

Volume 8: Bar None

8.1 Executive Summary

St. Charles Parish tasked Principal Engineering, Inc. to complete the study of the Bar None Drainage Area for the East Bank Master Drainage Plan. Principal Engineering performed analyses for 25-Year and 100-Year Design Storms (NOAA Atlas 14), and developed drainage improvements that:

1. 25-Year: Reduce the water surface elevations in the canals to one foot below top of the bank such that future internal drainage improvements may function to eliminate street flooding.
2. 100-Year: Lower water surface elevations in the canals such that direct structure flooding from the canals is eliminated and future internal drainage improvements may function to eliminate internal area structure flooding.

The recommended program consists of the 25-Year and select 100-Year improvements at canals along railroad and railroad crossings.

Analysis used models built in EPA SWMM and AutoDesk's Storm and Sanitary Analysis. Existing flood-prone areas were identified in areas along Rue Landry and Rue Sydney Drive. The results of the existing conditions simulation illustrate the inadequacy of the drainage system for the design events, however, modeled flooding does not appear severe and impact to the community is reported as low by Parish personnel.

The recommended improvements are grouped into phases and projects, building from the previous, in sensible order of construction, downstream to upstream. Major improvements include increasing capacity of existing crossings under CN RR and widening drainage ditch south of CN RR.

Modeled improvements have been partitioned into executable projects with cost estimates provided. It is expected that the Parish will create an integrated priority list consisting of projects

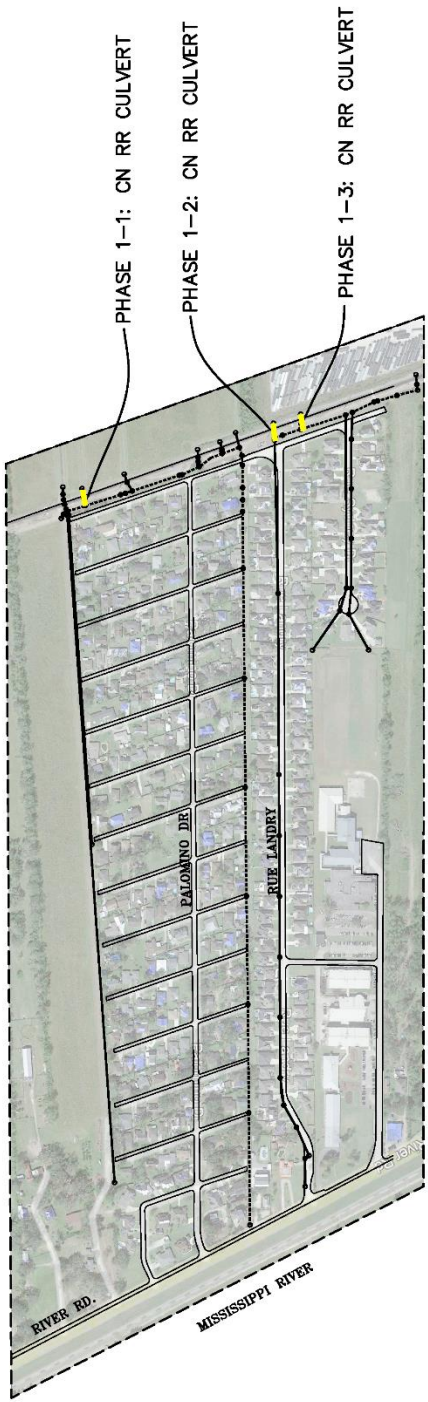
from all basins, constructed individually as funding becomes available. A summary of projects and costs is tabulated on the following pages by phase.

Recommended Program Construction Cost Estimation		
Phase	Number of Projects	Cost
Phase 1	1	\$ 5,760,000.00
Phase 2	1	\$ 72,278.00
Total	2	\$ 5,832,278.00



BAR-NONE PLACE WATERSHED

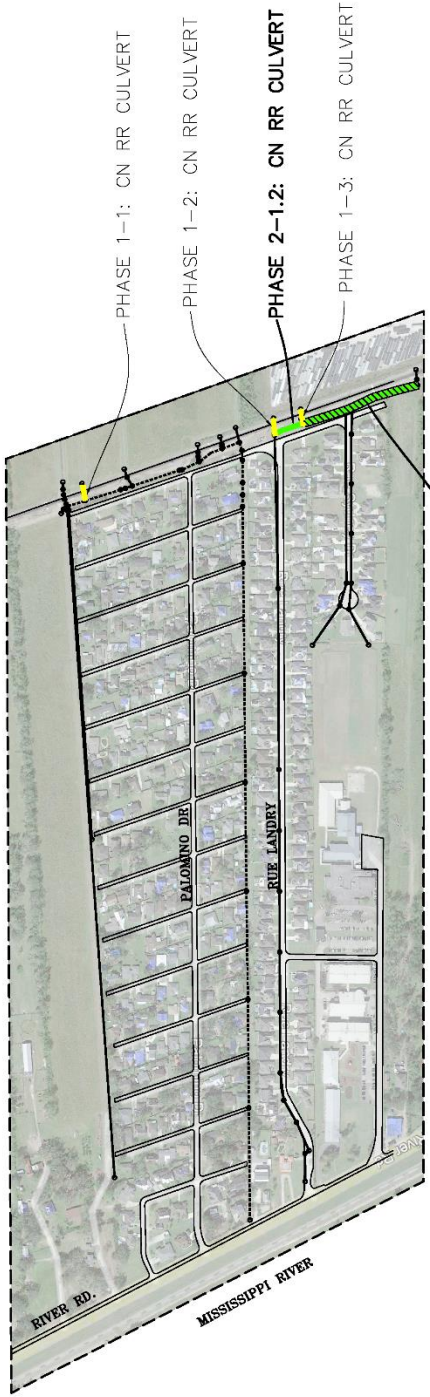
Phase 1 Projects and Construction Cost Estimates	
1-1: CN Railway Crossing West of Palomino Dr	
Required Jack and Bore 2-42" Pipe Approximately 100 Linear Feet	\$ 1,440,000.00
1-2: CN Railway Crossing at Rue Landry	
Required addition of 2-42" Jack & Bore Pipes Existing 1-42" Steel Pipe to remain Approximately 75 Linear Feet	\$ 1,080,000.00
1-3: CN Railway Crossing East of Rue Landry	
Required Jack and Bore 3-42" Pipe Approximately 150 Linear Feet	\$ 3,240,000.00
Phase 2 Subtotal	\$ 5,760,000.00



BAR-NONE PROGRAM - PHASE 1 IMPROVEMENTS

25-YEAR CRITERIA WITH SELECTED 100-YEAR IMPROVEMENTS

Phase 2 Projects and Construction Cost Estimates	
2-1.1: Canal Widening Along CN Railway	
Canal Widening: 3' Depth, 21' Width Approximately 610 Linear Feet	\$ 24,150.00
2-1.2: Pipe Along CN Railway	
Required 42" RCP Approximately 100 Linear Feet	\$ 48,128.00
Phase 2 Subtotal	\$ 72,278.00



BAR-NONE PROGRAM - PHASE 2 IMPROVEMENTS

25-YEAR CRITERIA WITH SELECTED 100-YEAR IMPROVEMENTS