

CONCEPTUAL

CITY OF FRANKLIN  
SITE PLAN REVIEW APPLICATION

Location of Proposed Development: Commerce Drive New Map #:   
Parcel ID (Map/Lot #): 102/9 & 102/402 Zoning of Parcel: Industrial 1

<b>Applicant</b>	<b>Owner of Record</b>
Name: Commerce Drive Solar, LLC	Name: Franklin Commons Realty Group
Address: 4445 Eastgate Mall Rd., Suite 200	Address: 70 Industrial Park Dr. - Suite
City/State/Zip: San Diego, CA 92121	City/State/Zip: Franklin, NH 03235
Phone: 603-817-1175	Phone:
Email: Akellar@luminia.io	Email:

<b>Applicant's Agent/Engineer</b>	<b>Other (if Applicable)</b>
Name: Nobis - Group	Name:
Address: 18 Chenell Drive	Address:
City/State/Zip: Concord, NH 03301	City/State/Zip:
Phone: 603-513-1018	Phone:
Email: gseibert@nobis-group.com	Email:

Development Proposal, Please explain: The project involves construction of an approximate 2 megawatt (AC) solar array on two undeveloped wooded parcels. The installation will include post-mounted panels as well as new electrical conduit, energy converting equipment, an access driveway, perimeter fencing and stormwater controls.

Information:

Number of Proposed Buildings/Units: None  
Frontage on What Road(s): Commercial Drive / South Main Street

Services Available: Sewer Municipal N/A Septic N/A Water Municipal N/A Well N/A  
Non-Municipal Services Proposed/Available, Explain:

Site in Acres 54.6 Acres Developable Acres 52.8 Acres

Are waiver’s requested, and if so, please fill out attached Waiver Request sheet: Yes No

Zoning Board Approvals Granted: Variance Special Exception Other None  
Please Explain:  
Dates Granted:

Does this submission represent an amended plan: Yes No  
Date approval Granted:  
Conditions of Approval:

Was a conceptual plan submitted to the Planning Board: Yes No  
Date approval Granted:  
Conditions of Approval:

Signature of Applicant: Date:

For Office Use Only

Deadline Date: 3/6/2024 Actual Date Submitted: 3/6/2024

Meeting Date: \_\_\_\_\_

Amount Due Application: \$ \_\_\_\_\_

Amount Due Abutters: \$ \_\_\_\_\_ Total Number of Abutters: \_\_\_\_\_

Total Due: \$ \_\_\_\_\_

Amount Paid: \$ \_\_\_\_\_ How Paid: ☐ Cash ☐ Check # \_\_\_\_\_

Date Paid \_\_\_\_\_

Is the following information attached to this application:

- ☐ Abutter’s List, complete with Name, Address, City, State, Zip and Map/Lot #;
- ☐ 16 Paper Prints of the Plan (4 Department Review Sheets/12 Member Sheets);
- ☐ Letter of Authorization from the Owner of Record; and,
- ☐ Waiver’s List and explanation.

What Supportive Documentation was submitted: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Hearing Dates:	Outcome:





March 6, 2024  
File No. 100704.000

City of Franklin– Planning Board  
2 High Street  
Franklin, NH 03235  
(603) 522-6205

Re: Project Narrative for Conceptual Site Plan Review Application  
Commerce Drive Solar, LLC.  
Tax Map 102, Lot 9 & 402  
Commerce Drive  
Franklin, NH 03235

On behalf of Franklin Commons Realty Group (Owner) and Commerce Drive Solar, LLC (Applicant), Nobis Group (Nobis) is submitting this project narrative to the City of Franklin Planning Board (PB) along with an application for a conceptual site plan review. The proposed project is located at the terminus of Commerce Drive, Tax Map 102, Lot 9 and 402 (Site). Please also refer to the attached Site Plan drawings for additional information.

The Applicant, Commerce Drive Solar, LLC, (Parent Company Luminia) has successfully permitted and constructed several similar solar arrays across the state which has increased renewable energy sources within those municipalities.

