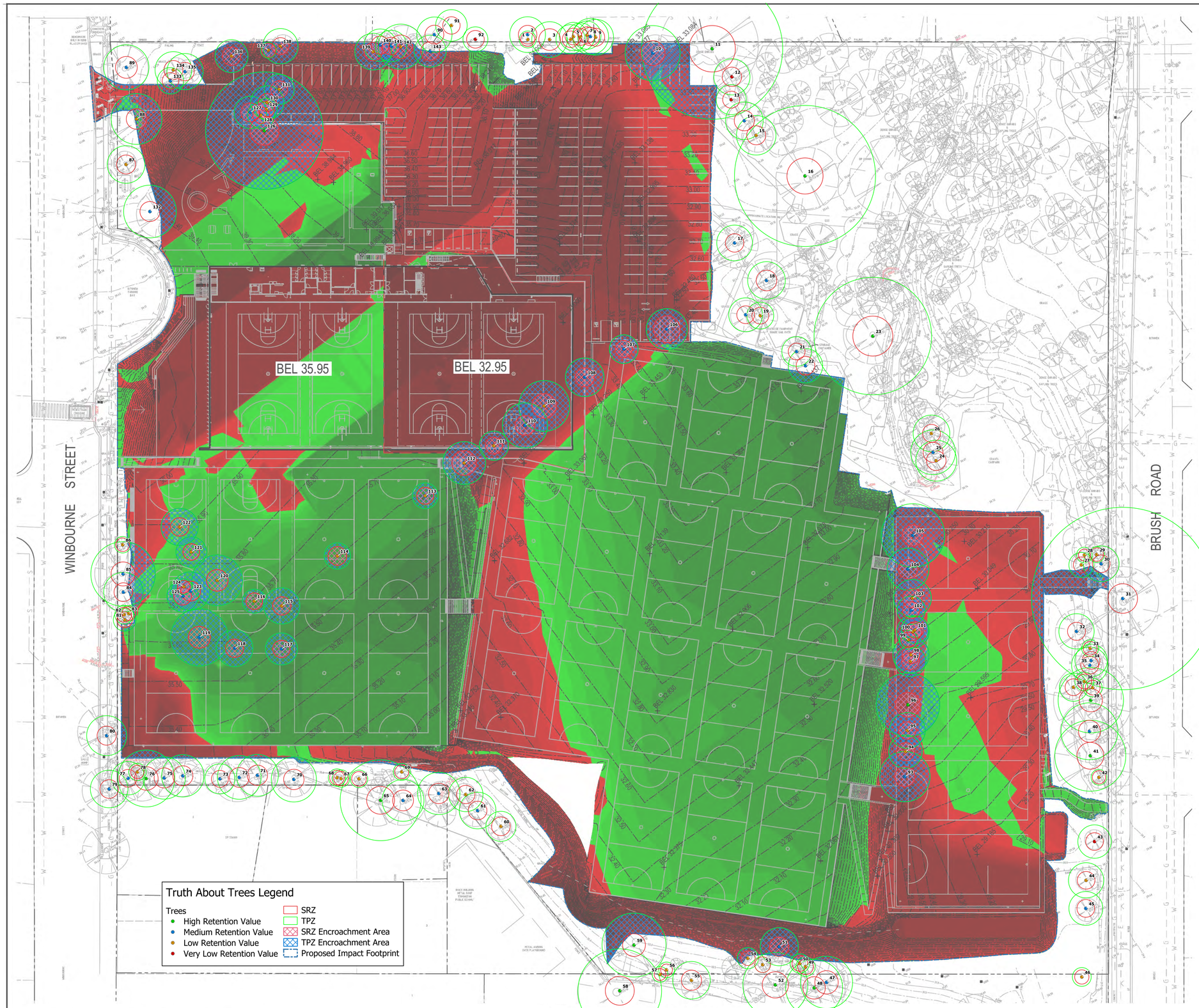

0 10 20 30 40 50m

10 8 6 4 2

SCALE 1:500

BULK EARTHWORKS CUT & FILL PLAN

SCALE: 1:500

DEPTH OF CUT & FILL RANGE

LOWER VALUE		UPPER VALUE		COLOUR
-4.0	to	-3.0	m	
-3.0	to	-2.0	m	
-2.0	to	-1.5	m	
-1.5	to	-1.0	m	
-1.0	to	-0.8	m	
-0.8	to	-0.6	m	
-0.6	to	-0.4	m	
-0.4	to	-0.2	m	
-0.2	to	-0.1	m	
-0.1	to	0.0	m	
0.0	to	0.1	m	
0.1	to	0.2	m	
0.2	to	0.4	m	
0.4	to	0.6	m	
0.6	to	0.8	m	
0.8	to	1.0	m	
1.0	to	1.5	m	
1.5	to	2.0	m	
2.0	to	3.0	m	
3.0	to	4.0	m	

BULK EARTHWORKS/ SUBGRADE PREPARATION - SITEWORKS.

1. REFER TO GEOTECHNICAL INVESTIGATION REPORT OR INFORMATION RELATING TO EXISTING GROUND CONDITIONS, SITE TREATMENT AND SUPERVISION.
2. THE LOCATIONS OF UNDERGROUND SERVICES SHOWN ON THESE DRAWINGS HAVE BEEN PLOTTED FROM SURVEY AND AUTHORITY INFORMATION. THE SERVICE INFORMATION HAS BEEN PREPARED ONLY TO SHOW THE APPROXIMATE POSITIONS OF ANY KNOWN SERVICES AND MAY NOT BE AS CONSTRUCTED OR ACCURATE.
3. HENRY AND HYMAS PTY LTD CAN NOT GUARANTEE THAT THE SERVICES INFORMATION SHOWN ON THESE DRAWINGS, ACCURATELY INDICATES THE PRESENCE OR ABSENCE OF SERVICES OR THEIR LOCATION AND WILL ACCEPT NO LIABILITY FOR INACCURACIES IN THE SERVICES INFORMATION SHOWN ARISING FROM ANY CAUSE WHATSOEVER.
   CONTRACTORS ARE TO CONTACT THE RELEVANT SERVICE AUTHORITY PRIOR TO COMMENCEMENT OF EXCAVATION.
   FOR COMMENCEMENT OF WORKS ON SITE, SEARCH RESULTS ARE TO BE KEPT ON SITE AT ALL TIMES.
4. ALL SERVICES ARE TO BE LOCATED AND CUT OFF PRIOR TO THE COMMENCEMENT OF EXCAVATION AND FILLING OPERATIONS.
5. ALL TOP SOIL, ORGANIC MATTER AND FILL MATERIAL SHALL BE REMOVED FROM ALL AREAS UNDER BUILDING AND CARPARK LOCATIONS TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER. AREAS TO BE FULLY STRIPPED OF EXISTING FILL AND DARK BROWN BLACK UPPER ORGANIC ALLUVIUM, OR OBVIOUS UNSUITABLE MATERIAL.
6. EXCAVATE TO ACHIEVE SUBGRADE LEVELS WHERE NECESSARY.
7. THE EXPOSED SUBGRADE AFTER STRIPPING AND/ OR EXCAVATION IS TO BE PROOF ROLLED USING NOT FEWER THAN 5 PASSES OF A MINIMUM 8 TONNE DEAD WEIGHT STEEL SMOOTH-DRUM ROLLER UNDER THE SUPERVISION OF AN EXPERIENCED GEOTECHNICAL ENGINEER OR AN EXPERIENCED CIVIL ENGINEER. ANY AREAS ON THE SUBGRADE EXHIBITING EXCESSIVE DEFLECTION / MOVEMENT UNDER ROLLER TO BE EXCAVATED TO A MIN. DEPTH OF 0.5m AND REPLACED WITH APPROVED GRANULAR MATERIAL COMPACTED IN 250mm LOOSE LAYERS OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
8. ENGINEERED FILL FOR REPLACEMENT OF SOFT OR HEAVING AREAS OR FOR BULK FILLING TO COMPRISE ESSENTIALLY OF GRANULAR MATERIALS (EG. EXCAVATED SHALE), WITH A PARTICLE SIZE NOT GREATER THAN 75mm DIAMETER. ENGINEERED FILL TO BE PLACED IN LAYERS NOT EXCEEDING 250mm LOOSE THICKNESS AND COMPACTED TO 100% OF STANDARD MAXIMUM DRY DENSITY (SMDD) WITHIN ± 2% OF OPTIMUM MOISTURE CONTENT (OMC).
9. IMPORTED FILLING (IF REQUIRED) IS TO BE TO THE APPROVAL OF THE GEOTECHNICAL ENGINEER. THE CONTRACTOR IS TO NOMINATE THE SOURCE AND PROVIDE A SAMPLE FOR APPROVAL PRIOR TO IMPORTATION AND PLACEMENT ON SITE.
10. ALL FILL MATERIAL SHALL BE FROM A SOURCE APPROVED BY THE SUPERINTENDENT AND SHALL COMPLY WITH THE FOLLOWING.
    FREE FORM ORGANIC AND PERISHABLE MATTER
    MAXIMUM PARTICLE SIZE = 75mm
    MAXIMUM PLASTICITY INDEX = 15%
11. ALL EARTHWORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH GEOTECH REPORT

LEGEND

32.0 — EXISTING CONTOURS

32.00 — CONTOURS BE

BULK EARTHWORKS QUANTITIES

TOTAL AREA (39,705.06m²)

CUT	19,244	m³
FILL	16,655	m³
EXCESS OF CUT OVER FILL	2,589	m³
EXCAVATION FOR RETAINING WALLS, FOOTINGS OR AGG BACKFILL MATERIAL NOT INCLUDED IN CALCULATION		
EXCAVATION FOR SERVICE TRENCHES NOT INCLUDED IN CALCULATION		
VOLUME HAS BEEN CALCULATED AFTER STRIPPING THE SITE OF TOPSOIL - ASSUMED TOPSOIL DEPTH 200mm. STRIPPED MATERIAL NOT INCLUDED IN ABOVE QUANTITIES		
REFER TO PAVEMENT PLAN FOR SETDOWN DEPTHS		
QUANTITIES ARE PRELIMINARY ONLY AND NOT TO BE USED FOR TENDERING PURPOSES		

FOR DA ONLY

SURVEY INFORMATION
SURVEYED BY LTS
DATUM: A.H.D.
ORIGIN OF LEVELS: PM1439 RL30.479

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE	REVISION	AMENDMENT	DRAWN	DESIGNED	DATE
07	ISSUED FOR DA ONLY	MP	NH	09.05.2023					
06	ISSUED FOR DA ONLY	MP	NH	22.03.2023					
05	ISSUED FOR DA ONLY	MP	NH	17.03.2023					
04	ISSUED FOR DA ONLY	MP	NH	01.03.2023					
03	ISSUED FOR DA ONLY	MB	NH	22.02.2022					
02	ISSUED FOR 100% SCHEMATIC DESIGN	IK	NH	07.12.2021					
01	PRELIMINARY	NH	NH	17.11.2021					

Client
SCHOOL INFRASTRUCTURE NSW

Architect
COX ARCHITECTURE

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DRAWING TO BE PRINTED IN COLOUR

henry&hymas

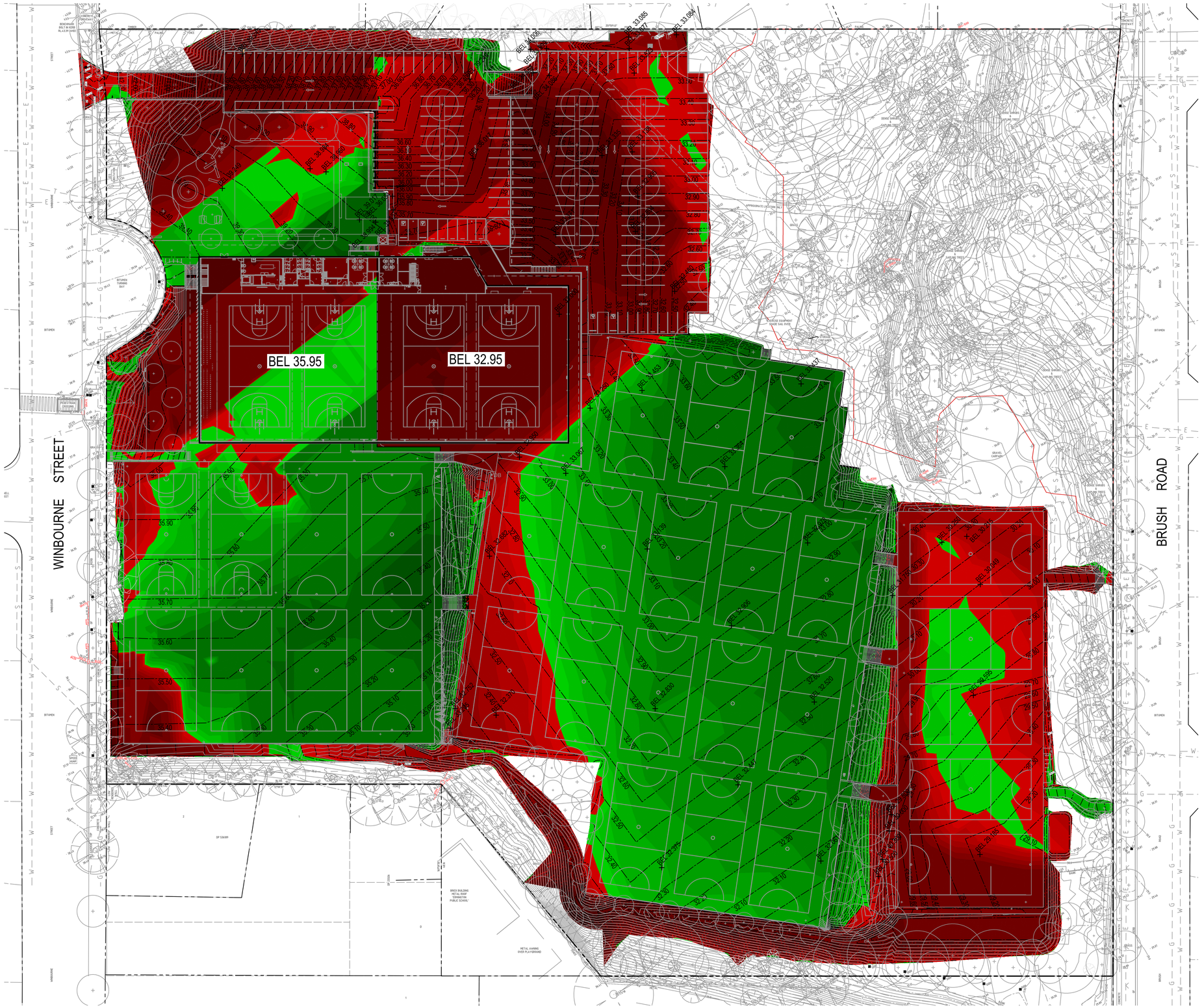
Project
WEST RYDE MULTI-SPORTS FACILITY
22 WINBOURNE ST, WEST RYDE NSW

Title
BULK EARTHWORKS CUT & FILL PLAN

Drawn	Designed	Date
I.Khachab	N.Heazlewood	MARCH 2021
Checked	Approved	Scale @A1
N.Heazlewood	A.Francis	1:500

Drawing number: 20D04_DA_BE10

Revision: 07



BULK EARTHWORKS CUT & FILL PLAN

SCALE: 1:500

0 10 20 30 40 50m

10 8 6 4 2

SCALE 1:500

DEPTH OF CUT & FILL RANGE

LOWER VALUE		UPPER VALUE		COLOUR
-4.0	to	-3.0	m	
-3.0	to	-2.0	m	
-2.0	to	-1.5	m	
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-0.2	to	-0.1	m	
-0.1	to	0.0	m	
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1.0	to	1.5	m	
1.5	to	2.0	m	
2.0	to	3.0	m	
3.0	to	4.0	m	

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LEGEND

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32.00 — CONTOURS BE

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EXCAVATION FOR SERVICE TRENCHES NOT INCLUDED IN CALCULATION

VOLUME HAS BEEN CALCULATED AFTER STRIPPING THE SITE OF TOPSOIL - ASSUMED TOPSOIL DEPTH 200mm. STRIPPED MATERIAL NOT INCLUDED IN ABOVE QUANTITIES

REFER TO PAVEMENT PLAN FOR SETDOWN DEPTHS

QUANTITIES ARE PRELIMINARY ONLY AND NOT TO BE USED FOR TENDERING PURPOSES

FOR DA ONLY

SURVEY INFORMATION
SURVEYED BY LTS
DATUM: A.H.D.
ORIGIN OF LEVELS: PM1439 RL30.479

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE	REVISION	AMENDMENT	DRAWN	DESIGNED	DATE
07	ISSUED FOR DA ONLY	MP	NH	09.05.2023					
06	ISSUED FOR DA ONLY	MP	NH	22.03.2023					
05	ISSUED FOR DA ONLY	MP	NH	17.03.2023					
04	ISSUED FOR DA ONLY	MP	NH	01.03.2023					
03	ISSUED FOR DA ONLY	MB	NH	22.02.2022					
02	ISSUED FOR 100% SCHEMATIC DESIGN	IK	NH	07.12.2021	09	ISSUED FOR DA ONLY	NH	NH	17.11.2023
01	PRELIMINARY	NH	NH	17.11.2021	08	ISSUED FOR DA ONLY	MP	NH	15.11.2023

Client
SCHOOL INFRASTRUCTURE NSW

Architect
COX ARCHITECTURE

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DRAWING TO BE PRINTED IN COLOUR

henry&hymas

Project
WEST RYDE MULTI-SPORTS FACILITY
22 WINBOURNE ST, WEST RYDE NSW

Title
BULK EARTHWORKS CUT & FILL PLAN

Drawn	Designed	Date
I.Khachab	N.Heazlewood	MARCH 2021
Checked	Approved	Scale @A1
N.Heazlewood	A.Francis	1:500

Drawing number: 20D04_DA_BE10

Revision: 09

WEST RYDE MULTI-SPORTS FACILITY
22 WINBOURNE ST, WEST RYDE NSW
CIVIL ENGINEERING WORKS

GENERAL NOTES:

1. ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH CITY OF RYDE SPECIFICATION. CONTRACTOR TO OBTAIN AND RETAIN A COPY ON SITE DURING THE COURSE OF THE WORKS.
2. ALL NEW WORKS ARE TO MAKE A SMOOTH JUNCTION WITH EXISTING CONDITIONS AND MARRY IN A 'WORKMANLIKE' MANNER.
3. THE CONTRACTOR IS TO VERIFY THE LOCATION OF ALL SERVICES WITH EACH RELEVANT AUTHORITY. ANY DAMAGE TO SERVICES SHALL BE RECTIFIED BY THE CONTRACTOR OR THE RELEVANT AUTHORITY AT THE CONTRACTOR'S EXPENSE. SERVICES SHOWN ON THESE PLANS ARE ONLY THOSE EVIDENT AT THE TIME OF SURVEY OR AS DETERMINED FROM SERVICE DIAGRAMS. H & H CONSULTING ENGINEERS PTY. LTD CANNOT GUARANTEE THE INFORMATION SHOWN NOR ACCEPT ANY RESPONSIBILITY FOR INACCURACIES OR INCOMPLETE DATA.
4. SERVICES & ACCESSES TO THE EXISTING PROPERTIES ARE TO BE MAINTAINED IN WORKING ORDER AT ALL TIMES DURING CONSTRUCTION.
5. ADJUST EXISTING SERVICE COVERS TO SUIT NEW FINISHED LEVELS TO RELEVANT AUTHORITY REQUIREMENTS WHERE NECESSARY.
6. REINSTATE AND STABILISE ALL DISTURBED LANDSCAPED AREAS.
7. MINIMUM GRADE OF SUBSOIL SHALL BE 0.5% (1:200) FALL TO OUTLETS.
8. ALL TEMPORARY SEDIMENT AND EROSION CONTROL DEVICES ARE TO BE CONSTRUCTED, PLACED AND MAINTAINED IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS, EROSION AND SEDIMENTATION CONTROL PLAN AND CITY OF RYDE REQUIREMENTS WHERE APPLICABLE.
9. CONTRACTOR TO CHECK AND CONFIRM SITE DRAINAGE CONNECTIONS ACROSS THE VERGE PRIOR TO COMMENCEMENT OF SITE DRAINAGE WORKS.
10. PROPERTIES AFFECTED BY THE WORKS ARE TO BE NOTIFIED IN ADVANCE WHERE DISRUPTION TO EXISTING ACCESS IS LIKELY.

LOCALITY SKETCH

SCALE: N.T.S.

EXISTING SERVICES & FEATURES

- THE CONTRACTOR SHALL ALLOW FOR THE CAPPING OFF, EXCAVATION AND REMOVAL (IF REQUIRED) OF ALL EXISTING SERVICES IN AREAS AFFECTED BY WORKS WITHIN THE CONTRACT AREA OR AS SHOWN ON THE DRAWINGS UNLESS DIRECTED OTHERWISE BY THE SUPERINTENDENT.
- THE CONTRACTOR SHALL ENSURE THAT AT ALL TIMES SERVICES TO ALL BUILDINGS NOT AFFECTED BY THE WORKS ARE NOT DISRUPTED.
- PRIOR TO COMMENCEMENT OF ANY WORKS THE CONTRACTOR SHALL GAIN APPROVAL OF HIS PROGRAM FOR THE RELOCATION/ CONSTRUCTION OF TEMPORARY SERVICES.
- CONTRACTOR SHALL CONSTRUCT TEMPORARY SERVICES TO MAINTAIN SUPPLY TO EXISTING BUILDING REMAINING IN OPERATION DURING WORKS TO THE SATISFACTION AND APPROVAL OF THE SUPERINTENDENT. ONCE DIVERSION IS COMPLETE AND COMMISSIONED, THE CONTRACTOR SHALL REMOVE ALL SUCH TEMPORARY SERVICES AND MAKE GOOD TO THE SATISFACTION OF THE SUPERINTENDENT.
- INTERRUPTION TO SUPPLY OF EXISTING SERVICES SHALL BE DONE SO AS NOT TO CAUSE ANY INCONVENIENCE TO THE PRINCIPAL. CONTRACTOR TO GAIN APPROVAL FROM THE SUPERINTENDENT FOR TIME OF INTERRUPTION.
- EXISTING SERVICES, BUILDINGS, EXTERNAL STRUCTURES AND TREES SHOWN ON THESE DRAWINGS ARE EXISTING FEATURES PRIOR TO ANY DEMOLITION WORKS.
- EXISTING SERVICES UNLESS SHOWN ON SURVEY PLAN HAVE BEEN PLOTTED FROM SERVICES SEARCH PLANS AND AS SUCH THEIR ACCURACY CANNOT BE GUARANTEED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COMPLETE A 'DIAL BEFORE YOU DIG' SEARCH AND TO ESTABLISH THE LOCATION AND LEVEL OF ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY WORK. ANY DISCREPANCIES SHALL BE REPORTED TO THE SUPERINTENDENT. CLEARANCES SHALL BE OBTAINED FROM THE RELEVANT SERVICE AUTHORITY.
- ALL BRANCH GAS AND WATER SERVICES UNDER DRIVEWAYS AND BRICK PAVING SHALL BE LOCATED IN Ø80 uPVC SEWER GRADE CONDUITS EXTENDING A MINIMUM OF 500mm BEYOND EDGE OF PAVING.

