

**STAGE 1 - DEMOLITION**

**STAGE 2 - CONCRETE JACKET**

**PIER COLUMN REPAIR - SECTION THRU CL PIER**  
 TYPICAL AT FOUR COLUMNS 1:100

**PIER COLUMN REPAIR NOTES**

- CONTRACTOR TO SUBMIT PIER COLUMN REPAIR CONSTRUCTION STAGING PLAN TO CONTRACT ADMINISTRATOR FOR REVIEW AND ACCEPTANCE PRIOR TO PROCEEDING WITH THE WORK. THE FOLLOWING CONSTRUCTION STAGING HAS BEEN ASSUMED AS THE BASIS OF DESIGN.

**CONSTRUCTION STAGING - BASIS OF DESIGN**

- EXCAVATE & DEMOLISH EXISTING CONCRETE DRAINAGE CHANNEL AS REQUIRED CONTRACTOR TO MINIMIZE THE EXTENT OF EXCAVATION REQUIRED.
- ERECT SCAFFOLDING FOR ACCESS
- PERFORM EXISTING CONCRETE REMOVALS
- PERFORM SANDBLAST FULL HEIGHT AND PERIMETER OF COLUMN
- PLACE REINFORCING STEEL
- PLACE EMBEDDED CORROSION CONTROL ZINC ANODES & PERFORM REQUIRED CONNECTIONS
- PLACE FORMWORK
- PLACE SELF COMPACTING CONCRETE BY PUMP-FROM-BELOW METHOD IN ONE OR TWO POURS
- MAINTAIN FORMS IN PLACE FOR MINIMUM 7 DAYS
- STRIP FORMS
- DISASSEMBLE SCAFFOLDING
- RESTORE CONCRETE DRAINAGE CHANNEL TO ORIGINAL SPECIFICATIONS. CONNECTION DETAILS TO BE PROVIDED BY THE CONTRACT ADMINISTRATOR ONCE EXTENTS OF DEMOLITION ARE KNOWN.
- BACKFILL EXCAVATION

**DEMOLITION NOTES**

- CONTRACTOR TO SUBMIT DEMOLITION PROCEDURE FOR CONTRACT ADMINISTRATOR'S REVIEW AND ACCEPTANCE PRIOR TO PROCEEDING WITH THE WORK.
- SANDBLASTING TO BE BLAST PER THE SOCIETY FOR PROTECTIVE COATINGS (SSPC) STANDARD SP6 COMMERCIAL BLAST CLEANING.
- ANY UNSOUND CONCRETE DETECTED BEYOND THE REMOVAL EXTENTS DEPICTED IN THESE DRAWINGS AND SPECIFICATIONS SHALL BE REPORTED TO THE CONTRACT ADMINISTRATOR IMMEDIATELY

**CONCRETE POUR NOTES**

- PROVIDE MAXIMUM ONE HORIZONTAL COLD JOINT IN CONCRETE COLUMN JACKET C/W POUR STOP FULL PERIMETER OF COLUMN AT COLD JOINT LOCATION. REFER TO DETAIL.
- COLUMN HEIGHT DIMENSION "A" SHOWN ON PIER COLUMN ELEVATION - BASIS OF DESIGN (mm):

	NORTH COLUMN	SOUTH COLUMN
PIER #3	±6850	±7500
PIER #8	±7250	±7900

**STRUCTURAL BACKFILL NOTES**

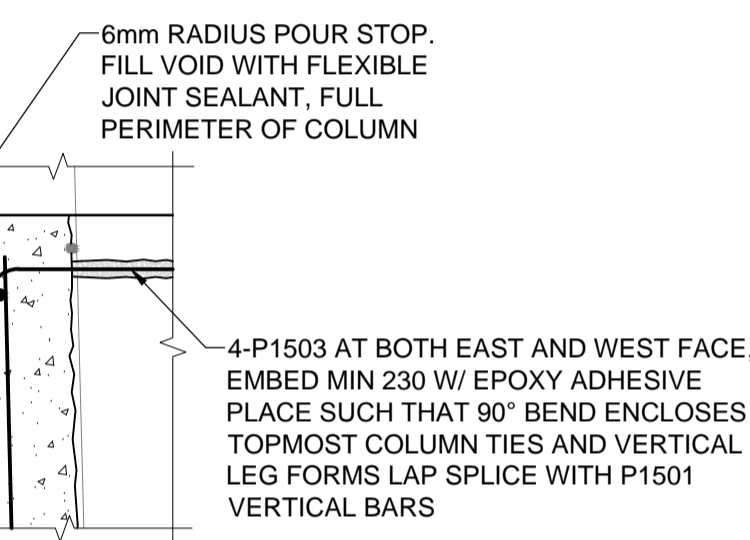
STRUCTURAL BACKFILL TO MEET THE REQUIREMENTS OF STANDARD SPECIFICATION CW 3110 SUB-BASE 50 mm MAX AGGREGATE SIZE, COMPACT TO 95% SPMD.

