

REVISION SUMMARY		
REV.	DATE	DESCRIPTION
0	29/06/2022	ISSUED FOR CONSTRUCTION
DRAWING NOTES		
ALL WORK ACCORDING TO SANS 1200.		
ALL DIMENSIONS TO BE VERIFIED ON SITE.		
EXCAVATIONS:		
- ALL TREE ROOTS AND VEGETATION TO BE REMOVED FROM EXCAVATIONS.		
- MINIMUM GROUND BEARING PRESSURE 100kPa		
REINFORCEMENT:		
- LAP LENGTH = 50x BAR DIAMETER		
- COVER = 50mm ALL ROUND		
- REFER TO BENDING SCHEDULE		
2127-F-BW-BS001 AND 002 FOR REINFORCEMENT DETAILS		
CONCRETE:		
- 25MPa CONCRETE CUBE STRENGTH (AT 28 DAYS) TO BE USED IN ALL FOUNDATIONS AND SURFACE BEDS		
- ALLOWED 50% EXTENDER (NO GG85)		
MAXIMUM IN CONCRETE MIX.		
- IT REMAINS CONTRACTOR'S RESPONSIBILITY TO CURE CONCRETE AND REACH THE SPECIFIED CONCRETE CUBE STRENGTH AT 28 DAYS. CONCRETE CUBE STRENGTH TEST RESULTS TO BE SENT TO ENGINEER AS CONFIRMATION THERE OF.		
MASONRY:		
- HOLLOW CLAY BRICKS (COMPRESSIVE STRENGTH OF ATLEAST 7MPa) TO BE USED FOR THE FACEBRICK WALLS WITH A WATER ABSORPTION RATE OF LESS THAN 7.5% AND A DENSITY OF 2.15kg/m ³ /mm.		
