



PROPOSED ACCESS TO EXISTING PROPERTIES

FIG. 6 KERB

PROPOSED 6M WIDE ROADWAY WITH ASPHALT SURFACING REFER TO ROADWAY LAYERWORKS DETAIL TYPE

FIG. 6 KERB

FIG. 9 KERB

LOFFELSTEIN RETAINING WALL MAX AVERAGE HEIGHT - 4.0m

ATTENUATION POND PLATFORM 1, LEVEL 417.000m

STORMWATER PIPES SHALL BE SPACED AT 30m INTERVALS

| SEWER COVER TYPE INFORMATION | |
|------------------------------|---|
| COVER TYPE | SPECIFICATIONS |
| A | HEAVY DUTY PRECAST CONCRETE COVERS AND FRAMES WITHIN ROADWAYS |
| B | LIGHT DUTY PRECAST CONCRETE COVERS AND FRAMES IN VERGES |

| SEWER SETTING OUT DETAILS | | | | | | |
|---------------------------|-------------|-----------|-------------|--------------|-------|------------|
| MANHOLE REFERENCE | X | Y | COVER LEVEL | INVERT LEVEL | DEPTH | COVER TYPE |
| SMH01 | 3375143.016 | 56230.282 | 418.55 | 417.80 | 0.75 | B |
| SMH02 | 3375122.916 | 56230.247 | 420.75 | 417.48 | 3.27 | B |
| SMH03 | 3375122.900 | 56235.614 | 420.75 | 417.4 | 3.35 | B |
| SMH04 | 3375102.027 | 56235.843 | 420.75 | 417.22 | 3.53 | B |
| SMH05 | 3375102.019 | 56233.282 | 420.75 | 417.2 | 3.55 | B |
| SMH05-1 | 3375101.985 | 56219.378 | 420.75 | 417.5 | 3.25 | B |
| SMH06 | 3375062.467 | 56233.241 | 419.55 | 417.00 | 2.55 | B |
| SMH07 | 3375078.128 | 56233.130 | 419.55 | 416.9 | 2.65 | B |
| SMH07-1 | 3375078.128 | 56233.875 | 419.55 | 417.08 | 2.47 | B |
| SMH08 | 3375071.150 | 56234.498 | 419.00 | 416.83 | 1.17 | B |
| SMH09 | 3375108.454 | 56208.458 | 422.13 | 421.24 | 0.89 | B |
| SMH10 | 3375130.660 | 56208.458 | 422.13 | 420.87 | 1.26 | B |
| SMH11 | 3375135.705 | 56208.559 | 422.00 | 420.8 | 1.20 | A |
| SMH12 | 3375135.705 | 56182.614 | 422.00 | 420.54 | 1.46 | A |
| SMH13 | 3375112.160 | 56182.614 | 422.00 | 420.31 | 1.69 | A |
| SMH14 | 3375112.177 | 56179.618 | 422.00 | 420.28 | 1.72 | A |
| SMH15 | 3375104.288 | 56179.641 | 421.90 | 420.20 | 1.70 | A |
| SMH15-1 | 3375104.288 | 56173.156 | 421.90 | 420.30 | 1.60 | A |
| SMH16 | 3375097.747 | 56187.800 | 422.13 | 420.03 | 2.10 | B |
| SMH17 | 3375090.969 | 56179.665 | 421.90 | 420.08 | 1.82 | A |
| SMH17-1 | 3375090.922 | 56184.070 | 422.13 | 420.40 | 1.73 | B |
| SMH18 | 3375078.289 | 56179.66 | 421.90 | 419.07 | 2.83 | A |
| SMH18-1 | 3375078.289 | 56187.653 | 422.13 | 420.13 | 2.00 | B |
| SMH18-2 | 3375073.632 | 56187.653 | 422.13 | 420.25 | 1.88 | B |
| SMH19 | 3375065.929 | 56179.66 | 421.90 | 418.84 | 3.06 | A |
| SMH20 | 3375065.85 | 56173.322 | 421.85 | 418.85 | 3.00 | B |
| SMH20-1 | 3375065.85 | 56173.322 | 421.85 | 418.85 | 3.00 | B |
| SMH21 | 3375032.581 | 56172.389 | 422.00 | 419.1 | 2.90 | B |
| SMH22 | 3375011.232 | 56182.768 | 420 | 418.87 | 3.13 | B |

