

GENERAL NOTES

- 1. STRUCTURAL DESIGN BASED ON THE MANITOBA BUILDING CODE 2011 EDITION.
A. IMPORTANCE CATEGORY: NORMAL
B. WIND LOAD: s50 = 0.45 kPa
C. GROUND SNOW LOAD: Sg = 1.5 kPa
D. ASSOCIATED RAIN LOAD: Sr = 0.2 kPa
2. SEISMIC SITE CLASSIFICATION: NOT APPLICABLE
3. DO NOT SCALE DRAWINGS
4. ALL DIMENSIONS ARE TO BE VERIFIED WITH THE SITE CONDITIONS PRIOR TO CONSTRUCTION.
5. THESE STRUCTURAL DRAWINGS SHOW THE COMPLETED STRUCTURE AND DO NOT INDICATE ALL COMPONENTS NECESSARY FOR SAFETY DURING CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SAFETY ON AND AROUND THE JOISTS DURING CONSTRUCTION.

FOUNDATIONS

- 1. A COPY OF THE GEOTECHNICAL REPORT COMMISSIONED BY THE CITY OF WINNIPEG IS AVAILABLE FOR REVIEW FROM THE CITY OF WINNIPEG WEBSITE.
2. NOTWITHSTANDING THE INFORMATION PROVIDED IN THE GEOTECHNICAL REPORT, THE FOUNDATION CONTRACTOR AND CONTRACTOR SHALL SATISFY THEMSELVES AS TO THE PREVAILING CONDITIONS AT THE SITE AS NO EXTRAS SHALL BE GRANTED SHOULD CONDITIONS DIFFER FROM THOSE INDICATED.
3. PRECAST CONCRETE PILES TO BE DRIVEN TO CAPACITIES AS SHOWN BELOW:
ALLOWABLE CAPACITY FACTORED CAPACITY
300 mm HEX - 445 kN 300 mm HEX - 660 kN
350 mm HEX - 652 kN 350 mm HEX - 938 kN
400 mm HEX - 800 kN 400 mm HEX - 1200 kN
NOTE: THE FACTORED CAPACITY IS TO BE USED ONLY IF DYNAMIC LOAD TESTING WITH CAPWAP ANALYSIS IS PERFORMED DURING FOUNDATION INSTALLATION. IF THIS IS NOT PERFORMED FOUNDATION RE-DESIGN WILL BE REQUIRED.

- 4. DRIVEN PILING SHALL BE COMPLETED BEFORE ANY FRICTION PILING OPERATIONS COMMENCE.
CAST-IN-PLACE CONCRETE

CONCRETE

- 1. ALL CONCRETE IS TO BE MANUFACTURED AND INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF CSA-A23.1-14 "CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION" AND CSA-A23.2-14 "METHODS OF TEST FOR CONCRETE".
2. PROVIDE CERTIFICATION THAT MIX PROPORTIONS SELECTED WILL PRODUCE CONCRETE OF QUALITY, YIELD AND STRENGTH AS SPECIFIED IN CONCRETE MIXES, AND WILL COMPLY WITH CSA-A23.1. CERTIFICATION LETTERS TO BE SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF MANITOBA.
3. PROVIDE CERTIFICATION THAT PLANT, EQUIPMENT, AND MATERIALS TO BE USED IN CONCRETE COMPLY WITH REQUIREMENTS OF CSA-A23.1. CERTIFICATION LETTERS TO BE SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF MANITOBA.
4. CONCRETE PROPERTIES SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE ON THE DRAWINGS.

- PRECAST DRIVEN PILES: 35 MPa MIN AT 28 DAYS
CEMENT TYPE: HS
SLUMP AND AGGREGATES TO MANUFACTURERS REQUIREMENTS
PILE CAPS: 35 MPa MIN AT 56 DAYS
CLASS OF EXPOSURE: F-1
ENTRAINED AIR/CATEGORY: 2 (4% TO 7%)
CEMENT TYPE: HS
AGGREGATE MAX. 20 mm
CURING TYPE: TYPE 2 - ADDITIONAL

- EXTERIOR WALLS AND GRADE BEAMS: 25 MPa MIN AT 28 DAYS
CLASS OF EXPOSURE: F-2
ENTRAINED AIR/CATEGORY: 2 (4% TO 7%)
AGGREGATE MAX. 20 mm
CURING TYPE: TYPE 2 - ADDITIONAL
INTERIOR WALLS AND BEAMS: 25 MPa MIN AT 28 DAYS
CLASS OF EXPOSURE: N
ENTRAINED AIR/CATEGORY: NONE (LESS THAN 3%)
AGGREGATE MAX. 20 mm
CURING TYPE: TYPE 2 - ADDITIONAL

- INTERIOR SLABS ON-GRADE: 32 MPa MIN AT 28 DAYS
CLASS OF EXPOSURE: C-4
ENTRAINED AIR/CATEGORY: NONE (LESS THAN 3%)
AGGREGATE MAX. 20 mm
CURING TYPE: TYPE 2 - ADDITIONAL
INTERIOR STRUCTURAL SLABS: 25 MPa MIN AT 28 DAYS
CLASS OF EXPOSURE: N
ENTRAINED AIR/CATEGORY: NONE (LESS THAN 3%)
AGGREGATE MAX. 20 mm
CURING TYPE: TYPE 2 - ADDITIONAL

- EXTERIOR SLABS ON GRADE: 32 MPa MIN AT 28 DAYS
CLASS OF EXPOSURE: C2
ENTRAINED AIR/CATEGORY: 1 (5% - 8%)
AGGREGATE MAX. 20 mm
CURING TYPE: TYPE 2 - ADDITIONAL
MASONRY WALL: 20 MPa MIN AT 28 DAYS
CLASS OF EXPOSURE: N
ENTRAINED AIR/CATEGORY: 2
AIR CONTENT: 4% TO 7%
SLUMP: 200 mm +/- 40 mm

