NORTH WESTWAY CENTER
a community recreation facility

an architectural thesis project prepared by Keith A. Bonham
for the College of Architecture & Planning
Ball State University
winter 1979
As an architectural thesis, I have proposed a community recreation center for the Indianapolis residents of Pike Township.

Pike Township is located in the northwest corner of Marion County. It is bordered on the west by Eagle Creek Reservoir and is traversed by the west leg of I-465 (Indianapolis' perimeter loop) and I-65, a major link with the CBD.

The population of Pike Township has tended to lag behind that of other communities in the Indianapolis area, particularly those to the east and northeast which witnessed a phenomenal growth in the 1960's and 70's and are now essentially built out, past the boundaries of Marion County. However, recent years have brought a significant growth in new office and retail concentrations along Pike Township's south, east and north edges; and with the development of Eagle Creek Reservoir to the west, Pike's population proves presently to be the second-fastest increasing in Marion County, and is expected to double within the next twenty years. So far, active recreational facilities in this corner of Indianapolis have lagged far behind this great influx of mostly lower-middle income young families and singles.

Considering the nature of growth inward from its edges, and the social characteristics of its residents, the need for a public recreational focus for the community appears quite obvious.

The most logical location for such a facility appears to be within the proposed North Westway Park, a 122-acre rectangular tract of city-owned property centrally located in Pike Township, in Planning Unit PK-3. The site is bordered by open farmland on the north and east sides, the New Augusta Nursery to the south, and the Oakbrook Apartments and Wildwood Townhomes to the east. A majority of the site is presently leased as farmland. While the tract adjoins open fields on two of its orientations, single and multi-family housing and office park developments are rapidly spreading west from Georgetown Road, the major north-south artery through the immediate community.

The Indianapolis Department of Parks and Recreation has prepared a preliminary master plan for North Westway Park. It should be noted that the Velodrome idea has since been abandoned.
PROGRAM OF SPACES

Having established the feasibility of a public recreation facility that might serve as a focus for community leisure activities, the next step was to determine specific needs, and to create a program of spaces to accommodate them. This was a rather difficult task in which intuition played a role. A familiarity with the Pike community and a personal survey of existing facilities, together with insight provided by the Indianapolis Dept. of Parks and Recreation, and specifically a report prepared by Walker Research, was augmented by a study of related building types. Special attention was given to the leisure centres of Great Britain. The following program evolved:

ATHLETIC
Swimming Pool: 6000 sq. ft. water surface w/ range of water depths to accommodate:
- competition swimming-- 75' length, min. 3½' depth
- diving-- min. 40'x30' to include: (1) 5-meter board, (1) 3-meter board, (1) 1-meter board w/ orientation to minimize glare
- youngster pool-- 2' depth, water slide
- spray pool-- 1' depth
provisions for opening to outdoors, weather permitting, south and west exposure, humidity control, observation area lifeguard twrs.
Deck Area: tot. min. 12000 sq. ft., indoor min. 4000 sq. ft., outdoor deck to have southern exposure, sun shelters, 6'-8' fencing w/ windbreaks
Filtration and Mechanical Equipment
General Storage: 250 sq. ft.
Pool Director’s Office: 100 sq. ft., views of entire pool area, possible combination w/ physical director’s office

First Aid Room: 90 sq. ft., to contain cot and lav.
Gymnasium: 8000 sq. ft., to accommodate:
- college regulation size basketball court: 84'x50'; (2) short courts, volleyball court: 60'x30', spectator seating(retractable), observation from above, diffused lighting, visual control
Equipment Storage: 250 sq. ft., eqpmt. dispensing
Raquetball Courts: (4) 20'x40'x20'-3200 sq. ft. sound isolation from adjacent spaces, observation from above
Exercise Room: 600 sq. ft., wt. lifting eqpmt., storage for misc. apparatus
Athletic Director’s Office: 100 sq. ft., adjacency to gym
Men’s Dressing Room: 1200 sq. ft. to include lockers and changing space, 10 shwr.s., drying bench, 3 toilets, 2 urinals 3 lavs., direct access to pool w/ 1 extra toilet, 1 urinal, showers located at pool entrance
Women’s Dressing Room: 1200 sq. ft. to include:
- lockers and changing cubicles, 8 shwr. cubicles, 5 toilets, 3 lavs., direct access to pool w/ 2 extra toilets, shwr.s. located at pool entrance

