Re: SD-0525-00080 – HPZ resubmission
BWS Architects PV Parking Canopy, 261 N Court Avenue
Date: 6/10/2025

This submission addresses these review comments posted 6/3/2025:

Comment

1. Please, revise the plan to include a Development Zone Map showing contributing and non-contributing properties using Historic Map Tucson. ***Done.***
2. A boundary should be drawn around the Development Zone to clearly mark it. ***Done.***
3. Please provide a revised project narrative based on UDC Section 5.8.9 (https://www.tucsonaz.gov/files/sharedassets/public/v/1/pdsd/documents/planning-amp-zoning/checklist_for_historic_design_review_-_general.pdf). Provide 2-3 sentences on each item. If the item does not apply, note as such. ***Done. In addition to an introductory paragraph, the checklist items are addressed one by one.***

I will upload the revised Design Package under the Historic sub-record.

Thanks, as always.

Kelly Rehm

Kelly Rehm, Co-Owner
Technicians For Sustainability INC (TFS)

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Re: BWS Architects 261 N Court Av Date: 6/10/2025

PV Canopy – Historic Review Design Package

Prepared by: Kelly Rehm, Co-Owner, Technicians for Sustainability INC (TFS)

Project Description

The proposed work is an installation of a Photovoltaic System for BWS Architects. The system will be comprised of 26 PV modules and an inverter mounted on a new steel canopy covering the majority of the existing 6-space parking bay at the northern boundary of the property. The modules are bi-facial and the canopy will have 3 posts and beams (painted Weathered Brown). Four galvanized steel purlins will span the beams to support the modules. Matching galvanized end caps will finish off the array. The canopy footprint is 49'-1" long and 13'-4.5" wide. The minimum clearance under the beams of the canopy is 8'-0" and the total height of the canopy (top of modules) is 13'-3.5".

The east-west placement of the PV canopy on the site is constrained by the need to provide fire separation from the building on the neighboring property to the west. The result is that the edge of the modules is set 7'-9" from the street side property line, while the face of the eastern canopy column is set back 13'-9".

Design Narrative

The proposed PV Canopy would be an unambiguously new addition to the existing property. The current BWS building is comprised of a relatively new, non-contributing addition to a restored contributing building (originally constructed "pre-1883"). It is adjacent to a non-contributing building that is on the west property line. The canopy will be sited in an existing parking area with mature landscaping; one tree will require some trimming to prevent shading of the PV modules. The minimum clearance for the canopy allows pedestrians and passenger vehicle occupants to see under it to the BWS and El Charro buildings as they can now. Shading from the canopy will only fall on a windowless wall and parking areas.

Resource checklist items

- Development Zone: is identified as properties on Court Ave and Council Street.
- Height: The proposed parking canopy height conforms to the buildings nearby. The maximum height is 13'-3.5", which is within 4" of the immediately adjacent building (which is non-contributing). It is lower than the roof of the contributing portion of the BWS Architects building (20'-5"). Typical buildings north on Court Av also have high parapets or roofs. The proposed canopy will not loom over any buildings.

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- Setbacks: The interior perimeter yard setback in the development zone is zero; this canopy is set back 2'-6" from the interior property line. The prescribed street setback is 20' from the street-side property line, with an allowed overhang encroachment of 2'. However, the contributing properties in the zone are typically right up to their property lines. The proposed canopy is not able to meet the prescribed street-side setback, as the lot is too narrow. W***e request a reduced setback to 7'-9" from the prescribed 18' allowance.***
- Site Utilization: As an open cover over an existing parking area, the proposed canopy has no real effect on inter-building spacing (which is negligible in the development zone). Its footprint is entirely within the existing parking area.
- Building form: At 679 square feet, the size and scale of the proposed canopy is as modest as is compatible with its purpose. It would be unique within the development zone.
- Rhythm: Considerations of rhythm don't really apply here, except that the column spacing is symmetrical and follows that of the existing parking stalls.
- Color: Columns and beams are to be painted a weathered brown color, and the modules are black on both sides; as the immediate area has gray asphalt, brown tree trunks & brown utility poles they should not be high contrast.
- Landscaping: Some trimming of an existing tree is anticipated to keep it from shading and/or scraping the PV modules. Beyond that the existing landscaping is unchanged.
- Enclosures: not applicable
- Utilities: not applicable – electrical conduit from the canopy to the building will be underground.
- Motor Vehicle & parking areas: The PV canopy will provide shade for existing parking on the BWS Architects' property; the section of the neighboring parking lot immediately to the north will also benefit from partial shading (seasonally variable).
- Signs: Not applicable. Visibility of existing signage will not be affected.