DRAWING SCHEDULE

20D04_DA_C000	COVER SHEET, DRAWING SCHEDULE, NOTES & LOCALITY SKETCH
20D04_DA_C100	GENERAL ARRANGEMENT PLAN
20D04_DA_C101	DETAIL PLAN, SHEET 1 OF 4
20D04_DA_C102	DETAIL PLAN, SHEET 2 OF 4
20D04_DA_C103	DETAIL PLAN, SHEET 3 OF 4
20D04_DA_C104	DETAIL PLAN, SHEET 4 OF 4
20D04_DA_C110	BASEMENT PLAN
20D04_DA_C200	STORMWATER MISCELLANEOUS DETAILS & PIT LID SCHEDULE
20D04_DA_C201	SITE SECTIONS AND DETAILS, SHEET 1 OF 2
20D04_DA_C202	SITE SECTIONS AND DETAILS, SHEET 2 OF 2
20D04_DA_C250	STORMWATER CATCHMENT PLAN
20D04_DA_C300	RETAINING WALL PLAN
20D04_DA_C310	RETAINING WALL TYPICAL DETAILS
20D04_DA_C500	PAVEMENT PLAN
20D04_DA_C505	PAVEMENT TYPICAL DETAILS
20D04_DA_SE01	SEDIMENT & EROSION CONTROL PLAN
20D04_DA_SE02	SEDIMENT & EROSION CONTROL TYPICAL SECTIONS & DETAILS
20D04_DA_BE10	BULK EARTHWORKS CUT & FILL PLAN
20D04_DA_EX01	EXTERNAL WORKS DETAIL PLAN, SHEET 1 OF 3
20D04_DA_EX02	EXTERNAL WORKS DETAIL PLAN, SHEET 2 OF 3
20D04_DA_EX03	EXTERNAL WORKS DETAIL PLAN, SHEET 3 OF 3

SITEWORKS NOTES

- DATUM : A.H.D.
- ORIGIN OF LEVELS : REFER TO BENCH OR STATE SURVEY MARKS WHERE SHOWN ON PLAN.
- CONTRACTOR MUST VERIFY ALL DIMENSIONS AND EXISTING LEVELS ON SITE PRIOR TO THE COMMENCEMENT OF WORK.
- ALL WORKS TO BE UNDERTAKEN IN ACCORDANCE WITH THE DETAILS SHOWN ON THE DRAWINGS & THE DIRECTIONS OF THE SUPERINTENDENT.
- EXISTING SERVICES UNLESS SHOWN ON THE SURVEY PLAN HAVE BEEN PLOTTED FROM SERVICES SEARCH PLANS AND AS SUCH THEIR ACCURACY CANNOT BE GUARANTEED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH THE LOCATION AND LEVEL OF ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY WORK. ANY DISCREPANCIES SHALL BE REPORTED TO THE SUPERINTENDENT. CLEARANCES SHALL BE OBTAINED FROM THE RELEVANT SERVICE AUTHORITY.
- WHERE NEW WORKS ABUT EXISTING THE CONTRACTOR SHALL ENSURE THAT A SMOOTH EVEN PROFILE, FREE FROM ABRUPT CHANGES IS ACHIEVED.
- THE CONTRACTOR SHALL ARRANGE ALL SURVEY SETOUT TO BE CARRIED OUT BY A REGISTERED SURVEYOR.
- CARE IS TO BE TAKEN WHEN EXCAVATING NEAR EXISTING SERVICES. NO MECHANICAL EXCAVATION IS TO BE UNDERTAKEN OVER TELSTRA OR ELECTRICAL SERVICES. HAND EXCAVATE IN THESE AREAS.
- CONTRACTOR TO OBTAIN AUTHORITY APPROVALS WHERE APPLICABLE.
- MAKE SMOOTH TRANSITION TO EXISTING SURFACES AND MAKE GOOD.
- THESE PLANS SHALL BE READ IN CONJUNCTION WITH APPROVED LANDSCAPE, ARCHITECTURAL, STRUCTURAL, HYDRAULIC AND MECHANICAL DRAWINGS AND SPECIFICATIONS
  OR WRITTEN INSTRUCTIONS THAT MAY BE ISSUED RELATING
  TO DEVELOPMENT AT THE SITE.
- TRENCHES THROUGH EXISTING ROAD AND CONCRETE PAVEMENTS SHALL BE SAWCUT TO FULL DEPTH OF CONCRETE AND A MINIMUM OF 50mm IN BITUMINOUS PAVING.
- ALL BRANCH GAS AND WATER SERVICES UNDER DRIVEWAYS AND BRICK PAVING SHALL BE LOCATED IN Ø80 uPVC SEWER GRADE CONDUITS EXTENDING A MINIMUM OF 500mm BEYOND EDGE OF PAVING.
- GRADES TO PAVEMENTS TO BE AS IMPLIED BY RL'S ON PLAN . GRADE EVENLY BETWEEN NOMINATED RL'S. AREAS EXHIBITING PONDING GREATER THAN 5mm DEPTH WILL NOT BE ACCEPTED UNLESS IN A DESIGNATED SAG POINT.
- ALL COVERS AND GRATES ETC TO EXISTING SERVICE UTILITIES ARE TO BE ADJUSTED TO SUIT NEW FINISHED SURFACE LEVELS WHERE APPLICABLE.

SURVEY NOTES

THE EXISTING SITE CONDITIONS SHOWN ON THE FOLLOWING DRAWINGS HAVE BEEN INVESTIGATED BY THE SURVEYOR SPECIFIED IN THE TITLE BLOCK.
THE INFORMATION IS SHOWN TO PROVIDE A BASIS FOR DESIGN. HENRY AND HYMAS PTY. LTD. DOES NOT GUARANTEE THE ACCURACY OR COMPLETENESS OF THE SURVEY BASE OR ITS SUITABILITY AS A BASIS FOR CONSTRUCTION DRAWINGS.
SHOULD DISCREPANCIES BE ENCOUNTERED DURING CONSTRUCTION BETWEEN THE SURVEY DATA AND ACTUAL FIELD DATA, CONTACT HENRY AND HYMAS PTY. LTD. THE FOLLOWING NOTES HAVE BEEN TAKEN DIRECTLY FROM ORIGINAL SURVEY DOCUMENTS.

ORIGIN OF LEVELS	PM1439 RL30.479
DATUM	A.H.D.
CONTOUR INTERVAL	0.5m

FOR DA ONLY

SURVEY INFORMATION
SURVEYED BY LTS
DATUM: A.H.D.
ORIGIN OF LEVELS: PM1439 RL30.479

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE	REVISION	AMENDMENT	DRAWN	DESIGNED	DATE
05	ISSUED FOR DA ONLY	MP	NH	17.03.2023					
04	ISSUED FOR DA ONLY	MS	NH	01.03.2023					
03	ISSUED FOR DA ONLY	NH	NH	30.03.2022					
02	ISSUED FOR DA ONLY	MB	NH	22.02.2022					
01	ISSUED FOR 100% SCHEMATIC DESIGN	IK	NH	07.12.2021					

Client
SCHOOLS INFRASTRUCTURE NSW

Architect
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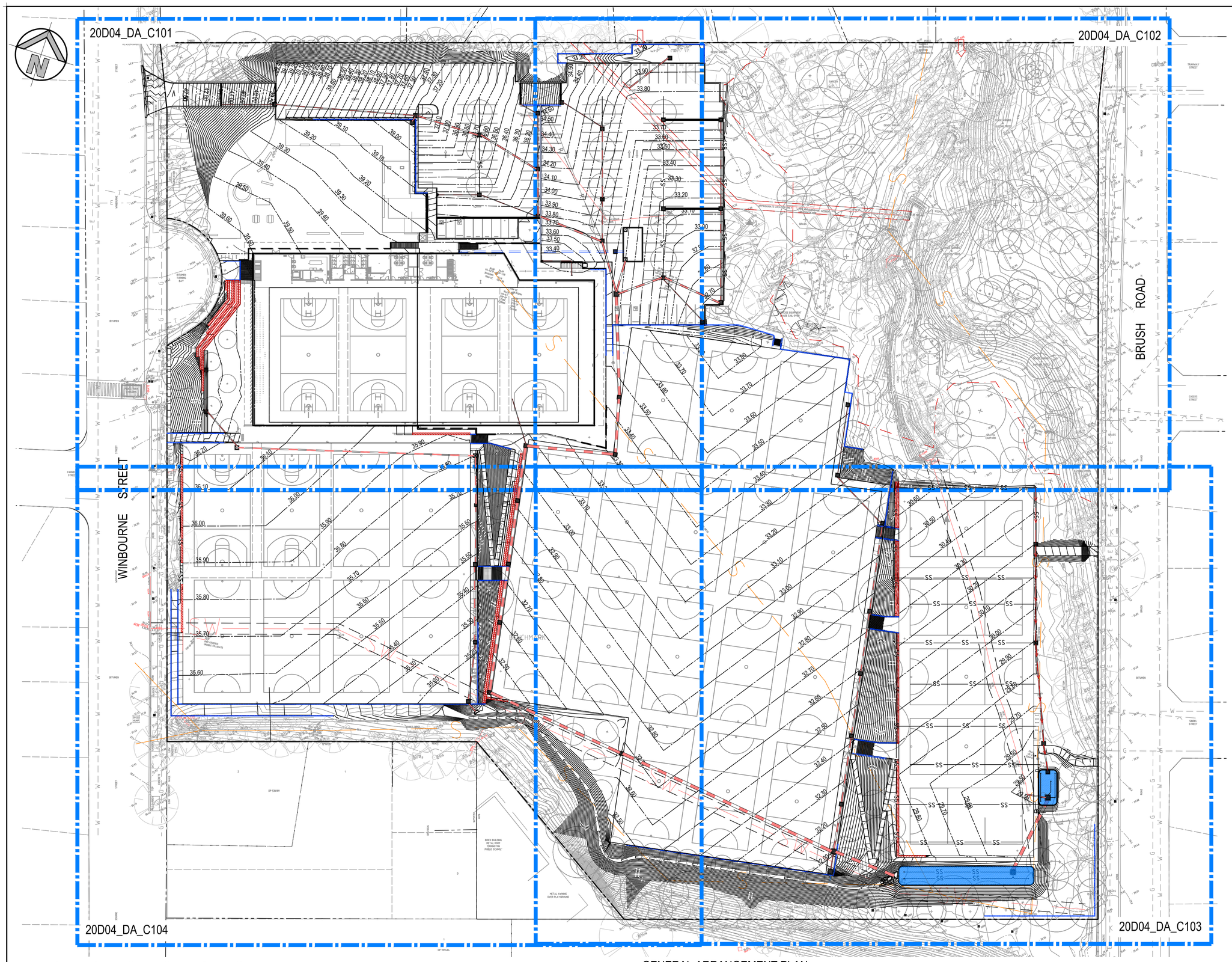
DRAWING TO BE PRINTED IN COLOUR

Project
WEST RYDE MULTI-SPORTS FACILITY
22 WINBOURNE ST, WEST RYDE NSW

Title
COVER SHEET, DRAWING SCHEDULE, NOTES & LOCALITY SKETCH

Drawn	Designed	Date
I.Khachab	N.Heazlewood	MARCH 2021
Checked	Approved	Scale @A1
N.Heazlewood	A.Francis	N.T.S.

Drawing number: 20D04_DA_C000
Revision: 05



LEGEND

- EXISTING BOUNDARY
- PROPOSED JUNCTION PITS
- PROPOSED SURFACE INLET PITS
- PROPOSED LINTEL ONGRADE & SAG PITS
- EXISTING STORMWATER PIT
- SW — SW — EXISTING STORMWATER PIPE (APPROXIMATE LOCATION)
- PROPOSED STORMWATER PIPE
- SW — SW — PROPOSED STORMWATER PIPE
- PROPOSED SIPHONIC DRAINAGE
- 33.0 EXISTING CONTOURS
- 33.00 PROPOSED CONTOURS
- RL33.80 PROPOSED SPOT LEVEL
- K&G PROPOSED KERB & GUTTER
- KO PROPOSED KERB ONLY
- DD PROPOSED DISH DRAIN
- RW1 PROPOSED SANDSTONE RETAINING WALL
- RW2 PROPOSED CORE FILLED BLOCK WALL
- EX.RW EXISTING RETAINING WALL
- PROPOSED STORMWATER SWALE
- SW — SW — EXISTING STORMWATER PIPE TO BE DEMOLISHED
- E — E — EXISTING ELECTRICAL MAINS LINE
- E — E — EXISTING ELECTRICAL LINE OVERHEAD
- G — G — EXISTING GAS LINE
- S — S — EXISTING SEWER LINE
- T — T — EXISTING TELSTRA (COMMS) LINES
- W — W — EXISTING WATER LINE
- SS — SS — PROPOSED SUBSOIL LINE
- PROPOSED GRATED DRAIN
- DD PROPOSED DISH GUTTER
- 40.125 / Ø425RCP / 20.450m / 1.5% / 39.818 — STORMWATER UPSTREAM INVERT RL. / STORMWATER PIPE DIAMETER & CLASS / STORMWATER PIPE LENGTH / STORMWATER PIPE GRADE / STORMWATER DOWNSTREAM INVERT RL.
- A-1 — LINE LETTER / PIT NUMBER — PROPOSED PIT TAG
- H=0.4m PROPOSED WALL HEIGHT
- DP PROPOSED DOWNPIPE LOCATION
- FP PROPOSED FLASHING POINT
- PROPOSED EASEMENT
- EXISTING EASEMENT
- C2 ZONE BOUNDARY AS CONFIRMED BY COUNCIL ON 20/09/2023 (05)

NOTES:

- SUBSOIL DRAINAGE TO BE INSTALLED IN LANDSCAPING AREAS ADJACENT TO PAVEMENTS.
- ALL RETAINING WALLS TO BE MAINTAINED BY DEVELOPER

0 10 20 30 40 50m
10 8 6 4 2
SCALE 1:500

GENERAL ARRANGEMENT PLAN

SCALE: 1:500

FOR DA ONLY

SURVEY INFORMATION
SURVEYED BY LTS
DATUM: A.H.D.
ORIGIN OF LEVELS: PM1439 RL30.479

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE	REVISION	AMENDMENT	DRAWN	DESIGNED	DATE
05	ISSUED FOR DA ONLY	MB	NH	05.10.2023					
04	ISSUED FOR DA ONLY	MP	NH	09.05.2023					
03	ISSUED FOR DA ONLY	MP	NH	22.03.2023					
02	ISSUED FOR DA ONLY	MP	NH	20.03.2023					
01	ISSUED FOR DA ONLY	MS	NH	01.03.2023					

Client
STEPHEN EDWARDS CONSTRUCTIONS

Architect
COX ARCHITECTURE

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DRAWING TO BE PRINTED IN COLOUR

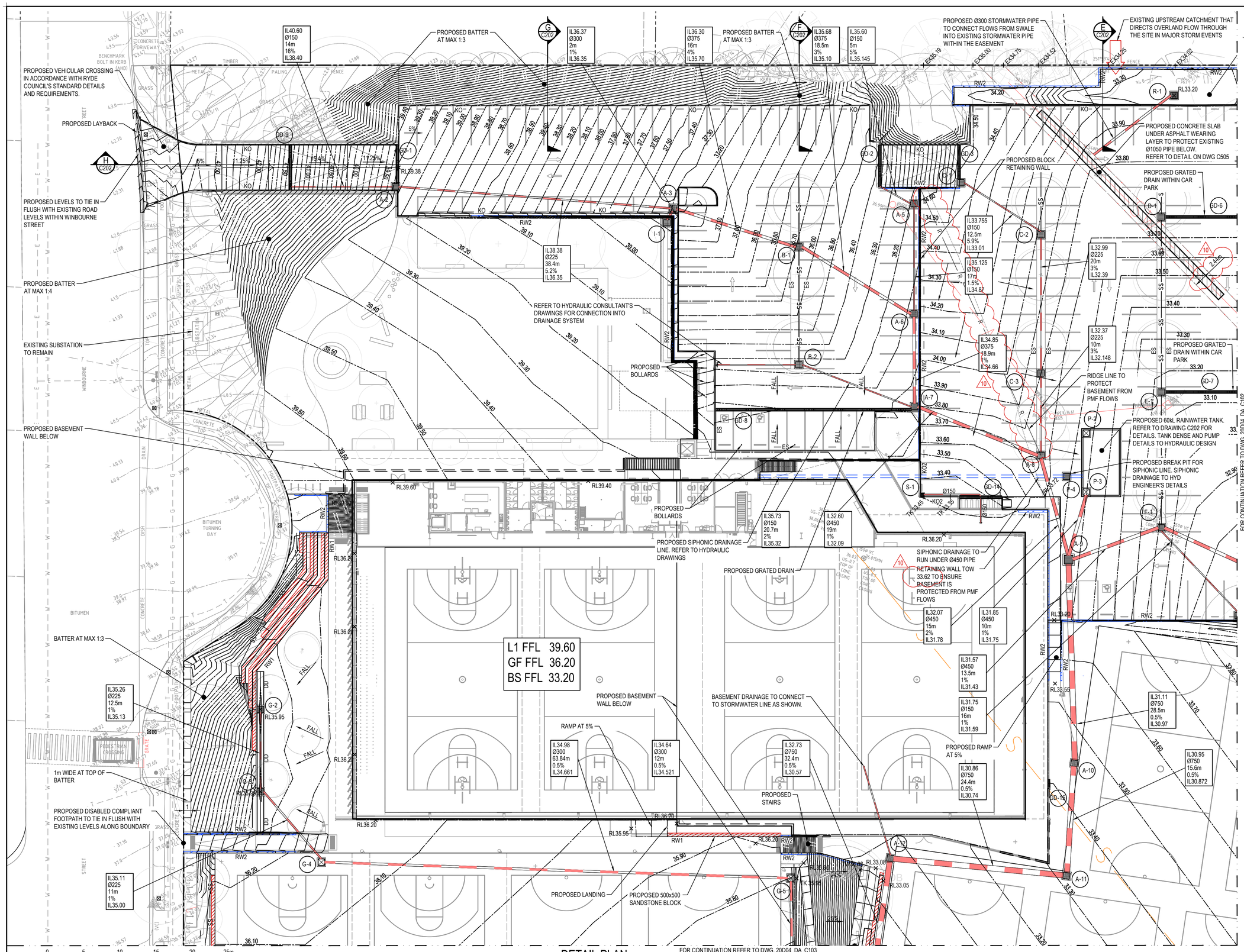
henry&hymas

Project
WEST RYDE MULTI-SPORTS FACILITY
22 WINBOURNE ST, WEST RYDE NSW

Title
GENERAL ARRANGEMENT PLAN

Drawn	Designed	Date
I.Khachab	N.Heazlewood	MARCH 2021
Checked	Approved	Scale @A1
N.Heazlewood	A.Francis	1:500

Drawing number: 20D04_DA_C100
Revision: 05



SCALE 1:250

DETAIL PLAN

SCALE: 1:250

NOTES:

- SUBSOIL DRAINAGE TO BE INSTALLED IN LANDSCAPING AREAS ADJACENT TO PAVEMENTS.
- SEWER AND STORMWATER SERVICES CO-ORDINATION PENDING SURVEY.

FOR DA ONLY

SURVEY INFORMATION
SURVEYED BY LTS
DATUM: A.H.D.
ORIGIN OF LEVELS: PM1439 RL30.479

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE	REVISION	AMENDMENT	DRAWN	DESIGNED	DATE
07	ISSUED FOR DA ONLY	MP	NH	20.03.2023					
06	ISSUED FOR DA ONLY	MP	NH	01.03.2023					
05	ISSUED FOR DA ONLY	NH	NH	08.03.2022					
04	ISSUED FOR DA ONLY	MB	NH	22.02.2022					
03	ISSUED FOR 100% SCHEMATIC DESIGN	NH	NH	20.01.2022	10	ISSUED FOR DA ONLY	MB	NH	05.10.2023
02	ISSUED FOR 100% SCHEMATIC DESIGN	IK	NH	07.12.2021	09	ISSUED FOR DA ONLY	MP	NH	09.05.2023
01	ISSUED FOR 50% SCHEMATIC DESIGN	NH	NH	11.11.2021	08	ISSUED FOR DA ONLY	MP	NH	22.03.2023

Client
SCHOOL INFRASTRUCTURE NSW

Architect
COX ARCHITECTURE

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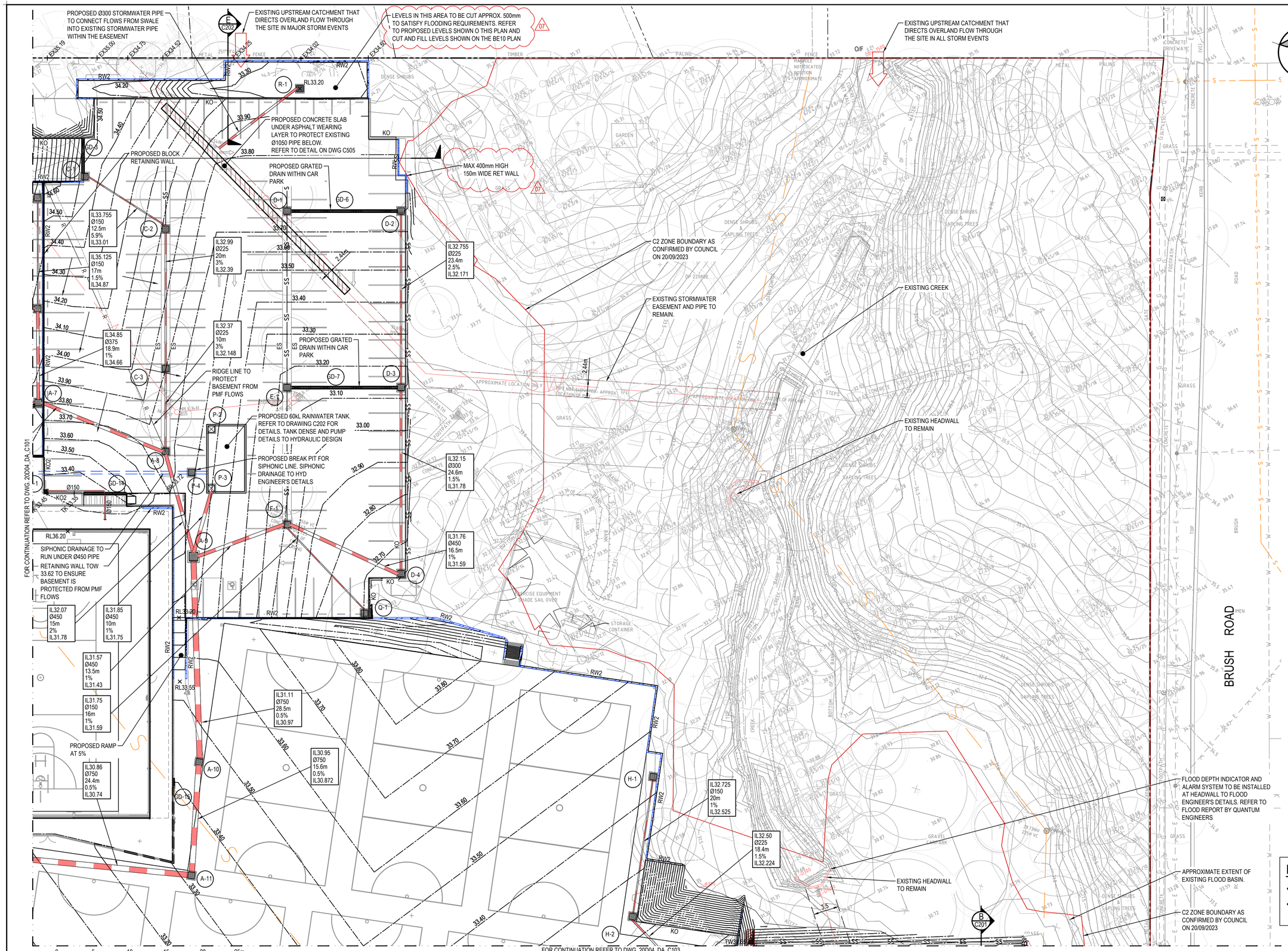
Project
WEST RYDE MULTI-SPORTS FACILITY
22 WINBOURNE ST, WEST RYDE NSW

Title
DETAIL PLAN
SHEET 1 OF 4

Drawn	Designed	Date
I.Khachab	N.Heazlewood	MARCH 2021
Checked	Approved	Scale @A1
N.Heazlewood	A.Francis	1:250

Drawing number: 20D04_DA_C101
Revision: 10



DETAIL PLAN

SCALE: 1:250

NOTES:

- SUBSOIL DRAINAGE TO BE INSTALLED IN LANDSCAPING AREAS ADJACENT TO PAVEMENTS.
- SEWER AND STORMWATER SERVICES CO-ORDINATION PENDING SURVEY.

FOR DA ONLY

SURVEY INFORMATION
SURVEYED BY LTS
DATUM: A.H.D.
ORIGIN OF LEVELS: PM1439 RL30.479

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE
07	ISSUED FOR DA ONLY	NH	NH	17.11.2023
06	ISSUED FOR DA ONLY	NH	NH	14.11.2023
05	ISSUED FOR DA ONLY	MB	NH	05.10.2023
04	ISSUED FOR DA ONLY	MP	NH	09.05.2023
03	ISSUED FOR DA ONLY	MP	NH	22.03.2023
02	ISSUED FOR DA ONLY	MP	NH	17.03.2023
01	ISSUED FOR DA ONLY	MS	NH	01.03.2023

Client: SCHOOL INFRASTRUCTURE NSW

Architect: COX ARCHITECTURE

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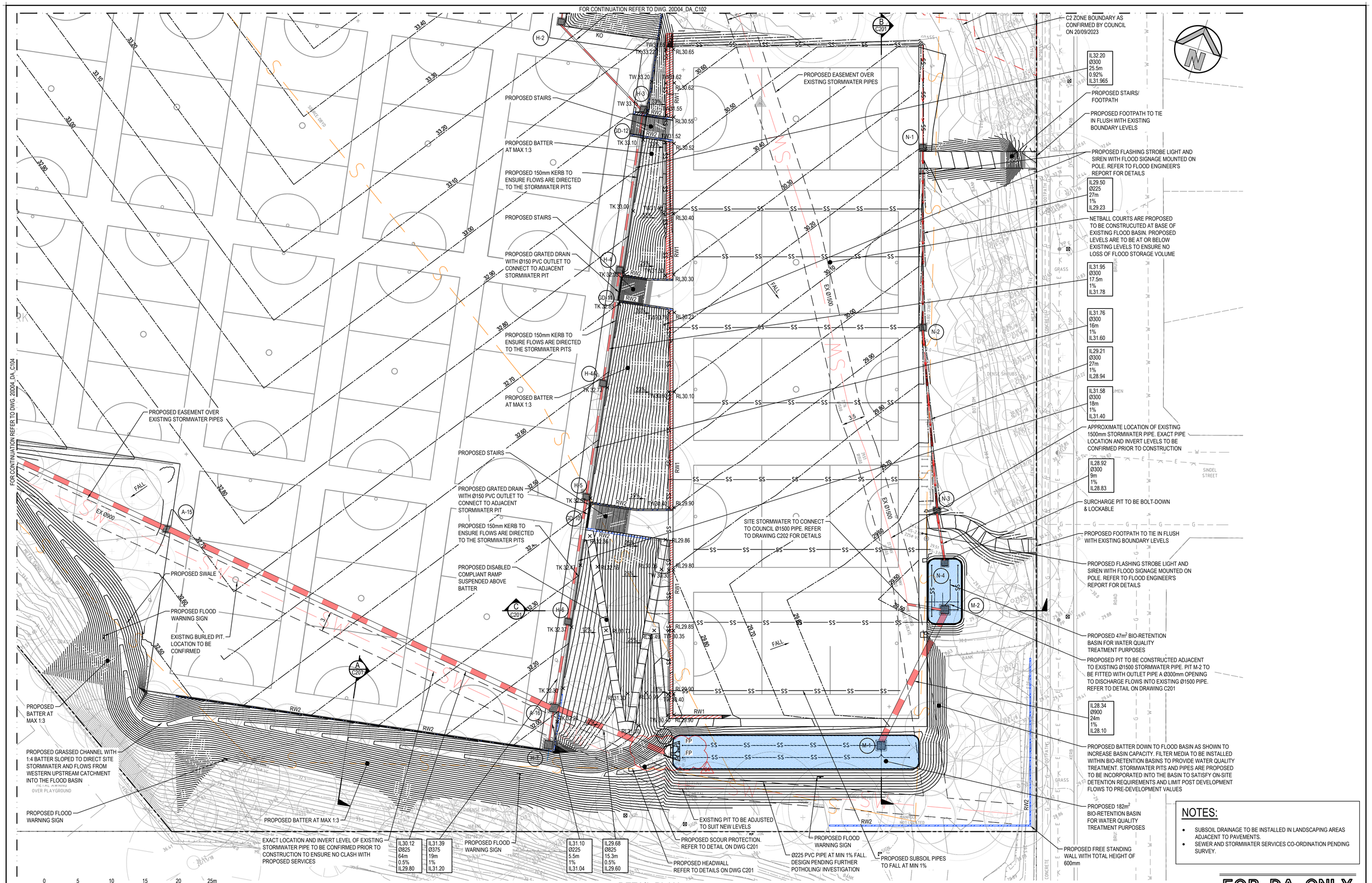
Project: WEST RYDE MULTI-SPORTS FACILITY
22 WINBOURNE ST, WEST RYDE NSW

Title: DETAIL PLAN
SHEET 2 OF 4

Drawn	Designed	Date
I.Khachab	N.Heazlewood	MARCH 2021
Checked	Approved	Scale @A1
N.Heazlewood	A.Francis	1:250

Drawing number: 20D04_DA_C102
Revision: 07



DETAIL PLAN

SCALE: 1:250

NOTES:

- SUBSOIL DRAINAGE TO BE INSTALLED IN LANDSCAPING AREAS ADJACENT TO PAVEMENTS.
- SEWER AND STORMWATER SERVICES CO-ORDINATION PENDING SURVEY.

