inventory / analysis
site inventory
existing golf course layout
existing vs. proposed layout
vehicular circulation / parking
soap box derby track / picnic area
goals / program
Problems Identified at Riverside

- "Freeway" Design promotes distance driven game – little strategic play
- Only serves one user – golfers
- Outdated and unattractive facilities

Goals

1) Improve course layout through principles of strategic golf course design
2) Provide opportunities for active and passive recreation in harmony with golf activity
3) Improve site facilities function and appearance

Program

Active / Passive Recreation Areas

- Trail
- Observation stations
- Cross-Country skiing (winter)
- Sledding (winter)
- White River Greenway access point(s)
Facilities

- New Clubhouse (Pro Shop / Snack Bar / 2nd Level Restaurant / Gathering Room)
- Buffer entrance / parking areas
- Consolidate / buffer maintenance facilities
- Subsurface golf cart storage

Course Design

- 18 hole layout
- Utilize as many existing land features as possible
- Maintain the character of #13 “Old Hickory”
- More hazards (water / sand / prairie / rough / mounding)

Non-Play Areas

- Woodlands
- Wetlands
- Prairie
Design Process

Goals

- Inventory of project site and context
- Analysis (layering of individual analysis elements)
- Goal refinement
- Program written
- Conceptual design (multiple layers to refine)
- Analysis (based on concept needs and questions raised during conceptual design)
- Goal and program refinement
- Concept refinement
- Selection of one (1) concept
- Concept Development (multiple layers to refine)
- Goal and program refinement
- Design refinement (heavy influence of peers and advisors)
- Final design established
- Masterplan drawn and rendered
- Supporting graphics drawn and rendered

(Advisor / Consultant / Peer feedback throughout)
**Description**

- Clubhouse / trailhead to south
- New putting / pitching practice greens
- Trailhead to north
- On-site trail (2 connections)
- Sledding (ridge)
- Cross-Country skiing (cart paths)
- Expansion area north
- Maintenance remain north
- Habitat areas throughout
- Existing hole converted so 1/10 tees & 9/18 greens meet clubhouse
- Main entrance south

concept one (1)
Strengths

- Enter at better location – major intersection
- Consolidation of high activity areas to one zone
- Relationship / shared parking with river pavilion

Weaknesses

- Major hole manipulation so that 1/10 tees and 9/18 greens meet the clubhouse
- Clubhouse and maintenance areas separated
- High impact on the land - cost
**Description**

Clubhouse remains north
New putting / pitching practice greens
On-sit trail (2 connections)
Expansion area north
Main entrance north

Maintenance south
Maintenance entrance south
Sledding (ridge)
Cross-Country skiing (cart paths)
Habitat areas throughout
Trailheads north and south
18 green closer to clubhouse

**concept two (2)**
Strengths

- 18 moves closer to clubhouse viewing area
- Clubhouse / maintenance separated
- Space freed for new entrance, larger practice area, larger clubhouse area

Weaknesses

- Clubhouse / maintenance separated
- Developed areas not consolidated (goal not met)
- Golfers / trail users passing maintenance
Description

Clubhouse / maintenance north
(reorganized to help circulation,
enhance entrance sequence, enhance
playing experience)
New putting / pitching practice
greens

On-sit trail (2 connections)
Main entrance north
Sledding (ridge)
Cross-Country skiing (cart paths)
Habitat areas throughout
Trailheads north and south
18 green closer to clubhouse

concept three (3)
Strengths

- Clubhouse / maintenance area accessible to each other, but not in direct conflict
- 18 moves closer to clubhouse viewing area
- Development consolidated

Weaknesses

- Expansion area possible to south
- Clubhouse / maintenance together
Rationale for selection of concept three (3)

- Strengths outweigh weaknesses
- Instructor / Advisor / Consultant review sessions yielded more positive discussion
- Vision of a better golfing experience
  - Fewer layout changes for regular golf patrons
  - Modification potential for weak points of existing course
  - Clubhouse secluded on site – get away from outside world… just golf
- Program element placement yields less potential for conflict among neighboring program elements
- Least manipulation to existing course layout (requested in program)
- Best potential for harmony of trail users and golfers (minimize conflict of activities)
Design development of concept three (3)

- Further bubble diagramming (smaller scale – more refined)
  - Clubhouse / Maintenance area / Entrance / Etc.
  - Start / Finish – front and back of course

- Overlay process of design development
  - General hole layout
  - Habitat (non-play) areas
  - Strategic elements
  - Refined shapes (greens, fairways, hazards, etc.)
  - Refine all of the above

