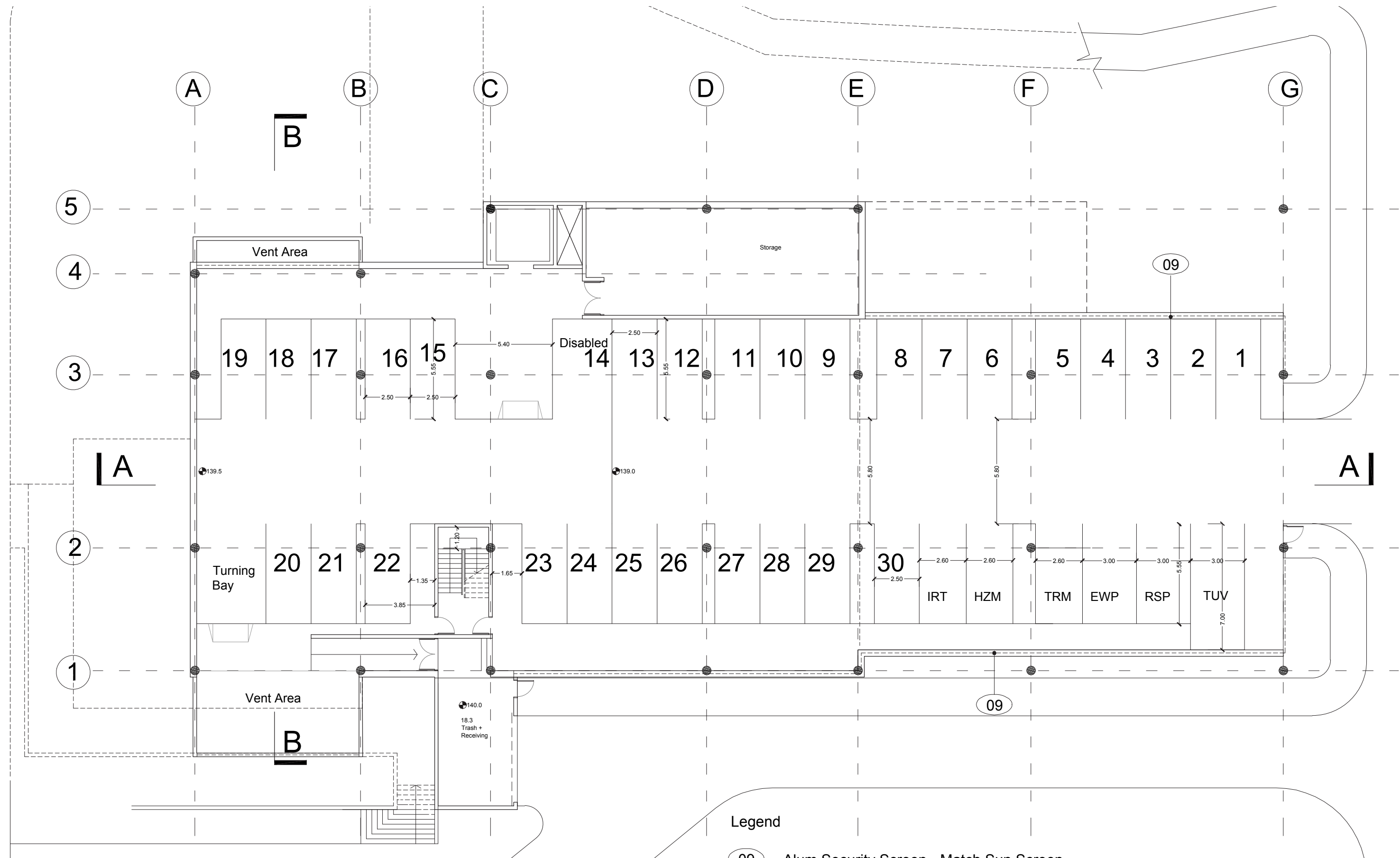
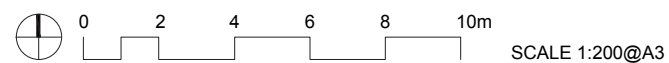
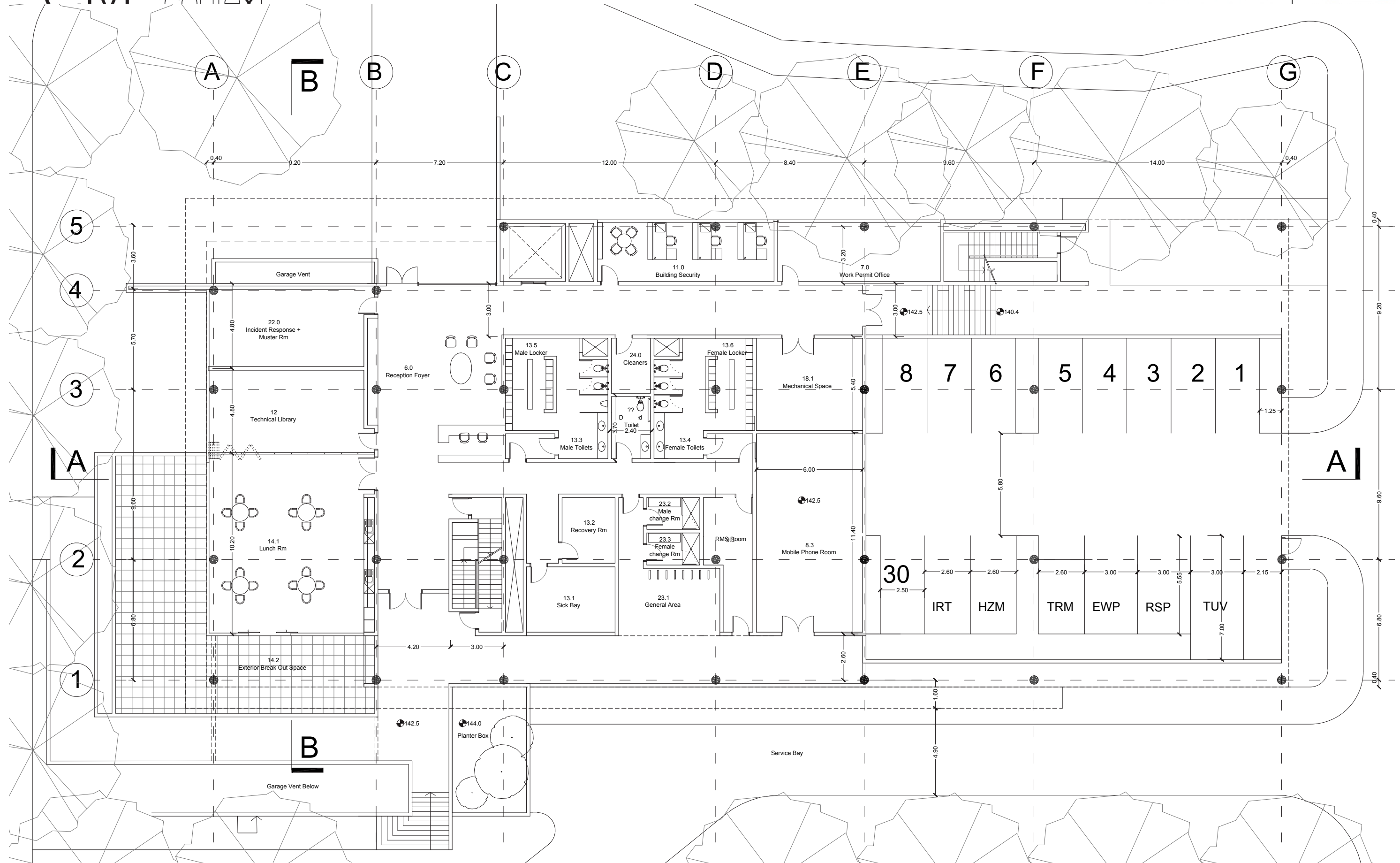