FOR DA ONLY

SURVEY INFORMATION
SURVEYED BY LTS
DATUM: A.H.D.
ORIGIN OF LEVELS: PM1439 RL30.479

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE
04	ISSUED FOR DA ONLY	NH	NH	14.11.2023
03	ISSUED FOR DA ONLY	MB	NH	05.10.2023
02	ISSUED FOR DA ONLY	MP	NH	17.03.2023
01	ISSUED FOR DA ONLY	MS	NH	01.03.2023

Client: SCHOOL INFRASTRUCTURE NSW

Architect: COX ARCHITECTURE

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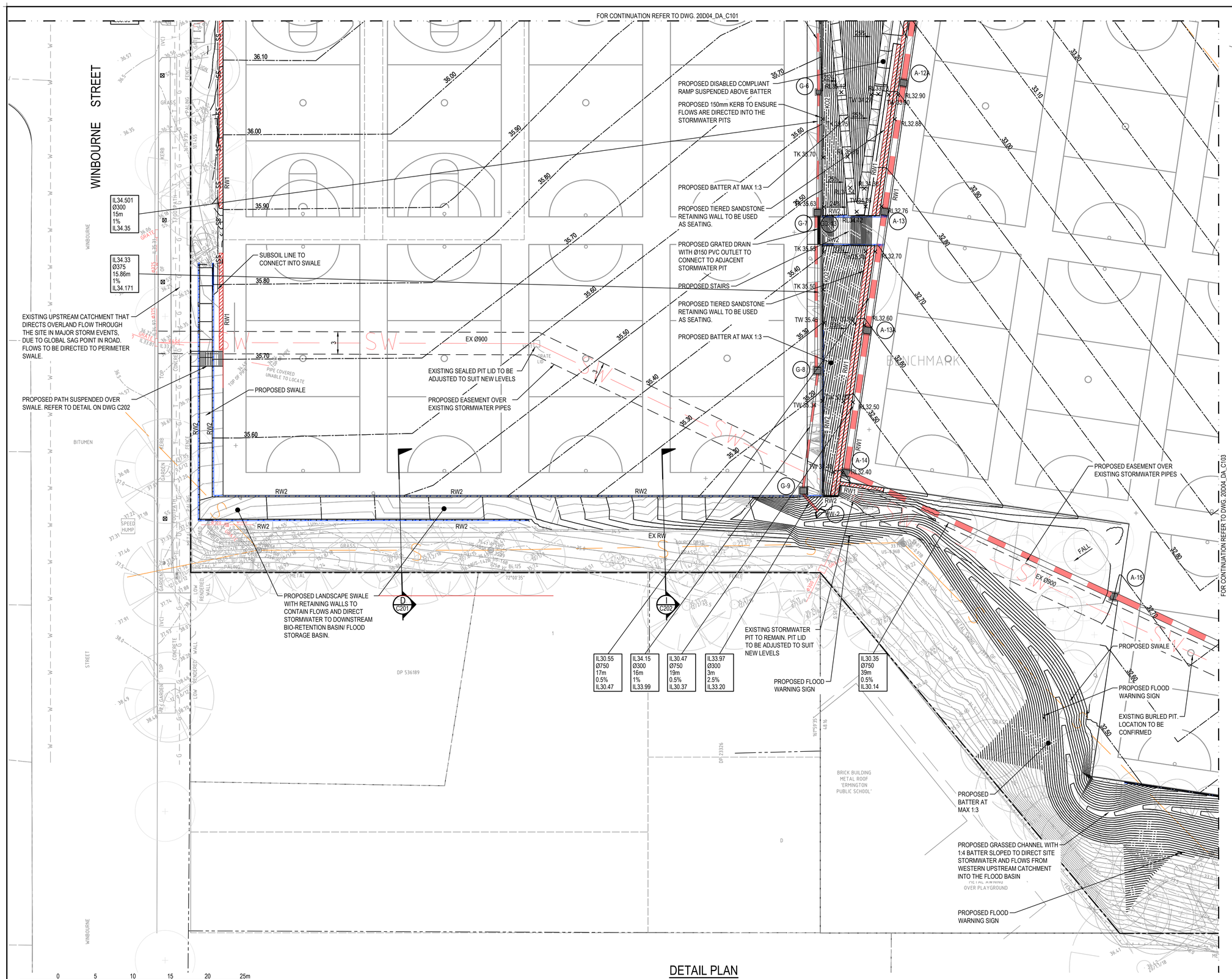
DRAWING TO BE PRINTED IN COLOUR

Project: WEST RYDE MULTI-SPORTS FACILITY
22 WINBOURNE ST, WEST RYDE NSW

Title: DETAIL PLAN
SHEET 3 OF 4

Drawn	Designed	Date
I.Khachab	N.Heazlewood	MARCH 2021
Checked	Approved	Scale @A1
N.Heazlewood	A.Francis	1:250

Drawing number: 20D04_DA_C103
Revision: 04



DETAIL PLAN

SCALE: 1:250

NOTES:

- SUBSOIL DRAINAGE TO BE INSTALLED IN LANDSCAPING AREAS ADJACENT TO PAVEMENTS.
- SEWER AND STORMWATER SERVICES CO-ORDINATION PENDING SURVEY.

FOR DA ONLY

SURVEY INFORMATION
SURVEYED BY LTS
DATUM: A.H.D.
ORIGIN OF LEVELS: PM1439 RL30.479

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE
03	ISSUED FOR DA ONLY	MB	NH	05.10.2023
02	ISSUED FOR DA ONLY	MP	NH	17.03.2023
01	ISSUED FOR DA ONLY	MS	NH	01.03.2023

Client: SCHOOL INFRASTRUCTURE NSW

Architect: COX ARCHITECTURE

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Project: WEST RYDE MULTI-SPORTS FACILITY
22 WINBOURNE ST, WEST RYDE NSW

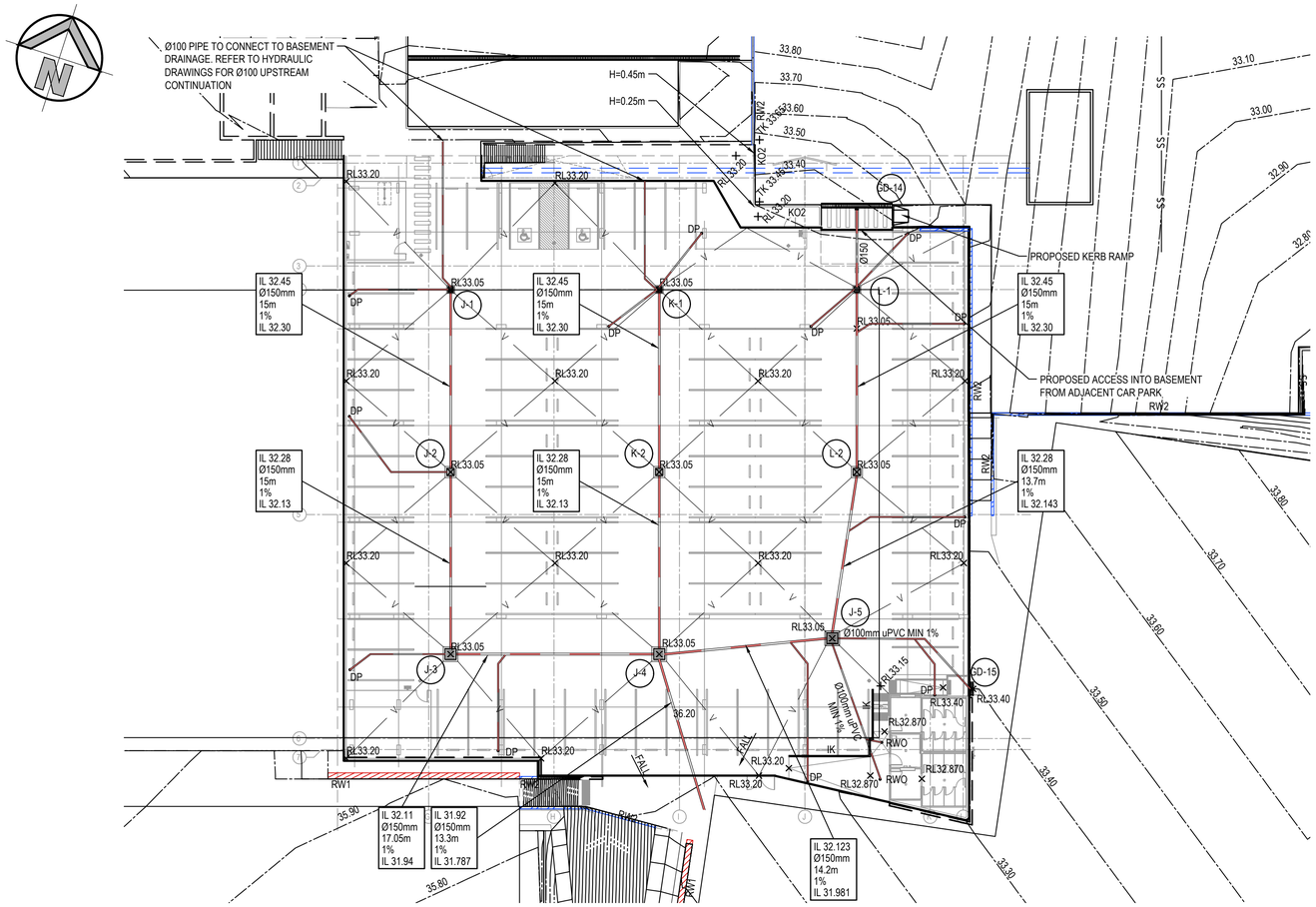
Title: DETAIL PLAN
SHEET 4 OF 4

Drawn	Designed	Date
I.Khachab	N.Heazlewood	MARCH 2021
Checked	Approved	Scale @A1
N.Heazlewood	A.Francis	1:250

Drawing number: 20D04_DA_C104
Revision: 03

LEGEND

- EXISTING BOUNDARY
- PROPOSED JUNCTION PITS
- PROPOSED SURFACE INLET PITS
- PROPOSED LINTEL ONGRADE & SAG PITS
- EXISTING STORMWATER PIT
- PROPOSED STORMWATER PIPE
- PROPOSED SIPHONIC DRAINAGE
- 33.0 — EXISTING CONTOURS
- 33.00 — PROPOSED CONTOURS
- RL33.80 — PROPOSED SPOT LEVEL
- RW1 — PROPOSED SANDSTONE RETAINING WALL
- RW2 — PROPOSED CORE FILLED BLOCK WALL
- 40.125 / Ø425RCP / 20.450m / 1.5% / 39.818 — STORMWATER UPSTREAM INVERT RL. / STORMWATER PIPE DIAMETER & CLASS / STORMWATER PIPE LENGTH / STORMWATER PIPE GRADE / STORMWATER DOWNSTREAM INVERT RL.
- A-1 — LINE LETTER / PIT NUMBER — PROPOSED PIT TAG
- DP — PROPOSED DOWNPIPE LOCATION



BASEMENT PLAN

SCALE: 1:250

0 5 10 15 20 25m

5 4 3 2 1

SCALE 1:250

FOR DA ONLY

SURVEY INFORMATION
SURVEYED BY LTS
DATUM: A.H.D.
ORIGIN OF LEVELS: PM1439 RL30.479

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE
04	ISSUED FOR DA ONLY	MS	NH	01.03.2023
03	ISSUED FOR DA ONLY	MB	NH	22.02.2022
02	ISSUED FOR 100% SCHEMATIC DESIGN	IK	NH	07.12.2021
01	ISSUED FOR 50% SCHEMATIC DESIGN	MP	NH	11.11.2021

Client: SCHOOL INFRASTRUCTURE NSW

Architect: COX ARCHITECTURE

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DRAWING TO BE PRINTED IN COLOUR

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Project: WEST RYDE MULTI-SPORTS FACILITY
22 WINBOURNE ST, WEST RYDE NSW

Title: BASEMENT PLAN

Drawn	Designed	Date
I.Khachab	N.Heazlewood	MARCH 2021
Checked	Approved	Scale @A1
N.Heazlewood	A.Francis	1:250

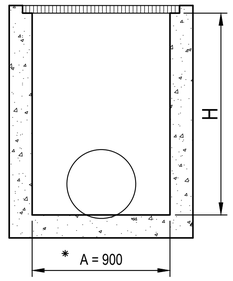
Drawing number: 20D04_DA_C110

Revision: 04

TYPICAL PIT CHAMBER SIZES

IT IS THE CONTRACTORS RESPONSIBILITY TO SELECT PIT CHAMBER SIZE WITH REGARDS TO PIPE SIZE, DEPTH TO INVERT AND SKEW ANGLE. REFER SKETCHES BELOW.

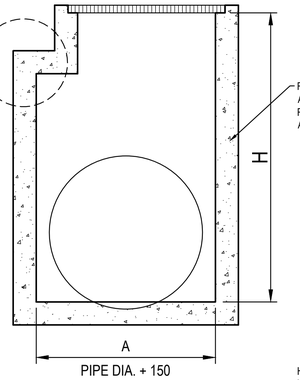
1. SELECT PIT CHAMBER USING THE STEPS BELOW:
2. SELECT PIT CHAMBER SIZE DEPENDING ON THE PIPE DIAMETERS.
3. CHECK PIT CHAMBER SIZE TO SATISFY DEPTH TO INVERT REQUIREMENTS.
   CHECK PIT CHAMBER DIMENSIONS TO SATISFY THE SKEW ANGLE IN THE TABLE.



SECTION
NTS

*A = 600 FOR PIPES UP TO 375 DIA.

1 PIT CHAMBER DIMENSIONS FOR PIPES UP TO 600 DIA.



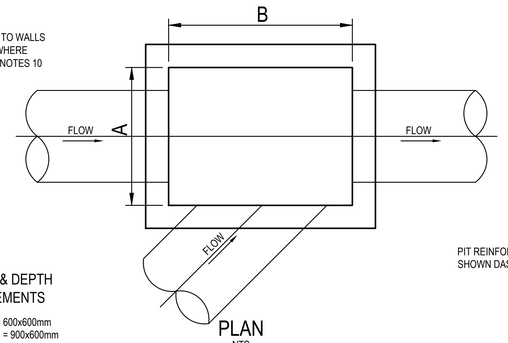
SECTION
NTS

1 PIT CHAMBER FOR PIPES GREATER THAN 600 DIA.

2 PIT SIZE & DEPTH REQUIREMENTS

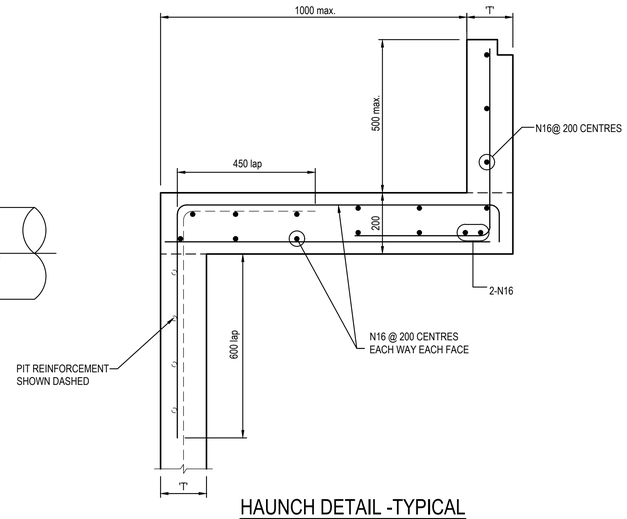
H = 0-900mm - AxB = 600x600mm
H = 900-1200mm - AxB = 900x600mm
H = >1200mm - AxB = 900x900mm

FOR B = 600mm - MAX. SIDE ENTRY PIPE AT 45° SKEW = 225mm
FOR B = 900mm - MAX. SIDE ENTRY PIPE AT 45° SKEW = 375mm
FOR B = 1200mm - MAX. SIDE ENTRY PIPE AT 45° SKEW = 600mm
FOR B = 1500mm - MAX. SIDE ENTRY PIPE AT 45° SKEW = 825mm
FOR B = 1900mm - MAX. SIDE ENTRY PIPE AT 45° SKEW = 1050mm



PLAN
NTS

3 PIT CHAMBER FOR SIDE ENTRY ON SKEW



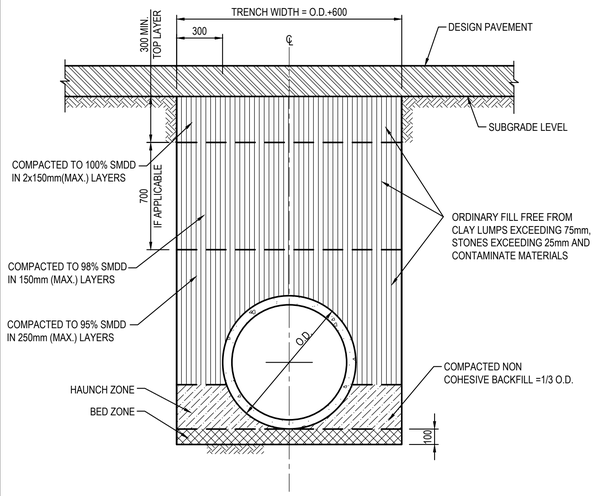
HAUNCH DETAIL -TYPICAL
SCALE 1:10

PIT LID SCHEDULE

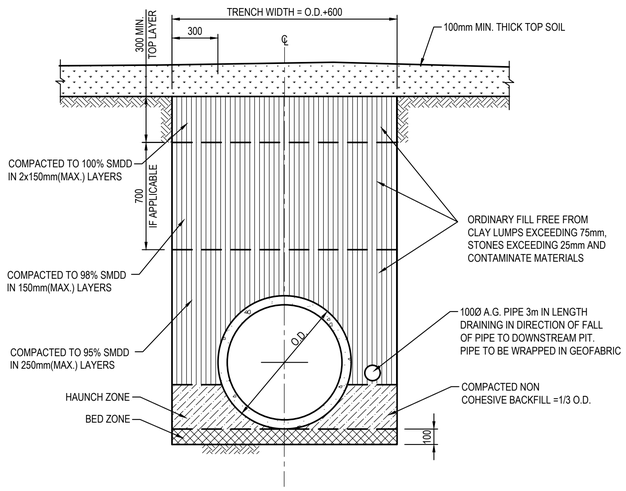
PIT/STRUCTURE NUMBER	DESCRIPTION
J-1, K-1, L-1, S-1	PROPOSED INLET PIT WITH 450x450 HINGED MEDIUM DUTY GRATED LID CLASS "C" IN ACCORDANCE WITH CITY OF RYDE COUNCIL'S REQUIREMENTS.
J-2, K-2, L-2	PROPOSED INLET PIT WITH 600x600 HINGED MEDIUM DUTY GRATED LID CLASS "C" IN ACCORDANCE WITH CITY OF RYDE COUNCIL'S REQUIREMENTS.
G-4, G-5	PROPOSED JUNCTION PIT WITH 900x900 HEAVY DUTY SEALED LID CLASS "D", IN ACCORDANCE WITH CITY OF RYDE COUNCIL'S REQUIREMENTS.
A-5, A-6, A-7, A-8, A-10, A-11, A-12, A-13, A-14, H-4A, A-15, A-16, B-1, B-2, C-1, C-2, C-3, D-2, D-3, D-4, E-1, F-1, G-2, G-3, G-6, G-7, G-8, H-1, H-2, H-3, H-4, H-5, H-6, H-7, I-1, J-3, J-4, J-5, N-1, N-2, N-3, N-4, A-12A, A-13A, P-4, Q-1, D-1, G-9, R-1, A-2, A-13	PROPOSED INLET PIT WITH 900x900 HINGED HEAVY DUTY GRATED LID CLASS "D" IN ACCORDANCE WITH CITY OF RYDE COUNCIL'S REQUIREMENTS.
M-1, M-2, A-9	PROPOSED INLET PIT WITH 1200x1200 HINGED HEAVY DUTY GRATED LID CLASS "D" IN ACCORDANCE WITH CITY OF RYDE COUNCIL'S REQUIREMENTS.
GD-1, GD-2, GD-3, GD-6, GD-7, GD-8, GD-9	300mm WIDE HEAVY DUTY GRATED DRAIN AND MEDIUM DUTY FRAME CLASS "C" IN ACCORDANCE WITH CITY OF RYDE COUNCIL'S REQUIREMENTS.
GD-10, GD-11, GD-12, GD-13, GD-14	150mm WIDE HEAVY DUTY GRATED DRAIN AND HEAVY DUTY FRAME CLASS "D" IN ACCORDANCE WITH CITY OF RYDE COUNCIL'S REQUIREMENTS.
P-2, P-3	OSD ACCESS LID 900x900 SEALED, CLASS "B" IN ACCORDANCE WITH CITY OF RYDE COUNCIL'S REQUIREMENTS.
HW-1, HW-2	PROPOSED HEADWALL TO SUIT PIPE
GD-15	100mm WIDE LIGHT DUTY GRATED DRAIN AND LIGHT DUTY FRAME CLASS "B" IN ACCORDANCE WITH CITY OF RYDE COUNCIL'S REQUIREMENTS.

NOTE:

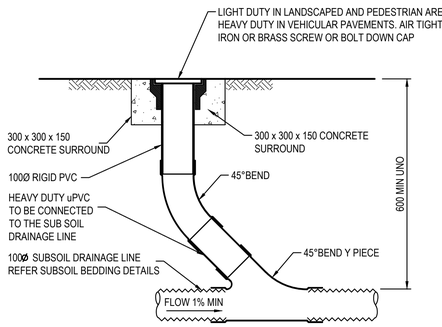
- ALL INLET PITS TO BE FITTED WITH OCEAN GUARD PIT BASKETS FOR WATER QUALITY TREATMENT PURPOSES.
- ALL GRATED INLET PITS TO BE LOCKABLE TO PREVENT PUBLIC ACCESS



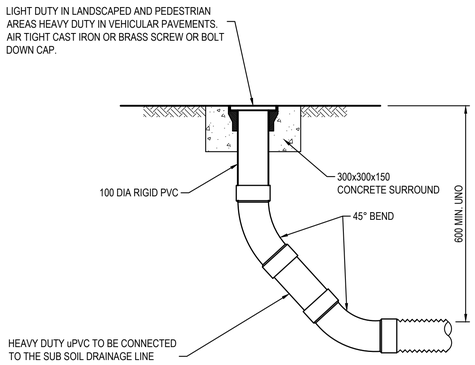
PIPE TRENCH INSTALLATION BENEATH PAVEMENT
(H1 & H2 SUPPORT)
SCALE 1:20



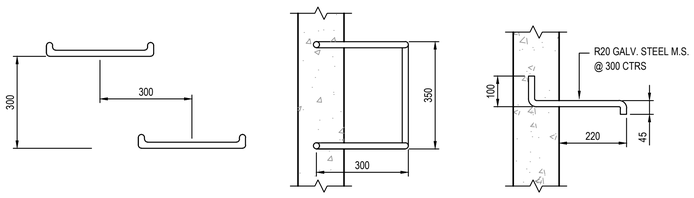
PIPE TRENCH INSTALLATION IN LANDSCAPE AREAS
(H1 & H2 SUPPORT)
SCALE 1:20



INTERMEDIATE RISER (IR)
SCALE 1:10
NOTE: SLOTTED RIGID PVC PIPE AND FITTINGS MAY BE USED



FLUSHING POINT (FP)
SCALE 1:10
NOTE: SLOTTED RIGID PVC PIPE AND FITTINGS MAY BE USED



ELEVATION PLAN SECTION

TYPICAL STEP IRON DETAIL
SCALE 1:10

DRAINAGE NOTES:

1. ALL STORMWATER WORK TO COMPLY WITH AS 3500 PART 3.

2. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE MINIMUM COVER OF 600mm ON ALL PIPES.

