

AGENDA

Committee on Ways and Means AGENDA FOR MARCH 13, 2023 AT 4:30 PM



Lansing City Hall, City Council Conference Room
124 W. Michigan Avenue, 10th Floor

To provide input or ask questions on any item that is listed on the agenda,
members of the public may contact the City Council at city.council@lansingmi.gov or (517) 483-4177 prior to the meeting.

Council Member Spadafore, Chairperson
Council Member Wood, Vice Chairperson
Council Member Jackson, Member

- 1. Call to Order**
- 2. Roll Call**
- 3. Minutes**
 - A. February 27, 2023
- 4. Public Comment on Agenda Items (Up to 3 Minutes)**
- 5. Discussion/Action:**
 - B. RESOLUTION - Grant Acceptance; U.S. Conference of Mayors Grant
 - C. RESOLUTION - Grant Acceptance; Michigan Department of Environment, Great Lakes, and Energy (EGLE) Recycling and Organics Infrastructure Grant
 - D. RESOLUTION - Grant Acceptance; Michigan Natural Resources Trust Fund (MNRTF) Grant
 - E. Sole Source Purchase; Office of Community Media request for Tempest Lighting Inc. as the vendor for Outdoor Projector Enclosures
- 6. Other**
- 7. Adjourn**

Persons with disabilities who need an accommodation to fully participate in these meetings should contact the City Council Office at 517-483-4177 (TTY 711) 24 hour notice may be needed for certain accommodations. An attempt will be made to grant all reasonable accommodation requests.



MINUTES
Committee on Ways and Means
Monday, February 27, 2023 @ 4:30 p.m.
City Council Conference Room

CALL TO ORDER

Council Member Spadafore called the meeting was called to order at 4:30 p.m.

PRESENT

Council Member Peter Spadafore, Chair
Council Member Carol Wood, Vice Chair
Council Member Brian T. Jackson, Member-excused

OTHERS PRESENT

Sherrie Boak, Council Office Manager
Lisa Hagen-Lawrence, OCA
Jim Smiertka, OCA
Bill Brunner, Public Service
Danielle Strouse, District Court
Anethia Brewer, District Court
Amber Paxton, Financial Empowerment

Minutes

MOTION BY COUNCIL MEMBER WOOD TO APPROVE THE MINUTES FROM FEBRUARY 13, 2023, AS PRESENTED. MOTION CARRIED 2-0.

Public Comment

No public comment at this time.

Discussion/Action:

RESOLUTION – Grant Acceptance; 54A District Court’s Specialty Court

Ms. Strouse and Ms. Brewer spoke on the Specialty Court and first apologized on the delay. Ms. Brewer then outlined the court based on the support of the State Court Administrators, and noted which one began in 2005 by Judge Alderson. The court is now handled by Judge Buchanan, and there was never a lag.

Ms. Strouse outlined stats including 24 active participants from 10/2022-9/2023. She then spoke briefly that since 2005 there are 237 submissions, 212 discharged with a 67% succession rate. This year they got \$34,000 from the State, and some goes to testing, interlock services, electronic monitoring, and there is some funds used for supplies and training.

DRAFT

Council Member Spadafore asked if GF has been spent, and this will reimbursed, and Ms. Strouse confirmed it is a reimbursement.

MOTION BY COUNCIL MEMBER WOOD TO APPROVE THE RESOLUTUION FOR THE GRANT ACCEPTANCE FOR THE SPECIALTY COURT. MOTION CARRIED 2-0.

RESOLUTION – Grant Acceptance; US Conference Mayor’s Dollarwise Innovation Grant

Ms. Paxton stated that this was written for the offender success program and paid by the State to run the program. There are some services that are not paid, so they seek outside funding, and this was partnered with Sylvan. There is a pre-assessment, and incorporated funding. Sylvan has stated that if they use Peckham staff for the pre-assessment they will not be charged.

Council Member Wood asked if Sylvan is prohibited to market products, and Ms. Paxton stated the contract has not been written yet, so they can write that in.

MOTION BY COUNCIL MEMBER WOOD TO APPROVE THE RESOLUTION FOR THE GRANT ACCEPTANCE FOR THE US CONFERENCE MAYOR’S DOLLARWISE INNOVATION GRANT. MOTION CARRIED 2-0.

