

Chapter 4: Inventory & System Evaluation

4.0 Introduction

While Chapter 2 outlined the overall airport classifications, Level 1 and Level 2 criteria, minimum service level recommendations, IAP recommendations, and inclusion criteria for this 2012 system plan update, this Chapter is focused on defining how each airport in the system is meeting each of those criteria. An inventory was conducted for each of the 69 airports to evaluate the system's performance as a whole, and to create recommendations for future development within the system (Chapter 6). The inventory and analysis provided is divided into the following three groups:

- INDOT Level 1 Service Requirements,
- INDOT Minimum Service Level Recommendations, and
- INDOT Minimum Vertically Guided IAP Recommendations for Primary Runways.

Appendix G includes a facility evaluation sheet for each system airport, which provides an airport-specific snapshot of how the requirements/recommendations are being met at the time of publication.

4.1 INDOT Level 1 Service Requirements

In addition to the criteria established by the FAA for inclusion in the ASSET categories, INDOT has included seven additional criteria for each category. As detailed in Chapter 2, these criteria are not the same for each category, rather they are reflective of the services and facilities that airports *should* have in each respective role:

- Airport Minimum Standards
- Pavement Maintenance Management Program
- Weather Reporting
- Runway Lights
- Full Parallel Taxiway or Comparable
- 24-Hour Fuel Availability
- Taxiway Lights



If an airport meets the criteria for its category, it is considered to be a “Level 1” airport. Any airport within a category that does not meet the criteria is considered to be a “Level 2” airport. **Table 4-1** outlines the specific criteria requirements for each category.

Table 4-1 – INDOT Level 1 Airport Requirements

INDOT LEVEL 1 SERVICE REQUIREMENTS	PRIMARY	NATIONAL	REGIONAL	LOCAL	BASIC
Minimum Standards	Required	Required	Required	Required	Required
Pavement Maintenance Management Program	Required	Required	Required	Required	Required
Weather Reporting	Required	Required	Required	Required	Required
Runway Lights	HIRL	MIRL	MIRL	MIRL	LIRL
Full Parallel Taxiway or Comparable	Required	Required	Required	Required	
24-Hour Fuel Availability	Required	Required	Required	Required	
Taxiway Lights	Required	Required	Required	Required	

The following subsections provide a system-wide analysis for each of these requirements.

4.1.1 Minimum Standards

Minimum standards and operating procedures help protect the public and an airport from irresponsible and unsafe actions. The establishment of these standards can help encourage and promote activities that contribute to quality of services provided to users of an airport.

Minimum standards are required for all airport categories to be considered a Level 1 airport. While all airports in the Primary and National categories are meeting this criterion, airports in the other three categories are not, as shown in **Figure 4-1**. The majority of Local and Basic airports do not have minimum standards. Overall, 36 airports in the system (or 52% of the system) are not meeting this requirement. **Table 4-2** includes a listing of all system airports. Those airports in bold text are not meeting the requirement.



Figure 4-1 - INDOT Level 1 Requirement: Minimum Standards

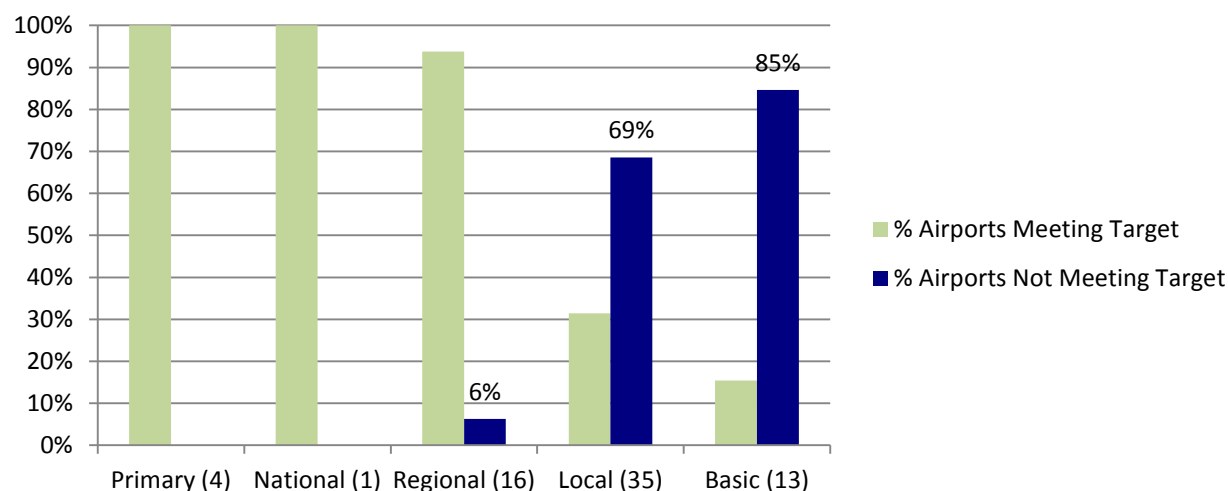


Table 4-2 – INDOT Level 1 Requirement: Minimum Standards

Aviation Facility	Associated City	Category	FAA ID	Minimum Standards
Evansville Regional	Evansville	Primary	EVV	Y
Ft. Wayne International	Fort Wayne	Primary	FWA	Y
Indianapolis International	Indianapolis	Primary	IND	Y
South Bend Regional	South Bend	Primary	SBN	Y
Gary/Chicago	Gary	National	GYG	Y
DeKalb County	Auburn	Regional	GWB	Y
Monroe County	Bloomington	Regional	BMG	Y
Columbus Municipal	Columbus	Regional	BAK	Y
Elkhart Municipal	Elkhart	Regional	EKM	Y
Goshen Municipal	Goshen	Regional	GSH	N
Huntingburg Airport	Huntingburg	Regional	HNB	Y
Eagle Creek Airpark	Indianapolis	Regional	EYE	Y
Indianapolis Executive	Indianapolis	Regional	TYQ	Y
Indianapolis Metropolitan	Indianapolis	Regional	UMP	Y
Indianapolis Regional	Indianapolis	Regional	MQJ	Y
Clark County	Jeffersonville	Regional	JVY	Y
Purdue University	Lafayette	Regional	LAF	Y
Marion Municipal	Marion	Regional	MZZ	Y
Delaware County	Muncie	Regional	MIE	Y
Porter County Regional	Valparaiso	Regional	VPZ	Y
Warsaw Municipal	Warsaw	Regional	ASW	Y
Anderson Municipal	Anderson	Local	AID	N
Steuben Co.-Tri State	Angola	Local	ANQ	N
Virgil I. Grissom	Bedford	Local	BFR	N
Brazil-Clay County	Brazil	Local	012	N
Crawfordsville Municipal	Crawfordsville	Local	CFJ	Y
Smith Field	Fort Wayne	Local	SMD	Y
Putnam County	Greencastle	Local	417	N



Table 4-2 – INDOT Level 1 Requirement: Minimum Standards

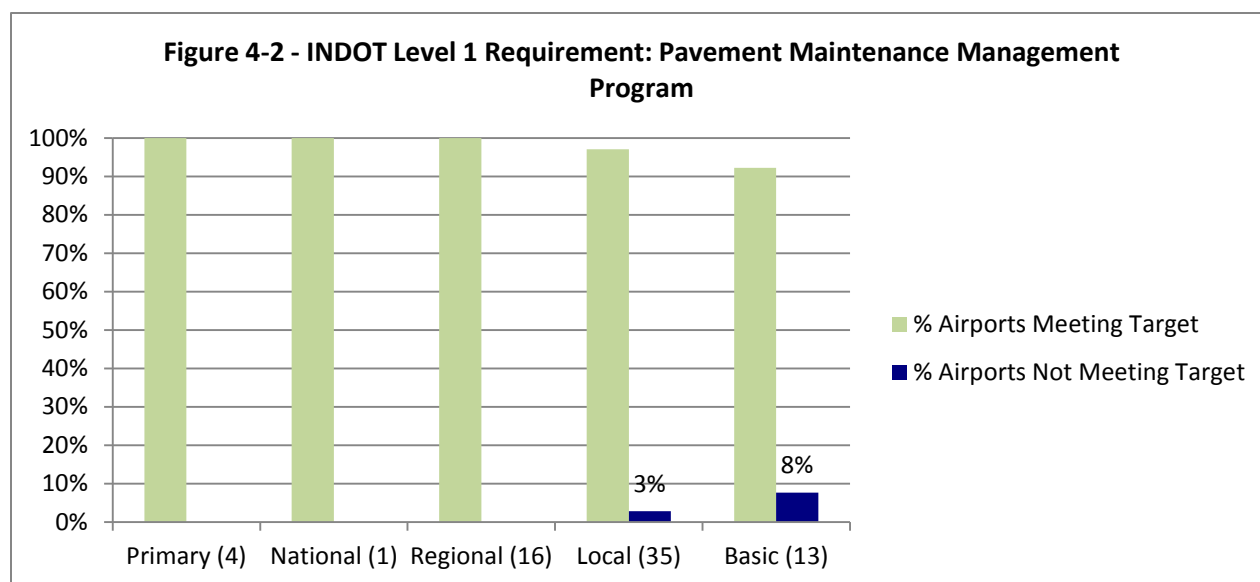
Aviation Facility	Associated City	Category	FAA ID	Minimum Standards
Greensburg-Decatur County	Greensburg	Local	I34	N
Griffith-Merrillville	Griffith	Local	05C	N
Huntington Municipal	Huntington	Local	HHG	N
Greenwood Municipal	Indianapolis	Local	HFY	Y
Hendricks County	Indianapolis	Local	2R2	Y
Kendallville Municipal	Kendallville	Local	C62	N
Starke County	Knox	Local	OXI	N
Kokomo Municipal	Kokomo	Local	OKK	Y
LaPorte Municipal	LaPorte	Local	PPO	Y
Madison Municipal	Madison	Local	IMS	N
Michigan City Municipal	Michigan City	Local	MGC	N
White County	Monticello	Local	MCX	N
New Castle-Henry Co.	New Castle	Local	UWL	N
North Vernon Municipal	North Vernon	Local	OVO	Y
Paoli Municipal	Paoli	Local	I42	N
Peru Municipal	Peru	Local	I76	N
Plymouth Municipal	Plymouth	Local	C65	N
Portland Municipal	Portland	Local	PLD	N
Jasper County	Rensselaer	Local	RZL	N
Richmond Municipal	Richmond	Local	RID	N
Salem Municipal	Salem	Local	I83	N
Freeman Municipal	Seymour	Local	SER	Y
Shelbyville Municipal	Shelbyville	Local	GEZ	Y
Sheridan	Sheridan	Local	5I4	N
Sullivan County	Sullivan	Local	SIV	Y
Terre Haute International	Terre Haute	Local	HUF	Y
Wabash Municipal	Wabash	Local	IWH	N
Daviess County	Washington	Local	DCY	N
Clinton	Clinton	Basic	1I7	N
Mettel Field	Connersville	Basic	CEV	N
Delphi Municipal	Delphi	Basic	1I9	N
Frankfort Municipal	Frankfort	Basic	FKR	Y
French Lick Municipal	French Lick	Basic	FRH	N
Ind. Downtown Heliport	Indianapolis	Basic	8A4	Y
Kentland Municipal	Kentland	Basic	50I	N
Boone County	Lebanon	Basic	6I4	N
Logansport Municipal	Logansport	Basic	GGP	N
Fulton County	Rochester	Basic	RCR	N
Perry County Municipal	Tell City	Basic	TEL	N
Arens Field	Winamac	Basic	RWN	N
Randolph County	Winchester	Basic	I22	N

Note: Airports in **BOLD** text are not meeting the criteria.



4.1.2 Pavement Maintenance Management Program

All airports should have a pavement maintenance management program in order to preserve their existing pavements and plan for future maintenance that will be needed. **Figure 4-2** shows the system is meeting this requirement very well with only 3% of Local airport category (one airport) and 8% of Basic airport category (one airport) not meeting it. **Table 4-3** includes a listing of all system airports. Those airports in bold text are not meeting this requirement.



Aviation Facility	Associated City	Category	FAA ID	Pavement Management Plan
Evansville Regional	Evansville	Primary	EVV	Y
Ft. Wayne International	Fort Wayne	Primary	FWA	Y
Indianapolis International	Indianapolis	Primary	IND	Y
South Bend Regional	South Bend	Primary	SBN	Y
Gary/Chicago	Gary	National	GYG	Y
DeKalb County	Auburn	Regional	GWB	Y
Monroe County	Bloomington	Regional	BMG	Y
Columbus Municipal	Columbus	Regional	BAK	Y
Elkhart Municipal	Elkhart	Regional	EKM	Y
Goshen Municipal	Goshen	Regional	GSH	Y
Huntingburg Airport	Huntingburg	Regional	HNB	Y
Eagle Creek Airpark	Indianapolis	Regional	EYE	Y
Indianapolis Executive	Indianapolis	Regional	TYQ	Y
Indianapolis Metropolitan	Indianapolis	Regional	UMP	Y
Indianapolis Regional	Indianapolis	Regional	MQJ	Y
Clark County	Jeffersonville	Regional	JVY	Y



Table 4-3 – INDOT Level 1 Requirement: Pavement Maintenance Management Program

Aviation Facility	Associated City	Category	FAA ID	Pavement Management Plan
Purdue University	Lafayette	Regional	LAF	Y
Marion Municipal	Marion	Regional	MZZ	Y
Delaware County	Muncie	Regional	MIE	Y
Porter County Regional	Valparaiso	Regional	VPZ	Y
Warsaw Municipal	Warsaw	Regional	ASW	Y
Anderson Municipal	Anderson	Local	AID	Y
Steuben Co.-Tri State	Angola	Local	ANQ	Y
Virgil I. Grissom	Bedford	Local	BFR	Y
Brazil-Clay County	Brazil	Local	012	Y
Crawfordsville Municipal	Crawfordsville	Local	CFJ	Y
Smith Field	Fort Wayne	Local	SMD	Y
Putnam County	Greencastle	Local	417	Y
Greensburg-Decatur County	Greensburg	Local	I34	Y
Griffith-Merrillville	Griffith	Local	05C	Y
Huntington Municipal	Huntington	Local	HHG	Y
Greenwood Municipal	Indianapolis	Local	HFY	Y
Hendricks County	Indianapolis	Local	2R2	Y
Kendallville Municipal	Kendallville	Local	C62	Y
Starke County	Knox	Local	OXI	Y
Kokomo Municipal	Kokomo	Local	OKK	Y
LaPorte Municipal	LaPorte	Local	PPO	Y
Madison Municipal	Madison	Local	IMS	Y
Michigan City Municipal	Michigan City	Local	MGC	Y
White County	Monticello	Local	MCX	Y
New Castle-Henry Co.	New Castle	Local	UWL	Y
North Vernon Municipal	North Vernon	Local	OVO	Y
Paoli Municipal	Paoli	Local	I42	Y
Peru Municipal	Peru	Local	I76	Y
Plymouth Municipal	Plymouth	Local	C65	Y
Portland Municipal	Portland	Local	PLD	Y
Jasper County	Rensselaer	Local	RZL	Y
Richmond Municipal	Richmond	Local	RID	Y
Salem Municipal	Salem	Local	I83	Y
Freeman Municipal	Seymour	Local	SER	Y
Shelbyville Municipal	Shelbyville	Local	GEZ	Y
Sheridan	Sheridan	Local	514	N
Sullivan County	Sullivan	Local	SIV	Y
Terre Haute International	Terre Haute	Local	HUF	Y
Wabash Municipal	Wabash	Local	IWH	Y
Daviess County	Washington	Local	DCY	Y
Clinton	Clinton	Basic	117	Y
Mettel Field	Connersville	Basic	CEV	Y
Delphi Municipal	Delphi	Basic	119	Y
Frankfort Municipal	Frankfort	Basic	FKR	Y
French Lick Municipal	French Lick	Basic	FRH	Y
Ind. Downtown Heliport	Indianapolis	Basic	8A4	Y
Kentland Municipal	Kentland	Basic	50I	Y
Boone County	Lebanon	Basic	614	N
Logansport Municipal	Logansport	Basic	GGP	Y



Table 4-3 – INDOT Level 1 Requirement: Pavement Maintenance Management Program				
Aviation Facility	Associated City	Category	FAA ID	Pavement Management Plan
Fulton County	Rochester	Basic	RCR	Y
Perry County Municipal	Tell City	Basic	TEL	Y
Arens Field	Winamac	Basic	RWN	Y
Randolph County	Winchester	Basic	I22	Y

Note: Airports in **BOLD** text are not meeting the criteria.

4.1.3 Weather Reporting

Indiana has an effective network of weather reporting sites, including 48 AWOS and ASOS systems combined, to help pilots obtain accurate information when arriving, departing, or traveling en route to an airport. Weather reporting is required for airports in all five categories to be considered Level 1. Every airport in the Primary, National, and Regional categories is meeting this target, while only 60% of Local airports (21 airports) and 46% of Basic airports (six airports) are achieving it as shown in **Figure 4-3**. **Table 4-4** includes a listing of all system airports. Those airports in bold text are not meeting this requirement.

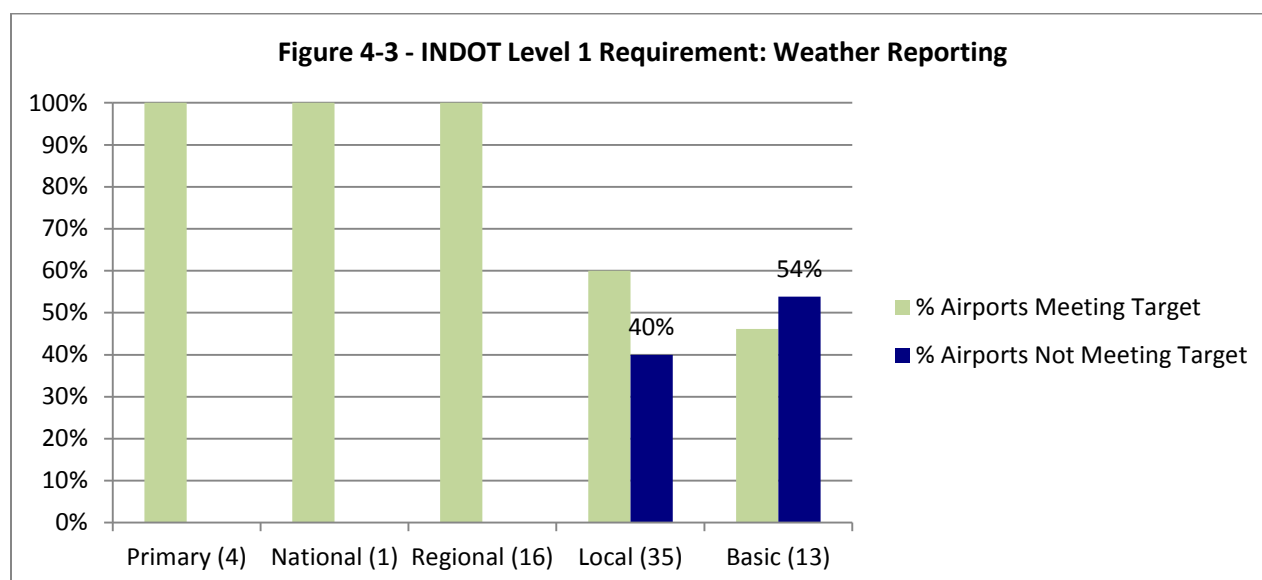


Table 4-4 – INDOT Level 1 Requirement: Weather Reporting				
Aviation Facility	Associated City	Category	FAA ID	Weather Reporting on Airport
Evansville Regional	Evansville	Primary	EVV	Y
Ft. Wayne International	Fort Wayne	Primary	FWA	Y
Indianapolis International	Indianapolis	Primary	IND	Y



Table 4-4 – INDOT Level 1 Requirement: Weather Reporting

Aviation Facility	Associated City	Category	FAA ID	Weather Reporting on Airport
South Bend Regional	South Bend	Primary	SBN	Y
Gary/Chicago	Gary	National	GYY	Y
DeKalb County	Auburn	Regional	GWB	Y
Monroe County	Bloomington	Regional	BMG	Y
Columbus Municipal	Columbus	Regional	BAK	Y
Elkhart Municipal	Elkhart	Regional	EKM	Y
Goshen Municipal	Goshen	Regional	GSH	Y
Huntingburg Airport	Huntingburg	Regional	HNB	Y
Eagle Creek Airpark	Indianapolis	Regional	EYE	Y
Indianapolis Executive	Indianapolis	Regional	TYQ	Y
Indianapolis Metropolitan	Indianapolis	Regional	UMP	Y
Indianapolis Regional	Indianapolis	Regional	MQJ	Y
Clark County	Jeffersonville	Regional	JVY	Y
Purdue University	Lafayette	Regional	LAF	Y
Marion Municipal	Marion	Regional	MZZ	Y
Delaware County	Muncie	Regional	MIE	Y
Porter County Regional	Valparaiso	Regional	VPZ	Y
Warsaw Municipal	Warsaw	Regional	ASW	Y
Anderson Municipal	Anderson	Local	AID	Y
Steuben Co.-Tri State	Angola	Local	ANQ	Y
Virgil I. Grissom	Bedford	Local	BFR	Y
Brazil-Clay County	Brazil	Local	012	N
Crawfordsville Municipal	Crawfordsville	Local	CFJ	Y
Smith Field	Fort Wayne	Local	SMD	Y
Putnam County	Greencastle	Local	417	Y
Greensburg-Decatur County	Greensburg	Local	I34	N
Griffith-Merrillville	Griffith	Local	05C	N
Huntington Municipal	Huntington	Local	HHG	N
Greenwood Municipal	Indianapolis	Local	HFY	Y
Hendricks County	Indianapolis	Local	2R2	Y
Kendallville Municipal	Kendallville	Local	C62	Y
Starke County	Knox	Local	OXI	Y
Kokomo Municipal	Kokomo	Local	OKK	Y
LaPorte Municipal	LaPorte	Local	PPO	Y
Madison Municipal	Madison	Local	IMS	Y
Michigan City Municipal	Michigan City	Local	MGC	Y
White County	Monticello	Local	MCX	N
New Castle-Henry Co.	New Castle	Local	UWL	N
North Vernon Municipal	North Vernon	Local	OVO	Y
Paoli Municipal	Paoli	Local	I42	N
Peru Municipal	Peru	Local	I76	N
Plymouth Municipal	Plymouth	Local	C65	N
Portland Municipal	Portland	Local	PLD	Y
Jasper County	Rensselaer	Local	RZL	Y
Richmond Municipal	Richmond	Local	RID	Y
Salem Municipal	Salem	Local	I83	N
Freeman Municipal	Seymour	Local	SER	Y
Shelbyville Municipal	Shelbyville	Local	GEZ	Y
Sheridan	Sheridan	Local	514	N



Table 4-4 – INDOT Level 1 Requirement: Weather Reporting				
Aviation Facility	Associated City	Category	FAA ID	Weather Reporting on Airport
Sullivan County	Sullivan	Local	SIV	N
Terre Haute International	Terre Haute	Local	HUF	Y
Wabash Municipal	Wabash	Local	IWH	N
Daviess County	Washington	Local	DCY	N
Clinton	Clinton	Basic	117	N
Mettel Field	Connersville	Basic	CEV	Y
Delphi Municipal	Delphi	Basic	119	N
Frankfort Municipal	Frankfort	Basic	FKR	Y
French Lick Municipal	French Lick	Basic	FRH	Y
Ind. Downtown Heliport	Indianapolis	Basic	8A4	Y
Kentland Municipal	Kentland	Basic	50I	N
Boone County	Lebanon	Basic	6I4	N
Logansport Municipal	Logansport	Basic	GGP	Y
Fulton County	Rochester	Basic	RCR	Y
Perry County Municipal	Tell City	Basic	TEL	N
Arens Field	Winamac	Basic	RWN	N
Randolph County	Winchester	Basic	I22	N

Note: Airports in **BOLD** text are not meeting the criteria.

4.1.4 Runway Lights

As described in Chapter 2, runway lighting is used to define the edges of a runway during nighttime and low visibility conditions. The runway lighting recommendations are different for each airport classification:

- Primary: HIRL
- National: MIRL
- Regional: MIRL
- Local: MIRL
- Basic: LIRL

As shown in **Figure 4-4**, the system as a whole is meeting this target very well with only 6% of Local airports (two airports) and 8% of Basic airports (one airport) not meeting it. **Table 4-5** includes a listing of all system airports. Those airports in bold text are not meeting this requirement.



