*Due to a malfunction with the Village recorder, these minutes were done via a copy of the taped version provided by Town Hall.

CHAIRMAN: JAMES PATTERSON
MEMBERS:WILLIAM OLSEN, JESSE GALLO, KERRY BOLAND&THOMAS McKNIGHT
Alternate: Bryan Barber

VILLAGE OF WARWICK
PLANNING BOARD MEETING
NOVEMBER 10, 2020

The monthly meeting of the Village of Warwick Planning Board was held on Tuesday, November 10, 2020. Present were Jim Patterson, Jesse Gallo, Bill Olsen, Kerry Boland, Thomas McKnight, Bryan Barber, Village Engineer, Dave Getz and Planning Board attorney, Robert Dickover. Others present: David Griggs, Becky Koze, Andrew Fetherston, Jason Anderson, Charles Gottlieb, Phillip Greeley, Nathan Ungar, Leiby Katz, Melanie Wesloske, Daniel Mack and others.

The meeting was held in Town Hall.

The Board recited the Pledge of Allegiance.

Mr. Patterson acknowledged that the Planning Board received 1 piece of correspondence referring to Warwick Commons/Sheffield Rd.

A MOTION was made by Bill Olsen, seconded by Kerry Boland, and carried to accept the minutes of the October 13, 2020 Planning Board meeting. (4 Ayes) {1 Abstention – Thomas McKnight}

28 CHURCH ST.	AMENDED SITE PLAN APPROVAL	CONVERGENT ENERGEY

Mr. Getz – We received a response from the Building Inspector indicating that the facility is an allowed use subject to the receipt of correspondence from O&R that the facility will be used for the Village of Warwick. We also received a response from Fire Dept. indicating they had no concerns with the proposed facility. The utility poles numbers shown on sheet 2 should be updated and consistent with the plan. The Emergency Response Plan mentions lighting. The

location, height, and illumination and fixtures should be provided on the map.
Mr. Griggs – There are 2 lights with motion detectors that will be placed on the North and South side.
Mr. Getz – Could you put that on the plan. The Emergency Response Plan indicates a meeting point, we need to know where it is, so it needs to be stated on the map where the meeting point is located.
Ms. Koze – We will do that.
Mr. Getz – You submitted a Decommissioning Plan. The cost of that plan should be established and an acceptable bond should be submitted to the Village Board. What is the life span of one of these?
Ms. Koze – Potentially 20 years, the batteries have about 10 years and will be replaced.
Mr. Getz – Are there similar places nearby?
Ms. Koze – There is one in NY but they are just breaking ground, and it is a different technology but we do have videos and drone shots and they really are the best source.
Mr. Getz – I believe the information in the EAF is sufficient for review.
Mr. Patterson – What happens after 20 years?
Ms. Koze – That is a projected time. We have a contract with options and extensions to continue and if it is not continued, we decommission and remove it.
Mr. Patterson – Do you picture extending the site or having any other locations in the area?
Ms. Koze – No, we have no intention of expanding or have any other locations.
Mr. Olsen – How many houses will these batteries be for?
Ms. Koze – Approximately 400-450 houses yearly but this is for the grid not individual homes.
Mr. Olsen – So this is not specifically for the Village of Warwick?
Ms. Koze – The grid is serving the Village of Warwick. It is for brown-outs, not to energize all of the homes in Warwick.
Mr. Getz – And also for peak times.
Ms. Koze – Yes.
Mr. Griggs – Like when they work on the sub-stations, they can use this.
Ms. Boland – Is the fire management portion specialized depending on the type of emergency event it is, is detailed in here?
Ms. Koze – Yes, it is all detailed in there and we will also coordinate directly with the Fire Dept. Emergency Responders and walk them through it and all the procedures.
Mr. Patterson – Is there a Fire Suppression System?
Mr. Koze – Yes.
Ms. Boland – I have asked multiply times for a Safety Report from your existing locations and I think I left it very open on what type of format it should take whether it was external or internal, so where is it?
Ms. Koze – Well, we have had no safety incidents…
Ms. Boland – Can I get a report?
Ms. Koze – Sure, I can provide something.
Ms. Boland – That is what I have been asking for. When can I get it?
Ms. Koze - I will have to talk to our operating people.
Ms. Boland – I have asked for it for 3 meetings in a row. How is 2 weeks?

Ms. Koze – We can certainly try to get that.
The Board review and amended the Long EAF submitted by applicant.

A MOTION was made by Jesse Gallo, seconded by Bill Olsen and carried to declare a Negative Declaration under SEQR. (5 Ayes)

A MOTION was made by Bill Olsen, seconded by Jesse Gallo and carried to schedule a public hearing on December 8, 2020 or at the Board's next regularly scheduled meeting. (5 Ayes)

WARWICK COMMONS	AMEND SITE PLAN	WC STAGE 5 LLC

Mr. Getz – There is a summary of consistent impacts in Exhibit E in the EAF which the Board should review for SEQR purposes to compare the last project to this one. We have talked about traffic and whether the proposed gate would it be closed to prohibit cars going through or open to let traffic pass. The traffic engineer recommended the gate be open and I think we should speak on that.
Mr. Greeley – When the traffic study was prepared it was assumed it would be gated and not a through connection. The supplement deals with it if it was opened to full traffic and the effect of that. From the development of traffic that would utilize Ball Rd. in the peak hour we estimate about 60 total trips and approximately 15 vehicles from the development. There may also be some traffic from the adjoining neighborhoods that may come out to get access to Brady but that would maybe, be 5 to 10 total that may try to use that. There could also be traffic from the South on Brady Rd. that may decide to make that maneuver and if it was open to full traffic I think there are some things that might be implemented to calm down traffic like a choker where traffic can still get through but it reduces the width of the road and it could cut down on more people but that is depending on what the Highway Dept. says, there are speed tables, speed bumps or gradual or contrast in pavement just so that it doesn't look like it is a thru way but it would calm the traffic speeds down but to have a through road makes sense definitely for emergencies. As I said before the original traffic study was done with just emergency access. There was some concern about weekend conditions and our study did look peak hours and on Saturdays around midday. I know there are concerns about the fall, with Applefest and other things and in our Supplemental submission we provided the data. We have data going back to 2012.
Mr. Patterson – If I read correctly, you would like to dedicate Sheffield to the Village. We do acknowledge where it ties into the community it does appear to be about 30ft. We would need to speak with the DPW and see what they have in mind. I think that during construction there should be a gate up there but after the dedication and acceptance of it, would it be removed? We also are going to be reaching out to the Village Board to see what their view is.
Mr. Getz – How would you describe the choker? How wide would it be?
Mr. Greeley – There are variations of it but the choker that I would use here would be to bring the road width down to like a one way for a very short distance and one vehicle would proceed at a time. I wouldn't use a speed hump but maybe a speed table, but what we can provide for the Board is some of the information that is being used in other areas that describes the exact treatment.

Mr. Olsen – Will there be parking on these roads?
Mr. Fetherstone – No. The width now is 30ft. and I guess you possibly could park.
Mr. Greeley - There are some advantages to a narrower road and parking does tend to slow traffic down but some communities don't like parking on the streets and the Village requirement is 30ft.
Mr. Fetherstone – There are a lot of options, it is not just gate open, gate closed. There is speed control, narrowing, you could build the road as it with the gate open and leave it, set aside a bond and if there are too many complaints on speeding and we want the narrowing you can do it after construction, see how it works.
Mr. Greeley – We can provide some sketches or back-up.
Mr. Fetherstone – The original letter we got was signed by 70 people in the adjacent community that they wanted the gate closed. The gate allows emergency access and that is the critical thing for Ridgefield, that they have another way in.
Mr. Gottlieb – We were contemplating requesting a public hearing so we could listen to the neighbors because as we go on and hear what the Village Board, the DPW and this Board thinks and it would also be interesting to hear what the residents adjacent to us think and get their input.
Mr. Patterson – Mr. Dickover, can you reach out to the Village attorney and see if the road was accepted and see what the liability is? I would also like to reach out and get some suggestions from the DPW and the Village Board to consider the speed reduction measures.
Mr. Dickover – In the letter it questions on whether the traffic study done in May which was during Covid? Could you please address that?
Mr. Greeley – We do have historical information which we used. Prior to the pandemic we estimated from 2019 and back to 2012 and with that we have adjusted factors. We adjusted by location and by about 25 to 30%. NYS DOT keeps data and we get information based on cell phone data and we adjust based on that information. When we do the study, we are also project the future so projecting out from the current year to 4 or 5yrs out we have another percentage year added on top of the base traffic and typically it is conservative.
Mr. Patterson – We would love to have suggestions to slow down the traffic and we can set up a meeting with the DPW and possibly a Village Board representative, Barry Cheney and make sure everyone is on board.
Mr. Getz – Regarding the dam…
Mr. Fetherstone – I copied you and the DEC dam safety engineer for Orange County. I sent an e-mail today to the HOA and their attorney and they said they would get back to me in a couple of days and that was 5 days ago, so nothing has changed. We are a little frustrated because we have to do a SWPP that relies on that dam one way or the other and that is a problem right now. We need a resolution.
Mr. Patterson – There is a pipe on the northside of the pond that sticks out of the pond, is that for Fire trucks?
Mr. Fetherstone – That is a dry hydrant and it is exactly what that is, they draw water and fill the tank. It is really not needed in that area There is municipal water you don't need to draw water out of a pond but if the Fire Dept. needs it we can take it out and relocate it if the decision was to decommission that dam.
Mr. Patterson – I don't know what the pressure is out there.

Mr. Getz – They are going to be testing that as part of their design…
Mr. Fetherstone – It was approved before, but we are going to do our own pressure test, understanding that we need to get 2 permits from DEC to do the dam. We can't go forward; we can't get approval without it being solved. We are looking to try and address one of the issues which is the gate, open or close, gate or no gate, narrow or not, speed tables….
Mr. Gottlieb – If we can schedule the public hearing hopefully that kind of expedites the decision on the dam. Certainly, if this Board does not feel it necessary to close the public hearing you can keep it open and continue the conversation. It is always my preference to ask for public comment as soon as possible and as often as possible so we can respond to it.
Ms. Boland – I am not sure how a public hearing would…
Mr. Fetherstone – Because they will all be noticed because we are going to do disturbance around that dam one way or another, it must happen. We must do mitigation around that dam, we have to either raise the dam or remove it, it has to happen for this project to be approved. So everyone around that dam, everyone around this development will be noticed. They come to a public hearing I will personally tell them that their HOA is holding this thing up. They have a dam that is in violation of the DEC safety standards, it is a liability, and their Board has to make a decision one way or another and that is what is holding everything up.
Mr. Olsen – Are you saying you only want a public hearing on the dam issue?
Mr. Fetherstone – No.
Mr. Patterson – I am a little hesitant, we have been going over this dam issue for many many years…
Mr. Dickover – It has always been the business of this Board for at least 15 years to do the environmental review prior to a public hearing. The Board needs to review the Consistency Statement before we can schedule a public hearing.
Mr. Gottlieb – On something that we would like to get figured out before we do the SEQR determination is what mitigation measures are going to be in place for the road because that is an impact that needs to be assessed for the SEQR determination. We would like to know what the residents would like to see or suggest, we would like to know what mitigation is necessary.
Mr. Patterson – I disagree with that. It is the Board's decision as to what mitigation takes place and although we will be happy to listen to them, it ultimately is the Board's decision and as I said I am hesitant to schedule a public hearing at this time.
Mr. Gallo – I agree.
Mr. Fetherstone – I understand the Board's regular procedure but I always think it is better to get all parties in the room, DPW, public, everyone, it is just that we put a lot of work into this and to have this slow us down, it is just frustrating.
Mr. Patterson – Now that they have an attorney, I think the process may be quicker.
Mr. Gottlieb – What items can we verify before the next meeting so that we can get past the hurdle for a public hearing?
Mr. Patterson – We have already stated the position this Board has regarding SEQR and so the dam issue needs to be resolved.
Mr. Dickover – The dam has always been a major component of this project and the Board will make the decision whenever they feel it is appropriate.

Mr. Getz – I would like to expand on the tax revenue projections and the fiscal impacts and the implications of fee ownership versus condominium ownership. Would that require a subdivision of every single lot?
Mr. Gottlieb – We looked in the Zoning Code to see whose authority would be to mandate that type of fees under subdivision ownership and we did not see that anywhere in there. But we will respond on that because no matter which way you dice it that type of subdivision would be very complicated with the Planning Board and at a transactional perspective for the future owners of these units. But we will respond to that comment as well as the tax implications.
Mr. Getz – We did receive a plan today. Can you point out some of the changes?
Mr. Fetherstone – We looked at the area bulk regulations in the current zoning and we realized that previously there was a 5-lot subdivision and there was really no need for those separate lots. All of the buildings have stayed the same we just eliminated the lot lines so there is now a 3 lot subdivision in addition to the road.
Mr. Patterson – For what reason?
Mr. Fetherstone – For zoning compliance. It helped us lower our FAR and the Developmental Coverage.

A MOTION was made by Jesse Gallo, seconded by Kerry Boland and carried to adjourn the meeting. (5 Ayes)

Respectfully submitted,

Maureen J. Evans,
Planning Board secretary

CHAIRMAN: JAMES PATTERSON
MEMBERS:WILLIAM OLSEN, JESSE GALLO, KERRY BOLAND&THOMAS McKNIGHT
Alternate: Bryan Barber

VILLAGE OF WARWICK
PLANNING BOARD MEETING
DECEMBER 8, 2020

The monthly meeting of the Village of Warwick Planning Board was held on Tuesday, December 8, 2020. Present were Jim Patterson, Jesse Gallo, Bill Olsen, Kerry Boland, Thomas McKnight, Bryan Barber, Village Engineer, Dave Getz and Planning Board attorney, Robert Dickover. Others present: Robert Silber, David Griggs, Becky Koze, Simi Falase, Vinnie Galligan, Mark Zeevat and others.

The meeting was held in Town Hall.

The Board recited the Pledge of Allegiance.

A MOTION was made by Bill Olsen, seconded by Jesse Gallo, and carried to accept the minutes of the November 10, 2020 Planning Board meeting as corrected. (5 Ayes)

VILLAGE VIEW	EXT. 28 LOT SUBDIVISION APPPROVAL	VILLAGE VIEW

A MOTION was made by Jesse Gallo, seconded by Bill Olsen and carried to grant an extension until March 10, 2021. (5 Ayes)

WARWICK COMMONS	EXT. OF SITE PLAN	STERLING BANK

A MOTION was made by Bill Olsen, seconded by Jesse Gallo and carried to grant an extension until March 10, 2021. (5 Ayes)

PUBLIC HEARING

28 CHURCH ST.	AMENDED SITE PLAN APPROVAL	CONVERGENT ENERGY

Mr. Getz – We received a letter from O & R that confirms the Boards question regarding the use. The letter confirms that this facility will be used for public use, so I believe that completes the investigation on that issue. We have also received safety records with a letter stating that they have had zero safety incidents since their inception. The applicant has revised the site plan in response to our comments. They have added light locations and the plan indicates that the light will not spill out any significant distance pass the facility. They have updated their Emergency Response Plan and they have provided an updated Decommissioning Plan. They have added an estimated amount for the decommissioning work which could be 30yrs or so and that amount in current dollars is estimated at $32,000.00. My reaction is that it seems like a lower amount than I would have anticipated. Can the applicant provide some back-up information on how that was estimated?

Ms. Falase – Convergent's purchase agreement with the battery supplier (GE/LG-Chem in this case) includes reclaiming and recycling the battery cabinets and modules upon decommissioning of the facility, meaning that a majority of the decommissioning cost is effectively accounted for at commissioning of the project which is why the amount given may appear to be underestimated. Some information on the removal and recycling of the batteries is provided in Section 2.1 of the Decommissioning Plan, with an understanding that the batteries comprise a majority of the facility, the decommission costs provided were determined based on the current estimated costs to have other ancillary equipment at the site (such as described in the Decommissioning plan Sections 2.2, 2.3, 2.4) removed by a contractor, and for site restoration. Just as a note, most of the ancillary equipment will retain some residual/second-hand/scrap value that is not even accounted for at this time but may balance some of the cost for decommissioning.

Mr. Getz – The Village needs to make sure we cover ourselves in the event that the applicant does not address it. I believe we would like more information.

Mr. Dickover – In your prior presentations it was indicated that you had provided municipalities a decommissioning bond in the past. It might be helpful if you could get a copy of that bond that was submitted so we can review it. This Board probably will make a recommendation to the Village Board in respect to the bond and the amount of it. If we can come to a number that the Board feels comfortable with then I can see us recommending to the Village Board that they accept the bond in the form that you are presenting.

Ms. Falase – We can certainly provide examples of other bonds and letters of credit that we have used in other municipalities.

Mr. Patterson – I see from the letter from O&R that there is another location in the Town of Warwick owned by the Warwick Valley School District which is twice the size as the one in the Village. Are you at the same stage with that application?

Ms. Koze – Yes.

Mr. Patterson – Do you have a number for the decommissioning of that particular location?

Ms. Koze – I don't know if we have provided a decommissioning plan at that facility yet but we will be preparing something similar.
Mr. Olsen – Has the Fire Dept. received, or will they receive this information?
Ms. Koze – Yes, we did do a safety presentation.
Mr. Olsen – Where will this be kept? In their files?
Ms. Koze – Yes and one on site.
Mr. McKnight – We spoke last time that the life span of the batteries was potentially 20 years and the batteries will probably be replaced in 10 years. So, the decommissioning cost is estimated on 30 years? What is relevant about 30 years?
Ms. Falase – The decommissioning is referring to the end of life.
Ms. Koze – The whole facility would be removed but the batteries have a potential 10-year life and would be swapped out and that would be augmenting of the facility not decommissioning.
Ms. Boland – Thank you for the Safety Report. In sec. 9.1 and 9.2, Small Battery Fire Response - it says that the site shall be periodically monitored by Convergent for re-ignition for 24 hrs. after the initial fire has been suppressed. I don't know what periodically means, especially if there was just an event at the site. I think I would be more reassured if there was a clarification about what will happen after a fire whether it is a small or large battery.
Ms. Koze – The idea is that it will be visually monitored. We constantly have somebody watch the site. If we need to specify the times and hrs. that is fine but if there is an incident, we will have someone constantly monitoring those sites.
Ms. Boland – Can this say that then?
Ms. Koze – Yes.
Ms. Boland – In (I) it says "Due to the composition of gas vented during a Li-ion battery fire, the air in the surrounding area of the facility should be considered potentially corrosive, toxic, and/or flammable". What surrounding area does it mean?
Ms. Koze – That would be the perimeter of the battery site, so within the fence line of the battery system.
Mr. Patterson read the public hearing notice.
Mr. Patterson opened the meeting to the public.
Mr. Mark Zeepvat, 56 Colonial Ave. – Is there any type of noise or humming that might be produced? Does it need to be cooled, is there air conditioning noise that could be an issue?
Ms. Falase – There is not expected to be any noise. There are no motors or generator equipment in the battery system. As far as venting, it is to make sure that the gas levels in the battery containers are maintained at a safe level but there is not going to be anything noticeable to you from our experience.
Mr. Getz – They have added a note on their plan indicating that the fence line is at its closest about 750ft. to the nearest home.
Mr. Dickover – During this Boards environmental review of this project, we made an inquiry with respect to noise and the venting and air conditioning and I believe the applicant's response was that the air conditioning was equivalent to the sound of an average household air conditioning unit.
Mr. Griggs – That is correct.
Ms. Koze – Yes.
Mr. Dickover – Any reason to believe it was in excess of that?
Ms. Koze – No.

A MOTION was made by Kerry Boland, seconded by Bill Olsen and carried to close the public hearing. (5 Ayes)

Mr. Patterson – I would like to point out that everything has a fire suppression built in, in all of the individual units, so the alarm systems notify the applicants off-site and depending on the severity of the condition is what will activate it. Is the fire suppression a chemical system?
Ms. Falase – Yes, it is a chemical system but it is a clean agent so it should not have any major environmental impact.
Mr. Patterson – So no real clean-up. If it were to activate individually on the particular unit and not on the whole system.
Ms. Falase – Yes.
Ms. Boland – Throughout the Emergency Document there is an emergency telephone number and I called it and it is active. I imagine that it will be posted on the fence somewhere and provided to the Fire Dept. Should signage be put somewhere else too, maybe the building at 28 Church St.
Ms. Falase – Yes and we are working very closely with the Fire Dept. we plan to have a Knox box close by. We will work with them once this and the Knox box placement is finalized. Once that is done everyone involved will be notified any aware.
Mr. Olsen – Can you put it on the map?
Ms. Falase – Yes.

A MOTION was made by Bill Olsen, seconded by Jesse Gallo and carried to grant final approval to the site plan application of Convergent Energy & Power located at 28 Church St. with the following conditions:

1. The Applicant is to provide a decommissioning bond in form and context acceptable to the Planning Board attorney and Village Board and shall post with the Village Clerk a decommissioning bond in a sum satisfactory to the Village Engineer. Said bond shall be maintained for the life of the battery storage system. In the event the applicant or its successor in ownership shall fail to decommission the facility pursuant to the Plan submitted to the Planning Board and made a part of this application, the Village may utilize the bond to complete the decommissioning.

2. The applicant or current owner of the facility shall at all times maintain the vertical clearance of the project site free and clear of foliage.

3. The applicant shall provide "as built" plans to the Building Department prior to issuance of a certificate of occupancy.

4. The applicant shall revise its Emergency Response Plan in accordance with the requests made by members of the Planning Board at the meeting held December 8, 2020.

5. The applicant shall revise its site plan set to include an approval block providing the signature by the Applicant, property owner, Village Engineer and Planning Board chair.

A MOTION was made by Kerry Boland, seconded by Jesse Gallo and carried to adjourn the meeting. (5 Ayes)

Respectfully submitted,

Maureen J. Evans,
Planning Board secretary

Full Environmental Assessment Form
Part 1 - Project and Setting

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either "Yes" or "No". If the answer to the initial question is "Yes", complete the sub-questions that follow. If the answer to the initial question is "No", proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the applicant or project sponsor to verify that the information contained in Part 1is accurate and complete.

