Approved at the April 18th, 2012 Regular Town Board Meeting.

TOWN OF ALGOMA
WINNEBAGO COUNTY, WISCONSIN
MINUTES FOR SPECIAL TOWN BOARD MEETING
STORMWATER MANAGEMENT
Tuesday, March 27th, 2012 at 5:30 PM
Algoma Town Hall
15 N. Oakwood Road, Oshkosh, WI 54904

The meeting was called to order by Chairperson Blake at 5:30 PM.

Present were: Chairperson Tim Blake, Mike Kierszh, Terry Hamann, Kristine Timm, Sue Drexler, Attorney Marone, Treasurer Edson, Deputy Clerk Andrews, and Clerk Nelson.

Chairperson Blake turned the meeting over to Mark Shubak of Strand Associates. Mr. Shubak presented a PowerPoint presentation which is attached to the record copy of the meeting minutes.

1. **Discuss Honey Creek - Oakwood Road/Sheldon Drive Project**
   a. **Provide status update of Phase I design progress.**
   Final grading and restoration plan is mostly completed. Slope intercepts have been flagged in the field, and is an on-going process based on feedback from the property owners. Slope intercepts means where there is going to be grading and tree vegetation. Trees that have been tagged with tape are going to be removed. Most of the property owners have given Mr. Shubak feedback on which trees can be removed and permission was given to remove those trees. The removing of the trees process is continuing. Mr. Shubak has been in contact with Jon Groth of Winnebago County Highway Department. Mr. Groth indicated the county does have the equipment and can get in the area to do the work. If the county does the work, the town may realize some savings. Tree removal can be done prior to construction if the work doesn't exceed the limit to where it would have to be bid out. Construction easement documents are in process now that the slope intercepts have been approved. The easement documents are going to consist of the legal description of where the work has to be done and access for construction. Those easement documents will be made available to Attorney Marone for review. At that point, the documents will go to the property owners for their review and signature. The design work is completed and Mr. Shubak is ready to make the permit submittal. In order to submit plans for permits, the design plans have to be far enough along so that the regulators can review and comment on them. The permit submittal is to the Department of Natural Resources and Army Corps of Engineers and should take place in the next week or so. That leaves the construction easements and the tree removal as the next critical steps in the project. There was a question on permanent easements. Mr. Shubak indicated that permanent easements for maintenance is preferred but not every property owner is willing to grant the town a permanent easement at this time and is a discussion that should take place with each individual property owners. Mr. Shubak does suggest if permanent maintenance easements are not able to be secured, at least a maintenance agreement is obtained indicating that the property owners are going to maintain the work that has been done. The project is designed in a way that not much maintenance is going to be required. The process is such that there would have to be discussions with the property owners to seek out their willingness to grant a maintenance easement. If not, a maintenance agreement

is an option. The critical part now is the construction easements; the ability to get a contractor in the area to physically do the work. Mr. Shubak showed the final design plan for the stream bank work and stream bank grading. Mr. Shubak walked the board through the plan. The goal is to get a 100 year storm protection. The channel will go over its banks for some storm events, but it won't do it in a way that will cause property damage.

b. Tree removal coordination status.

Trees that have been tagged with tape are going to be removed. Most of the property owners have given Mr. Shubak feedback on which trees can be removed and permission was given to remove those trees. The removing of the trees process is continuing. Mr. Shubak has been in contact with Jon Groth of Winnebago County Highway Department. Mr. Groth indicated the county does have the equipment and can get in the area to do the work. If the county does the work, the town may realize some savings. The tree removal can be done prior to construction if work doesn't exceed the limit to where it would have to be bid out.

c. Review results of Phase II - North Oakwood Road drainage structure feasibility evaluation

i. Single-span cast-in-place concrete bridge

The road would have be raised a little to accommodate a bridge. Approximate cost is $410,000. The pros of the bridge are; it will restore the natural channel bottom. The DNR would be in favor of this option. The cons of the bridge are; there is much longer construction duration. This would be inconvenient for residents in this area.

