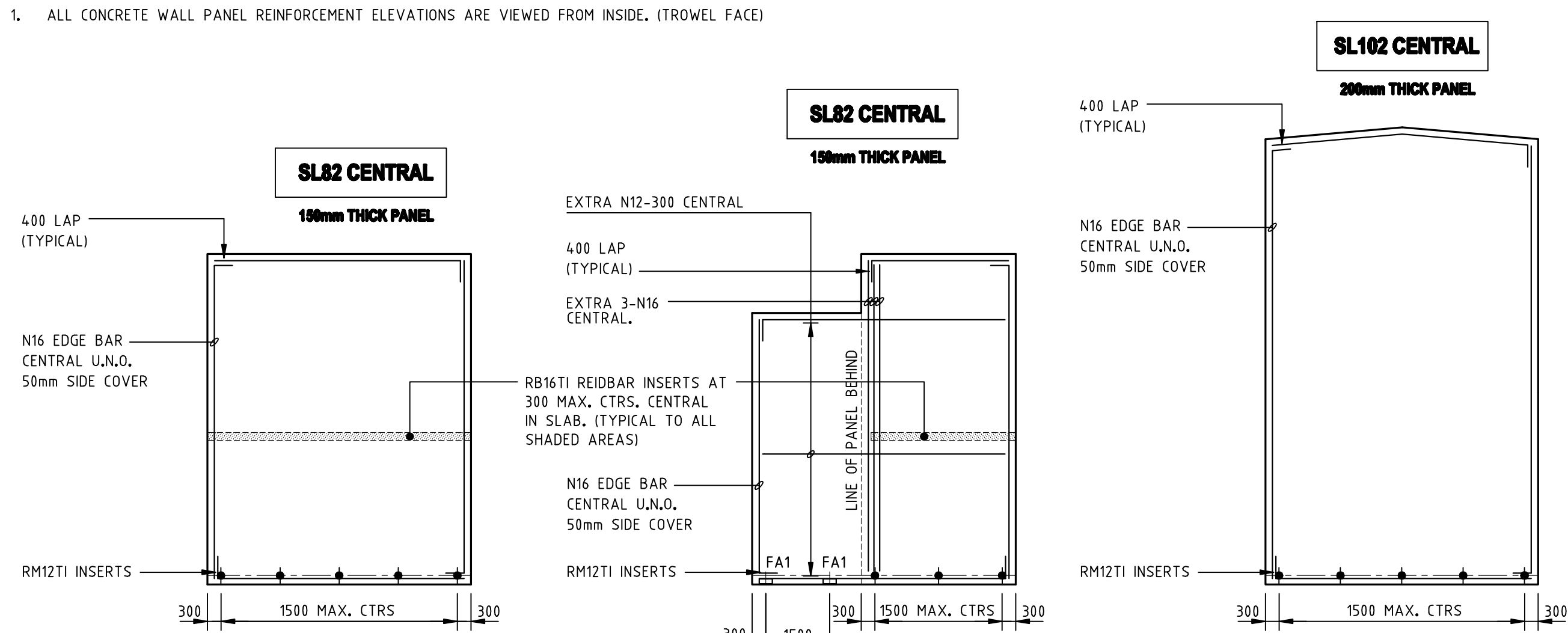
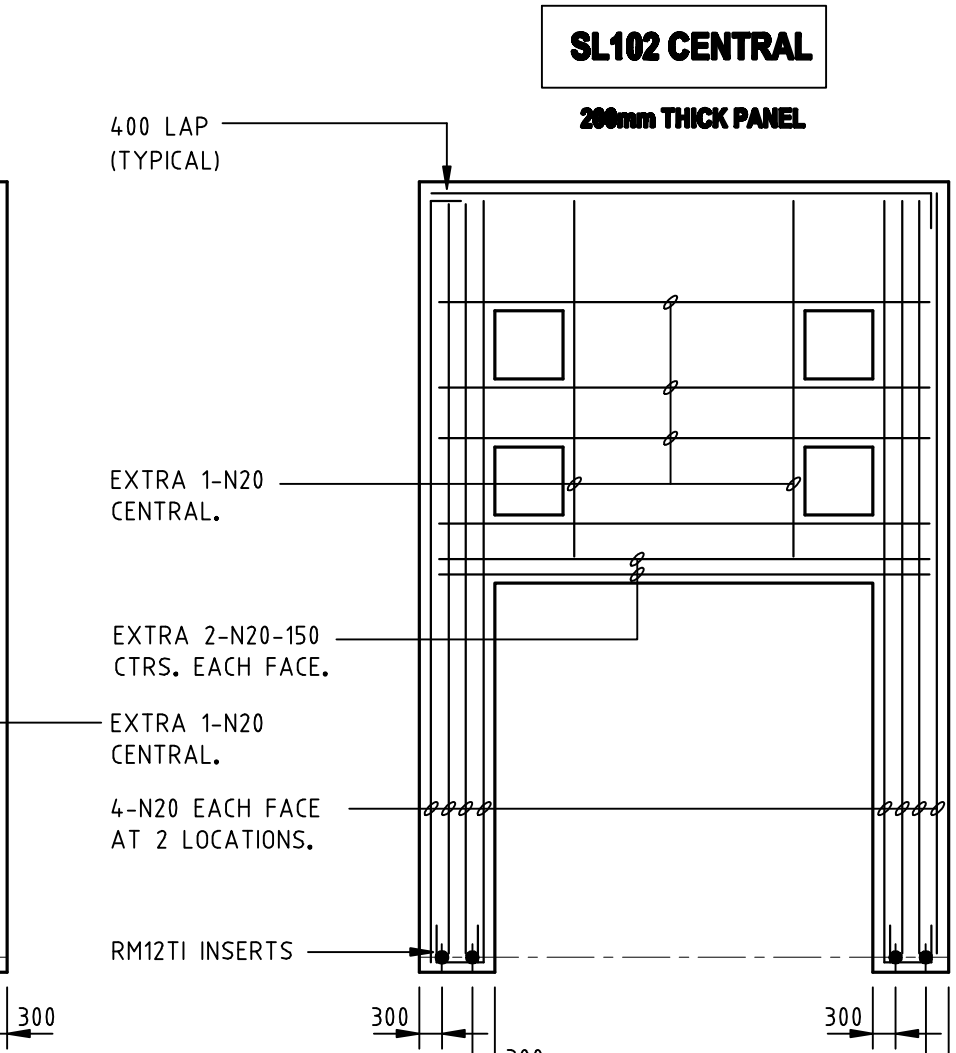