- BRICK MORTAR (DAGHA) TO BE OF CLASS II.		
- BRICK WALLS TO NOT EXTEND PAST 2.9m ABOVE NGL		
- BRICK WALLS TO BE TEECHED IN TO PIERS.		
- 3.15mm THK GALVANISED BRICKFORCE TO BE USED		
SETTING-OUT:		
- STRUCTURES / FOUNDATIONS TO BE SET-OUT ACCORDING TO ARCHITECT'S PLANS.		
ENGINEER:		
- INSPECTIONS TO BE REQUESTED WITHIN 48 HOURS OF CONCRETE POUR.		
- ANY CONTRASTING INFORMATION TO BE BROUGHT TO THE ENGINEER'S ATTENTION IMMEDIATELY.		

PROJECT
TOWNSHIP DEVELOPMENT
BLUE HILLS

LOCATION
ACACIA ROAD
BLUE HILLS EXT 105

DRAWING TITLE
BOUNDARY WALL - FOUNDATION LAYOUT
& DETAILS

DRAWING NUMBER
2127-BW-F01

REVISION
0

SCALE
AS SHOWN

SITE NUMBER
EXT 105

TOWNSHIP
BLUE HILLS

REGION
MIDRAND

SITE
A1

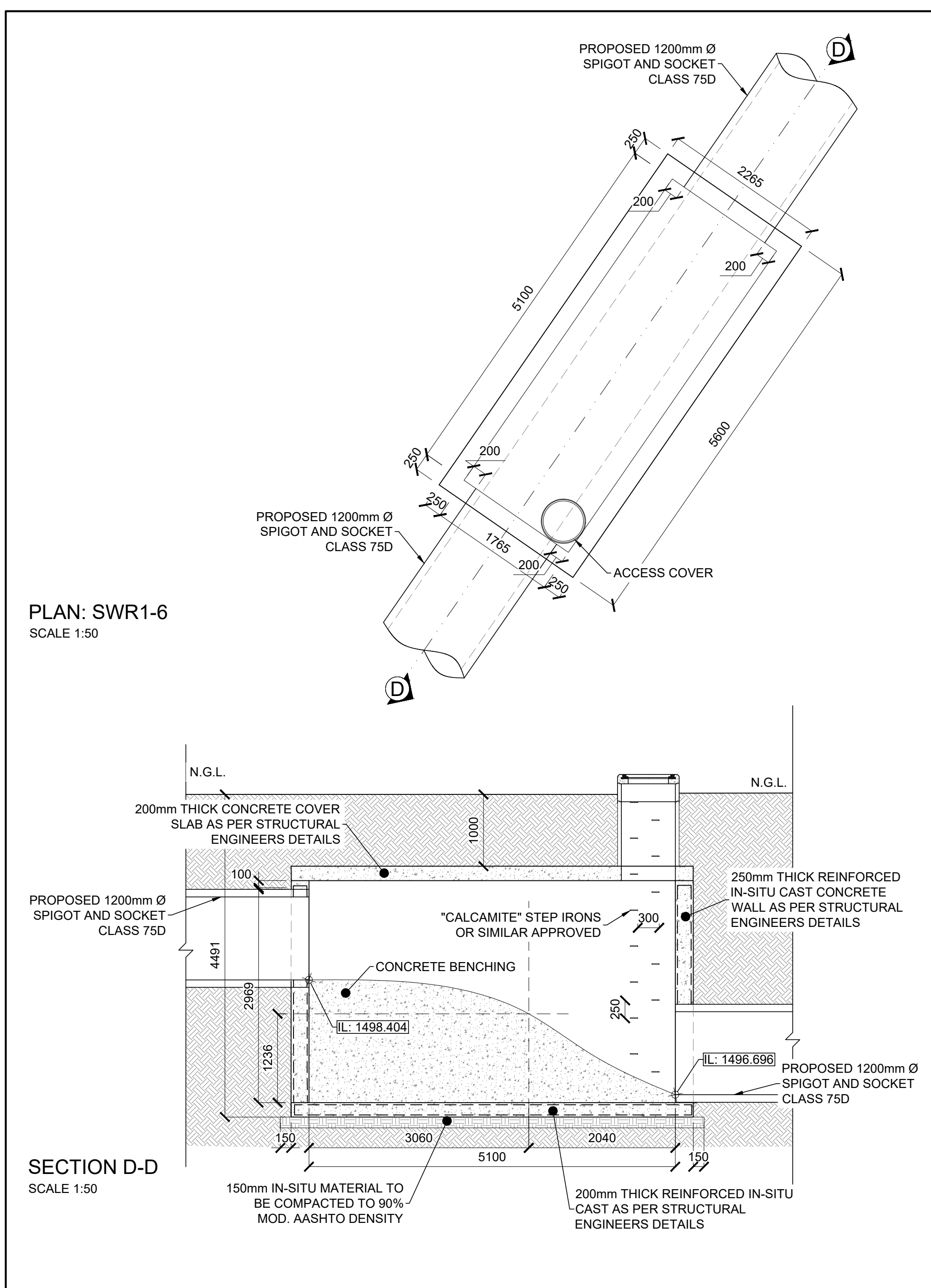
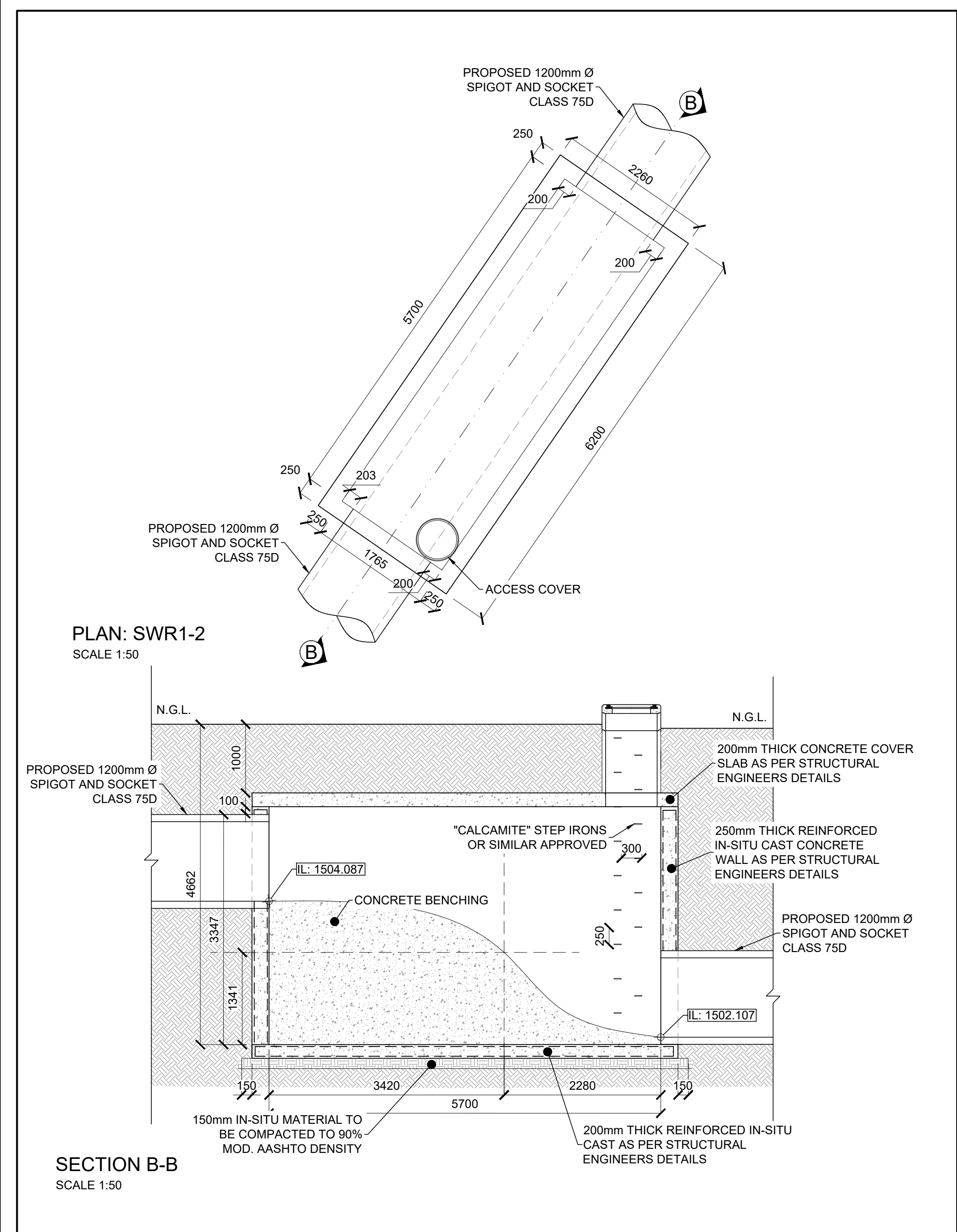
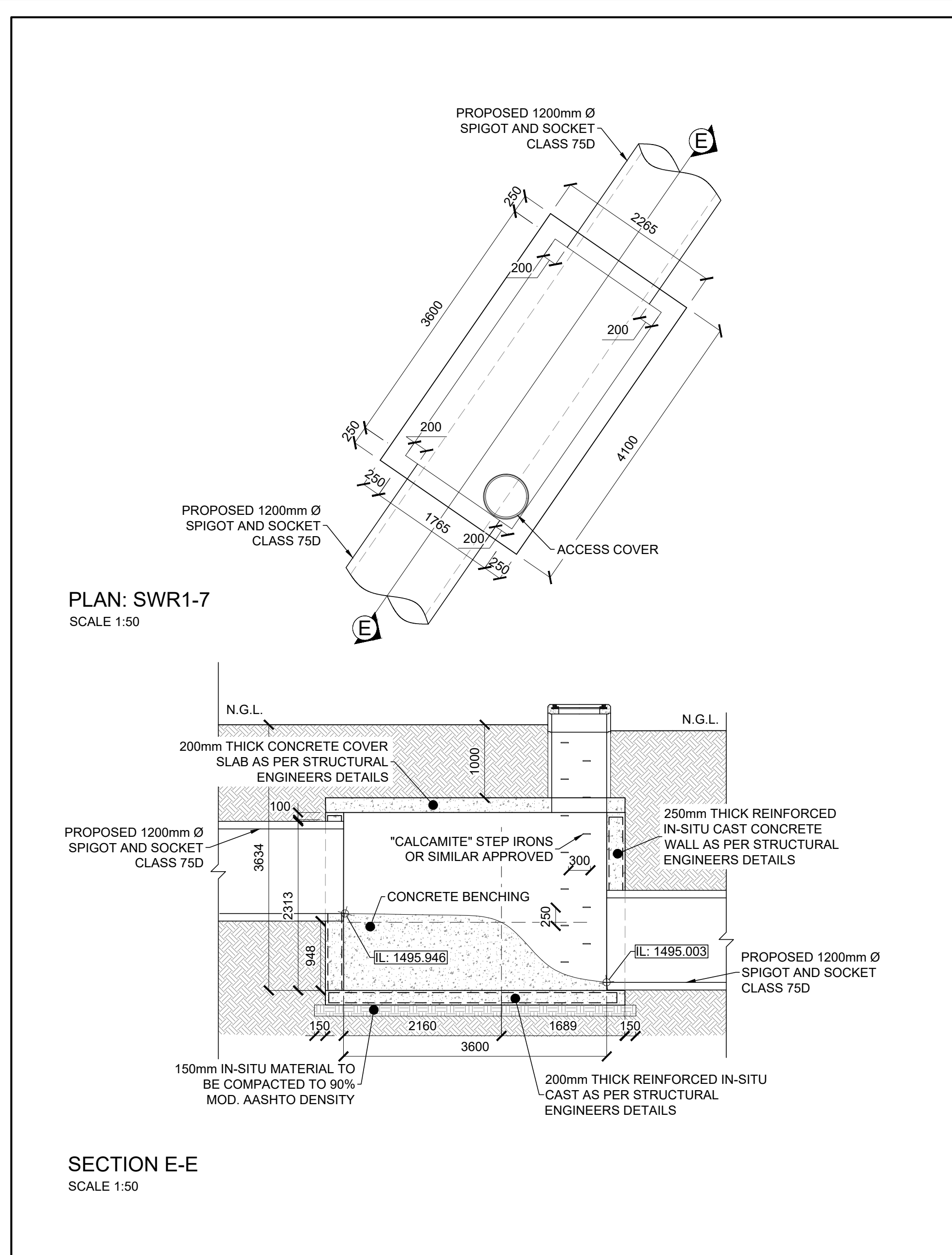
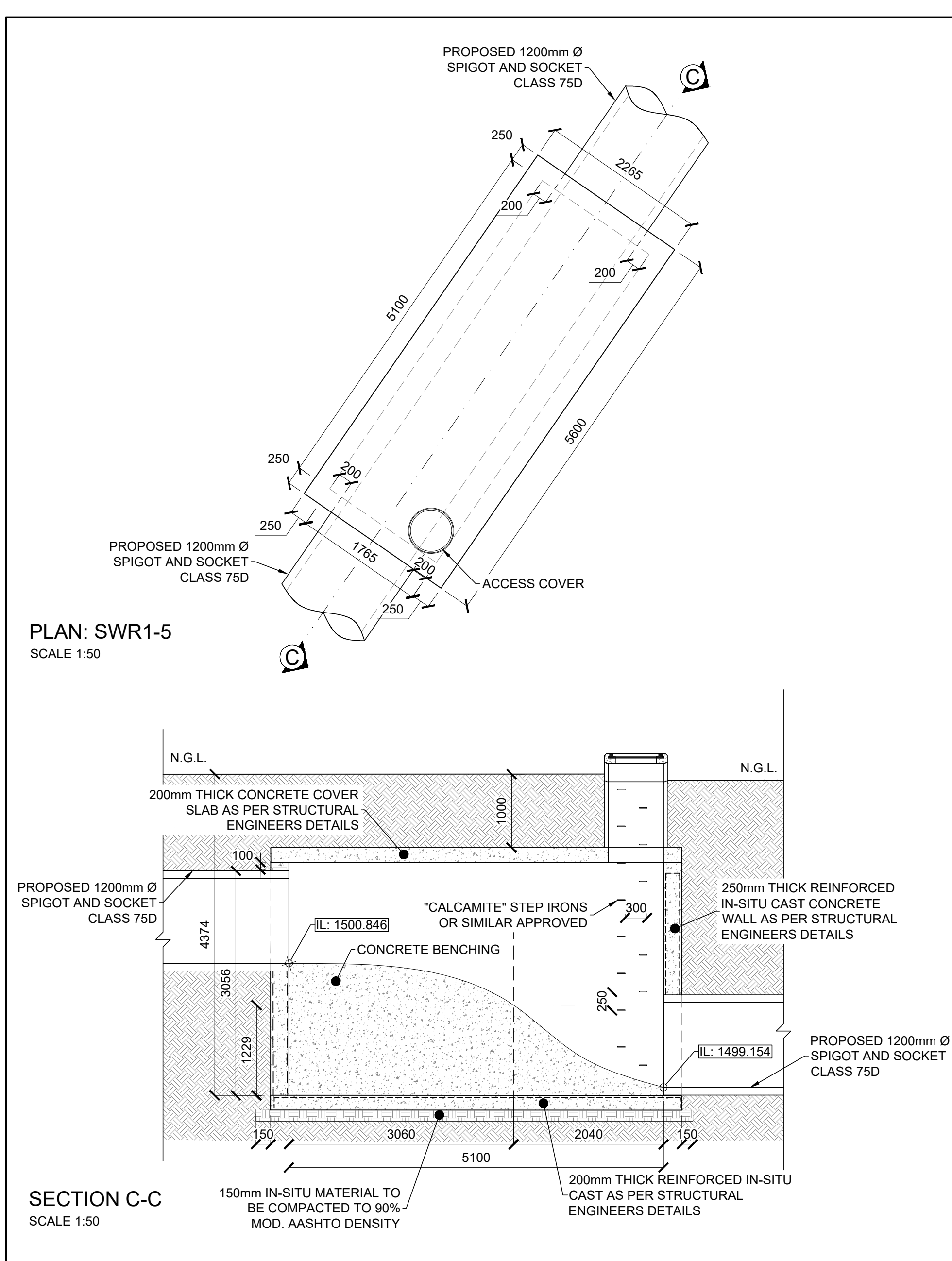
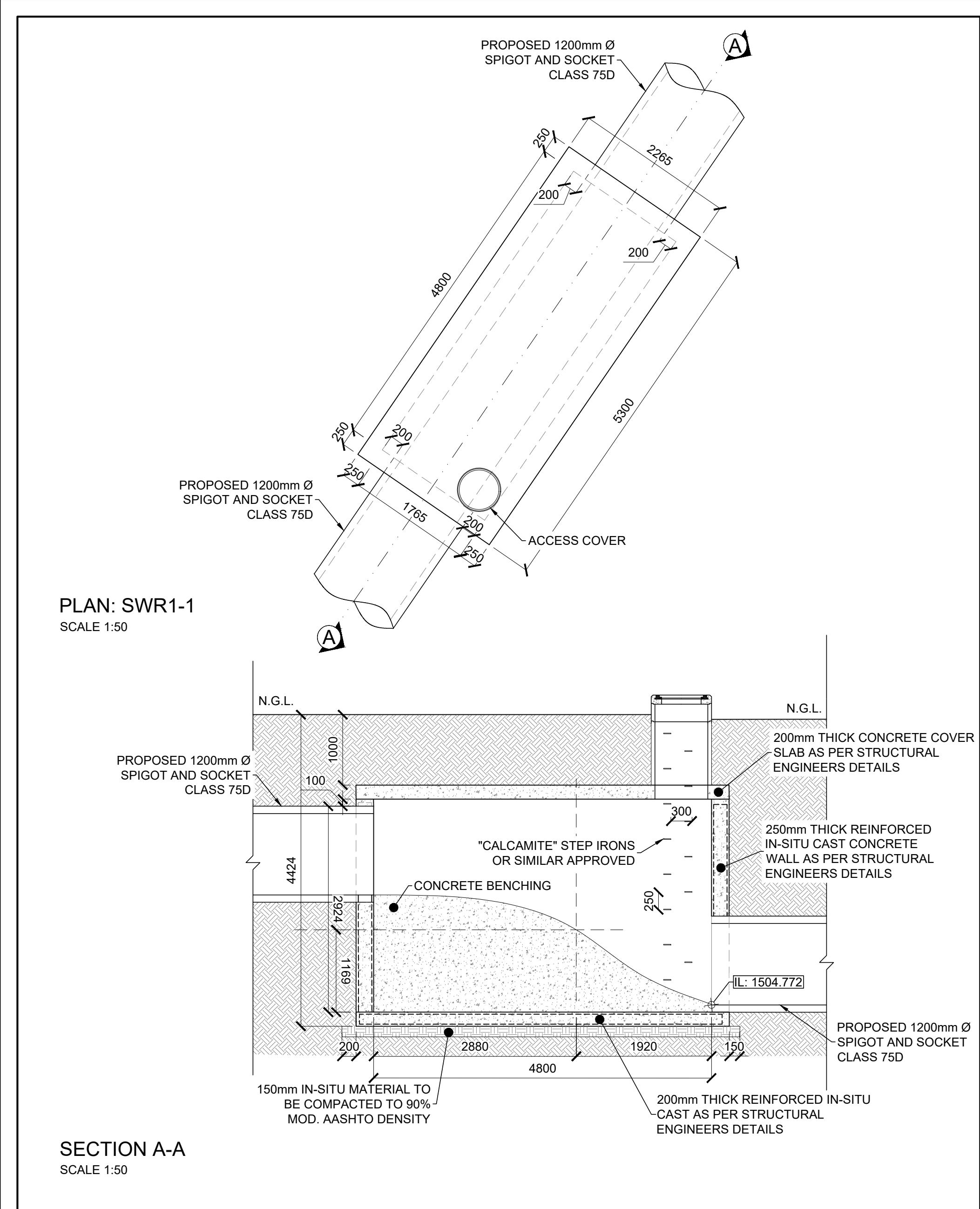
JOB NO.
2127

