

**GENERAL NOTES:**

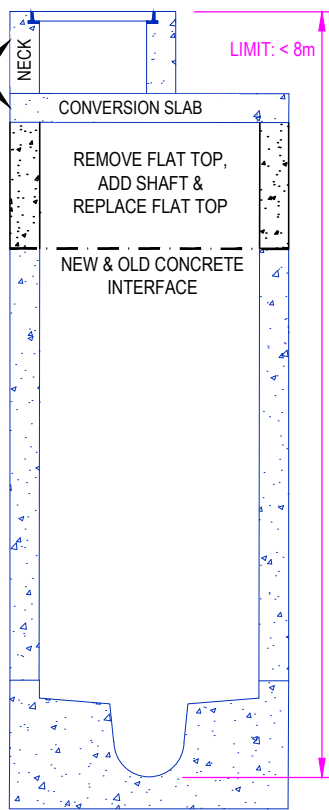
- Works shall be undertaken in accordance with the Water Agency's Confined Space procedure by a Live Sewer accredited Contractor.
- MHs shall be inspected and measured prior to works commencing so that the appropriate height adjustment method can be selected.
- Depending on Table 313-B, some of the provided options may be interchangeable, for example:
  - Figures 518-A and 518-F
  - Figures 518-E and 518-L.
 ie: once the existing shaft is exposed, the MH may be rebuilt with either a Flat Top or Conical Top.
- Where the existing MH has a shaft connection, new construction is not permitted within 500 of the shaft connection.
- Where MHs in a significantly deteriorated state are observed, contact the Water Agency for advice. A number of options may be considered:
  - Rehabilitate the existing MH to be retained with a liner or Calcium Aluminate Cement CAC.
  - Knock down the MH to the rib wall and reconstruct from that level.
  - Decommission the MH and reconstruct a new MH over the sewer (refer MRWA-S-508 to 512 & 516).
- MH depth may exceed 8m depth if structural assessment of the existing MH by a competent person indicates that it is structurally capable of being deepened.
- These details may also be applied to the removal and reconstruction of cover and step ironor ladder relocation within MHs

**LEGEND:**

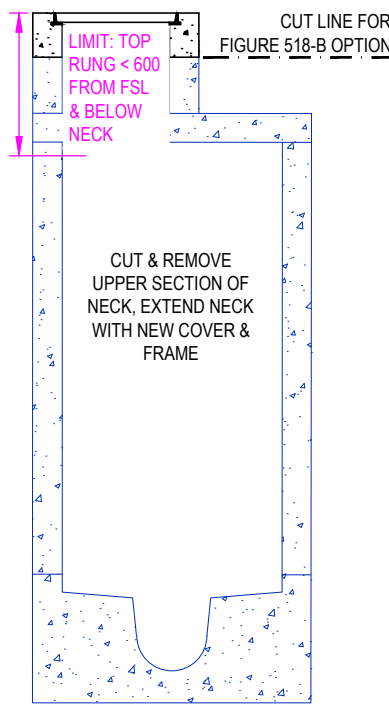
- New Asset (black)
- Existing asset (blue)

**FLAT TOP MH HEIGHT ADJUSTMENT OPTIONS:**

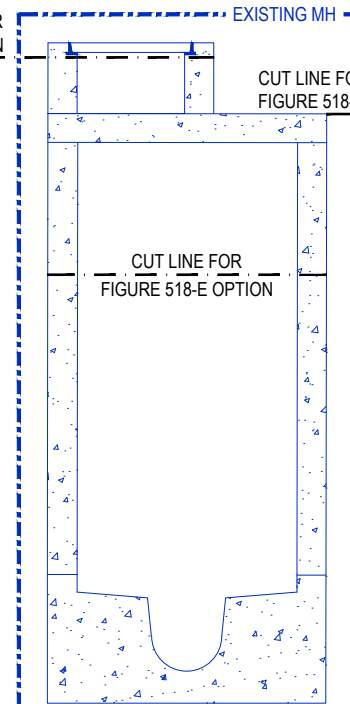
SHOWN AS EXISTING. MAY NEED TO BE NEW (REFER NOTES A & B)



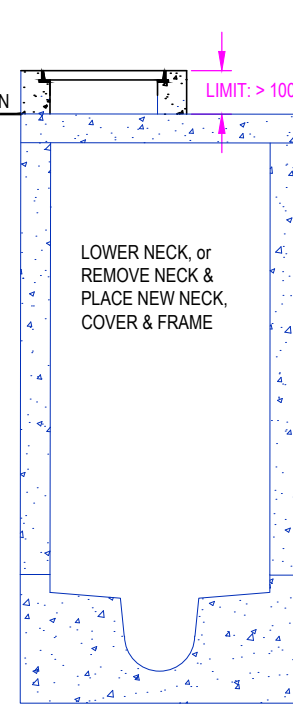
**FIGURE 518-A: SHAFT RAISE**  
REFER FIGURE 313B-C



