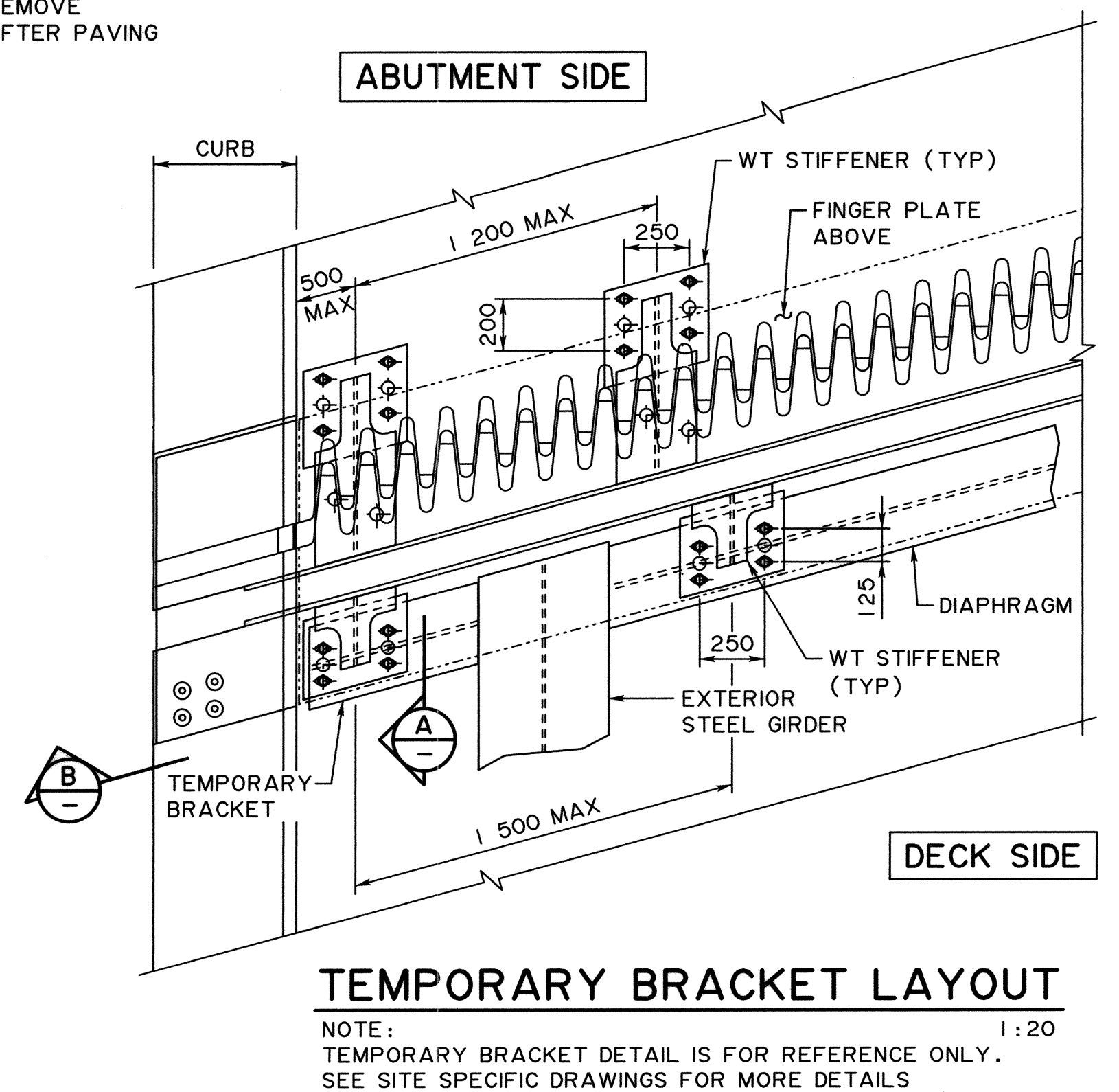
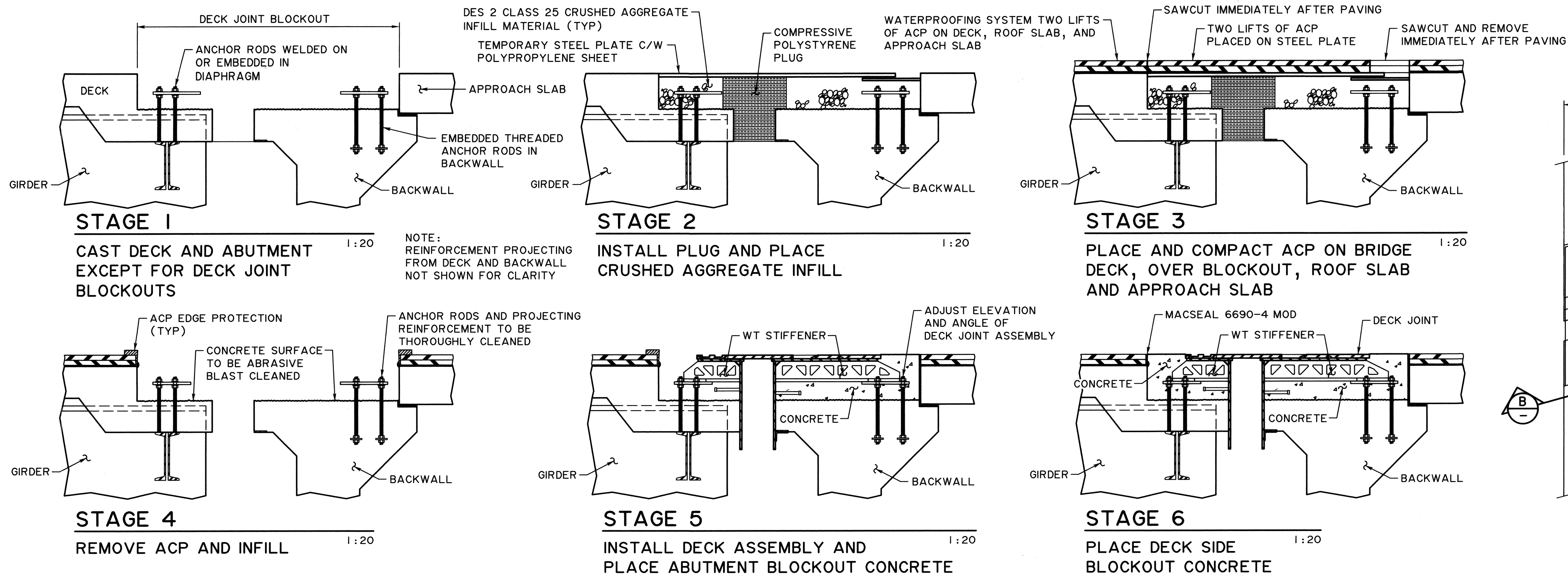




