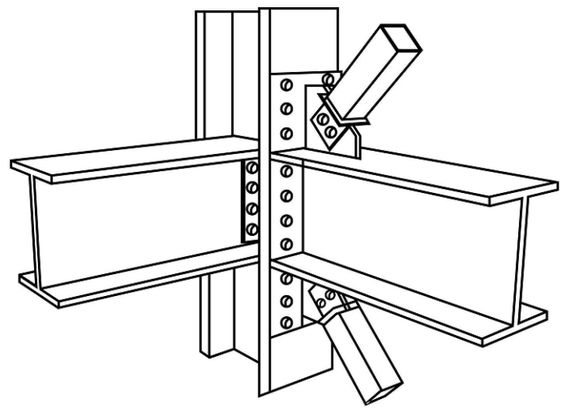
27 Walmer Street Abbey Hey

STRUCTURAL DRAWING SET

WEBSITE:- https://structurewise.net INFO:- hamza@structurewise.net CONTACT:- +44 7397 678486



STRUCTUREWISE

GENERAL NOTES:

PARTY WALL etc.Act 1996: Written notice must be given to adjoining owners prior to start of work on site, two month's notice for works to party wall or party structure, one months's notice for all other works.

HEALTH AND SAFETY GENERALLY: All works to be carried out in accordance with the Health and Safety ACT and Dam Regulations 2007 and prevailing Health & Safety requirements in force at the time of the works

THIS DRAWING TO BE READ IN CONJUNCTION WITH APPROVED PLANNING PLANS.

The Party Wall etc. act 1996
Where building near or working on the party walls or party fence walls it may be necessary to serve notice on the adjoining owners under The Party Wall etc. Act 1996. Professional advice should be sought before commencing building works to determine whether the act would apply and if so the correct action to be taken.

THE BUILDING REGULATION PART A: Party Wall act 1996 Written consent is required from adjoining owners where: Underpinning existing party wall.
Build up wall on top of party wall.
Excavating to enlarge existing basement.
where new beams are to be inserted 100mm into party wall.And existing party wall needs to be cut for inserting new flashing.

Demolition

Isolate all services affected by new works. Provide temporary supports to existing structure as necessary. Where existing services run through or under foundations provisions should be made for suitable ducts or lintels.

Existing Structure

Existing foundations and structure to be exposed in order to determine adequacy to take additional loadings. Exposed structure to be inspected by either Structural Engineer or Building Control to satisfy that existing structure is suitable. If found to be unsuitable Structural Engineer to design appropriate solution

Health & Safety
The Contractor shall ensure that all safety, health and welfare measures required under or by virtue of the provision of any enactment or regulations or the working rules of any industry are complied with. In carrying out the works the contractor shall at all times comply with the requirements of the Construction (Design and Management) Regulations 2015, this will include taking on Clients duties, unless Client appoints separate Principal Designer. Where necessary notifications to be served to HSE and appropriate
Construction manuals produced.

Notes
All work is to comply with the relevant Building Regulations and all statutory notices are to be given to the Building Control department at the local authority at the appropriate stages. All contractors are to visit site to acquaint themselves with the layout and access to the site prior to tendering. If an approved inspector is used then the AI must notify the local authority that the building regulations will be carried out under the initial notice procedure. AI to be given notice of statutory inspections to allow inspection at appropriate stages.

Materials, goods and workmanship
Goods, materials and workmanship are to be of the best quality of their respective kinds and those for which there are a British
Standard or Code of Practice are to conform thereto unless otherwise stated. Descriptions of goods, materials and workmanship given in any one trade are to apply throughout this Specification unless otherwise stated. All workmanship shall be carried out in accordance with current Building Regulations. All materials shall be used and fixed strictly in accordance with manufacturer's instructions, unless specified otherwise. All commodities to be new and left in perfect condition on completion and when incorporated into the works.

Discrepancies
Any discrepancy, discovered by the Contractor, between the structural drawings and specification or between the drawings/specification and the site, must be brought to the notice of the Architect for clarification and instruction immediately any such discrepancy becomes apparent.

Defects in existing work
Any defect not already identified in the existing work or structure to remain must be reported immediately to the Architect by the Contractor for instruction before proceeding with any work which may: –cover up or otherwise hinder access to the defective construction, –or be rendered abortive by the carrying out of remedial works.

Generally
Please note that these construction notes are to be read in conjunction with the detailed drawings that accompany the works, including those of the Structural Engineer. These notes and drawings are solely for the purposes of Building Regulation approval and do not set out the minimum standards of good practice to be complied with by the contractor. It is assumed that the minimum standards and manufactures installation guidance are known and will be complied with by a competent contractor. Finishes and materials to be in accordance with planning conditions.

