

533 Mosby Street

This project conforms to the guidelines of the historic district of the city of Richmond, VA from several standpoints.

The gable roof line is consistent with many homes in the area.

The traditional wood siding is consistent with many homes in the area and will be black. This is an approved color in the color matrix.

The foundation will be block with parged finish which is common in the area.

The house is narrow to conform with the lot size which keeps it very much in line with nearly all the homes in this district...long and narrow. The height is the exact height as the abutting properties.

The design is clean and simple and will surely enhance this street and be a great addition to improvements sure to come in the future.

The "window garden" is simply a plate glass fixed window surrounded by a wooden picket fence, for privacy. The fence will be the same color as the siding and project two feet from the side of the house.

The small entry way will be clad in Corten steel providing a contrast, to the black cedar siding siding.

The solar panels will be installed flush to the roof and will not be visible from the street. The slight roof angle and height of the roof will prevent them from being seen

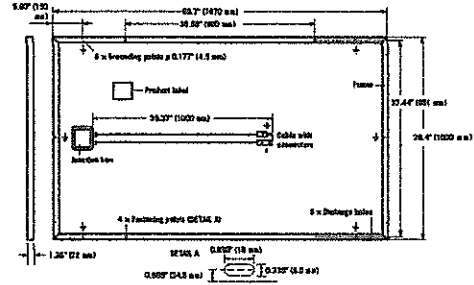
ECE VED

DEC 29 2016

4:03

MECHANICAL SPECIFICATION

Format	65.7 in x 39.4 in x 1.26 in (including frame) (1670 mm x 1000 mm x 32 mm)
Weight	41.45 lb (18.8 kg)
Front Cover	0.13 in (3.2 mm) thermally pre-stressed glass with anti-reflection technology
Back Cover	Composite film
Frame	Black anodised aluminum
Cell	6 x 10 Q.ANTUM solar cells
Junction box	3.03 in x 3.54 in x 0.62 in (77 mm x 90 mm x 15.8 mm), Protection class IP67, with bypass diodes
Cable	4 mm ² Solar cable; (+) ≥ 39.37 in (1000 mm), (-) ≥ 39.37 in (1000 mm)
Connector	MC4, IP68

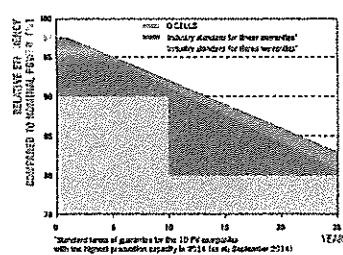


ELECTRICAL CHARACTERISTICS

POWER CLASS	270	275	280	
MINIMUM PERFORMANCE AT STANDARD TESTING CONDITIONS, STC ¹ (POWER TOLERANCE +5 W / -0 W)				
Power at MPP ²	P _{MPP} [W]	270	275	280
Short Circuit Current ³	I _{sc} [A]	9.29	9.35	9.41
Open Circuit Voltage ⁴	V _{oc} [V]	38.46	38.72	38.97
Current at MPP ⁵	I _{MPP} [A]	8.70	8.77	8.84
Voltage at MPP ⁶	V _{MPP} [V]	31.04	31.36	31.67
Efficiency ⁷	η [%]	≥ 16.2	≥ 16.5	≥ 16.8
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NOC ⁸				
Power at MPP ²	P _{MPP} [W]	199.6	203.3	207.0
Short Circuit Current ³	I _{sc} [A]	7.49	7.54	7.58
Open Circuit Voltage ⁴	V _{oc} [V]	35.89	36.13	36.37
Current at MPP ⁵	I _{MPP} [A]	6.81	6.87	6.93
Voltage at MPP ⁶	V _{MPP} [V]	29.30	29.59	29.87

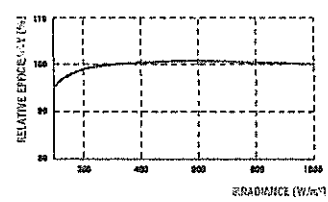
¹ 1000 W/m², 25 °C, spectrum AM 1.5G ² Measurement tolerances STC ± 3 %; NOC ± 5 % ³ 800 W/m², NOCT, spectrum AM 1.5G ⁴ typical values, actual values may differ

Q CELLS PERFORMANCE WARRANTY



At least 97% of nominal power during first year. Thereafter max. 0.6% degradation per year.
At least 92% of nominal power after 10 years.
At least 83% of nominal power after 25 years.
All data within measurement tolerances.
Full warranties in accordance with the warranty terms of the Q CELLS sales organisation of your respective country.

PERFORMANCE AT LOW IRRADIANCE



Typical module performance under low irradiance conditions in comparison to STC conditions (25 °C, 1000 W/m²).

TEMPERATURE COEFFICIENTS		α	β			
Temperature Coefficient of I _{sc}	[%/K]	+0.04	Temperature Coefficient of V _{oc}	β	[%/K]	-0.29
Temperature Coefficient of P _{MPP}	γ	-0.40	Normal Operating Cell Temperature	NOCT	[°F]	113 ± 5.4 (45 ± 3 °C)

PROPERTIES FOR SYSTEM DESIGN

Maximum System Voltage V _{sys}	[V]	1000 (IEC) / 1000 (UL)	Safety Class	II
Maximum Series Fuse Rating	[A DC]	20	Fire Rating	C (IEC) / TYPE 1 (UL)
Max Load (UL) ²	[lbs/ft ²]	75 (3600 Pa)	Permitted module temperature on continuous duty	-40 °F up to +185 °F (-40 °C up to +85 °C)
Load Rating (UL) ²	[lbs/ft ²]	55.6 (2666 Pa)	² see installation manual	

QUALIFICATIONS AND CERTIFICATES

UL 1703; VDE Quality Tested; CE-compliant; IEC 61215 (Ed.2); IEC 61730 (Ed.1) application class A



PACKAGING INFORMATION

Number of Modules per Pallet	32
Number of Pallets per 53' Container	32
Number of Pallets per 20' Container	26
Pallet Dimensions (L x W x H)	68.7 in x 45.3 in x 46.1 in (1745 x 1150 x 1170 mm)
Pallet Weight	1435 lb (651 kg)

NOTE: Installation Instructions must be followed. See the installation and operating manual or contact our technical service department for further information on approved installation and use of this product.

