



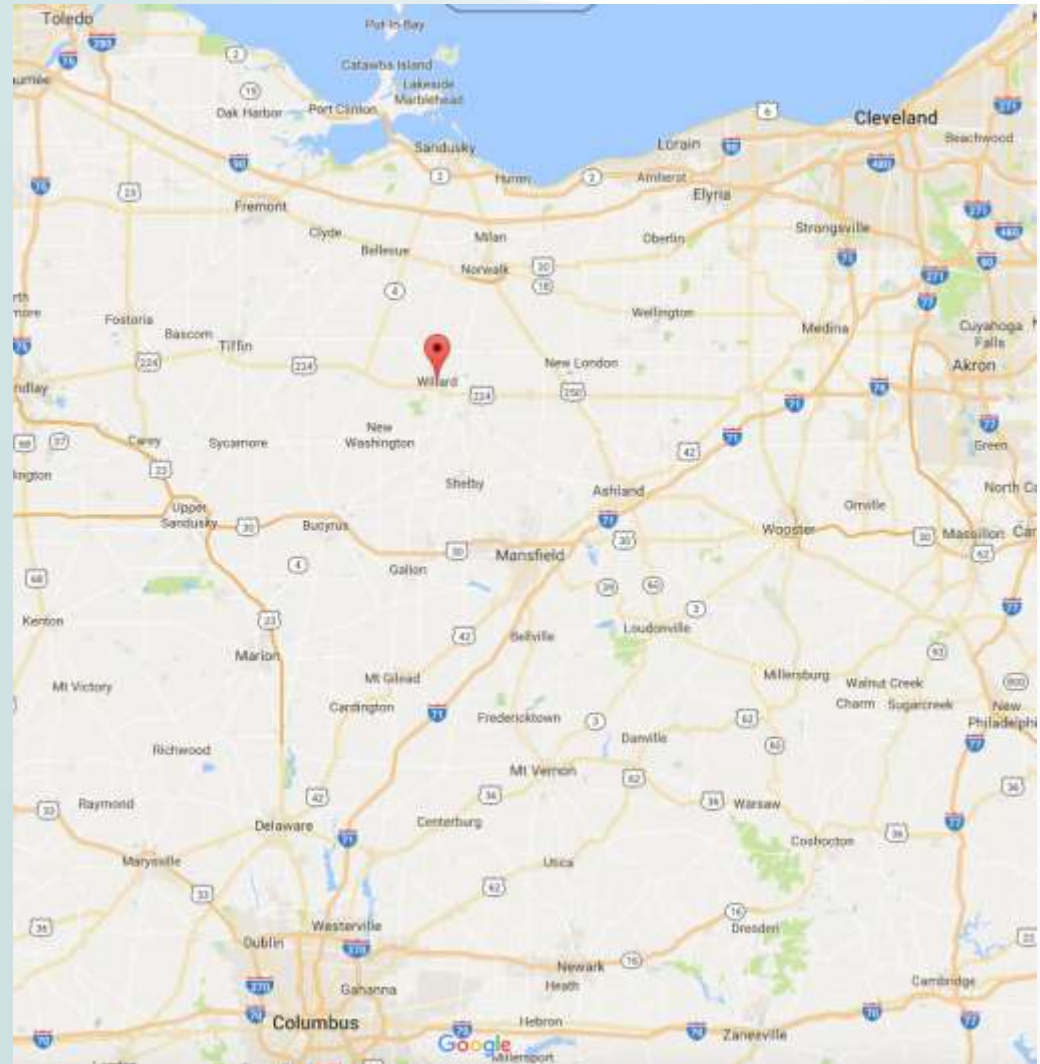
Moraine Country Club 10 Years in the Making

Overview

- Where I am from
- Professional background
- History of Moraine
- First steps
 - Master Plan Development
 - Tree Removal
 - Drainage
 - Practice Facility Renovation
- Golf course renovation
- Before / After pictures
- What we would do the same
- What we would do different

Background

- Willard, Ohio – population 6,000
- The Ohio State University ATI
 - Graduate - 2000
 - Turfgrass Management
- Married 13 years – Cary
 - Will (9), Caroline (5)





Professional Experience

- Willard Golf Club - Willard, OH
 - Began picking up range balls at age 14
- Kirtland CC - Cleveland, OH
 - Internship
- Sharon GC - Akron, OH
 - Apprentice Superintendent
- Hurstbourne CC - Louisville, KY
 - Assistant Superintendent
- Louisville CC - Louisville, KY
 - Assistant Superintendent
- Pine Valley GC - Pine Valley, NJ
 - Assistant Superintendent
- Moraine CC – Kettering, OH
 - Superintendent -9/22/06
- GCSAA – Grass Roots Ambassador, Chapter Outreach Committee
- Ohio Turfgrass Foundation – Board Member
- MVGCSA – President

