ARCHITECTURAL
BUILDING
ENVELOPES

FOCCHI
SINCE 1914

Project:	**1ST STREET SOUTH A,B,D MANCHESTER**
Project no.	**220020**
Client:	**Downing**
Architects:	**SimpsonHaugh and Partners (SHP)**
Report:	**Z9-FOC-G251-TS-XX-002**
Object:	**Project Quality Plan (PQP)**
Issued by:	**Focchi Quality & Environment Department**

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ARCHITECTURAL
BUILDING
ENVELOPES

FOCCHI
SINCE 1914

FIRST STREET SOUTH
Manchester

FOCCHI Ltd – Curtain Walling, Windows & Doors

Project Quality Plan (PQP)

Project: First Street South
Main Contractor: DOWNING CONSTRUCTION LIMITED
Company Name: Focchi Ltd
Document No: Z9-FOC-G251-TS-XX-002
Document Name: 220020-FSS-PQP_rev.00

Project :	First Street South - Manchester
Package:	Curtain walling, Windows & Doors
Document No:	
Document Name:	Project Quality Plan (PQP)_rev00
Main Contractor	DOWNING CONSTRUCTION LIMITED
Company Name	FOCCHI Ltd

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REVISION HISTORY

REVISION	DESCRIPTION	DATE	AUTHOR	REVIEWER
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INTRODUCTION

This document deals with the description of the core processes of Focchi SpA, ad certified ISO 9001 company and it is focused mainly on structural sealed unit prefabrication.
With reference to project First Street South, specific information regarding SOW, materials and finishes, procurement, quality assurance and control activities, delivery on site, samples and mock-ups, testing are to be confirmed and they could change and be updated during project development.

1. COMPANY QUALITY SYSTEM AND CERTIFICATES

Relevant documents attached:

- FOCCHI S.p.A. ISO 9001 Certificate
- FOCCHI S.p.A. ISO 14001 Certificate
- FOCCHI Organization Chart
- D-POL-01_FOCCHI Quality & Environment Policy

Relevant documents not attached but referred to:

- D-SIS-01_Integrated Quality–Environment Management System Manual

1.1. COMPANY CERTIFICATES

FOCCHI S.p.A. is an ISO 9001 and ISO 14001 certified company. *(Please refer to **Appendices A**, **B**)*

DNV

MANAGEMENT SYSTEM CERTIFICATE

Certificate no.: CERT-02762-98-ITA-SINCERT | Initial certification date: 15 March 1998 | Valid: 07 November 2021 – 06 November 2024

This is to certify that the management system of

FOCCHI S.p.A.
Via Cornacchiara, 805 - 47824 Poggio Torriana (RN) - Italy
and the sites as mentioned in the appendix accompanying this certificate

has been found to conform to the Quality Management System standard:
ISO 9001:2015

This certificate is valid for the following scope:
Design, manufacture, sale and installation of curtain walls, cladding, alluminium or steel windows and doors and relative metalwork (IAF 17, 28)
Evaluated according to the requirements of Technical Regulations RT-05
This certificate is meant to refer to the general management aspects of the organization as a whole and may be used by construction companies for qualification purposes according to Art. 84 of the Legislative Decree n. 50/2016 and s.c.i. and ANAC's applicable Guidelines

Place and date: **Vimercate (MB), 09 February 2022**

ACCREDIA

For the issuing office: **DNV - Business Assurance Via Energy Park, 14, - 20871 Vimercate (MB) - Italy**

Claudia Baroncini Management Representative

Lack of fulfilment of conditions as set out in the Certification Agreement may render this Certificate invalid.
ACCREDITED UNIT: DNV Business Assurance Italy S.r.l., Via Energy Park, 14 - 20871 Vimercate (MB) - Italy - TEL: +39 68 99 905. www.dnv.it

DNV·GL

MANAGEMENT SYSTEM CERTIFICATE

Certificato no./Certificate No.: 82506-2010-AE-ITA-SINCERT | Data prima emissione/Initial date: 02 agosto 2010 | Validità:/Valid: 03 agosto 2019 - 02 agosto 2022

Si certifica che il sistema di gestione di/This is to certify that the management system of

FOCCHI S.p.A.
Via Cornacchiara, 805 - 47824 Poggio Torriana (RN) - Italia

È conforme ai requisiti della norma per il Sistema di Gestione Ambientale/
Has been found to conform to the Environmental Management System standard:
ISO 14001:2015

Valutato secondo le prescrizioni del Regolamento Tecnico RT-09/
Evaluated according to the requirements of Technical Regulations RT-09

Questa certificazione è valida per il seguente campo applicativo:
Progettazione, produzione attraverso le fasi di taglio e assemblaggio, installazione e vendita di facciate continue, rivestimenti, serramenti in alluminio o acciaio e relative strutture metalliche (IAF 17, 28)

This certificate is valid for the following scope:
Design, manufacture by cutting and assembling, sale and installation of curtain walls, cladding, alluminium or steel windows and relative metalwork (IAF 17, 28)

Luogo e Data/Place and date: **Vimercate (MB), 07 settembre 2019**

ACCREDIA

Per l'Organismo di Certificazione/ For the Certification Body
DNV GL - Business Assurance Via Energy Park, 14, - 20871 Vimercate (MB) - Italy

Zeno Beltrami Management Representative

La validità del presente Certificato è subordinata al rispetto delle condizioni contenute nel Contratto di Certificazione/
Lack of fulfilment of conditions as set out in the Certification Agreement may render this Certificate invalid.
DNV GL Business Assurance Italia S.r.l., Via Energy Park, 14 - 20871 Vimercate (MB) - Italy . TEL.+39 68 99 905. www.dnvgl.it

1.2. LEADERSHIP

The General Management of FOCCHI S.p.A. (made up of the Chairman of the Board of Directors and the Chief Executive Officer) is committed to guaranteeing the efficiency and effectiveness of the Integrated Quality-Environment System along with its complete integration into the company's management.

To this end, it ensures the availability of the resources required, the focus on customer satisfaction and efforts for continuous improvement of corporate organisation.

1.3. QUALITY AND ENVIRONMENT POLICY

FOCCHI Management believes that the company's development and success are based on its ability to satisfy its customers through continuous improvement of its organization.

This is why it has established a Quality and Environmental Policy based on the following principles:

- Identification of customer needs and continuous monitoring of customer satisfaction;
- Definition of responsibilities and operating procedures for the execution and control of the various phases of product realization (design, purchase, production, installation) in order to guarantee all quality requirements;
- Continuous research and use of the most suitable technologies for product manufacture;
- Attention to the development of human resources so that the company figures have the skills demanded of their position;
- Continuous research into the improvement of corporate organization and environmental performance, through structured mechanisms for data collection and analysis, as well as through the implementation and control of improvement actions;
- Maximum attention to compliance with statutory and regulatory requirements relating to the product and environmental impacts.

It also ensures:

- the periodic review of the coherence and adequacy over time of the Quality and Environmental Policy;
- the update of the Policy, if required;
- the communication, understanding and application of the Policy within the company.

*(Please refer to **Appendix C** for the Focchi Spa Quality & Environmental Policy)*

1.4. QUALITY AND ENVIRONMENT INTEGRATED MANAGEMENT SYSTEM

FOCCHI's Quality and Environment Integrated Management System is based upon the following processes:

Primary Processes		
Input	**Process**	**Output**
• Client's request	**Selling**	• Contract
• Project kick-off • List of qualified suppliers	**Project planning**	• Official Project Programme (GANTT Diagram) • Production batching

Primary Processes		
Input	**Process**	**Output**
		• Supply chain
• Project drawings at tender stage • Client's technical specifications • Supply requirements	**Design**	• Definitive design drawings • Workshop drawings • Materials and component booking • Assembly and installation operating instructions • Testing operating instructions • Mock-ups
• Supply chain • Supplier QA documentation and certificates • Purchasing needs • Client's technical specification	**Procurement**	• Supply contract • Purchase orders • Procurement specifications • QC documentation
• Production orders • Control plans	**Production**	• QC documentation • Finished products
• Contract with the installation supplier • Supplier QA documentation • Client's site management documentation	**Installation**	• QC documentation • Safety and security management documents • Environmental management documents
• QC documentation • Packaging plans • Deliveries on site plans	**Inbound and Outbound Logistics**	• Storage of products • Packing list of finished products • Shipping plan
• Product Non-Conformities • Client's complaints	**Post-delivery assistance**	• Post-delivery assistance activities
• Factory production activities	**Waste management**	• Waste temporary storage • Waste production and disposal recording • Waste handling documentation
• Product specifications • Production and installation requirements • Safety Data Sheets	**Dangerous substances management**	• Dangerous substances storage • Database of dangerous substances used • ADR assessment for dangerous goods shipping
• Factory Fire Prevention Certificate • Factory Emergency Management Plan	**Fire protection controls management**	• Fire drill report • Control checklists for emergency workers • Flammable goods quantities controls

Support Processes		
Input	**Process**	**Output**
• Required know-how	**Human resources training**	• Knowledge evaluation • Training plan • Training recording
• Machines and equipment list • Internal maintenance requirements	**Machines and equipment maintenance**	• Machines and equipment maintenance plan • Maintenance recording
• Measuring requirements • Internal calibration requirements	**Management of measuring instruments**	• Measuring instrument calibration schedule • Calibrations recording
• Documentation requirements • IT procedures and internal ERP software	**Integrated System documentation management**	• Documentation availability
• Knowledge needed to assure company processes' functionality	**Knowledge management**	• Company's know-how description documents

Support Processes		
Input	**Process**	**Output**
• Communication requirements	**Communication management**	• Communications specifications

Leadership Processes		
Input	**Process**	**Output**
• Company's strategy • Company's context	**Quality and environment Policy definition**	• Quality and environment Policy
• Company's strategy • Company's context	**Organizational structure definition**	• Organization Chart

Planning Processes		
Input	**Process**	**Output**
• Company's strategy • Company's context • Company's processes	**Risk and opportunities management**	• Operating plan for risks elimination/reduction and opportunities exploitation
• Applicable norms • Company's context • Company's processes	**Factory Environmental aspects evaluation**	• Environmental Analysis Report • Environmental aspects-impacts chart • Applicable norms list and compliance schedule
• Company's strategy • Company's context • Quality and environment Policy	**Factory Quality and Environmental goals management**	• Quality and environmental goals and operating plan to achieve them
• Need of change	**Change management**	• Change management operating plan

Performance Evaluation Processes		
Input	**Process**	**Output**
• Company's processes • Processes' monitoring indicators	**Processes monitoring**	• Processes efficiency monitoring periodic reports
• Clients	**Client's satisfaction monitoring**	• Client's satisfaction monitoring periodic reports
• Company's processes	**Internal audit management**	• Internal audits plan • Internal audits recording
• Inputs for Management periodic Review	**Management Review**	• Operating plan for potential changes and improvements to the Quality System

Improvement Processes		
Input	**Process**	**Output**
• Non-Conformities recording	**Non-Conformities and Corrective Actions management**	• Non-Conformities treatment • Corrective Actions to remove Non-Conformities causes
• Periodic Analysis	**Continuous improvement management**	• Improvement projects and activities recording

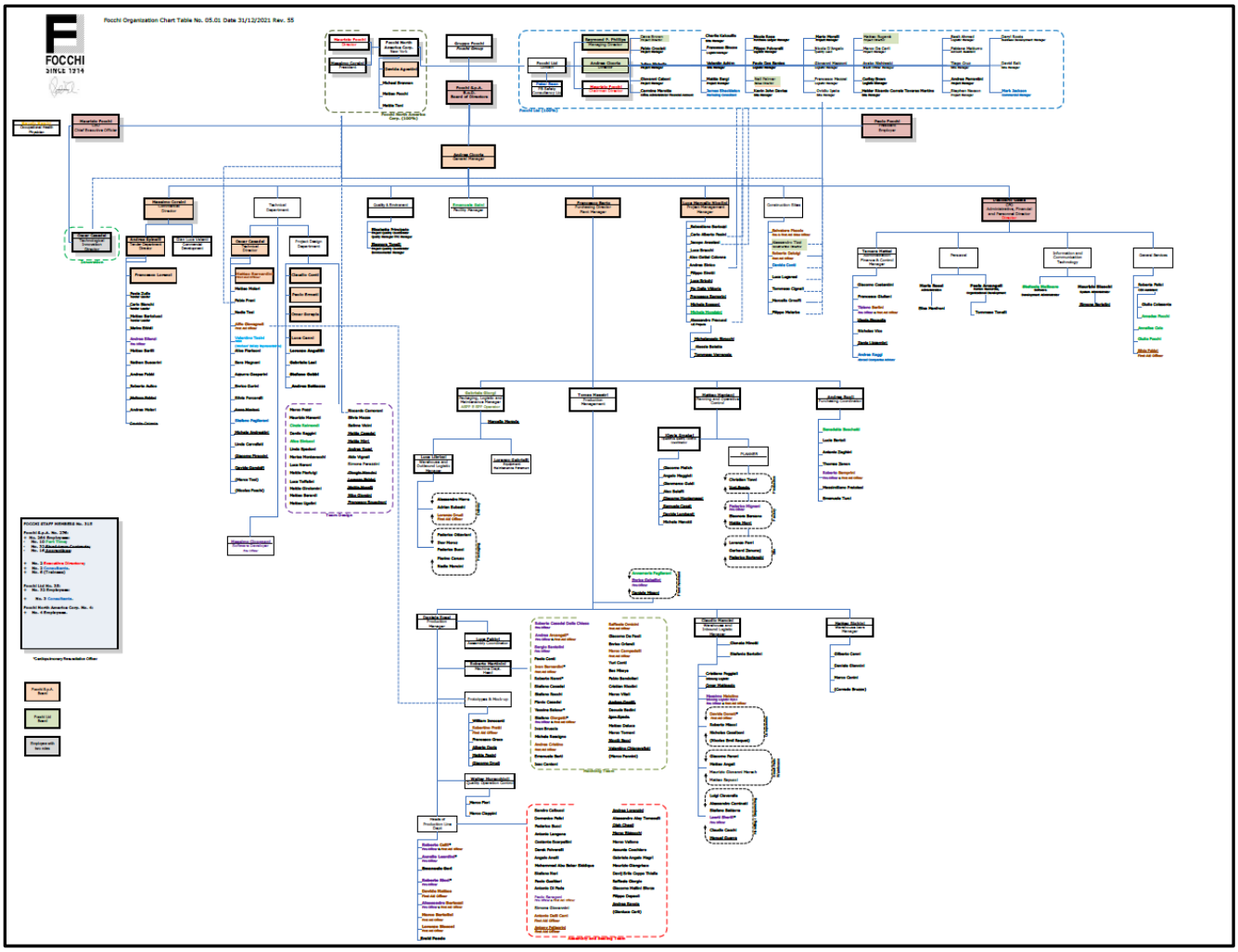
1.5. PROJECT QUALITY PLAN (PQP)

FOCCHI's mission is to produce, supply and install curtain walls, windows and doors characterized by cutting edge technology and manufactured in compliance with statutory and regulatory requirements, in accordance with current regulations, product standards, European Regulation of construction products and contractual specifications.

To this end, a Quality Plan is drawn up for each project, pursuant to EN ISO 9001:2015, which describes the management system in its entirety developed in compliance with the company's quality and environment policy.

The Project Manager, assisted by the entire project design team, is then tasked with implementing the Quality and Environmental Management System applied to the specific project. Any changes to the procedures applied are evaluated and discussed between the Project Manager and the Project Quality Manager.

1.6. COMPANY ORGANISATIONAL STRUCTURE



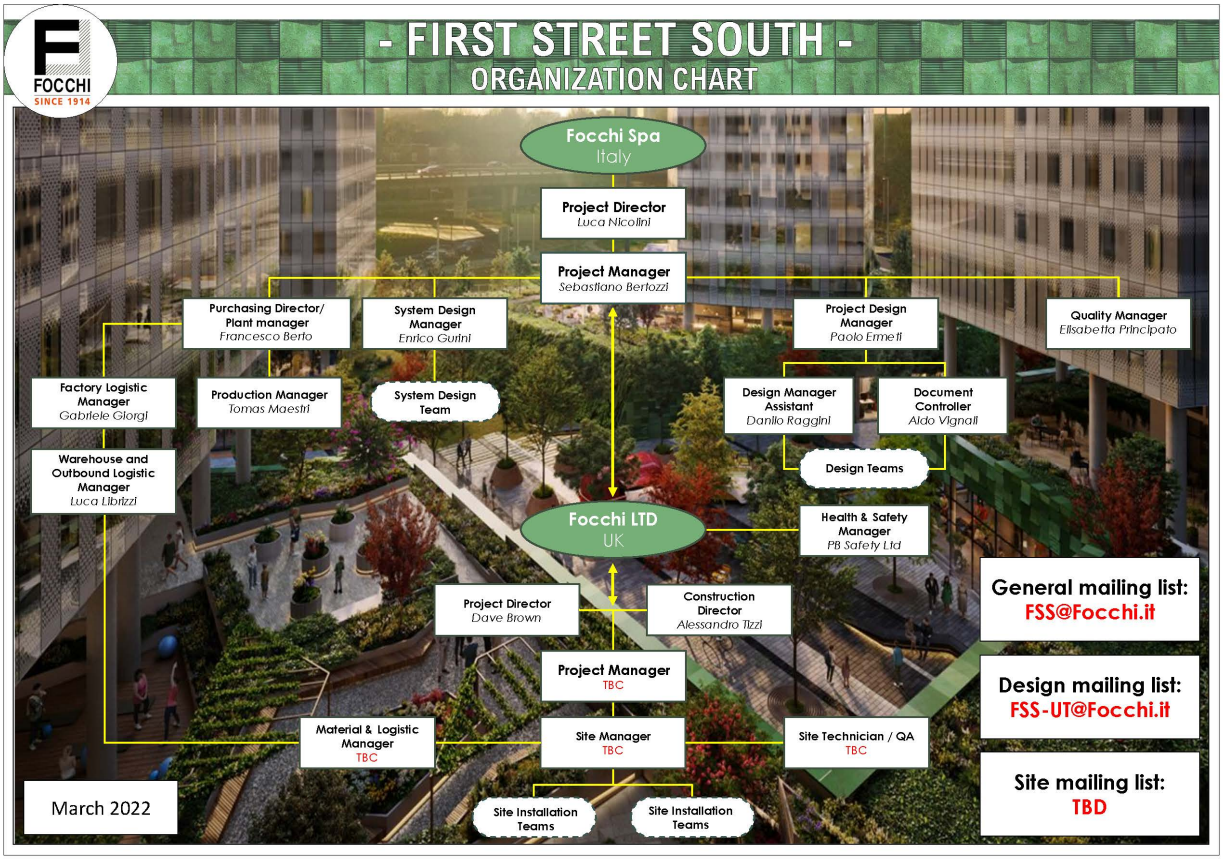
*(Please refer to **Appendix D** for the Focchi Company Organisation Chart)*

2. PROJECT TEAM STRUCTURE

Relevant documents attached:

- First Street South Organisation Chart

2.1. PROJECT ORGANISATIONAL STRUCTURE



*(Please refer to **Appendix E** for the Project Organisation Chart)*

Key Project Team Members

Name	Role	Contact
Sebastiano Bertozzi	Project Manager - FOCCHI Ltd	s.bertozzi@focchi.it
Sebastiano Bertozzi	Project Manager - FOCCHI S.p.A.	s.bertozzi@focchi.it
Paolo Ermeti	Project Design Manager	p.ermeti@focchi.it
Enrico Gurini	System Design Manager	e.gurini@focchi.it
Elisabetta Principato	Quality Manager	e.principato@focchi.it
Francesco Berto	Plant Manager	f.berto@focchi.it
to be defined	Site Manager	to be defined

2.2. ROLES AND RESPONSIBILITIES OF PROJECT TEAM MEMBERS

Project Manager (PM)

- Is fully liable towards the Client for the project;
- Coordinates projects in collaboration with the Client;
- Manages project objectives in line with the work order program;
- Analyses contractual documents, drawings, etc;
- Manages the project team in collaboration with Project Design Manager, Plant Manager, Production Planning Manager and Site Manager;
- Manages correspondence and minutes of the meeting;
- Ensures the correct transmission of drawings / documents to interested parties;
- Analyses and monitors the work in progress: design, procurement of materials, production, installation, etc;
- Collects the information necessary for drafting progress reports;
- Manages contract costs;
- Monitors correct implementation of quality controls envisaged by the contractual quality plan;
- Manages communication between construction team and design team;
- Manages aspects related to health and safety on site in collaboration with the Site Manager and FOCCHI's Health & Safety Consultant;
- Evaluates the selection of installation teams, jointly with the Site Manager;
- Draws up the project logistic plan;
- Draws up the installation method statement;
- Monitors installation quality in collaboration with the Site Manager and under Client supervision;
- Check production and installation progress;
- Coordinate and communicate with the project team.

Project Design Manager (PDM)

- Manages the project design on the basis of the work schedule, specifications and contractual requirements, in close collaboration with the Project Manager, the System Design Manager and the Production Planning Manager;
- Leads the project design team;
- Analyses technical specifications and implements the design in compliance with statutory and regulatory requirements, current regulations, product standards, European Regulation of construction products and contractual specifications;
- Controls construction and workshop drawings;
- Evaluates the requested revision of issued documents, proceeding with possible implementation or pointing out remarks;
- Manages the issue of drawings and documents and updates the relative register;
- Defines samples and manages their subsequent submission;
- Manages mock-up design in collaboration with the System Design Manager;

- Manages the issue of technical reports, in collaboration with the System Design Manager.

System Design Manager (SDM)

- Is fully responsible for the accuracy of the study and development of curtain wall systems;
- Analyses the system project drawings in order to verify compliance with the requirements and subsequently transmits the information to the Project Design Manager;
- Manages the issue of technical reports concerning the curtain walling system;
- Manages the execution of the required performance tests (air/water/wind tests, acoustic tests) in collaboration with the Project Design Manager;
- Is responsible for drafting assembly, installation, storage and shipping instructions.

Plant Manager

The Plant Manager is responsible for the planning, production, warehouse and inbound and outbound logistics departments, all of which are organized within the ERP business management system.

The Plant Manager deals with:

- supply chain management;
- production organization (scheduling, time management and methods);
- warehouse activities and inbound logistics;
- handling and storage of materials and finished product;
- quality controls of raw material and finished product;
- design and management of stillages for finished product;
- planning and management of shipments to construction sites;
- tasks related to health, safety and environment issues.

Site Manager

- Is responsible for construction site management, under the coordination of the Project Manager;
- Ensures the execution of installation tasks in compliance with contractual requirements, current safety regulations and procedures established by Method Statements;
- Manages coordination and control of installation personnel;
- Manages non-conformities regarding non-compliant materials, equipment and works and verifies the implementation and effectiveness of corrective actions;
- Ensures assistance for the correct implementation of on site tests;
- Monitors and analyses the progress of installation process;
- Manages aspects related to health and safety on site, in collaboration with the FOCCHI's Health & Safety Consultant and the Project Manager;
- Is responsible for quality assurance on site. In particular he assures:
- Quality in handling and installation of curtain walling kit components;
- Quality of the installed finished product.

Quality Manager

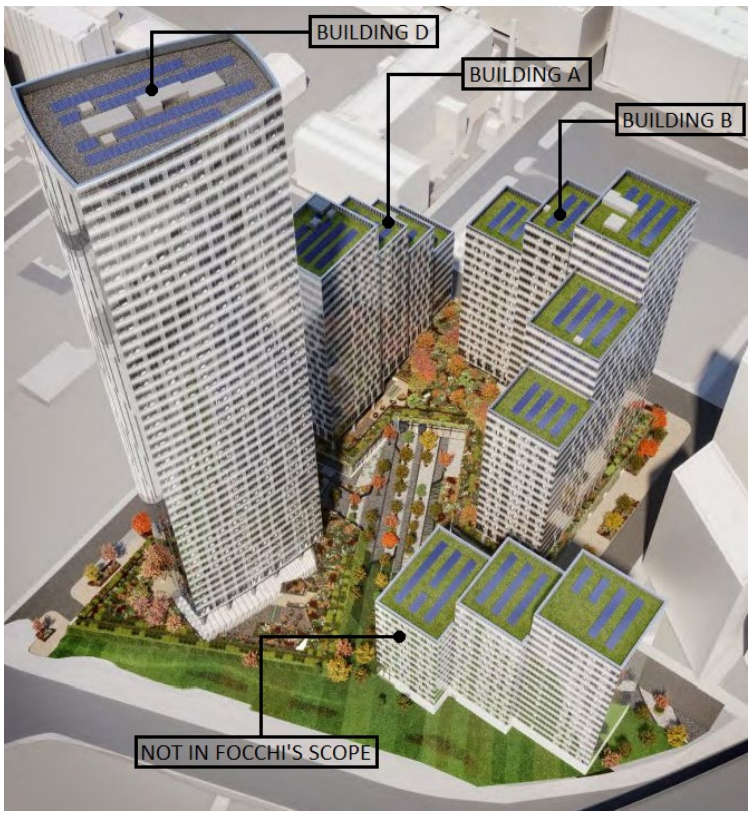
- Is responsible for the design and management of the Integrated Quality-Environment System and its compliance with the EN ISO 9001 and EN ISO 14001 standards;
- Ensures, in collaboration with various company managers, the drafting, distribution and systematic verification of the effectiveness of the Integrated Quality-Environment System procedures;
- Ensures that the integrity of the Integrated Quality-Environment System is maintained after undergoing changes;
- Plans and coordinates the implementation of internal audits on the Integrated Quality-Environment System;
- Maintains relations with external organizations regarding the Integrated Quality-Environment System;
- Collaborates with the General Management on the systematic reviews of the Integrated Quality-Environment System, in order to verify its effectiveness and promote its improvement;
- Collaborates with General Management on the definition and monitoring of projects to improve the Integrated Quality-Environment System;
- Coordinates the management of non-conformities and corrective actions;
- Ensures, as FPC (Factory Production Control) Manager, the planning and implementation of product/process controls that comply with the specific product standards (EN 1090-1, EN 14351-1, EN 13830);
- Is responsible for drafting and implementing the PQP (Project Quality Plan) in collaboration with the company departments involved.

3. SCOPE OF WORK, SPECIFICATION AND CONTRACT REVIEW

3.1. SCOPE OF WORK

The site is located along the Southern edge of the Manchester city centre area known as the Southern Gateway. The site covers an area of approximately 1.2 hectares and is located along the Northern edge of the A57 Mancunian way. This is a highly visible site, occupying a gateway location adjacent to the Mancunian Way, the A5103 Princess Parkway Road and Medlock Street. The immediate site is bounded by Hulme Street to the North, Wilmott Street to the East, Chester Street to the South and Medlock Street to the West.

The scheme is a Co-living residential development arranged in a sequence of buildings over a unifying landscape as illustrated below.



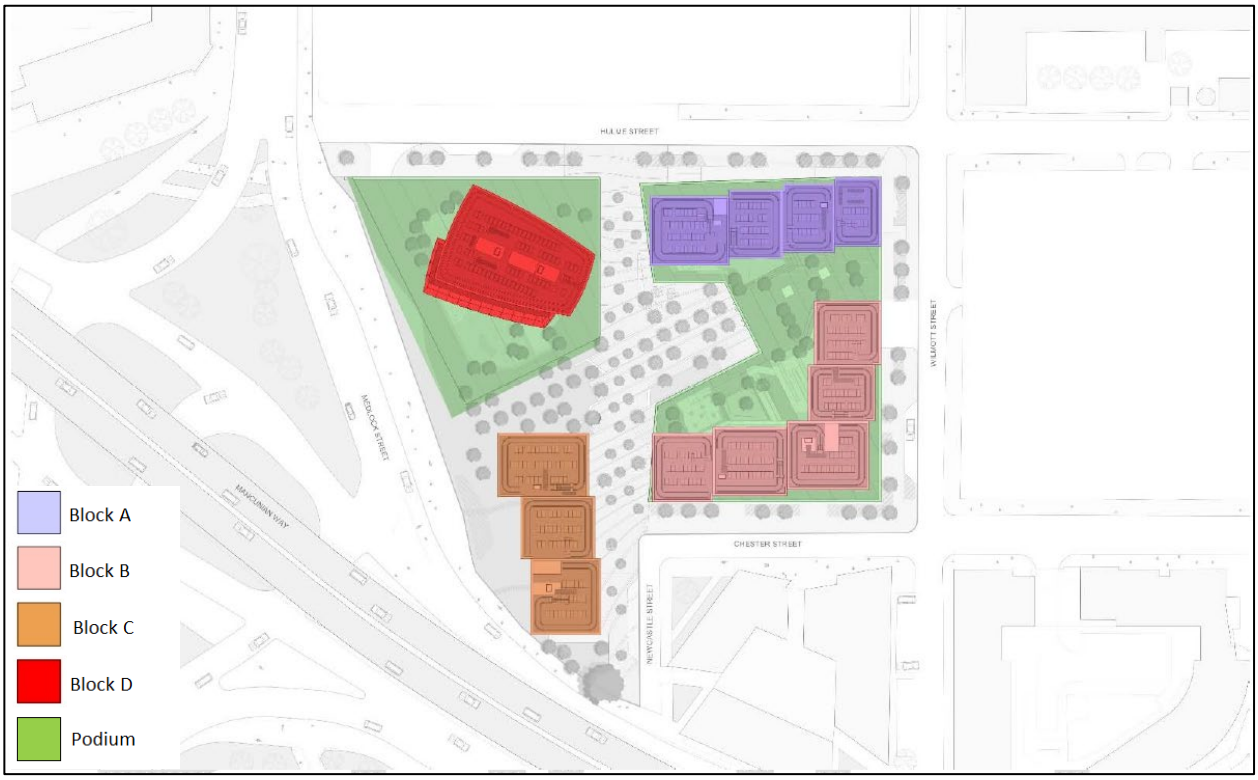
Blocks A,B and C are all formed from a series of stepping Blocks articulated both in elevation and height. Block A range from 10 to 22 storeys while Block B range from 18 to 26 storeys both of which are located over a sloped (01-02 storey) accessible podium which links the two buildings.

Block C is ranging from 11 to 17 storeys and comes to ground.

Block D, a 45 storey tower, similar to Building A and B sit over a single storey landscaped podium.

All four buildings are to be constructed from a unitized glazing system with bespoke frit patternation and metal rapid vents. The architectural design defines the podium as one element, wrapping the landscaspe

in a rich deep green terracotta. The podium facades would comprise bricks and glazed terracotta with glazed insets, colour match metal vent panels and doors and would contrast with the buildings above. The podium element of Block A\B and D forms a pedestrianised courtyard with a route through the development.



The project comprises co-living bedrooms arranged in a mixture of apartments and studio rooms. The scheme also includes amenity facilities,with ground floor commercial units like Cafè, Restaurant and Gym, private amenity space and public realm comprising hard and soft landscaping, car parking and cycle facilities and other associated works. Moreover, a large dining and social amenity space will be provided at the top of the tower for use by residents providing panoramic views back to the city.

Focchi has been designated to develop the design, procurement, production, fabrication and installation of the new cladding package for First Street South (Blocks A, B, D and Podium) in accordance with the requirement stated into Project specification.

The cladding package comprises:

- a SSG unitized curtain wall with openable windows and integrated unitized perforated rapid vent panels, fritted and enamelled glass panels and glazed insulated panels
- stick systems from Ground level 00 to level 02 (including metal louvers, glazed terracotta rainscreen and metal cladding)
- doors and windows systems
- external metal soffit to the underside of Blocks A, B & D)

and associated works including the design, mock-ups, testing, protection and commissioning

The specifications of the main types of cladding of Building A,B,D, together with their name and features, are shown in the following drawings and defined in the façade scope legend given below.

Note: façade features and names could change during design development

Type	Description	Colour
STICK SYSTEM EWS-101+GLP-101	**Stick system curtain wall** *Feature*: Stick curtain walling system with extruded aluminium frame and structural silicone double glazed panel. *Finishes:* TBC *Location:* Podium elevation of Block A,B&D	Block A,B,D Block A,B
STICK SYSTEM EWS-101+GLP-105	**Stick system curtain wall** *Feature*: Stick curtain walling system with extruded aluminium frame and structural silicone double glazed opaque panel. *Finishes:* TBC *Location:* Podium elevation of Block A,B&D	Block D Block A,B
VISION UNITS EWS-151+GLP - 121	**Unitised curtain wall** *Feature*: Unitised curtain walling system with extruded aluminium frame and double glazed unit bonded by structural silicone joints. Double glazed unit is characterired by ceramic fritting on face #2. *Finishes:* TBC *Location:* North, South, East and West – all levels from 2nd floor of Block A and B North, South and East – all levels from 2nd floor of Block D Podium elevation of Block A,B&D	Block A,B,D
VISION UNITS EWS-151+GLP - 123	**Stick system curtain wall** *Feature*: Stick curtain walling system with extruded aluminium frame and double glazed unit bonded by structural silicone joints. *Finishes:* TBC *Location:* Podium elevation of Block D	Block D
VISION UNITS EWS-151+GLP - 124	**Stick curtain wall** *Feature*: Stick curtain walling system with extruded aluminium frame and double glazed unit bonded by structural silicone joints. *Finishes:* TBC *Location:* Podium elevation of Block D	Block D
GLAZED SPANDREL UNITS EWS-151+GLP - 211	**Unitised curtain wall** *Feature*: Unitised curtain walling system with extruded aluminium frame and double glazed opaque insulated panel bonded by structural silicone joints. Double glazed unit is characterired by ceramic fritting on face #2. *Finishes:* TBC *Location:* North, South, East and West – all levels from 2nd floor of Block A and B North, South and East – all levels from 2nd floor of Block D Podium elevation of Block A,B&D	Block A,B,D
VISION UNITS EWS-152+GLP - 122	**Unitised curtain wall** *Feature*: Unitised curtain walling system with extruded aluminium frame and double glazed acoustic unit bonded by structural silicone joints. Double glazed unit is characterired by fritting on face #2. *Finishes:* TBC *Location:* West elevation – all levels from 2nd floor of Block D	Block D

Note: façade features and names could change during design development

Type	Description	Colour
GLAZED SPANDREL UNITS EWS-152+GLP - 212	**Unitised curtain wall** *Feature*: Unitised curtain walling system with extruded dark aluminium frame and double glazed opaque insulated panel bonded by structural silicone joints. Double glazed unit is characterized by ceramic fritting on face #2. *Finishes:* TBC *Location:* West elevation – all levels from 2nd floor of Block D	Block D
GLAZED ROOF RFS-401+GLP - 124	**Glazed roof** *Feature*: First floor sloped unitized clear glazed roof. *Finishes:* TBC *Location:* Podium of Block D	Block A,B,D
UNITS EWS-171	**Prefabricated Unitised Window Panels** *Feature*: Prefabricated unitized aluminium panels with double glazed units, structurally bonded to the frame. *Finishes:* TBC *Location:* Podium elevation of Block A&B	Block A,B
RAPID VENTS PANELS EWS-155	**Unitised curtain wall** *Feature*: Unitised curtain walling system, with inwards opening clear glazed integrated doorset with trickle vent system. The unit has fixed esternally an anodized Aluminium sheet with a bespoke perforated pattern. *Finishes:* TBC *Location:* North, South, East and West – all levels from 2nd floor of Block A&B North and East – all levels from 2nd floor of Block D	Block A,B,D
RAPID VENTS PANELS EWS-156	**Unitised curtain wall** *Feature*: Unitised curtain walling system with inwards opening clear glazed integrated doorset with extract and trickle vent system. The unit has fixed esternally an anodized Aluminium sheet with a bespoke perforated pattern. *Finishes:* TBC *Location:* North, South, East and West – all levels from 2nd floor of Block A&B North, South and East – all levels from 2nd floor of Block D	Block A,B Block D
RAPID VENTS PANELS EWS-157	**Unitised curtain wall** *Feature*: Unitised curtain walling system with inwards opening clear glazed integrated doorset with extract or intake system. The unit has fixed esternally an anodized Aluminium sheet with a bespoke perforated pattern. *Finishes:* TBC *Location:* North, South, East and West – all levels from 2nd floor of Block B North elevation – all levels from 2nd floor of Block A North, South and East – all levels from 2nd floor of Block D	Block A,B Block D
RAPID VENTS UNITS EWS-158	**Unitised curtain wall** *Feature*: Unitised curtain walling system with a perforated rapid vent panel with clear glazed integrated doorset with extract and intake. The unit has fixed esternally an anodized Aluminium sheet with a bespoke perforated pattern. *Finishes:* TBC *Location:* North and South – all levels from 2nd floor of Block D	Block D
RAPID VENTS UNITS EWS-163	**Unitised curtain wall** *Feature*: Unitised curtain walling system with a perforated rapid vent panel with clear glazed AOV. *Finishes:* TBC *Location:* North and East levels of Building A	Block A

Note: façade features and names could change during design development

Type	Description	Colour
RAPID VENTS UNITS EWS-161	**Unitised curtain wall** *Feature*: Unitised curtain walling system with inwards opening clear glazed integrated doorset with extract or intake system. The unit has fixed esternally an anodized Aluminium sheet with a bespoke perforated pattern. *Finishes:* TBC *Location:* West elevation – all levels from 2nd floor of Block D	Block D
RAPID VENTS UNITS EWS-162	**Unitised curtain wall** *Feature*: Unitised curtain walling system with inwards opening clear glazed integrated doorset with extract or intake system. The unit has fixed esternally an anodized Aluminium sheet with a bespoke perforated pattern. *Finishes:* TBC *Location:* West elevation – all levels from 2nd floor of Block D	Block D
RAPID VENTS UNITS EWS-166	**Unitised curtain wall** *Feature*: Unitised curtain walling system with a perforated rapid vent panel with anodized aluminium dummy transom. *Finishes:* TBC *Location:* North, South, East and West – 2nd floor of Block A&B North , South, and East – 2nd floor of Block D West elevation – 2nd floor of Block D	Block A,B,D
RAPID VENTS UNITS EWS-167	**Unitised curtain wall** *Feature*: Unitised curtain walling system with a perforated rapid vent panel with anodized aluminium dummy transom. *Finishes:* TBC *Location:* West elevation - 2nd floor of Block D	Block D
RAINSCREEN CLADDING EWS-501/505	**Terracotta curtain wall** *Feature*: Terracotta rainscreen cladding composed by glazed terracotta tiles supported by aluminium substructure fixed to the back structure. *Finishes:* Green galzed terracotta of Block A,B&D *Location:* Podium elevation	Block A,B Block A,B
RAINSCREEN CLADDING EWS-401	**Aluminium curtain wall** *Feature*: Aluminium rainscreen cladding composed by aluminium panels supported by aluminium substructure fixed to the back structure. *Finishes:* TBC *Location:* Podium elevation of Block A&B	Block A,B
UNIT EWS-412	**Aluminium coping** *Feature*: Aluminium parapet coping. *Finishes:* TBC *Location:* Podium parapet of Block A,B&D	Block A,B,D
UNIT EWS-421	**Aluminium flashing** *Feature*: Aluminium flashing fixed to the back structure. *Finishes:* TBC *Location:* Podium elevation of Block A&B	Block A,B
UNIT EWS-425	**Aluminium flashing** *Feature*: Aluminium flashing fixed to the back structure. *Finishes:* TBC *Location:* Podium elevation of Block A,B&D	Block D

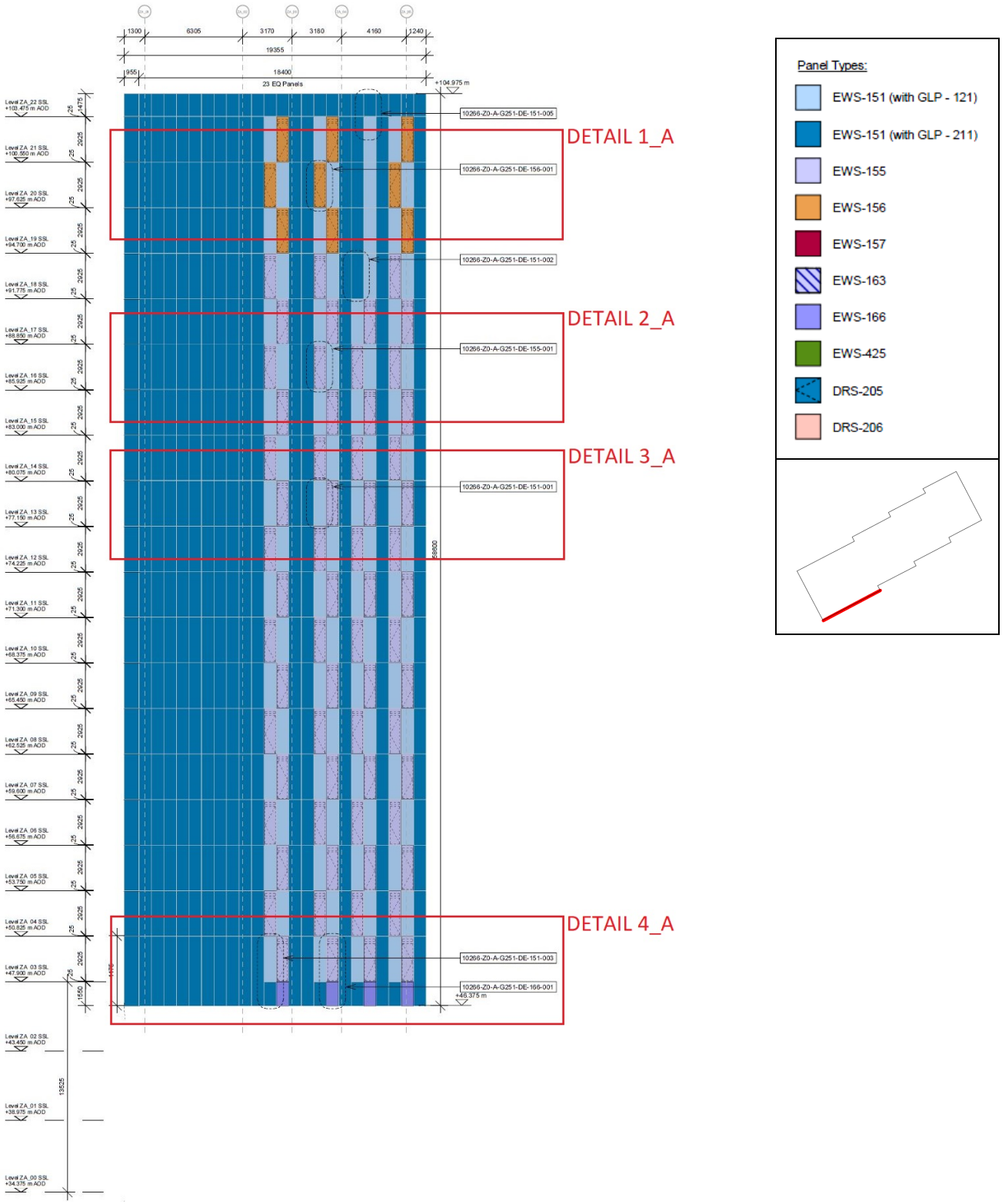
Note: façade features and names could change during design development

Type	Description	Colour
UNIT EWS-424	**Aluminium Panel** *Feature*: Stailess steel or aluminium panel fixed to the back structure. *Finishes:* TBC *Location:* Podium elevation of Block A,B&D	Block A,B,D
LOUVRE EWS-703	**Aluminium Louvres** *Feature*: Aluminium Louvre *Finishes:* TBC *Location:* Podium elevation of Block D	Block D
LOUVRE EWS-705	**Aluminium Louvres** *Feature*: Aluminium Louvre *Finishes:* TBC *Location:* Podium elevation of Block D	Block D
LOUVRE EWS-706	**Acoustic aluminium Louvres** *Feature*: Aluminium acoustic Louvre *Finishes:* TBC *Location:* Podium elevation of Block A,B&D	Block A,B
LOUVRE GLP-301	**Aluminium Louvres** *Feature*: Aluminium louvre unitised panels *Finishes:* TBC *Location:* Podium elevation of Block A,B&D	Block A,B
UNIT GLP-303	**Perforated Aluminium Panels** *Feature*: Perforated aluminium panels *Finishes:* TBC *Location:* Podium elevation of Block A,B&D	Block A,B
UNIT EWS-405	**Aluminium soffit system** *Feature*: Alluminium soffit cladding, supported by aluminium substructure fixed to the back structure. *Finishes:* TBC *Location:* Undrecroft of Block A,B&D	Block A,B
DOORS	**Doors** *Feature*: TBC *Finishes:* TBC *Location:* Podium elevation	Block A,B,D

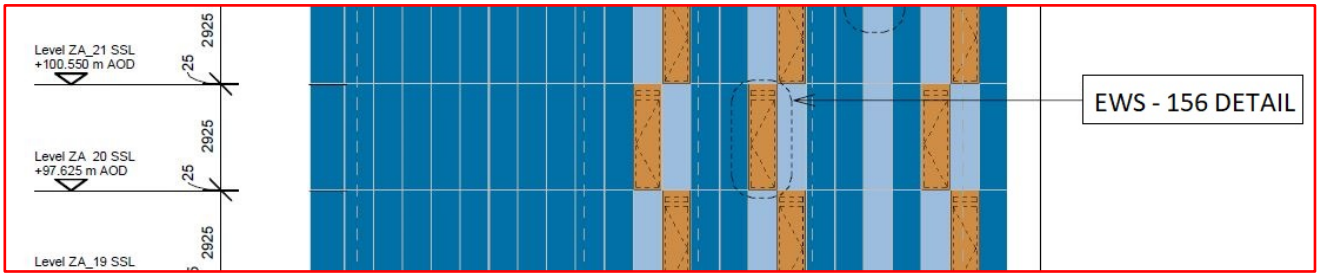
3.1.1 BLOCK A - SOW

(façade features and names could change during design development)

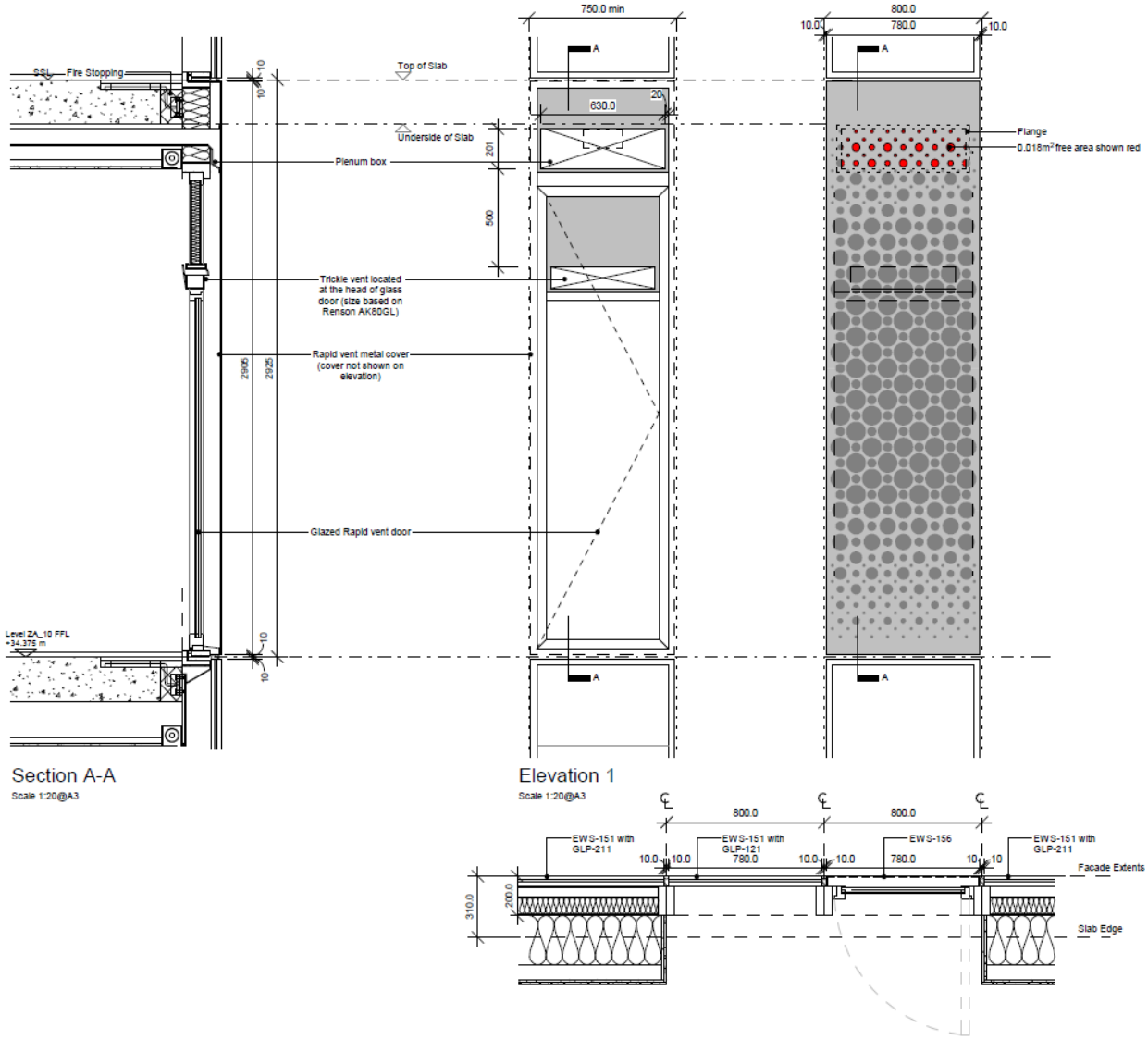
FIRST STREET SOUTH MANCHESTER– BUILDING A
SOUTH ELEVATION – FACET 1



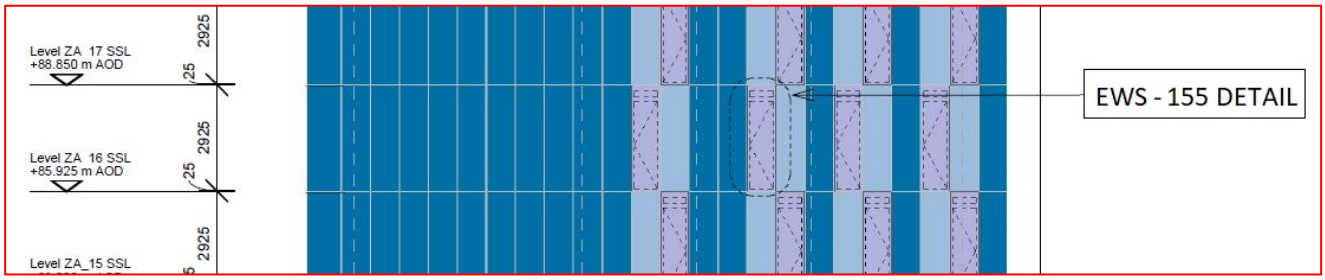
BUILDING A - **SOUTH** ELEVATION – FACET 1 – DETAIL 1_A



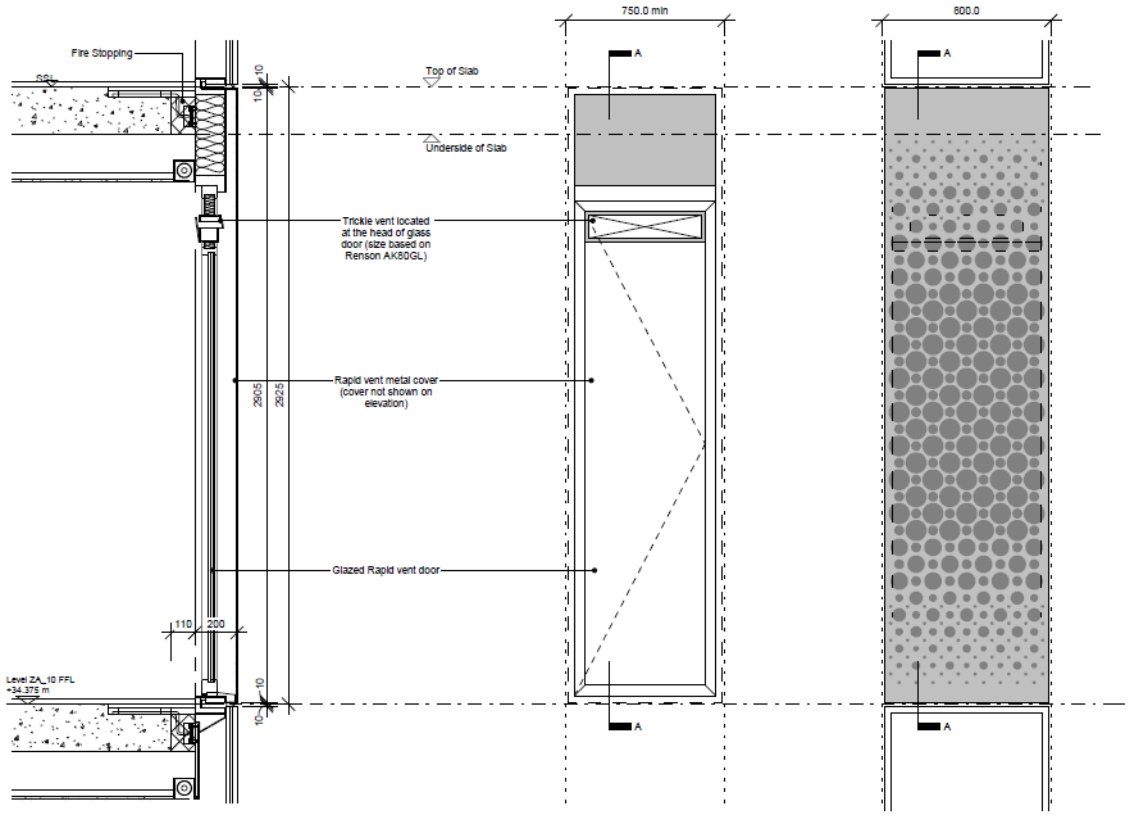
EWS - 156 DETAIL



BUILDING A - **SOUTH** ELEVATION – FACET 1 – DETAIL 2_A

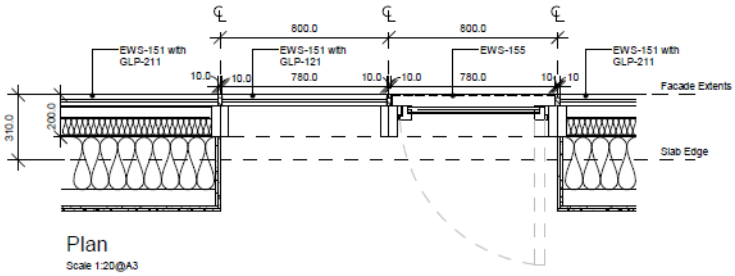


EWS - 155_DETAIL



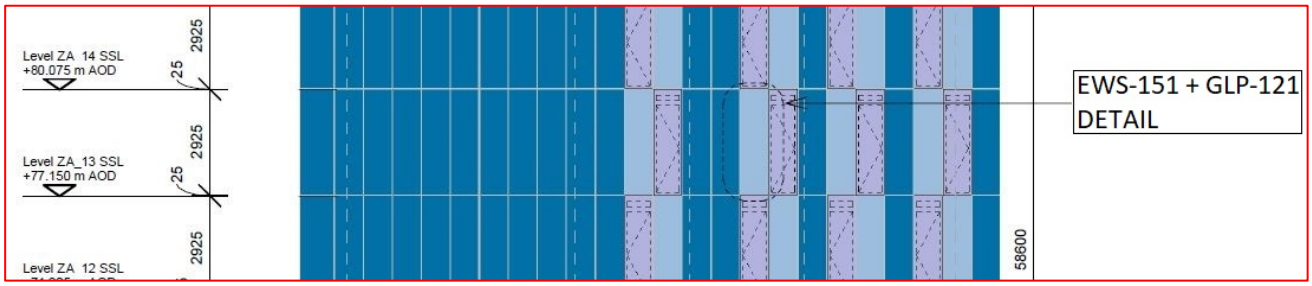
Section A-A
Scale 1:20@A3

Elevation 1
Scale 1:20@A3

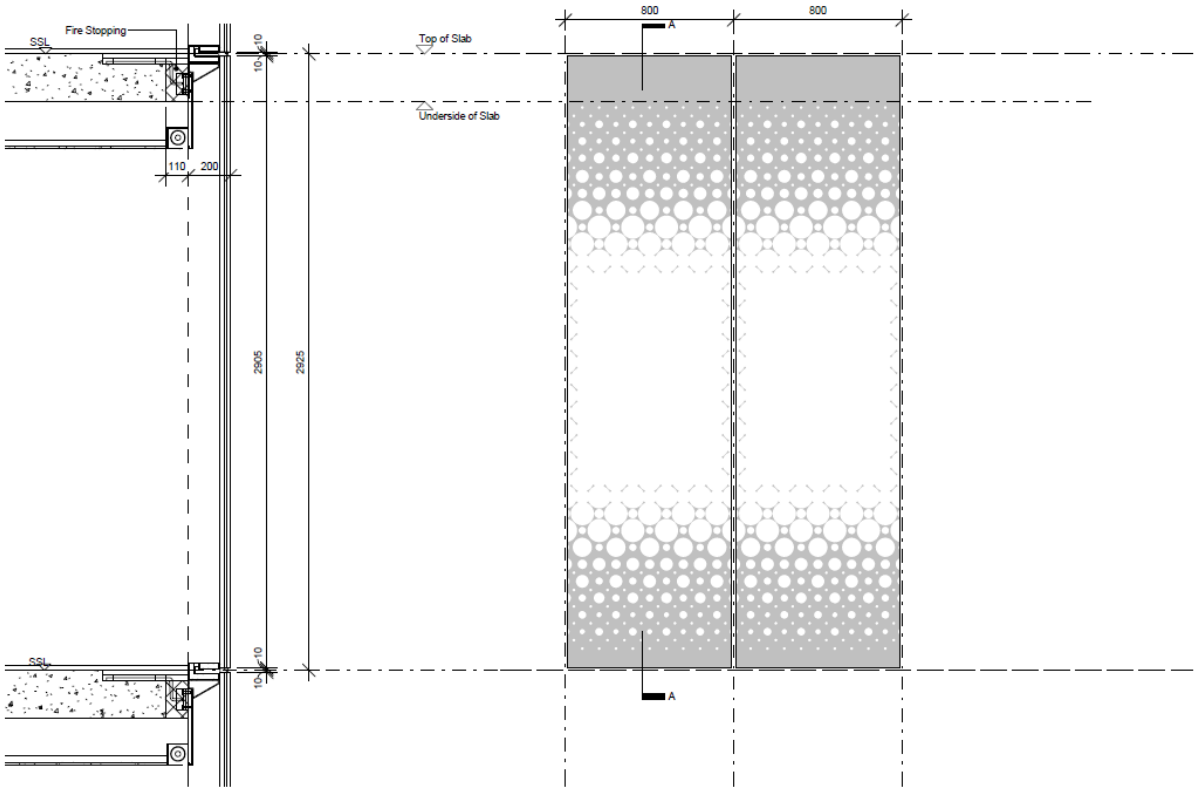


Plan
Scale 1:20@A3

BUILDING A - **SOUTH** ELEVATION – FACET 1 – DETAIL 3_A

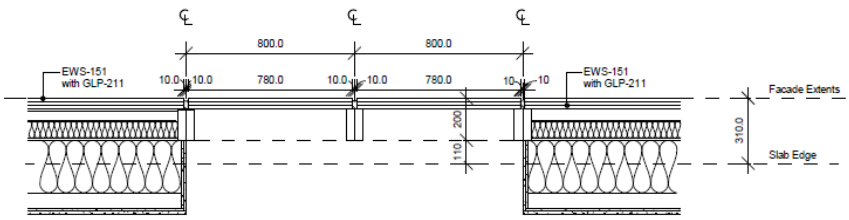


EWS – 151 + GLP 121 DETAIL

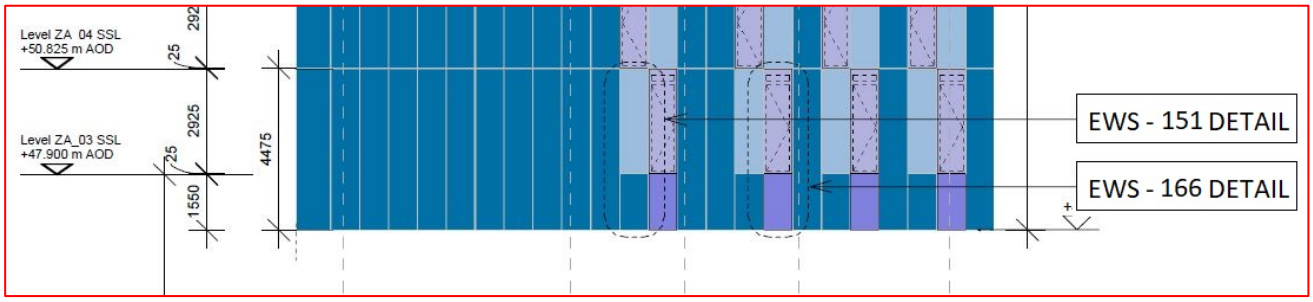


Section A-A
Scale 1:20@A3

Elevation 1
Scale 1:20@A3

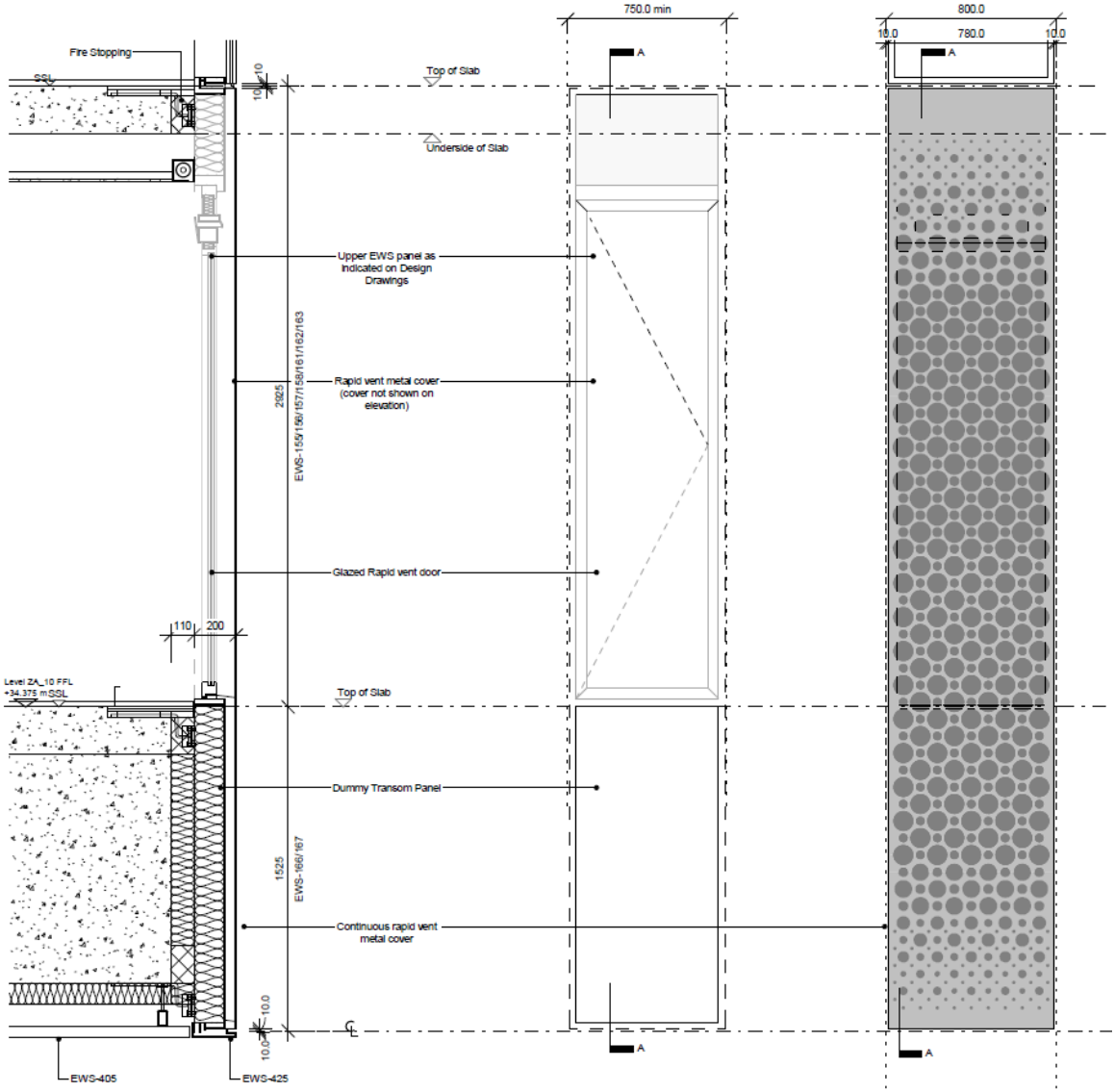


BUILDING A - **SOUTH** ELEVATION – FACET 1 – DETAIL 4_A

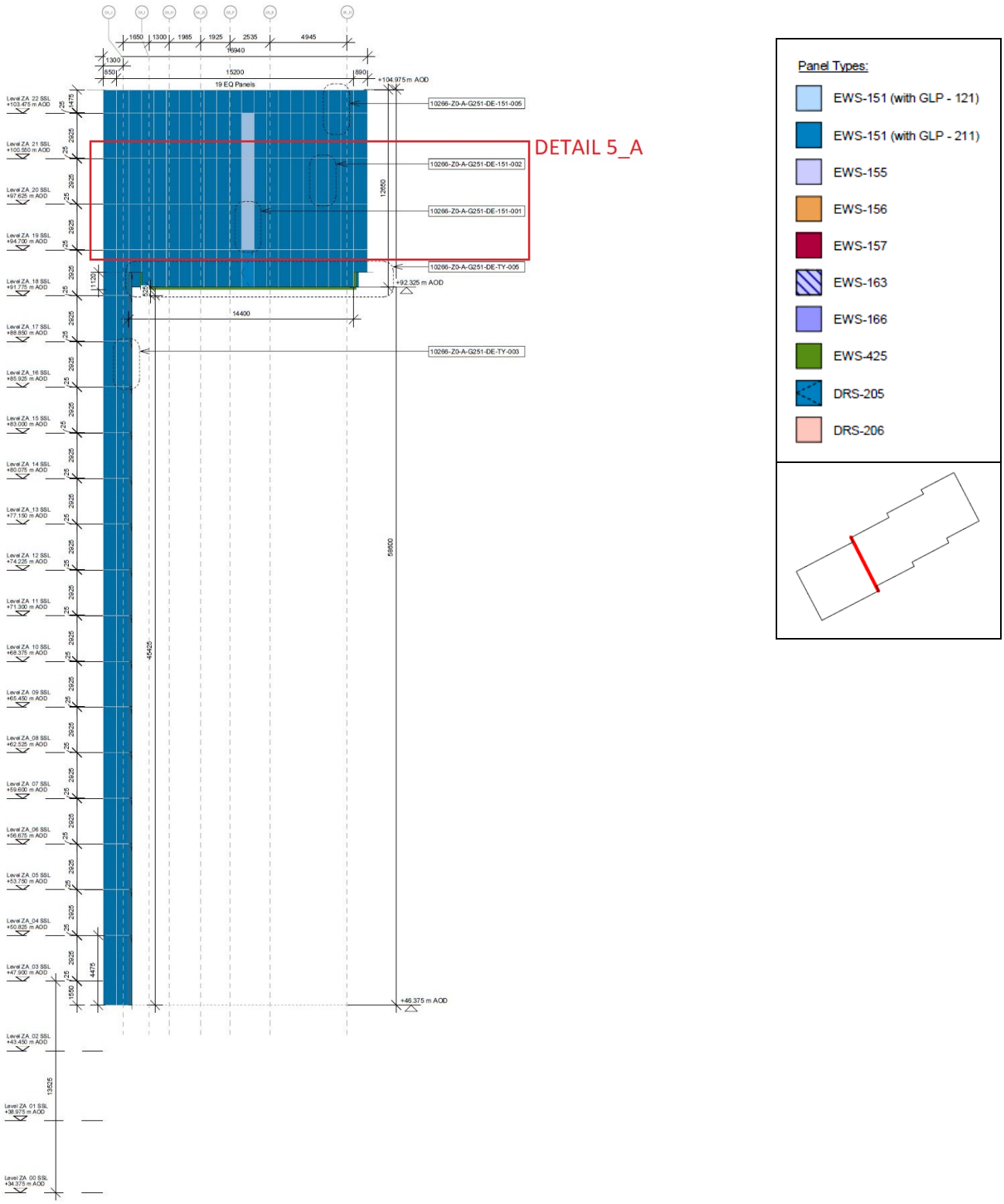


EWS - 166 DETAIL

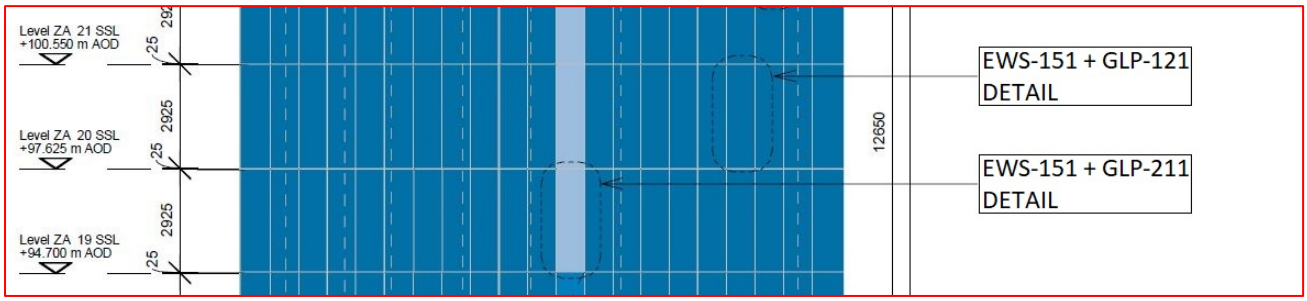
Different ventilation system would be provided according to SHP drawings (duct, extract **or** intake system, trickle vent, extract **and** intake system).