RESOLUTION – Grant Acceptance; Community Economic Association of Michigan (CEDAM) Children’s Savings Account Innovation Projects

Ms. Paxton stated this is for the specific cause of expanding the innovation project throughout the State. This campaign will increase the dollars through donations. The five year goal is for \$5 million.

Council Member Wood asked if any funds that comes in is equally divided by open accounts, and Ms. Paxton confirmed noting the funds will first go to the 8th grader account and then roll into the other.

MOTION BY COUNCIL MEMBER WOOD TO APPROVE THE RESOLUTION FOR THE GRANT ACCEPTANCE FOR CEDAM CHILDREN’S SAVINGS ACCOUNT INNOVATION PROJECTS. MOTION CARRIED 2-0.

Sole Source Purchase; Public Service Department Request Systems Specialties as vendor for two Rotork valve actuators

Mr. Brunner explained what an actuators is, and how it is used for a valve for the large pipes. The existing one has worn out, and the vendor is a sole source in this area, reliable and provide excellent services.

Council Member Wood asked how many are currently in place, and Mr. Brunner confirmed well over 100. Council Member Wood asked if there are some in stock if one malfunctions, and Mr. Brunner stated they would have to order as needed.

MOTION BY COUNCIL MEMBER WOOD TO PLACE ON FILE THE SOLE SOURCE FOR SYSTEMS SPECIALTIES FOR TWO ROTORK VALVE ACTUATORS. MOTION CARRIED 2-0.

OTHER

No other topics at this time.

ADJOURN

Adjourned at 4:44 p.m.

DRAFT

Submitted by,
Sherrie Boak, Recording Secretary
Lansing City Council
Approved by the Committee _____



LANSING CITY COUNCIL

GRANT INFORMATION FORM

(Required for all grant applications and acceptances)

REFERRAL DATE:

GRANT NAME: US Conference of Mayors, Childhood Obesity Prevention & Environmental Health & Sustainability Grant

DEPARTMENT: Public Service Department

CONTACT PERSON (INCLUDE EMAIL AND PHONE): Lori Welch, 517-483-4599, lori.welch@lansingmi.gov

APPLICATION DATE: 9/27/2022 AWARD DATE: 1/30/2023

GRANT CYCLE: 1/2023-12/2023 Check One: ☐ Annual ☒ One-Time

FUND AMOUNT: \$175,000 (Breakdown below should total this amount)

GOODS & SERVICES	\$0.00
PERSONNEL	\$0.00
CONSTRUCTION	\$0.00
LAND	\$0.00
<u>OTHER development of mini grant fund</u>	<u>\$175,000</u>

CITY MATCH (IF APPLICABLE): No match requirement

GRANT PAYS FOR: The development of a mini grant program to provide funding to Lansing schools and neighborhood groups to support existing and new community garden projects. The grant will be administered by the Public Service Department, in conjunction with the Department of Neighborhoods, Arts, and Citizen Engagement, with technical assistance from the Greater Lansing Food Bank Garden Project.

FUND ALLOCATIONS (Please describe the purpose of the grant and allowable uses):

The Public Service Department partnered with the Greater Lansing Food Bank Garden Project, who have experience working with a network of community gardens in the city of Lansing. The Department of Neighborhoods, Arts, and Citizen Engagement will provide grant administration support and outreach. Schools and community groups will have the opportunity to submit mini grant applications for garden projects to be considered for a grant award. The program was designed to empower Lansing residents, renters, community and neighborhood groups and local schools to best decide their garden needs and apply to the City's mini grant program as a means to fund these efforts. Grant funds are to be used for garden site preparation, raised garden beds, rainwater collection systems, and additional gardening infrastructure/supplies to support gardening efforts.

BY THE COMMITTEE ON WAYS AND MEANS
RESOLVED BY THE CITY COUNCIL OF THE CITY OF LANSING

WHEREAS, the City of Lansing was selected on January 30, 2023 to receive a US Conference of Mayors "Childhood Obesity Prevention and Environmental Health and Sustainability Grant" for \$175,000; and

WHEREAS, the City of Lansing's Public Service Department applied for a grant to administer a community garden mini grant program; and

WHEREAS, the Childhood Obesity Prevention and Environmental Health and Sustainability Grant was the result of a competitive proposal process, and the proposal was submitted by the Public Service Department on September 27, 2022, approved on January 30, 2023, and will be received upon approval by Council and signed agreement; and

WHEREAS, the award for \$175,000.00 does not require a local match.

