



AGENDA

President and Board of Trustees

Village of Arlington Heights

Committee-of-the-Whole

Board Room

33 S. Arlington Heights Road, Arlington Heights, IL 60005

August 9, 2021

7:00 PM

I. CALL TO ORDER

II. PLEDGE OF ALLEGIANCE

III. ROLL CALL OF MEMBERS

IV. NEW BUSINESS

- A. Potential New Sustainability Initiatives/Green Project Ideas

V. OTHER BUSINESS

VI. ADJOURNMENT

Any member of the public wishing to speak will be given the opportunity to do so. If the item is on the Agenda, that opportunity will be while that Agenda item is being discussed. Any member of the public wishing to speak on an item not on the Agenda will be given the opportunity during the Other Business portion of the meeting. Please limit comments to three minutes.

Persons with disabilities requiring auxiliary aids or services, such as an American Sign Language interpreter or written materials in accessible formats, should contact David Robb, Disability Services Coordinator, at 33 S. Arlington Heights Road, Arlington Heights, Illinois 60005, (847)368-5793 (Voice), (847)368-5980 (Fax) or drobb@vah.com.



Committee-of-the-Whole
8/9/2021

Item: Potential New Sustainability Initiatives/Green Project Ideas

Department: Planning & Community Development

Introduction/Purpose

One of the Village Board's prior strategic priorities was to evaluate potential sustainability projects and recommend utilization of green aggregation funds. The purpose of the Committee of the Whole meeting is to discuss on a preliminary basis the list of potential new sustainability initiatives or green project ideas. Upon feedback from the Board and prioritization of certain projects, additional research and cost estimating would take place for further consideration.

Recommendation

It is recommended that the Village Board Committee of the Whole review the attached sustainability initiatives and provide recommendations on highest ranked projects. In particular, Staff would recommend proceeding with the first phase EV charging stations at the Vail Avenue garage and continuing to pursue the Vail Avenue permeable paver project through a combination of grants and green aggregation funds.

ATTACHMENTS:

Description

Memo
New Sustainability Initiatives ideas
2021 Green Projects Rankiing Form

Type

Memorandum
Exhibits
Exhibits

MEMORANDUM

TO: Randy Recklaus, Village Manager
FROM: Charles Witherington-Perkins
Director of Planning and Community Development
DATE: August 2, 2021
SUBJECT: Potential New Sustainability Initiatives/Green Project Ideas

Introduction/Purpose

One of the Village Board's prior strategic priorities was to evaluate potential sustainability projects and recommend utilization of green aggregation funds. The purpose of the Committee of the Whole meeting is to discuss on a preliminary basis the list of potential new sustainability initiatives or green project ideas. Upon feedback from the Board and prioritization of certain projects, additional research and cost estimating would take place for further consideration.

Background

For the 2020 Village Board Strategic Business Plan, the Board included the following strategic priority.

Planning & Community Development

Evaluate Potential Sustainability Projects and Recommend Utilization of Green Aggregation Funds

Research, evaluate and prepare cost estimates for potential energy efficiency projects in order to utilize Green Aggregation Funds. Explore innovative opportunities in wind, solar and other potential projects to showcase the Village's commitment to sustainability.

Other components of the Business Plan included exploring New Sustainability Initiatives such as:

- 1) Explore an Electric Car Charger policy/program for public and private locations
- 2) Improve walkability for pedestrians
- 3) Enhance bike friendly initiatives

Staff had conducted research and prepared the attached list of potential projects for preliminary discussion and distributed it to the Village Board in September 2020 and again in May of 2021. Actual discussion at a Committee of the Whole meeting on this topic was deferred due to concerns relative to COVID 19 and the economy.

Funding

Between 2019 and 2022, the Village will have received approximately \$625,000 in funds from the Green Electric Aggregation program, which also provides renewable energy credits for the entire community. As part of the 2020 budget, \$30,000 was included for electric vehicle charging stations in one of the Downtown garages, although, again due to COVID 19 and other priorities this initiative was deferred. A first phase project for consideration could be to implement a pilot program for EV car charging stations in the Vail Avenue garage. In 2019, the Village received preliminary cost estimates to install car charging stations in the Vail Avenue garage (approximately \$16,000 to \$28,000 plus painting and striping). If this project or other project ideas are prioritized by the Board, more detailed cost estimates and analysis would need to be obtained and presented.

Potential Green Energy Ideas

Staff has conducted preliminary research and prepared the attached list of potential projects for preliminary discussion at the Committee of the Whole meeting. This vignette of ideas and preliminary information should be viewed as a starting point to narrow down the focus of potential initiatives. Also attached is a Green Projects ranking form that the Board may choose to use in assisting them in prioritizing projects as they are presented at the Committee of the Whole meeting.