## **BACKGROUND AND SITE CHARACTER**

The Site is located in the Industrial 1 Zone and is bound by Industrial businesses to the north, south and west, and by residential properties to the east. The Site consists of two parcels which consist of 2,377,318 SF (54.6 acres). The terrain within the panel area slopes gently from the west towards the northern and southern extents of the project area. There are delineated wetlands located to the north and south of the project area. These wetlands will not be impacted by the proposed project.



## **SITE PLAN APPLICATION – PROJECT DESCRIPTION**

The proposed site development features the construction of a 2.0-Megawatt (MW) photovoltaic solar array. Supporting this array and its appurtenances will be new electric utility lines, wildlife-friendly security fencing, a gravel access drive, new utility poles, stormwater controls including two sediment basins, and other Site improvements. The solar array will encompass approximately 5.9 acres, and the total on-site disturbance will be approximately 13.2 acres.

Access to the site will be provided by a 14' gravel driveway located at the end of Commerce Drive. The access drive will be approximately 1143' long with two locations for vehicle turnarounds. Wildlife friendly knot wire fencing will be installed along the perimeter to secure the solar array.

During the regular operation of the solar array, access to the site is expected to be minimal and will primarily consist of infrequent maintenance. As such, vehicle trips to and from the site are estimated to be 2 – 3 times per year.

To mitigate storm water runoff from the proposed project, the proposed site/stormwater design will incorporate the use of Best Management Practices (BMPs). Peak flows from the 2, 10, and 50-year storm will be reduced in accordance with the New Hampshire Department of Environmental Services' regulations.

We trust this project narrative meets the requirements of the City of Franklin and we look forward to meeting with Board members. Please feel free to contact me with any questions or if you need additional documentation.

Sincerely,

NOBIS GROUP®

J. Chris Nadeau, PE  
Director of Commercial Services  
cnadeau@nobis-group.com  
(617) 710-9449 (mobile)



## Commerce Drive Solar - Solar Equipment Examples

- *Section 305-29.2 F3 (c): See plan updates along with the following images of the equipment required in the Eversource application and an example of a transformer layout.*





# Commerce Drive Solar - Panel and Equipment Specifications

- Section 305-29.2 G (1) & (2): All solar panels must have anti glare coating (see attached spec sheet) and noise calculations by a certified electrical engineer are below. It should be noted that a normal human conversation is traditionally 60 Db and the transformers spec'ed for this project is 58 Db.

### MECHANICAL DATA

Specification	Data
Cell Type	Mono-crystalline
Cell Arrangement	144 [2 x (12 x 6) ]
Dimensions	2266 x 1134 x 35 mm (89.2 x 44.6 x 1.38 in)
Weight	32.2 kg (71.0 lbs)
Front Glass	2.0 mm heat strengthened glass with anti-reflective coating
Back Glass	2.0 mm heat strengthened glass
Frame	Anodized aluminium alloy
J-Box	IP68, 3 bypass diodes
Cable	4.0 mm² (IEC), 12 AWG (UL)
Cable Length (Including Connector)	410 mm (16.1 in) (+) / 290 mm (11.4 in) (-) or customized length*
Connector	T6 or T4 series or MC4-EVO2
Per Pallet	30 pieces
Per Container (40' HQ)	600 pieces or 540 pieces (only for US)

\* For detailed information, please contact your local Canadian Solar sales and technical representatives.


Assuming that you are buying standard transformers, per NEMA TR-1, a 1000 kva pad mounted transformer's the average allowable audible sound level is 58 db.

