

# Stations and Land Use

»» PLT Meeting July 18, 2012



Gone are the days.....







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## PEIS:

The capacity criterion (4900 passengers peak hour peak direction) is the minimum needed to adequately provide transit service and meaningfully reduce highway congestion in the peak hours and in the peak direction.

## ROD:

To meet travel demand needs, transit must have the capacity to serve 25% of the trip demand, which equates to a minimum of 4,900 passengers per hour in 2035, during peak times (defined as summer Sundays, which represents the highest average traffic volumes).

# What does this mean?

**Table 1**  
**Station Area Implications of Design Capacity**

Persons per Hour	Persons per Car	Cars per Hour	Trains per Hour	Cars per Train	Length per Car (feet)	Total Train Length (feet)
85 Persons per Car						
4,900	85	58	10-minute frequencies / 6 per hour	10	x 100 ft/car	1,000
4,900	85	58	15-minute frequencies / 4 per hour	15	x 100 ft/car	1,500
100 Persons per Car						
4,900	100	49	10-minute frequencies / 6 per hour	9	x 100 ft/car	900
4,900	100	49	15-minute frequencies / 4 per hour	13	x 100 ft/car	1,300

*Source: CDOT Division of Transit & Rail, 2012.*

# AGS Station Requirements

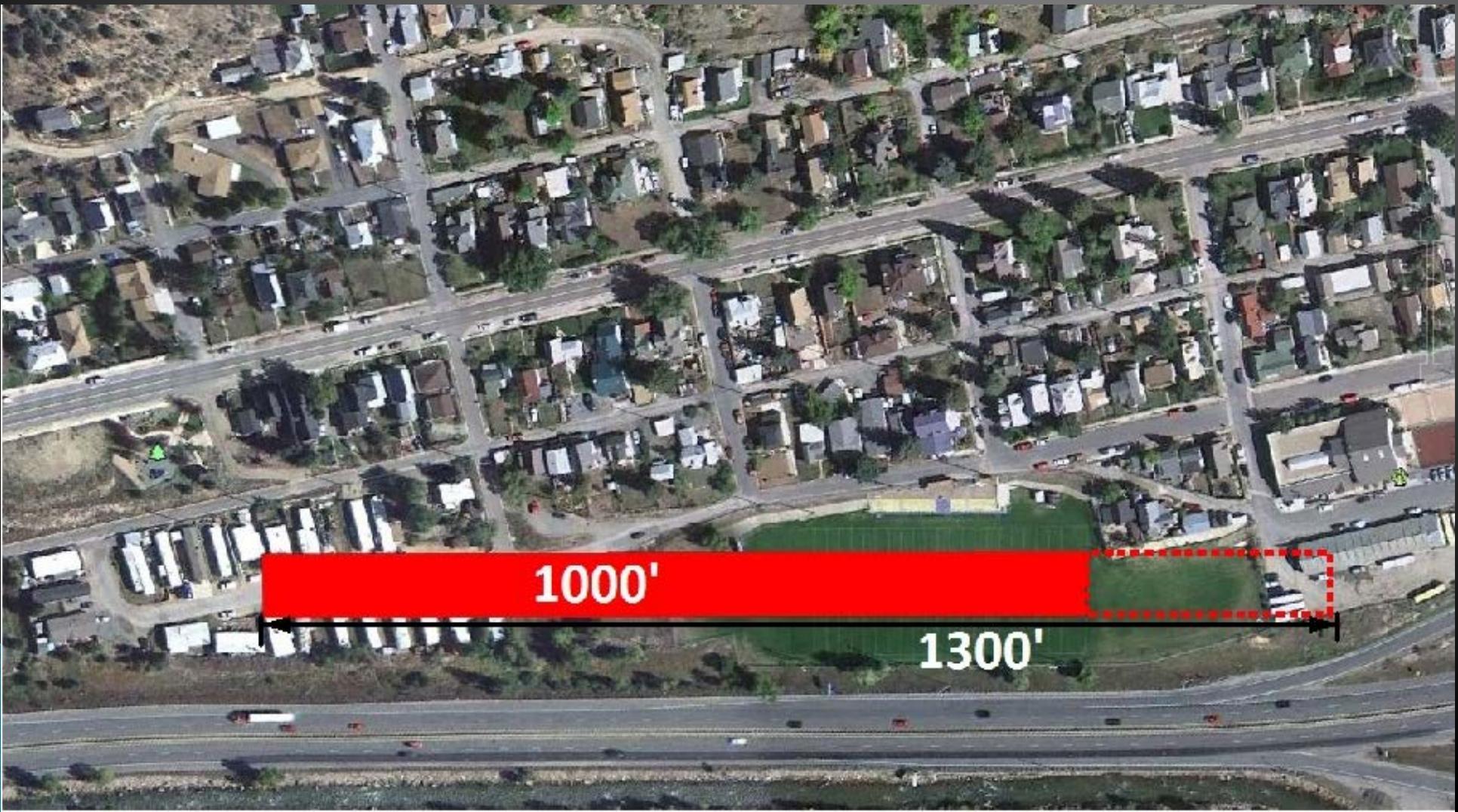
# Physical Elements of Station

- Platform
- Parking
- Traffic Circulation
- Transit interface
- Kiss and Ride
- Bicycle parking
- Bicycle/Pedestrian Circulation
- Baggage accommodation
- Landscaping
- Storm water
- Electrical power



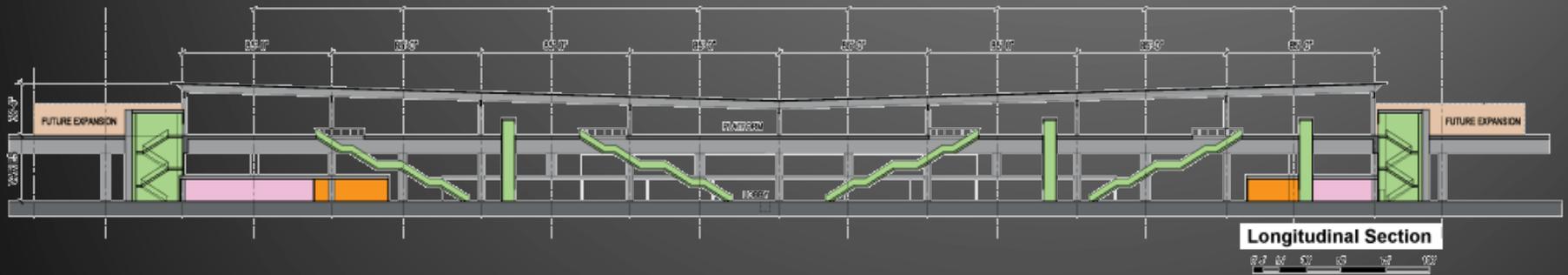
▶ *Example Station*

# Platform and Envelope (80')



1000'

