AN ANALYSIS OF THE METHODS USED IN THE PRODUCTION OF THREE INFORMATIONAL FILMS FOR TELEVISION

by

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A THESIS

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To my daughter, Dana, who supplied the incentive; and to my wife, Judith, without whom this study could not have been completed.

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CHAPTER I

INTRODUCTION

Thirty percent of the nation's programming structure on television consists of films.[1] An even greater proportion of film is used in New York City, the center of television. A recent poll of New York City indicates that forty-two percent of the programming for television stations there is composed solely of motion pictures.[2] Thousands of educational films, in film libraries, "which are not used nearly so widely as they might be"[3], will be called into use for programming newly-opened stations. However, up to the present time these films have been made for large-screen projection. They are, in most cases, technically poor for television showing. Of the films available to the television stations Battison says, "Only one in twenty-five is suitable for showing over the film camera chain on television".[4]

Television appears to be the most powerful form of

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1 Frederick Kugel, "The Economics of Film", Television Magazine, 8:11-47, July, 1951.

2 Dr. Sydney Roslow, "Programming Trends", Television Magazine, 9:22-23, March, 1952.

3 Edward T. Schofield as quoted in TV Channels for Education, (The Joint Committee on Educational Television, Washington, D.C.), p. 24.

4 John H. Battison, Movies for TV (New York: The MacMillan Company, 1950), p. 227.

communication today.[5] One of the nation's leading television film producers estimates that in the next five years, "75% of TV's programming will be on film".[6] Educational film producers will have to meet the challenge of this new medium of communication by learning the new techniques and methods of producing films for television. On this problem of making television films, Lenox Lohr states: "The methods in television production must depart from those in the movie industry because the respective requirements are fundamentally different".[7]

Recognizing the challenge of television and the need for information films produced for this new medium, President John A. Hannah discussed the film projects under way at Michigan State College in a statement to the Joint Committee on Educational Television:

> The delivery of the (television) equipment is nearly complete...we expect to have in operation a closed-circuit television project, linking the control room with the studio, two or three classrooms, and a large auditorium. With this equipment we plan to do extensive research in television...production and engineering. Motion picture equipment is already in use in the production of television films.[8]

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5 Gloria Waldron, The Information Film (New York: Columbia University Press, 1949), p.6.

6 Bill Craig as quoted in "TV Film Trends", Sponsor, 186-200, July 14, 1952.

7 Lenox R. Lohr, Television Broadcasting (New York: McGraw-Hill Book Company, 1940), p. 101.

8 John A. Hannah as quoted in TV Channels for Education (Joint Committee on Educational Television, Washington, D.C.), p. 23.

In line with the proposed program of research as outlined by President Hannah and the need for information on producing films expressly for television; the purpose of this study is to analyze the methods used in the production of three informational films for television.

With a minimum of equipment, trained crews and technicians, the production of three films was planned cooperatively by Television Development and the Agricultural Extension Division. Three specialists from Agricultural Extension developed informational programs for permanent recording on film. These films were produced with the idea that they could be transmitted over the college station when it becomes a reality, or that they could be sent to various commercial television stations all over the state for local transmission.

The three films, "Landscaping Your Home", from the Department of Landscape Architecture and Urban Planning; "This is Our Way", dealing with Agricultural Economics; and "36 Million Acres", on the subject of conservation; were part of a series called, "Design for Living". These films were the first such attempts, and required much trial and error in their production. They served as a learning process for the extension specialists, the television students, and the production staff in a new medium.

Educational film producers who intend to make films

for television using equipment similar to that used in this project, can benefit by studying the methods used in these films which have been analyzed and found satisfactory. On the other hand, pitfalls may be avoided by studying the unsatisfactory methods found in this study.

Each show of the series was rehearsed before filming, on the live television facilities which were available. It is significant that a different method of presentation was used in setting up each one of these films. In the first film a prepared script was used, which had also been used at the television rehearsal. For the second film, the television rehearsal was recorded on tape and transcribed into a script for shooting the film. The third film was completely extemporaneous, with only a list of slides used as a guide in shooting the film. In Chapters Three, Four and Five, relating to the production of each of these films, these methods of planning and production are summarized, and then analyzed as being either satisfactory or unsatisfactory. Chapter Two is concerned with the preparatory steps for all three films, and Chapter Six presents the conclusions.

