

March 14, 1989

FEASIBILITY REPORT
STORM DRAINAGE IMPROVEMENTS
(IC-3)

PINEHURST ESTATES LAKE;
NORTH OF 103RD ST., EAST OF ANTIOCH RD.

CITY OF OVERLAND PARK
JOHNSON COUNTY, KANSAS

DESCRIPTION: This report relates to the existing lake located within Pinehurst Estates, 4th Plat, a subdivision in the City of Overland Park, Johnson County, Kansas, north of 103rd Street and east of Antioch Road. The proposed improvements would correct the current problems associated with the existing lake by adding the necessary equipment to rejuvenate the lake, or installing an open or enclosed storm sewer system and thereby eliminating the existing lake.

USE: The existing lake was built in 1976 and presently serves the Pinehurst Estates, 4th Plat, subdivision. The area which includes the lake was platted as Tract HA7, which is presently owned by the Homes Association. The area around it is joined by subdivision lots. The alternates as outlined below show the existing lake rejuvenated or removal of the dam and constructing either an underground storm sewer or an open concrete ditch liner.

RIGHT-OF-WAY: Permanent drainage easements and temporary construction easements will be required from the adjacent property owners and the Home Association for this improvement. It is assumed that all easements would be dedicated to the City without cost.

ZONING: The adjacent properties are presently zoned for R-1 (Single-Family Residential District).

DESIGN: The proposed designs would satisfy all applicable sections of the City of Overland Park Municipal Code. The design for each alternate is as follows:

Alternate #1: This alternate would be to rejuvenate the existing lake. This would include draining the existing lake and removing all sedimentation, and constructing at the upper end of the existing lake, a sediment basin. Aerators and air compressors would be placed in and along the lake too add oxygen back into the water. This would eliminate the odor caused by the algae and the algae itself. A water line would be added to insure minimum lake depth.

Alternate #2: This alternate would be to construct an underground 10' by 4' reinforced concrete box storm sewer. The existing dam would be removed and the area next to and over the box would be filled. The existing storm sewer pipes terminating at the lake would be extended and connected to the proposed box.

Alternate #3: This alternate would be to construct an open 4' wide bottom concrete ditch liner with 3:1 side walls. The existing dam would be removed and the area next to the ditch liner filled. The existing storm sewer pipes would be extended and connected to the proposed ditch liner.

ESTIMATE OF PROBABLE COST: The estimated cost for rejuvenating the existing lake is outlined as follows:

Alternate #1

ITEM	DESCRIPTION	QUANTITY	UNITS	UNIT COST	TOTAL COST
1	Removing Sedimentation in Lake	L.S.	L.S.	15000.00	15,000.00
2	Aerators	7	Ea.	3500.00	24,500.00
3	Air Compressor	5	Ea.	5000.00	25,000.00
4	Power Control Box	1	Ea.	8000.00	8,000.00
5	Electrical Wiring	1250.0	L.F.	4.00	5,000.00
6	Electrical Hookup	L.S.	L.S.	2000.00	2,000.00
7	6" Water Line	100.0	L.F.	30.00	3,000.00
8	Water Valve	1.0	Ea.	2000.00	2,000.00
9	Sedimentation Wall w/Scrubber	10.0	C.Y.	400.00	4,000.00
10	Catch Basin @ S.S. Outlets	5.0	Ea.	1000.00	5,000.00
11	Sodding	2000.0	S.Y.	2.00	4,000.00
12	Construction Staking	L.S.	L.S.	2000.00	2,000.00
13	Project Sign	1.0	EA.	1000.00	1,000.00
14	Fence Removal & Replacement	100.0	L.F.	6.00	600.00
				SUB-TOTAL CONSTRUCTION COST	\$ 101,100.00
				CONTINGENCIES (10%)	10,110.00
				TOTAL CONSTRUCTION COST	\$ 111,210.00
				ENGINEERING, LEGAL, INTERIM FINANCING (25%)	27,802.00
				TOTAL COST	\$ 139,012.00

ESTIMATE OF PROBABLE COST: The estimated cost for removing the existing lake and constructing a concrete box culvert is outlined as follows:

