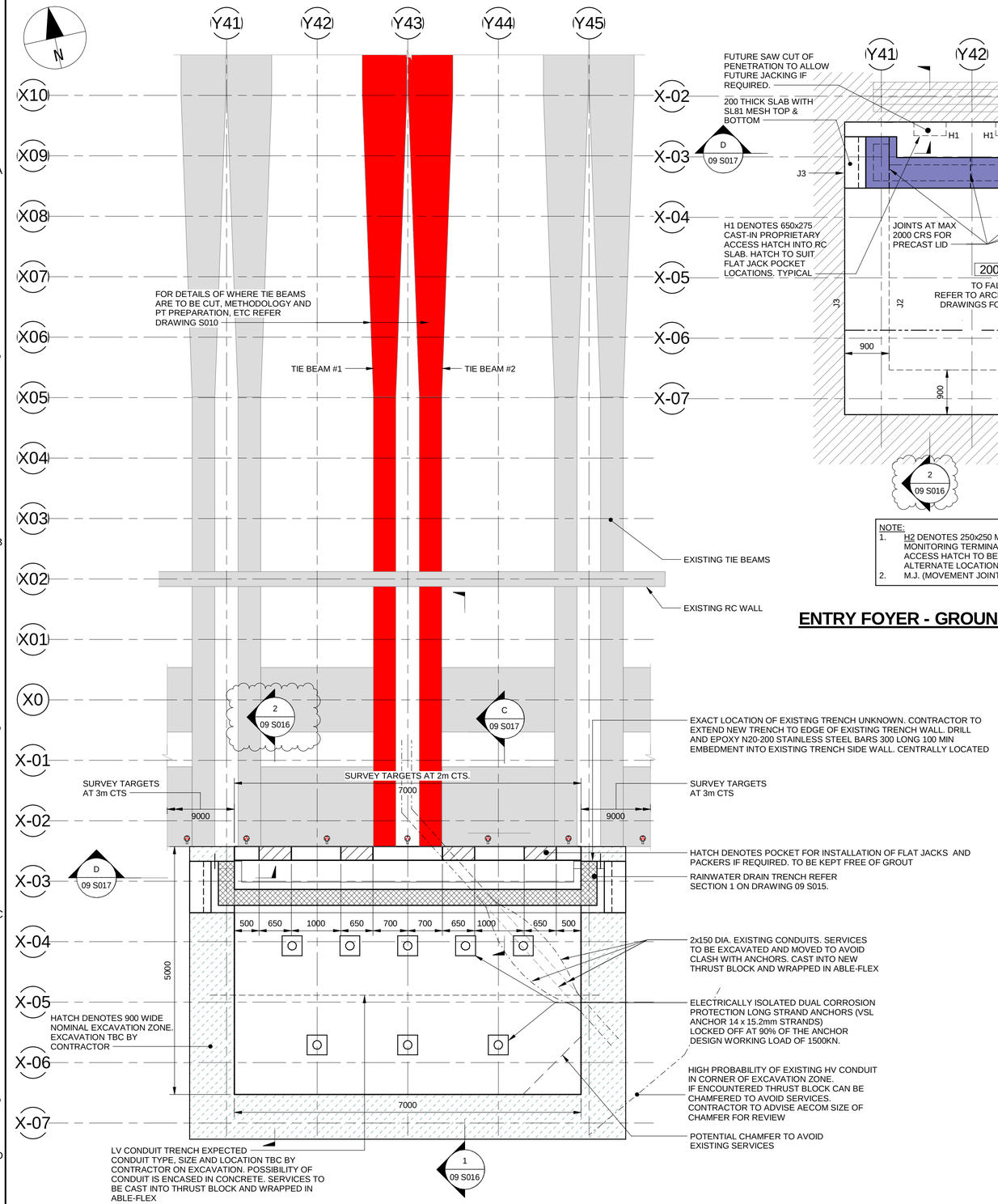
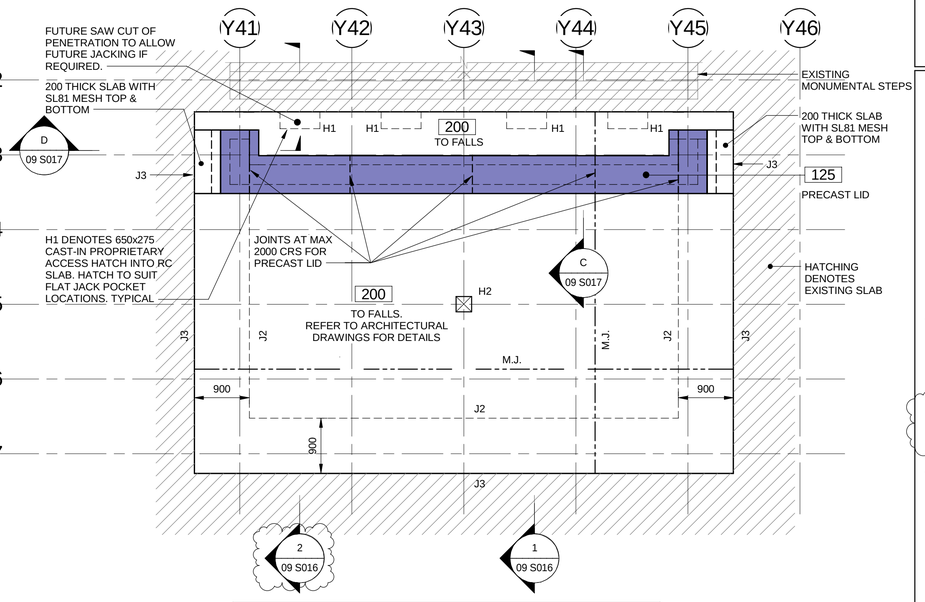


