

# STORMWATER MANAGEMENT PLAN (FOR DA)

## PROPOSED CHURCH

### No.120 ARNOLD AVENUE, KELLYVILLE

#### GENERAL NOTES

1. FINAL LOCATION OF NEW DOWNPIPES TO BE DETERMINED BY BUILDER/ARCHITECT AT TIME OF CONSTRUCTION.

2. THESE DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTS AND OTHER CONSULTANTS DRAWINGS. ANY DISCREPANCIES TO BE REFERRED TO THE ENGINEER BEFORE PROCEEDING WITH WORK.

3. ALL MATERIALS AND WORKMANSHIP TO BE IN ACCORDANCE WITH AS/NZS 3500.3:2003 STORMWATER DRAINAGE, BCA AND LOCAL COUNCIL POLICY/CONSENT/REQUIREMENTS.

4. ALL DIMENSIONS AND LEVELS TO BE VERIFIED BY BUILDER ON-SITE PRIOR TO COMMENCEMENT OF WORKS. THESE DRAWINGS ARE NOT TO BE SCALED FOR DIMENSIONS NOR TO BE USED FOR SETOUT PURPOSES.

5. ALL SURVEY INFORMATION AND PROPOSED BUILDING AND FINISHED SURFACE LEVELS SHOWN IN THESE DRAWINGS ARE BASED ON LEVELS OBTAINED FROM DRAWINGS BY OTHERS.
6. ALL STORMWATER DRAINAGE PIPES ARE TO BE uPVC AT MINIMUM 1% GRADE UNLESS NOTED OTHERWISE.

7. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE AND LEVEL ALL EXISTING SERVICES OR OTHER STRUCTURES WHICH MAY AFFECT/BE AFFECTED BY THIS DESIGN PRIOR TO COMMENCEMENT OF WORKS.

8. ALL PITS WITHIN DRIVEWAYS TO BE 150mm THICK CONCRETE OR EQUAL.

9. THIS PLAN IS THE PROPERTY OF NY CIVIL ENGINEERING AND MAY NOT BE USED OR REPRODUCED WITHOUT WRITTEN PERMISSION FROM DONOVAN ASSOCIATES.


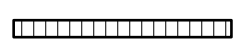

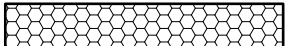




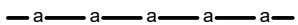




#### PLAN SPECIFIC NOTES

1. **ROOF DRAINAGE NOTE:** AS 3500 ROOF DRAINAGE REQUIRES EAVES GUTTERS TO BE SIZED FOR 20 YEAR 5 MIN. STORM = 205mm/hr. FOR EAVES GUTTERS, AS 3500.3:2003 THEN HAS THE FOLLOWING REQUIREMENTS:  
i) FOR TYPICAL STANDARD QUAD GUTTER WITH Ae = 6000mm² AND GUTTER SLOPE 1:500 AND STEEPER, THIS REQUIRES ONE DOWNPIPE PER 30m² ROOF AREA.  
ii) DOWNPIPES TO BE MINIMUM 90mm DIA. OR 100 x 50mm FOR GUTTERS SLOPE 1:500 AND STEPPER.  
iii) OVERFLOW METHOD TO FIGURE G1 OF AS 3500.3:2003 IT IS THE RESPONSIBILITY OF THE PLUMBER AND / OR BUILDER TO COMPLY WITH THIS. THIS DRAWING SHOWS PRELIMINARY LOCATIONS / NUMBERS OF DOWNPIPES ONLY WHICH ARE TO BE VERIFIED BY BUILDER / PLUMBER
2. **TREE PRESERVATION:** IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ANY PRIOR APPROVAL REQUIRED FROM COUNCIL WITH RESPECT TO POTENTIAL IMPACT ON TREES FOR ANY WORKS SHOWN ON THIS DRAWING PRIOR TO THE COMMENCEMENT OF THOSE WORKS

3. ALL ROOF GUTTERS TO HAVE OVERFLOW PROVISION IN ACCORDANCE WITH AS 3500.3:2003 AND SECTIONS 3.5.3, 3.7.5 AND APPENDIX G OF AS 3500.3:2003

4. THIS DRAWING IS NOT TO BE USED FOR SET-OUT PURPOSES - REFER TO ARCHITECTURAL DRAWINGS

5. LOCATION OF SURFACE STORMWATER GRATED INLET PITS MAY BE VARIED OR NEW PITS INSTALLED AT THE CONSTRUCTION STAGE PROVIDED DESIGN INTENT OF THIS DRAWING IS MAINTAINED

SURFACE INLET PIT		GRATED TRENCH DRAIN	
SURFACE INLET PIT (WITH ENVIROPOD 200 MICRON)		ABSORPTION TRENCH	
ACCESS GRATE (WITH ENVIROPOD 200 MICRON)		PROPOSED ROOF GUTTER FALL	
450 SQUARE INTERVAL	450 X 450	PROPOSED DOWNPIPE SPREADER	
GRATE LEVEL = 75.50	SL 75.50	STORMWATER PIPE 100mm DIA. MIN. UNO	
INVERT LEVEL = RL 75.20	IL 75.20	SUBSOIL PIPE	
PROPOSED DOWNPIPE 90mm DIA. OR 100mm x 50mm MIN.		EXISTING STORMWATER PIPE	
NATURAL GROUND FINISHED DESIGN LEVEL	× <span>10.00</span>	INSPECTION RISER	
		RAINWATER HEAD	

#### DRAINAGE NOTES

**PIPE SIZE:**  
THE MINIMUM PIPE SIZE SHALL BE:

- 90mm DIA WHERE THE LINE ONLY RECEIVES ROOFWATER RUNOFF; OR
- 100mm DIA WHERE THE LINE RECEIVES RUNOFF FROM PAVED OR UNPAVED AREAS ON THE PROPERTY

THE MINIMUM PIPE VELOCITY SHOULD BE 0.6 m/s AND A MAXIMUM PIPE VELOCITY OF 6.0 m/s DURING THE DESIGN STORM.

**PIPE GRADE:**  
THE MINIMUM PIPE GRADE SHALL BE:

- 1.0% FOR PIPES LESS THAN 225mm DIA (UNO)
- 0.5% FOR ALL LARGER PIPES (UNO)

PIPES WITH A GRADIENT GREATER THAN 20% WILL REQUIRE ANCHOR BLOCKS AT THE TOP AND BOTTOM OF THE INCLINED SECTION; AND AT INTERVALS NOT EXCEEDING 3.0m

ANCHOR BLOCKS ARE DESIGNED ACCORDING TO *CLAUSE 3.5.3 OF AS3500.3:1990*

**DEPTH OF COVER FOR PVC PIPES:**  
MINIMUM PIPE COVER SHALL BE AS FOLLOWS:

LOCATION	MINIMUM COVER
NOT SUBJECT TO VEHICLE LOADING	100mm SINGLE RESIDENTIAL 300mm ALL OTHER DEVELOPMENTS
SUBJECT TO VEHICLE LOADING UNDER A SEALED ROAD	450mm WHERE NOT IN A ROAD 600mm
UNSEALED ROAD	750mm
PAVED DRIVEWAY	100mm PLUS DEPTH OF CONCRETE

SEE AS2032 INSTALLATION OF UPVC PIPES FOR FURTHER INFORMATION.

CONCRETE PIPE COVER SHALL BE IN ACCORDANCE WITH *AS3725-1989 LOADS ON BURIED CONCRETE PIPES*, HOWEVER A MINIMUM COVER OF 450mm WILL APPLY.

WHERE INSUFFICIENT COVER IS PROVIDED, THE PIPE SHALL BE COVERED AT LEAST 50mm THICK OVERLAY AND SHALL THEN BE PAVED WITH AT LEAST:

- 150mm REINFORCED CONCRETE WHERE SUBJECT TO HEAVY VEHICLE TRAFFIC;
- 75mm THICKNESS OF BRICK OR 100mm OF CONCRETE PAVING WHERE SUBJECT TO LIGHT VEHICLE TRAFFIC; OR
- 50mm THICK BRICK OR CONCRETE PAVING WHERE NOT SUBJECT TO VEHICLE TRAFFIC.