FIRST STREET SOUTH MANCHESTER– BUILDING A
EAST ELEVATION – FACET 2



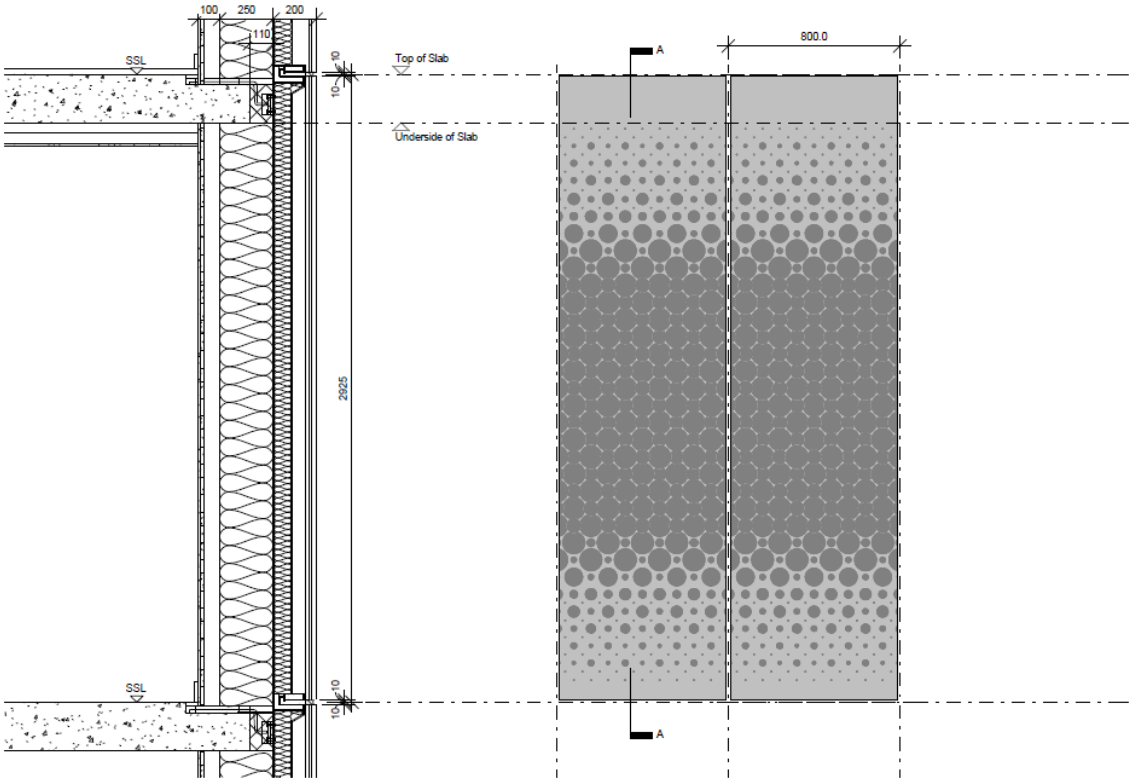
BUILDING A - **EAST** ELEVATION – FACET 2 – DETAIL 5_A

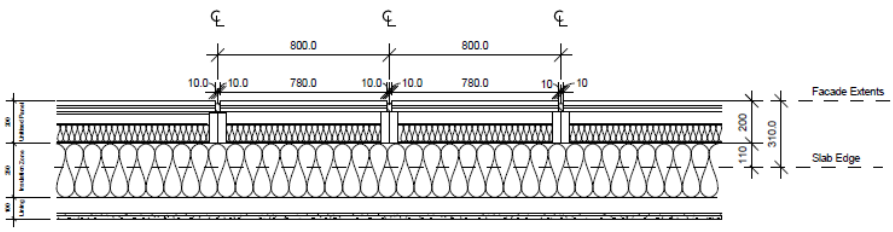


EWS – 151 + GLP 121 DETAIL

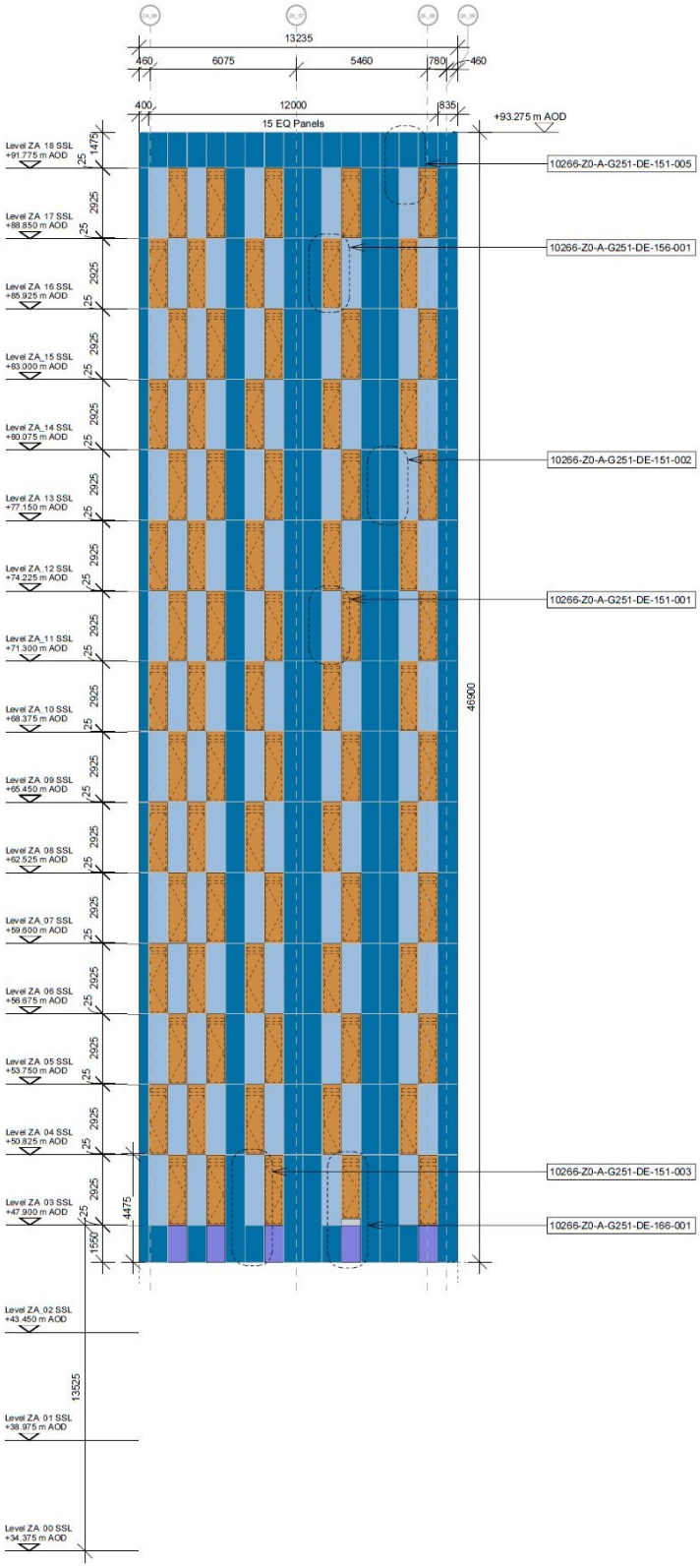
Refer to Building A detail 3_A.

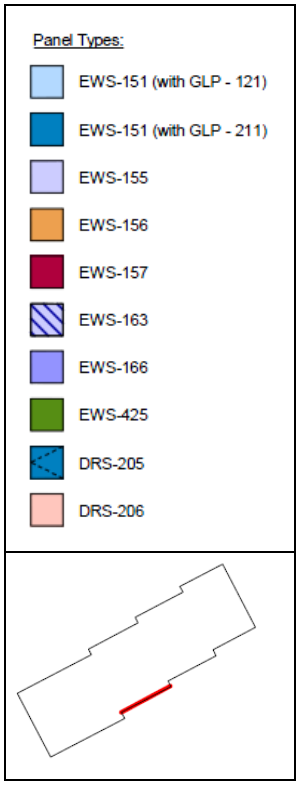
EWS – 151 + GLP 211 DETAIL



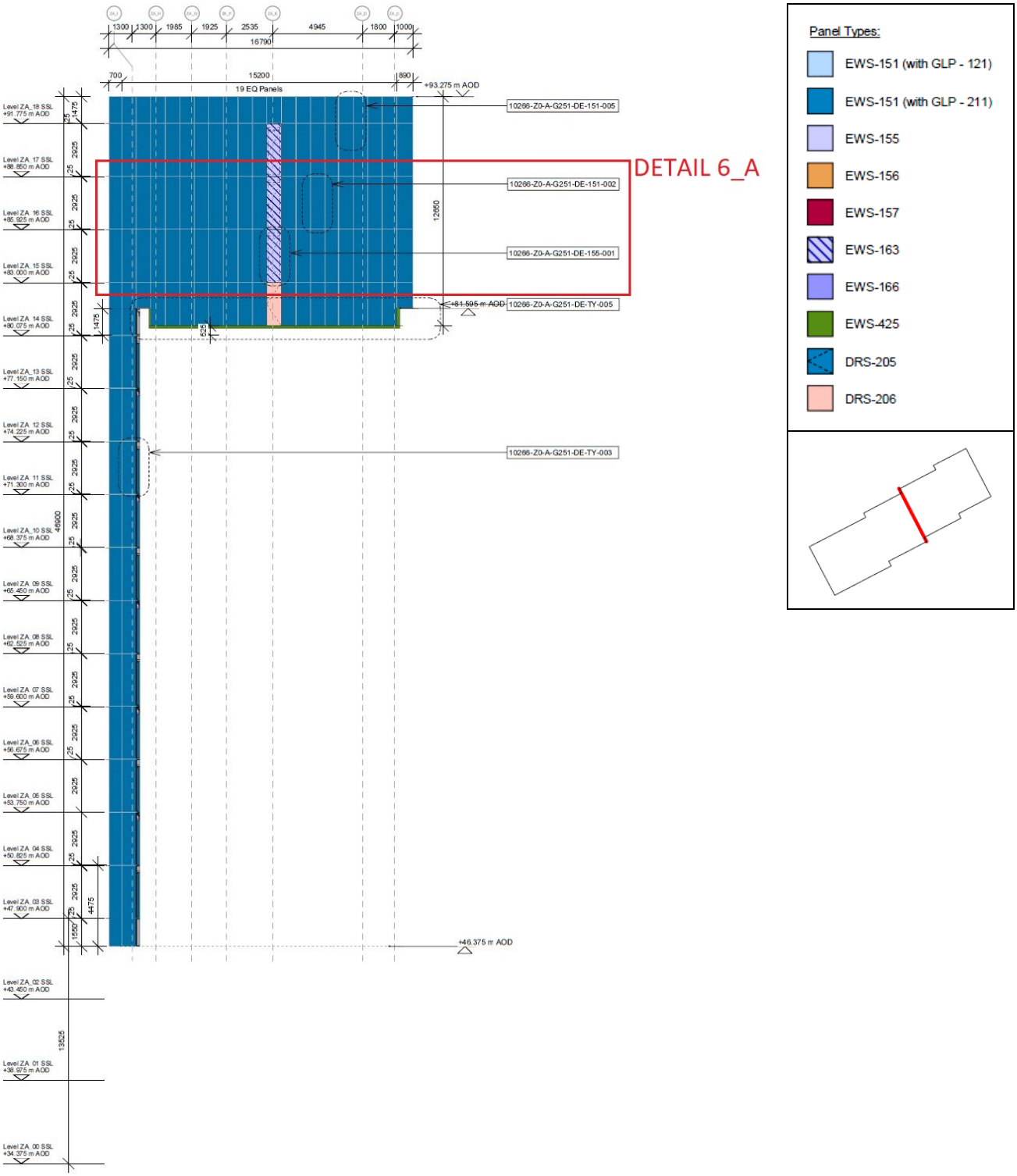


FIRST STREET SOUTH MANCHESTER– BUILDING A
SOUTH ELEVATION – FACET 3

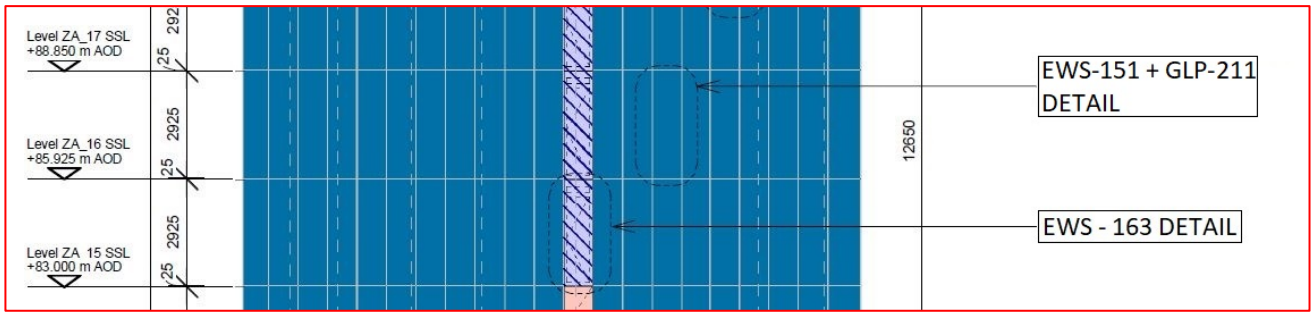




FIRST STREET SOUTH MANCHESTER– BUILDING A
EAST ELEVATION – FACET 4



BUILDING A - **EAST** ELEVATION – FACET 4 – DETAIL 6_A



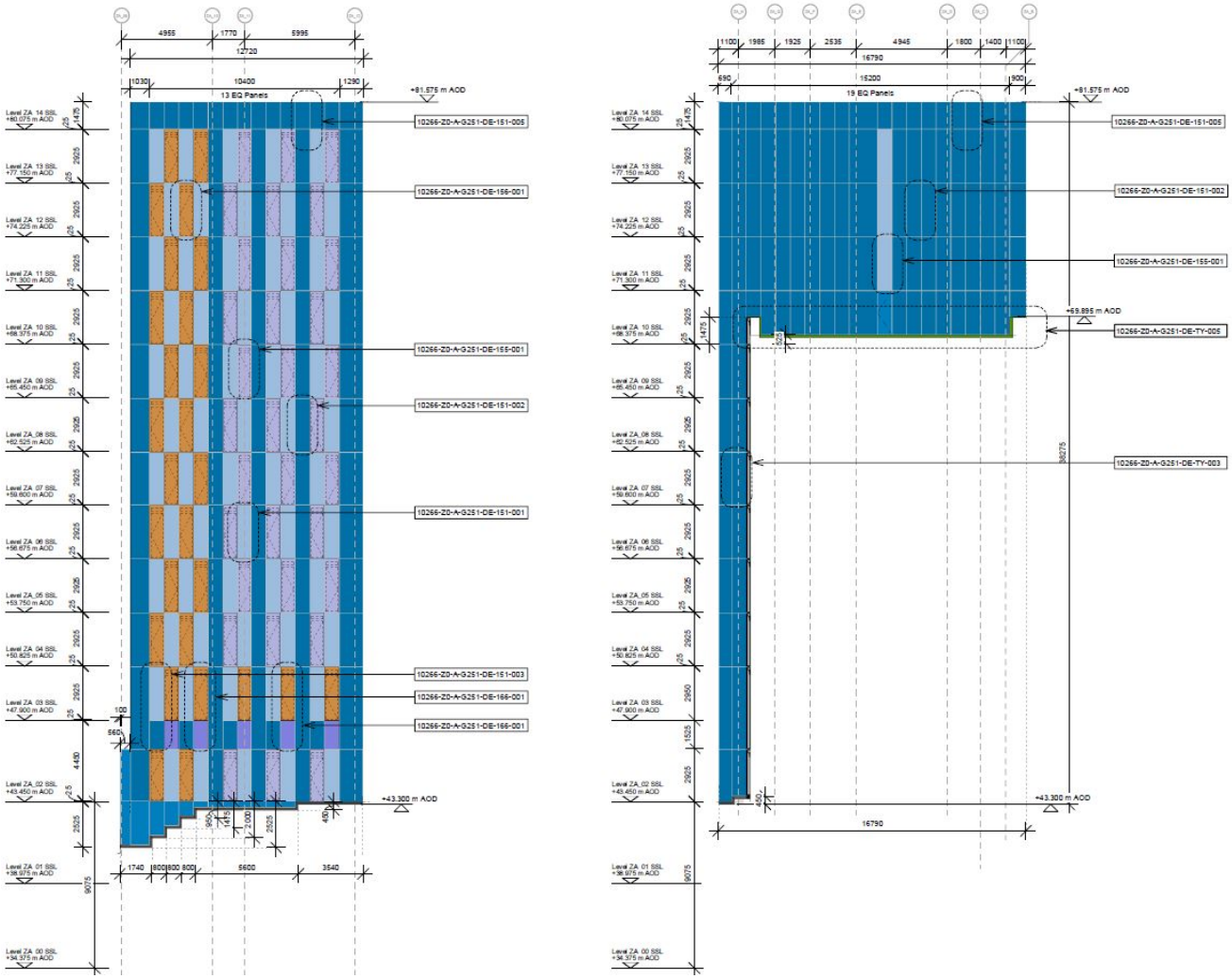
EWS – 151 + GLP 211 DETAIL

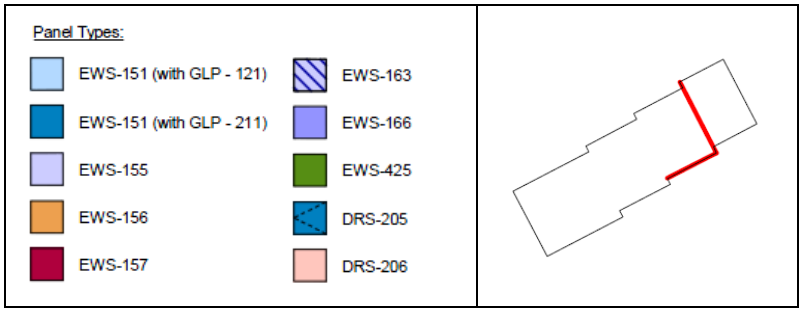
Refer to Building A detail 5_A.

EWS – 163 DETAIL

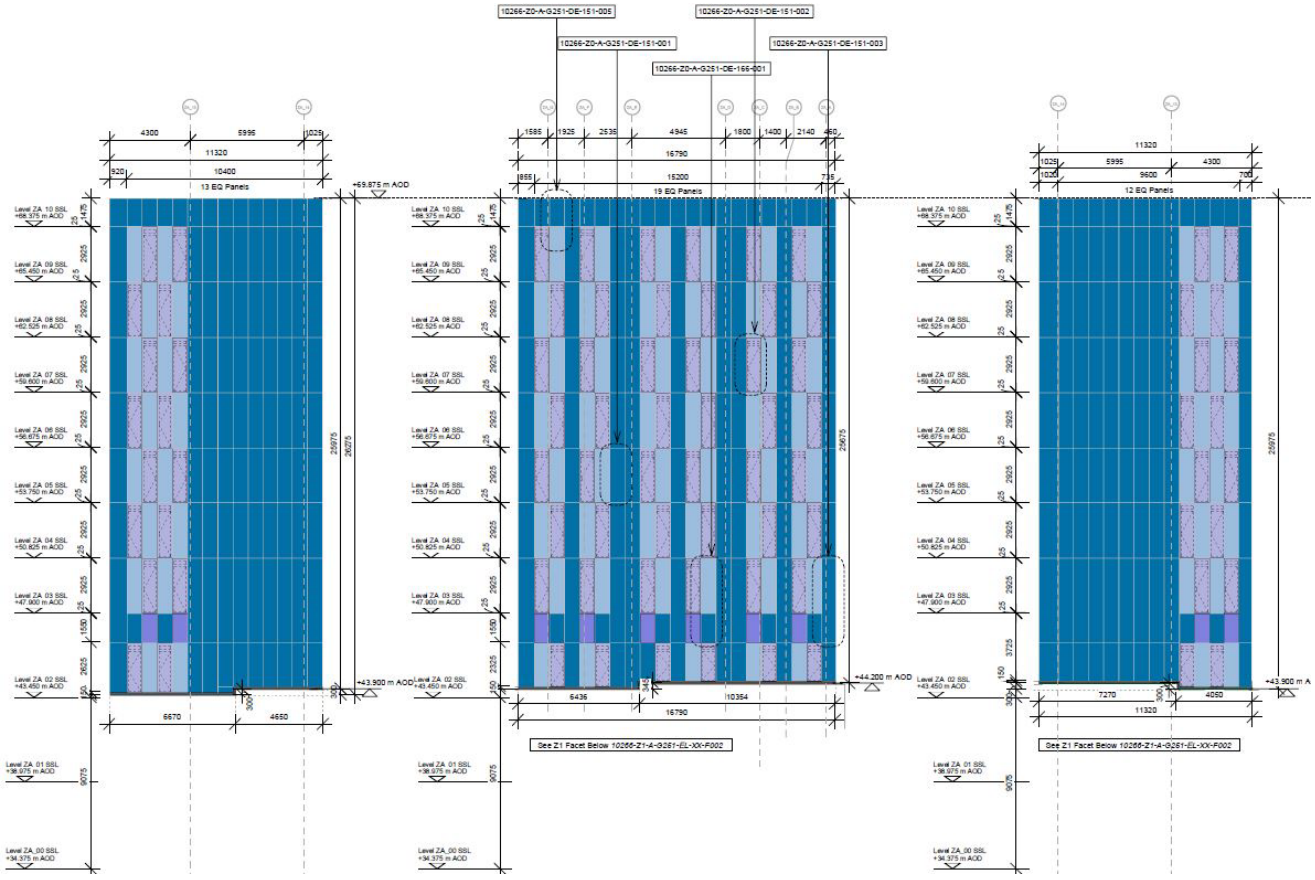
To be defined

FIRST STREET SOUTH MANCHESTER– BUILDING A
EAST AND **SOUTH** ELEVATION – FACET 5-6



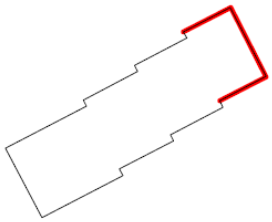


FIRST STREET SOUTH MANCHESTER– BUILDING A
NORTH, EAST AND **SOUTH** ELEVATION – FACET 7-8-9

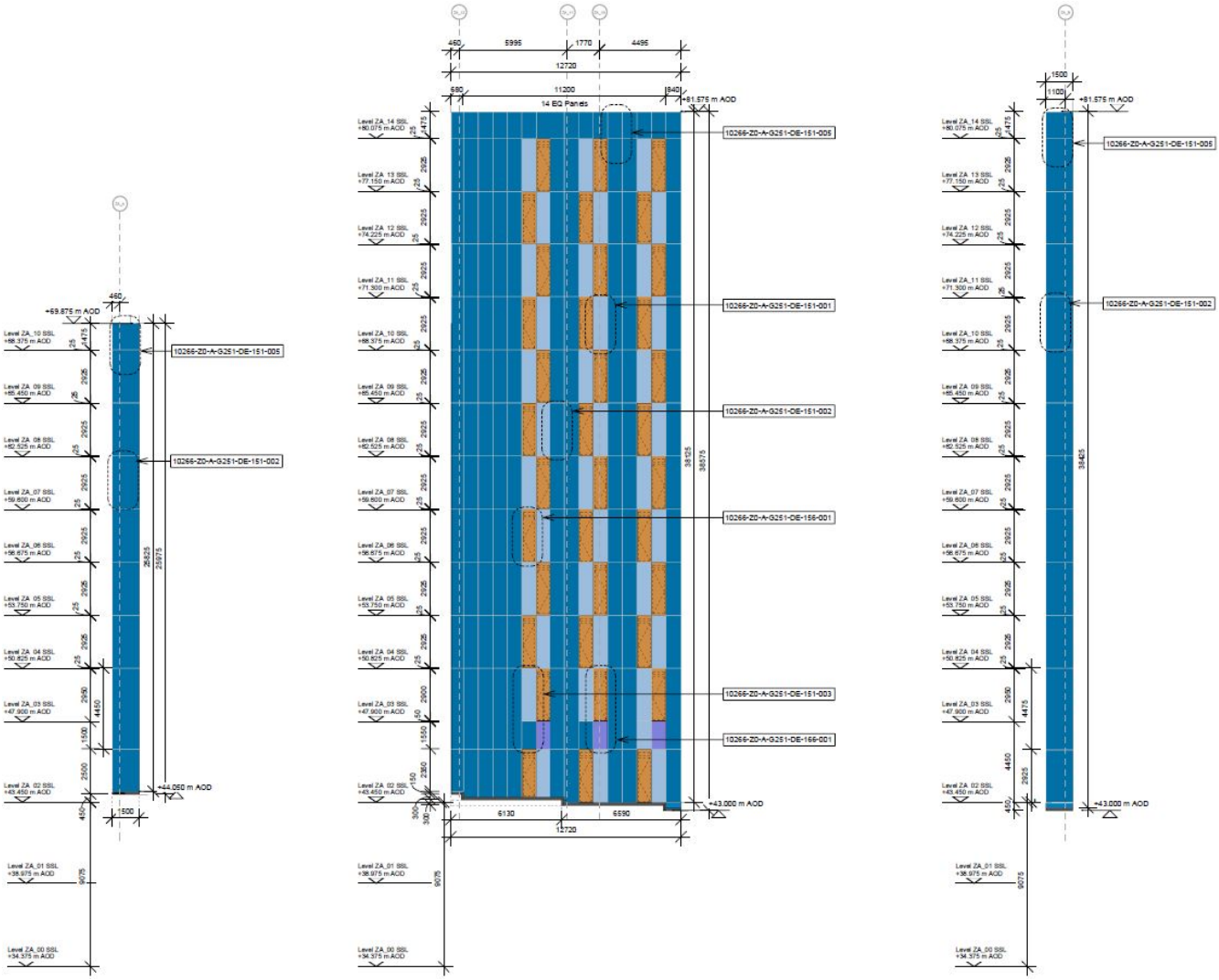


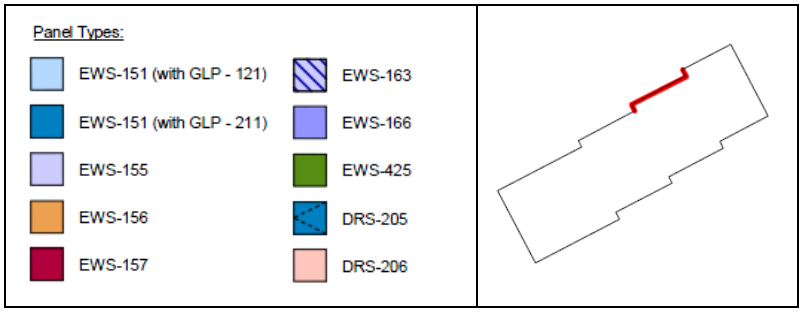
Panel Types:

- EWS-151 (with GLP - 121)
- EWS-151 (with GLP - 211)
- EWS-155
- EWS-156
- EWS-157
- EWS-163
- EWS-166
- EWS-425
- DRS-205
- DRS-206

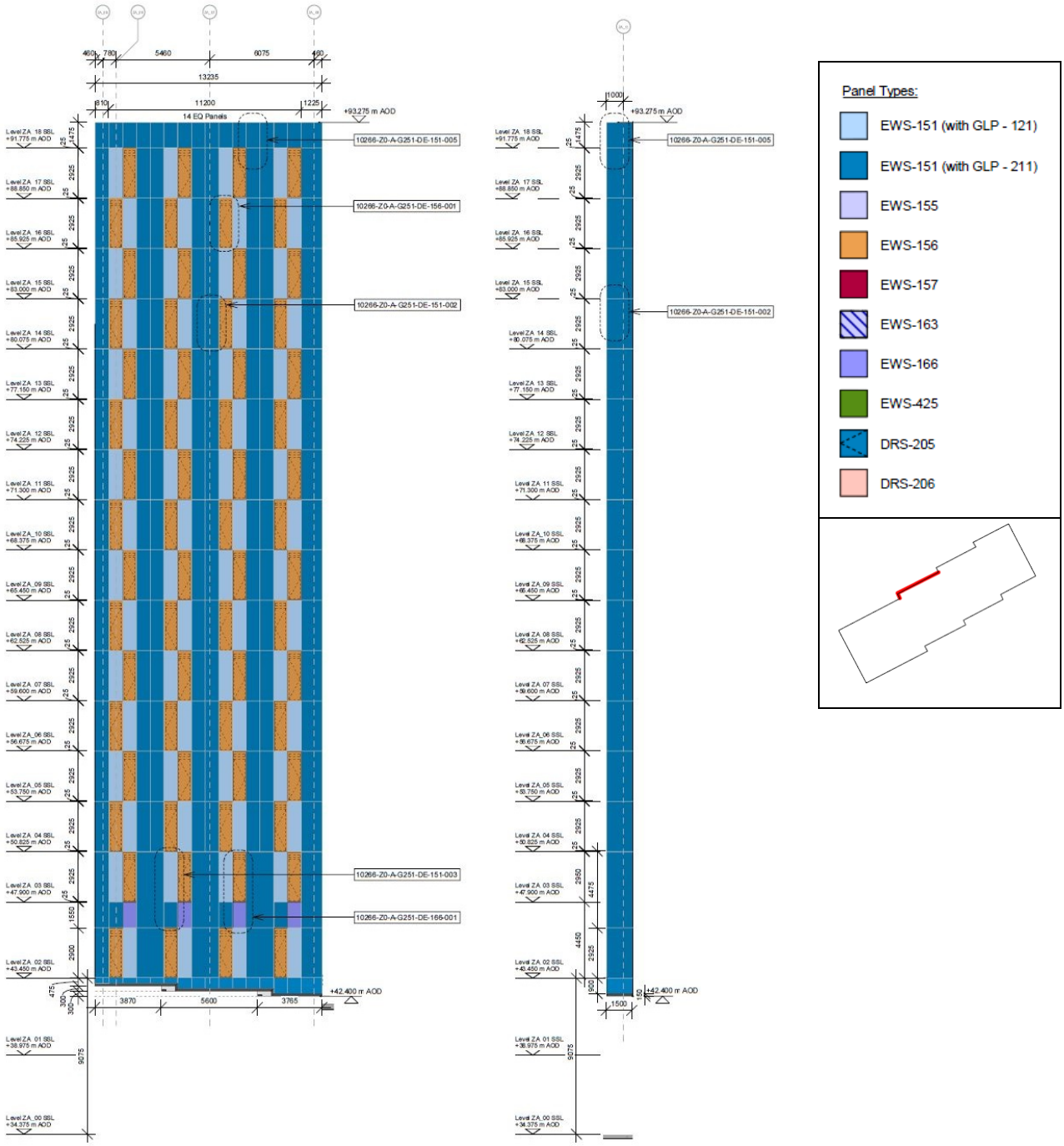


FIRST STREET SOUTH MANCHESTER– BUILDING A
NORTH AND **WEST** ELEVATION – FACET 10-11-12

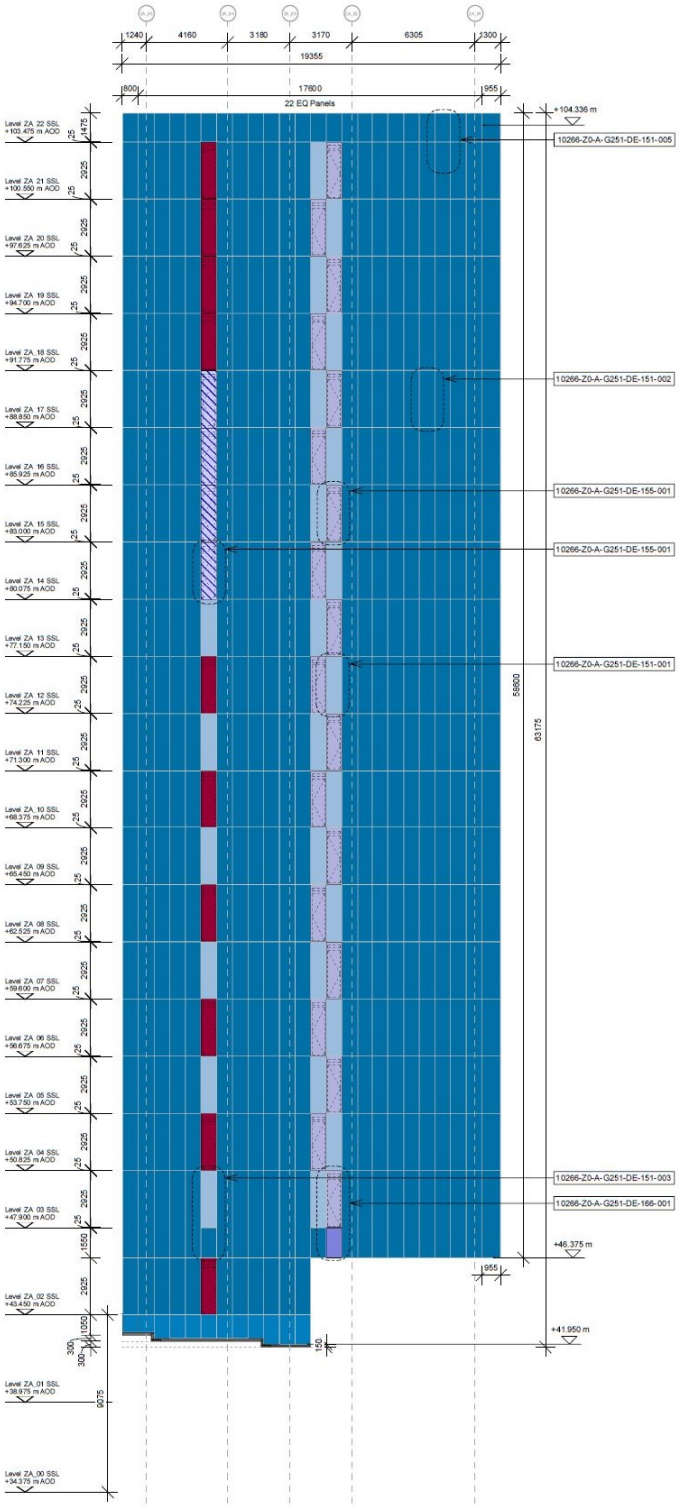


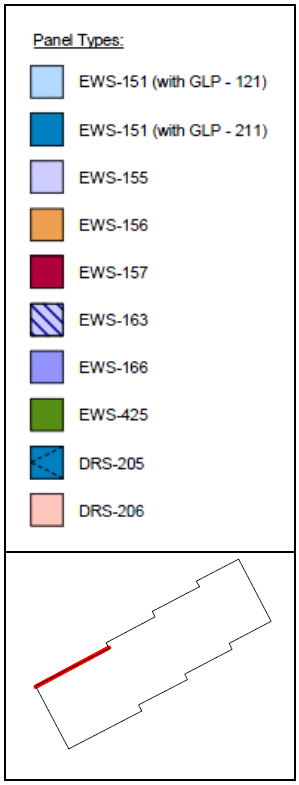


FIRST STREET SOUTH MANCHESTER– BUILDING A
NORTH AND **WEST** ELEVATION – FACET 13-14

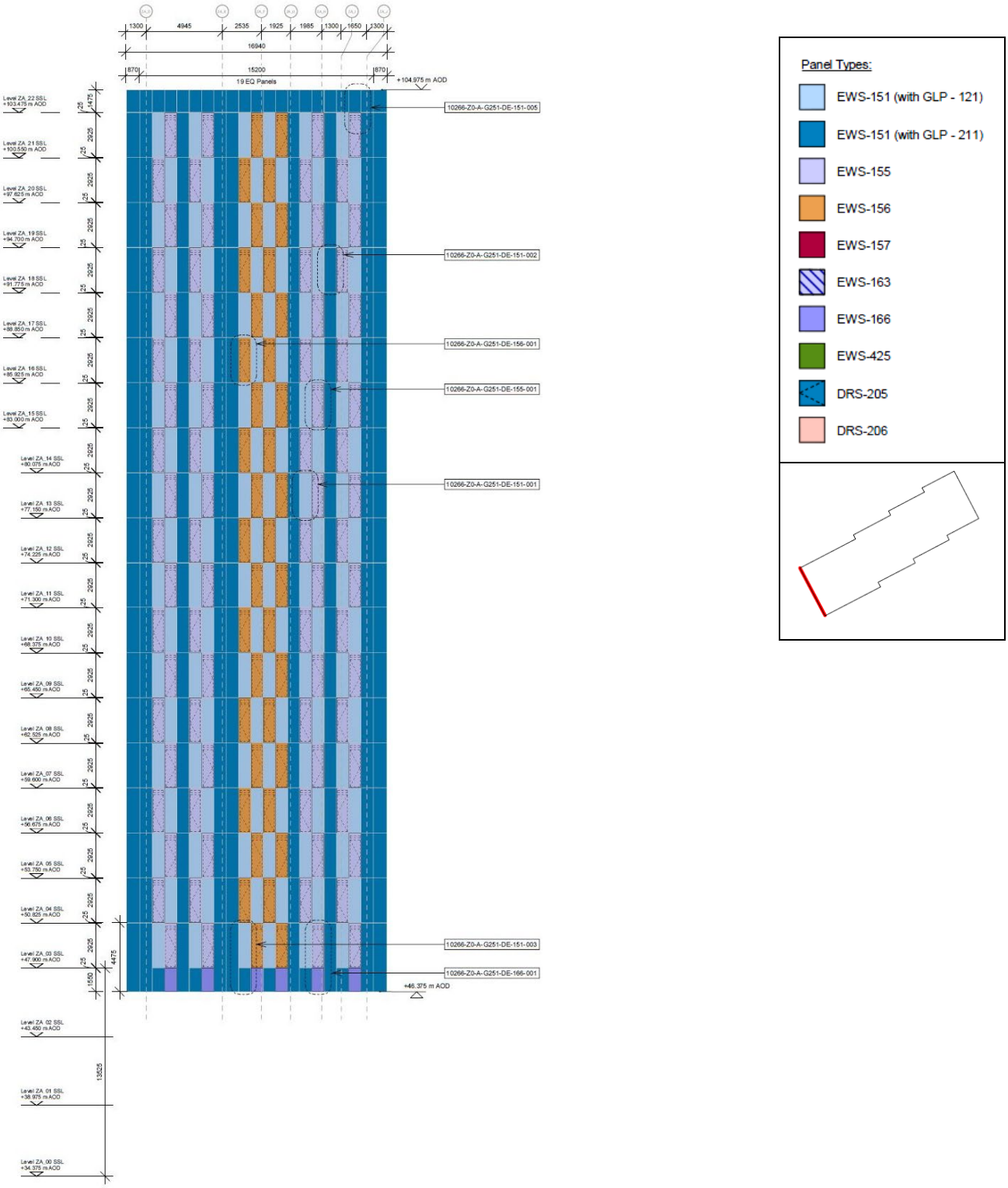


FIRST STREET SOUTH MANCHESTER– BUILDING A
NORTH ELEVATION – FACET 15





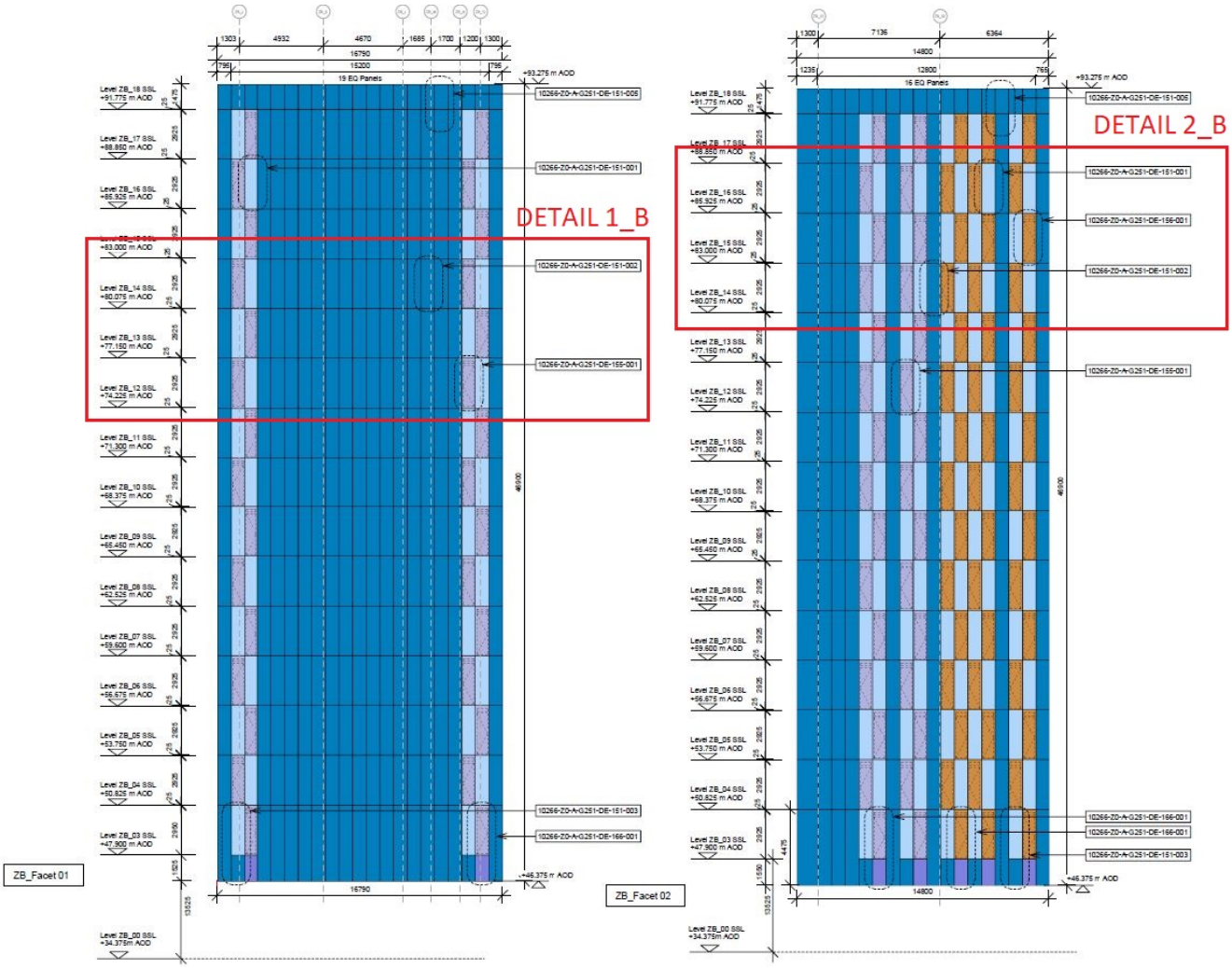
FIRST STREET SOUTH MANCHESTER– BUILDING A
WEST ELEVATION – FACET 16

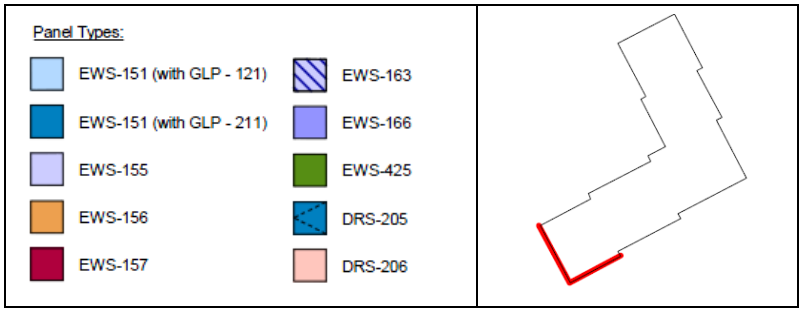


3.1.2 BLOCK B - SOW

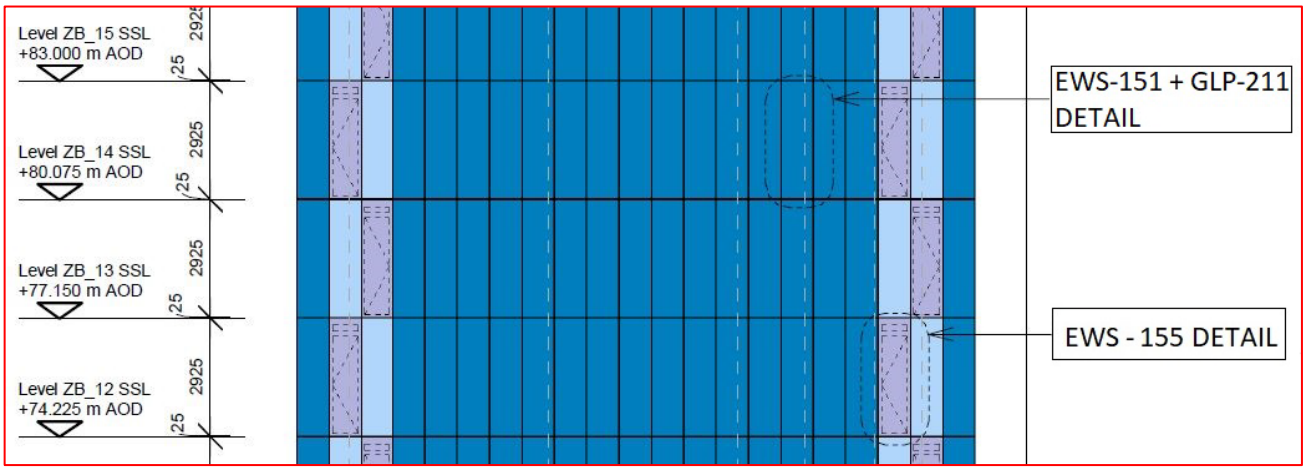
(façade features and names could change during design development)

FIRST STREET SOUTH MANCHESTER– BUILDING B
WEST AND **SOUTH** ELEVATION – FACET 1-2

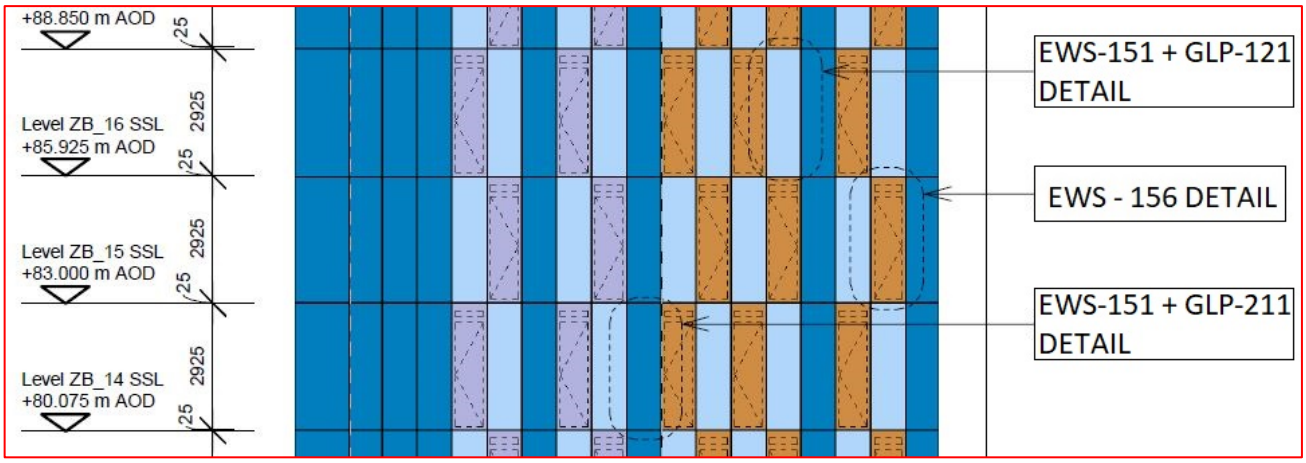




BUILDING B - **WEST** ELEVATION – FACET 1 – DETAIL 1_B



BUILDING B - **SOUTH** ELEVATION – FACET 2 – DETAIL 2_B



EWS – 151 + GLP 121 DETAIL

Refer to Building A detail 3_A.

EWS – 151 + GLP 211 DETAIL

Refer to Building A detail 5_A.

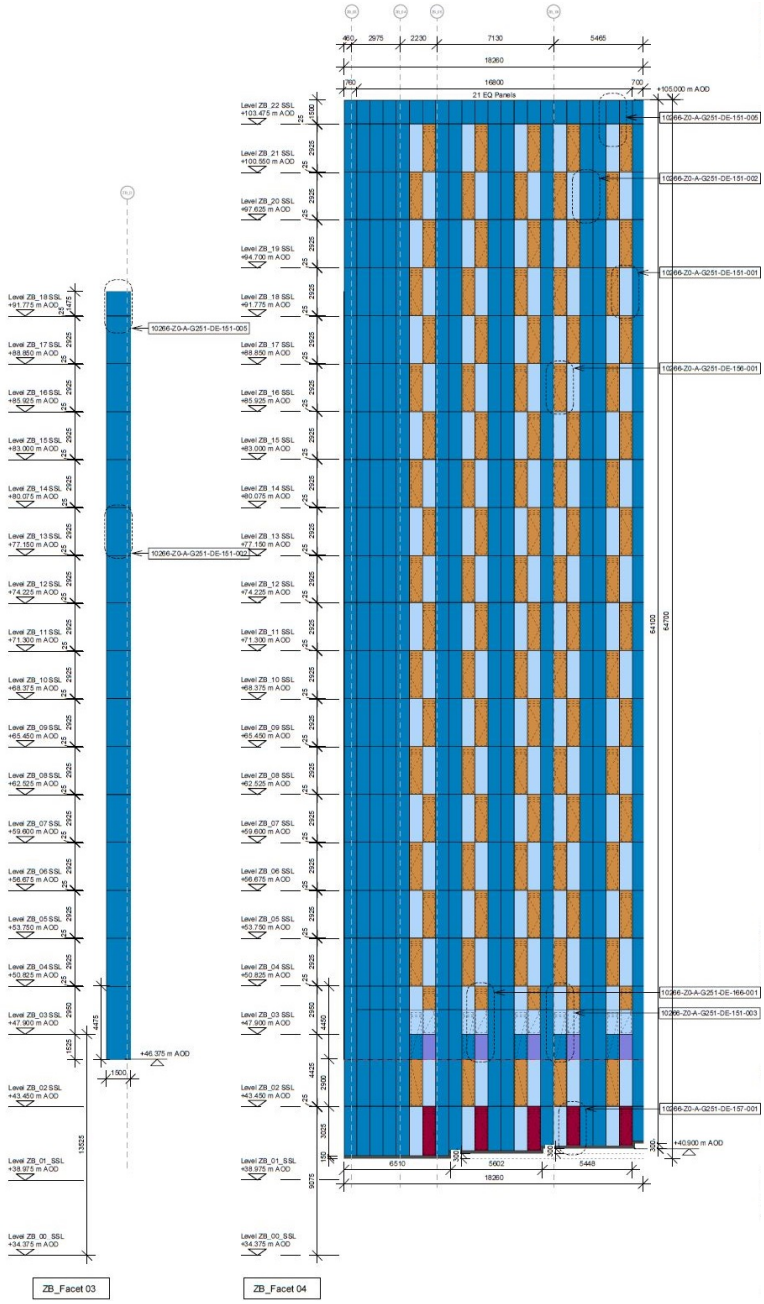
EWS – 155 DETAIL

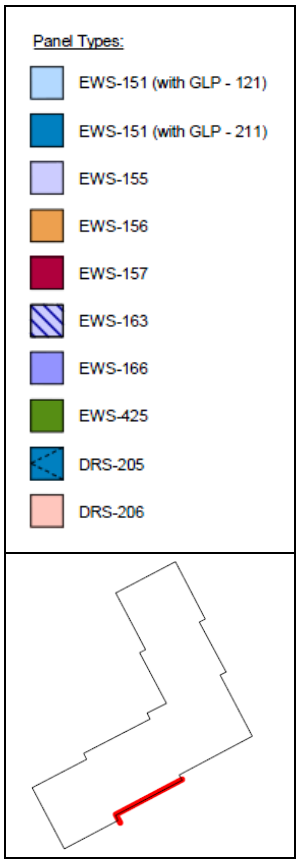
Refer to Building A detail 2_A..

EWS – 156 DETAIL

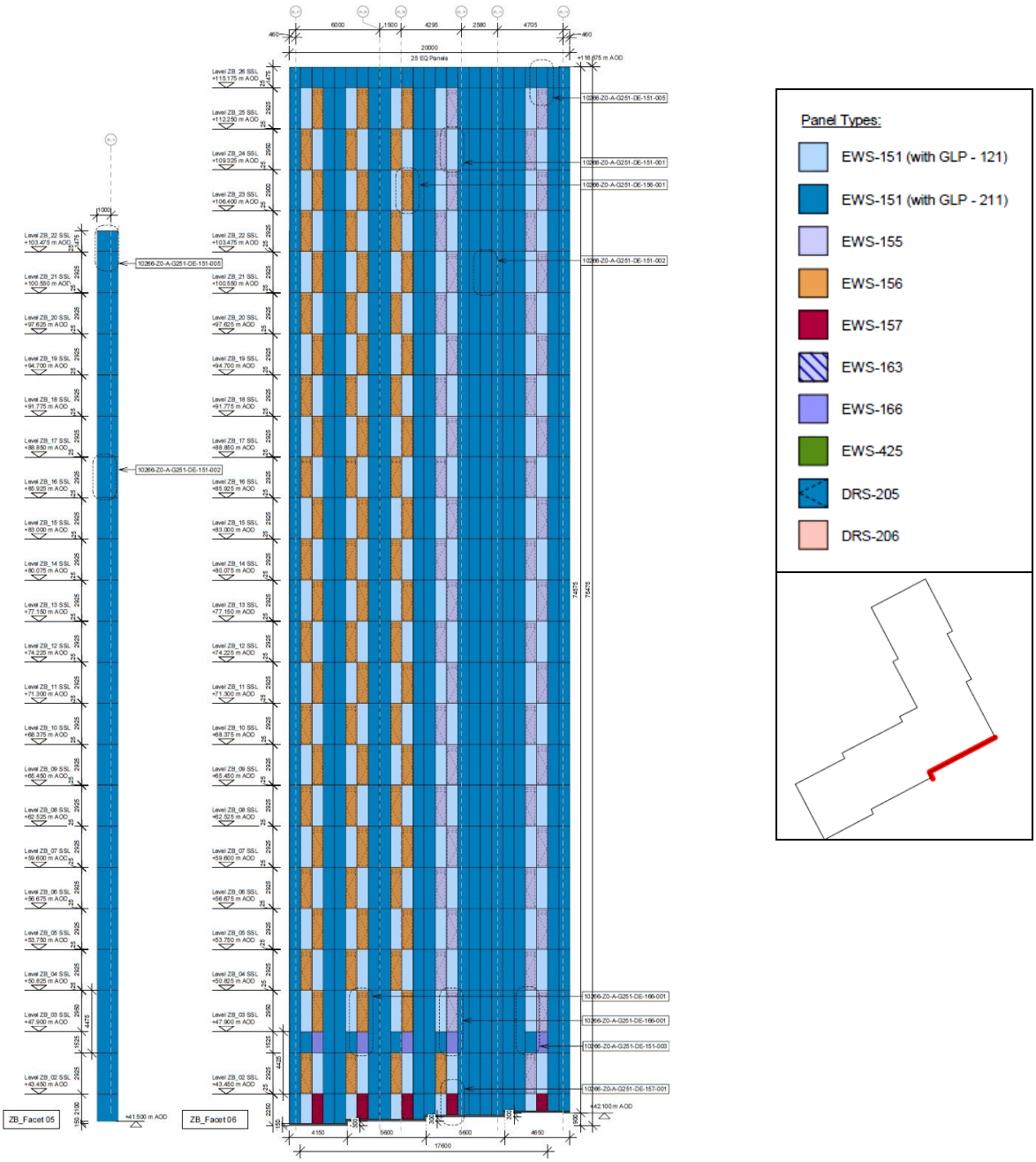
Refer to Building A detail 1_A.

