

VILLAGE OF ORLAND PARK

*14700 Ravinia Avenue
Orland Park, IL 60462
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Meeting Minutes

Tuesday, June 14, 2011

7:00 PM

Village Hall

Plan Commission

Louis Stephens, Chairman

*Commissioners: Judith Jacobs, Paul Aubin, Steve Dzierwa,
Nick Parisi, John J. Paul and Laura Murphy*

CALLED TO ORDER/ROLL CALL

Present: 6 - Jacobs; Dzierwa; Aubin; Stephens; Paul, Murphy

Absent: 1 - Parisi

APPROVAL OF MINUTES**2011-0373 Minutes of the May 24, 2011, Plan Commission Meeting**

A motion was made by Commissioner Dzierwa, seconded by Commissioner Paul to continue the minutes of the May 24, 2011 Plan Commission meeting minutes with the following corrections:

Page 7: Change 'ongoing' to 'on going'.

APPROVED

Aye: 6 - Jacobs, Dzierwa, Aubin, Stephens, Paul and Murphy

Nay: 0

Absent: 1 - Parisi

PUBLIC HEARINGS**2011-0328 Madison Construction Geothermal - SP**

2011 – 0373 MADISON CONSTRUCTION GEHOTHERMAL -SP
Geothermal Well – Appearance Review, Site Plan

PITTOS: Staff presentation made in accordance with the written Staff Report dated June 14, 2011 as presented.

STEPHENS: Thank you Mr. Pittos. I have a question. When I went out there, it seemed like there was a parking lot to the North and a parking lot to the South and in the back it was fenced in. These holes will be behind the building all the way to the East.

PITTOS: From the aerial, although you can't see it very well, the red outline indicates where the geothermal system will be planted, so-to-speak. It won't be exactly on the East property line because there is a utility easement and typically, you don't want to bury things in utility easements when the utilities can come by arbitrarily and dig things up for their own purposes.

STEPHENS: I understand that. It is twenty holes running along the East property line just West of the easement.

PITTOS: Correct.

STEPHENS: I just wanted to get that clear in my mind.

(Asked petitioner to come up to be sworn in to make comments and answer questions.)

AUBIN: Swore in: Christopher Woods 15657 S. 70th Ct. Orland Park, IL

WOODS: I just wanted to thank the committee as well as Terry and the rest of the village staff who have been so helpful with this particular project. We are proud of this project and the assistance in which the village has provided us and that they have allowed us to remain in Orland Park and continue to expand our operations. In addition, we are very excited about the geothermal installation on the property, as it will not only contribute to our continuing efforts of sustainability in all of our projects, but we hope that it serves as an example to other businesses and enterprises within the village of the potential for this type of technology to improve not only the sustainability of their properties but reduce their operating costs as well as carbon emissions and the carbon footprint of businesses throughout Orland Park.

STEPHENS: Mr. Woods, would you mind explaining to us on this committee how the geothermal process works. I understand that it is for heating and cooling as well.

WOODS: Correct. Essentially what it does is use the constant temperature of the Earth. In the wintertime, it will draw heat from the Earth that will funnel into the building through the ground loop exchanging system and serve to heat the building, and in the warmer months, it will serve to pull that same temperature from the Earth and will serve to cool the building. It is a rather elegantly simple process and it does not require a lot of equipment. The upfront cost of it is, as you can see is from drilling the wells as well as the piping.

STEPHENS: How deep do you have to go?

WOODS: For example, on one of our commercial projects, we have gone as deep as 650 feet. On this particular project, because of the engineering, I believe the maximum depth that we will go is 225 feet.

STEPHENS: And you put pipes in these holes?

WOODS: Correct. Essential it is plastic tubing.

STEPHENS: What do you run through that piping?

WOODS: Water.

STEPHENS: That funnels through into the heating system.

WOODS: Correct. Into the heat pump system...

STEPHENS: Electric heat pumps?

WOODS: Correct.

STEPHENS: And it funnels through the heat pump system?

WOODS: Correct.

STEPHENS: Your company does this on a regular basis.

WOODS: Correct. Actually, we are leader in some of the innovations with this. For example, a project that we did for a community health center in Chicago on Ogden Avenue. It's a twenty million dollar project. Mr. Terino, the owner of the company, is a trained mechanical electrical engineer and came up with I believe its been used only one other time throughout the entire world and that was in Europe whereby since we were already drilling caisson we installed the actual system within the tubing actually went in the caisson of that property. And what that did, since we were already drilling, it allowed us to avoid the cost of having to establish a separate well field. It is a very innovative technique that we hope to see replicated throughout our other projects.

