

APPROVED MINUTES



ACME TOWNSHIP PLANNING COMMISSION MEETING Acme Township Hall Monday, November 8, 2021 7:00 p.m.

CALL TO ORDER WITH PLEDGE OF ALLEGIANCE at 7:01 p.m.

ROLL CALL: Members present: K. Wentzloff, J. Aukerman, J. Challender, S. Feringa, D. VanHouten, D. Rosa

Members excused: M. Timmins

Staff present: Planning Consultant Sara Kopriva, Beckett & Raeder, Inc., Jeff Jocks, Legal Counsel
There were 18 attendees from the public.

A. LIMITED PUBLIC COMMENT:

Limited Public Comment opened at 7:02 p.m.

Theresa Bak, 7108 Hawley Road, Williamsburg MI 49690, expressed her concerns over the potential odor, noise, and groundwater contamination from the medical marihuana growing facility to be built near her residence. She also requested that Acme Township deny any applications that allow adult use marihuana to be grown, processed, and sold in Acme Township.

Rhonda Stevens, 7127 Hawley Road, Williamsburg MI 49690, expressed her concerns that Acme Township is considering allowing recreational marihuana. She asked: will crime and auto crashes increase? How will the horrible odors from grower and processing facilities be addressed? How will the Equestrian Center react to the odors? Recreational marihuana investors want to make profits and are not concerned about effects on the local population.

Kristina Hendrickson, 6900 Bates Road, Acme MI 49690, stated that the medical marihuana growing facility property surrounds her residence on both the entire eastern and southern sides. She is concerned this company will be granted an adult use/recreational marihuana license in addition to the medical license they hold today. She asked the Planning Commission to limit number and types of licenses at one location and to have the zoning ordinance for such facilities include setbacks from residences similar to those established from schools and parks.

Rob Evina, 6075 Arabian Lane, Williamsburg MI 49690, expressed concerns with the Horse Shows SUP/SPR application before the Planning Commission. He plans to challenge and provide evidence it does not meet the standards for SUPs in Acme Township. He requested that the Public Hearing be continued to December to enable him and his attorney time to review Horse Shows' tremendous amount of late-arriving information. He also explained that, to accommodate 600 more horses on site for the 2021 season, Horse Shows illegally trucked in thousands of cubic yards of dirt without Acme Township approval and permits. Additionally, when a portion of this dirt was moved to a nearby residential property, it eroded onto Mr. Evina's residential property.

Brian Kelley, Acme Township resident, asked that the Planning Commission continue the Public Hearing for the Traverse City Horse Shows, LLC SUP/SPR 2021-02 at its December Planning Commission meeting. He stated that the equestrian event, once small and with limited impact to neighbors and community, is now large. He has a friend who lives 6,300 feet from the Horse Show property, over a mile away, who can hear the PA system during events, and Mr. Kelley wonders if Acme's noise ordinance covers this. Another concern is storm water runoff to Yuba Creek. He said the entire site has been disturbed and it does not drain as well as they think it does.

Limited Public Comment closed at 7:19 p.m.

B. APPROVAL OF AGENDA

Wentzloff recommended the addition of four items under correspondence:

1. Steven R. Fox, Attorney, Pezzetti, Vermetten & Popovits, PC; letter distributed to Planning Commissioners at the meeting
2. Brian Chouinard, Nature's ReLeaf; letter distributed to Planning Commissioners at the meeting
3. Kristina Hendrickson; letter distributed to Planning Commissioners at the meeting
4. Heather Smith, Baykeeper, Grand Traverse Bay Watershed; letter distributed to Planning Commissioners at the meeting

Wentzloff also recommended the re-ordering of Old Business items to:

1. Traverse City Horse Shows, LLC SUP/SPR 2021-02
2. Recreational Marihuana Zoning Ordinance Text Edits
3. Acme Township Draft Zoning Ordinance

Motion by Feringa, supported by Rosa, to approve the agenda with addition of four pieces of correspondence and re-ordering of the Old Business items. Voice vote. No discussion. Motion carried unanimously.

C. INQUIRY AS TO CONFLICTS OF INTEREST: None stated.

D. SPECIAL PRESENTATIONS: None

E. CONSENT CALENDAR:

1. RECEIVE AND FILE

- a. Township Board Approved Meeting Minutes, 10.5.21

2. ACTION

- a. Approve Draft Planning Commission Meeting Minutes, 10.18.21

F. ITEMS REMOVED FROM CONSENT CALENDAR: None

Motion by Feringa, supported by Challender to approve the Consent Calendar as presented. Voice vote. No discussion. Motion carried unanimously.

G. CORRESPONDENCE

A letter from each person, below, was distributed to Planning Commissioners at the meeting.

1. Steven R. Fox, Pezzetti Vermetten & Popovits, PC, Attorneys
2. Brian Chouinard, Nature's ReLeaf
3. Kristina Hendrickson
4. Heather Smith, Baykeeper, Grand Traverse Bay Watershed

Wentzloff read the pieces of correspondence aloud.

Mr. Fox's letter was pertaining to the Special Use permit application by the Traverse City Horse Shows.

Mr. Chouinard's letter contained transcripts from the City of Traverse City court case regarding medical Planning Commission Regular Meeting, November 8, 2021

marihuana license locations litigation with Green Peak Industries LLC.

Ms. Hendrickson's letter referenced the marihuana growing facility near her residence on Bates Road.

Ms. Smith's letter advocated for clean water in Grand Traverse Bay and she offered to be a resource in the Acme Township zoning ordinance draft revisions.

Complete copies of all correspondence received are attached to these minutes.

H. PUBLIC HEARINGS:

1. Continuation Traverse City Horse Shows, LLC – SUP/SPR 2021- 02

Wentzloff asked the applicant to present additional information available since the previous meeting.

Mr. Ronald J. Gajoch, AIA, President, Ronald J. Gajoch & Associates, Inc., 5134 Blazer Parkway, Dublin Ohio 43017, stated he was here to provide the Planning Commission and the township with an update on Horse Shows and where it stands with its Application. He said objectives today, following the last meeting, are to clearly explain how Horse Shows operates, and provide quantitative data to help you [Planning Commission and Township] out in making decisions. He wanted to clearly identify future improvements; explain Horse Shows' compliance with GAAMPs; explain the business model and how it impacts parking and attendance; and discuss landscape calculations meeting required standards that the township sets forth.

Mr. Gajoch said that Mansfield Land Use Consultants have addressed and re-submitted outstanding items and everything has been sent to Sara Kopriva. He further explained that we (Horse Shows) is trying to get the citations lifted and he emphasized Horse Shows' earlier promise to Acme Supervisor Doug White that Horse Shows would not do any work other than seed until the SUP was approved. He went on to request conditional approval to move forward with the maintenance of retention ponds and construction of the life safety fire access route because these improve the facility and make it safe.

Regarding identification of future improvements, Mr. Gajoch summarized the following plans:

For 2021-2022:

(1) Complete South Emergency Access Drive for emergency services. Horse Shows received the paper approval today from Grand Traverse Metro Fire for this access drive. Horse Shows must name the roads and label the buildings so they can be located during an emergency.

(2) Accomplish landscape and buffers meeting landscape standards and complying with ordinances:

- > Northern boundary abutting adjacent property owners
- > Along Bates Road
- > Future campgrounds

Dusty Christensen, LLA for Applicant, and Sara Kopriva, Acme Planning Consultant, had discussed if picture documentation, not tree counts, would be satisfactory since tree counts, especially along a densely-wooded area, can be very subjective.

For 2022-2023:

> Add one, final riding ring; a VIP pavilion; replace some of the tents with permanent awnings; construction of the new RV campgrounds; and pedestrian walking path required by ordinances.

For 2024:

> VIP Plaza concession buildings

Regarding storm water, he said that Horse Shows was requested to provide percolation data to check infiltration rates to verify that all of the calculations are correct. This was provided to reviewers and Horse Shows is waiting on comments. He added this step is the last real hurdle of approval.

Mr. Gajoch said that he can assure everyone that Horse Shows meets and exceeds GAAMP guidelines which deal with three points:

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- (1) Above Freeboard Level - a nautical term that describes water table and deck height. He said Horse Shows is way above the water table.
- (2) Containment on Site - the Horse Shows' containment is a three-sided concrete wall structure with concrete pad.
- (3) Manure is collected twice per day and shipped out daily. It is the responsibility of the farmer or composter to apply correctly. Manure is benign and more ecologically friendly to put down.

Mr. Gajoch explained that the USEF (United States Equestrian Federation) organization oversees all horse shows. USEF sets rules, safety guidelines for humans and animals, and facility guidelines for those who operate the events. USEF inspects each facility and Traverse City Horse Shows was certified this past summer with no issues.

Next, he provided background on Horse Shows saying it's all about showcasing riders and horses. These events are family-oriented and involve mostly families who travel together in a group, driving here with their horses. An economic impact report is being generated and Mr. Gajoch provided some excerpts from the report: during summer 2021, Traverse City Horse Shows had families and farms attending from 24 states, Mexico and Canada; over 60% traveled by car typically carrying 3 to 5 individuals. When surveyed, 2 - 4 people come to Horse Shows each day in a car; we use 3 as average. These events are similar to soccer and track & field tournaments in that the main attendees are competitors, officials, and families -- not the general public. Horse Shows runs in sessions. Normal day is from 8am to 5pm -- 9 hours -- with three distinct 3-hour sessions during the morning, mid-day, and afternoon. Available daylight limits activity and the school year dictates attendance. June is light; July heavy; August less heavy; September is light.

Mr. Gajoch then covered parking counts. He noted that there are 33 RV sites and 30 competitors and staff living adjacent/nearby to show grounds, and these numbers are not included in the parking count. The on-site parking stalls count for cars is 550. Horse Shows issues parking passes for a fee, so that controls a number of people. Max attendance is 4500 people -- participants, staff, everyone; this was in 2021. Max capacity for horses is 1,700. Site is at its max capacity. Horse Shows has had to turn people away. He said that it is never going to get any bigger.

He then walked everyone through the math to show that there are approximately 493 cars per day per session. $(4,500 - 33 \text{ RV pkg} = 4,467 - 30 \text{ nearby} = 4,437 \text{ divided by } 3 \text{ sessions/day} = 1479 \text{ divided by average of } 3/\text{car} = 493)$. He stated other factors that relieve parking: RV campgrounds will provide 42 more parking stalls; the future farmettes across Bates Rd. will enable people to walk to Horse Shows; other people are investing in nearby farms where they can stay, keep their horses, and walk to Horse Shows events.

