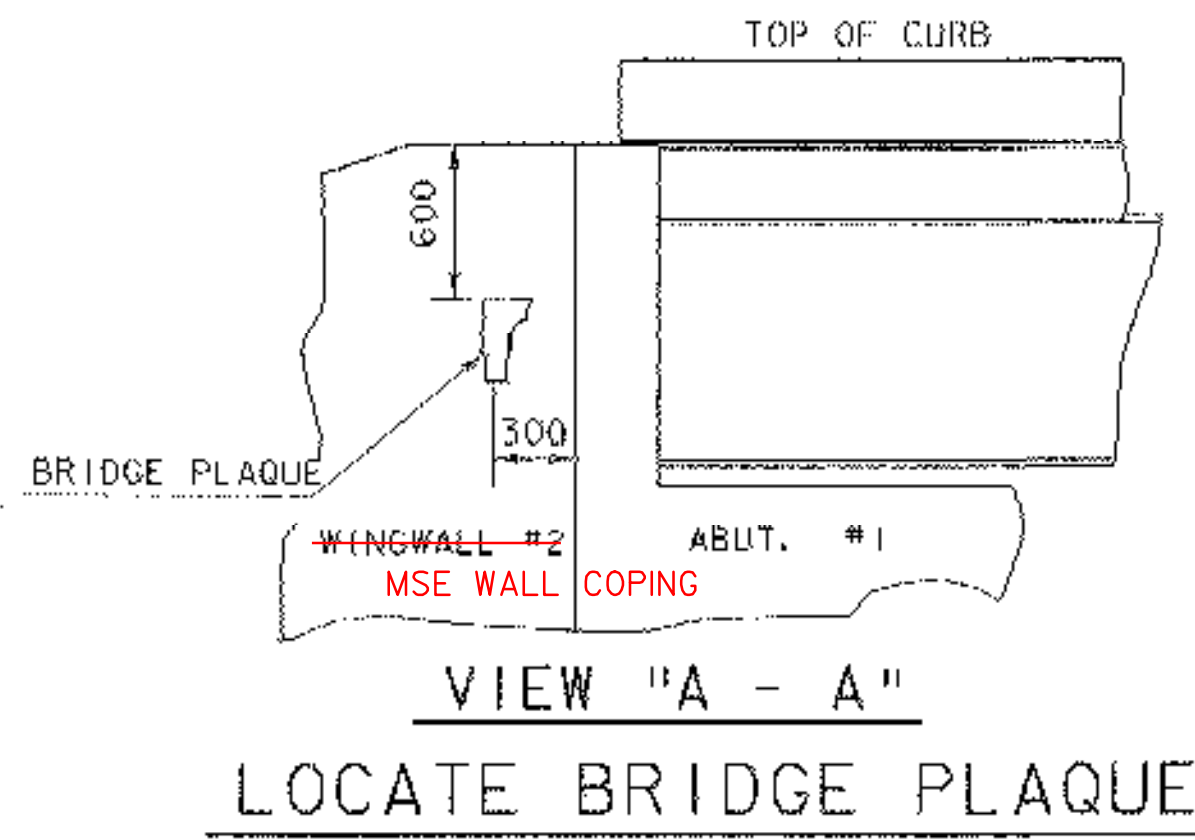
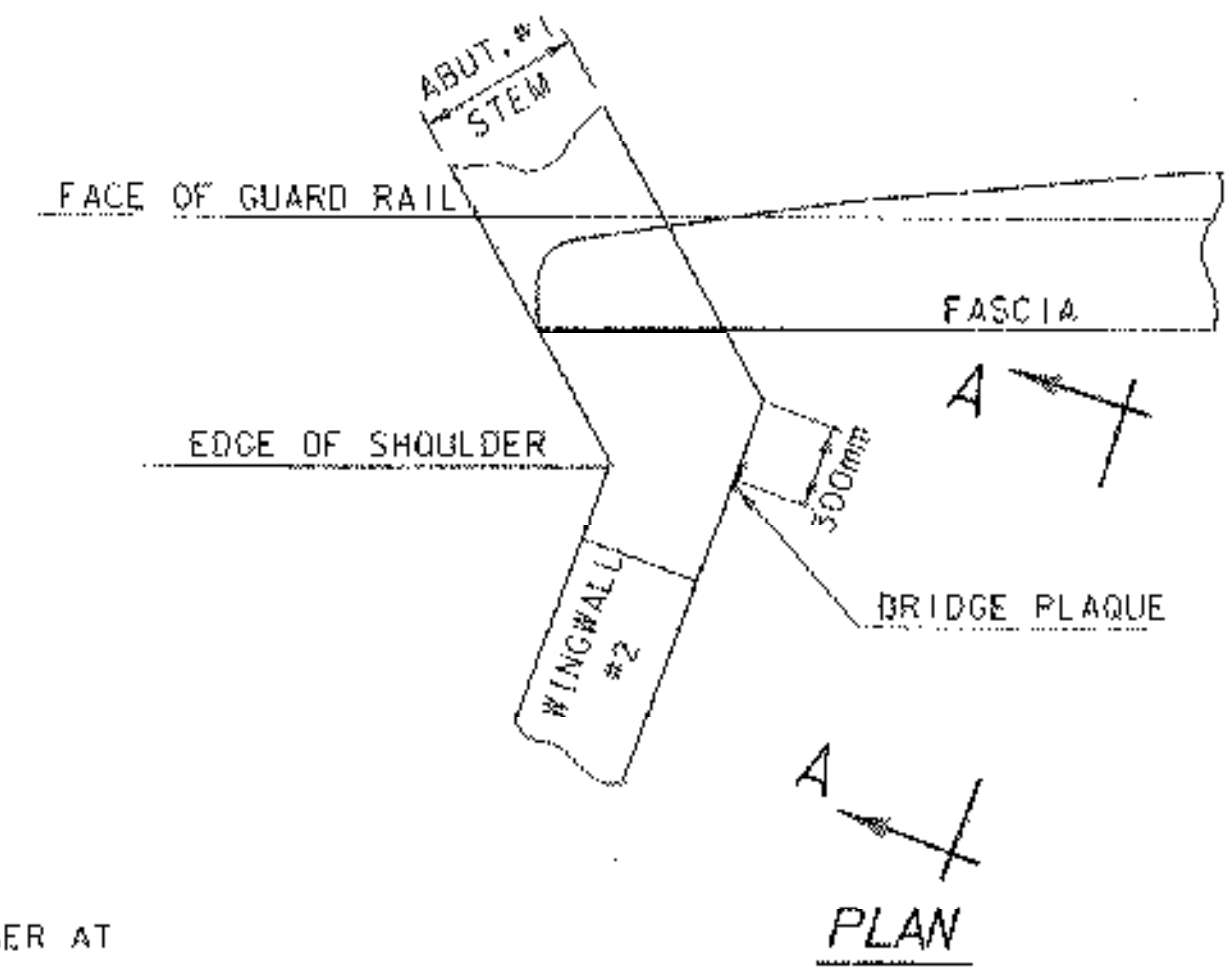


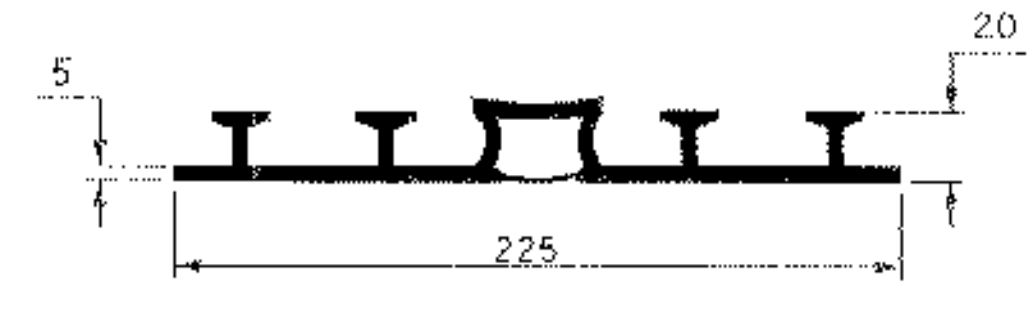
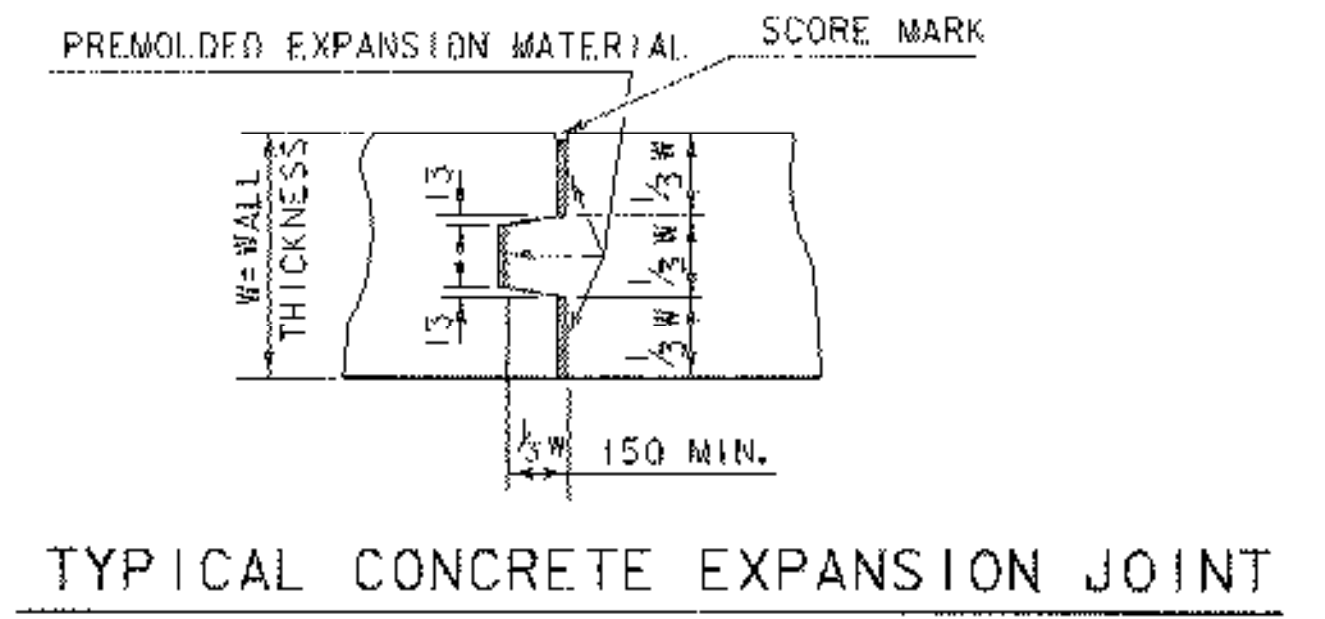
**VOIDED SLAB NOTES:**

1. PRESTRESSED, PRECAST MEMBERS SHALL:
  - A: CONFORM TO SECTION 510 "PRESTRESSED CONCRETE".
  - B: BE DESIGNED FOR AASHTO MS-22.5 LIVE LOAD.