Figure 4-4 - INDOT Level 1 Requirement: Runway Lights

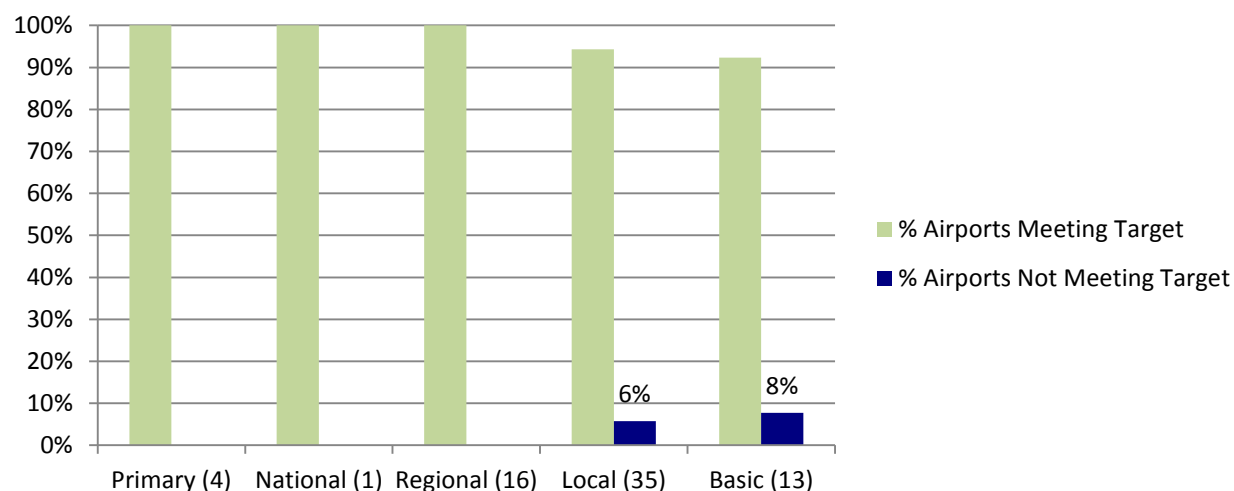


Table 4-5 – INDOT Level 1 Requirement: Runway Lights

Aviation Facility	Associated City	Category	FAA ID	Runway Lights
Evansville Regional	Evansville	Primary	EVV	HIRL
Ft. Wayne International	Fort Wayne	Primary	FWA	HIRL
Indianapolis International	Indianapolis	Primary	IND	HIRL
South Bend Regional	South Bend	Primary	SBN	HIRL
Gary/Chicago	Gary	National	GYG	HIRL
DeKalb County	Auburn	Regional	GWB	MIRL
Monroe County	Bloomington	Regional	BMG	HIRL
Columbus Municipal	Columbus	Regional	BAK	HIRL
Elkhart Municipal	Elkhart	Regional	EKM	HIRL
Goshen Municipal	Goshen	Regional	GSH	HIRL
Huntingburg Airport	Huntingburg	Regional	HNB	MIRL
Eagle Creek Airpark	Indianapolis	Regional	EYE	MIRL
Indianapolis Executive	Indianapolis	Regional	TYQ	HIRL
Indianapolis Metropolitan	Indianapolis	Regional	UMP	MIRL
Indianapolis Regional	Indianapolis	Regional	MQJ	HIRL
Clark County	Jeffersonville	Regional	JVY	MIRL
Purdue University	Lafayette	Regional	LAF	HIRL
Marion Municipal	Marion	Regional	MZZ	HIRL
Delaware County	Muncie	Regional	MIE	HIRL
Porter County Regional	Valparaiso	Regional	VPZ	HIRL
Warsaw Municipal	Warsaw	Regional	ASW	HIRL
Anderson Municipal	Anderson	Local	AID	MIRL
Steuben Co.-Tri State	Angola	Local	ANQ	MIRL
Virgil I. Grissom	Bedford	Local	BFR	MIRL
Brazil-Clay County	Brazil	Local	012	LIRL
Crawfordsville Municipal	Crawfordsville	Local	CFJ	MIRL
Smith Field	Fort Wayne	Local	SMD	MIRL
Putnam County	Greencastle	Local	417	MIRL



Table 4-5 – INDOT Level 1 Requirement: Runway Lights

Aviation Facility	Associated City	Category	FAA ID	Runway Lights
Greensburg-Decatur County	Greensburg	Local	I34	MIRL
Griffith-Merrillville	Griffith	Local	05C	MIRL
Huntington Municipal	Huntington	Local	HHG	MIRL
Greenwood Municipal	Indianapolis	Local	HFY	HIRL
Hendricks County	Indianapolis	Local	2R2	MIRL
Kendallville Municipal	Kendallville	Local	C62	MIRL
Starke County	Knox	Local	OXI	MIRL
Kokomo Municipal	Kokomo	Local	OKK	HIRL
LaPorte Municipal	LaPorte	Local	PPO	MIRL
Madison Municipal	Madison	Local	IMS	HIRL
Michigan City Municipal	Michigan City	Local	MGC	MIRL
White County	Monticello	Local	MCX	MIRL
New Castle-Henry Co.	New Castle	Local	UWL	MIRL
North Vernon Municipal	North Vernon	Local	OVO	MIRL
Paoli Municipal	Paoli	Local	I42	MIRL
Peru Municipal	Peru	Local	I76	MIRL
Plymouth Municipal	Plymouth	Local	C65	MIRL
Portland Municipal	Portland	Local	PLD	MIRL
Jasper County	Rensselaer	Local	RZL	MIRL
Richmond Municipal	Richmond	Local	RID	MIRL
Salem Municipal	Salem	Local	I83	MIRL
Freeman Municipal	Seymour	Local	SER	MIRL
Shelbyville Municipal	Shelbyville	Local	GEZ	MIRL
Sheridan	Sheridan	Local	514	NON-STND
Sullivan County	Sullivan	Local	SIV	MIRL
Terre Haute International	Terre Haute	Local	HUF	HIRL
Wabash Municipal	Wabash	Local	IWH	MIRL
Daviess County	Washington	Local	DCY	MIRL
Clinton	Clinton	Basic	117	NO
Mettel Field	Connersville	Basic	CEV	MIRL
Delphi Municipal	Delphi	Basic	119	MIRL
Frankfort Municipal	Frankfort	Basic	FKR	MIRL
French Lick Municipal	French Lick	Basic	FRH	MIRL
Ind. Downtown Heliport	Indianapolis	Basic	8A4	Yes
Kentland Municipal	Kentland	Basic	50I	HIRL
Boone County	Lebanon	Basic	6I4	LIRL NSTD
Logansport Municipal	Logansport	Basic	GGP	MIRL
Fulton County	Rochester	Basic	RCR	MIRL
Perry County Municipal	Tell City	Basic	TEL	MIRL
Arens Field	Winamac	Basic	RWN	LIRL
Randolph County	Winchester	Basic	I22	MIRL

Note: Airports in **BOLD** text are not meeting the criteria.

4.1.5 Full Parallel Taxiway or Comparable

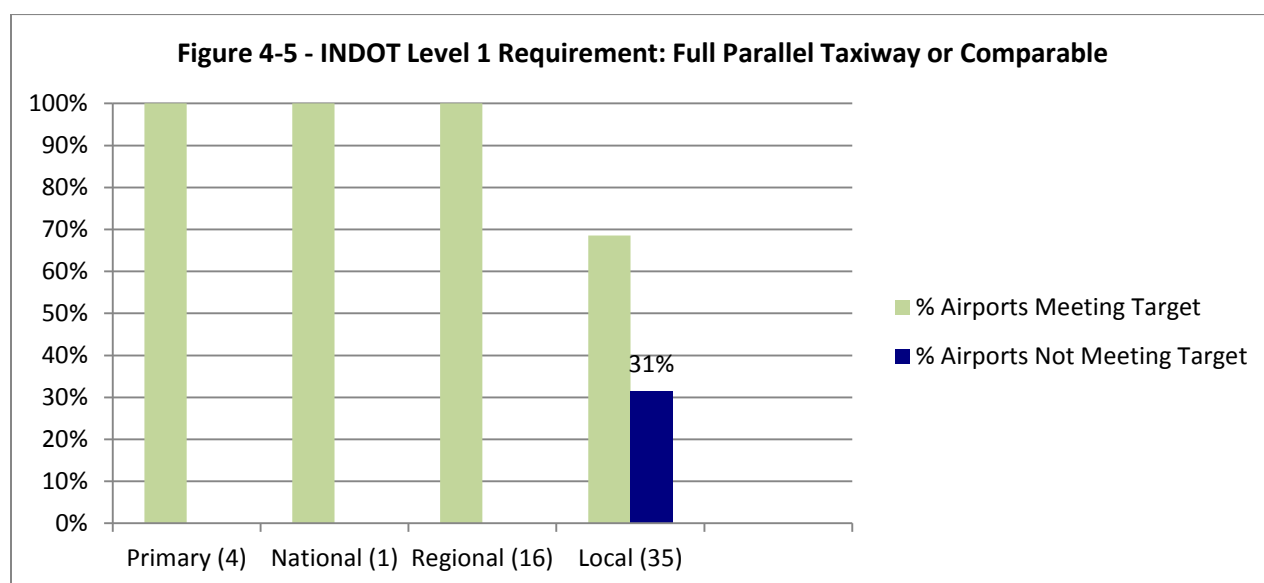
Parallel taxiways are aligned parallel to a runway and are designed to increase safety and capacity by minimizing the time an aircraft occupies the runway when maneuvering before takeoff or after landing.



Full parallel taxiways extend the entire length of a runway, providing access to each runway end. While some airports did not have a standard parallel taxiway at the time of the inventory, they did have alternate taxiways that allowed aircraft to taxi from one end of the runway to the other, without having to use the runway to taxi. Airports with this sort of configuration were considered to have a comparable taxiway.

A full parallel taxiway (or comparable) is required for each airport classification, except Basic airports.

Figure 4-5 shows 11 airports (31%) in the Local category are not meeting this target. **Table 4-6** includes a listing of all system airports. Those airports in bold text are not meeting this requirement.



Aviation Facility	Associated City	Category	FAA ID	Full Taxiway*
Evansville Regional	Evansville	Primary	EVV	Y
Ft. Wayne International	Fort Wayne	Primary	FWA	Y
Indianapolis International	Indianapolis	Primary	IND	Y
South Bend Regional	South Bend	Primary	SBN	Y
Gary/Chicago	Gary	National	GYG	Y
DeKalb County	Auburn	Regional	GWB	Y
Monroe County	Bloomington	Regional	BMG	Y
Columbus Municipal	Columbus	Regional	BAK	Y
Elkhart Municipal	Elkhart	Regional	EKM	Y
Goshen Municipal	Goshen	Regional	GSH	Y
Huntingburg Airport	Huntingburg	Regional	HNB	Y
Eagle Creek Airpark	Indianapolis	Regional	EYE	Y
Indianapolis Executive	Indianapolis	Regional	TYQ	Y



Table 4-6 – INDOT Level 1 Requirement: Full Parallel Taxiway or Comparable

Aviation Facility	Associated City	Category	FAA ID	Full Taxiway*
Indianapolis Metropolitan	Indianapolis	Regional	UMP	Y
Indianapolis Regional	Indianapolis	Regional	MQJ	Y
Clark County	Jeffersonville	Regional	JVY	Y
Purdue University	Lafayette	Regional	LAF	Y
Marion Municipal	Marion	Regional	MZZ	Y
Delaware County	Muncie	Regional	MIE	Y
Porter County Regional	Valparaiso	Regional	VPZ	Y
Warsaw Municipal	Warsaw	Regional	ASW	Y
Anderson Municipal	Anderson	Local	AID	Y
Steuben Co.-Tri State	Angola	Local	ANQ	Y
Virgil I. Grissom	Bedford	Local	BFR	N
Brazil-Clay County	Brazil	Local	012	N
Crawfordsville Municipal	Crawfordsville	Local	CFJ	Y
Smith Field	Fort Wayne	Local	SMD	N
Putnam County	Greencastle	Local	417	Y
Greensburg-Decatur County	Greensburg	Local	I34	N
Griffith-Merrillville	Griffith	Local	05C	N
Huntington Municipal	Huntington	Local	HHG	Y
Greenwood Municipal	Indianapolis	Local	HFY	Y
Hendricks County	Indianapolis	Local	2R2	Y
Kendallville Municipal	Kendallville	Local	C62	Y
Starke County	Knox	Local	OXI	Y
Kokomo Municipal	Kokomo	Local	OKK	Y
LaPorte Municipal	LaPorte	Local	PPO	Y
Madison Municipal	Madison	Local	IMS	Y
Michigan City Municipal	Michigan City	Local	MGC	Y
White County	Monticello	Local	MCX	Y
New Castle-Henry Co.	New Castle	Local	UWL	N
North Vernon Municipal	North Vernon	Local	OVO	Y
Paoli Municipal	Paoli	Local	I42	N
Peru Municipal	Peru	Local	I76	Y
Plymouth Municipal	Plymouth	Local	C65	N
Portland Municipal	Portland	Local	PLD	Y
Jasper County	Rensselaer	Local	RZL	Y
Richmond Municipal	Richmond	Local	RID	Y
Salem Municipal	Salem	Local	I83	N
Freeman Municipal	Seymour	Local	SER	Y
Shelbyville Municipal	Shelbyville	Local	GEZ	Y
Sheridan	Sheridan	Local	514	N
Sullivan County	Sullivan	Local	SIV	Y
Terre Haute International	Terre Haute	Local	HUF	Y
Wabash Municipal	Wabash	Local	IWH	Y
Daviess County	Washington	Local	DCY	N
Clinton	Clinton	Basic	117	N
Mettel Field	Connorsville	Basic	CEV	Y
Delphi Municipal	Delphi	Basic	119	N
Frankfort Municipal	Frankfort	Basic	FKR	N
French Lick Municipal	French Lick	Basic	FRH	N
Ind. Downtown Heliport	Indianapolis	Basic	8A4	NA



Table 4-6 – INDOT Level 1 Requirement: Full Parallel Taxiway or Comparable

Aviation Facility	Associated City	Category	FAA ID	Full Taxiway*
Kentland Municipal	Kentland	Basic	50I	N
Boone County	Lebanon	Basic	6I4	N
Logansport Municipal	Logansport	Basic	GGP	Y
Fulton County	Rochester	Basic	RCR	Y
Perry County Municipal	Tell City	Basic	TEL	N
Arens Field	Winamac	Basic	RWN	N
Randolph County	Winchester	Basic	I22	Y

*Airports had to have either a full parallel taxiway, or alternate taxiways that allowed aircraft to taxi from one end of the runway to the other, without having to use the runway to taxi.

Note: Airports in **BOLD** text are not meeting the criteria.

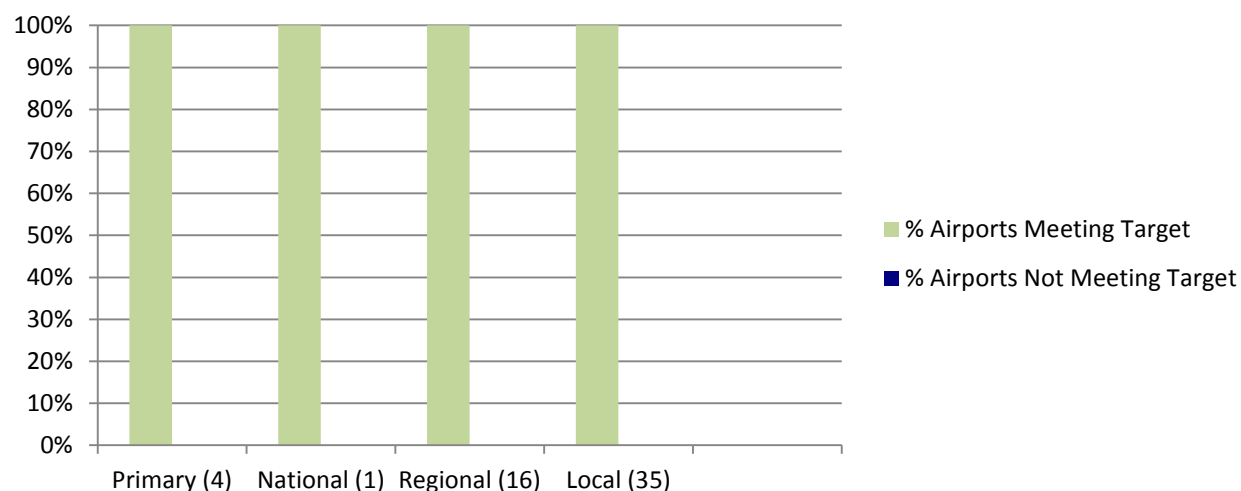
4.1.6 24-Hour Fuel Availability

An essential service for aircraft operations is the availability of aircraft fueling facilities. It is important that fuel is available for pilots 24/7 as many flights occur outside of what may be considered standard staffing hours. Airports that have credit card readers at the fuel pumps were noted as having 24/7 fueling availability. Those airports that do not have credit card readers, but could have staff out on the airfield to pump fuel within 60 minutes of being called, were also noted as having 24/7 fuel availability. If an airport could not provide fuel service within 60 minutes, they were not recorded as having 24/7 availability.

The availability of fuel 24 hours a day is a requirement for all airports, except those in the Basic category.

Figure 4-6 shows the system as a whole is meeting this target 100%. **Table 4-7** includes a listing of all system airports. Those airports in bold text are not meeting this requirement.



Figure 4-6 - INDOT Level 1 Requirement: 24-Hour Fuel Availability**Table 4-7 – INDOT Level 1 Requirement: 24 Hour Fuel Availability**

Aviation Facility	Associated City	Category	FAA ID	24-Hour Fuel Service
Evansville Regional	Evansville	Primary	EVV	Y
Ft. Wayne International	Fort Wayne	Primary	FWA	Y
Indianapolis International	Indianapolis	Primary	IND	Y
South Bend Regional	South Bend	Primary	SBN	Y
Gary/Chicago	Gary	National	GYG	Y
DeKalb County	Auburn	Regional	GWB	Y
Monroe County	Bloomington	Regional	BMG	Y
Columbus Municipal	Columbus	Regional	BAK	Y
Elkhart Municipal	Elkhart	Regional	EKM	Y
Goshen Municipal	Goshen	Regional	GSH	Y
Huntingburg Airport	Huntingburg	Regional	HNB	Y
Eagle Creek Airpark	Indianapolis	Regional	EYE	Y
Indianapolis Executive	Indianapolis	Regional	TYQ	Y
Indianapolis Metropolitan	Indianapolis	Regional	UMP	Y
Indianapolis Regional	Indianapolis	Regional	MQJ	Y
Clark County	Jeffersonville	Regional	JVY	Y
Purdue University	Lafayette	Regional	LAF	Y
Marion Municipal	Marion	Regional	MZZ	Y
Delaware County	Muncie	Regional	MIE	Y
Porter County Regional	Valparaiso	Regional	VPZ	Y
Warsaw Municipal	Warsaw	Regional	ASW	Y
Anderson Municipal	Anderson	Local	AID	Y
Steuben Co.-Tri State	Angola	Local	ANQ	Y
Virgil I. Grissom	Bedford	Local	BFR	Y
Brazil-Clay County	Brazil	Local	0I2	Y
Crawfordsville Municipal	Crawfordsville	Local	CFJ	Y
Smith Field	Fort Wayne	Local	SMD	Y
Putnam County	Greencastle	Local	4I7	Y



Table 4-7 – INDOT Level 1 Requirement: 24 Hour Fuel Availability

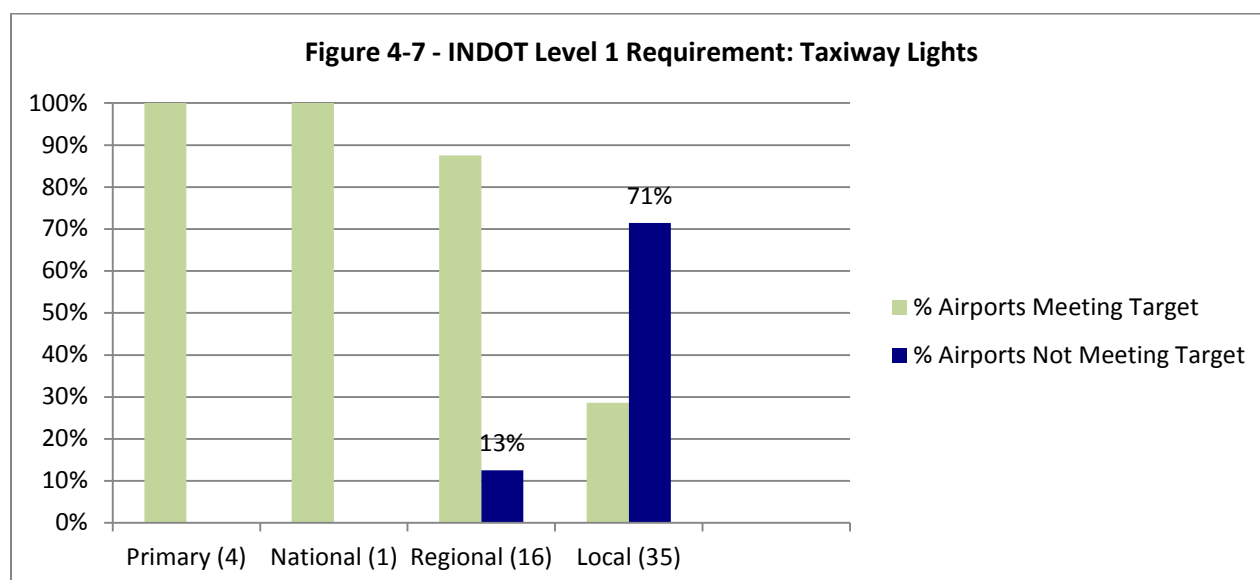
Aviation Facility	Associated City	Category	FAA ID	24-Hour Fuel Service
Greensburg-Decatur County	Greensburg	Local	I34	Y
Griffith-Merrillville	Griffith	Local	05C	Y
Huntington Municipal	Huntington	Local	HHG	Y
Greenwood Municipal	Indianapolis	Local	HFY	Y
Hendricks County	Indianapolis	Local	2R2	Y
Kendallville Municipal	Kendallville	Local	C62	Y
Starke County	Knox	Local	OXI	Y
Kokomo Municipal	Kokomo	Local	OKK	Y
LaPorte Municipal	LaPorte	Local	PPO	Y
Madison Municipal	Madison	Local	IMS	Y
Michigan City Municipal	Michigan City	Local	MGC	Y
White County	Monticello	Local	MCX	Y
New Castle-Henry Co.	New Castle	Local	UWL	Y
North Vernon Municipal	North Vernon	Local	OVO	Y
Paoli Municipal	Paoli	Local	I42	Y
Peru Municipal	Peru	Local	I76	Y
Plymouth Municipal	Plymouth	Local	C65	Y
Portland Municipal	Portland	Local	PLD	Y
Jasper County	Rensselaer	Local	RZL	Y
Richmond Municipal	Richmond	Local	RID	Y
Salem Municipal	Salem	Local	I83	Y
Freeman Municipal	Seymour	Local	SER	Y
Shelbyville Municipal	Shelbyville	Local	GEZ	Y
Sheridan	Sheridan	Local	5I4	Y
Sullivan County	Sullivan	Local	SIV	Y
Terre Haute International	Terre Haute	Local	HUF	Y
Wabash Municipal	Wabash	Local	IWH	Y
Daviess County	Washington	Local	DCY	Y
Clinton	Clinton	Basic	1I7	N
Mettel Field	Connersville	Basic	CEV	Y
Delphi Municipal	Delphi	Basic	1I9	Y
Frankfort Municipal	Frankfort	Basic	FKR	Y
French Lick Municipal	French Lick	Basic	FRH	Y
Ind. Downtown Heliport	Indianapolis	Basic	8A4	Y
Kentland Municipal	Kentland	Basic	50I	Y
Boone County	Lebanon	Basic	6I4	N
Logansport Municipal	Logansport	Basic	GGP	Y
Fulton County	Rochester	Basic	RCR	Y
Perry County Municipal	Tell City	Basic	TEL	Y
Arens Field	Winamac	Basic	RWN	Y
Randolph County	Winchester	Basic	I22	Y

Note: Airports in **BOLD** text are not meeting the criteria.



4.1.7 Taxiway Lights

As detailed in Chapter 2, taxiway lighting is utilized to illuminate the edge of taxiways in nighttime and low-visibility conditions. Taxiway lighting is required for all airports to be considered Level 1, except for those classified as Basic. **Figure 4-7** shows there are a significant number of Local airports that are not meeting this target; 25 of the 35 airports in this category (71%) do not have taxiway lighting. Primary and National airports are meeting this target 100%. **Table 4-8** includes a listing of all system airports. Those airports in bold text are not meeting this requirement.