Mr. Gajoch concluded by asking for conditional approval for the emergency services road and to clean out the storm water retention ponds.

Mr. Dusty Christensen, LLA, Planner, Mansfield Land Use Consultants, 830 Cottageview Drive, Suite 201, Traverse City, MI 49685, displayed the updated site plan for the Planning Commission and attendees to see as he walked through the current approved site plan and the projected layout as depicted in the SUP/SPR 2021-02 amendment application. Mr. Christensen noted that the Site Plan has been amended seven times since 2006, most recently in 2020. SUP/SPR 2021-02 is necessary to handle the expanding horse shows. He referenced the addition of 3 properties: a roughly 5-acre parcel on Arabian Lane to the north of the site; a 13.5-acre parcel adjoining it and fronting Bates Rd; and a 13-acre property off south-eastern corner of site where campgrounds are proposed.

The elevation drawings for the proposed horse stable buildings were submitted to Acme Township Planning and Zoning since the previous meeting. Mr. Christensen stated the phasing plan with dates and asked for direction on how best to quantify the trees on the property near Bates Road that are to be used for screening. He added that Horse Shows has permits for all improvements on deck for construction or already started, including from the Erosion Control office, County Health Department for septic system in Planning Commission Regular Meeting, November 8, 2021

southwest corner of site, and Road Commission for driveways. Mr. Christensen concluded his presentation by offering to answer any questions.

Wentzloff opened the Public Hearing at 8:03 p.m.

Wentzloff told the Commissioners that there are two options for next steps: close the Public Hearing or continue the Public Hearing. Staff had recommended Public Hearing be continued at next meeting because materials were not available to public for review. Sara Kopriva added that we received a lot of good information this evening but it would be good to have it in writing in our packets so that we know about it. Mr. Gajoch stated he will send Sara Kopriva, electronically, the document and data he used to provide information at tonight's Planning Commission meeting. Sara said she plans to include this information in the Planning Commissions' packet ahead of its next meeting.

Motion by Rosa, supported by Aukerman, to continue the Public Hearing until the next regularly scheduled Planning Commission meeting. Voice vote. No discussion. Motion carried unanimously.

I. OLD BUSINESS

1. Traverse City Horse Shows, LLC SUP/SPR 2021-02

Wentzloff asked the Planning Commissioners if they had any lingering issues to ask the Applicant or anything to be reviewed by Sara Kopriva or Jeff Jocks, legal counsel.

Feringa stated he was glad the Planning Commission voted to continue the Public Hearing on to the next month. He is not comfortable with conditional approval on SUPs. He wants all citations to be resolved and have everything we need from all the agencies, especially the storm water information -- and in a timely manner so that we are able to read and digest it, and make opinions. Providing it right ahead of the meeting gives him no time to review it.

Sara Kopriva said that she needs consensus on the screening/buffering question from Mr. Christensen. Does he need to count and specify the type of the existing trees? Does he need to provide photos of the existing trees?

It was agreed upon by the Planning Commissioners that photos would suffice to provide documentation that the buffer was sufficient to meet the Ordinance.

Wentzloff brought up traffic issues. Per Mr. Gajoch's presentation, 4,500 people attend the horse show each day. Conservatively estimating ride-sharing, that is 3,000 car trips or a car every 10 seconds going down Bates Rd. This does not include service vehicles to and from the Horse Shows property. There are also railroad tracks on Bates Road at M-72 which require special vehicles to stop. Wentzloff said she is concerned with the level of traffic.

Feringa added that this is a tough intersection [M-72 at Bates Rd] and not just during summer's peak times. There is an offset intersection combined with a railroad track.

Rosa asked what the difference between a tent and a pavilion is. Mr. Morrissey, Applicant for Traverse City Horse Shows, LLC, was present in the meeting audience and responded that tents are temporary, and pavilions are permanent structures. Mr. Rosa asked if a building permit is required for a tent. Mr. Christensen said it varies with the use of a tent. A tent on a residential property does not require a permit. Mr. Morrissey added that Grand Traverse Metro Fire Department inspects all tents on the Horse Show property, and fire extinguishers are placed in all tents.

Feringa said that, in building codes, tents are considered temporary structures and you do have to have a permit for them -- other than if it's a camping or personal residential tent.

Aukerman asked Mr. Gajoch if his presentation, when emailed to Sara Kopriva and the Planning Planning Commission Regular Meeting, November 8, 2021

Commissioners, will have web links to the raw data used to support his findings. He confirmed there are links in the document and that he would email all of it to Sara Kopriva.

Aukerman asked if there was a parking plan for the very large horse trailers. Mr. Gajoch said they will stay where they are (on site) currently. Morrissey responded that, downstream, Horse Shows is looking at locating horse trailers off site.

Aukerman asked about the buffer planned for Arabian Lane, specifically, the planting details and how long it would take for the trees to form a buffer. Dusty Christensen explained on the north property line, there are to be native evergreen, white pine and white spruce trees to create the buffer. He said that, by ordinance, the trees will be a minimum of 8 feet tall when planted, and spaced 20 - 25 feet on center with gaps in-between the trees to allow for growth. The trees will be about 18 to 20 feet tall in a decade, and it will be about ten years before it starts filling in completely. Dusty noted that the buffer shown on the Plan complies with the standards of the zoning ordinance for size and spacing.

Challender asked about the property of approximately 100 acres across Bates Road from the Traverse City Horse Shows property. Mr. Morrissey said the parcels will be sold in increments of five acres and larger.

Wentzloff noted a clarification on C4.1. She pointed out what she felt was a typo in #7; should be 9 spaces required; 10 provided. Dusty said he would look at that. She asked how required accessibility sites are calculated if there are no parking standards. Dusty said it's based on the number of spaces provided and that there is a table.

Another point was raised about the property across Bates Road. If these future farm owners show their horses at the Traverse City Horse Shows, they will be crossing Bates Road with their horses. Mr. Christensen said that Doug (Mansfield) has talked to the Grand Traverse County Road Commission about possibility of installing a "horse crossing" zone. Regarding Arabian Lane, Sara Kopriva asked if there are residents there who walk their horses across Arabian Lane. Matt Morrissey responded there are and there will be more. Sara recommended that, while some parking concerns are taken away now, we now have horse-and- traffic all together -- large animals and people walking to the site. We need to find an appropriate way to deal with any negative impacts this brings.

Wentzloff asked Jeff Jocks, legal counsel, for clarification on the expiration of the SUP/SPR 2021-02. Mr. Jocks stated that there is an expiration of one year after the SUP/SPR is submitted if no work has begun. If work has started, then no expiration will apply.

2. Recreational Marihuana Zoning Ordinance Text Edits

Sara Kopriva provided the Commissioners with a Zoning Districts official zoning map for Acme Township with the 1,000 ft Buffer from Parks and Schools marked. Sara found evidence in an ordinance that the Tart Trail is not considered a linear park in Acme Township zoning. There was discussion about the buffer.

Motion by Aukerman, supported by VanHouten to include buffers in the ordinance for recreational marijuana licensees that mimic the medical marijuana ordinance.

Motion withdrawn.

Motion by Aukerman, supported by VanHouten to hold a Public Hearing for the recreational marihuana zoning amendment including Zoning Ordinance 7.11 in its entirety. Voice vote. No discussion. Motion carried unanimously.

3. Acme Township Draft Zoning Ordinance

Wentzloff began the discussion with a concern that current zoning language unnecessarily punishes developers for impervious surface density. Wentzloff said that developers should be encouraged to include adequate sidewalks for pedestrian safety and usage. Sara Kopriva will review the current language.

J. NEW BUSINESS None

K. PUBLIC COMMENT & OTHER PLANNING COMMISSION BUSINESS

Public Comment was opened at 8:57 p.m.

Brian Kelley, Acme Township resident, believes a traffic study should be conducted to determine the impact of the Traverse City Horse Shows on M-72. Mr. Kelley attended the horse show this summer and traffic was bumper to bumper exiting the horse show grounds to M-72. For the expected horse show participants from the Equestrian Estates across Bates Road, he suggested the possibility of a horse tunnel to cross the road. Mr. Kelley said the dust from the horse shows needs to be addressed.

Scott Hardy, Commercial Realtor, Coldwell Banker Schmidt Commercial Realtors, 522 E. Front St, Traverse City MI 49686, is concerned with the buffer restrictions of the Recreational Marijuana Zoning Ordinance. Mr. Hardy has clients looking to invest \$1.5 to \$1.7 million dollars in the community. These potential investments are in jeopardy due to the current zoning buffering restrictions, and he asked if these buffers are necessary.

Theresa Bak, 7108 Hawley Road, Williamsburg MI 49690, expressed her views on the possible odors emitted from a medical marihuana facility to be established near her residence. She is concerned that medical marihuana license, alone, will not sustain the business and that they will seek a recreational marihuana license. She is a 50-plus year resident of Acme Township and is concerned for the quality of life for all Acme Township residents.

The Public Comment period was closed at 9:09 p.m.

OTHER PLANNING COMMISSION BUSINESS

Planning Commission - Sara Kopriva. No report.

Board - Jean Aukerman. Our meeting is tomorrow evening; no report now.

Parks & Trails Committee - Karly Wentzloff reported that they went out to bid for the Acme Connector Trail, and only one bid was received. They went back out to bid with some modifications for construction. They hope for 3 bids.

ADJOURN: Motion by Feringa, supported by Challenger to adjourn. Voice vote. No discussion. Motion carried unanimously.

Meeting adjourned at 9:12 p.m.



ACME TOWNSHIP PLANNING COMMISSION MEETING
ACME TOWNSHIP HALL
6042 Acme Road Williamsburg, MI 49690
November 8, 2021 7:00 p.m.

