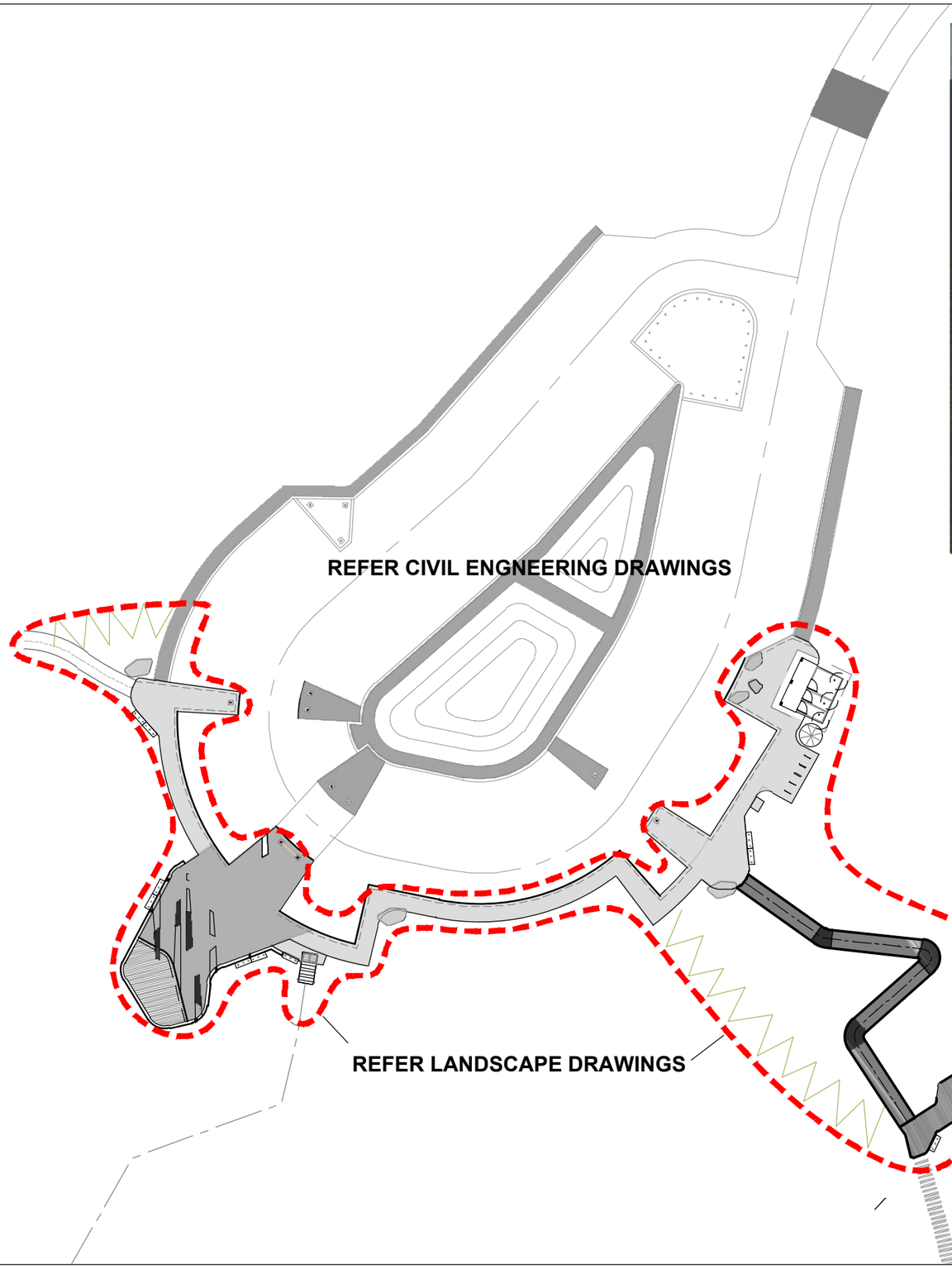

LIGHTS BEACH REDEVELOPMENT

LANDSCAPE ARCHITECTURE PLANS

SHEETS:

Sept. 2020

TENDER ISSUE

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GENERAL NOTES:

1) THE LANDSCAPE ARCHITECTURE PLANS SHOW THE LAYOUT OF THE PROPOSED ROADS, CAR PARKS AND ASSOCIATED WORKS FOR ENGINEERING DESIGN PURPOSES.

2) ALL DRAWINGS TO BE READ IN CONJUNCTION WITH ENGINEERING DRAWINGS AND SPECIFICATION.

3) ELECTRONIC DRAWINGS (AUTOCAD) AVAILABLE FOR SURVEY SETOUT FROM DRUM Landscape Architecture (DLA) REFER TO ENGINEERING DRAWINGS AND SPECIFICATION FOR ALL ROAD AND CAR PARK DESIGN AND SETOUT INCLUDING SUB-GRADE PREPARATION, DRAINAGE, EROSION CONTROL, TRAFFIC SIGNAGE, LINE MAKING. REFER TO LANDSCAPE ARCHITECTRAL DRAWINGS FOR RETAINING WALLS, COLLECTOR PATHS, FURNITURE, DECKING AND PAVING DESIGN; ELECTRONIC SURVEY AVAILABLE.

5) DRAWINGS AND SPECIFICATION FOR EARTHWORKS INCLUDING GRADING DESIGN, LEVELS AND CUT/FILL QUANTITIES BY ENGINEER.

6) SETOUT TO BE APPROVED ON SITE BY SHIRE of DENMARK (SoD) SUPERINTENDENT PRIOR TO COMMENCEMENT OF WORKS.

7) LOCATIONS AND ALIGNMENTS FOR FACILITIES INCLUDING STRUCTURES, GATHERING AREAS, PATHS, FURNITURE AND SIGNAGE TO BE APPROVED BY SoD SUPERINTENDENT.

8) INTERPRETATION AND DIRECTIONAL SIGNAGE BY SoD.

9) ON SITE LAY-DOWN AREA FOR MATERIALS TO BE CONFIRMED WITH SoD SUPERINTENDENT.

10) ALL VEHICLES AND MACHINERY SHALL BE CLEAN PRIOR TO DELIVERY TO SITE AND MUST BE LEAK, WEED, SEED, SOIL AND FERAL FREE. TREATMENT METHOD TO BE APPROVED BY SoD SUPERINTENDENT.

11) ALL EXISTING VEGETATION TO BE RETAINED UNLESS DIRECTED OTHERWISE BY SoD SUPERINTENDENT. THERE SHALL BE NO DISTURBANCE TO AREAS AND VEGETATION OUTSIDE THE PROPOSED WORKS AND DISTURBANCE IS TO BE KEPT TO A MINIMUM AT ALL TIMES.

12) REHABILITATION OF VEGETATION INCLUDING GARDEN BED PLANTING TO BE UNDERTAKEN BYSoD STAFF.

DEMOLITION:

1) ALL EXISTING SERVICE LOCATIONS TO BE DETERMINED PRIOR TO COMMENCEMENT OF WORKS.
2) CONFIRM TIMING FOR REMOVAL OF EXISTING TOILET BUILDING WITH SoD SUPERINTENDENT PRIOR TO COMMENCEMENT OF DEMOLITION WORKS. REMOVAL OF TANKS AND EFFLUENT SHALL CONFORM TO SoD AND HEALTH DEPARTMENT REQUIREMENTS.
3) REFER TO DEMOLITION PLAN AND STAGING FOR EXTENT OF DEMO WORKS.
4) EXISTING LOOKOUT TO REMAIN UNTIL STAGE 2 WORKS COMMENCE IN FEB 2021. THE CONTRACTOR SHALL ENSURE SAFE ACCESS TO THE LOOKOUT, BEACHED & WBNP IS MAINTAINED DURING THE SHUTDOWN PERIOD.

SITE PREPARATION:

1) ALL VEGETATION CLEARING TO BE CONFIRMED WITH SoD SUPERINTENDENT ON SITE.
2) TOPSOIL AND BOULDERS TO BE STOCKPILED FOR RE-USE AS DIRECTED BY SoD SUPERINTENDENT.

REHABILITATION AREAS (BY CIVIL CONTRACTOR):

RE-SPREAD TOPSOIL/ VEGETATION MIX OVER DISTURBED AREAS USING MATERIAL STRIPPED DURING CLEARING.

MATERIALS:

CARPARK (BY CIVIL CONTRACTOR):

BLACK ASPHALT SEAL TO CAR PARKS AND TWO COAT SEAL TO ROAD UP TO SITE ENTRY IF PATCHING REQUIRED.

ENSURE EXPOSED ASPHALT EDGES ARE FINISHED NEATLY AND FOLLOW ALIGNMENTS SET OUT ON ENGINEERING PLANS.

REINFORCED FLUSH KERBING (RFK) (BY CIVIL CONTRACTOR):

ALL FLUSH KERBING TO BE REINFORCED AND IN STANDARD GREY CONCRETE AS PER DETAIL.

WHEEL STOPS (BY CIVIL CONTRACTOR):

REINFORCED PRECAST CONCRETE WHEEL STOPS IN STANDARD GREY CONCRETE.

CONCRETE COLLECTOR PATHS, GATHERING AREA AND RETAINING WALLS (BY CIVIL CONTRACTOR):

REINFORCED INSITU INTEGRALLY COLOURED CONCRETE AS DETAILED.

REFER TO ADJACENT NOTES FOR FINISHES.

INSITU CONCRETE SEATS (BY CIVIL CONTRACTOR):

INTEGRALLY COLOURED PRECAST CONCRETE AS DETAILED. REFER NOTES ADJACENT FOR FINISHES.

LIMESTONE FINES PATHS (BY CIVIL CONTRACTOR):

COMPACTED IMPORTED CLEAN CRUSHED LIMESTONE.
MATERIAL SHALL CONTAIN SUFFICIENT FINES TO ACHIEVE COMPACTION SUITABLE FOR PEDESTRIAN TRAFFIC
NOTE: CONTRACTOR SHALL PROVIDE SAMPLES FOR APPROVAL BY LANDSCAPE ARCHITECT AND SoD SUPERINTENDENT.

BIKE RACKS (BY CIVIL CONTRACTOR):

'D' SHAPE BIKE PARKING RAIL
CORA 'CBR1 F' BIKE PARKING RAIL, OR SIMILAR APPROVED -
FINISH: 316 GRADE BRUSHED STAINLESS STEEL, 50.8mm OD x 3mm CHS.

FIXING: IN-SITU CONCRETE FOOTINGS 300x300 x 350mm DEEP MIN.

INSTALLATION AS PER MANUFACTURER'S INSTRUCTIONS. REFER DETAIL

FEATURE GRANITE BOULDERS
CIVIL CONTRACTOR TO EXCAVATE AND PLACE GRANITE BOULDERS TO AREAS SHOWN ON PLAN AND AS DIRECTED BY LANDSCAPE ARCHITECT. REFER DETAILS
BOULDERS TO BE SUPPLIED BY SoD.
CONTRACTOR SHALL PROVIDE PRICE TO CART FROM LOT 3000 HARDY ST, DENMARK.
NOTE: LARGER ROCKS WILL WEIGH UP TO 3.5 tns.
ALLOW UP TO 15 ROCKS TO BE PLACED.
A PORTION OF THE BOULDERS ARE TO BE PLACED WITHIN CONCRETE AREAS. REFER TYPICAL DETAIL.

RAIN WATER TANK (RWT) - TOILETS
CIVIL CONTRACTOR TO SUPPLY AND INSTALL RWT TO AREA SHOWN ON PLAN ADJACENT TO TOILETS. COMFIRM EXCT LOCATION ON SITE WITH LANDSCAPE ARCHITECT.
CONTRACTOR SHALL PLUMB TANK OFF TOILET ROOF.
INSTALL TANK TO MANUFACTURERS SPECIFICATIONS.
TANK SHALL BE A 'WESTCOAST POLY TANK', 4500LTRS IN **'BLACK'** COLOUR.

CONCRETE FINISHES

COLLECTOR PATHS (INC UNIV ACCESS PATH TO LOOKOUT. 32MPa
REINFORCED INSITU CONCRETE PAVING, INTEGRALLY COLOURED - CLASS 1
FINISH: Monolithic finish using steel float. **No framing to edges and joints**.
Light Sandblast finish to create a non-slip surface with a consistent finish.
COLOUR: Hanson Concrete - *CCS* "Apollo"

GATHERING AREA & LIGHTS LOOKOUT. 40MPa
REINFORCED INSITU CONCRETE PAVING, INTEGRALLY COLOURED - CLASS 1
FINISH: Monolithic finish using steel float, **no framing to edges and joints.**
Medium sandblast finish enough to expose aggregates over whole area. No sandblast to areas shown adjacent to insitu seating running north / south
COLOUR: *CCS* "ONYX 44" WITH HOLCIM PEBBLE BEACH AGGREGATE

INSITU SEATING COMPONENTS (GATHERING AREA) (Seats S1-S4). 40MPa
FINISH: Off-form precast finish, all exposed surfaces to be not less than Class 1 to AS 3610. Top to be Steel Float finish. Heavy sandblast to detail areas as shown (to match slab). Patterns to be taped and sandblasted to reveal aggregate where shown to a depth of 2mm. Continue sandblast down both vertical faces as shown.
Provide radii as shown to all exposed edges.
COLOUR: *CCS* "ONYX 44" WITH HOLCIM PEBBLE BEACH AGGREGATE
Refer to details

REINFORCED INSITU CONCRETE RETAINING WALL AND KERB BEAM - 40MPa
INTEGRALLY COLOURED
FINISH: Off-form finish not less than Class 2 to AS 3610. Medium sandblast finish enough to expose aggregates over whole area. No sandblast to areas shown adjacent to insitu seating running north / south.Provide 20mm radii to all wall corners and edges.
COLOUR: CCS "ONYX 44"
JOINTS & DRAINAGE SLOTS: Refer details

TOILET SLAB - 32MPa
REINFORCED INSITU CONCRETE PAVING, INTEGRALLY COLOURED - CLASS 1
FINISH: Monolithic finish using steel float. **No framing to edges and joints**.
Light Sandblast finish to create a non-slip surface with a consistent finish.
COLOUR: Hanson Concrete - *CCS* "Apollo"

NOTE:
1) SAMPLES SHALL BE PROVIDED FOR ALL CONCRETE FINISHES AND PRECAST COMPONENTS TO BE APPROVED BY LANDSCAPE ARCHITECT AND SUPERINTENDENT, INCLUDING SAND BLAST FINISH. PROVIDE 1m2 PANELS FOR REVIEW.
2) ALL INTEGRALLY COLOURED CONCRETE AND FINISHES INSTALLED TO MANUFACTURER'S RECOMMENDATIONS.

CONCRETE GENERAL

PAVING JOINTS: CONTROL JOINTS (CJ): Saw cut joints (3mm TYP.) located as per LANDSCAPE drawings. Refer details SH19

EXPANSION JOINTS (EJ): Located as per drawings with 10mm stiff expansion joint material 30kg/m³, colour charcoal. Stop mesh at either side of EJ (100mm typ)

Final locations of expansion and control joints to be approved on site with SoD Superintendent or Landscape Architect

Provide sample of expansion joint material for approval by SoD Superintendent or Landscape Architect

KERBING: Reinforced flush kerbing (RFK) in standard grey concrete; Refer Engineer drawings for locations

WHEEL STOPS: Reinforced precast concrete wheel stops in standard grey concrete. Product shall be 'HUMES Wheelstop' 1650(L) x 100(H) x 170(W) - Product code 5531234. Fill pin-holes with Non-Shrink grout after installation. Colour to match wheelstop; refer Engineer drawings for locations and setout.

GRADING - GENERAL:

1) PROVIDE 1.5-2% FALL AWAY FROM BUILDING PADS.
2) PATHS TO BE 1:14 OR FLATTER WHERE POSSIBLE WITH 1:10 MAX. GRADE TO COMPACTED GRAVEL OR FINES SURFACES.
3) PATH CROSS FALL 1.5-2% TYPICAL TO FOLLOW NATURAL SURFACE SLOPE.
4) MINIMISE WIDTH OF BATTERS TO REDUCE ENVIRONMENTAL DISTURBANCE.
5) EARTH BATTERS AS NOTED, 1:2 OR 1:1.5 GRADE TYPICAL.
6) PROVIDE 300mm MIN. APRON TO PATHS, PAVING AND RETAINING WALLS WHERE SURROUNDING TERRAIN IS STEEPER THAN 1:6.

TOILET BUILDING:

PROPOSED TOILET BUILDINGS (**SEALED VAULT TANKS AND CONCRETE SLAB BY CIVIL CONTRACTOR**, ALL WORK ABOVE SLAB LEVEL BY OTHERS):

REFER ADJACENT NOTE FOR SLAB COLOUR AND FINISH.

3 CUBICLE TOILET BUILDING (SEALED VAULT).

NOTE:

1) BULK EARTHWORKS, SEALED VAULT TANKS AND CONCRETE SLAB BY CIVIL CONTRACTOR (BUILDING ABOVE SLAB LEVEL BY OTHERS).

2) REFER TO CONSTRUCTION DRAWINGS PROVIDED BY SoD FOR SEALED VAULT TANKS AND SLABS, INCLUDING BATTERS, EXCAVATION, SUB-GRADE PREPARATION, DRAINAGE AND COMPACTION.

3) ENSURE THAT TANKS ARE LEVEL, WATERTIGHT, FOUNDED AT THE SPECIFIED COMPACTION RATE, AND WITH HOLES IN THE CORRECT LOCATIONS.(REFER TO DRAWINGS FOR WATERPROOFING PRIOR TO INSTALL).

4) ENSURE SLAB SETOUT, DIMENSIONS, FINISHED LEVELS, PENETRATIONS AND CAST-IN ELEMENTS ARE ACCURATE AS PER DBCA CONSTRUCTION DRAWINGS.

5) BUILDING LOCATIONS TO BE SET OUT ON SITE FOR APPROVAL BY SoD SUPERINTENDENT PRIOR TO COMMENCEMENT OF WORKS.

6) ACCESS FOR CONSTRUCTION OF BUILDING PADS AND SEALED VAULTS TO BE CONFIRMED WITH SoD SUPERINTENDENT.

GENERAL NOTES - LANDSCAPE

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REV 0	TENDER	07.09.20

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DS	DS	-
	Checked by:	Client Approval:
	-	-

LIGHTS BEACH REDEVELOPMENT
TENDER
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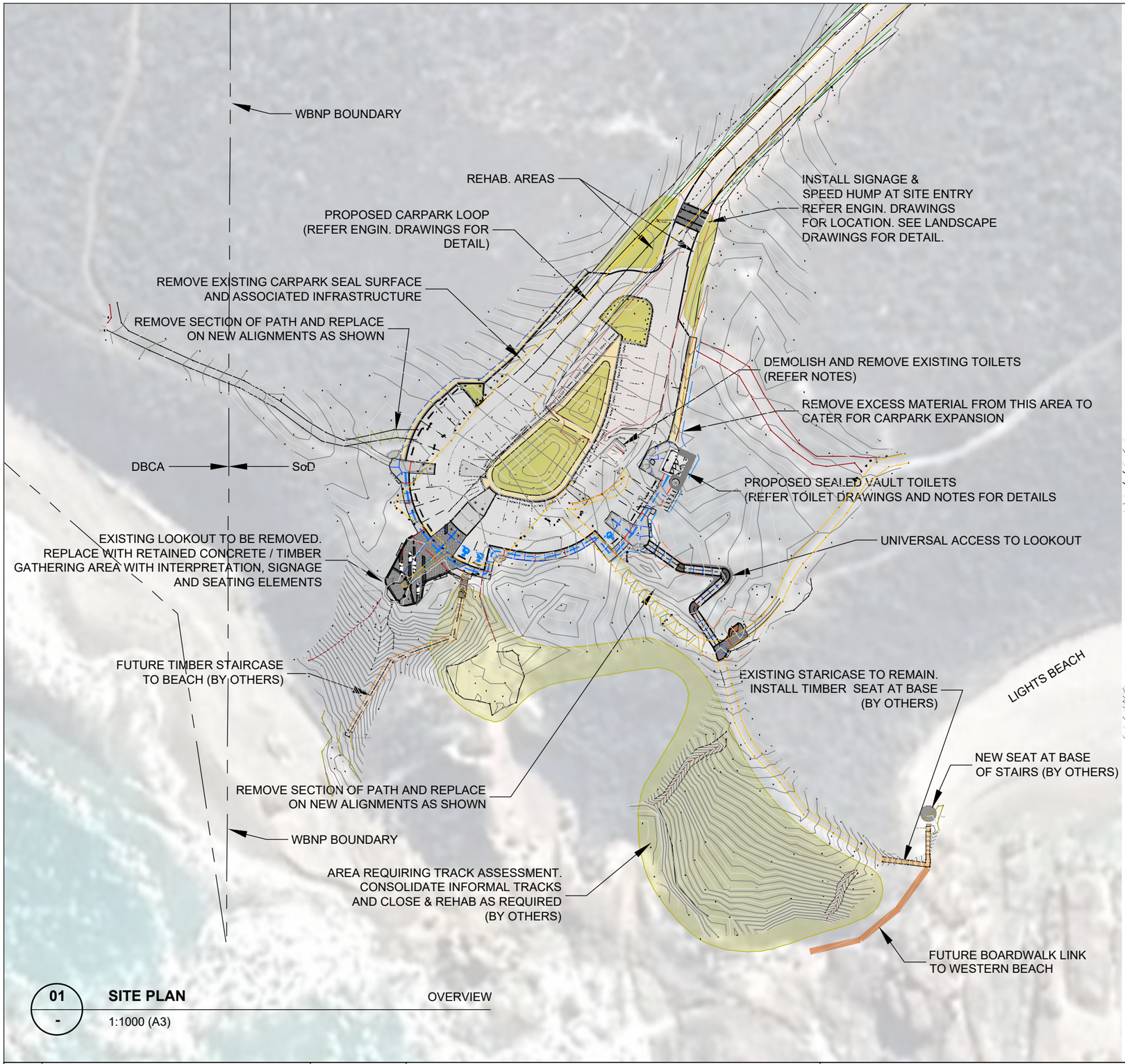
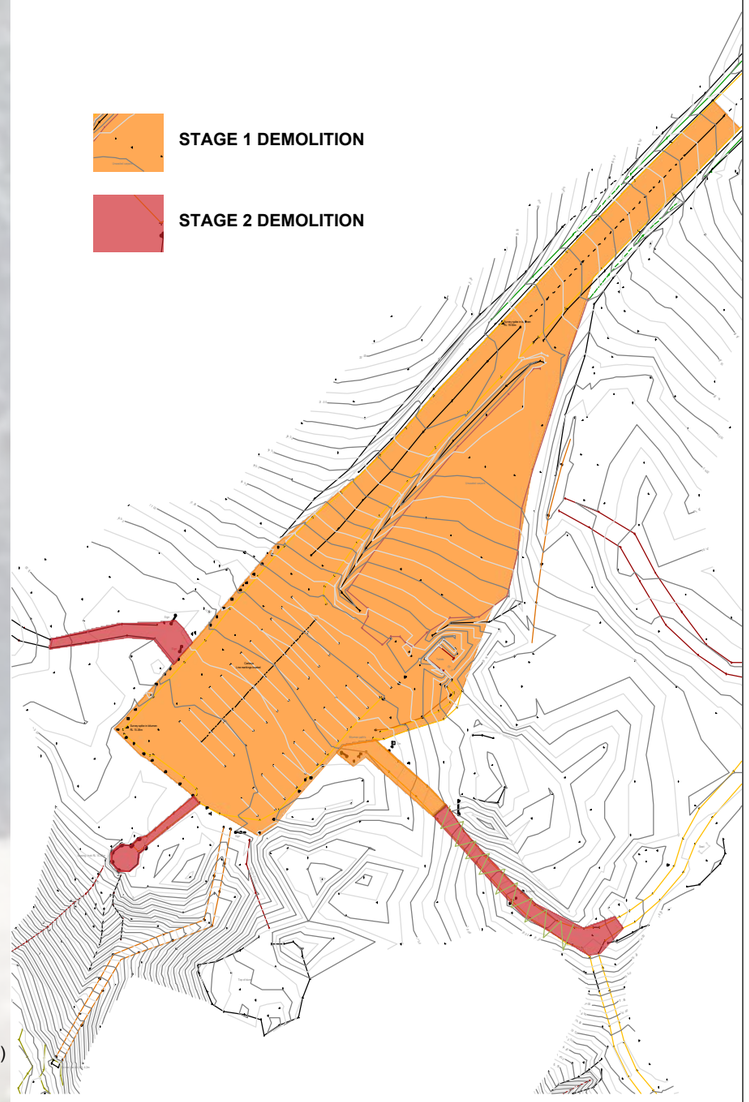


