

**EXCAVATION FOR SHALLOW TRENCHES**

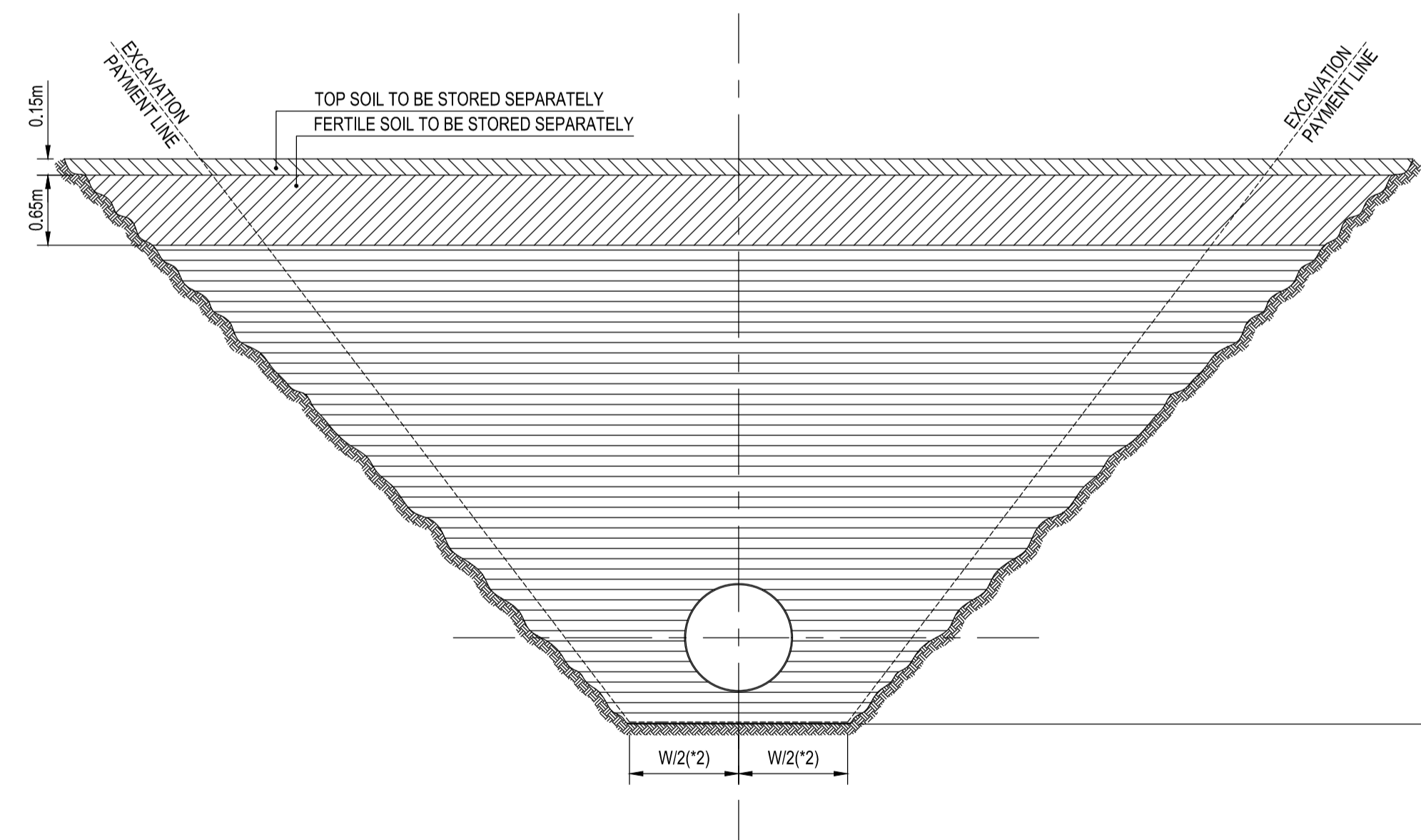