6.0 Operational Ancillary Facilities

MCC ARCHITECTURAL DESIGN BRIEF

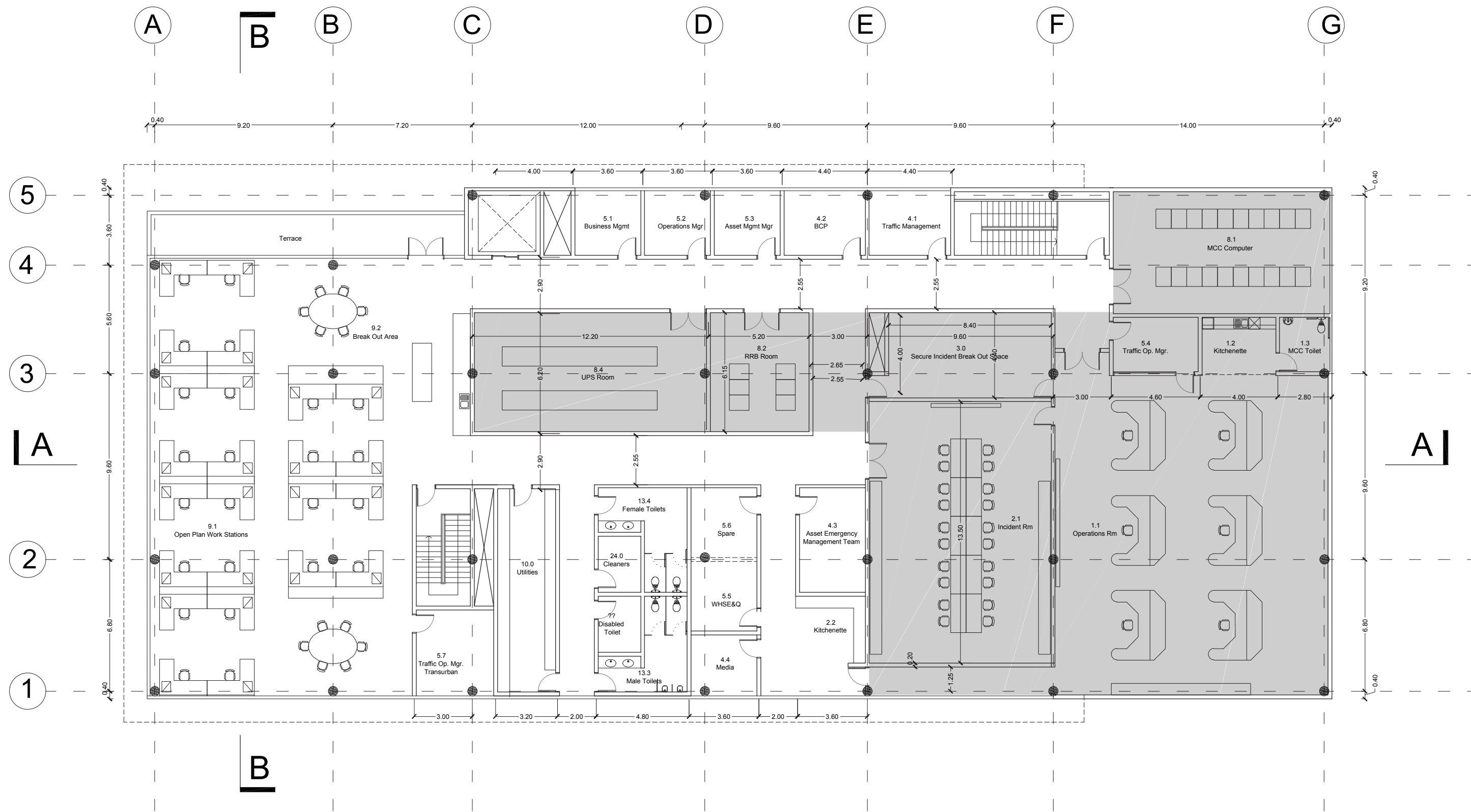
No	Room	Area	Area - Ex	Requirements
AMENITIES GROUPING				
6.0	Reception Foyer	82	----	Reception desk, seating for 4 visitors and F3-M2 Operations Centre signage. Flush mounted wall cabinet for display of Policy documents and accreditations
12.0	Technical Library	41	----	
13.0	Amenities	-----		
13.1	Sick Bay	19	----	
13.2	Recovery Room	11	----	
13.3	Male Toilets	24	----	
13.4	Female Toilets	24	----	
13.5	Male Lockers	15	----	Space for 9 Lockers
13.6	Female Lockers	14	----	Space for 9 Lockers
14.0	General Lunch Areas	-----		
14.1	Lunch Rm	94	----	Including 2 sinks, prep areas, 2 x 600 litre (nom) fridges, coffee machine, cupboards, 2 microwaves and 2 dish washers, hot-cold-chilled water.
14.2	Exterior Break Out Space	116	40	Window and door to Lunch Rm
18.0	Services + Utilities			Provide all services, utilities and back up systems and associated service rooms (as appropriate) to the standards typically incorporated in office facilities for 24/7 operations
18.1	Mechanical Space	31		As Required
18.2	Electrical Closet	0		As Required
18.3	Trash + Receiving	30		Access to Service Bay
23.0	Bicycle Facilities	-----		
23.1	General Area	27	----	8 bicycle racks - Undercover - Size to be Confirmed/Tested
23.2	Male Change Rm	5	----	Provide Shower
23.3	Female Change Rm	5	----	Provide Shower
24.0	Cleaners Rm	7	----	
Total Amenities Areas		545	40	
Total Building Areas		1832		Assigned Space
Circulation + Walls 7%		128.24		Multiplier
Total Overall		1960.2		

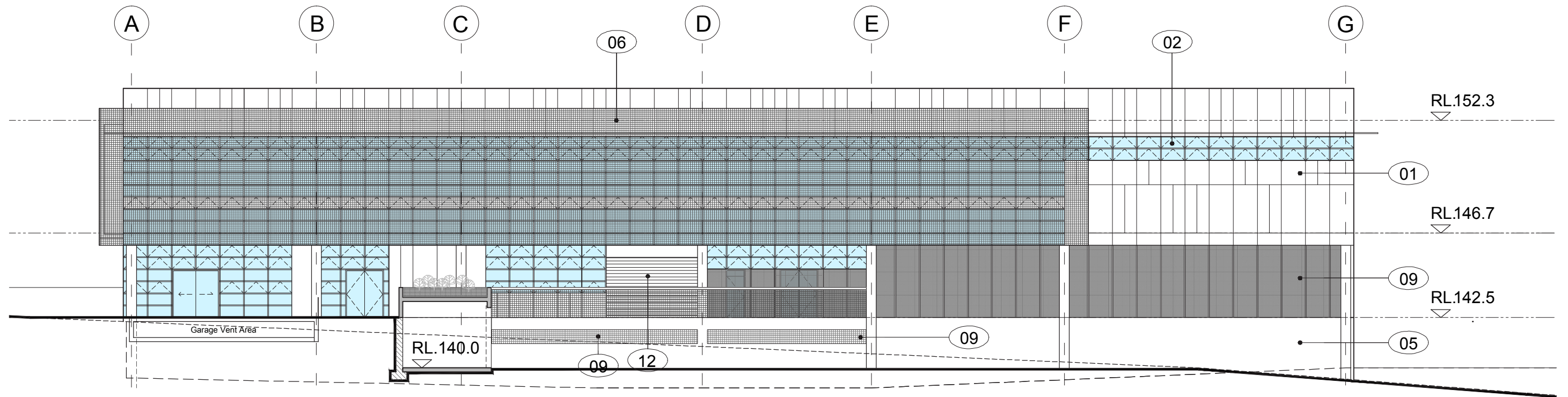
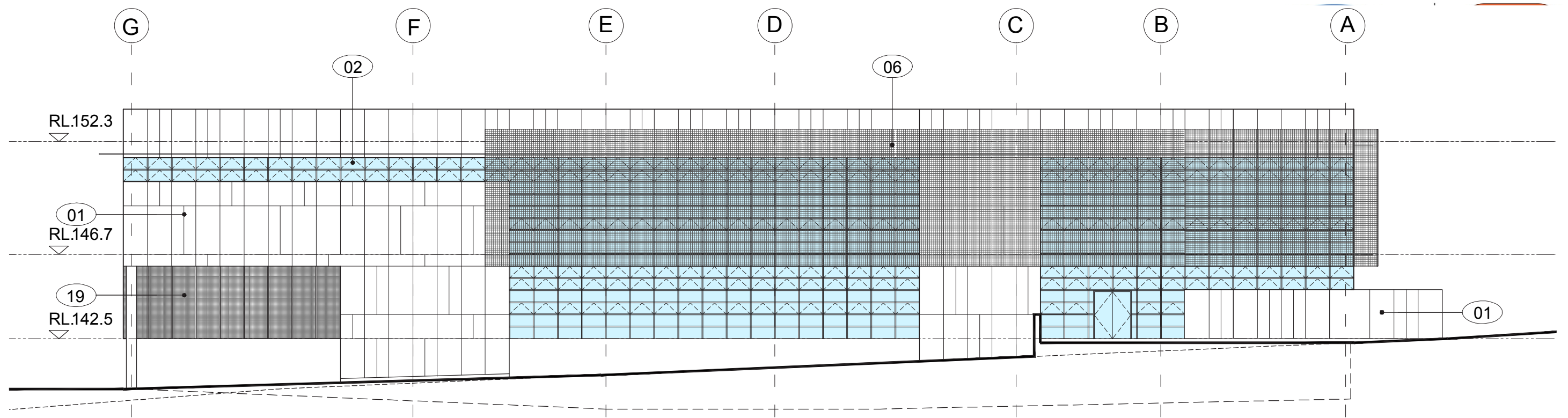




