

GENERAL NOTES:

1. ANY DEVIATION FROM THE CONDITIONS SHOWN ON THE DRAWING SHALL BE SUBMITTED TO THE ENGINEER.
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO COMMENCING WORK.
3. STRUCTURAL DESIGN DONE IN ACCORDANCE WITH CSA STANDARD Z259.15-12 AND CSA STANDARD Z259.16-04 DESIGN OF ACTIVE FALL-PROTECTION SYSTEMS.
4. DESIGN LOADS:
ANCHORAGES ARE DESIGNED TO RESIST 22.2 kN [5000 lbs] APPLIED IN ANY DIRECTION AS WELL AS AN ADDITIONAL 8 kN APPLIED IN ANY DIRECTION AS PER CSA STANDARD Z259.15-12.
5. MATERIALS:
CONCRETE: $f'_c = 20 \text{ MPa MIN.}$;
ANCHOR SOLUTION FALL PROTECTION ANCHORAGE SYSTEM:
1/2" ϕ B-14A ADJUSTABLE COIL BOLT (MIN. W.L.L. = 26.6 kN);
1/2" ϕ WASHER (MIN. W.L.L. = 22.2 kN);
1/2" ϕ BOLT ON D-RING ASSEMBLY (MIN. W.L.L. = 22.2 kN);
1/2" ϕ B-39 WING NUT (MIN. W.L.L. = 40 kN).
W.L.L. PROVIDES A FACTOR OF SAFETY OF 2 TO 1.

(ANCHORAGE SYSTEM COMPONENTS SHALL BE PROTECTED AGAINST CORROSION).
6. THE SYSTEM SHALL BE USED IN ACCORDANCE WITH THE REQUIREMENTS OF O. REG. 213/91 - OCCUPATIONAL HEALTH AND SAFETY REGULATIONS FOR CONSTRUCTION PROJECTS.
7. A COMPETENT WORKER SHALL INSTALL AND INSPECT THE SYSTEM AND ALL OTHER FALL PROTECTION EQUIPMENT TO ENSURE THAT ALL COMPONENTS ARE IN A SAFE OPERATIONAL CONDITION BEFORE EACH USE. THE WORKER SHALL REPORT ANY SIGNS OF DISTRESS TO THE ENGINEER. THE SYSTEM SHALL NOT BE USED UNTIL IT HAS BEEN REPAIRED AND APPROVED FOR USE BY A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN ONTARIO.
8. EACH D-RING CONNECTION SHALL SUPPORT ONLY ONE FALL ARREST SYSTEM (ONE WORKER) AT A TIME.
9. THE FULL BODY HARNESSES AND LANYARDS SHALL COMPLY WITH THE REQUIREMENTS OF CAN/CSA-Z259.10.
10. A WRITTEN EMERGENCY RESCUE PLAN SHALL BE DEVELOPED PRIOR TO USE.
11. THE ANCHORAGE ASSEMBLY SYSTEM SHALL BE INSTALLED INTO SOUND CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 20 MPa.
12. THE EXISTING HOLE IN THE CONCRETE WALL SHALL NOT EXCEED 1/4" ϕ LARGER THAN THE DIAMETER OF THE COIL BOLT. PROVIDE A 1/16" THICK MIN. PLASTIC SLEEVE INSERT IF THE EXISTING HOLE EXCEEDS 1/8" ϕ LARGER THAN THE DIAMETER OF THE COIL BOLT, OR INCREASE THE SIZE OF THE COIL BOLT AND ACCESSORIES AS REQUIRED.
13. THE STRUCTURAL INTEGRITY OF THE SYSTEM SUPPORTING THE ANCHORAGE CONNECTIONS SHALL BE DETERMINED BY OTHERS.