DATE
29/06/2022

ENGINEER

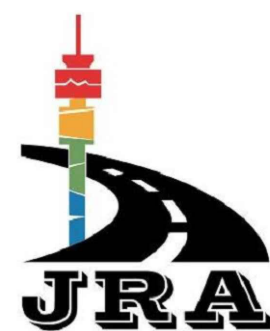

Mulato Tshilololi ECSA 201070156
ISSUED FOR CONSTRUCTION

THIS DOCUMENT IS THE PROPERTY OF THE ENGINEER. IT IS NOT TO BE REPRODUCED OR ANY PARTS OF IT BEING REPRODUCED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER.



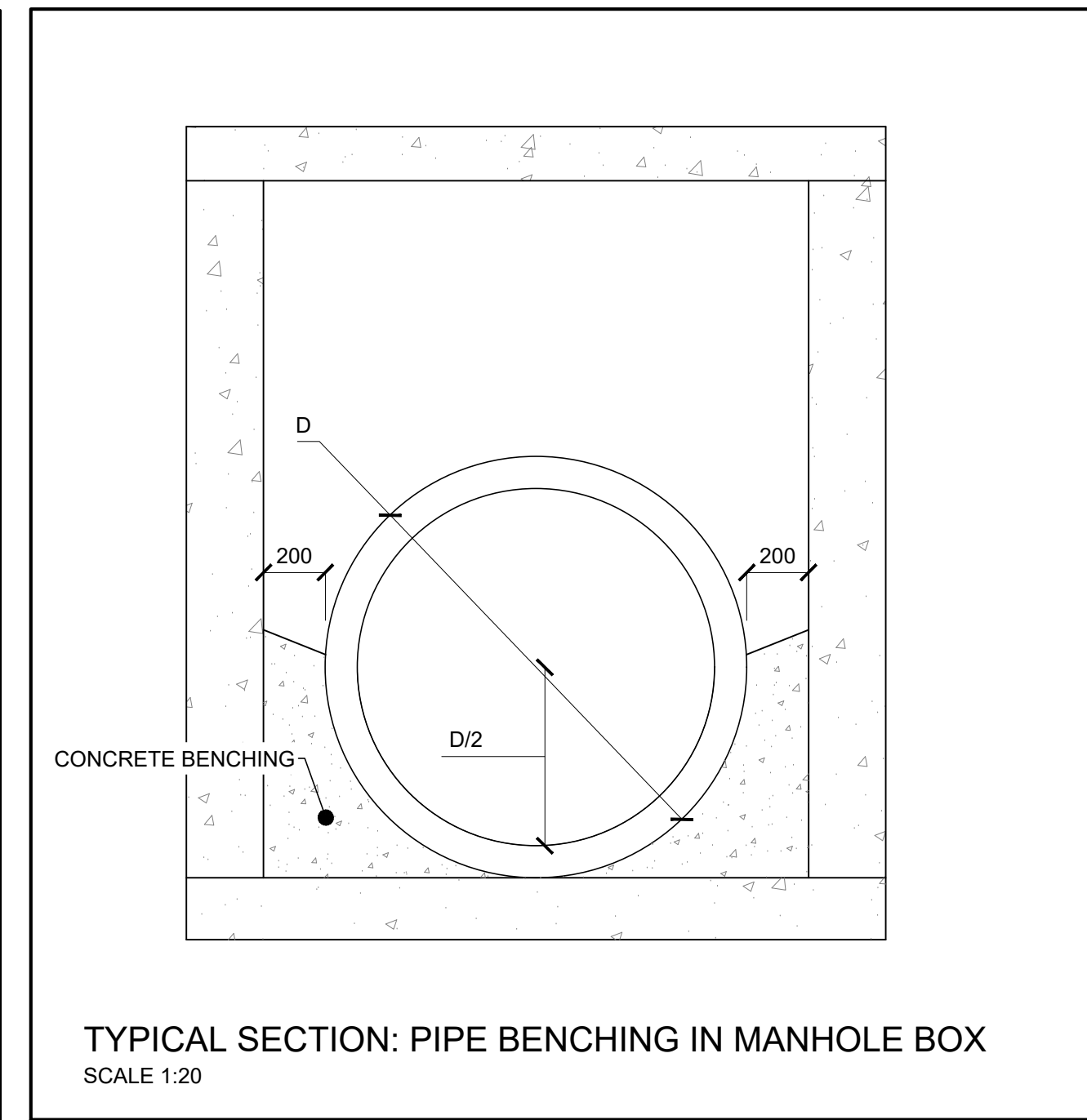
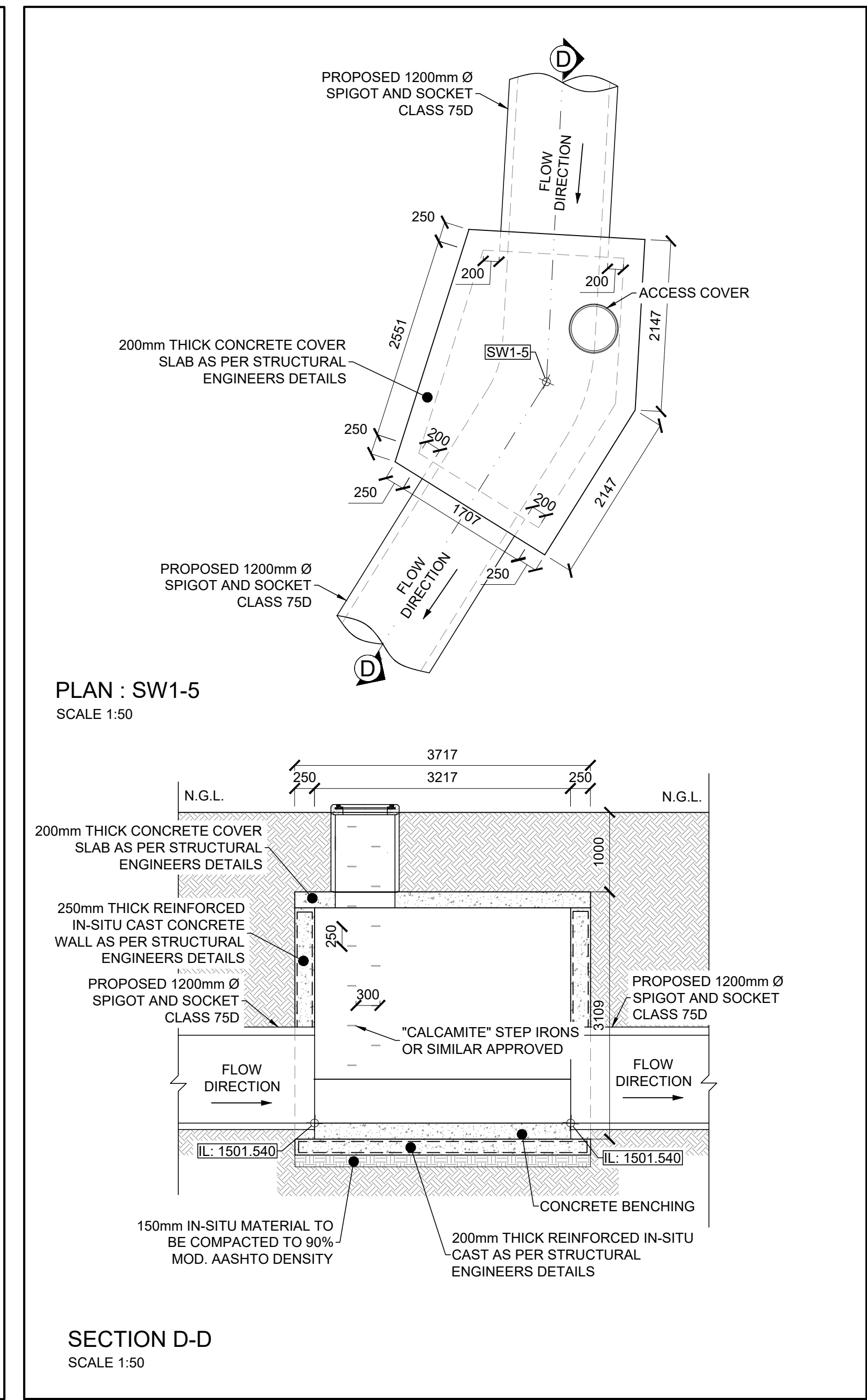
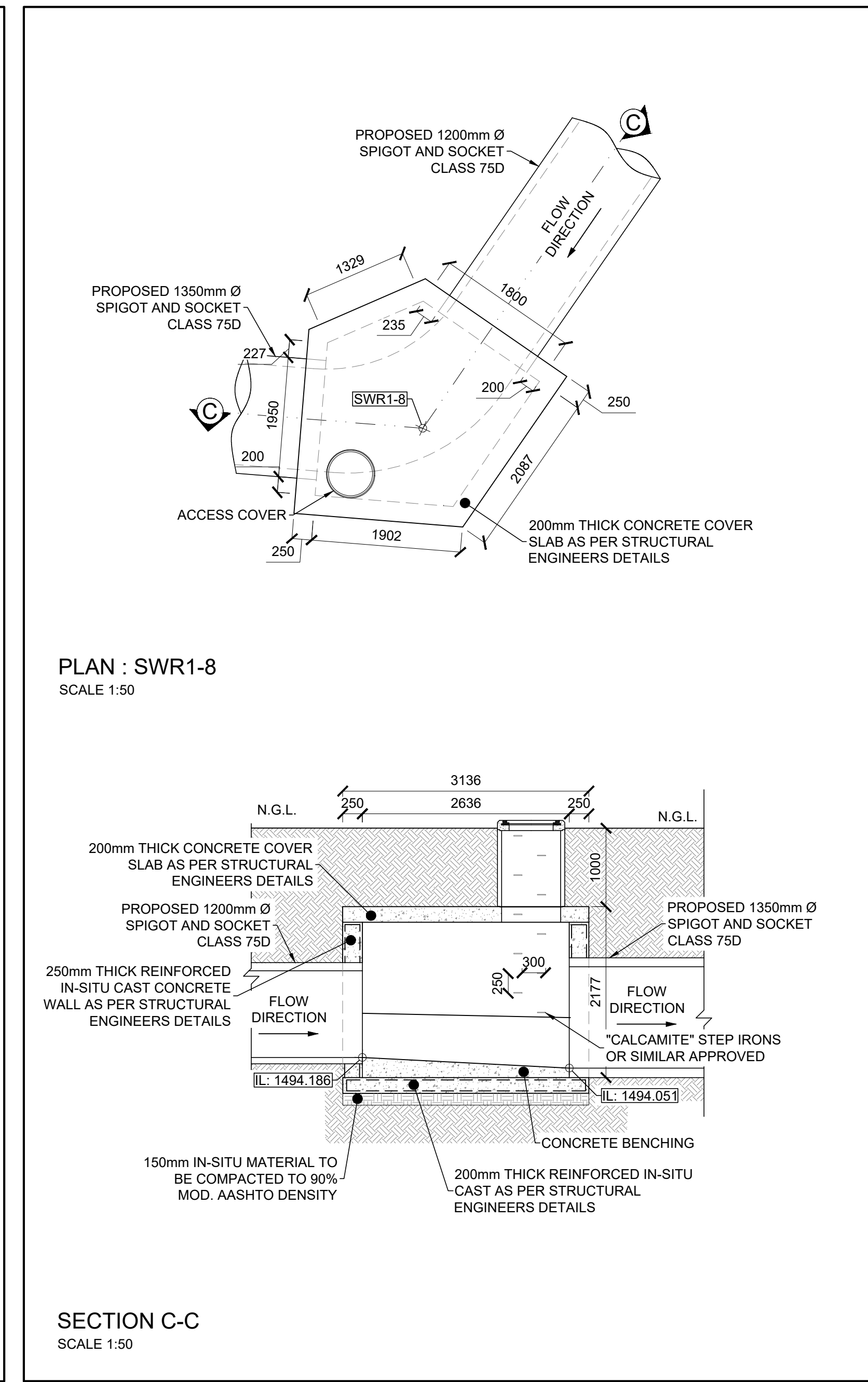
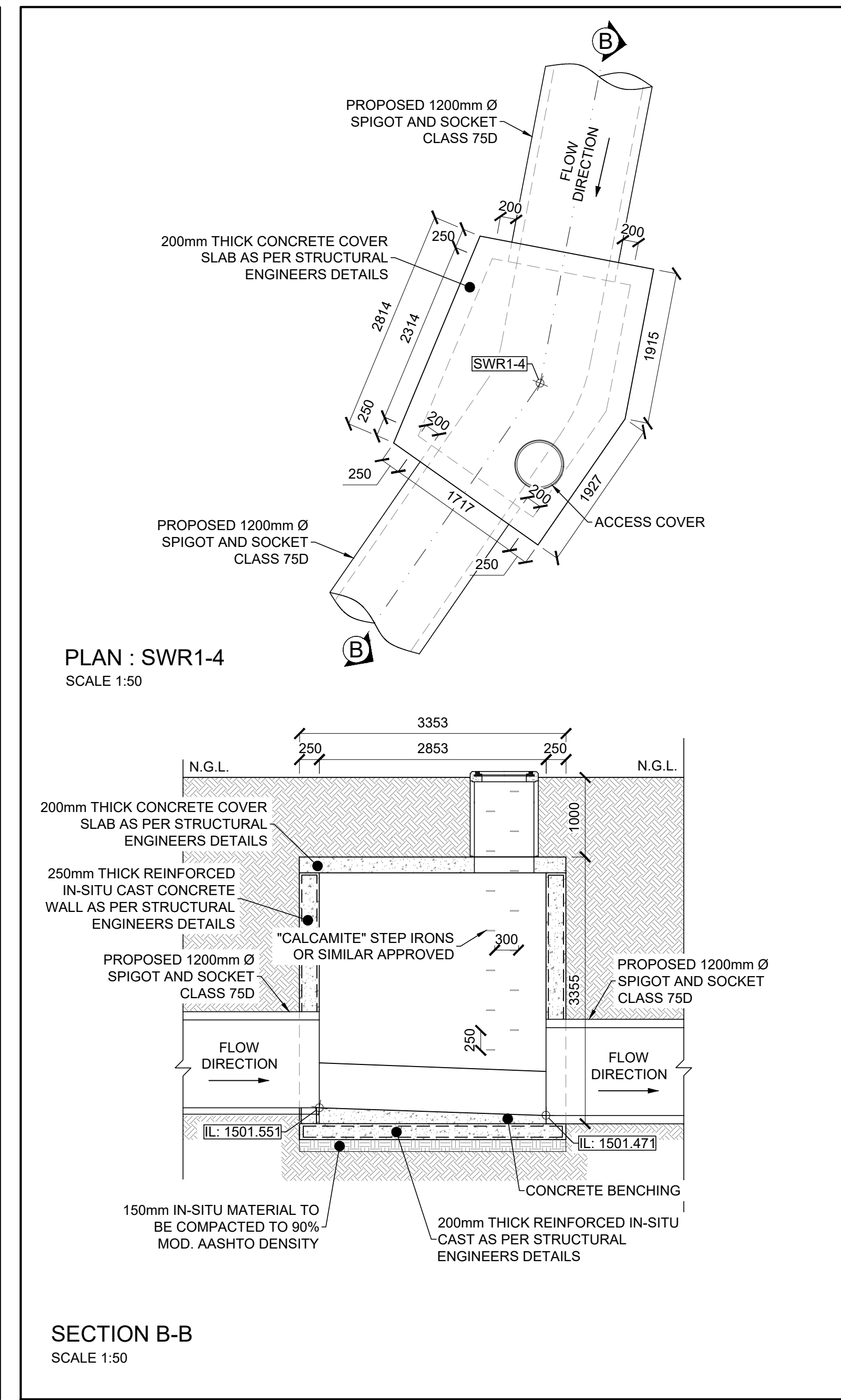
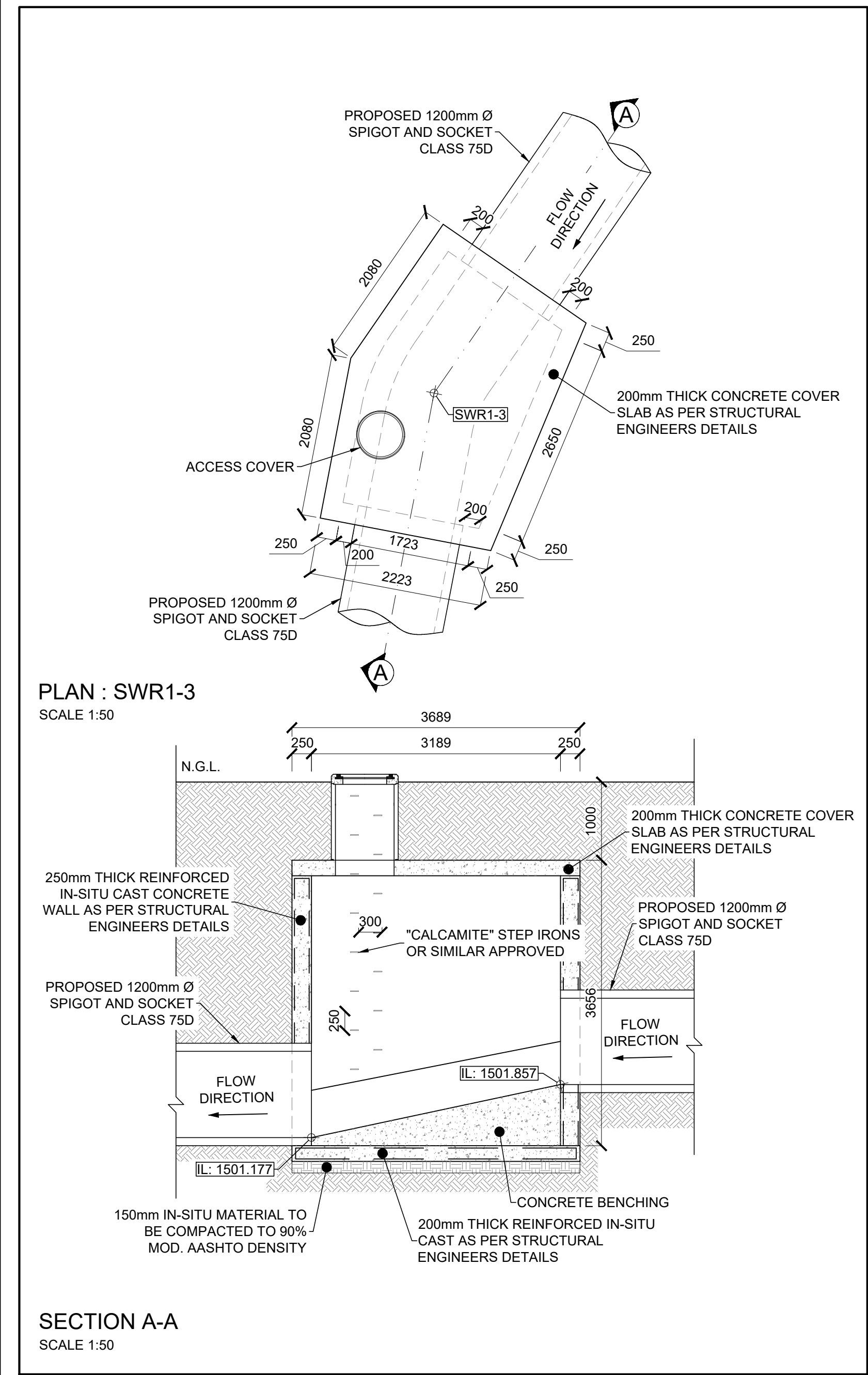
- NOTES:**
- ALL MATERIAL AND WORKMANSHIP MUST COMPLY WITH THE REQUIREMENTS OF THE LATEST RELEVANT SANS CODES.
 - ALL DIMENSIONS ARE IN MILLIMETERS, UNLESS OTHERWISE INDICATED.
 - DO NOT SCALE FROM THIS DRAWING.
 - ALL DIMENSIONS AND SETTING OUT POINTS MUST BE CHECKED AND APPROVED ON SITE BEFORE CONSTRUCTION COMMENCES.
 - ENGINEER OR THE ENGINEERS REPRESENTATIVE TO BE INVITED FOR INSPECTIONS ACCORDING TO SCE CIVIL ENGINEERING INSPECTION NOTIFICATION REQUIREMENTS.
 - CONTRACTOR TO COMPLY WITH THE OCCUPATIONAL HEALTH AND SAFETY ACT (85 OF 1993), THE CONSTRUCTION REGULATIONS OF 2014 AND ALL RELEVANT REGULATIONS AS WELL AS THEIR AMENDMENTS.
 - CONTRACTOR TO IMMEDIATELY REPORT ANY DAMAGE TO EXISTING SERVICES IN WRITING TO THE ENGINEER OR THE ENGINEERS REPRESENTATIVE.
 - ON COMPLETION OF STORMWATER INSTALLATION, CONTRACTOR TO PROVIDE COMPLETE AS-BUILT INFORMATION TO THE ENGINEER.
- REFERENCE DRAWINGS:**
- 4986-BM-L01 BENCHMARK LAYOUT
4986-SW-ML03 MUNICIPAL STORMWATER LAYOUT AND LONGSECTION
4986-SW-MD06 MUNICIPAL STORMWATER MANHOLE DETAILS
- REFERENCE DRAWINGS FOR MANHOLE CONSTRUCTION:**
- 4986-SW-01 - STORMWATER MANHOLES REBAR DETAILS