A. Project and Applicant/Sponsor Information.

Name of Action or Project: PROPOSED BATTERY ENERGY STORAGE SYSYTEM AREA		
Project Location (describe, and attach a general location map): 28 CHURCH STREET, MUNICIPALITY OF VILLAGE OF WARWICK, TOWN OF WARWICK, NY		
Brief Description of Proposed Action (include purpose or need): CONSTRUCTION OF A 10,000 SQUARE FOOT BATTERY ENERGY STORAGE SYSYTEM AREA		
Name of Applicant/Sponsor: CONVERGENT ENERGY + POWER	Telephone: 215-287-4398 E-Mail: bkoze@convergentep.com	
Address: 7 Times Square Tower, Suite 3504		
City/PO: New York	State: NY	Zip Code: 10036
Project Contact (if not same as sponsor; give name and title/role): ERS ENGINEERING CONSULTANTS, PC	Telephone: 845-987-1775 E-Mail: INFO@ERSCONSULTANTS.COM	
Address: 11 FORESTER AVE.		
City/PO: WARWICK	State: NY	Zip Code: 10990
Property Owner (if not same as sponsor): Warwick Valley BBA LLC	Telephone: 845-986-9334 E-Mail: bob@warwickvalleyproducts.com	
Address: P.O. Box 469		
City/PO: WARWICK	State: NY	Zip Code: 10990

B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. ("Funding" includes grants, loans, tax relief, and any other forms of financial assistance.)

Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Counsel, Town Board, or Village Board of Trustees ☐Yes☑No		
b. City, Town or Village Planning Board or Commission ☑Yes☐No	VILLAGE OF WARWICK PLANNING BOARD AND SITE PLAN APPROVAL	MAY 2, 2020
c. City, Town or Village Zoning Board of Appeals ☐Yes☑No		
d. Other local agencies ☐Yes☑No		
e. County agencies ☑Yes☐No	ORANGE COUNTY PLANNING DEPARTMENT	MAY 2, 2020
f. Regional agencies ☐Yes☑No		
g. State agencies ☑Yes☐No	NYSDEC - LONG EAF REVIEW	MAY 2, 2020
h. Federal agencies ☐Yes☑No		

i. Coastal Resources.

i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? ☐Yes☑No

ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program? ☐Yes☑No

iii. Is the project site within a Coastal Erosion Hazard Area? ☐Yes☑No

C. Planning and Zoning

C.1. Planning and zoning actions.

Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? ☐Yes☑No

- **If Yes,** complete sections C, F and G.
- **If No,** proceed to question C.2 and complete all remaining sections and questions in Part 1

C.2. Adopted land use plans.

a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located? ☐Yes☑No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? ☐Yes☐No

b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway; Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) ☑Yes☐No

If Yes, identify the plan(s):

Remediaton Sites:336003

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan? ☐Yes☑No

If Yes, identify the plan(s):

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☑ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?
LI ZONING DISTRICT

b. Is the use permitted or allowed by a special or conditional use permit? ☑ Yes ☐ No

c. Is a zoning change requested as part of the proposed action? ☐ Yes ☑ No
If Yes,
i. What is the proposed new zoning for the site? _____

C.4. Existing community services.

a. In what school district is the project site located? WARWICK VALLEY SCHOOL DISTRICT

b. What police or other public protection forces serve the project site?
WARWICK POLICE DEPARTMENT

c. Which fire protection and emergency medical services serve the project site?
WARWICK FIRE DEPARTMENT & WARWICK AMBULANCE

d. What parks serve the project site?
VETERANS MEMORIAL PARK

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)? COMMERCIAL

b. a. Total acreage of the site of the proposed action? 29.2 acres
b. Total acreage to be physically disturbed? 0.7 acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 29.2 acres

c. Is the proposed action an expansion of an existing project or use? ☐ Yes ☑ No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % _____ Units: _____

d. Is the proposed action a subdivision, or does it include a subdivision? ☐ Yes ☑ No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)
ii. Is a cluster/conservation layout proposed? ☐ Yes ☐ No
iii. Number of lots proposed? _____
iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____

e. Will the proposed action be constructed in multiple phases? ☐ Yes ☑ No
i. If No, anticipated period of construction: _____ months
ii. If Yes:
- Total number of phases anticipated _____
- Anticipated commencement date of phase 1 (including demolition) _____ month _____ year
- Anticipated completion date of final phase _____ month _____ year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases: _____

f. Does the project include new residential uses? ☐Yes ☑No

If Yes, show numbers of units proposed.

	One Family	Two Family	Three Family	Multiple Family (four or more)
Initial Phase				
At completion of all phases				

g. Does the proposed action include new non-residential construction (including expansions)? ☐Yes ☑No

If Yes,

i. Total number of structures _____

ii. Dimensions (in feet) of largest proposed structure: _____height; _____width; and _____ length

iii. Approximate extent of building space to be heated or cooled: _____ square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? ☐Yes ☑No

If Yes,

i. Purpose of the impoundment: _____

ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☐Other specify:

_____

iii. If other than water, identify the type of impounded/contained liquids and their source.

_____

iv. Approximate size of the proposed impoundment. Volume: _____ million gallons; surface area: _____ acres

v. Dimensions of the proposed dam or impounding structure: _____ height; _____ length

vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete):

_____

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? (Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite) ☐Yes ☑No

If Yes:

i .What is the purpose of the excavation or dredging? _____

ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?

- Volume (specify tons or cubic yards): _____
- Over what duration of time? _____

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them.

_____

_____

iv. Will there be onsite dewatering or processing of excavated materials? ☐Yes ☑No

If yes, describe. _____

_____

v. What is the total area to be dredged or excavated? _____ acres

vi. What is the maximum area to be worked at any one time? _____ acres

vii. What would be the maximum depth of excavation or dredging? _____ feet

viii. Will the excavation require blasting? ☐Yes ☐No

ix. Summarize site reclamation goals and plan: _____

_____

_____

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? ☐Yes ☑No

If Yes:

i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): _____

_____

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:

_____

_____

_____

_____

iii. Will the proposed action cause or result in disturbance to bottom sediments? ☐Yes ☑No

If Yes, describe: _____

iv. Will the proposed action cause or result in the destruction or removal of aquatic vegetation? ☐Yes ☑No

If Yes:

- acres of aquatic vegetation proposed to be removed: _____
- expected acreage of aquatic vegetation remaining after project completion: _____
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access): _____

_____

- proposed method of plant removal: _____
- if chemical/herbicide treatment will be used, specify product(s): _____

v. Describe any proposed reclamation/mitigation following disturbance: _____

_____

c. Will the proposed action use, or create a new demand for water? ☐Yes ☑No

If Yes:

i. Total anticipated water usage/demand per day: _____ gallons/day

ii. Will the proposed action obtain water from an existing public water supply? ☐Yes ☐No

If Yes:

- Name of district or service area: _____
- Does the existing public water supply have capacity to serve the proposal? ☐Yes ☐No
- Is the project site in the existing district? ☐Yes ☐No
- Is expansion of the district needed? ☐Yes ☐No
- Do existing lines serve the project site? ☐Yes ☐No

iii. Will line extension within an existing district be necessary to supply the project? ☐Yes ☑No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

_____

- Source(s) of supply for the district: _____

iv. Is a new water supply district or service area proposed to be formed to serve the project site? ☐ Yes ☑No

If, Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- Proposed source(s) of supply for new district: _____

v. If a public water supply will not be used, describe plans to provide water supply for the project: _____

_____

vi. If water supply will be from wells (public or private), what is the maximum pumping capacity: _____ gallons/minute.

d. Will the proposed action generate liquid wastes? ☐Yes ☑No

If Yes:

i. Total anticipated liquid waste generation per day: _____ gallons/day

ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each): _____

_____

_____

iii. Will the proposed action use any existing public wastewater treatment facilities? ☐Yes ☑No

If Yes:

- Name of wastewater treatment plant to be used: _____
- Name of district: _____
- Does the existing wastewater treatment plant have capacity to serve the project? ☐Yes ☐No
- Is the project site in the existing district? ☐Yes ☐No
- Is expansion of the district needed? ☐Yes ☐No

- Do existing sewer lines serve the project site? ☑Yes ☐No
- Will a line extension within an existing district be necessary to serve the project? ☐Yes ☑No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? ☐Yes ☑No

If Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge or describe subsurface disposal plans):

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? ☐Yes ☑No

If Yes:

i. How much impervious surface will the project create in relation to total size of project parcel?

_____ Square feet or _____ acres (impervious surface)

_____ Square feet or _____ acres (parcel size)

ii. Describe types of new point sources. _____

iii. Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?

- If to surface waters, identify receiving water bodies or wetlands: _____
- Will stormwater runoff flow to adjacent properties? ☐Yes ☐No

iv. Does the proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? ☐Yes ☐No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? ☐Yes ☑No

If Yes, identify:

i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)

ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? ☐Yes ☑No

If Yes:

i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) ☐Yes ☐No

ii. In addition to emissions as calculated in the application, the project will generate:

- _____Tons/year (short tons) of Carbon Dioxide (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- _____Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? ☐Yes ☑No

If Yes:

i. Estimate methane generation in tons/year (metric): _____

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? ☐Yes ☑No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust):

_____

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? ☐Yes ☑No

If Yes:

i. When is the peak traffic expected (Check all that apply): ☐Morning ☐Evening ☐Weekend ☐Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of truck trips/day and type (e.g., semi trailers and dump trucks): _____

iii. Parking spaces: Existing _____ Proposed _____ Net increase/decrease _____

iv. Does the proposed action include any shared use parking? ☐Yes ☐No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe:

vi. Are public/private transportation service(s) or facilities available within ½ mile of the proposed site? ☐Yes ☐No

vii Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? ☐Yes ☐No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? ☐Yes ☐No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? ☐Yes ☑No

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: _____

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other):

iii. Will the proposed action require a new, or an upgrade, to an existing substation? ☐Yes ☐No

l. Hours of operation. Answer all items which apply.

i. During Construction:

- Monday - Friday: 8AM - 5PM
- Saturday: 8AM - 5PM
- Sunday: NONE
- Holidays: NONE

ii. During Operations:

- Monday - Friday: 24/7
- Saturday: 24/7
- Sunday: 24/7
- Holidays: 24/7

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? ☐Yes ☑No

If yes:

i. Provide details including sources, time of day and duration:

ii. Will the proposed action remove existing natural barriers that could act as a noise barrier or screen? ☐Yes ☑No

Describe:

n. Will the proposed action have outdoor lighting? ☐Yes ☑No

If yes:

i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? ☐Yes ☑No

Describe:

o. Does the proposed action have the potential to produce odors for more than one hour per day? ☐Yes ☑No

If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures:

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? ☐Yes ☑No

If Yes:

i. Product(s) to be stored

ii. Volume(s) _____ per unit time _____ (e.g., month, year)

iii. Generally, describe the proposed storage facilities:

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? ☐ Yes ☑No

If Yes:

i. Describe proposed treatment(s):

ii. Will the proposed action use Integrated Pest Management Practices? ☐ Yes ☑No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? ☐ Yes ☑No

If Yes:

i. Describe any solid waste(s) to be generated during construction or operation of the facility:

- Construction: _____ tons per _____ (unit of time)
- Operation : _____ tons per _____ (unit of time)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction:
- Operation:

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction:
- Operation:

s. Does the proposed action include construction or modification of a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____

ii. Anticipated rate of disposal/processing:

- _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
- _____ Tons/hour, if combustion or thermal treatment

iii. If landfill, anticipated site life: _____ years

t. Will the proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

iii. Specify amount to be handled or generated _____ tons/month

iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? ☐ Yes ☑ No

If Yes: provide name and location of facility: _____

If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility:

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.

i. Check all uses that occur on, adjoining and near the project site.

☐ Urban ☑ Industrial ☑ Commercial ☑ Residential (suburban) ☐ Rural (non-farm)
☑ Forest ☑ Agriculture ☑ Aquatic ☐ Other (specify): _____

ii. If mix of uses, generally describe:

PROJECT SITE USE IS INDUSTRIAL WITH A PORTION OF SOUTH EAST IN FORESTED AREA. THE WAWAYANDA CREEK RUNS THROUGH THE SOUTH EAST PORTION OF THE SITE. MIXED COMMERCIAL ALONG THE NORTH EAST AND SOUTHWEST

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	5.9	6.1	+0.2
• Forested	12.8	12.5	-0.3
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	7.9	7.7	-0.2
• Agricultural (includes active orchards, field, greenhouse etc.)	0	0	0
• Surface water features (lakes, ponds, streams, rivers, etc.)	0.5	0.5	0
• Wetlands (freshwater or tidal)	4.56	4.56	0
• Non-vegetated (bare rock, earth or fill)	0	0	0
• Other Describe: _____			

c. Is the project site presently used by members of the community for public recreation? ☐ Yes ☑ No

i. If Yes: explain: _____

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? ☐ Yes ☑ No

If Yes,

i. Identify Facilities:

_____

_____

e. Does the project site contain an existing dam? ☐ Yes ☑ No

If Yes:

i. Dimensions of the dam and impoundment:

- Dam height: _____ feet
- Dam length: _____ feet
- Surface area: _____ acres
- Volume impounded: _____ gallons OR acre-feet

ii. Dam's existing hazard classification: _____

iii. Provide date and summarize results of last inspection:

_____

_____

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Has the facility been formally closed? ☐ Yes ☐ No

- If yes, cite sources/documentation: _____

ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:

_____

_____

iii. Describe any development constraints due to the prior solid waste activities: _____

_____

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:

_____

_____

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? ☑ Yes ☐ No

If Yes:

i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: ☑ Yes ☐ No

☐ Yes – Spills Incidents database — Provide DEC ID number(s): _____

☑ Yes – Environmental Site Remediation database — Provide DEC ID number(s): 336003

☐ Neither database

ii. If site has been subject of RCRA corrective activities, describe control measures: _____

_____

_____

iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? ☑ Yes ☐ No

If yes, provide DEC ID number(s): 336061, 336003

iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):

Previous owner NYSDEC reviewed reviewed and approved. These areas are deed restricted under Liber 12090 Page 649.

_____

v. Is the project site subject to an institutional control limiting property uses? ☑ Yes ☐ No

- If yes, DEC site ID number: 336061, 336003
- Describe the type of institutional control (e.g., deed restriction or easement): DEED RESTRICTIONS L. 12090 P. 649
- Describe any use limitations: AS DESCRIBED IN DEED RESTRICTIONS L. 12090 P. 649
- Describe any engineering controls: AS DESCRIBED IN DEED RESTRICTIONS L. 12090 P. 649
- Will the project affect the institutional or engineering controls in place? ☐ Yes ☑ No
- Explain: Project will not impact deed restricted areas

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? 7 feet

b. Are there bedrock outcroppings on the project site? ☐ Yes ☑ No
If Yes, what proportion of the site is comprised of bedrock outcroppings? ____ %

c. Predominant soil type(s) present on project site:

UH	63.3 %
RhB	19.2 %
Wd	12.8 %

d. What is the average depth to the water table on the project site? Average: 5 feet

e. Drainage status of project site soils:

☐ Well Drained:	% of site
☑ Moderately Well Drained:	70 % of site
☑ Poorly Drained	30 % of site

f. Approximate proportion of proposed action site with slopes:

☑ 0-10%:	89 % of site
☑ 10-15%:	6.5 % of site
☑ 15% or greater:	4.5 % of site

g. Are there any unique geologic features on the project site? ☐ Yes ☑ No
If Yes, describe:

h. Surface water features.

i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? ☑ Yes ☐ No

ii. Do any wetlands or other waterbodies adjoin the project site? ☑ Yes ☐ No

If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.

iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? ☑ Yes ☐ No

iv. For each identified regulated wetland and waterbody on the project site, provide the following information:

- Streams: Name 855.5-215, 855.5-228 Classification B(T), C(T)
- Lakes or Ponds: Name ____ Classification ____
- Wetlands: Name Federal Waters, Federal Waters, Federal Waters,... Approximate Size ____
- Wetland No. (if regulated by DEC) ____

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? ☐ Yes ☑ No

If yes, name of impaired water body/bodies and basis for listing as impaired:

i. Is the project site in a designated Floodway? ☑ Yes ☐ No

j. Is the project site in the 100-year Floodplain? ☑ Yes ☐ No

k. Is the project site in the 500-year Floodplain? ☑ Yes ☐ No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? ☑ Yes ☐ No
If Yes:

i. Name of aquifer: Principal Aquifer, Sole Source Aquifer Names:Northwest NJ 15 Basin SSA

m. Identify the predominant wildlife species that occupy or use the project site:

WHITE TAIL DEER	GRAY SQUIRREL	HOUSE SPARROW
GARTER SNAKE	RACCOON	
BLUE JAY	WOODCHUCK	

n. Does the project site contain a designated significant natural community? ☐Yes ☑No

If Yes:

i. Describe the habitat/community (composition, function, and basis for designation): _____

ii. Source(s) of description or evaluation: _____

iii. Extent of community/habitat:

- Currently: _____ acres
- Following completion of project as proposed: _____ acres
- Gain or loss (indicate + or -): _____ acres

o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? ☑Yes ☐No

If Yes:

i. Species and listing (endangered or threatened): _____

Bog Turtle, Indiana Bat

p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? ☐Yes ☑No

If Yes:

i. Species and listing: _____

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☐Yes ☑No

If yes, give a brief description of how the proposed action may affect that use: _____

E.3. Designated Public Resources On or Near Project Site

a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ☐Yes ☑No

If Yes, provide county plus district name/number: _____

b. Are agricultural lands consisting of highly productive soils present? ☐Yes ☑No

i. If Yes: acreage(s) on project site? _____

ii. Source(s) of soil rating(s): _____

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐Yes ☑No

If Yes:

i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature

ii. Provide brief description of landmark, including values behind designation and approximate size/extent: _____

d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☐Yes ☑No

If Yes:

i. CEA name: _____

ii. Basis for designation: _____

iii. Designating agency and date: _____

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places? ☐ Yes ☑ No

If Yes:

i. Nature of historic/archaeological resource: ☐ Archaeological Site ☐ Historic Building or District

ii. Name: _____

iii. Brief description of attributes on which listing is based:

_____

f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory? ☑ Yes ☐ No

g. Have additional archaeological or historic site(s) or resources been identified on the project site? ☐ Yes ☑ No

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

h. Is the project site within fives miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? ☑ Yes ☐ No

If Yes:

i. Identify resource: Appalachian Trail

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): National Scenic Trail

iii. Distance between project and resource: 3.43 miles.

i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? ☐ Yes ☑ No

If Yes:

i. Identify the name of the river and its designation: _____

ii. Is the activity consistent with development restrictions contained in 6NYCRR Part 666? ☐ Yes ☐ No

F. Additional Information

Attach any additional information which may be needed to clarify your project.

If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

I certify that the information provided is true to the best of my knowledge.

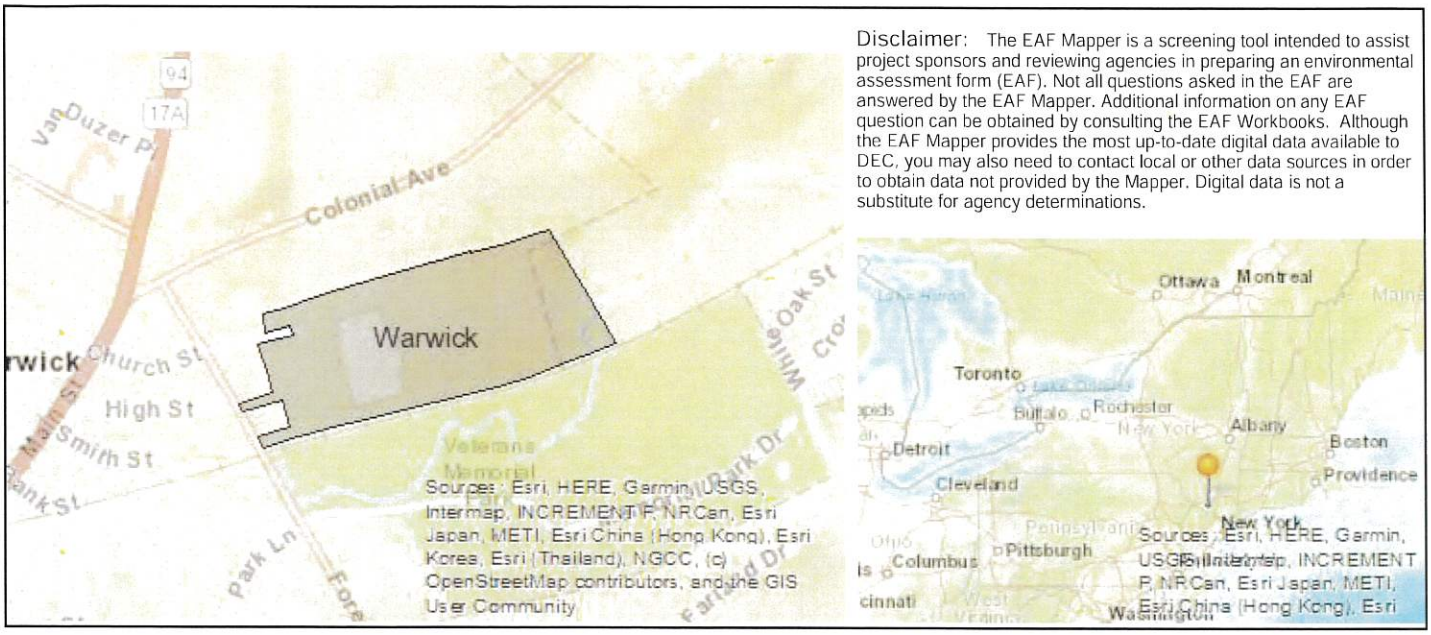
Applicant/Sponsor Name Rebecca Koze Date 10/29/2020

Signature Rebecca Koze Title Vice President, Development

PRINT FORM

EAF Mapper Summary Report

Friday, March 27, 2020 3:06 PM



B.i.i [Coastal or Waterfront Area]	No
B.i.ii [Local Waterfront Revitalization Area]	No
C.2.b. [Special Planning District]	Yes - Digital mapping data are not available for all Special Planning Districts. Refer to EAF Workbook.
C.2.b. [Special Planning District - Name]	Remediaton Sites:336003
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Yes - Digital mapping data for Spills Incidents are not available for this location. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Yes
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Yes
E.1.h.i [DEC Spills or Remediation Site - DEC ID Number]	336003
E.1.h.iii [Within 2,000' of DEC Remediation Site]	Yes
E.1.h.iii [Within 2,000' of DEC Remediation Site - DEC ID]	336061, 336003
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	Yes
E.2.h.ii [Surface Water Features]	Yes
E.2.h.iii [Surface Water Features]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
E.2.h.iv [Surface Water Features - Stream Name]	855.5-215, 855.5-228
E.2.h.iv [Surface Water Features - Stream Classification]	B(T), C(T)
E.2.h.iv [Surface Water Features - Wetlands Name]	Federal Waters

E.2.h.v [Impaired Water Bodies]	No
E.2.i. [Floodway]	Yes
E.2.j. [100 Year Floodplain]	Yes
E.2.k. [500 Year Floodplain]	Yes
E.2.l. [Aquifers]	Yes
E.2.l. [Aquifer Names]	Principal Aquifer, Sole Source Aquifer Names:Northwest NJ 15 Basin SSA
E.2.n. [Natural Communities]	No
E.2.o. [Endangered or Threatened Species]	Yes
E.2.o. [Endangered or Threatened Species - Name]	Bog Turtle, Indiana Bat
E.2.p. [Rare Plants or Animals]	No
E.3.a. [Agricultural District]	No
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	No
E.3.e. [National or State Register of Historic Places or State Eligible Sites]	Yes - Digital mapping data for archaeological site boundaries are not available. Refer to EAF Workbook.
E.3.e.ii [National or State Register of Historic Places or State Eligible Sites - Name]	Warwick Village Historic District
E.3.f. [Archeological Sites]	Yes
E.3.i. [Designated River Corridor]	No

Agency Use Only [If applicable]

Project :

Date :

Full Environmental Assessment Form
Part 2 - Identification of Potential Project Impacts

Part 2 is to be completed by the lead agency. Part 2 is designed to help the lead agency inventory all potential resources that could be affected by a proposed project or action. We recognize that the lead agency's reviewer(s) will not necessarily be environmental professionals. So, the questions are designed to walk a reviewer through the assessment process by providing a series of questions that can be answered using the information found in Part 1. To further assist the lead agency in completing Part 2, the form identifies the most relevant questions in Part 1 that will provide the information needed to answer the Part 2 question. When Part 2 is completed, the lead agency will have identified the relevant environmental areas that may be impacted by the proposed activity.