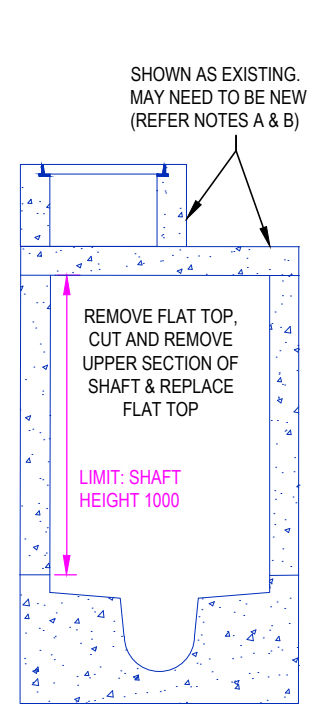
**FIGURE 518-B: NECK RAISE**  
REFER FIGURE 520-F or G



**FIGURE 518-C: EXISTING FLAT TOP MH**



**FIGURE 518-D: NECK LOWER**  
REFER FIGURE 313B-C

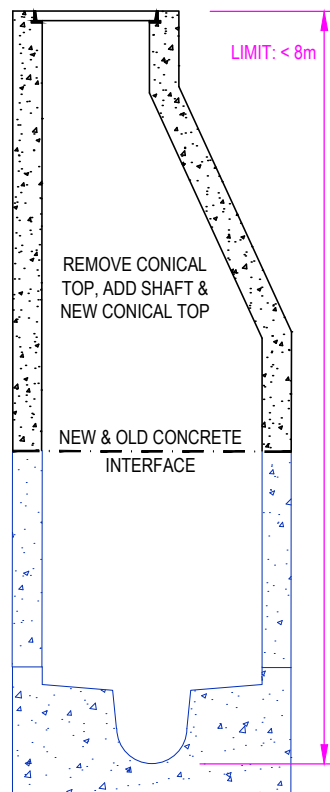


**FIGURE 518-E: SHAFT LOWER**  
REFER FIGURE 313B-C

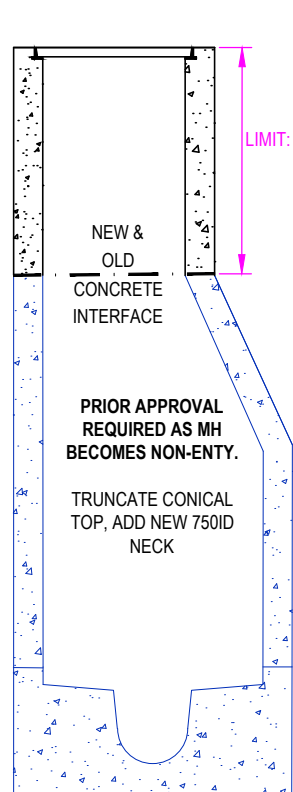
**FLAT TOP MH Height Adjustment:**

- Existing flat tops may only be reused if they are in excellent condition (ie: no discernable loss of material, concrete is hard such that it does not flake or spall when hit with a hammer, lift anchors in new condition).
- Where the frame is cast into the neck and it is in corroded or in poor condition and the conversion slab (flat top) is in good condition, the neck may be removed and rebuilt on the existing conversion slab if conversion slab is to be reused.

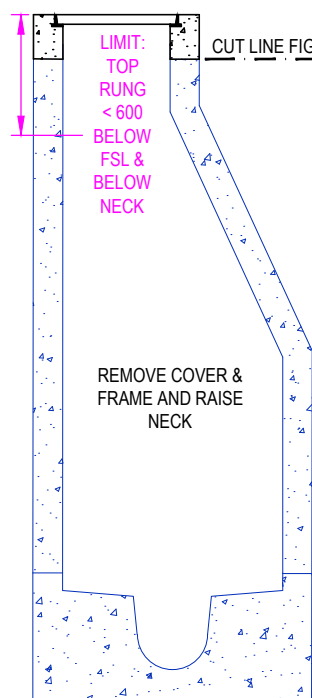
**CONICAL TOP MH HEIGHT ADJUSTMENT OPTIONS:**



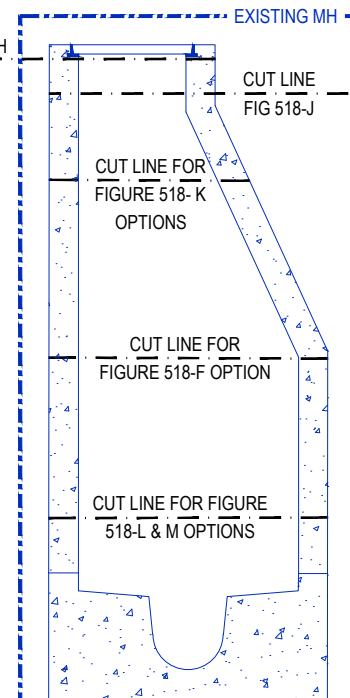
**FIGURE 518-F: SHAFT RAISE**  
REFER FIGURE 313B-A



