CONCRETE NOTES

C1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3600.

C2. ALL CONCRETE SHALL BE SUPPLIED BY AN APPROVED SUPPLIER.

C3. ALL CEMENT SHALL BE TYPE GP OR GB TO AS3972 UNTIL OTHERWISE SPECIFIED.

C4. ADJACENCIES WILL BE USED UNTIL APPROVED IN WRITING BY THE SUPERINTENDENT.

C5. NOMINAL AGGREGATE SIZE TO BE 20mm.

C6. CONCRETE STRENGTH AND CLEAR CONCRETE COVER TO REINFORCEMENT SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLE U.N.O.

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>CONCRETE GRADE</th>
<th>REINFORCEMENT COVER</th>
</tr>
</thead>
<tbody>
<tr>
<td>BONDING LAYER</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>MASS CONCRETE</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>BORED PIERS</td>
<td>20</td>
<td>50</td>
</tr>
</tbody>
</table>

C7. ALL LAPS IN REINFORCEMENT SHALL BE AS SHOWN IN THE TABLE BELOW UNTIL NOTED OTHERWISE.

<table>
<thead>
<tr>
<th>BAR LENGTH</th>
<th>N12</th>
<th>N16</th>
<th>N20</th>
<th>N24</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAR LENGTH</td>
<td>500</td>
<td>650</td>
<td>800</td>
<td>1050</td>
</tr>
<tr>
<td>BAR LENGTH</td>
<td>N29</td>
<td>N32</td>
<td>N36</td>
<td>FABRIC</td>
</tr>
</tbody>
</table>

C8. REINFORCEMENT SYMBOLS:

R: STRUCTURAL PLAIN ROUND GRADE 250 TO AS4671.
N: DEFORMED BAR GRADE D500 TO AS4671.
L: COLD ROLLED DEFORMED BAR GRADE D500L TO AS4671.
SL: HARD DRAWN STEEL REINFORCING FABRIC GRADE D500L TO AS4671.

C9. SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES.

C10. NO HOLES, CHASIS OR EmbedMENT OF PIPES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS WILL BE MADE IN CONCRETE MEMBERS WITHOUT PRIOR APPROVAL BY THE SUPERINTENDENT.

C11. ALL CONCRETE SHALL BE COMPACTED USING A MECHANICAL VIBRATION PROCESS.

C12. FORMWORK SHALL BE DESIGNED, CONSTRUCTED AND STRIPPED IN ACCORDANCE WITH AS3610. REFER TO THE SPECIFICATION FOR CLASSES OF SURFACE FINISHES.

STEELWORK NOTES

S1. ALL WORKManship & MATERIALS SHALL BE IN ACCORDANCE WITH AS1500.6, AS4141 & AS/NZS1554 AS APPLICABLE.

S2. ALL STEEL SHALL BE IN ACCORDANCE WITH:

AS/NZS3679 GRADE 300 FOR HOT ROLLED SECTIONS
AS1163 GRADE C350DL FOR RECTANGULAR HOLLOW SECTIONS
AS1163 GRADE C350DL FOR CIRCULAR HOLLOW SECTIONS

S3. ALL BOLTS TO BE M10, 8.8S TO AS/NZS 1272 U.N.O.

S4. THE CONTRACTOR SHALL SUBMIT REIGNED CERTIFICATION CONFIRMING THE FOLLOWING TOGETHER WITH THE RELEVANT MILL AND TEST CERTIFICATES TO THE SUPERINTENDENT FOR APPROVAL PRIOR TO COMMENCEMENT FABRICATION.

- THAT THE STRUCTURAL STEEL PRODUCTS SUPPLIED ARE FROM EITHER AN AUSTRALIAN OR OVERSEAS ACRS CERTIFIED MANUFACTURER REFER TO CURRENT CERTIFICATE HOLDERS, ACRS REFERS TO "AUSTRALIAN CERTIFICATION AUTHORITY FOR REINFORCING AND STRUCTURAL STEEL".
- THAT WHERE STRUCTURAL STEEL PRODUCTS ARE SOURCED FROM OVERSEAS FOR THIS PROJECT THE CERTIFYING ENGINEER HAS REVIEWED THE MILL AND TEST CERTIFICATES OF THE SUPPLIERS OF THE STEEL PRODUCTS AND CONFIRMS THAT THEY SATISFY THE RELEVANT AUSTRALIAN STANDARDS IN RELATION TO MATERIAL COMPOSITION AND STRENGTH.
- THAT ALL BOLTS USED SHALL COMPLY WITH AS1554 AND THE CURRENNT REQUIREMENTS OF THE AUSTRALIAN INSTITUTE FOR TECHNICAL NOTE KD01 SECTION 3.

S5. ALL CLEATS AND GUSSETS SHALL BE 10mm PLATE TO AS/NZS5078 GRADE 300 U.N.O.

S6. THE LENGTHS OF ALL TUBULAR MEMBERS ARE TO BE SEALED WITH 5mm THICK PLATES AND CONTINUOUS FILLED WELDED U.N.O.

S7. WHERE MEMBERS SHOWN ON THE STRUCTURAL DRAWINGS ARE TO BE BENT, CURVED OR ROLLED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REQUIREMENTS RELATING TO THE UTILITY OF THE LOADS SHOWN ON THE SHOP DRAWINGS TO THE SUPERINTENDENT FOR REVIEW. REVIEW DOES NOT INCLUDE CHECKING OF DIMENSIONS.

S9. ALL WELDS TO BE 5mm CONTINUOUS FILLER WELDS (CFW) STRUCTURAL PURPOSE (SP) WELDS U.N.O. ALL WELDS TO BE MADE USING E6011 OR E6013 GRADE 1 OR BETTER ELECTRODES TO AS/NZS1554. GRIND ALL CORNERS & WELDS SMOOTH. A RIVET CERTIFICATION CONFIRMING THAT ALL WELDING WORKS HAVE BEEN INSPECTED AND CERTIFIED AS COMPLYING WITH AS1554 BY A QUALIFIED WELDING INSPECTOR APPOINTED BY THE CONTRACTOR SHALL BE SUBMITTED TO THE SUPERINTENDENT FOR APPROVAL PRIOR TO THE DELIVERY TO THE CONTRACTOR.

S10. ALL STEELWORK TO BE HOT DIP GALVANISED IN ACCORDANCE WITH AS/NZS2321 HOT DIP SPECIFICATION. CORROSION PROTECTION COATING TO SURFACE PREPARATION OF SUBSTRATE MATERIAL IS CLASS 2a TO AS1020 AND PICKLED PRIOR GALVANISING. HOT DIPPED GALVANISED COATING SHALL BE IN ACCORDANCE WITH AS/NZS4680.

S11. THE PRINCIPAL CONTRACTOR SHALL PROVIDE THE FABRICATOR AND GALVANISER TO ENSURE VENT HOLE IS PROVIDED IN ACCORDANCE WITH AS/NZS 4680.

S12. PROTECTIVE COATINGS TO BE APPLIED AFTER ALL FABRICATION COMPLETED. NO WELDING ETC TO BE CARRIED OUT DURING OR AFTER APPLICATION OF COATING SYSTEM.

S13. ANY POST GALVANISING DAMAGED TO BE MADE GOOD WITH A HIGH QUALITY TWO PACK EPOXY ZINC RICH PAINT CONFORMING TO AS/NZS7565.5 WITH A MINIMUM DRY FILM THICKNESS OF 100 MICRONS. SURFACE PREPARATION AS PER PAINT MANUFACTURER'S RECOMMENDATIONS.