3. PROTECTION OF PIPES DUE TO LOADS EXCEEDING W7 WHEEL LOAD SHALL BE THE CONTRACTOR'S RESPONSIBILITY.

4. BEDDING TYPE SHALL BE TYPE H2 FOR RCP. WHERE NECESSARY THE OVERLAY ZONE SHALL BE REDUCED TO ACCOMMODATE PAVEMENT REQUIREMENTS. REFER TO THIS DRAWING FOR DETAILS.

5. MINIMUM COVER OVER EXISTING PIPES FOR PROTECTION DURING CONSTRUCTION SHALL BE 800mm.

6. NO CONSTRUCTION LOADS SHALL BE APPLIED TO PLASTIC PIPES.

7. FINISHED SURFACE LEVELS SHOWN ON LAYOUT PLAN DRGS TAKE PRECEDENCE OVER DESIGN DRAINAGE SURFACE LEVELS.

8. ALL PIPES UP TO AND INCLUDING 300 DIA. SHALL BE SOLVENT OR RUBBER RING JOINTED PVC CLASS SH PIPE TO AS1260. ALL OTHER PIPES TO BE RCP USING CLASS 2 RUBBER RING JOINTED PIPE. HARDIES FRC PIPE MAY BE USED IN LIEU OF RCP IF DESIRED IN GROUND. ALL AERIAL PIPES TO BE PVC CLASS SH.

9. ALL PITS IN NON TRAFFICABLE AREAS TO BE PREFABRICATED POLYESTER CONCRETE "POLYCRETE" WITH "LIGHT DUTY" CLASS B GALV. MILD STEEL GRATING AND FRAME.
ALL PITS IN TRAFFICABLE AREAS (CLASS "D" LOADING MAX) TO HAVE 150mm THICK CONCRETE WALLS AND BASE CAST IN-SITU f'c=32 MPa, REINFORCED WITH N12-200 BOTH LOADING WAYS CENTRALLY PLACE .U.N.O. ON SEPARATE DESIGN DRAWINGS IN THIS SET. GALV.MILD STEEL GRATING AND FRAME TO SUIT DESIGN LOADING. PRECAST PITS, RECTANGULAR OR CIRCULAR IN SHAPE, MAY BE USED IN LIEU AND SHALL COMPLY WITH RELEVANT AUSTRALIAN STANDARDS.

10. ALL PITS, GRATINGS AND FRAMES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATION AND TO BE IN ACCORDANCE WITH AS3500.3 AND AS3996.

11. PIT CHAMBER DIMENSIONS ARE TO BE SELECTED TO SATISFY THE FOLLOWING:
- PIPE SIZE
- DEPTH TO INVERT
- SKEW ANGLE
  REFER TYPICAL PIT CHAMBER DETAILS BELOW
IF PIT LID SIZE IS SMALLER THAN THE PIT CHAMBER SIZE THEN THE PIT LID IS TO BE CONSTRUCTED ON THE CORNER OF THE PIT CHAMBER WITH THE STEP IRONS DIRECTLY BELOW. ALTERNATIVELY THE PIT LID TO BE USED, IS TO BE THE SAME SIZE AS THE PIT CHAMBER.

12. FOR PIPE SIZES GREATER THAN Ø300mm, PIT FLOOR IS TO BE BENCHED TO FACILITATE FLOW.

13. GALVANISED STEP IRONS SHALL BE PROVIDED AT 300 CTS FOR PITS HAVING A DEPTH EXCEEDING 1200mm. SUBSOIL DRAINAGE PIPE SHALL BE PROVIDED IN PIPE TRENCHES ADJACENT TO INLET PIPES. (MINIMUM LENGTH 3m).

14. ALL SUBSOIL PIPES SHALL BE 100mm SLOTTED PVC IN A FILTER SOCK, UNO, WITH 3m INSTALLED UPSTREAM OF ALL PITS.

15. ALL PIPEWORK SHALL HAVE MINIMUM DIAMETER 100.

16. MINIMUM GRADE FOR ROOFWATER DRAINAGE LINES SHALL BE 1%.

17. ALL PIPE JUNCTIONS AND TAPER UP TO AND INCLUDING 300 DIA. SHALL BE VIA PURPOSE MADE FITTINGS.

18. ALL DRAINAGE TO BE INSTALLED IN ACCORDANCE WITH AS3500, PART 3. TESTING TO BE UNDERTAKEN AND REPORTS PROVIDED TO THE SUPERINTENDENT.

19. LOCATION OF THE DIRECT DOWN PIPE CONNECTIONS MAY VARY ON SITE TO SUIT SITE CONDITIONS, WHERE CONNECTION SHOWN ON LONG SECTIONS CHAINAGES ARE INDICATIVE ONLY.

20. PITS IN EXCESS OF 1.5 m DEEP TO HAVE WALL AND FLOOR THICKNESS INCREASED TO 200mm. REINFORCED WITH N12@200 CTS CENTRALLY PLACED BOTH WAYS THROUGHOUT U.N.O.ON SEPARATE DESIGN DRAWINGS IN THIS SET. IF DEPTH EXCEEDS 5m CONTACT ENGINEER.

21. SUBSOIL DRAINAGE LINES FOR LANDSCAPE AREA NOT SHOWN ON THESE DRAWINGS. REFER TO LANDSCAPING DRAWINGS FOR ANY ADDITIONAL SUBSOIL LINES IN LANDSCAPING AREAS THAT ARE NOT SHOWN ON THESE CIVIL DRAWINGS.

22. ALL STORMWATER PITS TO HAVE Ø100 uPVC SLOTTED SUBSOIL PIPES CONNECTED TO THEM. THESE SUBSOILS TO EXTEND 3m UPSTREAM OF THE PIT AT A MINIMUM GRADE.

FOR DA ONLY

0 200 400 600 800 1000mm
200 100
SCALE 1:10

0 400 800 1200 1600 2000mm
400 200
SCALE 1:20

SURVEY INFORMATION
SURVEYED BY LTS
DATUM: A.H.D.
ORIGIN OF LEVELS: PM1439 RL30.479

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE
04	ISSUED FOR DA ONLY - PITS A-17 AND A-18 DELETED, PIT H-7 ADDED	MB	NH	05.10.2023
03	ISSUED FOR DA ONLY	MS	NH	01.03.2023
02	ISSUED FOR DA ONLY	MB	NH	22.02.2022
01	ISSUED FOR 100% SCHEMATIC DESIGN	IK	NH	07.12.2021

Client: SCHOOLS INFRASTRUCTURE NSW
Architect: COX ARCHITECTURE

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henry&hymas

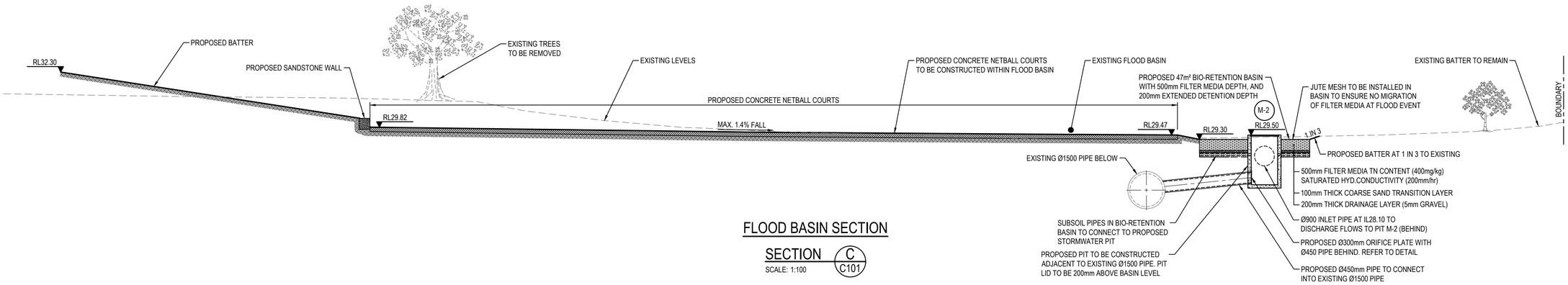
DRAWING TO BE PRINTED IN COLOUR

Project: WEST RYDE MULTI-SPORTS FACILITY
22 WINBOURNE ST, WEST RYDE NSW

Title: STORMWATER MISCELLANEOUS DETAILS & PIT LID SCHEDULE

Drawn	Designed	Date
I.Khachab	N.Heazlewood	MARCH 2021
Checked	Approved	Scale
N.Heazlewood	A.Francis	AS NOTED

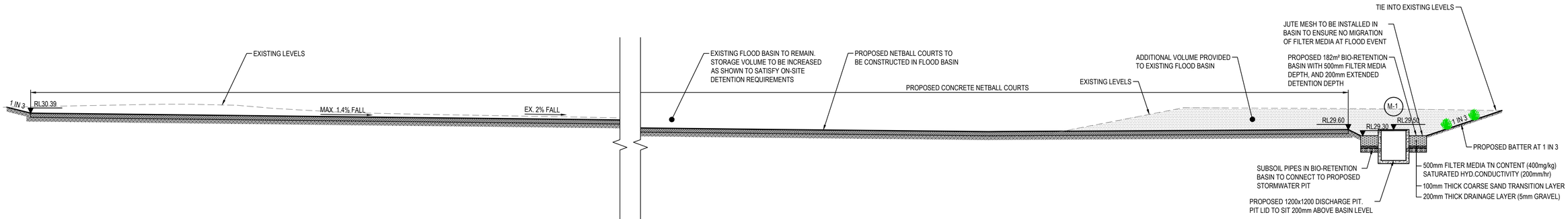
Drawing number: 20D04_DA_C200
Revision: 04



FLOOD BASIN SECTION

SECTION C / C101

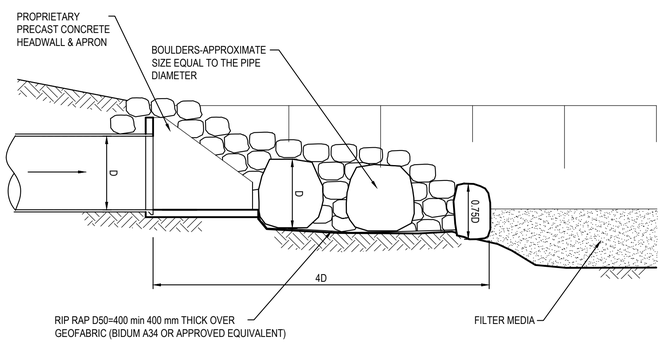
SCALE: 1:100



FLOOD BASIN SECTION

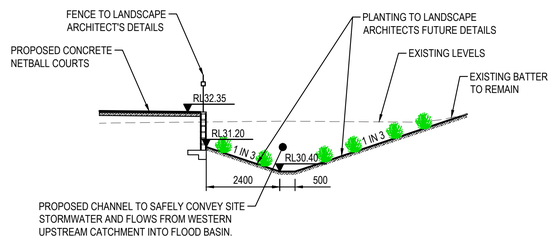
SECTION B / C101

SCALE: 1:100



SCOUR PROTECTION TYPICAL DETAIL

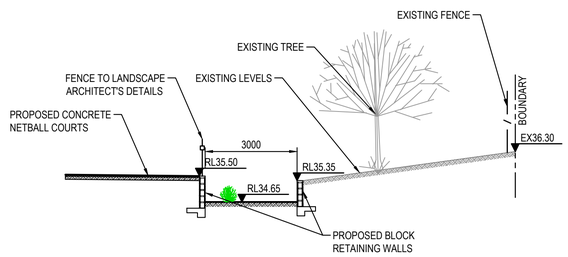
SCALE 1:50



TYPICAL LANDSCAPED CHANNEL SECTION

SECTION A / C101

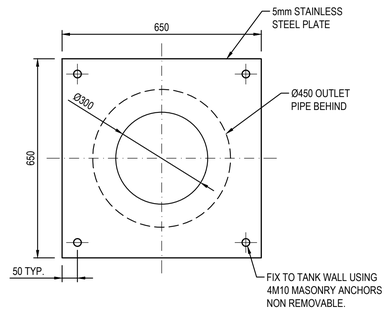
SCALE: 1:100



TYPICAL LANDSCAPED CHANNEL WITH RETAINING WALLS SECTION

SECTION D / C101

SCALE: 1:100



ORIFICE PLATE DETAIL

SCALE 1:10

0 2 4 6 8 10m

2 1

SCALE 1:100

FOR DA ONLY

SURVEY INFORMATION

SURVEYED BY LTS

DATUM: A.H.D.

ORIGIN OF LEVELS: PM1439 RL30.479

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE	REVISION	AMENDMENT	DRAWN	DESIGNED	DATE
04	ISSUED FOR DA ONLY	MP	NH	17.03.2023					
03	ISSUED FOR DA ONLY	MP	NH	01.03.2023					
02	ISSUED FOR DA ONLY	MB	NH	22.02.2022					
01	ISSUED FOR 100% SCHEMATIC DESIGN	IK	NH	07.12.2021					

Client: SCHOOL INFRASTRUCTURE NSW

Architect: COX ARCHITECTURE

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DRAWING TO BE PRINTED IN COLOUR

henry&hymas

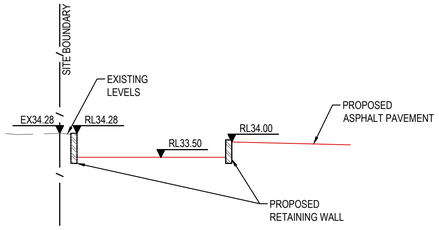
Project: WEST RYDE MULTI-SPORTS FACILITY
22 WINBOURNE ST, WEST RYDE NSW

Title: SITE SECTIONS AND DETAILS
SHEET 1 OF 2

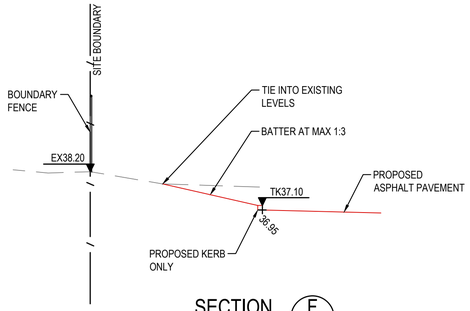
Drawn	Designed	Date
I.Khachab	N.Heazlewood	MARCH 2021
Checked	Approved	Scale @A1
N.Heazlewood	A.Francis	1:100

Drawing number: 20D04_DA_C201

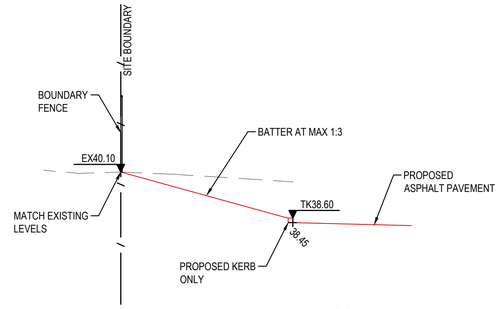
Revision: 04



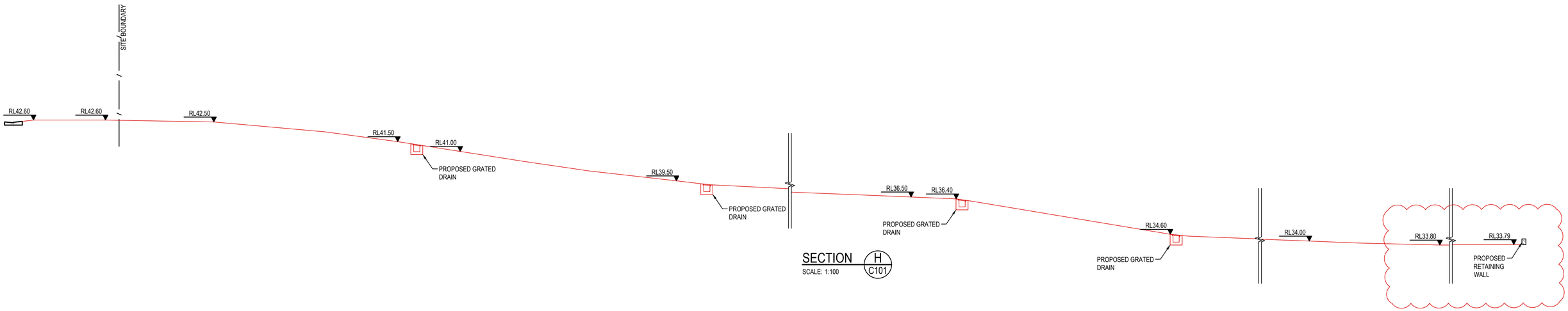
SECTION E C101
SCALE: 1:100



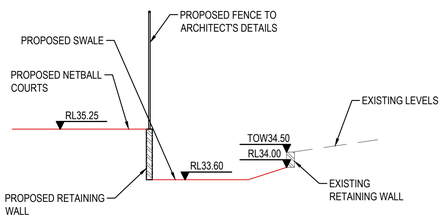
SECTION F C101
SCALE: 1:100



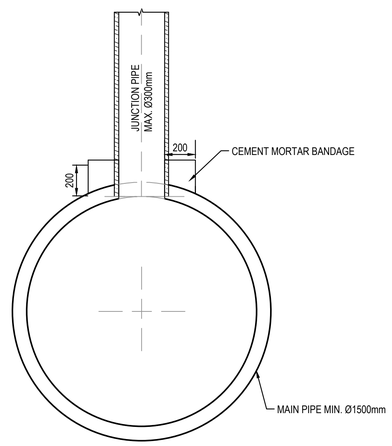
SECTION G C101
SCALE: 1:100



SECTION H C101
SCALE: 1:100



SECTION I C101
SCALE: 1:100



TYPICAL DIRECT CONNECTION OF SMALL PIPE AND LARGE PIPE
SCALE: N.T.S.

0 2 4 6 8 10m
2 1
SCALE 1:100

FOR DA ONLY

SURVEY INFORMATION
SURVEYED BY LTS
DATUM: A.H.D.
ORIGIN OF LEVELS: PM1439 RL30.479

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE	REVISION	AMENDMENT	DRAWN	DESIGNED	DATE
04	ISSUED FOR DA ONLY	NH	NH	17.11.2023					
03	ISSUED FOR DA ONLY	MB	NH	05.10.2023					
02	ISSUED FOR DA ONLY	MP	NH	22.03.2023					
01	ISSUED FOR DA ONLY	MP	NH	20.03.2023					

Client
SCHOOL INFRASTRUCTURE NSW

Architect
COX ARCHITECTURE

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DRAWING TO BE PRINTED IN COLOUR

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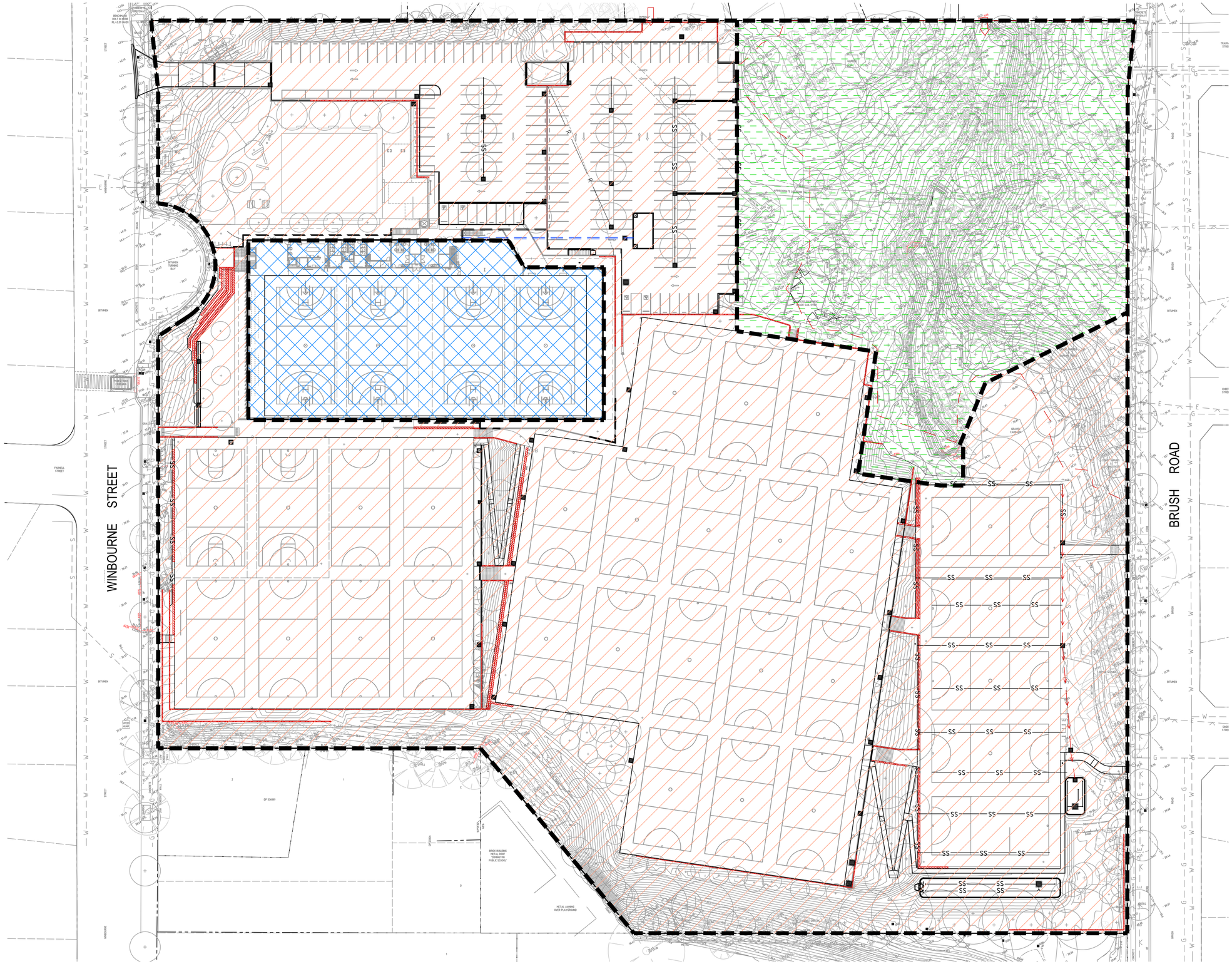
Project
WEST RYDE MULTI-SPORTS FACILITY
22 WINBOURNE ST, WEST RYDE NSW

Title
SITE SECTIONS AND DETAILS
SHEET 2 OF 2

Drawn	Designed	Date
I.Khachab	N.Heazlewood	MARCH 2021
Checked	Approved	Scale @A1
N.Heazlewood	A.Francis	1:100

Drawing number 20D04_DA_C202
Revision 04



TOTAL SITE AREA= 54812m²

ROOF AREA TO RAINWATER TANK
AREA= 4180m²

EXTERNAL AREAS (HARDSTAND + LANDSCAPING TO WATER QUALITY + FLOOD BASIN)
AREA= 41020m²

EXISTING LANDSCAPE AREA BYPASSING THE BASIN
AREA= 9612m²

0 10 20 30 40 50m
10 8 6 4 2
SCALE 1:500

STORMWATER CATCHMENT PLAN

SCALE: 1:500

FOR DA ONLY

SURVEY INFORMATION
SURVEYED BY LTS
DATUM: A.H.D.
ORIGIN OF LEVELS: PM1439 RL30.479

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE	REVISION	AMENDMENT	DRAWN	DESIGNED	DATE
06	ISSUED FOR DA ONLY	NH	NH	14.11.2023					
05	ISSUED FOR DA ONLY	MP	NH	09.05.2023					
04	ISSUED FOR DA ONLY	MP	NH	17.03.2023					
03	ISSUED FOR DA ONLY	MP	NH	01.03.2023					
02	ISSUED FOR DA ONLY	MB	NH	22.02.2022					
01	ISSUED FOR 100% SCHEMATIC DESIGN	IK	NH	07.12.2021					

Client
SCHOOL INFRASTRUCTURE NSW

Architect
COX ARCHITECTURE

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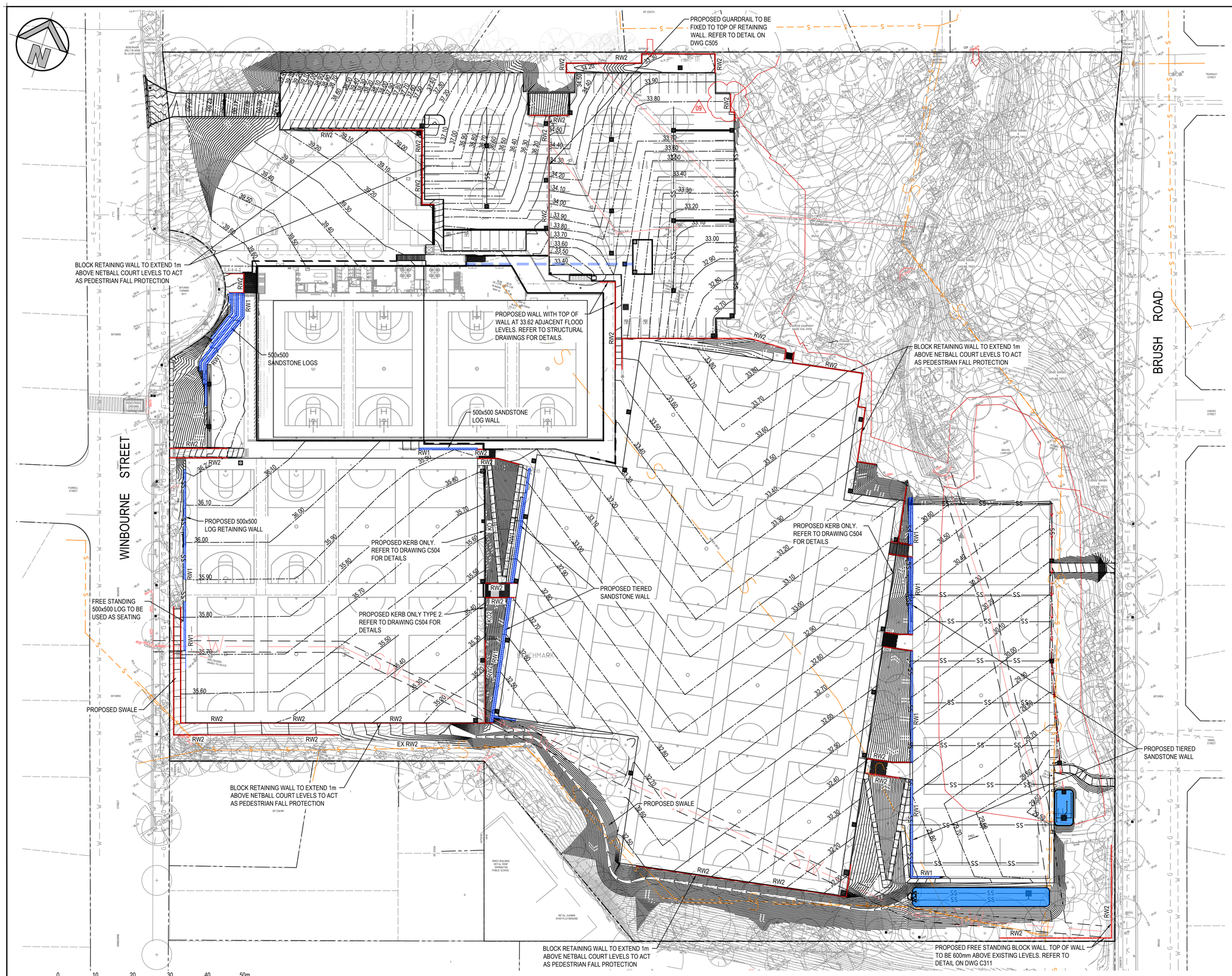
Project
WEST RYDE MULTI-SPORTS FACILITY
22 WINBOURNE ST, WEST RYDE NSW

Title
STORMWATER CATCHMENT PLAN

Drawn	Designed	Date
I.Khachab	N.Heazlewood	MARCH 2021
Checked	Approved	Scale @A1
N.Heazlewood	A.Francis	1:500

Drawing number: 20D04_DA_C250
Revision: 06



LEGEND

	EXISTING BOUNDARY
RW1	PROPOSED SANDSTONE RETAINING WALL
RW2	PROPOSED CORE FILLED BLOCK WALL
SHW	PROPOSED SHORING WALL
EX.RW	EXISTING RETAINING WALL
TW33.80	PROPOSED TOP OF WALL LEVEL
BW33.80	PROPOSED BOTTOM OF WALL LEVEL
H=1.5m	PROPOSED WALL HEIGHT

NOTE:

- ALL RETAINING WALLS TO BE MAINTAINED BY THE DEVELOPER.

