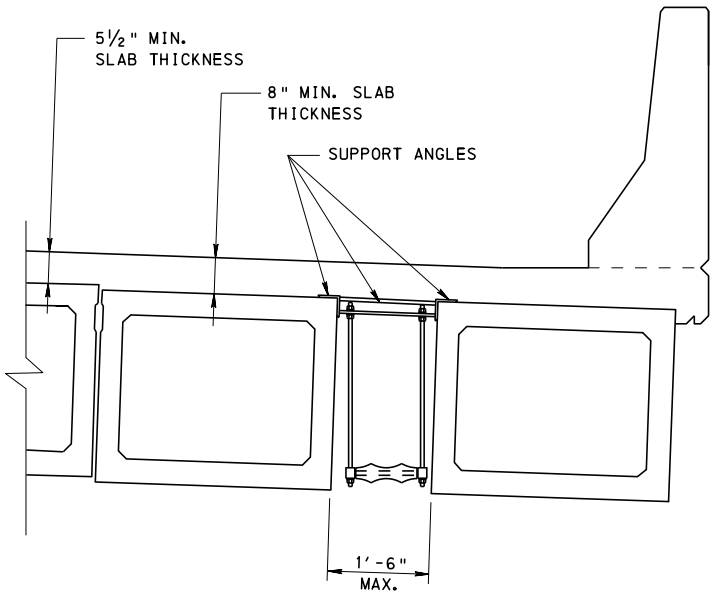
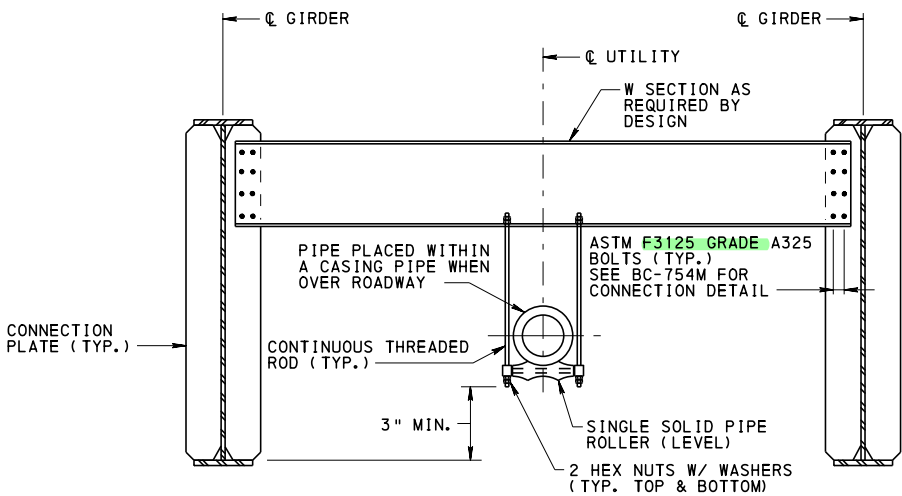