Aviation Facility	Associated City	Category	FAA ID	Taxiway Lights
Evansville Regional	Evansville	Primary	EVV	Y
Ft. Wayne International	Fort Wayne	Primary	FWA	Y
Indianapolis International	Indianapolis	Primary	IND	Y
South Bend Regional	South Bend	Primary	SBN	Y
Gary/Chicago	Gary	National	GYG	Y
DeKalb County	Auburn	Regional	GWB	Y
Monroe County	Bloomington	Regional	BMG	Y
Columbus Municipal	Columbus	Regional	BAK	Y
Elkhart Municipal	Elkhart	Regional	EKM	Y
Goshen Municipal	Goshen	Regional	GSH	N
Huntingburg Airport	Huntingburg	Regional	HNB	Y
Eagle Creek Airpark	Indianapolis	Regional	EYE	Y
Indianapolis Executive	Indianapolis	Regional	TYQ	Y
Indianapolis Metropolitan	Indianapolis	Regional	UMP	Y



Table 4-8 - INDOT Level 1 Requirement: Taxiway Lights

Aviation Facility	Associated City	Category	FAA ID	Taxiway Lights
Indianapolis Regional	Indianapolis	Regional	MQJ	Y
Clark County	Jeffersonville	Regional	JVY	Y
Purdue University	Lafayette	Regional	LAF	Y
Marion Municipal	Marion	Regional	MZZ	Y
Delaware County	Muncie	Regional	MIE	Y
Porter County Regional	Valparaiso	Regional	VPZ	Y
Warsaw Municipal	Warsaw	Regional	ASW	N
Anderson Municipal	Anderson	Local	AID	Y
Steuben Co.-Tri State	Angola	Local	ANQ	N
Virgil I. Grissom	Bedford	Local	BFR	NA
Brazil-Clay County	Brazil	Local	0I2	NA
Crawfordsville Municipal	Crawfordsville	Local	CFJ	N
Smith Field	Fort Wayne	Local	SMD	NA
Putnam County	Greencastle	Local	4I7	Y
Greensburg-Decatur County	Greensburg	Local	I34	NA
Griffith-Merrillville	Griffith	Local	05C	N
Huntington Municipal	Huntington	Local	HHG	N
Greenwood Municipal	Indianapolis	Local	HFY	Y
Hendricks County	Indianapolis	Local	2R2	Y
Kendallville Municipal	Kendallville	Local	C62	N
Starke County	Knox	Local	OXI	Y
Kokomo Municipal	Kokomo	Local	OKK	Y
LaPorte Municipal	LaPorte	Local	PPO	N
Madison Municipal	Madison	Local	IMS	N
Michigan City Municipal	Michigan City	Local	MGC	N
White County	Monticello	Local	MCX	N
New Castle-Henry Co.	New Castle	Local	UWL	N
North Vernon Municipal	North Vernon	Local	OVO	Y
Paoli Municipal	Paoli	Local	I42	NA
Peru Municipal	Peru	Local	I76	Y
Plymouth Municipal	Plymouth	Local	C65	NA
Portland Municipal	Portland	Local	PLD	N
Jasper County	Rensselaer	Local	RZL	Y
Richmond Municipal	Richmond	Local	RID	N
Salem Municipal	Salem	Local	I83	N
Freeman Municipal	Seymour	Local	SER	N
Shelbyville Municipal	Shelbyville	Local	GEZ	N
Sheridan	Sheridan	Local	5I4	NA
Sullivan County	Sullivan	Local	SIV	Y
Terre Haute International	Terre Haute	Local	HUF	Y
Wabash Municipal	Wabash	Local	IWH	N
Daviess County	Washington	Local	DCY	N
Clinton	Clinton	Basic	1I7	NA
Mettel Field	Connersville	Basic	CEV	N
Delphi Municipal	Delphi	Basic	1I9	NA
Frankfort Municipal	Frankfort	Basic	FKR	NA
French Lick Municipal	French Lick	Basic	FRH	Y
Ind. Downtown Heliport	Indianapolis	Basic	8A4	NA
Kentland Municipal	Kentland	Basic	50I	NA



Table 4-8 - INDOT Level 1 Requirement: Taxiway Lights				
Aviation Facility	Associated City	Category	FAA ID	Taxiway Lights
Boone County	Lebanon	Basic	6I4	N
Logansport Municipal	Logansport	Basic	GGP	N
Fulton County	Rochester	Basic	RCR	N
Perry County Municipal	Tell City	Basic	TEL	N
Arens Field	Winamac	Basic	RWN	N
Randolph County	Winchester	Basic	I22	N

Note: Airports in **BOLD** text are not meeting the criteria.



4.2 INDOT Minimum Service Level Recommendations

This section of the system inventory includes the second group of airport criteria – the INDOT Minimum Service Level Recommendations. These have been developed to enhance the service level provided in each category. Please note that these are minimum recommendations and not requirements. Not meeting or exceeding these recommendations may be justified based on local conditions. **Table 4-9** identifies the minimum service level recommendations for each airport category. Each of these are inventoried and evaluated in the following subsections.

Table 4-9 – INDOT Recommended Minimum Service Level Goals

INDOT MINIMUM SERVICE LEVEL RECOMMENDATIONS ¹	PRIMARY	NATIONAL	REGIONAL	LOCAL	BASIC
Primary Runway Length (ft.)	7,000	7,000	5,000 - 7,000	3,400 - 5,000	3,400
Primary Runway Strength (SW ² or DW ³)	100,000 SW 175,000 DW	100,000	60,000	30,000	12,500
Primary Runway Grooving ⁴	Grooving	Grooving	Grooving	Grooving	
Primary Runway End Identifier Lights ^{5*}	REILs (If no AL)	REILs (If no AL)	REILs (If no AL)	REILs	
Primary Runway Visual Slope Indicators ^{6*} or Approach Lights ^{7*}	AL	AL	VSI or AL (Recommended)	VSI	
Perimeter Fencing	Fencing	Fencing	Fencing	Fencing	Fencing
Zoning or Land Use Coordination	Zoning/Coord.	Zoning/Coord.	Zoning/Coord.	Zoning/Coord.	Zoning/Coord.

NOTES, ACRONYMS, AND GLOSSARY

1 The following recommendations represent the minimum goal for at least one end of the primary runway. Attaining greater may be justified.

2 SW – Single wheel gear.

3 DW – Dual wheel gear.

4 Grooving – Runway grooves are small linear cuts on a runway pavement surface which provide a way for water to escape under aircraft tires traveling at high speed, reducing the hydroplaning effect when water is present on a runway. These grooves allow aircraft to maintain a higher degree of contact with the pavement surface when standing water is present to provide sufficient directional and braking control.

5 REILs – Runway end identifier lights generally provide rapid and positive identification of the end of the runway to the pilot.

6 VSI – Visual slope indicators – generally provide visual glide slope guidance to pilots in non-precision approaches environment.

7 AL – Approach lights generally provide the basic means for the pilot to transition from instrument flight to visual flight for landing. They can provide the pilot with visual information on runway alignment, height perception, role guidance, and horizontal references during these times.

* Recommendation for minimum of one (1) runway end.



4.2.1 Primary Runway Length

The recommended length of a runway is based upon the performance characteristics of the most demanding aircraft type intended to use an airport. Information provided by aircraft manufacturers and FAA AC 150/5325-4, *Runway Length Requirements for Airport Design*, provide guidance and recommendations to determine the preferred length of a runway. The primary runway is typically the longest runway capable of meeting the landing and takeoff distance requirements of the most demanding aircraft operating at an airport. While each airport's local conditions and most demanding aircraft are different, general length targets for the primary runway for each category have been established as part of this ISASP update:

- Primary: 7,000 feet
- National: 7,000 feet
- Regional: 5,000-7,000 feet
- Local: 3,400-5,000 feet
- Basic: 3,400 feet

Figure 4-8 indicates the percentage of airports, per category, meeting their individual primary runway length target. As the data shows, the majority of airports within each category are meeting their runway length target. Regional, Local, and Basic airports are those that require improvements. Thirteen percent of Regional airports (two airports), 11% of Local airports (four airports), and 8% of Basic airports (one airport) are not meeting this recommendation. **Table 4-8** includes a listing of all system airports, and the length of their primary runway. Those airports in bold text are not meeting this recommendation.



Figure 4-8 - INDOT Minimum Service Level Recommendation: Primary Runway Length

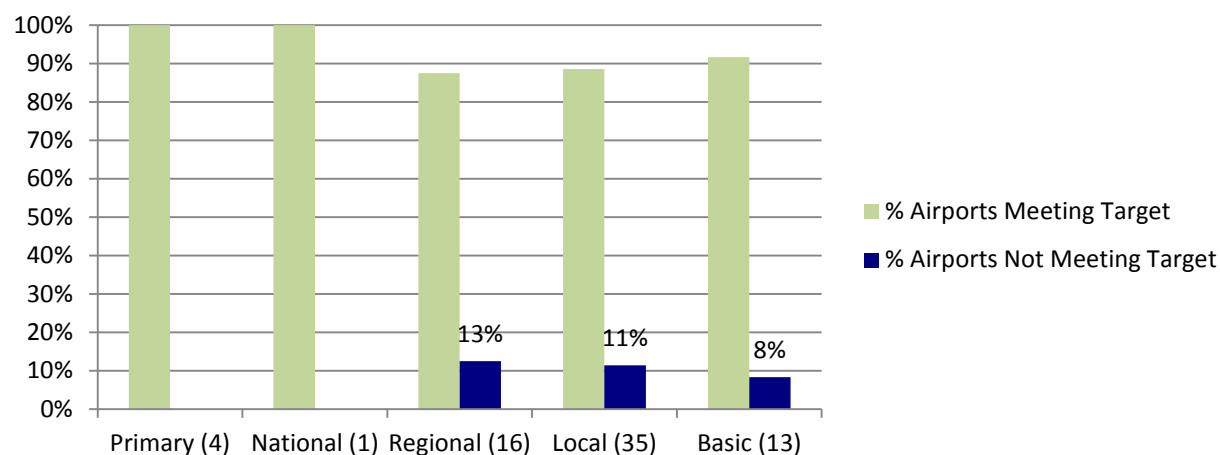


Table 4-9 – INDOT Minimum Service Level Recommendation: Primary Runway Length

Aviation Facility	Associated City	Category	FAA ID	Runway Length
Evansville Regional	Evansville	Primary	EVV	8,020
Ft. Wayne International	Fort Wayne	Primary	FWA	11,981
Indianapolis International	Indianapolis	Primary	IND	11,200
South Bend Regional	South Bend	Primary	SBN	8,414
Gary/Chicago	Gary	National	GYG	7,003
DeKalb County	Auburn	Regional	GWB	5,000
Monroe County	Bloomington	Regional	BMG	6,500
Columbus Municipal	Columbus	Regional	BAK	6,400
Elkhart Municipal	Elkhart	Regional	EKM	6,500
Goshen Municipal	Goshen	Regional	GSH	6,050
Huntingburg Airport	Huntingburg	Regional	HNB	5,000
Eagle Creek Airpark	Indianapolis	Regional	EYE	4,200
Indianapolis Executive	Indianapolis	Regional	TYQ	5,500
Indianapolis Metropolitan	Indianapolis	Regional	UMP	3,850
Indianapolis Regional	Indianapolis	Regional	MQJ	5,500
Clark County	Jeffersonville	Regional	JVY	5,500
Purdue University	Lafayette	Regional	LAF	6,600
Marion Municipal	Marion	Regional	MZZ	6,000
Delaware County	Muncie	Regional	MIE	6,500
Porter County Regional	Valparaiso	Regional	VPZ	7,001
Warsaw Municipal	Warsaw	Regional	ASW	6,002
Anderson Municipal	Anderson	Local	AID	5,400
Steuben Co.-Tri State	Angola	Local	ANQ	4,540
Virgil I. Grissom	Bedford	Local	BFR	4,501
Brazil-Clay County	Brazil	Local	012	2,941
Crawfordsville Municipal	Crawfordsville	Local	CFJ	4,500
Smith Field	Fort Wayne	Local	SMD	3,124
Putnam County	Greencastle	Local	417	4,987



Table 4-9 – INDOT Minimum Service Level Recommendation: Primary Runway Length				
Aviation Facility	Associated City	Category	FAA ID	Runway Length
Greensburg-Decatur County	Greensburg	Local	I34	3,433
Griffith-Merrillville	Griffith	Local	05C	4,900
Huntington Municipal	Huntington	Local	HHG	5,003
Greenwood Municipal	Indianapolis	Local	HFY	4,901
Hendricks County	Indianapolis	Local	2R2	4,400
Kendallville Municipal	Kendallville	Local	C62	4,400
Starke County	Knox	Local	OXI	4,401
Kokomo Municipal	Kokomo	Local	OKK	5,201
LaPorte Municipal	LaPorte	Local	PPO	5,000
Madison Municipal	Madison	Local	IMS	5,000
Michigan City Municipal	Michigan City	Local	MGC	4,100
White County	Monticello	Local	MCX	4,002
New Castle-Henry Co.	New Castle	Local	UWL	4,002
North Vernon Municipal	North Vernon	Local	OVO	5,002
Paoli Municipal	Paoli	Local	I42	2,793
Peru Municipal	Peru	Local	I76	4,400
Plymouth Municipal	Plymouth	Local	C65	4,400
Portland Municipal	Portland	Local	PLD	4,002
Jasper County	Rensselaer	Local	RZL	4,001
Richmond Municipal	Richmond	Local	RID	5,500
Salem Municipal	Salem	Local	I83	2,738
Freeman Municipal	Seymour	Local	SER	5,500
Shelbyville Municipal	Shelbyville	Local	GEZ	5,000
Sheridan	Sheridan	Local	5I4	3,760
Sullivan County	Sullivan	Local	SIV	4,360
Terre Haute International	Terre Haute	Local	HUF	9,020
Wabash Municipal	Wabash	Local	IWH	4,401
Daviess County	Washington	Local	DCY	4,621
Clinton	Clinton	Basic	1I7	3,750
Mettel Field	Connersville	Basic	CEV	6,503
Delphi Municipal	Delphi	Basic	1I9	2,898
Frankfort Municipal	Frankfort	Basic	FKR	5,000
French Lick Municipal	French Lick	Basic	FRH	5,500
Ind. Downtown Heliport*	Indianapolis	Basic	8A4	60
Kentland Municipal	Kentland	Basic	50I	3,504
Boone County	Lebanon	Basic	6I4	3,600
Logansport Municipal	Logansport	Basic	GGP	5,001
Fulton County	Rochester	Basic	RCR	5,001
Perry County Municipal	Tell City	Basic	TEL	4,400
Arens Field	Winamac	Basic	RWN	4,200
Randolph County	Winchester	Basic	I22	4,300

Note: Airports in **BOLD** text are not meeting the recommendation.

*The heliport is not included in this evaluation.



4.2.2 Primary Runway Strength

The strength of a runway is calculated for two scenarios – single wheel (SW) strength and double wheel (DW) strength, since an aircraft can have either SW or DW landing gear. A runway strength target has been established for each airport in the system, depending on their classification (and therefore the types of aircraft they serve):

- Primary: 100,000 pounds (SW) **and** 175,000 pounds (DW)
- National: 100,000 pounds (SW **or** DW)
- Regional: 60,000 pounds (SW **or** DW)
- Local: 30,000 pounds (SW **or** DW)
- Basic: 12,500 pounds (SW **or** DW)

While 100% of the Primary and National airports are meeting this recommended target, there are several airports in the Regional, Local and Basic categories that are not, as shown in **Figure 4-9**. A total of 26 airports (38% of the system) do not meet the recommended strength for their primary runway. **Table 4-11** includes a listing of all system airports. Those airports in bold text are not meeting this recommendation.

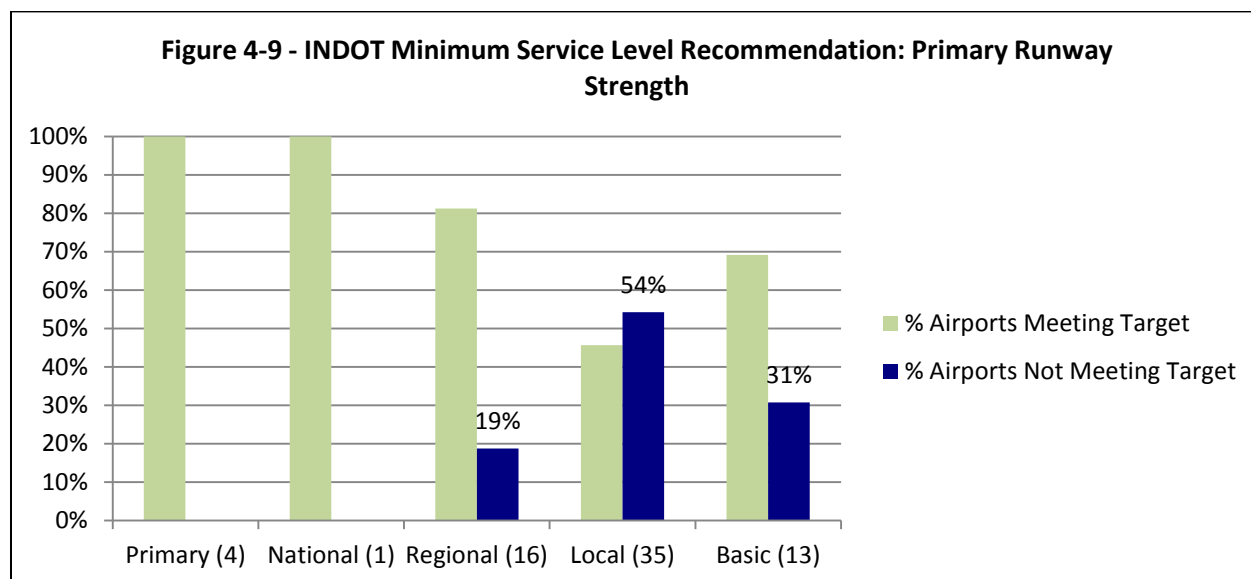


Table 4-11 – INDOT Minimum Service Level Recommendation: Primary Runway Strength

Aviation Facility	Associated City	Category	FAA ID	Strength SW (1000s)	Strength DW (1000s)
Evansville Regional	Evansville	Primary	EVV	100	175
Ft. Wayne International	Fort Wayne	Primary	FWA	100	190
Indianapolis International	Indianapolis	Primary	IND	145	300
South Bend Regional	South Bend	Primary	SBN	100	175
Gary/Chicago	Gary	National	GYG	75	157
DeKalb County	Auburn	Regional	GWB	30	60
Monroe County	Bloomington	Regional	BMG	68	121
Columbus Municipal	Columbus	Regional	BAK	43.5	125
Elkhart Municipal	Elkhart	Regional	EKM	40	60
Goshen Municipal	Goshen	Regional	GSH	45	60
Huntingburg Airport	Huntingburg	Regional	HNB	28	33
Eagle Creek Airpark	Indianapolis	Regional	EYE	12.5	NA
Indianapolis Executive	Indianapolis	Regional	TYQ	45	90
Indianapolis Metropolitan	Indianapolis	Regional	UMP	17	NA
Indianapolis Regional	Indianapolis	Regional	MQJ	30	65
Clark County	Jeffersonville	Regional	JVY	45	60
Purdue University	Lafayette	Regional	LAF	90	110
Marion Municipal	Marion	Regional	MZZ	60	90
Delaware County	Muncie	Regional	MIE	80	100
Porter County Regional	Valparaiso	Regional	VPZ	NA	250
Warsaw Municipal	Warsaw	Regional	ASW	46	60
Anderson Municipal	Anderson	Local	AID	45	55
Steuben Co.-Tri State	Angola	Local	ANQ	22	NA
Virgil I. Grissom	Bedford	Local	BFR	25	30
Brazil-Clay County	Brazil	Local	012	8	NA
Crawfordsville Municipal	Crawfordsville	Local	CFJ	16	25
Smith Field	Fort Wayne	Local	SMD	12.5	40
Putnam County	Greencastle	Local	417	30	60
Greensburg-Decatur County	Greensburg	Local	I34	8	10
Griffith-Merrillville	Griffith	Local	05C	38	50
Huntington Municipal	Huntington	Local	HHG	38	50
Greenwood Municipal	Indianapolis	Local	HFY	12.5	NA
Hendricks County	Indianapolis	Local	2R2	12.5	NA
Kendallville Municipal	Kendallville	Local	C62	12.5	NA
Starke County	Knox	Local	OXI	30	NA
Kokomo Municipal	Kokomo	Local	OKK	56	75
LaPorte Municipal	LaPorte	Local	PPO	18	NA
Madison Municipal	Madison	Local	IMS	30	NA
Michigan City Municipal	Michigan City	Local	MGC	12.5	NA
White County	Monticello	Local	MCX	22	NA
New Castle-Henry Co.	New Castle	Local	UWL	6	NA
North Vernon Municipal	North Vernon	Local	OVO	20	50
Paoli Municipal	Paoli	Local	I42	7	NA
Peru Municipal	Peru	Local	I76	10	NA
Plymouth Municipal	Plymouth	Local	C65	25	40
Portland Municipal	Portland	Local	PLD	12.5	29
Jasper County	Rensselaer	Local	RZL	12.5	NA
Richmond Municipal	Richmond	Local	RID	50	90
Salem Municipal	Salem	Local	I83	12.5	NA



Table 4-11 – INDOT Minimum Service Level Recommendation: Primary Runway Strength					
Aviation Facility	Associated City	Category	FAA ID	Strength SW (1000s)	Strength DW (1000s)
Freeman Municipal	Seymour	Local	SER	20	35
Shelbyville Municipal	Shelbyville	Local	GEZ	30	40
Sheridan	Sheridan	Local	514	NA	NA
Sullivan County	Sullivan	Local	SIV	12.5	NA
Terre Haute International	Terre Haute	Local	HUF	75	200
Wabash Municipal	Wabash	Local	IWH	27	NA
Daviess County	Washington	Local	DCY	10	44
Clinton	Clinton	Basic	117	NA	NA
Mettel Field	Connersville	Basic	CEV	50	84
Delphi Municipal	Delphi	Basic	119	12.5	NA
Frankfort Municipal	Frankfort	Basic	FKR	30	60
French Lick Municipal	French Lick	Basic	FRH	50	60
Ind. Downtown Heliport	Indianapolis	Basic	8A4	29	42.5
Kentland Municipal	Kentland	Basic	50I	12.5	NA
Boone County	Lebanon	Basic	614	10.5	NA
Logansport Municipal	Logansport	Basic	GGP	20	NA
Fulton County	Rochester	Basic	RCR	30	40
Perry County Municipal	Tell City	Basic	TEL	12	NA
Arens Field	Winamac	Basic	RWN	12	NA
Randolph County	Winchester	Basic	I22	25	30

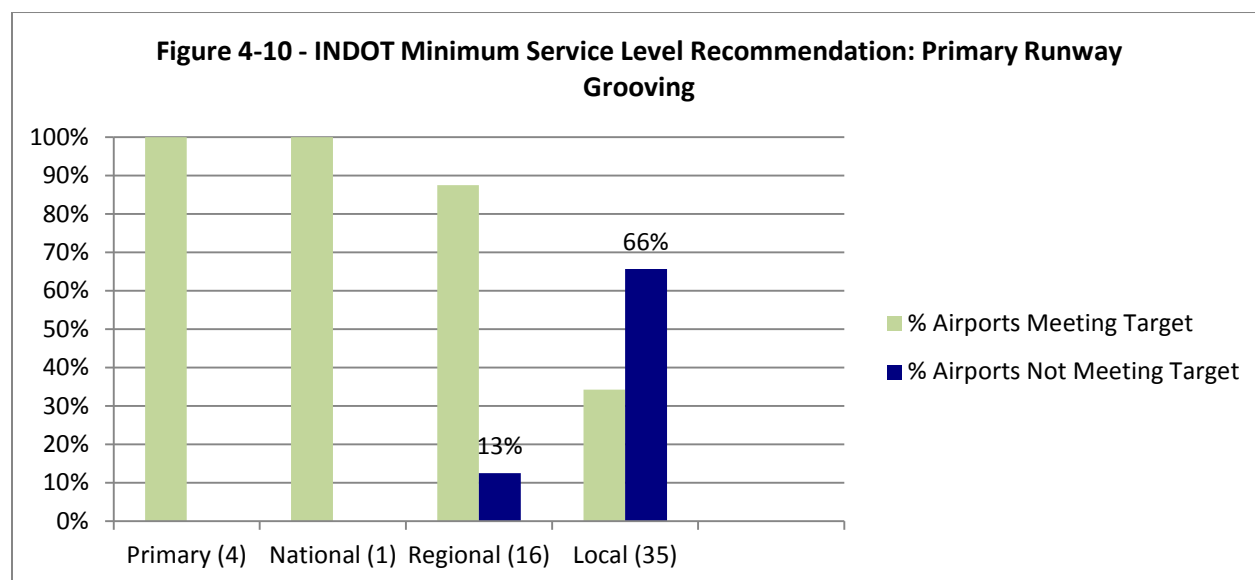
Note: Airports in **BOLD** text are not meeting the recommendation.

4.2.3 Primary Runway Grooving

As explained in Chapter 2, runway grooving allows aircraft to maintain a higher degree of contact with the pavement surface when standing water is present to provide sufficient directional and braking control. Runway grooving is a recommendation for all airport classifications, except for those in the Basic category.

Figure 4-10 indicates 66% of airports (23 airports) in the Local category are not meeting this recommended target, while all airports in the Primary and National classifications are. **Table 4-12** includes a listing of all system airports. Those airports in bold text are not meeting this recommendation.