MOTORWAY OPERATIONS COMPLEX - MOTORWAY CONTROL CENTRE - GROUND FLOOR PLAN

M1-M2-5000-DR-UD-0504



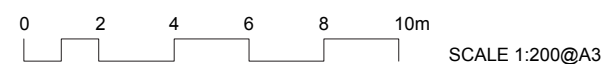


Legend

- 01 GRC Panels in Various Colours
- 02 Insulated Glass - 600 x 1200 - Operable as shown
- 03 Single Panel Glass - 600 x 1200 - Operable as shown
- 04 Shed Panels Wall - Horizontal 300 ridges

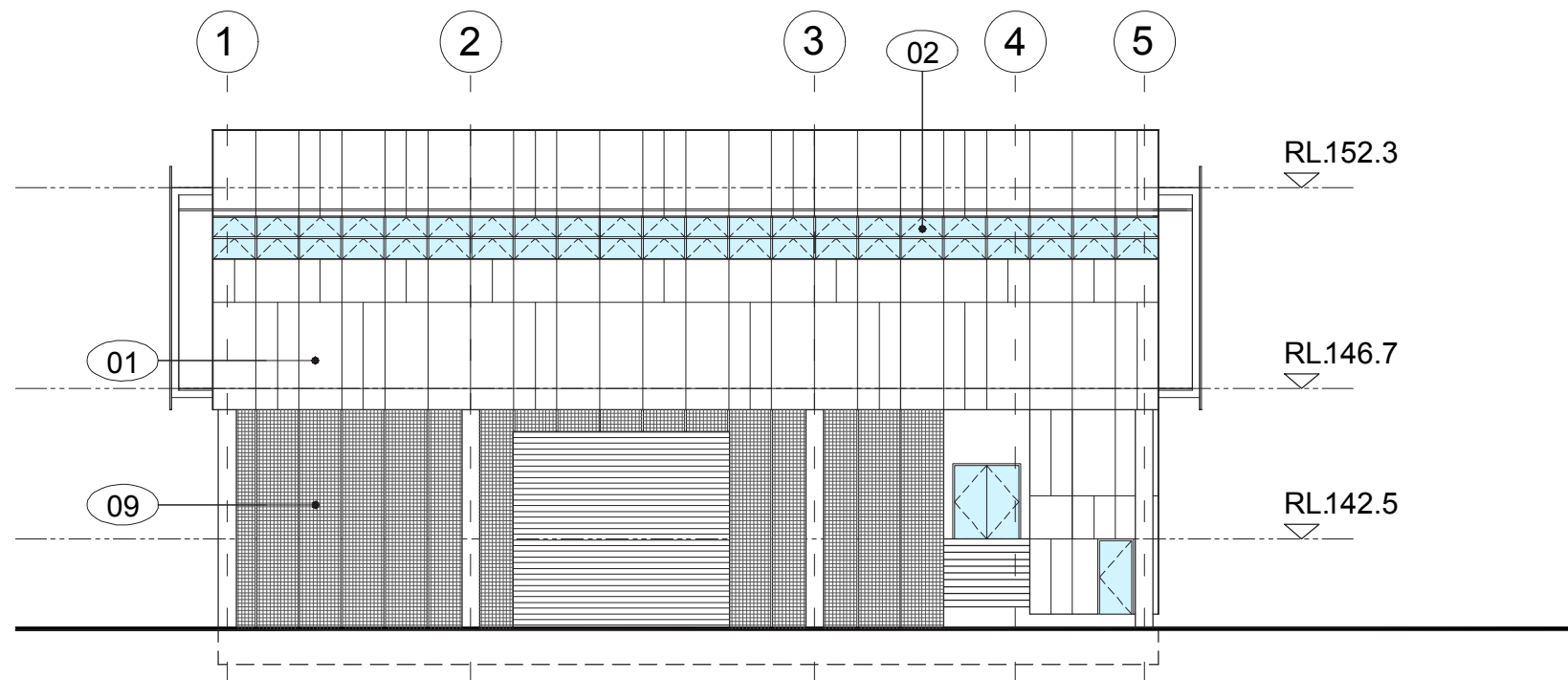
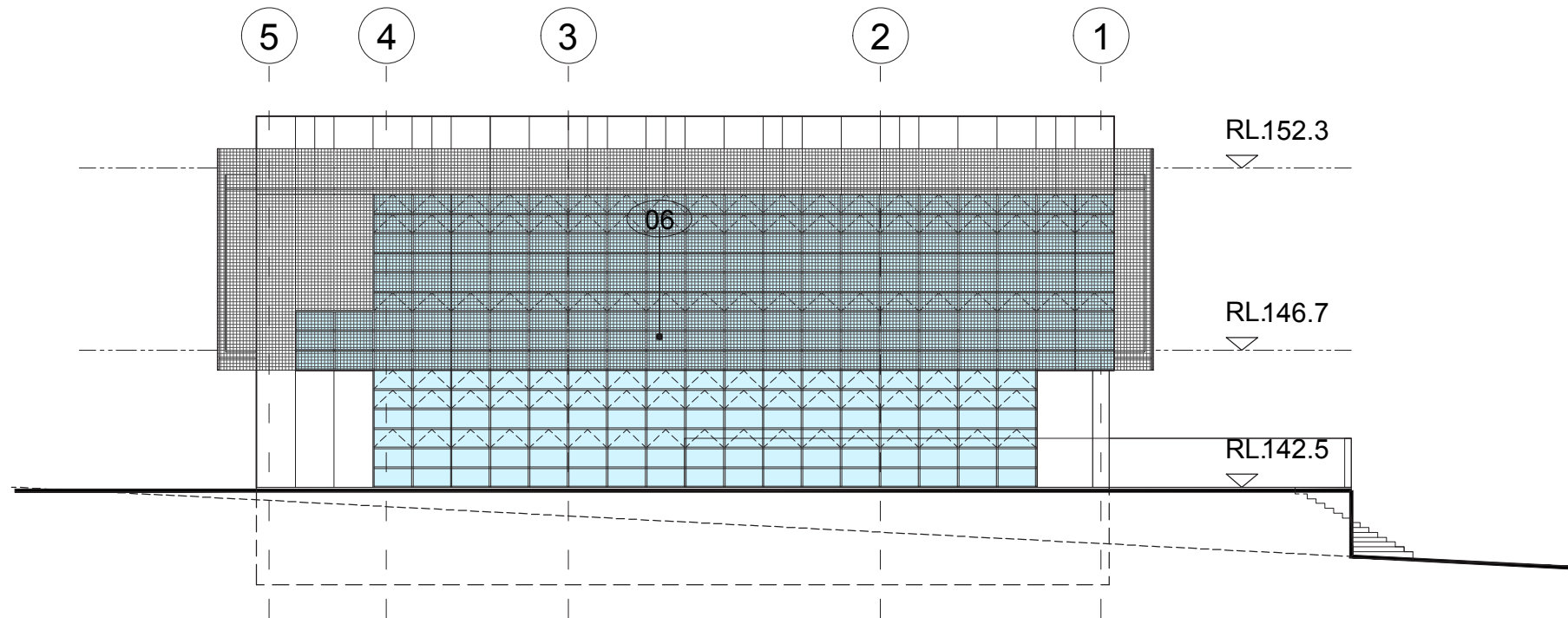
- 05 Painted rendered Concrete Wall
- 06 Standard Pattern Alum Sun Screen Grating 1200 wide
- 07 Steel Structure to Engineers Requirement
- 08 Removable Alum Louver