  - C: MEET THE FOLLOWING DESIGN CRITERIA:
    - PRESTRESSED CONCRETE STRENGTH
    - RELEASE  $f'c = 30 \text{ MPa}$
    - SERVICE  $f'c = 45 \text{ MPa}$
    - CONTAIN CORROSION INHIBITOR @ 10.00 L/CM
  - MAXIMUM SERVICE LOADS
 

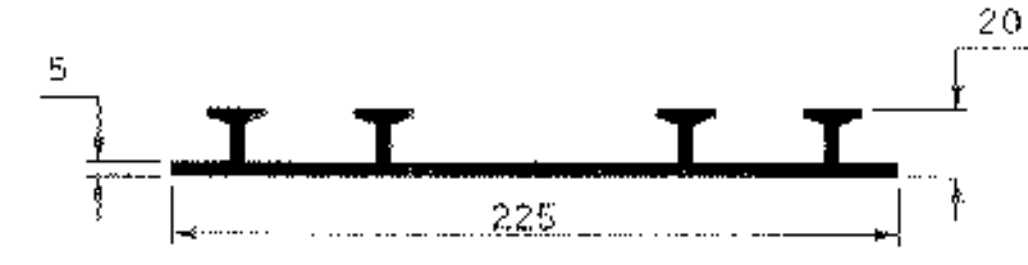
MEMBER MOMENT	138.3 KN-M
DEAD LOAD ON MEMBER MOMENT	88.1 KN-M
SUPER DEAD LOAD ON MEMBER MOMENT	84.7 KN-M
LIVE LOAD + IMPACT MOMENT	297.4 KN-M
DEAD LOAD REACTION/MEMBER	59.55 KN
LIVE LOAD REACTION/MEMBER	61.74 KN
TOTAL REACTION/MEMBER	121.29 KN
  - D: CONTAINS A TOTAL OF (12) 15.25mm DIAMETER, 1860 MPA, LOW RELAXATION STRANDS, AND CONFORM TO AASHTO M203.
