PROJECT: ACCESS RAMP - CARDIOLOGY CLINIC
ADDRESS: 438 HIGH STREET, MELTON
VIC 3337

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WB CIVIL STRUCTURAL ENGINEERS
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DISCLAIMER

CIVIL/STRUCTURAL DESIGN ENGINEER WB CIVIL STRUCTURAL ENGINEERS MUST NOT BE HELD RESPONSIBLE FOR ANY CLAIM ARISING DUE TO MISTAKES, OMISSIONS AND SUBSTANDARD WORKMANSHIP BY BUILDER OR ITS SUB-CONTRACTORS AND SUPPLIERS.

NOTE:
SETTING-OUT OF ANY ELEMENT MUST BE DONE AS PER ARCHITECTURAL PLANS. DIMENSIONS PROVIDED ON THESE PLANS MUST ALWAYS BE CHECKED AGAINST ARCHITECTURAL PLANS.

STRUCTURAL ENGINEER (MOBILE: 0401023328)MUST BE KEPT INFORMED IMMEDIATELY OF ANY DISCREPANCY AND CLARIFICATION SOUGHT BEFORE SETTING-OUT AND CONCRETING IS ORGANISED.

DIAL BEFORE YOU DIG www.1100.com.au

WARNING
ALL SERVICES SHOWN ON THESE DRAWINGS ARE APPROXIMATE ONLY AND EXACT LOCATION IS TO BE CONFIRMED ON SITE BY CONTRACTOR PRIOR TO COMMENCEMENT OF ANY WORKS.

CLIENT:
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JOB NO: CARDIOLOGIST/2016/1

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PROJECT:
ACCESS RAMP
PROJECT ADDRESS:
438 HIGH STREET, MELTON
VIC 3337

SHEET NO: 1/6

SCALE: AS SHOWN

DATE: 08/04/2016

Rev.	Remarks/comments	Date	Aprv.
A	Remarks/comments	Date	Aprv.

STANDARDS, MATERIALS, AND WORKMANSHIP REQUIREMENTS

THESE NOTES TO BE FOLLOWED UNLESS NOTED OTHERWISE BY THE ENGINEER

GENERAL NOTES

G1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH SPECIFICATION AND OTHER WORKING DRAWINGS. ANY DISCREPANCIES SHALL BE NOTIFIED TO THE ENGINEER IMMEDIATELY.

G2. ALL DIMENSIONS RELEVANT TO SETTING OUT AND OFF-SITE WORK SHALL BE VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION AND FABRICATION IS COMMENCED. THE ENGINEER'S DRAWINGS SHALL NOT BE SCALED.

G4. MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE SPECIFICATION, THE CURRENT REVISION OF ALL RELEVANT SAA CODES, THE REQUIREMENTS OF THE VICTORIAN BUILDING REGULATIONS, THE BUILDING CODE OF AUSTRALIA AND THE RELEVANT AUTHORITY.

G5. CONTRACTORS SHALL ENSURE THAT LOCATIONS OF ALL UNDERGROUND SERVICES ARE IDENTIFIED PRIOR TO COMMENCEMENT OF WORKS AND EXCAVATIONS. THE WORK COMMENCES.

G6. RELEVANT STANDARDS USED:

1	Structural Steel Design	AS4100
2	Structural Reinforced Concrete Design	AS3600
3	Structural Timber Framing	AS1684
4	Timber Structures Design	AS1720
5	Domestic Slab Design	AS2870
6	Brickwork	AS3700
6	Wind Analysis & Design	AS1170
7	Access & Mobility	AS1428
8	Welding	AS1554
9	Bolts & Nuts	AS1252
10	Cold formed Steel	AS 4600
11	Bolts & Nuts	AS1252
12	Stormwater Drainage	AS3500
13	Glazing	AS1288/AS2047
14	Water Proofing to Wet Areas	AS3740/BCA 4-3-1

LIVE LOADS

L1. THE STRUCTURAL WORKS SHOWN ON THESE DRAWINGS HAS BEEN DESIGNED FOR THE FOLLOWING LIVE LOADS:-

ROOF ..... 0.25 kPa OR [1.8/A + 0.12] WHICHEVER IS GREATER

FLOOR ..... 1.5 kPa. (OR AS USED FOR COMPUTATIONS)

Balcony ..... 2.0 kPa. (OR AS USED FOR COMPUTATIONS)

TEMPORARY BRACING

TB1. DURING CONSTRUCTION THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PARTS SHALL BE OVER STRESSED.

TB2. THE CONTRACTOR SHALL PROVIDE AND INSTALL ANY ADDITIONAL BRACING, EQUIPMENT NECESSARY TO ADEQUATELY AND SAFELY HOLD THE STRUCTURE IN POSITION DURING CONSTRUCTION.

CONCRETE

C1. ALL CONCRETE AND WORKMANSHIP TO CONFORM TO THE REQUIREMENTS OF AS 3600.