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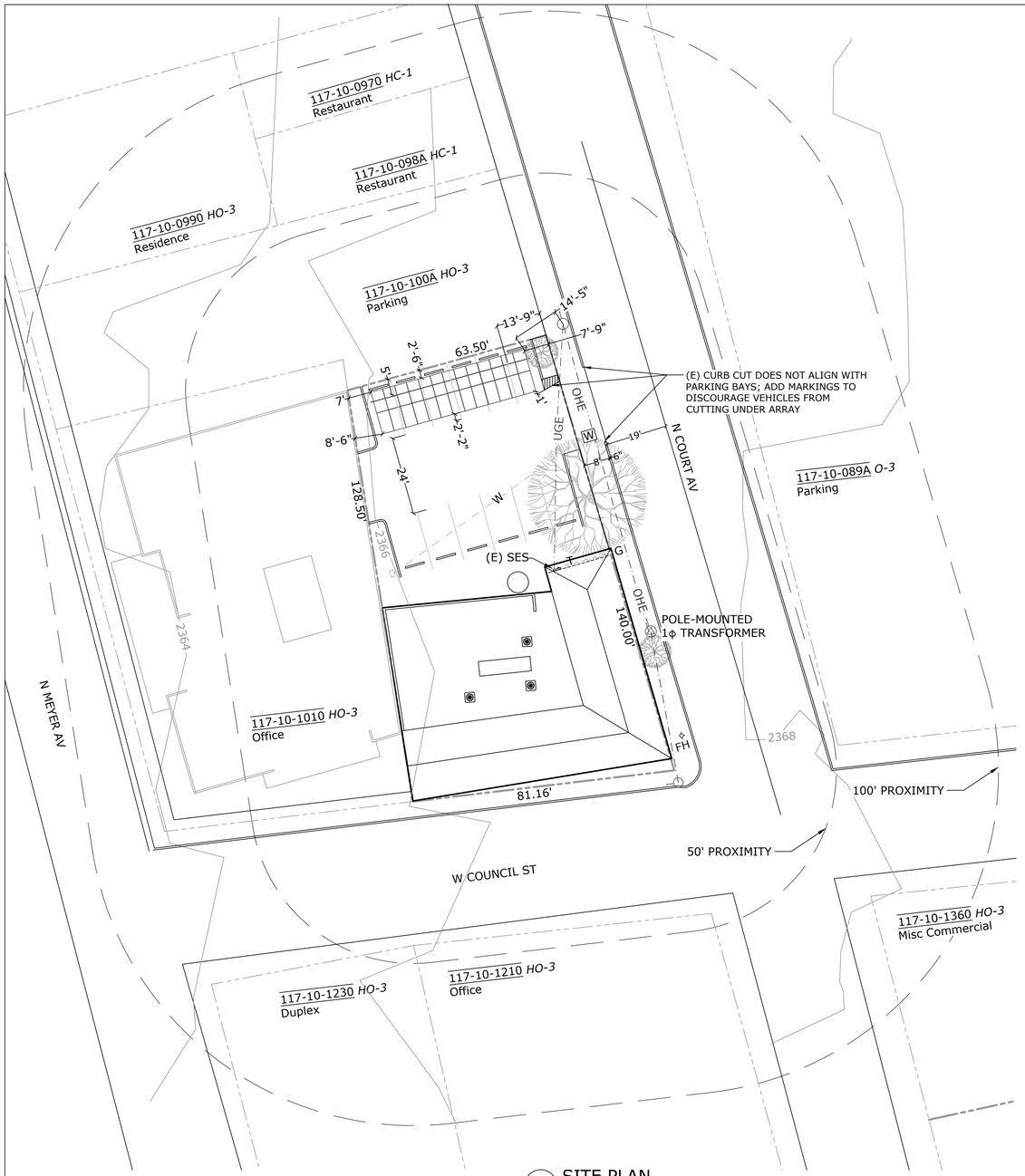
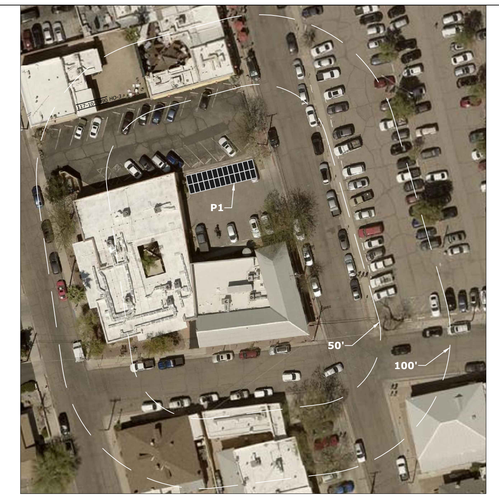
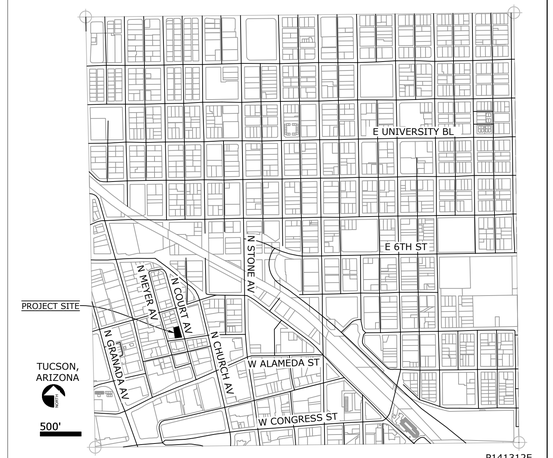


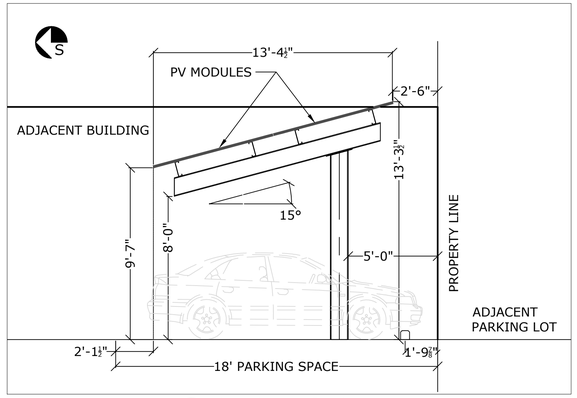
3 SITE PLAN
1" 1"=20'



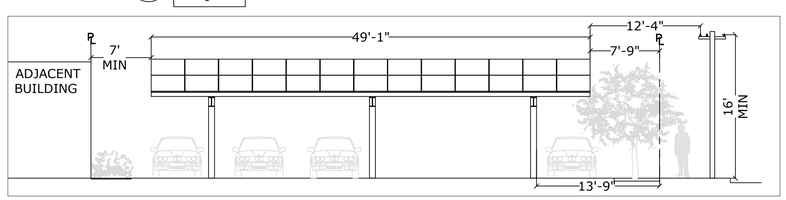
1 GENERAL LAYOUT
NTS



2 LOCATION PLAN
6"=1 MILE



4 ARRAY PROFILE
1/4"=1'



5 ARRAY ELEVATION - FACING NORTH
1/8"=1'

NESC CLEARANCE FROM POWER LINES IS MET: HORIZONTAL = 5' MIN.

ADJACENT PROPERTIES

PARCELS:
117-10-0990 [HO-3] Miller, Alexandra Morgan
117-10-0970 [HC-1] El Charro Enterprises Inc.
117-10-098A [HC-1] El Charro Enterprises Inc.
117-10-100A [HO-3] 46 Meyer LC
117-10-1010 [HO-3] 46 Meyer LC
117-10-089A [O-3] Industrial Development Authority of the City of Tucson
117-10-1230 [HO-3] Valdez Antonio C & Batinovich Consuelo
117-10-1210 [HO-3] KC Posse LLC
117-10-1360 [HO-3] Pima County Tucson Womens Commission

PV SYSTEM DESCRIPTION

13.78 KW DC GRID TIED SYSTEM

THE BWS ARCHITECTS PHOTOVOLTAIC SYSTEM WILL CONSIST OF 26 SILFAB 530 MODULES & A GRID-TIED INVERTER. THE SYSTEM WILL SUPPLY POWER THROUGH EXISTING TEP SERVICE.

MODULES WILL BE MOUNTED ON A NEW STEEL PARKING CANOPY IN AN EXISTING PAVED PARKING AREA.

P1: 26 (2 X 12) MODULES, 15° TILT, AZ 170°, 679 SF

NO PUBLIC SEWER ON SITE.
NO PLANTINGS WILL BE DISTURBED.

CONTRACTOR

TECHNICIANS FOR SUSTAINABILITY
P.O. BOX 1109, TUCSON AZ 85702
info@TFSsolar.com (520) 740-0736
R.O.C. 310732 CR11 D

PROPERTY DESCRIPTION

JOB NAME: BWS ARCHITECTS
JOB ADDRESS: 261 N COURT AV, TUCSON AZ 85701
OTHER ADDRESSES: 141 W COUNCIL ST
151 W COUNCIL ST

UTILITY METER #156689319
SERVICE ADDRESS: 261 N COURT AVE

PARCEL # 117-10-1020

LEGAL DESCRIPTION
TUCSON PORT OF LOT 3 BLOCK 176

AHJ: CITY OF TUCSON

OWNER: SLINGERLAND SHAMBACH LLC
MAILING ADDRESS: 261 N COURT AVE
TUCSON, AZ 85701

CONTACT: Robin Shambach
rshambach@bwsarchitects.com
(520) 505-3906

ZONING DATA

CURRENT ZONING: HO-3
TUCSON REGISTERED NEIGHBORHOOD: EL PRESIDIO
NATIONAL REGISTER DISTRICT: EL PRESIDIO HISTORIC DISTRICT [CONTRIBUTING STRUCTURE]
LOT AREA: 9,315 SF, 0.211A
EXISTING USE CODE: 1511 (OFFICE BUILDING 1 STORY)
OCCUPANCY USE: OFFICE
ADJACENT ZONING: HO-3 (North, South, Southeast)
O-3 (East)
HC-3 (West)
ZONING OVERLAYS: HISTORIC - EL PRESIDIO
ARCHAEOLOGICAL SENSITIVITY
REQUIRED SETBACKS: 10' - PERIMETER YARD (NON-RES TO NON-RES)
20' - STREET (N COURT AV)