CALL TO ORDER WITH PLEDGE OF ALLEGIANCE

ROLL CALL:

- A. LIMITED PUBLIC COMMENT:** Members of the public may address the Commission regarding any subject of community interest during public comment periods by filling out a Public Comment Card and submitting it to the Secretary. Public comments are limited to three minutes per individual. Comments during other portions of the agenda may or may not be entertained at the moderator's discretion
- B. APPROVAL OF AGENDA:**
- C. INQUIRY AS TO CONFLICTS OF INTEREST:**
- D. SPECIAL PRESENTATIONS:**
- E. CONSENT CALENDAR:** The purpose of the consent calendar is to expedite business by grouping non-controversial items together for one Commission motion without discussion. A request to remove any item for discussion later in the agenda from any member of the Commission, staff or public shall be granted.
 - 1. RECEIVE AND FILE**
 - a.** Township Board Approved Meeting Minutes 10.05.21
 - 2. ACTION:**
 - a.** Approve Draft Planning Commission Meeting Minutes 10.18.21
- F. ITEMS REMOVED FROM THE CONSENT CALENDAR**
 - 1.** _____
 - 2.** _____
- G. CORRESPONDENCE:**
- H. PUBLIC HEARINGS:**
 - 1.** Continuation Traverse City Horse Shows, LLC – SUP/SPR 2021-02
- I. OLD BUSINESS:**
 - 1.** Acme Township Draft Zoning Ordinance
 - 2.** Traverse City Horse Shows, LLC SUP/SPR 2021-02
 - 3.** Recreational Marihuana Zoning Ordinance Text Edits
- J. NEW BUSINESS:**
- K. PUBLIC COMMENT & OTHER PC BUSINESS**
 - 1.** Planning & Zoning Administrator Report – Lindsey Wolf
 - 2.** Township Board Report – Jean Aukerman
 - 3.** Parks & Trails Committee Report – Marcie Timmins

ADJOURN:

1.

Acme Township Planning Commission
6042 Acme Rd.
Williamsburg, MI 49690

RE: Public comment on the Medical Marijuana grow operation located at 6980 Bates Rd.

I recently stopped at the Township Office and looked over the proposed site plans that the township has approved for the second time with regard to the Medical Marijuana Growing Operation to be located at 6980 Bates Road. I did notice several items not included in the site plan, and, as a property owner and resident of Acme Township, I would like to express the following concerns to the Planning Commission for consideration:

- **Hours of Operation, Delivery:** An operation of this type will require machinery and large vehicles for daily production, which means there will be loud, continuous noises from vehicles backing up, equipment for loading and unloading, systems for climate control and waste removal within the facility, as well as intense lighting during times commonly considered to be after hours.
For example: the Medical Marijuana Growing Facility to be located at 6980 Bates Road, where the surrounding properties are all residences and loud noises in the overnight hours would create disturbance.
- **Concentration of Permits in one location:** Following the example of other local townships, place a limit to the number and types of permits available to one site, as well as distance restrictions to avoid high intensity use within areas where there are residences in close proximity to such a facility, with particular regard to bordering properties.
For example: The facility to be located at 6980 Bates Road surrounds the neighboring residence at 6900 Bates Road on both the Eastern and Southern borders, as well as the entire Southern border of the residence located at 6920 Bates Road. Allowing multiple permits at this location would cause inappropriately high intensity usage in close proximity to both residences.
- **Site Planning:** Business concerns of this nature be required to include such information as the location and placement of any existing homes, buildings, designated wetlands, or watersheds on bordering properties. These would indicate the need for additional site features or requirements such as vegetative screening, erosion control, and wastewater or snow melt runoff.
For example: The original site plan submitted for the 6980 Bates Road Facility does not indicate the placement of the home located on the bordering property at 6900 Bates Road. That house is set well back from the road where the entire facility to the east will be plainly visible. Yet, there are no provisions in the original plan for vegetative screening or distance restrictions. Additionally, the property borders a wetlands

- **Processing of liquid waste containing solvents or chemicals:** Facilities of this type that produce a large volume of waste water containing concentrations of solvents, fertilizers and other chemicals should be required to make provision for holding, treating, and safe removal of such waste that may contaminate surrounding aquifers, residential wells, wetlands, and watersheds. Waste of this nature should be removed in a manner that will avoid possible contamination of nearby properties and not disposed of by pumping into deep wells or drainage fields.

Respectfully submitted,

Kristina Hendrickson
6900 Bates Road
Williamsburg, MI 49690
231-267-5688

Nancy Edwardson

From: Heather Smith <hsmith@gtbay.org>
Sent: Monday, November 8, 2021 11:59 AM
To: Lindsey Wolf
Cc: Nancy Edwardson
Subject: FW: Draft Zoning Ordinance

Dear Acme Township Planning Commissioners,

We understand that draft Zoning Ordinance, Version 7 (11.01.21) is schedule for discussion at your November 8, 2021 Planning Commission meeting. The Watershed Center advocates for clean water in Grand Traverse Bay and works to preserve and protect the watershed. We work with townships and municipalities across the watershed to support the adoption of zoning standards and land use policies that protect our water.

We understand prior Zoning Ordinance drafts omitted Section 4.3.5, *Removal of Shore Cover*, while the Planning Commission continued to discuss the preservation of vegetation at the land-water interface. We are pleased to see this section reinstated in this current draft. Trees and other vegetation along our shorelines and streambanks are critical for infiltrating and filtering runoff, controlling erosion, dampening noise, providing screening, shading land and water, providing habitat, and protecting the scenic beauty that makes the Grand Traverse region such a desirable place. We support zoning tools such as this subsection of the Waterfront Overlay District to ensure our water is protected.

The Watershed Center is happy to serve as a resource if any questions arise about these draft provisions. Thank you for protecting our land and water.

Thank you,

Heather Smith

Grand Traverse BAYKEEPER
The Watershed Center Grand Traverse Bay
13170 S. West Bay Shore Drive, Suite 102 | Traverse City, MI 49684
Office: 231.935.1514 x 3 | Direct: 231.299.0118
www.gtbay.org

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November 8, 2021

VIA EMAIL TO zoning@acmetownship.org
Karly Wentzloff, Chair
Planning Commission
6042 Acme Road
Williamsburg, MI 49690

VIA EMAIL TO zoning@acmetownship.org
Lindsey Wolf, Planning and Zoning Administrator
6042 Acme Road
Williamsburg, MI 49690

VIA EMAIL TO cdye@acmetownship.org
Cathy Dye, Township Clerk
6042 Acme Road
Williamsburg, MI 49690

RE: Traverse City Horse Shows

Dear Ms. Wentzloff, Ms. Wolf and Ms. Dye:

I have had the opportunity to review that packet submitted to the Planning Commission for tonight's meeting. I would like to emphasize a few points on behalf of my clients.

First, it is clear that the applicant has not submitted a complete proposal for a major amendment to an existing special use permit. As the Chairperson noted at the last meeting, the applicant moved forward with construction before seeking an amendment, and used the unauthorized improvements this summer. The failure by the applicant to submit a complete application by November is indicative of the applicant's disdain for the zoning process and disregard for the effect their operation has on the community.

Second, we agree with the Township planner that not only is the application incomplete, but that the use proposed is a fundamental change over time. We encourage the Planning Commission to direct the applicant to resubmit an appropriate application for consideration, including: to address (i) what lands will be used within what time frame (we see no reason the Township should approve improvements or activities which will occur more than 12 months from now) and (ii) why this proposal should not be considered as a planned unit development. The use of the property has already, and will continue to have a substantial impact on the neighbors, and appropriate due diligence is necessary, including a traffic study.

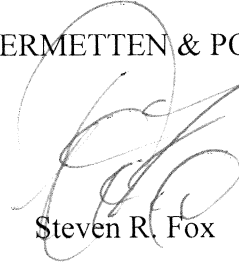
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Finally, the neighbors and the community have a right to be heard regarding this proposed amendment. They also have the right to review a complete application in the process. We encourage the Planning Commission to demand an appropriate application and process. My client will insist on that as an element of fair process moving forward.

Sincerely,

PEZZETTI, VERMETTEN & POPOVITS, P.C.

A handwritten signature in black ink, appearing to read 'S. Fox', is written over the printed name 'Steven R. Fox'.

Steven R. Fox

SRF/sab

cc. Jeffrey L. Jocks- via email to jjocks@sondeeracine.com

November 5, 2021

Acme Township
Attn: Lindsey Wolf, Zoning Administrator
6042 Acme Road
Williamsburg, Michigan 49690

Re: 6535 Bates Road
Storm Water Review Response

Dear Lindsey,

We are in receipt of the Twp.'s consultant review email dated October 12, 2021, regarding the latest storm water submittal for the Horse Shows property located at 6535 Bates Road. We have attached the following information and have itemized responses below:

1. (1) copy of revised Drainage Area Exhibit
2. (1) copy of stormwater calculations
3. (1) copy of HydroCAD reports for all basins
4. (1) copy of infiltration test results
5. (1) copy of revised plan set

Since the last storm water submittal, a drone survey has been performed of the entire site. Topographic plans have been provided for all basins (Sheet C5.2). Infiltration tests were performed and your concern for reduced capacity due to siltation of the bottom was confirmed. The Owner has mentioned that regular maintenance of the existing basins has not been performed in previous years. We will work with the Owner to establish a schedule for yearly spring cleaning for each basin to ensure infiltration capacity is not reduced. Based on the results from the infiltration tests, if the basins are regularly maintained, each basin has more than enough infiltration capacity to contain back-to-back 100-year storm events.

Due to the routing of the emergency access lane, the South Basin has been revised to meet capacity requirements. Runoff from the proposed emergency access lane is included in the volume calculations for both the Northwest Basin and the South Basin.

Area A

- The revised calculations include all area from newly constructed "Arabian Lanes Site Addition". Also, runoff from a portion of the emergency access drive and all the

future impervious areas that will be built with the VIP Pavilions (or BLDG A) has been designed to be stored within the NW Basin.

- Infiltration tests were completed, and results are attached. The existing Northwest Basin had a measured infiltration rate of **10 in/hr**. We used a design infiltration rate of 4.0 in/hr giving us a proposed max water depth in the Basin of 2.01' after a back-to-back 100-year storm event.
- A minimum infiltration rate of 2.45 in/hr would be needed for this Basin to effectively store runoff from a back-to-back 100-year storm event.

Area B

- The revised calculations include area from the emergency access drive.
- Infiltration tests were completed, and results are attached. The existing South Basin had a measured infiltration rate of **16 in/hr**. We used a design infiltration rate of 4.0 in/hr giving us a proposed max water depth in the Basin of 4.77 after a back-to-back 100-year storm event.

