

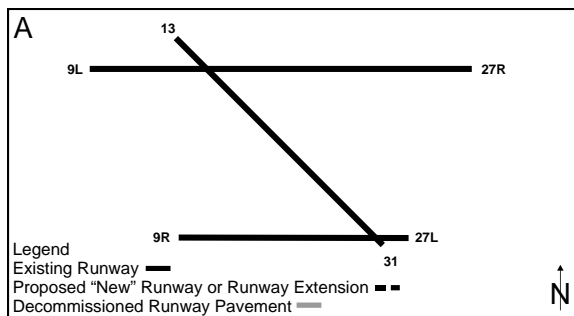
6.H.3 LIGHT EMISSIONS AND VISUAL IMPACTS

6.H.3.1 Light Emissions

FAA order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*, states that “the extent to which any lighting associated with an airport action will create an annoyance among people in the vicinity of the installation” shall be examined.

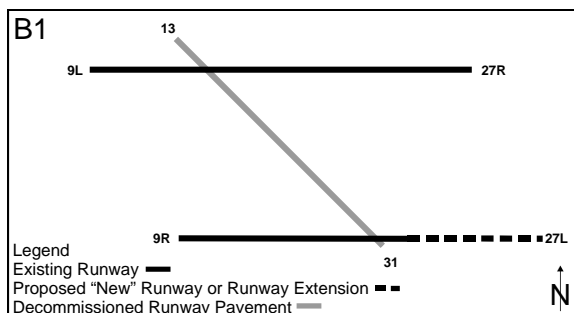
Many of the residential areas around FLL are currently shielded from airport light emissions primarily due to natural and man made buffers and existing compatible land uses around the airport. These include major highways, industrial development, noise berms, mature trees, and the distance of the residential structures from airport property.

6.H.3.1.1 ALTERNATIVE A: NO ACTION



No additional lighting would be required for the No Action Alternative. *Alternative A would have no impact on light emissions.*

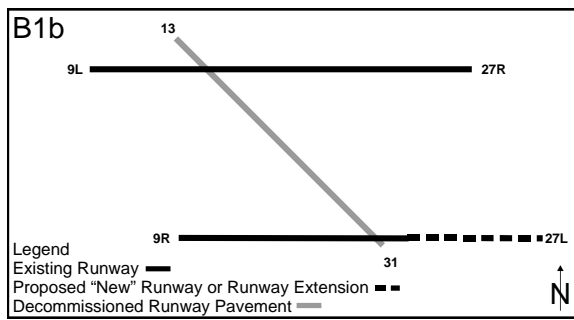
6.H.3.1.2 ALTERNATIVE B1: REDEVELOP AND EXTEND EXISTING RUNWAY 9R/27L TO AN 8,600-FOOT BY 150-FOOT ELEVATED RUNWAY



The redevelopment of Runway 9R/27L would include the installation of a Medium-Intensity Approach Light System (MALS) with Runway End Identifier Lights (REIL) on Runway 9R (referred to as a MALSR). Runway 27L would be equipped with a shorter MALS. **Exhibit 6.H.3-1, *Light Emissions Alternative B1***, graphically depicts the configuration of these approach light systems, as well as other airfield light sources. No light emissions from either the MALSR or MALS would impact any existing residential areas. The Aviation Greenbelt, Griffin Road, and the wall along

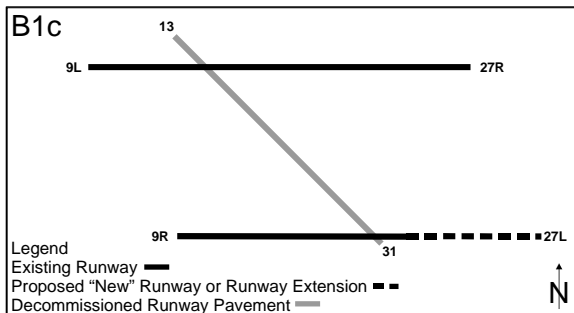
Griffin Road would continue to act as a buffer between the airport and the residential area to the south of Griffin Road. The extension of the runway to the east would be elevated to bridge over the FEC railway tracks and U.S. Highway 1. Lighting in this area would not impact the surrounding commercial/mixed-use area south of the easterly runway extension and would have minimal impact on West Lake Park to the east of the airport. The runway and associated runway lighting would be elevated above the park. New approach lights installed on the west end of the redeveloped runway would be directed to the west and upward, and would not affect the existing commercial and transportation land uses west of the airport. *No significant light emission impacts would occur with implementation of Alternative B1.*

