



LEGEND

EXISTING SEWER

PROPOSED SEWER DESIGN

EXISTING FENCE

CADASTRAL

MAN-HOLE

FUTURE SEWER

NOTES:

1. THIS DRAWING PROVIDES INFORMATION RELATED TO THE FORM OF THE WORK WHEN COMPLETED TOGETHER WITH GUIDANCE, WHEN FUNDAMENTAL TO THE DESIGN FOR THE SEQUENCE OF CONSTRUCTION. THIS DRAWING DOES NOT PURPORT TO INCLUDE ANY NECESSARY PRECAUTIONS, ITEMS OR COMPONENTS REQUIRED FOR CONSTRUCTION SAFETY. ALL SUCH PRECAUTIONS MUST BE TAKEN AND ITEMS OR COMPONENTS SUPPLIED BY THE CONTRACTOR.

2. ANY DISCREPANCIES ARE TO BE CONFIRMED WITH THE ENGINEER ON SITE PRIOR TO WORK PROCEEDING.

3. ONLY WRITTEN DIMENSIONS SHALL BE USED.

4. ALL DIMENSIONS ARE IN METERS

COORDINATE PROJECTION

Lo. 29

FOR TENDER

PROCUREMENT

SIGNED

DATE

REV

DESCRIPTION

MADE BY

DATE

DRG. NO.

REFERENCE DRAWINGS

P030-LS-03

LINE: 5, 6, 8, 42, 43, 44.

CONSULTANT

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EMAIL: admin@mvulo.co.za

MSUNDUZI MUNICIPALITY

INFRASTRUCTURE SERVICES AND FACILITIES

WATER AND SANITATION DIVISION

B. SIVPARSAD

PROCESS MANAGER : WATER AND SANITATION

CITY OF CHOICE

PIETERMARITZBURG

MSUNDUZI

DRAWING PROJECT

CONSTRUCTION OF SEWER

RETICULATION PIPELINE IN SHENSTONE

AMBLETON

LAYOUT PLAN

SCALES ON A1

1:1000

DESIGN

NL

PROCESS

MANAGER

DRAWN

TZ

TEAM

MANAGER

CHECKED

NL

AS BUILT

DESIGN

DATE

08-2026

DRAWING NO.

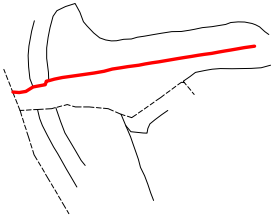
P030-LP-01

REVISION

K:\ACTIVER - 0080 - SHENSTONE AMBLETON\0080 - DESIGN AND DRAWINGS\0080 - PRELIMINARY DESIGN\2026 SCOPED\030\PAH-01 PLAN REV 01.DWG

PIPE DESIGN DATA		
REFERENCE	Y	X
L1 - MH01	60986.755	3283845.747
L1 - MH02	61059.973	3283857.456
L1 - MHF03	61125.846	3283868.002
LE - MH03	61157.055	3283873.108
LD - MH03	61173.637	3283875.822
L1 - MH04	61190.299	3283878.548
LC - MH04	61203.882	3283880.748
LB - MH04	61238.971	3283886.430
L1 - MH6	61255.418	3283889.094
LA - MH2	61271.445	3283891.622
L1 - MH07	61286.124	3283893.937
L1 - MH8	61315.653	3283898.594
L1 - MH9	61349.451	3283904.448
L1 - MH10	61381.670	3283910.027
L1 - MH11	61459.534	3283922.413
L1 - MH12	61492.756	3283928.886
L1 - MH13	61498.356	3283929.977
L1 - MH14	61501.483	3283940.184
L1 - MH15	61531.263	3283945.566
L1 - MH16	61548.971	3283956.708
L1 - MH17	61562.458	3283957.353
L1 - MH18	61580.898	3283958.234

- LEGEND
- NATURAL GROUND LEVEL
 - ===== FUTURE SEWER
 - ===== EXISTING SEWER



LOCALITY SKETCH

FOR TENDER

PROCUREMENT

SIGNED _____ DATE _____

REV	DESCRIPTION	MADE BY	DATE

DRG. NO.	REFERENCE DRAWINGS
P030-LP-02	LAYOUT PLAN
P030-LS-02	LONG SECTION

CONSULTANT



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PROCESS MANAGER : WATER AND SANITATION

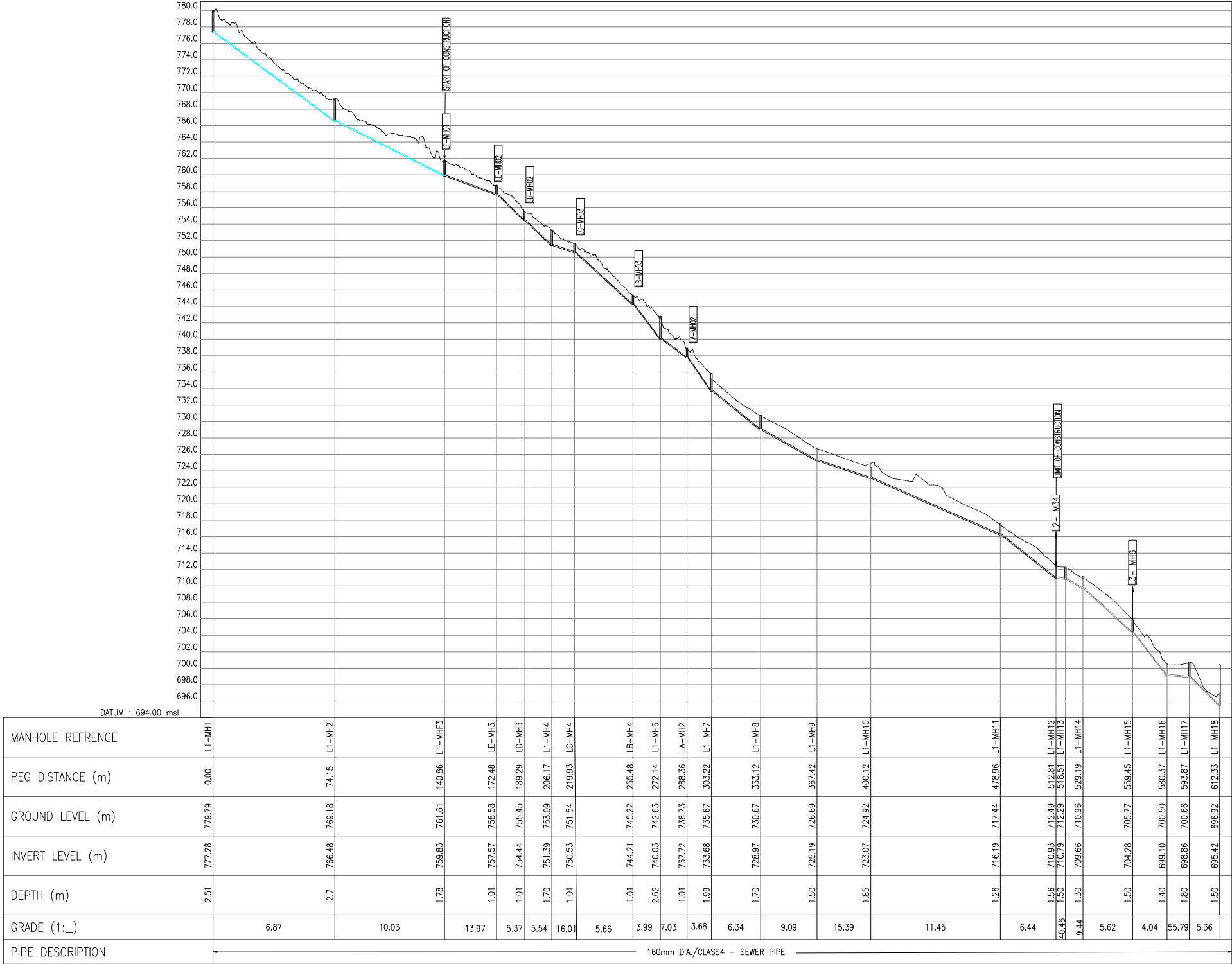


DRAWING PROJECT

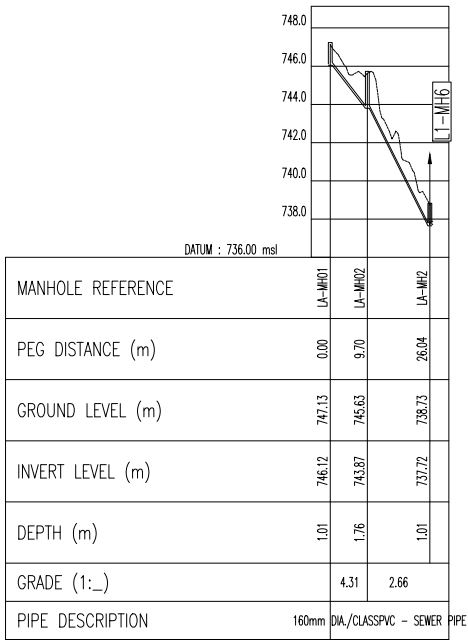
**CONSTRUCTION OF SEWER
RETICULATION PIPELINE IN SHENSTONE
AMBLETON**

LINE 1 LONG-SECTION

SCALES ON A1				
H 1:1000 V 1:200				
DESIGN	NL	PROCESS MANAGER	.	
DRAWN	XZ	TEAM MANAGER	.	
CHECKED	NL	AS BUILT	.	
DESIGN			DATE	08-2026
DRAWING NO.	P030-LS-01		REVISION	.