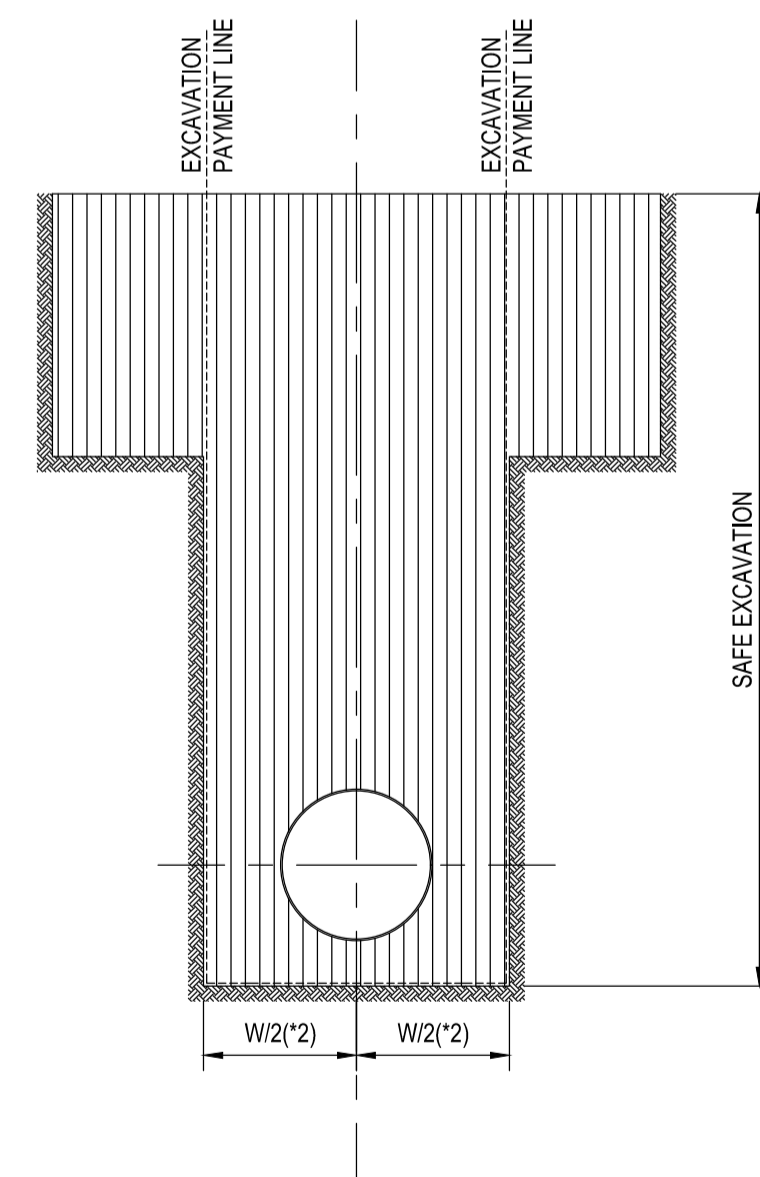
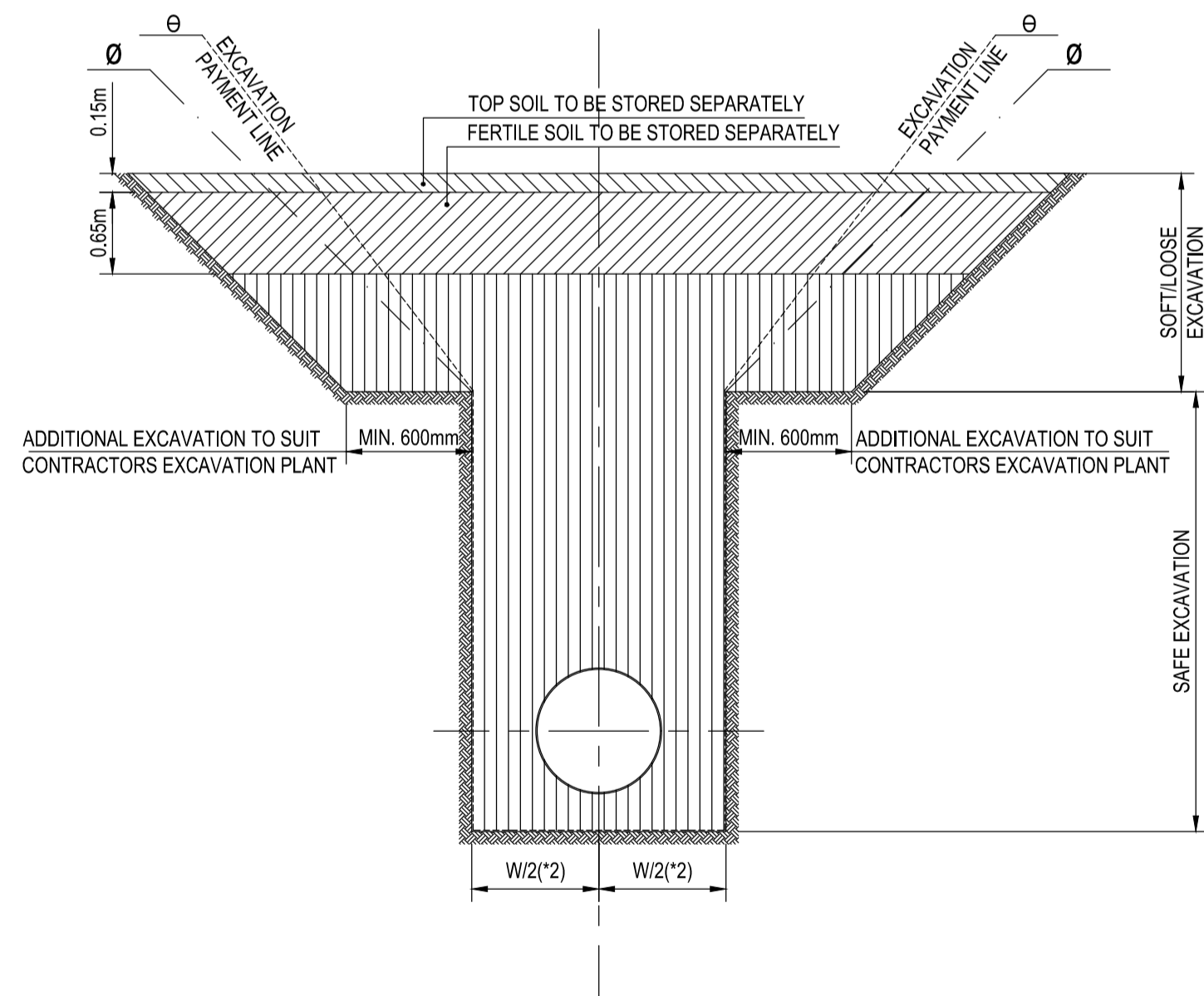
SEE NOTE 12