Tournament Experience

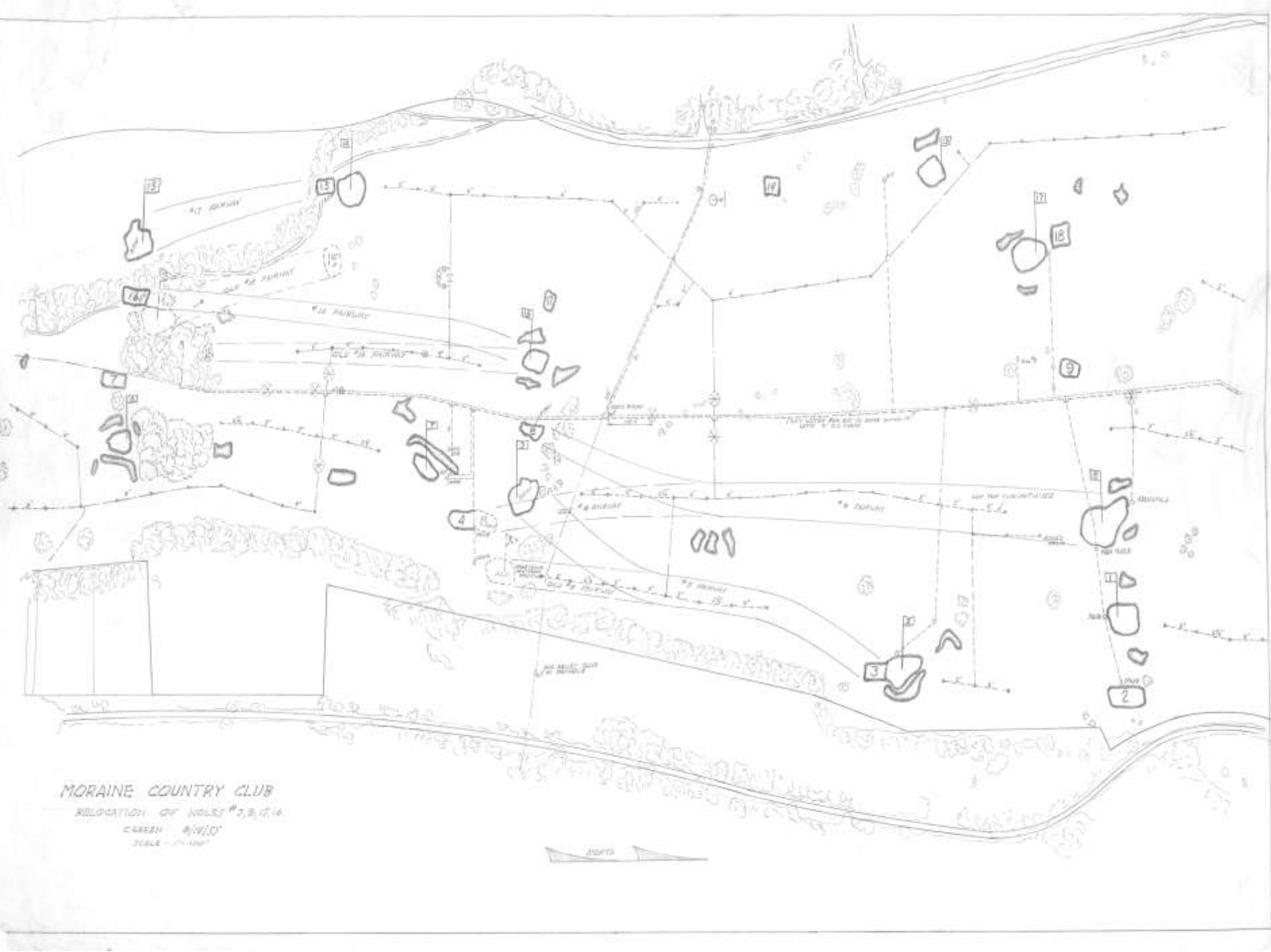
- 2002 PGA Club Pro Championship – Valhalla GC
- 2004 / 2011 Senior PGA – Valhalla GC
- 2005 / 2007 / 2010 Crump Cup – Pine Valley GC
- 2006 / 2008 Masters – Augusta National GC
- 2008 Ryder Cup – Valhalla GC
- 2009 Ohio Amateur – Moraine CC
- 2013 USGA Women's State Team - NCR CC
- 2013 Presidents Cup – Muirfield GC
- 2014 PGA Championship – Valhalla GC

Moraine Country Club – Kettering, Ohio

- Private 18 hole - 165 acres
 - 70 Acres of rough
 - 30 Acres of fairways / approaches
 - 40 Acres of native
 - 20 Acres of woods / out of play areas
 - 2.3 Acres of tees – including practice tee
 - 3 Acres of greens – including 3 practice greens
- Alex “Nipper” Campbell – 1930
- 1945 PGA Championship – Bryon Nelson – 9 of 11 in a row
- Dick Wilson – 1955, changed 3rd / 15th greens
- Keith Foster – 2015 Renovation
- Ohio Amateur Championship – 1979, 1989, 1999, 2009, 2019

How Did We Get Here?

