

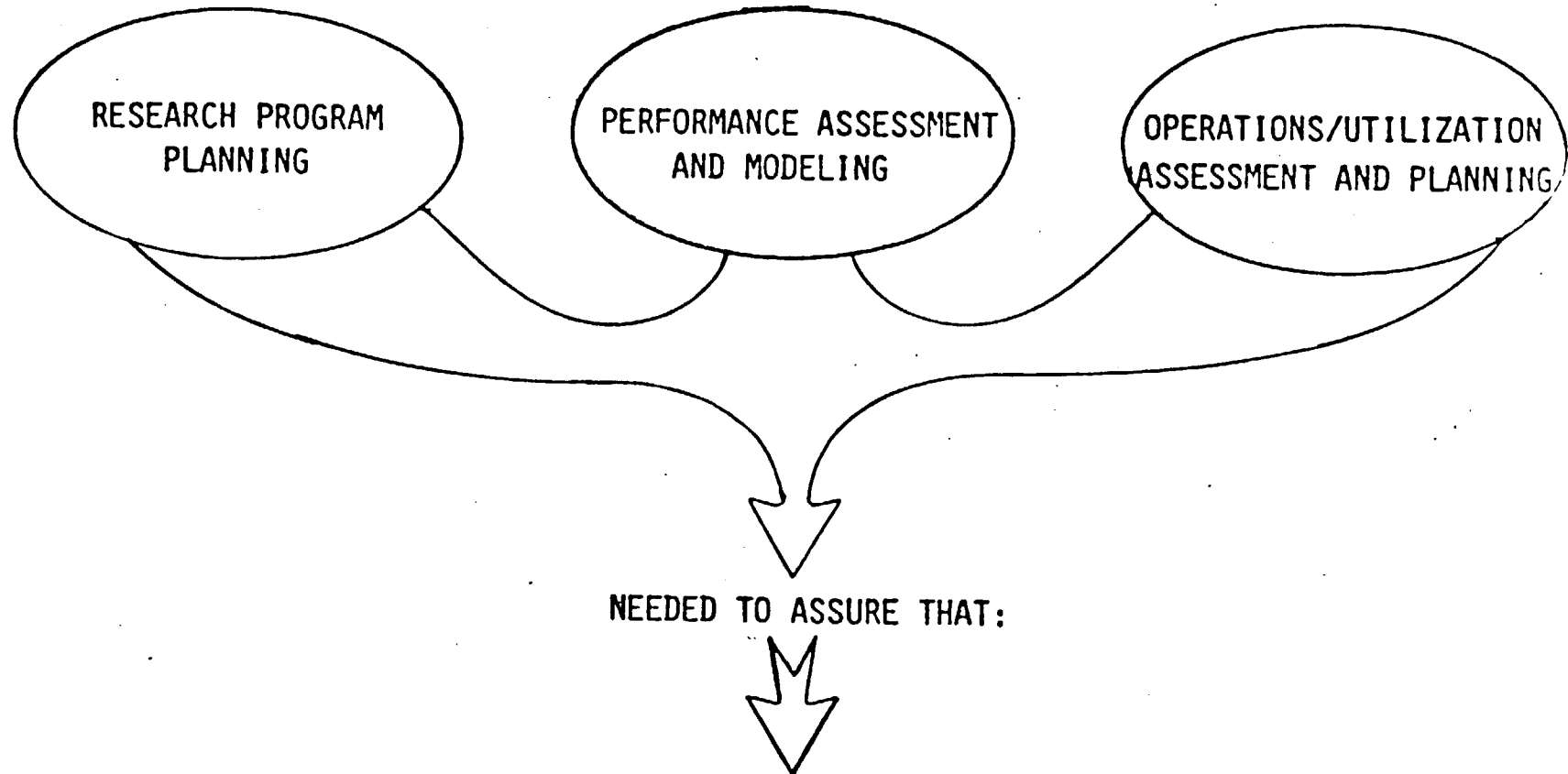
AWT MODELING STATUS

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N 92 - 70485

Handwritten notes:
N 92 - 70485
pp 9
2.07
22.07

AERO DIRECTORATE AWT ACTIVITIES



- SUITABLE AWT PERFORMANCE CAPABILITIES DEFINED
- SOUND AWT DESIGN ESTABLISHED

AWT PERFORMANCE ASSESSMENT AND MODELING

OBJECTIVES: 0 DEVELOP A TECHNICALLY SOUND AWT DESIGN THROUGH ANALYTICAL AND PHYSICAL PERFORMANCE ASSESSMENT AND MODELING

0 ADVISE THE AWT PROJECT OFFICE ON CONTRACTED DESIGN ACTIVITIES

APPROACH: 0 LEARN FROM OTHERS WHO HAVE RECENT MODELING EXPERIENCE

0 VISITS FOR TECHNICAL DISCUSSIONS