All scaffolds shall have debris/safety netting sufficiently sealed and tied to avoid loosening. Scaffolds must be designed to resist all applied wind loadings and suitable kentledge used if necessary (located so as not to disrupt the works).

Preparation
You must ensure that any ground covered by the building is reasonably free from any material that might damage the building or affect its stability, including vegetable matter, topsoil and preexisting foundations.

Reasonable precautions must also be taken to avoid danger to health and safety caused by contaminants on or in the ground covered, or to be covered by the building and ANY LAND ASSOCIATED WITH THE BUILDING. (A major change to the regulations, which previously only applied to the ground covered by the building).

Precautions must be taken against ground gases e.g. landfill gases, radon, vapours etc

Remedial measures for dealing with land affected by contaminants have been expanded to include biological, chemical and physical treatment processes.

Guidance on protection from radon is expanded to include buildings other than dwellings.

Requirements to protect persons occupying premises from contaminants, are now included to 'Material Changes of Use', and apply to residential use or sleeping accommodation e.g. dwellings/ flats / hotels /institutions and changes of use of previous exempt structures.

Timber Treatment
All softwood timbers to be adequately treated to prevent infestation by the house longhorn beetle in accordance with current Building
Regulations. All structural timbers, external frames, window & softwood cladding shall be treated against fungal attack. All structural timber to be marked DRY or KD and to have stress grade mark.

Scaffolding
The Contractor shall erect, move and maintain in a safe condition suitable for its purpose and strike and clear away on completion all necessary scaffolding.

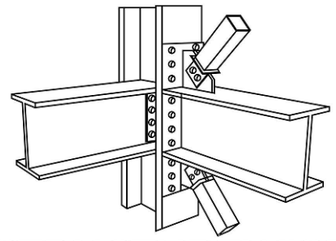
All scaffolds must be designed, supplied, erected, maintained and dismantled in strict accordance with all relevant Health & Safety
Executive (HSE) Guidelines, information sheets and other publications, TG20:13, BS EN 12811:1, BS1139, BS5974, BS EN 280:2001 + A2:2009 and BSEN1298 and all local bylaws.

Contractor is to obtain all permits from the relevant authorities before erecting scaffolds and shall ensure the permits are valid and authorised throughout the duration of the works. All watching, lighting, public safety signs and hazard warning signs to be in strict accordance with HSE and local authority requirements.

Propping and Shoring
The Contractor is to be responsible for the design, erection, maintenance and dismantling of all horizontal and vertical temporary propping and shoring.
All spreaders are to be chosen dependent upon the nature of the substrate being propped to or from. Sensitive finishes will require a resilient layer between spreaders and finish. Account should be taken of any surface mounted services which may require bridging of spreaders.
Propping shall take account of all loadings from the self weight of the structure and any imposed load left in place or envisaged during the works.
Spreaders shall be so located at ground level so as not to load the edge or influence the ground conditions to existing or
proposed foundation/drainage/services trenches that will be employed during the time temporary propping is required. Where propping and spreaders influence such trenches as noted in 4 above, the trenches must be propped horizontally to take due account of all loads.
All services that are redundant are to be disconnected and removed. Services requiring rerouting or amending shall be disconnected and temporarily removed if necessary and replaced upon completion of the works
Protection of Services
Check positions of all existing services prior to commencement of work. Protect, maintain and prevent damage during the course of the works.
If any damage results from execution of the works, the
Contractor shall notify the appropriate service authority and the Contractor shall make arrangements for the damage to be made good without delay at his own cost and to the satisfaction of the service authority and/or private owner as appropriate.

Asbestos
The client/contractor is to carry out an intrusive survey for asbestos and/or asbestos based products if this has not already been done. After the survey has been carried out and known asbestos related items removed, the Main Contractor is to be aware that the building may contain asbestos related products and should take all due care and diligence during the execution of the works. If it is suspected that during the demolition and stripping out operations further asbestos or asbestos based products are present then a specialist subcontractor licensed by the Health and Safety Executive to survey/report/advise should be appointed to offer advice and recommendations regarding removal and safe disposal off site.

Keep approaches to the site clear of mud and debris.
Surplus Material
Unless described as refixed, set aside for reuse or similar expressions, all materials arising from the works shall remain the property of the Employer unless otherwise instructed by the Architect.
Moisture & Frost
The Contractor shall prevent the work from becoming wet or damp where this may cause damage and shall allow for all necessary heating and covering up to protect against damage by frost. Drying times and the provision of heaters, etc., to facilitate drying out must be allowed for in the Contractor's pricing where necessary.



