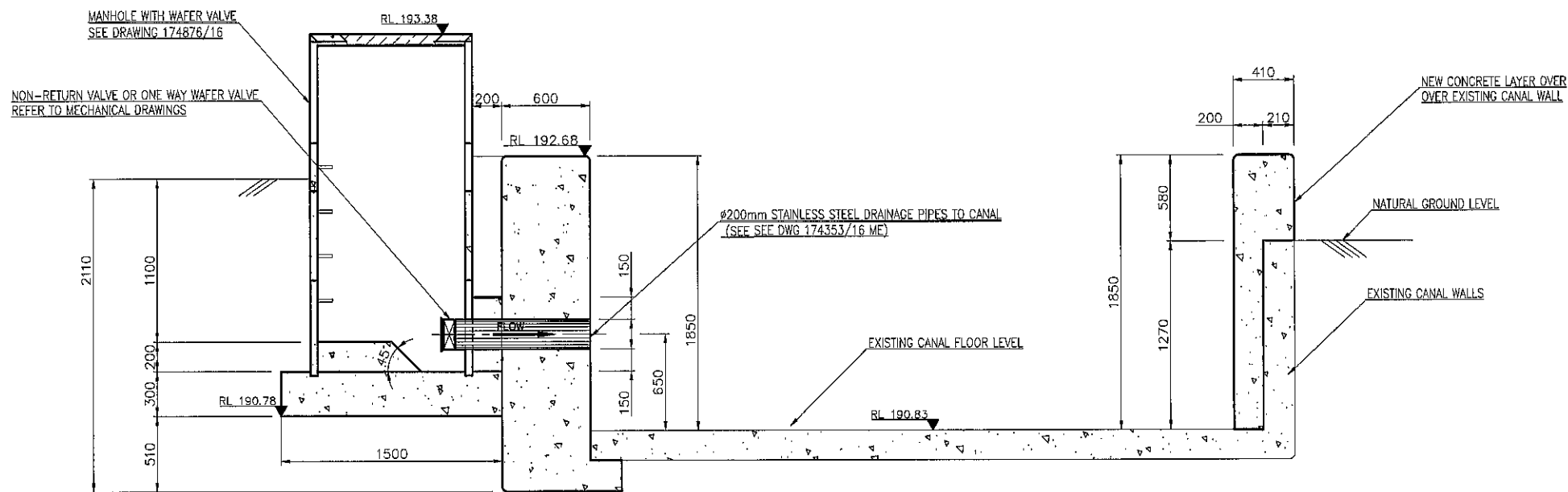
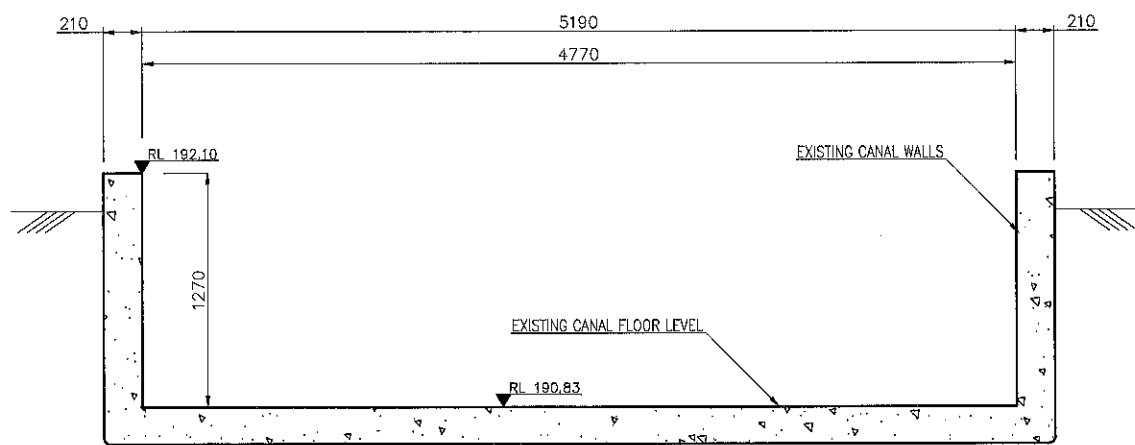
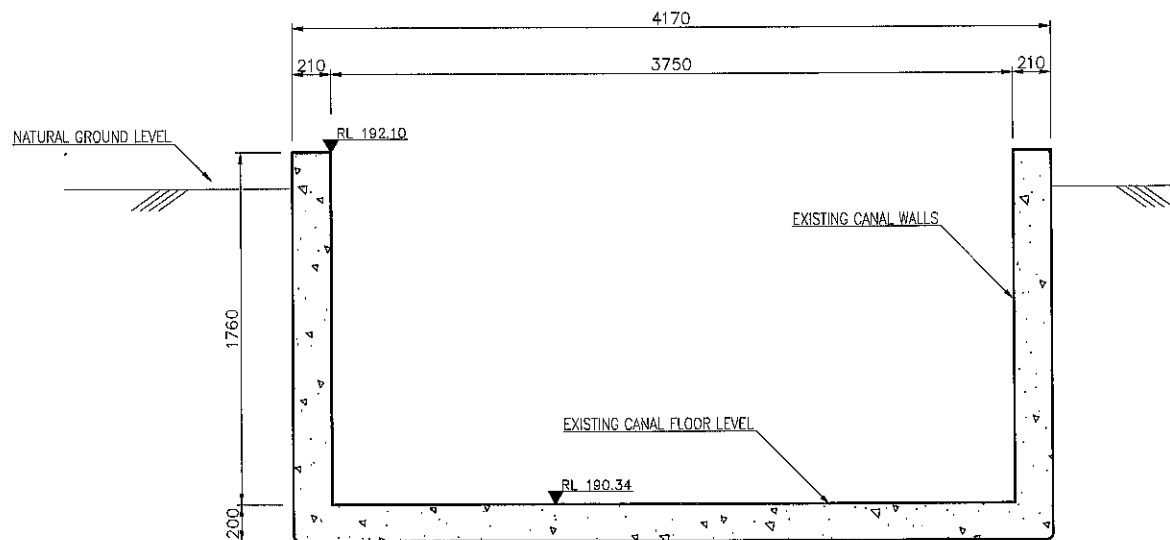