- WOOD
1. ALL TRELLIS JOISTS AND BEAMS TO BE DOUGLAS FIR L ALL WOOD TO BE KILN DRIED AND PRESERVATIVE TREATED FOR EXTERIOR EXPOSURE.
2. TRUSSES TO BE SEPARATELY BRACED UNTIL SHEATHING IS INSTALLED AND JOISTS AND DIAGONAL BRACES ARE INSTALLED.
3. NAILING PATTERNS AND NAIL LENGTHS SHALL CONFORM TO TABLE 9.23.3.4 AND 9.23.3.5 OF THE NATIONAL BUILDING CODE RESIDENTIAL STANDARDS.
4. PLYWOOD SHEATHING SHALL BE EXTERIOR DOUGLAS FIR PLYWOOD CONFORMING TO CSA 0121-08(R2013) "DOUGLAS FIR PLYWOOD" UNLESS OTHERWISE NOTED.
5. ALL WOOD TRUSSES ARE TO BE DESIGNED IN ACCORDANCE WITH:
A. CSA 086-14 "ENGINEERING DESIGN IN WOOD".
B. THE NATIONAL BUILDING CODE OF CANADA.
C. THE MANITOBA BUILDING CODE, AND FOR ANY ANTICIPATED SNOW BUILD-UP LOADS.
6. TRUSSES FRAMING INTO BEAMS OR OTHER TRUSSES SHALL BE CONNECTED WITH PROPER METAL FRAMING ACCESSORIES APPROVED BY THE PROJECT ENGINEER.
7. THE TRUSS SUPPLIER IS TO SUBMIT ENGINEERING DRAWINGS BEARING THE SEAL OF AN ENGINEER REGISTERED IN THE PROVINCE OF MANITOBA TO THE PROJECT ENGINEER FOR REVIEW PRIOR TO FABRICATION. ENGINEERING SHOP DRAWINGS SHALL INCLUDE A LAYOUT PLAN SHOWING ALL TRUSSES, PERMANENT WEB AND CHORD BRACING REQUIRED BY TRUSS DESIGN, AND TEMPORARY BRACING. ALL MISCELLANEOUS METAL FRAMING CONNECTORS AND BRACING NOTED ABOVE SHALL BE SPECIFIED BY TRUSS SUPPLIER UNLESS NOTED OTHERWISE ON THE DRAWINGS, AND SUPPLIED AND INSTALLED BY CONTRACTOR.
NOTE: TRUSS SUPPLIER SHALL INCLUDE IN CONTRACT PRICE ALLOWANCE FOR FINAL INSPECTION AND A LETTER SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF MANITOBA CERTIFYING THAT TRUSSES ARE CONSTRUCTED AND ERECTED AS PER TRUSS SUPPLIER'S DESIGN ASSUMPTIONS AND INSTALLATION REQUIREMENTS.
NOTE: IN PREPARATION OF TRUSS DESIGNS, THE WEB ORIENTATIONS, LUMBER GRADE AND MEMBER SIZES EMPLOYED ARE TO MINIMIZE THE REQUIREMENT FOR WEB BRACING.
8. ALL JOISTS OR BEAMS FLUSH FRAMED INTO OTHER BEAMS SHALL BE CONNECTED USING METAL JOIST OR BEAM HANGERS.
9. ALL EXTERIOR TRELLIS METALWORK, SUCH AS HANGERS, BOLTS, NUTS, WASHERS, PLATES AND ANGLES TO BE GALVANIZED.
10. UNFACTORED DESIGN LOADS FOR TRUSSES ARE AS FOLLOWS:
A. TOP CHORD DEAD LOAD 0.30 kN/m
B. TOP CHORD DEAD LOAD 0.15 kN/m PLUS TRUSS SELF-WEIGHT
C. BOTTOM CHORD DEAD LOAD 0.50 kN/m PLUS TRUSS SELF-WEIGHT

- UNLESS INDICATED OTHERWISE THE CONTRACTOR SHALL SPECIFY CONCRETE SLUMP APPROPRIATE WITH PLACEMENT METHODS AND SITE CONDITIONS. THE CONTRACTOR SPECIFIED SLUMP MUST BE SHOWN ON THE CERTIFICATION LETTER AND CONCRETE DELIVERY TICKET.
5. UNLESS NOTED OTHERWISE CONCRETE CURING TO CONFORM TO THE LATEST EDITION OF CSA-A23.1-14 AS FOLLOWS:
A. TYPE 1 - BASIC: 3 DAYS >= 10°C AND FOR A TIME NECESSARY TO ATTAIN 40% OF THE SPECIFIED STRENGTH.
B. TYPE 2 - ADDITIONAL: 7 DAYS >= 10°C AND FOR A TIME NECESSARY TO ATTAIN 70% OF THE SPECIFIED STRENGTH.
C. TYPE 3 - EXTENDED: 7 DAYS WET CURING >= 10°C.