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GENERAL NOTES

Client		Project	
SR		27 Walmer Street Abbey Hey	
Scale:	N.T.S	Date:	17-09-2024
Drawn By:	A	Checked By:	H / A

Project No.	Drawing No.	Revision
H-Z-66/114	GN-01	00

Project Description
STRUCTURE DRAWING SET

Masonry Work

–Bricks are to have the following characteristics :

–Frost Resistance Class F to BS3921;

–Soluble salt content Class L to BS3921

–Brickwork above DPC level is to have a minimum compressive strength of 20 N/mm2

–Brickwork below DPC level have to be in class B Engineering Bricks;

–Blocks are to be 7.5N/mm2 compressive strength;

–Party Walls Block Density to be sufficient to achieve an as–built mass of at least 415kg PER m2 of Elevation;

–Non–load bearing partition blocks to have a maximum density of

750kg/m3;

–Inner leaf of external wall density to be specified below to suit flanking sound requirements;

–Bricks and blocks are to be manufactured at least 28 days prior to use in the works;

–Mortar in Masonry walls is to be 1:1:6 CEMENT:LIME:SAND Mix above DPC and 1:3 cement:sand mix below DPC;

–Mortar for capping's, copings, and cills is to be a 1:41:3 Cement:Lime:sand mix; All cavity wall ties in External walls are to be stainless steel

Double–Triangular type with 4mm Wire diameter to BS1243;

–Spacing is to be 900mm Centers horizontally and 450mm centers

vertically staggered at reveals and expansion joints ; also at 225mm

Vertical centers and 225mm away from the reveal or joint;

–ALL NEW BRICKWORK BELOW DPC LEVEL TO BE 'CLASS B' ENGINEERING BRICK IN MORTAR DESIGNATION (ii) (TYPICAL)

Foundation Work

EXCAVATION FOR FOUNDATION

Basic workmanship for excavating shall comply with Eurocode 7: Geotechnical Design. Before beginning general excavation or filling excavate top soil from required area to full depth and keep separate from excavated subsoil.The temporary support of trenches should be provided where necessary.

FOUNDATIONS

Use concrete strip (1:3:6 mix) GN3 nominal, use sulphate resistance cement if ground condition dictate. Foundations to below invert level of any adjacent drains and no foundations to be built over any drains. The depth of the foundations are to be dependant on site conditions and constructed to Local Authority approval. Foundations to be constructed in accordance with current Eurocodes EN1992/1997. Foundations also to comply with Approved Document A and BRE Digest 298 and NHBC practice Note 3 guidelines. Where any roots present, continue foundations down to 800mm below the roots.

Foundations should not be made on made ground or wide variation in type of subsoil within the loaded area.Note there are trees within 30M of the proposed works.

The following design provisions relate to foundations:

a. Foundations should be centrally situated under the walls;

b. Strip foundations should have a minimum width of 600mm;

c. The soil is firm sandy clay, can be moulded by substantial

pressure with the fingers and can be excavated with graft or spade and the loading (D.L. + I.L.) is less than

60kN/m2 run.

d. Concrete should be composed of cement to BS12:1978 and fine and coarse agregate confirming to BS882:1983:

e. The minimum thickness of foundation to be 750mm;

f. Foundations of piers, butresses, and chimneys etc., should project as indicated on the drawings.

Concrete Work

1. USE CONCRETE GRADE C32/40 EVERYWHERE

2. PROVIDE 30mm NOMINAL CONCRETE COVER AND 50mm WHERE IN CONTACT WITH SOIL

3. ALLOW 47 HOURS FOR PAD STONES TO CURE BEFORE STRIKING TEMPORARY SUPPORT TO STEEL BEAMS BEARING ON THE PAD STONES

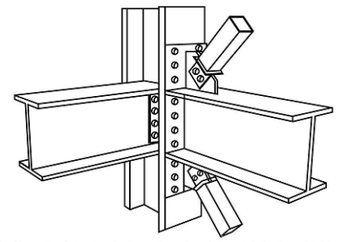
4. FOUNDATION TO BE CONSTRUCTED IN MINIMUM 100 kN/m2 SOIL AND DEPTH OF FOUNDATION TO BUILDING CONTROL RECOMMENDATIONS