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Specifications subject to technical changes © Hanwha Q CELLS Q PLUS 6FF-64-270-280-2015-12_Rev02_NA







SHOCKOE
VALLEY
VIEW

OFFICE

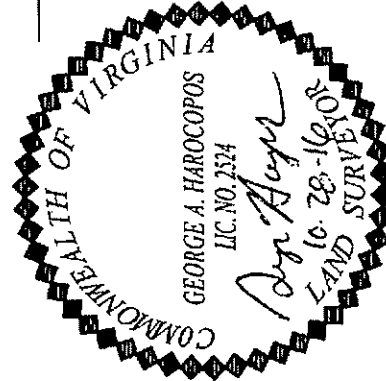




This is to certify that on 10/28/16
 I made an accurate field survey of the known premises
 shown hereon; that all improvements known or visible
 are shown hereon; that there are no encroachments by
 improvements either from adjoining premises, or from
 subject premises upon adjoining premises, other than
 shown hereon.

NOTE: THIS LOT APPEARS
 TO BE IN FEMA FLOOD ZONE
 AS SHOWN ON HUD
 COMMUNITY PANEL NUMBERS
5101290041E

NOTE:
 This survey has been prepared without
 the benefit of a title report and does
 not therefore necessarily indicate all
 encumbrances on the property.

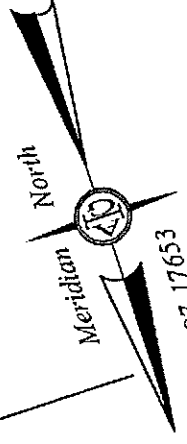


ALLEY

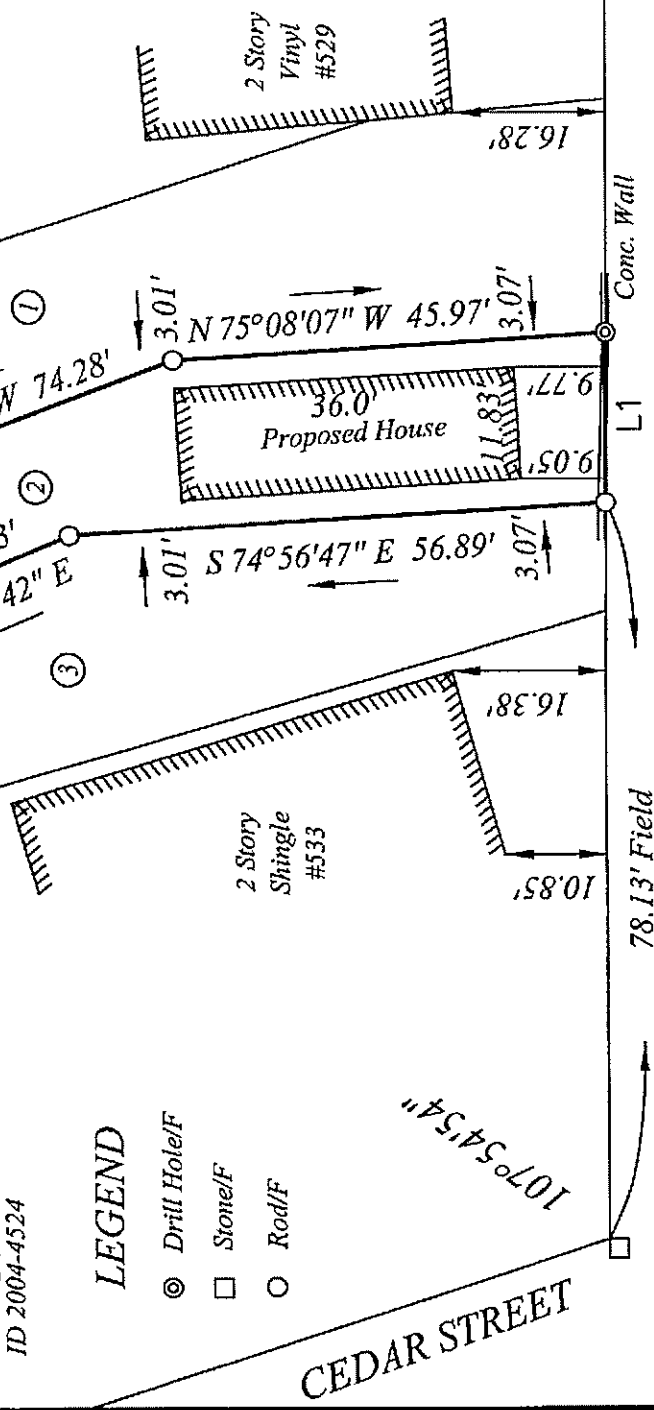
LINE	BEARING	DISTANCE
L1	N 18°25'00" E	18.04'
L2	S 18°25'00" W	16.86'

Note: Original House Was 15' Off
 Mosby Street And Party Wall On
 The Southern Boundary Line

- E0000252047
Bobby H. Duhart Jr. & Antone Evum
ID 97-17654
- E0000252048
1915.183 Sq. Ft.
0.044 Acre
- E0000252049
Bobby H. Duhart Jr. & Antone Evum
ID 97-17653
- E0000252003
Sinh Nguyen
ID 2004-4524



