

W:\2 - PROJECTS\2022\22325 - 91 FLORIDA RD, PALM BEACH\DESIGN FILES\A-DESIGN DRAWINGS\B-CIVIL\22325_DA001.DWG

SURVEY

- LEVELS BASED ON SURVEY PREPARED BY:
BEE & LETHBRIDGE, REF: 21704 & DATED: 22.06.2020

DESIGN GUIDES

- NORTHERN BEACHES COUNCIL - PITTWATER 21 DEVELOPMENT CONTROL PLAN
- AS\428.1:2009 DESIGN FOR ACCESS AND MOBILITY, PART 1: GENERAL REQUIREMENTS FOR ACCESS - NEW BUILDING WORK
- AS2890.1:2004 PARKING FACILITIES, PART 1: OFF-STREET CAR PARKING
- AS3500.3:2018 PLUMBING AND DRAINAGE, PART 3: STORMWATER DRAINAGE

DEVELOPMENT APPLICATION (DA) STAGE

- DOCUMENTS ARE PROVIDED FOR DA APPROVAL PURPOSES ONLY AND ARE NOT TO BE USED FOR CONSTRUCTION
- STORMWATER DESIGN SHOWN IS CONCEPTUAL ONLY AND SUBJECT TO FINAL DESIGN AT CONSTRUCTION CERTIFICATE STAGE
- FINISHED LEVELS SHOWN ARE CONCEPTUAL ONLY AND SUBJECT TO DETAILED DESIGN AT CONSTRUCTION CERTIFICATE STAGE. FINAL FINISHED LEVELS TO BE $\pm 0.5m$ FROM LEVELS SHOWN

EXISTING UTILITIES

- UTILITY INFORMATION SHOWN ON PLAN DOES NOT DEPICT ANY MORE THAN THE PRESENCE OF A SERVICE BASED ON AVAILABLE DOCUMENTARY EVIDENCE
- THE PRESENCE OF A UTILITY SERVICE, SIZE AND LOCATION SHOULD BE CONFIRMED BY FIELD INSPECTION PRIOR TO THE COMMENCEMENT OF ROAD WORKS, AND THE RELATED UTILITY PLANS OBTAINED BY DIALING 110 OR FAX 130 652 077 (DIAL BEFORE YOU DIG)
- UTILITY LOCATION, SIZE AND DEPTH TO BE CONFIRMED BY SERVICE LOCATING OR NON-DESTRUCTIVE EXCAVATION PRIOR TO CONSTRUCTION. ALL CLASHES WITH PROPOSED SERVICES ARE TO BE RESOLVED
- CAUTION SHOULD BE EXERCISED WHEN WORKING IN THE VICINITY OF ALL UTILITY SERVICES
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE RELEVANT SERVICES AUTHORITIES OF THE WORKS AND VERIFY THE LOCATION OF ALL EXISTING SERVICES PRIOR TO ANY CONSTRUCTION ACTIVITIES COMMENCING
- THE CONTRACTOR SHALL LIAISE AND COORDINATE THE TIMING OF THE CONSTRUCTION OF THE WORKS WITH THE RELEVANT SERVICES CONCURRENTLY AT THIS SITE
- THE CONSTRUCTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE CAUSED TO EXISTING SERVICES AS A RESULT OF THE CONSTRUCTION WORKS

FINISHED LEVELS

- LEVELS BASED ON SITE SURVEY INFORMATION. THE CONTRACTOR SHALL VERIFY LEVELS PRIOR TO CONSTRUCTION COMMENCEMENT, ANY DISCREPANCIES SHALL BE NOTIFIED TO THE ENGINEER OR SUPERINTENDENT FOR CLARIFICATION
- CARPORT & DRIVEWAY GRADES TO COMPLY WITH AS2890.
- DRIVEWAY LAYOUT AND DESIGN TO COMPLY WITH APPROVAL AUTHORITY ACCESS DRIVEWAY DESIGN AND CONSTRUCTION SPECIFICATION.
- ALL CONTOUR LINES & SPOT LEVELS INDICATE FINISHED PAVEMENT LEVELS U.N.O. ON PLAN.
- PERMANENT BATTER SLOPES ARE TO HAVE A MAXIMUM GRADE OF 1V:3H.
- ALL FOOTPATHS ARE TO FALL AWAY FROM THE BUILDING AT 2.5% NOMINAL. GRADE.