Area C

- Topographic plan is now included for the existing East Basin. The basin details are shown on Sheet C5.2.
- Infiltration tests were completed, and results are attached. The existing East Basin had a measured infiltration rate of **24 in/hr**. We used a design infiltration rate of 4.0 in/hr giving us a proposed max water depth in the Basin of 3.0' after a back-to-back 100-year storm event.
- A minimum infiltration rate of 2.60 in/hr would be needed for this Basin to effectively store runoff from a back-to-back 100-year storm event.

Area D

- Topographic plan is now included for the existing Northeast Basins. The basin details are shown on Sheet C5.2. For the existing NE Basin #1, the available storage extends into the wooded area to the north. Aerial imagery of this basin does not accurately reflect the actual storage area.
- Infiltration tests were completed, and results are attached. The existing NE Basin #1 had a measured infiltration rate of **18.5 in/hr** and NE Basin #2 had a measured infiltration rate of **30+ in/hr**. We used a design infiltration rate of 4.0 in/hr for both basins giving us a proposed max water depth in the Basin of 1.55' after a back-to-back 100-year storm event. These two basins were modeled together.

- Please note that there are additional shallow basins located within Area D, as shown on the Drainage Areas Exhibit. Using a conservative approach, these two additional shallow basins were not included in the overall calculations for this area.
- A minimum infiltration rate of 2.60 in/hr would be needed for these Basins to effectively store runoff from a back-to-back 100-year storm event.

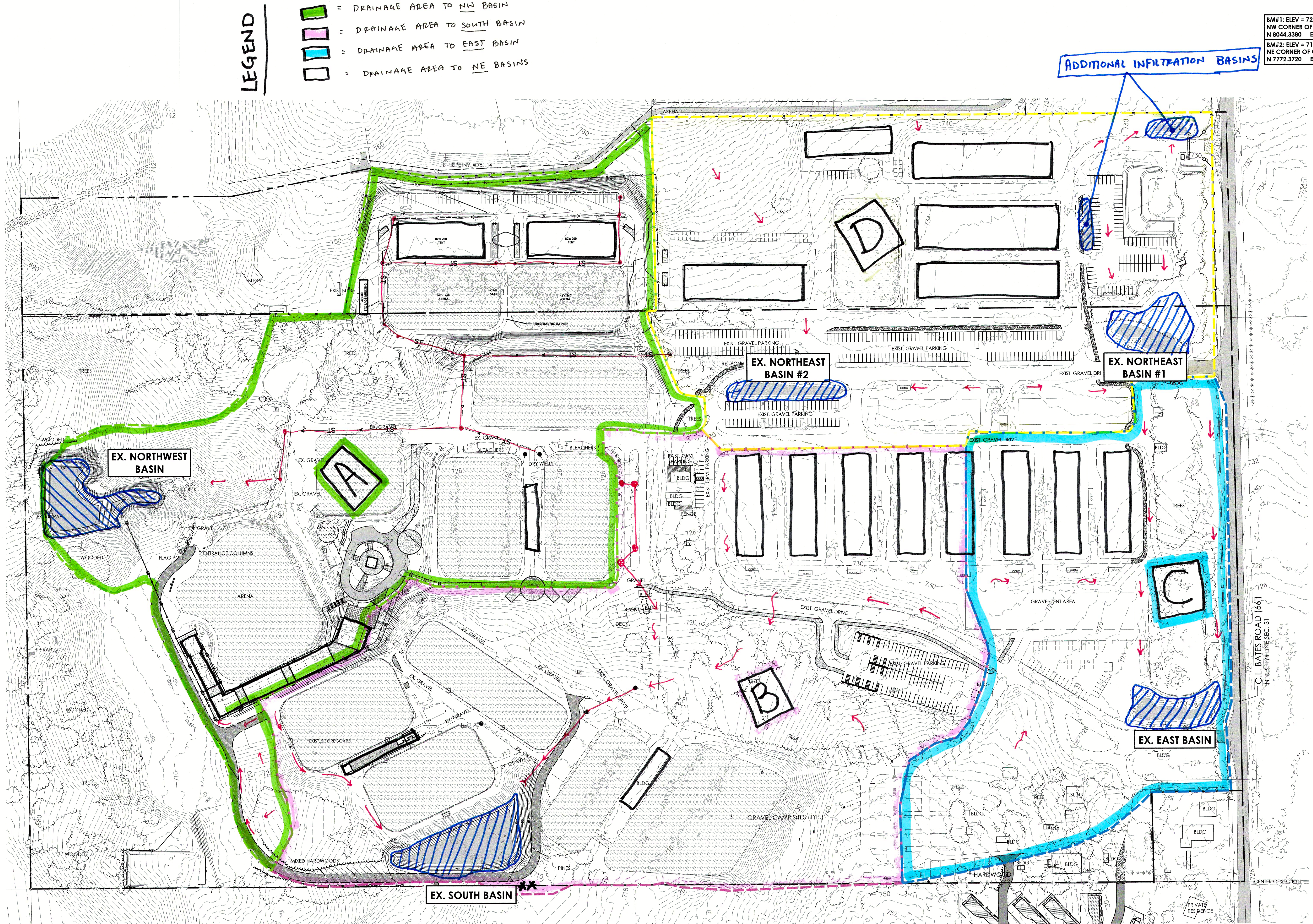
Should you have any questions please feel free to call me at (815) 236-0940 or email me at ericw@maaeps.com.

Sincerely,
Mansfield Land Use Consultants



Eric Wilde, P.E.

P:\Land Projects\2019\19039 Traverse City Horse Shows Land Improvements\19039 Plan 11 Land Drainage Exhibit - Nov 03, 2021 10:25am - mdc



NOTE:
Property boundaries, land contours, physical features and the like, illustrated on this plan are exhibited for planning purposes only. Mansfield Land Use Consultants makes no guarantee to the correctness nor the completeness of this information.

REV#	DATE	BY	CHK	DESC
02	05-18-20	dmc	mm	Two Submittal
03	08-01-20	dmc	mm	Proposed Ring - North Parcel
04	08-05-20	dmc	mm	Proposed Grand Arena Ring and Buildings
05	11-12-20	dmc	mm	Health Department Submittal
06	12-21-20	dmc	mm	Revisions per Health Department
07	02-04-21	dmc	mm	Revisions Building Department Plan Review #1
08	05-12-21	dmc	mm	Township Submittal
09	11-02-21	dmc	mm	Township Submittal

Traverse City Horse Shows, LLC
Horse Park Improvements
OVERALL DRAINAGE AREAS EXHIBIT
Section 31, Town 28 North, Range 09 West
Acme Township, Grand Traverse County, Michigan

PRELIMINARY

DATE: 03.04.19

PROJECT: 19039

EXHIBIT

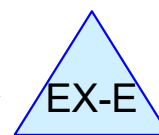
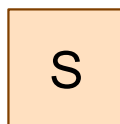
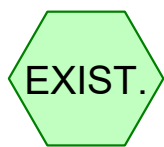
Mansfield
Land Use Consultants

830 Cottageview Dr., Ste. 201
P.O. Box 4015
Traverse City, MI 49685
Phone: 231-946-9510
www.maaaps.com
info@maaaps.com

SITE STORM WATER CALCS:

Project: **Horse Shows - Existing Drainage Calcs**
 Project No.: **19039**
 Location: **Acme Township**
 Client: **Traverse City Horse Shows**

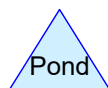
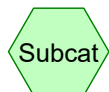
AREA	GRAVEL	ROOF	ARENA / LAWN	TOTAL (sft)	TOTAL (ac.)
NW Basin	171,799 sft	63,153 sft	855,060 sft	1,116,616 sft	25.63 ac.
South Basin	220,501 sft	85,392 sft	977,010 sft	1,282,903 sft	29.45 ac.
East Basin	140,605 sft	43,466 sft	429,166 sft	613,237 sft	14.08 ac.
NE Basins	305,123 sft	115,290 sft	505,133 sft	925,546 sft	21.25 ac.
					90.41 ac.



EX. DRAINAGE AREA

SURFACE FLOW

EX. BASIN - EAST



Routing Diagram for Horse-Show_FINAL_Basin_East
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Horse-Show FINAL Basin East**Prepared by Mansfield Land Use Consultants****Printed 11/3/2021****HydroCAD® 10.00-18 s/n 09498 © 2016 HydroCAD Software Solutions LLC****Page 2****Area Listing (all nodes)**

Area (acres)	C	Description (subcatchment-numbers)
3.228	0.60	Gravel Drives (EXIST.)
9.852	0.15	Lawn / Arenas (EXIST.)
0.998	0.95	Roof (EXIST.)
14.078	0.31	TOTAL AREA

Summary for Subcatchment EXIST.: EX. DRAINAGE AREA

Runoff = 1.85 cfs @ 0.00 hrs, Volume= 3.698 af, Depth= 3.15"

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Rainfall Duration=1,452 min, Inten=0.42 in/hr

Area (sf)	C	Description
140,605	0.60	Gravel Drives
43,466	0.95	Roof
429,166	0.15	Lawn / Arenas
613,237	0.31	Weighted Average
569,771		92.91% Pervious Area
43,466		7.09% Impervious Area

Summary for Reach S: SURFACE FLOW

Inflow Area = 14.078 ac, 7.09% Impervious, Inflow Depth = 3.15"
Inflow = 1.85 cfs @ 0.00 hrs, Volume= 3.698 af
Outflow = 1.85 cfs @ 0.00 hrs, Volume= 3.698 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Pond EX-E: EX. BASIN - EAST

Inflow Area = 14.078 ac, 7.09% Impervious, Inflow Depth = 3.15"
Inflow = 1.85 cfs @ 0.00 hrs, Volume= 3.698 af
Outflow = 1.83 cfs @ 24.20 hrs, Volume= 3.698 af, Atten= 1%, Lag= 1,452.0 min
Primary = 1.83 cfs @ 24.20 hrs, Volume= 3.698 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Peak Elev= 720.19' @ 24.20 hrs Surf.Area= 9,703 sf Storage= 19,715 cf

Plug-Flow detention time= 151.4 min calculated for 3.697 af (100% of inflow)

