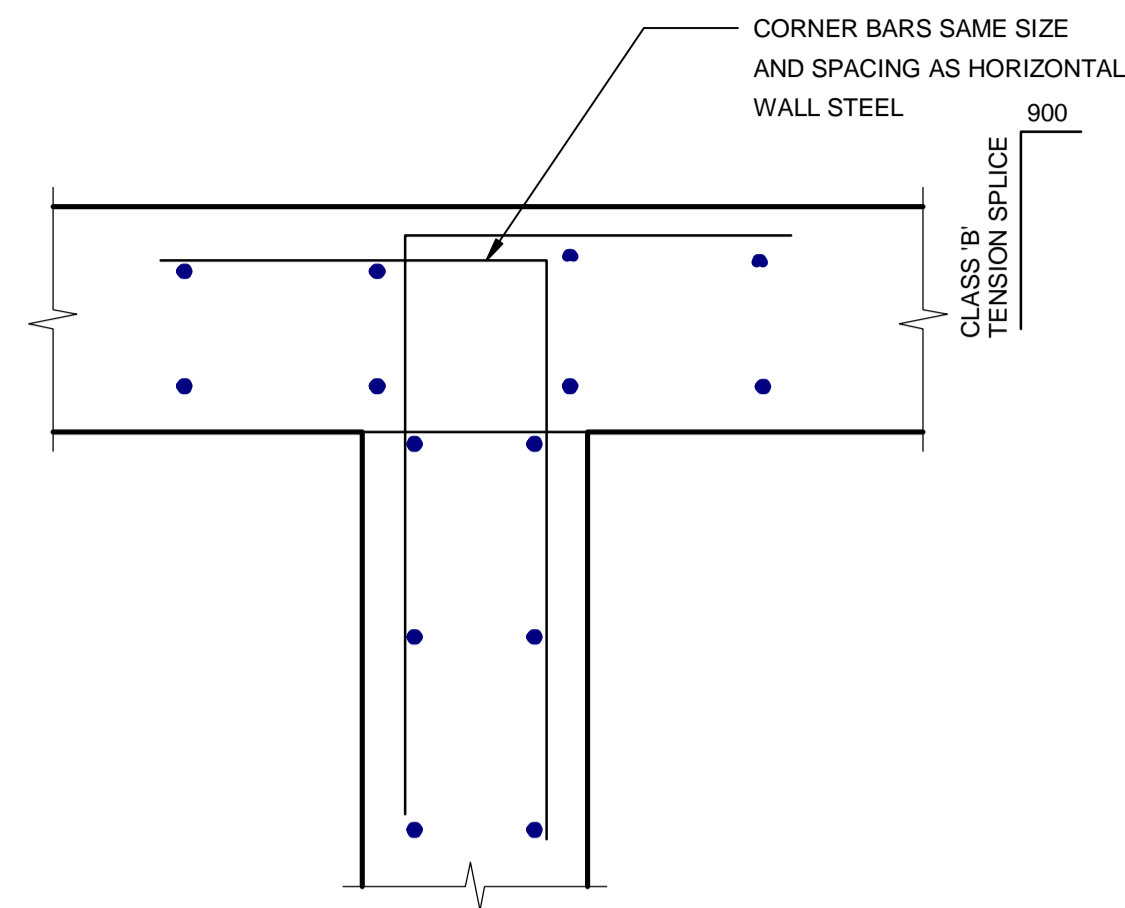


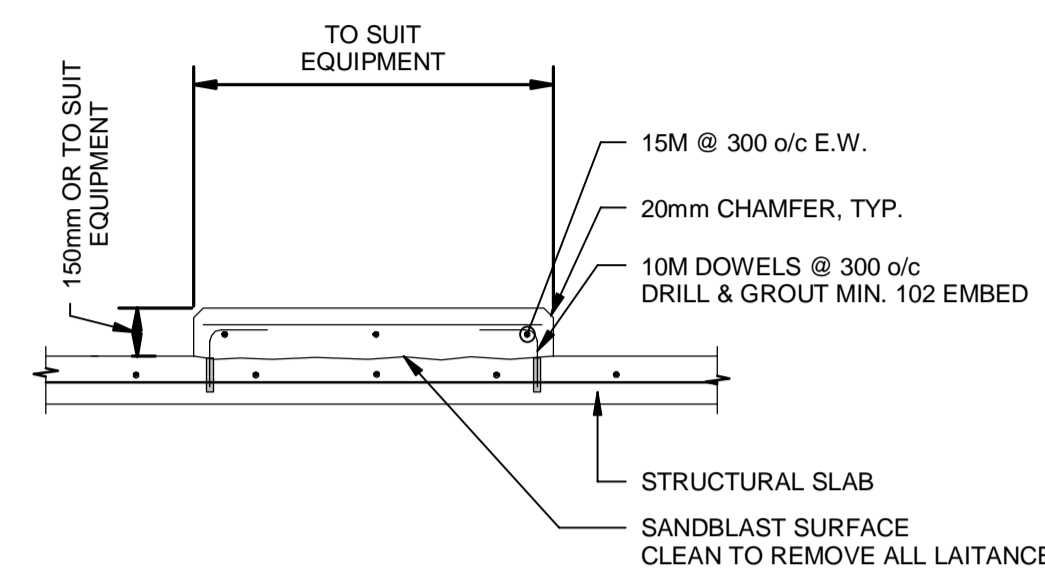
1 WALL CORNER REINFORCING DETAIL