NO PUBLIC SEWER ON SITE
NO CHANGES TO EXISTING GRADING
NO CHANGES TO AMOUNT OF PAVED AREA

GENERAL NOTES
THE DEVELOPER, ANY SUCCESSORS AND ASSIGNS, WILL HOLD THE CITY OF TUCSON, ITS OFFICERS, EMPLOYEES, AND AGENTS HARMLESS FROM ANY AND ALL CLAIMS FOR DAMAGES RELATED TO THE USE OF THIS DEVELOPMENT AS SHOWN HEREON, NOW AND IN THE FUTURE, BY REASON OF FLOODING, FLOWAGE, EROSION, OR DAMAGE CAUSED BY WATER, WHETHER SURFACE FLOOD OR RAINFALL.

DRAINAGE WILL REMAIN IN ITS NATURAL STATE AND WILL NOT BE ALTERED, DISTURBED, OR OBSTRUCTED OTHER THAN AS SHOWN ON THIS PLAN.

TFS TECHNICIANS FOR SUSTAINABILITY, INC
TECHNICIANS FOR SUSTAINABILITY
P.O. BOX 1109
TUCSON, AZ 85702
(520) 740-0736
R.O.C. 310732 CR11 D

BWS ARCHITECTS
PV SYSTEM
13.78 KW DC
261 N COURT AV, TUCSON AZ 85701

DEVELOPMENT PLAN TD-DEV-0225-00062

REV.	DESCRIPTION	DATE

DRAWING BY: KR
ISSUED FOR: PERMIT

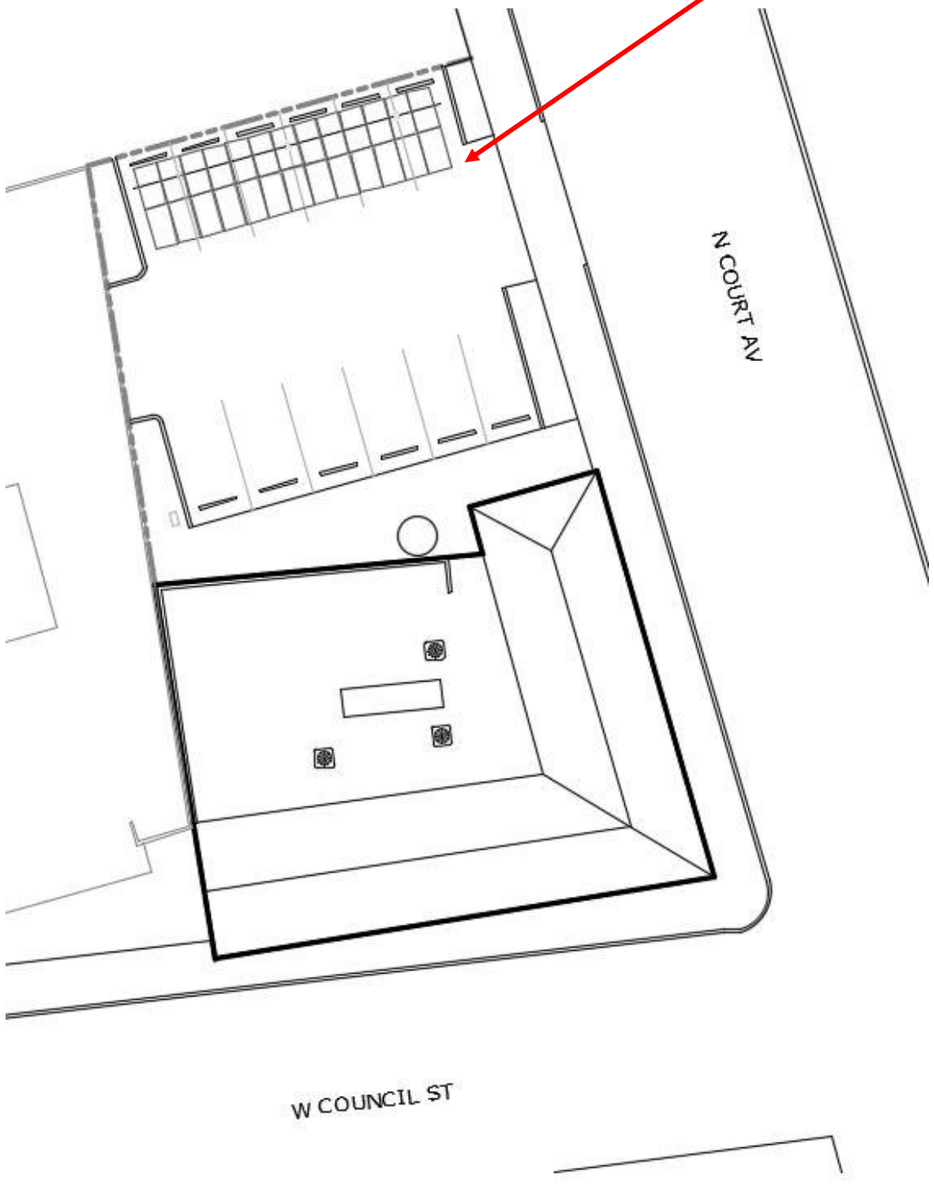
PV 0.0
5.21.2025

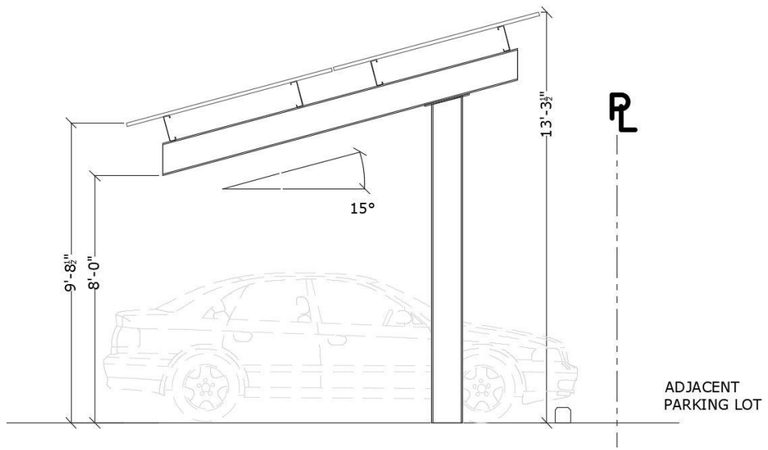
BWS Architects
PV Parking Canopy

261 N Court Avenue
Tucson, AZ 85701

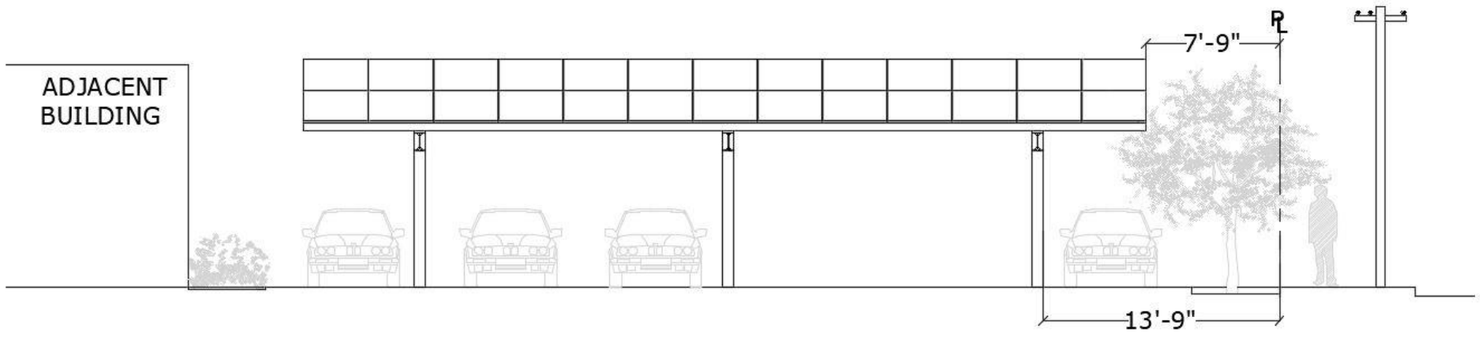
- Site plan & elevations of PV Canopy
- Renderings
- Aerial photo
- Photographs of project site
- Development zone map
- Contributing and non-contributing properties
- Photographs of surrounding properties
- Materials

The proposed PV Canopy is 2 rows of 13 modules, at a tilt of 15 degrees. Three posts and beams form the main structure.