- 09 Alum Security Screen - Match Sun Screen
- 10 Exposed Concrete - No Finish
- 11 Door to Engineers Requirements
- 12 Galv Steel Roll Up Door
- 13 Rain Harvesting Equipment



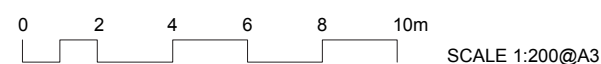
MOTORWAY OPERATIONS COMPLEX - MOTORWAY CONTROL CENTRE - ELEVATIONS

M1-M2-5000-DR-UD-0506

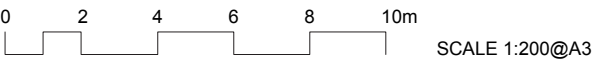
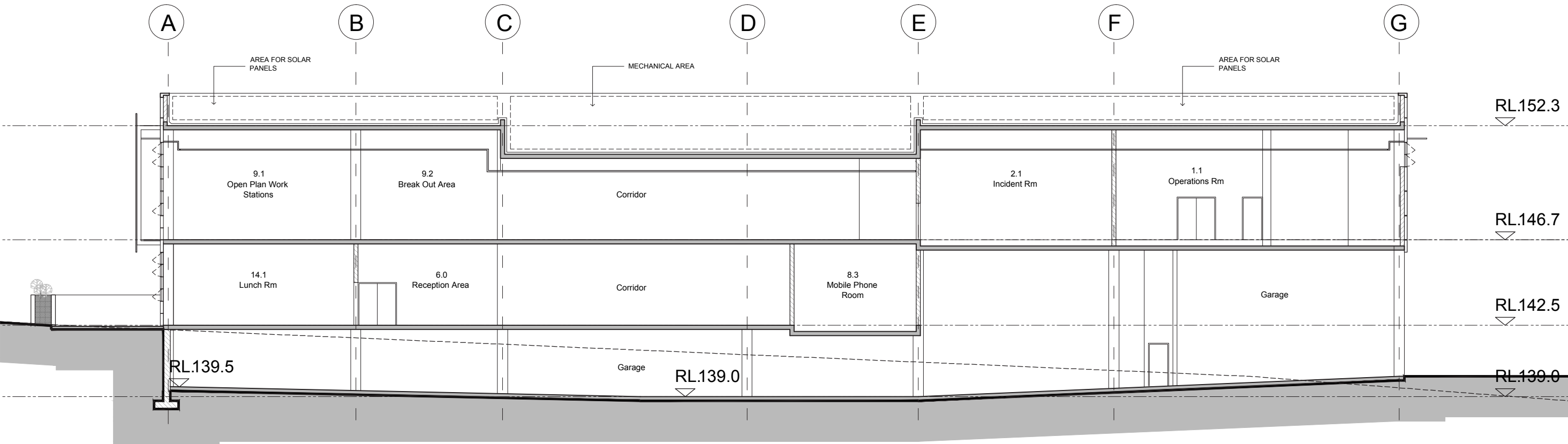
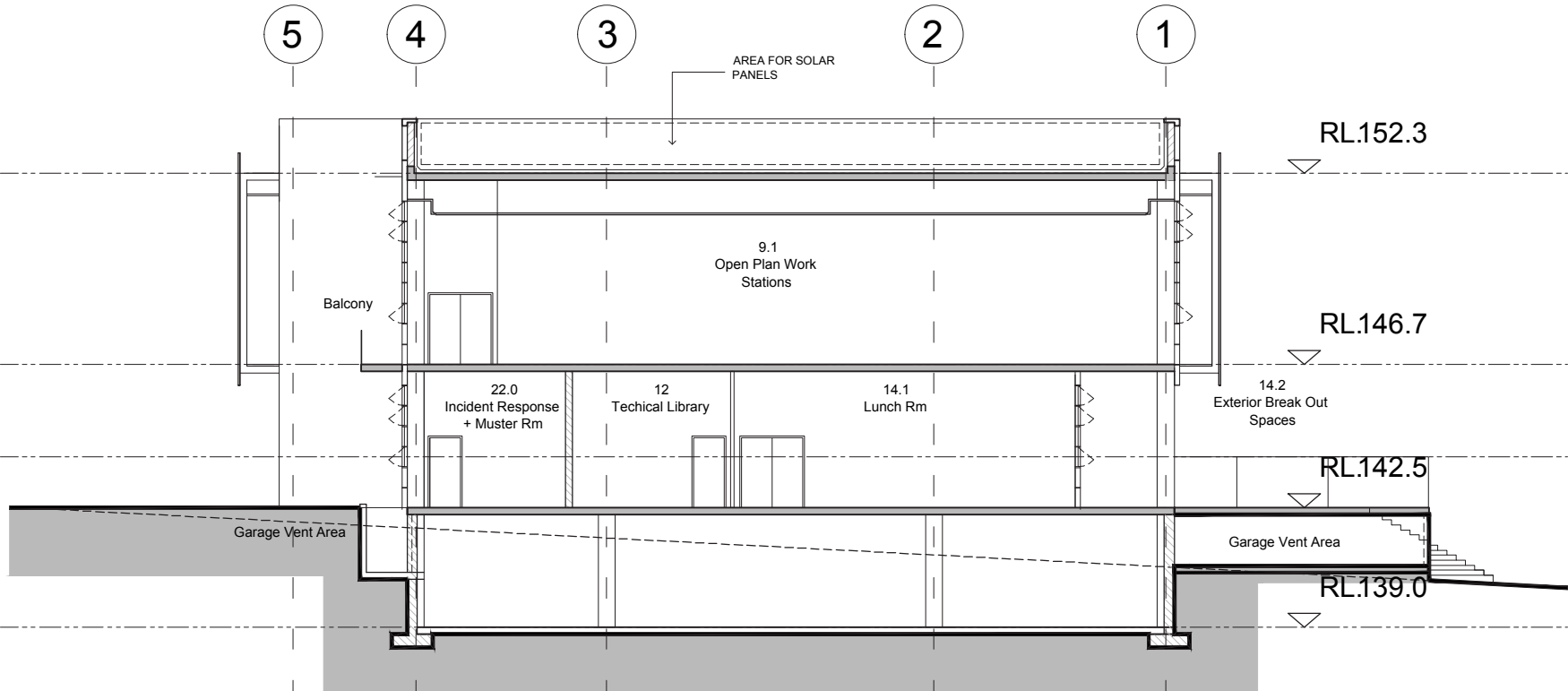


Legend

- | | | |
|--|---|--|
| 01 GRC Panels in Various Colours | 05 Painted rendered Concrete Wall | 09 Alum Security Screen - Match Sun Screen |
| 02 Insulated Glass - 600 x 1200 - Operable as shown | 06 Standard Pattern Alum Sun Screen Grating 1200 wide | 10 Exposed Concrete - No Finish |
| 03 Single Panel Glass - 600 x 1200 - Operable as shown | 07 Steel Structure to Engineers Requirement | 11 Door to Engineers Requirements |
| 04 Shed Panels Wall - Horizontal 300 ridges | 08 Removable Alum Louver | 12 Galv Steel Roll Up Door |
| | | 13 Rain Harvesting Equipment |