If the lead agency is a state agency **and** the action is in any Coastal Area, complete the Coastal Assessment Form before proceeding with this assessment.

Tips for completing Part 2:

- Review all of the information provided in Part 1.
- Review any application, maps, supporting materials and the Full EAF Workbook.
- Answer each of the 18 questions in Part 2.
- If you answer "**Yes**" to a numbered question, please complete all the questions that follow in that section.
- If you answer "**No**" to a numbered question, move on to the next numbered question.
- Check appropriate column to indicate the anticipated size of the impact.
- Proposed projects that would exceed a numeric threshold contained in a question should result in the reviewing agency checking the box "Moderate to large impact may occur."
- The reviewer is not expected to be an expert in environmental analysis.
- If you are not sure or undecided about the size of an impact, it may help to review the sub-questions for the general question and consult the workbook.
- When answering a question consider all components of the proposed activity, that is, the "whole action".
- Consider the possibility for long-term and cumulative impacts as well as direct impacts.
- Answer the question in a reasonable manner considering the scale and context of the project.

1. Impact on Land

Proposed action may involve construction on, or physical alteration of, the land surface of the proposed site. (See Part 1. D.1) ☐NO ☐YES

If "Yes", answer questions a - j. If "No", move on to Section 2.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may involve construction on land where depth to water table is less than 3 feet.	E2d	☐	☐
b. The proposed action may involve construction on slopes of 15% or greater.	E2f	☐	☐
c. The proposed action may involve construction on land where bedrock is exposed, or generally within 5 feet of existing ground surface.	E2a	☐	☐
d. The proposed action may involve the excavation and removal of more than 1,000 tons of natural material.	D2a	☐	☐
e. The proposed action may involve construction that continues for more than one year or in multiple phases.	D1e	☐	☐
f. The proposed action may result in increased erosion, whether from physical disturbance or vegetation removal (including from treatment by herbicides).	D2e, D2q	☐	☐
g. The proposed action is, or may be, located within a Coastal Erosion hazard area.	B1i	☐	☐
h. Other impacts: _____		☐	☐

2. Impact on Geological Features

The proposed action may result in the modification or destruction of, or inhibit access to, any unique or unusual land forms on the site (e.g., cliffs, dunes, minerals, fossils, caves). (See Part 1. E.2.g) ☐NO ☐YES

If "Yes", answer questions a - c. If "No", move on to Section 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Identify the specific land form(s) attached: _____	E2g	☐	☐
b. The proposed action may affect or is adjacent to a geological feature listed as a registered National Natural Landmark. Specific feature: _____	E3c	☐	☐
c. Other impacts: _____		☐	☐

3. Impacts on Surface Water

The proposed action may affect one or more wetlands or other surface water bodies (e.g., streams, rivers, ponds or lakes). (See Part 1. D.2, E.2.h) ☐NO ☐YES

If "Yes", answer questions a - l. If "No", move on to Section 4.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may create a new water body.	D2b, D1h	☐	☐
b. The proposed action may result in an increase or decrease of over 10% or more than a 10 acre increase or decrease in the surface area of any body of water.	D2b	☐	☐
c. The proposed action may involve dredging more than 100 cubic yards of material from a wetland or water body.	D2a	☐	☐
d. The proposed action may involve construction within or adjoining a freshwater or tidal wetland, or in the bed or banks of any other water body.	E2h	☐	☐
e. The proposed action may create turbidity in a waterbody, either from upland erosion, runoff or by disturbing bottom sediments.	D2a, D2h	☐	☐
f. The proposed action may include construction of one or more intake(s) for withdrawal of water from surface water.	D2c	☐	☐
g. The proposed action may include construction of one or more outfall(s) for discharge of wastewater to surface water(s).	D2d	☐	☐
h. The proposed action may cause soil erosion, or otherwise create a source of stormwater discharge that may lead to siltation or other degradation of receiving water bodies.	D2e	☐	☐
i. The proposed action may affect the water quality of any water bodies within or downstream of the site of the proposed action.	E2h	☐	☐
j. The proposed action may involve the application of pesticides or herbicides in or around any water body.	D2q, E2h	☐	☐
k. The proposed action may require the construction of new, or expansion of existing, wastewater treatment facilities.	D1a, D2d	☐	☐

l. Other impacts: _____ _____		☐	☐

4. Impact on groundwater

The proposed action may result in new or additional use of ground water, or may have the potential to introduce contaminants to ground water or an aquifer. (See Part 1. D.2.a, D.2.c, D.2.d, D.2.p, D.2.q, D.2.t) ☐NO ☐YES

If "Yes", answer questions a - h. If "No", move on to Section 5.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may require new water supply wells, or create additional demand on supplies from existing water supply wells.	D2c	☐	☐
b. Water supply demand from the proposed action may exceed safe and sustainable withdrawal capacity rate of the local supply or aquifer. Cite Source: _____	D2c	☐	☐
c. The proposed action may allow or result in residential uses in areas without water and sewer services.	D1a, D2c	☐	☐
d. The proposed action may include or require wastewater discharged to groundwater.	D2d, E2l	☐	☐
e. The proposed action may result in the construction of water supply wells in locations where groundwater is, or is suspected to be, contaminated.	D2c, E1f, E1g, E1h	☐	☐
f. The proposed action may require the bulk storage of petroleum or chemical products over ground water or an aquifer.	D2p, E2l	☐	☐
g. The proposed action may involve the commercial application of pesticides within 100 feet of potable drinking water or irrigation sources.	E2h, D2q, E2l, D2c	☐	☐
h. Other impacts: _____ _____		☐	☐

5. Impact on Flooding

The proposed action may result in development on lands subject to flooding. (See Part 1. E.2) ☐NO ☐YES

If "Yes", answer questions a - g. If "No", move on to Section 6.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in development in a designated floodway.	E2i	☐	☐
b. The proposed action may result in development within a 100 year floodplain.	E2j	☐	☐
c. The proposed action may result in development within a 500 year floodplain.	E2k	☐	☐
d. The proposed action may result in, or require, modification of existing drainage patterns.	D2b, D2e	☐	☐
e. The proposed action may change flood water flows that contribute to flooding.	D2b, E2i, E2j, E2k	☐	☐
f. If there is a dam located on the site of the proposed action, is the dam in need of repair, or upgrade?	E1e	☐	☐

e. The proposed action may diminish the capacity of a registered National Natural Landmark to support the biological community it was established to protect.	E3c	☐	☐
f. The proposed action may result in the removal of, or ground disturbance in, any portion of a designated significant natural community. Source: _____	E2n	☐	☐
g. The proposed action may substantially interfere with nesting/breeding, foraging, or over-wintering habitat for the predominant species that occupy or use the project site.	E2m	☐	☐
h. The proposed action requires the conversion of more than 10 acres of forest, grassland or any other regionally or locally important habitat. Habitat type & information source: _____ _____	E1b	☐	☐
i. Proposed action (commercial, industrial or recreational projects, only) involves use of herbicides or pesticides.	D2q	☐	☐
j. Other impacts: _____ _____		☐	☐

8. Impact on Agricultural Resources

The proposed action may impact agricultural resources. (See Part 1. E.3.a. and b.) ☐NO ☐YES

If "Yes", answer questions a - h. If "No", move on to Section 9.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may impact soil classified within soil group 1 through 4 of the NYS Land Classification System.	E2c, E3b	☐	☐
b. The proposed action may sever, cross or otherwise limit access to agricultural land (includes cropland, hayfields, pasture, vineyard, orchard, etc).	E1a, E1b	☐	☐
c. The proposed action may result in the excavation or compaction of the soil profile of active agricultural land.	E3b	☐	☐
d. The proposed action may irreversibly convert agricultural land to non-agricultural uses, either more than 2.5 acres if located in an Agricultural District, or more than 10 acres if not within an Agricultural District.	E1b, E3a	☐	☐
e. The proposed action may disrupt or prevent installation of an agricultural land management system.	E1 a, E1b	☐	☐
f. The proposed action may result, directly or indirectly, in increased development potential or pressure on farmland.	C2c, C3, D2c, D2d	☐	☐
g. The proposed project is not consistent with the adopted municipal Farmland Protection Plan.	C2c	☐	☐
h. Other impacts: _____		☐	☐

9. Impact on Aesthetic Resources

The land use of the proposed action are obviously different from, or are in sharp contrast to, current land use patterns between the proposed project and a scenic or aesthetic resource. (Part 1. E.1.a, E.1.b, E.3.h.) ☐NO ☐YES

If "Yes", answer questions a - g. If "No", go to Section 10.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Proposed action may be visible from any officially designated federal, state, or local scenic or aesthetic resource.	E3h	☐	☐
b. The proposed action may result in the obstruction, elimination or significant screening of one or more officially designated scenic views.	E3h, C2b	☐	☐
c. The proposed action may be visible from publicly accessible vantage points: i. Seasonally (e.g., screened by summer foliage, but visible during other seasons) ii. Year round	E3h	☐ ☐	☐ ☐
d. The situation or activity in which viewers are engaged while viewing the proposed action is: i. Routine travel by residents, including travel to and from work ii. Recreational or tourism based activities	E3h E2q, E1c	☐ ☐	☐ ☐
e. The proposed action may cause a diminishment of the public enjoyment and appreciation of the designated aesthetic resource.	E3h	☐	☐
f. There are similar projects visible within the following distance of the proposed project: 0-1/2 mile ½ -3 mile 3-5 mile 5+ mile	D1a, E1a, D1f, D1g	☐	☐
g. Other impacts: _____		☐	☐

10. Impact on Historic and Archeological Resources

The proposed action may occur in or adjacent to a historic or archaeological resource. (Part 1. E.3.e, f. and g.) ☐NO ☐YES

If "Yes", answer questions a - e. If "No", go to Section 11.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may occur wholly or partially within, or substantially contiguous to, any buildings, archaeological site or district which is listed on the National or State Register of Historical Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places.	E3e	☐	☐
b. The proposed action may occur wholly or partially within, or substantially contiguous to, an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory.	E3f	☐	☐
c. The proposed action may occur wholly or partially within, or substantially contiguous to, an archaeological site not included on the NY SHPO inventory. Source: _____	E3g	☐	☐

d. Other impacts: _____		☐	☐
e. If any of the above (a-d) are answered "Moderate to large impact may occur", continue with the following questions to help support conclusions in Part 3:			
i. The proposed action may result in the destruction or alteration of all or part of the site or property.	E3e, E3g, E3f	☐	☐
ii. The proposed action may result in the alteration of the property's setting or integrity.	E3e, E3f, E3g, E1a, E1b	☐	☐
iii. The proposed action may result in the introduction of visual elements which are out of character with the site or property, or may alter its setting.	E3e, E3f, E3g, E3h, C2, C3	☐	☐

11. Impact on Open Space and Recreation

The proposed action may result in a loss of recreational opportunities or a reduction of an open space resource as designated in any adopted municipal open space plan. ☐ NO ☐ YES

(See Part 1. C.2.c, E.1.c., E.2.q.)

If "Yes", answer questions a - e. If "No", go to Section 12.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in an impairment of natural functions, or "ecosystem services", provided by an undeveloped area, including but not limited to stormwater storage, nutrient cycling, wildlife habitat.	D2e, E1b E2h, E2m, E2o, E2n, E2p	☐	☐
b. The proposed action may result in the loss of a current or future recreational resource.	C2a, E1c, C2c, E2q	☐	☐
c. The proposed action may eliminate open space or recreational resource in an area with few such resources.	C2a, C2c E1c, E2q	☐	☐
d. The proposed action may result in loss of an area now used informally by the community as an open space resource.	C2c, E1c	☐	☐
e. Other impacts: _____		☐	☐

12. Impact on Critical Environmental Areas

The proposed action may be located within or adjacent to a critical environmental area (CEA). (See Part 1. E.3.d) ☐ NO ☐ YES

If "Yes", answer questions a - c. If "No", go to Section 13.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in a reduction in the quantity of the resource or characteristic which was the basis for designation of the CEA.	E3d	☐	☐
b. The proposed action may result in a reduction in the quality of the resource or characteristic which was the basis for designation of the CEA.	E3d	☐	☐
c. Other impacts: _____		☐	☐

13. Impact on Transportation
The proposed action may result in a change to existing transportation systems. ☐NO ☐YES
(See Part 1. D.2.j)
If "Yes", answer questions a - f. If "No", go to Section 14.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Projected traffic increase may exceed capacity of existing road network.	D2j	☐	☐
b. The proposed action may result in the construction of paved parking area for 500 or more vehicles.	D2j	☐	☐
c. The proposed action will degrade existing transit access.	D2j	☐	☐
d. The proposed action will degrade existing pedestrian or bicycle accommodations.	D2j	☐	☐
e. The proposed action may alter the present pattern of movement of people or goods.	D2j	☐	☐
f. Other impacts: _____ _____		☐	☐

14. Impact on Energy
The proposed action may cause an increase in the use of any form of energy. ☐NO ☐YES
(See Part 1. D.2.k)
If "Yes", answer questions a - e. If "No", go to Section 15.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action will require a new, or an upgrade to an existing, substation.	D2k	☐	☐
b. The proposed action will require the creation or extension of an energy transmission or supply system to serve more than 50 single or two-family residences or to serve a commercial or industrial use.	D1f, D1q, D2k	☐	☐
c. The proposed action may utilize more than 2,500 MWhrs per year of electricity.	D2k	☐	☐
d. The proposed action may involve heating and/or cooling of more than 100,000 square feet of building area when completed.	D1g	☐	☐
e. Other Impacts: _____ _____		☐	☐

15. Impact on Noise, Odor, and Light
The proposed action may result in an increase in noise, odors, or outdoor lighting. ☐NO ☐YES
(See Part 1. D.2.m., n., and o.)
If "Yes", answer questions a - f. If "No", go to Section 16.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may produce sound above noise levels established by local regulation.	D2m	☐	☐
b. The proposed action may result in blasting within 1,500 feet of any residence, hospital, school, licensed day care center, or nursing home.	D2m, E1d	☐	☐
c. The proposed action may result in routine odors for more than one hour per day.	D2o	☐	☐

d. The proposed action may result in light shining onto adjoining properties.	D2n	☐	☐
e. The proposed action may result in lighting creating sky-glow brighter than existing area conditions.	D2n, E1a	☐	☐
f. Other impacts: _____ _____		☐	☐

16. Impact on Human Health
The proposed action may have an impact on human health from exposure to new or existing sources of contaminants. (See Part 1.D.2.q., E.1. d. f. g. and h.) ☐ NO ☐ YES
If "Yes", answer questions a - m. If "No", go to Section 17.

	Relevant Part I Question(s)	No,or small impact may occur	Moderate to large impact may occur
a. The proposed action is located within 1500 feet of a school, hospital, licensed day care center, group home, nursing home or retirement community.	E1d	☐	☐
b. The site of the proposed action is currently undergoing remediation.	E1g, E1h	☐	☐
c. There is a completed emergency spill remediation, or a completed environmental site remediation on, or adjacent to, the site of the proposed action.	E1g, E1h	☐	☐
d. The site of the action is subject to an institutional control limiting the use of the property (e.g., easement or deed restriction).	E1g, E1h	☐	☐
e. The proposed action may affect institutional control measures that were put in place to ensure that the site remains protective of the environment and human health.	E1g, E1h	☐	☐
f. The proposed action has adequate control measures in place to ensure that future generation, treatment and/or disposal of hazardous wastes will be protective of the environment and human health.	D2t	☐	☐
g. The proposed action involves construction or modification of a solid waste management facility.	D2q, E1f	☐	☐
h. The proposed action may result in the unearthing of solid or hazardous waste.	D2q, E1f	☐	☐
i. The proposed action may result in an increase in the rate of disposal, or processing, of solid waste.	D2r, D2s	☐	☐
j. The proposed action may result in excavation or other disturbance within 2000 feet of a site used for the disposal of solid or hazardous waste.	E1f, E1g E1h	☐	☐
k. The proposed action may result in the migration of explosive gases from a landfill site to adjacent off site structures.	E1f, E1g	☐	☐
l. The proposed action may result in the release of contaminated leachate from the project site.	D2s, E1f, D2r	☐	☐
m. Other impacts: _____ _____		☐	☐

17. Consistency with Community Plans

The proposed action is not consistent with adopted land use plans. ☐ NO ☐ YES
(See Part 1. C.1, C.2. and C.3.)
If "Yes", answer questions a - h. If "No", go to Section 18.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action's land use components may be different from, or in sharp contrast to, current surrounding land use pattern(s).	C2, C3, D1a E1a, E1b	☐	☐
b. The proposed action will cause the permanent population of the city, town or village in which the project is located to grow by more than 5%.	C2	☐	☐
c. The proposed action is inconsistent with local land use plans or zoning regulations.	C2, C2, C3	☐	☐
d. The proposed action is inconsistent with any County plans, or other regional land use plans.	C2, C2	☐	☐
e. The proposed action may cause a change in the density of development that is not supported by existing infrastructure or is distant from existing infrastructure.	C3, D1c, D1d, D1f, D1d, E1b	☐	☐
f. The proposed action is located in an area characterized by low density development that will require new or expanded public infrastructure.	C4, D2c, D2d D2j	☐	☐
g. The proposed action may induce secondary development impacts (e.g., residential or commercial development not included in the proposed action)	C2a	☐	☐
h. Other: _____ _____		☐	☐

18. Consistency with Community Character

The proposed project is inconsistent with the existing community character. ☐ NO ☐ YES
(See Part 1. C.2, C.3, D.2, E.3)
If "Yes", answer questions a - g. If "No", proceed to Part 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may replace or eliminate existing facilities, structures, or areas of historic importance to the community.	E3e, E3f, E3g	☐	☐
b. The proposed action may create a demand for additional community services (e.g. schools, police and fire)	C4	☐	☐
c. The proposed action may displace affordable or low-income housing in an area where there is a shortage of such housing.	C2, C3, D1f D1g, E1a	☐	☐
d. The proposed action may interfere with the use or enjoyment of officially recognized or designated public resources.	C2, E3	☐	☐
e. The proposed action is inconsistent with the predominant architectural scale and character.	C2, C3	☐	☐
f. Proposed action is inconsistent with the character of the existing natural landscape.	C2, C3 E1a, E1b E2g, E2h	☐	☐
g. Other impacts: _____ _____		☐	☐