Table 4. Audible Sound Levels

Self-Cooled, Two Winding kVA Rating	NEMA® TR-1 Average
	Decibels (dB)
45-500	56
501-700	57
701-1000	58
1001-1500	60
1501-2000	61
2001-2500	62
2501-3000	63
3001-4000	64
4001-5000	65
5001-6000	66
6001-7500	67
7501-10000	68

Scott Secrest PE  
64 Beacon St., Unit C202  
Worcester, MA 01608  
781-929-0139  
[scott.secrest@sssecreslpa.com](mailto:scott.secrest@sssecreslpa.com)

NEW



BiHiKu6

520 W ~ 550 W

BIFACIAL MONO PERC

CS6W-520|525|530|535|540|545|550MB-AG

MORE POWER

550 W

Module power up to 550 W

Module efficiency up to 21.4 %

\$

Jp to 12.3 % lower LCOE

Jp to 5.2 % lower system cost

FRONT

BACK

12 Years

Enhanced Product Warranty or Materials and Workmanship\*

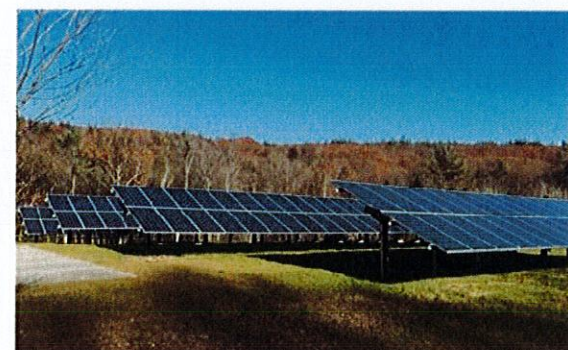
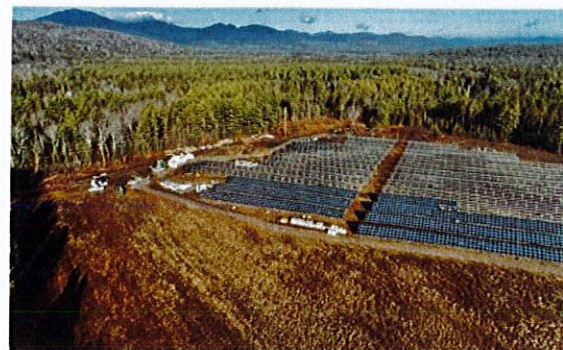
30 Years

Linear Power Performance Warranty\*



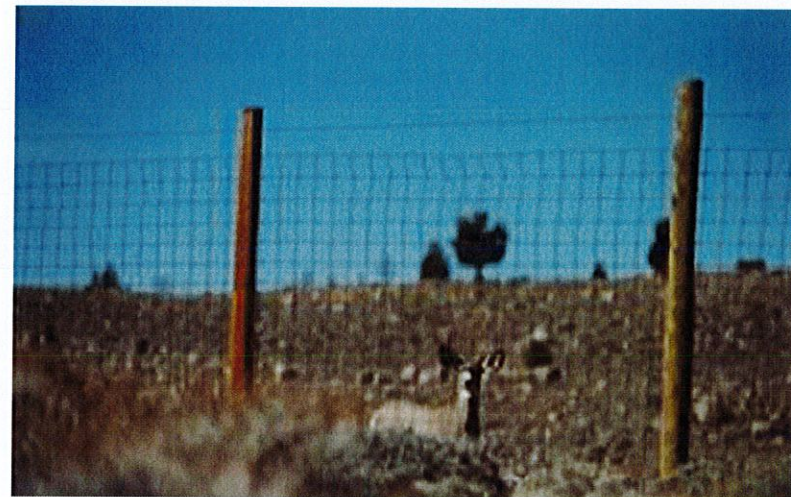
## Commerce Drive Solar - Similar Project Completion Photos

- *Section 402-7 (1): The project will incorporate fixed tilt panels at a 25-degree angle facing south. Below are examples of this type of layout.*