M1-M2-5000-DR-UD-0507
MOTORWAY OPERATIONS COMPLEX - MOTORWAY CONTROL CENTRE - ELEVATIONS



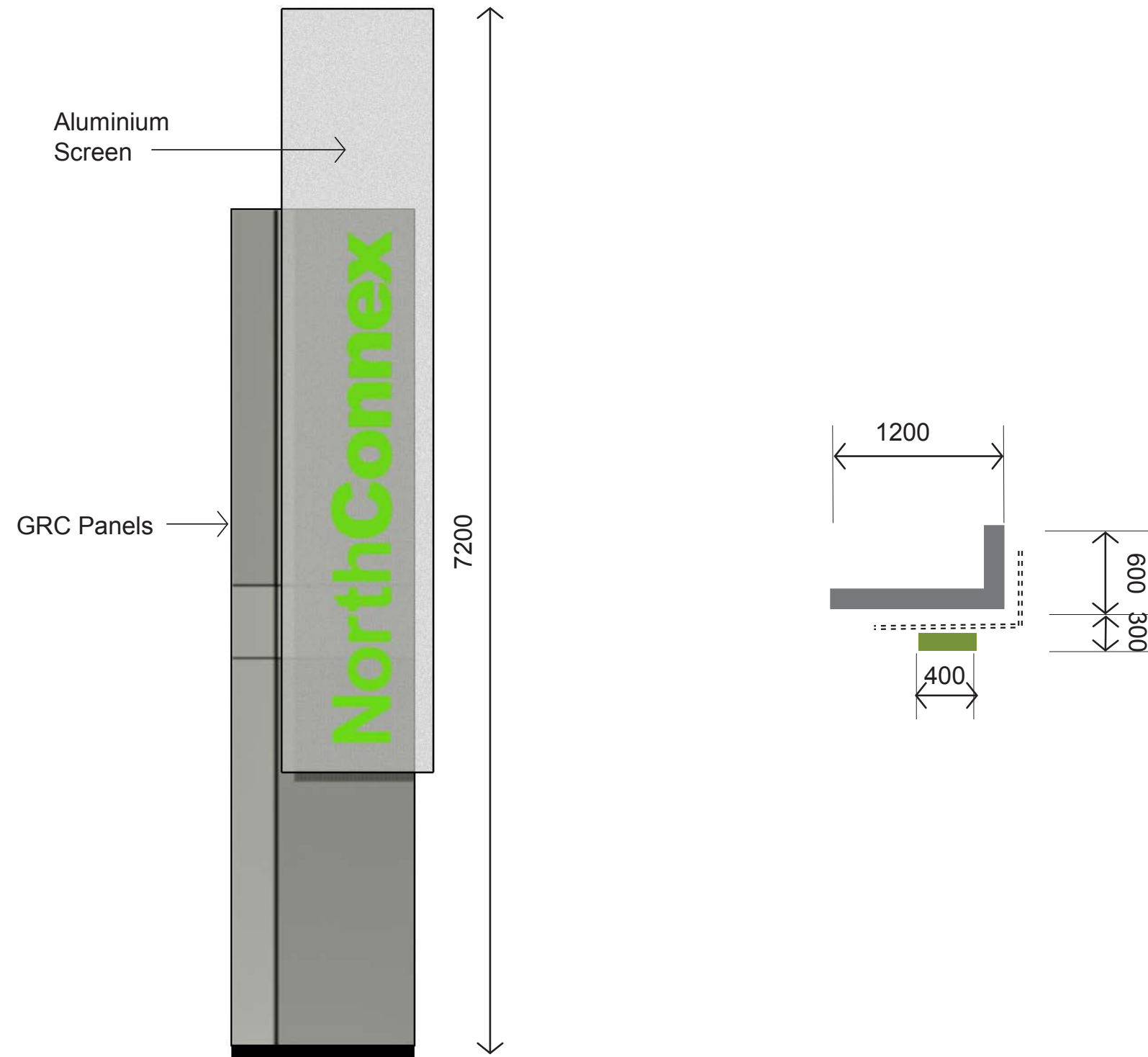
6.0 Operational Ancillary Facilities

Pylon

The pylon at the northern end of the motorway operations complex provides building identity and stands as a marker for the project.

For the purposes of this report it has been assumed that the tunnel would be branded with its own identity rather than be seen as simply an extension of the M1 Pacific Motorway towards the Hills M2 Motorway. 'NorthConnex' has been used as a placeholder for the name and branding of the tunnel.

The pylon design has been developed to continue the family of forms concept for the project. The pylon is faced with GRC panels supporting a screened blade with 3D letters representing the tunnel identity. It is assumed that this name would also be found on driving lanes at the entrance to the tunnel approaches as a signal to drivers.



6.0 Operational Ancillary Facilities

6.8 Maintenance Grouping

The workshop is located to the south of the Motorway Control Centre (MCC) and is co-located with the secure storage facility and the covered service yard. These facilities make a coordinated cluster for maintenance contractor activities. They have the following features:

- The building is organised parallel to Pennant Hills Road with access points along the site service road;
- Due to the slope in the site the workshop and service yard are at the same level whilst the maintenance contractor amenities and offices, and secure storage facility step up the site;
- The workshop covers an area of approximately 540m²;
- The service yard covers an area of approximately 2,000m²;
- The secure storage covers an area of approximately 205m²;
- The built form typology is a single storey layout for each facility;
- The landform is benched away and below Pennant Hills Road to the west, allowing for a reduced building height to Pennant Hills Road;
- The highly visible walls of these facilities form part of the feature wall that runs along the site;
- Together with any required noise walls these elements provide the most visible street face for the grouping;
- The service yard is enclosed with security fencing on all sides except that of the feature wall;
- Finishes include GRC panels in various colours and sizes, glass walls, galvanised and aluminium screens to provide a pattern and can provide for an artistic expression at a scale appropriate to passing drivers and the motorway itself; and
- Outdoor amenity is provided for staff in the form of a north facing the lunch room terrace.