C2. ALL INSET CONCRETE SHALL BE A CHARACTERISTIC STRENGTH TO BE AS NOTED BELOW AT 28 DAYS UNLESS NOTED OTHERWISE:-

BLINDING CONCRETE 15 MPa
STRIP FOOTINGS 20 MPa.
PAD FOOTINGS 20 MPa
SLAB ON GROUND 20 MPa
ALL OTHER MEMBERS TO BE 32 MPa (OR AS NOTED OTHERWISE).

MAXIMUM SLUMP TO BE 75mm
MAXIMUM AGGREGATE TO BE 20mm

C3. CONCRETE ELEMENTS SHOWN ON THE DRAWINGS MUST NOT BE REDUCED IN ANY WAY WITHOUT THE ENGINEER'S APPROVAL NO HOLES, CHASES DRY EMBEDMENT'S OTHER THAN THOSE SHOWN WILL BE PERMITTED IN ANY CONCRETE ELEMENTS WITHOUT THE ENGINEER'S APPROVAL

C4. REINFORCEMENT NOTATION:-
N - DENOTES HOT-ROLLED DEFORMED BARS TO AS 4671
RL - DENOTES RECTANGULAR REINFORCEMENT FABRIC TO AS/NZS 4671
SL - DENOTES SQUARE REINFORCEMENT FABRIC TO AS/NZS 4671
LXTM - DENOTES TRENCH MESH REINFORCEMENT TO AS/NZS 4671.

LAPPING REINFORCEMENT:

REINFORCEMENT SPLICES SHALL BE LAP SPLICES AS REQUIRED BY THE CURRENT CONCRETE CODE UNLESS NOTED IN THE DRAWINGS. FOR FABRIC, THE MINIMUM SPLICE SHALL BE 220mm MINIMUM WITH THE OVERLAP MEASURED BETWEEN THE OUTERMOST WIRES AND NOT LESS THAN THE PITCH OF THE SECONDARY WIRES.

C5. CLEAR COVER TO REINFORCEMENT AS NOTED ON THE DRAWINGS.

C6. CONCRETE COVER TO BE MAINTAINED BY THE USE OF APPROVED BAR CHAIRS AND/OR CONCRETE BLOCKS SPACED AT APPROXIMATELY 1000 CROSS CTS. CONDUITS, PIPES ETC. ARE NOT TO BE PLACED IN CONCRETE COVER.

C7. CONCRETE TO BE KEPT FREE OF SUPPORTING BRICKWORK BY TWO LAYERS OF A SUITABLE MEMBRANE; VERTICAL FACES OF CONCRETE TO BE KEPT FREE BY 12mm THICKNESS OF BITUMINOUS CANEITE.

C8. ALL MILD STEEL BRACKETS, SLOTS ETC. EMBEDDED IN THE CONCRETE SHALL BE HOT-DIP GALVANISED.

C9. DIRECTION OF MESH ON PLAN INDICATES THE DIRECTION OF MAIN WIRES WHICH SHOULD BE PLACED NEAREST THE RELEVANT SLAB SURFACE.

C10. ALL CONCRETE SHALL BE PROPERLY COMPACTED BY MEANS OF APPROVED VIBRATORS.

C11. CONSTRUCTION JOINTS WHERE NOT SHOWN, SHALL BE LOCATED TO THE APPROVAL OF THE ENGINEER.

C12. FORMWORK SHALL NOT BE STRIPPED UNTIL 3 DAYS HAS ELAPSED FROM TIME OF POUR - UNLESS APPROVED OTHERWISE BY THE ENGINEER. NO LOADS APPLIED FOR 28 DAYS.

C13. ENGINEER TO BE NOTIFIED 48 HOURS PRIOR TO POURING CONCRETE.

C14. ALL PIPEWORK CAST INTO CONCRETE IS TO BE SLEEVED OR LAGGED WITH APPROPRIATE COMPRESSIBLE MATERIAL FOR THE FULL LENGTH OF EMBEDMENT.

BRICKWORK - BLOCKWORK

B1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3700.

B2. LOAD BEARING BRICKS SHALL HAVE A MINIMUM CHARACTERISTIC UNCONFINED STRENGTH OF 20 MPa AND LOAD BEARING BLOCKS SHALL HAVE A CHARACTERISTIC UNCONFINED COMPRESSIVE STRENGTH OF 15 MPa. UNLESS OTHERWISE NOTED.

B3. MORTAR SHALL BE FRESHLY PREPARED AND UNIFORMLY MIXED IN THE RATIO OF ONE PART CEMENT, ONE PART LIME AND SIX

B4. BLOCKWORK CORE FILLING CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE: 20 MPa.

B5. BRICKWORK OR BLOCKWORK SUPPORTING CONCRETE SHALL BE TROWELLED SMOOTH AND SEPARATED AT THE BEARING SURFACE BY A LAYER OF GALVANIZED STRIP OR TWO LAYERS OF BITUMINOUS BUILDING PAPER.

B6. JOINT REINFORCEMENT WHERE SHOWN ON THE PLAN SHALL BE AT EVERY 600mm. WITH AN EXTRA COURSE OVER AND UNDER WINDOW OPENINGS USING 'RECTOR', 'BLOTTER' OR SIMILAR.

