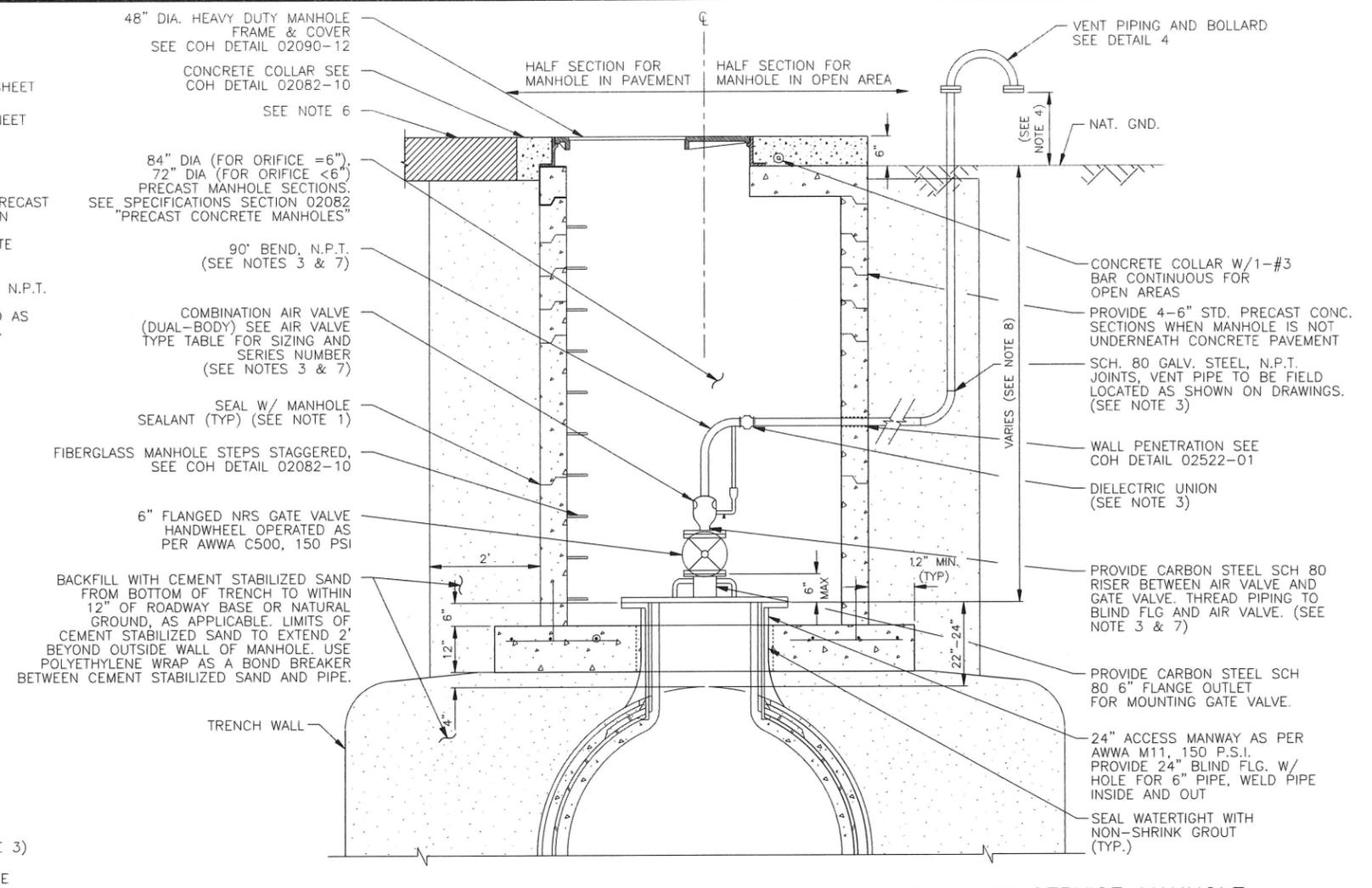
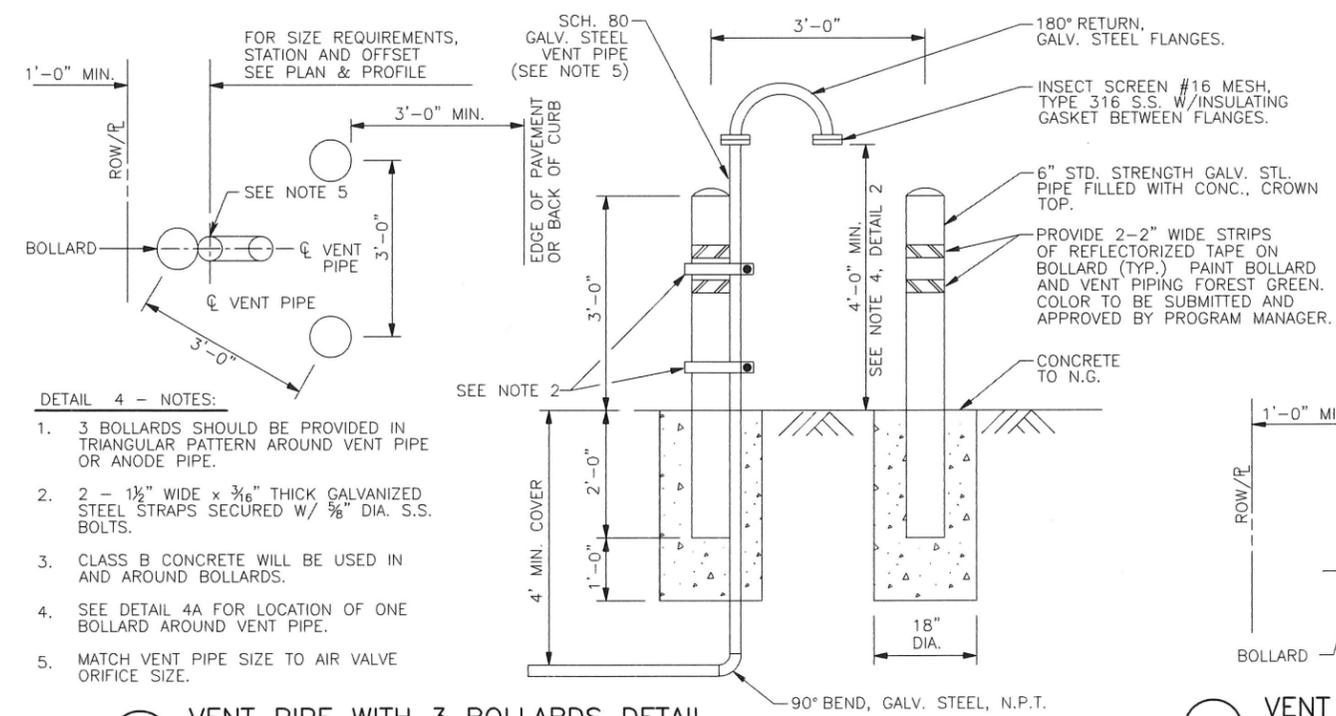