BS-003 SCALE: 1:20



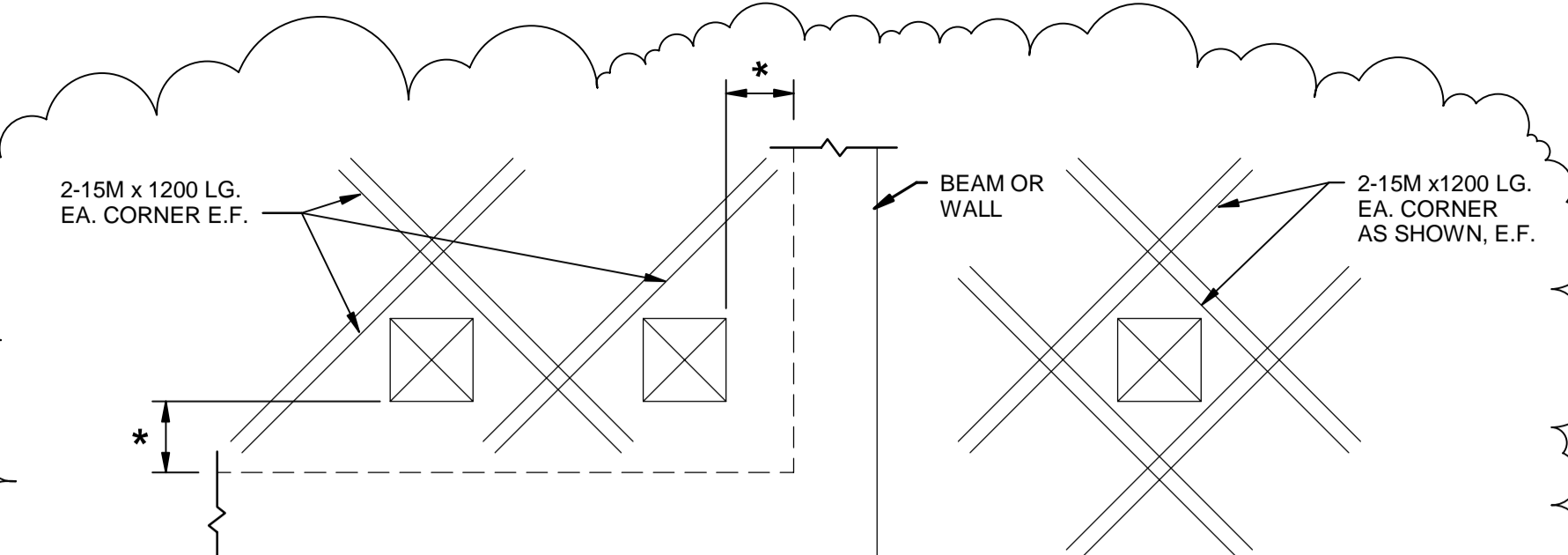
2 STD DETAIL WALL INTERSECTION REINFORCING