**CONNECTIONS TO STORMWATER DRAINS UNDER BUILDINGS:**  
SHALL BE CARRIED OUT IN ACCORDANCE WITH *SECTION 3.10 OF AS3500.3:1990*

**CONNECTIONS TO COUNCIL SYSTEM:**  
IF PROPOSED DRAINAGE SYSTEM IS DESIGNED TO CONNECT TO COUNCIL'S DRAINAGE SYSTEM, IT IS ADVISED THAT A 'WORKS PERMIT' IS OBTAINED FROM THE RESPECTIVE COUNCIL PRIOR TO COMMENCEMENT OF WORKS

**ABOVE GROUND PIPEWORK:**  
SHALL BE CARRIED OUT IN ACCORDANCE WITH *SECTION 6 OF AS3500.3:1990*

#### PIT SIZES AND DESIGN:

DEPTH (mm)	MINIMUM PIT SIZE (mm)
UP TO 450mm	450 x 450
450mm TO 600mm	600 x 600
600mm TO 900mm	600 x 900
900mm TO 1500mm	900 x 900 (WITH STEP IRONS)
1500mm TO 2000mm	1200 x 1200 (WITH STEP IRONS)

ALL PIPES SHOULD BE CUT FLUSH WITH THE WALL OF THE PIT.

PITS GREATER THAN 600mm DEEP SHALL HAVE A MINIMUM ACCESS OPENING OF 600 x 600mm

THE GRATED COVERS OF PITS LARGER THAN 600 x 600mm ARE TO BE HINGED TO PREVENT THE GRATE FROM FALLING INTO THE PIT.

THE BASE OF THE DRAINAGE PITS SHOULD BE AT THE SAME LEVEL AS THE INVERT OF THE OUTLET PIPE. RAINWATER SHOULD NOT BE PERMITTED TO POND WITHIN THE STORMWATER SYSTEM

- TRENCH DRAINS:**  
CONTINUOUS TRENCH DRAINS ARE TO BE OF WIDTH NOT LESS THAN 150mm AND DEPTH NOT LESS THAN 100mm. THE BARS OF THE GRATING ARE TO BE PARALLEL TO THE DIRECTION OF SURFACE FLOW.
- STEP IRONS:**  
PITS BETWEEN 1.2m AND 6m ARE TO HAVE STEP IRONS IN ACCORDANCE WITH AS1657. FOR PITS GREATER THAN 6m OTHER MEANS OF ACCESS MUST BE PROVIDED.
- PVC PITS:**  
PVC PITS WILL ONLY BE PERMITTED IF THEY ARE NOT A GREATER SIZE THAN 450 x 450mm (MAXIMUM DEPTH 450mm) AND ARE HEAVY DUTY
- IN-SITU PITS:**  
IN-SITU PITS ARE TO BE CONSTRUCTED ON A CONCRETE BED OF AT LEAST 150mm THICK. THE WALLS ARE TO BE DESIGNED TO MEET THE MINIMUM REQUIREMENTS OF *CLAUSE 4.6.3 OF AS3500.4:1990*. PITS DEEPER THAN 1.8m SHALL BE CONSTRUCTED WITH REINFORCED CONCRETE.
- GRATES:**  
GRATES ARE TO BE GALVANISED STEEL GRID TYPE. GRATES ARE TO BE OF HEAVY-DUTY TYPE IN AREAS WHERE THEY MAY BE SUBJECT TO VEHICLE LOADING.

REVISION	DRAWN	DESCRIPTION	DATE	PLAN BY	DRAWING TITLE	APPROVED BY	DESIGNED	CHECKED
A	YR	ISSUED FOR DA	24.10.2020	 <div>0416 734 977 edward@nycivilengineering.com.au www.nycivilengineering.com.au</div>	DETAILS, NOTES & LEGEND	<div>NADER ZAKI MIEAust CPEng NER</div>  <div>JOB REFERENCE E200200</div>	YR	NZ
B	YR	PIT LOCATION AMENDED	17.08.2021				SHEET SIZE	SCALE
C	YR	ARCHITECTURAL AMENDMENTS	30.03.2022				A1	-
D	YR	LONGSECTIONS ADDED	13.04.2022				ISSUE	No. IN SET
							D	8
					PROPOSED CHURCH No.120 ARNOLD AVENUE KELLYVILLE		DRAWING No.	
								D1



### CONFINED SPACE DANGER SIGN

COLOURS:- "DANGER" AND BACKGROUND	-	WHITE
ELLIPTICAL AREA		
RECTANGLE CONTAINING ELLIPSE	-	RED
OTHER LETTERING AND BORDER	-	BLACK

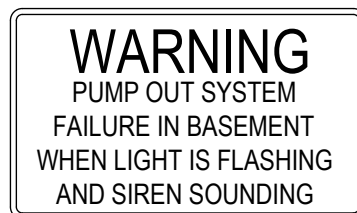
A) A CONFINED SPACE DANGER SIGN SHALL BE POSITIONED AT ALL ACCESS POINTS, SUCH THAT IT IS CLEARLY VISIBLE TO PERSONS PROPOSING TO ENTER THE BELOW GROUND TANK/S CONFINED SPACE.

B) MINIMUM DIMENSIONS OF THE SIGN

- 300mm x 450mm (LARGE ENTRIES, SUCH AS DOORS)
- 250mm x 180mm (SMALL ENTRIES SUCH AS GRATES AND MANHOLES)

C) THE SIGN SHALL BE MANUFACTURED FROM COLOUR BONDED ALUMINUM OR POLYPROPELENE.

D) SIGN SHALL BE AFFIXED USING SCREWS AT EACH CORNER OF THE SIGN.



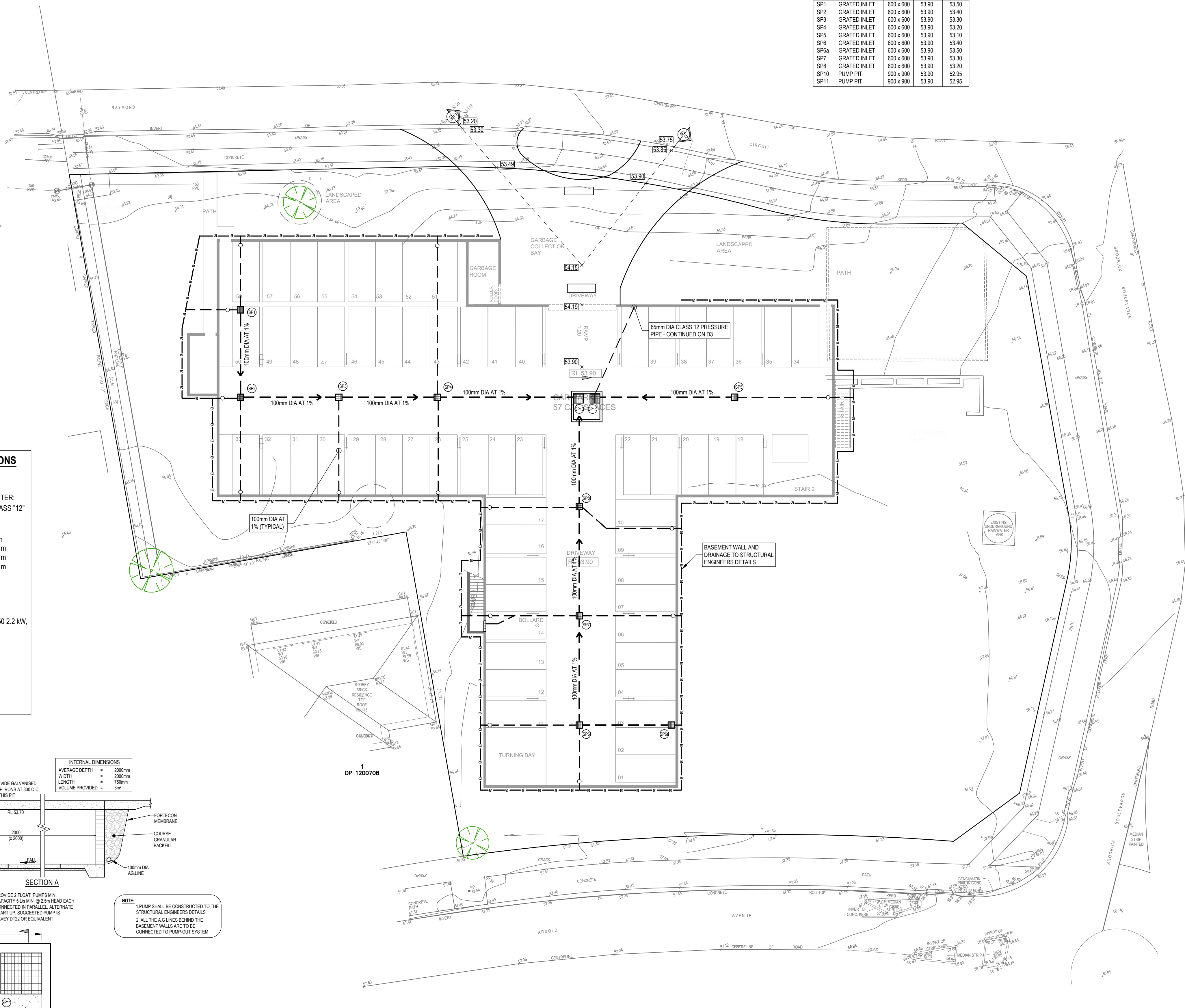
## BASEMENT PUMP-OUT FAILURE WARNING SIGN

