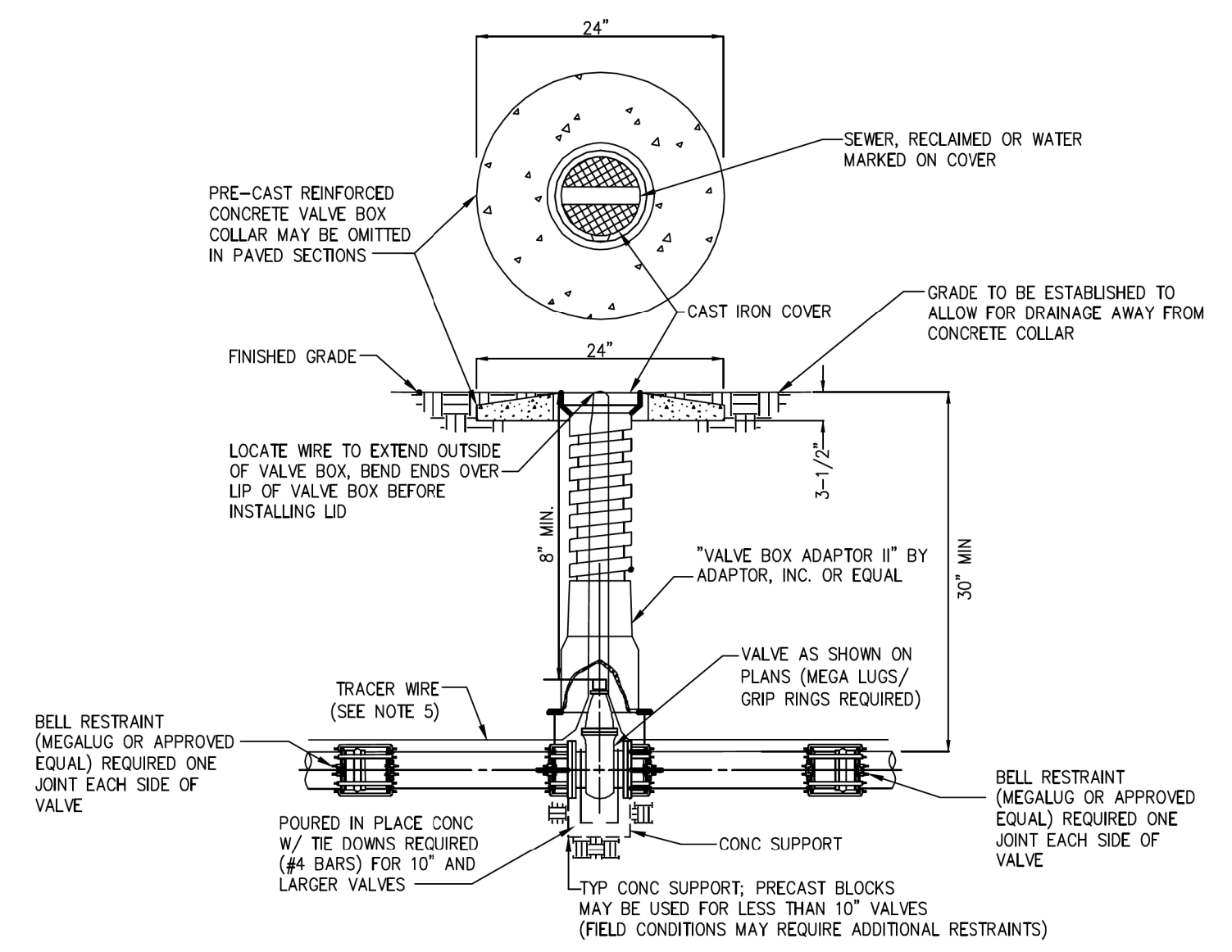


5/14/99

GENERAL WATER & SEWER DETAILS

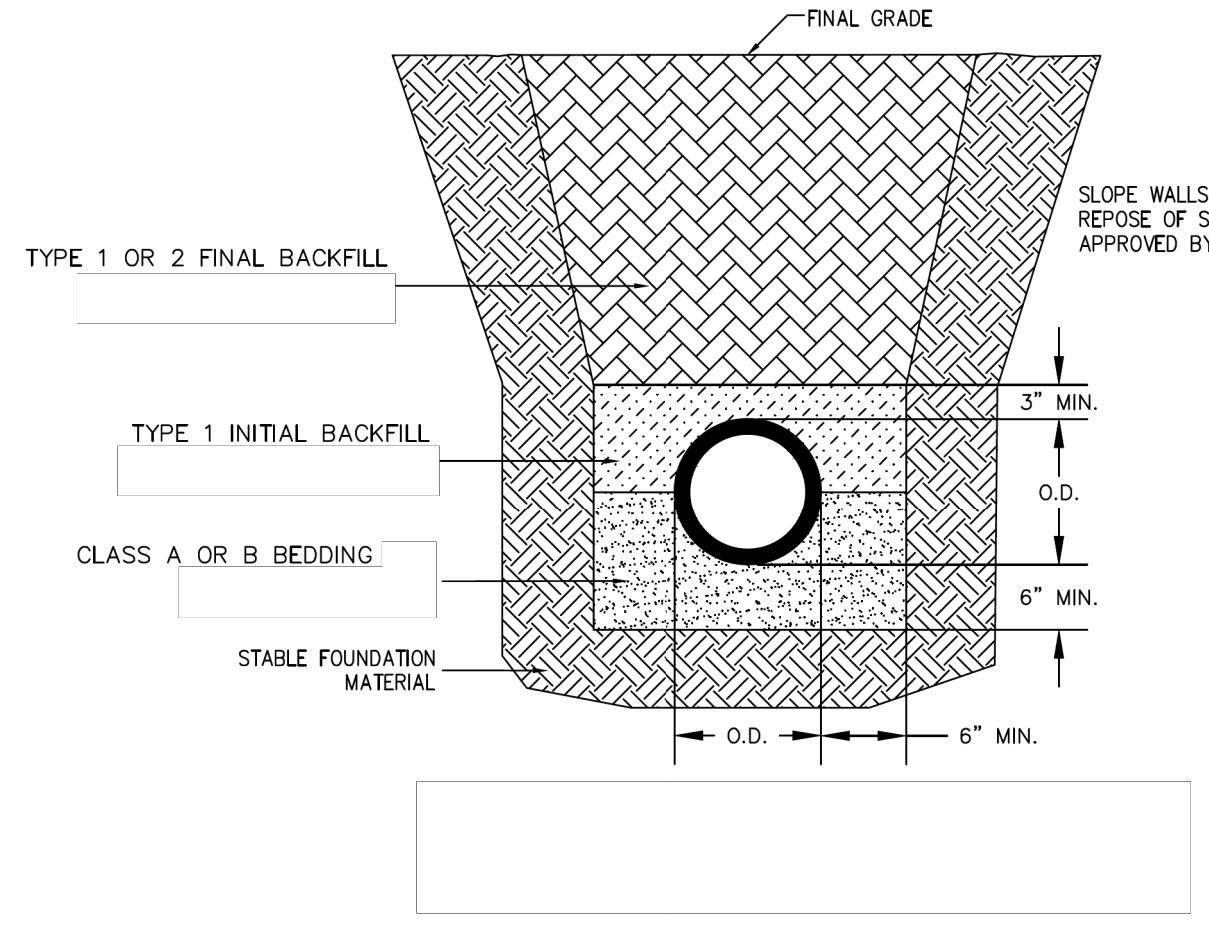
PROJECT REFERENCE NO. <i>R-5020B</i>	SHEET NO. <i>UC-3E</i>
DESIGNED BY: <i>DK</i>	
DRAWN BY: <i>AP</i>	
CHECKED BY: <i>MM</i>	
APPROVED BY:	
REVISID:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY 	