**Table 4-12 – INDOT Minimum Service Level Recommendation: Primary Runway Grooving**

Aviation Facility	Associated City	Category	FAA ID	Runway Grooving
Evansville Regional	Evansville	Primary	EVV	Y
Ft. Wayne International	Fort Wayne	Primary	FWA	Y
Indianapolis International	Indianapolis	Primary	IND	Y
South Bend Regional	South Bend	Primary	SBN	Y
Gary/Chicago	Gary	National	GYG	Y
DeKalb County	Auburn	Regional	GWB	Y
Monroe County	Bloomington	Regional	BMG	Y
Columbus Municipal	Columbus	Regional	BAK	N
Elkhart Municipal	Elkhart	Regional	EKM	Y
Goshen Municipal	Goshen	Regional	GSH	Y
Huntingburg Airport	Huntingburg	Regional	HNB	Y
Eagle Creek Airpark	Indianapolis	Regional	EYE	Y
Indianapolis Executive	Indianapolis	Regional	TYQ	Y
Indianapolis Metropolitan	Indianapolis	Regional	UMP	N
Indianapolis Regional	Indianapolis	Regional	MQJ	Y
Clark County	Jeffersonville	Regional	JVY	Y
Purdue University	Lafayette	Regional	LAF	Y
Marion Municipal	Marion	Regional	MZZ	Y
Delaware County	Muncie	Regional	MIE	Y
Porter County Regional	Valparaiso	Regional	VPZ	Y
Warsaw Municipal	Warsaw	Regional	ASW	Y
Anderson Municipal	Anderson	Local	AID	Y
Steuben Co.-Tri State	Angola	Local	ANQ	N
Virgil I. Grissom	Bedford	Local	BFR	N
Brazil-Clay County	Brazil	Local	0I2	N
Crawfordsville Municipal	Crawfordsville	Local	CFJ	Y
Smith Field	Fort Wayne	Local	SMD	N
Putnam County	Greencastle	Local	4I7	N



Table 4-12 – INDOT Minimum Service Level Recommendation: Primary Runway Grooving

Aviation Facility	Associated City	Category	FAA ID	Runway Grooving
Greensburg-Decatur County	Greensburg	Local	I34	N
Griffith-Merrillville	Griffith	Local	05C	Y
Huntington Municipal	Huntington	Local	HHG	Y
Greenwood Municipal	Indianapolis	Local	HFY	Y
Hendricks County	Indianapolis	Local	2R2	N
Kendallville Municipal	Kendallville	Local	C62	N
Starke County	Knox	Local	OXI	N
Kokomo Municipal	Kokomo	Local	OKK	Y
LaPorte Municipal	LaPorte	Local	PPO	Y
Madison Municipal	Madison	Local	IMS	N
Michigan City Municipal	Michigan City	Local	MGC	N
White County	Monticello	Local	MCX	N
New Castle-Henry Co.	New Castle	Local	UWL	N
North Vernon Municipal	North Vernon	Local	OVO	N
Paoli Municipal	Paoli	Local	I42	N
Peru Municipal	Peru	Local	I76	N
Plymouth Municipal	Plymouth	Local	C65	N
Portland Municipal	Portland	Local	PLD	N
Jasper County	Rensselaer	Local	RZL	Y
Richmond Municipal	Richmond	Local	RID	Y
Salem Municipal	Salem	Local	I83	N
Freeman Municipal	Seymour	Local	SER	Y
Shelbyville Municipal	Shelbyville	Local	GEZ	Y
Sheridan	Sheridan	Local	5I4	N
Sullivan County	Sullivan	Local	SIV	N
Terre Haute International	Terre Haute	Local	HUF	Y
Wabash Municipal	Wabash	Local	IWH	N
Daviess County	Washington	Local	DCY	N
Clinton	Clinton	Basic	1I7	N
Mettel Field	Connersville	Basic	CEV	Y
Delphi Municipal	Delphi	Basic	1I9	N
Frankfort Municipal	Frankfort	Basic	FKR	N
French Lick Municipal	French Lick	Basic	FRH	N
Ind. Downtown Heliport*	Indianapolis	Basic	8A4	N
Kentland Municipal	Kentland	Basic	50I	N
Boone County	Lebanon	Basic	6I4	N
Logansport Municipal	Logansport	Basic	GGP	Y
Fulton County	Rochester	Basic	RCR	Y
Perry County Municipal	Tell City	Basic	TEL	N
Arens Field	Winamac	Basic	RWN	Y
Randolph County	Winchester	Basic	I22	N

Note: Airports in **BOLD** text are not meeting the recommendation.

*The heliport is not included in this evaluation.



4.2.4 Primary Runway End Identifier Lights

Runway End Identifier Lights (REILs) are high intensity, synchronized flashing lights located on either side of a runway threshold to provide positive visual identification of the end of a runway. This navigational aid is helpful for pilots in adverse conditions such as limited visibility, low cloud ceiling heights, or in urban environments where an airport may be surrounded by additional lighting.

Having REILs and/or approach lighting is a recommendation for all airport classifications, except Basic:

- Primary: Approach Lighting
- National: REILs if no Approach Lighting
- Regional: REILs if no Approach Lighting
- Local: REILs

The system as a whole is meeting this recommendation for the most part, with the exception of 17% of Local airports (six airports). **Table 4-13** includes a listing of all system airports. Those airports in bold text are not meeting this recommendation.

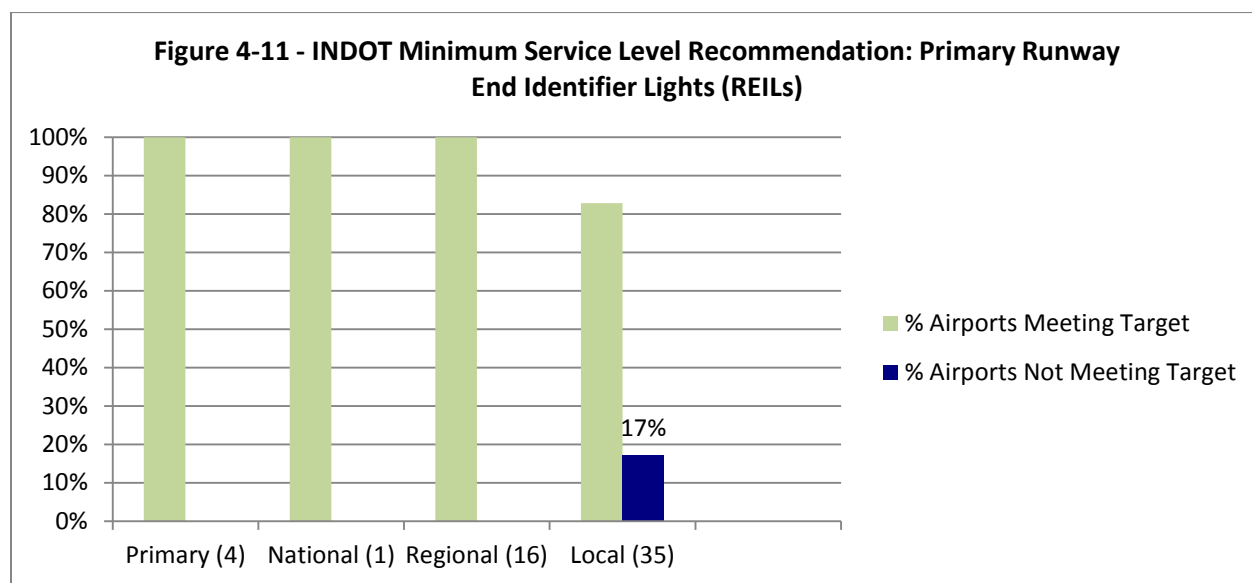


Table 4-13 – INDOT Minimum Service Level Recommendation: Primary Runway End Identifier Lights (REILs)

Aviation Facility	Associated City	Category	FAA ID	REILs	Approach Lights
Evansville Regional	Evansville	Primary	EVV	Y	MALSR
Ft. Wayne International	Fort Wayne	Primary	FWA	Y	ALSF2
Indianapolis International	Indianapolis	Primary	IND	N	ALSF2
South Bend Regional	South Bend	Primary	SBN	N	MALSR
Gary/Chicago	Gary	National	GYG	Y	MALSR
DeKalb County	Auburn	Regional	GWB	Y	MALSR
Monroe County	Bloomington	Regional	BMG	N	MALSR
Columbus Municipal	Columbus	Regional	BAK	N	MALSR
Elkhart Municipal	Elkhart	Regional	EKM	N	MALSR
Goshen Municipal	Goshen	Regional	GSH	Y	N
Huntingburg Airport	Huntingburg	Regional	HNB	Y	N
Eagle Creek Airpark	Indianapolis	Regional	EYE	N	MALS
Indianapolis Executive	Indianapolis	Regional	TYQ	Y	N
Indianapolis Metropolitan	Indianapolis	Regional	UMP	Y	N
Indianapolis Regional	Indianapolis	Regional	MQJ	Y	MALSR
Clark County	Jeffersonville	Regional	JVY	Y	MALSR
Purdue University	Lafayette	Regional	LAF	Y	MALSR
Marion Municipal	Marion	Regional	MZZ	Y	MALSR
Delaware County	Muncie	Regional	MIE	Y	MALSR
Porter County Regional	Valparaiso	Regional	VPZ	Y	MALSR
Warsaw Municipal	Warsaw	Regional	ASW	Y	N
Anderson Municipal	Anderson	Local	AID	Y	MALSF
Steuben Co.-Tri State	Angola	Local	ANQ	Y	N
Virgil I. Grissom	Bedford	Local	BFR	Y	N
Brazil-Clay County	Brazil	Local	012	N	N
Crawfordsville Municipal	Crawfordsville	Local	CFJ	Y	N
Smith Field	Fort Wayne	Local	SMD	N	N
Putnam County	Greencastle	Local	417	Y	N
Greensburg-Decatur County	Greensburg	Local	I34	N	N
Griffith-Merrillville	Griffith	Local	05C	Y	N
Huntington Municipal	Huntington	Local	HHG	Y	N
Greenwood Municipal	Indianapolis	Local	HFY	Y	N
Hendricks County	Indianapolis	Local	2R2	Y	N
Kendallville Municipal	Kendallville	Local	C62	Y	N
Starke County	Knox	Local	OXI	Y	N
Kokomo Municipal	Kokomo	Local	OKK	Y	MALSR
LaPorte Municipal	LaPorte	Local	PPO	Y	N
Madison Municipal	Madison	Local	IMS	N	MALSF
Michigan City Municipal	Michigan City	Local	MGC	Y	N
White County	Monticello	Local	MCX	Y	N
New Castle-Henry Co.	New Castle	Local	UWL	Y	N
North Vernon Municipal	North Vernon	Local	OVO	N	N
Paoli Municipal	Paoli	Local	I42	N	N
Peru Municipal	Peru	Local	I76	Y	N
Plymouth Municipal	Plymouth	Local	C65	Y	N
Portland Municipal	Portland	Local	PLD	Y	N
Jasper County	Rensselaer	Local	RZL	N	N
Richmond Municipal	Richmond	Local	RID	Y	LDIN
Salem Municipal	Salem	Local	I83	Y	N



Table 4-13 – INDOT Minimum Service Level Recommendation: Primary Runway End Identifier Lights (REILs)

Aviation Facility	Associated City	Category	FAA ID	REILs	Approach Lights
Freeman Municipal	Seymour	Local	SER	Y	ODALS
Shelbyville Municipal	Shelbyville	Local	GEZ	Y	N
Sheridan	Sheridan	Local	514	N	N
Sullivan County	Sullivan	Local	SIV	Y	N
Terre Haute International	Terre Haute	Local	HUF	Y	MALSR
Wabash Municipal	Wabash	Local	IWH	Y	N
Daviess County	Washington	Local	DCY	Y	N
Clinton	Clinton	Basic	117	N	N
Mettel Field	Connersville	Basic	CEV	Y	MALSR
Delphi Municipal	Delphi	Basic	119	N	N
Frankfort Municipal	Frankfort	Basic	FKR	Y	N
French Lick Municipal	French Lick	Basic	FRH	Y	N
Ind. Downtown Heliport	Indianapolis	Basic	8A4	PLASI	ODALS
Kentland Municipal	Kentland	Basic	50I	Y	N
Boone County	Lebanon	Basic	614	N	N
Logansport Municipal	Logansport	Basic	GGP	Y	N
Fulton County	Rochester	Basic	RCR	Y	N
Perry County Municipal	Tell City	Basic	TEL	Y	N
Arens Field	Winamac	Basic	RWN	Y	N
Randolph County	Winchester	Basic	I22	Y	N

Note: Airports in **BOLD** text are not meeting the recommendation.

4.2.5 Primary Runway Visual Slope Indicators or Approach Lights

As described in Chapter 2, visual slope indicators (VSI) and approach lights (AL) help the pilot to see the runway end. The following list indicates what is recommended for each airport classification:

- Primary: Approach Lighting
- National: Approach Lighting
- Regional: VSI (Approach Lighting Recommended)
- Local: VSI
- Basic: There is no minimum service level recommendation for Basic Airports

To meet this recommendation, an airport had to have either a VSI or AL on their primary runway (depending on their airport classification). Approach lights can be in the form of MALSR: (medium intensity approach lighting system with runway alignment indicator lights) SSALR (short simplified approach light system with runway alignment indicator lights) or ALSF: (approach lighting system with sequenced flashers). The VSI can be in the form of a Visual Approach Slope Indicators (VASIs) or Precision Approach Path Indicators (PAPIs). **Table 4-14** summarizes the types of VSI lighting systems and/or



approach lighting found at each system airport. Those airports in bold text are not meeting the recommendation. Only 9% of Local airports (three airports) are not meeting this target as a whole.

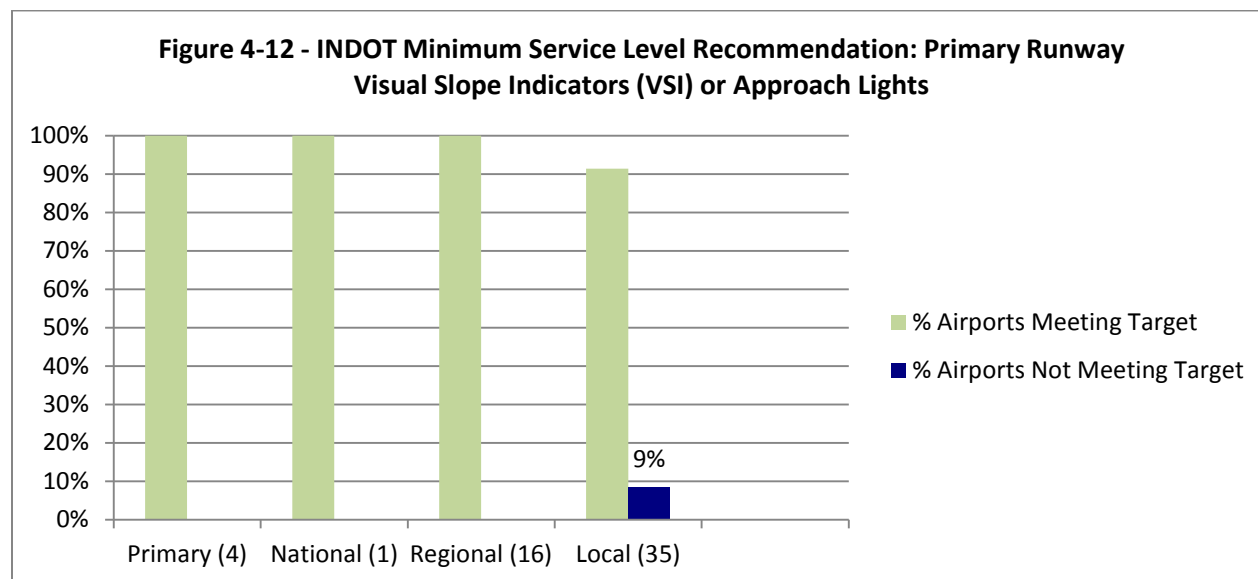


Table 4-14 – INDOT Minimum Service Level Recommendation: Primary Runway Visual Slope Indicators (VSI) or Approach Lights

Aviation Facility	Associated City	Category	FAA ID	VSI	Approach Lights
Evansville Regional	Evansville	Primary	EVV	NO	MALSR
Ft. Wayne International	Fort Wayne	Primary	FWA	PAPI	ALSF2
Indianapolis International	Indianapolis	Primary	IND	PAPI	ALSF2
South Bend Regional	South Bend	Primary	SBN	PAPI	MALSR
Gary/Chicago	Gary	National	GYG	PAPI	MALSR
DeKalb County	Auburn	Regional	GWB	PAPI	MALSR
Monroe County	Bloomington	Regional	BMG	NO	MALSR
Columbus Municipal	Columbus	Regional	BAK	PAPI	MALSR
Elkhart Municipal	Elkhart	Regional	EKM	PAPI	MALSR
Goshen Municipal	Goshen	Regional	GSH	PAPI	N*
Huntingburg Airport	Huntingburg	Regional	HNB	VASI	N*
Eagle Creek Airpark	Indianapolis	Regional	EYE	PAPI	MALS
Indianapolis Executive	Indianapolis	Regional	TYQ	PAPI	N*
Indianapolis Metropolitan	Indianapolis	Regional	UMP	PAPI	N*
Indianapolis Regional	Indianapolis	Regional	MQJ	PAPI	MALSR
Clark County	Jeffersonville	Regional	JVY	VASI	MALSR
Purdue University	Lafayette	Regional	LAF	PAPI	MALSR
Marion Municipal	Marion	Regional	MZZ	VASI	MALSR
Delaware County	Muncie	Regional	MIE	VASI	MALSR
Porter County Regional	Valparaiso	Regional	VPZ	VASI	MALSR
Warsaw Municipal	Warsaw	Regional	ASW	PAPI	N*
Anderson Municipal	Anderson	Local	AID	VASI	MALSF
Steuben Co.-Tri State	Angola	Local	ANQ	N	N
Virgil I. Grissom	Bedford	Local	BFR	VASI	N



Table 4-14 – INDOT Minimum Service Level Recommendation: Primary Runway Visual Slope Indicators (VSI) or Approach Lights

Aviation Facility	Associated City	Category	FAA ID	VSI	Approach Lights
Brazil-Clay County	Brazil	Local	012	N	N
Crawfordsville Municipal	Crawfordsville	Local	CFJ	PAPI	N
Smith Field	Fort Wayne	Local	SMD	PAPI	N
Putnam County	Greencastle	Local	417	PAPI	N
Greensburg-Decatur County	Greensburg	Local	I34	VASI	N
Griffith-Merrillville	Griffith	Local	05C	PAPI	N
Huntington Municipal	Huntington	Local	HHG	PAPI	N
Greenwood Municipal	Indianapolis	Local	HFY	PAPI	N
Hendricks County	Indianapolis	Local	2R2	PAPI	N
Kendallville Municipal	Kendallville	Local	C62	PAPI	N
Starke County	Knox	Local	OXI	PAPI	N
Kokomo Municipal	Kokomo	Local	OKK	PAPI	MALSR
LaPorte Municipal	LaPorte	Local	PPO	PAPI	N
Madison Municipal	Madison	Local	IMS	PAPI	MALSF
Michigan City Municipal	Michigan City	Local	MGC	PAPI	N
White County	Monticello	Local	MCX	PAPI	N
New Castle-Henry Co.	New Castle	Local	UWL	PAPI	N
North Vernon Municipal	North Vernon	Local	OVO	PAPI	N
Paoli Municipal	Paoli	Local	I42	PAPI	N
Peru Municipal	Peru	Local	I76	PAPI	N
Plymouth Municipal	Plymouth	Local	C65	VASI	N
Portland Municipal	Portland	Local	PLD	PAPI	N
Jasper County	Rensselaer	Local	RZL	N	N
Richmond Municipal	Richmond	Local	RID	PAPI	LDIN
Salem Municipal	Salem	Local	I83	PAPI	N
Freeman Municipal	Seymour	Local	SER	PAPI	ODALS
Shelbyville Municipal	Shelbyville	Local	GEZ	VASI	N
Sheridan	Sheridan	Local	514	TRCV	N
Sullivan County	Sullivan	Local	SIV	VASI	N
Terre Haute International	Terre Haute	Local	HUF	PAPI	MALSR
Wabash Municipal	Wabash	Local	IWH	PAPI	N
Daviess County	Washington	Local	DCY	PAPI	N
Clinton	Clinton	Basic	117	N	N
Mettel Field	Connersville	Basic	CEV	PAPI	MALSR
Delphi Municipal	Delphi	Basic	119	N	N
Frankfort Municipal	Frankfort	Basic	FKR	PAPI	N
French Lick Municipal	French Lick	Basic	FRH	VASI	N
Ind. Downtown Heliport	Indianapolis	Basic	8A4	VASI	ODALS
Kentland Municipal	Kentland	Basic	50I	PAPI	N
Boone County	Lebanon	Basic	614	N	N
Logansport Municipal	Logansport	Basic	GGP	PAPI	N
Fulton County	Rochester	Basic	RCR	PAPI	N
Perry County Municipal	Tell City	Basic	TEL	PAPI	N
Arens Field	Winamac	Basic	RWN	PAPI	N
Randolph County	Winchester	Basic	I22	PAPI	N

* Approach lighting is recommended for Regional airports, although VSI is all that is required.

Note: Airports in **BOLD** text are not meeting the recommendation.



4.2.6 Perimeter Fencing

Fencing is a recommendation for airports in all five classifications. Access to an airport should be properly controlled through the use of fencing and gates, to maintain security on the airfield, and to reduce wildlife activity on the facility. For the purposes of this inventory effort, a simple yes or no was reported for each airport regarding the existence of fencing.

Figure 4-13 indicates 50% of Regional airports (eight airports), 77% of Local airports (27 airports), and 85% of Basic airports (11 airports) are not meeting this recommendation. **Table 4-15** includes a listing of all system airports. Those airports in bold text are not meeting this target.