**NOTE:**

1: SIGN SHALL BE IN CLEAR AND  
VISIBLE LOCATION WHERE  
VEHICLES ENTER THE BASEMENT

**COLOURS:**  
WARNING - RED  
ALL OTHERS - BLACK

PIT SCHEDULE (U.N.O)				
PIT No.	PIT TYPE	PIT SIZE	SURFACE LEVEL	INVERT LEVEL
SP1	GRATED INLET	600 x 600	53.90	53.50
SP2	GRATED INLET	600 x 600	53.90	53.40
SP3	GRATED INLET	600 x 600	53.90	53.30
SP4	GRATED INLET	600 x 600	53.90	53.20
SP5	GRATED INLET	600 x 600	53.90	53.10
SP6	GRATED INLET	600 x 600	53.90	53.40
SP6a	GRATED INLET	600 x 600	53.90	53.50
SP7	GRATED INLET	600 x 600	53.90	53.30
SP8	GRATED INLET	600 x 600	53.90	53.20
SP10	PUMP PIT	900 x 900	53.90	52.95
SP11	PUMP PIT	900 x 900	53.90	52.95



**PUMP-OUT CALCULATIONS**  
**AS PER AS3500.3**

- NO DRIVEWAY CATCHMENT AREA ENTERING UNDERCROFT PARKING AREA
- ASSUMED SEEPAGE MAX.  $0.001\text{L/m}^2/\text{s}$  (TO BE CONFIRMED BY GEOTECHNICAL ENGINEER)
- BASEMENT PERIMETER = 165m. AVERAGE DEPTH = 2.3m
- ASSUMED SEEPAGE RATE =  $0.4\text{L/s}$
- $0.4\text{L/s} \times 60\text{s} \times 60\text{s} = 1,440\text{L}$  (TWO HOUR DESIGN DURATION)

**THEREFORE PROVIDE MINIMUM 3.0m<sup>3</sup> HOLDING TANK  
PUMP OUT PSD 10.0 L/s (AS PER AS 3500.3)**

PROVIDE DUAL PUMPS WITH MINIMUM  
DISCHARGE RATE OF 5 l/s EACH. REFER TO DETAIL.

**PUMP-OUT CALCULATIONS**  
**AS PER AS3500.3**

PROPOSED RISING MAIN PIPE DIAMETER:  
65mm DIA uPVC 'PRESSURE PIPE' CLASS '12'

### HEAD LOSS

- STATIC = 1.5 m
- PIPE FRICTION = 0.5 m
- FITTINGS = 0.5 m
- TOTAL = 1.5 m

PUMP DUTY :

5 l/s AT 2.5 m HEAD

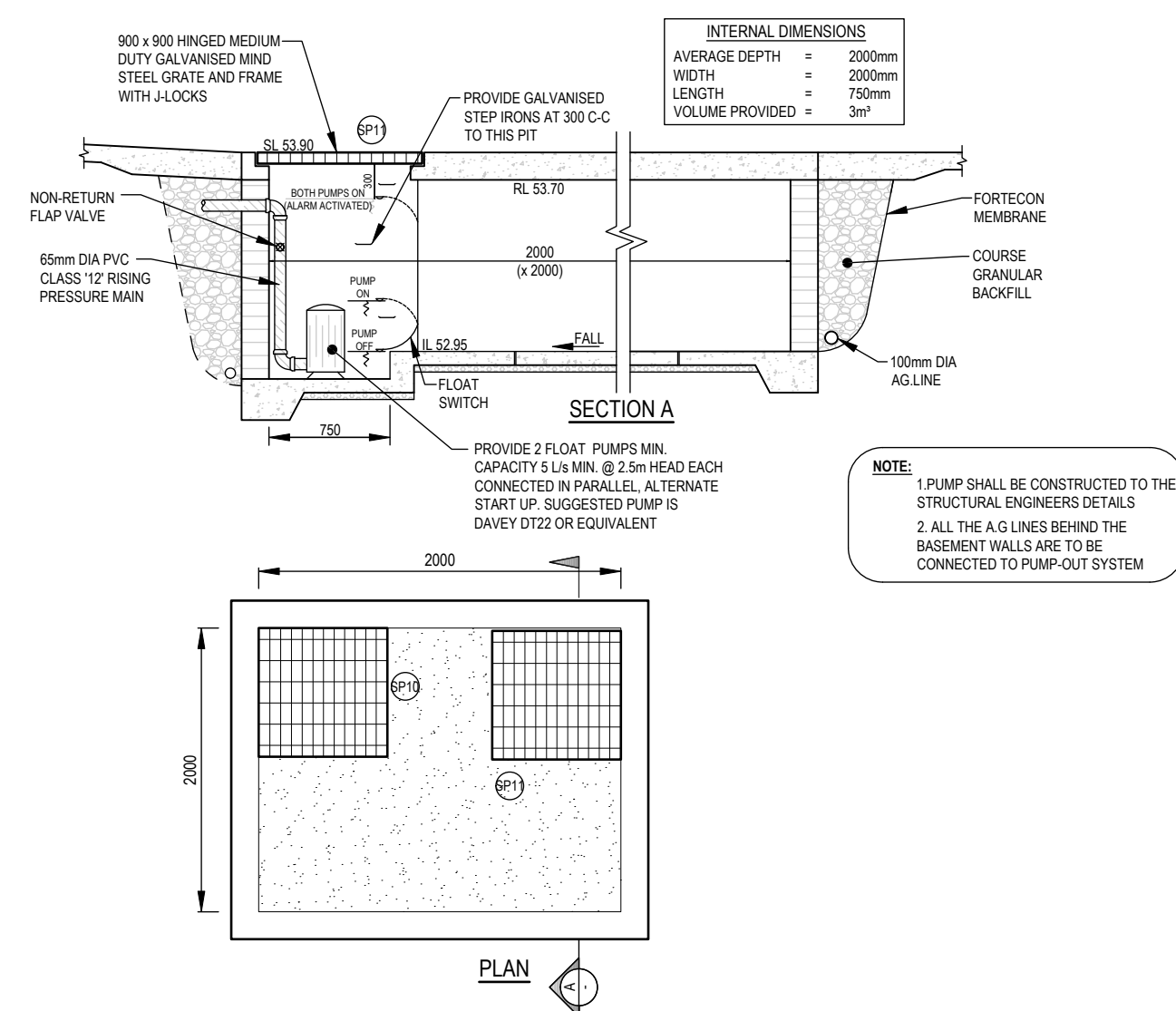
PUMP TYPE :

SUBMERSIBLE EQUAL TO DAVEY D150 2.2 KW,  
240 V, OR EQUIVALENT.

USE TWO (2) x PUMPS TO OPERATE

ALTERNATIVELY  
AS PER AS3500.3.

PUMP CONTROL:  
AUTOMATIC WITH FLOAT SWITCHES



PUMP HOLDING TANK  
NTS

**STANDARD PUMP OUT DESIGN NOTES:**

THE PUMP OUT SYSTEM SHALL BE DESIGNED TO OPERATE IN THE FOLLOWING MANNER-

- THE PUMPS SHALL BE PROGRAMMED TO WORK ALTERNATELY SO AS TO ALLOW BOTH PUMPS TO HAVE AN EQUAL OPERATION LOAD AND PUMP LIFE.