RETAINING WALL PLAN

SCALE: 1:500

FOR DA ONLY

SURVEY INFORMATION
SURVEYED BY LTS
DATUM: A.H.D.
ORIGIN OF LEVELS: PM1439 RL30.479

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE	REVISION	AMENDMENT	DRAWN	DESIGNED	DATE
07	ISSUED FOR DA ONLY	MB	NH	05.10.2023					
06	ISSUED FOR DA ONLY	MP	NH	09.05.2023					
05	ISSUED FOR DA ONLY	MP	NH	22.03.2023					
04	ISSUED FOR DA ONLY	MP	NH	17.03.2023					
03	ISSUED FOR DA ONLY	MP	NH	01.03.2023					
02	ISSUED FOR DA ONLY	MB	NH	22.02.2022	09	ISSUED FOR DA ONLY	NH	NH	17.11.2023
01	ISSUED FOR 100% SCHEMATIC DESIGN	IK	NH	07.12.2021	08	ISSUED FOR DA ONLY	NH	NH	14.11.2023

Client
SCHOOL INFRASTRUCTURE NSW

Architect
COX ARCHITECTURE

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DRAWING TO BE PRINTED IN COLOUR

henry&hymas

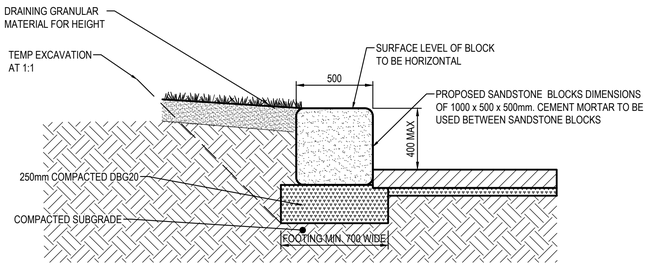
Project
WEST RYDE MULTI-SPORTS FACILITY
22 WINBOURNE ST, WEST RYDE NSW

Title
RETAINING WALL PLAN

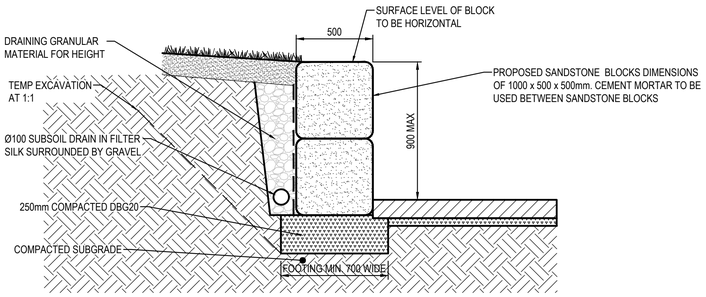
Drawn	Designed	Date
I.Khachab	N.Heazlewood	MARCH 2021
Checked	Approved	Scale @A1
N.Heazlewood	A.Francis	1:500

Drawing number
20D04_DA_C300

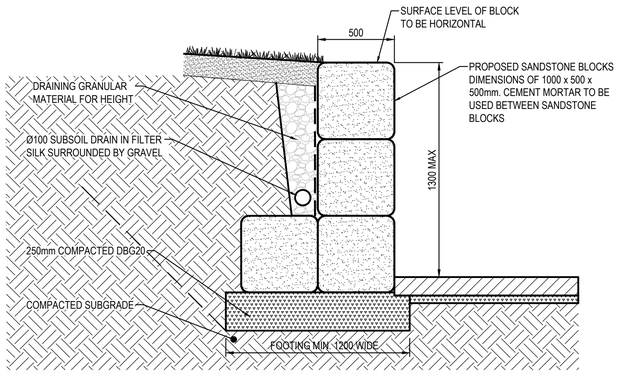
Revision
09



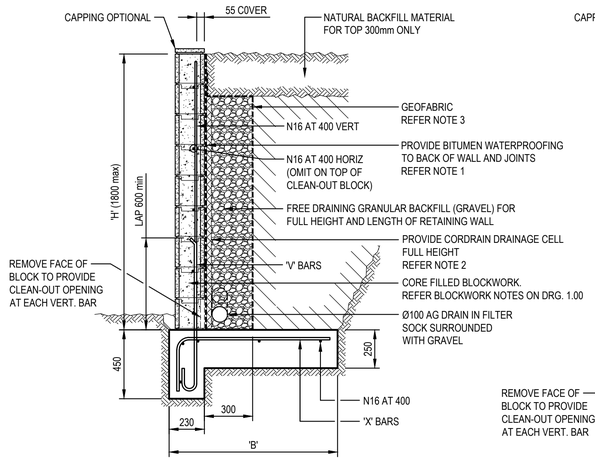
GRAVITY SANDSTONE WALL (RW1)
DETAIL 1
SCALE 1:20



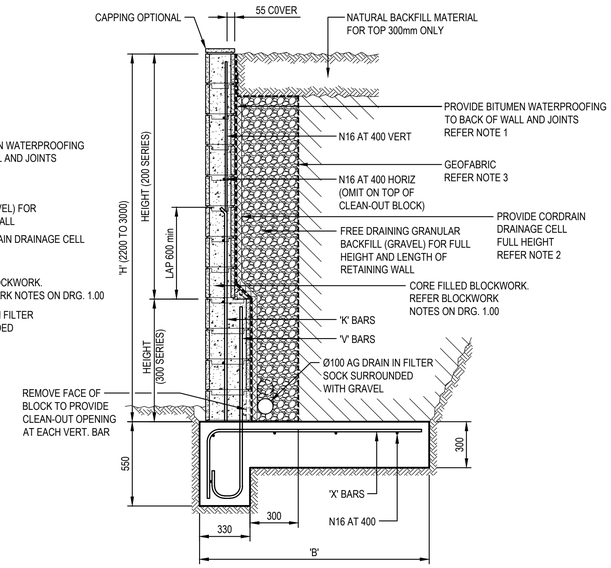
GRAVITY SANDSTONE WALL (RW1)
DETAIL 2
SCALE 1:20



GRAVITY SANDSTONE WALL (RW1)
DETAIL 3
SCALE 1:20



150 OR 200 SERIES BLOCK WALL
15.0 kPa SURCHARGE



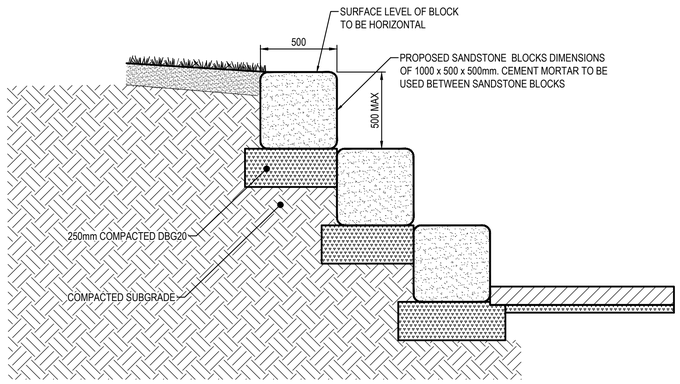
200 AND 300 SERIES BLOCK WALL
15.0 kPa SURCHARGE

RETAINING WALL SCHEDULE

TOTAL HEIGHT 'H' (mm)	HEIGHT OF BLOCK TYPE		'B' (mm)	'V' & 'X' BARS	'K' BARS
	200 SERIES	300 SERIES			
800	800	-	900	N16 AT 400	-
1000	1000	-	1000	N16 AT 400	-
1200	1200	-	1100	N16 AT 400	-
1400	1400	-	1300	N16 AT 400	-
1600	1600	-	1400	N16 AT 400	-
1800	1800	-	1600	N20 AT 400	-
2000	1400	600	1800	N16 AT 400	-
2200	1400	800	1900	N16 AT 400	N16 AT 400
2400	1400	1000	2100	N20 AT 400	N20 AT 400
2600	1400	1200	2200	N20 AT 400	N20 AT 400
2800	1400	1400	2400	N20 AT 200	N20 AT 200
3000	1400	1600	2600	N20 AT 200	N20 AT 200

NOTES:

1. ENSURE REAR FACE OF RETAINING WALL IS FULLY WATERPROOFED. USE EMER-PROOF ECOFLEX OR APPROVED EQUIVALENT IN ACCORDANCE WITH MANUFACTURERS SPECIFICATION. EG: 2 COATS min. APPLIED IN OPPOSITE DIRECTIONS AND ALLOWED TO CURE FOR 7 DAYS.
2. INSTALL FULL HEIGHT DRAINAGE CELL TO REAR OF WALL, USE NYLEX CORDRAIN/18 OR APPROVED EQUIVALENT, THESE ARE SUPPLIED IN 1.2m WIDE ROLLS x 25m LONG AVAILABLE FROM MACCAFERRI IN ALL CAPITAL CITIES.
3. PROVIDE GEOFABRIC MATERIAL AS SEPERATION BETWEEN GRANULAR BACKFILL (GRAVEL) AND NATURAL BACKFILL MATERIAL. USE BIDIM A24 OR APPROVED EQUIVALENT.



GRAVITY SANDSTONE WALL (RW1)
DETAIL 4
SCALE 1:20

RETAINING WALL TYPE 3 (RW 2)
CANTILEVERED BLOCK WALL
SCALE: 1:20

0 400 800 1200 1600 2000mm
400 200
SCALE 1:20

FOR DA ONLY

SURVEY INFORMATION
SURVEYED BY CBH
DATUM: A.H.D.
ORIGIN OF LEVELS: SSM 68340 RL24.324

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE
03	ISSUED FOR DA ONLY	MP	NH	01.03.2023
02	ISSUED FOR DA ONLY	MB	NH	22.02.2022
01	ISSUED FOR 100% SCHEMATIC DESIGN	IK	NH	07.12.2021

Client: SCHOOL INFRASTRUCTURE NSW
Architect: COX ARCHITECTURE

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DRAWING TO BE PRINTED IN COLOUR

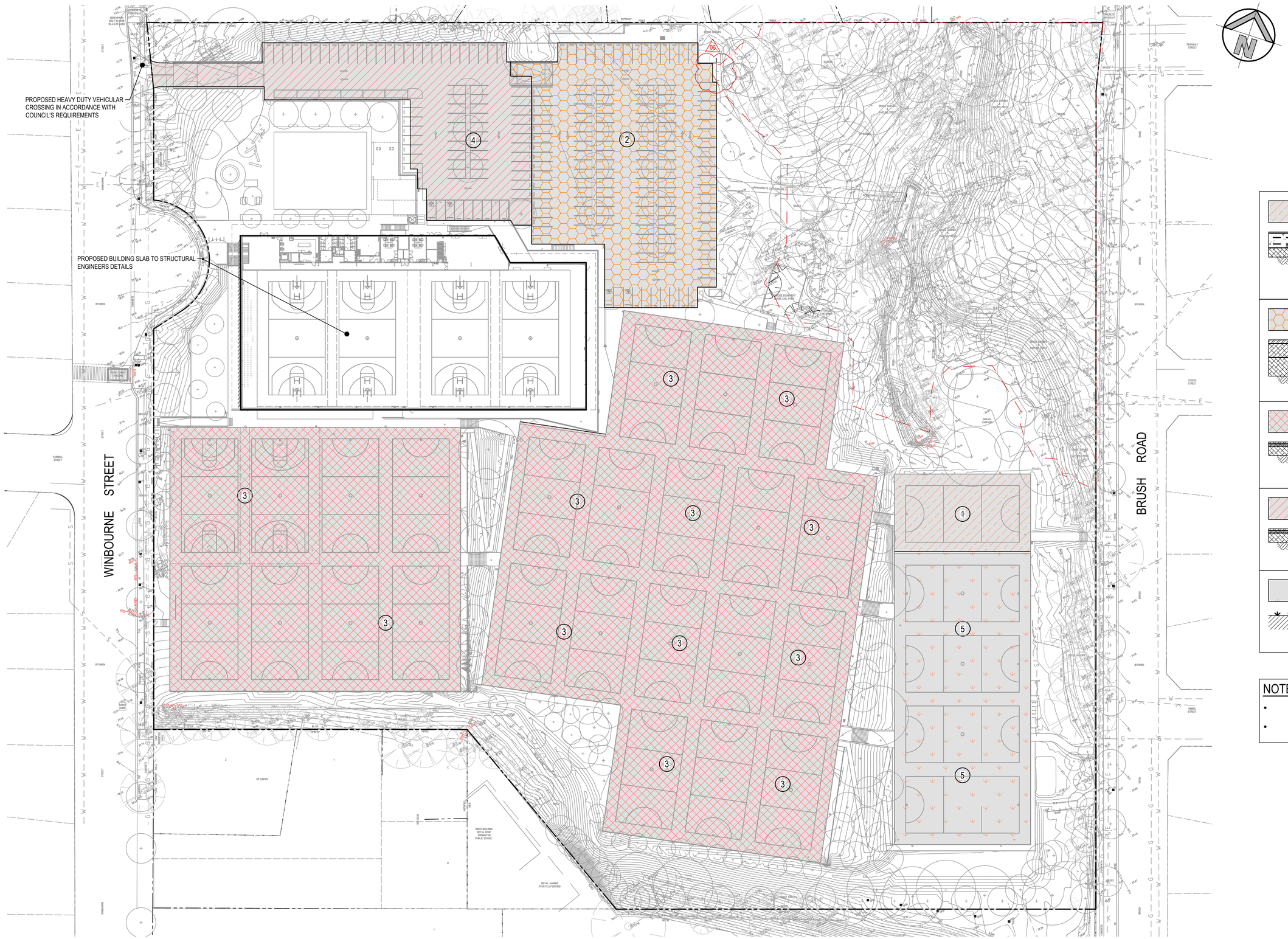
henry&hymas

Project: WEST RYDE MULTI-SPORTS FACILITY
22 WINBOURNE ST, WEST RYDE NSW

Title: RETAINING WALL TYPICAL DETAILS

Drawn	Designed	Date
I.Khachab	N.Heazlewood	MARCH 2021
Checked	Approved	Scale @A1
N.Heazlewood	A.Francis	AS NOTED

Drawing number: 20D04_DA_C310
Revision: 03



PAVEMENT TYPE 1

SUSPENDED CONCRETE PAVEMENT-COURTS

- 4 LAYERS OF ACRYLIC COAT FLEXIPAVE SURFACING
- 150mm THICK 32MPa CONCRETE WITH SL92 TOP & BOTTOM (40mm COVER MIN.)
- 100mm DGB20 (COMPACTED TO 100% SMDD)
- GEOGRID OR EQUIVALENT
- COMPACTED SUBGRADE TO 100% SDD ASSUMED CBR OF 3%

PAVEMENT TYPE 2

ASPHALTIC CONCRETE PAVEMENT-LIGHT DUTY

- 40mm AC10 ON 7mm PRIMER SEAL
- 150mm DGB20 COMPACTED TO 100% SMDD
- 200mm SUBBASE DGS40 COMPACTED TO 100% SMDD
- COMPACTED SUBGRADE TO 100% SDD ASSUMED CBR OF 3%

PAVEMENT TYPE 3

ASPHALTIC CONCRETE PAVEMENT-COURTS

- 4 LAYERS OF ACRYLIC COAT FLEXIPAVE SURFACING
- 25mm AC5 ON (SINGLE LAYER)
- 150mm DGB20 COMPACTED TO 100% SMDD
- COMPACTED SUBGRADE TO 100% SDD ASSUMED CBR OF 3%

PAVEMENT TYPE 4

ASPHALTIC CONCRETE PAVEMENT-HEAVY DUTY

- 50mm AC14 ON 7mm PRIMER SEAL
- 180mm DGB20 COMPACTED TO 100% SMDD
- 200mm DGS40 COMPACTED TO 100% SMDD
- COMPACTED SUBGRADE TO 100% SDD ASSUMED CBR OF 3%

PAVEMENT TYPE 5

GRASS

- GRASSED COURT TO LANDSCAPE ARCH DETAILS

NOTES:

- REFER TO ARCH. DRAWINGS FOR FOOTPATH PAVEMENT EXTENT
- DESIGN OF PAVEMENT TYPE 1 TO BE CONFIRMED PENDING FURTHER GEOTECHNICAL INVESTIGATIONS

0 10 20 30 40 50m

10 8 6 4 2

SCALE 1:500

PAVEMENT PLAN

SCALE: 1:500

FOR DA ONLY

SURVEY INFORMATION

SURVEYED BY LTS

DATUM: A.H.D.

ORIGIN OF LEVELS: PM1439 RL30.479

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE	REVISION	AMENDMENT	DRAWN	DESIGNED	DATE
06	ISSUED FOR DA ONLY	MB	NH	05.10.2023					
05	ISSUED FOR DA ONLY	MP	NH	22.03.2023					
04	ISSUED FOR DA ONLY	MP	NH	01.03.2023					
03	ISSUED FOR DA ONLY	MB	NH	22.02.2022					
02	ISSUED FOR 100% SCHEMATIC DESIGN	IK	NH	07.12.2021					
01	ISSUED FOR 50% SCHEMATIC DESIGN	MP	NH	11.11.2021					

Client: SCHOOL INFRASTRUCTURE NSW

Architect: COX ARCHITECTURE

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DRAWING TO BE PRINTED IN COLOUR

henry&hymas

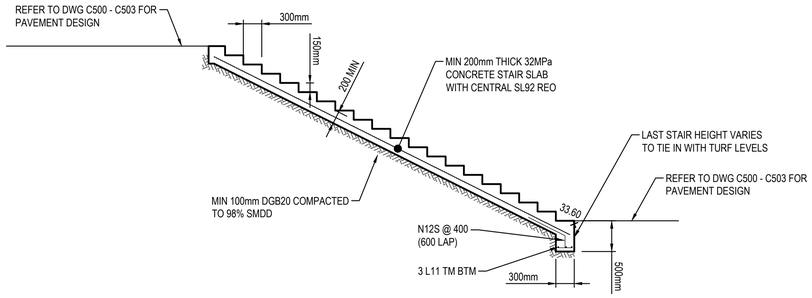
Project: WEST RYDE MULTI-SPORTS FACILITY
22 WINBOURNE ST, WEST RYDE NSW

Title: PAVEMENT PLAN

Drawn	Designed	Date
I.Khachab	N.Heazlewood	MARCH 2021
Checked	Approved	Scale @A1
N.Heazlewood	A.Francis	1:500

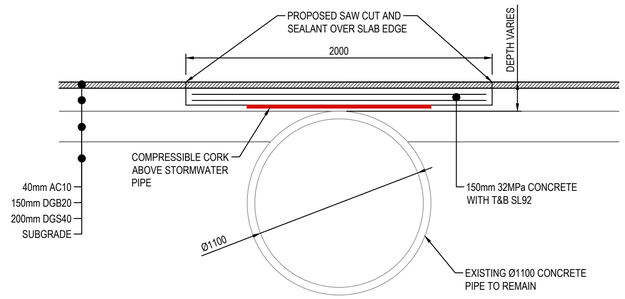
Drawing number: 20D04_DA_C500

Revision: 06



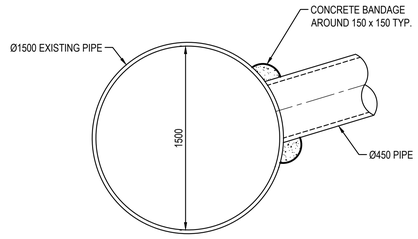
TYPICAL STAIR DETAIL

SCALE: 1:50



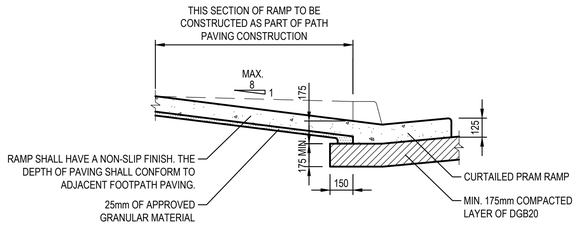
PROTECTIVE SLAB DETAIL

SCALE 1:20



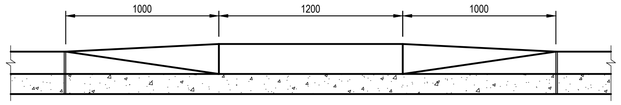
CONCRETE BANDAGE TYPICAL DETAIL

SCALE: 1:25



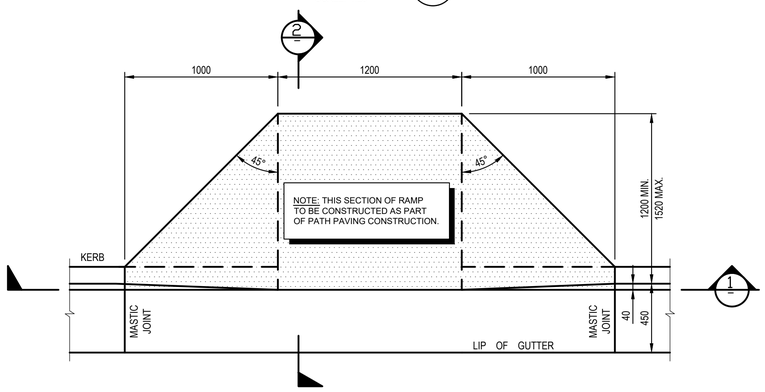
SECTION 2 -

SCALE: 1:20



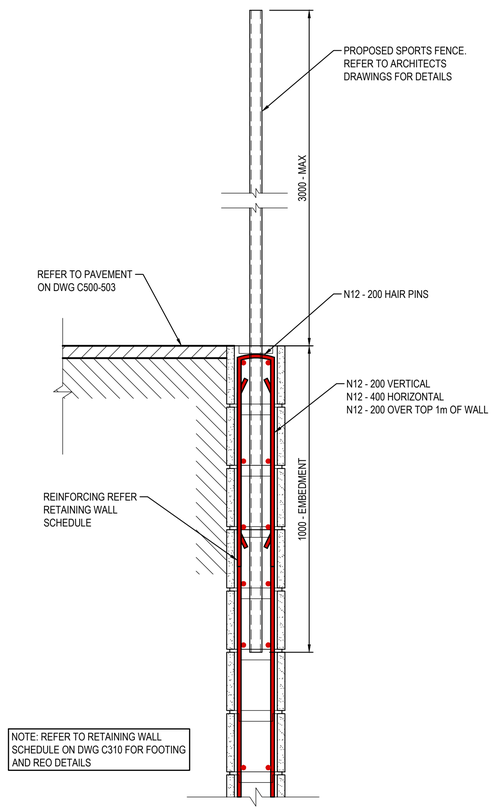
SECTION 1 -

SCALE: 1:20



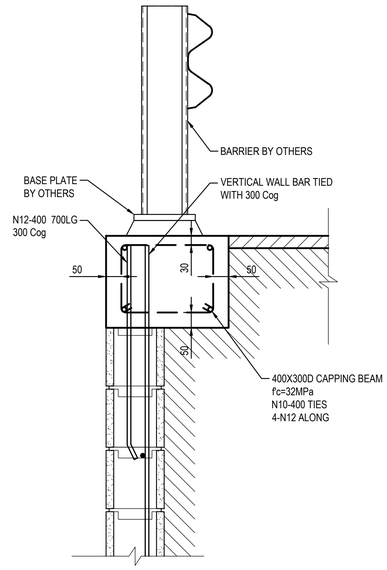
PRAM RAMP DETAIL

SCALE 1:20



SPORTS FENCE AND RETAINING WALL DETAIL

SCALE 1:10



GUARDRAIL TYPICAL SECTION

SCALE 1:10

RETAINING WALL SCHEDULE (RW2)

TOTAL HEIGHT 'H' (mm)	HEIGHT OF BLOCK TYPE		'B' (mm)	'V' & 'X' BARS	'K' BARS
	200 SERIES	300 SERIES			
800	-	-	800	N16 AT 200	N16 AT 400
1000	-	-	900	N16 AT 200	N16 AT 400
1200	-	-	1000	N16 AT 200	N16 AT 400
1400	1400	-	1100	N16 AT 200	N16 AT 400
1600	1600	-	1400	N16 AT 200	N16 AT 400
1800	1800	-	1600	N16 AT 200	N16 AT 400
2000	1400	600	1800	N16 AT 200	N16 AT 400
2200	1400	800	2000	N16 AT 200	N16 AT 400
2400	1600	800	2200	N16 AT 200	N16 AT 400
2600	1600	1000	2400	N16 AT 200	N16 AT 400
2800	1800	1000	2600	N16 AT 200	N16 AT 200
3000	2000	1000	3000	N16 AT 200	N16 AT 200
3200	2000	1200	3300	N20 AT 200	N16 AT 200
3400	2000	1400	3600	N20 AT 200	N16 AT 200

NOTES:

1. REFER TO THE RETAINING WALL TYPICAL DETAILS SHOWN ON DRAWING C310. THE RETAINING WALL SCHEDULE ABOVE SHOULD BE USED FOR ALL RETAINING WALLS WHERE A GUARDRAIL IS PROPOSED TO BE FIXED TO THE TOP OF THE WALL.
2. GUARDRAIL TO BE RHINO-STOP STANDARD TYPE 4 GUARDRAIL OR EQUIVALENT. REFER TO MANUFACTURE'S DRAWINGS FOR BARRIER SPECIFICATIONS.