0 SEMINAR ON WIND TUNNEL MODELING

0 CONDUCT MODELING AND PERFORMANCE ASSESSMENT ACTIVITIES WITHIN THE AERONAUTICS DIRECTORATE

0 AD HOC AWT PERFORMANCE WORKING GROUP

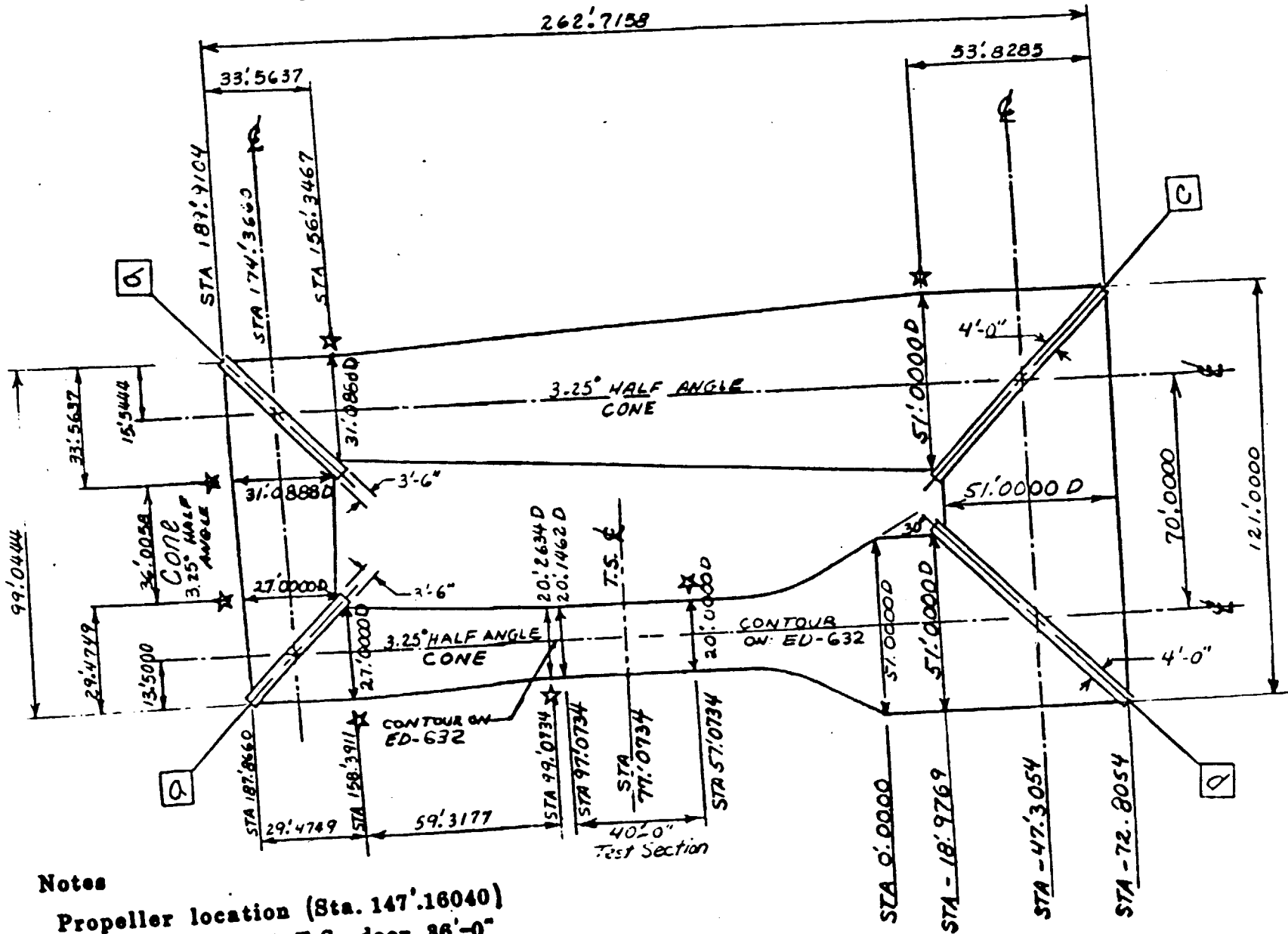
0 PERFORMANCE ASSESSMENT AND MODELING TASK FORCE

AD HOC AWT PERFORMANCE WORKING GROUP

- OBJECTIVE:
- 0 PULL TOGETHER A DATA PACKAGE OF INFORMATION ON AWT THAT INCLUDES:
 - 0 CIRCUIT DIMENSIONS
 - 0 CIRCUIT AREA DISTRIBUTION
 - 0 CIRCUIT 1-D FLOW CHARACTERISTICS (M, P, RE, ETC.)

- STATUS:
- 0 GROUP ESTABLISHED JANUARY 13 (4 MEMBERS)
 - 0 GEOMETRIC CHARACTERIZATION COMPLETE. PHYSICAL DIMENSIONS OF TUNNEL BEING VERIFIED