MCC ARCHITECTURAL DESIGN BRIEF - MAINTENANCE GROUPING

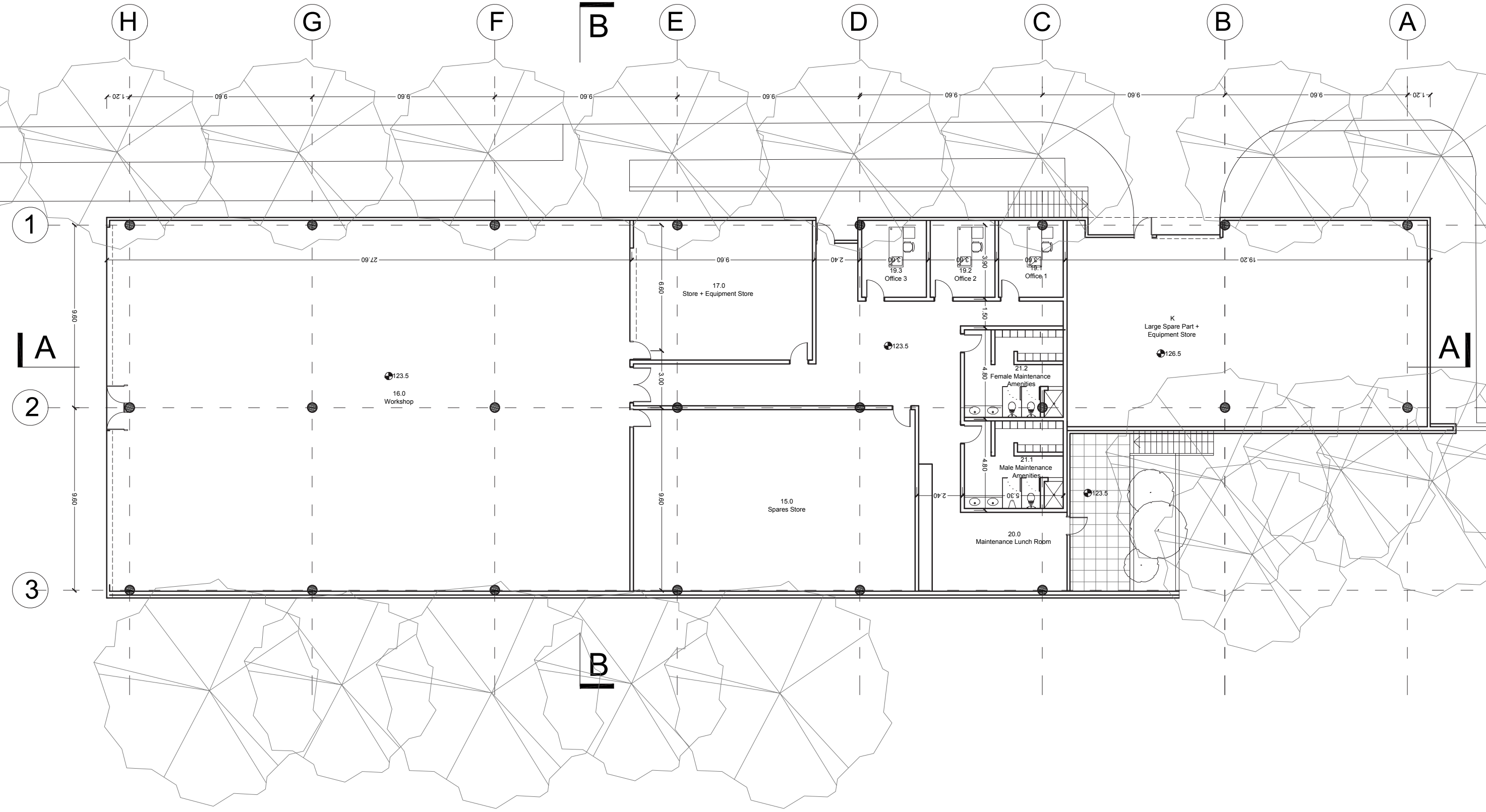
No	Room	Area	Area - Ex	Requirements
----	------	------	-----------	--------------

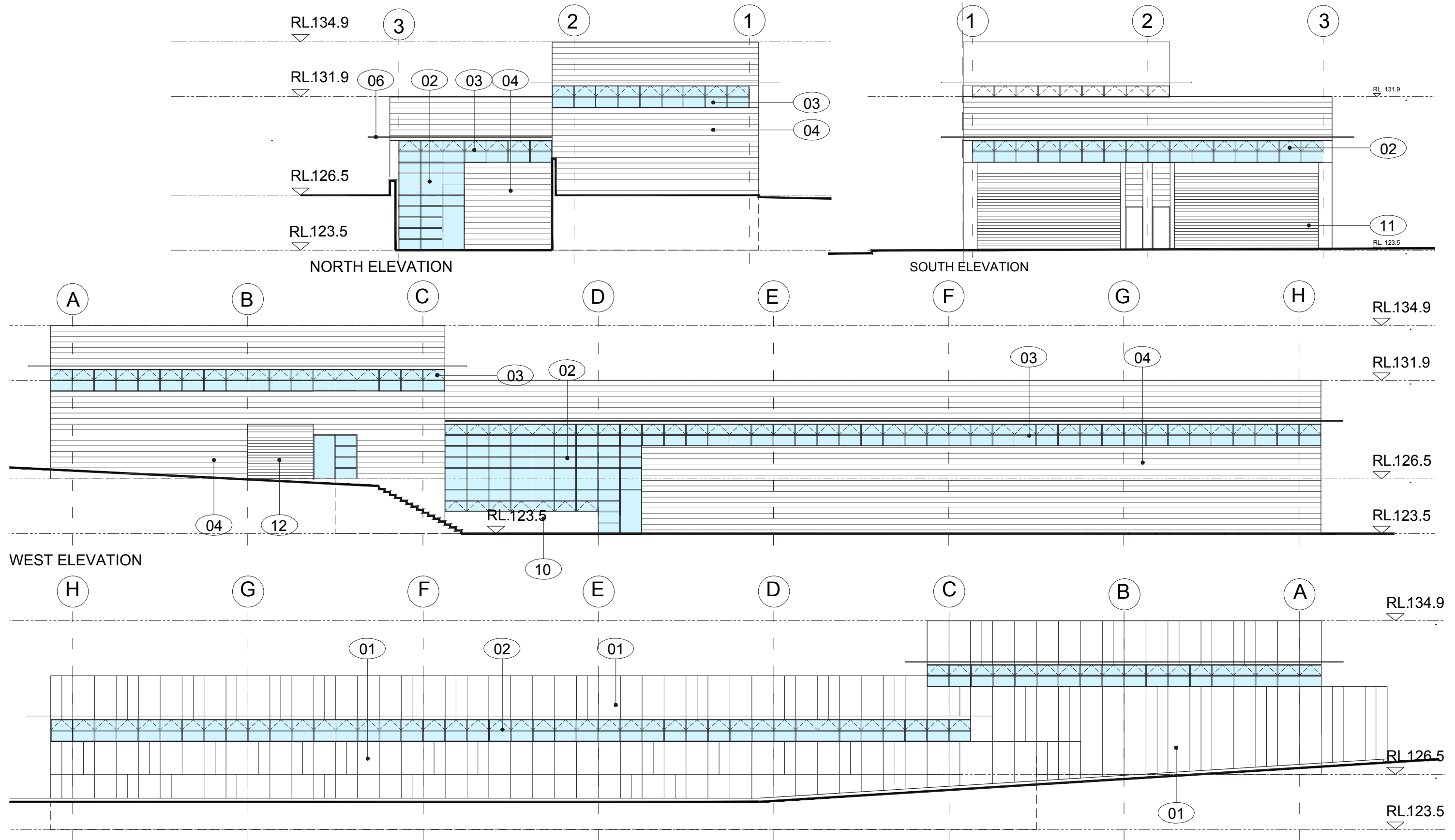
MAINTENANCE BUILDING GROUPING

15.0	Spares Store	141	-----	Spare part storage
16.0	Workshop	533	-----	Electrical workshop, mechanical workshop, electronics Laboratory
17.0	Tools and Equipment Store	69	-----	
19.0	Maintenance Contractor Offices		-----	
	19.1 Office 1	14	-----	
	19.1 Office 2	14	-----	
	19.3 Office 3	14	-----	
20.0	Maintenance Lunch Rm	40	-----	Includes kitchenette comprising sink, 600 litre (nom) fridge, coffee machine, cupboards, microwave, dish washer, hot-cold-chilled water
21.0	Maintenance Amenities		-----	
	21.1 Male Maintenance Amenities	24	-----	Check Size
	21.2 Female Maintenance Amenities	24	-----	Check Size

Total Maintenance Areas732

Total Building Areas	732	Assigned Space
Circulation + Walls 7%	51	Multiplier
Total Overall	783	





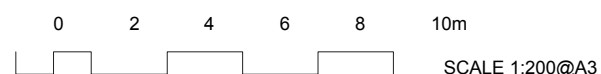
EAST ELEVATION

Legend

- (01) GRC Panels in Various Colours
- (02) Insulated Glass - 600 x 1200 - Operable as shown
- (03) Single Panel Glass - 600 x 1200 - Operable as shown
- (04) Shed Panels Wall - Horizontal 300 ridges

