CONCRETE

GENERAL

1. ALL CONCRETE WORK, INCLUDING MATERIALS, MIXING, PLACING, CURING AND FORMWORK SHALL BE IN ACCORDANCE WITH CSA A23.1.
2. TESTING OF CONCRETE AND CONCRETE MATERIALS SHALL BE IN ACCORDANCE WITH CSA A23.2.
3. FALSEWORK AND FORMWORK SHALL BE IN ACCORDANCE WITH CSA S269.1 (R2019).
4. UNLESS NOTED OTHERWISE, ALL EXPOSED CORNERS SHALL BE FINISHED WITH 20mm CHAMFER.

REINFORCING STEEL

1. REINFORCING STEEL SHALL BE DEFORMED STEEL BARS IN ACCORDANCE WITH CSA G30.18, GRADE 400R.
2. ALL REINFORCING STEEL SHALL BE DETAILED, FABRICATED, PLACED AND SUPPORTED IN ACCORDANCE WITH THE REINFORCING STEEL INSTITUTE OF CANADA MANUAL OF STANDARD PRACTICE AND CSA A23.3, UNLESS NOTED OTHERWISE.
3. UNLESS INDICATED OTHERWISE, REINFORCING TO BE EXTENDED INTO ADJACENT CONCRETE ELEMENTS AND DEVELOPED WITH A STANDARD HOOK OR LAP SPLICE.
4. PROVIDE DOWELS TO MATCH REINFORCING IN ALL PIERS, COLUMNS, WALLS AND CURBS. PROVIDE CLASS 'B' TENSION LAP SPLICE UNLESS NOTED OTHERWISE AND FULLY EMBED. / DEVELOP REINFORCING.
5. REINFORCING SHALL BE EFFECTIVELY CONTINUOUS AT ALL CORNERS AND INTERSECTIONS. HOOK AND SPLICE AS REQUIRED.
6. STANDARD HOOKS SHALL BE USED UNLESS NOTED OTHERWISE.
7. SPLICE REINFORCING AS INDICATED ON STRUCTURAL DRAWINGS OR OTHERWISE APPROVED BY THE STRUCTURAL ENGINEER.

CONCRETE COVER

1. CONCRETE COVER TO REINFORCING BARS SHALL BE AS FOLLOWS OR AS NOTED ON THE DRAWINGS (WHICHEVER IS GREATER):

FOUNDATIONS - CAST AGAINST SOIL:	75 mm
FOUNDATIONS - NOT CAST AGAINST SOIL:	50 mm
WALLS:	40 mm

2. MAINTAIN SPECIFIED CONCRETE COVER AT ALL SLOPES, DEPRESSIONS, CORNERS AND CHANGES IN ELEVATION / THICKNESS.

CONCRETE MIXES

1. UNLESS NOTED OTHERWISE, PROPORTION NORMAL DENSITY CONCRETE IN ACCORDANCE WITH CSA A23.1 TO ACHIEVE THE FOLLOWING PERFORMANCE CHARACTERISTICS:

LOCATION	28-DAY STRENGTH	EXPOSURE CLASS	ENTRAINED AIR CONTENT
FOOTINGS	25 MPa	F-2	-
RETAINING WALLS	25 MPa	F-2	5 - 8%

2. CONCRETE STRENGTHS NOTED ON SPECIFIC PLANS OR SCHEDULES TAKE PRECEDENCE OVER ABOVE VALUES.
3. CONCRETE SHALL BE TYPE GU OR GUb PORTLAND CEMENT UNLESS SPECIFIED OTHERWISE.
4. IF BLENDED PORTLAND CEMENT / SLAG IS USED, SLAG CONTENT SHALL NOT BE MORE THAN 25% OF TOTAL MASS OF CEMENT.
5. USE OF CALCIUM CHLORIDE IS NOT PERMITTED.
6. SUBMIT CONCRETE MIX DESIGNS FOR REVIEW.

DESIGN LOADS

GROUND LEVEL SURCHARGE (LIVE LOAD):	12 kPa
ACTIVE SOIL PRESSURE COEFFICIENT (Ka):	0.33
UNIT WEIGHT OF BACKFILL:	20 kN·m^3

DESIGN BEARING PRESSURES

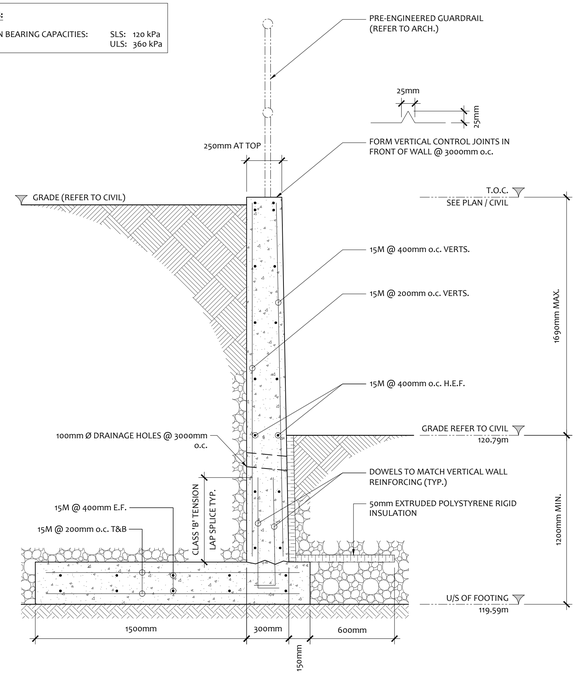
IN ACCORDANCE WITH RECOMMENDATIONS OF GEOTECHNICAL REPORT # 230403 BY KOLAARD ASSOCIATES (TO BE CONFIRMED ON SITE DURING CONSTRUCTION):