- Midterm review and instructor / advisor / consultant items to consider
  - David Fisher – hole centerline balance, circulation, par balance, front and back ending experience, parallel safety
  - Dr. Bilello – trail safety, speed of play, start and finish experience, public vs. private (as it relates to accommodating varying skill levels)
  - Dr. Spangler / Darren Reno – trail safety, entrance sequence, river pavilion

- Further refinement based upon midterm items to consider
- Smaller scale design of several areas of site
concept three (3) at midterm
Goal one (1) Improve course layout through principles of strategic golf course design

- Three new practice greens are situated on a path between the clubhouse (pay greens fees) and the first and tenth tees. These greens are designed to give golfers the widest variety of practice shots. Shots they encounter here will be similar to the course. Two putting greens are designed with two tiers on the first and three on the second, with the second having more slope. This allows golfers to practice putting on various slopes and from various distances. Each green is 6,000 square feet. The 6,000 square foot pitching green includes a sand pot bunker, grass pot bunker, sand bunker, grass bunker, grass hollow, various sizes and shapes mounding and an extended fringe.

- Strategic design principles have been applied to the new course layout. These strategic principles help Riverside to be challenging and a golf course where distance of shot is not the greatest advantage on a majority of shots. Hole themes include waste bunker, woodland, water and prairie. One of the four themes is typically dominant on a hole, but the themes are combined throughout to provide continuity yet diversity throughout the playing experience. The first and tenth tees, as well as the ninth and eighteenth greens are situated near the clubhouse for surveillance by staff, viewing from the terrace adjacent the clubhouse and easy golfer circulation. A significant change from the midterm concept is the meeting goals
eighteenth hole. This 325 yard par 4 is just a short walk down the ridge and through the woods from the seventeenth. The view from the tee and back from the terrace is magnificent in both directions. Spectators will also enjoy watching players attempt to get out of the sand pot bunker that gives the hole its defining character. Throughout the course are non-play habitat areas. These woodland, wetland and prairie areas give riverside golf course an enhanced character and promote environmental awareness and golf course stewardship at riverside. The course layout is designed with all skill levels in mind and a concern for the public to get on and off the course in around four hours.

**Goal two (2) Provide opportunities for active and passive recreation in harmony with golf activity**

- A major concern with the midterm design was safety (several points of conflict along trail) for trail users and conflict points between them and golfers. In keeping with the goal of providing recreation on the site for non-golfers, a lookout tower has been placed in the largest woodland area on the south side of the course. This 70 foot open-air tower connects with an existing trail and then connects with the White River Greenway. The location in the woodlands provides spectacular views of the course and Indianapolis, while providing a harmony between tower activities and golf.
• Another opportunity for recreation will be sledding on the ridge and cross country skiing in the winter. The management will monitor these activities. Revenue from these activities will benefit the management and the activities will bring non-golfers to the site for fun in a season where golf courses are rarely used. A sled house in atop the ridge near thirteen green and skiing will occur along the cart paths.

Goal three (3) Improve site facilities function and appearance

• The first step in addressing goal three was to design the entrance experience. This begins at the main entrance from White River Parkway, where new signage rests. The entrance road is a comfortable sweeping curve that controls views as you enter. On the way to the clubhouse, golfers get a glimpse of several holes, the practice greens and then the organically shaped stunning new clubhouse.

• The new clubhouse features a pro shop, snack bar, meeting hall and second level restaurant. The meeting hall can serve tournaments, outings or possible outreach programs with schools that might visit to talk about ecology (native prairie, etc.). The second level restaurant is a great place to eat after a round or if you are not on the site for golf. Being elevated will give patrons great views of the course, especially all the activity at the practice greens, first tees and finishing greens. The
pro shop is situated so that management can view everyone going and coming from the course and the practice greens. The organic shape, symbolic of typical land features of a golf course, offsets its basic shape to form a terrace area for eating, viewing and gathering during tournaments or outings. From car to clubhouse and on to the tee is an effortless sequence. Carts are stored underground and brought to the surface in a staging area along the path to the practice greens and the first and tenth tees. This gives golfers an opportunity to practice and management to see who is on the course. After finishing at nine or eighteen, golfers have several options. If they have a cart, it can be parked, returned to underground storage by an attendant, parked for a moment or taken to their car and back for storage. The clubhouse also features a new parking lot of approximately 200 spaces to serve the course and the restaurant.

