## 8'-0" x 14'-0" Guardhouse Plan A Twin Modular Services Inc.

LOCATION: Carter Machinery Co. 8362 Richfood Rd. Mechanicsville, VA 23116 1001 Lower Landing Road Suit 607, Blackwood, NJ

DESIGN BASIS			
State/Jurisdiction	North Carolina		
Building Code	Virginia Building Code, 2015 Edition		
Plumbing Code	Virginia Plumbing Code, 2015 Edition		
Electrical Code	Virginia Electrical Code, 2015 Edition		
Mechanical Code	Virginia Mechanical Code, 2015 Edition		
Energy Code	Virginia Energy Code, 2015 Edition		

		STRUCTURAL DES	SIGN CRITERIA	
GRAVIT SNOW WIND	Floor Live Floor Dead Roof Live Floor Dead Roof Live Roof Dead Exterior Wall Dead Ground Snow Load Flat-Roof Snow, P <sub>1</sub> Wind Speed (Vult) Wind Speed (Vasd) Exposure Category Internal Pressure, GC <sub>pl</sub> Base Wind Pressure,	50 psf 10 psf 20 psf 10 psf 5 psf 20 psf 20 psf 20 psf 20 psf 20 psf 20 psf 20 psf 115 mph 90 mph C +/-0.18	SEISMIC (IBC) Seismic Design Category Site Class Importance Category Risk Category Mapped Accelerations Ss Sq Sq Spectral Response Sps Spl Seismic Force Resisting System Design Base Shear Response Modification Factor	C D 1.0 III 0.43 0.11 0.41 0.16 A13 0.06W 6.5 (Frame)
WIND	Mean Roof Height Setback	15 ft Greater than 10 feet to a common or assumed property line.	FLOOD  Building shall not be located, in a flood hazard area as establi authority having jurisdiction unle foundation designed in accordar	shed by the ss set on a
half	lding shall not be placed on f of a hill or escarpment exc t in height.		ASCE/SEI 25. The flood resista shall be designed by a registere professional and constructed to loads without transferring loads structure.	nt foundation d design resist all flood

COMPONENTS AND CLADDING WIND LOADS		
End Zone Interior Zone Component (psf) (psf)		
Windows & Siding	+17.7/-23.7	+17.7/-19.2
Doors	+15.0/-18.4	+15.0/-16.5
Roof Cladding	+10.0/-44.6	+10.0/-17.7
Roof Overhangs	-41.9	-25.5

LIFE SAFETY SUMMARY			
	Sprinkl		VB 1.00 1.00 900 ft <sup>2</sup> 2 stories 40 ft
LEVEL	OCCUPANCY	AREA	OCCUPANT LOAD
1	В	96 ft <sup>2</sup>	1

	DRAWING INDEX			
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3.	Floor Plan	ı		
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3.2	Framing Details	ı		
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5.	Cross Section	ı		
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THIS PLAN MAY BE REVERSED OR MIRRORED.

### ACCESSIBILITY EXCEPTIONS

1103.2.6 Raised areas. Raised areas used primarily for purposes of security, life safety, or fire safety including but not limited to, observation galleries, prison guard towers, fire towers or life guard stands are not required to comply with this chapter (Accessibility).

Adequate handicapped restroom facilities to handle this additional occupant load created by the addition of this building to a site shall be provided in an adjacent building on the same property. The local official having jurisdiction shall verify the existing facilities.

### THERMAL ZONE

This buildings design complies with or exceeds the minimum requirements for thermal zone 4.

### ATTENTION LOCAL BUILDING OFFICIAL

All work to be completed on-site is to be in compliance with all state and local codes and is subject to review, approval, and inspection by the local authority having jurisdiction. This building is designed for installation on a permanent foundation and is not intended to be moved once installed. All on-site work shall be performed by a licensed contractor with experience in the setup of modular buildings. The following list is not all inclusive, nor does it limit the items of work or materials that may be required for complete installation.

- Complete foundation support and anchorage system
- Ramps, stairs and general access to building.
   Electrical service connection (including feeders) to the building.

