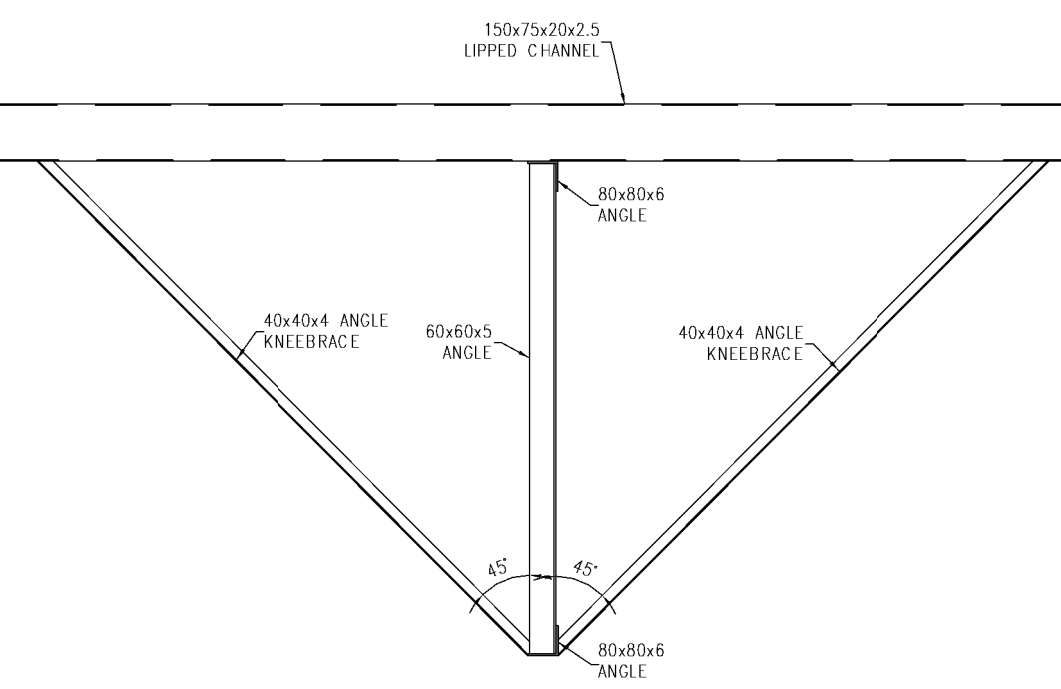
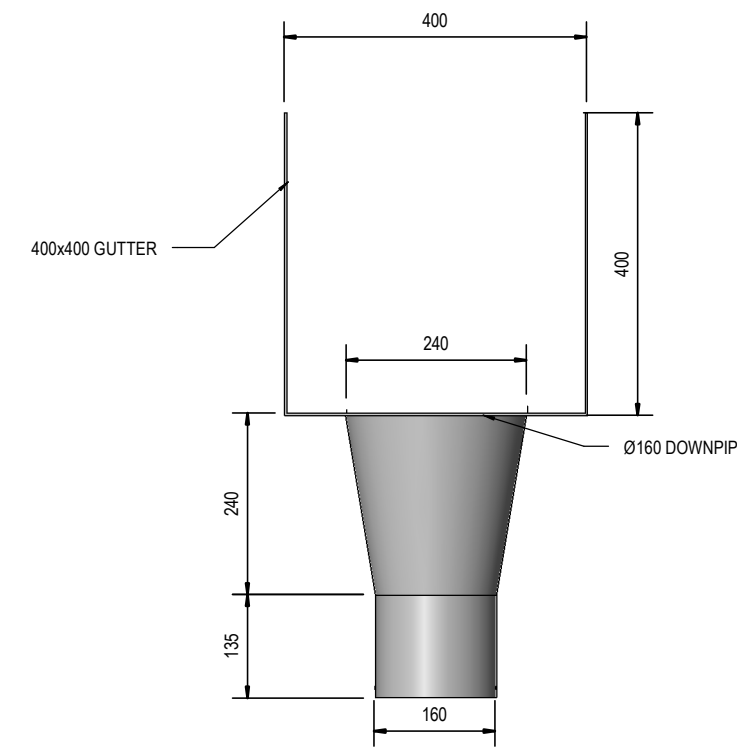