BS-003 SCALE: 1:20



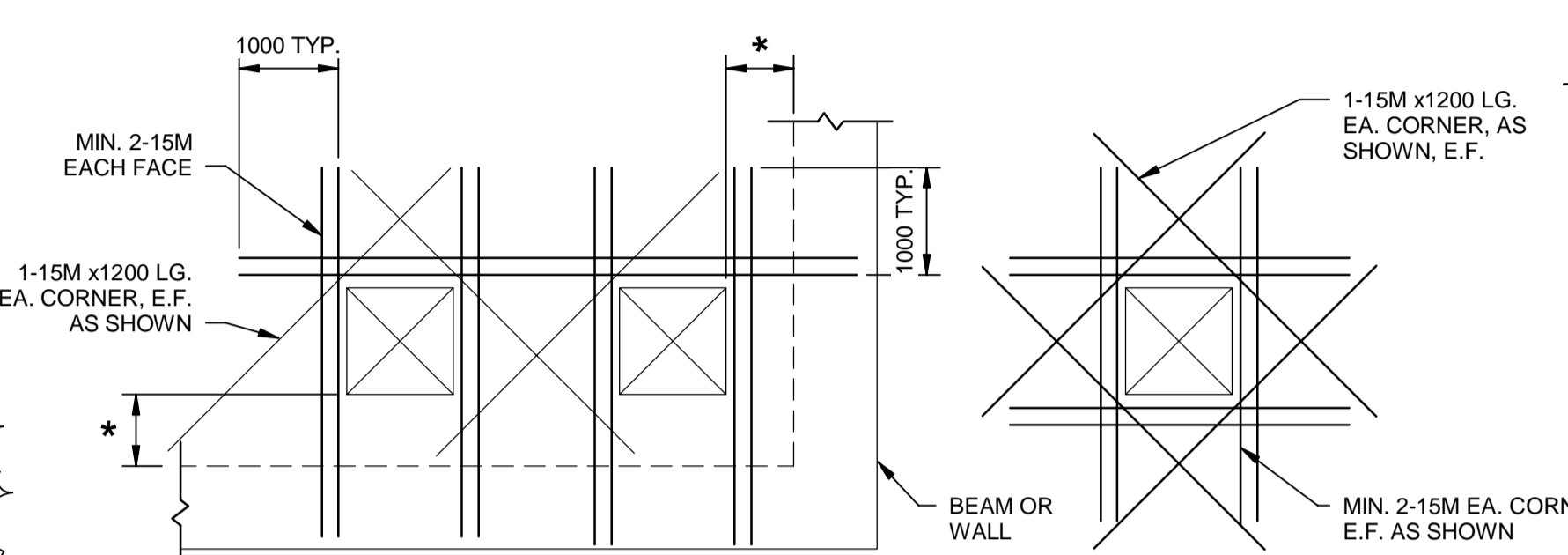
3 STD DETAIL HOUSEKEEPING PAD

BS-003 SCALE: NTS



PLAN SHOWING EXTRA REINF. AROUND OPENING 150 TO 280

WHEN OPENING IS MORE THAN 300 FROM BEAM OR WALL



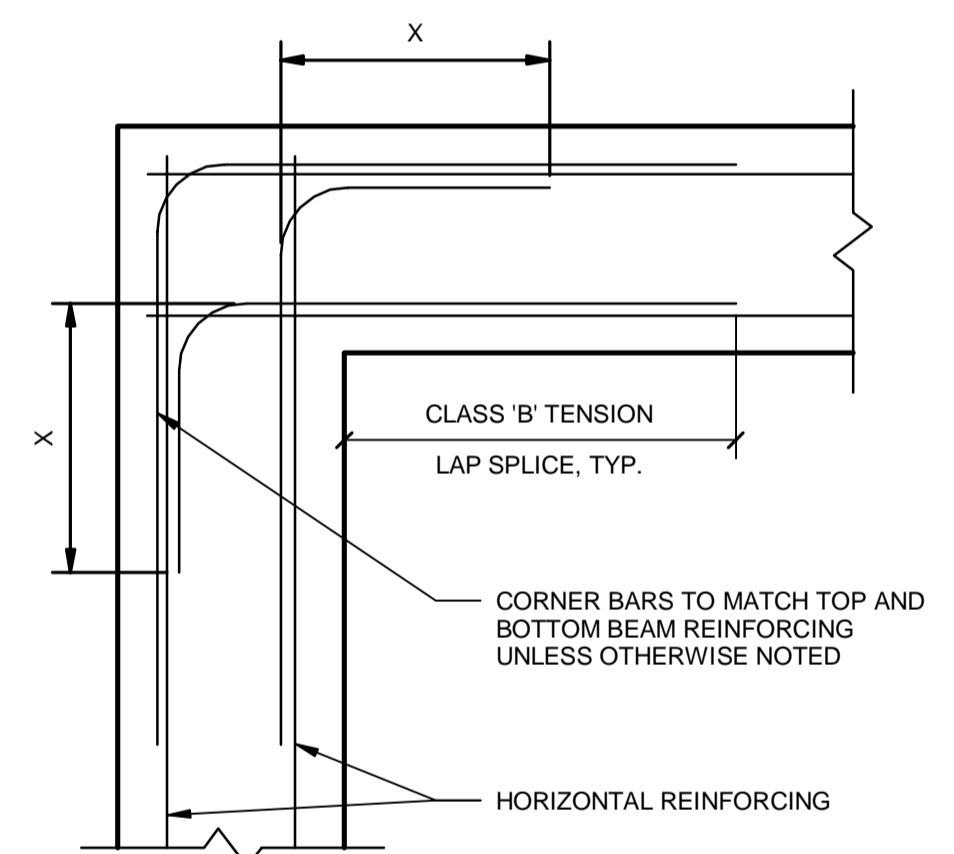
PLAN SHOWING EXTRA REINF. AROUND OPENING LARGER THAN 280

WHEN OPENING IS MORE THAN 300 FROM BEAM OR WALL

- 1. DEFLECT MINIMUM BARS EACH SIDE OF OPENING AS SHOWN.
- 2. WHERE OPENING IS LARGE ENOUGH THAT MORE THAN 4 CUT BARS WOULD BE DEFLECTED, PLACE MINIMUM 4-15M BARS ALONG THAT OPENING LENGTH SIDE.
- 3. NUMBER OF REINFORCING BARS TO BE CUT AT OPENING TO BE KEPT AT A MINIMUM.
- 4. REINFORCING BARS TO BE KEPT MINIMUM 50 CLEAR OF OPENING.
- 5. CIRCULAR OPENINGS TO BE TREATED IN SAME MANNER AS RECTANGULAR UNLESS OTHERWISE DETAILED.