SITE WORKS - GENERAL

- ALL WORKS ARE TO BE UNDERTAKEN IN ACCORDANCE WITH LOCAL COUNCIL, AUSTRALIAN AND AUTHORITY STANDARDS.
- ALL TRENCHING WORKS ARE TO BE RESTORED TO ORIGINAL CONDITION.
- THE INTEGRITY OF ALL EXISTING AND NEW SERVICES IS TO BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
- ALL PLANS ARE TO BE READ IN CONJUNCTION WITH APPROVED ARCHITECTS, STRUCTURAL ENGINEERS AND OTHER CONSULTANT'S PLANS. ANY DISCREPANCIES ARE TO BE NOTIFIED TO THE ENGINEER FOR CLARIFICATION.
- THE ENGINEER SHALL BE GIVEN A MIN. OF 48 HOURS NOTICE FOR ALL STORMWATER DRAINAGE AND PAVEMENT INSPECTIONS. CONCRETE SHALL NOT BE DELIVERED UNTIL ENGINEERS APPROVAL IS OBTAINED.

SITE WORKS - ACCESS AND SAFETY

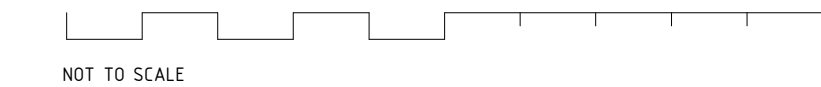
- ALL WORKS ARE TO BE UNDERTAKEN IN A SAFE MANNER IN ACCORDANCE WITH ALL STATUTORY AND INDUSTRIAL RELATION REQUIREMENTS.
- ACCESS TO ADJACENT BUILDINGS AND PROPERTIES SHALL BE MAINTAINED AT ALL TIMES.
- WHERE NECESSARY SAFE PASSAGE SHALL BE PROVIDED FOR VEHICLES AND PEDESTRIANS THROUGH OR ADJACENT TO THE SITE.

SEDIMENT AND EROSION CONTROL

- THE CONTRACTOR SHALL INSTIGATE ALL SEDIMENT AND EROSION CONTROL MEASURES IN ACCORDANCE WITH COUNCIL AND THE "BLUE BOOK" (MANAGING URBAN STORMWATER SOILS AND CONSTRUCTION, PRODUCED BY THE DEPARTMENT OF HOUSING). THESE MEASURES ARE TO BE REGULARLY INSPECTED AND MAINTAINED.
- THE SEDIMENT & EROSION CONTROL PLAN PRESENTS CONCEPTS ONLY, THE CONTRACTOR SHALL AT ALL TIMES BE RESPONSIBLE FOR THE ESTABLISHMENT & MANAGEMENT OF A DETAILED SCHEME MEETING COUNCIL'S DESIGN, AND ALL OTHER REGULATORY AUTHORITY REQUIREMENTS.
- WHERE PRACTICAL, THE SOIL EROSION HAZARD ON THE SITE SHALL BE KEPT AS LOW AS POSSIBLE. TO THIS END, WORKS SHOULD BE UNDERTAKEN IN THE FOLLOWING SEQUENCE:
 - INSTALL ALL TEMPORARY SEDIMENT FENCES AND BARRIER FENCES. WHERE FENCES ARE ADJACENT TO EACH OTHER THE SEDIMENT FENCE CAN BE INCORPORATED INTO THE BARRIER FENCE.
 - CONSTRUCT TEMPORARY STABILISED SITE ACCESS. INCLUDING SHAKE DOWN AND WASH PAD.
 - INSTALL SEDIMENT CONTROL MEASURES AS OUTLINED ON THESE SEDIMENT AND CONTROL PLANS (ONCE APPROVED)
- THE CONTRACTOR SHALL UNDERTAKE SITE DEVELOPMENT WORKS SO THAT LAND DISTURBANCE IS CONFINED TO AREAS OF MINIMUM WORKABLE SIZE.
- AT ALL TIMES AND IN PARTICULAR DURING WINDY AND DRY WEATHER, LARGE, UNPROTECTED AREAS WILL BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER TO KEEP DUST UNDER CONTROL. TACKIFIERS MAY BE USED TO CONTROL DUST DURING EXTENDED PERIODS OF DRY WEATHER.
- ANY SAND USED IN THE CONCRETE CURING PROCESS (SPREAD OVER THE SURFACE) SHALL BE REMOVED AS SOON AS POSSIBLE AND WITHIN 10 WORKING DAYS FROM PLACEMENT.
- WATER SHALL BE PREVENTED FROM ENTERING THE PERMANENT DRAINAGE SYSTEM UNLESS THE CATCHMENT AREA HAS BEEN STABILISED AND/OR ANY LIKELY SEDIMENT HAS BEEN FILTERED OUT.
- TEMPORARY SOIL AND WATER MANAGEMENT STRUCTURES SHALL BE REMOVED ONLY AFTER THE LANDS THEY ARE PROTECTING ARE STABILISED / REHABILITATED.
- THE CONTRACTOR SHALL ALLOW FOR THE ESTABLISHMENT OF ANY OTHER EROSION PROTECTION MEASURES (IF APPLICABLE).
- THE CONTRACTOR SHALL REGULARLY INSPECT (MINIMUM TWICE PER WEEK) ALL EROSION AND SEDIMENT CONTROL MEASURES TO ENSURE THEY ARE OPERATING EFFECTIVELY. REPAIRS AND/OR MAINTENANCE SHALL BE UNDERTAKEN REGULARLY AND AS REQUIRED, PARTICULARLY FOLLOWING STORM EVENTS.
- ACCEPTABLE RECEPTORS SHALL BE USED FOR CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHT-WEIGHT WASTE MATERIALS AND LITTER. WASTE FROM THESE RECEPTORS SHALL BE DISPOSED OF IN ACCORDANCE WITH REGULATORY AUTHORITY REQUIREMENTS. PAY ALL FEES AND PROVIDE EVIDENCE OF SAFE DISPOSAL.

