1. **Revision Log**

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| Revision Log |
| Revision Level | Revision Date | Section | Description | Revised By |
| REL | 11/29/18 | ---- | Initial Release | NT |
| A | 3/27/20 | Title4.0 | Changed Autonomous Intelligent Vehicles to Autonomous Mobile RobotAdded 4.3 as a reference | NT |
| B | 12/1/23 | Header | Replaced GHSP logo with newer version | B. Balok |
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| Approval: | CN: RS,FS | MX: JH |
| US: JA | Other (as req’d): DRW |

1. **Purpose:**
	1. To define the global standard for the use of Autonomous Mobile Robot (AMR) within GHSP manufacturing facilities.
2. **Scope:**
	1. This global standard applies to all GHSP manufacturing facilities.
3. **Definitions:** N/A
4. **References:**
	1. ISO 10218-1, 2:2011 Industrial Robot Safety Standards
	2. ANSI/RIA R15.08 Industrial Mobile Robot Safety
	3. ISO 3691-4:2020 Industrial Trucks-Safety Requirements and Verification-Part 4: Driverless Industrial Trucks and Their Systems
	4. MiR User Guide
5. **Method:**
	1. **Autonomous Mobile Robot Selection**
		1. Preferred Brands

*Selection outside the preferred brand requires approval by the Advanced Process Engineer and Global Standards Team*

* Mobile Industrial Robots (MiR)
	+ If using only 1 MiR, Call Boxes will be needed at each docking point/station.
	+ If using 2 or more, MiRFleet Software required.
		- MiRFleet Software will have wireless and server requirements. These requirements will have to be reviewed with JSJ prior to bringing the AMR’s into the plant.
	1. **Requirements**
		1. VL Marker
			+ A VL Marker (see picture below) must be used at every docking point/station.
			+ If needed, contact the Machine Build Group and let them know the quantity needed.



* + 1. Light Indicators
			- The AMR will use the default light indicator scheme (see picture below) to indicate current operational state.



* + 1. Sound
			- AMR must use the default “Beep” sound before moving, to make personnel nearby aware that it is about to move.
	1. **Guidelines**
		1. Accessories
			+ Auto Roller Conveyor
			+ Auto Roller Conveyor with Lift
			+ Lift
			+ Tow Hook
			+ Cobot
1. **Records:** N/A