6.H.3.1.3 ALTERNATIVE B1b: REDEVELOP AND EXTEND EXISTING RUNWAY 9R/27L TO AN 8,000-FOOT BY 150-FOOT ELEVATED RUNWAY WITH EMAS



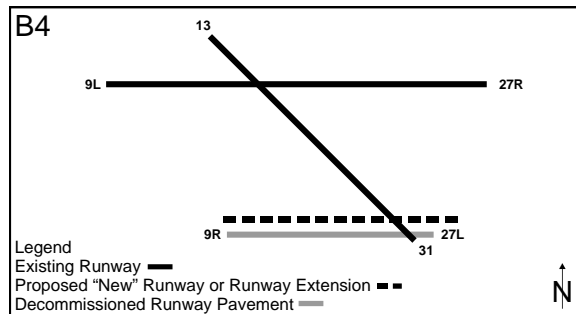
For Alternative B1b, the redevelopment of Runway 9R/27L and the associated potential for light emissions is same as Alternative B1 (See **Exhibit 6.H.3-2, Light Emissions Alternative B1b**). *No significant light emission impacts would occur with implementation of Alternative B1b.*

6.H.3.1.4 ALTERNATIVE B1c: (AIRPORT SPONSOR’S PROPOSED PROJECT) REDEVELOP AND EXTEND EXISTING RUNWAY 9R/27L TO AN 8,000-FOOT BY 150-FOOT ELEVATED RUNWAY WITH EMAS; RUNWAY USE DETERMINED BY BROWARD COUNTY’S INTERLOCAL AGREEMENTS.



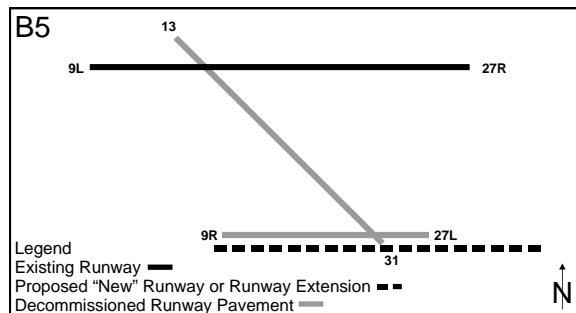
For Alternative B1c, the redevelopment of Runway 9R/27L and the associated potential for light emissions is same as Alternatives B1 and B1b (See **Exhibit 6.H.3-3, Light Emissions Alternative B1c**). *No significant light emission impacts would occur with implementation of Alternative B1c.*

6.H.3.1.5 ALTERNATIVE B4: BUILD A NEW 6,001-FOOT AT GRADE RUNWAY WITH EMAS LOCATED 340 FEET NORTH OF EXISTING SOUTH RUNWAY (TO REPLACE EXISTING RUNWAY 9R/27L)



The redevelopment of Runway 9R/27L would include the installation of a MALSR to serve Runway 27L, while a MALS would be installed on Runway 9R. No light emissions from the MALSR or the MALS would impact any existing residential areas surrounding the airport. **Exhibit 6.H.3-4, *Light Emissions Alternative B4***, graphically depicts the sources of light emissions associated with Alternative B4. The Aviation Greenbelt, Griffin Road, and the wall along Griffin Road would continue to act as a buffer between the airport and the residential area to the south of Griffin Road. Given that the southern edge of the proposed taxiway would not generally extend any further south than the existing runway pavement, the new runway edge light systems should have no additional light emissions impact on adjacent residential uses. *No significant light emission impacts would occur with implementation of Alternative B4.*

