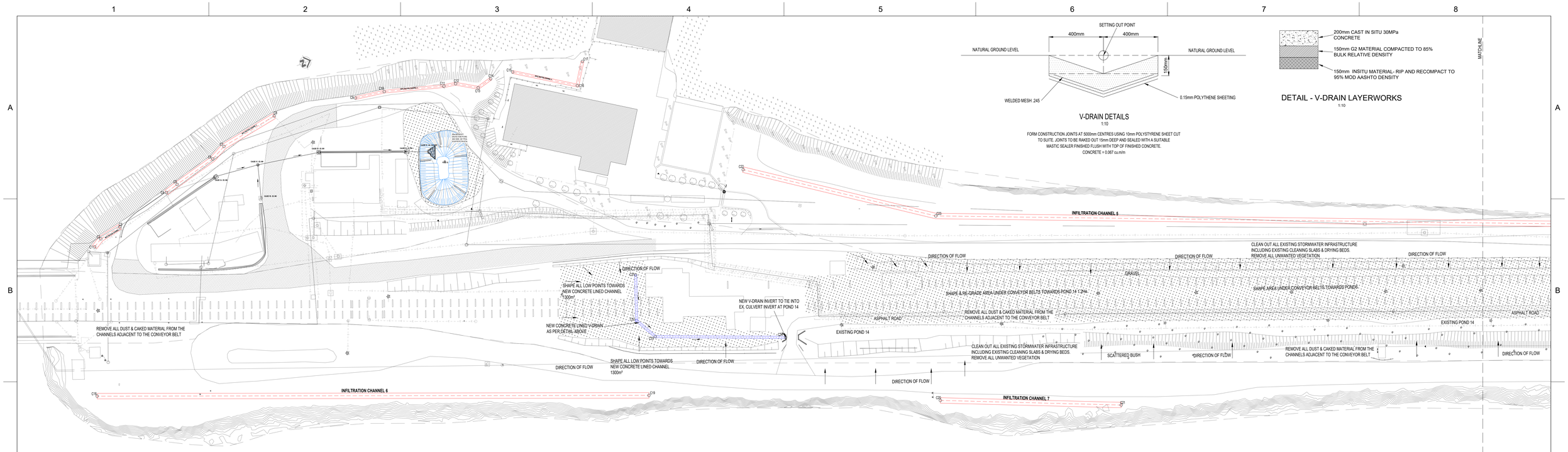


PLAN LAYOUT: DETENTION POND 13 & 14

1:500

V-DRAIN DETAILS

1:10

FORM CONSTRUCTION JOINTS AT 5000mm CENTRES USING 10mm POLYSTYRENE SHEET CUT TO SUITE. JOINTS TO BE RAKED OUT 15mm DEEP AND SEALED WITH A SUITABLE MASTIC SEALER FINISHED FLUSH WITH TOP OF FINISHED CONCRETE.
CONCRETE = 0.067 cu.m/m

DETAIL - V-DRAIN LAYERWORKS

1:10

CONSTRUCTION & REHABILITATION ACTIVITIES FOR STORMWATER SYSTEM

1. REMOVE ALL DUST & CAKED MATERIAL FROM SURFACE & SUB-SURFACE DRAINAGE SYSTEMS
2. REPAIR EROSION RUNNELS & RE-SHAPE ALL HARD STANDING AREAS TO ENSURE DRAINAGE TOWARDS THE DETENTION POND
3. PIPES, CULVERTS, MANHOLES & CHANNELS NEED TO BE CLEANED REGULARLY AS SYSTEM IS BLOCKED & MANHOLES ARE SILTED UP
4. LENGTHS OF PIPES, NUMBER OF CULVERTS & MANHOLES CLEARLY SHOWN IN LONGITUDINAL SECTION FOR QUANTIFYING
5. CLEAN OUT ALL SLABS & DRYING BEDS
6. RE-SHAPE ALL HARD STANDING AREAS TO ENSURE DRAINAGE AWAY FROM THE ROADS TOWARDS THE STORMWATER POND
7. LOW POINTS TO BE REPAIRED WITH A MINIMUM OF 150 mm G2 LAYER COMPACTED TO 95 % MOD-AASHTO