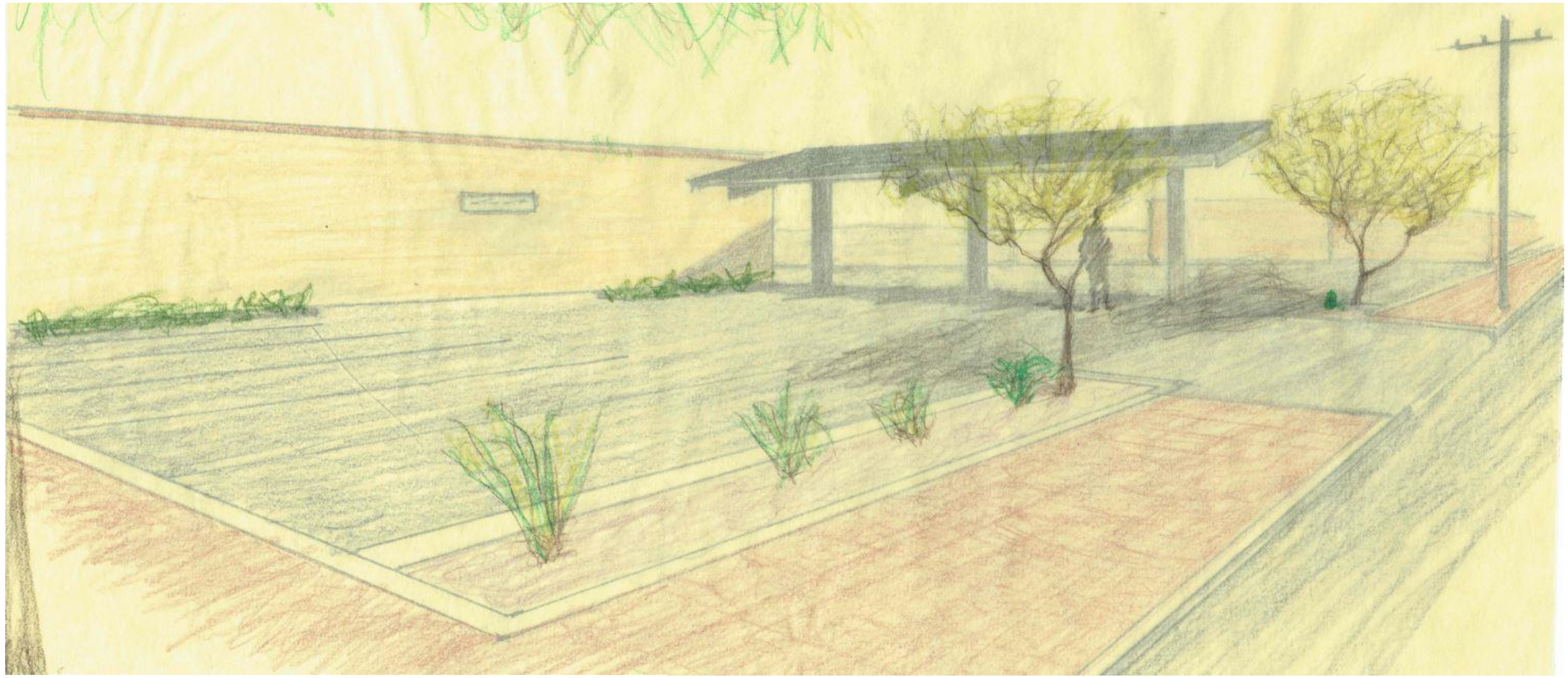


Elevation from N Court Av



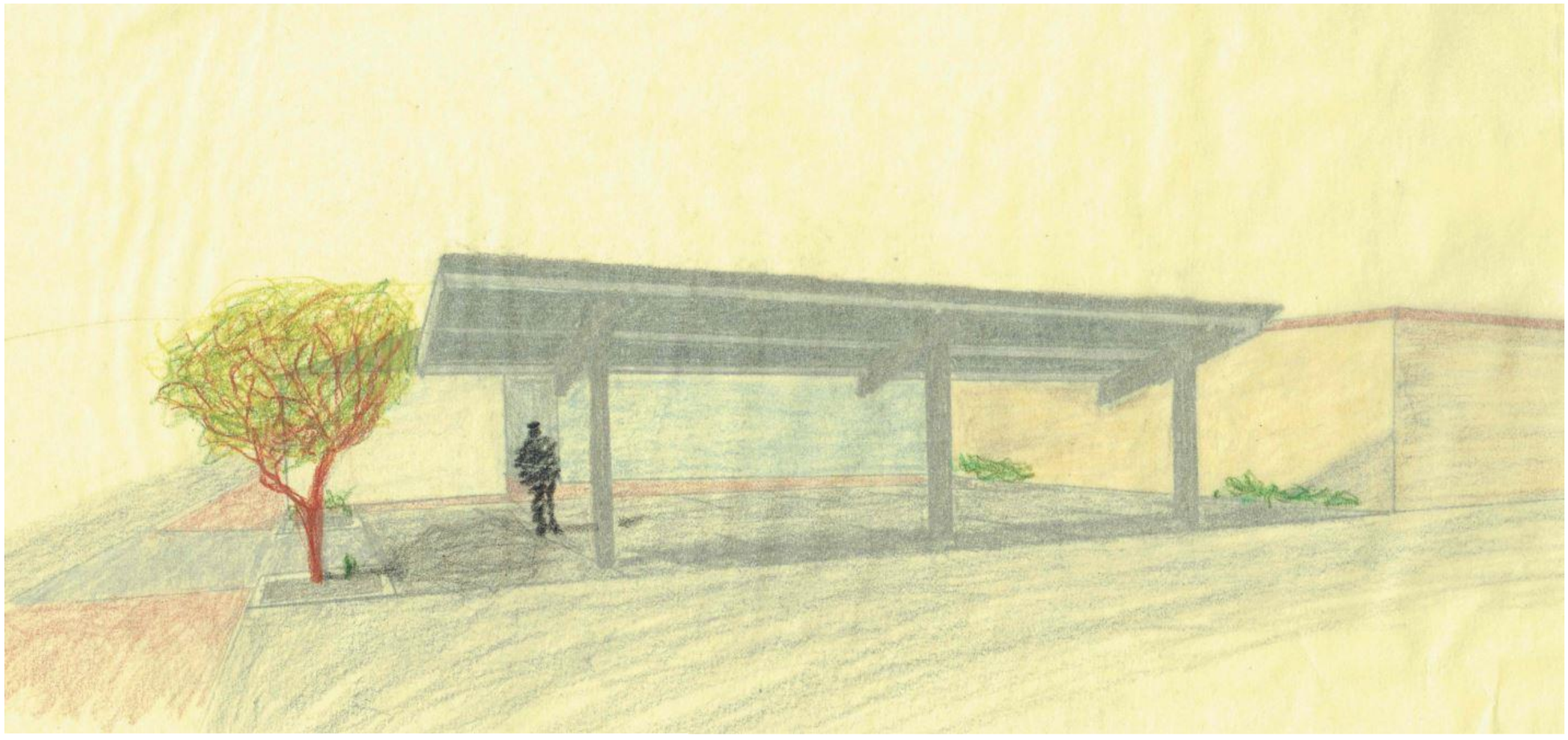
Elevation looking NNW from building

PV Canopy



Looking NNW from sidewalk close to building

