

CHAPTER XII. SURFACE ACCESS AND PARKING CONCEPTS

1. PROPOSED CONNECTIONS TO REGIONAL HIGHWAY SYSTEM

A. East End

Sky Harbor Boulevard is planned to be extended eastward to connect directly with the East Papago Freeway in the vicinity of Priest Drive (approximately two miles east of Taxiway W). This will provide direct access between the airport and the eastern Phoenix metropolitan area via the East Papago Freeway. Between Taxiway W and the interchange with East Papago, Sky Harbor Boulevard will pass beneath and have limited interchange capability with both Rt. 153 and Rt. 143. Access to and from the airport will be provided only via an interchange with Rt. 153 because of capacity restrictions on Rt. 143. Traffic to and from the south-east would use I-10 in conjunction with Rt. 153 to enter and leave the airport. Traffic to and from the north would approach the airport via 44th Street and Rt. 153. (See Figure XII-1.)

The interchange between Sky Harbor Boulevard and Rt. 143 would permit movement to and from the south and east only, thus precluding any direct access to or from the airport via the Hohokam Expressway.

Sky Harbor Boulevard will be a minimum of four lanes in each direction between Taxiway W and Rt. 153 on an east-west alignment through much of the distance. East of Rt. 153, the roadway will be reduced to three lanes. Between Rt. 153 and Rt. 143, the eastbound roadway will cross over the westbound roadway to change from the "English-style" configuration through the airport to conventional roadway configuration.

Between Taxiway W and Rt. 153, an interchange will be developed to provide access to the America West facility and other facilities to be developed in the area between Taxiway W and Rt. 143. The interchange may be in the form of a series of "diamond" ramps between Sky Harbor Boulevard and a pair of local roadways, which will cross over the depressed alignment of Sky Harbor Boulevard and provide access to the facilities to be developed at the east end of the airport. These improvements are shown in Figure XII-1.

B. West End

In 1988, Sky Harbor Boulevard was extended westward over 24th Street to provide a direct connection with I-10 to and from the north and west (downtown Phoenix). As the Phoenix expressway system is completed, this spur off I-10 will replace 24th Street as the primary entry point at the west end of the airport.

Plans are also proceeding for the realignment of 24th Street between Air Lane Boulevard on the north side of Sky Harbor Airport and I-10 on the south side. The realignment, scheduled for the early 1990s, will shift 24th Street to

the west to the approximate alignment of 22nd Street opposite the west end of the airport to provide for expansion of the airport facilities between the runways as well as to permit the potential for lengthening the north runway. This, together with improvements to the interchange between I-10 and Buckeye Road, will shift traffic off 24th Street. As a result, the I-10 spur will eventually accommodate nearly 60 percent of all traffic entering Sky Harbor at the west end, while the remaining 40 percent will use Buckeye Road and I-10 to and from the south and southwest. Roadway improvements at the west end of the airport are shown in Figures XII-2 and XII-3.

To provide for complete movement between the two major approach routes at the west end (the I-10 Spur and Buckeye Road) and the terminal area, cargo area and general aviation complex, a series of roadway/ramp improvements must be made in this area. Since the primary movement will be to and from the terminal, the emphasis is in providing a smooth and direct connection between Buckeye Road and Sky Harbor Boulevard. With the elimination of 24th Street on its present alignment, the connection can be made by transiting the eastbound lanes of Buckeye Road onto the existing "ramp" from 24th Street onto Sky Harbor Boulevard and using the existing single-lane westbound exit roadway currently providing access onto 24th Street northbound to turn to the south and pass beneath the I-10 Spur to form westbound Buckeye Road. (See Figures XII-2 and XII-3). Buckeye Road east of existing 24th Street, would serve as a local access road to the cargo complex, hotel and other facilities to be developed in this general area. Roadway connections between Sky Harbor Boulevard, carrying both I-10 and Buckeye Road traffic, and the cargo access and the general aviation access roads would permit traffic from either direction to access these facilities.

