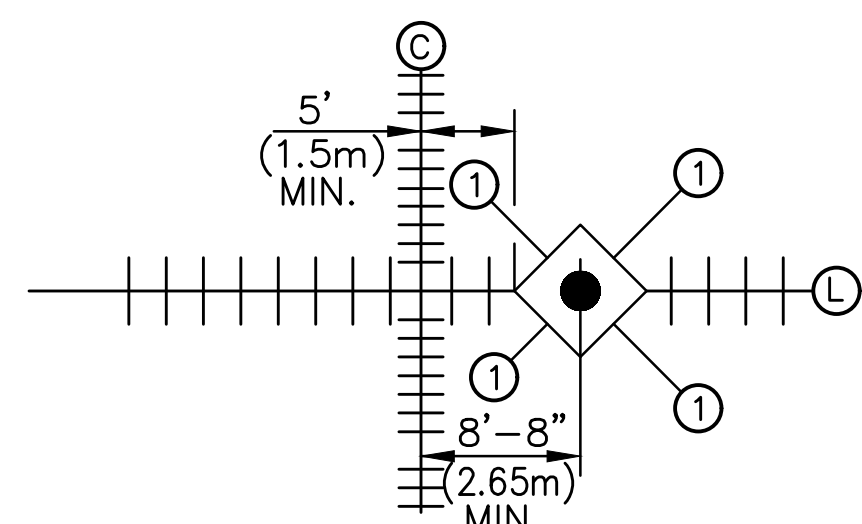
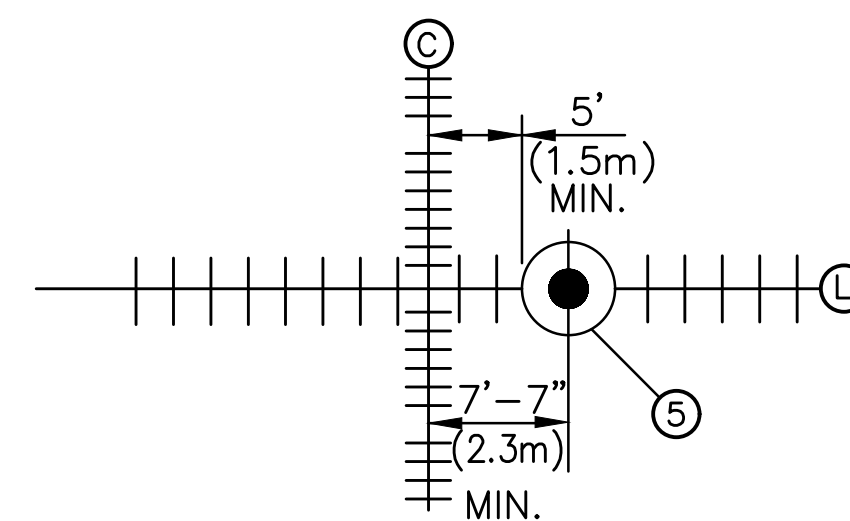


### SITUATION 1

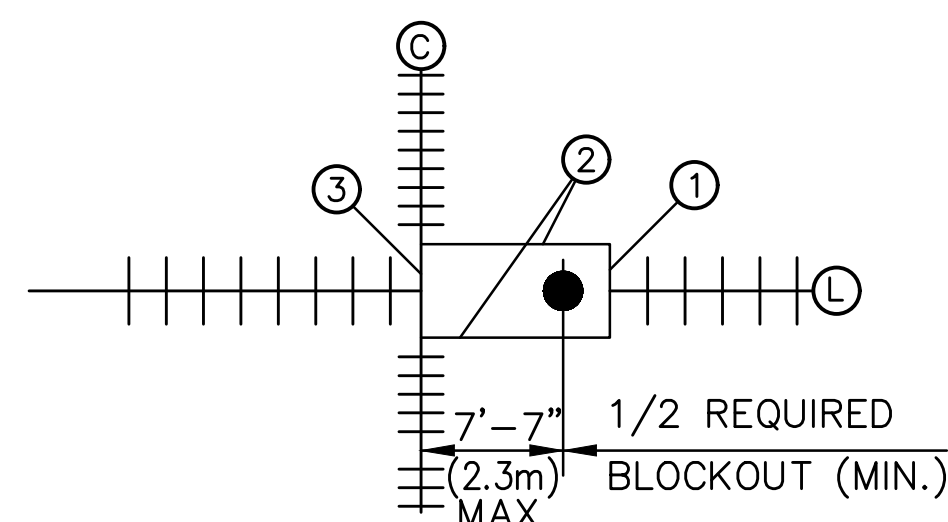
CASTING CENTERED +/-6" (±150mm) ON PROPOSED LONGITUDINAL JOINT.