CONCRETE WALL PANEL LAYOUT 1:200

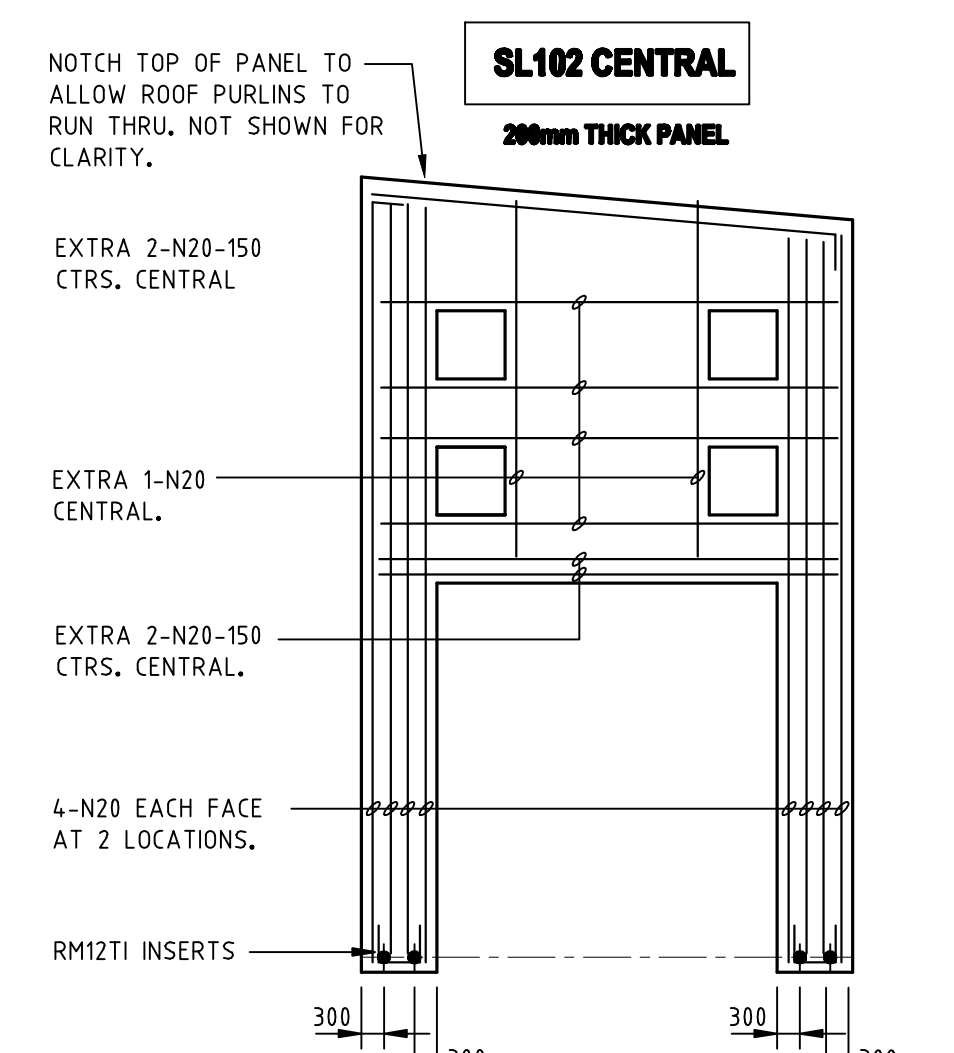
1. ALL CONCRETE WALL PANEL REINFORCEMENT ELEVATIONS ARE VIEWED FROM INSIDE. (TROWEL FACE)



