

Date	Prepared by	Approved by	Document nos	Revision
11 Jun 2021	Ray Ling	Pavel	MS-18F45-IM-001	00

## **INSTRUCTION MANUAL MS-18F45**

### **TABLE OF CONTENTS:**

#### **1.00 BEAMS & CONNECTORS:**

- 1.10 Plan View Resultant Beam And Connector Layout
  - 1.11 Beam 1 to Beam 6 (Row 1)
  - 1.12 Beam 7 to Beam 12 (Row 2)
  - 1.13 Beam 13 to Beam 18 (Row 3)
- 1.20 Connector Details
- 1.30 Connector Ports Table

#### **2.00 BEAM PATTERN**

- 2.10 Horizontal Beam Pattern
  - 2.11 Row 1 & Row 3 Pattern
  - 2.12 Row 2 Pattern
- 2.20 Vertical Beam Pattern

#### **3.00 TRANSPORTATION / INSTALLATION**

- 3.10 Transportation (From Point to Point)
- 3.20 Bracket Mounting
- 3.30 Installation using a crane
  - 3.31 Lifting the Antenna
- 3.40 Antenna Installation
  - 3.41 Antenna Leveling
  - 3.42 Digital Level Gauge Calibration
  - 3.43 Adjustment Requirement

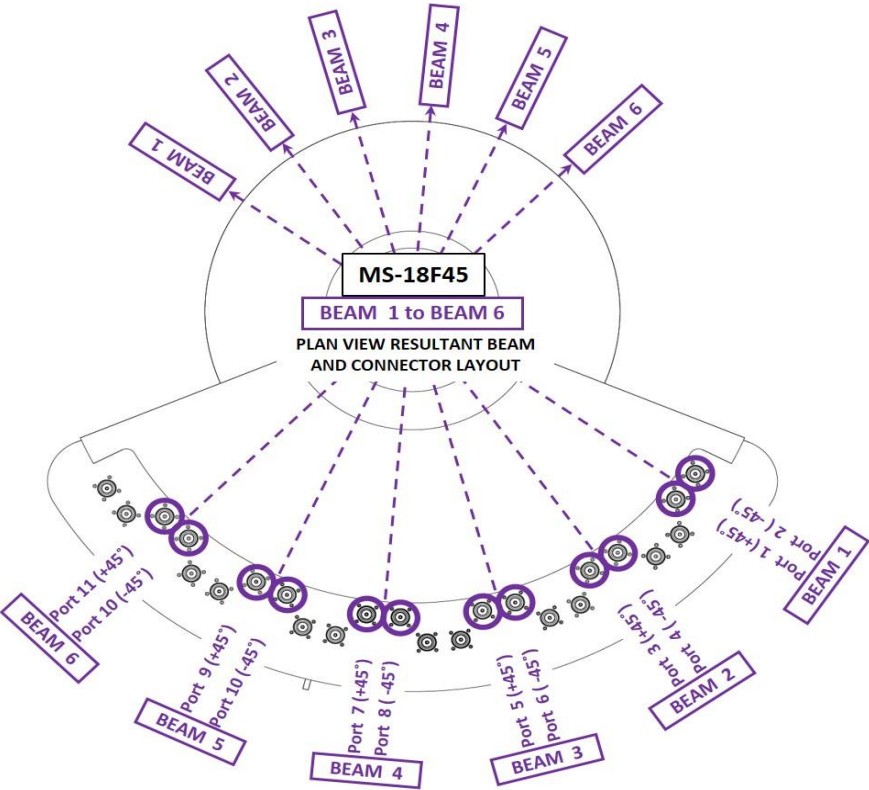
#### **Revision History:**

Date	Description	Revised by	Revision nos.