CONSULTING ENGINEERS			SURVEYED	-	-
 34 DENNINGTON ROAD WINSTON RIDGE SANDTON 2196	PROJECT NO.	DRAWING NO.	DESIGNED	C.LEMMER	
	4986	4986-SW-MD05	DRAWN	A.GLAFKE	
			CHECKED	S.SOTIRALIS	
			SERVICES CHECKED	TBC	-
			GEOTECHNICAL INVESTIGATION	TBC	-
			SERVITUDES	TBC	-
			APPROVED	M.TSHIOLOLI	
			PR. ENG. NO.	201070156	DATE : 2023/08/21

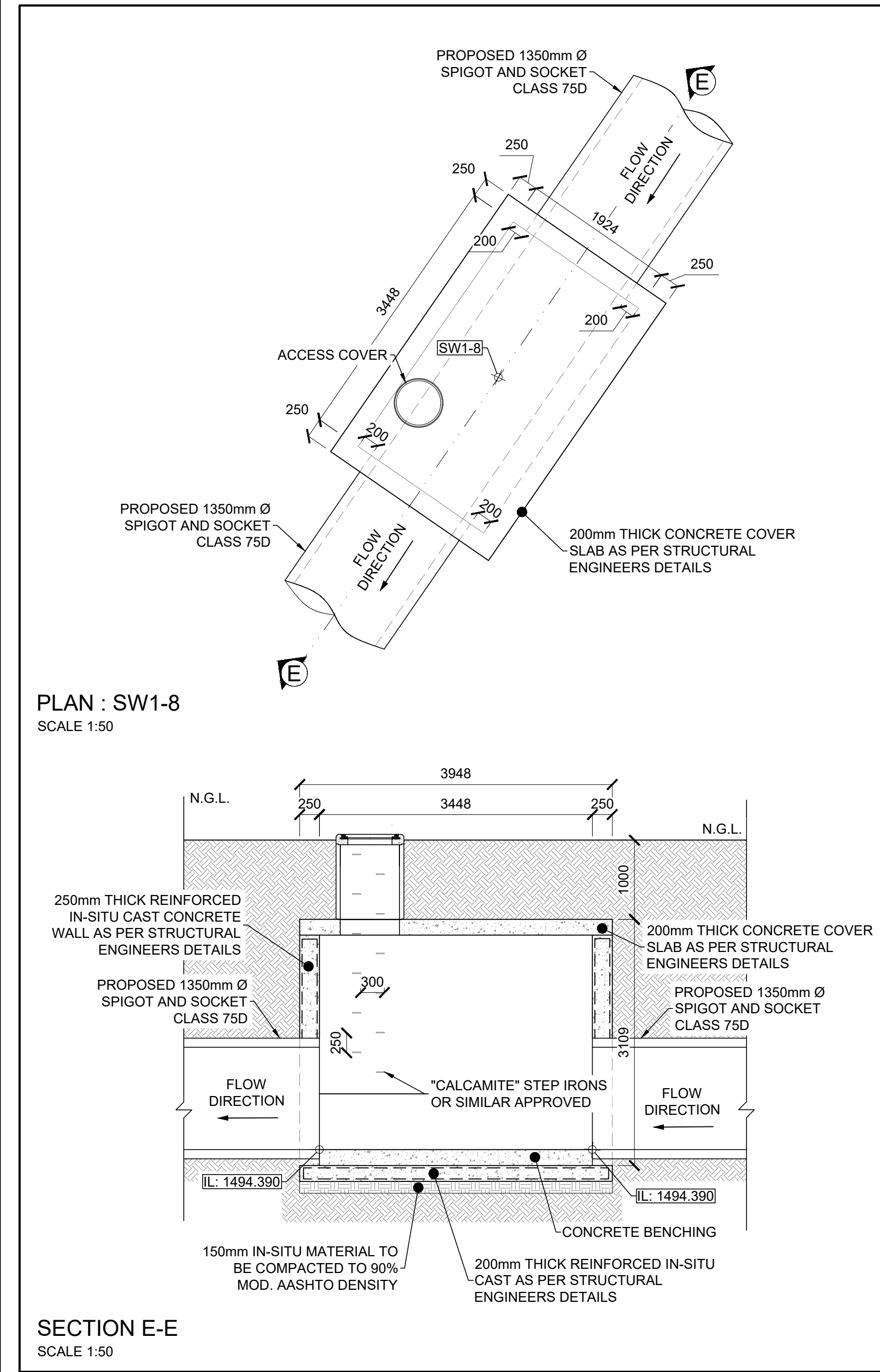


CITY OF JOHANNESBURG	
PROJECT: BLUE HILLS EXTENSION 105	
DRAWING TITLE: MUNICIPAL STORMWATER DROP MANHOLE DETAILS	

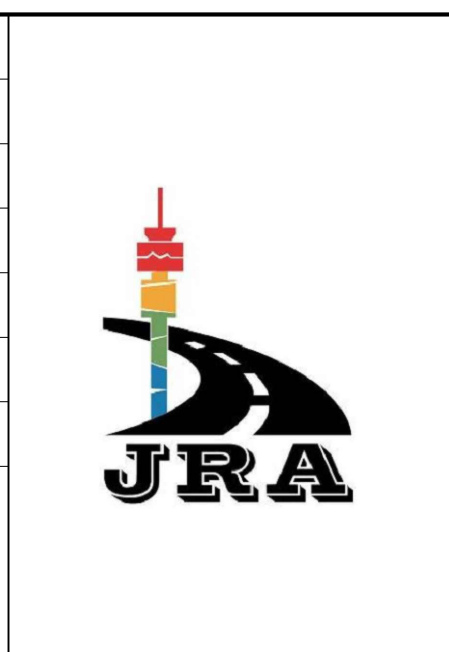
DESIGN MANAGER	SCALE	AMENDMENTS		APPR.	DATE	DRAWING NO.
	AS SHOWN	A	FOR APPROVAL		2024-10-18	4986-SW-MD05
		ISSUED FOR:				APPROVAL
		FILE NO.				
		CONTRACT NO.				
	DATE					



- NOTES:**
- ALL MATERIAL AND WORKMANSHIP MUST COMPLY WITH THE REQUIREMENTS OF THE LATEST RELEVANT SANS CODES.
 - ALL DIMENSIONS ARE IN MILLIMETERS, UNLESS OTHERWISE INDICATED.
 - DO NOT SCALE FROM THIS DRAWING.
 - ALL DIMENSIONS AND SETTING OUT POINTS MUST BE CHECKED AND APPROVED ON SITE BEFORE CONSTRUCTION COMMENCES.
 - ENGINEER OR THE ENGINEERS REPRESENTATIVE TO BE INVITED FOR INSPECTIONS ACCORDING TO SCS CIVIL ENGINEERING INSPECTION NOTIFICATION REQUIREMENTS.
 - CONTRACTOR TO COMPLY WITH THE OCCUPATIONAL HEALTH AND SAFETY ACT (85 OF 1993), THE CONSTRUCTION REGULATIONS OF 2014 AND ALL RELEVANT REGULATIONS AS WELL AS THEIR AMENDMENTS.
 - CONTRACTOR TO IMMEDIATELY REPORT ANY DAMAGE TO EXISTING SERVICES IN WRITING TO THE ENGINEER OR THE ENGINEERS REPRESENTATIVE.
 - ON COMPLETION OF STORMWATER INSTALLATION, CONTRACTOR TO PROVIDE COMPLETE AS-BUILT INFORMATION TO THE ENGINEER.
- REFERENCE DRAWINGS:**
- 4986-BM-L01 BENCHMARK LAYOUT
4986-SW-ML03 MUNICIPAL STORMWATER LAYOUT
4986-SW-MD05 MUNICIPAL STORMWATER MANHOLE DETAILS
- REFERENCE DRAWINGS FOR MANHOLE CONSTRUCTION:**
- 4986-SW-02 - STORMWATER MANHOLES REBAR DETAILS



