

Exhibit A - Nettleton Avenue Drainage Improvements

x 5% = 6500⁰⁰
- Total Level Damages -> look for levels
- Project Damages

Damage Level	Damages		Average Property Value:	\$130,000
1	\$6,500 5% Average Property Value		2005 FEMA Average Damages for Arkansas:	\$8,225
2	\$9,750	DL #1 * 1.5		
3	\$14,625	DL #2 * 1.5		
4	\$21,938	DL #3 * 1.5	Total Claims:	95
5	\$32,906	DL #4 * 1.5	Total Damages:	\$955,703
6	\$49,359	DL #5 * 1.5	Average Damages	\$10,060
7	\$74,039	DL #6 * 1.5		

Existing Conditions									50 year
Flood Frequency	LEVEL 1 Damages	LEVEL 2 Damages	LEVEL 3 Damages	LEVEL 4 Damages	LEVEL 5 Damages	LEVEL 6 Damages	LEVEL 7 Damages	Projected Damages	Accumulated Damages
1-year	0	0	0	0	0	0	0	\$0	\$0
2-year	1	0	0	0	0	0	0	\$6,500	\$162,500
5-year	0	1	0	0	0	0	0	\$9,750	\$260,000
10-year	5 x 6,500	0	1	0	0	0	0	\$47,125	\$495,625
25-year	1	5	0	1	0	0	0	\$77,188	\$650,000
50-year	1	1	5	0	1	0	0	\$122,281	\$772,281
100-year	0	1 9750	1 14,625	5 x 21,938	0	1 49,359	0	\$183,422	\$955,703

6,500 x 50 = 212,500
= 9,750 x 50 = 511,250 + 162,500
= 47,125 x 50 = 10,156,250 + 260,000
= 77,188 x 50 = 25,194,000 + 495,625
+ 122,281 x 50 = 50,140,500 + 650,000
= 183,422 + 183,422

1-YEAR DESIGN									50 year
Flood Frequency	LEVEL 1 Damages	LEVEL 2 Damages	LEVEL 3 Damages	LEVEL 4 Damages	LEVEL 5 Damages	LEVEL 6 Damages	LEVEL 7 Damages	Projected Damages	Accumulated Damages
1-year	0	0	0	0	0	0	0	\$0	\$0
2-year	1	0	0	0	0	0	0	\$6,500	\$162,500
5-year	0	1	0	0	0	0	0	\$9,750	\$260,000
10-year	5	0	1	0	0	0	0	\$47,125	\$495,625
25-year	1	5	0	1	0	0	0	\$77,188	\$650,000
50-year	1	1	5	0	1	0	0	\$122,281	\$772,281
100-year	0	1	1	5	0	1	0	\$183,422	\$955,703

** (1)(6500) + (5)(9750) + (1)21,938 = 77,188 -*
(77,188)(1/50) (1/25) + 495,625 = 650,000 -

ESTIMATED PROJECT COST: \$0
 ACCUMULATED COST OF DESIGN: \$955,703
 B/C RATIO: 1.000

Exhibit A - Nettleton Avenue Drainage Improvements cont.

2-YEAR DESIGN									50 year Accumulated Damages
Flood Frequency	LEVEL 1 Damages	LEVEL 2 Damages	LEVEL 3 Damages	LEVEL 4 Damages	LEVEL 5 Damages	LEVEL 6 Damages	LEVEL 7 Damages	Projected Damages	
1-year	0	0	0	0	0	0	0	\$0	\$0
2-year	0	0	0	0	0	0	0	\$0	\$0
5-year	1	0	0	0	0	0	0	\$6,500	\$65,000
10-year	0	1	0	0	0	0	0	\$9,750	\$113,750
25-year	5	0	1	0	0	0	0	\$47,125	\$208,000
50-year	1	5	0	1	0	0	0	\$77,188	\$285,188
100-year	1	1	5	0	1	0	0	\$122,281	

407,469
+ 125,000
#

ESTIMATED PROJECT COST: \$125,000
ACCUMULATED COST OF DESIGN: \$32,438
B/C RATIO: 2.929

Est. Cond
955,703
= 530,469

5-YEAR DESIGN									50 year Accumulated Damages
Flood Frequency	LEVEL 1 Damages	LEVEL 2 Damages	LEVEL 3 Damages	LEVEL 4 Damages	LEVEL 5 Damages	LEVEL 6 Damages	LEVEL 7 Damages	Projected Damages	
1-year	0	0	0	0	0	0	0	\$0	\$0
2-year	0	0	0	0	0	0	0	\$0	\$0
5-year	0	0	0	0	0	0	0	\$0	\$0
10-year	1	0	0	0	0	0	0	\$6,500	\$32,500
25-year	0	1	0	0	0	0	0	\$9,750	\$52,000
50-year	5	0	1	0	0	0	0	\$47,125	\$99,125
100-year	1	5	0	1	0	0	0	\$77,188	\$176,313

