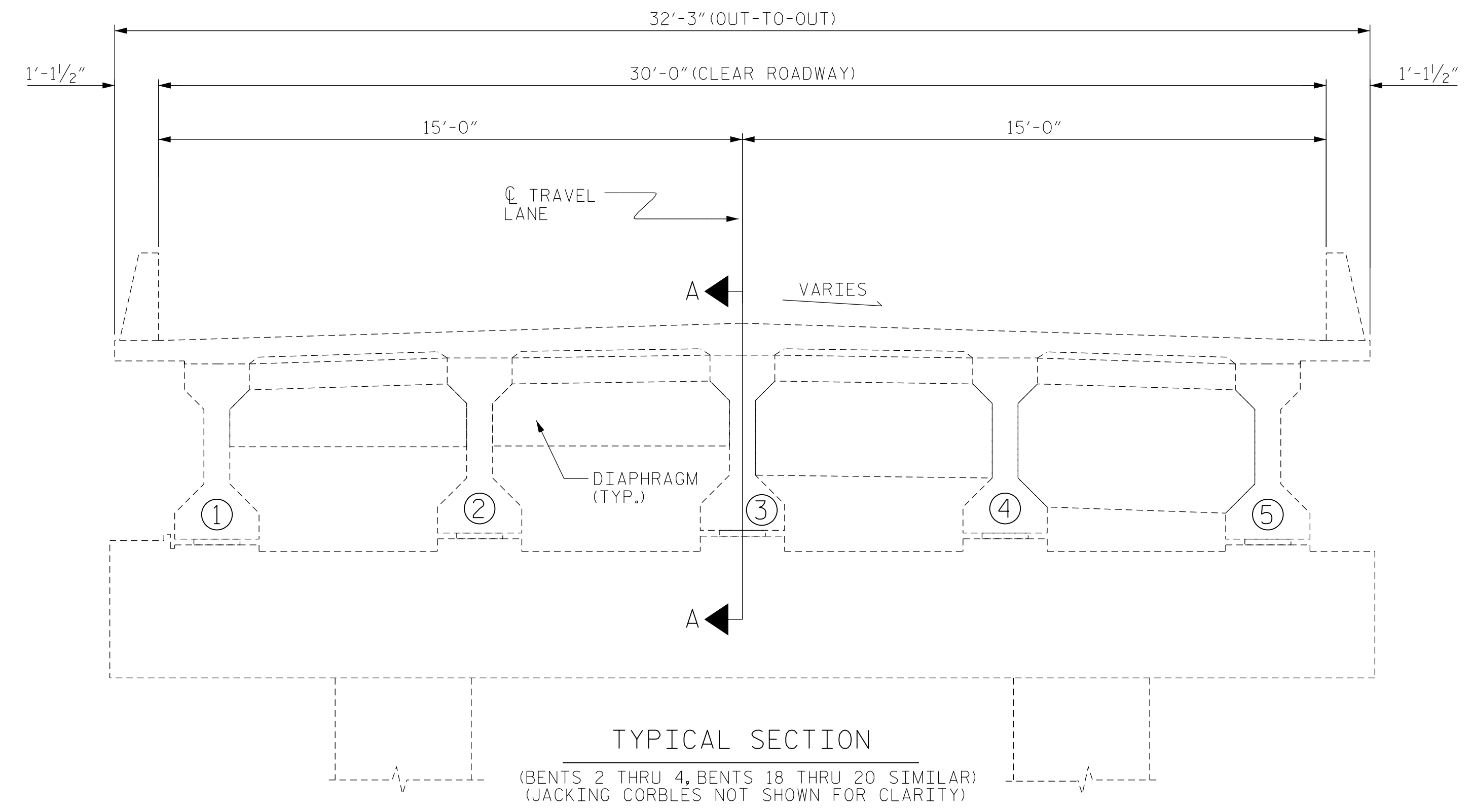


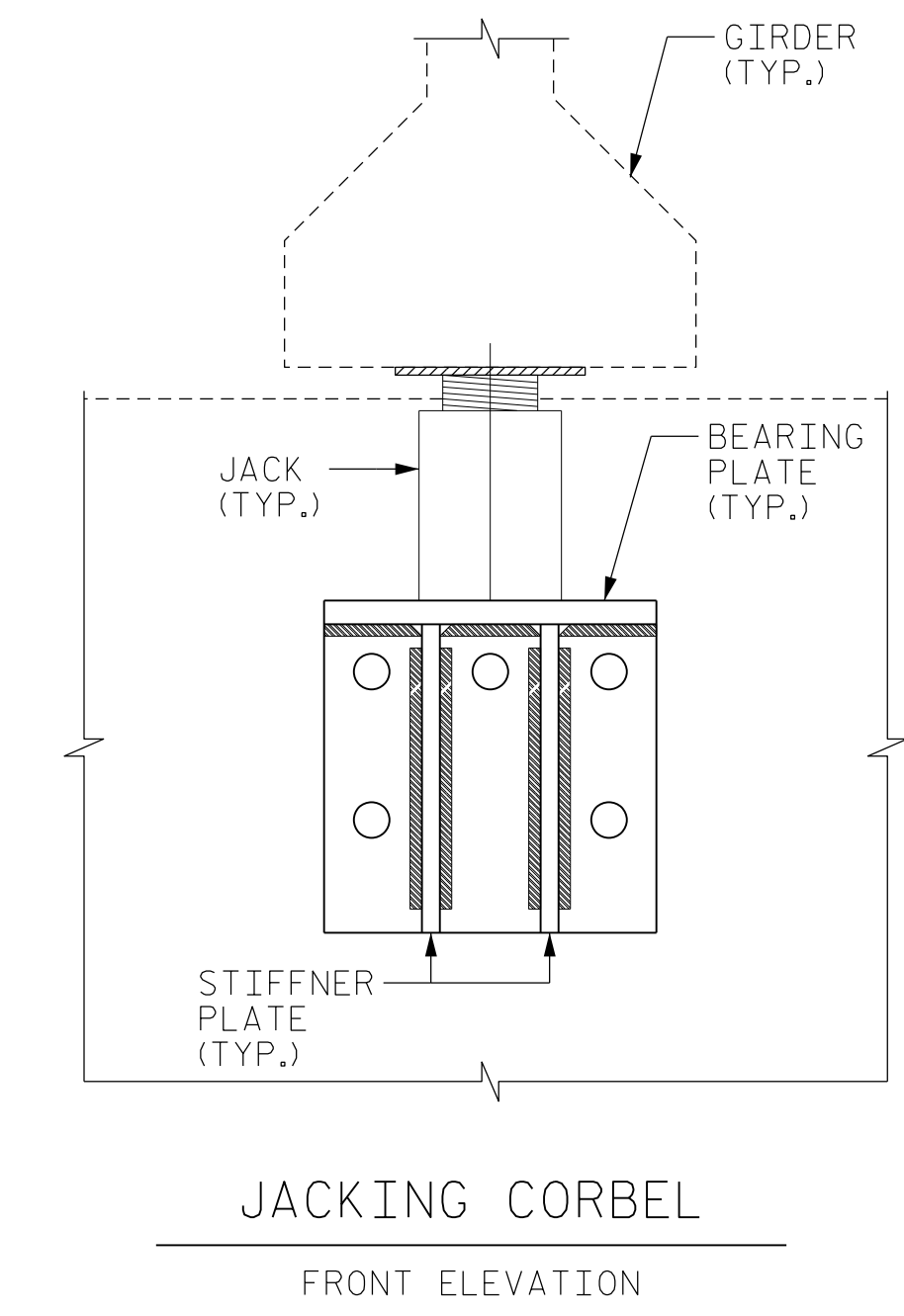