CONSULTING ENGINEERS			SURVEYED	-	-
 34 DENNINGTON ROAD WINSTON RIDGE SANDTON 2196			DESIGNED	C.LEMMER	
			DRAWN	A.GLAFKE	
			CHECKED	S.SOTIRALIS	
			SERVICES CHECKED	TBC	-
			GEOTECHNICAL INVESTIGATION	TBC	-
			SERVITUDES	TBC	-
PROJECT NO. 4986			DRAWINGS NO. 4986-SW-MD06	FILE NO. -	
			APPROVED M.TSHOLOLI	DATE . 2023/08/21	
			PR. ENG. NO. 201070156		



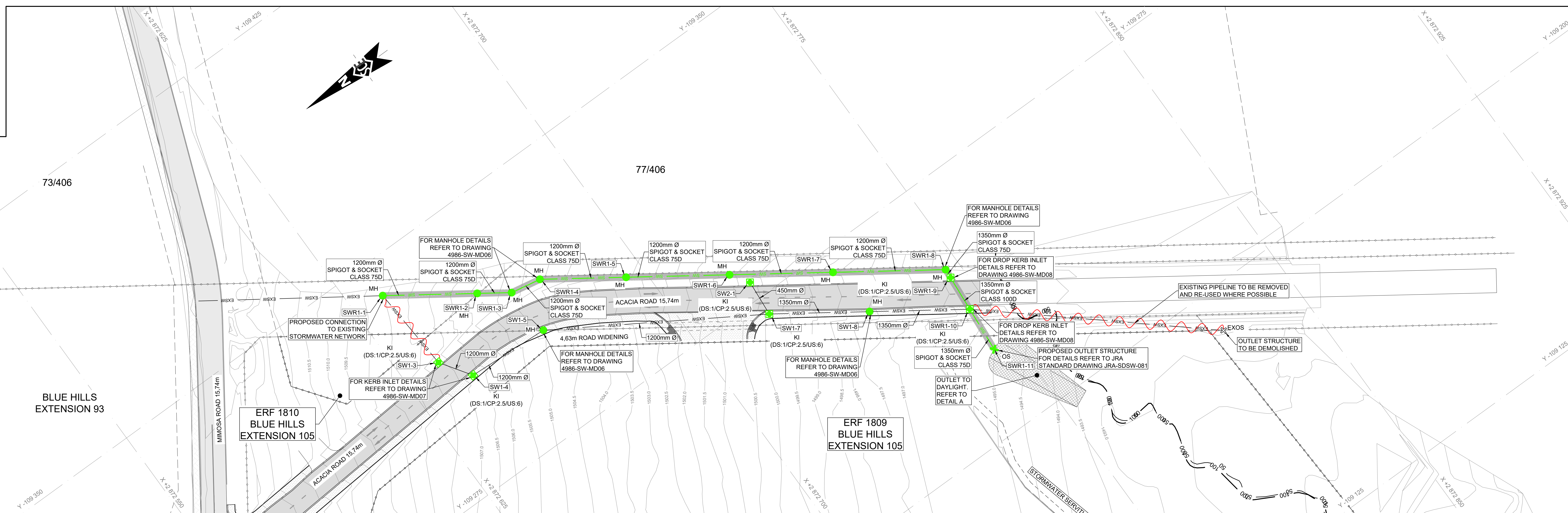
CITY OF JOHANNESBURG	
PROJECT: BLUE HILLS EXTENSION 105	
DRAWING TITLE: MUNICIPAL STORMWATER MANHOLE DETAILS	

DESIGN MANAGER	SCALE	AMENDMENTS		APPR.	DATE	DRAWING NO.
	AS SHOWN	A	FOR APPROVAL		2024-10-21	4986-SW-MD06
		ISSUED FOR:				
		APPROVAL				
		FILE NO. _____				
		CONTRACT NO. _____				
DATE						

LOCALITY PLAN
NOT TO SCALE

STORMWATER SETTING OUT POINTS SYSTEM: WGS84		
CODE XXXX	Y (+0.0)	X (+0.0)
SW1-3	-109 314.534	2 872 636.039
SW1-4	-109 305.641	2 872 641.987
SW1-5	-109 304.249	2 872 666.149
SW1-7	-109 269.543	2 872 721.930
SW1-8	-109 253.019	2 872 745.857
SW2-1	-109 280.247	2 872 722.797
SW1-11	-109 339.714	2 872 634.378
SW2-2	-109 324.157	2 872 656.906
SW1-13	-109 318.474	2 872 655.165
SW1-14	-109 316.772	2 872 674.036
SW1-15	-109 302.566	2 872 694.608
SW1-6	-109 285.518	2 872 719.293
SW1-7-1	-109 268.471	2 872 743.971
SW1-8-1	-109 249.901	2 872 770.869
SW1-9-1	-109 247.200	2 872 770.650
SW1-10-1	-109 236.496	2 872 769.783
SW1-11-1	-109 222.940	2 872 768.686

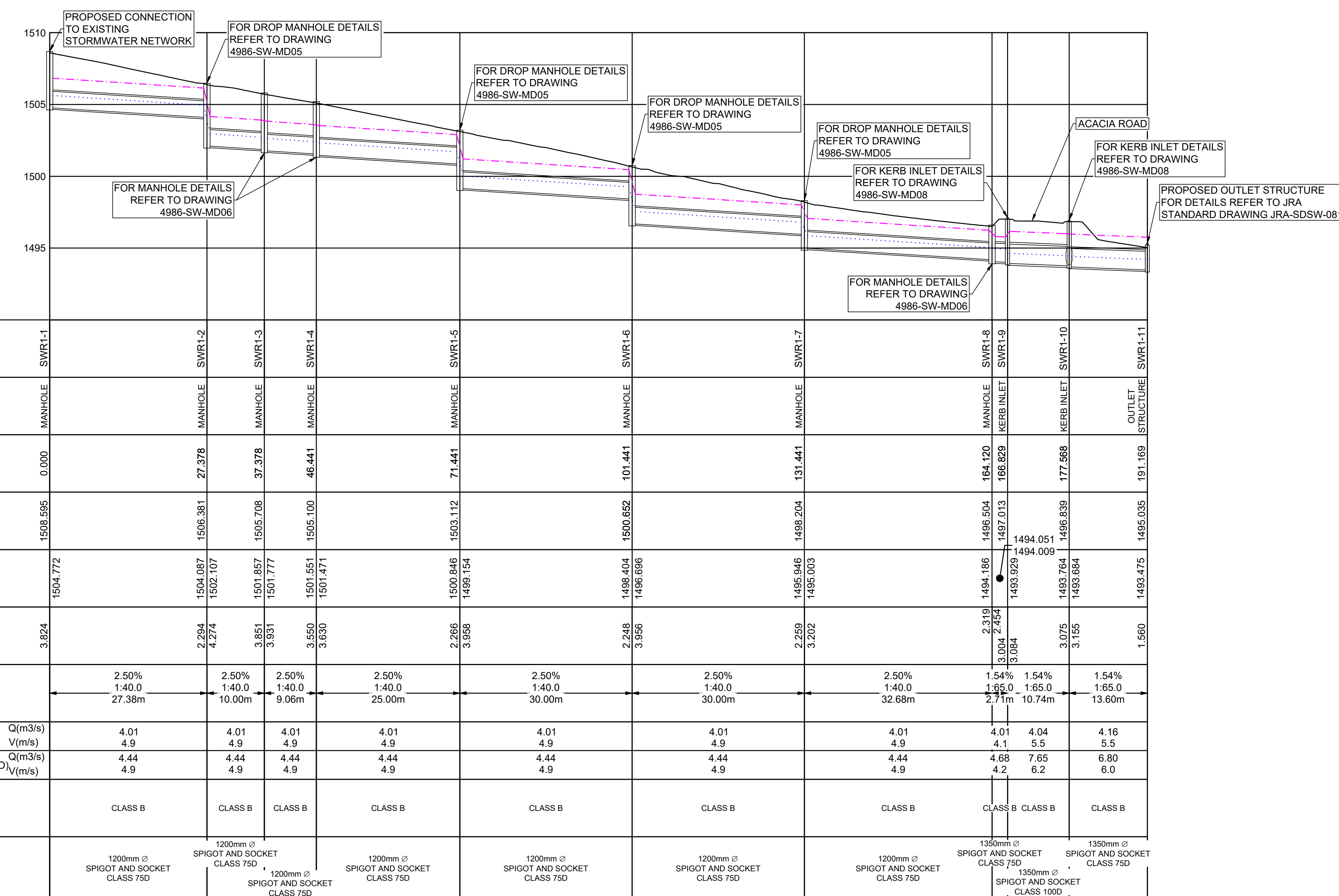
MUNICIPAL STORMWATER LAYOUT
SCALE 1:500



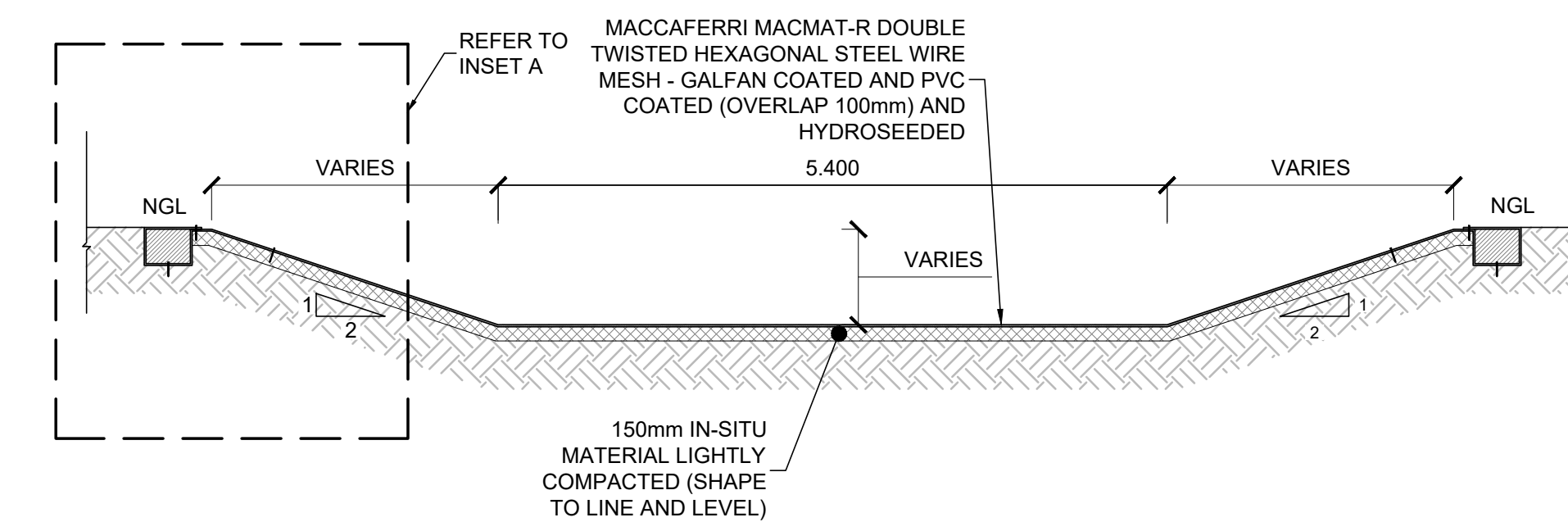
- NOTES:**
1. ALL MATERIAL AND WORKSMANSHIP MUST COMPLY WITH THE REQUIREMENTS OF THE LATEST RELEVANT SANS CODES.
 2. ALL DIMENSIONS ARE IN METERS, UNLESS OTHERWISE INDICATED.
 3. DO NOT SCALE FROM THIS DRAWING.
 4. ALL DIMENSIONS MUST BE TO FACE.
 5. ALL DETAILS MUST BE CHECKED AND APPROVED ON SITE.
 6. VERTICAL AND HORIZONTAL ALIGNMENT TO FORMER EXISTING ROAD SURFACE, WITH A MINIMUM CROSS FALL OF 3%, IF APPLICABLE.
 7. ALL MATERIALS FOR PAVEMENT LAYERS SHALL CONFORM TO THE REQUIREMENTS OF THE SANS CODES, AS INDICATED IN THE PROJECT SPECIFICATIONS.
 8. ALL KERBS TO BE INSTALLED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS VOLUME 2, STANDARD DESIGN DETAILS FOR ROADS AND STORMWATER PART 1 - ROADS.
 9. ALL KERBS TO BE FIGURED AS SHOWN, UNLESS OTHERWISE INDICATED.
 10. SLEEVES TO BE DRAWING ACCORDING TO SCS STANDARD INDICATED SC-SW011.
 11. ALL WORKS TO COMPLY WITH THE SANS OCCUPATIONAL HEALTH AND SAFETY ACT (86 OF 1993), THE CONSTRUCTION REGULATIONS OF 1997 AND ALL RELEVANT REGULATIONS AS WELL AS THEIR AMENDMENTS.
 12. ALL KERB INLETS TO BE INSTALLED IN ACCORDANCE WITH JRA VOLUME 2, STANDARD WORMWATER VOLUME 2, STANDARD DESIGN DETAILS FOR ROADS AND STORMWATER PART 2 - STORMWATER.