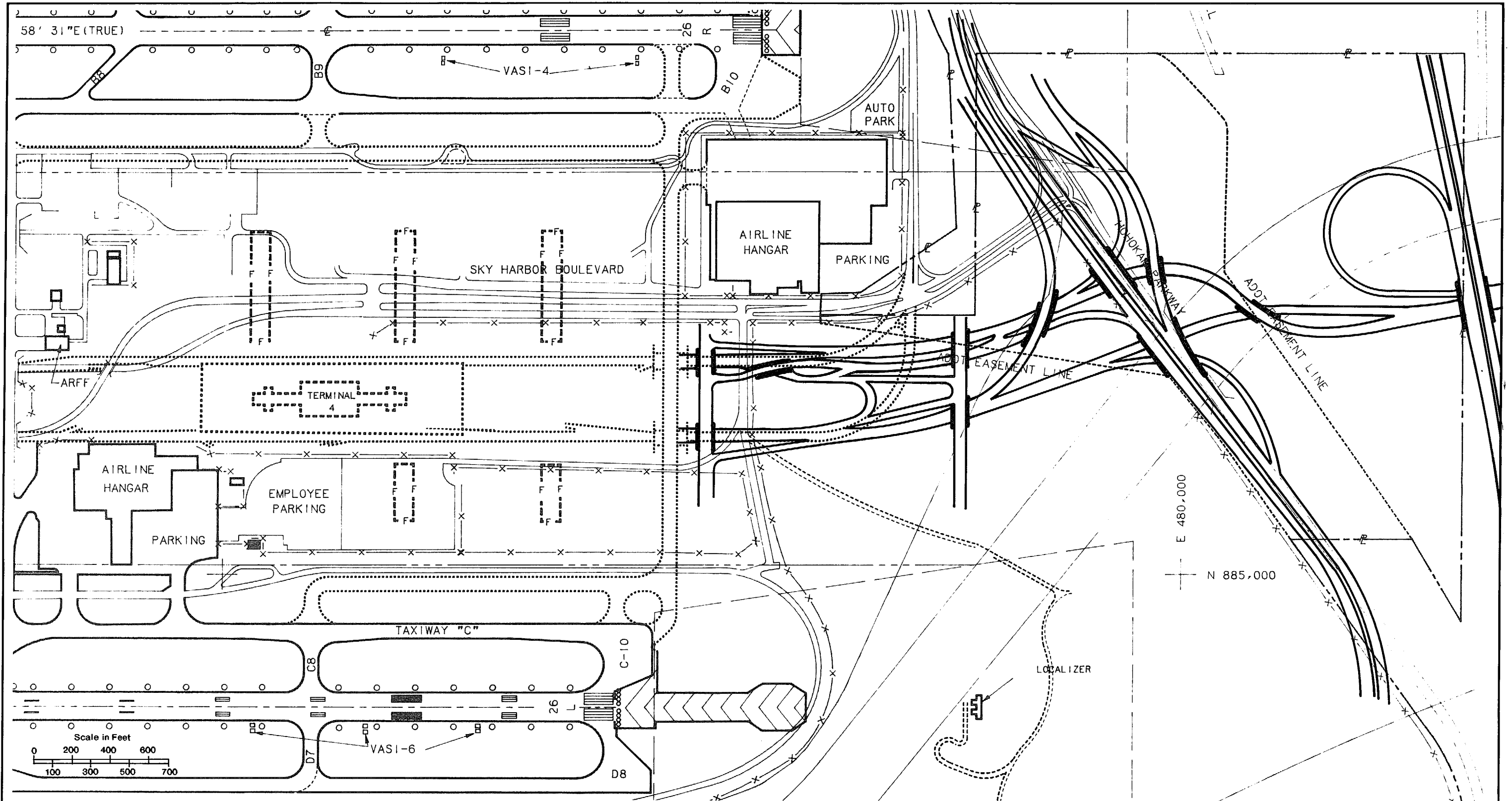
Since Terminal 2 will remain in use until approximately the year 2000, the west end access/roadway network must retain some of the existing roadway recently constructed west of the hotel site (see Figure XII-2). With the elimination of Terminal 2, the road network can be simplified as shown in Figure XII-3.