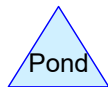
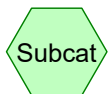
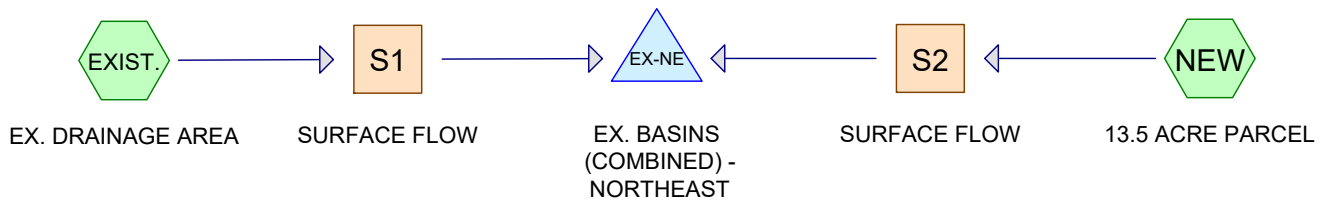
Center-of-Mass det. time= 151.1 min (877.1 - 726.0)

Volume	Invert	Avail.Storage	Storage Description		
#1	717.00'	57,546 cf	Custom Stage Data (Irregular) Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
717.00	2,048	211.0	0	0	2,048
718.00	5,277	409.0	3,537	3,537	11,822
719.00	7,148	454.0	6,189	9,726	14,942
720.00	9,257	506.0	8,180	17,906	18,944
721.00	11,710	557.0	10,460	28,366	23,290
722.00	14,506	608.0	13,083	41,449	28,054
723.00	17,743	670.0	16,097	57,546	34,392

Device	Routing	Invert	Outlet Devices
#1	Primary	717.00'	4.000 in/hr Exfiltration over Wetted area

Primary OutFlow Max=1.83 cfs @ 24.20 hrs HW=720.19' (Free Discharge)

↑1=Exfiltration (Exfiltration Controls 1.83 cfs)



Horse-Show FINAL Basin Northeast**Prepared by Mansfield Land Use Consultants****Printed 11/2/2021****HydroCAD® 10.00-18 s/n 09498 © 2016 HydroCAD Software Solutions LLC****Page 2****Area Listing (all nodes)**

Area (acres)	C	Description (subcatchment-numbers)
7.005	0.60	Gravel Drives (EXIST., NEW)
11.596	0.15	Lawn / Arenas (EXIST., NEW)
2.647	0.95	Roof (EXIST., NEW)
21.248	0.40	TOTAL AREA

Summary for Subcatchment EXIST.: EX. DRAINAGE AREA

Runoff = 1.47 cfs @ 0.00 hrs, Volume= 2.937 af, Depth= 4.37"

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Rainfall Duration=1,452 min, Inten=0.42 in/hr

Area (sf)	C	Description
170,283	0.60	Gravel Drives
28,076	0.95	Roof
152,754	0.15	Lawn / Arenas
351,113	0.43	Weighted Average
323,037		92.00% Pervious Area
28,076		8.00% Impervious Area

Summary for Subcatchment NEW: 13.5 ACRE PARCEL

Runoff = 2.12 cfs @ 0.00 hrs, Volume= 4.246 af, Depth= 3.86"

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Rainfall Duration=1,452 min, Inten=0.42 in/hr

Area (sf)	C	Description
134,840	0.60	Gravel Drives
87,214	0.95	Roof
352,379	0.15	Lawn / Arenas
574,433	0.38	Weighted Average
487,219		84.82% Pervious Area
87,214		15.18% Impervious Area

Summary for Reach S1: SURFACE FLOW

Inflow Area = 8.060 ac, 8.00% Impervious, Inflow Depth = 4.37"
Inflow = 1.47 cfs @ 0.00 hrs, Volume= 2.937 af
Outflow = 1.47 cfs @ 0.00 hrs, Volume= 2.937 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Reach S2: SURFACE FLOW

Inflow Area = 13.187 ac, 15.18% Impervious, Inflow Depth = 3.86"

Inflow = 2.12 cfs @ 0.00 hrs, Volume= 4.246 af

Outflow = 2.12 cfs @ 0.00 hrs, Volume= 4.246 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Pond EX-NE: EX. BASINS (COMBINED) - NORTHEAST

Inflow Area = 21.248 ac, 12.46% Impervious, **Inflow Depth =** 4.06"
Inflow = 3.59 cfs @ 0.00 hrs, **Volume=** 7.183 af
Outflow = 3.59 cfs @ 24.20 hrs, **Volume=** 7.183 af, **Atten=** 0%, **Lag=** 1,452.0 min
Primary = 3.59 cfs @ 24.20 hrs, **Volume=** 7.183 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, **dt=** 0.01 hrs

Peak Elev= 728.55' @ 24.20 hrs **Surf.Area=** 21,527 sf **Storage=** 24,705 cf

Plug-Flow detention time= 107.0 min calculated for 7.182 af (100% of inflow)

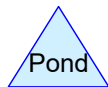
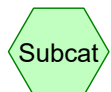
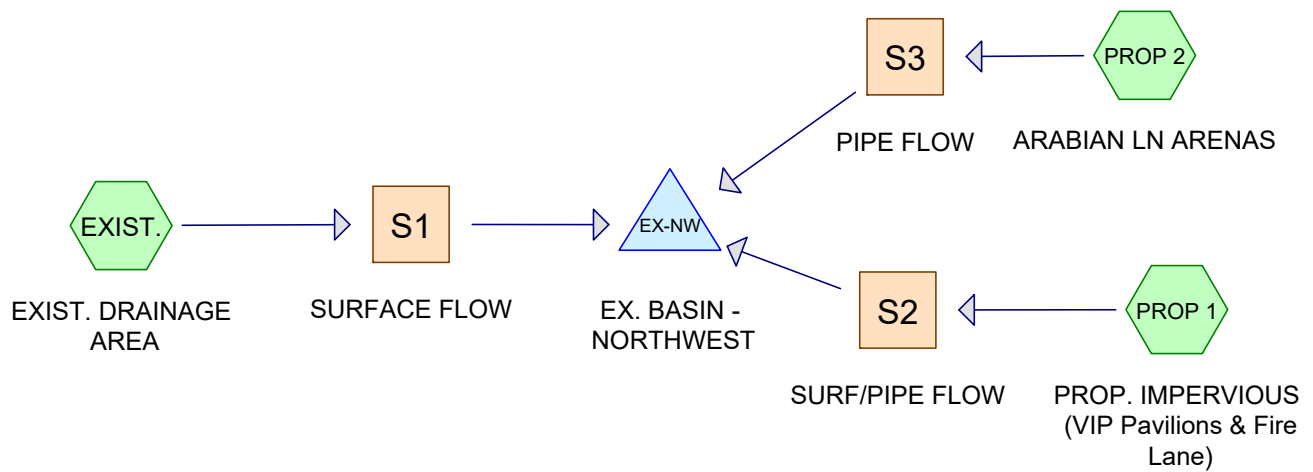
Center-of-Mass det. time= 106.7 min (832.7 - 726.0)

Volume	Invert	Avail.Storage	Storage Description		
#1	727.00'	67,453 cf	Custom Stage Data (Irregular) Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
727.00	10,745	903.0	0	0	10,745
728.00	17,508	1,017.0	13,990	13,990	28,189
729.00	25,125	1,132.0	21,202	35,192	47,885
730.00	39,970	1,383.0	32,262	67,453	98,135

Device	Routing	Invert	Outlet Devices
#1	Primary	727.00'	4.000 in/hr Exfiltration over Wetted area

Primary OutFlow Max=3.59 cfs @ 24.20 hrs **HW=**728.55' (Free Discharge)

↑1=Exfiltration (Exfiltration Controls 3.59 cfs)



Routing Diagram for Horse-Show_FINAL_Northwest
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Horse-Show FINAL Northwest**Prepared by Mansfield Land Use Consultants****Printed 11/3/2021****HydroCAD® 10.00-18 s/n 09498 © 2016 HydroCAD Software Solutions LLC****Page 2****Area Listing (all nodes)**

Area (acres)	C	Description (subcatchment-numbers)
1.913	0.15	Exist. Arena (PROP 2)
1.213	0.60	Gravel (PROP 2)
2.286	0.60	Gravel Drive (EXIST.)
0.444	0.60	Gravel Fire Lane (PROP 1)
0.574	0.15	Lawn (PROP 2)
15.424	0.15	Lawn / Horse Arenas (EXIST.)
1.718	0.15	New Arenas (PROP 2)
0.674	0.98	Pvmt (PROP 1, PROP 2)
0.791	0.98	Roof (PROP 2)
0.559	0.98	Roof/Deck (PROP 1)
25.598	0.28	TOTAL AREA

Summary for Subcatchment EXIST.: EXIST. DRAINAGE AREA

Runoff = 1.58 cfs @ 0.00 hrs, Volume= 3.151 af, Depth= 2.14"

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Rainfall Duration=1,452 min, Inten=0.42 in/hr

Area (sf)	C	Description
99,597	0.60	Gravel Drive
671,876	0.15	Lawn / Horse Arenas
771,473	0.21	Weighted Average
771,473		100.00% Pervious Area

Summary for Subcatchment PROP 1: PROP. IMPERVIOUS (VIP Pavilions & Fire Lane)

Runoff = 0.60 cfs @ 0.00 hrs, Volume= 1.203 af, Depth= 8.95"

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Rainfall Duration=1,452 min, Inten=0.42 in/hr

Area (sf)	C	Description
26,604	0.98	Pvmt
24,352	0.98	Roof/Deck
19,349	0.60	Gravel Fire Lane
70,305	0.88	Weighted Average
19,349		27.52% Pervious Area
50,956		72.48% Impervious Area

Summary for Subcatchment PROP 2: ARABIAN LN ARENAS

Runoff = 0.93 cfs @ 0.00 hrs, Volume= 1.861 af, Depth= 3.56"

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Rainfall Duration=1,452 min, Inten=0.42 in/hr

Area (sf)	C	Description
52,853	0.60	Gravel
2,761	0.98	Pvmt
34,477	0.98	Roof
74,856	0.15	New Arenas
25,000	0.15	Lawn
83,328	0.15	Exist. Arena
273,275	0.35	Weighted Average
236,037		86.37% Pervious Area
37,238		13.63% Impervious Area