FIRST STREET SOUTH MANCHESTER– BUILDING B
EAST AND **SOUTH** ELEVATION – FACET 3-4

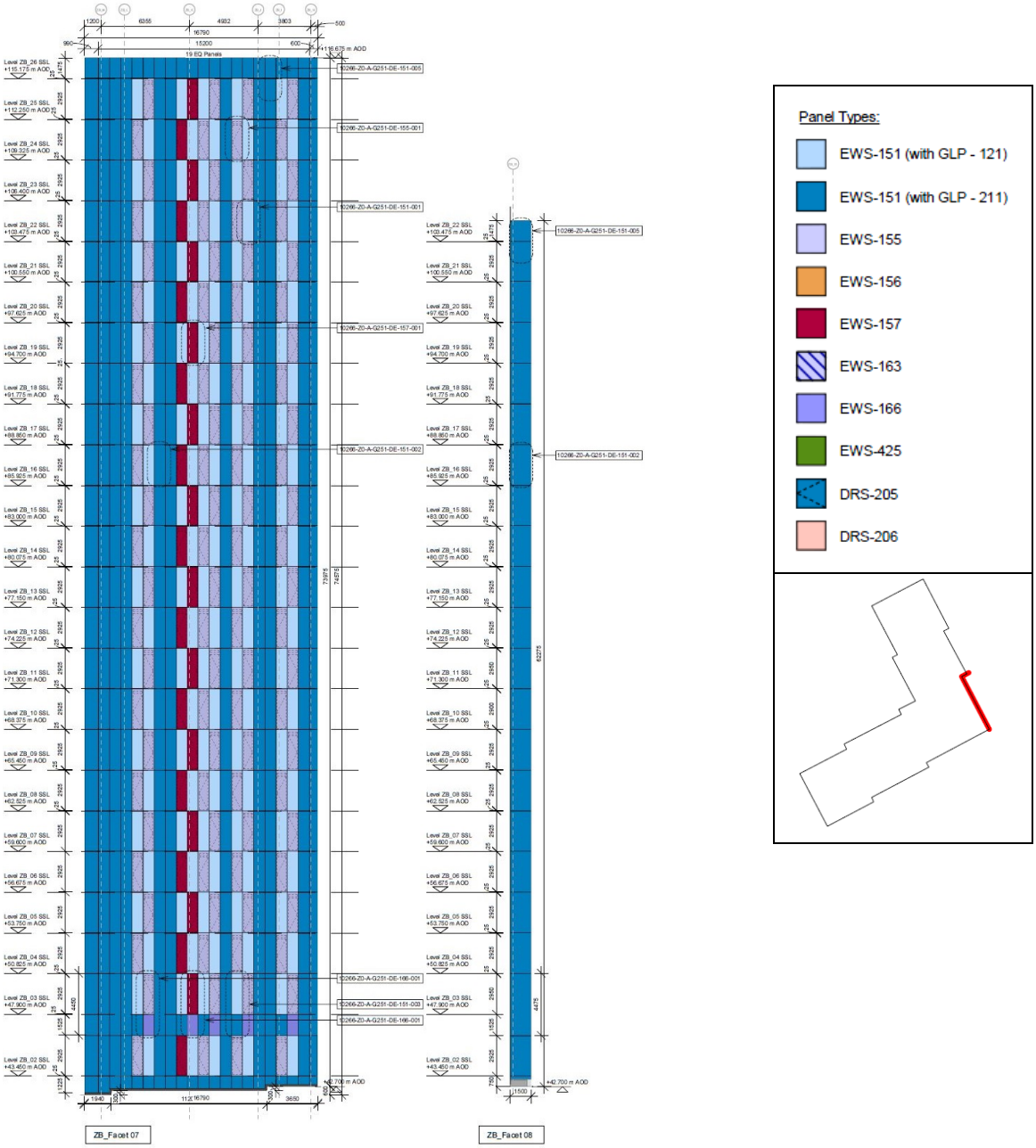




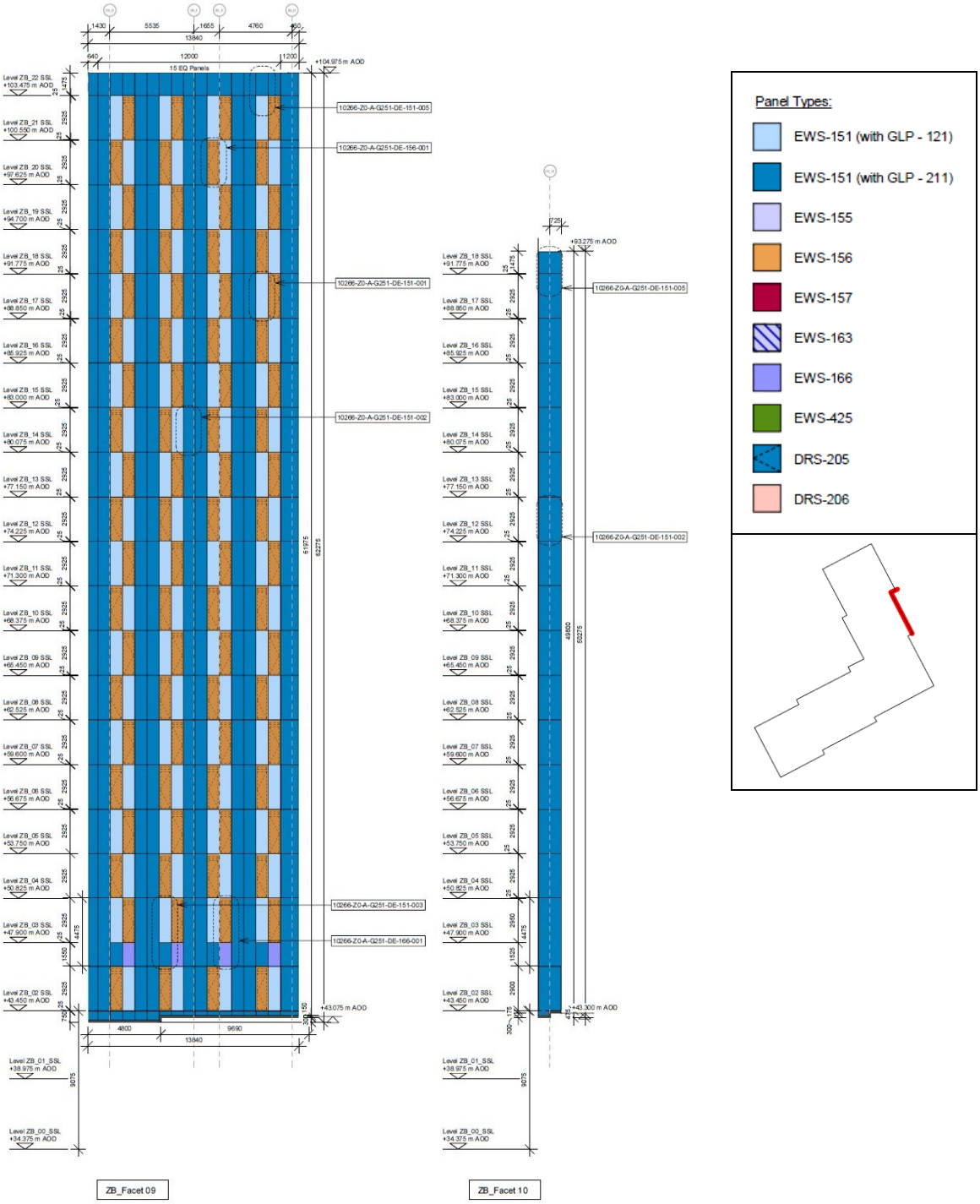
FIRST STREET SOUTH MANCHESTER– BUILDING B
EAST AND **SOUTH** ELEVATION – FACET 5-6



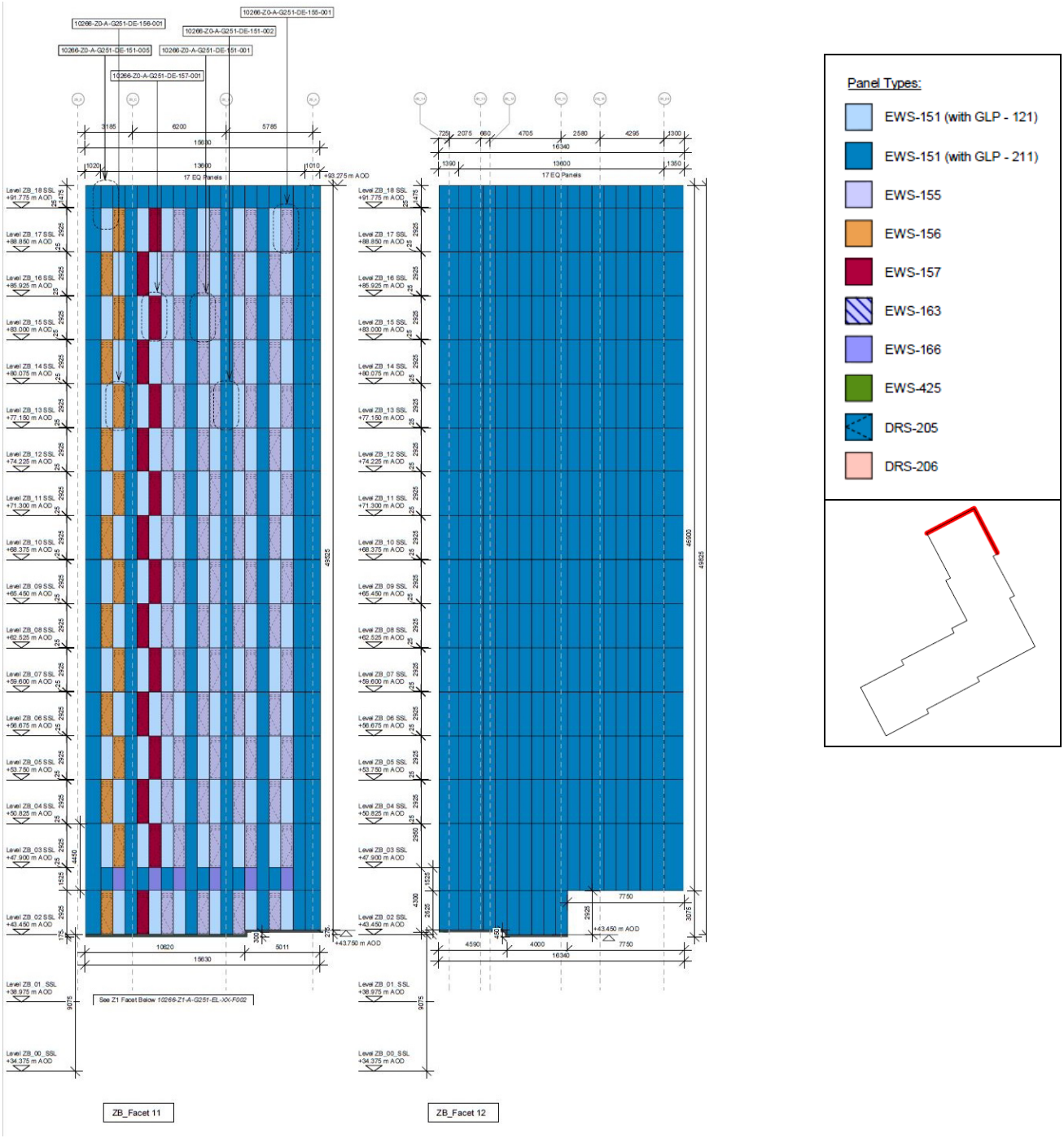
FIRST STREET SOUTH MANCHESTER– BUILDING B
EAST AND **SOUTH** ELEVATION – FACET 7-8



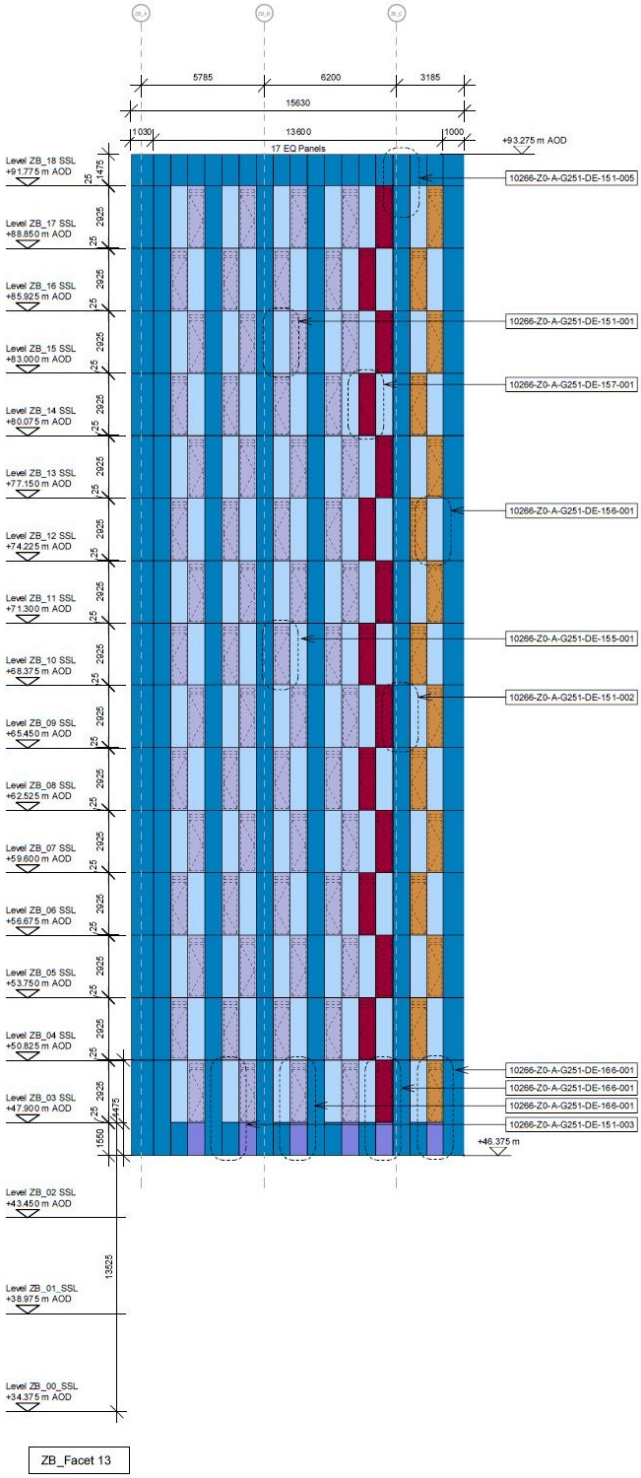
FIRST STREET SOUTH MANCHESTER– BUILDING B
EAST AND **SOUTH** ELEVATION – FACET 9-10

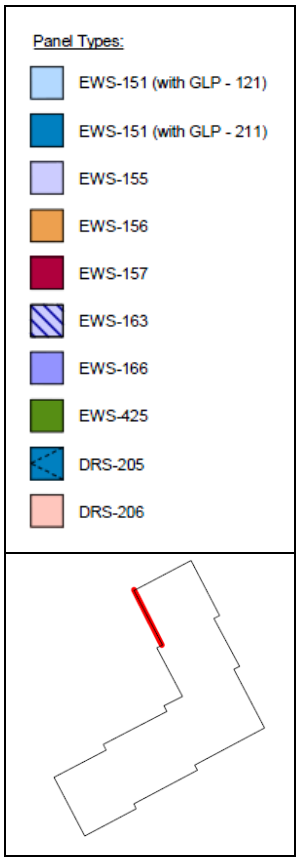


FIRST STREET SOUTH MANCHESTER– BUILDING B
EAST AND **NORTH** ELEVATION – FACET 11-12

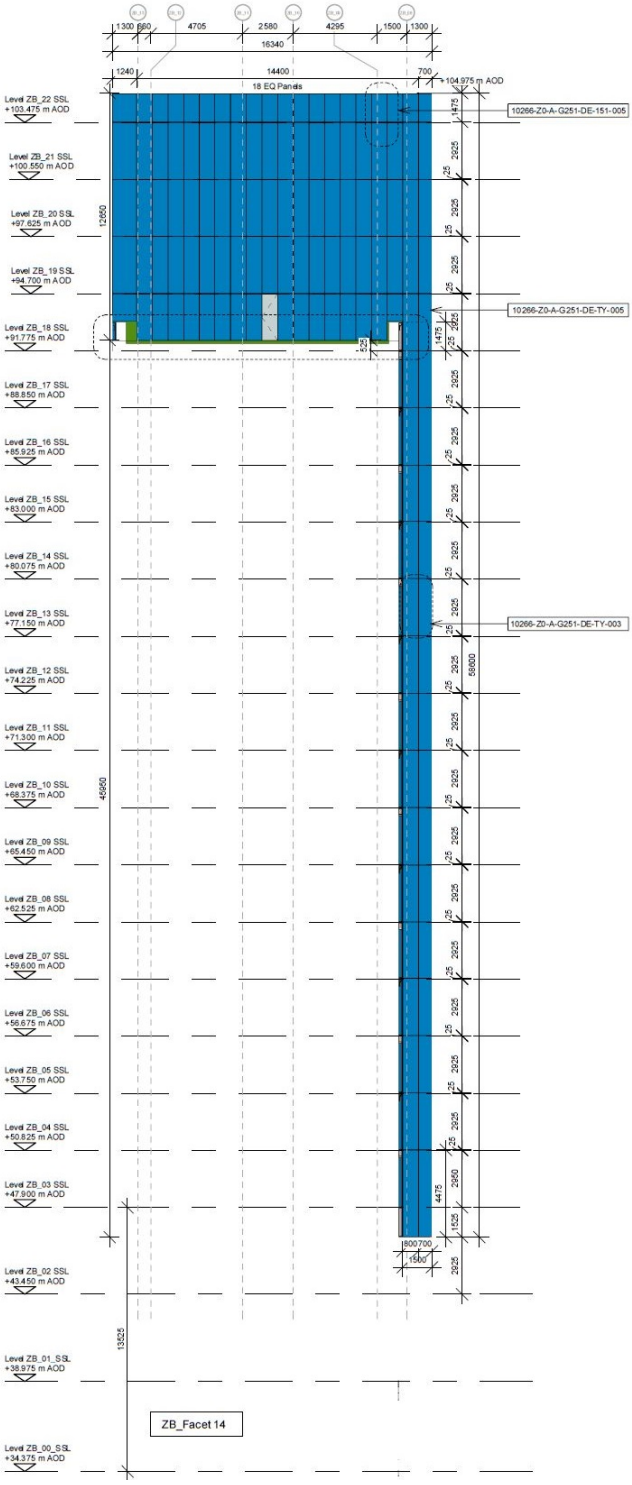


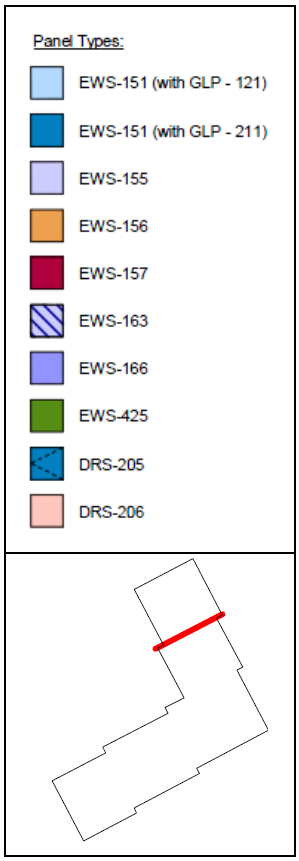
FIRST STREET SOUTH MANCHESTER– BUILDING B
WEST ELEVATION – FACET 13



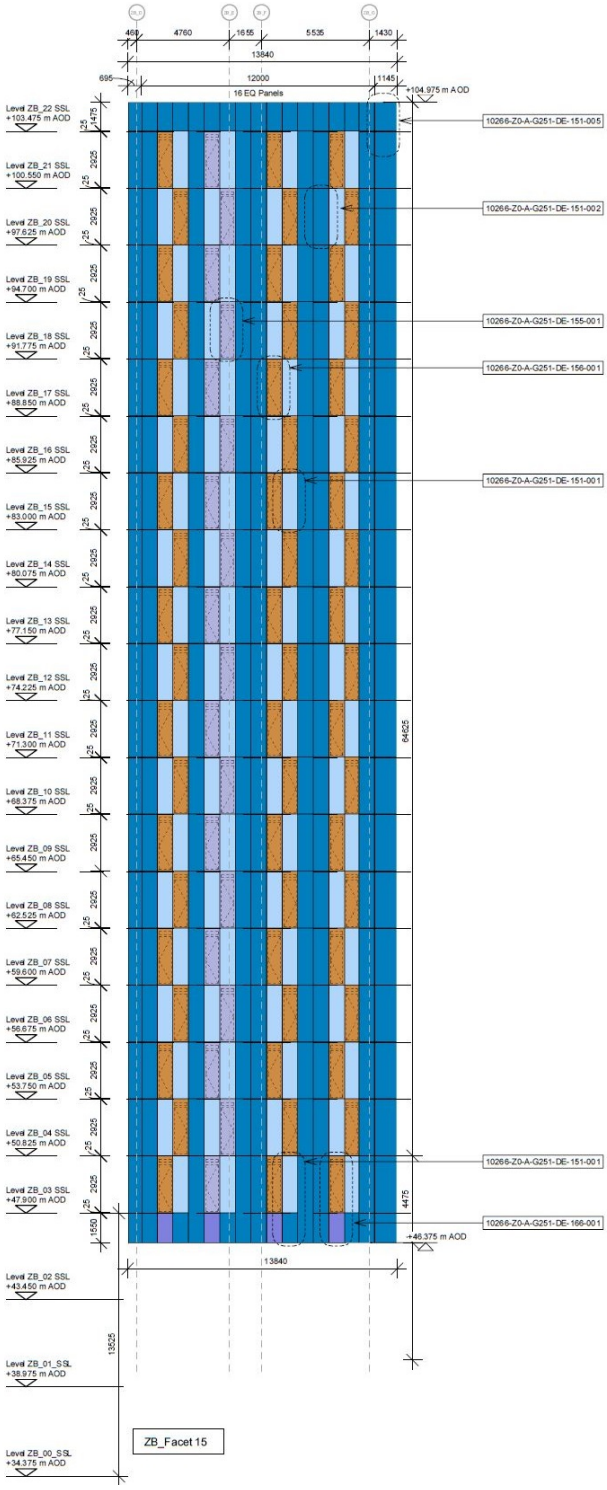


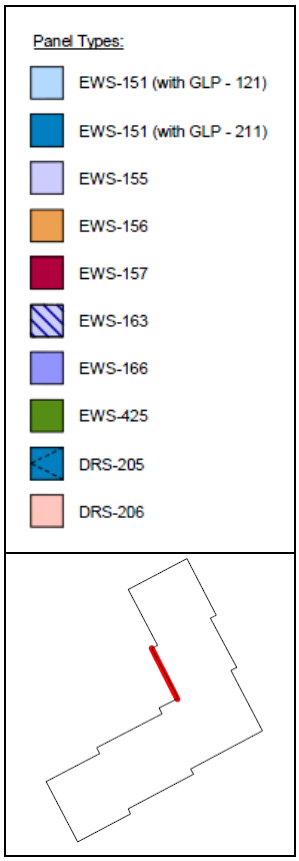
FIRST STREET SOUTH MANCHESTER– BUILDING B
NORTH ELEVATION – FACET 14



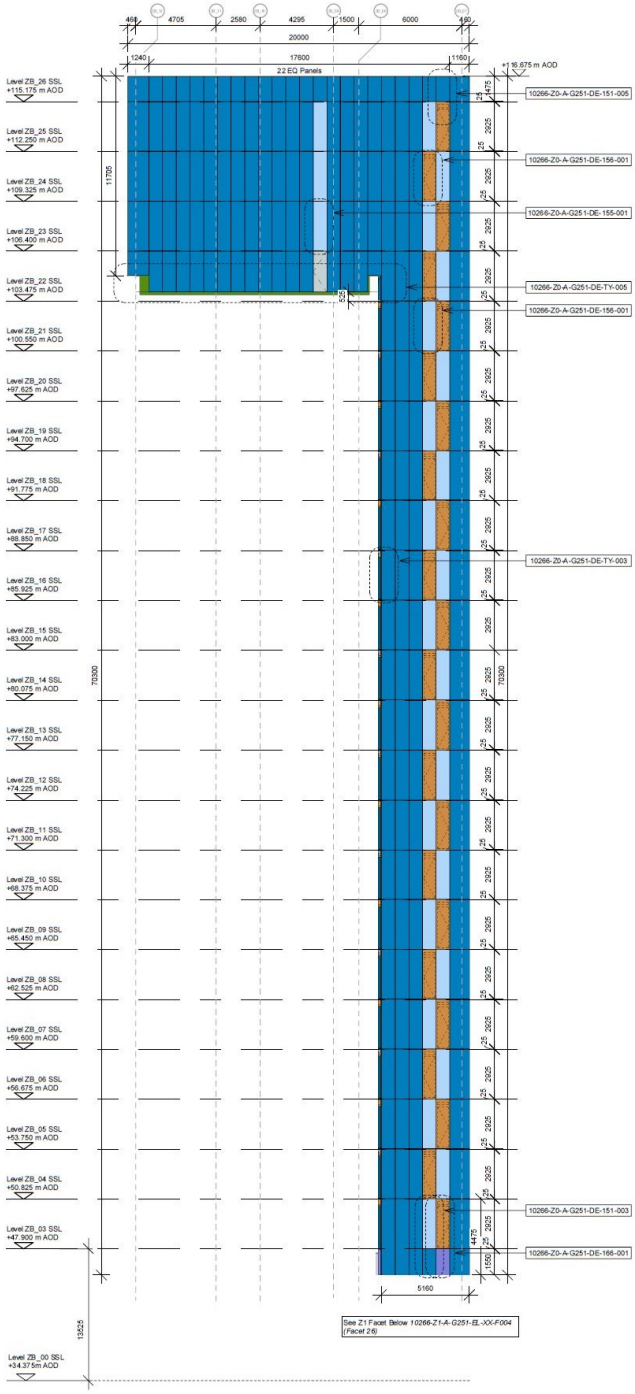


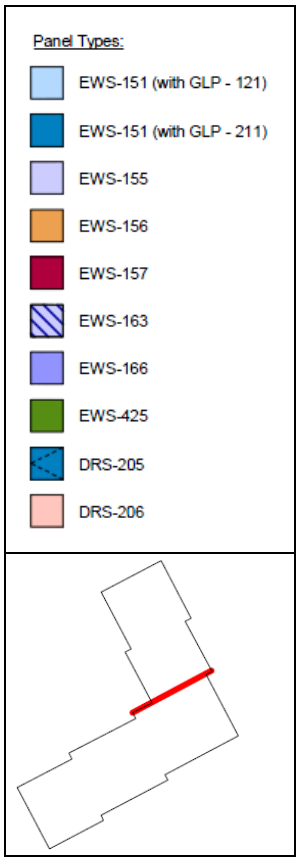
FIRST STREET SOUTH MANCHESTER– BUILDING B
WEST ELEVATION – FACET 15



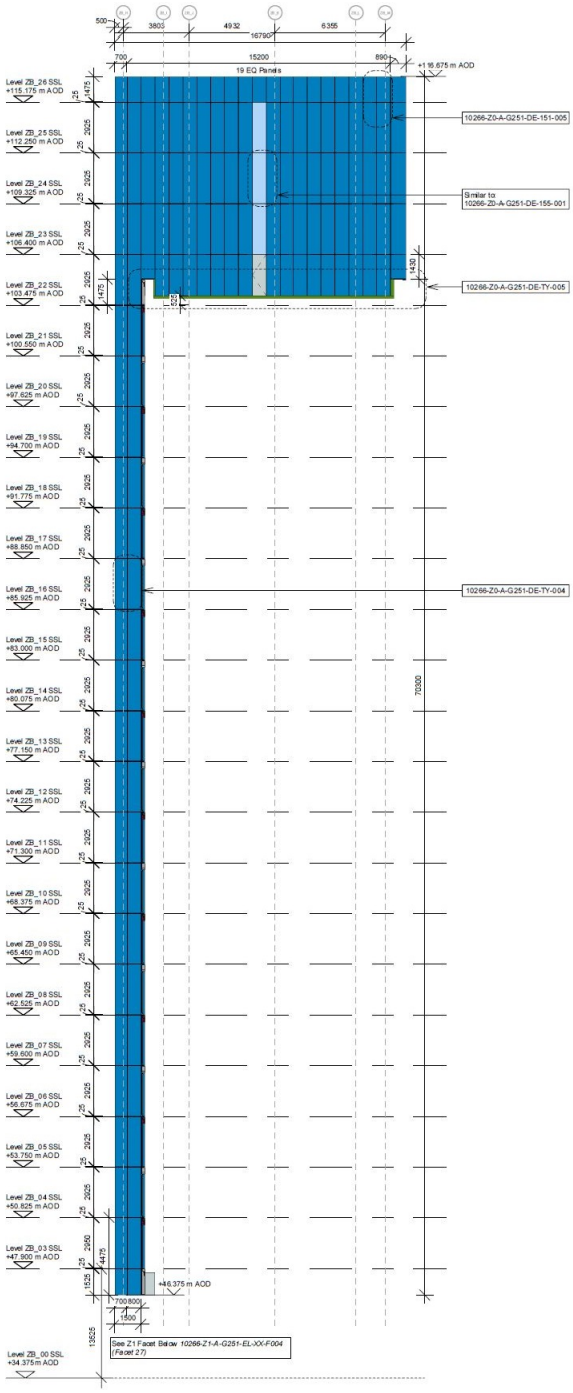


FIRST STREET SOUTH MANCHESTER– BUILDING B
NORTH ELEVATION – FACET 16

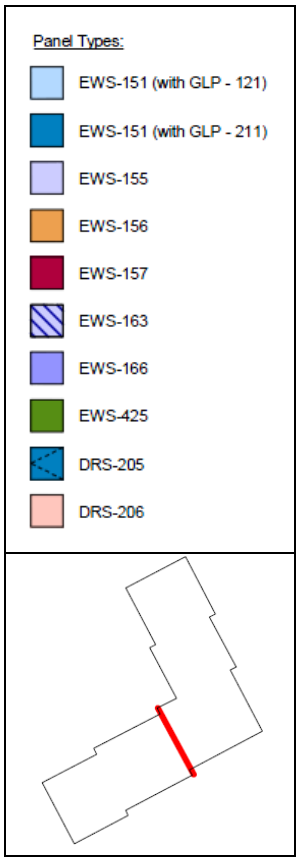




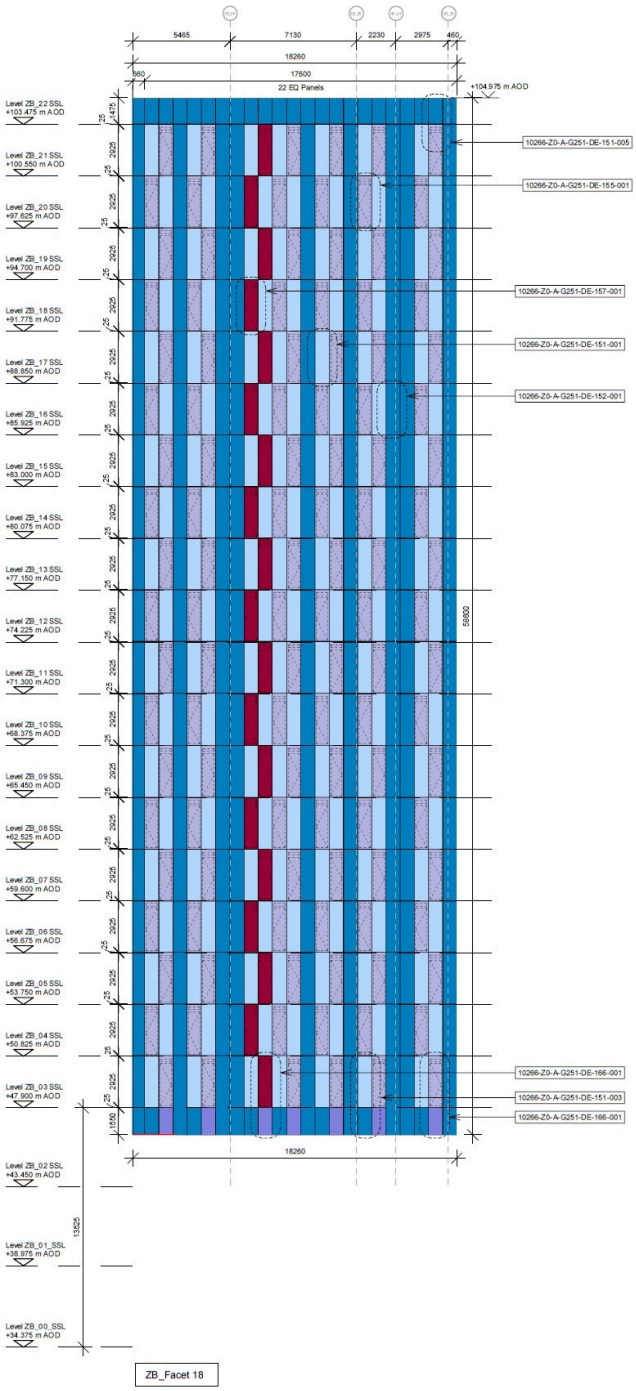
FIRST STREET SOUTH MANCHESTER– BUILDING B
WEST ELEVATION – FACET 17

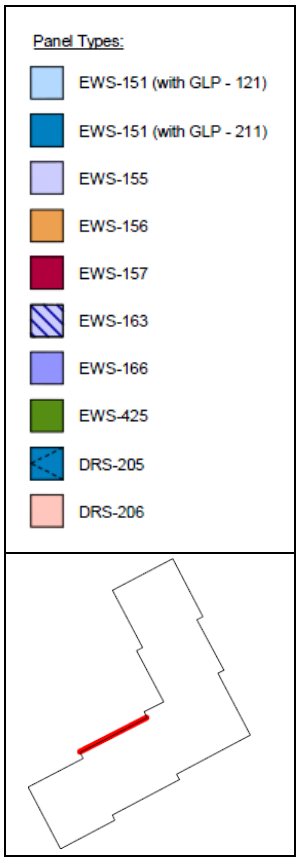


ZB_Facet 17

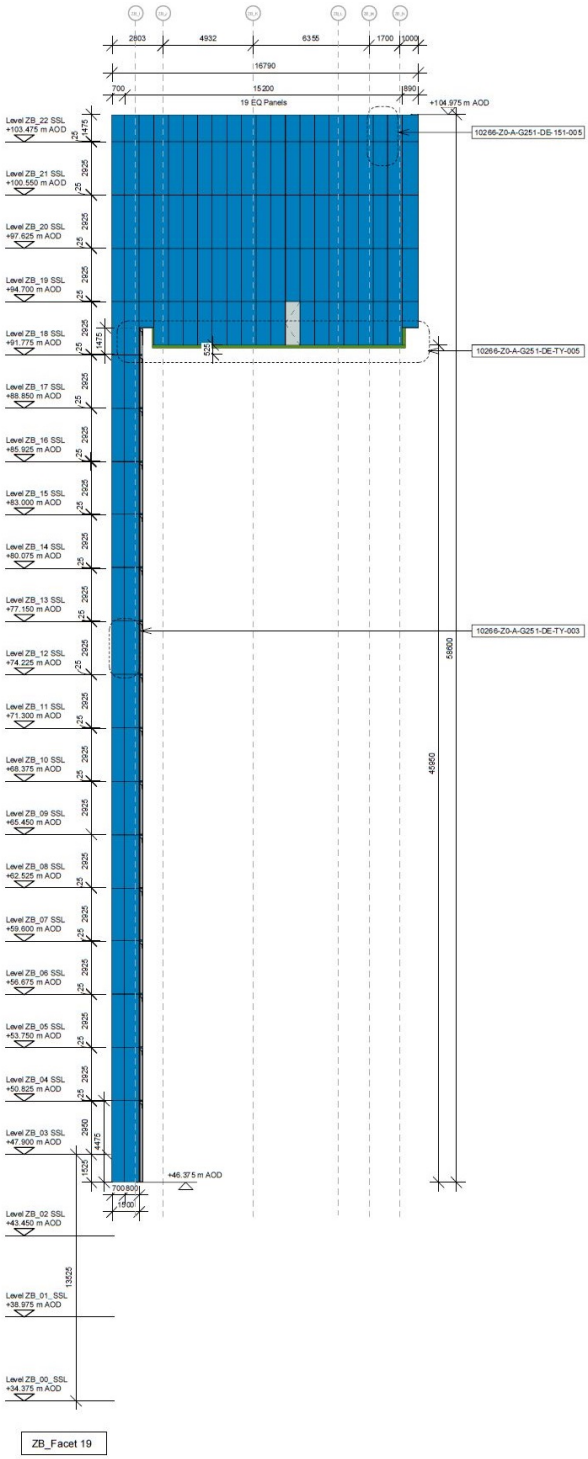


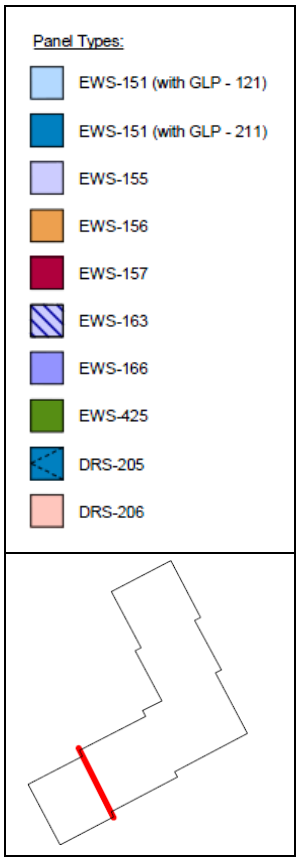
FIRST STREET SOUTH MANCHESTER– BUILDING B
NORTH ELEVATION – FACET 18



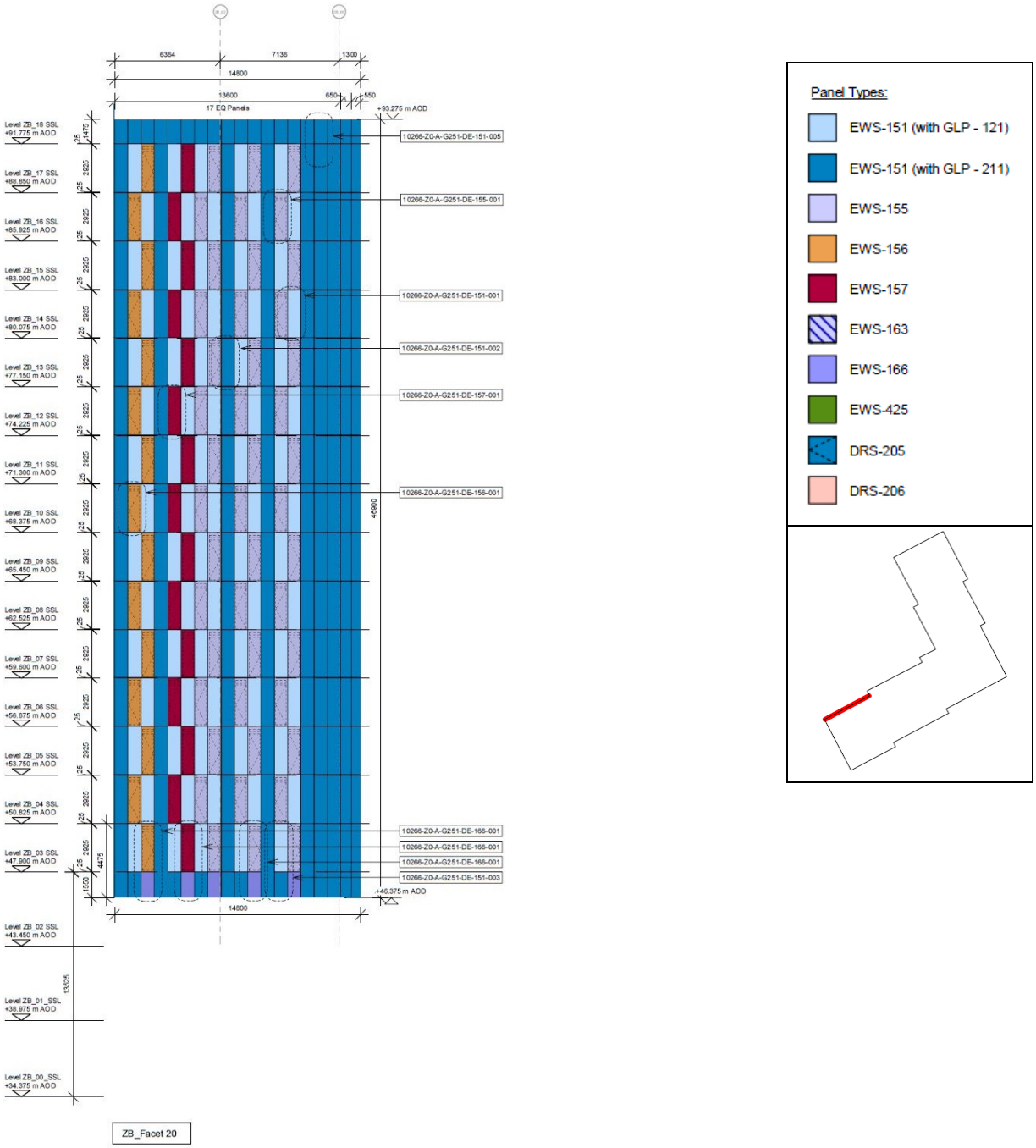


FIRST STREET SOUTH MANCHESTER– BUILDING B
WEST ELEVATION – FACET 19





FIRST STREET SOUTH MANCHESTER– BUILDING B
NORTH ELEVATION – FACET 20

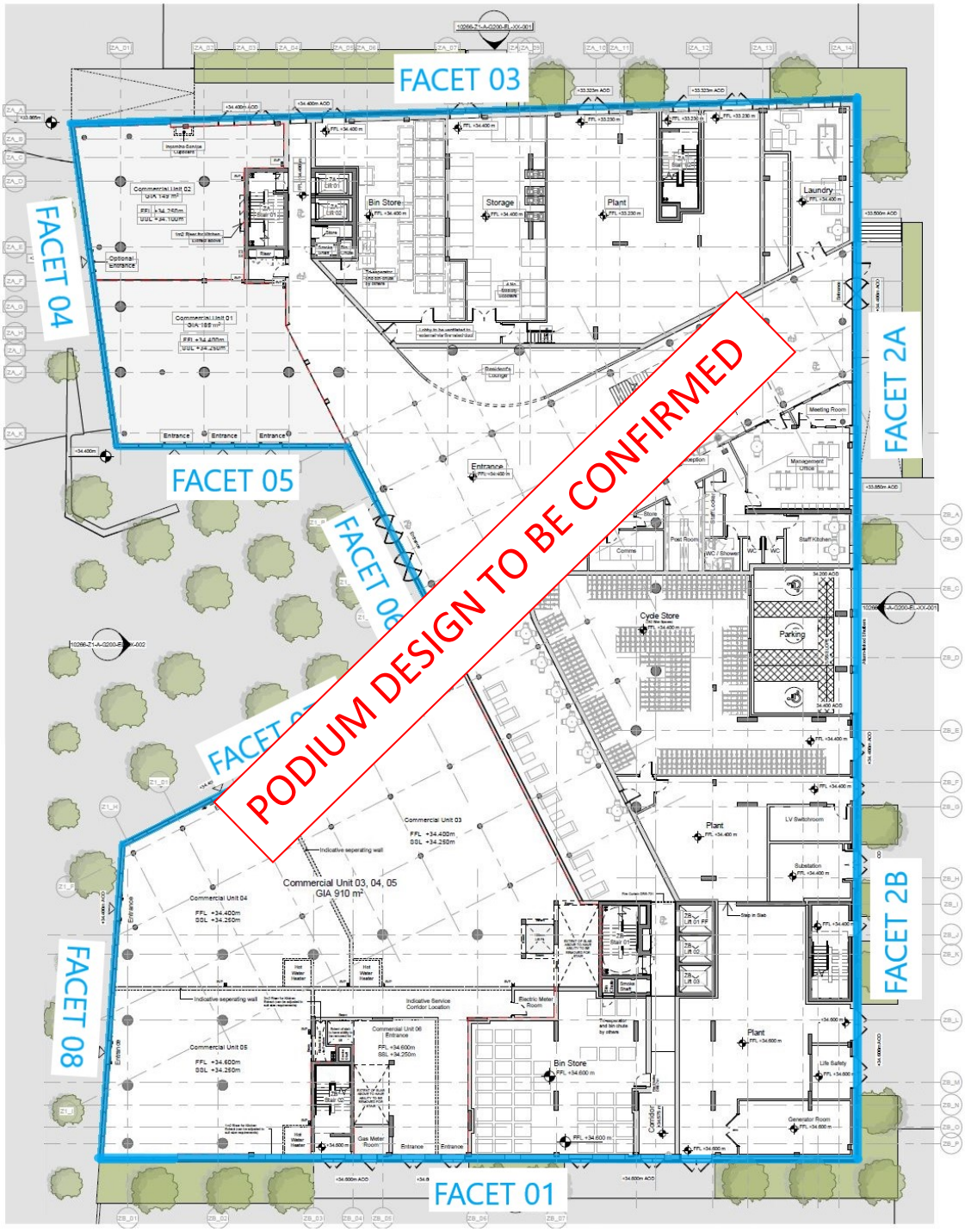


3.1.3 PODIUM A & B - SOW

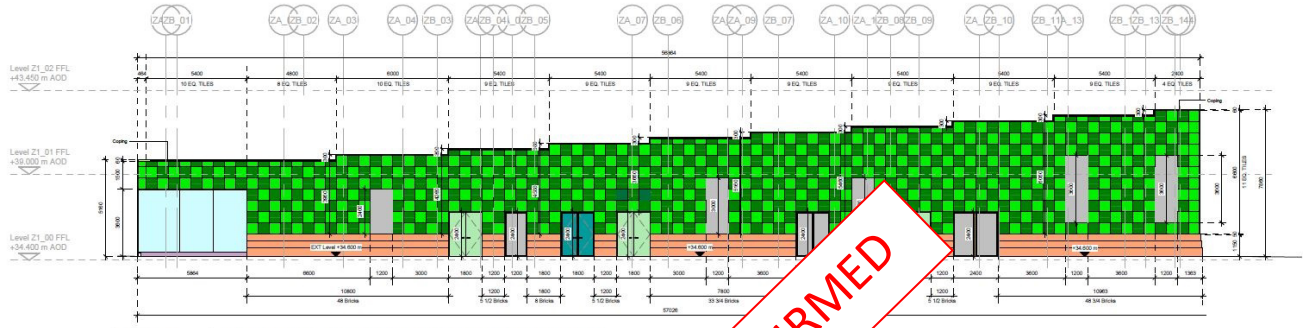
(façade features and names could change during design development)

FIRST STREET SOUTH MANCHESTER– BUILDING A,B PODIUM

GENERAL ARRANGEMENT

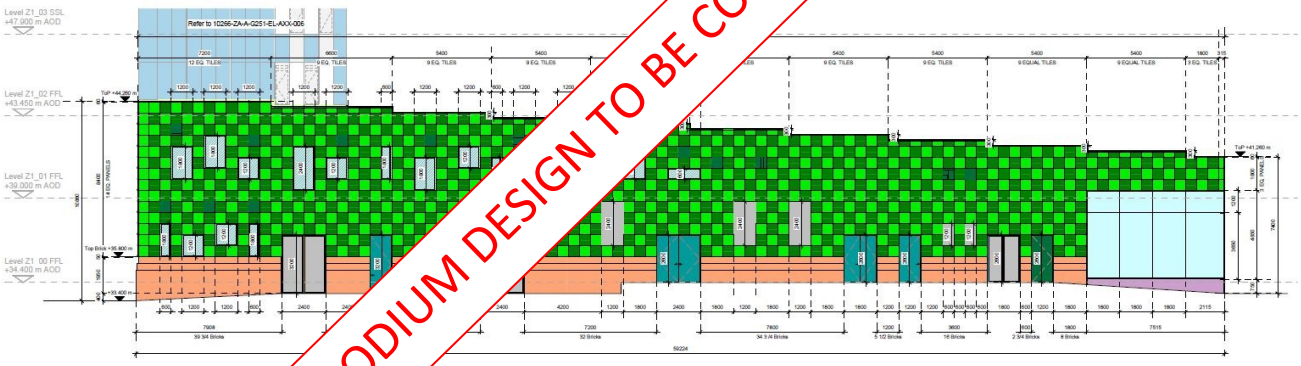


FIRST STREET SOUTH MANCHESTER– BUILDING A&B PODIUM
Z1 PODIUM SOUTH / NORTH ELEVATION – FACET 01 and 03



Z1_Facet 01
South Elevation

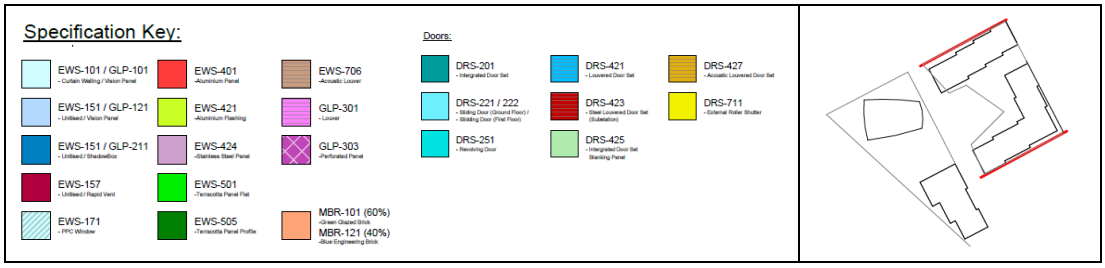
MBR 101/121 BRICKWORK EXCLUDED



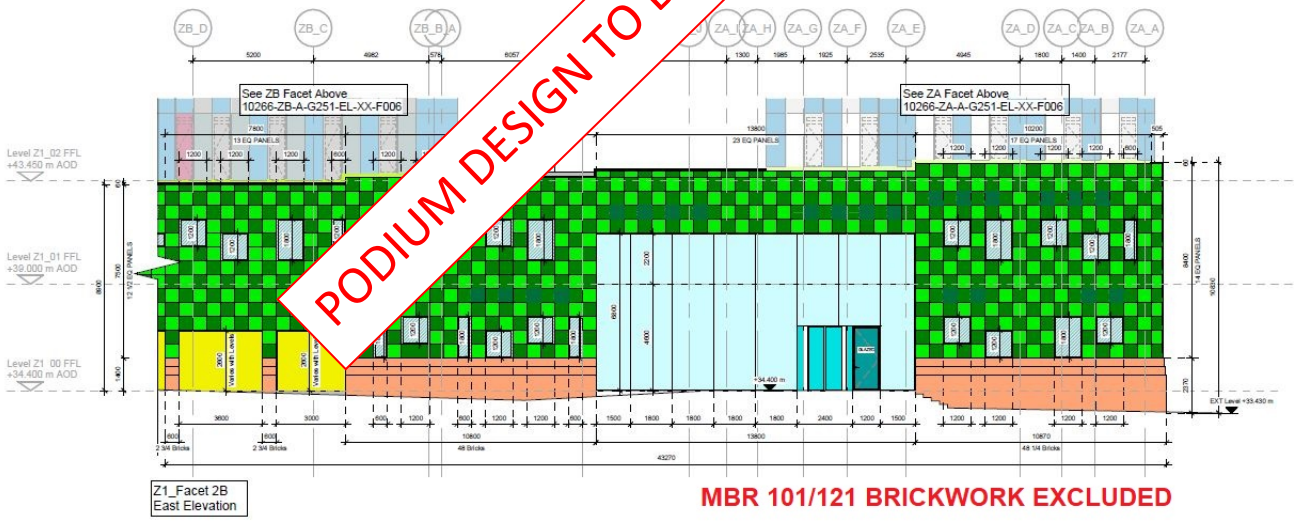
Z1_Facet 03
North Elevation

MBR 101 WORK EXCLUDED

PODIUM DESIGN TO BE CONFIRMED

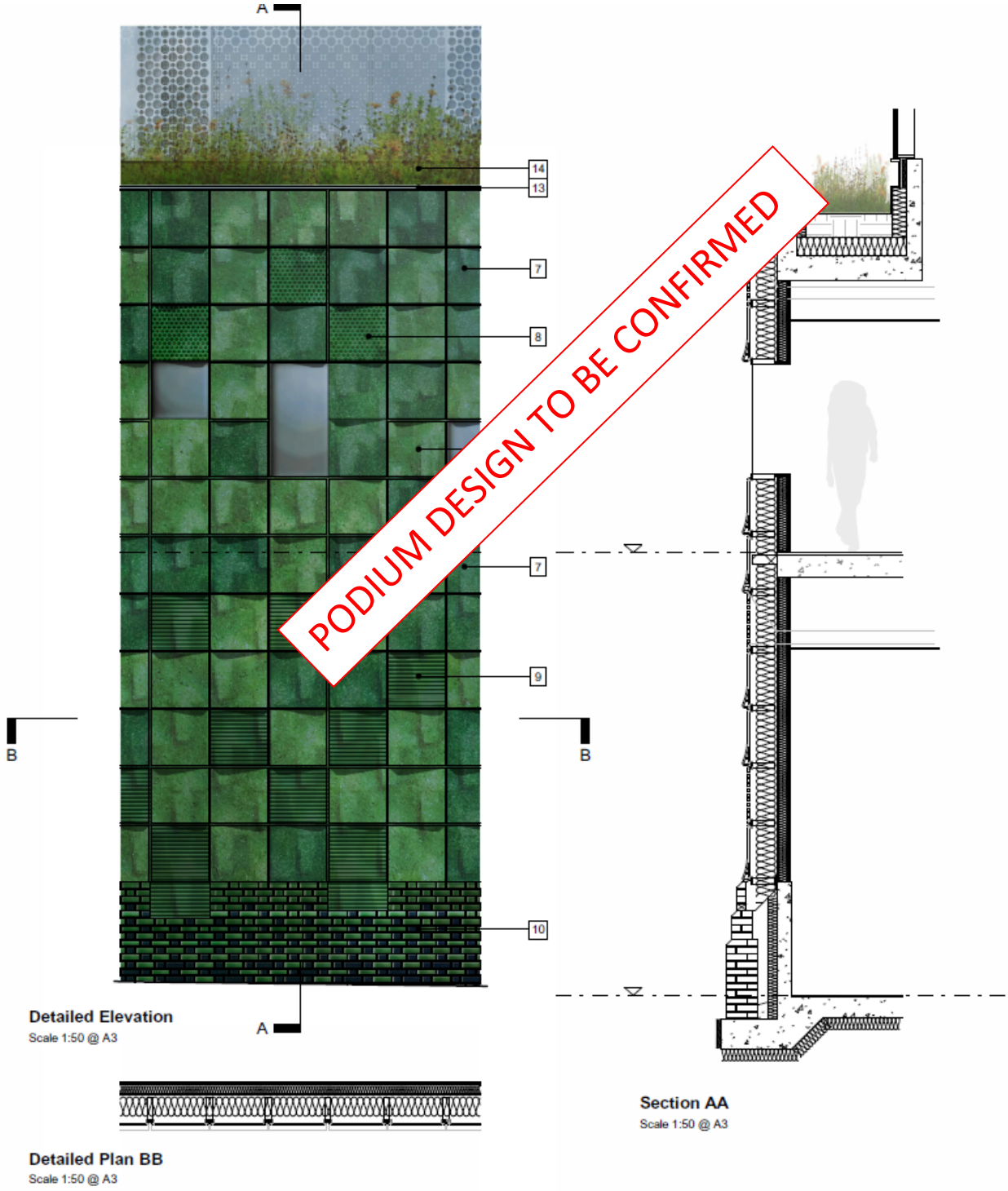


FIRST STREET SOUTH MANCHESTER– BUILDING A&B PODIUM
Z1 PODIUM EAST ELEVATION – FACET 2A and 2B

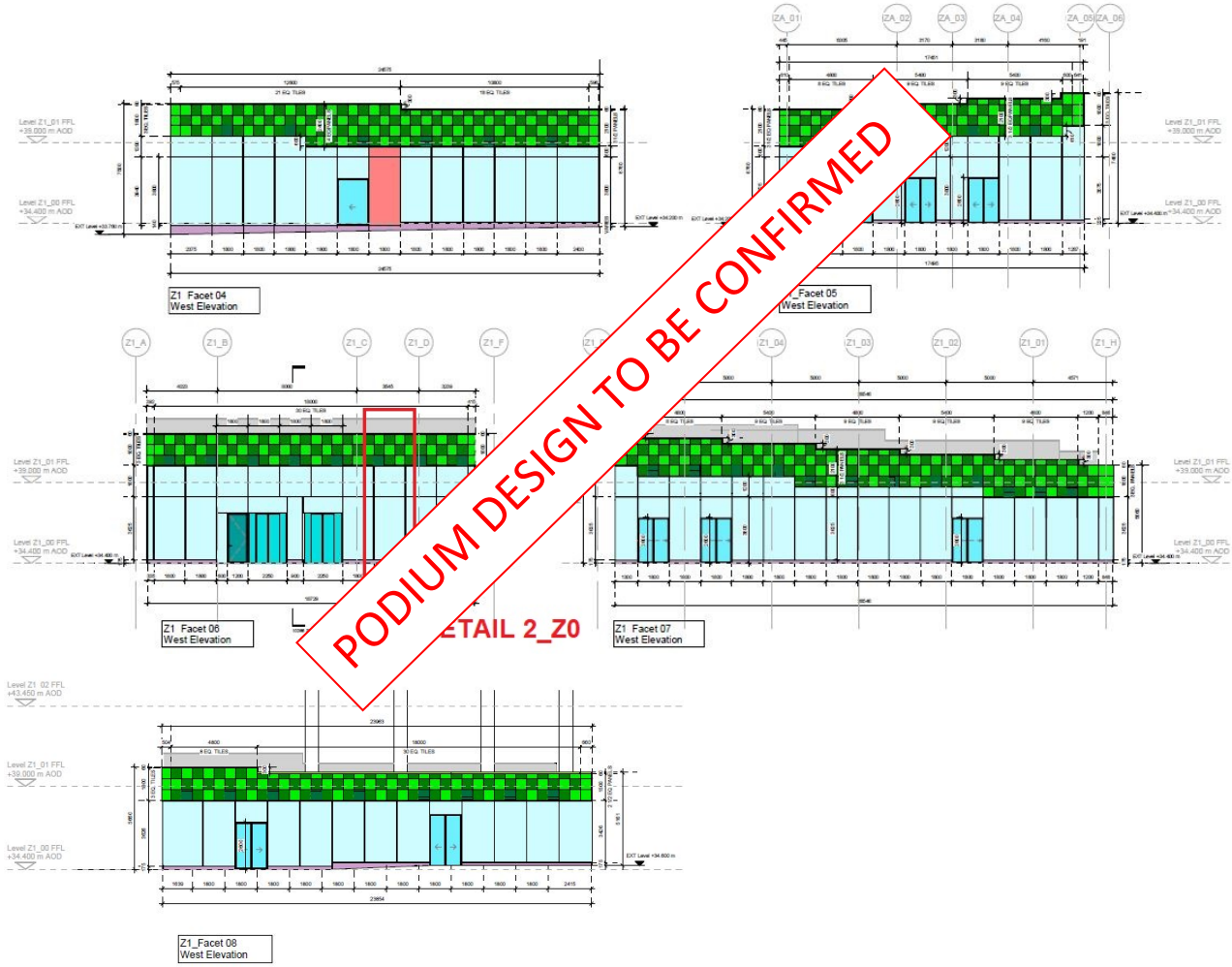


PODIUM DESIGN TO BE CONFIRMED

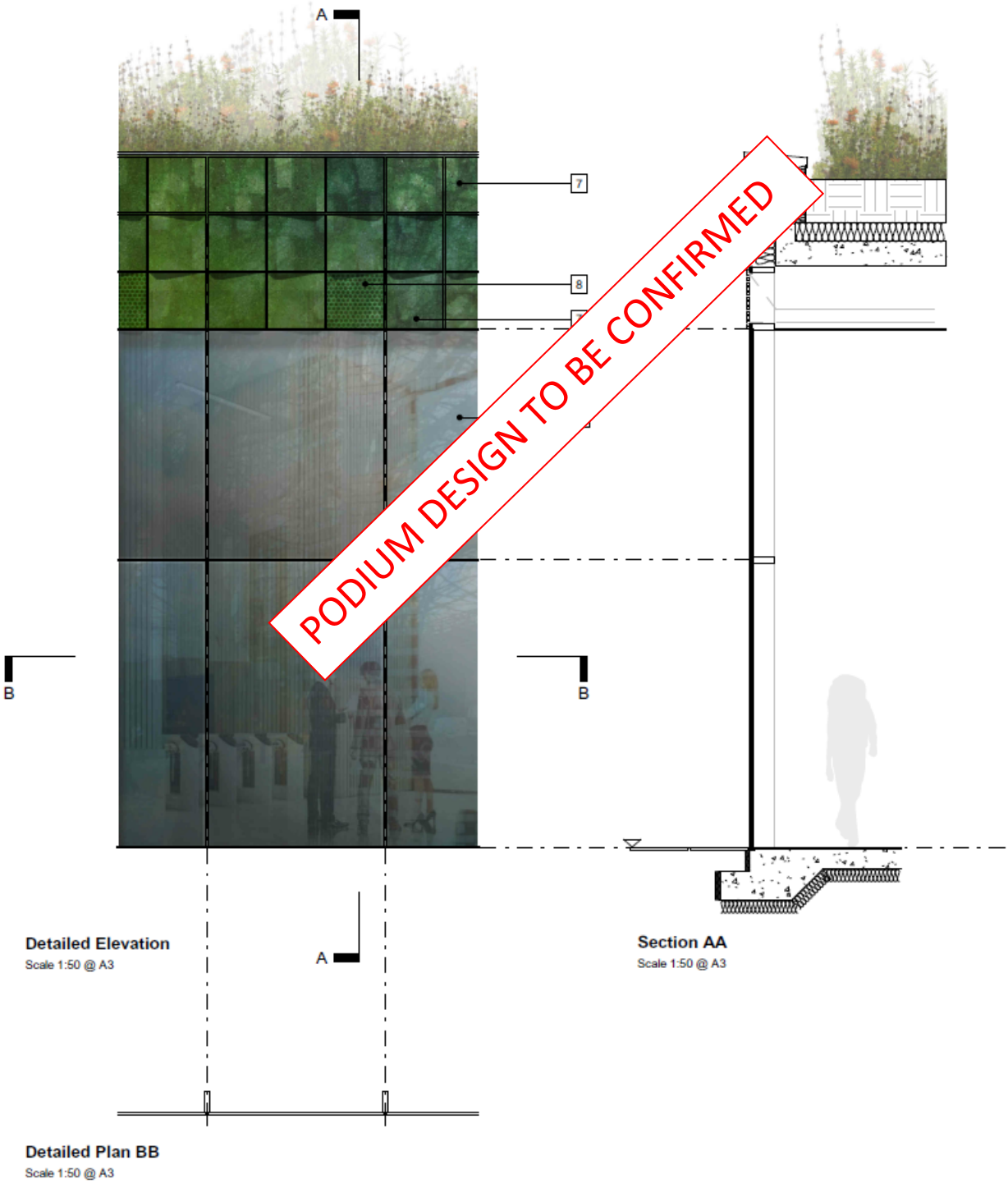
BUILDING A&B PODIUM - **EAST** ELEVATION – FACET 2A – DETAIL 1_Z0



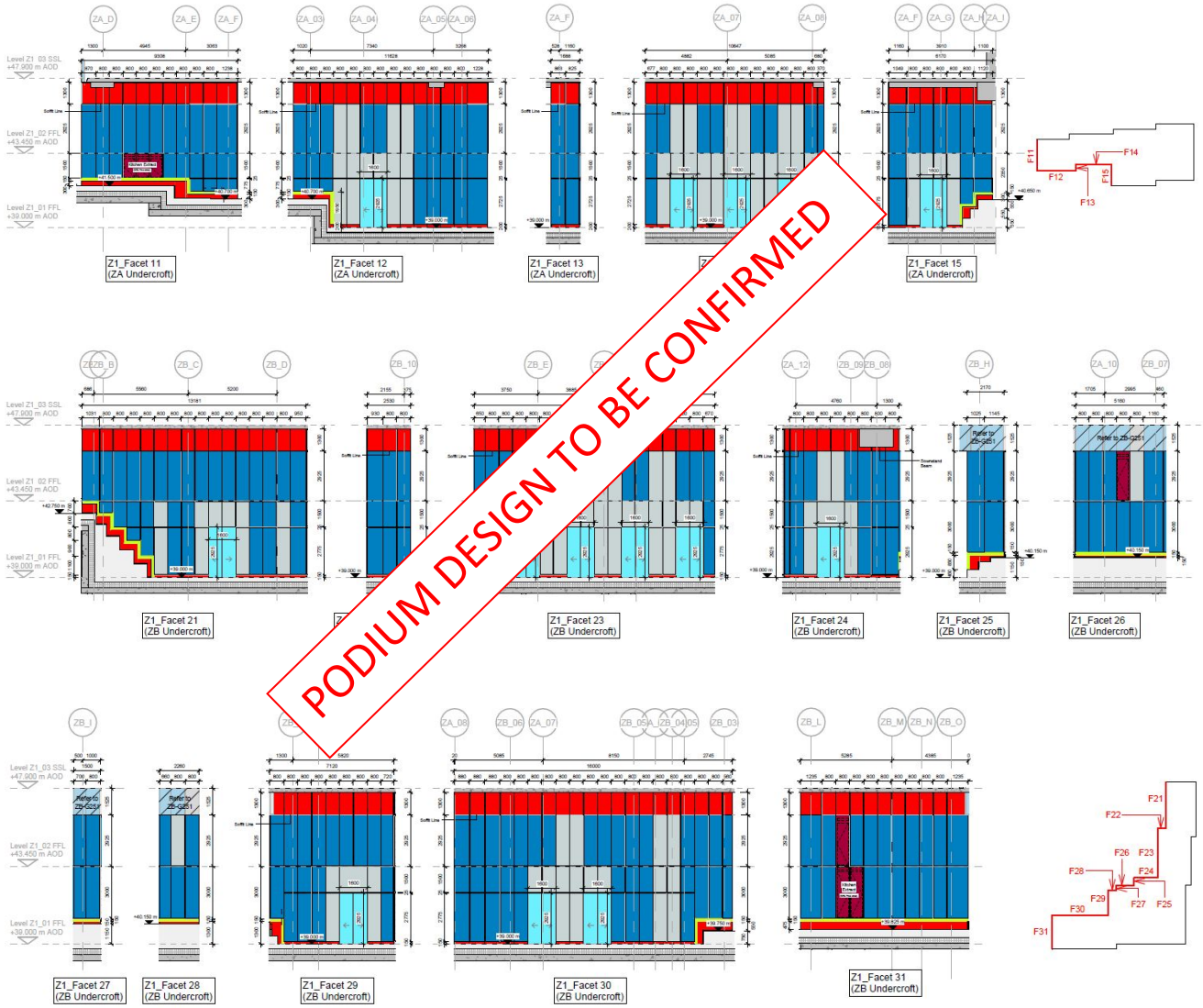
FIRST STREET SOUTH MANCHESTER– BUILDING A&B PODIUM
Z1 PODIUM WEST ELEVATION– FACET 04-05-06-07-08



BUILDING A&B PODIUM - **EAST** ELEVATION – FACET 06 – DETAIL 2_Z0



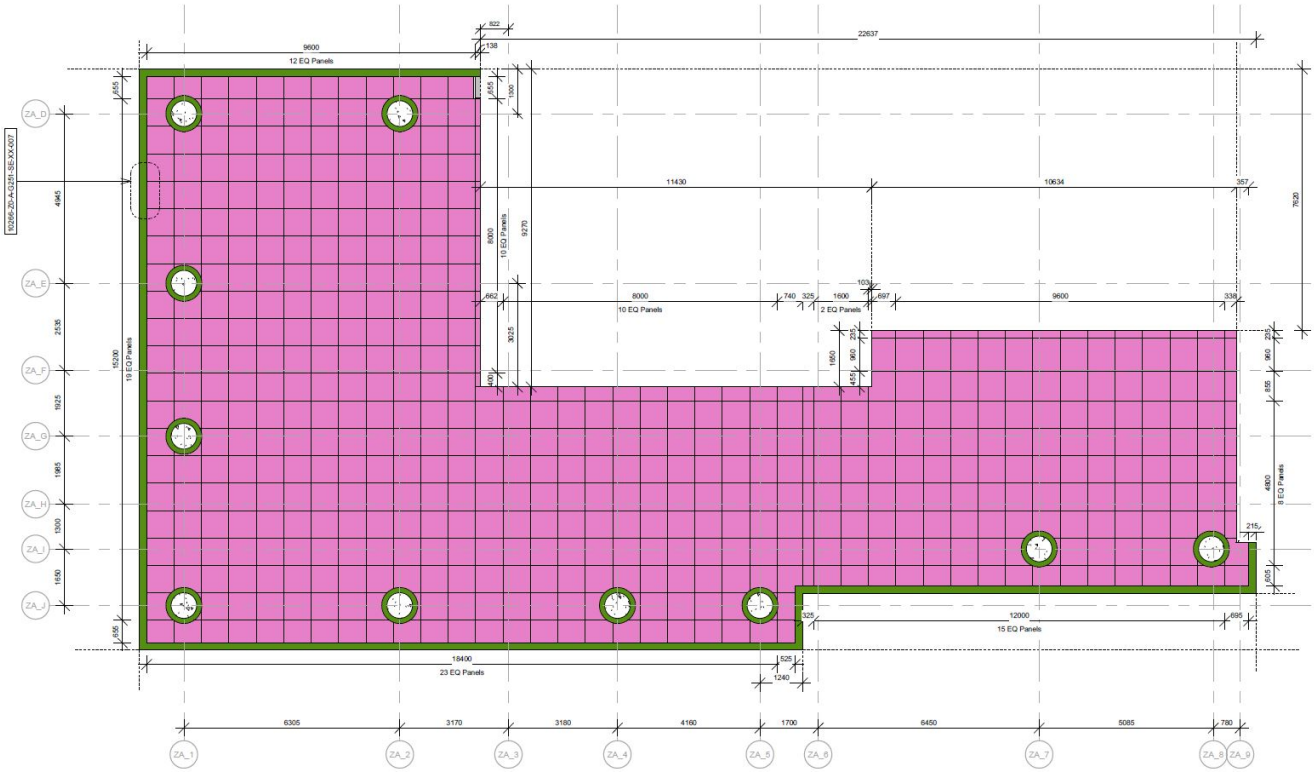
FIRST STREET SOUTH MANCHESTER– BUILDING A,B PODIUM
Z1 PODIUM_ZA & ZB UNDERCROFT– FACET 11-15, 21-31

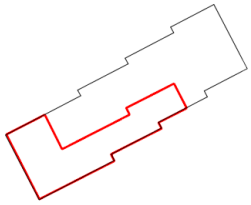


3.1.4 SOFFIT A & B - SOW

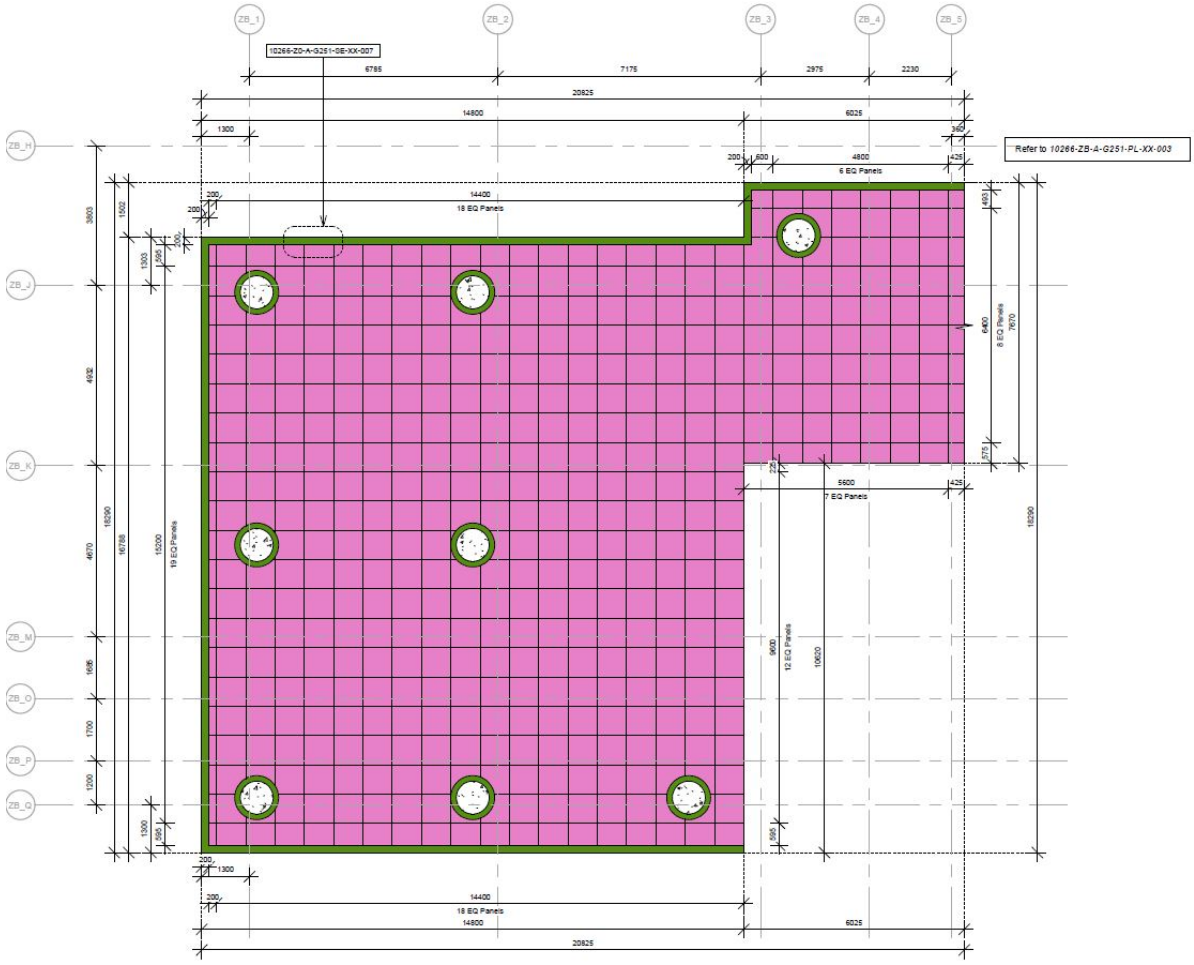
(soffit features and names could change during design development)