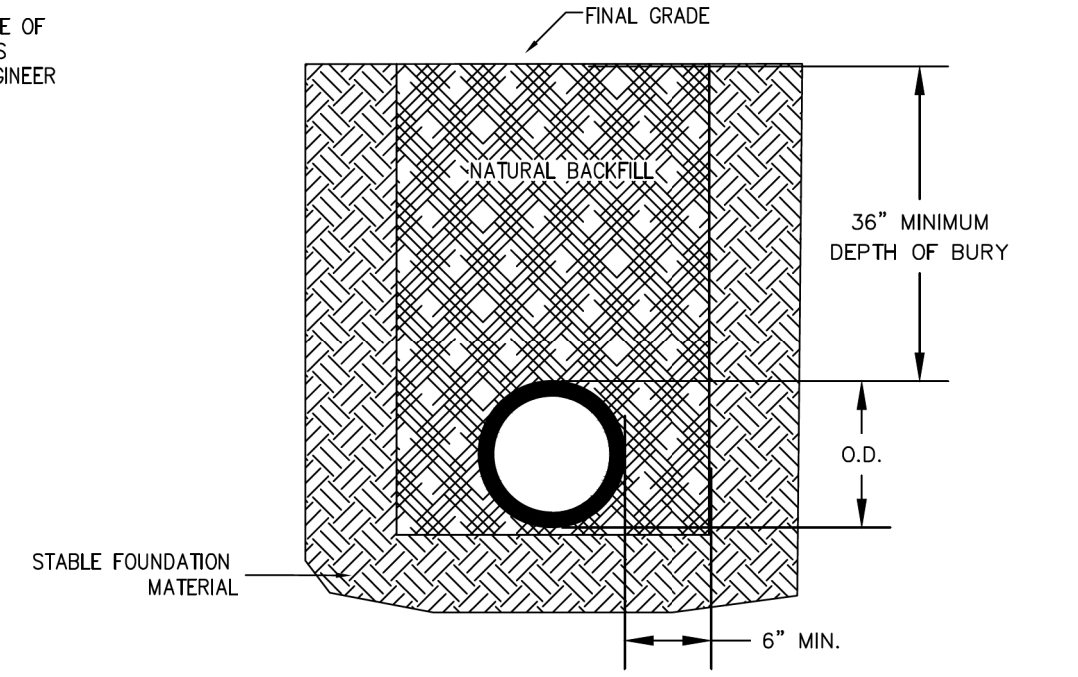
- NOTES:
- TOP OF VALVE BOX AND COLLAR SHALL BE PAINTED GREEN FOR SEWER FM, PURPLE FOR RECLAIMED WATER, AND BLUE FOR WATER.
 - EXTENSION STEM WILL BE REQUIRED TO BE WITHIN 2 FEET OF THE SURFACE IF OPERATING NUT WOULD OTHERWISE BE OVER 5 FEET BELOW GRADE. EXTENSIONS SHALL BE PERMANENTLY ATTACHED TO VALVE NUT AND SHALL BE PROVIDED WITH HORIZONTAL SPACERS FOR VERTICAL ALIGNMENT WITHIN THE VALVE BOX.
 - MINIMUM CLEARANCE TO EXTENSION IS 8".
 - WIRE COLORS REQUIRED: SEWER-GREEN/WATER-BLUE/RECLAIMED WATER-PURPLE OR GREEN WITH PURPLE STRIPE
 - 12 GA. COPPERHEAD SUPER FLEX TRACER WIRE OR APPROVED EQUAL.

VALVE BOX
DETAIL WS-9

- DEPTH < 20 FEET - CLASS "A" BEDDING
- UNDERCUT TRENCH BOTTOM 6 INCHES MINIMUM BELOW PIPE
 - FILL PIPE TO SPRING LINE WITH NO. 57 STONE
- DEPTH > 20 FEET - CLASS "B" BEDDING
- UNDERCUT TRENCH BOTTOM 6 INCHES MINIMUM BELOW PIPE
 - FILL TO 6 INCHES ABOVE PIPE WITH NO. 57 STONE
- INSTALLATIONS THAT EXCEED 20 FEET DEPTH SHALL BE DR-18 C900 MINIMUM OR PER MANUFACTURERS RECOMMENDATIONS