| LEGEND | |
|--------|--------------------------|
| | 160mm CLASS 34 uPVC PIPE |
| | NEW SEWER MANHOLE |

- NOTES :**
- A. GENERAL :**
- ALL SETTING OUT TO BE UNDERTAKEN BY A REGISTERED PROFESSIONAL LAND SURVEYOR.
 - PROVE ALL SERVICES PRIOR TO CONSTRUCTION.
 - ALL WORK AREAS TO BE REINSTATED (PREMIX CONCRETE, ETC.)
 - MUNICIPALITY TO EXECUTE ALL CONNECTIONS INTO MUNICIPAL LINES.
 - ALL LEVELS AND DIMENSIONS TO BE VERIFIED ON SITE.
 - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE STRUCTURAL ENGINEERING AND ARCHITECTURAL DRAWINGS.
 - ALL WORK IS TO BE EXECUTED IN ACCORDANCE WITH SANS 1200.
 - CONTRACTOR TO PROVIDE AN AS-BUILT SURVEY OF ALL WORKS CONSTRUCTED UPON COMPLETION OF THE PROJECT.
 - ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH THE RELEVANT SANS 1200 SPECIFICATIONS.
 - THE CONTRACTOR MUST GIVE THE ENGINEER 48 HOURS WRITTEN NOTICE OF INSPECTIONS PRIOR TO COVERING UP ANY WORKS.
 - THE CONTRACTOR MUST ARRANGE FOR CONTROL TESTING AT FREQUENCIES SPECIFIED IN THE RELEVANT SANS 1200 SPECIFICATIONS. COSTS FOR CONTROL TESTING WILL BE FOR THE CONTRACTOR'S ACCOUNT.
 - ONCE THE WORKS ARE SET OUT THE CONTRACTOR MUST CALL THE ENGINEER FOR INSPECTION PRIOR TO COMMENCING WITH CONSTRUCTION.
 - SHOULD THE CONTRACTOR DISCOVER ANY DISCREPANCIES IN THE DRAWINGS, THESE DISCREPANCIES MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY. NO ASSUMPTIONS MUST BE MADE.
 - SHOULD THE CONTRACTOR WISH TO USE ANY MATERIALS OTHER THAN THOSE SPECIFIED, HE MUST OBTAIN WRITTEN APPROVAL FROM THE ENGINEER TO DO SO.
 - ANY DESIGN CHANGES DURING CONSTRUCTION MUST BE ISSUED UNDER SITE INSTRUCTION, AFTER APPROVAL BY THE PRINCIPAL AGENT.
 - ALL BRICKS USED TO CONSTRUCT SEWER AND STORMWATER MANHOLES MUST BE NFX LOAD BEARING BRICKS CONFORMING TO SANS 1200 LD.
 - ALL EXISTING SERVICES TO BE PROVED PRIOR TO WORK COMMENCING. ANY EXISTING SERVICE THAT IS DAMAGED BY THE CONTRACTOR AND IS SHOWN ON THE CONSTRUCTION DRAWINGS OR INDICATED TO THE CONTRACTOR ON SITE BY THE ENGINEER, MUST BE REPAIRED BY THE CONTRACTOR AT HIS OWN COST.