0 1000 2000 3000 4000 5000mm
1000 600 200
SCALE 1:50

0 2.5 5 7.5 10 12.5m
2.5 1.5 0.5
SCALE 1:125

0 400 800 1200 1600 2000mm
400 200
SCALE 1:20

0 200 400 600 800 1000mm
200 100
SCALE 1:10

FOR DA ONLY

SURVEY INFORMATION
SURVEYED BY LTS
DATUM: A.H.D.
ORIGIN OF LEVELS: PM1439 RL30.479

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE	REVISION	AMENDMENT	DRAWN	DESIGNED	DATE
01	ISSUED FOR DA ONLY	MP	NH	01.03.2023					

Client
STEPHEN EDWARDS CONSTRUCTIONS

Architect
COX ARCHITECTURE

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Project
WEST RYDE MULTI-SPORTS FACILITY
22 WINBOURNE ST, WEST RYDE NSW

Title
PAVEMENT TYPICAL DETAILS

Drawn	Designed	Date
M.Pereira	N.Heazlewood	MARCH 2021
Checked	Approved	Scale @A1
N.Heazlewood	A.Francis	AS NOTED

Drawing number 20D04_DA_C505
Revision 01

0 10 20 30 40 50m

10 8 6 4 2

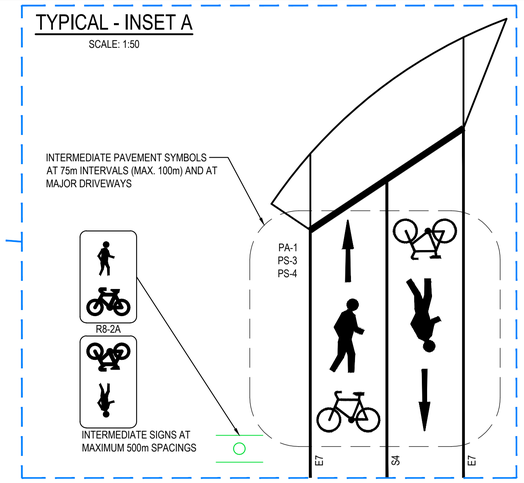
SCALE 1:500

EXTERNAL WORKS DETAIL PLAN

SCALE: 1:500

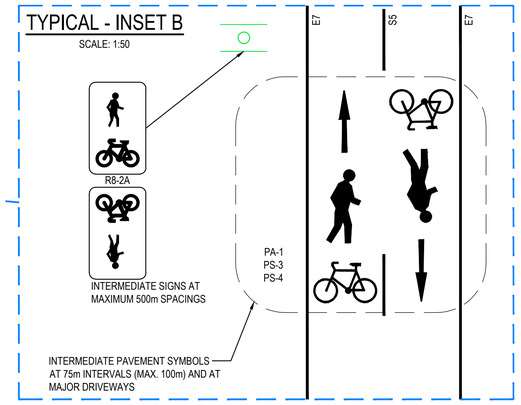
TYPICAL - INSET A

SCALE: 1:50



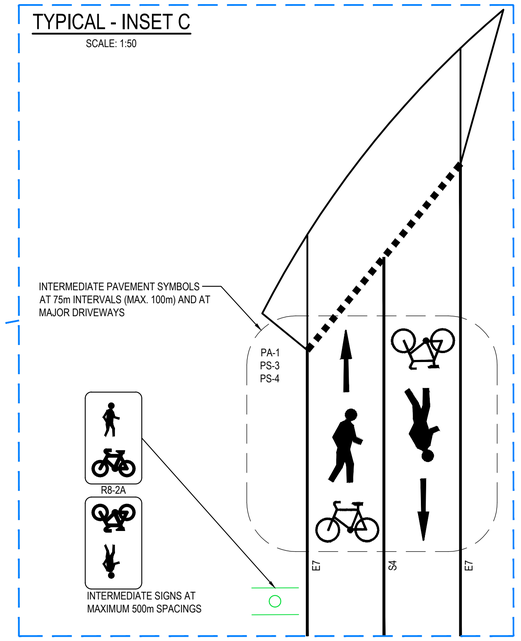
TYPICAL - INSET B

SCALE: 1:50



TYPICAL - INSET C

SCALE: 1:50



LINEMARKING TABLE

LINE TYPE	USE	DIMENSIONS (m)	COLOUR
E7	CONTINUOUS EDGE LINE 80mm WIDE	0.08	WHITE
S4	CONTINUOUS SEPARATION LINE 80mm WIDE	0.08	WHITE
S5	BROKEN SEPARATION LINE 80mm WIDE, 1000mm LONG WITH 3000mm GAP	0.08	WHITE
	GIVE WAY LINE 200mm WIDE, 200mm LONG, 200mm GAP	0.2	WHITE
	STOP LINE 200mm WIDE	0.2	WHITE

PAVEMENT SYMBOLS

1000	PA-1	WHITE
580 / 1200	PS-4	WHITE
490 / 800	PS-3	WHITE

LEGEND

- PROPOSED TRAFFIC SIGNAGE
- EXISTING TREE
- PROPOSED KERB RAMP
- PROPOSED FOOTPATH
- EXISTING FOOTPATH TO REMAIN

NOTES:

1. EXISTING TREES ARE PLACED INDICATIVELY ONLY. EXACT LOCATION TO BE CONFIRMED VIA SURVEY WORKS.
2. EXISTING FOOTPATH WIDTHS TO BE CONFIRMED VIA SURVEY.
3. REFER TO CITY OF RYDE STANDARD DRAWING CIV 09 FOR DETAILS.

FOR DA ONLY

SURVEY INFORMATION
SURVEYED BY LTS
DATUM: A.H.D.
ORIGIN OF LEVELS: PM1439 RL30.479

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE
03	ISSUED FOR DA ONLY	MP	NH	17.03.2023
02	ISSED FOR DA ONLY	MP	NH	28.02.2023
01	ISSED FOR DA ONLY	MP	NH	08.06.2022

Client: SCHOOLS INFRASTRUCTURE NSW

Architect: COX ARCHITECTURE

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Project: WEST RYDE MULTI-SPORTS FACILITY
22 WINBOURNE ST, WEST RYDE NSW

Title: EXTERNAL WORKS DETAIL PLAN
SHEET 1 OF 3

Drawn	Designed	Date
M.Barrozo	N.Heazlewood	MAY 2022
Checked	Approved	Scale @A1
N.Heazlewood	A.Francis	1:500

Drawing number: 20D04_DA_EX01
Revision: 03

0 10 20 30 40 50m
10 8 6 4 2
SCALE 1:500

EXTERNAL WORKS DETAIL PLAN

SCALE: 1:500

NOTES:
1. EXISTING TREES ARE PLACED INDICATIVELY ONLY. EXACT LOCATION TO BE CONFIRMED VIA SURVEY WORKS.
2. EXISTING FOOTPATH WIDTHS TO BE CONFIRMED VIA SURVEY.
3. REFER TO CITY OF RYDE STANDARD DRAWING CIV 09 FOR DETAILS.

FOR DA ONLY

SURVEY INFORMATION
SURVEYED BY LTS
DATUM: A.H.D.
ORIGIN OF LEVELS: PM1439 RL30.479

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE	REVISION	AMENDMENT	DRAWN	DESIGNED	DATE
03	ISSUED FOR DA ONLY	MP	NH	17.03.2023					
02	ISSED FOR DA ONLY	MP	NH	28.02.2023					
01	ISSED FOR DA ONLY	MP	NH	08.06.2022					

Client
SCHOOLS INFRASTRUCTURE NSW

Surveyor
COX ARCHITECTURE

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henry&hymas

Project
WEST RYDE MULTI-SPORTS FACILITY
22 WINBOURNE ST, WEST RYDE NSW

Title
EXTERNAL WORKS DETAIL PLAN
SHEET 2 OF 3

Drawn	Designed	Date
M.Barrozo	N.Heazlewood	MAY 2022
Checked	Approved	Scale @A1
N.Heazlewood	A.Francis	1:500

Drawing number: 20D04_DA_EX02
Revision: 03

EXTERNAL WORKS DETAIL PLAN

SCALE: 1:500

0 10 20 30 40 50m

10 8 6 4 2

SCALE 1:500

FOR DA ONLY

SURVEY INFORMATION

SURVEYED BY LTS

DATUM: A.H.D.

ORIGIN OF LEVELS: PM1439 RL30.479

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE
03	ISSUED FOR DA ONLY	MP	NH	17.03.2023
02	ISSED FOR DA ONLY	MP	NH	28.02.2023
01	ISSED FOR DA ONLY	MP	NH	08.06.2022

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE

Client: SCHOOLS INFRASTRUCTURE NSW

Architect: COX ARCHITECTURE

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Project: WEST RYDE MULTI-SPORTS FACILITY
22 WINBOURNE ST, WEST RYDE NSW

Title: EXTERNAL WORKS DETAIL PLAN
SHEET 3 OF 3

Drawn	Designed	Date
M.Barrozo	N.Heazlewood	MAY 2022
Checked	Approved	Scale @A1
N.Heazlewood	A.Francis	1:500

Drawing number: 20D04_DA_EX03

Revision: 03

DO NOT SCALE

N

MARSDEN HSSC
WEST RYDE, NSW
HYDRAULIC SERVICES

PREPARED BY

wsp

CONSULTING ENGINEERS

DRAWING INDEX

H000	HYDRAULIC SERVICES	COVER SHEET AND DRAWING INDEX
H001	HYDRAULIC SERVICES	LEGEND OF SYMBOLS AND GENERAL NOTES
H010	HYDRAULIC SERVICES	SCHEMATIC
H100	HYDRAULIC SERVICES	DRAINAGE SERVICES - BASEMENT LEVEL
H101	HYDRAULIC SERVICES	DRAINAGE SERVICES - LOWER GROUND FLOOR
H102	HYDRAULIC SERVICES	DRAINAGE SERVICES - GROUND FLOOR
H103	HYDRAULIC SERVICES	DRAINAGE SERVICES - ROOF LEVEL
H200	HYDRAULIC SERVICES	PRESSURE SERVICES - BASEMENT LEVEL
H201	HYDRAULIC SERVICES	PRESSURE SERVICES - LOWER GROUND FLOOR
H202	HYDRAULIC SERVICES	PRESSURE SERVICES - GROUND FLOOR

REV	DATE	BY	DESCRIPTION	CHK	APD
1	02.12.2021	CAD	100% SCHEMATIC DESIGN	NL	SK

DRAWING STATUS: PRELIMINARY

REFERENCE COORDINATION DRAWINGS

DESCRIPTION	DRAWING NO.	REV	CHK

wsp

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CLIENT: SINSW

ARCHITECT: COX ARCHITECTURE

PROJECT: WEST RYDE MULTI-SPORTS FACILITY

TITLE: HYDRAULIC SERVICES COVERSHEET AND DRAWING INDEX

SCALE @ A1:	CHECKED: NL	APPROVED: SK
PROJECT No: PS123419	DRAWN: BIM	DATE: DEC 2021

DRAWING No: H000 REV: 1

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DO NOT SCALE

N

LEGEND OF SYMBOLS

NEW SERVICES

	SANITARY PLUMBING/DRAINAGE
SRM	SEWER RISING MAIN
	STORMWATER DRAINAGE
SDP	SIPHONIC DOWNPIPE
SWRM	STORMWATER RISING MAIN
CD	CONDENSATE DRAIN
	VENT PIPE
CHV	CHAMBER VENT
TWV	TRADE WASTE VENT
OF	OVERFLOW
PO	PUMP OUT
TW	TRADE WASTE
AG	SUBSOIL DRAIN
IRR	IRRIGATION
	COLD WATER
CWRM	COLD WATER RISING MAIN
	HOT WATER FLOW
	HOT WATER RETURN
NPCW	NON-POTABLE COLD WATER
NPHW	NON-POTABLE HOT WATER
	NON-POTABLE HOT WATER RETURN
	WARM WATER
RCW	RECYCLED COLD WATER
FCW	FILTERED COLD WATER
DW	DEIONISED WATER
RW	RAIN WATER
RO	REVERSE OSMOSIS
FS	FIRE SERVICE
FSTD	FIRE SERVICE TEST DRAIN
FHR	FIRE HOSE REEL
FH	FIRE HYDRANT
	GAS
SR	SOLAR RETURN
SF	SOLAR FLOW
NDW	NON DRINKABLE WATER

EXISTING SERVICES

eSD	EXISTING SANITARY DRAINAGE
eS	EXISTING SEWER
eSW	EXISTING STORMWATER
eTW	EXISTING TRADEWASTE
eAG	EXISTING SUBSOIL DRAINAGE
eVP	EXISTING VENT PIPE
eTWV	EXISTING TRADE WASTE VENT PIPE
eCW	EXISTING COLD WATER
eG	EXISTING GAS
eHW	EXISTING HOT WATER
eHWR	EXISTING HOT WATER RETURN
eNPCW	EXISTING NON-POTABLE COLD WATER
eNPHW	EXISTING NON-POTABLE HOT WATER
eFH	EXISTING FIRE HYDRANT
eFS	EXISTING FIRE SERVICES
	REDUNDANT SERVICE
C	CONDUIT

SYMBOLS

AG	ACCESS GATE
AAV	AIR ADMITTANCE VALVE
	BALANCING VALVE
	BALL FLOAT VALVE
	CAPPED END
Ø15 Ø10	CHANGE IN PIPE SIZE/GRADE/MATERIAL
DCV	DOUBLE CHECK VALVE
R	GAS REGULATOR
	ISOLATION VALVE
	ISOLATION VALVE IN VALVE BOX
	LOCKABLE VALVE
MV	MONITORED VALVE
	NON RETURN VALVE (CHECK VALVE)
	PIPE - RISER
	PIPE - DROPPER
PRV	PRESSURE REDUCTION VALVE
RPZD	REDUCED PRESSURE ZONE DEVICE
	CHECK VALVE IN PATH BOX
	PIPE BREAK
	SERVICE TEE CONNECTION
SV	SOLENOID VALVE
	STRAINER
	SPREADER
	UNION
BD/PD	BALCONY DRAIN/PLANTER DRAIN
BFW	BASKET FLOOR WASTE
DTU	DRAINAGE TURN UP POINTS
FW	FLOOR WASTE
GO	GRATED OUTLET
PFW	PLANTROOM FLOOR WASTE
RWO	RAINWATER OUTLET
RVP	ROOF VENT PENETRATION
SFW	SEALED FLOOR WASTE
SDO	SPOON DRAIN OUTLET
SRO	SIPHONIC RAINWATER OUTLET
SOO	SIPHONIC OVERFLOW OUTLET
TD	TUNDISH
TTD	TRAPPED TUNDISH
ITD	INWALL TUNDISH
VFW	VINYL FLOOR WASTE
	TRAP AND WASTE
	REDUNDANT FLOOR WASTE
	AUTHORITY CONNECTION POINT
BWU	BOILING WATER UNIT
CP	CONTROL PANEL
	EMERGENCY SHOWER
FS	FLOW SWITCH
GBP	GAS BAYONET POINT
	GAS ISOLATION VALVE
G	GAS METER
	HAND HELD EYEWASH
HT/VB	HOSE TAP WITH VACUUM BREAKER
HWU OR HWU	HOT WATER UNIT
P	PRESSURE GAUGE
	PRESSURE SWITCH
	PUMP
T	THERMOMETER
T	THERMOSTATIC MIXING VALVE
HOT COLD	TAPWARE (POTABLE) REFER SPECIFICATION
	HOT WATER POINT
	COLD WATER POINT
	TAPWARE TO BE REMOVED
	IRRIGATION TAKE-OFF SUPPLY
F	WATER FILTER
W	WATER METER
W	REMOTE READOUT
BT/GT	BOUNDARY TRAP/GULLY TRAP
	FLOOR GRATE
GTD	GRATED TRENCH DRAIN
ID(S)	INSPECTION OPENING/TO SURFACE
	INDUCT PIPE MICA FLAP
ORG/DG	OVERFLOW RELIEF GULLY/DISCONNECTOR GULLY
SGT	SEALED GULLY TRAP
SAC	SEWER ACCESS CHAMBER
SWAC	STORMWATER ACCESS CHAMBER
SIP	SEWER INSPECTION PIT
SWIP	STORMWATER INSPECTION PIT
SWGP	STORMWATER GRATED PIT
SMS	SEWER MAINTENANCE SHAFT

FIRE PROTECTION SYMBOLS

DFH	DOUBLE HEADED PILLAR FIRE HYDRANT
FHR	FIRE HOSE REEL
FH	FIRE HYDRANT
H	STREET HYDRANT
C	CARBON DIOXIDE FIRE EXTINGUISHER
D	DRY CHEMICAL FIRE EXTINGUISHER
D	WATER FIRE EXTINGUISHER
FB	FIRE BLANKET

ABBREVIATIONS

AAV	AIR ADMITTANCE VALVE
A/C	AIR CONDITIONING
AHD	AUSTRALIAN HEIGHT DATUM
AP	ACCESS PANEL
ASSL	ABOVE STRUCTURAL SLAB LEVEL
B	BASIN / VANITY BASIN / HANDBASIN
BBTH	BABY BATH
BCWU	BOILING CHILLED WATER UNIT
BCHWU	BOILING CHILLED HOT WATER UNIT
BD	BALCONY DRAIN
BT	BOUNDARY TRAP
BTH	BATH
BFW	BASKET FLOOR WASTE
BV	BALANCING VALVE
CD	CONDENSATE DRAIN
CHV	CHAMBER VENT
CI	CAST IRON
CICL	CAST IRON CEMENT LINED
CO	CLEAR OUT
CM	COFFEE MACHINE
CP	CHROME PLATED
CS	CONDENSATE STACK
CSK	CLEANERS SINK
CV	CHECK VALVE
CW	COLD WATER
CWRM	COLD WATER RISING MAIN
ø	DIAMETER
DCHV	DOUBLE CHECK VALVE
DF	DRINKING FOUNTAIN
DFH	DOUBLE HEADED PILLAR FIRE HYDRANT
DICL	DUCTILE IRON CEMENT LINED
DP	DOWNPIPE
DT	DISCONNECTOR TRAP
DWG NO.	DRAWING NUMBER
DW	DISH WASHER
ED	ELEVATED DRAINAGE
EJ	EXPANSION JOINT
EPD	ELEVATED PIPEWORK DROPPER
EW	EYE WASH
e	EXISTING
F/A	FROM ABOVE
F/B	FROM BELOW
FFL	FINISHED FLOOR LEVEL
FH	FIRE HYDRANT
FHR	FIRE HOSE REEL
FRC	FIBRE REINFORCED CEMENT
FU	FIXTURE UNIT
FW	FLOOR WASTE
G	GAS
GM	GAS METER
GMS	GALVANISED MILD STEEL
GO	GRATED OUTLET
GTD	GRATED TRENCH DRAIN
GV	GATE VALVE
GW	GLASS WASHER
HDPE	HIGH DENSITY POLYETHYLENE
HL	HIGH LEVEL
HT	HOSE TAP
HW	HOT WATER
HWF	HOT WATER FLOW
HWM	HOT WATER METER
HWR	HOT WATER RETURN
HWU	HOT WATER UNIT
IL	INVERT LEVEL
IM	ICE MACHINE
IO(S)	INSPECTION OPENING (TO SURFACE)
IV	ISOLATING VALVE
JU	JUMP UP
KIP	KERB INLET PIT
kPa	KILOPASCALS
kW	KILOWATTS
L	LITRES
LL	LOW LEVEL
LPG	LIQUIDFIED PETROLEUM GAS
L/S	LITRES PER SECOND
LT	LAUNDRY TUB
LU	LOADING UNIT
MJ/h	MEGA JOULES PER HOUR
MPa	MEGA PASCAL
MDL	MASTER DATA LOGGER
m	METRES
m/s	METRES PER SECOND
mm	MILLIMETRES
NG	NATURAL GAS
NP	NON POTABLE
OF	OVERFLOW
ORG	OVERFLOW RELIEF GULLY
Pa	PASCAL
PD	PLANTER DRAIN
PDP	PROVISONAL DRAINAGE POINT
PE	POLYETHYLENE
PLV	PRESSURE LIMITING VALVE
PPR	POLYPROPYLENE
PRV	PRESSURE REDUCTION VALVE
PVC	POLYVINYL CHLORIDE
RCP	REINFORCED CONCRETE PIPE
RCW	RECYCLED COLD WATER
RL	REDUCED LEVEL
RM	RISING MAIN
RO	REVERSE OSMOSIS
RPZD	REDUCED PRESSURE ZONE DEVICE
RV	RELIEF VENT
RWO	RAINWATER OUTLET
RWH	RAINWATER HEAD
SAC	SEWER ACCESS CHAMBER
SD	SOIL DRAIN
SDO	SPOON DRAIN OUTLET
SDP	SIPHONIC DOWNPIPE
SFL	STRUCTURAL FLOOR LEVEL
SFW	SEALED FLOOR WASTE
SHR	SHOWER
SK	SINK
SIP	SEWER INSPECTION PIT
SL	SURFACE LEVEL
SPS	SEWER PUMP STATION
SRM	SEWER RISING MAIN
SO	SIPHONIC OUTLET
S/S	STAINLESS STEEL
SSD	SUBSOIL DRAINAGE
SSHR	SAFETY SHOWER
SS	SOIL STACK
SV	SLUECE VALVE
SW	STORMWATER
SWD	STORMWATER DRAIN
SWIP	STORMWATER INSPECTION PIT
SWAC	STORMWATER ACCESS CHAMBER
SWGP	STORMWATER GRATED PIT
SWPS	STORMWATER PUMP STATION
SWRM	STORMWATER RISING MAIN
T/A	TO ABOVE
T/B	TO BELOW
TD	TUNDISH
TTD	TRAPPED TUNDISH
TMV	THERMOSTATIC MIXING VALVE
TPRV	TEMPERATURE & PRESSURE RELIEF VALVE
TR	TROUGH
TV	TEMPERING VALVE
TW	TRADE WASTE
TWD	TRADE WASTE DRAIN
TWPDP	TRADE WASTE PROVISIONAL DRAINAGE POINT
TWS	TRADE WASTE STACK
TWV	TRADE WASTE VENT
UR	URINAL
U/S	UNDERSIDE
uPVC	UNPLASTISED POLYVINYL CHLORIDE
UTW	UNTRAPPED WASTE
VB	VENT BREATHER
VCP	VITRIFIED CLAY PIPE
VP	VENT PIPE
VSD	VARIABLE SPEED DRIVE
WC	WATER CLOSET
WL	WATER LEVEL
WM	WASHING MACHINE
WS	WASTE STACK
WW	WARM WATER

GENERAL NOTES:

1. COMPLY WITH THE GENERAL CONDITIONS AND ALL CONTRACTUAL REQUIREMENTS.
2. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE SPECIFICATION, ARCHITECTS AND ASSOCIATED ENGINEERS DRAWINGS AND SPECIFICATIONS, FIRE ENGINEERS REPORTS AND BUILDING SURVEYOR'S CONDITIONS OF APPROVAL.
3. INSTALL SERVICES TO COMPLY WITH ALL RELEVANT AUSTRALIAN STANDARDS, THE BUILDING CODE OF AUSTRALIA AND REQUIREMENTS OF THE LOCAL AUTHORITY.
4. THE INSTALLATION IS TO BE UNDERTAKEN BY SUITABLY QUALIFIED, LICENSED AND EXPERIENCED TRADESPERSONS.
5. INSPECT THE SITE PRIOR TO TENDER SUBMISSION AND BE FAMILIAR WITH THE SITE CONDITIONS. ALL SITE SPECIFIC CONSIDERATIONS TO BE INCLUDED IN THE TENDER SUBMISSION.
6. IF THE INSTALLER CONSIDERS THAT A COMPONENT OF DESIGN IS NON COMPLIANT, THEN THE INSTALLER MUST NOTIFY THE ENGINEER IN WRITING.
7. THE INSTALLER IS TO MAKE APPLICATIONS TO THE APPROPRIATE AUTHORITIES AND PROCURE ALL NECESSARY APPROVALS.
8. THE INSTALLER IS TO PAY ALL REQUIRED FEES INCLUDING ALL APPLICATION, CONNECTION, METER, INSPECTION, ROAD OPENING, ETC. AS NECESSARY TO COMPLETE AND COMMISSION THE INSTALLATION.
9. ANY AUTHORITY CONTRIBUTION FEES TO BE THE PRINCIPAL'S RESPONSIBILITY.
10. ALLOW TO ENGAGE THE SERVICES OF APPROPRIATELY RECOGNISED AND QUALIFIED INDEPENDENT CERTIFIERS OR LOCAL AUTHORITY TO CERTIFY COMPLIANCE OF THE INSTALLATION. PAY ALL CERTIFIER'S FEES.
11. PROVIDE A 'CERTIFICATE OF COMPLIANCE' AND/OR INDEPENDENT CERTIFIER'S REPORT PRIOR TO PRACTICAL COMPLETION.
12. PROVIDE 3 SETS 'AS BUILT' HARD COPIES, CD COPIES AND OPERATIONAL AND MAINTENANCE MANUALS PRIOR TO PRACTICAL COMPLETION.
13. ALL DEFECTS TO BE RECTIFIED. WARRANT THE INSTALLATION FOR WORKMANSHIP AND MATERIALS AS REQUIRED BY THE PLUMBING INDUSTRY COMMISSION.