SECTION 03-03
CANAL CROSS SECTION AFTER REHABILITATION AT CH 179.81
SCALE 1:20



SECTION 04-04
EXISTING CANAL BEFORE REHABILITATION
SCALE 1:20



SECTION 05-05
EXISTING CANAL AFTER PARSHALL FLUME
SCALE 1:20

NOTES:

- SUB-SURFACE DRAINAGE SYSTEM:**
- SUPPLY, LAY AND BED SUB-SURFACE DRAINAGE SYSTEM WITH CONCRETE MANHOLE ALONG THE LEFT SIDE OF THE CANAL.
 - SUB-SURFACE DRAINAGE PIPE TO RUN FROM CHAINAGE 118.36m TO 179.81m.
 - SUPPLY AND INSTALL PRECAST CONCRETE MANHOLE AT CHAINAGE 179.81m.
 - 2000 STAINLESS STEEL PIPE WITH NON-RETURN VALVE TO BE INSTALLED WITHIN MANHOLE ACCORDING TO MECHANICAL SPECIFICATION AND DRAWINGS.
 - EXCAVATE TRENCH AS SPECIFIED ON DRAWINGS. DURING EXCAVATIONS THE CONTRACTOR HAS TO ENSURE SAFE WORKING SLOPES.
 - PLACE TWO PARALLEL HDPE SLOTTED PIPES (WITH SMOOTH BORE) AND SURROUNDING FILTER LAYER WITH ON-SITE SUPERVISION OF THE EMPLOYER'S AGENT. ENSURE THAT THE SMOOTH BORE IS AT THE BOTTOM WHEN LAYING THE PIPE.
 - THE FILTER LAYER GRADING MUST BE ACCORDING TO THE GRADING SPECIFICATION.
 - THE FILTER LAYER MUST NOT BE COMPACTED BY MEANS OF MECHANICAL EQUIPMENT.
 - THE FILTER LAYER MUST BE SLICED WITH WATER UNTIL FLOW APPEARS IN THE HDPE SLOTTED PIPES.
 - BACKFILLING ABOVE FILTER MAY ONLY PROGRESS AFTER SUCCESSFUL SLICING AS PRESCRIBED IN 6. ABOVE.
 - BACKFILL IN-SITU MATERIAL OBTAINED FROM TRENCH EXCAVATION. ALL SELECTED MATERIAL MUST BE SMALLER THAN 19mm.

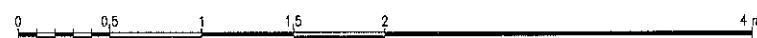
- CANAL WALL RAISING:**
- RAISE CANAL BY PLACING A NEW CONCRETE WALL OVER THE EXISTING CANAL.
 - ON THE LEFT SIDE RAISE CANAL FROM CHAINAGE 138.690M TO 169.660m.
 - ON THE RIGHT SIDE RAISE CANAL FROM CHAINAGE 138.690M TO 180.560M.
 - BREAK-OUT AND RECONSTRUCT EXISTING CANAL ON THE LEFT SIDE FROM CHAINAGE 169.660M TO 180.56M TO ACCOMMODATE FOR NEW INSTRUMENTATION.
 - PREPARE EXISTING CANAL SURFACE BY PRESSURE WASHING OR SIMILAR AS APPROVED BY THE EMPLOYER'S AGENT.
 - FOR REINFORCEMENT DETAILS REFER TO DRAWING 174878/16 AND 174879/16.
 - MAKE PROVISION FOR SUMP DE-WATERING PIPES RUNNING FROM FLOW METER CHAMBER AND STRAINER ROOM INTO THE CANAL. SEE MECHANICAL AND DE-WATERING EQUIPMENT DRAWING 174581/16 ME.
 - BACKFILL TO RAISED CANAL WALL LEVEL. MATERIAL FOR BACKFILLING TO BE APPROVED BY THE EMPLOYER'S AGENT.
 - CONTRACTOR TO PROVIDE EMPLOYER'S AGENT WITH METHOD STATEMENTS FOR APPROVAL PRIOR TO ANY DEMOLITION, EXCAVATION, FOUNDATION PREPARATION, SURFACE PREPARATION (FROM NEW TO EXISTING STRUCTURES) AND CONSTRUCTION.
 - CONTRACTOR TO TAKE INTO ACCOUNT ALL INFORMATION INCLUDED IN THE CONTRACT, INCLUDING BUT NOT LIMITED TO CONTRACT DATA, PRICING DATA, SCOPE OF WORKS WITH SPECIFICATIONS AND SITE INFORMATION.