FIRST STREET SOUTH MANCHESTER– BUILDING A
SOFFIT PLAN – SHEET 1 - LEVEL 02-03



Soffit Panel Types:	
EWS - 425	
EWS - 405	

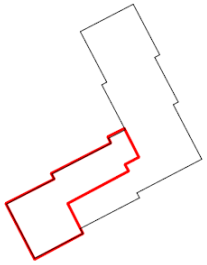
FIRST STREET SOUTH MANCHESTER– BUILDING B
SOFFIT PLAN – SHEET 1 - LEVEL 02-03



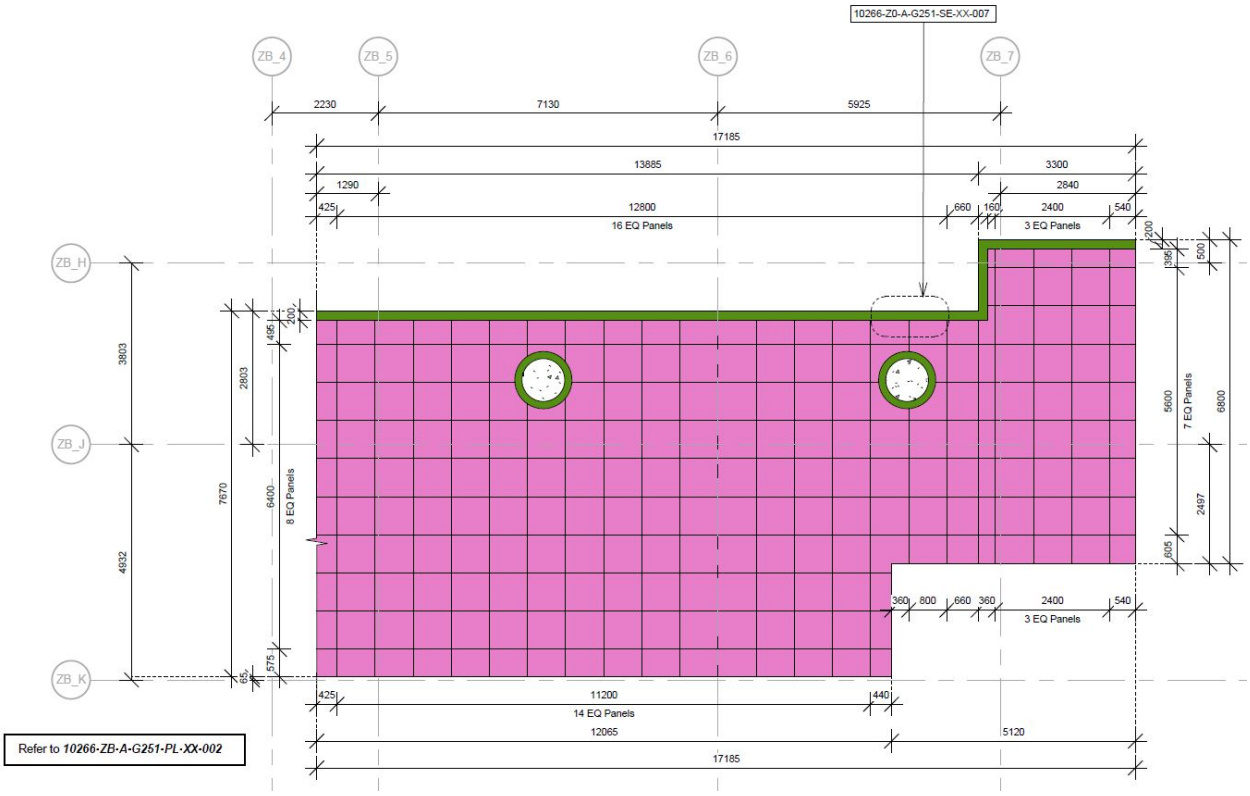
Soffit Panel Types:

EWS - 425

EWS - 405



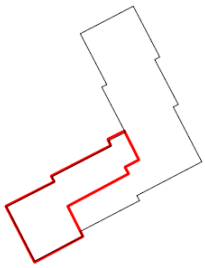
FIRST STREET SOUTH MANCHESTER– BUILDING B
SOFFIT PLAN – SHEET 2 - LEVEL 02-03



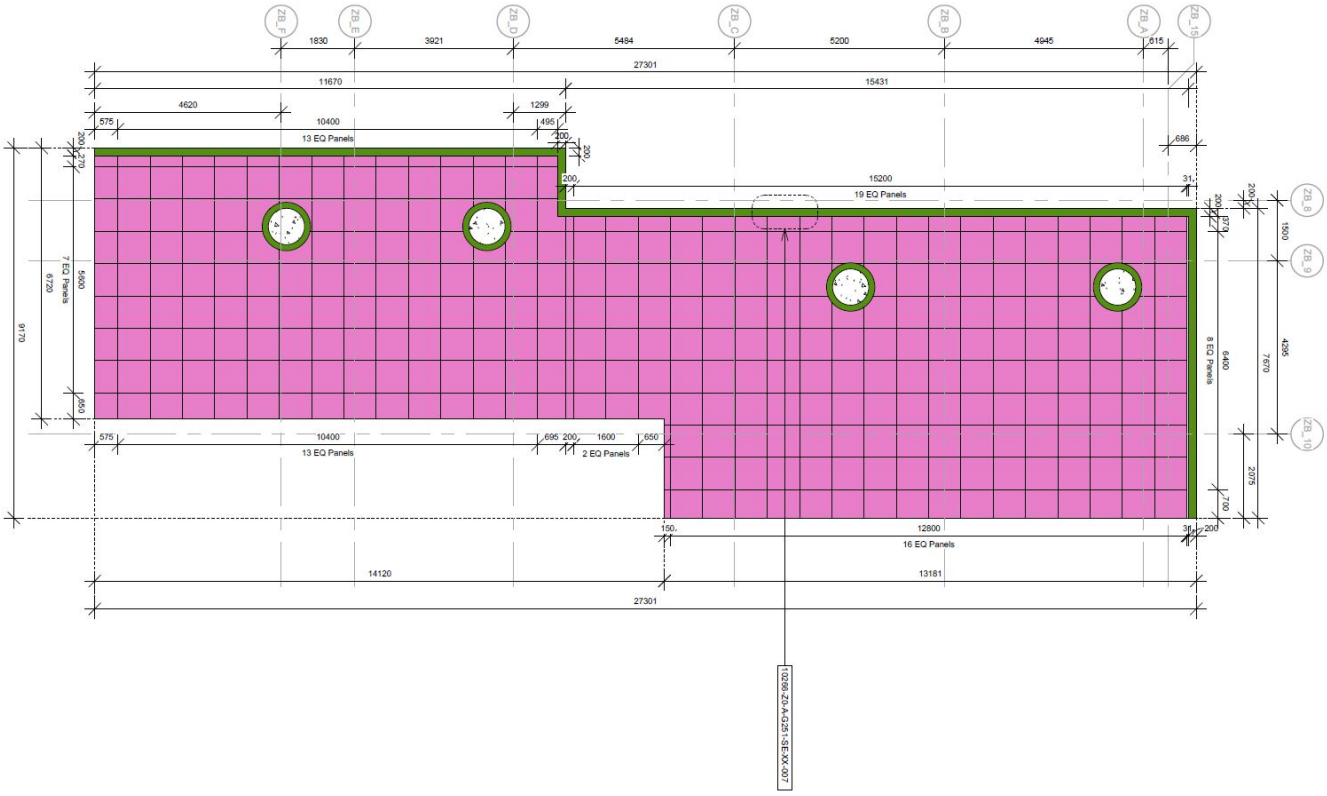
Soffit Panel Types:

EWS - 425

EWS - 405



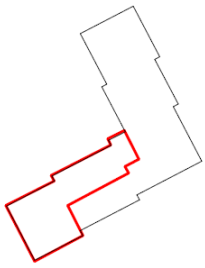
FIRST STREET SOUTH MANCHESTER– BUILDING B
SOFFIT PLAN – SHEET 3 - LEVEL 02-03



Soffit Panel Types:

EWS - 425

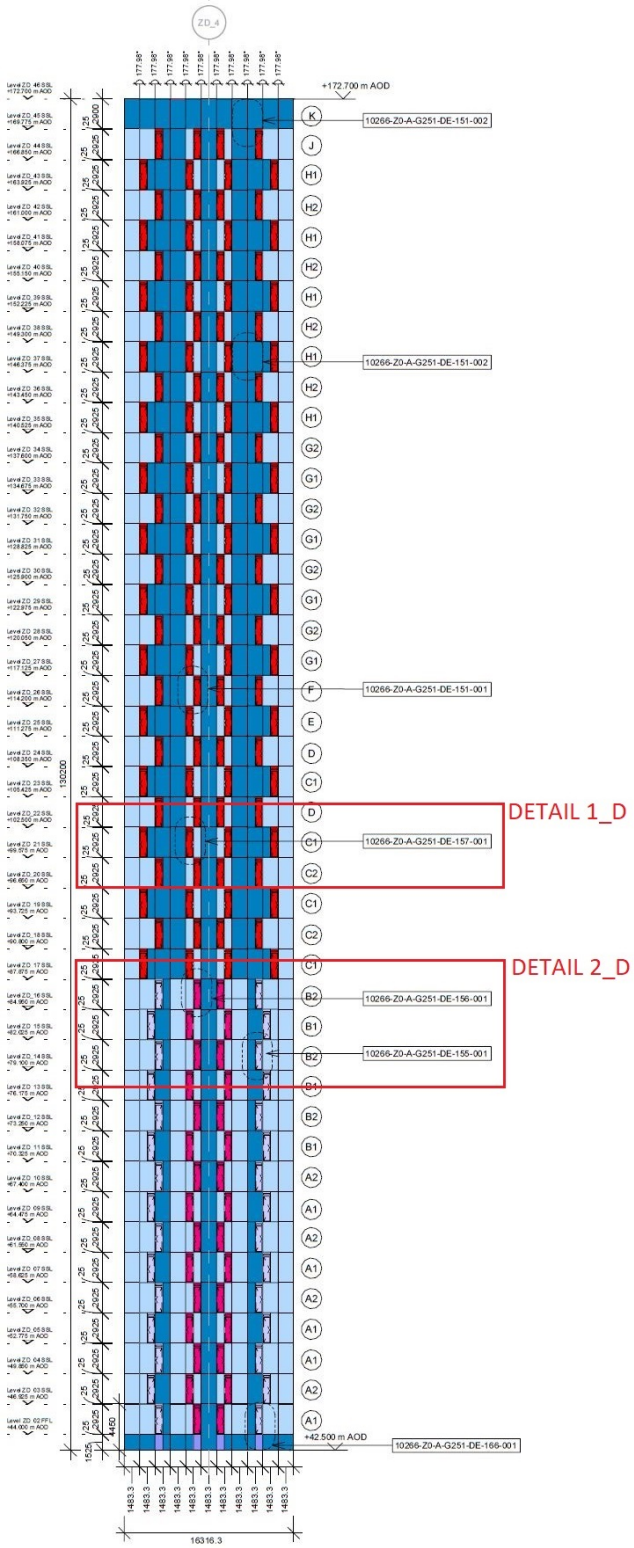
EWS - 405

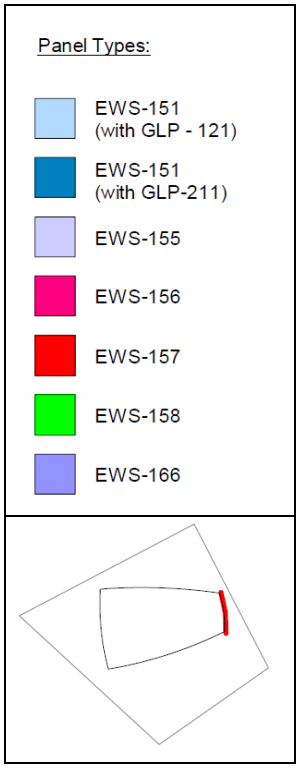


3.1.5 BLOCK D - SOW

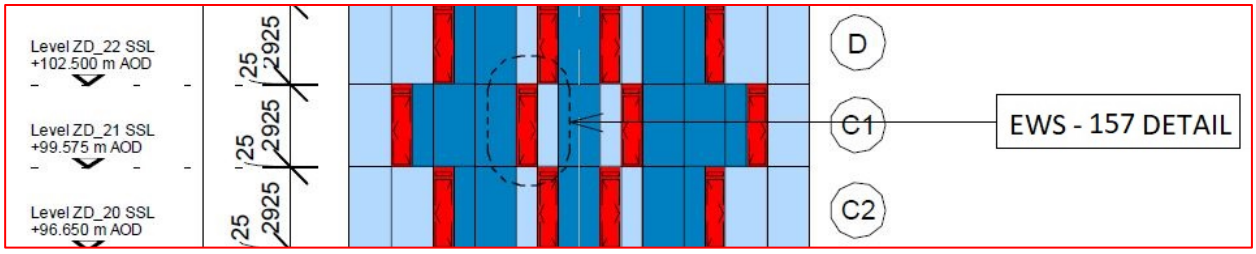
(façade features and names could change during design development)

FIRST STREET SOUTH MANCHESTER– BUILDING D
EAST ELEVATION – FACET 1

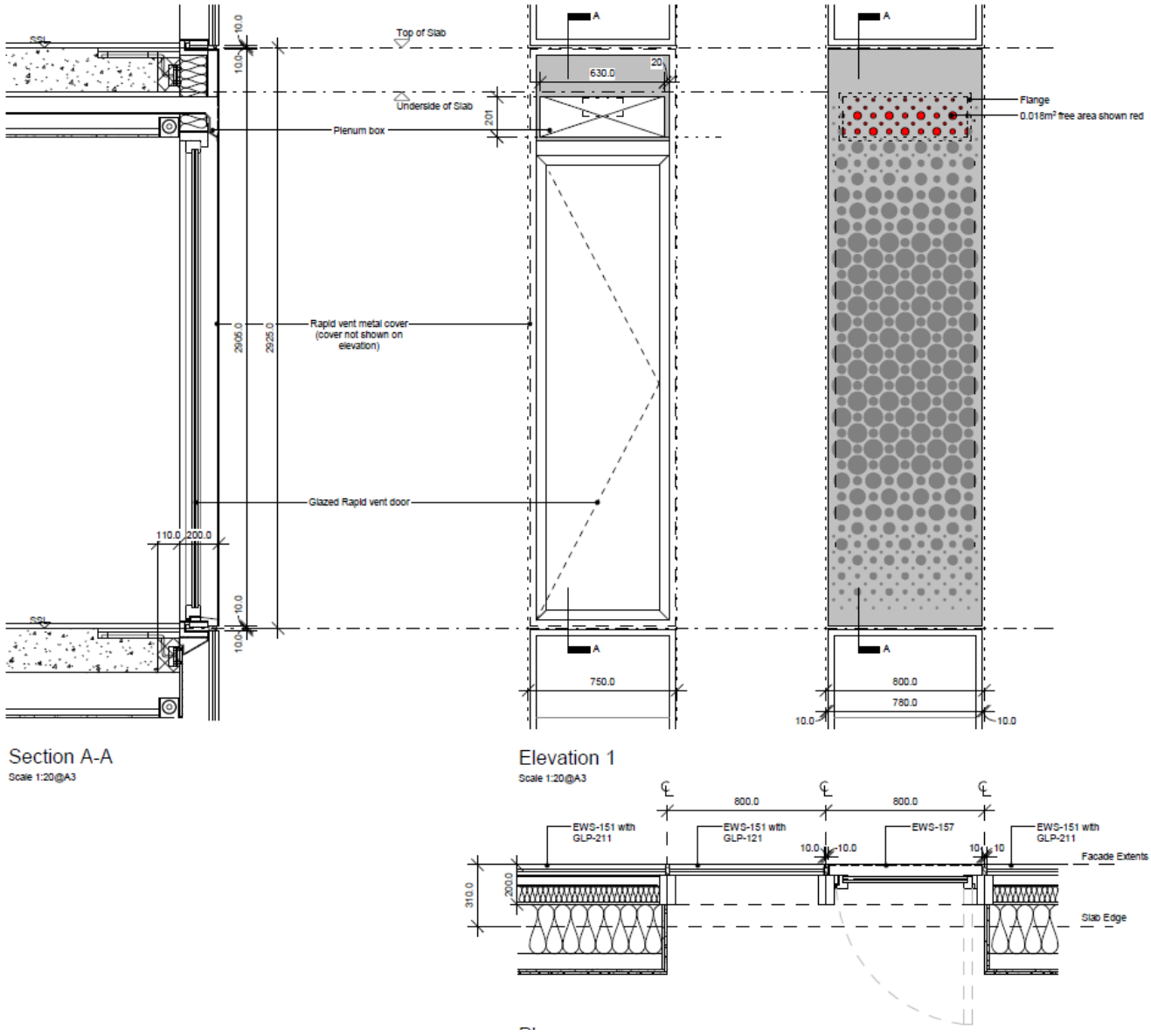




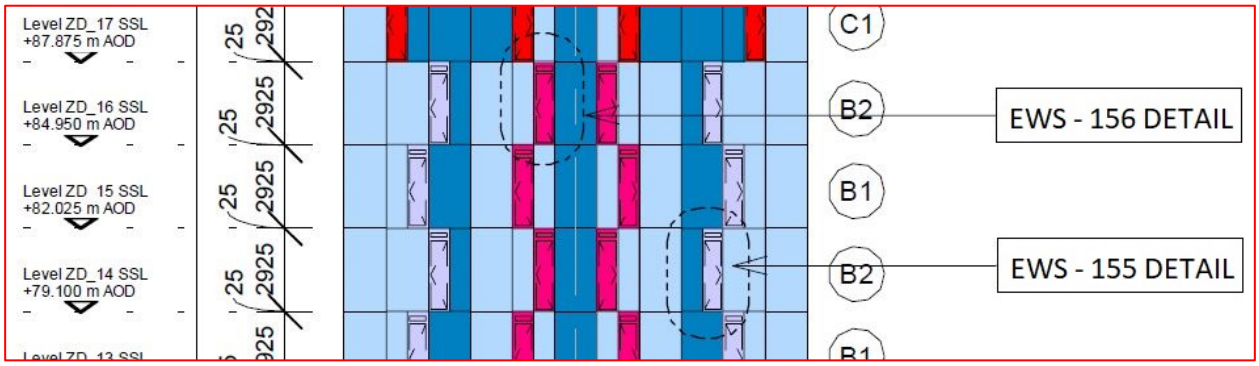
BUILDING D - **EAST** ELEVATION – FACET 1 – DETAIL 1_D



EWS – 157 DETAIL



BUILDING D - **EAST** ELEVATION – FACET 2 – DETAIL 2_D



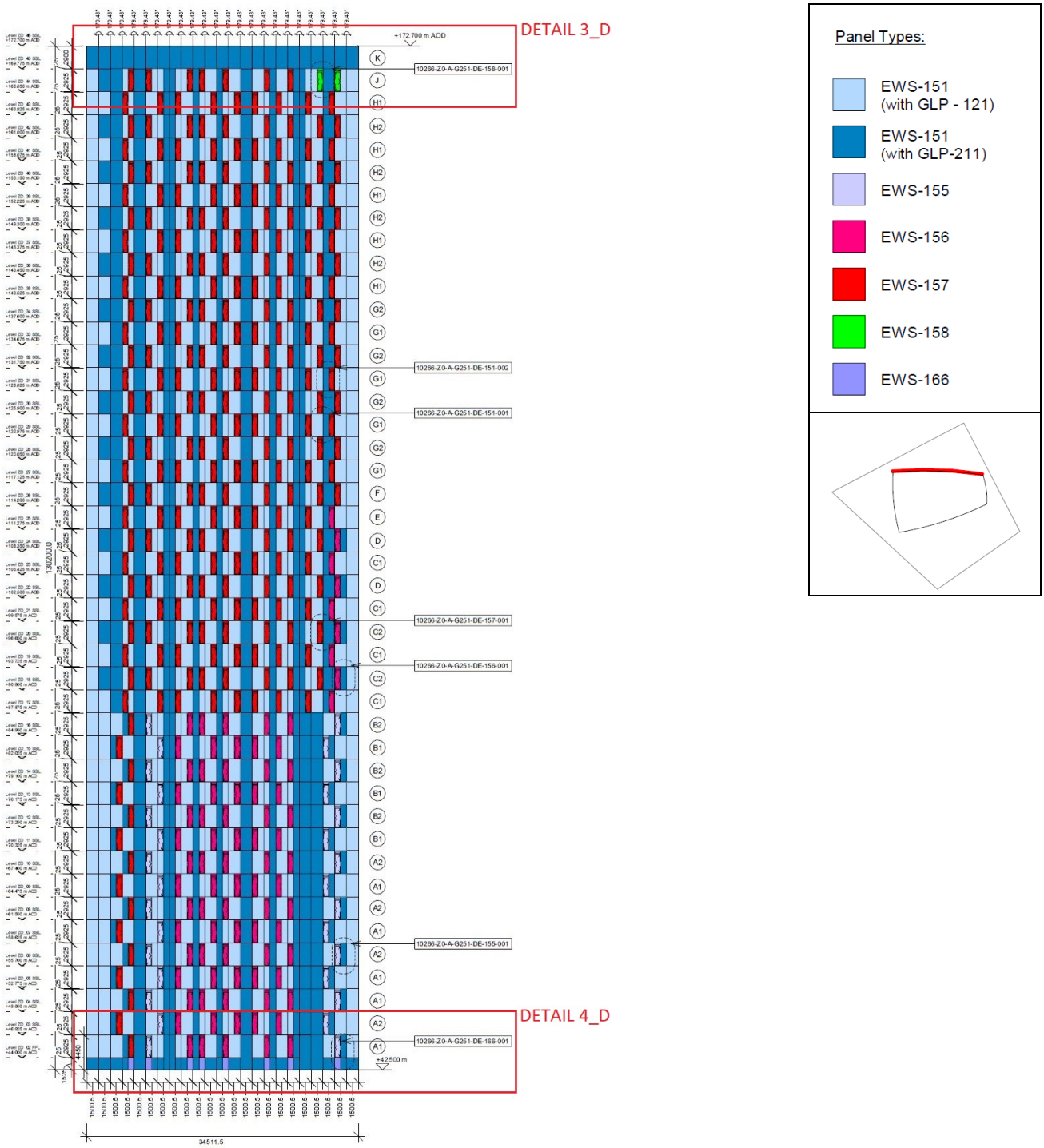
EWS – 155 DETAIL

Refer to Building A detail 2_A.

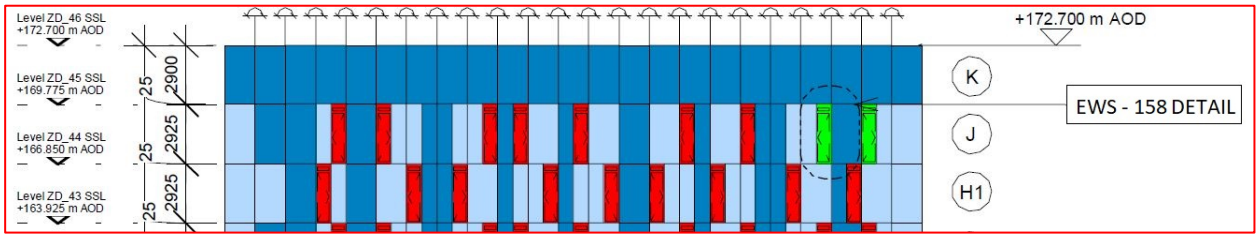
EWS – 156 DETAIL

Refer to Building A detail 1_A.

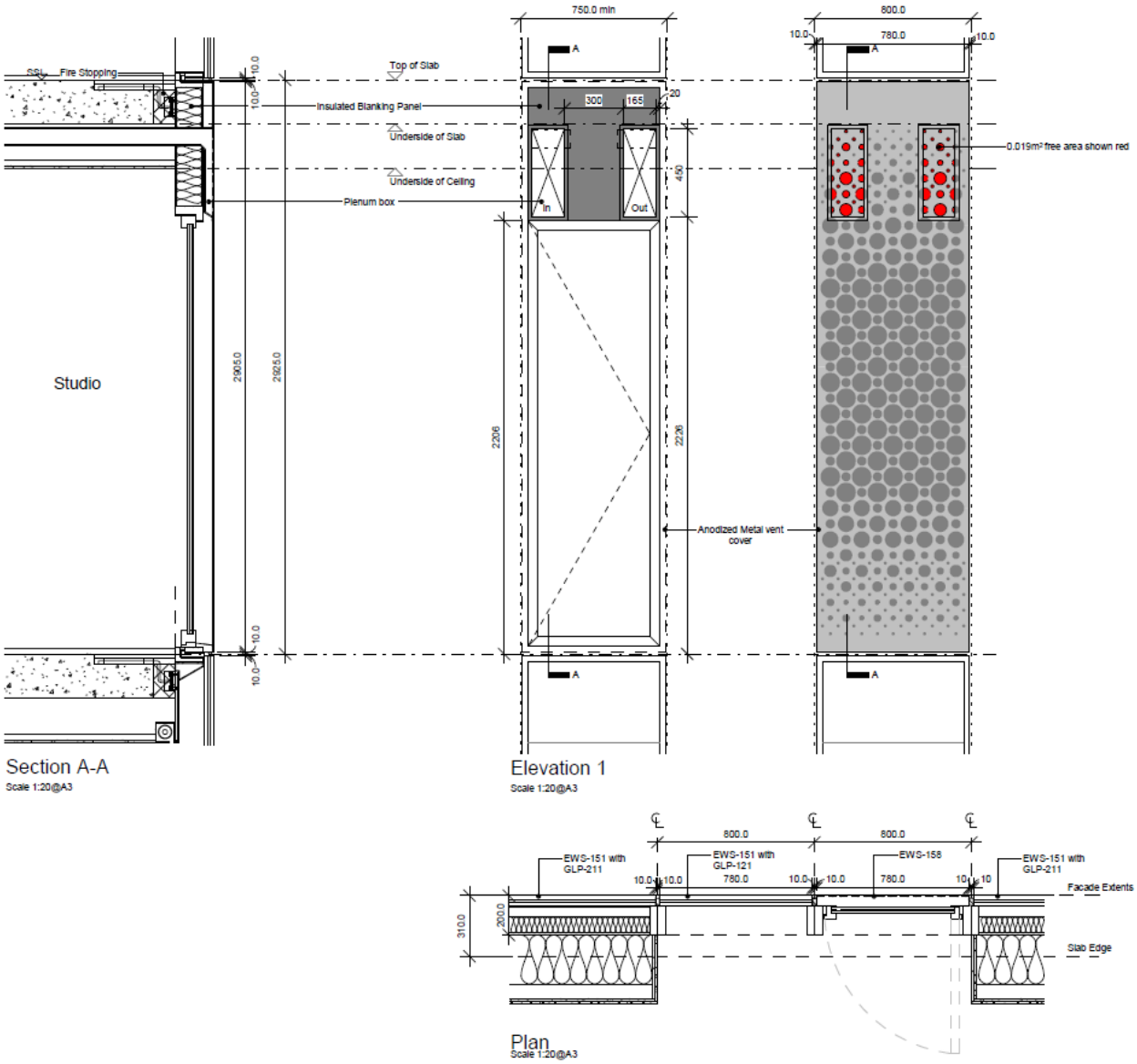
FIRST STREET SOUTH MANCHESTER– BUILDING D
NORTH ELEVATION – FACET 2



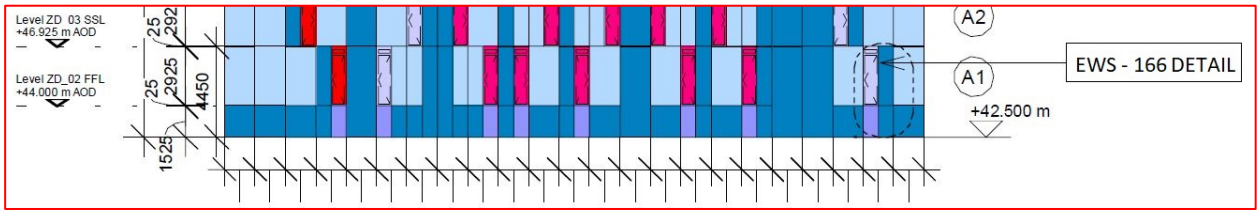
BUILDING D - **NORTH** ELEVATION – FACET 2 – DETAIL 3_D



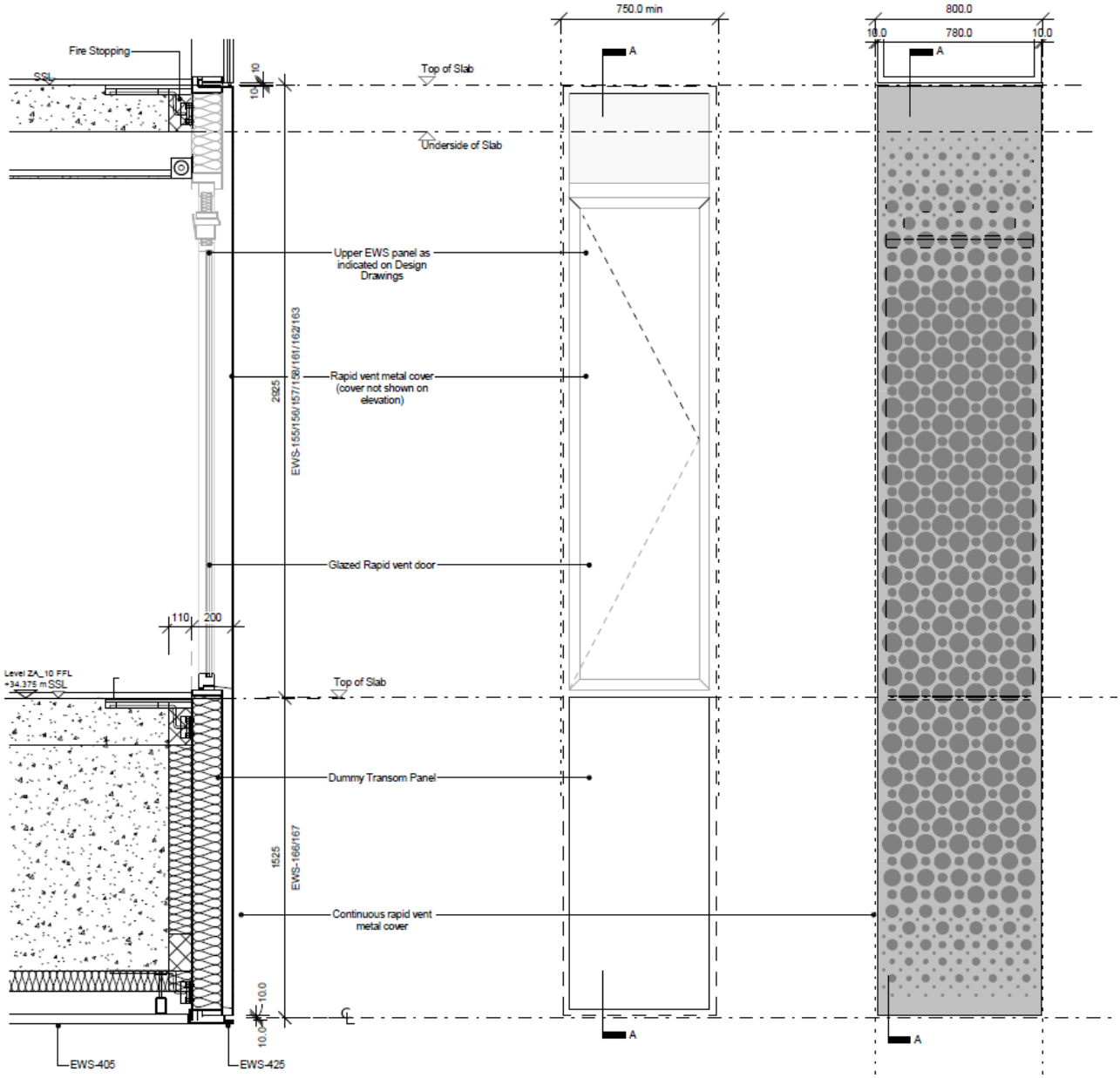
EWS – 158 DETAIL



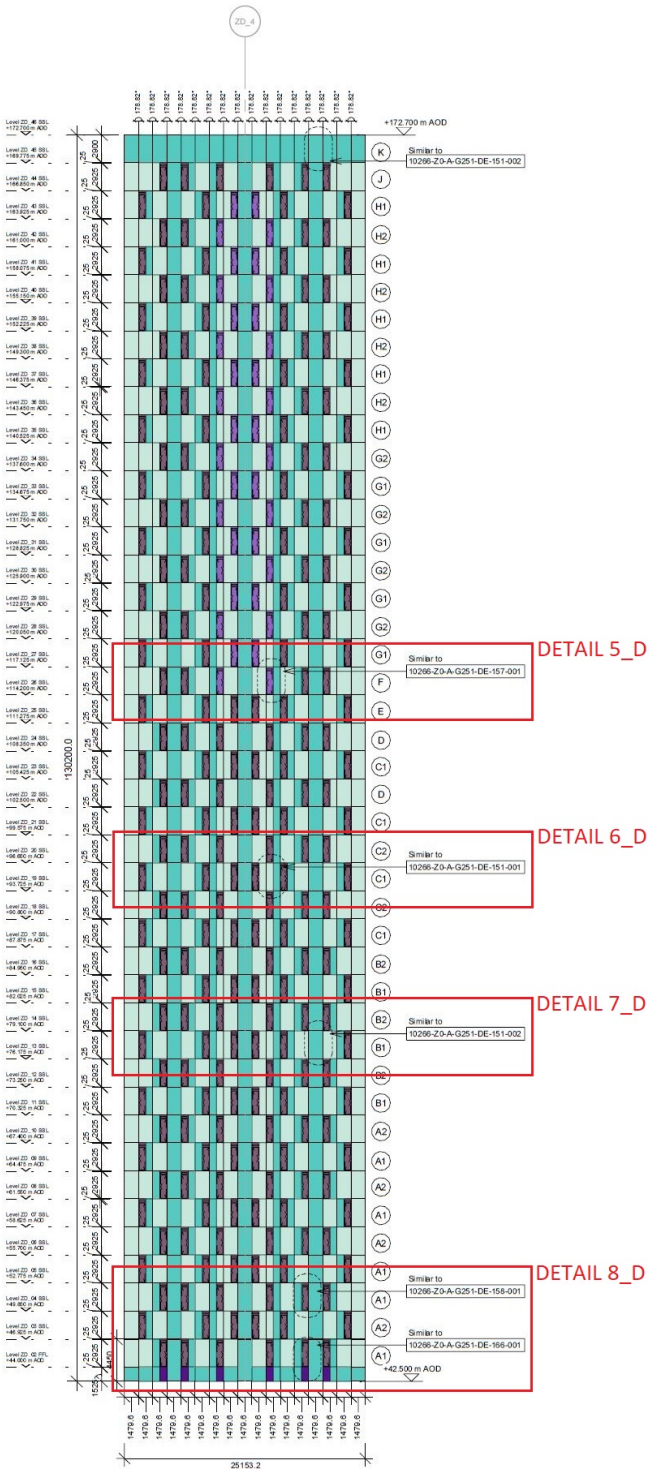
BUILDING B - **NORTH** ELEVATION – FACET 2 – DETAIL 4_D



EWS – 166 DETAIL

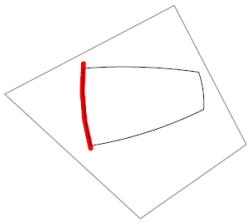


FIRST STREET SOUTH MANCHESTER– BUILDING D
WEST ELEVATION – FACET 3

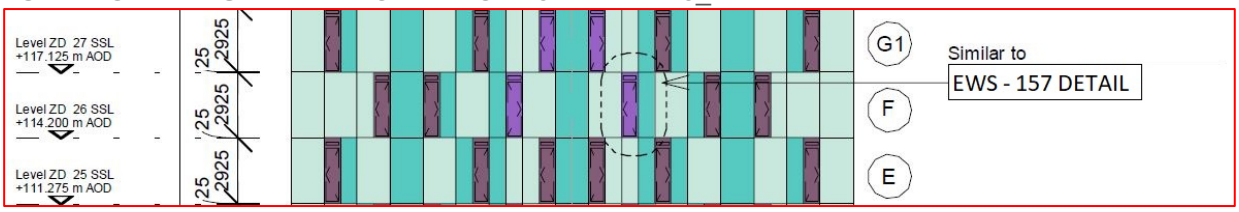


Panel Types:

- EWS-152 (with GLP - 122)
- EWS-152 (with GLP - 212)
- EWS-161
- EWS-162
- EWS-167



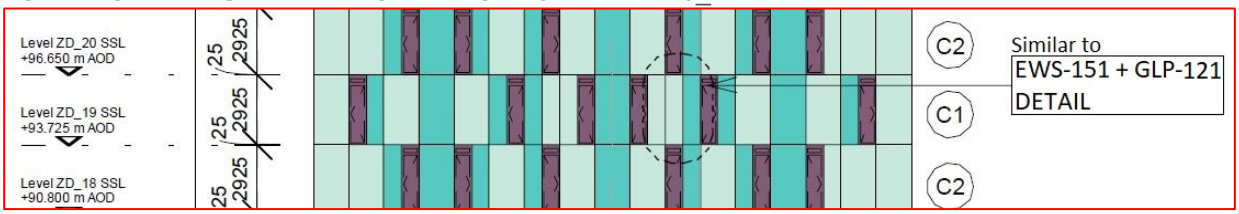
BUILDING D - **WEST** ELEVATION – FACET 3 – DETAIL 5_D



EWS – 157 DETAIL

Refer to Building D detail 1_D.

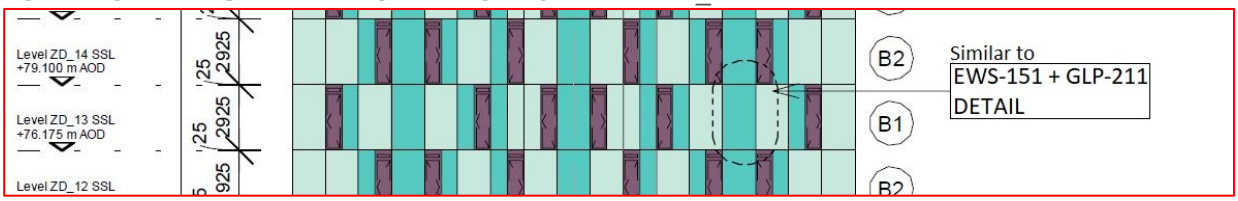
BUILDING D - **WEST** ELEVATION – FACET 3 – DETAIL 6_D



EWS – 151 + GLP 121 DETAIL

Refer to Building A detail 3_A.

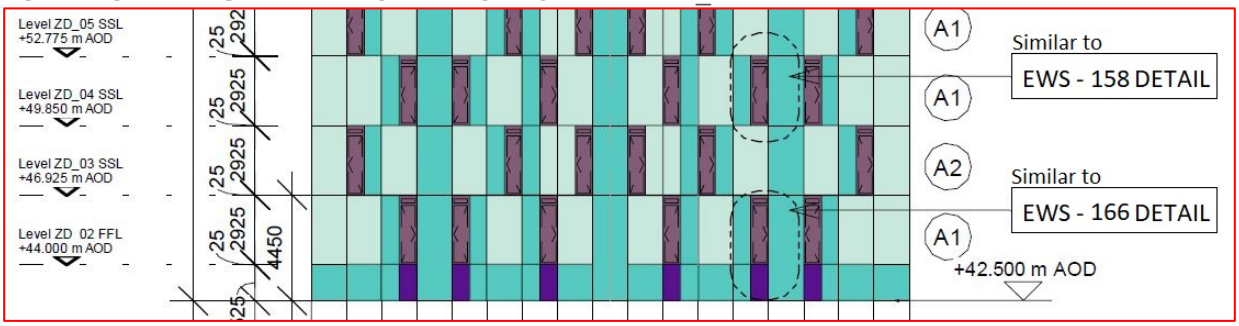
BUILDING D - **WEST** ELEVATION – FACET 3 – DETAIL 7_D



EWS – 151 + GLP 211 DETAIL

Refer to Building A detail 5_A.

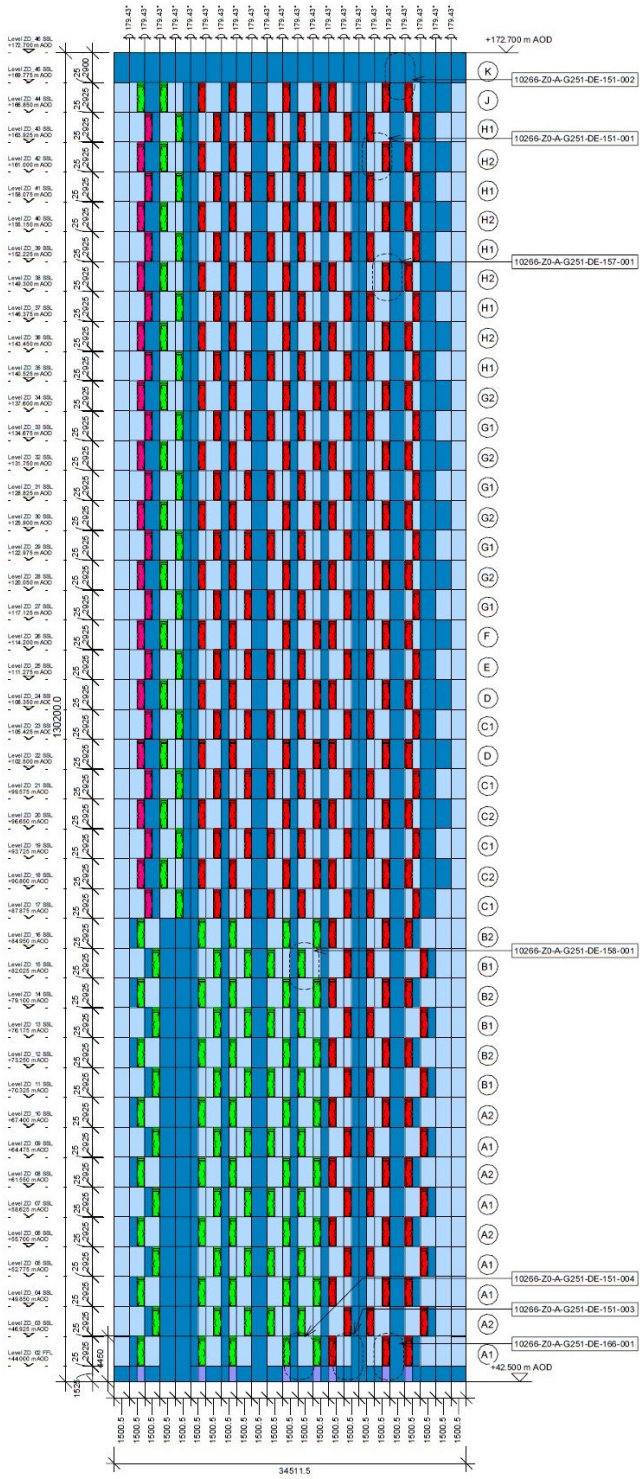
BUILDING D - **WEST** ELEVATION – FACET 3 – DETAIL 7_D



EWS – 158 and 166 DETAIL

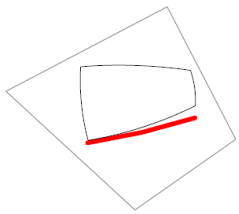
Refer to Building D detail 3_D and 4_D.

FIRST STREET SOUTH MANCHESTER– BUILDING D
SOUTH ELEVATION – FACET 4



Panel Types:

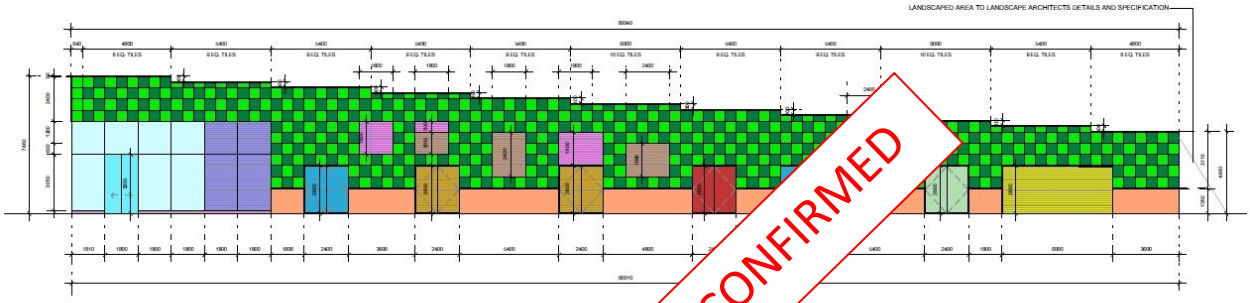
- EWS-151 (with GLP - 121)
- EWS-151 (with GLP-211)
- EWS-155
- EWS-156
- EWS-157
- EWS-158
- EWS-166



3.1.6 PODIUM D - SOW

(façade features and names could change during design development)

FIRST STREET SOUTH MANCHESTER– BUILDING D PODIUM
LEVEL 00 – FACET 05 and 06



ZD_Facet 05
North Elevation

MBR 101/121 BRICKWORK E

ZD_Facet 06
East Elevation

MBR 101/121 BRICKWORK EXCLUDED

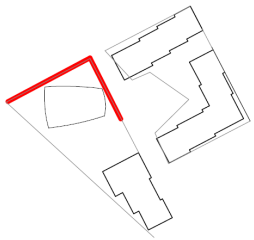
PODIUM DESIGN TO BE CONFIRMED

Specification Key:

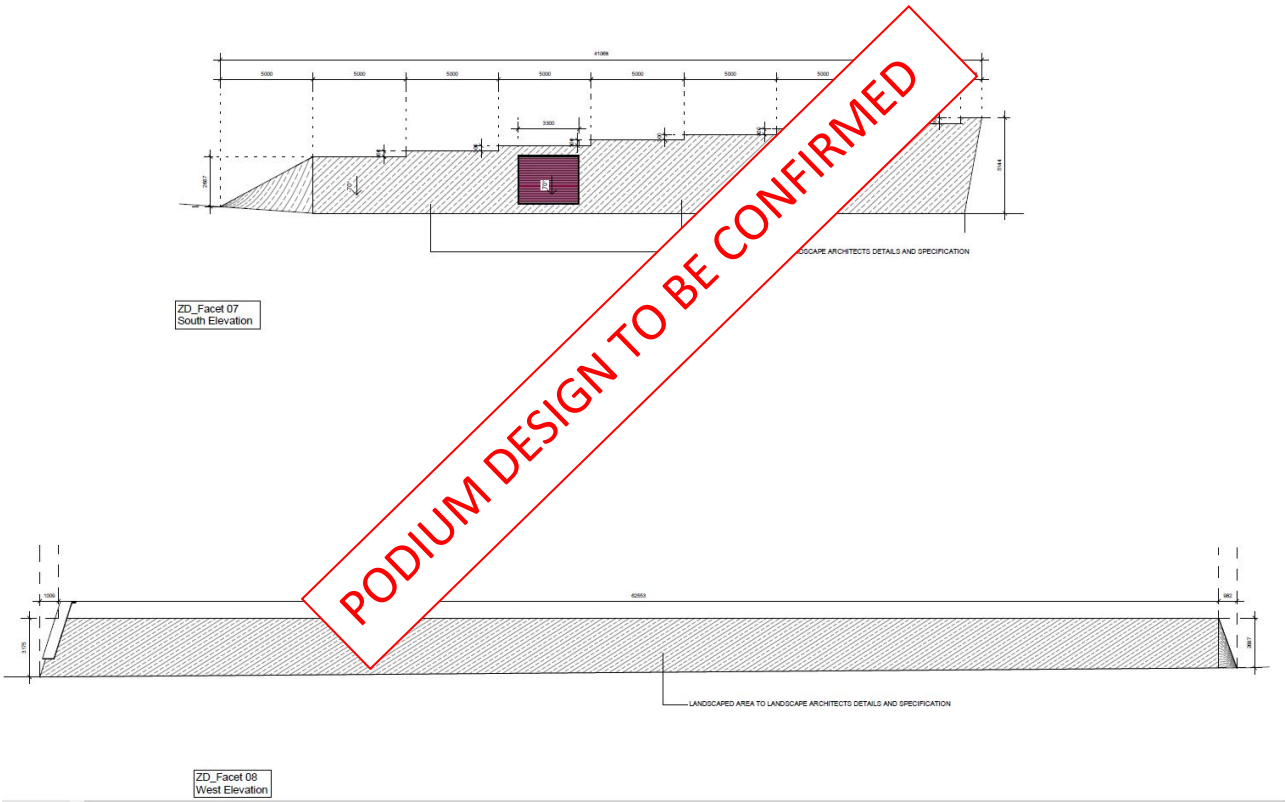
- AMW-105
- EWS-101 with GLP-101
- EWS-101 with GLP-105
- EWS-151 with GLP-123
- EWS-151 with GLP-124
- EWS-424
- EWS-425
- EWS-501
- EWS-505
- EWS-711
- EWS-703
- EWS-705
- EWS-706
- GLP-301
- GLP-303
- MBR-101 (60% MBR-121(40%)
- RFS-401 with GLP-124

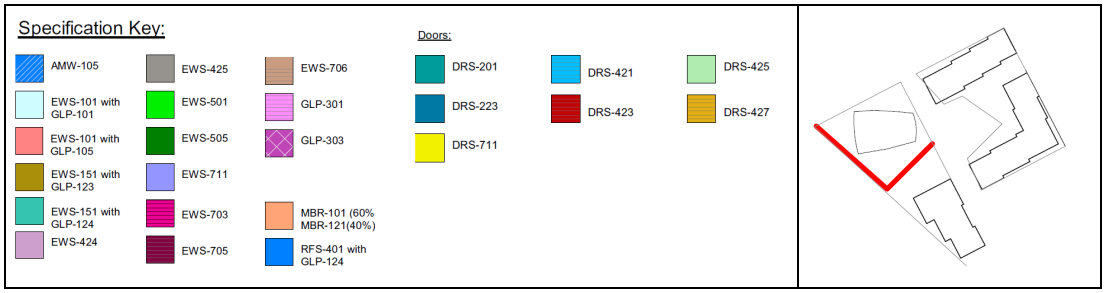
Doors:

- DRS-201
- DRS-223
- DRS-711
- DRS-421
- DRS-423
- DRS-425
- DRS-427

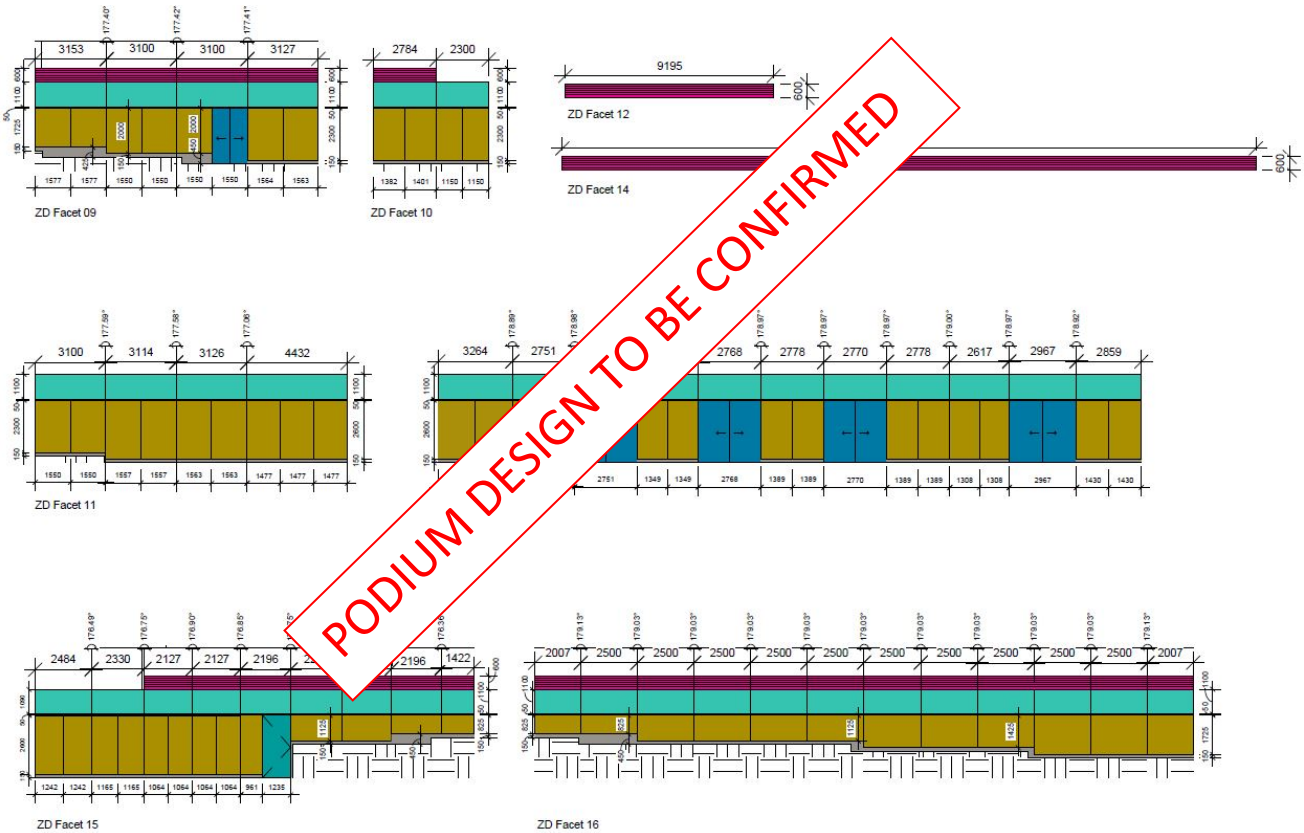


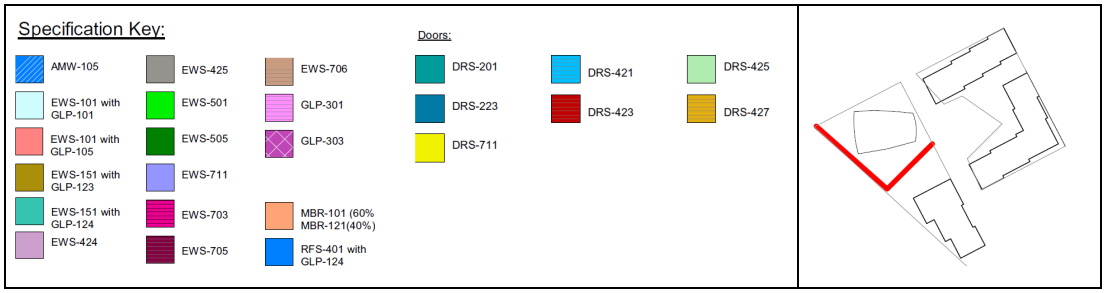
FIRST STREET SOUTH MANCHESTER– BUILDING D PODIUM
LEVEL 00 – FACET 07 and 08





FIRST STREET SOUTH MANCHESTER– BUILDING D PODIUM
LEVEL 00 – FACET 09- 16

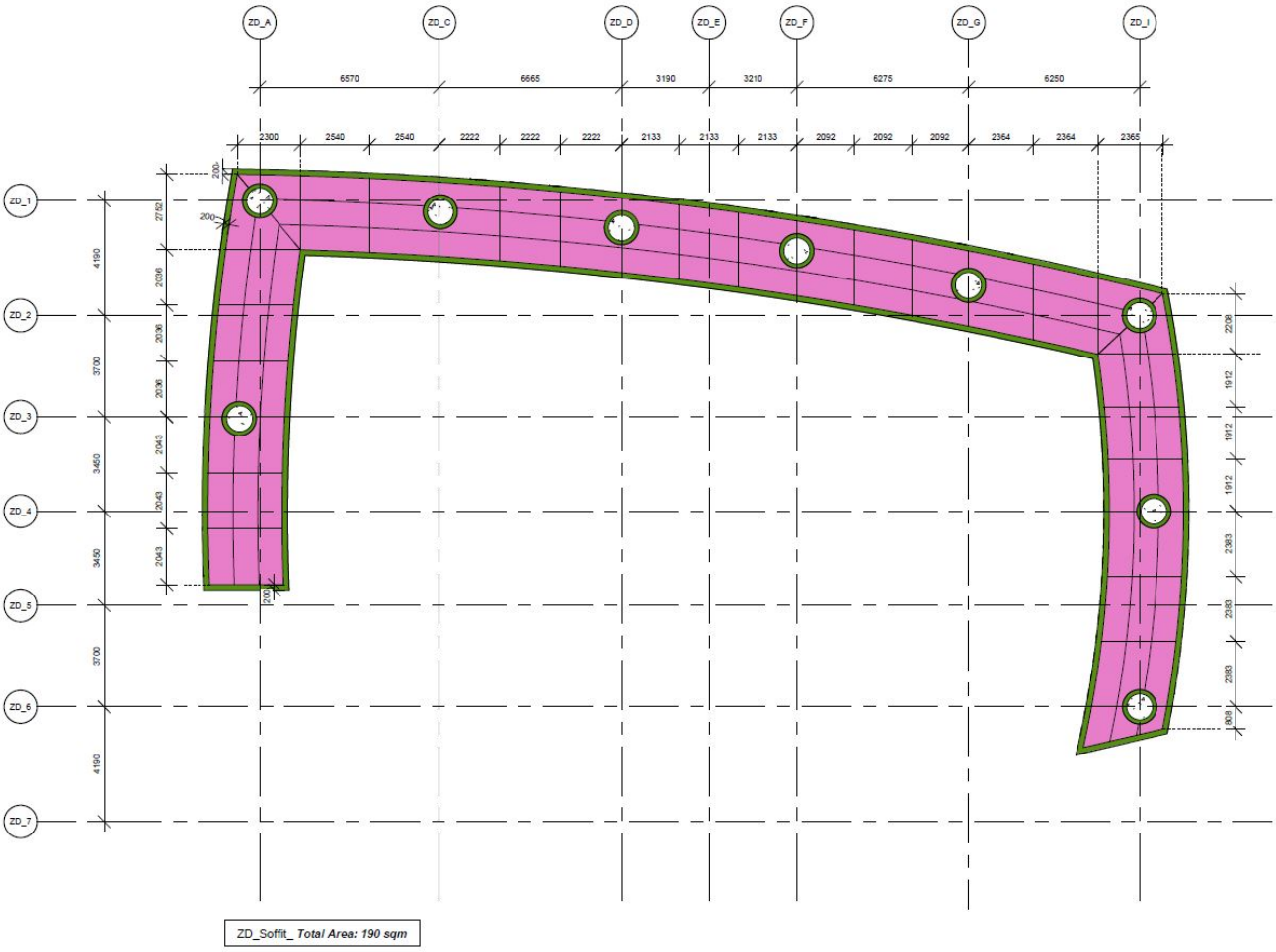


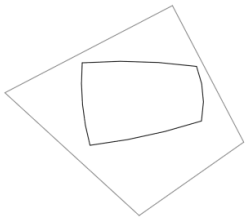


3.1.7 SOFFIT D - SOW

(soffit features and names could change during design development)

FIRST STREET SOUTH MANCHESTER– BUILDING D
SOFFIT PLAN – LEVEL 01-02



Soffit Panel Types:	
EWS - 425	
EWS - 405	

3.2. SPECIFICATION

The proprietary cladding systems is designed in line with the design intent received from DOWNING CONSTRUCTION LIMITED and the architect and in accordance with the requirements of:

- Local Authorities and Building Regulations;
- Codes of Practice Standards, Fire and Safety Regulations;
- All relevant British Standards, Codes of Practice and standards relevant to the proprietary cladding systems design for this contract (this includes EN, EN ISO, and DIN standards);
- Centre for Window and Cladding Technology (CWCT) Standards;
- Sustainability and Environmental Standards such as BREEAM and BRE Green Guide to Specification;
- NHBC standards;
- ASTM Standards;
- AAMA Standards;

Focchi will develop the project in compliance with project requirements and technical specification detailed onto the following documents:

- *10266-Z0-A-F000-SP-XX-001-Plot 11- First Street South Architectural Specification (SimpsonHaugh and Partners)*
- *04469/CJE/RH/48894/WL-Plot 11 First Street South Performance Specification (Wintech)*
- *04469/CJE/RH/54250/WL-Plot 11 Block A&B First Street South Performance Specification (Wintech)*
- *04469/CJE/RH/52468/WL-Plot 11 Block D First Street South Performance Specification (Wintech)*
- *200408 RWDI 2002113 First Street South - FINAL Cladding Report (*Wind Load Study) (RWDI)
- P3921 - R3 - Plot 11 in First Street South Manchester - Stage 3 - Acoustic Design Report (AEC)
- First Street - AJP Block A M&T Report_Ver2_2 (The Alan Johnston Partnership LLP)
- First Street - AJP Block B M&T Report_Ver2_2 (The Alan Johnston Partnership LLP)
- First Street - AJP Block D M&T Report_Ver2_2 (The Alan Johnston Partnership LLP)
- BB-DFS-3612-OF-01-A - 200529-First Street-Detailed Fire Strategy-A (BB7)

3.3. CONTRACT REVIEW

A kick/off meeting is held after the contract has been signed or the contractor's letter of intent has been received.

Meeting attendees are:

- Tender Director;
- Project Manager;
- Project Design Manager;
- Purchasing Manager;
- Quality- Manager;
- Plant Manager.

The meeting analyses drawings, documentation and the report of the Sales-Commercial Manager, highlighting critical elements of the project.

The economic aspects and the budget available to the various company departments are also analysed.

Subsequently, during the work, the Project Manager and the Client shall resolve any deviations between the technical specifications and the design solutions implemented.

Any project variation necessary shall be evaluated in terms of changes to costs and time schedule, as established and submitted to the Client for approval.

4. RESOURCES AND STAFF TRAINING

Relevant documents not attached but referred to:

- P-RUM-01_Recruitment, selection and training of personnel
- IO-75-05-01_Quality Controls at the suppliers' premises

4.1 RECRUITMENT AND SELECTION OF NEW RESOURCES

New employees are selected in relation to the profile outlined by the company, through one or more interviews between the individual applicant and the Human Resources and Organizational Development Manager.

Resources are selected based on their:

- proven track record in the construction industry;
- skills and abilities (specific and general) ;
- personality;
- references.

The list of applicants considered interesting is identified through:

- the internal computer database, containing a selection of curricula directly received by the company, and the names of professional figures outlined to the company by educational institutions and/or other databases;
- web searches;
- personnel recruitment agencies.

The company adopts a Human Resource Management application, which includes the electronic employee roster and the applicants database. This archives are constantly updated and monitored by the Administrative, Financial and Human Resources Department.

4.2 IDENTIFICATION OF TRAINING NEEDS

New resources take part in a training course aimed at providing corporate familiarity, and they are assisted by a tutor. The training plan is defined by the Department Manager in collaboration with the Human Resources and Organizational Development Manager.

In addition to the specific incoming training, FOCCHI plans and develops a general training program for new entries, including compulsory training on safety and security and soft skills training.

As concerns company personnel, training is planned on the basis of the skills required for the various company roles through periodic (annual) assessment of their skills or at the request for specific training by Department Managers. All training activities are defined by the Human Resources and Organizational Development Manager in collaboration with the various Department Managers.

4.3 MANAGEMENT OF INTERNAL AND EXTERNAL TRAINING

Training courses cover various topics, including:

- Safety procedures in the wokplace;
- Knowledge of the Integrated Quality-Environment System procedures;
- Use of specific computer softwares;
- Use of measuring instruments and equipment;
- Project management;
- In-depth technical topics related to materials, treatments, design, etc.;
- Training in the workshop;
- On site training;
- Knowledge of a foreign language (English)
- Effective communication in the company in order to improve interpersonal relations among employees.

Documentation relating to staff training (registers, course assessment forms, certificates) is uploaded into the Human Resources Management application and monitored by the Administrative, Financial and Human Resources Department.

4.4 TRAINING FOR PROJECT QUALITY CONTROL

On a regular basis (weekly), meetings are held with the different project figures to analyse and discuss aspects of product quality controls during supply and production.

Quality control personnel shall be appropriately trained on the frequency and type of inspections to be performed on raw and finished materials, surface treatments, possible critical issues, suppliers, order deadlines.

The operational details for these activities are given in the operating instruction *IO-75-05-01_Quality Controls at the suppliers' premises*, which defines the steps to follow in order to manage and coordinate quality controls at suppliers' premises.

5. CONTROL OF DOCUMENTS AND DATA

Relevant documents not attached but referred to:

- P-PRG-01_Design Planning Management
- UT-001_Incoming Documentation and Information Management
- UT-002_Outgoing Documentation and Information Management

5.1. INPUT AND OUTPUT DOCUMENTATION MANAGEMENT PROCEDURE

The Project Manager and the Project Design Manager are responsible for managing and storing input and output documents and information, including drawings, reports and programs.

Documentation from/to the Client is digitally managed:

- on web platforms, by means of document management software indicated by the Client.

  All documentation on the project First Street South will be managed on the Adoddle Protocols System (commonly refererred to as "Asite") – https://www.asite.com

  Documentation will include project drawings, document reviews and other information such as Transmittals, Technical Queries, RFI's, reporting and other formal Project Mail.

  Document numbering and filenaming will be in accordance with the naming procedure agreed with Client.

- via e-mail, by sending downloadable files:
- via e-mail, by reference links using a large-file sending service, or a cloud storage service, or a FTP server.

Documentation from/to the site is generally managed:

- by sending e-mails with attached files;
- by sending e-mails with reference links using a large-file sending service, or a cloud storage service, or a FTP server.

Drawings and documents received or issued are managed from Asite platform by the Document Controller.

The information received / issued can be managed at the discretion of the Department Manager only digitally, without keeping a hard copy.

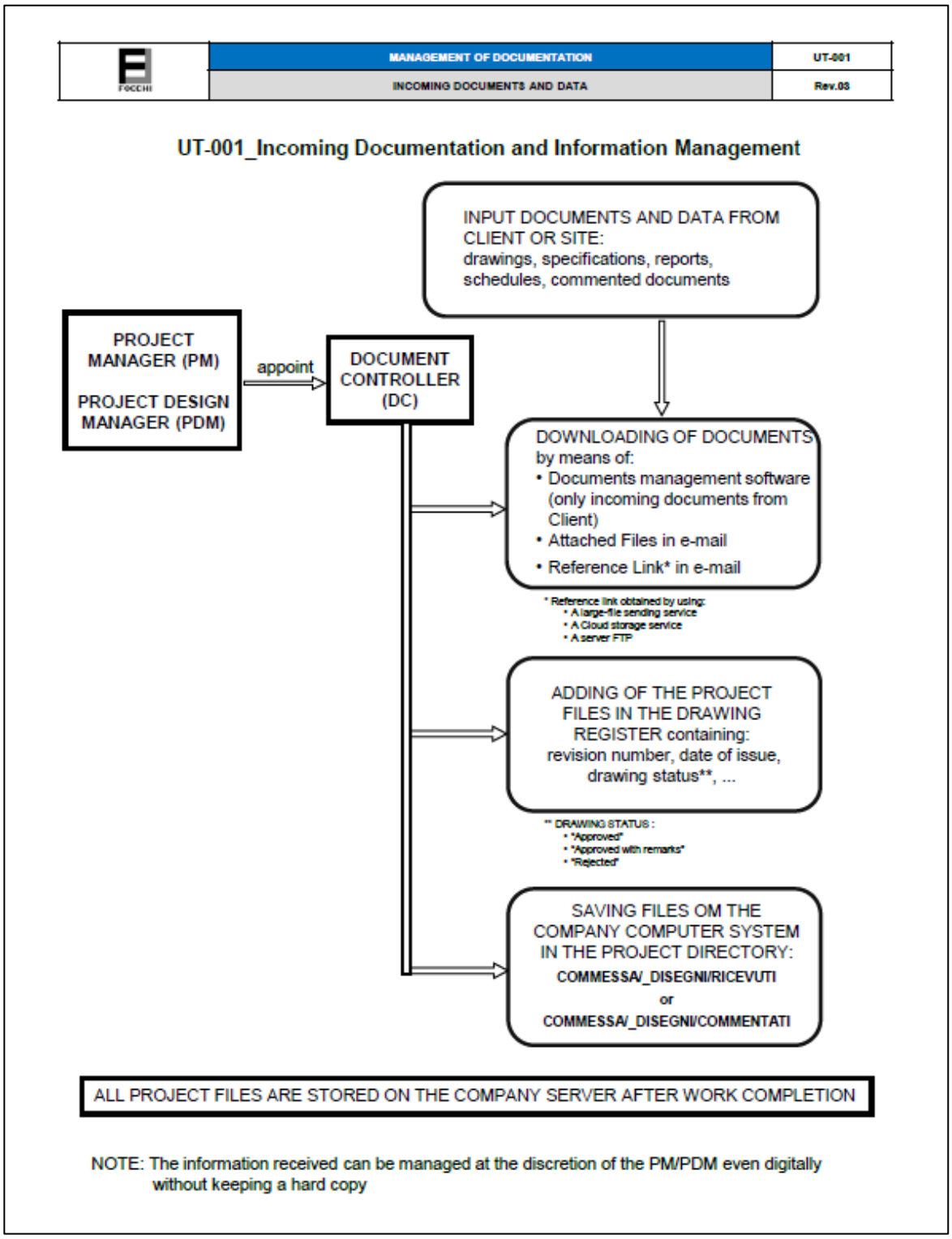
Output documentation is reviewed by the Project Manager and the Project Design Manager before being issued.