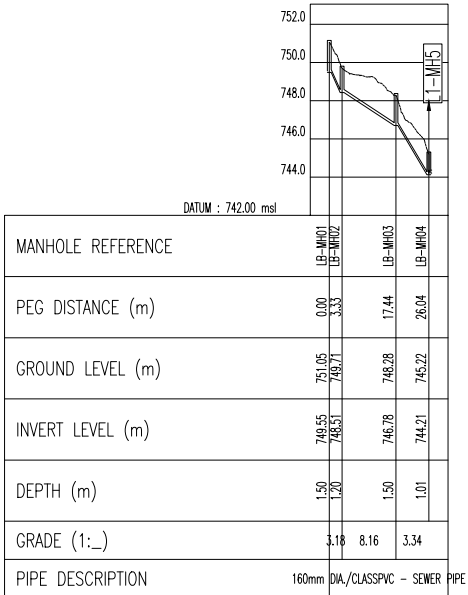


K:\ACTIVEP - 0030_SHENSTONE AMBLETON\0030 - DESIGN AND DRAWINGS\00302 - PRELIMINARY DESIGN\2026 SCOPE\CAD\P030-LS-01_LONG SECTIONS\WARD 13 LINE 1.DWG



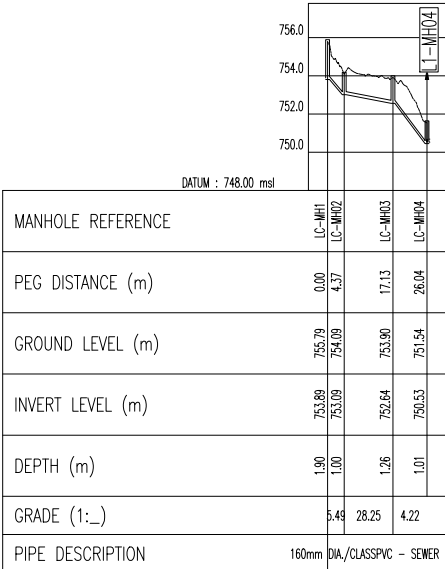
LINE A

PIPE DESIGN DATA.		
REFERENCE	Y	X
LA-MH01	-61275.528	-3283865.907
LA-MH02	-61274.007	-3283875.487
LA-MH2	-61271.445	-3283891.622



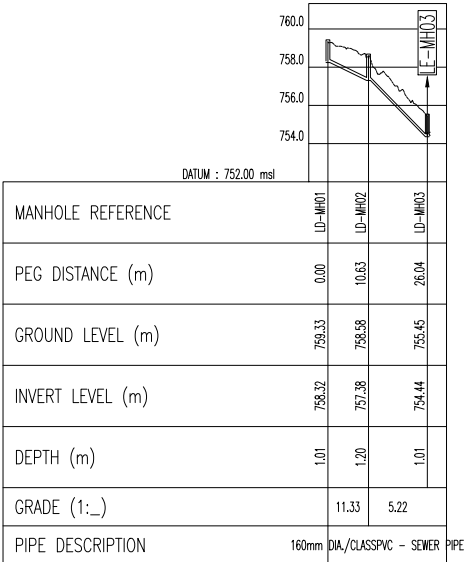
LINE B

PIPE DESIGN DATA.		
REFERENCE	Y	X
LB-MH01	-61243.054	-3283860.716
LB-MH02	-61242.532	-3283864.005
LB-MH03	-61240.318	-3283877.943
LB-MH04	-61238.971	-3283886.430



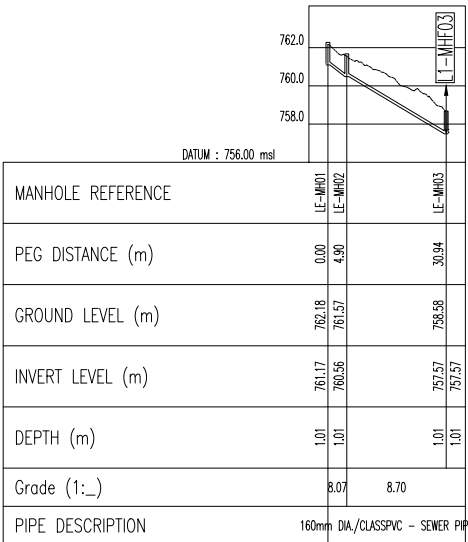
LINE C

PIPE DESIGN DATA.		
REFERENCE	Y	X
LC-MH1	-61207.966	-3283855.033
LC-MH02	-61207.281	-3283859.345
LC-MH03	-61205.279	-3283871.949
LC-MH04	-61203.882	-3283880.748



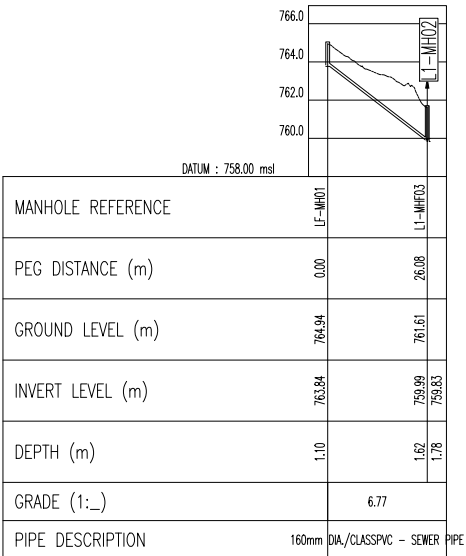
LINE D

PIPE DESIGN DATA.		
REFERENCE	Y	X
LD-MH01	-61177.720	-3283850.107
LD-MH02	-61176.053	-3283860.608
LD-MH03	-61173.637	-3283875.822



LINE E

PIPE DESIGN DATA.		
REFERENCE	Y	X
LE-MH01	-61156.461	-3283845.933
LE-MH02	-61161.138	-3283847.394
LE-MH03	-61157.055	-3283873.108

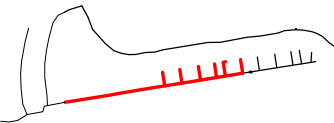


LINE F

PIPE DESIGN DATA.		
REFERENCE	Y	X
LF-MH01	-61128.440	-3283842.049
LF-MH03	-61125.846	-3283868.002

LEGEND

----- NATURAL GROUND LEVEL



LOCALITY SKETCH

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REV	DESCRIPTION	MADE BY	DATE

DRG. NO.	REFERENCE DRAWINGS
P030-LP-02	LAYOUT PLAN
P030-LS-01	LONG SECTION

CONSULTANT

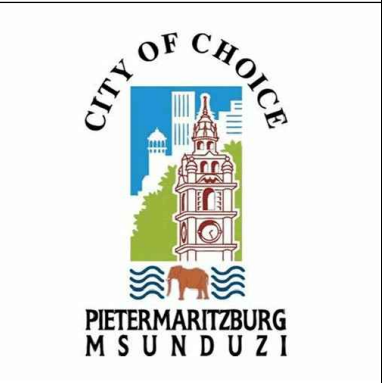
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PROCESS MANAGER : WATER AND SANITATION

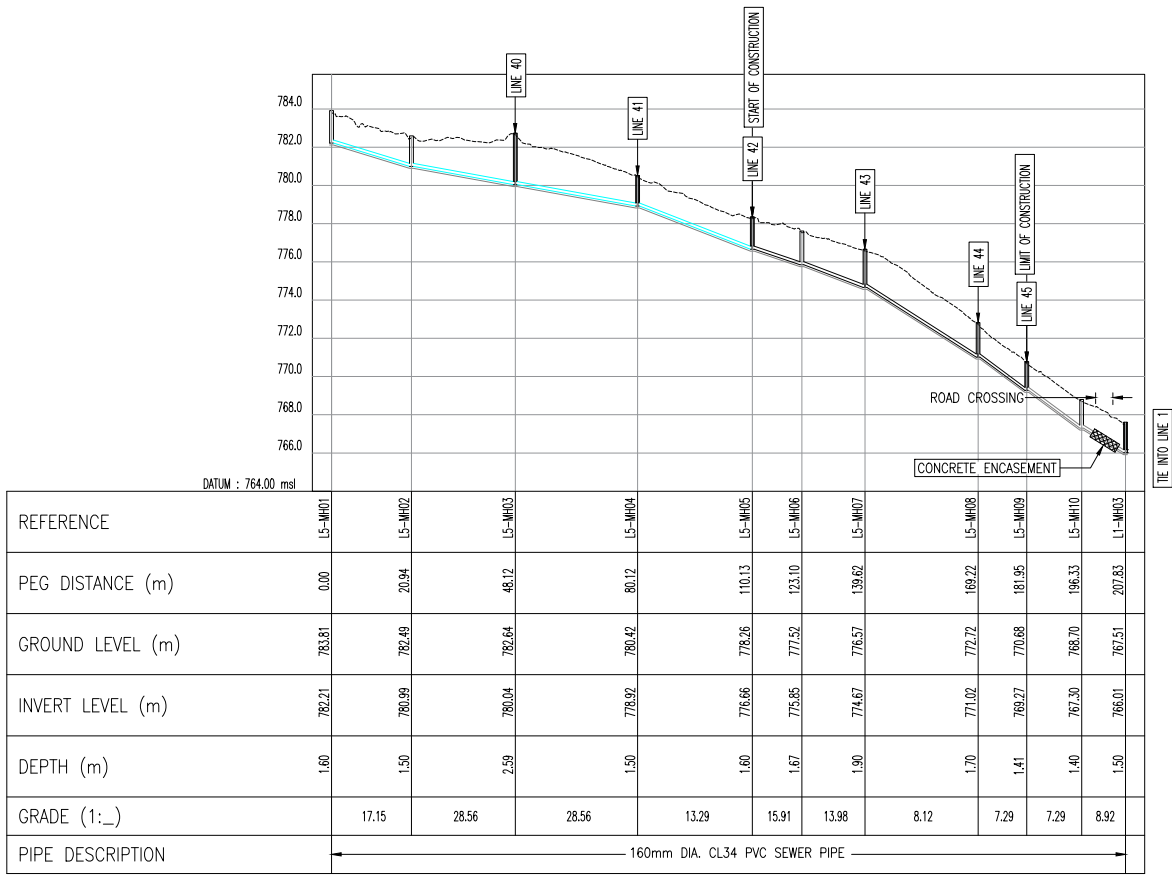


DRAWING PROJECT

**CONSTRUCTION OF SEWER
RETICULATION PIPELINE IN SHENSTONE
AMBLETON**

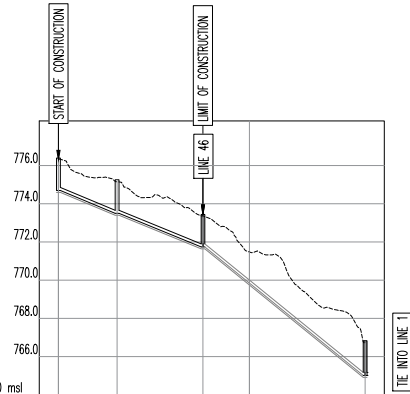
LINE A TO F
LONG-SECTION

SCALES ON A1				
H 1:1000 V 1:200				
DESIGN	NL		PROCESS MANAGER	.
DRAWN	XZ		TEAM MANAGER	.
CHECKED	NL		AS BUILT	.
DESIGN				DATE 08-2026
DRAWING NO.	P030-LS-02			REVISION .