TYPICAL WALL PANEL P1

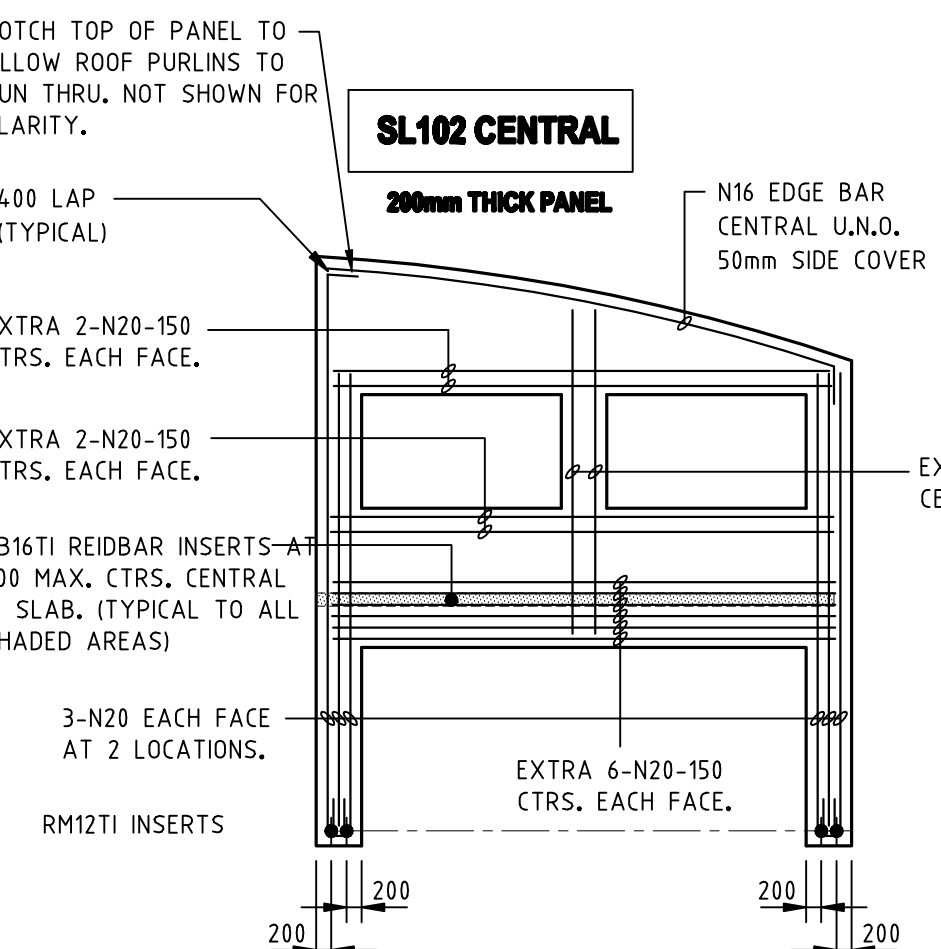


TYPICAL WALL PANEL P2
PANELS P3, P4, P10 to P16
& P27 SIMILAR

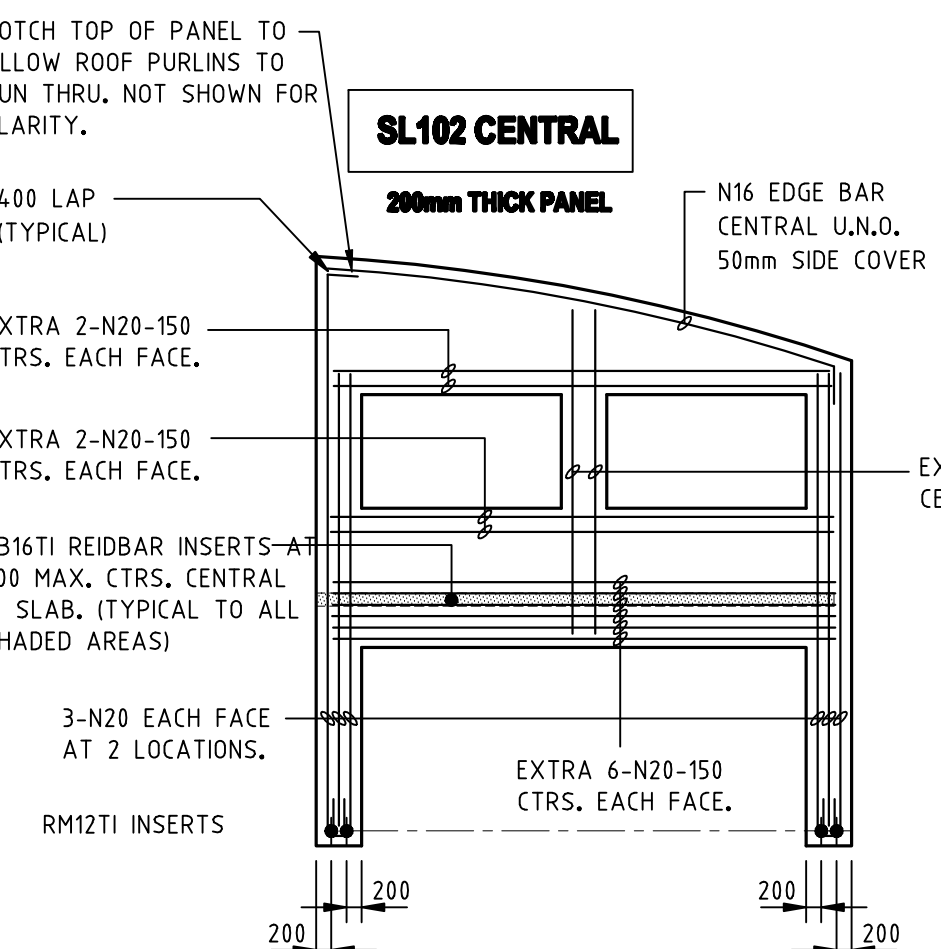


TYPICAL WALL PANEL P5
PANEL P6 SIMILAR
PANELS P8 & P9 SIMILAR (OPP. HAND)

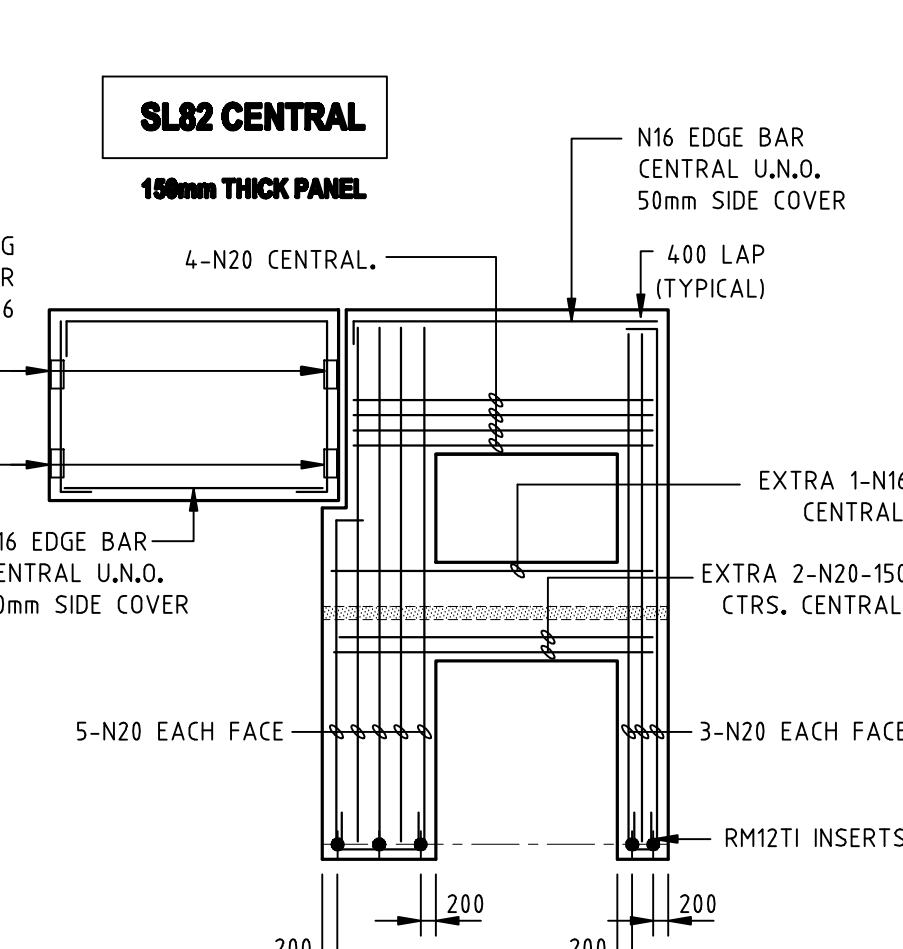
TYPICAL WALL PANEL P17
PANEL P22 SIMILAR NO INSERTS