5. WITH ADJACENCY TO TREES FOUNDATIONS TO BE CONSTRUCTED AT A MINIMUM DEPTH OF 1.7m TO BCO RECOMMENDATIONS

6. PROVIDE MINIMUM 100mm TO STEEL FRAME CONSTRUCTED IN FOUNDATIONS AND WHERE IT COMES IN CONTACT WITH SOIL.

7. CONTRACTOR TO PRODUCE FULL REBAR SCHEDULE AND REINFORCEMENT DETAILS AND SUBMIT TO THE APPROVAL OF THE SE OR BCO PRIOR TO CONSTRUCTION

8. ALL BASEMENT WORKS AND ASSOCIATED DAMP PROOFING IS CONTRACTOR DESIGNED AND TO BE UNDERTAKEN BY AN APPROPRIATE SPECIALIST



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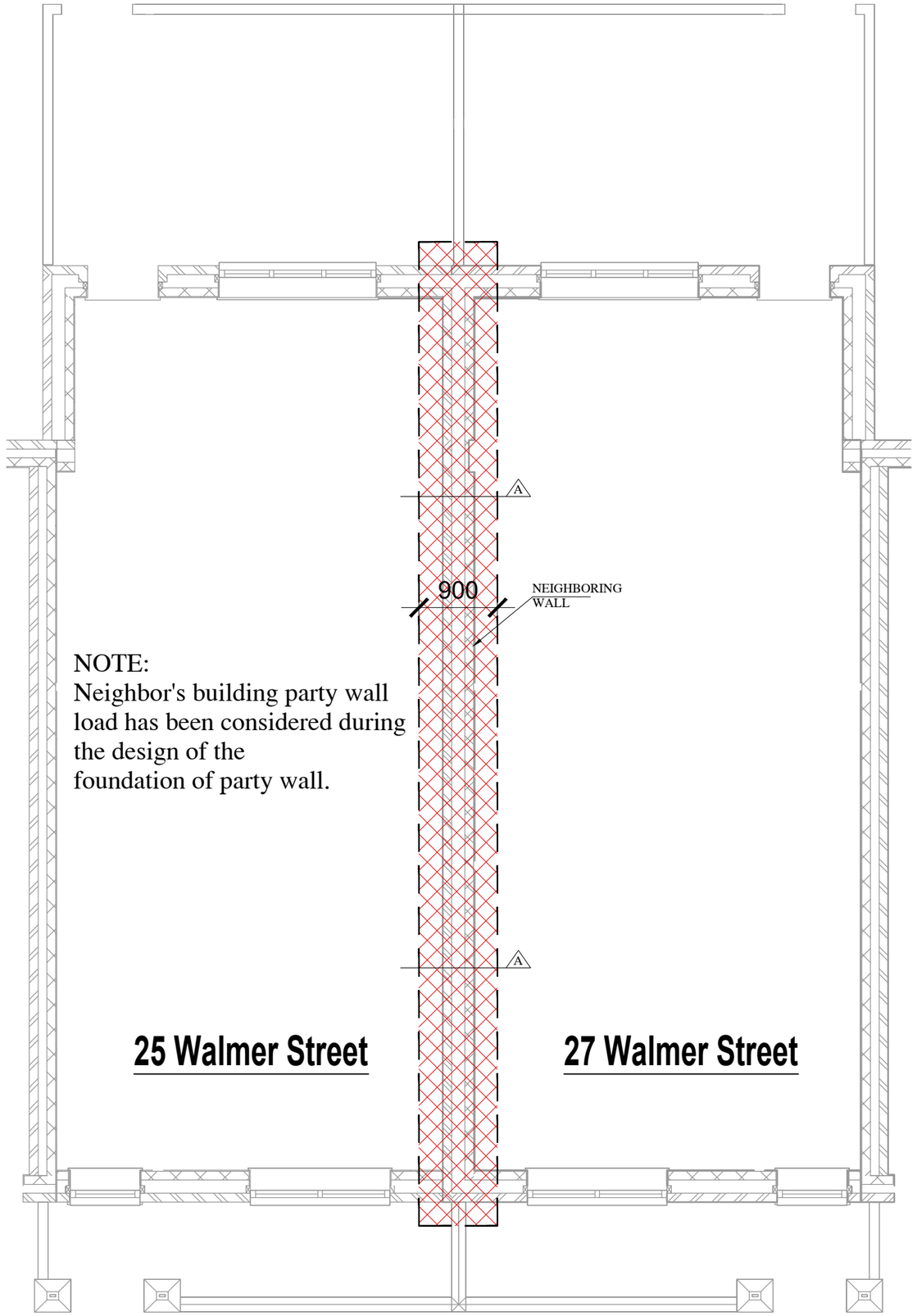
GENERAL NOTES

