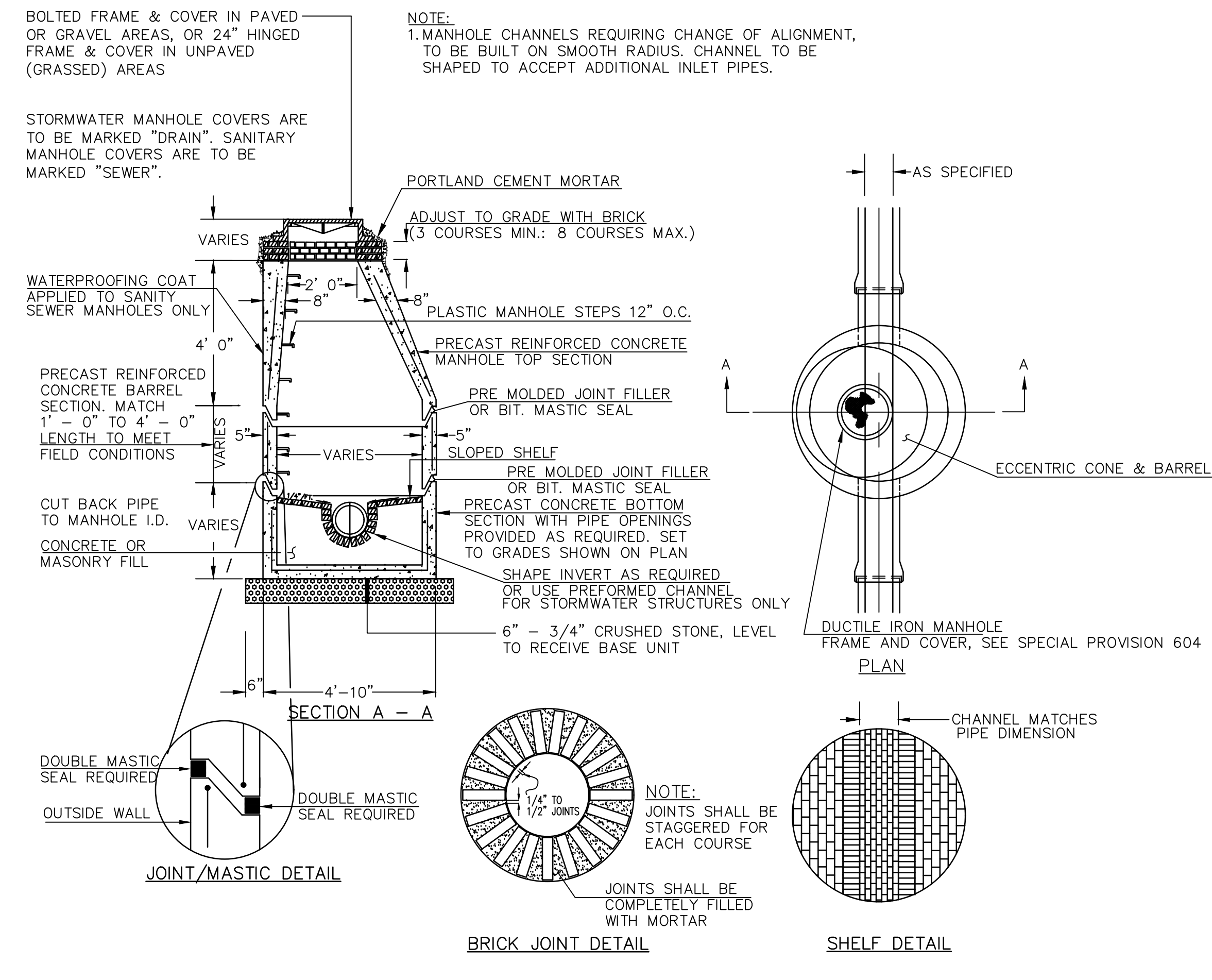
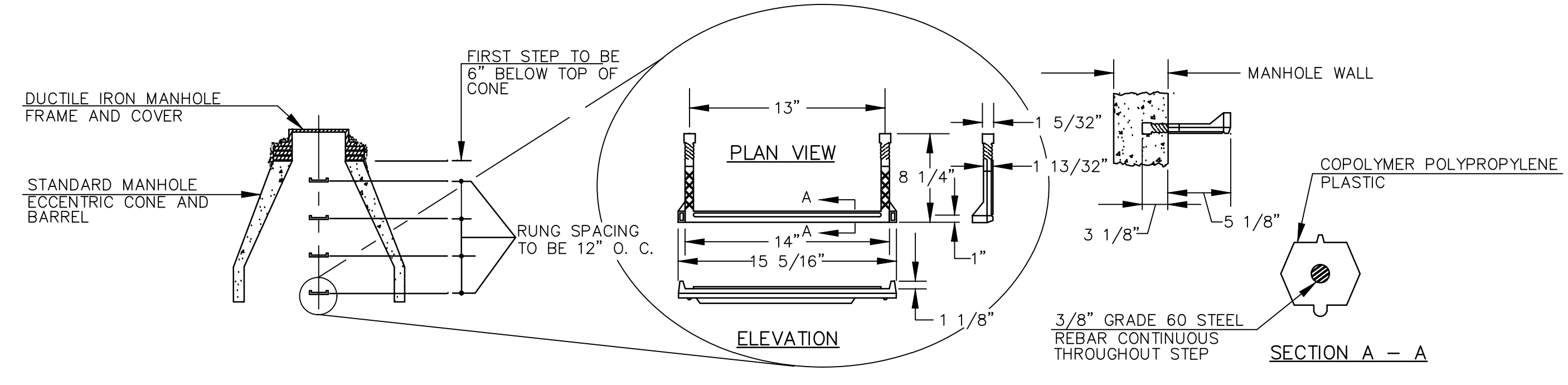