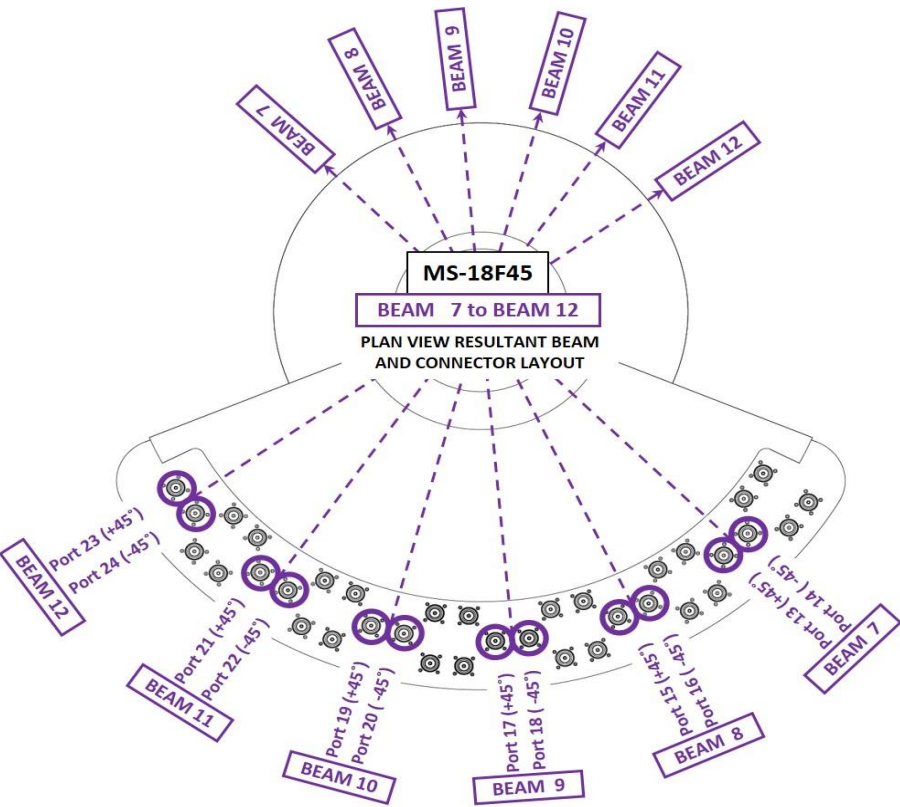
**1.00 BEAMS & CONNECTORS:**

**1.10 Plan View Resultant Beam And Connector Layout**

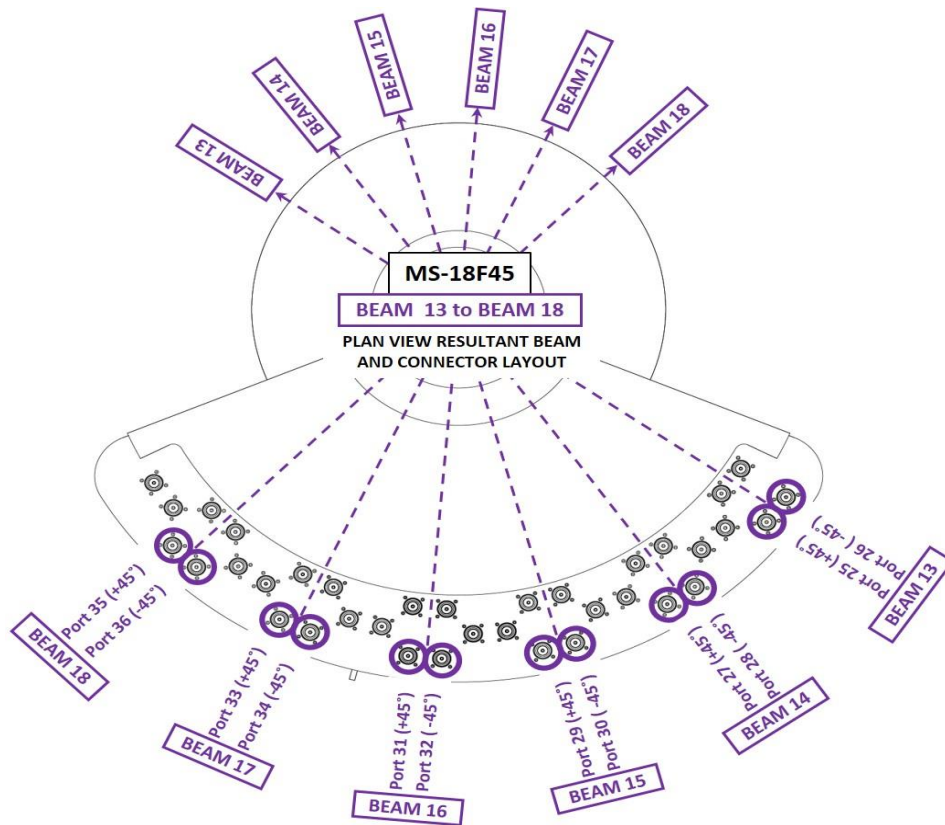
**1.11 Beam 1 to Beam 6 (Row 1)**



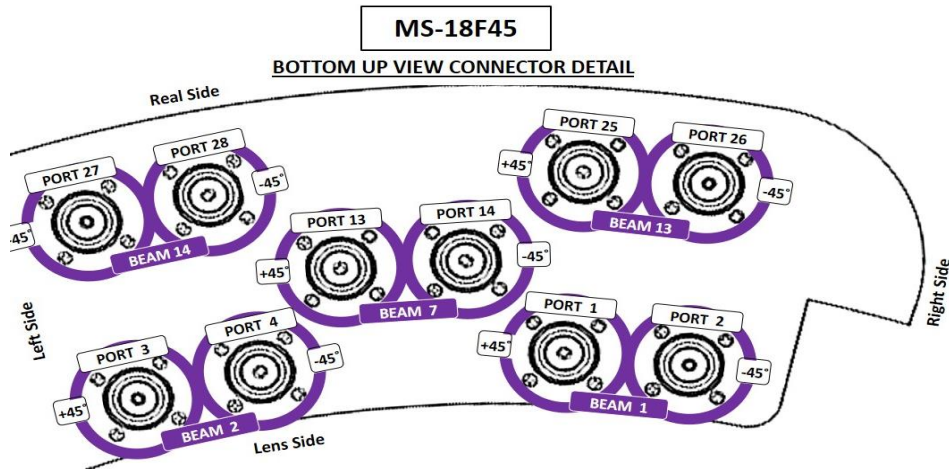
**1.12 Beam 7 to Beam 12 (Row 2)**



### 1.13 Beam 13 to Beam 18 (Row 3)



### 1.20 Connector Details



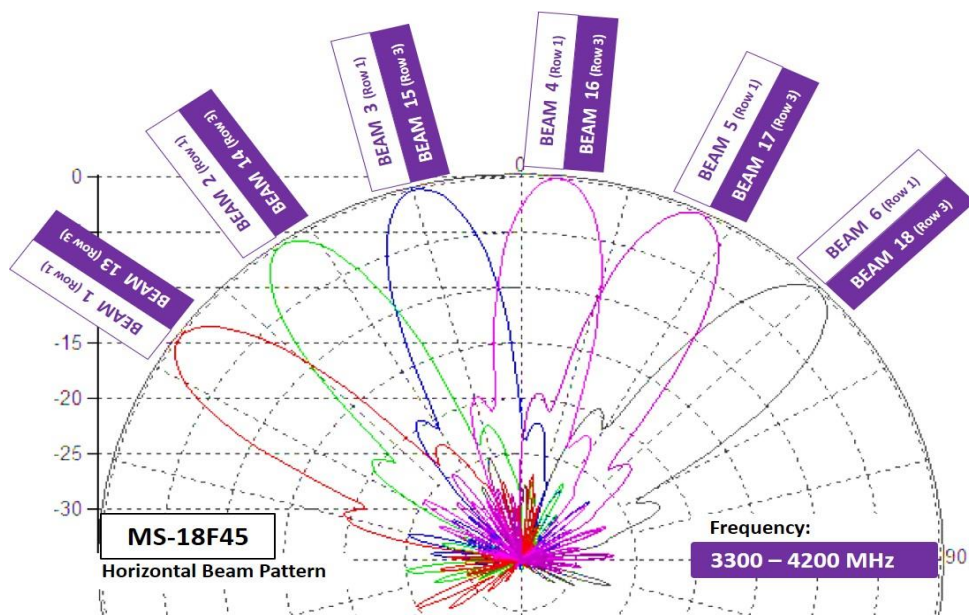
### 1.30 Connector Ports Table

	BEAM 6		BEAM 5		BEAM 4		BEAM 3		BEAM 2		BEAM 1	
Row 1	Port 11 (+45°)	Port 12 (-45°)	Port 9 (+45°)	Port 10 (-45°)	Port 7 (+45°)	Port 8 (-45°)	Port 5 (+45°)	Port 6 (-45°)	Port 3 (+45°)	Port 4 (-45°)	Port 1 (+45°)	Port 2 (-45°)
	BEAM 12	BEAM 11	BEAM 10	BEAM 9	BEAM 8	BEAM 7	Row 2					
	Port 23 (+45°)	Port 24 (-45°)	Port 21 (+45°)	Port 22 (-45°)	Port 19 (+45°)	Port 20 (-45°)						
Row 3	BEAM 18	BEAM 17	BEAM 16	BEAM 15	BEAM 14	BEAM 13						
	Port 35 (+45°)	Port 36 (-45°)	Port 33 (+45°)	Port 34 (-45°)	Port 31 (+45°)	Port 32 (-45°)	Port 29 (+45°)	Port 30 (-45°)	Port 27 (+45°)	Port 28 (-45°)	Port 25 (+45°)	Port 26 (-45°)