B7. NO BRICKWORK OR BLOCKWORK WHICH IS SUPPORTED BY CONCRETE SHALL BE ERECTED UNTIL SUPPORTING FORMWORK HAS BEEN REMOVED.

B8. CAVITY WALL TIES TO BE IN ACCORDANCE WITH THE CURRENT BCA REQUIREMENTS.

STRUCTURAL STEELWORK

S1. ALL WORKMANSHIP, FABRICATION, ERECTION AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 4100.

S2. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER AND APPROVED BEFORE FABRICATION IS COMMENCED.

S3. EXCEPT AS SHOWN, STEEL MEMBERS SHALL NOT BE SPLICED WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.

S4. WELDING OF STEELWORK TO BE IN ACCORDANCE WITH AS 1554 AND UNLESS OTHERWISE NOTED, SHALL BE 6mm FILLET WELD ALL AROUND.

S5. ALL HIGH STRENGTH BOLTS SHALL BE ASSEMBLED AND INSPECTED IN ACCORDANCE WITH AS 1252.

8.8/S BOLTS ARE HIGH STRENGTH BOLTS.
8.8/TB BOLTS ARE HIGH STRENGTH BEARING TYPE SLOTS.
8.8/FT. BOLTS ARE HIGH STRENGTH FRICTION TYPE BELTS.

S6. STEEL WORK TO BE ENCASED IN CONCRETE SHALL NOT BE PAINTED, BUT SHALL BE GIVEN ONE COAT OF CEMENT WASH.

S7. STEEL WORK NOT ENCASED OR OTHERWISE NOTED SHALL BE GIVEN ONE COAT OF APPROVED METALLIC PRIMER AT LEAST 48 HOURS BEFORE DISPATCH.

S8. STEEL WORK TO BE ENCASED SHALL BE WRAPPED WITH 3mm WIRE AT 100mm PITCH AND ENCASED IN 42:1 CONCRETE WITH A MINIMUM COVER OF 50mm.

S9. ALL STEEL WORK BELOW GROUND SHALL BE ENCASED IN CONCRETE AND IF EXPOSED, GALVANISE TO HAVE 600 g/sq.m OF GALVANISE.

S10. ALL CLEATS AND DRILLING FOR FIXING OF ARCHITECTURAL ELEMENTS, TIMBER FRAMING ETC. SHALL BE PROVIDED BY THE FABRICATOR. THE STRUCTURAL DRAWINGS ARE DEEMED TO PROVIDE FOR ALL THE NECESSARY MAJOR STRUCTURAL STEEL WORK AND CONNECTIONS. MINOR NON-STRUCTURAL ITEMS SUCH AS TRIMMERS, CLEATS AND OTHER ITEMS SHOWN ON THE ARCHITECTURAL DRAWINGS, BUT NOT SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE ALLOWED FOR BY THE CONTRACTOR IN HIS TENDER PRICE, AND DETAILED.

S11. THE CONTRACTOR SHALL PROVIDE BRACING AND LEAVE IN PLACE UNTIL PERMANENT BRACING ELEMENTS ARE CONSTRUCTED OR CLEATS, ETC. AS IS NECESSARY TO STABILISE THE STRUCTURE DURING ERECTION.

S12. ALL UB, UC AND PFC MEMBERS TO HAVE Fy= 300 MPa MINIMUM.

TIMBER NOTES

T1. ALL TIMBER MATERIALS, WORKMANSHIP AND PRACTICE SHALL BE IN ACCORDANCE WITH THE TIMBER ENGINEERING CODE AS 1720 AND THE TIMBER FRAMING CODE AS 1684. ALL LINTELS, BEAMS ETC. NECESSARY FOR THE PROPER SUPPORT OF ROOF FRAMING SHALL BE PROVIDED EITHER AS SHOWN ON THE DRAWINGS OR AS REQUIRED IN ACCORDANCE WITH AS 1684.

T2. ALL TIMBER SHALL BE IN ACCORDANCE WITH THE STRESS GRADE NOMINATED ON THE DRAWINGS AND SHALL BE FREE OF DEFECTS, SPLITS, ROT ETC. THE ENGINEER RESERVES THE RIGHT TO REJECT UNSUITABLE TIMBER.

T3. ALL BOLTED TIMBER CONNECTIONS SHALL BE MADE WITH M12 BOLTS UNLESS NOTED OTHERWISE MILD STEEL WASHERS SHALL BE PLACED UNDER THE HEAD AND NUT IN ACCORDANCE WITH THE TABLE BELOW:-

WASHER SIZE

50x50x3mm	BOLTS UP TO M12
65x65x5mm	M16, M20 BOLTS
75x75x5mm	BOLTS GREATER THAN M20

ALL EXPOSED BOLTS AND FITTINGS SHALL BE HOT-DIP GALVANISHED.

