

IFLA Speech – Frye Gillan Molinaro Architects
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It's a pleasure to be speaking today, and hello everyone, I hope you have enjoyed the conference so far.

So, here we are, 1/10th of the way through the 21st century, trying to figure out where we are all going.

I want to tell you a story before I launch into our project. I remember in university I had the fortune of having the challenge of designing a 21st century library (before it actually was the 21st century). I took the concept far into "the future" and did some rather space-aged things. I had a huge jumbo-tron over a giant plaza and entrance, and the library was shaped like a tall cylinder with an open atrium inside. And - you didn't actually read any books inside of the building - you used holodecks that had limitless digital information. Oh, and you could also fly into the side of the building and dock into it with your home transport "pod"... Now, I know you're all starting to get terribly excited about all this but we're not quite there yet, so let's bring it back to reality a little.

So here I am today – I've been involved in approximately 30 library projects in my tenure at Frye Gillan Molinaro. And I haven't built a single holodeck yet.

But, I think that the lesson I took from that experiment was that limitations need to be expanded once in a while, and I think that's the approach we took towards this building. It was certainly a culmination of both knowledge and insight from relevant experience. I think we were trying to be forward-thinking while at the same time be pragmatic in some way, to ground our ideas.

And one final caveat here is that this project is not just about new architecture or ideas, but it's also about the transformation of existing architecture into something fresh. We wanted to help the library to survive and thrive by giving it a "clear vision" of how to change into something different. I think that is an important factor to the overall equation here. If you can find a way to define something that sets your project apart from what the typical library means - and execute it in a positive way - people will jump on board with you. It takes a leap of faith to

believe in a project when it has something different to offer, and I truly believe that the way to achieve this is by finding a concise and clear way of presenting the changes as a beneficial idea.

So, let me start the project walk-through. I'm going to try to identify what I think were the 6 strengths of this project so that you can understand a bit more of the methodology behind it. Let's begin by describing the context of this project.

To start, a major concept for this project was dealing with "TRANSFORMATION and IDENTITY" on a large scale.

This is a photo from 2006 of the original Poplar Creek Public Library in Streamwood that we expanded and renovated. You can see how non-descript and even oppressive the building was on the street. But the caveat here is that the look of formed concrete and dark glass was very much en vogue then – it was fashioned to be "energy" conscious, and for the time, it was.

So the new image we created in the same location became a beacon of light. This replaced the original stoic facade, and it's now a welcoming statement.

There's also a new ramp with an illuminated handrail that adds to the composition and draws your eye towards the tower on the approach.

This new façade has already become iconic enough that it was featured prominently on the Village of Streamwood's community guide.

Now, let me show you an aerial view of the existing site.

Parking and main entry were actually behind the building (the blue area in the upper right corner)

The entrance on the opposite side was an "overflow" for remote parking across the street.

Park Avenue, which is the main street in front of the building, is a **very** busy thoroughfare with trucks and high speed traffic. Pedestrians were somewhat afraid to use the remote parking lot because of safety issues.

The program required that we double the size of the building on a very tight site. So, to achieve this we engulfed the back parking lot and also recessed the building into the earth. This helped us to respond to the existing one-story homes adjacent to the site.

The remote parking lot became the “main” lot, a new stoplight and crosswalk were installed for safety for pedestrians crossing Park Avenue, and 15 minute and accessible parking were provided at the expansion along with a new drive thru book return.

I think one of the progressive aspects of the site is really the fact that we reduced the amount of parking on site. One of the concepts behind sustainable sites these days is to avoid increasing parking if possible, and we took that a small step further by sharing the remote parking with the park district.

Here is another view of the west entry – you can see how the library communicates much more effectively with the street.

You can also see the addition of clear building signage which is illuminated at night for impact. I've seen some projects that include digital signage, and I suppose that could be used effectively, but I personally think it's preferable to rely more heavily on “image” and a clear name.

And here is the south face of the new addition. It's very transparent on the main level to show off a 4,000 square foot Young Adults library. It really effectively communicates the services inside.

