

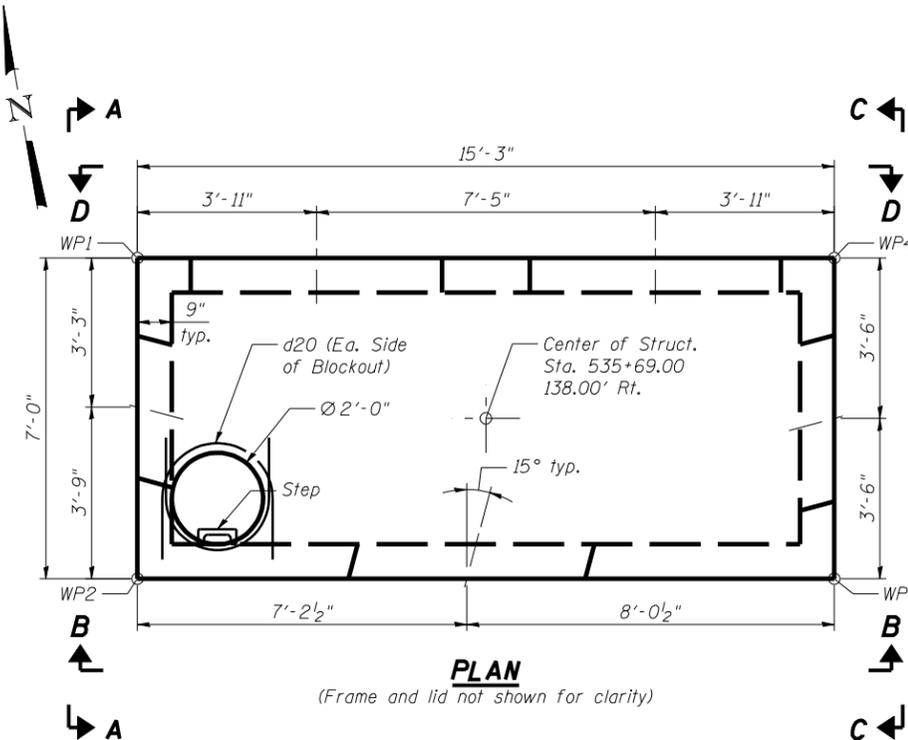
**\*BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a20	11	#5	6'-9"	—
a21	62	#5	7'-11"	U
a22	9	#4	6'-9"	—
b20	26	#4	15'-0"	—
b21	11	#5	15'-0"	—
d20	2	#4	6'-4"	C
d21	2	#4	7'-11"	C
d22	2	#4	8'-9"	C
d23	2	#4	11'-1"	C
d24	4	#4	11'-10"	C
h20	28	#5	15'-0"	—
h21	28	#5	6'-9"	—
v20	64	#5	10'-4"	—
v21	64	#5	3'-2"	—
Concrete Structures	Cu. Yd.		14.1	
Reinforcement Bars	Pound		2,680	

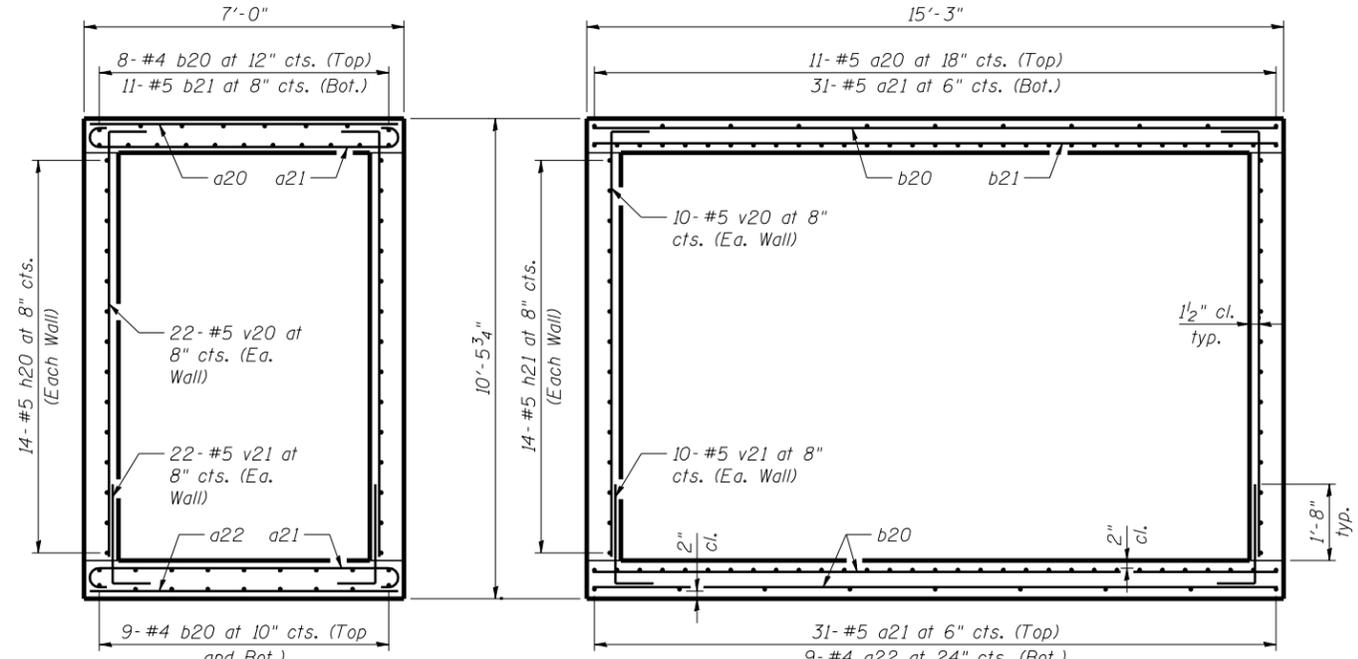
\* For information only.