**EMBEDDED CORROSION CONTROL ZINC ANODE NOTES**

- EMBEDDED CORROSION CONTROL ZINC ANODES ARE GALVANODE DAS ACTIVATED ZINC DISTRIBUTED ANODE SYSTEM SUPPLIED BY VECTOR CORROSION TECHNOLOGIES OR ACCEPTED EQUIVALENT
- DESIGN LIFE: 15 CALENDAR YEARS BEFORE TOTAL CONSUMPTION OF ZINC
- SIZE AND DISTRIBUTION OF THE EMBEDDED CORROSION CONTROL ZINC ANODES SHALL BE AS DETERMINED BY A NACE-QUALIFIED CATHODIC PROTECTION SPECIALIST EMPLOYED BY THE CORROSION MITIGATION TECHNOLOGY COMPANY AND ENLISTED BY THE CONTRACTOR.
- REFER TO PIER COLUMN REPAIR SECTION THRU CL PIER FOR EXTENTS OF ZONE 1 & ZONE 2. PROVIDE EMBEDDED CORROSION CONTROL ZINC ANODES IN AT LEAST THE FOLLOWING QUANTITY:
  - ZONE 1 - 9.6 KG OF ZINC PER METER OF COLUMN HEIGHT
  - ZONE 2 - 7.1 KG OF ZINC PER METER OF COLUMN HEIGHT
- SUPPLIER TO SUBMIT SHOP DRAWINGS CONFIRMING SIZE AND DISTRIBUTION OF ZINC ANODES FOR CONTRACT ADMINISTRATOR'S REVIEW AND ACCEPTANCE PRIOR TO FABRICATION
- COLUMN JACKET DESIGN ASSUMES NOMINAL ANODE DIAMETER OF 33 mm
- SPACING OF ANODES NOT TO EXCEED 400 mm O/C, AND END-TO-END SPACING OF ANODES NOT TO EXCEED 150 mm