OPTION 1A



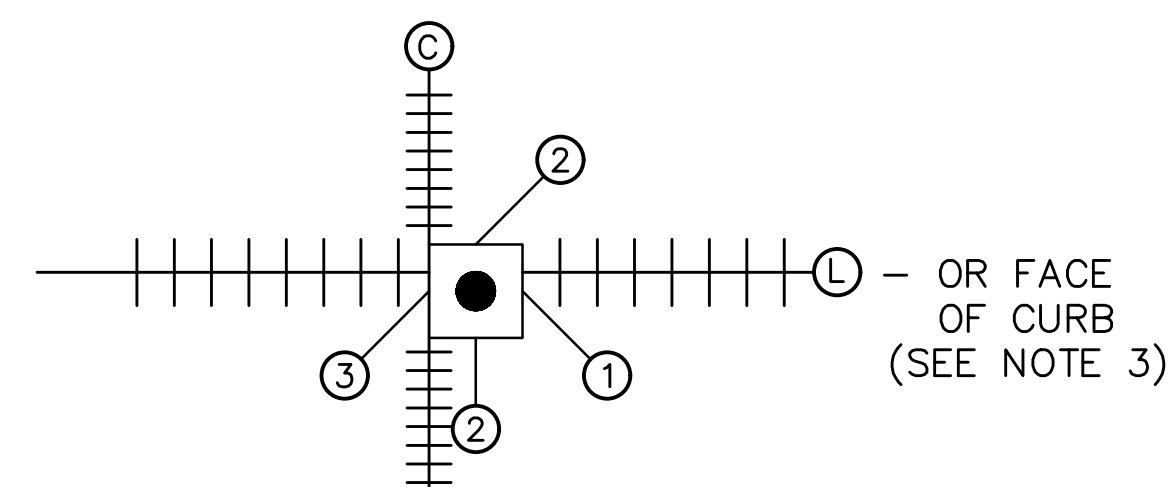
OPTION 1B



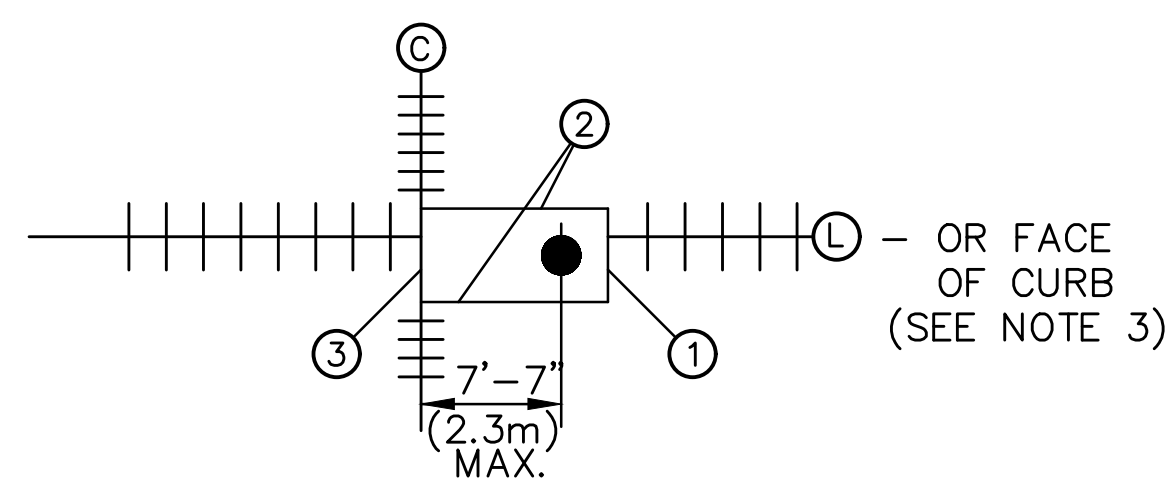
OPTION 2

### SITUATION 2

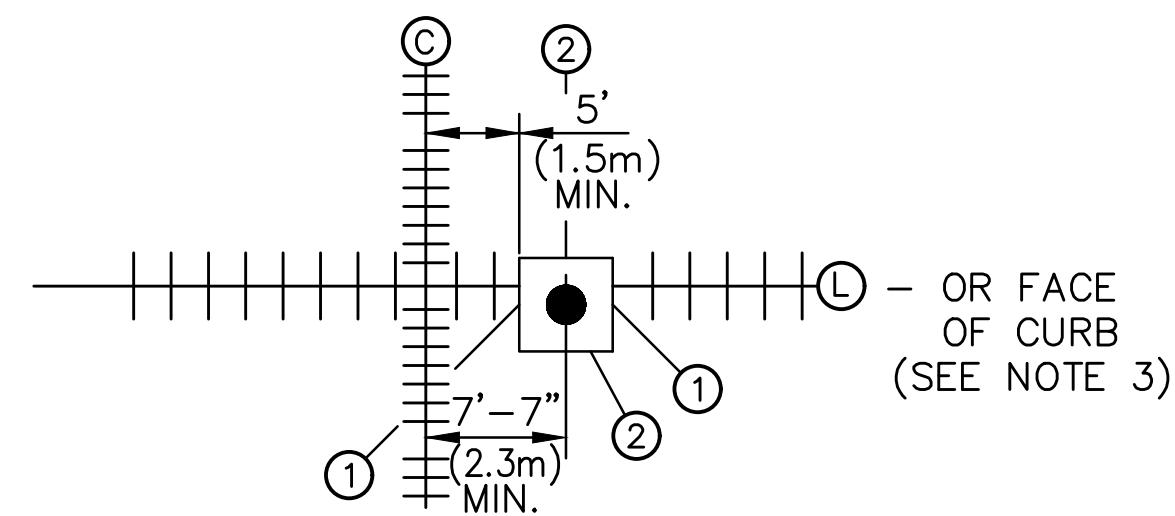
CENTER OF CASTING OFFSET MORE THAN SIX (6) INCHES (150mm) FROM PROPOSED LONGITUDINAL JOINT (OR FACE OF CURB), BUT THE REQUIRED (TYP./MIN.) BLOCKOUT INTERSECTS PROPOSED LONGITUDINAL JOINT (OR FACE OF CURB). (SEE NOTE 3.)