**WORK POINTS**

WP	Station	Offset
WP1	535+61.63	134.51' Rt.
WP2	535+61.65	141.51' Rt.
WP3	535+76.35	141.51' Rt.
WP4	535+76.37	134.51' Rt.



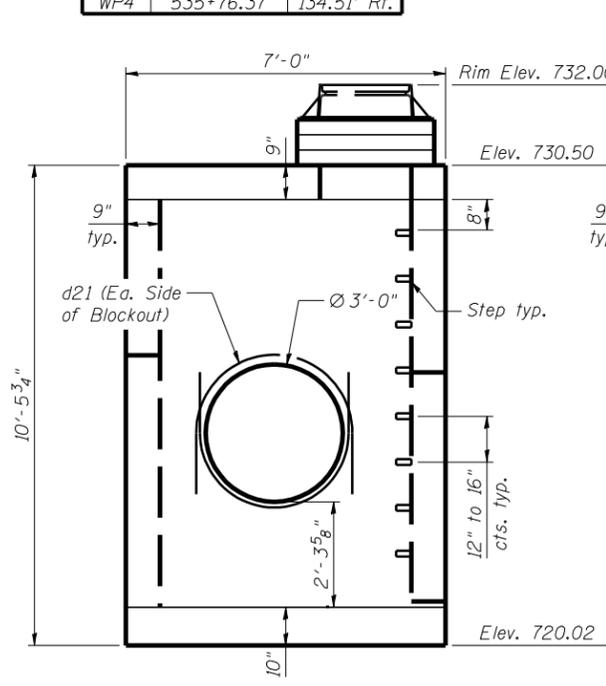
**PLAN**  
(Frame and lid not shown for clarity)



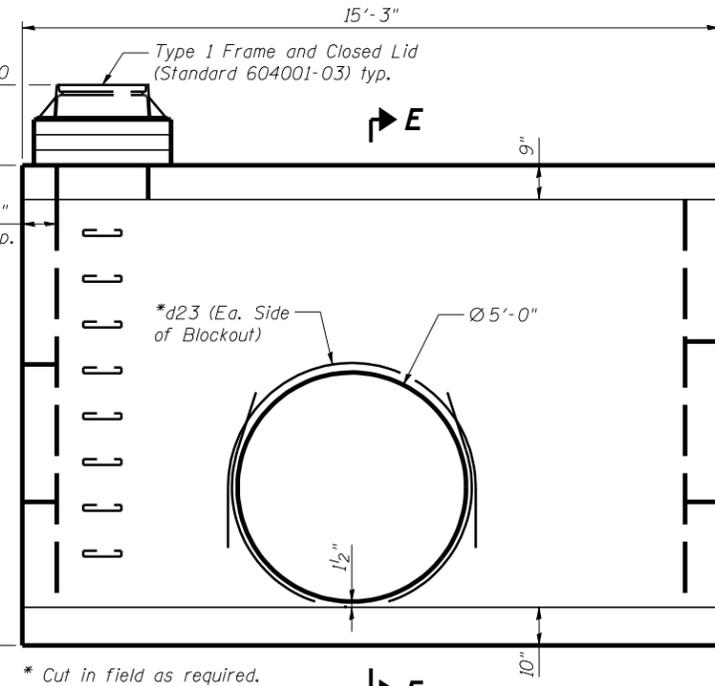
**SECTION E-E**  
(Blockouts not shown for clarity)

