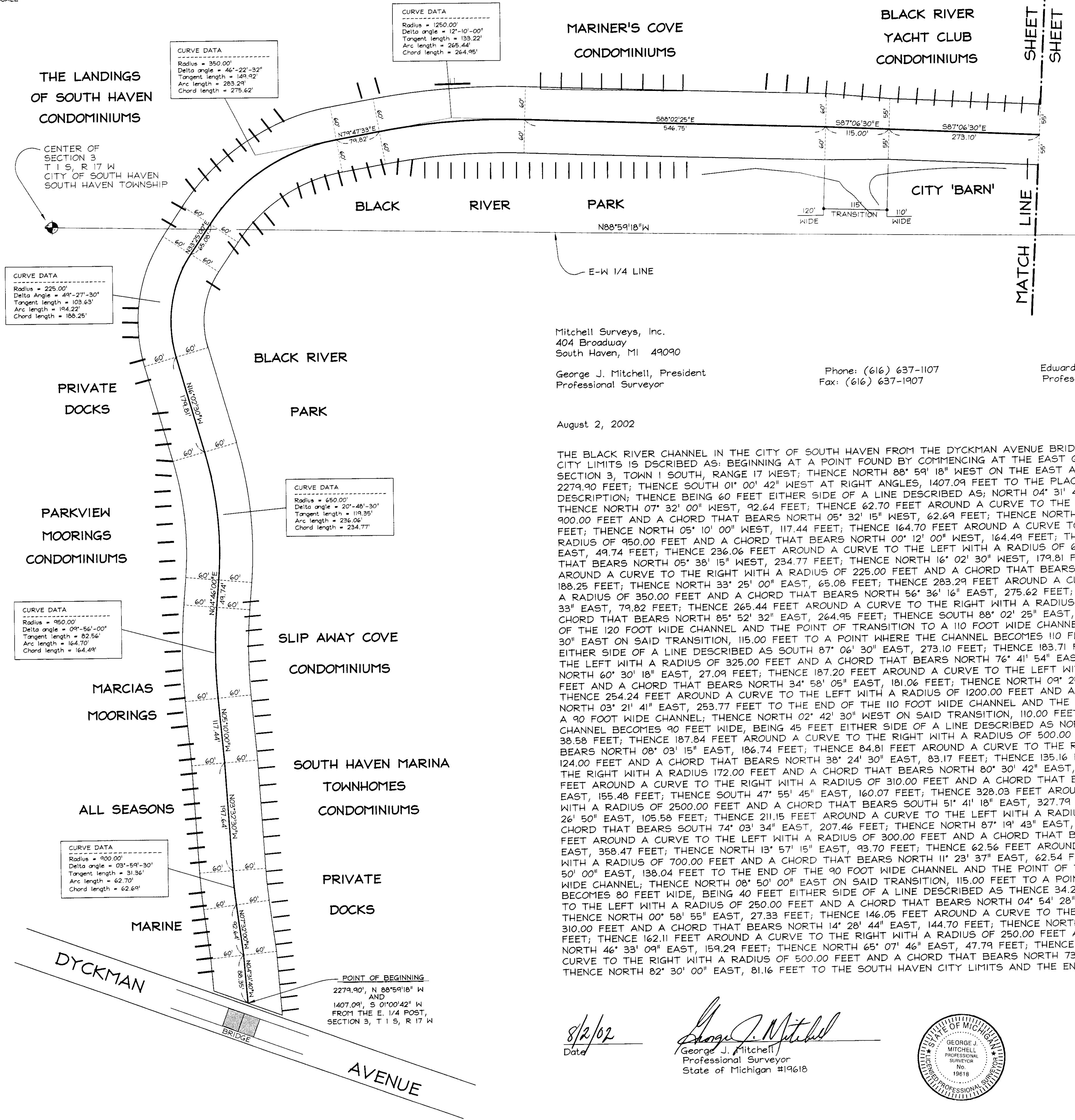


**BLACK RIVER CHANNEL ALIGNMENT  
DYCKMAN AVENUE TO EAST CITY LIMITS**

PREPARED FOR  
**THE CITY OF SOUTH HAVEN**  
539 PHOENIX STREET  
SOUTH HAVEN, MICHIGAN 49090



Mitchell Surveys, Inc.  
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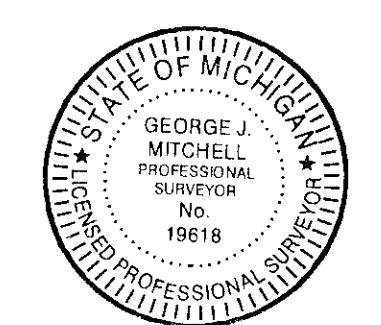
August 2, 2002