01 - **SITE PLAN** — OVERVIEW

1:1000 (A3)



02 - **DEMOLITION PLAN** — EXISTING CARPARK

1:1000 (A3)

N

1:1000

0 10 20 30 40 50 100m

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REHAB. AREAS
REMOVE & INSTALL
TOPSOIL. PLANTING
BY OTHERS

SPEED HUMP AT
SITE ENTRY

NOTE: REFER TO ENGINEER
PLANS FOR CARPARK
DETAILS

WBNP BOUNDARY

VEGETATION ISLAND

LONG VEHICLE BAYS

CENTRAL DRAINAGE SWALES

LONG VEHICLE BAYS

CAMPERVAN / WINNEBAGO
BAYS

COLLECTOR PATH (COMPACTED FINES)

SHEET 10

SHEET 9

RELOCATE WALTRAIL ENTRY

NEW SEALED VAULT TOILET
(REFER TOILET DRAWINGS ***)

BIB TRACK & WALKTRAIL TO
WILLIAM BAY NATIONAL PARK

INFORMATION NODE AND ACCESS
TO WILLIAM BAY NATIONAL PARK

BIKE RACKS
(REFER DETAIL)

300mm THK CONCRETE
CROSSING

BLUE LINE INDICATES
AREA TO CONFORM TO UNIV ACCESS
STANDARDS

WOW TRAIL TO OCEAN BEACH

NEW CONCRETE PATH 1.8m WIDE TO
UNIVERSAL ACCESS STANDARDS
(BY CIVIL CONTRACTOR)

INFORMATION NODE
FOR LIGHTS BEACH AND
'WOW' WALKTRAIL

SHEET 10

CONCRETE INFORMATION / GATHERING / VIEWING AREA
WITH SEATING & BEACH ACCESS STEPS

COLLECTOR PATH
(CONCRETE 1.8m)

TIMBER STAIRCASE

REMOVE SECTION OF
EXISTING BEACH ACCESS PATH

CONCRETE UNIVERSAL ACCESS
LOOKOUT & SEATING AREAS
(BY CIVIL CONTRACTOR)

SHEET 5/6

EXISTING SEALED PATH TO LIGHTS BEACH

SHEET 15

CONSTRUCT NEW TIMBER STAIRCASE
TO BEACH (BY OTHERS)

CONSTRUCT NEW TIMBER STAIRCASE
FROM NEW STAIRCASE (BY OTHERS)

SHEET 4

CARPARK & SURROUNDS

UNDERTAKE ASSESSMENT OF ALL INFORMAL TRACKS.
AND EXPOSED DUNES.
FENCE / REHAB AS REQUIRED (BY OTHERS)

N

1:500

0 5 10 20 30 40 50m

03 **SITE PLAN**

\- 1:500 (A3)

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REMOVE SECTION OF EXIST. PATH

BOLLARDS (REFER DETAIL)

NEW SECTION OF PATH 12LM-ASPHALT). LINK TO EXIST.

NEW ENTRY POINT TO WBNP WITHINFORMATION AND DIRECTIONAL SIGNAGE

EXTENT OF EXISTING CARPARK

PAINTED PEDESTRIAN CROSSING

CONCRETE COLLECTOR PATH. UNIVERSAL ACCESSIBLE

NO SANDBLAST TO THESE AREAS

CONCRETE SANDBLAST FINISH - REFER NOTES

INTERPRETIVE SIGNAGE (BY SoD)

CONCRETE INSITU SEATING

GATHERING AREA

TOW. 15.825

DECK @15.75

TIMBER DECKING INFILL REFER DETAILS

CONCRETE RETAINING WALL (600mm HIGH MAX. - NO HANDRAIL

CLOSE AND REHAB TRACK (BY OTHERS)

VEGETATED ISLAND SWALE

COMPACTED LIMESTONE PATH

SSTEEL BOLLARDS (REFER DETAIL)

CONCRETE COLLECTOR PATH. 1.8m WIDE UNIVERSAL ACCESSIBLE

BEACH ACCESS STAIRS TO START OF PATH - REFER DETAILS

BLUE LINE INDICATES AREAS REAQUIRING 1:14 MAX SLOPE

REMOVE SECTION OF PATH AND REALIGN TO ACCOMMODATE UNIV. ACCESS TO LOOKOUT

FEATURE BARRIER / SEATING BOULDERS. REFER NOTES & DETAIL

COMPACTED LIMESTONE PATH. REFER DETAILS

NEW SEALED VAULT TOILETS. 3 CUBICLE (ONE UNIV. ACCESSIBLE) - REFER TOILET DRAWINGS NOTE: TANKS AND SLAB SUPPLY & INSTALL. ONLY - THIS CONTRACT

RL16.690

1200mm STRIP OF 20mm BLUE METAL AS SHOWN

4500LTR RWT FOR HANDWASHING

DRAIN AT CUT BATTER (REFER ENGIN DWGS)

BIKE RACKS (REFER DETAIL)

CONCRETE WHEELSTOPS (REFER DETAIL)

RL16.240

ENTRY POINT TO LIGHTS BEACH WITH SIGNAGE (BY SoD) AND ROCK SEATING

NEW UNIVERSAL ACCESS PATH & LOOKOUT REFER DETAIL

Carbays Line markings located

Survey spike in bitumen RL 15.38m

Viewing deck RL 15.37m

Bitumen path's

Toilets

Bollards

15.50(exist.)

1200

2240

6000

3000

N

1:250

0 5 10 15 20 25m

04 **SITE PLAN** CARPARK & GATHERING AREA

- 1:250 (A3)

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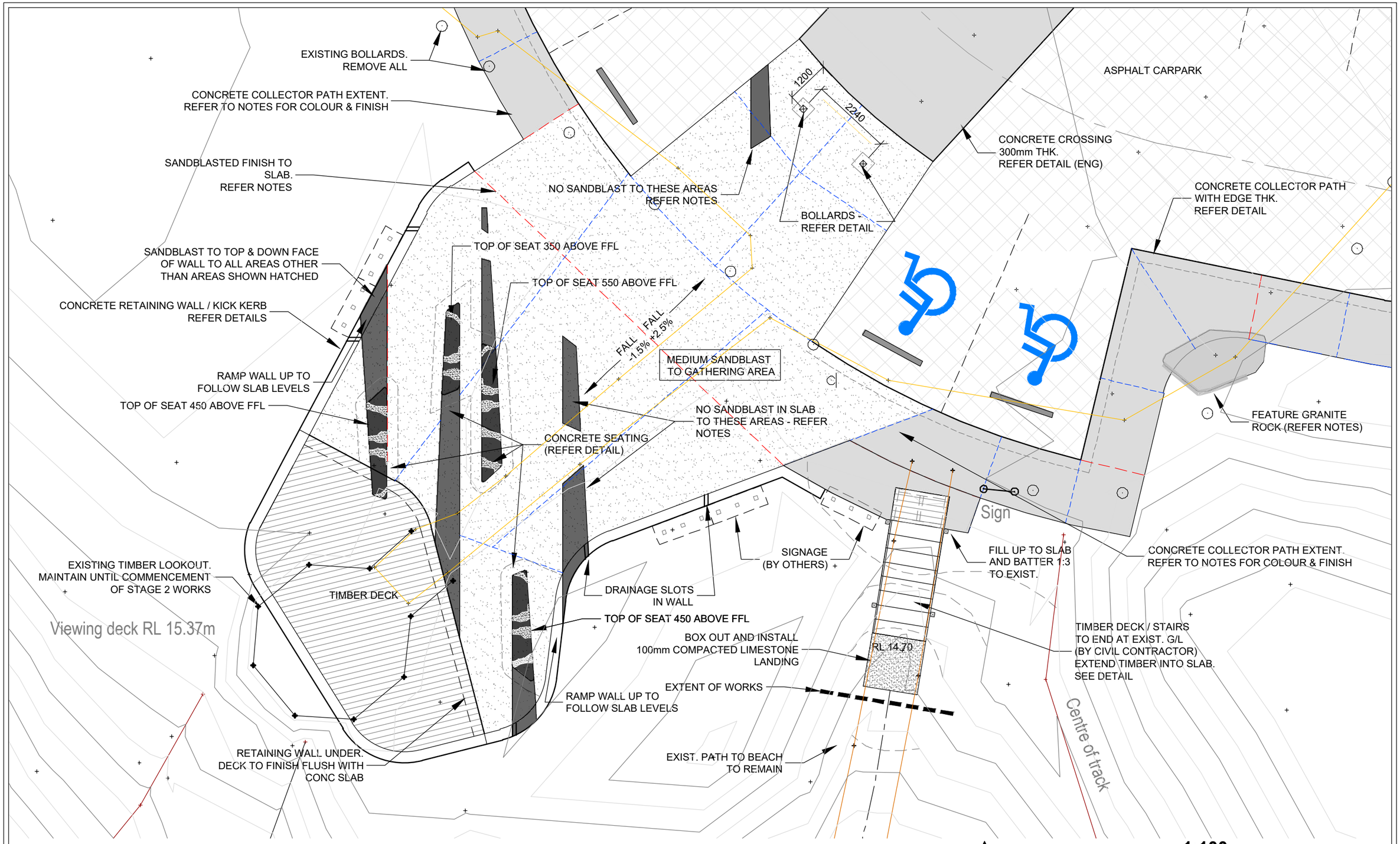

05 **PLAN** GATHERING AREA

\- 1:100 (A3)

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REV 0	TENDER	07.09.20

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CARPARK - ASPHALT

LIGHTSANDBLAST TO CROSSOVER

NO SANDBLAST IN SLAB DETAIL

CONCRETE (MEDIUM SANDBLAST)

CONTINUE NO SANDBLAST OVER WALL / KERB

INSITU CONC SEATING WITH SANDBLAST DETAIL. REFER DETAIL

EJ. (REFER NOTES)

BREAKS IN WALL / KERB FOR DRAINAGE

1.5% TYP.

TOS +350 ABOVE SLAB

TOS +550 ABOVE SLAB

NO SANDBLAST TO THESE AREAS

CJ. (REFER TYP. DETAIL)

THICKENING UNDER SEATS TO 300mm (TYP) - REFER DETAIL

TOS +450 ABOVE SLAB

CONCRETE RETAINING WALL. 600 HIGH MAX AGL. NO HANDRAIL - KICK KERB ONLY 75mm HIGH REFER DETAIL

PORTION OF SEAT TO CANTILEVER OVER DECK

CONCRETE RETAINING WALL UNDER DECK. TOW TO ALLOW FOR SLAB OVER TO FINISH FLUSH WITH TIMBER DECK

Viewing deck RL 15.37m

TIMBER DECK

TOS +450 ABOVE SLAB

SIGNAGE (BY OTHERS)

FILL UP TO SLAB LEVEL

TIMBER DECK / STAIRS (BY CIVIL CONTRACTOR REFER DETAILS)

SLOTS IN WALL / KERB FOR DRAINAGE - REFER DETAIL

EXTENT OF WORKS

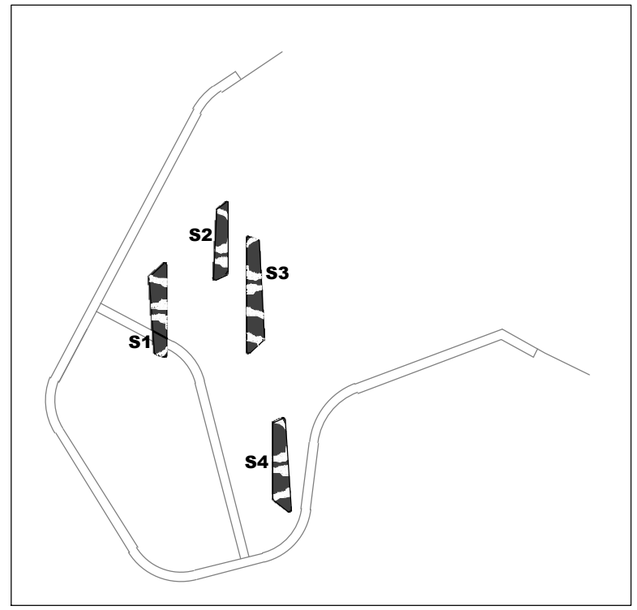
EXIST. LOOKOUT

TIMBER DECK. CCA PINE CONSTRUCTION WITH 140x45 DECKING BOARDS

982 880 300 R2000 9910 1880 4560 2530 2285 2400 2176 2182 100 300 1200 5000 900 1500

REFER ENGINEERING DRAWINGS FOR LEVELS.
RL - REDUCED LEVEL
TOW - TOP OF WALL
TOS - TOP OF SEAT

S01 07



07 / 07 **PLAN** 1:200 (A3) — CONCRETE SEAT NUMBERS

SEATING INSPIRATION

06 / - **PLAN** 1:100 (A3) — SEAT & CONCRETE DETAILS - GATHERING AREA

N

1:100
0 1 2 3 4 5 10m

REV	DESCRIPTION	DATE
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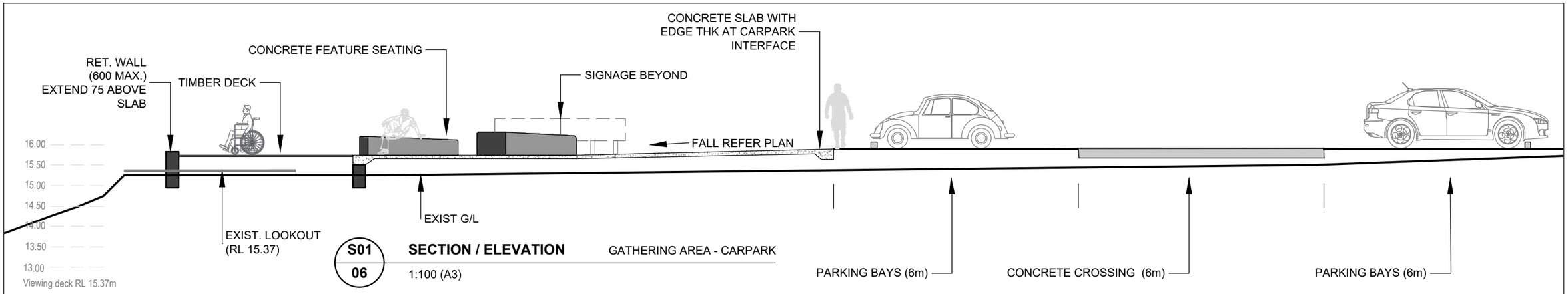
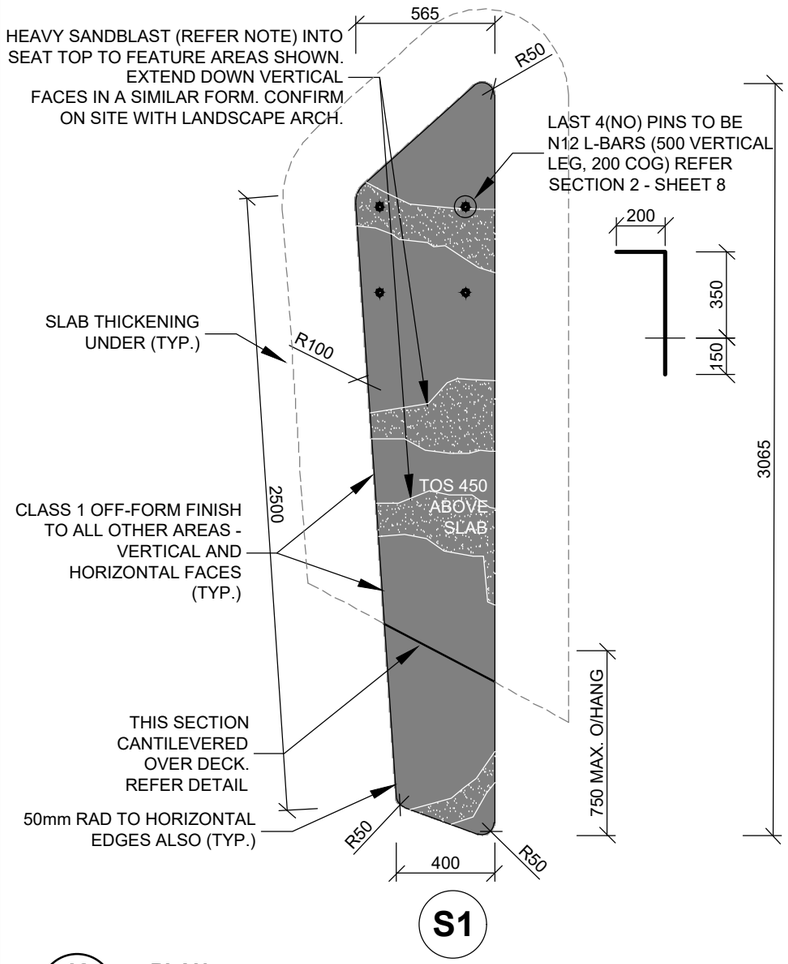
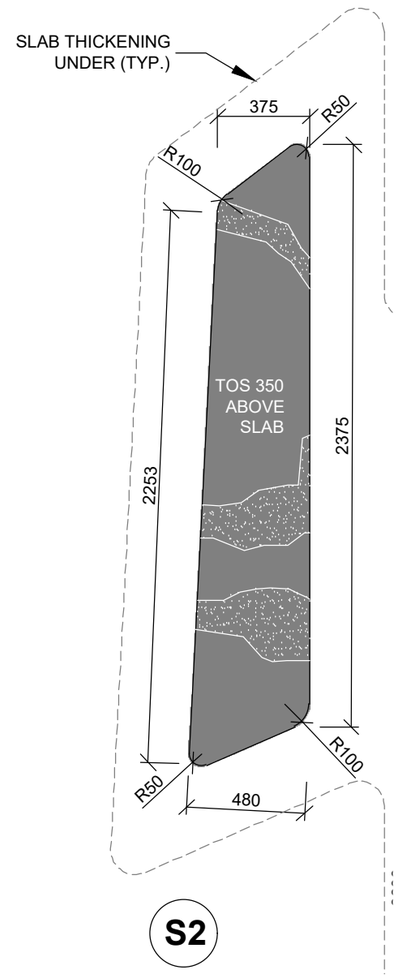


S01 / 06 **SECTION / ELEVATION** GATHERING AREA - CARPARK

1:100 (A3)



S1



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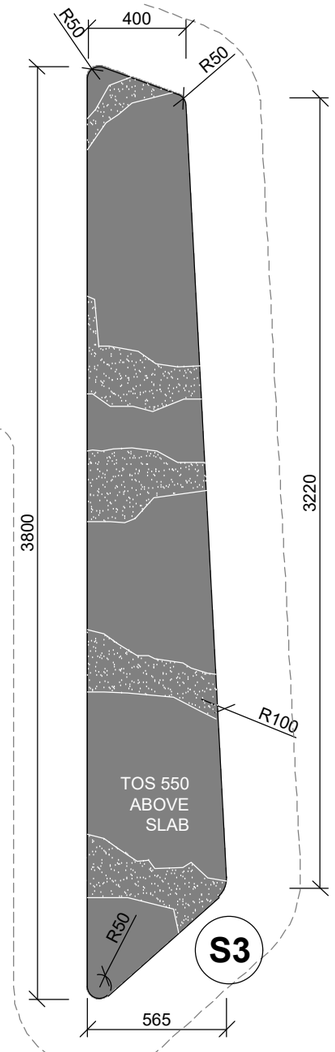
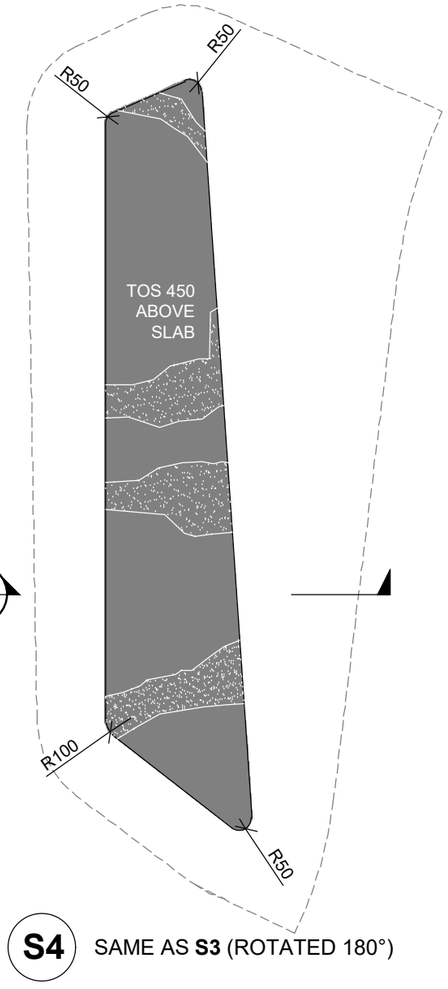