PV Canopy

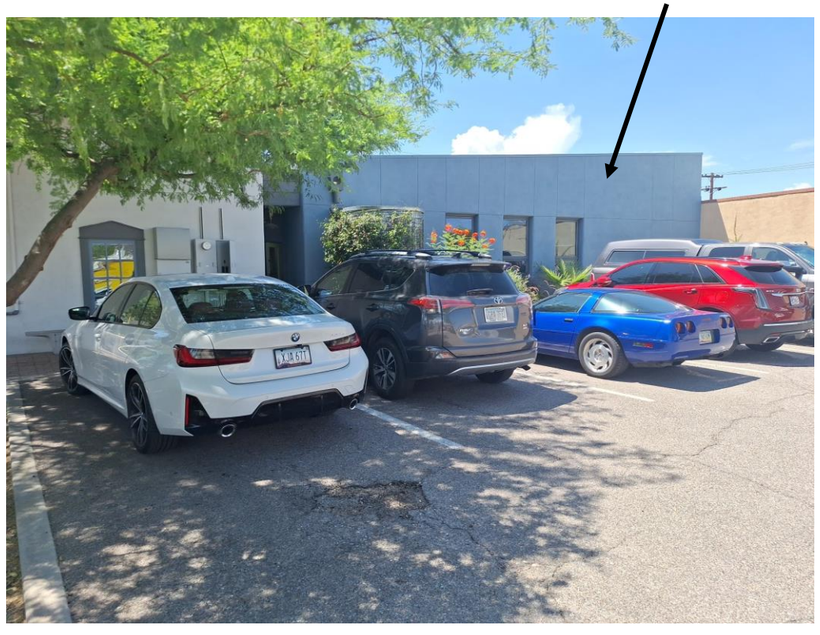


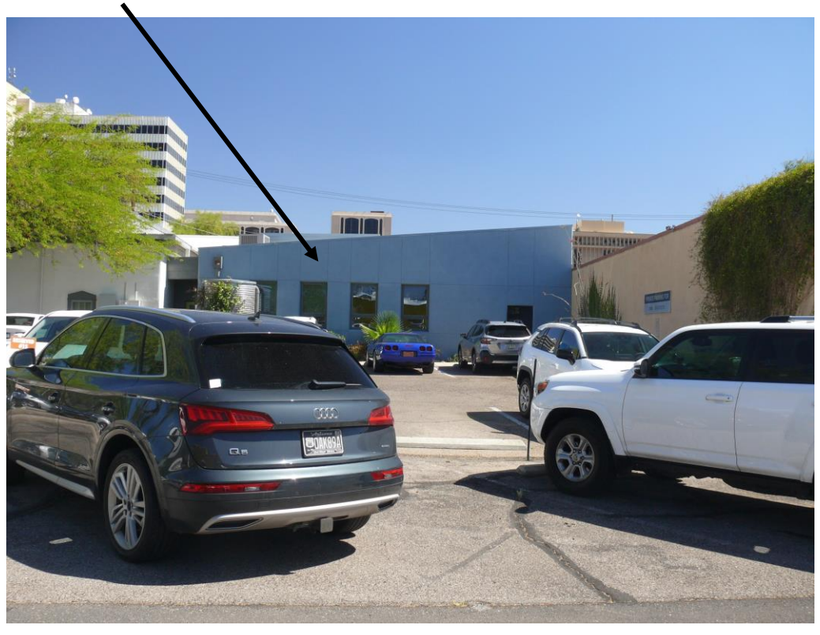
Looking SSE from adjacent parking lot
(the underside of bi-facial modules is dark)