SERVICEABILITY LIMIT STATE (SLS):	120 kPa
ULTIMATE LIMIT STATE (ULS):	360 kPa

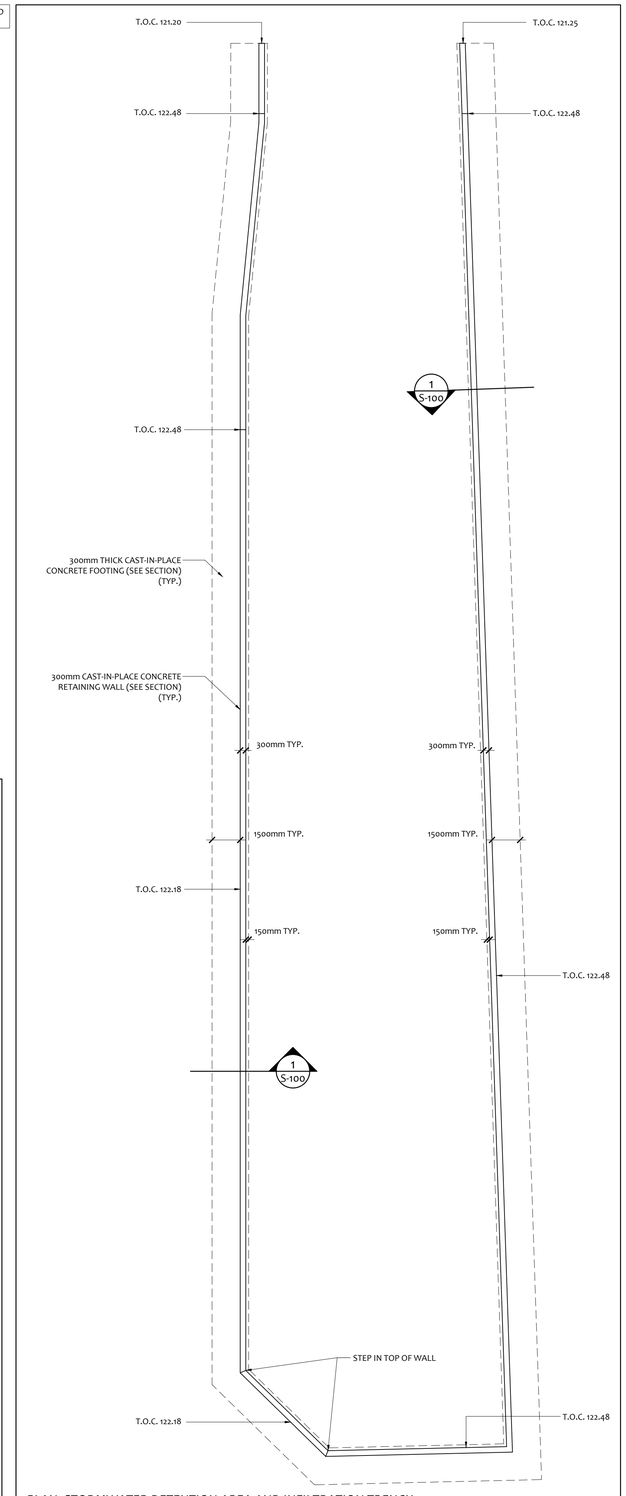
NOTE: TOP OF WALL ELEVATIONS ARE FOR REFERENCE ONLY - DETERMINED AND SPECIFIED BY CIVIL ENGINEER - REFER TO GRADING PLAN.

NOTES:

DESIGN BEARING CAPACITIES: SLS: 120 kPa
ULS: 360 kPa



1 S-100 SECTION: RETAINING WALL
SCALE: 1:20



PLAN: STORMWATER DETENTION AREA AND INFILTRATION TRENCH
SCALE: 1:150

D+M STRUCTURAL ENGINEERING

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#	DATE	DESCRIPTION
1	2024 06 11	ISSUED FOR SITE PLAN

STAMP:

LICENSED PROFESSIONAL ENGINEER
C.L. DAVIES
2024 06 11
PROVINCE OF ONTARIO

NORTH ARROW:

PROJECT NAME AND ADDRESS:

SUNBELT RENTALS INC.
- EQUIPMENT MAINTENANCE FACILITY
151 - 159 WESCAR LANE, CARP ON

DRAWING NAME:

FOUNDATION / GROUND FLOOR PLAN

DESIGNED BY: C. DAVIES

DRAWN BY: J. LABBÉ

START DATE: 2024 05 03

D+M PROJECT #: 23-213

S-100