**1 LOW PROFILE AIR VALVE ASSEMBLY**  
(FOR WATER LINES 36-INCH TO 96-INCH DIAMETER, ONLY IF SPECIFIED IN PLAN AND PROFILE SHEETS)



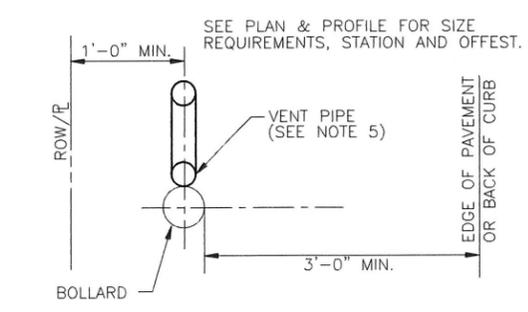
**2 AIR VALVE ASSEMBLY WITH ACCESS MANWAY IN SERVICE MANHOLE**  
(FOR WATER LINES 36-INCH TO 96-INCH DIAMETER)



**4 VENT PIPE WITH 3 BOLLARDS DETAIL**

WATER MAIN DIAMETER	MANUFACTURER (1)	VACUUM (AI/VR)		AIR RELEASE		
		SERIES	ORIFICE SIZE	SERIES	INLET SIZE (NPT)	ORIFICE SIZE (2)
>=36" <=96"	APCO	1500C		200A	1"	
	CLAVAL	38VB		34AR-C	1"	
	PRATT	WAVVB		WAR 02	1"	

**3 AIR VALVE & TYPE TABLE**  
(FOR WATER LINES 36" TO 96" DIAMETER)



**4A VENT PIPE WITH 1 BOLLARD DETAIL**

- DETAILS 1 & 2 - NOTES:**
1. PROVIDE RAM-NEK OR APPROVED EQUAL BETWEEN PRECAST SEGMENTS OF THE MANHOLE.
  2. FOR MANHOLES DEEPER THAN 20 FEET, SAFETY CLIMBING RAIL MUST BE PROVIDED (SAF-T-CLIMB OR APPROVED EQUAL). SEE COH DETAIL 02082-11.
  3. PIPING AND APPURTENANCES OF THE SAME DIAMETER AND CONSTRUCTED OF THE SAME MATERIAL AND CLASS.
  4. VERIFY THAT LOCATION OF VENT PIPE SCREEN IS 1 FOOT ABOVE 100-YEAR FLOOD PLAIN ELEVATION OR 4 FEET ABOVE NATURAL GROUND WHICHEVER IS HIGHER.
  5. REFER TO PLAN AND PROFILE SHEETS FOR LOCATIONS OF AIR VALVES.
  6. FOR PAVEMENT REPAIR, SEE COH DETAILS 02902-01 & 02902-02.
  7. PROVIDE AN APPROVED PETROLATUM BASED TAPE ENCAPSULATING ALL BOLTS IN ACCESS MANHOLE.
  8. USE "LOW PROFILE AIR VALVE ASSEMBLY DETAIL" ONLY IF SPECIFIED IN PLAN AND PROFILE SHEETS.
  9. NATIONAL PIPE THREAD IS ABBREVIATED AS N.P.T. ON THIS DRAWING

- DETAILS 3 - NOTES:**
- (1) OR APPROVED EQUAL.
  - (2) MINIMUM ORIFICE SIZE REQUIRED. TO BE UPDATED FOR EACH PROJECT BASED ON TRANSIENT ANALYSIS.

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

**LDWL**  
**AIR VALVE ASSEMBLY IN**  
**SERVICE MANHOLE DETAIL**  
(NOT TO SCALE)

APPROVED BY: <i>Subail Kanwar</i> CITY ENGINEER	APPROVED BY: <i>Carl Hadden</i> DIRECTOR OF HOUSTON PUBLIC WORKS
EFF DATE: JUL - 01 - 2021	DWG NO: 02524-03