Alternate #2

ITEM	DESCRIPTION	QUANTITY	UNITS	UNIT COST	TOTAL COST
1	Class AAA(AE) Concrete	1245.0	C.Y.	290.00	361,050.00
2	18" RCP	160.0	L.F.	45.00	7,200.00
2	24" RCP	30.0	L.F.	50.00	1,500.00
2	30" RCP	30.0	L.F.	55.00	1,650.00
4	Inlets & Manholes	3.0	EA.	2500.00	7,500.00
8	Fence Removal & Replacement	400.0	L.F.	6.00	2,400.00
10	Sodding	19000.0	S.Y.	2.00	38,000.00
12	Construction Staking	L.S.	L.S.	10000.00	10,000.00
13	Project Sign	1.0	EA.	1000.00	1,000.00
14	Earthwork	17700.0	C.Y.	10.00	177,000.00
15	Removal of Existing Structures	L.S.	L.S.	10000.00	10,000.00
SUB-TOTAL CONSTRUCTION COST					\$ 617,300.00
CONTINGENCIES (10%)					61,730.00
TOTAL CONSTRUCTION COST					\$ 679,030.00
ENGINEERING, LEGAL, INTERIM FINANCING (25%)					169,758.00
TOTAL COST					\$ 848,788.00

ESTIMATE OF PROBABLE COST: The estimated cost for removing the existing lake and constructing a concrete ditch liner is outlined as follows:

Alternate #3

ITEM	DESCRIPTION	QUANTITY	UNITS	UNIT COST	TOTAL COST
1	Concrete Ditch Liner	3900.0	S.Y.	45.00	175,500.00
2	18" RCP	190.0	L.F.	45.00	8,550.00
2	24" RCP	40.0	L.F.	50.00	2,000.00
2	30" RCP	40.0	L.F.	55.00	2,200.00
8	Fence Removal & Replacement	400.0	L.F.	6.00	2,400.00
10	Sodding	7500.0	S.Y.	2.00	15,000.00
12	Construction Staking	L.S.	L.S.	00.00	7,000.00
13	Project Sign	1.0	EA.	1000.00	1,000.00
14	Earthwork	6000.0	C.Y.	10.00	60,000.00
15	Removal of Existing Structures	L.S.	L.S.	10000.00	10,000.00
SUB-TOTAL CONSTRUCTION COST					\$ 283,650.00
CONTINGENCIES (10%)					28,365.00
TOTAL CONSTRUCTION COST					\$ 312,015.00
ENGINEERING, LEGAL, INTERIM FINANCING (25%)					78,004.00
TOTAL COST					\$ 390,019.00

These cost estimates are based on projected 1989 construction costs, rounded to the nearest dollar, and include finish grading, fence construction, and sodding of all disturbed areas. All easements are assumed being dedicated without any cost to the City.

IMPROVEMENT DISTRICT: The proposed Improvement District to accomplish these improvements should include the following described properties:

All of Lots 30 through 51 inclusive and HA-7 all in Block 7 of Pinehurst Estates 4th Plat, a subdivision in the City of Overland Park, Johnson County, Kansas.

METHOD OF ASSESSMENT: If an Improvement District is created, properties in the Improvement District will be assessed a percentage of their property and improvements valuations totalling the cost of the project less the City's commitment of \$7,500.00 for Alternate 1. Based on the estimated project cost of \$139,012.00, the assessment would be 3.5567 percent of the property and improvements valuations as recorded in the Johnson County Clerk's Office. For alternates 2 and 3, 3.1 percent of the property and improvements valuations would be assessed. The assessments, as shown below, are based on the 1989 total property and improvements valuations. A listing of all adjacent properties to be assessed including total property and improvement valuations is attached.

APPORTIONMENT OF COSTS: The apportionment of costs between the Improvement District and City-At-Large based on the total estimated project cost is as follows:

Based on 1989 Total Property and Improvements Valuations:

Total of 1989 Valuations (Property and Improvements)	\$3,697,540.00
3.5567 Percent of 1989 Improvement District Valuation for Alternate 1	\$ 131,512.00
3.1 Percent of 1989 Improvement District Valuation for Alternates 2, & 3	\$ 114,623.74

	Alternate 1	Alternate 2	Alternate 3
Total Estimated Project Cost	\$ 139,012.00	\$ 848,788.00	\$ 390,019.00
Percentage of Project	(100.000%)	(100.000%)	(100.000%)
Improvement District Share	\$ 131,512.00	\$ 114,623.74	\$ 114,623.74
Percentage of Project	(94.605%)	(13.504%)	(29.389%)
City-at-Large Share	* \$ 7,500.00	\$ 734,164.26	\$ 275,395.26
Percentage of Project	(5.395%)	(86.496%)	(70.611%)

* Note: Under Alternate 1, the City-at-Large tentatively agreed to pay an amount not to exceed \$7,500.00 for a one time lake maintenance. The City-at-Large share as shown for Alternates 2 & 3 is calculated based on the city paying all costs in excess of the 3.1% of the Total Valuations of those properties in the Improvement District.

