

Mr. Thomas Powell  
Ohio Department of Transportation  
District 4  
2088 S. Arlington Road  
Akron, OH 44306

Re: SUM-76/77/8-10.99/11.54/0.00  
Airway / Highway Clearance Analysis  
PID 101402

March 16, 2020

Dear Mr. Powell:

We have conducted an Airway/Highway Clearance Analysis for the above referenced project. Figure 1 shows public and private use airports and heliports in the project vicinity. ODOT Location & Design Manual Volume 3 (LDMV3), section 1404.1.2, requires an encroachment analysis to be performed for public use airports within 20,000 feet of projects and for heliports within 5,000 feet. Akron Fulton International Airport (AKR), a public use airport, is located approximately 10,000 feet from the project and therefore warrants analysis for airspace encroachments. Summa Akron City Hospital heliport, slightly within the 5,000 foot requirement, also warrants analysis.

## Akron Fulton International Airport

### Proposed Permanent Project Features

As part of the Akron Central Interchange project, all new lighting will be installed. The existing interchange is lighted with high mast lights, which will be replaced by fourteen new high mast lights. The new lights, each 100 feet tall, will, by inspection, control over any other proposed (permanent) project features with respect to proximity to the airspace notification surface.

Figure 2 shows the location of the proposed high mast lights and their relationship to the airport. Figure 3 shows a schematic profile of the relationship of these features to the 100:1 notification surface and defining parameters. Table 1 shows the specific values of these parameters for the 14 high mast lights. The results of this analysis shows that there are two lights which penetrate above the 100:1 notification surface.

Table 1: Akron Fulton International Airport – Proposed Project Conditions

Object #	Description	"L" (ft)	"A" (ft)	"B" (ft)	"C" (ft)	"X" (ft)	Notification Required (Y/N)	Latitude	Longitude
1	100' High Mast Light	12034	1066	1166	1188	0	N	N/A	N/A
2	100' High Mast Light	12320	1070	1170	1191	0	N	N/A	N/A
3	100' High Mast Light	12204	1081	1181	1190	0	N	N/A	N/A
4	100' High Mast Light	12174	1112	1212	1190	22	Y	41°03'41"N	81°30'09"W
5	100' High Mast Light	12089	1117	1217	1189	28	Y	41°03'43"N	81°30'02"W
6	100' High Mast Light	12715	1078	1178	1195	0	N	N/A	N/A
7	100' High Mast Light	12593	1086	1186	1194	0	N	N/A	N/A
8	100' High Mast Light	12426	1092	1192	1192	0	N	N/A	N/A
9	100' High Mast Light	12795	1093	1193	1196	0	N	N/A	N/A
10	100' High Mast Light	13552	1075	1175	1204	0	N	N/A	N/A
11	100' High Mast Light	13238	1088	1188	1200	0	N	N/A	N/A
12	100' High Mast Light	13011	1093	1193	1198	0	N	N/A	N/A
13	100' High Mast Light	13074	1074	1174	1199	0	N	N/A	N/A
14	100' High Mast Light	13194	1082	1182	1200	0	N	N/A	N/A

Construction/Temporary Features

Two new flyover bridges will be built for the proposed project. The embankments approaching these bridges will be the highest ground surface elevations for the project. Cranes will be used to construct these bridges and it is assumed that 100' high cranes (per LDMV3) will be located on these embankments to erect bridge girders. These cranes will be the highest temporary features utilized during construction. Figure 4 shows the locations of the cranes assumed for the analysis. Table 2 shows the parameter values for the four crane locations. The results of the analysis shows that there are two crane locations that would penetrate the notification surface.

Table 2: Akron Fulton International Airport – Construction/Temporary Conditions

Object #	Description	"L" (ft)	"A" (ft)	"B" (ft)	"C" (ft)	"X" (ft)	Notification Required (Y/N)	Latitude	Longitude
1	100' Crane	12407	1092	1192	1192	0	N	N/A	N/A
2	100' Crane	12509	1123	1223	1193	30	Y	41°03'42"N	81°30'15"W
3	100' Crane	13023	1123	1223	1198	25	Y	41°03'43"N	81°30'23"W
4	100' Crane	13063	1095	1195	1199	0	N	N/A	N/A

Summa Akron City Hospital Heliport

Figure 5 shows the relationship of the heliport to the project. Figure 6 shows the relationship of the 25:1 heliport

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notification surface to the project. By inspection, the notification surface is more than 80 feet above any permanent or temporary features associated with this project.

Conclusion

Since construction equipment would penetrate the notification surface, Plan Note G118A is required for the Akron Fulton International Airport and will be included in the plans.

