

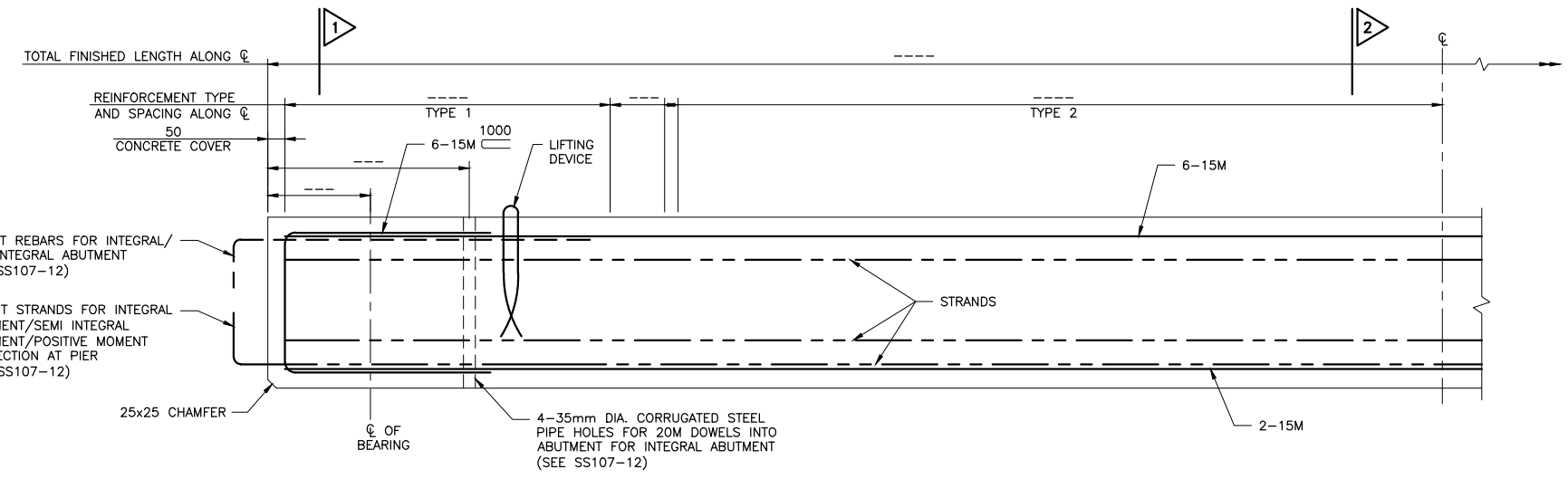
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 MODIFIED: 2023-08-11 15:24  
 MINISTRY OF TRANSPORTATION OF ONTARIO STRUCTURAL ANS D FRAME 2020-05

**Ontario** Ministry of Transportation  
 CONT WP **DRAFT**  
 PRESTRESSED SOLID SLAB AND BEARINGS (S300, S400, S500)  
 SHEET