Final apportionment of costs between the Improvement District and City-At-Large will be based on the actual Total Project Cost apportioned as per the Method of Assessment section of this report.

MAP: Attached are maps showing the proposed alternates and the area to be assessed.

SUMMARY: This feasibility report has been prepared by the Engineering Staff of the Public Works Department at the direction of the Public Works Committee and represents the best information available to the City Engineer. Decisions or further recommendations based on this report or on any other criteria or information available should be made after due deliberation by the Public Works Committee and/or the Governing Body.


 MICHAEL C. HALE, P.E.
 SPECIAL PROJECTS ENGINEER

Attachment

March 14, 1989

OWNERSHIP AND ASSESSMENT TABLE

(IC-3)

PINEHURST ESTATES LAKE;
NORTH OF 103RD ST., EAST OF ANTIOCH RD.

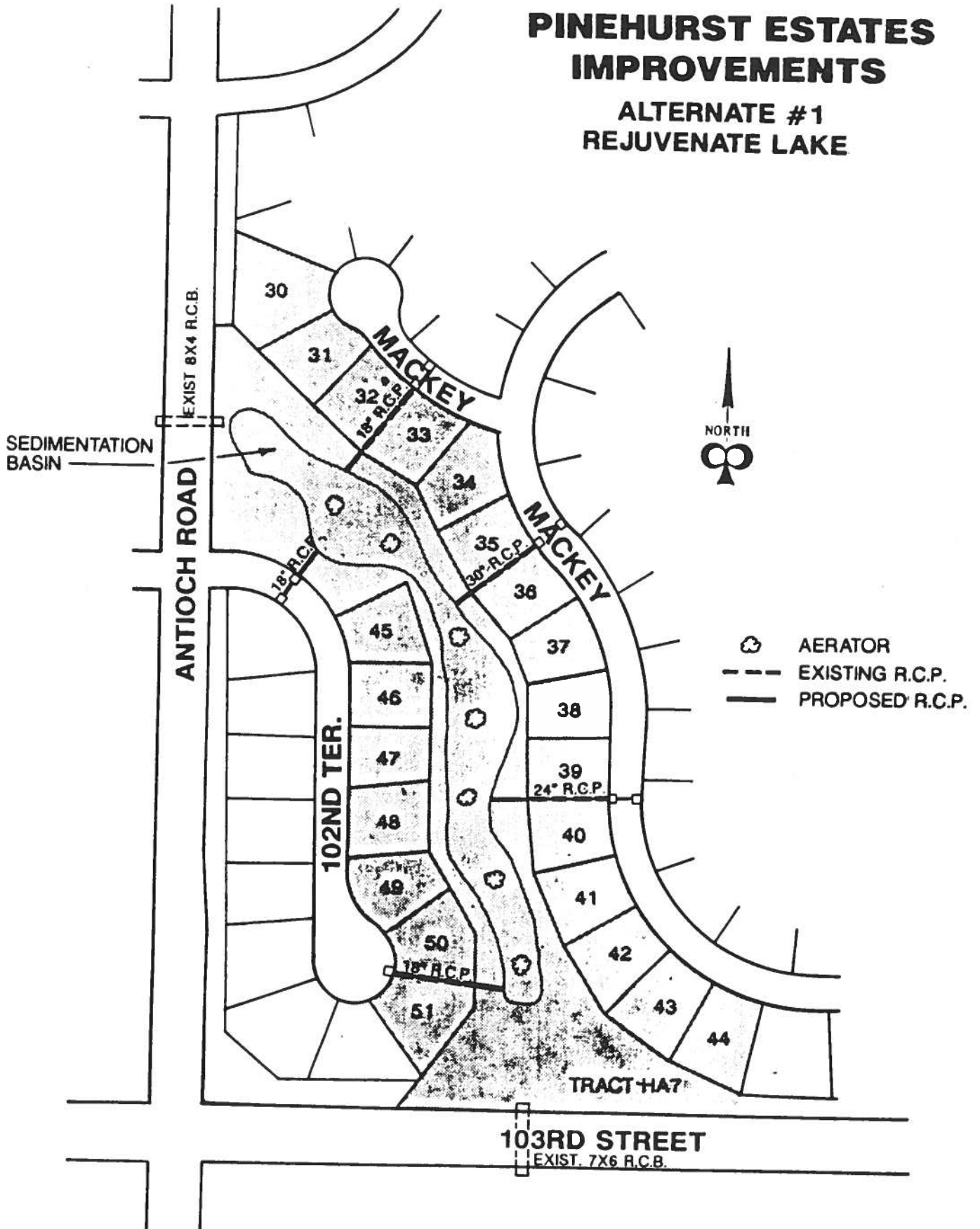
CITY OF OVERLAND PARK
JOHNSON COUNTY, KANSAS

Tract No.	Owner	Address	Total Valuation 1989
HA-7	Pinehurst Estates Homes Association	P.O. Box 12013 O.P. Ks. 66212	29,440
30	Harriet B. Beckman	10128 Mackey	144,700
31	Joe B. Gibson Sherry L. Gibson	10132 Mackey	155,000