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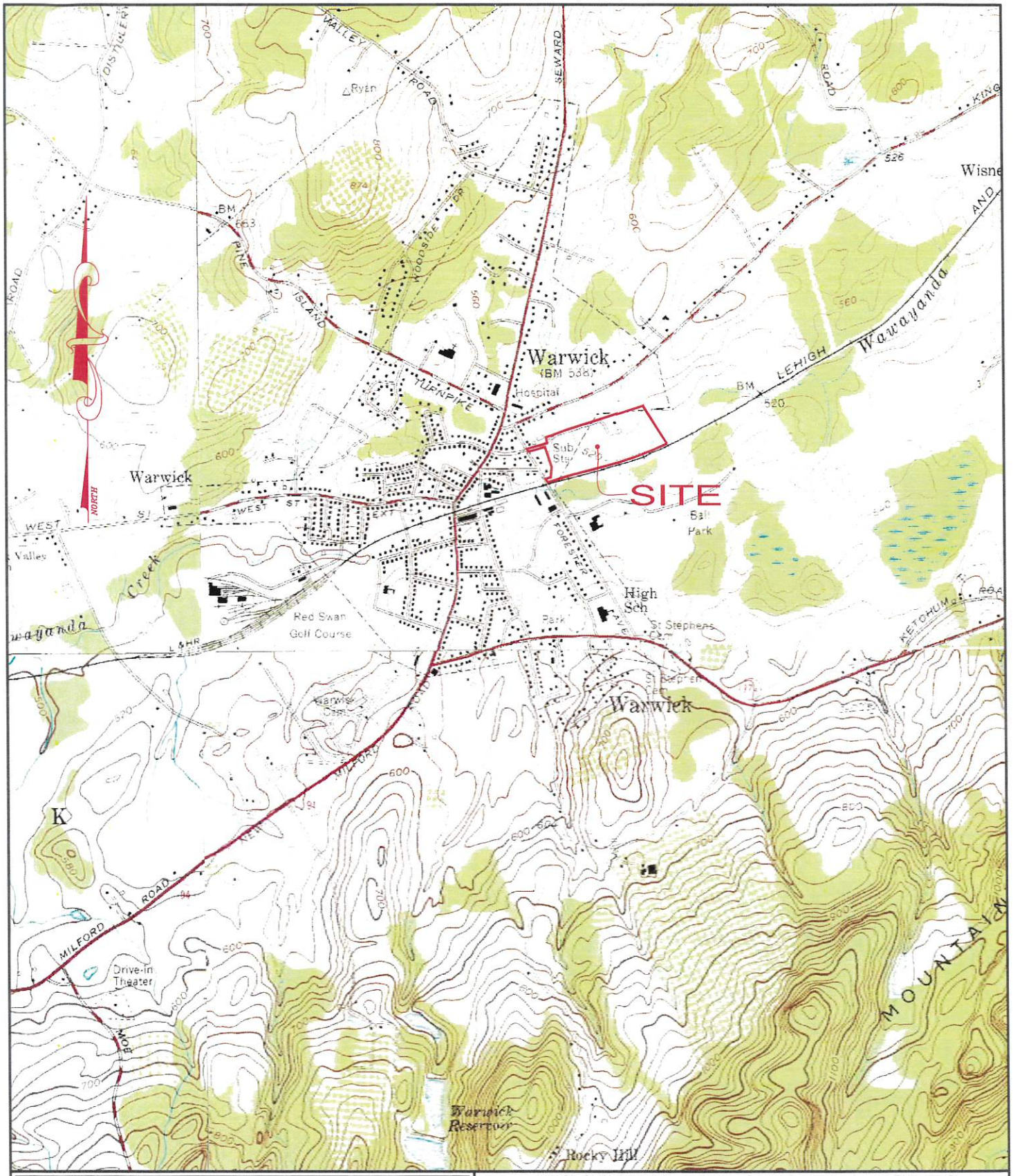

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USGS 7.5 MIN. QUADRANGLES
WARWICK, MONROE, PINE ISLAND & WAWAYANDA
SECTION 208 BLOCK 2 LOT 10
VILLAGE OF WARWICK, COUNTY OF ORANGE, NEW YORK
SCALE: 1"=2,000'

CONVERGENT

2020-CEP-DEV-004
Revision Number 2

Warwick ES2
Warwick, NY

Decommissioning Plan

September 28, 2020

Revision Status

Rev	Date	Description	Prepared	Checked	Approved
0	09/28/2020	Issued for Review	SF	BK	RG
1	10/07/2020	Revised per ESRG comments. Issued for Review	SF	BK	RG
2	10/26/2020	Changed from ES1 to ES2. Issued for Review	SF	BK	RG

CONVERGENT

Table of Contents

CONVERGENT

1 EXECUTIVE SUMMARY

1.1 Purpose

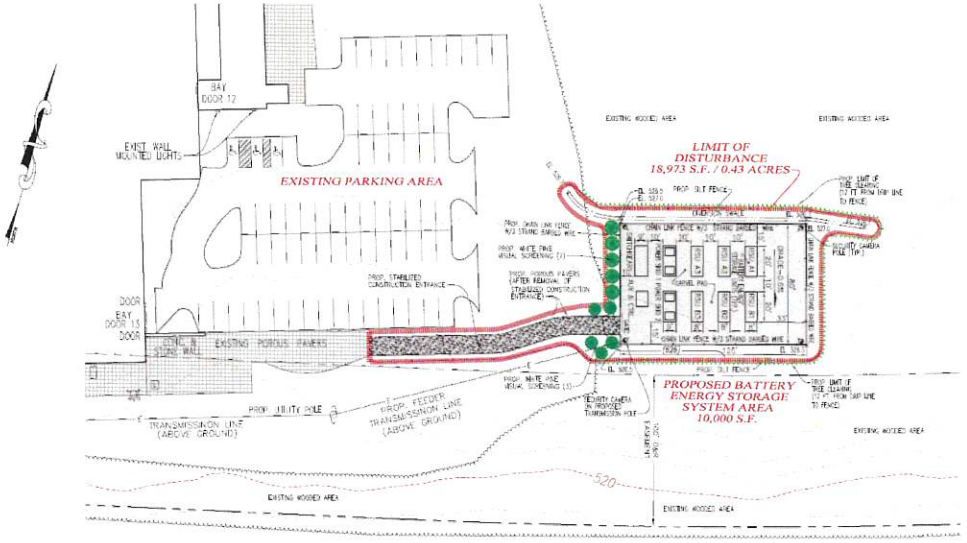
The purpose of this document is to provide an overview of activities that will occur during the decommissioning phase of Convergent's Battery Energy Storage System (BESS), Warwick ES2 facility, located in the Village of Warwick, NY within the Orange and Rockland (O&R) service territory. Activities related to the restoration of land, the management of materials and waste will be considered in this document including:

- Equipment Dismantling and Removal
- Removal and Recycling of the Battery Energy Storage Modules
- Removal of the Ancillary Electrical Systems
- Removal of Equipment Pads, Supports, Gravel and Perimeter Fence
- Site Restoration
- Environment Impacts

This plan is based on current best management practices and procedures. This plan will be updated as necessary based on new standards and emergent best management practices at the time of decommissioning. Permits will be obtained as required and notification will be given to stakeholders prior to decommissioning.

1.2 Facilities Description

The Warwick ES2 BESS with total nameplate rating of 3.4 MW / 24.3 MWh will be comprised of two identical energy storage blocks, with each block consisting of three (3) Reservoir Storage Units (RSU) connected to one Reservoir Inverter Unit (RIU) manufactured by General Electric (GE). The facility will also include an auxiliary transformer and switchboard, and a metal enclosed switchgear. A site plan and conceptual layout of the facility is provided below.



2 DECOMMISSIONING OF THE FACILITY

At the time of decommissioning the installed equipment will be removed, repurposed, disposed of and recycled where possible. The facility will be restored to a state similar to its preconstruction condition. The removal of equipment and material will be done in accordance with the applicable regulations and manufacturer recommendations. All necessary permits will be acquired and any Authorities having Jurisdiction will be notified.

Prior to decommissioning, the facility will be deenergized and disconnected from the grid in coordination with all applicable parties. Generally, the decommissioning of the facility proceeds in reverse order of the original installation as follows.

2.1 Removal and Recycling of the Battery Energy Storage Modules

The BESS will be disconnected from the ancillary electric systems, removed from the site and returned to the manufacturer to be disposed of per the manufacturer's guidelines.

The GE LG-Chem Battery modules are designed for end-of-life management through recycling and materials reclamation, tasks which are handled by the equipment manufacturer, GE/LG-Chem, both periodically through the contract term and at the end of useful life.

Lithium-ion batteries contain, among other useful metals, high-grade copper and aluminium in addition to – depending on the active material – transition metals cobalt and nickel as well

as rare earths. To prevent a future shortage of cobalt, nickel, and lithium and to enable a sustainable life cycle of these technologies, recycling processes for lithium batteries are already in place and are managed by the battery manufacturer, LG-Chem (Please see the attached LG-Chem document). These processes regain not only cobalt, nickel, copper, and aluminium from spent battery cells, but also a significant share of lithium. Another potentially valuable and re-gainable materials are graphite and manganese. In order to achieve this goal, several steps are combined into complex process chains, especially considering the task to recover high rates of valuable materials with regard to involved safety issues.

As per Convergent's agreement with the battery manufacturer and system provider – General Electric (GE) will be mandated to remove the spent batteries and recycle the materials using the following steps, for secondary life purposes and to extract any residual value upon the end of the contract term.

- Deactivation or discharging of the battery (at the project site)
- Disassembly of battery systems (at the LG-Chem facility)
- Mechanical processes (including crushing, sorting, and sieving processes) (at the LG-Chem facility)
- Electrolyte recovery (at the LG-Chem facility)
- Hydrometallurgical processes (at the LG-Chem facility)
- Pyrometallurgical processes (at the LG-Chem facility)

N.B. Due to the specific dangers associated with lithium-ion battery recycling processes, under no circumstances shall any Lithium-Ion module be disassembled at the project site, this must be performed at a qualified facility.

2.2 Removal of Ancillary Electrical Systems

Trenches will be dug to remove the underground electrical cables and will be backfilled with native soil afterward. Pad-mount transformer(s), switchgear(s), inverter(s) and associated electronic equipment (switches, disconnects, etc.) will first be disconnected from the facility electrical connection system and evaluated for repurposing and removed from site. The transformers will be evaluated for oil leaks before removal and the oil will be removed if need be to reduce the potential for an oil spill. Equipment that cannot be repurposed will be sent to the manufacturer, recycled, or disposed of offsite in accordance with the current standards and best practices.

2.3 Removal of Electrical Pads, Supports, Gravel and Perimeter Fence

The concrete pad foundations, support structures and gravel ground cover will be exposed, excavated, and removed offsite to an appropriate recycling or disposal facility. Likewise, the perimeter fence will be removed and recycled or disposed.

2.4 Site Restoration

Once all equipment, structures and gravel are removed site restoration will begin. The site will be graded to maintain existing drainage patters and control soil erosion. To stabilize disturbed areas, topsoil will be placed, and the area will be seeded with a native seed mix. All site restoration and removal of components will comply with applicable laws.

3 ENVIRONMENTAL IMPACTS

Decommissioning activities have a similar risk of environmental impacts as those associated with construction phase. For example, decommissioning activities will result in the disturbance of soil, and erosion prevention measures will be put in place, so nearby watercourses or other natural features are not impacted. A Stormwater Pollution Prevention Plan (SWPPP), similar to that used during construction will be employed. The SWPPP will remain in place until the site is stabilized to mitigate stormwater runoff and soil erosion. Temporary impact to roadway traffic similar to those during construction will accompany the decommissioning process. Noise levels similar to those during construction may be heard in the surrounding area while the decommissioning is taking place.

4 DECOMMISSIONING NOTIFICATION

Decommissioning activities may require the notification of stakeholders given the nature of the works at the Project Site. The local municipality will be notified prior to commencement of any decommissioning activities. Convergent will periodically update their list of stakeholders and notify appropriate municipalities of decommissioning activities. Federal, county, and local authorities will be notified as needed to discuss the potential approvals required to engage in decommissioning activities.

5 DECOMMISSIONING AFTER AN EVENT

In the case of a fire or other event that requires emergency decommissioning of any part of the facility, Convergent will coordinate with the battery manufacturer and system provider, GE, to ensure any affected equipment is safely taken out of service and removed from the site. The same aforementioned decommissioning procedures will be undertaken, and the same decommissioning and restoration program will be honoured where feasible. Please also refer to the Warwick ES2 Emergency Response Plan for additional information regarding procedures to be taken in response to potential events.

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2020-CEP-DEV-003
Revision Number 2

Warwick ES2
Warwick, NY

Emergency Response Plan

September 14, 2020

Revision Status

Rev	Date	Description	Prepared	Checked	Approved
0	09/14/2020	Issued for Review	SF	BK	RG
1	10/07/2020	Revised per O&R comments. Issued for Review	SF	BK	RG
2	10/026/2020	Revised per O&R comments – Changed from ES1 to ES2. Issued for Review	SF	BK	RG

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1 EXECUTIVE SUMMARY

1.1 Purpose

The purpose of this document is to detail the proper emergency responses to potential events at Convergent's Battery Energy Storage System (BESS), Warwick ES2 facility, located in the Village of Warwick, NY within the Orange and Rockland (O&R) service territory.

The following events are considered in this document:

- Site Description
- Convergent Response Plan
- Emergency Contacts
- Failure and Hazard Risk Analysis
- Battery System Information
- Firefighting and Post-Fire Considerations

This document shall be activated at the start of site construction activities and be in effect during commissioning, normal operations and through the decommissioning of the facility.

All alarms from the BESS will be under 24-Hour central monitoring by the Convergent Network Operations Center (NOC). In any event, Convergent will coordinate all the response as it pertains to the BESS facility. Convergent will directly contact local emergency responders including the Warwick Fire Department, as soon as an event requiring emergency response is reported, and the O&R control room will be notified in the event of an emergency but is not expected to perform any actions unless specifically requested.

In the event of an Emergency please call Convergent Energy & Power at 917-508-0275.

Convergent will periodically update this document with regards to input from stakeholders, Federal, county, and local requirements, and facility updates. Appropriate parties will be notified of any revisions to this document.

2 DEFINITIONS

BESS – Battery Energy Storage System

BMS – battery Management System

Convergent – Convergent Energy & Power

ERT – Emergency Response Team

E-Stop – Emergency Stop

FDS – Fire Detection System

FSS – Fire Suppression System

GE – General Electric

IEC – International Electrotechnical Commission

IEEE – Institute of Electrical and Electronics Engineers

NEC – National Electric Code

NEMA – National Electrical Manufacturers Association

NFPA – National Fire Protection Association

NOC – Network Operations Center

O&R – Orange & Rockland Utility Company

OSHA – Occupational Safety and Health Administration

PCB – Polychlorinated Biphenyls

PPE – Personal protective Equipment

RIU – Reservoir Inverter Unit

RSU – Reservoir Storage Unit

SCBA – Self-Contained Breathing Apparatus

UL – Underwriter Laboratories

3 SITE DESCRIPTION

3.1 Facilities Description

The Warwick ES2 BESS with total nameplate rating of 3.4 MW / 24.3 MWh will be comprised of two identical energy storage blocks, with each block consisting of three (3) Reservoir Storage Units (RSU) connected to one Reservoir Inverter Unit (RIU) manufactured by General Electric (GE). The facility will also include an auxiliary transformer and switchboard, and a metal enclosed switchgear. A conceptual rendering of the facility is provided in Figure 1 below.

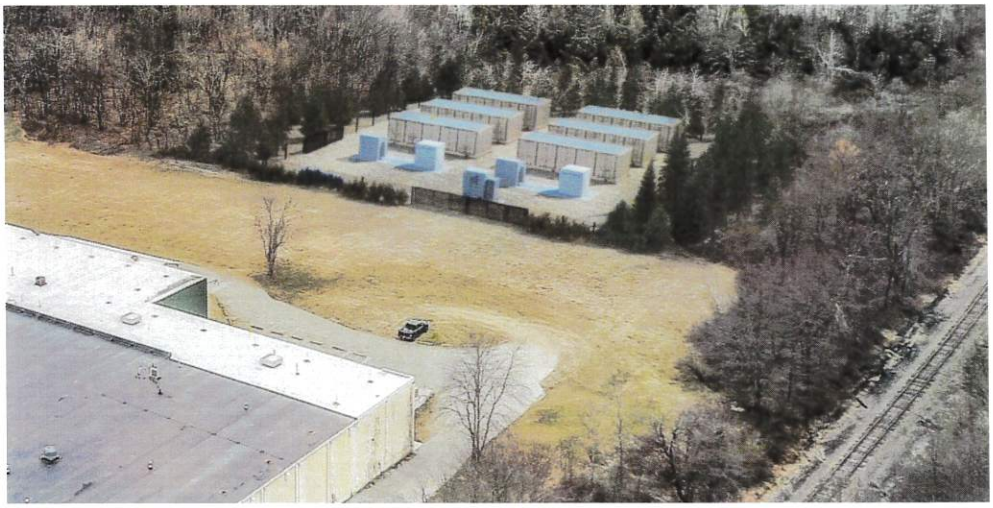

Figure 1: Facility Rendering

Each of the battery cabinets is designed to contain an integrated Fire Detection System (FDS) and Fire Suppression System (FSS) utilizing the Stat-X potassium-based aerosol solution, as well as fire alarms/strobe lights.

The BESS also incorporates a SCADA system that communicates all necessary operations data to the Convergent NOC. The BESS can also be operated remotely by the NOC via SCADA. The installed system is always connected in stand-by mode except when charging, discharging, or off-line for maintenance. The system is unmanned and controlled / operated remotely from Convergent Energy & Power's New York based NOC.

3.1.1 Facility Lighting and Security

The energy storage facility will be equipped with flood lighting for visibility after daylight hours and security cameras strategically placed for 24-Hour monitoring. The facility is also

proposed to be fenced around the perimeter and to have a lockbox with keys for access inside the fence line. No individual shall be permitted to enter the facility without the expressed consent of Convergent.

3.1.2 Site Access Route

The facility shall be accessed via Church Street, off Forester Avenue in the Village of Warwick, NY. The access route for emergency services to the facility is as shown in Figure 2 below.

Figure 2: Site Access Route

A staging plan will be in agreement with the property owner and emergency services to ensure all emergency responders can conveniently access the facility in parallel in the event of an emergency. The access road to the BESS site shall always be maintained to guarantee accessibility to the site by emergency personnel, especially during inclement weather. Convergent will ensure that maintenance contracts for snow removal, landscaping and other ongoing upkeep activities are in place by the start of the site development.

3.1.3 Site Surrounding Area

The parcel the facility is sited on is located on the east side of 28 Church Street, Warwick, NY 10990. The parcel features a commercial building with designated parking areas for around the building. Normal business hours for the building are 5am – 7pm. The land parcel is flanked by private residential dwellings to the northeast, wetlands to the east, a railroad to

the south, more commercial land parcels and to the West and the Warwick Fire Department conveniently located to the northwest.

A total of two (2) fire hydrants have been identified in proximity to the BESS site. These water sources are identified on the Facility Evacuation Plan in Section 4.4, Figure 6. The fire hydrant shall be periodically checked for compliance with NFPA 24.

Approved signage shall be provided on or adjacent to all BESS cabinets. The signage shall include the following verbiage or equivalent.

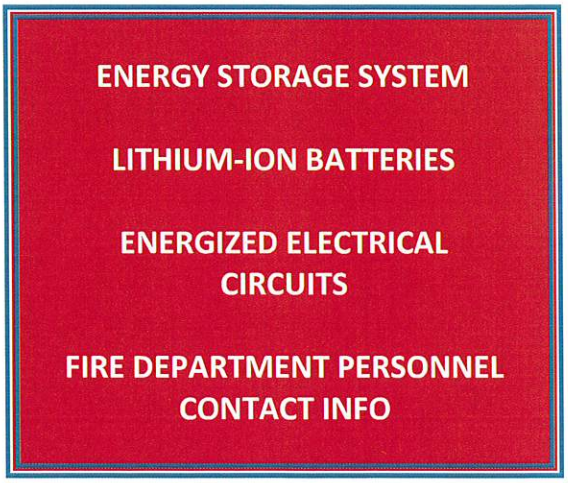

Figure 3: Typical Signage

4 CONVERGENT ORGANIZATION & RESPONSE PLAN

4.1 Organizational Structure

Convergent Emergency Response Team (ERT) shall manage and control the facilities remotely by monitoring and operating of both the BESS and interconnection equipment including all emergency alarms. A full Convergent ERT contact list is provided in Section 5.1, Table 1.

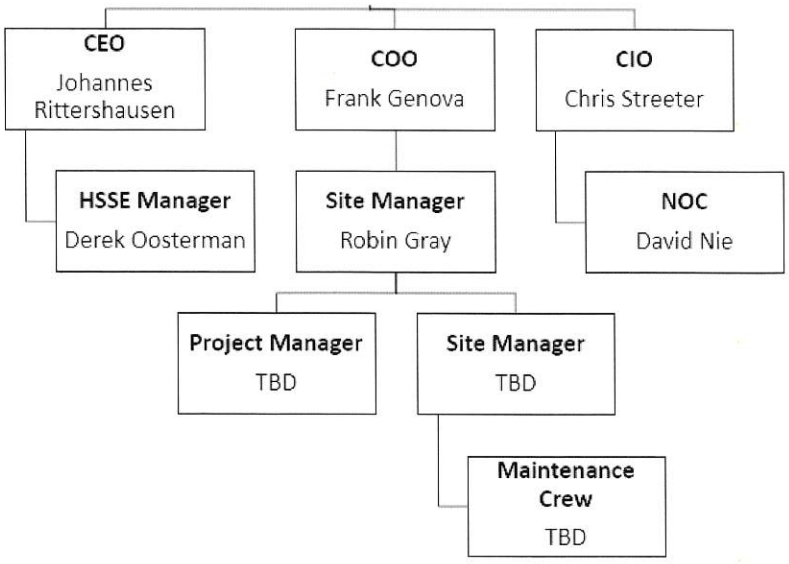

Figure 4: Convergent Organizational Chart

4.2 Emergency Response

In the event of an emergency at the BESS facility, the response will be spearheaded by the Convergent ERT. The ERT will keep the O&R control room informed as to the facilities status per normal or emergency communication protocol. For an emergency stemming from the O&R power grid, the ERT will remove or return the BESS to service at O&R's direction. The ERT is staffed by the NOC. All relevant Convergent and O&R contact information are listed in Section 5.1.

The following responses to events are considered:

- General Facility Emergency Shutdown
- Fire or Thermal Event
- Medical Emergency
- Chemical Spill
- Unauthorized Individual

In the event of an Emergency please call Convergent Energy & Power at 917-508-0275.

IN NO SITUATION SHOULD THE BESS CABINETS BE OPENED BY ANY UNAUTHORIZED PERSONS OR EMERGENCY RESPONDERS; ALL RESPONSE IS TO BE COORDINATED BY CONVERGENT AND ITS SUBVENDORS. DO NOT APPLY WATER TO A BURNING UNIT. THE VILLAGE OF WARWICK IS ADVISED TO PROTECT OUTSIDE OF THE FENCED AREA ONLY.

4.2.1 General Facility Emergency Shutdown

In the event of a power system failure within the BESS, on the O&R power grid, or at the direction of the O&R control room, Convergent will:

- Log the status of the facility equipment.
- Obtain communication with O&R and report facility conditions. Obtain permission to re-establish connection.
- Get as much equipment ready for re-start as possible while awaiting re-connection or permission to reconnect.
- Re-start facility equipment and ready BESS equipment for synchronization / operation.
- Operate the BESS equipment in accordance with O&R.