All drawings and documents are saved on the company computer system, into the project-dedicated directory.

The documents are then stored on the company server one year after work completion.

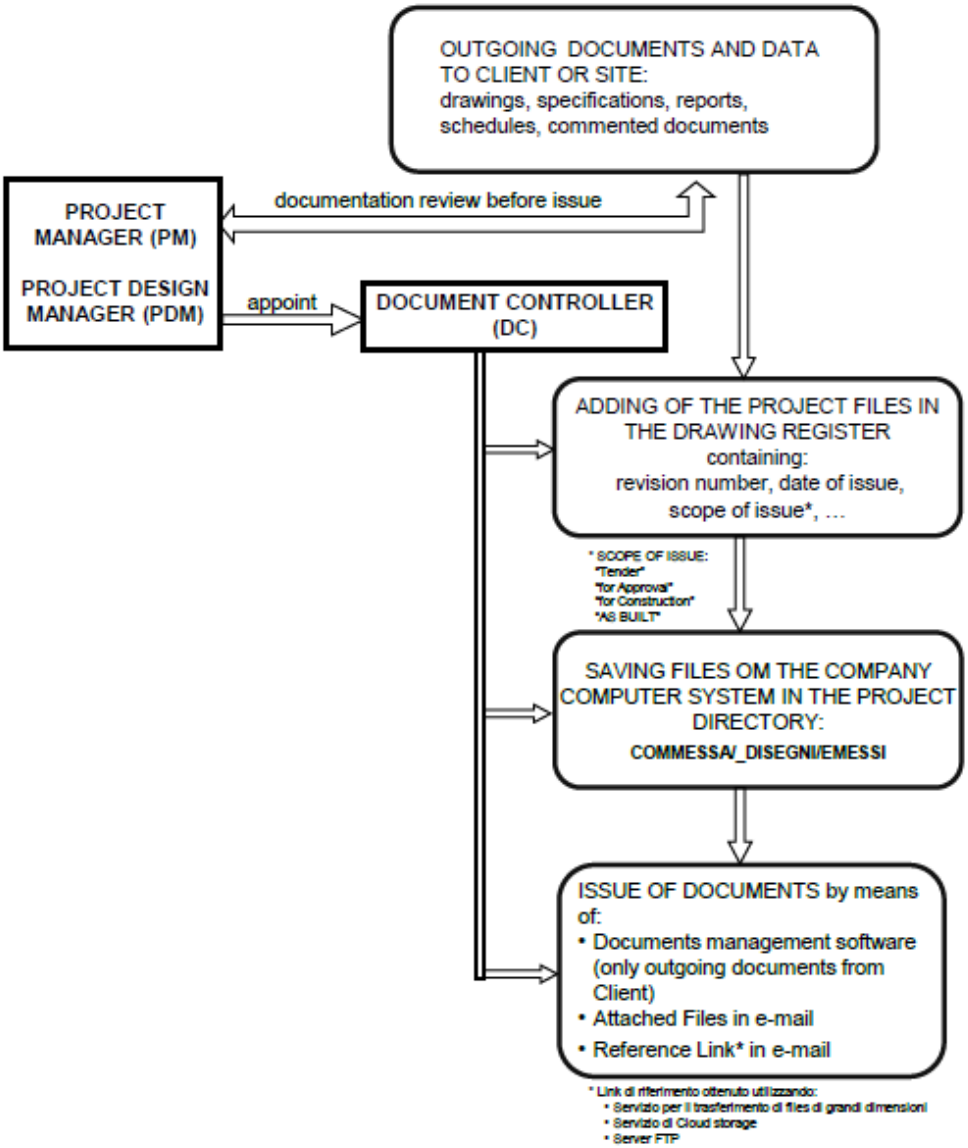
The operative instructions for managing input/output documentation are set out in the following documents:

- *UT-001_Incoming Documentation and Information Management*
- *UT-002_Outgoing Documentation and Information Management*



	MANAGEMENT OF DOCUMENTATION	UT-002
FOCCHI	OUTGOING DOCUMENTS AND DATA	Rev.04

UT-002_Outgoing Documentation and Information Management



ALL PROJECT FILES ARE STORED ON THE COMPANY SERVER AFTER WORK COMPLETION

NOTE: The information received can be managed at the discretion of the PM/PDM even digitally without keeping a hard copy

6. DESIGN PLANNING AND RESPONSIBILITIES

Relevant documents not attached but referred to:

- P-PRG-01_Design Planning Management

6.1. DESIGN PROCESS

The design process consists of the following tasks:

- Project kick-off: definition and analysis of the input elements of the project;
- Planning and management of the curtain walling system design;
- Planning and management of the working design;
- Management of design changes.

Responsibilities and operational procedures for the management of these tasks are described in the document *P-PRG-01_Design Planning Management.*

6.2. PROJECT KICK-OFF: DEFINITION AND ANALYSIS OF INPUT ELEMENTS OF THE PROJECT

The System Design Manager and the Project Design Manager acquire the input documentation of the project, consisting of:

- technical specifications;
- contractual documents (copy of the proposal, copy of the contract);
- summary of costs;
- contract plan;
- preliminary project developed for the proposal;
- drawings of the building received by the Client;
- proposals received to support the estimate.

The documentation is analysed in order to guarantee the realization of a product that complies with contractual requirements and regulations in force in terms of quality, performance and environmental sustainability.

6.3. PLANNING AND MANAGEMENT OF THE CURTAIN WALLING SYSTEM DESIGN

The System Design Manager is responsible for planning and controlling the curtain wall system design. The process is divided into the following phases:

- Definition of the main elements of the curtain wall system, based on the analysis of previously designed systems, required technical and functional performance, regulatory constraints, time available and anticipated costs;
- Transfer of information to the Project Design Manager and to the Purchasing Manager in order to allow initiation of the working design;

- Definition of the system design team, based on the skills and abilities of the staff and in compliance with general contract program;
- Execution of technical calculations and laboratory tests, building visual and performance mock-ups and pre-production prototypes to validate system design on architectural, technical and performance aspects;
- Issue of working drawings of profile dies, gaskets, accessories and other components of the curtain wall system kit;
- Issue of the mock-ups and prototypes working drawings;
- Issue of the operating instructions, for both internal workshop and building site, relating to the assembly and installation of the main elements of the curtain walling;
- Design review, at each significant stage, through data sharing with the other interested functions and the Client, in order to verify the compliance with project requirements and the possibility of industrialising the product in compliance with anticipated costs.

6.4. PLANNING AND MANAGEMENT OF THE WORKING DESIGN

Based on the documentation received after the project kick-off and on the information received from the System Design Manager, the Project Design Manager plans and controls the working design through the following activities:

- Definition of materials and finishes and submission of the related samples to the Client for approval;
- Sizing and organization of the design team, taking into account the skills and abilities of the staff and in compliance with general project program;
- Management of communication with Clients and Consultants in order to develop design and operational aspects;
- Management of the relationship with any external design studio;
- Analysis of planned costs;
- Management of Technical Department input and output information (*see Ch. 5 "Control of documents and data"*);
- Definitive issue of design drawings (elevations, sections, details, calculation reports, material technical sheets, installation drawings, As Built drawings);
- Issue of workshop drawings for the processing of curtain wall components;
- Issue to the workshop of assembled components drawings and related assembly operating instructions;
- Issue of installation instructions for secondary elements of the curtain walling, such as copings, balustrades, architectural components for outside finishing, etc;
- Transmission of the bill of materials, for both workshop and construction site components, to the Production and Planning Department and to the Purchasing Department.

Design validation is ensured throughout the various design phases through laboratory tests, visual and performance mock-ups and pre-production prototypes.

Validation of the work as a whole is determined by passing the final test, upon completion of the work, carried out by a Technical Body appointed by the Client.

6.5. MANAGEMENT OF DESIGN CHANGES

Any changes requested by the Client or recommended by the design team are analysed and managed by the Project Manager and the Project Design Manager, who evaluate the costs and technical feasibility and then send the formal proposal to the Client for approval.

After the change has been approved, the Project Design Manager adds the task into the general contract plan and identifies required resources.

7. SUPPLY OF MATERIALS AND COMPONENTS

Relevant documents not attached but referred to:

- P-ACQ-01_Suppliers' evaluation and qualification
- D-ACQ-01_List of qualified suppliers
- D-ACQ-02_Criteria for the initial qualification of suppliers
- D-ACQ-03_Criteria for periodic supplier evaluation
- D-ACQ-04_Table of importance of each parameter for the periodic evaluation of suppliers
- P-ACQ-02_Management of Purchasing Process

7.1. ASSESSMENT AND QUALIFICATION OF SUPPLIERS

In compliance with EN ISO 9001 standard, FOCCHI has defined the suppliers' evaluation process as described in *P-ACQ-01_Suppliers' Evaluation and Qualification*, which is summarized in the following phases:

- **Supplier first evaluation and initial qualification**

  It is carried out on the basis of the criteria defined in the document *D-ACQ-02_Criteria for the initial qualification of suppliers*, including:

  - first inspection at the supplier's premises;
  - first sample supply.

  For cases in which contracts exceed a predetermined threshold, the supplier shall also be evaluated from an economic point of view by analysing its accounts.

  If passing the assessment, the supplier is enlisted in the document *D-ACQ-01_List of qualified suppliers*; the criteria used for the evaluation are included in the document.

- **Follow-up periodic evaluations of the supplier**

  The Quality Manager verifies the maintenance over time of the assigned qualification through:

  - a periodic numerical evaluation of the reference parameters (quality of the product/service, punctuality, availability/flexibility) identified for each supplier.

    The evaluation is carried out considering the importance of each parameter for each type of supply (reference document *D-ACQ-04_Table of importance of each parameter for the periodic evaluation of suppliers*) and by means of the analysis of the non-conformities results performed every six months in accordance with the criteria included in the document *D-ACQ-03_Criteria for periodic supplier evaluation*;
  - the ascertainment of the possession by the suppliers of the required binding requisites.

  The data are shown in the document *D-ACQ-01_List of qualified suppliers* and updated every six months.

7.2. PURCHASING CONTROL PROCEDURES

The responsibilities and operational procedures for purchasing management are described in the document *P-ACQ-02_Management of Purchasing Process*.

Purchasing management is completely integrated into the ERP management system.

The Technical Department transmits to Purchasing and Production Planning Departments through the company IT system the components and the products to be supplied.

The Purchasing Manager is responsible for the supplier management policy. In collaboration with the Project Manager, the Project Design Manager and the Plant Manager, the Purchasing Manager develops the procurement strategy by selecting suppliers based on the following factors:

- production capacity of the supplier with respect to contractual terms (times and costs) and existence of orders for several jobs;
- reliability;
- specialisation.

The Purchasing Manager signs specific supply contracts for the main supplies with technical attachments containing the specifications, the criteria of acceptability and required certificates.

The IT system generates purchase orders with deadlines defined on the basis of the contract plan.

Purchase orders contain the following information:

- reference to the supply contract, if previously stipulated;
- product code;
- product description;
- technical documentation / workshop drawing;
- request for test report, quality controls and final inspections, subject to agreement;
- type of packaging, where required;
- shipping requirements;
- delivery date.

Delivery times are constantly monitored in order to update the production schedules of the various jobs. Meetings are held periodically between the Project Manager, the Project Design Manager, the Production Planning Manager and the Projects Operational Control Manager.

The main suppliers selected for the project are monitored during production to ensure compliance with delivery times and product quality standards. Audit frequency is established based on product complexity or critical aspects or in case of doubts or complaints regarding the quality of materials / products supplied. Visits are carried out by Quality Control Inspectors, who record the results of the audits by completing an inspection report and product checklist *(see Ch. 12 "Inspection and Testing" and Ch. 14.2 "Audit at Suppliers' Premises").*

Any unacceptable defect / fault is subject to the issue of a non-conformity report *(see Ch. 15 "Non-conformities and Corrective Actions").*

The suppliers selected for the First Street South project are listed in the following table:

FOCCHI
SINCE 1914

220020 – FIST STREET SOUTH - MANCHESTER

SUPPLY CHAIN

Supplier	Product	Address	E-mail	Phone
To be defined	Extruded Aluminium Profiles			
To be defined	Aluminium Profiles Finish			
To be defined	Metal Perforated panels			
FOCCHI SPA	Metalworking	Via Cornacchiara, 805 47824 Poggio Torriana (Rimini) - Italy	info@focchi.it	+39 0541 62 73 55
To be defined	Steel (Structural) Components			
To be defined	Glass panels			
To be defined	Louvre Panels			
To be defined	Terracotta Tiles			
To be defined	Rapid Vent Insulated panels			
FOCCHI SPA	Plastic components (PLASTIC SHIMS, THERMAL BREAK)	Via Cornacchiara, 805 47824 Poggio Torriana (Rimini) - Italy	info@focchi.it	+39 0541 62 73 55
To be defined	Insulation material			
To be defined	Fire Stop Systems			
POSA SPA	Gaskets and Vulcanized Gaskets	Via San Francesco d'Assisi, 330 20047 Brugherio (Monza Brianza) - Italy	posa@grupporeda.it	+39 039 28 70 51
To be defined	Structural Silicone Sealant			
To be defined	Weatherproofing Silicone Sealant			
To be defined	Membranes			
To be defined	Fixing system (ANCHOR CHANNELS)			
To be defined	Doors			
FOCCHI SPA	Ironmongery	Via Cornacchiara, 805 47824 Poggio Torriana (Rimini) - Italy	info@focchi.it	+39 0541 62 73 55

8. PRODUCT IDENTIFICATION AND TRACEABILITY

Relevant documents not attached but referred to:

- Company IT Procedures
- P-PRO-01_Management of Project and Production Process

8.1. PRODUCT IDENTIFICATION

FOCCHI ensures that each product / component is identified and traceable from start to finish, which includes design, production, delivery and on-site installation phases.

The design, production and shipping processes are managed through SAP ERP software.

A PLM software, integrated with the CAD design system and the ERP system, is used as a "user-friendly" interface for the management and display of information by the various users.

Moreover, an encoding system has been set up to allow each component to be uniquely identified by means of an alphanumeric string or a number code.

8.1.1 CODING OF PROJECT-MANAGED COMPONENTS

Each component designed for a specific project is identified by means of an alphanumeric string containing the job code, the component type code, a progressive numbering and a “position” code for managing any dimensional variations.

List of types of project-managed components:

- AB Structurally sealed Glazed / Spandrel panels
- AS Various Assemblies
- CA Aluminium structural components / Aluminium structural metalwork
- CE Curtain walling units
- CS Special plastic components
- CX Stainless steel structural components / Stainless steel structural metalwork
- CZ Steel structural components / Steel structural metalwork
- GU Gaskets / Vulcanised Gaskets
- IV Windows and Doors
- LA Aluminium sheets
- LP Pre-painted metal sheets
- LX Stainless-steel components/sheets
- LZ Steel components / sheets
- PE Components from extruded aluminium bar
- PN Infill panels
- ST Cotto / ceramic / stone components
- SB Various customized subsupplies (curtains, handrail, balustrade systems, sandwich panels)
- VE Glazing panels
- US Escape route doorsets.

EXAMPLE: CODING OF A UNITISED PANEL AND WORKSHOP DRAWING

140050 CE 1002 -001

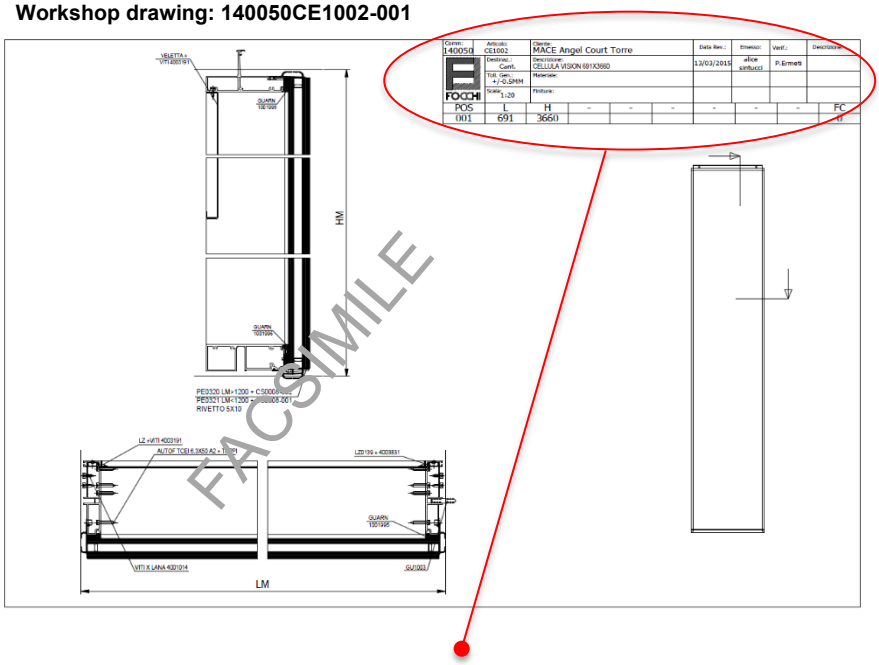
PROJECT CODE

COMPONENT TYPE CODE

PROGRESSIVE NUMBER

"POSITION" CODE

Workshop drawing: 140050CE1002-001



PROJECT CODE

COMPONENT TYPE CODE

Comm: 140050	Articolo: CE1002	Cliente: MACE Angel Court Torre				Data Rev.:	Emesso:	Verif.:	Descrizione:
FOCCHI	Destinaz.: Cant.	Descrizione: CELLULA VISION 691X3660				13/03/2015	alice sintucci	P.Ermeti	
	Toll. Gen.: +/-0.5MM	Materiale:							
	Scala: 1:20	Finitura:							
POS	L	H	-	-	-	-	-	-	FC
001	691	3660							0

"POSITION" CODE

8.1.2 CODING OF WAREHOUSE-MANAGED COMPONENTS

Each warehouse-managed component is identified by means of an alphanumeric string or a number code.

List of types of warehouse-managed components:

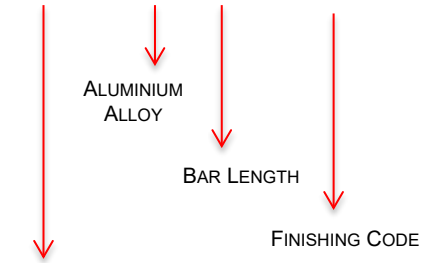
- Extruded aluminium profiles (alphanumeric string)
- Accessories (number code)
- Sealants (number code)
- Membranes (number code)
- Nuts and bolts (number code)
- Ironmongery (number code)
- Plastic components (number code)

EXAMPLE: CODING OF EXTRUDED ALUMINIUM PROFILES

Extruded aluminium bars are identified by an alphanumeric string that contains:

- die code;
- alloy code;
- bar length;
- finishing code.

0101795/L34/5900/F_X0125



DIE CODE
010xxxx = aluminium bars without thermal break (by FOCCHI design)
020xxxx = aluminium bars with thermal break (by FOCCHI design)
2xxxxx = commercial aluminium bars

EXAMPLE: CODING OF ACCESSORIES AND IRONMONGERY

Ironmongery and fasteners are identified by the following numerical codes:

- 3xxxxxx = accessories
- 4xxxxxx = nuts and bolts

8.1.3. IDENTIFICATION FOR SUPPLIES OF RAW MATERIAL AND COMPONENTS

Raw materials and components are identified through:

- a label applied on each piece;
- the packing list applied to the pallet with reference to the project, to the list code, to the component code and to the quantity, to the purchase order number, to the production batch, to the number of the shipping document.

Below are listed several methods of identification by type of product.

- **IDENTIFICATION OF EXTRUDED ALUMINIUM PROFILES: BARS AND MACHINED COMPONENTS**

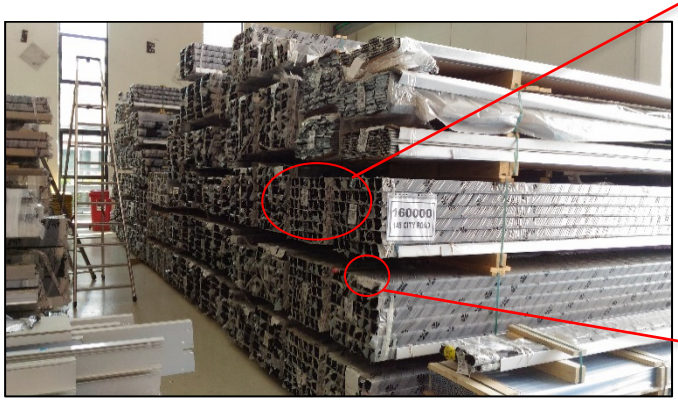
For the bars, an accompanying label is applied by the supplier to the entire package indicating:

- project code;
- supplier profile code;
- quantity;
- finish;
- supplier production batch;
- order number;
- delivery date and document number.

In addition to the supplier label, an additional FOCCHI issued label is applied with the following information:

- project code;
- FOCCHI profile code;
- finish code;
- bar length;
- quantity;
- anodic oxide layer thickness (on anodised profiles).

Estruded aluminium bars



FOCCHI LABEL

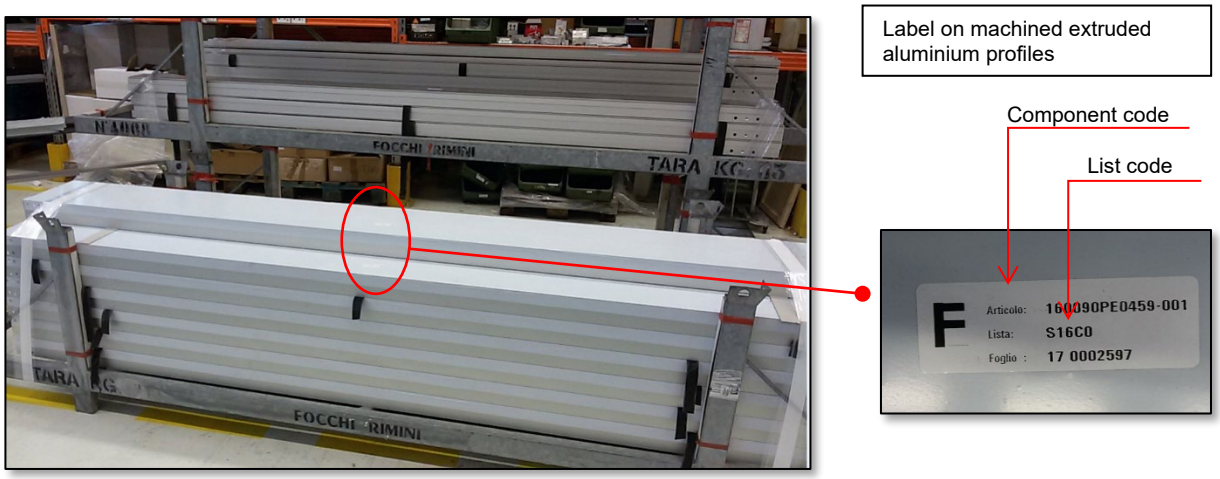
SUPPLIER LABEL

The bars are then machined in FOCCHI's plant and an adhesive label is applied to each processed component which contains:

- the component code;
- the list code.

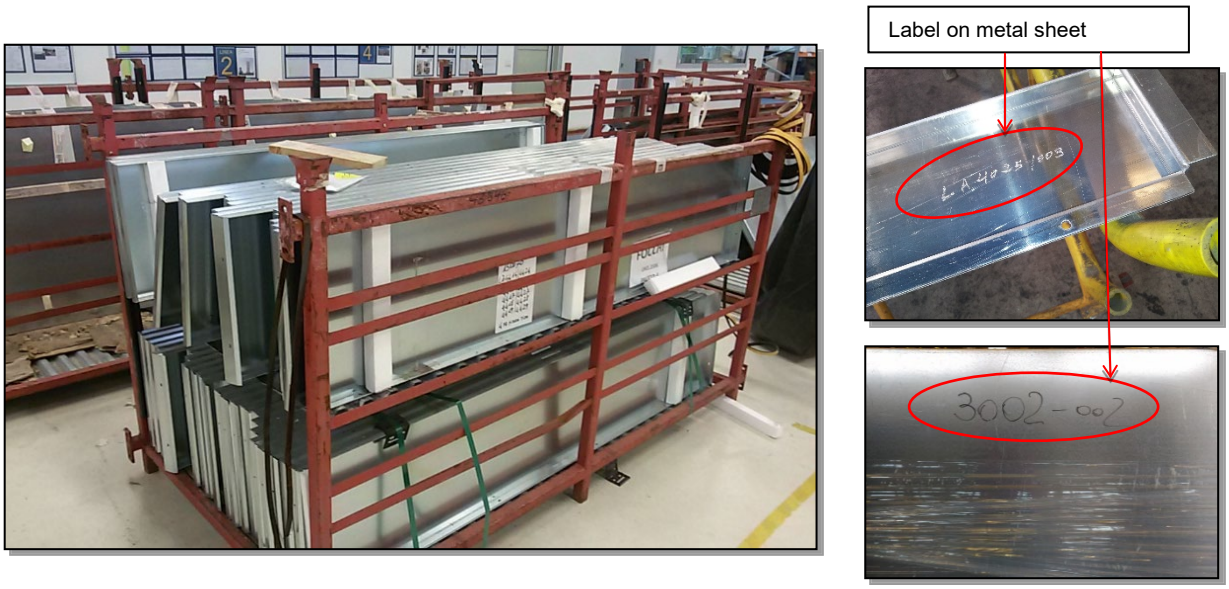
The identification mark will be positioned so that it is not visible after assembly.

Components obtained from extruded aluminium bars



- **IDENTIFICATION OF STEEL AND ALUMINIUM COMPONENTS**

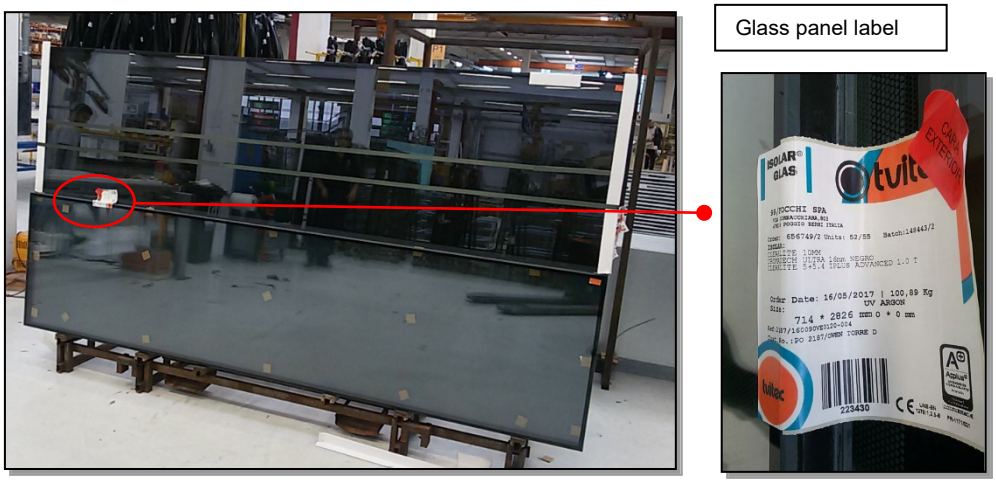
The label contains the component code, applied to each piece in a position that is not visible after assembly.



- **IDENTIFICATION OF ROCKWOOL PANELS**

- **IDENTIFICATION OF GLASS PANELS**

The glass panels are identified with an adhesive label applied to each panel.

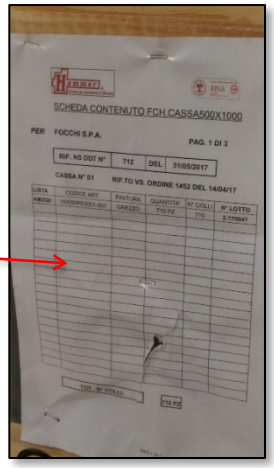


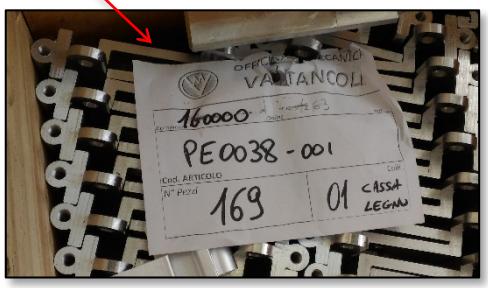
- **IDENTIFICATION OF GASKETS**

Gasket label

- **IDENTIFICATION OF SMALL COMPONENTS**

The smallest components (bolts, plates, accessories) are delivered in wooden boxes. A packing list is applied to each box and contains project code, list code, component code, quantity, production lot and shipping document number.





8.2. PRODUCT TRACEABILITY

A bill of materials (BOM) is associated with each component on the PLM.

Example of the BOM for component 140050CE1002-001

Direct PLM - Vista sulla distinta base

Scarica come. Selezionato | Pack 'n Go Document

Esplosa: 140050CE1002-0...

Trova | Esplosa | EBom Explode.

	Seq	Codice	State	Rev	Descrizione
140050CE1002-001/1 - CELLULA VISION 691X3660		140050CE1002-001	Released	1	CELLULA VISION 691X3660
140050CS0002-001/0 - FONDELLO 0101498	1	140050CS0002-001	Released	0	FONDELLO 0101498
140050CS0003-001/0 - FONDELLO 0101499/0101534	2	140050CS0003-001	Released	0	FONDELLO 0101499/0101534
4003790/0 - UNI 6947 VITE AUTOF.TCEI 6,3 X 50 A2 CL70	3	4003790	Released	0	UNI 6947 VITE AUTOF.TCEI 6,3 X 50 A2 CL70
3005178/0 - TAPPO MINIPLAST MP 55-10125 NATURALE	4	3005178	Released	0	TAPPO MINIPLAST MP 55-10125 NATURALE
140050LZ0139-001/2 - PIASTRINA CONN. BLOCCHETTO	5	140050LZ0139-001	Released	2	PIASTRINA CONN. BLOCCHETTO
140050LZ0139-001G/2 - PIASTRINA CONN. BLOCCHETTO	1	140050LZ0139-001G	Released	2	PIASTRINA CONN. BLOCCHETTO
4003831/1 - UNI 9200A RIVETTI 4,8 X 12 ALLUMINIO T.SVASATA	6	4003831	Released	1	UNI 9200A RIVETTI 4,8 X 12 ALLUMINIO T.SVASATA
140050PE0321-001/1 - MANINA DI SUPPORTO L=100	7	140050PE0321-001	Released	1	MANINA DI SUPPORTO L=100
0101506/L23/6200/F_V147/0 - SUPPORTO VETROCAMERA	1	0101506/L23/6200/F_V147	Released	0	SUPPORTO VETROCAMERA
140050CS0008-001/1 - SPESSORE MANINA SUPPORTO	8	140050CS0008-001	In Revi...	1	SPESSORE MANINA SUPPORTO
4000077/0 - UNI 9200A RIVETTI 5 X 10 INOX A2	9	4000077	Released	0	UNI 9200A RIVETTI 5 X 10 INOX A2
4001014/0 - UNI 6947 VITE AUTOF.TCEI 4,8 X 13 ZINC	10	4001014	Released	0	UNI 6947 VITE AUTOF.TCEI 4,8 X 13 ZINC
4003191/0 - UNI 6947 VITE AUTOF.TCEI 4,8 X 16 ZINC	11	4003191	Released	0	UNI 6947 VITE AUTOF.TCEI 4,8 X 16 ZINC
140050GU1003-001/1 - CHIAVE VERTICALE -1002139	12	140050GU1003-001	Released	1	CHIAVE VERTICALE -1002139
1002139/60EPNERO/0 - GIUNTO VERTICALE	2	1002139/60EPNERO	Released	0	GIUNTO VERTICALE
140050CS0004-001/0 - FONDELLO 0101500	13	140050CS0004-001	Released	0	FONDELLO 0101500
140050PE1008-001/0 - TRAVERSO SUPERIORE	14	140050PE1008-001	Released	0	TRAVERSO SUPERIORE
0101499/L26/6200/F_X0125/0 - TRAVERSO SUPERIORE FCT UNIT	1	0101499/L26/6200/F_X01...	Released	0	TRAVERSO SUPERIORE FCT UNIT
140050PE1009-001/0 - TRAVERSO INFERIORE	15	140050PE1009-001	Released	0	TRAVERSO INFERIORE
0101498/L26/6200/F_X0125/1 - TRAVERSO INFERIORE FCT UNIT	1	0101498/L26/6200/F_X01...	Released	1	TRAVERSO INFERIORE FCT UNIT
140050GU1001-001/0 - TELAIO UNIT<1200	16	140050GU1001-001	Released	0	TELAIO UNIT<1200
1002207/70VMQ7035/0 - CAPPOTTO ESTERNO	1	1002207/70VMQ7035	Released	0	CAPPOTTO ESTERNO
1002208/70VMQ7035/0 - CAPPOTTO ESTERNO	2	1002208/70VMQ7035	Released	0	CAPPOTTO ESTERNO
1002158/70VMQ7035/1 - GUARNIZIONE INFERIORE CAPPOTTO ES...	3	1002158/70VMQ7035	Released	1	GUARNIZIONE INFERIORE CAPPOTTO ESTERNO
140050PE1010-001/0 - MONTANTE STANDARD DX	17	140050PE1010-001	Released	0	MONTANTE STANDARD DX
0101500/L26/3850/F_X0125/2 - MONTANTE FCT UNIT	1	0101500/L26/3850/F_X01...	Released	2	MONTANTE FCT UNIT
140050PE1011-001/0 - MONTANTE STANDARD SX	18	140050PE1011-001	Released	0	MONTANTE STANDARD SX
0101500/L26/3850/F_X0125/2 - MONTANTE FCT UNIT	1	0101500/L26/3850/F_X01...	Released	2	MONTANTE FCT UNIT
1001995/70VMQ7035/0 - BATTUTA INTERNA VETRO	19	1001995/70VMQ7035	Released	0	BATTUTA INTERNA VETRO
1001996/70VMQ7035/0 - BATTUTA INTERNA VETRO	20	1001996/70VMQ7035	Released	0	BATTUTA INTERNA VETRO
140050VE1000-002/1 - VTERO VISION TOWER	21	140050VE1000-002	Released	1	VTERO VISION TOWER
140050LZ1000-002/2 - VELETTA UNIT STANDARD	22	140050LZ1000-002	Released	2	VELETTA UNIT STANDARD
140050LZ1000-002G/2 - VELETTA UNIT STANDARD	1	140050LZ1000-002G	Released	2	VELETTA UNIT STANDARD
4000234/0 - UNI 6954 VITE AUTOF.TC 4,8 X 9,5 ZINC	23	4000234	Released	0	UNI 6954 VITE AUTOF.TC 4,8 X 9,5 ZINC

A lot-based (list) management process is triggered when the component is released for production by the Technical Department, which generates:

- production orders for workshop;
- purchase orders linked to all components of the BOM from external procurement;
- outsourcing orders.

The list is identified by an alphanumeric code and indicates the location of the product in the building (ex: subdivision of the curtain walls per floor).

Once production has been completed, loading onto the ERP system of the component code automatically entails the unloading from the warehouse of all the sub-components of the bill of materials.

The ERP management system based on the bill of materials allows traceability of raw materials, components, treatments and finished products.

8.2.1 TRACEABILITY OF RAW MATERIALS AND COMPONENTS FROM EXTERNAL SUPPLIER

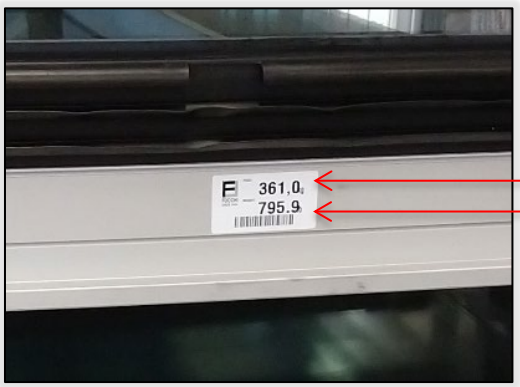
With reference to the procurement of materials, each purchase or outsource order refers to the workshop drawing, the name of the project, the name of the supplier and FOCCHI's product code.

8.2.2 CURTAIN WALLING UNITS TRACEABILITY

The activities that guarantee the traceability of the product along all the production phases are described in the procedure *P-PRO-01_Management of Project and Production Process.*

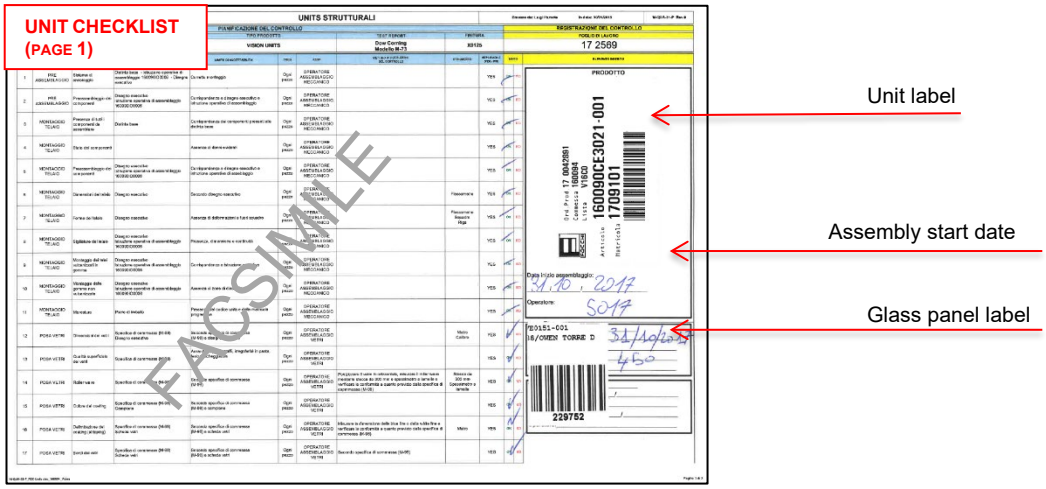
Units are marked with an adhesive label containing the unit code and the serial number. The label is applied in such a position that it is not visible after installation.

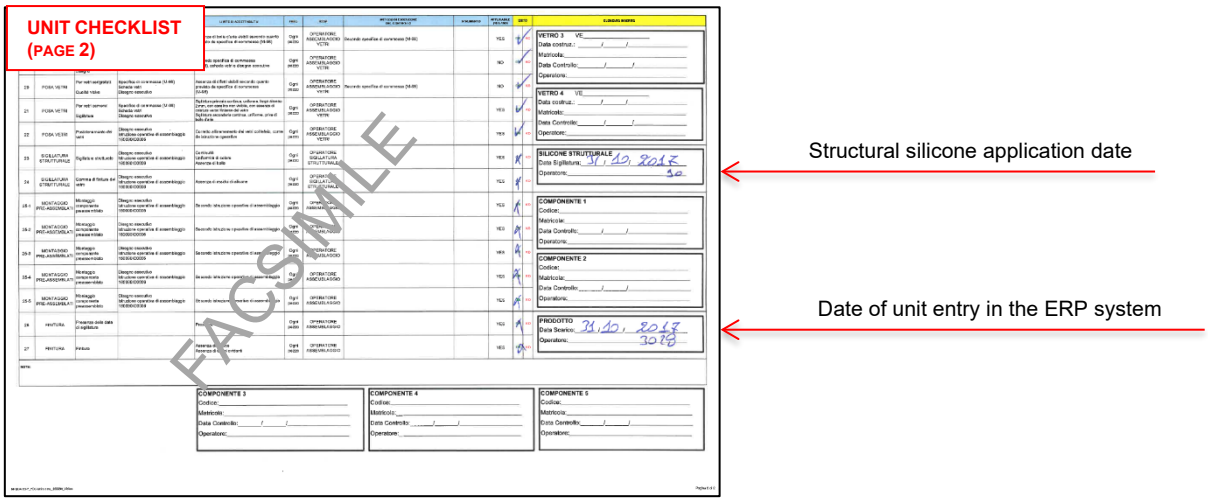
The unit produced is registered on the ERP System using the barcode.



On the upper transom of each factory assembled Unit is also applied an adhesive label reporting its total weight (in kilograms and pounds).

A dedicated checklist is filled in during assembly, listing the quality controls carried out on the production line along with the information relevant to traceability (unit label, glass panel label, sealing date, assembly start date, etc.).





During installation, the Installation Quality Manager (IQM) in collaboration with the Site Manager ensures tracking installation and quality control using and sharing specific apps for in the field data collection and management based check sheets from delivery to snagging

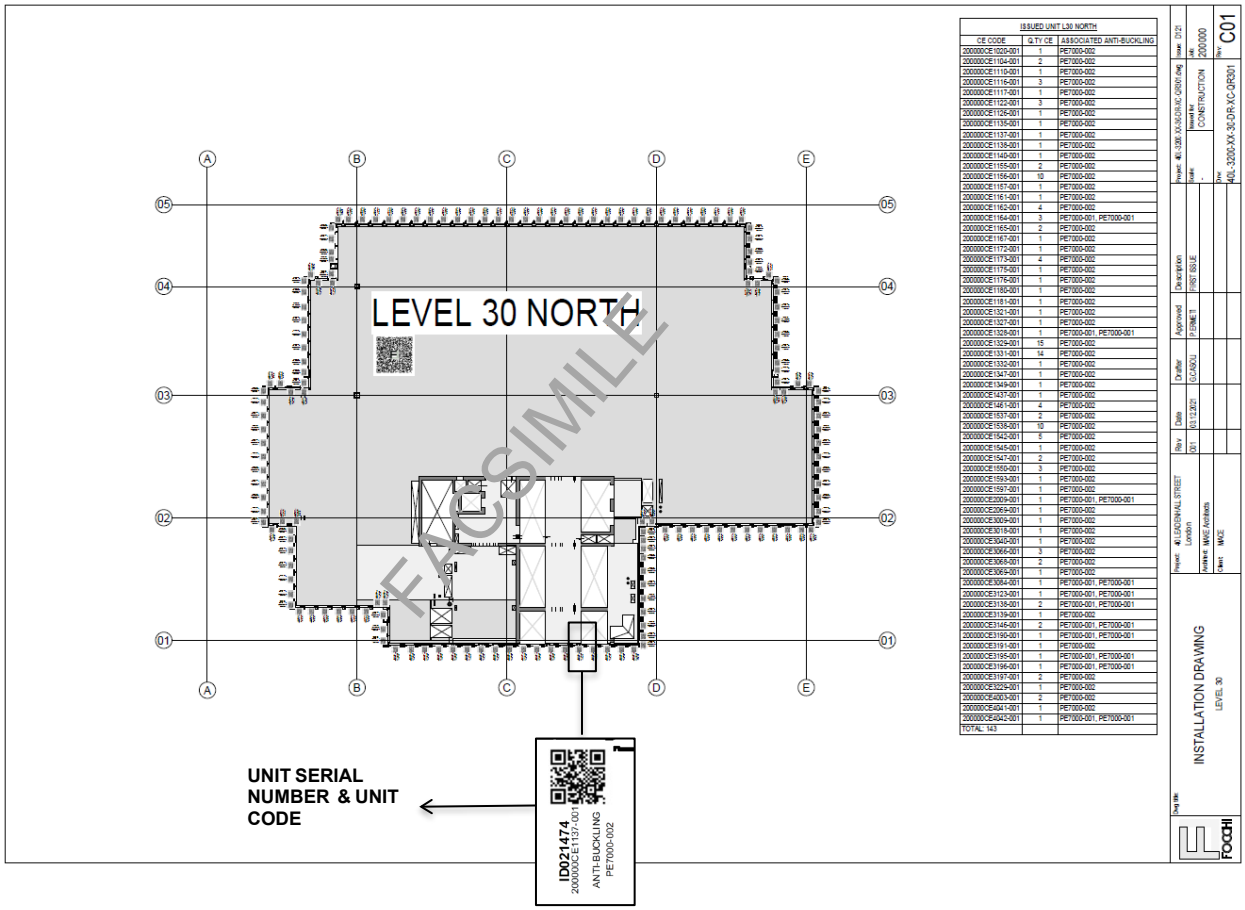
The IQM will complete an ITP check list while installing (*see Ch. 12.1 "Quality Controls"*). One checklist will be completed for each unit.

The IQM will digit the position code from the Focchi installation drawing, the code will allow the tracing of the unit and the recording of the unique location. A second scan will be done on the unit label to automatically record the serial number.

A QR code from Focchi installation drawings will be scanned for tracing and recording of each unit, if available

Each unit will have a unique reference number used for traceability. The reference number on installation drawings which also include the unit code.

Elevation drawing for installation



9. MANUFACTURE

Relevant documents not attached but referred to:

- P-PRO-01_Management of Project and Production Process
- P-PRG-04_Management of validation process for SSG system
- P-QUA-01_Management of quality controls along the production cycle
- IO-75-02-09_Silicone Structural Glazing (SSG) process – Additional internal adhesion tests

9.1. LEAN PRODUCTION

FOCCHI's production process is based on the LEAN Production methodology, whose aim is to increase production efficiency by optimizing task flow and reducing / eliminating waste.

LEAN production process takes into account only the aspects of the product that add concrete value to the customer, eliminating all tasks that fail to create value, whenever possible.

Some LEAN Production tools applied in FOCCHI:

- *Just in Time,* that means to make sure that materials are available on the assembly line only when needed;
- *Workshop layout optimized* in order to follow the FOCCHI product workflow;
- *Department Supermarket* for the management of nuts and bolts, to provide the assembly line only the bolts required to produce a specific unit (with refilling managed through Kanban methodology);
- "*5S" Methodology (Sort / Set in Order / Shine / Standardize / Sustain)*, tool aimed at increasing the order and cleaning of the work areas in order to reduce search times;
- *Visual Management of production*, using a monitor in order to make production trend visible in real time;
- *OEE (Overall Equipment Effectiveness),* an indicator for monitoring the productivity of the machine along the work shift;
- *Total Productive Maintenance,* a methodology aimed at increasing OEE with a modest investment in maintenance, avoiding downtime in production processes;
- *Flash meetings*, 15-minute daily meetings at the end of the shift, in which the various department employees provide brief updates on the work just completed, on work in progress or on any problems to be remedied. Flash meetings also serve to monitor the progress of the various departments and to launch any action plan;
- *PDCA (Plan-Do-Check, Act)*, a methodology aimed at solving the problems encountered during Flash meetings;
- *Ishikawa Fishbone Diagram* (also called: Cause-Effect Diagram), an instrument that aims to identify the root causes of an anomaly by analysing the 4M: Methods, Machines (equipment), Manpower, Materials;
- *Continuous Improvement Process (C.I.P.)* tool that allows the quick resolution of minor problems arising in production and involving the intervention of different business functions.

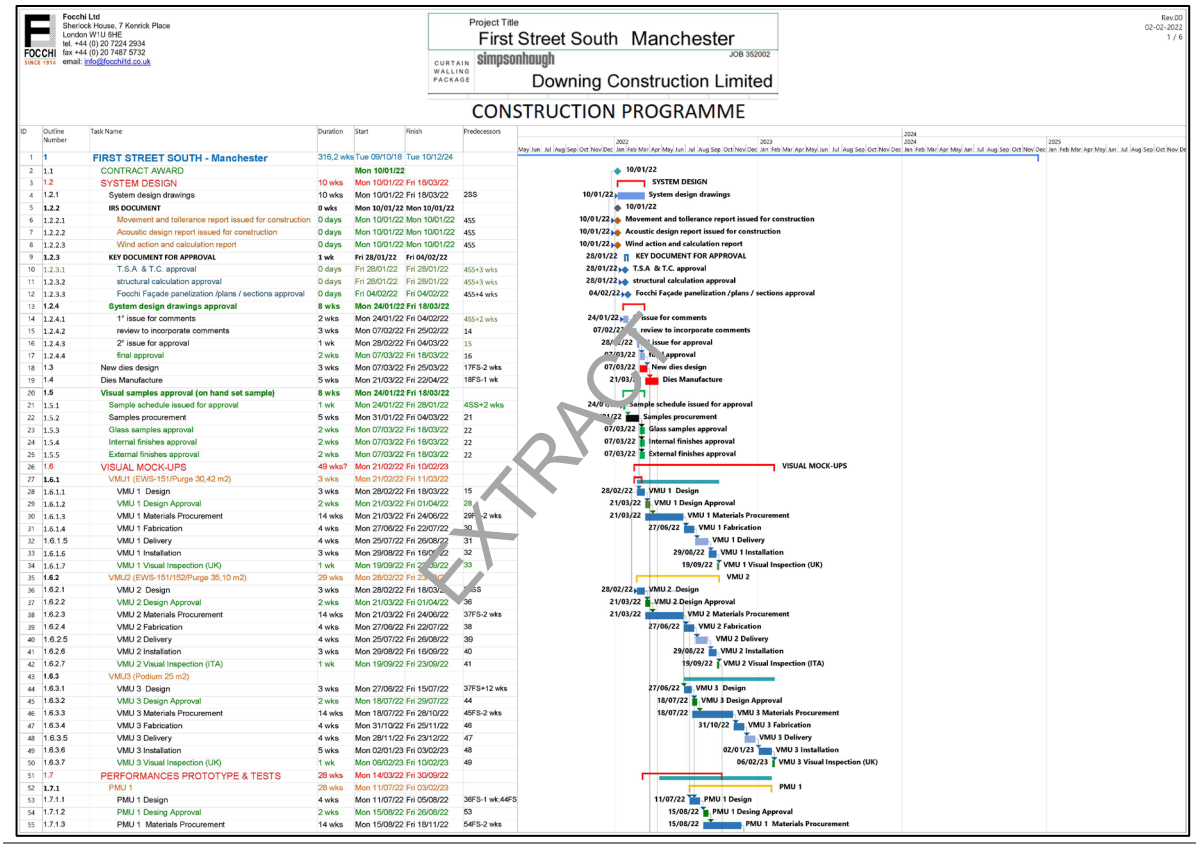
Examples of LEAN Production Tools applied in Focchi

9.2. FROM DESIGN……TO SHIPMENT

Prefabrication of façade units, mock-ups and prototypes includes the following activities:

- **IMPLEMENTATION OF A PROJECT PROGRAM** in which design, procurement, production and installation tasks are scheduled.

Project Program



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email: info@focchi-ltd.co.uk

Project Title
First Street South Manchester
JOB 352002
CURTAIN WALLING PACKAGE
simpsonhough
Downing Construction Limited

Rev.00
02-02-2022
1 / 6

CONSTRUCTION PROGRAMME

ID	Outline Number	Task Name	Duration	Start	Finish	Predecessors
1	1	FIRST STREET SOUTH - Manchester	316,2 wks	Tue 09/10/18	Tue 10/12/24	
2	1.1	CONTRACT AWARD		Mon 10/01/22		
3	1.2	SYSTEM DESIGN	10 wks	Mon 10/01/22	Fri 18/03/22	
4	1.2.1	System design drawings	10 wks	Mon 10/01/22	Fri 18/03/22	2SS
5	1.2.2	IRS DOCUMENT	0 wks	Mon 10/01/22	Mon 10/01/22	
6	1.2.2.1	Movement and tollerance report issued for construction	0 days	Mon 10/01/22	Mon 10/01/22	4SS
7	1.2.2.2	Acoustic design report issued for construction	0 days	Mon 10/01/22	Mon 10/01/22	4SS
8	1.2.2.3	Wind action and calculation report	0 days	Mon 10/01/22	Mon 10/01/22	4SS
9	1.2.3	KEY DOCUMENT FOR APPROVAL	1 wk	Fri 28/01/22	Fri 04/02/22	
10	1.2.3.1	T.S.A. & T.C. approval	0 days	Fri 28/01/22	Fri 28/01/22	4SS+3 wks
11	1.2.3.2	structural calculation approval	0 days	Fri 28/01/22	Fri 28/01/22	4SS+3 wks
12	1.2.3.3	Focchi Façade panelization /plans / sections approval	0 days	Fri 04/02/22	Fri 04/02/22	4SS+4 wks
13	1.2.4	System design drawings approval	8 wks	Mon 24/01/22	Fri 18/03/22	
14	1.2.4.1	1° issue for comments	2 wks	Mon 24/01/22	Fri 04/02/22	4SS+2 wks
15	1.2.4.2	review to incorporate comments	3 wks	Mon 07/02/22	Fri 25/02/22	14
16	1.2.4.3	2° issue for approval	1 wk	Mon 28/02/22	Fri 04/03/22	15
17	1.2.4.4	final approval	2 wks	Mon 07/03/22	Fri 18/03/22	16
18	1.3	New dies design	3 wks	Mon 07/03/22	Fri 25/03/22	17FS-2 wks
19	1.4	Dies Manufacture	5 wks	Mon 21/03/22	Fri 22/04/22	18FS-1 wk
20	1.5	Visual samples approval (on hand set sample)	8 wks	Mon 24/01/22	Fri 18/03/22	
21	1.5.1	Sample schedule issued for approval	1 wk	Mon 24/01/22	Fri 28/01/22	4SS+2 wks
22	1.5.2	Samples procurement	5 wks	Mon 31/01/22	Fri 04/03/22	21
23	1.5.3	Glass samples approval	2 wks	Mon 07/03/22	Fri 18/03/22	22
24	1.5.4	Internal finishes approval	2 wks	Mon 07/03/22	Fri 18/03/22	22
25	1.5.5	External finishes approval	2 wks	Mon 07/03/22	Fri 18/03/22	22
26	1.6	VISUAL MOCK-UPS	49 wks?	Mon 21/02/22	Fri 10/02/23	
27	1.6.1	VMU1 (EWS-151/Purge 30,42 m2)	3 wks	Mon 21/02/22	Fri 11/03/22	
28	1.6.1.1	VMU 1 Design	3 wks	Mon 28/02/22	Fri 18/03/22	15
29	1.6.1.2	VMU 1 Design Approval	2 wks	Mon 21/03/22	Fri 01/04/22	28
30	1.6.1.3	VMU 1 Materials Procurement	14 wks	Mon 21/03/22	Fri 24/06/22	29FS-2 wks
31	1.6.1.4	VMU 1 Fabrication	4 wks	Mon 27/06/22	Fri 22/07/22	30
32	1.6.1.5	VMU 1 Delivery	4 wks	Mon 25/07/22	Fri 26/08/22	31
33	1.6.1.6	VMU 1 Installation	3 wks	Mon 29/08/22	Fri 16/09/22	32
34	1.6.1.7	VMU 1 Visual Inspection (UK)	1 wk	Mon 19/09/22	Fri 23/09/22	33
35	1.6.2	VMU2 (EWS-151/152/Purge 35,10 m2)	29 wks	Mon 28/02/22	Fri 23/09/22	
36	1.6.2.1	VMU 2 Design	3 wks	Mon 28/02/22	Fri 18/03/22	15SS
37	1.6.2.2	VMU 2 Design Approval	2 wks	Mon 21/03/22	Fri 01/04/22	36
38	1.6.2.3	VMU 2 Materials Procurement	14 wks	Mon 21/03/22	Fri 24/06/22	37FS-2 wks
39	1.6.2.4	VMU 2 Fabrication	4 wks	Mon 27/06/22	Fri 22/07/22	38
40	1.6.2.5	VMU 2 Delivery	4 wks	Mon 25/07/22	Fri 26/08/22	39
41	1.6.2.6	VMU 2 Installation	3 wks	Mon 29/08/22	Fri 16/09/22	40
42	1.6.2.7	VMU 2 Visual Inspection (ITA)	1 wk	Mon 19/09/22	Fri 23/09/22	41
43	1.6.3	VMU3 (Podium 25 m2)				
44	1.6.3.1	VMU 3 Design	3 wks	Mon 27/06/22	Fri 15/07/22	37FS+12 wks
45	1.6.3.2	VMU 3 Design Approval	2 wks	Mon 18/07/22	Fri 29/07/22	44
46	1.6.3.3	VMU 3 Materials Procurement	14 wks	Mon 18/07/22	Fri 28/10/22	45FS-2 wks
47	1.6.3.4	VMU 3 Fabrication	4 wks	Mon 31/10/22	Fri 25/11/22	46
48	1.6.3.5	VMU 3 Delivery	4 wks	Mon 28/11/22	Fri 23/12/22	47
49	1.6.3.6	VMU 3 Installation	5 wks	Mon 02/01/23	Fri 03/02/23	48
50	1.6.3.7	VMU 3 Visual Inspection (UK)	1 wk	Mon 06/02/23	Fri 10/02/23	49
51	1.7	PERFORMANCES PROTOTYPE & TESTS	28 wks	Mon 14/03/22	Fri 30/09/22	
52	1.7.1	PMU 1	28 wks	Mon 11/07/22	Fri 03/02/23	
53	1.7.1.1	PMU 1 Design	4 wks	Mon 11/07/22	Fri 05/08/22	36FS-1 wk;44FS
54	1.7.1.2	PMU 1 Desing Approval	2 wks	Mon 15/08/22	Fri 26/08/22	53
55	1.7.1.3	PMU 1 Materials Procurement	14 wks	Mon 15/08/22	Fri 18/11/22	54FS-2 wks

EXTRACT

- **IMPLEMENTATION OF A DESIGN PLAN** for the issue of workshop and installation drawings, defined on the basis of the project program.

- **SUBDIVISION OF THE PROJECT INTO BATCHES** (called **LISTS**) identified by an alphanumeric code.

  FOCCHI uses its own internal management system based on the list concept for procurement, production and shipping activities.

- **IMPLEMENTATION OF A LIST SCHEDULE**, drawn up in accordance with the installation program and containing the deadlines for the following activities:
  - issue of workshop drawings;
  - components supply to the workshop;
  - end of assembly;
  - shipment on construction site;
  - start of installation.