## Commerce Drive Solar - Additional Specifications



SOLAR ARRAY MODULE - TOP VIEW  
NOT TO SCALE



SOLAR ARRAY MODULE - ISO VIEW  
NOT TO SCALE



SOLAR ARRAY MODULE - SIDE VIEW  
NOT TO SCALE

4-6 ft in height



SOLAR ARRAY MODULE - TRACKER  
NOT TO SCALE



SOLAR ARRAY MODULE - TRACKER  
NOT TO SCALE

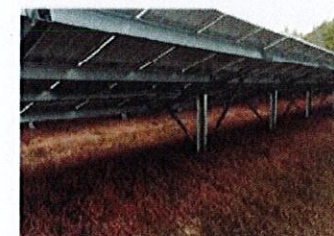


SOLAR ARRAY MODULE - POST X-SEC  
NOT TO SCALE

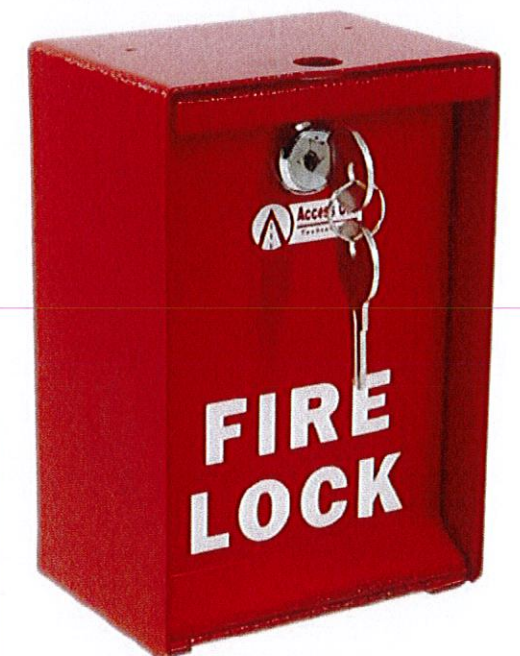
8-12 ft in height



SOLAR ARRAY MODULE - FIXED TILT  
NOT TO SCALE



SOLAR ARRAY MODULE - FIXED TILT  
NOT TO SCALE







J:\100704.000-Commerce Drive Solar Franklin, NH\CAD\DWG\100704.000-C-200-SITE.dwg 3/6/2024 8:36 AM



**nobis**

Nobis Group®  
18 Chenell Drive  
Concord, NH 03301  
T(603) 224-4182  
www.nobis-group.com

NOT ISSUED  
FOR  
CONSTRUCTION

**COMMERCE DRIVE  
SOLAR, LLC**

**SOUTH MAIN STREET  
FRANKLIN, NH 03235**

TAX MAP:  
MAP 102 / LOT 009

OWNER(S):  
FRANKLIN COMMONS  
REALTY GROUP, LLC  
70 INDUSTRIAL PARK DRIVE, SUITE 7  
FRANKLIN, NH 03235

APPLICANT:  
COMMERCE DRIVE SOLAR, LLC  
C/O LUMINIA  
4445 EASTGATE MALL ROAD, SUITE 200  
SAN DIEGO, CA 92121

NO.	DATE	DESCRIPTION
REVISIONS		

0 200' 400'  
GRAPHIC SCALE

DATE:	DECEMBER 2023
NOBIS PROJECT NO.	100704.000
DRAWN BY:	EAL/GS
CHECKED BY:	JCN
CAD DRAWING FILE:	100704.000-C-200-SITE.dwg