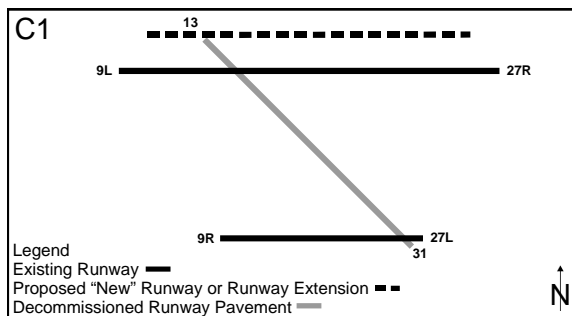
6.H.3.1.6 ALTERNATIVE B5: BUILD A 7,800-FOOT ELEVATED RUNWAY WITH EMAS LOCATED 320 FEET SOUTH OF EXISTING SOUTH RUNWAY (TO REPLACE EXISTING RUNWAY 9R/27L)



The redevelopment of Runway 9R/27L would include the installation of a MALSR on Runway 9R and a MALS on Runway 27L. **Exhibit 6.H.3-5, *Light Emissions Alternative B5***, graphically depicts the configuration of these approach light systems, as well as other airfield light sources. No light emissions from the new runway approach light systems would impact any existing residential areas. With redevelopment of Runway 9R/27L further to the south than existing Runway 9R/27L, the proposed runway and taxiway edge lights would be closer to the residential areas south of Griffin Road. Although a portion of the Aviation Greenbelt would be removed to facilitate construction of the redeveloped runway, a sufficient portion of the Greenbelt would remain to shield light emissions from

Melaluca Gardens, south of Griffin Road. The wall and landscaping along Griffin Road would continue to act as a buffer between the airport and Melaluca Gardens. Land uses adjacent to the eastern extension of Runway 9R/27L include existing commercial and mixed-use development. No light emissions from the elevated portion of the runway would affect surrounding land uses. *No significant light emission impacts would occur with implementation of Alternative B5.*

6.H.3.1.7 ALTERNATIVE C1: BUILD A 7,721-FOOT AT GRADE RUNWAY LOCATED 850 FEET NORTH OF EXISTING RUNWAY 9L/27R (A DEPENDENT PARALLEL RUNWAY TO EXISTING RUNWAY 9L/27R)

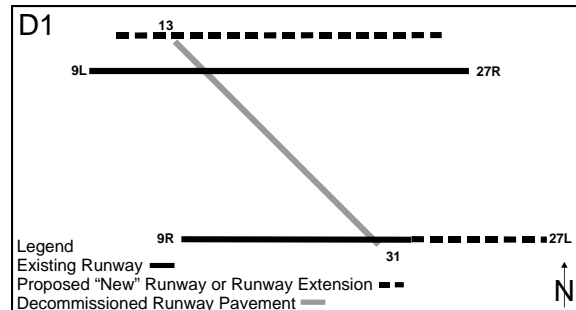


Alternative C1, with the development of new Runway 8/26, would require relocation of the existing airport tenants present on the north airfield. The commercial land uses off-airport and located along the northern perimeter of the airport would not be impacted by the proposed runway edge light systems along Runway 8/26, due to the location of Interstate-595 between the airport and these adjacent developments.

Lighting associated with the north airfield airport tenants would be removed from the north airfield and redeveloped with each tenant as they are relocated to other sites on-airport or within an area east of U.S. Highway 1, south and east of the airport as graphically depicted on **Exhibit 6.H.3-6, Light Emissions Alternative C1**. The light emissions generated from the relocated facilities would be in areas of existing commercial and industrial land use and should have no impact on any residential areas.