ii. Single-span precast concrete arch culvert

This is a precast arch that can be built in very short period of time. This maybe the most economical and cost effective option for this project. The culvert is manufactured and pieced together at the site. The pieces can be put in place in a matter of a couple days. The approximate cost is $330,000. Pros to this option are; there is a much shorter construction duration, restores the natural channel bottom, minimizes required footprint and it's 36 feet wide versus the 40 feet wide bridge.

iii. Three-span precast concrete arch culverts

More guardrails are required for this option. There is more excavation and more impacts with the option. The cost is approximately $385,000. The pros of this option; much shorter construction duration and restores the natural channel bottom.

iv. Three-span corrugated aluminum arch culverts, keeping existing corrugated aluminum arch culvert in place.

This option is not cost effective. In order to get the hydraulics there needs to be an additional two corrugated aluminum arch culverts installed. Aluminum corrugated culverts are not hydraulically as efficient as concrete. They also have a bottom, so it doesn't restore the natural channel bottom. The footprint is much longer, approximately 60 feet, and would be impossible to fix two additional culverts within the corridor. The DNR may allow this because the existing culvert is there, but they wouldn't be in favor of it. The approximate cost is $390,000. The pros of this option are; there is a much shorter construction duration. The cons are; it doesn't allow for restoration of the natural channel bottom, and there is a much wider footprint needed.

The feasibility study on the N. Oakwood Road culvert wasn't included in the original master plan. The culvert is a 16 foot arched culvert which is vastly undersized and needs to be replaced. This culvert is very restrictive and is the source of most of the flooding in N. Oakwood Road/Sheldon Drive area. The original plan called for a 40 foot, single span, cast in place concrete bridge. At that time it was based on the hydraulic performance that was needed in order to protect that area from flooding from a hundred year storm event. There were other options that were brought forth that might be viable, can achieve the same goal, but cost less. Mr. Shubak provided a summary of the options that were researched. Please refer to Mr. Shubak's PowerPoint presentation for detailed information on the options. There are two sanitary sewers located in this area that are going to have to be relocated along with other utilities in the area. Most of this work can be done without closing the entire road down. With the construction of the cast in place the bridge, the road would have to be closed in order to get the existing bridge out and cast the new bridge. The precast bridge can be done in a couple of weeks but the footings will still have to be poured. There was discussion regarding the road closure. There are ways to keep one lane of the road open with traffic control. The other option is to close the road down as there is another access to the subdivision. There is flexibility depending on board's wishes. The relocating of the utilities is included in the cost estimates. The most cost effective option is single-span precast concrete arch culvert on many fronts. There are many hydraulic pros with this option and hardly any cons. The design criteria for this structure are a hundred year storm event or 1200 cfs passing through this structure. The current structure passes roughly 600 cfs through and the other 600 cfs pass through the Sheldon area.

d. Discuss tasks to be performed prior to next workshop.

2. Review request to replace Prairie Wood Drive and Oakwood Road culverts and downstream ditch cleaning.

Mr. Shubak explained the request to replace the Prairie Wood Drive culvert, Oakwood Road culvert, and clean the ditch downstream. The Prairie Wood culvert is crushed which allows very little water to run through. The Prairie Wood ditch is very flat and overgrown. The box culvert is in good shape, but the ditch prior to the culvert is so overgrown that the water doesn't get to the box culvert. Mr. Shubak explained just cleaning out the overgrowth and doing nothing else isn't going to do anything because it will grow right back to its current state very quickly. The town has a minimum requirement of half a percent slope for all ditches. It's difficult to get water to flow with a half a percent even if it's properly maintained. Topographical landscape shots of this area indicate the slope is currently at .2 percent. Therefore simply cleaning out this ditch is not going to do anything. The condition of the box culvert was the first thing that was looked at. The culvert is made of concrete which is showing some sparling at the top. The original culvert had a section that was built onto it and is slightly separating. The condition of the culvert is very good. There is overgrowth barricading the water from getting to the culvert. If the overgrowth is cleaned out, Mr. Shubak strongly recommended that this culvert is not replaced. The pavement can be removed over the top and the joint separating can be filled with joint compound. The ditch downstream of the box culvert flows to Honey Creek. This ditch is very overgrown and the ditch is not properly sloped. This ditch has to be cleaned out and the sediment removed. The recommendation is to install an under drain to get the water to flow out of the box culvert. Just cleaning out the overgrowth is going to be a continuous maintenance issue for the town. The under drain is a six inch diameter, corrugated PVC pipe, that has holes