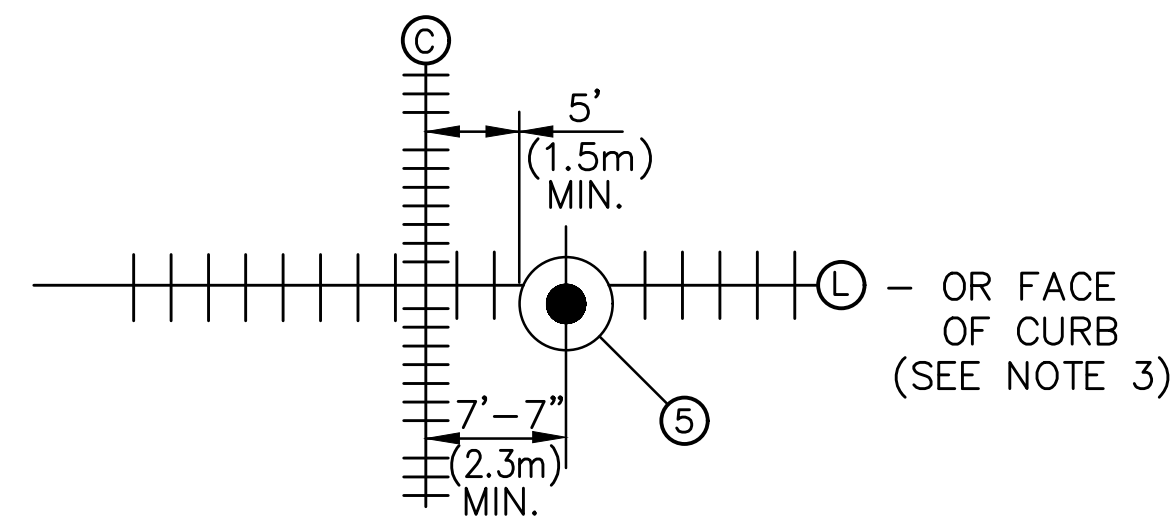
OPTION 1



OPTION 2



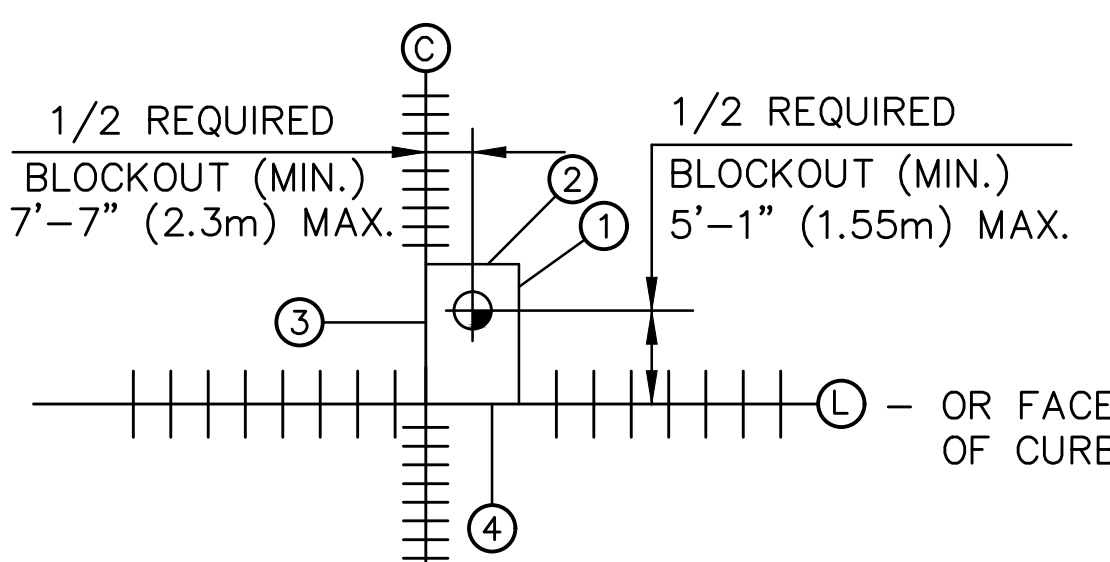
OPTION 3A



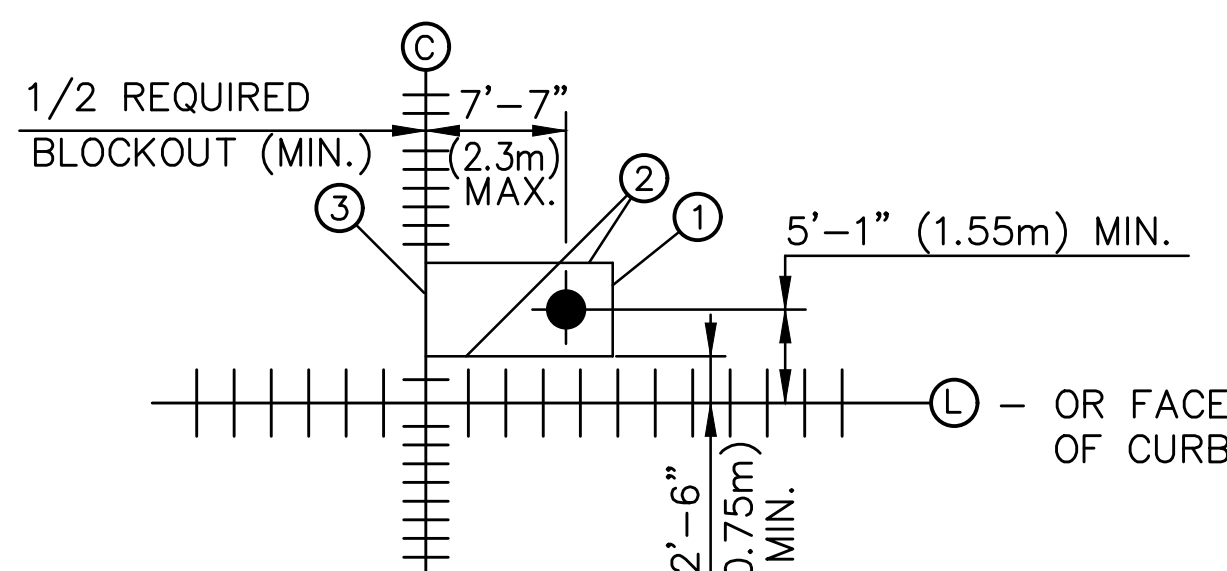
OPTION 3B

### SITUATION 3

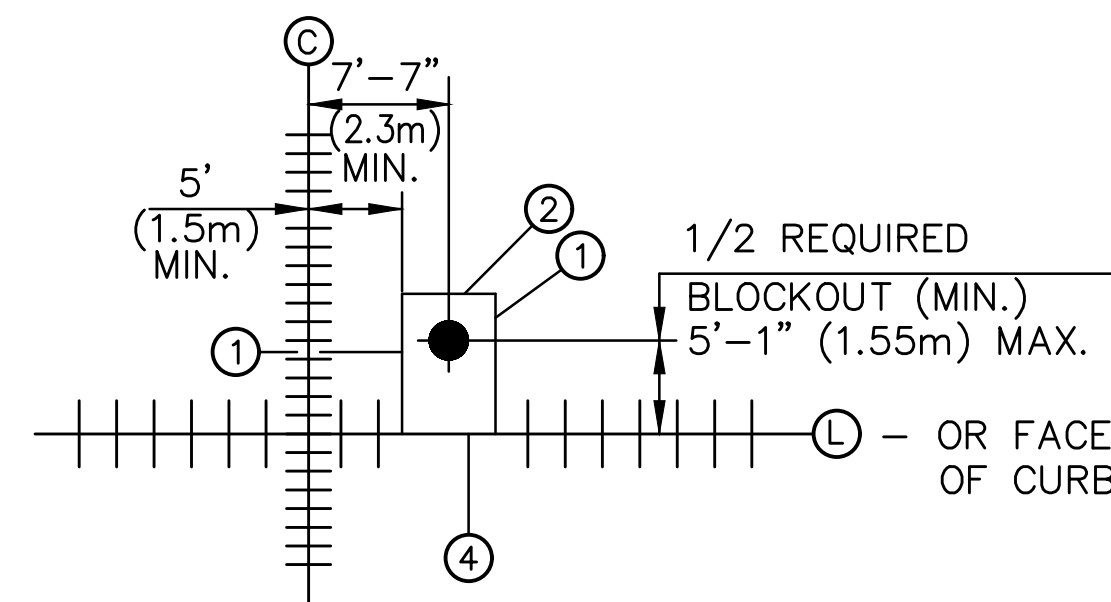
CENTER OF CASTING IS OFFSET FROM PROPOSED LONGITUDINAL JOINT (OR FACE OF CURB) AND REQUIRED (TYP./MIN.) BLOCKOUT DOES NOT INTERSECT PROPOSED LONGITUDINAL JOINT (OR FACE OF CURB).