- STRUCTURAL STEEL NOTES**
1. ALL STRUCTURAL STEELWORK SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH SANS 1016 AND SANS 1017: 2011 AND SANS 1017: 2011 AND SANS 1017: 2011.
 2. ALL WELDS SHALL CONFORM TO SANS 1017: 2011 AND SANS 1017: 2011 AND SANS 1017: 2011.
 3. THAT THE THINNESS OF THE PLATE OF THE CONNECTING PLATE ELEMENTS UNLESS OTHERWISE SPECIFIED SHALL BE DEVELOPED IN CONNECTION WITH THE CONNECTION.
 4. WHEN USING ELECTRIC ARC WELDING, ALL ELECTRODES SHALL BE USED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
 5. CONTRACTOR SHALL APPLY, IN WRITING, FOR THE APPROVAL FROM THE ENGINEER FOR THE USE OF ANY OTHER WELDING PROCESSES.
 6. ALL BUTT WELDS SHALL DEVELOP THE FULL STRENGTH OF THE ELEMENTS JOINED.
 7. ALL SPICES SHALL DEVELOP THE FULL STRENGTH OF THE ELEMENTS JOINED.
 8. WELDING SHALL ONLY BE PERFORMED BY QUALIFIED WELDERS.
 9. WELDING QUALITY AND CONFIDENCE WELDERS USING PROPER EQUIPMENT IN A GOOD CONDITION SHALL BE ALLOWED TO DO ALL WELDING.
 10. THE CONTRACTOR SHALL DESIGN ALL WELDS AND, WHERE NECESSARY, SUBSIST OF SUFFICIENT STRENGTH SHALL BE PROVIDED TO ENSURE THE REQUIRED WELD LENGTH TO ENSURE THE FULL STRENGTH OF THE CONNECTION.
 11. ALL DIMENSIONS AND ANGLES SHALL BE CHECKED ON SITE BEFORE DROP DRAMING COMMENCE. ANY DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
 12. SHOP DRAWINGS WILL ONLY BE CHECKED FOR COMPLIANCE WITH DESIGN INTENT. NO DIMENSIONAL CHECKS WILL BE DONE.
 13. A COMPLETE SET OF SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER, ARCHITECT AND SHEETING SPECIALIST. SUB-CONTRACTOR (TO ENSURE STEELWORK PROVIDES SUFFICIENT SUPPORT FOR LOADS) FOR APPROVAL BEFORE FABRICATION COMMENCES. SHOP DRAWING TO SHEETING REQUIREMENTS INTO ACCOUNT. NO HAND-DRAWN WELLS WILL BE ACCEPTED. TOTAL OF SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER WITHOUT COMPROMISING SHOP DRAWING PROGRAM.
 14. ALL COLD ROLLED STEEL MEMBERS TO BE GALVANIZED REMAINING INTERNAL STEEL WORK TO RECEIVE COAT OF PRIMER AND WELDING COAT ON SILENT APPROVED AND 2 FINAL COATS POLYURETHANE ENAMEL TO PROTECT SPECIFICATION (AS NOTED PER COAT). ALL STEEL SHALL BE PROTECTED TO THE FULL EXTENT OF THE PROTECTIVE COAT.
 15. ALL HOT ROLLED AND COLD FORMED STEEL SHALL BE GRADE 355MPa EXCEPT COLD FORMED OPEN STEEL SECTIONS, WHICH SHALL HAVE A MINIMUM YIELD STRENGTH OF 355MPa. TENSILE TESTING RESULTS MUST BE PROVIDED FOR EACH BATCH OF STEEL FROM WHICH COLLECTED SECTION ARE SOURCED.
 16. A CERTIFICATE FROM THE STEEL MANUFACTURER IN WHICH THE GRADE OF THE STRUCTURAL STEEL IS VERIFIED SHALL BE HAND TO THE ENGINEER FOR APPROVAL.
 17. ALL STRUCTURAL BOLTS SHALL BE GRADE 8.8 UNLESS OTHERWISE NOTED.
