Project 2: Paint Bay Jack Pads

GENERAL NOTES

THIS IS A GENERAL SPECIFICATION. SOME STATED ITEMS MY NOT APPLY. 1.0 GENERAL

1.1 DESIGN AND CONSTRUCTION IS TO CONFORM TO THE 2012 ONTARIO BUILDING CODE. REFER ALSO TO TYPICAL DETAILS, NOTES UNDER PLANS & SCHEDULE ON THE STRUCTURAL DRAWINGS, AND TO THE SPECIFICATION. ALL CODES, MANUALS, STANDARDS AND SPECIFICATIONS REFERRED TO SHALL BE THE LATEST EDITIONS INCLUDING ALL REVISIONS AND ADDENDA. ALL DIMENSIONS, AND DETAILS OTHER THAN PURELY STRUCTURAL DIMENSIONS AND DETAILS SHOWN ON THE STRUCTURAL DRAWINGS MUST BE CHECKED AGAINST THE ARCHITECTURAL DRAWINGS AND ANY INCONSISTENCIES REPORTED TO THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE WORK. STRUCTURAL DRAWINGS MUST NOT BE SCALED.

1.2 REFER TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATIONS AND SIZES OF OPENINGS, TRENCHES, PITS, SUMPS, EQUIPMENT, SLEEVES, DEPRESSIONS, GROOVES AND CHAMFERS NOT INDICATED ON THE STRUCTURAL DRAWINGS. UNLESS SPECIFICALLY NOTED OTHERWISE, THE ABOVE ITEMS WHERE SHOWN ON THE STRUCTURAL DRAWINGS ARE INDICATED ONLY APPROXIMATELY AS TO SIZE AND LOCATION.

1.3 UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS, NO PROVISIONS HAS BEEN MADE IN THE DESIGN FOR CONDITIONS OCCURRING DURING CONSTRUCTION. THE CONTRACTOR IS TO PROVIDE ALL NECESSARY BRACINGS AND SHORING REQUIRED FOR STRESSES AND INSTABILITY OCCURRING FROM ANY CAUSE DURING CONSTRUCTION. THE CONTRACTOR SHALL ACCEPT FULL RESPONSIBILITY FOR ALL SUCH MEASURES. IT SHALL ALSO BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL NECESSARY BRACINGS, SHORINGS, SHEET PILING OR OTHER TEMPORARY SUPPORTS TO SAFEGUARD ALL EXISTING OR ADJACENT STRUCTURES AFFECTED BY THIS WORK.

1.4 ALL LOADS SHOWN ON THESE DRAWINGS ARE FACTORED LOADS UNLESS OTHERWISE NOTED.

2.0 SHOP DRAWINGS, PLACING DRAWINGS & BAR LISTS: -2.1 FOR ALL STRUCTURAL COMPONENTS SHOWN ON THE STRUCTURAL DRAWINGS, SUBMIT COPIES OF SHOP DRAWINGS , FOR REVIEW BY THE STRUCTURAL CONSULTANT. SHOP DRAWINGS ARE REQUIRED FOR THE FOLLOWING ITEMS AND REQUIRE AN ENGINEERING SEAL OF AN ENGINEER LICENSED IN ONTARIO & RESPONSIBLE FOR THE WORK. ALL STRUCTURAL STEEL, OWSJ, PRE-ENGINEERED

WOOD TRUSS, HEAVY WOOD TIMBER CONNECTIONS, CONCRETE PRECAST CORE SLAB, REBAR, METAL ROOF & FLOOR DECK, PRE-ENGINEERED BUILD FRAME. SHOP DRAWINGS TO SHOW COMPLETE INFORMATION FOR THE FABRICATION AND ERECTION OF THE STRUCTURAL COMPONENTS.