## CONSTRUCTION SEQUENCE NOTES:

- THE CONTRACTOR SHALL SUBMIT A DECK JOINT INSTALLATION PROCEDURE INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION STAGING, DETAILS OF PROPOSED TEMPORARY SUPPORTS AND CONNECTIONS, FORMWORK, FALSEWORK, AND ACP PROTECTION MEASURES. THE DECK JOINT INSTALLATION PROCEDURE SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF ALBERTA AND SUBMITTED TO THE CONSULTANT FOR REVIEW AND ACCEPTANCE A MINIMUM OF TWO WEEKS PRIOR TO COMMENCEMENT OF THE WORK. THE CONSULTANT'S REVIEW AND ACCEPTANCE OF THE CONTRACTOR'S INSTALLATION PROCEDURE WILL NOT RELIEVE THE CONTRACTOR OF HIS SOLE RESPONSIBILITY TO ACHIEVE THE SPECIFIED INSTALLATION TOLERANCES
- CONSTRUCTION STAGING SHOWN ILLUSTRATES MINIMUM GENERAL REQUIREMENTS THAT SHALL BE INCLUDED IN THE CONTRACTOR'S DECK JOINT INSTALLATION PROCEDURE

### STAGE 1

- CONSTRUCT ABUTMENT BACKWALL, ROOF SLAB, APPROACH SLAB, DECK AND BARRIER/CURB, EXCEPT AT DECK JOINT BLOCKOUTS. PROTECT PROJECTING REINFORCING STEEL AND ANCHOR RODS PRIOR TO AND DURING CONCRETE PLACEMENT

### STAGE 2

- INSTALL COMPRESSIBLE POLYSTYRENE PLUG WITHIN THE DECK JOINT GAP. THE SIZE AND SHAPE OF THE POLYSTYRENE PLUG TO BE DESIGNED AND INSTALLED SUCH THAT IT REMAINS IN CONTACT WITH THE DECK AND ABUTMENT CONCRETE UNTIL ACP PLACEMENT AND COMPACTION IS COMPLETE
- FILL AND COMPACT THE DECK JOINT BLOCKOUT AREA WITH DES 2 CLASS 25 CRUSHED AGGREGATE MATERIAL
- INSTALL 16 mm AND 25 mm STEEL PLATES ON THE COMPACTED CRUSHED AGGREGATE INFILL. INSTALL POLYETHYLENE SHEET BETWEEN THE 25 mm STEEL PLATE AND INFILL CRUSHED AGGREGATE ON THE ABUTMENT SIDE OF THE DECK JOINT BLOCKOUT

