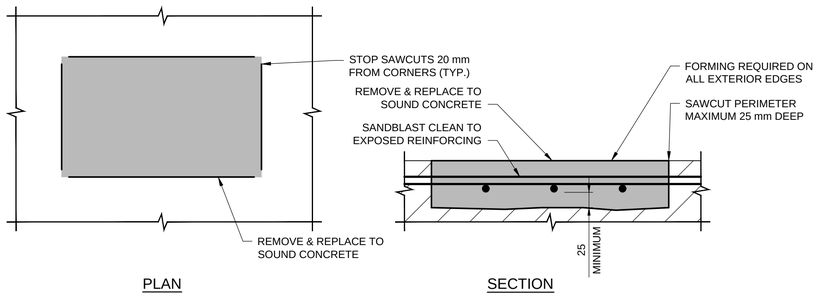
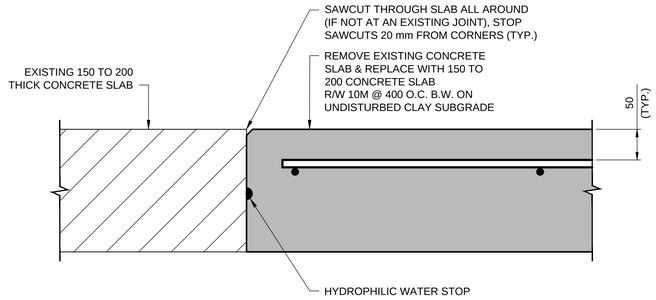


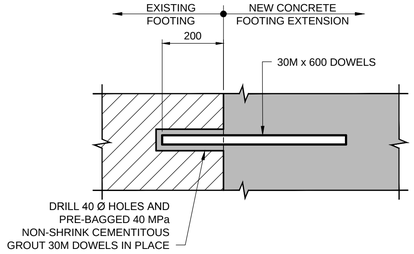
1 / - DETAIL 1:5

TYPICAL CONCRETE REPAIRS OF HORIZONTAL AND VERTICAL FACE AT PILE CAPS



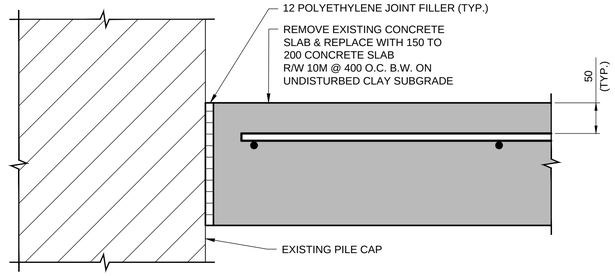
2 / - DETAIL 1:5

TYPICAL CONCRETE SLAB REPLACEMENT AT CONCRETE SLAB PANELS



3 / 12 DETAIL 1:10

FOUNDATION FOOTING STABILIZATION DOWELS



4 / - DETAIL 1:5

TYPICAL CONCRETE SLAB REPLACEMENT AT PILE CAP

GENERAL REPAIR NOTES:

1. THE EXISTING DETAILS AND DIMENSIONS SHOWN ON ALL DRAWINGS ARE TAKEN FROM ORIGINAL CONTRACT DOCUMENTS AT TIME OF CONSTRUCTION. ACTUAL CONDITIONS MAY VARY. CONTRACTOR TO VERIFY EXISTING CONDITIONS BEFORE COMMENCING WITH THE WORK.
2. CONCRETE REPAIRS TO BE SAW CUT 25 mm AND REMOVED. WHERE APPLICABLE, CARE MUST BE TAKEN TO NOT DAMAGE EXISTING EMBEDDED PLATES, ANCHORS, PIPES AND REINFORCING.
3. CONCRETE SUBSTRATE SHALL BE CLEAN AND FREE OF ALL LOOSE AND LATENT MATERIAL PRIOR TO POURING NEW CONCRETE.

PILE CAP REPAIRS - CONSTRUCTION PROCEDURE NOTES:

1. THE LOCATION, TOTAL NUMBER AND FOOTPRINT SIZE OF ALL PILE CAP REPAIRS ARE SHOWN ON THE DRAWINGS. THE PILE CAP SPALL SHALL BE REPAIRED USING RAPID-SETTING REPAIR MORTAR MIXED AND APPLIED ACCORDING TO THE MANUFACTURER'S SPECIFICATION.
2. SAWCUT 25 mm DEEP RECTANGULAR VERTICAL CUT THAT WILL ENCOMPASS THE SPALLED AREA. REMOVE DETERIORATED AND SOUND CONCRETE TO MINIMUM DEPTH OF 25 mm BELOW THE BOTTOM REINFORCING OF THE TOP MAT.
3. THE CONCRETE SURFACE SHALL BE MECHANICALLY ABRAIDED TO ACHIEVE A SURFACE PROFILE EQUAL TO SCP 5-7. SOAK THE REPAIR AREA WITH POTABLE WATER TO ACHIEVE A SATURATED-SURFACE DRY (SSD) CONDITION. THE SSD SURFACE MUST BE PRIMED IF REQUIRED BY MORTAR MANUFACTURER. EXPOSED REINFORCING STEEL SHALL BE THOROUGHLY CLEANED BY WIRE BRUSH TO REMOVE ALL LOOSE CONCRETE AND RUST PARTICLES.
4. FORM THE SIDES WHERE REQUIRED AND FILL THE PATCH AREA WITH RAPID-SETTING REPAIR MORTAR. THE REPAIR MORTAR SHALL BE EXTENDED WITH CLEAN SSD 9.5 mm PEA GRAVEL AND MIXED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. CURING SHALL BE COMPLETED WITH AN NSF 61 CURING COMPOUND OR WET BURLAP.