T4. ALL BOLTS SHALL BE RE-TIGHTENED AT THE COMPLETION OF THE CONTRACT AND AGAIN AT THE END OF THE MAINTENANCE PERIOD. BOLTS WHICH ARE INACCESSIBLE AT THE COMPLETION OF THE STRUCTURAL WORKS SHALL BE RE-TIGHTENED IMMEDIATELY BEFORE BEING BUILT-IN.

TSO. ALL PROPRIETARY FIXINGS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS, OR AS NOTED ON THE STRUCTURAL DRAWINGS.

T6. THE STRUCTURAL DRAWINGS ARE DEEMED TO PROVIDE FOR ALL NECESSARY MAJOR STRUCTURAL TIMBER AND CONNECTIONS. MINOR NON-STRUCTURAL ITEMS SUCH AS TRIMMERS, CLEATS AND OTHER ITEMS AS SHOWN ON THE ARCHITECTURAL DRAWINGS, BUT ARE NOT SHOWN ON THE STRUCTURAL DRAWINGS, SHALL BE ALLOWED FOR BY THE CONTRACTOR IN HIS TENDER PRICE, AND DETAILED AT THE SHOP DRAWING STAGE IF REQUIRED.

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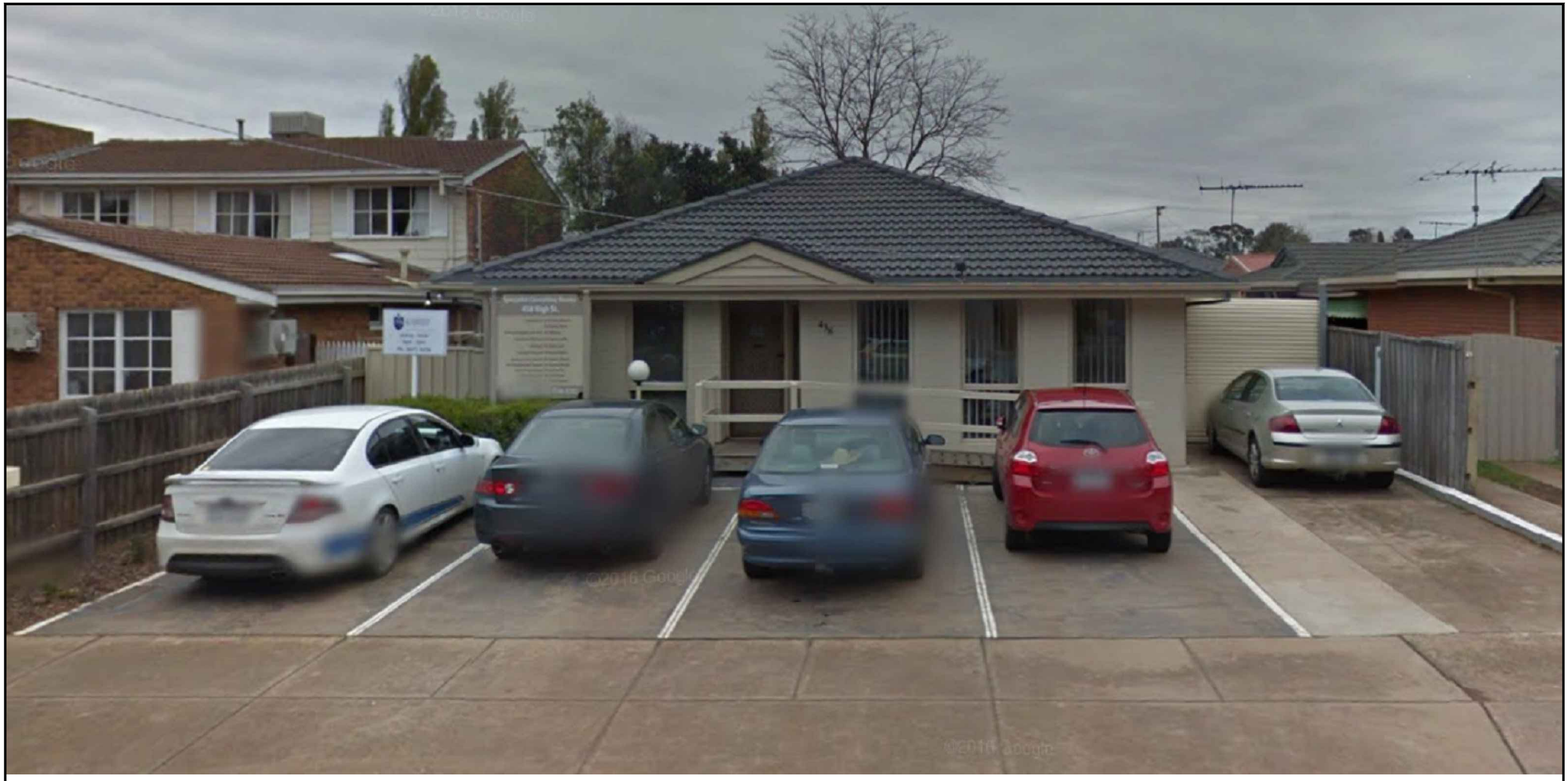
PROJECT:
ACCESS RAMP
PROJECT ADDRESS:
438 HIGH STREET, MELTON
VIC 3337