Process

The following process is suggested

Step 1: Review and discuss the list of sustainable initiatives

Step 2: Rank or prioritize by level of importance

Step 3: Conduct research and obtain updated pricing or actual cost proposals for the highest ranked projects.

Step 4: Pursue implementation of the approved projects in a phased approach.

Recommendation

It is recommended that the Village Board Committee of the Whole review the attached sustainability initiatives and provide recommendations on highest ranked projects. In particular, Staff would recommend proceeding with the first phase EV charging stations at the Vail Avenue garage and continuing to pursue the Vail Avenue permeable paver project through a combination of grants and green aggregation funds.

C: Cris Papierniak: Assistant Public Works Director
 Derek Mach: Landscape Planner
 Jake Schmidt: Assistant Planner

CW-P:Imp

POTENTIAL GREEN ENERGY PROJECTS 2020 FOR DISCUSSION

Note: Preliminary cost estimates based upon 2019 research are for discussion and prioritization only. The highlighted projects are a higher priority. Once projects are ranked, more detailed cost estimates will be obtained.

1. SOLAR

A. Vail Garage Sheltered Parking w/solar panels

180 kW System

(Estimated annual return at .1138 per kw = \$26,629)

Preliminary Costs

Solar Panels w/ carports & installation: \$725,000-\$775,000

Engineering costs \$50,000

Total \$775,000-\$825,000



B. Vail Garage Sheltered Parking w/solar panels 6.5 kW System

(Estimated annual return at .1138 per kw = \$961)

Preliminary Costs

Solar Panels w/ carports & installation: \$35,000-\$45,000

Engineering and Contingency costs \$30,000

Total: \$65,000 - \$75,000

C. Public Works solar photovoltaic system at Hanson Center

20 Kw System

(Estimated annual return at .1138 per kw = \$2,959)

Preliminary Costs

Solar Panels w/installation \$59,000-\$63,000

Total \$59,000-\$63,000



D. Downtown Train Station Bike Shelter

2kW System

(Estimated annual return at .1138 per kw = \$296)

Preliminary Costs

Solar Panels \$6,000-7,000

Installation \$22,000

Total \$28,000-\$29,000

2. WIND SYSTEMS

A. Install 3 Semtive (2kw) wind turbines north of Village Hall

(Estimated annual return at .1138 per kw for three turbines = \$500)

Preliminary Costs

Total \$52,000



- B. Install 3 Windspire (3kw) wind turbines north of Village Hall**
(Estimated annual return at .1138 per kw for three turbines = \$679)
Preliminary Costs
Total \$110,000

- C. Install 3 Windspire (3kw) wind turbines at the former train station site**
(Estimated annual return at .1138 per kw for three turbines = \$679)
Preliminary Costs
Total \$110,000



- D. Incorporate solar/wind turbines as part of surface parking lot light poles**
Preliminary Costs
\$4,500 per pole
\$1,500 installation (foundation and assembly)
Total \$6,000 per light pole



3. EDUCATION, PROMOTION & PUBLIC RELATIONS

- A. Green Museum – Train Station**
Preliminary Costs
Total \$5,000

- B. Update website and develop an educational video**
Preliminary Costs
Total \$2,500



4. VEHICLE CHARGING STATIONS (2019 Cost Estimates)

- A. Vail Garage Charging Stations – 5 year estimate**
Preliminary Costs
Total \$15,988 - \$28,000 (purchase)

- B. Evergreen Garage Charging Stations – 5 year estimate**
Preliminary Costs
Total \$37,188 - \$48,000 (purchase)

- C. North Garage Charging Stations – 5 year estimate**
Preliminary Costs
Solar Panels

EV charging in the Evergreen and North Garages will require additional infrastructure upgrades

A. Vail Promenade

- Widening of sidewalks near Harmony Park with permeable pavers
- Permeable pavers within the street adjacent to Harmony Park
- Lighted bollards
- New street furniture
- Landscaping
- Entry modifications to allow quick conversion of the street to the pedestrian realm
- Gateway features near the Alfresco perimeter with removable bollards

Total Project Cost: \$1,998,000



A. Electric Automobile

- Upcharge per vehicle: \$8,000
- Cost per charging station: \$2,000
- Infrastructure improvements: \$12,000

Note: Per the replacement schedule, a total of \$75,000 is budgeted or planned for 2020 and 2021 for three replacement vehicles for inspectors.



