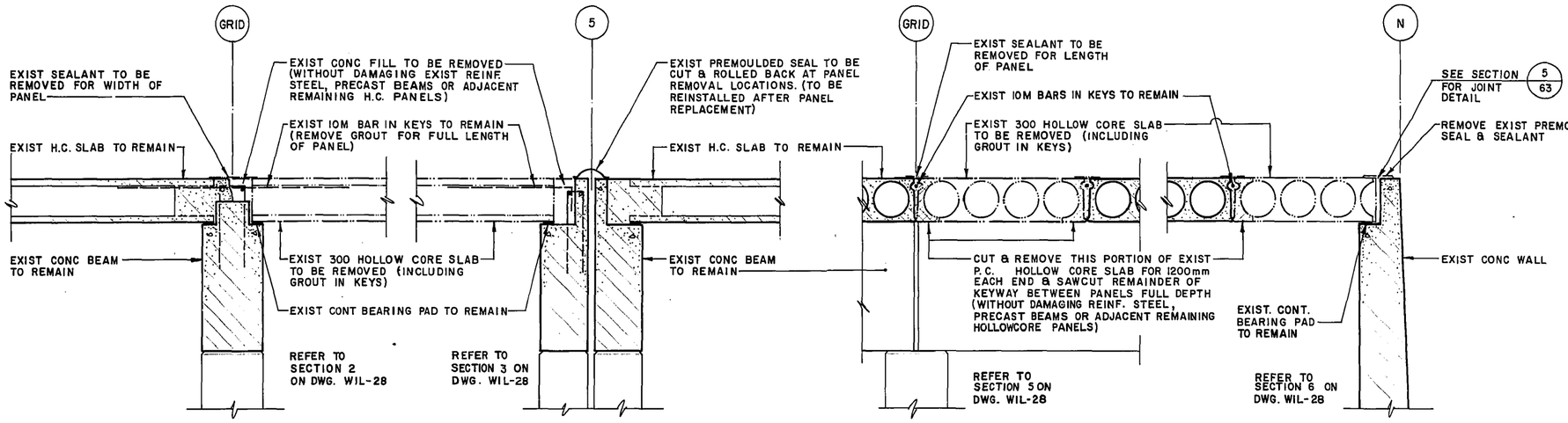
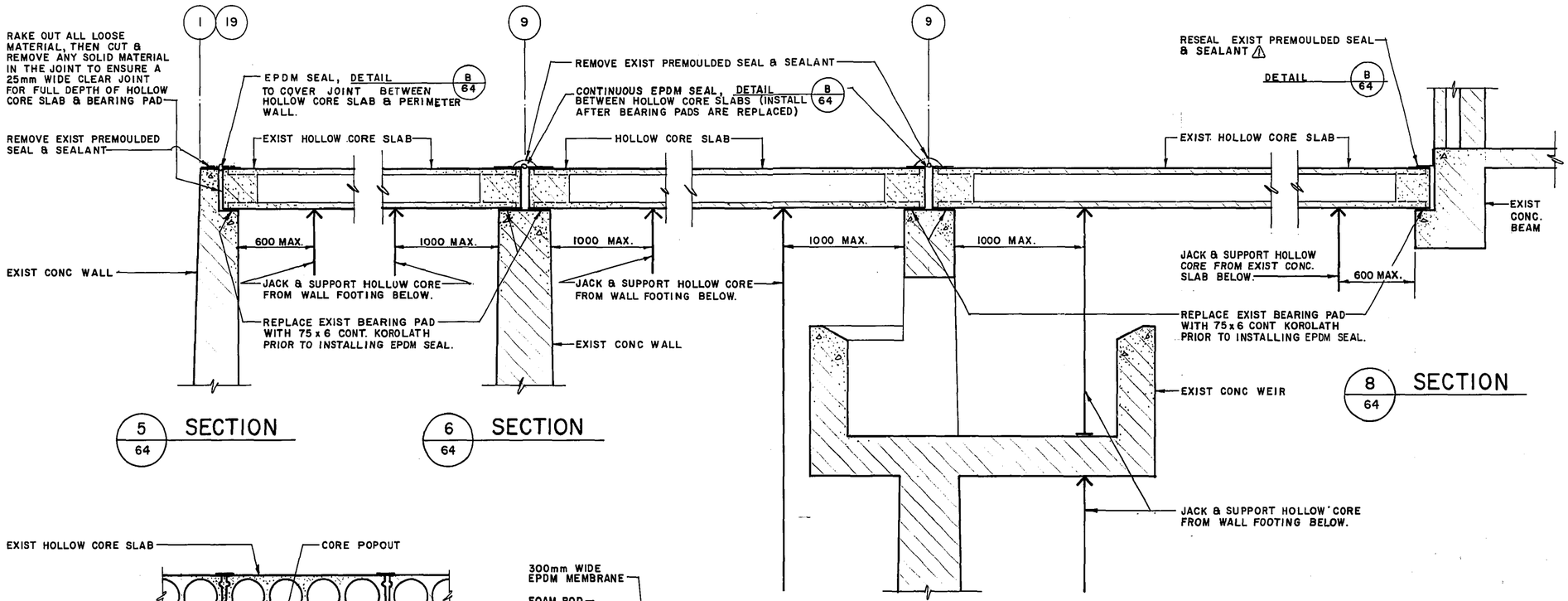
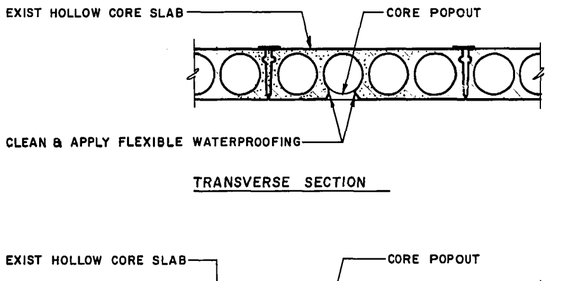