  - E: SHALL HAVE CENTROID OF ALL STRANDS 190.5mm FROM THE BOTTOM OF THE MEMBER AT MIDSPAN.
  - F: HAVE ENDS OF STRANDS RECESSED AND GROUTED AS PER STANDARD PRACTICE.
  - G: VOIDS SHALL TERMINATE AS SHOWN ON THE PLANS AND SHALL BE CONTINUOUS EXCEPT AT LOCATIONS OF THE TRANSVERSE TIE TENDONS.
  - H: ENDS OF VOIDED SLABS TO BE VERTICAL IN FINAL POSITION.
2. THE PRICE PER VOIDED SLAB UNIT SHALL INCLUDE ALL OF THE MATERIALS, LABOR, AND ANY OTHER COSTS ASSOCIATED WITH THE INSTALLATION OF THE TRANSVERSE TENDONS.
3. THE PRICE PER VOIDED SLAB UNIT SHALL INCLUDE ALL OF THE MATERIALS, LABOR AND ANY OTHER COSTS ASSOCIATED WITH THE ANCHOR BOLTS, AND THEIR INSTALLATION.
4. ADVANCE NOTIFICATION OF AT LEAST TWO WEEKS MUST BE PROVIDED BY THE FABRICATOR TO THE PROJECT MANAGER AND THE STRUCTURAL CONCRETE ENGINEER CONCERNING THE PROPOSED INTENTION TO COMMENCE WORK. A MINIMUM OF FIVE WORKING DAYS NOTIFICATION MUST BE PROVIDED TO THE STRUCTURAL CONCRETE ENGINEER BY THE FABRICATOR TO CONFIRM THE FABRICATION START DATE.
5. THE TOP SURFACE OF THE VOIDED SLAB UNITS SHALL BE ROUGHENED TO AN AMPLITUDE OF 6mm.
6. VOID DRAINS WILL BE REQUIRED IN EACH END OF ALL VOIDS. THE VOID DRAIN SHALL BE 20mm DIAMETER AND NON-FERROUS. THE DRAINS SHALL BE CLEANED UPON REMOVAL FROM FORMS.  
**NO VOID DRAINS PROVIDED**
7. AN ALTERNATIVE STRAND CONFIGURATION FOR THE VOIDED SLAB UNITS MAY BE SUBMITTED FOR APPROVAL TO THE PROJECT MANAGER, PROVIDED THE DESIGN IS SIGNED AND STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF VERMONT AND THE DESIGN MEETS ALL THE APPLICABLE DESIGN CRITERIA, LOADINGS AND CODES.
8. AFTER THE PRESTRESSED UNITS HAVE BEEN SET ON THE BEARINGS, ELEVATIONS SHALL BE TAKEN ALONG THE TOP OF EACH BEAM UNDER THE DIRECTION OF THE RESIDENT ENGINEER. THESE ELEVATIONS SHALL BE USED IN DETERMINING THE FINAL GRADE.
9. CONCRETE SHALL NOT BE PLACED ABOVE THE BRIDGE SEAT UNTIL THE VOIDED SLAB UNITS HAVE BEEN SET AND BEAM PROFILES FOR SPAN #2 HAVE BEEN COMPLETED.
10. CONSTRUCTION AND PLACEMENT SEQUENCE:
  - A) WORKING LINES MEASURED FROM THE WORKING POINTS SHALL BE LAID OUT THE ENTIRE WIDTH OF THE BRIDGE ALONG CENTERLINE OF BEARING. THE WORKING LINES SHALL BE BASED ON THE NOMINAL BEAM WIDTHS.