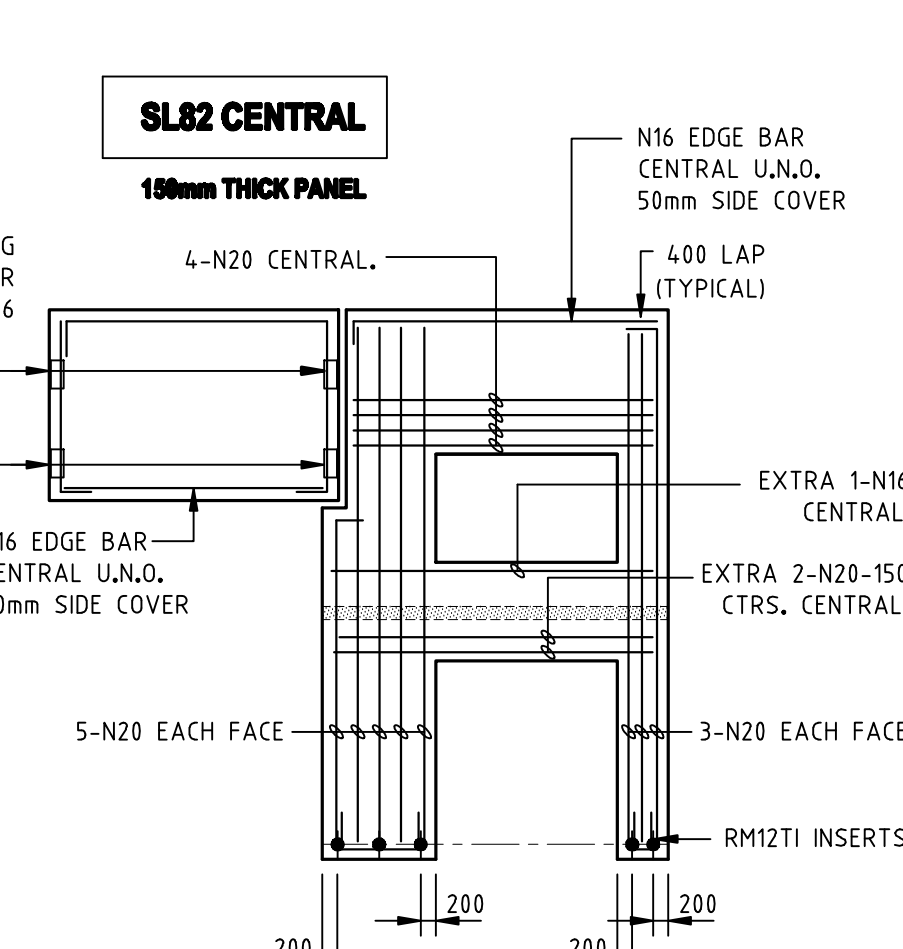
TYPICAL WALL PANEL P19
PANEL P20 SIMILAR