SLIP PROTECTIVE LEVEL OF DRAINAGE

ESTIMATED PROJECT COST: \$150,000
ACCUMULATED COST OF DESIGN: \$326,313
B/C RATIO: 2.929

Est. Cond

10-YEAR DESIGN									50 year Accumulated Damages
Flood Frequency	LEVEL 1 Damages	LEVEL 2 Damages	LEVEL 3 Damages	LEVEL 4 Damages	LEVEL 5 Damages	LEVEL 6 Damages	LEVEL 7 Damages	Projected Damages	
1-year	0	0	0	0	0	0	0	\$0	\$0
2-year	0	0	0	0	0	0	0	\$0	\$0
5-year	0	0	0	0	0	0	0	\$0	\$0
10-year	0	0	0	0	0	0	0	\$0	\$0
25-year	1	0	0	0	0	0	0	\$6,500	\$13,000
50-year	0	1	0	0	0	0	0	\$9,750	\$22,750
100-year	5	0	1	0	0	0	0	\$47,125	\$69,875

ESTIMATED PROJECT COST: \$250,000
ACCUMULATED COST OF DESIGN: \$319,875
B/C RATIO: 2.988

(1)(6500) + (5)(9750) + (1)(21,938) => 77,188

(77,188) (50 YRS.) (1/50 FLOOD PER.) => 77,188 + 208,000 => 285,188

Exhibit A - Nettleton Avenue Drainage Improvements cont.

25-YEAR DESIGN									50 year
Flood Frequency	LEVEL 1 Damages	LEVEL 2 Damages	LEVEL 3 Damages	LEVEL 4 Damages	LEVEL 5 Damages	LEVEL 6 Damages	LEVEL 7 Damages	Projected Damages	Accumulated Damages
1-year	0	0	0	0	0	0	0	\$0	\$0
2-year	0	0	0	0	0	0	0	\$0	\$0
5-year	0	0	0	0	0	0	0	\$0	\$0
10-year	0	0	0	0	0	0	0	\$0	\$0
25-year	0	0	0	0	0	0	0	\$0	\$0
50-year	1	0	0	0	0	0	0	\$6,500	\$6,500
100-year	0	1	0	0	0	0	0	\$9,750	\$16,250

ESTIMATED PROJECT COST: \$300,000
 ACCUMULATED COST OF DESIGN: \$316,250 ✓
 B/C RATIO: 3.022 X

50-YEAR DESIGN									50 year
Flood Frequency	LEVEL 1 Damages	LEVEL 2 Damages	LEVEL 3 Damages	LEVEL 4 Damages	LEVEL 5 Damages	LEVEL 6 Damages	LEVEL 7 Damages	Projected Damages	Accumulated Damages
1-year	0	0	0	0	0	0	0	\$0	\$0
2-year	0	0	0	0	0	0	0	\$0	\$0
5-year	0	0	0	0	0	0	0	\$0	\$0
10-year	0	0	0	0	0	0	0	\$0	\$0
25-year	0	0	0	0	0	0	0	\$0	\$0
50-year	0	0	0	0	0	0	0	\$0	\$0
100-year	1	0	0	0	0	0	0	\$6,500	\$6,500

ESTIMATED PROJECT COST: \$450,000
 ACCUMULATED COST OF DESIGN: \$456,500
 B/C RATIO: 2.094

100-YEAR DESIGN									50 year
Flood Frequency	LEVEL 1 Damages	LEVEL 2 Damages	LEVEL 3 Damages	LEVEL 4 Damages	LEVEL 5 Damages	LEVEL 6 Damages	LEVEL 7 Damages	Projected Damages	Accumulated Damages
1-year	0	0	0	0	0	0	0	\$0	\$0
2-year	0	0	0	0	0	0	0	\$0	\$0
5-year	0	0	0	0	0	0	0	\$0	\$0
10-year	0	0	0	0	0	0	0	\$0	\$0
25-year	0	0	0	0	0	0	0	\$0	\$0
50-year	0	0	0	0	0	0	0	\$0	\$0
100-year	0	0	0	0	0	0	0	\$0	\$0

ESTIMATED PROJECT COST: \$600,000
 ACCUMULATED COST OF DESIGN: \$600,000
 B/C RATIO: 1.593