LEGEND:

- | | |
|------|------------------------------------|
| SW | PROPOSED STORMWATER LINE |
| SW | PROPOSED STORMWATER LINE BY OTHERS |
| EXDW | EXISTING STORMWATER LINE |
| MH | PROPOSED MANHOLE |
| EXMH | EXISTING MANHOLE |
| JB | EXISTING JUNCTION BOX |
| EXJB | EXISTING JUNCTION BOX |
| GI | PROPOSED GRID INLET |
| EXGI | EXISTING GRID INLET |
| FI | PROPOSED FIELD INLET |
| EXFI | EXISTING FIELD INLET |
| OS | PROPOSED OUTLET STRUCTURE |
| EXOS | EXISTING OUTLET STRUCTURE |
| KI | PROPOSED KERB INLET |
| EXKI | EXISTING KERB INLET |



LONGSECTION SWR1-1 TO SWR1-11
 SCALES
 HORIZONTAL 1:500
 VERTICAL 1:200



DETAIL A: TRAPEZOIDAL CHANNEL (MACMAT-R LINED)
SCALE 1:50

CONSULTING ENGINEERS



34 DENNINGTON ROAD
WINSTON RIDGE
SANDTON
2196

PROJECT NO.	DRAWING NO.	FILE NO.	CONTENTS	DATE
4986	4986-SW-ML03	-	APPROVED M.TSHOLOLO PR. ENG. NO. 201070156	 DATE - 2023/08/21

SURVEYED	-	-
DESIGNED	CE.L	-
DRAWN	DL.H	-
CHECKED	LL	-
SERVICES CHECKED	TBC	=
GEOTECHNICAL INVESTIGATION	TBC	-
SERVITUDES	TBC	=
APPROVED	M.TSHIOLOLI	
PR. ENG. NO. 2010/07156		DATE - 2023/08/21



CITY OF JOHANNESBURG

PROJECT:
ERF 1809, BLUE HILLS EXTENSION 105

DRAWING TITLE:
MUNICIPAL STORMWATER LAYOUT AND LONGSECTIONS

DESIGN
MANAGER

DATE _____

SCALE

AS
SHOWN

AMENDMENTS

OR APPROVAL

APPR.	DATE
-------	------

2024-10-18

--	--

--	--

--	--

--	--

--	--

--	--

--	--

DRAWING NO.

4986-SW-ML03

ISSUED FOR :

APPROVAL

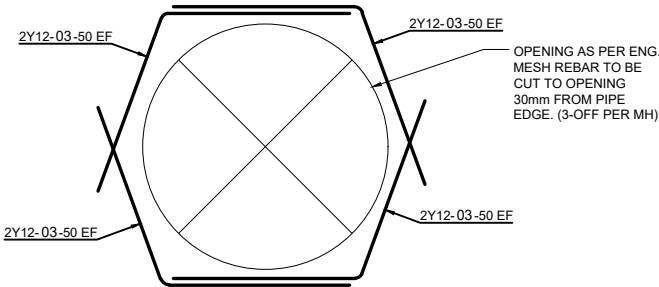
FILE NO.

1000 2000 3000 4000 5000 6000 7000 8000 9000 10000

CONTRACT NO.	-
--------------	---

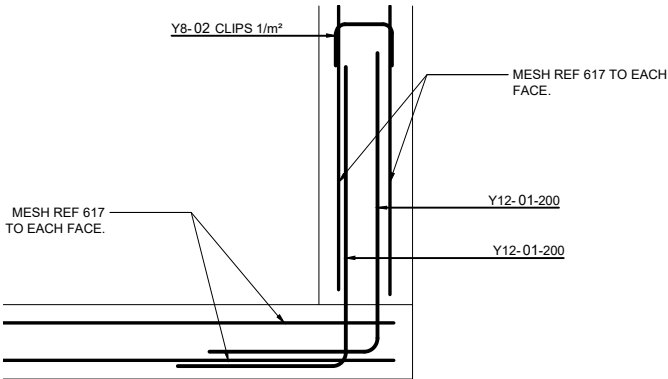
Members	No. of Mbrs	Type & Size	No. of Bars	Cutting Length	Total Bars	Mark	Shape Code	A	B	C	D	E/R	Rev
SW1-5	1	Y12	118	1250	118	01	37	800	450				
	1	Y8	68	350	68	02	35	150					
	1	Y12	48	2000	48	03	62	1000	950	1000			
SW1-8	1	Y12	128	1250	128	01	37	800	450				
	1	Y8	72	350	72	02	35	150					
	1	Y12	48	2000	48	03	62	1000	950	1000			
SWR1-3	1	Y12	118	1250	118	01	37	800	450				
	1	Y8	80	350	80	02	35	150					
	1	Y12	48	2000	48	03	62	1000	950	1000			
SWR1-4	1	Y12	112	1250	112	01	37	800	450				
	1	Y8	70	350	70	02	35	150					
	1	Y12	48	2000	48	03	62	1000	950	1000			
SWR1-8	1	Y12	106	1250	106	01	37	800	450				
	1	Y8	40	350	40	02	35	150					
	1	Y12	48	2000	48	03	62	1000	950	1000			

	6	8	10	12	16	20	25	32	40	TOTAL
Y		46		1072						1118
R										
TOTAL		46		1072						1118

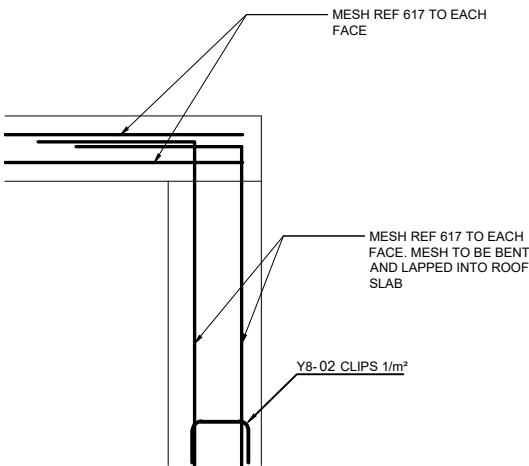


NOTE:
50mm COVER TO ALL SIDES.
ALL MESH TO BE LAPPED WITH MIN TWO SQUARES.
60mm SPACER BLOCK TO BE USED BETWEEN MESH LAYERS OF ROOF AND OF FLOOR.

TYPICAL DETAIL TO PIPES AND MANHOLE ACCES



TYPICAL BOTTOM CORNER DETAIL

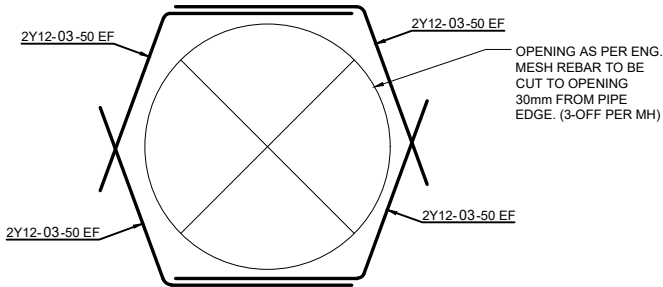


TYPICAL TOP CORNER DETAIL

Client:	JRA	Job Description:	BLUE HILLS EXTENSION 105	Job No:	4986
				Date:	2024/10/21
				Det. by:	LRS
				Ref Dwg:	4986-SW-MD06
		Schedule Description:	STORMWATER MANHOLES (PG 01)	Revision:	0
				Schedule No:	4986-SW-01

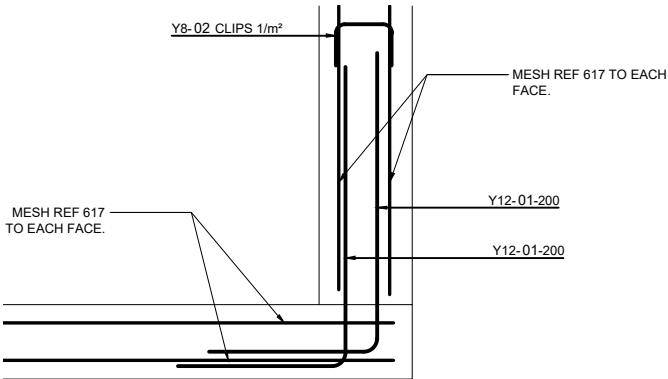
Members	No. of Mbrs	Type & Size	No. of Bars	Cutting Length	Total Bars	Mark	Shape Code	A	B	C	D	E/R	Rev
SW1-5	1	Y12	174	1250	174	01	37	800	450				
	1	Y8	118	350	118	02	35	150					
	1	Y12	48	2000	48	03	62	1000	950	1000			
SW1-8	1	Y12	156	1250	156	01	37	800	450				
	1	Y8	92	350	92	02	35	150					
	1	Y12	48	2000	48	03	62	1000	950	1000			
SWR1-1	1	Y12	132	1250	132	01	37	800	450				
	1	Y8	60	350	60	02	35	150					
	1	Y12	48	2000	48	03	62	1000	950	1000			
SWR1-5	1	Y12	162	1250	162	01	37	800	450				
	1	Y8	96	350	96	02	35	150					
	1	Y12	48	2000	48	03	62	1000	950	1000			
SWR1-8	1	Y12	162	1250	162	01	37	800	450				
	1	Y8	96	350	96	02	35	150					
	1	Y12	48	2000	48	03	62	1000	950	1000			

	6	8	10	12	16	20	25	32	40	TOTAL
Y		64		1298						1362
R										
TOTAL		64		1298						1362

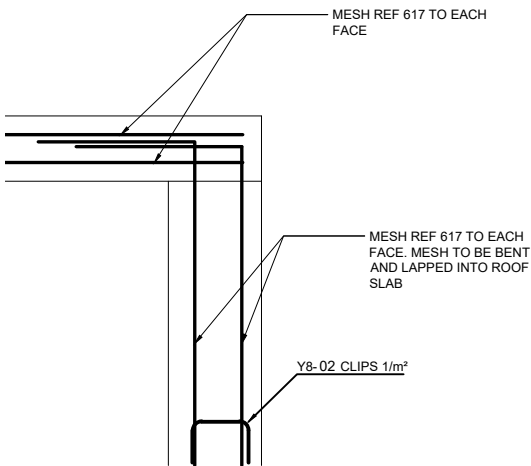


NOTE:
50mm COVER TO ALL SIDES.
ALL MESH TO BE LAPPED WITH MIN TWO SQUARES.
60mm SPACER BLOCK TO BE USED BETWEEN MESH LAYERS OF FLOOR AND OF ROOF.