B. Motorcycle

Preliminary Costs
\$10,000-\$20,000
Zero Motorcycles
Upcharge to be determined



C. Electric Cart

Preliminary Costs
Cart: \$7,795 - \$11,595
Moto EV



MotoEV 2 Passenger Utility Deluxe
MSRP: \$11,595.00

D. Electric Shuttle

Preliminary Costs
Shuttle: \$17,495 - \$26,995
Moto EV



MSRP: \$17,495.00

E. eTuk:

Preliminary Costs
To be determined



7. DIGITAL SOLAR KIOSKS

A. Soofa Digital Kiosk

Preliminary Costs
Full Purchase: \$18,000 per Kiosk
Yearly Software Subscription: \$2,000

Note: Costs can be reduced by allowing sign sponsorship or advertising. Other vendors have been researched and currently there are limited options.



8. ROOFING

A. Green Roofs

Preliminary Costs

Installation and roof upgrades: \$122 - \$211 per square-foot

Note: Green roofs can be maintenance intense and difficult to retrofit to an existing structure.



B. White Roofs

Preliminary Costs

Installation costs: \$6 - \$8 per square-foot



9. PERMEABLE PAVERS

A. Parking Lot Pavers

Preliminary Costs

Removal of existing pavement and installation of permeable pavers: \$25 - \$28 per square-foot



10. BIOSWALES

A. Traffic Calming/Bumpouts/Medians

Preliminary Costs

To be determined



11. BIKE/SCOOTER SHARE PROGRAM – Private Enterprise

A. Zagster Bike Share

Preliminary Costs

Minimal – none



B. Bird Scooters

Preliminary Costs

Minimal – none



12. RAIN WATER SYSTEM

A. Below Grade Rain System or Rain Barrels

Preliminary Costs

Varies on the size of the system \$6,000 - \$10,000



13. BIKE PLAN IMPROVEMENTS

A. Bike Lane Striping

Kennicott Avenue from Palatine Frontage to Oakton Street – install parking lane striping
(Approximate striping length 6" = 8770 LF)

Preliminary Costs \$6665.20

- a. Goebbert Road from Algonquin Road to Falcon Rd – install bike lanes – west side (no parking allowed) stripe 4' from edge of pavement / east side (parking allowed) 12' from edge of pavement bike/parking lane. This will leave 9.5' driving lanes.
- b. Approximate striping length = 4" = 900 LF 6" = 1800 LF
- c. *Preliminary Costs* \$1836 plus cost of markings for BIKE LANE and bike symbol
- d. Goebbert Road from Falcon to Golf Rd – install buffered bike lanes – no parking allowed on either side. – bike lane striped at 4' from EOP and buffer 2.5' wide
- e. Approximate striping length = 6" = 4560 LF and 4" = 4560 LF plus 4" = 200 LF needed for angled stripes in buffer area

- f. *Preliminary Costs* \$5940.80 plus cost of markings for BIKE LANE and bike symbol

B. Improve Biked Route Signage

Preliminary Costs

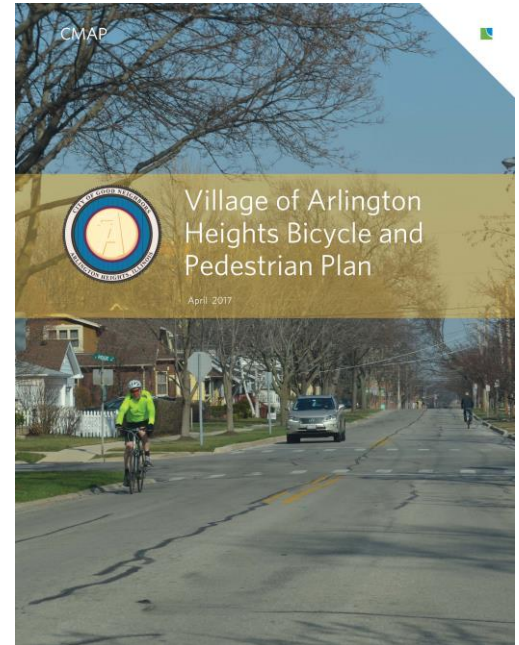
To be determined

C. Potential Longer Term Projects

Preliminary Costs

To be determined

- a. Dryden/Windsor connection to Lake Arlington
- b. Path along Wilke Road from Algonquin to White Oak
- c. Kennicott Ave crossing at Palatine Road.
- d. Walnut-Ridge Crossing at Northwest Highway
- e. Goebbert Road Bike Lane Striping
- f. Comed R-O-W bike path
- g. Triangle District Improvements.