The writer made an extensive search for previous studies and research done on films for television, and related fields. Failing to find any such material in the library indices of Michigan State College and the University of Michigan, the writer sent 103 letters to heads of university film and television research departments; to the major film and television publications in the United States, England and Canada; and to educational and governmental research organizations. The eighty-

one replies indicated in all cases that no such study has been done. It would appear that this thesis is one of the first of its kind to be prepared.

To further illustrate this statement, excerpts from letters received from authoritative sources are included here:

Albert Crews, Director of Radio and Television
Broadcasting and Film Commission
National Council of the Churches of Christ

"I am not aware of any specific research done in the field of motion picture production for television. To the best of my knowledge, no theses have been done in this field".

John R. Winnie, Director, Film-Television
State University of Iowa
Iowa City, Iowa

"I know of nothing written that would be of value to you. The work I have done, Bob Wagner at Ohio State, Wegener of Iowa State, and one or two others has never been put into print. Actually there is so little we know as yet that we prefer to keep working in the field for awhile before attempting to make any startling revelations".

Information Department
The British Film Institute
London, W.C. 2

"...the Institute has not published any material on the use of films in Television...but it appears that not a great deal has been published yet".

Martin Codel, Publisher
<u>Television Digest</u>
Washington, D.C.

"...we frankly know little or nothing ourselves about techniques of producing movies for TV. I wish I could help you -- but I don't see how I can..."

American Documentation Institute
Washington, D.C.

"We are sorry that we do not have any material on the subject of films for television".

Little, Brown and Company, Publishers
Boston 6, Massachusetts

"I'm sorry not to be able to help you in your search for material on producing motion pictures for television. We haven't published any books on the subject, and I haven't heard of any put out by another firm".

There are a number of companies in Hollywood that are actively engaged in producing films for television. However, very little has been published on the technical aspect of the methods used in producing these films. Some of the trade and professional organizations have presented articles on films for television, in their publications. The few articles available are found in the Journal of the Society of Motion Picture and Television Engineers,[9] Movie Makers,[10] American Cinematographer,[11] Specifications for Motion Picture Films Intended for Television,[12] Hollywood Quarterly,[13]

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9 Jerry Fairbanks, "Motion Picture Production for Television", Journal of the Society of Motion Picture and Television Engineers, 567-575, December, 1950.

10 Jerry Fairbanks, "Films for Television", Movie Makers, 186-197, May, 1949.

11 Leigh Allen, "Filming The 'I Love Lucy' Show", American Cinematographer, 22-23, 34+, January, 1952.

12 Charles Townsend, Specifications for Motion Picture Films Intended for Television Transmission, (New York: National Broadcasting Company, Inc., 1950), p.3-18.

13 Irving Pichel, "Films for Television", Hollywood Quarterly, 5:363-373, Summer, 1951.

British Kinematography,[14] Television Magazine,[15] and International Photographer.[16] These publications, the book, Movies for TV,[17] and a United States Department of Agriculture Report, Television Report, Section I, Films,[18] have been a source of reference to the writer in determining the satisfactory and unsatisfactory methods used in the film series, "Design for Living.

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14 Otto Sanvik and T. G. Veal, "Motion Pictures for Television", British Kinematography, 17:141-153, November, 1950.

15 "A Primer of Film Technique for Television", Television Magazine, 23, 26, July, 1951.

16 Jerry Fairbanks, "Television Filming", International Photographer, 6-7+, February, 1951.

17 Battison, Op. cit., p. 227.

18 Tom Noone, Maynard A. Speece and Kenneth Gapen, "New Films for Television", Television Report, Section I, Films, Radio and Television Service, Office of Information, United States Department of Agriculture, 12-17, June, 1950.