Above that is a horizontal sculpted facade which holds the Administration spaces – each window corresponds to an office or meeting room.

When I was at ALA this year I attended a program there about the 21st century library. One of the speakers (Maxine Bleiweis) mentioned that we need to “stop building libraries that look like libraries”. This little tidbit of truth is something that needs to be implemented a bit more if we intend to inspire to believe in a library of the future. I think this facade is somewhat demonstrative of that in that concept in that it's inspired a bit more by museum architecture than library architecture, which by nature tends to be slightly more risk-taking.

And here is a section through the addition we built -

the facade you just saw is on the right hand side.

Almost 40% of the building's square footage is excavated into the earth – once again, this is to prevent overwhelming the nearby residential scale.

This is also a small visual trick because the large volume of space inside is somewhat hidden by this technique. The building opens up and feels very spacious inside even though the outside may not give you that impression.

There was also one unexpected community effect that our expansion had: The Village of Streamwood ended up creating a new bicycle and pedestrian path in what was previously a utility corridor between homes. This linked city hall and the police department with the library and increased bicycle traffic to the site by almost 400%. This type of community outreach is I think, a great example of the effect of a 21st century library.

So, the next concept to mention would be “GREEN and ENVIRONMENTAL” practices

Let me describe some of the exterior green features that deal with site and landscaping.

This is the site plan. The shaded blue areas show the “expansion zones” for the project to give you another of a sense of the “scale” of the new building.

The majority of the site features native Landscaping while 15,000 square feet of Green Roof were placed on the building to create extra water retention.

You can also note a drive-up book return at the lower portion of the image.

Here is a quick view of the green roof system. The sedum trays also act as an insulating overcoat for the roof, preventing heat gain in the summer and retaining heat during the winter.

The north side of the addition also features roof scuppers which pour water onto a bioswale. The bioswale is not simply a filtration device – its real purpose (along with the green roof) is actually to slow the rate of rainwater flow into the sewer system. This was an economical way to provide interest and an educational component to the site.

To create layers of interest, the Landscaping features spring bulbs and mixtures of plants that flower in different seasons along with grasses that stay ornamental all year long.

So, that sums up the context and green features of the exterior and site. The green movement obviously extends far beyond site design so as I walk through the building

I will mention some of the interior green features later but let's move on to the next concept which is: FUNCTIONALITY / ZONING

On each level, the floor plan and departments are laid out to achieve efficiency. The staff areas are mostly centralized near the "middle" of the building – this helps make all departments easily accessible.

The west wing contains the Fiction collection and meeting room spaces, and the east wing contains the young adult department as well as the area that we call the "amoeba". The amoeba was one of the most important concepts in this design, but I will get to that in a moment.

And here is the lower level plan. The east wing of the lower level contains the remainder of the adult collection, and the west wing contains the children's department. Between them is the government documents collection and "the green zone", which I will explain later.

Functionality is expressed through an "open floor plan" for all departments. This is good not only for flexibility and for patrons' navigation, but also for visibility and control. The library was able to reduce security staff because we nearly eliminated blind corners from the design.

So now let me tell you about the concepts behind the zone called the "amoeba".

Early in the planning process, we wanted to define space in a manner which would easily delineate book stack space versus study space. We also wanted to let natural light penetrate the recessed lower level of the building. So what we did was pull away the floor of the main level from the outside edges of the building to create a floating blob-shaped "platform" (which we nicknamed the "amoeba".)

The amoeba houses the AV and non-fiction collections as well as study areas and the majority of the public computers.

Well, here is a dramatic view of what it is like in the "amoeba". It is easy to forget that this space is actually 14 feet underground when you are there.

By compressing the majority of the non-fiction collection *under* the amoeba, we allowed the edge condition to be a continuous open atrium and seating area.

One of the green features on the interior is the flooring, which is a recycled rubber sheetgood.

This flooring also provides overall acoustic absorption for the space and prevents noise from shoes and rolling carts from making an impact.

