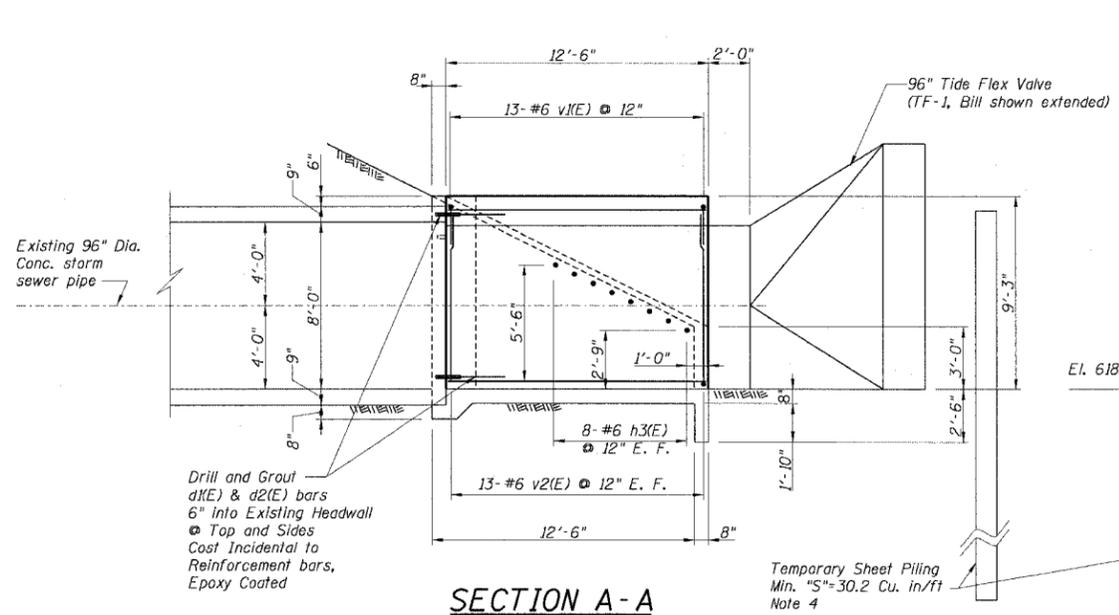


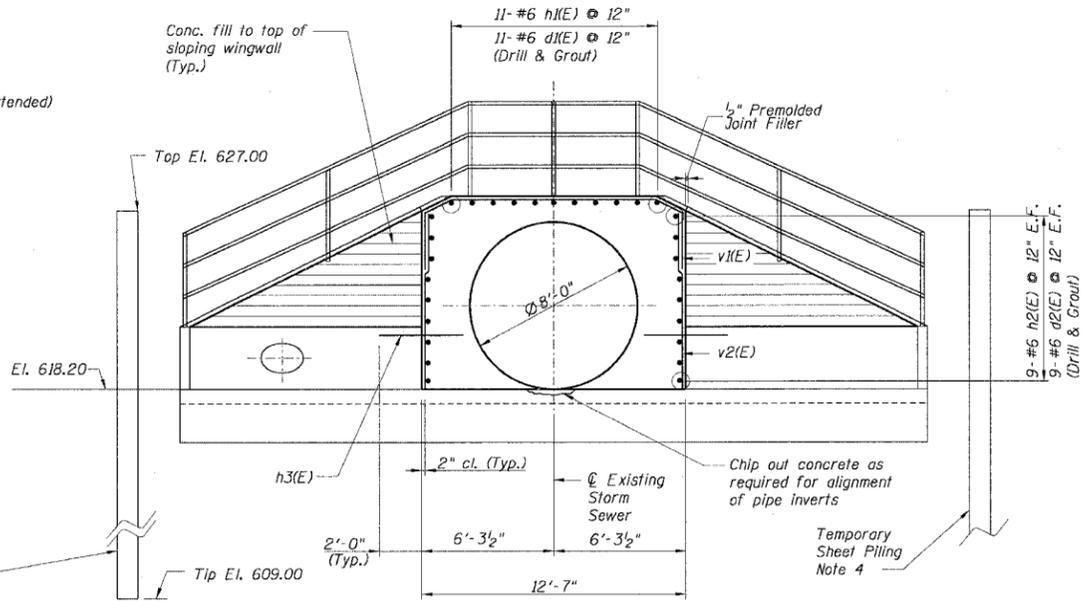
BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
d1(E)	11	#6	3'-0"	—	
d2(E)	18	#6	3'-1"	—	
h1(E)	11	#6	12'-2"	—	
h2(E)	18	#6	10'-10"	—	
h3(E)	16	#6	4'-0"	—	
v1(E)	13	#6	18'-6"	—	
v2(E)	26	#6	8'-11"	—	
Concrete Structures				Cu. Yd.	72
Reinforcement Bars, Epoxy Coated				Pound	1432
Temporary Sheet Piling				Sq. Ft.	2030
96" Tideflex Valve				Ea.	1
24" Tideflex Valve				Ea.	1
Big Bend Lake Pipe Extensions				L. Sum	1
Protective Coat				Sq. Yd.	60