- The maintenance are for riverside has been consolidated into an area roughly the same square footage as was previously used. This consolidation puts it in close proximity to the clubhouse, but vegetation will screen the area from view on the entrance drive and the golf course.
masterplan - clubhouse area
1
Par 4
401 yards
Water, Grass Bunker

2
Par 5
523 yards
Water, Grass Bunker, Sand Bunker

3
Par 3
187 yards
Grass Bunker, Sand Bunker

front nine
4
Par 5
540 yards
Grass Bunker, Sand Bunker

5
Par 4
408 yards
Grass Bunker

6
Par 4
325 yards
Grass Bunker, Water

front nine
8
Par 4
344 yards
Waste Bunker, Sand Bunker

9
Par 3
133 yards
Water, Grass Bunker

7
Par 4
378 yards
Waste Bunker, Water, Grass Bunker, Sand Bunker

front nine
10
Par 4
317 yards
Sand Bunker, Grass Bunker

11
Par 4
368 yards
Sand Bunker, Grass Bunker

12
Par 5
551 yards
Sand Bunker (pot), Grass Bunker, Water
14
Par 3
166 yards
Grass Bunker (pot), Sand Bunker, Waste Bunker

13
“Old Hickory”
Par 4
385 yards
Water, Severe Incline, Grass Bunker

15
Par 4
305 yards
Sand Bunker, Grass Bunker

back nine
16
Par 4
358 yards
Waste Bunker, Grass Bunker

18
Par 4
325 yards
Sand Bunker (pot), Grass Bunker, Tee Shot from 2nd Level

17
Par 4
300 yards
Waste Bunker, Grass Bunker

back nine
<table>
<thead>
<tr>
<th>Hole</th>
<th>Par</th>
<th>Par</th>
<th>Yards</th>
<th>Yards</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4</td>
<td>4</td>
<td>361</td>
<td>401</td>
</tr>
<tr>
<td>2</td>
<td>4,5</td>
<td>5</td>
<td>420</td>
<td>523</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>3</td>
<td>168</td>
<td>187</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>5</td>
<td>503</td>
<td>540</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>4</td>
<td>397</td>
<td>408</td>
</tr>
<tr>
<td>6</td>
<td>4</td>
<td>4</td>
<td>288</td>
<td>325</td>
</tr>
<tr>
<td>7</td>
<td>4</td>
<td>4</td>
<td>363</td>
<td>378</td>
</tr>
<tr>
<td>8</td>
<td>4</td>
<td>4</td>
<td>309</td>
<td>344</td>
</tr>
<tr>
<td>9</td>
<td>3</td>
<td>3</td>
<td>138</td>
<td>133</td>
</tr>
<tr>
<td>Out</td>
<td>36</td>
<td>36</td>
<td>2947</td>
<td>3239</td>
</tr>
<tr>
<td>10</td>
<td>4</td>
<td>4</td>
<td>288</td>
<td>317</td>
</tr>
<tr>
<td>11</td>
<td>4</td>
<td>4</td>
<td>308</td>
<td>368</td>
</tr>
<tr>
<td>12</td>
<td>5</td>
<td>5</td>
<td>558</td>
<td>551</td>
</tr>
<tr>
<td>13</td>
<td>5</td>
<td>4</td>
<td>425</td>
<td>385</td>
</tr>
<tr>
<td>14</td>
<td>3</td>
<td>3</td>
<td>149</td>
<td>166</td>
</tr>
<tr>
<td>15</td>
<td>4</td>
<td>4</td>
<td>388</td>
<td>305</td>
</tr>
<tr>
<td>16</td>
<td>4</td>
<td>4</td>
<td>387</td>
<td>358</td>
</tr>
<tr>
<td>17</td>
<td>4</td>
<td>4</td>
<td>302</td>
<td>300</td>
</tr>
<tr>
<td>18</td>
<td>3</td>
<td>4</td>
<td>108</td>
<td>325</td>
</tr>
<tr>
<td>In</td>
<td>36</td>
<td>36</td>
<td>2913</td>
<td>3075</td>
</tr>
<tr>
<td>Totals</td>
<td>72</td>
<td>72</td>
<td>5860</td>
<td>6314</td>
</tr>
</tbody>
</table>

Highlighted columns are proposed data.

Golf course comparison data.
lookout tower section
Preparing my comprehensive project, *Golf Course Design: Reclaiming Design Tradition and Providing Community Open Space*, has been a challenging yet very rewarding experience. Through personal experience and vast research in the realm of golf, the project has taken form. I am especially pleased with the design process, which involved continual refinement and critique by golfers, peers, professors, and professionals in the golf course architecture field. Applying what I learned has been easy and rewarding because I have learned so much throughout the process. These lessons are not only about golf, but about cooperation and life.

I believe my masterplan has achieved the goals set forth in January of 2003. It is a success because of vast research, effort and determination, design knowledge, mentor and advisor review and golfing experience. My comprehensive project has inspired me to leave Ball State University and enter the field of landscape architecture with confidence and an eagerness to learn throughout my career.

conclusions