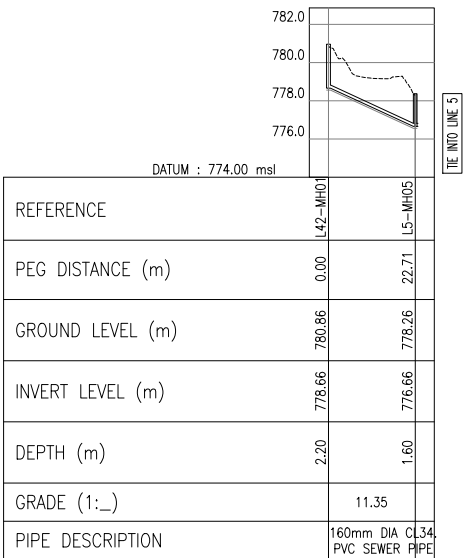
LINE 5

PIPE DESIGN DATA.		
REFERENCE	Y	X
L5-MH01	-60997.806	-3285546.190
L5-MH02	-60999.010	-3285525.288
L5-MH03	-60971.952	-3285522.680
L5-MH04	-60940.098	-3285519.611
L5-MH05	-60910.231	-3285516.733
L5-MH06	-60897.320	-3285515.514
L5-MH07	-60881.743	-3285509.994
L5-MH08	-60854.197	-3285499.156
L5-MH09	-60842.362	-3285494.414
L5-MH10	-60829.044	-3285489.060
L1-MH03	-60825.530	-3285478.020



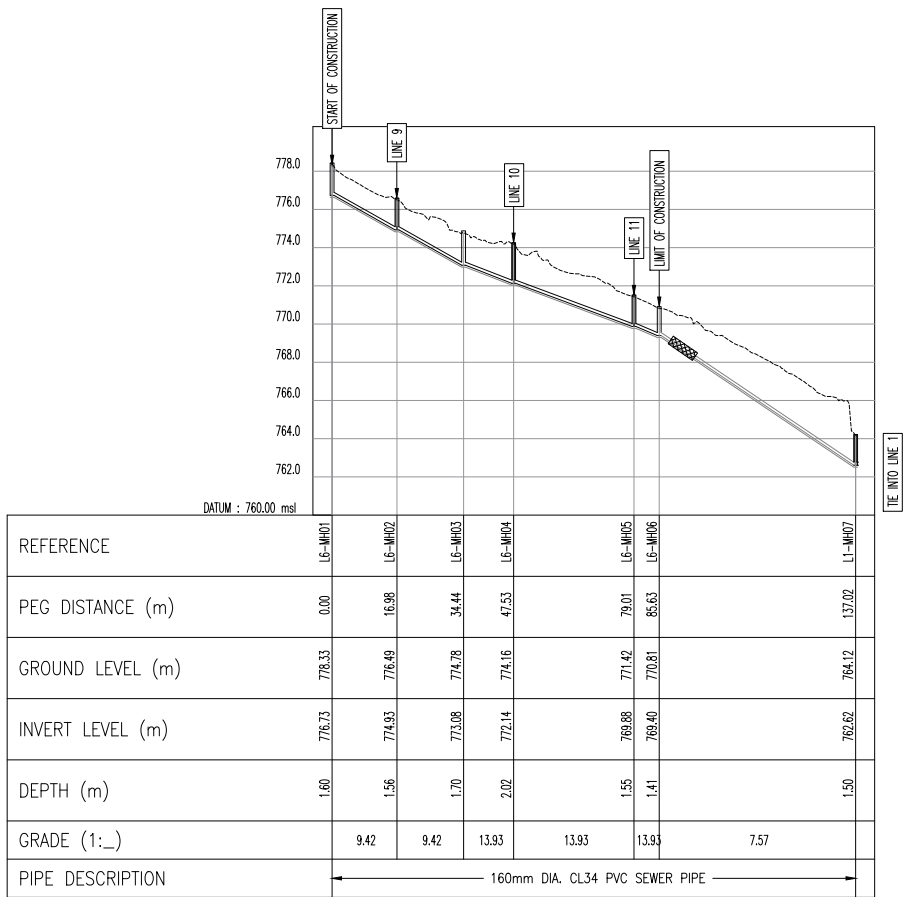
LINE 8

PIPE DESIGN DATA.		
REFERENCE	Y	X
L8-MH01	-60903.693	-3285493.899
L8-MH02	-60907.561	-3285479.044
L8-MH03	-60885.792	-3285473.378
L1-MH04	-60854.471	-3285444.744



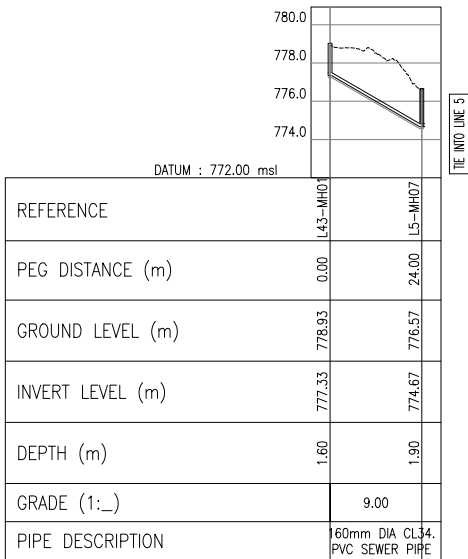
LINE 42

PIPE DESIGN DATA.		
REFERENCE	Y	X
L42-MH01	-60908.144	-3285539.343
L5-MH05	-60910.231	-3285516.733



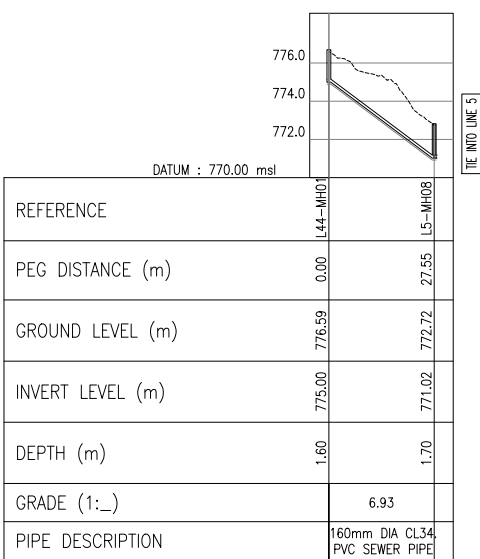
LINE 6

PIPE DESIGN DATA.		
REFERENCE	Y	X
L6-MH01	-60932.918	-3285499.150
L6-MH02	-60933.831	-3285482.191
L6-MH03	-60934.770	-3285464.758
L6-MH04	-60938.068	-3285452.093
L6-MH05	-60946.002	-3285421.624
L6-MH06	-60947.670	-3285415.217
L1-MH07	-60908.231	-3285382.285



LINE 43

PIPE DESIGN DATA.		
REFERENCE	Y	X
L43-MH01	-60877.584	-3285533.635
L5-MH07	-60881.743	-3285509.994



LINE 44

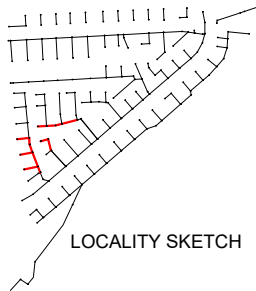
PIPE DESIGN DATA.		
REFERENCE	Y	X
L44-MH01	-60848.491	-3285526.108
L5-MH08	-60854.197	-3285499.156

LEGEND

----- NATURAL GROUND LEVEL

----- FUTURE SEWER

----- EXISTING SEWER



FOR TENDER

PROCUREMENT

SIGNED _____ DATE _____

REV	DESCRIPTION	MADE BY	DATE

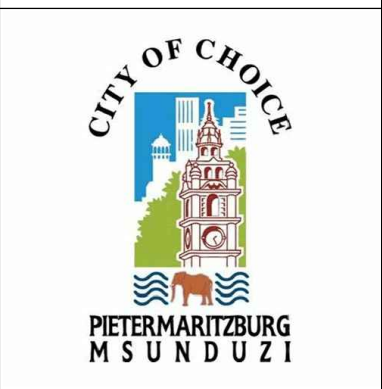
DRG. NO.	REFERENCE DRAWINGS
P030-LP-01	LAYOUT PLAN

CONSULTANT



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INFRASTRUCTURE SERVICES AND FACILITIES
WATER AND SANITATION DIVISION

B. SIVPARSAD
PROCESS MANAGER : WATER AND SANITATION

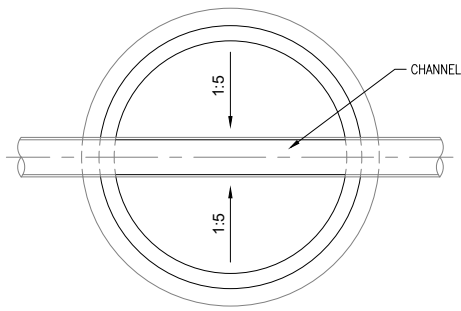


DRAWING PROJECT

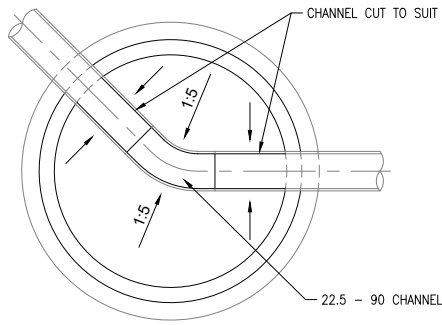
CONSTRUCTION OF SEWER
RETICULATION PIPELINE IN SHENSTONE
AMBLETON

LONG-SECTION

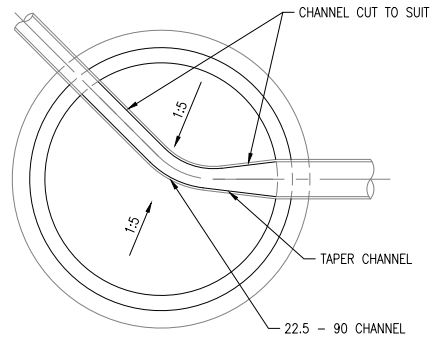
SCALES ON A1			
H 1:1000 V 1:200			
DESIGN	NL	PROCESS MANAGER	.
DRAWN	XZ	TEAM MANAGER	.
CHECKED	NL	AS BUILT	.
DESIGN			DATE 08-2026
DRAWING NO. P030-LS-03			REVISION .



