

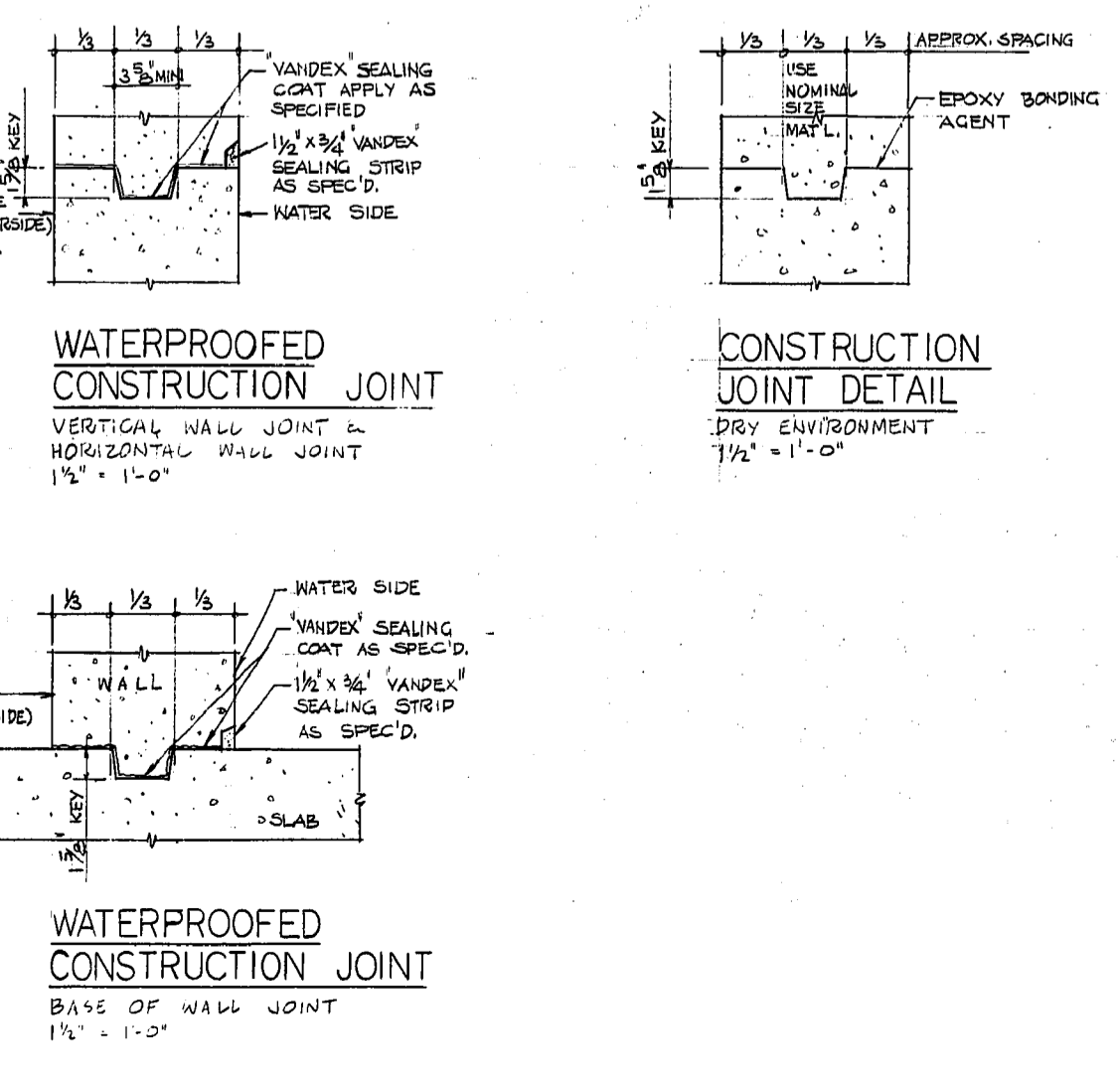
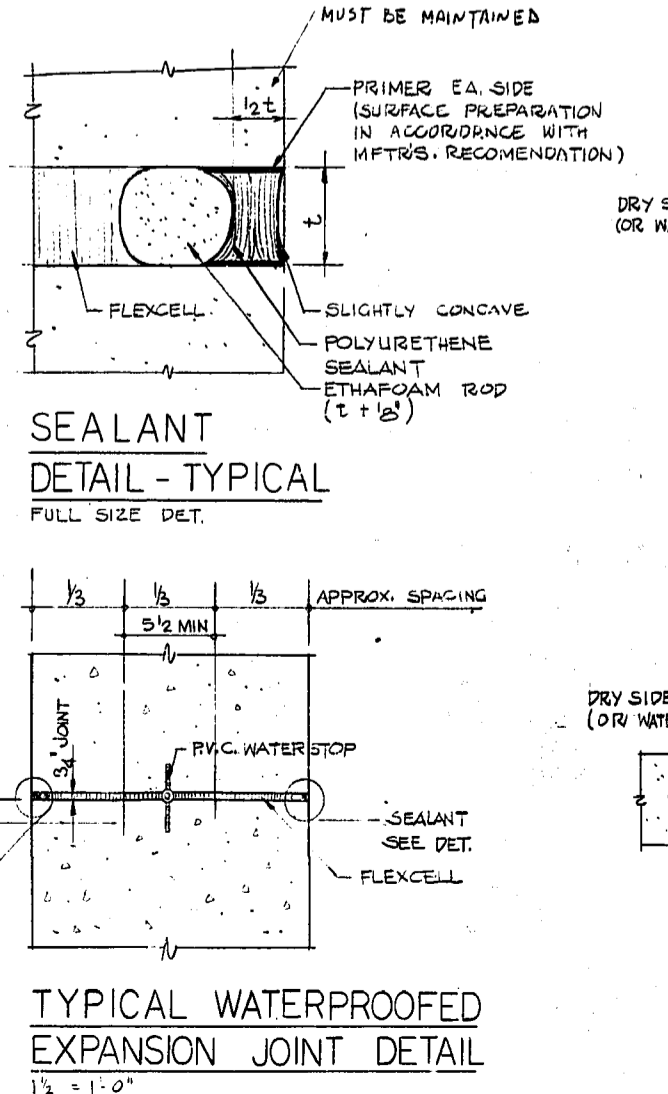
NOTES