Macrolist

List

Date of issue of workshop drawings

Date of supply of components for the workshop

Date of end of assembly

Date of shipment on site

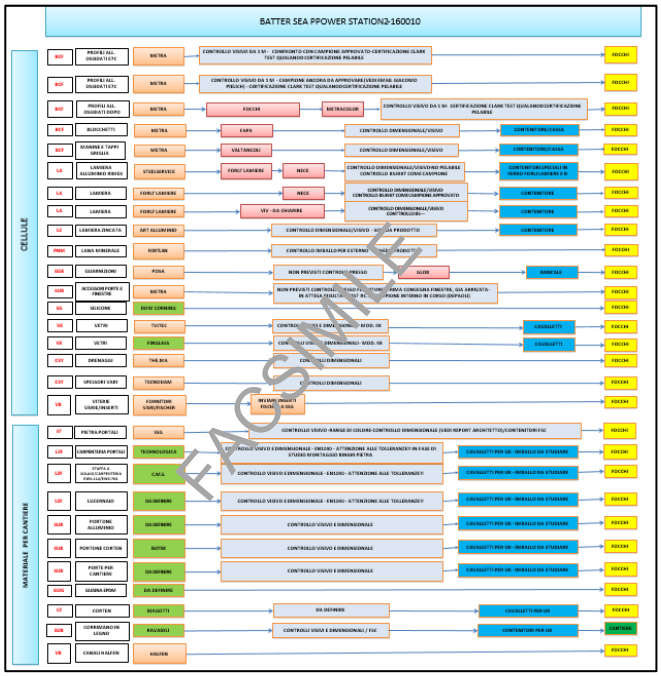
Date of start of installation

ANA	Lista	Descrizione	Passaggio cicli	COMPONENTI OFFICINA	PRODOTTO FINITO	ARRIVO IN CANTIERE	INIZIO POSA
160010ANA1000	K22X0	2 - Courtyard 2 SHW 2X - Staffe	09/10/2017	01/01/2099	18/12/2017	15/01/2018	29/01/2018
160010ANA1000	K22K0	2 - Courtyard 2 SHW 2K - Corten	09/10/2017	01/01/2099	18/12/2017	15/01/2018	29/01/2018
160010ANA1000	K22D0	2 - Courtyard 2 SHW 2D - Doors (IV)	06/11/2017	27/10/2017	18/12/2017	15/01/2018	29/01/2018
160010ANA1000	K22E0	2 - Courtyard 2 SHW 2E - External finishes/Copings/Soffit/Gutters	09/10/2017	01/01/2099	18/12/2017	15/01/2018	29/01/2018
160010ANA1000	K22H0	2 - Courtyard 2 SHW 2H - Fire stop/galvan flashings/closures	09/10/2017	01/01/2099	18/12/2017	15/01/2018	29/01/2018
160010ANA1000	U23A0	2 - Courtyard 2 SHW 3 to 3A - Profili di base e guarnizioni per cantiere	31/07/2017	30/10/2017	18/12/2017	15/01/2018	29/01/2018
160010ANA1000	U23X0	2 - Courtyard 2 SHW 3 to 3X - Staffe	09/10/2017	01/01/2099	18/12/2017	15/01/2018	29/01/2018
160010ANA1000	U23B0	2 - Courtyard 2 SHW 3 to 3B - Cellule (CE), Moduli spandrel (AS)	04/09/2017	04/09/2017	18/12/2017	15/01/2018	29/01/2018
160010ANA1000	U23C0	2 - Courtyard 2 SHW 3 to 3C - Corner Units (CE)	18/09/2017	18/09/2017	18/12/2017	15/01/2018	29/01/2018
160010ANA1000	U23E0	2 - Courtyard 2 SHW 3 to 3E - External finishes/Copings/Soffit/Gutters	09/10/2017	01/01/2099	18/12/2017	15/01/2018	29/01/2018
160010ANA1000	U23H0	2 - Courtyard 2 SHW 3 to 3H - Fire stop/galvan flashings/closures	09/10/2017	01/01/2099	18/12/2017	15/01/2018	29/01/2018
160010ANA1000	U23I0	2 - Courtyard 2 SHW 3 to 3I - Internal finishes	09/10/2017	01/01/2099	18/12/2017	15/01/2018	29/01/2018
160010ANA1000	C23A0	2 - Courtyard 2 SHW 3 to 5A - Profili di base e guarnizioni per cantiere	25/09/2017	04/12/2017	18/12/2017	15/01/2018	29/01/2018
160010ANA1000	C23X0	2 - Courtyard 2 SHW 3 to 5X - Staffe	09/10/2017	01/01/2099	18/12/2017	15/01/2018	29/01/2018
160010ANA1000	C23B0	2 - Courtyard 2 SHW 3 to 5B - Cellule (CE), Moduli spandrel (AS)	06/11/2017	06/11/2017	18/12/2017	15/01/2018	29/01/2018
160010ANA1000	C23C0	2 - Courtyard 2 SHW 3 to 5C - Corner Units (CE)	20/11/2017	20/11/2017	18/12/2017	15/01/2018	29/01/2018
160010ANA1000	C23H0	2 - Courtyard 2 SHW 3 to 5H - Fire stop/galvan flashings/closures	09/10/2017	01/01/2099	18/12/2017	15/01/2018	29/01/2018
160010ANA1000	C23M0	2 - Courtyard 2 SHW 3 to 5M - Metalwork / Carpenteria	09/10/2017	01/01/2099	18/12/2017	15/01/2018	29/01/2018
160010ANA1000	G25A0	2 - Courtyard 2 SHW 3A - Profili di base e guarnizioni per cantiere	26/06/2017	25/09/2017	18/12/2017	15/01/2018	29/01/2018
160010ANA1000	G25X0	2 - Courtyard 2 SHW 3X - Staffe	09/10/2017	01/01/2099	18/12/2017	15/01/2018	29/01/2018
160010ANA1000	G25B0	2 - Courtyard 2 SHW 3B - Cellule (CE), Moduli spandrel (AS)	04/09/2017	04/09/2017	18/12/2017	15/01/2018	29/01/2018
160010ANA1000	G25E0	2 - Courtyard 2 SHW 3E - External finishes/Copings/Soffit/Gutters	09/10/2017	01/01/2099	18/12/2017	15/01/2018	29/01/2018
160010ANA1000	G25H0	2 - Courtyard 2 SHW 3H - Fire stop/galvan flashings/closures	09/10/2017	01/01/2099	18/12/2017	15/01/2018	29/01/2018
160010ANA1000	G25U0	2 - Courtyard 2 SHW 3U - Balaustre (AB)	04/09/2017	04/09/2017	18/12/2017	15/01/2018	29/01/2018
160010ANA1000	Z25A0	2 - Courtyard 2 SHW 5 -Level 5 SHE & SHWA - Profili di base e guarnizioni per cantiere	16/10/2017	01/01/2099	25/12/2017	15/01/2018	29/01/2018
160010ANA1000	Z25X0	2 - Courtyard 2 SHW 5 -Level 5 SHE & SHWX - Staffe	09/10/2017	01/01/2099	18/12/2017	15/01/2018	29/01/2018
160010ANA1000	Z25E0	2 - Courtyard 2 SHW 5 -Level 5 SHE & SHWE - External finishes/Copings/Soffit/Gutters	09/10/2017	01/01/2099	18/12/2017	15/01/2018	29/01/2018
160010ANA1000	Z25L0	2 - Courtyard 2 SHW 5 -Level 5 SHE & SHWL - Rockwool/Insulation/Membrane	09/10/2017	01/01/2099	18/12/2017	15/01/2018	29/01/2018
160010ANA1000	Z25Z0	2 - Courtyard 2 SHW 5 -Level 5 SHE & SHWZ - Metal zinc	09/10/2017	01/01/2099	18/12/2017	15/01/2018	29/01/2018
160010ANA1100	U32A0	3 - Courtyard 3 SHW 2 to 3A - Profili di base e guarnizioni per cantiere	31/07/2017	30/10/2017	18/12/2017	15/01/2018	29/01/2018
160010ANA1100	U32X0	3 - Courtyard 3 SHW 2 to 3X - Staffe	09/10/2017	01/01/2099	18/12/2017	15/01/2018	29/01/2018
160010ANA1100	U32B0	3 - Courtyard 3 SHW 2 to 3B - Cellule (CE), Moduli spandrel (AS)	04/09/2017	04/09/2017	18/12/2017	15/01/2018	29/01/2018
160010ANA1100	U32C0	3 - Courtyard 3 SHW 2 to 3C - Corner Units (CE)	18/09/2017	18/09/2017	18/12/2017	15/01/2018	29/01/2018
160010ANA1100	U32D0	3 - Courtyard 3 SHW 2 to 3D - Doors (IV)	18/09/2017	18/09/2017	18/12/2017	15/01/2018	29/01/2018
160010ANA1100	U32E0	3 - Courtyard 3 SHW 2 to 3E - External finishes/Copings/Soffit/Gutters	09/10/2017	01/01/2099	18/12/2017	15/01/2018	29/01/2018
160010ANA1100	U32H0	3 - Courtyard 3 SHW 2 to 3H - Fire stop/galvan flashings/closures	09/10/2017	01/01/2099	18/12/2017	15/01/2018	29/01/2018
160010ANA1100	U32I0	3 - Courtyard 3 SHW 2 to 3I - Internal finishes	09/10/2017	01/01/2099	18/12/2017	15/01/2018	29/01/2018
160010ANA1100	U32U0	3 - Courtyard 3 SHW 2 to 3U - Balaustre (AB)	18/09/2017	18/09/2017	18/12/2017	15/01/2018	29/01/2018
160010ANA1100	U33A0	3 - Courtyard 3 SHW 3 to 4 mezzA - Profili di base e guarnizioni per cantiere	31/07/2017	30/10/2017	18/12/2017	15/01/2018	29/01/2018
160010ANA1100	U33X0	3 - Courtyard 3 SHW 3 to 4 mezzX - Staffe	09/10/2017	01/01/2099	18/12/2017	15/01/2018	29/01/2018
160010ANA1100	U33B0	3 - Courtyard 3 SHW 3 to 4 mezzB - Cellule (CE), Moduli spandrel (AS)	04/09/2017	04/09/2017	18/12/2017	15/01/2018	29/01/2018
160010ANA1100	U33C0	3 - Courtyard 3 SHW 3 to 4 mezzC - Corner Units (CE)	18/09/2017	18/09/2017	18/12/2017	15/01/2018	29/01/2018
160010ANA1100	U33E0	3 - Courtyard 3 SHW 3 to 4 mezzE - External finishes/Copings/Soffit/Gutters	09/10/2017	01/01/2099	18/12/2017	15/01/2018	29/01/2018
160010ANA1100	U33H0	3 - Courtyard 3 SHW 3 to 4 mezzH - Fire stop/galvan flashings/closures	09/10/2017	01/01/2099	18/12/2017	15/01/2018	29/01/2018
160010ANA1100	U33I0	3 - Courtyard 3 SHW 3 to 4 mezzI - Internal finishes	09/10/2017	01/01/2099	18/12/2017	15/01/2018	29/01/2018
160010ANA1100	C33A0	3 - Courtyard 3 SHW 3 to 5A - Profili di base e guarnizioni per cantiere	25/09/2017	04/12/2017	18/12/2017	15/01/2018	29/01/2018
160010ANA1100	C33X0	3 - Courtyard 3 SHW 3 to 5X - Staffe	09/10/2017	01/01/2099	18/12/2017	15/01/2018	29/01/2018
160010ANA1100	C33B0	3 - Courtyard 3 SHW 3 to 5B - Cellule (CE), Moduli spandrel (AS)	06/11/2017	06/11/2017	18/12/2017	15/01/2018	29/01/2018
160010ANA1100	C33C0	3 - Courtyard 3 SHW 3 to 5C - Corner Units (CE)	20/11/2017	20/11/2017	18/12/2017	15/01/2018	29/01/2018
160010ANA1100	C33H0	3 - Courtyard 3 SHW 3 to 5H - Fire stop/galvan flashings/closures	09/10/2017	01/01/2099	18/12/2017	15/01/2018	29/01/2018
160010ANA1100	C33M0	3 - Courtyard 3 SHW 3 to 5M - Metalwork / Carpenteria	09/10/2017	01/01/2099	18/12/2017	15/01/2018	29/01/2018
160010ANA1100	S35A0	3 - Courtyard 3 SHW 5 -Level 5 SHE & SHWA - Profili di base e guarnizioni per cantiere	28/08/2017	06/11/2017	18/12/2017	08/01/2018	22/01/2018
160010ANA1100	S35X0	3 - Courtyard 3 SHW 5 -Level 5 SHE & SHWX - Staffe	09/10/2017	01/01/2099	18/12/2017	15/01/2018	29/01/2018
160010ANA1100	S35E0	3 - Courtyard 3 SHW 5 -Level 5 SHE & SHWE - External finishes/Copings/Soffit/Gutters	09/10/2017	01/01/2099	18/12/2017	15/01/2018	29/01/2018
160010ANA1100	S35H0	3 - Courtyard 3 SHW 5 -Level 5 SHE & SHWH - Fire stop/galvan flashings/closures	09/10/2017	01/01/2099	18/12/2017	15/01/2018	29/01/2018
160010ANA1100	S35T0	3 - Courtyard 3 SHW 5 -Level 5 SHE & SHWT - Timber handrail (Kebony)	09/10/2017	01/01/2099	18/12/2017	15/01/2018	29/01/2018
160010ANA1100	S35U0	3 - Courtyard 3 SHW 5 -Level 5 SHE & SHWU - Balaustre (AB)	13/11/2017	13/11/2017	15/01/2018	15/01/2018	29/01/2018
160010ANA1100	G35A0	3 - Courtyard 3 SHW 5 -Level 5 SHE & SHWA - Profili di base e guarnizioni per cantiere	26/06/2017	25/09/2017	18/12/2017	15/01/2018	29/01/2018
160010ANA1100	G35X0	3 - Courtyard 3 SHW 5 -Level 5 SHE & SHWX - Staffe	09/10/2017	01/01/2099	18/12/2017	15/01/2018	29/01/2018
160010ANA1100	G35B0	3 - Courtyard 3 SHW 5 -Level 5 SHE & SHWB - Cellule (CE), Moduli spandrel (AS)	04/09/2017	04/09/2017	18/12/2017	15/01/2018	29/01/2018
160010ANA1100	G35E0	3 - Courtyard 3 SHW 5 -Level 5 SHE & SHWE - External finishes/Copings/Soffit/Gutters	09/10/2017	01/01/2099	18/12/2017	15/01/2018	29/01/2018

- **ISSUE OF SUPPLY CONTRACTS AND PURCHASE ORDERS**

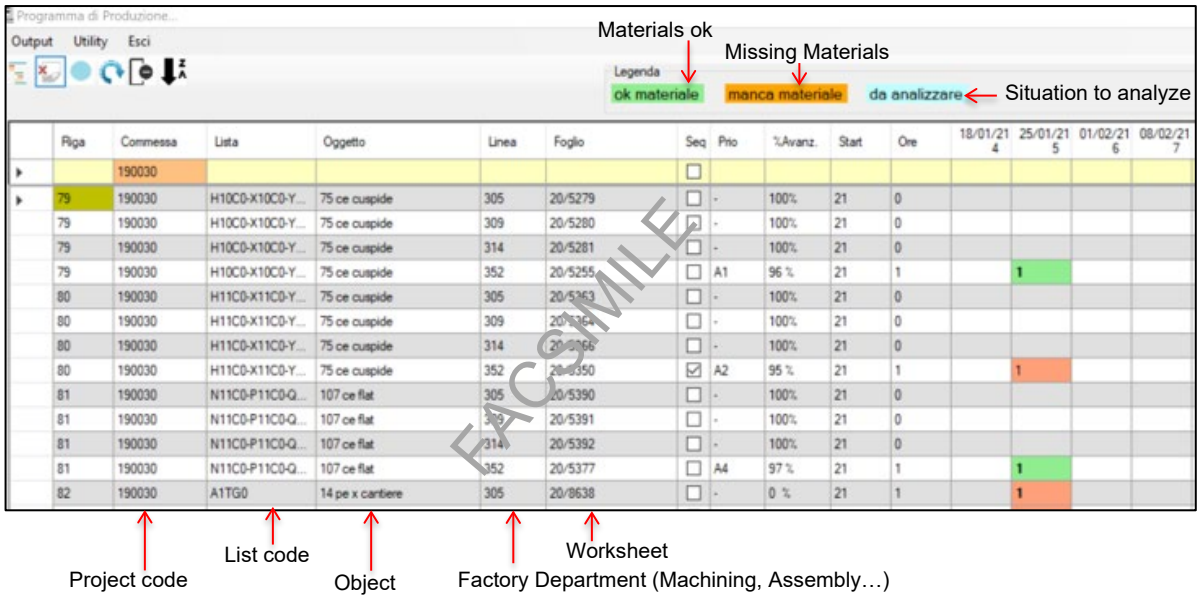
  Procurement process information is summarized in the "Project Supply Chain" document, which lists the suppliers selected for each material / component and finish, quality controls required and type of packaging.

Project Supply Chain



- **IMPLEMENTATION OF A FACTORY PRODUCTION PLAN**, drawn up in compliance with the general project programs and managed by the Plant Manager, in collaboration with the Project Manager and the Project Design Manager of each project.

Factory Production Scheduler



Riga	Commessa	Lista	Oggetto	Linea	Foglio	Seq	Prio	%Avanz.	Start	Ore	18/01/21 4	25/01/21 5	01/02/21 6	08/02/21 7
	190030					☐								
79	190030	H10C0-X10C0-Y...	75 ce cuspide	305	20/5279	☐	-	100%	21	0				
79	190030	H10C0-X10C0-Y...	75 ce cuspide	309	20/5280	☐	-	100%	21	0				
79	190030	H10C0-X10C0-Y...	75 ce cuspide	314	20/5281	☐	-	100%	21	0				
79	190030	H10C0-X10C0-Y...	75 ce cuspide	352	20/5255	☐	A1	96 %	21	1		1		
80	190030	H11C0-X11C0-Y...	75 ce cuspide	305	20/5363	☐	-	100%	21	0				
80	190030	H11C0-X11C0-Y...	75 ce cuspide	309	20/5364	☐	-	100%	21	0				
80	190030	H11C0-X11C0-Y...	75 ce cuspide	314	20/5366	☐	-	100%	21	0				
80	190030	H11C0-X11C0-Y...	75 ce cuspide	352	20/8350	☑	A2	95 %	21	1		1		
81	190030	N11C0-P11C0-Q...	107 ce flat	305	20/5390	☐	-	100%	21	0				
81	190030	N11C0-P11C0-Q...	107 ce flat	309	20/5391	☐	-	100%	21	0				
81	190030	N11C0-P11C0-Q...	107 ce flat	314	20/5392	☐	-	100%	21	0				
81	190030	N11C0-P11C0-Q...	107 ce flat	352	20/5377	☐	A4	97 %	21	1		1		
82	190030	A1TG0	14 pe x cantiere	305	20/8638	☐	-	0 %	21	1		1		

- **SUPPLY MANAGEMENT THROUGH A SCHEDULE OF DEADLINES** in order to ensure compliance with the production schedule

Order number

Project number

Planned delivery date

aggiornato il 9/11/17 17:48 OGGI 10/11/2017

Schedule of deadlines

PARZIALMENTE CONSEGNATO
CONSEGNATO A SALDO
CRITICO

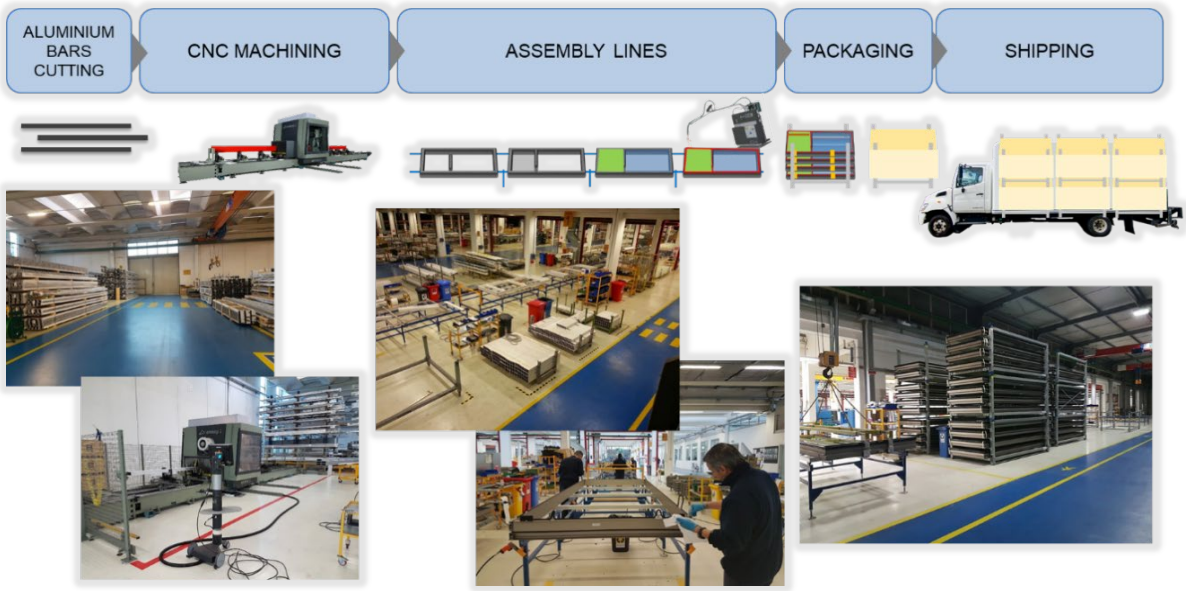
N° ORDINE	N° COMMESSA	LISTE	N°CODICI	N° PEZZI	DATA CONSEGNA PREVISTA	data ordine	valore	EVENTUALE FASE SUCCESSIVA	COMMENTI	CONFERMA
4796 - 17	160060	PWBF0 PWAF0	1	140	10/11/2017	19/09/2017	25			
2509 - 17	160094	A20J0	8	211	13/11/2017	17/05/2017	1400			
2140 - 17	160094	A20I0	10	382	13/11/2017	27/04/2017	7103			
3838 - 17	160091	S24C0 V24C0 HMZF0	7	11	17/11/2017	21/07/2017	111			MAIL CILLONI
4791 - 17	160060	PS2C0 PS3C0 PS1C0 PS4C0	25	31	17/11/2017	19/09/2017	676			
2510 - 17	160094	A24J0	8	211	24/11/2017	17/05/2017	1400			MAIL CILLONI
3697 - 17	160060	PN2C0 PN3C0 PS3C0 PS2C0 PN4C0	56	421	30/11/2017	17/07/2017	10694			
2140 - 17	160094	A24I0	10	380	04/12/2017	27/04/2017	7076			
2141 - 17	160094	A28I0	10	382	04/12/2017	27/04/2017	7103			
2508 - 17	160091	A24J0	8	211	08/12/2017	17/05/2017	1400			
2146 - 17	160091	A20I0	10	376	08/12/2017	27/04/2017	7022			MAIL CILLONI
2507 - 17	160091	A20J0	8	210	08/12/2017	17/05/2017	1393			MAIL CILLONI
3848 - 17	160094	A32J0	8	198	15/12/2017	21/07/2017	85			MAIL CILLONI
2141 - 17	160094	A32I0	10	381	15/12/2017	27/04/2017	7582			
3697 - 17	160060	PS4C0 PC3C0 PN4C0 PN3C0 PN2C0 PS3C0	76	408	22/12/2017	17/07/2017	9074			
2148 - 17	160091	A28I0	10	380	22/12/2017	27/04/2017	7076			
3839 - 17	160091	A28J0	8	205	22/12/2017	21/07/2017	88			
2142 - 17	160094	A36I0	10	572	11/01/2018	27/04/2017	11358			
3849 - 17	160094	A36J0	8	299	11/01/2018	21/07/2017	129			
4797 - 17	160060	PXAF0 PXBF0	1	276	12/01/2018	19/09/2017	50			
3698 - 17	160060	PS5C0 PN5C0	70	409	19/01/2018	17/07/2017	9705			
4910 - 17	160060	PN1C0	16	38	19/01/2018	22/09/2017	229			
2147 - 17	160091	A24I0	10	380	22/01/2018	27/04/2017	7076			
3847 - 17	160094	A26J0	8	211	22/01/2018	21/07/2017	91			
4911 - 17	160060	PC2C0 PC4C0 PC3C0	23	110	02/02/2018	22/09/2017	3200			
3699 - 17	160060	PS6C0 PN6C0	66	410	09/02/2018	17/07/2017	9755			
2148 - 17	160091	A32I0	10	380	23/02/2018	27/04/2017	7076			
3840 - 17	160091	A32J0	8	211	23/02/2018	21/07/2017	91			
3700 - 17	160060	PN7C0 PS7C0	67	409	02/03/2018	17/07/2017	9705			
4798 - 17	160060	PWCF0 PXCF0	1	238	09/03/2018	19/09/2017	42			
4912 - 17	160060	PC8C0 PC6C0 PC7C0 PC5C0	23	148	16/03/2018	22/09/2017	4057			
3701 - 17	160060	PS8C0 PN8C0	85	492	23/03/2018	17/07/2017	11244			
2149 - 17	160091	A36I0	10	380	30/03/2018	27/04/2017	7076			
3841 - 17	160091	A36J0	8	211	30/03/2018	21/07/2017	91			
3702 - 17	160060	PS9C0	35	218	13/04/2018	17/07/2017	5185			
3850 - 17	160094	H32F0 H24F0 H16F0	4	11	27/04/2018	21/07/2017	140			
4913 - 17	160060	PCPC0 PCXC0 PC9C0	31	189	04/05/2018	22/09/2017	6505			
3703 - 17	160060	PSXC0 PNHC0 PSHC0	66	444	11/05/2018	17/07/2017	9276			
2142 - 17	160094	A42I0	20	382	18/05/2018	27/04/2017	8411			
2149 - 17	160091	A40I0	10	376	18/05/2018	27/04/2017	7022			
3842 - 17	160091	A40J0	8	210	18/05/2018	21/07/2017	90			
3851 - 17	160094	A42J0	8	150	18/05/2018	21/07/2017	67			
2150 - 17	160091	A44I0	10	380	15/06/2018	27/04/2017	7076			
3843 - 17	160091	A44J0	8	211	15/06/2018	21/07/2017	91			
2150 - 17	160091	A52I0 A48I0	16	756	13/07/2018	27/04/2017	15014			
3844 - 17	160091	A48J0 A52J0	11	399	13/07/2018	21/07/2017	173			
2151 - 17	160091	A56I0 A60I0	30	944	24/08/2018	27/04/2017	19802			
3845 - 17	160091	A60J0 A56J0	12	449	24/08/2018	21/07/2017	194			

- **INSPECTION AND TESTING OF SSG PROCESS** according to procedure *P-PRG-04_Management of validation process for SSG system*.

  (*see Ch. 12 "Inspection and Testing"*)

- **QUALITY CONTROLS OF ALL RELEVANT MATERIALS AND COMPONENTS,** carried out at the suppliers' premises and incoming, using appropriate checklists defined for each element.
  (*see Ch.12 "Inspection and Testing"*)

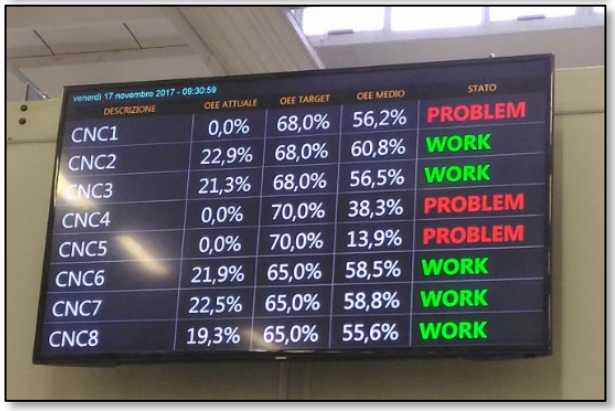
- **FACTORY PRODUCTION**, whose main stages can be summarized in the following work-flow and are detailed below:



  - **MECHANICAL CUTTING AND CNC MACHINING** carried out in FOCCHI factory to produce aluminum components from extruded aluminium bars.

Mechanical cutting machines

CNC processing machines



Visual Display Unit (VDT) to monitor machines efficiency

- **QUALITY CONTROL OF MACHINED COMPONENTS** (*see Ch. 12 "Inspection and Testing"*)

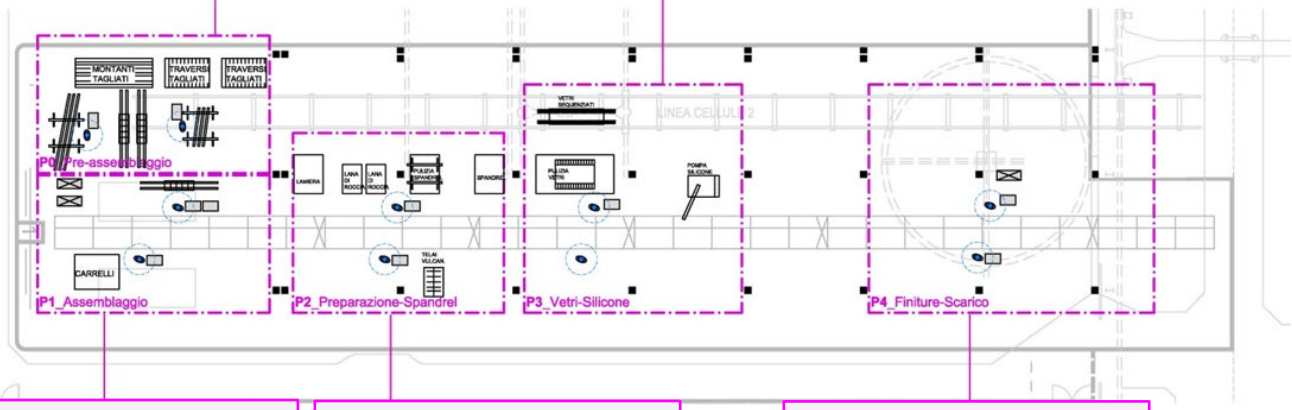
- **UNITS ASSEMBLY** in accordance with sequencing sheet and assembly instructions. Both documents are available for operators along production line.

  Production trend is constantly monitored through a display.

  Following, the standard organization of FOCCHI's Units Assembly Lines:

P0 – Pre-Assembly
Input: Machined Profiles (Mullions, Transoms) by Mechanical Cutting Department
Output: Mullions and Transoms ready to be assembled
Activity: Assembly of accessories (brackets, etc.) and gaskets on profiles

P3 – Glasses and SSG
Input: Frames and Spandrels prepared by preceding workstations
Output: Structurally glazed Unit
Activity: Glass Panels installation (glasses moved through vacuum lifter cranes) and Structural Silicone Sealing



P1 – Frame Assembly
Input: Mullions and Transoms prepared by P0 workstation
Output: Unit frames
Activity: Assembly of Mullions and Transoms to create Unit frame, according to the Assembly Operating Instructions sequence

P2 – Spandrels Assembly
Input: Unit frames prepared by P1 workstation
Output: Spandrel modules
Activity: Assembly of galvanized sheets, insulation materials and external sheets in Unit's opaque components (Spandrels)

P4 – Finishing and Drop off
Input: Structurally glazed Unit prepared by P3 workstation
Output: Finished Unit
Activity: Assembly of final accessories (glass restraints, etc.), final cleaning and drop off to the stillage according to Project's Packaging Plan

Unit Assembly Line: Aluminum frame assembly

Unit Assembly Line – Glass panel installation

Unit Assembly Line - SSG process

Visual Display Unit along Unit Assembly line

Production requested

Current production

Units to produce

Unit Sequencing sheet

160094
OWEN STREET
Lista P16CD
Foglio 2605

Cellula	CE1014-001	CE1004-001	CE1005-001	CE1007-001	CE1131-001	CE1033-001	CE1017-001	CE1020-001	CE1022-001	CE1024-001	CE1027-001
QLTA	2	3	1	1	1	2	3	4	2	4	2
Lista	P16CD	P16CD	P16CD	P16CD	P16CD	P16CD	P16CD	P16CD	P16CD	P16CD	P16CD
Tipo	VISION/PURGE	PURGE/VISION	PURGE/VISION/R	PURGE/VISION	PURGE/VISION	VISION/PURGE	PURGE/VISION	PURGE/VISION	PURGE/VISION	PURGE/VISION	VISION/PURGE
Sequenza	01°	02°	03°.	04°	05°	06°	07°	08°	09°	10°	11°
Tappi di spugna	CS0203-001 (2 pz)	CS0203-001 (2 pz)	CS0203-001 (2 pz)	CS0203-001 (2 pz)	CS0203-001 (2 pz)	CS0203-001 (2 pz)	CS0203-001 (2 pz)	CS0203-001 (2 pz)	CS0203-001 (2 pz)	CS0203-001 (2 pz)	CS0203-001 (2 pz)
Tappi di spugna	CS0204-001 (2 pz)	CS0204-001 (2 pz)	CS0204-001 (2 pz)	CS0204-001 (2 pz)	CS0204-001 (2 pz)	CS0204-001 (2 pz)	CS0204-001 (2 pz)	CS0204-001 (2 pz)	CS0204-001 (2 pz)	CS0204-001 (2 pz)	CS0204-001 (2 pz)
Tappi di spugna	CS0205-001 (2 pz)	CS0205-001 (2 pz)	CS0205-001 (2 pz)	CS0205-001 (2 pz)	CS0205-001 (2 pz)	CS0205-001 (2 pz)	CS0205-001 (2 pz)	CS0205-001 (2 pz)	CS0205-001 (2 pz)	CS0205-001 (2 pz)	CS0205-001 (2 pz)
Tappi di spugna	CS0206-001 (2 pz)	CS0206-001 (2 pz)	CS0206-001 (2 pz)	CS0206-001 (2 pz)	CS0206-001 (2 pz)	CS0206-001 (2 pz)	CS0206-001 (2 pz)	CS0206-001 (2 pz)	CS0206-001 (2 pz)	CS0206-001 (2 pz)	CS0206-001 (2 pz)
Tappi di spugna	CS0207-001 (2 pz)	CS0207-001 (2 pz)	CS0207-001 (2 pz)	CS0207-001 (2 pz)	CS0207-001 (2 pz)	CS0207-001 (2 pz)	CS0207-001 (2 pz)	CS0207-001 (2 pz)	CS0207-001 (2 pz)	CS0207-001 (2 pz)	CS0207-001 (2 pz)
Tappi di spugna											
Tappi di spugna											
Tappi di spugna											
Tappi di spugna											
Tappi di spugna											
Chiave verticale	GU0211-001	GU0211-001	GU0211-001	GU0211-001	GU0211-001	GU0211-001	GU0211-001	GU0211-001	GU0211-001	GU0211-001	GU0211-001
GIUNTO verticale	GU0214-001	GU0214-001	GU0214-001	GU0214-001	GU0214-001	GU0214-001	GU0214-001	GU0214-001	GU0214-001	GU0214-001	GU0214-001
TELAIO VULCANIZZATO	GU0304-001	GU0305-001	GU0305-001	GU0305-001	GU0305-001	GU0304-001	GU0305-001	GU0303-001	GU0303-001	GU0303-001	GU0302-001
Lamiera veletta ALTO	LP0304-001	LP0304-001	LP0304-001	LP0304-001	LP0304-001	LP0304-001	LP0313-001	LP0313-001	LP0313-001	LP0313-001	LP0313-001
Lamiera veletta ALTO	LP0316-001	LP0316-001	LP0316-001	LP0316-001	LP0316-001	LP0316-001	LP0320-001	LP0320-001	LP0320-001	LP0320-001	LP0320-001
Lana di roccia a veletta ALTO	FN0311-002	FN0311-002	FN0311-002	FN0311-002	FN0311-002	FN0311-002	FN0311-004	FN0311-004	FN0311-004	FN0311-004	FN0311-004
LAMIERA interna											
TRAVERSO superiore	PE0112-001	PE0308-001	PE0308-001	PE0308-001	PE0308-001	PE0112-001	PE0322-001	PE0320-001	PE0320-001	PE0320-001	PE0320-001
TRAVERSO inferiore	PE0113-001	PE0309-001	PE0309-001	PE0309-001	PE0309-001	PE0113-001	PE0322-001	PE0322-001	PE0322-001	PE0322-001	PE0230-001
Montne	PE0901-001 (2 pz)	PE0901-001 (2 pz)	PE0901-001 (2 pz)	PE0901-001 (2 pz)	PE0901-001 (2 pz)	PE0901-001 (2 pz)	PE0901-001 (2 pz)	PE0901-001 (2 pz)	PE0901-001 (2 pz)	PE0901-001 (2 pz)	PE0901-001 (2 pz)
Spessori montne	CS0300-001 (2 pz)	CS0300-001 (2 pz)	CS0300-001 (2 pz)	CS0300-001 (2 pz)	CS0300-001 (2 pz)	CS0300-001 (2 pz)	CS0300-001 (2 pz)	CS0300-001 (2 pz)	CS0300-001 (2 pz)	CS0300-001 (2 pz)	CS0300-001 (2 pz)
MONTANTE sinistro	PE0303-001	PE0307-001	PE0307-001	PE0307-001	PE0307-001	PE0303-001	PE0307-001	PE0307-001	PE0307-001	PE0307-001	PE0303-001
Boschetto	PE0001-001	PE0001-001	PE0001-001	PE0001-001	PE0001-001	PE0001-001	PE0001-001	PE0001-001	PE0001-001	PE0001-001	PE0001-001
Spessore bloschetto	LZ0017-001	LZ0017-001	LZ0017-001	LZ0017-001	LZ0017-001	LZ0017-001	LZ0017-001	LZ0017-001	LZ0017-001	LZ0017-001	LZ0017-001
STAFFA CRADLE											
Spessore cradle											
Piatto interno cradle											
MONTANTE intermedio	PE0314-001	PE0310-001	PE0310-001	PE0310-001	PE0310-001	PE0314-001	PE0310-001	PE0310-001	PE0310-001	PE0310-001	PE0314-001
Spessore bloschetto	LZ0209-001 (2 pz)	LZ0208-001 (2 pz)	LZ0208-001 (2 pz)	LZ0208-001 (2 pz)	LZ0208-001 (2 pz)	LZ0209-001 (2 pz)	LZ0208-001 (2 pz)	LZ0208-001 (2 pz)	LZ0208-001 (2 pz)	LZ0208-001 (2 pz)	LZ0209-001 (2 pz)
MONTANTE destro	PE0311-001	PE0304-001	PE0316-001	PE0316-001	PE0304-001	PE0311-001	PE0304-001	PE0304-001	PE0316-001	PE0316-001	PE0311-001
Boschetto	PE0002-001	PE0002-001	PE0002-001	PE0002-001	PE0002-001	PE0002-001	PE0002-001	PE0002-001	PE0002-001	PE0002-001	PE0002-001
Spessore bloschetto	LZ0017-001	LZ0017-001	LZ0017-001	LZ0017-001	LZ0017-001	LZ0017-001	LZ0017-001	LZ0017-001	LZ0017-001	LZ0017-001	LZ0017-001
STAFFA CRADLE			LA0203-001	LA0203-001					LA0203-001		
Spessore cradle			CS0215-001	CS0215-001					CS0215-001		
Spessore cradle											
Piatto interno cradle			LA0203-001	LA0203-001					LA0203-001	LA0203-001	
PANNELLO SOPRA PURGE	AS0300-001	AS0300-001	AS0300-001	AS0300-001	AS0300-001	AS0300-001	AS0310-001	AS0308-001	AS0310-001	AS0308-001	AS0310-001
ANTA PURGE	VV0305-001	VV0309-001	VV0309-001	VV0302-001	VV0302-001	VV0307-001	VV0319-001	VV0308-001	VV0319-001	VV0308-001	VV0315-001
LATO MANIGLIA (esterr)	DE	DX	DX	DX	DX	DE	DX	DX	DX	DX	DE
SPESSORE purge	CS0302-002 (2 pz)	CS0302-002 (2 pz)	CS0302-002 (2 pz)	CS0302-002 (2 pz)	CS0302-002 (2 pz)	CS0302-002 (2 pz)	CS0302-002 (2 pz)	CS0302-002 (2 pz)	CS0302-002 (2 pz)	CS0302-002 (2 pz)	CS0302-002 (2 pz)
LAMIERA facata purge	LA0306-001	LA0306-001	LA0306-001	LA0306-001	LA0306-001	LA0304-001	LA0307-001	LA0307-001	LA0307-001	LA0307-001	LA0307-001
LANA DI ROCCIA spandrel											
LANA DI ROCCIA spandrel											
VETRO	VE0120-001	VE0120-001	VE0120-001	VE0120-001	VE0120-001	VE0120-001	VE0120-004	VE0120-004	VE0120-004	VE0120-004	VE0120-004

FOCCHI LTD

Unit progressive production number

Unit components

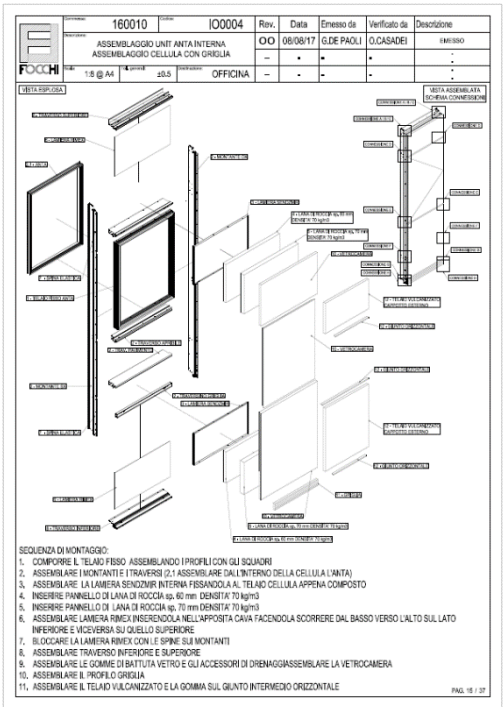
Component code

Units Assembly Operating Instructions are made available to operators through the “Smart Kiosks 4.0” placed all along the Lines, near each workstation.

Assembly Operating Instructions

Below, some sample pages about assembly operating instructions of a unit:

Assembly Operating Instructions - Examples



Commessa	Codice	Rev.	Data	Emesso da	Verificato da	Descrizione
160010	IO0004	OO	08/08/17	G.DE PAOLI	O.CASADEI	EMESSO
ASSEMBLAGGIO UNIT ANTA INTERNA ASSEMBLAGGIO CELLULA CON GRIGLIA		–	-	-	-	-
Scala 1:5 @ A4	Tolleranze ±0.5	–	-	-	-	-
Stabilimento OFFICINA						

VISTA ESPLOSA

VISTA ASSEMBLATA SCHEMA CONNESSIONE

SEQUENZA DI MONTAGGIO:
1. COMPORRE IL TELAIO FISSO ASSEMBLANDO I PROFILI CON GLI SQUADRI
2. ASSEMBLARE I MONTANTI E I TRAVERSI (2,1 ASSEMBLARE DALL'INTERNO DELLA CELLULA L'ANTA)
3. ASSEMBLARE LA LAMIERA SENDZIMIR INTERNA FISSANDOLA AL TELAIO CELLULA APPENA COMPOSTO
4. INSERIRE PANNELLO DI LANA DI ROCCIA sp. 60 mm DENSITA' 70 kg/m3
5. INSERIRE PANNELLO DI LANA DI ROCCIA sp. 70 mm DENSITA' 70 kg/m3
6. ASSEMBLARE LAMIERA RIMEX INSERENDOLA NELL'APPOSITA CAVA FACENDOLA SCORRERE DAL BASSO VERSO L'ALTO SUL LATO INFERIORE E VICEVERSA SU QUELLO SUPERIORE
7. BLOCCARE LA LAMIERA RIMEX CON LE SPINE SUI MONTANTI
8. ASSEMBLARE TRAVERSO INFERIORE E SUPERIORE
9. ASSEMBLARE LE GOMME DI BATTUTA VETRO E GLI ACCESSORI DI DRENAGGIO ASSEMBLARE LA VETROCAMERA
10. ASSEMBLARE IL PROFILO GRIGLIA
11. ASSEMBLARE IL TELAIO VULCANIZZATO E LA GOMMA SUL GIUNTO INTERMEDIO ORIZZONTALE

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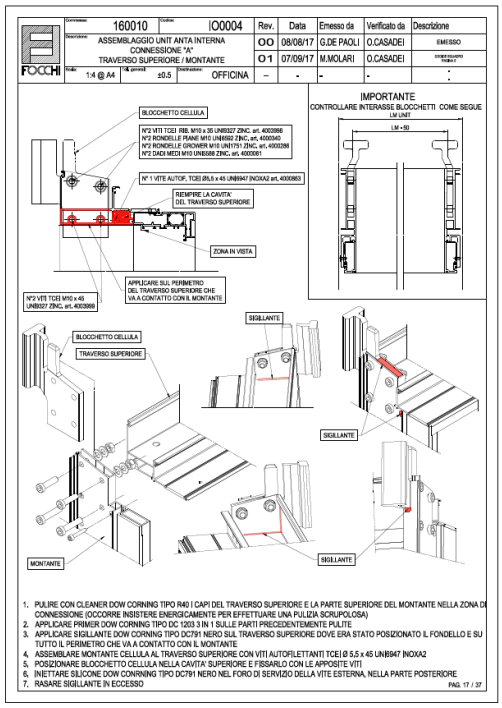

Commessa	Codice	Rev.	Data	Emesso da	Verificato da	Descrizione
160010	IO0004	OO	08/08/17	G.DE PAOLI	O.CASADEI	EMESSO
ASSEMBLAGGIO UNIT ANTA INTERNA CONNESSIONE "A" TRAVERSO SUPERIORE / MONTANTE		O1	07/09/17	M.MOLARI	O.CASADEI	[illegible]
Scala 1:4 @ A4	Tolleranze ±0.5	–	-	-	-	-
Stabilimento OFFICINA						

BLOCCHETTO CELLULA
N°2 VITI TCEI RBS. M10 x 35 UNI6327 ZINC. art. 4003986
N°2 RONDELLE PIANE M10 UNI6592 ZINC. art. 4000340
N°2 RONDELLE GROWER M10 UNI1751 ZINC. art. 4000286
N°2 DADI MEDI M10 UNI5588 ZINC. art. 4000061
N° 1 VITE AUTOF. TCEI Ø5,5 x 45 UNI6947 INOXA2 art. 4000863
REMPIRE LA CAVITA' DEL TRAVERSO SUPERIORE
ZONA IN VISTA
APPLICARE SUL PERIMETRO DEL TRAVERSO SUPERIORE CHE VA A CONTATTO CON IL MONTANTE
N°2 VITE TCEI M10 x 45 UNI6327 ZINC. art. 4003989

IMPORTANTE
CONTROLLARE INTERASSE BLOCCHETTI COME SEGUE
LM UNIT
LM + 50

BLOCCHETTO CELLULA
TRAVERSO SUPERIORE
SIGILLANTE
MONTANTE

1. PULIRE CON CLEANER DOW CORNING TIPO R40 I CAPI DEL TRAVERSO SUPERIORE E LA PARTE SUPERIORE DEL MONTANTE NELLA ZONA DI CONNESSIONE (OCCORRE INSISTERE ENERGICAMENTE PER EFFETTUARE UNA PULIZIA SCRUPOLOSA)
2. APPLICARE PRIMER DOW CORNING TIPO DC 1203 3 IN 1 SULLE PARTI PRECEDENTEMENTE PULITE
3. APPLICARE SIGILLANTE DOW CORNING TIPO DC791 NERO SUL TRAVERSO SUPERIORE DOVE ERA STATO POSIZIONATO IL FONDELLO E SU TUTTO IL PERIMETRO CHE VA A CONTATTO CON IL MONTANTE
4. ASSEMBLARE MONTANTE CELLULA AL TRAVERSO SUPERIORE CON VITI AUTOFILETTANTI TCEI Ø 5,5 x 45 UNI6947 INOXA2
5. POSIZIONARE BLOCCHETTO CELLULA NELLA CAVITA' SUPERIORE E FISSARLO CON LE APPOSITE VITI
6. INIETTARE SILICONE DOW CORNING TIPO DC791 NERO NEL FORO DI SERVIZIO DELLA VITE ESTERNA, NELLA PARTE POSTERIORE
7. RASARE SIGILLANTE IN ECCESSO

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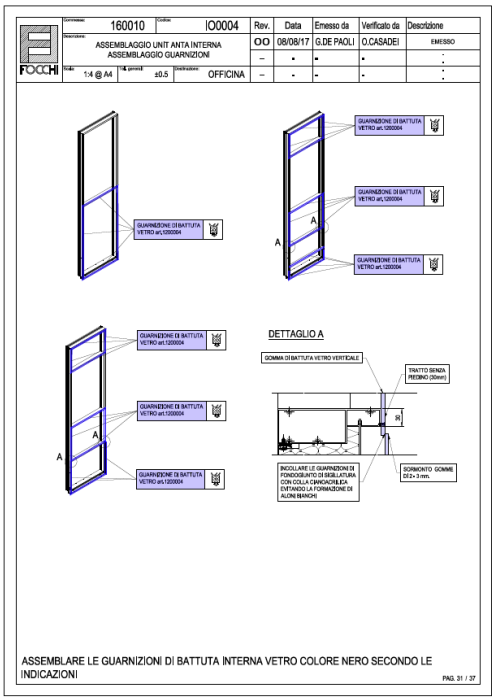
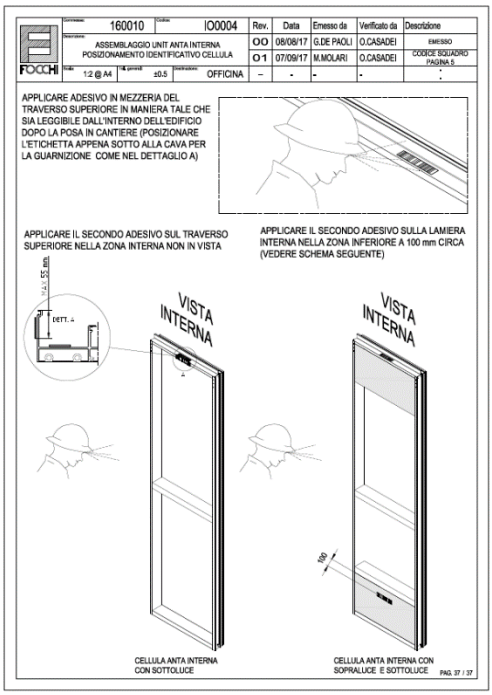
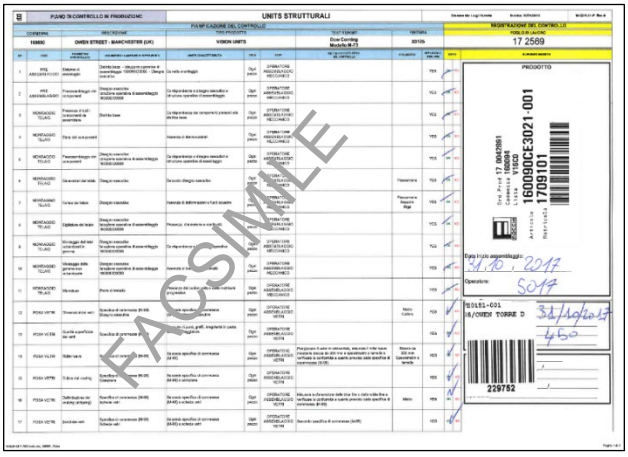


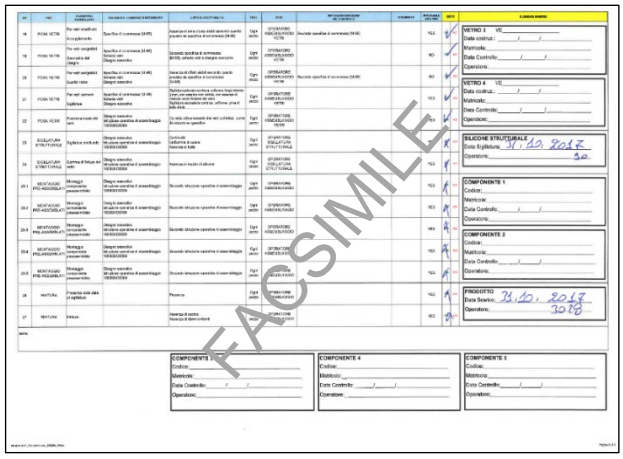


- **UNITS QUALITY CONTROL**, recorded on a specific checklist.
  (*see Ch. 12 "Inspection and Testing"*)

UNIT CHECKLIST (PAGE 1)



UNIT CHECKLIST (PAGE 2)



- **PACKAGING AND STORAGE OF UNITS WITHIN THE FACTORY**

  Units are placed on stillages in the defined picking sequence for installation. They are not moved for a proper period, as per the sealants manufacturer's instructions and guidelines, to allow complete sealant curing. Subsequently, they are packaged for shipping and stored in specific outdoor areas.
  For more detail, see *Ch. 10 "Packaging, Storage and Delivery"*.

- Management of any faults / problems could arise during production through the **EDITING OF NON-CONFORMITY REPORTS AND IMPLEMENTATION OF APPROPRIATE CORRECTIVE ACTIONS**.
  (*see Ch. 15 "Non-conformities and Corrective actions"*)

Nonconformity Report form

FOCCHI SINCE 1914

FOCCHI S.p.a.
Via Comacchiara, Loc.Poggio Berni, n.305
47824 POGGIO TORRIANA (RN) – Italy
Tel.+39 0541 627355 – Fax.+39 0541 686546
C.F. / P.I. IT 01903410403 – REA Rimini n. 225184

C·U·R·T·A·I·N·····W·A·L·L·I·N·G A·R·C·H·I·T·E·C·T·U·R·A·L P·R·O·D·U·C·T·S

IDENTIFICAZIONE DELLA NC *Identification of NC*

N° NC *Number No*	160091RNC023	Data Chiusura *Close Date*	30/09/2017	Responsabile Gestione *Responsible Management*	D.Gessarolo
Tipologia di NC *Type of NC*	Interna				
Reparto di segnalazione *Department of emission*	Assemblaggio e Sigilllatura (10)	Persona che ha segnalato la NC *NC advised By*	Roberto Celli		
Descrizione della NC *Description of NC*	Glasses with various defects				
Area tematica della NC *Thematic Area of NC*	Qualità *Quality*	N° Commessa *Project N°*	160091 Renaker Owen St. Torre A		
Tipo Articolo *Type of product*	Vetri (01)				
Tipo Difetto *Defect type*	Realizzazione non conforme alle specifiche (06)	Processo *Process*	Approvvigionamento		
Data Apertura NC *Emission Date*	22/09/2017	Responsabile apertura NC *NCR issued by*	Walter Muracchioli		

Codice	Ordine	Lista	Q.tà	Costo/Uo
160090VE0120-001			9	0
160090VE0120-004			1	0
160090VE0120-001			4	0
160090VE0104-001			1	0

ESAME E TRATTAMENTO DELLA NC *Inspection and treatment of NC*

Fornitore *Supplier*	TVITEC SYSTEM GLASS S.L.		
Area di Imputazione della NC *Responsable Department*	Fornitore (00) *Supplier*		
Causa della NC *Cause of NC*	Errore de fornitore (09)		
Azione di trattamento della NC *Treatment action of NC*	Reso e riordino in garanzia *Return and reorganization under warranty*		
Istruzione Operativa per il trattamento della NC *Treatment operating instruction of NC*	To be shipped back and replaced asap		
Responsabile azione di trattamento *Responsible of treatment action*	Minotti e Tonni	Data scadenza azione di trattamento *Expiration Date of treatment action*	25/09/2017
Data Esame *Exam Date*	22/09/2017	Responsabile esame della NC *Responsible of examination*	D.Gessarolo

VERIFICA DI RISOLUZIONE DELLA NC *Prove of resolution NC*

Data verifica azione di trattamento *Date treatment verify action*	22/09/2017	Esito verifica azione di trattamento *Result of verify treatment action*	OK
Costo azione di trattamento *Price of treatment action*			
Dettaglio costo azione di trattamento *Retail cost of treatment action*			

Reparto	€	Quantità	Totale
Posa	35	0	0
PD	35	5	175
Sped.Extra	0	0	0
Gest.RNC	100	1	100
Forniture	0	0	0
Extra	0	0	0
TOTALE			275

FACSIMILE

10. PACKAGING, STORAGE AND DELIVERY

Relevant documents not attached but referred to:

- P-LOG-01_Products Preservation
- Z9-FOC-G251-TS-XX-001_FOCCHI First Street South Logistic Plan

10.1. PRODUCTS PRESERVATION

All the responsibilities and operational procedures to ensure a proper handling, packaging, storage and delivery of products (raw materials, semi-finished products, finished products) as such as not to cause damage to them are described in the document *P-LOG-01_Products Preservation.*

- HANDLING

  The various company managers ensure the application of methods and means that prevent damage to the products during their handling. A careful handling is carried out through transit areas and clean floors without any oily substances, bulky and/or heavy materials (over 25 kg) are handled by special equipment (forklifts, pallet trucks) or manually by several operators simultaneously.

- PACKAGING

  The products are packaged in a manner suitable for the expected transport and storage conditions, in order to prevent damage. The packing methods are reported in specific project documents (technical order specifications, quality plan, site logistics plan, supply contracts).

- STORAGE

  The Logistics Manager ensures that the storage activities are carried out in compliance with the protection of product quality:

  - the environmental conditions of the storage areas are such as not to cause damage and deterioration on the goods stored;
  - the stacking systems are such as not to cause damage: any products superimposed on others must be of a weight and shape that does not cause damage to the underlying products;
  - appropriate storage spaces are provided in the storage areas for the transit and handling of the products;
  - the floor of the storage areas is kept clean of any oily substances.

  In the case of flammable products and / or products that may contribute to the burden of the fire load, the Logistics Manager monitors the quantities stored and verifies that suitable prevention devices and equipment are available.

  For products with an expiration date such as sealants, cleaners/solvents, primer and absorbent/extinguishing substances, the following methods are implemented:

  - verification of the expiry date on receipt;
  - identification of the expiry date on the product in a visible manner for subsequent collection;
  - verification of the expiry date of the product before each use;
  - use of the products through a FIFO products storage system;

Expired and deteriorated products, in any case not reusable, will be managed in accordance with current regulations for special waste.

- DELIVERY

  In order to ensure the quality of the product until delivery, all the shipments are carried out by reliable carriers, qualified by FOCCHI according to the provisions of the procedure *P-ACQ-01_Suppliers' evaluation and qualification.*

10.2. PACKAGING AND STORAGE OF ACCESSORIES AND OUTSOURCED COMPONENTS

Purchased materials, such as brackets, gaskets, sealants, glass panels, bolts, ironmongery, aluminium sheets and steel sheets, are packed by the supplier in accordance with the methods established by contract and delivered to FOCCHI's factory for subsequent processing or for direct shipment to the construction site.

Wooden boxes and wooden or steel pallets are used. Materials are protected with a UV-resistant transparent polyethylene film and adhesive insulating tape.

Weather-resistant materials are stored outdoors, while all others are stored indoors or in sheltered storage spaces.

As concerns materials destined for the construction site, on the stillages / boxes a packing list is applied, which includes: project code and the delivery address, list code, stillage information (reference number, type, weight, dimensions), product information (component code, description, quantity, weight).

Warehouse and Outbound Logistics operators carry out final inspections before shipment, in order to check the conformity of the packaging.

In the event that shipment is direct to the construction site by the supplier, FOCCHI provides the packing list and verifies packaging compliance through appropriate visits to the supplier's premises.

Packing List

10.3. UNITS PACKAGING

Units packaging is made in the last production phase by the operators of the assembly line.

A "Packaging Plan" is drawn up based on production and installation programs. The document shows for each unit the production sequence and the number of the reference stillage to be used for packaging.

Package Plan

PIANO	CONTENITORE	FACADE TYPE	TIPO	SEQUENZ.	NOME CELL.	LARGH	ALTEZ	MATRICOLA	LISTA	SPALLA	TRAVERSO	CONTENI	CODICE CONTENITORE	PACKING LIST	TRAVERSING
L11	1113	EWT001	STD	28°	CE1019-001	1800	3200		A11B0	LZ0103		1	CV003		
L11		EWT001	STD	29°	CE1022-001	1800	3200		A11B0						
L11	1114	EWT001	STD	30°	CE1024-001	1800	3200		A11B0	LZ0103		1	CV003		
L11		EWT001	STD	31°	CE1025-001	1800	3200		A11B0						
L11	1115	EWT001	STD	32°	CE1026-001	1800	3200		A11B0	LZ0103		1	CV003		
L11		EWT001	STD	33°	CE1027-001	1800	3200		A11B0						
L11	1116	EWT001	STD	34°	CE1030-001	1800	3200		A11B0	LZ0103		1	CV003		
L11		EWT001	STD	35°	CE1039-001	1800	3200		A11B0						
L11	1117	EWT001	STD	20°	CE1021-001	1200	3200		A11B0	AS0004	1270	1	CM015		
L11		EWT001	STD	19°	CE1033-001	1200	3200		A11B0						
L11		EWT001	STD	18°	CE1015-001	1200	3200		A11B0						
L11	1118	EWT001	STD	27°	CE1040-001	1500	3200		A11B0	LZ0501	1550	1	CM056		
L11		EWT001	STD	26°	CE1036-001	1500	3200		A11B0						
L11		EWT001	STD	25°	CE1020-001	1500	3200		A11B0						
L11	1119	EWT001	STD	21°	CE1038-001	1200	3200		A11B0	AS0002	1270	1	CM005		
L11	1120	EWT001	STD	24°	CE1034-001	900	3200		A11B0	LZ0501	1100	1	CM041		
L11		EWT001	STD	23°	CE1007-001	900	3200		A11B0						
L11		EWT001	STD	22°	CE1004-001	600	3200		A11B0						

Stillage number

Production Sequence

Unit code

List code

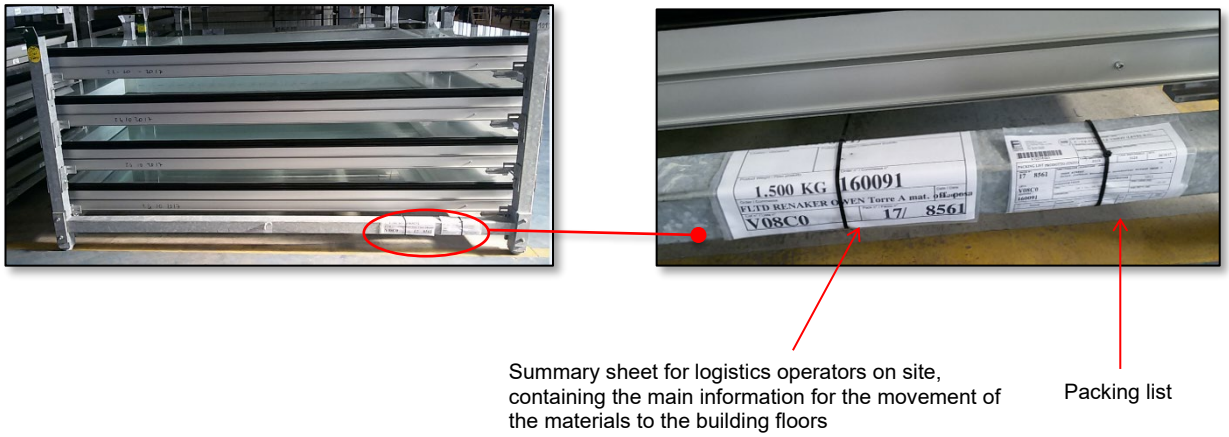
Produced units are stored and transported on site by means of demountable steel stillages (*refer to "Z9-FOC-G251-TS-XX-001_FOCCHI First Street South Logistic Plan"*)

Each stillage can hold three or four units, depending on the weight and size of the unit.

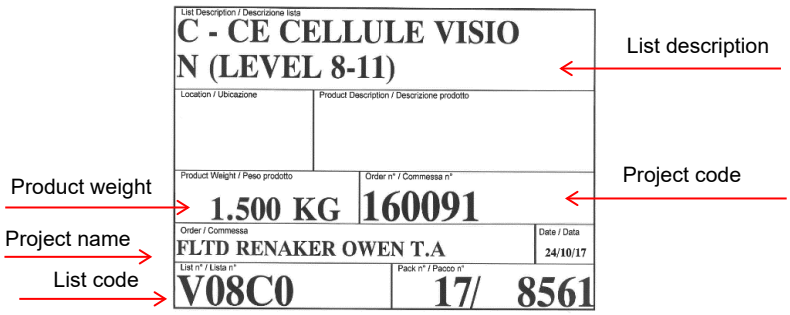
Steel brackets are fitted to stillages to support the units. A rubber coating is placed between bracket and units to protect the aluminium frame.

Stillages are moved only after structural sealant has cured (generally in 3 or 4 days).

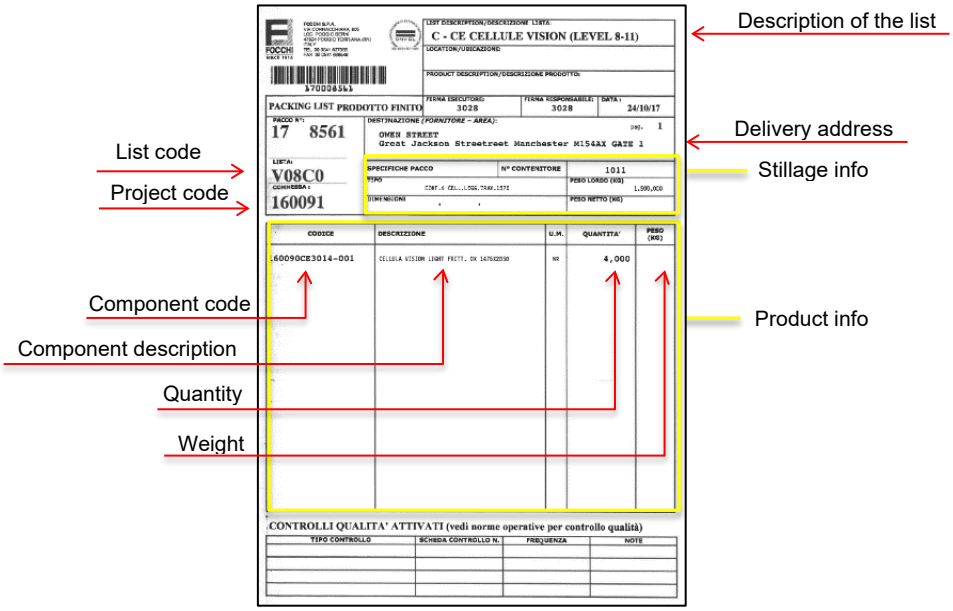
Each stillage is labelled with a packing list showing project code and delivery address, stillage information (reference number, type, weight, dimensions), product information (component code, description, quantity, weight) and a list code that indicates the position of the unit in the building. The packing list is automatically generated by the computer system by reading the bar code assigned to each unit.



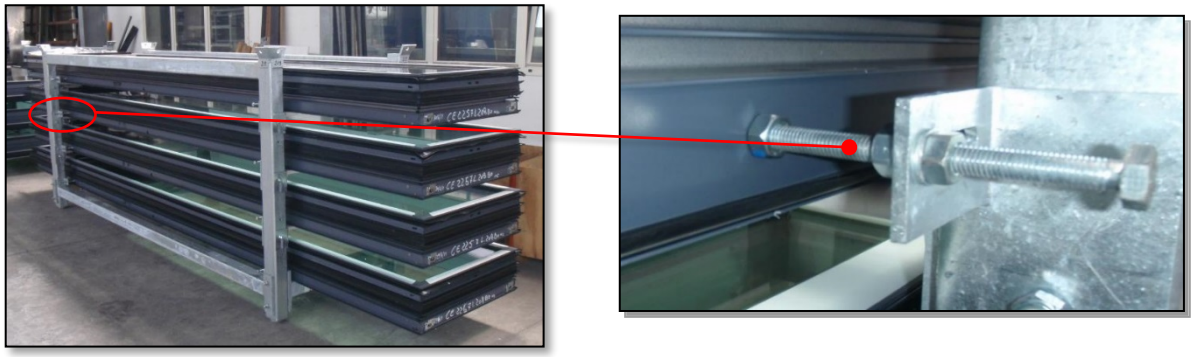
Summary sheet



Packing list



Before shipment, each unit is mechanically fixed to the stillage to avoid any damage during transport.

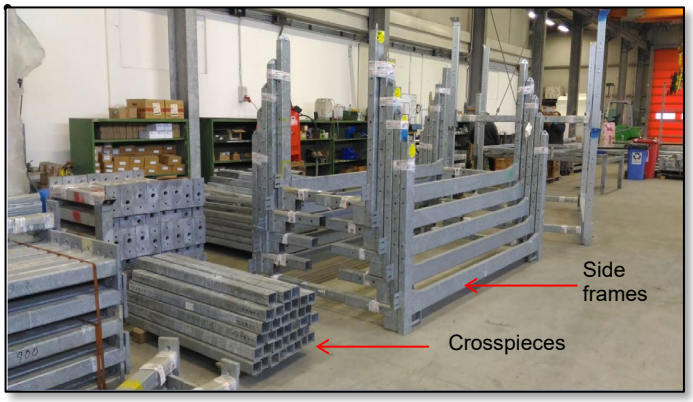


Each stillage, wrapped with UV resistant plastic film and adhesive insulating tape, is stored outside.

The Warehouse and Outbound Logistics Manager guarantees the compliance of the packaging before shipping.

Stillages are composed of:

- # 2 crosspieces (various length, according to the size of the unit);
- # 2 side frames;
- brackets and fasteners.

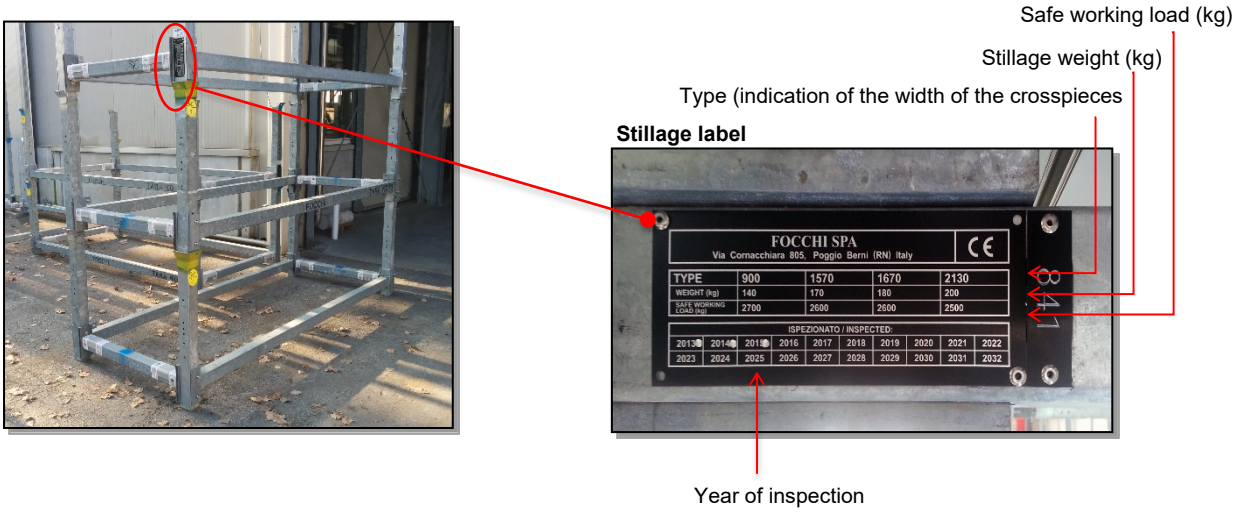


Stillages are assembled in the factory, taking into account unit size.

After units installation on site, stillages are disassembled and sent back to the factory. This makes it possible to reduce transport volumes and to optimize load.

Appropriate software allows the company to locate and manage each stillage.

On each pallet is applied a label containing the results of the annual safety checks.



10.4. UNITS STORAGE

Structurally glazed units are stored inside the plant until the sealant has achieved full adhesion (100% cohesive failure).

They are then moved to Warehouse and Outbound Logistics Department to be packaged for shipping.

Ready to ship materials are finally stored outdoors, awaiting to be loaded onto a truck.

10.5. DELIVERY ON SITE

Shipment to the installation site starts from FOCCHI S.p.A. Italian warehouse or from supplier's plant (in case of direct delivery) and follows the logistic routes established by the Client.

The Project Manager and the Site Manager, in collaboration with the Production Manager and the Plant Logistics Manager, define a production program and a packaging plan based on the approved installation program (*see Ch. 10.3 "Units Packaging"*).

Deliveries are handled using PLM software, that allows networking between installation site and shipping department.

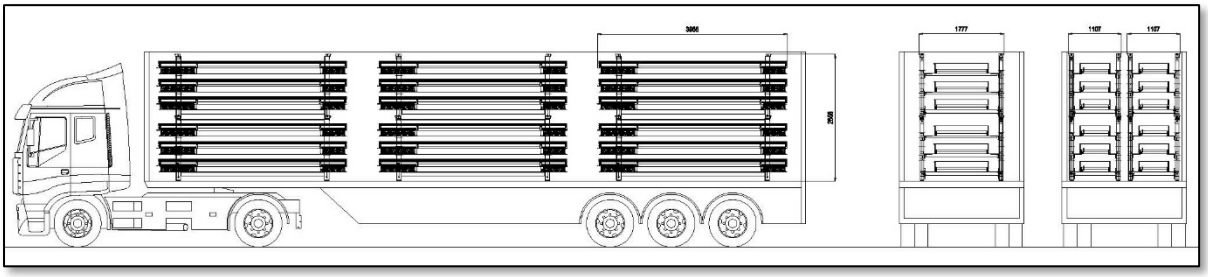
Logistics and shipping activities are divided into the following phases:

- loading of produced units on the ERP information management system;
- packing list issuance for produced units, according to the packaging plan, and subsequent application to stillages;
- packing list issuance for accessories and components, and subsequent application on their packaging;
- materials and ready for shipment stillages visualization on PLM platform by the Site Manager and the Site Logistics Manager;
- issuance of a loading plan based on material requests from construction site, drafted by the Shipping Manager;
- issuance of documents for transport.

DELIVERIES TO ITALY AND UK

Material is transported in Italy and to the United Kingdom by lorries.

A total of 6 to 12 stillages are loaded onto the lorry, depending on the size of the modules.



Based on a "Delivery Schedule" provided by the Client, the time slot for shipments is identified. The scheduled deliveries are communicated by FOCCHI Site Staff to the other sub-contractors during the daily coordination meetings.

Before unloading, the following checks are performed:

- verification of integrity of stillages or wooden crates;
- verification of goods condition;
- compliance of the load with the delivery note and the list of materials required by the building site.

All checks are recorded on appropriate goods acceptance checklists.

Goods acceptance checklist

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7 Kenrick Place
London W1U 6HE
Tel: (+44) 020 7224 2934
Fax: (+44) 020 7487 5732
E-mail: info@focchiltd.co.uk

FSS - ITP-001 - DELIVERY ARRIVAL ON SITE

GENERAL INFO

Date/Time	13/12/2021
Bar Code	
Record damages below if applicable	
Multi Photo	

Page 1 of 1

Stillages are unloaded from the truck by means of cranes or forklifts.

Materials distribution in relevant areas is carried out in accordance with the specific approved Project Offloadings and Material Distribution Method Statement. Lorry off-loading usually takes two or three hours, depending on the content of delivery and means of material distribution.