SOCIAL
Social Hall: 3000 sq. ft., separate exterior entrance preferable

SOCIAL
Social Hall: 3000 sq. ft., additional exterior entrance preferable, min. 16' clg., overflow space, light control, projection screen, sound isolation, central location, adjacency to outdoor terrace, stage min. 15' d. 30' l.
Projection Booth: 80 sq. ft.
Storage: 300 sq. ft., stacking chairs, tables, misc. equipment
Kitchenette: 140 sq. ft., serving counter, to serve social hall and meeting rooms

Passive Lounge: 700 sq. ft., central location near social hall, fireplace, views important

TV Lounge: 400 sq. ft., location near main entrance

Game Room: 2000 sq. ft., 2 pool tables, 2 bumper pool tables, 2 table tennis, 5 pin-ball machines, card tables, free of structural obstructions, visual control, sound control, equipment dispensing, adjacency to outdoor terrace

Play Room: controlled play space for toddlers, visual control, adjacency to play terrace

Meeting Rooms: 1000 sq. ft., subdivision option, sound isolation, access to kitchenette

Arts/Crafts Space: 1000 sq. ft., subdivision option, misc. stor., cleanup area w/ sinks, views out important

Exhibition Space: 200 sq. ft., high visibility, visual control, central location

Administration: 300 sq. ft., program director, business office, location at main entrance, orientation counter, sound isolation, misc. stor., office equipment

Community Affairs Offices: (2) @ 100 sq. ft. ea., relatively high visibility

Vending Area: space for 5 vending machines, snack tables, centrally located

Restrooms: centrally located

Custodial Spaces

Mechanical Equipment

Variety of Outdoor Spaces: to include game court, play terrace, etc.

Parking Spaces to accommodate 200 cars w/ provisions for overflow into unpaved areas
North Westway Park is situated one mile due east of Eagle Creek Park and Reservoir, which have been restricted to solely passive recreation development. The existence of Eagle Creek Park therefore should not be used as an excuse for not developing local parks in the area. An existing bike path along 62nd Street provides a direct link between North Westway Park and Eagle Creek Reservoir. A connection could be developed from 62nd Street south through North Westway Park to the 56th Street Golf Center directly southeast of the park.

A tributary of Little Eagle Creek divides the site from the northeast corner to the southwest corner where it joins two smaller tributaries and flows into Little Eagle Creek. The creek normally varies in width from ten to twenty feet within the site, and is usually one to two feet in depth. The creek banks are heavily wooded with deciduous trees that range in height up to sixty feet. A fifteen foot ridge has been formed by erosion along the south edge of the park. Thickets border the creek along the northern two thirds. Rolling farmland extends west and north to the bordering roads and beyond. The southeast corner is also farmed.

The Hollingsworth Homestead, a historic brick farmhouse of the federal style recently placed on the national register for preservation is situated on the extreme eastern edge of the site, overlooking the creek. Plans have been proposed to retain this area as a model farm.

Working within the constraints of the master plan, the following criteria helped to establish the location of the proposed facility within the park itself:

* should be centrally located to be accessible from all activity areas

* should have a strong relationship with the main entrance off Moller Road and proposed access through the park

* should be situated on high ground for visibility and drainage

* should take advantage of the appealing views centering around Little Eagle Crk.

* should remain separate from the historic area

* should fit into the master plan of proposed activities

Two locations were determined which satisfied the selection criteria, however, site B proved more favorable due to its closer proximity to the park's main entrance, the advantage of combining parking requirements with the tennis center and its desired visual separation from the picnic area.
view east from proposed park entry at Moller Road

view north from center of park
view east across creek to historic area

typical view of creek banks

typical meadow bordering north half of creek

typical view of creek banks
boundary to west - Moller Road

boundary to east - Hollingsworth Lane

farm to west of proposed park

historic Hollingsworth homestead
As can be seen from the site photos, the proposed park is relatively devoid of any distinguishing natural features, except for the creek with its wooded banks that bisects the acreage from north to south. However, there is a certain appeal to the vastness of the gently rolling fields punctuated by the strong east-west lines of the treerows. Approaching from the west, there is a sense of progression from the openness of the site's fringes, through the fields between these natural fences, into the undisturbed thickets and deeper into the secluded wooded area where one is surprised by the presence of the creek. A feeling of tranquility possesses the heart of the site. A major vista opens up across the creek in the direction of the historic homestead on the eastern fringe of the acreage.