STORMWATER

- ALL WORKS ARE TO BE UNDERTAKEN IN ACCORDANCE WITH THE FOLLOWING AUSTRALIAN STANDARDS AS2032, AS3500 AND AS3725 AS A MINIMUM.
- ALL PIPES LESS THAN OR EQUAL TO $\varnothing 300mm$ IN SIZE ARE TO BE SOLVENT WELD-JOINTED uPVC CLASS SN10 U.N.O.
- ALL PIPES $\varnothing 375mm$ OR GREATER IN SIZE ARE TO BE MIN. CLASS 2 REINFORCED CONCRETE PIPE (RCP) WITH SPIGGOT AND SOCKETED JOINT OR VANTAGE PIPE PLUS (VPIPE+) FIBRE REINFORCED CONCRETE (FRC) WITH VANTAGE PIPE PLUS JOINT U.N.O.
- ALL PIPES ARE TO BE LAID AT MIN. 1.0% GRADE U.N.O.
- PIPE BEDDING IS TO BE HS2 UNDER ROADS AND TRAFFICKED AREAS AND SHALL BE H2 IN LANDSCAPED AND PEDESTRIAN TRAFFICKED AREAS U.N.O.
- ALL PIPE BENDS AND JUNCTIONS ARE TO BE MADE WITH EITHER PURPOSE MADE FITTINGS OR STORMWATER DRAINAGE PITS.
- MINIMUM COVER FROM THE OBVERT OF THE STORMWATER PIPE OF 300mm IS TO BE PROVIDED IN LANDSCAPED AREAS AND 300mm IN VEHICULAR TRAFFICKED AREAS U.N.O.
- WHERE MINIMUM COVER CANNOT BE ACHIEVED, CONCRETE ENCASEMENT OF THE AFFECTED PIPE MAY BE UNDERTAKEN WITH 20MPa CONCRETE WITH A MIN. COVER OF 150mm TO ALL SIDES OF THE PIPE. THE CONTRACTOR SHALL CONFIRM THIS REQUIREMENT WITH THE ENGINEER OR SUPERINTENDENT.
- LAID PIPELINES ARE TO HAVE THE FOLLOWING CONSTRUCTED TOLERANCES:
 - HORIZONTAL-1:300 ANGULAR DEVIATION FROM REQUIRED ALIGNMENT;
 - VERTICAL-1:300 ANGULAR DEVIATION FROM REQUIRED ALIGNMENT.
- ALL DRAINAGE PITS ARE TO BE CAST IN-SITU. PRECAST DRAINAGE PITS MAY BE USED WITH APPROVAL FROM THE ENGINEER. THE CONTRACTOR SHALL SUBMIT A PRECAST PIT INSTALLATION WORK METHOD STATEMENT FOR ASSESSMENT BY THE ENGINEER FOR APPROVAL.
- DRAINAGE PIT COVERS ARE TO BE EITHER GALVANISED STEEL OR CAST IRON CLASS 'B' IN LANDSCAPED AND PEDESTRIAN TRAFFICKED AREAS AND CLASS 'D' IN ALL VEHICULAR TRAFFICKED AREAS U.N.O.
- DRAINAGE PIT COVERS ARE TO BE 'HEELSAFE' TYPE IN ALL PEDESTRIAN TRAFFICKED AREAS U.N.O.
- EXISTING STORMWATER PIT LOCATIONS AND INVERT LEVELS TO BE CONFIRMED PRIOR TO COMMENCING WORKS ON SITE.
- PROVIDE CLEANING EYES (RODDING POINTS) TO PIPES AT ALL CORNERS AND T-JUNCTIONS WHERE NO PITS ARE PRESENT.
- DOWN PIPES CONNECTED DIRECT TO PIPES TO BE CONNECTED AT 45° TO THE FLOW DIRECTION WITH A CLEANING EYE PROVIDED AT GROUND LEVEL.