- 6. AIR ENTRAINING ADMIXTURES SHALL CONFORM TO THE REQUIREMENTS OF ASTM C260/C260M-10a "STANDARD SPECIFICATION FOR AIR ENTRAINING ADMIXTURES FOR CONCRETE". SUPERPLASTICIZING ADMIXTURES SHALL CONFORM TO ASTM C494/C494M "STANDARD SPECIFICATION FOR CHEMICAL MIXTURES FOR CONCRETE" OR ASTM C1017/C1017M "STANDARD SPECIFICATION FOR CHEMICAL ADMIXTURES FOR USE IN PRODUCING FLOWING CONCRETE" WHEN FLOWING CONCRETE IS APPLICABLE. AIR ENTRAINING ADMIXTURES TO HAVE A DURABILITY FACTOR GREATER THAN 75, WHEN TESTED TO ASTM STANDARDS C666/C666M PROCEDURE A. SPACING FACTOR FOR ANY AIR ENTRAINING ADMIXTURE MUST BE 0.17mm OR LESS WHEN TESTED IN ACCORDANCE WITH ASTM C457 "STANDARD TEST METHOD FOR MICROSCOPICAL DETERMINATION OF PARAMETERS OF THE AIR-VOID SYSTEM IN HARDENED CONCRETE".
7. CONCRETE TOPPINGS INDICATED AS BONDED SHALL HAVE A TENSILE BOND STRENGTH BETWEEN THE TOPPING AND BASE COURSE CONCRETE OF NOT LESS THAN 0.9 MPa AT 28 DAYS WHEN TESTED IN ACCORDANCE WITH CSA A23.2-68 AT A FREQUENCY OF NOT LESS THAN ONE TEST PER 100 m2 PRIOR TO CONSTRUCTION SUBMIT DOCUMENTATION DEMONSTRATING MINIMUM PERFORMANCE REQUIREMENT WILL BE MET.
8. CONCRETE TO RECEIVE BONDED TOPPING SHALL BE INTENTIONALLY ROUGHENED TO ACHIEVE A SURFACE PROFILE OF R3-RSP-6 OR GREATER.
9. CONCRETE TOPPINGS INDICATED AS BONDED SHALL BE WET CURED FOR A MINIMUM OF 7 DAYS.

REINFORCING STEEL

- 1. ALL REINFORCING STEEL TO BE CSA-G30.18M-09 GRADE 400R DEFORMED BARS EXCEPT COLUMN TIES AND BEAM STIRRUPS WHICH SHALL BE GRADE 400W STEEL. ALL REINFORCING IS TO BE DETAIL IN ACCORDANCE WITH THE LATEST EDITION OF THE REINFORCING STEEL INSTITUTE OF CANADA - MANUAL OF STANDARD PRACTICE, EXCEPT OTHERWISE NOTED.
2. WELDED STEEL WIRE MESH SHALL BE TO ASTM A185/A185M-07, 400 MPa YIELD, FLAT SHEETS ONLY.
3. REINFORCING STEEL COVER IS TO CONFORM TO CAN/CSA A23.3-14 "DESIGN OF CONCRETE STRUCTURES FOR BUILDINGS" AND AS FOLLOWS:

- INTERIOR STRUCTURAL SLABS: EXPOSURE CLASS: N
20 mm TOP 20 mm BOTTOM
GRADE BEAMS: EXPOSURE CLASS: F-2
50 mm BOTTOM TO TIES 40 mm SIDES AND TOP TO TIES.
PILES & PILE CAPS: EXPOSURE CLASS: S-2
75 mm TO TIES.

- INTERIOR SLABS ON-GRADE: EXPOSURE CLASS: C-4
40 mm TOP 20 mm BOTTOM
EXTERIOR SLABS ON GRADE: EXPOSURE CLASS: C-2
40 mm TOP 40 mm BOTTOM

- 4. IN WALLS AND GRADE BEAMS, BEND ALL TOP AND INTERMEDIATE HORIZONTAL STEEL 600 mm AROUND CORNERS, OR USE EXTRA L BARS 1200 mm LONG. ALL OPENINGS IN WALLS TO HAVE 2-15M EACH SIDE AND 2-25M OVER, EXCEPT AS NOTED.
5. TOP STEEL IN BEAMS TO BE LAPPED AT CENTRE SPAN. BOTTOM STEEL TO BE BUTTED AT SUPPORT.
6. ALL REINFORCING TO BE HELD IN PLACE, AND TIED BY THE USE OF PROPER ACCESSORIES, SUCH AS H-CHAIRS, SPACERS, ETC. TO BE SUPPLIED BY THE REINFORCING STEEL FABRICATOR. H-CHAIRS TO HAVE 4 LEGS AND TO BE STAPLED OR NAILED TO THE FORMWORK.
7. ALL OPENINGS IN CAST-IN-PLACE CONCRETE FLOORING TO BE TRIMMED WITH 2-15M ALL AROUND ON BOTH FACES, EXCEPT AS NOTED.
8. FOR ALL STRUCTURAL SLABS A MINIMUM OF 50% OF THE BOTTOM STEEL SHALL BE CONTINUED A MINIMUM DISTANCE OF 150 mm INTO ALL SUPPORTING WALLS AND BEAMS. IF KEYS ARE USED AT JOINTS BETWEEN SLABS AND WALLS OR BEAMS, BOTTOM DOWELS EQUAL TO BOTTOM REINFORCEMENT OR 10M AT 300 mm O/C SHALL BE PROVIDED WHICHEVER IS GREATER.
9. ALL MISCELLANEOUS CONCRETE PADS AND CURBS ARE TO BE REINFORCED WITH A MINIMUM OF 10M AT 400 mm O/C EACH WAY, UNLESS NOTED.
10. WHEN CONCRETE BEAMS ARE CAST INTO A WALL CHASE, DOWELS SIZE AND NUMBER SAME AS BEAM REINFORCING ARE TO BE PROVIDED FROM WALL, UNLESS OTHERWISE SHOWN ON PLAN.
11. PROVIDE MINIMUM 2-10M BOTTOM INTEGRITY BARS THROUGHOUT STRUCTURES IN ACCORDANCE WITH CSA A23.3-14, CLAUSE 13.10.6.