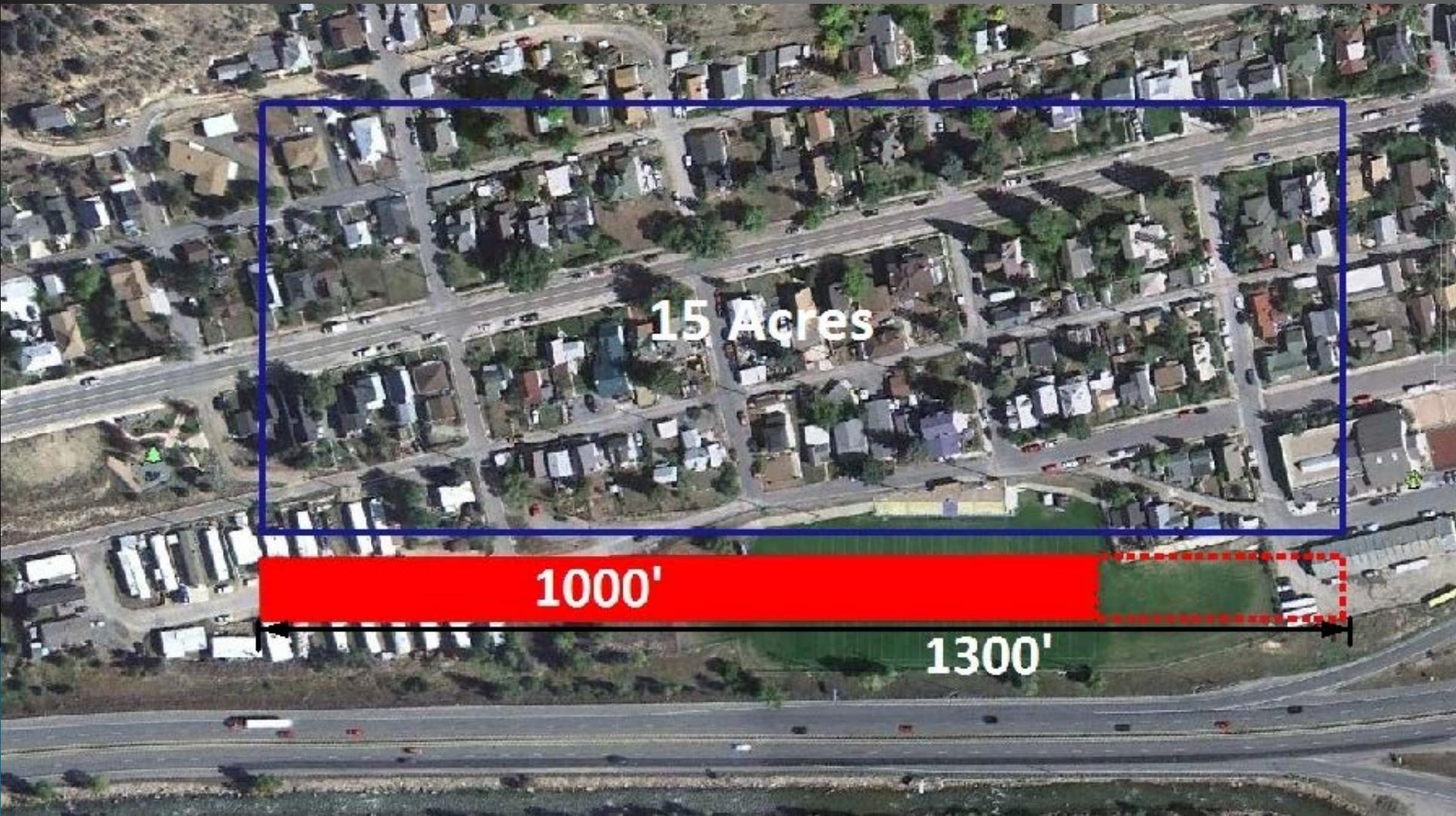
1300'