CHAPTER II

PREPARATION FOR THE PRODUCTION OF THE SERIES, "DESIGN FOR LIVING"

In the fall of 1951, the Television Development Service at Michigan State College planned the production of three motion pictures for television. These films were to be made in conjunction with the Agricultural Extension Division of the college. The proposed plans included full use of the closed-circuit television facilities and studio at Michigan State College.

The purpose of this chapter is to explain the methods used in preparing and planning this series of films. This includes the following: (1) selection of personnel and crews, (2) selection of talent and program material, (3) use of the television studio and equipment, (4) television rehearsals, (5) use of film equipment, (6) 16mm. reversal film, (7) film tests and (8) music.

Selection of personnel and crews. One of the first preparatory steps was the selection of personnel and the assignment of crew positions for these productions. Two separate crews were found to be needed. The television rehearsals required more crew members of a less skilled nature than the crew operating the film equipment.

For the television rehearsals it was found to be expedient to use students enrolled in television courses as the crew, except for the positions of engineering and direction. These latter positions were assigned to the Video Engineer and the Production Supervisor of Television Development. For the film production, members of the television production staff were assigned to positions of producer, director, scenic director, audio director and film editor, in a manner similar to that of a professional film production unit. The cameraman was a staff photographer in the Agricultural Extension Department. Lighting crew and general crew members for the film were selected from among the students. The author held the position of assistant director in both the television rehearsals and the film productions, and was able to see and record and analyze all aspects of this project.

Selection of talent and program material. Another primary step in the preparation of these films was the selection of talent and program material. The selection of qualified specialists and the recommended program material originated from the Agricultural Extension Department. This department had a number of specialists whose informational talks were suitable for television films. Among its personnel are a group of specialists who travel around the state of Michigan speaking on Agricultural Economics, Engineering,

Home Economics, Landscaping, Conservation and Poultry Husbandry, to name a few of the subjects covered. The Agricultural Extension Department, desiring to extend its message to a larger number of people in Michigan, furnished the talent, program subjects and funds for these television films.

The three specialists selected for these shows were Mr. Joseph T. Cox, from the Department of Landscape Architecture and Urban Planning; Mr. D. B. Varner, from the Department of Agricultural Economics; and Mr. Paul M. Barrett, from the Department of Land and Water Conservation. These men were chosen because they were qualified to speak on their specialized fields.

Prior to the filming of these shows, conferences were arranged between the specialists and the production staff. At these conferences the subject material was presented to the production staff members, who analyzed the material for visual qualities. These meetings are discussed at length in Chapters Three, Four and Five. One common factor which proved important in the planning stage was the necessity for reviewing all of the specialists' lecture material, props, charts and visual aids. This was done to select the material which could be incorporated into these programs.

Use of the television studio and equipment. Since it was decided to rehearse these shows as television programs and view them on the television system before filming them, a brief

discussion of the studios and facilities is included here. The television studio, located in the Electrical Engineering Building of Michigan State College, was used for these productions. The television area was divided into four units: studio; control room; projection room and announce booth. Plate "A" on the following page represents the studio arrangement.

Facilities in this studio included two RCA field type cameras equipped with tripod dollies. Each of the camera lens mounts held four lenses. These lenses were a 50mm., a 90mm., a 135mm., an 8½-inch and a 13-inch lens respectively. For sound work the studio was equipped with several three-wheeled microphone booms. The types of microphones used in this studio were the Western Electric 639B and the RCA 77D, both of which are uni-directional types.

A number of picture monitors on portable stands were included in the studio equipment. These monitors, which can be used to cue the talent, also served as guides to the boom operator and floor manager. The lighting equipment included large overhead fluorescent slimline floods, fresnel spotlights, scoops and reflector floodlights. The lighting of the studio was divided into four major areas. Each of the lights was secured to an overhead grid. Additional lights were set up on floor stands.

