

Telephone Road from IH610 to Park Place Boulevard / Long Dr — Alternate 2







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TELEPHONE RD ROADWAY RECONSTRUCTION CONCEPTUAL ESTIMATE ALTERNATE 2B April 10, 2023

Item No.	Spec Ref.	Base unit Short Title	Unit of Measure	Estimated Quantity	Unit Cost (this column controls)	Total in figures
	1	General	1	1		
1	01502	Mobilization	LS	1	\$ 250,000.00	\$ 250,000
2	01555	Traffic Control and Regulation	LS	1	\$ 135,000.00	\$ 135,000
3	01570	Reinforced Filter Fabric	LF	0	\$ 5.00	\$
4	01570	Hay Bale Barrier	LF	100	\$ 8.00	\$ 800
5	02922	Sodding	SY EA	17,550 22	\$ 6.00 \$ 500.00	\$ 105,300 \$ 11,000
ь		Tree Removal	EA		\$ 500.00 neral Items Subtotal	\$ 11,000 \$ 502,100
				Ge	neral items subtotal	\$ 502,100
		Storm				
7	02221	Remove and Dispose of Existing Inlets, All Types and Sections	EA	82	\$ 500.00	\$ 41,000
8	02221	Remove Existing Storm Manhole (All Types)	EA	85	\$ 600.00	\$ 51,000
9	02221	Remove Existing Sanitary Manhole (All Types)	EA	26	\$ 600.00	\$ 15,600
10	02221	Remove and Dispose of Exist Storm Sewer	LF	16,582	\$ 20.00	\$ 331,640
11	02221	Remove and Dispose of Exist Sanitary Sewer	LF	5,906	\$ 20.00	\$ 118,120
12	02260	Trench Safety System	LF	16,582	\$ 15.00	\$ 248,730
13	02631	24-Inch Diameter Storm Sewer RCP by Open-Cut (Complete in Place)	LF	6,736	\$ 135.00	\$ 909,360
14	02631	30-Inch Diameter Storm Sewer RCP by Open-Cut (Complete in Place)	LF	206	\$ 175.00	\$ 36,050
15	02631	36-Inch Diameter Storm Sewer RCP by Open-Cut (Complete in Place)	LF	1,869	\$ 240.00	\$ 448,56
16	02631	42-Inch Diameter Storm Sewer RCP by Open-Cut (Complete in Place)	LF	371	\$ 260.00	\$ 96,46
17	02631	48-Inch Diameter Storm Sewer RCP by Open-Cut (Complete in Place)	LF	1,625	\$ 300.00	\$ 487,50
18	02631	60-Inch Diameter Storm Sewer RCP by Open-Cut (Complete in Place)	LF	78	\$ 450.00	\$ 35,10
19	02631	66-Inch Diameter Storm Sewer RCP by Open-Cut (Complete in Place)	LF	538	\$ 550.00	\$ 295,90
20	02631	72-Inch Diameter Storm Sewer RCP by Open-Cut (Complete in Place)	LF	1,602	\$ 650.00	\$ 1,041,30
21	02643	Install 8x8 Box Culvert	LF	1,962	\$ 980.00	\$ 1,922,76
22	02643	Install 5x5 Box Culvert	LF	1,533	\$ 550.00	\$ 843,15
23	02633	Type BB Inlet	EA	82	\$ 4,500.00	\$ 369,00
24	02633	Type C Manhole	EA	85	\$ 5,000.00	\$ 425,00
				S	torm Items Subtotal	\$ 7,716,23
26	02082	4-foot diameter precast concrete manholes (water tight including vent)	EA	3	\$ 8,000.00	\$ 24,00
27						
	02531	8-inch diameter sanitary sewer by Open-Cut (Complete in Place)	LF	2,714	\$ 160.00	\$ 434,24
28	02531	12-inch diameter sanitary sewer by Open-Cut (Complete in Place)	LF	249	\$ 180.00	\$ 434,24 \$ 44,82
		12-inch diameter sanitary sewer by Open-Cut (Complete in Place) 15-inch diameter sanitary sewer by Open-Cut (Complete in Place)				\$ 434,24 \$ 44,82 \$ 78,00
28 29 30 31	02531 02531 02531 02531	12-inch diameter sanitary sewer by Open-Cut (Complete in Place) 15-inch diameter sanitary sewer by Open-Cut (Complete in Place) 16-inch diameter sanitary sewer by Open-Cut (Complete in Place) 21-inch diameter sanitary sewer by Open-Cut (Complete in Place)	LF LF LF LF	249 325 99 196	\$ 180.00 \$ 240.00 \$ 260.00 \$ 280.00	\$ 434,24 \$ 44,82 \$ 78,00 \$ 25,74 \$ 54,88
28 29 30 31 32	02531 02531 02531 02531 02531 02531	12-inch diameter sanitary sewer by Open-Cut (Complete in Place) 15-inch diameter sanitary sewer by Open-Cut (Complete in Place) 16-inch diameter sanitary sewer by Open-Cut (Complete in Place) 21-inch diameter sanitary sewer by Open-Cut (Complete in Place) 24-inch diameter sanitary sewer by Open-Cut (Complete in Place)	LF LF LF LF LF	249 325 99 196 578	\$ 180.00 \$ 240.00 \$ 260.00 \$ 280.00 \$ 300.00	\$ 434,24 \$ 44,82 \$ 78,00 \$ 25,74 \$ 54,88 \$ 173,40
28 29 30 31	02531 02531 02531 02531	12-inch diameter sanitary sewer by Open-Cut (Complete in Place) 15-inch diameter sanitary sewer by Open-Cut (Complete in Place) 16-inch diameter sanitary sewer by Open-Cut (Complete in Place) 21-inch diameter sanitary sewer by Open-Cut (Complete in Place)	LF LF LF LF	249 325 99 196 578 1,602	\$ 180.00 \$ 240.00 \$ 260.00 \$ 280.00 \$ 300.00 \$ 120.00	\$ 434,24 \$ 44,82 \$ 78,00 \$ 25,74 \$ 54,88 \$ 173,40 \$ 192,26
28 29 30 31 32	02531 02531 02531 02531 02531 02531	12-inch diameter sanitary sewer by Open-Cut (Complete in Place) 15-inch diameter sanitary sewer by Open-Cut (Complete in Place) 16-inch diameter sanitary sewer by Open-Cut (Complete in Place) 21-inch diameter sanitary sewer by Open-Cut (Complete in Place) 24-inch diameter sanitary sewer by Open-Cut (Complete in Place)	LF LF LF LF LF	249 325 99 196 578 1,602	\$ 180.00 \$ 240.00 \$ 260.00 \$ 280.00 \$ 300.00	\$ 434,24 \$ 44,82 \$ 78,00 \$ 25,74 \$ 54,88 \$ 173,40 \$ 192,24
28 29 30 31 32	02531 02531 02531 02531 02531 02531	12-inch diameter sanitary sewer by Open-Cut (Complete in Place) 15-inch diameter sanitary sewer by Open-Cut (Complete in Place) 16-inch diameter sanitary sewer by Open-Cut (Complete in Place) 21-inch diameter sanitary sewer by Open-Cut (Complete in Place) 24-inch diameter sanitary sewer by Open-Cut (Complete in Place)	LF LF LF LF LF	249 325 99 196 578 1,602	\$ 180.00 \$ 240.00 \$ 260.00 \$ 280.00 \$ 300.00 \$ 120.00	\$ 434,24 \$ 44,82 \$ 78,00 \$ 25,74 \$ 54,88 \$ 173,40 \$ 192,26
28 29 30 31 32	02531 02531 02531 02531 02531 02531	12-inch diameter sanitary sewer by Open-Cut (Complete in Place) 15-inch diameter sanitary sewer by Open-Cut (Complete in Place) 16-inch diameter sanitary sewer by Open-Cut (Complete in Place) 21-inch diameter sanitary sewer by Open-Cut (Complete in Place) 24-inch diameter sanitary sewer by Open-Cut (Complete in Place) 6-inch diameter sanitary sewer service lines	LF LF LF LF LF LF EA	249 325 99 196 578 1,602	\$ 180.00 \$ 240.00 \$ 260.00 \$ 280.00 \$ 300.00 \$ 120.00	\$ 434,24 \$ 44,82 \$ 78,00 \$ 25,74 \$ 54,88 \$ 173,40 \$ 192,24
28 29 30 31 32 33	02531 02531 02531 02531 02531 02531 02534	12-inch diameter sanitary sewer by Open-Cut (Complete in Place) 15-inch diameter sanitary sewer by Open-Cut (Complete in Place) 16-inch diameter sanitary sewer by Open-Cut (Complete in Place) 21-inch diameter sanitary sewer by Open-Cut (Complete in Place) 24-inch diameter sanitary sewer by Open-Cut (Complete in Place) 6-inch diameter sanitary sewer service lines 6-inch diameter sanitary sewer service lines Water	LF LF LF LF LF LF	249 325 99 196 578 1,602 Sanitary S	\$ 180.00 \$ 240.00 \$ 260.00 \$ 280.00 \$ 300.00 \$ 120.00 ewer Items Subtotal	\$ 434,24 \$ 44,82 \$ 78,000 \$ 25,74 \$ 54,88 \$ 173,40 \$ 192,24 \$ 1,122,32