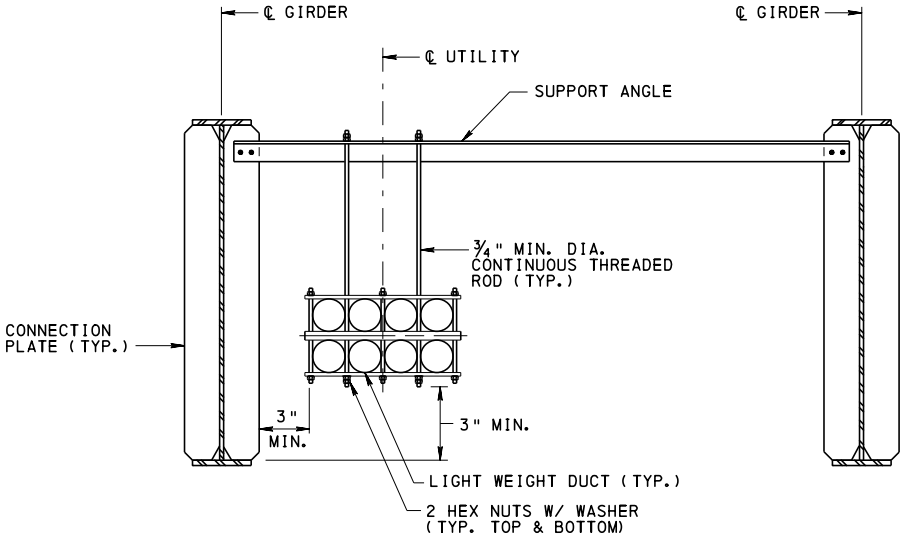
LOCATION OF UTILITIES
ON ADJACENT BOX BRIDGES



WATER OR GAS LINE SUPPORT DETAIL
N. T. S.

NOTES:

1. ALL COMPONENTS FOR SUPPORTS MUST BE DESIGNED DURING FINAL PLAN PREPARATION.
2. SHOP DRAWINGS OF SUPPORTS MUST BE PROVIDED AND APPROVED PRIOR TO CONSTRUCTION.
3. GALVANIZE ALL HANGERS, SUPPORTS AND ASSOCIATED HARDWARE. IN ADDITION, FOR STEEL BRIDGES PAINT ALL FABRICATED STEEL WITH ZINC RICH PRIMER AND APPLY FINISH COAT TO MATCH BEAM COLOR.
4. VERTICAL POSITION OF UTILITIES MUST BE SET TO PROVIDE AT LEAST 3" CLEARANCE TO BOTTOM OF BEAMS FROM UTILITY OR ITS CASING. IN ADDITION, MAINTAIN AT LEAST 1" CLEARANCE FROM UTILITY TO TOP OR BOTTOM HORIZONTAL REBARS IN END DIAPHRAGM.



UTILITY SUPPORT DETAIL
N. T. S.

SPECIAL RESTRICTIONS AND NOTES FOR:
LOCATION OF PIPES CARRYING CHEMICALS
OR HEAT RADIATING GASES OR FLUIDS &
OF CONDUITS CARRYING ELECTRICAL POWER:

NOT ACCEPTABLE:

1. EMBEDMENT OF SUCH PIPES IN P/S ADJACENT BOX BEAMS.
2. EMBEDMENT OF SUCH PIPES IN CURBS & PARAPETS UNLESS SPECIAL PROVISIONS (TO BE APPROVED BY THE BRIDGE ENGINEER) ARE TO BE MADE TO PERMIT DISSIPATION OF THE DEVELOPING HEAT.

ACCEPTABLE:

1. BETWEEN BEAMS ON SPREAD BEAM BRIDGES (I OR BOX).
2. UNDER DIVISOR, IF IN EXISTENCE.
3. ON COMPOSITE ADJACENT BOXES WHEN SPREAD UP TO 1'-6". IN THIS CASE SLAB THICKNESS BETWEEN BEAMS DESIGNED PER BD-601M. ALSO SPECIAL PROVISIONS (TO BE APPROVED BY THE BRIDGE ENGINEER) ARE TO BE MADE TO PERMIT DISSIPATION OF THE DEVELOPING HEAT.

SPECIAL REQUIREMENTS FOR FLUID CARRYING PIPES:

1. STEEL CASING REQUIRED IN SPANS OVER ROADWAYS OR WALKWAYS.

DESIGN INSTRUCTIONS:

1. FURNISH COMPUTATIONS FOR ADJACENT BEAMS WHEN UTILITY LOAD IS LOCATED BETWEEN BEAMS AND IS MORE THAN 5 lb/ft.
2. FURNISH COMPUTATIONS IN ANY CASE FOR ADJACENT BEAMS WHEN UTILITY IS SUSPENDED FROM OVERHANGING SLAB OR DIVISOR (INCLUDE HORIZONTAL ACCIDENTAL IMPACT ON RAILING AND PARAPET).
3. STRUCTURES WITH CATHODIC PROTECTION REQUIRE SPECIAL DETAILS AND APPROVAL OF BRIDGE ENGINEER.