For further details about Unloading and Distribution of the material, please refer to the *Project Logistics Plan*. Every one or two weeks, metal stillages (disassembled) and wooden crates are collected and shipped back to FOCCHI's factory in Italy to be re-used.

11. QUALITY ASSURANCE AND CERTIFICATION

Relevant documents not attached but referred to:

- P-ACQ-01_Suppliers' evaluation and qualification
- P-ACQ-02_Management of Procurement Process
- P-ACQ-03_Management of product / process certifications provided by suppliers

11.1. SUPPLIER CERTIFICATIONS

Procurement management procedures are implemented and updated in order to guarantee products that comply with the contractual specifications and quality requirements.

All major suppliers are subject to an initial assessment aimed at ensuring the compliance of their quality control systems.

Accreditation as a qualified supplier is subject to an inspection at supplier's facilities and to an initial trial order.

Passing these tests leads to inclusion in the list of qualified suppliers.

Suppliers are evaluated every six months on the basis of indicators linked to the number and value of recorded non-conformities.

Periodic audits are performed to assess the quality of suppliers and the compliance with controls management and registration (*see Ch. 14.2 "Audit at suppliers' premises"*).

In the Procurement Process, the following supplier selection criteria are applied:

- First evaluation (if new suppliers);
- Verification of previous supplies (if usual suppliers);
- Production capacity, taking into account the complexity of the project and the timing set by the project program;
- Reliability in economic and financial terms;
- Material requirements in accordance with the technical design specifications. For this purpose, FOCCHI Quality Manager issues a document called "*Supply Requirements*".

Suppliers have to issue valid certifications of conformity, test reports, CE marking, control records, as shown in the table below, depending on the type of supply.

PRODUCT	PRODUCT CERTIFICATIONS	SUPPLIER CERTIFICATIONS
Insulated Glass Unit (IGU):	• Quality Control Plan • Declaration of Performance (DoP) and accompanying CE label according to EN 1279-5 • Environmental Product Declaration (EPD) (if available) • Recycled Content Declaration according to EN 14021	• ISO 9001 Certification • Supplier certification according to EN 1279 (if relevant) • ISO 14001 / EMAS Certification • Supply chain certification according to ISO14001 / EMAS
Laminated Glass and laminated Safety Glass	• Quality Control Plan • Declaration of Performance (DoP) and accompanying CE label according to EN 14449 • Environmental Product Declaration (EPD) (if available) • Recycled Content Declaration according to EN 14021	• ISO 9001 Certification • Supplier certification according to EN 14449 (if relevant) • ISO 14001 / EMAS Certification • Supply chain certification according to ISO14001 / EMAS
Heat Strengthened Glass	• Quality Control Plan • Declaration of Performance (DoP) and accompanying CE label according to EN 1863-2 • Environmental Product Declaration (EPD) (if available) • Recycled Content Declaration according to EN 14021	• ISO 9001 Certification • Supplier certification according to EN 1863-2 (if relevant) • ISO 14001 / EMAS Certification • Supply chain certification according to ISO14001 / EMAS
Thermally Toughened Glass	• Quality Control Plan • Declaration of Performance (DoP) and accompanying CE label according to EN 12150-2 • Environmental Product Declaration (EPD) (if available) • Recycled Content Declaration according to EN 14021	• ISO 9001 Certification • Supplier certification according to EN 12150-2 (if relevant) • ISO 14001 / EMAS Certification • Supply chain certification according to ISO 14001 / EMAS
HST Thermally Toughened safety Glass	• Quality Control Plan • Declaration of Performance (DoP) and accompanying CE label according to EN 14179-2 • Environmental Product Declaration (EPD) (if available) • Recycled Content Declaration according to EN 14021	• ISO 9001 Certification • Supplier certification according to EN 14179-2 (if relevant) • ISO 14001 / EMAS Certification • Supply chain certification according to ISO 14001 / EMAS
Enamelled / Fritted Glass	• Quality Control Plan • Coating Test Reports according to ISO 1518, DIN 67 530, AST D 523-78, ISO 2813 • Painting process Test Report	• ISO 9001 Certification • ISO 14001 / EMAS Certification • Supply chain certification according to ISO 14001 / EMAS
Extruded Aluminium Profiles	• Quality Control Plan • Inspection certificate type 2.2 (as a minimum) / 3.1 according to EN 10204 • Declaration of Performance (DoP) according to EN 15088 (for structural products) • Recycled Content Declaration according to EN 14021	• ISO 9001 Certification • FPC Certificate according to EN 15088 (for structural products) • ISO 14001 / EMAS Certification (if required) • Supply chain certification according to ISO 14001 / EMAS
Thermally-broken extruded aluminium profiles	• Quality Control Plan • Inspection certificate type 2.2 (as a minimum) / 3.1 for aluminium extruded profiles according to EN 10204 • Declaration of Performance (DoP) according to EN 15088 (for structural products) • Test report of shear test according to EN 14024 • Test report of transverse tensile strength at the laboratory according to EN 14024 (if required by specifications) • Recycled Content Declaration according to EN 14021	• ISO 9001 Certification • FPC Certificate according to EN 15088 (for structural products) • ISO 14001 / EMAS Certification • Supply chain certification according to ISO 14001 / EMAS
Aluminium Sheets	• Inspection certificate type 2.2 (as a minimum) / 3.1 according to EN 10204 • Recycled Content Declaration according to EN 14021	• ISO 9001 Certification • FPC Certificate according to EN 15088 (for structural products) • ISO 14001 / EMAS Certification • Supply chain certification according to ISO 14001 / EMAS
Finishes of extruded aluminium profiles and aluminium sheets: **PPC Coating**	• Quality Control Plan • Certificate of Conformity with order and / or test reports according to EN 10204 • Painting process Warranty	• ISO 9001 Certification (not mandatory) • QUALICOAT Licence

PRODUCT	PRODUCT CERTIFICATIONS	SUPPLIER CERTIFICATIONS
Finishes of extruded aluminium profiles and aluminium sheets: **Anodising**	• Quality Control Plan • Certificate of Conformity with order and / or test reports according to EN 10204 • Anodising process Warranty	• ISO 9001 Certification (not mandatory) • QUALANOD Licence
Structural Steel/Stainless Steel Components	• Inspection certificate type 2.2 according to EN 10204 • Declaration of Performance (DoP) and accompanying CE label according to EN 1090-1	• EN 1090-1 Certification - EXC2 / EXC3
Steel finishes: **Hot Dip Galvanizing (EN ISO 1461)**	• Declaration of Conformity with order according to EN ISO 1461	
Steel finishes: **Painting (EN ISO 12944 / EN 13438)**	• Declaration of Conformity with order according to EN ISO 12944 / EN 13438	• QUALISTEELCOAT Licence (if requested)
Gaskets	• Certificate of Conformity with order • Rubber Technical sheet	
Structural / non-Structural Sealants	• Declaration of Performance (DoP) according to reference ETA • Environmental Product Declaration (EPD) (if available) • Sealant technical Sheet • VOC Emission Testing and VOC content assessment according to specification requirements (if requested) • Guarantee of the application at the completion of the supply	• ISO 9001 Certification • Statement of Conformance to Responsible Care Management System Technical Specification RC101.06 2019
Rockwool	• BREEAM rating according to specification requirements (if requested) • BRE Green Guide rating according to specification requirements • Environmental Product Declaration (EPD) • Recycled Content Declaration according to EN 14021 (if requested) • VOC Emission Testing and VOC content according to specification requirements (if requested) • Rockwool Technical sheet	• ISO 9001 Certification • ISO 14001 / EMAS Certification
Terracotta	• Quality Control Plan • Declaration of Performance (DoP) and CE accompanying label of the products according to EN 14411	• ISO 9001 Certification • ISO 14001 / EMAS Certification

11.2. CE MARKING OF FACADE SYSTEMS

Until the end of UKCA transition period, established on January, 1st 2023, FOCCHI is going to CE mark its façades and to issue Declarations of Performance according to EU CPR 305/2011, based on the following product standards:

- EN 13830 (Curtain walling);
- EN 14351 (Windows and Doors);
- EN 1090 (Steel and Aluminium structural components).

The above mentioned products standard have become 'designated standards' in relation to Great Britain's *Construction Products (Amendment etc.) (EU Exit) Regulations 2019* (Statutory Instrument 2019, No. 465).

For First Street South project Focchi would be able to provide also the UKCA marking

DECLARATION OF PERFORMANCE OF CURTAIN WALLING (EN 13830)

ARCHITECTURAL BUILDING ENVELOPES

FOCCHI SINCE 1914

CE **DECLARATION OF PERFORMANCE**
according to CPR (EU) No 305/2011

DoP No. 001CPR2017-160080

1. Product type:

UNITISED CURTAIN WALL
Job No/ Project: 160080/ EXCHANGE COURT, Manchester (UK)

2. Type:

Unitised cladding: aluminium extruded frame EN AW 6063 T6 with anodic oxidation coating, double glazing unit with structural silicone sealant EN 1300:2015

3. Use:

Curtain wall for residential and commercial building

4. Manufacturer:

FOCCHI S.p.A.
Via Cornacchiara, 805
(83024 Poggio Torriana)
RIMINI Italy

5. Authorised person:

N/A

6. System for assessment and verification of function and performance:

System 3

7. Harmonised product standard:

EN 13830:2003

8. Notified body:

N/A

9. **Declared performance**

Essential Characteristics	ER (CPR305/11)	Performance	Classification Standard	Test or Calculation Standard	Test Report/ Calculation
Reaction to fire under system 1	ER2	NPD			
Reaction to fire under system 3	ER2	NPD			
Fire resistance	ER2	NPD			
Fire propagation (Horizontal fire and smoke stop)	ER2	EI120			EC-FOC-G251-RP-NA-011(*) (Focchi, Siderite Insulation Ltd)
Resistance to own dead load	ER4	0.74 KN/m2	EN 1991-1-1		EC-FOC-G251-Ca-NA-002(*) (Focchi)
Resistance to horizontal load	ER4	0.74 kN/m 1.00 kN/m2 0.50 kN	EN 1991-1-1		EC-FOC-G251-Ca-NA-002(*) (Focchi)
Resistance to wind load	ER4	+1500 Pa -3100 Pa (Serviceability)	EN 13116	EN 12179	EC-FOC-G251-RP-NA-012 (Vinci Technology Centre UK Ltd)
Air permeability	ER6	A4	EN 12152	EN 12153	EC-FOC-G251-RP-NA-012 (Vinci Technology Centre UK Ltd)
Watertightness	ER3	R7	EN 12154	EN 12155	EC-FOC-G251-RP-NA-012 (Vinci Technology Centre UK Ltd)
Airborne sound insulation	ER5	NPD	EN ISO 717-1	EN ISO 10140-2	EC-FOC-G251-RP-NA-007(*) (Istituto Giordano S.p.A.) Test performed according to EN ISO 16283-3:2016
Thermal transmittance Ucw	ER6	1.06 W/m2K	EN ISO 10077-2 EN 12631:2012		EC-FOC-G251-Ca-NA-003(*) (Focchi)
Water vapour permeability	ER	NPD			
Impact resistance	ER4	NPD	EN 14019:2004		EC-FOC-G251-Ca-NA-002(*) (Focchi) Test performed according to CWCT TN76
Thermal shock resistance	ER4	Heat Straegthened and toughened + HST glasses			
Durability		NPD			

NPD= No Performance Determined/ (*) Specific technical documentation

10. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 9.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.
Signed for and on behalf of the manufacturer:

FOCCHI S.p.A.
(President) Paolo Focchi

Poggio Torriana (RN) Italy , 30.11.2017

File: 160080_DoP Unit

2 di 2

FACSIMILE

FOCCHI S.p.A.
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info@focchi.it www.focchi.it

P.IVA IT 01193410403
C.F./REG. IMPRN 01193410403
Capitale sociale E 1.549.380,00 R.A.A: n. 225184

DECLARATION OF PERFORMANCE OF WINDOWS AND DOORS (EN 14351)

ARCHITECTURAL BUILDING ENVELOPES

FOCCHI SINCE 1914

DECLARATION OF PERFORMANCE
according to CPR (EU) No 305/2011

DoP No. 001CPR2017-150010

1. Unique identification code of the product-type:

DOUBLE LEAF SWING DOORS TYPE D01/D02/D03/D04/D05/D06
Code: 150010IV1200-001/ 150010IV1201-001/ 150010IV1202-001/ 150010IV1203-001/ 150010IV1204-001
Job No/ Project: 150010/ 4 PANCRAS SQUARE - King's Cross London

2. Type:

External swing doorsets, aluminium extruded profiles in alloy EN AW 6060 T6 with polyester powder coating RAL 7021, Qualicoat marking, incorporating insulating glass unit.
System: Schüco AMS 50.N

3. Intended use:

External pedestrian doorsets without resistance to fire and/or smoke leakage characteristics for residential and commercial buildings

4. Manufacturer:

FOCCHI S.p.A.
Via Cornacchiara 805
47825 Poggio Torriana
RIMINI - Italy

5. Authorised representative:

N/A

6. System of Assessment and Verification of Constancy of Performance (AVCP):

System 3

7. Relevant Harmonised Standard:

EN 14351-1:2006+A1:2010

8. European Technical Assessment

N/A

FACSIMILE

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P.IVA IT 01903410403
C.F./REG. IMP.RN 01903410403
Capitale sociale € 1.569.380,00 R.A.A: n. 225184

FOCCHI SINCE 1914

9. Declared Performance

ESSENTIAL CHARACTERISTICS	ER (CPR305/2011)	PERFORMANCE	CLASSIFICATION STANDARD	TEST or CALCULATION STANDARD	TEST REPORT /CALCULATION
Watertightness	ER3	NPD	EN 12208	EN 1027	
Dangerous substances	ER3	NPD			
Resistance to wind load	ER4	NPD	EN 12210	EN 12211	
Load bearing capacity of safety devices	ER4	NPD		EN 14609	
Height and width	ER4	different sizes	EN 12519		
Airborne sound insulation	ER5	NPD		EN ISO 10140-2 EN ISO 717-1	
Thermal transmittance U_w	ER6	NPD		EN ISO 10077-1/2	
Air permeability	ER6	NPD	EN 12207	EN 1026	
Impact resistance	ER4	NPD	EN 13049	EN 13049	
Light Transmittance (LT)	ER6	79%		EN 410	
Solar Factor (g-value)	ER6	58 %		EN 410	

NPD= No Performance Determined

10. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 9.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.

Signed for and on behalf of the manufacturer:

FOCCHI S.p.A.
(CEO) Paolo Focchi

Poggio Torriana (RN), 26.01.2017

FACSIMILE

File: DoP 001CPR2017-150010 2 di 2

DECLARATION OF PERFORMANCE OF ALUMINIUM STRUCTURAL COMPONENTS (EN 1090)

ARCHITECTURAL BUILDING ENVELOPES

FOCCHI SINCE 1914

DICHIARAZIONE DI PRESTAZIONE
DECLARATION OF PERFORMANCE
(CPR (EU) No 305/2011)

DoP No. 001CPR2017-160090

1. Codice di identificazione unico del prodotto-tipo: / *Unique identification code of the product-type:*

Componente strutturale da profilo estruso in alluminio
Finitura grezza uso interno - Lega EN AW 6005A-T6 (EN 15088)
Structural Aluminium component from extruded aluminium profile
Finishing mill finish internal use - Aluminium Alloy EN AW 6005A (EN 15088)

Progetto: 160090 – Owen Street Renaker - Manchester
Project: 160080– Owen Street Renaker - Manchester

codice profilo: / *profile code:* **0101792**

codice componente(i): /*component(s) code:* **160090PE8901-001/160090PE8901-002 (ITC_160090PE(0101792))**

2. Numero di tipo, lotto, serie o qualsiasi altro elemento consentito per l'identificazione del prodotto da costruzione
Type, batch or serial number or any other element allowing identification of the construction product:

Tutti i codici di commessa (160090PE….) riferiti al profilo 0101792
All component codes as (160090PE….) obtained by profile 0101792

3. Uso o usi previsti: / *Intended use(s):* **Staffe standard in alluminio per supporto cellula di facciata**
Aluminium brackets for fixing facade unit

4. Produttore: / *Manufacturer:* **FOCCHI S.p.A. - Via Cornacchiara 805 - 47824 Poggio Torriana (Rimini) Italy**

5. Mandatario: / *Authorised representative:* **Non applicabile** / *Not applicable*

6. Sistema di valutazione e verifica della costanza della prestazione del prodotto da costruzione (VVCP):
System of Assessment and Verification of Constancy of Performance of the construction product (AVCP):

System 2+

7. Norma armonizzata: / *Harmonized Standard:* **EN 1090-1: 2009 + A1:2011**

Organismo notificato: / *Notified body:*
Istituto Giordano S.p.A. (n. 0407) Via Rossini, 2 – 47814 Bellaria Igea Marina -Italy
Ha rilasciato il certificato di conformità del controllo della produzione in fabbrica n. 0407-CPR-909
fondandosi sui seguenti elementi:
i) ispezione iniziale dello stabilimento di produzione e del controllo della produzione di fabbrica
ii) sorveglianza, valutazione e verifica continue del controllo della produzione di fabbrica
Istituto Giordano S.p.A.(No. 0407) has issued the certificate of conformity of the factory production control No. 0407-CPR-909 based on:
i) initial inspection of the manufacturing plant and of factory production control
ii) continuous surveillance, assessment and evaluation of factory production control

8. Valutazione tecnica europea: / *European Technical Assessment:* **Non applicabile** / *Not applicable*

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FOCCHI SINCE 1914

9. Prestazione dichiarata / *Declared Performance*

Caratteristiche essenziali *Essential characteristics*	Prestazione *Performance*	Specifica tecnica armonizzata *Harmonised technical specification*
Tolleranze dimensionali *Geometrical tolerance:*	EN 1090-3	EN1090-1:2009+A1:2011
Saldabilità *Weldability*	EN AW 6005A-T6 (EN 1999-1-1)	EN1090-1:2009+A1:2011
Resistenza alla rottura *Fracture toughness*	Non richiesto *Not required*	EN1090-1:2009+A1:2011
Reazione al fuoco *Fire Reaction*	CLASS A1 (EN 13501-1)	EN1090-1:2009+A1:2011
Rilascio di cadmio *Release of cadmium*	NPD	EN1090-1:2009+A1:2011
Emissione di radioattività *Emission of Radioactivity*	NPD	EN1090-1:2009+A1:2011
Durabilità *Durability*	Mill finish – Internal use	EN1090-1:2009+A1:2011
CARATTERISTICHE STRUTTURALI / *STRUCTURAL CHARACTERISTICS*		
Capacità di supporto del carico *Load bearing capacity*	vedere / *refer to* ITC_160090PE(0101792)	EN1090-1:2009+A1:2011
Resistenza a fatica *Fatigue strength*	NPD	EN1090-1:2009+A1:2011
Resistenza al fuoco *Fire Resistance*	NPD	EN1090-1:2009+A1:2011
Deformazione allo stato limite di servizio *Deformation at serviceability limit state*	vedere / *refer to* ITC_160090PE(0101792)	EN1090-1:2009+A1:2011
Classe di esecuzione *Execution class*	EXC2	EN1090-1:2009+A1:2011
Fabbricazione *Manufacturing*	secondo la specifica del componente e la EN 1090-3 *according to component specific specification and EN 1090-3*	EN1090-1:2009+A1:2011

NPD= Nessuna Prestazione Dichiarata / *Performance Determined*

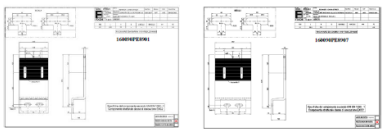
10. La prestazione del prodotto di cui ai punti 1 e 2 è conforme alla prestazione dichiarata di cui al punto 9.
The performance of the product identified in point 1 and 2 is in conformity with the declared performance in point 9.

Si rilascia la presente dichiarazione sotto la responsabilità esclusiva del produttore di cui al punto 4.
This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.

Firmato a nome e per conto del produttore: / *Signed for and on behalf of the manufacturer by:*

Paolo Focchi
Presidente Focchi SpA
Focchi SpA President

Poggio Torriana (Rimini) – Italia, 11/07/2017



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12. INSPECTION AND TESTING

Relevant documents not attached but referred to:

- P-PRO-01_Management of Project and Production process
- P-PRG-04_Management of validation process for SSG system
- P-QUA-01_Management of quality controls along the production cycle
- Quality control checklists
- Production ITPs for raw materials, finished products, SSG process
- FOCCHI Ltd Site Inspection & Test Plan

12.1. QUALITY CONTROLS

Focchi implements Production Inspection and test Plans (ITPs) for:

- each type of raw material, component and finished product classified in its Management System. In particular, they are relevant: extruded profiles and components from extruded profiles, aluminium sheet components, glass panels, gaskets, metal components, terracotta, treatments and finishes and prefabricated curtain walling units;
- structural silicone glazing (SSG) process.

The Production ITPs show:

- the acquired documentation of quality assurance;
- the inspection and test performed (type, method, frequency, involved parties);
- the quality control recording sheet drawn up.

Extract from Production ITP

FOCCHI	INSPECTION AND TEST PLAN										170060-ITP- Extruded Aluminium Members and Finishes_rev00	
	EXTRUDED ALUMINIUM MEMBERS AND FINISHES											
Client	Westfield Europe LTD			Revision	Description	Date	Written by	Approved by Contractor				
Job	Westfield Stratford M7 Offices – Bld A - London			00	First Issue	06/08/2018	E.Principato	Name				
Package	CURTAIN WALLING, WINDOWS & DOORS							Signature				
Technical Specification	M7-SHP-ZA-00-SP-A-00001 (Rev. P00 17-01-2018)							Date				
No	Activity	Type of Inspection or Test	Test or Inspection method	Reference Document for acceptance criteria	Frequency of Inspection or Test	Inspection by	Test by	Notification	Approved by	Hold Point for	Verification/ Recording	Comments
1	Preliminary Documentation of Quality Assurance											
1.1	Supplier's EN ISO 9001 Certification	Document Inspection	S to submit Certification to F / C	Technical Specification	before contract signature	F		C		S	Obtain a copy of ISO 9001 Certificate from S	
1.2	Supplier's EN ISO 14001 Certification/ Alternatively EMAS Certification/ Other	Document Inspection	S to submit Certification to F / C	Technical Specification LEED/BREEAM Requirements	before contract signature			C		S	Obtain a copy of ISO 14001 Certificate or EMAS Certificate or other from S	
1.3	Product Sustainability Certifications	Document Inspection	S to submit Certification to F / C	LEED/BREEAM Requirements	before contract signature			C			Obtain a copy of Recycled Content Declaration from S	
1.4	Supplier's EN 15088 Certification (Aluminium profiles for structural use)	Document Inspection	S to submit Certification to F / C	EN 15088	before contract signature	F		C			Obtain a copy of EN 15088 Certificate from S	
1.5	QUALICOAT License	Document Inspection	S to submit document to F / C	Technical Specification Qualicoat Specification	before contract signature	F		C		S	Obtain a copy of QUALICOAT License from S	
1.6	QUALANOD License	Document Inspection	S to submit document to F / C	Technical Specification QUALANOD Specification	before contract signature	F		C		S	Obtain a copy of QUALANOD License from S	
1.7	Supplier's Quality Plan	Document Inspection	F to review the Supplier's Quality Plan	EN ISO 9001	before contract signature	F			F		Supplier qualification by F entering or confirming S in the list of qualified suppliers	
1.8	PPC Coating	Document Inspection	S to submit powder coating process report to F for approval	Technical Specification Qualicoat Specification	before contract signature	F			F		Powder coating process report from S	
1.9	Anodising	Document Inspection	S to submit anodizing process report to F for approval	Technical Specification Qualanod Specification	before contract signature	F			F		Anodizing process report from S	

KEY: F= Focchi C = General Contractor S = Supplier IA = Independent Authority

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Production Quality Controls include:

- QUALITY CHECKS ON INCOMING GOODS;
- INSPECTIONS AT THE SUPPLIER'S PREMISES;
- INSPECTIONS DURING ASSEMBLY.

Inspection activities involve the use of samples materials made in compliance with project technical specifications and previously submitted to the approval of the Client.

During production the following additional checks are performed:

- QUALITY CONTROLS BY THIRD PARTIES (INDEPENDENT AUTHORITIES)
  Frequency of checks is determined according to contractual specifications;
- QUALITY CONTROLS IN STRUCTURAL SEALING PROCESS
  Controls are carried out in accordance with procedure *P-PRG-04_Management of validation process for SSG system.* (*see Ch. 12.2 "Structural Sealing Glazing (SSG) process - Quality control");*
- PERFORMANCE TESTS OF MOCK-UPS
  Tests are performed to demonstrate that the curtain wall systems manufactured and installed and the materials used comply with design requirements (*see Ch. 18 "Test"*).

FOCCHI also implements Installation Inspection and test Plans (ITPs) that include:

- QUALITY CHECKS ON DELIVERED GOODS;
- INSPECTIONS BEFORE AND DURING INSTALLATION;
- INSPECTIONS BEFORE HAND-OVERING.

For further details, please refer to *FOCCHI Ltd Site Inspection & Test Plan* document.

Quality controls are recorded using specific checklists.

The following tables show the list of production and installation checklists.

12.1. List of Production QC Checklist

DOCUMENT	REFERENCE PRODUCT	TYPE OF DOCUMENT
M-QUA-01-F	Glass	S
M-QUA-01-A	Glass	I
M-QUA-01-P	Glass	P
M-QUA-02-F	Extruded Aluminium bars	S
M-QUA-02-A	Extruded Aluminium bars	I
M-QUA-03-F	Components from extruded aluminium bars	S
M-QUA-03-A	Components from extruded aluminium bars	I
M-QUA-03-P	Components from extruded aluminium bars	P
M-QUA-04-F	Structural components from extruded aluminium bars	S
M-QUA-04-A	Structural components from extruded aluminium bars	I
M-QUA-04-P	Structural components from extruded aluminium bars	P
M-QUA-05-F	Steel components	S
M-QUA-05-A	Steel components	I
M-QUA-06-F	Structural steel components	S
M-QUA-06-A	Structural steel components	I
M-QUA-07-F	Components from aluminum sheet	S
M-QUA-07-A	Components from aluminum sheet	I
M-QUA-08-F	Gasket rolls	S
M-QUA-08-A	Gasket rolls	I
M-QUA-09-F	Gasket vulcanized frame	S
M-QUA-09-A	Gasket vulcanized frame	I
M-QUA-10-F	Assembled components	S
M-QUA-10-A	Assembled components	I
M-QUA-10-P	Assembled component	P
M-QUA-12-F	Components from stainless steel sheet	S
M-QUA-12-A	Components from stainless steel sheet	I
M-QUA-13-F	Aluminium sheet	S
M-QUA-13-A	Aluminium sheet	I
M-QUA-14-F	Stainless Steel sheet	S
M-QUA-14-A	Stainless Steel sheet	I
M-QUA-15-F	Special Assembled components	S
M-QUA-15-A	Special Assembled components	I
M-QUA-15-P	Special Assembled component	P
M-QUA-17-F	Terracotta panels	S
M-QUA-17-A	Terracotta panels	I

DOCUMENT	REFERENCE PRODUCT	TYPE OF DOCUMENT
M-QUA-17-P	Terracotta panels	**P**
M-QUA-31-F	Structurally Glazed Units	**S**
M-QUA-31-A	Structurally Glazed Units	**I**
M-QUA-31-P	Structurally Glazed Units	**P**
M-QUA-32-F	Units / Windows / Glazed components	**S**
M-QUA-32-A	Units / Windows / Glazed components	**I**
M-QUA-32-P	Units / Windows / Glazed components	**P**

KEY
S = Quality Control Checklist at the Supplier's Premises
I = Incoming Quality Control Checklist
P = Quality Control Checklist during Production

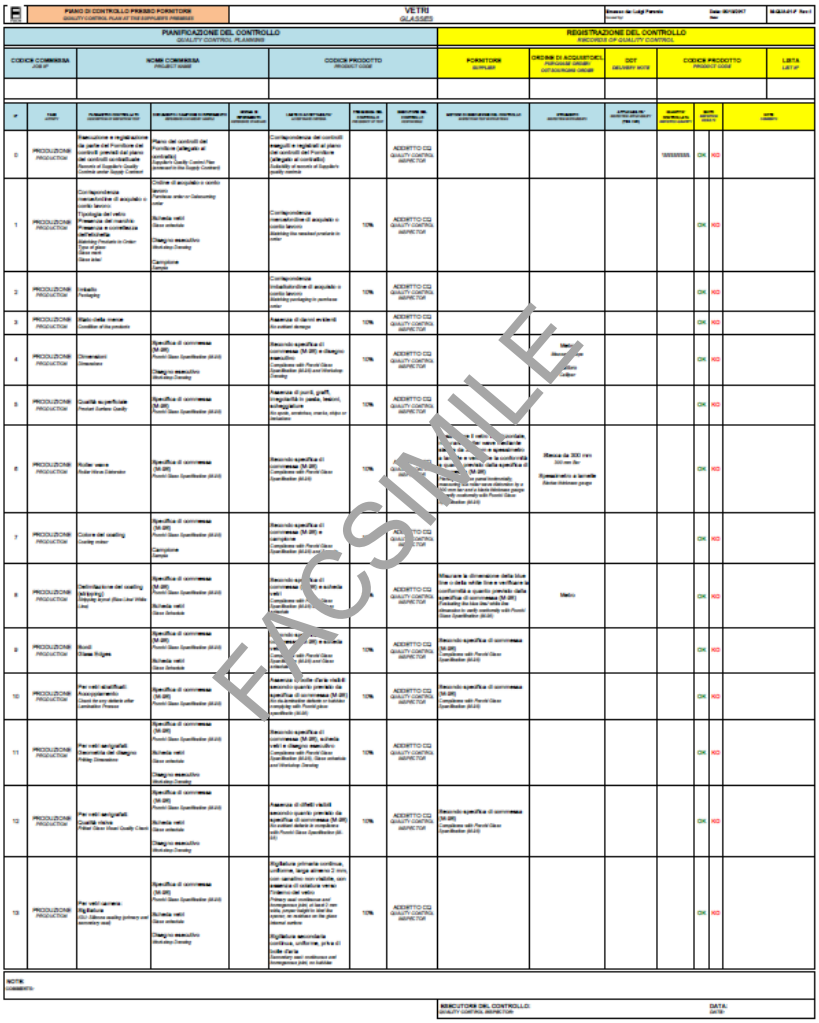
12.2. List of Installation QC Checklist

DOCUMENT
ITP-001 - DELIVERY ARRIVAL ON SITE
ITP-002 - CAST-IN CHANNEL ITO CHECKS
ITP-003 - SLAB BRACKETS INSTALLATION ITP CHECKS
ITP-004 - BASE/PERIMETER PROFILE INSTAL. ITP CHECKS
ITP-005 - SADDLE GASKET INSTALLATION
ITP-006 - UNITS INSTALLATION ITP CHECKS
ITP-007 - FIRE BARRIER INSTALLATION CHECK
ITP-008 - TOP CLOSURE & COPING INSTALLATION CHECK
ITP-009 - STICK SYSTEM INSTALLATION CHECK
ITP-010 - STICK SYSTEM GLASS INSTALLATION CHECK
ITP-011 - SOFFIT INSTALLATION CHECK
ITP - PROTECTION OF FAÇADE WORKS
BENCHMARK INSPECTION REPORT
WATER TEST REGISTER
DC - AREA HANDOVER INSPECTION REPORT
DC-004 - PRE-PROTECTION HANDOVER FORM
DC-005 - FINAL STAGE HANDOVER INSPECTION REPORT

Below, some checklist examples:

- **QUALITY CONTROL CHECKLIST AT THE SUPPLIER'S PREMISES**
  (Refer to table 12.1: *M-QUA-XX-F)*

Example: M-QUA-01-F_QC checklist for Glass



VETRI
GLASSES

PIANIFICAZIONE DEL CONTROLLO
QUALITY CONTROL PLANNING

CODICE COMMESSA JOB N°	NOME COMMESSA PROJECT NAME	CODICE PRODOTTO PRODUCT CODE

REGISTRAZIONE DEL CONTROLLO
RECORDS OF QUALITY CONTROL

FORNITORE SUPPLIER	ORDINE DI ACQUISTO/C.L. PURCHASE ORDER CUSTOMER ORDER	DDT DELIVERY NOTE	CODICE PRODOTTO PRODUCT CODE	LISTA LIST N°

N°	FASE STAGE	PUNTI DI CONTROLLO CONTROL POINTS	CONTROLLI EFFETTUATI CONTROLS CARRIED OUT	MODALITÀ DI CONTROLLO CONTROL PLAN	CRITERI ACCETTABILITÀ ACCEPTANCE CRITERIA	FREQUENZA DEI CONTROLLI FREQUENCY OF THE CONTROLS	EMISSIONE DEI CONTROLLI CONTROLS CARRIED OUT	RIFERIMENTI DEI CONTROLLI EFFETTUATI CONTROLS CARRIED OUT	STRUMENTI MEASURING EQUIPMENT	STRUMENTI DI CONTROLLO CONTROL EQUIPMENT USED	QUANTITÀ CONTROLLATE QUANTITY CONTROLLED	ESITO CONTROLLO RESULTS		NOTE COMMENTS
0	PRODUZIONE PRODUCTION	Ricevuto e registrato il piano dei controlli del Fornitore del contratto applicabile Receipt of Supplier's Quality Control plan provided in the Supply Contract	Piano dei controlli del Fornitore (allegato al contratto) Supplier's Quality Control Plan provided in the Supply Contract		Corrispondenza dei controlli eseguiti e registrati al piano dei controlli del Fornitore (allegato al contratto) Suitability of records of Supplier's quality control		ADDETTO CQ QUALITY CONTROL INSPECTOR				1000000000	OK	KO	
1	PRODUZIONE PRODUCTION	Corrispondenza merce/ordine di acquisto o conto lavoro Typology of order Presence of marks Presence of correct or defective Matching the received products to order	Ordine di acquisto o conto lavoro Purchase order or Outsourcing order Richiesta vetri Glass schedule Disegno esecutivo Workshop Drawing Campione Sample		Corrispondenza merce/ordine di acquisto o conto lavoro Matching the received products to order	10%	ADDETTO CQ QUALITY CONTROL INSPECTOR					OK	KO	
2	PRODUZIONE PRODUCTION	Imballo Packaging			Corrispondenza imballo/ordine di acquisto o conto lavoro Matching packaging to purchase order	10%	ADDETTO CQ QUALITY CONTROL INSPECTOR					OK	KO	
3	PRODUZIONE PRODUCTION	Stato della merce Condition of the products			Assenza di danni evidenti No evident damage	10%	ADDETTO CQ QUALITY CONTROL INSPECTOR					OK	KO	
4	PRODUZIONE PRODUCTION	Dimensioni Dimensions	Specifica di commessa (M-08) Pontri Glass Specification (M-08) Disegno esecutivo Workshop Drawing		Rispetto specifica di commessa (M-08) e disegno esecutivo Compliance with Pontri Glass Specification (M-08) and Workshop Drawing	10%	ADDETTO CQ QUALITY CONTROL INSPECTOR		Metro Measuring tape Calibro Caliper			OK	KO	
5	PRODUZIONE PRODUCTION	Qualità superficiale Product Surface Quality	Specifica di commessa (M-08) Pontri Glass Specification (M-08)		Assenza di punti, graffi, irregolarità in pasta, testoni, scheggature No spots, scratches, cracks, chips or irregulars	10%	ADDETTO CQ QUALITY CONTROL INSPECTOR					OK	KO	
6	PRODUZIONE PRODUCTION	Roller wave Roller Wave Extrusion	Specifica di commessa (M-08) Pontri Glass Specification (M-08)		Rispetto specifica di commessa (M-08) Compliance with Pontri Glass Specification (M-08)	10%	ADDETTO CQ QUALITY CONTROL INSPECTOR	[illegible]	Riscala da 300 mm 300 mm Bar Rotrasmetro a tavola Rotra-Hohlmass gauge			OK	KO	
7	PRODUZIONE PRODUCTION	Colore del sealing Sealing colour	Specifica di commessa (M-08) Pontri Glass Specification (M-08) Campione Sample		Rispetto specifica di commessa (M-08) e campione Compliance with Pontri Glass Specification (M-08) and sample		ADDETTO CQ QUALITY CONTROL INSPECTOR					OK	KO	
8	PRODUZIONE PRODUCTION	Delimitazione del sealing (stripping) Stripping Spread (Blue Line/ White Line)	Specifica di commessa (M-08) Pontri Glass Specification (M-08) Richiesta vetri Glass Schedule		Rispetto specifica di commessa (M-08) e richiesta vetri Compliance with Pontri Glass Specification (M-08) Schedule		ADDETTO CQ QUALITY CONTROL INSPECTOR	Misurare la dimensione della blue line o della white line e verificare la conformità a quanto previsto dalla specifica di commessa (M-08) Pontri Glass Specification (M-08)	Metro			OK	KO	
9	PRODUZIONE PRODUCTION	Buchi Glass Edges	Specifica di commessa (M-08) Pontri Glass Specification (M-08) Richiesta vetri Glass Schedule		Rispetto specifica di commessa (M-08) e richiesta vetri Compliance with Pontri Glass Specification (M-08) and Glass Schedule	10%	ADDETTO CQ QUALITY CONTROL INSPECTOR	Rispetto specifica di commessa (M-08) Compliance with Pontri Glass Specification (M-08)				OK	KO	
10	PRODUZIONE PRODUCTION	Per vetri stratificati: Accoppiamento Check the ply debris after lamination Process	Specifica di commessa (M-08) Pontri Glass Specification (M-08)		Assenza di bolle d'aria visibili secondo quanto previsto da specifica di commessa (M-08) No evident debris in contact or between the plies with Pontri Glass specification (M-08)	10%	ADDETTO CQ QUALITY CONTROL INSPECTOR	Rispetto specifica di commessa (M-08) Compliance with Pontri Glass Specification (M-08)				OK	KO	
11	PRODUZIONE PRODUCTION	Per vetri temperati: Simmetria del disegno Piling Dimensions	Specifica di commessa (M-08) Pontri Glass Specification (M-08) Richiesta vetri Glass schedule Disegno esecutivo Workshop Drawing		Rispetto specifica di commessa (M-08), richiesta vetri e disegno esecutivo Compliance with Pontri Glass Specification (M-08), Glass schedule and Workshop Drawing	10%	ADDETTO CQ QUALITY CONTROL INSPECTOR					OK	KO	
12	PRODUZIONE PRODUCTION	Per vetri temperati: Qualità vetro Pontri Glass Visual Quality Check	Specifica di commessa (M-08) Pontri Glass Specification (M-08) Richiesta vetri Glass schedule Disegno esecutivo Workshop Drawing		Assenza di difetti visibili secondo quanto previsto da specifica di commessa (M-08) No evident defects in compliance with Pontri Glass Specification (M-08)	10%	ADDETTO CQ QUALITY CONTROL INSPECTOR	Rispetto specifica di commessa (M-08) Compliance with Pontri Glass Specification (M-08)				OK	KO	
13	PRODUZIONE PRODUCTION	Per vetri camera: Sigillatura Glass Silicone sealing (primary and secondary seal)	Specifica di commessa (M-08) Pontri Glass Specification (M-08) Richiesta vetri Glass schedule Disegno esecutivo Workshop Drawing		Sigillatura primaria continua, uniforme, larga almeno 2 mm, non sensibile non visibile, non assenza di cratteri verso l'interno del vetro Primary seal continuous and uniform, plate at least 2 mm wide, properly bonded, slide the spacer, no cratters on the glass internal surface Sigillatura secondaria continua, uniforme, priva di bolle d'aria Secondary seal continuous and homogeneous plate, no bubbles	10%	ADDETTO CQ QUALITY CONTROL INSPECTOR					OK	KO	

NOTE:
COMMENTS:

ISPETTORE DEL CONTROLLO:
QUALITY CONTROL INSPECTOR:

DATA:
DATE:

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- **INCOMING QUALITY CONTROL CHECKLIST**
  (Refer to table 12.1: *M-QUA-XX-A)*

Example: M-QUA-02-A_QC checklist for Extruded Aluminium Bars

PIANO DI CONTROLLO IN ACCETTAZIONE	BARRE ESTRUSE IN ALLUMINIO	Rev. 00 - Luigi Ferrara - In data 18/01/2018	M-QUA-02-A Rev.1

PIANIFICAZIONE DEL CONTROLLO			REGISTRAZIONE DEL CONTROLLO			
COMMESSA	DESCRIZIONE	TIPO PRODOTTO	FORNITORE	ORDINE DI ACQUISTO/OA	DDT	TIPO PRODOTTO / LISTA

N°	FASE	PARAMETRI CONTROLLATI	DOCUMENTO CAMPIONE DI RIFERIMENTO	NORMA DI RIFERIMENTO	CRITERI DI ACCETTABILITÀ	FREQUENZA DEI CONTROLLI	ESECUTORE DEI CONTROLLI	METODO DI ESECUZIONE DEI CONTROLLI	STRUMENTI	APPLICABILITÀ	QUANTITÀ CONTROLLATA	ESITO		NOTE
1	ACCETTAZIONE	Corrispondenza DDT/ordine di acquisto	DDT Ordine di acquisto		Corrispondenza DDT/ordine di acquisto	Ogni DDT	RESPONSABILE MAGAZZINI E LOGISTICA IN ENTRATA					OK	KO	
2	ACCETTAZIONE	Corrispondenza merce/Bolla di entrata: Tipo di profilo Quantità Presenza del trattamento (se richiesto) Presenza del pellicola (se richiesto)	Bolla di entrata Disegno matrice Campione colore		Corrispondenza merce/Bolla di entrata	Ogni Bolla di entrata	OPERATORE MAGAZZINI E LOGISTICA IN ENTRATA					OK	KO	
3	ACCETTAZIONE	Per barre destinate a calandratura: Durezza di lega	Ordine di acquisto o conto lavoro Disegno matrice		Durezza HB >65 per lega T5	Ogni collo	ADDETTO CQ	Verifica risultati prova di trazione				OK	KO	
4	ACCETTAZIONE	Imballo			Presenza di fogli di cartone fra un profilo e l'altro Compattezza dell'insieme dei profili per escludere possibili movimenti durante il trasporto	Ogni collo	OPERATORE MAGAZZINI E LOGISTICA IN ENTRATA					OK	KO	
5	ACCETTAZIONE	Stato della merce			Assenza di danni evidenti	Ogni collo	OPERATORE MAGAZZINI E LOGISTICA IN ENTRATA					OK	KO	
6	ACCETTAZIONE	Per profili rettilinei: geometria della sezione della barra	Disegno matrice	UNI EN 12020	Da norma di riferimento	10%	ADDETTO CQ		Calibro Squadro			OK	KO	
7	ACCETTAZIONE	Rettilineità della barra		UNI EN 12020	Da norma di riferimento	10%	ADDETTO CQ		Piano di riscontro			OK	KO	
8	ACCETTAZIONE	Per barre destinate a calandratura: Durezza di lega	Ordine di acquisto o conto lavoro Disegno matrice		Durezza HB >65 per lega T5	100%	ADDETTO CQ		Durometro/ Prova Webster/ Report del test di trazione da estrusore			OK	KO	
9	ACCETTAZIONE	Per profili calandrati: Raggio di curvatura	Disegno esecutivo del componente calandrato (in scala 1:1) Disegno esecutivo		Secondo disegno esecutivo	10%	ADDETTO CQ	Sovrapporre il pezzo al disegno esecutivo del componente calandrato				OK	KO	
10	ACCETTAZIONE	Per profili calandrati: Torsione, geometria della sezione	Disegno esecutivo del componente calandrato, disegno matrice		Assenza svergolamento sezioni, assenza di deformazioni macroscopiche della sezione	10%	ADDETTO CQ	Appoggiare a superficie piana Verificare l'assenza di svergolamento evidente Confrontare con campione				OK	KO	
11	ACCETTAZIONE	Per profili verniciati: Uniformità e integrità del trattamenti di finitura della barra	Campione di riferimento		Da norma di riferimento	10%	ADDETTO CQ	Visivo				OK	KO	
12	ACCETTAZIONE	Per profili verniciati: Brillantezza	Disegno matrice con indicazione superficie significativa Campione di riferimento Ordine di acquisto	QUALICOAT	Da norma di riferimento	10%	ADDETTO CQ		GLOSSMETRO			OK	KO	
13	ACCETTAZIONE	Per profili verniciati: Spessore dello strato di vernice	Disegno matrice con indicazione di superficie significativa	QUALICOAT	Da norma di riferimento	10%	ADDETTO CQ		ISOSCOPE			OK	KO	
14	ACCETTAZIONE	Per profili ossidati: Uniformità e integrità del trattamenti di finitura	Campione di riferimento		Corrispondenza a campione di riferimento	10%	ADDETTO CQ	Visivo				OK	KO	
15	ACCETTAZIONE	Per profili ossidati: Spessore dello strato di ossido	Disegno matrice Ordine di acquisto	QUALANOD BS 3987	Da norma di riferimento	10%	ADDETTO CQ	Secondo EN 2360 (su superficie significativa) Registrazione misurazioni su modulo M-QUA-42	ISOSCOPE					
16	ACCETTAZIONE	Per profili ossidati: Resistenza all'abrasione	Disegno matrice Ordine di acquisto	QUALANOD BS 3987	Da norma di riferimento	10%	ADDETTO CQ	Secondo BS 6161-18 (su superficie significativa)				OK	KO	
17	ACCETTAZIONE	Per profili ossidati: Ermeticità	Disegno matrice Ordine di acquisto	QUALANOD BS 3987	Da norma di riferimento	10%	ADDETTO CQ	Secondo EN 2931 (su superficie significativa)	Fischer ANOTEST			OK	KO	

NOTE:

ESECUTORE DEL CONTROLLO: DATA:

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- **QUALITY CONTROL CHECKLIST IN PRODUCTION**

  (Refer to table 12.1: *M-QUA-XX-P)*

Example: M-QUA-03-P_QC checklist for Components from extruded aluminum bars

	PIANO DI CONTROLLO IN PRODUZIONE	COMPONENTI DA BARRA ESTRUSA IN ALLUMINIO	Revisione da: Luigi Perante In data: 29/07/2010	M-QUA-03-P Rev.1

PIANIFICAZIONE DEL CONTROLLO			REGISTRAZIONE DEL CONTROLLO		
COMMESSA	DESCRIZIONE	TIPO PRODOTTO	FOGLIO DI LAVORO	TIPO PRODOTTO	LISTA

N°	FASE	PARAMETRO CONTROLLATO	DOCUMENTO / CAMPIONE DI RIFERIMENTO	NORMA DI RIFERIMENTO	LIMITE DI ACCETTABILITÀ	FREQUENZA DEI CONTROLLI	RESPONSABILE DEL CONTROLLO	METODO DI RILEVAMENTO DEL CONTROLLO	STRUMENTO	APPLICABILITÀ	QUANTITÀ CAMPIONATA	ESITO		DATA	FIRMA
1	TAGLIO	Geometria della sezione della barra	Disegno matrice		Assenza di deformazioni o fuori squadro Assenza di lighe o bande di estrusione longitudinali	Ogni pezzo	OPERATORE TAGLIO E LAVORAZIONI	Visivo In caso di esito negativo del controllo avvisare ADDETTO CQ				OK	KO		
2	TAGLIO	Geometria della sezione della barra	Disegno matrice	UNI EN 12020	Da norma di riferimento	Su segnalazione a OPERATORE TAGLIO E LAVORAZIONI	ADDETTO CQ		Calibro Squadro			OK	KO		
3	TAGLIO	Rettilineità della barra			Assenza di deformazione longitudinale	Ogni pezzo	OPERATORE TAGLIO E LAVORAZIONI	Visivo In caso di esito negativo del controllo avvisare ADDETTO CQ				OK	KO		
4	TAGLIO	Rettilineità della barra		UNI EN 12020	Da norma di riferimento	Su segnalazione a OPERATORE TAGLIO E LAVORAZIONI	ADDETTO CQ		Piano di riscontro			OK	KO		
5	TAGLIO	Per profili verniciati: Uniformità e integrità dei trattamenti di finitura della barra	Campione di riferimento		Corrispondenza a campione di riferimento	10%	OPERATORE TAGLIO E LAVORAZIONI	Visivo				OK	KO		
6	TAGLIO	Per profili verniciati: Brillantezza della barra	Campione di riferimento		Corrispondenza a campione di riferimento	Ogni pezzo	OPERATORE TAGLIO E LAVORAZIONI	Visivo In caso di esito negativo del controllo avvisare ADDETTO CQ				OK	KO		
7	TAGLIO	Per profili verniciati: Brillantezza della barra	Disegno matrice con indicazione di superficie significativa Campione di riferimento Ordine di acquisto (per individuare il tipo di vernice)	QUALICOAT	Da norma di riferimento	Su segnalazione a OPERATORE TAGLIO E LAVORAZIONI	ADDETTO CQ		Misuratore di brillantezza GLOSSMETTRO			OK	KO		
8	TAGLIO	Per profili verniciati: Spessore dello strato di vernice	Disegno matrice con indicazione di superficie significativa	QUALICOAT	Da norma di riferimento	Da definire per ogni commessa	ADDETTO CQ		Misuratore di spessore ISOSCOPE			OK	KO		
9	TAGLIO	Per profili ossidati: Uniformità e integrità dei trattamenti di finitura della barra	Campione di riferimento		Corrispondenza a campione di riferimento	10%	OPERATORE TAGLIO E LAVORAZIONI	Visivo				OK	KO		
10	TAGLIO	Per profili ossidati: Spessore dello strato di ossido della barra	Disegno matrice con indicazione di superficie significativa Ordine di acquisto (per individuare lo spessore)	QUALICOAT Classe BS 2653 mercato inglese	Da norma di riferimento	Da definire per ogni commessa	ADDETTO CQ		Misuratore di spessore ISOSCOPE			OK	KO		
11	TAGLIO	Finitura e aspetto superficiale del pezzo tagliato			Nessun difetto nelle zone in vista	Ogni pezzo	OPERATORE TAGLIO E LAVORAZIONI	Osservare alla distanza di 1 metro e verificare la mancanza di graffi o altri danni dovuti alla lavorazione, le condizioni adeguate del pezzo, la mancanza di trucioli				OK	KO		
12	TAGLIO	Per componenti calandrati: Raggio di curvatura	Disegno esecutivo del componente calandrato (in scala 1:1), Disegno esecutivo		Secondo disegno esecutivo	10%	ADDETTO CQ	Sovrapporre il pezzo al disegno esecutivo del componente calandrato				OK	KO		
13	TAGLIO	Per componenti calandrati: Torsione, geometria della sezione	Disegno esecutivo del componente calandrato, disegno matrice		Assenza di sregolamento evidente, assenza di deformazioni macroscopiche della sezione	10%	ADDETTO CQ	Appoggiare a superficie piana Verificare l'assenza di sregolamento evidente sovrapposto con campione				OK	KO		
14	LAVORAZIONE MECCANICA	Dimensioni del pezzo lavorato e lavorazioni meccaniche	Disegno esecutivo		+/- 1 mm (lunghezza) +/- 1° (angoli di taglio)	1 pezzo ogni 10	OPERATORE LAVORAZIONI MECCANICHE		Flessometro cl. 1 Goniometro Squadro Calibro			OK	KO		
15	LAVORAZIONE MECCANICA	Aspetto superficiale finale del pezzo lavorato			Nessun difetto nelle zone in vista	Ogni pezzo	OPERATORE LAVORAZIONI MECCANICHE	Verificare la mancanza di graffi o altri danni dovuti alla lavorazione, le condizioni adeguate del pezzo, la mancanza di trucioli				OK	KO		

NOTE:

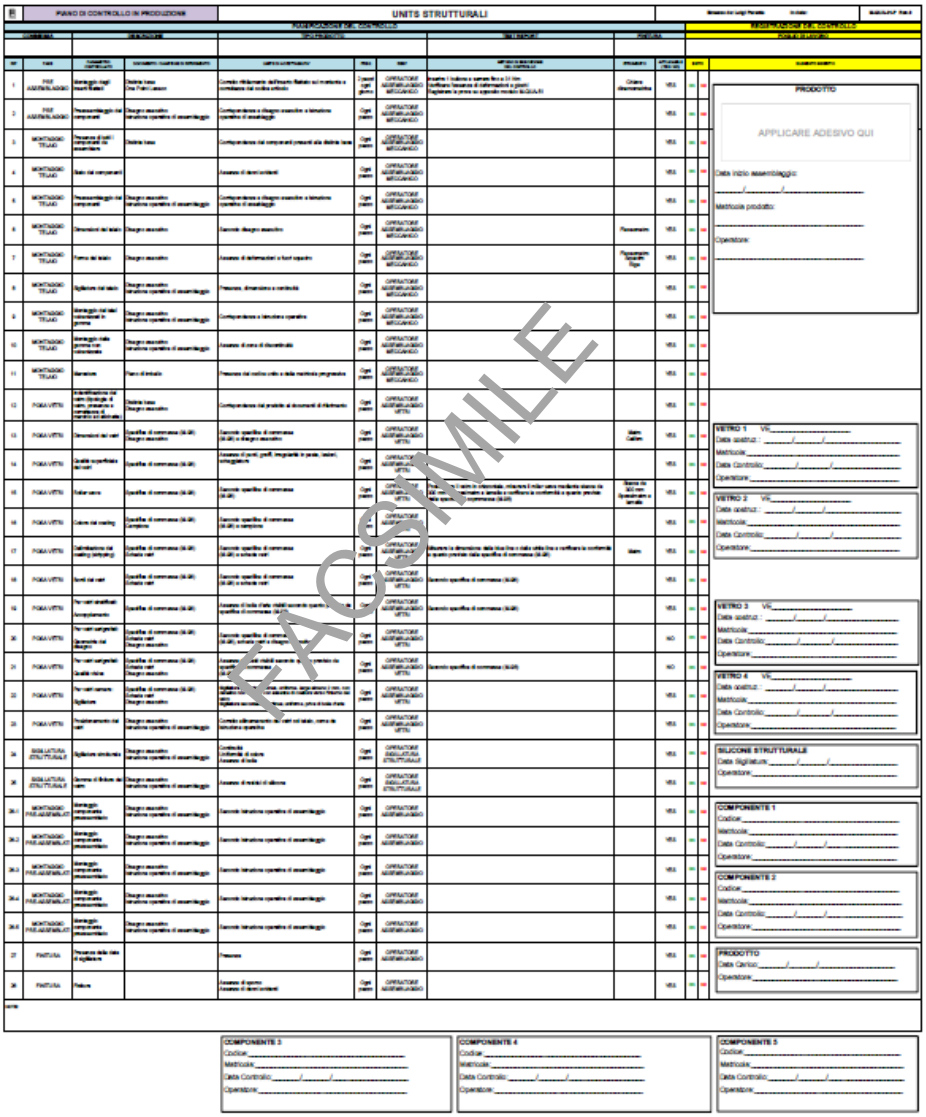
FACSIMILE

M-QUA-03-P_PDC Comp da barra estr in all

Pagina 1 di 1

- **QUALITY CONTROL CHECKLIST IN PRODUCTION (DURING ASSEMBLY)**
  (Refer to table 12.1: *M-QUA-10-P / M-QUA-31-P / M-QUA-32-P)*

Example: M-QUA-31-P_QC checklist for Structurally glazed Units



- **INSTALLATION QUALITY CONTROL CHECKLIST** (Refer to table 12.2)

Example: ITP-002-Cast in channels ITP Checks

ARCHITECTURAL BUILDING ENVELOPES

FOCCHI SINCE 1914

Focchi Ltd
Sherlock House
7 Kenrick Place
London W1U 6HE
Tel: (+44) 020 7224 2934
Fax: (+44) 020 7487 5732
E-mail: info@focchiltd.co.uk

FSS - ITP-002 - CAST-IN CHANNELS ITP CHECKS

GENERAL INFO

LEVEL	
GRID LINE	
ELEVATION	
Date/Time	

CHECK - Focchi installation team to check 100% before submit the form to Focchi managment

Renaker carried out the pull out test and it was successful	
Visual check that all cast-in channels have been cast in according to Focchi builderswork	
Record (if any) all missing channels	
Visual check the correct placement of the channel according to HILTI cast-in channel installation guidelines	
Record (if any) misplacement of channels	

COMMENTS

COMMENTS	
Notes: Record all remedial works required by FOCCHI (post anchor fixings, shimming, modified bracket) Record all remedial works required (scabbling, grouting)	

PHOTOS

Multi Photo	

On behalf of Focchi

PRINT NAME	
Signature	

Example: ITP-003-Slab Brackets Installation ITP Checks

ARCHITECTURAL BUILDING ENVELOPES

FOCCHI SINCE 1914

Focchi Ltd
Sherlock House
7 Kenrick Place
London W1U 6HE
Tel: (+44) 020 7224 2934
Fax: (+44) 020 7487 5732
E-mail: info@focchiltd.co.uk

FSS - ITP-003 - SLAB BRACKETS INSTALLATION ITP CHECKS

GENERAL INFO

LEVEL	
ELEVATION	
Date/Time	

HOLD POINT 1

Cast-in channels have been inspected according to QA sheet ITP-X-0002 and remedial works (if any) carried out and recorded	

CHECK - Focchi installation team to check 100% before submit the form to Focchi managment

Check of brackets and fixings reference code according to Focchi installation drawings	
Brackets correct installation according to Focchi installation drawings	
Check of correct positioning (in/out, left/right, level)	
Final position check	
Torque setting according to Focchi installation manual	
Spray marking	

COMMENTS

COMMENTS	
RELEVANT DOCUMENTS	

PHOTOS

Multi Photo	

On behalf of Skyklass

PRINT NAME	
Signature	

On behalf of Focchi

PRINT NAME	
Signature	

On behalf of Renaker - Spot check

Print Name	
Signature	

Example: ITP-006-UNITS Installation ITP Checks

ARCHITECTURAL BUILDING ENVELOPES

Focchi Ltd
Sherlock House Tel: (+44) 020 7224 2934
7 Kenrick Place Fax: (+44) 020 7487 5732
London W1U 6HE E-mail: info@focchiltd.co.uk

FSS - ITP-006 - UNITS INSTALLATION CHECKS

GENERAL INFO

LEVEL	
Position Code	The position code is a 3 digit code obtained from the elevation provided by Focchi with the position code reference
POSITION CODE	ID
Serial Number	The serial number is obtained scanning the Bar code on the unit label
SERIAL NUMBER	
LABEL PHOTO	
DATE INSTALLATION	
DATE ITP SHEET	

HOLD POINTS

Sadle gasket installed on the row of units below and inspected according to QA sheet ITP-005	
Document Viewer	Click to Download
Insulation panel infill installed between the two mullions on the row of units below	
Horizontal insulation panel between transom installed in correspondence of the internal partition wall	

CHECK - Focchi installation team to check 100% before submit the form to Focchi managment

Check unit frame integrity after offloading and decanting	
Fins installed as per specifications (if applicable)	
Fins checked for damages (if applicable)	
Unit with BMU socket installed in the correct position (when applicable)	
Check the CE-NUMBER on the relevant Focchi elevation or floor-plan drawing	
Correct installation and sealing of vertical "key" gasket as per Focchi installation manual	
Final levelling and alignment of the unit	
Check for ducts in correct position (if applicable)	

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ARCHITECTURAL BUILDING ENVELOPES

Focchi Ltd
Sherlock House Tel: (+44) 020 7224 2934
7 Kenrick Place Fax: (+44) 020 7487 5732
London W1U 6HE E-mail: info@focchiltd.co.uk

FSS - ITP-006 - UNITS INSTALLATION CHECKS

Check of the integrity of the unit after installation (frame, glass,gasket) any damage are to be recorded	

COMMENTS

COMMENTS	
RELEVANT DOCUMENTS	

PHOTOS

INSTALLATION SNAGS	

On behalf of Skyklass

PRINT NAME	
Signature	

On behalf of Focchi - CHECK 10% installation

PRINT NAME	
Signature	

On behalf of Renaker - Spot check

Print Name	
Signature	

Page 2 of 2

12.2. STRUCTURAL SEALING GLAZING (SSG) PROCESS - QUALITY CONTROL

FOCCHI performs tests of sealant adhesion and compatibility with the various substrates involved, during different project steps, always indicating the products (Cleaner and Primer) used:

- Preliminary phase: Adhesion and Compatibility tests for approval of the SSG System, sending preliminary samples to supplier's laboratory;
- Production start-up phase: Adhesion tests on material from production batch, sending production samples to supplier's laboratory, with subsequent test report provided by the sealant supplier;
- Production phase: Daily tests, Peel Adhesion supplementary tests and In-Itinere Peel tests at FOCCHI laboratory, with results recorded on specific daily sheets.

  In addition, to ensure correct structural sealing, Primer application is checked by means of a UV lamp (or visually, in case of not UV traceable Primer) and recorded on the unit's quality control checklist.

  In order to confirm sealant adhesion, joint fill and quality in sealant glazed production units some Deglaze Tests are performed during production.

12.2.1 SEALING PRODUCTS DEFINITION AND PRELIMINARY ADHESION TESTS

Sample characteristics and their traceability are recorded on a specific form.

Sample data sheet for adhesion test

FOCCHI SINCE 1914	**TEST ADESIONE SILICONE - SCHEDA CAMPIONI** CAMPIONATURE – PRODUZIONE – IN ITINERE *SILICONE ADHESION TEST – SAMPLE DATA SHEET* *PRELIMINARY TEST – PRODUCTION TEST – IN ITINERE TEST*	M-75-24 Rev.0

Commessa *Job*			
Fase del lavoro *Work phase*	☐ **CAMPIONATURE** *PRELIMINARY TEST*	☐ **PRODUZIONE** *PRODUCTION TEST*	☐ **IN ITINERE** *IN ITINERE TEST*
Codice componente Focchi *Focchi Component Code*			
Codice campione test Dow Corning / Sika *Dow Corning/ Sika Component Code*			
Fornitore componente *Component Supplier*			
Materiale *Material*			
Codice Focchi Trattamento *Surface treatment Focchi Code*			
Fornitore Trattamento *Surface treatment Supplier*			
Numero Collo *Batch Number*			
Numero Ddt e data *Delivery Document Number and Date*			
Data di prelievo *Sampling Date*			
Codice identificativo del campione *Sample Identification Code*	**PROFILI E LAMIERE IN ALLUMINIO** / *ALUMINIUM PROFILES/ SHEETS*		
	spessore trattamento (µm)* - EN ISO 2360 *Film Thickness (µm)* - EN ISO 2360*		**Gloss*** *Gloss**
	Media/ *Average value*	Min. / *Minimum value*	Max. / *Maximum value*	
	Media/ *Average value*	Min. / *Minimum value*	Max. / *Maximum value*	
	Media/ *Average value*	Min. / *Minimum value*	Max. / *Maximum value*	
	Media/ *Average value*	Min. / *Minimum value*	Max. / *Maximum value*	
	Media/ *Average value*	Min. / *Minimum value*	Max. / *Maximum value*	
	Media/ *Average value*	Min. / *Minimum value*	Max. / *Maximum value*	
Note				

* Le letture sono effettuate sulla superficie soggetta alla sigillatura strutturale
All measurements shall be taken on aluminium surface to be used for structural glazing applications

DATA / *DATE*	**COMPILATO DA** / *WRITTEN BY*

According to project-specific characteristics, all the substrates that will come into contact with sealants are identified and recorded:

REGISTRO PRODOTTI PER SIGILLATURA / REGISTER OF SEALING PRODUCTS
UFFICIO TECNICO / TECHNICAL OFFICE
DETERMINAZIONE DEI SUBSTRATI / IDENTIFICATION OF SUBSTRATES

M-73-06
Rev.05

Note:
Compilazione a cura del capoprogetto */ To be filled in by Project Design Manager*
Referente / Contact person: ***Matteo Molari***
Test report archiviati da / Test reports filed by: ***Matteo Molari***

Commessa / Project	
Descrizione / Description	

Rev.	Data / Date	Emesso / Issued by	Descrizione / Description
0			
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Project

Tipologia substrato Type of substrate	Codice / Ciclo campione Component Code / Sample Workshop drawing	Lega Alloy	Fornitore Supplier	Trattamento Surface Finishing	Fornitore del trattamento Finishing's supplier	Sigillante a contatto / Sealant																				
						DOWSIL											SIKA									
						790	756	796	791	895	993	121	3363	898	300	Tessuto / Tested	Isolmastic 205	WS-1055	SG-30	SG-109	Ki-25 MS Plus	Sikaflex Pro-2	Sikaflex-11 FC PLUS N	WS-305 EU	WS-290	WS-245	Tessuto / Tested
Profili Profiles																										
Guarnizioni Gaskets																										

Substrate | Code / Sample | Alloy | Supplier | Finishing | Finishing Supplier | Sealants

Then, according to the performed tests, approved sealing procedures and products are identified for each substrate:

REGISTRO PRODOTTI PER SIGILLATURA / REGISTER OF SEALING PRODUCTS
PRODUZIONE / PRODUCTION
SEQUENZE FINALI DA UTILIZZARE / APPROVED SEALING PROCEDURES AND PRODUCTS

M-73-08
Rev.06

Note:
Compilazione a seguito dei report di adesione ricevuti */ Filling in following the adhesion reports received*
Referente */ Contact person:* ***Marco Cioppini***

Commessa / Project	0
Descrizione / Description	0

Rev.	Data / Date	Emesso / Issued by	Descrizione / Description
0	0	0	0
1	0	0	0
2	0	0	0
3	0	0	0
4	0	0	0
5	0	0	0
6	0	0	0
7	0	0	0
8	0	0	0
9	0	0	0
10	0	0	0

	Supporto di sigillatura Type of substrate	Campione di riferimento Sample	Pulizia Cleaner	Pretrattamento Primer	Sigillante Sealant	Note	Officina / Cantiere Workshop / Construction site
Profili Profiles	**Materiale** / Material: **Trattamento** / Treatment:						
	Materiale / Material: **Trattamento** / Treatment:						
	Materiale / Material: **Trattamento** / Treatment:						
Guarnizioni Gaskets	**Materiale** / Material:						
	Materiale / Material:						
	Materiale / Material:						
Accessori & Viteria Accessories / Fixtures	**Materiale** / Material: **Trattamento** / Treatment:						
	Materiale / Material: **Trattamento** / Treatment:						
	Materiale / Material: **Trattamento** / Treatment:						
Lastre vetrate Glass panes / Sheets	**Materiale** / Material: **Trattamento** / Treatment:						
	Materiale / Material: **Trattamento** / Treatment:						

Substrate | Cleaner | Primer | Sealant | Workshop Use / Construction Site Use

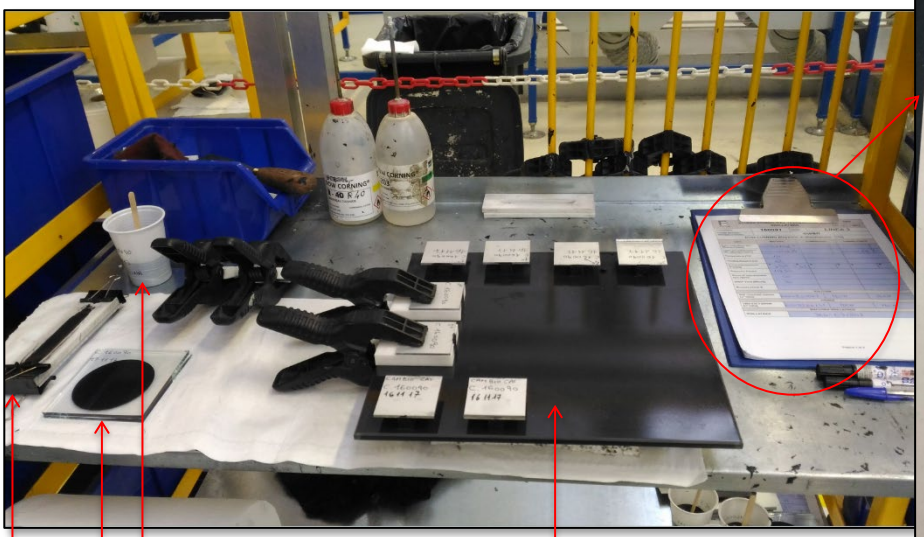
12.2.2 DAILY TEST

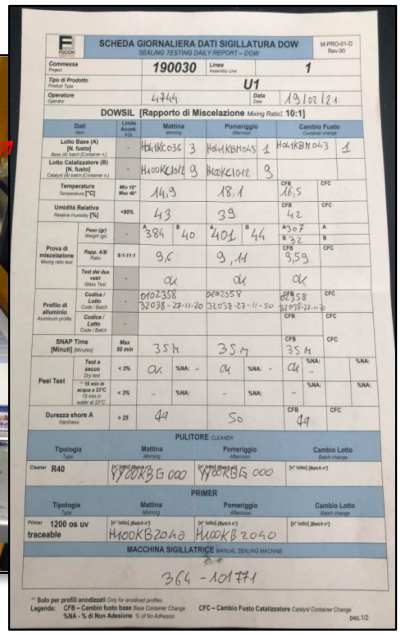
Daily tests are performed on the sealant used at defined frequencies to:

- ensure correct mixing of sealant base and curing agent (Glass Test, Snap Time Test and Mixing Test);
- verify sealant adhesion to substrates (Peel Adhesion Test);
- evaluation of the correct degree of sealant curing and the achievement of the minimum levels of joint strength (H-piece Test).