28 29 30 31 32 33 33 33	02531 02531 02531 02531 02531 02531 02534	12-inch diameter sanitary sewer by Open-Cut (Complete in Place) 15-inch diameter sanitary sewer by Open-Cut (Complete in Place) 16-inch diameter sanitary sewer by Open-Cut (Complete in Place) 21-inch diameter sanitary sewer by Open-Cut (Complete in Place) 24-inch diameter sanitary sewer by Open-Cut (Complete in Place) 6-inch diameter sanitary sewer service lines Water Adjust Valve Box to New Grade (on Roadway) Trench Safety System 8-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction	LF LF LF LF LF LF EA	249 325 99 196 578 1,602 Sanitary S	\$ 180.00 \$ 240.00 \$ 260.00 \$ 280.00 \$ 300.00 \$ 120.00 ewer Items Subtotal \$ 250.00	\$ 434,24 \$ 44,82 \$ 78,00 \$ 25,74 \$ 54,88 \$ 173,40 \$ 192,24 \$ 1,122,32 \$ 1,77,55
28 29 30 31 32 33 33 33 34 35	02531 02531 02531 02531 02531 02531 02534 02534	12-inch diameter sanitary sewer by Open-Cut (Complete in Place) 15-inch diameter sanitary sewer by Open-Cut (Complete in Place) 16-inch diameter sanitary sewer by Open-Cut (Complete in Place) 21-inch diameter sanitary sewer by Open-Cut (Complete in Place) 24-inch diameter sanitary sewer by Open-Cut (Complete in Place) 6-inch diameter sanitary sewer service lines Water Adjust Valve Box to New Grade (on Roadway) Trench Safety System 8-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 12-Inch Diameter Water Line by Trenchless Construction or Open-Cut	LF LF LF LF LF EA LF	249 325 99 196 578 1,602 Sanitary S 0 9,864	\$ 180.00 \$ 240.00 \$ 260.00 \$ 280.00 \$ 300.00 \$ 120.00 ewer Items Subtotal \$ 250.00 \$ 18.00	\$ 434,24 \$ 44,82 \$ 78,00 \$ 25,74 \$ 54,88 \$ 173,40 \$ 192,24 \$ 1,122,32 \$ 1,122,32 \$ 169,90
28 29 30 31 32 33 33 33 34 35 36	02531 02531 02531 02531 02531 02534 02534 02086 02260 02511	12-inch diameter sanitary sewer by Open-Cut (Complete in Place) 15-inch diameter sanitary sewer by Open-Cut (Complete in Place) 16-inch diameter sanitary sewer by Open-Cut (Complete in Place) 21-inch diameter sanitary sewer by Open-Cut (Complete in Place) 24-inch diameter sanitary sewer by Open-Cut (Complete in Place) 6-inch diameter sanitary sewer service lines Water Adjust Valve Box to New Grade (on Roadway) Trench Safety System 8-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 12-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 20-Inch Diameter Water Line by Trenchless Construction or Open-Cut	LF LF LF LF LF LF LF LF LF	249 325 99 196 578 1,602 Sanitary S 0 9,864 1,699	\$ 180.00 \$ 240.00 \$ 260.00 \$ 280.00 \$ 300.00 \$ 120.00 ewer Items Subtotal \$ 250.00 \$ 18.00 \$ 100.00	\$ 434,24 \$ 44,82 \$ 78,00 \$ 25,74 \$ 54,88 \$ 173,40 \$ 192,24 \$ 1,122,32 \$ 1,122,32 \$ 1,77,55 \$ 169,90 \$ 285,40
28 29 30 31 32 33 33 34 35 36 37 38	02531 02531 02531 02531 02531 02534 02534 02534 02534 02534 02551 025511	12-inch diameter sanitary sewer by Open-Cut (Complete in Place) 15-inch diameter sanitary sewer by Open-Cut (Complete in Place) 16-inch diameter sanitary sewer by Open-Cut (Complete in Place) 21-inch diameter sanitary sewer by Open-Cut (Complete in Place) 24-inch diameter sanitary sewer by Open-Cut (Complete in Place) 6-inch diameter sanitary sewer service lines Water Adjust Valve Box to New Grade (on Roadway) Trench Safety System 8-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 12-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 20-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 5/8-Inch to 2-Inch Diameter Water Water Jane by Trenchless Construction or Open-Cut Sonstruction	LF LF LF LF LF LF LF LF LF LF	249 325 99 196 578 1,602 Sanitary S 0 9,864 1,699 2,854 5,241	\$ 180.00 \$ 240.00 \$ 2260.00 \$ 280.00 \$ 120.00 ewer Items Subtotal \$ 250.00 \$ 18.00 \$ 100.00 \$ 100.00	\$ 434,24 \$ 44,82 \$ 78,00 \$ 25,74 \$ 54,88 \$ 173,44 \$ 192,24 \$ 1,122,32 \$ 1,77,55 \$ 169,90 \$ 285,40 \$ 524,10
28 29 30 31 32 33 33 33 34 35 36 37 38 39	02531 02531 02531 02531 02531 02534 02534 02534 02534 02534 02560 02511 02511 02511 02512	12-inch diameter sanitary sewer by Open-Cut (Complete in Place) 15-inch diameter sanitary sewer by Open-Cut (Complete in Place) 16-inch diameter sanitary sewer by Open-Cut (Complete in Place) 21-inch diameter sanitary sewer by Open-Cut (Complete in Place) 24-inch diameter sanitary sewer by Open-Cut (Complete in Place) 24-inch diameter sanitary sewer by Open-Cut (Complete in Place) 6-inch diameter sanitary sewer service lines Water Adjust Valve Box to New Grade (on Roadway) Trench Safety System 8-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 12-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 20-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 20-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 5/8-Inch to 2-Inch Diameter Water Une Safety and Copper Service Line with Meter Box, Short or Long Side	LF LF LF LF LF LF LF LF LF LF LF EA	249 325 99 196 578 1,602 Sanitary S 0 9,864 1,699 2,854 5,241 2,767	\$ 180.00 \$ 240.00 \$ 2260.00 \$ 280.00 \$ 280.00 \$ 120.00 ewer Items Subtotal \$ 250.00 \$ 18.00 \$ 100.00 \$ 100.00 \$ 100.00 \$ 2,000.00	\$ 434,24 \$ 44,82 \$ 78,00 \$ 25,74 \$ 54,88 \$ 173,44 \$ 192,24 \$ 1,122,32 \$ 1,77,55 \$ 169,90 \$ 285,40 \$ 2245,40 \$ 524,10 \$ 5,534,00
28 29 30 31 32 33 33 33 34 35 36 37 38 37 38 39 40	02531 02531 02531 02531 02531 02534 02534 02534 02534 02534 02560 02511 02511 02511 02511 02512 02513	12-inch diameter sanitary sewer by Open-Cut (Complete in Place) 13-inch diameter sanitary sewer by Open-Cut (Complete in Place) 16-inch diameter sanitary sewer by Open-Cut (Complete in Place) 21-inch diameter sanitary sewer by Open-Cut (Complete in Place) 24-inch diameter sanitary sewer by Open-Cut (Complete in Place) 24-inch diameter sanitary sewer by Open-Cut (Complete in Place) 6-inch diameter sanitary sewer service lines Water Adjust Valve Box to New Grade (on Roadway) Trench Safety System 8-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 12-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 20-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 5/8-Inch to 2-Inch Diameter Watertaps and Copper Service Line with Meter Box, Short or Long Side 4-Inch Diameter Wet Connection	LF LF LF LF LF LF LF LF LF LF LF LF EA EA	249 325 99 196 578 1,602 Sanitary S 0 9,864 1,699 2,854 5,241 2,767 1	\$ 180.00 \$ 240.00 \$ 2260.00 \$ 280.00 \$ 300.00 \$ 120.00 ewer Items Subtotal \$ 250.00 \$ 18.00 \$ 100.00 \$ 100.00 \$ 100.00 \$ 2,000.00 \$ 2,500.00	\$ 434,22 4 4,82 5 44,82 5 44,82 5 78,00 5 5 4,88 5 173,40 5 192,24 5 1,122,32 5 5 5 169,90 5 5 169,90 5 5 285,40 5 5 5,534,00 5 5 2,554,00 5 5 2,554,00 5 5 2,554,00 5 5 2,554,00 5 5 2,554,00 5 5 2,554,00 5 5 2,55