**SECTION F-F**  
(Blockouts not shown for clarity)

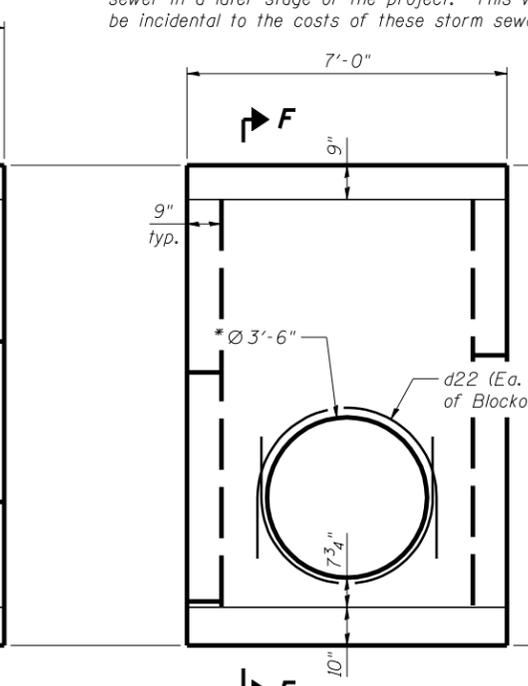
\*This opening will first receive a temp. 24" storm sewer to be removed and replaced with a permanent 30" storm sewer in a later stage of the project. This work shall be incidental to the costs of these storm sewer items.



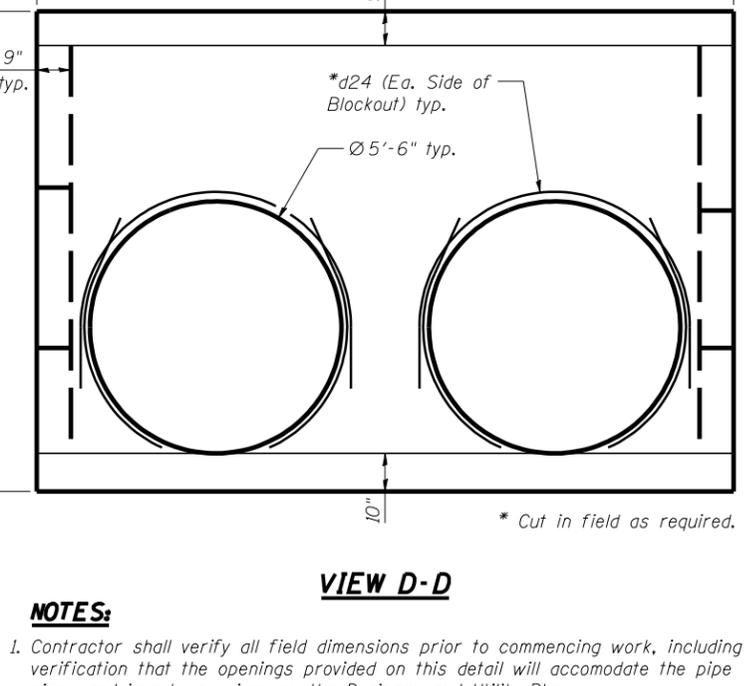
**VIEW A-A**



**VIEW B-B**



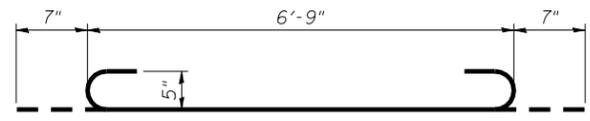
**VIEW C-C**



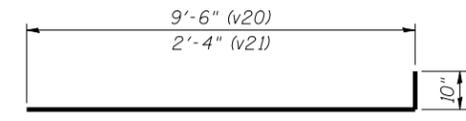
**VIEW D-D**

**NOTES:**

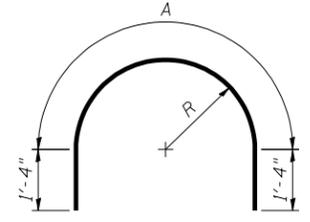
- Contractor shall verify all field dimensions prior to commencing work, including verification that the openings provided on this detail will accommodate the pipe sizes and inverts as given on the Drainage and Utility Plans.
- Reinforcement bars shall conform to the requirements of ASTM A706 Grade 60.
- All bar dimensions are out-to-out.
- Bars shall be cut in field as required to accommodate blockouts.
- See Std. 602701 for manhole step details.
- Quantities for Concrete Structures and Reinforcement Bars are for information only. All work and materials shown on this sheet shall be paid for as Junction Box, Number 3.
- All joints between pipe and structure shall be mortared from both sides.
- Contractor may install the pipe(s) that enter the structure with the cast-in-place concrete, without forming the holes noted separately, as approved by the Engineer. It shall be the Contractor's responsibility to provide compacted support for the pipe(s) to ensure no differential settlement will occur.



**BAR a21**



**BARS v20 and v21**



**BARS d20 THRU d24**

Bar	R	A
d20	1'-2"	3'-8"
d21	1'-8"	5'-3"
d22	1'-11"	6'-0 1/2"
d23	2'-8"	8'-4 1/2"
d24	2'-11"	9'-2"