Specific details pertaining to the BESS operations, including equipment isolation procedure in a shut-down will be provided in the Facility Operations and Maintenance Procedures. It should be noted that there is no expected impact to the grid during an emergency shutdown. The NOC will work in a coordinated effort with the O&R control room to ensure that the system will still shut down in a controlled manner and grid stability will not be affected.

4.2.2 Fire or Thermal Event

Convergent will provide training for local emergency responders pertaining to emergencies with the BESS. This training will be administered in collaboration with the battery supplier, a Professional Fire System consultant and coordinated directly with the local emergency teams during the permitting process. Refreshers will be offered periodically as needed and revisions to this document will be highlighted.

In the event of a fire or thermal event in the battery cabinets, transformer or other electrical equipment, the SCADA or site controller will notify the NOC, the ERT, and the O&R control room. The ERT will lead the response and notify all other relevant responding agencies. In the event the system is in distress and the NOC does not receive any indication, individuals

present at or near the facility may contact local emergency responders. See below for specific responses for battery cabinet and transformers / other electrical equipment.

a) Battery Cabinets

The battery cabinets are intended to be left alone and will respond to any thermal event automatically. It is essential to maintain the integrity of battery cabinet until a Convergent representative is onsite. A Convergent representative shall be on-site in response to an event within an hour of notification. DO NOT OPEN THE CABINET DOORS. The battery cabinets are designed with an integrated fire detection and suppression system including a fire suppression clean agent to prevent the spread of fire.

A single smoke alarm in a battery cabinet alerts the Convergent NOC. A second smoke/heat alarm assumes that there is a fire and triggers Stat-X Aerosol fire suppression agent release. In a case that the Fire Suppression System (FSS) signal indicates that the system has released the fire suppression agent, the Convergent ERT will contact the Warwick Fire Department to respond to the event. Specific Fire Fighting considerations are provided in section 8. If the alarms are determined to be due to a fault, the fault will be investigated and repairs will be scheduled by Convergent.

Local emergency responders shall be directed to standby on site only to prevent the spread of fire outside the battery cabinet IF NECESSARY. No one shall attempt to extinguish the battery fire on or within the battery cabinets. Please refer to Section 8 for more detailed battery fire considerations for firefighters.

b) Transformers and Other Electrical Equipment

The standard response to fires in a substation should be followed when responding. They are summarized below:

- The NOC will open the breaker to isolate and deenergize the affected equipment.
- Any personnel present should be staged uphill / upwind until the arrival of emergency responders.
- The ERT shall ensure that isolation exists on both the line and load side of the transformer through the operations of breaker and disconnect switches.
- Local emergency responders should perform the following actions:
    i. Do not engage the burning equipment, it may still be energized.

ii. Isolate the surrounding area and keep unauthorized individuals away.

iii. Monitor for oil runoff and redirect runoff away from surface water and drainage ditches.

iv. Monitor the transformers for possible fumes and oil releases, staying upwind and consider evacuating downwind for at least 100 feet.

v. Remain alert for potential transformer explosions.

vi. A smaller fire can be suppressed using Carbon Dioxide which has a class C rating to 100,000 volts.

i. Dry Chemical is not recommended as it offers no cooling. Transformer failures are persistent because the internal fault/arc retains heat in the windings and surrounding metal keeping oil above it autoignition temperature.

ii. For a larger fire, a 25' standoff distance is required, agents should be applied using a combo nozzle (bubble cup) employing a 30-degree fog pattern, no straight streams.

4.2.3 Medical Emergency

In the event of a medical emergency within the BESS facility, the NOC should be notified. Depending on the severity, local emergency responders will be requested. See Section 5.2, Table 2 for contact information of medical emergency responders.

4.2.4 Chemical Spill

Chemical spills can potentially come from three major sources: battery electrolyte, transformer oil or HVAC condensate. Spills are highly unlikely and remote monitoring and periodic facility inspections during routine maintenance of the BESS facility are adequate to recognize them in a timely manner. Once identified, spills will be cleaned up by Convergent's designated maintenance contractor for the project under the direction of Convergent's designated Project Manager / Site Manager. Any required risk mitigating actions have been taken by Convergent personnel in the design of the facility. It should be noted that all electrical insulating oil used at the site is free of PCBs.

4.2.5 Unauthorized Access

Personnel visiting the BESS facility will only do so with the express consent of the NOC, and Convergent will be notified to their expected presence at the facility in advance of arrival.

The NOC will monitor the facility through remote surveillance and appropriate action will be taken if the presence of unauthorized individuals is suspected. Trespassing individuals will be asked to leave the facility, and local law enforcement will be asked for assistance as required. All Convergent BESS sites are equipped with camera's and 24-hour monitoring.

4.3 Facility Site Plan / Layout

The facility site plan is shown below. A detailed facility layout showing the as-built positions of all BESS and interconnection equipment shall be provided upon construction completion.

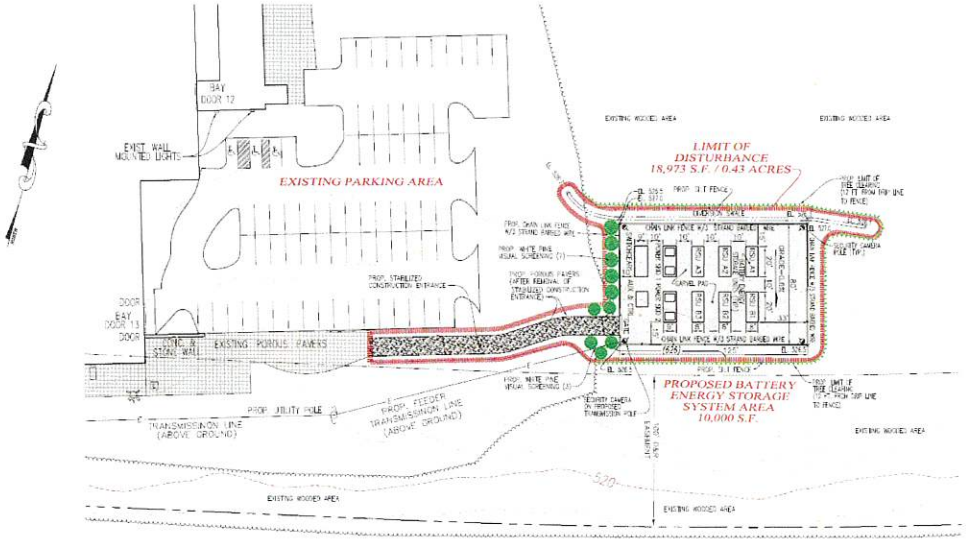

Figure 5: Facility Site Plan

4.4 Facility Evacuation

On hearing the evacuation alarm, all contractors, visitors, and Convergent employees must evacuate the BESS facility and rendezvous at a nearby Meeting Point (location to be determined) for a head count. Convergent personnel at the BESS facility will follow a pre-determined evacuation route as shown below. This route is subject to revision based on input from the local AHJs. A sign will be located at the Meeting Point to ensure safety. The Warwick Fire Department will be alerted to provide support with evacuations and firefighting.

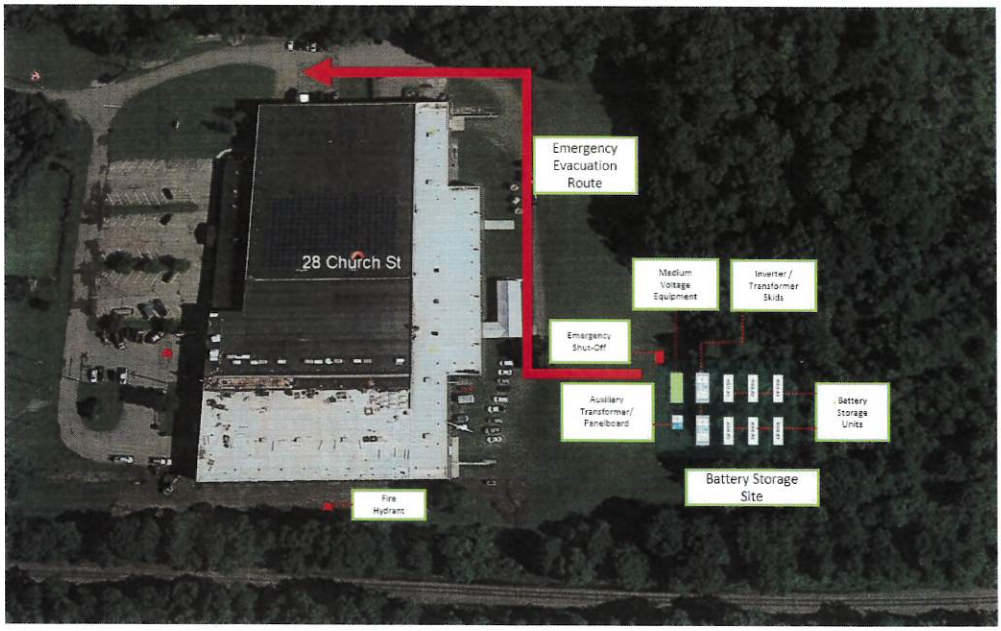

Figure 6: Facility Evacuation Route

5 EMERGENCY CONTACTS

5.1 Site Contact List

The following list represents the parties who should be contacted in the event of an emergency. The Alternate Contacts should be used when the Primary Contact is unavailable.

Primary Contact Position/Name	Primary Contact Number	Alternate Contact Position/Name	Alternate Contact Number
Site Manager Robin Gray	646.465.2625	Derek Longo	484.515.9191
NOC & ERT Chris Streeter	617.939.3805	David Nie	419.348.0986

Primary Contact Position/Name	Primary Contact Number	Alternate Contact Position/Name	Alternate Contact Number
On-Call Phones Frank Genova	646.210.3247	Johannes Rittershausen	917.508.0191
Convergent HSSE Manager Derek Oosterman	612.325.1167		
O&R Control Room Contact	877.434.4100 (To be Confirmed)		
Warwick Fire Department Mr. Daniel Schweikart	845.986.3473		

Table 1: Site Contact List

5.2 Local Emergency Contact List

The following list represents the local emergency contacts for the Village of Warwick who should be contacted in the event of an emergency.

POLICE	**Warwick Police Department**	**Emergency Only 911** **Non-Emergency 845.986.3423**
AMBULANCE	**Warwick Community Ambulance Service**	**Emergency Only 911** **Non-Emergency 845.986.4136**
FIRE	**Warwick Fire Department**	**Emergency Only 911**
HOSPITAL	**St. Anthony's Community Hospital**	**845.986.2276**

O&R	Emergency Gas Hotline	800.533.5325
OTHER	Orange County Emergency Management Office	845.615.0400

Table 2: Local Emergency Contact List

6 SYSTEM SAFETY CONSIDERSTIONS

The proposed GE BESS safety features and Battery Management Systems (BMS) work together to help protect against common industrial battery failure modes due to abuse, damage or other external factors. These protections are evaluated with a comprehensive Safety Risk Assessment for the equipment and designed to meet applicable UL, NEC, and NFPA standards.

The LI-ion batteries are sourced from Tier-1 suppliers with products that have a track record of utilizing technology and components that renders the likelihood of a safety event low. Such an event could be isolated by the module cabinets, rack assemblies, and steel shell of the storage unit. However, the system design requires at least 10 feet of separation from the adjacent cabinets and intentional setback from native fuels to provide a buffer for minimizing the likelihood of engaging materials beyond the site boundaries.

A key aspect in battery safety is adhering to the recommended operating practices. If safe operating limits are exceeded, the BMS are designed to isolate the affected batteries and racks from the system. The BMS continues to monitor operating conditions and will return the battery to service when conditions warrant availability.

Potential hazard sources are identified and discussed as follows.

6.1 Voltage

The BESS is expected to operate in the range of 500VDC to 1500VDC. The National Fire Protection Agency's (NFPA) standard 70E on electrical safety in the workplace establishes a limited approach boundary for unqualified workers at 3.3'. This boundary is observed in

the system design to prevent those who are unable to avoid hazards from coming within arm's reach of the exposed electrical conductors. It should be noted that non-contact electrical detectors cannot be used to determined what equipment may be energized. Also, operating any E-Stops and disconnects in an emergency may not discharge the BESS, emergency responders should assume electrical conductors remain hazardous.

6.2 Arc-Flash

High string voltage affects both the potential for shock and the potential for arc flash/blast, which results from components of an electric arc (e.g. vaporized copper) and depends greatly on the equipment and environment involved in the arc. Industry accepted controls to prevent injury from arc flash include increasing separation between positive and negative conductors, regular maintenance to prevent equipment failure, and providing arc-rated PPE for electrical workers.

6.3 Thermal Runaway

Thermal runaway is a process where self-heating in a battery cell can exceed the rate of cooling thereby causing internal temperatures to increase beyond normal operating limits. Under these conditions, battery cells may experience melting, off-gassing/venting, and in extreme cases, fire. Thermal runaway events can occur due to mechanical or electrical abuse as well as manufacturing defects or metallic dendrites that form an internal short over time. The BESS is designed and supplied with various devices and/or mechanisms to prevent, detect and minimize the impact of thermal runaway. For instance, 24/7 system monitoring, along with automatic detection and isolation at the cell level is included to prevent a thermal runaway event from taking place. In addition, the system is designed with barriers and controls in place, such, that thermal runaway cannot propagate from one stack to adjacent stacks.

6.4 Fire

Lithium ion batteries contain flammable liquid electrolyte that may vent, ignite, and produce sparks when subjected to high temperatures (> 150 0 C (302 0 F)), when damaged, or abused (e.g., mechanical damage or electrical overcharging). Materials within a battery energy storage system, including plastics, electrolyte, wire insulation, thermal insulation and others may be flammable, acting as a potential fuel source during a fire. Without proper ventilation a combination of gasses can build up in an enclosed space spreading the fire.

The BESS has been designed with integral exhaust ventilation in addition to Smoke and Automatic Fire Detection systems to help mitigate and contain potential fires. All material

components of the system are also appropriately rated, sized and protected to prevent overheating or mechanical damage that could lead to a fire hazard.

6.5 Toxicity

Any contact by personnel with battery electrolyte or battery emissions may be irritating to skin, eyes, and mucous membranes. In the event of a battery fire, irritating, corrosive and/or toxic gases such as toxic hydrogen fluoride gas could be produced which may cause dizziness or suffocation to personnel close by. The use of a positive pressure breathing apparatus and SCBA gear is recommended for emergency response personnel whenever responding to battery system fires.

6.6 Explosion

Explosion is a very rare but potential risk with battery systems. However, the battery cabinets have built-in deflagration control using a ventilation system located on the sides of the cabinets, powered by an independent power source and, an activation mechanism located away from the cabinets. This explosion venting design helps to maintain flammable gas emissions in the battery cabinets below 25% Lower Flammable Limit (LFL) and prevent potential explosions due to cabinet pressure build-up of battery emissions.

7 BATTERY INFORMATION

The BESS is comprised of two identical 1.5 MW / 9 MWh energy storage blocks, with each block consisting of three (3) Reservoir Storage Units (RSU) connected to one Reservoir Inverter Unit (RIU), manufactured by General Electric (GE). All units have been designed with protections and a safety approach to energy storage. Each component configuration and system conform to industry standards and certification requirements.

7.1 Reservoir Storage Unit (RSU) Specifications

Each 20' ISO cabinet is designed to be reach-in only and includes a fully integrated thermal management, fire detection / suppression and control system. They have a relatively high energy density of up to 4.1MWh / cabinet. The high-density battery loading minimizes unoccupied space in the RSU leaving minimal room for gas build-up. The cabinets are NEMA 3R rated and feature more than 4" of fire-barrier grade insulation upgrade.

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Specifications are given below.

RSU-4000 Series

Overview	RSU-4000/20
	RSU-4000/20
Overview	
Nameplate Energy Capacity (KWh.dc, usable)	4184
Individual Battery Blades - Factory Installed	20 of 20
Maximum Power - Factory Installed (KW.dc)	1200
Maximum DC Current - Factory Installed (A)	1600
Available Augmentation Capacity (% BOL)	0%
Available Augmentation Capacity (kWh.dc)	N/A

Battery Information		
Battery Chemistry		Lithium-Ion, NCM
Battery Module Design		Energy
Continuous C-Rate		<C/3
Pulse C-Rate		<C/3
Voltage Class		1500V
Nominal DC Voltage (V)		1300
Minimum DC Voltage (V)		770
Mechanical Information		
Package Format		20' ISO w/Exterior Acces
Dimensions (mm) (L X W X H)		6058 x 2438 x 2890 mm
Weight (kg)	37k	31k
Fully Integrated HVAC		Dual Self-Contained 3 Ton Units (High Efficiency 10. EER)
- Hot Climate Upgrade		+33% Cooling Capacity
- Cold Climate Upgrade		+ Electric Heating Package
Fire Suppression - Aerosol		Optional
Installation		Pad/Pier
Cable Entry		Bottom
Weatherization		NEMA 3R, IP54
Design Conditions		
Min Operating Temperature (C)		-40°C
Max operating Temperature (C)		50°C (55°C w/ hot climate upgrade)
Maximum Altitude (m)		2000
Maximum Relative Humidity (%)		95%, non-condensing
Seismic Zone		UBC Zone-4
Audible Noise		<60 dB at 3M

Figure 7: 20'L x 8'W x 9.5'H ISO Cabinets

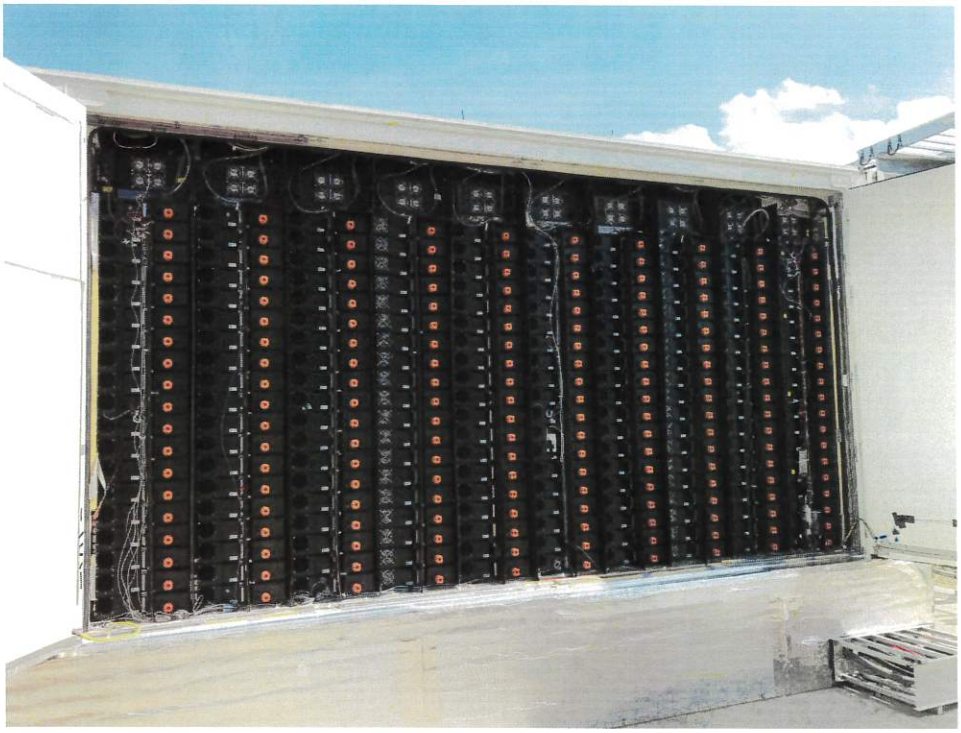

Figure 8: Reach-In Only Cabinet Design

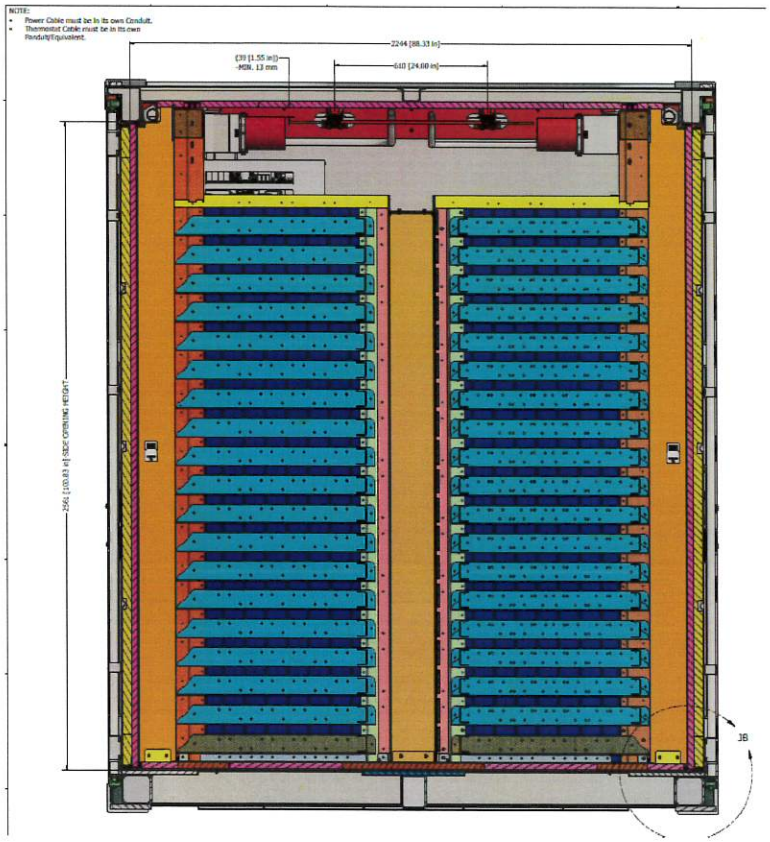

Figure 9: Reservoir Design Detail

7.1.1 Battery Cell Protection

• Each cell has Safety Function layer that maintains electrical separation even if the polymer separator is damaged.

• Each cell has an overcharge safety device designed to prevent current flow once activated. The fuses are designed to cut the current path when abnormally high current flows.

• Cell vents are used for controlled release under abnormal conditions or abuse.

7.1.2 Battery Module Protection

• Tested to applicable UL Standards to demonstrate resistance to thermal runaway.