Note: Survey Based On
 Existing Monuments Found



LEGEND

SURVEY OF
 LOT AND IMPROVEMENTS THEREON LOCATED AT

533 MOSBY STREET

SECTION XXX
 RICHMOND, VIRGINIA

JN 45935

A. G. HAROCOPOS & ASSOCIATES, P.C.

CERTIFIED LAND SURVEYOR AND CONSULTANT

4920 E. MILLRIDGE PKWY. SUITE 200 MIDLOTHIAN VA. 23112
 Office 804 744 2630 FAX 804 744 2632
 E-MAIL: AGHAROCOPOS@VERIZON.NET

Scale 1"=20' Date 10/28/16 Drawn by GAH

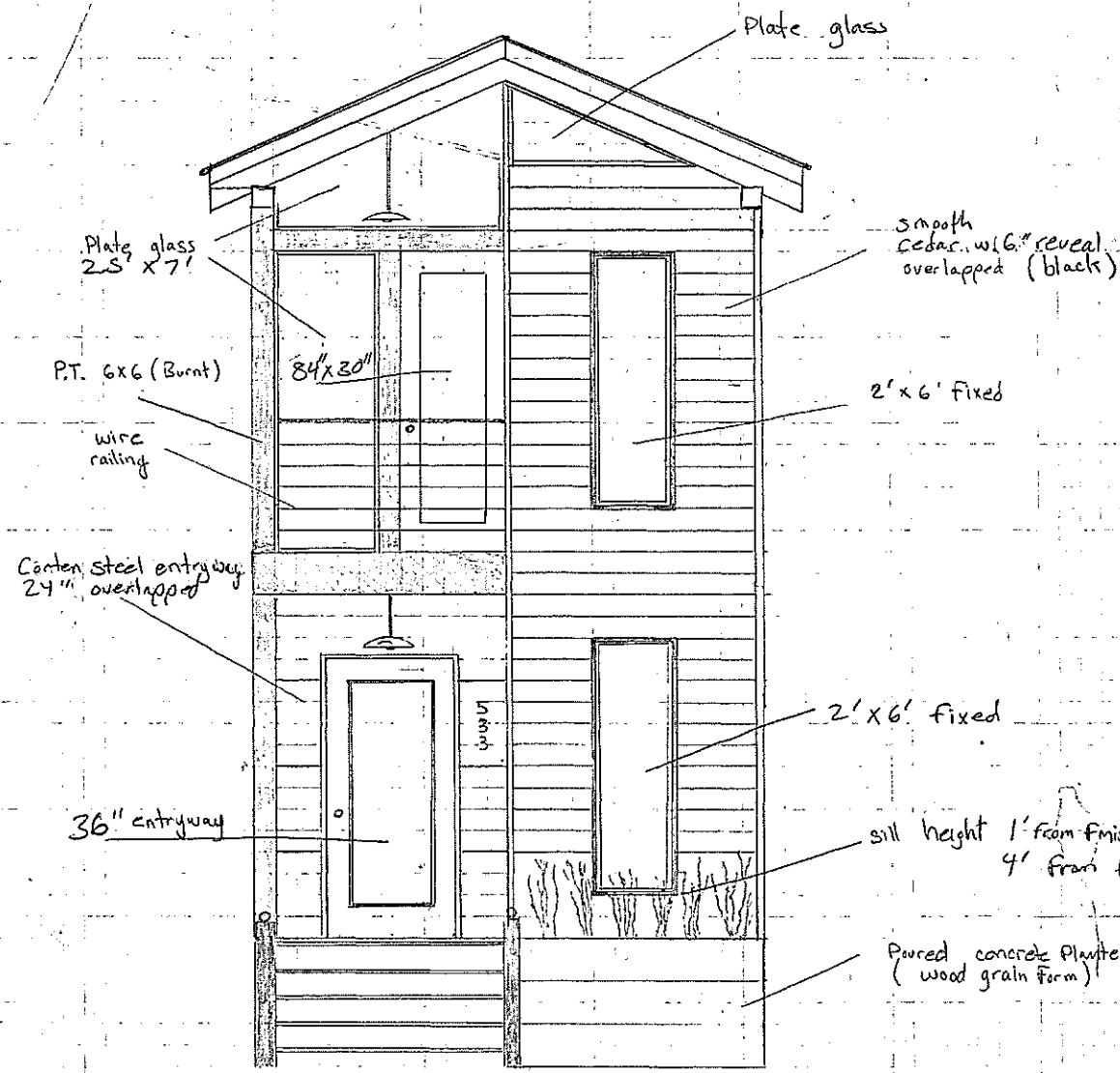
NOTE: PLAT PREPARED FOR THE EXCLUSIVE
 USE OF GREEN BUILDERS

Union Hill (Mosby St.)
792 s.f.