The studio control room equipment was arranged on two levels. Located on the upper level were a field switching unit, an audio control board, two turntables and an intercommunication system. On the floor level were the field camera

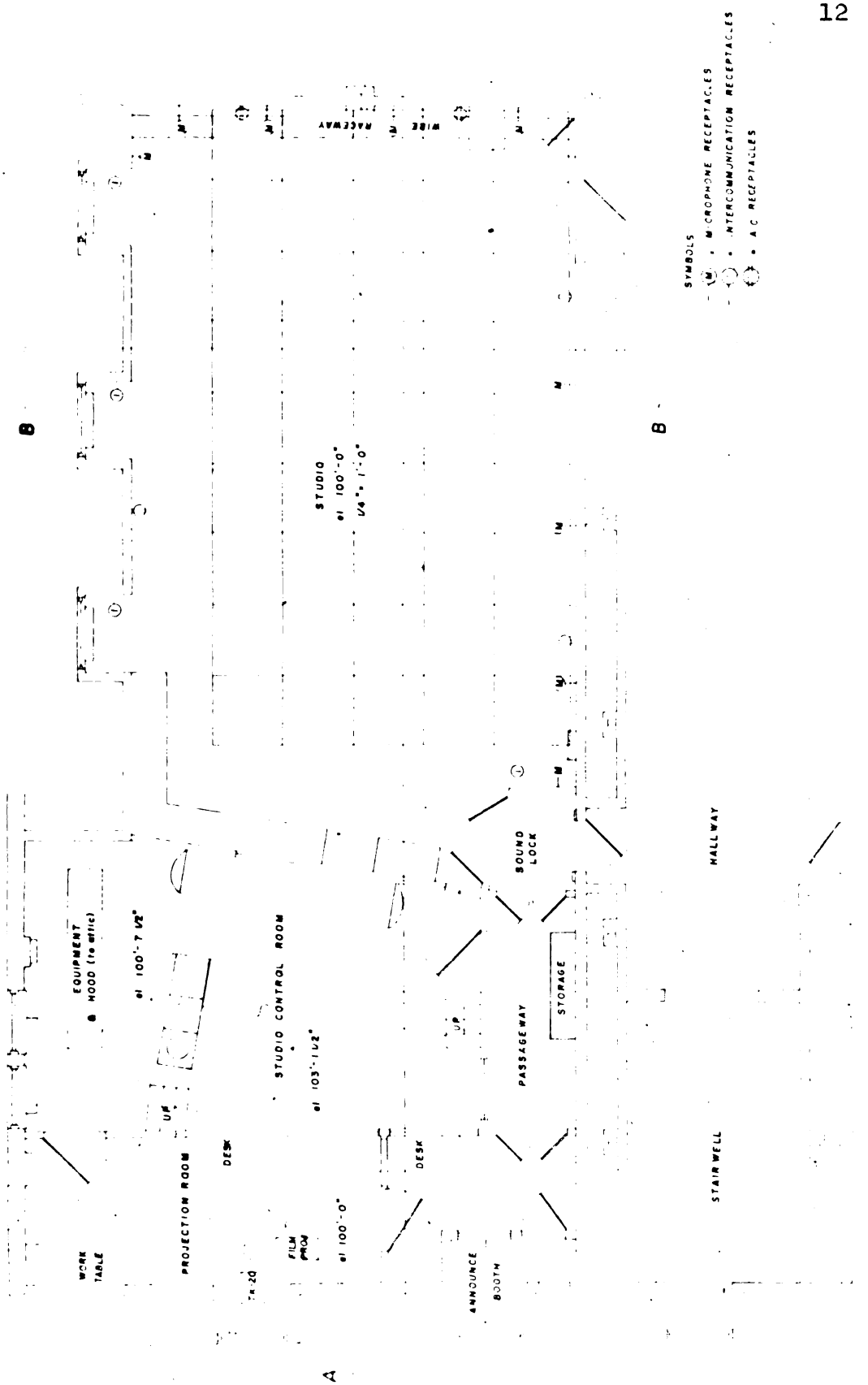


Plate A.

The Studio Floor Plan

monitors, a master monitor and the film camera monitor. An RCA film camera chain and two slide projectors were in the projection room.