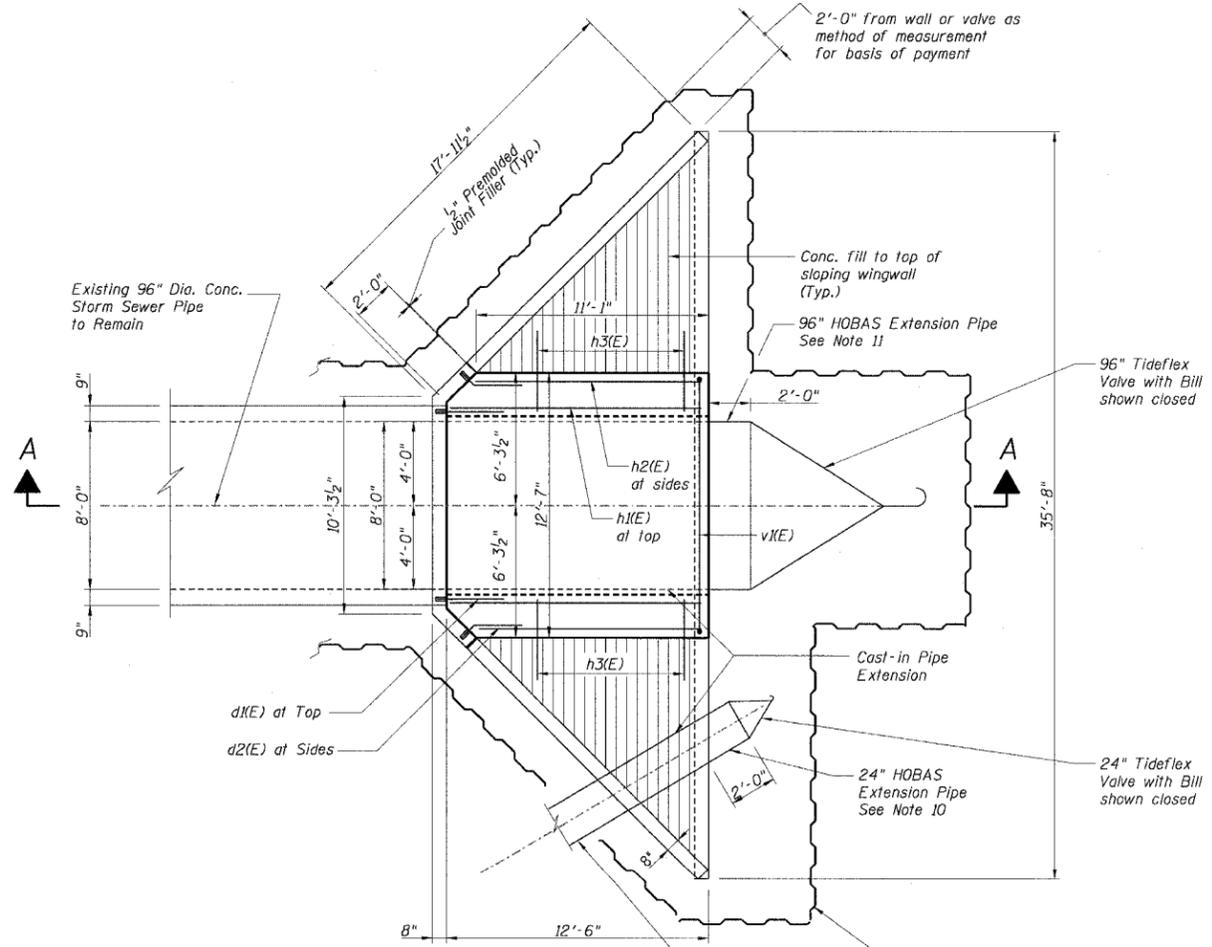
Reinforcement bars designated (E) shall be Epoxy Coated.