  - B) THE BEAM SEAT ELEVATIONS AT BOTH ABUTMENTS SHALL BE VERIFIED TO BE CORRECT PRIOR TO ERECTING THE PRESTRESSED UNITS. IF NECESSARY THE SEATS SHALL BE GROUND TO THE PROPER ELEVATION. IF NECESSARY THE ELASTOMERIC BEARINGS SHALL BE SHIMMED TO PROVIDE EVEN LOAD DISTRIBUTION TO ALL BEARINGS AND PREVENT THE PRESTRESSED UNITS FROM "ROCKING". PRIOR TO ERECTING THE PRESTRESSED UNITS THE CONTRACTOR SHALL HAVE AN ADEQUATE SUPPLY OF APPROVED SHIMS FOR USE UNDER THE BEARINGS. ALL COSTS ASSOCIATED WITH SUPPLY AND INSTALLATION OF THE SHIMS IS INCIDENTAL TO THE PRESTRESSED CONCRETE ITEMS.
  - C) ERECT THE PRESTRESSED UNITS TO FIT WITHIN THE WORKING LINES. AS THE WORK PROGRESSES INSTALL HARDWOOD WEDGES TO ENSURE PROPER JOINT OPENING. ONE WEDGE AT EACH TRANSVERSE TIE LOCATION SHALL BE THE MINIMUM.
  - D) THE BACKER ROD SHALL BE INSTALLED AFTER THE PRESTRESSED UNITS HAVE BEEN ERECTED BUT PRIOR TO INSTALLING THE HARDWOOD WEDGES. THE BACKER ROD SHALL BE INSTALLED UNIFORMLY IN THE BOTTOM OF THE SHEAR KEY.
  - E) DRILL INTO ABUTMENTS AND INSTALL ANCHOR BOLTS AT THE ENDS OF THE PRESTRESSED UNITS AFTER BEAMS HAVE BEEN SET.
  - F) INSTALL TRANSVERSE TIES AND POST TENSION TO 22.24 KN TO REMOVE SAGS AND TO SEAT THE CHUCK.
  - G) THE SHEAR KEYS SHALL BE CLEANED WITH OIL FREE COMPRESSED AIR TO REMOVE ANY DEBRIS. THE SHEAR KEYS SHALL BE PRE-WETTED TO A SATURATED SURFACE DRY CONDITION IMMEDIATELY PRIOR TO PLACING THE MORTAR. PREPARATION AND GROUTING OF SHEAR KEYS TO BE PAID FOR UNDER ITEM 510.24 "GROUTING SHEAR KEYS".
  - H) THE FINAL POST TENSIONING OF THE TRANSVERSE TIES TO 133.44 KN SHALL BE DONE ONCE THE MORTAR HAS ATTAINED 10 MPa COMPRESSIVE STRENGTH.
  - I) THE WEDGES SHALL BE REMOVED AND THE AFFECTED AREAS PATCHED PRIOR TO THE PLACING OF THE COMPOSITE DECK.



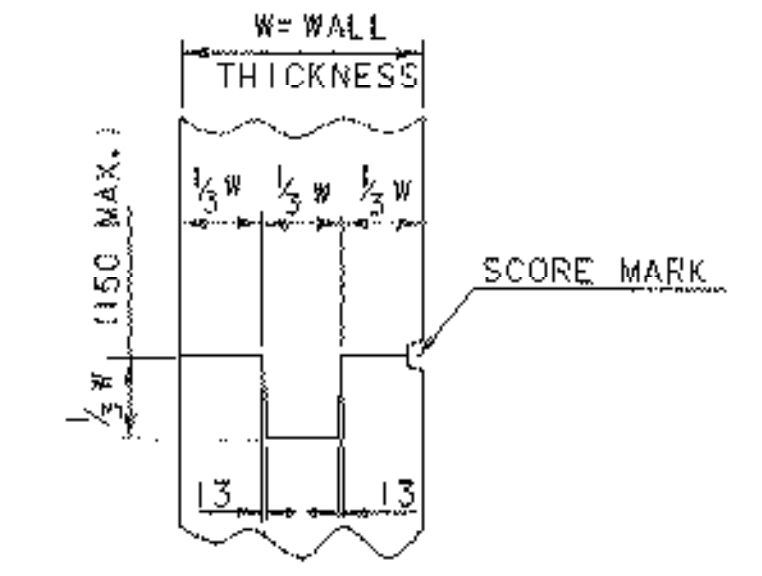
LOCATE BRIDGE PLAQUE  
THE BENCH MARK AND BRIDGE PLAQUE WILL BE SUPPLIED BY THE AGENCY OF TRANSPORTATION AND SHALL BE INSTALLED BY THE CONTRACTOR AT ABUTMENT #1 ON THE RIGHT SIDE AS SHOWN OR AS DIRECTED BY THE ENGINEER.