PV CANOPY LOCATION

Original portion of building, pre 1883. Restored ca 2000

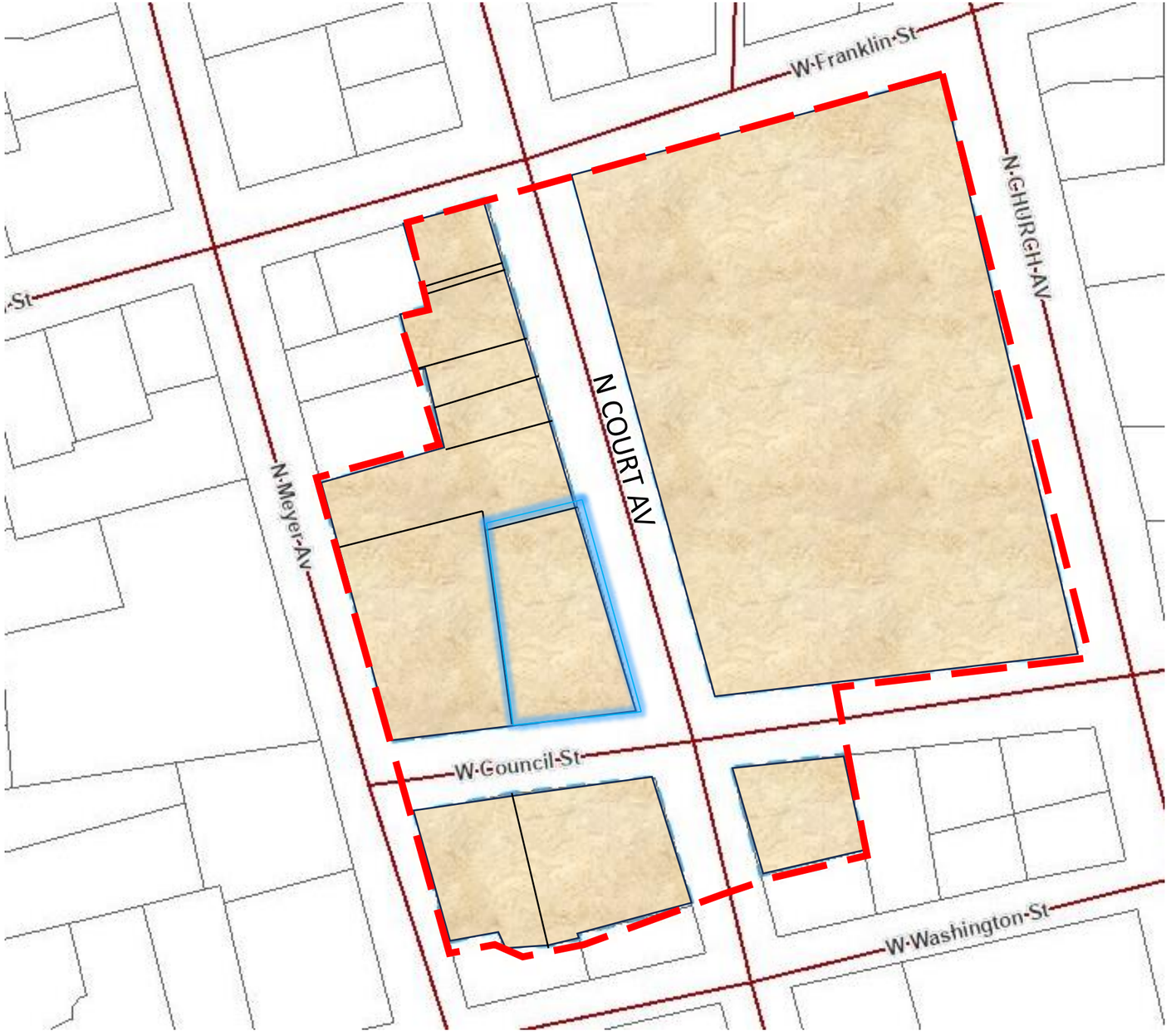
Addition circa 2000





Development zone

All lots fronting on Court & Council, plus the diagonal corner lot.
The outline of the zone is red, and affected lots are shown in tan.
The BWS Architects property is outlined in blue.

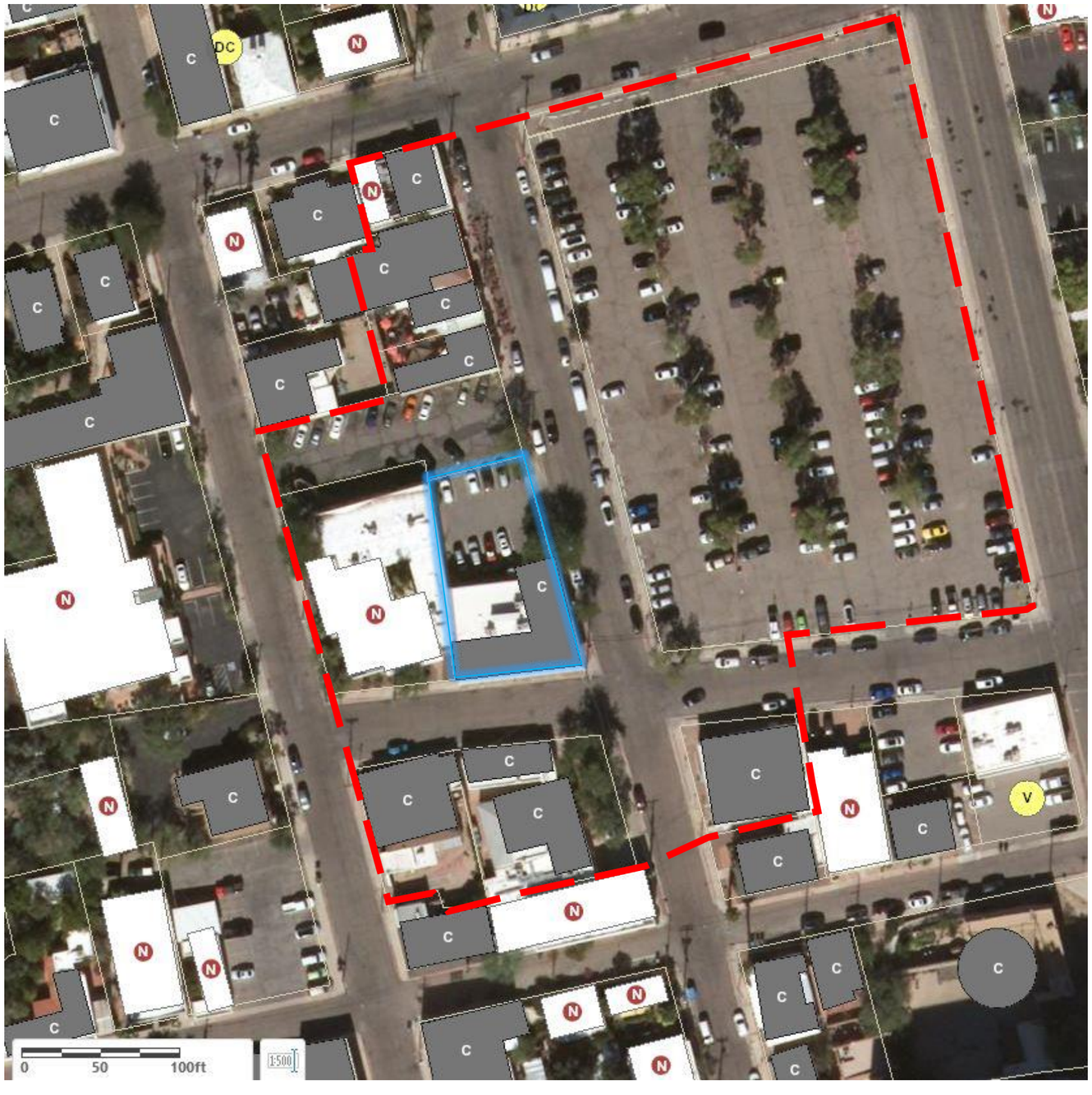


Development zone

Properties within the Development Zone
Contributing properties are marked “C”

Development zone

Properties within the Development Zone
Contributing properties are marked “C”