NOW, THEREFORE, BE IT RESOLVED, the Lansing City Council approves acceptance of the grant in the total amount of \$175,000.00 for the grant period beginning on the date of council approval for the City of Lansing and ending on Dec 31, 2023.

BE IT FINALLY RESOLVED, the Administration is authorized to create appropriate accounts and to make the necessary operating transfers for the expenditure and control of the balance of the grant funds.



LANSING CITY COUNCIL

GRANT INFORMATION FORM

(Required for all grant applications and acceptances)

REFERRAL DATE:

GRANT NAME: Michigan Dept. of Environment Great Lakes and Energy, Recycling and Organics Infrastructure Grant

DEPARTMENT: Public Service Department

CONTACT PERSON (INCLUDE EMAIL AND PHONE): Lori Welch, 517-483-4599, lori.welch@lansingmi.gov

APPLICATION DATE: 9/27/2022 AWARD DATE: 2/9/2023

GRANT CYCLE: 02/09/2023-09/30/2024 Check One: ☐ Annual ☒ One-Time

FUND AMOUNT: \$490,917.00 (Breakdown below should total this amount)

GOODS & SERVICES	\$238,377.00
PERSONNEL	\$0.00
CONSTRUCTION (site demo/site prep)	\$250,140.00
LAND	\$0.00
<u>OTHER (signage)</u>	<u>\$2400.00</u>

CITY MATCH (IF APPLICABLE): \$127,730.00

GRANT PAYS FOR: Demolition of existing salt barn, located at 601 E. South St, City Operations and Maintenance Division. This includes site prep, such as grading and fencing; and the construction of a new comprehensive recycling drop off center. The site will have multiple roll off containers for the collection of various materials, security cameras, and signage. Funds will also pay for a new roll off truck that will be used to deliver roll off containers to material recovery facility (MRF).

FUND ALLOCATIONS (Please describe the purpose of the grant and allowable uses):

Funds will be used to construct a public recycling drop off site, to be located at the site of the old salt storage barn at O&M. The site will take all of the materials that are collected curbside, with the addition of styrofoam. This will allow us to better serve residents who live in multi-family properties, as well as local businesses who don't have curbside service. We will also be able to purchase a new recycling vehicle designed to transport roll off containers to the recycling center.

BY THE COMMITTEE ON WAYS AND MEANS
RESOLVED BY THE CITY COUNCIL OF THE CITY OF LANSING

WHEREAS, the City of Lansing was selected on February 9, 2023 to receive a Michigan Department of Environment, Great Lakes, and Energy (EGLE) Grant for \$490,917; and

WHEREAS, the City of Lansing's Public Service Department applied for a grant to construct a public recycling drop off site; and

WHEREAS, the Recycling and Organics infrastructure grant was the result of a competitive proposal process, and the proposal was submitted by the Public Service Department on September 9, 2022, approved on February 9, 2023, and will be received upon approval by Council and signed agreement; and

WHEREAS, the award for \$ 490,917 requires a local match of \$127,730.

NOW, THEREFORE, BE IT RESOLVED, the Lansing City Council approves acceptance of the grant in the total amount of \$490,917 for the grant period beginning on the date of council approval for the City of Lansing and ending on September 30, 2024.

BE IT FINALLY RESOLVED, the Administration is authorized to create appropriate accounts and to make the necessary operating transfers for the expenditure and control of the balance of the grant funds.



LANSING CITY COUNCIL

GRANT INFORMATION FORM

(Required for all grant applications and acceptances)

REFERRAL DATE: February 14, 2023

GRANT NAME: 1624 E Cavanaugh Land Acquisition Grant Michigan Natural Resources Trust Fund

DEPARTMENT: Parks and Recreation

CONTACT PERSON (INCLUDE EMAIL AND PHONE): Brett Kaschinske, Director, 483-4042

APPLICATION DATE 04/01/2023

AWARD DATE: 12/02/2023 (Tentative Award)

GRANT CYCLE: 2023

Check One: Annual X One-Time

FUND AMOUNT: \$300,000 (Breakdown below should total this amount)

GOODS & SERVICES	\$0.00
PERSONNEL	\$0.00
CONSTRUCTION	\$0.00
LAND	\$300,000 (grant)
OTHER (Training)	\$0.00

CITY MATCH (IF APPLICABLE): \$110,000 maximum

GRANT PAYS FOR: land acquisition

FUND ALLOCATIONS (Please describe the purpose of the grant and allowable uses):

The City of Lansing is looking to acquire 0.98-acre property. The owner of the property reached out to the City of Lansing requesting that the City purchase the property through the DNR grant acquisition process. The property is adjacent to the River Trail just south of Hawk Island.



