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## Landing on taxiway, Boeing 737-3H4, January 30, 2005

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**Micro-summary: This crew inadvertently landed on a taxiway.**

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**Event Date: 2005-01-30 at 1135 PST**

**Investigative Body: National Transportation Safety Board (NTSB), USA**


**Investigative Body's Web Site: <http://www.nts.gov/>**


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		NTSB ID: SEA051A040		Aircraft Registration Number: N350SW	
		Occurrence Date: 01/30/2005		Most Critical Injury: None	
		Occurrence Type: Incident		Investigated By: NTSB	
Location/Time					
Nearest City/Place Seattle		State WA	Zip Code 98188	Local Time 1135	Time Zone PST
Airport Proximity: Off Airport/Airstrip		Distance From Landing Facility: 2		Direction From Airport: 340	
Aircraft Information Summary					
Aircraft Manufacturer Boeing		Model/Series 737-3H4		Type of Aircraft Airplane	
Sightseeing Flight: No			Air Medical Transport Flight: No		
Narrative					
<p>Brief narrative statement of facts, conditions and circumstances pertinent to the accident/incident:</p> <p>On January 30, 2005, approximately 1135 Pacific standard time, the crew of a Southwest Airlines 737, N350SW, inadvertently aligned their aircraft for a landing on Taxiway Tango at Seattle-Tacoma International Airport, Seattle, Washington (SeaTac). There were no injuries to any of the crew members, nor to any of the 41 passengers, and the aircraft was not damaged. The 14 CFR Part 121 scheduled domestic passenger flight, which was operating in visual meteorological conditions at the time of the incident, departed Albuquerque International Airport, Albuquerque, New Mexico, at 0940 mountain standard time. The flight crew had filed and activated an IFR flight plan at the initiation of the flight, and they were on a visual approach final at the time of the event.</p> <p>According to the First Officer, who was the flying flight crew member during the approach, as he rolled out on final after being vectored for a visual approach, he aligned the aircraft with the paved surface that he was convinced was Runway 16 Right, but was actually Taxiway Tango. He then continued the approach until the aircraft was about 500 feet above ground level (AGL), whereupon he noticed the large yellow "X" just off the north end of Taxiway Tango. At that point he realized that the surface that he intended to land on was not an operational runway, so he decided to initiate a go-around. At almost the same time as the First Officer realized he was aligned with the incorrect surface, the Captain came to the same conclusion, and directed the First Officer to execute a go-around. According to data retrieved from the Flight Data Recorder (FDR), the go-around was initiated at 250 feet AGL. After completing a successful go-around, the flight crew received vectors to a second visual approach final, whereupon they completed an uneventful full-stop landing. Although the FAA Control Tower had the Runway End Identifier Lights (REIL's) for both Runway 16 Left and Runway 16 Right on at the time of the first approach, both flight crew members stated that they had not seen the REIL's for either runway during this approach. When they came around for the second approach, the tower had turned on the sequencing approach flashers (rabbit) for Runway 16 Right, and according to the flight crew, it was at that time that they first saw the REIL's for either runway.</p> <p>In further discussions with the flight crew, it was determined that although in the pre-approach briefing they had not specifically reviewed the notes and diagrams associated with the ongoing Taxiway Tango misidentification problems at SeaTac, they were both aware that other crews had inadvertently lined up on the taxiway in the past. It was further determined that although the First Officer had the localizer displayed on his navigational instruments, once he had identified the surface he was going to land on, he did not continue to monitor the displacement of the localizer needle. During the same interview, the Captain stated that he had the VOR set on his navigational instruments, and that a significant amount of his attention was directed toward looking for traffic around Boeing Field, handling radio communications, and monitoring the flight instruments. Both flight crew members said that although the paved surfaces were wet and a little shiny (from an earlier shower), they felt it was the shape, size, and color of the taxiway surface that most directly contributed to the misidentification.</p>					
FACTUAL REPORT - AVIATION					


 <p>National Transportation Safety Board <b>FACTUAL REPORT</b> AVIATION</p>	NTSB ID: SEA05IA040
	Occurrence Date: 01/30/2005
	Occurrence Type: Incident

Narrative (Continued)

This incident was the eighth in a series of known events wherein flight crews inadvertently aligned their aircraft with the subject taxiway with the intent to land on its surface. During three of these events the aircrews completed their landings on the taxiway surface. Although both airport operations personnel and the local FAA Airports Inspector were aware of this series of events, no markings or visual cues had been placed directly on the taxiway surface to assist crews in more easily identifying Taxiway Tango as a taxiway and not a runway.

This investigation has also determined that even though in June of 2004 the National Transportation Safety Board recommended the Federal Aviation Administration apply large-scale taxiway identification markings directly to the Taxiway Tango surface, in conjunction with applying a continuous serpentine centerline (Safety Recommendation A-04-48), as of the date of this report, no additional markings or visual cues of any sort have been added to the concrete surface of Taxiway Tango.