2. PROPOSED IMPROVEMENTS TO INTERIOR ROADWAYS

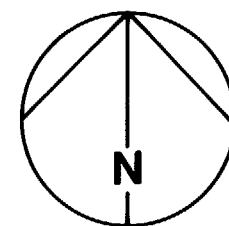
A. Sky Harbor Boulevard

Improvements to Sky Harbor Boulevard between 24th Street and Taxiway X will be required to adequately handle the projected traffic and respond to changes in the terminal complex. In addition to the improvements to provide adequate access at the west end, other improvements are:

- 1. Taxiway Z Underpass.** Taxiway Z is proposed to be constructed just east of the hotel to assist in cross-field movements following the closing and demolition of Terminal 1. This will necessitate depressing Sky Harbor Boulevard from just east of the Executive Terminal to just west of Terminal 2. To accommodate this, Sky Harbor Boulevard will have to be realigned and the employee parking lots in this area will be eliminated.

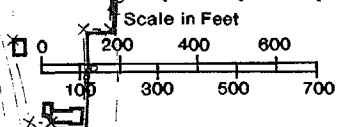
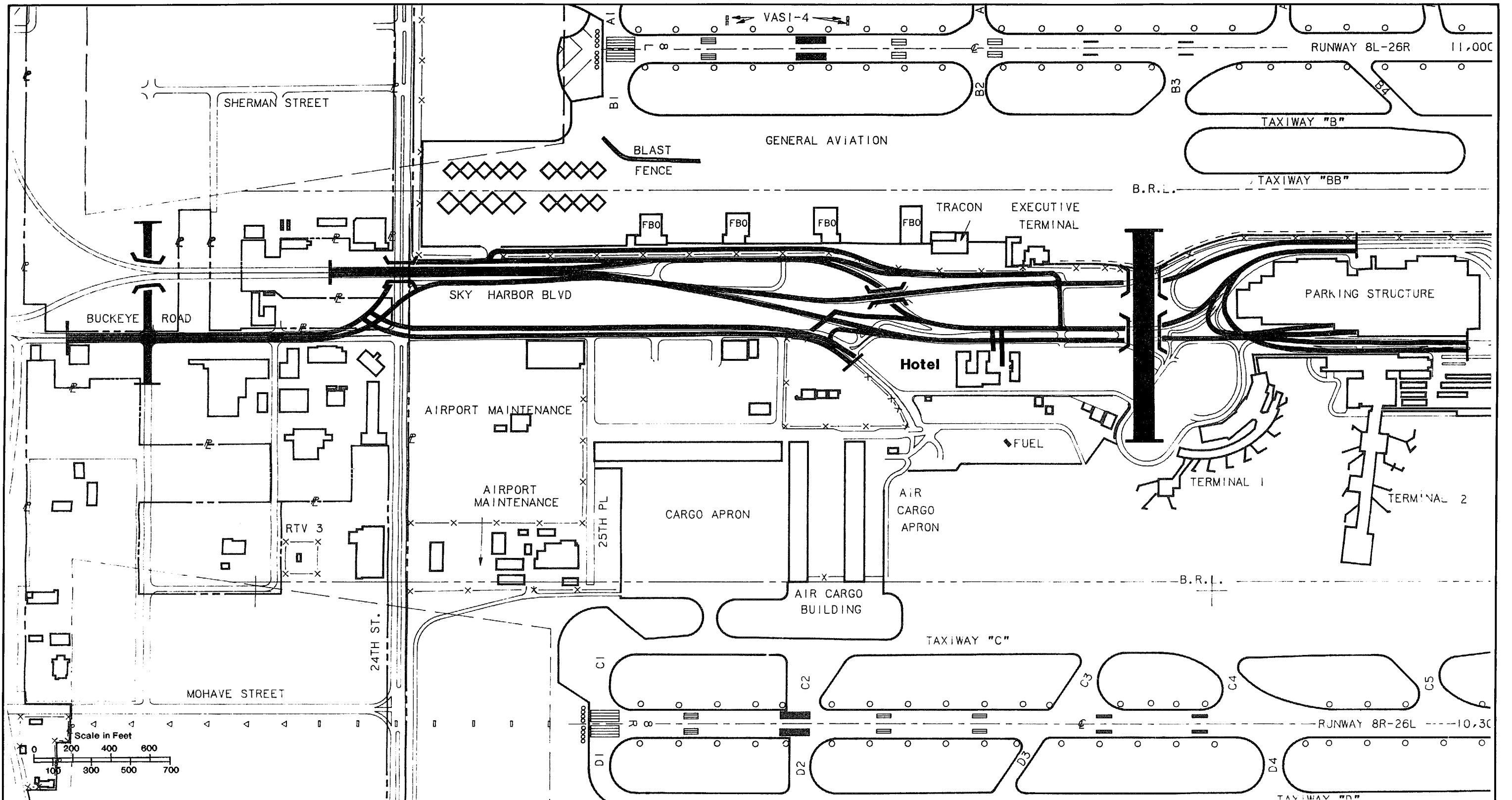