LANSING CITY COUNCIL

GRANT INFORMATION FORM

(Required for all grant applications and acceptances)

REFERRAL DATE: February 14, 2023

GRANT NAME: S Waverly Land Acquisition Grant Michigan Natural Resources Trust Fund

DEPARTMENT: Parks and Recreation

CONTACT PERSON (INCLUDE EMAIL AND PHONE): Brett Kaschinske, Director, 483-4042

APPLICATION DATE 04/01/2023

AWARD DATE: 12/02/2023 (Tentative Award)

GRANT CYCLE: 2023

Check One: Annual X One-Time

FUND AMOUNT: \$500,000 (Breakdown below should total this amount)

GOODS & SERVICES	\$0.00
PERSONNEL	\$0.00
CONSTRUCTION	\$0.00
LAND	\$500,000
OTHER (Training)	\$0.00

CITY MATCH (IF APPLICABLE): \$180,000 maximum

GRANT PAYS FOR: land acquisition

FUND ALLOCATIONS (Please describe the purpose of the grant and allowable uses):

The City of Lansing is looking to acquire 33-acre property. The owner of the property reached out to the City of Lansing requesting that the City purchase the property through the DNR grant acquisition process.



LANSING CITY COUNCIL

GRANT INFORMATION FORM

(Required for all grant applications and acceptances)

REFERRAL DATE: February 14, 2023

GRANT NAME: Pickle Ball Court at St Joseph Park Development Grant Michigan Natural Resources Trust Fund

DEPARTMENT: Parks and Recreation

CONTACT PERSON (INCLUDE EMAIL AND PHONE): Brett Kaschinske, Director, 483-4042

APPLICATION DATE 04/01/2023

AWARD DATE: 12/02/2023 (Tentative Award)

GRANT CYCLE: 2023

Check One: Annual X One-Time

FUND AMOUNT: \$300,000 (Breakdown below should total this amount)

GOODS & SERVICES	\$0.00
PERSONNEL	\$0.00
CONSTRUCTION	\$300,000 (grant)
LAND	\$0.00
OTHER (Training)	\$0.00

CITY MATCH (IF APPLICABLE): \$110,000 maximum

GRANT PAYS FOR: construction of pickleball courts and fencing

FUND ALLOCATIONS (Please describe the purpose of the grant and allowable uses):

The development proposal for this grant is for the conversion of the St Joseph Park tennis courts from tennis courts to pickleball courts. The redevelopment will allow for ADA accessibility.



LANSING CITY COUNCIL

GRANT INFORMATION FORM

(Required for all grant applications and acceptances)

REFERRAL DATE: February 14, 2023

GRANT NAME: Davis Park Fitness Grant Michigan Natural Resources Recreation Passport

DEPARTMENT: Parks and Recreation

CONTACT PERSON (INCLUDE EMAIL AND PHONE): Brett Kaschinske, Director, 483-4042

APPLICATION DATE 04/01/2023

AWARD DATE: 12/02/2023 (Tentative Award)

GRANT CYCLE: 2023

Check One: Annual X One-Time

FUND AMOUNT: \$300,000 (Breakdown below should total this amount)

GOODS & SERVICES	\$0.00
PERSONNEL	\$0.00
CONSTRUCTION	\$300,000
LAND	\$0.00
OTHER (Training)	\$0.00

CITY MATCH (IF APPLICABLE): \$110,000 maximum

GRANT PAYS FOR: construction of fitness facility

FUND ALLOCATIONS (Please describe the purpose of the grant and allowable uses):

The development proposal for this grant is for the construction of a fitness facility at Davis Park.