ENTRY FOYER - GROUND FLOOR THRUST BLOCK SLAB PART PLAN

Scale: 1 : 50



NOTE:
1. H2 DENOTES 250x250 MAX SLAB PENETRATION FOR ANCHOR MONITORING TERMINAL (TERMINAL DETAILS TBC BY VSL). PROPRIETARY ACCESS HATCH TO BE RECESSED INTO FORECOURT FINISHES. ALTERNATE LOCATION FOR TERMINAL IS UNDER H1 HATCH.
2. M.J. (MOVEMENT JOINT) LOCATIONS TO SUIT ARCHITECTURAL LAYOUTS

LEGEND

DENOTES EXISTING STRUCTURE

DENOTES SURVEY TARGET

NOTES:
1. REFER DRAWING No. S001 & S002 FOR STRUCTURAL GENERAL NOTES.
2. PLAN GRID AND R.L. DIMENSIONS SHOWN ON THE STRUCTURAL DRAWINGS ARE INDICATIVE ONLY AND REFLECT THE SET-OUT INFORMATION USED DURING DESIGN. REFER GENERAL NOTES AND ARCHITECT'S DRAWINGS FOR FINAL SET-OUT.

THRUST BLOCK NOTES

GEOTECHNICAL NOTES:
1. THRUST BLOCK EXCAVATIONS SHALL BE DEWATERED, ALL ROCK SURFACES SHALL BE CLEANED OF ALL DEBRIS AND ROUGHENED TO AT LEAST R4 –DEFINED AS "GROOVES OR UNDULATIONS GREATER THAN 10, WIDTH GREATER THAN 10, AT SPACING 50 TO 200", ORIENTATED PERPENDICULAR TO TIE BEAMS.
2. ROCK SHALL BE INSPECTED BY THE AECOM GEOTECHNICAL ENGINEER TO CONFIRM MINIMUM ROUGHNESS REQUIREMENTS HAVE BEEN MET PRIOR TO PLACING CONCRETE.

GROUND ANCHORING & MONITORING NOTES:
1. REFER TO SPECIFICATION FOR GROUND ANCHORING INFORMATION.
2. SURVEY DATA SHALL BE PROVIDED TO THE AECOM GEOTECHNICAL AND STRUCTURAL ENGINEERS TO MONITOR STRUCTURAL MOVEMENTS PRIOR, DURING AND FOLLOWING CONSTRUCTION.
3. THE DESIGN ASSUMES A MINIMUM ANCHOR HOLE DIAMETER IN ROCK OF 210.
4. ALL GROUND ANCHORS SHALL BE LOAD TESTED IN ACCORDANCE WITH SECTION 1.4 OF THE STRUCTURAL ENGINEERING SPECIFICATION WITH THE FOLLOWING TEST LOAD MODIFICATION. ANCHORS SHALL BE STRESSED TO 140% OF THE NOMINATED WORKING LOAD OF 1500KN OR 75% OF THE ULTIMATE ANCHOR CAPACITY, WHICHEVER IS LOWER.
5. AFTER TESTING ANCHORS SHALL BE LOCKED OFF AT 90% OF THE ANCHOR DESIGN WORKING LOAD OF 1500KN

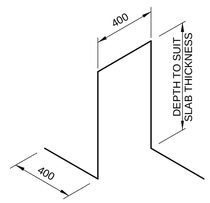
DESIGN ASSUMPTIONS:
1. ULTIMATE DESIGN THRUST FROM EXISTING TIE BEAMS, 7000kN (3500kN PER TIE BEAM).
2. WHERE STAGED CONCRETE WORKS ARE UNDERTAKEN, CONCRETE SURFACE IS TO BE CLEARED OF ALL WATER & DEBRIS AND DELIBERATELY ROUGHENED BY TEXTURING THE CONCRETE TO GIVE A PRONOUNCED PROFILE, MUST ACHIEVE A FRICTION COEFFICIENT OF 0.9 & A COHESION COEFFICIENT OF 0.4 AS PER TABLE 8.4.3 AS3600-2009.
3. THE CONTRACTOR SHALL ENGAGE THE AECOM GEOTECHNICAL ENGINEER TO VERIFY THAT THE ROCK EXPOSED IN THE EXCAVATION IS CLASS II SANDSTONE OR BETTER, (CLASSIFIED IN ACCORDANCE WITH PELLS ET AL 1998).