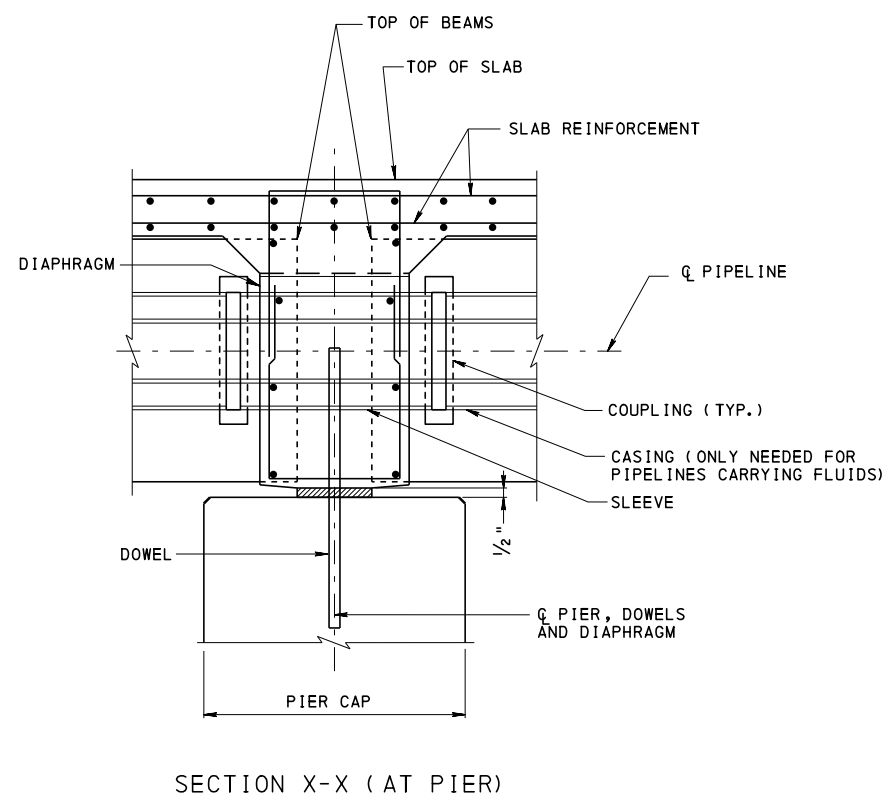
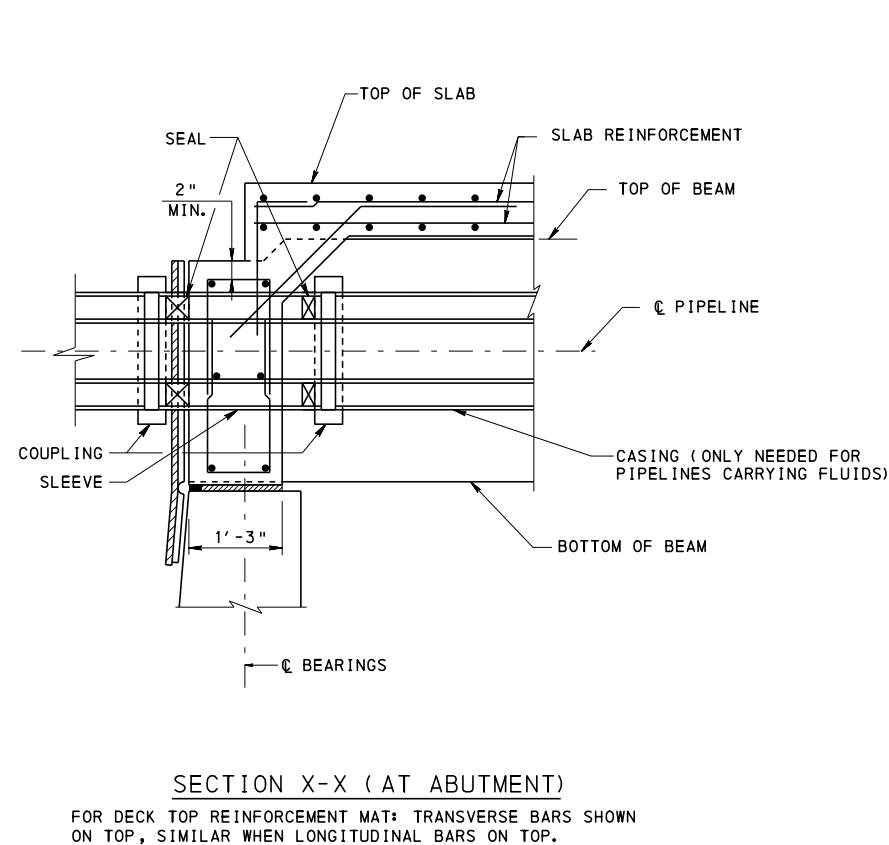