- A LOW LEVEL FLOAT SHALL BE PROVIDED TO ENSURE THAT THE MINIMUM REQUIRED WATER LEVEL IS MAINTAINED WITHIN THE SUMP AREA OF THE BELOW GROUND TANK. IN THIS REGARD THE FLOAT WILL FUNCTION AS AN OFF SWITCH FOR THE PUMPS.

- A SECOND FLOAT HALL BE PROVIDED AT A HIGHER LEVEL, APPROXIMATELY 300mm ABOVE THE MINIMUM WATER LEVEL, WHEREBY ONE OF THE PUMPS WILL OPERATE AND DRAIN THE TANK TO THE LEVEL OF THE LOW-LEVEL FLOAT.


- A THIRD FLOAT SHALL BE PROVIDED AT A HIGH LEVEL, WHICH IS APPROXIMATELY THE ROOF LEVEL OF THE BELOW GROUND TANK. THIS FLOAT SHOULD START THE OTHER PUMP THAT IS NOT OPERATING AND ACTIVATE THE ALARM.

- AN ALARM SYSTEM SHALL BE PROVIDED WITH A FLASHING STROBE LIGHT AND A PUMP FAILURE WARNING SIGN WHICH ARE TO BE LOCATED AT THE DRIVEWAY ENTRANCE TO THE BASEMENT LEVEL. THE ALARM SYSTEM SHALL BE PROVIDED WITH A BATTERY BACK-UP IN CASE OF POWER FAILURE.

REVISION	DRAWN	DESCRIPTION	DATE
A	YR	ISSUED FOR DA	24.10.2020
B	YR	PIT LOCATION AMENDED	17.08.2021
C	YR	ARCHITECTURAL AMENDMENTS	30.03.2022
D	YR	LONGSECTIONS ADDED	13.04.2022



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DRAWING TITLE		APPROVED BY	DESIGNED	CHECKED
STORMWATER MANAGEMENT PLAN BASEMENT		NADER ZAKI MIEAUST CPEng NER	YR	NZ
PROJECT TITLE			SHEET SIZE	SCALE
PROPOSED CHURCH No.120 ARNOLD AVENUE KFI1YV7I1F			A1	1:200
			ISSUE	No. IN SET
		JOB REFERENCE	DRAWING No.	
		E200200	D2	



NOTE: ENSURE ANY PROPOSED PAVING IS GRADED SO THAT IT IS NOT IMPACTING ADJOINING PROPERTIES.

INSPECTION RISER (IR)  
PROVIDE 'SCREW CAP' INSPECTION RISER AT LOWEST POINT OF CHARGED LINES

DRAINAGE PIPE LEGEND

- EXISTING STORMWATER PIPE
- DRAINAGE PIPES TO RAINWATER TANK
- DRAINAGE PIPES VIA GRAVITY
- CHARGED DRAINAGE PIPES

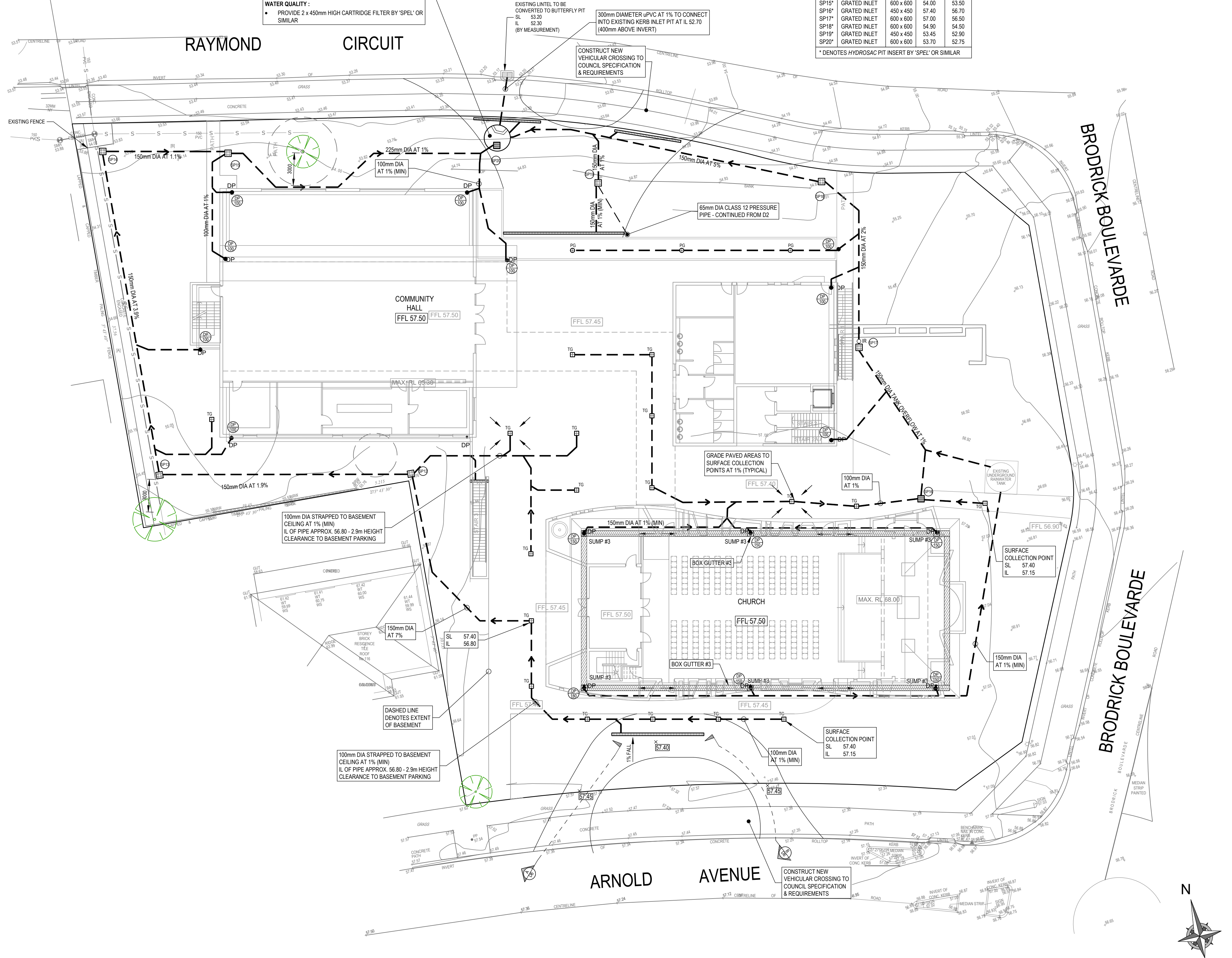
NOTE: ALL PIPES TO BE 100mm DIA PVC UNO

BELOW GROUND WATER QUALITY CHAMBER

- WATER QUALITY CHAMBER:
- SURFACE AREA: 4.45m<sup>2</sup> - 2.38m DIA CHAMBER
  - SURFACE LEVEL: RL 53.70
  - WEIR LEVEL: RL 53.20
  - INVERT LEVEL (IN): RL 52.85
  - INVERT LEVEL (OUT): RL 52.75
- WATER QUALITY:
- PROVIDE 2 x 450mm HIGH CARTRIDGE FILTER BY 'SPEL' OR SIMILAR

PIT SCHEDULE (U.N.O)				
PIT No.	PIT TYPE	PIT SIZE	SURFACE LEVEL	INVERT LEVEL
SP12*	GRATED INLET	600 x 600	55.70	55.30
SP13*	GRATED INLET	600 x 600	55.30	54.90
SP14*	GRATED INLET	600 x 600	54.00	53.60
SP15*	GRATED INLET	600 x 600	54.00	53.50
SP16*	GRATED INLET	450 x 450	57.40	56.70
SP17*	GRATED INLET	600 x 600	57.00	56.50
SP18*	GRATED INLET	600 x 600	54.90	54.50
SP19*	GRATED INLET	450 x 450	53.45	52.90
SP20*	GRATED INLET	600 x 600	53.70	52.75