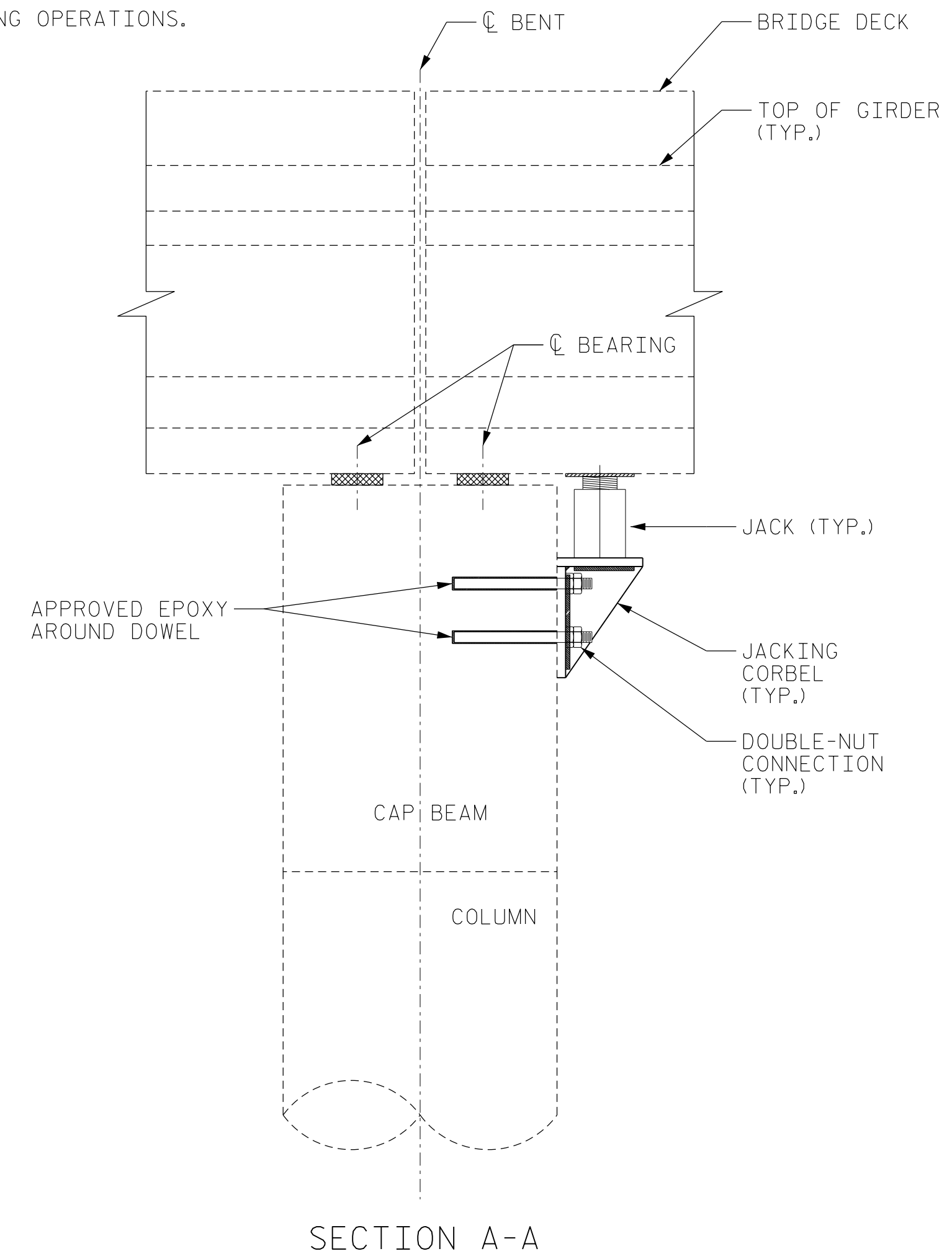
**JACKING NOTES:**