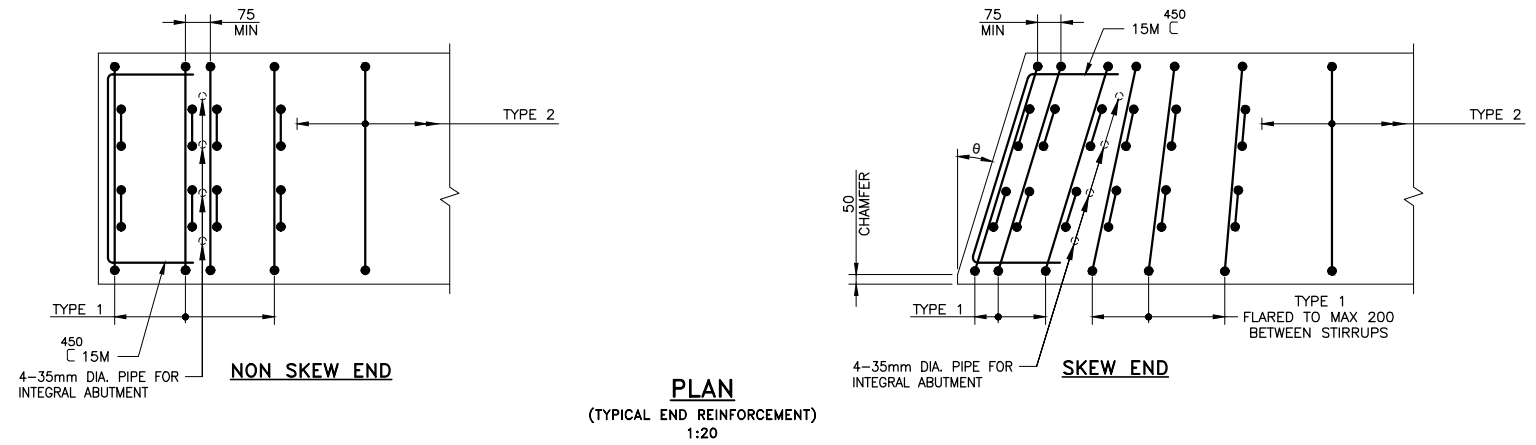
METRIC  
DIMENSIONS ARE IN METRES AND/OR  
MILLIMETRES UNLESS OTHERWISE SHOWN

**BEARING DATA**

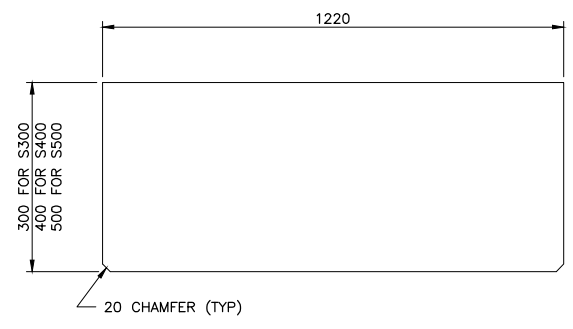
LOCATION	ABUTMENTS	PIERS
TYPE	---	---
SIZE (mm)	---x---x---	---x---x---
NUMBER REQUIRED	---	---
DEAD LOAD (kN)	---	---
TOTAL LOAD (kN)	---	---
MOVEMENT (mm)	+/----	+/----
ROTATION (radian)	---	---
SHEAR RATE @ 20°C (kN/mm)	---	---



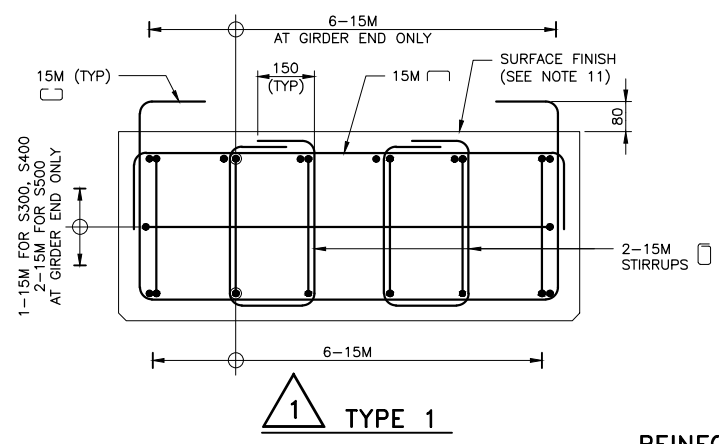
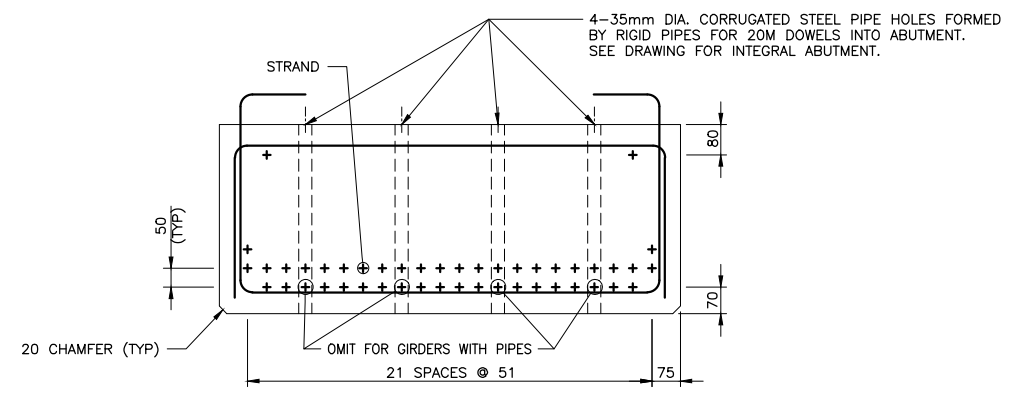
**LONGITUDINAL SECTION**