FORMWORK

- 1. SHEARMAT OR APPROVED CARDBOARD VOIDFORM WITH A MIN. DEPTH OF 150 mm SHALL BE USED AS THE BOTTOM FORM FOR STRUCTURAL SLABS AT GRADE, GRADE BEAMS, AND WALLS IN CONTACT WITH SOIL. SELECT AND INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. ACCESSORIES SUCH AS H-CHAIRS, SPACERS, ETC. SHALL BE SUPPORTED BY PADS OF PLYWOOD OR TEMPERED HARDBOARD TO PREVENT PUNCTURING THE VOIDFORM.
2. UNLESS NOTED OTHERWISE PROVIDE SLIP JOINT ALL PAVING OR CONCRETE SLABS ON GRADE AGAINST STRUCTURAL MEMBERS WITH 12 mm ASPHALT IMPREGNATED FIBREBOARD.
3. ALL CONSTRUCTION JOINT KEYS ARE TO BE A MINIMUM OF 40 mm DEEP.
4. PLACE 10 ML POLYETHYLENE UNDER ALL SLABS ON FILL AND OVER TOP OF VOIDFORM.
5. PROVIDE 150 mm WIDE, RIBBED, PVC WATERSTOPS IN ALL HORIZONTAL AND VERTICAL CONSTRUCTION JOINTS IN ALL EXTERIOR WALLS BELOW GRADE AND PIT WALLS.

STEEL JOISTS

- 1. JOIST FABRICATOR TO CONSULT THE SUPPLEMENTS TO THE NATIONAL BUILDING CODE OF CANADA ON NON-UNIFORM SNOW LOADS.
2. JOISTS ARE TO BE CAMBERED FOR THE GREATER OF: FULL DEAD LOAD DEFLECTION OR FOR NOMINAL CAMBER AS SPECIFIED IN CSA S16-14.
3. ALL JOIST BRIDGING TO CONFORM WITH THE LATEST BUILDING CODE REQUIREMENTS, EXCEPT AS NOTED.
4. JOISTS BEARING ON BEAMS TO REST ON THE MIDDLE THIRD OF THE FLANGE. JOISTS IN LINE TO BEAR END TO END ON THE SUPPORTING BEAMS WITH A MAXIMUM GAP OF 12 mm 1/2 IN.
5. JOIST SUPPLIER TO REFER TO MECHANICAL DRAWINGS FOR LOCATION AND WEIGHTS OF EQUIPMENT SUPPORTED BY JOISTS. JOISTS TO HAVE INTERNAL MEMBERS IN LINE WHERE REQUIRED BY MECHANICAL DRAWINGS.
6. ALL STEEL JOISTS TO RECEIVE ONE COAT OF SHOP PRIMER CISC/CPMA 1-73a QUICK DRYING. JOISTS IN CRAWLSPACE TO HAVE 2 COATS. JOISTS TO BE CLEANED IN CONFORMANCE WITH SSPC-SP2. JOISTS RECEIVING FINISH PAINTING TO HAVE ONE COAT OF CISC/CPMA 2-75 QUICK DRYING SHOP PRIMER. STEEL TO BE CLEANED IN CONFORMANCE WITH SSPC-SF1.
7. JOIST SUPPLIER IS TO SUBMIT ENGINEERING DRAWINGS BEARING THE SEAL OF A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF MANITOBA TO THE PROJECT DESIGN ENGINEER FOR REVIEW PRIOR TO FABRICATION.
8. JOISTS WHICH ARE RESISTANCE WELDED SHALL CONFORM TO CSA W55.2, "RESISTANCE WELDING PRACTICE" AND CSA W55.3, "RESISTANCE WELDING QUALIFICATION CODE FOR FABRICATORS OF STRUCTURAL MEMBERS USED IN BUILDINGS".
9. ALL COLUMNS TO BE STRUTTED BY JOISTS OR BEAMS. WHERE JOISTS DO NOT LINE UP WITH COLUMNS USE L76 x 76 x 6.4 ANGLE FROM COLUMN AT BOTTOM OF BEAM FLANGE TO ADJACENT JOIST TOP CHORD AT PANEL POINTS.
10. ALL JOISTS LINING UP WITH COLUMNS ARE TO BE STRUT JOISTS. DESIGNED TO RESIST END MOMENTS AS INDICATED ON THE DRAWINGS.
11. LIVE LOAD DEFLECTION CRITERIA SHALL BE L/360 UNLESS OTHERWISE NOTED.
12. CONTRACTOR SHALL REPORT TO ENGINEER ANY EQUIPMENT LOADS TO BE SUPPORTED BY JOISTS NOT SHOWN ON DRAWINGS.

METAL DECK

- 1. ROOF DECK SHALL BE 38 mm DEEP PROFILE, 0.76mm, WITH RIB SPACING OF 150 mm.
2. DECK SHALL BE MINIMUM GRADE A WITH A MINIMUM GALVANIZED GALVALUX ZINC COATING TO Z75.
3. DECK SHALL BE ARC SPOT WELDED TO BEARING SUPPORTS AT 300 mm O/C. WELDS SHALL BE 20 mm DIAMETER.
4. SIDE LAPS SHALL BE MECHANICALLY FASTENED (BUTTED/PUNCHED) AT 600 mm ON-CENTRE.
5. DECK SUPPLIER SHALL PROVIDE OPENINGS OVER 150 mm TO 300 mm ACROSS THE FLUTES WITH MINIMUM L65 x 65 x 6.4 EACH SIDE OF OPENING PERPENDICULAR TO FLUTES. ANGLE SHALL BE WELDED TO AT LEAST TWO FLUTES ON EACH SIDE OF OPENING.
6. DECK SUPPLIER SHALL PROVIDE OPENINGS OVER 300 mm TO 450 mm ACROSS THE FLUTES WITH SUITABLE REINFORCEMENT BASED ON A STRUCTURAL ANALYSIS OF THE LOADS AND BEARING CAPACITY OF THE DECK.
7. TOUCH UP DECK WITH ZINC RICH PAINT WHERE ZINC COATING HAS BEEN BURNED BY WELDING.