2.2 REVIEW BY THE STRUCTURAL CONSULTANT SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR SEEING THAT THE WORK IS COMPLETE, ACCURATE AND IN CONFORMITY WITH THE STRUCTURAL DRAWINGS AND SPECIFICATIONS. 3.0 INSPECTION AND TESTING: - TESTING ITEMS MAY BE DELETED WITH ENGINEER PERMISSION 3.1 A SOILS CONSULTANT AND AN INDEPENDENT INSPECTION AND TESTING COMPANY

ARE TO BE ENGAGED TO CARRY OUT THE FOLLOWING SERVICES: -.1 BEARING SOIL - REFER TO NOTES ON STRUCTURAL DRAWINGS AND ALSO

TO THE SOIL REPORT. .2 FILL UNDER SLABS-ON-GRADE - CONFIRM THAT FILL MATERIAL USED IS SATISFACTORY AND THAT THE REQUIRED DEGREE OF COMPACTION HAS BEEN

3 CAST-IN-PLACE & PRECAST CONCRETE - ROUTINE INSPECTION OF MATERIALS, INCLUDING SLUMP CYLINDER AND AIR ENTRAINMENT TESTS & REINFORCING ROD TESTS WHEN REQUIRED AS DIRECTED IN ACCORDANCE WITH CAN/CSA-A23.2-M.

.4 THE PROJECT SUPERINTENDENT IS TO ADVISE THE STRUCTURAL CONSULTANT A MINIMUM OF 24 HOURS IN ADVANCE OF A CONCRETE POURS FOR A REVIEW OF PREPARATIONS.

.5 STRUCTURAL STEEL AND OWSJ - ROUTINE SHOP AND FIELD INSPECTION SHALL BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF CAN/CSA-16.1-M .6 MASONRY - WHEN REQUIRED OR DIRECTED, CONCRETE BLOCKS SHALL BE TESTED IN ACCORDANCE WITH CAN3-A165-M SERIES; BRICKS IN ACCORDANCE WITH CSA CAN3-A82M; AND MORTAR AND/OR GROUT IN ACCORDANCE WITH CSA A179M.

3.2 ALL INSPECTION AND TESTING SERVICES ARE TO BE PERFORMED BY COMPANIES CERTIFIED BY THE CANADIAN STANDARDS ASSOCIATION AND WELDING, INSPECTORS ARE TO BE CERTIFIED BY THE CANADIAN BUREAU.

4.0 FOUNDATIONS

4.0 REFER TO NOTES UNDER FOUNDATION PLANS. ALL EXTERIOR FOOTINGS OR OTHER FOOTINGS EXPOSED TO FREEZING IN THE FINISHED BUILDING SHALL BE FOUNDED AT A MINIMUM1700mm (5'-6") BELOW FINISHED GRADE, UNLESS OTHERWISE NOTED. ON THE THE DRAWINGS FOOTINGS EXPOSED TO FROST ACTION DURING CONSTRUCTING SHALL BE PROTECTED BY A MINIMUM OF 1200mm (4'-0") OF EARTH OR IT'S EQUIVALENT SUFFICIENT TO PREVENT FREEZING.

4.2 THE LINE OF SLOPE BETWEEN ADJACENT EXCAVATIONS FOR FOOTINGS OR ALONG STEPPED FOOTINGS SHALL NOT EXCEED A RISE OF 7 IN A RUN OF 10, MAXIMUM STEP APPROX. 600mm (2'-0").

4.3 CAP DEPTHS AND FOOTING ELEVATIONS SHOWN ON THE STRUCTURAL DRAWINGS ARE BASED UPON INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THE STRUCTURAL DRAWINGS.

4.4 IF ACTUAL JOB SITE OR SOIL CONDITIONS VARY FROM THOSE STATED IN THE GEOTECHNICAL REPORT BY ENGLOBE OR SHOWN BY STRUCTURAL CONSULTANT IN ITS DRAWINGS. WRITTEN DIRECTIONS MUST BE OBTAINED FROM THE STRUCTURAL CONSULTANT BEFORE PROCEEDING WITH THE WORK.