32	Fred G. Kalush Joy A. Kalush	10136 Mackey	174,200
33	Jan M. Freeman Patricia S. Freeman	10140 Mackey	195,500
34	Roger A. Gruenke Margaret M. Gruenke	10144 Mackey	163,900
35	J.B. Leclaire Nanette V. Leclaire	10148 Mackey	144,300
36	Bank of Holyrood	10152 Mackey @P.O. Box 128 Holyrood, Ks.67450	175,100
37	Norman E. Glass Linda R. Glass	10156 Mackey	168,900
38	Edward C. Regan Madelyn K. Regan	10160 Mackey	179,700
39	Yon K. Kim Chung H. Kim	10164 Mackey	209,500

40	Gale W. Gunnison Catherine E. Gunnison	10166 Mackey	142,300
41	Patrick F. Brown Jessica L. Brown	10168 Mackey	153,500
42	Glenn E. Wilkens Marilyn J. Wilkens	10172 Mackey	166,200
43	David M. Gordon Minette I. Gordon	10176 Mackey	152,300
44	Chris N. Vedros Pauline Vedros	10182 Mackey	157,400
45	William C. Herre Marian S. Herre	8661 W. 102nd Ter.	182,400
46	Barbara E. Schneider	8665 W. 102nd Ter.	150,200
47	Phillip J. Slimm Marcia C. Slimm	8669 W. 102nd Ter.	194,800
48	Benjamin E. Medley Lynn H. Medley	8671 W. 102nd Ter.	187,000
49	John L. Nickerson Jr. Linda E. Nickerson	8675 W. 102nd Ter. P.O. Box 12263 O.P., Ks. 66212	163,000
50	Alfred A. Mannino Trustee	8679 W. 102nd Ter.	159,700
51	Dale C. Corder Jean H. Corder	8683 W. 102nd Ter.	148,500
		Total	<u>3,679,540</u>