INSTALLATION AND SAFETY NOTES:

1. INSPECT THE COMPONENTS OF THE ANCHORAGE SYSTEM FOR ANY SIGNS OF DEFECTS PRIOR TO EACH USE. DO NOT USE IF ANY DEFECTS ARE FOUND. REPLACE THE DEFECTIVE COMPONENTS.
2. DETERMINE A SUITABLE INSTALLATION LOCATION IN THE CONCRETE WALL WHERE THE WALL IS 200 mm THICK MIN., $f'_c = 20 \text{ MPa MIN.}$, & THE CONCRETE HOLE DOES NOT EXCEED 1/4" ϕ LARGER THAN THE DIAMETER OF THE COIL BOLT.
3. DETERMINE THE LENGTH OF THE BOLT TO BE USED THAT CORRESPONDS WITH THE THICKNESS OF THE CONCRETE WALL (THICKNESS OF WALL PLUS 100 mm MIN.). THE 1/2" ϕ BOLT ON D-RING ASSEMBLY SHALL BE TIGHT TO THE CONCRETE WALL WHEN INSTALLED.
4. START ASSEMBLY OF THE ANCHORAGE SYSTEM BY INSERTING THE 1/2" ϕ B-14A ADJUSTABLE COIL BOLT THROUGH A 1/2" ϕ WASHER AND 1/2" ϕ D-RING ASSEMBLY.
5. PLACE THE BOLT THROUGH AN EXISTING SLEEVE OR CORE A HOLE IN THE CONCRETE WALL (HOLE DIAMETER SHALL NOT EXCEED 1/4" ϕ LARGER THAN THE DIAMETER OF THE COIL BOLT. PROVIDE A PLASTIC SLEEVE INSERT IN ACCORDANCE WITH NOTE 12, AS REQUIRED). PLACE THE 1/2" ϕ BOLT ON D-RING ASSEMBLY, 1/2" ϕ WASHER, AND THE 1/2" ϕ B-39 WING NUT ON THE 1/2" ϕ B-14A ADJUSTABLE BOLT ASSEMBLY. ENSURE THE ANCHORAGE ASSEMBLY IS FASTENED TIGHT TO THE CONCRETE WALL.
6. INSPECT THE ANCHORAGE SYSTEM BEFORE EACH USE TO ENSURE ALL COMPONENTS ARE SECURED IN PLACE.
7. KEEP A WRITTEN LOG OF ALL INSPECTIONS.

*ANCHORAGE CONNECTIONS:

EDGE DISTANCE: 600 mm MIN.
ANCHOR SPACING: 300 mm MIN.

(UNLESS ADEQUATE TESTING IS PREFORMED TO SUGGEST OTHERWISE)

THE ANCHORAGE SYSTEM IS INTENDED TO BE USED AS AN ANCHORAGE CONNECTION FOR A FALL PROTECTION SYSTEM AND IS NOT INTENED TO BE USED AS A HORIZONTAL LIFELINE. FURTHER INSTRUCTIONS TO THESE DRAWINGS MAY BE REQUIRED IF THE SYSTEM IS TO BE USED AS A HORIZONTAL LIFELINE.

EXISTING CONCRETE WALL
($f'_c = 20 \text{ MPa MIN.}$)

1/2" ϕ B-14 ADJUSTABLE
COIL BOLT c/w
1/2" ϕ WASHER &
1/2" ϕ B-39 WING NUT
(TYP.)

1/2" ϕ BOLT ON
D-RING ASSEMBLY
(TYP.)

1 ANCHORAGE SYSTEM - PARTIAL ELEVATION
1:20

1/2" ϕ B-14 ADJUSTABLE COIL BOLT
1/2" ϕ WASHER (TYP.)
ANCHORAGE SYSTEM D-RING ASSEMBLY TIGHT TO CONCRETE WALL
EXISTING CONCRETE WALL ($f'_c = 20 \text{ MPa MIN.}$)
1/2" ϕ B-39 WING NUT
1/2" ϕ BOLT ON D-RING ASSEMBLY (TYP.)
PLASTIC SLEEVE INSERT 1/16" THICK MIN. (*SEE NOTE 12)
200 MIN.
*1/2" ϕ TYP.
*3/4" ϕ MAX.

2 ANCHORAGE SYSTEM - SECTION
1:5

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scale VARIES

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no. de détail
B location drawing no.
sur dessin no.

project
ANCHOR SOLUTIONS:
FALL ARREST
D-RING ANCHORAGE
CONNECTION

drawing
ANCHORAGE SYSTEM
DETAILS
& NOTES

PROFESSIONAL ENGINEER
772
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5 Jan 16
PROVINCE OF ONTARIO

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drawn J. P.	approved T. R.
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