\* DENOTES HYDROSAC PIT INSERT BY 'SPEL' OR SIMILAR



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A	YR	ISSUED FOR DA	24.10.2020
B	YR	PIT LOCATION AMENDED	17.08.2021
C	YR	ARCHITECTURAL AMENDMENTS	30.03.2022
D	YR	LONGSECTIONS ADDED	13.04.2022

PLAN BY

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DRAWING TITLE		APPROVED BY	DESIGNED	CHECKED
STORMWATER MANAGEMENT PLAN ROOF AND SITE PLAN		NADER ZAKI MIEAust CPeng NER	YR	NZ
PROJECT TITLE			SHEET SIZE	SCALE
PROPOSED CHURCH No.120 ARNOLD AVENUE KELLYVILLE			A1	1:200
			ISSUE	No. IN SET
			D	8
			JOB REFERENCE	DRAWING No.
			E200200	D3



REVISION	DRAWN	DESCRIPTION	DATE	PLAN BY	DRAWING TITLE	APPROVED BY	DESIGNED	CHECKED
A	YR	ISSUED FOR DA	24.10.2020	 <div>T 0416 334 977 E admin@nycivilengineering.com.au W www.nycivilengineering.com.au</div>	<div>STORMWATER AND WATER QUALITY DETAILS</div> <div>PROJECT TITLE</div> <div>PROPOSED CHURCH No.120 ARNOLD AVENUE KELLYVILLE</div>	NADER ZAKI MIEAust CPeng NER	YR	NZ
B	YR	PIT LOCATION AMENDED	17.08.2021			SHEET SIZE	SCALE	
C	YR	ARCHITECTURAL AMENDMENTS	30.03.2022			A1	AS NOTED	
D	YR	LONGSECTIONS ADDED	13.04.2022			ISSUE	No. IN SET	
						D	8	
						JOB REFERENCE	DRAWING No.	
						E200200	D4	



#### DUST CONTROL:

• NOTE: DURING EXCAVATION, DEMOLITION AND CONSTRUCTION, ADEQUATE MEASURES SHALL BE TAKEN TO PREVENT DUST FROM AFFECTING THE AMENITY OF THE NEIGHBORHOOD.

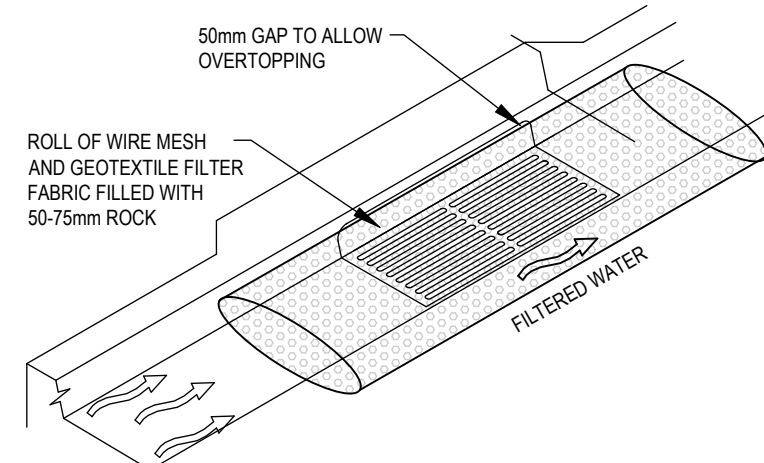
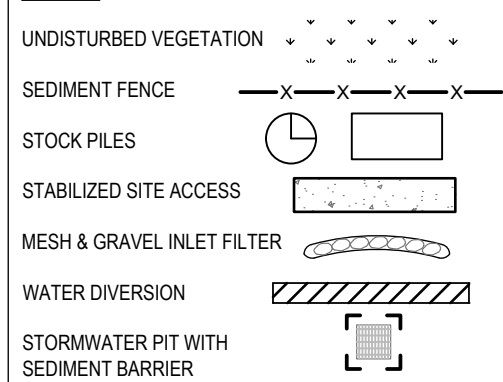
THE FOLLOWING MEASURES MUST BE ADOPTED:

1. PHYSICAL BARRIERS SHALL BE ERECTED AT RIGHT ANGLES TO PREVENT WIND DIRECTION OR SHALL BE PLACED AROUND OR OVER DUST SOURCES TO PREVENT WIND OR ACTIVITY FROM GENERATING DUST.
2. EARTHWORKS AND SCHEDULING ACTIVITIES SHALL BE MANAGED TO COINCIDE WITH THE NEXT STAGE OF DEVELOPMENT TO MINIMISE THE AMOUNT OF TIME THE SITE IS LEFT TO DUST OR EXPOSED.
3. ALL MATERIALS SHALL BE STORED OR STOCKPILED AT THE BEST LOCATIONS.
4. THE GROUND SURFACE SHOULD BE DAMPENED SLIGHTLY TO PREVENT DUST FROM BECOMING AIRBORNE BUT SHOULD NOT BE WET TO THE EXTENT THAT RUN-OFF OCCURS.
5. ALL VEHICLES CARRYING SOIL OR RUBBLE TO OR FROM THE SITE SHALL AT ALL TIMES BE COVERED TO PREVENT THE ESCAPE OF DUST.
6. ALL EQUIPMENT WHEELS SHALL BE WASHED BEFORE EXISTING THE SITE USING MANUAL OR AUTOMATED SPRAYERS AND DRIVE - THROUGH WASHING BAYS.
7. GATES SHALL BE CLOSED BETWEEN VEHICLE MOVEMENTS SHALL BE FITTED WITH SHADE CLOTH.
8. CLEANING OF FOOTPATHS AND ROADWAYS SHALL CARRIED OUT DAILY.
9. ALL BUILDERS REFUSE, SPOIL AND/OR MATERIAL UNSUITABLE FOR USE IN LANDSCAPE AREAS SHALL BE REMOVED FROM SITE ON COMPLETION OF THE BUILDING WORKS.

#### NOTES:

1. ALL EROSION AND SEDIMENT CONTROL MEASURES TO BE INSPECTED AND MAINTAINED DAILY BY SITE MANAGER IN ACCORDANCE WITH COUNCIL REQUIREMENTS.
2. ALL STOCKPILES TO BE CLEAR FROM DRAINS, GUTTERS AND FOOTPATHS.
3. DRAINAGE IS TO BE CONNECTED TO STORMWATER SYSTEM AS SOON AS POSSIBLE.
4. ROADS AND FOOTPATH TO BE SWEEP DAILY AS REQUIRED BY COUNCIL.
5. IF YOU DO NOT COMPLY WITH COUNCIL REQUIREMENTS & DOCUMENTATION, YOU MAY BE LIABLE TO PROSECUTION FROM GOVERNMENT AUTHORITIES.

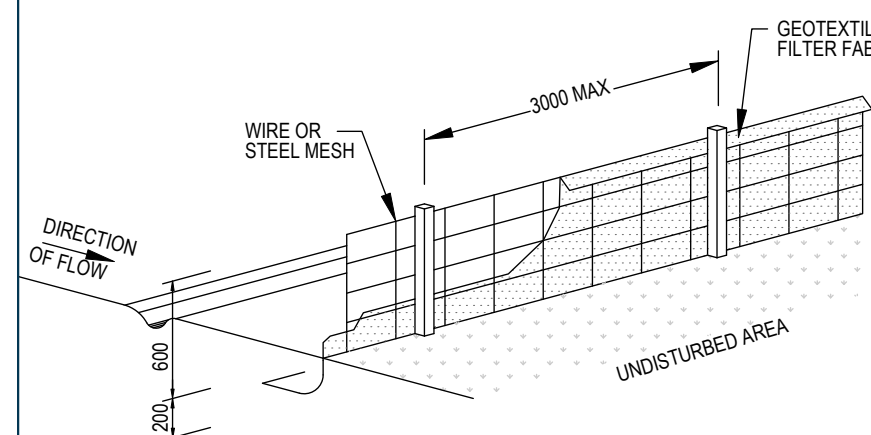
#### LEGEND:



#### MESH AND GRAVEL INLET FILTER NTS

##### CONSTRUCTION NOTES:

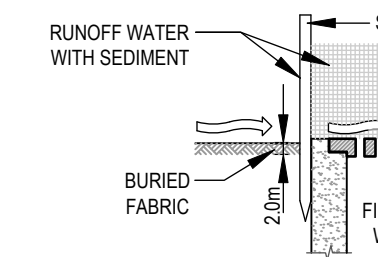
1. INSTALL FILTERS TO KERB INLETS ONLY AT SAG POINTS
2. FABRICATE A SLEEVE MADE FROM GEOTEXTILE OR WIRE MESH LONGER THAN THE LENGTH OF THE INLET PIT AND FILL IT WITH 25mm TO 50mm GRAVEL
3. FORM AN ELLIPTICAL CROSS-SECTION ABOUT 150mm(x) 400mm(w)
4. PLACE THE FILTER AT THE OPENING LEAVING AT LEAST 100mm SPACE BETWEEN IT AND THE KERB INLET. MAINTAIN THE OPENING WITH SPACER BLOCKS.
5. FORM A SEAL WITH THE KERB TO PREVENT SEDIMENT BYPASSING THE FILTER.
6. SANDBAGS FILLED WITH GRAVEL CAN SUBSTITUTE FOR THE MESH OR GEOTEXTILE PROVIDING THEY ARE PLACED SO THAT THEY FIRMLY ABUT EACH OTHER AND SEDIMENT-LADEN WATERS CANNOT PASS BETWEEN.