28 29 30 31 32 33 33 34 35 36 37 38 39 40 41	02531 02531 02531 02531 02531 02534 02534 02534 02534 02534 02560 02511 02511 02511 02511 02512 02513 02513	12-inch diameter sanitary sewer by Open-Cut (Complete in Place) 15-inch diameter sanitary sewer by Open-Cut (Complete in Place) 16-inch diameter sanitary sewer by Open-Cut (Complete in Place) 21-inch diameter sanitary sewer by Open-Cut (Complete in Place) 24-inch diameter sanitary sewer by Open-Cut (Complete in Place) 24-inch diameter sanitary sewer by Open-Cut (Complete in Place) 6-inch diameter sanitary sewer service lines Water Adjust Valve Box to New Grade (on Roadway) Trench Safety System 8-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 12-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 20-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 20-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 5/8-Inch to 2-Inch Diameter Water Une Safety and Copper Service Line with Meter Box, Short or Long Side	LF LF LF LF LF LF LF LF LF LF LF EA EA EA	249 325 99 196 578 1,602 Sanitary S 0 9,864 1,699 2,854 5,241 2,767 1 1	\$ 180.00 \$ 240.00 \$ 2260.00 \$ 280.00 \$ 120.00 \$ 120.00 \$ 120.00 \$ 120.00 \$ 120.00 \$ 120.00 \$ 18.00 \$ 100.00 \$ 100.00 \$ 100.00 \$ 2,000.00 \$ 2,500.00 \$ 2,500.00	\$ 434,22 4 4,82 5 44,82 5 78,00 5 25,74 5 5 173,46 5 192,24 5 1,122,32 5 5 5 169,90 5 5 169,90 5 5 285,40 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
28 29 30 31 32 33 33 34 35 36 37 38 39 40 41 42	02531 02531 02531 02531 02531 02534 02534 02534 02534 02534 02560 02511 02511 02511 02511 02511 02512 02513 02513 02513	12-inch diameter sanitary sewer by Open-Cut (Complete in Place) 13-inch diameter sanitary sewer by Open-Cut (Complete in Place) 16-inch diameter sanitary sewer by Open-Cut (Complete in Place) 21-inch diameter sanitary sewer by Open-Cut (Complete in Place) 24-inch diameter sanitary sewer by Open-Cut (Complete in Place) 6-inch diameter sanitary sewer by Open-Cut (Complete in Place) 6-inch diameter sanitary sewer service lines Water Adjust Valve Box to New Grade (on Roadway) Trench Safety System 8-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 12-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 20-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 5/8-Inch to 2-Inch Diameter Water Line by Trenchless Construction or Open-Cut Softnch to 2-Inch Diameter Water Line by Trenchless Construction or Open-Cut 6-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 5/8-Inch to 2-Inch Diameter Water Line by Trenchless Construction Open-Cut 6-Inch Diameter Water Line by Trenchless Construction or Open-Cut 6-Inch Diameter Water Line by Trenchless Construction or Open-Cut 6-Inch Diameter Water Line by Trenchless Construction Open-Cut 6-Inch Diameter Water Connection 6-Inch Diameter Wet Connection 8-Inch Diameter Wet Connection	LF LF LF LF LF LF LF LF LF LF	249 325 99 196 578 1,602 Sanitary S 0 9,864 1,699 2,854 5,241 2,767 1 1 1 26	\$ 180.00 \$ 240.00 \$ 240.00 \$ 280.00 \$ 300.00 \$ 120.00 ewer Items Subtotal \$ 250.00 \$ 18.00 \$ 100.00 \$ 100.00 \$ 100.00 \$ 100.00 \$ 2,000.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00	\$ 434,22 \$ 44,82 \$ 78,00 \$ 25,72 \$ 54,88 \$ 173,44 \$ 192,24 \$ 1,122,32 \$ 1,122,32 \$ 1,77,55 \$ 169,90 \$ 285,40 \$ 285,40 \$ 5,534,00 \$ 2,50 \$ 2,50 \$ 2,50 \$ 2,50
28 29 30 31 32 33 33 34 35 36 37 38 39 40 41	02531 02531 02531 02531 02534 02534 02534 02534 02534 02534 02560 02511 02511 02511 02511 02511 02512 02513 02513 02513	12-inch diameter sanitary sewer by Open-Cut (Complete in Place) 13-inch diameter sanitary sewer by Open-Cut (Complete in Place) 16-inch diameter sanitary sewer by Open-Cut (Complete in Place) 21-inch diameter sanitary sewer by Open-Cut (Complete in Place) 24-inch diameter sanitary sewer by Open-Cut (Complete in Place) 6-inch diameter sanitary sewer by Open-Cut (Complete in Place) 6-inch diameter sanitary sewer by Open-Cut (Complete in Place) 6-inch diameter sanitary sewer service lines Water Adjust Valve Box to New Grade (on Roadway) Trench Safety System 8-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 12-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 20-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 5/8-Inch to 2-Inch Diameter Watertaps and Copper Service Line with Meter Box, Short or Long Side 4-Inch Diameter Wet Connection 6-Inch Diameter Wet Connection 12-Inch Diameter Wet Connection 12-Inch Diameter Wet Connection	LF LF LF LF LF LF LF LF LF LF LF EA EA EA	249 325 99 196 578 1,602 Sanitary S 0 9,864 1,699 2,854 5,241 2,767 1 1	\$ 180.00 \$ 240.00 \$ 260.00 \$ 280.00 \$ 300.00 \$ 120.00 ewer Items Subtotal \$ 250.00 \$ 180.00 \$ 100.00 \$ 100.00 \$ 100.00 \$ 2,000.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00	\$ 434,24 5 44,82 5 78,00 5 5,54,88 5 173,44 5 192,24 5 1,122,32 5 5 169,90 5 5 169,90 5 5 285,40 5 5 285,40 5 5 2,55 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
28 29 30 31 32 33 33 34 35 36 37 38 38 39 40 41 42 43	02531 02531 02531 02531 02534 02534 02534 02534 02534 02534 02560 02511 02511 02511 02511 02511 02512 02513 02513 02513 02513	12-inch diameter sanitary sewer by Open-Cut (Complete in Place) 15-inch diameter sanitary sewer by Open-Cut (Complete in Place) 16-inch diameter sanitary sewer by Open-Cut (Complete in Place) 21-inch diameter sanitary sewer by Open-Cut (Complete in Place) 24-inch diameter sanitary sewer by Open-Cut (Complete in Place) 6-inch diameter sanitary sewer by Open-Cut (Complete in Place) 6-inch diameter sanitary sewer service lines Water Adjust Valve Box to New Grade (on Roadway) Trench Safety System 8-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 12-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 20-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 5/8-Inch to 2-Inch Diameter Watertaps and Copper Service Line with Meter Box, Short or Long Side 4-Inch Diameter Wet Connection 6-Inch Diameter Wet Connection 12-Inch Diameter Wet Connection 20-Inch Diameter Wet Connection 6-Inch Diameter Wet Connection 20-Inch Diameter Wet Connection	LF LF LF LF LF LF LF LF LF LF	249 325 99 196 578 1,602 sanitary S 0 9,864 1,699 2,854 5,241 2,767 1 1 1 26 4 2	\$ 180.00 \$ 240.00 \$ 260.00 \$ 280.00 \$ 300.00 \$ 120.00 ewer Items Subtotal \$ 250.00 \$ 18.00 \$ 100.00 \$ 100.00 \$ 100.00 \$ 2,000.00 \$ 2,500.00 \$ 2,500.	\$ 434,24 \$ 44,82 \$ 78,00 \$ 25,74 \$ 54,88 \$ 192,24 \$ 192,24 \$ 192,24 \$ 1,122,32 \$ 1,22,32 \$ 2,85,40 \$ 285,40 \$ 285,40 \$ 5,534,00 \$ 5,534,00 \$ 2,50 \$ 65,00 \$ 10,00 \$ 5,000
28 29 30 31 32 33 33 34 35 36 37 38 39 40 41 42 43 44 45	02531 02531 02531 02531 02534 02534 02534 02534 02534 02534 02511 02511 02511 02511 02511 02511 02513 02513 02513 02513 02513 02513	12-inch diameter sanitary sewer by Open-Cut (Complete in Place) 15-inch diameter sanitary sewer by Open-Cut (Complete in Place) 16-inch diameter sanitary sewer by Open-Cut (Complete in Place) 21-inch diameter sanitary sewer by Open-Cut (Complete in Place) 24-inch diameter sanitary sewer by Open-Cut (Complete in Place) 6-inch diameter sanitary sewer by Open-Cut (Complete in Place) 6-inch diameter sanitary sewer by Open-Cut (Complete in Place) 4-inch diameter sanitary sewer by Open-Cut (Complete in Place) 6-inch diameter sanitary sewer service lines Water Adjust Valve Box to New Grade (on Roadway) Trench Safety System 8-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 12-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 20-Inch Diameter Water Connection 6-Inch Diameter Wet Connection 8-Inch Diameter Wet Connection 20-Inch Diameter Wet Connection	LF LF LF LF LF LF LF LF LF LF	249 325 99 196 578 1,602 sanitary S 0 9,864 1,699 2,854 5,241 2,767 1 1 2,67 4 2,107 1 1 2,60 4 1	\$ 180.00 \$ 240.00 \$ 240.00 \$ 280.00 \$ 280.00 \$ 280.00 \$ 280.00 \$ 120.00 \$ 120.00 \$ 120.00 \$ 120.00 \$ 100.00 \$ 100.00 \$ 100.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00	\$ 434,24 \$ 44,82 \$ 78,00 \$ 25,74 \$ 54,88 \$ 192,24 \$ 192,24 \$ 192,24 \$ 192,24 \$ 192,24 \$ 1,122,32 \$ 1,22,32 \$ 285,40 \$ 285,40 \$ 285,40 \$ 5,534,00 \$ 5,534,00 \$ 2,50 \$ 65,000 \$ 10,000 \$ 5,000 \$ 5,000 \$ 1,500