Respectfully,

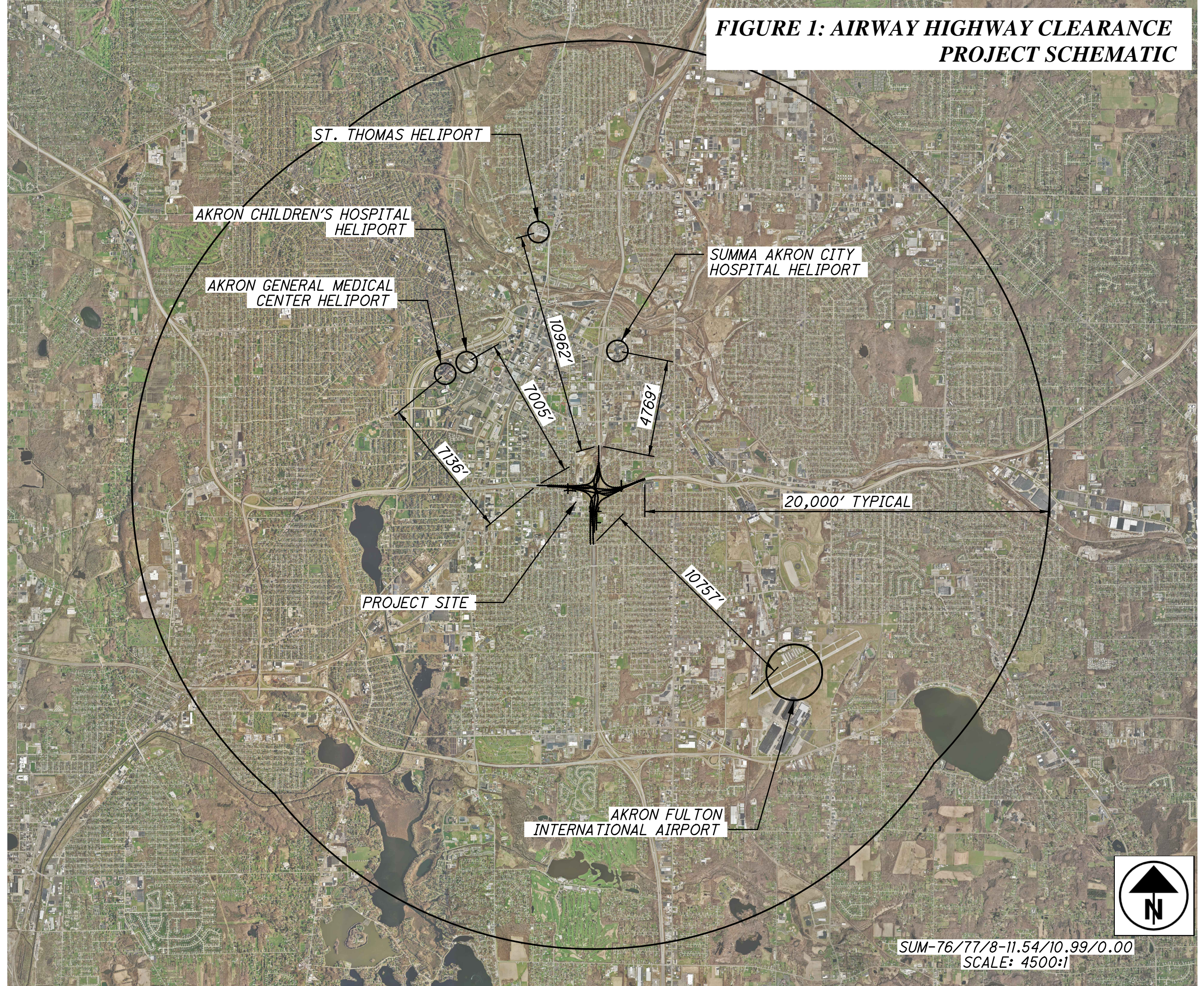


Thomas A. Bolte, PE

Project Manager

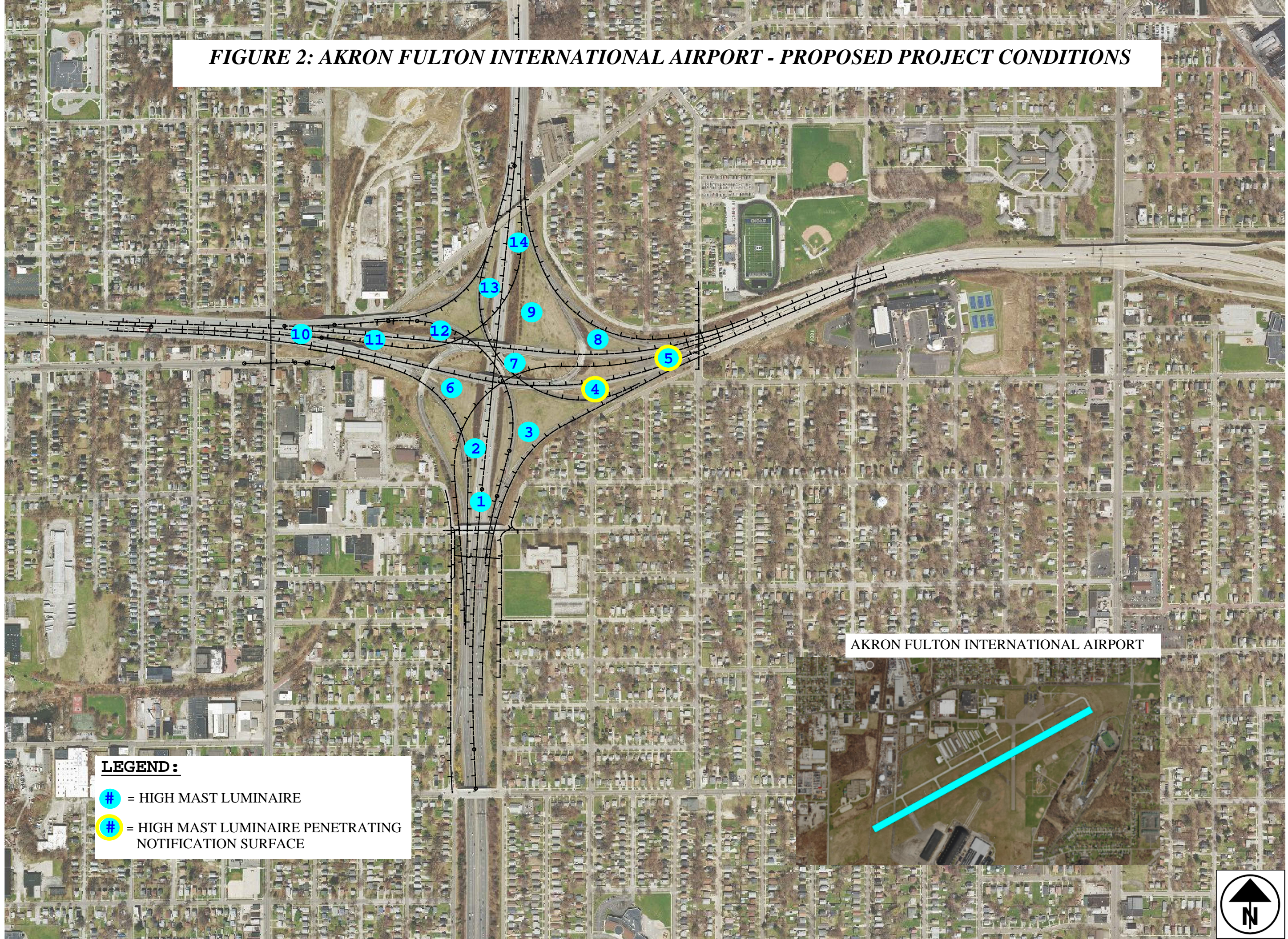


**FIGURE 1: AIRWAY HIGHWAY CLEARANCE  
PROJECT SCHEMATIC**