SHEET NO: 2/6

SCALE: AS SHOWN

DATE: 08/04/2016

WB CIVIL STRUCTURAL ENGINEERS



EXISTING CARDILOGIST CLINIC & CARPARK – STREET VIEW
438 HIGH STREET, MELTON
VICTORIA 3337

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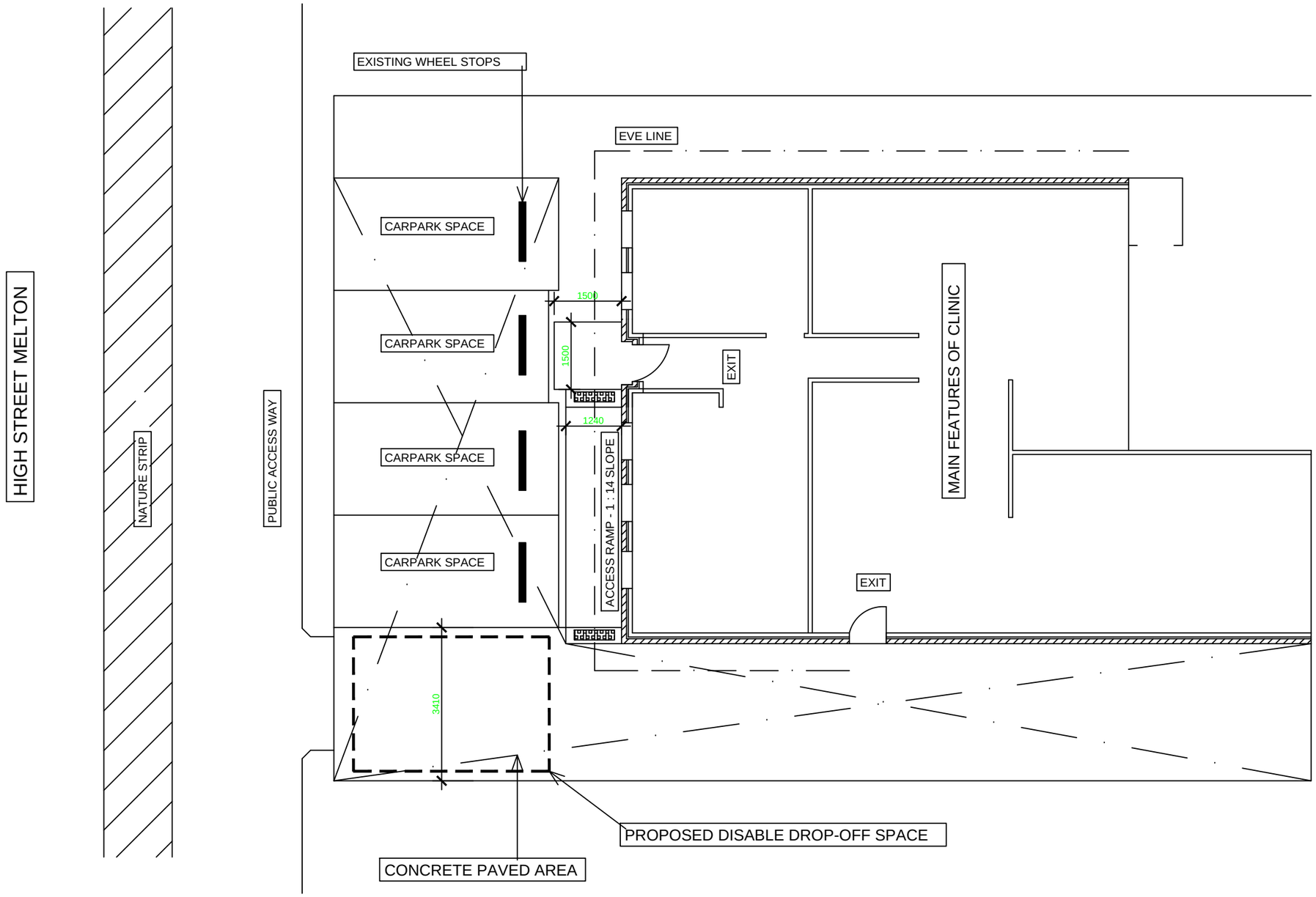
PROJECT:
ACCESS RAMP
PROJECT ADDRESS:
438 HIGH STREET, MELTON
VIC 3337