The television rehearsal. Each of these shows was first rehearsed on this closed-circuit television system. The date of the rehearsal was used as a deadline for the completion of all sets, props, visual aids and special effects. The rehearsal also served as a means of introduction for the television staff, the students and the specialists, to the problems they would encounter in the show when it was filmed.

The methods used in these three rehearsals followed a similar pattern. Starting with a "dry" rehearsal, the director and his assistant ran through the show to block the action with the specialist. The second rehearsal, again "dry", or without cameras, was set up in order that the shots might be blocked. Using a viewing device called a "Televiewer", the director was able to see and block each shot as it would appear on camera. The blocking of shots meant the assigning of a specific lens size to a specific camera, a description of the shot, and instructions for movement of the camera in order to secure the shot. These shots were then written on the script or on lists by the assistant director.

The third run-through was a start-and-stop rehearsal, using the cameras. This run-through was stopped at any point needing additional work, such as better picture composition or

sound balance. The next run-through was to get an accurate timing of the show, and to see and hear the program as a whole. This was the dress rehearsal for the filming which followed the next day.

For the television rehearsal of the first show the specialist was asked to memorize a prepared script. However, in the dress rehearsal, the specialist did not have the script fully memorized, and had to read some of the lines. Since this could not be done in the film, the director decided to break the script down into segments of short duration for filming. This was done to permit the specialist to memorize a scene at a time, after which the scenes were shot. These scenes were assembled in their correct order by the film editor after the film was developed. The script used for the television rehearsal and the film production of the first show, "Landscaping Your Home", is found in Chapter Three.

In the second show, "This is Our Way", no prepared script was used at the television rehearsal. Instead, the specialist's program was outlined on a non-script television blocking sheet, which is shown in Chart I, on page 16. This sheet was used as a guide for the assistant director during the television show. Using it, he was able to (1) list the timing for each shot, (2) set up the cameras with the proper lenses and types of shots, (3) move the cameras into position, and (4) list the cues for the talent and the technical staff.

During the dress rehearsal of this second show the dialogue was recorded on a tape recorder. This recording was then transcribed by a secretary into script form, to be used in the filming of this show. In the television rehearsal the director realized that the show could be filmed straight from the script in chronological order, instead of breaking down the script as had been done in the first film. The information on the non-script television blocking sheet was then transferred to the shooting script which is a part of Chapter Four, on the production of "This is Our Way". The television blocking sheet which follows was one of the methods used in the rehearsal of this film, using television cameras.

The specialist who took part in the third show, "36 Million Acres", also worked without a script at the television rehearsal. Instead of using a prepared lecture, as had been done in the second show, the specialist of this third show spoke extemporaneously on conservation, illustrating his talk with slides which made up the main text of this show. A list of the slides used in the film, and the four timings of delivery which were recorded during the television rehearsal, is included in Chapter Five which deals with the production of "36 Million Acres", the final film of this series.

Film equipment. While these films were in the preparatory stage, it was important for the director to be aware of the advantages and limitations of his film equipment. The camera used to film this series was a 16mm. Auricon Pro single

TABLE I

NON-SCRIPT TELEVISION BLOCKING SHEET
"THIS IS OUR WAY"