CONSTRUCTION & REHABILITATION ACTIVITIES FOR PONDS

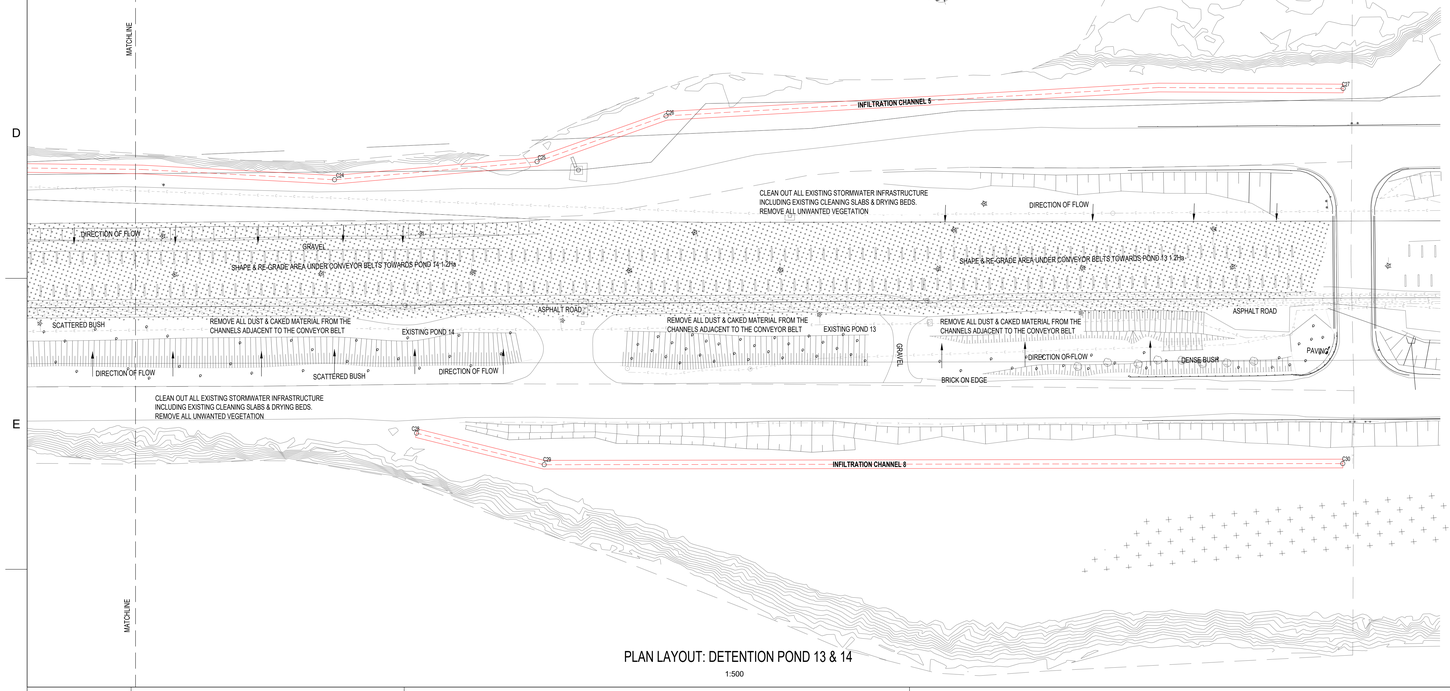
1. CLEAR & GRUB ALL VEGETATION
2. REPAIR & REINSTATE ALL STORMWATER INFRASTRUCTURE
3. DETENTION POND TO BE CLEANED & REINSTATED TO IT'S ORIGINAL CONDITION

V-DRAIN C/L COORDINATES & LEVELS			
NO.	Y	X	TOP OF DRAIN LEVEL (m)
C31	-94639.169	3656025.444	2.820
C32	-94623.383	3656031.057	2.710
C33	-94615.418	3656026.667	2.560
C34	-94598.276	3655982.071	2.420

PLEASE NOTE:
V-DRAIN COORDINATES ARE GIVEN FOR CENTER OF DRAIN.