In general, the shelving heights around the facility are low to encourage browsing - 6 high (adult), 5 high (youth), 4 high (young adult), and in the AV and periodical area there are low A-frame shelves with face-out browsing, which is more accessible and helps increase turnover. I think all these things contribute to a very user friendly experience when you are looking for something to read.

The program included conference rooms in all departments for a variety of uses which we painted distinct colors in different zones to help achieve a visual identity. (top two images) We used different colors for the adult, children's and young adult zones to distinguish them.

We also created what we call "search pods" to distinctly and easily brand the location of search catalogs and self-check machines.(bottom two images) It's just a small detail that helps create an "experience" here.

Now let me move to the concept of "DAYLIGHTING". I'd like to show you two examples of how we implemented this "green" feature.

To increase the quality of experience on the interior we added what we call "sun scoops" that light the amoeba. These light catching elements at the roof work in a dualistic manner.

This section shows you how the scoop and the angle of the sun coincide to mostly block summer sun rays,

while letting in indirect light. The sun has a high angle which is blocked by the scoop.

In comparison, here is how the winter rays hit the scoop. The lower angle helps them capture light and they also capture some heat gain with the back surface of the scoop, which also reflects the light down into the amoeba.

The end result is a space filled with natural light and that really adds to the psychological experience of the space.

Now let me show you the second example:

This photo from 2006 shows a portion of the existing building that was in the children's department – the concrete walkway above was the entry into the space from the main level.

This is what it looks like now – bathed in light and it certainly feels less like a lower level. By removing the concrete walkway we unveiled the skylight to the room.

In the end, we achieved access to daylight in 85% of the library spaces, which corresponds to LEED tenets.

The next concept I want to mention is "EFFICIENCY".

Here is another photo from 2006. We retrofitted the existing building with high efficiency boilers and air handlers, low-flow toilet fixtures, and digital mechanical controls.

However, much of the energy efficiency of this project actually comes from creative use of lighting sources.

As a result, the upgraded building spends almost \$17,000 less per year on its utility bills, even though it has double the square footage. Let me show you an example of how we used lighting to achieve energy and cost savings:

Efficient lighting was placed close to the task at hand. Much of the lighting is low or close to the floor. Shelf-mounted fixtures create high efficiency, (as opposed to using hanging lights to illuminate the entire room - which would have required more lights and energy.

Another example is that we used LED task lighting in many areas for ultra-high efficiency. These two factors, used in conjunction with a daylight dimming and a central lighting control system help optimize and automate efficiently.

I bet some of you are wondering – how do they change the bulbs?

We decided to send the maintenance staff to an intensive 3 day course on stilt walking! No - the maintenance crew actually uses an in-house scissor lift to reach the high sources, and we specified long-life lamping to maximize the time between changes. This was something that we planned for because we knew that it was going to be needed.

We also streamlined the lamp selection which minimized bulb types so that maintenance and supply were easier.

Another type of efficiency is internal operation - that self-service is a heavy focus with self-check machines being prominently located in several places.

The library went from 0 to 76% self-check in the first year as a result of this implementation.

RFID was also integrated, with adequate space for a sorting system to be installed in the future.

And lastly, we have the efficiency of the toilet rooms. Functionally, the plumbing fixtures are "low-flow" and some are even ultra-low flow, and the faucets are, of course, electronically metered. All of that is standard issue design these days but there is also a touch of thoughtful design ideas in spaces like these which I think helps out overall.

So now we've talked about some of the nuts and bolts – it's time to explain some of the more whimsical aspects of the design.

The final concept I want to mention is "COLOR AND FORM".

I'm going to show you a dramatic transformation of this original reading space. The existing round inspired us to use round light fixtures to keep the same 'vocabulary' in our new design. We didn't like the visual intrusion of the duct in the center of the room, but we did like the concept of being able to

blow dry your hair while reading a book! Ultimately we decided it had to go.

So here is the transformation – notice a much brighter and fresher aspect to the lighting and the finishes, as well as relocated duct. The space is now sophisticated, enjoyable and contemplative. I think that subtle and “fun” elements like this help humanize and personalize the experience of using the library, so that it becomes more interactive and engaging - instead of simply sitting down and reading your book in a room.