S3



S02 / 08

S4 SAME AS **S3** (ROTATED 180°)

SAME AS **S1** (ROTATED / LONGER)

08 / 06 **PLAN** SEAT DETAILS

1:25 (A3)

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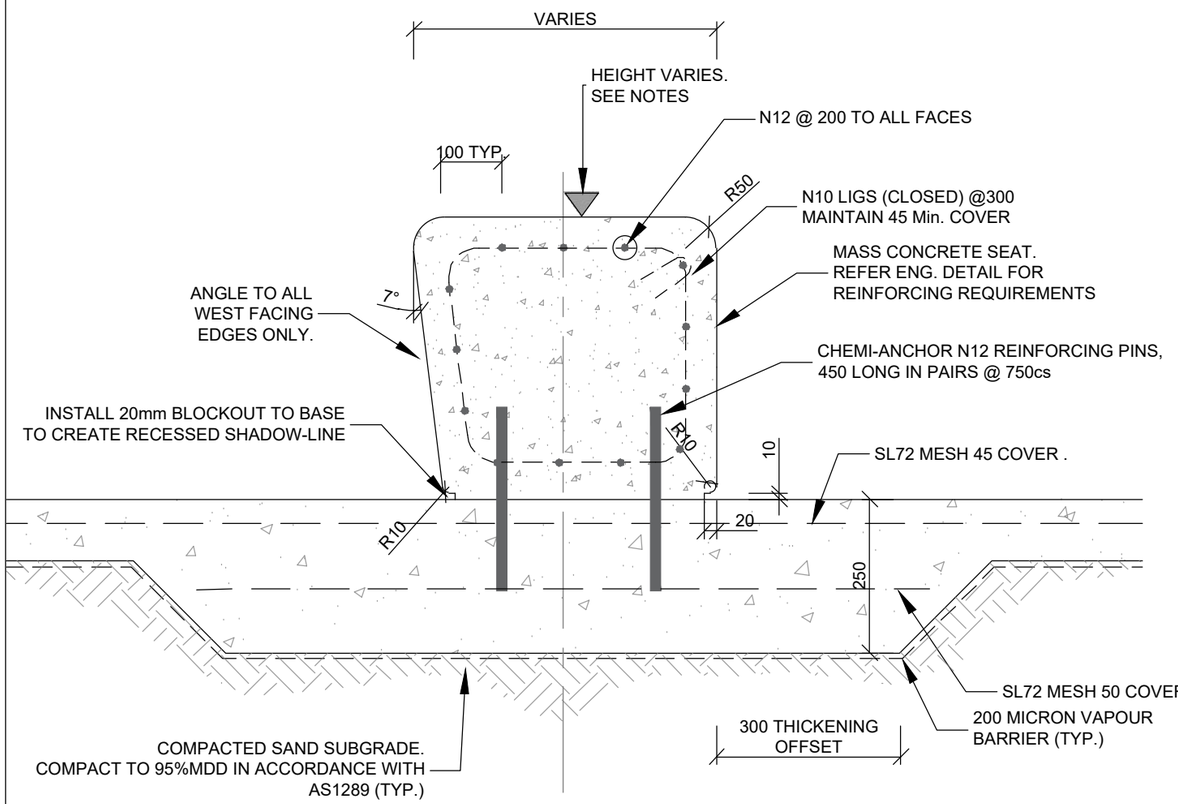
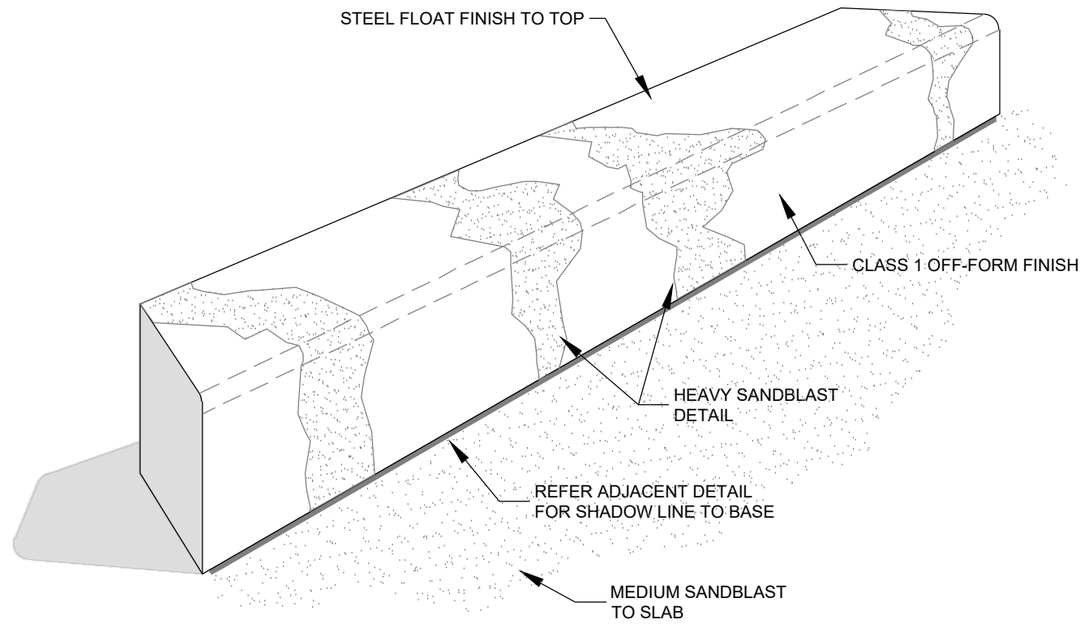


S02 / 07 **SECTION (TYP.)** SEATS

1:10 (A3)

"CHEMI-ANCHOR" REFERS TO Hilti HIT-RE 500 EPOXY OR APPROVED EQUIVALENT. INSTALL IN ACCORDANCE TO MANUFACTURERS SPECIFICATION



09 / - **PERSPECTIVE (INDICATIVE)** CONCRETE SEAT

NTS

REV	DESCRIPTION	DATE
REV 0	TENDER	07.09.20

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LIGHTS BEACH REDEVELOPMENT

TENDER

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DS	DS	Stantec
	Checked by:	Client Approval:
	-	-

Date:	Project Number:	Drawing:	Sheet no.
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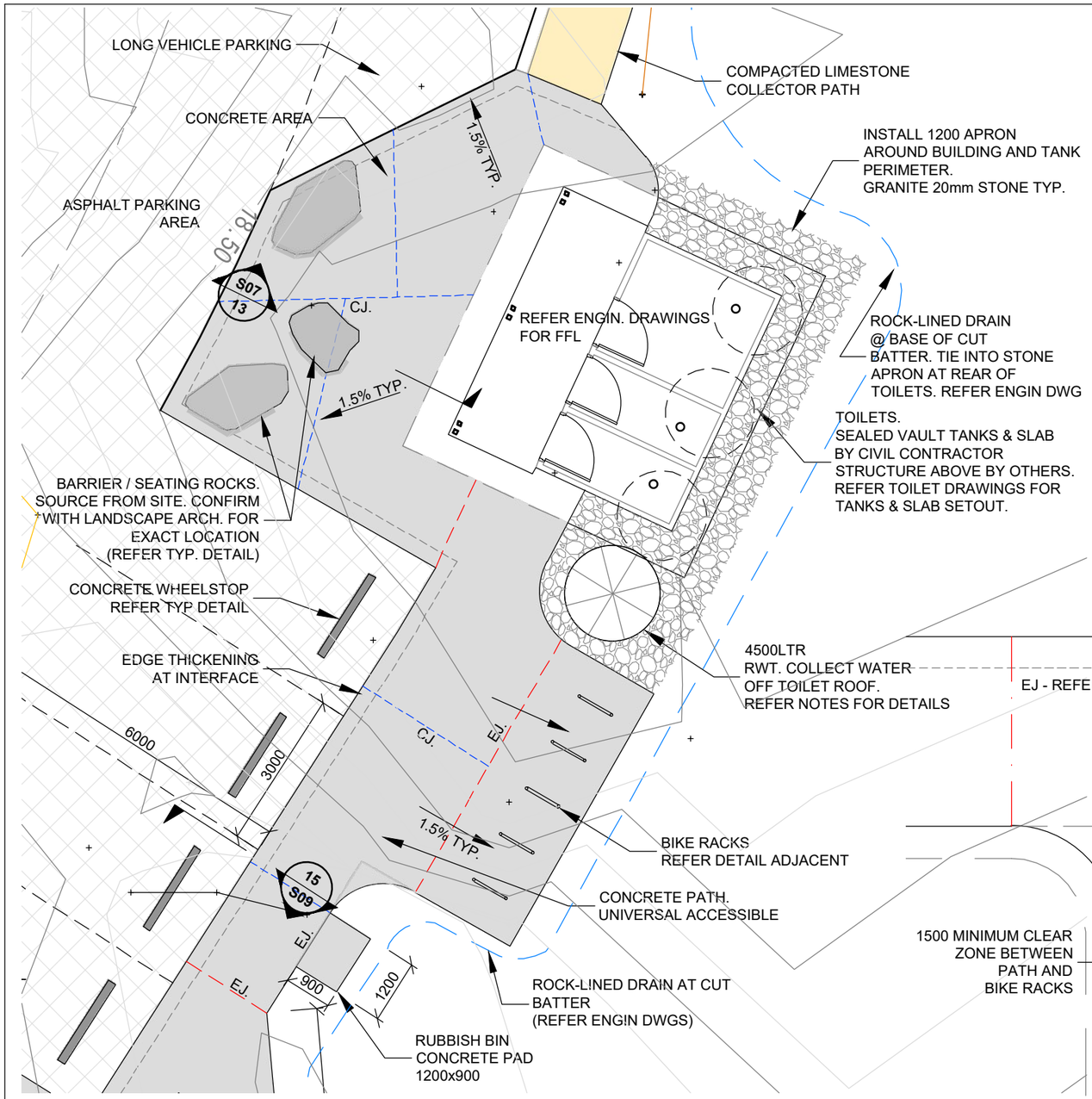
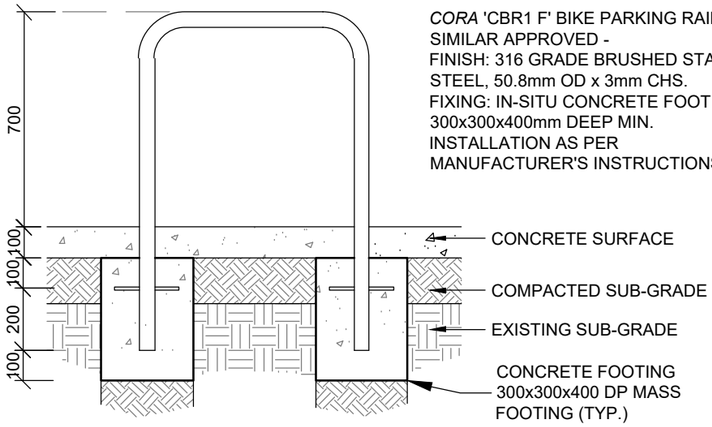


10 - **PLAN** — BIKE RACKS / TOILETS

1:100 (A3)

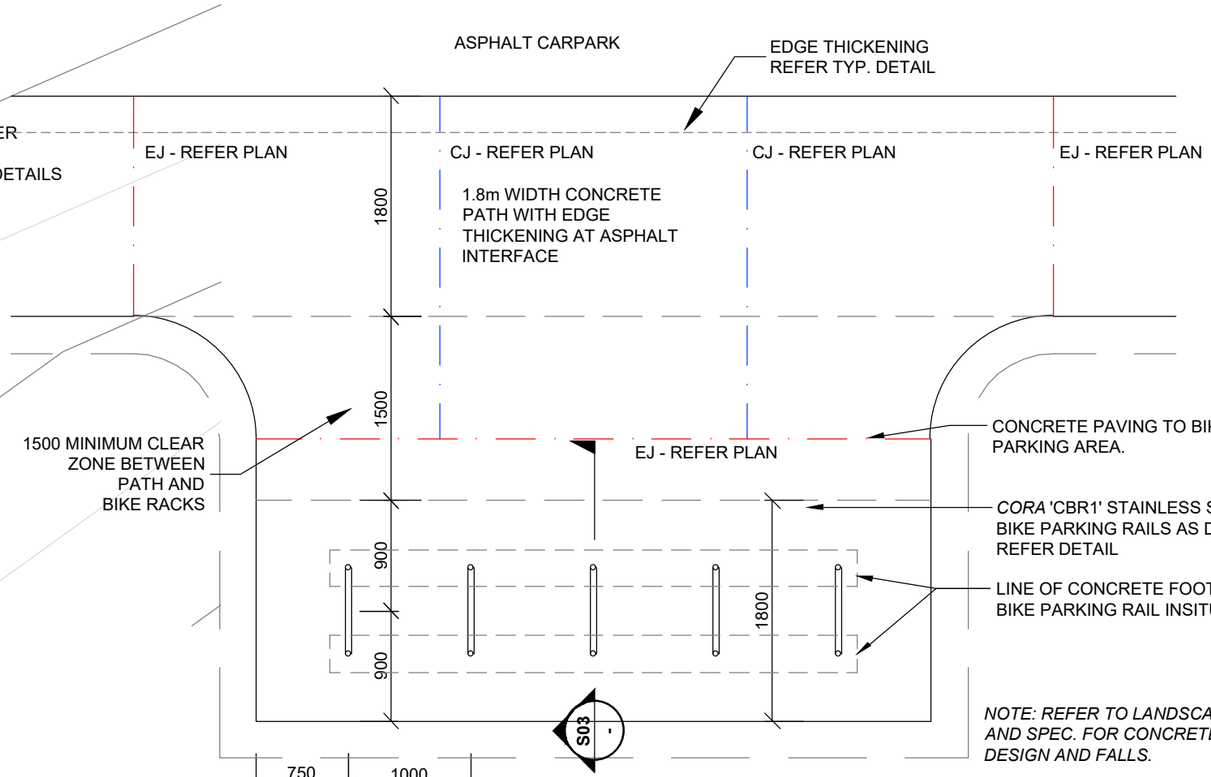
1:100



CORA 'CBR1 F' BIKE PARKING RAIL, OR SIMILAR APPROVED -
FINISH: 316 GRADE BRUSHED STAINLESS STEEL, 50.8mm OD x 3mm CHS.
FIXING: IN-SITU CONCRETE FOOTINGS 300x300x400mm DEEP MIN.
INSTALLATION AS PER MANUFACTURER'S INSTRUCTIONS.

S03 - **SECTION** — BIKE RACKS

1:50 (A3)



NOTE: REFER TO LANDSCAPE DWGS AND SPEC. FOR CONCRETE PAVING DESIGN AND FALLS.

11 - **PLAN** — BIKE RACKS - DETAIL

1:50 (A3)

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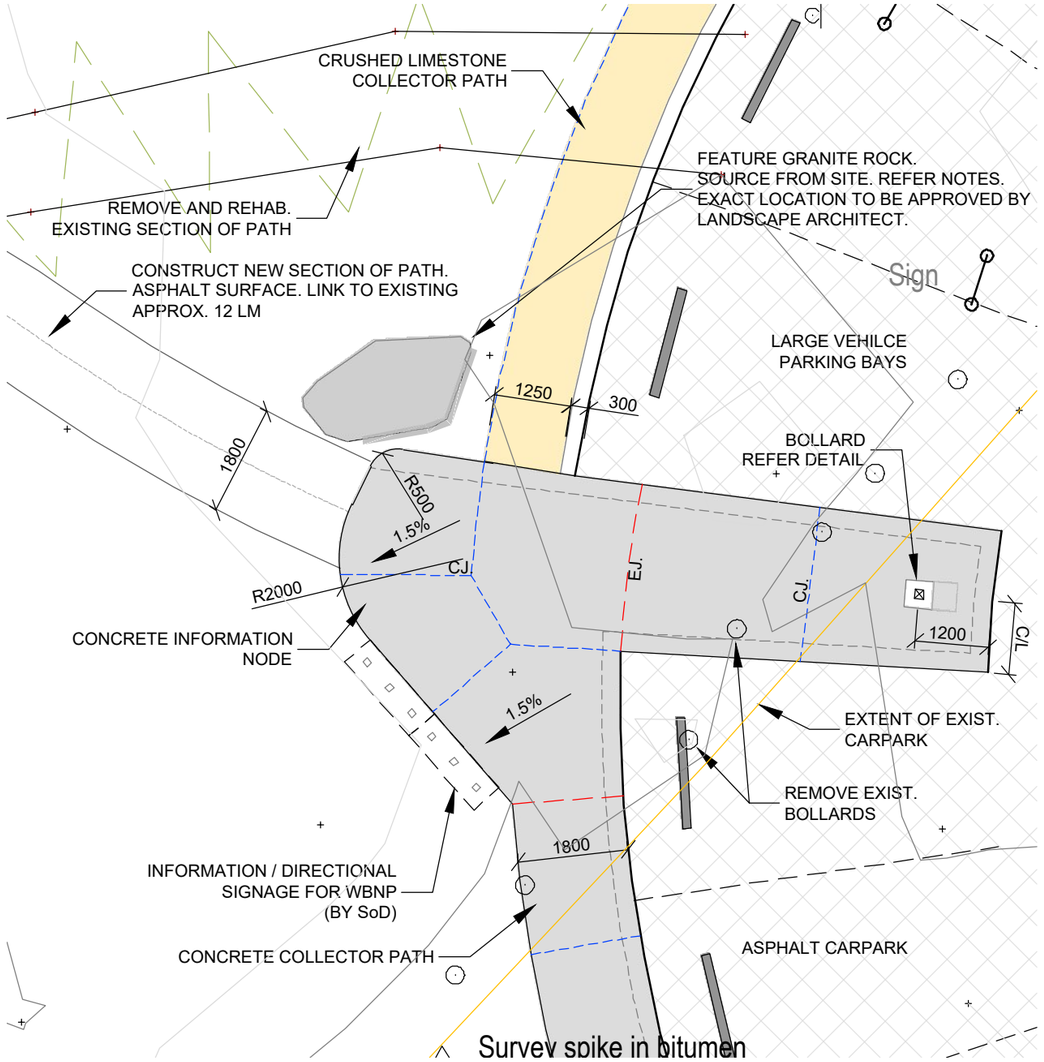
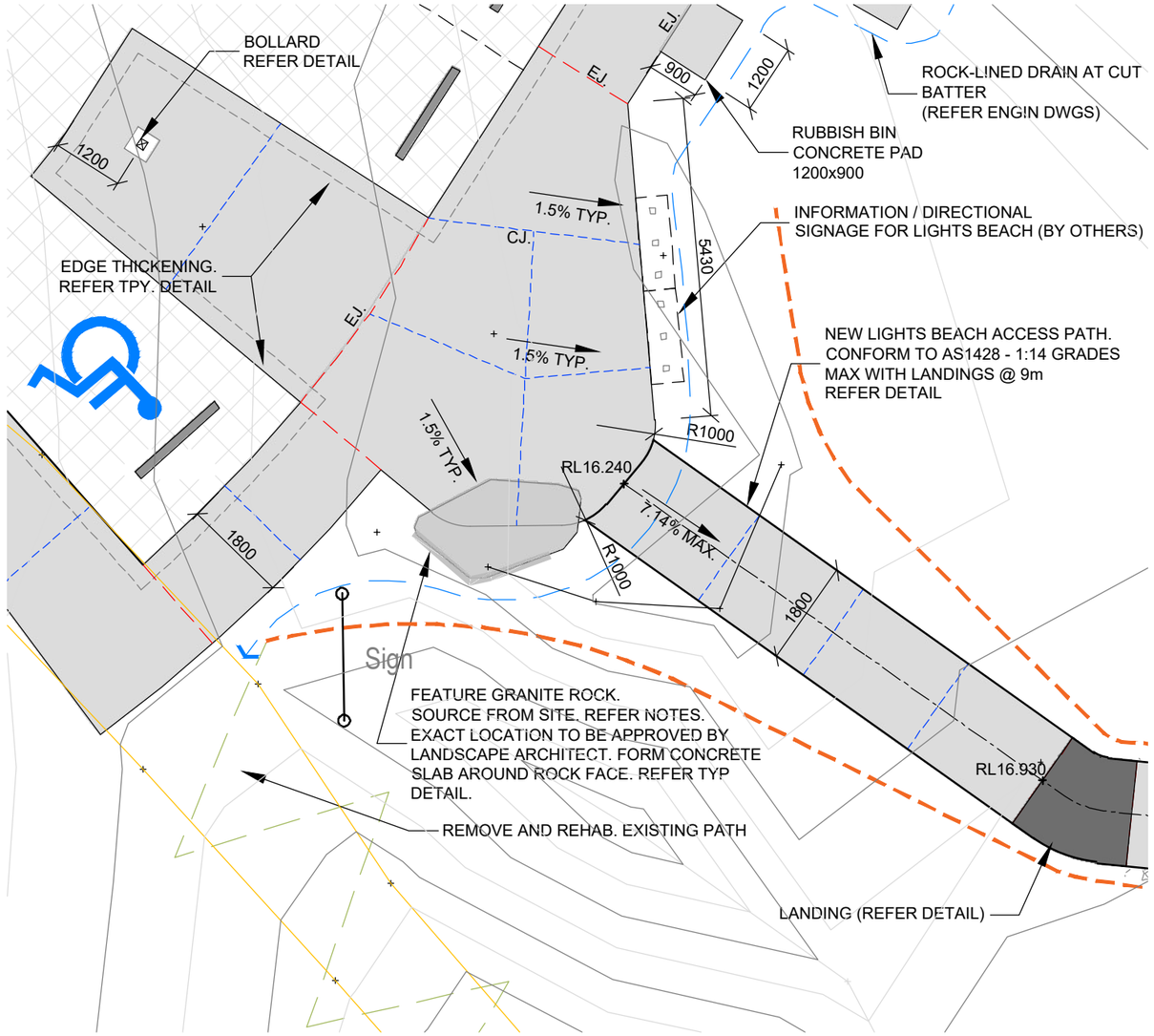