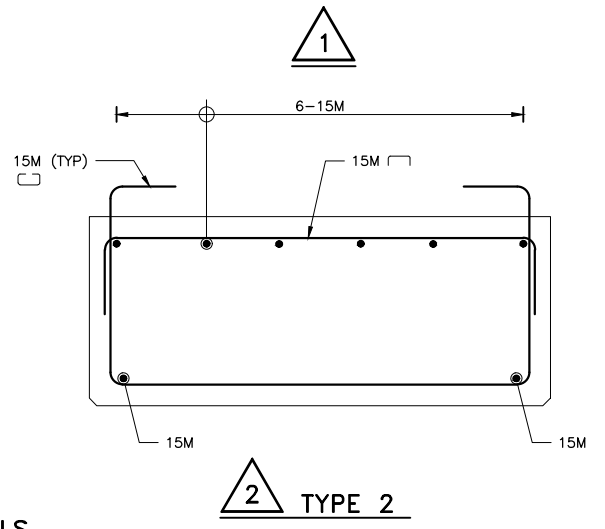
**PLAN**  
(TYPICAL END REINFORCEMENT)  
1:20



**TYPICAL SECTION**



**1 TYPE 1**



**2 TYPE 2**

**REINFORCEMENT DETAILS**

- NOTES:**
- PRESTRESSING STEEL SHALL BE LOW-RELAXATION SEVEN WIRE STRANDS, SIZE DESIGNATION 15, GRADE 1860.
  - MINIMUM BREAKING STRENGTH OF STRAND 261 kN.
  - PRESTRESSING FORCE PER STRAND IMMEDIATELY PRIOR TO TRANSFER 192.7 kN.
  - FORCE PER STRAND AFTER ALL LOSSES \_\_\_\_ kN.
  - THE ELAPSED TIME INTERVAL BETWEEN JACKING OF STRANDS AND TRANSFER SHALL NOT BE LESS THAN 15 HOURS.
  - SPECIFIED 28-DAY CONCRETE COMPRESSIVE STRENGTH PRECAST GIRDER 50 MPa.
  - CONCRETE STRENGTH AT TRANSFER \_\_\_\_ MPa.
  - REINFORCING STEEL SHALL BE GRADE 500W. STAINLESS STEEL BARS SHALL BE TYPE 316 LN OR DUPLEX 2205 WITH A MINIMUM YIELD STRENGTH OF 500 MPa.
  - CLEAR COVER TO REINFORCING STEEL:  
SOFFIT OF BOTTOM SLAB (EXCEPT UNDERCUT) 48 +15mm/-5mm  
UNDERCUT AND ELSEWHERE 30 +15mm/-5mm
  - ALL STIRRUPS, DOWELS INTO DECK AND BURSTING/SPLITTING REINFORCEMENT WITHIN 1000mm FROM THE GIRDER END WITH EXPANSION JOINT SHALL BE STAINLESS.
  - FOR BRIDGES ON GRADES EXCEEDING 3%, THE ENDS OF GIRDERS SHALL BE CAST SO THAT THEY ARE VERTICAL WHEN ERECTED.
  - THE TOP OF PRECAST BEAM SHALL BE GIVEN ROUGH FINISH OF ABOUT 5mm AMPLITUDE ACROSS THE WIDTH.
  - DRAWING TO BE READ IN CONJUNCTION WITH SS107-26.
  - NO WELDING SHALL BE PERMITTED EXCEPT AS SHOWN ON THIS DRAWING OR APPROVED BY THE OWNER.