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06.02.23	DA ISSUE	DD	2				

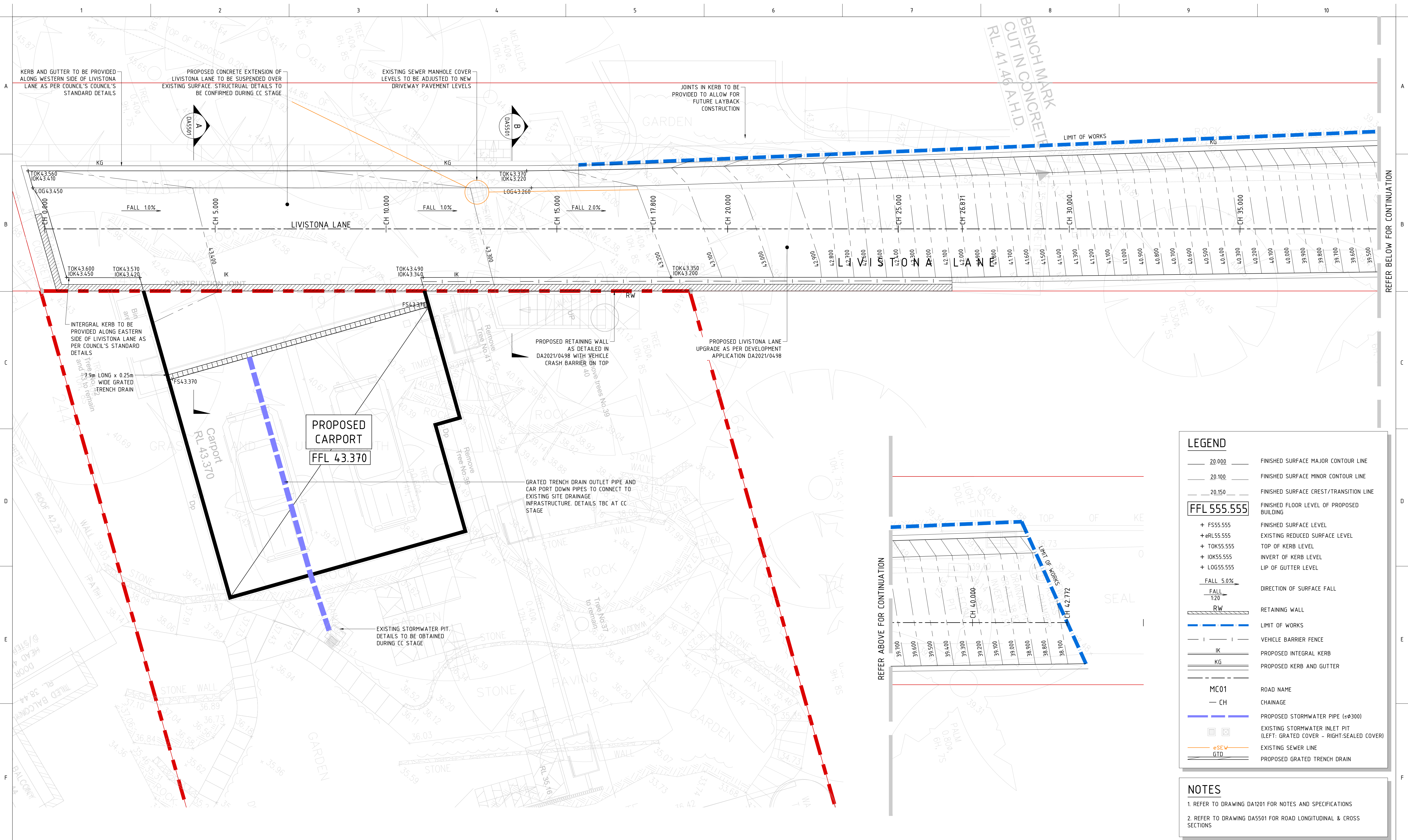
STRUCTURAL	-
MECHANICAL	-
ELECTRICAL	-
CIVIL	-