MASONRY

- 1. CONCRETE BLOCKS TO CONFORM TO CSA-A165-14 SERIES "STANDARDS FOR CONCRETE MASONRY UNITS".
A. STANDARD HOLLOW MASONRY UNITS SHALL BE 200 A/N. (COMPRESSIVE STRENGTH IS BASED ON NET AREA).
2. EXTERIOR AND LOAD BEARING WALLS ARE TO BE BUILT WITH TYPE "M" MORTAR HAVING A MINIMUM STRENGTH OF 12 MPa AT 28 DAYS. INTERIOR MASONRY NON-LOAD BEARING WALLS MAY BE BUILT WITH TYPE "N" MORTAR HAVING A COMPRESSIVE STRENGTH OF 5 MPa AT 28 DAYS. MORTAR SHALL CONFORM TO CSA A179-14, "MORTAR AND GROUT FOR UNIT MASONRY".
3. USE B-9 WALL OR EQUAL FOR EVERY SECOND COURSE AT EVERY CORNER AND STACK BOND.
4. THE TOP COURSE OF ALL BLOCK WALLS IS TO BE A 'U' BLOCK WITH 2-10M CONTINUOUS CENTERED AND FILLED WITH 20 MPa CONCRETE UNLESS NOTED ON PLAN.
5. ALL MASONRY WALLS TO BE PROPERLY BRACED UNTIL STRUCTURE IS CLOSED IN AND WALL PERMANENTLY SUPPORTED.
6. ALL BLOCK WALLS RECEIVING BEAMS TO HAVE 2 COURSES HIGH, 400 mm LONG FILLED WITH 20 MPa CONCRETE UNLESS NOTED ON DRAWINGS. MASONRY TIES AND ANCHORS SHALL BE DESIGNED IN CONFORMANCE WITH CSA-A370-14, "CONNECTORS FOR MASONRY". DESIGN WIND PRESSURE FOR TIES IN EXTERIOR WALLS SHALL BE 1.4 kPa.
7. DOOR AND WINDOW LINTELS IN BLOCK WALLS SHALL BE AS FOLLOWS UNLESS NOTED ON DRAWINGS:
UP TO 1200 mm 200 mm HIGH 'U' BLOCK
20 MPa CONCRETE FILL
2-10M BOTTOM
1200 mm TO 2400 mm 400 mm HIGH 'U' BLOCK
20 MPa CONCRETE FILL
2-15M BOTTOM

STRUCTURAL STEEL

- 1. THE STRUCTURAL STEEL FABRICATOR'S ENGINEER SHALL BE RESPONSIBLE FOR LOCATING AND DESIGNING PROVISIONS FOR ALL TEMPORARY FALL PROTECTION SYSTEMS REQUIRED DURING CONSTRUCTION TO MEET MANITOBA WORKPLACE HEALTH AND SAFETY REGULATIONS.
2. STRUCTURAL STEEL TO CONFORM TO CSA-G40.21, "STRUCTURAL QUALITY STEELS" AND CSA-G40.20 "GENERAL REQUIREMENTS FOR ROLLED OR WELDED STRUCTURAL QUALITY STEEL".
3. ALL ROLLED OR STEEL STRUCTURAL SECTIONS SHALL BE G40.21-350W. ALL HOLLOW STRUCTURAL SECTIONS TO BE G40.21-350W CLASS C. ALL ANGLES, CHANNELS AND PLATES SHALL BE G40.21-300W.
4. FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE PERFORMED IN ACCORDANCE WITH CSA S16-14, "DESIGN OF STEEL STRUCTURES".
5. ALL WELDING SHALL CONFORM TO THE LATEST EDITION OF CSA W59, "WELDED STEEL CONSTRUCTION". FABRICATORS SHALL BE PROPERLY CERTIFIED IN ACCORDANCE WITH CSA W47.1, "CERTIFICATION OF COMPANIES FOR FUSION WELDING OF STEEL STRUCTURES".
6. ALL BOLTED CONNECTIONS TO USE A25 HIGH STRENGTH BOLTS. MINIMUM CONNECTION SHALL CONSIST OF 2 BOLTS.
7. ALL STRUCTURAL STEEL IS TO RECEIVE ONE COAT OF CISC/CPMA 1-73a QUICK DRYING SHOP PRIMER. STEEL TO BE CLEANED IN CONFORMANCE WITH SSPC-SP2. STEEL RECEIVING FINISH PAINTING TO HAVE ONE COAT OF CISC/CPMA 2-75 QUICK DRYING SHOP PRIMER. STEEL TO BE CLEANED IN CONFORMANCE WITH SSPC-SF1.
8. ALL BEAMS CONTINUOUS OVER COLUMNS ARE TO HAVE WEB STIFFENERS THE SAME SIZE AND ORIENTATION AS THE COLUMN BELOW, UNLESS OTHERWISE NOTED.
9. FABRICATOR TO NOTIFY ENGINEER OF ANY PROPOSED MEMBER SUBSTITUTIONS AND CHANGED CONNECTION DETAILS.
10. THE STRUCTURAL STEEL SUPPLIER SHALL PROVIDE AND BE RESPONSIBLE FOR ALL HOLES IN STEEL SECTIONS REQUIRED BY OTHER TRADES. SECTION SHALL BE STRENGTHENED WHERE REQUIRED TO GUARANTEE THE ORIGINAL STRENGTH OF THE BEAM. ANY CUTTING OF STEEL AT THE JOB SITE SHALL BE DONE ONLY AS DIRECTED AND APPROVED BY THE ENGINEER.
11. THE STRUCTURAL STEEL ERECTOR SHALL BE RESPONSIBLE FOR SUPPLYING AND ERECTING ALL TEMPORARY GUYING AND BRACING OF THE STEEL FRAMING TO PROVIDE STABILITY FOR THE STRUCTURE AS A WHOLE. THESE SHALL REMAIN IN PLACE UNTIL ALL STEEL DECKING IS ERECTED, WELDED IN PLACE AND ALL MASONRY/CONCRETE WALLS CONSTRUCTED.
12. ALL DUCTS LARGER THAN 450x450, THROUGH ROOF DECK TO BE FRAMED WITH L76x76x6.4 ANGLES ALL AROUND, EXCEPT AS NOTED. SMALLER OPENINGS THROUGH STEEL DECK TO BE STIFFENED BY STEEL DECK SUPPLIER. WHERE STEEL DECK REVERSES ITS FRAMING DIRECTION, USE L51x51x6.4 ANGLE TO SUPPORT EDGE.
13. STRUCTURAL STEEL SUPPLIER IS TO SUBMIT ENGINEERING DRAWINGS BEARING THE SEAL OF A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF MANITOBA COVERING THE DESIGN OF CONNECTIONS, TO THE PROJECT DESIGN ENGINEER FOR REVIEW PRIOR TO FABRICATION. CONNECTION DESIGN TO INCLUDE FOR ALL ADJUSTABLE CONNECTIONS REQUIRED TO SUITE FABRICATION AND ERECTION PROCEDURES AND TOLERANCES.
14. UNLESS NOTED OTHERWISE PROVIDE L76x76x6.4 DIAPHRAGM CHORD ANGLE AROUND ENTIRE PERIMETER OF BUILDING.
15. STRUCTURAL STEEL WHICH SUPPORTS ARCHITECTURAL FINISHES MUST BE DESIGNED TO SUFFICIENTLY ADJUSTABLE TO MEET REQUIRED INSTALLATION TOLERANCES. SEE ARCHITECTURAL DRAWINGS FOR REQUIRED TOLERANCES.