**FIGURE 2: AKRON FULTON INTERNATIONAL AIRPORT - PROPOSED PROJECT CONDITIONS**



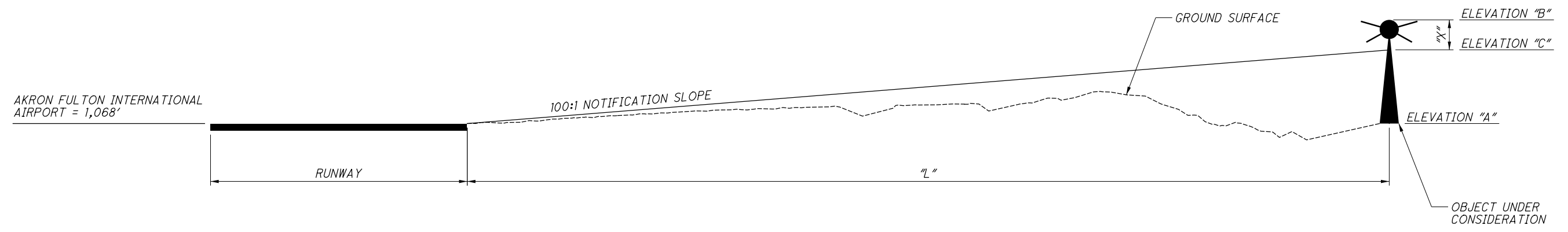
**LEGEND:**

-  = HIGH MAST LUMINAIRE
-  = HIGH MAST LUMINAIRE PENETRATING NOTIFICATION SURFACE





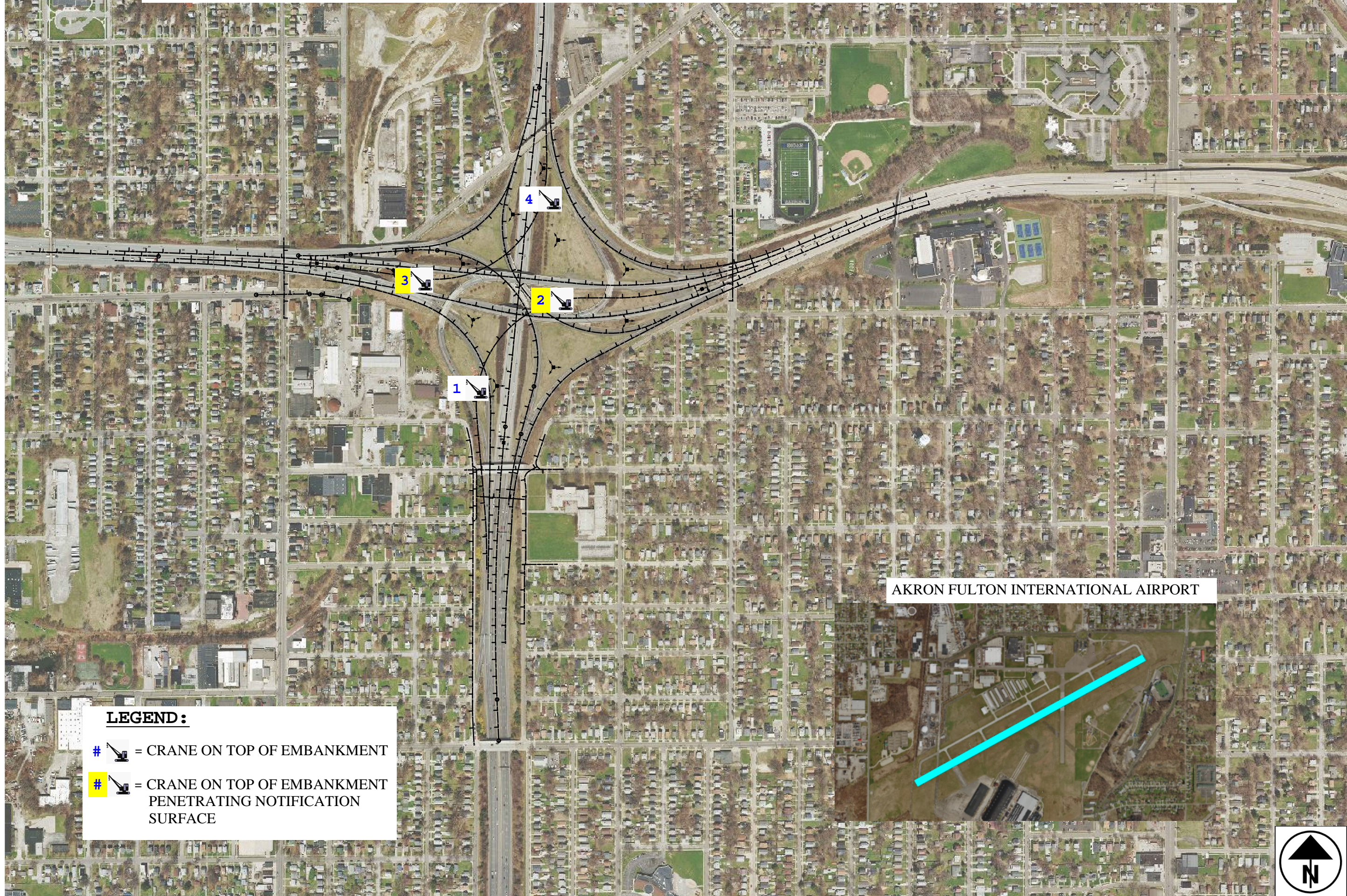