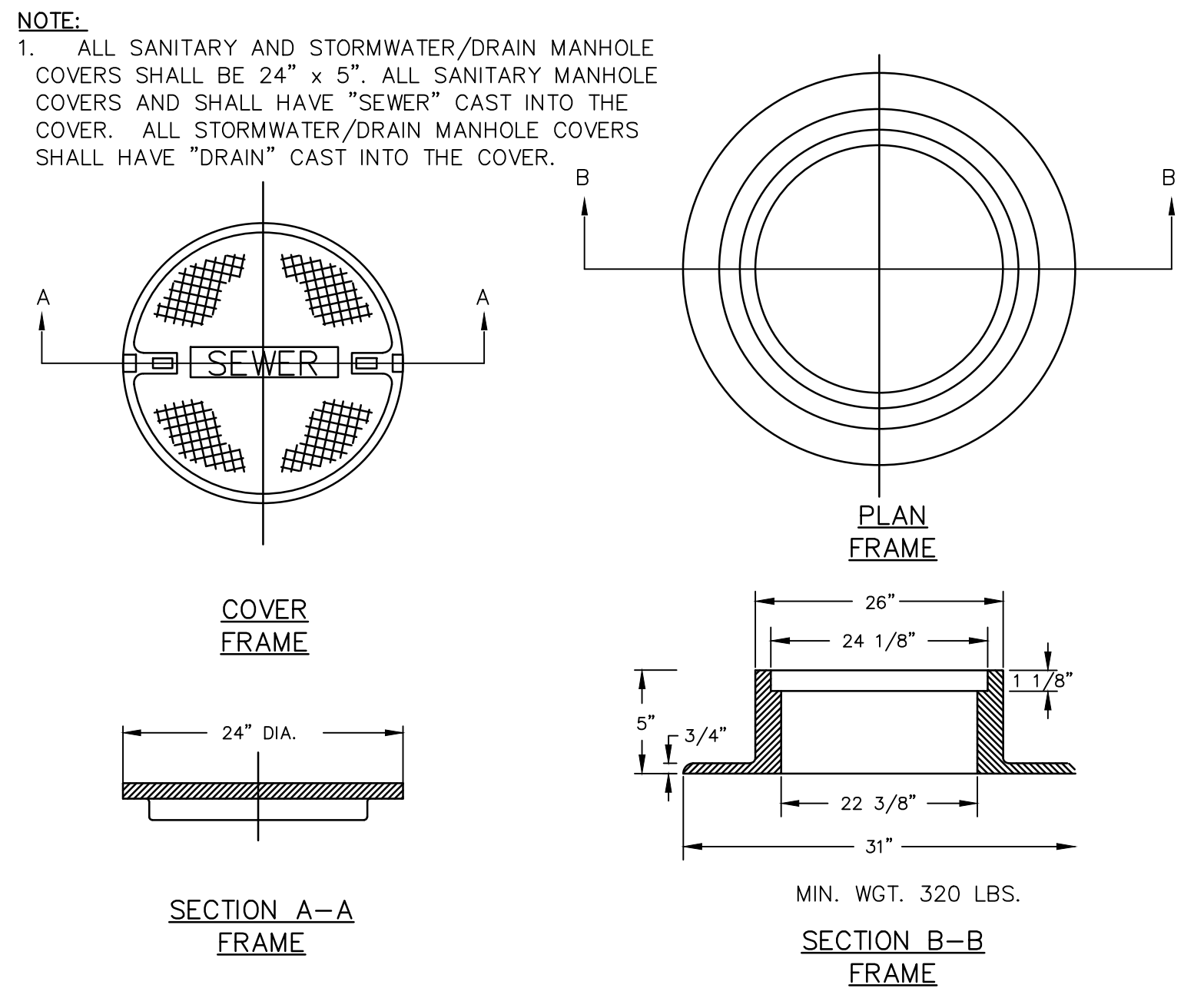
NO.	ISSUE	DATE
Job Number	152189.000	
Drawn	MAL/AMM	
Checked	DLR	
Approved	DLR	