### NTA, Inc., 305 N Oakland Ave Nappanee, Indiana 46550

Nappanee, Indiana 46550
Engineering CoA No. 3977
These documents are applicable only to the elements and loading criteria specifically provided herein. These documents shall not be construed in any way to specify, certify or design any aspects of the building not contained herein. Specified design criteria are based solely on information provided by the client and must be verified and approved by the local suthority having jurisdiction. NTA, Inc. is not responsible for fabrication or erection. If it is suspected that these documents have been modified, substituted or altered in any way, contact NTA, Inc. at (574) 773-7975 to obtain a file copy.

0104 2008-05-28

REVISIONS:	SCALE:	APPROVED BY:
	NTS	
	DATE:	DRAWN BY:
	2/20/2019	HDS

These drawings are applicable only to the elements and loading criteria specifically provided herein. These drawings shall not be construed in any way to specify, certify or design any aspects of the building not contained herein. Elements not contained herein are to be constructed in accordance with the prescriptive requirements of the adopted building code or designed by other registered design professionals, as applicable. Specified design criteria are based solely on information provided by the client and must be verified and approved by the local authority having jurisdiction. NTA, Inc. is not responsible for fabrication or erection. If it is suspected that these drawings have been modified, substituted or altered in any way, contact NTA, Inc. directly to obtain a file copy.

> Twin Modular Services Inc. Blackwood, NJ

TITLE:		JOB NO:
COVE	R SHEET	TMS021919-7
MODEL:		DRAWING NO:
812 OPERA	ATORS BOOTH	1

### NTA, Inc., 305 N Oakland Ave Nappanee, Indiana 46550 Engineering COA No. 3977

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### WOOD FRAMING

- 1. Structural sawn lumber shall be identified by a grade mark in accordance with DOC PS 20
- 2. Approved end-jointed lumber may be use interchangeably with solid-sawn member of the same species and grade except in fire rated assemblies.
- 3. Structural sheathing shall be rated and labeled for compliance with DOC PS 1 or DOC PS 2.
- 4. LVL members shall have the following minimum properties, E=2.0, F<sub>b</sub>=2800 psi, unless noted otherwise.
- 5. All wood shall have a moisture content of 19% or less at the time of
- 6. Wood framing members, including wood sheathing, that rest on exterior foundation walls and are less than 8" from exposed earth each shall be naturally durable or preservative treated.
- 7. Wood members shall be cut and joined so no gap larger than 1/8" exists between members.
- 8. Wood in contact with concrete or masonry shall be naturally durable or preservative treated in accordance with AWPA use category UC4C and properly identified as preservative treated.
- 9. Nails and staples shall conform to ASTM F1667. Nails with shank diameters of 0.099" but not larger than 0.142" shall have a minimum average bending yield strength,  $F_{\rm by}$ = 100 ksi. 10. Fasteners shall be installed to avoid splitting of the wood members.
- If splitting occurs, the connection shall be made by alternate means or otherwise reinforced under the direction of the design engineer 11. Fasteners shall be driven so their head or crown is flush with the
- surface of the wood member or sheathing. Overdriven fasteners shall be replaced. 12. Bolts shall conform to ASTM A307 meeting the requirements of
- ANSI/ASME B18.2.1 for full-body diameter bolts. Screws and lag screws shall conform to ANSI B18.2.1 and ANSI B18.6.1,
- 13. Bolt holes shall be at least a minimum of 1/32" and no more than a maximum of 1/16" larger than the bolt diameter
- 14. Bolt nuts shall be finger-tight plus 1/3 to 1/2 turn with a hand wrench. 15. Connection hardware shall be the brand and model specified.
- Alternate connectors shall be submitted to the design engineer for approval.
- 16. Unless otherwise noted, connectors shall be installed with the maximum number and size of fasteners as required in the manufacturer's installation instructions.
- 17. Prefabricated wood I-joist and structural composite lumber shall not be notched or drilled except where permitted by the manufacturer's recommendations.
- 18. Plywood beams shall be detailed and fabricated in accordance with the latest edition of APA Plywood Design Specification Supplement 5 - Design & Fabrication of All-Plywood Beams.
  19. Douglas Fir, Hem Fir, or Southern Yellow Pine may be substituted for
- Spruce-Pine-Fir using an equal size and grade.