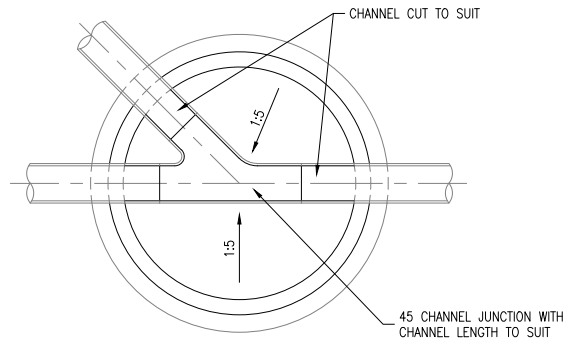
TYPE 1:
STRAIGHT



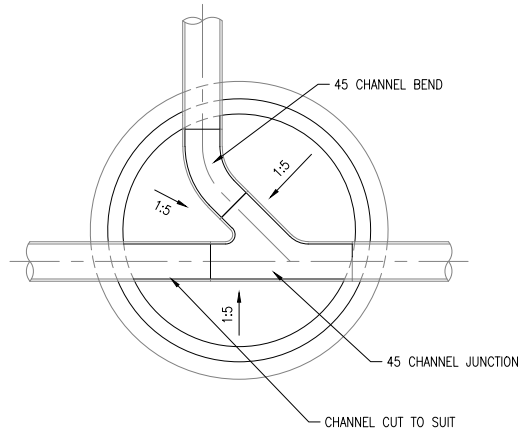
TYPE 2:
22.5° TO 90° BEND.



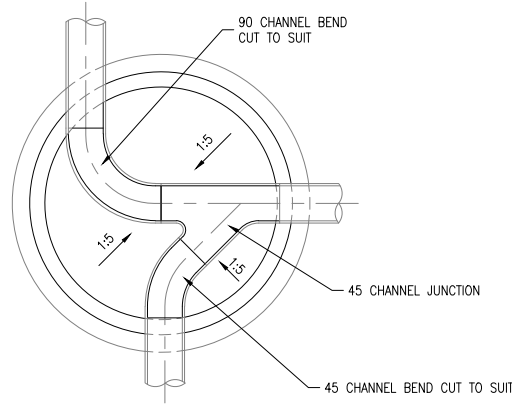
TYPE 3:
22.5° TO 90° TERMINAL BEND.



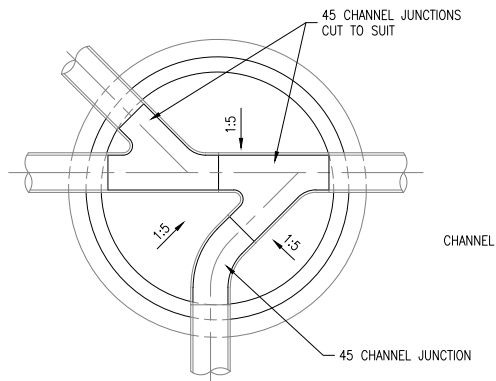
TYPE 4:
SINGLE JUNCTION



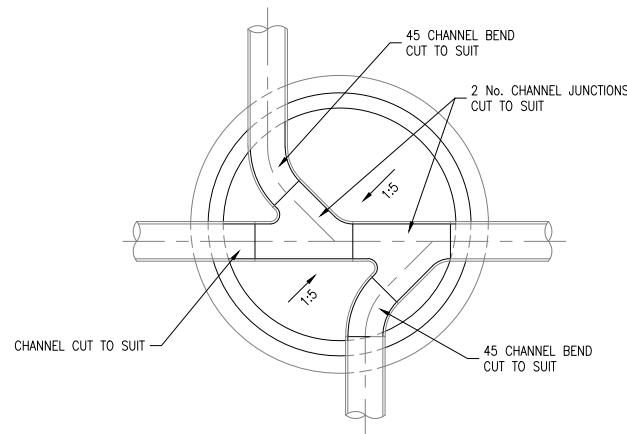
TYPE 4:
SINGLE JUNCTION



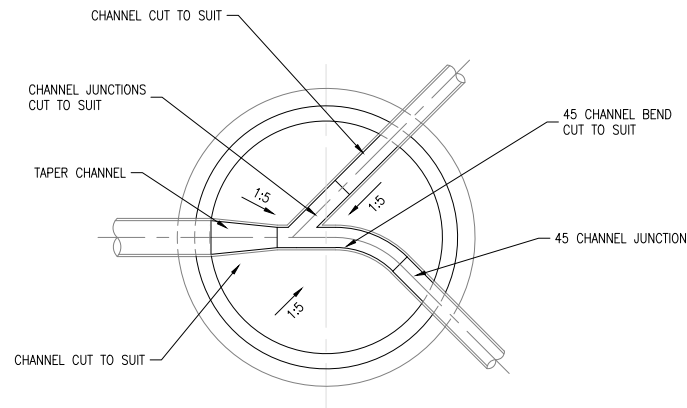
TYPE 4:
SINGLE JUNCTION.



TYPE 5:
DOUBLE JUNCTION.



TYPE 5:
DOUBLE JUNCTION.



TYPE 6:
TERMINAL JUNCTION.

NOTES CONTINUED:

8. FACTORY FABRICATED MANHOLE RINGS MUST COMPLY WITH SANS 1294-1981.
9. OVER EXCAVATION TO BE BACKFILLED WITH A BEDDING MATERIAL ACCORDING TO SPECIFICATION FOR BEDDING MATERIAL.

NOTES:

1. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING P0030-SD-02.
2. WHERE APPROACH GRADES INTO THE MANHOLE ARE 1:15 OR STEEPER AND ASSOCIATED WITH A CHANGE IN DIRECTION IN THE MANHOLE OF 30° OR MORE, THE BENCHING IS TO BE BROUGHT UP TO TWO PIPE DIAMETERS ABOVE THE PIPE INVERT (TYPE B BENCHING SEWERS)
3. RENDERING FOR MANHOLE BENCHING SHALL CONSIST OF ONE PART H.A.C. TO TWO PARTS SAND THOROUGHLY MIXED AND APPLIED TO CONCRETE SURFACES WHILE THE LATTER ARE STILL GREEN. RENDERING SHALL BE AT LEAST 20mm THICK.
4. PLASTIC STEPS ARE NOT REQUIRED IN MANHOLES LESS THAN 1400 DEEP MEASURED FROM THE INVERT OF THE OUTLET PIPE TO THE TOP OF THE CAST IRON COVER
5. CONCRETE BASE SLAB TO BE 25MPa WITH 19mm STONE SIZE
6. MANHOLES TOP OF FRAME MUST BE 50mm TO 250mm PROUD OF NATURAL GROUND LEVEL. RODDING EYES TOP OF THE FRAME MUST BE 50mm TO 250mm PROUD OF FINISHED GROUND LEVEL
7. CONCRETE SECTION TO BE SEALED WITH BITUMEN PUTTY JOINT FROM ABE OR SIMILAR APPROVED

FOR TENDER

PROCUREMENT

SIGNED _____ DATE _____

REV	DESCRIPTION	MADE BY	DATE

DRG. NO. _____ REFERENCE DRAWINGS _____

CONSULTANT



MSUNDUZI MUNICIPALITY
INFRASTRUCTURE SERVICES AND FACILITIES
WATER AND SANITATION DIVISION

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PROCESS MANAGER : WATER AND SANITATION

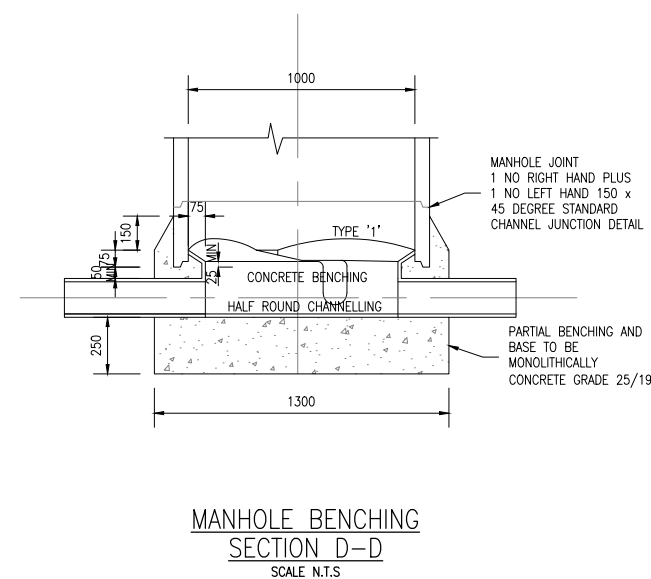
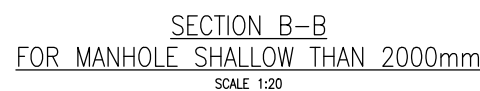
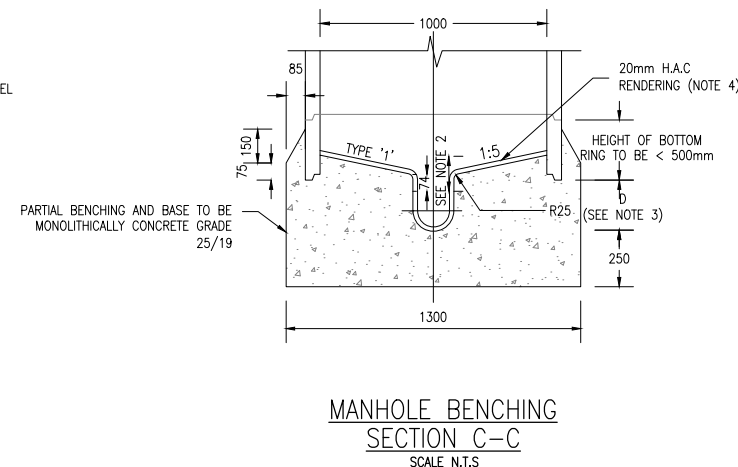
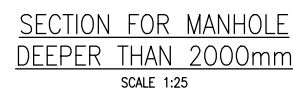


DRAWING PROJECT

**CONSTRUCTION OF SEWER
RETICULATION PIPELINE IN SHENSTONE
AMBLETON**

**TYPICAL SEWER DETAILS:
MANHOLE BENCHING**

SCALES		N.T.S	
DESIGN	SM	PROCESS MANAGER	
DRAWN	MH	TEAM MANAGER	
CHECKED	SM	AS BUILT	
DESIGN		DATE	08-2026
DRAWING NO.	P030-SD-01	REVISION	