CHANNEL C/L COORDINATES		
NO.	Y	X
C1	-94718.803	3656207.577
C2	-94720.785	3656204.412
C3	-94722.429	3656196.327
C4	-94728.201	3656175.852
C5	-94729.413	3656171.282
C6	-94733.732	3656155.618
C7	-94736.59	3656150.150
C7	-94740.54	3656128.934
C9	-94736.202	3656099.704
C10	-94734.671	3656080.000
C11	-94728.819	3656036.776
C12	-94728.122	3656032.455
C13	-94723.818	3656030.229
C14	-94725.268	3656049.706
C15	-94724.777	3656041.365
C16	-94711.727	3656020.897
C17	-94719.365	3656016.037
C18	-94667.215	3656226.024
C19	-94596.04	3656036.430
C20	-94556.569	3656937.000
C21	-94531.572	3655875.497
C22	-94661.362	3655974.833
C23	-94620.607	3655914.829
C24	-94519.794	3655662.408
C25	-94507.151	3655617.079
C26	-94506.544	3655585.508
C27	-94457.333	3655437.085
C28	-94458.342	3655665.205
C29	-94441.256	3655640.419
C30	-94376.379	3655467.693
C35	-94697.390	3656080.311
C36	-94703.890	3656079.074
C37	-94697.348	3656076.828
C38	-94703.066	3656074.549

PLEASE NOTE:
CHANNEL COORDINATES ARE GIVEN FOR CENTER OF CHANNEL.



PLAN LAYOUT: DETENTION POND 13 & 14

1:500

LEGEND - SERVICES

PROPOSED	EXISTING	DESCRIPTION
	EX SW	STORMWATER MANHOLE/ PIPE
F2		SEWER MANHOLE/ PIPE
F2		EFFLUENT MANHOLE /PIPE
		NEW INFILTRATION CHANNEL
T1		COMMUNICATION MANHOLE/DUCTS
E3		ELECTRICAL MANHOLE/DUCTS
		WATERMAIN
x x x		FENCE
		CATCHMENTS BOUNDARY
		ASPHALT ROAD
		EARTH BANKS
		NEW V-DRAIN
		DEMOLISH EXISTING SERVICE
		NEW POND

C-01
3.42

B1

BENCHMARK

SETTING OUT COORDINATE:
- R - RAIL EMBANKMENT
- M - MULTI PURPOSE TERMINAL
- S - STOCKPILE
- C - CAUSEWAY
- T - TIPPLER

ABBREVIATIONS
MH = MANHOLE
ELP = ELECTRICAL LIGHT POLE
HML = HIGH MAST LIGHT
EX = EXISTING
BM =BENCH MARKS
SW =STORMWATER
EF =EFFLUENT
FH =FIRE HYDRANT
V =WATERMAIN VALVE

GENERAL NOTES:-
1. THE CONTRACTOR WILL BE DEEMED TO HAVE INSPECTED THE SITE AND BE IN AGREEMENT WITH THE WORKS REQUIRED AS PER THE TENDER DOCUMENTS, UNLESS ALTERNATIVE PROPOSALS WITH COST IMPLICATIONS ARE RECEIVED TOGETHER WITH THE TENDER DOCUMENTS. ALTERNATIVE PROPOSALS SUBMITTED DURING CONSTRUCTION SHALL BE ON A DESIGN AND CONSTRUCT BASIS, WITH THE DESIGN AT CONTRACTOR'S EXPENSE.

2. VARIATIONS DEEMED NECESSARY BY THE CONTRACTOR SHALL BE FORWARDED TO THE PROJECT MANAGER IN WRITING FOR APPROVAL BEFORE ANY CONSTRUCTION BASED ON THE VARIATION COMMENCES.