Client		Project	
SR		27 Walmer Street Abbey Hey	
Scale:	N.T.S	Date:	17-09-2024
Drawn By:	A	Checked By:	H / A

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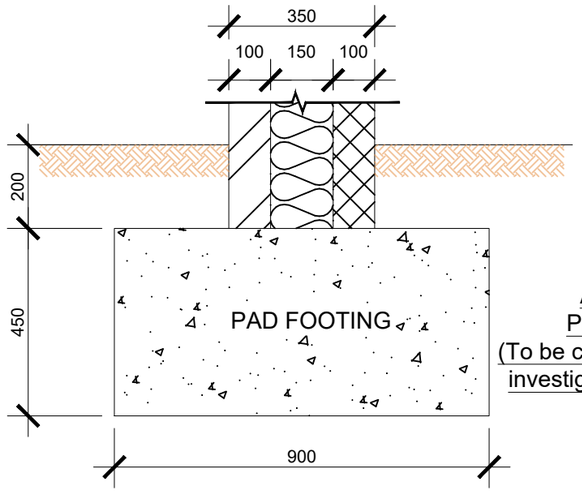
Project Description

STRUCTURE DRAWING SET



NOTE:
Neighbor's building party wall load has been considered during the design of the foundation of party wall.

FOUNDATION PLAN



NOTE:
Allowable Bearing Pressure is 80kN/m²
(To be confirmed by Geotechnical investigation or building control)

DETAIL: A

STRUCTUREWISE

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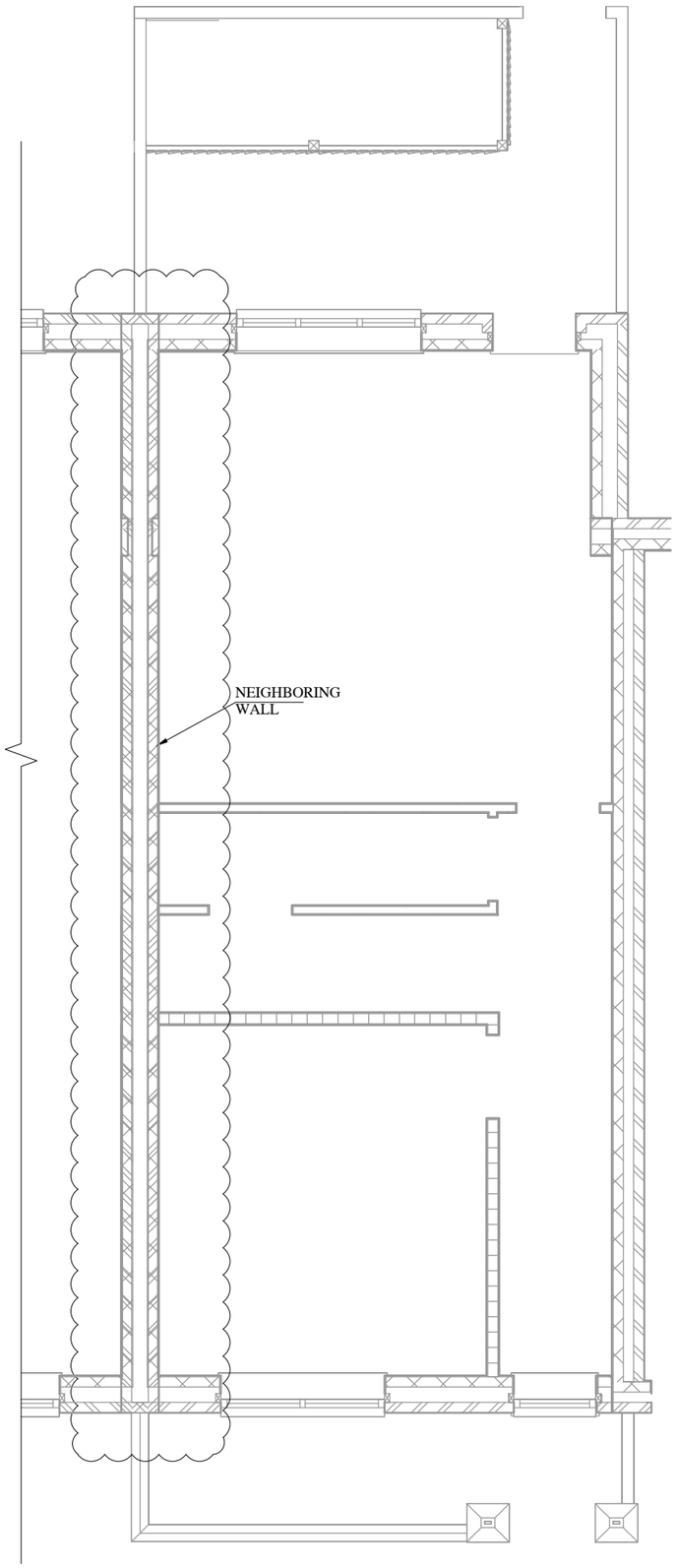
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PROPOSED
FOUNDATION PLAN