STEPHENS: Did you have the job for the college that was built last year on 179th Street?

WOODS: I don't believe so.

STEPHENS: Okay. Thank you sir.

Asks for comments from the public and receiving none, asks commissioners for comments and questions.

DZIERWA: Thank you Mr. Chairman. Mr. Woods, could I ask you to return to the podium.

WOODS: I must stipulate that my actual title with the company is director of development. I did not bring along my technical expert. My apologies if I sound too broad in my answers.

DZIERWA: What is the temperature of the Earth at 225 feet?

WOODS: Approximately 57 degrees.

DZIERWA: 57 degrees is cooler than I had thought. This will be a dual system

that is basically going to be a closed loop system and you will use a heat pump?

WOODS: Correct. It will be a closed loop heating and chilling system.

DZIERWA: Basically this system works great during extremes?

WOODS: The idea behind it is actually to be constant and to do what is called smoothing of the peaks.

DZIERWA: I guess my point is that your heat pump doesn't work as hard when you're bringing up 60 degree water in the summertime when it is 100 degrees outside and vice versa, your heat pump doesn't work as hard when you're bringing up 60 degree water in the winter time when it is zero.

WOODS: Conceptually, yes.

DZIERWA: That is what I wanted to know. I understand a little bit about heat exchange because I work with steam and chillers (473) and I have been trying to get my company to go with this. It is very intriguing. I think it is a great concept. It must take deep pockets to do something like this, but your initial cost probably will be made up in the future. I am really glad to see this.

WOODS: Correct. The operating recovery horizon is approximately 84 months relative to the cap expenditures and relative to other operating costs from a conventional system.

DZIERWA: Do you use the typical treatments, such as glycol in the waters and the inhibitors and all of that stuff?

WOODS: I don't want to speak out of turn. I can get back to you with the proper answer.

DZIERWA: Okay, it's not that big of a deal. That's all that I have Mr. Chairman.

STEPHENS: Thank you Commissioner Dzierwa.

JACOBS: Thank you Mr. Chairman. How much water does it use?

WOODS: I would also have to get back to you on that. I wouldn't want to give you a (wrong answer).

JACOBS: Is this going to be the primary system?

WOODS: To service the building, yes.

JACOBS: Are there any dangers or concerns related to this? This thing won't

blow up or have any other issues?

WOODS: To answer that question, I could tell you, and you've probably seen this, the actual system will fit into a space that is probably bigger than that (refers to secretary of state photo booth). One of the advantages of going with this system in terms of the building structure is that you don't have to have large dedicated areas for your systems. It is no more dangerous than a conventional system.

JACOBS: Thank you. That is all Mr. Chairman.

STEPHENS: Thank you Commissioner Jacobs.

MURPHY: I don't really have any questions. I think it's great to see it come to Orland Park. I have read a little bit about LEED and all of those good things for sustainability. I know that a lot of these projects don't happen because they do cost up front, but eventually they pay off in more ways than one. I think it's great.

WOODS: I must say, with respect to subsidies available from the federal government as well as organizations like DCEO that can also help to fray the upfront capitol expenditures for these projects, which combined with the operating savings recovery period really makes a lot of economic sense, certainly for conversions and even more certainly for new ground up construction. I would encourage anybody to come by our offices and we could put you in charge of our lead people and Mark Nussbaum, who is well regarded in this field and is the engineer on this project, and we can discuss it further.

STEPHENS: Thank you.

AUBIN: Thank you Mr. Chairman. I just have one comment. The project has been approved by the preliminary engineering from our engineering staff here in Orland Park, so I am sure that there is nothing wrong with it as far as any dangers or anything like that. Full speed ahead. Those federal grants and money that might be available could be the incentive that pushes somebody over the top to do it themselves.

WOODS: Absolutely.

AUBIN: Thank you. I appreciate your time.

PAUL: Thank you Mr. Chairman. I just have a comment. Any time you can come up with something that is cost effective and that saves energy and is cleaner, I am all for it. That's all that I have to say.

STEPHENS: Thank you. You said the recovery for the cost is 8 to 12 months?

WOODS: I'm sorry. It is 84 months, 5 to 7 years on an operating basis.

STEPHENS: Including grants that you get from the federal government?

WOODS: Correct.

STEPHENS: What are the other grants?

WOODS: DCEO.

PITTOS: It is the Illinois Department of Commerce and Economic Opportunity.

STEPHENS: What do they give you? A percentage of the cost? Do you have to show them what the total cost is?

WOODS: Yes. There is a competitive grant process and there are limitations, perhaps three that I know. I believe the latest one was a capita of 150,000 dollars

STEPHENS: Is it based on how much you spend for the whole project?