LANSING CITY COUNCIL

GRANT INFORMATION FORM

(Required for all grant applications and acceptances)

REFERRAL DATE: February 14, 2023

GRANT NAME: Letts Tennis Grant Michigan Natural Resources Land and Water Conservation Fund

DEPARTMENT: Parks and Recreation

CONTACT PERSON (INCLUDE EMAIL AND PHONE): Brett Kaschinske, Director, 483-4042

APPLICATION DATE 04/01/2023

AWARD DATE: 12/02/2023 (Tentative Award)

GRANT CYCLE: 2023

Check One: Annual X One-Time

FUND AMOUNT: \$500,000 (Breakdown below should total this amount)

GOODS & SERVICES	\$0.00
PERSONNEL	\$0.00
CONSTRUCTION	\$500,000
LAND	\$0.00
OTHER (Training)	\$0.00

CITY MATCH (IF APPLICABLE): \$500,000 maximum

GRANT PAYS FOR: Development of tennis courts

FUND ALLOCATIONS (Please describe the purpose of the grant and allowable uses):

The development proposal for this grant is for the upgrade of the tennis courts at Letts Community Center.

BY THE COMMITTEE ON WAYS AND MEANS
RESOLVED BY THE CITY COUNCIL OF THE CITY OF LANSING

Authorizing Michigan Natural Resources Trust Fund (MNRTF) Grant Funding

WHEREAS, the Parks and Recreation Department is applying for grant funding through Michigan Natural Resources Trust Fund (MNRTF); and

WHEREAS, MNRTF will be accepting grant applications for the next grant cycle no later than April 1, 2023; and

WHEREAS, MNRTF requires a resolution from the governing body of the applicant supporting the applications, acknowledging the required match and committing to the amount and source of match that are specified in the applications; and

WHEREAS, the Parks and Recreation Director is recommending the City apply for grant funding for the following projects:

Land acquisition of 1624 E. Cavanaugh \$300,000

Land Acquisition of Parcel 23-50-80-01-282-004 \$500,000

Development Grant for Pickle Ball Courts at St. Joseph Park \$300,000

Recreation Passport for fitness facility at Davis Park \$300,000

Land and Water Conservation Fund for Tennis at Letts \$500,000

NOW, THEREFORE, BE IT RESOLVED that the City Council authorizes the submission of grant applications to the Michigan Natural Resources Trust Fund for the above projects; and

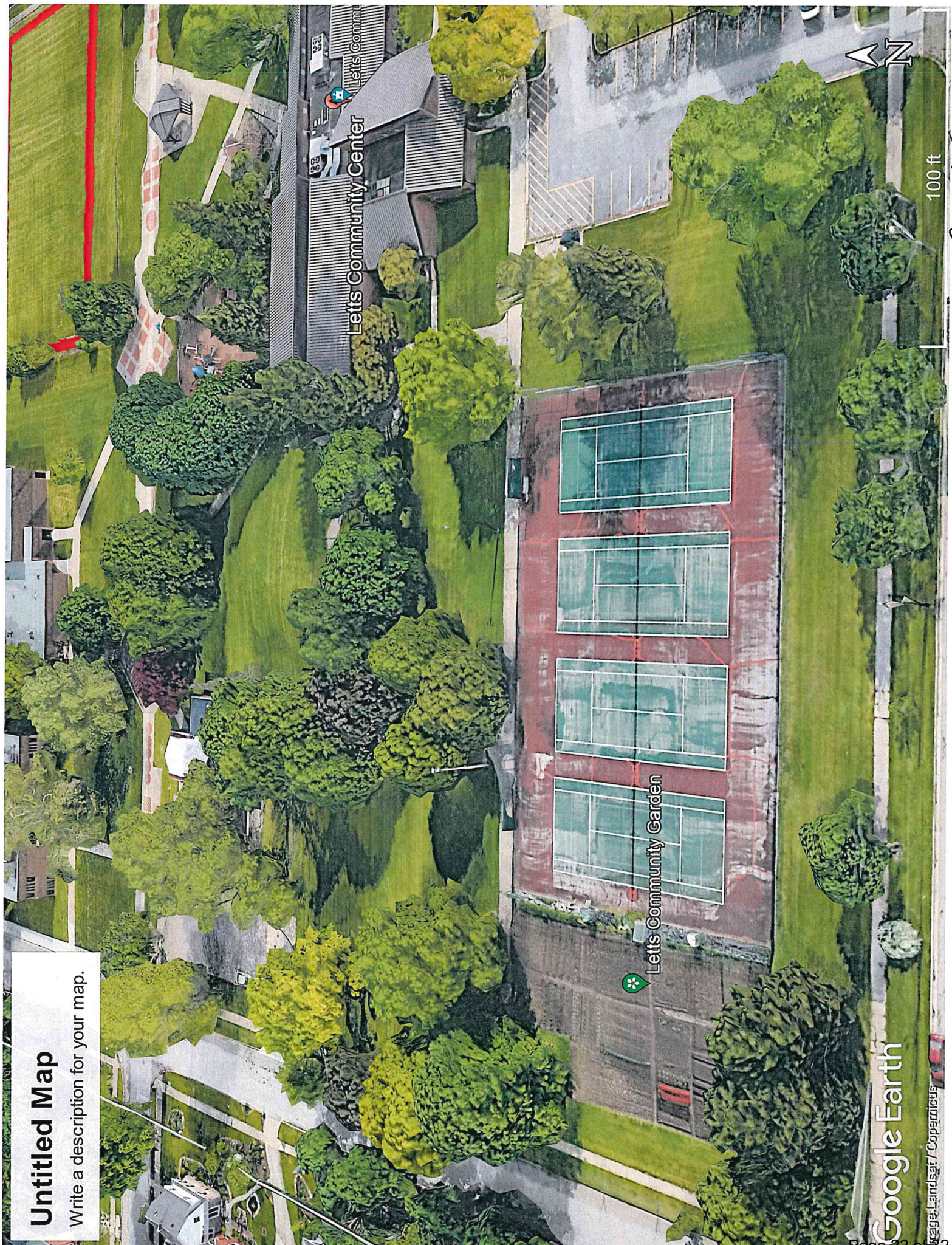
BE IT FINALLY RESOLVED that the City of Lansing, Michigan, does hereby accept the terms of the Agreement as received from the Michigan Department of Natural Resources and that the City of Lansing Parks and Recreation Department does hereby specifically agree, but not by way of limitation, as follows:

1. To appropriate all funds necessary to complete the project during the project period and to provide funding with a maximum 26% match on the \$300,000 grants and 50% on the \$500,000 grants authorized by the department.
2. To maintain satisfactory financial accounts, documents, and records to make them available to the department for auditing at reasonable times in perpetuity.

3. To regulate the use of the property acquired and reserved under this Agreement to assure the use thereof by the public on equal and reasonable terms.
4. To comply with any and all terms of said Agreement included all terms not specifically set forth in the foregoing portions of this Resolution.

Untitled Map

Write a description for your map.



Google Earth

Image Landsat / Copernicus

100 ft

@ m + x



Untitled Map

Write a description for your map.

Legend

- BoBo Asian Grocery Store
- Feature 1
- Feature 2
- Jolly & Waverly Coin Laundry
- Kensington Meadows
- Wexford Montessori Academy



Google Earth

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Untitled Map

Write a description for your map.

Legend



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Dollar General



New St. Paul Church of God In Christ

Google Earth

Image Landsat / Copernicus

insing River

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E Cavanaugh Rd

E Cavanaugh Rd

Dollar General

New St. Paul Church of God In Christ

200 ft



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CITY of LANSING

INTEROFFICE COMMUNICATION

TO: Andy Schor, Mayor

FROM: Stephanie Robinson, Senior Buyer

DATE: February 9, 2023

SUBJECT: Sole Source – Tempest Lighting Inc

The Office of Community Media requests that Tempest Lighting be designated as a Sole Source vendor for four all-weather outdoor projector enclosures, for the Downtown Lansing Projection Mapping Project.

Please see the attached letter from T. Dominic Cochran regarding the request.

Based on the attached letter we recommend issuing a sole source purchase order to Tempest Lighting the amount of \$ 89,293.05 from account 1019012109-970000.

Attachment

Date: _____

Approved _____ Denied _____

Andy Schor, Mayor



Andy Schor, Mayor

Memo

To: Stephanie Robinson, Senior Buyer

From: T. Dominic Cochran, Director, Mayor's Office of Community Media

cc:

Date: 2/8/2023

Re: Recommendation of Sole-Source Supplier, All-climate outdoor projector enclosures

I recommend Tempest Lighting, Inc, as a sole-source supplier, to provide four all-weather outdoor projector enclosures for the Downtown Lansing projection mapping project. Per Ordinance 206.05(c), this situation meets multiple criteria including special features, special market conditions, and special facilities. Tempest is the only company in the US that manufactures enclosures that are appropriate for Michigan's climate. The only other company that produces a similar product offers *either* a heated option *or* a cooled option. Additionally, to explore all procurement options, we put this project out for bid in February of 2020 and received no responses from any other suppliers or dealers. The total project cost is \$89,293.05 and funding to be debited from PEG Account #1019012109-970000

If you have any questions regarding this recommendation, please contact me at your earliest convenience.