A MALSR would be installed for Runway 8/26. It would be located in areas of existing airport and commercial land use. It would not impact any existing residential areas. *No significant impacts due to light emissions would occur with implementation of Alternative C1.*

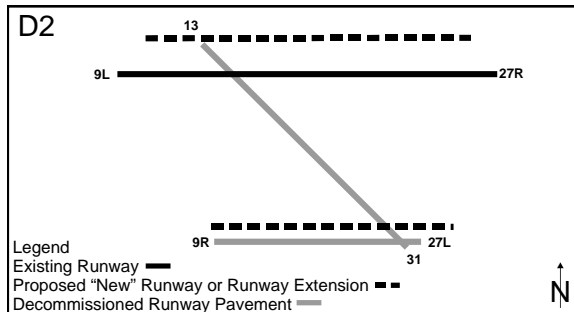
6.H.3.1.8 ALTERNATIVE D1: REDEVELOP AND EXTEND EXISTING RUNWAY 9R/27L TO 8,000 FEET AND BUILD A NEW 7,721-FOOT RUNWAY NORTH OF EXISTING RUNWAY 9L/27R (COMBINATION OF ALTERNATIVES B1b AND C1)



The impacts resulting from implementation of Alternative D1 would be a combination of the impacts resulting from Alternatives B1b and C1. The redevelopment of Runway 9R/27L would include the installation of a MALSR on Runway 9R, MALS on Runway 27L, and a MALSR on Runway 8/26. **Exhibit 6.H.3-7, Light Emissions Alternative D1**, graphically depicts the configuration of these approach light systems, as well as other airfield light sources. No light emissions from either the MALSR or MALS would impact any existing residential areas. The Aviation Greenbelt, Griffin Road, and the wall along Griffin Road would continue to act as a buffer between the airport and the residential area to the south of Griffin Road. The extension of the runway to the east would be elevated to bridge over the FEC railway tracks and U.S. Highway 1. Lighting in this area would not impact the surrounding commercial/mixed-use area south of the easterly runway extension and would have minimal impact on West Lake Park to the east of the airport. The runway and associated runway lighting would be elevated above the park. New approach lights installed on the west end of the redeveloped runway would be directed to the west and upward, and would not affect the existing commercial and transportation land uses west of the airport.

The development of new Runway 8/26 would require relocation of the existing airport tenants present on the north airfield and no impact would occur to the commercial land uses off-airport. Lighting associated with the north airfield airport tenants would be removed from the north airfield and redeveloped with each tenant as they are relocated to other sites on-airport or within an area east of U.S. Highway 1, south and east of the airport. The light emissions generated from the relocated facilities would be in areas of existing commercial and industrial land use and should have no impact on any residential areas. The MALSR for Runway 8/26 would be located in areas of existing airport and commercial land use. It would not impact any existing residential areas. *No significant light emission impacts would occur with implementation of Alternative D1.*

6.H.3.1.9 ALTERNATIVE D2: BUILD A NEW 6,001-FOOT AT GRADE RUNWAY WITH EMAS LOCATED 340 FEET NORTH OF EXISTING SOUTH RUNWAY AND BUILD A 7,721-FOOT AT GRADE RUNWAY LOCATED 850 FEET NORTH OF EXISTING RUNWAY 9L/27R (COMBINATION OF ALTERNATIVES B4 AND C1)



The impacts resulting from implementation of Alternative D2 would be a combination of the impacts from Alternatives B4 and C1. As described previously, a MALSR for Runway 8/26 would be located in areas of existing airport and commercial land use and would not impact any existing residential areas as graphically depicted in **Exhibit 6.H.3-8, Light Emissions Alternative D2**. The development of Runway 8/26 would require relocation of the existing airport tenants present on the north airfield and no impact would occur to the commercial land uses off-airport. Lighting associated with the north airfield airport tenants would be removed from the north airfield and redeveloped with each tenant as they are relocated to other sites on-airport or within an area east of U.S. Highway 1, south and east of the airport. The light emissions generated from the relocated facilities would be in areas of existing commercial and industrial land use and should have no impact on any residential areas.