WOODS: Correct.

STEPHENS: Why are you guys doing this? Do you do this for living?

WOODS: It is a part of our business now. We are a general construction firm and we do sizable projects up to 30 million dollars. When we look at them, we try to be out front on sustainability and green features and green architecture. Number one, because it is part of our culture and number two, we believe that it benefits projects, benefits owners, and it benefits communities. Mr. Terino had a lot of foresight; he has actually purchased drill rigs at great expense. We believe this is something that is only on an upward trajectory and will continue to be a feature or new construction and re-purposing of buildings going forward.

STEPHENS: Are the twenty holes that you are going to have to bore determined by the square footage of the building that you are going to heat and cool?

WOODS: Not necessarily. It is determined by the load of the building. For instance, a manufacturing facility that is generating a lot of heat will require a larger load capacity. The engineers have to do a load study.

STEPHENS: Based on the use of the building?

WOODS: Correct.

STEPHENS: I have one final question. What is the total cost to do this in your application here?

WOODS: I believe it is approximately six figures. I can't give you an accurate number, but it will be in excess of 100,000 dollars.

STEPHENS: How many square feet is that building?

WOODS: It is approximately 20,000 square feet.

STEPHENS: How much would it cost to heat it and cool it? Around 25,000 dollars?

WOODS: Annually?

STEPHENS: No, the cost of the equipment, because basically you are putting in new equipment here.

WOODS: I believe we are going to utilize the existing distribution. The cost of the actual heat pump system itself and the tubing I can not give you an accurate figure on, but the large expenditure is on the drilling.

STEPHENS: Compared to a traditional system now; what would it be a gas forced air system?

WOODS: Correct.

STEPHENS: Would a gas forced air system for that building cost around 25 or 30,000 dollars versus over 100,000 dollars for this geothermal system?

WOODS: Approximately yes.

STEPHENS: I just wanted to get the numbers straight. Thank you.

JACOBS: What is the life expectancy of this system?

WOODS: We project about 50 years, but it could last as long as 100 years. There are still systems that were deployed in the 1940s that are operational.

JACOBS: With new technology could you upgrade this as you go along or is this it?

WOODS: This would be it. As long as it is properly maintained, there would be no need unless there is an expansion of the property or the load capacity requirements change, in which case we would need to add additional wells and a larger exchanger.

JACOBS: Thank you.

STEPHENS: Thank you. Are there any further questions?

DZIERWA: This is directed to Mr. Chairman. I just wanted to clarify something. Heat exchanger units use hot water and cool water. You have cooling coils and heating coils in all air-handling units. This is something that I have known from 35 years in the business. The existing system they have, if it uses water now for heating through heating coils and chill water with chill water coils, they have separate coils in the air-handling units. Obviously, they are used at different times of the year. These are all close looped systems. These are systems that are a do not leak from time to time. Commissioner Jacobs, you have to add water to the system because you do lose water from time to time through evaporation. These units are self-made up. They are all self-contained. The only thing that could possibly leak would be in the ground, but that would happen with any other system too. Coils do leak. It is very easy to adapt a system that is in place right now that uses water as its medium for heating and cooling, you just have to have separate heating coils and cooling coils. They are just using the ground temperature to assist them in that. That is why I think it is such a great idea. That is all that I have to add.

STEPHENS: Thank you.
The commissioner then asked for a motion.

AUBIN:

I move to accept as findings of fact of this Plan Commission the findings of fact set forth in this staff report dated June 14, 2011

and

I move to recommend to the Village Board to approve the site plan titled "Ground Loop Heat Exchanger Borehole Plan", prepared by Architectural Consulting Engineers, dated 2/13/11, last revised 4/19/11, sheet GL-1, for an environmental clean technology at 15657 S. 70th Court, subject to the following conditions:

1. That all building code related items are met;
2. That all building permits are obtained prior to construction;
3. That all utility conduits and systems related to the geothermal energy system not be visible from the street and from neighboring properties;
4. That any landscaping impacted by the project is replaced with like material;
5. That an administrative review of the building elevations is complete prior to construction of exterior building improvements.

A motion was made by Aubin, seconded by Dzierwa, that this matter be RECOMMENDED FOR APPROVAL to the Development Services & Planning Committee. due back on 7/18/2011 The motion carried by the following vote:

Aye: 6 - Jacobs, Dzierwa, Aubin, Stephens, Paul and Murphy

Nay: 0

Absent: 1 - Parisi

NON-PUBLIC HEARINGS

2011-0321 Comprehensive Plan - Open Space Chapter - Information Only!