- B. EARTHWORKS :**
- 150mm TOPSOIL TO BE STRIPPED AND STOCKPILED AS INSTRUCTED.
 - UNSUITABLE MATERIAL TO BE SPILT AS INDICATED BY THE ENGINEER.
 - IN SITU MATERIAL TO BE COMPACTED TO 93% MOD. ASH TO DENSITY.
 - FILL TO BE COMPACTED IN MAX. 200mm THICKNESS TO 93% MOD. ASH TO DENSITY.
 - ALL BATTERS TO BE TOPSOILED WITH MATERIAL FROM STOCKPILE.
- C. STORMWATER**
- ALL STORMWATER PIPES ARE :
- 250mm NOMINAL DIAMETER - CLASS 34HD uPVC
 - 375mm / 450mm NOMINAL DIAMETER - CLASS 1000 CONCRETE
 - ALL STORMWATER CONCRETE PIPES TO COMPLY WITH SANS 877 STANDARDS.
 - ALL JOINTS TO BE 'SPIGOT AND SOCKET' TYPE.
 - ALL STORMWATER PIPES TO BE LAID ON CLASS B BEDDING.
- D. SEWER**
- ALL SEWER PIPES ARE 160mm NOMINAL DIAMETER CLASS 34 HEAVY DUTY uPVC PIPES.
- ALL SEWER PIPES TO BE LAID ON CLASS B BEDDING.
 - ALL SEWER PIPES TO COMPLY WITH SANS 1001 STANDARDS.
 - ALL SEWER PIPES IN PARKING AREAS/ROAD CROSSINGS TO BE CONCRETE ENCASED 150mm ALL ROUND WITH 25MPa CONCRETE AT 28 DAYS STRENGTH.

- E. WATER RETICULATION**
- BULK WATER MAIN - 75mm Ø HDPE PE100 PN 12.5
 - BEDDING TO SUIT FLEXIBLE PIPES
 - PIPES TO BE INSTALLED WITH ALL COUPLINGS AND TO BE TESTED AND DISINFECTED.
 - INSTALLATION TO COMPLY WITH SANS 1200.
 - THRUST BLOCKS TO BE 25MPa CONCRETE AT 28 DAYS STRENGTH.
 - CONTRACTOR TO ENSURE THAT ALL INDIVIDUAL DOMESTIC SUPPLY WATER MAINS ARE CONNECTED TO THE POTABLE WATER RETICULATION AND NOT THE FIRE RETICULATION.
 - PRECAST MARKERS TO BE INSTALLED TO INDICATE TO THE RELEVANT UNDERGROUND SERVICES (WATER LINES, VALVES, FIRE LINES ETC.).
 - MINIMUM COVER TO BURIED PIPES SHALL BE 900mm, EXCEPT AT ROAD CROSSINGS WHERE THE COVER SHALL BE INCREASED TO 1000mm.

SCALE (mm)

| No. | REFERENCE DRAWINGS |
|-----|--------------------------------------|
| 908 | BULK STORMWATER RETICULATION LAYOUT |
| 907 | BULK SEWER LONG SECTIONS |
| 905 | BULK SEWER AND WATER TYPICAL DETAILS |
| 904 | BULK WATER RETICULATION LAYOUT |
| 900 | BULK EARTHWORKS LAYOUT |

| REV | DESCRIPTION | BY | DATE |
|-----|-------------------------|-----|------------|
| P2 | SEWER LOCATIONS UPDATED | S.M | 2025.04.14 |
| P1 | ISSUED FOR COMMENTS | A.M | 2024.09.20 |

Professional person Registration

CLIENT

SOUTH AFRICAN POLICE SERVICES

PROJECT

MSINSINI POLICE STATION

DETAILS

BULK SEWER RETICULATION LAYOUT

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| DRAWN | A.M | | AS SHOWN |
| APPROVED | S.S | PL | DATE 2024.09.20 |

TENDER No.

DRAWING No. **589/MSI/903** REV **P2**

BULK SEWER RETICULATION LAYOUT SCALE 1:200

PRELIMINARY