BWS Architects

BWS Architects parking lot

PV canopy location

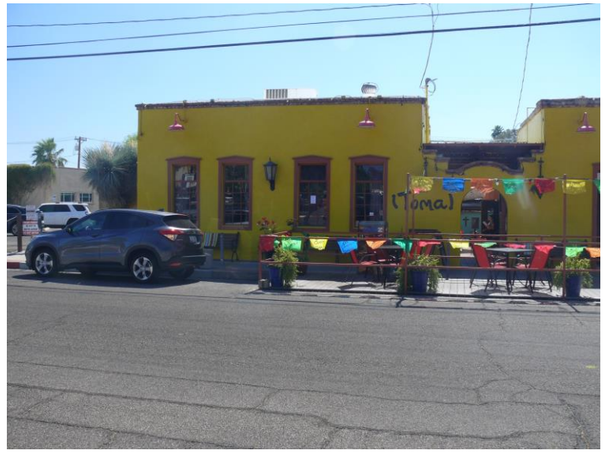
BWS Architects Parking lot

Surrounding properties

Parking for 46 Meyer LC Office

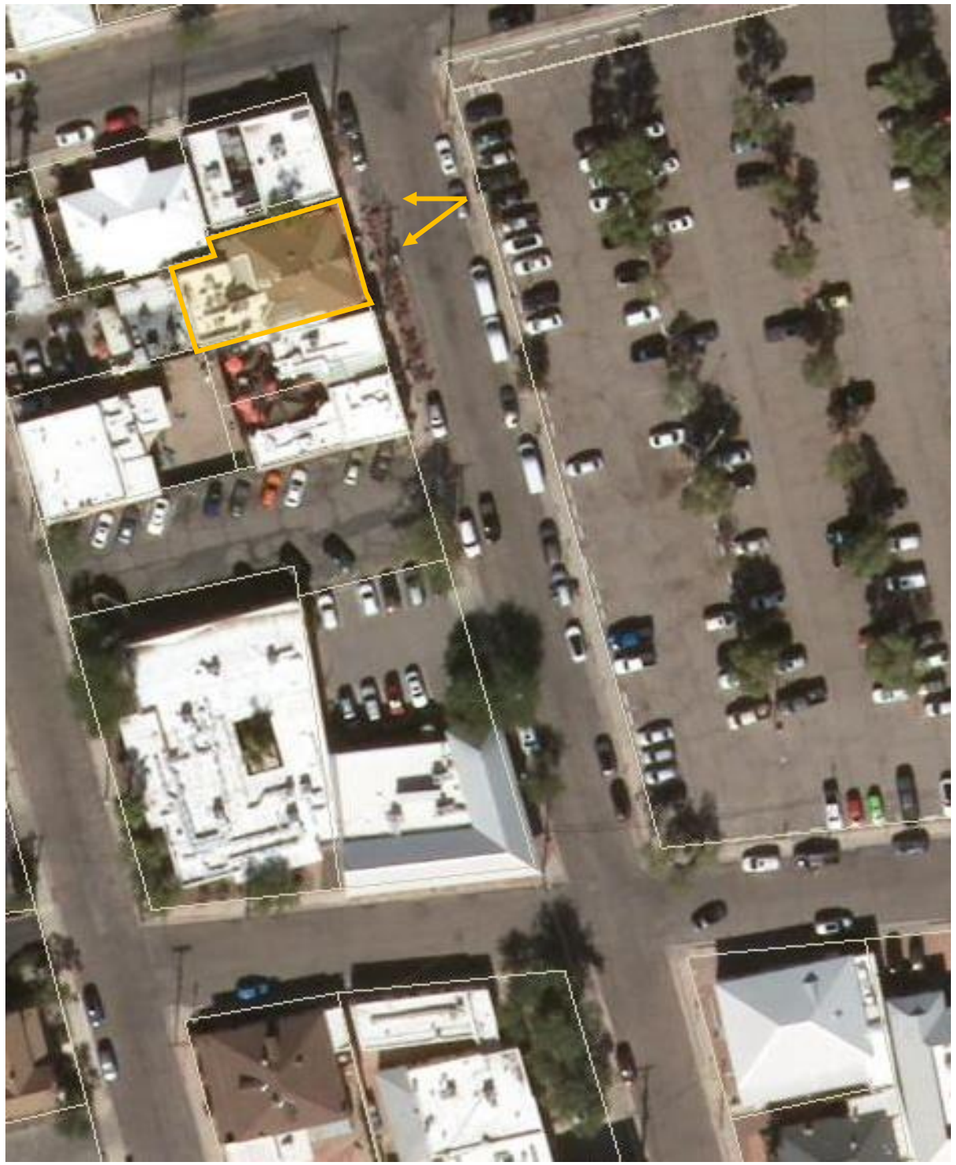
Surrounding properties

El Charro Restaurant



Surrounding properties

El Charro Restaurant



Surrounding properties

PMM Architecture

Surrounding properties

City of Tucson Parking Lot

Surrounding properties

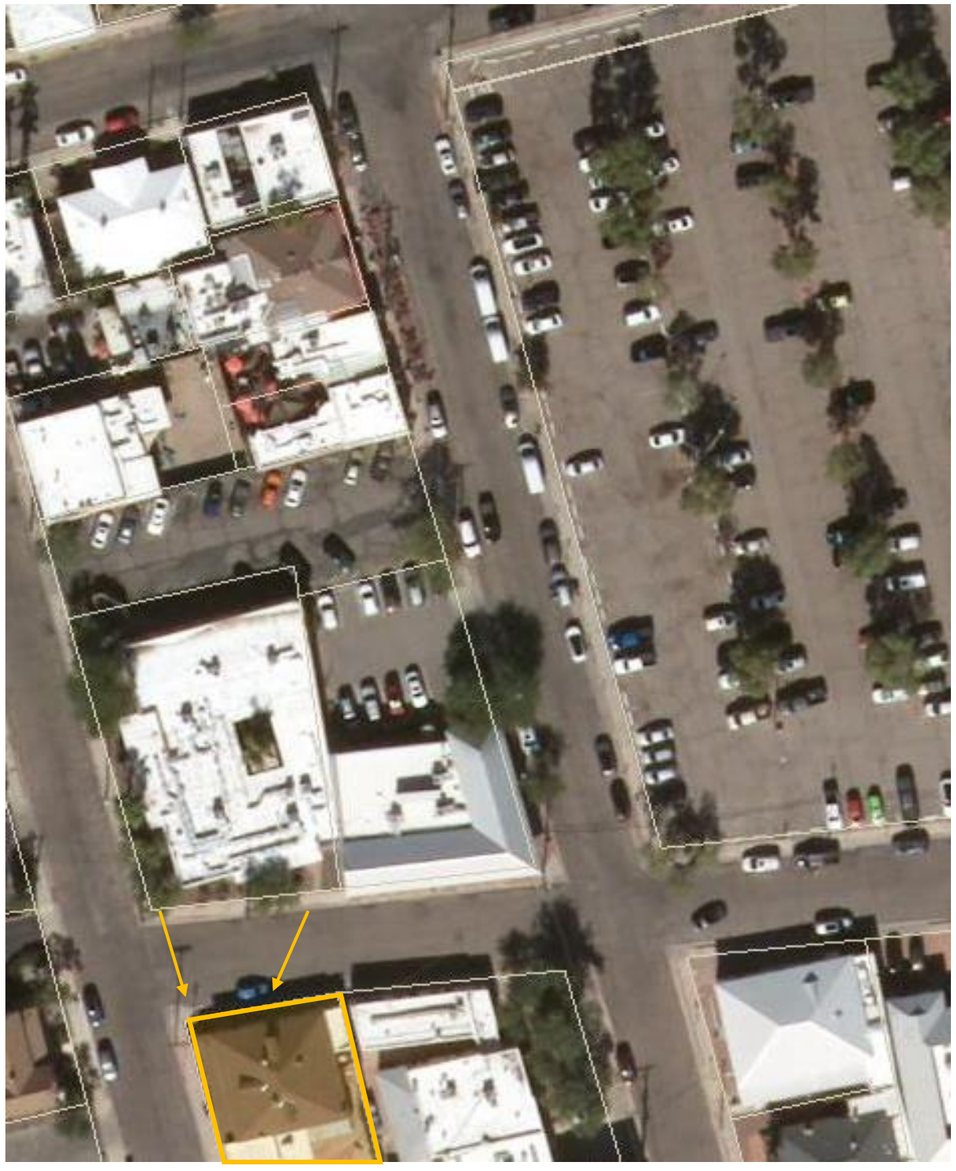
KC Posse LLC

Pima County Tucson Womens Assoc.

KC Posse LLC - Office

Surrounding properties

Duplex



Historic Streetlight

Surrounding properties

46 Meyer LC - Office

Historic Streetlight

Precedents

Center for Biological Diversity Canopy.

Weathered Brown paint color, with typical safety & clearance markings.

255 N Asbury Lane parking

Materials

Silfab 530W PV modules are bi-facial –
both the front and back surfaces are dark.

Posts and beams will be painted brown, purlins and end caps are galvanized steel, as above.

SILFAB COMMERCIAL NTC

SIL-530 XM
BIFACIAL

SILFAB SOLAR®

NEXT-GENERATION N-TYPE CELL TECHNOLOGY

- Improved Shade Tolerance
- Improved Low-Light Performance
- Increased Performance in High Temperatures
- Efficient Bifacial Energy Yield
- Enhanced Durability
- Reduced Degradation Rate
- 25-Year Product Warranty/ 30-Year Performance Warranty

SILFABSOLAR.COM

ELECTRICAL SPECIFICATIONS		530		
Test Conditions		STC	BSTC	NOCT
Module Power (Pmax)	Wp	530	578.2	391.3
Maximum power voltage (Vpmax)	V	41.05	41.05	37.76
Maximum power current (Ipmax)	A	12.91	14.08	10.36
Open circuit voltage (Voc)	V	47.74	47.79	43.91
Short circuit current (Isc)	A	13.71	14.96	11.00
Module efficiency	%	22.3%		
Maximum system voltage (VDC)	V	1500		
Series fuse rating	A	30		
Power Tolerance	Wp	0 to +10		
Bifaciality Factor	%	80±5		

Performance conditions: Measurement tolerance ≤ 3% • Standard Test Conditions (STC): 1000 W/m², AM 1.5, Temperature 25 °C • Nominal Operating Cell Temperature (NOCT): 800 W/m², AM 1.5 • Bifacial Standard Test Conditions (BSTC): 1000 W/m2 + φ × 135 W/m2 , φ = 80 % , AM 1.5 • Electrical characteristics may vary by ±5%.

MECHANICAL PROPERTIES / COMPONENTS	METRIC	IMPERIAL