- FOR TENDER

- NOTES:**
1. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING P0030-SD-01.
 2. WHERE APPROACH GRADES INTO THE MANHOLE ARE 1:15 OR STEEPER AND ASSOCIATED WITH A CHANGE IN DIRECTION IN THE MANHOLE OF 30° OR MORE, THE BENCHING IS TO BE BROUGHT UP TO TWO PIPE DIAMETERS ABOVE THE PIPE INVERT (TYPE B BENCHING SEWERS)
 3. DIMENSION D VARIES WITH THE DIAMETER OF THE SEWER PIPES AND SHALL BE THE SUM OF 50mm AND THE PIPE DIAMETER
 4. RENDERING FOR MANHOLE BENCHING SHALL CONSIST OF ONE PART H.A.C. TO TWO PARTS SAND THOROUGHLY MIXED AND APPLIED TO CONCRETE SURFACES WHILE THE LATTER ARE STILL GREEN. RENDERING SHALL BE AT LEAST 20mm THICK.
 5. PLASTIC STEPS ARE NOT REQUIRED IN MANHOLE LESS THAN 1400 DEED MEASURED FROM THE INVERT OF THE OUTLET PIPE TO THE TOP OF THE CAST CONCRETE COVER
 6. CONCRETE COVER TO BE 25MPa WITH 19mm STONE SIZE
 7. MANHOLES TOP OF THE FRAME MUST 50mm TO 250mm PROUD OF NATURAL GROUND LEVEL. RODDING EYES TOP OF THE FRAME MUST BE 50mm TO 250mm PROUD OF FINISHED GROUND LEVEL

PROCUREMENT

SIGNED	DATE
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	CONSULTANT



75 IMPALA DRIVE
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EMAIL: admin@mivulo.co.za

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INFRASTRUCTURE SERVICES AND FACILITIES
WATER AND SANITATION DIVISION

B. SIVPARSAD
PROCESS MANAGER : WATER AND SANITATION



DRAWING PROJECT

CONSTRUCTION OF SEWER RETICULATION PIPELINE IN SHENSTONE AMBLETON

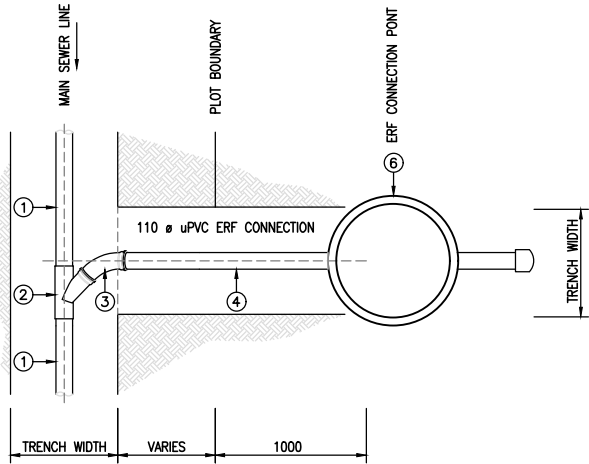
TYPICAL SEWER DETAILS: MANHOLE & BENCHING DETAILS

SCALES	AS SHOWN
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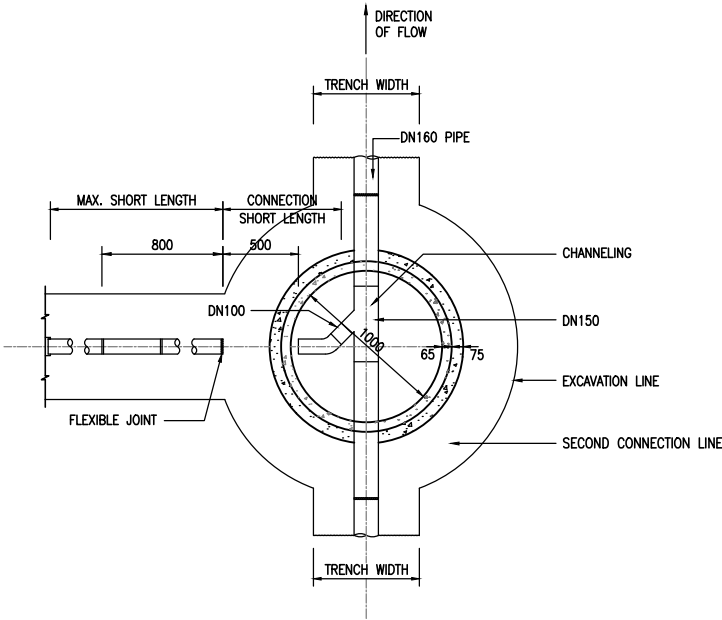
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DRAWN	MH		TEAM MANAGER		
CHECKED	SM		AS BUILT		

DESIGN	DATE	08-2026
DRAWING NO. P030-SD-02		REVISION

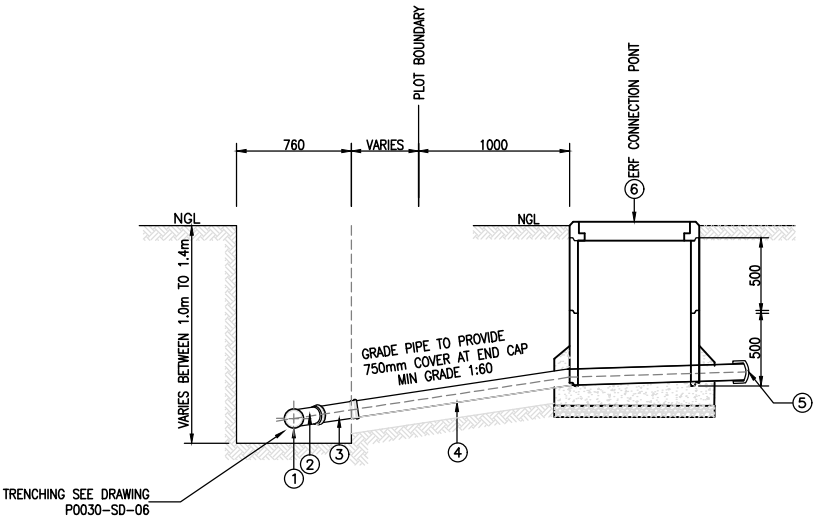
160 ø MAIN SEWER LINE	
ITEM	DESCRIPTION
1	160 ø uPVC SEWER MAIN LINE
2	160 x 110 UNDERGROUND Y SEDDLE
3	110 ø 45° SEWER ELBOW
4	110 ø uPVC SEWER PIPE
5	END CAP
6	TERMINAL MANHOLE



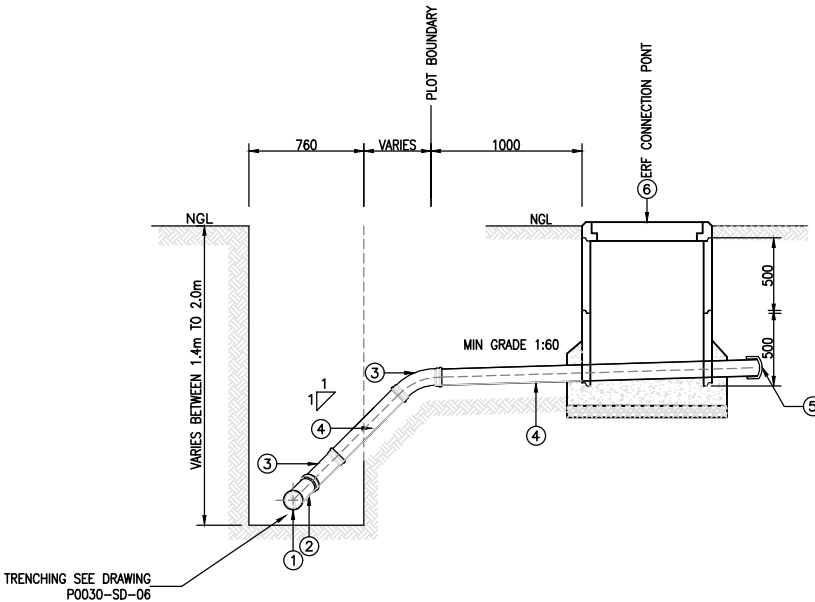
PLAN



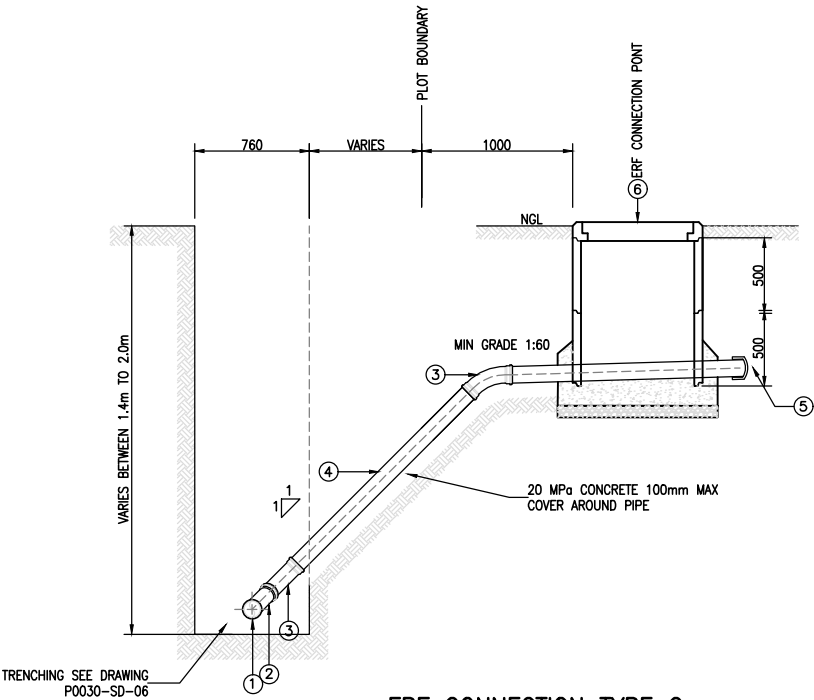
TYPICAL PLAN OF MANHOLE WITH
ERF/HOUSE CONNECTION



ERF CONNECTION TYPE A
MAIN SEWER DEPTH 1.0m TO 1.4m



ERF CONNECTION TYPE B
MAIN SEWER DEPTH 1.4m TO 2.0m



ERF CONNECTION TYPE C
MAIN SEWER DEPTH 2.0m AND GREATER

NOTES:

FOR TENDER

PROCUREMENT

SIGNED _____ DATE _____

REV	DESCRIPTION	MADE BY	DATE

DRG. NO.	REFERENCE DRAWINGS

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NEWCASTLE 2940

TEL: 087 285 1181
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MSUNDUZI MUNICIPALITY
INFRASTRUCTURE SERVICES AND FACILITIES
WATER AND SANITATION DIVISION