#### SEDIMENT FENCE DETAIL NTS

##### CONSTRUCTION NOTES:

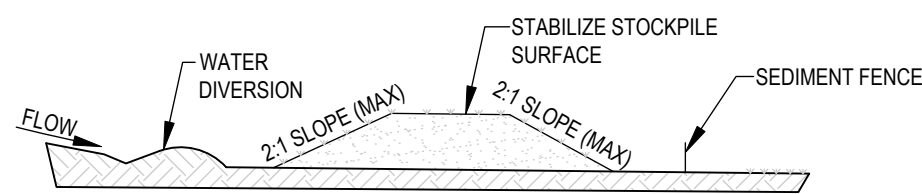
1. CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWINGS TO LIMIT THE CATCHMENTS AREA OF ANY ONE SECTION. THE CATCHMENTS AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW IF CONCENTRATED AT ONE POINT TO 50 LITRES PER SECOND IN THE DESIGN STORM EVENT, USUALLY THE 10 YEAR EVENT.
2. CUT A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
3. DRIVE 1.5m LONG STAR PICKETS INTO GROUND AT 2.5m INTERVALS (MAX) AT THE DOWNSLOPE EDGE OF THE TRENCH. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS.
4. FIX SELF-SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS ENSURING IT GOES TO THE BASE OF THE TRENCH. FIX THE GEOTEXTILE WITH WIRE TIES OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE OF SHADE CLOTH FOR THIS PURPOSE IS NOT SATISFACTORY.
5. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH 150mm OVERLAP.
6. BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.



#### SEDIMENT BARRIER AROUND PIT NTS

##### CONSTRUCTION NOTES:

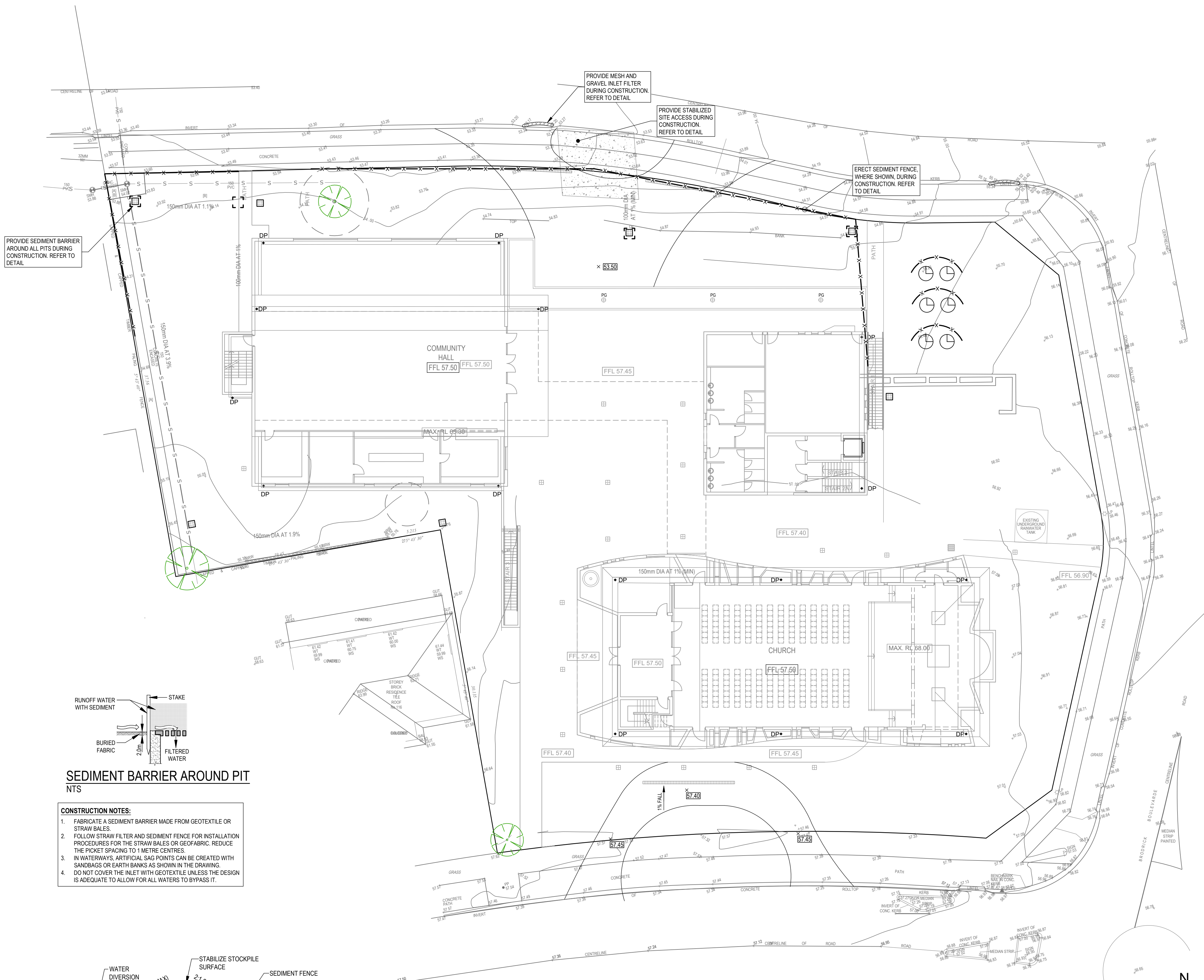
1. FABRICATE A SEDIMENT BARRIER MADE FROM GEOTEXTILE OR STRAW BALES.
2. FOLLOW STRAW FILTER AND SEDIMENT FENCE FOR INSTALLATION PROCEDURES FOR THE STRAW BALES OR GEOTEXTILE. REDUCE THE PICKET SPACING TO 1 METRE CENTRES.
3. IN WATERWAYS, ARTIFICIAL SAG POINTS CAN BE CREATED WITH SANDBAGS OR EARTH BANKS AS SHOWN IN THE DRAWING.
4. DO NOT COVER THE INLET WITH GEOTEXTILE UNLESS THE DESIGN IS ADEQUATE TO ALLOW FOR ALL WATERS TO BYPASS IT.



#### STOCKPILE NTS

##### NOTE:

1. PLACE STOCKPILES MORE THAN 2 (PREFERABLY 5) METRES FROM EXISTING VEGETATION, CONCENTRATED WATER FLOW, ROADS AND HAZARD AREAS.
2. CONSTRUCT ON THE CONTOUR AS LOW, FLAT, ELONGATED MOUNDS.
3. WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2 METRES IN HEIGHT.
4. WHERE THEY ARE TO BE IN PLACE FOR MORE THAN 10 DAYS, STABILIZE FOLLOWING THE APPROVED ESCP OR SWMP TO REDUCE THE C-FACTOR TO LESS THAN 0.10.
5. CONSTRUCT EARTH BANKS (LOW FLOW) ON THE UPSLOPE SIDE TO DIVERT WATER AROUND STOCKPILES AND SEDIMENT FENCES 1 TO 2 METRES ON THE DOWNSLOPE.