4.5 KEEP EXCAVATIONS CONTINUOUSLY DRY BEFORE CONCRETE IS PLACED. IF THE SOIL IS SOFTENED BY WATER, THE EXCAVATION SHALL EXTENDED BELOW THE SOFTENED MATERIAL AND THE BOTTOM OF THE FOOTINGS LOWERED TO SUIT. 5.0 BACKFILLING AND COMPACTION: -

5.1 SLABS-ON-GRADE AND ALL STRUCTURAL ELEMENTS FRAMING INTO WALLS WHICH RETAIN EARTH MUST BE IN BEFORE BACKFILLING.

BACKFILL & COMPACT EACH SIDE OF WALL SIMULTANEOUSLY. 5.2 AT FOUNDATION WALLS WITH GRADE BOTH SIDES, UNLESS ADEQUATELY SHORED, THE SUB-GRADE. (WHERE SUB-GRADE CONSISTS OF COMPACTED FILL, REFER TO SPECIFIC NOTES ON THE DRAWINGS).

5.3 UNDER SLABS-ON-GRADE, REMOVE SOFT SPOTS, ORGANIC AND FOREIGN MATTER IN 5.4 BACKFILL UNDER SLAB-ON-GRADE, IN FOOTING EXCAVATIONS AND IN TRENCHES ONLY WITH APPROVED MATERIAL. UNLESS SPECIFICALLY NOTED OTHERWISE, BACKFILLING SHALL BE CARRIED OUT IN MAXIMUM OF 200mm (8") THICK LIFTS OF LOOSE FILL EACH COMPACTED TO A MINIMUM OF 98% STANDARD PROCTOR

MAXIMUM DRY DENSITY. 5.5 UNLESS OTHERWISE NOTED, PROVIDE IMMEDIATELY UNDER SLABS-ON-GRADE A MINIMUM OF 150mm (8") OF COMPACTED GRANULAR "A" MATERIAL. COMPACTION TO ACHIEVE A MINIMUM OF 100% STANDARD PROCTOR MAXIMUM DRY DENSITY.

CAST-IN-PLACE CONCRETE NOTES

1.0 GENERAL

1.1 PROVIDE ALL LABOUR MATERIAL, TOOLS AND EQUIPMENT REQUIRED TO CARRY OUT THE WORK.

1.2 REFER ALSO TO GENERAL NOTES, NOTES UNDER PLANS AND SCHEDULES, TYPICAL DETAILS AND SPECIFICATION.

2.0 PRODUCTS

2.1 PORTLAND CEMENT, WATER AND AGGREGATES SHALL CONFORM TO CSA STANDARD A23.1.

2.2 PROVIDE AN APPROVED WATER REDUCING ADDITIVE IN ALL CONCRETE. PROVIDE AN APPROVED AIR ENTRAINING ADDITIVE IN ALL CONCRETE WHICH WILL BE EXPOSED TO A FREEZE/THAW CYCLE AND/OR THE ACTION OF DE-ICING SALT. ADMIXTURES SHALL CONFORM TO CSA STANDARD

2.3 FORM WORK SHALL CONFORM TO CSA STANDARD A23.1, CSA STANDARD S269.3 AND FALSE WORK SHALL CONFORM TO CSA S269.1.

2.4 IF SO INSTRUCTED, THE DESIGNS FOR THE FORM WORK SHALL BE SUBMITTED FOR REVIEW BEFORE CONSTRUCTION. FORM WORK DRAWINGS AND DESIGN SHALL BEAR THE STAMP OF A LICENSED PROFESSIONAL ENGINEER.

2.5 UNLESS OTHERWISE NOTED PROVIDE SLAB & BEAM FORMS WITH AN UPWARD CAMBER OF 2mm/1000mm (1/4" PER 10'-0") OF SPAN, AND UPLIFT ENDS OF CANTILEVERED SLAB & BEAM FORMS 3mm/1000mm (1/4" PER 8'-0") OF CANTILEVER LENGTH.

2.6 PROVIDE STANDARD ADJUSTABLE MASONRY ANCHOR SLOTS FOR ALL MASONRY FACING OR ABUTTING CONCRETE FACES.

2.7 PROVIDE AND/OR INSTALL STANDARD ADJUSTABLE INSERTS & ALL OTHER CAST-IN INSERTS AS REQUIRED BY THE ARCHITECTURAL, STRUCTURAL, MECHANICAL & ELECTRICAL DRAWINGS & SPECIFICATION.