CLIENT	ALEX HILL
BUILDER	

PROJECT	ALTERATIONS & ADDITIONS TO EXISTING RESIDENTIAL PROPERTY 91 FLORIDA ROAD, PALM BEACH, LOT 113 DP6937
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DRAWING TITLE	
CIVIL DESIGN SPECIFICATION	
DATE	NOV 2022
DRAWN	DD
DESIGNED	DD
CHECKED	MW
SCALE	NTS
SIZE	A1
PROJECT No	22325
DRAWING No	DA1201
REVISION	2



LEGEND

20.000

20.100

20.150

FFL 555.555

+ FS55.555

+ eRL55.555

+ TOK55.555

+ IOK55.555

+ LOG55.555

FALL 5.0%

FALL 1:20

RW

I

I

IK

KG

MC01

CH

eSEW

GTD

FINISHED SURFACE MAJOR CONTOUR LINE

FINISHED SURFACE MINOR CONTOUR LINE

FINISHED SURFACE CREST/TRANSITION LINE

FINISHED FLOOR LEVEL OF PROPOSED BUILDING

FINISHED SURFACE LEVEL

EXISTING REDUCED SURFACE LEVEL

TOP OF KERB LEVEL

INVERT OF KERB LEVEL

LIP OF GUTTER LEVEL

DIRECTION OF SURFACE FALL

RETAINING WALL

LIMIT OF WORKS

VEHICLE BARRIER FENCE

PROPOSED INTEGRAL KERB

PROPOSED KERB AND GUTTER

ROAD NAME

CHAINAGE

PROPOSED STORMWATER PIPE (ø300)

EXISTING STORMWATER INLET PIT (LEFT: GRATED COVER - RIGHT: SEALED COVER)

EXISTING SEWER LINE

PROPOSED GRATED TRENCH DRAIN

NOTES
1. REFER TO DRAWING DA1201 FOR NOTES AND SPECIFICATIONS
2. REFER TO DRAWING DA5501 FOR ROAD LONGITUDINAL & CROSS SECTIONS