FLATJACK NOTES:
1. TO BE UTILISED INITIALLY TO PRELOAD THRUST BLOCK PRIOR TO CUTTING TIE BEAM. TEMPORARY 4X MIN 500DIA FLAT JACKS TO BE INSTALLED INTO 4X POCKETS AND PRELOADED TO 1000KN MAX PER JACK (MAX TOTAL THRUST 4000KN)
2. TO BE UTILISED IN CONJUNCTION WITH MONITORING DATA WHERE REQUIRED BY ADVICE OF STRUCTURAL ENGINEER.

CONSTRUCTION NOTES:
1. CONTRACTOR TO MITIGATE THE EFFECTS OF SHRINKAGE AND THERMAL EFFECTS DUE TO HEAT OF HYDRATION. CONTRACTOR TO SUBMIT PROPOSAL FOR REVIEW AND APPROVAL OF MIX DESIGN, POUR SEQUENCE AND METHODOLOGY.

REPORTING & SEQUENCING:
1. BASELINE MONITORING SURVEY.
2. EXCAVATE TO 1.2m.
3. READ & REPORT SURVEY DATA.
4. EXCAVATE TO FINAL LEVEL (2.4m).
5. READ & REPORT SURVEY DATA.
6. READ & REPORT SURVEY DATA EVERY 2 DAYS UNTIL PRESTRESSING HAS BEEN COMPLETE.
7. PREPARE GROUND SURFACE, THE AECOM GEOTECHNICAL ENGINEER IS TO REVIEW SURFACE ROUGHNESS AND TO ADVISE SUITABILITY BEFORE CONTINUATION OF CONSTRUCTION.
8. PLACE REINFORCEMENT.
9. CONCRETING WORKS (POSSIBLY STAGED).
10. INSTALL VSL ANCHORS, BOND LENGTH TO BE INSTALLED. FREE LENGTH TO BE LEFT UNGROUTED.
11. FORMING, COMPACTION AND INTERFACE OF THRUST BLOCK UP AGAINST EXISTING TIE BEAM IS CRITICAL. AECOM ENGINEER TO INSPECT AND APPROVE CONCRETE WORKS IN THIS ZONE PRIOR TO PROCEEDING
12. VSL ANCHORS TO BE STRESSED FOLLOWING THRUST BLOCK ACHIEVING 28 DAY STRENGTH, NOTE : ADMIXTURES CAN BE ADDED TO MIX DESIGN TO REDUCE CURING TIME IF REQUIRED. CONTRACTOR TO SUBMIT PROPOSAL TO AECOM FOR REVIEW. PROOF LOAD TEST TO BE COMPLETED AND LOADING REPORT TO BE SENT TO THE AECOM GEOTECHNICAL AND STRUCTURAL ENGINEERS.
13. INSTALL 4 NUMBER TEMPORARY FLAT JACKS INTO FLAT JACK POCKETS AND PRELOAD TO 1000KN MAX PER JACK (MAX TOTAL THRUST 4000KN) OR UNTIL ANY MOVEMENT TRIGGERED OF EXISTING TIE BEAM IN NORTH DIRECTION FROM MONITORING SURVEY TARGET POINTS.
14. READ & REPORT SURVEY DATA.
15. CUT FIRST EXISTING PT BEAM.
16. READ & REPORT SURVEY DATA.
17. CUT SECOND EXISTING PT BEAM.
18. READ & REPORT SURVEY DATA.
19. GROUT FREE END OF PT DUCT IN THRUST BLOCK
20. GROUT PACK INTERFACE ZONE BETWEEN THRUST BLOCK AND EXISTING TIE BEAMS IF ANY LATERAL MOVEMENT HAS OCCURRED. ENGINEER TO ADVISE AND INSPECT GROUT PACKING LOCATIONS FOLLOWING SITE INSPECTION.
21. CONTINUE REPORTING SURVEY DATA UNTIL CONSTRUCTION WORKS ARE COMPLETE AND THE AECOM GEOTECHNICAL ENGINEER CONCLUDES THAT MAJOR LATERAL MOVEMENT HAS CEASED.
22. REMOVE FLAT JACKS SEQUENTIALLY
23. ON COMPLETION OF WORKS CONTRACTOR TO INSPECT SUBSTATION AND PROVIDE CONDITION REPORT TO STRUCTURAL ENGINEER FOR REVIEW