REVISION	DRAWN	DESCRIPTION	DATE
A	YR	ISSUED FOR DA	24.10.2020
B	YR	PIT LOCATION AMENDED	17.08.2021
C	YR	ARCHITECTURAL AMENDMENTS	30.03.2022
D	YR	LONGSECTIONS ADDED	13.04.2022



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#### SEDIMENT CONTROL PLAN AND DETAILS

PROJECT TITLE

PROPOSED CHURCH  
No.120 ARNOLD AVENUE  
KELLYVILLE

APPROVED BY  
NADER ZAKI  
MIEAust CPENG NER

DESIGNED  
YR

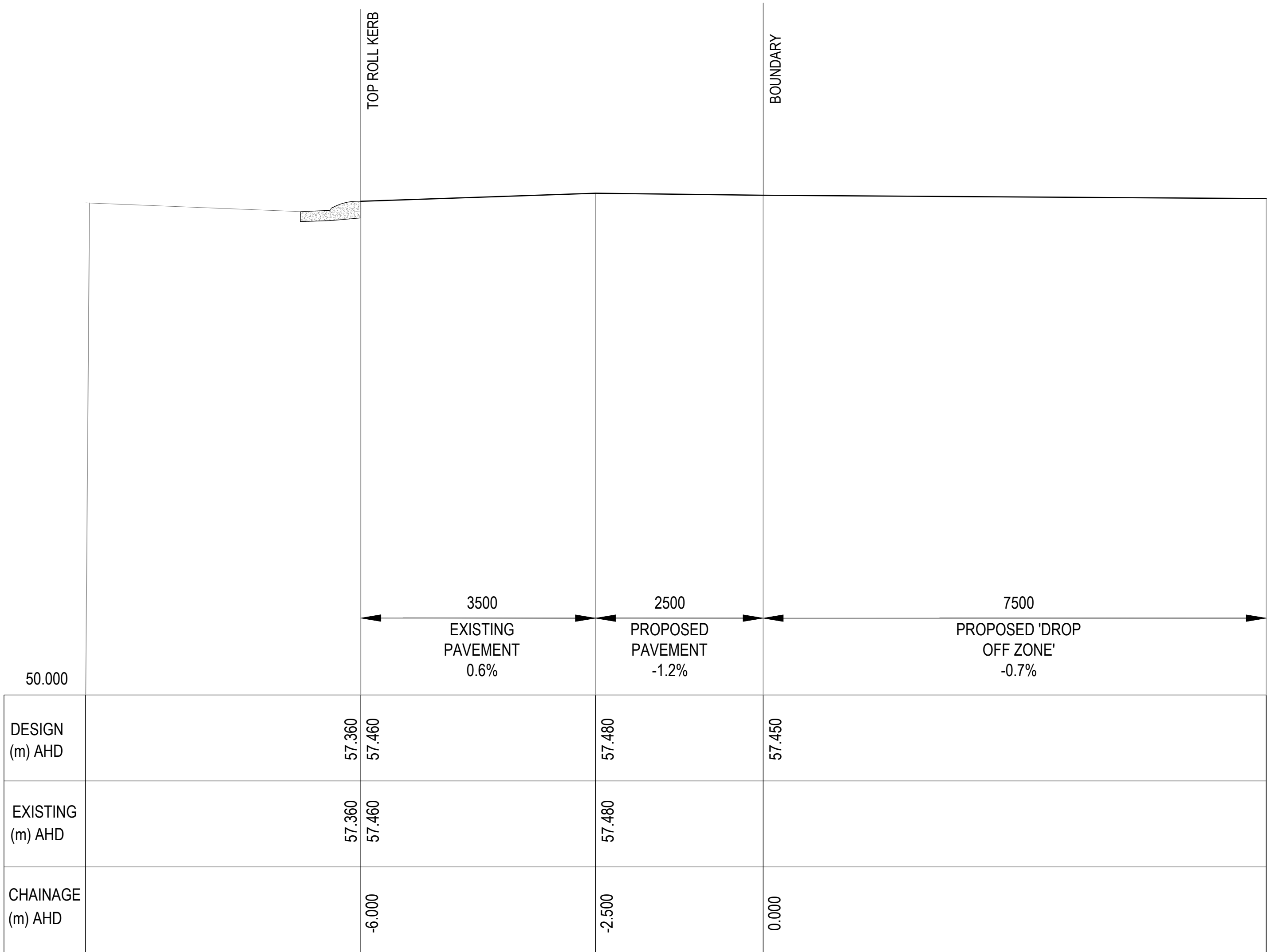
SCALE  
A1

ISSUE  
D

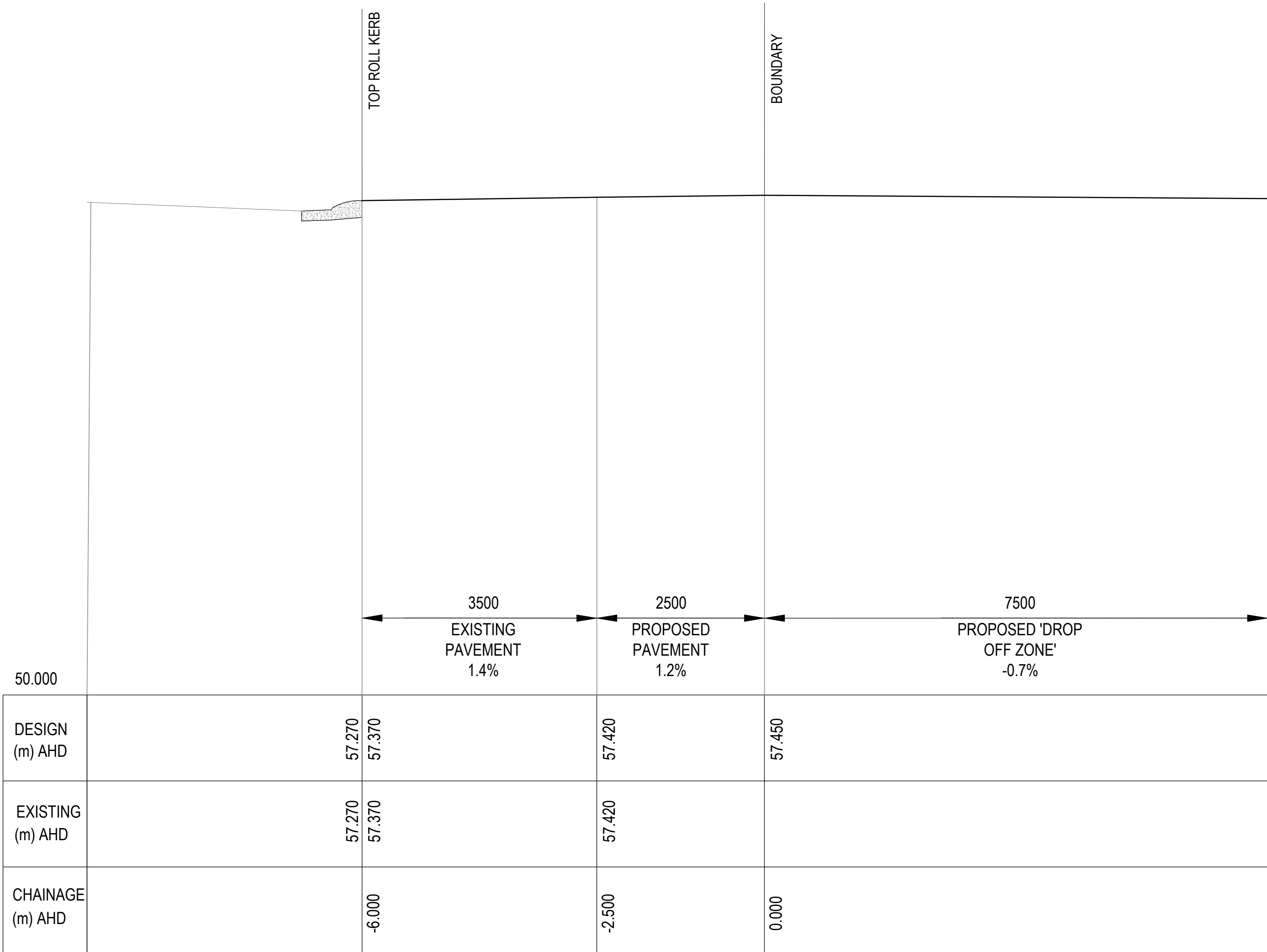
No. IN SET  
8

DRAWING No.  
D5

JOB REFERENCE  
E200200



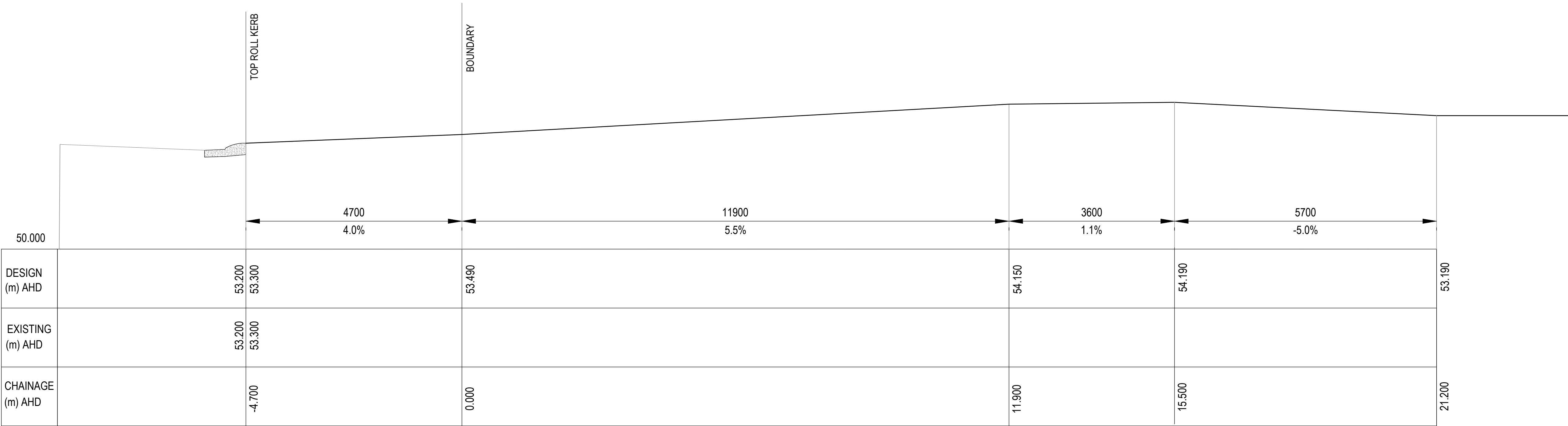
DRIVEWAY LONGSECTION A  
HORIZONTAL 1:50  
VERTICAL 1:50



DRIVEWAY LONGSECTION B  
HORIZONTAL 1:50  
VERTICAL 1:50

REVISION	DRAWN	DESCRIPTION	DATE	PLAN BY	DRAWING TITLE	APPROVED BY	DESIGNED	CHECKED
A	YR	ISSUED FOR DA	24.10.2020		DRIVEWAY LONGSECTIONS	NADER ZAKI MIEAust CPEng NER	YR	NZ
B	YR	PIT LOCATION AMENDED	17.08.2021		PROJECT TITLE		A1	SCALE
C	YR	ARCHITECTURAL AMENDMENTS	30.03.2022		PROPOSED CHURCH		ISSUE	No. IN SET
D	YR	LONGSECTIONS ADDED	13.04.2022		No.120 ARNOLD AVENUE		D	8
					KELLYVILLE	JOB REFERENCE E200200	DRAWING No.	D6

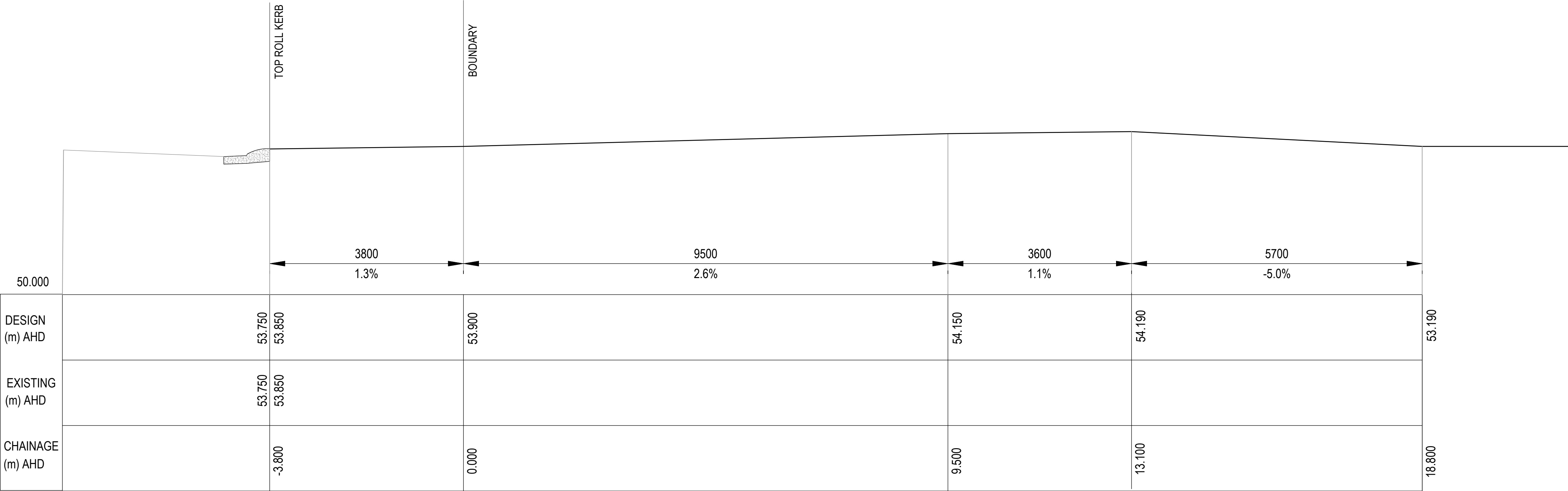




DRIVEWAY LONGSECTION C

HORIZONTAL 1:50

VERTICAL 1:50



DRIVEWAY LONGSECTION D

HORIZONTAL 1:50

VERTICAL 1:50