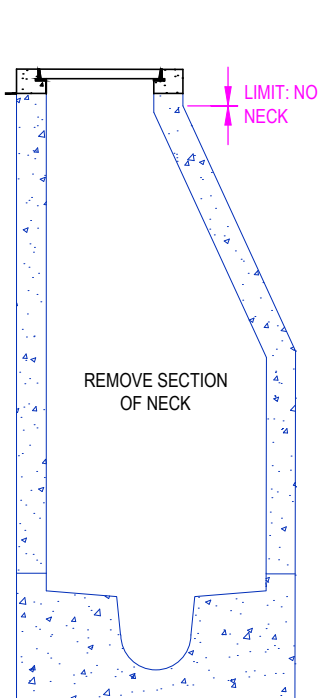
**FIGURE 518-G: TRUNCATE CONICAL TOP & NECK RAISE**  
REFER FIGURE 520-J



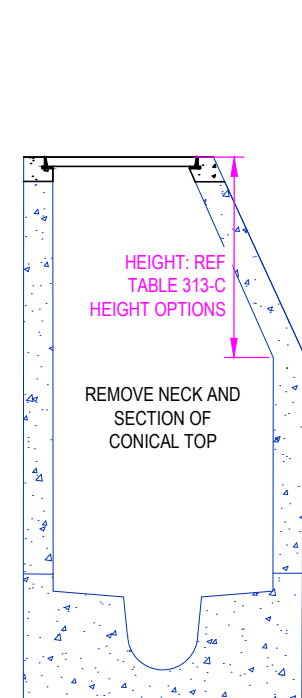
**FIGURE 518-H: NECK RAISE**  
REFER FIGURE 520-F or G



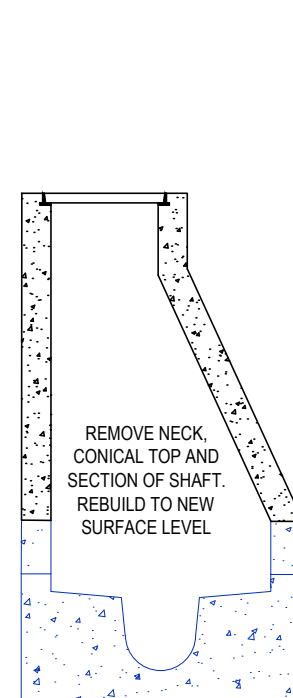
**FIGURE 518-I: EXISTING CONICAL TOP MH**



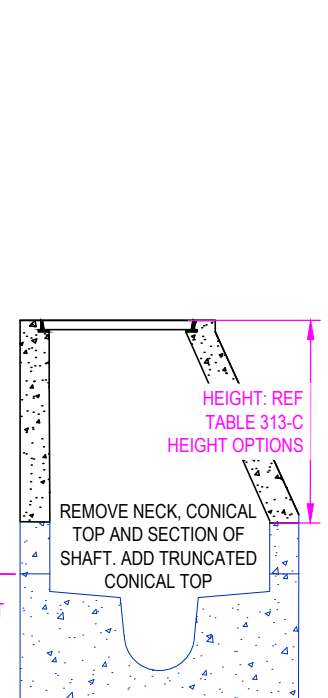
**FIGURE 518-J: NECK LOWER**  
REFER FIGURE 520-D or E



**FIGURE 518-K: TRUNCATE CONICAL TOP**  
REFER FIGURE 520-H & I



**FIGURE 518-L: SHAFT LOWER**  
REFER FIGURE 313B-B



**FIGURE 518-M: TRUNCATE CONICAL TOP & SHAFT LOWER**  
REFER FIGURE 313B-B

ALL DIMENSIONS IN mm UNLESS STATED OTHERWISE				DESIGNED: R. JAGGER		DATE: JAN 2020	
				DRAWN: R. JAGGER		DATE: JAN 2020	
CHECKED: NAME		DATE		APPROVED: NAME		DATE	
<input checked="" type="checkbox"/> CWW		G. ANTHONSEN		<input checked="" type="checkbox"/> CWW		S. TRIKHA	
<input checked="" type="checkbox"/> SEW		C. PAXMAN		<input checked="" type="checkbox"/> SEW		D. STEWART	
<input checked="" type="checkbox"/> YVW		N. GERHARD		<input checked="" type="checkbox"/> YVW		R. LEON	
ISSUED 2020				VERSION 1			
REV	DESCRIPTION	DATE	APPROVED				
2	PUBLISHED FIRST ISSUE	SEP 20	CP / GA / RL				
1	PRE-PUBLISHED DRAFT	JUN 20	CP / GA / NG				

MELBOURNE RETAIL WATER AGENCIES

**MRWA SEWERAGE STANDARDS**

**EXISTING CONCRETE MH HEIGHT ADJUSTMENT, METHOD SELECTION & GENERAL REQUIREMENTS**

**NOT TO SCALE**

**MRWA-S-518**

Planning	Design	Construction
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>