3. SERVICES SHOWN ON DRAWING ARE KNOWN OR SOURCED FROM EXISTING DRAWINGS. THE CONTRACTOR MUST ENSURE THAT ALL SERVICES THAT INTERSECT OR RUN ALONGSIDE THE PROPOSED WORKS ARE LOCATED BEFORE CONSTRUCTION COMMENCES. ANY CLASHES SHALL BE REPORTED TO THE PROJECT MANAGER IN WRITING. THE CONTRACTOR SHALL BE HELD LIABLE FOR ANY DAMAGES TO EXISTING SERVICES DUE TO NEGLIGENCE.

4. ALL EXISTING PIPES AND MANHOLES INCORPORATED INTO THE NEW SYSTEM SHALL HAVE DEFECTS RECTIFIED TO COMPLY TO STANDARDS FOR NEW WORKS.

5. DIMENSIONS SHOWN ON DRAWINGS SHALL TAKE PREFERENCE OVER DIMENSIONS SCALED.

6. ALL LEVELS AND DIMENSIONS SHALL BE CHECKED BEFORE ANY WORK COMMENCES. FAILURE TO DO SO SHALL DEEM THE CONTRACTOR LIABLE FOR ANY WORK REQUIRED TO RECTIFY ERRORS AS A RESULT OF THE FAILURE TO CHECK THE LEVELS AND DIMENSIONS.

7. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METERS, UNLESS OTHERWISE INDICATED

8. THE LATEST REVISION OF SANS SPECIFICATIONS SHALL APPLY. ALL WORK SHALL BE DONE IN ACCORDANCE WITH RELEVANT SANS SPECIFICATIONS, UNLESS OTHERWISE INDICATED.

9. ALL LENGTHS SHOWN ARE APPROXIMATE AND SHALL BE CONFIRMED ON SITE BY CONTRACTOR.

STORMWATER NOTES

1. TRENCHES FOR PIPES TO BE EXCAVATED AND BACKFILLED IN ACCORDANCE WITH THE REQUIREMENT OF SANS 1200 DB - PIPE TRENCHES.

2. ALL RRGD CONCRETE PIPES SHALL HAVE CLASS B BEDDING UNLESS STATED OTHERWISE.

3. FOR STORMWATER, PIPES SHALL BE SPIGOT & SOCKET CLASS 100D (SANS 677)

4. ALL CONCRETE PIPE JOINTS TO BE WRAPPED, WITH X2 BIDIM/INONWOVEN,CONTINUOUS FILAMENT,NEEDLE PUNCHED, POLYESTER,GEOTEXTILE) MIN. WIDTH TO BE 750mm FOR PIPES 3000 TO 6000

5. NB: ALL MANHOLE COVERS TO SUIT CROSSFALL OF FINISHED PAVING.

6. ON COMPLETION, THE INSTALLATION SHALL BE TESTED TO THE ENGINEER'S SPECIFICATION.

7. THE CONTRACTOR SHALL SUBMIT A FULL SET OF AS-BUILT DRAWINGS UPON COMPLETION OF THE INSTALLATION.

8. ALL EXISTING STORMWATER PIPES, MANHOLES, CHANNELS AND ANY OTHER STORMWATER INFRASTRUCTURE TO BE CLEANED AND CLEARED OF ALL DEBRIS BEFORE ANY WORK COMMENCES. ALL DAMAGED EXISTING STORMWATER INFRASTRUCTURE SHALL BE REINSTATED TO ORIGINAL CONDITION.

9. ANY DISCREPANCES IN LEVELS AND SETTING OUT DATA TO BE QUERIED WITH THE ENGINEER PRIOR TO COMMENCEMENT OF ANY WORK.

10. ALL EXISTING STORMWATER PIPES ARE CONCRETE UNLESS STATED OTHERWISE.

11. WHERE MINIMUM COVER OF 1000mm FOR OPERATIONAL AREAS & 600mm FOR NON OPERATIONAL AREA CANNOT BE ACHIEVED, CONCRETE ENCASEMENT IS REQUIRED AS PER THE DETAIL DRAWINGS.