2.8 REINFORCING STEEL UNLESS SPECIFICALLY NOTED, SHALL BE DEFORMED BARS CONFORMING TO CAN/CSA-G30.18-M GRADE 400 (58000 PSI).

2.9 WELDED WIRE FABRIC TO CONFORM TO CSA G30.5-M.

2.10 REINFORCING SHALL BE DETAILED, BENT, PLACED AND SUPPORTED TO CONFORM TO ACI STANDARD 315 AND THE MANUAL OF STANDARD PRACTICE PUBLISHED BY THE REINFORCING STEEL INSTITUTE OF CANADA.

2.11 DRY-PACK GROUT TO BE 1 PART PORTLAND CEMENT TO 11/2 PARTS SAND TO 2 PARTS OF 8mm PEA GRAVEL WITH ONLY SUFFICIENT WATER TO DAMPEN MIXTURE. COMPRESSIVE STRENGTH 50MPa AT 28 DAYS.

2.12 NON-SHRINK GROUT TO BE AN APPROVED PRE-MIXED PROPRIETARY

2.13 PROVIDE APPROVED EXTRUDED PVC WATER STOPS OF SIZE & STYLES INDICATED, WITH PRE-WELDED CORNERS & INTERSECTIONS. SEE ALSO TYPICAL DETAILS.

2.14 CURING AND SEALING COMPOUNDS WHERE APPROVED FOR USE TO CONFORM TO ASTM STANDARD C309. GENERALLY, ALL CONCRETE SURFACES ARE TO BE SEALED UNLESS NOTED OTHERWISE. COMPOUNDS ARE TO BE COMPATIBLE WITH APPLIED FINISHES.

3.0 EXECUTION

3.1 MINIMUM COMPRESSIVE STRENGTH FOR CONCRETE @ 28 DAYS SHALL BE AS FOLLOWS -25MPa FOR FOOTINGS

-25MPa FOR WALL AND PIERS

-25MPa FLOOR SLAB 3.2 SLUMP AT THE POINT OF DISCHARGE SHALL BE CONSISTENT AT 80mm +/-30mm (3" +/- 11/8") UNLESS NOTED OTHERWISE.

GREATER SLUMPS ARE NOT ACCEPTABLE. 3.3 CONCRETE MIXING, TRANSPORTATION, HANDLING AND PLACING SHALL CONFORM TO CSA STANDARD A23.1.

3.4 CONSTRUCTION JOINTS FOR WALLS ARE BASED UPON VERTICAL JOINTS AT A MAXIMUM SPACING OF 10000mm (30'-0").

3.5 CONSTRUCTION JOINTS FOR WALLS, SLABS, AND BEAMS NOT SHOWN ON THE DRAWINGS SHALL BE APPROVED BY THE STRUCTURAL CONSULTANT BEFORE CONSTRUCTION. GENERALLY JOINTS IN SLABS SHALL BE AT RIGHT ANGLES TO THE SPANS, AT MID-SPAN IF POSSIBLE AND BE CLEAR OF SUPPORTS AND POINT LOADS.

3.6 INSERTS, FRAME-OUTS, SLEEVES, BRACKETS, CONDUITS AND FASTENING DEVICES, SHALL BE INSTALLED AS REQUIRED BY THE DRAWINGS AND SPECIFICATIONS IN A MANNER THAT SHALL NOT IMPAIR THE STRUCTURAL STRENGTH OF THE SYSTEM, BE SO INSTALLED THAT THEY SHALL NOT REQUIRE THE CUTTING, BENDING, OR DISPLACEMENT OF THE REINFORCING OTHER THAN AS SHOWN ON THE TYPICAL DETAILS.