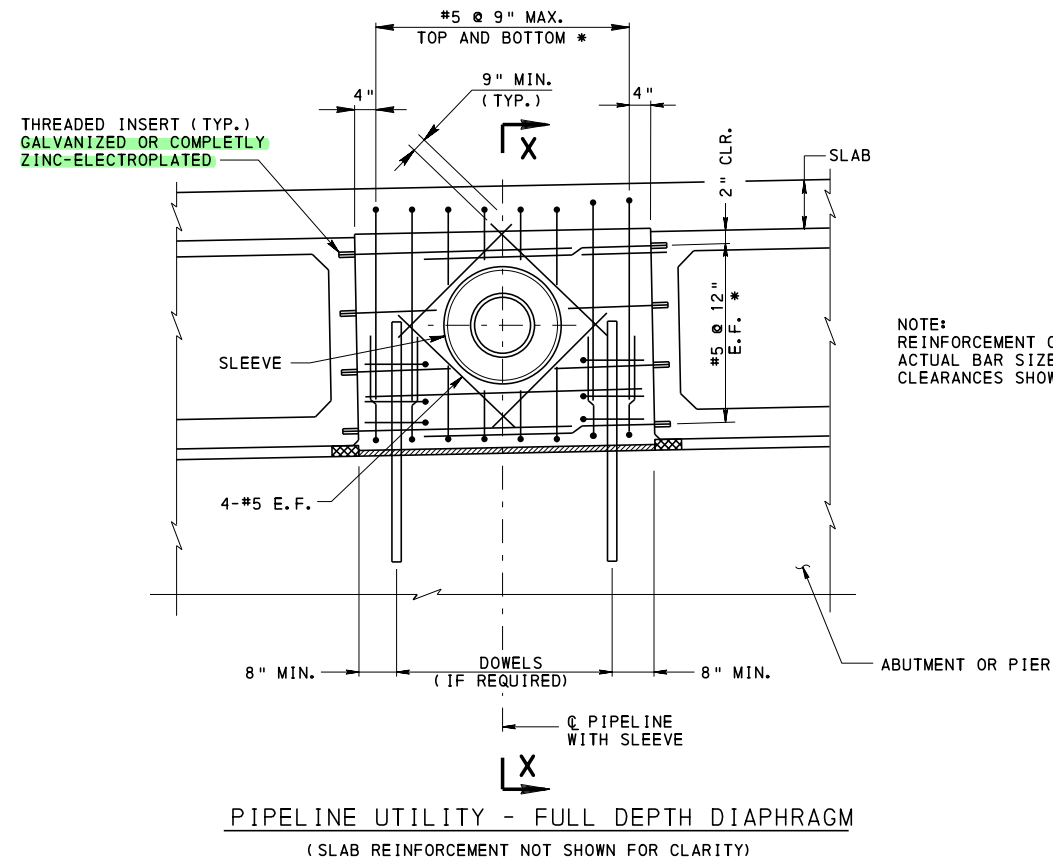
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF PROJECT DELIVERY