12 / 03 **PLAN** WESTERN ACCESS - TO WBNP

1:100 (A3)

NOTE: REFER TO ENGINEER PLANS FOR SPOT LEVELS OTHER THAN THOSE SHOWN



13 / 03 **PLAN** LIGHTS BEACH ACCESS NODE (EAST)

1:100 (A3)

N

1:100

0 1 2 3 4 5 10m

REV	DESCRIPTION	DATE
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LIGHTS BEACH REDEVELOPMENT

TENDER

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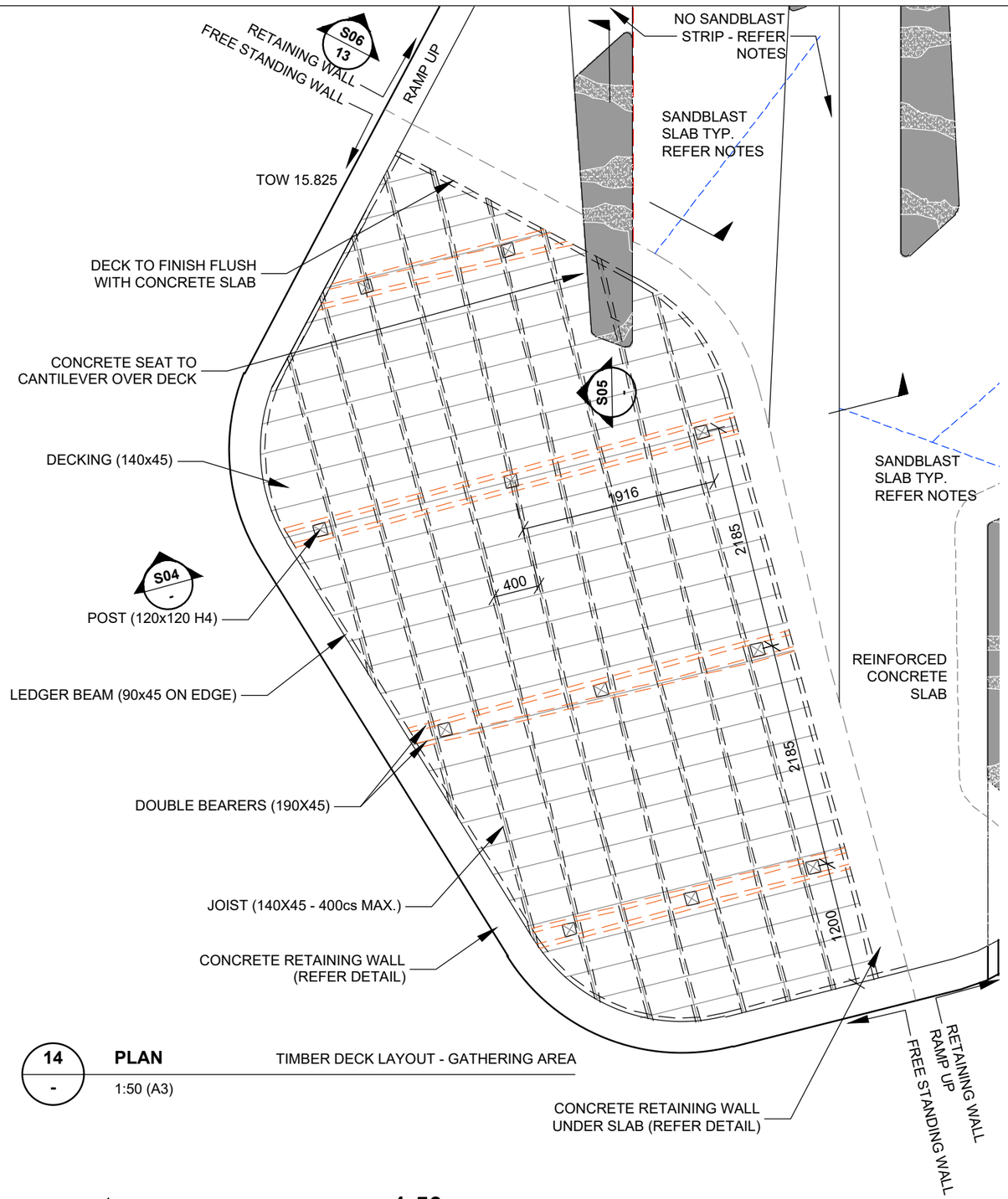
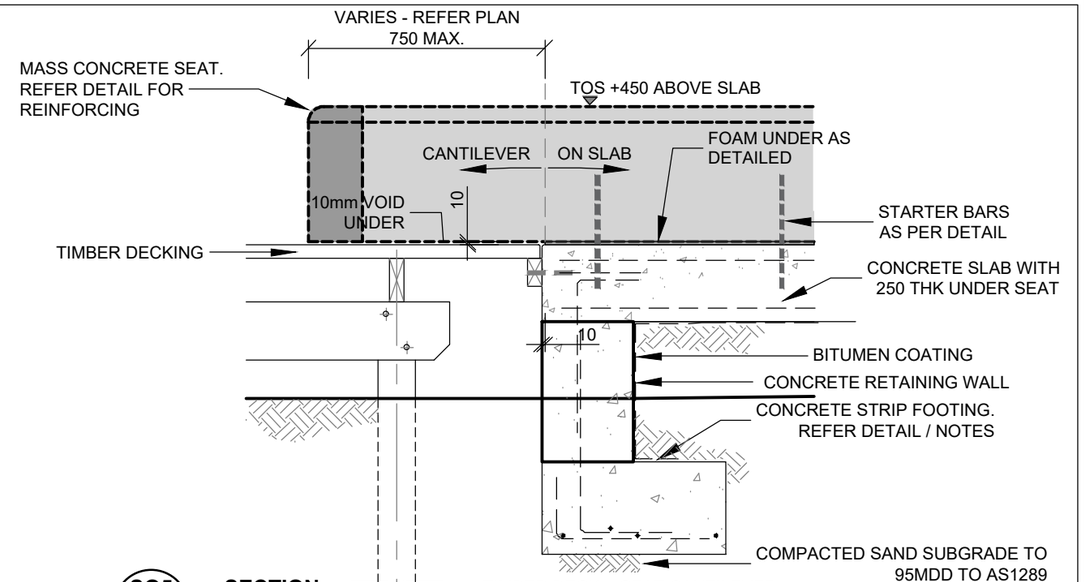


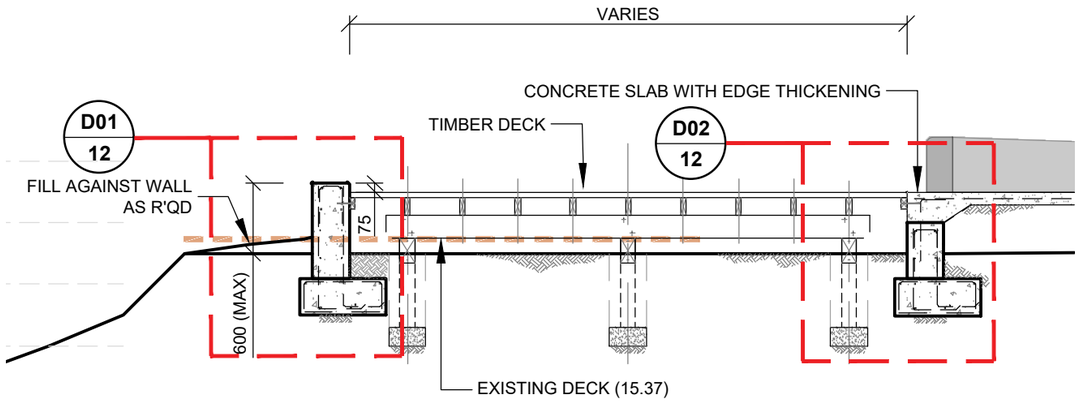
14 - **PLAN** TIMBER DECK LAYOUT - GATHERING AREA

1:50 (A3)



SO5 - **SECTION** TIMBER DECK - SEAT CANTILEVER

1:20 (A3)



SO4 - **SECTION** TIMBER DECK - GATHERING AREA

1:50 (A3)

TIMBER DECKING NOTES:

ALL TIMBER SHALL BE CCA PINE - POSTS H4, JOISTS & DECK H3 (MGP10).
TREAL ALL TIMBER IN-GROUND WITH BITUMINOUS PAINT TO MANUFACTURERS RECOMMENDATIONS.
ALL FIXINGS SHALL BE STAINLESS STEEL.
TREAT ALL TIMBER ABOVE GROUND WITH **'ÇUTEK CD50'** **CLEAR OIL** AS PER MANUFACTURERS RECOMMENDATIONS. ENSURE ALL CUT ENDS ARE TREATED PRIOR TO FIXING.
ENSURE ALL EXPOSED TIMBER IS FREE FROM SPLINTERS AND SHARP EDGES.
INSTALL DECKING TIMBER WITH CUP UP. FIX WITH 304 STAINLESS BUGLE BATTEN SCREWS (2 PER JOIST - 30mm FROM EDGE TYP.)
REFER ENGINEER NOTES FOR FURTHER DETAIL

N

1:50

0 0.5 1 2 3 4 5m

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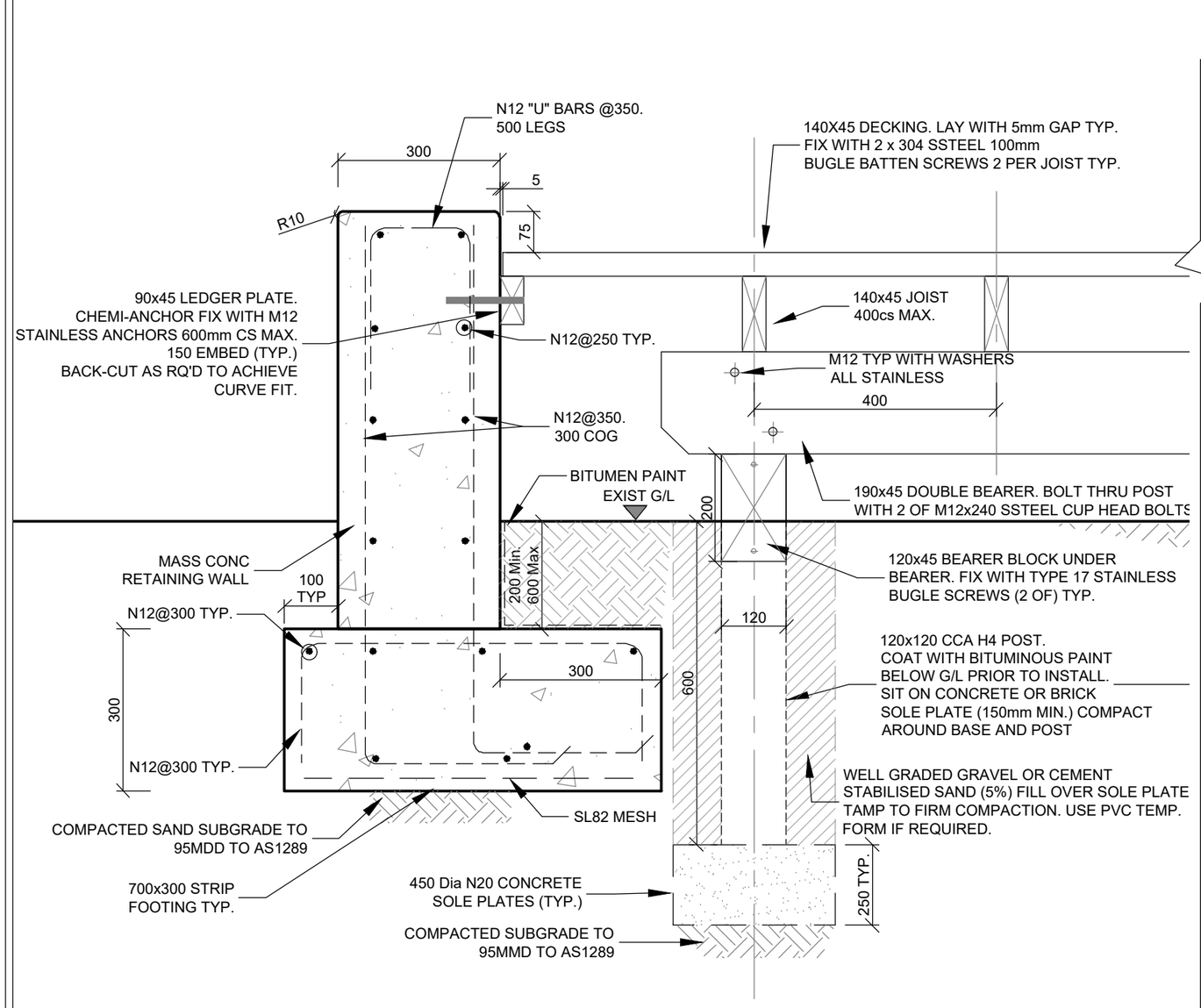
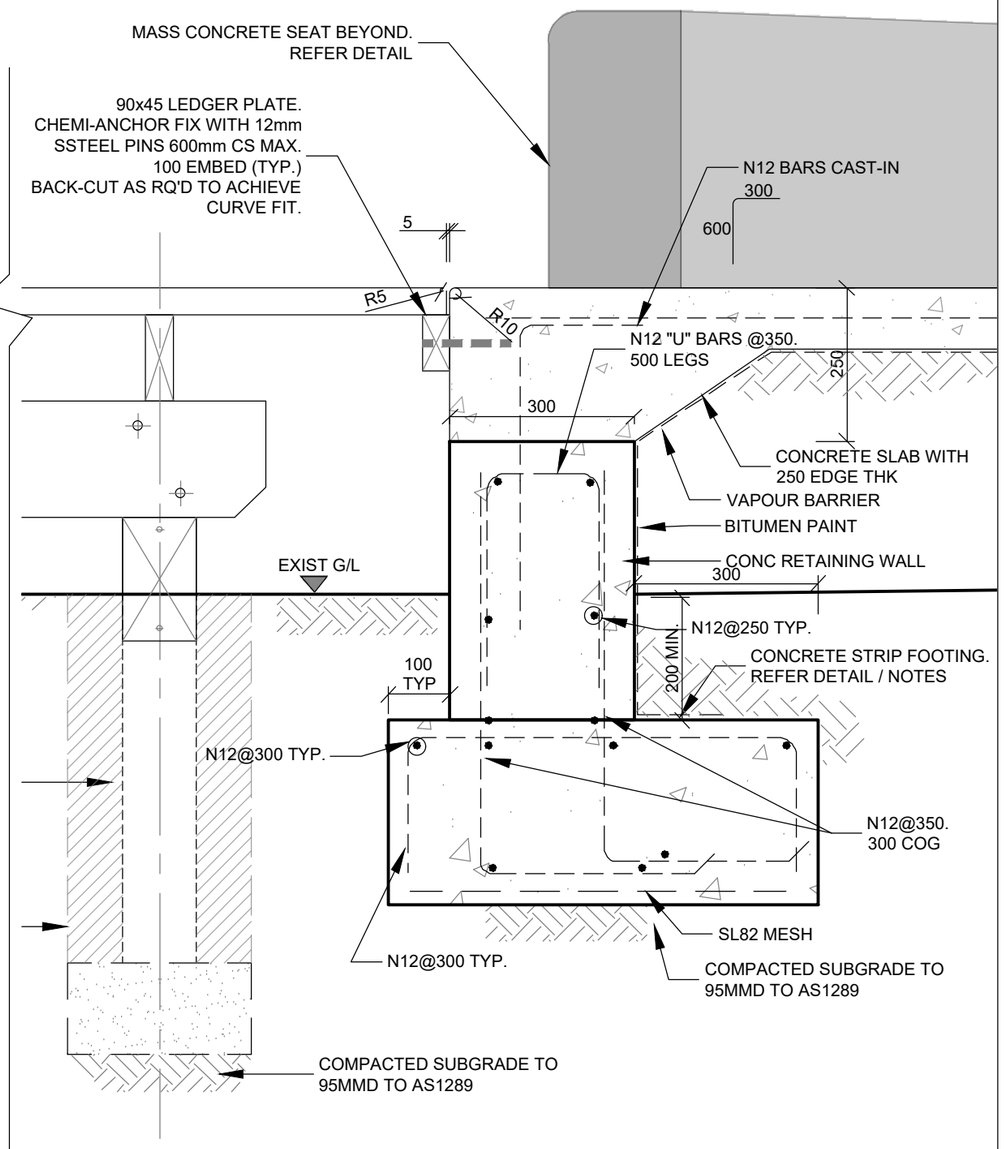


D01 / 11 **DETAIL** TIMBER DECK - WALL / KERB CONNECTION

1:10 (A3)



D02 / 11 **DETAIL** TIMBER DECK - WALL CONNECTION

1:10 (A3)

REV	DESCRIPTION	DATE
REV 0	TENDER	07.09.20

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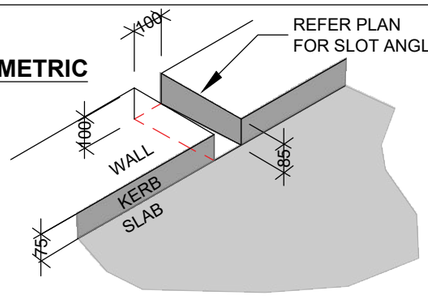
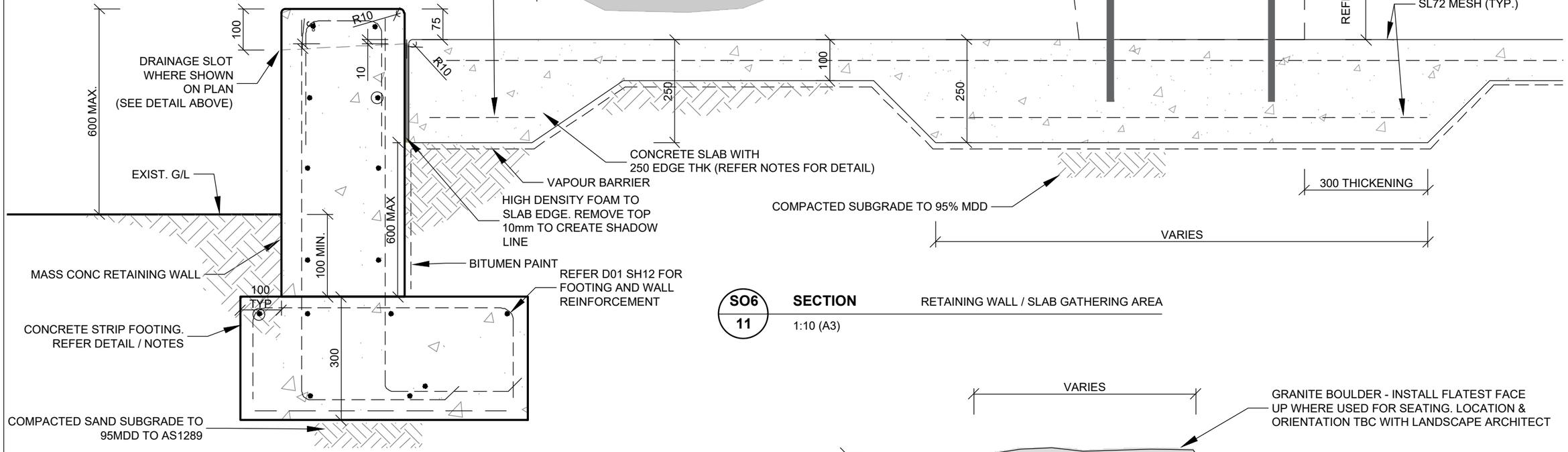
DRAINAGE SLOT ISOMETRIC

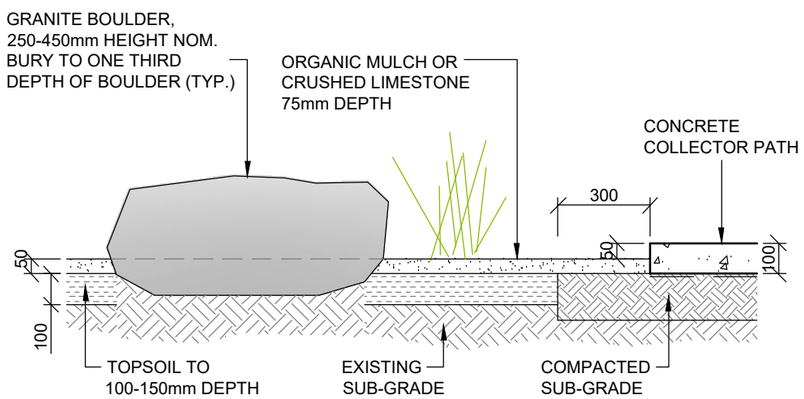
SCALE 1:20





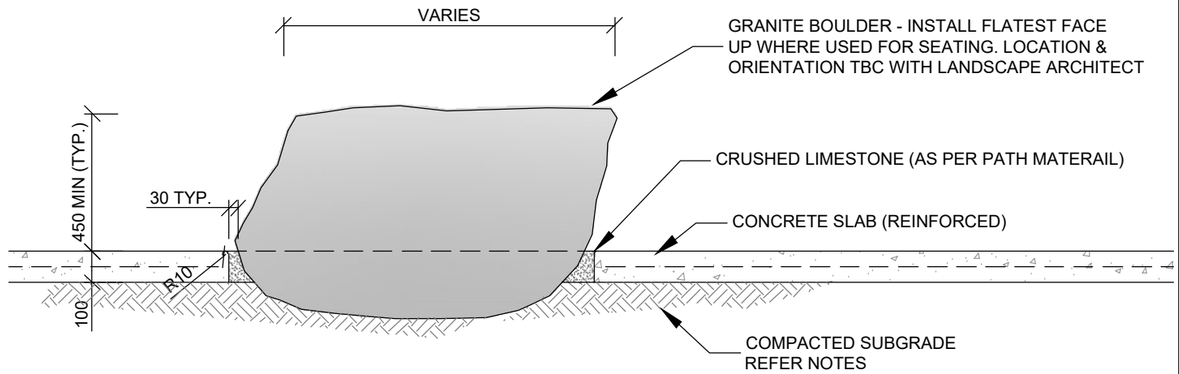
SO6 / 11 **SECTION** RETAINING WALL / SLAB GATHERING AREA

1:10 (A3)



- / - **SECTION (TYP.)** GRANITE BOULDER IN-GOUND

1:20 (A3)