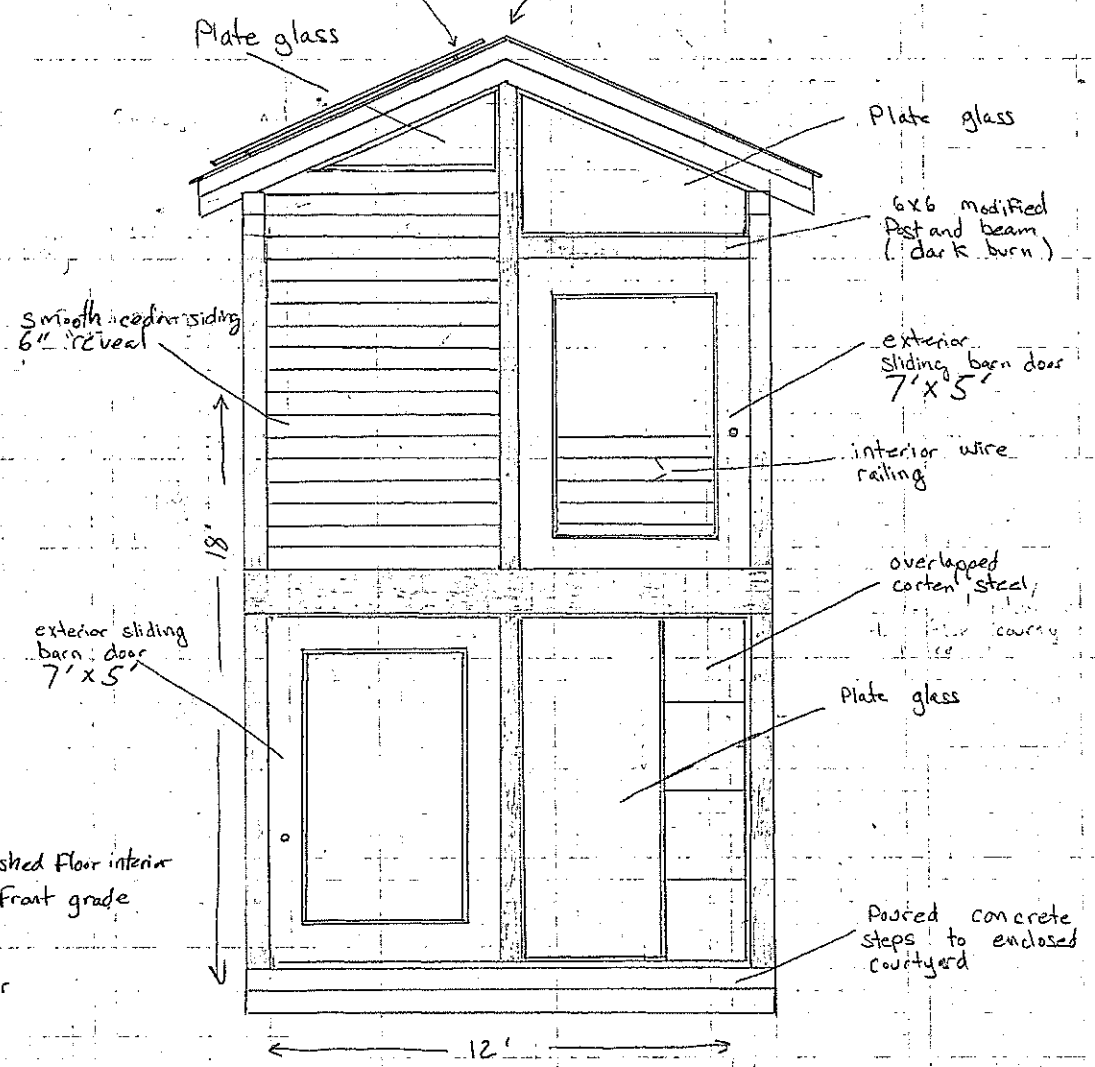
Solar panels on south slope of roof will not be visible from street due to height of roof and angle will not extend to front of house will be mounted flat to roof with minimal gap to maintain flush appearance

