



PHOKWANE LOCAL MUNICIPALITY

BONITAPARK UPGRADING OF TAXI ROUTES

TENDER DRAWINGS

VOLUME 2

CONTRACT NUMBER: PL12/UTB/0123

FEBRUARY 2023



VERSION	DRAWING NUMBER	DRAWING DESCRIPTION
1.0	2022-11-G/A/001	PROJECT DRAWING INDEX
1.0	2022-11-G/D/001	PROJECT NAME BOARD
1.0	2022-11-G/P/001	LOCALITY MAP
1.0	2022-11-R/D/001	TYPICAL KERBING DETAILS
1.0	2022-11-R/D/002	TYPICAL PAVEMENT DESIGN DETAIL FOR SURFACED ACCESS STREETS (PAVING BLOCK FINISH)
1.0	2022-11-R/D/003	TYPICAL DETAILS PATCHING & EDGEBREAK REPAIR
1.0	2022-11-R/K/001	PROPOSED ROAD LAYOUT KEYPLAN
1.0	2022-11-R/P/001	PROPOSED ROAD LAYOUT SHEET 1
1.0	2022-11-R/P/002	PROPOSED ROAD LAYOUT SHEET 2
1.0	2022-11-R/P/003	PROPOSED ROAD LAYOUT SHEET 3

REVISIONS

No.	DATE	BY	DESCRIPTION

NOTES

REFERENCE DRAWINGS

PLAN No.	DESCRIPTION

APPROVED: _____ DATE: _____

ENGINEER: _____ DATE: _____

APPROVED: _____ DATE: _____

CLIENT: _____ DATE: _____

PRINT ISSUED ON _____



Tsela Tsweu
CONSULTING ENGINEERS

Mobile: + 27 (0)83 265 1524
329 Stateway Chambers, Stateway, Welkom,
PO Box 2600, Welkom, 9460, South Africa



CLIENT
PHOKWANE LOCAL MUNICIPALITY

PROJECT
BONITAPARK UPGRADING OF TAXI ROUTES

IMPLEMENTING AGENT:
PHOKWANE LM



DRAWING TITLE
PROJECT DRAWING INDEX

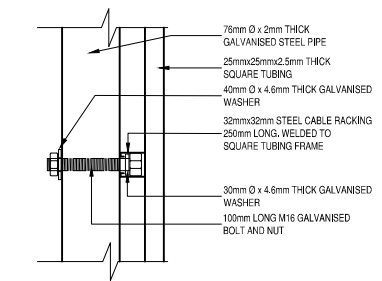
DESIGN	DATE	DRAWN	DATE
	AUG 2022		AUG 2022
SURVEYED	DATE	CHECKED	DATE
		J.BATEMAN	AUG 2022

SCALE **NTS**

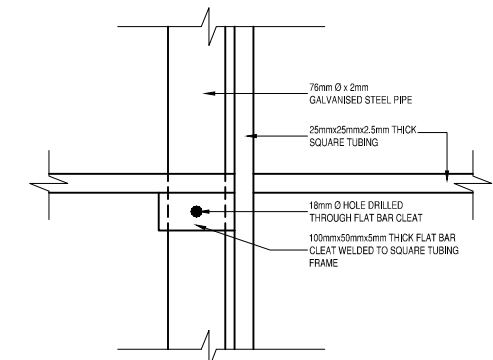
DRAWING No.
2022-11-G/A/001

REVISION No.							
1.0							

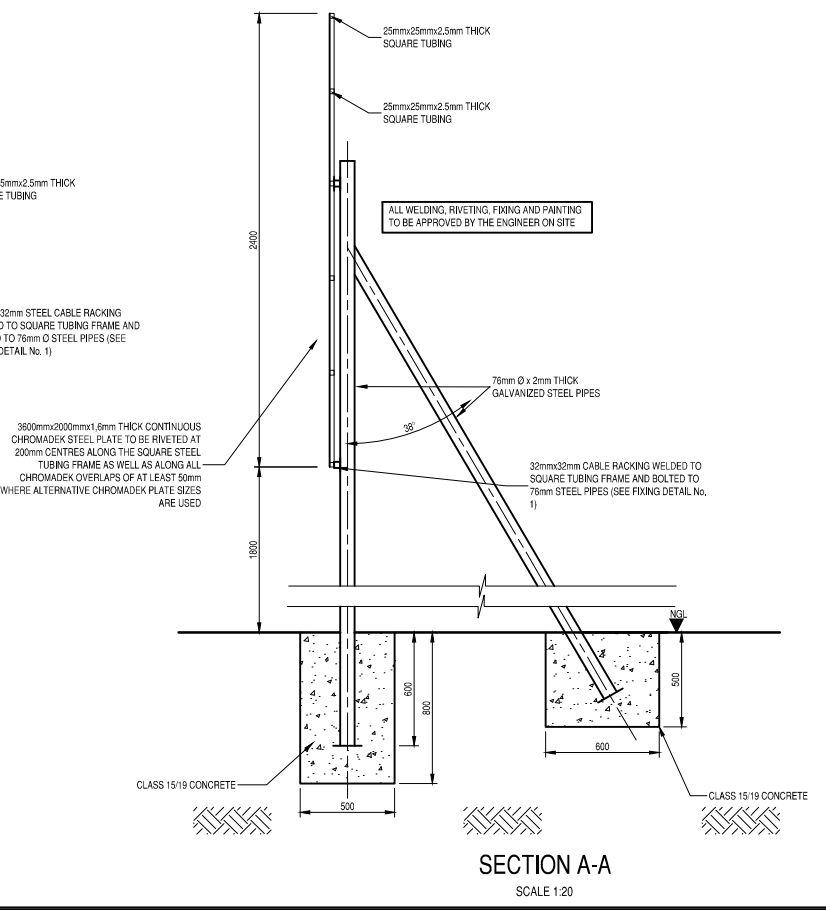
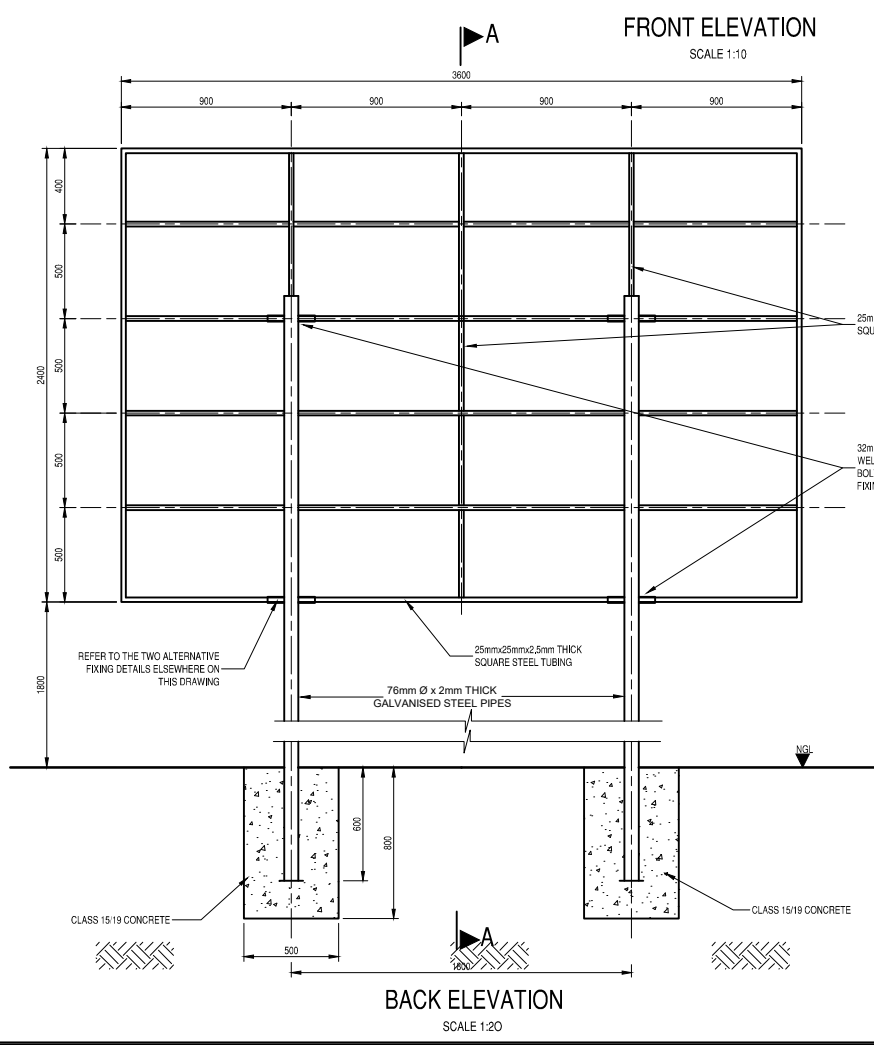
	<h1 style="margin: 0;">PHOKWANE LOCAL MUNICIPALITY</h1>
<p>PROJECT NAME: BONITAPARK UPGRADING OF TAXI ROUTES</p>	
<p>CONTRACT NUMBER: PL12/UTB/0123</p>	<p>PROJECT AMOUNT: -</p>
<p>FUNDING AGENT</p>	
<p>FUNDING AGENT NAME</p>	
	<p>CONSULTING ENGINEERS</p>
<p>TSELA TSWEU CONSULTING ENGINEERS</p>	
<p>CONTRACTOR (LOGO)</p>	<p>CONTRACTOR</p>
<p>CONTRACTOR NAME</p>	



FIXING DETAIL No. 1
SCALE 1:5



FIXING DETAIL No. 2
SCALE 1:5
ALTERNATIVE FIXING DETAILS



REVISIONS			
No.	DATE	BY	DESCRIPTION

- NOTES**
- Description in *italics* must be adjusted to suit project details.
 - Type face to be used shall be Helvetica Medium Colour of lettering AS INDICATED.
 - LETTERS TO BE CAPITALISED.
 - Background of board to be **WHITE**. ALL borders & lines to be **MIDDLE BLUE**. Colour for logos to be **AS PER RESPECTIVE**.
 - All paint used should match Ref. 290 Acrylic Road Sign Paint.
 - All lettering to be painted on. Stick-on labels will NOT be permitted.

