BRUNING 82486

10 Sections 8 ft. 8 ga. piling 6x4x3/8 cap angle

WITNESSES TO P.O.B.
Tacked hub sta. 0+00
N71°30'E 8.23' to E.M. Tag in 17" Maple
(12)°W. 8.70' to B.M. Tag in 20" Maple
S 35°E 50.10' to B.M. Tag in 18" Oak

WITNESSES TO P.I.
Tacked Hub sta. 2+90.86
N 1°E 56.60' to B.M. Tag in 12" Twin Maple
N 8°E 63.40' to B.M. Tag in 8" Maple
N 61°W 26.17' to B.M. Tag in 10" Maple

BENCH MARKS
B.M. #21 Elev. 750.66 (MSLD)
North toilet building, in SE Cor. of retaining wall, a chiseled square.
B.M. #23 Elev. 748.82
South toilet building, in SW cor. of retaining wall, a chiseled square.
Note: Zero of original Park datum equals 654.62, Mean Sea Level Datum.

PILING CURVE #1
Δ = 38°30'
D = 8°30'
T = 202.87'
R = 673.07'
E = 29.87'
L = 394.11
L.C. = 388.52

PILING CURVE #2
Δ = 23°10'
D = 12°20'
T = 96.22'
R = 464.86
E = 9.56'
L = 187.94'
L.C. = 186.58'

WITNESSES TO P.I.
Tacked Hub sta. 6+92.82
N 23°30'E 12.87' to B.M. tag in 12" Maple
N 78°W 6.35' to B.M. tag in 6" Maple
S 43°30'W 33.13' to B.M. tag in 26" Maple.

WITNESSES TO P.O.E.
Tacked Hub sta. 13+11.95
N 13°E 6.00' to B.M. tag in 16" Ash
S 62°E 31.15' to B.M. tag in 20" Ash
S 24°W 26.54' to B.M. tag in 22" Oak

LEGEND
Guard Post
Power Pole
Power Pole with Anchor
Sewer Pipe — S — S
Water Pipe — W — W
Trees

Note: Only shoreline trees and topography are shown.

P.O.B. 0+00
P.I. 2+90.86
P.O.E. 13+11.95
P.T. 18+83.5
15+00
S 66°15'E
N 36°32'E
Baseline
Existing Drive
Existing shoreline
N 11°33'30"E
P.C. 11+20.10
P.T. 11+58.05
P.I. 6+92.82
Spread anchors to miss trees where possible.
Sheet Piling
Boat Dock
Mooring Post
Boat Ramp
5 Sections 8 ft. piling, 8 ga. 6x4x3/8 cap L.
11 Sec @ 14 plus 2-90° Cor. Sec = 180'-6" ±
12 ft. piling 8 gage 6x4x1/2 Cap Angle 10 ft. 8 ga. Anchor piles at 10' spacing
272 Sections @ 14 plus 2-65° Cor. Sec's = 319'-8" ±
18 ft. piling, 5 gage, 6x4x1/2 cap angle 10 ft. 8 gage anchor piles at 8 ft. spacing
75 Sections @ 14 plus 1-90° Cor. Sec = 876'-9" ±
12 ft. piling, 8 gage, 6x4x1/2 Cap Angle 10 ft. 8 gage, anchor piles at 10 ft. spacing
50 Boats Docks at 18'-0" on center = 900 ft.

PLAN OF SHEET PILING AND DOCKS
1" = 50'

Excavate to 15% slope
Drive
Baseline
Boat Ramp 8 ft. 8 ga. Piling 6x4x3/8 Cap Angle 1-8 ft. 8 ga. anchor pile at ctr. each side.
M.L.L.

SECTION B-B
1" = 20'

Top of Piling Elev. 745.5
6 E 13 - 6'-0" lg.
Top 741.3
Top 740.2
Cut 3-Sec's of piling at 4'-0" from top. Bolt each pair on back with 5/8" bolt & washers, each section

ELEVATION A-A
1/8" = 1'-0"

"Spot" weld cap angle to corrugated piling at two places, each section. Weld 3/8" fillet 4" long to alternate sections of O.A. piling

6x4 Cap Angle
2x6
3/4" ⌀
Bend
1/2
5"
8 1/2 x 2 1/2 Galv. m. bolt & washer
2x8
Steel Piling
3/4 x 8 1/2 m. bolt & washer ctsk. head.
2 x 1/2 x 9" lg Bar washer (Omit for OA piling)
2x6
3/8 x 5" Galv. m. bolt & washer

DETAIL #1
1 1/2" = 1'-0"

3/8" x 3" Lag screws in outside 2x8's
1x8 m. Bolt
Cut 3x2x1/4 250" long
6" Post

DETAIL #2
1 1/2" = 1'-0"

11'-0"
3'-0"
Cut off posts at Elev. 742.0
15' Minimum
Length to be increased as needed to place anchor in firm material.
Slope
Top of Piling Elev. 745.5
DETAIL #1
DETAIL #2
2x6
2x8
Elev. 745.5
Mooring Posts @ 18'-0" c between docks.
Normal (legal) Lake Level = 744.32
Elev. 744.0 Top of Anchor
6"
1'-0"
Bar 3/4" ⌀
1'-0" Min
3/8 x 12
3/8 6
Earth Fill
Existing Ground Line
6" x 16'-0" Poles Pressure Treated
Sheet Piling - Continuous
Anchor Pile (One section steel sheet piling) Place in firm material. See cross sections.
Piling is designed to permit clean-out or excavation of lagoon to elev. 738.0
Note: Drive posts 3 feet into sand or to elev. 735.0 whichever is deepest.
PILING: Steel sheet piling to be Armco Interlocking Steel Sheeting or Larrsen steel Sheet Piling, Section OA, or approved equal.

TYPICAL SECTION SHEET PILING AND DOCK
1/4" = 1'-0"

4x6 Bumper Wale - Continuous
2-3/4 x 8 1/2 m. bolts @ 5'-0"
12'-0"
2'-0"
4'-0"
4'-0"
1'-0"
1'-0"
3/8" Typ.
16d (Typ.)
6x4 x 1/4
Nail to Post
Continuous 6x4 Cap Angle. Weld 1/2" V groove at joints, both legs.
2x6 Floor
2x8 Frame
2x8 Cross brace
6" Post
1'-0"
1'-0"

PLAN OF DOCK
3/4" = 1'-0"

Bar 2 x 1/4 - 9"
6"
4"
3/4
2 1/2
3/4
4 x 3 x 1/2 angle Drill 1/2" holes
SIDE

3/4
2 1/2
3/4

TOP DOCK BRACKETS
1 1/2" = 1'-0"

RECOMMENDED FOR APPROVAL	IN CHARGE OF DESIGN	7-15-65 DATE
APPROVED	CHIEF ENGINEER	DATE

MICHIGAN DEPARTMENT OF CONSERVATION
ENGINEERING AND ARCHITECTURE

YANKEE SPRINGS RECREATION AREA
LAGOON EROSION CONTROL
PARKS SECTION — BARRY COUNTY

RECOMMENDED FOR APPROVAL	ENGINEER	6-22-65 DATE
RECOMMENDED FOR APPROVAL	CHIEF OF SPONSORING DIVISION	DATE
RECOMMENDED FOR APPROVAL	REG. PROF. ENGINEER OR ARCHITECT	DATE
SURVEYED BY	J. V. McCOND	May 1965
DESIGNED BY	W. H. Evans	June 1965
DRAWN BY	W. H. E.	June 1965
CHECKED BY	NAME	DATE

PLAN E-141
SHEET 1 of 5
REVISED
INITIAL DATE

E-141