COLUMN SCHEDULE table with columns MARK, DESCRIPTION. C1, HSS 152x152x6.4

CONCRETE SLAB SCHEDULE table with columns MARK, THICKNESS, REINFORCING/DESCRIPTION. S1, 150, 15M @ 300 O/C TOP EACH WAY...

CONCRETE BEAM SCHEDULE table with columns MARK, WIDTH, HEIGHT, REINFORCING. B1, 300, 900, 2-30M TOP & BOTTOM CONTINUOUS...

MASONRY WALL SCHEDULE table with columns MARK, WIDTH, DESCRIPTION. MW1, 190, 15MPa BLOCKS...

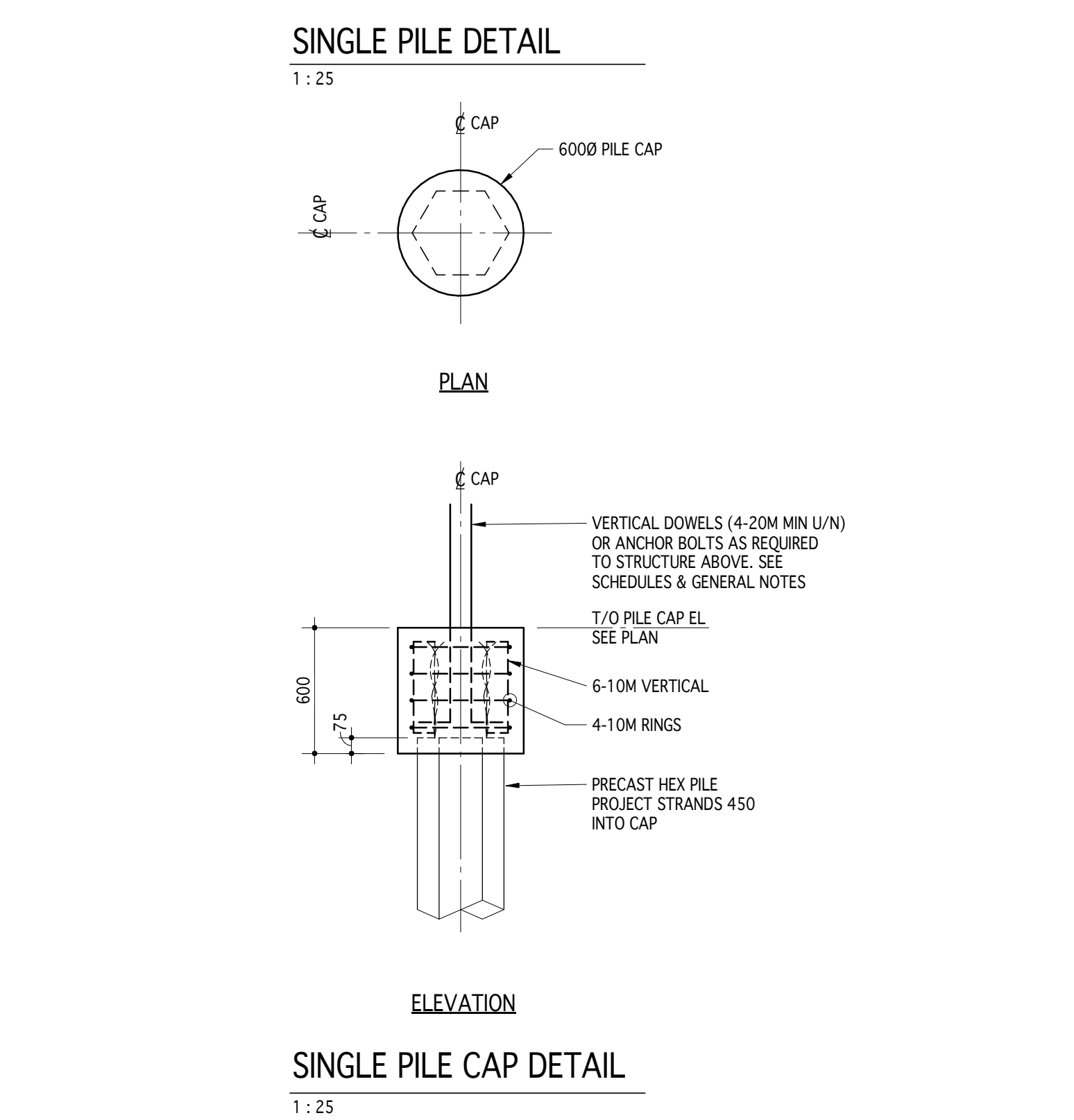
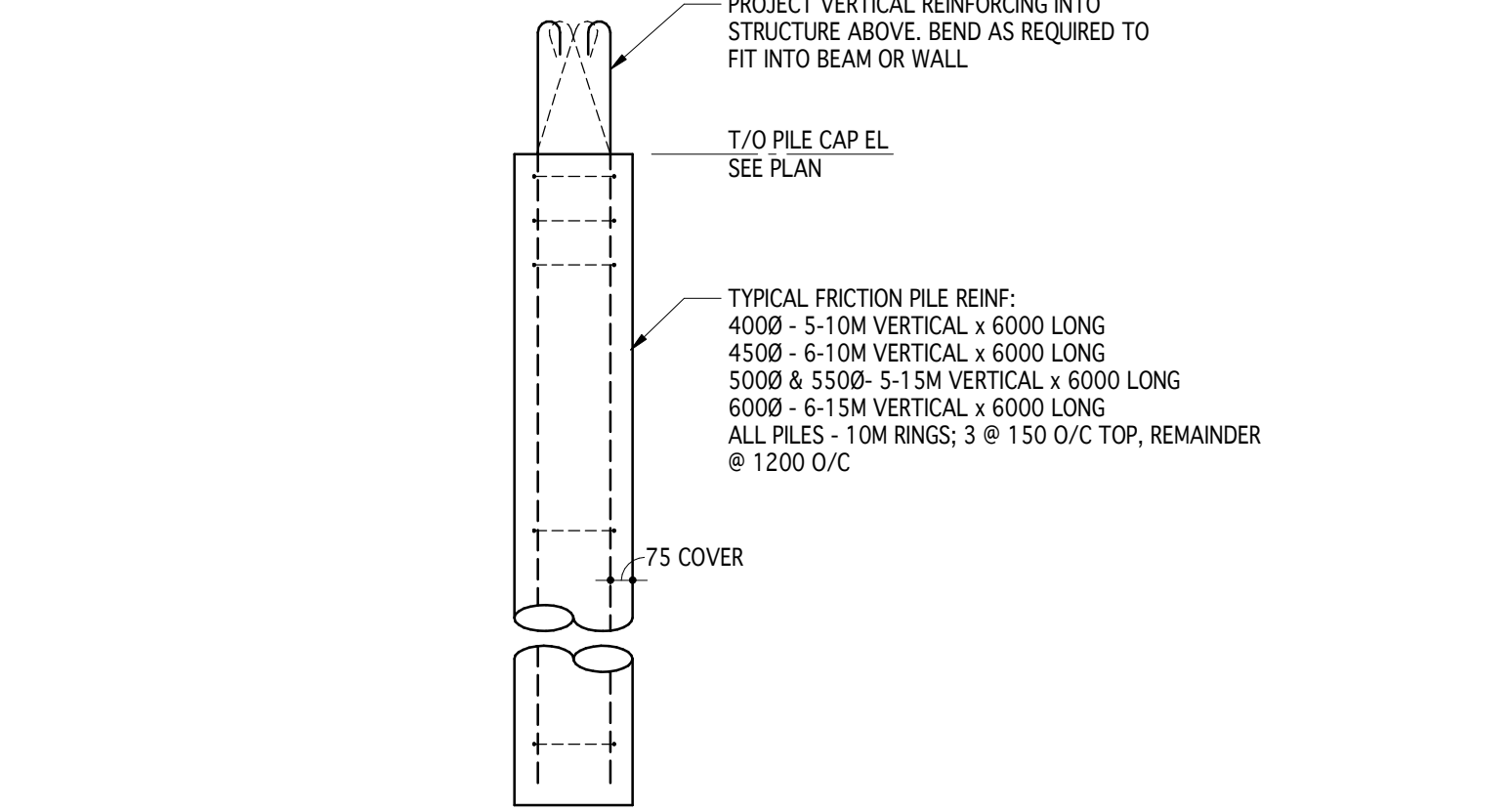
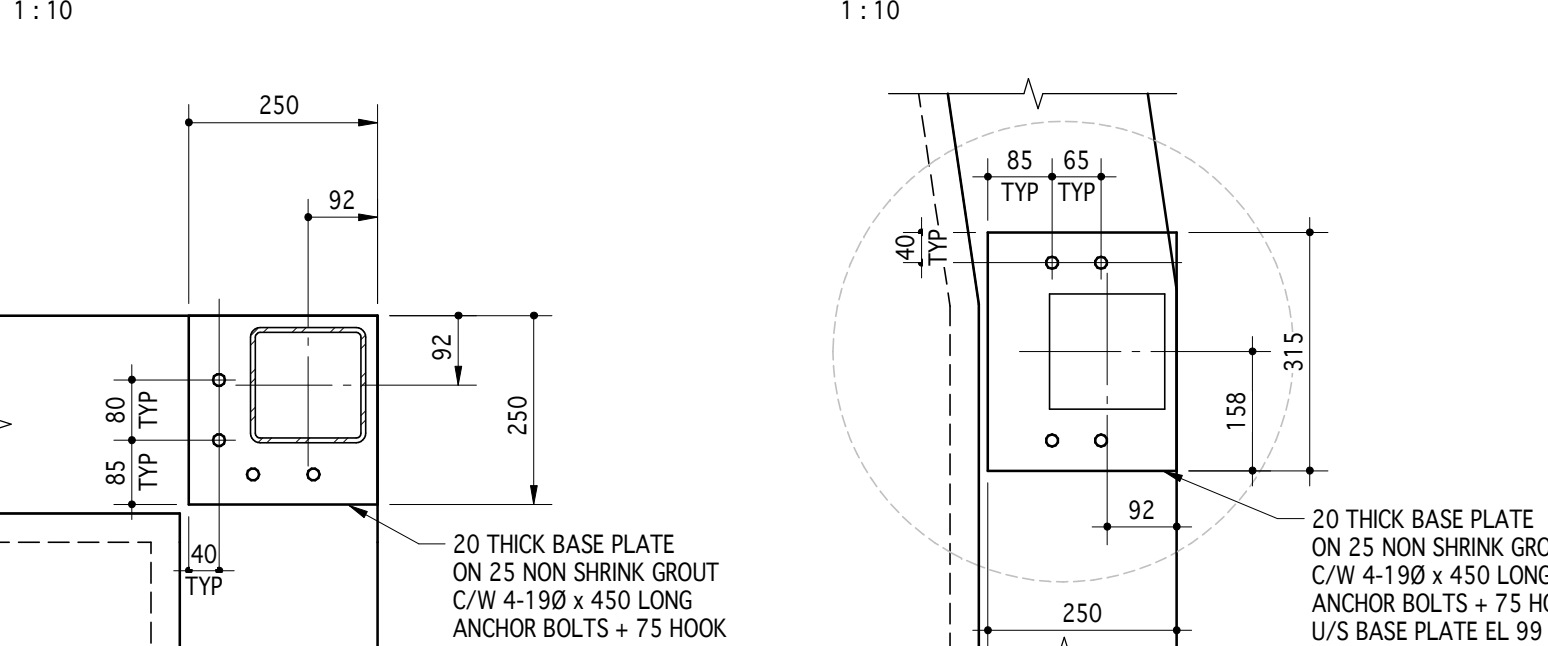
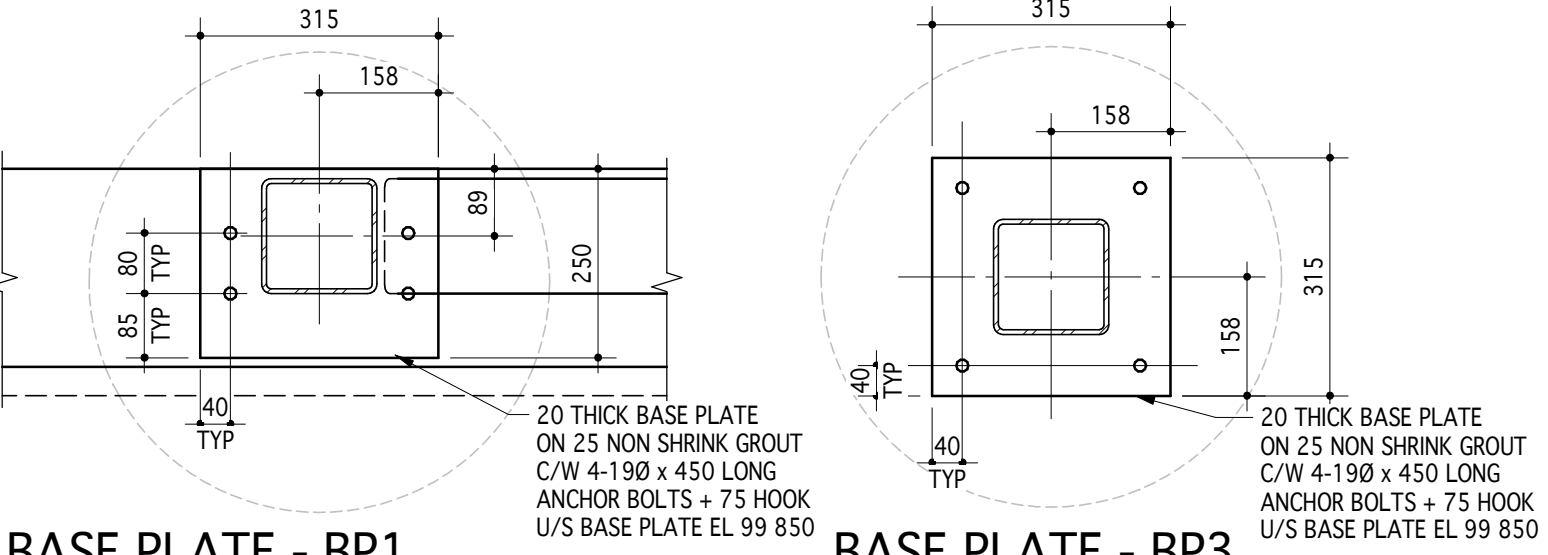


Table with columns No., DATE, REVISION/ISSUANCE. 0, 2017-06-30, ISSUED FOR CONSTRUCTION

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Project BID OPPORTUNITY 450-2017

KILDONAN PARK MAINTENANCE BUILDING

Sheet Title

GENERAL NOTES, SCHEDULES & PILE DETAILS

Project No. 1559

Date 2017-06-30

S1.1