REFERENCE DRAWINGS	
PLAN No.	DESCRIPTION

APPROVED: _____ DATE: _____

ENGINEER: _____ DATE: _____

APPROVED: _____ DATE: _____

CLIENT: _____ DATE: _____

PRINT ISSUED ON _____



Mobile: + 27 (0)33 265 1524
329 Stately Chambers, Stateway, Welkom,
PO Box 2600, Welkom, 9460, South Africa

CLIENT

**PHOKWANE
LOCAL MUNICIPALITY**

PROJECT

**BONITAPARK UPGRADING OF TAXI
ROUTES**

IMPLEMENTING AGENT:

PHOKWANE LM

DRAWING TITLE

PROJECT NAME BOARD

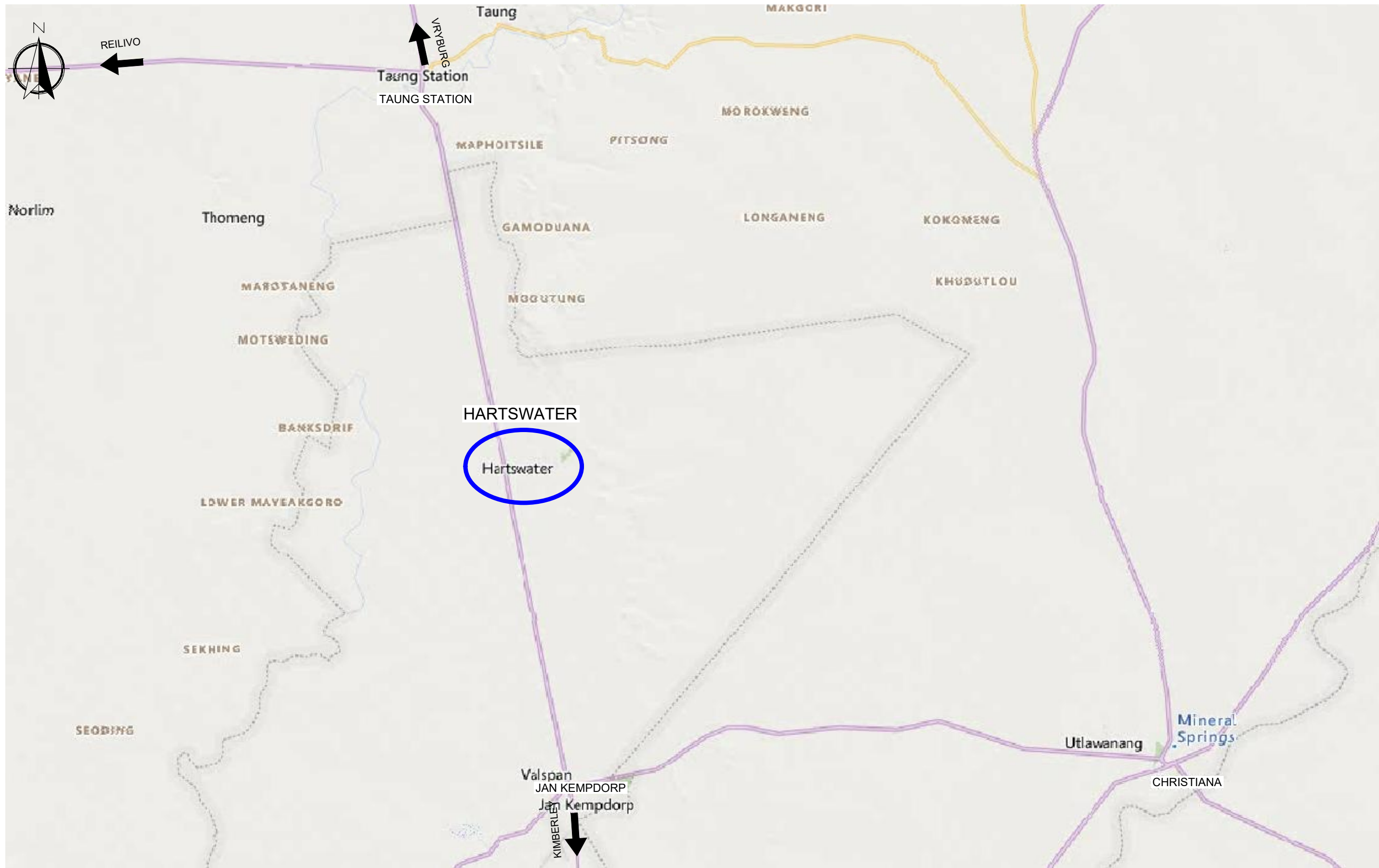
DESIGN	DATE	DRAWN	DATE
SURVEYED	DATE	CHECKED	DATE
		J.BATEMAN	AUG 2022

SCALE as shown

DRAWING No.


2022-11-G/D/001


REVISION No.					
1.0					



NOTES	APPROVED:
ENGINEER:	
DATE:	
APPROVED:	
CLIENT:	
DATE:	

REFERENCE DRAWINGS	
PLAN Nr.	DESCRIPTION


Tsela Tsweu
 CONSULTING ENGINEERS
 Mobile: + 27 (0)83 265 1524
 329 Stateway Chambers, Stateway, Welkom,
 PO Box 2600, Welkom, 9460, South Africa

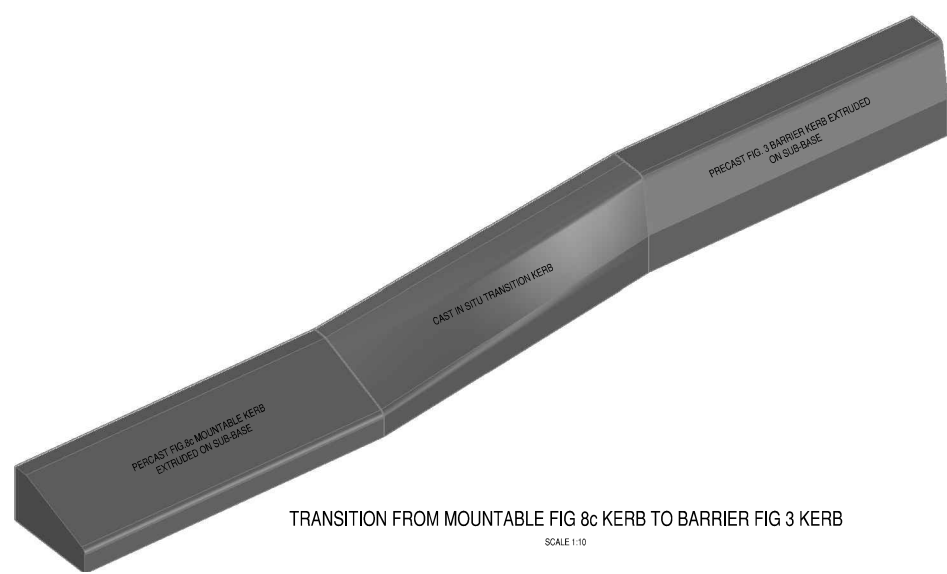

 CLIENT
PHOKWANE LOCAL MUNICIPALITY
 IMPLEMENTING AGENT
PHOKWANE LOCAL MUNICIPALITY

PROJECT
BONITAPARK UPGRADING OF TAXI ROUTES
 DRAWING TITLE
LOCALITY MAP

PRINT ISSUED ON			
REVISIONS			
No.	DATE	BY	DESCRIPTION

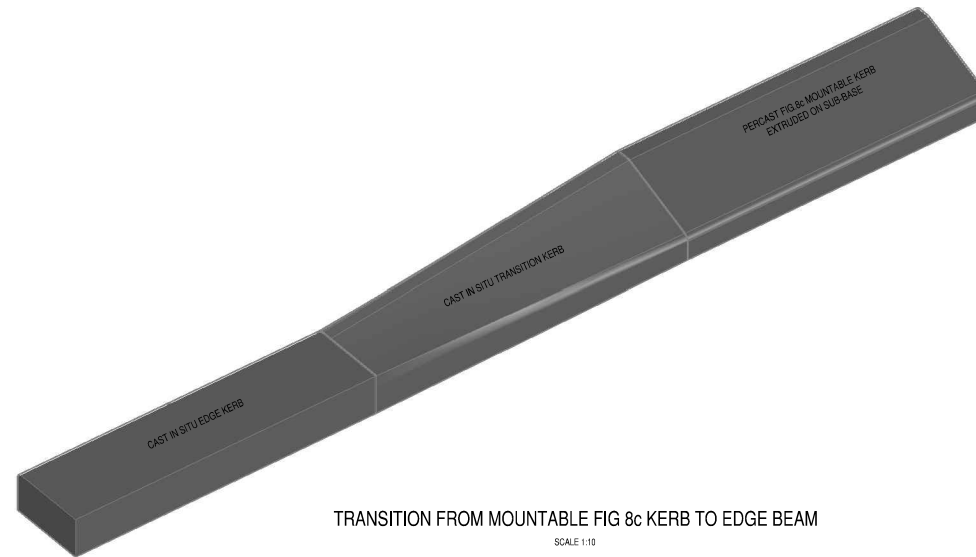
SCALE: 1:200 000

DESIGN	DATE	DRAWN	DATE
SURVEYED	DATE	CHECKED	DATE
		J. BATEMAN	AUG 2022
DRAWING No. 2022-11-G/P/001			
REVISION No.			
1.0			