REHEARSAL TIMINGS 1	2	3	4	CAMERA NUMBER	LENS FOCAL LENGTH	SHOT DESCRIPTION
:00	:00	:00	:00	#2	6"	"Shoes" Cartoon, Announcer.
:15	:18	:16	:19	#3		Slides, Music, Announcer.
:50	:50	:49	:51	#1	4"	Waist shot of Woody,* hold 20 seconds. Dolly in.
1:25	1:30	1:40	1:38	#2	4"	Woody rises, walks to "Percentage" Chart.
1:38	1:45	1:51	1:46			Dolly back, include Woody.
2:05	2:20	2:28	2:12	#1	6"	Chest shot, Woody at desk.
3:12	3:35	3:37	3:37	#2	6"	(Limbo) "State Supreme" Cartoon.
3:33	3:50	3:50	3:45	#1	4"	Waist shot, Woody.
4:00	4:00	4:35	4:06			Dolly back, include desk top.
4:10	4:20	5:10	4:23	#2	13"	Tight shot of book.
4:16	4:25	5:25	4:31	#1	4"	Same shot, waist shot of Woody.
4:25	4:45	5:35	4:52	#2	6"	(Limbo) "Individual Supreme" Cartoon
4:31	4:54	5:47	4:59	#1	6"	Chest shot, Woody.
4:47	5:18	6:10	5:20	#2	6"	(Limbo) Personal gain "Mousetrap" Cartoon.
4:55	5:27	6:21	5:30	#1	4"	Truck right, pan Woody to "Production" Cartoon.
5:15	5:50	6:53	6:02	#2	6"	Include Woody and chart.
5:40	6:04	7:10	6:06	#1	4"	Pan Woody as he sits.
6:30	6:32	7:20	6:30			Dolly in to waist shot, Woody.
7:00	7:37	7:32	7:35	#2	4"	Cover shot, pan Woody to "Man with House" Cartoon.

* Note: In the script, Mr. Varner is referred to as "Woody".

TABLE I (continued)

NON-SCRIPT TELEVISION BLOCKING SHEET

"THIS IS OUR WAY"

REHEARSAL TIMINGS 1	2	3	4	CAMERA NUMBER	LENS FOCAL LENGTH	SHOT DESCRIPTION
7:08	7:48	8:44	7:50	#1	8"	Tight shot, "Man with House" Cartoon.
7:20	7:58	8:58	8:00	#2	4"	Pan Woody, "Professions" Cartoon.
7:32	8:08	9:06	8:07	#1	8"	Tight shot of "Professions" Cartoon.
7:46	8:25	9:14	8:20	#2	4"	Pan Woody.
7:54	8:42	9:20	8:28	#1	8"	Tight shot, "Profit" Cartoon
8:10	8:55	9:39	8:38	#2	4"	Pan Woody.
8:28	9:18	9:45	9:03	#1	8"	Tight shot of "Price" Cartoon.
Five minutes - 8:40						
8:45	9:45	10:00	9:24	#2	4"	Pan Woody.
9:02	9:55	10:10	9:33	#1	8"	Tight shot, "Sale" Cartoon.
9:21	10:07	10:18	9:42	#2	4"	Pan Woody.
9:55	10:40	10:40	10:13	#1	6"	Woody and "Comparative Production" Chart.
Three minutes - 10:40						
10:47	11:20	11:20	11:12	#2	6"	Woody and "Per Capita Income" Chart. Pan Woody to
Two minutes - 11:40						"One Week's Wages" Chart.
12:37	12:35	12:42	12:25	#1	4"	Waist shot of Woody.
One minute - 12:40						
13:15	13:07	13:50	13:35	#2	4"	Truck left, pan Woody to desk, then dolly in.
14:00	13:40	14:10	14:05			
				#3		Slides, music, announcer.

system sound recording camera. It was equipped to take 200-foot reels of film. The turret on this camera is built to hold three lenses, any of which may be used at random. The entire camera is "blimped", or soundproofed, so that no internal camera noises can be heard during the filming. The complete filming unit included the camera, the tripod, the lenses, the automatic parallax view-range finder, the tape measure, the amplifying unit and the microphone.

There are several advantages to using the single system sound camera. First, there is a saving in the original film cost and the cost of developing, because the sound and the picture are exposed on the same film. Second, there is a saving of time in the processing, editing and printing, because the sound and picture are on one film during each of these steps. A third advantage is that there is no need to use a clapstick before each take, because the picture and the sound are synchronized on one film during the shooting.

On the other hand, there are some limitations in using the single system sound recording camera. First, because the sound is recorded twenty-six frames ahead of the picture on the same film, editing becomes difficult without having to sacrifice either sound or picture. Second, good sound recording calls for a very slow fine-grain film, which is not the most satisfactory type for picture reproduction. Good pictures call for fairly fast film, which is coarser in grain. The best that can be hoped for is a compromise. Both

sound and picture must be sacrificed to some degree when the film is selected. Third, there is very little separate laboratory control that can be used on a film that has both picture and sound on it. Both receive the same processing.