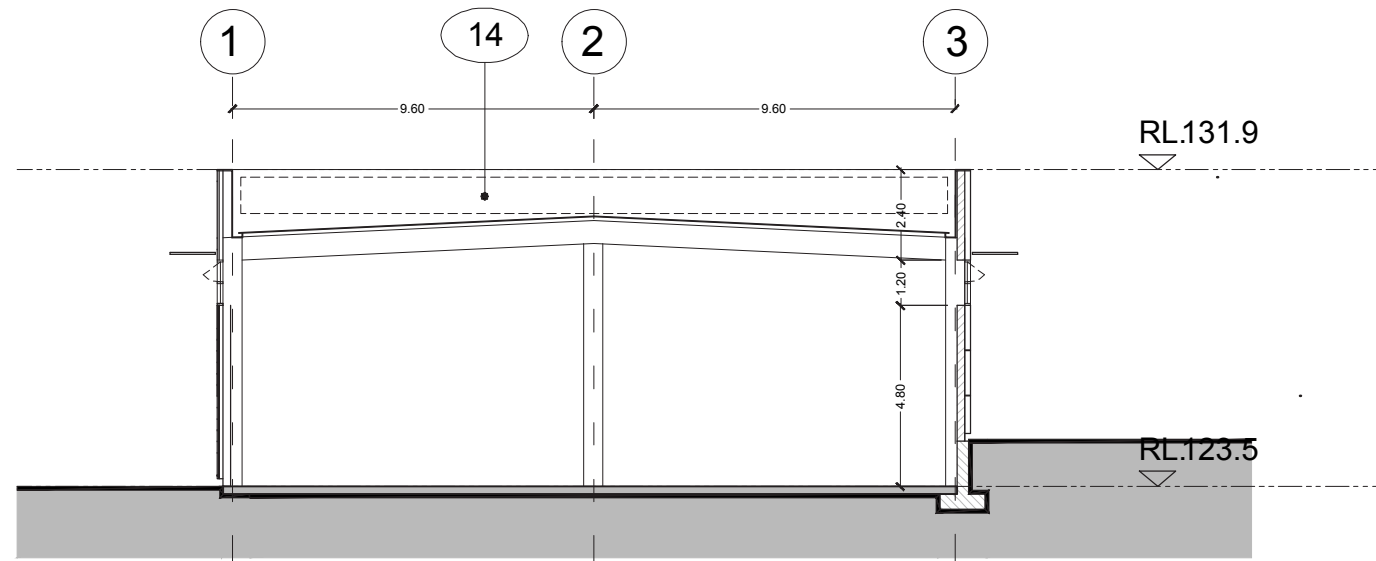
- (05) Painted rendered Concrete Wall
- (06) Standard Pattern Alum Sun Screen Grating 1200 wide
- (07) Steel Structure to Engineers Requirement
- (08) Removable Alum Louver
- (09) Alum Security Screen - Match Sun Screen

- (10) Exposed Concrete - No Finish
- (11) Door to Engineers Requirements
- (12) Galv Steel Roll Up Door
- (13) Rain Harvesting Equipment