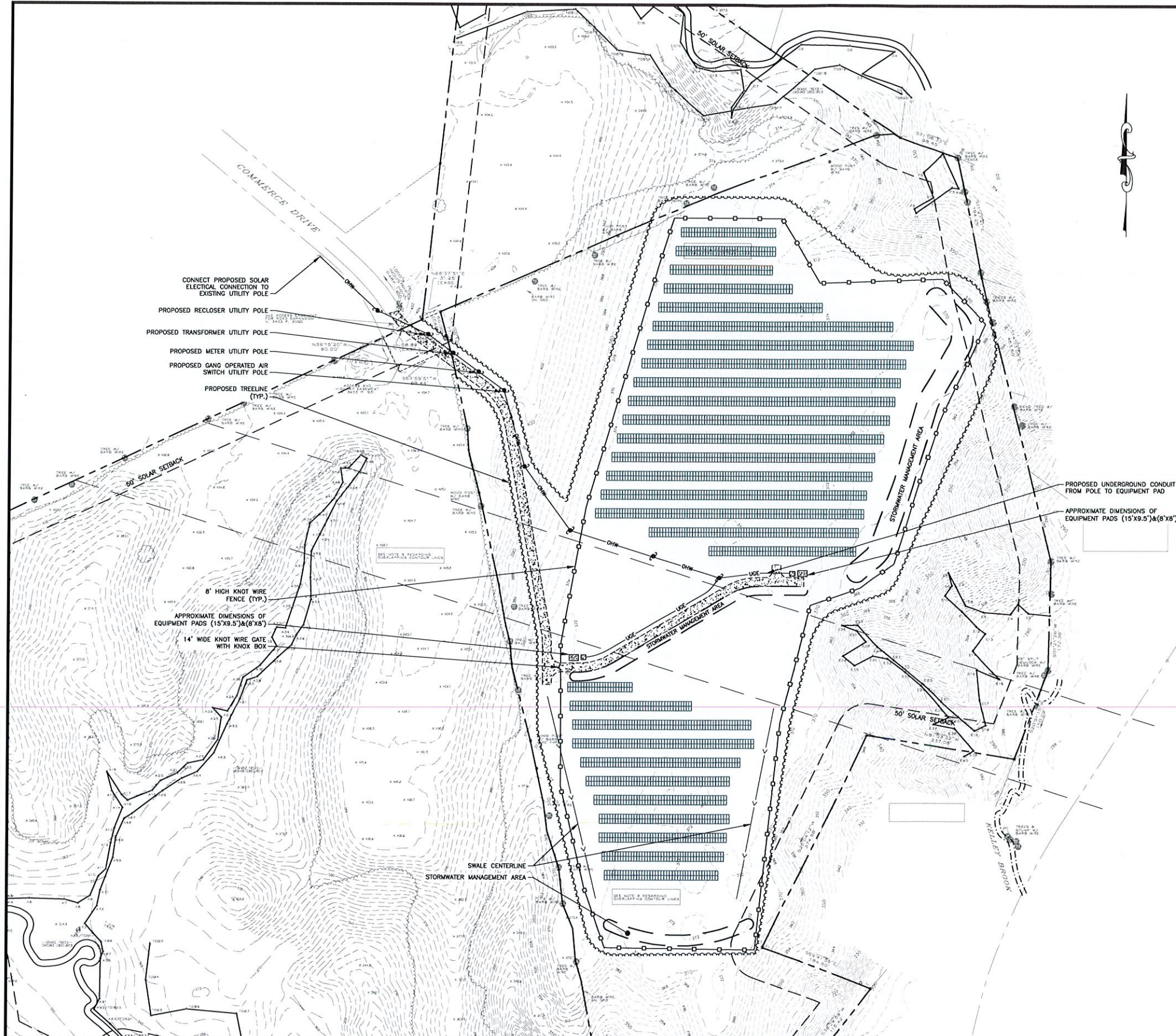
SHEET TITLE

**SITE OVERVIEW**

SHEET  
**C-1**



J:\100704-000-Commerce Drive Solar Franklin, nh\CAD\DWG\100704-000-C-200-SITE.dwg 3/16/2024 9:23 AM