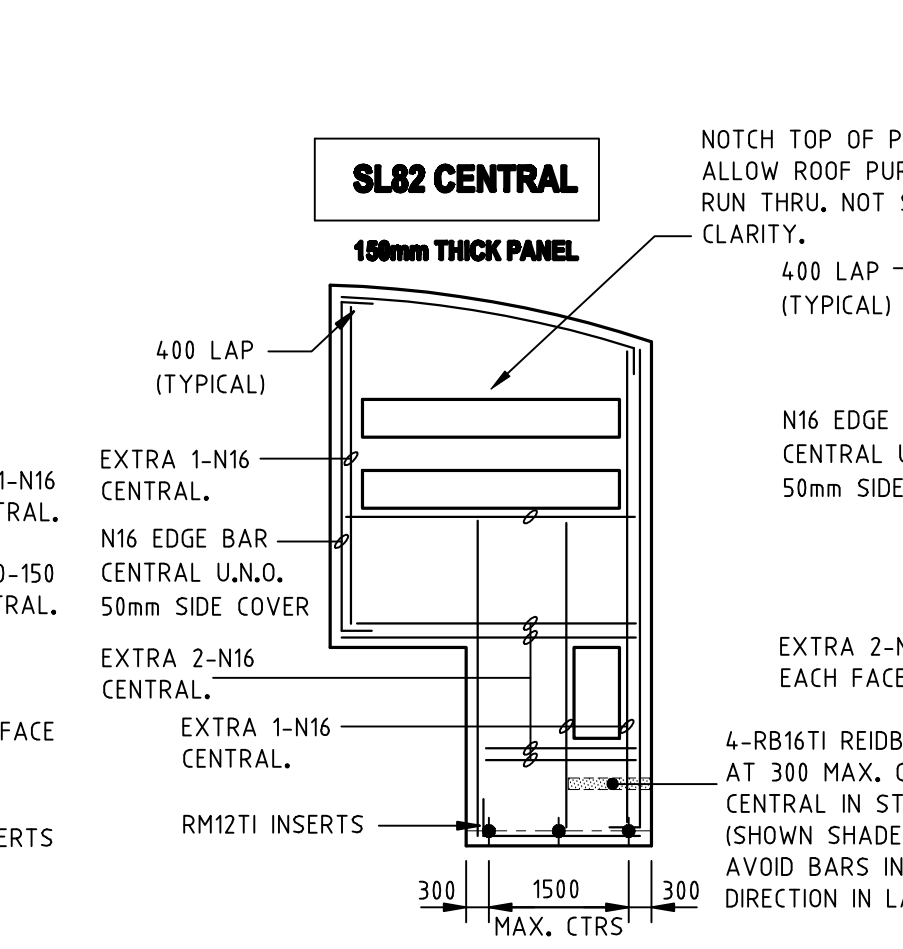
TYPICAL WALL PANEL P18



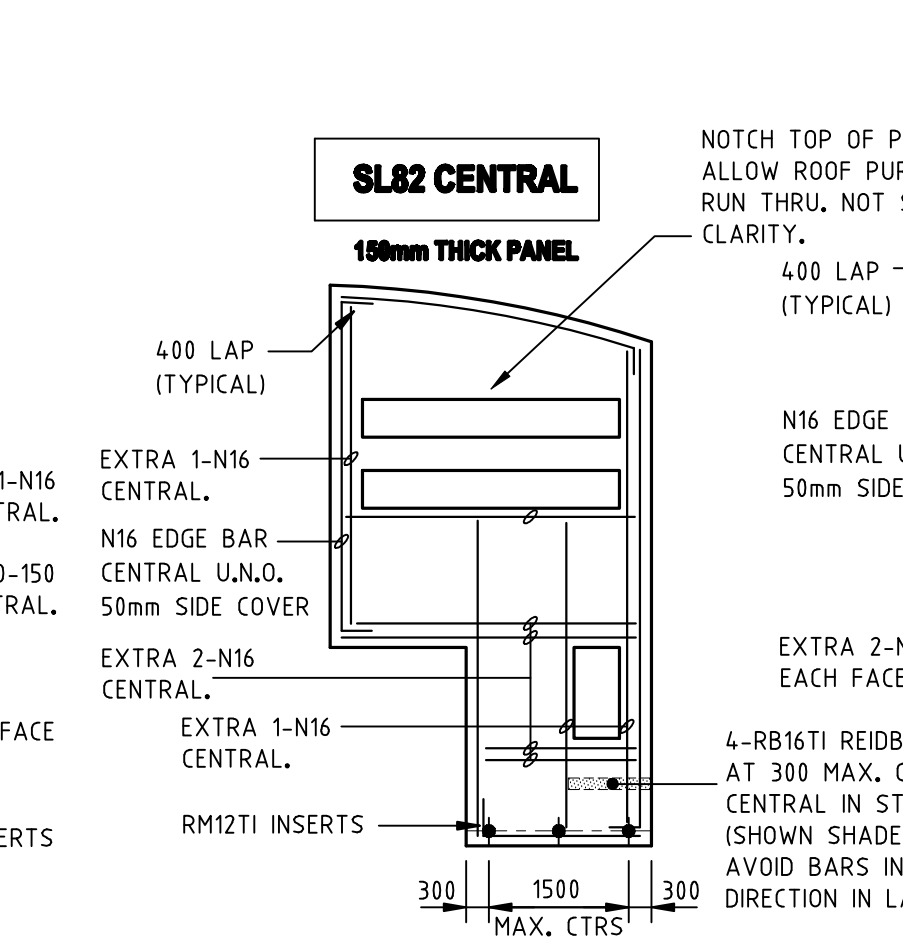
TYPICAL WALL PANEL P21 & 21a



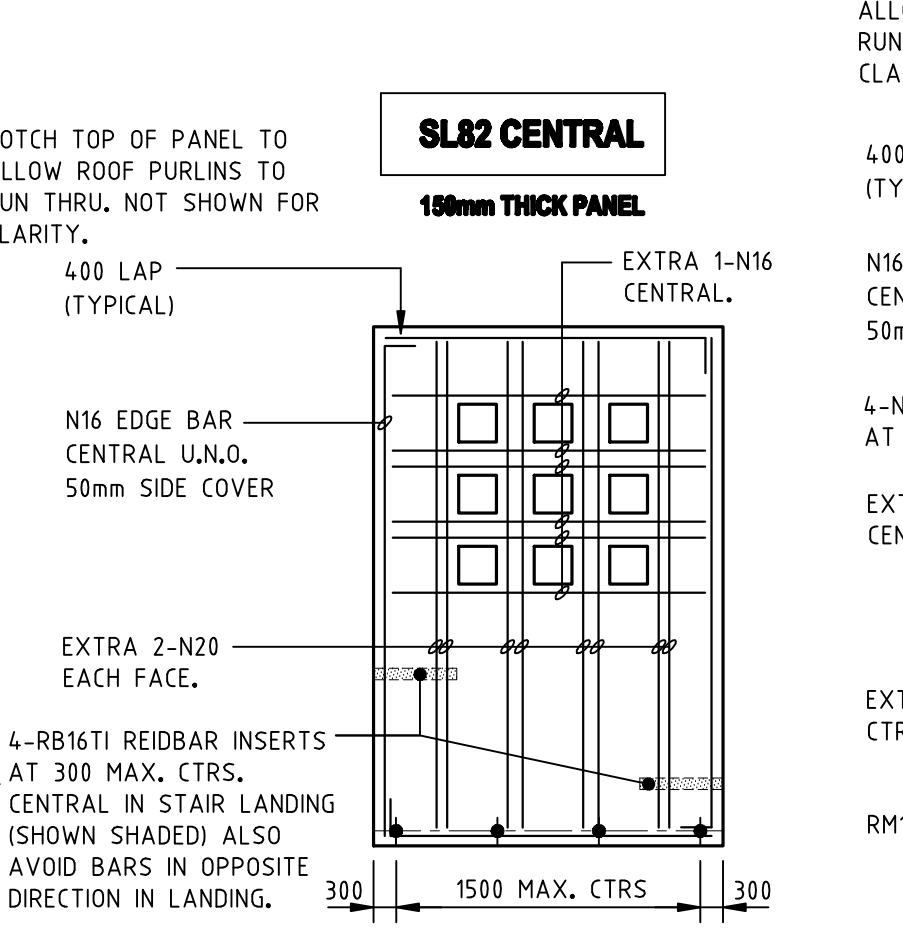
TYPICAL WALL PANEL P7



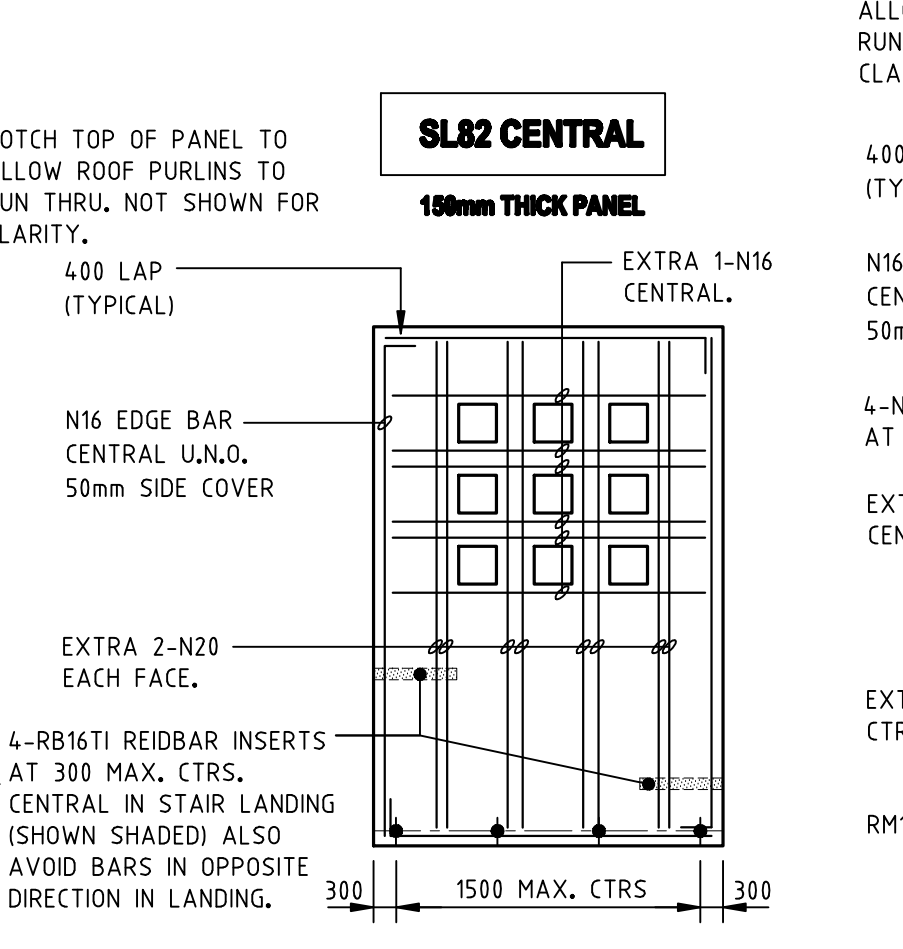
TYPICAL WALL PANEL P23



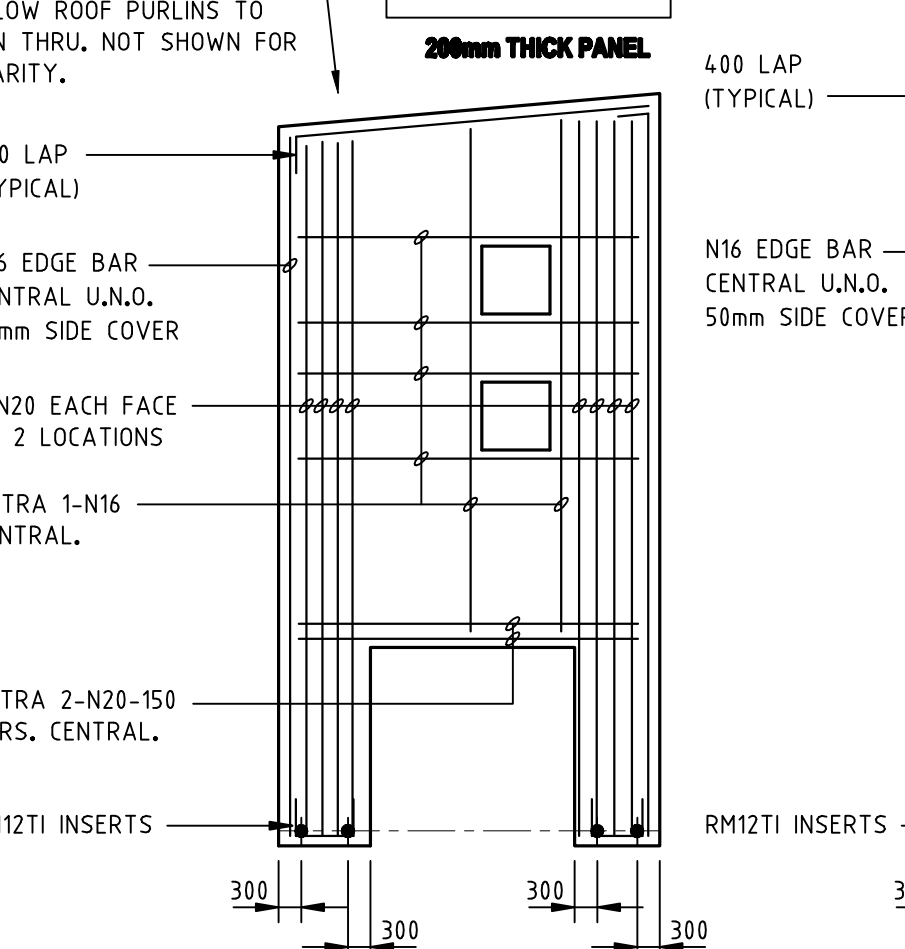
TYPICAL WALL PANEL P25



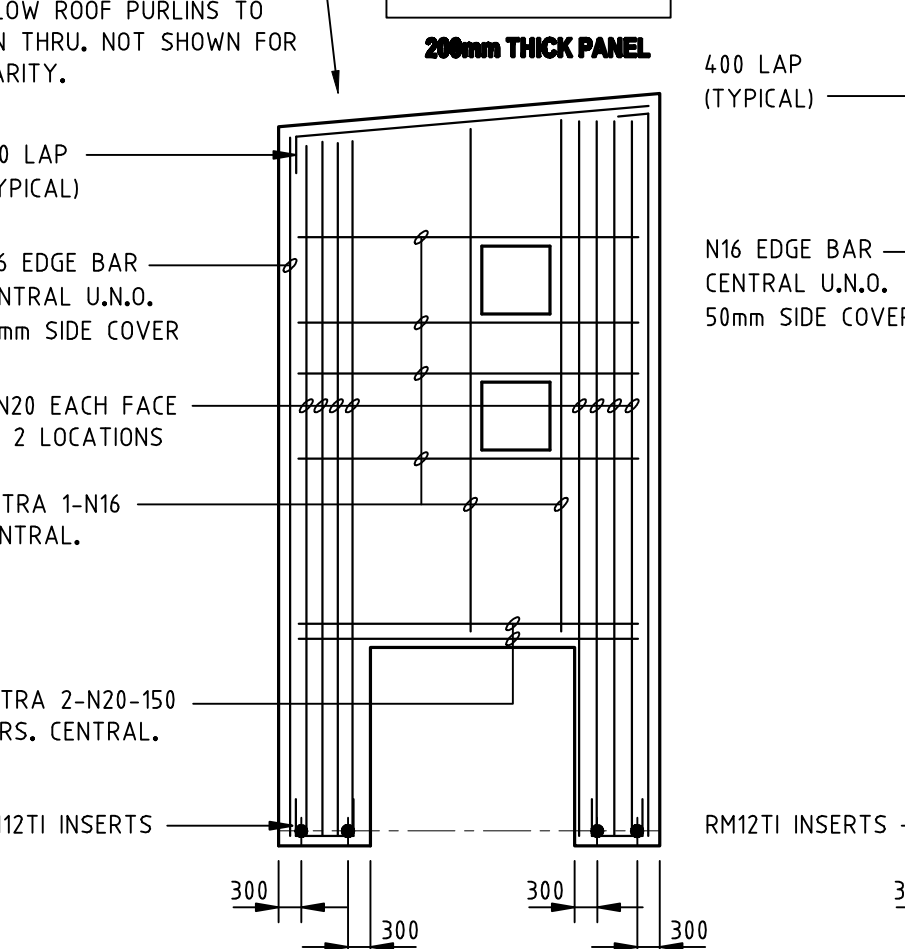
TYPICAL WALL PANEL P24



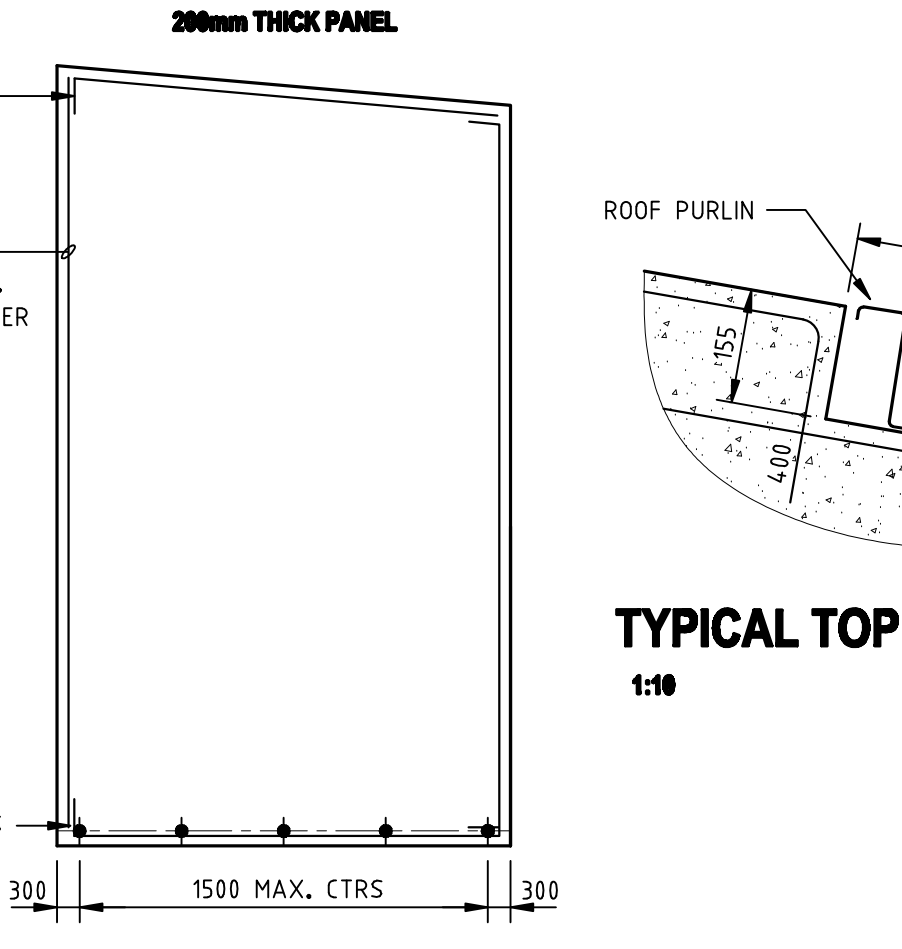
TYPICAL WALL PANEL P26



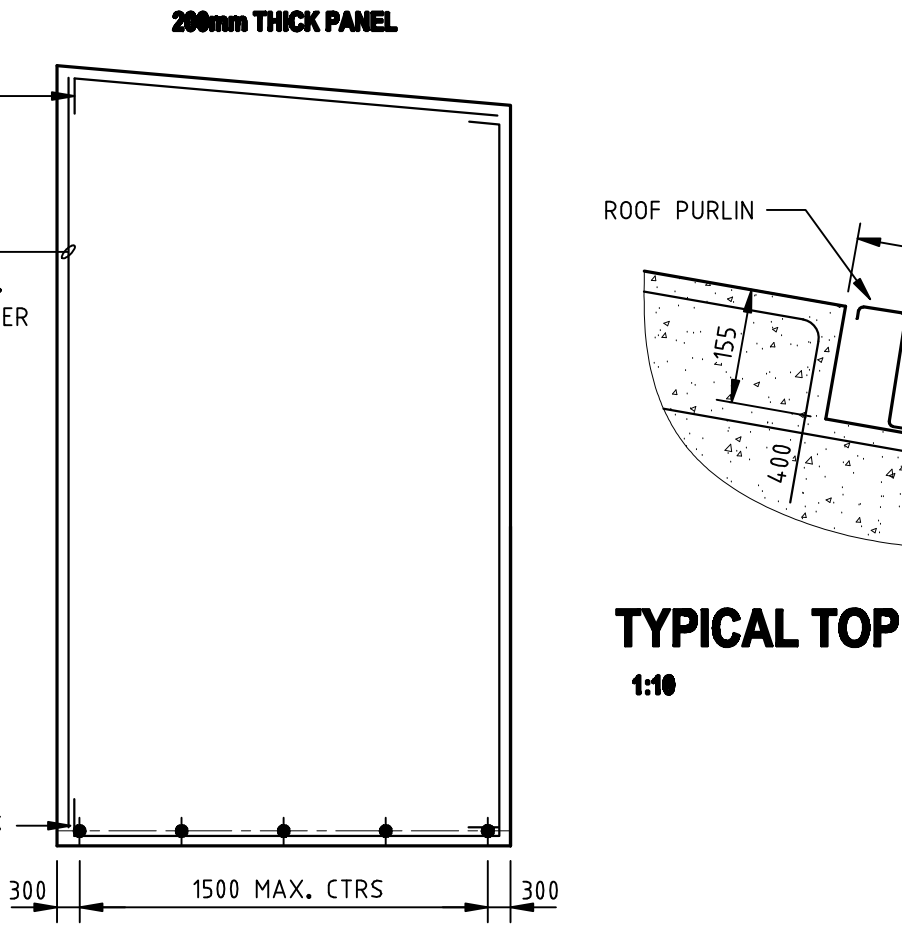