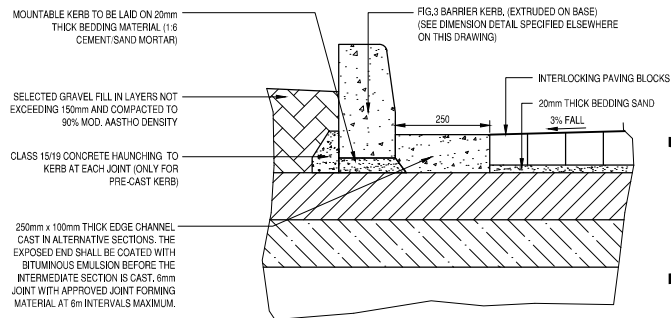
TRANSITION FROM MOUNTABLE FIG 8c KERB TO BARRIER FIG 3 KERB

SCALE 1:10



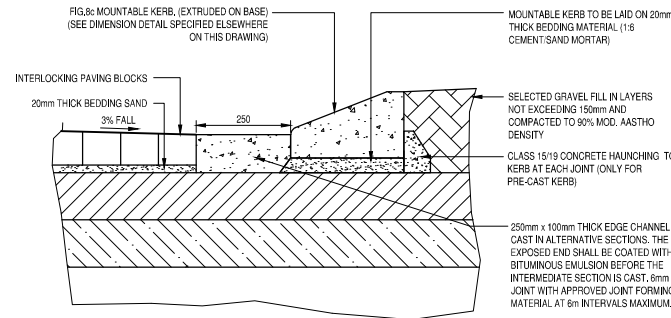
TRANSITION FROM MOUNTABLE FIG 8c KERB TO EDGE BEAM

SCALE 1:10



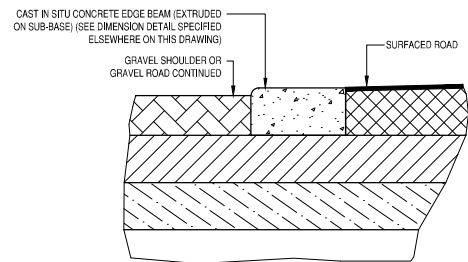
TYPICAL SECTION THROUGH FIG.3 BARRIER KERB

SCALE 1:10

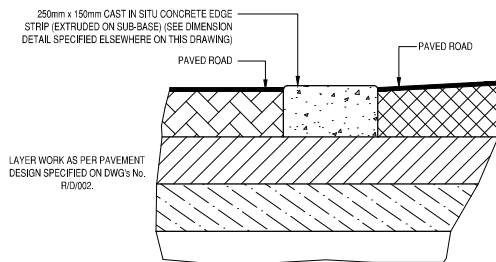


TYPICAL SECTION THROUGH FIG.8b MOUNTABLE KERB

SCALE 1:10

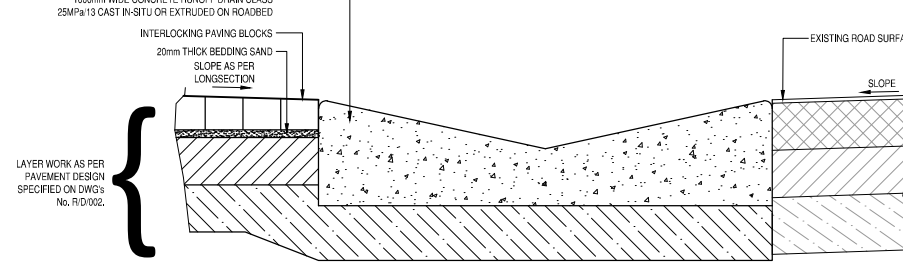


TYPICAL SECTION THROUGH EDGING KERB (FLAT)



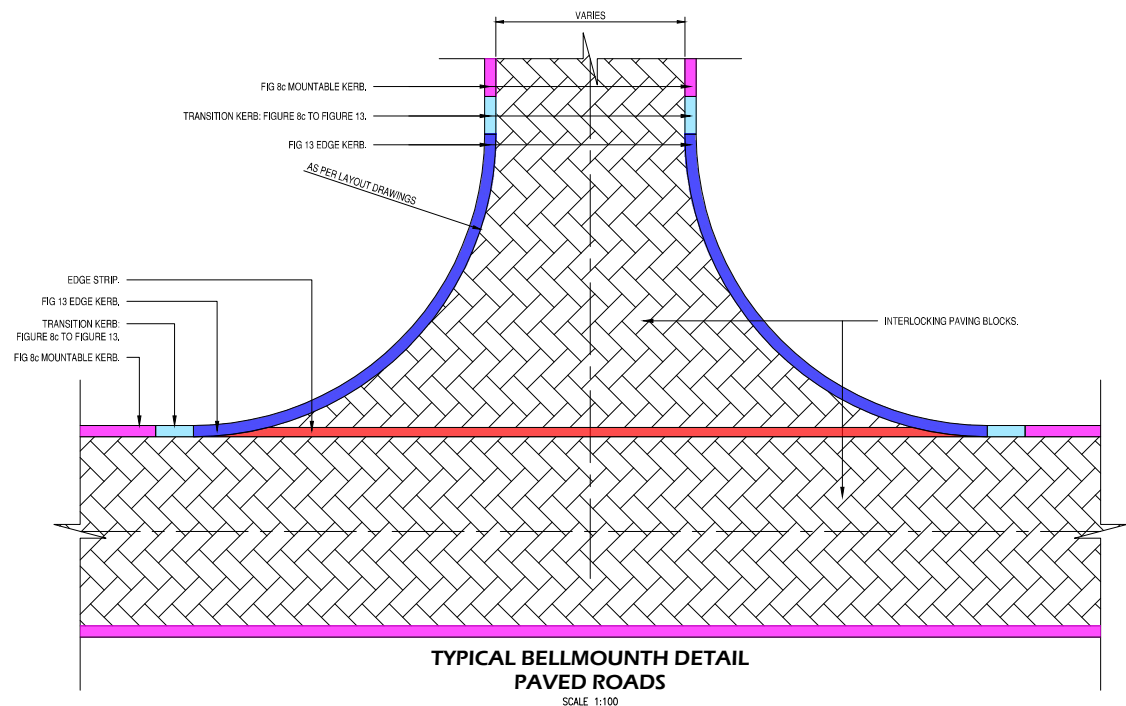
TYPICAL SECTION THROUGH EDGE STRIP

SCALE 1:10



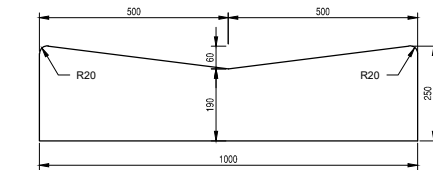
TYPICAL RUNOFF DRAIN SECTION AT INTERSECTION CONNECTION

SCALE 1:10



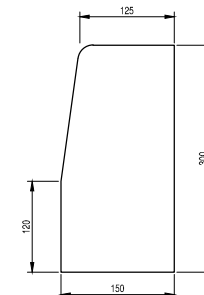
TYPICAL BELLMOUTH DETAIL PAVED ROADS

SCALE 1:100



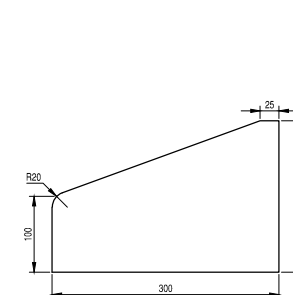
RUNOFF DRAIN CAST INSITU OR EXTRUDED ON ROADBED

SCALE 1:10



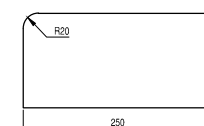
BARRIER KERB (FIG.3)

SCALE 1:5



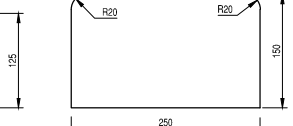
MOUNTABLE KERB (FIG.8c)

SCALE 1:5



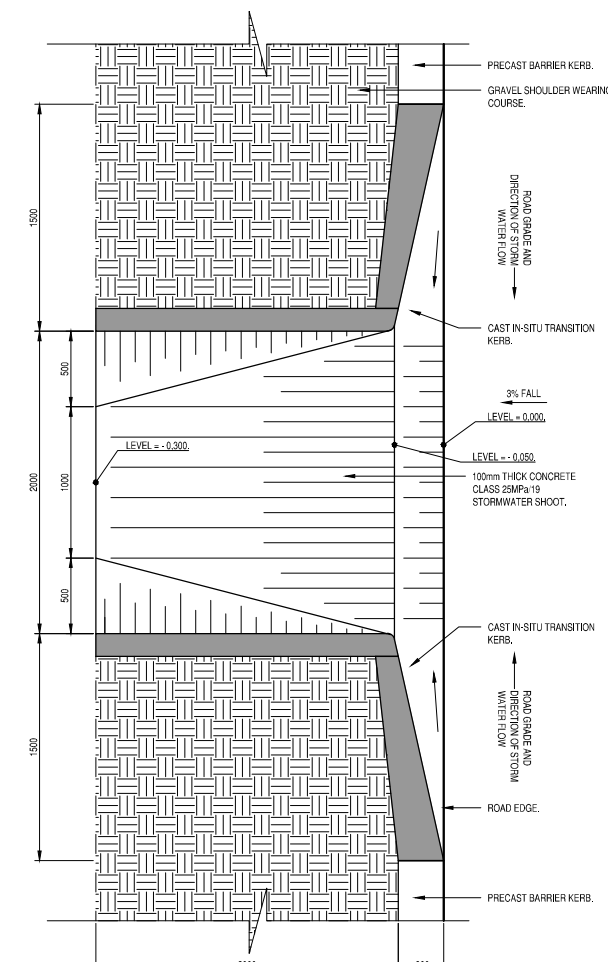
EDGE KERB (FIG.13)

SCALE 1:5



RECTANGULAR EDGING STRIP

SCALE 1:5



TYPICAL STORM WATER KERB OUTLET DETAIL

SCALE 1:25

REVISIONS

No.	DATE	BY	DESCRIPTION

NOTES

- ALL EXTRUDED CONCRETE KERBING AND EDGE STRIPS SHALL BE CLASS 25/13 CONCRETE.
- FIGURE 8 MOUNTABLE KERB TO BE CONSTRUCTED ON THE DRAINAGE SIDE (LOW LEG) OF ALL THE SURFACED CROSSFALL ROADS, UNLESS OTHERWISE SPECIFIED OR INDICATED ON THE LAYOUT DRAWINGS.
- EDGING STRIP TO BE CONSTRUCTED ON THE NON DRAINAGE SIDE (HIGHER LEG) OF ALL THE SURFACED CROSSFALL ROADS UNLESS OTHERWISE SPECIFIED OR INDICATED ON THE LAYOUT DRAWINGS.
- EDGING STRIP TO BE CONSTRUCTED ALONG THE TOTAL LENGTH OF THE BELLMOUTH OPENING AT ALL INTERSECTIONS WITH THE SURFACED ROADS AS INDICATED ON THE LAYOUT DRAWINGS.
- PRIOR TO THE CONSTRUCTION OF ANY EXTRUDED KERBING OR EDGE STRIP AN APPROPRIATELY CERTIFIED LABORATORY TESTED DESIGN MIX SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER FOR APPROVAL.
- THE STRENGTH OF ALL PRE-CAST CONCRETE KERBING SHALL BE IN TERMS OF SABS 927.