B. SIVPARSAD
PROCESS MANAGER : WATER AND SANITATION

CITY OF CHOICE

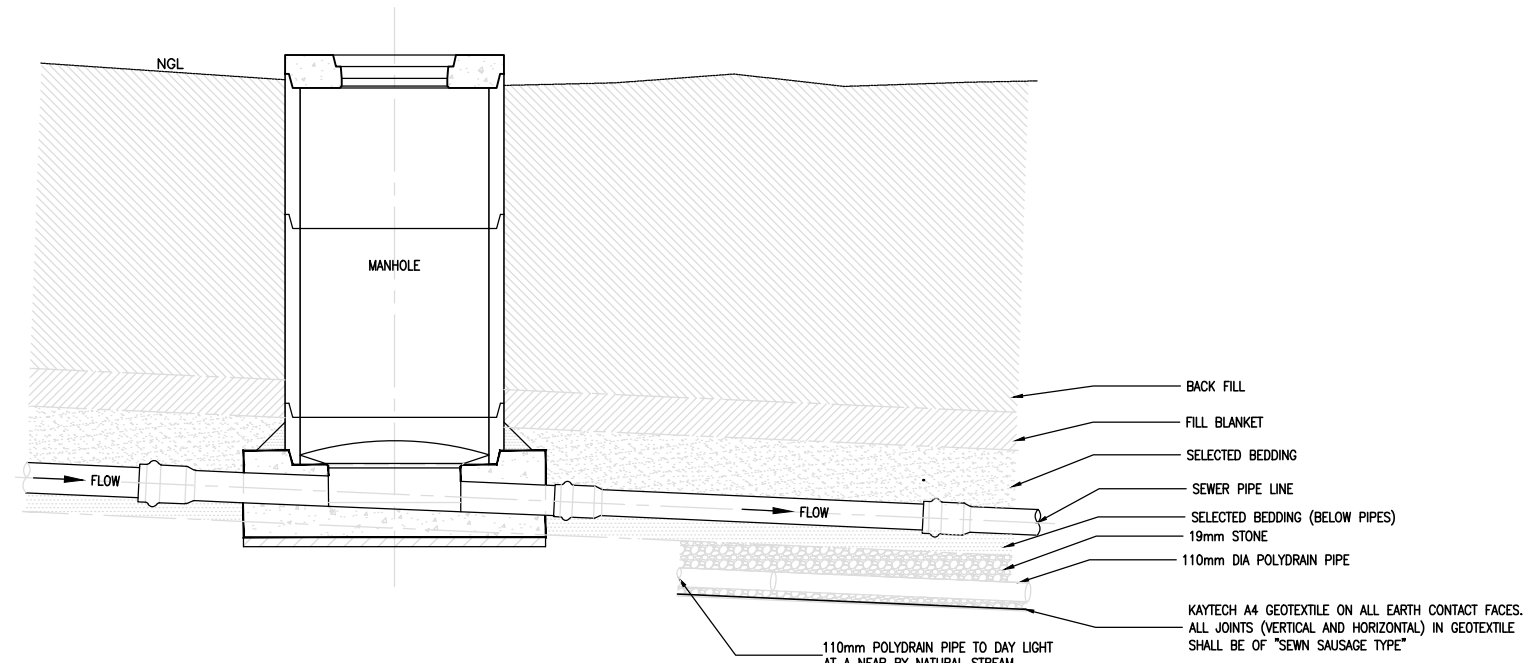
**PIETERMARITZBURG
MSUNDUZI**

DRAWING PROJECT

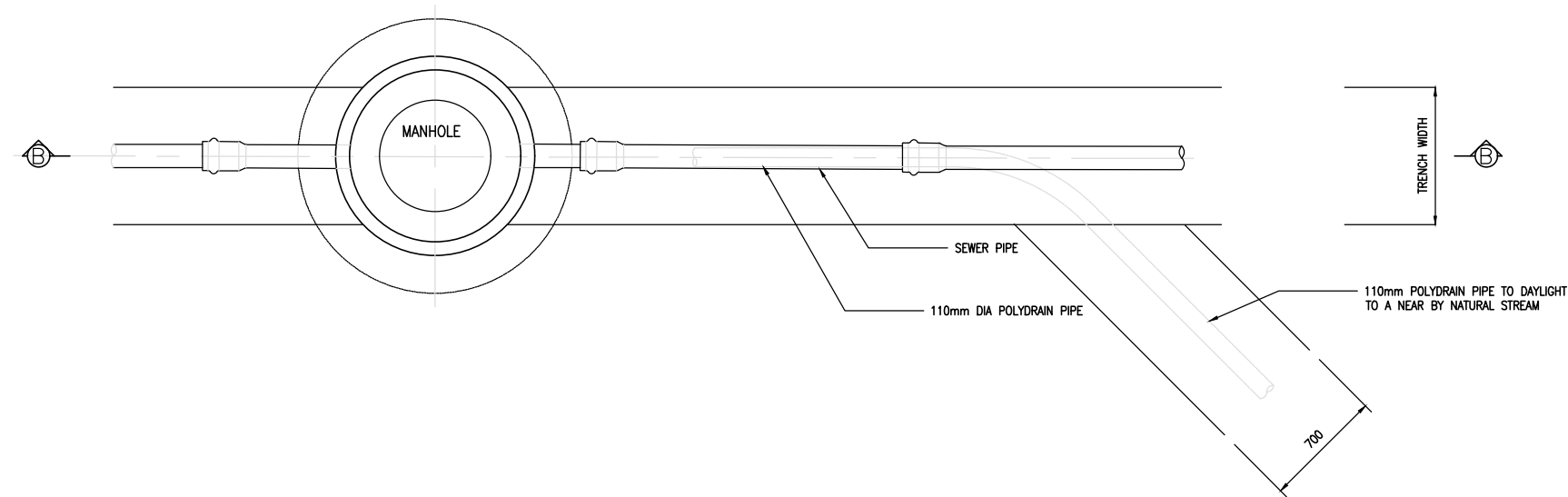
**CONSTRUCTION OF SEWER
RETICULATION PIPELINE IN SHENSTONE
AMBLETON**

TYPICAL SEWER DETAILS:
ERF CONNECTIONS

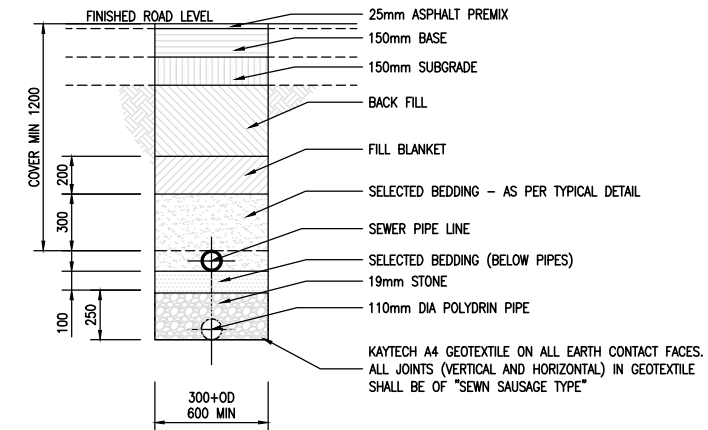
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DRAWN	MH	TEAM MANAGER	
CHECKED	SM	AS BUILT	
DESIGN		DATE	08-2026
DRAWING NO.	P030-SD-03		REVISION



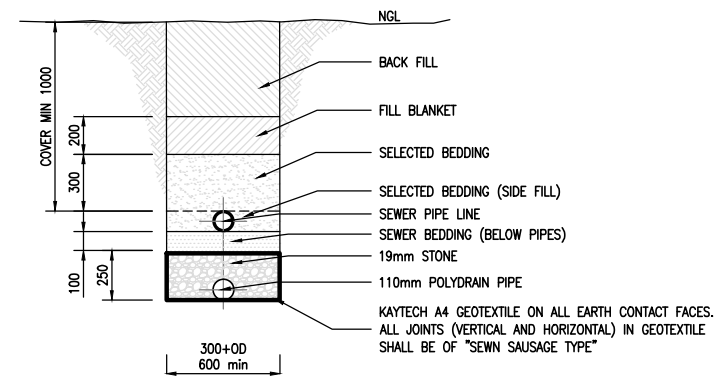
TYPICAL TRENCHING PLAN AGRICULTURAL DRAIN TO DAYLIGHT
SECTION B-B



TYPICAL TRENCHING PLAN AGRICULTURAL DRAIN TO DAYLIGHT



TYPICAL TRENCHING SECTION IN WET AREAS
UNDER ROADS (URBAN)



TYPICAL TRENCHING SECTION IN
NON-TRAFFICKED AREAS

NOTES:

FOR TENDER

PROCUREMENT

SIGNED _____ DATE _____

REV	DESCRIPTION	MADE BY	DATE

DRG. NO. _____ REFERENCE DRAWINGS _____

CONSULTANT



75 IMPALA DRIVE
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DRAWING PROJECT

CONSTRUCTION OF SEWER
RETICULATION PIPELINE IN SHENSTONE
AMBLETON

TYPICAL SEWER DETAILS:
TRENCHING IN WET AREAS

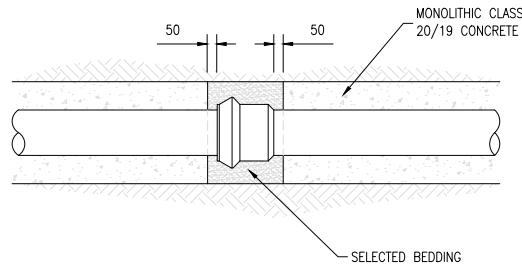
SCALES 1:20

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DRAWN	MH	TEAM MANAGER		
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DESIGN DATE 08-2026