GUARDHOUSE LIFTING AND PLACEMENT INSTRUCTIONS

Approximate weight of guardhouse = 7000 lbs. Guardhouse should only be lifted by an experienced fork truck operator with additional help as required for site and placement. The fork-lift must have a minimum lifting capacity of 8000 lbs and a minimum fork length of 6'. The fork pockets are 32" on center and each fork slot is 7" wide and 3" in height. The fork slots are reinforced with 8" steel C-channel on the underside of the floor.

### CORROSION PROTECTION

- 1. Metal framing, connectors, fasteners, and flashing in contact with preservative treated or fire retardant treated wood members shall be hot-dipped zinc coated galvanized steel, stainless steel, silicon bronze, copper, or otherwise protected from the corrosive action of the wood member
- 2. A barrier between the treated members can be used when approved by the design engineer.
- Selection of the appropriate connector and fastener coating shall be based on the intended end use of the connector or fastener and the chemical preservative used in the treatment of the member for which it is in contact.
- 4. Where connection hardware is used, such as joint hangers, fasteners used shall be made of the same material as the connection
- 5. Corrosion protection of metal connectors, fasteners, and flashing based on galvanized or stainless steel materials shall be in accordance with the table below

Product Coatings		Galvanized A153)	Stainless
Preservative	G90	G185	Steel
Untreated Wood SBX/DOT CCA-C	Yes	Yes	Yes
ACQ-C & ACQ-B CBA-A & CA-B NON-DOT No Ammonia and Not Rated For Ground Contact	No	Yes	Yes
Unknown Preservative, Contains Ammonia, Rated For Ground Contact or ACZA	No	No	Yes

SBX = DOT Sodium Borate, CCA-C = Chromated Copper Arsenate, ACQ-C & ACQ-D = Alkaline Copper Quat, CBA-A & CA-B = Copper Azote, Non-DOT = Other Borate, ACZA = Ammoniacal Copper Zinc Arsenate

### COASTAL CORROSION PROTECTION

- 1. The corrosion protection requirements in this sections shall apply to all structures located within 3000' landward of the mean high-tide waterline for all metal components or connectors not contained within the pressure envelope of the structure.
- 2. Fasteners or bolts less than 5/8" in diameter shall be Type 316L stainless steel. Fasteners or bolts 5/8" or larger shall be hot dip galvanized per ASTM A653 or ASTM A153 with a zinc coating thickness of 1.85 oz of zinc per square foot of surface area (G185).
- Connection hardware, such as pre-formed connectors, steel plates. or steel straps, exposed to weather and having a base metal thickness equal to or less than 1/8" shall be Type 303, 304, 305 or 316 stainless steel. Steel exposed to weather having a base metal thickness greater than 1/8" shall be hot dip galvanized per ASTM A653 or ASTM A153 with a zinc coating thickness of 1.85 oz of zinc per square foot of surface area (G185) or painted using one of the following formulations: A. Epoxy-polyamide
- B. Coal-tar epoxy-polyamide Zinc chormate-vinvl butyral primer with asphatic mastic
- 3. Contact between dissimilar materials (stainless steel and carbon steel) shall be avoided.

06.04 2007-06-19

REVISIONS: APPROVED BY: SCALE: Twin Modular Services Inc. NTS DRAWN BY: DATE: Blackwood . NJ 02/20/2019 HDS

ITLE:	JOB NO:
GENERAL NOTES	TMS021919-7
MODEL:	DRAWING NO:
812 OPERATORS BOOTH	1.1

# NTA, Inc., 305 N Oakland Ave Nappanee, Indiana 46550 Engineering COA No. 3977

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Type: Perimeter Main Beam: 6" C Channel 8.2 lbs per foot Cross Members: 6" C Channel at 24" o.c. Paint: Marine Based 2 Part Epoxy-Black