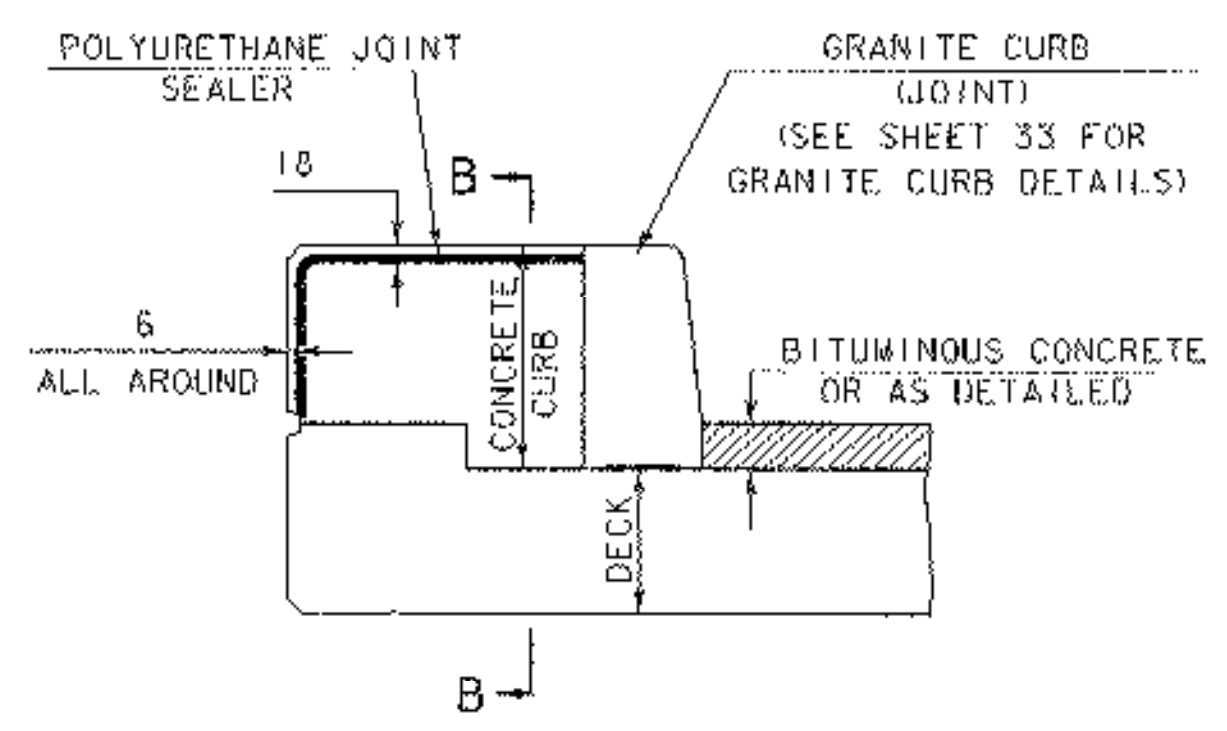
**P. V. C. WATERSTOP FOR EXPANSION JOINTS**  
THE COSTS FOR P. V. C. WATERSTOP SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONCRETE. OTHER CONFIGURATIONS MAY BE USED UPON APPROVAL OF THE STRUCTURES ENGINEER.