28 29 30 31 32 33 33 34 35 36 37 38 38 39 40 41 42 43 44	02531 02531 02531 02531 02534 02534 02534 02534 02534 02534 02560 02511 02511 02511 02511 02511 02512 02513 02513 02513 02513	12-inch diameter sanitary sewer by Open-Cut (Complete in Place) 15-inch diameter sanitary sewer by Open-Cut (Complete in Place) 16-inch diameter sanitary sewer by Open-Cut (Complete in Place) 21-inch diameter sanitary sewer by Open-Cut (Complete in Place) 24-inch diameter sanitary sewer by Open-Cut (Complete in Place) 6-inch diameter sanitary sewer by Open-Cut (Complete in Place) 6-inch diameter sanitary sewer service lines Water Adjust Valve Box to New Grade (on Roadway) Trench Safety System 8-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 12-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 20-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 5/8-Inch to 2-Inch Diameter Watertaps and Copper Service Line with Meter Box, Short or Long Side 4-Inch Diameter Wet Connection 6-Inch Diameter Wet Connection 12-Inch Diameter Wet Connection 20-Inch Diameter Wet Connection 6-Inch Diameter Wet Connection 20-Inch Diameter Wet Connection 20-Inch Diameter Wet Connection 6-Inch Diameter Wet Connection 20-Inch Diameter Wet Connection 20-Inch Diameter Wet Connection 20-Inch Diameter Wet Connection	LF LF LF LF LF LF LF LF LF LF EA EA EA EA EA EA	249 325 99 196 578 1,602 sanitary S 0 9,864 1,699 2,854 5,241 2,767 1 1 1 26 4 2	\$ 180.00 \$ 240.00 \$ 260.00 \$ 280.00 \$ 300.00 \$ 120.00 ewer Items Subtotal \$ 250.00 \$ 18.00 \$ 100.00 \$ 100.00 \$ 100.00 \$ 2,000.00 \$ 2,500.00 \$ 2,500.	\$ 434,22 \$ 44,82 \$ 78,00 \$ 25,74 \$ 54,88 \$ 173,44 \$ 192,24 \$ 192,24 \$ 192,24 \$ 192,24 \$ 192,24 \$ 177,55 \$ 169,99 \$ 285,40 \$ 5,534,00 \$ 5,534,00 \$ 2,500 \$ 2,500 \$ 10,000 \$ 5,000 \$ 1,500 \$ 1,500
28 29 30 31 32 33 33 34 35 36 37 38 39 40 41 42 43 44 45 46	02531 02531 02531 02531 02531 02534 02534 02534 02534 02511 02511 02511 02511 02511 02512 02513 02513 02513 02513 02513 02516	12-inch diameter sanitary sewer by Open-Cut (Complete in Place) 15-inch diameter sanitary sewer by Open-Cut (Complete in Place) 16-inch diameter sanitary sewer by Open-Cut (Complete in Place) 21-inch diameter sanitary sewer by Open-Cut (Complete in Place) 24-inch diameter sanitary sewer by Open-Cut (Complete in Place) 6-inch diameter sanitary sewer by Open-Cut (Complete in Place) 6-inch diameter sanitary sewer by Open-Cut (Complete in Place) 7	LF LF LF LF LF LF LF LF LF LF	249 325 99 196 578 1,602 Sanitary S 0 9,864 1,699 2,854 5,241 2,767 1 1 26 4 2 26 4 1	\$ 180.00 \$ 240.00 \$ 240.00 \$ 280.00 \$ 280.00 \$ 280.00 \$ 280.00 \$ 280.00 \$ 120.00 \$ 120.00 \$ 120.00 \$ 100.00 \$ 100.00 \$ 100.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 1,500.00 \$ 1,500.00	\$ 434,22 \$ 44,82 \$ 78,00 \$ 25,74 \$ 54,88 \$ 192,24 \$ 192,24 \$ 192,24 \$ 192,24 \$ 192,24 \$ 192,24 \$ 192,24 \$ 1,122,32 \$ 169,90 \$ 285,40 \$ 285,410 \$ 524,10 \$ 5,534,00 \$ 2,50 \$ 2,50 \$ 3,500 \$ 1,500 \$ 1,500 \$ 1,500 \$ 1,500 \$ 1,500 \$ 1,500 \$ 1,500 \$ 1,500 \$ 1,500 \$ 1,500 \$ 1,500 \$ 1,500
28 29 30 31 32 33 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47	02531 02531 02531 02531 02531 02534 02534 02534 02534 02534 02534 02560 02511 02511 02511 02511 02511 02512 02513 02513 02513 02513 02516 02516	12-inch diameter sanitary sewer by Open-Cut (Complete in Place) 13-inch diameter sanitary sewer by Open-Cut (Complete in Place) 13-inch diameter sanitary sewer by Open-Cut (Complete in Place) 21-inch diameter sanitary sewer by Open-Cut (Complete in Place) 24-inch diameter sanitary sewer by Open-Cut (Complete in Place) 6-inch diameter sanitary sewer by Open-Cut (Complete in Place) 6-inch diameter sanitary sewer service lines Water Adjust Valve Box to New Grade (on Roadway) Trench Safety System 8-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 12-inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 20-inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 20-inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 5/8-Inch to 2-Inch Diameter Water Line by Trenchless Construction Open-Cut Construction 5/8-Inch Diameter Water Connection 6-Inch Diameter Wet Connection 6-Inch Diameter Wet Connection 12-Inch Diameter Wet Connection 12-Inch Diameter Wet Connection 20-Inch Diameter Wet Connection Cut, Plug and Abandon Existing 4-Inch Diameter Water Line Cut, Plug and Abandon Existing 8-Inch Diameter Water Line	LF LF LF LF LF LF LF LF LF LF	249 325 99 196 578 Sanitary S 0 9,864 1,699 2,854 5,241 2,767 1 1 26 4 2 2 1 1 26	\$ 180.00 \$ 240.00 \$ 240.00 \$ 280.00 \$ 280.00 \$ 280.00 \$ 280.00 \$ 280.00 \$ 120.00 \$ 120.00 \$ 120.00 \$ 100.00 \$ 100.00 \$ 100.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 1,501.00 \$ 1,501.00 \$ 2,000.00	\$ 434,2: \$ 44,8: \$ 78,00 \$ 25,7: \$ 54,8: \$ 173,4: \$ 192,2: \$ 1,122,3: \$ 1,122,3: \$ 1,77,5: \$ 169,90 \$ 285,4: \$ 5,534,00 \$ 2,50 \$ 5,534,00 \$ 2,50 \$ 2,50 \$ 0,000 \$ 0,000 \$ 0,000 \$ 1,50 \$ 1,50 \$ 1,50 \$ 1,50 \$ 1,50 \$ 1,50 \$ 1,50 \$ 1,50 \$ 1,50 \$ 1,50 \$ 1,50 \$ 5,2,00 \$ 8,00
28 29 30 31 32 33 33 34 35 36 37 38 39 40 41 41 42 43 44 45 46 47 48 49	02531 02531 02531 02531 02531 02534 02534 02534 02534 02534 02534 02551 02511 02511 02511 02511 02511 02512 02513 02513 02513 02513 02516 02516 02516 02516	12-inch diameter sanitary sewer by Open-Cut (Complete in Place) 15-inch diameter sanitary sewer by Open-Cut (Complete in Place) 21-inch diameter sanitary sewer by Open-Cut (Complete in Place) 21-inch diameter sanitary sewer by Open-Cut (Complete in Place) 24-inch diameter sanitary sewer service lines Water Adjust Valve Box to New Grade (on Roadway) Trench Safety System 8-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 12-inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 20-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 5/8-Inch to 2-Inch Diameter Water Line by Trenchless Construction or Open-Cut Short or Long Side 4-Inch Diameter Wet Connection 6-Inch Diameter Wet Connection 12-Inch Diameter Wet Connection 12-Inch Diameter Wet Connection 12-Inch Diameter Wet Connection 20-Inch Diameter Wet Connection Cut, Plug and Abandon Existing 4-Inch Diameter Water Line Cut, Plug and Abandon Existing 8-Inch Diameter Water Line Cut, Plug and Abandon Existing 8-Inch Diameter Water Line Cut, Plug and Abandon Existing 8-Inch Diameter Water Line Cut, Plug and Abandon Existing 20-Inch Diameter Water Line Cut, Plug and Abandon Existing 20-Inch Diameter Water Line	LF LF LF LF LF LF LF LF LF LF	249 325 99 196 578 1,602 Sanitary S 0 9,864 1,699 2,854 5,241 2,767 1 2,767 1 1 2,67 4 2 2 6 4 2 1 1 2,6 4 2 2 1	\$ 180.00 \$ 240.00 \$ 240.00 \$ 280.00 \$ 280.00 \$ 280.00 \$ 280.00 \$ 120.00 \$ 120.00 \$ 120.00 \$ 120.00 \$ 100.00 \$ 100.00 \$ 100.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 1,501.00 \$ 2,000.00 \$ 2,001.00 \$ 2,001.00	\$ 434,24 \$ 44,82 \$ 78,00 \$ 25,74 \$ 54,88 \$ 173,44 \$ 192,24 \$ 192,24 \$ 1,122,32 \$ 169,90 \$ 285,40 \$ 285,40 \$ 5,534,00 \$ 2,500 \$ 2,500 \$ 2,500 \$ 5,000 \$ 1,500 \$ 1,500 \$ 1,500 \$ 1,500 \$ 1,500 \$ 1,500 \$ 1,500 \$ 3,800 \$ 5,2,000 \$ 8,000 \$ 8,000
