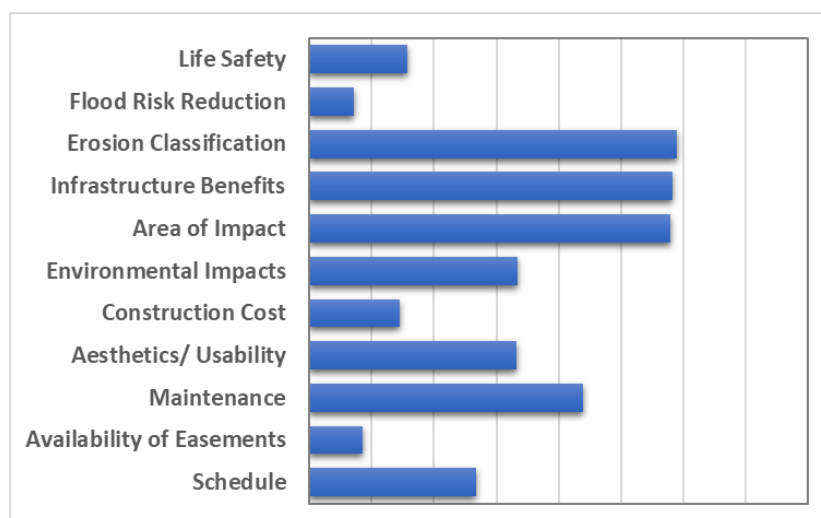
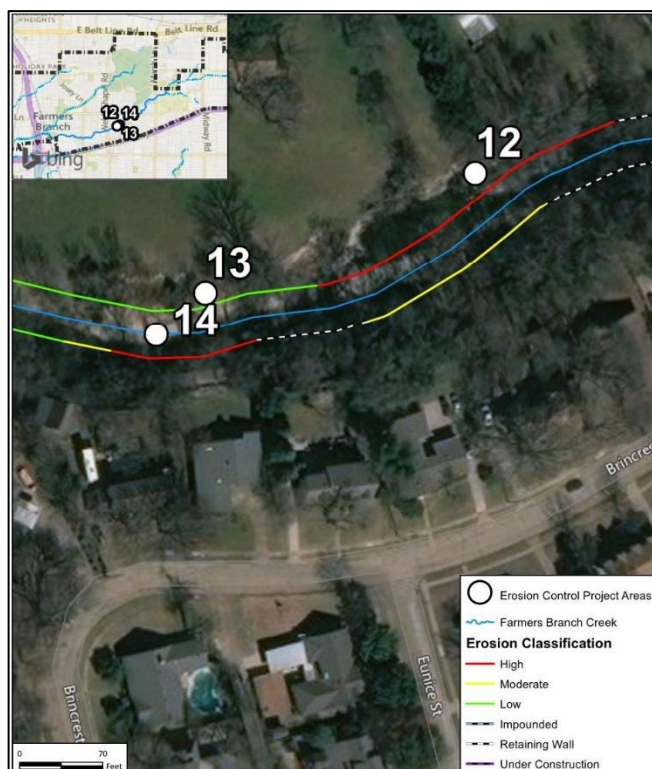
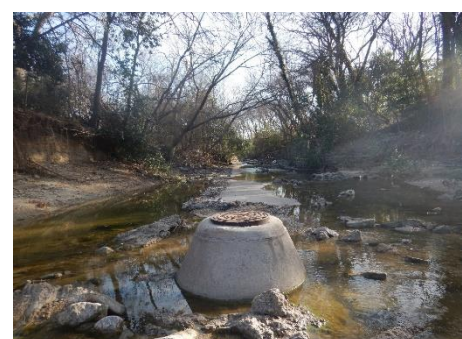


Reference Address:	3100 Block of Brookhollow Dr		
Project ID: E-12	CIP Rank: 2 of 29	Score: 17.3	Estimated Cost: \$764,340
Problem Description:	Pipe exposed downstream of manhole; pipe exposed on bed; Manhole in center of channel at a junction of three lines; Eroded right bank next to manhole; exposed pipes show >12 FT of erosion		
Proposed Improvement:	Encase 50 LF exposed sanitary sewer line. Monitor existing sanitary sewer manhole and consider removal and relocation. Install 100 LF, 15-FT tall MSE wall with 5 FT stone toe protection through concrete-lined portion of the channel.		