• Monitoring system provides multiple measurements of voltage and temperature.

• Rate Fuses that are designed to open on an overcurrent condition.

• Integrated Manual Service Disconnect (MSD) to help to isolate faults within a string. Also helps to preserve that the PPE required no great than HRC Level 2.

7.1.3 Blade (String) Level Protection

• Blade Protection Units (BPU) can detect and respond to fault conditions.

• Coordinated BPU controls are designed to limit current during abnormal conditions (Temperature, SOC, Voltage, etc.) to help to minimize secondary effects and prevent cascading failures.

• String level fuses to help to minimize string contribution to system failures.

• Monitoring system provides multiple measurements of voltage, current, temperature and independent SOC/SOH estimations.

• Unit and Plant Level Control system can enable blade level shut down rack during fault conditions.

7.2 Reservoir Inverter Unit (RIU) Specifications

Each 20' RIU is outdoor rated, 3-phase 2.5 MVA Power Conversion units, consisting of a power transformer close coupled (550V) with an AC inverter system (RIU) capable of sub-second response times and fault detection. Specifications are given below.

SPECIFICATIONS	UNITS	RIU-2500
AC Parameters		
Nominal Power (at 45°C)	kVA_{AC}	2500
Max Power (at 40°C)	kVA	2750
Rated AC Operating Voltage (10-35kV)	V_{AC}	550
AC Operating Voltage Range	%	+/ - 10
Grid Frequency (+/-5 Hz)	Hz	50 / 60
Power Factor Range		-1.0 to 1.0
DC Parameters		
DC Input Range	V_{DC}	800-1500
Max DC Current	A	3508
Operational Parameters		
Max Efficiency	%	98.73
CEC Efficiency	%	98.50
Power Consumption at Stop	W	370
Max Power Consumption	kW	4.3
Audible Noise (at 1m)	dBA	<80

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Transformer	
Transformer rated power	2500 kVA
Transformer max. power	2750 kVA
LV / MV voltage	0.55 kV / 10 – 35 kV
Transformer vector	Dy11
Transformer cooling type	ONAN (Oil Natural Air Natural)
Oil type	Mineral oil (PCB free) or degradable oil on request

Figure 10: 20'L x 8'W x 9.5'H Reservoir Inverter Unit

7.3 Standards and Compliance List

7.3.1 Energy Storage System

UL 9540 - Energy Storage Systems and Equipment

IEC 62933 - Series Electrical energy storage (EES) systems

IEC 61000-6-2: Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments

UL 9540A* - Test Method for Evaluating Thermal Runaway Fire Propagation in ESS

NFPA 855 - Standard for the Installation of Stationary Energy Storage Systems (system adaptations in process)

7.3.2 Batteries / Battery Racks

UL 1642 - Standard for Lithium Batteries

UL 1973 - Standard for Batteries for Use in Stationary, Vehicle Auxiliary Power and Light Electric Rail (LER) Applications

IEC 62133 - Secondary cells and batteries containing alkaline or other non-acid electrolytes – Safety

IEC 62619 - Safety requirements for secondary lithium cells and batteries, for use in industrial applications

7.3.3 Inverters

IEEE Std 1547 Series – Standard for Interconnecting Distributed Resources with Electric Power Systems

UL 1741 - Standard for Inverters, Converters, Controllers and Interconnection System Equipment

IEC 62477-1 - Safety requirements for power electronic converter systems and equipment - Part 1: General

IEC 61000-6-2: Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments

7.3.4 Supplemental Information

- * Battery manufacturer has completed Cell and Module testing – GE will leverage that data and execute relevant rack/system testing in near future
- Fire Risk Assessment (FRA) has been completed for similar projects
- NFPA 68, Explosion Protection by Deflagration Venting in process with 3rd party

7.4 Battery management System (BMS)

Battery Monitoring System (BMS) is integrated into the BESS and will disconnect electrical equipment or place it in a safe operating condition if potentially hazardous temperatures or other conditions such as short circuits, overvoltages, overcurrents, etc are detected. BMS is designed to monitor, relay and balance battery cell voltages, currents and temperatures. System shall have the ability to isolate affected modules from the rest of the system and communicate directly with the NOC.

8 BATTERY FIRE PROTECTION SYSTEMS

8.1 Fire Detection System

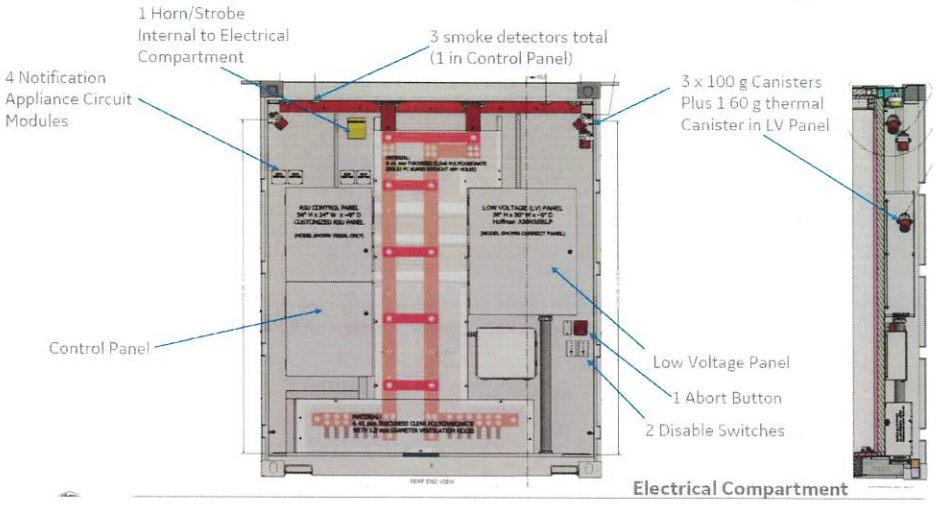


Figure 11: Cabinet Interior Fire System Components

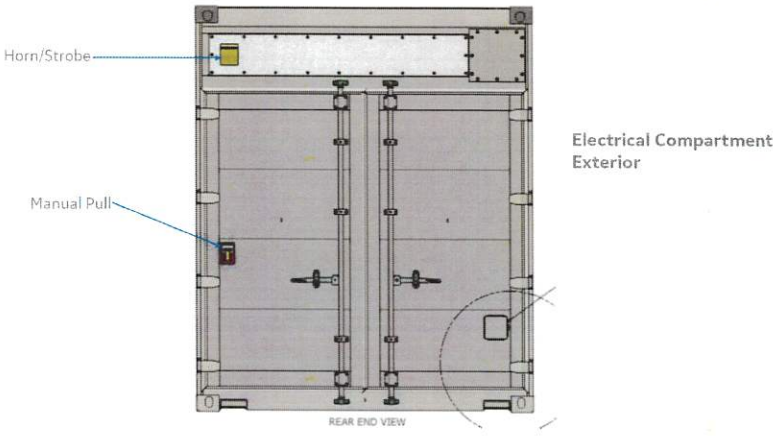


Figure 12: Cabinet Exterior Fire System Components

8.1.1 Smoke Detection

Carbon monoxide programmed gas detector shall be installed to detect smoke before temperature rise significantly. Each RSU is designed with two (2) detection zones - Battery compartment and Electrical Compartment. Battery compartment contains a total of 4 x conventional (non-addressable) photoelectric smoke detectors, type CPS-24. Electric

compartment contains a total of Total of 3 x Addressable Photoelectric Smoke Detector detectors, type PAD100-PD.

8.1.2 Horn/Strobe

A horn strobe is included in the fire detection system to provide audible and visual notification of a potential fire incident in the battery cabinets.

8.2 Fire Suppression System (FSS)

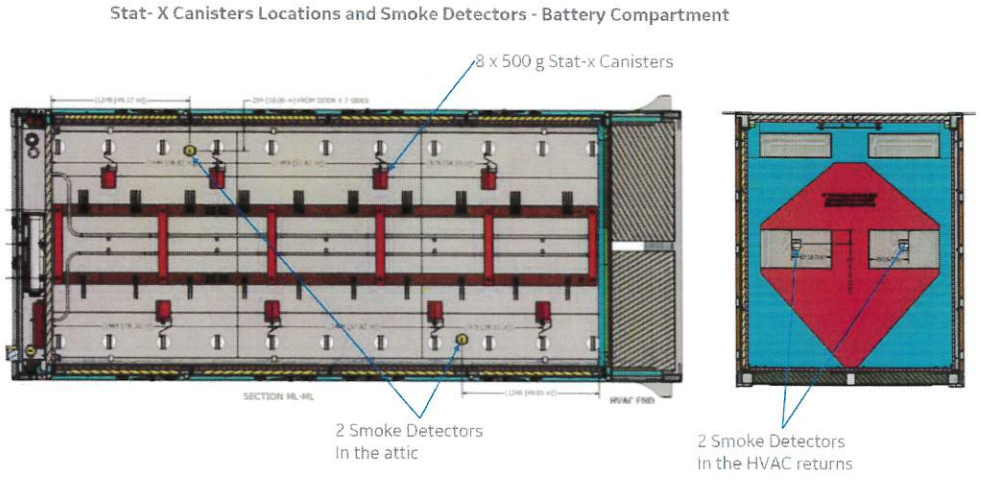


Figure 13: Fire Suppression Clean Agent Details

The Figure 13 above illustrates the general layout of the FSS components in an RSU battery compartment. Each RSU will be provided with two (2) detection zones:

- Battery compartment (4 smoke sensors and 8 Stat-X Cannisters)
- Electrical compartment (3 smoke sensors)

In the event of a battery fire in a single RSU, the following response will occur:

- The first smoke detector in the affected zone triggers an alarm, a second triggers the FSS.
- The affected RSU block is shut down automatically.
- The Stat-X aerosol agent will be automatically dispersed to contain fire.

- The battery temperature, alarms, smoke detector, FSS discharge (by RSU) are actively monitored by the battery management system (BMS).
- The BMS also works to pinpoint the exact origin of the fire and determine if external sprinkler zones should be activated.
- Convergent NOC will coordinate with emergency first responders to contain fire safely and adequately.

8.3 Deflagration / Explosion Control

Deflagration in the cabinets will be accomplished by maintaining flammable gas emissions below 25% Lower Flammable Limit (LFL) using a specifically designed ventilation system powered by an independent power source.

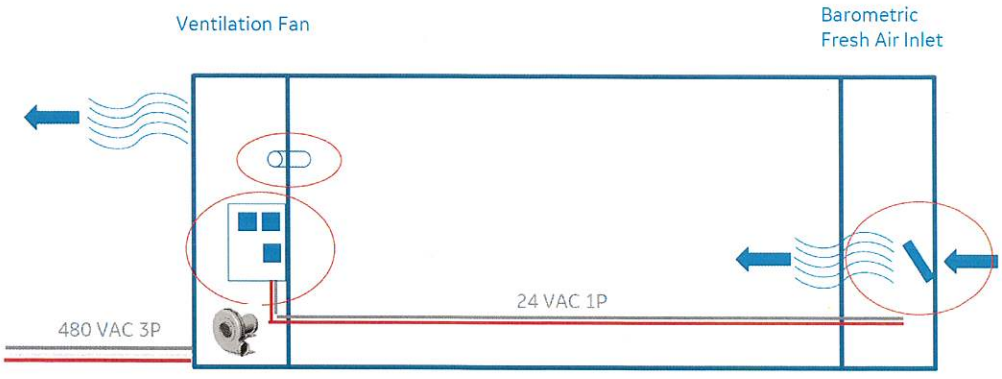


Figure 14: Deflagration / Ventilation System Design

The system vents to the side/end of the cabinet which helps avoid failure due to debris or other build-up on top of the cabinet and features an interlock to prevent use of ventilation system while FSS agent is fighting fire.

The components of the system are designed and sized based on the following assumptions:

a) Single cell failure

b) Thermal runaway

c) Rack system shut down

d) Total of 3 adjacent cells in thermal runaway

e) Smoke & FSS Deployment

f) HVAC E-stop

The general layout of the ventilation system components is shown below.

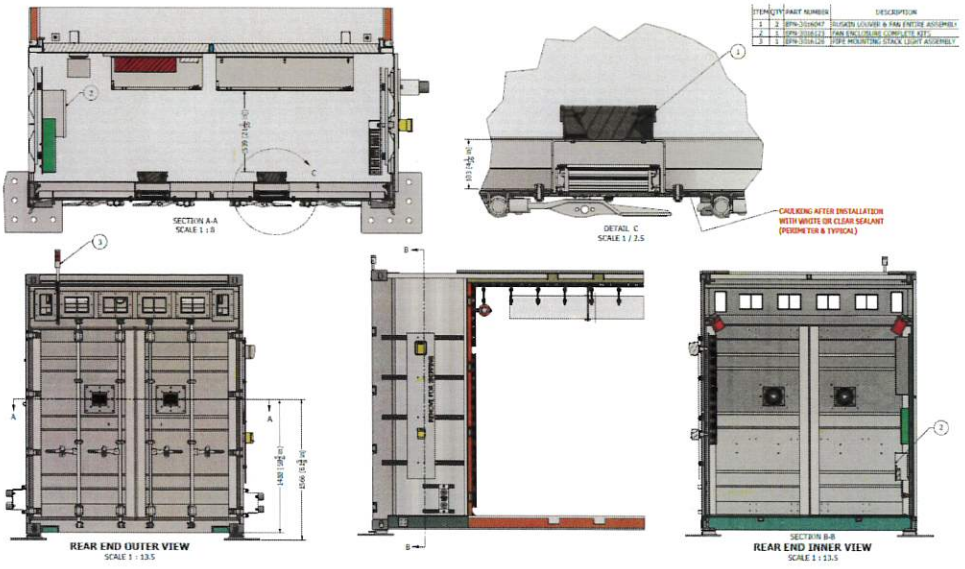


Figure 15: Deflagration / Ventilation System Details

9 FIREFIGHTING CONSIDERATIONS

In the event of an emergency, Convergent should be immediately notified at 917-508-0275.

IN NO SITUATION SHOULD THE BESS CABINETS BE OPENED BY ANY UNAUTHORIZED PERSONS OR EMERGENCY RESPONDERS; ALL RESPONSE IS TO BE COORDINATED BY CONVERGENT AND ITS SUBVENDORS. DO NOT APPLY WATER TO A BURNING UNIT. THE VILLAGE OF WARWICK FIRE DEPARTMENT IS ADVISED TO PROTECT OUTSIDE OF THE FENCED AREA ONLY.

9.1 Small Battery Fire Response

A small battery fire shall be defined as an event whereby a the FSS signal indicates that the fire suppression agent has been released and / or there are visible signs of fire including

smoke and heat, however, smoke and/or fumes are contained within one battery cabinet.

Convergent and GE recommend adherence to the NFPA's BESS EMERGENCIES QUICK REFERENCE GUIDE. During incidents involving a BESS, responders should follow the steps: IDENTIFY, SHUTDOWN, WATCHOUT!

Identify - Once a fire is identified, it should be reported to Convergent and other emergency response units. Convergent, with the aid of the NOC and the BMS, will coordinate with GE to locate the affected unit configurations and components. A remote shutdown will then be employed accordingly.

Shutdown - The BESS should be shut down physically by emergency responders if safely possible. The BESS can be shutdown automatically by the Emergency Stop System. Emergency responders should locate the E-stop, which will be marked as such and highlighted on emergency response documents.

Watch Out - Emergency responders should be on the lookout for high voltage, exposed wires, moving parts, and other hazards. The site should also be monitored for potential reignition and toxic fumes in the air. The use of a positive pressure breathing apparatus is recommended for emergency response personnel whenever responding to battery system fires.

Every fire emergency is unique and requires a customized approach, but a typical battery incident may include the following response:

- A firefighter would arrive on scene and identify the situation
- Calls for support would be made as necessary
- Convergent's NOC should be contacted for assistance in evaluating system status

9.2 Larger Battery Fire Response

A larger battery fire shall be defined as an event whereby a the FSS signal indicates that the fire suppression agent has been released and / or there are visible signs of fire including smoke and heat, however, the smoke or fumes have spread to two or more battery cabinets and/or the surrounding BESS facility area. An explosion will also be considered a larger battery fire.

Assuming a larger battery fire that has breached the battery cabinet and ri sks spreading, the following sequence of response should occur:

a. The Heat or Smoke detectors in the storage unit could detect a fire and initiate de-energization.

b. The Stat-X aerosol fire suppression system is activated to contain the fire until firefighters arrive.

c. The affected storage unit and associated reservoir inverter unit would be automatically de-energized by the control system. As a precaution and depending on the severity of the incident, adjacent storage units (up to the entire system) may be de-energized as a precaution.

d. Non-essential personnel should evacuate the affected area.

e. The BESS should be shut down physically by emergency responders if safely possible. The BESS can be shutdown automatically by the Emergency Stop System. Emergency responders should locate the E-stop, which will be marked as such and highlighted on emergency response documents.

f. Any area surrounding the BESS facility (outside of the BESS perimeter) that has been affected by a battery fire could be cooled by blanketing with low velocity water stream or water fog.

g. The site shall be periodically monitored by Convergent for re-ignition for a 24 hours.

h. Cabinet doors should not be opened by any emergency response personnel, including the Warwick Fire Department until a thorough analysis has been done by GE and there is no indication of raising temperatures inside the container.

i. Due to the composition of gases vented during a Li-ion battery fire, the air in the surrounding area of the facility should be considered potentially corrosive, toxic, and/or flammable.

j. Batteries which are exposed to excessive heat beyond their recommended temperature range are at risk for explosion. During thermal decomposition from a fire, chlorine, hydrogen chloride, and sulphur dioxide can be formed. Thus, it is of utmost importance that responders do not enter the BESS perimeter during a fire.

k. It is recommended that full PPE including SCBA gear should be worn by any Warwick Fire Department personnel responding to a fire event at the BESS facility.

CONVERGENT

10 POST-FIRE CONSIDERATIONS

Following a fire event, Convergent will coordinate with the battery manufacturer and system provider, GE, to ensure that any affected equipment are safe-guarded, then safely taken out of service and eventually removed from the site. Please refer to the Warwick ES2 Decommissioning Plan for additional details regarding the decommissioning procedures.

11 APPENDICES

11.1 Project Site Plan

Attached.

11.2 Battery Reservoir Storage Unit Specifications

Attached.

11.3 Battery Reservoir Inverter Unit Specifications

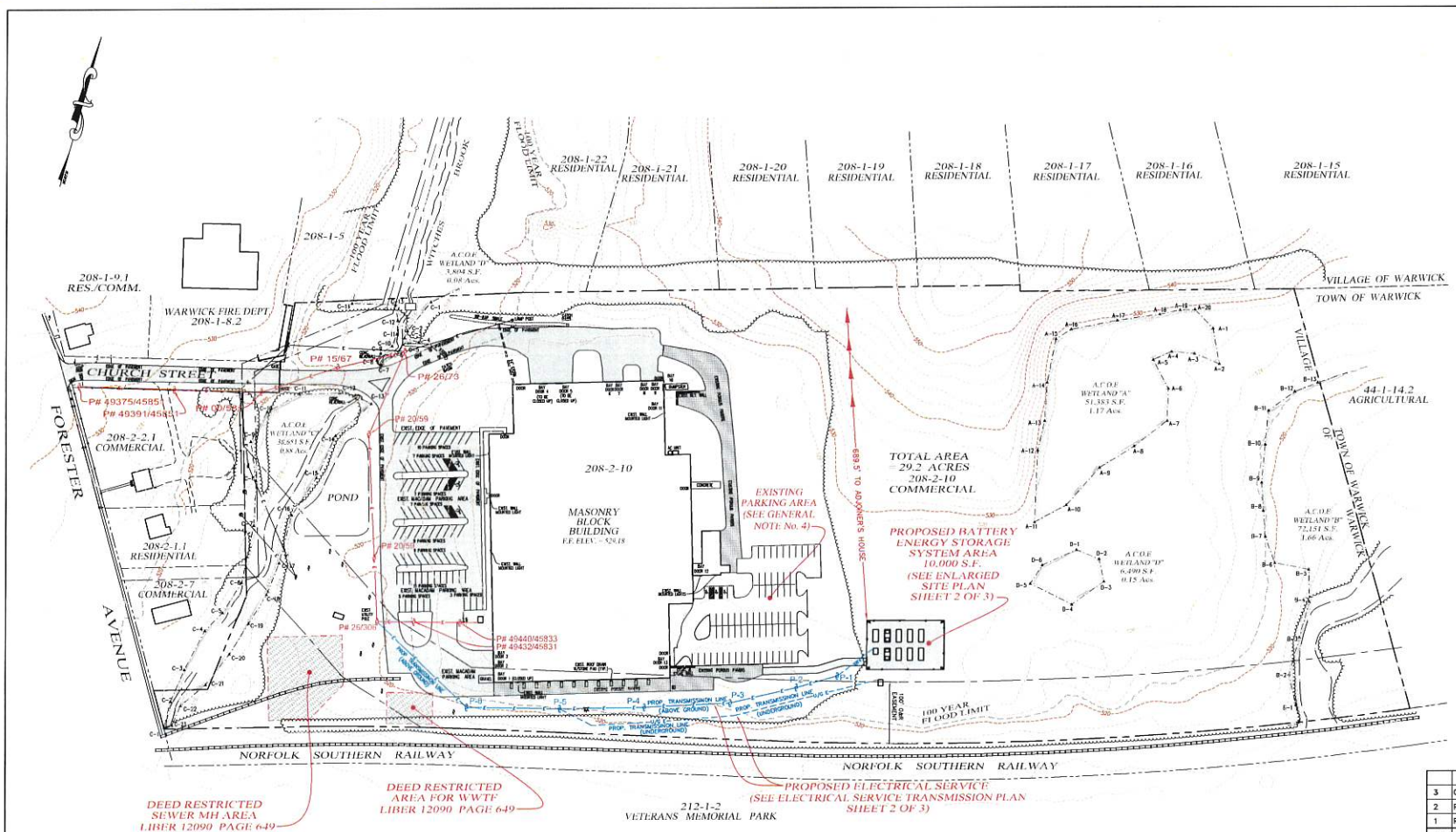
Attached

11.4 Fire Suppressant Specifications

Attached.