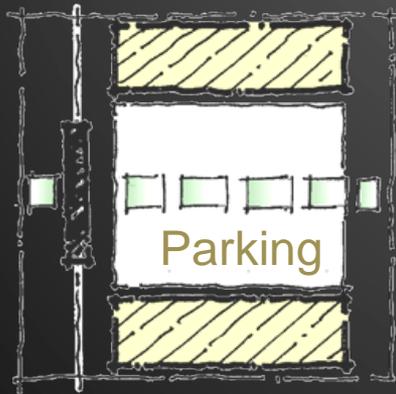
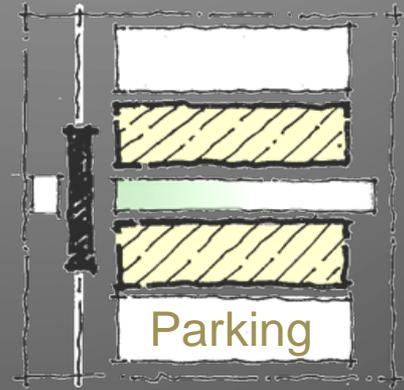
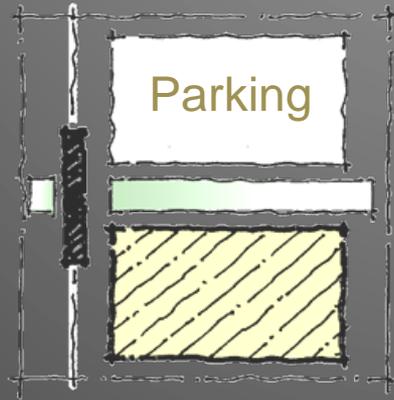
# Parking

- ▶ Varies by role of station in the system
- ▶ Base requirement: 1500 spaces
  
- ▶ Surface parking 9' X 18' per space
- ▶ 105 parking spaces/acre