EARTHWORKS

1. ANY DISCREPANCIES IN LEVELS AND SETTING OUT DATA TO BE QUERIED WITH THE ENGINEER PRIOR TO COMMENCEMENT OF ANY WORK.

2. ALL WORKMANSHIP TO BE IN ACCORDANCE WITH SANS 1200 PART D : EARTHWORKS AND THE RELEVANT PROJECT SPECIFICATIONS AS INCLUDED IN THE CONTRACT.

3. BEFORE PLACING ANY FILL MATERIAL, THE EXISTING GROUND SURFACE MUST BE CLEARED AND GRUBBED OF ALL VEGETATION AND ORGANIC MATTER.

4. UNLESS OTHERWISE INDICATED, ALL BANK BATTERS TO BE : 1:1.5 CUT AND 1:2 FILL

5. THE UNCOMPLICATED THICKNESS OF FILL LAYERS SHALL NOT EXCEED 300mm

6. LOCATE ALL EXISTING SERVICES IN AREA PRIOR TO ANY CONSTRUCTION TAKING PLACE.

DRAWING NO.	REFERENCE
REFERENCE DRAWINGS	
5200157-2-001-C-GA-0005-01	GENERAL ARRANGEMENT
5200157-2-001-C-LA-0005-01	PLAN LAYOUT & DETAILS CATCHMENT AREA 1
5200157-2-001-C-LA-0005-02	PLAN LAYOUT & DETAILS CATCHMENT AREA 2
5200157-2-001-C-LA-0005-03	PLAN LAYOUT & DETAILS CATCHMENT AREA 3 & 4
5200157-2-001-C-DE-0001-02	TYPICAL STORMWATER MANHOLE DETAILS
5200157-2-001-C-DE-0001-03	TYPICAL STORMWATER GRID INLET & CATCHPIT DETAILS
5200157-2-001-C-DE-0001-04	TYPICAL HEADWALL, SCOUR & CONCRETE ENCASEMENT DETAILS

NOTES:

a. **MEASUREMENTS ARE BASED ON METRIC SYSTEM.**
b. **ALL LEVELS ARE IN METERS TO MEAN SEA LEVELS (MSL)**
c. **DO NOT SCALE DRAWING - ONLY DIMENSIONS SHOWN TO BE USED.**
d. **THE CONTRACTOR SHALL VERFIY ALL SERVICES OR CONDITIONS ON THE SITE AND NOTIFY THE ENGINEERING OF ANY VARIATIONS FROM DIMENSIONS BEFORE CONSTRUCTION.**

NO.	DESCRIPTION	BY	CHKD	APPD	DATE
00	ISSUED FOR CONSTRUCTION	HD	RM	RN	04/08/2023
0A	ISSUED FOR CLIENT APPROVAL	HD	RM	RN	28/10/2022

REVISIONS

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CONTRACTOR / CONSULTANT					
TITLE	NAME	SIGN			DATE

TRANSNET PORT TERMINALS					
TITLE	NAME	SIGN	DATE		
DRAWN	HvdW		28	10	22
CHECKED	RM		28	10	22
DESIGNED	HvdW		28	10	22
CHECKED	RM		28	10	22

OPERATING DIVISIONS			
TITLE	NAME	SIGN	DATE

PR.ENG. / PR.TECH./PR. ARCH

NAME R. NAIDOO DATE

SIGNATURE 04 08 23

REG. NUMBER 20070216

SCALE AS SHOWN A0

Transcribe Port Terminals

TRANSNET

PORT OF SALDANHA

SALDANHA STORMWATER MANAGEMENT
CAUSEWAY AREA
PLAN LAYOUT & DETAILS
CATCHMENT AREA 2

PROJECT NUMBER	OD	FBS	DIS	TYPE	DRAWING NO.	SHEET	REV	ID
5200157-2-001-C-LA-0005-02	00	00	01	C	LA	0005	02	00	HD