SHEET NO: 3/6

SCALE: AS SHOWN

DATE: 08/04/2016

PLAN OF EXISTING & PROPOSED FEATURES
CARDIOLOGIST CLINIC SCALE 1 : 100



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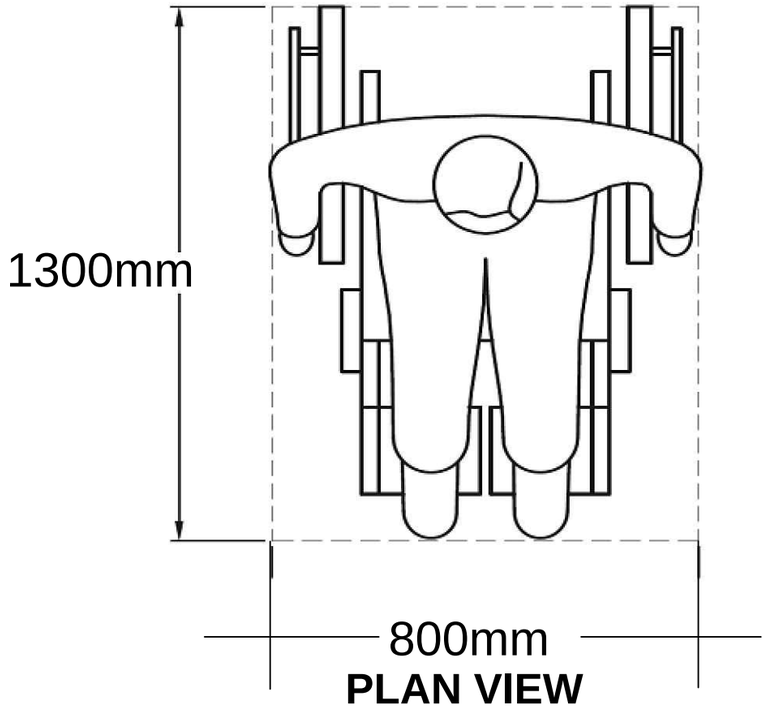
ACCESS RAMP
PROJECT ADDRESS:
438 HIGH STREET, MELTON
VIC 3337

SHEET NO: 4/6

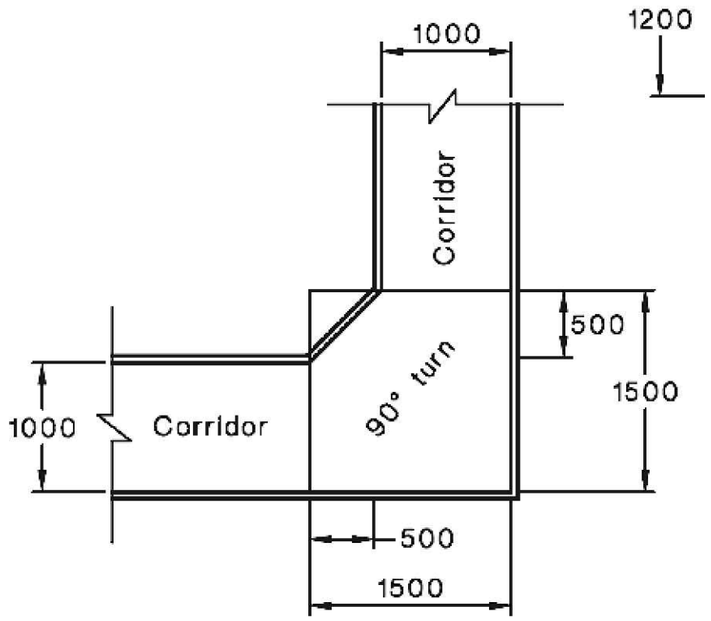
SCALE: AS SHOWN

DATE: 08/04/2016

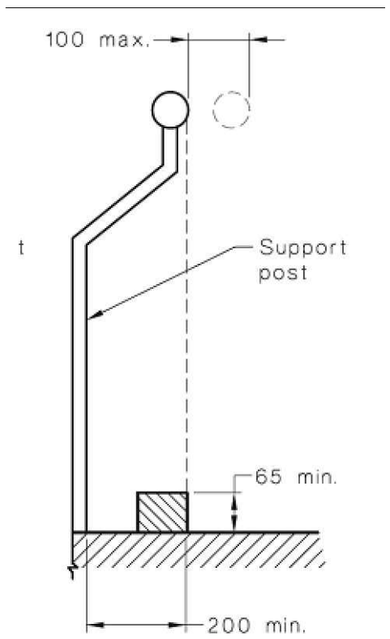
STANDARDS AS PER AS 1428 – 2009 DIMENSIONS (mm) -NTS