 - 0 DETAILED LOOK AT COMPONENT LOSS MODELS NOW UNDERWAY - NEEDED TO DETERMINE 1-D FLOW CHARACTERISTICS
 - 0 GROUP FUNCTION HAS BEEN ABSORBED INTO CIRCUIT AEROTHERMODYNAMICS TASK TEAM

ORIGINAL A.W.T. GEOMETRIC DIMENSIONS



Notes

- Propeller location (Sta. 147'.16040)
- Clear opening of T.S. door 36'-0"
- ☆ represents beginning or end of conic section
- All linear dimensions taken from prints

Soi e: NACA Dwgs. ED-602, EX-603, ED-632 & ED-686

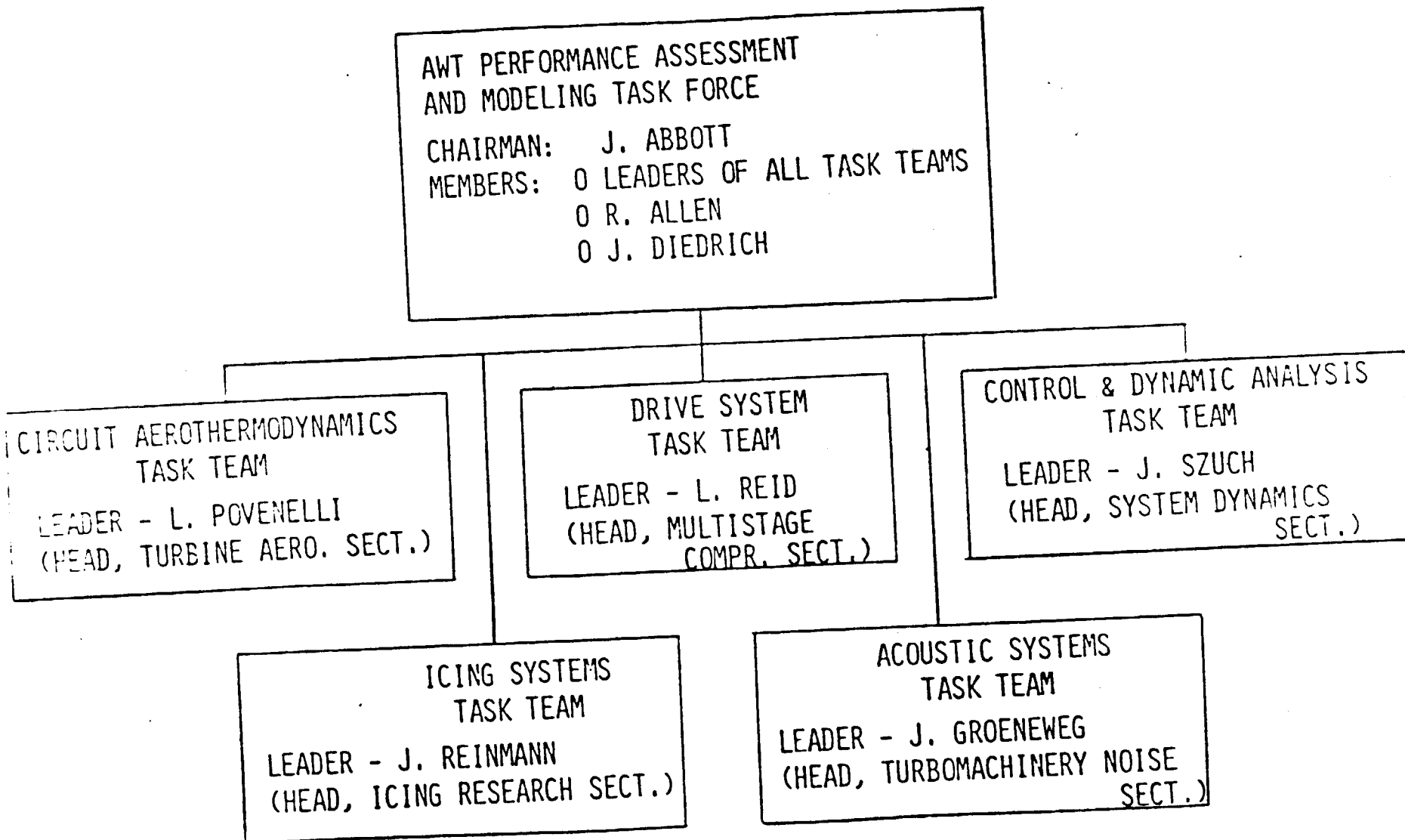
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AWT PERFORMANCE ASSESSMENT AND MODELING
TASK FORCE