Daily tests results are recorded on a specific form.

SSG Daily Tests





SCHEDA GIORNALIERA DATI SIGILLATURA DOW
SEALING TESTING DAILY REPORT – DOW

Commessa (Project)	190030	Linea (Assembly Line)	1
Tipo di Prodotto (Product Type)	U1		
Operatore (Operator)	4744	Data (Date)	19/02/21

DOWSIL [Rapporto di Miscelazione Mixing Ratio: 10:1]

Dati (Item)	Limite Accett. (Acceptance limit)	Mattina (Morning)	Pomeriggio (Afternoon)	Cambio Fusto (Container change)
Lotto Base (A) [N. fusto] (Base (A) batch [Container n.])	-	H04KB0036 3	H04KB0043 1	H04KB0043 1
Lotto Catalizzatore (B) [N. fusto] (Catalyst (B) batch [Container n.])	-	H100KC1012 9	H100KC1012 9	
Temperatura (Temperature [°C])	Min 10° Max 40°	14,9	18,1	CFB 16,5 CFC
Umidità Relativa (Relative Humidity [%])	<80%	43	39	CFB 42 CFC
Prova di miscelazione (Mixing ratio test) – Peso (gr) (Weight (gr))	-	A 384 B 40	A 401 B 44	A 307 B 32 A B
Prova di miscelazione – Rapp. A/B (Ratio)	9:1-11:1	9,6	9,11	CFB 9,59 CFC
Prova di miscelazione – Test del due vetri (Glass Test)	-	ok	ok	ok
Profilo di alluminio (Aluminium profile) – Codice / Lotto (Code / Batch)	-	0102358 32038-23-11-20	0102359 32038-23-11-20	0102358 32038-23-11-20 CFB CFC
Profilo di alluminio – Codice / Lotto (Code / Batch)	-			CFB CFC
SNAP Time [Minuti] (Minutes)	Max 50 min	35 M	35 M	CFB 35 M CFC
Peel Test – Test a secco (Dry test)	< 2%	ok %NA: -	ok %NA: -	ok %NA: - %NA:
Peel Test – * 15 min in acqua a 23°C (15 min in water at 23°C)	< 2%	- %NA:	- %NA:	- %NA: %NA:
Durezza shore A (Hardness)	> 25	49	50	CFB 49 CFC

PULITORE (CLEANER)

Tipologia (Type)	Mattina (Morning)	Pomeriggio (Afternoon)	Cambio Lotto (Batch change)
Cleaner R40	[n° lotto] (Batch n°) Y00KBG000	[n° lotto] (Batch n°) Y00KBG000	[n° lotto] (Batch n°)

PRIMER

Tipologia (Type)	Mattina (Morning)	Pomeriggio (Afternoon)	Cambio Lotto (Batch change)
Primer 1200 OS UV traceable	[n° lotto] (Batch n°) H100KB2040	[n° lotto] (Batch n°) H100KB2040	[n° lotto] (Batch n°)

MACCHINA SIGILLATRICE (MANUAL SEALING MACHINE)

364 - 101771

* Solo per profili anodizzati (Only for anodized profiles)
Legenda: CFB – Cambio fusto base (Base Container Change) CFC – Cambio Fusto Catalizzatore (Catalyst Container Change)
%NA - % di Non Adesione (% of Non Adhesion)

M-PRO-01-D Rev.00

pag.1/2

Peel Adhesion Test

Glass Test

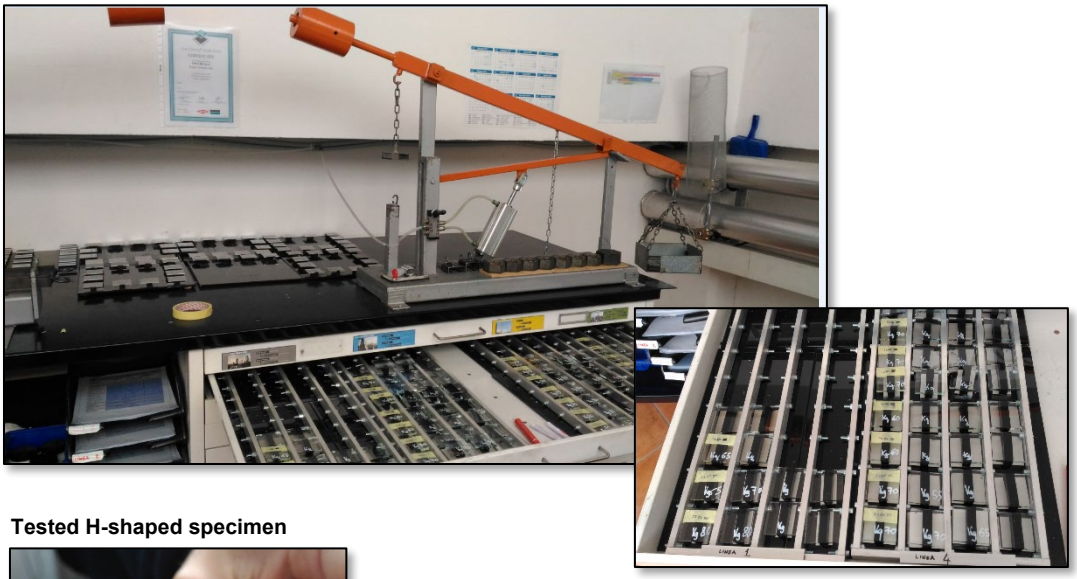
Snap Time test

H-piece tests

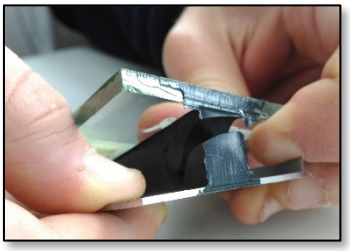
Daily test results recording sheet

H-shaped specimens are prepared on production lines and are then taken to FOCCHI's laboratory for a load test. The load causing failure is recorded on the specimen and in the daily test results log.

Focchi Laboratory for SSG Tests



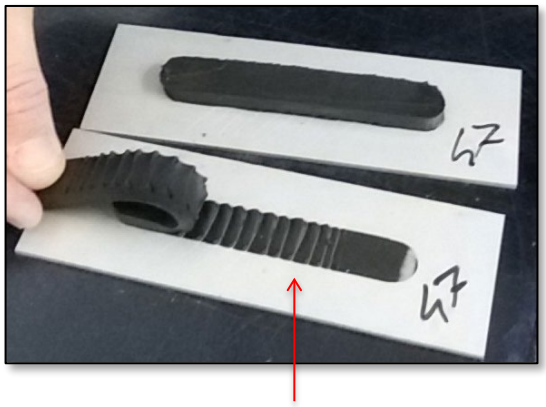
Tested H-shaped specimen



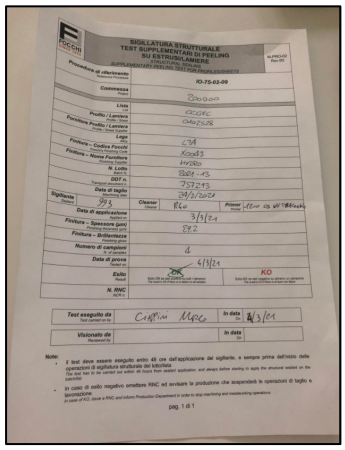
12.2.3 SUPPLEMENTARY TEST

Supplementary Peel Adhesion tests are performed on profiled sections requiring structural sealant taken from each production batch and for each code of profiles.

Specimen characteristics, traceability and test results are recorded on a specific document.



100% Cohesive Failure.
Excellent sealant adhesion



SIGILLATURA STRUTTURALE
TEST SUPPLEMENTARI DI PEELING
SU ESTRUSI/LAMIERE

Procedura di riferimento	IO-75-02-09
Commessa	200000
Lista	
Profilo / Lamiera	00416
Formina Profilo / Lamiera	040528
Lega	6060
Finitura – Codice Finitura	X0083
Finitura – Nome Finitura	HMRO
N. Lotto	8201-13
DDT n.	757243
Data di taglio	28/2/2021
Sigillante	993
Classe	B4
Primer	
Data di applicazione	3/3/21
Finitura – Spessore (µm)	8.2
Finitura – Brillantezza	
Numero di campioni	4
Data di prova	4/3/21
Esito	OK / KO
N. RNC	
Test eseguito da	Carlos Mora
in data	4/3/21
Visionato da	
in data	

Note:
- il test deve essere eseguito entro 48 ore dall'applicazione del sigillante, e sempre prima dell'inizio delle operazioni di sigillatura strutturale del lotto/lista
  The test has to be carried out within 48 hours from sealant application, and always before starting to apply the structural sealant on the specimen
- in caso di esito negativo emettere RNC ed avvisare la produzione che sospenderà le operazioni di taglio e lavorazione
  In case of KO, issue a RNC and inform Production Department in order to stop machining and manufacturing operations

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Supplementary Peeling Test log

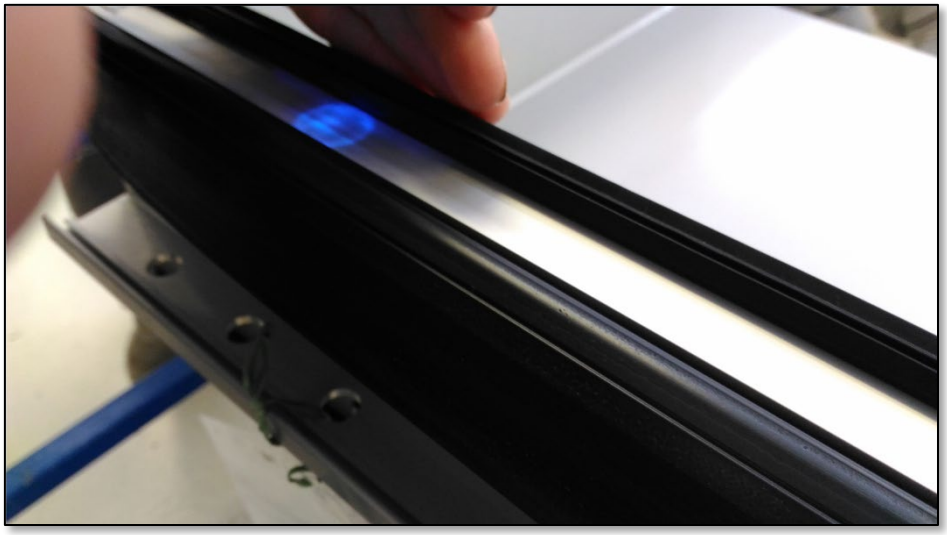
12.2.4 IN ITINERE PEEL TEST

In-Itinere Peel tests are performed at the beginning of production and approximately at the middle of production stage. Those tests, consisting in accelerated aging peel adhesion testing on chunks of production substrates, are performed both by the Supplier and Focchi, taking into account sealants supplier's accelerated testing procedure and according to ASTM C794-93 and ETAG 002 Guidelines.

In Itinere Peel test

12.2.5 PRIMER APPLICATION CHECK

A UV lamp is used to check correct application of UV traceable Primer on the surface that will come into contact with the sealant.



12.2.6 DEGLAZE TEST

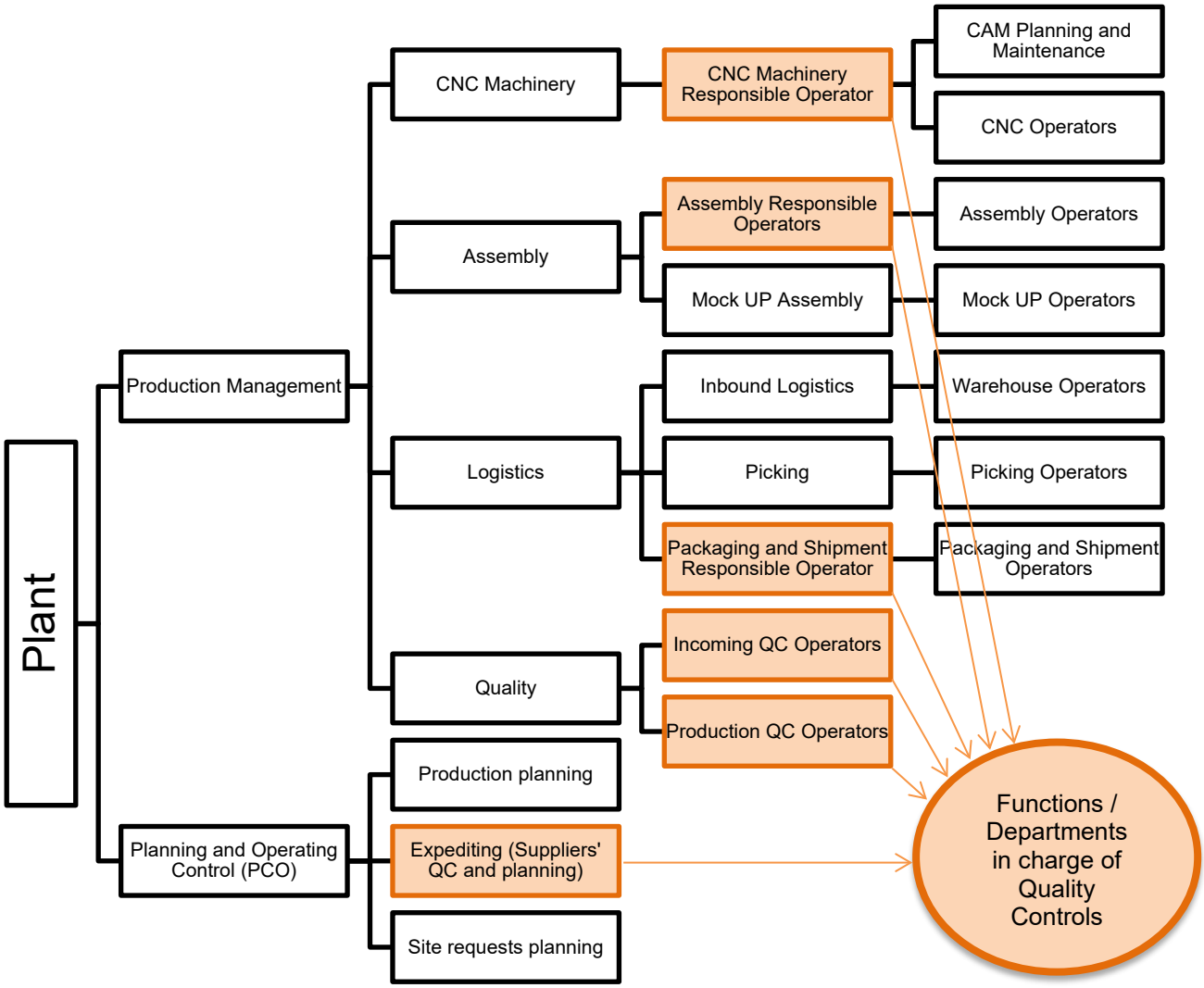
The Deglaze Test includes complete detachment of structurally glazed panel from a frame. Once the glass/panel is removed, the silicone sealant is inspected for cure, mix, uniformity of fill, lack of bubbles or air entrapment and to verify sealant adhesion.

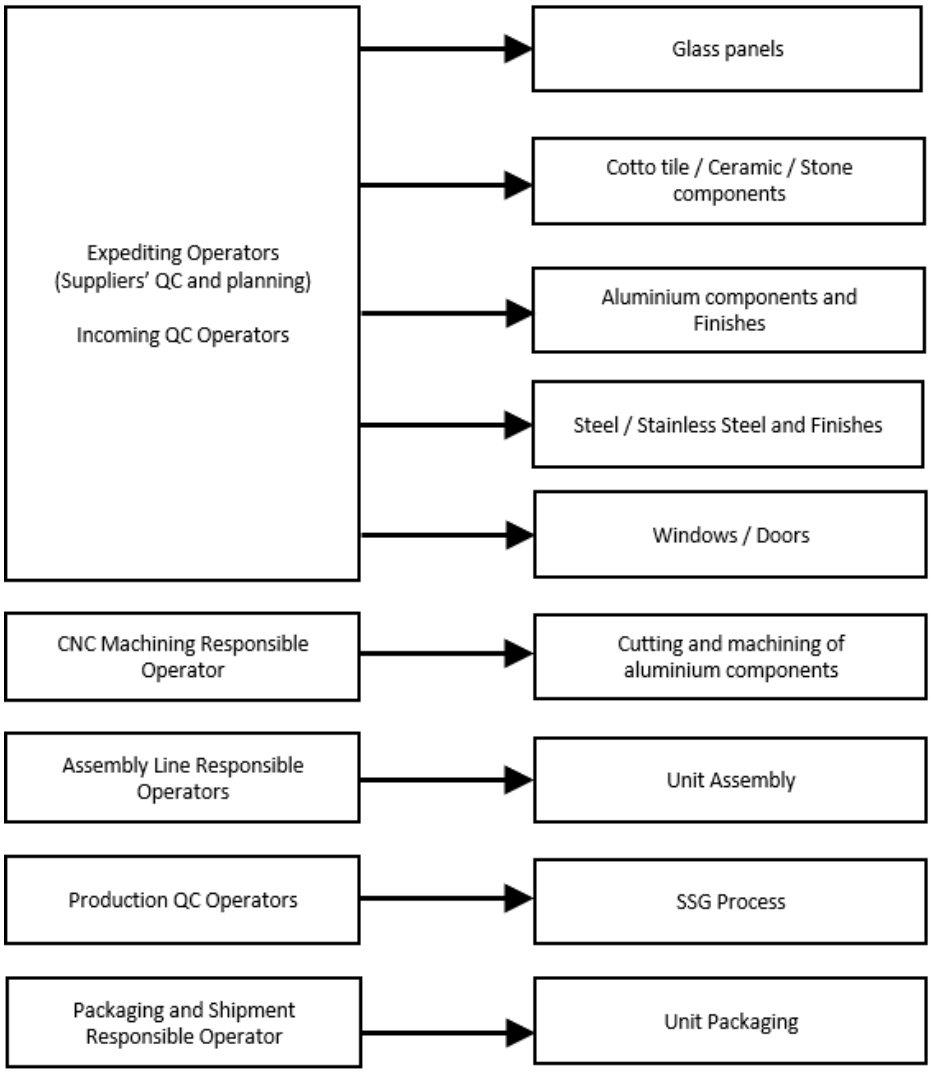
The test procedure is carried out in accordance with sealant supplier's quality control test procedures.

The frequency of Deglaze Testing is as follows:

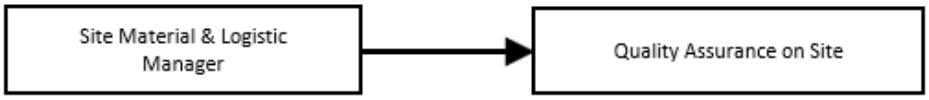
- First Deglaze: 1 unit out of first 10 units manufactured (1/10);
- Second Deglaze: 1 unit out of next 40 units manufactured (2/50);
- Third Deglaze: 1 unit out of next 50 units manufactured (3/100);
- Through remainder of project: 1 unit of every 100 units manufactured.

12.3. PERSONNEL RESPONSIBLE FOR QUALITY CONTROLS DURING PRODUCTION





12.4. PERSONNEL RESPONSIBLE FOR QUALITY CONTROLS ON SITE



13. MEASUREMENT INSTRUMENTS

Relevant documents not attached but referred to:

- P-STR-01_Management of measuring instruments
- D-STR-01_List of measuring instruments and calibration schedule
- D-STR-02_Measurement instruments - Assessment of suitability

Measuring instruments management is divided into the following tasks:

- Identification;
- Suitability evaluation of measuring instruments;
- Programming and implementation of calibration of measuring instruments;
- Management of measuring instruments that are faulty or without valid calibration certificate;
- Handling and storage of measuring instruments.

The measuring instruments are listed in the document *D-STR-01_List of measuring instruments and calibration schedule.* The Quality Manager keeps the list up-to-date and establishes which instruments need calibration.

Measurement instrumentation consists of:

- Callipers;
- Goniometers;
- Thermo-Hygrometers;
- Torque wrenches;
- Spectrophotometer;
- Shore A durometer;
- Glossmeter.

Measuring instruments are classified as "primary" and "secondary" instruments. They are uniquely identified by means of appropriate code (or serial number) shown on the instrument (or on its case) with self-adhesive label or stamp. It also identifies calibration status by means of a special mark, applied to the instrument (or on the custody), showing the expiry date (month / year).

Primary instruments calibration is performed in Accredited Calibration Laboratories (LAT).

Secondary instruments are calibrated directly by the company, taking the primary ones as a reference, or in external laboratories for which accreditation is not required.

A measuring instrument is considered suitable for a measurement if its resolution and uncertainty values fall within acceptable limit values defined according to the tolerance required in the document *D-STR-02_Measurement instruments - Assessment of suitability.*

In case of measuring instruments that are faulty or without valid calibration certificate, the Quality Manager ensures the identification of the instrument by means of a special label that indicates its non-usability and

guarantees instrument segregation. This person also evaluates the validity of previous measurements and defines any corrective actions to be implemented on the instrumentation.

Handling and storage of measuring instruments is entrusted to specially trained personnel and must be such as to avoid damage and deterioration.

All responsibilities and operating procedures for measuring instruments management are specified in the procedure *P-STR-01_Management of measuring instruments*.

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14. AUDITS

Relevant documents not attached but referred to:

- P-AUD-01_Internal Audits Management
- P-QUA-01_Management of Quality Controls along the production cycle
- IO-75-05-01_Quality Controls at the suppliers' premises

14.1. INTERNAL AUDITS

FOCCHI plans and implements internal audits to verify effectiveness and compliance of business process management in relation to the requirements of the Integrated Quality-Environment Management System procedures.

Audits are conducted for each company process by the Quality Manager or by other internal auditor, on the basis of an audit plan defined in the form *M-AUD-01_Internal Audits Schedule* and formulated according to process importance, significant changes introduced and results of previous checks.

Audit results, recorded in the *M-AUD-02_Audit Plan and Report* form, are discussed with relevant company managers, who ensure a prompt planning and implementation of the necessary actions to remove detected non-conformities and their causes.

Responsibilities and operational procedures for internal audits management are defined in the procedure: *P-AUD-01_Internal Audits Management.*

14.2. AUDIT AT SUPPLIERS' PREMISES

FOCCHI plans and implements external audits on material procurement processes (purchase and outsource orders). Responsibilities and operational procedures for quality control planning, implementation and logging at suppliers are defined in the procedure *P-QUA-01_Management of Quality Controls along the production cycle.*

The main suppliers identified for a specific project are subject to scheduled audit.

Audits usually consist of an initial visit with follow-up during production, as established in relation to the project requirements.

The Plant Manager defines the plan of inspection visits to be carried out at the suppliers' premises and ensures their implementation, taking into account the delivery dates of the orders and any critical issues of the products. Operational details for these activities are set out in the document *IO-75-05-01_Quality Controls at the suppliers' premises.*

Visits are carried out by the Quality Control Inspectors. Inspection results are recorded on the forms for quality control at the suppliers' premises and an audit report is drafted, which will be archived in the company's IT system.

Non-conformities that may significantly impact the production plan are reported by the Plant Manager to the Project Manager.

The Quality Manager constantly monitors the correct execution and registration of controls.

M-AUD-01_Internal Audits Schedule

FOCCHI SPA	PROGRAMMA DEGLI AUDIT INTERNI *INTERNAL AUDIT SCHEDULE*	ANNO: *YEAR:*	EMESSO DA: *ISSUED BY:*	IN DATA: *DATE OF ISSUE:*

TIPO DI PROCESSO *TYPE OF PROCESS*	PROCESSO DA VERIFICARE *PROCESS TO VERIFY*	RESPONSABILE PROCESSO *PROCESS MANAGER*	RESPONSABILE AUDIT *AUDIT MANAGER*	GEN *JAN*	FEB *FEB*	MAR *MAR*	APR *APR*	MAG *MAY*	GIU *JUNE*	LUG *JULY*	AGO *AUG*	SET *SEPT*	OTT *OCT*	NOV *NOV*	DIC *DEC*

M-AUD-02_Audit Plan and Report

FOCCHI SPA	PIANO E RAPPORTO DI AUDIT *AUDIT PLAN & RECORDS*	ANNO: *YEAR:*

PIANO DELL'AUDIT *AUDIT PLAN*															REGISTRAZIONE DELLE EVIDENZE *AUDIT EVIDENCE*							
AUDIT N°	DATA AUDIT *AUDIT DATE*	FUNZIONE ORGANIZZATIVA *ORGANIZATIONAL FUNCTION*	TIPO DI PROCESSO *TYPE OF PROCESS*	PROCESSO	RESP. PROCESSO *PROCESS MANAGER*	ESECUTORE AUDIT *AUDITOR*	RIF. ISO 9001:1	RIF. ISO 9001:1	RIF. ISO 9001:1	RICHIESTO DI RIFERIMENTO *REFERENCE REQUIREMENT*	NCR *NCR*	DATA NCR *DATE NCR*	CHECKLIST	PESSIMA INTERVISTATA *INTERVIEWED PERSON*	RICHIESTI / RICHIESTI VISIONATI *REFERENCE TOPICS AND REQUIREMENTS*	NCR *NCR*	DATA AC *DATE AC*	ESITO *RESULT*	ALLEGATI *EVIDENCE*	AC / OCE

15. NON-CONFORMITIES AND CORRECTIVE ACTIONS

Relevant documents not attached but referred to:

- P-NCA-01_Management of Non-Conformities and Corrective Actions

15.1. NON-CONFORMITIES (NCs)

Non-conformities (NCs) happen when there is a failure to meet a specified requirement.

Non-conformities are managed through the following steps:

- *Identification*: non-conformity is ascertained, recorded, coded and formally issued;
- *Segregation* (only for product NCs): material is labelled as shown in the figure below and, in any case, separated from compliant materials in order to avoid involuntary use;

Red label to identify non-compliant material

- *Examination*: the person in charge of NC issuing, in collaboration with his superiors and / or the Quality Manager, analyses the NC, looks for possible causes and decides its treatment;
- *Cause*: phenomenon and responsibility at the base of the NC, if it can be ascertained;
- *Measure*: action implemented to resolve the NC;
- *Resolution* control: verification of the effective execution of the action.

15.2. CORRECTIVE ACTIONS (CAs)

Action(s) taken to eliminate the causes of a NC or more. It is issued only if, in the opinion of the Quality Manager, non-conformities have been caused by systematic causes. The need to issue a CA may be immediate, or may arise during periodic reviews, following the statistical verification of the recurrence of a certain type of NC.

15.3. NON-CONFORMITIES MANAGEMENT

Authorized company functions may issue NCs. They collect the reports, analyse possible causes and extent, propose measures to resolve them and, if possible, also evaluate related costs.

This management process is entirely registered and coded into the company IT system, up to NC closing.

A *complaint* is opened if the NC is made by a customer or other interested party.
In this case, the person in charge of the issuing will reply within two working days, indicating corrective actions that will be taken and expected times for the treatment.
In the event of a claim on products for which a Factory Production Control (FPC) certification exists, the Quality Manager will promptly notify it to the notified body.

If the NC regards health and safety issues, concerning both factory and building site, the company Health & Safety Manager shall be informed.

The Quality Manager follows the management of the NC in the IT system, verifying that the NC is regularly processed, checking the effectiveness of treatment actions within the time scheduled and evaluating the opportunity to issue a corrective action (CA), in case of systemic causes.

In addition, the Quality Manager, through the company's IT system, monitors the deadlines for actions in progress and closes the NC regularly addressed through a CA every three months.

NON-CONFORMITY Report Form

FOCCHI S.p.a.
Via Cornacchiara, Loc.Poggio Berni, n.805
47824 POGGIO TORRIANA (RN) - Italy
Tel +39 0541 627355 – Fax +39 0541 686546
C.F. / P.I. IT 01903410403 - REA Rimini n. 225184

CURTAIN WALLING ARCHITECTURAL PRODUCTS

IDENTIFICAZIONE DELLA NC *Identification of NC*

NC N° *NC number*	**Codice della NC** *NC code*	Data Chiusura *Closure date of NC*		Responsabile Gestione *Person responsible for NC Management*	
Tipologia di NC *Type of NC*					
Reparto di segnalazione *Department which has notified the NC*			Persona che ha segnalato la NC *Person who has notified the NC*		
Descrizione della NC *Description of NC*					
Area tematica della NC *Thematic Area of NC*			N° Commessa *Project N°*		

Tipo Articolo *Type of Product*

Product

Codice *Product Code*	Ordine *Order N°*	Lista *List*	Quantità *Quantity*	Costo *Product Cost*

Tipo Difetto *Type of Defect*		Processo *Process*	
Data Apertura NC *Date of NC Issue*		Responsabile apertura NC *NC Issued by*	

ESAME E TRATTAMENTO DELLA NC / *Review and Management of NC*

Fornitore / *Supplier*			
Area di Imputazione della NC *Department to which charging the NC*			
Causa della NC *Cause of NC*			
Azione di trattamento della NC / *NC Treatment*			
Istruzione Operativa per il trattamento della NC *Operating Instructions for NC Treatment*			
Responsabile azione di trattamento *Person responsible for NC Treatment*		Data scadenza azione di trattamento *Deadline of NC Treatment*	
Data Esame *Date of NC Review*		Responsabile esame della NC *Person responsible for NC Review*	

VERIFICA DI RISOLUZIONE DELLA NC / *Evidence of NC Resolution*

Data verifica azione di trattamento *Date of NC Treatment Verification*		Esito verifica azione di trattamento *Outcome of NC Treatment Verification*	

Costo azione di trattamento *Cost of NC Treatment*

Reparto / *Department*	€	Quantità / *Quantity*	Totale / *Total*
Posa / *Installation*	0	0	0
PD / *Production*	0	0	0
Sped.Extra / *Extra Delivery*	0	0	0
Gest.RNC / *NCR Management*	0	0	0
Fornitura / *Supply*	0	0	0
Extra	0	0	0
TOTALE / *TOTAL*			**0**

Dettaglio costo azione di trattamento *Cost detail of NC Treatment*	
Responsabile verifica risoluzione *Person responsible for Verification of NC Resolution*	

Rapporto di Non Conformità – *Non Conformity Report* Page 1 of 1

15.4. CORRECTIVE ACTIONS MANAGEMENT

The need to request a CA is assessed by the Quality Manager in collaboration with the manager of the affected company department. The circumstances in which this may occur are summarized in the table below:

TASKS THAT MAY REQUIRE A CA	COMPANY MANAGER INVOLVED
Analysis of findings emerged as a result of internal audits	Manager of the department affected by the audit
Analysis of individual NCs, identified internally or by customers (complaints) (analysis carried out when the single NC is examined)	Relevant Company Manager
Periodic analysis of the set of NCs (internal and claims)	Quality Manager with the involvement of the various company managers
Periodic analysis of the progress of the monitoring indexes of the Integrated Quality-Environment System	General Management (made up of the Chairman of the Board of Directors and the Chief Executive Officer)
Regular review of the Integrated Quality-Environment System	General Management

Issuing and management of CAs take place within the company IT system by the Quality Manager, who performs the following actions:

- Plans the actions agreed with the company manager;
- Plans times and methods of implementation;
- Verifies the effectiveness of the actions taken;
- Arranges to close the CA once completed.

Responsibilities and operational procedures for NCs and CAs management are described in the procedure *P-NCA-01_Management of Non-Conformities and Corrective Actions.*

CORRECTIVE ACTION Report Form

FOCCHI S.p.a. Via Cornacchiara, Loc.Poggio Berni, n.605 47824 POGGIO TORRIANA (RN) - Italy Tel +39 0541 627355 – Fax +39 0541 686546 C.F. / P.I. IT 01903410403 - REA Rimini n. 225184	**CURTAIN WALLING ARCHITECTURAL PRODUCTS**

EMISSIONE DELLA AC/AP *Issuing of corrective/preventive action*

N° AC/AP *CA/PA number*		Tipo di azione *Type of action*	**CA / PA**
Data apertura AC/AP *Date of CA/PA Issue*		Resp.Apertura AC/P *Person responsible for CA/PA Issuing*	**Luigi Parente**
Descrizione del problema *Problem description*			
Riferimento NC *Reference NC*		**NC**	

ANALISI DELLE CAUSE E PIANIFICAZIONE DELLA LORO RIMOZIONE
Analysis of the causes and planning of CAs

Cod.causa del problema *Cause of the problem (code)*			
Descrizione della causa *Cause of the problem (Description)*			
Azioni per la rim.della causa del problema *Actions taken to remove the cause of the problem*			
Resp. azioni di rimozione causa *Person Responsible for CA/PA Implementation*		Data scad. azioni di rim.causa *Deadline of CA/PA*	
Resp. Pianificazione AC/AP *Person responsible for CA/PA Planning*		Data pianificazione AC/AP *Date of CA/AP Planning*	

VERIFICA DELLA AC/AP
Verification of CA/PA

Data esec. azioni di rim causa *Date of CA/PA Implementation*		Data pianif. ver. eff. *Planned Date of CA/PA efficacy verification*	
Data ver. eff. *Date of CA/PA efficacy verification*		Esito ver.eff. *Outcome of CA/PA efficacy verification*	
Modalità di esecuzione ver.eff. *Execution methods of CA/PA efficacy verification*			
Resp.verifica AC/P *Person Responsible for CA/PA Verification*			

Azione correttiva/preventiva – Corrective Action/Preventive Action

Page 1 of 1

16. MOCK UPS AND SAMPLES

Relevant documents not attached but referred to:

- IO-75-02-10_Management of Samples and Mock ups before production

16.1. SAMPLES

Samples for all materials and finishes are prepared and submitted to the Client for approval.

Copies of approved samples are shared with:

- Suppliers of extruded profiles, sheets, glass panels;
- Anodizers and Painters;
- Internal Production Departments (cutting and machining, assembly, units production line).

At the beginning of the production process, machining of aluminium profiles cannot start if reference samples are not available to machine operators. This is to avoid the risk of installing on the units some components which do not conform to approved samples.

Approved reference samples are stored in a dedicated warehouse (Focchi Sample Warehouse) located inside Focchi facility and accessible only to authorized persons.

Specific samples are also set up to test particular machining and assembly processes or special components. The aim is to verify time and equipment needed to optimize production process in line with the requirements of visual acceptability.

16.2. MOCK UP

Visual Mock-ups are constructed for Client and Architect approval to confirm the general visual intent including finishes, size and co-ordination and to make final finishes selection (e.g. coating, frit, type of glass; coating of aluminium; type of stone). Working drawings describing the entire visual mock-up are issued for review.

Prototypes for testing are fabricated to demonstrate compliance with the requirements of project specification and applicable product standards.

Working drawings describing the entire prototypes and sequence of testing are submitted

Mock-up design, production and installation are managed in the project program.

17. RISK AND OPPORTUNITIES

Relevant documents not attached but referred to:

- P-RIS-01_Risk and Opportunity Management
- D-RIS-01_Analysis of interested parties
- D-RIS-02_Risks/Opportunities Management Specification

17.1. RISK AND OPPORTUNITY MANAGEMENT

FOCCHI S.p.A. Integrated Quality-Environment System, in compliance with ISO 9001:2015 and ISO 14001:2015, includes the management of relevant (internal and external) risks and opportunities within the company environment, in relation to the achievement of company's strategic and Integrated Quality-Environment System objectives.

On an annual basis, and whenever necessary, General Management, in collaboration with the Quality Manager and with the various company managers, performs the following activities:

- Identification of stakeholders and their needs;
- Identification of risk / opportunity factors;
- Evaluation of risk / opportunity factors;
- Definition and implementation of an operational plan that defines actions to eliminate / reduce risks and exploit opportunities;
- Monitoring of operational plan progress;
- Evaluation of implemented actions effectiveness.

Responsibilities and operational procedures for the above activities are specified in the procedure: *P-RIS-01_Risk and Opportunity Management.*

The following table shows the risk factors assessed in relation to the processes that are most directly related to project management (design, manufacture and installation of the product):

STRATEGIC AREA	RISK FACTOR	RISK DESCRIPTION
Supplier	Supplier reliability	Risk that suppliers are not able to meet the requirements in terms of quality, delivery time, costs, ...
		Risk that suppliers do not have adequate technical and professional qualifications
		Risk that suppliers do not follow the instructions and specifications given by the company
	Financial Stability of suppliers	Risk that strategic suppliers go out of business
	Workload of suppliers	Risk that suppliers are overloaded with work and are unable to meet agreed deadlines
	Quality and availability of labour	Risk that labour is unavailable and / or of poor quality
	Unclear and incomplete purchase specifications	Risk of not being able to issue clear and complete purchase specifications

STRATEGIC AREA	RISK FACTOR	RISK DESCRIPTION
Product/ Service	Product Quality	Risk that product quality does not match customer requirements
	Delivery time	Risk that the delivery time of the product is not appropriate to customer needs
	Product cost	Risk that product cost does not match customer requirements
	Mandatory Product standards	Risk of not being able to meet statutory and regulatory product requirements
	Environmental impact of the product	Risks that activities related to production and transport / installation of the product generate high environmental burdens and impacts
	Site layout	Risks that site layout could cause extensive logistics management difficulties
Job Planning	Staff competence	Risk that skills are not adequate to the roles
	Staff interchangeability	Risk of non-interchangeability of personnel for critical tasks with consequent stopping / slowing down of the activity in case of absence of specific staff
	Staff motivation	Risk of demotivated staff
	Operational tools	Risk of inadequate operating tools (plants, machines, equipment, measuring instruments, IT tools, ...)
	Data	Risk of data loss
	Operational documentation	Risk of inadequate operational documentation (procedures, instructions, supporting documents, forms)
	Work environment	Risk of inadequate working environment (lack of safety, healthiness, space, cleanliness, ergonomics)
Design	Staff competence	Risk that the skills are not adequate to the roles
	Staff interchangeability	Risk of non-interchangeability of personnel for critical tasks with consequent stopping/slowing down of the activity in case of absence of specific staff
	Staff motivation	Risk of demotivated staff
	Operational tools	Risk of inadequate operating tools (plants, machines, equipment, measuring instruments, IT tools, ...)
	Data	Risk of data loss
	Operational documentation	Risk of inadequate operational documentation (procedures, instructions, supporting documents, forms)
	Work environment	Risk of inadequate working environment (lack of safety, healthiness, space, cleanliness, ergonomics)
Purchasing	Staff competence	Risk that the skills are not adequate to the roles
	Staff interchangeability	Risk of non-interchangeability of personnel for critical tasks with consequent stopping/slowing down of the activity in case of absence of specific staff
	Staff motivation	Risk of demotivated staff
	Operational tools	Risk of inadequate operating tools (plants, machines, equipment, measuring instruments, IT tools, ...)
	Data	Risk of data loss
	Operational documentation	Risk of inadequate operational documentation (procedures, instructions, supporting documents, forms)
	Work environment	Risk of inadequate working environment (lack of safety, healthiness, space, cleanliness, ergonomics)
Production	Staff competence	Risk that the skills are not adequate to the roles
	Staff interchangeability	Risk of non-interchangeability of personnel for critical tasks with consequent stopping/slowing down of the activity in case of absence of specific staff
	Staff motivation	Risk of demotivated staff

STRATEGIC AREA	RISK FACTOR	RISK DESCRIPTION
	Operational tools	Risk of inadequate operating tools (plants, machines, equipment, measuring instruments, IT tools, ...)
	Data	Risk of data loss
	Operational documentation	Risk of inadequate operational documentation (procedures, instructions, supporting documents, forms)
	Work environment	Risk of inadequate working environment (lack of safety, healthiness, space, cleanliness, ergonomics)
Installation	Staff competence	Risk that the skills are not adequate to the roles
	Staff interchangeability	Risk of non-interchangeability of personnel for critical tasks with consequent stopping/slowing down of the activity in case of absence of specific staff
	Staff motivation	Risk of demotivated staff
	Operational tools	Risk of inadequate operating tools (plants, machines, equipment, measuring instruments, IT tools, ...)
	Data	Risk of data loss
	Operational documentation	Risk of inadequate operational documentation (procedures, instructions, supporting documents, forms)
	Work environment	Risk of inadequate working environment (lack of safety, healthiness, space, cleanliness, ergonomics)
Logistic	Staff competence	Risk that the skills are not adequate to the roles
	Staff interchangeability	Risk of non-interchangeability of personnel for critical tasks with consequent stopping/slowing down of the activity in case of absence of specific staff
	Staff motivation	Risk of demotivated staff
	Operational tools	Risk of inadequate operating tools (plants, machines, equipment, measuring instruments, IT tools, ...)
	Data	Risk of data loss
	Operational documentation	Risk of inadequate operational documentation (procedures, instructions, supporting documents, forms)
	Work environment	Risk of inadequate working environment (lack of safety, healthiness, space, cleanliness, ergonomics)
Post-delivery assistance	Staff competence	Risk that the skills are not adequate to the roles
	Staff interchangeability	Risk of non-interchangeability of personnel for critical tasks with consequent stopping/slowing down of the activity in case of absence of specific staff
	Staff motivation	Risk of demotivated staff
	Operational tools	Risk of inadequate operating tools (plants, machines, equipment, measuring instruments, IT tools, ...)
	Data	Risk of data loss
	Operational documentation	Risk of inadequate operational documentation (procedures, instructions, supporting documents, forms)
	Work environment	Risk of inadequate working environment (lack of safety, healthiness, space, cleanliness, ergonomics)

18. TEST

FOCCHI provides necessary data to demonstrate that the curtain wall systems manufactured and installed, as well as materials used, comply with performance requirements of the Project Technical Specifications.

Such information, if available, can be obtained from previous independent tests.

Alternatively, tests are performed at an independent accredited laboratory in accordance with test criteria indicated in the specification.

18.1. LAB TEST

Performance dates of tests are indicated in the contract program. FOCCHI provides prototypes to be tested using proposed systems with real dimensions and geometries. Once test has been completed, FOCCHI issues the "Performance Mock-up" document, containing mock-up designs, the sequence of the test and performance requirements to be achieved.

All information regarding test procedures, equipment used, instrumentation, test sequence, performance criteria, provisional daily program are detailed in the document "Method Statement for performance testing" issued by the accredited laboratory. The document is processed in compliance with CWCT standards, European and American standards for curtain walling and reference standards for the achievement of environmental sustainability requirements.

Test results are then collected and presented in a final technical report.

18.2. ON-SITE TEST

All tests to be carried out on site are conducted and certified by an independent accredited body with the operational assistance of FOCCHI personnel and are carried out in compliance with contractual specifications.

For further details, please refer to *FOCCHI Ltd Site Inspection & Test Plan* document.

APPENDICES

A – Focchi SpA ISO 9001 Certificate

MANAGEMENT SYSTEM CERTIFICATE

Certificate no.:
CERT-02762-98-ITA-SINCERT

Initial certification date:
15 March 1998

Valid:
07 November 2021 – 06 November 2024

This is to certify that the management system of

FOCCHI S.p.A.

Via Cornacchiara, 805 - 47824 Poggio Torriana (RN) - Italy

and the sites as mentioned in the appendix accompanying this certificate

has been found to conform to the Quality Management System standard:

ISO 9001:2015

This certificate is valid for the following scope:

Design, manufacture, sale and installation of curtain walls, cladding, alluminium or steel windows and doors and relative metalwork
(IAF 17, 28)

Evaluated according to the requirements of Technical Regulations RT-05
This certificate is meant to refer to the general management aspects of the organization as a whole and may be used by construction companies for qualification purposes according to Art. 84 of the Legislative Decree n. 50/2016 and s.c.i. and ANAC's applicable Guidelines

Place and date:
Vimercate (MB), 09 February 2022

ACCREDIA
L'ENTE ITALIANO DI ACCREDITAMENTO

SGQ N° 003 A
SGA N° 003 D
SGE N° 007 M
SCR N° 004 F
EMAS N° 009 P
PRD N° 003 B
PRS N° 094 C
SSI N° 002 G

Membro di MLA EA per gli schemi di accreditamento SGQ, SGA, PRD, PRS, ISP, GHG, LAB e LAT, di MLA IAF per gli schemi di accreditamento SGQ, SGA, SSI, FSM e PRD e di MRA ILAC per gli schemi di accreditamento LAB, MED, LAT e ISP

For the issuing office:
DNV - Business Assurance
Via Energy Park, 14, - 20871 Vimercate (MB) - Italy

Claudia Baroncini
Management Representative

Lack of fulfilment of conditions as set out in the Certification Agreement may render this Certificate invalid.

ACCREDITED UNIT: DNV Business Assurance Italy S.r.l., Via Energy Park, 14 - 20871 Vimercate (MB) - Italy - TEL: +39 68 99 905. www.dnv.it

Certificate no.: CERT-02762-98-ITA-SINCERT
Place and date: Vimercate (MB), 09 February 2022

Appendix to Certificate

FOCCHI S.p.A.

Locations included in the certification are as follows:

Site Name	Site Address	Site Scope
FOCCHI S.p.A.	Via Cornacchiara, 805 - 47824 Poggio Torriana (RN) - Italy	Design, manufacture, sale and installation of curtain walls, cladding, alluminium or steel windows and doors and relative metalwork
FOCCHI S.p.A.	Via Santarcangiolese, 6 - 47824 Poggio Torriana (RN) - Italy	Manufacture of curtain walls, cladding, alluminium or steel windows and doors and relative metalwork
FOCCHI LTD	Sherlock House, 7 Kenrick Pl, London, W1U 6HE, United Kingdom	Sale and installation management of curtain walls, cladding, aluminium or steel windows and doors and relative metalwork

Lack of fulfilment of conditions as set out in the Certification Agreement may render this Certificate invalid.
ACCREDITED UNIT: DNV Business Assurance Italy S.r.l., Via Energy Park, 14 - 20871 Vimercate (MB) - Italy - TEL: +39 68 99 905. www.dnv.it

MANAGEMENT SYSTEM CERTIFICATE

Certificate no.:
CERT-02762-98-ITA-SINCERT-SINCERT-CC1

Valid:
07 November 2021 – 06 November 2024

Belongs to Central Office Certificate No.:
CERT-02762-98-ITA-SINCERT

This is to certify that the management system of

FOCCHI LTD

Sherlock House, 7 Kenrick Pl, London, W1U 6HE, United Kingdom

has been found to conform to the Quality Management System standard:

ISO 9001:2015

This certificate is valid for the following scope:

Sale and installation management of curtain walls, cladding, aluminium or steel windows and doors and relative metalwork
(IAF 17, 28)
Evaluated according to the requirements of Technical Regulations RT-05
This certificate is meant to refer to the general management aspects of the organization as a whole and may be used by construction companies for qualification purposes according to Art. 84 of the Legislative Decree n. 50/2016 and s.c.i. and ANAC's applicable Guidelines

Place and date:
Vimercate, 09 February 2022

ACCREDIA
L'ENTE ITALIANO DI ACCREDITAMENTO

SGQ N° 003 A
SGA N° 003 D
SGE N° 007 M
SCR N° 004 F
EMAS N° 009 P
PRD N° 003 B
PRS N° 094 C
SSI N° 002 G

Membro di MLA EA per gli schemi di accreditamento SGQ, SGA, PRD, PRS, ISP, GHG, LAB e LAT, di MLA IAF per gli schemi di accreditamento SGQ, SGA, SSI, FSM e PRD e di MRA ILAC per gli schemi di accreditamento LAB, MED, LAT e ISP

For the issuing office:
DNV - Business Assurance
Via Energy Park, 14, - 20871 Vimercate (MB) - Italy

Claudia Baroncini
Management Representative

Lack of fulfilment of conditions as set out in the Certification Agreement may render this Certificate invalid.

ACCREDITED UNIT: DNV Business Assurance Italy S.r.l., Via Energy Park, 14 - 20871 Vimercate (MB) - Italy - TEL: +39 68 99 905. www.dnv.it

B – Focchi SpA ISO 14001 Certificate

DNV·GL

MANAGEMENT SYSTEM CERTIFICATE

Certificato no./Certificate No.:
82506-2010-AE-ITA-SINCERT

Data prima emissione/Initial date:
02 agosto 2010

Validità:/Valid:
03 agosto 2019 - 02 agosto 2022

Si certifica che il sistema di gestione di/This is to certify that the management system of

FOCCHI S.p.A.

Via Cornacchiara, 805 - 47824 Poggio Torriana (RN) - Italia

È conforme ai requisiti della norma per il Sistema di Gestione Ambientale/
Has been found to conform to the Environmental Management System standard:

ISO 14001:2015

Valutato secondo le prescrizioni del Regolamento Tecnico RT-09/
Evaluated according to the requirements of Technical Regulations RT-09

Questa certificazione è valida
per il seguente campo applicativo:

Progettazione, produzione attraverso le fasi di taglio e assemblaggio, installazione e vendita di facciate continue, rivestimenti, serramenti in alluminio o acciaio e relative strutture metalliche (IAF 17, 28)

This certificate is valid
for the following scope:

Design, manufacture by cutting and assembling, sale and installation of curtain walls, cladding, alluminium or steel windows and relative metalwork (IAF 17, 28)

Luogo e Data/Place and date:
Vimercate (MB), 07 settembre 2019

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Per l'Organismo di Certificazione/
For the Certification Body
DNV GL - Business Assurance
Via Energy Park, 14, - 20871
Vimercate (MB) - Italy

Zeno Beltrami
Management Representative

C – Focchi Group Quality and Environment Policy

ARCHITECTURAL
BUILDING
ENVELOPES

FOCCHI
SINCE 1914

QUALITY AND ENVIRONMENT INTEGRATED POLICY

FOCCHI S.p.a., Italian company of the Focchi Group together with Focchi Ltd and the recent American company Focchi North America Corporation, is leader in the sector of building envelopes and is directly involved in the design, manufacturing delivery and installation of curtain walling.

FOCCHI S.p.a. believes that the development and success of the company are based on the ability to satisfy their customers, through the continuous improvement of its organization and a constant search for innovative, performing, efficient and sustainable technological solutions.

Focchi S.p.A. operates its Quality Management System according to the international standard ISO 9001: 2015, and, with a view to constant improvement, since 2010 it has implemented an environmental management system certified according to ISO 14001: 2015 standard. The management of the integrated Quality-Environment system, which is based on definition and analysis of processes, risks, business opportunities and environmental management, has allowed the company to optimise its activities, the constant improvement of products and services offered to customers and the enhancement of its human resources.

In a today's context, where an increasingly demanding, a constantly growing competition, and globally recognized needs for sustainability, FOCCHI is required to think of solutions aimed at energy saving and containing resources. Focchi is then committed to:

- ensuring compliance with applicable legal requirements, relevant product or process technical standards and any commitments made or signed with third parties.
- identifying the needs of customers and stakeholders and constantly pursuing their satisfaction.
- maintaining constant control of the different production phases (design, purchasing, manufacturing, installation), in order to guarantee the required quality, defining information flows, responsibilities and operating methods.
- developing its human resources, enhancing their talent and skills with a view to excellence, with a work methodology geared towards integration and team building.
- researching and developing innovative technologies to create more and more performing and unique products, without sacrificing aesthetics, committing to "*make beauty tangible*".
- approaching the design of each façade system with the utmost attention to its energy cost, its life cycle, the overall level of sustainability that the building will guarantee.
- assessing the environmental impacts associated with its business and the product life cycle, identifying and implementing the necessary measures to contain them, while in a logic of production efficiency.
- ensuring the control of energy and natural resources used, waste products and pollutant emissions generated, setting specific performance targets, periodically reviewed.
- seeking for constant improvement of its organization through formal instruments (structured mechanisms for collecting and analysing data, identifying plans and action for improvement, review of its performance) and also informal instruments such as participation and involvement of human resources, customers, designers and suppliers in the life of the company, establishing lasting and mutually stimulating relationships.

Poggio Torriana, 15th April 2020

Maurizio Focchi and Paolo Focchi
Managing Directors

FOCCHI GROUP **www.focchi.it**

Focchi Spa
Via Cornacchiara, 808
47824 Poggio Torriana (RN) - ITALY
Tel. +39 0541 627355 - Fax +39 0541 686546
info@focchi.it focchispa@pec.it

Focchi Ltd
Sherlock House - 7 Kenrick Place
London W1U 6HE - UK
Tel. +44 (0)207 22 42934 - Fax +44 (0) 207 4875732
info@focchiltd.co.uk

Focchi North America Corp.
27-01 Queens Plaza N - 13th Floor
Long Island City, New York 11101 - USA
Tel. +1 (347) 778-5872
info@focchigroup.com

CERTIFICAZIONE DI SISTEMA DI GESTIONE
DNV·GL
ISO 9001=ISO 14001

D – Focchi Group Organisation Chart Table

Focchi Organization Chart Table No. 05.01 Date 31/12/2021 Rev. 55

FOCCHI
SINCE 1914

Marcello Mancini
Occupational Health Physician

Maurizio Focchi
CEO
Chief Executive Officier

Maurizio Focchi
Director

Massimo Corsini
President

Focchi North America Corp.
New York

Davide Agostini

Michael Brennan

Matteo Focchi

Mattia Toni

Focchi North America Corp. (100%)

Gruppo Focchi
Focchi Group

Focchi S.p.A.
B.o.D.
Board of Directors

Focchi Ltd
London

Peter Bean
PB Safety Consultancy Ltd

Raymond P. Phillips
Managing Director

Andrea Cicoria
Director

Maurizio Focchi
Chairman Director

Dave Brown
Project Director

Fabio Crociati
Project Manager

Julian Nicholls
Project Manager

Giovanni Caboni
Project Manager

Carmine Marotta
Office Administrator Financial Account

Charlie Kakoullis
Site Manager

Francesco Simone
Logistic Manager

Valentin Achim
Site Manager

Mattia Sergi
Project Manager

James Shackleton
Marketing Consultant

Nicole Rose
Purchase Ledger Manager

Filippo Polverelli
Logistic Manager

Paulo Dos Santos
Logistic Manager

Neil Palmer
Sales Director

Kevin John Davies
Site Manager

Mario Morelli
Project Manager

Nicola D'Angelo
Quality Lead

Giovanni Mazzoni
Logistic Manager

Francesco Mazzei
Logistic Manager

Ovidiu Ipate
Site Manager

Matteo Buganè
Project Director

Marco De Carli
Project Manager

Ayako Nishiwaki
Brexit Officer Manager

Curtley Brown
Logistic Manager

Helder Ricardo Correia Tavares Martins
Site Manager

Basit Ahmed
Logistic Manager

Fabiana Matturro
Account Assistant

Tiago Cruz
Site Manager

Andrea Ferrantini
Project Manager

Stephen Nacson
Project Manager

Daryl Roots
Business Development Manager

David Salt
Site Manager

Mark Jackson
Commercial Manager

Focchi Ltd (100%)

Paolo Focchi
President
Employer

Andrea Cicoria
General Manager

Oscar Casadei
Technological Innovation Director

Innovation

Massimo Corsini
Commercial Director

Andrea Spinelli
Tender Department Director

Gian Luca Valenti
Commercial Development

Francesco Lorenzi

Paola Zullo
Tender Leader

Carlo Bianchi
Tender Leader

Matteo Bartolucci
Tender Leader

Marina Erbisti

Andrea Silenzi
Fire Officer

Matteo Barilli

Nathan Buscarini

Andrea Fabbi

Roberto Aulico

Melissa Fabbri

Andrea Molari

Davide Catania

Technical Department

Oscar Casadei
Technical Director

Matteo Bernardini
First Aid Officer

Matteo Molari

Fabio Frani

Nadia Tosi

Alfio Giovagnoli
First Aid Officer

Valentino Tasini
WSR
(Workers' Safety Rapresentative)

Alice Pierleoni

Sara Magnani

Azzurra Gasperini

Enrico Gurini

Silvia Porcarelli

Anna Mariani

Stefano Pagliarani

Michele Andreatini

Linda Cervellati

Giacomo Piraccini

Davide Gandolfi

(Marco Tosi)

(Nicolas Foschi)

Project Design Department

Claudio Conti

Paolo Ermeti

Omar Screpis

Luca Cenni

Lorenzo Angelilli

Gabriele Lasi

Stefano Gobbi

Andrea Battazza

Marco Pozzi
Maurizio Manenti
Cinzia Raimondi
Danilo Raggini
Alice Sintucci
Linda Spadoni
Marisa Montevecchi
Luca Neroni
Mattia Pierluigi
Luca Toffalini
Mattia Girolomini
Matteo Berardi
Matteo Ugolini

Riccardo Camorani
Silvia Mazza
Salima Vicini
Mattia Casadei
Mattia Mirri
Andrea Rossi
Aldo Vignali
Simone Perazzini
Giorgia Mancini
Lorenzo Fabbri
Mattia Morelli
Niko Giorgini
Francesco Squadroni

Team Design

Massimo Cicognani
Software Developer
Fire Officer

Quality & Enviroment

Elisabetta Principato
Project Quality Coordinator
Quality Manager FPC Manager

Eleonora Tonelli
Project Quality Coordinator
Environmental Manager

Emanuela Saini
Facility Manager

Francesco Berto
Purchasing Director
Plant Manager

Luca Marcello Nicolini
Project Management Manager

Sebastiano Bertozzi

Carlo Alberto Pasini

Jacopo Anastasi

Luca Bracchi

Alex Gattei Colonna

Andrea Sinico

Filippo Sirotti

Luca Bricchi

Pio Della Vittoria

Francesco Semprini

Michele Rossoni

Michela Mondaini

Alessandro Pracucci
UE Projects

Michelangelo Strocchi

Alessia Baietta

Tommaso Verrengia

Construction Sites

Salvatore Piccolo
Fire & First Aid Sites Officer

Alessandro Tizzi
Construction Director

Roberto Deluigi
First Aid Officer

Davide Conti

Luca Lugaresi

Tommaso Cignali

Marcello Ornoffi

Filippo Malerba

Desiderio Gaeta
CFO
Administrative, Financial and Personnel Director
Director

Tamara Mattei
Administration Finance & Control Manager

Giacomo Costantini

Francesca Giuliani

Tiziano Berlini
Fire Officer e First Aid Officer

Ylenia Piscaglia

Nicholas Vico

Ilenia Lizzambri

Andrea Raggi
Abroad Companies Advisor

Personnel

Maria Rossi
Administration

Elisa Manfroni

Paola Arcangeli
Human Resources, Organizational Development

Tommaso Tonelli

Information and Communication Technology

Stefania Molinaro
Software Development Administrator

Maurizio Bianchi
System Administrator

Simone Bartolini

General Services

Roberta Felici
CEO Assistant

Giulia Colasante

Amedeo Focchi

Annalisa Cola

Giulia Focchi

Silvia Fabbri
First Aid Officer

Gabriele Giorgi
Packaging, Logistic and Maintenance Manager
ASPP E SPP Operator

Marcello Marzola

Luca Librizzi
Warehouse and Outbound Logistic Manager

Alessandro Marra
Adrian Subashi
Lorenzo Drudi
First Aid Officer
(Delivery)

Federico Ottaviani
Ihor Moroz
Federico Bucci
Pierino Caruso
Nadia Mancini
(Packaging)

Lorenzo Gabrielli
Equipment Maintenance Foreman

Tomas Maestri
Production Management

Matteo Mantani
Planning and Operative Control

Klevis Smakaj
Operative quality Control Coordinator

Giacomo Pielich

Angelo Maggioli

Gianmarco Guidi

Alex Beleffi

Giacomo Montemaggi

Samuele Casali

Davide Lombardi

Michele Menotti

PLANNER

Christian Tonni
Yuri Spada
(Production)

Federico Mignani
Fire Officer
Eleonora Bersano
Mattia Morri
(Factory)

Lorenzo Parri
Gerhard Zenunaj
Federico Borlenghi
(Site)

Annamaria Pagliarani
Enrico Gabellini
Fire Officer
Daniele Migani
(Plant Assistant)

Andrea Bugli
Purchasing Coordinator

Benedetta Boschetti

Lucia Bartoli

Antonio Zaghini

Thomas Zanon

Roberto Semprini
Fire Officer e First Aid Officer

Massimiliano Pretolesi

Emanuele Turci

Daniele Rossi
Production Manager

Luca Fabbri
Assembly Coordinator

Roberto Martinini
Machine Dept. Head

Roberto Casadei Della Chiesa
Fire Officer

Andrea Arcangeli*
Fire Officer & First Aid Officer

Sergio Santolini
Fire Officer

Paolo Conti

Ivan Bernardini*
First Aid Officer

Roberto Nanni*

Stefano Casadei

Stefano Rocchi

Flavio Casadei

Yassine Sakour*

Stefano Giorgetti*
Fire Officer & First Aid Officer

Ivan Bruscia

Michele Rescigno

Andrea Cristino
First Aid Officer

Emanuele Berti

Isac Cantoni

Raffaele Omicini
First Aid Officer

Giacomo De Paoli

Enrico Orlandi

Marco Campedelli
First Aid Officer

Yuri Conti

Bas Mbaye

Fabio Bandolieri

Cristian Nicolini

Marco Vitali

Andrea Gentili

Daouda Badini

Igor Spada

Matteo Deluca

Marco Tornani

Nicolò Bacci

Valentino Chiaravalloti

(Marco Pennini)

Machinig Team

Prototypes & Mock-up

William Innocenti

Robertino Fratti
First Aid Officer

Francesco Greco

Alberto Doria

Mattia Pasini

Giacomo Drudi

Walter Muracchioli
Quality Operation Control

Marco Fiori

Marco Ciappini

Heads of Production Line Dept

Roberto Celli*
Fire Officer & First Aid Officer

Aurelio Leardini*
Fire Officer

Emanuele Gori

Roberto Ricci*
Fire Officer

Davide Matteo
First Aid Officer

Alessandro Bertozzi
Fire Officer e First Aid Officer

Marco Bartolini
First Aid Officer

Lorenzo Bissoni
First Aid Officer

Erald Pando

Sandro Calbucci

Domenico Felici

Federico Bucci

Antonio Langone

Costante Scarpellini

Derek Polverelli

Angelo Anelli

Mohammad Abu Bakar Siddique

Stefano Neri

Paolo Gualtieri

Antonio Di Fede

Paolo Saragoni
Fire Officer e First Aid Officer

Simone Giovannini

Antonio Delli Carri
First Aid Officer

Antony Pellegrini
First Aid Officer

Andrea Lorenzini

Alessandro Aley Tomaselli

Oleh Chepil

Marco Bizzocchi

Marco Vallone

Assunta Cocchiaro

Gabriele Angelo Magrì

Maurizio Giangrieco

Devij Srila Coppo Thiella

Raffaele Giorgio

Giacomo Mellini Sforza

Filippo Depaoli

Andrea Savoia

(Gianluca Carli)

Assembly and Sealing Team

Claudio Mancini
Warehouse and Inbound Logistic Manager

Gionata Minotti

Stefania Bartolini

Cristiano Poggiali
Inbound Logistic

Omar Mattoscio

Massimo Maiolino
Inbound Logistic Myo+
Fire Officer e First Aid Officer

Davide Donati*
First Aid Officer

Roberto Miacci

Nicholas Casalboni

(Nicolas Emil Raquet)
(Components)

Giacomo Peroni

Matteo Angeli

Maurizio Giovanni Marech

Matteo Sapucci
(Small Parts' Warehouse)

Luigi Ciavarella

Alessandro Caminati

Stefano Battarra

Laerti Sherifi*
Fire Officer

Claudio Cacchi

Manuel Guerra
(Handling/ Sequencing)

Matteo Righini
Warehouse bars Manager

Gilberto Cenni

Daniele Giannini

Marco Canini

(Corrado Bruzzo)

FOCCHI STAFF MEMBERS No. 315

Focchi S.p.A. No. 276:
+ No. 264 Employees:
· No. 10 Part Time;
· No. 32 Fixed-term Contracts;
· No. 16 Apprentices;

+ No. 2 Executive Directors;
+ No. 2 Consultants.
+ No. 6 (Trainees)

Focchi Ltd No. 35:
+ No. 32 Employees:

+ No. 3 Consultants.

Focchi North America Corp. No. 4:
+ No. 4 Employees.

*Cardiopulmonary Resuscitation Officer

Focchi S.p.A. Board

Focchi Ltd Board

Employee with two roles

E – First South Street Project Organisation Chart

- FIRST STREET SOUTH -
ORGANIZATION CHART

FOCCHI
SINCE 1914

Focchi Spa
Italy

Project Director
Luca Nicolini

Project Manager
Sebastiano Bertozzi

Purchasing Director/ Plant manager
Francesco Berto

System Design Manager
Enrico Gurini

Project Design Manager
Paolo Ermeti

Quality Manager
Elisabetta Principato

Factory Logistic Manager
Gabriele Giorgi

Production Manager
Tomas Maestri

System Design Team

Design Manager Assistant
Danilo Raggini

Document Controller
Aldo Vignali

Design Teams

Warehouse and Outbound Logistic Manager
Luca Librizzi

Focchi LTD
UK

Health & Safety Manager
PB Safety Ltd

Project Director
Dave Brown

Construction Director
Alessandro Tizzi

Project Manager
TBC

Material & Logistic Manager
TBC

Site Manager
TBC

Site Technician / QA
TBC

Site Installation Teams

Site Installation Teams

General mailing list:
FSS@Focchi.it

Design mailing list:
FSS-UT@Focchi.it

Site mailing list:
TBD

March 2022