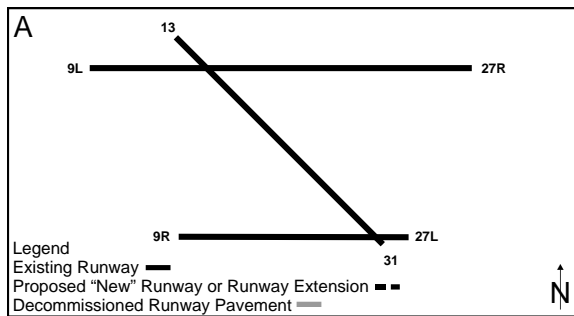
The redevelopment of Runway 9R/27L would include the installation of a MALSR to serve Runway 27L, while a MALS would be installed on Runway 9R. No light emissions from the MALSR or the MALS would impact any existing residential areas surrounding the airport. The Aviation Greenbelt, Griffin Road, and the wall along Griffin Road would continue to act as a buffer between the airport and the residential area to the south of Griffin Road. Given that the southern edge of the proposed taxiway would not generally extend any further south than the existing runway pavement, the new runway edge light systems should have no additional light emissions impact on adjacent residential uses. *No significant light emission impacts would occur with implementation of Alternative D2.*

6.H.3.2 Visual Impacts

The airport is bounded on three sides by major transportation facilities - on the east by U.S. Highway 1, on the north by Interstate-595, and on the south by Interstate-95. On the south side of the airport and north of Griffin Road there is a landscaped Aviation Greenbelt. The Aviation Greenbelt, landscaping along Griffin Road, and a wall along the south side of Griffin Road act as a buffer between airport property and the residential areas (Melaluca Gardens) on the south side of Griffin Road.

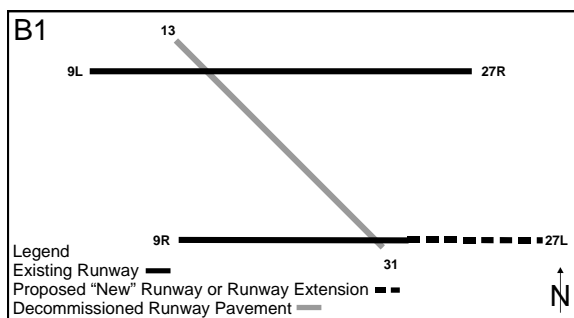
None of the runway development alternatives would create a substantial impact on the view as seen from parcels adjacent to the airport. The views within the airport vicinity are currently characterized by the existing network of highways, terminal buildings, runways, taxiways, and ancillary transportation infrastructure. These view characteristics should remain unchanged with implementation of any of the runway development alternatives.

6.H.3.2.1 ALTERNATIVE A: NO ACTION



Because no changes or alterations would occur under Alternative A, no visual or aesthetic changes are anticipated. *No significant visual impacts would occur with implementation of Alternative A.*

6.H.3.2.2 ALTERNATIVE B1: REDEVELOP AND EXTEND EXISTING RUNWAY 9R/27L TO AN 8,600-FOOT BY 150-FOOT ELEVATED RUNWAY

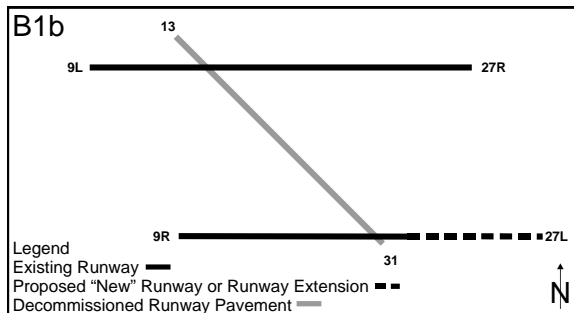


More pavement and lighting systems would be installed on the south airfield under Alternative B1. The Aviation Greenbelt, Griffin Road landscaping, and the Griffin Road wall would shield the view of these improvements from the surrounding areas. Thus, no new visual impact would occur for the adjacent residential land uses south of the airport.