REFERENCE DRAWINGS

PLAN No.	DESCRIPTION

APPROVED:	
ENGINEER:	
DATE:	
APPROVED:	
CLIENT:	
DATE:	

PRINT ISSUED ON

Tsela Tsweu
CONSULTING ENGINEERS

Mobile: + 27 (0)83 265 1524
329 Stateway Chambers, Stateway, Welkom,
PO Box 2600, Welkom, 9460, South Africa

CLIENT
PHOKWANE LOCAL MUNICIPALITY

PROJECT
BONITAPARK UPGRADING OF TAXI ROUTES

IMPLEMENTING AGENT:
PHOKWANE LM

DRAWING TITLE
TYPICAL KERBING DETAILS

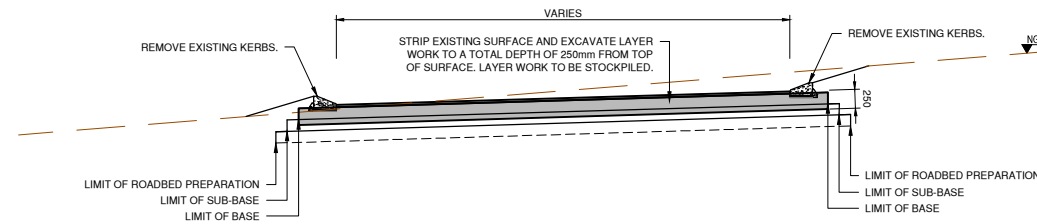
DESIGN	DATE	DRAWN	DATE
	AUG 2022		AUG 2022
SURVEYED	DATE	CHECKED	DATE
		J.BATEMAN	AUG 2022

SCALE as shown

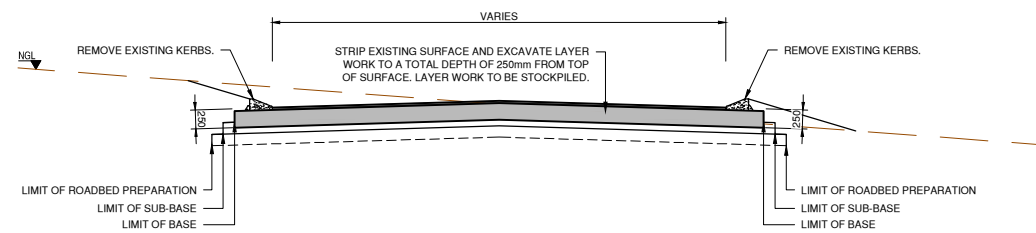
DRAWING No. **2022-11-R/D/001**

REVISION No.

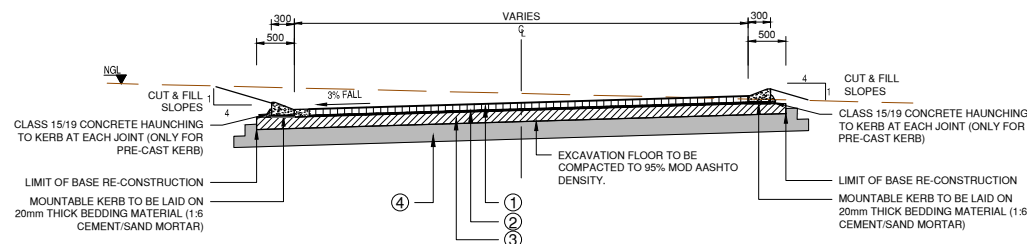
1.0					
-----	--	--	--	--	--



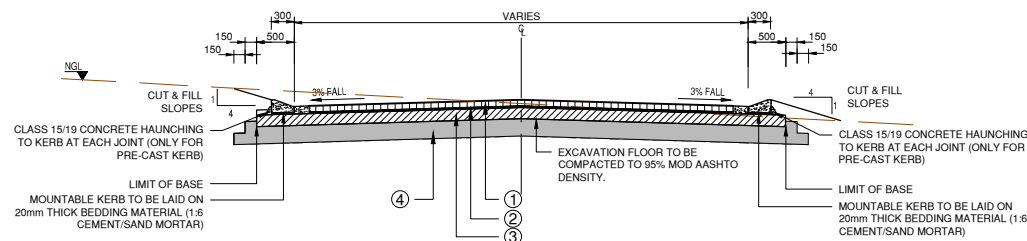
**TYPICAL PAVEMENT DESIGN DETAIL
EXISTING CROSS-FALL ROAD TO BE CUT FOR RE-CONSTRUCTION**
SCALE 1:50



**TYPICAL PAVEMENT DESIGN DETAIL
CAMBER ROAD TO BE CUT FOR RE-CONSTRUCTION**
SCALE 1:50



**TYPICAL PAVEMENT DESIGN DETAIL
CROSS-FALL ROAD RE-CONSTRUCTION WITH PAVING BLOCKS**
SCALE 1:50



**TYPICAL PAVEMENT DESIGN DETAIL
CAMBER ROAD RE-CONSTRUCTION WITH PAVING BLOCKS**
SCALE 1:50

NOTE:

- PRIOR TO THE UNDERTAKING OF ANY VIBRATORY OR PAD FOOT ROLLING WITHIN THE ROAD FOUNDATION, AN ON SITE TRIAL SECTION SHALL BE PREPARED AND CONDUCTED IN ORDER TO ASCERTAIN THE AVERAGE NUMBER OF # PASSES REQUIRED IN ORDER TO OBTAIN THE SPECIFIED COMPACTION EFFORT FOR THE ROADBED PREPARATION.
- THE ENGINEER SHALL THEN INSTRUCT THE CONTRACTOR TO REMOVE AND SPILL THE TOPSOIL AND HILLWASH OVERBURN TO WEARING COURSE DEPTH OR FERRICRETE LEVEL WHERE REQUIRED WHICHEVER IS THE SHALLOWEST.
- ALL FERRICRETE MATERIAL SHALL BE CUT TO TEMPORARY STOCKPILES AS DETERMINED BY THE ENGINEER FOR LATER USE IN THE PAVEMENT STRUCTURE AND WEARING COURSE LAYER WORKS.
- THE CONTRACTOR SHALL THEN APPLY THE NUMBER OF # PASSES ORDERED BY THE ENGINEER, PERIODICALLY WATERING AND BLADING THE ROADBED FOUNDATION AREA TO ENSURE MAXIMUM WORKABILITY AND COMPACTION EFFICIENCY.
- AFTER APPLYING THE VIBRATORY OR PAD FOOT ROLLING, CUT TO FILL OR BLADE TO WINDROW THE FERRICRETE PINNACLES, RP, SCARIFY AND RECOMPACT ROADBED TO ABOVE SPECIFICATION WHERE REQUIRED.

LEGEND:

- REQUIREMENTS ARE GIVEN IN THE FOLLOWING ORDER: LAYER THICKNESS-MATERIAL/CBR AND MIN COMPACTION/MIN. GMMAX. PI
- MIN. UNCONFINED COMPRESSIVE STRENGTH (UCS) IS SHOWN IN MPa.
- MIN. DENSITY IS GIVEN AS % OF MAX MODIFIED AASHTO DENSITY.
- SG - STABILIZED GRAVEL
NG - NATURAL GRAVEL
IS - IN SITU SOIL
PI - PLASTICITY INDEX
GM - GRADING MODULES
SBP - SHOULDER BREAK POINT
- FIGURE # MOUNTABLE CONCRETE KERB (CLASS 25/19) EXTRUDED ON BASE.

- 250mm WIDE x 100mm THICK EDGE STRIP CAST IN ALTERNATIVE SECTIONS. THE EXPOSED END SHALL BE COATED WITH BITUMINOUS EMULSION BEFORE THE INTERMEDIATE SECTION IS CAST. 60mm JOINT WITH APPROVED JOINT FORMING MATERIAL AT 5m INTERVALS MAXIMUM.