THE BLACK RIVER CHANNEL IN THE CITY OF SOUTH HAVEN FROM THE DYCKMAN AVENUE BRIDGE UPSTREAM TO THE CITY LIMITS IS DESCRIBED AS: BEGINNING AT A POINT FOUND BY COMMENCING AT THE EAST QUARTER POST OF SECTION 3, TOWN 1 SOUTH, RANGE 17 WEST; THENCE NORTH 88° 59' 18" WEST ON THE EAST AND WEST QUARTER LINE, 2279.90 FEET; THENCE SOUTH 01° 00' 42" WEST AT RIGHT ANGLES, 1407.09 FEET TO THE PLACE OF BEGINNING OF THIS DESCRIPTION; THENCE BEING 60 FEET EITHER SIDE OF A LINE DESCRIBED AS: NORTH 04° 31' 40" WEST, 88.35 FEET; THENCE NORTH 07° 32' 00" WEST, 92.64 FEET; THENCE 62.70 FEET AROUND A CURVE TO THE RIGHT WITH A RADIUS OF 900.00 FEET AND A CHORD THAT BEARS NORTH 05° 32' 15" WEST, 62.69 FEET; THENCE NORTH 03° 32' 30" WEST, 197.64 FEET; THENCE NORTH 05° 10' 00" WEST, 117.44 FEET; THENCE 164.70 FEET AROUND A CURVE TO THE RIGHT WITH A RADIUS OF 950.00 FEET AND A CHORD THAT BEARS NORTH 00° 12' 00" WEST, 164.49 FEET; THENCE NORTH 04° 46' 00" EAST, 49.74 FEET; THENCE 236.06 FEET AROUND A CURVE TO THE LEFT WITH A RADIUS OF 650.00 FEET AND A CHORD THAT BEARS NORTH 05° 38' 15" WEST, 234.77 FEET; THENCE NORTH 16° 02' 30" WEST, 179.81 FEET; THENCE 194.22 FEET AROUND A CURVE TO THE RIGHT WITH A RADIUS OF 225.00 FEET AND A CHORD THAT BEARS NORTH 08° 41' 15" EAST, 188.25 FEET; THENCE NORTH 33° 25' 00" EAST, 65.08 FEET; THENCE 283.29 FEET AROUND A CURVE TO THE RIGHT WITH A RADIUS OF 350.00 FEET AND A CHORD THAT BEARS NORTH 56° 36' 16" EAST, 275.62 FEET; THENCE NORTH 79° 47' 33" EAST, 79.82 FEET; THENCE 265.44 FEET AROUND A CURVE TO THE RIGHT WITH A RADIUS OF 1250.00 FEET AND A CHORD THAT BEARS NORTH 85° 52' 32" EAST, 264.95 FEET; THENCE SOUTH 88° 02' 25" EAST, 546.75 FEET TO THE END OF THE 120 FOOT WIDE CHANNEL AND THE POINT OF TRANSITION TO A 110 FOOT WIDE CHANNEL; THENCE SOUTH 87° 06' 30" EAST ON SAID TRANSITION, 115.00 FEET TO A POINT WHERE THE CHANNEL BECOMES 110 FEET WIDE, BEING 55 FEET EITHER SIDE OF A LINE DESCRIBED AS SOUTH 87° 06' 30" EAST, 273.10 FEET; THENCE 183.71 FEET AROUND A CURVE TO THE LEFT WITH A RADIUS OF 325.00 FEET AND A CHORD THAT BEARS NORTH 76° 41' 54" EAST, 181.27 FEET; THENCE NORTH 60° 30' 18" EAST, 27.09 FEET; THENCE 187.20 FEET AROUND A CURVE TO THE LEFT WITH A RADIUS OF 210.00 FEET AND A CHORD THAT BEARS NORTH 34° 58' 05" EAST, 181.06 FEET; THENCE NORTH 09° 25' 52" EAST, 98.00 FEET; THENCE 254.24 FEET AROUND A CURVE TO THE LEFT WITH A RADIUS OF 1200.00 FEET AND A CHORD THAT BEARS NORTH 03° 21' 41" EAST, 253.77 FEET TO THE END OF THE 110 FOOT WIDE CHANNEL AND THE POINT OF TRANSITION TO A 90 FOOT WIDE CHANNEL; THENCE NORTH 02° 42' 30" WEST ON SAID TRANSITION, 110.00 FEET TO A POINT WHERE THE CHANNEL BECOMES 90 FEET WIDE, BEING 45 FEET EITHER SIDE OF A LINE DESCRIBED AS NORTH 02° 42' 30" WEST, 38.58 FEET; THENCE 