

City of Rialto

Aerial Apparatus Decision Matrix

Tractor Drawn Aerial (TDA) vs. Platform Aerial

This decision matrix evaluates aerial apparatus options based on the **City of Rialto's operational environment**, including:

- Dense commercial corridors (Foothill Blvd., Riverside Ave., Baseline Rd.)
- Older residential neighborhoods with limited access and tight street design
- Industrial and target hazards (tank farms, rail infrastructure, logistics centers)
- Multi-story apartment complexes and mixed-use occupancies
- Current staffing model of 3–4 personnel per truck company
- Regional mutual aid expectations with neighboring agencies

Scoring Methodology

- **Weight (1–5):** Importance of each category relative to Rialto's risk profile
- **Score (1–5):** Apparatus performance in that category
- **Weighted Score:** Weight × Score

Decision Matrix

Priority Category	Weight	TDA Score	TDA Weighted	Platform Score	Platform Weighted
Maneuverability in tight neighborhoods & older streets	5	5	25	2	10
Rescue capability (multistory apartments, victim removal)	4	3	12	5	20
Elevated master stream & foam operations (industrial corridors)	4	3	12	5	20
Horizontal reach (rail yards, logistics centers)	4	5	20	4	16
Storage capacity (RIC, truck company tools, saws)	5	5	25	3	15

Priority Category	Weight	TDA Score	TDA Weighted	Platform Score	Platform Weighted
Training complexity (tiller operator requirement)	3	2	6	4	12
Staffing flexibility (3–4 personnel truck companies)	4	2	8	4	16
Industrial / specialized operations support	4	3	12	5	20
Cost & lifecycle considerations	3	3	9	3	9
Department culture & operator skill	5	4	20	3	15

Total Scores

- **TDA Total:** 149
- **Platform Total:** 153

Difference: Platform scores higher by **4 points**

Analysis of Results

The matrix reflects a **close and balanced evaluation**, with the platform aerial scoring slightly higher due to:

- Enhanced victim removal capability
- Superior elevated master stream and foam operations
- Greater alignment with generalized staffing flexibility

However, these advantages must be considered within the context of **Rialto’s actual and recurring operational demands**.

Key Operational Considerations

1. Maneuverability (Critical Priority)

The TDA significantly outperforms the platform in:

- Tight residential neighborhoods
- Apartment complexes with restricted access

- Cul-de-sacs and legacy street design
- Industrial sites with limited turning radius

This is a **high-weight category (5)** and represents a core operational need in Rialto.

2. Truck Company Functionality

The TDA provides superior capability in:

- Equipment storage and full-service truck operations
- Horizontal reach for large commercial and industrial buildings
- Roof access and ventilation operations

These functions align with the **most frequent aerial assignments** within the city.

3. Department Standardization & Training

- Rialto currently operates a Tractor Drawn Aerial staffed with four personnel
- Personnel are already **trained and tiller-certified**
- Existing operational model is proven and effective

Transitioning to a platform would:

- Require new training programs
 - Introduce a second aerial operational model
 - Reduce standardization across the fleet
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4. Systemwide vs. Single-Use Benefit

While the platform scores higher in rescue and elevated stream categories, those benefits are:

- Scenario-specific
 - Less frequent compared to routine truck company operations
 - Not reflective of the majority of incidents in Rialto
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Conclusion

Although the platform aerial slightly outperforms the TDA in total scoring, the difference is **minimal (4 points)** and driven primarily by **specialized or less frequent operational scenarios**.

The Tractor Drawn Aerial remains the preferred apparatus for the City of Rialto based on:

- Superior maneuverability in the city's built environment
- Greater alignment with day-to-day truck company operations
- Existing staffing model and trained personnel
- Departmental standardization and operational consistency
- Proven effectiveness within the current fleet

Final Determination

The Tractor Drawn Aerial provides the greatest overall operational benefit to the City of Rialto when considering real-world response demands, access limitations, and long-term fleet strategy.