- SEGMENTED PAVING SHAPE S-A (G-BLOCKS), CLASS 25, 80mm THICK
- RIVER SAND 20 / RIVER SAND IMPORTED FROM COMMERCIAL SOURCE
- BASE 150mm RE-CONSTRUCTED BASE TO BE CEMENT STABILIZED BY 3% OF MASS AND CONSTRUCTED FROM STOCKPILED MATERIAL. ADDITIONAL MATERIAL REQUIRED TO MATCH EXISTING BASE MATERIALS.
- EXISTING ROAD LAYERS TO BE COMPACTED TO 95% MOD AASHTO DENSITY

REVISIONS			
No.	DATE	BY	DESCRIPTION

NOTES

REFERENCE DRAWINGS	
PLAN No.	DESCRIPTION

APPROVED: _____ DATE: _____
ENGINEER: _____
APPROVED: _____ DATE: _____
CLIENT: _____

PRINT ISSUED ON

Mobile: + 27 (0)83 265 1524
329 Stateway Chambers, Stateway, Welkom,
PO Box 2600, Welkom, 9460, South Africa

CLIENT
PHOKWANE LOCAL MUNICIPALITY

PROJECT
BONITAPARK UPGRADING OF TAXI ROUTES

IMPLEMENTING AGENT:
PHOKWANE LM

DRAWING TITLE
**TYPICAL PAVEMENT DESIGN
DETAIL FOR
SURFACED ACCESS STREETS
(PAVING BLOCK FINISH)**

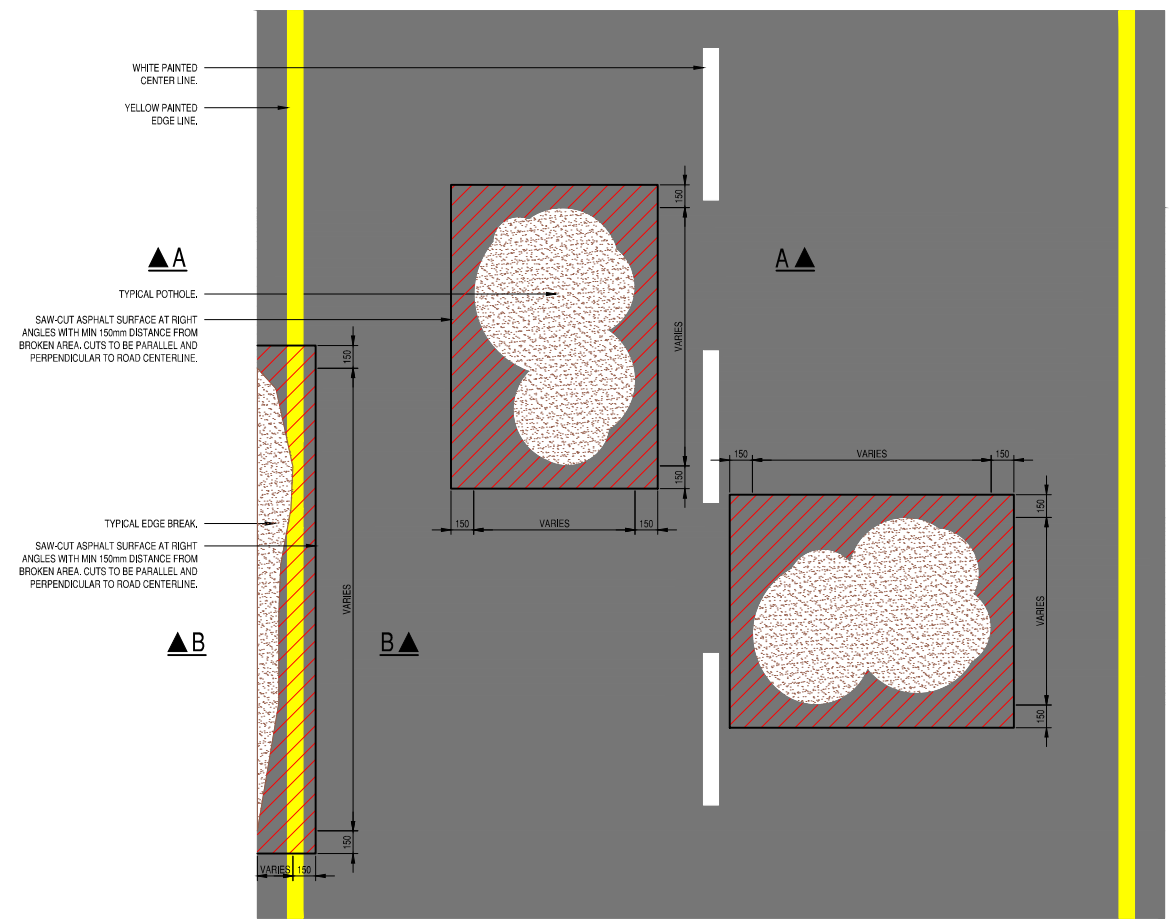
DESIGN	DATE	DRAWN	DATE
	AUG 2022		AUG 2022
SURVEYED	DATE	CHECKED	DATE
		J.BATEMAN	AUG 2022

SCALE 1:50

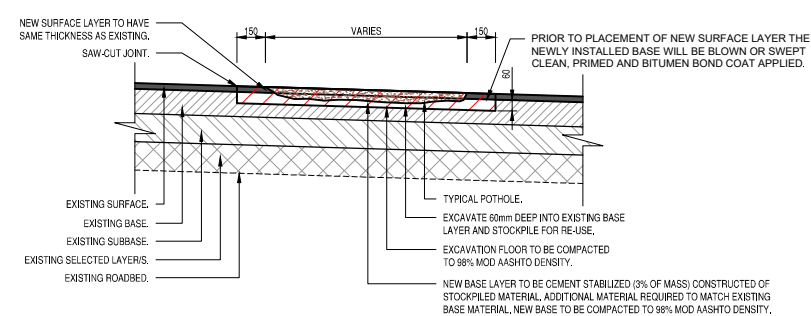
DRAWING No.
2022-11-R/D/002

REVISION No.					
1.0					

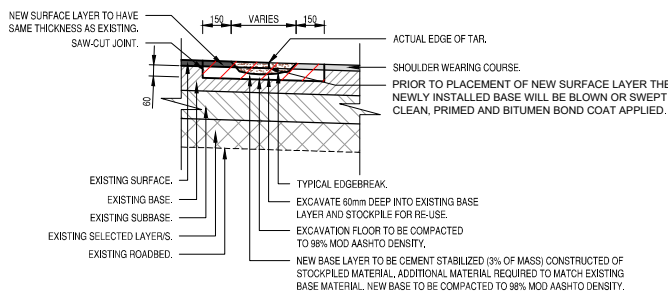
NOTE:
 1. PRIOR TO THE UNDERTAKING OF ANY VIBRATORY OR PAD FOOT ROLLING WITHIN THE ROAD FOUNDATION, AN ON SITE TRIAL SECTION SHALL BE PREPARED AND CONDUCTED IN ORDER TO ASCERTAIN THE AVERAGE NUMBER OF # PASSES REQUIRED IN ORDER TO OBTAIN THE SPECIFIED COMPACTION EFFORT FOR THE ROADBED PREPARATION.
 2. THE ENGINEER SHALL THEN INSTRUCT THE CONTRACTOR TO REMOVE AND SPOIL THE TOPSOIL AND HILL WASH OVERBURN TO WEARING COURSE DEPTH OR FERRICRETE LEVEL WHERE REQUIRED WHICHEVER IS THE SHALLOWEST.
 3. ALL FERRICRETE MATERIAL SHALL BE CUT TO TEMPORARY STOCKPILE AS DETERMINED BY THE ENGINEER FOR LATER USE IN THE PAVEMENT STRUCTURE AND WEARING COURSE LAYER WORKS.
 4. THE CONTRACTOR SHALL THEN APPLY THE NUMBER OF # PASSES ORDERED BY THE ENGINEER, PERIODICALLY WATERING AND BLADING THE ROADBED FOUNDATION AREA TO ENSURE MAXIMUM WORKABILITY AND COMPACTION EFFICIENCY.
 5. AFTER APPLYING THE VIBRATORY OR PAD FOOT ROLLING, CUT TO FILL OR BLADE TO WITHIN THE FERRICRETE PINNACLES, RP, SCARIFY AND RECOMPACT ROADBED TO ABOVE SPECIFICATION WHERE REQUIRED.



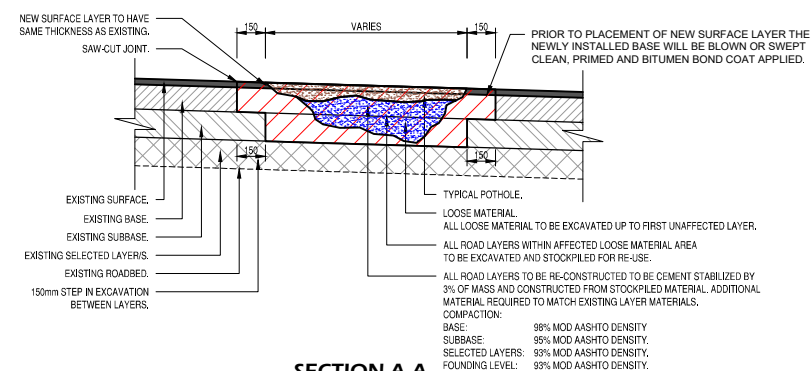
**TYPICAL LAYOUT
 PATCHING & EDGE BREAK REPAIR**
 SCALE 1:25



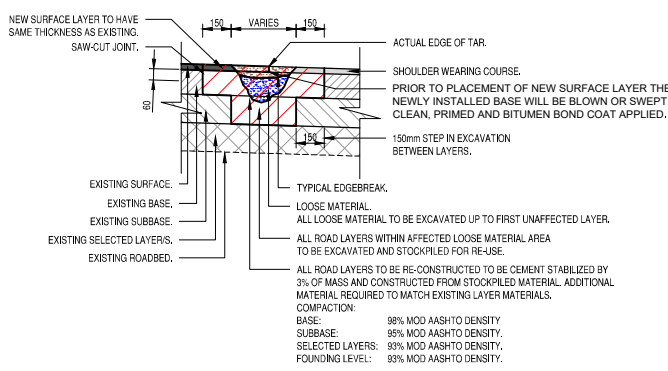
**SECTION A-A
 SURFACE PATCHING**
 SCALE 1:20



**SECTION B-B
 EDGEBREAK (SURFACE)**
 SCALE 1:20



**SECTION A-A
 STRUCTURAL PATCHING**
 SCALE 1:20



**SECTION B-B
 EDGEBREAK (STRUCTURAL)**
 SCALE 1:20

REVISIONS				
No.	DATE	BY	DESCRIPTION	

NOTES

REFERENCE DRAWINGS	
PLAN No.	DESCRIPTION

APPROVED:
 ENGINEER: _____ DATE: _____
 APPROVED:
 CLIENT: _____ DATE: _____

PRINT ISSUED ON

Tsela Tsweu
 CONSULTING ENGINEERS

Mobile: + 27 (0)83 265 1524
 329 Stately Chambers, Stateway, Welkom,
 PO Box 2600, Welkom, 9460, South Africa