Summary for Reach S1: SURFACE FLOW

Inflow Area = 17.711 ac, 0.00% Impervious, Inflow Depth = 2.14"
Inflow = 1.58 cfs @ 0.00 hrs, Volume= 3.151 af
Outflow = 1.58 cfs @ 0.00 hrs, Volume= 3.151 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Reach S2: SURF/PIPE FLOW

Inflow Area = 1.614 ac, 72.48% Impervious, Inflow Depth = 8.95"

Inflow = 0.60 cfs @ 0.00 hrs, Volume= 1.203 af

Outflow = 0.60 cfs @ 0.00 hrs, Volume= 1.203 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Reach S3: PIPE FLOW

Inflow Area = 6.274 ac, 13.63% Impervious, Inflow Depth = 3.56"

Inflow = 0.93 cfs @ 0.00 hrs, Volume= 1.861 af

Outflow = 0.93 cfs @ 0.00 hrs, Volume= 1.861 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Pond EX-NW: EX. BASIN - NORTHWEST

Inflow Area = 25.598 ac, 7.91% Impervious, **Inflow Depth =** 2.91"
Inflow = 3.11 cfs @ 0.00 hrs, **Volume=** 6.216 af
Outflow = 3.10 cfs @ 24.20 hrs, **Volume=** 6.216 af, **Atten=** 0%, **Lag=** 1,452.0 min
Primary = 3.10 cfs @ 24.20 hrs, **Volume=** 6.216 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, **dt=** 0.01 hrs

Peak Elev= 682.75' @ 24.20 hrs **Surf.Area=** 18,585 sf **Storage=** 42,991 cf

Plug-Flow detention time= 215.0 min calculated for 6.213 af (100% of inflow)

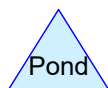
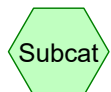
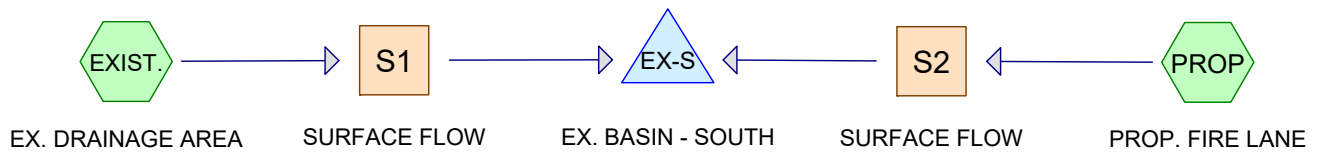
Center-of-Mass det. time= 214.7 min (940.7 - 726.0)

Volume	Invert	Avail.Storage	Storage Description		
#1	680.00'	116,533 cf	Custom Stage Data (Irregular) Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
680.00	13,115	570.0	0	0	13,115
681.00	14,875	605.0	13,986	13,986	16,440
682.00	16,763	665.0	15,810	29,795	22,537
683.00	19,223	794.0	17,979	47,774	37,532
684.00	21,645	823.0	20,422	68,196	41,350
685.00	24,163	851.0	22,892	91,089	45,173
686.00	26,748	871.0	25,445	116,533	48,046

Device	Routing	Invert	Outlet Devices
#1	Primary	680.00'	4.000 in/hr Exfiltration over Wetted area

Primary OutFlow Max=3.10 cfs @ 24.20 hrs **HW=**682.75' (Free Discharge)

↑ **1=Exfiltration (Exfiltration Controls 3.10 cfs)**



Horse-Show FINAL Basin South**Prepared by Mansfield Land Use Consultants****Printed 11/2/2021****HydroCAD® 10.00-18 s/n 09498 © 2016 HydroCAD Software Solutions LLC****Page 2****Area Listing (all nodes)**

Area (acres)	C	Description (subcatchment-numbers)
5.062	0.60	Gravel Drives (EXIST., PROP)
22.429	0.15	Lawn / Arenas (EXIST.)
1.960	0.95	Roof (EXIST.)
29.451	0.28	TOTAL AREA

Summary for Subcatchment EXIST.: EX. DRAINAGE AREA

Runoff = 3.45 cfs @ 0.00 hrs, Volume= 6.897 af, Depth= 2.85"

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Rainfall Duration=1,452 min, Inten=0.42 in/hr

Area (sf)	C	Description
203,782	0.60	Gravel Drives
85,392	0.95	Roof
977,010	0.15	Lawn / Arenas
1,266,184	0.28	Weighted Average
1,180,792		93.26% Pervious Area
85,392		6.74% Impervious Area

Summary for Subcatchment PROP: PROP. FIRE LANE

Runoff = 0.10 cfs @ 0.00 hrs, Volume= 0.195 af, Depth= 6.10"

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Rainfall Duration=1,452 min, Inten=0.42 in/hr

Area (sf)	C	Description
16,719	0.60	Gravel Drives
16,719		100.00% Pervious Area

Summary for Reach S1: SURFACE FLOW

Inflow Area = 29.068 ac, 6.74% Impervious, Inflow Depth = 2.85"
Inflow = 3.45 cfs @ 0.00 hrs, Volume= 6.897 af
Outflow = 3.45 cfs @ 0.00 hrs, Volume= 6.897 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Reach S2: SURFACE FLOW

Inflow Area = 0.384 ac, 0.00% Impervious, Inflow Depth = 6.10"

Inflow = 0.10 cfs @ 0.00 hrs, Volume= 0.195 af

Outflow = 0.10 cfs @ 0.00 hrs, Volume= 0.195 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Pond EX-S: EX. BASIN - SOUTH

Inflow Area = 29.451 ac, 6.66% Impervious, Inflow Depth = 2.89"
 Inflow = 3.54 cfs @ 0.00 hrs, Volume= 7.092 af
 Outflow = 2.90 cfs @ 24.20 hrs, Volume= 7.092 af, Atten= 18%, Lag= 1,451.9 min
 Primary = 2.90 cfs @ 24.20 hrs, Volume= 7.092 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Peak Elev= 700.77' @ 24.20 hrs Surf.Area= 26,820 sf Storage= 102,753 cf

Plug-Flow detention time= 406.4 min calculated for 7.090 af (100% of inflow)

Center-of-Mass det. time= 406.0 min (1,132.0 - 726.0)

Volume	Invert	Avail.Storage	Storage Description		
#1	696.00'	138,129 cf	Custom Stage Data (Irregular) Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
696.00	16,589	654.0	0	0	16,589
697.00	18,589	678.0	17,580	17,580	19,219
698.00	20,662	703.0	19,616	37,196	22,052
699.00	22,809	729.0	21,727	58,923	25,100
700.00	25,043	761.0	23,917	82,840	28,966
701.00	27,369	785.0	26,197	109,037	32,018
702.00	30,849	809.0	29,092	138,129	35,165

Device	Routing	Invert	Outlet Devices
#1	Primary	696.00'	4.000 in/hr Exfiltration over Wetted area

Primary OutFlow Max=2.90 cfs @ 24.20 hrs HW=700.77' (Free Discharge)

↑ 1=Exfiltration (Exfiltration Controls 2.90 cfs)



SOILS & STRUCTURES

November 4, 2021

Traverse City Horse Shows, LLC
15355 DeHavilland Court
Wellington, Florida 33414

Attention: Mr. Matt Morrissey

Regarding: Soil Infiltration Test
Traverse City Horse Shows
Williamsburg, Grand Traverse County, Michigan
Project No. 2021.2209

Dear Mr. Morrissey:

Soils & Structures is pleased to present the results of the soil infiltration tests conducted for the Traverse City Horse Shows property located on Bates Road in Williamsburg, Michigan.

The soil infiltration tests were performed in existing stormwater basins to measure the rate of water flow into the soil. The field testing was completed on October 29, 2021.

Measurements were obtained using a hand auger boring drilled to a depth of 30.0 inches below the bottom of the topsoil layer. The hand auger boring was filled with water to the bottom of the topsoil layer. Water level measurements were collected at specific time intervals until the boring sidewalls collapsed or up to a maximum duration of 60 minutes. Two trials are completed at each test location. The soil infiltration rates were calculated from the change in water level over time. Due to the current water table elevation at basin number five, a soil sample was obtained for further laboratory analysis. The results are included in the table below.

Location	Infiltration Rate (Inches per Hour)
Basin 1	18
Basin 2	30
Basin 3	18
Basin 4	16
Basin 5	10

The surface conditions of the drainage basins contain a layer of silt and impermeable sediment. The layer thickness ranges from 0.5 to 2.0 inches. This layer has developed over time from storm event runoff, impeding the drainage basin's ability to permeate water.

We appreciate the opportunity to be of service to you. If you have any questions concerning this letter please contact our office.

Sincerely,

Eric R. Tourre
Field Manager
ERT/et



Coefficient of Permeability Tests (Constant Head) – ASTM D2434

Date 11/4/2021 Job Number 2021.2209
 Test Number 1 Depth Job Name Traverse City Horse Shows
 Lab Number 1 Tested By HB
 Description of Soil Brown Sand Fine with lenses of gray silty clay

K = Coefficient of permeability (cm/second)

Q = Quantity of water discharged (g or ml)

L = Distance between manometers (cm)

A = Cross sectional area of specimen ($\pi \times \text{radius}^2$)

T = Total time of discharge (seconds)

H = Difference in head on manometers (cm)

Diameter 7.62 cm
 Height 16.002 cm
 Area 45.60367312 cm²

Trial	Q (ml)	L (cm)	A (cm ²)	T (sec)	H (in) (cm)		Temp (C) (Correction)		K	Infiltration Rate	
1	100	7.62	45.60367312	30.14	22	55.88	22.2	0.953	0.00945	13.40017	in/hr.
2	100	7.62	45.60367312	30.5	22	55.88	22.2	0.853	0.00836	11.85249	in/hr.
3	100	7.62	45.60367312	32.4	22	55.88	22.2	0.853	0.00787	11.15744	in/hr.
4	100	7.62	45.60367312	34.57	22	55.88	22.2	0.853	0.00738	10.45707	in/hr.
5	100	7.62	45.60367312	36.54	24	60.96	22.2	0.853	0.00640	9.068855	in/hr.
6	100	7.62	45.60367312	40.08	24	60.96	22.2	0.853	0.00583	8.267863	in/hr.
7	100	7.62	45.60367312	40.58	24	60.96	22.2	0.853	0.00576	8.165992	in/hr.