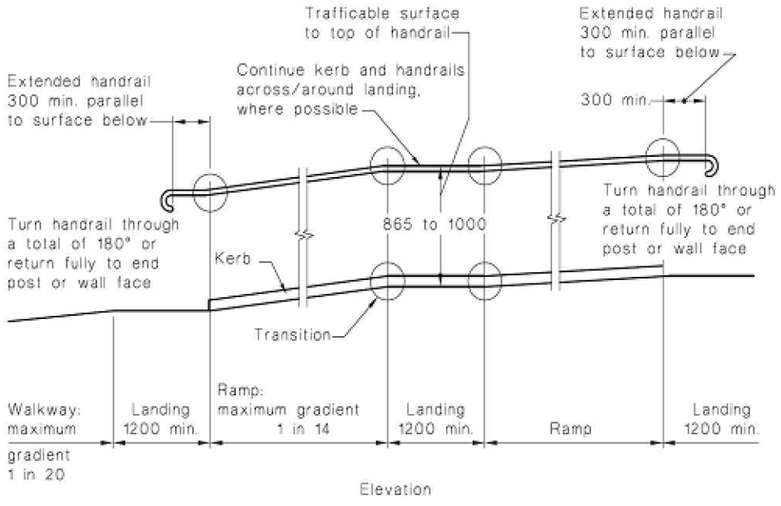
PLAN VIEW



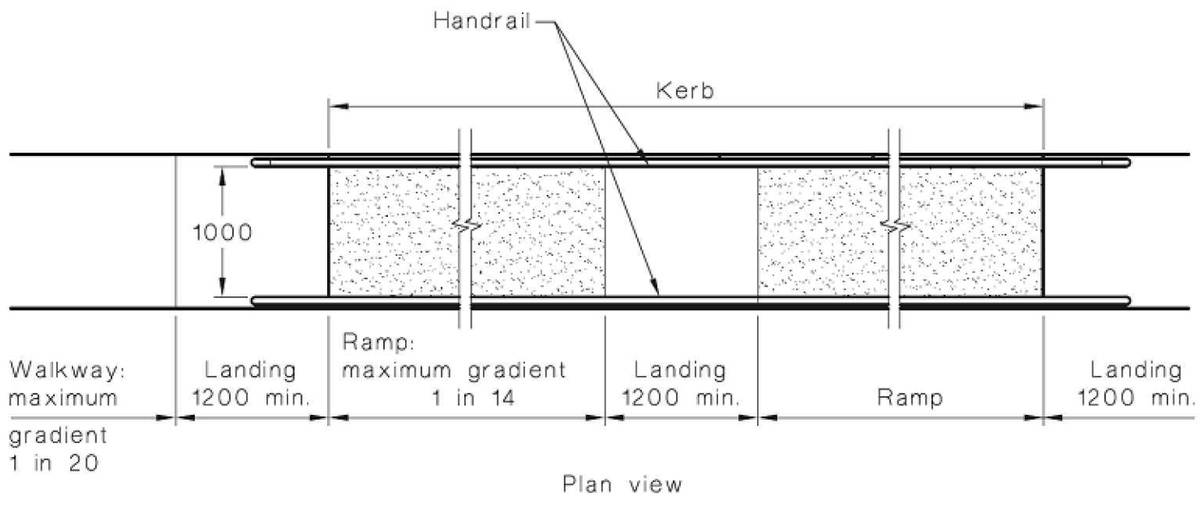
PLAN VIEW



SECTION



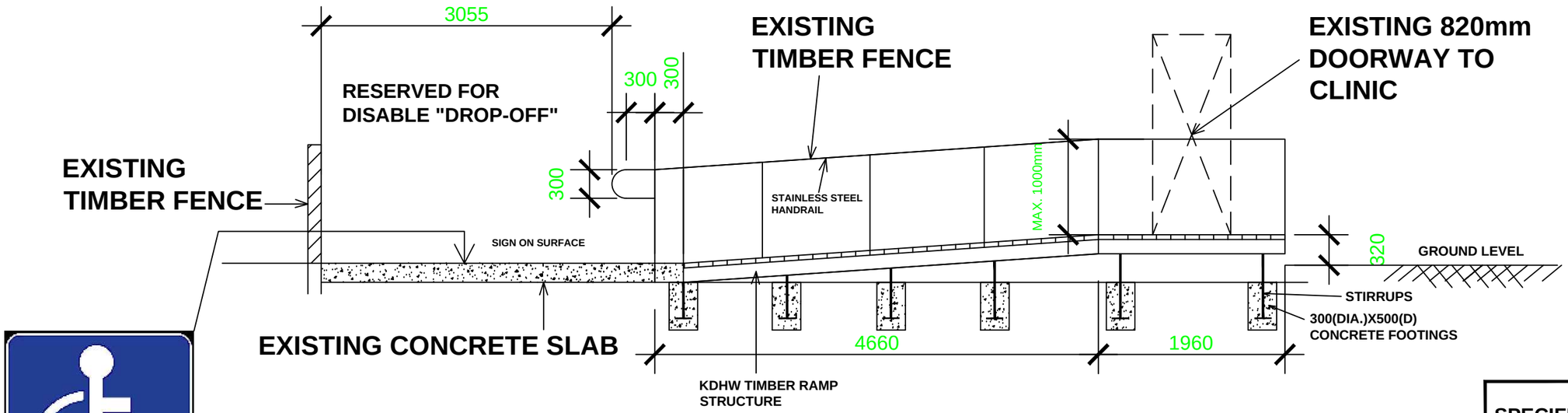
ELEVATION



PLAN VIEW

CLIENT: JOHN WILLIAMS JW CARDIOLOGIST 438, HIGH STREET, MELTON VIC 3337 **JOB NO:** CARDIOLOGIST/2016/1	**WB CIVIL STRUCTURAL ENGINEERS** ENGINEERS & BUILDERS ABN: 84119322436 OFFICE: NO: 9, NUMERING COURT, MELTON, VIC 3337 Mobile: 0401023328 / Ph: 03 9746 0089 Email: wbcseng@gmail.com	REGISTERED ENGINEER REGISTERED BUILDER VICTORIAN BUILDING AUTHORITY PRIYAN WIJEYERATNE EC 19060, D-BU 22220 M.I.E.(AUST)., C.P.ENG. M.Eng(Struct)., M.Tech.(Mgt.), BSc(Civil)	**PROJECT:** ACCESS RAMP **PROJECT ADDRESS:** 438 HIGH STREET, MELTON VIC 3337	**SHEET NO:** 5/6 **SCALE:** AS SHOWN **DATE:** 08/04/2016	WB CIVIL STRUCTURAL ENGINEERS

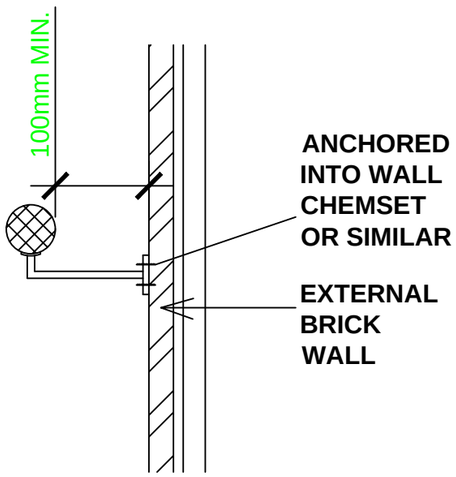
PROPOSED RAMP DESIGN SCALE 1: 200



ELEVATION SHOWING ESSENTIAL MINIMUM DIMENSIONS AS PER 1428 - 2009

SPECIFICATIONS

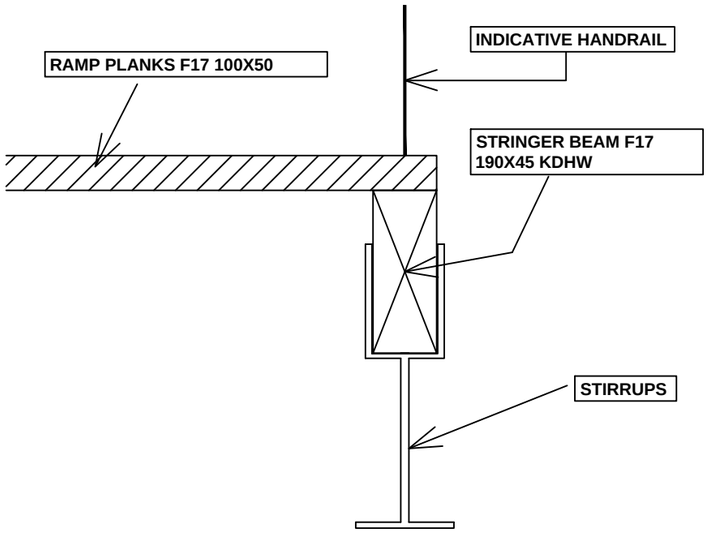
1. HANDRAIL TO BE GALVANISED STEEL.