CLIENT
**PHOKWANE
 LOCAL MUNICIPALITY**

PROJECT
**BONITAPARK UPGRADING OF TAXI
 ROUTES**

IMPLEMENTING AGENT:
PHOKWANE LM

DRAWING TITLE
**TYPICAL DETAILS
 PATCHING & EDGEBREAK
 REPAIR**

DESIGN	DATE	DRAWN	DATE
	AUG 2022		AUG 2022
SURVEYED	DATE	CHECKED	DATE
		J.BATEMAN	AUG 2022

SCALE as shown

DRAWING No.
2022-11-R/D/003

REVISION No.					
1.0					



LEGEND:

- EXISTING 6m WIDE ASPHALT ROAD TO BE REJUVENATED BY MEANS OF:
BASE REPAIR
EDGE BREAK REPAIR,
POTHOLE REPAIR, AND
DOUBLE SEAL 13.2/6.7 USING 80/100 PENETRATION GRADE BITUMEN
- EXISTING 6m WIDE ASPHALT ROAD TO BE REJUVENATED BY MEANS OF:
BASE REPAIR
EDGE BREAK REPAIR,
POTHOLE REPAIR, AND
SINGLE SEAL/CAPE SEAL USING 80/100 PENETRATION GRADE BITUMEN
- REMOVE EXISTING SEAL AND
CONSTRUCT NEW PAVING ROAD.
- NEW KERB.

NOTES:

1. REFER TO DRAWING R/D/001 FOR TYPICAL KERB DETAILS.
2. REFER TO DRAWING R/D/002 FOR TYPICAL PAVEMENT DESIGN DETAILS FOR PAVING BLOCK FINISH.
3. REFER TO DRAWING R/D/003 FOR BASE REPAIR, EDGE BREAK REPAIR AND POTHOLE REPAIR DETAILS.

QUANTITIES:

LENOUS ROAD : 255m (RIP & REPAVE = 425m ; REJUVENATE: ASPHALT DOUBLE SEAL = 2135m)
 THAGAS ROAD : 550m (RIP & REPAVE = 65m ; REJUVENATE: ASPHALT DOUBLE SEAL = 485m)
 HAVANA ROAD : 281m (REJUVENATE: ASPHALT DOUBLE SEAL = 281m)
 JAN SMIT ROAD : 335m (REJUVENATE: ASPHALT DOUBLE SEAL = 335m)

REVISIONS			
No.	DATE	BY	DESCRIPTION

NOTES

REFERENCE DRAWINGS	
PLAN No.	DESCRIPTION

APPROVED: _____ DATE: _____

ENGINEER: _____

APPROVED: _____ DATE: _____

CLIENT: _____

PRINT ISSUED ON _____

Tsela Tsweu
CONSULTING ENGINEERS

Mobile: + 27 (0)83 265 1524
329 Stateway Chambers, Stateway, Welkom,
PO Box 2600, Welkom, 9460, South Africa

CLIENT

PHOKWANE LOCAL MUNICIPALITY

PROJECT

BONITAPARK UPGRADING OF TAXI ROUTES

IMPLEMENTING AGENT:

PHOKWANE LM

DRAWING TITLE

PROPOSED ROAD LAYOUT KEYPLAN

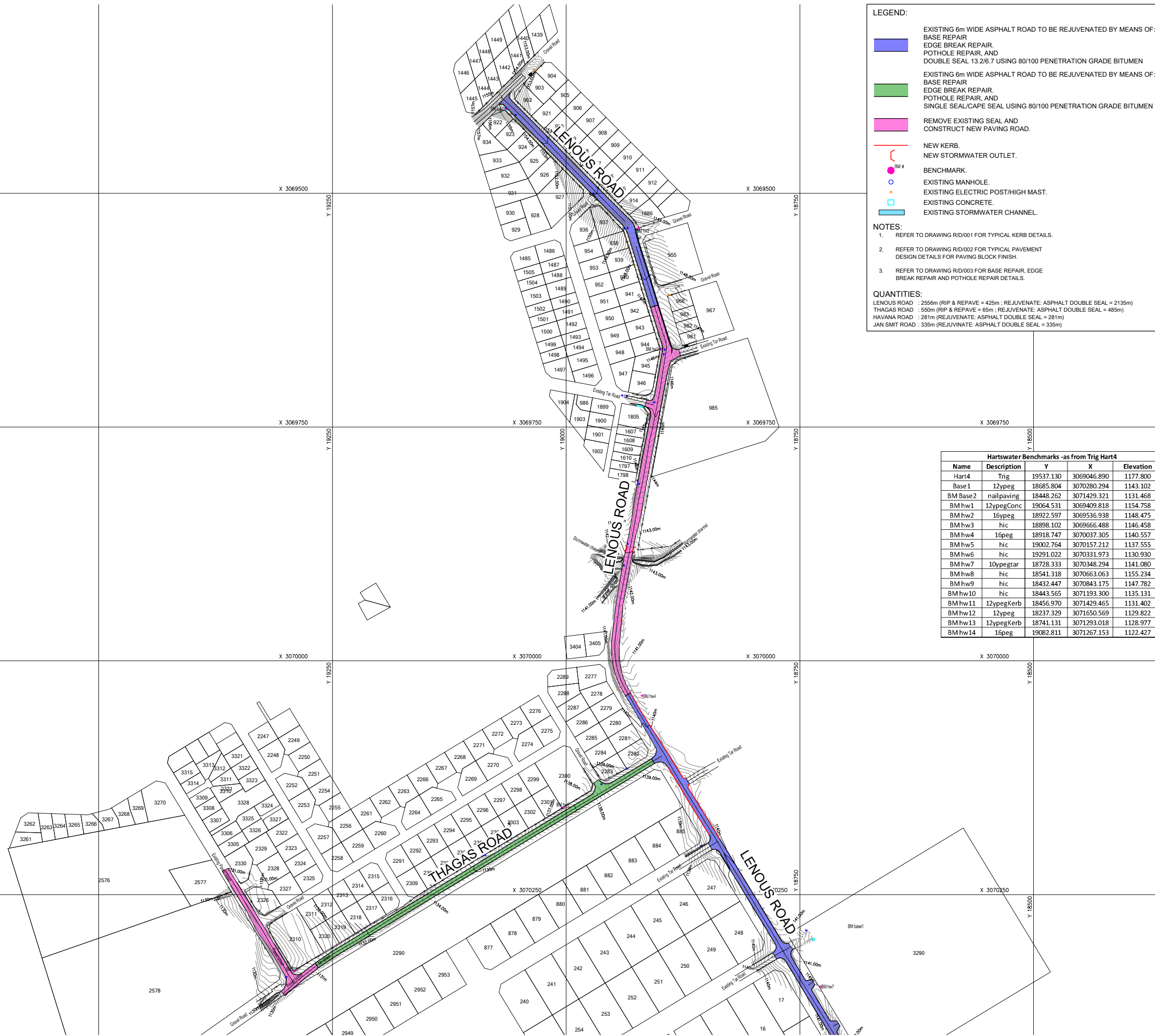
DESIGN	DATE	DRAWN	DATE
	AUG 2022		AUG 2022
SURVEYED	DATE	CHECKED	DATE
		J.BATEMAN	AUG 2022

SCALE 1:5000

DRAWING No.

2022-11-R/K/001

REVISION No.					
1.0					



LEGEND:

- EXISTING 6m WIDE ASPHALT ROAD TO BE REJUVENATED BY MEANS OF:
BASE REPAIR
EDGE BREAK REPAIR,
POTHOLE REPAIR, AND
DOUBLE SEAL 13.2/6.7 USING 80/100 PENETRATION GRADE BITUMEN
- EXISTING 6m WIDE ASPHALT ROAD TO BE REJUVENATED BY MEANS OF:
BASE REPAIR
EDGE BREAK REPAIR,
POTHOLE REPAIR, AND
SINGLE SEAL/CAPE SEAL USING 80/100 PENETRATION GRADE BITUMEN
- REMOVE EXISTING SEAL AND
CONSTRUCT NEW PAVING ROAD.
- NEW KERB.
NEW STORMWATER OUTLET.
- BENCHMARK.
- EXISTING MANHOLE.
- EXISTING ELECTRIC POST/HIGH MAST.
- EXISTING CONCRETE.
- EXISTING STORMWATER CHANNEL.

NOTES:

- REFER TO DRAWING R/D/001 FOR TYPICAL KERB DETAILS.
- REFER TO DRAWING R/D/002 FOR TYPICAL PAVEMENT DESIGN DETAILS FOR PAVING BLOCK FINISH.
- REFER TO DRAWING R/D/003 FOR BASE REPAIR, EDGE BREAK REPAIR AND POTHOLE REPAIR DETAILS.