1/64 SECTION — 2/64 SECTION — 3/64 SECTION — 4/64 SECTION

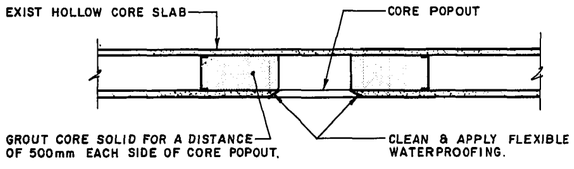
ROOF PANEL REMOVAL DETAILS - ROOF PANEL REPLACEMENT AS PER EXISTING DETAILS ON DRAWING NO. WIL-28.
(EXCEPT FOR THE 6 WIDE X 6 DEEP SAWCUT TYP. (EACH EDGE) AND THE 1.3 TO 1.5 THICK SEALANT OVER PRIMED SURFACE SHOWN AT THE JOINTS BETWEEN PANELS)



5/64 SECTION — 6/64 SECTION — 8/64 SECTION — 7/64 SECTION

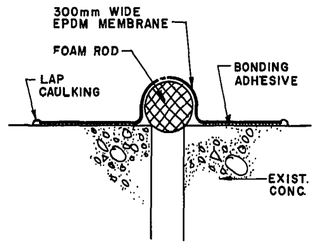


TRANSVERSE SECTION



LONGITUDINAL SECTION

A/64 DETAIL — HOLLOW CORE PANEL POPOUT REPAIRS



B/64 DETAIL

NOTES FOR HOLLOW CORE ROOF PANEL REPLACEMENTS

A. REMOVAL

1. 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/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_o KN

   b_o = PERIPHERY OF CRITICAL SECTIONS IN METRES LOCATED AT 0.016 METRES AWAY FROM THE PERIPHERY OF THE CONCENTRATED LOAD AREA

   (B) 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
		≤	602.2 KN.M FOR 10.98 M SPANS
SHEAR	V	≤	146.25 KN FOR 9.76 M SPANS
		≤	164.5 KN FOR 10.98 M SPANS

   (C) SUPERIMPOSED LOADING ALLOWED ON EXISTING FLOOR SLAB WITH THE RESERVOIR EMPTY.

   LOADING ≤ 70 KN/M²

2. 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

1. 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.
2. DESIGN AND SUBMIT SHOP DRAWINGS AND DESIGN CALCULATIONS FOR INSTALLATION. THE DESIGN SHALL BE BASED ON THE SAME LOADING RESTRICTIONS AS FOR THE REMOVAL.
3. PLACE GROUT AND CONCRETE AS PER EXISTING DETAILS ON DRAWING NUMBER WIL-28.

JACKING OPERATIONS FOR PRECAST HOLLOW CORE SLABS

1. INSTALL BRACING AND SHORING SYSTEM PRIOR TO ANY JACKING.
2. RESTRICT DIFFERENTIAL MOVEMENT BETWEEN ADJACENT CONNECTED PANELS TO LESS THAN 1 mm DURING ALL OPERATIONS TO REPLACE THE HOLLOW CORE BEARING PADS.
3. THE HOLLOW CORE SLABS SHALL NOT BE JACKED UP MORE THAN 10 mm AT ANY LOCATION.
4. 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.

RECORD DRAWING P.D. No. 91-19

LOCATION APPROVED
UNDERGROUND STRUCTURES
SUPV U/G STRUCTURES COMMITTEE — DATE

NOTE:
LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION

NO.	REVISIONS	DATE	BY
	B.M ELEV		
1	TO RECORD DRAWING	10/91	A.M.U.

UMA Engineering Ltd. Engineers & Planners
1479 Buffalo Place, Winnipeg, Manitoba, Canada R3T 1L7

DESIGNED BY	S.B.B.	CHECKED BY	
DRAWN BY	K.J.L.	APPROVED BY	
HOR SCALE	1:20	RELEASED FOR CONSTRUCTION	
VERTICAL			
DATE	1991-01-31	DATE	1991 02 15

ENGINEER'S SEAL — PROVINCE OF MANITOBA — S. B. BISWANGER — 01/02/13 — REGISTERED PROFESSIONAL ENGINEER

CONSULTANT DRAWING NO. 4113 0265 259 02

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

WILKES RESERVOIR
PHASE II CONSTRUCTION
STRUCTURAL WORKS

ROOF PANEL REPAIR & REPLACEMENT DETAILS

CITY DRAWING NUMBER
SHEET 4 OF 5
WIL-64

Job #RE 10318