Approved: Thomas D Cochran

**Tempest Lighting, inc.**

11845 Wicks Street
Sun Valley, CA 91352
USA
info@tempest.biz
tel: (818) 787-8984
fax: (818) 252-7101

No. 2415

Date (mm/dd/yy) 2/3/2023

Incoterms EXW

Created By Felipe Hermosillo

BILL TO

City of Lansing
City of Lansing, MI

SHIP TO**CONTACT**

Dominic Cochran
Dominic Cochran
dominic.cochran@lansingmi.gov
(517) 862-6159

Currency

Terms

Lead Time (Weeks)

Customer Job

50/50 upon shipment

8

Terra Forms Projection Mapping

LINE NO.	ITEM	DESCRIPTION	QUANTITY	PRICE	EXT.	UOM
1	55.240.L	Cyclone 240 Landscape, 200-250V	4.00	\$14,944.48	\$59,777.92	EA
2	55.TI.240L	Thermal Insulation, Cyclone 55.240 Landscape	4.00	\$965.00	\$3,860.00	EA
3	51.IC.15	Tempest Inlet Cowl 15in	4.00	\$263.03	\$1,052.12	EA
4	55.PP	Positive Pressure Option for Cyclone	4.00	\$470.38	\$1,881.52	EA
5	55.C2	Cyclovator 2 , G4 Enclosures	2.00	\$7,516.33	\$15,032.66	EA
6	55.AM2	Angle Mount Kit, Cyclone 210-305	1.00	\$2,998.99	\$2,998.99	EA
7	55.UR.240	Cyclone G4 2400 Pair of Unistrut Rail Kit	2.00	\$528.56	\$1,057.12	EA
8	51.D4.15	DEC4 Ethernet Board	4.00	\$449.15	\$1,796.60	EA
9	55.SH.240L	Cyclone Sun Shade Kit, Cyclone 55.240 Landscape	2.00	\$918.06	\$1,836.12	EA
10	EXW	Incoterms: EXW Sun Valley, California (buyer is responsible for all freight charges)	1.00	\$0.00	\$0.00	EA

Memo :

Subtotal

\$89,293.05

Taxes

\$0.00

Total Amount

\$89,293.05

All sales are subject to Tempest Lighting, Inc. Standard Terms and Conditions, available for download at www.tempest.biz

TECHNICAL BULLETIN

IP and NEMA Enclosure Ratings Explained

Tempest Enclosures have historically been rated using the US NEMA (National Electrical Manufacturers Association) standards, with a rating of NEMA 3R, and tested under UL50, section 30. This has caused understandable confusion internationally, since the NEMA standards are not used outside the United States.



This article should help explain the differences and similarities between the two systems – which unfortunately have no direct means of correlation, since their testing requirements differ quite markedly.

Definition: NEMA3R

Type 3R: Enclosures constructed for either indoor or outdoor use to provide a degree of protection to personnel against access to hazardous parts; to provide a degree of protection of the equipment inside the enclosure against ingress of solid foreign objects (falling dirt); to provide a degree of protection with respect to harmful effects on the equipment due to the ingress of water (rain, sleet, snow); and that will be undamaged by the external formation of ice on the enclosure.

National Electrical Manufacturers Association
1300 N. 17th Street, Suite 1752
Rosslyn, VA 22209

This standard has proved to be very satisfactory from the point of view of Tempest's mission – to protect and assure longest possible life of lighting and projection equipment in an outdoor

environment. With thousands of enclosures in all parts of the world, in all climate types and even at sea, Tempest enclosures have proven themselves time and time again.

So, why not IP65?

This is probably the question we hear most often – and it deserves an answer!

First, let's review the IES International Protection (often referred to as Ingress Protection) ratings system. Each rated product is tested to the appropriate standards to assure protection at two levels – the ingress of physical objects such as fingers or dust (first digit), and the ingress of water (second digit). The standard also provides for an optional third letter in certain circumstances, but we need not concern ourselves with that here.