CLEAN PILE SURFACE AND DAMPEN THOROUGHLY PRIOR TO CONCRETING

BACKFILL - COMPACT AND FILL AROUND EXTENSION TO 95% MOD. PROCTOR CONCRETE - MIN. STRENGTH AT 28 DAYS - 5000 PSI CEMENT - SULPHATE RESISTING MAX. AGGREGATE SIZE = 1/2"

REINFORCING - MIN. YIELD STRENGTH = 40 KSI (CSA 630.1) CURING - AS SPECIFIED

WHERE PILE OCCURS BELOW A SINGLE PILE CAP, EXTEND EXTENSION TO TOP OF PILE CAP ELEVATION AND DELETE CAP UNLESS OTHERWISE DIRECTED



STRUCTURAL STEEL & STEEL JOISTS

General: All material and workmanship shall conform to CSA S16 and as specified in Sections 5A & 5D.

Material: Structural steel shall conform to the following specifications:
 Rolled sections, plates & bars CSA G40.12
 H. S. S. Bolts ASTM A325
 Anchor bolts ASTM A307
 Hollow structural section CSA G40.16

Connections: Bolted friction type connections & shop welded connections.
 Welding: Welding shall be performed only by CWB approved welders in accordance with CSA W59, W55.2, & CSA S16.

Primer: One shop coat plus field touch-up.

Erection: Provide adequate temporary bracing to maintain stability of structure until permanent bracing and other systems are in place.

PRECAST PRESTRESSED CONCRETE

General: All fabrication, handling and erection shall conform to CSA A135, CSA A23.1 and as specified in Section 2B.

Concrete: Compressive strength at distress - 3500 psi unless noted otherwise.
 Compressive strength in 28 days - 5000 psi.
 Cement - Normal Portland cement.

Prestressing Strand: Uncoated seven wire stress relieved strand, fy = 250,000 or 270,000 psi. Cover to be 2" min.

Flexural tension in concrete at working loads will not be permitted.

Metal inserts and splice plates and bars shall be hot dipped galvanized (2 oz. per sq. ft.). Touch-up for all scratches, welds and areas adjacent to welds shall be an approved zinc-rich paint.

Field cut holes shall be approved by the Engineer before any cutting is performed.

Unightly spalls or chips must be repaired.

GENERAL NOTES FOR ALL BUILDINGS

These notes are stated here to briefly describe the construction requirements and to specify some requirements not covered in the Specifications. They do not replace the Specifications, which must be consulted constantly to control all construction.

SOILS DATA

For soils data, see reports prepared by Ripley, Klehn & Leonoff International Ltd.
 Report #1. Job No. W-580 Report on Subsoil Investigation, March 8/71
 Report #2. Job No. W-619 Report on Installation of Test Caissons, March 24/71 (N.B. Test caissons referred to here are 2-30" dia. holes drilled to limestone)
 Report #3. Job No. W-699 Report on Solution to Problems in Connection with Control of Ground Water & Excavations, Sept. 28/71.