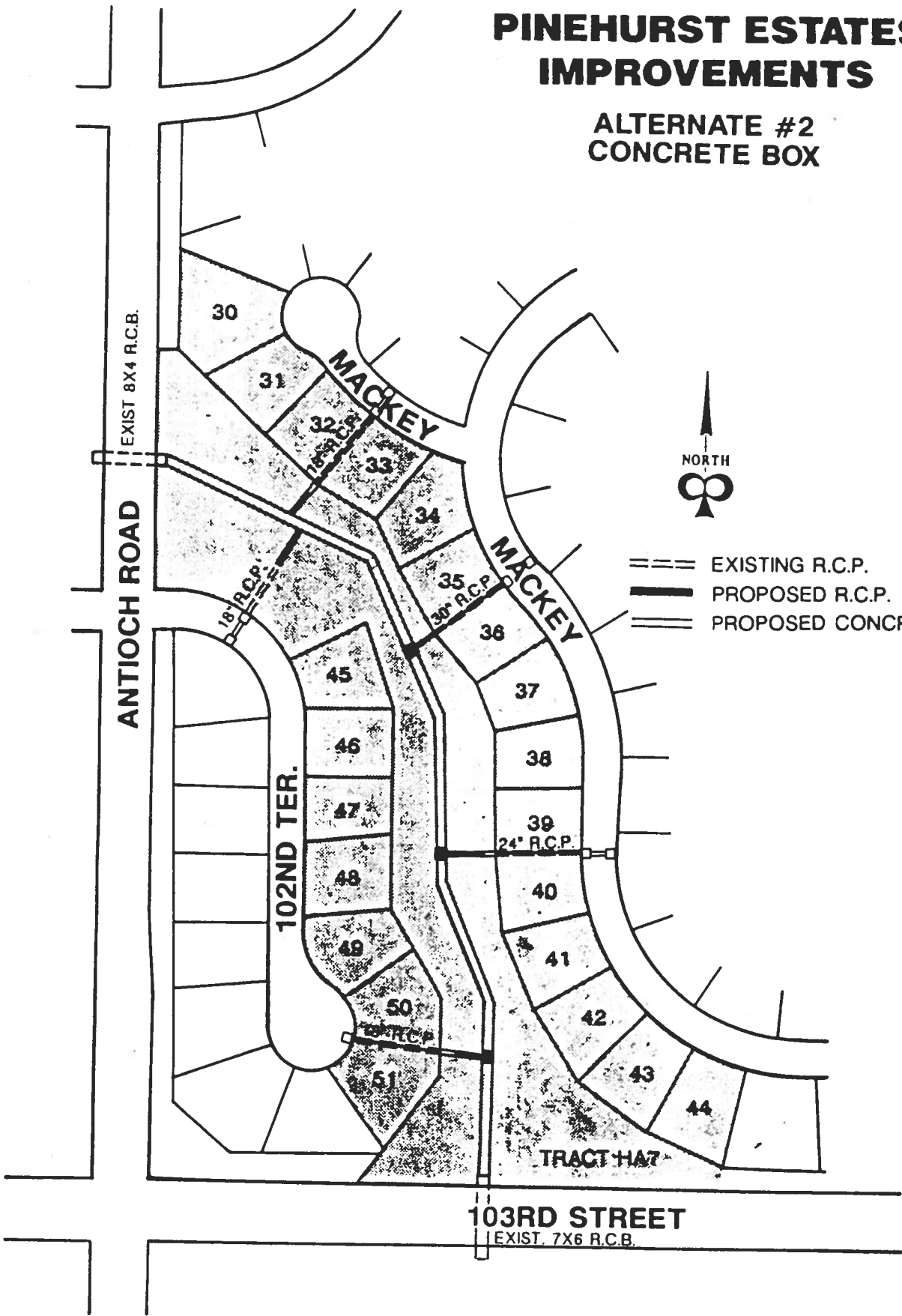
PINEHURST ESTATES IMPROVEMENTS

ALTERNATE #1 REJUVENATE LAKE



PINEHURST ESTATES IMPROVEMENTS

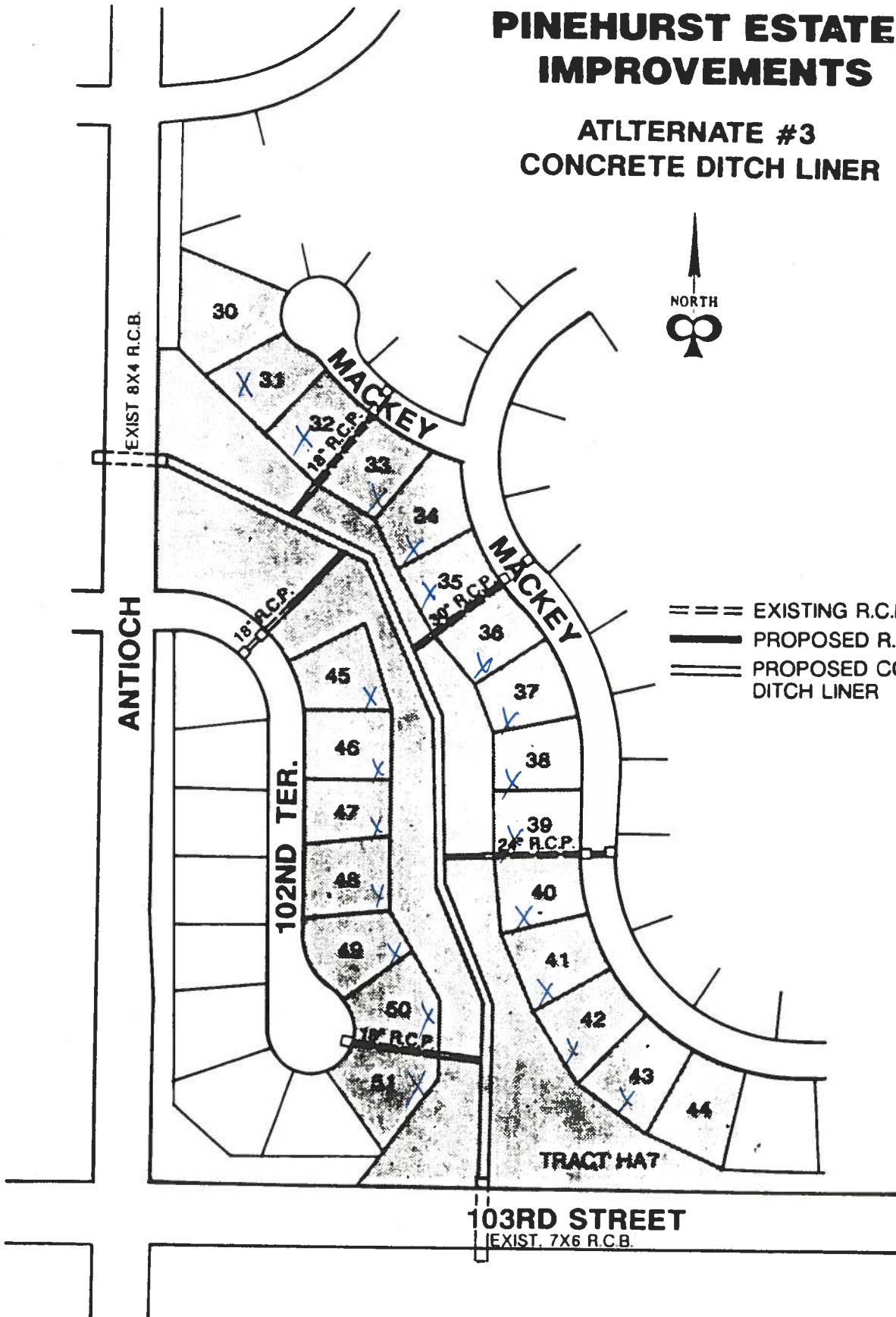
ALTERNATE #2 CONCRETE BOX



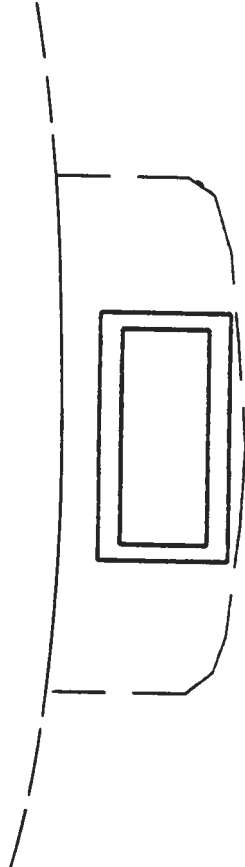