TYPICAL WALL PANEL P29
PANEL P32 SIMILAR
INSERTS TO SLAB & STAIR LANDING



TYPICAL WALL PANEL P28



TYPICAL WALL PANEL P30
PANEL P31 SIMILAR



PANELS SHOWN ARE INDICATIVE ONLY. SUBMIT SHOP DRAWINGS FOR APPROVAL. PROVIDE STRONGBACKS AS REQUIRED FOR LIFTING.

CONCRETE WALL PANELS

- ALL PANELS TO BE 180mm THICK U.N.O. - REFER ELEVATIONS.
- PANEL REINFORCEMENT TO BE AS NOTED CENTRAL U.N.O. PLUS 1-N12 EDGE BAR WITH MINIMUM 400mm LAP AT CORNERS. PROVIDE ADDITIONAL REINFORCEMENT AT PANEL OPENINGS AS NOTED ON ELEVATIONS.
- COMPRESSIVE STRENGTH OF CONCRETE TO BE 32MPa TO ACHIEVE MINIMUM CONCRETE STRENGTH AT LIFTING OF 25 MPa.
- ALL PANEL LIFTING BRACING AND FERRULE INSERTS TO BE IN ACCORDANCE WITH MANUFACTURERS SPECIFICATION.
- PANEL SHOP DETAILER TO CONFIRM LOCATIONS OF N12 FERRULES FOR CONNECTION TO FLOOR SLAB, E. TROWELLED OR FORM FACE. FOR CAST-IN PLATES REFER TO STRUCTURAL STEEL DRAWINGS.
- PROVIDE 15x15 CHAMFERS TO ALL EXPOSED EDGES OF PANELS (TYPICAL)