150

1

25

5

NORTH POINT

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STRUCTURAL

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PROJECT

ALTERATIONS & ADDITIONS TO EXISTING RESIDENTIAL PROPERTY
91 FLORIDA ROAD, PALM BEACH, LOT 113 DP6937

ARCHITECT

robert jones Architects

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DRAWING TITLE

CIVIL DESIGN
CONCEPT ROAD SITEWORKS & GRADING PLAN

DATE

NOV 2022

PROJECT No

22325

DRAWN

DD

SCALE

1:200 @ A1

DESIGNED

DD

SIZE

A1

CHECKED

MW

REVISION

DRAWING No

DA5101

2

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HCAA

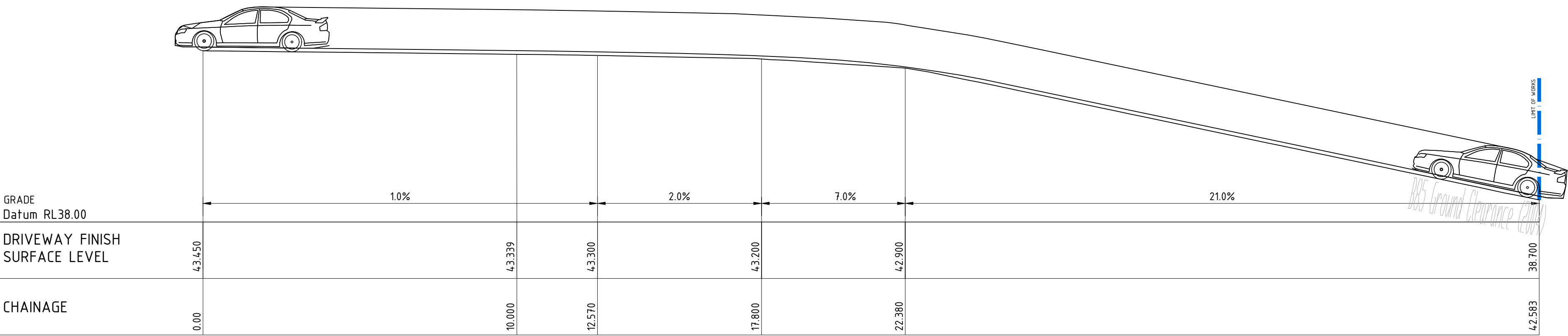
FPA

GOLD MEMBER Fire Protection Association Australia

DNV-GL

JAS-ANZ

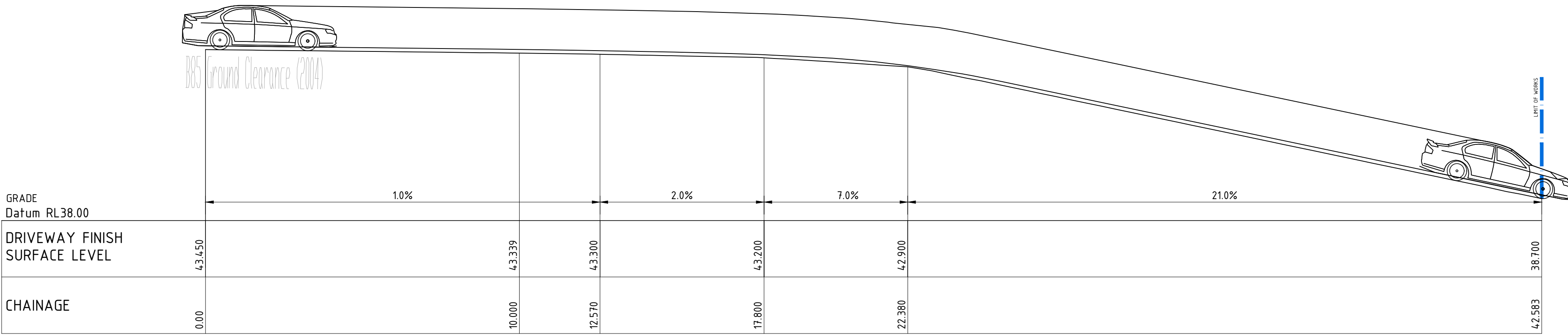
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LIVISTONA LANE - LONGITUDINAL SECTION - B85

HORIZONTAL SCALE 1:50

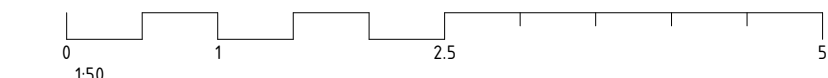
VERTICAL SCALE 1:50



LIVISTONA LANE - LONGITUDINAL SECTION - B85

HORIZONTAL SCALE 1:50

VERTICAL SCALE 1:50



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91 FLORIDA ROAD, PALM BEACH, LOT 113 DP6937