14. PEDESTRIAN CROSSWALKS

A. DuraTherm Decorative Crosswalk

Preliminary Costs

Varies on the size of the crosswalk \$6,000 - \$8,000 per crosswalk (Approximately \$15 per square foot)



2021 Green Projects Ranking Form

	Project	Estimated Cost	Importance			Comments
			Low	Moderate	High	
1	Solar Systems					
A	Vail Garage Sheltered Parking w/solar panels 180 kW System	\$775,000-\$825,000				
B	Vail Garage Sheltered Parking w/solar panels 6.5 kW System	\$65,000 - \$75,000				
C	Public Works solar photovoltaic system at Hanson Center 20 Kw System	\$59,000-\$63,000				
D	Downtown Train Station Bike Shelter 2kW System	\$28,000-\$29,000				
2	Wind Systems					
A	3 Semtive (2kw) wind turbines north of Village Hall	\$52,000				
B	3 Windspire (3kw) wind turbines north of Village Hall	\$110,000				
C	3 Windspire (3kw) wind turbines at the former train station site	\$110,000				
D	Incorporate solar/wind turbines as part of surface parking lot light poles	\$6,000 per light pole				
3	Education, Promotion, & Public Relations					
A	Green Museum – Train Station	\$5,000				
B	Update website and develop an educational video	\$2,500				
4	Vehicle Charging Stations					
A	Vail Garage Charging Stations – 5 year estimate	\$15,988 - \$28,000 (purchase)				

2021 Green Projects Ranking Form

	Project	Estimated Cost	Importance			Comments
			Low	Moderate	High	
4	Vehicle Charging Stations					
B	Evergreen Garage Charging Stations – 5 year estimate	\$37,188 - \$48,000 (purchase)				
C	North Garage Charging Stations – 5 year estimate	\$16,946 - \$27,000 (purchase)				
	Vehicle Charging Stations at All Three Garages	\$103,000				
	Painting Costs	\$9,985				
5	Vail Permeable Street Pavement/Plaza					
A1	Vail Pervious Pavers (MWRD Grant plus Village match)	\$625,000				
A2	Vail Streetscape Improvements	\$1,373,000				
	Total Project Cost	\$1,998,000				
6	Electric Vehicles					
A	Electric Automobile	\$42,000				
B	Motorcycle	\$10,000-\$20,000				
C	Electric Cart	\$7,795 - \$11,595				
D	Electric Shuttle	\$17,495 - \$26,995				
E	eTuk	TBD				
7	Digital Solar Kiosks					
A	Soofa Digital Kiosk	\$18,000 per Kiosk (Yearly: \$2,000)				

2021 Green Projects Ranking Form

	Project	Estimated Cost	Importance			Comments
			Low	Moderate	High	
8	<i>Roofing</i>					
A	Green Roofs	\$122 - \$211 per SF				
B	White Roofs	\$6 - \$8 per SF				
9	<i>Permeable Pavers</i>					
A	Parking Lot Pavers	\$25 - \$28 per SF				
10	<i>Bioswales</i>					
A	Traffic Calming/Bumpouts/Medians	TBD				
11	<i>Bike/Scooter Program</i>					
A	Zagster Bike Share	Minimal - none				
B	Bird Scooters	Minimal - none				
12	<i>Rain Water System</i>					
A	Below Grade Rain System or Rain Barrels	\$6,000 - \$10,000				
13	<i>Bike Plan Improvements</i>					
A	Bike Lane Striping					
	Kennicott Avenue from Palatine Frontage to Oakton Street	\$6,665.20				
	Goebbert Road from Algonquin Road to Falcon Rd	\$1836 plus cost of markings				
	Goebbert Road from Falcon to Golf Rd	\$5940.80 plus cost of markings				
B	Improve Biked Route Signage	TBD				

2021 Green Projects Ranking Form

	Project	Estimated Cost	Importance			Comments		
			Low	Moderate	High			
13	Bike Plan Improvements							
C	Potential Longer Term Projects							
	Dryden/Windsor connection to Lake Arlington	TBD						
	Path along Wilke Road from Algonquin to White Oak	TBD						
	Kennicott Ave crossing at Palatine Road	TBD						
	Walnut-Ridge Crossing at Northwest Highway	TBD						
	Goebbert Road Bike Lane Striping	TBD						
	Comed R-O-W bike path	TBD						
	Triangle District Improvements	TBD						
14	Pedestrian Crosswalks							
A	DuraTherm Decorative Crosswalk	\$6,000 - \$8,000 per crosswalk (Approximately \$15 per SF)						