TILT UP PANEL NOTES

- ALL CONSTRUCTION OF TILT UP PANELS, INCLUDING LIFTING AND BRACING INSERTS, BRACES, PROPS, LEVELLING PADS (SHMS), STRONGBACKS AND CRANAGE SHALL COMPLY WITH AS3850 PARTS 1 & 2.
- THE PANELS SHALL BE DESIGNED TO AVOID ANY CRACKING/WARPING ETC. DURING STRIPPING, LIFTING, TRANSPORTATION, ERECTION OR BRACING. (E.G. THE LIFTING INSERT LOCATIONS SHALL BE DESIGNED TO ENSURE THAT THE FLEXURAL TENSION IS LESS THAN THE ALLOWABLE TENSILE CAPACITY OF THE CONCRETE AT THE TIME OF LIFTING THE FOLLOWING LOAD FACTORS SHALL BE USED IN THE DESIGN:

| | |
|----------------|------|
| STRIPPING | 1.5 |
| TRANSPORTATION | 2.0 |
| ERECTION | 1.25 |

IT SHALL BE THE PANEL MANUFACTURERS RESPONSIBILITY TO HAVE THE PANELS DESIGNED & APPROVED BY A QUALIFIED ENGINEER, FOR THE PROPOSED METHOD OF LIFTING & BRACING OF ERECTED PANELS.

- A SAFETY FACTOR OF 2.5 AGAINST FAILURE OF ALL LIFTING AND BRACING INSERTS SHALL BE USED.
- LIFTERS, INSERTS, FERRULES, BRACING ETC. SHALL BE AS SUPPLIED BY ALAN H. REID PTY. LTD. ENGINEER TO BE NOTIFIED AND WRITTEN APPROVAL OBTAINED FOR USE OF ANY ALTERNATIVE SYSTEM.
- ENGINEER MUST INSPECT ALL WALL PANEL REINFORCEMENT, PRIOR TO POURING ANY WALL PANELS. NO CERTIFICATES OF STRUCTURAL ADEQUACY WILL BE GIVEN IF INSPECTIONS HAVE NOT BEEN MADE.

- PANEL REINFORCEMENT SHOWN ON THE DRAWINGS ARE FOR GENERAL IN-SERVICE LOADS ONLY. (E.G. WIND LOADS, THERMAL AND SHRINKAGE CRACK CONTROL). ADDITIONAL REINFORCEMENT AND/OR STRONGBACKS SHALL BE USED AS DEEMED NECESSARY DURING ALL STAGES OF THE WORK TO MAINTAIN THE PERFORMANCE OF ALL PANELS.

- THE CONCRETE SHALL BE DESIGNED TO ACHIEVE THE SPECIFIED STRENGTH AND BE SUFFICIENT TO LIMIT CRACKING DUE TO SHRINKAGE AND TEMPERATURE EFFECTS IN THE CURING OF CONCRETE. CRACK WIDTHS MUST BE COMPATIBLE WITH THE DURABILITY REQUIREMENTS OF EXPOSURE CLASSIFICATION C OF AS3603-1998.

- PROVIDE STEEL SPLICE PLATES OR THE LIKE TO ENSURE THAT PANELS ARE STRAIGHT AND WARP FREE, RELATIVE TO EACH OTHER AT ALL VERTICAL JOINTS. REFER TO ELEVATIONS.

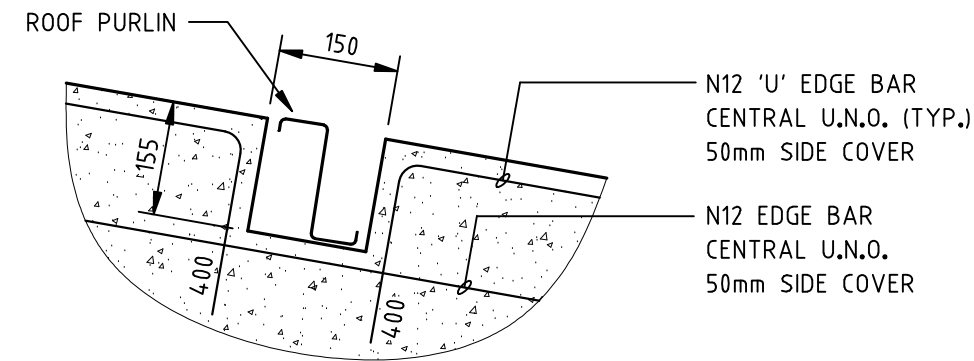
- TIE ALL BRICKWORK AT PRECAST PANELS WITH MEDIUM DUTY STEEL TIES AT 600 CRS. MAX. VERTICAL U.N.O.

- ALL PRESSURE GROUTED CORES AND HOLES TO BE GROUTED WITH NON-SHRINK EPOXY GROUT.

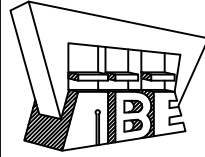
- ALL CAST-IN FERRULES AND STUDS SHALL EXTEND BEYOND THE CENTRAL REINFORCING MESH. ALL FERRULES SHALL BE TIED IN BEHIND THE REINFORCEMENT AND PROVIDED WITH CROSS BARS, REFER TO AS3850 FOR REQUIREMENTS.

- PROPRIETARY SLEEVE SPLICE SHALL BE INSTALLED STRICTLY TO MANUFACTURER'S RECOMMENDATIONS. SLEEVE SHALL BE GROUTED FROM BOTTOM INLET ONLY AND FULLY PENETRATE THE VOID BETWEEN THE SLEEVE. GROUTING SHALL NOT COMMENCE UNTIL GROUT PRODUCT HAS BEEN APPROVED BY THE ARCHITECT.

NOTE : ALL FERRULES CAST INTO PANEL TO HAVE CROSS BARS TIED INTO PANEL REINFORCEMENT IN ACCORDANCE WITH FERRULE DIAMETER REQUIREMENTS.



TYPICAL TOP OF PANEL BLOCKOUT DETAIL 1:10

| | | | |
|--|--|---------|--------------|
|  ADVANCED BUILDING ENGINEERS PTY LTD ABN 43 120 473 832 ACN 120 473 832 632 NEWCASTLE STREET, LEEDERVILLE, WA 6007. T. 08 9228 4644, F. 08 9328 2937 www.abewa.com.au | | PROJECT | |
| DRAWING TITLE CONCRETE WALL PANEL REINFT ELEVATIONS AND DETAILS | | DRAWN | APPROVED BY: |
| DESIGNED | | CHECKED | SCALE: 1:100 |
| | | | SHEET S3 |
| | | | REV 2 |