- NOTES:**
- THE PURPOSE OF THIS PLAN IS TO SHOW THE PROPOSED LOCATION OF THE PHOTOVOLTAIC ARRAY, FENCING, EQUIPMENT PAD, GRAVEL ACCESS DRIVE, AND UTILITY POLES IN RELATION TO EXISTING SITE FEATURES.
- DIMENSIONS SHOWN TAKE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR TO USE CAUTION WHEN SCALING REPRODUCED PLANS. IN THE EVENT OF A CONFLICT BETWEEN THIS PLAN SET AND ANY OTHER DRAWINGS AND / OR SPECIFICATIONS, THE ENGINEER WILL BE NOTIFIED BY THE CONTRACTOR.
  - JURISDICTIONAL WETLANDS WERE FOUND ON THE SUBJECT PARCEL BASED ON AN INSPECTION MADE BY STONEY BROOK ENVIRONMENTAL CERTIFIED WETLAND SCIENTIST ON XX, XXXX.
  - THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING DIG SAFE (1-888-DIG-SAFE) AT LEAST 72 HOURS PRIOR TO THE COMMENCEMENT OF WORK. THE CONTRACTOR WILL COORDINATE WORK WITH THE CITY FIRE, POLICE, AND COMMUNITY DEVELOPMENT DEPARTMENTS.
  - A MANDATORY PRE-CONSTRUCTION MEETING WILL NEED TO BE HELD PRIOR TO ISSUANCE OF ANY PERMITS TO DISCUSS INSPECTION FEES, CONSTRUCTION SCHEDULE, ETC.
  - REFER TO CONSTRUCTION DETAIL SHEETS FOR ALL APPLICABLE SITE DETAILS.
  - CONTRACTOR WILL NOTIFY ENGINEERS IMMEDIATELY IF SITE CONDITIONS DIFFER FROM WHAT IS SHOWN ON PLAN.
  - TEST PITS PERFORMED BY STONEY BROOK ENVIRONMENTAL ON FEBRUARY 7, 2024.
  - REFER TO SHEET G-1 FOR GENERAL NOTES AND LEGEND.

- PLAN REFERENCES:**
- EXISTING CONDITIONS, TOPOGRAPHICAL INFORMATION, NORTH ORIENTATION, NORTH ARROW, AND COORDINATE VALUES DEPICTED ON THESE DRAWINGS ARE BASED ON PLANS TITLED "EXISTING CONDITIONS PLAT OF LAND OF FRANKLIN COMMONS REALTY GROUP, LLC", DATED DECEMBER 4, 2023, PROVIDED TO NOBIS GROUP, BY RICHARD D. BARTLETT & ASSOCIATES LLC.

ZONING ANALYSIS	
TAX MAP/BLOCK/LOT:	TAX MAP 102/LOT 9 & 402
ADDRESS:	COMMERCE DRIVE FRANKLIN, NEW HAMPSHIRE
ZONING DISTRICT: DISTRICT (H-1)	COMMERCIAL / INDUSTRIAL
MINIMUM LOT AREA 40,000 SF	PROVIDED LOT 9 - 1,051,974 SF LOT 402 - 1,325,344 SF TOTAL - 2,377,318
MINIMUM LOT FRONTAGE 90'	PROVIDED 317.8'
MAXIMUM HEIGHT 35'	PROVIDED 43'
BUILDING SETBACKS REQUIRED	REQUIRED
FRONT YARD	20'
SIDE YARD	15'
REAR YARD	20'
SOLAR SETBACKS REQUIRED	REQUIRED
FRONT YARD	50'
SIDE YARD	50'
REAR YARD	50'

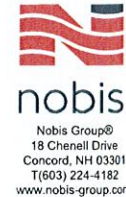
APPROVED

BY THE FRANKLIN PLANNING BOARD

THIS SITE PLAN IS APPROVED IN ACCORDANCE WITH THE CITY OF FRANKLIN DEVELOPMENT REGULATIONS

CHAIR OR VICE CHAIR

DATE



NOT ISSUED  
FOR  
CONSTRUCTION

COMMERCE DRIVE  
SOLAR, LLC  
SOUTH MAIN STREET  
FRANKLIN, NH 03235

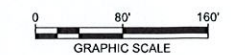
TAX MAP:  
MAP 102 / LOT 009

OWNER(S):  
FRANKLIN COMMONS  
REALTY GROUP, LLC  
70 INDUSTRIAL PARK DRIVE, SUITE 7  
FRANKLIN, NH 03235

APPLICANT:  
COMMERCE DRIVE SOLAR, LLC  
C/O LUMINIA  
4445 EASTGATE MALL ROAD, SUITE 200  
SAN DIEGO, CA 92121

NO.	DATE	DESCRIPTION
-----	------	-------------

REVISIONS



DATE:	DECEMBER 2023
NOBIS PROJECT NO.	100704-000
DRAWN BY:	EAL/GS
CHECKED BY:	JCN
CAD DRAWING FILE:	100704-000-C-200-SITE.dwg

SHEET TITLE

SITE PLAN

SHEET  
C-2