STANDARD
UTILITY ATTACHMENT
TO SUPERSTRUCTURE

BD-601M	CONCRETE DECK SLAB
BC-754M	STEEL DIAPHRAGMS
REFERENCE DRAWINGS	

RECOMMENDED AUG. 30, 2019	RECOMMENDED AUG. 30, 2019
<i>John J. Rizzo</i>	<i>Mark V. Bito</i>
ACTING CHIEF BRIDGE ENGINEER	ACT. DIR., BUR. OF PROJECT DELIVERY

SHEET 1 OF 3
BD-612M



LEGEND:

E.F. DENOTES EACH FACE

PREFORMED CELLULAR POLYSTYRENE

* SPLAY OR CUT AS NEEDED TO ACCOMMODATE UTILITY

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF PROJECT DELIVERY

STANDARD
UTILITY ATTACHMENT
TO SUPERSTRUCTURE

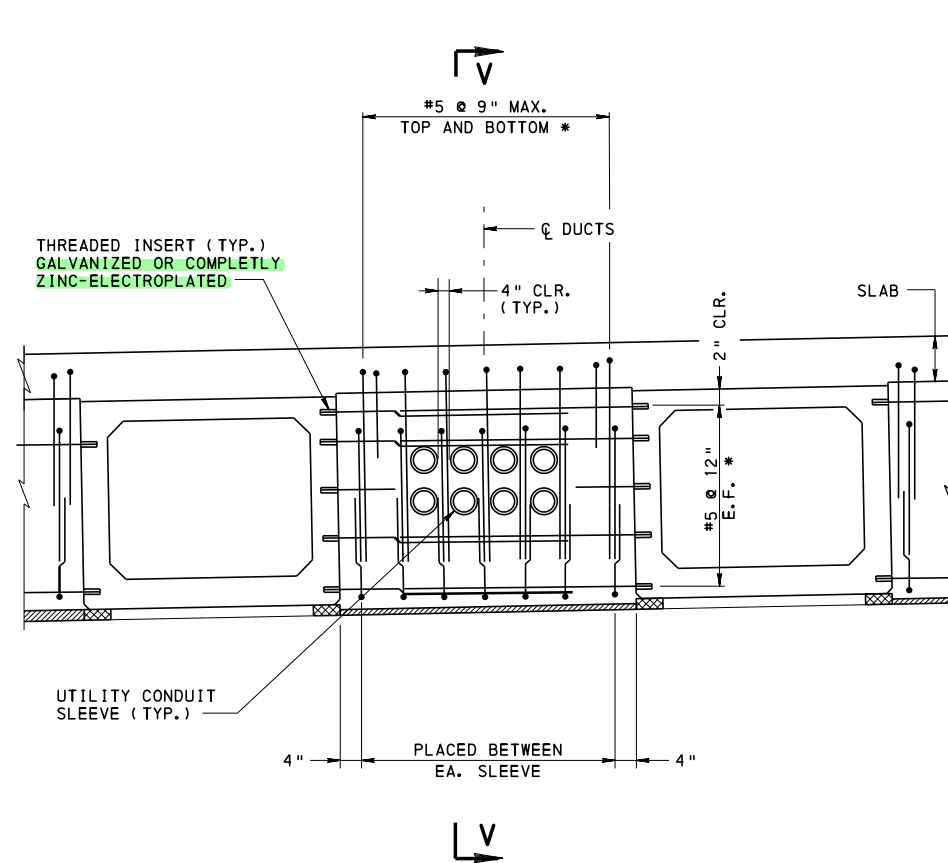