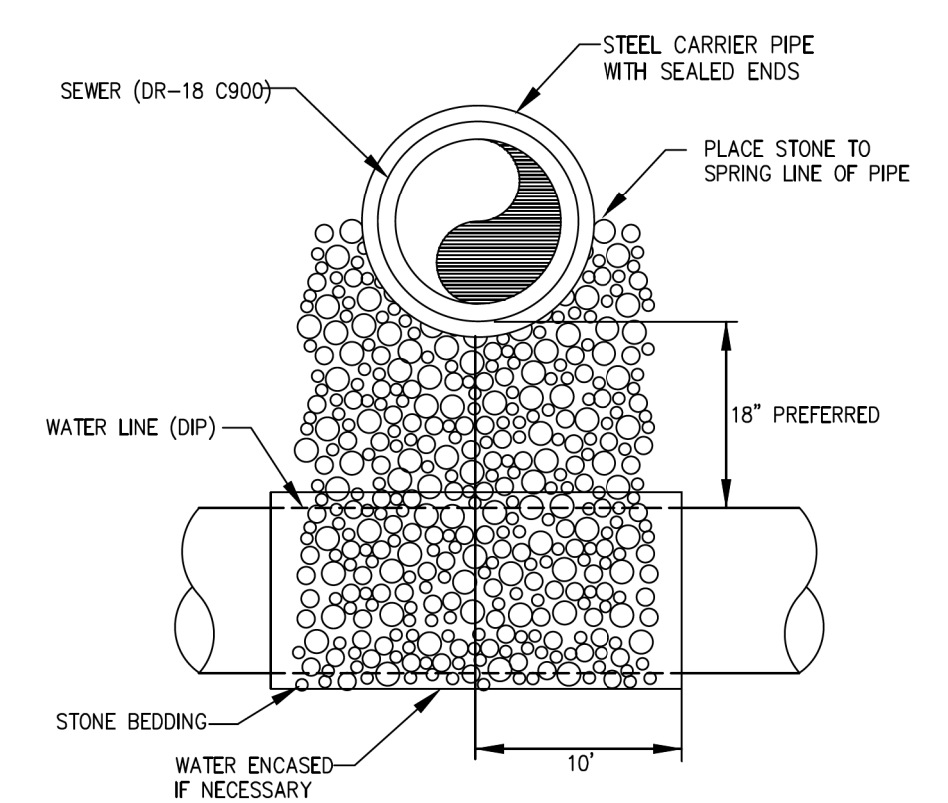


GRAVITY SEWER
PIPE TRENCH/BEDDING DETAIL
DETAIL WS-22



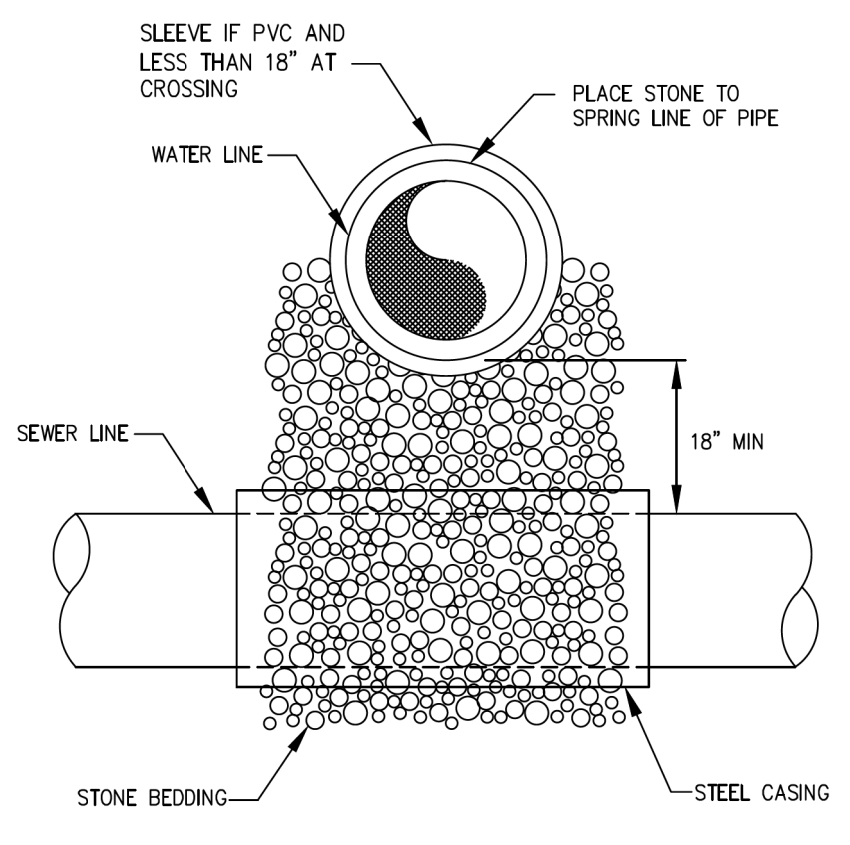
WATERMAIN AND/OR SEWER FORCEMAIN (PRESSURE PIPE)
PIPE TRENCH/BEDDING DETAIL
DETAIL WS-22A

UTILITY CONSTRUCTION
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



- NOTES:
- BOTH THE WATER MAIN AND THE SEWER MAIN SHALL BE FERROUS MATERIALS WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS FOR A MINIMUM DISTANCE OF 10 FEET ON EACH SIDE OF THE CROSSING.
 - ALTERNATIVELY, PIPES MAY BE SLEEVED WITH FERROUS MATERIALS FOR A MINIMUM DISTANCE OF 10 FEET ON EACH SIDE OF THE CROSSING

SEWER CROSSING ABOVE WATER LINE



- NOTES:
- SOIL REPLACED UNDER THE WATER MAIN SHALL BE COMPACTED.
 - IF THE WATER MAIN CROSSES AT LESS THAN 18" ABOVE THE SEWER MAIN BOTH THE WATER MAIN AND THE SEWER MAIN SHALL BE FERROUS MATERIALS WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS FOR A MINIMUM DISTANCE OF 10 FEET ON EACH SIDE OF THE CROSSING, OR THEY MAY HAVE FERROUS SLEEVES PUT AROUND THEM.

SEWER CROSSING BELOW WATER LINE

SEWER OFFSETS ABOVE
AND BELOW WATER MAINS
DETAIL WS-21

I:\158_2020_1810_Ceming\Water_Sanitary\R-5020B-ut_UC03A.dtl.dgn
 R-5020B-02701.dwg
 5/14/99 10:00 AM
 100T