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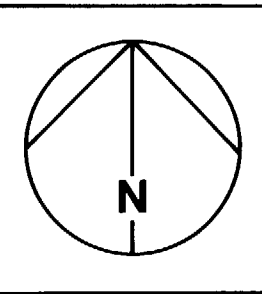


East End Access System

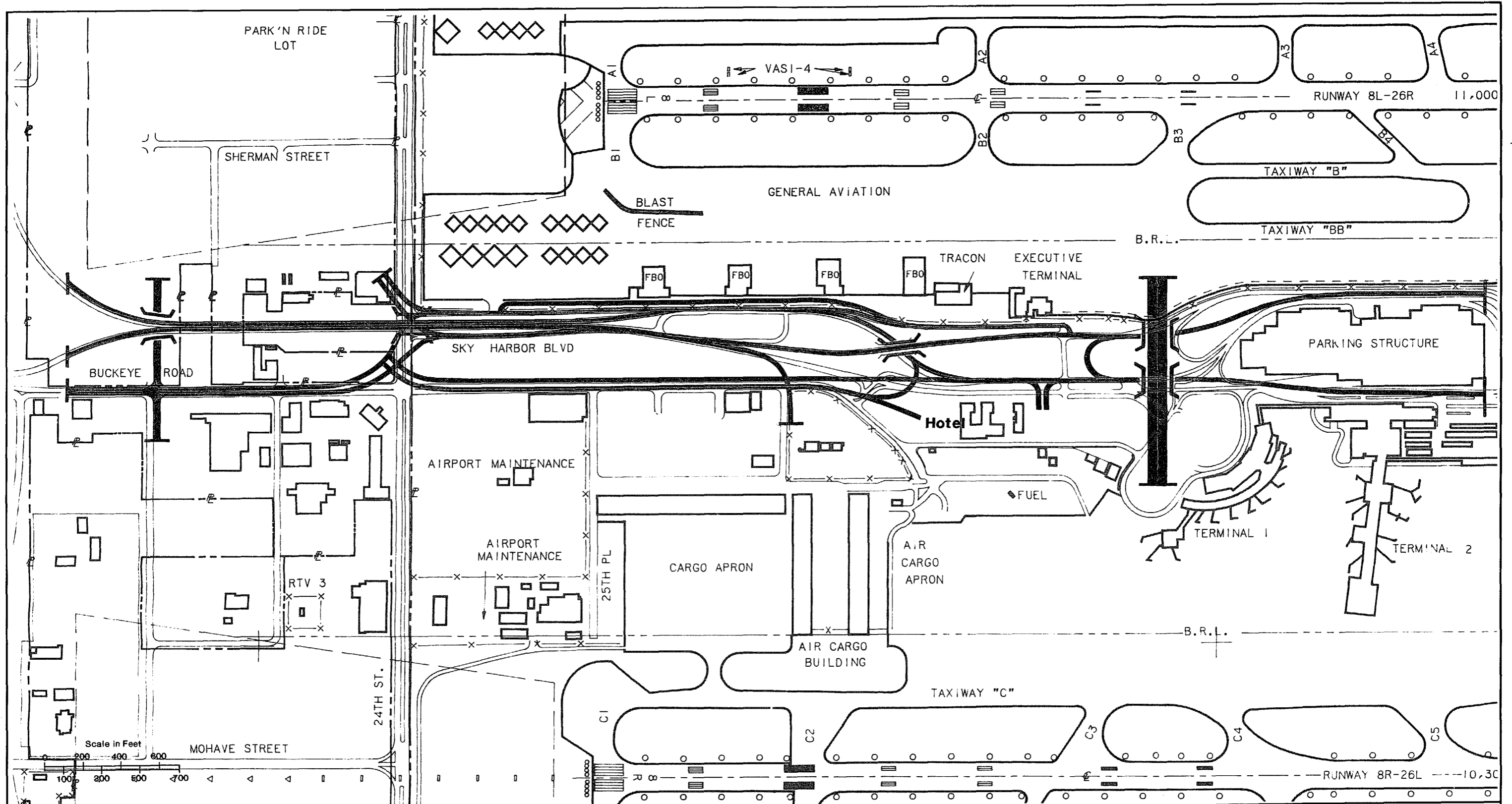
Figure XII-1



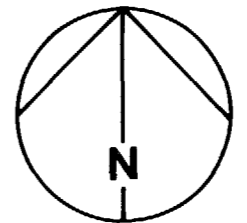
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**West End Access System
Pre-Year 2000**
Figure XII-2



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**West End Access System
Post Year 2000**

Figure XII-3

Because Terminal 2 will remain in use for some period of time after Taxiway Z is constructed, the southern-most underpass, which would be built to accommodate ultimately four lanes westbound, should be initially operated with two lanes westbound and one (wide) lane eastbound separated by a "jersey barrier". This will provide simple and direct access to Terminal 2 from the west, using much of the roadway in the existing general configuration (refer to Figure XII-2).

2. Sky Harbor Boulevard Widening. Provision should be made to widen Sky Harbor Boulevard to three lanes in each direction between the ramps at Buckeye and 24th Street and Terminal 3. Between the west end of Terminal 3 and Taxiways X and Y, Sky Harbor Boulevard may have to be widened to four lanes if use is made of the outer curb at Terminal 3. This would be necessary to preserve the capacity of three lanes for through traffic.

3. Alignment. Once Terminal 2 is removed from service, the alignment of Sky Harbor Boulevard can be modified in accordance with need. Options include:

- a) Retain present alignment (permits parking structure to remain);
- b) Extend alignment (depressed) from Taxiway Z eastward to Terminal 3 (requires removal of parking structure); and
- c) Extend alignment (depressed) from Terminal 3 westward to Taxiway Z (requires removal of parking structure).

Since the parking structure at Terminal 2 contains over 2,000 spaces and will have an economic life beyond the year 2000, it is recommended that the parking structure remain in its current location and that eastbound Sky Harbor Boulevard traffic passes to the north and westbound Sky Harbor Boulevard traffic be relocated to pass to the south of the structure (see Figure XII-4). It is also recommended that to save costs and permit the greatest flexibility for the future, Sky Harbor Boulevard remain "on grade" between Taxiway Z and Terminal 3. Because of the distance between these two points, the roadway would not have a noticeable "roller coaster" profile despite the changes in vertical alignment.