Client		Project	
SR		27 Walmer Street Abbey Hey	
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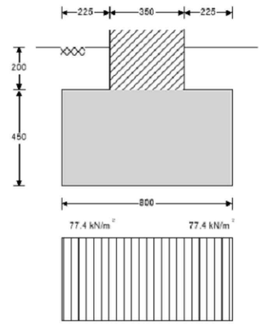
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H-Z-66/114	S-01	00

Project Description
STRUCTURE DRAWING SET



DESIGN CALCULATIONS

STRIP FOOTING ANALYSIS AND DESIGN (BS8110-1:1997)



Strip footing details

Width of strip footing;	B = **800** mm
Depth of strip footing;	h = **450** mm
Depth of soil over strip footing;	h_{soil} = **200** mm
Density of concrete;	ρ_{conc} = **23.6** kN/m³

Load details

Load width;	b = **350** mm
Load eccentricity;	e_P = **0** mm

Soil details

Density of soil;	ρ_{soil} = **20.0** kN/m³
Design shear strength;	ϕ' = **25.0** deg
Design base friction;	δ = **19.3** deg
Allowable bearing pressure;	$P_{bearing}$ = **80** kN/m²

Axial loading on strip footing

Dead axial load;	P_G = **37.0** kN/m
Imposed axial load;	P_Q = **13.3** kN/m
Wind axial load;	P_W = **0.0** kN/m
Total axial load;	P = **50.3** kN/m

Foundation loads

Dead surcharge load;	F_{Gsur} = **0.000** kN/m²
Imposed surcharge load;	F_{Qsur} = **0.000** kN/m²
Strip footing self weight;	$F_{swt} = h \times \rho_{conc}$ = **10.620** kN/m²
Soil self weight;	$F_{soil} = h_{soil} \times \rho_{soil}$ = **4.000** kN/m²
Total foundation load;	$F = B \times (F_{Gsur} + F_{Qsur} + F_{swt} + F_{soil})$ = **11.7** kN/m

Calculate base reaction

Total base reaction;	T = F + P = **62.0** kN/m
Eccentricity of base reaction in x;	$e_T = (P \times e_P + M + H \times h) / T$ = **0** mm

Base reaction acts within middle third of base

Calculate base pressures

$q_1 = (T / B) \times (1 - 6 \times e_T / B)$ = **77.445** kN/m²

$q_2 = (T / B) \times (1 + 6 \times e_T / B)$ = **77.445** kN/m²

Minimum base pressure; $q_{min} = \min(q_1, q_2)$ = **77.445** kN/m²

Maximum base pressure; $q_{max} = \max(q_1, q_2)$ = **77.445** kN/m²

PASS - Maximum base pressure is less than allowable bearing pressure

Material details

Characteristic strength of concrete; f_{cu} = **30** N/mm²

Calculate base lengths

Left hand length;	$B_L = B / 2 + e_P$ = **400** mm
Right hand length;	$B_R = B / 2 - e_P$ = **400** mm

Calculate rate of change of base pressure

Length of base reaction;	B_x = B = **800** mm
Rate of change of base pressure;	$C_x = (q_1 - q_2) / B_x$ = **0.000** kN/m²/m

Calculate minimum depth of unreinforced strip footing

Average pressure to left of strip footing; $q_L = q_1 - C_x \times (B_L - b / 2) / 2$ = **77.445** kN/m²