3.7 ELECTRICAL CONDUIT SHALL NOT PASS THROUGH A COLUMN, SHALL NOT BE LARGER IN OUTSIDE DIAMETER THAN 1/3 SLAB THICKNESS OR WALL OR BEAM IN WHICH IT IS EMBEDDED, SHALL NOT BE SPACED CLOSER THAN 3 DIAMETERS ON CENTRE UNLESS APPROVED AND HAVE A MINIMUM CONCRETE COVER OF 25mm (1") AND UNLESS SPECIFICALLY PERMITTED OTHERWISE, SHALL NOT RUN HORIZONTALLY IN A CONCRETE

3.8 OPENINGS AND DRIVEN FASTENERS REQUIRED IN THE CONCRETE AFTER THE CONCRETE IS PLACED SHALL BE APPROVED BY THE STRUCTURAL CONSULTANT BEFORE PROCEEDING.

3.9 FINISHING, REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR REQUIRED FINISH TO EXPOSED CONCRETE. ALL HONEYCOMBING SHALL BE CUT OUT AND FILLED. FLOOR FINISHES SHALL BE AS REQUIRED BY THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS AND SHALL CONFORM TO CSA STANDARD A23.1 (CLASS A CONVENTIONAL SMOOTH CLASSIFICATION).

3.10 TOLERANCES FOR PLACING STRUCTURAL CONCRETE, REINFORCING STEEL, CAST-IN HARDWARE AND FOR FLOOR & ROOF FINISHES SHALL BE AS SPECIFIED IN CSA STANDARD A23.1.

3.11 MINIMUM REINFORCING FOR ANY CONCRETE WALL TO BE AS SHOWN ON TYPICAL DETAIL FOR CONCRETE WALLS.

3.12 MINIMUM REINFORCING FOR ANY SUSPENDED SLAB SHALL BE TEMPERATURE BARS BOTTOM EACH WAY PLUS 10M @ 400 (16") DOWLES 600x600 (2'-0" x 2'-0") TOP AROUND PERIMETER, REFER TO TYPICAL DETAIL OF ONE WAY SLABS.

SCOPE OF WORK

GENERAL CONTRACTOR TO PROVIDE FOR ALL MATERIALS, LABOUR, SUPERVISION, EQUIPMENT/TOOLS, & PERMITS TO MAKE ALL WORK COMPLETE

THE FOLLOWING IS A GENERAL SCOPE OF WORK AND ACTIVITIES REQUIRED TO COMPLETE THE PROJECT. CONTRACTOR TO REVIEW ON SITE DURING THE PRETENDER & PRE-CONSTRUCTION MEETINGS ALL ITEMS AFFECTING THE WORK AND MAKE APPROPRIATE ALLOWANCES

FOR THE COMPLEXITY OF THE PROJECT (INCLUDING BUT NOT LIMITED TO THE FOLLOWING ITEMS);

-SET UP AND CONTROL OF CONSTRUCTION ISLAND(S) AS REQUIRED

-COORDINATION OF STAGING OF WORK WITH ONTO -COORDINATE DAILY ACTIVITIES WITH ONTC

-DEMOLITION AND DISPOSAL OF ANY & ALL ITEMS OFFSITE AS REQ'D AND AS SHOWN ON THE DRAWINGS

-PATCH AND REPAIR ALL ITEMS AFFECTED BY CONSTRUCTION TO ORIGINAL CONDITION AND TO SATISFACTION OF ONTC -PAINT ALL AREAS INDICATED ON DRAWINGS

-CAULK AND SEAL ALL ITEMS AS REQUIRED & INSTRUCTED BY ENGINEER

GENERAL NOTES

1. OBTAIN ALL PERMITS INCLUDING BUILDING AND OCCUPANCY PERMITS AND ARRANGE ALL INSPECTIONS.

2. THE SCOPE OF WORK IS NOT LIMITED TO THIS SET OF DRAWING.

CONTRACTOR TO REPORT ANY DISCREPANCIES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS PRIOR TO STARTING THE WORK.