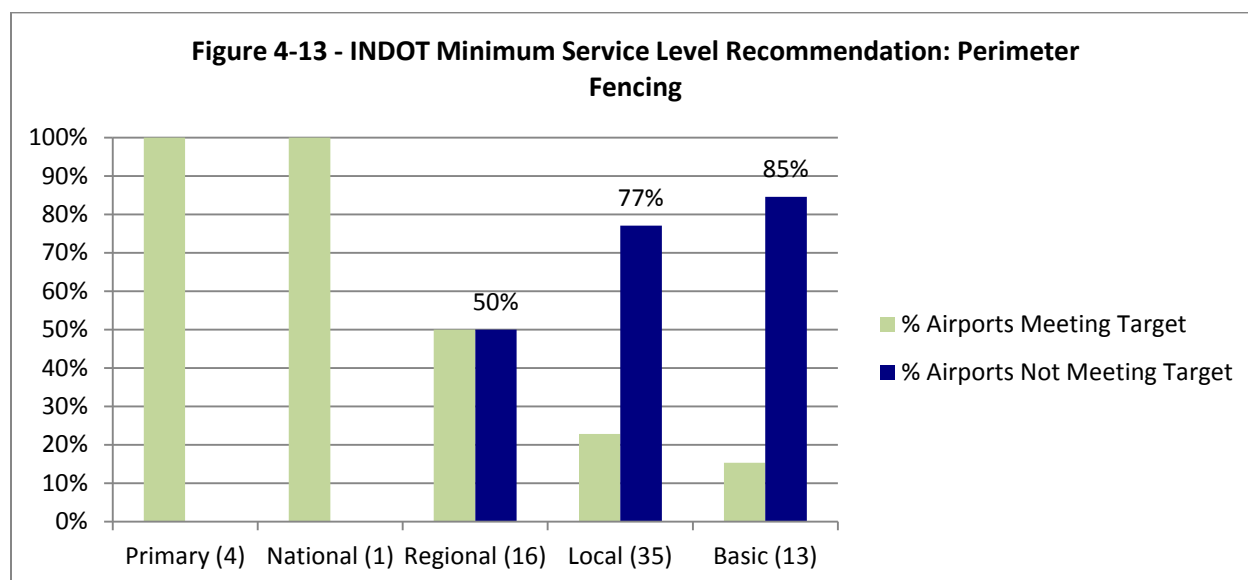


Table 4-15 – INDOT Minimum Service Level Recommendation: Perimeter Fencing

Aviation Facility	Associated City	Category	FAA ID	Perimeter Fencing
Evansville Regional	Evansville	Primary	EVV	Y
Ft. Wayne International	Fort Wayne	Primary	FWA	Y
Indianapolis International	Indianapolis	Primary	IND	Y
South Bend Regional	South Bend	Primary	SBN	Y
Gary/Chicago	Gary	National	GYG	Y
DeKalb County	Auburn	Regional	GWB	Y
Monroe County	Bloomington	Regional	BMG	Y
Columbus Municipal	Columbus	Regional	BAK	N
Elkhart Municipal	Elkhart	Regional	EKM	Y
Goshen Municipal	Goshen	Regional	GSH	Y
Huntingburg Airport	Huntingburg	Regional	HNB	N
Eagle Creek Airpark	Indianapolis	Regional	EYE	Y
Indianapolis Executive	Indianapolis	Regional	TYQ	N
Indianapolis Metropolitan	Indianapolis	Regional	UMP	Y
Indianapolis Regional	Indianapolis	Regional	MQJ	N
Clark County	Jeffersonville	Regional	JVY	N
Purdue University	Lafayette	Regional	LAF	Y
Marion Municipal	Marion	Regional	MZZ	N
Delaware County	Muncie	Regional	MIE	N
Porter County Regional	Valparaiso	Regional	VPZ	Y
Warsaw Municipal	Warsaw	Regional	ASW	N
Anderson Municipal	Anderson	Local	AID	Y
Steuben Co.-Tri State	Angola	Local	ANQ	N
Virgil I. Grissom	Bedford	Local	BFR	N
Brazil-Clay County	Brazil	Local	012	N
Crawfordsville Municipal	Crawfordsville	Local	CFJ	N
Smith Field	Fort Wayne	Local	SMD	Y
Putnam County	Greencastle	Local	417	N
Greensburg-Decatur County	Greensburg	Local	I34	N
Griffith-Merrillville	Griffith	Local	05C	N
Huntington Municipal	Huntington	Local	HHG	N
Greenwood Municipal	Indianapolis	Local	HFY	Y
Hendricks County	Indianapolis	Local	2R2	N
Kendallville Municipal	Kendallville	Local	C62	N
Starke County	Knox	Local	OXI	N
Kokomo Municipal	Kokomo	Local	OKK	Y
LaPorte Municipal	LaPorte	Local	PPO	N
Madison Municipal	Madison	Local	IMS	N
Michigan City Municipal	Michigan City	Local	MGC	N
White County	Monticello	Local	MCX	N
New Castle-Henry Co.	New Castle	Local	UWL	N
North Vernon Municipal	North Vernon	Local	OVO	Y
Paoli Municipal	Paoli	Local	I42	N
Peru Municipal	Peru	Local	I76	N
Plymouth Municipal	Plymouth	Local	C65	N
Portland Municipal	Portland	Local	PLD	N
Jasper County	Rensselaer	Local	RZL	N
Richmond Municipal	Richmond	Local	RID	N
Salem Municipal	Salem	Local	I83	Y



Table 4-15 – INDOT Minimum Service Level Recommendation: Perimeter Fencing

Aviation Facility	Associated City	Category	FAA ID	Perimeter Fencing
Freeman Municipal	Seymour	Local	SER	N
Shelbyville Municipal	Shelbyville	Local	GEZ	N
Sheridan	Sheridan	Local	514	N
Sullivan County	Sullivan	Local	SIV	Y
Terre Haute International	Terre Haute	Local	HUF	Y
Wabash Municipal	Wabash	Local	IWH	N
Daviess County	Washington	Local	DCY	N
Clinton	Clinton	Basic	117	N
Mettel Field	Connersville	Basic	CEV	N
Delphi Municipal	Delphi	Basic	119	N
Frankfort Municipal	Frankfort	Basic	FKR	N
French Lick Municipal	French Lick	Basic	FRH	N
Ind. Downtown Heliport	Indianapolis	Basic	8A4	N
Kentland Municipal	Kentland	Basic	50I	N
Boone County	Lebanon	Basic	614	N
Logansport Municipal	Logansport	Basic	GGP	N
Fulton County	Rochester	Basic	RCR	N
Perry County Municipal	Tell City	Basic	TEL	Y
Arens Field	Winamac	Basic	RWN	N
Randolph County	Winchester	Basic	I22	N

Note: Airports in **BOLD** text are not meeting the recommendation.

4.2.7 Zoning or Land Use Coordination

Coordination with local officials to address incompatible land uses surrounding an airport through zoning or inclusion in a comprehensive plan (or other local/community land use planning document) helps protect an airport from development encroachment and incompatible land uses. The establishment of zoning and land use coordination offers airports protection from activities that could impact the operation of their facility. These efforts also assist in guiding public policy and community development that prevents land uses with high concentrations of people, wildlife attractants, and visual obstructions, such as smoke or steam, to be located in proximity of an airport.

Having zoning or land use coordination is a recommendation for airports in all categories. In order to meet this target, an airport has to either have airport-specific zoning implemented at the local level, or have staff that regularly attend local planning commission meetings and/or participate on a zoning board to advocate for airport protection. **Figure 4-14** indicates there is significant room for improvement in this area, with 25% of Primary airports (one airport), 56% of Regional airports (nine airports), 74% of Local airports (26 airports), and 77% of Basic airports (10 airports) not meeting this target. **Table 4-16** includes a listing of all system airports. Those airports in bold text are not meeting this recommendation.



Figure 4-14 - INDOT Minimum Service Level Recommendation: Zoning or Land Use Coordination

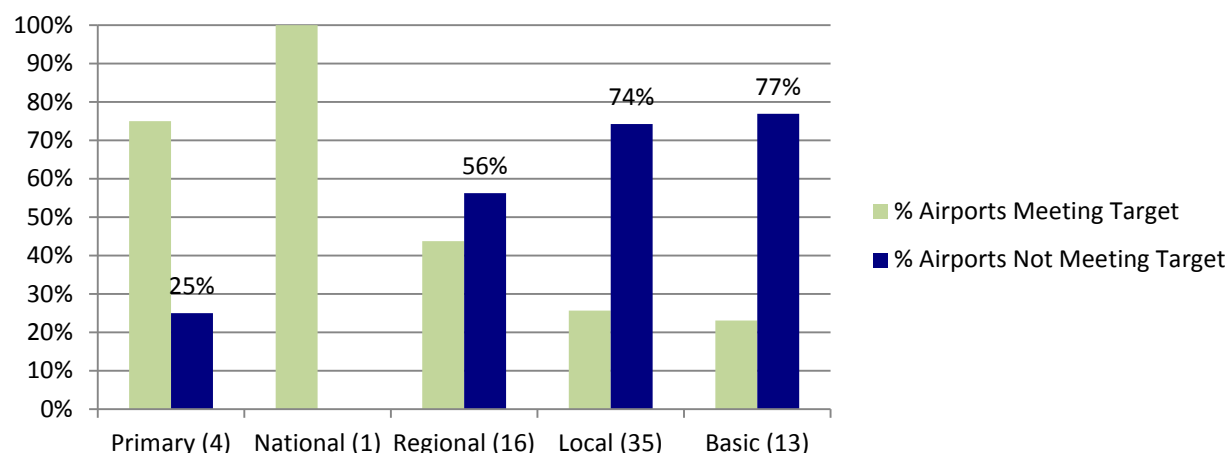


Table 4-16 – INDOT Minimum Service Level Recommendation: Zoning or Land Use Coordination

Aviation Facility	Associated City	Category	FAA ID	Zoning
Evansville Regional	Evansville	Primary	EVV	Y
Ft. Wayne International	Fort Wayne	Primary	FWA	N
Indianapolis International	Indianapolis	Primary	IND	Y
South Bend Regional	South Bend	Primary	SBN	Y
Gary/Chicago	Gary	National	GYG	Y
DeKalb County	Auburn	Regional	GWB	Y
Monroe County	Bloomington	Regional	BMG	Y
Columbus Municipal	Columbus	Regional	BAK	Y
Elkhart Municipal	Elkhart	Regional	EKM	N
Goshen Municipal	Goshen	Regional	GSH	N
Huntingburg Airport	Huntingburg	Regional	HNB	N
Eagle Creek Airpark	Indianapolis	Regional	EYE	Y
Indianapolis Executive	Indianapolis	Regional	TYQ	N
Indianapolis Metropolitan	Indianapolis	Regional	UMP	N
Indianapolis Regional	Indianapolis	Regional	MQJ	Y
Clark County	Jeffersonville	Regional	JVY	Y
Purdue University	Lafayette	Regional	LAF	N
Marion Municipal	Marion	Regional	MZZ	N
Delaware County	Muncie	Regional	MIE	Y
Porter County Regional	Valparaiso	Regional	VPZ	N
Warsaw Municipal	Warsaw	Regional	ASW	N
Anderson Municipal	Anderson	Local	AID	N
Steuben Co.-Tri State	Angola	Local	ANQ	Y
Virgil I. Grissom	Bedford	Local	BFR	N
Brazil-Clay County	Brazil	Local	0I2	N
Crawfordsville Municipal	Crawfordsville	Local	CFJ	Y
Smith Field	Fort Wayne	Local	SMD	N
Putnam County	Greencastle	Local	4I7	N



Table 4-16 – INDOT Minimum Service Level Recommendation: Zoning or Land Use Coordination

Aviation Facility	Associated City	Category	FAA ID	Zoning
Greensburg-Decatur County	Greensburg	Local	I34	N
Griffith-Merrillville	Griffith	Local	05C	N
Huntington Municipal	Huntington	Local	HHG	N
Greenwood Municipal	Indianapolis	Local	HFY	N
Hendricks County	Indianapolis	Local	2R2	Y
Kendallville Municipal	Kendallville	Local	C62	N
Starke County	Knox	Local	OXI	N
Kokomo Municipal	Kokomo	Local	OKK	Y
LaPorte Municipal	LaPorte	Local	PPO	Y
Madison Municipal	Madison	Local	IMS	N
Michigan City Municipal	Michigan City	Local	MGC	Y
White County	Monticello	Local	MCX	N
New Castle-Henry Co.	New Castle	Local	UWL	N
North Vernon Municipal	North Vernon	Local	OVO	Y
Paoli Municipal	Paoli	Local	I42	N
Peru Municipal	Peru	Local	I76	N
Plymouth Municipal	Plymouth	Local	C65	Y
Portland Municipal	Portland	Local	PLD	N
Jasper County	Rensselaer	Local	RZL	N
Richmond Municipal	Richmond	Local	RID	N
Salem Municipal	Salem	Local	I83	N
Freeman Municipal	Seymour	Local	SER	N
Shelbyville Municipal	Shelbyville	Local	GEZ	N
Sheridan	Sheridan	Local	5I4	N
Sullivan County	Sullivan	Local	SIV	N
Terre Haute International	Terre Haute	Local	HUF	Y
Wabash Municipal	Wabash	Local	IWH	N
Daviess County	Washington	Local	DCY	N
Clinton	Clinton	Basic	1I7	N
Mettel Field	Connersville	Basic	CEV	N
Delphi Municipal	Delphi	Basic	1I9	N
Frankfort Municipal	Frankfort	Basic	FKR	Y
French Lick Municipal	French Lick	Basic	FRH	N
Ind. Downtown Heliport	Indianapolis	Basic	8A4	Y
Kentland Municipal	Kentland	Basic	50I	N
Boone County	Lebanon	Basic	6I4	N
Logansport Municipal	Logansport	Basic	GGP	N
Fulton County	Rochester	Basic	RCR	Y
Perry County Municipal	Tell City	Basic	TEL	N
Arens Field	Winamac	Basic	RWN	N
Randolph County	Winchester	Basic	I22	N

Note: Airports in **BOLD** text are not meeting the recommendation.



4.3 INDOT Minimum Vertically Guided Instrument Approach Procedure (IAP) Recommendations

This section of the system inventory includes the INDOT Minimum Vertically Guided IAP Recommendations. These have been identified to support the continued development of approaches that provide increased access to the system airports. **Table 4-17** includes the recommended target for visibility and ceiling minimum for vertically guided IAPs for each airport classification. Each of these are inventoried and evaluated in the following sections. FAA Advisory Circular AC 150/5300-13, *Airport Design*, Change 18, was the current FAA guidance at the time of the evaluation, and the FAA requirements associated with each IAP minimum were derived from this source.

Table 4-17 – INDOT Minimum Vertically Guided IAP Recommendations

INDOT MINIMUM VERTICALLY GUIDED IAP RECOMMENDATIONS ³	PRIMARY	NATIONAL	REGIONAL	LOCAL	BASIC
Visibility Minimums (One End Minimum)	1/2 mile	< 3/4 mile	< 1 mile	1 mile	> 1 mile
Ceiling Minimums ¹ (One End Minimum)	200'	250'	300'	350'	400'
Obstruction Survey (VG or ANA) ⁴	VG	VG or ANA	VG or ANA	VG or ANA	VG or ANA
Basic Requirements by AC FAA 150/5300-13 ²					
Approved ALP on File	ALP w/ LPV or ILS	ALP w/ LPV or ILS	ALP w/ LPV or ILS	ALP w/ LPV	ALP w/ LPV
Minimum Runway Length	4,200 ft. (Paved)	4,200 ft. (Paved)	3,200 ft. (Paved)	3,200 ft.	3,200 ft.
Runway Markings & Signage	Precision	Precision	Nonprecision (precision recommended)	Nonprecision	Nonprecision
	Hold Position Setback 250'	Hold Position Setback 250'	Hold Position Setback 250' (200' <=A/B-II)	Hold Position Setback 250' (200' <=A/B-II; 125' <=A/B-I Sm)	Hold Position Setback 200' (125' <=A/B-I Sm)
Full Parallel Taxiway or Comparable	Required	Required	Required	Recommended	Recommended
Runway Edge Lights	HIRL/MIRL	HIRL/MIRL	HIRL/MIRL	MIRL/LIRL	MIRL/LIRL
Approach Lights (One End Minimum)	MALSR, SSALR, ALSF	MALSR, SSALR, ALSF	Recommended	Recommended	Recommended
POFZ	Required	Required	Recommended	Recommended	Recommended

¹ For LPV with ILS, lowest ceiling minimums are 200'.

² The requirements under this heading are found within FAA AC 150/5300-13, *Airport Design*, Change 18. Meeting basic required elements of class does not guarantee minimums. A detailed airspace analysis will need to be performed to determine best potential minimums.

³ Represents minimum goal for Primary runway. Attaining greater may be justified.

⁴ Vertically Guided or Area Navigation Approach Survey

ACRONYMS AND GLOSSARY

IAP: Instrument Approach Procedure



LPV: Localizer performance with vertical guidance

VG: Vertical guidance

ILS: Instrument Landing System

ANA: Area Navigation Approach

ALP: FAA approved airport layout plan

POFZ: Precision object free area - rectangular safety area at the runway threshold, centered on the extended runway centerline and is 200 feet long by 800 feet wide.

Runway Edge Lights:

HIRL: High intensity runway lighting

LIRL: Low intensity runway lighting

Approach Lights (AL):

MALSR: Medium intensity approach lighting system with runway alignment indicator lights

SSALR: Short simplified approach light system with runway alignment indicator lights

ALSF: Approach lighting system with sequenced flashers

Runway Markings and Signage: A runway is painted with various markings that coincide with the type of approach it has. This recommended target, as part of the FAA AC 150/5300-13 criteria, has two components for each airport classification. The first component is the type of markings on an airport's runway: precision or non-precision. The second component is the hold position setback, which is the line on a taxiway where a pilot is to stop when not cleared to proceed onto the runway. The appropriate setback distance is determined by the design aircraft (the most demanding aircraft making at least 500 annual operations on a runway [see following page]) and the type of approach to the runway.

Airport Reference Code (e.g. A/B-II): The FAA has developed a system to relate airport planning and design criteria to the operational and physical characteristics of the aircraft intended to use the airport. This system is known as the Airport Reference Code (ARC), and is detailed in *FAA Advisory Circular 150/5300-13, Airport Design*. A combination of two codes is used to develop the ARC. The first code, Aircraft Approach Category, relates to the approach speed (landing speed) of an aircraft. The second code, Airplane Design Group, pertains to the design group determined by the wingspan or tail height of an aircraft. The ARC is based upon the aircraft or combination of aircraft with the highest approach speed code and greatest wingspan that use, or are expected to make substantial use, of the airport. Per FAA Order 5090.3C, Field Formulation of the National Plan of Integrated Airport Systems, substantial use means 500 or more annual itinerant operations. An operation is a takeoff or landing by an aircraft.

Aircraft Approach Category	Speed (knots)	Airplane Design Group	Wingspan (feet) or Tail Height (feet)
A	Less than 91	I	Wingspan less than 49 or Tail Height up to but not including 20
B	91 to less than 121	II	Wingspan 49 up to but not including 79 or Tail Height from 20 up to but not including 30
C	121 to less than 141	III	Wingspan 79 up to but not including 118 or Tail Height from 30 up to but not including 45
D	141 to less than 166	IV	Wingspan 118 up to but not including 171 or Tail Height from 45 up to but not including 60
E	166 or more	V	Wingspan 171 up to but not including 214 or Tail Height from 60 up to but not including 66
		VI	Wingspan 214 up to but not including 262 or Tail Height from 66 up to but not including 80

Source: FAA Advisory Circular 150/5300-13, *Airport Design*.



4.3.1 Visibility Minimums (One End Minimum)

Visibility minimums indicate the lowest visibility distance at which a pilot must be able to see the airfield in order to land. Runways with precision approaches (such as those equipped with an ILS) can allow pilots to land with as little as a ½ mile visibility or less whereas runways with non-precision approaches (such as those with an LPV or RNAV-GPS approach) or visual approaches have greater visibility minimums since a lower degree of guidance is offered. The recommended visibility minimum targets for each airport classification are as follows:

- Primary: ½ mile
- National: <¾ mile
- Regional: <1 mile
- Local: 1 mile
- Basic: >1 mile

Figure 4-15 illustrates that the majority of the system airports are meeting their recommended minimums; however 13% of Regional airports (two airports), 14% of Local airports (five airports), and 23% of Basic airports (three airports) are not meeting their airport category target. **Table 18** includes a listing of all system airports. Those airports in bold text are not meeting this recommendation.

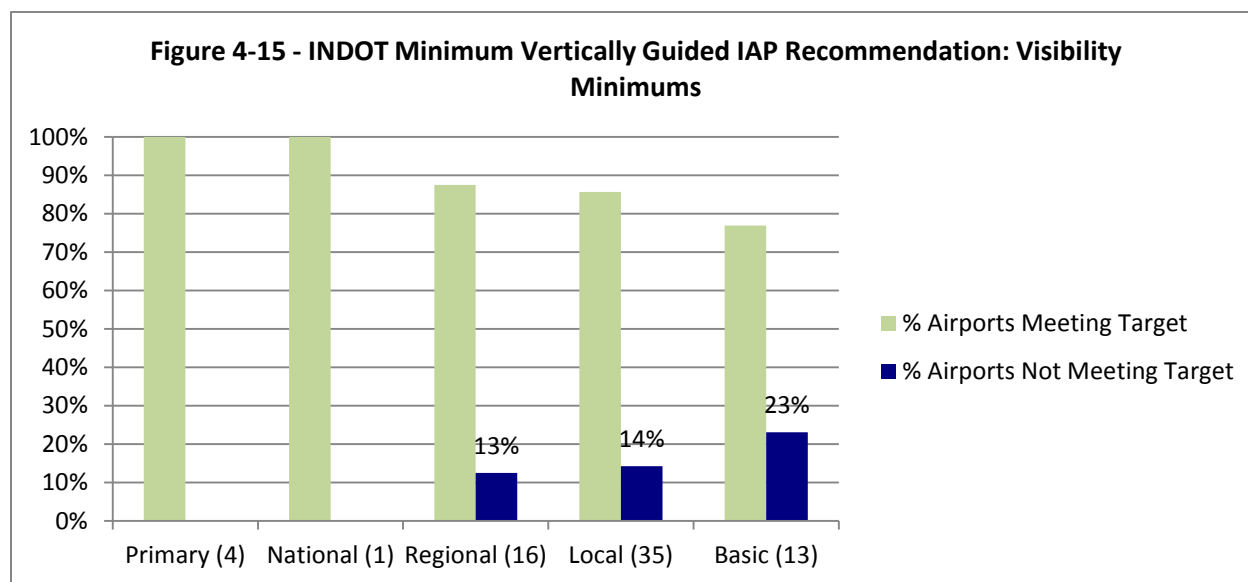


Table 4-18 – INDOT Minimum Vertically Guided IAP Recommendation: Visibility Minimums

Aviation Facility	Associated City	Category	FAA ID	Best IAP Visibility
Evansville Regional	Evansville	Primary	EVV	½
Ft. Wayne International	Fort Wayne	Primary	FWA	CAT II
Indianapolis International	Indianapolis	Primary	IND	CAT III
South Bend Regional	South Bend	Primary	SBN	½
Gary/Chicago	Gary	National	GYG	½
DeKalb County	Auburn	Regional	GWB	½
Monroe County	Bloomington	Regional	BMG	½
Columbus Municipal	Columbus	Regional	BAK	½
Elkhart Municipal	Elkhart	Regional	EKM	½
Goshen Municipal	Goshen	Regional	GSH	¾
Huntingburg Airport	Huntingburg	Regional	HNB	1
Eagle Creek Airpark	Indianapolis	Regional	EYE	¾
Indianapolis Executive	Indianapolis	Regional	TYQ	¾
Indianapolis Metropolitan	Indianapolis	Regional	UMP	1
Indianapolis Regional	Indianapolis	Regional	MQJ	½
Clark County	Jeffersonville	Regional	JVY	½
Purdue University	Lafayette	Regional	LAF	½
Marion Municipal	Marion	Regional	MZZ	½
Delaware County	Muncie	Regional	MIE	½
Porter County Regional	Valparaiso	Regional	VPZ	½
Warsaw Municipal	Warsaw	Regional	ASW	¾
Anderson Municipal	Anderson	Local	AID	1
Steuben Co.-Tri State	Angola	Local	ANQ	1½
Virgil I. Grissom	Bedford	Local	BFR	1
Brazil-Clay County	Brazil	Local	OI2	1
Crawfordsville Municipal	Crawfordsville	Local	CFJ	1
Smith Field	Fort Wayne	Local	SMD	1
Putnam County	Greencastle	Local	417	1¼
Greensburg-Decatur County	Greensburg	Local	I34	1
Griffith-Merrillville	Griffith	Local	O5C	1
Huntington Municipal	Huntington	Local	HHG	1
Greenwood Municipal	Indianapolis	Local	HFY	1
Hendricks County	Indianapolis	Local	2R2	1
Kendallville Municipal	Kendallville	Local	C62	1
Starke County	Knox	Local	OXI	1
Kokomo Municipal	Kokomo	Local	OKK	1
LaPorte Municipal	LaPorte	Local	PPO	1
Madison Municipal	Madison	Local	IMS	1 ¼
Michigan City Municipal	Michigan City	Local	MGC	1
White County	Monticello	Local	MCX	1
New Castle-Henry Co.	New Castle	Local	UWL	1
North Vernon Municipal	North Vernon	Local	OVO	1
Paoli Municipal	Paoli	Local	I42	NA
Peru Municipal	Peru	Local	I76	1
Plymouth Municipal	Plymouth	Local	C65	1
Portland Municipal	Portland	Local	PLD	1
Jasper County	Rensselaer	Local	RZL	1
Richmond Municipal	Richmond	Local	RID	¾
Salem Municipal	Salem	Local	I83	NA



Table 4-18 – INDOT Minimum Vertically Guided IAP Recommendation: Visibility Minimums

Aviation Facility	Associated City	Category	FAA ID	Best IAP Visibility
Freeman Municipal	Seymour	Local	SER	1
Shelbyville Municipal	Shelbyville	Local	GEZ	1
Sheridan	Sheridan	Local	5I4	1
Sullivan County	Sullivan	Local	SIV	1
Terre Haute International	Terre Haute	Local	HUF	½
Wabash Municipal	Wabash	Local	IWH	1
Daviess County	Washington	Local	DCY	1
Clinton	Clinton	Basic	117	NA
Mettel Field	Connersville	Basic	CEV	½
Delphi Municipal	Delphi	Basic	119	NA
Frankfort Municipal	Frankfort	Basic	FKR	1
French Lick Municipal	French Lick	Basic	FRH	1
Ind. Downtown Heliport	Indianapolis	Basic	8A4	¾
Kentland Municipal	Kentland	Basic	50I	1
Boone County	Lebanon	Basic	614	NA
Logansport Municipal	Logansport	Basic	GGP	¾
Fulton County	Rochester	Basic	RCR	1½
Perry County Municipal	Tell City	Basic	TEL	1
Arens Field	Winamac	Basic	RWN	1
Randolph County	Winchester	Basic	I22	1

Note: Airports in **BOLD** text are not meeting the recommendation.