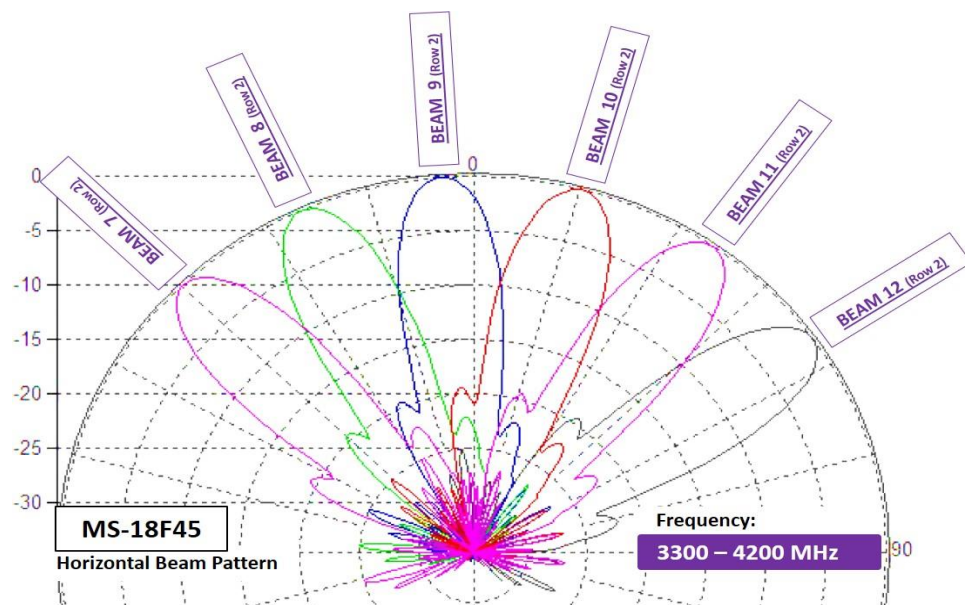
## 2.00 BEAM PATTERN

### 2.10 Horizontal Beam Pattern

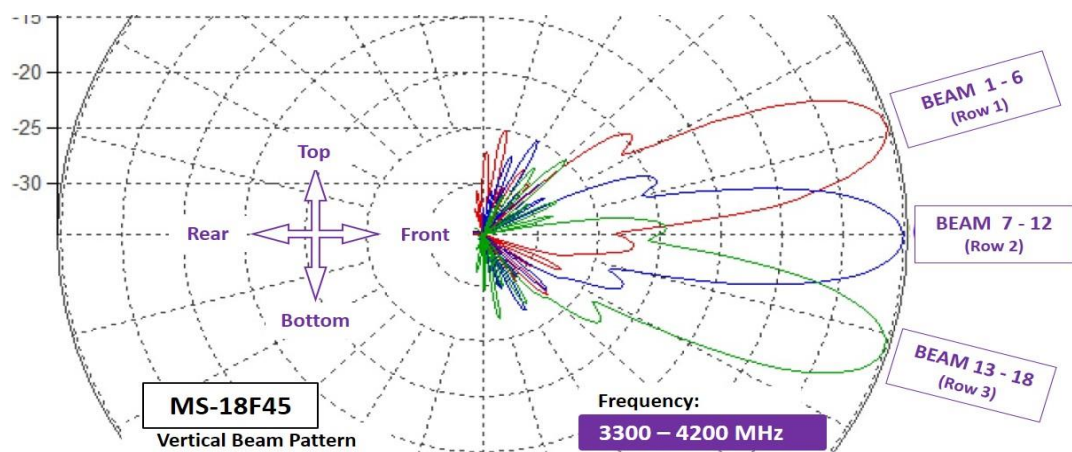
#### 2.11 Row 1 & Row 3 Pattern



#### 2.12 Row 2 Pattern



### 2.20 Vertical Beam Pattern

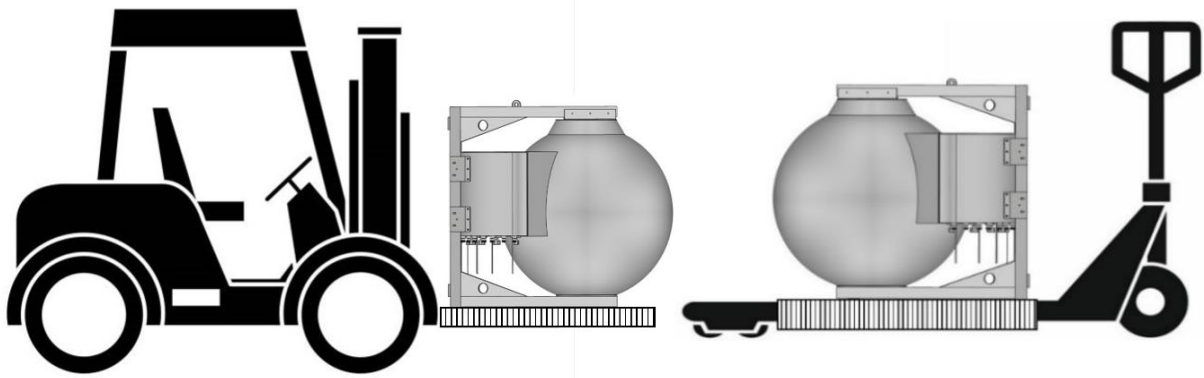