B. Other Public Roads

The recommended changes at the west end of the airport to facilitate movements from Buckeye Road east of 22nd Street to Sky Harbor Boulevard to access the terminals and much of the parking will require changes to some of the secondary public roads. In general, this includes down-grading Buckeye Road from 24th Street (existing) to the hotel site, providing local access and allowing two-way movement through a combination of roadways and parking lot drive aisles within the general aviation area just west of Taxiway Z.

3. PROPOSED PARKING IMPROVEMENTS

A. Terminal Parking

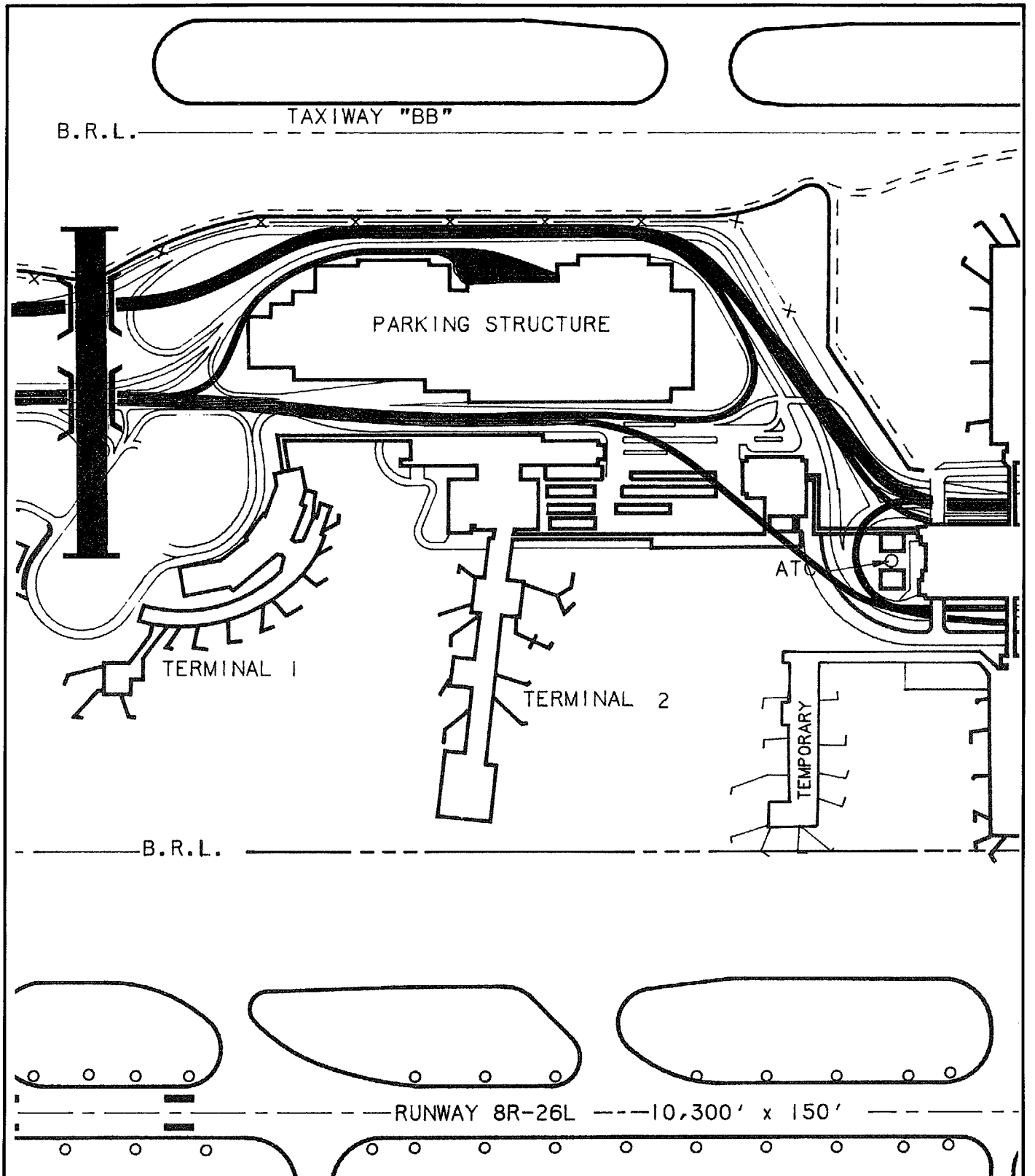
The overall projected parking requirements of 16,500 spaces by the year 2007 assumes that demand is met in an optimal manner for on-airport parking. A portion of the air traveling public will always prefer to park off-airport in an effort to avoid airport congestion, avoid the possibility of on-airport parking being full, save money (if the rates are cheaper), or take advantage of "more personal service" (as is promised by some off-airport operations). Generally, the on-airport parking spaces are proportionally distributed between spaces close to the terminal, which are priced to satisfy those who park short-term, and remote lots, which are priced to attract the longer term parkers. Since the parking to be developed in the terminal area is entirely structured parking with limited expansion capabilities, the terminal area parking cannot be expanded annually/incrementally to satisfy a specific type of demand in the manner that surface lots can easily and inexpensively be expanded. Instead, parking rates must be adjusted periodically upward. Thus, the short term parker may always be accommodated within the terminal area, while the volume of longer term parkers which can be accommodated within the terminal area is diminished through financial incentives to use the remote lots.