Moisture Barrier: Tyvek or Equal Insulation: 2 Layers of 2" Ridged Insulation R-19, R-Max Per ESR-1864

Decking: 3/4" Plywood, 24" o.c. Secured Directly to Steel Frame Trim: 4" Vinyl Cove Base - Dove Gray Covering: 16Ga Aluminum Tread Plate Over 3/4" Plywood

### EXTERIOR WALLS

Studs: 2x4 Stud Grade SPF at 16" o.c. Bottom Plate: Single 2x4 #3 SPF Top Plate: Single 2x4 #3 SPF

Steel Tube: 3"x3"x3/16" Steel Tube Beams and Corner Posts Exterior Sheathing: 7/16" OSB Sheathing 24/16

Wall Height: 8'-3"

Finished Ceiling Height: 7'-9" AFF Insulation: R-13 Kraft-Backed Batts

Interior Wall Covering: 1/4" Vinyl Covered Paneling

Moisture Barrier: House Wrap Exterior Walls - Tyvex or Equal

Type: Rafter, 2x8 #3 SPF at 16" o.c. Bow Type Ceiling: 2'x4' T-Grid Drop Ceiling at 7'-9" AFF Insulation: R-30 Kraft Unfaced Fiberglass Batts Overhang: 3" on 12' Sides and 6" on 8' Sides Roofing: EPDM Rubber Roofing per ESR3026

### **ENERGY PACKAGE**

Exterior Light: (1) Exterior LED Security Light Fixture with Integral Photo Eye Switch (dusk to dawn)

(1) Exterior LED Above Door Light Fixture on an Interior Toggle Switch

Interior Lights: (2) 2'x4' 120V LED with Prismatic Lens - Lithonia Type 2GTL460LEZ1LP840

ELECTRICAL

Main Distribution Panel: Exterior Surface Mount, 100 Amp. Single Phase, 3 wire, 60 HZ with Ground 12/24

Space NEMA 3R Type

Raceway: Minimum #14/2 with Ground 90 Deg. C Type MC Copper

Interior Lights: See Above Energy Package Exterior Lights: See Above Energy Package Switches: 120V 15 Amp Duplex Recepts per Print Recepts: 20 Amp - 120V Duplex Recepts per Print

Optional Data Box: Exterior Data Junction Box with Conduit to Interior Under Desk

Heating: 220V, 20 Amp, 3,000 Watt Wall Mount, Dedicated Circuit

Air Conditioning: 230V (Dedicated Circuit) 12,000 BTU Wall Mount Approx 75" AFF

Optional: Wall Mount 12,000 BTU Air Conditioner with Electric Heat Strip

### EXTERIOR WINDOWS AND DOORS

Doors: 36"x80" Steel Door with 22" x36" Window (Safety Glazed) Ball Hardware and Heavy Duty Closer, Schlage Ball Type Lockset

Windows: 36"x39" Horizontal Slider, Vinyl Clad Thermal Pane Tempered Low-E Type 4 per Print

36"x39" Fixed Glazing, Vinyl Clad Thermal Pane Low-E Type 4 per Print

Optional Film Tint: All Windows and Door Vision to be Tinted on the Inside with VLT-50 Low Exterior Reflectance Film

### **EXTERIOR FINISHES**

Siding: 0.19 Aluminum Light Grav

Trim: 0.19 Aluminum Dark Gray

Wall Sheathing: 7/16" OSB, 24/16 APA Span Index Rating

Roof Sheathing: 1/2" CDX Plywood, 24/16 Span Rating

Roof: 0.45 EPDM Rubber Roofing

Door Trim: 2-1/2" Non Corrosive Solid Vinvl Painted White

Window Trim: 2"x2"x0.19" Aluminum Corner - White

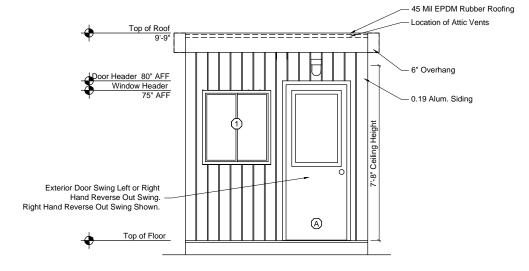
Furniture: 24"x7'-5" Laminated Counter Top with 3 Draw File Cabinet