**NOTES:**

1. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE STATED. ALL LEVELS IN METRES ABOVE SEA LEVEL (MASL) UNLESS OTHERWISE STATED.
2. THE TRENCH WIDTH W FOR THE PIPELINE IS DEFINED IN THE PROJECT SPECIFICATION.
3. REFER TO LONG SECTION DRAWINGS FOR DEPTH OF COVER OVER THE PIPE.
4. THE TOP 150mm OF SOFT EXCAVATION IS REGARDED AS TOPSOIL AND SHALL BE EXCAVATED AND STORED SEPARATELY AND REINSTATED IN THE SAME POSITION UPON BACKFILLING OF THE PIPE TRENCH.
5. SOFT EXCAVATION BETWEEN 150mm AND 800mm DEPTH IS REGARDED AS FERTILE SOIL AND SHALL BE EXCAVATED AND STORED SEPARATELY AND REINSTATED IN THE SAME POSITION UPON BACKFILLING OF THE PIPE TRENCH.
6. REFER TO PROJECT SPECIFICATIONS FOR THE CLASSIFICATION OF SOFT AND HARD EXCAVATION.
7. SOFT EXCAVATION TO BE REUSED MAY BE STORED ALONG THE TRENCH INSIDE THE CONSTRUCTION SERVITUDE WHERE THERE IS SUFFICIENT SPACE AVAILABLE. REFER TO PROPOSED TYPICAL SERVITUDE DRAWINGS.
8. HARD EXCAVATION SHALL BE REMOVED FROM SITE TO DESIGNATED SPOIL SITES IMMEDIATELY AFTER BEING EXCAVATED AND WILL NOT BE STORED WITHIN THE CONSTRUCTION SERVITUDE.
9. FOR PAYMENT PURPOSES, THE QUANTITY OF EXCAVATION WILL BE CALCULATED TO THE SLOPE Ø AS GIVEN IN THE PROJECT SPECIFICATIONS. THE SLOPE Ø WAS BASED ON THE DEEMED SAFE EXCAVATION SLOPE, DETERMINED IN TERMS OF KNOWN GEOTECHNICAL CONDITIONS AND PARAMETERS AT THE TIME OF TENDER.
10. THE TRENCH EXCAVATION SHALL BE EXCAVATED TO THE SAFE EXCAVATION SLOPE Ø AS DETERMINED ON SITE AND BASED ON AN ASSESSMENT OF THE KNOWN EXISTING CONDITIONS AND GEOTECHNICAL PARAMETERS.
11. FOR PAYMENT PURPOSES, ANY ADDITIONAL EXCAVATION (WHETHER POSITIVE OR NEGATIVE), BETWEEN THE SLOPES Ø AND Ø WILL NOT BE CONSIDERED.
12. WITH RESPECT TO THE MECHANICAL EXCAVATION OF PIPE TRENCHES, A SHALLOW TRENCH IS DEFINED AS A TRENCH WITH A MAXIMUM DEPTH OF 3.50m.
13. A DEEP TRENCH IS A TRENCH THAT IS DEEPER THAN A SHALLOW TRENCH.
14. SAFE EXCAVATION IS EXCAVATION IN A MATERIAL THAT CAN BE EXCAVATED WITH VERTICAL SIDE SLOPES AND THAT WILL IN THE LONG TERM BE SAFE AGAINST COLLAPSE OR ANY OTHER FORM OF GEOTECHNICAL INSTABILITY.
15. THE THICKNESSES OF THE TOP SOIL AND FERTILE SOIL ARE NOMINALLY AS INDICATED ON THIS DRAWING, BUT VARIES ALONG THE PIPELINE.

**LEGEND:**

- (\*) NOTE REFERENCE
- EXCAVATION PAYMENT LINE
- - - SAFE SLOPE EXCAVATION LINE



**EXCAVATION FOR DEEP TRENCHES**

SEE NOTE 13

| No. | DATE       | AMENDMENTS        |
|-----|------------|-------------------|
| A   | 2016/08/31 | ISSEUD FOR TENDER |

**CONSULTING FIRM:**

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**MOGALAKWENA**  
**BULK WATER AUGMENTATION**

**OPEN PIPE TRENCH**  
**TYPICAL DETAIL**

| SCALE | DRAWING No  | Rev No       |
|-------|-------------|--------------|
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