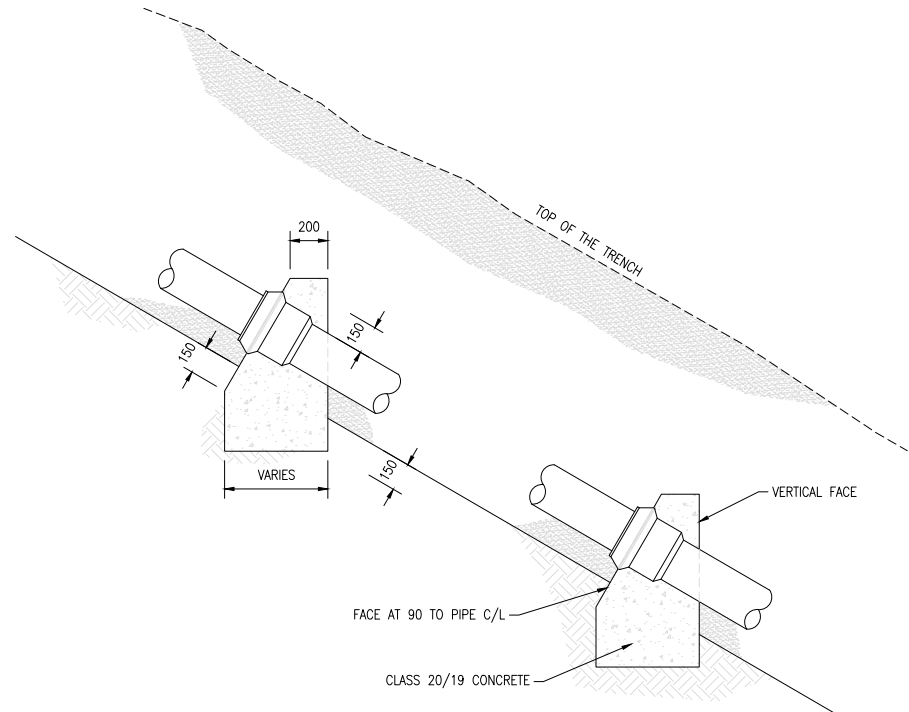
DRAWING NO. P030-SD-04 REVISION

K:\ACTIVE\P - 0030 - SHENSTONE AMBLETON\0030 - DESIGN AND DRAWINGS\0030 - DETAIL DESIGN\N2026P0030 - SD-04 - SEWER PIPE TRENCHING IN WET AREAS.DWG

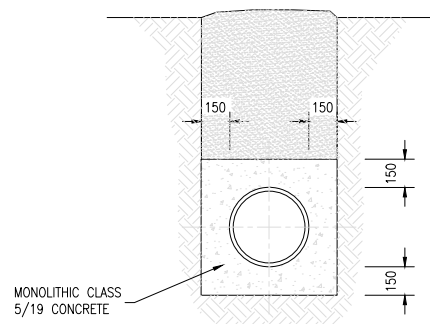


DETAIL AT JOINT – CONCRETE SURROUND

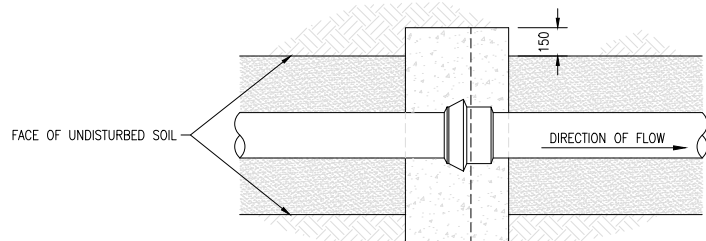
ANCHOR BLOCK SPACING FOR 4m LONG PIPES	
GRADIENTS 1:x	NUMBER OF PIPES BETWEEN ANCHORS
5	ALTERNATE JOINT
6	EVERY 3rd JOINT
7	EVERY 3rd JOINT
8	EVERY 4th JOINT
9	EVERY 4th JOINT
10	EVERY 5th JOINT



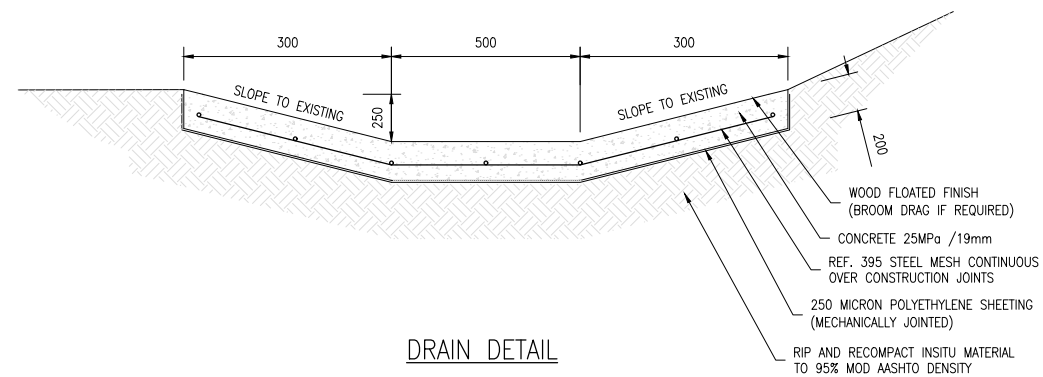
TYPICAL SECTION SHOWING ANCHOR BLOCKS FOR PIPES IN TRENCHES AT GRADIENTS STEEPER THAN 1:10



CONCRETE SURROUND TO PIPE



TYPICAL PLAN SHOWING PIPE ANCHOR BLOCKS



DRAIN DETAIL

NOTES:

FOR TENDER

PROCUREMENT

SIGNED _____ DATE _____

REV	DESCRIPTION	MADE BY	DATE

DRG. NO. _____ REFERENCE DRAWINGS _____

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DRAWING PROJECT

CONSTRUCTION OF SEWER
RETICULATION PIPELINE IN SHENSTONE
AMBLETON

TYPICAL SEWER DETAILS:
ANCHOR BLOCK AND V-DRAINS

SCALES 1:20

DESIGN	SM	PROCESS MANAGER		
DRAWN	MH	TEAM MANAGER		
CHECKED	SM	AS BUILT		

DESIGN _____ DATE 08-2026

DRAWING NO. P0030-SD-05 REVISION .

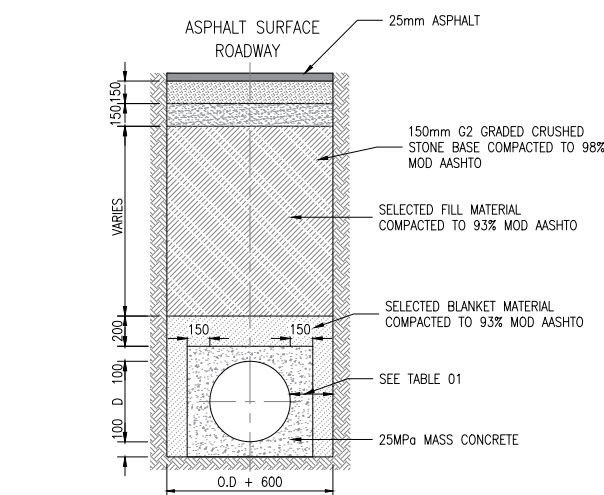
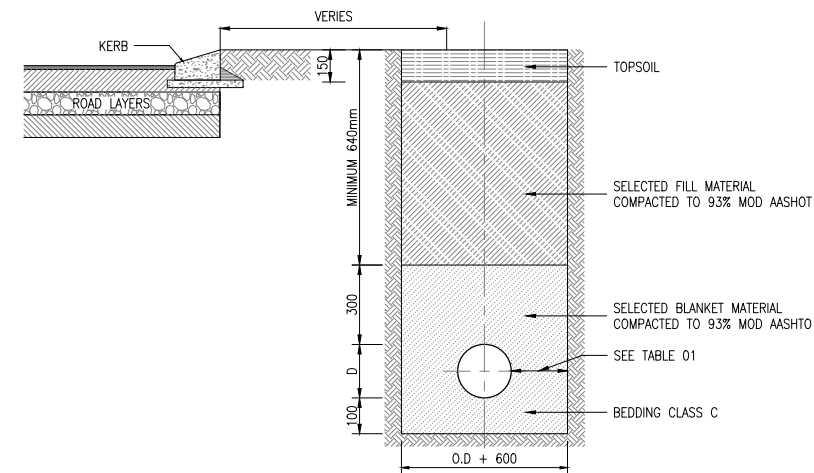
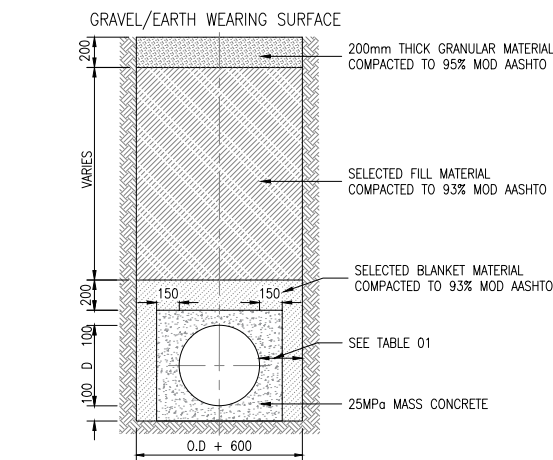
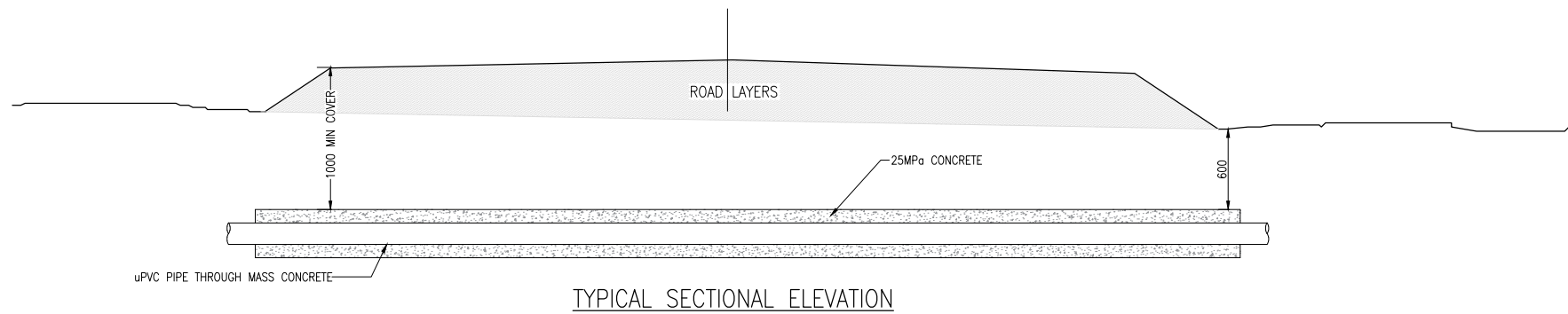
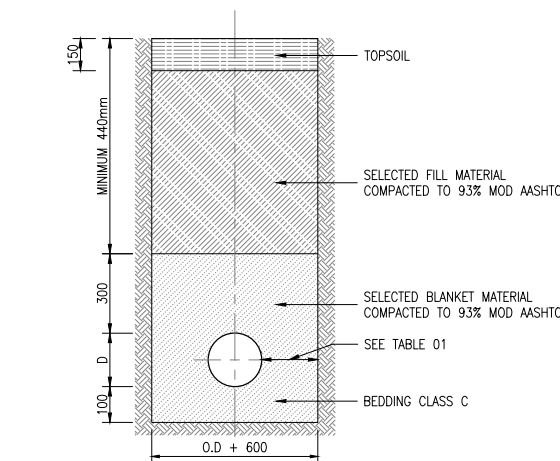