RECOMMENDED AUG. 30, 2019

ACTING CHIEF BRIDGE ENGINEER

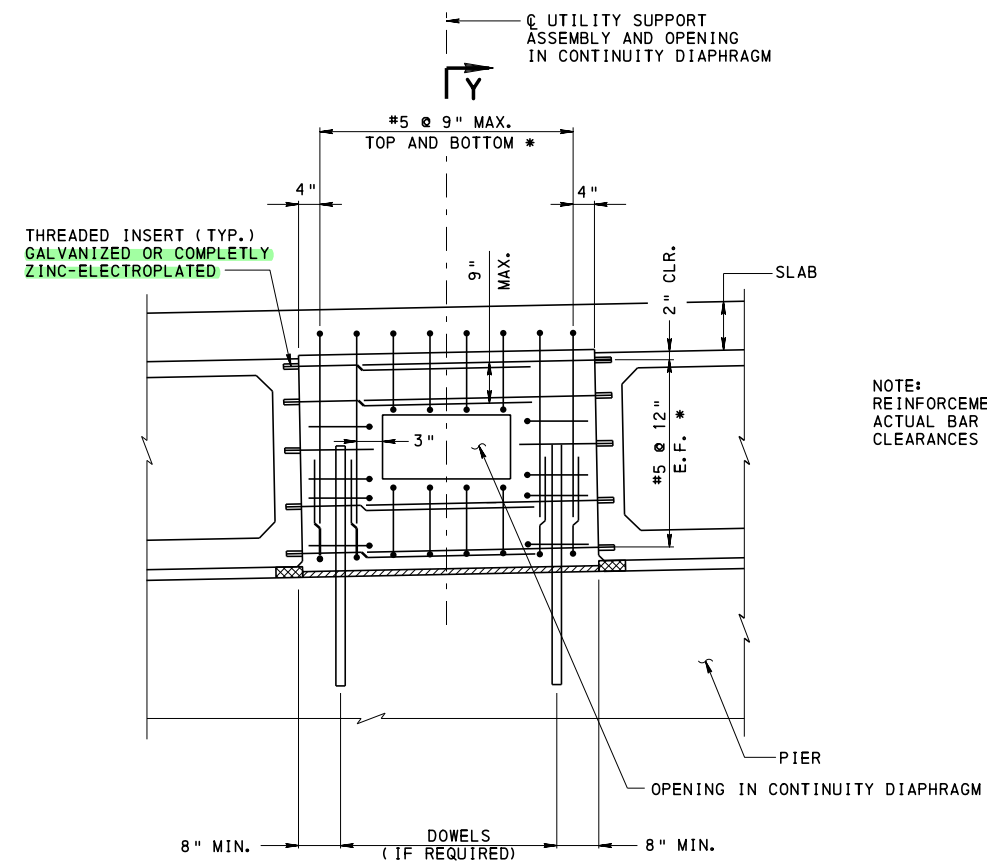
RECOMMENDED AUG. 30, 2019

ACT. DIR., BUR. OF PROJECT DELIVERY

SHEET 2 OF 3
BD-612M

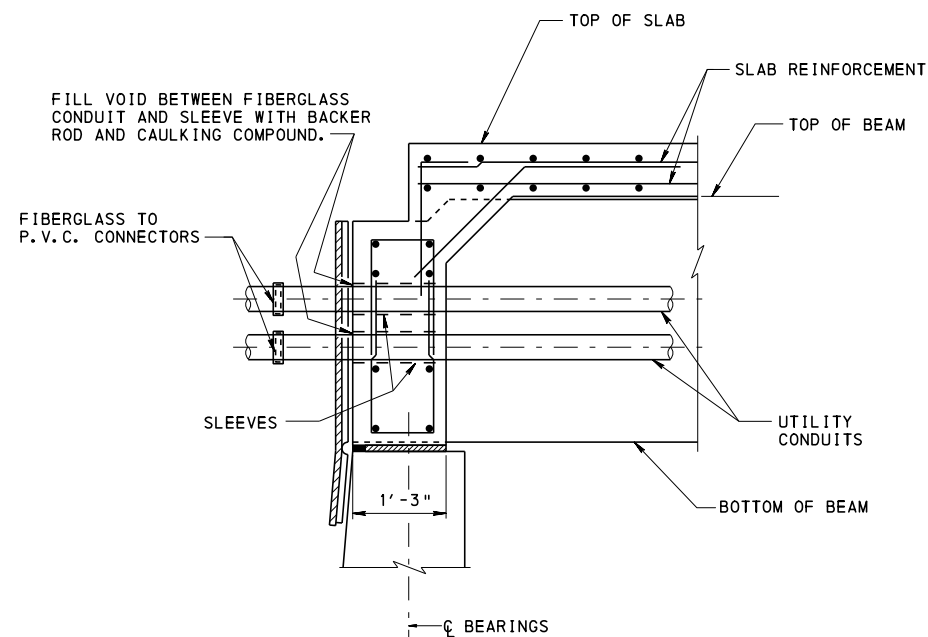


**END DIAPHRAGM W/MULTIPLE SLEEVES
FOR UTILITY CONDUITS**
(SLAB REINFORCEMENT NOT SHOWN FOR CLARITY)

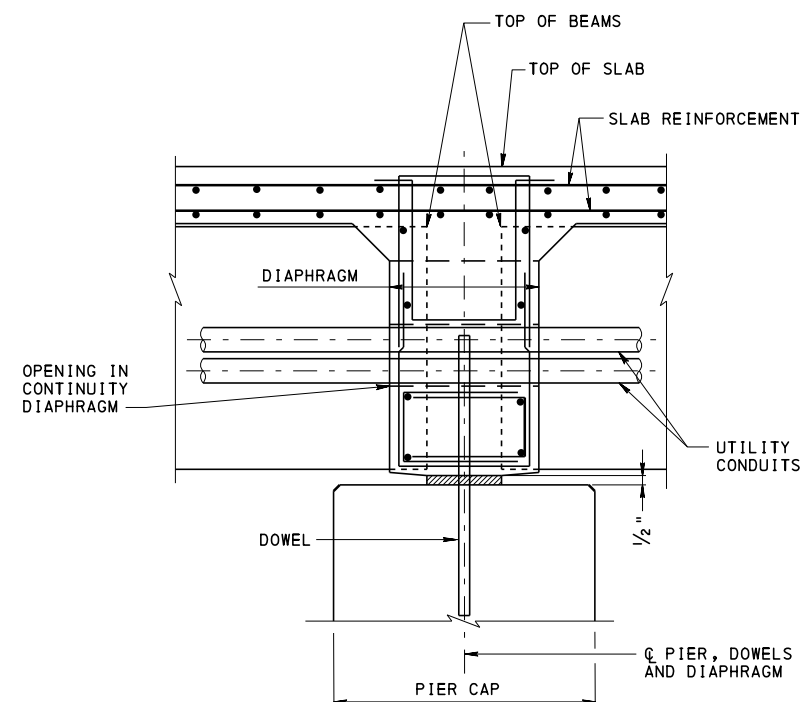


**PIER DIAPHRAGM OPENING
FOR UTILITY CONDUITS**
(SLAB REINFORCEMENT NOT SHOWN FOR CLARITY)

NOTE:
REINFORCEMENT CONFIGURATIONS SHOWN ARE MINIMUMS.
ACTUAL BAR SIZES AND SPACING MUST BE DESIGNED.
CLEARANCES SHOWN ARE MINIMUMS.



SECTION V-V
FOR DECK TOP REINFORCEMENT MAT: TRANSVERSE BARS SHOWN
ON TOP, SIMILAR WHEN LONGITUDINAL BARS ON TOP.



SECTION Y-Y

- LEGEND:**
- E.F. DENOTES EACH FACE
 - PREFORMED CELLULAR POLYSTYRENE
 - * SPLAY OR CUT AS NEEDED TO ACCOMMODATE UTILITY

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF TRANSPORTATION BUREAU OF PROJECT DELIVERY		
STANDARD UTILITY ATTACHMENT TO SUPERSTRUCTURE		
RECOMMENDED AUG. 30, 2019 ACTING CHIEF BRIDGE ENGINEER	RECOMMENDED AUG. 30, 2019 ACT. DIR., BUR. OF PROJECT DELIVERY	SHEET 3 OF 3 BD-612M