Average soils profile (except from Report #3, Material Depth
 Top soil 0'-0" to 1'-0"
 Mottled grey-brown clay 1'-0" to 25'-0"
 Grey clay 25'-0" to 50'-0"
 Interlayered till-like, till, sands and gravel 50'-0" to 70'-0"
 Broken limestone with sand and gravel 70'-0" to 73'-0"
 Sound limestone Below 73'-0"

PRECAST CONCRETE PILES

General: All fabrication, handling and installation shall conform to CSA A135, CSA A23.1 and as specified in Section 2B.

Concrete: Compressive strength at distress - 3500 psi
 Compressive strength at driving - 5000 psi
 Compressive strength in 28 days - 5000 psi
 Cement - Sulphate resisting cement (Type 5)

Prestressing Strand: Uncoated seven wire stress relieved strand.

Initial Stressing: 0.7 A_{ps}

Tolerances: Pile alignment shall not vary more than 1/4" in 10'-0" (max. 1")
 Pile cross-section shall not vary suddenly by more than 1/4" or gradually more than 1/2";
 Ends of piles shall be cast perfectly square.
 Piles with bevelled ends greater than 1 degree from the pile axis will be cause for rejection.

Handling: Piles shall be properly stored to prevent damage or breakage.
 Piles shall be lifted at lifting points only.

Driving: Driving shall be performed and driving records kept as specified.
 All piles shall be driven to refusal as specified and as determined by test loadings.
 Assumed Pile Refusal - Elevation 705'0".

CAST-IN-PLACE CONCRETE

Mixing, handling, placing, formwork, etc., shall conform to CSA A23.1 and as specified in Section 3A.

General: For special requirements for concrete for water retaining structures, see the specifications.
 Compressive Strength: 4000 psi in 28 days unless noted otherwise.
 Cement: Sulphate resisting cement for all below grade construction in contact with sewage and/or soil.
 Normal Portland cement for all other concrete construction.
 Do not use different cement mixtures in the same element, for example, wall, beam, slab, etc.

Aggregate Size: See Specifications.
 Air-Entrainment: See Specifications for requirements re water retaining structures and re restrictions for good slab finishing.
 Reinforcing: Deformed billet steel bars (fy = 60,000 psi) conforming to CSA G30.10 except as noted below.
 Stirrups, ties and special dowels (permitting tight bends & restraughtening) billet steel bars (fy = 40,000 psi) conforming to CSA G30.1.
 Detailing & placing drawings shall conform to ACI 315 standard practice for detailing reinforced concrete structures.
 Stagger splices in adjacent bars 5'-0".
 Minimum cover.
 Member Exposure
 Water Earth Wet Air Dry Air
 Footings & Fdn. slabs 2" 2" 2" 1 1/2"
 Walls 2" 2" 2" 1 1/2"
 Beams & columns 2" 2" 2" 1 1/2"
 Floor & Roof Slabs 2" 2" 1 1/2" 3/4"
 * With Engineer's approval, 1 1/2" for #5 bars or smaller.

Openings: Provide 2 additional #5 bars each side unless noted otherwise on the drawings. Extend 2'-0" beyond edge of opening.

Finishes: Vertical Surfaces: Normal form finish as specified unless noted otherwise on plans.
 Horizontal Surfaces: Steel trowelled for interior areas (spin trowelled for non-slip surfaces).
 Steel float for tank floor slabs.
 Wood float for exterior slabs.
 Edges: Chamfer 1" all exposed concrete corners.
 Slabs: All floors (except tanks) shall receive a non-metallic hardener unless scheduled otherwise.

Dimensional Tolerances: See Specifications.
 Void Form: Waxmat by "Shearmat".
 Construction Joints: Joints required but not shown must be approved by the Engineer.
 Inserts: Check all other dwgs., mechanical, electrical, etc., for inserts that must be cast into concrete.

MICROFILMED MAR 3 1980

REVISIONS

NO.	DATE	DESCRIPTION

THE METROPOLITAN CORPORATION OF GREATER WINNIPEG WATERWORKS & WASTE DISPOSAL DIVISION
 A. PENMAN - DIRECTOR

W.L. WARDROP & ASSOCIATES LTD. ENGINEERING CONSULTANTS
 WINNIPEG - THUNDER BAY - REGINA - TORONTO

SOUTH END WATER POLLUTION CONTROL CENTRE

STRUCTURAL TYPICAL PILE CAPS, CONCRETE DETAILS & GENERAL NOTES

SCALE: AS SHOWN
 DATE: OCTOBER 1971
 APPROVED (W.L.W.)
 W.L.W. FILE NO. 70012-01-S601
 ENGINEER OF DESIGN
 B. RUZSICKA
 REGISTERED ENGINEER
 S.E.P. - 3

AS - BUILT

DATE	FB. NO.	PAGE
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