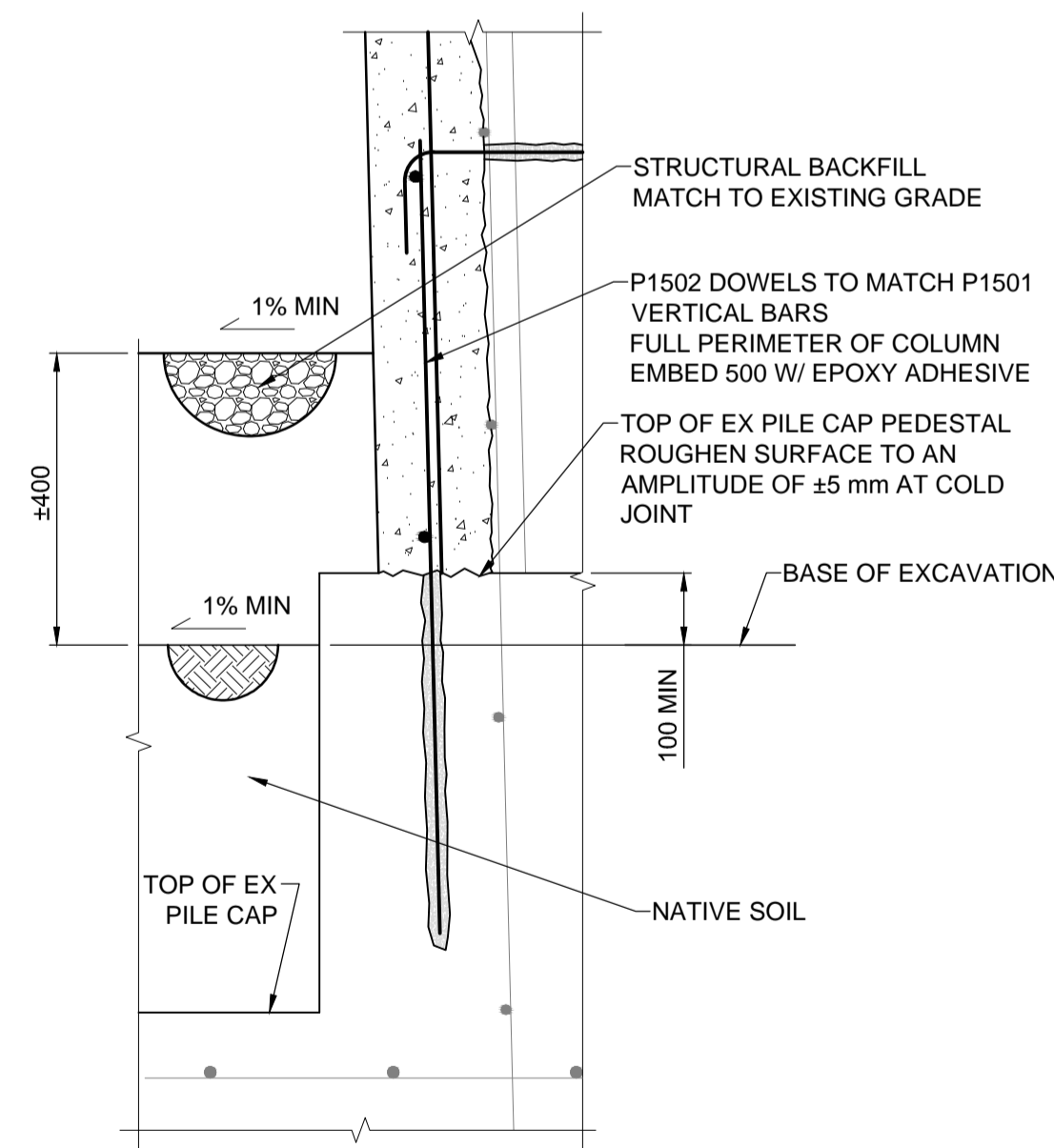
**DETAIL - OPTIONAL POUR JOINT**

1:2



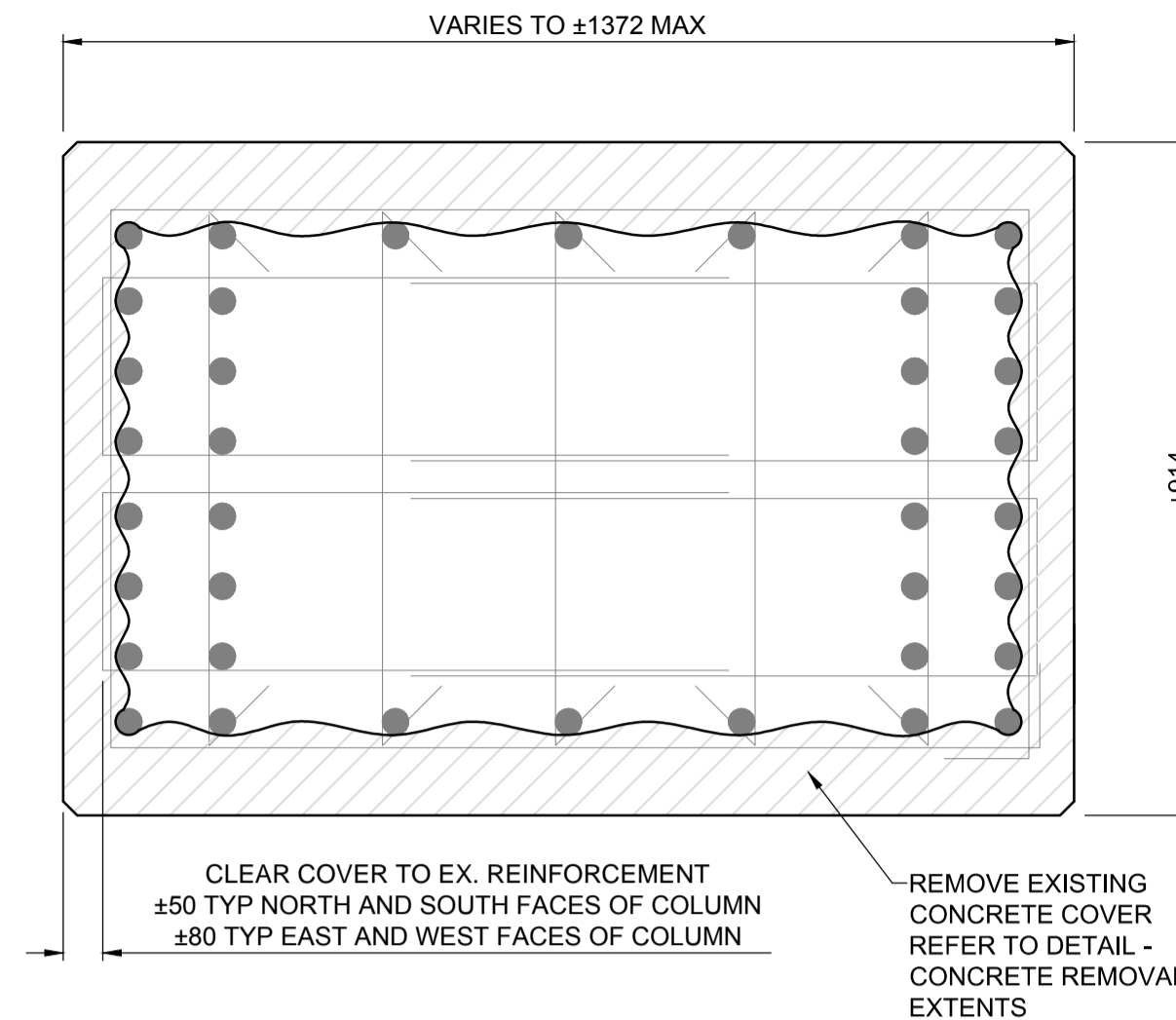
**DETAIL - COLUMN JACKET**

@ U/S OF PIER CAP EAST AND WEST FACES ONLY 1:10



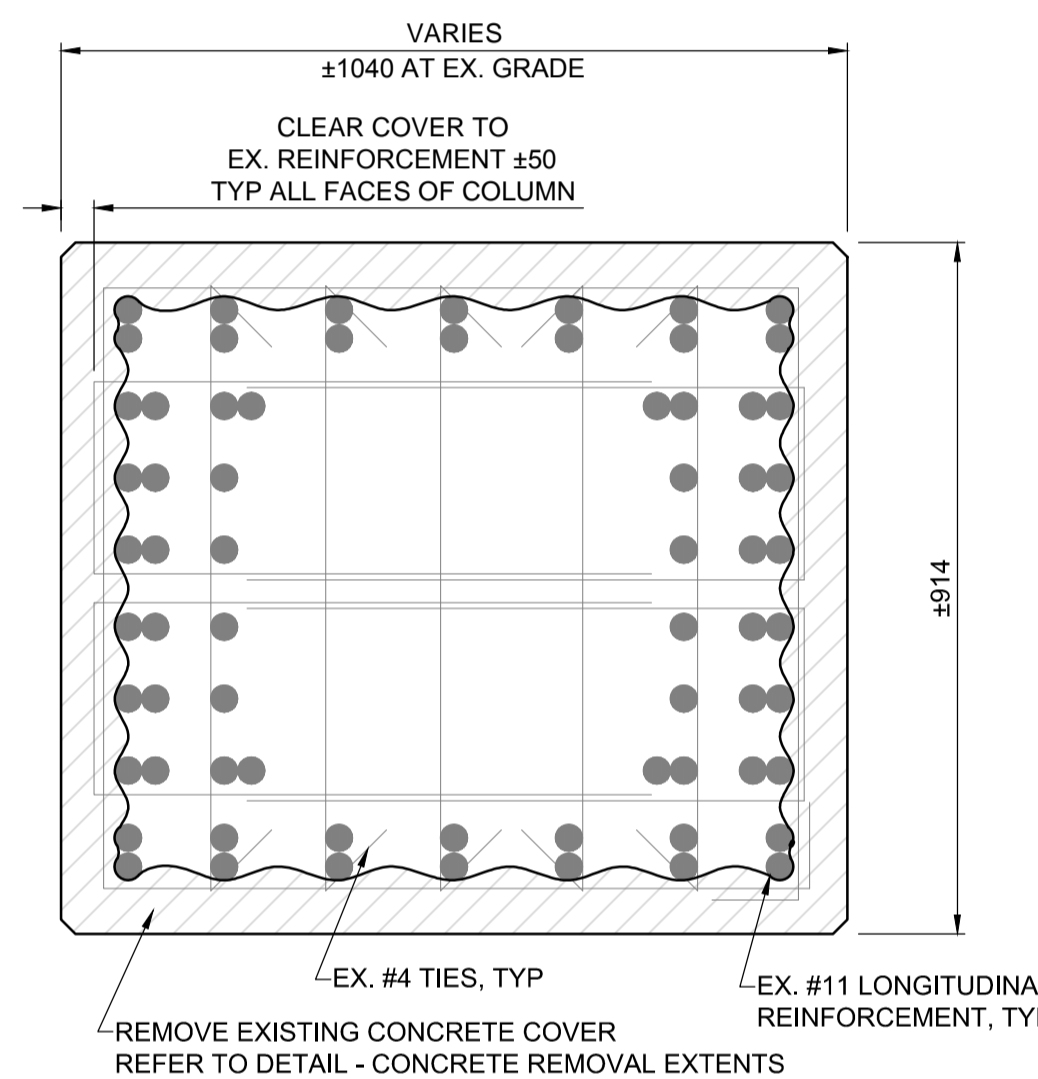
**DETAIL - COLUMN JACKET BASE**

1:10