There were three lenses used in filming these shows. These lenses were changed at the discretion of the cameraman, to give the director the shot that closely matched the picture seen in the television rehearsals. To give assurance that each shot was properly focused, a tape measure rule was used to measure exact distances from the camera to the subject. Also, a light reading was taken with a Weston Meter to obtain the proper lens aperture.

In each rehearsal before the take, the sound director checked the level of the microphones on the volume indicator. This rehearsal also enabled the sound boom operator to become familiar with, and follow, each specialist's movements. Sudden rises and actions could be anticipated, which prevented the boom from being caught and filmed in the final picture frame.

The cameraman also used these rehearsals to learn to anticipate the movements of each specialist. He could then pan, tilt, dolly in or dolly out, and decide whether his lenses were adjusted for the proper depth of focus.

<u>16mm. reversal film</u>. In the preparatory stage of these films, advice was sought on the type of film most suitable for reproduction on television. What was needed was an inexpensive

film that had the qualities of high fidelity sound and low contrast photographic reproduction. From the Eastman Kodak Company the cameraman learned that Super X reversal film would be closest to meeting the requirements of this production. The reversal original becomes the master positive, cutting the cost of making a positive from a negative. The master print is used to make a duped negative, and a work print is made from the negative. This work print is used in the editing, saving the master positive. For this series, after editing the work print, the duped negative was edited and the release prints were made from this.

Film tests. On October 9, 1951, preliminary film tests were made using the Auricon film camera. Because of the limitations of the single system sound of this camera, production problems were tested before venturing into the filming of these three shows. Some of the major factors tested were sound level and sound track exposures, lighting, filming of slides and makeup.

Various types of equipment were tested to determine which would be most satisfactory for use in these films. Two different microphones, an RCA 77D and an Auricon, were alternated in the sound tests. For lighting, several different lighting setups were tested. Graphic arts, titles and backdrops were also included in the tests to determine color values and the legibility of the lettering.

One of the main aims of these tests was to determine the best means of sound reproduction with the Auricon camera.

The various factors tested in sound reproduction were (1) placement of the microphone, (2) the distance of the mike from the subject, (3) variations of the sound track exposure, (4) variations of voices alone, (5) testing the voice with music, and finally (6) testing music separately. In the sound tests it became obvious that further tests were necessary, because the variables were not all-inclusive.

The filming of slides projected on a screen was also tested on the Auricon camera. In these preliminary takes it was necessary to determine whether or not slides could be photographed from front screen projection. The test slides were varied from long shots to closeups. Black and white slides, as against colored slides, were also tested for their effectiveness on film. Slides projected on a screen were found to photograph in greater detail, and with more clarity, if they were closeups.

Stage makeup was tested, using various types of eye shadow, pancake makeup, lip rouge and face powder. A Max Factor #22 natural "blush" pancake makeup seemed to be all that was needed for reasonable face modeling.

In the second group of preliminary film tests, sound and lighting were the two main factors to be tested. The second group of tests was conducted on October 22, 1951, using the same equipment as had been used in the first series of tests, with one addition. This additional piece of equipment was a Western Electric microphone, 639B. This was included with the

two microphones which had already been selected for previous testing. In the first tests, the volume indicator peaks had been kept constant; however, in the second series of tests, the peaks and sound track exposures were varied. The Western Electric microphone 639B was found to be more satisfactory than the other two microphones tested. Consequently, for the production of these films, the Western Electric microphone, which had given the best results, was substituted for the Auricon microphone.

Music. The music was selected from the Lang-Worth transcription library. Praeludium, by Jaunefelt, was chosen as being a suitable theme for the series, "Design for Living", because it was felt that the melody suited the mood for the opening and closing of three informational films.