- THIS DETAIL IS A GENERIC EXAMPLE OF A JACKING SCHEME AND DOES NOT NECESSARILY REPRESENT SPECIFIC CONDITIONS AT A PARTICULAR BRIDGE. ACTUAL BRIDGE GEOMETRIES, DIMENSIONS AND CONDITIONS MAY DIFFER FROM THIS DETAIL. PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL INVESTIGATE THE BRIDGE AND DEVELOP A PROPER STRENGTH JACKING SCHEME TO BE SUBMITTED FOR REVIEW.
- PRIOR TO BRIDGE JACKING OPERATIONS, THE ENGINEER AND CONTRACTOR SHALL INSPECT THE STRUCTURE FOR ANY NOTABLE DEFECTS TO THE PRIMARY AND SECONDARY STRUCTURAL MEMBERS. ALL NOTABLE DEFECTS SHALL BE DOCUMENTED AND REPORTED TO THE AREA BRIDGE MAINTENANCE ENGINEER PRIOR TO THE COMMENCEMENT OF BRIDGE JACKING. THE CONTRACTOR SHALL PROVIDE SAFE AND SUFFICIENT ACCESS TO ALL STRUCTURAL MEMBERS FOR THE ENGINEER TO ESTABLISH PROPER DOCUMENTATION.
- PRIOR TO JACKING, THE CONTRACTOR SHALL ENSURE THERE ARE NO OBSTACLES PREVENTING THE BEAM FROM BEING LIFTED.
- THE BEAMS SHALL BE LIFTED ENOUGH THAT THE BEAM CLEARS THE BEARINGS AND ALL LOAD IS SUPPORTED BY THE JACKS. AFTER JACKING IS COMPLETE, THE CONTRACTOR SHALL PROVIDE FOR A METHOD TO REMOVE THE JACKS AND SUPPORT THE BEAM FOR DEAD AND LIVE LOAD DURING THE REPAIR OPERATIONS IF THE JACKS REMAIN IN PLACE DURING THE ENTIRE JACKING AND REPAIR OPERATION, THEY SHALL HAVE MECHANICAL LOCK OFF CAPABILITIES.
- IF, DURING THE JACKING PROCESS, OR WHILE THE BEAM IS BEING SUPPORTED, THE BEAM SHIFTS FROM ITS ORIGINAL POSITION, ALL WORK SHALL CEASE AND THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
- BEARINGS ADJACENT TO THE BEAM BEING JACKED MAY BE LOOSENED TO DECREASE THE RESISTANCE OF THE DECK SLAB DURING JACKING. ALL BEARINGS LOOSENED SHALL BE TIGHTENED BACK AFTER REPAIR OPERATIONS ARE COMPLETED AND THE JACKS AND BLOCKING HAVE BEEN REMOVED.
- THE MAXIMUM DIFFERENTIAL BETWEEN ADJACENT BEAMS THAT ARE BEING JACKED IS  $\frac{1}{8}$ ".
- LOADS PROVIDED IN THE "BRIDGE JACKING TABLE" ARE SHOWN FOR INFORMATION PURPOSES ONLY, THE CONTRACTOR'S ENGINEER SHALL DETERMINE THE EXPECTED LOADS TO BE LIFTED DURING THE BRIDGE JACKING OPERATIONS.
- THE CONTRACTOR SHALL SUBMIT WORKING DRAWINGS AND CALCULATIONS OF THE JACKING PROCEDURE(S) SEALED BY A PROFESSIONAL ENGINEER IN THE STATE OF NORTH CAROLINA TO THE ENGINEER FOR APPROVAL PRIOR TO BRIDGE JACKING OPERATIONS.
- FOR TYPE I OR TYPE II BRIDGE JACKING, SEE SPECIAL PROVISIONS.
- FOR WORKING DRAWING SUBMITTALS, SEE SPECIAL PROVISIONS.
- TYPE II BRIDGE JACKING SHALL BE DONE WITH A HYDRAULIC JACKING SYSTEM THAT LIFTS EACH BEAM ALONG ENTIRE SPAN END WITH EQUAL FORCE AND AT AN EQUAL RATE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY DAMAGE CAUSED TO THE EXISTING STRUCTURE BY BRIDGE JACKING OPERATIONS AT NO ADDITIONAL COST TO THE DEPARTMENT.
- PRIOR TO JACKING, LOOSEN ANY ATTACHMENTS TO ALLOW MOVEMENT AND COMPLETE ALL JOINT AND BARRIER SAWCUTS.
- JACKS SHALL BE IN FULL COMPLIANCE WITH ANSI B30.1.
- A PRE-JACKING MEETING SHALL BE REQUIRED BETWEEN THE CONTRACTOR, THE UTILITY REPRESENTATIVE, AND THE ENGINEER PRIOR TO ANY JACKING OPERATIONS.
- THE CONTRACTOR SHALL BE AWARE OF UTILITY CONDUITS THROUGHOUT BRIDGE AND SHALL MAKE ARRANGEMENTS FOR JACKING OPERATIONS. A UTILITY REPRESENTATIVE SHALL BE ON SITE DURING JACKING OPERATIONS.