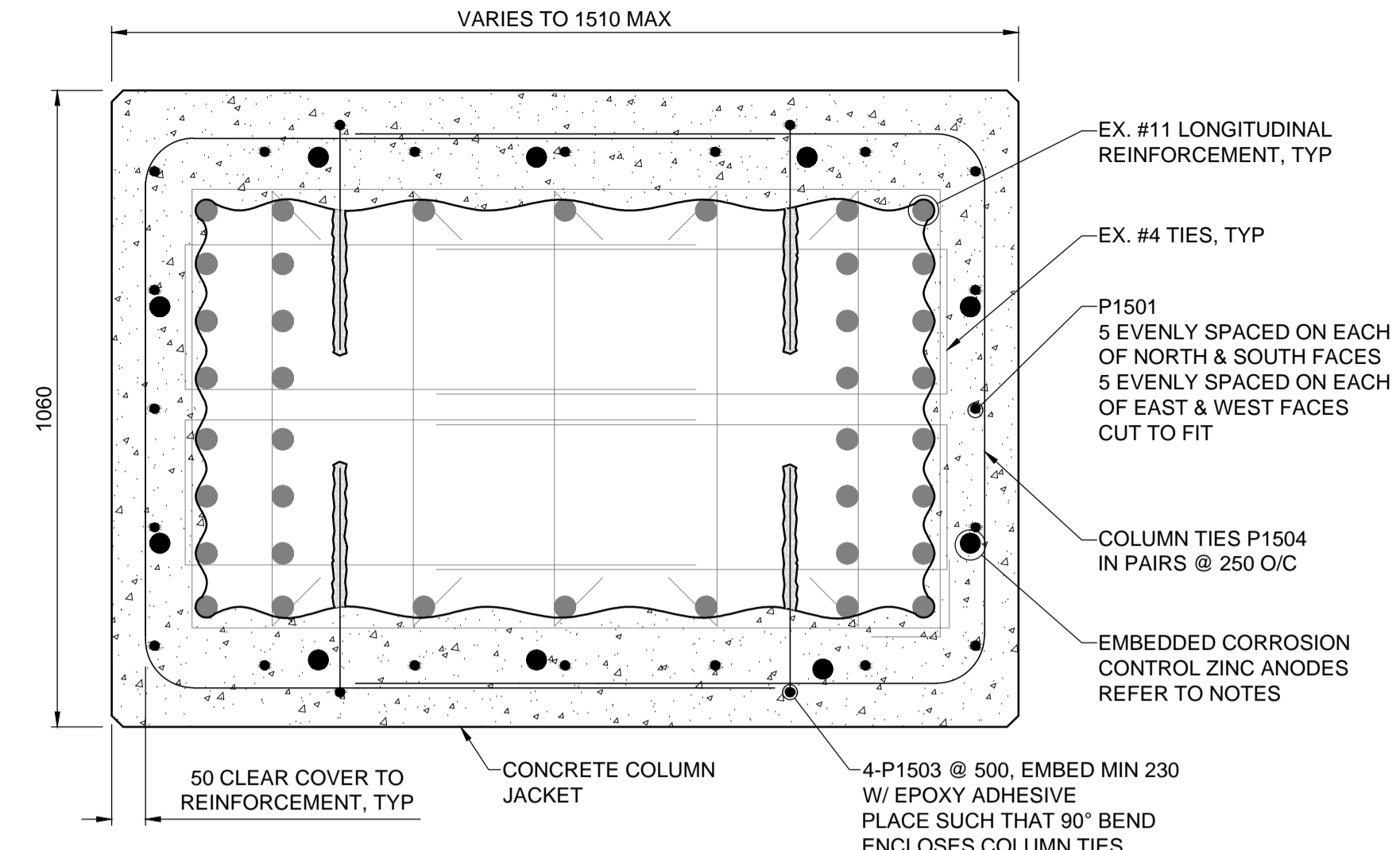
**COLUMN SECTION - ZONE 2**

STAGE 1 - DEMOLITION 1:10



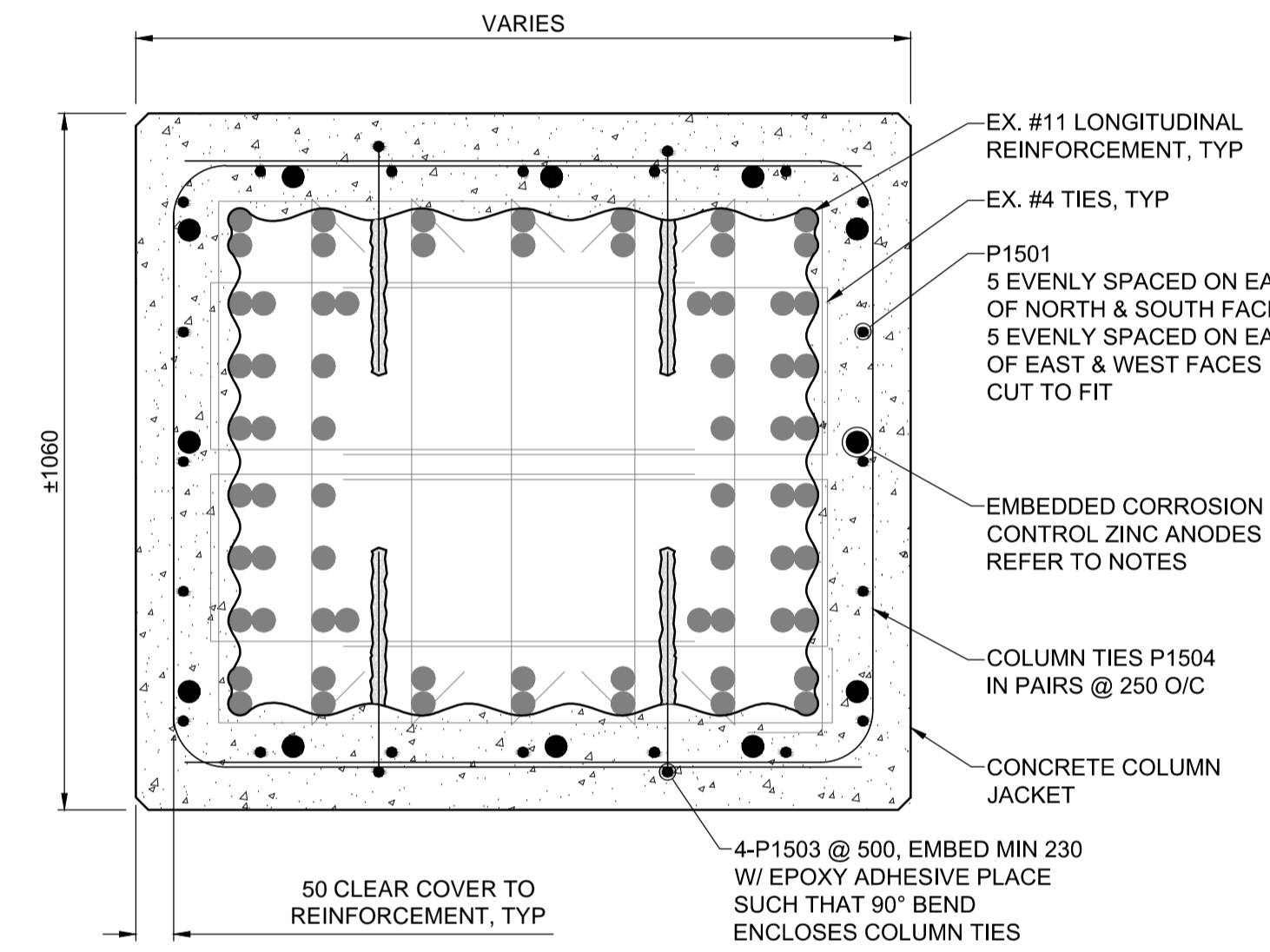
**COLUMN SECTION - ZONE 1**

STAGE 1 - DEMOLITION 1:10



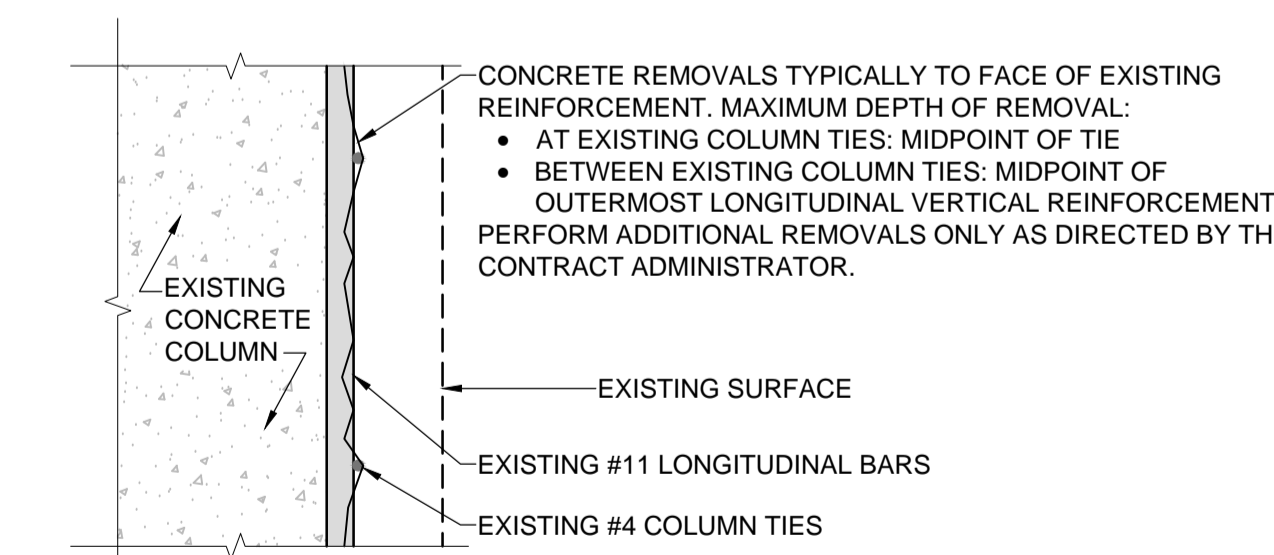
**COLUMN JACKET - ZONE 2**

STAGE 2 - CONCRETE JACKET 1:10