12 Panels 5' x 3'
Spec sheet included

12' 3" 23" to top of ridge beam

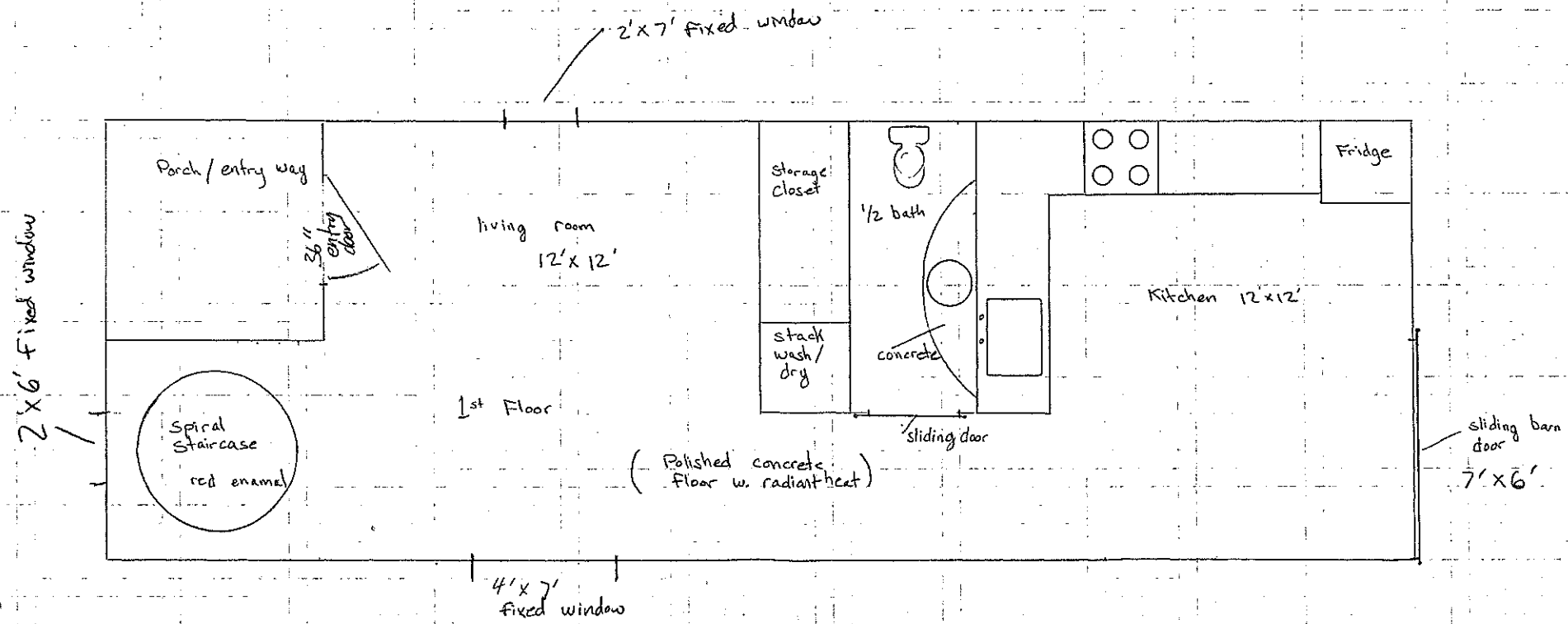
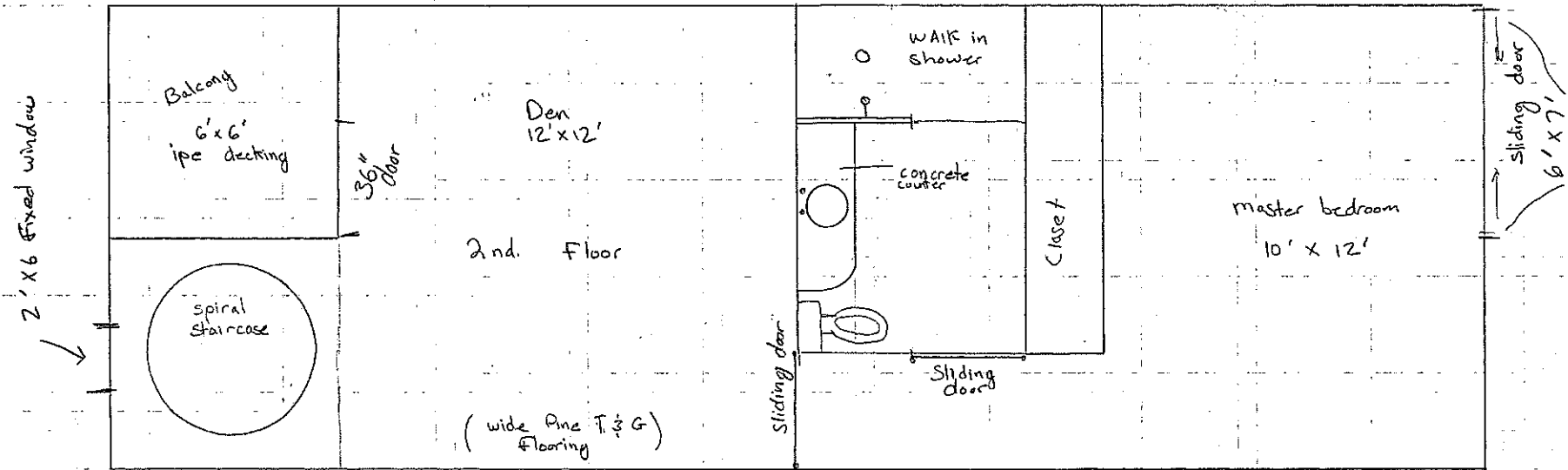


