneven surfaces or gaps between paving slabs can cause problems for people with disabilities and wheelchair users.

Due to the vulnerability to flooding, the finished floor elevation for the first floor of the NSCR Tutuban station is designed to be 1.0 m higher than the ground elevation. Therefore, universal access,

such as installation of slopes with an appropriate gradient (1/8 maximum for inside, 1/20 maximum for outside), needs to be considered and provided.



Source: JICA Study Team

Figure 3 Image of Pedestrian Deck

2.3 Signage

Signage should reflect the consideration for the people with disabilities and foreigners. In compliance to the provisions of BP 344 (The Philippine Law to Enhance Mobility of Disabled Persons), the following must be observed:

- Directional and informational sign should be located at the points conveniently seen even by a person on a wheelchair.
- Signs should be kept simple and easy to understand; signage should be made of contrasting colors and gray values to make detection and reading easy.
- International symbols for access should be used to designate routes and facilities that are accessible.
- Signage labelling in public rooms and places should have raised symbols, letters or numbers with a minimum height of 1 mm; Braille symbols should be included in signs indicating public places and safety routes.

2.4 Lighting

The proposed lightings range from the ones located in pedestrian decks/walkways, platform, and vehicle circulation to emergency evacuation routes. They need to be selected and laid out to meet the minimum illumination level for each facility in accordance with Occupational Safety and Health Standards and relevant regulations. On the other hand, consideration for the integration with the lightings for the Heritage Building is required not to ruin the ambiance of the Heritage Building.

Lighting should complement the architecture elements of the station, considering the heritage feel of the area. One approach to reflect the historic context on the lighting fixture is to extract the essence of the original ramp attached to the façade of the original Tutuban station (see Figure 4).

Utilization of the energy efficient lighting such as LED lighting and/or renewable energy is encouraged.



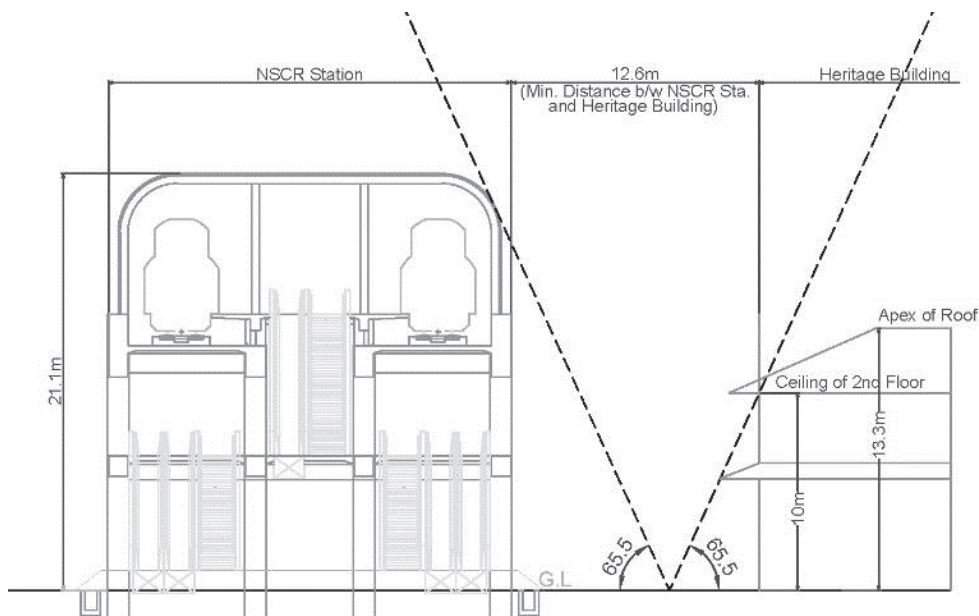
Source: JICA Study Team

Figure 4 Lamp and Façade of Original Tutuban Station

3. NSCR Tutuban Station Design Guideline

3.1 Open Space between NSCR Tutuban Station and Heritage Building

As Figure 5 indicates, a minimum distance of 12.6m is recommended to maximize the benefits of natural lighting and ventilation according to the National Building Code, considering a 65.5 degree Philippine solar angle. Since the proposed facility layout plan shown in Figure 1 secures approximately 25m of clearance between the NSCR Tutuban station and the Heritage Building, ample space provides an opportunity to fully appreciate the historic features of the Heritage Building as well as to utilize the space as an alternative relocation site for the affected street vendors by LRT-Line 2 west extension project (see Figure 6).



Source: JICA Study Team

Figure 5 Recommended Distance between NSCR Tutuban Station and Heritage Building



Source: JICA TOD Study Team

Figure 6 Image of Open Space between NSCR Tutuban Station and Heritage Building

3.2 Ground Level

Ground level of the NSCR Tutuban station includes public transportation facilities (jeepney bay and access areas to concourse) and commercial facilities.

Exterior

- Facade treatment should conform to the characteristics of the existing heritage elements (horizontality of façade lines, deep eaves, pattern of openings, etc.). The overall look of the facilities should complement the heritage building beside it in terms of color theme, modular bay span (for the shops), lighting and signage.
- Commercial facilities at the ground floor must provide clear and unobstructed windows, free of reflective coatings and exterior mounted gates and security grills.

Interior

- Commercial spaces under the viaduct can either be pre-fabricated (larger and more permanent structure) or Tiangge-type (smaller and made of light materials such as steel tubular and tent fabric). The typical size of pre-fabricated type stall is 5.0x7.5m and Tiangge-type stall is 1.5x2.0m. Mezzanine is allowed by providing the minimum clear headroom (1.80m) according to the National Building Code. A main access to the stalls with minimum width of 3.0m should be provided. Utility lines (electrical, plumbing, etc.) must be provided for each stall especially for the pre-fabricated type stalls.
- Main entrance and entry approach must accommodate persons of all mobility levels by taking 1.0 m elevation difference from the adjacent ground into consideration.



Source: JICA TOD Study Team

Figure 7 Image of Commercial Facilities (Pre-fabricated Stalls) at the Ground Level

3.2 Second Level (Concourse)

Exterior

- The second level exterior walls should be mainly glass panels to adopt sympathetic modern architecture.
- The exterior walls and the corridor features (railing, roof eaves, lighting fixtures, signage, etc) should consist of low maintenance modern materials. Its overall architectural style should however complement the heritage building details in terms of color theme, modular bay spacing, lighting fixtures and the design detailing of repetitive building surface features.

Interior

- The enclosed area is a concourse of the NSCR Tutuban station including both inside and outside of the ticket gates. The design and materials of the concourse amenities should be universal, modern, low maintenance and functional.

3.3 Third Floor (Platform Level)

Exterior

- The third level wall design should be a continuation of the second level glass walls so as not to distract the heritage building below.
- Roofing should follow the materials used for the Heritage Building and colors shown in Figure 2 considering its level of historic significance. Skylight is recommended to keep the consistency with the Heritage Building as well as to maximize the benefits of natural sunlight and ventilation.

Interior

- The platform should secure the sufficient width to accommodate passengers during the peak hours including their access routes as well as necessary equipment such as seating, signage, and lighting.
- The architectural style of the interior facilities and equipment should be universal, modern, low maintenance and functional.



Source: JICA Study Team

Figure 8 Image of Façade of the NSCR Tutuban Station