DRAWING NOTES:

1. DRAWINGS ARE INDICATIVE OF INSTALLATION. ALLOW FOR ALL NECESSARY EXCAVATION, TRENCH PLANKING & STRUTTING, BEDDING, BACKFILL, PLANT HIRE, SCAFFOLDING MATERIALS, LABOUR, FITTINGS, TESTING, ETC. TO COMPLETE AND COMMISSION AND WARRANT THE INSTALLATION.
2. COMPLY WITH ALL OH&S, WORK COVER AND SITE SPECIFIC SAFETY REQUIREMENTS. COORDINATE THE INSTALLATION WITH THE BUILDING STRUCTURE AND SERVICES. PROVIDE SHOP DRAWINGS AND PENETRATION DRAWINGS FOR REVIEW BY THE ARCHITECT AND ENGINEER.
3. PRIOR TO START OF WORKS, CONFIRM THE LOCATION OF AUTHORITY SERVICES. CONFIRM THAT CONNECTION TO SERVICES CAN BE ACHIEVED AT THE REQUIRED LEVEL AND COVER & ALLOW FOR ALL ASSOCIATED COSTS.
4. CONTRACTOR SHALL BEFORE COMMENCING EXCAVATION WORKS OBTAIN BY SITE MEASUREMENT THE INVERT LEVELS OF ALL PIPEWORK TO WHICH CONNECTIONS ARE TO BE MADE. EXISTING BELOW GROUNG INVERT LEVELS ARE NOT KNOWN. IT IS THE CONTRACTORS RESPONSIBILITY TO ESTABLISH THE ACTUAL INVERT LEVEL OF THE POINT OF CONNECTION TO EXISTING PIPEWORK, DETERMINE OBSTRUCTIONS EXISTING OR PROPOSED & ASSESS THAT THE PIPE ROUTE AS SHOWN ON THE DRAWINGS CAN BE CONSTRUCTED TO CORRECT FALLS & LEVELS PRIOR TO ORDERING MATERIALS OR CARRYING OUT ANY ON SITE CONSTRUCTION WORKS.
5. PRIOR TO START OF WORKS, UNDERTAKE ALL NECESSARY PROBING, EXCAVATION, DETECTION, ETC. AS REQUIRED TO LOCATE EXISTING SERVICES.
6. CONTRACTOR SHALL ALLOW TO CO-ORDINATE WITH UNIVERSITY MANAGEMENT & BUILDER PRIOR TO SERVICE SHUTDOWN.
7. ALLOW TO SET OUT AND INSTALL SLEEVES OR CORING FOR PIPE PENETRATIONS THROUGH FOOTINGS, FLOORS, WALLS, BEAMS, ETC.
8. ALLOW TO INSTALL FIRE COLLARS TO PENETRATIONS THROUGH FIRE RATED WALLS, FLOORS AND CEILINGS, ETC., OF THE APPROPRIATE FIRE RESISTANT RATINGS.
9. DURING CONSTRUCTION PROVIDE REMOVABLE CAPS TO TEMPORARY PIPE ENDS TO PREVENT ENTRY OF DEBRIS, ETC.
10. LOCATE EXCAVATIONS AWAY FROM FOOTINGS SO AS NOT TO CAUSE UNDERMINING, TO THE SATISFACTION OF THE STRUCTURAL ENGINEER.
11. PROVIDE ALL NECESSARY BARRIERS, HOARDINGS, LIGHTS AND WARNINGS, TRAFFIC MANAGEMENT, ETC., AROUND ALL EXCAVATIONS, STOCK PILES, WORKS, ETC. PROVIDE TEMPORARY ACCESS FOR PEDESTRIAN AND VEHICULAR TRAFFIC IF REQUIRED.
12. PROVIDE SHORING TO EXCAVATIONS TO OH&S AND AUTHORITY REQUIREMENTS. WITHDRAW SHORING PRIOR TO BACKFILL.
13. COVER PIPE COLLARS TO A MINIMUM OF 80MM WITH COMPACTED BEDDING MATERIAL PRIOR TO BACKFILLING. BACKFILL WITH SELECTED BACKFILL MATERIAL FREE OF CLAY, VEGETATION & RUBBISH, ETC.
14. BACKFILL UNDER ROADS, CAR PARKS, PAVING AND CONCRETE FLOOR SLABS TO BE ROAD BASE MATERIAL COMPACTED IN LAYERS TO THE SATISFACTION OF THE STRUCTURAL/CIVIL ENGINEER.
15. ALLOW TO REINSTATE ALL ROADS, FOOT PATHS, PAVING, ETC. TO THE SATISFACTION OF THE UNIVERSITY.
16. ALLOW FOR ALL NECESSARY EXPANSION JOINTS AND INSPECTION OPENINGS AS REQUIRED BY AS 3500 AND THE LOCAL INSPECTOR.
17. CONTRACTOR SHALL ALLOW TO LOCATE, CUT & SEAL & FOR THE REMOVALOF ANY ABOLISHED EXISTING SERVICES FROM BUILDINGS TO BE DEMOLISHED & MAKE GOOD GROUND SURFACE TO MATCH EXISTING.
18. EXTEND I.O.S TO SURFACE LEVEL AND TERMINATE FLUSH WITH THE FINISHED SURROUNDING SURFACE AS BELOW:
19. a. LANDSCAPE AREAS - PRECAST CONCRETE SURROUND AND COVER
20. c. CONCRETE AREAS - BRASS I.O. COVER SET.
21. b. TILED AND OTHER FLOOR FINISHES - STAINLESS STEEL I.O. COVER SET.
22. PROVIDE NOGGINGS, BRACKETS, HANGERS, FIXINGS, ETC. NECESSARY TO COMPLETE THE INSTALLATION. EXPLOSIVE FIXINGS ARE NOT PERMITTED.
23. BRACKETS TO BE UNISTRUT GALVANISED MILD STEEL. PROVIDE 3MM NEOPRENE SPACERS BETWEEN DISSIMILAR METALS.
24. SPACING OF BRACKETS TO COMPLY WITH AS 3500. ENSURE PIPES AND JOINTS ARE NOT STRESSED, ARE SECURED, HAVE ADEQUATE MEANS OF EXPANSION AND ARE FREE OF VIBRATION AND WATER HAMMER.
25. PROVIDE WATERTIGHT/WEATHER PROOF 'DECKTITE' FLASHINGS TO PIPE PENETRATIONS THROUGH ROOFS AND ROOF DECKS.
26. ALL EXPOSED WASTE PIPEWORK EXCEPT IN BASEMENT AREAS AND PLANT ROOMS ARE TO BE CHROME PLATED BRASS OR STAINLESS STEEL.
27. ALLOW FOR THE INSTALLATION OF SELF ADHESIVE STICKERS TO IDENTIFY SERVICES AT ACCESS PANEL LOCATIONS IN DUCTS AND AT NOT MORE THAN 3 METRE CENTRES. ALL PAINTED OR ADHESIVE LABELLING ON PIPEWORK SHALL BE IN ACCORDANCE WITH AS1345.
28. INSTALL PUNCH BRASS LABELS TO IDENTIFY EACH ISOLATION VALVE.
29. PROVIDE CHROME PLATED WALL FLANGES AT ALL WALL, FLOOR AND CEILING SERVICES PENETRATIONS.
30. WHERE THERE IS NO ASSIGNED PIPE DIAMETER DOCUMENTED FOR SANITARY / SEWER DRAINAGE ASSIGN DN 100ø AT A MINIMUM GRADE OF 1 : 60.

REV	DATE	BY	DESCRIPTION	CHK	APD
1	02.12.2021	CAD	100% SCHEMATIC DESIGN	NL	SK

DRAWING STATUS: PRELIMINARY

REFERENCE COORDINATION DRAWINGS

DESCRIPTION	DRAWING NO.	REV	CHK

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www.wsp.com

CLIENT: SINSW

ARCHITECT: COX ARCHITECTURE

PROJECT: WEST RYDE MULTI-SPORTS FACILITY

TITLE: HYDRAULIC SERVICES LEGEND OF SYMBOLS

SCALE @ A1:	CHECKED:	APPROVED:
	NL	SK
PROJECT No: PS123419	DRAWN: BIM	DATE: DEC 2021

DRAWING No: H001 REV: 1

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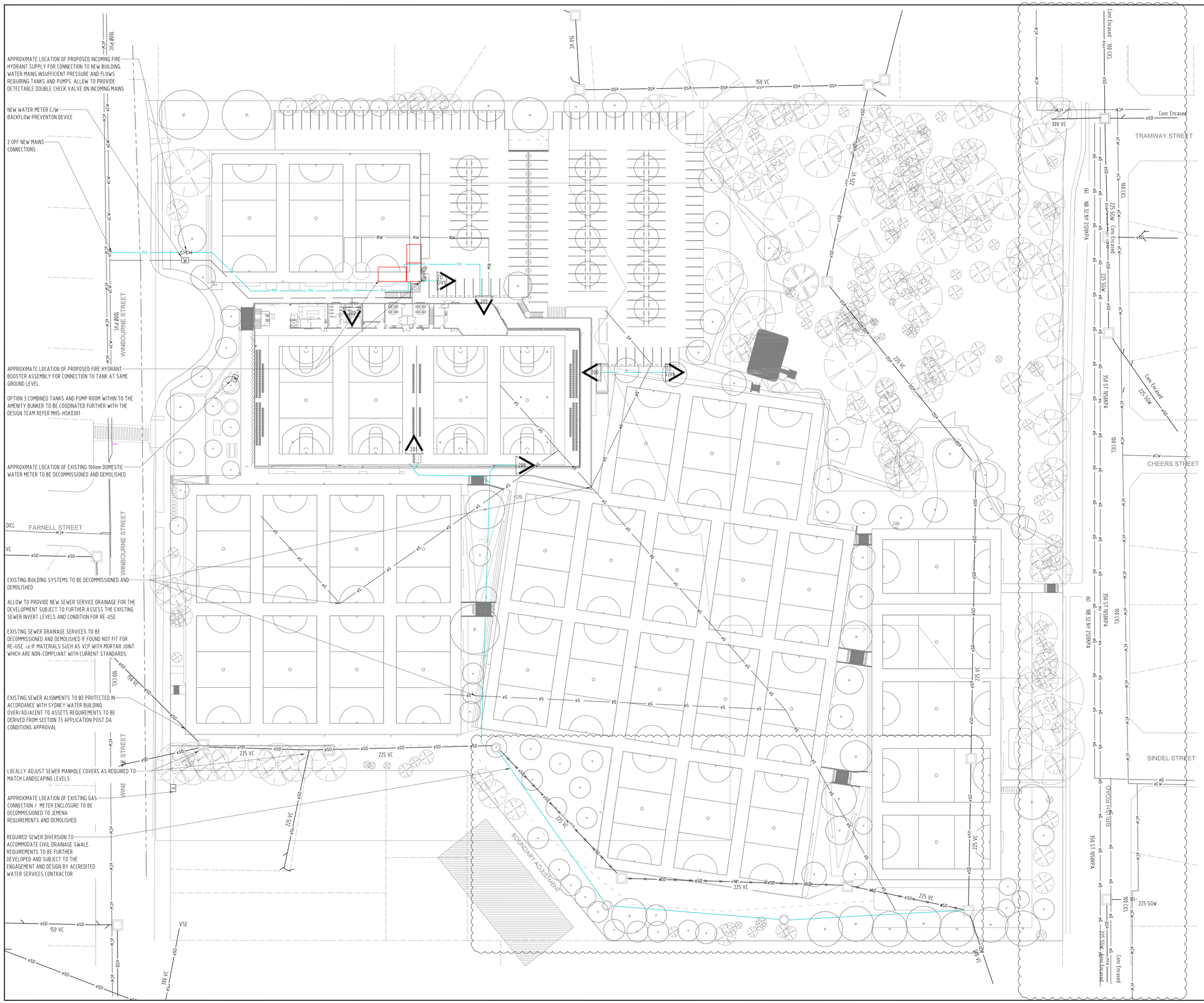

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GENERAL NOTES:

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B. ALL DIMENSIONS ARE NOMINAL AND MUST BE CONFIRMED ON SITE.

C. ALL WORKS SHALL COMPLY WITH BCA AND ALL RELEVANT AUSTRALIAN STANDARDS.

D. IT IS THE RESPONSIBILITY OF THE SERVICES CONTRACTOR FOR ALL SUCH WORKS AND TO PRODUCE A COMPLETE LAYOUT FULLY COORDINATED WITH ARCHITECTURE, STRUCTURE AND OTHER SERVICES TO MEET EMPLOYER'S REQUIREMENTS AND RELEVANT STANDARDS. THIS IS TO INCLUDE ALL NECESSARY BENDS, TEES, SETS (ETC). THAT MAY BE NECESSARY TO LOCATE SERVICES CORRECTLY. AVOID CLASHES & MAXIMIZE MAINTENANCE ACCESS. QUANTITIES SHOWN ON THE DRAWING ARE INDICATIVE ONLY.

E. DRAWING TO BE READ IN CONJUCTION WITH LEGEND OF SYMBOLS.

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CLIENT: SINSW

ARCHITECT: COX ARCHITECTURE

PROJECT: WEST RYDE MULTI-SPORTS FACILITY

TITLE: HYDRAULIC SERVICES LAYOUT SITE PLAN

SCALE @ A1: 1:500	CHECKED: NL	APPROVED: SK
PROJECT No: PS123419	DRAWN: BIM	DATE: DEC 2021
DRAWING No: H050		REV: 1

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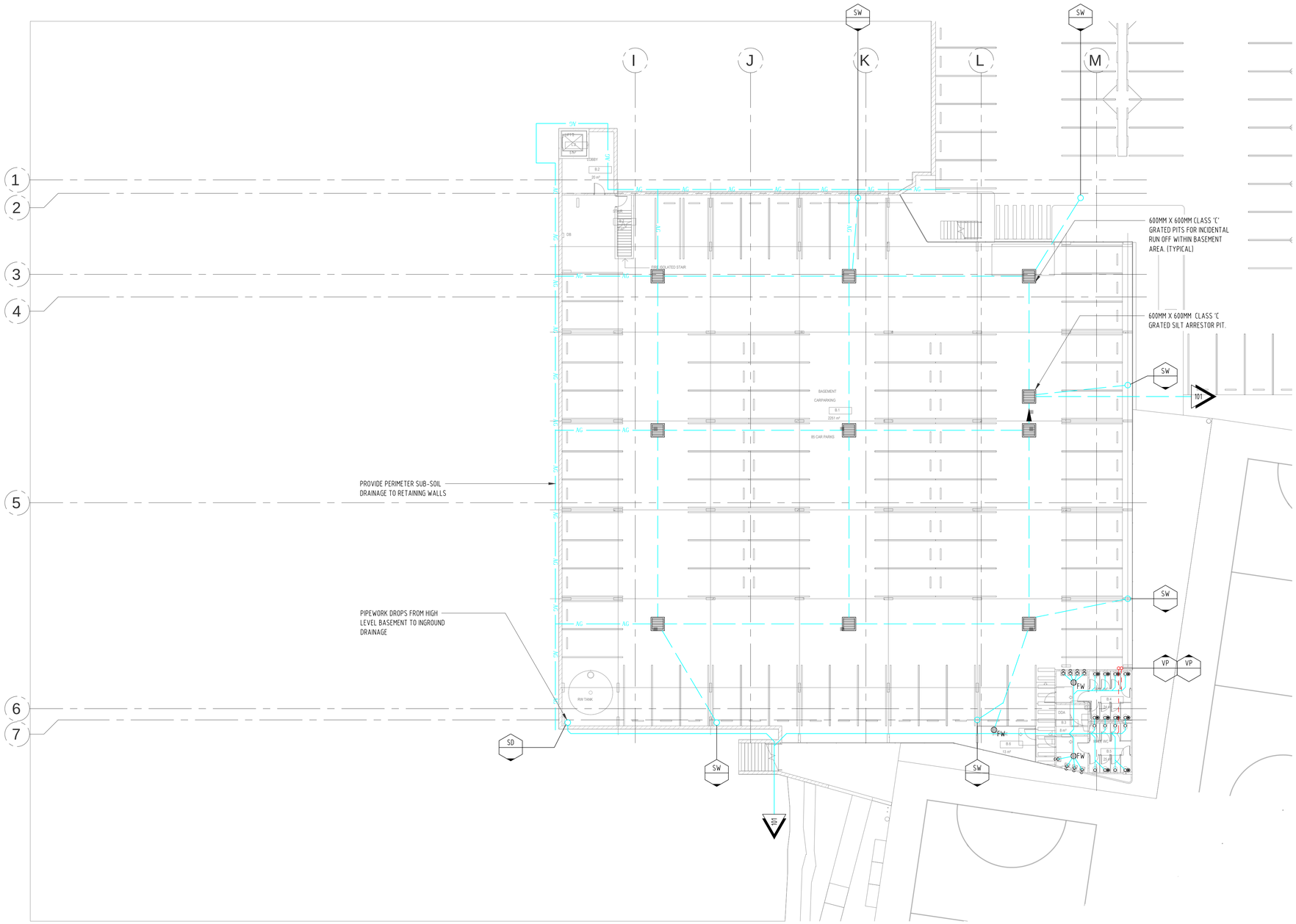

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ARCHITECT: COX ARCHITECTURE

PROJECT: WEST RYDE MULTI-SPORTS FACILITY

TITLE: HYDRAULIC SERVICES DRAINAGE SERVICES BASEMENT

SCALE @ A1:	CHECKED:	APPROVED:
1:200	NL	SK
PROJECT No: PS123419	DRAWN: BIM	DATE: DEC 2021

DRAWING No: H100 REV: 1

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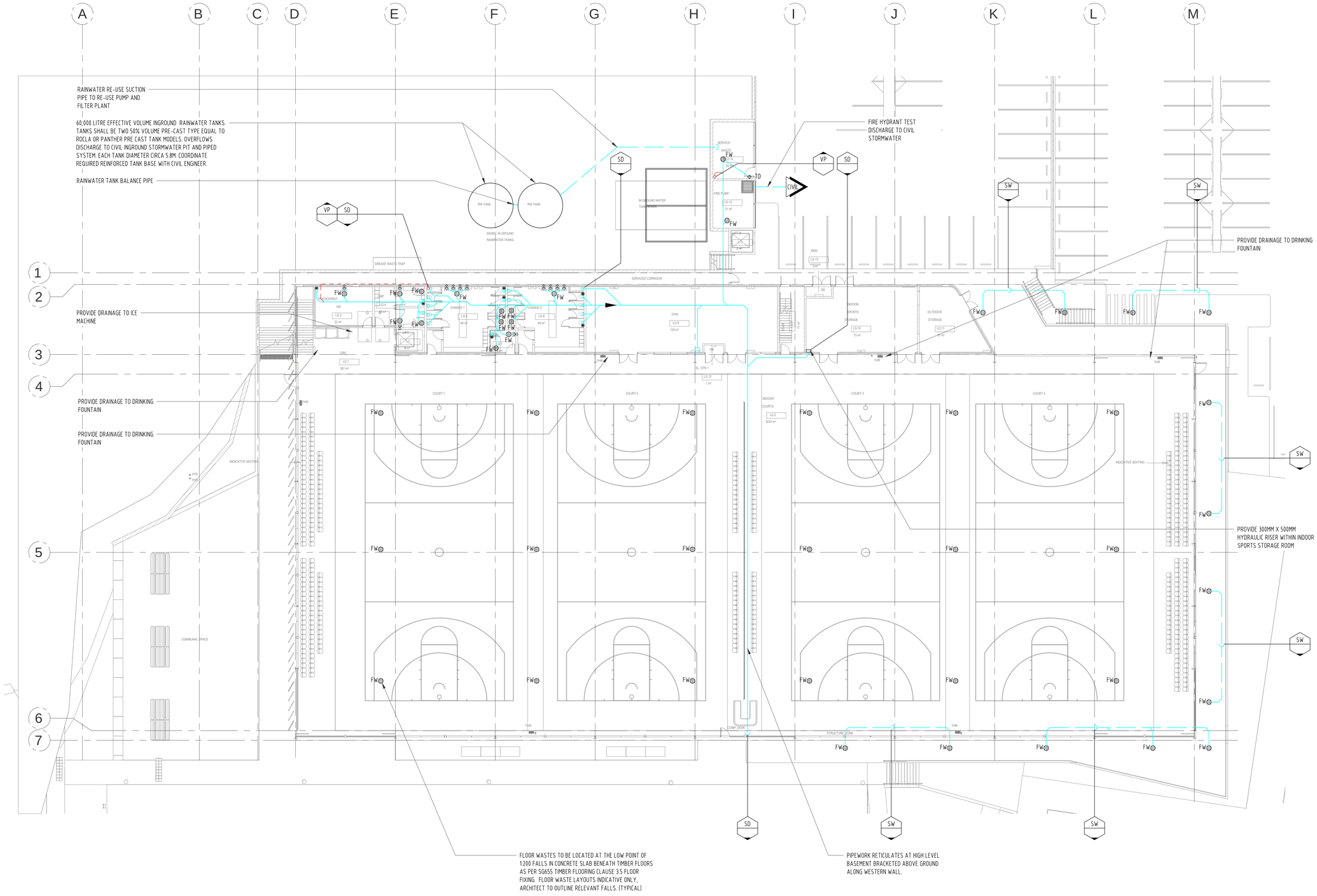

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1	02.12.2021	CAD	100% SCHEMATIC DESIGN	NL	SK