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adm 18/9/15 BSA 862

DEVELOPMENT APPLICATION

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HCAA

FPA

GOLD MEMBER

DNV-GL

JAS-ANZ

DRAWING TITLE

CIVIL DESIGN
CONCEPT ROAD LONGITUDINAL
SECTION

DATE

NOV 2022

SCALE

1:50 @ A1

PROJECT No

22325

DRAWN

DD

DESIGNED

DD

CHECKED

MW

SIZE

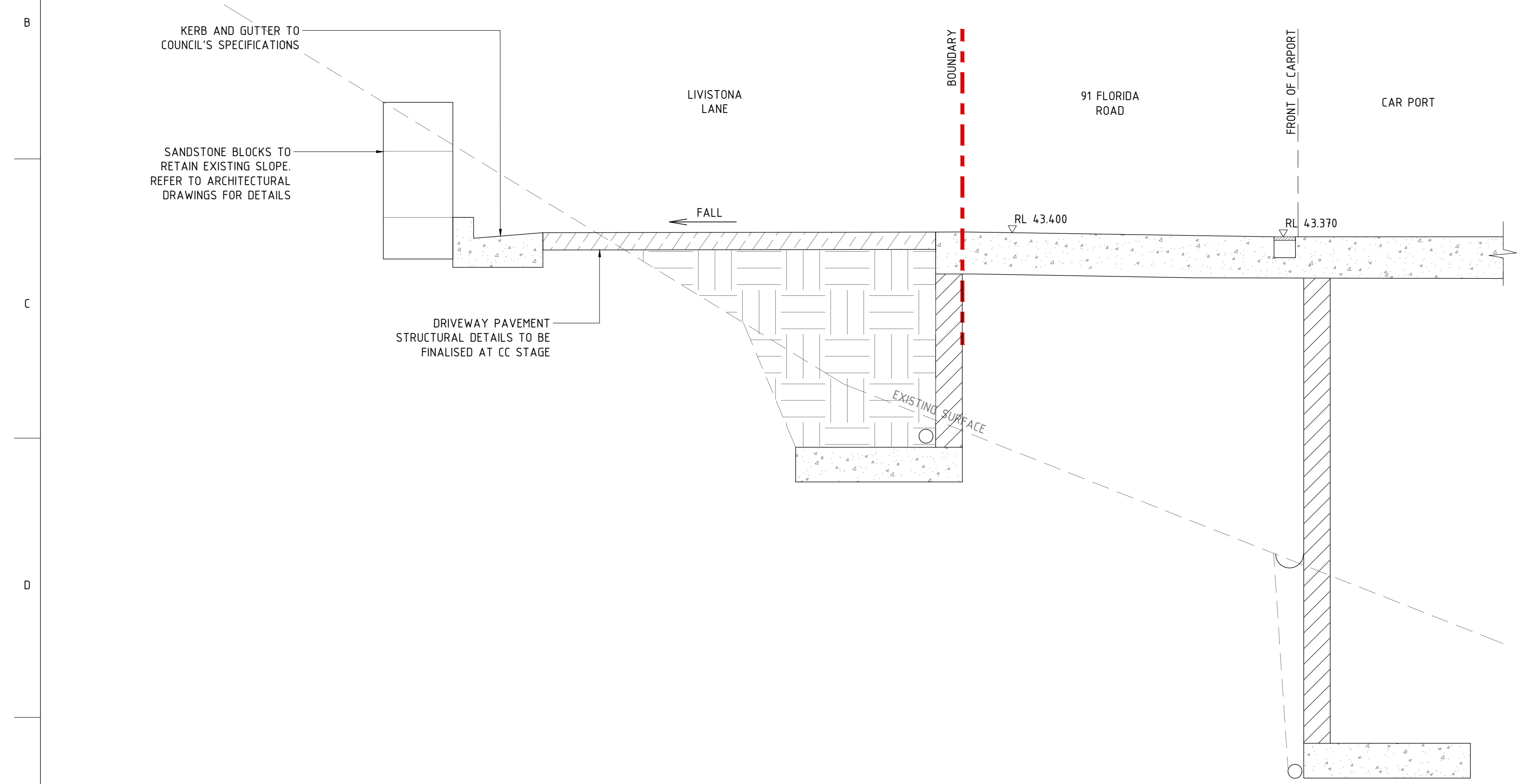
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REVISION