Front Elevation

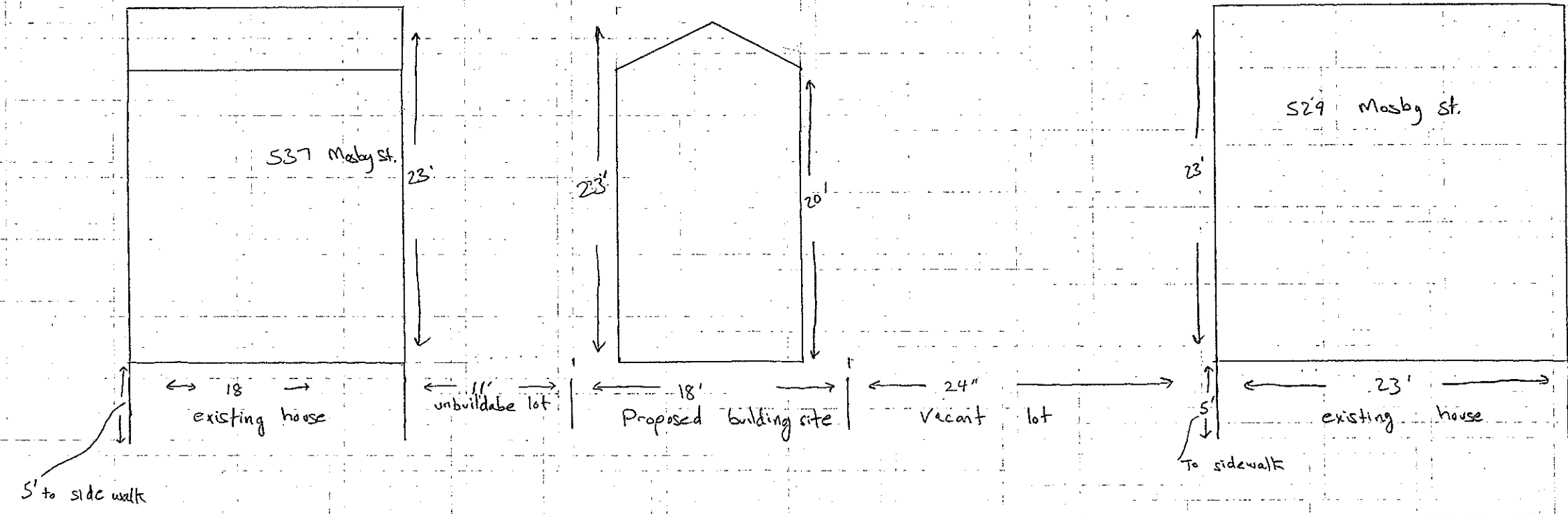


Rear Elevation

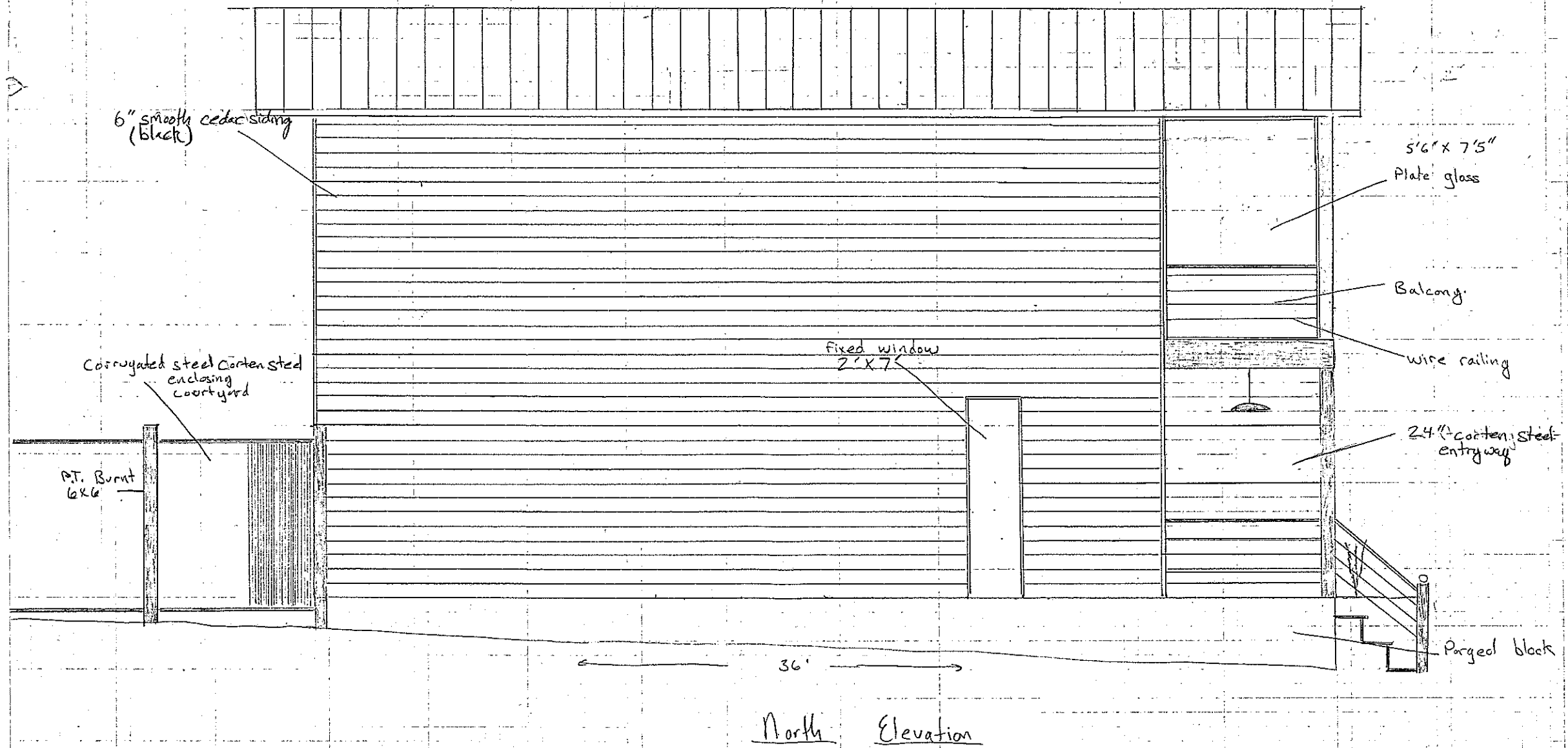
Union Hill (Masby St.)
792 S.F.