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CLIENT: SINSW

ARCHITECT: COX ARCHITECTURE

PROJECT: WEST RYDE MULTI-SPORTS FACILITY

TITLE: HYDRAULIC SERVICES DRAINAGE SERVICES LOWER GROUND FLOOR

SCALE @ A1:	CHECKED:	APPROVED:
1:200	NL	SK
PROJECT No: PS123419	DRAWN: BIM	DATE: DEC 2021

DRAWING No: H101 REV: 1

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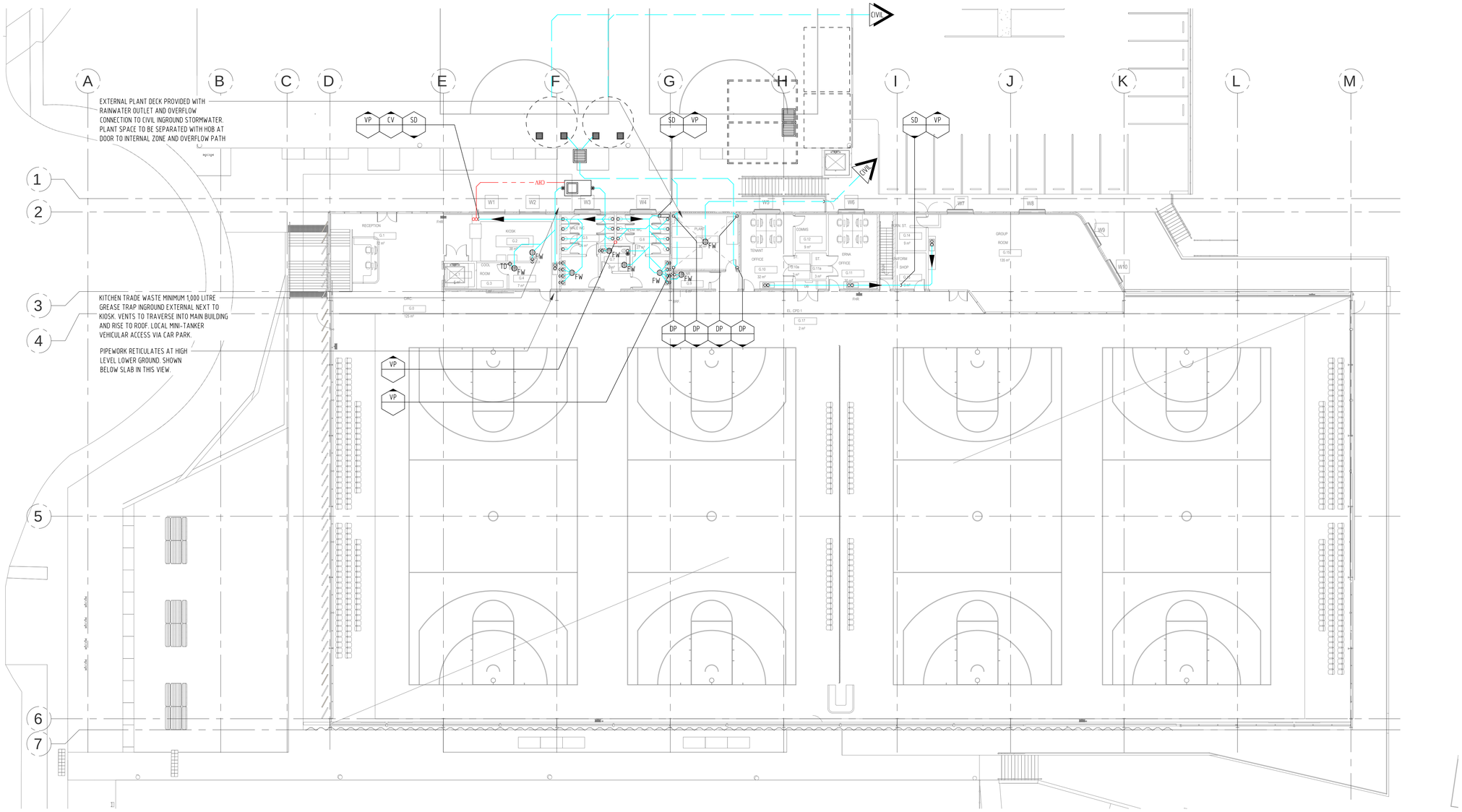

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ARCHITECT: COX ARCHITECTURE

PROJECT: WEST RYDE MULTI-SPORTS FACILITY

TITLE: HYDRAULIC SERVICES DRAINAGE SERVICES GROUND FLOOR

SCALE @ A1:	CHECKED:	APPROVED:
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PROJECT No: PS123419	DRAWN: BIM	DATE: DEC 2021

DRAWING No: H102 REV: 1

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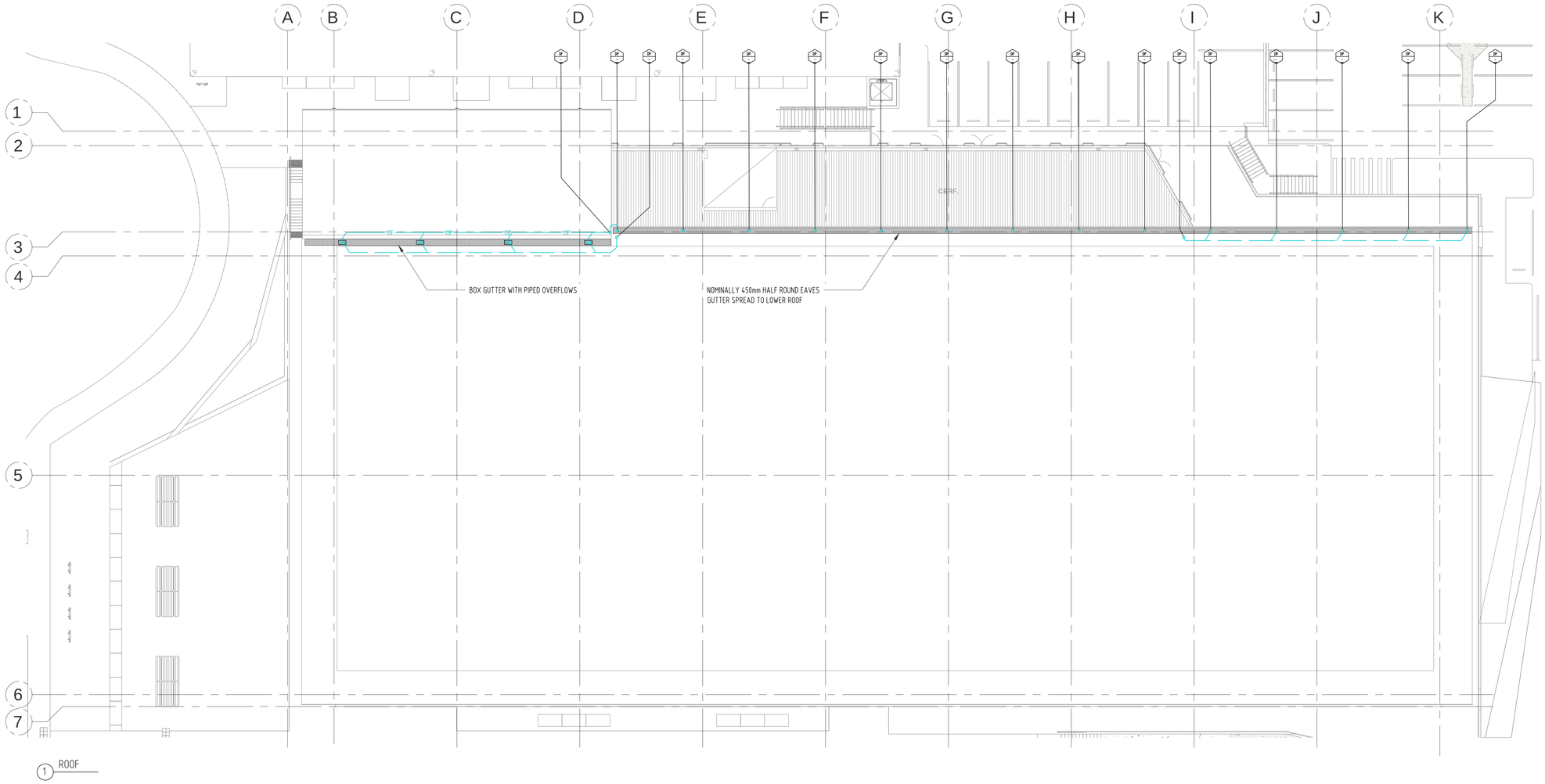
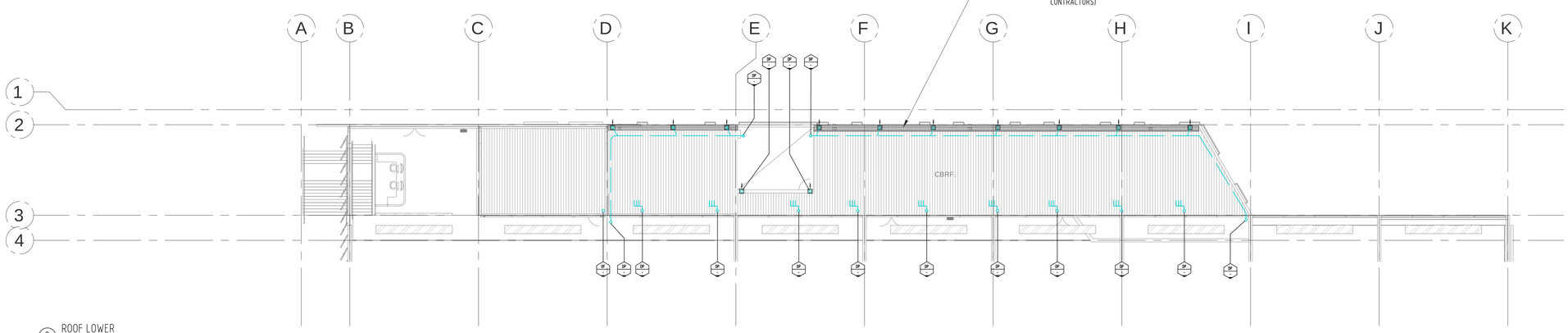


1 ROOF

APPROXIMATE BOX GUTTER WITH SIDE OVERFLOWS THROUGH PARAPET. DRAINAGE TYPE SHALL BE CONFIGURED WITH SYFONICS TO ACHIEVE CONNECTION WITH RAINWATER TANK PRIOR TO DISCHARGE TO CIVIL INGROUND STORMWATER. DESIGN SOLUTION SHALL ACCOMMODATE APPROXIMATELY 40L/s FROM SECONDARY ROOF PRIMARY SYSTEM WITH AN OVERFLOW SYSTEM TO ACCOMMODATE APPROXIMATELY 350L/s FOR THE MAIN ROOF AND THE LOWER ROOF.

BOX GUTTER SIZE (600mm W X 150mm DEEP PENDING CONFIRMATION FROM SIPHONIC CONTRACTORS)



2 ROOF LOWER

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N

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DRAWING STATUS: PRELIMINARY

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ARCHITECT: COX ARCHITECTURE

PROJECT: WEST RYDE MULTI-SPORTS FACILITY

TITLE: HYDRAULIC SERVICES DRAINAGE SERVICES ROOF LEVEL

SCALE @ A1:	CHECKED:	APPROVED:
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PROJECT No: PS123419	DRAWN: BIM	DATE: DEC 2021

DRAWING No: H103 REV: 1

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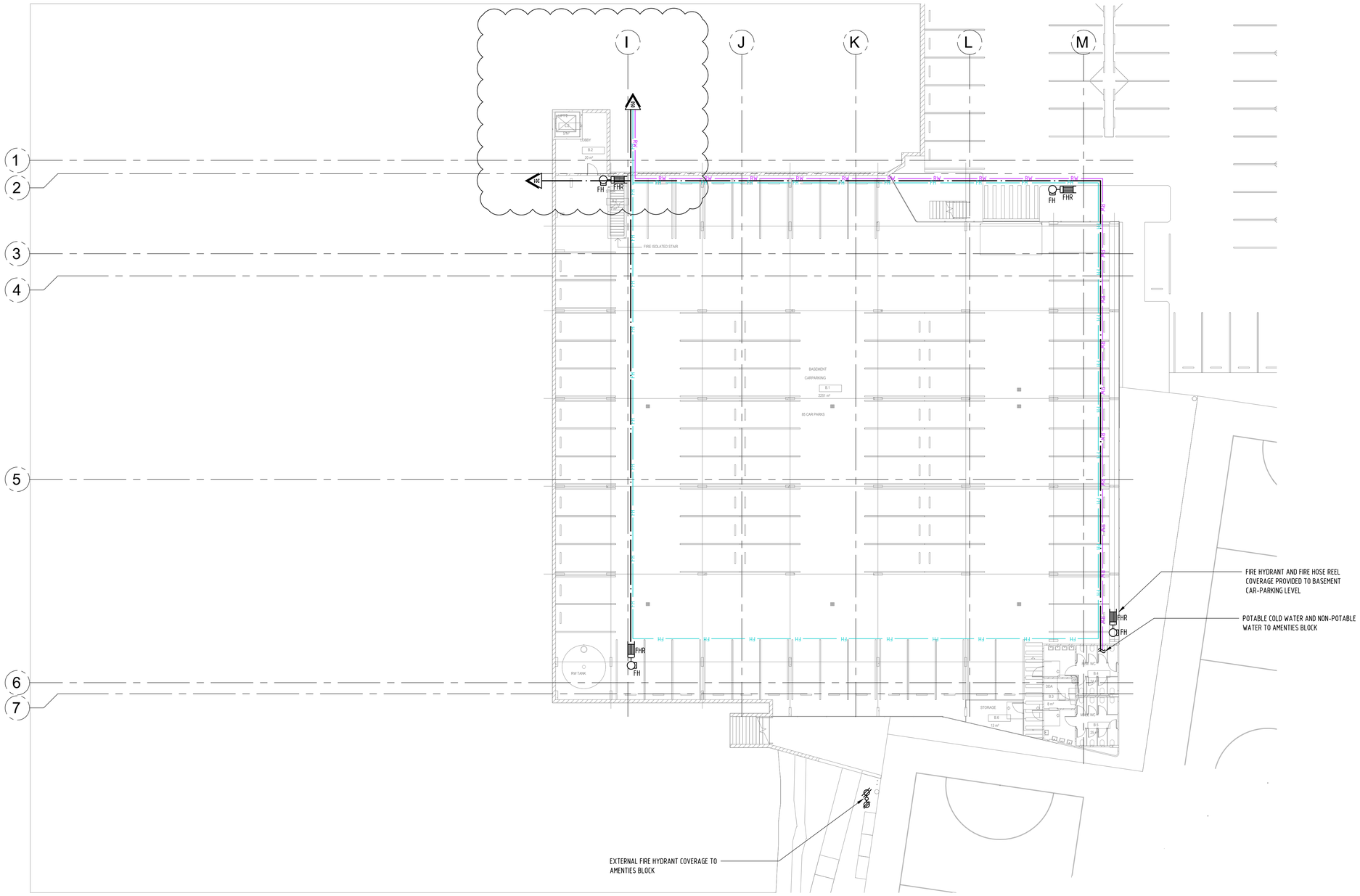

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DRAWING STATUS: PRELIMINARY

REFERENCE COORDINATION DRAWINGS

DESCRIPTION	DRAWING NO.	REV	CHK

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CLIENT: SINSW

ARCHITECT: COX ARCHITECTURE

PROJECT: WEST RYDE MULTI-SPORTS FACILITY

TITLE: HYDRAULIC SERVICES PRESSURE SERVICES BASEMENT

SCALE @ A1:	CHECKED:	APPROVED:
1:200	NL	SK
PROJECT No: PS123419	DRAWN: BIM	DATE: DEC 2021

DRAWING No: H200 REV: 1

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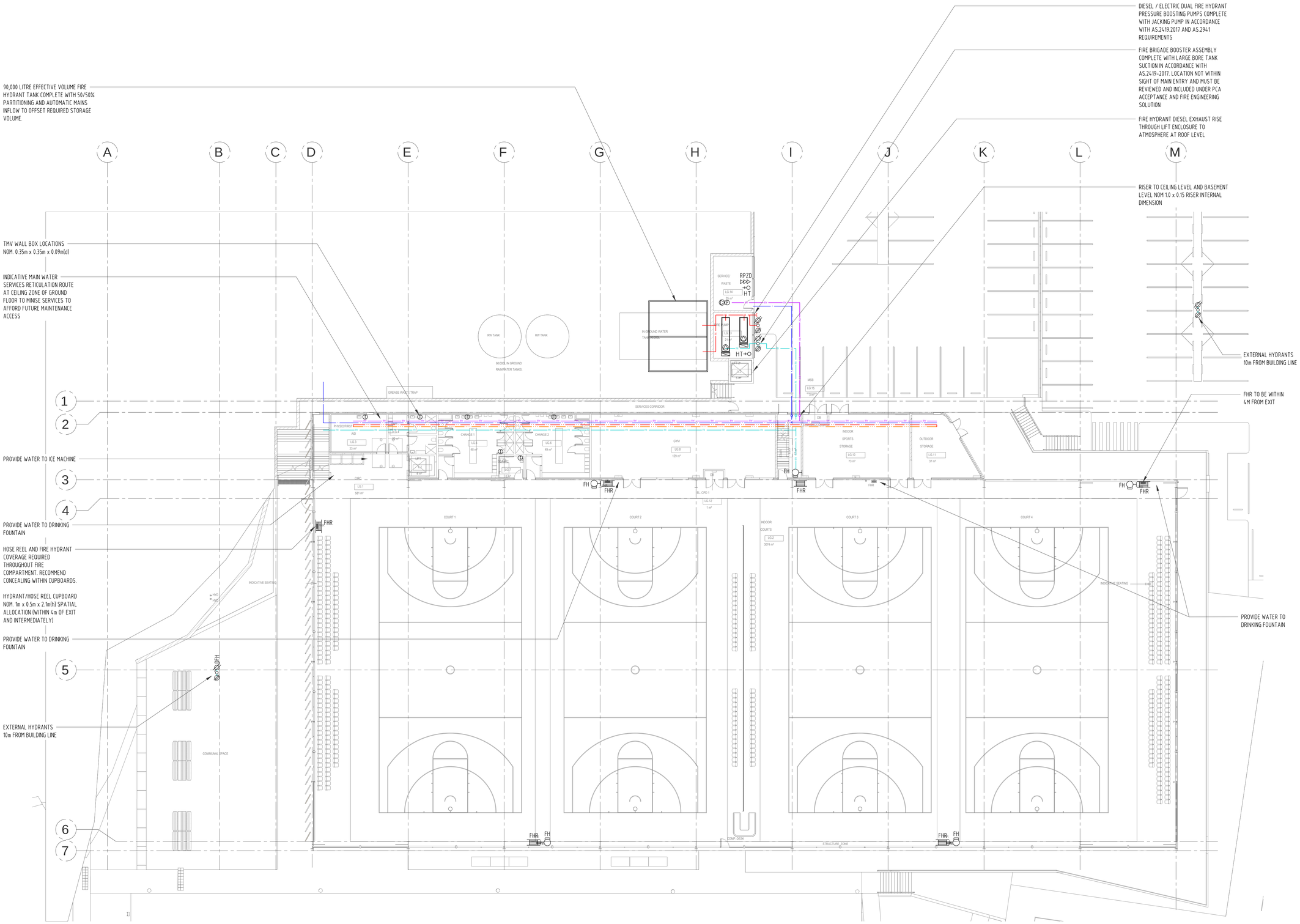

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B. ALL DIMENSIONS ARE NOMINAL AND MUST BE CONFIRMED ON SITE.

C. ALL WORKS SHALL COMPLY WITH BCA AND ALL RELEVANT AUSTRALIAN STANDARDS.

D. IT IS THE RESPONSIBILITY OF THE SERVICES CONTRACTOR FOR ALL SUCH WORKS AND TO PRODUCE A COMPLETE LAYOUT FULLY COORDINATED WITH ARCHITECTURE, STRUCTURE AND OTHER SERVICES TO MEET EMPLOYER'S REQUIREMENTS AND RELEVANT STANDARDS. THIS IS TO INCLUDE ALL NECESSARY BENDS, TEES, SETS (ETC). THAT MAY BE NECESSARY TO LOCATE SERVICES CORRECTLY. AVOID CLASHES & MAXIMIZE MAINTENANCE ACCESS. QUANTITIES SHOWN ON THE DRAWING ARE INDICATIVE ONLY.

E. DRAWING TO BE READ IN CONJUCTION WITH LEGEND OF SYMBOLS.

REV	DATE	BY	DESCRIPTION	CHK	APD
1	02.12.2021	CAD	100% SCHEMATIC DESIGN	NL	SK

DRAWING STATUS: PRELIMINARY

REFERENCE COORDINATION DRAWINGS

DESCRIPTION	DRAWING NO.	REV	CHK

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Level 27, 680 George Street Sydney, NSW 2000, Australia
Tel: +61 2 9272 5100 Fax: +61 2 9272 5101
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CLIENT: SINSW

ARCHITECT: COX ARCHITECTURE

PROJECT: WEST RYDE MULTI-SPORTS FACILITY

TITLE: HYDRAULIC SERVICES PRESSURE SERVICES LOWER GROUND FLOOR

SCALE @ A1:	CHECKED:	APPROVED:
1:200	NL	SK
PROJECT No: PS123419	DRAWN: BIM	DATE: DEC 2021

DRAWING No: H201 REV: 1

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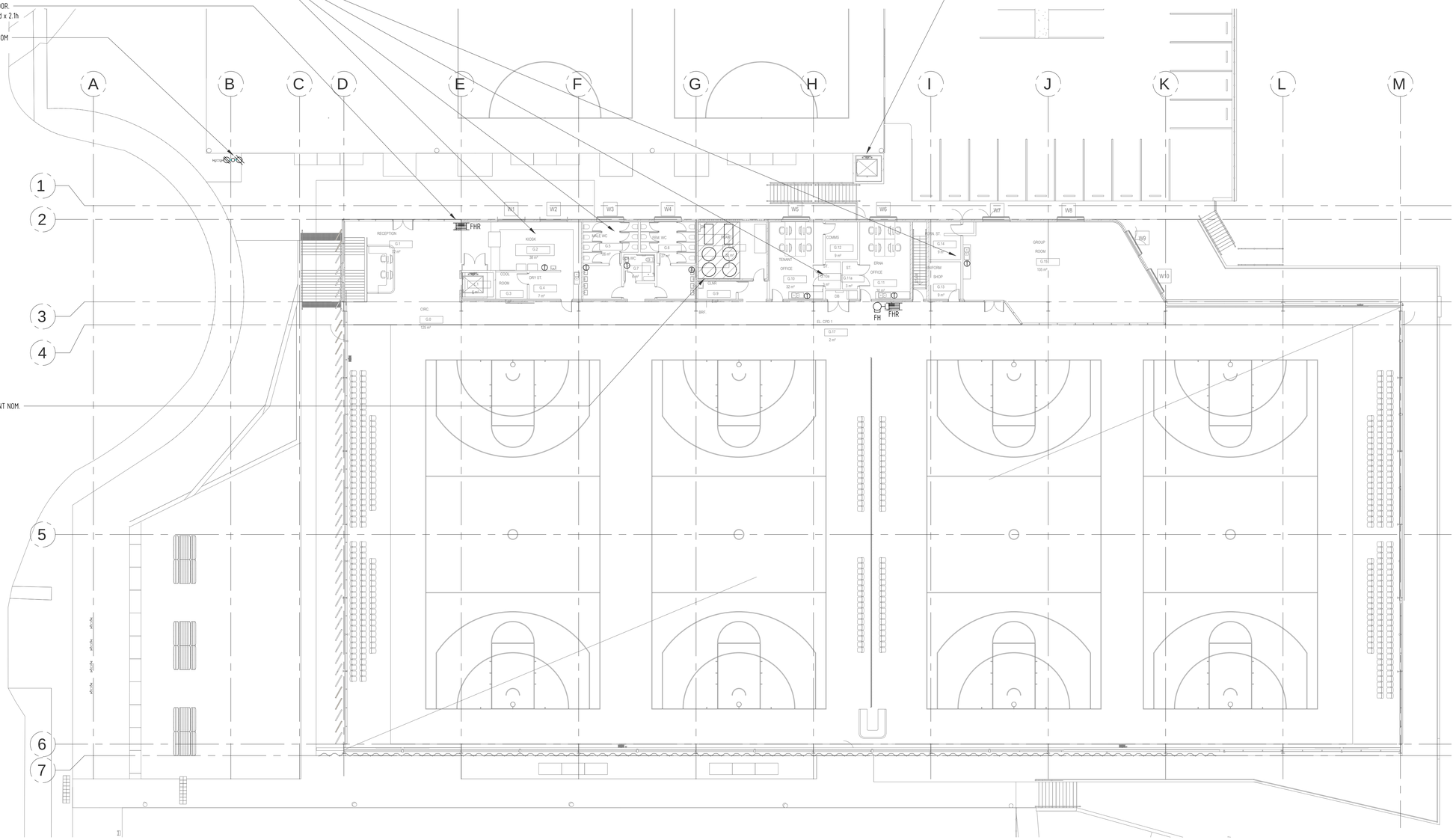
WATER SERVICES ROUTED WITHIN CEILING BELOW AND RISE AS REQUIRED WITHIN CAVITY WALLS

FHR WITHIN 4m OF EGRESS DOOR. NOM. CUPBOARD 0.85w x 0.45d x 2.1h

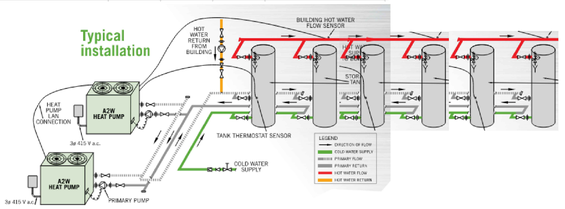
EXTERNAL HYDRANTS 10m FROM BUILDING LINE

FIRE HYDRANT DIESEL EXHAUST RISE THROUGH LIFT ENCLOSURE TO ATMOSPHERE AT ROOF LEVEL

HEAT PUMP HOT WATER PLANT NOM. 5m x3.7m x 2.6m(h) SPATIAL ALLOCATION EXTERNAL.



CHANGE-ROOMS/AMENITIES				
		Units	Flow	
# Showers	10	No.	0.3	l/s
# Basins	32	No.	0.1	l/s
Time per shower	4	Min		
Total Flow	4704		4 uses, Basins in use for 30 secs	
TOTAL	4704	Litres	Per 2 hour peak	
Diversity 70%	3292.8			



HEAT PUMP HOT WATER PLANT NOM. 5m x3.7m x 2.6m(h) SPATIAL ALLOCATION EXTERNAL.

DO NOT SCALE

N

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CLIENT: SINSW

ARCHITECT: COX ARCHITECTURE

PROJECT: WEST RYDE MULTI-SPORTS FACILITY

TITLE: HYDRAULIC SERVICES PRESSURE SERVICES GROUND FLOOR

SCALE @ A1: 1:200	CHECKED: NL	APPROVED: SK
PROJECT No: PS123419	DRAWN: BIM	DATE: DEC 2021

DRAWING No: H202 REV: 1

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