NOTE: INSTALL BOULDERS PRIOR TO
POURING SLAB. INSTALL FOAM AROUND BASE OF ROCK
AND REMOVE POST POUR TO REVEAL 30mm VOID.
FILL WITH LIMESTONE PRODUCT AS SPECIFIED.
BOULDER SELECTION AND PLACEMENT TO BE CONFIRMED
ON SITE WITH LANDSCAPE ARCHITECT.
FOR BOULDERS OUTSIDE SLAB AREAS - REFER NOTES

SO7 / 09 **SECTION (TYP.)** GRANITE BOULDER IN CONC. SLAB

1:20 (A3)

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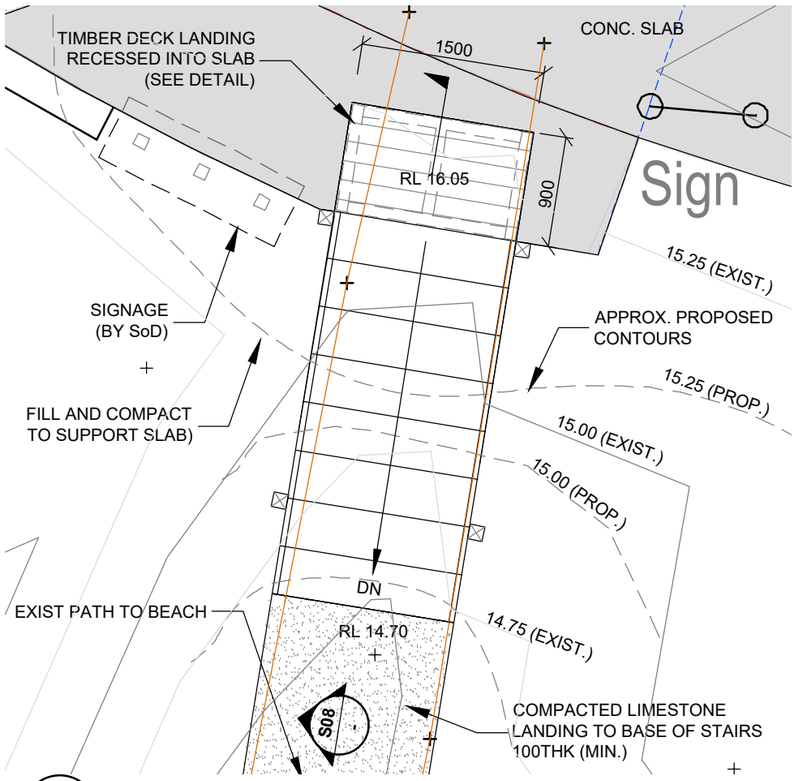
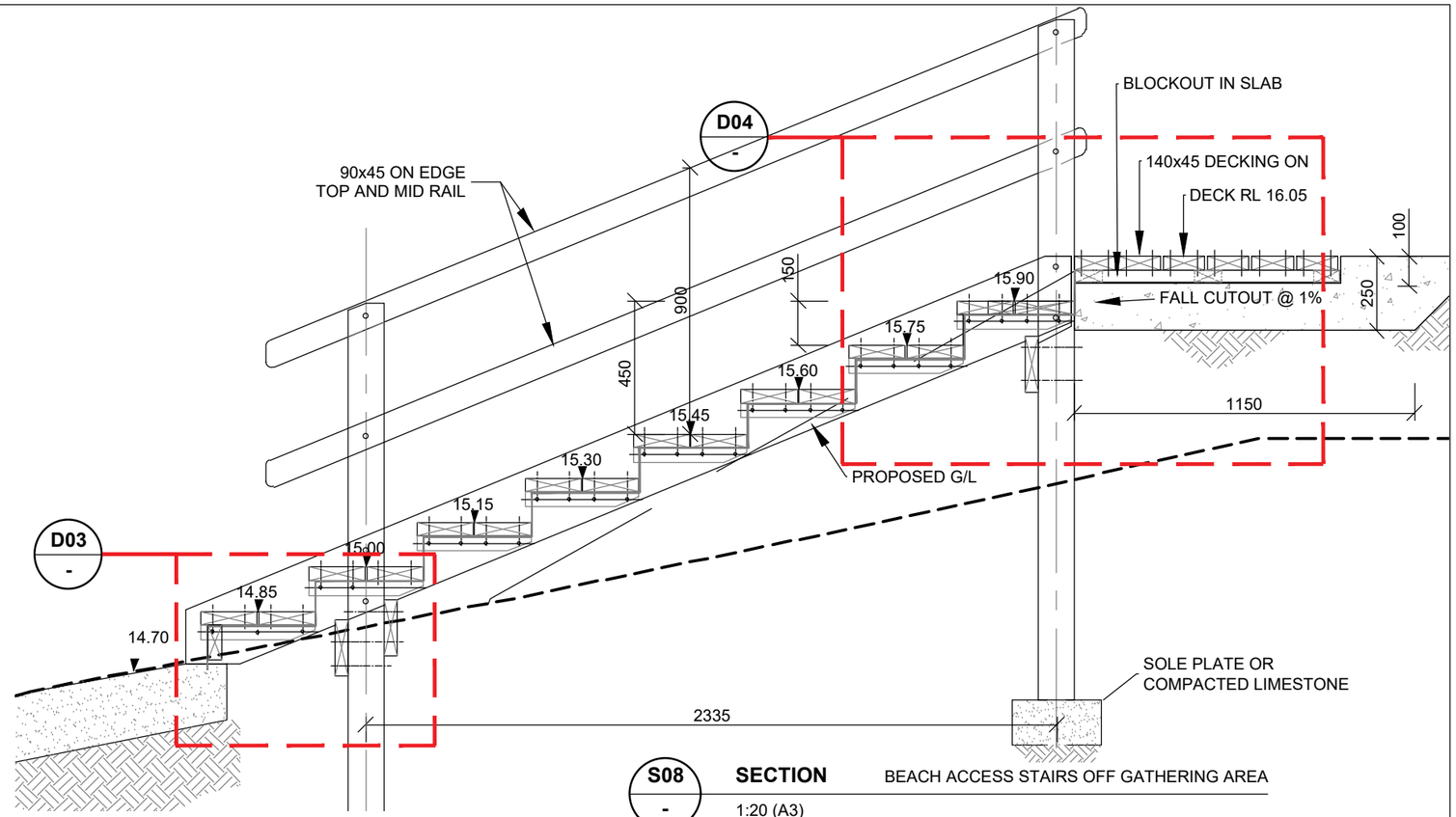


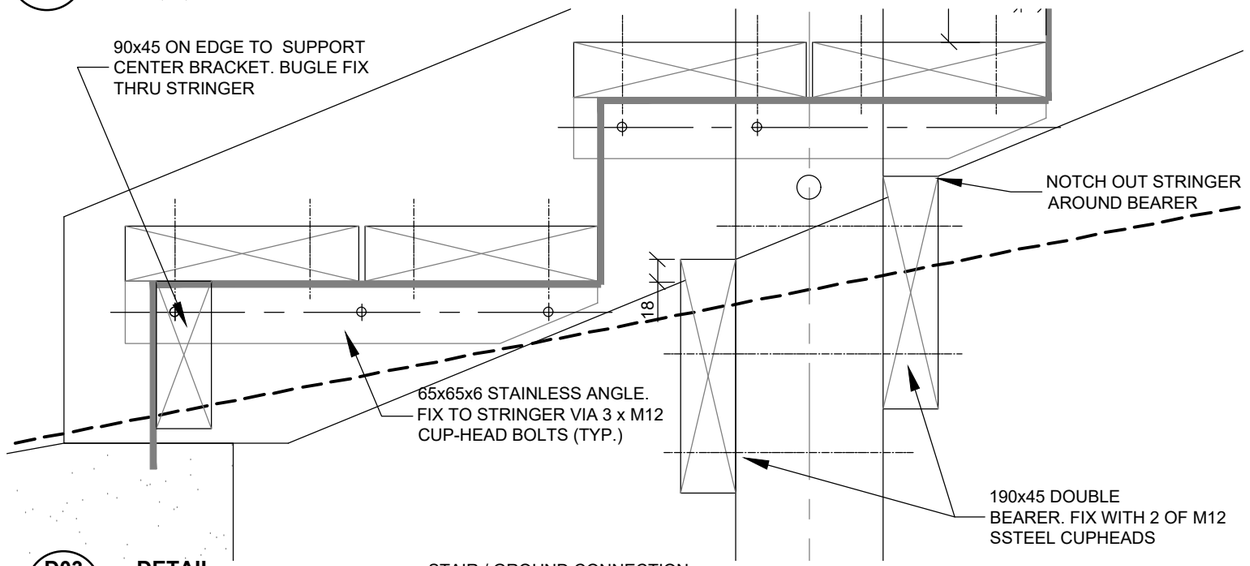
14 - **PLAN** BEACH ACCESS STAIRS OFF GATHERING AREA

1:50 (A3)



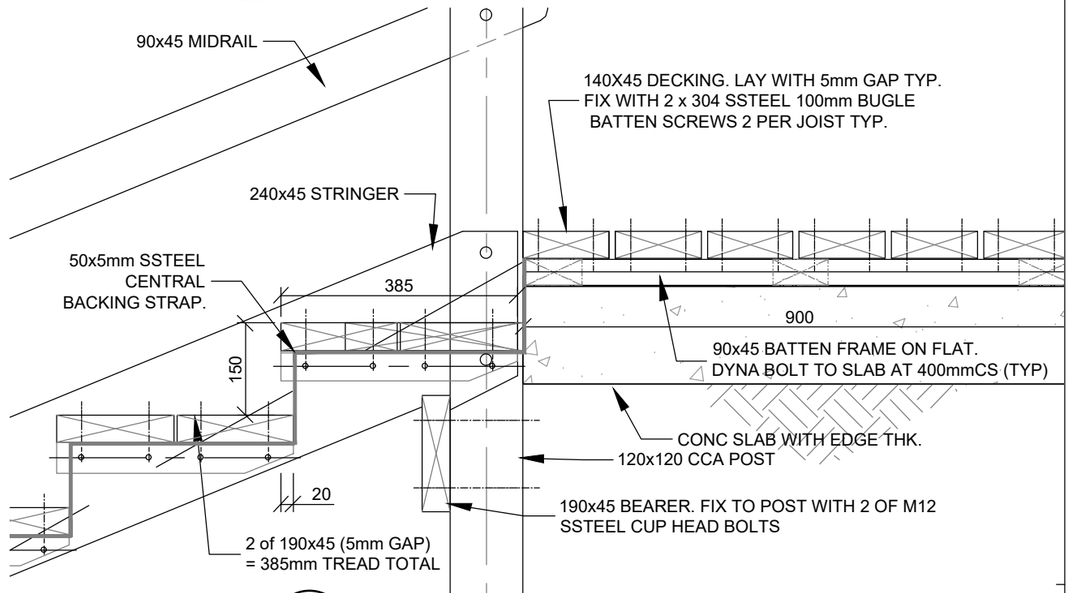
S08 - **SECTION** BEACH ACCESS STAIRS OFF GATHERING AREA

1:20 (A3)



D03 - **DETAIL** STAIR / GROUND CONNECTION

1:5 (A3)



D04 - **DETAIL** TIMBER DECK - STAIR CONNECTION

1:10 (A3)

REV	DESCRIPTION	DATE
REV 0	TENDER	07.09.20

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LIGHTS BEACH REDEVELOPMENT

TENDER

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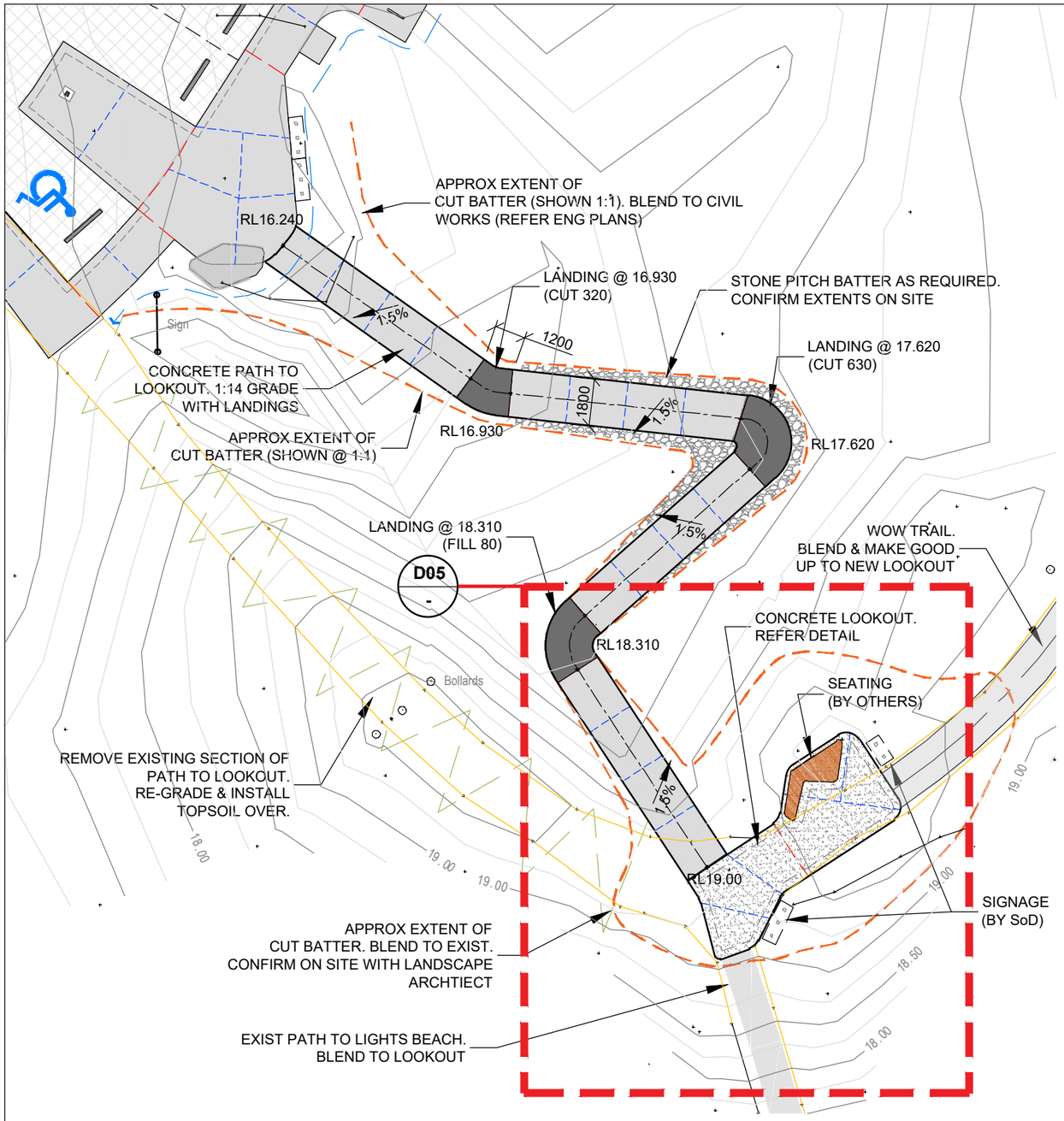


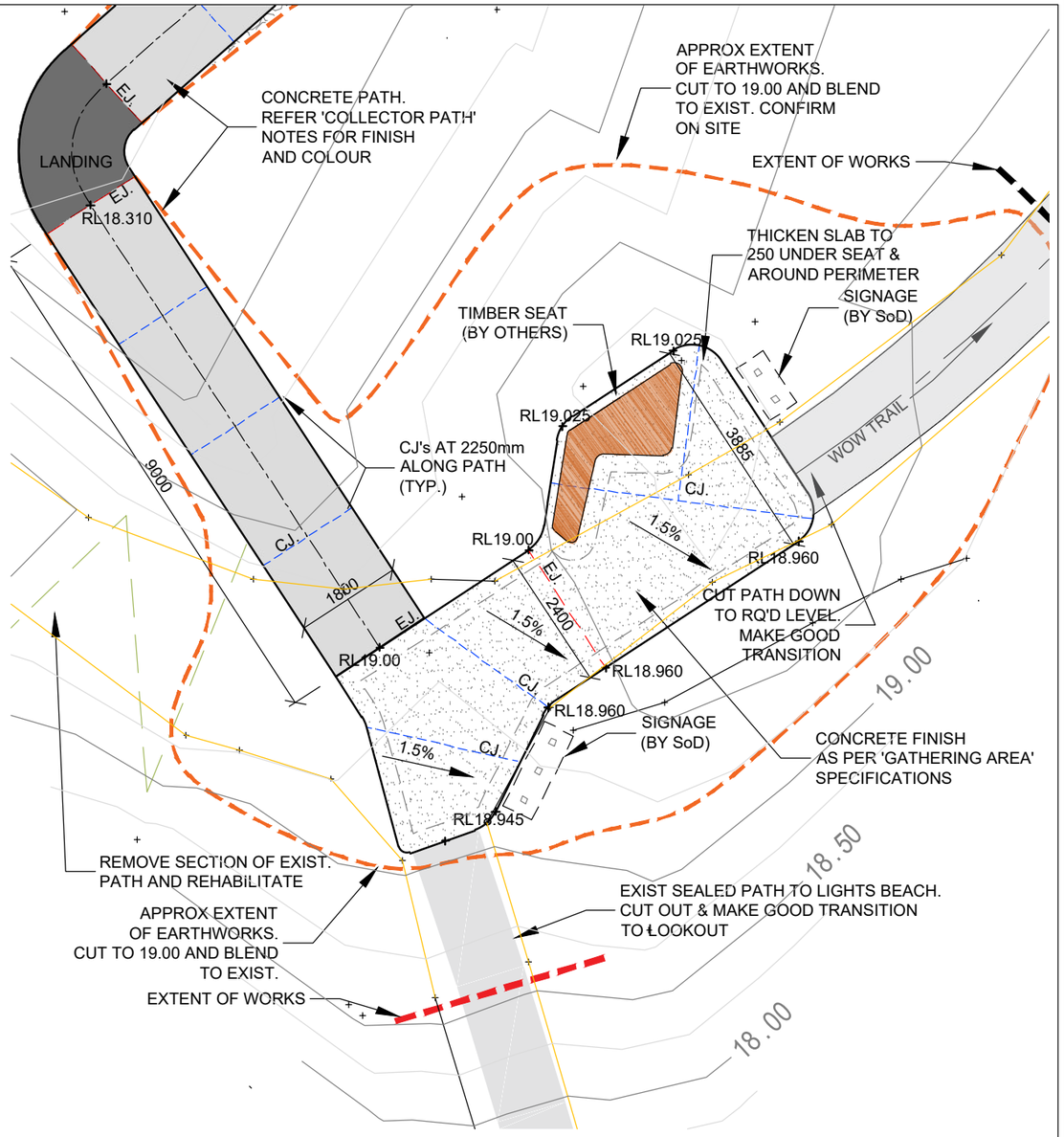
15 - **PLAN** UNIVERSAL ACCESS PATH TO LOOKOUT

1:200 (A3)

N

1:200

0 2.5 5 10 15 20m



D05 - **PLAN** UNIVERSAL ACCESS LOOKOUT

1:100 (A3)

N

1:100

0 1 2 3 4 5 10m

REV	DESCRIPTION	DATE
REV 0	TENDER	07.09.20

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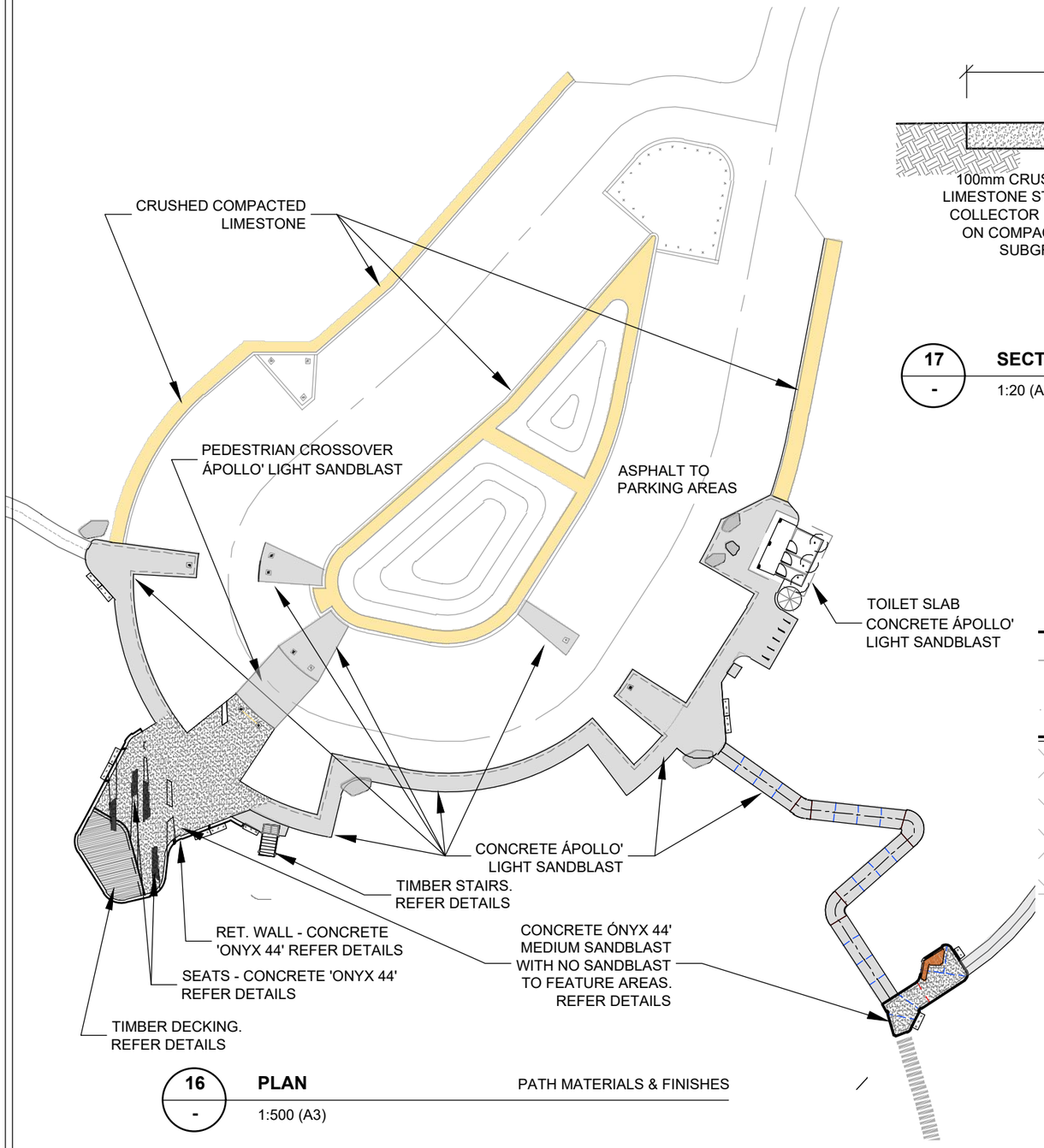
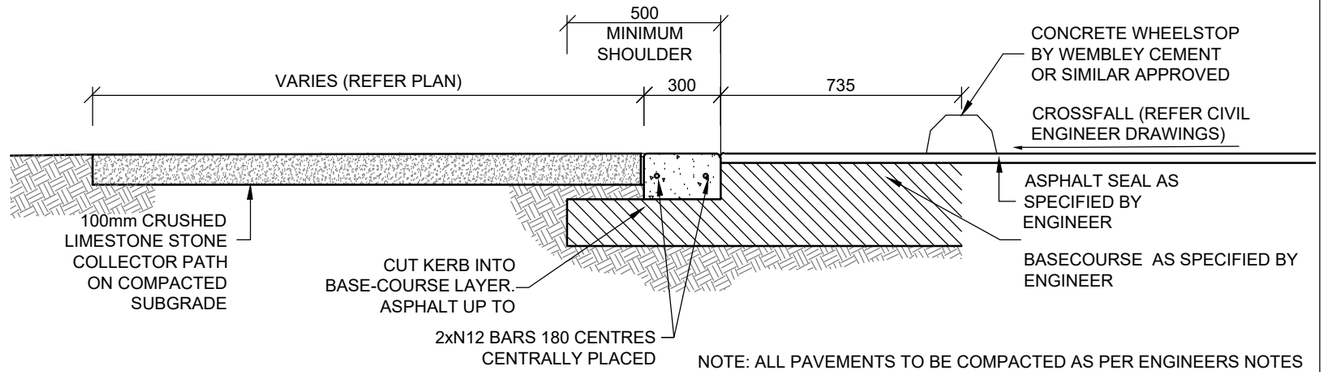