SUB-FLOOR SOIL MODIFICATION FOR LEAKAGE CONTROL - CONSTRUCTION PROCEDURES:

1. THE LOCATION AND AREAS WHERE THIS WORK IS TO BE UNDERTAKEN IS SHOWN ON THE CONTRACT DRAWINGS. ADDITIONAL AREAS WHERE THIS MAY BE REQUIRED MAY BE DESIGNATED BY THE CONTRACT ADMINISTRATOR DURING THIS PROJECT.
2. FLOOR SLAB DEMOLITION AND REMOVAL SHALL PROCEED BY JACK HAMMER OR HYDRAULIC DEMOLITION METHODS TO PERMIT MANUAL REMOVAL OF THE CONCRETE RUBBLE AND IN SUCH A MANNER TO MINIMIZE DISTURBANCE OF THE SUBGRADE. AT NO TIMES SHALL HEAVY EQUIPMENT OPERATE IN THE SLAB AREA DESIGNATED FOR REMOVAL AND REPLACEMENT.
3. AFTER REMOVAL OF THE AFFECTED FLOOR SLAB AND INSPECTION OF SUBSURFACE LEAKAGE PATTERNS BY THE CONTRACT ADMINISTRATOR, A PUMPING OPERATION SHALL BE INTRODUCED AT THE NEAREST EXTERIOR WEEPING TILE MANHOLE THAT IS UPSTREAM OF THE WORK SITE. FOR THE WEST CELL THIS IS LOCATED AT THE EXTERIOR NORTHWEST CORNER AND THE EAST CELL IT IS AT THE EXTERIOR NORTH EAST CORNER OF THE RESERVOIR FOOTPRINT. PUMPING OPERATIONS SHALL BE SUFFICIENT (ESTIMATED AT ± 100 gal PER MINUTE) TO EFFECTIVELY CUT OFF WATER FLOW IN THE EXTERIOR WEEPING TILE NEAR THE WORK SITE.
4. THE CONTRACTOR WILL BE INSTRUCTED WHERE TO INJECT THE SPECIFIED GEL INJECTION MATERIAL. ONLY QUALIFIED PERSONNEL WITH EXPERIENCE IN THE USE OF THIS PRODUCT SHALL BE PERMITTED TO UNDERTAKE THIS WORK. GEL MIXING AND INJECTION SHALL PROCEED ACCORDING TO THE MANUFACTURER'S SPECIFICATION FROM A DEPTH OF UP TO 3 m AND PROCEED UPWARDS TO SEAL OFF THE OBSERVED LEAKAGE PATTERN. CARE SHALL BE TAKEN NOT TO DAMAGE ANY SUB-FLOOR PIPING DURING THIS OPERATION. WHEN IT APPEARS AS IF THE LEAKAGE SITE IS SUFFICIENTLY GEL INJECTED THE EXTERIOR PUMPING OPERATIONS SHALL BE STOPPED SUCH THAT FLOW IN THE EXTERIOR WEEPING TILE RESUMES AND THE SUB-GRADE CHECKED FOR ONGOING WATER INFILTRATION. IF MORE GEL INJECTION IS DEEMED NECESSARY THE GEL INJECTION PROCESS SHALL BE REPEATED.
5. AFTER THE CONTRACT ADMINISTRATOR HAS ACCEPTED THE LEAKAGE REDUCTION LEVEL THE SUBGRADE SHALL BE GRADED, COMPACTED AND COVERED WITH A LAYER OF 10 mil POLYETHYLENE IN PREPARATION FOR THE REPLACEMENT OF THE CONCRETE SLAB. THE CONTRACT ADMINISTRATOR SHALL PROVIDE LOCATION OF SLAB CONTRACTION JOINTS.

METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

APEGM
Certificate of Authorization
Dillon Consulting Limited (MB)
No. 1789 Date: 2015-11-20

LOCATION APPROVED
UNDERGROUND STRUCTURES
N/A
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.

B.M.
ELEV.
CONSTRUCTION COMPLETION DATE:

NO.	REVISIONS	DATE	BY
1	ISSUED FOR TENDER	2015 11 20	SSR

CHECKED BY: DRA
APPROVED BY: SSR
DESIGNED BY: FAK
DRAWN BY: TLK
SCALE: HORIZONTAL AS NOTED, VERTICAL
DATE: 2015 11 20
PLOT DATE: 2015 11 18

DILLON CONSULTING

RELEASED FOR CONSTRUCTION
DATE

ENGINEER'S SEAL

Winnipeg

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
ENGINEERING DIVISION

WILKES RESERVOIR NORTH CELL REHABILITATION
CONCRETE FLOOR REPLACEMENT
DETAILS

CONSULTANT DRAWING NUMBER: 14-1411-S-106
SHEET 14 OF 47
CITY DRAWING NUMBER: 1-0650R-S0006-001
BID OPPORTUNITY: 930-2015
FILE PATH: P:\20154593\00_Kemp_Wilkes\Working_Dwgs\300_Structural\