TABLE 01	
NOMINAL DIAMETER OF PIPE "D"	SIDE ALLOWANCE ON EACH SIDE
110 mm	300 mm
160 mm	300 mm
250 mm	300 mm



NOTES:

FOR TENDER

PROCUREMENT

SIGNED _____ DATE _____

REV	DESCRIPTION	MADE BY	DATE

DRG. NO. _____ REFERENCE DRAWINGS _____

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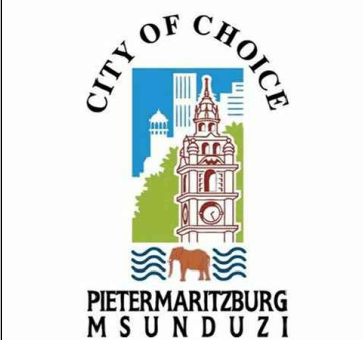
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DRAWING PROJECT

**CONSTRUCTION OF SEWER
RETICULATION PIPELINE IN SHENSTONE
AMBLETON**

**TYPICAL SEWER DETAILS:
PIPE CROSSING THE ROAD AND
TYPICAL PIPE TRENCH**

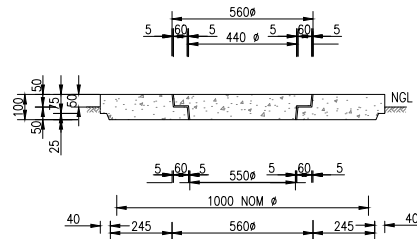
SCALES N.T.S

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DRAWN	MH	TEAM MANAGER		
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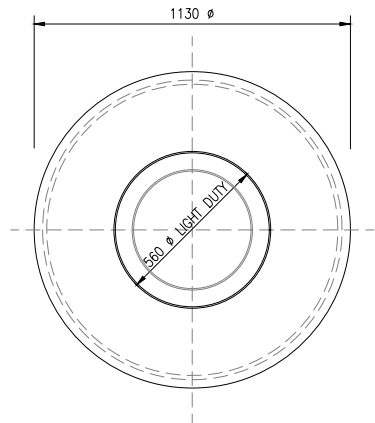
DESIGN _____ DATE 08-2026

DRAWING NO. P0030-SD-06 REVISION _____

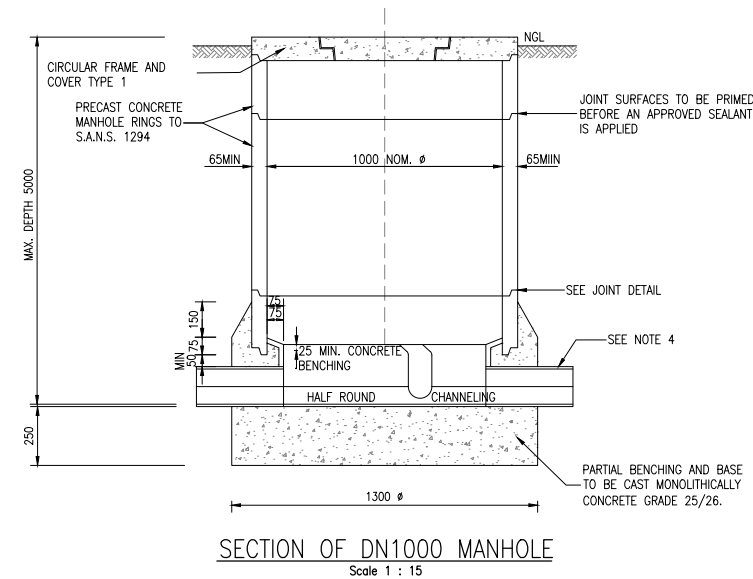
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SECTION OF CIRCULAR LIGHT DUTY MANHOLE
COVER AND FRAME TYPE 1
SCALE 1 : 15

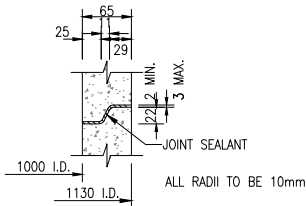


PLAN OF CIRCULAR LIGHT FRAME FOR 1000mm NOM DIA.
MANHOLE TYPE 1
SCALE 1 : 15

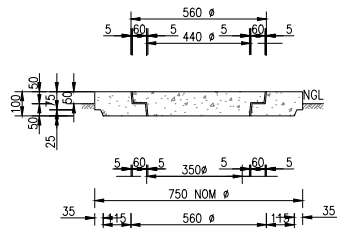


SECTION OF DN1000 MANHOLE
Scale 1 : 15

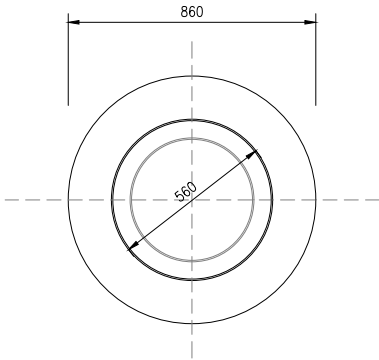
PRECAST CONCRETE SEWER MANHOLES



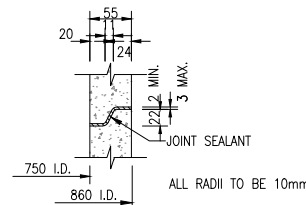
JOINT DETAIL OF 1000mm MANHOLE
Scale 1 : 5



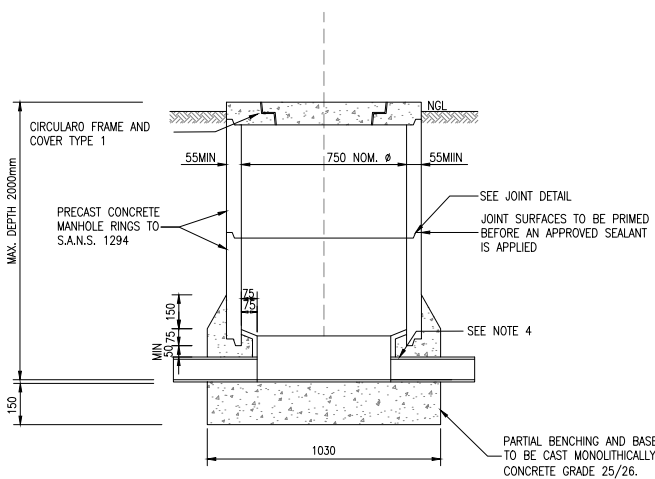
SECTION OF CIRCULAR LIGHT DUTY MANHOLE
COVER AND FRAME TYPE 1
SCALE 1 : 15



PLAN OF CIRCULAR LIGHT FRAME FOR 750mm NOM DIA.
MANHOLE TYPE 1
SCALE 1 : 15



JOINT DETAIL OF 750mm MANHOLE
Scale 1 : 5



SECTION OF DN750 MANHOLE
Scale 1 : 15

PRECAST CONCRETE SEWER MANHOLES

NOTES :

- DIMENSION D VARIES WITH THE DIAMETER OF THE SEWER PIPES AND SHALL BE THE SUM OF 50mm AND THE PIPE DIAMETER.
- RENDERING FOR MANHOLE BENCHING SHALL CONSIST OF ONE PART H A C TO TWO PARTS SAND THOROUGHLY MIXED AND APPLIED TO CONCRETE SURFACES WHILE THE LATTER ARE STILL GREEN. RENDERING SHALL BE AT LEAST 20mm THICK.
- EVERY uPVC PIPE BUILT INTO A MANHOLE, SHALL HAVE CLEAN DRY SAND (TO S.A.N.S. 083 TABLE 1) GLUED TO ITS OUTSIDE AS RECOMMENDED BY THE PIPE MANUFACTURE USING APPROVED SPECIAL PVC CEMENT TO ENSURE GOOD ADHESION TO THE BASE CONCRETE.
- IN LOCATIONS DEFINED BY THE ENGINEER AS SUBJECT TO FLOODING, C.I. MANHOLES COVERS, AN APPROVED SEALANT AND TAPE SHALL BE USED.
- PLASTIC STEP TO BE PROVIDED FOR MANHOLES DEEPER THAN 1.4m.
- MINIMUM ONE, MAXIMUM THREE SPACER RINGS FOR THE TOP OF MANHOLES ARE REQUIRED. THE RINGS ARE TO BE JOINED WITH 1:6 CEMENT MORTAR.
- TOP OF MANHOLES AND EYES SHOULD STAND 50mm TO 250mm PROUD OF ADJACENT FINISHED GROUND LEVEL IN MID-BLOCK SERVITUDE.

PROCUREMENT

SIGNED _____ DATE _____

REV	DESCRIPTION	MADE BY	DATE

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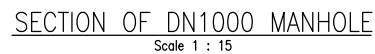
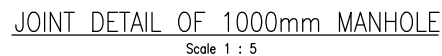


DRAWING PROJECT

**CONSTRUCTION OF SEWER
RETICULATION PIPELINE IN SHENSTONE
AMBLETON**

**TYPICAL SEWER DETAILS:
PRE-CAST MANHOLE
DETAIL (TYPE 1)**

SCALES				AS SHOWN	
DESIGN	SM		PROCESS MANAGER		
DRAWN	MH		TEAM MANAGER		
CHECKED	SM		AS BUILT		
DESIGN			DATE	08-2026	
DRAWING NO.	P0030-SD-07		REVISION		



SECTION OF CIRCULAR HEAVY DUTY MANHOLE
COVER AND FRAME TYPE 2



Scale 1 : 15

SCALES					AS SHOWN	
DESIGN	SM	PROCESS	MANAGER			
DRAWN	MH	TEAM	MANAGER			
CHECKED	SM	AS BUILT				
DESIGN				DATE	08-2026	
DRAWING NO.					REVISION	
P0030-SD-08						