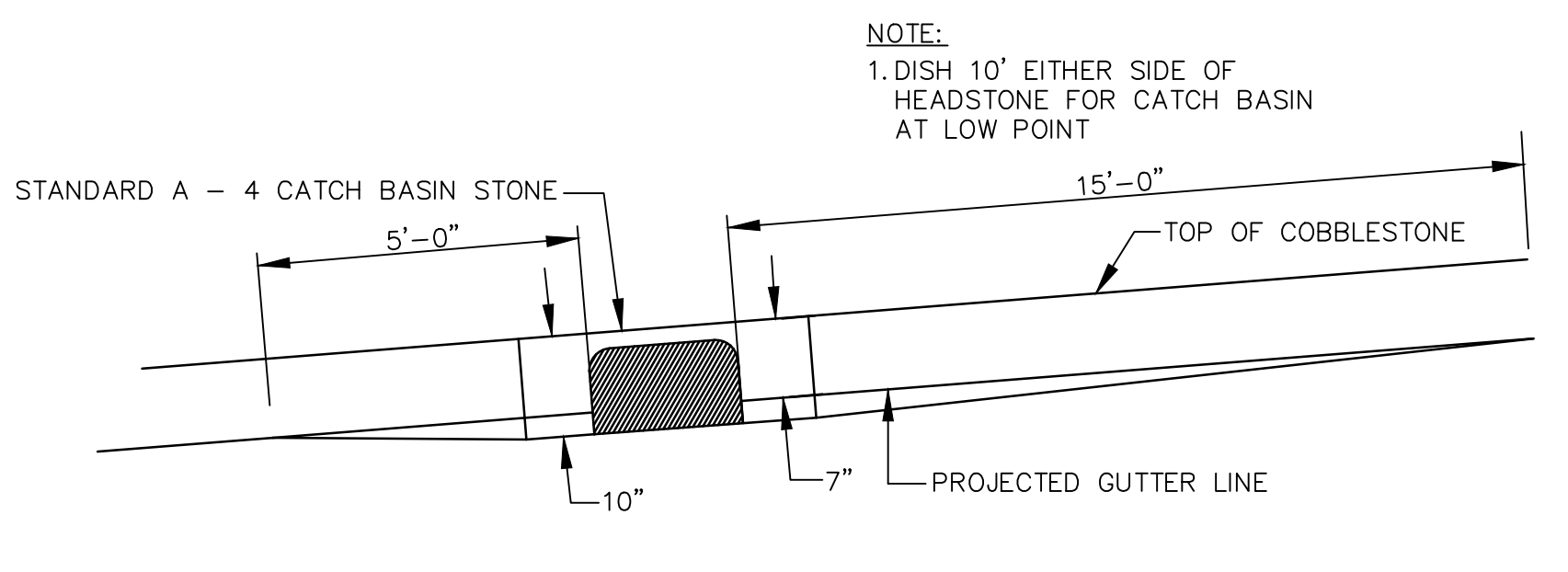
PRECAST CONCRETE MANHOLE TYPE "A"
NOT TO SCALE



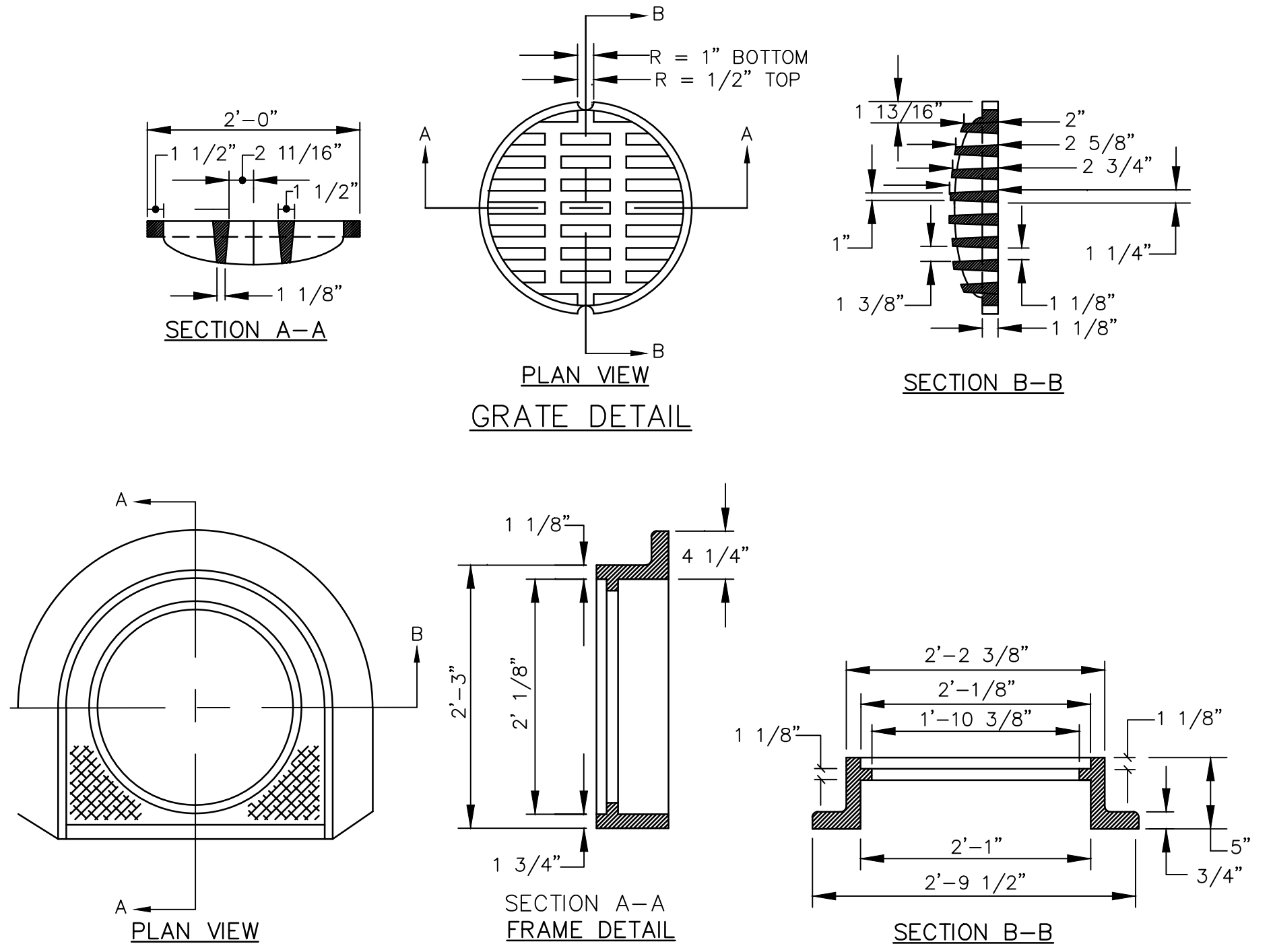
PLASTIC MANHOLE STEPS
NOT TO SCALE



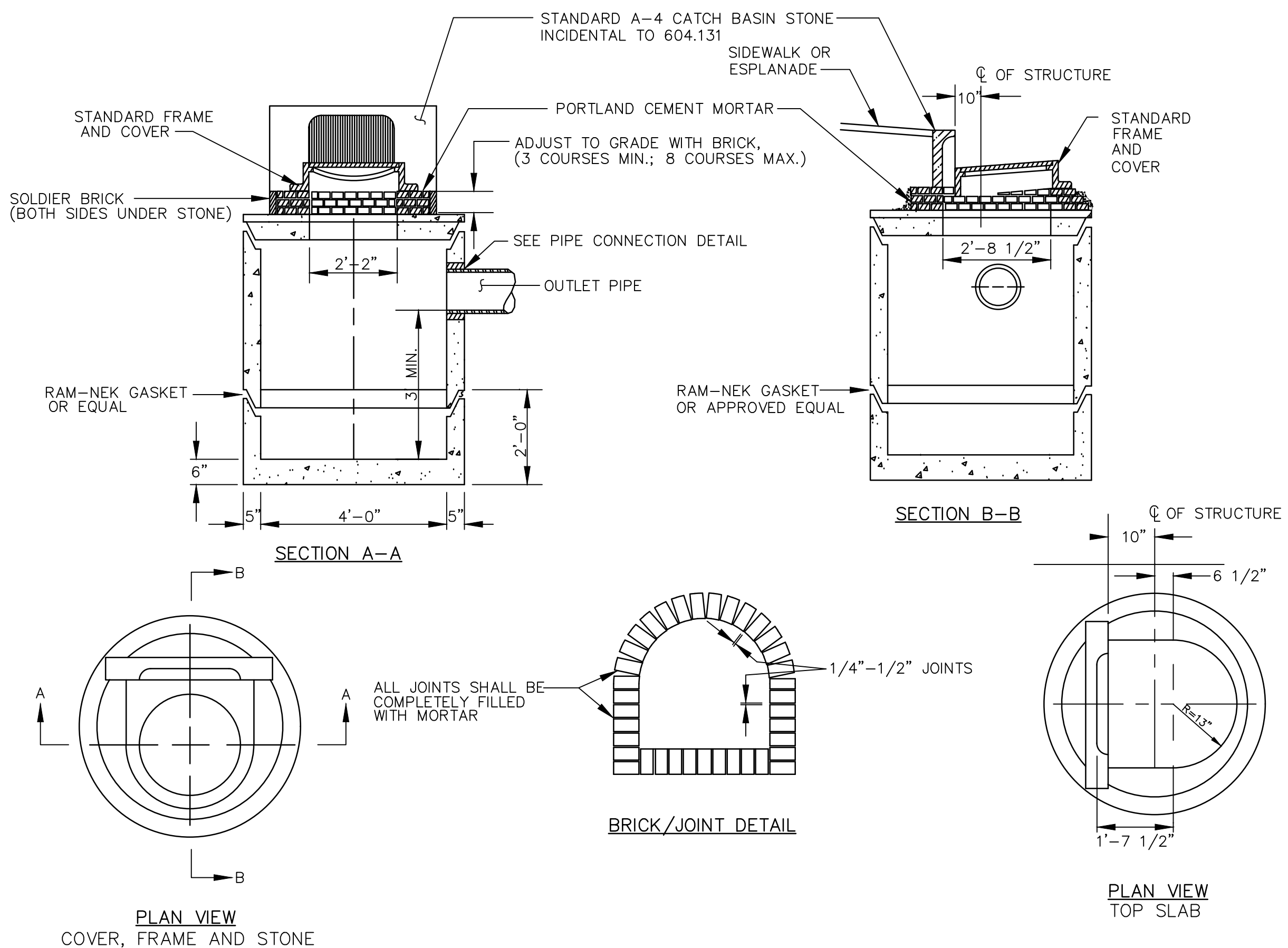
CAST IRON MANHOLE FRAME AND COVER
NOT TO SCALE



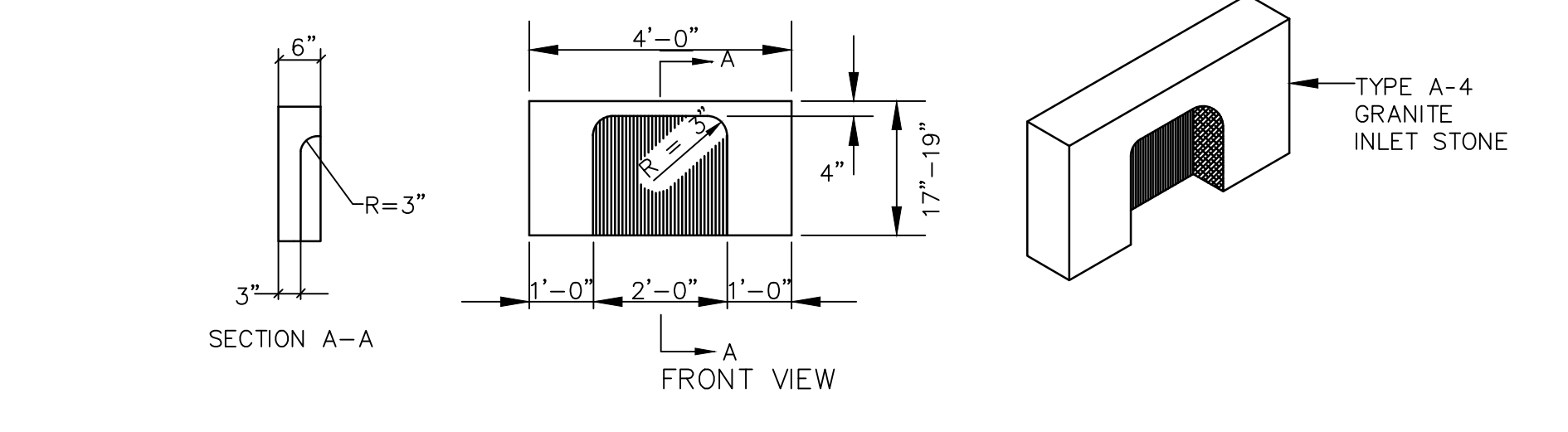
TYPICAL PAVEMENT GRADING ON SLOPES FOR CATCH BASIN & INLET
NOT TO SCALE



CATCH BASIN TYPE "D" - FRAME & COVER DETAIL
NOT TO SCALE



PRECAST CONCRETE CATCH BASIN - TYPE E
NOT TO SCALE



TYPE A-4 GRANITE CATCH BASIN INLET STONE DETAIL
NOT TO SCALE

NOTE:
1. TYPE D FRAME AND COVER AND TYPE A-4 GRANITE HEADSTONES ARE TO BE INSTALLED AT CATCH BASINS IN PUBLIC STREETS ONLY. SEE SHEET C30-04 FOR TYPICAL BASINS TO BE INSTALLED ON MMC PROPERTY ENTRANCE PLAZA.

NOTE:
1. TYPE E CATCH BASINS ARE TO BE INSTALLED AT LOCATIONS IN PUBLIC STREETS ONLY. SEE SHEET C30-04 FOR TYPICAL BASINS TO BE INSTALLED ON MMC PROPERTY ENTRANCE PLAZA.

GENERAL NOTES FOR MANHOLES & CATCH BASINS

- ALL CONCRETE SHALL BE CLASS "A" AND HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 4000 LBS. PER SQ. INCH AT THE END OF 28 DAYS, UNLESS OTHERWISE NOTED.
- PRECAST REINFORCED CONE BARREL MANUFACTURED PER ASTM SPEC. C-478-67
- SEWER BRICK SHALL CONFORM TO ASTM SPEC. DESIGNATE ON C-32-63, GRADE MA AND SA.
- SANITARY SEWER MANHOLES SHALL HAVE A BITUMINOUS WATERPROOFING APPLIED TO THE EXTERIOR SURFACE. IF CONSTRUCTED OF BRICK MASONRY, SURFACE SHALL BE PLASTERED WITH A SMOOTH MORTAR FINISH 3/8" THICK. AFTER THE MORTAR HAS SET, THE SURFACE SHALL BE WATERPROOFED AS REQUIRED BY SUPPLEMENTAL SPECIFICATIONS SECTION 604.
- MANHOLES MAY BE CONSTRUCTED OF MASONRY, PRECAST REINFORCED CONCRETE, OR CAST IN PLACE.
- ALL PRECAST MANHOLES AND CATCH BASINS SHALL BE IDENTIFIED BY STATION AND OFFSET, PAINTED ON THE SIDE OF THE STRUCTURE BY THE MANUFACTURER.
- EXISTING FRAMES, AND COVERS SHALL BE SALVAGED BY THE CONTRACTOR, AND SHALL REMAIN THE PROPERTY OF THE CITY OF PORTLAND. CONTRACTOR SHALL DELIVER TO CITY STOCKYARD AT NO COST.
- EXISTING GRANITE COBBLE STONE AND PAVERS SHALL BE STOCKPILED BY THE CONTRACTOR, AND REUSED FOR CONSTRUCTION OF NEW COBBLE STONE GUTTER. GRANITE NOT USED SHALL REMAIN THE PROPERTY OF THE CITY OF PORTLAND.
- ALL NEW CATCH BASINS IN PUBLIC STREETS SHALL RECEIVE A TYPE A-4 GRANITE INLET STONE UNLESS OTHERWISE NOTED.