16 - **PLAN** PATH MATERIALS & FINISHES

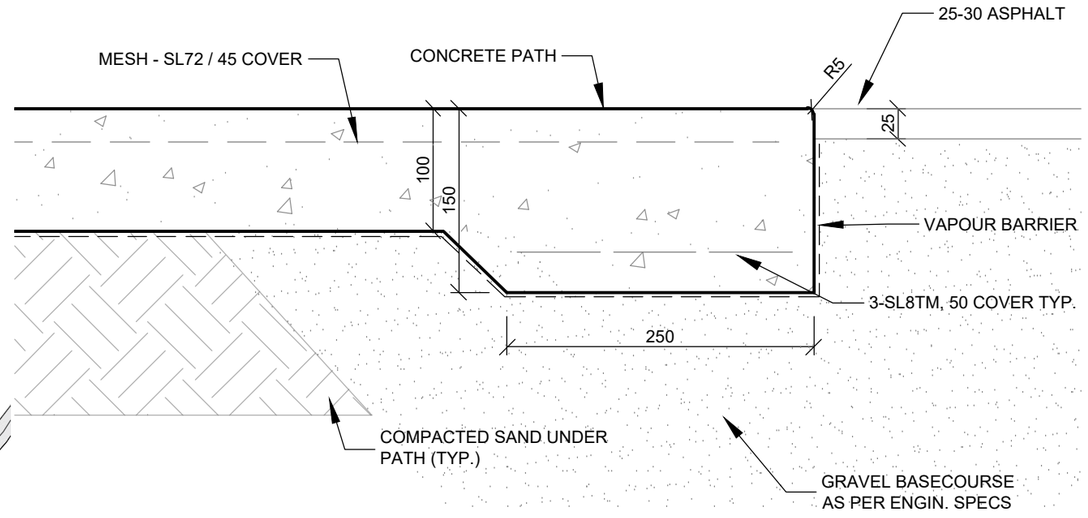
1:500 (A3)



NOTE: ALL PAVEMENTS TO BE COMPACTED AS PER ENGINEERS NOTES

17 - **SECTION** FLUSH KERB INTERFACE / PATH (TYP)

1:20 (A3)



S09 - **09** **SECTION** CONCRETE PATH - ASPHALT INTERFACE / EDGE THK

1:5 (A3)

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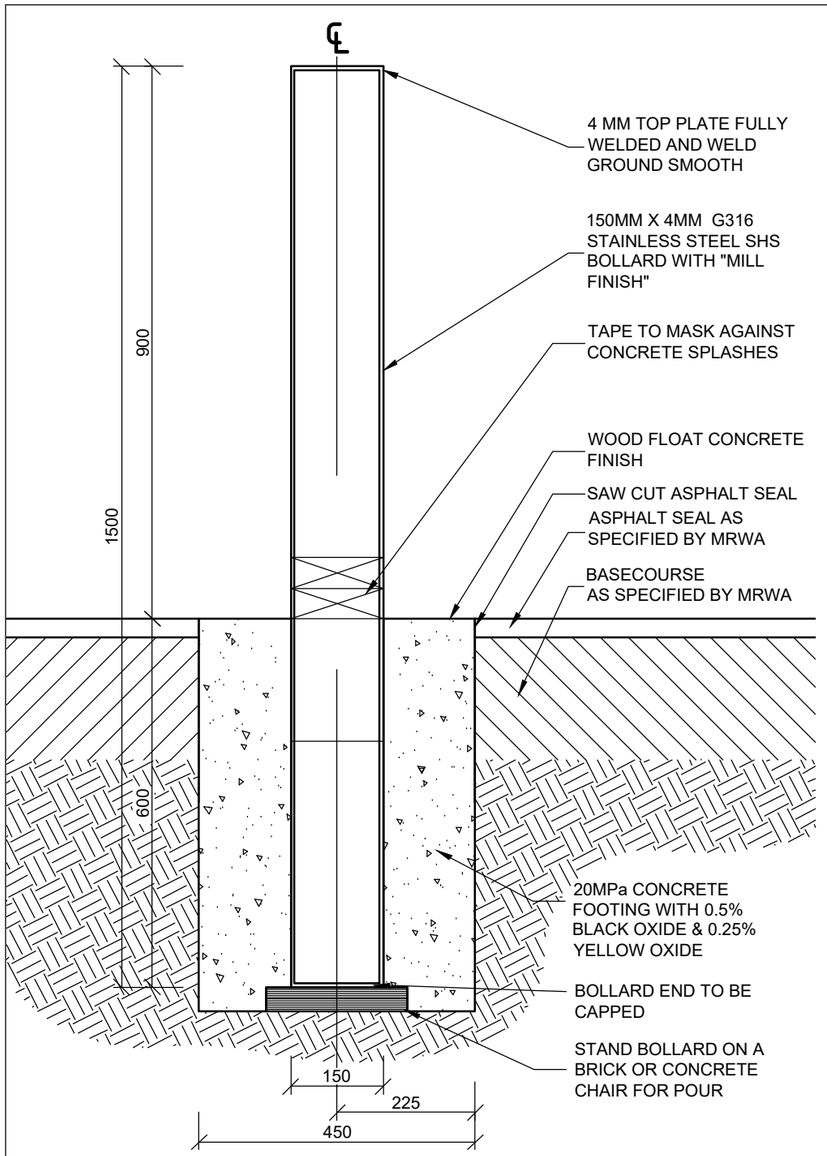
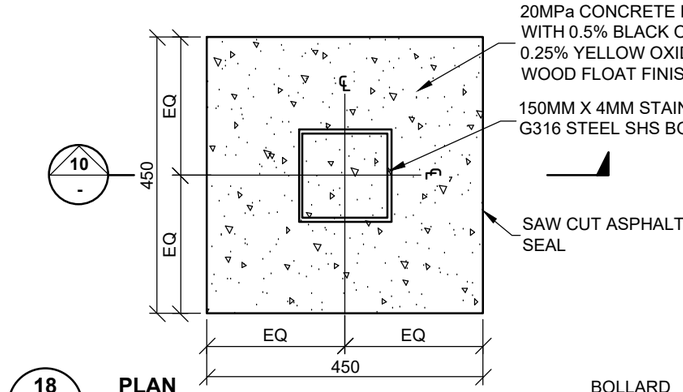


S10 - **SECTION** BOLLARD

1:10 (A3)



18 - **PLAN** BOLLARD

1:10 (A3)

19 - **IMAGE** PROPOSED BIN ENCLOSURE (BY SoD)

NTS

ALL FOUNDATIONS TO BE COMPACTED TO 95%MDD UNO.

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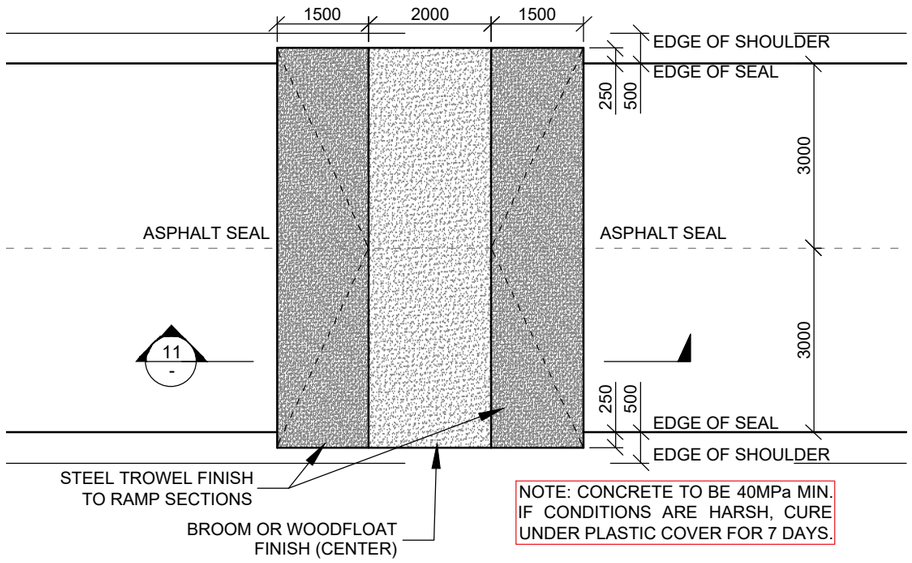
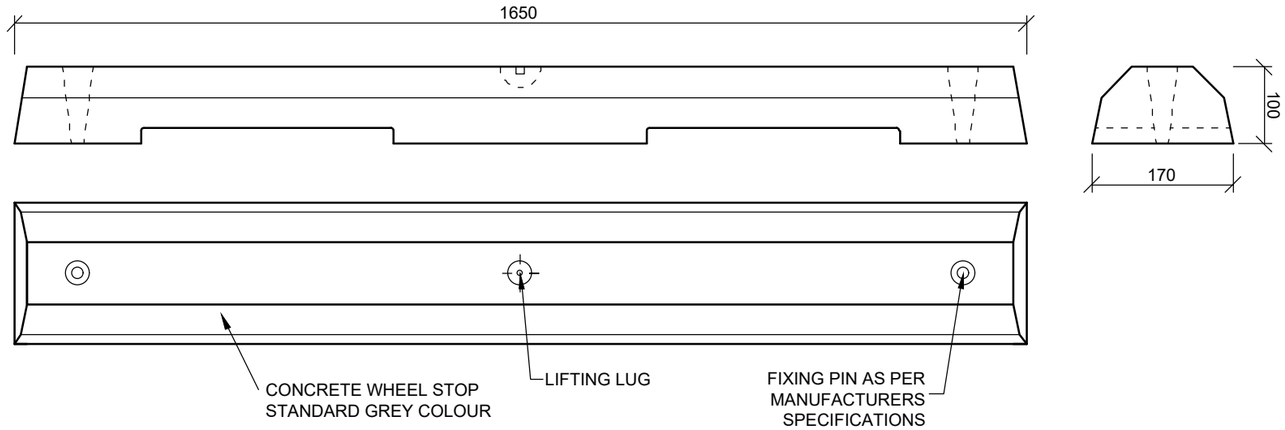


NOTE: CONCRETE TO BE 40MPa MIN. IF CONDITIONS ARE HARSH, CURE UNDER PLASTIC COVER FOR 7 DAYS.

20 - PLAN SPEED HUMP / CROSSING

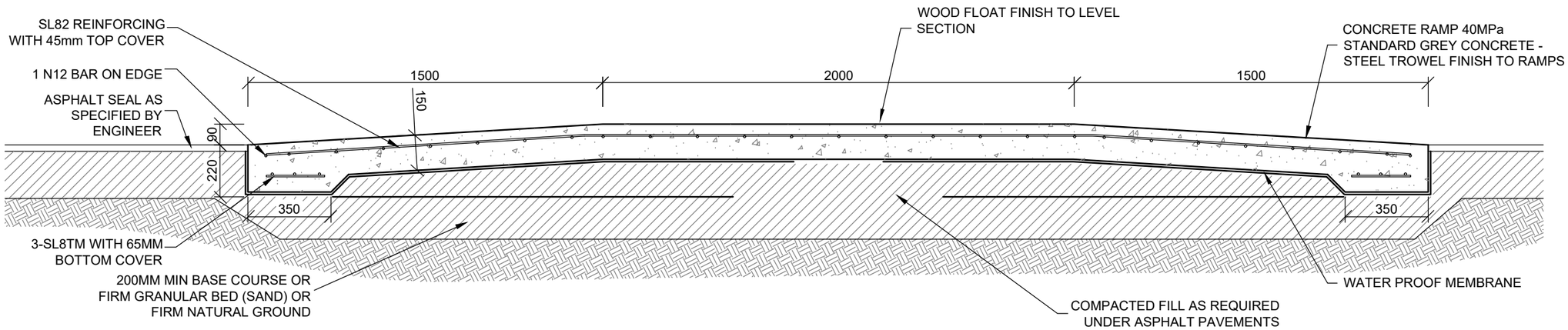
1:100 (A3)



21 - DETAIL - TYP WHEELSTOPS

1:10 (A3)

NOTE: REFER TO GENERAL NOTES FOR EXACT PRODUCT SPECIFICATIONS.



S11 - SECTION SPEED HUMP / ENTRY

1:20 (A3)

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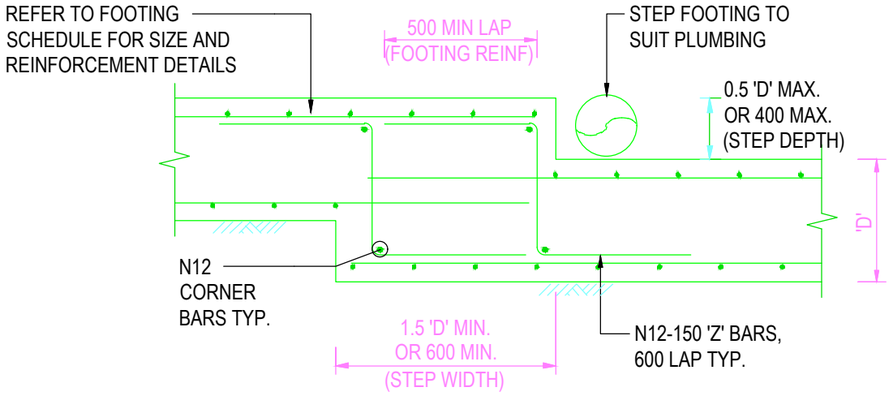
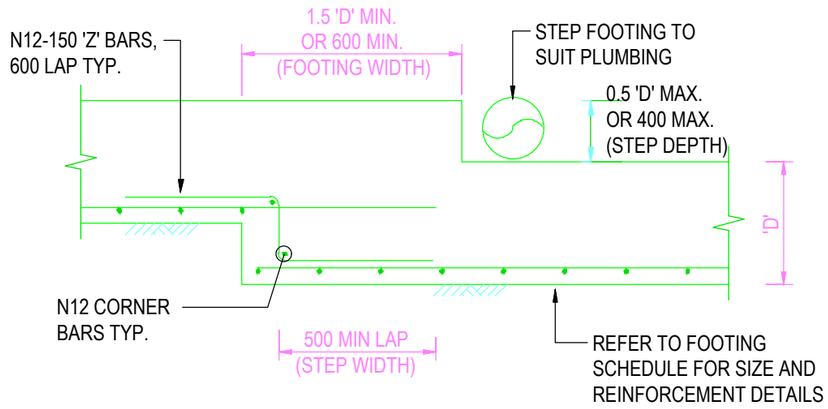


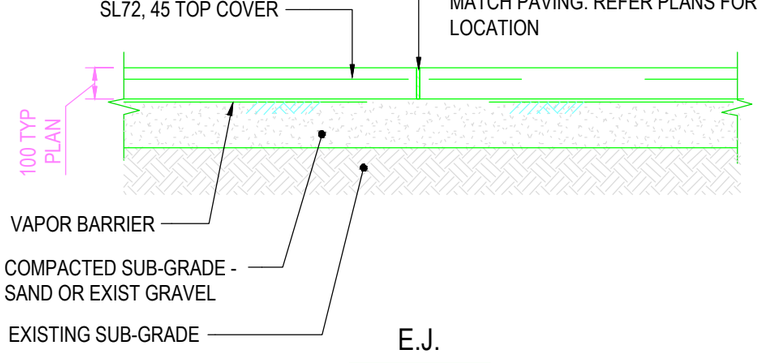
TYPICAL FOOTING STEP DETAIL

SCALE - 1:20



TYPICAL STRIP FOOTING STEP DETAIL

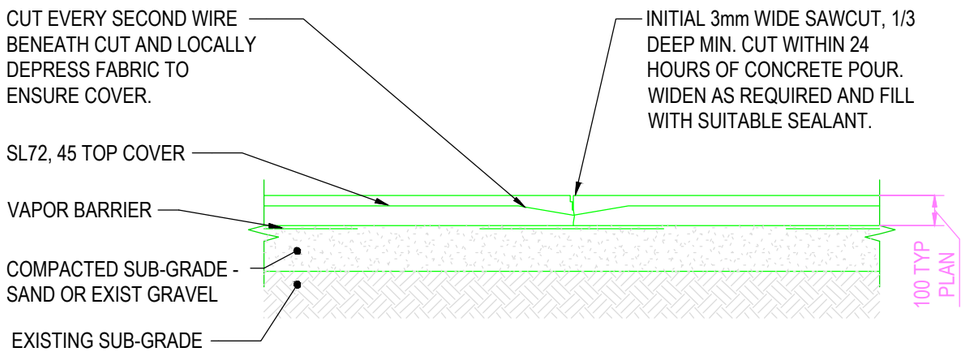
SCALE - 1:20



E.J.

TYPICAL EXPANSION JOINT (E.J.)

SCALE - 1:20



S.C.J.

TYPICAL SAW CUT JOINT DETAIL (S.C.J)

SCALE - 1:20

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DETAILS -

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of **23**

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GENERAL

1. ALL STRUCTURAL WORK EXECUTED ON SITE AND INFORMED BY THESE DRAWINGS SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.
2. ALL WORKS ARE TO BE CONSTRUCTED SUCH THAT TOLERANCES COMPLY WITH THE MOST ONEROUS REQUIREMENTS OF THE RELEVANT AUSTRALIAN STANDARD AND THE PROJECT DOCUMENTS.
3. ALL WORKS SHALL COMPLY WITH THE CURRENT AND RELEVANT NATIONAL CONSTRUCTION CODE (NCC), AUSTRALIAN STANDARDS AND BEST PRACTICE INDUSTRY GUIDELINES.
4. THIS DRAWING SET SHALL BE READ IN CONJUNCTION WITH ALL OTHER RELATED CONTRACT DOCUMENTS INCLUDING SPECIFICATIONS AND OTHER CONSULTANT DOCUMENTS. TENDERERS PRICING FROM THIS SET OF DOCUMENTS IN ISOLATION, DO SO AT THEIR OWN RISK. ANY DISCREPANCIES OR AREAS OF UNCERTAINTY IN DOCUMENTATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO FINALIZING A CONTRACT PRICE.
5. DO NOT SCALE FROM DRAWINGS. ALL DIMENSIONS ARE TO BE TAKEN FROM THE ARCHITECTURAL DRAWINGS UNO.
6. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CHECK DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO COMMENCEMENT OF PROCUREMENT, FABRICATION OR CONSTRUCTION.
7. ALLOW, IN ALL FIXINGS TO STRUCTURE, FOR LONG TERM DEFLECTION OF SLABS AND BEAMS OF UP TO 0.4% OF SPAN.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE INTEGRITY AND OVERALL STABILITY OF THE STRUCTURE AND ALL EXISTING STRUCTURES IN THE IMMEDIATE VICINITY OF THE WORKS.
9. THE CONSULTING ENGINEER HAS NOT DESIGNED AND IS NOT RESPONSIBLE FOR STRUCTURAL ELEMENTS OTHER THAN THOSE SHOWN ON THE ENGINEERING DRAWINGS.
10. NO STRUCTURAL ELEMENTS ARE TO BE PENETRATED, NOTCHED, CHASED OR OTHERWISE MODIFIED WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
11. THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL CURRENT OCCUPATIONAL HEALTH AND SAFETY REGULATIONS ON SITE FOR THE DURATION OF CONSTRUCTION. THIS SHALL INCLUDE PROVISION OF SAFE ACCESS FOR THE ENGINEER.
12. ALL PROPRIETARY ITEMS TO BE INSTALLED IN STRICT ACCORDANCE WITH THE SUPPLIER'S RECOMMENDATIONS.
13. PROPRIETARY SYSTEMS SHOWN ON THESE DRAWINGS ARE TO BE USED AS NOMINATED UNLESS IT CAN BE SHOWN THAT A SUBSTITUTION OFFERS EQUIVALENT OR BETTER PERFORMANCE. SUBSTITUTIONS MAY NOT BE USED UNLESS PRIOR ENGINEER APPROVAL HAS BEEN OBTAINED.
14. THESE DRAWINGS HAVE BEEN PRODUCED ON THE ASSUMPTION THAT THE CONTRACTOR WILL REMAIN SOLELY ACCOUNTABLE FOR THE WORKS UNDERTAKEN BY THEIR SUB-CONTRACTORS AND THAT ALL INDIVIDUALS OR FIRMS EMPLOYED TO CARRY OUT WORKS ARE COMPETENT AND SUITABLY EXPERIENCED IN THEIR TRADES.
15. THE CONTRACTOR SHALL RECORD ALL VARIATIONS TO THE DRAWINGS AND BE RESPONSIBLE FOR PRODUCING AS CONSTRUCTED DRAWINGS IN ELECTRONIC FORMAT AT THE COMPLETION OF THE WORKS.
16. TEMPORARY WORKS REQUIREMENTS DURING CONSTRUCTION PHASE IS THE RESPONSIBILITY OF THE CONTRACTOR AND DOES NOT FORM PART OF STANTEC'S SCOPE OF WORKS UNLESS SEPARATELY ARRANGED. THE CONTRACTOR IS RESPONSIBLE FOR LIAISING WITH THEIR TEMPORARY WORKS ENGINEER IN TERMS OF ALL ANTICIPATED CONSTRUCTION LOADING AND ANY REQUIRED ENHANCEMENTS TO THE DOCUMENTED DESIGN. REPORT ANY PROPOSED CHANGES TO THE ENGINEER.
17. IN THE EVENT THAT A CONTRACTOR IS PRICING THE STRUCTURE WHEN DOCUMENTS ARE DESCRIBED AS BEING PARTIALLY COMPLETE OR GENERALLY PRIOR TO CONSTRUCTION ISSUE, IT IS THE CONTRACTOR'S RESPONSIBILITY TO:
    - i) LIAISE WITH THE ENGINEER AS REQUIRED IN ORDER TO UNDERSTAND THE SPECIFIC STATUS OF DOCUMENTS.
    - ii) ALLOW A SUITABLE CONTINGENCY TO COVER WORKS NOT YET DOCUMENTED IN ORDER TO FUND THE PROJECT THROUGH TO COMPLETION. IN ADDITION, THE CONTRACTOR SHALL KEEP THE ENGINEER INFORMED AS TO THE DATE WHEN THE PRICE IS TO BE FINALIZED.