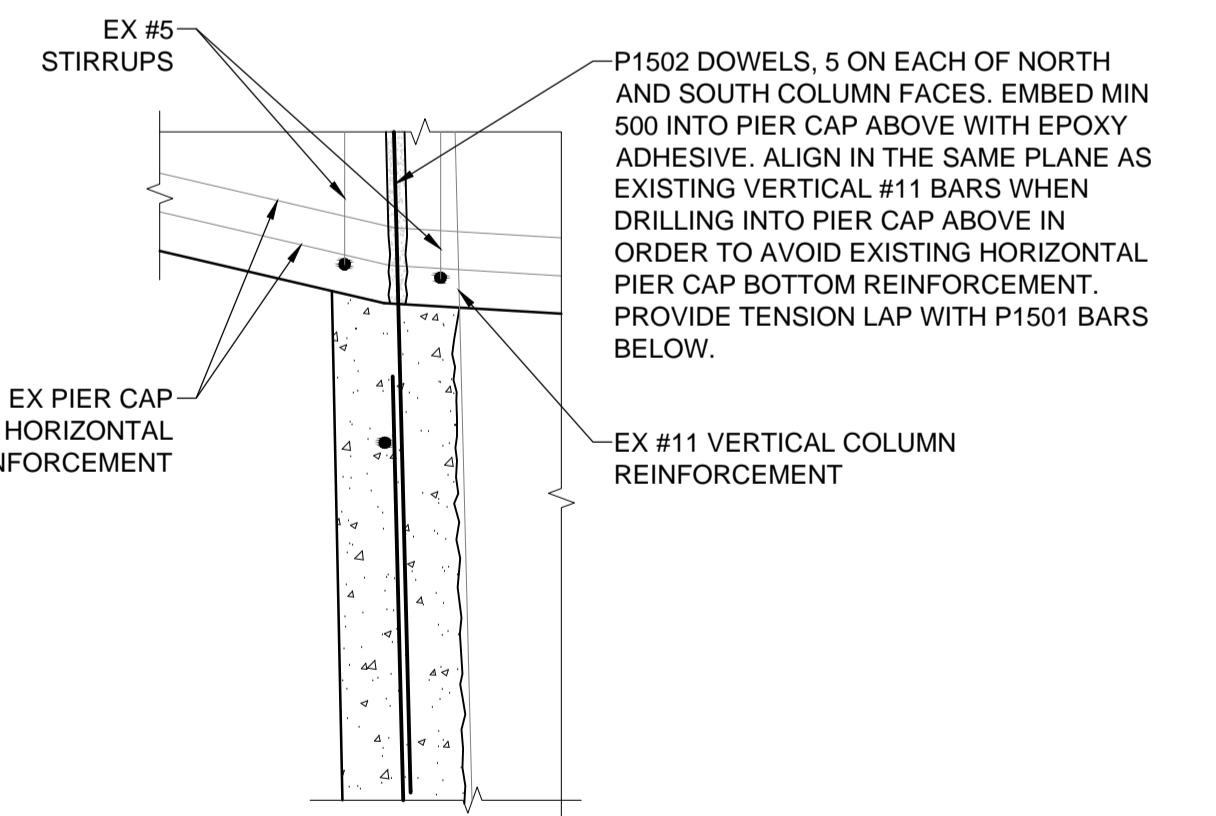
**COLUMN JACKET - ZONE 1**

STAGE 2 - CONCRETE JACKET 1:10



**DETAIL - CONCRETE COLUMN REMOVAL EXTENTS**

VERTICAL SECTION AT EXISTING LONGITUDINAL BAR SHOWN NOTE: LONGITUDINAL BAR WIDTH SHOWN TO REAL SCALE IN THIS DETAIL ONLY 1:10