 <b>National Transportation Safety Board</b> <b>FACTUAL REPORT</b> <b>AVIATION</b>		NTSB ID: SEA05IA040			
		Occurrence Date: 01/30/2005			
		Occurrence Type: Incident			
<b>Landing Facility/Approach Information</b>					
Airport Name	Airport ID:	Airport Elevation	Runway Used	Runway Length	Runway Width
Seattle-Tacoma Int.	KSEA	433 Ft. MSL	16R	9426	150
Runway Surface Type: Concrete					
Runway Surface Condition: Wet					
Type Instrument Approach: Visual					
VFR Approach/Landing: Go Around					
<b>Aircraft Information</b>					
Aircraft Manufacturer		Model/Series		Serial Number	
Boeing		737-3H4		24409	
Airworthiness Certificate(s): Transport					
Landing Gear Type: Retractable - Tricycle					
Homebuilt Aircraft? No	Number of Seats: 145	Certified Max Gross Wt.	139000 LBS	Number of Engines: 2	
Engine Type:	Engine Manufacturer:	Model/Series:	Rated Power:		
Turbo Fan	General Electric	CFM-56	20000 LBS		
- Aircraft Inspection Information					
Type of Last Inspection	Date of Last Inspection	Time Since Last Inspection	Airframe Total Time		
Continuous Airworthiness	01/2005	11 Hours	51686 Hours		
- Emergency Locator Transmitter (ELT) Information					
ELT Installed? No	ELT Operated? No	ELT Aided in Locating Accident Site? No			
<b>Owner/Operator Information</b>					
Registered Aircraft Owner		Street Address			
Southwest Airlines Co.		2832 Shore Crest Drive			
		City	State	Zip Code	
		Dallas	TX	75235	
Operator of Aircraft		Street Address			
Same as Reg'd Aircraft Owner		Same as Reg'd Aircraft Owner			
		City	State	Zip Code	
Operator Does Business As:			Operator Designator Code: SWAA		
- Type of U.S. Certificate(s) Held:					
Air Carrier Operating Certificate(s): Flag Carrier/Domestic					
Operating Certificate:					
Regulation Flight Conducted Under: Part 121: Air Carrier					
Type of Flight Operation Conducted: Scheduled; Domestic; Passenger Only					

 <p><b>National Transportation Safety Board</b> <b>FACTUAL REPORT</b> <b>AVIATION</b></p>	NTSB ID: SEA05IA040
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	Occurrence Type: Incident

**First Pilot Information**

Name On File	City On File	State On File	Date of Birth On File	Age 46
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Sex: M	Seat Occupied: Left	Principal Profession: Civilian Pilot	Certificate Number: On File
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Certificate(s): Airline Transport; Flight Engineer

Airplane Rating(s): Multi-engine Land; Single-engine Land

Rotorcraft/Glider/LTA:

Instrument Rating(s): Airplane

Instructor Rating(s):

Type Rating/Endorsement for Accident/Incident Aircraft? Yes	Current Biennial Flight Review? 09/2004
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Medical Cert.: Class 1	Medical Cert. Status: Valid Medical--no waivers/lim.	Date of Last Medical Exam: 11/2004
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- Flight Time Matrix	All A/C	This Make and Model	Airplane Single Engine	Airplane Multi-Engine	Night	Instrument		Rotorcraft	Glider	Lighter Than Air
						Actual	Simulated			
Total Time	15000	9159								
Pilot In Command(PIC)	8000	4827								
Instructor										
Last 90 Days	262	262								
Last 30 Days	77	77								
Last 24 Hours										

Seatbelt Used? Yes	Shoulder Harness Used? Yes	Toxicology Performed? No	Second Pilot? Yes
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**Flight Plan/Itinerary**

Type of Flight Plan Filed: IFR

Departure Point Albuquerque	State NM	Airport Identifier KABQ	Departure Time 0940	Time Zone MST
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Destination Same as Accident/Incident Location	State	Airport Identifier KSEA	
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Type of Clearance: IFR

Type of Airspace: Class D

**Weather Information**

Source of Briefing: Company

Method of Briefing: Aircraft Radio; Telephone

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**Weather Information**

WOF ID	Observation Time	Time Zone	WOF Elevation	WOF Distance From Accident Site	Direction From Accident Site
KSEA	1156	PST	433 Ft. MSL	2 NM	160 Deg. Mag.
Sky/Lowest Cloud Condition: Scattered			4800 Ft. AGL	Condition of Light: Day	
Lowest Ceiling: Overcast			9000 Ft. AGL	Visibility: 10 SM	Altimeter: 30.37 "Hg
Temperature: 9 °C	Dew Point: 6 °C	Wind Direction: 200		Density Altitude: Ft.	
Wind Speed: 7	Gusts:	Weather Conditions at Accident Site: Visual Conditions			
Visibility (RVR): Ft.	Visibility (RVV)	SM	Intensity of Precipitation:		
Restrictions to Visibility: None					
Type of Precipitation: None					

**Accident Information**

Aircraft Damage: None	Aircraft Fire: None	Aircraft Explosion: None
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Classification: U.S. Registered/U.S. Soil

- Injury Summary Matrix	Fatal	Serious	Minor	None	TOTAL
First Pilot				1	1
Second Pilot				1	1
Student Pilot					
Flight Instructor					
Check Pilot					
Flight Engineer					
Cabin Attendants				3	3
Other Crew					
Passengers				41	41
- TOTAL ABOARD -				46	46
Other Ground					
- GRAND TOTAL -				46	46

National Transportation Safety Board

**FACTUAL REPORT**

**AVIATION**



NTSB ID: SEA051A040

Occurrence Date: 01/30/2005

Occurrence Type: Incident

Administrative Information

Investigator-In-Charge (IIC)

Orrin K. Anderson

Additional Persons Participating in This Accident/Incident Investigation:

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