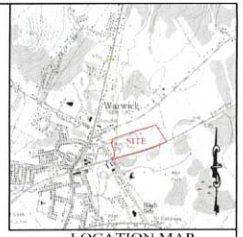
11.5 Transformer Oil

To be provided upon transformer procurement.



GRAPHIC SCALE

(IN FEET)
1 inch = 80 ft.



LOCATION MAP
SCALE: 1"=2000'

BULK REQUIREMENTS
LI (LIGHT INDUSTRIAL) ZONE
USE GROUP "N/A"

	MINIMUM REQUIRED
MINIMUM LOT AREA (SQ. FT)	N/A
LOT WIDTH (FT.)	N/A
FRONT SETBACK (FT.)	N/A
FRONT YARD (FT.)	N/A
SIDE SETBACK (FT.)	N/A
TOTAL SIDE SETBACK (FT.)	N/A
SIDE YARD (FT.)	N/A
SIDE YARD 25' OF A RESIDENTIAL DISTRICT BOUNDARY (FT.)	N/A
REAR SETBACK (FT.)	N/A
REAR YARD (FT.)	N/A
REAR YARD 25' OF A RESIDENTIAL DISTRICT BOUNDARY (FT.)	N/A
STREET FRONTAGE (FT.)	N/A
FLOOR AREA RATIO	N/A
	MAXIMUM ALLOWED
BUILDING HEIGHT (FT.)	N/A
BUILDING COVERAGE (%)	N/A

SHEET INDEX

RECORD OWNER
WARWICK VALLEY BBA LLC
P.O. BOX 469
WARWICK NY 10990

APPLICANT
CONVERGENT ENERGY + POWER
7 TIMES SQUARE TOWER, SUITE 3504
NEW YORK, N.Y. 10036

GENERAL NOTES:
1. TOPOGRAPHIC DATA PREPARED BY ERS CONSULTANTS, INC.
2. WETLAND DELINEATION PREPARED ERS CONSULTANTS ON 03-11-20.
3. FLOOD MAPPING PER FIRM PANEL No. 36071C046E DATED 08-03-09.
4. EXISTING PARKING AREA: PERMIT ISSUED ON 03-16-20 FROM THE VILLAGE OF WARWICK BUILDING DEPT.

REFERENCE SITE PLAN:
SITE PLAN ENTITLED "SITE PLAN PREPARED FOR WARWICK VALLEY BBA, LLC & CACTUS PETE BEEF JERKY, LLC" PREPARED BY ERS ENGINEERING CONSULTANTS, P.C. AND DATED: 05-13-16. LAST REVISION DATE: 07-20-16

LEGEND:
ADJOINER'S PROPERTY LINE
APPLICANT'S PROPERTY LINE
EXISTING HYDRANT
EXISTING UTILITY POLE
EXISTING INTERMEDIATE CONTOUR
EXISTING INDEX CONTOUR
UTILITY EASEMENT
A.C.O.E. WETLAND LIMIT LINE
100 YEAR FLOOD LIMIT LINE
EXISTING TREELINE
EXISTING ABOVE GROUND ELECTRIC
EXISTING UTILITY POLE AND No. FOR CONNECTION
EXISTING ABOVE GROUND ELECTRIC FOR CONNECTION
PROPOSED UTILITY POLE AND No.
PROPOSED ABOVE GROUND ELECTRIC
PROPOSED UNDERGROUND ELECTRIC
PROPOSED TREE CLEARING LIMIT
PROPOSED SILT FENCE
PROPOSED LIMIT OF DISTURBANCE
P# 26/306
P-4
PROP. TRANSMISSION LINE (ABOVE GROUND)
PROP. TRANSMISSION LINE (UNDERGROUND)

NO.	DESCRIPTION	DATE
	REVISIONS	
3	GAR SOUCRE DATA ADDED TO PLANS	09-10-20
2	REVISED PER PLANNING BOARD COMMENTS DATED 08-04-20	08-06-20
1	REVISED PER PLANNING BOARD COMMENTS DATED 07-06-20	07-16-20

SITE PLAN

PROPOSED BATTERY ENERGY STORAGE SYSTEM AREA

PREPARED FOR

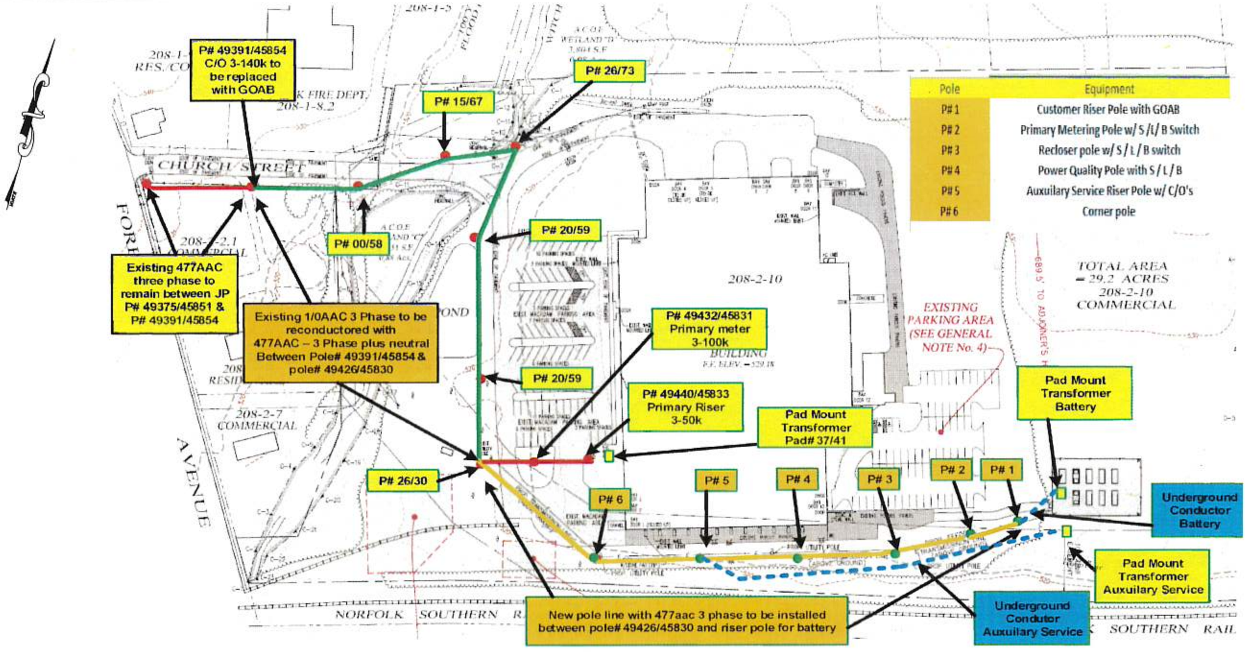
CONVERGENT

SECTION 208 BLOCK 2 LOT 10
VILLAGE OF WARWICK - ORANGE COUNTY - NEW YORK

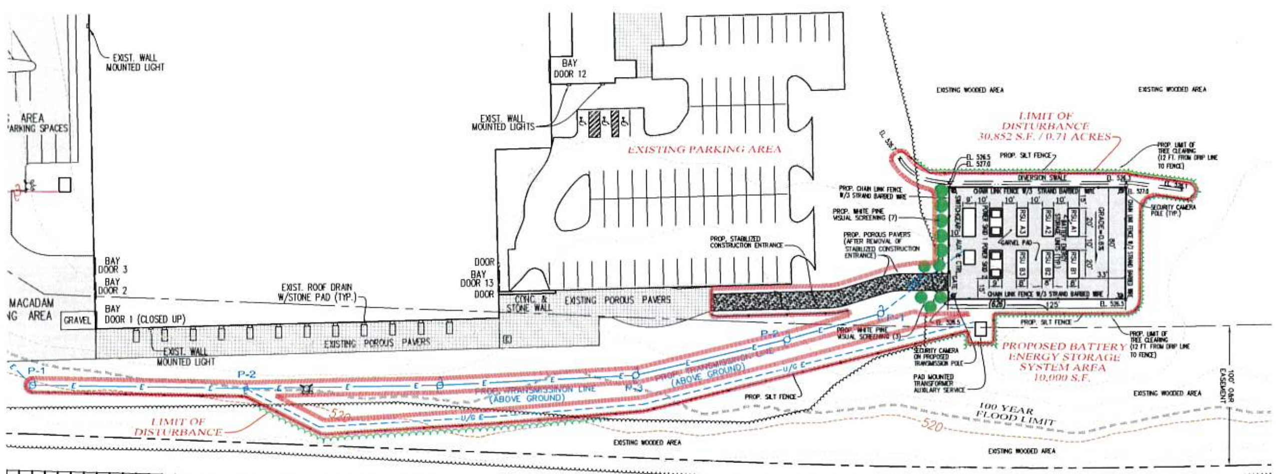
JOHN D. FULLER, P.E.
PROFESSIONAL ENGINEER
N.J. LIC. NO. 42708
N.Y. LIC. NO. 077703

ERS ENGINEERING CONSULTANTS, P.C.
PHONE: (845) 987-1775 FAX: (845) 987-1788
11 FORESTER AVE., WARWICK, NEW YORK 10990

SCALE:	DATE:	JOB NO.	SHEET NO.
1"=80'	03-31-20	3121	1 OF 3



ELECTRICAL SERVICE TRANSMISSION PLAN
(SOURCE: ORANGE & ROCKLAND UTILITIES)
SCALE: 1"=80'



ENLARGED SITE & SEDIMENT & EROSION CONTROL PLAN
SCALE: 1"=40'

LEGEND:

- ADJOINER'S PROPERTY LINE
- APPLICANT'S PROPERTY LINE
- EXISTING HYDRANT
- EXISTING UTILITY POLE
- EXISTING INTERMEDIATE CONTOUR
- EXISTING INDEX CONTOUR
- UTILITY EASEMENT
- A.C.O.E. WETLAND LIMIT LINE
- 100 YEAR FLOOD LIMIT LINE
- EXISTING TREELINE
- EXISTING ABOVE GROUND ELECTRIC
- EXISTING UTILITY POLE AND No. FOR CONNECTION — P# 26/306
- EXISTING ABOVE GROUND ELECTRIC FOR CONNECTION
- PROPOSED UTILITY POLE AND No. — P-4
- PROPOSED ABOVE GROUND ELECTRIC — PROP. TRANSMISSION LINE
- PROPOSED UNDERGROUND ELECTRIC — PROP. TRANSMISSION LINE
- PROPOSED TREE CLEARING LIMIT
- PROPOSED SILT FENCE
- PROPOSED LIMIT OF DISTURBANCE

NO.	DESCRIPTION	DATE
3	O&R SOUCRE DATA ADDED TO PLANS	09-10-20
2	REVISED PER PLANNING BOARD COMMENTS DATED 08-04-20	08-06-20
1	REVISED PER PLANNING BOARD COMMENTS DATED 07-06-20	07-16-20

REVISIONS

ELECTRICAL SERVICE TRANSMISSION PLAN & ENLARGED SITE & SEDIMENT & EROSION CONTROL PLAN

PROPOSED BATTERY ENERGY STORAGE SYSTEM AREA

PREPARED FOR

CONVERGENT

SECTION 208 BLOCK 2 LOT 10
VILLAGE OF WARWICK - ORANGE COUNTY - NEW YORK

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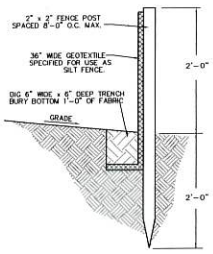
ERS ENGINEERING CONSULTANTS, P.C.
PHONE: (845) 987-1775 FAX: (845) 987-1788
11 FORESTER AVE., WARWICK, NEW YORK 10990

SCALE:	DATE:	JOB NO.	SHEET NO.
AS NOTED	03-31-20	3121	2 OF 3

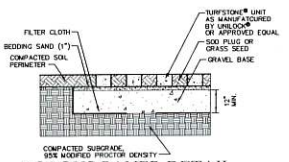
FENCE PROPERTIES	MINIMUM VALUE	STANDARD
GRAB TENSILE STRENGTH (LBS)	90	ASTMD 1682
ELONGATION AT FAILURE(%)	50	ASTM D1682
MULEN BURST STRENGTH (PSI)	190	ASTM D3786
PUNCTURE STRENGTH (LBS)	40	ASTM D751 (MODIFIED)
SLURRY FLOW RATE (GAL/MIN/SF)	0.3	
EQUIVALENT OPENING SIZE	40-80	US STD SIEVE CW-02215
ULTRAVIOLET RADIATION STABILITY (%)	90	ASTM G-26

SLOPE STEEPNESS	MAXIMUM FENCE SPACING (FT)
2:1	50
3:1	75
4:1	125
5:1	175
FLATTER THAN 5:1	200



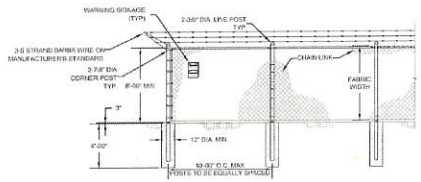
NOTES:
1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION
3. ALL SILT FENCES SHALL RUN PARALLEL TO THE CONTOUR OF THE LAND.
4. ALL SILT FENCING SHALL MEET THE MINIMUM REQUIREMENTS AS STATED UNLESS OTHERWISE NOTED AND APPROVED BY THE BUILDING INSPECTOR AND ENGINEER.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL SHALL BE REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

FILTER FABRIC SILT FENCE DETAIL
NOT TO SCALE



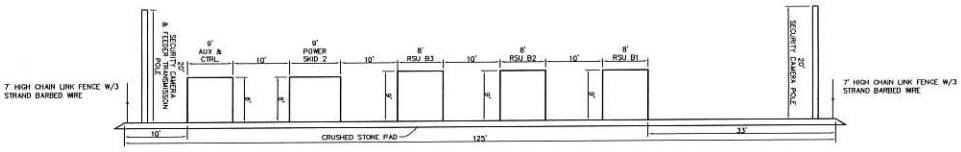
POROUS PAVER DETAIL
NOT TO SCALE

SECURITY CAMERA POLE DETAIL
NOT TO SCALE

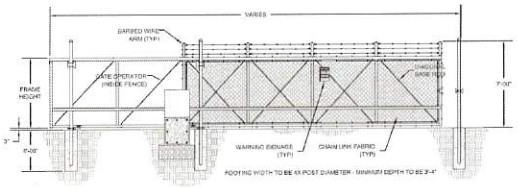


1. CHAIN LINK SHALL BE 2" MESH NO.9 GAGE WIRE SECURITY FASTED TO LINE POSTS AND RAILS WITH FASTENERS AND TIE CLIPS SHALL BE NO.11 GAGE
2. WIRE CONCRETE FOOTINGS SHALL HAVE TOPS EXCAVATED AT GROUND LEVEL
3. CHAIN LINK FENCE TO BE FITTED WITH UV-RESISTANT MESH FABRIC, COLOR PER CUSTOMER REQUEST.
4. ELECTRICAL SAFETY SIGNAGE TO BE PLACED ALONG PERIMETER.

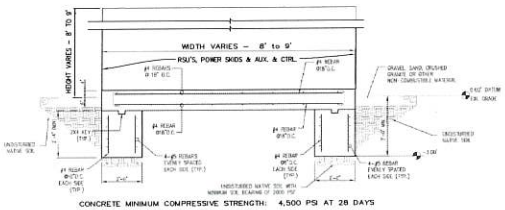
CHAIN LINK FENCE DETAIL
NOT TO SCALE



ELEVATION VIEW - PROPOSED BATTERY ENERGY STORAGE SYSTEM AREA
SCALE: 1"=10'

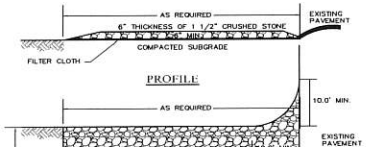


GATE DETAIL
NOT TO SCALE



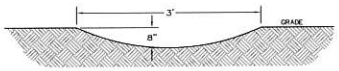
CONCRETE MINIMUM COMPRESSIVE STRENGTH: 4,500 PSI AT 28 DAYS

FOUNDATION WIDTH SECTION
NOT TO SCALE

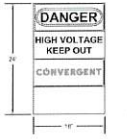


CONSTRUCTION SPECIFICATIONS:
1. ENTRANCE SHALL BE MAINTAINED AS CONDITIONS DEMAND TO PREVENT TRACKING OF SEDIMENT ONTO PUBLIC R.O.W.
2. A CRUSHED STONE, VEHICLE WHEEL-CLEANING BLANKET WILL BE INSTALLED WHERE A CONSTRUCTION ACCESS ROAD INTERSECTS ANY PAVED ROADWAY. THE BLANKET SHALL BE COMPOSED OF 6" DEPTH OF 1"-1 1/2" CRUSHED STONE. SHALL BE PLACED ON COMPACTED SUB-GRADE.
3. A FILTER CLOTH WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
4. ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
5. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

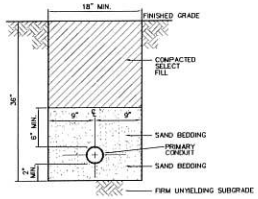
STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE



DIVERSION SWALE SECTION
NOT TO SCALE



WARNING SIGNAGE
NOT TO SCALE



COUNDUIT TRENCH DETAIL
NOT TO SCALE

SOIL EROSION AND SEDIMENT CONTROL NOTES:

1. SILT FENCE BARRIERS TO BE INSTALLED PRIOR TO CONSTRUCTION.
2. DISTURBANCE TO BE LIMITED TO NECESSARY GRADING ON ROADS, BUILDING LOCATIONS, DRIVEWAYS AND IN AREAS AS CALLED CALLED FOR IN THE PLANS.
3. TEMPORARY SEEDING WITH ANNUAL RYE GRASS OR OTHER RAPID GROWING MIXTURE TO BE PERFORMED ON DISTURBED SOIL REMAINING VACANT FOR MORE THAN ONE MONTH AS FOLLOWS:
   A. LOOSEN SEEDED BY DISCING TO 4" DEPTH.
   B. FERTILIZE WITH 400 LBS. PER ACRE PERENNIAL RYE GRASS.
   C. SEED WITH 20 LBS. PER ACRE PERENNIAL RYE GRASS.
   D. MULCH WITH 90 LBS. PER ACRE STRAW, BOUND IN PLACE WITH 200 GALLONS PER ACRE CUTBACK ASPHALT (RC-70).
4. ALL DISTURBED AREAS TO BE MULCHED TO PREVENT EROSION, THE CONTRACTOR SHALL COMPLY WITH ALL REQUESTS OF THE VILLAGE ENGINEER OR BUILDING INSPECTOR DURING CONSTRUCTION WITH REGARD TO EROSION CONTROL DEVICES.
5. EROSION CONTROL MEASURES TO REMAIN IN PLACE AND BE MAINTAINED BY CONTRACTOR UNTIL PERMANENT STABILIZATION HAS BEEN ESTABLISHED.

CONSTRUCTION SEQUENCE

1. ERECT SNOW FENCING AROUND TREES, STRUCTURES, AND OTHER FEATURES TO BE PROTECTED.
2. CONSTRUCT SILT FENCE BARRIERS DOWNSLOPE OF ALL AREAS TO BE DISTURBED.
3. CLEAR AND GRUB VEGETATION IN AREAS TO BE REGRADED.
4. PERFORM GRADING, EXCAVATION, CONSTRUCTION OF PARKING AREAS, BUILDINGS, UTILITIES, PAVING, ETC..
5. MAINTAIN SILT FENCE BARRIERS AND OTHER MEASURES IN PROPER CONDITION THROUGHOUT THE MEASURES IN PROPER CONDITION THROUGHOUT THE CONSTRUCTION PERIOD.
6. AS CONSTRUCTION PROCEEDS, ALL DISTURBED AREAS SHALL BE PLANTED, SEEDED, OR PAVED IN A TIMELY MANNER TO PREVENT UNNECESSARY EROSION. ONCE DISTURBED AREAS HAVE BEEN PROPERLY STABILIZED, SILT FENCE, TEMPORARY BERMS, TEMPORARY SWALES, ETC, SHALL BE REMOVED.
7. ADDITIONAL SILT FENCE BARRIERS OR OTHER EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PROVIDED AS DEEMED NECESSARY BY THE VILLAGE ENGINEER OR BUILDING INSPECTOR.