6 STD DETAIL ADDITIONAL REINFORCING AROUND OPENINGS WALLS AND SLABS

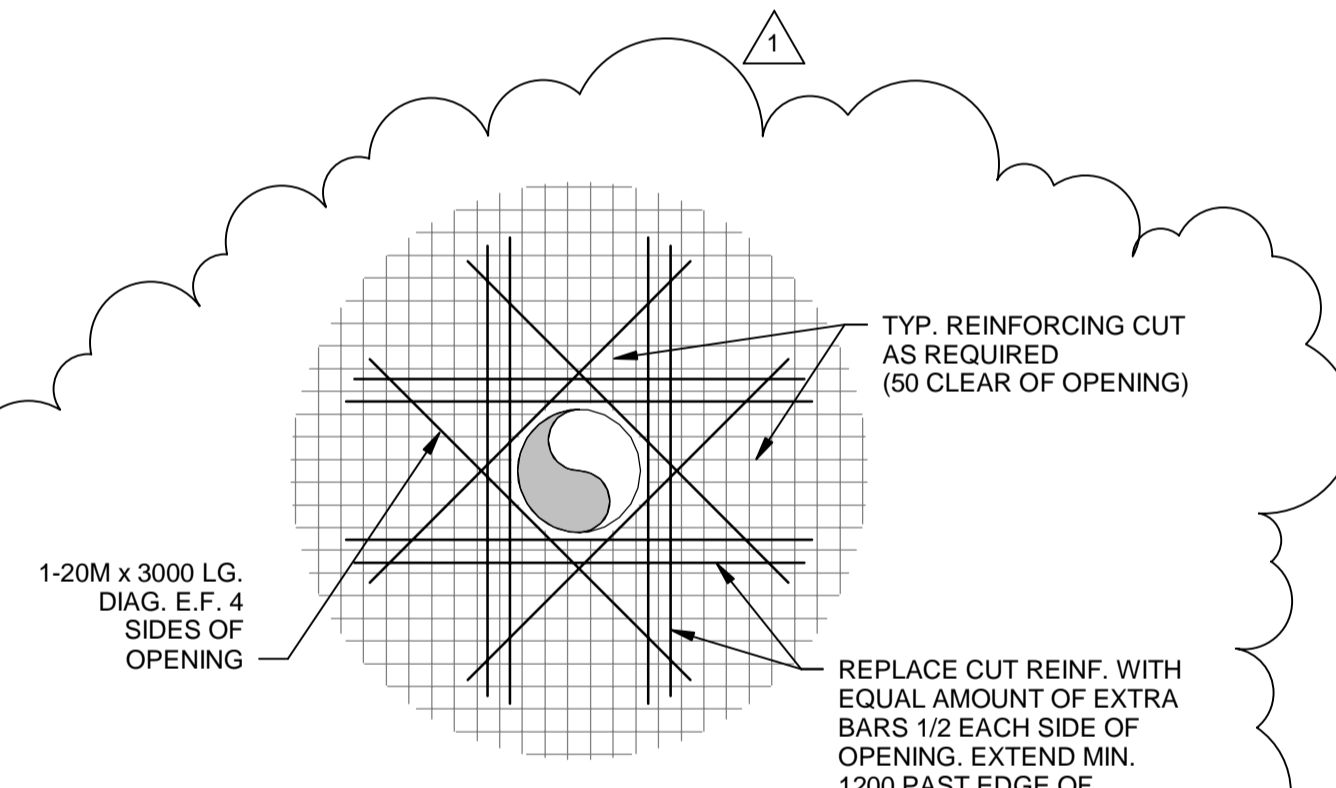
BS-003 SCALE: 1:20



4 DETAIL - BEAM CORNER REINFORCING DETAIL

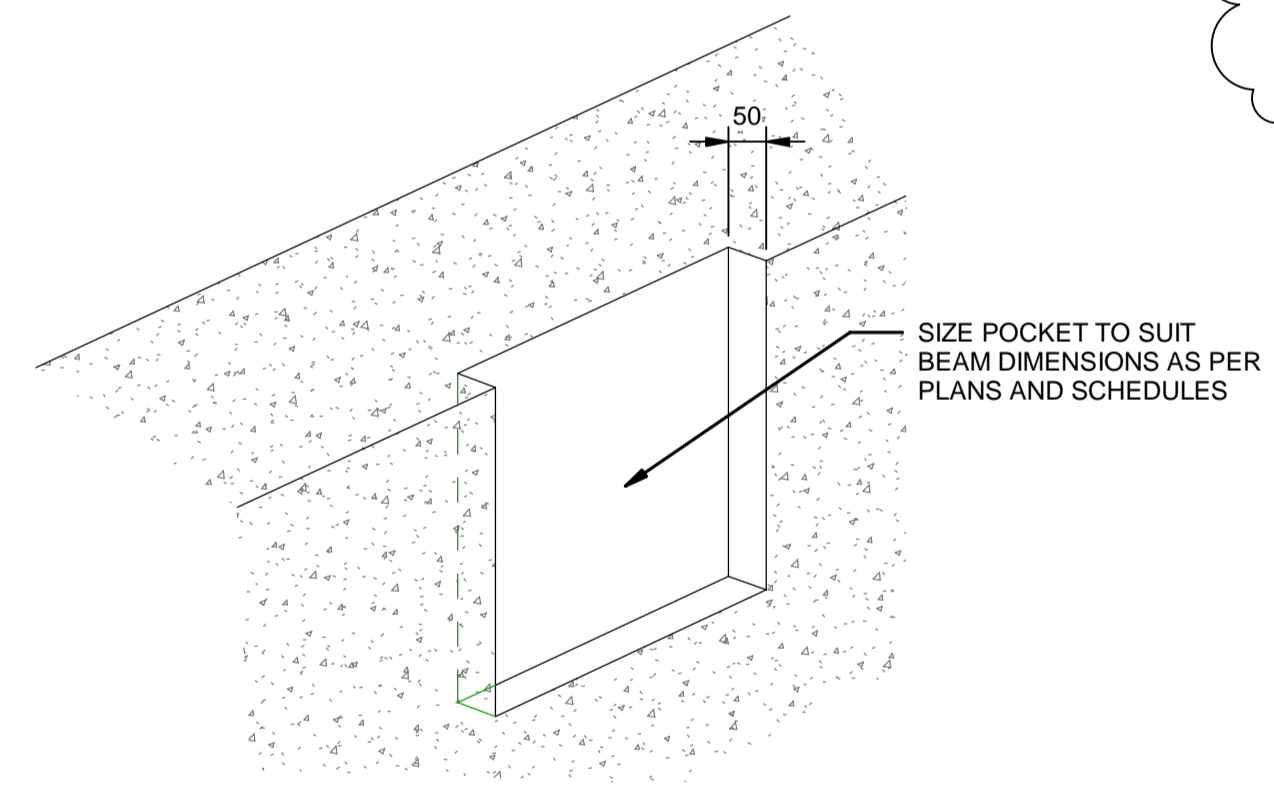
BS-003 SCALE: NTS

X = 35 x BAR Ø FOR 20M OR SMALLER
X = 45 x BAR Ø FOR 25M OR GREATER



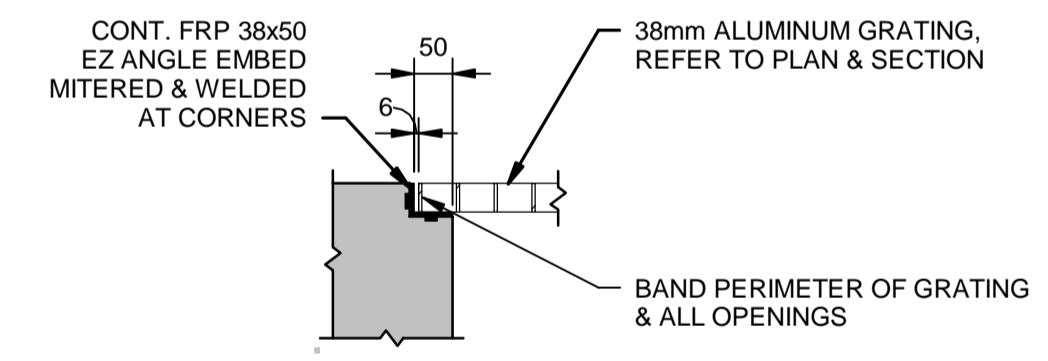
24 STD DETAIL ADDITIONAL REINFORCING FOR ROUND PENETRATIONS GREATER THAN Ø600mm WALL AND SLABS

BS-003 SCALE: 1:50



5 STD DETAIL TYPICAL BEAM POCKET

BS-003 SCALE: 1:10



7 STD DETAIL - ALUMINUM GRATING

BS-003 SCALE: 1:10

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES



| UNDERGROUND STRUCTURES | | B.M. ELEV. |
|---|------|------------|
| SUPV. U/G STRUCTURES | DATE | |
| | | |
| LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION. | | |

| DESIGNED BY | | CHECKED BY | |