4.3.2 Ceiling Minimums

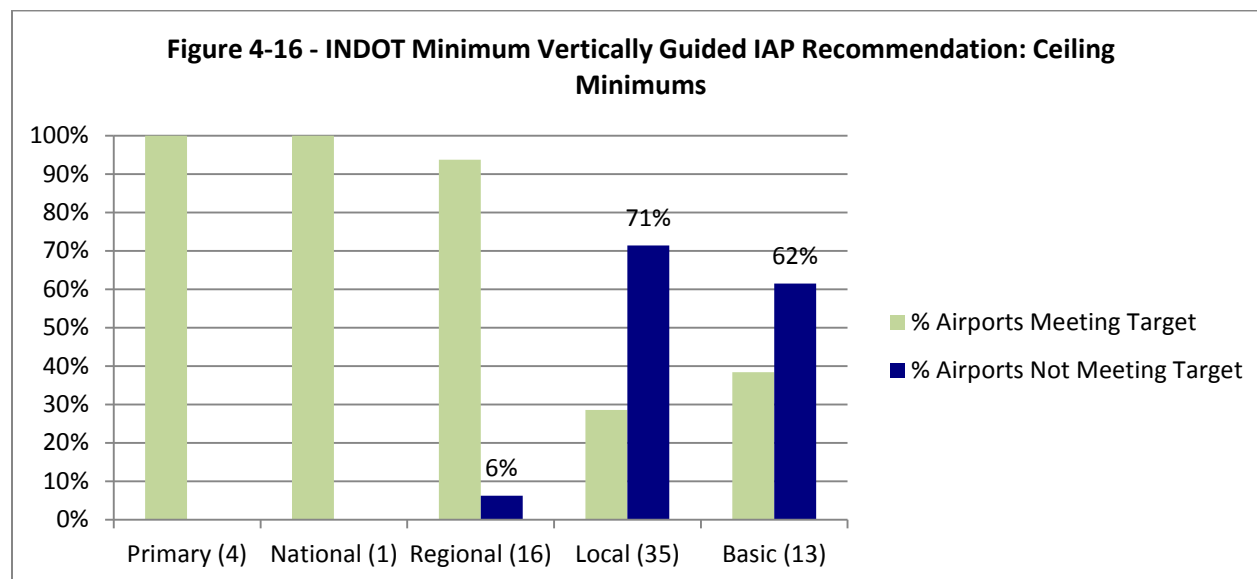
A ceiling minimum indicates the lowest cloud ceiling at which a pilot can conduct a landing. The ceiling minimum, in combination with the visibility minimum, is the decision point at which a pilot must be able to visually identify the airfield prior to landing. If a pilot is unable to visually identify the airfield at the decision point, he or she must declare a missed approach and try again or divert to another airport. Runways with precision approach procedures offer lower ceiling minimums than those with non-precision or visual approaches. The recommended ceiling minimum for each airport classification is:

- Primary: 200 feet (both ends)
- National: 250 feet (one end minimum)
- Regional: 300 feet (one end minimum)
- Local: 350 feet (one end minimum)
- Basic: 400 feet (one end minimum)

As shown in **Figure 4-16**, every Primary and National airport is meeting their target; however six percent of the Regional category (one airport), 71% of the Local category (25 airports), and 62% of the Basic



category (eight airports) are not meeting their recommendation. **Table 4-19** includes a listing of all system airports. Those airports in bold text are not meeting the IAP recommendation.



Aviation Facility	Associated City	Category	FAA ID	Meets Ceiling Minimum
Evansville Regional	Evansville	Primary	EVV	Y
Ft. Wayne International	Fort Wayne	Primary	FWA	Y
Indianapolis International	Indianapolis	Primary	IND	Y
South Bend Regional	South Bend	Primary	SBN	Y
Gary/Chicago	Gary	National	GYG	Y
DeKalb County	Auburn	Regional	GWB	Y
Monroe County	Bloomington	Regional	BMG	Y
Columbus Municipal	Columbus	Regional	BAK	Y
Elkhart Municipal	Elkhart	Regional	EKM	Y
Goshen Municipal	Goshen	Regional	GSH	Y
Huntingburg Airport	Huntingburg	Regional	HNB	Y
Eagle Creek Airpark	Indianapolis	Regional	EYE	Y
Indianapolis Executive	Indianapolis	Regional	TYQ	Y
Indianapolis Metropolitan	Indianapolis	Regional	UMP	N
Indianapolis Regional	Indianapolis	Regional	MQJ	Y
Clark County	Jeffersonville	Regional	JVY	Y
Purdue University	Lafayette	Regional	LAF	Y
Marion Municipal	Marion	Regional	MZZ	Y
Delaware County	Muncie	Regional	MIE	Y
Porter County Regional	Valparaiso	Regional	VPZ	Y
Warsaw Municipal	Warsaw	Regional	ASW	Y
Anderson Municipal	Anderson	Local	AID	Y
Steuben Co.-Tri State	Angola	Local	ANQ	N
Virgil I. Grissom	Bedford	Local	BFR	N



Table 4-19 – INDOT Minimum Vertically Guided IAP Recommendation: Ceiling Minimums

Aviation Facility	Associated City	Category	FAA ID	Meets Ceiling Minimum
Brazil-Clay County	Brazil	Local	012	N
Crawfordsville Municipal	Crawfordsville	Local	CFJ	N
Smith Field	Fort Wayne	Local	SMD	N
Putnam County	Greencastle	Local	417	Y
Greensburg-Decatur County	Greensburg	Local	I34	N
Griffith-Merrillville	Griffith	Local	05C	N
Huntington Municipal	Huntington	Local	HHG	N
Greenwood Municipal	Indianapolis	Local	HFY	Y
Hendricks County	Indianapolis	Local	2R2	N
Kendallville Municipal	Kendallville	Local	C62	N
Starke County	Knox	Local	OXI	Y
Kokomo Municipal	Kokomo	Local	OKK	Y
LaPorte Municipal	LaPorte	Local	PPO	N
Madison Municipal	Madison	Local	IMS	N
Michigan City Municipal	Michigan City	Local	MGC	N
White County	Monticello	Local	MCX	N
New Castle-Henry Co.	New Castle	Local	UWL	N
North Vernon Municipal	North Vernon	Local	OVO	Y
Paoli Municipal	Paoli	Local	I42	N
Peru Municipal	Peru	Local	I76	N
Plymouth Municipal	Plymouth	Local	C65	N
Portland Municipal	Portland	Local	PLD	N
Jasper County	Rensselaer	Local	RZL	N
Richmond Municipal	Richmond	Local	RID	Y
Salem Municipal	Salem	Local	I83	N
Freeman Municipal	Seymour	Local	SER	Y
Shelbyville Municipal	Shelbyville	Local	GEZ	Y
Sheridan	Sheridan	Local	514	N
Sullivan County	Sullivan	Local	SIV	N
Terre Haute International	Terre Haute	Local	HUF	Y
Wabash Municipal	Wabash	Local	IWH	N
Daviess County	Washington	Local	DCY	N
Clinton	Clinton	Basic	117	N
Mettel Field	Connersville	Basic	CEV	Y
Delphi Municipal	Delphi	Basic	119	N
Frankfort Municipal	Frankfort	Basic	FKR	N
French Lick Municipal	French Lick	Basic	FRH	Y
Ind. Downtown Heliport	Indianapolis	Basic	8A4	N
Kentland Municipal	Kentland	Basic	50I	N
Boone County	Lebanon	Basic	614	N
Logansport Municipal	Logansport	Basic	GGP	Y
Fulton County	Rochester	Basic	RCR	Y
Perry County Municipal	Tell City	Basic	TEL	N
Arens Field	Winamac	Basic	RWN	N
Randolph County	Winchester	Basic	I22	Y

Note: Airports in **BOLD** text are not meeting the recommendation.

* For LPV with ILS, lowest ceiling minimums are 200'



4.3.3 Obstruction Survey

An obstruction survey identifies obstructions that penetrate an airport's runway approach(es) that must be avoided by aircraft when on approach to land or take-off. Penetrating objects should be removed or lowered below the approach and departure surface slope so that the approach and departure area can remain free of obstructions. There are generally two types of obstruction surveys to meet FAA standards for developing instrument approaches: those for runways with vertical guidance (VG) and those for runways without vertical guidance (NVG). There are a few kinds of VG surveys, but for simplicity in this chapter they are broken down into VG or ANA (Area Navigation Approach for Localizer Performance with Vertical guidance [LPV]). The recommended obstruction survey is the one needed to meet FAA guidelines for the IAP visibility and ceiling minimums recommended for each airport classification:

- Primary: VG
- National: VG or ANA
- Regional: VG or ANA
- Local: VG or ANA
- Basic: VG or ANA

Figure 4-17 illustrates 50 % of Regional airports (eight airports), 83% of Local airports (29 airports), and 69% of Basic airports (nine airports) are not meeting this target. **Table 4-20** includes a listing of all system airports. Those airports in bold text are not meeting this recommendation.

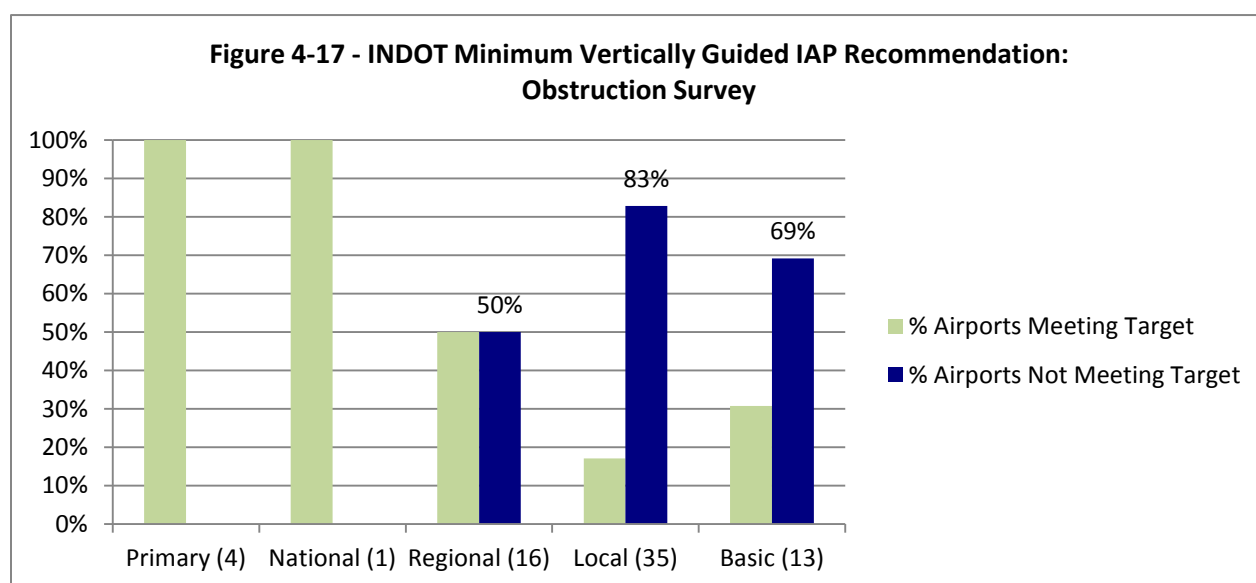


Table 4-20 – INDOT Minimum Vertically Guided IAP Recommendation: Obstruction Survey

Aviation Facility	Associated City	Category	FAA ID	Obstruction Survey
Evansville Regional	Evansville	Primary	EVV	Y
Ft. Wayne International	Fort Wayne	Primary	FWA	Y
Indianapolis International	Indianapolis	Primary	IND	Y
South Bend Regional	South Bend	Primary	SBN	Y
Gary/Chicago	Gary	National	GYG	Y
DeKalb County	Auburn	Regional	GWB	N
Monroe County	Bloomington	Regional	BMG	N
Columbus Municipal	Columbus	Regional	BAK	Y
Elkhart Municipal	Elkhart	Regional	EKM	Y
Goshen Municipal	Goshen	Regional	GSH	Y
Huntingburg Airport	Huntingburg	Regional	HNB	N
Eagle Creek Airpark	Indianapolis	Regional	EYE	Y
Indianapolis Executive	Indianapolis	Regional	TYQ	N
Indianapolis Metropolitan	Indianapolis	Regional	UMP	Y
Indianapolis Regional	Indianapolis	Regional	MQJ	Y
Clark County	Jeffersonville	Regional	JVY	N
Purdue University	Lafayette	Regional	LAF	N
Marion Municipal	Marion	Regional	MZZ	Y
Delaware County	Muncie	Regional	MIE	N
Porter County Regional	Valparaiso	Regional	VPZ	Y
Warsaw Municipal	Warsaw	Regional	ASW	N
Anderson Municipal	Anderson	Local	AID	N
Steuben Co.-Tri State	Angola	Local	ANQ	Y
Virgil I. Grissom	Bedford	Local	BFR	N
Brazil-Clay County	Brazil	Local	012	N
Crawfordsville Municipal	Crawfordsville	Local	CFJ	Y
Smith Field	Fort Wayne	Local	SMD	N
Putnam County	Greencastle	Local	417	N
Greensburg-Decatur County	Greensburg	Local	I34	N
Griffith-Merrillville	Griffith	Local	05C	N
Huntington Municipal	Huntington	Local	HHG	N
Greenwood Municipal	Indianapolis	Local	HFY	N
Hendricks County	Indianapolis	Local	2R2	Y
Kendallville Municipal	Kendallville	Local	C62	Y
Starke County	Knox	Local	OXI	N
Kokomo Municipal	Kokomo	Local	OKK	N
LaPorte Municipal	LaPorte	Local	PPO	Y
Madison Municipal	Madison	Local	IMS	N
Michigan City Municipal	Michigan City	Local	MGC	N
White County	Monticello	Local	MCX	N
New Castle-Henry Co.	New Castle	Local	UWL	N
North Vernon Municipal	North Vernon	Local	OVO	N
Paoli Municipal	Paoli	Local	I42	N
Peru Municipal	Peru	Local	I76	N
Plymouth Municipal	Plymouth	Local	C65	N
Portland Municipal	Portland	Local	PLD	N
Jasper County	Rensselaer	Local	RZL	N
Richmond Municipal	Richmond	Local	RID	Y
Salem Municipal	Salem	Local	I83	N



Table 4-20 – INDOT Minimum Vertically Guided IAP Recommendation: Obstruction Survey				
Aviation Facility	Associated City	Category	FAA ID	Obstruction Survey
Freeman Municipal	Seymour	Local	SER	N
Shelbyville Municipal	Shelbyville	Local	GEZ	N
Sheridan	Sheridan	Local	514	N
Sullivan County	Sullivan	Local	SIV	N
Terre Haute International	Terre Haute	Local	HUF	N
Wabash Municipal	Wabash	Local	IWH	N
Daviess County	Washington	Local	DCY	N
Clinton	Clinton	Basic	117	N
Mettel Field	Connersville	Basic	CEV	N
Delphi Municipal	Delphi	Basic	119	N
Frankfort Municipal	Frankfort	Basic	FKR	Y
French Lick Municipal	French Lick	Basic	FRH	N
Ind. Downtown Heliport	Indianapolis	Basic	8A4	N
Kentland Municipal	Kentland	Basic	50I	N
Boone County	Lebanon	Basic	614	N
Logansport Municipal	Logansport	Basic	GGP	Y
Fulton County	Rochester	Basic	RCR	N
Perry County Municipal	Tell City	Basic	TEL	Y
Arens Field	Winamac	Basic	RWN	N
Randolph County	Winchester	Basic	I22	Y

Note: Airports in **BOLD** text are not meeting the recommendation.



4.3.4 Basic Requirements by AC FAA 150/5300-13, Airport Design, Change 18

The following sub-sections include an inventory and evaluation of some of the other basic requirements that are included in FAA AC 150/5300-13 for new instrument approach procedures. Even though having a vertically guided approach is a recommendation of INDOT, the elements associated with the criteria are actually requirements to meet FAA design standards for the respective approach recommended. (Note: FAA Advisory Circular AC 150/5300-13, *Airport Design, Change 18*, was the current FAA guidance at the time of the evaluation.) Consequently, meeting these criteria are not optional based upon FAA needs, if an airport wants to develop an approach or reduce existing approach visibility and ceiling minimums to meet the recommendation.

4.3.4.i Approved Airport Layout Plan (ALP) on File with Appropriate Approach

To meet this requirement, an airport has to have an approved ALP on file with the FAA that shows an approach appropriate to the design criteria associated with the specific airport, depending on the airport's classification.

The required approach type for each airport classification varies:

- Primary: LPV and ILS approaches
- National: LPV or ILS approaches
- Regional: LPV or ILS approaches
- Local: LPV approach
- Basic: LPV approach

Figure 4-18 illustrates that six percent of Regional airports (one airport), 71% of Local airports (25 airports), and 62% of Basic airports (eight airports) are not meeting this requirement. A significant number of system airports could target this as a goal to better enhance and serve the system. **Table 4-21** includes a listing of all system airports. Those airports in bold text are not meeting this requirement for their IAP recommendation.



Figure 4-18 - INDOT Minimum Vertically Guided IAP Recommendation: ALP w/Appropriate Approach

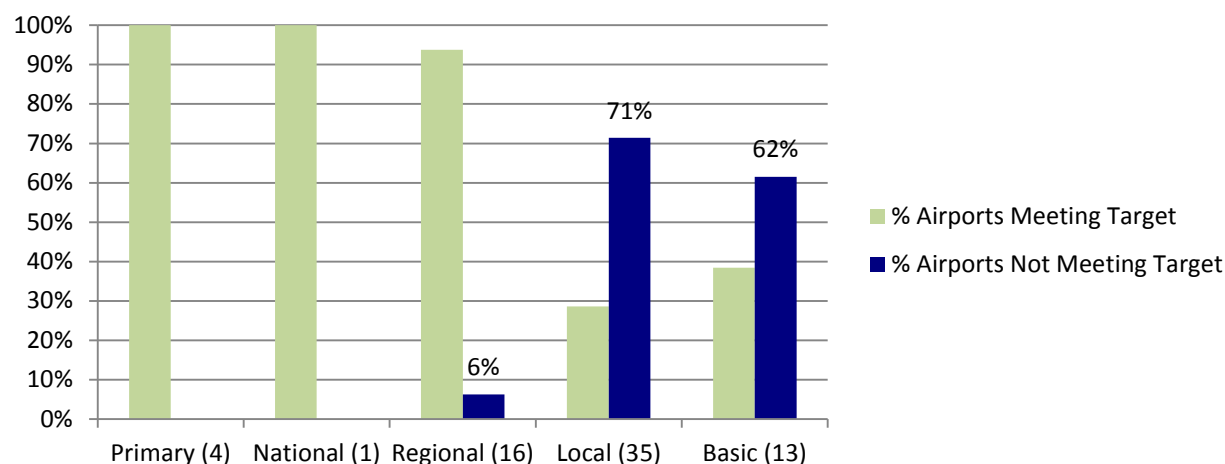


Table 4-21 – INDOT Minimum Vertically Guided IAP Recommendation: ALP w/Appropriate Approach

Aviation Facility	Associated City	Category	FAA ID	Best IAP	ALP Date
Evansville Regional	Evansville	Primary	EVV	ILS & LPV	2009
Ft. Wayne International	Fort Wayne	Primary	FWA	ILS & LPV	2012
Indianapolis International	Indianapolis	Primary	IND	ILS & LPV	2007
South Bend Regional	South Bend	Primary	SBN	ILS & LPV	2011
Gary/Chicago	Gary	National	GYV	ILS	2005
DeKalb County	Auburn	Regional	GWB	ILS	1997
Monroe County	Bloomington	Regional	BMG	ILS	2009
Columbus Municipal	Columbus	Regional	BAK	ILS	2000
Elkhart Municipal	Elkhart	Regional	EKM	ILS	2011
Goshen Municipal	Goshen	Regional	GSH	ILS	2004
Huntingburg Airport	Huntingburg	Regional	HNB	LPV	1976
Eagle Creek Airpark	Indianapolis	Regional	EYE	LPV	1994
Indianapolis Executive	Indianapolis	Regional	TYQ	ILS	2009
Indianapolis Metropolitan	Indianapolis	Regional	UMP	RNAV-GPS	1985
Indianapolis Regional	Indianapolis	Regional	MQJ	ILS	2008
Clark County	Jeffersonville	Regional	JVY	ILS	1993
Purdue University	Lafayette	Regional	LAF	ILS	2002
Marion Municipal	Marion	Regional	MZZ	ILS	2011
Delaware County	Muncie	Regional	MIE	ILS	2010
Porter County Regional	Valparaiso	Regional	VPZ	ILS	2011
Warsaw Municipal	Warsaw	Regional	ASW	ILS	1999
Anderson Municipal	Anderson	Local	AID	ILS	1992
Steuben Co.-Tri State	Angola	Local	ANQ	RNAV/GPS	1975
Virgil I. Grissom	Bedford	Local	BFR	GPS	1986
Brazil-Clay County	Brazil	Local	012	RNAV/GPS	Pending
Crawfordsville Municipal	Crawfordsville	Local	CFJ	RNAV-GPS	2001
Smith Field	Fort Wayne	Local	SMD	RNAV-GPS	2007
Putnam County	Greencastle	Local	417	LPV	Pending



Table 4-21 – INDOT Minimum Vertically Guided IAP Recommendation: ALP w/Appropriate Approach

Aviation Facility	Associated City	Category	FAA ID	Best IAP	ALP Date
Greensburg-Decatur County	Greensburg	Local	I34	RNAV-GPS	2010
Griffith-Merrillville	Griffith	Local	05C	RNAV-GPS	2003
Huntington Municipal	Huntington	Local	HHG	RNAV-GPS	1995
Greenwood Municipal	Indianapolis	Local	HFY	LPV	2004
Hendricks County	Indianapolis	Local	2R2	RNAV-GPS	2010
Kendallville Municipal	Kendallville	Local	C62	RNAV-GPS	1981
Starke County	Knox	Local	OXI	LPV	1998
Kokomo Municipal	Kokomo	Local	OKK	ILS	1999
LaPorte Municipal	LaPorte	Local	PPO	LOC/NDB	1999
Madison Municipal	Madison	Local	IMS	LPV	2003
Michigan City Municipal	Michigan City	Local	MGC	RNAV-GPS	2007
White County	Monticello	Local	MCX	GPS	2004
New Castle-Henry Co.	New Castle	Local	UWL	GPS	2011
North Vernon Municipal	North Vernon	Local	OVO	LPV	2011
Paoli Municipal	Paoli	Local	I42	VISUAL	2006
Peru Municipal	Peru	Local	I76	RNAV-GPS	1988
Plymouth Municipal	Plymouth	Local	C65	GPS	2004
Portland Municipal	Portland	Local	PLD	RNAV-GPS	2000
Jasper County	Rensselaer	Local	RZL	GPS	2006
Richmond Municipal	Richmond	Local	RID	ILS	1976
Salem Municipal	Salem	Local	I83	VISUAL	2009
Freeman Municipal	Seymour	Local	SER	LPV	2004
Shelbyville Municipal	Shelbyville	Local	GEZ	LPV	1991
Sheridan	Sheridan	Local	5I4	GPS	NA
Sullivan County	Sullivan	Local	SIV	RNAV-GPS	2000
Terre Haute International	Terre Haute	Local	HUF	ILS	2003
Wabash Municipal	Wabash	Local	IWH	RNAV-GPS	1975
Daviess County	Washington	Local	DCY	RNAV-GPS	2004
Clinton	Clinton	Basic	117	VISUAL	No
Mettel Field	Connersville	Basic	CEV	ILS	1996
Delphi Municipal	Delphi	Basic	119	VISUAL	1986
Frankfort Municipal	Frankfort	Basic	FKR	RNAV-GPS	1979
French Lick Municipal	French Lick	Basic	FRH	LPV	1975
Ind. Downtown Heliport	Indianapolis	Basic	8A4	RNAV-GPS	1986
Kentland Municipal	Kentland	Basic	50I	GPS	2005
Boone County	Lebanon	Basic	6I4	VISUAL	NA
Logansport Municipal	Logansport	Basic	GGP	LPV	2006
Fulton County	Rochester	Basic	RCR	LPV	1999
Perry County Municipal	Tell City	Basic	TEL	GPS	2000
Arens Field	Winamac	Basic	RWN	RNAV-GPS	2010
Randolph County	Winchester	Basic	I22	LPV	2009

Note: Airports in **BOLD** text are not meeting the recommendation.

4.3.4.ii Minimum Runway Length for New Instrument Approach Procedure

While a minimum runway length was previously discussed in Section 4.2.1, this runway length is focused on the specific criteria to meet the FAA AC 150/5300-13 design standard for the



recommended IAP, which vary from the overall primary runway length criteria. As shown below, the minimum runway length in this instance is 4,200 feet for Primary airports, whereas the minimum runway length noted in Section 4.2.1 is 7,000 feet for Primary airports. The runway length requirements are different for the IAP recommended each airport classification:

- Primary: 4,200 feet
- National: 4,200 feet
- Regional: 3,200 feet
- Local: 3,200 feet
- Basic: 3,200 feet

Figure 4-20 indicates the percentage of airports, per category, meeting their classification recommendations. As the data shows, 11% of Local airports (four airports) and eight percent of Basic airports (one airport) are meeting their target. **Table 4-22** includes a listing of all system airports. Those airports in bold text are not meeting this requirement for their IAP recommendation.