PRELIMINARY JACKING LOADS				
SPAN 2 & 3	BEAM	FACTORED DEAD LOAD (KIPS)	FACTORED LIVE LOAD NO IMPACT (KIPS)	MIN. JACK CAPACITY LIVE & DEAD LOAD (TONS)
	EXTERIOR	110	120	120
	INTERIOR	110	160	140
SPAN 18 & 20	BEAM	FACTORED DEAD LOAD (KIPS)	FACTORED LIVE LOAD NO IMPACT (KIPS)	MIN. JACK CAPACITY LIVE & DEAD LOAD (TONS)
	EXTERIOR	110	120	120
	INTERIOR	110	160	140

NOTES:  
DL FACTOR: 1.25  
LL FACTOR: 1.75



PROJECT NO. 15BPR.24  
BRUNSWICK COUNTY  
 BRIDGE NO. 090013



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
JACKING DETAILS					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					S-17
					TOTAL SHEETS 45

DRAWN BY : DIEGO A. AGUIRRE DATE : 10/2018  
 CHECKED BY : JACOB H. DUKE DATE : 10/2018  
 DESIGN ENGINEER OF RECORD : JACOB H. DUKE DATE : 10/2018

DOCUMENT NOT CONSIDERED  
 FINAL UNLESS ALL  
 SIGNATURES COMPLETED

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 RALEIGH, NC 27601  
 (919) 882-7839  
 LICENSE #: C-1506