10.3386



SOILS & STRUCTURES

REPORT OF PERCOLATION TEST # 1 NE BASIN #1

Project: TRAVERSE CITY HORSE SHOWS

Job No: 2021.2209

Soil Description: SAND - LIGHT BROWN FINE TO MEDIUM

Date: 10/28

Topsoil Thickness: 1" - SILTY CLAY

Depth of Hole Below Topsoil: ^{30 INCHES}
60 inches

TIME	TRIAL # 1	TRIAL # 2
Initial Water Depth	30 INCHES 60.0 inches	30 INCHES 60.0 inches
Water Level Drop		
30 sec	1.5"	2.0"
1 min	2.0"	3.0"
1 min 30 sec	2.5"	4.0"
2 min	3.0"	4.5"
3 min	4.0"	5.5"
4 min	4.5"	6.25"
5 min	5.0"	7.0"
10 min	7.0"	9.0"
15 min	9.0"	10.5"
20 min	11.0"	12.0"
25 min	13.0"	12.5"
30 min	15.0"	13.5"
40 min	17.0"	14.25"
50 min	19.0"	15.75"
60 min	20.5"	16.5"

Remarks POOR SURFACE DRAINAGE DUE TO SILTY CLAY LAYER AT THE

SURFACE OF THE BASIN

Percolation Rate 18.5 in/hr



REPORT OF PERCOLATION TEST # 2 NE BASIN #2

Project: TRAVERSE CITY HORSE SHOWS

Job No: 2021.2209

Soil Description: LIGHT BROWN FINE TO MEDIUM SAND

Date: 10/28

Topsoil Thickness: 1" - SILTY CLAY

Depth of Hole Below Topsoil: 30 INCHES
60 inches

TIME	TRIAL # 1	TRIAL # 2
Initial Water Depth	30 INCHES 60.0 inches	30 INCHES 60.0 inches
Water Level Drop		
30 sec	9.75"	3.5"
1 min	12.0"	6.0"
1 min 30 sec	13.5"	8.0"
2 min	15.0"	10.0"
3 min	16.0"	13.0"
4 min	17.0"	15.0"
5 min	18.0"	16.0"
10 min	21.0"	21.5"
15 min	24.0"	27.0"
20 min	27.0"	30.0" +
25 min	30.0" +	
30 min		
40 min		
50 min		
60 min		

Remarks POOR SURFACE DRAINAGE DUE TO SILTY CLAY LAYER AT THE SURFACE
OF THE BASIN

Percolation Rate 30+ in/hr



REPORT OF PERCOLATION TEST #3 EAST BASIN

Project:

Job No:

Soil Description: SAND - LIGHT BROWN FINE TO MEDIUM Date: 10/09

Topsoil Thickness: 1.5" - SILTY CLAY

Depth of Hole Below Topsoil: ^{30 INCHES}
60 inches

TIME	TRIAL # 1	TRIAL # 2
Initial Water Depth	^{30 INCHES} 60.0 inches	^{30 INCHES} 60.0 inches
Water Level Drop		
30 sec	3.0"	1.5"
1 min	4.75"	2.5"
1 min 30 sec	6.0"	3.5"
2 min	7.0"	5.0"
3 min	9.0"	6.0"
4 min	10.25"	7.25"
5 min	11.25"	8.0"
10 min	14.5"	9.75"
15 min	16.0"	11.0"
20 min	18.25"	12.0"
25 min	19.0"	14.0"
30 min	20.0"	14.5"
40 min	24.0"	16.0"
50 min	28.0"	17.5"
60 min	30.0"	18.25"

Remarks POOR SURFACE DRAINAGE DUE TO SILTY CLAY LAYER AT THE SURFACE OF THE BASIN

Percolation Rate 24 1/8 in/hr



REPORT OF PERCOLATION TEST # 4 SOUTH BASIN

Project: TRAVERSE CITY HORSE SHOWS

Job No:

Soil Description: SAND - LIGHT BROWN FINE TO MEDIUM

Date: 10/29

Topsoil Thickness: 18"

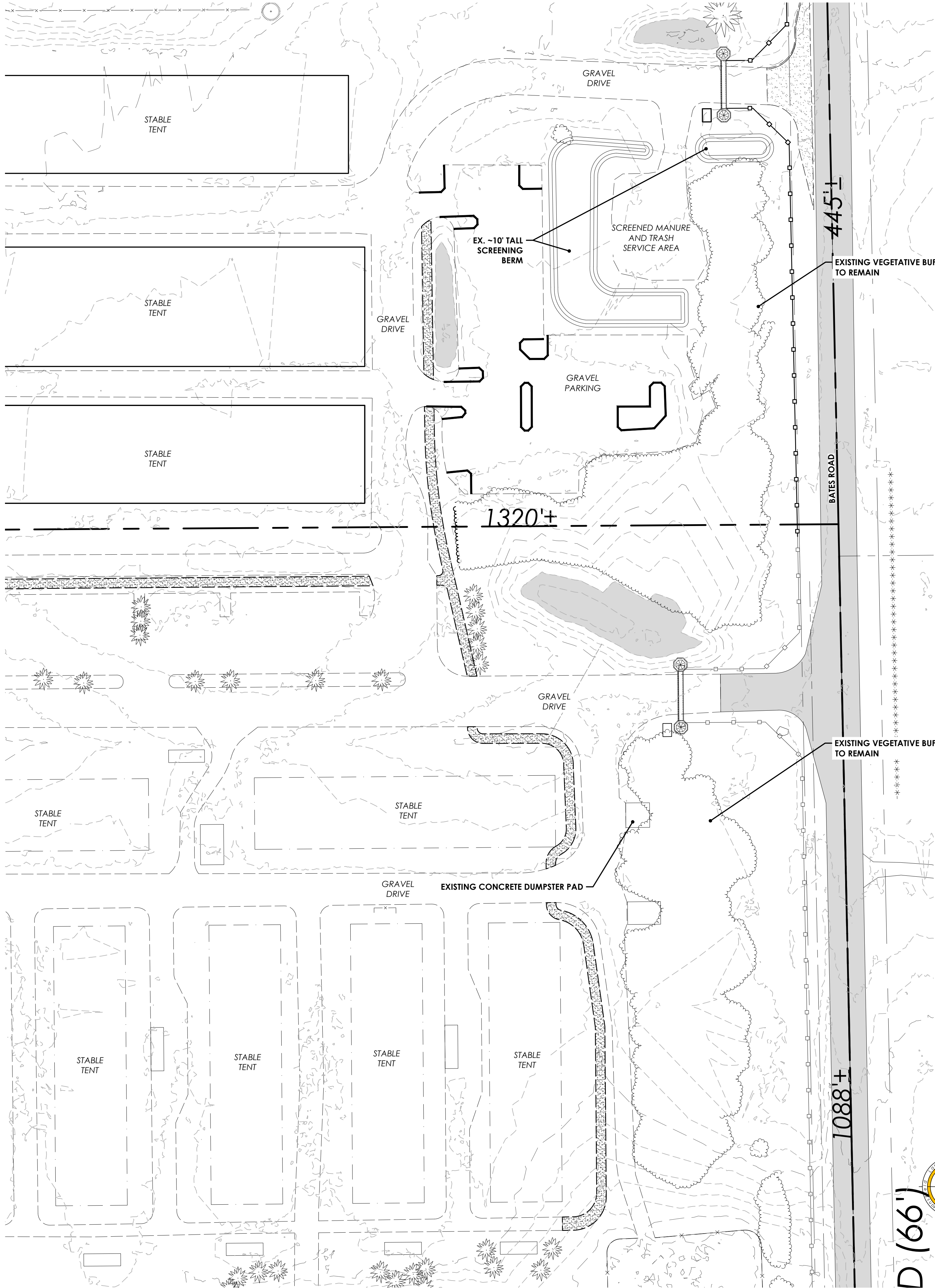
Depth of Hole Below Topsoil: 30 INCHES
60 inches

TIME	TRIAL # 1	TRIAL # 2
Initial Water Depth	30 INCHES 60.0 inches	30 INCHES 60.0 inches
Water Level Drop		
30 sec	0.25"	0.25"
1 min	1.0"	0.5"
1 min 30 sec	1.5"	1.0"
2 min	2.0"	1.25"
3 min	2.5"	1.75"
4 min	3.0"	2.0"
5 min	4.0"	2.5"
10 min	5.5"	3.75"
15 min	8.5"	5.0"
20 min	9.5"	6.5"
25 min	11.0"	7.75"
30 min	11.5"	9.0"
40 min	15.0"	11.5"
50 min	15.75"	13.25"
60 min	17.0"	15.0"