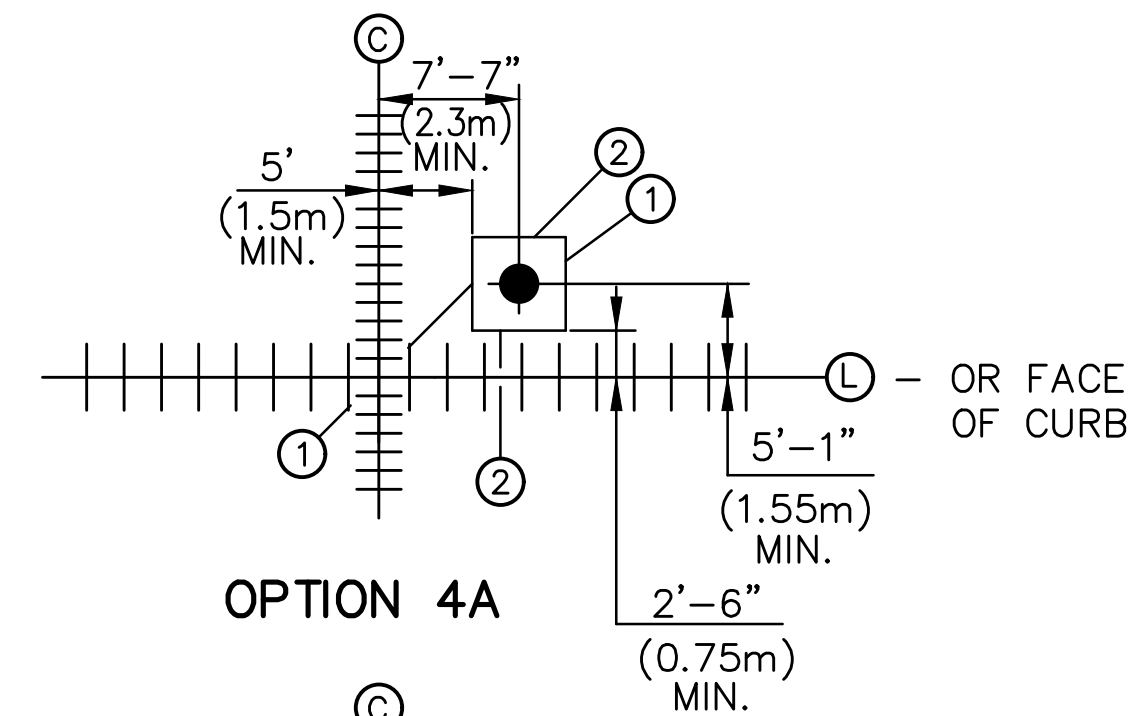
OPTION 1



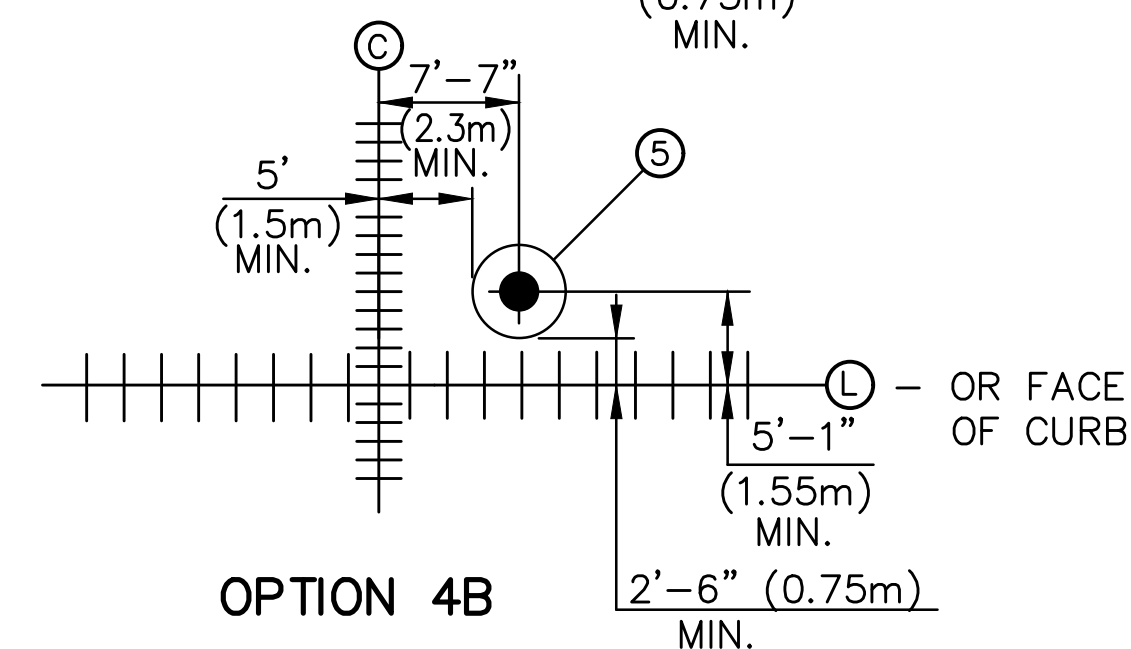
OPTION 2



OPTION 3



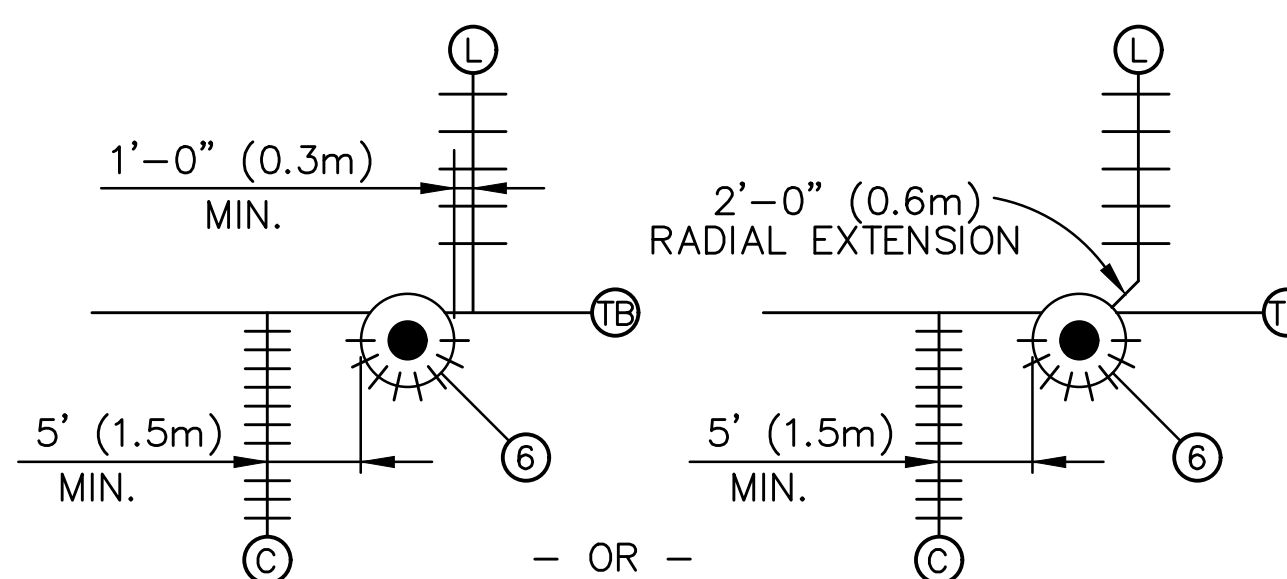
OPTION 4A



OPTION 4B

### SITUATION 4

WHERE CASTING/BLOCKOUT INTERSECTS PROPOSED (TB) JOINT, USE CIRCULAR BLOCKOUT WITH MAIN LINE PAVEMENT CONTRACTION JOINT PLACED NO CLOSER THAN FIVE (5) FEET (1.5m) FROM BLOCKOUT. THE INTERSECTING STREET LONGITUDINAL JOINTS THAT ARE WITHIN 1'-0" (0.3m) OF THE CASTING BLOCKOUTS SHALL BE CONNECTED TO THE BLOCKOUTS WITH 2'-0" (0.6m) RADIAL EXTENSIONS.



### NOTES

- PER THE CUYAHOGA COUNTY ENGINEER'S CONSTRUCTION DRAWING MH-10C, TYPICAL (MIN.) MANHOLE BLOCKOUT IS THE BOTTOM OF MANHOLE FRAME DIA. (38") (965mm) PLUS THE 12" (305mm) MIN. CLEAR DISTANCE ON EACH SIDE OF THE FRAME = 38" (965mm) + 12" (305mm) + 12" (305mm) = 62" (1,575mm) = 5'-2" (1.57m) MIN. USE 5'-2" (1.57m) TYP./MIN. SQUARE/DIAMETER BLOCKOUTS.
- BLOCKOUT LOCATIONS RELATIVE TO PROPOSED EXPANSION (E) JOINTS SHALL BE THE SAME AS THE CONTRACTION JOINTS SHOWN HEREON.