**DETAIL - COLUMN JACKET**

@ U/S OF PIER CAP NORTH AND SOUTH FACES ONLY 1:10

**LOCATION APPROVED UNDERGROUND STRUCTURES**

NO.	REVISIONS	DATE	BY
C	ISSUED FOR TENDER	15/03/31	DAN
B	ISSUED FOR 99% PROGRESS	15/03/13	DAN
A	ISSUED FOR 50% PROGRESS	15/02/27	DAN

NO.	REVISIONS	DATE	BY
C	ISSUED FOR TENDER	15/03/31	DAN
B	ISSUED FOR 99% PROGRESS	15/03/13	DAN
A	ISSUED FOR 50% PROGRESS	15/02/27	DAN

DESIGNED BY	CHECKED BY	DATE
DAN	SAL	15/02/27
DRAWN BY	APPROVED BY	DATE
EDM	BE	15/02/27

DESIGNED BY	CHECKED BY	DATE
DAN	SAL	15/02/27
DRAWN BY	APPROVED BY	DATE
EDM	BE	15/02/27

**THE CITY OF WINNIPEG PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION**

**Winnipeg**

**NAIRN AVENUE OVERPASS CONCRETE GIRDER AND PIER REPAIRS**

PIER COLUMN REPAIRS

CITY DRAWING NUMBER B121-2015-04

SHEET 4 OF 7

DRAWING No. 04 REV C