**FIGURE 3: AIRWAY HIGHWAY CLEARANCE STUDY PROFILE SCHEMATIC**



*PROFILE VIEW SCHEMATIC*



**FIGURE 4: AKRON FULTON INTERNATIONAL AIRPORT - CONSTRUCTION / TEMPORARY CONDITIONS**



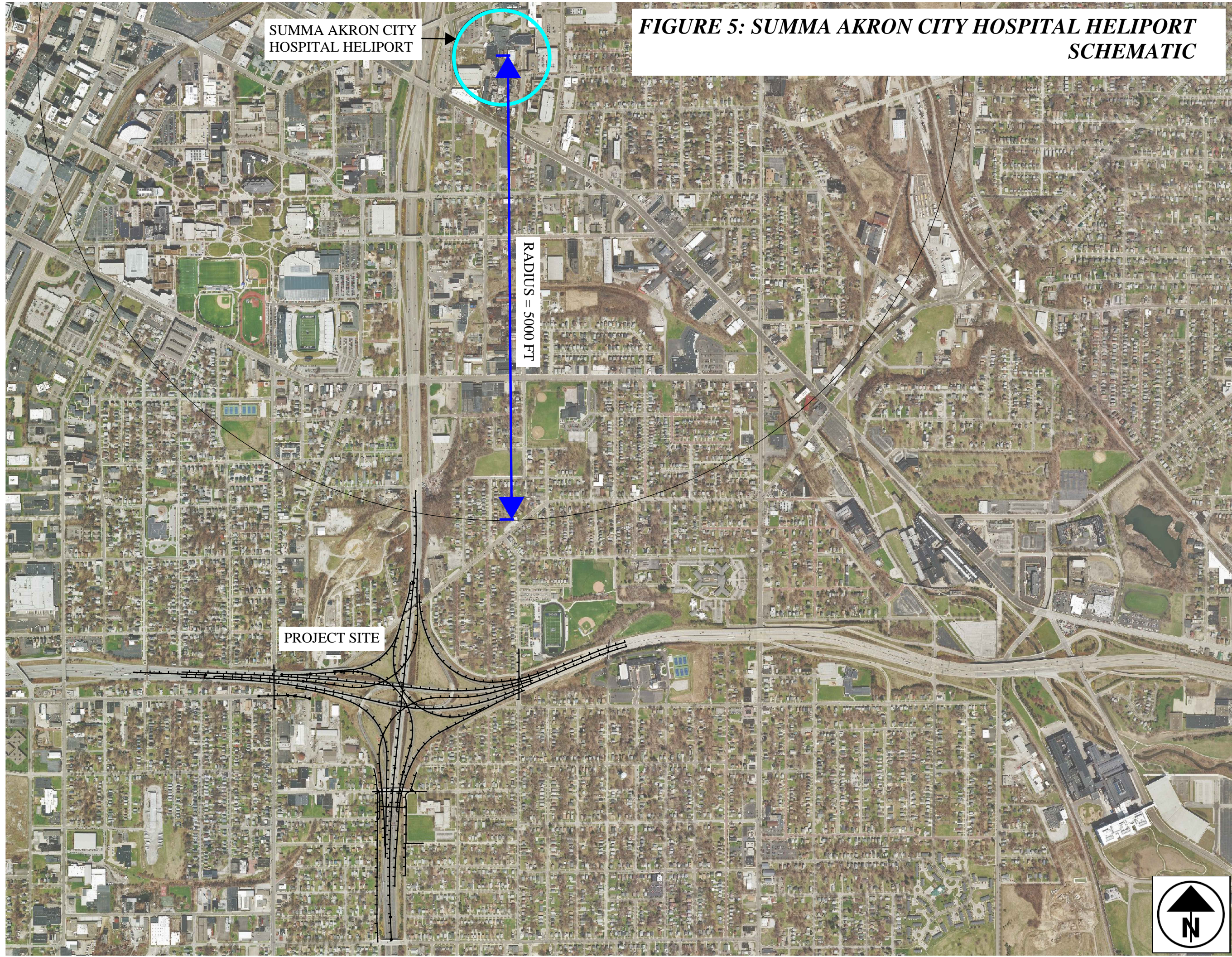
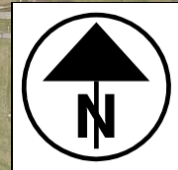


SUMMA AKRON CITY  
HOSPITAL HELIPORT

**FIGURE 5: SUMMA AKRON CITY HOSPITAL HELIPORT  
SCHEMATIC**

RADIUS = 5000 FT

PROJECT SITE





**FIGURE 6: SUMMA HELIPORT PROFILE SCHEMATIC**