### STAGE 3

- INSTALL BRIDGERAIL BUT DO NOT GROUT BRIDGERAIL POST BASEPLATES. FINAL SETTING OF BRIDGERAIL AND GROUTING TO OCCUR AFTER WATERPROOFING AND ACP PLACEMENT
- INSTALL ASPHALTIC MEMBRANE AND PROTECTION BOARD COMPONENTS OF THE WATERPROOFING SYSTEM OVER DECK, ROOF AND APPROACH SLABS
- INSTALL CONCRETE MEDIAN, EXCEPT AT DECK JOINT BLOCKOUT
- PLACE ACP IN CONTINUOUS MONOLITHIC MATS OVER THE DECK, DECK JOINT BLOCKOUT, ABUTMENT ROOF AND APPROACH SLABS. SAWCUT ACP AT THE EDGES OF DECK JOINT BLOCKOUTS IMMEDIATELY AFTER THE SECOND LAYER OF ACP IS PLACED AND COMPACTED. REMOVE MINIMUM 200 mm OF ACP OVER THE 16 mm TEMPORARY STEEL PLATE IMMEDIATELY AFTER THE ACP HAS BEEN SAWCUT

### STAGE 4

- REMOVE THE ACP OVER THE DECK JOINT BLOCKOUT AREA. INSTALL TEMPORARY PROTECTION OF THE SAWCUT ACP EDGE AND MEMBRANE. APPLY SIKAGARD EWL TROWEL GRADE BETWEEN THE TIP OF TEMPORARY PROTECTION AND WATERPROOFING MEMBRANE
- REMOVE CRUSHED AGGREGATE INFILL MATERIAL AND TEMPORARY SUPPORTS WITHOUT DAMAGING THE WATERPROOFING, ACP AND REINFORCING STEEL
- CLEAN ALL CONCRETE AND REINFORCING STEEL SURFACES TO THE SATISFACTION OF THE CONSULTANT. ABRASIVE BLAST THE DECK JOINT BLOCKOUT CONCRETE SURFACES TO AN ICRI CSP3 SURFACE PROFILE