28 29 30 31 32 33 33 34 35 36 37 38 39 40 41 42 43 40 41 42 43 44 45 46 47 48 49 50	02531 02531 02531 02531 02534 02534 02534 02534 02534 02534 02534 02551 02511 02511 02511 02511 02512 02513 02513 02513 02513 02516 02516 02516 02520	12-inch diameter sanitary sewer by Open-Cut (Complete in Place) 15-inch diameter sanitary sewer by Open-Cut (Complete in Place) 21-inch diameter sanitary sewer by Open-Cut (Complete in Place) 21-inch diameter sanitary sewer by Open-Cut (Complete in Place) 24-inch diameter sanitary sewer by Open-Cut (Complete in Place) 6-inch diameter sanitary sewer by Open-Cut (Complete in Place) 4-inch diameter sanitary sewer by Open-Cut (Complete in Place) 6-inch diameter sanitary sewer by Open-Cut (Complete in Place) 6-inch diameter sanitary sewer service lines Water Adjust Valve Box to New Grade (on Roadway) Trench Safety System 8-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 12-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 20-Inch Diameter Water Connection 4-Inch Diameter Wet Connection 5-Inch Diameter Wet Connection 20-Inch Diameter Weter Line Cut, Plug and Abandon Existing 8-Inch Diameter Wa	LF LF LF LF LF LF LF LF LF LF	249 325 99 196 578 Sanitary S 0 9,864 1,699 2,854 5,241 2,767 1 1 26 4 2 1 1 26 4 2 1 1 26 4 2 1 1	\$ 180.00 \$ 240.00 \$ 240.00 \$ 280.00 \$ 280.00 \$ 280.00 \$ 280.00 \$ 120.00 \$ 120.00 \$ 120.00 \$ 120.00 \$ 100.00 \$ 100.00 \$ 100.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 1,501.00 \$ 2,000.00 \$ 2,001.00 \$ 2,001.00 \$ 3,000.00	\$ 434,22 \$ 44,82 \$ 78,00 \$ 25,74 \$ 54,88 \$ 192,24 \$ 192,24 \$ 192,24 \$ 192,24 \$ 192,24 \$ 192,24 \$ 192,24 \$ 1,122,32 \$ 1,122,32 \$ 1,122,32 \$ 1,122,32 \$ 1,122,32 \$ 1,122,32 \$ 1,122,32 \$ 1,122,32 \$ 1,122,32 \$ 1,50 \$ 169,99 \$ 285,40 \$ 2,50 \$ 2,50 \$ 3,500 \$ 1,50 \$ 1,50 \$ 1,50 \$ 3,000 \$ 5,200 \$ 8,000
28 29 30 31 32 33 33 34 35 36 37 38 39 40 41 41 42 43 44 45 46 47 48 49 50 51	02531 02531 02531 02531 02531 02534 02534 02534 02534 02534 02534 02534 02551 02551 02551 02513 02513 02513 02513 02513 02516 02516 02516 02516 02516 02520	12-inch diameter sanitary sewer by Open-Cut (Complete in Place) 15-inch diameter sanitary sewer by Open-Cut (Complete in Place) 21-inch diameter sanitary sewer by Open-Cut (Complete in Place) 21-inch diameter sanitary sewer by Open-Cut (Complete in Place) 24-inch diameter sanitary sewer by Open-Cut (Complete in Place) 24-inch diameter sanitary sewer by Open-Cut (Complete in Place) 6-inch diameter sanitary sewer service lines Water Adjust Valve Box to New Grade (on Roadway) Trench Safety System 8-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 12-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 20-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 20-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 5/8-Inch to 2-Inch Diameter Water Line by Trenchless Construction Open-Cut Construction 5/8-Inch Diameter Water Connection 6-Inch Diameter Wet Connection 12-Inch Diameter Wet Connection 20-Inch Diameter Wet Connection 20-Inch Diameter Wet Connection 20-Inch Diameter Wet Line Cut, Plug and Abandon Existing 8-Inch Diameter Water Line Cut, Plug and Abandon Existing 12-Inch Diameter Water Line Fire Hydrant Assembly, All Depths, Including 6-In	LF LF LF LF LF LF LF LF LF LF	249 325 99 196 578 Sanitary S 0 9,864 1,699 2,854 5,241 2,767 1 1 2,67 4 2 2 1 1 2,6 4 2 1 1 2,6 4 2 1 1 1 2,6 4 2 1 1 1 2,6 4 2 1 1 1 2,6 4 2 1 1 1 2,6 1 1 2,6 1 1 1 2,6 1 2,7 1 1 1 2,7 1 1 1 2,7 2,7 1 2,7 1 2,7 2,7 1 2,7 2,7 1 2,7 1 2,7 2,7 2,7 2,7 1 2,7 2,7 2,7 2,7 2,7 2,7 2,7 2,7 2,7 2,7	\$ 180.00 \$ 240.00 \$ 240.00 \$ 280.00 \$ 280.00 \$ 280.00 \$ 280.00 \$ 280.00 \$ 120.00 \$ 120.00 \$ 120.00 \$ 100.00 \$ 100.00 \$ 100.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 1,501.00 \$ 2,000.00 \$ 2,000.00 \$ 2,001.00 \$ 3,000.00 \$ 5,500.00 \$ 5,500.00	\$ 434,24 \$ 44,82 \$ 78,00 \$ 25,74 \$ 544,82 \$ 173,44 \$ 192,24 \$ 192,24 \$ 192,24 \$ 1,122,32 \$ 169,90 \$ 285,40 \$ 285,40 \$ 25,534,00 \$ 5,534,00 \$ 2,500 \$ 2,500 \$ 0,000 \$ 0,000 \$ 1,500 \$ 1,500 \$ 1,500 \$ 1,500 \$ 1,500 \$ 3,000 \$ 5,2,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$
28 29 30 31 32 33 33 34 35 36 37 38 39 40 41 42 43 44 42 43 44 45 46 47 48 49 50	02531 02531 02531 02531 02534 02534 02534 02534 02534 02534 02534 02551 02511 02511 02511 02511 02512 02513 02513 02513 02513 02516 02516 02516 02520	12-inch diameter sanitary sewer by Open-Cut (Complete in Place) 15-inch diameter sanitary sewer by Open-Cut (Complete in Place) 21-inch diameter sanitary sewer by Open-Cut (Complete in Place) 21-inch diameter sanitary sewer by Open-Cut (Complete in Place) 24-inch diameter sanitary sewer by Open-Cut (Complete in Place) 6-inch diameter sanitary sewer by Open-Cut (Complete in Place) 4-inch diameter sanitary sewer by Open-Cut (Complete in Place) 6-inch diameter sanitary sewer by Open-Cut (Complete in Place) 6-inch diameter sanitary sewer service lines Water Adjust Valve Box to New Grade (on Roadway) Trench Safety System 8-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 12-Inch Diameter Water Line by Trenchless Construction or Open-Cut Construction 20-Inch Diameter Water Connection 4-Inch Diameter Wet Connection 5-Inch Diameter Wet Connection 20-Inch Diameter Weter Line Cut, Plug and Abandon Existing 8-Inch Diameter Wa	LF LF LF LF LF LF LF LF LF LF	249 325 99 196 578 Sanitary S 0 9,864 1,699 2,854 5,241 2,767 1 1 26 4 2 1 1 26 4 2 1 1 26 4 2 1 1	\$ 180.00 \$ 240.00 \$ 240.00 \$ 280.00 \$ 280.00 \$ 280.00 \$ 280.00 \$ 120.00 \$ 120.00 \$ 120.00 \$ 120.00 \$ 100.00 \$ 100.00 \$ 100.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00 \$ 1,501.00 \$ 2,000.00 \$ 2,001.00 \$ 2,001.00 \$ 3,000.00	\$ 434,24 \$ 44,82 \$ 78,00 \$ 25,74 \$ 54,88 \$ 173,44 \$ 192,24 \$ 192,24 \$ 192,24 \$ 192,24 \$ 192,24 \$ 1,122,32 \$ 169,90 \$ 285,40 \$ 2285,40 \$ 524,10 \$ 5,534,00 \$ 2,500 \$ 2,500 \$ 3,000 \$ 5,000 \$ 1,500 \$ 1,500 \$ 5,2,000 \$ 8,000 \$ 6,000 \$ 7,7,000