- Proposed to the Board of Governors in 2007 that the club hire golf course architect Keith Foster to develop a Golf Course Master Plan.
- A Master Plan would ensure that any future changes on the golf course would be consistent with the vision of the original design as boards and management change.
- The vision of the Master Plan was to take the course back to it's original design, a links style course. So we began researching finding old pictures, drawings and maps.
- In the fall of 2007, the club hired Keith Foster to develop a Golf Course Master Plan.
- From the Master Plan a tree management plan was developed and we began extensive tree / honeysuckle removal to take Moraine back to the original links style golf course it was intended to be.



MORaine COUNTRY CLUB

RELOCATION OF HOLES #3, 5, 12, 18

CAREEN 4/11/57

SCALE - 1" = 100'





1945 PGA
CHAMPIONSHIP





How Did We Get Here

- Removed over 3,000 trees – 90% of work done in house.
- Established 40 acres of native grass areas.
- Identified and corrected all the problem wet areas on the golf course over the last 10 years utilizing sub surface drainage and sump pumps where needed.
- August 2014 the Practice Facility was constructed, Platform Tennis courts moved and upgraded, Club utilities updated.



Best TREE EXPERTS™
RESIDENTIAL • COMMERCIAL
LOT CLEARING • STUMP GRINDING
937-256-9828

12.03.2007



11.27.2007



02.08.2008

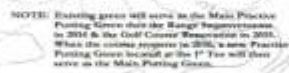


12.14.2007









Plan depicting the upcoming
Practice Facility Improvements
- Fall 2014 -
Mar 22nd, 2014





















Moraine Country Club - Master Plan





2015 Golf Course Renovation Components

- Greens re-built to USGA specifications – GreenScan3D
- Tees re-built and re-aligned
- Fairways killed, re-aligned and re-grassed
- Bunkers re-built to reflect original architect's style
- Existing gravel cart paths re-built to chip seal paths
- Sodded the green, tee, fairway and bunker surrounds
- 2 feet of low mow bluegrass around greens as collar
- 7 feet of low mow bluegrass around fairways
- Native area adjustments and additions

TDI Renovation Responsibilities

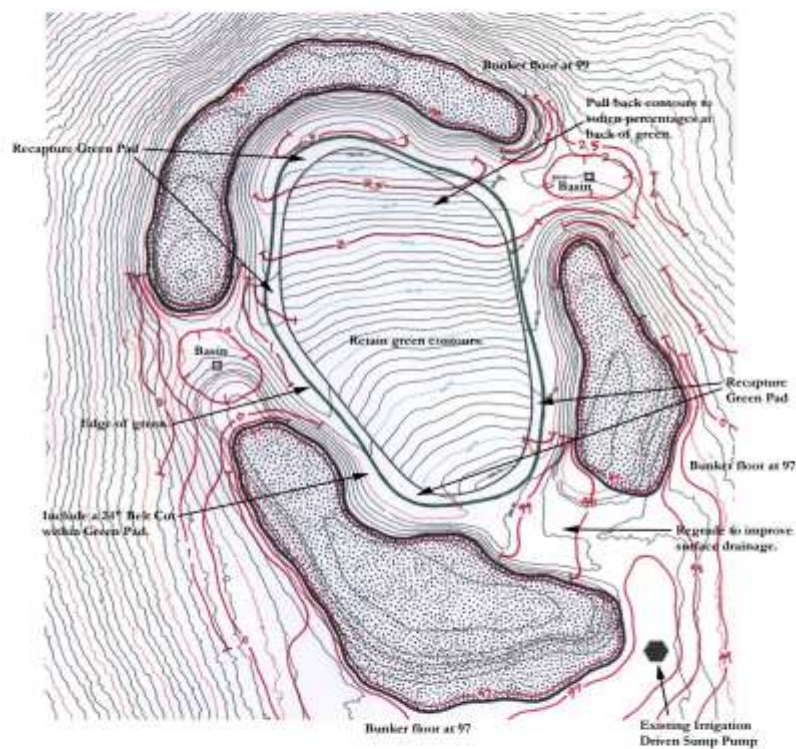
- USGA greens construction
- Tee construction and alignment
- Bunker construction
- Green, tee and bunker surrounds prep and sod
- Approach sodding
- Cart path removal, prep and construction
- Drainage installation on greens, tees, bunkers and rough areas
- Miscellaneous fairway preparation / tie ins
- Sand capping native and sodding select areas