JOHN D. FULLER, P.E.
STATE OF NEW YORK – JOHN DOUGLAS FULLER – No. 077703 – LICENSED PROFESSIONAL ENGINEER
PROFESSIONAL ENGINEER
N.J. LIC. NO. 42708
N.Y. LIC. NO. 077703

NO.	DESCRIPTION	DATE
3	O&R SOUCRE DATA ADDED TO PLANS	09-10-20
2	REVISED PER PLANNING BOARD COMMENTS DATED 08-04-20	08-06-20
1	REVISED PER PLANNING BOARD COMMENTS DATED 07-06-20	07-16-20

REVISIONS

SITE DETAILS

PROPOSED BATTERY ENERGY STORAGE SYSTEM AREA

PREPARED FOR

CONVERGENT

SECTION 208 BLOCK 2 LOT 10

VILLAGE OF WARWICK - ORANGE COUNTY - NEW YORK

ERS ENGINEERING CONSULTANTS, P.C.
PHONE: (845) 987-1775 FAX: (845) 987-1788
11 FORESTER AVE., WARWICK, NEW YORK 10990

SCALE:	DATE:	JOB NO.	SHEET NO.
AS NOTED	03-31-20	3121	3 OF 3

Modular, Scalable Solutions For Utility Scale Applications

RSU-4000 Series

Overview	RSU-4000/20	RSU-4000/16	RSU-4000/12
	RSU-4000/20	RSU-4000/16	RSU-4000/12
Overview			
Nameplate Energy Capacity (KWh.dc, usable)	4184	3347.2	2510.4
Individual Battery Blades - Factory Installed	20 of 20	16 of 20	12 of 20
Maximum Power - Factory Installed (KW.dc)	1200	960	720
Maximum DC Current - Factory Installed (A)	1600	1280	960
Available Augmentation Capacity (% BOL)	0%	25%	67%
Available Augmentation Capacity (kWh.dc)	N/A	836.8	1673.6
Key Features			
Batery Management System		GE Blade Protection Unit (BPU)	
Compatible Inverters		GE RIU-2750MV	
Remote Management		Reservoir Suite	
Solar DC Coupling		Yes (DC:AC Ratio <2.8)	
Integrated PV Combiner		Yes	
Integrated Lockable Disconnect		Module & Rack Level	
Augmentation Options for Lifecyle Management		Yes	
DC Bus Control		DC-IQ Intelligent Bus	
Battery LifeCycle Management		Digital Twin Life Optimization - Optional	
Unit Validation		Factory Built & Tested	
Design life (years)		25	
Battery Information			
Battery Chemistry		Lithium-Ion, NCM	
Battery Module Design		Energy	
Continuous C-Rate		<C/3	
Pulse C-Rate		<C/3	
Voltage Class		1500V	
Nominal DC Voltage (V)		1300	
Minimum DC Voltage (V)		770	
Mechanical Information			
Package Format		20' ISO w/Exterior Acces	
Dimensions (mm) (L X W X H)		6058 x 2438 x 2890 mm	
Weight (kg)	37k	31k	25k
Fully Integrated HVAC		Dual Self-Contained 3 Ton Units (High Efficiency 10. EER)	
- Hot Climate Upgrade		+33% Cooling Capacity	
- Cold Climate Upgrade		+ Electric Heating Package	
Fire Suppression - Aerosol		Optional	
Installation		Pad/Pier	
Cable Entry		Bottom	
Weatherization		NEMA 3R, IP54	
Design Conditions			
Min Operating Temperature (C)		-40°C	
Max operating Temperature (C)		50°C (55°C w/ hot climate upgrade)	
Maximum Altitude (m)		2000	
Maximum Relative Humidity (%)		95%, non-condensing	
Seismic Zone		UBC Zone-4	
Audible Noise		<60 dB at 3M	
Certifications & Compliance			
Certifications		UN38.3, UL 1973, UL 508C, CE	
Compliance		UL1642, UNDOT 38.3, IEC 62477-1, NFPA 70E, IEC 50110, ASTM4169, IEEE 605, IEEE C37.32	

GEPower.com/**EnergyStorage**

GEA-33122-(E)
English
180802

GE Energy Storage Reservoir Inverter Unit

Modular, Scalable Energy Storage Inverter for Utility-Scale Applications

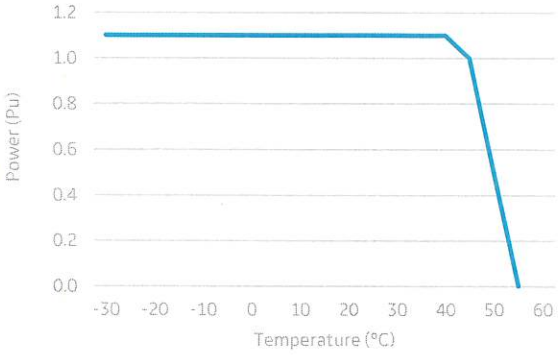
Reservoir Inverter Unit Data

SPECIFICATIONS	UNITS	RIU-2500
AC Parameters		
Nominal Power (at 45°C)	kVA_{AC}	2500
Max Power (at 40°C)	kVA	2750
Rated AC Operating Voltage (10-35kV)	V_{AC}	550
AC Operating Voltage Range	%	+ / - 10
Grid Frequency (+/-5 Hz)	Hz	50 / 60
Power Factor Range		-1.0 to 1.0
DC Parameters		
DC Input Range	V_{DC}	800-1500
Max DC Current	A	3508
Operational Parameters		
Max Efficiency	%	98.73
CEC Efficiency	%	98.50
Power Consumption at Stop	W	370
Max Power Consumption	kW	4.3
Audible Noise (at 1m)	dBA	<80
Physical Parameters		
Dimensions (L x W x H)	mm	6058 X 2438 X 2890
Weight	kg	17000
Ambient Temperature Range	°C	-30 to +50[1]
Elevation	m	<2500[2]
IP Class / NEMA Rating		IP 54 / NEMA 3R
Cable Entry		Bottom
Communications		
External Standard		RS-485 / Ethernet / FO
Response Time	mSec	<100

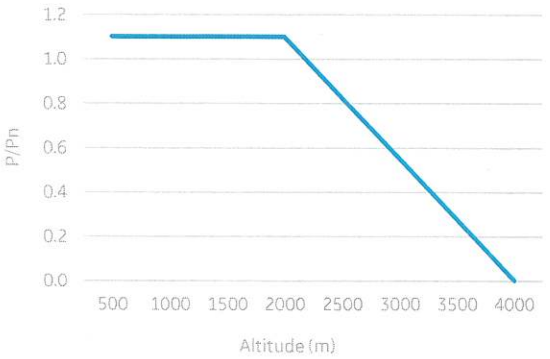
SPECIFICATIONS	UNITS	RIU-2500
Equipment		
Ground Fault Monitoring		Yes
AC Circuit Breaker		Yes (Lockable)
Fused DC Load Switch		Yes (Lockable)
Integrated LV Auxiliary Power Supply		Yes
Features		
Anti-islanding		Yes
Reactive Power Compensation		Yes
Low Voltage Ride Though (LVRT)		Yes
High Voltage Ride Through (HVRT)		Yes
Frequency Ride Through		Yes
Certifications & Compliance		
Certifications		UL 1741; IEC 62109
Compliance		SA/Rule 21; IEEE 547; IEC 62477; PRC-024 (Optional); AS300 (Optional); CE Mark

1. Lower ambient temperature -40°C optional with kit
2. Higher altitudes up to 4000m (with derating) on request

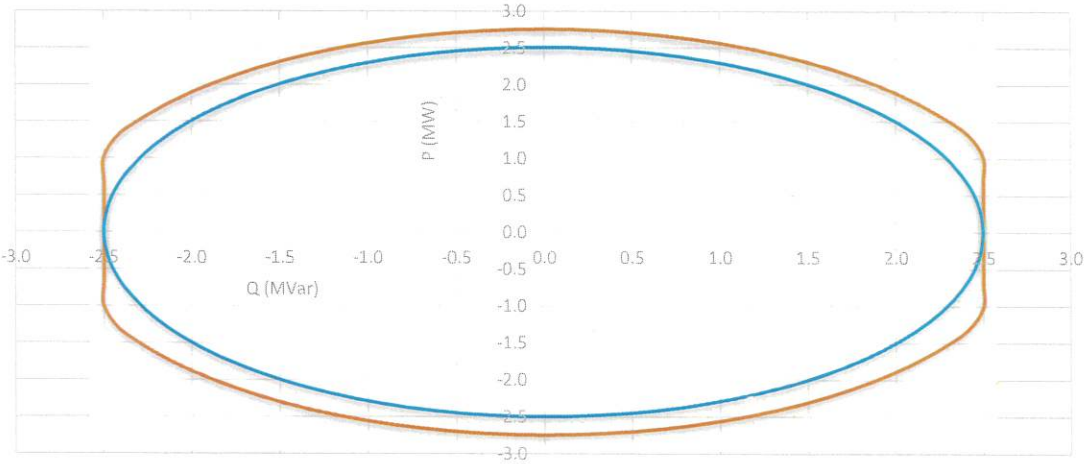
2. Temperature Rating



3. Altitude Rating



4. Nominal Capability Curve**



**≤45°C represented in blue; ≤40°C represented in orange

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Stat-X

Condensed Aerosol Fire Suppression Systems

Nobel Fire Systems has built on over 30 years of reliable, proven technology to develop fire suppression technologies aimed at special risk environments.

Underpinning the product development programme is a certain conviction that early fire detection and fast effective suppression saves lives, assets and the environment. The Company offers a complete range of services from risk based analysis, consultation and design through to distribution and installation. As no single suppression medium or application method covers all fire risk scenarios, our range of fire suppression systems covers all class of fires, and systems can be tailored to meet individual needs.

Stat-X

www.nobel-fire-systems.com

Nobel fire systems

Stat-X

Stat-X

The Condensed Aerosol System

Stat-X is an innovative, self-contained, environmentally friendly suppression system, proven to be extremely effective in use across a wide range of applications and is especially effective where there is a need to protect critical areas and high value enclosures. Combining science and economics, it's the advanced method for protecting more challenging applications.

The extinguishing agent

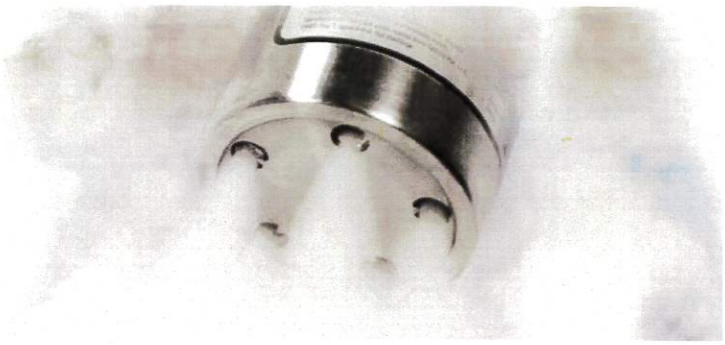
Recognised as being one of the most effective fire suppression agents available, potassium suppresses fire by a combination of chemical and physical mechanisms similar to Halon but without the negative effects on the environment. Because of the aerosol's ultra-fine particle size (1-2μ micron) there is a dramatic increase in the surface area interaction between the agent and the fire.

Potassium based aerosol has proved in numerous tests to be a highly effective alternative to other extinguishing agents. Unlike some gaseous agents, the aerosol does not decompose in the presence of heat nor does it extinguish by oxygen deprivation. The result is an ultra fast fire knock down capacity and due to the potassium aerosol being suspended in the air of an enclosure for extended periods; it possesses long post fire security and can easily be vented after discharge. The Stat-X aerosol generator is hermetically sealed and has been evaluated for temperatures down to -40 degrees Centigrade and humidity (up to 95% relative humidity). Accelerated aging tests have shown the generator's charge maintains its viability for 10 years and longer. Being unpressurised without the requirement for nozzles, pipework is ultra-reliable and requires very little maintenance.

Stat-X has undergone and passed stringent US accreditation under UL and is approved to UL2127. It is the only Condensed Aerosol to have undergone

independent assessment by the US Environmental Protection Agency and deemed 'Safe For Occupied Spaces'.

Stat-X also holds a wide range of international approvals such as ISO 9001, ULC – Activfire Australia and the US Military.



UL RINA mca ULC LISTED ABS BUREAU VERITAS

Manufacturing

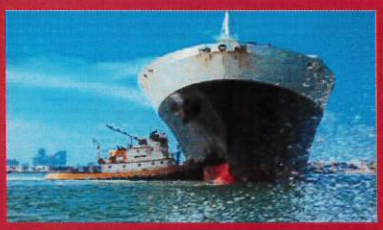
From multinational manufacturers to small independent producers, Nobel is providing industrial fire protection systems to ensure safe and productive working environments 24/7 whatever the circumstances.

Mining

In the punishingly demanding mining environment, dangerous fires are a frequent occurrence. Protecting surface vehicles, mobile equipment, and electrical components from fire is therefore of critical importance.

Property

Residential, commercial and public property all contain assets in need of protection. Most significantly the people, but also the documents and hardware.



Marine and Offshore

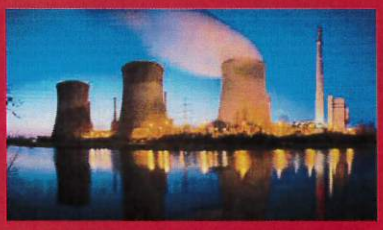
There may be significant differences in size and usage but all marine vessels, boats and offshore oil rigs have one thing in common, an absolute commitment to avoiding a fire on board..

Catering

Industrial fryers represent an obvious fire hazard within the global fast food industry with residual oil and grease in the internal compartments providing fuel for electrical and gas malfunctions.

Transport

Getting people and product from A to B is an essential part of the modern world, even more important is ensuring this is done safely for driver and passengers alike.



Utilities/Power Generation

All businesses have critical assets in the form of building and/or plant infrastructure. The protection of these assets from the risk of fire is essential to help alleviate down time.

Telecoms/Data

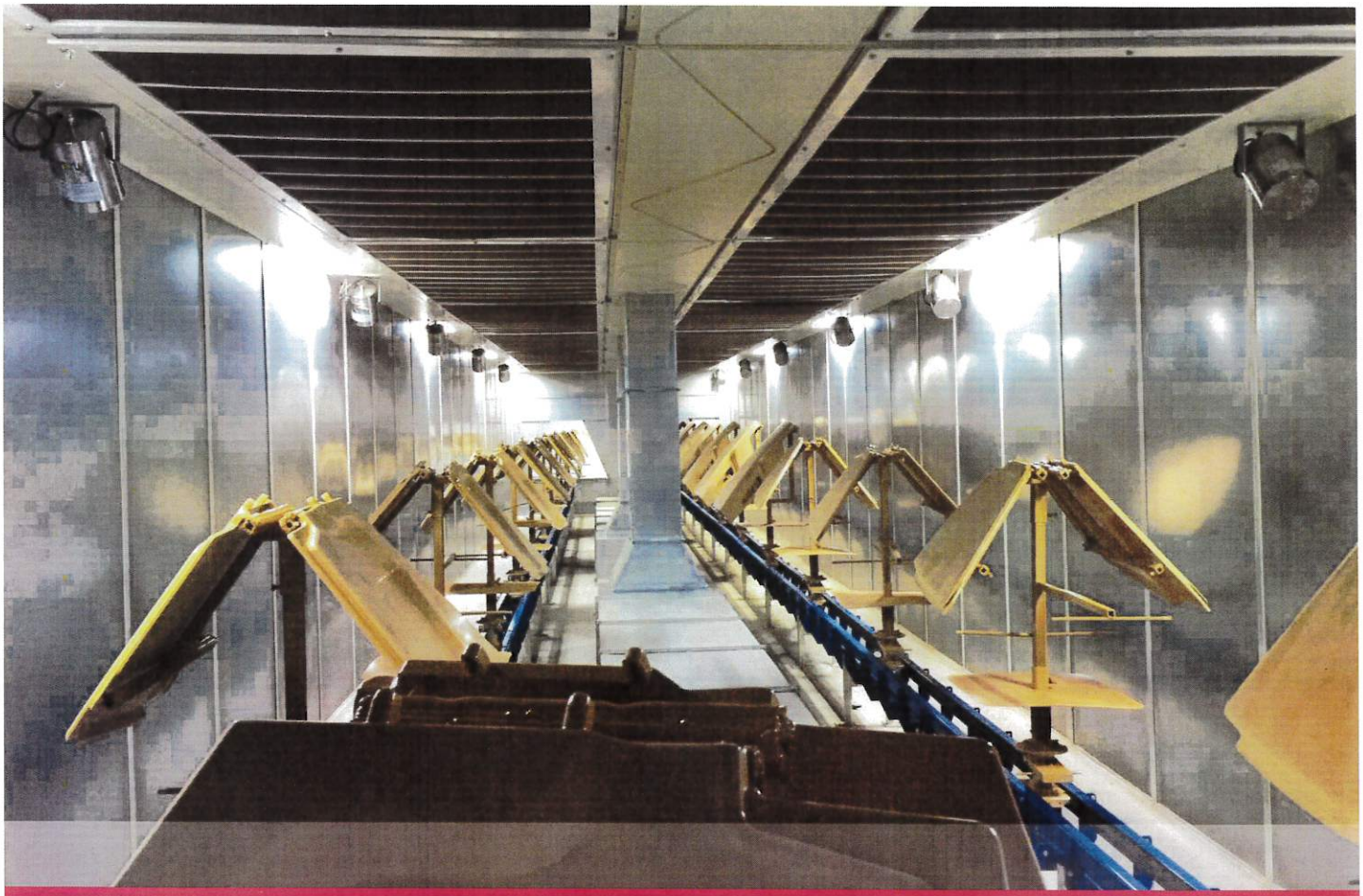
The emphasis on data protection has never been greater. Whilst keeping data safe from fire is critical, the means of doing so must be clean and have minimal impact on the environment.

Fire fighting

Nobel's Stat-X First Responder is an innovative, portable unit for use by emergency responders in emergency egress or entrance situations where every second counts.

Insightful Experience Innovative Solutions

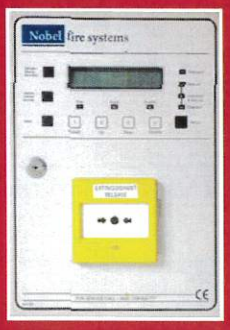
Nobel's Stat-X fire suppression systems are used in critical applications across a wide range of industries around the globe. Because of their fast response time, compact size, low fire extinguishing concentration, and environmental safety, Stat-X fire systems are protecting company assets throughout the world, providing advanced methods of fire safety for use across more challenging applications.



Stat-X Control panels

Nobel has a range of specifically designed control panels to interface fire detection and actuation of Stat-X units for differing risk locations. The panels can be connected to Mains power or derive power from 12-30VDC supplies or there is an invaluable ability to provide a totally stand alone self sufficient unit requiring no outside power source.

All control panels also have an ability to have automatic or manual release capability with tamper proof release points, should the need to actuate the system manually arise and facilitates full fault monitoring on all detector and actuation circuits ensuring any faults with the system are immediately flagged.



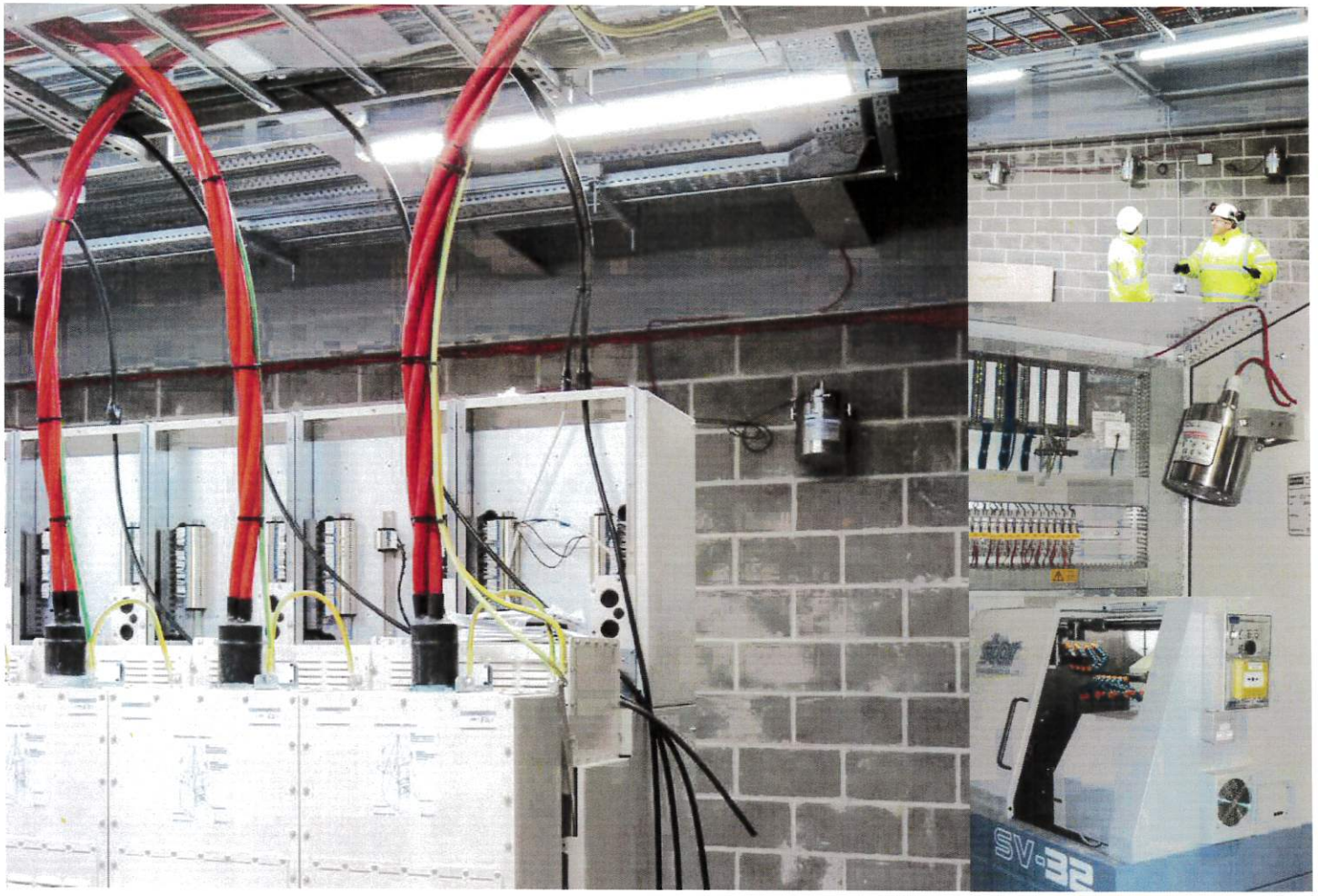
Critical Applications in Numerous Industries

Stat-X fire suppression systems are used in critical applications across a wide range of industries. Because of their fast response time, compact size, low fire extinguishing concentration, and environmental safety, Stat-X fire protection systems are protecting company assets throughout the world.

Stat-X Key benefits

- Significantly more effective than alternative extinguishing agents
- Environmentally friendly, Ozone depletion potential (ODP) = 0
- Zero global warming potential
- Easy installation – no pressure vessels, piping or nozzles required
- Extremely low maintenance
- Provides reliable, cost effective protection for a wide range of fixed and transport related fire hazards
- Suitable for enclosed facilities and 'local' applications
- Tested and Listed to UL Standard 2127
- Safe for personnel - non harmful at design application rates
- Does not reduce oxygen levels in the enclosure
- Will not damage electronic equipment or magnetic media
- The aerosol suspends in air for extended suppression hold times and is quick and easy to vent after discharge
- Compact - up to 90% reduction in space and weight requirement
- No risk of loss of loss of expellant gasses

Systems are installed based on established and tested design densities and application rates are designed specifically to the volume of the compartment being protected.



catering marine industrial property data protection transport

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+ LPCB / UKAS accreditation certification (Cert No. 642)

Nobel fire systems