I felt it important to work the proposed facility into the master plan of the site in such a way as to heighten this sense of progression into the site. It was decided early to situate the building at right angles to and directly between the two treelines that frame the proposed entrance from Moller Road on the west in such a way that the structure create an oblique plane interrupting the natural perspective. This is also the highest point on the site and takes advantage of the most desirable views to the northeast and directly east beyond the creek. The building could thus serve as a gateway to the more secluded and appealing parts of the site and form a semi-enclosed space with the creek as a boundary. I felt it necessary for the structure to create not only interior spaces but exterior spaces as well, and especially to set up rather controlled vistas across the site. The idea of the west facade being a semi-solid plane behind which the spaces unfolded was pursued throughout the building's development.

The necessarily large parking areas could be screened by the structure from the more private parts of the site and could be used in conjunction with the proposed tennis center on the flatter ground at the main entrance to the park.

Several basic organizational concepts were established which would help to order the various activity spaces with respect to one another and the site. Criteria explored included:

* entrance approach, boundaries
* indoor/outdoor relationships
* zoning of functions
* hierarchy
* orientation
* internal movement
* supervision
* scale
Working within the basic organizational concepts resulting from the building's interaction with the site, relationships between individual spaces were investigated in functional subgroups. Keeping in mind critical positions of adjacency (service-served), desired views from one space to the next, importance of views out, and orientation to climatic elements, spaces were ordered along circulation lines at two levels. A major element in the design would be the progression through space, both indoors and out. Directed views into activity zones would help to arouse interest and stimulate activity. The major space of the pool with its outdoor deck naturally demanded a south and west exposure, view-oriented spaces such as arts/crafts, meeting rooms, and the main lounge were oriented to the east. An interior ramp between the two levels became an observation element. Transitional spaces such as the lobby/exhibition space, game room and play room, and vending area created a link between the social and athletic zones.
By moving the social hall from its position adjoining the raquetball courts, problems of sound transmission were alleviated and a sheltered entrance court was created using the projecting form of the social hall as protection from winter winds. A strong relationship was recognized between these latter spaces and the sense of enclosure was heightened with the use of a punctured wall. Investigations of positive/negative space helped shape the main facade into a flat plane in which forms projected or receded. The natural corridor created by the rigid treerows was retained and dramatized simply by the omission of additional planting beyond the building's boundaries. Semi-circular forms were employed to create a funneling effect through the center of the building. The separate entrance to the athletic zone was later considered disorienting and generally unnecessary and was later altogether eliminated.
In the final design development stage, the original concepts were reinforced, forms were simplified, and the building assumed a certain order and coherence that had been lacking throughout its evolution.

Internal movement was refined with two major changes: athletic spaces were lowered below the entry/concourse level and the raquetball courts were shifted from the front to the rear, and occur along the major activity spine. This resulted in several improvements:

* circulation became more efficient and better scaled to volume
* lines of movement, both internal and external form a cross intersecting at the main entrance space, with a single concourse providing views into all high-activity spaces.
* supervision of all activity zones is possible from two major control points, one at each level
* spaces flow together more freely
* the entrance lobby assumes its intended role as a central orientation node
* the pool deck occurs at grade level where the site drops off to the south
* passive spaces at the northeast corner are slightly elevated above grade for maximum views
* spaces are generally more functional, especially the social hall, entry terrace, and the entire athletic zone

* structural layout is more logical, HVAC lines are more organized, and the overall shape of the building is more refined as a result
* large volumes are more balanced, and the concept of the major facade being an opaque plane stretching between the directional treerows was finally realized

Concrete masonry bearing walls, steel pipe columns and steel beams support longspan steel bar joists throughout with the following exceptions:

* spaceframe is used over the central lobby/exhibition space for its special visual appeal and transparency with pyramidal skylights occuring at the center
* spaceframe is used for the entrance arch and pool deck shade canopy with nylon fabric panels, again for its visual appeal

HVAC consists of zoned heat-pumps and air handlers situated on the roofdeck above circulation spines where ductwork can feed directly into adjacent spaces. A heat recovery system is used in the dressing room spaces. Glass areas are minimized on the north elevations. The south wall of the gymnasium is opaque to minimize heat gain and control bright reflections on the playing surface. However, the south wall of the pool enclosure where solar gain and an indoor/outdoor feel is desired, consists of transparent glass overhead doors. Glare is controlled by oper-
able louvers. Major glass areas occur on the east to maximize views. Here, heat gain is again controlled by operable louvers where necessary, as are the glass areas with a western exposure, with the exception of the circular fenestrations in the pool enclosure, which are glazed with silver reflective glass to reduce glare and give the appearance of open punched holes in a thin facade. Clear glazing on the east and west faces of the central entrance space will permit an unobstructed vista through the center of the building to the wooded banks beyond.

In summer, the structure will make a strong contrast with the yellow-green foreground and backdrop.

Interior wall surfaces are to be painted block and gypsum board, and glass block. Ceilings are suspended acoustical tile and Alcan Aluminum Planar Ceilings in selected areas. The pool enclosure ceiling will require a moisture-resistant coating over plaster on metal lath.

Exterior materials consist of white corrugated insulated metal panels on major wall surfaces, black insulated metal panels in spandrel conditions, black space frame for maximum contrast, yellow baked-enamel metal louvers and rooftop equipment screens, and yellow nylon fabric panels.

In winter, the structure is intended to blend with the white snow-covered fields and black tree masses with the bright yellow accents lending a certain playful vitality.

Planted trees at the entrance terrace and northwest corner are to be yellow-leaved locusts.

Parking areas are to screened with earth mounds planted with wild wheat to retain the original feel of the site and to further reduce the visual impact of the asphalt.
A multitude of recreational equipment is contained in the enclosed parts of the building, and it is made feasible by users paying for damage. Over the bowling lanes (near the entrance) a mezzanine accommodates practice rooms, pinball machines and tables for billiards and paddle tennis (photo, left). A lounge, toward the rear of the building, has tables for study and snacks (photo below).
Coal Street Pool (Wilkes-Barre Aquadome) - Pennsylvania

Bohlin and Powell

Consists of two outdoor swimming pools which can be used year-round with the use of an air-supported fabric dome, and a permanent support building containing dressing rooms, offices, maintenance & equipment spaces and storage.

The building is very linear with a required progression of access and seems larger than it is.

Air support equipment is handled in a playful manner with huge graphic ducts. Materials are plain & simple - concrete frame and block with bright graphics and colorful canvas awnings over a series of picnic alcoves.

The structure presents a strong identifiable form and creates new spaces in the landscape.

Source: Arch Record July '74 p.97
Inside, Bletchley has one big improvement to offer: for the first time the circulation is relaxed and generous. No longer do the sportsmen arrive in a little cramped lobby only to be dispersed into a tangle of narrow passages and stairways. Instead they arrive on a deck with long and pleasant outdoor vistas and a wide view outdoors on to the shaded north front of the multi-storey car park and of the viscous walkway. The passages at Bletchley are consistently generous, well finished and well lit. This makes it a very pleasant building to be in; and it reminds us forcibly that the social character of a complex of this sort depends much more on the quality and disposition of the common rooms and circulation than it does on the quality of the specialised spaces.
HERRINGTHORPE LEISURE CENTRE
SILLINGON & BARNETT

Interiors of Herringthorpe: the architects have infused much drama into the design, mainly in the extreme contrast between the small, confined, low-ceilinged spaces (such as the entrance foyer, 2) enclosed with red brick, and the huge top-lit volumes of the sports hall, 26, and the leisure pool, 24, 25. Compare the leisure pool and its deliberate seaside planning with that at Picketta Lock or Carlton Forum.