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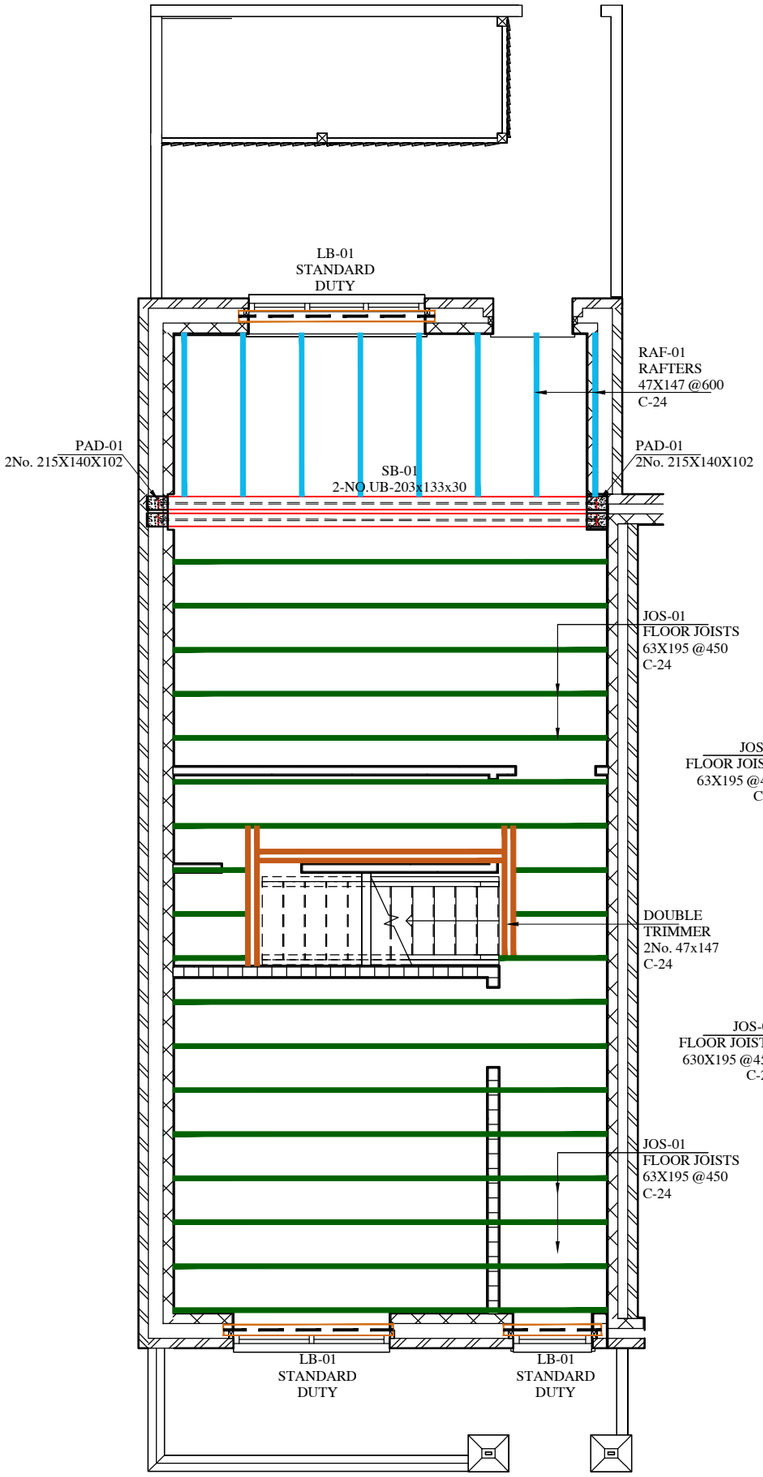
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DESIGN CALCULATION
& NEIGHBOR WALL DETAIL