- EXISTING R.C.P.
- PROPOSED R.C.P.
- == PROPOSED CONCRETE BOX

PINEHURST ESTATES IMPROVEMENTS

ALTERNATE #3 CONCRETE DITCH LINER

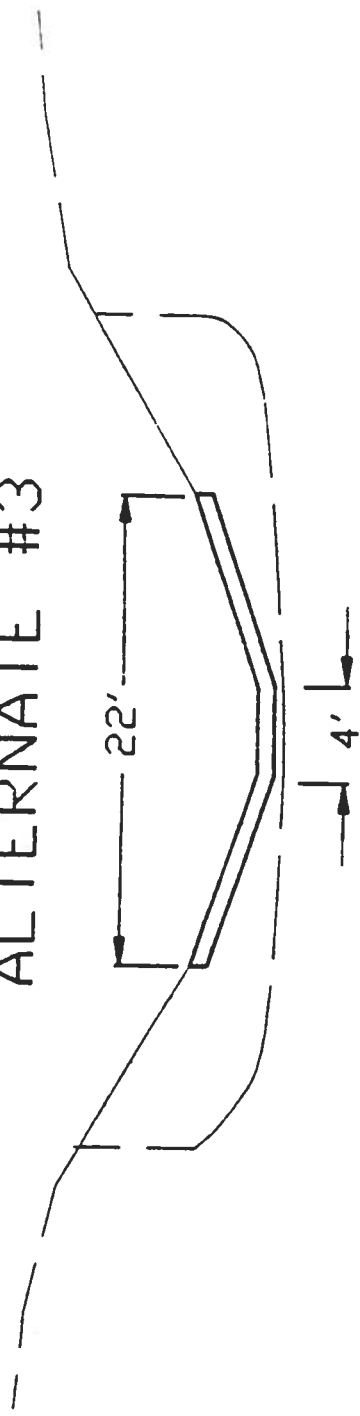


ALTERNATE #2



10' x 4' R.C.B.

ALTERNATE #3



4' CONCRETE DITCH LINER
WITH 3 : 1 WALLS