GENERAL NOTES

1. ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION DATED 2016, AND AMENDMENTS.

2. THE CULVERT TO BE DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 7TH EDITION 2016 WITH INTERIM THROUGH 2015.


4. THE CULVERT SHALL BE DESIGNED FOR SCOUR PER HYDRAULIC REPORT.

5. THE PRECAST CULVERT SHALL BE DESIGNED AS A PIN CONNECTION AT BOTTOM OF PRECAST AND THE WALL. THE CONNECTION BETWEEN THE PRECAST CULVERT THE WALLS SHALL BE DESIGNED PER LOADING DEFINED BELOW.

6. THE PRECAST CONCRETE SHALL BE CLASS 5000, 6000, OR 7000 SELF CONSOLIDATING CONCRETE (SCC). OTHER CONCRETE SHALL BE CLASS 4000.

7. THE FABRICATOR SHALL DESIGN FOR LIFTING AND TRANSPORTING FOR SUBMITTAL PER STD. SPEC. SECTION 7-02.3(6).


10. THE BACKFILL ON BOTH SIDES OF THE CULVERT TO BE PLACED IN SEQUENCE AND COMPACTED IN ACCORDANCE TO THE STD. SPEC 2-09.3(1)E. THE MAXIMUM FIELD HEIGHT DIFFERENCE MEASURED FROM SIDE TO SIDE NO MORE THAN 2".

LOAD COMBINATIONS

THE BURIED STRUCTURES TO BE DESIGNED WITH THE LIMIT STATES SHOWN BELOW:

STRENGTH I = p DC + p DW + 1.50/0.80 EH + 1.50/0.75 ES + 1.75 (L+I) + 1.00 WA
+ 1.00 B + 0.05/120 TU

SERVICE = 1.00 DC + 1.00 DW + 1.00 EH + 1.00 EV + 1.00 ES + 1.00 LS + 1.00 (L+I) + 1.00 WA + 1.00 B
+ 1.00/120 TU

EXTREME I = 1.00 DC + 1.00 DW + 1.00 EH + 1.00 EV + 1.00 ES + 1.00 LS + EQ (L+I) + 1.00 WA + 1.00 B
+ 1.00 EQ

EXTREME II = 1.00 DC + 1.00 DW + 1.00 EH + 1.00 EV + 1.00 ES + 1.00 LS + EQ (L+I) + 1.00 WA + 1.00 B + 1.00 IC

DC = WEIGHT OF SUPERSTRUCTURE
EH = EARTH PRESSURE
ES = EARTH SURCHARGE
EQ = EARTHQUAKE
EV = VERTICAL EARTH PRESSURE
LL+I = LIVE LOAD PLUS IMPACT
LS = LIVE LOAD SURCHARGE
WA = HYDRO-STATIC PRESSURE
B = BUOYANCY
IC = ICE LOAD

NOTES:

EQ = LOADING FOR BOTH LATERAL AND VERTICAL COMBINED
EXTREME II CASE IS FOR SCOUR AND ICE DESIGN

LOADING DIAGRAMS

1. PINNED CONNECTION
2. FIXED CONNECTION

LOADING COMBINATIONS

1. PINNED CONNECTION
2. FIXED CONNECTION

GEOMETRY

SEE BRIDGE STANDARD DRAWING 8.3.1-A2 FOR DIMENSIONS

LOADING DIAGRAMS

SEE BRIDGE STANDARD DRAWING 8.3.1-A2 FOR DIMENSIONS