**NOTES TO DESIGNER:**

- THE DESIGNER SHALL USE STRAIGHT STRANDS ONLY.
- ROTATION IN BEARING DATA TABLE CORRESPONDS TO TOTAL LOAD.
- ANCHORED EMBEDDED STEEL BEARING PLATES WITH PINTLED BEVEL PLATES SHALL BE USED ONLY IF THE CALCULATED REQUIRED SLAB SOFFIT UNDERCUT DIMENSION EXCEEDS 18mm.
- CONCRETE STRENGTH AT TRANSFER SHALL NOT BE GREATER THAN 35 MPa.
- THE 'NOTES TO DESIGNER' SHALL BE DELETED FROM THIS DRAWING PRIOR TO ISSUING.

REFER TO THE STRUCTURAL MANUAL FOR PROFESSIONAL ENGINEER STAMPING REQUIREMENTS.

STANDARD DRAWING AUG 11, 2023	SS107-25
PRESTRESSED SOLID SLAB AND BEARINGS (S300, S400, S500)	

S300	S400	S500
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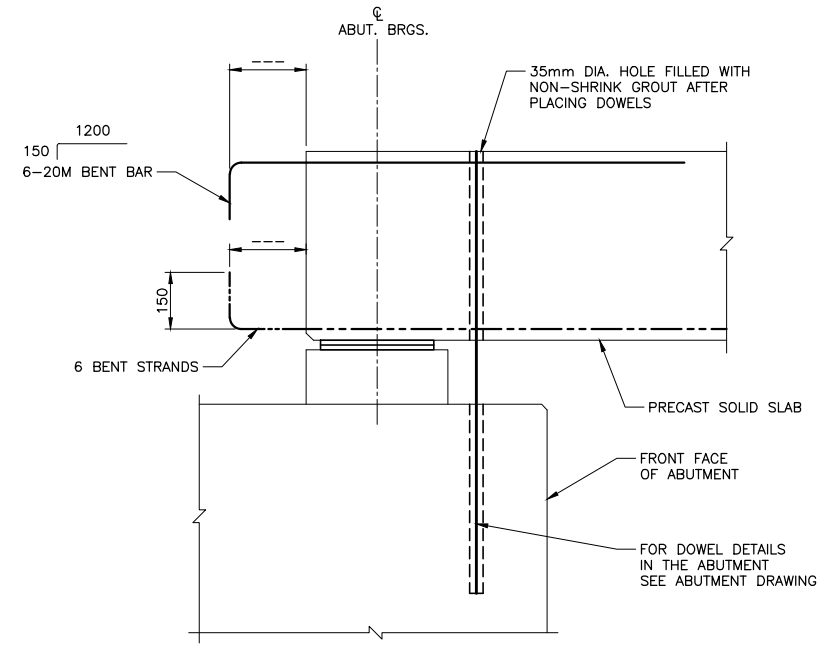
REVISIONS	DATE	BY	DESCRIPTION