- THE PROPOSED FACE OF CURB MAY INTERSECT REQUIRED (TYP./MIN.) BLOCKOUT, BUT THE CENTER OF CASTING SHALL BE NO CLOSER THAN TWO (2) FEET (0.6M) FROM THE FACE OF CURB UNLESS OTHERWISE APPROVED BY THE ENGINEER.
- APPROPRIATELY CUT/SHAPED STEEL REINFORCEMENT (PER BP-1.1) SHALL BE INSTALLED WITHIN THE BLOCKED OUT PAVEMENT: ALL AT THE APPROVAL OF THE ENGINEER.
- BUTT JOINTS WITH GROOVE AND SEAL PER BP-2.6C AND SEALED WITH 705.04 JOINT SEALER SHALL BE PROVIDED FOR JOINTS (1), (2) AND (3).

### JOINT LEGEND

- CONSTRUCTION JOINT USING #11x14" (36Mx355mm) DEFORMED BARS TYPICALLY SPACED AT TWELVE (12) INCH (300mm) CENTERS. ACTUAL BAR PLACEMENTS SHALL PROVIDE A SIX (6) INCH (150mm) MINIMUM CLEAR DISTANCE FROM INTERSECTING LONGITUDINAL PAVEMENT AND/OR BLOCKOUT JOINTS; ALL AT THE APPROVAL OF THE ENGINEER.
- LONGITUDINAL CONSTRUCTION JOINT USING #5x24" (16Mx600mm) TIE BAR TYPICALLY SPACED AT TWENTY-FOUR (24) INCH (600mm) CENTERS. ACTUAL BAR PLACEMENTS SHALL PROVIDE A TWELVE (12) INCH (300mm) MINIMUM CLEAR DISTANCE FROM INTERSECTING TRANSVERSE PAVEMENT AND/OR BLOCKOUT JOINTS; ALL AT THE APPROVAL OF THE ENGINEER.
- CONSTRUCT PROPOSED CONTRACTION (C) (EXPANSION (E)) JOINT THROUGH BLOCKOUT. DOWELS TYPICALLY SPACED AT TWELVE (12) INCH (300mm) CENTERS SHALL BE PLACED TO PROVIDE A SIX (6) INCH (150mm) MINIMUM CLEAR DISTANCE FROM INTERSECTING LONGITUDINAL PAVEMENT AND/OR BLOCKOUT JOINTS; ALL AT THE APPROVAL OF THE ENGINEER.
- CONSTRUCT PROPOSED LONGITUDINAL (L) JOINT THROUGH BLOCKOUT. TIE BARS TYPICALLY SPACED PER BP-2.1 (TABLE A) SHALL BE PLACED TO PROVIDE A TWELVE (12) INCH (300mm) MINIMUM CLEAR DISTANCE FROM INTERSECTING TRANSVERSE PAVEMENT AND/OR BLOCKOUT JOINTS; ALL AT THE APPROVAL OF THE ENGINEER.
- CIRCULAR CONSTRUCTION JOINT USING #11x14" (36Mx355mm) DEFORMED BARS RADIALLY SPACED AT TWELVE (12) INCH (300mm) CENTERS. ACTUAL BAR PLACEMENTS SHALL PROVIDE A SIX (6) INCH (150mm) MINIMUM CLEAR DISTANCE FROM INTERSECTING LONGITUDINAL PAVEMENT JOINTS; ALL AT THE APPROVAL OF THE ENGINEER.
- ONE HALF (1/2) INCH WIDE CIRCULAR EXPANSION JOINT (PER BP-2.2) WITH DOWELS RADIALLY SPACED AT TWELVE (12) INCH (300mm) CENTERS AND PLACED ON ONE SIDE OF (TB) ONLY. ACTUAL DOWEL PLACEMENTS SHALL PROVIDE A SIX (6) INCH (150mm) MINIMUM CLEAR DISTANCE FROM INTERSECTING PAVEMENT JOINTS; ALL AT THE APPROVAL OF THE ENGINEER.

- (C) CONTRACTION JOINT, PER BP-2.2
- (E) EXPANSION JOINT, PER BP-2.2
- (L) LONGITUDINAL JOINT, PER BP-2.1
- (TB) THICKENED EDGE BUTT JOINT, PER BP-2.6C

CUYAHOGA COUNTY ENGINEER

TYPICAL MANHOLE CASTING PAVEMENT BLOCKOUTS

CONSTRUCTION DRAWING BP-2.7C

DATE  
12-07-99  
08-15-00  
08-20-03  
06-27-05  
10-10-08