The extension of Runway 9R/27L to the east would be elevated to bridge over the FEC railway tracks and U.S. Highway 1. The existing land use in the area south of the extension is commercial and mixed-use. The current view from those properties is the entrance and exit ramps from U.S. Highway 1 to the airport. The addition of the elevated runway in that area would not significantly alter the existing views in this area.

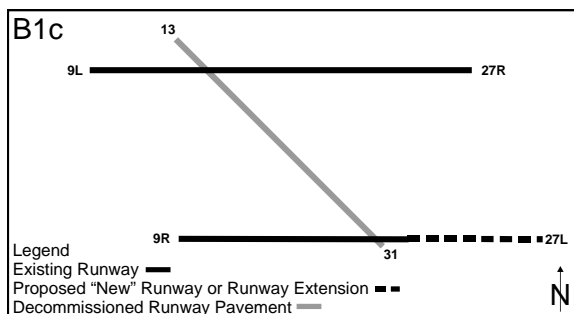
The extension of Runway 9R/27L to the east would extend toward, but not within West Lake Park and could potentially be seen from the park. Existing industrial development and U.S. Highway 1 separate West Lake Park from the airport. The view of the runway extension would not be significantly different from what exists today. *No significant visual impacts would occur with implementation of Alternative B1.*

6.H.3.2.3 ALTERNATIVE B1b: REDEVELOP AND EXTEND EXISTING RUNWAY 9R/27L TO AN 8,000-FOOT BY 150-FOOT ELEVATED RUNWAY WITH EMAS



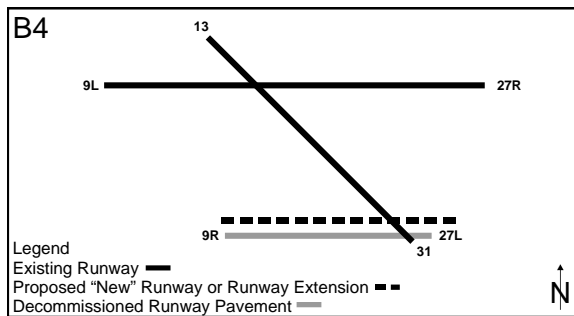
The physical development characteristics of Alternative B1b are very similar to Alternative B1, with a shorter length of Runway 9R/27L proposed. With the shorter length of Runway 9R/27L, less or similar aesthetic and visual characteristics would occur. *No significant visual impacts would occur with implementation of Alternative B1b.*

6.H.3.2.4 ALTERNATIVE B1c: (AIRPORT SPONSOR'S PROPOSED PROJECT) REDEVELOP AND EXTEND EXISTING RUNWAY 9R/27L TO AN 8,000-FOOT BY 150-FOOT ELEVATED RUNWAY WITH EMAS; RUNWAY USE DETERMINED BY BROWARD COUNTY'S INTERLOCAL AGREEMENTS



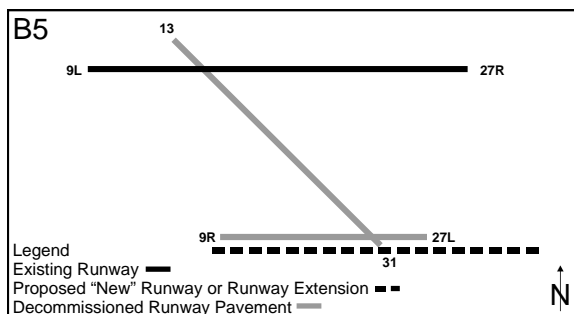
Because the physical development characteristics of Alternative B1c are the same as Alternative B1b, the aesthetic and visual characteristics would be the same. *No significant visual impacts would occur with implementation of Alternative B1c.*

6.H.3.2.5 ALTERNATIVE B4: BUILD A NEW 6,001-FOOT AT GRADE RUNWAY WITH EMAS LOCATED 340 FEET NORTH OF EXISTING SOUTH RUNWAY (TO REPLACE EXISTING RUNWAY 9R/27L)