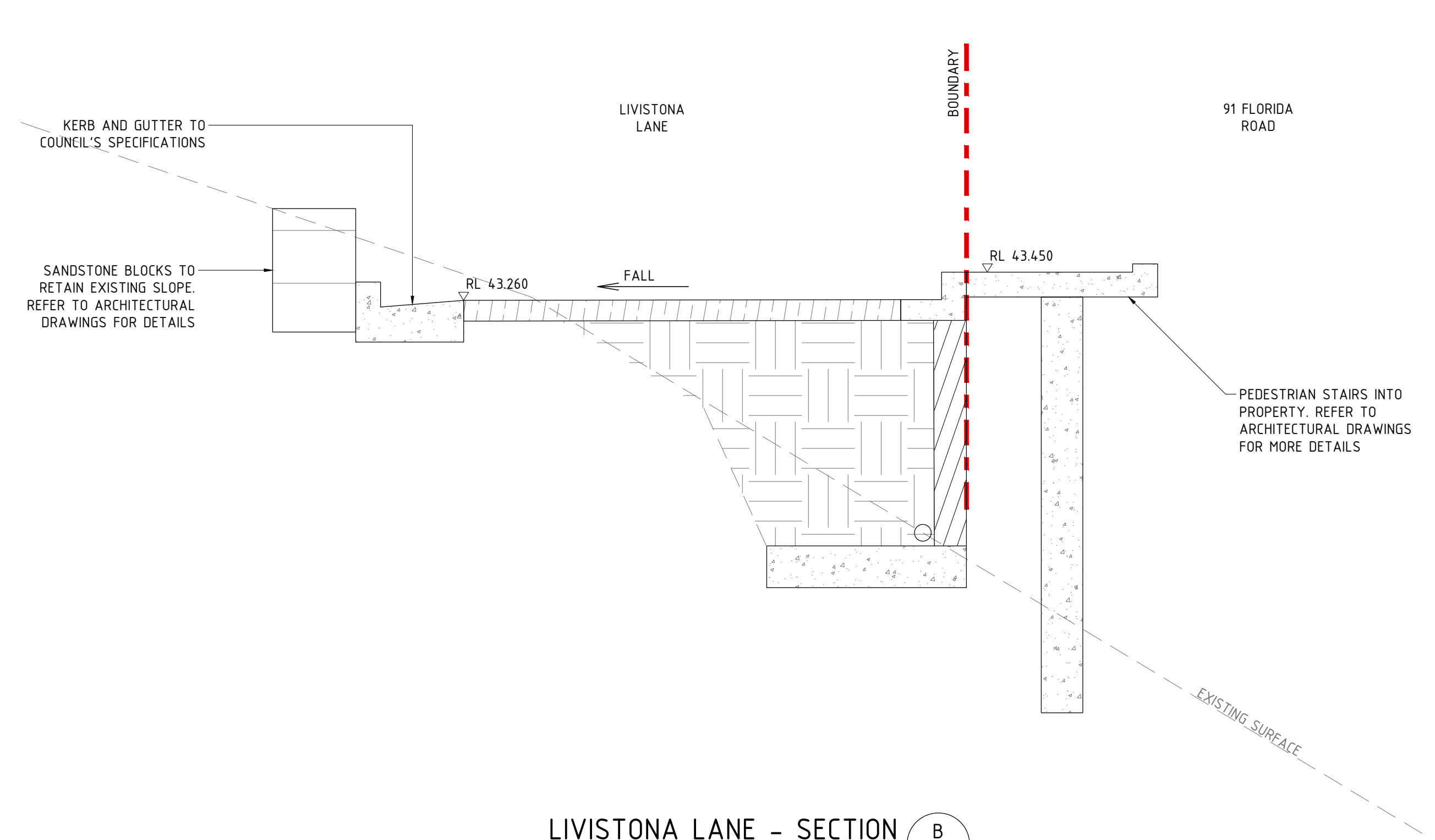
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DA5501

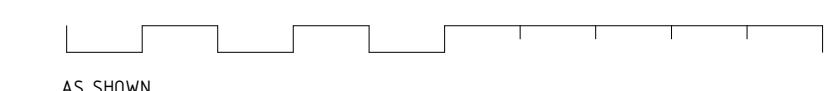
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LIVISTONA LANE - SECTION A
SCALE 1:25



LIVISTONA LANE - SECTION B
SCALE 1:25



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		20.12.22 50% ISSUE DD 1		MECHANICAL -					
		06.02.23 DA ISSUE DD 2		ELECTRICAL -					
				CIVIL -					

DATE NOV 2022	DRAWN DD	DESIGNED DD	CHECKED MW
PROJECT No 22325	SCALE AS SHOWN	SIZE A1	REVISION
DRAWING No DA5601	2		