# Parking layout







# Vehicular Access and Circulation



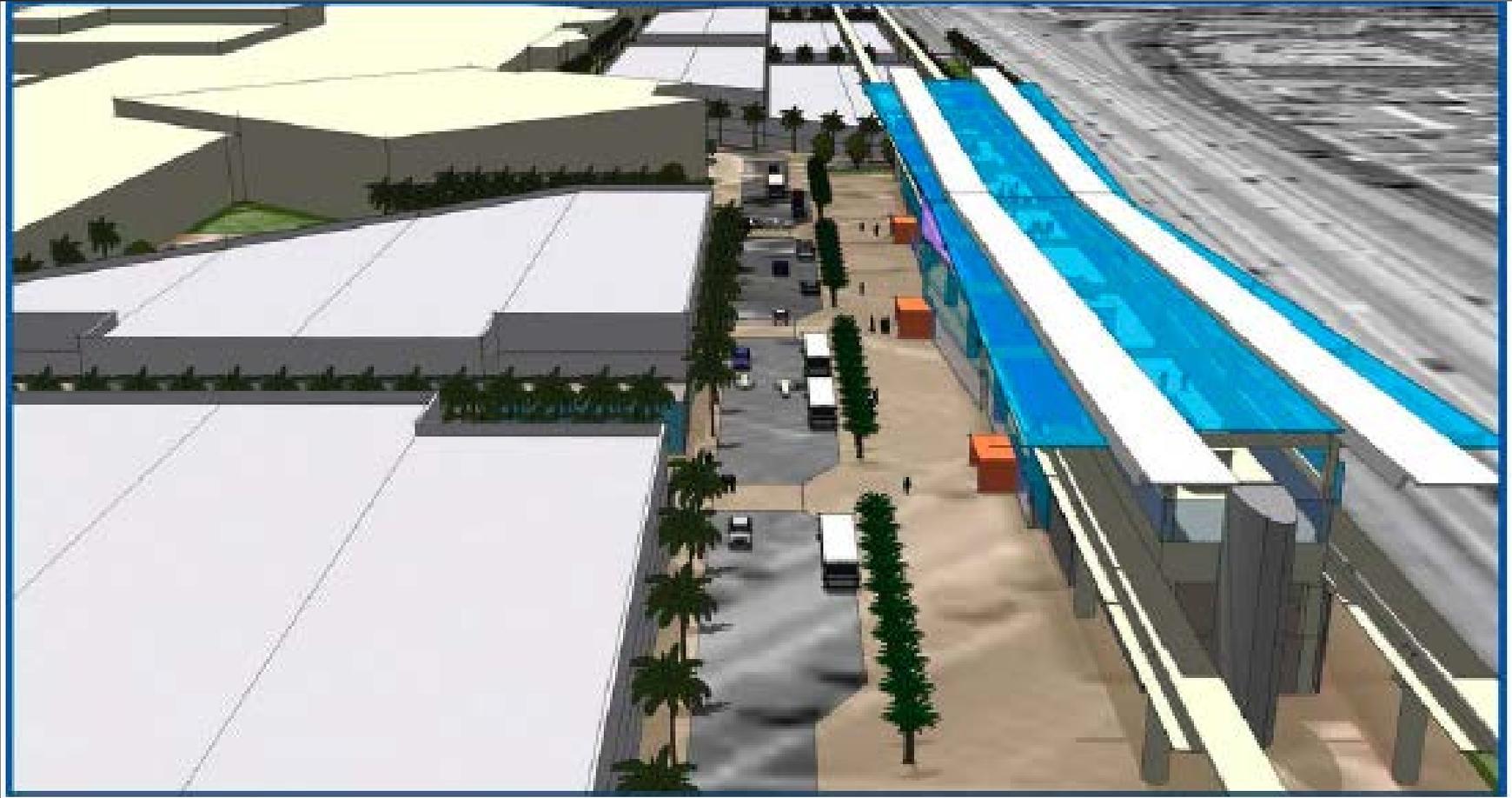
- ▶ Access to the Site:
  - Highway, arterial, local
- ▶ Site Circulation
- ▶ Acreage dependent on characteristics of site
- ▶ Needs to accommodate future traffic demand