2. AS 1428 TO BE FOLLOWED FOR ALL DIMENSION DETAIL
3. RAMP SLOPE TO BE 1 IN 14 MAXIMUM
4. TIMBER ELEMENT TO BE F17 KDHW
5. FOOTING TO BE GRADE 20 MPa CONCRETE
6. DUAL HANDRAIL AND KICK BOARD AS PER SHEET NO: S5 IS MANDATORY
7. TACTILE GROUND SURFACE INDICATORS (TGSIs) TO COMPLY WITH AS 1428.4.1
8. DISABLE 'DROP-OFF' AREA



FIXING ON TO WALL NTS

WALL SIDE RAIL

FREE SIDE RAIL



TYPICAL RAMP SECTION NTS

CLIENT: JOHN WILLIAMS, JW CARDIOLOGIST, 438, HIGH STREET, MELTON VIC 3337 **JOB NO:** CARDIOLOGIST/2016/1	**WB CIVIL STRUCTURAL ENGINEERS** ENGINEERS & BUILDERS ABN: 84119322436 OFFICE: NO: 9, NUMERING COURT, MELTON, VIC 3337 Mobile: 0401023328 / Ph: 03 9746 0089 Email: wbcseng@gmail.com	REGISTERED ENGINEER REGISTERED BUILDER VICTORIAN BUILDING AUTHORITY PRIYAN WIJEYERATNE EC 19060, D-BU 22220 M.I.E.(AUST)., C.P.ENG. M.Eng(Struct)., M.Tech.(Mgt.), BSc(Civil)	**PROJECT:** ACCESS RAMP PROJECT ADDRESS: 438 HIGH STREET, MELTON VIC 3337	SHEET NO: 6/6 SCALE: AS SHOWN DATE: 08/04/2016	WB CIVIL STRUCTURAL ENGINEERS