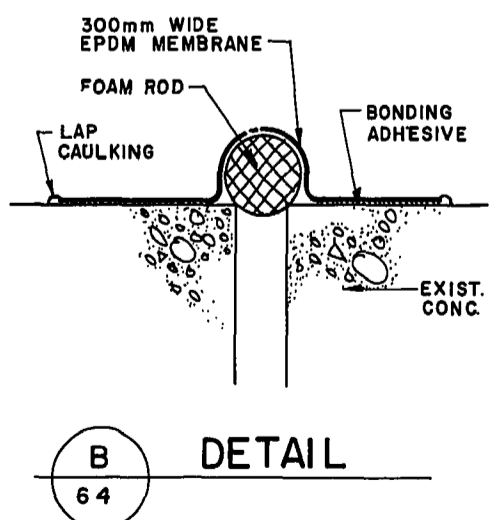
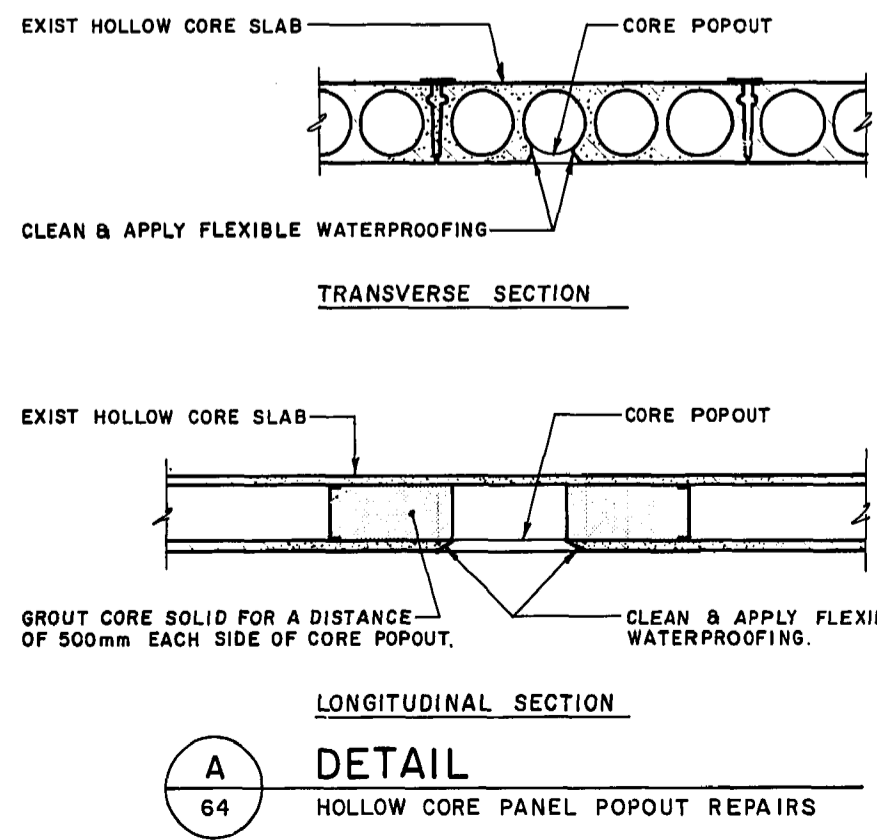
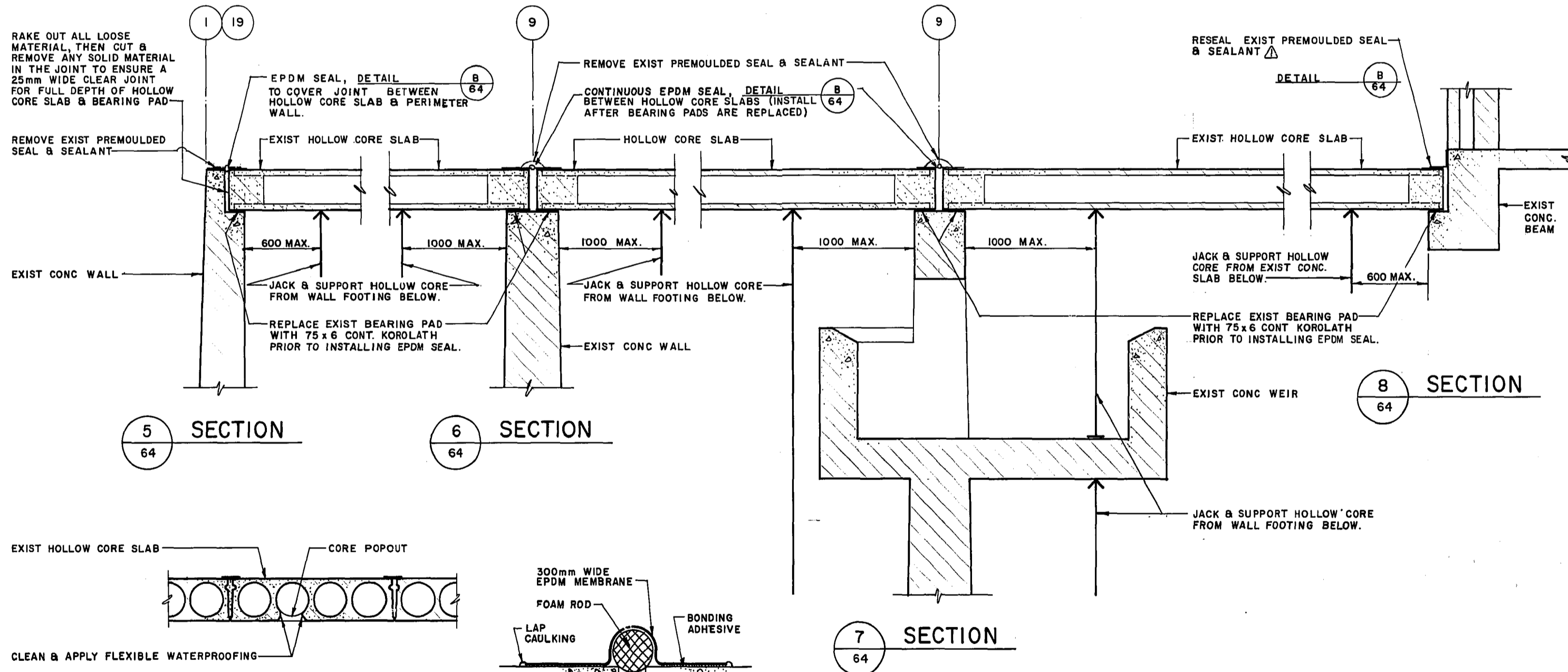