TYPICAL DETAIL TO PIPES AND MANHOLE ACCES



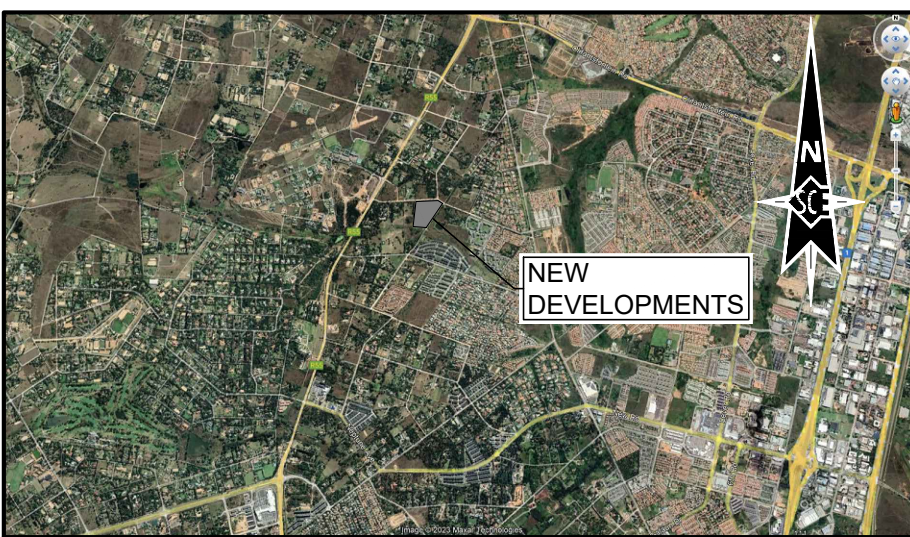
TYPICAL BOTTOM CORNER DETAIL



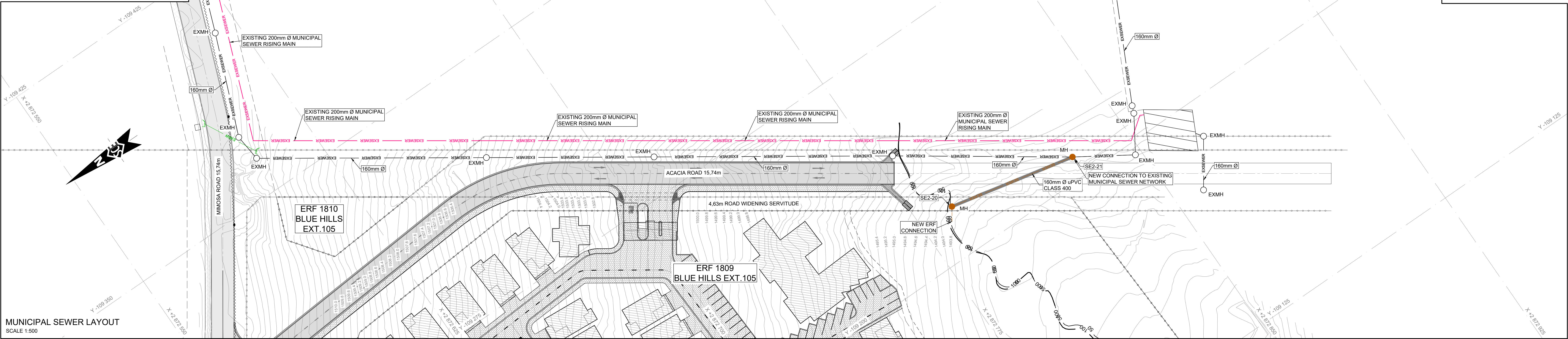
TYPICAL TOP CORNER DETAIL

Client:	Job Description:	Job No:	
JRA	BLUE HILLS EXTENSION 105	Date:	4986 2024/10/21
		Det. by:	LRS
		Ref Dwg:	4986-SW-MD06
	Schedule Description:	Revision:	0
	STORMWATER MANHOLES (PG 02)	Schedule No:	4986-SW-02

BLUE HILLS EXTENSION 105



LOCALITY PLAN
NOT TO SCALE



MUNICIPAL SEWER LAYOUT
SCALE 1:500

SEWER SETTING OUT POINTS SYSTEM: WGS84 (LO27)

CODE XXXX	Y (+0.0)	X (+0.0)
SE2-20	-109 216.609	2 872 787.284
SE2-21	-109 207.312	2 872 829.969

1. GENERAL NOTES:

- THE NEW CUSTOMER MANAGER AT JOHANNESBURG WATER(PTY) LTD REGIONAL OFFICE MUST BE NOTIFIED BEFORE ANY CONSTRUCTION WORK RELATED TO THE INSTALLATION OF THE THE WATER OR SEWER MAY COMMENCE.
- ALL CONSTRUCTION WORK SHALL COMPLY WITH THE RELEVANT SANS 1200 SPECIFICATION AND JOHANNESBURG WATER (PTY) LTD SPECIFIC REQUIREMENTS.
- ALL MATERIAL USED IN INSTALLING WATER AND SEWER MAINS SHALL COMPLY WITH THE RELEVANT SANS SPECIFICATION AND WITH THE MINIMUM REQUIREMENTS OF JOHANNESBURG WATER(PTY) LTD. THE POSITION AND DEPTH OF ALL EXISTING SERVICES ON THE SITE AND OFF THE SITE WHERE AFFECTED BY THE WORKS SHALL BE CONFIRMED PRIOR TO ANY CONSTRUCTION WORK ON THE INSTALLATION OF WATER AND SEWER MAINS BEING COMMENCED.
- ONLY JOHANNESBURG WATER (PTY) LTD STAFF SHALL CARRY OUT TIE-IN CONNECTIONS TO EXISTING WATER AND SEWER MANHOLES AND MAINS. NOTE THAT A MINIMUM OF 2 WEEKS NOTICE SHALL BE GIVEN TO JOHANNESBURG WATER(PTY) LTD STAFF TO ATTEND SITE INSPECTIONS, MEETINGS AND ANY OTHER NECESSARY ON SITE LIAISON.

2. SPECIFIC SEWER REQUIREMENTS:

- FOR STANDARD DETAILS REFER TO JOHANNESBURG WATER STANDARD DWG 5.8 & 7.
- ALL MATERIALS SHALL COMPLY WITH THE RELEVANT SANS SPECIFICATION AND WITH THE REQUIREMENTS OF JOHANNESBURG WATER (PTY) LTD.
- ANCHORING OF SEWER MAINS:
 - GRADE - BETWEEN 1:10 AND 1:6 ANCHOR BLOCKS SHALL BE INSTALLED AT INTERVALS NOT EXCEEDING 12 METERS
 - GRADE - STEEPER THAN 1:6 : SEWER MAIN SHALL BE ENCASED FOR THE ENTIRE SECTION WHERE THE GRADE IS STEEPER THAN 1:6

3. TESTING & INSPECTIONS:

THE ONUS IS ON THE ENGINEER TO ENSURE THAT THE WORKS ARE PROPERLY CARRIED OUT. WITHOUT ABSOLVING THE ENGINEER OF THIS RESPONSIBILITY, JM SHALL REQUIRE THE FOLLOWING TESTS AND INSPECTIONS DURING THE CONSTRUCTION PHASE :

- INSPECTION ON THE COMPLETION OF THE EXCAVATION PRIOR TO LAYING THE BEDDING.
- INSPECTION OF PRESCRIBED BEDDING AND THE COMPACTION OF SURROUNDING MATERIAL UP TO THE CENTRE LINE LEVEL OF THE PIPE. PRESSURE TESTS TO BE CONDUCTED AFTER THE PLACING AND COMPACTION OF THE BACKFILLING. CONTRACTORS ARE ENCOURAGED TO PRESSURE TEST THE PIPELINE PRIOR TO BACKFILLING, AT THEIR OWN EXPENSE, TO AVOID EXCAVATION OF THE FINAL BACKFILL TESTING IN ACCORDANCE WITH SANS SPECIFICATIONS.
- DENSITY TESTS MUST BE CONDUCTED ON BACKFILL. CORRELATED DCP TESTS WILL BE ACCEPTED UNLESS OTHERWISE SPECIFIED.

GENERAL LEGEND:

- ERF BOUNDARY
- BENCHMARK
- DOLOMITIC ZONE
- SEWER SETTING OUT POINT

HATCH LEGEND:

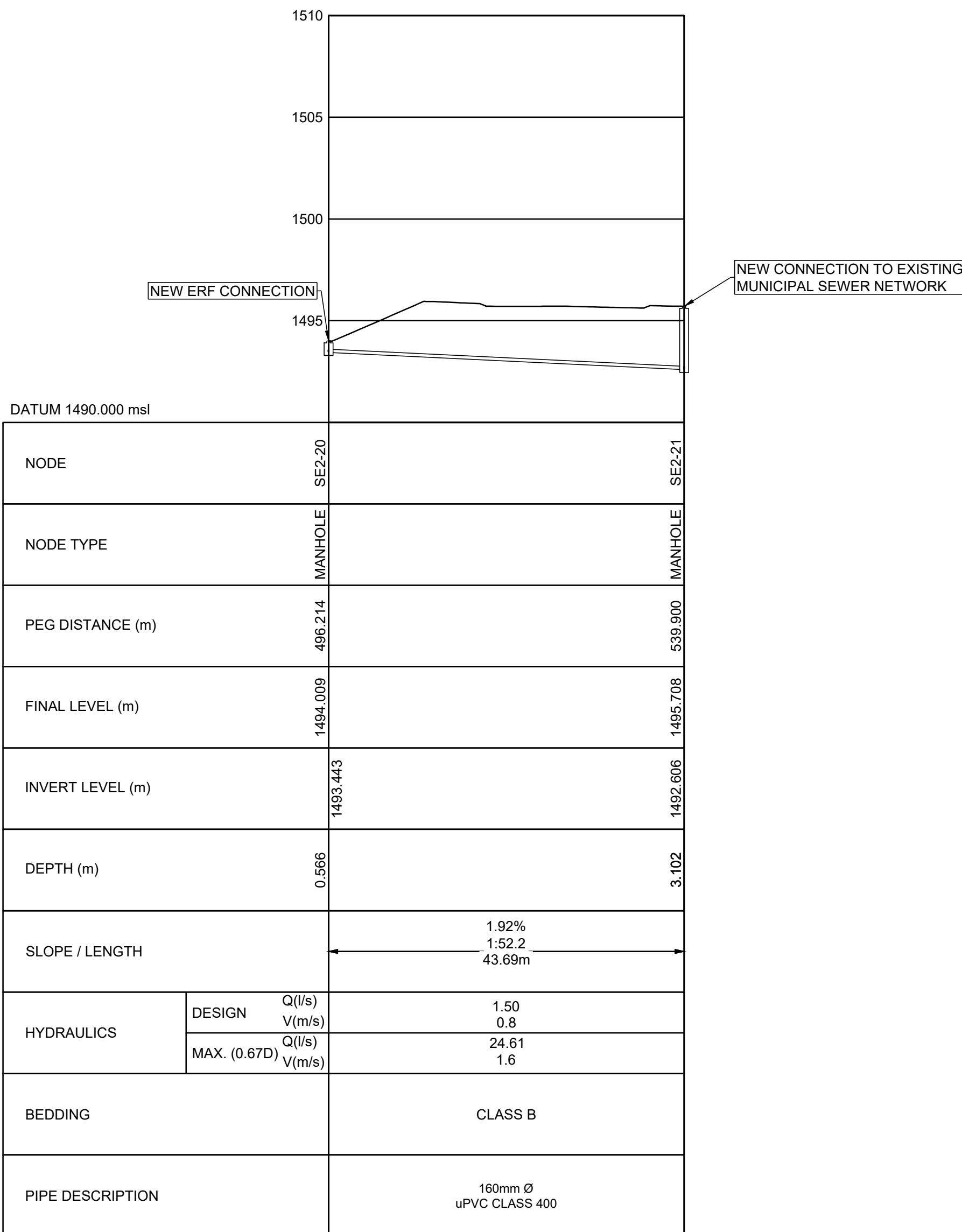
- NEW ASPHALT
- EXISTING ASPHALT
- NEW 80mm PAVERS
- NEW BUILDING
- NEW ATTENUATION FACILITY
- EXISTING STRUCTURES

SEWER LEGEND:

- SEWER NEW SEWER LINE
- EXSEWER EXISTING SEWER LINE
- EXSEWER EXISTING SEWER RISING MAIN
- J NEW JUNCTION
- MH NEW MANHOLE
- EXMH EXISTING MANHOLE
- RE NEW RODDING EYE
- EXRE EXISTING RODDING EYE
- LH NEW LAMP HOLE
- EXLH EXISTING LAMP HOLE
- SEWER BUILDING CONNECTION (AS PER ARCHITECTS LAYOUT & DETAILS)
- AREA OF CONSTRUCTION
- FINAL LEVEL
- NATURAL GROUND LEVEL

REFERENCE DRAWINGS:

- 4986-BM-L01 BENCHMARK LAYOUT
- 4986-SE-ML01 PRIVATE SEWER LAYOUT
- 4986-SE-ML-S01 LONGSECTIONS SHEET 1 OF 2
- 4989-SE-ML-S02 LONGSECTIONS SHEET 2 OF 2



LONGSECTION SE2-20 TO SE2-21
SCALES:
HORIZONTAL 1:500
VERTICAL 1:200

AS BUILT DRAWING And final inspection by

M. TSHOLOLO
(print name)
201070156
(print Prof. Reg. No.)
(signature)
2024/06/28
(date)

CONSULTING ENGINEERS

PROJECT NO.	DRAWING NO.	FILE NO.
4986	4986-SE-ML02	-
APPROVED: M.TSHOLOLO PR. ENG. NO. 201070156 DATE : 2023/06/21		

JOHANNESBURG WATER (PTY) LTD

65 NTEMI PILISO STREET NEWTOWN 2001	TEL : (011) 688-1400 FAX : (011) 688-1521
---	--

CITY OF JOHANNESBURG

PROJECT:
ERF 1809, BLUE HILLS EXTENSION 105
DRAWING TITLE:
MUNICIPAL SEWER LAYOUT AND LONGSECTION

DESIGN MANAGER

SCALE

1:500

AMENDMENTS

AB

AS-BUILT

ABA

AS-BUILT

AS-BUILT

AS-BUILT

APPR DATE

2024-06-28

2024-06-28

2024-06-28

2024-06-28

2024-06-28

2024-06-28

DRAWING NO.