SPECIFICATIONS:

- CONCRETE CLASS 40/19
- 50% GROUND GRANULATED COREX SLAG (GGCS) CEMENT REPLACEMENT (OR EQUIVALENT, SUBJECT TO THE APPROVAL OF THE EMPLOYER'S AGENT)
- ALL EXPOSED CORNERS TO HAVE 25 X 25 MM CHAMFER.
- ALL NON-SHUTTERED CONCRETE SURFACES SHALL HAVE WOOD-FLOATED FINISHES.
- SLOTTED HDPE PIPES WITH SMOOTH BORE:
 - DIAMETER: 160mm
 - SLOT WIDTH: 1.8mm
 - MINIMUM SLOPE TOWARDS NEW DOWNSTREAM MANHOLE: 0.1% (1:1000)

STATUS:			
CONSTRUCTION			
32 OF 55	ALTERATIONS OF CANAL AT EXISTING PARSHALL FLUME; REINFORCEMENT DETAILS AND BENDING SCHEDULE		174879/16
31 OF 55	RAISING OF CANAL WALLS; REINFORCEMENT DETAILS AND BENDING SCHEDULE		174878/16
30 OF 55	REMOVAL OF PARSHALL FLUME AND RECONSTRUCTION OF CANAL SECTION BETWEEN CHAINAGE 229.84m AND 238.34m		174877/16
29 OF 55	RAISING OF CANAL WALLS; MANHOLE DETAIL FOR SUBSURFACE DRAINAGE ALONG THE LEFT SIDE OF THE CANAL		174876/16
28 OF 55	RAISING OF CANAL WALLS; CRUMP WEIR AND RECONSTRUCTION OF A SECTION OF THE LEFT CANAL WALL WITH INSTRUMENTATION		174875/16
27 OF 55	RAISING OF CANAL WALLS; CROSS SECTIONS 03-03, 04-04 AND 05-05		174874/16
26 OF 55	RAISING OF CANAL WALLS; CROSS SECTIONS 01-01 AND 02-02		174873/16
25 OF 55	RAISING OF CANAL WALLS; PLAN VIEW AND LONGITUDINAL SECTION		174872/16
2 OF 55	GENERAL LAYOUT OF OUTLET WORKS (KEY PLAN)		174849/16
1 OF 55	LIST OF DRAWINGS FOR REHABILITATION OF OUTLET WORKS		174848/16
SHEET	DESCRIPTION	OTHER No.	REV. No.
LIST OF DRAWINGS			

SCALE 1:20



SECTION
SECTION NUMBER
01
02
SHEET NUMBER

REVISION				
MOD No.	DATE	DESCRIPTION	FOR	DWA

DEPARTMENT OF WATER AND SANITATION REPUBLIC OF SOUTH AFRICA	
HEAD OFFICE STRATEGIC ASSET MANAGEMENT PRIVATE BAG X 313 PRETORIA 0001	SEDIBENG BUILDING 165 FRANCIS BAARD STREET PRETORIA 012 335 7500
CHECKED: K. POOE DATE: 26/7/2016 ENGINEER: C. MABALE DATE: 19/08/2016 CHIEF ENG/ APP (PR ENG)	DESIGNED: TI MABALE DATE: 19/08/2016 EXTERNAL APPROVAL: [Signature] DATE: 19/08/2016 DIRECTOR (PR ENG)

DAM SAFETY REHABILITATION PROJECT									
KWAGGASKLOOF DAM REHABILITATION PROJECT									
RAISING OF CANAL WALLS: CROSS SECTION 03-03, 04-04 AND 05-05									
PROVINCE:	WESTERN CAPE	DISTRICT:	WORCESTER	KEY CODES:	DAE	SLP	DET	PSS	OTHER No. XXX
LOCALITY No:	H100-08	TENDER/ CONTRACT No.							
CALCULATION FILE:									
SHEET	27 OF 55	REG. No.	174874/16						
REV.	00								