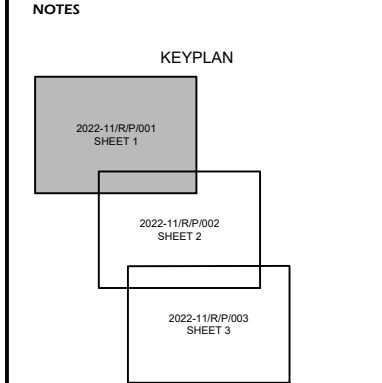
QUANTITIES:

LENOUS ROAD : 2556m (RIP & REPAVE = 425m ; REJUVENATE: ASPHALT DOUBLE SEAL = 2135m)
 THAGAS ROAD : 550m (RIP & REPAVE = 65m ; REJUVENATE: ASPHALT DOUBLE SEAL = 485m)
 HAVANA ROAD : 281m (REJUVENATE: ASPHALT DOUBLE SEAL = 281m)
 JAN SMIT ROAD : 335m (REJUVENATE: ASPHALT DOUBLE SEAL = 335m)

Hartswater Benchmarks -as from Trig Hart4				
Name	Description	Y	X	Elevation
Hart4	Trig	19537.130	3069046.890	1177.800
Base1	12ypeg	18685.804	3070280.294	1143.102
BM Base2	nailpaving	18448.262	3071429.321	1131.468
BM hw1	12ypegConc	19064.531	3069409.818	1154.758
BM hw2	16ypeg	18922.597	3069536.938	1148.475
BM hw3	hic	18898.102	3069666.488	1146.458
BM hw4	16peg	18918.747	3070037.305	1140.557
BM hw5	hic	19002.764	3070157.212	1137.555
BM hw6	hic	19291.022	3070331.973	1130.930
BM hw7	10ypegtar	18728.333	3070348.294	1141.080
BM hw8	hic	18541.318	3070663.063	1155.234
BM hw9	hic	18432.447	3070843.175	1147.782
BM hw10	hic	18443.565	3071193.300	1135.131
BM hw11	12ypegKerb	18456.970	3071429.465	1131.402
BM hw12	12ypeg	18237.329	3071650.569	1129.822
BM hw13	12ypegKerb	18741.131	3071293.018	1128.977
BM hw14	16peg	19082.811	3071267.153	1122.427

REVISIONS

No.	DATE	BY	DESCRIPTION



REFERENCE DRAWINGS

PLAN No.	DESCRIPTION

APPROVED: _____ DATE: _____
 ENGINEER: _____
 APPROVED: _____
 CLIENT: _____ DATE: _____

PRINT ISSUED ON

Tsela Tsweu
CONSULTING ENGINEERS

Mobile: + 27 (0)83 265 1524
 329 Stateway Chambers, Stateway, Welkom,
 PO Box 2600, Welkom, 9460, South Africa

CLIENT
PHOKWANE LOCAL MUNICIPALITY

PROJECT
BONITAPARK UPGRADING OF TAXI ROUTES

IMPLEMENTING AGENT:
PHOKWANE LM

DRAWING TITLE
PROPOSED ROAD LAYOUT SHEET 1

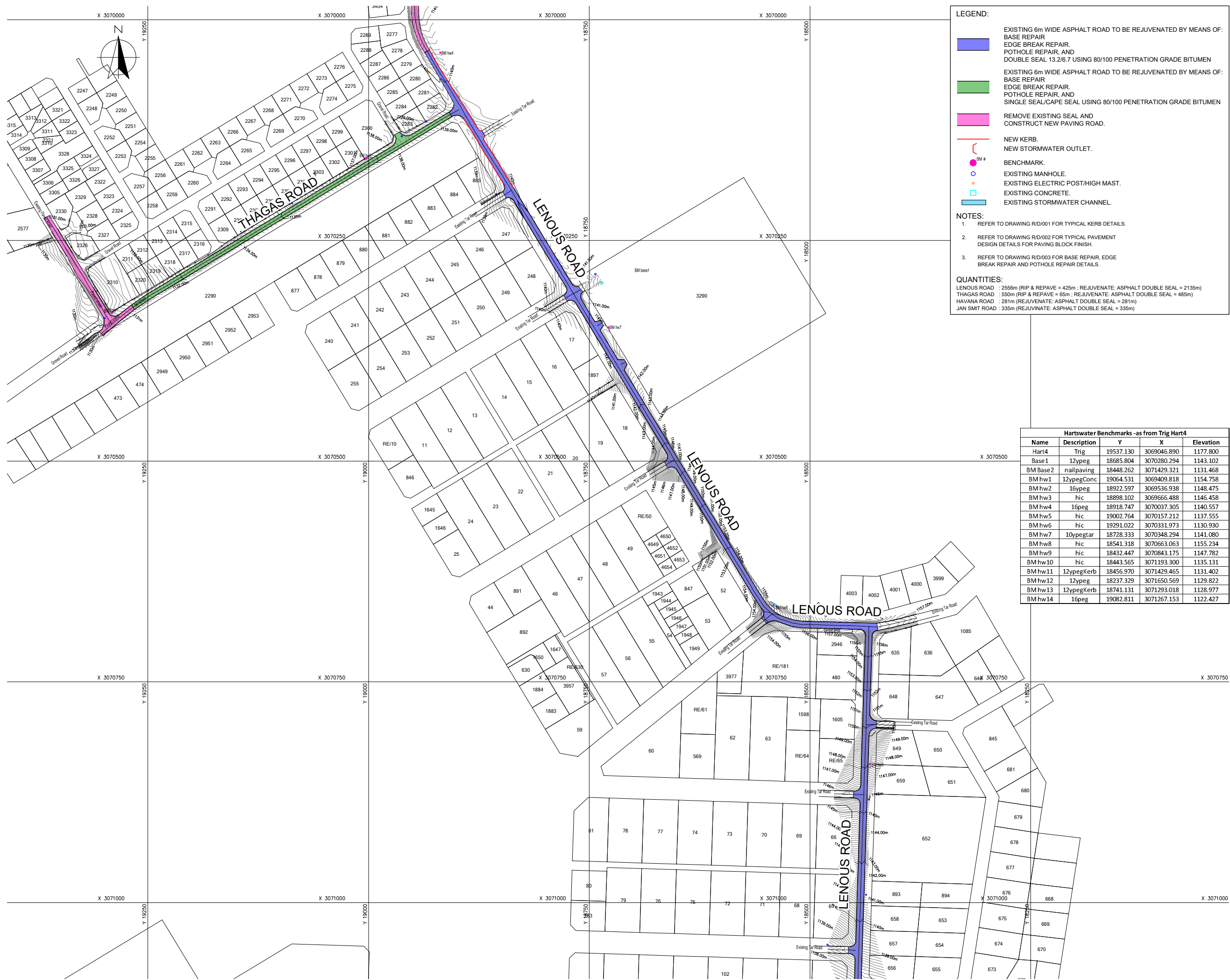
DESIGN	DATE	DRAWN	DATE
	AUG 2022		AUG 2022
SURVEYED	DATE	CHECKED	DATE
		J.BATEMAN	AUG 2022

SCALE **1:2000**

DRAWING No.
2022-11-R/P/001

REVISION No.

No.	DATE	BY	DESCRIPTION
1.0			



LEGEND:

- EXISTING 6m WIDE ASPHALT ROAD TO BE REJUVENATED BY MEANS OF: BASE REPAIR, EDGE BREAK REPAIR, POTHOLE REPAIR, AND DOUBLE SEAL 13.2/6.7 USING 80/100 PENETRATION GRADE BITUMEN
- EXISTING 6m WIDE ASPHALT ROAD TO BE REJUVENATED BY MEANS OF: BASE REPAIR, EDGE BREAK REPAIR, POTHOLE REPAIR, AND SINGLE SEAL/CAPE SEAL USING 80/100 PENETRATION GRADE BITUMEN
- REMOVE EXISTING SEAL AND CONSTRUCT NEW PAVING ROAD.
- NEW KERB.
- NEW STORMWATER OUTLET.
- BENCHMARK.
- EXISTING MANHOLE.
- EXISTING ELECTRIC POST/HIGH MAST.
- EXISTING CONCRETE.
- EXISTING STORMWATER CHANNEL.

NOTES:

- REFER TO DRAWING R/D/001 FOR TYPICAL KERB DETAILS.
- REFER TO DRAWING R/D/002 FOR TYPICAL PAVEMENT DESIGN DETAILS FOR PAVING BLOCK FINISH.
- REFER TO DRAWING R/D/003 FOR BASE REPAIR, EDGE BREAK REPAIR AND POTHOLE REPAIR DETAILS.

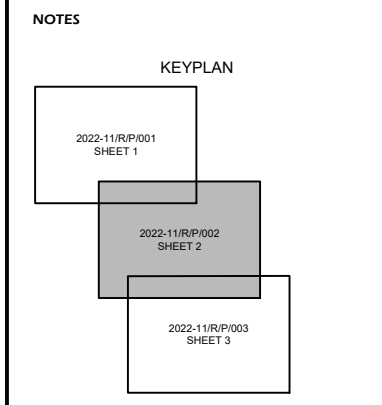
QUANTITIES:

LENOUS ROAD : 2556m (RIP & REPAVE = 425m ; REJUVENATE: ASPHALT DOUBLE SEAL = 2135m)
 THAGAS ROAD : 550m (RIP & REPAVE = 65m ; REJUVENATE: ASPHALT DOUBLE SEAL = 485m)
 HAVANA ROAD : 281m (REJUVENATE: ASPHALT DOUBLE SEAL = 281m)
 JAN SMIT ROAD : 335m (REJUVENATE: ASPHALT DOUBLE SEAL = 335m)

Hartswater Benchmarks -as from Trig Hart4				
Name	Description	Y	X	Elevation
Hart4	Trig	19537.130	3069046.890	1177.800
Base1	12ypeg	18685.804	3070280.294	1143.102
BM Base2	nailpaving	18448.262	3071429.321	1131.468
BM hw1	12ypegConc	19064.531	3069409.818	1154.758
BM hw2	16ypeg	18922.597	3069536.938	1148.475
BM hw3	hic	18898.102	3069666.488	1146.458
BM hw4	16peg	18918.747	3070037.305	1140.557
BM hw5	hic	19002.764	3070157.212	1137.555
BM hw6	hic	19291.022	3070331.973	1130.930
BM hw7	10ypegtar	18728.333	3070348.294	1141.080
BM hw8	hic	18541.318	3070663.063	1155.234
BM hw9	hic	18432.447	3070843.175	1147.782
BM hw10	hic	18443.565	3071193.300	1135.131
BM hw11	12ypegKerb	18456.970	3071429.465	1131.402
BM hw12	12ypeg	18237.329	3071650.569	1129.822
BM hw13	12ypegKerb	18741.131	3071293.018	1128.977
BM hw14	16peg	19082.811	3071267.153	1122.427