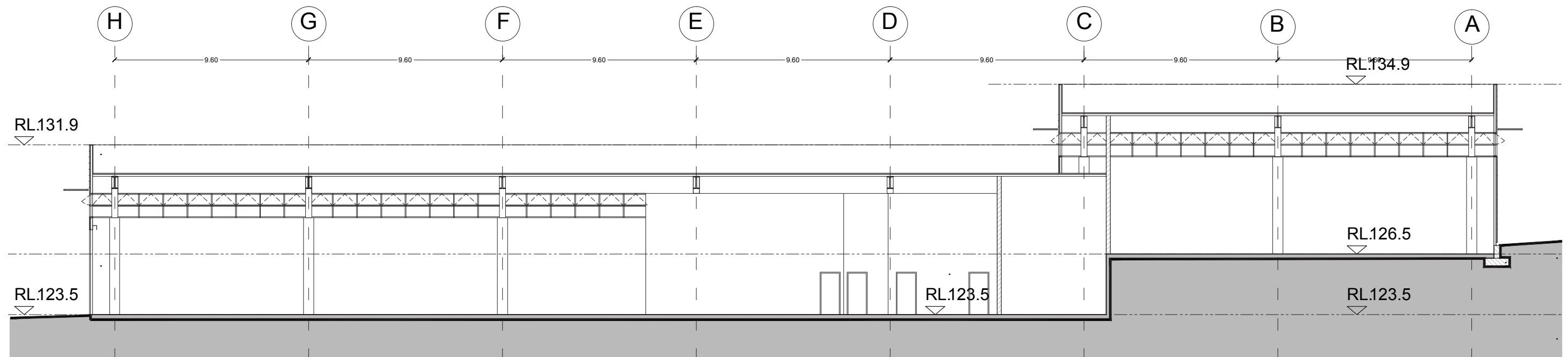


MOTORWAY OPERATIONS COMPLEX - WORKSHOP - ELEVATIONS

M1-M2-5000-DR-UD-0510



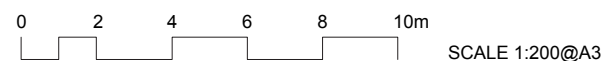
SECTION B-B

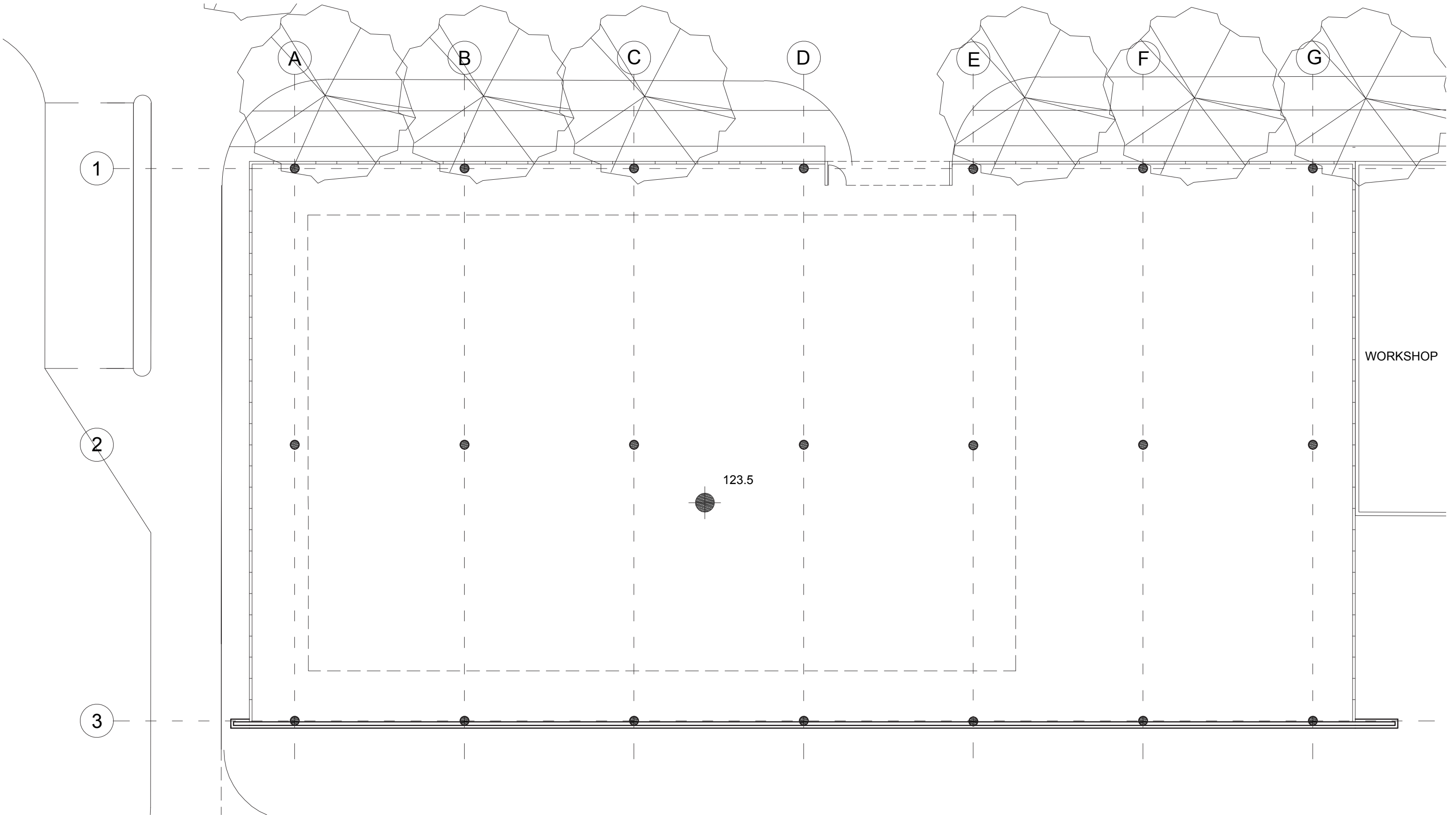


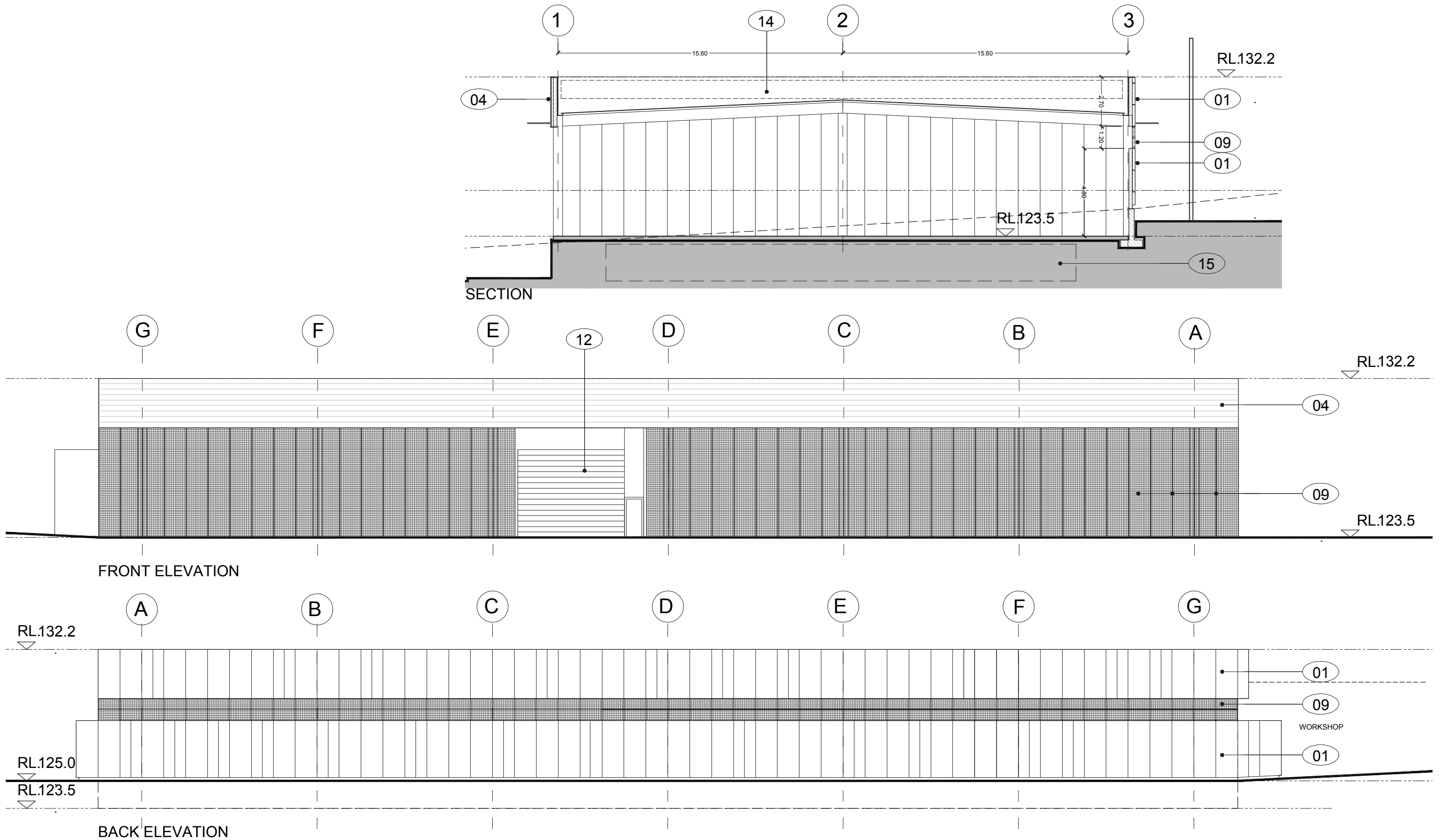
SECTION A-A

Legend

- | | | |
|--|---|-----------------------------------|
| 01 GRC Panels in Various Colours | 05 Painted rendered Concrete Wall | 10 Exposed Concrete - No Finish |
| 02 Insulated Glass - 600 x 1200 - Operable as shown | 06 Standard Pattern Alum Sun Screen Grating 1200 wide | 11 Door to Engineers Requirements |
| 03 Single Panel Glass - 600 x 1200 - Operable as shown | 07 Steel Structure to Engineers Requirement | 12 Galv Steel Roll Up Door |
| 04 Shed Panels Wall - Horizontal 300 ridges | 08 Removable Alum Louver | 13 Rain Harvesting Equipment |
| | 09 Alum Security Screen - Match Sun Screen | 14 Area for Solar Panels |







0 2 4 6 8 10m
SCALE 1:200@A3

M1-M2-5000-DR-UD-0513
MOTORWAY OPERATIONS COMPLEX - COVERED SERVICE YARD - ELEVATIONS

6.0 Operational Ancillary Facilities

6.9 Southern Ventilation Facility

The southern ventilation facility is located at the southern end of the motorway operations complex site and consists of the ventilation building, a substation, a water treatment plant and a fire tank and pump room. These facilities make a coordinated cluster for tunnel services and have adjacent hardstand areas as required for support. They have the following features:

- The building is organised with a loop road for access;
- Due to limited site area the ventilation is located above the other facilities;
- The ventilation building covers an area of approximately 2,000m²
- The water treatment plant covers an area of approximately 550m²;
- The substation covers an area of approximately 700m²;
- The fire water tank covers an area of approximately 65m²;
- The landform is benched away and below Pennant Hills Road to the west, allowing for a reduced building height to Pennant Hills Road;
- The built form reaches RL134.4 at the ventilation with the lower substation stepping down to RL125.0 toward the residential area to the west. The tallest element on the vent outlet at the southern side is at RL144.8;
- Most of the building is screened from Pennant Hills Road by two noise walls;
- The building profile steps up away from adjacent residential properties and up towards the east ; and
- Finishes include GRC panels in various colours and sizes, rendered concrete, and galvanised aluminium screens to provide a pattern and can provide for an art expression at a scale appropriate to passing drivers and the motorway itself. A screening element has been provided at the south east corner to provide a reference to the solar screen on the Motorway Control Centre (MCC) . A feature wall panel is included ventilation outlet wall facing the Hills M2 Motorway.



View looking southwest from Pennant Hills Road.

Artist's Impression Only



M1-M2-5000-DR-UD-0941
MOTORWAY OPERATIONS COMPLEX - SOUTHERN VENTILATION FACILITY - VIEW LOOKING SOUTH WEST FROM PENNANT HILLS ROAD

Artist's Impression Only



M1-M2-5000-DR-UD-0942
MOTORWAY OPERATIONS COMPLEX - SOUTHERN VENTILATION FACILITY - VIEW LOOKING NORTH FROM PENNANT HILLS ROAD

Artist's Impression Only



MOTORWAY OPERATIONS COMPLEX - SOUTHERN VENTILATION FACILITY - VIEW LOOKING NORTH WEST FROM CORNER OF PENNANT HILLS ROAD AND HILLS M2 MOTORWAY

M1-M2-5000-DR-UD-0990

Artist's Impression Only



M1-M2-5000-DR-UD-0991
MOTORWAY OPERATIONS COMPLEX - SOUTHERN VENTILATION FACILITY - VIEW LOOKING SOUTH EAST FROM GUM GROVE PLACE