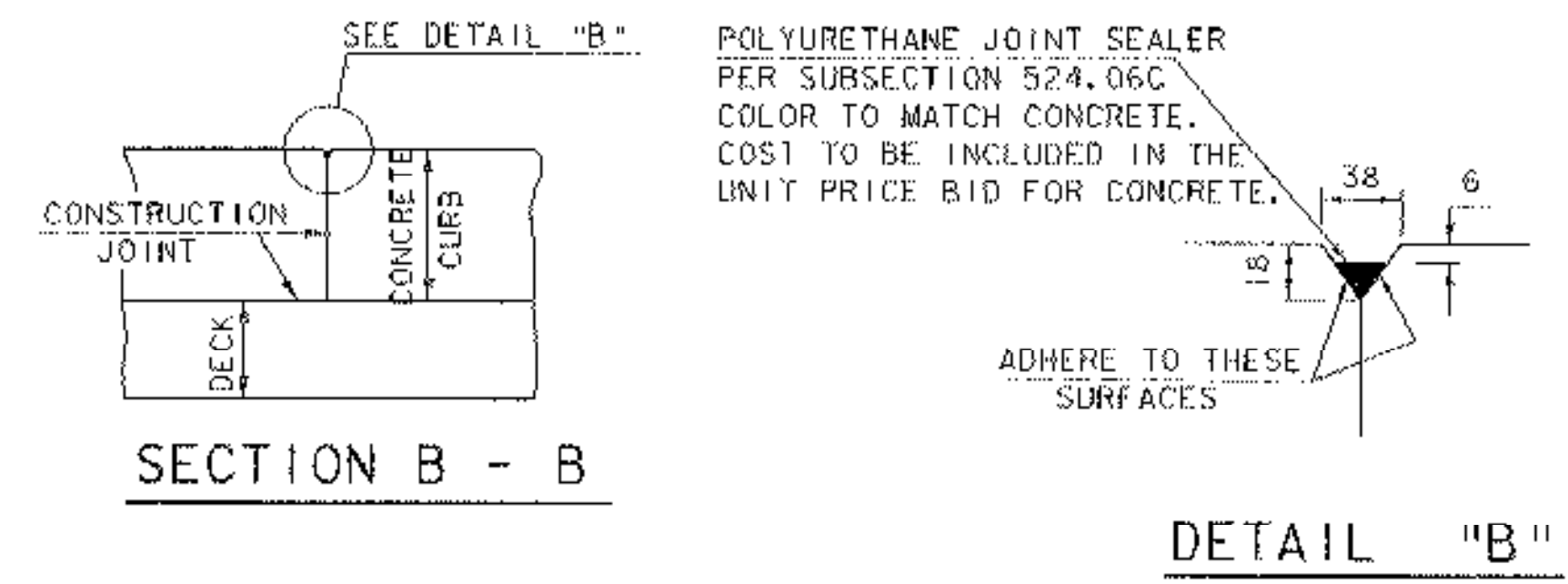
**P. V. C. WATERSTOP FOR CONSTRUCTION JOINTS**  
THE COSTS FOR P. V. C. WATERSTOP SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONCRETE. OTHER CONFIGURATIONS MAY BE USED UPON APPROVAL OF THE STRUCTURES ENGINEER.



TYPICAL CONCRETE CONSTRUCTION JOINT



TYPICAL SECTION THROUGH CONCRETE CURB CONSTRUCTION JOINT



- NOTES:
1. CONSTRUCTION JOINTS THROUGH CONCRETE CURBS SHALL BE SPACED MAXIMUM 4500 CENTER TO CENTER AND SHALL BE 450 MINIMUM FROM THE CENTER OF THE NEAREST BRIDGE RAIL POST. CONCRETE SHALL BE PLACED IN ALTERNATING SECTIONS WITH A MINIMUM OF 48 HOURS DELAY BETWEEN ADJACENT POURS.
  2. LONGITUDINAL REINFORCING SHALL PASS THROUGH CONCRETE CURB CONSTRUCTION JOINTS.
  3. CONSTRUCTION JOINTS THROUGH SIDEWALKS SHALL BE SIMILAR TO CONCRETE CURB CONSTRUCTION JOINTS.

MATERIAL ITEM	TOLERANCE
PAVEMENT	±5 mm TOTAL THICKNESS
AGGREGATE SURFACE COURSE	±10 mm
BASE COURSE	±10 mm
SUBBASE	±30 mm
SAND BORROW	±30 mm
GRANULAR BORROW	±30 mm

PROJECT: <b>BETHEL</b>	PROJECT NO.: <b>BRF0231 (33) C/2</b>
DESIGN FILE NAME: 02c180/structures/s02c180sup.dgn	PLOT DATE: 15-APR-2005
IPARM FILE NAME: s02c180vnotes.i	DRAWN BY: E.L. RUSTAY
DESIGNED BY: K. M. HIGGINS	CHECKED BY: K. M. HIGGINS
SQUAD LEADER: C. P. WILLIAMS	SHEET: 32 OF 130
SPAN #1 NOTES & MISC. DETAIL	