An aerial photograph showing a large, rectangular area highlighted in yellow. This area is situated between a residential neighborhood with winding streets and a multi-lane highway. The highlighted area contains several large, interconnected rectangular structures, possibly a parking garage or a large commercial building. A road or driveway extends from the highway into the highlighted area. The surrounding landscape is a mix of developed areas and open, undeveloped land.

**20.9 Acres**

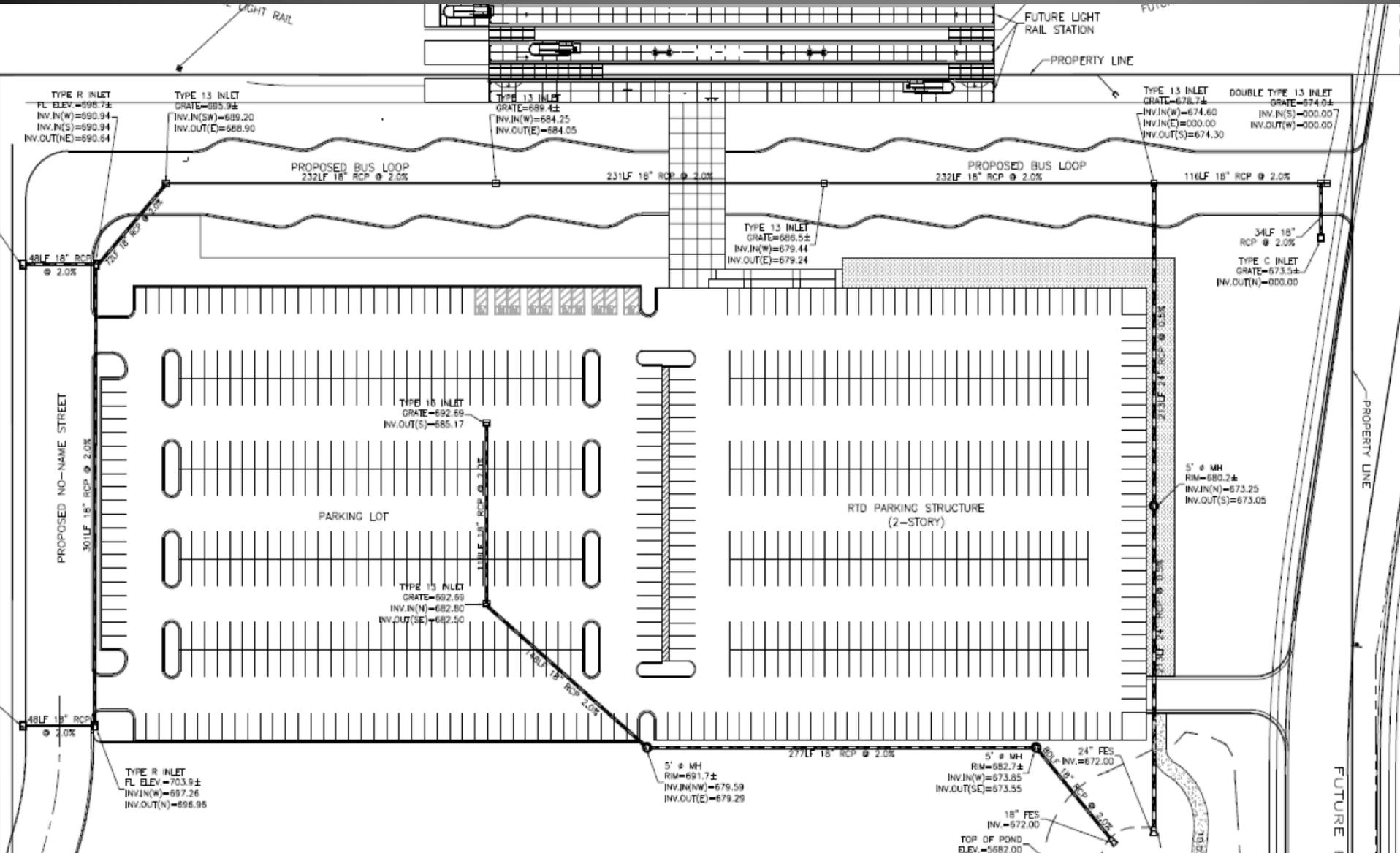
**Lincoln Station  
I-25/Lincoln – Lone Tree**