Moraine Turf Staff Renovation Responsibilities

- Greens and tees seeding and grow in
- All work related to fairways (alignment, killing of existing grasses / prep / seeding and grow in)
- Establishment of new native areas
- Removal / alignment changes of select native areas
- Irrigation applications, repair, adjustments and coverage control
- Rough prep and seeding / sodding
- All fertilizer and pesticide applications
- Project quality control over TDI, Irrigation consultant, Leibold Irrigation
- Tracking deliveries, invoices, receipts and purchasing materials saved 9% (\$90K)
- Sample testing of green and tee mixes, bunker sand
- Seed testing
- Clubhouse grounds maintenance
- Practice facility daily maintenance
- Equipment repair and maintenance
- Mowing remaining rough and native areas

Slope Analysis of Green Surfaces

- For 12 of the original greens, respected the existing surface contours, core & rebuild to USGA Specs.
- For 4 greens (#1, #2, #9 & #18) we modified the green contours to increase cupping. When doing so, we honored the original look & feel of the surfaces by duplicating existing forms.
- The 2 non-original greens (#12 & #15) were rebuilt to reflect the style & feel of Mr. Campbell.



Existing Green Square Footage: 3,863 SF
 Existing Average Percent Grade: 4.13 %
 New Green Square Footage: 4,735 SF
 (No Collar but a 24" Belt Cut will
 be included within the Green Pad.)

Mapping done by:

 1000 Mendocino Drive, Ukiah, CA 99901
 Tel: 707-438-7800 (Contact David Ford)

Keith Foster
 GOLF ARCHITECT

Hole # 5
 Par 3
 Yards 170
 Date May 27th, 2014
 Scale 1" = 20'













2015 - BEFORE / DURING
2016 - AFTER PICTURES





Hole #2



Hole #2



Hole #4







Hole #6



Hole #6





Hole #7





Hole #9



Hole #9



Hole #15



Hole #15



Hole #16



Hole #16



Hole #18



Hole #18

2006 – BEFORE / 2016 - AFTER

















November 2015

What we would do the same

- Research, research – Turfnet / GCSAA- forums, talk to peers that have gone through renovations – learn from their mistakes, vendors, company representatives, consultants / agronomists, make road trips
- Seed first, then hydro mulch – didn't initially plan on doing course wide – 110 acres
- Basamid – worth every penny! Wish we would have done rough...
- Build a nursery to evaluate grass varieties and soil / mix types –
 - Did this 3 years prior to renovation – this is how we chose the grasses for project; great to show committee / board members.
- Build a nursery to use for sod
 - Built a 2.5 acre nursery in 2014 to use for approach sod
- Grow in program – fertility, topdressing, mowing schedules





Bold Brings Better - August 16, 2016



GCSAA Regional Blogs - July 9, 2016



Between grass & trees, pick grass every time - June 24, 2016



The Treeless Trend - June 17, 2016



Why Oakmont Waged the War on Trees - June 17, 2016



Course at Moraine reopens - June 10, 2016



Moraine CC draws from it's past for it's future - June 9, 2016



XM Radio Interview with Jason Mahl - June 8, 2016

What we would do different

- Rough – 2 applications of Tenacity 4 weeks apart followed by pre-emergent if you feel you have good catch. Prograss late fall / winter
- 10% Contingency – budgeted 5% ended up at 10% - add on' s and changes happen
- Take time to adjust at end of project after grow in – native lines, part circle / full – just now getting around to doing this. Make sure computer is programmed to what is in the field (correct nozzle / arc)
- Larger crew
- Sod all rough!!!
- Start earlier – you can never start too soon

Golf Course Renovation by the Numbers

- Contractor area of disturbance – 22 + Acres
- MCC Turf staff area of disturbance – 125 Acres
- Hydromulch – 110 Acres
- Green / tee mix, bunker sand, gravel truck deliveries – 709
 - Green mix – 6,125 Tons
 - Tee mix – 2,000 Tons
 - Bunker sand – 2,400 Tons
 - Drainage gravel – 3,500 Tons
 - Cart path gravel – 3,000 tons
 - Over 17,000 Tons of materials
- Drainage pipe – 6.4 Miles
- Drainage inlets – 70
- Cart paths – 1.2 miles
- Rough / Native sod – 25 + Acres
- Sod truck deliveries – 145

HAVE FUN – ENJOY IT
ONCE IN A CAREER OPPURTUNITY

Thank you!

Questions?