ROOF PANEL REMOVAL DETAILS - ROOF PANEL REPLACEMENT AS PER EXISTING DETAILS ON DRAWING NO. WIL-28. (EXCEPT FOR THE 6 WIDE X 6 DEEP SAWCUT TYP. (EACH EDGE) AND THE 1.3 TO 1.5 THICK SEALANT OVER PRIMED SURFACE SHOWN AT THE JOINT'S BETWEEN PANELS)



NOTES FOR HOLLOW CORE ROOF PANEL REPLACEMENTS

- A. REMOVAL
- DESIGN AND SUBMIT SHOP DRAWINGS AND DESIGN CALCULATIONS FOR REMOVALS. THE DESIGN SHALL BE BASED ON THE FOLLOWING LOADING RESTRICTIONS:
 - (A) SUPERIMPOSED LOADING ALLOWED ON PRECAST HOLLOW CORE PANELS

MOMENT	M	≤	78.65 KN/M OR 95.0 KN/M/PANEL
SHEAR	V	≤	29.7 KN/M OR 36.0 KN/PANEL
PUNCHING SHEAR	V _p	≤	30.52 b _c KN

b_c = PERIPHERY OF CRITICAL SECTIONS IN METRES LOCATED AT 0.016 METRES AWAY FROM THE PERIPHERY OF THE CONCENTRATED LOAD AREA
 - SUPERIMPOSED LOADING (IN EXCESS OF EXISTING STRUCTURAL DEAD WEIGHT) ALLOWED ON PRECAST ROOF BEAMS

MOMENT	M	≤	475.8 KN.M FOR 9.76 M SPANS
SHEAR	V	≤	602.2 KN.M FOR 10.98 M SPANS
			146.25 KN FOR 9.76 M SPANS
			164.5 KN FOR 10.98 M SPANS
 - SUPERIMPOSED LOADING ALLOWED ON EXISTING FLOOR SLAB WITH THE RESERVOIR EMPTY.

LOADING ≤ 70 KN/M²
 - REMOVE PANELS WITHOUT DAMAGING ANY PART OF THE STRUCTURE THAT IS TO REMAIN. ANY DAMAGE WILL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR TO THE SATISFACTION OF THE CONTRACT ADMINISTRATOR.

- B. REPLACEMENT
- DESIGN AND SUBMIT SHOP DRAWINGS FOR 300 HOLLOW CORE ROOF PANELS TO MATCH DIMENSIONS OF THE EXISTING. DESIGN FOR SUPERIMPOSED LOAD OF 6.0 KN/M².
 - DESIGN AND SUBMIT SHOP DRAWINGS AND DESIGN CALCULATIONS FOR INSTALLATION. THE DESIGN SHALL BE BASED ON THE SAME LOADING RESTRICTIONS AS FOR THE REMOVAL.
 - PLACE GROUT AND CONCRETE AS PER EXISTING DETAILS ON DRAWING NUMBER WIL-28.

- JACKING OPERATIONS FOR PRECAST HOLLOW CORE SLABS
- INSTALL BRACING AND SHORING SYSTEM PRIOR TO ANY JACKING.
 - RESTRICT DIFFERENTIAL MOVEMENT BETWEEN ADJACENT CONNECTED PANELS TO LESS THAN 1 mm DURING ALL OPERATIONS TO REPLACE THE HOLLOW CORE BEARING PADS.
 - THE HOLLOW CORE SLABS SHALL NOT BE JACKED UP MORE THAN 10 mm AT ANY LOCATION.
 - ADJUST BRACING AND SHORING SYSTEM DURING JACKING OPERATIONS TO RESTRICT MOVEMENT OF THE HOLLOW CORE SLABS TO LESS THAN 2 mm IN CASE OF JACKING FAILURE.

LOCATION APPROVED UNDERGROUND STRUCTURES

BM ELEV

DESIGNED BY S.B.B.

CHECKED BY

DRAWN BY K.J.L.

APPROVED BY

HOR SCALE 1:20

VERTICAL

RELEASED FOR CONSTRUCTION

DATE 1991-01-31

DATE 1991 02 15

CONSULTANT DRAWING NO. 4113 0265 259 02

UMA Engineering Ltd. Engineers & Planners
1478 Buffalo Place, Winnipeg, Manitoba, Canada R3T 1L7

ENGINEER'S SEAL

PROVINCE OF MANITOBA

BISWANGER

REGISTERED PROFESSIONAL ENGINEER

DATE 1991-01-31

DATE 1991 02 15

RECORD DRAWING P.D. No. 91-19

THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
WATERWORKS, WASTE & DISPOSAL DIVISION

WILKES RESERVOIR
PHASE II CONSTRUCTION
STRUCTURAL WORKS

CITY DRAWING NUMBER

SHEET 4 OF 5

ROOF PANEL REPAIR & REPLACEMENT DETAILS

WIL-64

File # RE 10318