Main Channel



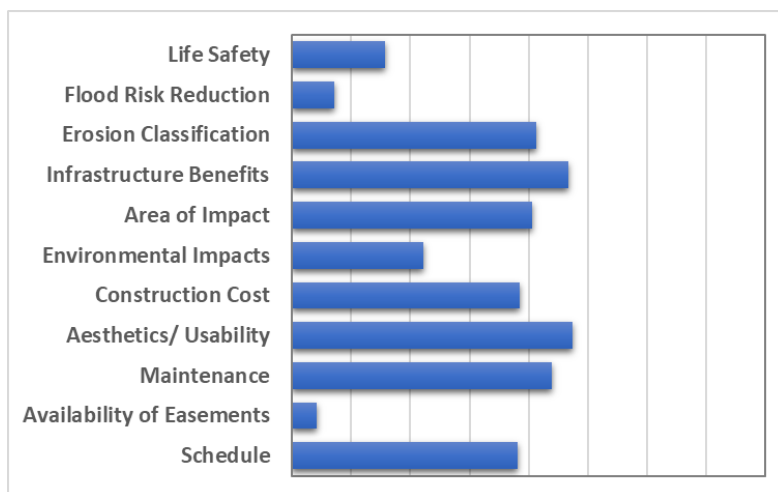
Right Bank



*Opinion of Probable Construction Cost
Preliminary – Intended for Review Only*

Reference Address:	2900 Block of Maydelle Ln		
Project ID: E-20	CIP Rank: 3 of 29	Score: 16.7	Estimated Cost: \$76,560
Problem Description:	Erosion of left bank above retaining wall, exposing manhole at downstream end		
Proposed Improvement:	Install riprap to protect existing manhole. Repair undermined wall structure with CIP concrete. Consider repairs or unclogging to low level outlet structure.		

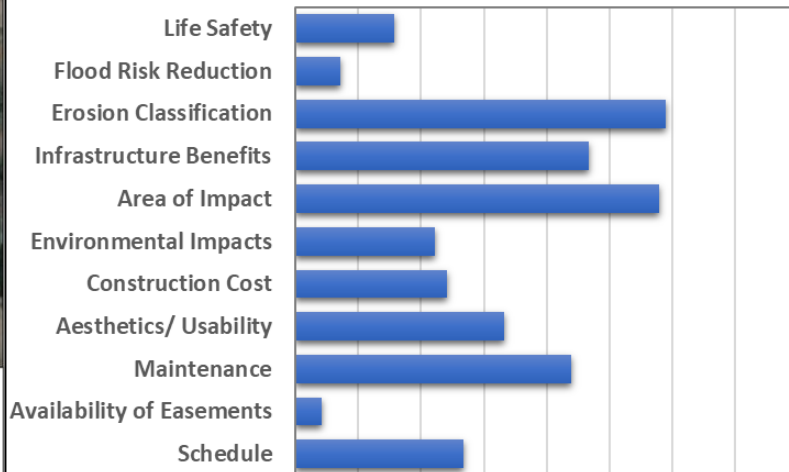
Left Bank



*Opinion of Probable Construction Cost
Preliminary – Intended for Review Only*

Reference Address:	12200 Block of Treeview Ln		
Project ID: E-21	CIP Rank: 4 of 29	Score: 16.5	Estimated Cost: \$243,330
Problem Description:	Manhole threatened by high bank erosion		
Proposed Improvement:	Extend anchored gabions 50 LF downstream to protect existing manhole. Install gabion mattress around bend. Add rock rip rap protection around manhole and downstream of gabion structure.		

Right Bank



*Opinion of Probable Construction Cost
Preliminary – Intended for Review Only*

Reference Address:	3300 Block of Valley View Ln		
Project ID: E-8	CIP Rank: 8 of 29	Score: 14.7	Estimated Cost: \$128,230
Problem Description:	Gully undercutting trail crossing near Valley View Lane; shale on bed of gully		
Proposed Improvement:	Backfill undercut outlet structure. Install 20 FT x 20 FT x 4.5 FT gabion mattress downstream of outfall. Embed below flowline. Connect to existing gabion wall. Install riprap upstream of outlet structure and downstream of mattress. Establish natural slope and riparian vegetation 100 LF downstream of mattress or as necessary.		

Main Channel



*Opinion of Probable Construction Cost
Preliminary – Intended for Review Only*