

To: Tom Barnitz, ODOT D9

From: Brad Hyre, P.E.

Project: SCI-823-6.81

CC:

Date: September 17, 2010

Job No: 45878

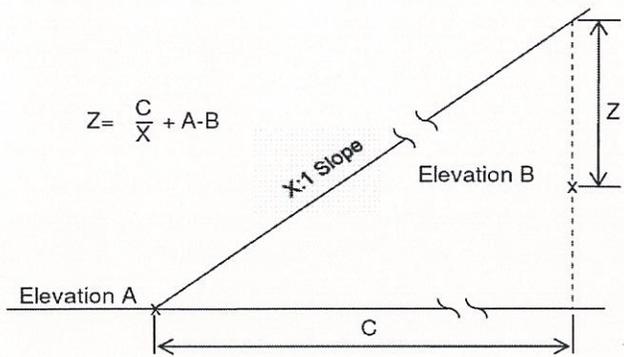
**RE: Airway / Highway Clearance Analysis
Sci-823-6.81 (Phase 1)
PID 19415**

According to Section 1404.1 of the L&D manual, when a project is identified as being within 20,000 feet of a public-use or military airport or heliport, an analysis must be performed to determine if FAA notification is required. Portions of the proposed bypass are well within 20,000 feet of the Greater Portsmouth Regional Airport located off of SR 335 in Minford, Ohio.

The airway/highway clearance analysis procedures are described in the L&D manual. Most of the notification surfaces are set at the ends of the runway and extend along the same bearing as the runway. Since the proposed bypass runs essentially parallel to the runway, there are no runway obstructions caused by the bypass. However, there is a significant amount of helicopter traffic using this airport. Even though there is no designated heliport, care must be taken to provide safe helicopter operation. Section 1404.1.2 specifies an imaginary slope of 25:1 for a horizontal distance of 5,000 feet from the nearest point of the nearest landing and takeoff area for helicopter operations.

Several critical points within the project area are within 5,000 feet of the nearest landing/takeoff area. Each of these points was investigated to determine if construction equipment could encroach into the 25:1 notification surface. The attached calculation sheet uses the maximum operating height of construction equipment (Figure 1404-3) to analyze each of these critical points.

As shown on the attached calculation sheet, three locations could encroach on the 25:1 notification surface, thus making it necessary to notify FAA. All of these intrusions are temporary conditions and two (Relocated TR 234 bridge over CSXT and the temporary signal at the Relocated TR 234/SR 335 intersection) will be limited to bid package 1A (SR 335); and one location (the SR 823 bridge over TR 234) will be during Phase 3 construction. Standard plan note G119A has been added to the construction drawings.



- X:1 - Notification Slope
- A - Airport Elevation
- B - Project Elevation/Construction Equipment/Temporary Structures
- C - Distance between Project and Airport
- **Z - +Z is amount of Clearance
-Z will require Notification *

* This number shall be inserted into Plan Note G119A, G119B, or G119C.
 ** These clearances should be calculated at critical points for projects of considerable length and variable heights. (i.e. closest point, highest point, etc.).

Helipad elevation 661 ft
 End of Run way 663 ft

X	A	Elevation B		C	Z	
x:1	ft		ft	ft	ft	
Intersection of 335 and Shumway Hollow Road temporary traffic signal						
25	661	662 + 50 =	712	1230	-1.8	Notification required
Bridge Construction CSXT and Shumway Hollow						
25	661	650 + 100 =	750	1450	-31	Notification required
Bridge Construction SR 823 and Shumway Hollow						
25	661	675 + 100 =	775	2050	-32	Notification required
Culvert construction Sta 364+00						
100	663	630 + 50 =	680	2170	4.7	Notification not required

Greater Portsmouth Regional Airport
 Just off Route 335, Minford, Ohio, 10 miles northeast of Portsmouth
 Runway Length: 5,001 feet
 Lat/Long: 38-50-25.692N / 082-50-50.329W
 (38.8404700 / -82.8473136)(est.)
 Elevation: 663 ft. / 202.1 m (surveyed)
 Variation: 05W (1995)

MAXIMUM OPERATING HEIGHT OF CONSTRUCTION EQUIPMENT	1404-3
	REFERENCE SECTION 1404.1.5

<u>WORK TYPE</u>	<u>HEIGHT</u>	<u>CONTROLLING CRITERIA</u>
Small Bridges	60 ft. [18.5 m]	Crane
Large Bridges	100 ft. [30.5 m]	Crane
Culverts	50ft. [15.5 m]	Crane
Bridge Painting	Bridge Height + 10ft. [3.5 m]	Containment Structure
Deck Overlays	25 ft. [8.0 m]	Truck
Resurfacing	25 ft. [8.0 m]	Raised Dump Truck
Highway Lighting	Pole Height	Pole Height
Traffic Signals	50ft. [15.5 m]	Cherry Picker
Pavement Repair	25 ft. [8.0 m]	Raised Dump Truck
Pavement Marking	12 ft. [4.0 m]	Truck
Bikeways	25 ft. [8.0 m]	Truck
Guardrail	25 ft. [8.0 m]	Auger
Noise Walls	25 ft. [8.0 m]	Crane
Barrier Construction	50ft. [15.5 m]	Crane
Rest Areas	50ft. [15.5 m]	Crane
House Demolition	25 ft. [8.0 m]	Excavator
Earthwork	25 ft. [8.0 m]	Truck
Slope Repair	25 ft. [8.0 m]	Excavator/Grader
Pile Driving	50 ft. [15.5 m]	Crane
Mowing/Landscaping	10 ft. [5.0 m]	Mower
Trash Collection	25 ft. [8.0 m]	Truck

The heights given are on average height for the specific types of projects.
These heights should be adjusted, as necessary for any project.