|---------------|--|---------------------------|--|
| KK/JT | | SBB | |
| DRAWN BY | | APPROVED BY | |
| KK | | AN | |
| HOR. SCALE | | RELEASED FOR CONSTRUCTION | |
| AS SHOWN | | | |
| VERTICAL | | DATE | |
| | | 06/01/2016 | |
| NO. REVISIONS | | DATE | |
| | | 09/06/2016 | |



ENGINEER'S SEAL
PROVINCE OF MANITOBA
J.A. THOMPSON
Member
30632
REGISTERED PROFESSIONAL ENGINEER
CONSULTANT PROJECT NUMBER
60321148

THE CITY OF WINNIPEG
PUBLIC WORKS DEPARTMENT
Waverley Street Underpass at CN Mile 3.89 Rivers Sub
CONTRACT 2: UNDERPASS STRUCTURE, RAILWORKS, ROADWORKS, LAND DRAINAGE SEWER, PUMPING STATION AND LANDSCAPING WORKS
PUMPING STATION
STANDARD DETAILS
CITY DRAWING NUMBER
U-239-2016-C2-BS-003
SHEET 3 OF 16
CONSULTANT DRAWING NUMBER
C2-BS-003

P:\60321148\900-CAD\910-CAD\99-SUPPORT\PROJECT_TITLE_BLOCKS\Title_Block_for_Pump_Station_works\163383-XTB-C1-CU.dwg