SECTION A-A



END ELEVATION



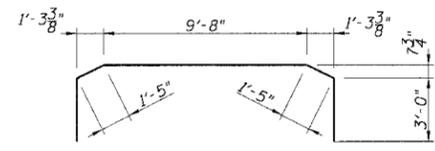
PLAN

GENERAL NOTES AND SUGGESTED SEQUENCE OF WORK (CONT'D.):

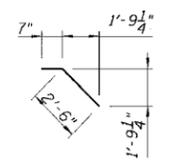
- 10. The 24" storm sewer to be extended at Big Bend Lake penetrates the existing headwall at an unknown angle. In addition, the end condition of the pipe is unknown. Provide 24" diameter minimum stiffness Hobas pipe 8 ft long and then trim to match the existing alignment of the wall. In order to keep the extension pipe in alignment during the concrete pour it is suggested that a 2.3.5" diameter 2 ft. long fabricated insertion nipple be inserted inside the existing 24" storm sewer such that it extends out from the about 12". The nipple can then be affixed to the inside of the existing storm sewer to prevent it from moving during the pour. The extension pipe can then be fitted over the exposed nipple and sealant injected into the joint to prevent seepage of concrete during concrete placement. The contractor is required to adequately support and restrain the pipe to prevent movement and/or flotation during placement of concrete.
- 11. Provide 96" diameter minimum stiffness Hobas pipe 14'-6" long as the extension piece. The end condition of the existing 96" pipe is unknown. It is likely that the bottom slab of the headwall was poured flush with the invert of the pipe. Chip out concrete from the bottom slab as necessary to align the proposed pipe with the existing pipe invert. In order to keep the extension pipe in alignment during the concrete pour it is suggested that internal braces or angle irons be inserted inside the existing 96" storm sewer and that the joint between the two pipes be wrapped with Synko Flex or other appropriate sealant to prevent seepage of concrete into the pipe during placement. The contractor is required to adequately support and restrain the pipe to prevent movement and/or flotation during placement of concrete. Before mounting the Tideflex valve, Contractor is to remove internal alignment bracing.
- 12. Cost for installation of both 96" and 24" extension pipes including any field modifications necessary for alignment, support or restraint of pipes and concrete demolition is included in the lump sum cost for Big Bend Lake Pipe Extensions.

GENERAL NOTES AND SUGGESTED SEQUENCE OF WORK

- 1. The existing headwall was constructed in the late 1970's as part of an overall drainage improvement project that extended along Golf Road almost four miles to the east. Two storm sewers tie into the headwall. One is a 24" storm sewer that takes flow from a 3' x 2' box culvert crossing Golf Road. The second storm sewer is a 96" sewer that also crosses Golf Road and extends nearly 4 miles to the east, varying in size up to 120" in diameter. The service area for the storm sewers is significant and storm water flow must be maintained. Should storm flow occur during construction, the Contractor is required to maintain unimpeded flow of water into the lake.
- 2. The proposed modifications to the headwall include removal of the existing grating over the end of the 96" pipe opening and surface mounted steel plates on the water side of the headwall, placement of new concrete on the water side of the headwall tied into the existing concrete, installation of 96" and 24" pipes to be used as mounting thimbles, and installation of both a 96" diameter and a 24" diameter Tideflex valve. Cost of removal of existing grating and steel plate shall be included in the pay item for Concrete Structures and will not be paid for separately.
- 3. The normal water level in the lake is established by an existing spillway at Elevation 626.0'. As a result, the existing 96" pipe is normally submerged.
- 4. Permit requirements for construction of these modifications stipulate that this work shall be performed between October 15th of any year and the April 1 of the following year. The proposed modifications must be completed under dry conditions. Temporary Sheet Piling is to be driven in Big Bend Lake around the existing headwall to isolate the headwall from the lake. The Contractor is to provide temporary pumping to maintain dry conditions for construction of the required headwall modifications. Included with the sheeting should be a removable section or single or multiple openings that can be controlled with valves or gates with a minimum total cross sectional area of 55 square feet at a minimum invert elevation at Elevation 622.0' to allow free flow of water into the lake under storm conditions. Temporary Sheet Piling shall be removed when the work is complete. Sheet Piling top elevation 627.00'. Estimated Tip elevation 609.00. Minimum Section Modulus is 30.2 Cu in/ft. Cost of Dewatering and opening in Sheet Piling shall be included in the pay item for Temporary Sheet Piling and will not be paid for separately.
- 5. At the Contractor's option, the contractor may install temporary bulkheads within the two influent storm sewers. These temporary bulkheads must be removed to allow free flow of storm water under storm conditions.
- 6. The temporary steel sheeting must not be removed until after the temporary bulkheads in the pipes have been removed and/or the differential head between the two sides of the sheeting equalizes.
- 7. Clean and roughen existing concrete surface to bond new concrete to existing. Cost shall be included in the pay item for Concrete Structures and will not be paid for separately.
- 8. Excavation and/or cleaning of the structure in order to place the new concrete is included in the pay item for Concrete Structures and will not be paid for separately.
- 9. For location of Storm Sewer, see Location Map on Cover Sheet.



BAR v1(E)



BAR d2(E)

REVISION	
DATE	DESCRIPTION

PLANS PREPARED BY:
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