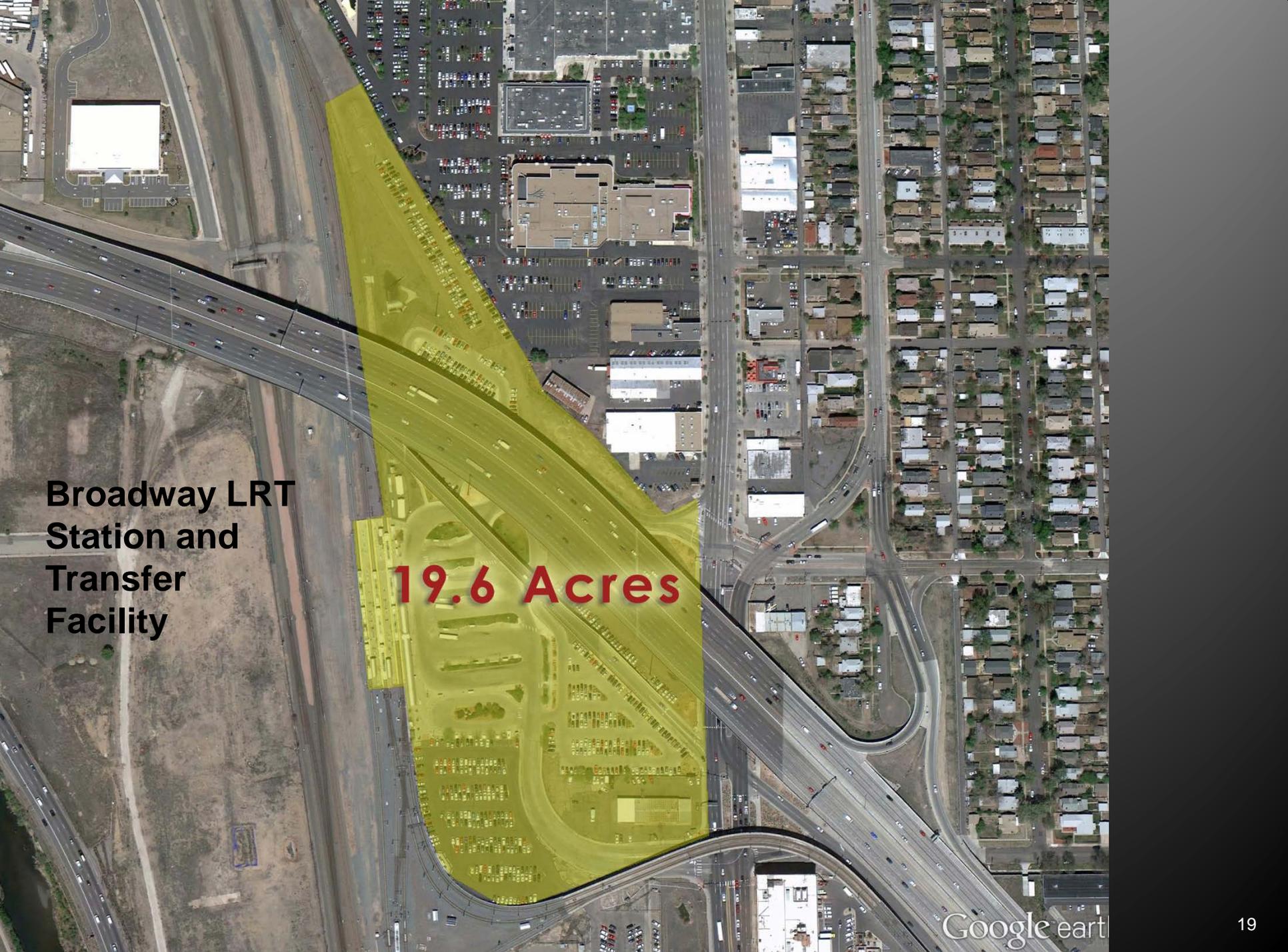
# Transit



**Station example – 300 linear ft. curb space for buses, additional 200 ft. auto pick-up/drop-off**

# Operations and Bus Circulation





**Broadway LRT  
Station and  
Transfer  
Facility**

**19.6 Acres**

# Intermodal Connectivity

- ▶ Bicycle/Pedestrian connections to the site
- ▶ Pedestrian movement at the site
- ▶ Bicycle parking/loading