187.84 FEET AROUND A CURVE TO THE RIGHT WITH A RADIUS OF 500.00 FEET AND A CHORD THAT BEARS NORTH 08° 03' 15" EAST, 186.74 FEET; THENCE 84.81 FEET AROUND A CURVE TO THE RIGHT WITH A RADIUS OF 124.00 FEET AND A CHORD THAT BEARS NORTH 38° 24' 30" EAST, 83.17 FEET; THENCE 135.16 FEET AROUND A CURVE TO THE RIGHT WITH A RADIUS 172.00 FEET AND A CHORD THAT BEARS NORTH 80° 30' 42" EAST, 131.71 FEET; THENCE 157.16 FEET AROUND A CURVE TO THE RIGHT WITH A RADIUS OF 310.00 FEET AND A CHORD THAT BEARS SOUTH 62° 27' 11" EAST, 155.48 FEET; THENCE SOUTH 47° 55' 45" EAST, 160.07 FEET; THENCE 328.03 FEET AROUND A CURVE TO THE LEFT WITH A RADIUS OF 2500.00 FEET AND A CHORD THAT BEARS SOUTH 51° 41' 18" EAST, 327.79 FEET; THENCE SOUTH 55° 26' 50" EAST, 105.58 FEET; THENCE 211.15 FEET AROUND A CURVE TO THE LEFT WITH A RADIUS OF 325.00 FEET AND A CHORD THAT BEARS SOUTH 74° 03' 34" EAST, 207.46 FEET; THENCE NORTH 87° 19' 43" EAST, 91.82 FEET; THENCE 384.19 FEET AROUND A CURVE TO THE LEFT WITH A RADIUS OF 300.00 FEET AND A CHORD THAT BEARS NORTH 50° 38' 28" EAST, 358.47 FEET; THENCE NORTH 13° 57' 15" EAST, 93.70 FEET; THENCE 62.56 FEET AROUND A CURVE TO THE LEFT WITH A RADIUS OF 700.00 FEET AND A CHORD THAT BEARS NORTH 11° 23' 37" EAST, 62.54 FEET; THENCE NORTH 08° 50' 00" EAST, 138.04 FEET TO THE END OF THE 90 FOOT WIDE CHANNEL AND THE POINT OF TRANSITION TO A 80 FOOT WIDE CHANNEL; THENCE NORTH 08° 50' 00" EAST ON SAID TRANSITION, 115.00 FEET TO A POINT WHERE THE CHANNEL BECOMES 80 FEET WIDE, BEING 40 FEET EITHER SIDE OF A LINE DESCRIBED AS THENCE 34.26 FEET AROUND A CURVE TO THE LEFT WITH A RADIUS OF 250.00 FEET AND A CHORD THAT BEARS NORTH 04° 54' 28" EAST, 34.23 FEET; THENCE NORTH 00° 58' 55" EAST, 27.33 FEET; THENCE 146.05 FEET AROUND A CURVE TO THE RIGHT WITH A RADIUS OF 310.00 FEET AND A CHORD THAT BEARS NORTH 14° 28' 44" EAST, 144.70 FEET; THENCE NORTH 27° 58' 31" EAST, 20.04 FEET; THENCE 162.11 FEET AROUND A CURVE TO THE RIGHT WITH A RADIUS OF 250.00 FEET AND A CHORD THAT BEARS NORTH 46° 33' 09" EAST, 159.29 FEET; THENCE NORTH 65° 07' 46" EAST, 47.79 FEET; THENCE 151.59 FEET AROUND A CURVE TO THE RIGHT WITH A RADIUS OF 500.00 FEET AND A CHORD THAT BEARS NORTH 73° 48' 53" EAST, 151.01 FEET; THENCE NORTH 82° 30' 00" EAST, 81.16 FEET TO THE SOUTH HAVEN CITY LIMITS AND THE END OF SAID CHANNEL.

**POINT OF BEGINNING**  
2279.90', N 88°59'18" W  
AND  
1407.09', S 01°00'42" W  
FROM THE E. 1/4 POST,  
SECTION 3, T 1 S, R 17 W

8/2/02  
Date

*George J. Mitchell*  
George J. Mitchell  
Professional Surveyor  
State of Michigan #19618



PREPARED BY:  
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PHONE (616) 637-1107 FAX (616) 637-1907  
PROJECT NO. 02-628 DATE AUGUST 5, 2002  
BOOK 300 PAGE 65 REVISION  
SHEET 1 OF 2