### STAGE 5

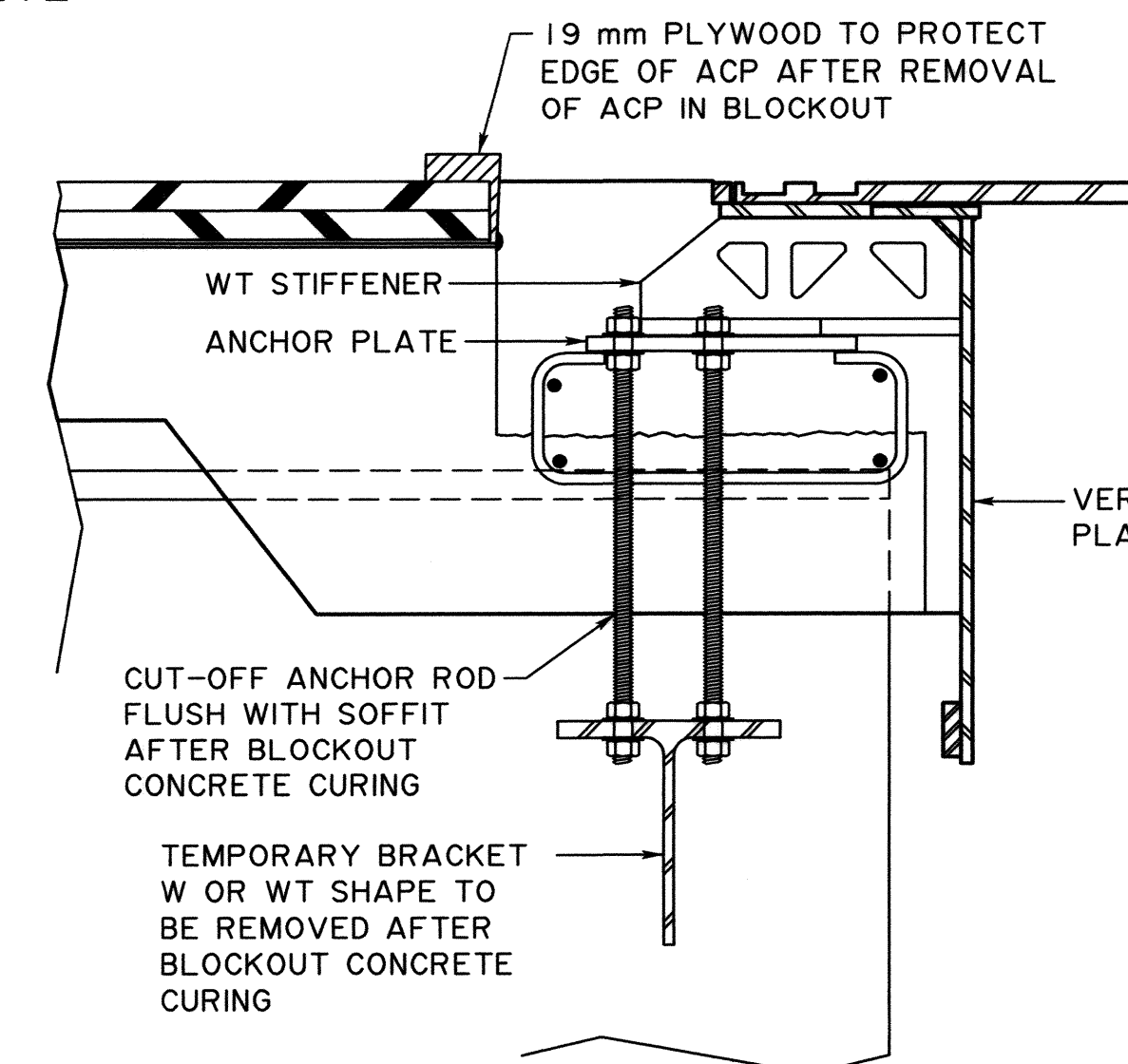
- INSTALL DECK JOINT ASSEMBLY AND REINFORCING STEEL. SUPPORT THE DECK JOINT ASSEMBLY ON THE DECK SIDE WITH ANCHOR PLATE/ANCHOR ROD ASSEMBLY ATTACHED TO STEEL DIAPHRAGMS OR CAST INTO CONCRETE END DIAPHRAGMS. SUPPORT THE DECK JOINT ASSEMBLY ON THE ABUTMENT SIDE WITH ANCHOR PLATE/ANCHOR ROD ASSEMBLY CAST INTO THE BACKWALL OR ROOF SLAB. BOLT VERTICAL DECK JOINT PLATE ON THE ABUTMENT SIDE TO EMBEDDED ABUTMENT BACKWALL/ROOF SLAB PLATE. ADJUST THE ELEVATION AND GRADE OF DECK JOINT
- SET DECK JOINT TO THE THERMAL EXPANSION GAP "X" PROVIDED ON THE SITE SPECIFIC DRAWINGS. GAP SETTING TO CORRESPOND TO THE ANTICIPATED GIRDER TEMPERATURE AT TIME FIELD WELDING IS COMPLETED
- SET VERTICAL AND HORIZONTAL ALIGNMENT OF DECK JOINT ASSEMBLY. FIELD WELD DECK JOINT ASSEMBLY TO ANCHOR PLATES. REMOVE SHIPPING ANGLES IMMEDIATELY AFTER THE DECK JOINT ASSEMBLY HAS BEEN FIELD WELDED TO ANCHOR PLATES
- MEASURE AND RECORD THE FINGER PLATE GAPS AT TIP AND HEEL LOCATIONS (WITNESS POINT 1)
- PLACE, FINISH AND WET CURE ABUTMENT SIDE DECK JOINT BLOCKOUT CONCRETE