DESIGN	CHK	CODE	CHBDC-19/LOAD	DATE
DRAWN	CHK	SITE		DWG

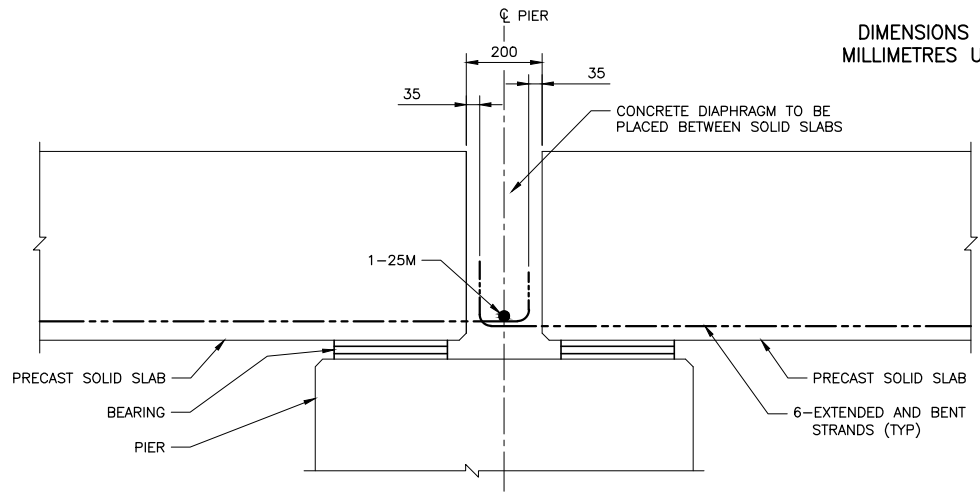
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 MODIFIED: 2023-08-11 12:36  
 MINISTRY OF TRANSPORTATION OF ONTARIO STRUCTURAL ANS1 D FRAME 2020-05

**Ontario** Ministry of Transportation  
 CONT WP **DRAFT**  
 PRESTRESSED SOLID SLABS DETAILS  
 SHEET

METRIC  
DIMENSIONS ARE IN METRES AND/OR  
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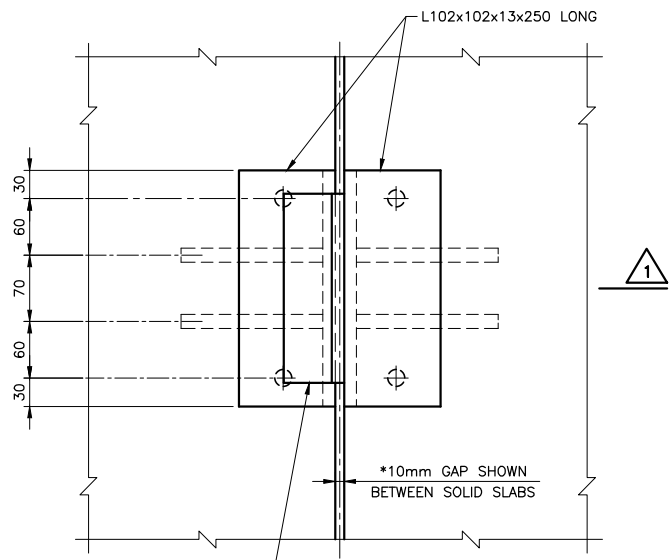