2011 – 0321 COMPREHENSIVE PLAN- OPEN SPACE

CHAPTER-INFORMATIONAL ONLY!

Informative discussion

TURLEY: Staff presentation made in accordance with the written Staff Report dated May 24, 2011 as presented.

STEPHENS: You said you had to do some work on your framework map a little bit?

TURLEY: Correct. In order to make it a little bit more readable.

STEPHENS: It says in red 'existing multi-purpose path'.

TURLEY: Correct.

STEPHENS: I am looking at red from 159th Street along 104th Avenue going south to 167th Street. I know there is a road there but I don't know if there is a path there.

TURLEY: Although it says existing, what is shown on here is really a combination or existing and proposed. That is something that needs to be corrected. The red line is a combination of existing and proposed.

STEPHENS: Basically, the red line is highlighting roadways because there are no paths there.

TURLEY: Either existing or proposed bike paths.

STEPHENS: Are you going to make a change on that?

TURLEY: Yes. Do you think it should differentiate existing and proposed?

STEPHENS: I think so because when it says existing multi-purpose path and I look at 159th Street from just West of LaGrange Road running West of Will-Cook Road, there is no path there. As a layman, and just being on the committee here, I am looking at this and I am saying this map doesn't make sense because there is

no path there.

TURLEY: Typically when you have a master plan for something you show the final picture of what is existing and proposed. I guess there are two different schools of thinking here. You would show a master plan that shows it as it should be, but I can see where it would be confusing. And, the label is correct.

STEPHENS: Maybe you should put another category there that says 'proposed path' and maybe make it a different color so that we know that it doesn't exist now but is a vision for the future.

TURLEY: The way it has been shown on other plans is a dashed red line for proposed and solid red for existing. We will just go back to that. That makes the most sense.

STEPHENS: Asks for comments or questions from fellow commissioners.

DZIERWA: This early on in the framework map you don't show anything as far as conservation easements do you.

TURLEY: At this scale it is hard to get too detailed.

DZIERWA: I understand that but we have seen a few of them in the past and I was curious if something like that could be added. If you don't want to, that is fine. Also, on page 7, I noticed that when you were talking about item number 3 under needs and issues you talk about a lack of pedestrian friendly sidewalks. You gave an example that people who live West of LaGrange Road wanting to get to Centennial Park when actually they live East of LaGrange Road, Correct?

TURLEY: Which line was that?

DZIERWA: That was number 3 on page 7 under Recommendations, Needs and Issues. It says "For example, residents who live West of Lagrange Road, but want to bike to Centennial Park Aquatic Center..." They would have to live East of Lagrange Road.

TURLEY: You're right.

STEPHENS: I would say it should say East and West, because if you are on 108th Avenue how are you going to bike from there to Centennial Park? There is no path along 153rd Street. I'm sorry, there is a sidewalk, but I do not know if it runs the whole distance to 108th.

PITTOS: There is a sidewalk on 153rd Street, but there is also a bike path on Jillian Road that runs parallel to Jillian Road East into the Metra parking lots and then South to the train station that connects to Centennial. There is a path system that will be proposed for 153rd Street as well.

TURLEY: One of the things that we talked about, the little diagram in the beginning, shows the overlapping chapters. The transportation chapter is going to include an expanded bicycle plan from the point of view of transportation so it can actually be looked at as a viable transportation option. It will also contribute to recreational riders. It is going to benefit both open space and transportation. We are going to look at things like how a person gets from one location to another. The most likely routes to where people want to go and how to get there. We will look at that in a little more detail.

DZIERWA: I have one more quick thing Mr. Chairman, and Commissioner Aubin will probably agree with me on this. When we were with parks and recreation, we always wondered about those properties on Lake Sedgewick and why they weren't part of that park. It's talking about parcels that have been marketed for commercial use. Is there any way that we can stop that?

TURLEY: Of course the village would love to have those parcels. I think that's the only definitive way to (stop that).

DZIERWA: Because the walking paths can't go onto private property, they just end on both sides of it and it would be a nice connectivity type thing.

TURLEY: Right. I think there are a lot of good reasons for those to be a part or the park if the opportunity arises.

DZIERWA: I would make that a priority. That is all that I have Mr. Chairman.

STEPHENS: Are there any more questions or comments? Thank you Mrs. Turley. I am sure we will see more of this shortly.

No motion. This is an informational item only.

OTHER BUSINESS

STEPHENS: Asked if there was any other business from the Commissioners or Staff. Being none he moved to adjournment.

ADJOURNMENT

There being no further business before the Plan Commission, the Chairman adjourned the meeting.

STEPHENS: This meeting is adjourned at 7:50 p.m.

ADJOURNED