### STAGE 6

- MEASURE AND RECORD THE FINGER PLATE GAPS AT TIP AND HEEL LOCATIONS (WITNESS POINT 2)
- DETERMINE THE DECK SIDE BLOCKOUT CONCRETE PLACEMENT TIMING BY RECORDING THE RELATIVE BRIDGE GIRDER MOVEMENT AND CORRESPONDING AIR TEMPERATURES HOURLY FOR A MINIMUM OF 3 DAYS AND NIGHTS PRIOR TO PROPOSED DECK SIDE BLOCKOUT CONCRETE PLACEMENT. THE PLACEMENT OF DECK SIDE BLOCKOUT CONCRETE TO OCCUR IMMEDIATELY AFTER THE BRIDGE HAS FULLY CONTRACTED AND HAS BEGUN TO EXPAND. DURING SUMMER MONTHS THIS TYPICALLY OCCURS SOME TIME NEAR SUNRISE. SUBMIT PROPOSED CONCRETE PLACEMENT TIME TO THE CONSULTANT FOR REVIEW AND ACCEPTANCE A MINIMUM OF 24 HOURS PRIOR TO COMMENCEMENT OF THE WORK
- PLACE, FINISH AND WET CURE DECK SIDE DECK JOINT BLOCKOUT CONCRETE
- REMOVE TEMPORARY ACP AND MEMBRANE EDGE PROTECTION. CLEAN THE BOTTOM OF THE GAPS BETWEEN THE ACP AND THE DECK JOINT BLOCKOUT CONCRETE. PLACE MCSEAL 6690-4 MOD, OR AN APPROVED EQUIVALENT, AFTER THE DECK JOINT BLOCKOUT CONCRETE HAS BEEN WET CURED AND SUBSEQUENTLY ALLOWED TO AIR DRY FOR 3 DAYS
- MEASURE AND RECORD THE FINGER PLATE GAPS AT TIP AND HEEL LOCATIONS (HOLD POINT 2)
- REMOVE FINGER PLATES TO COMPLETE EPOXY INJECTION. INSTALL PROTECTION MEASURES FOR CONCRETE SURFACES, DECK JOINT PLATES, AND ALL OTHER BRIDGE COMPONENTS FROM EPOXY MATERIAL EJECTION
- COMPLETE EPOXY INJECTION OF THE DECK JOINT BASE PLATES AFTER THE DECK SIDE DECK JOINT BLOCKOUT CONCRETE HAS REACHED A MINIMUM OF 20 MPa. COMMENCE INJECTION FROM THE LOWEST ELEVATION OF THE DECK JOINT TO THE HIGHEST. CONTINUOUSLY INJECT EPOXY UNTIL IT EJECTS FROM EACH FITTING ALONG THE SAME SECTION OF HOSE. ENSURE EXCESS EPOXY PROTECTION MEASURES ARE SUFFICIENT. INSTALL THREADED PLUG INTO ONE OF THE TWO INJECTION FITTINGS AND CONTINUE INJECTION UNTIL ALL THE FITTINGS ARE PLUGGED AND NO NEW LOCATIONS OF EPOXY EJECTION ARE NOTED BETWEEN THE CONCRETE AND DECK JOINT PLATES. REMOVE AND CLEANUP ANY EXCESS EJECTED EPOXY. REMOVE ADAPTERS, FITTINGS AND PLUGS AFTER THE EPOXY HAS SET AND FILL ANY REMAINING CAVITIES WITH EPOXY
- COAT THREADS AND SURFACE UNDER BOLT HEADS WITH "KOPR-KOTE" OR "NEVER-SEEZ" ANTI SEIZE AND LUBRICATING COMPOUND PRIOR TO BOLT INSTALLATION. REINSTALL THE FINGER PLATES. BOLT TIGHTENING TO START FROM THE CENTERLINE OF EACH FINGER PLATE AND PROCEED OUTWARD TOWARD PLATE ENDS. TIGHTEN FINGER PLATE BOLTS USING THE TURN-OF-NUT METHOD

### STAGE 7

- INSTALL CURB/BARRIER/MEDIAN DECK JOINT BLOCKOUT CONCRETE AND CURB/BARRIER/MEDIAN COVER PLATES
- INSTALL DECK JOINT PLUMBING



## SECTION AT OVERHANG INSTALLATION SECTION

| MOVEMENT RANGE | X @ -5° | F   | X MIN | X MAX | W   |
|----------------|---------|-----|-------|-------|-----|
| 300            | 200     | 500 | 50    | 350   | 300 |
| 250            | 175     | 450 | 50    | 300   | 275 |
| 200            | 150     | 400 | 50    | 250   | 250 |
| 150            | 125     | 350 | 50    | 200   | 225 |
| 100            | 100     | 300 | 50    | 150   | 200 |

• WORK THESE DRAWINGS TOGETHER: S-1860, S-1861, S-1862, S-1863, S-1864 AND S-1865

|                   |  |                                             |  |
|-------------------|--|---------------------------------------------|--|
|                   |  | <b>FINGER PLATE DECK ASSEMBLY - SHEET 6</b> |  |
| DATE 2020-09-04   |  | SHEET 6 OF 6                                |  |
| DRAWING S-1865-20 |  | DATE Feb 16, 2021                           |  |