Item No.	Spec Ref.	Base unit Short Title	Unit of Measure	Estimated Quantity	Unit Cost (this column controls)	Total in figures
	-	Paving				
54	02221	Remove and Dispose of Asphaltic Surface, All Depths (Including Curbs, Base, Subgrade, and Excavation)	SY	100,560	\$ 10.00	\$ 1,005,600
55	02221	Remove and Dispose of Reinforced Concrete Pavement with or without Asphalt Overlay (Including Curbs, Base, Subgrade, and Excavation)	SY	98,250	\$ 10.00	\$ 982,500
56	02221	Remove and Dispose of Driveways (All Materials, All Thicknesses)	SY	45,677	\$ 6.00	\$ 274,062
57	02221	Remove and Dispose of Sidewalks (All Materials, All Thicknesses)	SY	31,401	\$ 8.00	\$ 251,208
58	02221	Lime Stabilized Subgrade	SY	59,802	\$ 5.00	\$ 299,010
59	02221	Lime by dry weight	TON	1723	\$ 180.00	\$ 310,140
60	02711	Type D Hot-Mix Asphaltic Surfacing, 2"	TON	1,304	\$ 95.00	\$ 123,853
61	02751	11-inch Reinforced Concrete Pavement	SY	53,022	\$ 85.00	\$ 4,506,870
62	02754	7-inch Concrete Driveway, Including Excavation and Subgrade	SF	94,645	\$ 11.00	\$ 1,041,095
63	02711	Hot-Mix Asphaltic Base Course, 8"	TON	5,215	\$ 85.00	\$ 443,264
65	02771	Concrete Curb and Gutter, 6-Inches and Greater	LF	11,259	\$ 13.00	\$ 146,367
66	02771	Concrete Esplanade Curb, 6-Inches and Greater	LF	4,656	\$ 13.00	\$ 60,528
67	02771	Concrete Pavement Header	LF	1,066	\$ 20.00	\$ 21,320
68	02771	Concrete Median	SY	1,462	\$ 20.00	\$ 29,240
69	02775	ADA Accessible Wheelchair Ramps with Subgrade	SF	3,711	\$ 40.00	\$ 148,440
70	02775	4 1/2" Thick Concrete Sidewalk with 6-Inch Cement Stabilized Subgrade (Includes Soil Excavation and Disposal)	SF	60,449	\$ 13.00	\$ 785,837
71	02775	6" Thick Concrete Bike Trail with 6-Inch Cement Stabilized Subgrade (Includes Soil	SF	44,847	\$ 13.00	\$ 583,011
		Excavation and Disposal)				
72	00000	Concrete Pavers (includes 4 1/2" thick subbase)	SF	49,275	\$ 18.00	\$ 886,950
				Pa	aving Items Subtotal	\$ 11,899,296
	1	Signing and Pavement Markings		I		I
73	1554S	Remove and Relocate Exist Signs Assemblies (Complete in Place)	EA	200	\$ 200.00	\$ 40,000
74	01554	Placement of Permanant Figns (Complete in Place)	EA	200	\$ 400.00	\$ 80,000
		Placement of Permanent Signs (Complete in Place)				
75	02764	Raised Reflective Pavement Markers, Type II-A-A	EA	400	\$ 5.00	\$ 2,000
76	02764	Raised Reflective Pavement Markers, Type II-C-R	EA	447	\$ 5.00	\$ 2,232
77	02767	Thermoplastic Pavement Markings (Y) 4" (SLD)	LF	8,000	\$ 1.00	\$ 8,000
78	02767	Thermoplastic Pavement Markings (W) 4" (SLD)	LF	4,465	\$ 2.00	\$ 8,930
79	02767	Thermoplastic Pavement Markings (W) 12" (SLD)	LF	4,200	\$ 4.00	\$ 16,800
80	02767	Thermoplastic Pavement Markings (W) 24" (SLD)	LF	1,920	\$ 8.00	
81	02767	Thermoplastic Pavement Markings (Word)	EA	33	\$ 200.00	\$ 6,600
82	02767	Thermoplastic Pavement Markings (Turning Arrow)	EA	66	\$ 160.00	\$ 10,560
			Signi	ng and Pavement Marl	kings Items Subtotal	\$ 190,482
		Lighting				
83	02581A		LF	33,000	\$ 22.00	\$ 726,000
		Furnish and Install Street Lighting Conduit, 2-inch PVC, Schedule 80		33,000		
84	02581B	Light Foundation, Complete in Place	EA	210	\$ 1,500.00	\$ 315,000
85	2893A	Furnish and Install 15' Pedestal Pole Assembly with Luminaire	EA	210	\$ 2,000.00	\$ 420,000
86	16710	Furnish and Install TY B Pull Box with Apron, Gravel, RMC ELLS, and Ground Rod	EA	45	\$ 1,500.00	\$ 67,500
87	16720	Furnish and Install #8 THHN Luminaire Insulated Wire	LF	102,000	\$ 3.00	\$ 306,000
				Ligi	nting Items Subtotal	\$ 1,834,500
		Traffic Signals				
88	01270S	Relocate Traffic Signal Equipment PER Intersection	EA	6	\$ 150,000.00	\$ 900,000
				Traffic Sig	gnals Items Subtotal	\$ 900,000
		REVEILLE ST IMPROVEMENTS, OPTION-2, TWO ROUNDABOUTS W	IN KOADW			1
89	02221	Remove and Dispose of Asphaltic Surface, All Depths (Including Curbs, Base, Subgrade, and Excavation)	SY	10,700	\$ 10.00	\$ 107,000
90	02221	Lime Stabilized Subgrade	SY	10,700	\$ 5.00	\$ 53,500
91	02221	Lime by dry weight	TON	309	\$ 180.00	\$ 55,620
92	02751	11-inch Reinforced Concrete Pavement	SY	8,310	\$ 85.00	\$ 706,350
93	02754	7-inch Concrete Driveway, Including Excavation and Subgrade	SF	1,000	\$ 11.00	\$ 11,000
94	02771	Concrete Curb and Gutter, 6-Inches and Greater	LF	2,000	\$ 13.00	\$ 26,000
95	02771	Concrete Esplanade Curb, 6-Inches and Greater	LF	3,560	\$ 13.00	\$ 46,280
55	02775	ADA Accessible Wheelchair Ramps with Subgrade	SF	450	\$ 40.00	\$ 18,000
96	02775					
96		4 1/2" Thick Concrete Sidewalk with 6-Inch Cement Stabilized Subgrade (Includes	¢E	6 200	\$ 12.00	\$ 00.000
	02775	4 1/2" Thick Concrete Sidewalk with 6-Inch Cement Stabilized Subgrade (Includes Soil Excavation and Disposal)	SF	6,200	\$ 13.00	\$ 80,600 \$ 1,104,350