Module weight	26.2 kg ±0.2 kg	57.8 lbs ±0.4 lbs
Dimensions (H x L x D)	2098 mm x 1133 mm x 35 mm	82.6 in x 44.6 in x 1.4 in
Maximum surface load (wind/snow)*	2400 Pa rear load / 5400 Pa front load	50.1 lb/ft² rear load / 112.8 lb/ft² front load
Hail impact resistance	ø 25 mm at 83 km/h	ø 1 in at 51.6 mph
Cells	132 Half cells - N-Type Silicon solar cell 91 x 182 mm	132 Half cells - N-Type Silicon solar cell 3.58 x 7.16 in
Glass	3.2 mm high transmittance, tempered, DSM antireflective coating	0.126 in high transmittance, tempered, DSM antireflective coating
Cables and connectors (refer to installation manual)	1350 mm, ø 5.7 mm, EVO2 from Staubli	53.1 in, ø 0.22 in (12AWG), EVO2 from Staubli
Backsheet	High durability, superior hydrolysis and UV resistance, multi-layer dielectric film, fluorine-free clear PV backsheet	
Frame	Anodized Aluminum (Silver)	
Junction Box	UL 3730 Certified, IEC 62790 Certified, IP68 rated, 3 diodes	

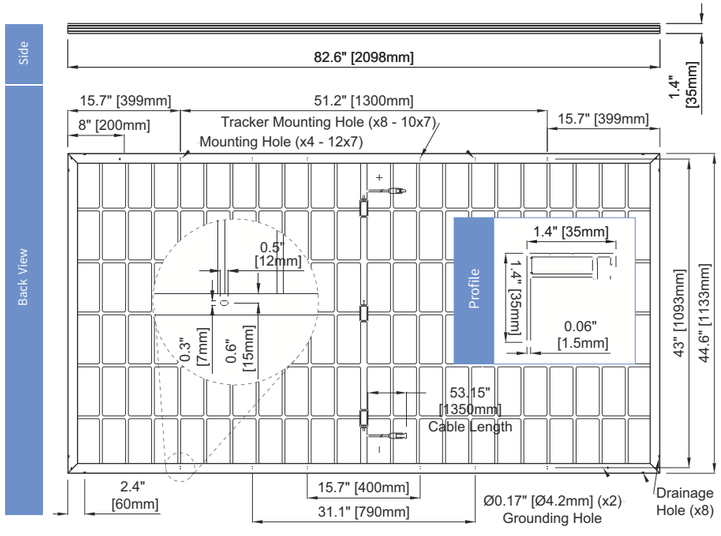
TEMPERATURE RATINGS	
Temperature Coefficient Isc	0.04 %/°C
Temperature Coefficient Voc	-0.24 %/°C
Temperature Coefficient Pmax	-0.29 %/°C
NOCT (± 2°C)	45 °C
Operating temperature	-40/+85 °C

WARRANTIES	
Module product workmanship warranty	25 years**
Linear power performance guarantee	30 years
	≥ 98% end 1st yr ≥ 94.7% end 12th yr ≥ 90.8% end 25th yr ≥ 89.3% end 30th yr

CERTIFICATIONS	
Product	UL 61215, UL 61730, CSA C22.2#61730, IEC 61215, IEC 61730, IEC 61701 (Salt Mist Corrosion), IEC 62716 (Ammonia Corrosion), CEC Listing, UL Fire Rating: Type 1
Factory	ISO9001:2015

SHIPPING SPECS	
Modules Per Pallet:	29 or 29 (California)
Pallets Per Truck	24 or 23 (California)
Modules Per Truck	696 or 667 (California)

* ⚠ Warning. Read the Safety and Installation Manual for mounting specifications and before handling, installing and operating modules.
** 12 year extendable to 25 years subject to registration and conditions outlined under "Warranty" at silfabsolar.com.
PAN files generated from 3rd party performance data are available for download at: silfabsolar.com/downloads.



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F +1 905.696.0267

Silfab - SIL-530-XM-BIFACIAL 20241211