### 3.00 TRANSPORTATION / INSTALLATION

#### 3.10 Transportation (From Point to Point)

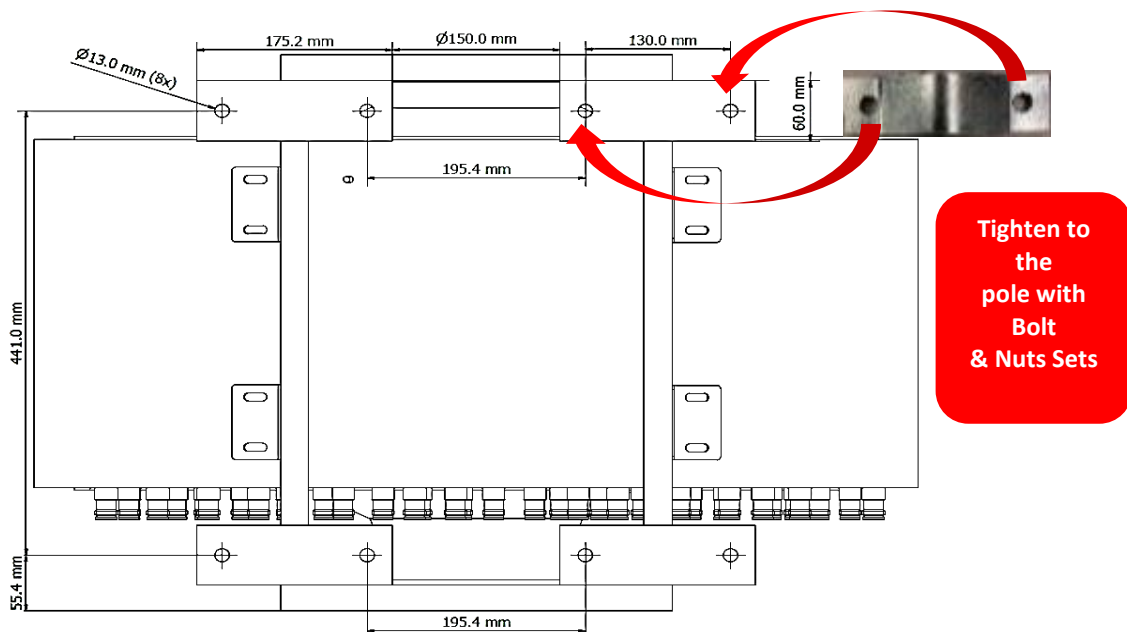
Strictly comply to the local authority and regulatory on Workplace Safety and Health Control and Measure when moving and transporting of large or heavy equipment.