TELEPHONE RD ROADWAY RECONSTRUCTION CONCEPTUAL ESTIMATE ALTERNATE 2B April 10, 2023

Item No.	Spec Ref.	Base unit Short Title	Unit of Measure	Estimated Quantity	Unit Cost (this column controls)	т	otal in figures
WOODRIDGE DR IMPROVEMENTS, OPTION-2, TRAFFIC SIGNAL WITH ROADWAY REALIGNMENT							
92		Reconfigure Woodridge Rd approaches	EA	1	\$ 100,000.00	\$	100,000.00
			Woodrid	ge Improvements Opt	ion 2 Items Subtotal	\$	100,000.0
		Tree				-	
93		Root Pruning	LF	3,321	\$ 2.00	\$	6,642.0
94		Tree Planking	EA	44	\$ 500.00	\$	22,000.0
95	01562	Tree and Plant Protection	LF	6,250	\$ 4.00	\$	25,000.0
96	02811	Irrigation	LS	1	\$ 800,000.00	\$	800,000.0
97	02911	Top Soil	CY	995	\$ 30.00	\$	29,850.0
98	02915	Tree Planting	EA	258	\$ 750.00	\$	193,500.0
99	00000	Shrubs and Groundcover	SF	64,900	\$ 7.50	\$	486,750.0
					Tree Items Subtotal	\$	1,563,742.0
		Extra Unit Price Items					
100	02318	Excavation Around Obstructions	CY	40	\$ 15.00	\$	600.0
101	02318	Extra Hand Excavation	CY	40	\$ 20.00	\$	800.0
102	02318	Extra Machine Excavation	CY	40	\$ 20.00	\$	800.0
103	02318	Extra Placement of Backfill (Cement Stabilized Sand or Granular fill)	CY	50	\$ 15.00	\$	750.0
104	02318	6-Inch Over Excavation of Trench Bottom	CY	50	\$ 15.00	\$	750.0
105	02318	Extra Cement Stabilized Sand Backfill	CY	100	\$ 26.00	\$	2,600.0
106	02318	Extra Machine Excavation	CY	100	\$ 25.00	\$	2,500.0
107	02318	Extra Placement of Select Backfill Material	CY	200	\$ 30.00	\$	6,000.0
108	00000	Benches	EA	33	\$ 5,000.00	\$	165,000.0
109	00000	Trash Recepticle	EA	33	\$ 3,500.00	\$	115,500.0
110	00000	Upgraded Bus Shelter	EA	19	\$ 25,000.00	\$	475,000.0
	•	·		Extra Unit	Price Items Subtotal	\$	770,300.0
		Cash Allowance Table					
111	01110	Street Cut Permits	LS	1	\$ 5,000.00	\$	5,000.0
112	01110	CenterPoint Energy (Street Light Removals & Installations)	LS	1	\$ 20,000.00	\$	20,000.0
		•		Cash	Allowance Subtotal	\$	25,000.0
					Total	\$	34,667,877.70

Total w/30% Contingency \$ 45,068,241.01

Easement Acquisition \$ 38,345.28 TOTAL \$ 45,106,586.29 38,345.28





























Telephone Road DCR – Stage 1 TREE IMPACTS













41 acres

174 acres

Telephone Road DCR - Stage 1

6

20

CONTRIBUTING

DRAINAGE AREA



Telephone Road DCR - Stage 1

EXISTING CONDITIONS – DRAINAGE

21

19





Sheetfl
 Outfall
 HC0 De





 Telephone Road DCR – Stage 1

 • DCR Summary Table – 2-Year Ponding

 • 1.2 ft near C100-00-00

 • 0.9 ft near IH-610

 • 0.6 ft near Woodridge Drive

 • 0.5 ft near Dixie Drive and Buena Vista Street











Telephone Road DCR – Stage 1 Pine Gully Outfall System – 100-Year Ponding Pine Gully Telephone Rd er Outfa 100-Year Existing Co and Drainage Syste Lockwood, Andrews Lockwood, Andrews S Nowman, Ise. 0.25 - 0.50 0.53 - 1.80 1.00 - 2.80 ٩Ð

32



33

































Mark Woodward PE Team Leader Engineering rgon

Kristi Miller, AICP

Funding Pursuit

Public Engagement

Project Manager

Engineering

POTENTIAL TELEPHONE ROAD RECONSTRUCTION PROJECT



May 10, 2022





Corridor Overview Two sections: · 4 lanes + continuous left-turn lane from South Loop East Freeway frontage road to Long Drive/Park Place Blvd • 6 lanes + raised median from Long Drive/Park Place Blvd to Reveille Street • Speed Limit is 35 MPH • Major Thoroughfare · Designed to accumulate and distribute traacross the road network in the area · Provide access to commercial, mixed use, and residential areas May 10, 2022 POTENTIAL TELEPHONE ROAD RECONSTRUCTION PROJECT 9