All development associated with Alternative B4 is contained within airport property. Redeveloped Runway 9R/27L is shifted slightly to the north, thus relocating airport infrastructure and activities further away from the existing residential areas south of Griffin Road. The view of the airfield from Melaluca Gardens would continue to be shielded by the Aviation Greenbelt, Griffin Road landscaping, and the wall located along Griffin Road. Motorists traveling along Interstate-595 and U.S. Highway 1 would still be able to see the airfield, but the overall character of the airfield view would not change. *No significant visual impacts would occur with implementation of Alternative B4.*

6.H.3.2.6 ALTERNATIVE B5: BUILD A 7,800-FOOT ELEVATED RUNWAY WITH EMAS LOCATED 320 FEET SOUTH OF EXISTING SOUTH RUNWAY (TO REPLACE EXISTING RUNWAY 9R/27L)

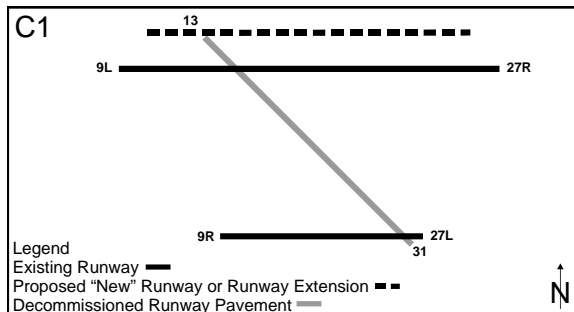


Alternative B5 includes the shifting of Runway 9R/27L to the south. This would place the runway closer to the residential areas south of Griffin Road. Although a portion of the Aviation Greenbelt would be removed to facilitate construction of the redeveloped runway, a sufficient portion of the Greenbelt would remain to shield the view of the airfield from Melaluca Gardens. The wall (approximately seven feet high) and landscaping along Griffin Road would continue to act as a visual barrier between the airport and Melaluca Gardens.

The extension of the runway to the east would be elevated to bridge over the FEC Railway tracks and U.S. Highway 1. The current view from the commercial and mixed land uses east of the airport is the entrance and exit ramps from U.S. Highway 1 to the airport. The addition of the elevated runway in that area would not significantly alter the existing views from this area.

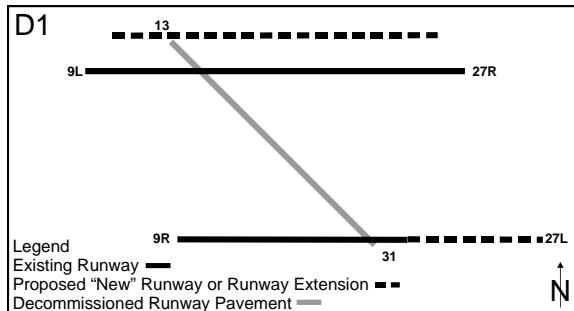
The view from West Lake Park currently includes existing industrial development and U.S. Highway 1. With the easterly extension of Runway 9R/27L, the view from West Lake Park should not be substantially different from what exists today. *No significant visual impacts would occur with implementation of Alternative B5.*

6.H.3.2.7 ALTERNATIVE C1: BUILD A 7,721-FOOT AT GRADE RUNWAY LOCATED 850 FEET NORTH OF EXISTING RUNWAY 9L/27R (A DEPENDENT PARALLEL RUNWAY TO EXISTING RUNWAY 9L/27R)



Alternative C1, with the addition of Runway 8/26, would shift the limits of runway development further north than with the existing alignment of Runway 9L/27R. This alignment of Runway 8/26 would require the airport tenants located along the north side of the airport to be relocated. Only motorists traveling on Interstate-595 would see the new runway (8/26). Land uses adjacent to the north side of the airport are separated by Interstate-595 and thus would not have a view of the new runway. The displaced airport tenants would be relocated to the west central portion of the airport. Under this alternative, the potential for relocating tenants on or off-airport could produce visual impacts on surrounding residential uses. However, these impacts are not anticipated to be significant. Relocations on-airport would most likely not be visible from adjacent properties. *No significant visual impacts would occur with implementation of Alternative C1.*