4986-SE-ML02

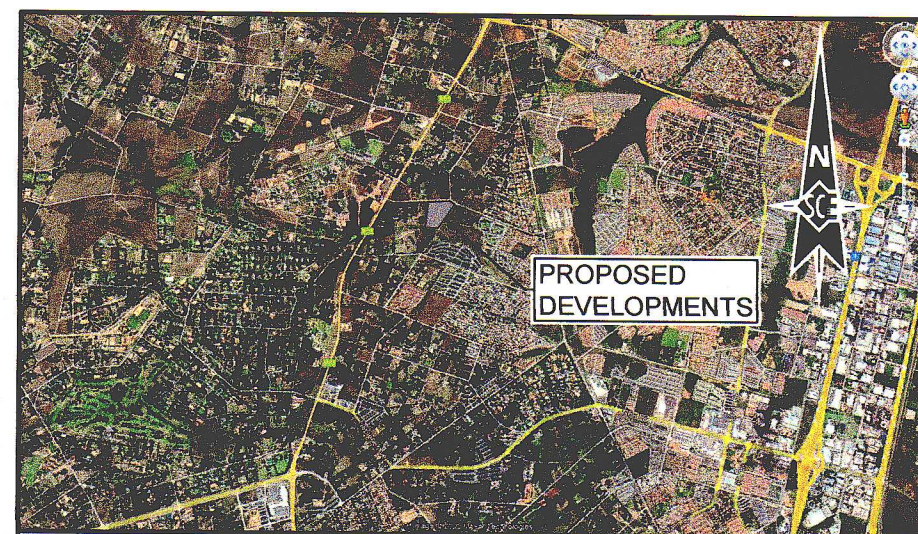
4986-SE-ML02

4986-SE-ML02

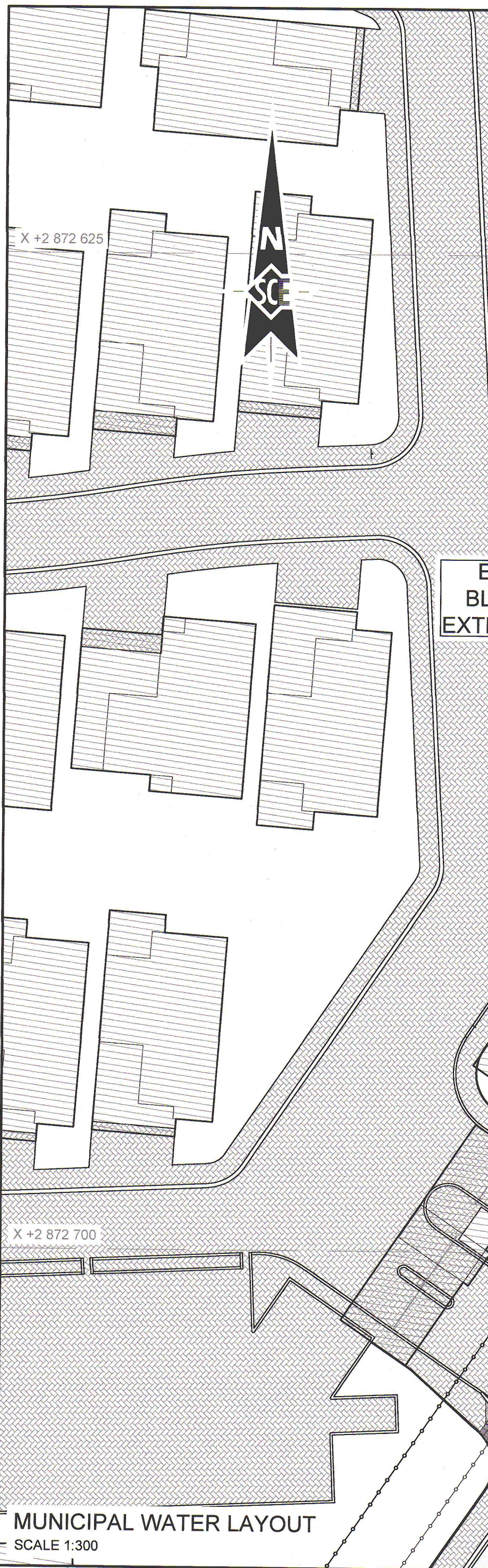
4986-SE-ML02

4986-SE-ML02

BLUE HILLS EXTENSION 105



LOCALITY PLAN
NOT TO SCALE



MUNICIPAL WATER LAYOUT
SCALE 1:300

ERF 1809
BLUE HILLS
EXTENSION 105

ERF 1810
BLUE HILLS
EXTENSION 105

WATER SETTING OUT POINTS SYSTEM: WGS84 (LO27)

CODE XXXX	Y (+0.0)	X (+0.0)
W1	-109 298.525	2 872 706.623
W2	-109 281.378	2 872 694.897
W3	-109 280.552	2 872 694.333
W4	-109 280.350	2 872 694.194
W5	-109 280.148	2 872 694.056
W6	-109 279.951	2 872 693.922
W7	-109 279.743	2 872 693.779

SCHEMATIC NODE DETAIL

NODE NUMBER	SCHEMATIC	DESCRIPTION
1		110mm $\varnothing$ x 110mm $\varnothing$ EQUAL T-PIECE AND THRUST BLOCK
2		160mm $\varnothing$ x 110mm $\varnothing$ REDUCER
3		FLANGED uPVC ADAPTOR AND FLANGED STUB END ON HDPE
4		180mm $\varnothing$ x 180mm $\varnothing$ FIRE HYDRANT T-PIECE AND THRUST BLOCK
5		FIRE HYDRANT AS PER FIRE ENGINEERS SPECIFICATIONS
6		180mm $\varnothing$ ISOLATING VALVE
7		IN-LINE HIGH PRESSURE BASKET STRAINER
8		BULK COMBINATION WATER METER BY COUNCIL
9		180mm $\varnothing$ NON RETURN VALVE

GENERAL LEGEND:

- ERF BOUNDARY
- BENCHMARK
- DOLOMITIC ZONE
- WATER SETTING OUT POINT
- AREA OF CONSTRUCTION

WATER LEGEND:

- WATER PROPOSED WATER LINE
- EXWATER EXISTING WATER LINE
- PROPOSED ERF CONNECTION
- PROPOSED ISOLATING WATER VALVE
- EXISTING ISOLATING WATER VALVE
- PROPOSED NON RETURN WATER VALVE
- EXISTING NON RETURN WATER VALVE
- PROPOSED PRESSURE REDUCING WATER VALVE
- EXISTING PRESSURE REDUCING WATER VALVE
- PROPOSED BULK WATER METER
- EXISTING BULK WATER METER
- PROPOSED FIRE HYDRANT
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HOSE REEL
- EXISTING FIRE HOSE REEL
- PROPOSED WATER LEAK DETECTION UNIT
- EXISTING WATER LEAK DETECTION UNIT
- PROPOSED BOOSTER
- EXISTING BOOSTER
- PROPOSED REDUCER
- EXISTING REDUCER

NOTES:

- ALL MATERIAL AND WORKMANSHIP MUST COMPLY WITH THE REQUIREMENTS OF THE LATEST RELEVANT SANS CODES.
- ALL DIMENSIONS ARE IN METERS, UNLESS OTHERWISE INDICATED.
- DO NOT SCALE FROM THIS DRAWING.
- ALL DIMENSIONS AND SETTING OUT POINTS MUST BE CHECKED AND APPROVED ON SITE BEFORE CONSTRUCTION COMMENCES.
- FINAL POSITION OF EXISTING SERVICES TO BE CONFIRMED ON SITE BY CONTRACTOR.
- ALL EXISTING SERVICES TO BE EXPOSED BY HAND EXCAVATION AND INVERT LEVELS TO BE PROVIDED TO THE ENGINEER IN WRITING BEFORE CONSTRUCTION COMMENCES.
- ALL WATER PIPES SHALL BE A MINIMUM 110mm DIAMETER UNPLASTICIZED POLYVINYL CHLORIDE (uPVC) CLASS 12 AND SHALL COMPLY WITH SANS 968, UNLESS OTHERWISE INDICATED.
- ALL FITTINGS TO BE S.G. IRON, BENDS TO BE LONG RADIUS uPVC CLASS 16 WITH THRUST BLOCKS AS PER SCE STANDARD DETAIL.
- MARKERS TO COMPLY IN ACCORDANCE WITH SCE STANDARD DRAWING SCE - W002.
- ENGINEER OR THE ENGINEER'S REPRESENTATIVE TO BE INVITED FOR INSPECTIONS ACCORDING TO SCE CIVIL ENGINEERING INSPECTION NOTIFICATION REQUIREMENTS.
- TRENCH BACKFILLING OF SURFACED ROAD CROSSING TO BE DONE IN ACCORDANCE WITH SCE STANDARD DRAWING SCE-SW009.
- ENGINEER OR THE ENGINEER'S REPRESENTATIVE TO BE INVITED FOR THRUST BLOCK INSPECTION BEFORE CONCRETE IS CAST. ALL CONCRETE THRUST BLOCKS TO BE IN ACCORDANCE WITH SCE STANDARD DRAWING SCE-W003.
- ALL FIRE HYDRANTS TO BE SINGLE HEADED, UNLESS OTHERWISE INDICATED.
- FIRE HYDRANTS TO BE FIRE ENGINEERS SPECIFICATIONS, SEE SCE STANDARD DETAIL SCE-W002.
- ALL VALVES TO BE PLACED AS PER SCE STANDARD DETAIL SCE-W001.
- ALL VALVES TO BE GATE VALVES, RESILIENT SEALED, CLASS 16, FLANGED, NON-RISING SPINDLE, ANTICLOCKWISE CLOSING WITH CAP TOP, UNLESS OTHERWISE INDICATED.
- ALL STEEL PIPES AND FITTINGS MUST BE DENSO WRAPPED TO 100mm ABOVE FINAL LEVEL.
- MUNICIPAL WATER METER TO BE INSTALLED BY THE RELEVANT MUNICIPALITY.
- ALL ERF CONNECTIONS TO BE MINIMUM 25mm DIAMETER HIGH DENSITY POLYETHYLENE (HDPE) PIPES PE100, PN16 AND SHALL COMPLY WITH SANS 4427, UNLESS OTHERWISE INDICATED. REFER TO SCE STANDARD DRAWING SCE-W004 FOR DETAILS OF ERF CONNECTIONS.
- ALL WATER PIPES TO BE PRESSURE TESTED ACCORDING TO SANS 1200 IN THE PRESENCE OF THE ENGINEER AFTER THE 300mm BLANKET ON TOP OF THE PIPE HAS BEEN COMPACTED IN ACCORDANCE WITH SCE STANDARD DETAIL SCE-W004.
- CONTRACTOR TO COMPLY WITH THE OCCUPATIONAL HEALTH AND SAFETY ACT (85 OF 1993), THE CONSTRUCTION REGULATIONS OF 2014 AND ALL RELEVANT REGULATIONS AS WELL AS THEIR AMENDMENTS.
- CONTRACTOR TO IMMEDIATELY REPORT ANY DAMAGE TO EXISTING SERVICES IN WRITING TO THE ENGINEER OR THE ENGINEER'S REPRESENTATIVE.
- ON COMPLETION OF WATER INSTALLATION, CONTRACTOR TO PROVIDE COMPLETE AS-BUILT INFORMATION TO THE ENGINEER.

HATCH LEGEND:

- PROPOSED ASPHALT
- EXISTING ASPHALT
- PROPOSED 60mm PAVERS
- PROPOSED BUILDING
- PROPOSED ATTENUATION FACILITY
- EXISTING STRUCTURES

REFERENCE DRAWINGS:

- 4689-W-ML01 INTERNAL WATER LAYOUT
- 4689-BM-L01 BENCHMARK LAYOUT

CONSULTING ENGINEERS

SURVEYED	-
DESIGNED	C. LEMMER
DRAWN	D. LHOONBERG
CHECKED	L. LOTTERING
SERVICES CHECKED	-
GEOTECHNICAL INVESTIGATION	TBA
SERVITUDES	TBA
APPROVED	M. TSHILOLOU
PR. ENG. NO.	201070156
DATE	2023-08-21



JOHANNESBURG WATER
65 NTEM PILISO STREET
NEWTOWN
2001
TEL: (011) 688-1400

CITY OF JOHANNESBURG

PROJECT:
ERF 1809, BLUE HILLS EXTENSION 105

DRAWING TITLE:
MUNICIPAL WATER LAYOUT

DESIGN
MANAGER

SCALE

AS-SHOWN

AMENDMENTS

A FOR APPROVAL
B ENTIRE LAYOUT UPDATED AS PER OF JOHANNESBURG
COUNCIL COMMENTS

APPR. DATE

2023-05-31
2023-10-20

DRAWING NO.

4986-W-ML04

ISSUED FOR:
APPROVAL

Signature: Mr B. Sibya
Date: 07/11/2023

FILE NO.
CONTRACT NO.