REVISION	DRAWN	DESCRIPTION	DATE	PLAN BY	DRAWING TITLE	APPROVED BY	DESIGNED	CHECKED
A	YR	ISSUED FOR DA	24.10.2020	<div><div>NY CIVIL ENGINEERING</div><div>0416 734 977</div><div>adnan@nycivilengineering.com.au</div><div>www.nycivilengineering.com.au</div></div>	DRIVEWAY LONGSECTIONS	NADER ZAKI MIEAust CPEng NER	YR	NZ
B	YR	PIT LOCATION AMENDED	17.08.2021					
C	YR	ARCHITECTURAL AMENDMENTS	30.03.2022					
D	YR	LONGSECTIONS ADDED	13.04.2022					
					PROJECT TITLE		SHEET SIZE	SCALE
					PROPOSED CHURCH		A1	AS NOTED
					No.120 ARNOLD AVENUE		ISSUE	No. IN SET
					KELLYVILLE		D	8
						JOB REFERENCE	DRAWING No.	
						E200200	D7	

1% AEP TWL 53.32 - FPL 53.83

1% AEP TWL 53.40 (INTERPOLATED) - FPL 53.90

1% AEP TWL 53.46 (INTERPOLATED) - FPL 53.96

1% AEP TWL 53.52 - FPL 54.02

1% AEP TWL 53.90 - FPL 54.42

1% AEP TWL 54.18 - FPL 54.68

REVISION	DRAWN	DESCRIPTION	DATE
A	YR	ISSUED FOR DA	24.10.2020
B	YR	PIT LOCATION AMENDED	17.08.2021
C	YR	ARCHITECTURAL AMENDMENTS	30.03.2022
D	YR	LONGSECTIONS ADDED	13.04.2022

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DRAWING TITLE	APPROVED BY
FLOOD LEVEL PLAN	NADER ZAKI MIEAust CPEng NER
PROJECT TITLE	
PROPOSED CHURCH No.120 ARNOLD AVENUE KELLYVILLE	
JOB REFERENCE E200200	

DESIGNED	CHECKED
YR	NZ
SHEET SIZE	SCALE
A1	1:200
ISSUE	No. IN SET
D	8
DRAWING No.	D8