First digit:

The first digit indicates the level of protection that the enclosure provides against access to hazardous parts (e.g., electrical conductors, moving parts) and the ingress of solid foreign objects.

Level	Protected against (object size)	Effective against
0	—	No protection against contact and ingress of objects
1	>50 mm	Any large surface of the body, such as the back of a hand, but no protection against deliberate contact with a body part
2	>12.5 mm	Fingers or similar objects
3	>2.5 mm	Tools, thick wires, etc.
4	>1 mm	Most wires, screws, etc.
5	dust protected	Ingress of dust is not entirely prevented, but it must not enter in sufficient quantity to interfere with the satisfactory operation of the equipment; complete protection against contact
6	dust tight	No ingress of dust; complete protection against contact

Second digit:

Protection of the equipment inside the enclosure against harmful ingress of water.

Level	Protected against:	Details
0	not protected	—
1	dripping water	Dripping water (vertically falling drops) shall have no harmful effect.
2	dripping water when tilted up to 15°	Vertically dripping water shall have no harmful effect when the enclosure is tilted at an angle up to 15° from its normal position.
3	spraying water	Water falling as a spray at any angle up to 60° from the vertical shall have no harmful effect.
4	splashing water	Water splashing against the enclosure from any direction shall have no harmful effect.
5	water jets	Water projected by a nozzle against enclosure from any direction shall have no harmful effects.
6	powerful water jets	Water projected in powerful jets against the enclosure from any direction shall have no harmful effects.
7	immersion up to 1m	Ingress of water in harmful quantity shall not be possible when the enclosure is immersed in water under defined conditions of pressure and time (up to 1 m of submersion).
8	immersion beyond 1m	The equipment is suitable for continuous immersion in water under conditions which shall be specified by the manufacturer. NOTE: Normally, this will mean that the equipment is hermetically sealed. However, with certain types of equipment, it can mean that water can enter but only in such a manner that produces no harmful effects.

Based on this, Tempest enclosures would carry an IP rating of 54 – Some protection against dust ingress, and good protection against water spray and splashing. Keep in mind the NEMA3R rating also specifically tests for snow and sleet, which are not covered by the IP system. NEMA also carries a corrosion-resistance requirement, which is also not in the IP standard. So you can start to see that the two standards are inherently quite different, and comparisons between them tend to be erratic.

In the case of **IP65**, we would have a problem with the no ingress of dust requirement (that would get us to the 6). It is critically important to remember that in order to protect the equipment inside the enclosure, we change the air approximately every 2 seconds when the lamp is on. That's a lot of air, traveling at high velocity, and it's very effective! But, it inevitably means that we need to provide large, filtered air inlet vents, and equivalent exhaust vents, for the air to pass through. The inlet vents are invariably filtered to prevent passage of dust particles larger than 5 microns and in most cases to block the moisture that carries contaminants such as salt or chlorine – so 6 is not an option – by definition, we have to allow some level of dust ingress along with the air, or we'd have no ventilation. So the best first digit possible in these circumstances is a 5 - *Ingress of dust is not entirely prevented, but it must not enter in sufficient quantity to interfere with the satisfactory operation of the equipment; complete protection against contact*. For all practical purposes, this is perfectly satisfactory.

For the second digit, we are happy with a 4 – splashing water will have no deleterious effect on a Tempest Enclosure. Of course, you could spray most of the enclosure with a fire hose (that would get us a 5), BUT, a fire hose directed into an air vent with the lamp on and the fan(s) running would cause water to be sucked into the enclosure, with potentially damaging consequences. Depending on the enclosure type, it is possible in certain circumstances that some splashing or spraying water might seep through the filters into the enclosure. For that reason, all Tempest enclosures are provided with weep holes or plugs that are specifically designed to allow any such small amounts of water to drain harmlessly away. And because Tempest enclosures are built from inherently corrosion-resistant materials, such minor water ingress will not cause internal damage. Note that the NEMA3R standard specifically requires that such drainage should never expose live electrical parts to the passage of draining water.

Tempest Enclosures have the overwhelming bottom-line advantage that they WORK, effectively protecting delicate, expensive equipment in the most challenging environments. If we maintain realistic expectations of the levels of ingress protection required to achieve this objective, then users may be assured of long and trouble-free operation of the enclosure and the equipment it is there to protect.