in it. Under drain works best when placed in crushed stone. We did a similar project on Omro Road near Welsh Haven which has worked very well. There are three advantages to doing this; 1- Water can flow through a pipe at .2 percent slope, 2 – there is low maintenance because this system maintains itself, and 3 – the pipe can be extended further upstream if necessary. The standing water won't disappear unless the under drain is installed in this area. For a little bit of additional cost, the under drain will bring a better result. Also if the hydraulic water pressure needs to be updated, it can be done by installing an additional culvert next to the box culvert. Those options are available. The box culvert is offset of the channel, so the new culvert would be installed in line with the channel just south of the existing box culvert. The recommendation is to keep the existing box culvert and add an additional culvert just south of the existing culvert. The Prairie Wood culvert, the recommendation is to replace the crushed culvert with an larger culvert. The town owns the right of way where this ditch work can be done without getting any easements. Again, the recommendation is to clean out the ditch and lay the stone encased tile. If this is done, it's going to allow this area to drain much better. It's estimated that this portion will cost about $30,000. Extending the work all the way to Sheldon will cost about an additional $15,000 to $20,000. The beauty of installing the under drain pipe is that it's below the bottom on the ditch, and water can flow through a perforated pipe better then ground. The standing water will be gone. A good example is the Omro Road near Welsh Haven. The pipe isn't going to do much as far as flooding, but it will allow water to freely flow through the corridor now. Doing this work simultaneously with the phase 1 project will provide additional capacity of water flow. This work is a worthwhile endeavor because this will dry the area up. This work could be included in phase 1, but would have to wait until the permitting is complete. Mr. Shubak's recommendation is that this work can be done as soon as the design is done because permits aren't required for most of this work. There is one permit that may need to be acquired through Winnebago County, but that should be it. This work will be a pre-phase 1 work. This work is less than the public bid plateau and having the county do the work is an option. This will require construction drawings that Strand can do.

3. **Review request to construct ditching or storm sewer pipe along south side of Sheldon Drive/west side of N. Oakwood Road to Honey Creek.**
   The way the drainage functions now is that the area to the west of Sheldon Drive is flowing to the north through the existing corrugated metal pipe. The idea was to short circuit this drainage flow and take the water down the south side of Sheldon Road to Oakwood, south on Oakwood to Honey Creek. If that were done, we would plug the cross culvert. Improvements would be done to the south side of Sheldon Drive to Oakwood Road and then south on Oakwood Road to Honey Creek. The same concept would have to be done in this ditch, i.e. putting a pipe in the bottom of the ditch embedded in clear, crushed stone. Mr. Shubak recommends replacing an existing driveway culvert on Sheldon. The intent is to cut the drainage off from crossing Sheldon Drive. The key is in the hundred year event, this is a project that isn't going to provide relief. However, in smaller rain events, it's going to provide some benefits. This work can be part of what Winnebago County can do. The approximate cost estimate is about $14,000. Mr. Shubak thinks the work could be done without disturbing the utilities. The sanitary would not have to be moved, but the gas may have to. The cost of moving the gas is not a responsibility of the town. Motion by Blake/Drexler to ask for a task order to do construction drawings for both item 2 and item 3 from Strand Associates. Discussion ensued regarding other possible options for work in this area which will be looked at through designing the construction drawings. No further discussion. Motion carried in a voice vote, 5-0.

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4. **Next Stormwater Workshop - Schedule TBA**
   Look for a doodle from Clerk Nelson for the next three months. Once those dates are finalized, they will be posted on the website.

Motion to adjourn Hamann/Kierszh. No further discussion. Motion carried in a voice vote, 5-0. Meeting adjourned at 7:05 PM.

Respectfully submitted,

Charlotte K. Nelson, Town Clerk
Town of Algoma, Winnebago County, Wisconsin