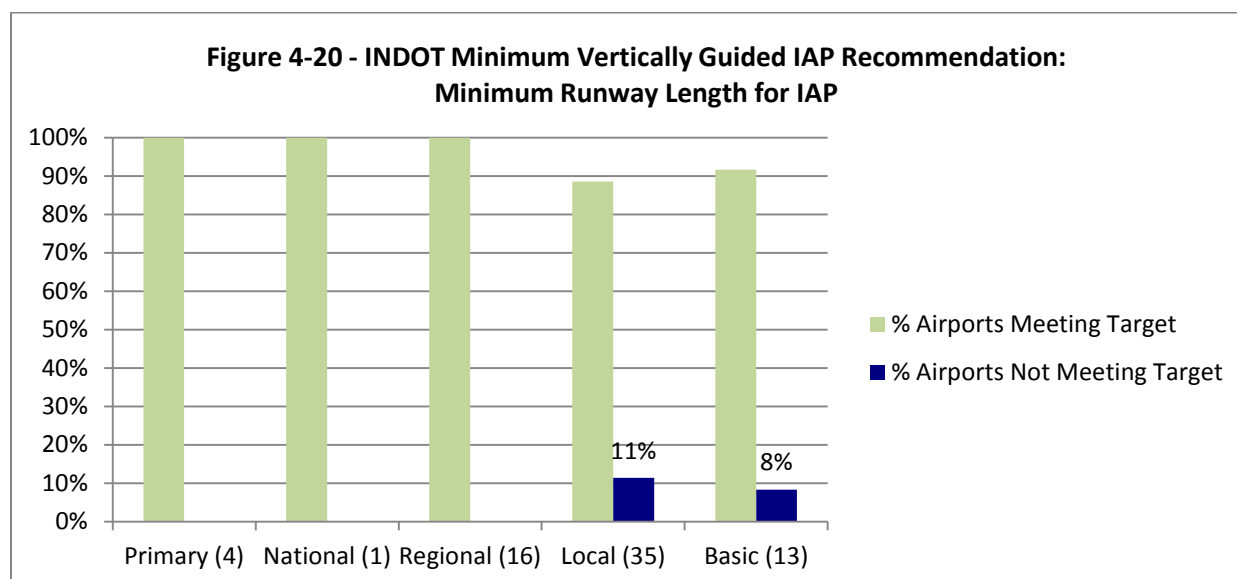


Table 4-22 – INDOT Minimum Vertically Guided IAP Recommendation: Minimum Runway Length for IAP				
Aviation Facility	Associated City	Category	FAA ID	Runway Length
Evansville Regional	Evansville	Primary	EVV	8,020
Ft. Wayne International	Fort Wayne	Primary	FWA	11,981



Table 4-22 – INDOT Minimum Vertically Guided IAP Recommendation: Minimum Runway Length for IAP				
Aviation Facility	Associated City	Category	FAA ID	Runway Length
Indianapolis International	Indianapolis	Primary	IND	11,200
South Bend Regional	South Bend	Primary	SBN	8,414
Gary/Chicago	Gary	National	GYG	7,003
DeKalb County	Auburn	Regional	GWB	5,000
Monroe County	Bloomington	Regional	BMG	6,500
Columbus Municipal	Columbus	Regional	BAK	6,400
Elkhart Municipal	Elkhart	Regional	EKM	6,500
Goshen Municipal	Goshen	Regional	GSH	6,050
Huntingburg Airport	Huntingburg	Regional	HNB	5,000
Eagle Creek Airpark	Indianapolis	Regional	EYE	4,200
Indianapolis Executive	Indianapolis	Regional	TYQ	5,500
Indianapolis Metropolitan	Indianapolis	Regional	UMP	3,850
Indianapolis Regional	Indianapolis	Regional	MQJ	5,500
Clark County	Jeffersonville	Regional	JVY	5,500
Purdue University	Lafayette	Regional	LAF	6,600
Marion Municipal	Marion	Regional	MZZ	6,000
Delaware County	Muncie	Regional	MIE	6,500
Porter County Regional	Valparaiso	Regional	VPZ	7,001
Warsaw Municipal	Warsaw	Regional	ASW	6,002
Anderson Municipal	Anderson	Local	AID	5,400
Steuben Co.-Tri State	Angola	Local	ANQ	4,540
Virgil I. Grissom	Bedford	Local	BFR	4,501
Brazil-Clay County	Brazil	Local	012	2,941
Crawfordsville Municipal	Crawfordsville	Local	CFJ	4,500
Smith Field	Fort Wayne	Local	SMD	3,124
Putnam County	Greencastle	Local	417	4,987
Greensburg-Decatur County	Greensburg	Local	I34	3,433
Griffith-Merrillville	Griffith	Local	05C	4,900
Huntington Municipal	Huntington	Local	HHG	5,003
Greenwood Municipal	Indianapolis	Local	HFY	4,901
Hendricks County	Indianapolis	Local	2R2	4,400
Kendallville Municipal	Kendallville	Local	C62	4,400
Starke County	Knox	Local	OXI	4,401
Kokomo Municipal	Kokomo	Local	OKK	5,201
LaPorte Municipal	LaPorte	Local	PPO	5,000
Madison Municipal	Madison	Local	IMS	5,000
Michigan City Municipal	Michigan City	Local	MGC	4,100
White County	Monticello	Local	MCX	4,002
New Castle-Henry Co.	New Castle	Local	UWL	4,002
North Vernon Municipal	North Vernon	Local	OVO	5,002
Paoli Municipal	Paoli	Local	I42	2,793
Peru Municipal	Peru	Local	I76	4,400
Plymouth Municipal	Plymouth	Local	C65	4,400
Portland Municipal	Portland	Local	PLD	4,002
Jasper County	Rensselaer	Local	RZL	4,001
Richmond Municipal	Richmond	Local	RID	5,500
Salem Municipal	Salem	Local	I83	2,738
Freeman Municipal	Seymour	Local	SER	5,500
Shelbyville Municipal	Shelbyville	Local	GEZ	5,000



Table 4-22 – INDOT Minimum Vertically Guided IAP Recommendation: Minimum Runway Length for IAP				
Aviation Facility	Associated City	Category	FAA ID	Runway Length
Sheridan	Sheridan	Local	5I4	3,760
Sullivan County	Sullivan	Local	SIV	4,360
Terre Haute International	Terre Haute	Local	HUF	9,020
Wabash Municipal	Wabash	Local	IWH	4,401
Daviess County	Washington	Local	DCY	4,621
Clinton	Clinton	Basic	1I7	3,750
Mettel Field	Connersville	Basic	CEV	6,503
Delphi Municipal	Delphi	Basic	1I9	2,898
Frankfort Municipal	Frankfort	Basic	FKR	5,000
French Lick Municipal	French Lick	Basic	FRH	5,500
Ind. Downtown Heliport*	Indianapolis	Basic	8A4	60
Kentland Municipal	Kentland	Basic	5OI	3,504
Boone County	Lebanon	Basic	6I4	3,600
Logansport Municipal	Logansport	Basic	GGP	5,001
Fulton County	Rochester	Basic	RCR	5,001
Perry County Municipal	Tell City	Basic	TEL	4,400
Arens Field	Winamac	Basic	RWN	4,200
Randolph County	Winchester	Basic	I22	4,300

Note: Airports in **BOLD** text are not meeting the recommendation.

*The heliport is not included in this evaluation

4.3.4.iii Runway Markings & Signage

The requirements of FAA AC 150/5300-13 for runway markings and signage are different for each airport classification depending on its IAP recommendation:

- Primary: Precision markings with a hold position setback of 250 feet
- National: Precision markings with a hold position setback of 250 feet
- Regional: Non-precision markings with a hold position setback of 250 feet (200 feet \leq A/B-II)
- Local: Non-precision markings with a hold position setback of 250 feet (200' $<$ A/B-II, 125' \leq A/B-I)
- Basic: Non-precision markings with a hold position setback of 200 feet (125 feet \leq A/B-I)

As shown in **Figure 4-21**, 25% of Regional airports (four airports), 54% of Local airports (19 airports), and 69% of Basic airports (nine airports) are not meeting their requirement. **Table 4-23** includes a listing of all system airports. Those airports in bold text are not meeting this requirement for their IAP recommendation.



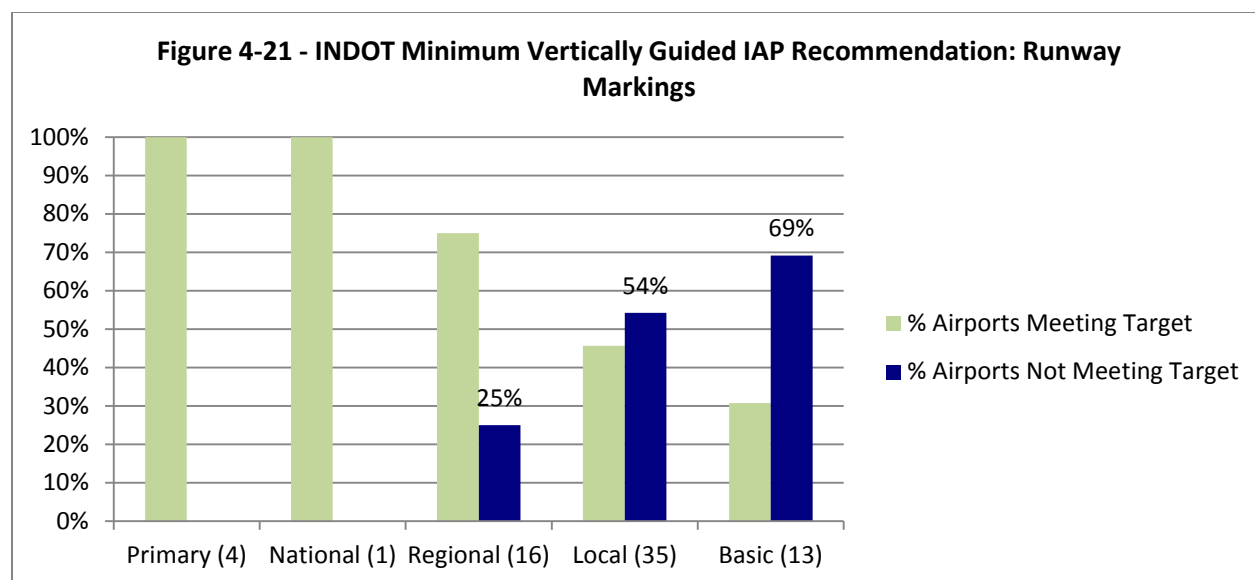


Table 4-23 – INDOT Minimum Vertically Guided IAP Recommendation: Runway Markings and Signage

Aviation Facility	Associated City	Category	FAA ID	Runway Markings	Meets Hold Position Setback
Evansville Regional	Evansville	Primary	EVV	PRECISION	Y
Ft. Wayne International	Fort Wayne	Primary	FWA	PRECISION	Y
Indianapolis International	Indianapolis	Primary	IND	PRECISION	Y
South Bend Regional	South Bend	Primary	SBN	PRECISION	Y
Gary/Chicago	Gary	National	GYG	PRECISION	Y
DeKalb County	Auburn	Regional	GWB	PRECISION	Y
Monroe County	Bloomington	Regional	BMG	PRECISION	Y
Columbus Municipal	Columbus	Regional	BAK	PRECISION	Y
Elkhart Municipal	Elkhart	Regional	EKM	PRECISION	Y
Goshen Municipal	Goshen	Regional	GSH	PRECISION	Y
Huntingburg Airport	Huntingburg	Regional	HNB	NON-PREC	Y
Eagle Creek Airpark	Indianapolis	Regional	EYE	NON-PREC	N
Indianapolis Executive	Indianapolis	Regional	TYQ	PRECISION	Y
Indianapolis Metropolitan	Indianapolis	Regional	UMP	NON-PREC	N
Indianapolis Regional	Indianapolis	Regional	MQJ	PRECISION	Y
Clark County	Jeffersonville	Regional	JVY	PRECISION	N
Purdue University	Lafayette	Regional	LAF	PRECISION	N
Marion Municipal	Marion	Regional	MZZ	PRECISION	Y
Delaware County	Muncie	Regional	MIE	PRECISION	Y
Porter County Regional	Valparaiso	Regional	VPZ	PRECISION	Y
Warsaw Municipal	Warsaw	Regional	ASW	PRECISION	Y
Anderson Municipal	Anderson	Local	AID	PRECISION	N
Steuben Co.-Tri State	Angola	Local	ANQ	NON-PREC	N
Virgil I. Grissom	Bedford	Local	BFR	NON-PREC	Y
Brazil-Clay County	Brazil	Local	O12	BASIC	Y
Crawfordsville Municipal	Crawfordsville	Local	CFJ	NON-PREC	Y
Smith Field	Fort Wayne	Local	SMD	BASIC	Y
Putnam County	Greencastle	Local	417	NON-PREC	Y



Table 4-23 – INDOT Minimum Vertically Guided IAP Recommendation: Runway Markings and Signage					
Aviation Facility	Associated City	Category	FAA ID	Runway Markings	Meets Hold Position Setback
Greensburg-Decatur County	Greensburg	Local	I34	BASIC	N
Griffith-Merrillville	Griffith	Local	05C	BASIC	Y
Huntington Municipal	Huntington	Local	HHG	NON-PREC	Y
Greenwood Municipal	Indianapolis	Local	HFY	NON-PREC	N
Hendricks County	Indianapolis	Local	2R2	NON-PREC	N
Kendallville Municipal	Kendallville	Local	C62	NON-PREC	Y
Starke County	Knox	Local	OXI	NON-PREC	N
Kokomo Municipal	Kokomo	Local	OKK	PRECISION	Y
LaPorte Municipal	LaPorte	Local	PPO	NON-PREC	Y
Madison Municipal	Madison	Local	IMS	NON-PREC	N
Michigan City Municipal	Michigan City	Local	MGC	NON-PREC	N
White County	Monticello	Local	MCX	NON-PREC	N
New Castle-Henry Co.	New Castle	Local	UWL	NON-PREC	N
North Vernon Municipal	North Vernon	Local	OVO	NON-PREC	Y
Paoli Municipal	Paoli	Local	I42	BASIC	N
Peru Municipal	Peru	Local	I76	NON-PREC	Y
Plymouth Municipal	Plymouth	Local	C65	BASIC	N
Portland Municipal	Portland	Local	PLD	NON-PREC	Y
Jasper County	Rensselaer	Local	RZL	NON-PREC	Y
Richmond Municipal	Richmond	Local	RID	PRECISION	Y
Salem Municipal	Salem	Local	I83	BASIC	N
Freeman Municipal	Seymour	Local	SER	NON-PREC	N
Shelbyville Municipal	Shelbyville	Local	GEZ	NON-PREC	Y
Sheridan	Sheridan	Local	5I4	BASIC	N
Sullivan County	Sullivan	Local	SIV	NON-PREC	Y
Terre Haute International	Terre Haute	Local	HUF	PRECISION	Y
Wabash Municipal	Wabash	Local	IWH	NON-PREC	Y
Daviess County	Washington	Local	DCY	NON-PREC	N
Clinton	Clinton	Basic	1I7	BASIC	N
Mettel Field	Connersville	Basic	CEV	BASIC	Y
Delphi Municipal	Delphi	Basic	1I9	BASIC	Y
Frankfort Municipal	Frankfort	Basic	FKR	NON-PREC	Y
French Lick Municipal	French Lick	Basic	FRH	NON-PREC	Y
Ind. Downtown Heliport	Indianapolis	Basic	8A4	NON-PREC	Y
Kentland Municipal	Kentland	Basic	50I	BASIC	Y
Boone County	Lebanon	Basic	6I4	BASIC	N
Logansport Municipal	Logansport	Basic	GGP	NON-PREC	N
Fulton County	Rochester	Basic	RCR	NON-PREC	N
Perry County Municipal	Tell City	Basic	TEL	BASIC	N
Arens Field	Winamac	Basic	RWN	NON-PREC	N
Randolph County	Winchester	Basic	I22	NON-PREC	Y

Note: Airports in **BOLD** text are not meeting the recommendation.

4.3.4.iv Full Parallel Taxiway or Comparable

As detailed in Chapter 2, full parallel taxiways extend the entire length of a runway providing access to each runway end. While some airports did not have a standard parallel taxiway at the



time of the inventory, they did have alternate taxiways that allowed aircraft to taxi from one end of the runway to the other, without having to use the runway to taxi. Airports with this sort of configuration were considered to have a comparable taxiway.

The requirements of the recommended IAP for each category of airport are affected by the corresponding requirements by the FAA in AC 150/5300-13 for that IAP. Accordingly, they are different for each airport classification:

- Primary: Required
- National: Required
- Regional: Required
- Local: Recommended
- Basic: Recommended

Each airport that is required to have a parallel taxiway (or comparable) according to the AC, is meeting that requirement. Although it is not required, it is recommended that Local and Basic airports have a parallel taxiway (or comparable) as well. Thirty-one percent of Local airports (11 airports) and 67% of Basic airports (eight airports) do not have a parallel taxiway. Consequently, the likelihood of meeting the overall criteria for a recommended IAP approach may be limited for these 19 airports at this time. **Table 4-24** includes a listing of all system airports. Those airports in bold text are not meeting this requirement for their IAP recommendation.

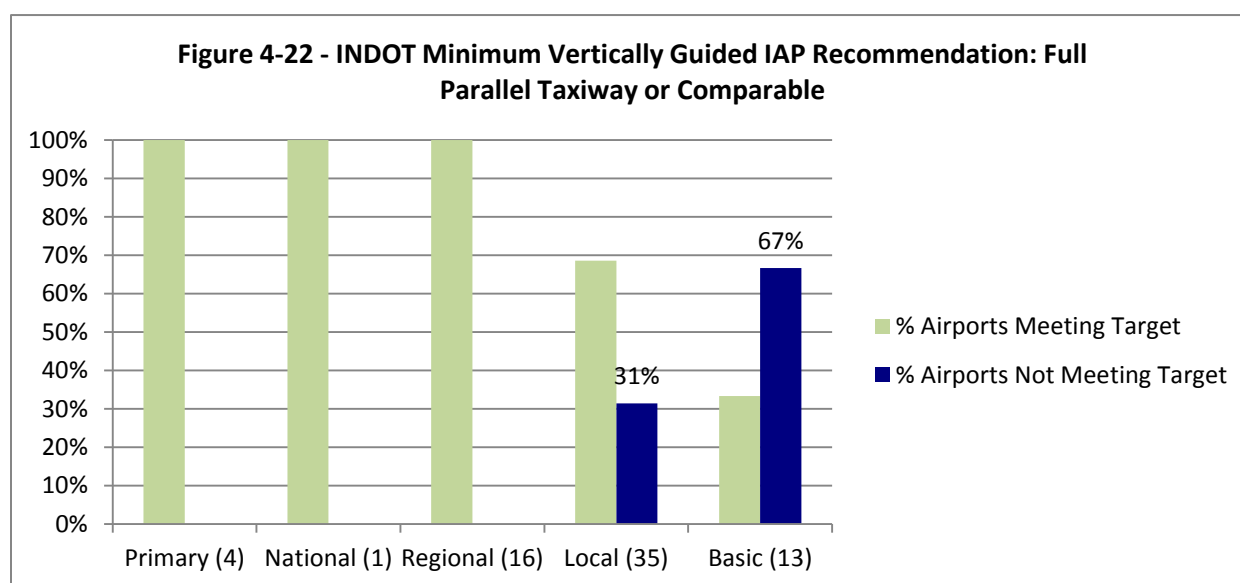


Table 4-24 – INDOT Minimum Vertically Guided IAP Recommendation: Full Parallel Taxiway or Comparable

Aviation Facility	Associated City	Category	FAA ID	Full Taxiway*
Evansville Regional	Evansville	Primary	EVV	Y
Ft. Wayne International	Fort Wayne	Primary	FWA	Y
Indianapolis International	Indianapolis	Primary	IND	Y
South Bend Regional	South Bend	Primary	SBN	Y
Gary/Chicago	Gary	National	GYG	Y
DeKalb County	Auburn	Regional	GWB	Y
Monroe County	Bloomington	Regional	BMG	Y
Columbus Municipal	Columbus	Regional	BAK	Y
Elkhart Municipal	Elkhart	Regional	EKM	Y
Goshen Municipal	Goshen	Regional	GSH	Y
Huntingburg Airport	Huntingburg	Regional	HNB	Y
Eagle Creek Airpark	Indianapolis	Regional	EYE	Y
Indianapolis Executive	Indianapolis	Regional	TYQ	Y
Indianapolis Metropolitan	Indianapolis	Regional	UMP	Y
Indianapolis Regional	Indianapolis	Regional	MQJ	Y
Clark County	Jeffersonville	Regional	JVY	Y
Purdue University	Lafayette	Regional	LAF	Y
Marion Municipal	Marion	Regional	MZZ	Y
Delaware County	Muncie	Regional	MIE	Y
Porter County Regional	Valparaiso	Regional	VPZ	Y
Warsaw Municipal	Warsaw	Regional	ASW	Y
Anderson Municipal	Anderson	Local	AID	Y
Steuben Co.-Tri State	Angola	Local	ANQ	Y
Virgil I. Grissom	Bedford	Local	BFR	N
Brazil-Clay County	Brazil	Local	012	N
Crawfordsville Municipal	Crawfordsville	Local	CFJ	Y
Smith Field	Fort Wayne	Local	SMD	N
Putnam County	Greencastle	Local	417	Y
Greensburg-Decatur County	Greensburg	Local	I34	N
Griffith-Merrillville	Griffith	Local	05C	N
Huntington Municipal	Huntington	Local	HHG	Y
Greenwood Municipal	Indianapolis	Local	HFY	Y
Hendricks County	Indianapolis	Local	2R2	Y
Kendallville Municipal	Kendallville	Local	C62	Y
Starke County	Knox	Local	OXI	Y
Kokomo Municipal	Kokomo	Local	OKK	Y
LaPorte Municipal	LaPorte	Local	PPO	Y
Madison Municipal	Madison	Local	IMS	Y
Michigan City Municipal	Michigan City	Local	MGC	Y
White County	Monticello	Local	MCX	Y
New Castle-Henry Co.	New Castle	Local	UWL	N
North Vernon Municipal	North Vernon	Local	OVO	Y
Paoli Municipal	Paoli	Local	I42	N
Peru Municipal	Peru	Local	I76	Y
Plymouth Municipal	Plymouth	Local	C65	N
Portland Municipal	Portland	Local	PLD	Y
Jasper County	Rensselaer	Local	RZL	Y
Richmond Municipal	Richmond	Local	RID	Y
Salem Municipal	Salem	Local	I83	N



Table 4-24 – INDOT Minimum Vertically Guided IAP Recommendation: Full Parallel Taxiway or Comparable

Aviation Facility	Associated City	Category	FAA ID	Full Taxiway*
Freeman Municipal	Seymour	Local	SER	Y
Shelbyville Municipal	Shelbyville	Local	GEZ	Y
Sheridan	Sheridan	Local	514	N
Sullivan County	Sullivan	Local	SIV	Y
Terre Haute International	Terre Haute	Local	HUF	Y
Wabash Municipal	Wabash	Local	IWH	Y
Daviess County	Washington	Local	DCY	N
Clinton	Clinton	Basic	117	N
Mettel Field	Connersville	Basic	CEV	Y
Delphi Municipal	Delphi	Basic	119	N
Frankfort Municipal	Frankfort	Basic	FKR	N
French Lick Municipal	French Lick	Basic	FRH	N
Ind. Downtown Heliport**	Indianapolis	Basic	8A4	NA
Kentland Municipal	Kentland	Basic	501	N
Boone County	Lebanon	Basic	614	N
Logansport Municipal	Logansport	Basic	GGP	Y
Fulton County	Rochester	Basic	RCR	Y
Perry County Municipal	Tell City	Basic	TEL	N
Arens Field	Winamac	Basic	RWN	N
Randolph County	Winchester	Basic	I22	Y

*Airports had to have either a full parallel taxiway, or alternate taxiways that allowed aircraft to taxi from one end of the runway to the other, without having to use the runway to taxi.

**The heliport is not included in this evaluation.

Note: Airports in **BOLD** text are not meeting the recommendation.

4.3.4.v Runway Edge Lights

Again, the AC 150/5300-13 criteria for specific IAP minimum visibility and ceiling heights are slightly different than the INDOT criteria for runway edge lighting outlined in Section 4.1.4 of this document. As previously mentioned, runway lighting is used to define the edges of a runway during nighttime and low visibility conditions. Runway lighting is classified into three types of systems based upon illumination intensity and level of control: High Intensity Runway Lighting (HIRL), Medium Intensity Runway Lighting (MIRL), and Low Intensity Runway Lighting (LIRL). HIRL systems offer pilots the greatest lighting intensity and control, while LIRL systems have a single illumination setting. (Note: Runway edge lighting is required for night minimums. High intensity lights are required for runway visual range-based minimums.)

The requirements of FAA AC 150/5300-13 are different for each airport category depending on the recommended IAP for the category:



- Primary: HIRL/MIRL
- National: HIRL/MIRL
- Regional: HIRL/MIRL
- Local: MIRL/LIRL
- Basic: MIRL/LIRL

As **Figure 4-22** illustrates, the majority of system airports are meeting their runway edge lighting requirement, with only 3% of the Local category (one airport) and 15% of the Basic category (two airports) not meeting it. **Table 4-25** includes a listing of all system airports. Those airports in bold text are not meeting this requirement for their IAP recommendation.