ANCHOR MONITORING PROCEDURE:
1. ELECTRICALLY ISOLATED ANCHORS TO BE REMOTE MONITORED.
2. MONITORING CONDUITS TO BE INSTALLED TO ANCHOR HEADS AND LINKED TO A CENTRAL MONITORING TERMINAL LOCATED AT HATCH H2 (ALTERNATE LOCATION AT ANY HATCH H1). CONDUITS TO BE CAST INTO NEW SLAB AND RUN THROUGH SAND/CEMENT LAYER UNDER FORECOURT FINISHES INTO H2 HATCH. MONITORING OF ELECTRICALLY ISOLATED ANCHORS TO OCCUR MINIMUM EVERY 5 YEARS AND DATA SUBMITTED TO VSL AND AECOM FOR REVIEW.
3. INSTALL SURVEY POINTS TO MONITOR THRUST BLOCK LATERAL MOVEMENT WITHIN H1 HATCHES. LATERAL MOVEMENT TO BE SURVEYED MINIMUM EVERY 5 YEARS AND DATA SUBMITTED TO AECOM FOR REVIEW. FUTURE FLAT JACKING AND GROUT PACKING MAYBE REQUIRED IF LATERAL MOVEMENT HAS OCCURRED. ENGINEER TO ADVISE BASED ON 5 YEAR REPORTING DATA.
4. ANCHOR DESIGN LIFE TO BE REVIEWED BY VSL AFTER INITIAL 95 YEARS HAS EXPIRED.



TYPICAL BAR CHAIR DETAIL

NTS

NOTES:
1. SHOWN IN ISOMETRIC VIEW.
2. BAR CHAIRS AT 2000 CRS. EACH WAY UNO.
3. FOR ≤ 750 THICK SLAB BAR SIZE TO BE N16.
4. FOR > 750 THICK SLAB BAR SIZE TO BE N20.

TRIGGER LEVELS

LATERAL MOVEMENT AT INTERFACE OF THRUST BLOCK AND EXISTING STRUCTURE.

<3mm	3mm	5-10mm	>10mm
A	B	C	D
-	INFORM THE AECOM GEOTECHNICAL AND STRUCTURAL ENGINEERS AND SEEK INSTRUCTION.	PROCEED WORK UNDER ADVICE FROM THE AECOM GEOTECHNICAL AND STRUCTURAL ENGINEERS AND INCREASE SURVEY REPORTING TO TWICE A DAY.	FLAT JACKING TO BEGIN.

0 1250 2500 mm

1:50

CONTRACTOR CAUTION: HIGH PROBABILITY OF EXISTING HV & LV CONDUIT LOCATED IN EXCAVATION ZONE.

NOT FOR CONSTRUCTION

Issue	Description	Drwn	Apvd	Date
05	ISSUED FOR TENDER	J.T.	J.O.	10.08.2018
04	ISSUED FOR TENDER	E.C.	J.O.	13.07.2018
03	ISSUED FOR TENDER	J.T.	J.O.	26.06.2018
02	ISSUED FOR TENDER	HG	J.O.	02.05.2018
01	ISSUED FOR TENDER	J.T.	J.O.	15.12.2017

SAFETY IN DESIGN INFORMATION

SAFETY IN DESIGN ISSUES HAVE BEEN ASSESSED AS PART OF THE DESIGN PROCESS. ALL REASONABLE STEPS HAVE BEEN TAKEN TO ENSURE HAZARDS AND RISKS NORMALLY ASSOCIATED WITH THIS TYPE OF DESIGN HAVE BEEN MITIGATED AND/OR COMMUNICATED. RESIDUAL HAZARDS AND RISKS AND/OR HAZARDS AND RISKS NOT NORMALLY ASSOCIATED WITH THIS TYPE OF WORK WHICH MAY REQUIRE SUBSEQUENT CONSIDERATION AND/OR ACTION ARE DESCRIBED IN - SOH-FOH SAFETY DESGIN REGISTER MATRIX DOCUMENT

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Location

Status: FOR TENDER

Contract: SOH-513

Dwn J.BRAGA 10-08-2018

Ckd J.ONSLOW Scale 1:1, 1:50

Project: BUILDING RENEWAL PROGRAM
ENTRY FOYER ESCALATORS

Title: STRUCTURAL
THRUST BLOCK DETAILS - SHEET 1

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Location	Drawing No:	Sheet:	Rev:	
BX VA	29 BR AEC09	S015	05	A1