Recognizing the existing conditions at Terminal 3 and the parking expansion capabilities at Terminal 4, it is recommended that 4,200 spaces (5 levels-basic garages) to 6,000 spaces be constructed at Terminal 4 depending on whether this third concourse is build on T-3 or not. By providing this amount of parking under these two cases, all who park less than a few hours can be accommodated as well as many who park up to 24 hours. By providing the specific quantities cited above, parking rates at the two terminals would be nearly identical, providing the passenger with a nearly equivalent "level of service" in each terminal.

B. Remote Parking

Remote surface parking lots must be developed to serve the longer term parkers. To avoid requiring air travelers to drive through the airport to reach the remote parking, one lot should be located at each end of the airport and sized in accordance with the percentage of traffic using that entrance. In general, it is anticipated that the 50-50 split between the east and west entrance will continue. Therefore, an ultimate of between 4,100 and 5,000 surface parking spaces should be developed at each end of the airport.

At the east entrance, the parking lot should be located in the area between Taxiway W and Rt. 153 south of Sky Harbor Boulevard. To provide remote parking for those approaching from the west, it is recommended that the structure located at Terminal 2 remain in use after Terminal 2 is closed. This 2,200-space facility together with the 3,000 space lot presently being constructed west of existing 24th Street opposite Runway 8L will be adequate to meet the need for "remote" parking for traffic approaching from the west.



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Central Area-Interim Road System

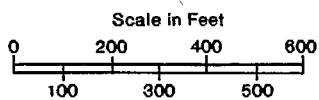


Figure XII-4

4. PROPOSED RAIL TRANSIT FACILITIES

A. Alignment

The Regional Public Transportation Authority of Phoenix was planning to develop a regional rail rapid transit system to serve the Phoenix Metropolitan Area until the decision was made early in 1989 to shelf these plans. The East Valley Corridor Line traversed the airport in an east-west direction with stations at Terminals 3 and 4. Based on current planning, the two-track system would have entered the airport at the west end on elevated structure on alignment between Sky Harbor Boulevard and Buckeye Road.

It would then have descended to below-grade through the airport and out to the east beyond S.R. 153. Because the reservation of the right-of-way to construct the system has only minor impacts on other facility development, it is recommended that its land requirements be protected unless airport development subsequently requires abandonment of this approach. In the event of a future reversal of public policy on the rail transit issue, construction of this essential link could thereby be facilitated.