**SOLID SLAB TO ABUTMENT FOR PINNED END**

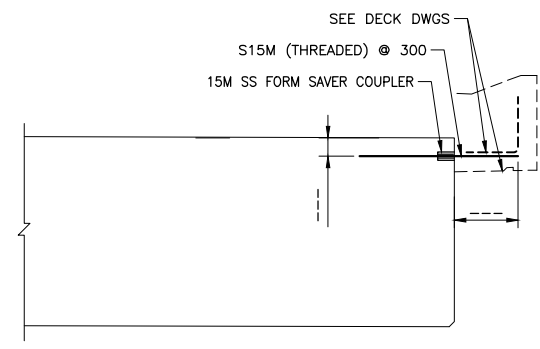


**POSITIVE MOMENT CONNECTION AT PIERS**

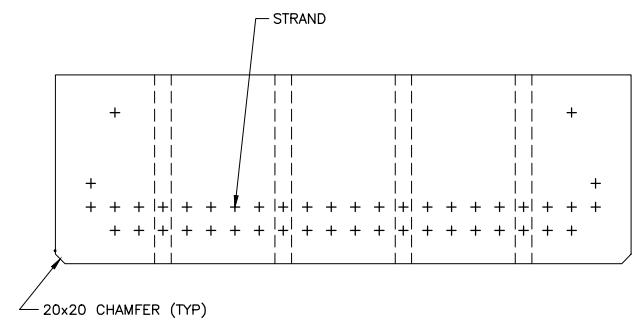
- NOTES:**
- THIS DRAWING SHOWS TYPICAL DETAILS FOR PRECAST CONCRETE SOLID SLABS AND IS TO BE READ IN CONJUNCTION WITH DRAWING SS107-25.
  - STEEL PLATES AND ANGLES SHALL BE ACCORDING TO CSA G40.20-13/G40.21-13, GRADE 300W.
  - STEEL PLATES AND ANGLES SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
  - IF ANCHORED EMBEDDED STEEL BEARING PLATES ARE REQUIRED AT GIRDER ENDS, THEY SHALL HAVE A THICKNESS OF 20mm. THEY SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION. ALL DAMAGED GALVANIZED SURFACES SHALL BE COATED WITH TWO COATS OF ZINC-RICH PAINT.
  - AT ENDS OF GIRDERS WHICH ARE NOT TO BE ENCASED IN CONCRETE, STRAND ENDS SHALL BE RECESSED AND GROUTED, AND GIRDER END FACE SHALL BE PAINTED WITH TWO COATS OF ASPHALTIC PAINT.
  - IF ANCHORED EMBEDDED STEEL BEARING PLATES ARE REQUIRED THE REINFORCING MAY BE ADJUSTED SLIGHTLY TO ACCOMMODATE THE SHEAR CONNECTORS.
  - THE CIRCLED STRANDS ON DETAIL 'A' SHALL BE EXTENDED AND BENT.
  - LIFTING DEVICES SHALL NOT BE CUT WITHOUT APPROVAL OF THE CONTRACT ADMINISTRATOR.



**PLAN STEEL TIES BETWEEN SOLID SLABS STEEL TIES LOCATION: AT 1/3 SPAN**

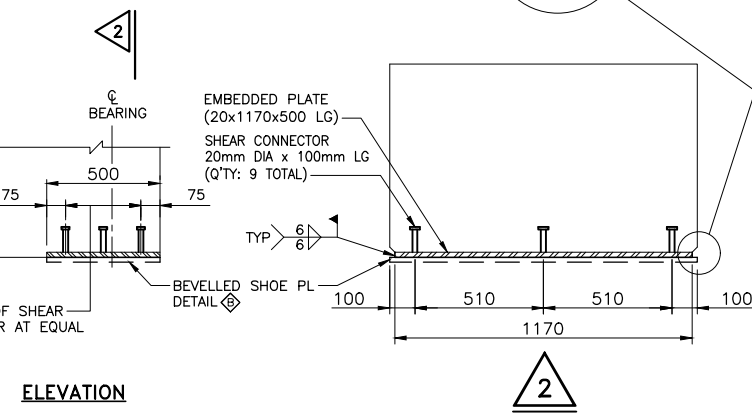
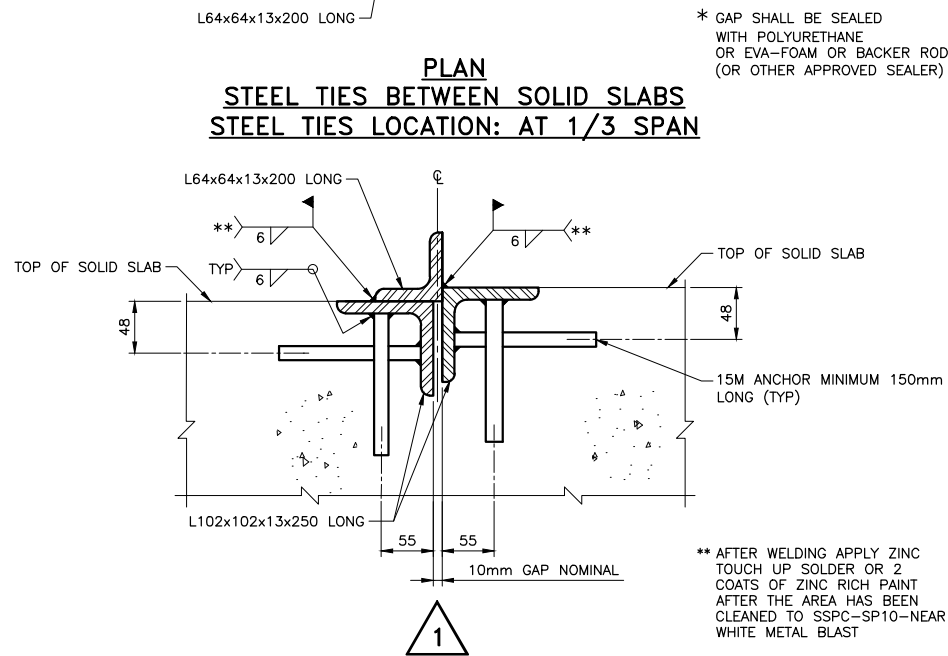