REVISIONS

No.	DATE	BY	DESCRIPTION



REFERENCE DRAWINGS

PLAN No.	DESCRIPTION

APPROVED: _____ DATE: _____
 ENGINEER: _____
 APPROVED: _____
 CLIENT: _____ DATE: _____

PRINT ISSUED ON

Tsela Tsweu
CONSULTING ENGINEERS

Mobile: + 27 (0)33 265 1524
 329 Stateway Chambers, Stateway, Welkom,
 PO Box 2600, Welkom, 9460, South Africa

CLIENT
PHOKWANE LOCAL MUNICIPALITY

PROJECT
BONITAPARK UPGRADING OF TAXI ROUTES

IMPLEMENTING AGENT:
PHOKWANE LM

DRAWING TITLE
PROPOSED ROAD LAYOUT SHEET 2

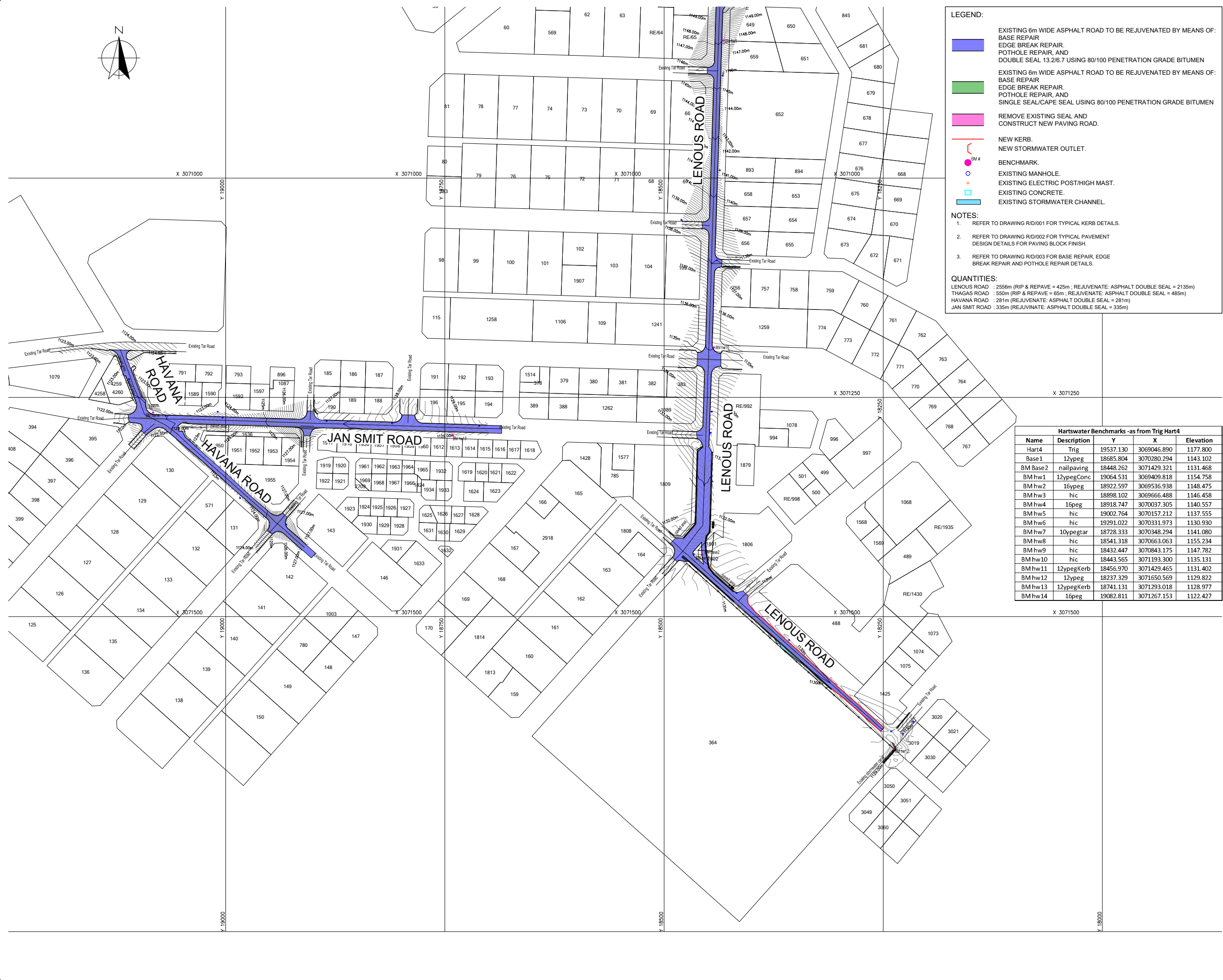
DESIGN	DATE	DRAWN	DATE
	AUG 2022		AUG 2022
SURVEYED	DATE	CHECKED	DATE
		J.BATEMAN	AUG 2022

SCALE **1:2000**

DRAWING No.
2022-11-R/P/002

REVISION No.

No.	DATE	BY	DESCRIPTION
1.0			



LEGEND:

- EXISTING 6m WIDE ASPHALT ROAD TO BE REJUVENATED BY MEANS OF: BASE REPAIR, EDGE BREAK REPAIR, POTHOLE REPAIR, AND DOUBLE SEAL 13.2/6.7 USING 80/100 PENETRATION GRADE BITUMEN
- EXISTING 6m WIDE ASPHALT ROAD TO BE REJUVENATED BY MEANS OF: BASE REPAIR, EDGE BREAK REPAIR, POTHOLE REPAIR, AND SINGLE SEAL/CAPE SEAL USING 80/100 PENETRATION GRADE BITUMEN
- REMOVE EXISTING SEAL AND CONSTRUCT NEW PAVING ROAD.
- NEW KERB.
- NEW STORMWATER OUTLET.
- BENCHMARK.
- EXISTING MANHOLE.
- EXISTING ELECTRIC POST/HIGH MAST.
- EXISTING CONCRETE.
- EXISTING STORMWATER CHANNEL.

NOTES:

- REFER TO DRAWING R/D/001 FOR TYPICAL KERB DETAILS.
- REFER TO DRAWING R/D/002 FOR TYPICAL PAVEMENT DESIGN DETAILS FOR PAVING BLOCK FINISH.
- REFER TO DRAWING R/D/003 FOR BASE REPAIR, EDGE BREAK REPAIR AND POTHOLE REPAIR DETAILS.

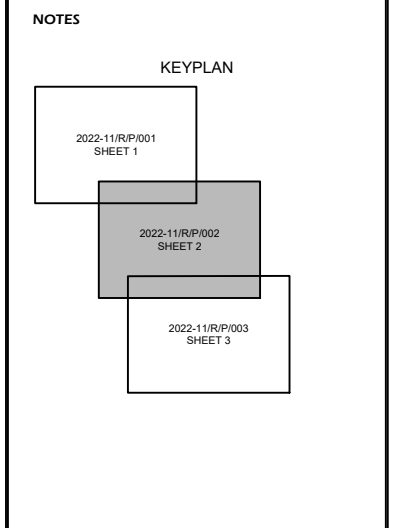
QUANTITIES:

LENOUS ROAD : 2556m (RIP & REPAVE = 425m ; REJUVENATE: ASPHALT DOUBLE SEAL = 2135m)
 THAGAS ROAD : 550m (RIP & REPAVE = 65m ; REJUVENATE: ASPHALT DOUBLE SEAL = 485m)
 HAVANA ROAD : 291m (REJUVENATE: ASPHALT DOUBLE SEAL = 281m)
 JAN SMIT ROAD : 335m (REJUVENATE: ASPHALT DOUBLE SEAL = 335m)

Hartswater Benchmarks - as from Trig Hart4				
Name	Description	Y	X	Elevation
Hart4	Trig	19537.130	3069046.890	1177.800
Base1	12ypeg	18685.804	3070280.294	1143.102
BM Base2	nailpaving	18448.262	3071429.321	1131.468
BM hw1	12ypegConc	19064.531	3069409.818	1154.758
BM hw2	16ypeg	18922.597	3069536.938	1148.475
BM hw3	hic	18898.102	3069666.488	1146.458
BM hw4	16peg	18918.747	3070037.305	1140.557
BM hw5	hic	19002.764	3070157.212	1137.555
BM hw6	hic	19291.022	3070331.973	1130.930
BM hw7	10ypegtar	18728.333	3070348.294	1141.080
BM hw8	hic	18541.318	3070663.063	1155.234
BM hw9	hic	18432.447	3070843.175	1147.782
BM hw10	hic	18443.565	3071193.300	1135.131
BM hw11	12ypegKerb	18456.970	3071429.465	1131.402
BM hw12	12ypeg	18237.329	3071650.569	1129.822
BM hw13	12ypegKerb	18741.131	3071293.018	1128.977
BM hw14	16peg	19082.811	3071267.153	1122.427

REVISIONS

No.	DATE	BY	DESCRIPTION



REFERENCE DRAWINGS

PLAN No.	DESCRIPTION

APPROVED: _____ DATE: _____
 ENGINEER: _____
 APPROVED: _____ DATE: _____
 CLIENT: _____

PRINT ISSUED ON

Tsela Tsweu
CONSULTING ENGINEERS

Mobile: + 27 (0)83 265 1524
 329 Stateway Chambers, Stateway, Welkom,
 PO Box 2600, Welkom, 9460, South Africa

CLIENT
PHOKWANE LOCAL MUNICIPALITY

PROJECT
BONITAPARK UPGRADING OF TAXI ROUTES

IMPLEMENTING AGENT:
PHOKWANE LM

DRAWING TITLE
PROPOSED ROAD LAYOUT SHEET 3

DESIGN	DATE	DRAWN	DATE
	AUG 2022		AUG 2022
SURVEYED	DATE	CHECKED	DATE
		J.BATEMAN	AUG 2022

SCALE **1:2000**

DRAWING No.
2022-11-R/P/003

REVISION No.

1.0			
-----	--	--	--