Sidewalk Conditions

- Sidewalks range from fair to poor
- · Lacking safe passageway for pedestrians
- Sidewalk widths are too narrow by current criteria and not ADA-compliant
- Large gaps in sidewalk coverage, inconsistent ramps and crossings, utility poles and other barriers
- Existing sidewalks have exceeded their useful life



POTENTIAL TELEPHONE ROAD RECONSTRUCTION PROJECT

18

May 10, 2022









Phase 1 - Now!		
 Project Developn Public Input 	nent	
Phase 2 – Sumr	mer 2022	
	ive Design Solutions onsensus – Date TBD (Check the website for more information!)	
Phase 3 – Begir	n Fall 2022	
Pursue Funding	Opportunities	
Phase 4 – TBD /	/ Determined by Funding	
Engineering & D Construction	esign	
May 10, 2022	POTENTIAL TELEPHONE ROAD RECONSTRUCTION PROJECT	22



Closing Remarks





Telephone Road - Survey Questions (survey open April-June 2022)

TIRZ 8 - Proposed Telephone Road Reconstruction Project

Reconstructing Telephone Road from S. Loop 610 Frontage Road to Reveille Street is an integral part of the Gulfgate area's growth and redevelopment.

Please take 5 minutes to complete this short survey. Your input is extremely valuable and will help shape the future of this project when funding is available.

For this survey, please consider the section of Telephone Road from S. Loop 610 Eastbound Frontage Road to Reveille Street, shown in red here:

1. How do you currently use Telephone Road (between S. Loop 610 and Reveille Street)? Please check all that apply.

I commute to school or work using Telephone Road.
I work on Telephone Road.
I live near Telephone Road.
I run errands on Telephone Road.
I use Telephone Road to get to a major destination (e.g., William P. Hobby Airport)
Other (please specify)
I do not use this portion of Telephone Road.

2. How often do you use this portion of Telephone Road?

Daily
3-4 times per week
1-2 times per week
1-2 times per month
Never
Other (please specify)

3. How do you most frequently travel along this portion of Telephone Road?

O Drive my own vehicle.	Bike
Public Transportation	
Walk	
Other (please specify)	
 I do not use this portion of Telephone Road. 	

4. What are you most concerned about this along this section of Telephone Road (between S. Loop 610 and Reveille Street)? Please rank the following choices (1 - most concerned).



The corridor is dangerous due to traffic.



Telephone Road is not well lit at night.



There are no bicycle facilities along the corridor.



Access to public transportation is insufficient along the corridor.



There is a lack of landscaping and other aesthetic elements along the corridor.



The corridor floods during rain and storm events.



There is not enough parking along the corridor.



There is too much congestion during peak hour along the corridor.

5. As a motorist, how safe, or otherwise protecting from crashes, do you feel when traveling along this portion of Telephone Road?

Not Safe At All	Neutral	Very Safe
0		

6. As a pedestrian, how safe, or otherwise protected from crashes, do you feel when traveling along this portion of Telephone Road?

Not Safe At All	Neutral	Very Safe
0		

7. As a bicyclist, how safe, or otherwise protected from crashes, do you feel when traveling along this portion of Telephone Road?

Not Safe At All	Neutral	Very Safe
0		

8. How would you like to travel along this portion of Telephone Road in the future?

Walk	Personal Vehicle
Bicycle	
Public Transportation	
Other (please specify)	
I will not travel along this portion of Telephone Road in the future.	

9. Should the project team consider anything else when developing design alternatives for this section of Telephone Road?





Telephone Road Reconstruction and Access Management Improvements Public Meeting Summary & Preliminary Survey Results

FOR

TIRZ 8 / Gulfgate Redevelopment Authority

May 12, 2022





PUBLIC MEETING SUMMARY

- May 10, 2022, 6:30 PM
- 33 Attended (26 Public / 5 consultant staff / 2 Directors)
 - City of Houston
 - City Council District I

- Texas House District 145
- McDonald's
- Houston Airport System
- Outreach:
 - Email & phone calls to local, city, regional, State reps; Super Neighborhoods and civic groups; churches; schools; journalists
 - Facebook posts, Next Door, Reddit
 - Canvassed businesses on Telephone Road
- Questions & Comments:
 - Right of way, transit, bike lanes, mobility for students, flooding/drainage, scope of work, overlap with projects along Telephone Road corridor
- General attitude is positive 🙂



PRELIMINARY SURVEY RESULTS

As of May 12, 2022: 50 Respondents

47 English / 3 Spanish

How often to do use Telephone Road?

- 50% use daily

How do you currently use Telephone Road?

- 75% live near Telephone Road
- 66% run errands
- 40% travel to a major destination

What are you most concerned about?

- Lighting, traffic & congestion, lack of landscaping

Safety / Protected from Crashes (1 – 100)

- Motorist: 39
- Pedestrian: 22
- Bicyclist: 18

https://tinyurl.com/TelephoneRdSurvey

In the future, how would you like to travel on Telephone Rd?

- 54% personal vehicle
- 30% bicycle
- 10% public transportation

What else should the project team consider?

- Landscaping, beautification, tree coverage
- Colorful corridor; design "theme"
- Pedestrian priorities, appropriate lighting, signage
- Traffic calming design; enforcement for speeding; congestion near schools/drive-thru
- Parking; pavement markings
- Drainage and flooding
- Population growth & development in the area
- Safety
- Mixed comments on bike lanes, public transit, light rail

Excerpt from 2019 Southeast Houston Mobility Plan

TELEPHONE ROAD



Existing Conditions

Telephone Rd. provides north-south connectivity from IH-45 to Beltway 8. Variations in the existing cross section include:

- IH 610 to Park Place Blvd.: 4-lane Thoroughfare with 100' right-of-way and center turn lane.
- Park Place Blvd. to E Orem Dr.: 6-lane median divided Principal Thoroughfare with 120' right-of-way.
- E Orem Dr. to Beltway 8: 6-lane Principal Thoroughfare with 120' right-of-way and center turn lane.

Sidewalks are either nonexistent or in need of repair north of Park Place Blvd. METRO operates a local bus route along the corridor until Airport Blvd., accessing Hobby Airport Transit Center. There is an on-street bikeway proposed for this corridor. Land use is a mix of commercial, industrial, and public and institutional uses abutting the corridor.

Improvement Needs

The intersection of Telephone Rd./Reveille St. at Bellfort St. was identified as the highest crash location throughout the study area. Based on modeling, traffic volume along this corridor is expected to be significant into 2040. Improving pedestrian amenities with wide sidewalks, ADA compliant ramps, and bicycle infrastructure will enhance pedestrian connectivity and safety.

Existing Cond	ditions	Future Conditions		
Lanes	4-6	MTFP Designation	T-4-100/P-6-120	
Existing Counts Range	25,000 - 39,900	Future Volume Range	6,600 - 58,000	
Right-of-Way	100' - 120'	Multimodal Class	Commercial Mixed-Use Blvd - Industrial Blvd	
Median/CTL/Undivided	Median/CTL	Median/CTL	Median/CTL	



Completing the sidewalk gaps between Airport Blvd. and Almeda Genoa Rd. would enhance pedestrian connectivity in this area. Improved sidewalk infrastructure is also needed north of Park Place Blvd.

Public comment indicated pavement failure due to truck traffic near the intersection of Telephone Rd./Reveille St. at Bellfort St. Other comments indicated safety concerns due to congestion around Ortiz Middle School.

Recommendations

Based on projected traffic volumes, Telephone Rd. should remain a 4-lane Thoroughfare from IH 610 to Park Place Blvd., and a 6-lane Principal Thoroughfare from Park Place Blvd. to Beltway 8. A median with left turn bays is recommended north of Park Place Blvd. and south of Braniff St. to improve access management. A shared-use path should be provided along the west side with a 5' sidewalk along the east side for the length of the corridor. Connection to Sims Bayou Greenway should be prioritized. Long Term improvements include the continuation of the Light Rail Purple Line accessing Hobby Airport from Long Dr. to Bellfort St. Further study is recommended for light rail transit feasibility along this corridor.

> COST: \$3.0M planning level cost estimate