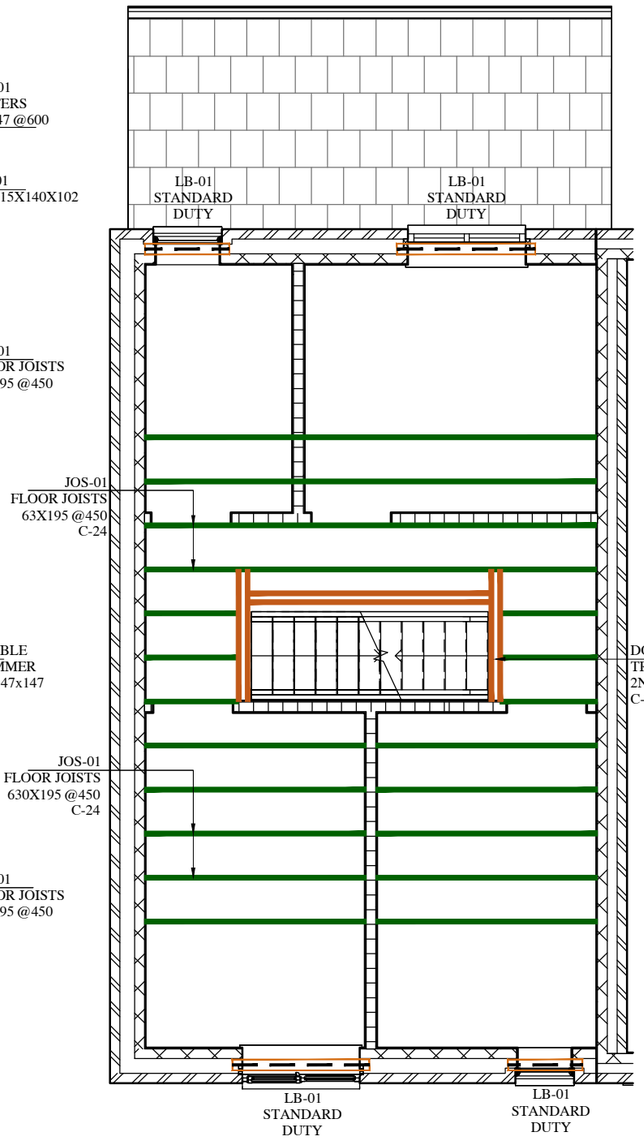
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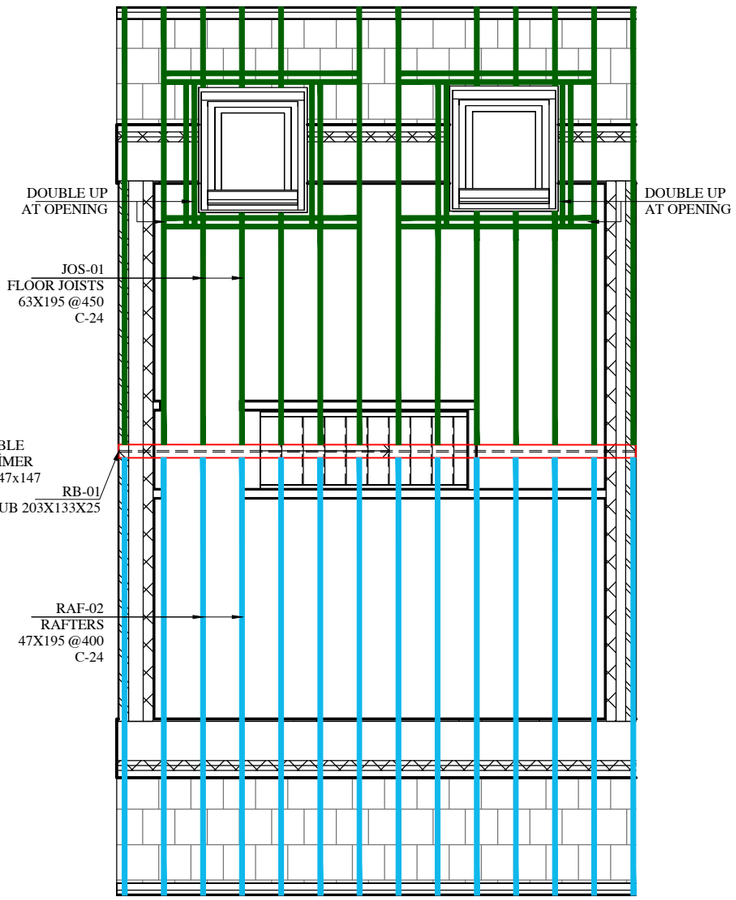
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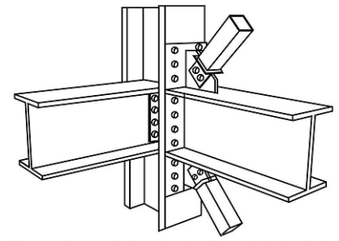
GF LAYOUT PLAN



FF LAYOUT PLAN



LOFT LAYOUT PLAN



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PROPOSED FLOOR PLANS

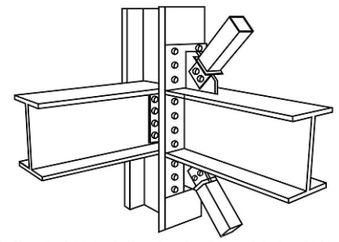
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Project Description
STRUCTURE DRAWING SET

MEMBER SCHEDULE

MEMBER	SIZE	SPECIFICATION
SB–01	UB–203x133x30	DOUBLE SECTION S355
RB–01	UB–203x133x25	SINGLE SECTION S355
JOS–01	63x195 @450	C–24
RAF–01	47x147 @600	C–24
RAF–02	47x195 @400	C–24
LB–01	STANDARD DUTY	BIRTLEY



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Project Description
STRUCTURE DRAWING SET