6.H.3.2.8 ALTERNATIVE D1: REDEVELOP AND EXTEND EXISTING RUNWAY 9R/27L TO 8,000 FEET AND BUILD A NEW 7,721-FOOT RUNWAY NORTH OF EXISTING RUNWAY 9L/27R (COMBINATION OF ALTERNATIVES B1b AND C1)

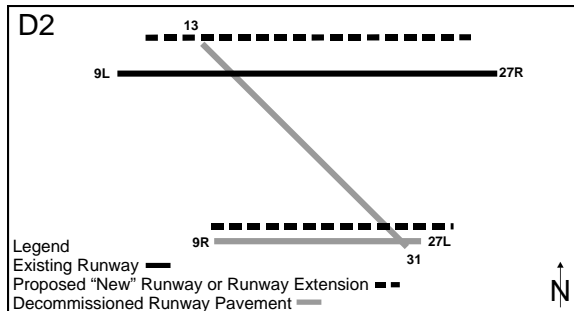


Alternative D1, a combination of Alternatives B1b and C1, would have the combined visual and aesthetic impacts of those two alternatives. Alternative D1 includes the redevelopment of Runway 9R/27L to the east, placing the associated runway edge light systems slightly north of the existing runway/taxiway system for Runway 9R/27L. The Aviation Greenbelt, Griffin Road landscaping, and Griffin Road wall would continue to act as a buffer between the airport and Melaluca Gardens. Thus, no visual impact would occur to the adjacent residential land use to the south of the airport.

The extension of the runway to the east would be elevated to bridge over the FEC Railway tracks and U.S. Highway 1. The current view from the commercial and mixed land uses south and east of the airport, and from West Lake Park includes the entrance and exit ramps from U.S. Highway 1 to the airport. The addition of the elevated runway in that area would not significantly alter the existing views from these developments.

As described under Alternative C1, Alternative D1 would require the displacement of on-airport businesses. Redevelopment of Runway 9R/27L would require acquisition of a portion of the Hilton (formerly the Wyndam) Fort Lauderdale Airport Hotel. Under this alternative, the potential for relocating tenants on or off-airport could produce visual impacts on surrounding residential uses. However, these impacts are not anticipated to be significant. *No significant visual impacts would occur with implementation of Alternative D1.*

6.H.3.2.9 ALTERNATIVE D2: BUILD A NEW 6,001-FOOT AT GRADE RUNWAY WITH EMAS LOCATED 340 FEET NORTH OF EXISTING SOUTH RUNWAY AND BUILD A 7,721-FOOT AT GRADE RUNWAY LOCATED 850 FEET NORTH OF EXISTING RUNWAY 9L/27R (COMBINATION OF ALTERNATIVES B4 AND C1)



Alternative D2 is a combination of Alternatives B4 and C1. Redeveloped Runway 9R/27L is shifted slightly to the north, thus relocating airport infrastructure and activities further away from the existing residential areas south of Griffin Road. The view of the airfield from Melaluca Gardens would continue to be shielded by the Aviation Greenbelt, Griffin Road landscaping, and the wall located along Griffin Road. Motorists traveling along Interstate-595 and U.S. Highway 1 would still see the airfield, but the overall character of the airfield view would not change.

As described under Alternative C1, Alternative D2 would require the displacement of on-airport businesses. Redevelopment of Runway 9R/27L would require acquisition of a portion of the Hilton (formerly the Wyndam) Fort Lauderdale Airport Hotel. Under this alternative, the potential for relocating tenants on or off-airport could produce visual impacts on surrounding residential uses. However, these impacts are not anticipated to be significant. *No significant visual impacts would occur with implementation of Alternative D2.*