**EXTERIOR SLAB DOWELS FOR OVERHANG CURBS**



**A EXTENDED AND BENT STRANDS OUTSIDE BOX (SEE NOTE 7)**

- NOTES TO DESIGNER:**
- IN DETERMINING THE SLAB SPACING ADD 10mm TO ACCOUNT FOR THE GAP BETWEEN THE SLABS.
  - AT EXTERIOR SLABS, THE OVERHANG LENGTH, CURB FACIA DEPTH, AND SOFFIT SLOPE SHALL BE ADJUSTED TO ACCOMMODATE THE COUPLER BAR LOCATION TO LAP WITH DECK REINFORCEMENT. THE COVER IN SOFFIT OF THE CANTILEVER OVERHANG MAY BE INCREASED FROM 40mm UP TO 100mm IF REQUIRED, AND THE COUPLER MAY BE DETAILED AT ANY DEPTH IN THE TOP FLANGE OF THE GIRDER RESPECTING COVER WITHIN THE PRECAST GIRDER.
  - ANCHORED EMBEDDED STEEL BEARING PLATES WITH PINTLED BEVEL PLATES SHALL BE USED ONLY IF THE CALCULATED REQUIRED SLAB SOFFIT UNDERCUT DIMENSION EXCEEDS 18mm.
  - THE BEVELLED SHOE PLATE USED WITH ELASTOMERIC BEARING MAY HAVE PINTLES. THE DESIGNER SHALL DETAIL THIS REQUIREMENT.
  - TRANSVERSE TIES SHALL BE PROVIDED BETWEEN SLAB AT LOCATIONS ACCORDING TO THE DESIGN TABLE AND TO BE SHOWN ON THE GIRDERS LAYOUT PLAN.
  - IF INSERTS FOR CANTILEVER REINFORCEMENT ARE REQUIRED, THEY SHALL BE DETAILED BY THE DESIGNER.
  - THE DESIGNER SHALL CIRCLE ON DETAIL 'A' THE 6 STRANDS THAT SHALL BE EXTENDED AND BENT AT INTEGRAL ABUTMENT, SEMI-INTEGRAL ABUTMENT, AND POSITIVE MOMENT CONNECTION OVER PIER. PROJECTED STRANDS SHALL NOT BE SIDE BY SIDE AND SHALL BE SPACED MINIMUM 100mm FOR THE ACCESS OF MECHANICAL BENDING DEVICE.
  - THE 'NOTES TO DESIGNER' SHALL BE DELETED FROM THIS DRAWING PRIOR TO ISSUING.



**GIRDER SOFFIT DETAIL AT BEARINGS**

NOTE: DIMENSIONS a AND b = 9, 12, 15 OR 18mm, AS REQUIRED BY THE DESIGN

**EMBEDDED BEARING PLATE DETAIL (NON INTEGRAL ABUTMENT ONLY)**

REFER TO THE STRUCTURAL MANUAL FOR PROFESSIONAL ENGINEER STAMPING REQUIREMENTS

STANDARD DRAWING AUG 11, 2023  
**SS107-26**  
 PRESTRESSED SOLID SLABS DETAILS

REVISIONS	DATE	BY	DESCRIPTION
DESIGN	CHK	CODE	CHBDC-19/LOAD - DATE
DRAWN	CHK	SITE	DWG