Union Hill S33 Masby St.
Context drawing

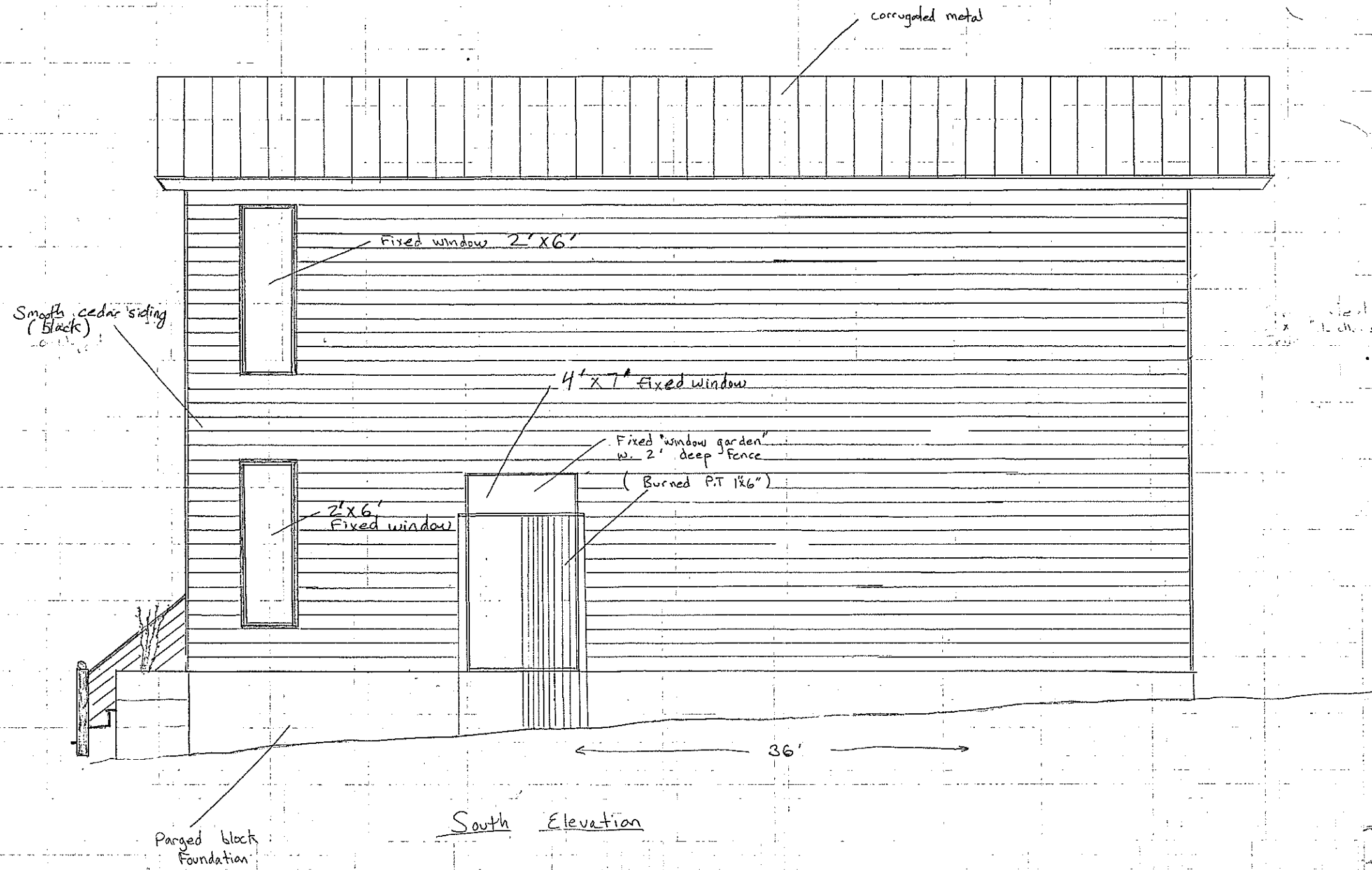


Union Hill (Masby St.)



Union Hill (Mosby St.)
792 S.F.

- Corrugated metal roof
- Cedar siding 6" reveal (black)



Studio 12" x 20" 792 sq ft
Smooth cedar siding 2" reveal (black)

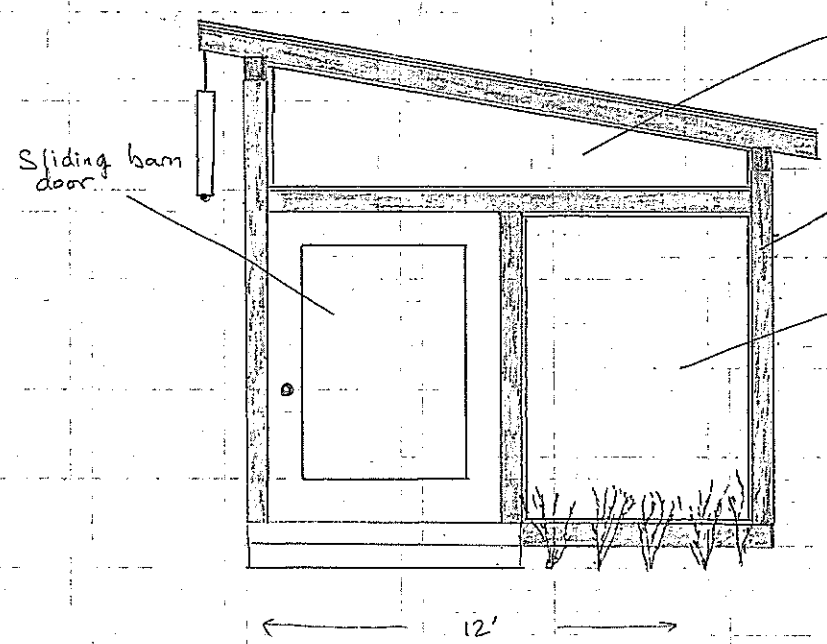


Plate glass
black 6"x6" (PT.)
Plate glass 6'x7'