 18. GALVANIZED BOLTS TO BE USED (GRADE 4.8 MAY BE USED TO CONNECT PURLIN AND GIRTS).
 19. WHERE TEMPORARY BRACING OR PROPPING IS REQUIRED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, INSTALLATION, MAINTENANCE AND REMOVAL. WHERE NECESSARY OF SUCH SUPPORTS, PROPOSALS OF THIS SHALL BE SUBMITTED TO THE ENGINEER AT AN EARLY STAGE FOR WRITTEN APPROVAL.
 20. FABRICATION TO ENSURE THAT CENTERS OF GRAVITY OF MEMBERS INTERSECT AT JOINTS POINTS EXCEPT WHERE EXCEPTED ARE SPECIFIED ON ENGINEER'S DRAWINGS.
 21. ALL STRUCTURAL STEEL DRAWINGS TO BE READ IN CONJUNCTION WITH THE RELEVANT ARCHITECTURAL, CONCRETE DRAWINGS AS WELL AS THE BILL OF MATERIALS AND ANY DISCREPANCY TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
 22. QUALITY CONTROL ON WELDING SHALL BE AS FOLLOWS:
 - 22.1 ALL WELDS SHALL BE INSPECTED USING VISUAL AIDS
 - 22.2 ALL BUTT WELDS: 100% ULTRASONIC
 - 22.3 ALL FILLET WELDS: 20% MPI
 - 22.4 CRANE / CRAWL BEAMS: 100% ULTRASONIC
 23. WHERE APPLICABLE, CONCRETE WORK SHALL BE PROVIDED UNDER BASE PLATES BEFORE ANY PRIMARY LOADS ARE APPLIED TO THE STRUCTURE.
 24. WHERE HPS BOLTS ARE SPECIFIED, THE FOLLOWING SHALL APPLY:
 - 24.1 ALL CONTACT SURFACES AT HPS BOLT SPICES SHALL BE FREE FROM OIL, GREASE, RUST, SCALE, PAINT OR ANY OTHER IMPURITIES AT THE TIME OF TIGHTENING.
 - 24.2 THE TIGHTENING OF HIGH STRENGTH FRICTION GRIP BOLTS SHALL BE DONE ACCORDING TO THE TORQUE VALUE AND DELIVERY TIME OF THE PRODUCT MANUFACTURER'S RECOMMENDATIONS. TORQUE VALUE SHALL BE CLASSED AS A 1/4 OF SANS 1016: 2011 OR WHERE HPS BOLTS HAVE BEEN SPECIFIED, THE CONTRACTOR SHALL USE TORQUE WRENCHES TO INDICATING WASHERS IN CONJUNCTION WITH EACH BOLT.
 25. WHERE SLOTTED HOLES FOR BOLTS OCCUR, THE NUT SHALL BE HAND TIGHTENED AND A LOCKWASHER BE PROVIDED UNLESS NOTED OTHERWISE.
 26. ALL TRUSSES TO BE CONTINUOUS OVER GIRDERS.
 27. ALL PURLIN AND GIRDERS TO BE CONTINUOUS OVER SPANS WITH STAGGERED BRIDGE POSITIONS. THE SPACING OF GIRDERS AND GIRTS TO BE SPECIFIED.
 28. GIRDERS TO BE CONTINUOUS OVER SUPPORT COLUMNS.

ROOF
1 : 150

SECTION THROUGH GUTTER
S1
1 : 10



TYPICAL KNEE BRACING
2
1 : 20

REV	DESCRIPTION	DATE
001	ISSUED FOR CONSTRUCTION	2016-07-20
002	ISSUED FOR INFORMATION	
003	REVISION DESCRIPTION	

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PROJECT:
JUMBO CROWN MINES

CLIENT:
MASS MART

DRAWING TITLE:
ROOF LAYOUT

SCALE: 1:150
DATE: 28.04.16
CHECKED: M.B.

DWG No.:
4977_S_DW04

REVISION:
C01

NOTE:
THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL THE RELEVANT CONSULTANT'S DRAWINGS. ALL DIMENSIONS ARE TO BE READ AND NOT SCALE. ANY DISCREPANCIES ARE TO BE REPORTED TO THE PROJECT MANAGER IMMEDIATELY.
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