The round lighting theme continues through the main level of the building. Also note another example of high efficiency light sources in this main hallway photo. The bookshelves on the right have lights mounted directly to the face of the wall. The focus created on the face out browsing of this area is another important example of “engaging” your patrons in interesting ways.

Now, color and form were used in a sculptural way in the amoeba, with a very sinuous orange wall and a light cove that snakes around the edge condition. The movement and fluidity of following the edge around on the lower level is something that is also curiously engaging.

Now, color and form can mean paints, finishes, and surfaces, but there’s also another interpretation for this: light. Here’s an example.

Directly behind this is something that we call the “lightwall” in the amoeba – it is a 100 foot long LED wall that we created as a way to directly interact with the patrons. There are a dozen programmed themes that correspond to major holidays around the year, so this light show that you see can change to respond to the “seasons”. We also created a special “greeting” and “closing” routine for opening and closing time that automatically **wakes up** and **turns off** the wall one panel at a time. It sparkles with a colorful routine at opening time, and flashes briefly with an alert at closing time. Most of the time it does subtle color changes though – it was intended to be something you could pay attention to if you wanted to, but otherwise be a little bit inconspicuous. I think that interactive elements like this are things that really attract people to the facility. It gets people talking – it gives them something to respond to.

So while we are on the subject of playful color and form – let me unveil the “green zone” now. We needed to find a way to enliven this connective lower level tunnel between the existing and new addition.

We started out with the idea that this was a high-energy tech zone which ended with a “gateway” to the children’s department. The green color came about as a way to express the level of energy we wanted to create. However, this room was intended not just to be a youth-themed zone but, moreover, an experience for all ages.

One of the most memorable events during construction was unveiling this space to the owner’s representative. We turned towards the space from the main staircase and neither of us had seen the color yet. They were just finishing applying the green floor and as soon as she saw it she very loudly erupted with an “Oh - my -God!” So, of course, I had to diffuse the situation somehow - and since it happened to be March - I eventually squeaked out “Happy Saint Patrick’s Day”. It was the best I could do at the time.

So we picked the color green as the theme, and used creative lighting to help accent the space. People of all ages use the computers in the area. Now, you may have also noticed the graphical approach we took towards the building signage.

I think we felt that we wanted to take the library experience a little further so we custom created a set of symbolic imagery that complemented the architecture. Graphical symbols are displayed in many places – and in the children’s area we even created special icons to represent each particular collection type. In other areas we repeated visual icons such as a “computer symbol” and “search / self check symbols” to established branding. The large scale of the graphics also helps with visibility from long distances.

So, now that we have reached the end of the tour, how do these concepts ultimately fit in the scheme of things? To sum up, I think the overarching ideas of functionality and environmentalism mixed in with frivolity make this building somewhat distinctive as a whole. Libraries were originally created because information was scarce and expensive, but in today’s digital age, there obviously has to be something transcendent about the library experience.

The “bones” of the brutalist architecture provided us with a blank canvas to do something exciting. And we reacted against the starkness of the original building by using color, light, and form to achieve something special.

By the same token, we wanted to provide interest for all ages, but most of the focus was spent creating an environment that would inspire the next generation of library users to visit the facility. We also wanted to put people in touch with each other – to give them a reason to interact – to give them a place that would expand their knowledge of the possibilities of architecture.

We tried to make it a place that offered a fresh experience with each visit. The environment ends up absorbing you with a vibrant experience that is somewhat rare for its suburban location, and it stimulates your imagination.

In this building, there is a “wow” factor that creates a genuine and lasting visceral reaction as a visitor. I think that is the legacy that this library will carry into the future. The psychology of the architecture is as important as any design factor or technological or green ideology. And once again, it takes a clear vision to establish that changes can be good for survival. I’m pretty sure that if we give ourselves more opportunities to exceed our expectations about what is possible in the library that we will have, by default, created a 21st century facility.

Thank you for listening!