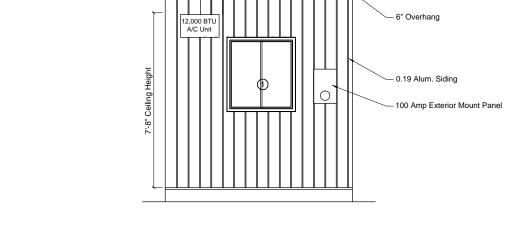
REVISIONS: APPROVED BY: NTS DATE: DRAWN BY 02/20/2019 HDS

Twin Modular Services Inc. Blackwood . NJ

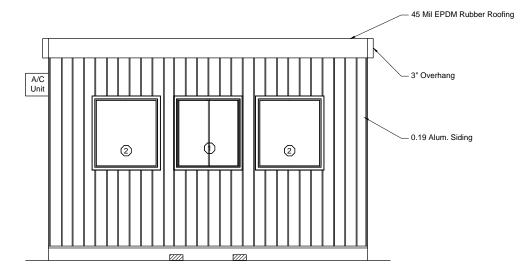
06.04 2007-06-19 JOB NO: SPECIFICATIONS TMS021919-7 MODEL: DRAWING NO: 812 OPERATORS BOOTH 1.2

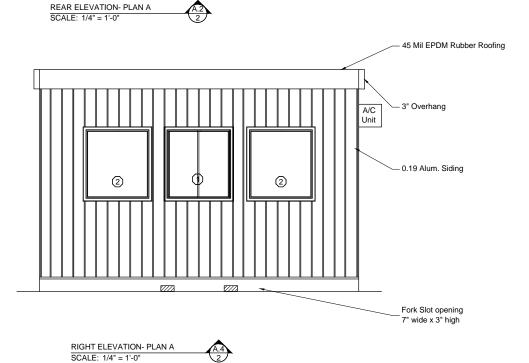
### PLAN A ELEVATIONS





### FRONT ELEVATION- PLAN A SCALE: 1/4" = 1'-0"





- 45 Mil EPDM Rubber Roofing

Location of Attic Vents

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Engineering COA No. 3977
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NTA, Inc., 305 N Oakland Ave

## All Windows to be Low-E, Tempered and Tinted

DOOR SCHEDULE		
Mark	Description	
A	36" x 80" Steel Door with 22"x22" window, closer and ball knob	
	WINDOW SCHEDULE	
Mark Description		
1	36" x 39" Horizontal Slider, Vinyl Clad Thermal Pane, Tempered Safety Glazing	
2	36" x 39" Fixed, Vinyl Clad Thermal Pane, Tempered Safety Glazing	

### ATTIC VENTILATION

Vents shall be installed to provide a total net free ventilating area not less than 1/150 of the area of the space being ventilated. Vents shall be positioned to provide cross ventilation.

LEFT ELEVATION- PLAN A SCALE: 1/4" = 1'-0"

96 Area /150= 0.64 sq. ft. Ventilation Required

### SITE INSTALLED ITEMS

Steps, rails, and decks are to be designed by others and built on-site in accordance with local codes and subject to approval by the local authority having jurisdiction.