LOADS FOR DESIGN PURPOSES

1. WIND

REGION	A1	
TERRAIN CATEGORY	1.5	
IMPORTANCE LEVEL	1	
DESIGN TYPE	NON CYCLONIC	
ULTIMATE RETURN PERIOD VR	500	YEARS
SERVICEABILITY RETURN PERIOD	46	YEARS
ULTIMATE WIND SPEED	45	m/sec
SERVICEABILITY WIND SPEED	39	m/sec

2. LIVE LOADS

WALKWAY DECK	4 kPa	(400 kg/sq.m)

FOUNDATIONS

1. NO FORMAL GEOTECHNICAL INVESTIGATION HAS BEEN CARRIED OUT ON THIS SITE.
2. THE STRUCTURAL DESIGN HAS BEEN UNDERTAKEN ON THE BASIS OF THE FOLLOWING ASSUMED DESIGN CRITERIA:
    - i) SITE CLASSIFICATION (TO AS2870, AS APPLICABLE) A
    - ii) GROUND BEAMS/STRIP FOOTINGS: 170 kPa
    - iii) PAD FOOTINGS: 170 kPa
    - iv) SLAB PANELS ON GROUND: 150 kPa
    - v) ACCEPTABLE FOUNDING MATERIAL: SAND
    - vi) MINIMUM FOUNDING INTO ACCEPTABLE MATERIAL: 200 mm
3. THE CONTRACTOR SHALL ALLOW, IN THE TENDERED PRICE, TO ENGAGE THE SERVICES OF AN APPROVED GEOTECHNICAL TESTING AGENCY TO UNDERTAKE AN INVESTIGATION OF SITE CONDITIONS AND PROVIDE A WRITTEN REPORT PRIOR TO WORKS OCCURRING AND FOR SUBMISSION TO THE ENGINEER. THE WRITTEN REPORT IS TO VERIFY THE ASSUMPTIONS ABOVE.
4. EXISTING GROUND IS EXPECTED TO CONSIST OF SAND OF VARYING COMPACTION. TENDERERS ARE TO ASSUME SAND FOR TENDER PURPOSES.
5. FOUNDATION MATERIAL AND COMPACTION LEVELS SHALL BE VERIFIED BY TESTING AT THE CONTRACTOR'S EXPENSE AND SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE THE PLACEMENT OF MEMBRANE, REINFORCEMENT OR CONCRETE.
6. THE SITE SHALL BE STRIPPED, TRIMMED, COMPACTED, BACKFILLED AND GENERALLY PREPARED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT. IN ALL CASES THE SITE SHALL BE STRIPPED OF ALL VEGETATION IN BUILDING AREAS. NO VEGETATION OR ORGANIC MATTER SHALL EXIST IN THE SOIL STRATA BELOW FOOTINGS OR SLAB ON GROUND.
7. WHERE REQUIRED, FILL MAY BE IMPORTED OR RECLAIMED FROM INSITU CUT MATERIAL BUT ALWAYS SUBJECT TO THE GEOTECHNICAL ENGINEER'S APPROVAL. ALL FILL MATERIAL SHALL BE WELL GRADED, NON-REACTIVE AND IN STRICT ACCORDANCE WITH THE REQUIREMENTS OF THE GEOTECHNICAL REPORT.
8. USE OF FREE DRAINING FILL IN CLAY EXCAVATIONS MAY INITIATE REQUIREMENT FOR SUB-SURFACE WATER MANAGEMENT PROVISIONS. CONTRACTOR TO SEEK CLARIFICATION AT TENDER PHASE AND COMMUNICATE FILL MATERIAL INTENT TO ENGINEER PRIOR TO PROCEEDING ON SITE.
9. UNLESS THE GEOTECHNICAL REPORT NOTES OTHERWISE, COMPACT FOUNDATION MATERIAL AND FILL IN LAYERS NOT EXCEEDING 300mm TO 95% MODIFIED MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS 1289.
10. THE COMPACTION LEVEL PRESCRIBED IS TO BE ACHIEVED FOR A MINIMUM OF 750mm BELOW UNDERSIDE OF FOOTINGS UNO ON DRAWINGS OR IN GEOTECHNICAL REPORT.
11. PROOF ROLL THE SUBGRADE TO IDENTIFY SOFT SPOTS. WHERE COMPACTION CANNOT BE ACHIEVED OR SOFT SPOTS ARE IDENTIFIED, MATERIAL TO BE LOCALLY EXCAVATED AND REPLACED WITH APPROVED FILL AS PER NOTES ABOVE. REPORT ISSUE TO THE ENGINEER PRIOR TO PROCEEDING.
12. DO NOT USE COMPACTION METHODS WHICH MAY CAUSE DAMAGE TO ADJACENT STRUCTURES. SELECTION OF METHODS SHALL BE THE BUILDERS RESPONSIBILITY.
13. POUR LOWEST LEVEL FOOTINGS FIRST. VERTICAL DIFFERENCE IN FOOTING LEVELS IS NOT TO EXCEED HALF THE CLEAR DISTANCE BETWEEN THEM.
14. LOCATE FOOTINGS/FOUNDATIONS CENTRALLY UNDER WALLS AND COLUMNS UNO.

FORMWORK

1. DESIGN AND CERTIFICATION OF FORMWORK & SUPPORTING STRUCTURES SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
2. FORMWORK CONSTRUCTION TO ACCOUNT FOR ALL ITEMS AFFECTING SURFACE SHAPE AND FINISH INCLUDING BUT NOT LIMITED TO PLUMBING PIPES, RECESSES, SET DOWN AREAS, DRIP GROOVES, FALLS, CHAMFERS, STEPS, REGLETS & BUILT IN FIXINGS.
3. STRIPPING TIMES SHALL BE THE GREATER OF THOSE REQUIRED UNDER CI 17.6 OF AS3600 OR THE FOLLOWING MINIMUM STRIPPING TIMES:
    - i) WALLS AND COLUMNS: 3 DAYS
    - ii) SLABS AND STAIRS: 7 DAYS
4. STRIPPING TIMES MAY BE REDUCED AT THE DISCRETION OF THE ENGINEER UPON RECEIPT OF STRENGTH TEST RESULTS.
5. SLABS SHALL REMAIN BACK PROPPED FOLLOWING STRIPPING. BACK PROPPING SHALL BE PROVIDED FOR 28 DAYS AS A MINIMUM AND SUCH THAT ALL CONSTRUCTION LOADING (INCLUDING WET WEIGHT OF CONCRETE) IS ACCOMMODATED. THE CONTRACTOR'S TEMPORARY WORKS ENGINEER SHALL BE RESPONSIBLE FOR THE DESIGN, CERTIFICATION AND PERFORMANCE OF THE PROPPING ARRANGEMENT. FINAL PROPPING PROPOSALS ARE TO BE SUBMITTED TO THE ENGINEER FOR COMMENT AND/OR RECORD PURPOSES.
6. ENSURE ALL DEBRIS IS REMOVED FROM FORMWORK PRIOR TO CONCRETING.

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REINFORCEMENT

1. 'N' DENOTES HOT ROLLED DEFORMED BARS OF GRADE 500 (D500N) TO AS/NZS 4671. SL' DENOTES SQUARE WELDED WIRE MESH OF GRADE 500 (D500L) TO AS/NZS 4671. 'RL' DENOTES RECTANGULAR WELDED WIRE MESH OF GRADE 500 (D500L) TO AS/NZS 4671. 'TM' DENOTES TRENCH MESH OF GRADE 500 (D500L) TO AS/NZS 4671. 'R' DENOTES ROUND BAR OF GRADE 250 (R250N) TO AS/NZ 4671.
2. SLOPES OF CRANKS SHALL NOT EXCEED 1 IN 6.
3. REINFORCE SLAB RE-ENTRANT CORNERS WITH BARS PLACED AT 45 DEGREES, TIED TO THE INSIDE OF THE REINFORCEMENT AS FOLLOWS:
   i) STIFFENED RAFT GROUND SLABS: 3-N12 x 2000 LONG, TOP.
   ii) OTHER GROUND SLABS: 1-N16 x 1500 LONG, TOP.
   iii) SUSPENDED SLABS: 1-N16 x 1500 LONG, TOP & BOTTOM.
4. MINIMUM LAPS (UNO ON DRAWINGS):
   i) SQUARE/RECTANGULAR MESH: OVERLAP 2 OUTER MOST TRANSVERSE BARS.
   ii) TRENCH MESH: 500mm.
   iii) N & R BARS: 50 BAR DIAMETERS.
5. REINFORCEMENT IS SHOWN DIAGRAMMATICALLY AND NOT NECESSARILY IN TRUE PROJECTION OR POSITION.
6. ALL REINFORCEMENT SHALL BE SECURELY SUPPORTED VIA NON-FERROUS CHAIRS PRIOR TO CONCRETING TO ENSURE THAT COVER IS MAINTAINED, BARS REMAIN STRAIGHT AND CORRECT POSITIONING IS ACHIEVED.
7. WHERE A PENETRATION THROUGH A SLAB IS SMALLER THAN THE BAR SPACING, ENSURE COVER IS MAINTAINED. WHERE REINFORCEMENT IS CUT DUE TO A LARGER PENETRATION (UPTO 1000mm IN ANY DIRECTION), ADD THE SAME NUMBER OF BARS CUT AND DISTRIBUTE EQUALLY TO EACH SIDE OF THE OPENING IN CONJUNCTION WITH RE-ENTRANT BARS. RELOCATED BARS TO EXTEND 50 BAR DIAMETERS BEYOND EACH SIDE OF THE PENETRATION. REFER ENGINEER/DRAWINGS FOR CLARIFICATION IN SITUATIONS WHERE PENETRATIONS EXCEED THIS LIMIT.
8. WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED WITHOUT THE PRIOR APPROVAL OF THE ENGINEER. IF APPROVED, METHODS TO COMPLY WITH AS1554.3.
9. COVER TO REINFORCEMENT TO BE (UNO):

ELEMENT	COVER
PAD FOOTINGS	
STRIP FOOTINGS	50
SLABS ON GROUND (INTERNAL)	50
SLABS ON GROUND (EXTERNAL)	45
MASONRY CAVITY FILL	45
INSITU WALLS	N/A
PERMANENT FORMWORK PROPRIETARY WALL SYSTEMS	45
COLUMNS (INTERNAL)	N/A
COLUMN (EXTERNAL)	N/A
SUSPENDED SLABS, BEAMS AND STAIRS (INTERNAL)	N/A
SUSPENDED SLABS, BEAMS AND STAIRS (EXTERNAL)	N/A
PRECAST/TILT-UP	N/A
PILECAPS	N/A
# REDUCE TO 20 COVER ONLY IF STRUCTURAL ADEQUACY FIRE RATING IS 60min OR LESS	N/A

CONCRETE

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL CONCRETE ELEMENTS ARE CONSTRUCTED TO THE MINIMUM DIMENSIONS SHOWN ON DRAWINGS. SPECIFIED DIMENSIONS ARE THE MINIMUM REQUIREMENT AND INDEPENDENT OF FALLS AND FINISHES.
2. ALL CONCRETE TO BE NORMAL WEIGHT (2400kg/m³) UNO.
3. THE QUALITY OF THE CONCRETE SURFACE FINISH SHALL BE IN ACCORDANCE WITH AS3610.1 AND CONSULTANT DRAWINGS/SPECIFICATIONS.
4. A CLASS 2 SURFACE FINISH SHALL APPLY TO ALL EXPOSED CONCRETE SURFACES UNLESS ARCHITECTURAL DOCUMENTS ADVISE OTHERWISE.
5. LOCATE CAST-IN CONDUITS AND PIPES IN THE CENTRE OF CONCRETE ELEMENTS SUCH THAT ADEQUATE CLEARANCE IS PROVIDED TO ENABLE PLACEMENT AND VIBRATION (50mm MIN).
6. COMPACT CONCRETE USING INTERNAL VIBRATORS TYPICALLY. COMPACTION IN CONFINED CAVITY SITUATIONS SHALL BE ACHIEVED BY RODDING OR USE OF AN APPROVED SELF-COMPACTING CONCRETE.
7. ALL CONCRETE ELEMENTS ARE TO BE ACTIVELY CURED FOR A MINIMUM OF 14 DAYS FOLLOWING POURING BY PONDING OR AN APPROVED PROPRIETARY SYSTEM. THE CONTRACTOR SHALL SUBMIT THE PROPOSED CURING METHODOLOGY TO THE ENGINEER FOR APPROVAL PRIOR TO POURING. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING SUITABILITY AND COMPATIBILITY OF ANY PROPRIETARY CURING AGENTS WITH FLOOR FINISHES.
8. CONCRETE SHALL BE READY MIXED BY AN APPROVED SUPPLIER AS BELOW (UNO):

ELEMENT	SLUMP (mm)	MAX COURSE AGGREGATE (mm)	MIN. f'_c AT 28 DAYS (MPa)
PAD FOOTINGS	100	20	40
STRIP FOOTINGS	100	20	40
SLABS ON GROUND (INTERNAL)	100	14	40
SLABS ON GROUND (EXTERNAL)	100	14	40
MASONRY CAVITY FILL	N/A	N/A	N/A
INSITU WALLS	100	14	40
PERMANENT FORMWORK PROPRIETARY WALL SYSTEMS	N/A	N/A	N/A
COLUMNS (INTERNAL)	N/A	N/A	N/A
COLUMN (EXTERNAL)	N/A	N/A	N/A
SUSPENDED SLABS, BEAMS AND STAIRS (INTERNAL)	N/A	N/A	N/A
SUSPENDED SLABS, BEAMS AND STAIRS (EXTERNAL)	N/A	N/A	N/A
PRECAST/TILT-UP	N/A	N/A	N/A
PILECAPS	N/A	N/A	N/A
# WHERE CONCRETE IS TO BE PLACED BY PUMPING THIS MAY BE INCREASED TO 80mm.			

9. USE TYPE 'GP' PORTLAND CEMENT. UNO.
10. WATER SHALL NOT BE ADDED TO CONCRETE ON SITE WITHOUT THE ENGINEER'S APPROVAL.
11. ADMIXTURES SHALL NOT ADVERSELY AFFECT SPECIFIED CONCRETE PROPERTIES. DO NOT USE ADMIXTURES UNLESS APPROVED BY THE ENGINEER.
12. UNO, HOLDING DOWN (HD) BOLTS AND STARTER BARS SHOWN ON DRAWINGS ARE TO BE CAST-IN AND NOT POST FIXED. USE TEMPLATES TO SET OUT.
13. CAST CONCRETE TO JOINTS SHOWN ON DRAWINGS OR OTHERWISE APPROVED BY THE ENGINEER, IN A HIT AND MISS PATTERN.
14. BUILD ALL LOAD-BEARING MASONRY HARD UP TO UNDERSIDE OF BEAMS OR SLABS BEFORE THESE ARE POURED. MASONRY IS NOT TO PROTRUDE MORE THAN 5mm ABOVE SOFFIT LEVEL.
15. PROVIDE PROPRIETARY BOND BREAKER OR APPROVED EQUIVALENT BETWEEN LOAD-BEARING MASONRY AND CONCRETE.
16. NON-LOAD BEARING WALLS BUILT TO THE UNDERSIDE OF THE CONCRETE MEMBERS OVER SHALL BE SEPARATED FROM THAT CONCRETE BY 20mm OF COMPRESSIBLE FILLER, INCAPABLE OF TRANSFERRING VERTICAL LOAD TO THE WALL. HORIZONTAL RESTRAINT IS TO BE PROVIDED AT THE TOP OF THE WALL IN ACCORDANCE WITH DETAILS SHOWN ON THE DRAWINGS.
17. SLABS ON GROUND TO BE UNDERLAIN WITH A CONTINUOUS 0.2mm POLYTHENE VAPOR BARRIER, TAPED AT ALL JOINTS AND TURNED UP AGAINST WALLS AND AT EDGES FOR FULL DEPTH OF SLAB U.N.O. VAPOUR BARRIER TO FOLLOW THE EXTERNAL PROFILE OF ALL CONCRETE IN THE CASE OF STIFFENED RAFTS.NO HOLES, CHASES OR EMBEDMENT OF PIPES OTHER THAN THOSE SHOWN ON THESE DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT PRIOR APPROVAL OF THE ENGINEER.
18. CONCRETE IS NOT TO BE POURED WHEN THE AMBIENT TEMPERATURE ON SITE IS OR IS LIKELY TO EXCEED 32° UNLESS APPROVED PRECAUTIONARY MEASURES ARE TAKEN. REFER SPECIFICATION AND/OR LIAISE WITH ENGINEER IN THESE CIRCUMSTANCES.
19. ALL SURFACE EXPOSED, CAST-IN COMPONENTS ARE TO BE HOT DIP GALVANISED AND FIRE PROTECTED AS REQUIURED.
20. TESTING FOR CONVENTIONALLY REINFORCED ELEMENTS: UNO IN SPECIFICATIONS OR ON DRAWINGS, THE CONTRACTOR IS TO ARRANGE FOR PROJECT SAMPLING FOR EVERY 50m³ OF CONCRETE SUPPLIED (1000m³ IN THE CASE OF SHRINKAGE TESTS ALONE). PROVIDE SLUMP, 7 AND 28 DAY COMPRESSIVE STRENGTH AND SHRINKAGE TEST RESULTS IN ACCORDANCE WITH AS1379 AND AS1012.1 TO THE ENGINEER, AS A MINIMUM.
21. TESTING FOR POST TENSIONED ELEMENTS: UNO IN SPECIFICATIONS OR ON DRAWINGS, THE CONTRACTOR IS TO ARRANGE FOR PROJECT SAMPLING FOR EVERY 50m³ OF CONCRETE SUPPLIED (1000m³ IN THE CASE OF SHRINKAGE TESTS ALONE). PROVIDE SLUMP, 18 HOUR, 3-5 DAY, 28 DAY COMPRESSIVE STRENGTH AND SHRINKAGE TEST RESULTS IN ACCORDANCE WITH AS1379 AND AS1012.1 TO THE ENGINEER, AS A MINIMUM.
22. UNLESS OTHERWISE NOTED, MAXIMUM SLAB ON GROUND PANEL SIZE (BETWEEN CONTROL JOINTS AND/OR SLAB EDGES) TO BE 64m² WITH A MAXIMUM ASPECT RATIO OF 2:1.
23. CONTRACTOR TO SUBMIT PROPOSED CONSTRUCTION JOINT ARRANGEMENT TO ENGINEER FOR REVIEW AND APPROVAL.
24. RESTRICT CONCRETE FALL HEIGHT DURING PLACEMENT TO THE FOLLOWING:
   i) 1500mm - WHEN INTERNAL BASE OF FORMS CAN BE SHOWN TO BE DRY.
   ii) 1000mm - OTHERWISE.
25. UNO, FLOOR SURFACES SHALL HAVE A MAXIMUM DEVIATION OF 5mm FROM A 3m STRAIGHT EDGE AT ANY POINT AND IN ANY DIRECTION.
26. BLINDING CONCRETE REQUIRED TO PROTECT EXCAVATIONS, BUILD FORMWORK FROM, ACHIEVE FOUNDING DEPTH AND/OR ASSIST IN LAYING REINFORCEMENT ARE NOT SHOWN ON STRUCTURAL DRAWINGS. CONTRACTOR TO MAKE APPROPRIATE ASSESSMENT OF THIS DURING TENDER TO SATISFY CONTRACTIBILITY OR GEOTECHNICAL REQUIREMENTS.
27. REFER TO ARCHITECTURAL DOCUMENTATION FOR ALL CONCRETE WATER PROOFING REQUIREMENTS.
28. THE FACE OF ALL CONCRETE WHICH HAS REINFORCEMENT PROJECTING FROM IT AND AGAINST WHICH NEW CONCRETE IS TO BE CAST, IS TO BE THOROUGHLY MECHANICALLY SCABBLED, FULLY EXPOSING THE AGGREGATE MATRIX.
29. REFER TO ARCHITECTS DRAWINGS AND SPECIFICATION FOR FALLS, FINISHES, REGLETS AND CHAMFERS ETC. PROVIDE DRIP GROOVES AT ALL EXPOSED EDGES, ENSURE COVER TO REINFORCEMENT IS MAINTAINED.
30. SLABS ON GROUND TO BE PROTECTED FROM FOOT TRAFFIC AND LIGHT PNEUMATIC TYRED TRAFFIC FOR FOR 2 DAYS AND 7 DAYS MIN, RESPECTIVELY. SEEK APPROVAL FROM ENGINEER FOR ANY OTHER PROPOSED LOADING.