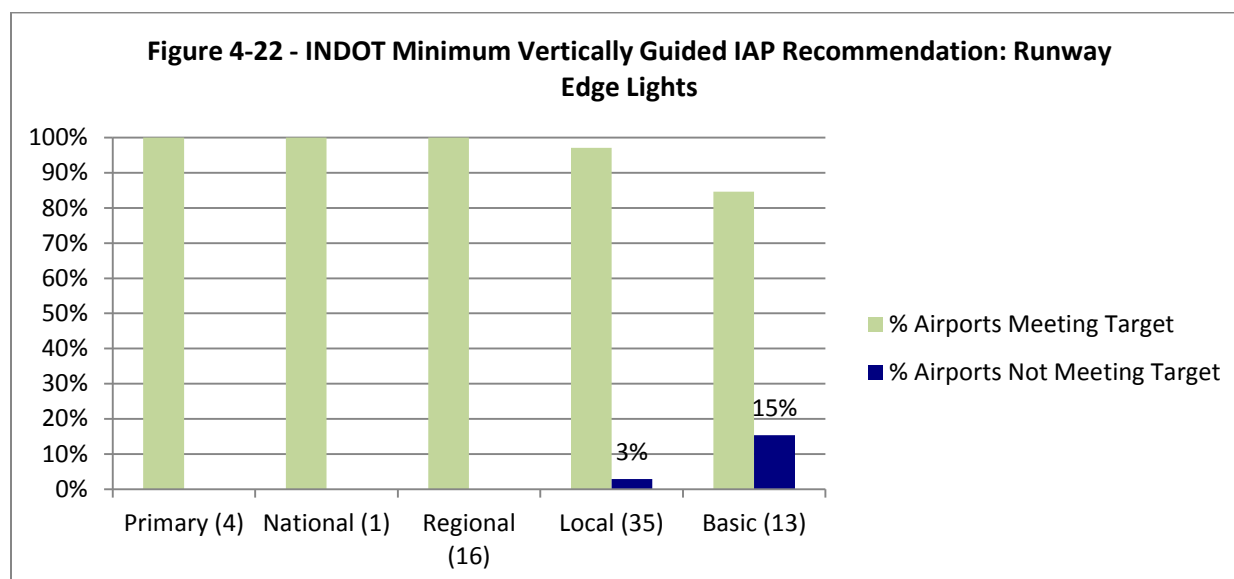


Table 4-25 – INDOT Minimum Vertically Guided IAP Recommendation: Runway Edge Lights

Aviation Facility	Associated City	Category	FAA ID	Runway Lights
Evansville Regional	Evansville	Primary	EVV	HIRL
Ft. Wayne International	Fort Wayne	Primary	FWA	HIRL
Indianapolis International	Indianapolis	Primary	IND	HIRL
South Bend Regional	South Bend	Primary	SBN	HIRL
Gary/Chicago	Gary	National	GYG	HIRL
DeKalb County	Auburn	Regional	GWB	MIRL
Monroe County	Bloomington	Regional	BMG	HIRL
Columbus Municipal	Columbus	Regional	BAK	HIRL
Elkhart Municipal	Elkhart	Regional	EKM	HIRL
Goshen Municipal	Goshen	Regional	GSH	HIRL
Huntingburg Airport	Huntingburg	Regional	HNB	MIRL



Table 4-25 – INDOT Minimum Vertically Guided IAP Recommendation: Runway Edge Lights

Aviation Facility	Associated City	Category	FAA ID	Runway Lights
Eagle Creek Airpark	Indianapolis	Regional	EYE	MIRL
Indianapolis Executive	Indianapolis	Regional	TYQ	HIRL
Indianapolis Metropolitan	Indianapolis	Regional	UMP	MIRL
Indianapolis Regional	Indianapolis	Regional	MQJ	HIRL
Clark County	Jeffersonville	Regional	JVY	MIRL
Purdue University	Lafayette	Regional	LAF	HIRL
Marion Municipal	Marion	Regional	MZZ	HIRL
Delaware County	Muncie	Regional	MIE	HIRL
Porter County Regional	Valparaiso	Regional	VPZ	HIRL
Warsaw Municipal	Warsaw	Regional	ASW	HIRL
Anderson Municipal	Anderson	Local	AID	MIRL
Steuben Co.-Tri State	Angola	Local	ANQ	MIRL
Virgil I. Grissom	Bedford	Local	BFR	MIRL
Brazil-Clay County	Brazil	Local	0I2	LIRL
Crawfordsville Municipal	Crawfordsville	Local	CFJ	MIRL
Smith Field	Fort Wayne	Local	SMD	MIRL
Putnam County	Greencastle	Local	4I7	MIRL
Greensburg-Decatur County	Greensburg	Local	I34	MIRL
Griffith-Merrillville	Griffith	Local	05C	MIRL
Huntington Municipal	Huntington	Local	HHG	MIRL
Greenwood Municipal	Indianapolis	Local	HFY	HIRL
Hendricks County	Indianapolis	Local	2R2	MIRL
Kendallville Municipal	Kendallville	Local	C62	MIRL
Starke County	Knox	Local	OXI	MIRL
Kokomo Municipal	Kokomo	Local	OKK	HIRL
LaPorte Municipal	LaPorte	Local	PPO	MIRL
Madison Municipal	Madison	Local	IMS	HIRL
Michigan City Municipal	Michigan City	Local	MGC	MIRL
White County	Monticello	Local	MCX	MIRL
New Castle-Henry Co.	New Castle	Local	UWL	MIRL
North Vernon Municipal	North Vernon	Local	OVO	MIRL
Paoli Municipal	Paoli	Local	I42	MIRL
Peru Municipal	Peru	Local	I76	MIRL
Plymouth Municipal	Plymouth	Local	C65	MIRL
Portland Municipal	Portland	Local	PLD	MIRL
Jasper County	Rensselaer	Local	RZL	MIRL
Richmond Municipal	Richmond	Local	RID	MIRL
Salem Municipal	Salem	Local	I83	MIRL
Freeman Municipal	Seymour	Local	SER	MIRL
Shelbyville Municipal	Shelbyville	Local	GEZ	MIRL
Sheridan	Sheridan	Local	5I4	NON-STND
Sullivan County	Sullivan	Local	SIV	MIRL
Terre Haute International	Terre Haute	Local	HUF	HIRL
Wabash Municipal	Wabash	Local	IWH	MIRL
Daviess County	Washington	Local	DCY	MIRL
Clinton	Clinton	Basic	1I7	NO
Mettel Field	Connersville	Basic	CEV	MIRL
Delphi Municipal	Delphi	Basic	1I9	MIRL
Frankfort Municipal	Frankfort	Basic	FKR	MIRL



Table 4-25 – INDOT Minimum Vertically Guided IAP Recommendation: Runway Edge Lights

Aviation Facility	Associated City	Category	FAA ID	Runway Lights
French Lick Municipal	French Lick	Basic	FRH	MIRL
Ind. Downtown Heliport	Indianapolis	Basic	8A4	Yes
Kentland Municipal	Kentland	Basic	50I	HIRL
Boone County	Lebanon	Basic	614	LIRL NSTD
Logansport Municipal	Logansport	Basic	GGP	MIRL
Fulton County	Rochester	Basic	RCR	MIRL
Perry County Municipal	Tell City	Basic	TEL	MIRL
Arens Field	Winamac	Basic	RWN	LIRL
Randolph County	Winchester	Basic	I22	MIRL

Note: Airports in **BOLD** text are not meeting the recommendation.

4.3.4.vi Approach Lights

As outlined in Chapter 2, approach lights (AL) provide a means to transition from instrument flight to visual flight for landing. Operational requirements dictate the sophistication and configuration of the approach lighting system for a particular runway. A common approach lighting system is the Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights (MALSR). Other systems include the High Intensity Approach Lighting System with Sequenced Flashing Lights (ALSF), and the Simplified Short Approach Lighting System with Runway Alignment Indicator Lights (SSALR).

The requirements of FAA AC 150/5300-13 to meet the specific criteria for the IAP are different for each airport based upon their recommended IAP minimums:

- Primary: MALSR, SSALR, ALSF
- National: MALSR, SSALR, ALSF
- Regional: Recommended
- Local: Recommended
- Basic: Recommended

Approach lighting is required for Primary and National airports, but is only recommended for Regional, Local, and Basic airports. As shown in **Figure 4-23**, all airports in the system that are required to have approach lighting for their recommended IAP are meeting this target. However, 31% of Regional airports (five airports), 83% of Local airports (29 airports), and 85% of Basic airports (11 airports) are not meeting it where the FAA AC “recommends” it. **Table 4-26** includes



a listing of all system airports. Those airports in bold text are not meeting this requirement/recommendation.

**Figure 4-23 - INDOT Minimum Vertically Guided IAP Recommendation:
Approach Lights**

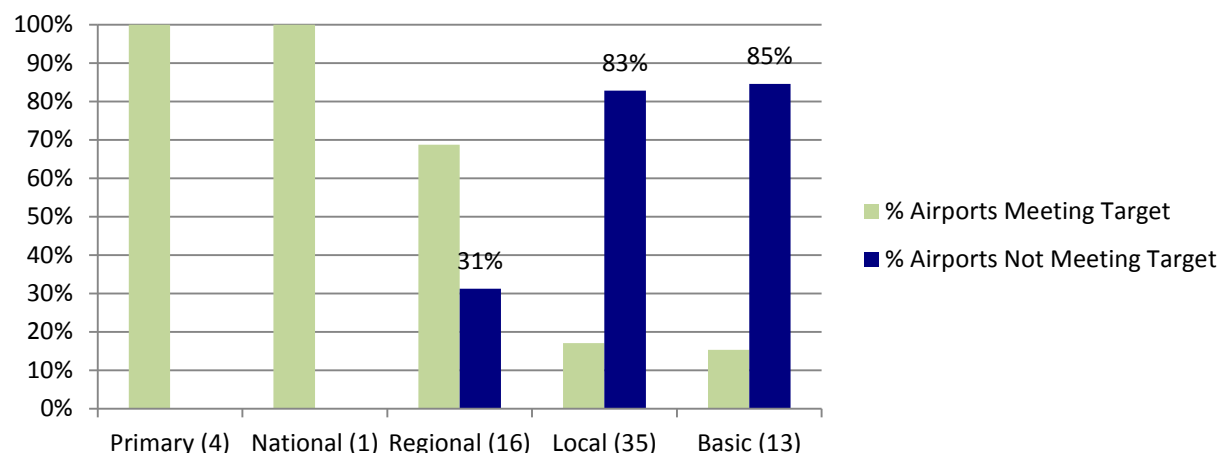


Table 4-26 – INDOT Minimum Vertically Guided IAP Recommendation: Approach Lights

Aviation Facility	Associated City	Category	FAA ID	Approach Lights
Evansville Regional	Evansville	Primary	EVV	MALSR
Ft. Wayne International	Fort Wayne	Primary	FWA	ALSF2
Indianapolis International	Indianapolis	Primary	IND	ALSF2
South Bend Regional	South Bend	Primary	SBN	MALSR
Gary/Chicago	Gary	National	GYG	MALSR
DeKalb County	Auburn	Regional	GWB	MALSR
Monroe County	Bloomington	Regional	BMG	MALSR
Columbus Municipal	Columbus	Regional	BAK	MALSR
Elkhart Municipal	Elkhart	Regional	EKM	MALSR
Goshen Municipal	Goshen	Regional	GSH	N
Huntingburg Airport	Huntingburg	Regional	HNB	N
Eagle Creek Airpark	Indianapolis	Regional	EYE	MALS
Indianapolis Executive	Indianapolis	Regional	TYQ	N
Indianapolis Metropolitan	Indianapolis	Regional	UMP	N
Indianapolis Regional	Indianapolis	Regional	MQJ	MALSR
Clark County	Jeffersonville	Regional	JVY	MALSR
Purdue University	Lafayette	Regional	LAF	MALSR
Marion Municipal	Marion	Regional	MZZ	MALSR
Delaware County	Muncie	Regional	MIE	MALSR
Porter County Regional	Valparaiso	Regional	VPZ	MALSR
Warsaw Municipal	Warsaw	Regional	ASW	N
Anderson Municipal	Anderson	Local	AID	MALSF
Steuben Co.-Tri State	Angola	Local	ANQ	N
Virgil I. Grissom	Bedford	Local	BFR	N



Table 4-26 – INDOT Minimum Vertically Guided IAP Recommendation: Approach Lights				
Aviation Facility	Associated City	Category	FAA ID	Approach Lights
Brazil-Clay County	Brazil	Local	0I2	N
Crawfordsville Municipal	Crawfordsville	Local	CFJ	N
Smith Field	Fort Wayne	Local	SMD	N
Putnam County	Greencastle	Local	4I7	N
Greensburg-Decatur County	Greensburg	Local	I34	N
Griffith-Merrillville	Griffith	Local	05C	N
Huntington Municipal	Huntington	Local	HHG	N
Greenwood Municipal	Indianapolis	Local	HFY	N
Hendricks County	Indianapolis	Local	2R2	N
Kendallville Municipal	Kendallville	Local	C62	N
Starke County	Knox	Local	OXI	N
Kokomo Municipal	Kokomo	Local	OKK	MALSR
LaPorte Municipal	LaPorte	Local	PPO	N
Madison Municipal	Madison	Local	IMS	MALSF
Michigan City Municipal	Michigan City	Local	MGC	N
White County	Monticello	Local	MCX	N
New Castle-Henry Co.	New Castle	Local	UWL	N
North Vernon Municipal	North Vernon	Local	OVO	N
Paoli Municipal	Paoli	Local	I42	N
Peru Municipal	Peru	Local	I76	N
Plymouth Municipal	Plymouth	Local	C65	N
Portland Municipal	Portland	Local	PLD	N
Jasper County	Rensselaer	Local	RZL	N
Richmond Municipal	Richmond	Local	RID	LDIN
Salem Municipal	Salem	Local	I83	N
Freeman Municipal	Seymour	Local	SER	ODALS
Shelbyville Municipal	Shelbyville	Local	GEZ	N
Sheridan	Sheridan	Local	5I4	N
Sullivan County	Sullivan	Local	SIV	N
Terre Haute International	Terre Haute	Local	HUF	MALSR
Wabash Municipal	Wabash	Local	IWH	N
Daviess County	Washington	Local	DCY	N
Clinton	Clinton	Basic	1I7	N
Mettel Field	Connersville	Basic	CEV	MALSR
Delphi Municipal	Delphi	Basic	1I9	N
Frankfort Municipal	Frankfort	Basic	FKR	N
French Lick Municipal	French Lick	Basic	FRH	N
Ind. Downtown Heliport	Indianapolis	Basic	8A4	ODALS
Kentland Municipal	Kentland	Basic	50I	N
Boone County	Lebanon	Basic	6I4	N
Logansport Municipal	Logansport	Basic	GGP	N
Fulton County	Rochester	Basic	RCR	N
Perry County Municipal	Tell City	Basic	TEL	N
Arens Field	Winamac	Basic	RWN	N
Randolph County	Winchester	Basic	I22	N

Note: Airports in **BOLD** text are not meeting the recommendation.



4.3.4.vii Precision Obstacle Free Zone (POFZ)

A POFZ is a rectangular safety area at the runway threshold, centered on the extended runway centerline and is 200 feet long by 800 feet wide. According to AC 150/5300-13, this area is in effect only when all of the following operational conditions are met:

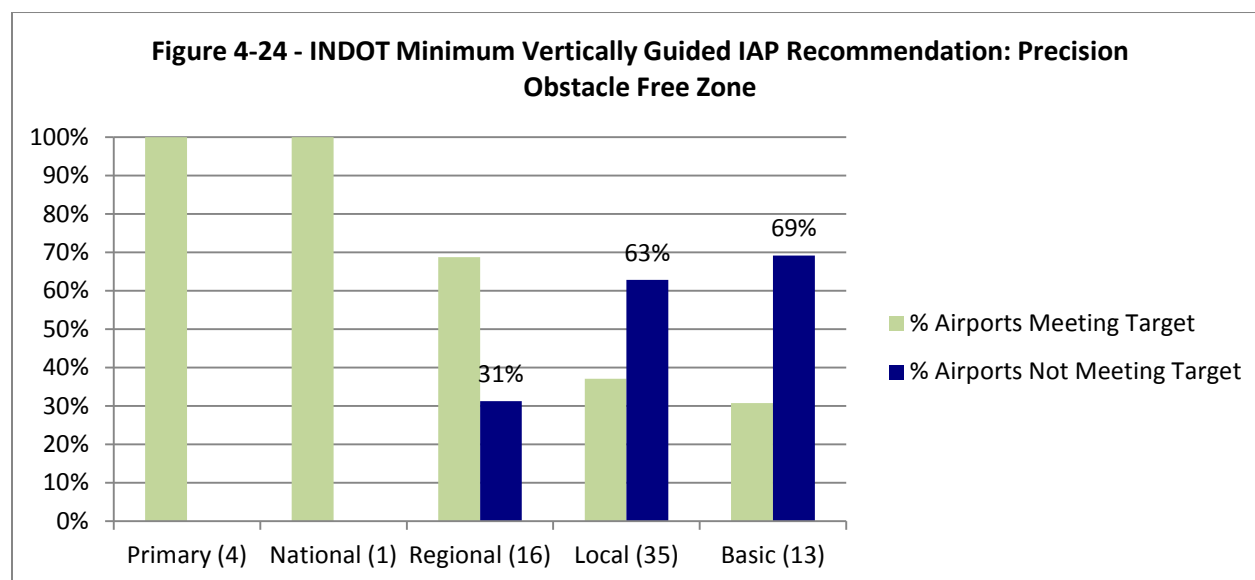
1. Vertically guided approach
2. Reported ceiling below 250 feet and/or visibility less than $\frac{3}{4}$ mile
3. An aircraft on final approach within two miles of the runway threshold

A POFZ is either required or recommended for an airport based upon the approach type recommended for its airport category. Those airports with precision approaches to their runway(s) are required to have a POFZ. For Regional, Local, and Basic airports, a POFZ is recommended but not required.

- Primary: Required
- National: Required
- Regional: Recommended
- Local: Recommended
- Basic: Recommended

Figure 24 indicates 100% of airports required to have a POFZ, have one. However, 31% of Regional airports (five airports), 63% of Local airports (22 airports), and 69% of Basic airports (nine airports) are not meeting this recommendation. **Table 4-27** includes a listing of all system airports. Those airports in bold text are not meeting this requirement/recommendation.



**Table 4-27 - INDOT Minimum Vertically Guided IAP Recommendation: Precision Obstacle Free Zone**

Aviation Facility	Associated City	Category	FAA ID	POFZ
Evansville Regional	Evansville	Primary	EVV	Y
Ft. Wayne International	Fort Wayne	Primary	FWA	Y
Indianapolis International	Indianapolis	Primary	IND	Y
South Bend Regional	South Bend	Primary	SBN	Y
Gary/Chicago	Gary	National	GYG	Y
DeKalb County	Auburn	Regional	GWB	N
Monroe County	Bloomington	Regional	BMG	Y
Columbus Municipal	Columbus	Regional	BAK	Y
Elkhart Municipal	Elkhart	Regional	EKM	N
Goshen Municipal	Goshen	Regional	GSH	Y
Huntingburg Airport	Huntingburg	Regional	HNB	Y
Eagle Creek Airpark	Indianapolis	Regional	EYE	N
Indianapolis Executive	Indianapolis	Regional	TYQ	Y
Indianapolis Metropolitan	Indianapolis	Regional	UMP	N
Indianapolis Regional	Indianapolis	Regional	MQJ	Y
Clark County	Jeffersonville	Regional	JVY	Y
Purdue University	Lafayette	Regional	LAF	Y
Marion Municipal	Marion	Regional	MZZ	Y
Delaware County	Muncie	Regional	MIE	N
Porter County Regional	Valparaiso	Regional	VPZ	Y
Warsaw Municipal	Warsaw	Regional	ASW	Y
Anderson Municipal	Anderson	Local	AID	N
Steuben Co.-Tri State	Angola	Local	ANQ	N
Virgil I. Grissom	Bedford	Local	BFR	N
Brazil-Clay County	Brazil	Local	0I2	N
Crawfordsville Municipal	Crawfordsville	Local	CFJ	Y
Smith Field	Fort Wayne	Local	SMD	N
Putnam County	Greencastle	Local	4I7	Y



Table 4-27 - INDOT Minimum Vertically Guided IAP Recommendation: Precision Obstacle Free Zone

Aviation Facility	Associated City	Category	FAA ID	POFZ
Greensburg-Decatur County	Greensburg	Local	I34	N
Griffith-Merrillville	Griffith	Local	05C	N
Huntington Municipal	Huntington	Local	HHG	N
Greenwood Municipal	Indianapolis	Local	HFY	N
Hendricks County	Indianapolis	Local	2R2	N
Kendallville Municipal	Kendallville	Local	C62	N
Starke County	Knox	Local	OXI	N
Kokomo Municipal	Kokomo	Local	OKK	Y
LaPorte Municipal	LaPorte	Local	PPO	Y
Madison Municipal	Madison	Local	IMS	Y
Michigan City Municipal	Michigan City	Local	MGC	N
White County	Monticello	Local	MCX	N
New Castle-Henry Co.	New Castle	Local	UWL	Y
North Vernon Municipal	North Vernon	Local	OVO	Y
Paoli Municipal	Paoli	Local	I42	N
Peru Municipal	Peru	Local	I76	N
Plymouth Municipal	Plymouth	Local	C65	N
Portland Municipal	Portland	Local	PLD	N
Jasper County	Rensselaer	Local	RZL	N
Richmond Municipal	Richmond	Local	RID	Y
Salem Municipal	Salem	Local	I83	N
Freeman Municipal	Seymour	Local	SER	Y
Shelbyville Municipal	Shelbyville	Local	GEZ	Y
Sheridan	Sheridan	Local	5I4	N
Sullivan County	Sullivan	Local	SIV	Y
Terre Haute International	Terre Haute	Local	HUF	Y
Wabash Municipal	Wabash	Local	IWH	N
Daviess County	Washington	Local	DCY	Y
Clinton	Clinton	Basic	1I7	N
Mettel Field	Connersville	Basic	CEV	Y
Delphi Municipal	Delphi	Basic	1I9	N
Frankfort Municipal	Frankfort	Basic	FKR	Y
French Lick Municipal	French Lick	Basic	FRH	N
Ind. Downtown Heliport	Indianapolis	Basic	8A4	Y
Kentland Municipal	Kentland	Basic	50I	N
Boone County	Lebanon	Basic	6I4	N
Logansport Municipal	Logansport	Basic	GGP	Y
Fulton County	Rochester	Basic	RCR	N
Perry County Municipal	Tell City	Basic	TEL	N
Arens Field	Winamac	Basic	RWN	N
Randolph County	Winchester	Basic	I22	N

Note: Airports in **BOLD** text are not meeting the requirement/recommendation.



4.4 Summary

Overall, the system is doing fairly well at meeting the requirements and recommendations outlined in this Chapter; however, there is room for improvement. Airports in the Primary and National categories are meeting nearly every individual requirement and recommendation. Unfortunately, a number of airports in the Regional, Local, and Basic categories are not meeting their targets. **Table 4-28** indicates significant gaps in a few of the targets, such as perimeter fencing, zoning/land use coordination, obstruction survey, minimum standards, ceiling minimums, approved ALP, and runway markings/signage. These gaps are the basis for the system recommendations presented in Chapter 6.

Table 4-28 – Number of Airports (per classification) Not Meeting Requirements/Recommendations

Criteria	Primary	National	Regional	Local	Basic	Total
Minimum Standards			1	24	11	36
Pavement Maintenance Mgmt. Program				1	1	2
Weather Reporting				14	7	21
Runway Lights				2	1	3
Full Parallel Taxiway (or comparable)				11	N/A	11
24-Hour Fuel Availability					N/A	0
Taxiway Lights			2	25	N/A	27
Primary Runway Length			2	4	1	7
Primary Runway Strength			3	19	4	26
Primary Runway Grooving			2	23	N/A	25
Primary Runway End Identifier Lights (REIL)				6	N/A	6
Primary Visual Slope Indicators (VSI) or Approach Lights				3	N/A	3
Perimeter Fencing			8	27	11	46
Zoning/Land Use Coordination	1		9	26	10	46
Visibility Minimums			2	5	3	10
Ceiling Minimums			1	25	8	34
Obstruction Survey			8	29	9	46
Approved Airport Layout Plan			1	25	8	34
Minimum Runway Length				4	1	5
Runway Markings/Signage			4	19	9	32
Full Parallel Taxiway (or comparable)				11	8	19
Runway Edge Lights				1	2	3
Approach Lights			5	29	11	45
Precision Obstacle Free Zone (POFZ)			5	22	9	36