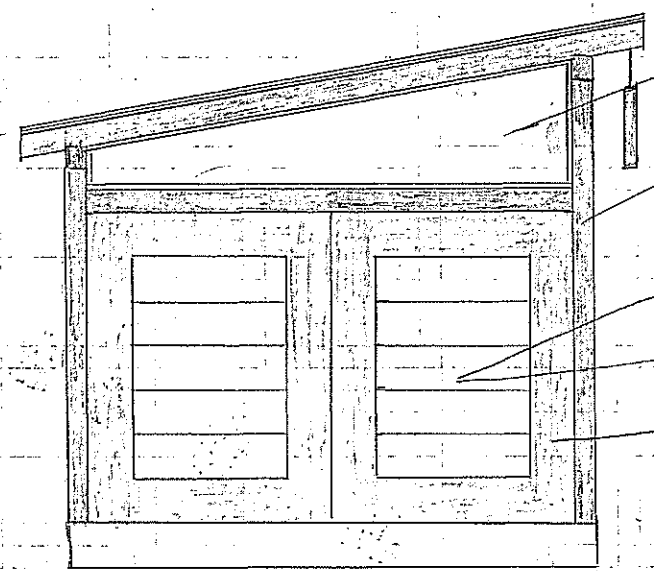
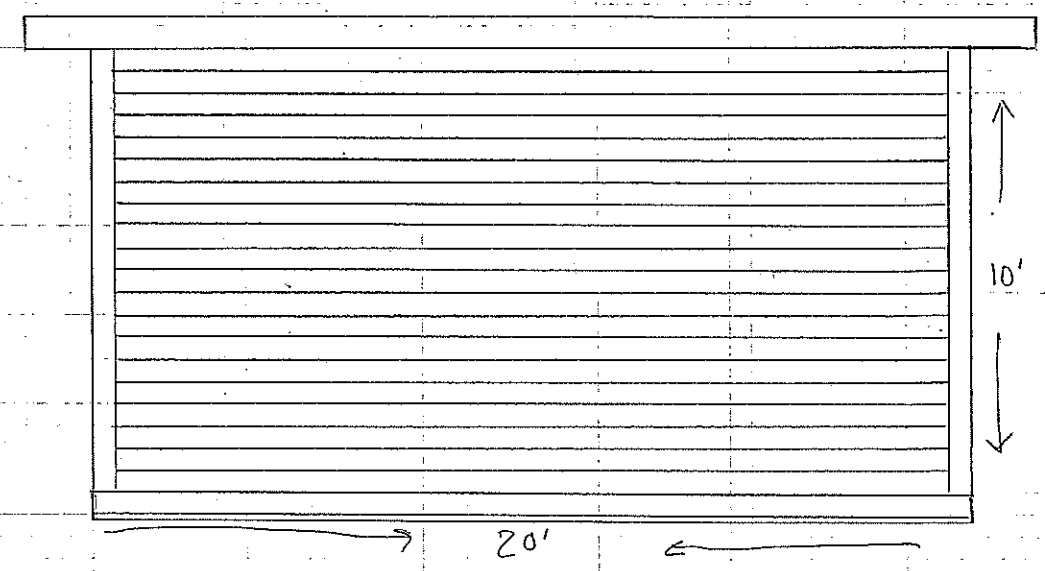
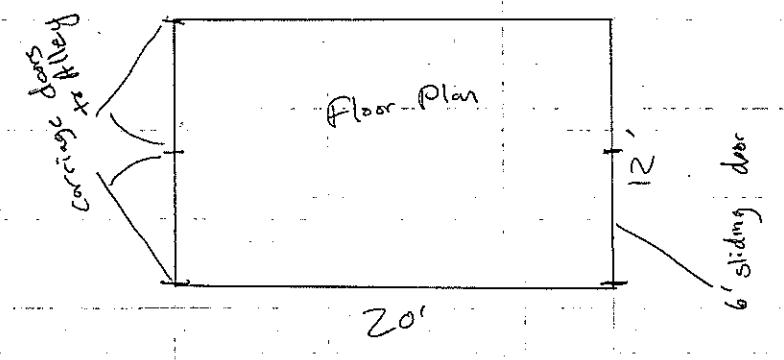
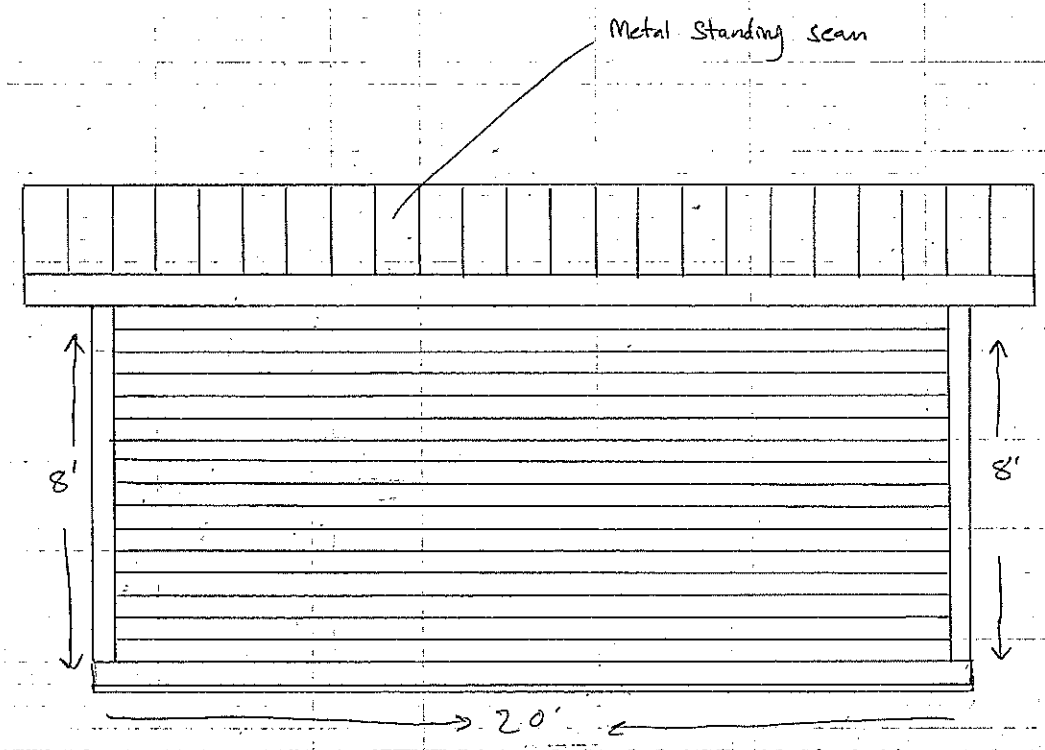


Plate Glass 12' x 25'
6"x6" (black)
Carriage doors 6'x7' (Corten Steel inset Panel) 12" reveal
Cedar frame

12'x20' carriage house/studio
cedar siding to match house (black)
concrete pad
Black cedar carriage doors w. corten steel inset panels



North Elevation



South Elevation