Remarks

Percolation Rate 16 in/hr

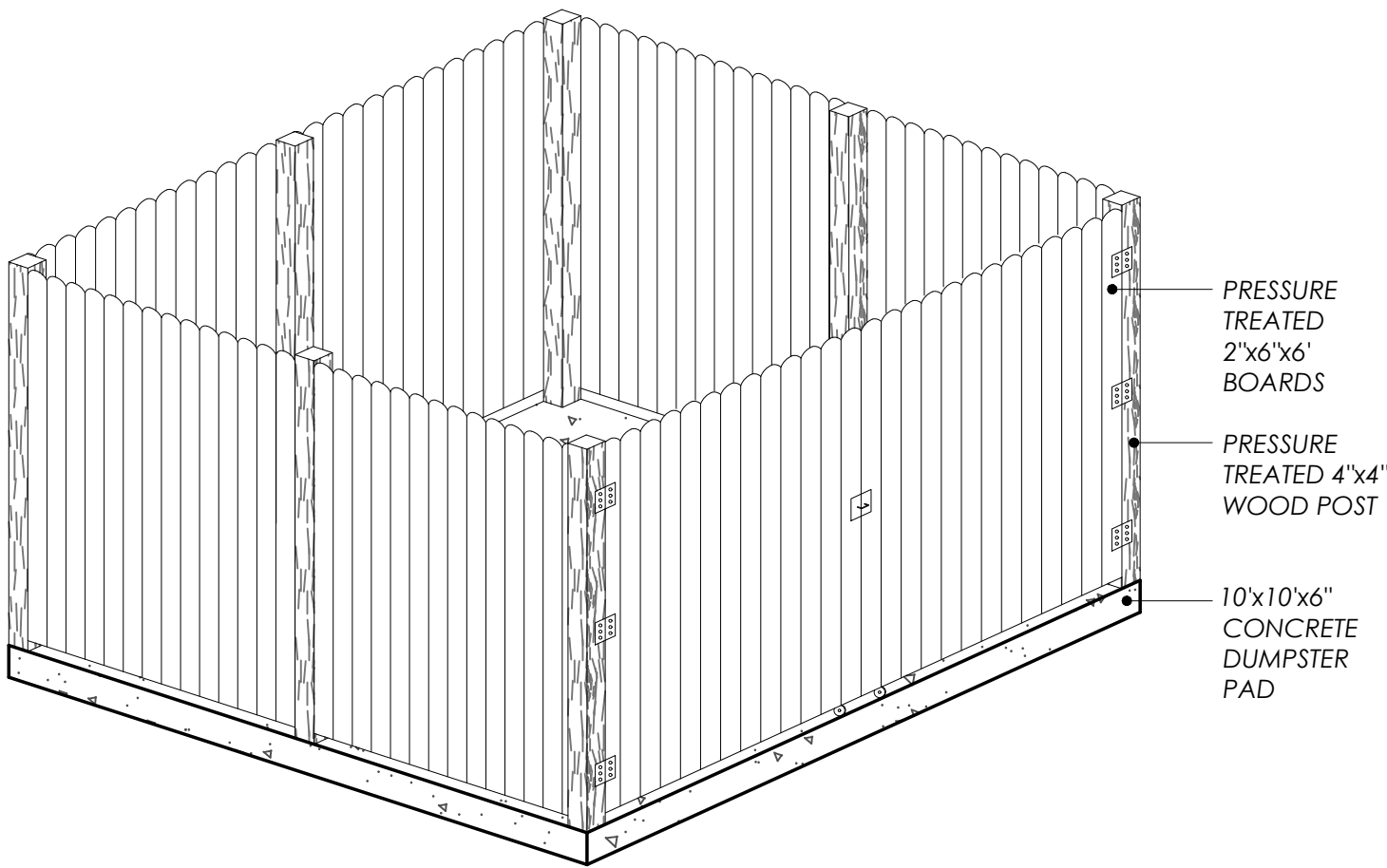
F:\Land Projects\2019\19030 Traverse City Horse Shows.dwg (Rev\19039 plan) (Landing from mobile) - Nov 08, 2021 1:25:45pm - dms



NOTE:
Property boundaries, land contours, physical features and the like, illustrated on this plan are exhibited for planning purposes only. Mansfield Land Use Consultants makes no guarantee to the correctness nor the completeness of this information.

GENERAL NOTES - DUMPSTERS AND TRASH REMOVAL:

1. SMALL TRASH RECEPTACLES ARE LOCATED ACROSS THE SITE AND ARE EMPTIED EACH DAY INTO PRIMARY TRASH DUMPSTERS.
2. PRIMARY TRASH DUMPSTER LOCATIONS ARE IN THE SCREENED TRASH AND MANURE SERVICE AREA AND ON A CONCRETE PAD TUCKED INTO THE WOODED BUFFER ALONG BATES ROAD.
3. DUMPSTER LOCATIONS ARE SCREENED BY ~10'-TALL EARTH BERM AND EXISTING VEGETATIVE BUFFER ALONG BATES ROAD.
4. ALL DUMPSTER LOCATIONS TO REMAIN SCREENED, IN ACCORDANCE WITH THE ACME TOWNSHIP ZONING ORDINANCE, WITH EITHER 6' TALL LANDSCAPING OR A 6' TALL SOLID DUMPSTER ENCLOSURE.
5. IT IS ASSUMED THAT EXISTING VEGETATIVE SCREENING AND EARTH BERM ARE SUITABLE DUMPSTER SCREENING. IF AND WHERE DUMPSTER ENCLOSURE(S) NEEDED, DETAIL SHOWN ON THIS SHEET SHALL APPLY.



DUMPSTER SCREENING PAD
NO SCALE

Traverse City Horse Shows, LLC
Horse Park Improvements
DUMPSTER LOCATION AND SCREENING PLAN
Section 31, Town 28 North, Range 09 West
Acme Township, Grand Traverse County, Michigan

PRELIMINARY

PRJ: dms

DR: mmm CDD: dms CREATED: 03.04.19

FOR NO.: 19039

1 OF 1

REV#	DATE	DES	DRN	CHK	DESC
02	05-18-20	dms	mmm	dms	Twp. Submittal
03	08-01-20	dms	mmm	dms	Proposed Rings - North Parcel
04	08-05-20	dms	mmm	dms	Proposed Grand Arena Ring and Buildings
05	11-12-20	dms	mmm	dms	Health Department Submittal
06	12-21-20	dms	mmm	dms	Revisions per Health Department
07	02-04-21	dms	mmm	dms	Revisions Building Department Plan Review #1
08	05-19-21	dms	mmm	dms	Township Submittal
09	11-02-21	dms	mmm	dms	Township Submittal

Mansfield

Land Use Consultants

830 Cottageview Dr., Ste. 201
P.O. Box 4015
Traverse City, MI 49685
Phone: 231-946-9310
www.mlsuaps.com
info@mlsuaps.com



GRAND TRAVERSE METRO FIRE DEPARTMENT

FIRE PREVENTION BUREAU

897 Parsons Road ~ Traverse City, MI 49686
Phone: (231) 922-2077 Fax: (231) 922-4918 ~ Website: www.gtfire.org Email: Info@gtfire.org

SITE PLAN REVIEW RECORD

Site Plan Review #2

This site review is for the new north addition, the south campground and an overall site review of existing conditions due to the addition of structures without site review.

ID # M7037

DATE: 11/8/21

PROJECT NAME: Horse Shows By The Bay- 2021 site changes/expansion.

PROJECT ADDRESS: 6535 Bates Rd.

TOWNSHIP: Acme

APPLICANT NAME: Dusty Christensen

APPLICANT COMPANY: Mansfield Land Use Consultants

APPLICANT ADDRESS: PO Box 4015

APPLICANT CITY: Traverse City

STATE: MI ZIP: 49685

APPLICANT PHONE: 231-946-9310

FAX #

REVIEW FEE: \$00.00

Reviewed By: Brian Belcher, Asst. Chief & Fire Marshal

This review is based solely on the materials submitted for review and does not encompass any outstanding information. Compliance with all applicable code provisions is required and is the responsibility of the permit holder. Items not listed on the review do not negate any requirements of the code nor the compliance with same. Inspection requests must be made a minimum of 48 hours prior to needed inspection. This plan review is based on the 2015 International Fire Code, as adopted.



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SITE PLAN REVIEW

REVIEW #2

ID # M7037

DATE: 11/8/21

1. 505.1 Address identification.

New and existing buildings shall be provided with *approved* address identification. The address identification shall be legible and placed in a position that is visible from the street or road fronting the property. Address identification characters shall contrast with their background. Address numbers shall be Arabic numbers or alphabetical letters. Numbers shall not be spelled out. Each character shall be not less than 4 inches (102 mm) high with a minimum stroke width of 1/2 inch (12.7 mm). Where required by the *fire code official*, address identification shall be provided in additional *approved* locations to facilitate emergency response. Where access is by means of a private road and the building cannot be viewed from the *public way*, a monument, pole or other sign or means shall be used to identify the structure. Address identification shall be maintained.

- **Provide a number or lettering system for all buildings and tents and post for emergency response identification. Plans indicate that all current buildings and tents have been given numbers and will be posted permanently.**

- **Provide permanent markers for lot identification in the campground. Plans indicate that all campsites in the proposed campground have been given numbers and will be posted permanently.**

- **The existing campground does not have individual campsite designation, provide.**

2. 505.2 Street or road signs.

Streets and roads shall be identified with *approved* signs. Temporary signs shall be installed at each street intersection when construction of new roadways allows passage by vehicles. Signs shall be of an *approved* size, weather resistant and be maintained until replaced by permanent signs..

- **With the numerous entrances and road network, provide road names and provide signage. Plans indicate the road designations have been provided, however actual names are in the process of being assigned to each road. Signs will be permanently posted.**



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3. 503.1.1 Buildings and facilities.

Approved fire apparatus access roads shall be provided for every facility, building or portion of a building hereafter constructed or moved into or within the jurisdiction. The fire apparatus access road shall comply with the requirements of this section and shall extend to within 150 feet (45 720 mm) of all portions of the facility and all portions of the *exterior walls* of the first story of the building as measured by an *approved* route around the exterior of the building or facility.

D103.2 Grade.

Fire apparatus access roads shall not exceed 10 percent in grade.

- There is not an approved emergency access drive for the future VIP pavilion or the current tent.

- The proposed emergency access for the future VIP on the plans does not show any dimensions.

- Before the 2022 show or the erection of the tent an approved emergency access road shall be in place.

- There are no road dimensions shown for the new north end roads

- Plans indicate an emergency access drive for the future pavilion or the current tent, that is a minimum of 20 feet wide.

- Plans indicate a minimum of 20 feet wide for North end roads.

- Plans indicate and via email response, all grades are less than 10%.

4. D103.6 Signs.

Where required by the *fire code official*, fire apparatus access roads shall be marked with permanent NO PARKING—FIRE LANE signs complying with Figure D103.6. Signs shall have a minimum dimension of 12 inches (305 mm) wide by 18 inches (457 mm) high and have red letters on a white reflective background. Signs shall be posted on one or both sides of the fire apparatus road as required by Section D103.6.1 or D103.6.2.

- No Parking Fire Lane signs shall be provided along all roads and emergency access lanes spaced no farther than 100 feet apart and facing the direction of travel.

- Signs will be provided.

5. Campground lots 39-42 show buildings. What is their use? These are rental unit models on wheels.

6. Plans show a wedding barn. Is this being used as a public assembly building or is this a future propose use? There are no plans now or in the future to use this barn as anything other than storage.



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>> Before any additional buildings are added to the complex, a water supply capable of providing the highest required fire flow will be required to provide adequate fire protection before land use permits are issued.

>> All fire department access roads shall be capable of supporting vehicles that weigh a minimum of 75,000 pounds.

>>Responses in red are provided by Mansfield Land Use Consultants either on resubmitted plans or via email.

Summary: Project may proceed with township approval process.