Appropriate material handling machine should be used. **(Risk Assessment applies for Forklift or Pallet Truck Lifting)**



#### 3.20 Bracket Mounting

Lens Size (Model)	Bracket Qty (pc)	Bolt & Nuts Size	Bolts Set (pc)
180 (cm) Lens	6	M14 x 16cm	12
45, 60,90,120 (cm) Lens	4	M12 x 16cm	8



#### Important Notes:

End User is required to CUSTOM-MAKE the additional supporting bracket and tighten it

Strictly comply to the local authority and regulatory on Workplace Safety and Health Control and Measure when performing lifting of large or heavy equipment, appropriate material handling machine should be used and only certified personnel should perform the task. **(Risk Assessment requirement applies for both Up-Lifting and Down-Lifting.)**

Using cable, rope or sling belt to cross over frame base 4 main area to the top and grouping by securing with fastener.

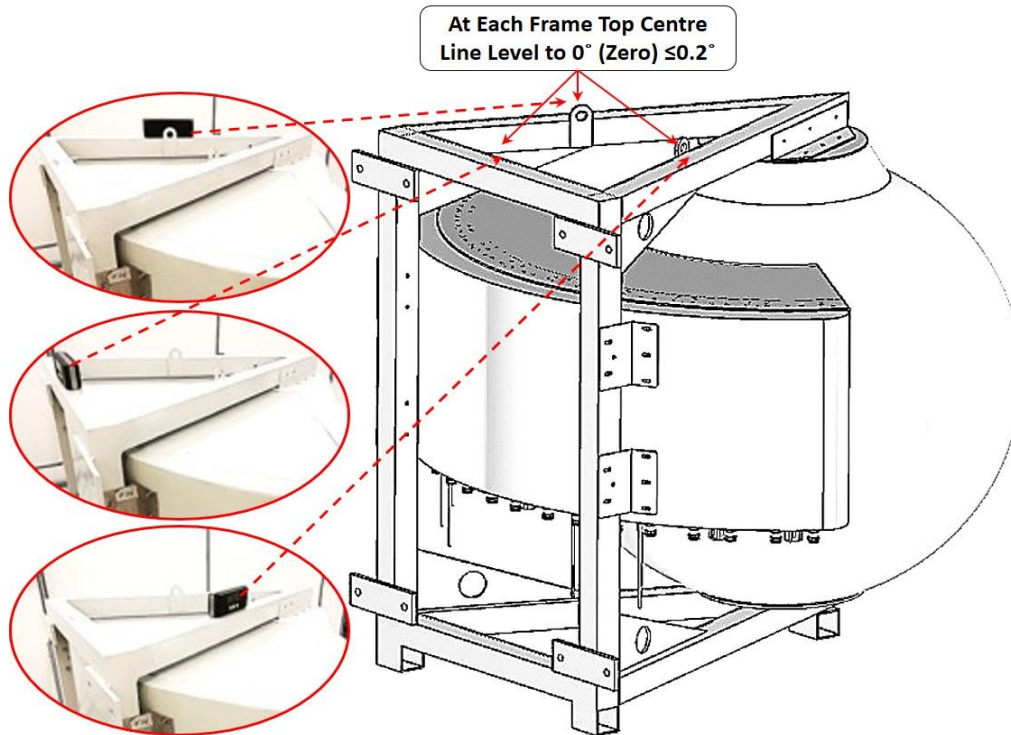


### 3.40 Antenna Installation

With reference to **Item 3.20 Bracket Mounting**, End user is required to Custom-Make the additional supporting bracket and tighten it to the existing Antenna bracket to meet the deployment needs.

### 3.41 Antenna Leveling

After the Antenna is mounted to the bracket, it is required to be adjusted to  $0^{\circ}$  (Zero Degree) with  $\leq 0.2^{\circ}$  on 3 sides of the frame top level. (Rear, Right & Left=As shown in picture)



### ANTENNA LEVELING ADJUSTMENT (AFTER INSTALLATION)

### 3.42 Digital Level Gauge Calibration



### 3.43 Adjustment Requirement



### ANTENNA LEVELING ACCEPTED



### REQUIRE ADJUSTMENT