# Land Availability: 12-14 acres



# Related Station Elements

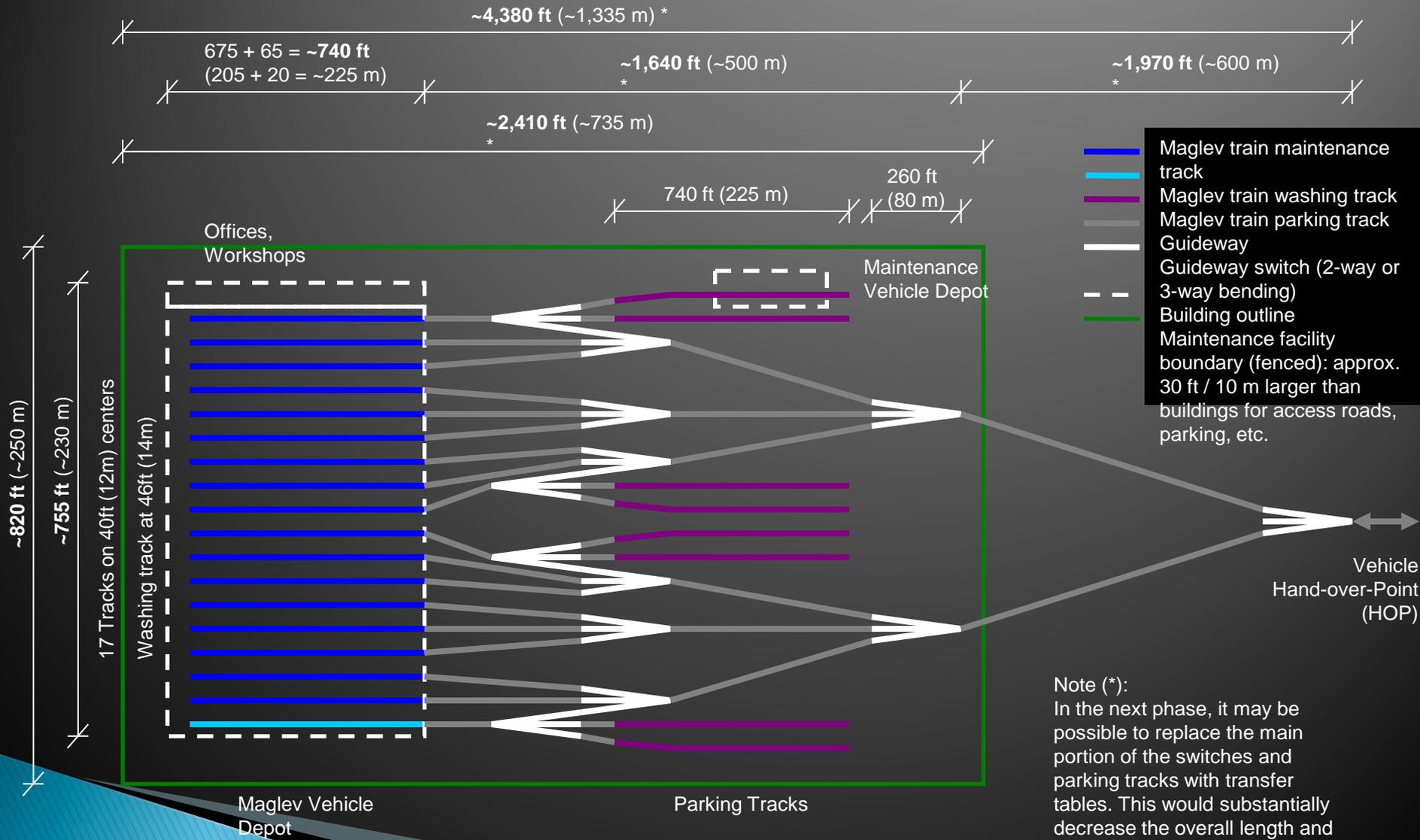
# Electrical Substations

- ▶ Dependent upon the operating scenarios and stations, the number of electrical substations might be 8–10.
- ▶ A major substation will be approximately 260' x 330'
- ▶ Light Rail 100' X 50', Commuter Rail 300' X 100'

# Operations and Maintenance Facility

- ▶ The main O&M facility could be about 680' x 2,400'.
- ▶ The minor O&M facility could be about 440' x 2,400'.
- ▶ One near the west end, and one near the east end.

# Central Facility Conceptual Layout (not to scale)



Note (\*):  
In the next phase, it may be possible to replace the main portion of the switches and parking tracks with transfer tables. This would substantially decrease the overall length and cost of the guideway portion of the maintenance facility.



**24.16 Acres**

**RTD LRT Maintenance  
Facility  
Englewood**

# Land Use:

Existing/Potential Use, Property Availability, Ownership, Growth Potential



# Urban Design and Context

- ▶ Compatible with surrounding land use?  
Compatible with area plans?
- ▶ Are cities willing to implement policies, station area plans and eventual rezoning to achieve medium/high density, compact residential/commercial development between  $\frac{1}{4}$  and  $\frac{1}{2}$  mile of station areas?
- ▶ Historic relevance
- ▶ Community character

# Current Station Assumptions

- ▶ C-470/US-6/I-70
- ▶ Clear Creek County (one station)
- ▶ Summit County (2 stations)
- ▶ Vail and Eagle County Regional Airport



# Next Steps:

Refinement of Station/Land Use Criteria

Future county/town discussions