- OBJECTIVE:
- 0 ESTABLISH AND IMPLEMENT AN AWT PERFORMANCE ASSESSMENT AND MODELING PLAN TO ENSURE THE TECHNICAL SOUNDNESS OF THE AWT PROJECT
 - 0 ANALYTICAL MODELING REQUIREMENTS
 - 0 PHYSICAL MODELING REQUIREMENTS (INCLUDING FACILITIES)
 - 0 RESOURCE REQUIREMENTS (8'S, MY'S)
 - 0 SCHEDULE
- APPROACH:
- 0 CONDUCT MODELING AND PERFORMANCE ASSESSMENT ACTIVITIES WITHIN THE AERONAUTICS DIRECTORATE VIA FIVE TASK TEAMS LED BY SECTION HEADS WITH THE APPROPRIATE BACKGROUND
- STATUS:
- 0 KICKOFF MEETING - JANUARY 27
 - 0 IDENTIFYING NEEDS FOR PERFORMANCE ASSESSMENT AND MODELING



ORGANIZATION FOR AWT PERFORMANCE ASSESSMENT AND MODELING



ISSUES/QUESTIONS BEING ADDRESSED BY TASK TEAMS

- 0 ASSESS CURRENT ANALYTICAL CAPABILITIES; DETERMINE ADDITIONAL NEEDS; DEVELOP NEW CAPABILITIES.
- 0 WHAT, AND HOW MUCH, NEEDS TO BE PHYSICALLY MODELED?
- 0 WHAT SIZE SHOULD THE PHYSICAL MODELS BE?
- 0 IN WHAT FACILITIES SHOULD THE MODELS BE TESTED? PERMANENCE IS AN ISSUE.
- 0 AT WHAT CONDITIONS WILL THE MODELS BE TESTED? P, T, H, RE, ETC.
- 0 WHAT INSTRUMENTATION IS REQUIRED?
- 0 WHAT ARE RESOURCE REQUIREMENTS? #'S? MY'S?
- 0 WHAT IS THE SCHEDULE OF ACTIVITIES?

SCHEDULE OF PERFORMANCE ASSESSMENT AND MODELING ACTIVITIES

1984

ACTIVITY	J	F	M	A	M	J	J	A	S	O	N	D
ESTABLISH MODELING TASK FORCE	▽											
OBTAIN A.R.C, LARC & BAC INPUT	▽▽											
ESTABLISH PRELIMINARY PLAN		▽										
PRESENT TO AWT OVERSIGHT COMM.		22ND ▽										
MODELING SEMINAR			▽									
PRESENT PLANS TO DIRECT. MGMT.			▽									
MODELING - ANALYSIS/TEST	→											
PER MILESTONES		25% ▽		50% ▽				75% ▽				100% ▽