Source: Architectural Review
Facilities are provided for every age group in the 17,000 sf two-story building. Entrance is at the lower level which contains large community room w/stage, children & teen game rooms, shop, senior citizens room w/courtyard garden/meeting room which can be divided into two smaller rooms & which opens onto large outside plaza. Second floor includes reception area & quieter areas: library, offices, club room & crafts rooms. Large volume of comm. rm. is surrounded on three sides by smaller spaces thus diminishing its volume. Scale is urban, public. Entrance plaza is an extension of the interior spaces and includes children's play court. Bldg form determined by site. Concrete block bearing wall construction. Simple, clean detailing.

Source: Arch Rec. July 72 p. 120
PORTLAND JEWISH COMMUNITY CENTER - OREGON
WOLFF SIMMER GUNSLIL FRASCA

Large center for social, cultural & athletic activities on two levels.
Central lobby provides direct access to gym, pool, multipurpose and two spines containing crafts, game and classrooms, and adm. offices.
Locker rooms are located below the gym along with a health club, handball courts, teenage club rooms and a separate wing for preschool activities.
Configuration allows natural light to most major spaces but results in long narrow corridors.
Economical materials are employed out of necessity. Overall appearance is rather dull and lifeless and doesn't speak of the building's function.

Source: Arch. Rec. June '74 p. 102
PROPOSED YMCA FOR A TOWN IN OHIO
VENTURI AND RAUCH

The building was to be an integral part of a
downtown plaza scheme in which it would be
opposite an existing factory. The structure
has both a large scale to compete with the
factory and an intimate scale which re-
sponds to the pedestrian through the use
of a false wall with punched openings
that forms an open arcade.
Social spaces are zoned up front, adjacent
to the plaza with athletic spaces located
in back and facing onto an interior
street."
Complexity of forms articulates the interior
as well as the exterior of the building.
A gym and indoor track are located on
the first level; the pool & locker facilities
are located on the second level. Very
logical organization and ease of access.

Source: Community Centers & Student Unions p.215
Northern Branch, New Haven YMCA
Harold Roth & Edward Saad

Spaces are gathered around a central 2-story lobby which acts as the nucleus of the very open plan eliminating long circulation paths. The interior, exterior relationship is minimal even though the sloping wooded site in a residential area seems to offer many opportunities.

Control & Adm. offices are centrally located on the upper (entrance) level which also includes a general purpose room with kitchen, the upper pool space & the upper health club. The lower level includes the Olympic sized swimming pool w/adj. boys' & girls' locker rooms, the lower health club & exercise rooms. A control office is located at the entrance to the swimming pool, locker rooms and health club.

The large volume of the pool is well integrated in the bldg's overall form which is basically two intersecting rectangular forms 2 stories in height. It is a clean design with deeply recessed corbeled punched openings in brick bearing walls. The same brick is used inside for nonbearing walls. A highly sculptured concrete exterior stair becomes a dominant element. Cast in place beams span swimming pool. Interior surfaces are clean & monochromatic in brick, quarry tile, & maple. Indirect lighting is employed throughout.

Building can be operated with minimal staffing and maintenance.

Future plans call for gym & handball courts.
The building is zoned into two wings separated by a courtyard and entrance connection with adm. offices. Lockers are located in a core between gym and pool. Social wing consists of club & crafts rooms above youth center, adult lounge and multipurpose space.

Scale is monumental with large planes of poured in place concrete and glass. Building is cold and impersonal, and tails to indicate interior activity.

Source: Community Centers & Student Unions p. 158
### Social Characteristics

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<th>Pike Township</th>
<th>Pop. 1970</th>
<th>Med. Fam. Income</th>
<th># Employed</th>
<th>% White</th>
<th>Pop. Under 15 yrs.</th>
<th>Pop. 65 yrs.</th>
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These figures indicate that Pike Township's population will double in the next 20 years, making it the second fastest growing township in Marion County.
LEISURE RESEARCH

The results of a recent survey of recreation habits of Marion County residents conducted by Walker Research of Indianapolis indicate:

1. The majority of Marion County residents spend most of their leisure time when away from work near their home or neighborhood.

2. Six out of ten indicated they used public facilities for leisure time spent in Marion County.

3. The largest proportion said they spent leisure time about equally as individuals and as a household.

4. 40% of Pike Township’s residents use school sites for leisure.

5. 36% of Pike Township residents are members of private or semi-private clubs in other parts of Indianapolis.