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THIS DRAWING HAS BEEN DOCUMENTED IN **COLOUR**
THIS DRAWING IS REQUIRED TO BE PRINTED IN **COLOUR**
FAILURE TO DO SO MAY RESULT IN LOSS OF INFORMATION
BLACK & WHITE PRINTING MAY BE USED IF SPECIFIC BLACK & WHITE DOCUMENTS HAVE BEEN OBTAINED FROM STANTEC

TENDER ISSUE

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STRUCTURAL STEEL

1. ALL ERECTED STEELWORK SHALL BE NEW, FREE OF TWISTS/DISTORTIONS AND COMPLYING WITH THE FOLLOWING MINIMUM GRADES UNO:
   - i) OPEN SECTIONS 300 MPa
   - ii) HOLLOW SECTIONS (SHS, RHS) 450 MPa
   - iii) HOLLOW SECTIONS (CHS) 350 MPa
   - iv) PLATES: 300 MPa
2. ALL STEELWORK SHALL BE PRODUCED IN AUSTRALIA AND CERTIFIED AS BEING COMPLIANT WITH THE RELEVANT AUSTRALIAN STANDARDS. THE CONTRACTOR SHALL DEMONSTRATE COMPLIANCE BY PROVIDING THE ENGINEER WITH NATA ACCREDITED LABORATORY TEST DATA AND ANY OTHER COMPLIANCE DOCUMENTATION.
3. IN THE CIRCUMSTANCE WHERE THE CONTRACTOR WISHES TO USE IMPORTED STEEL, THE CONTRACTOR SHALL PROPOSE THIS IN WRITING TO THE ENGINEER DURING THE TENDER PROCESS. THE CONTRACTOR SHALL DEMONSTRATE EQUIVALENT COMPLIANCE STATUS WITH AUSTRALIAN STANDARDS BY PROVIDING THE ENGINEER WITH MILL CERTIFICATES ENDORSED BY AN INDEPENDENT NATA ACCREDITED LABORATORY. THE ENGINEER RESERVES THE RIGHT TO ACCEPT OR REJECT SUCH A PROPOSAL.
4. OBTAIN APPROVAL OF ALTERNATIVE DETAIL PROPOSALS PRIOR TO FABRICATION.
5. SHOP DRAWINGS TO BE REVIEWED FOR COMPLIANCE WITH DOCUMENTATION BY ENGINEER PRIOR TO FABRICATION. ALLOW 5 WORKING DAYS FOR REVIEW. THIS IS A COURTESY REVIEW ONLY (NOT AN APPROVAL) AND DOES NOT RELIEVE OTHER PARTIES OF THEIR RESPONSIBILITIES.
6. MEMBERS TO BE CAPABLE OF DEVELOPING FULL SECTION STRENGTH AT WELDED CONNECTIONS.
7. WELDING ASSESSMENT TO COMPLY WITH THE FOLLOWING (PERCENTAGE BASED ON TOTAL LENGTH OF WELD TYPE):

TYPE	MINIMUM REQUIREMENTS	TESTING REQUIREMENTS
SHOP BUTT WELDS	FULL STRENGTH BUTT WELD (F.S.B.W.) FULL PENETRATION TO AS 1554 U.N.O.	100%- VISUAL SCAN 50% - VISUAL EXAMINATION 5% - ULTRASONICALLY & MAGNETIC PARTICLE TESTED
SHOP FILLET WELDS	MINIMUM 6 mm E49 xx C.F.W. U.N.O. CATEGORY SP U.N.O.	100%- VISUAL SCAN 25% - VISUAL EXAMINATION 5% - ULTRASONICALLY & MAGNETIC PARTICLE TESTED
SITE BUTT WELDS	FULL STRENGTH BUTT WELD (F.S.B.W.) FULL PENETRATION TO AS 1554 U.N.O.	100%- VISUAL SCAN 100% - VISUAL EXAMINATION 25% - ULTRASONICALLY & MAGNETIC PARTICLE TESTED
SITE FILLET WELDS	MINIMUM 6 mm E49 xx C.F.W. U.N.O. CATEGORY SP U.N.O.	100%- VISUAL SCAN 50% - VISUAL EXAMINATION 10% - ULTRASONICALLY & MAGNETIC PARTICLE TESTED

8. FULLY SEAL ALL HOLLOW SECTIONS USING THE LARGER OF 3mm PLATE OR PLATE TO MATCH THE SECTION THICKNESS, UNO. PROVIDE BLOW HOLES AS REQUIRED PRIOR TO ANY HOT DIP GALVANIZING PROCESS.
9. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING THE COMPATIBILITY OF STEEL SECTIONS WITH THE HOT DIP GALVANIZING PROCESS.
10. ALL PRECAMBERS TO BE UNIFORM CURVE. NATURAL CAMBERS IN STEELWORK TO BE ORIENTATED TO OPPOSE PERMANENT DEAD LOADS, UNO.
11. MEMBERS TO BE DELIVERED IN ONE LENGTH, UNLESS OTHERWISE APPROVED. REFER TO DRAWINGS FOR ALL SPLICE LOCATIONS. UNO, ALL JOINTS ARE TO BE FULL PENETRATION BUTT WELDED SUCH THAT THE INTEGRITY OF THE SECTION STRENGTH IS NOT COMPROMISED.
12. DRILL ALL HOLES 2mm GREATER THAN BOLT DIA IN CLEATS, 6mm GREATER THAN H.D. BOLT DIA IN BASE PLATES. USE 50 x 50 x 6 WASHERS ON H.D. BOLTS.
13. USE WASHERS UNDER ALL NUTS.
14. ALL BOLTS ABOVE BASEPLATE LEVEL TO BE GRADE 8.8/S, SNUG TIGHTENED UNO.
15. THE CONTRACTOR SHALL OBTAIN FROM THE GRADE 8.8/S BOLT SUPPLIER, A MANUFACTURER'S TEST CERTIFICATE FROM A NATA ACCREDITED TESTING ORGANIZATION, WHICH CONFIRMS THAT EACH BATCH OF BOLTS SUPPLIED COMPLIES WITH THE REQUIREMENTS OF AS 1252-1996. IN ADDITION, ALL GRADE 8.8/S BOLT ASSEMBLIES IMPORTED FROM AN INTERNATIONAL SUPPLIER SHALL ALSO BE SUBJECT TO INDEPENDENT TESTING AND VERIFICATION BY A LOCAL NATA ACCREDITED LABORATORY. THE COST OF THE LOCAL NATA ACCREDITED COMPLIANCE CERTIFICATE SHALL BE BORNE BY THE CONTRACTOR OR PURCHASER OF THE INTERNATIONALLY SUPPLIED BOLTS AS REQUIRED. CONTRACTOR TO ADVISE THE ENGINEER OF INTENDED USE OF INTERNATIONALLY SUPPLIED BOLTS AND SUPPLY COMPLIANCE DOCUMENTATION FOR REVIEW.
16. GROUT UNDER ALL SEATING AND BASE PLATES WITH PROPRIETARY DRY PACK SYSTEM. ENSURE SPACE UNDER PLATES IS COMPLETELY FILLED. MINIMUM GROUT DEPTH TO BE 20mm.

19. MINIMUM STEEL CLEATED CONNECTIONS TO BE AS FOLLOWS, UNO:
   - i) UB, UC, PFC BEAMS TO 200 DEEP: 2-M20 8.8/S BOLTS, 10PL CLEAT, 6mm CFW's
   - ii) UB, UC, PFC BEAMS 250 TO 310 DEEP: 3-M20 8.8/S BOLTS, 10PL CLEAT, 6mm CFW's
   - iii) UB, UC, PFC BEAMS 360/380 DEEP: 4-M20 8.8/S BOLTS, 10PL CLEAT, 6mm CFW's
   - iv) UB, UC BEAMS 410 DEEP: 4-M24 8.8/S BOLTS, 10PL CLEAT, 8mm CFW's
   - v) UB, UC BEAMS 460 TO 530 DEEP: 5-M24 8.8/S BOLTS, 10PL CLEAT, 8mm CFW's
   - vi) UB, UC BEAMS 610 DEEP: 6-M24 8.8/S BOLTS, 10PL CLEAT, 8mm CFW's
20. MINIMUM COLUMN BASEPLATE SHALL BE 20mm THICK, 6mm SP CFW TO COLUMN, UNO.
21. HOLDING DOWN BOLTS IN FOOTINGS ARE TO BE GRADE 4.6/S, SNUG TIGHTENED UNO. GRADE 4.6/S COMMERCIAL BOLTS TO BE IN ACCORDANCE WITH AS1111.1. MINIMUM HOLD DOWN BOLTS TO BE 4-M20 4.6/S 'L' BOLTS, CAGED WITH R6 BAR, 200mm COG AND 300mm MIN. EMBEDMENT INTO CONCRETE, UNO. CONTROLLED TACK WELDING OF 4.6/S BOLTS TO CREATE CAGES IS PERMITTED. ALL HOLD DOWN BOLTS TO BE ACCURATELY LOCATED AND SECURED WITH TEMPLATES PRIOR TO POUR. BOLTS TO BE SECURELY TIED TO REINFORCEMENT. WELDING IS NOT PERMITTED WHERE GRADE 8.8/S BOLTS ARE SPECIFICALLY NOMINATED.
22. ENSURE ALL DISSIMILAR METALS ARE ISOLATED FROM EACH OTHER VIA RUBBER/NYLON PACKERS, AS APPROVED.
23. WHERE 8.8/TF BOLTS ARE USED IN SLOTTED HOLES, A SPECIAL WASHER OR COVER PLATE, NOT LESS THAN 8mm THICK, IS TO BE USED TO COMPLETELY COVER THE SLOTTED HOLE IN ACCORDANCE WITH AS4100.

STRUCTURAL STEEL PROTECTIVE TREATMENTS

1. ALL STEEL WORK AND FIXING UNLESS NOTED OTHERWISE ARE TO BE STAINLESS STEEL. REFER LANDSCAPE ARCHITECT DRAWINGS.

POST FIXED ANCHORS

1. POST FIXED ANCHORS SHALL ONLY BE USED IF SPECIFICALLY NOMINATED ON DRAWINGS.
2. POST FIXED ANCHORS ARE TO BE ETA (EUROPEAN TECHNICAL ASSESSMENT) CERTIFIED. THE PRODUCTION OF FASTENERS SHALL COMPLY WITH AS 5216:2018. THE CONTRACTOR SHALL MAKE AVAILABLE SUPPORTING DOCUMENTATION UPON REQUEST.
3. ALL ANCHORING SYSTEMS ARE TO BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND AS 5216:2018.
4. THE CONTRACTOR SHALL ENSURE THAT ANCHORS ARE INSTALLED BY INFORMED, EXPERIENCED AND COMPETENT PERSONNEL. INDIVIDUALS INSTALLING ANCHORS IN SAFETY CRITICAL APPLICATIONS (DEFINED IN AS 5216:2018) SHALL BE CERTIFIED TO DO SO VIA THE AEFAC INSTALLER CERTIFICATION PROGRAM AND/OR SPECIFIC TRAINING FROM THE SUPPLIER OF THE FASTENER BEING INSTALLED.
5. THE STRUCTURAL DESIGN HAS RELIED ON THE ASSUMPTION THAT ANCHOR INSTALLATION DOES NOT INCLUDE GROSS ERRORS, INCLUDING BUT NOT LIMITED TO INCORRECT HOLE SIZE, INCORRECT DRILLING SYSTEM, USE OF AN INCORRECT SETTING TOOL, INADEQUATE HOLE CLEANING AND INCORRECT FASTENER LOCATION/ALIGNMENT.
6. HOLES ARE TO BE DRY AND THOROUGHLY CLEANED PRIOR TO INSTALLATION OF THE FASTENER. IN PARTICULAR, HOLES MUST BE COMPLETELY BRUSHED AND BLOWN OUT TO ENSURE A DUST-FREE SURFACE, USING AN APPROVED SOURCE OF COMPRESSED AIR OR SUPPLIER RECOMMENDED DEVICE.
7. MINIMUM FASTENER SPACING AND EDGE DISTANCE TO BE 150mm UNO. PARAMETERS SPECIFIED ON THE STRUCTURAL DRAWINGS, INCLUDING MINIMUM EMBEDMENT DEPTH HAVE A ZERO NEGATIVE TOLERANCE.
8. THE CONTRACTOR SHALL ALLOW IN THE TENDERED PRICE FOR USE OF THE SPECIFIC PROPRIETARY FASTENERS NOMINATED UNLESS AGREED OTHERWISE. IN THE EVENT THAT THE ENGINEER IS PREPARED TO CONSIDER ALTERNATIVES, THE ONUS IS ON THE CONTRACTOR TO PROVIDE SUPPORTING INFORMATION DEMONSTRATING EQUAL OR IMPROVED STATUS.
9. THE CONTRACTOR IS RESPONSIBLE FOR DEMONSTRATING INSTALLATION COMPLIANCE WITH SPECIFICATIONS PROVIDED ON DOCUMENTS WHEN REQUESTED. THE ENGINEER RESERVES THE RIGHT TO REJECT ANCHORS DEEMED TO BE UNACCEPTABLE.

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RETAINING

1. ALL PROPRIETARY RETENTION SYSTEMS NOT EXPLICITLY SHOWN/DETAILED ON THESE DRAWINGS ARE TO BE DESIGNED, CERTIFIED AND INSTALLED BY THE SPECIALIST SUPPLIER/SUB-CONTRACTOR COMMISSIONED BY THE MAIN CONTRACTOR OR CLIENT.
2. NO HEAVY DUTY PLATE COMPACTORS OR SELF-PROPELLED VIBRATORY ROLLERS TO BE USED WITHIN "HEIGHT OF RETAINING" METRES OF THE WALL.
3. ALL WALLS TO BE FULLY PROPPED PRIOR TO BACKFILLING. THE SPECIFICATION OF PROPPING REQUIREMENTS IS THE CONTRACTOR'S RESPONSIBILITY. TEMPORARY PROPPING TO BE DESIGNED TO CATER FOR ANY COMPACTION INDUCED LOADS. TEMPORARY PROPPING MAY BE OMITTED ONLY IN THE CASE OF PROPPED CANTILEVER WALLS WHERE THE SLAB TIED IN TO THE TOP OF THE WALL AND THE GROUND SLAB PROPPING THE BOTTOM OF THE WALL (IF PRESENT)HAS FULLY CURED PRIOR TO BACKFILLING.
4. FOOTINGS ARE TO BE CURED FOR 3 DAYS MINIMUM PRIOR TO CONSTRUCTION OF THE WALL. WALLS ARE TO REMAIN UNDISTURBED FOR 7 DAYS PRIOR TO BACKFILL AND COMPACTION.
5. REFER "FOUNDATION" NOTES FOR BACKFILL AND COMPACTION REQUIREMENTS. UNLESS RECOMMENDATIONS IN THE GEOTECHNICAL REPORT OR SEPARATE ENGINEERING INSTRUCTIONS ADVISE OTHERWISE, ALL RETAINING WALL BACKFILL SHALL BE TAKEN TO BE A CLEAN, FREE DRAINING, NO FINES, NON-REACTIVE GRANULAR MATERIAL.
6. PROVISION FOR DRAINAGE MUST BE MADE BEHIND ALL RETAINING WALLS. UNO, ALLOW FOR WEEPHOLES AT 2.0m CRS AND FULL LENGTH SUB-SOIL DRAINS, WRAPPED IN GEOFABRIC AND FALLING TO DISCHARGE POINT AT 1 IN 100 MIN. SUB-SOIL DRAINS TO BE SURROUNDED BY A CONTINUOUS 400mm X 400mm ZONE OF CLEAN, 20mm COURSE AGGREGATE, WRAPPED IN GEOFABRIC UNLESS BACKFILL IS A CLEAN, FREE DRAINING, NO FINES, NON-REACTIVE GRANULAR MATERIAL.
7. COMPACT GROUND IN FRONT OF WALL PRIOR TO BACKFILLING AND COMPACTION FOR A DISTANCE OF "HEIGHT OF RETAINING" UNO.
8. REFER "MASONRY" NOTES FOR BRICK/BLOCK STRENGTH AND MORTAR COMPOSITION.
9. CAVITIES AND CORES ARE TO BE FILLED WITH AN ADEQUATELY RODDED OR SELF-COMPACTING, HIGH SLUMP CONCRETE COMPLYING WITH THE STRENGTH REQUIREMENTS SHOWN. CAVITIES/VOIDS ARE TO BE CLEANED OUT DOWN TO FOOTING LEVEL (INCLUDING MORTAR ACCUMULATIONS ON TIES) PRIOR TO FILLING. PROVIDE CLEAN-OUT BLOCKS IN BLOCK WALL CONSTRUCTION.
10. UNO, LIMESTONE BLOCKS TO BE RECONSTITUTED WITH A MIN. DRY DENSITY OF 1800Kg/m³.
11. LOAD-BEARING FOOTINGS ARE NOT TO BE BUILT WITHIN "HEIGHT OF RETAINING" METRES FROM THE BACK OF THE WALL WITHOUT APPROVAL FROM THE ENGINEER.
12. THE MAIN (HIGHEST STEEL AREA) BARS OF ANY SPECIFIED MESH ARE TO BE LAID VERTICALLY UNO.
13. EXCAVATIONS ARE NOT PERMITTED AT THE FRONT OF WALLS WITHIN A ZONE PRESCRIBED BY A 30° LINE PROJECTED DOWN FROM THE LOWER FRONT CORNER OF THE FOOTING.
14. THE DESIGN OF TEMPORARY ANCHORED OR SOIL NAILED SHEET PILE WALLS SHALL BE BY A SPECIALIST SUPPLIER. SHEET PILED AND PILED BOUNDARY WALLS SHALL INCORPORATE A METHODOLOGY TO ENSURE THE SAFETY AND STABILITY OF THE SITE AND ADJACENT STRUCTURES THROUGHOUT ALL STAGES OF INSTALLATION, EXCAVATION AND CONSTRUCTION.
15. UNO, BRICK TIES TO BE 6mm WIRE OR APPROVED EQUIVALENT AT 3 COURSES VERTICALLY (275 MAX.) AND 600mm CRS HORIZONTALLY, IN CAVITY RETAINING WALLS SITUATIONS.
16. REAR OF ALL RETAINING WALLS TO BE FULLY TANKED USING A PROPRIETARY BITUMEN TREATMENT TO ENSURE A WATERPROOF COATING.

TIMBER

1. ALL TIMBER SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER. DEFECTS SUCH AS SPRINGS, SPLITS, KNOTS, HEARTWOOD, UNTREATED SAPWOOD AND EXCESSIVE TWISTS AND WARPS MAY BE CAUSE FOR REJECTION.
2. TIMBER MUST BE AT LEAST THE SPECIFIED FINISHED SIZE AS SHOWN ON THE STRUCTURAL DRAWINGS.
3. ALL TIMBER MEMBERS SHALL HAVE A LEVEL OF DURABILITY APPROPRIATE FOR THEIR EXPOSURE ENVIRONMENT. ALL PRESERVATIVE TREATMENT IS TO BE IN ACCORDANCE WITH AS 1604. INDICATIVE MIN. LEVELS OF TREATMENT ARE SHOWN BELOW:

SPECIES	EXPOSURE		
	INTERNAL	EXTERNAL ABOVE GROUND	EXTERNAL IN GROUND
MACHINE GRADED PINE (MGP)	S	NS (H3)	NS (H5)
JARRAH	S	S	S
KARRI	S	NS (H3)	NS (H5)
MARRI	S	NS (H3)	NS (H5)
OREGON	S	NS (H3)	NS (H5)
LAMINATED VENEER LUMBER (LVL)	S	NS (H3)	NS (H5)
CYPRESS PINE	S	S	S
WESTERN RED CEDAR	S	S	S
VICTORIAN ASH (KDHW)	S	NS (H3)	NS (H5)

S = SUITABLE
NS (H3) = NOT SUITABLE IF UNTREATED (LOSP OR CCA TREAT TO H3 LEVEL)
NS (H5) = NOT SUITABLE IF UNTREATED (CCA TREAT TO H5 LEVEL)

4. MINIMUM TIMBER TO STEEL CONNECTION TO BE VIA. 10 PL. CLEAT, 2-M16 BOLTS, UNO.
5. ALL FIXINGS INTO TIMBER ARE TO BE GALVANIZED, MIN. USE STAINLESS STEEL COUNTERPARTS WITHIN 1km OF THE COAST/INDUSTRIAL AREAS. USE WASHERS WITH ALL BOLTS. SCREW FIXINGS TO BE TYPE 17 COUNTERSUNK/BUGLE HEAD UNO. USE ONLY CCA RESISTANT PROPRIETARY FIXINGS IN CCA PRESERVATIVE TREATED TIMBER.
6. TIMBER STRESS GRADES TO COMPLY WITH THE FOLLOWING MINIMUM REQUIREMENTS:

SPECIES	SEASONED	UNSEASONED
MACHINE GRADED PINE (MGP)	MPG10	DO NOT USE
JARRAH	F14	F8
KARRI	F22	F11
MARRI	F17	F11
OREGON	F7	DO NOT USE
LAMINATED VENEER LUMBER (LVL)	F17	DO NOT USE
CYPRESS PINE	F8	DO NOT USE
WESTERN RED CEDAR	F17	DO NOT USE
VICTORIAN ASH (KDHW)	F17	DO NOT USE

7. UNLESS SPECIFICALLY REFERRED TO ON DRAWINGS, ALL TIMBER IS TO BE SEASONED.
8. ALL TIMBER SHALL BE STRESS GRADED IN ACCORDANCE WITH AS 2082, AS 2858, AS 1748 OR AS 3519 AS APPROPRIATE. ALL TIMBER TO BE MARKED AS SUCH.
9. ALL TIMBER SURFACES DIRECTLY EXPOSED TO THE GROUND SHALL BE TREATED WITH A PROPRIETARY PRISMATIC BITUMEN BASED COATING IN ADDITION TO THE PRESSURE TREATMENT REQUIRED.
10. ALL PLYWOOD USED FOR STRUCTURAL PURPOSES SHALL BE BRANDED WITH THE PLYWOOD ASSOCIATION OF AUSTRALIA (P.A.A.) TEST TRADEMARK AND MANUFACTURED IN ACCORDANCE WITH THE RELEVANT AUSTRALIAN STANDARDS AND UNDER P.A.A. QUALITY.
11. ALL EXPOSED STEEL/METAL COMPONENTS TO BE FIRE TREATED IN ACCORDANCE WITH THE FIRE ENGINEERING REPORT OR BCA CONSULTANT'S ADVICE.

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