3. CO-ORDINATE ALL WORK, INCLUDING THE WORK OF ALL SUBTRADES AND SUBCONTRACTORS.

4. AT THE COMPLETION OF ALL WORK ALL TEMPORARY FACILITIES SHALL BE REMOVED AND THE ENTIRE AREA SHALL BE CLEANED & THOROUGHLY RESTORED TO ORIGINAL CONDITIONS

5. CO-ORDINATE INSTALLATION OF EQUIPMENT WITH MANUFACTURERS REQUIREMENTS, INSTRUCTIONS AND THEIR SITE REPRESENTATIVES, WHERE APPLICABLE.

6. ALL WORK SHALL CONFORM TO THE LATEST EDITION OF THE ONTARIO BUILDING CODE AND LOCAL REGULATIONS.

7. COORDINATE ALL WORK WITH ONTO SITE REPRESENTATIVE & OBEY ALL ONTO SITE SAFETY REGULATIONS & PROCEDURES.

10. CONTRACTOR TO PROVIDE PROTECTION OF THE EXISTING FACILITY AND EQUIPMENT IN ACCORDANCE AND AS APPROVED BY ONTC & NORTHSHORE ENGINEERING. ALL ASSOCIATED COSTS FOR PRE AND POST INSPECTIONS AT EACH PHASE OF CONSTRUCTION AND REPORTING WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. THIS IS APPLICABLE TO ANY AREAS AFFECTED BY THE WORK. CONTRACTOR TO PROVIDE PROTECTION PROCEDURE/PLAN ENDORSED BY NORTHSHORE ENGINEERING FOR ONTC'S REVIEW AND APPROVAL INCLUDING DUST CONTROL PLAN DURING CONSTRUCTION AND CLEANING OF BUILDING INTERIOR AFTER COMPLETION OF PROJECT.

11. CONTRACTOR TO REVIEW DESIGNATED SUBSTANCES SURVEY PROVIDED IN THE ONTC CONTRACT DOCUMENTS (DSS). THERE ARE ITEMS LISTED IN THE DSS DOCUMENT THAT ARE AFFECTED BY THE REQUIRED DEMOLITION/CONSTRUCTION. CONTRACTOR TO ALLOW FOR ALL COSTS ASSOCIATED WITH ANY/ALL DSS ITEMS AFFECTED.

INSPECTION SCHEDULE

1.0 NOTIFY ENGINEER 24 HOURS PRIOR TO REQUIRED INSPECTIONS

1.1 INSPECTION REQUIRED AT THE FOLLOWING POINTS DURING CONSTRUCTION THE FOLLOWING IS A MINIMUM REQUIREMENT.

-BEFORE START OF PROJECT (PRE-CONSTRUCTION MEETING) -AFTER COMPLETION OF REMOVALS (PRIOR TO EXCAVATION)

-AFTER EXCAVATION (REVIEW OF EXPOSED AND CLEANED ROCK) -AFTER INSTALLATION OF FORMWORK AND REBAR (PRIOR TO CONC POUR) -AFTER INSTALLATION OF FORMWORK AND REBAR (SLAB)

-AFTER COMPLETION OF WORK

DRAWING INDEX

<u>GENERAL</u>

GENERAL NOTES

STRUCTURAL

S1.0 PARTIAL FLOOR PLAN

S2.0 FOUNDATION SECTIONS S2.1 FOUNDATION SECTIONS

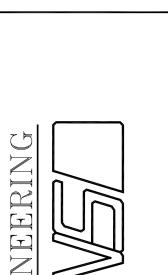
REFERENCE DOCUMENTS/DRAWINGS USED FOR DESIGN

1) K.H.KING. ASSOCIATES LIMITED - SOIL INVESTIGATION REPAIR & MAINTENANCE FACILITIES 1973

2) COLE, SHERMAN & ASSOCIATES LIMITED — CONSOLIDATION OF REPAIR FACILITIES — PAINT SHOP — 1974

ONTC TO PROVIDE CONTRACTOR W/ EXISTING SOILS REPORT AND EXISTING DRAWINGS UPON REQUEST







checked by: TIM T scale: project no: NTS 231398 date plotted: SEPT 05 23

dwg no:

date revised:

50.0