HEIGHT ABOVE FINISHED GRADE

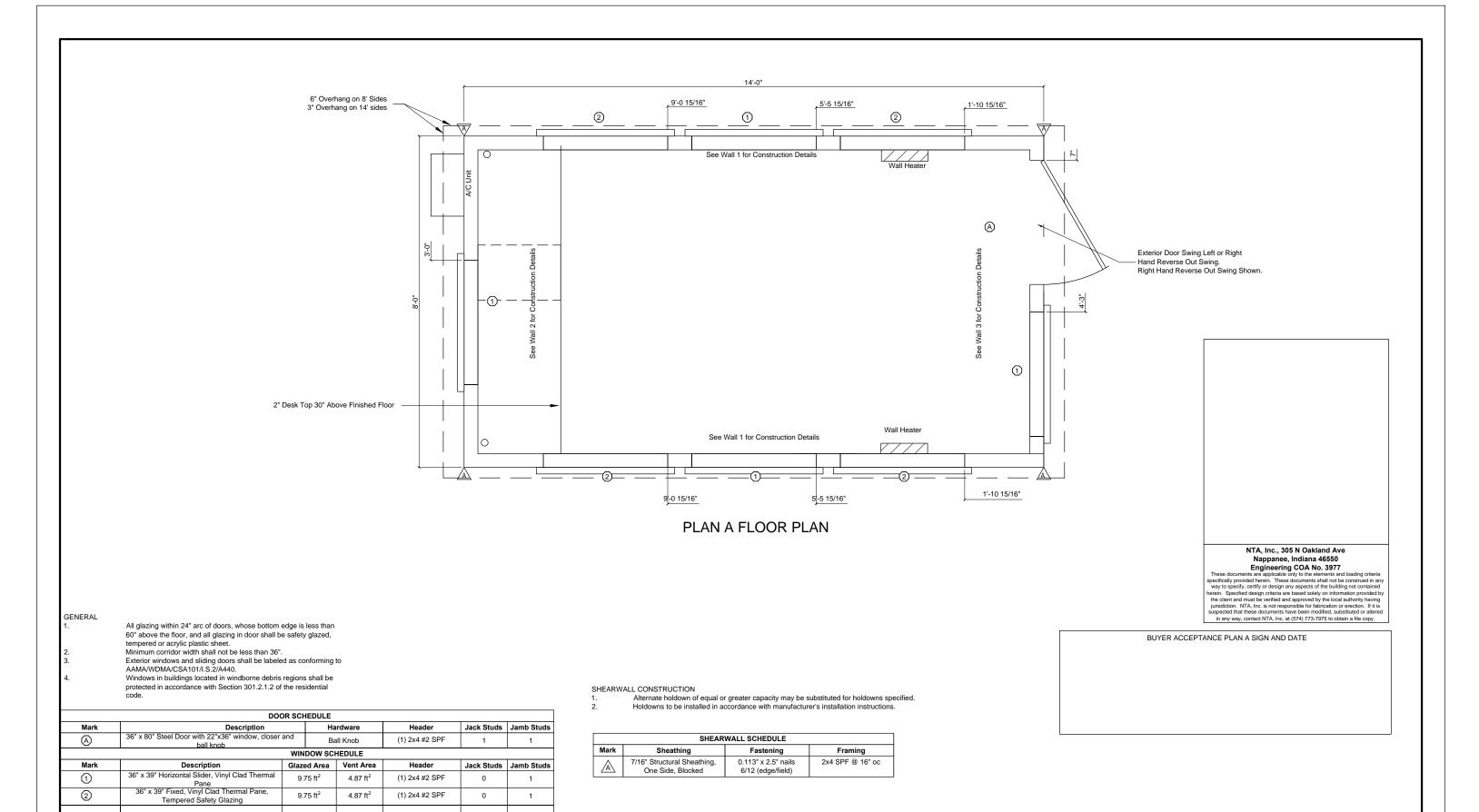
Height above finished grade shall be established by a site-specific foundation design or by the local authority having jurisdiction. In no case shall the bottom of the floor joists be closer than 18" to

0105.1151 2008-12-02

REVISIONS: SCALE: APPROVED BY: 1/2" = 1'-0" DATE: DRAWN BY: 02/20/2019 HDS

# Twin Modular Services Inc. Blackwood, NJ

TITLE:	JOB NO:
ELEVATIONS PLAN A	TMS021919-7
MODEL:	DRAWING NO:
812 OPERATORS BOOTH	2A



0106 2008-09-23

Twin Modular Services Inc.

Blackwood, NJ

REVISIONS:

APPROVED BY:

HDS

DRAWN BY:

1/2" = 1'-0"

02/20/2019

DATE:

TITLE:	JOB NO:
FLOOR PLAN A	TMS021919-7
MODEL:	DRAWING NO:
812 OPERATORS BOOTH	3A