CHAPTER III

THE FILM, "LANDSCAPING YOUR HOME"

The first in this series of films was on Landscape Architecture. In this chapter the methods used in the production of the film are organized into three sections entitled (1) Planning, (2) Filming and (3) Analysis. In the Planning section the methods followed before the filming of the show are shown. In the Filming section, the methods used in the actual shooting of the film are described. In the Analysis section the methods are analyzed in relation to making this film for television.

PLANNING

The script conferences. One of the primary planning steps was the preliminary meeting between the landscape specialist and the production staff. At this meeting the specialist explained and demonstrated his subject matter in order to acquaint the production staff members with possible program material. Following this, the staff members selected those elements which would be best suited for a film on landscaping.

The purpose of this program, decided at this meeting, was to demonstrate visually to the average television viewer methods of planning and planting the area surrounding an average home. The key ideas were (1) maintenance, (2) adjustment

to prevailing conditions and (3) the pleasing arrangement of materials.

To narrow down this film to a specific period of time and to give a thorough treatment to the subject, a "before" and "after" type of presentation was decided upon; that is, using two miniature models of lots, one landscaped and the other not landscaped. The general content and format were then worked around this basic approach. With this nucleus for the script decided upon, the scenic designer made notes of the visual settings that would be necessary. Finally, a general outline of the material which had been discussed and decided upon at this conference was made by the writer, for use in writing the final script.

At a second meeting, the script was drafted. In order to maintain naturalness in the script, the writer asked questions on Landscape Architecture, and the specialist's own words were noted by a recording secretary. Subsequently, the staff writer incorporated the agreed upon visual elements into the script. These were eight cartoons illustrating key ideas, two charts showing methods of landscaping, and two scale models of the actual lot to be landscaped for the show.

An opening shot of an undeveloped lot was planned to attract the attention of the viewer. At the same time an announcer's voice would suggest to the viewer that he might own such a lot with the idea of building on it some day. This

opening shot is illustrated in Figure 1.

Figure 1.

Opening Shot of the Undeveloped Lot

Selecting the title. The principal idea in selecting the title was to give it and the program a "you" approach. The intention was to make an informational show more attractive to the television viewer. Titles were listed and discussed by the production staff and "Landscaping Your Home" was chosen.

The program content. Starting with a scale model of the bare lot and props, the landscape specialist demonstrated: (1) how to preserve trees while building; (2) how to avoid root damage; (3) the importance of saving topsoil; (4) the planning of sunken gardens and (5) the necessity for proper drainage and planning before building the home. He stressed the importance of planning the placement of shrubs, trees, sidewalks and driveways, after the completion of the home.

The setting aside of special use-areas for recreation and work and living needs was discussed. The specialist showed when, where and how to plant greenery. Utility, judgment and planning were stressed throughout. The final shot, seen in Figure 2, showed a landscaped and developed lot much improved over the opening lot; and the specialist explained that this result was achieved by planning the work areas and the planting months ahead.

Figure 2.

The Specialist and the Completely Landscaped Lot

<u>The format</u>. After the opening, and the title acknowledgments, the specialist was introduced and appeared "on

camera", as shown in Figure 3. He started his demonstration

Figure 3.

Introduction Shot of the Specialist

with the bare lot, on which he built and landscaped as he talked. He used cartoons and charts as visual aids to point up his ideas, as seen in Figure 4, on Page 28. Then a second, partially landscaped,lot was substituted. The specialist completed the landscaping of this second model illustrated in Figure 2, on Page 26. He then displayed a card indicating the source of additional information. After a final shot of the landscaped lot, the film ended with visual titles, a musical background and acknowledgments by the announcer.

Figure 4.

Use of Charts as Visual Aids

The physical setting. The setting for the filming was planned for low color contrasts, and to avoid extreme whites or blacks. The walls of the set were canvas flats painted a blue color which registered light gray on the film. The properties were chosen to establish the realistic setting of a landscape specialist's office. In addition to the office furniture, an easel for holding paper charts and a model stand were placed to provide areas for movement.

The two model lots used were designed and built by the scenic designer to a scale of one inch representing four feet.

The first model, shown in Figure 5, was of a vacant lot with two trees. The second model was an improved reproduction of

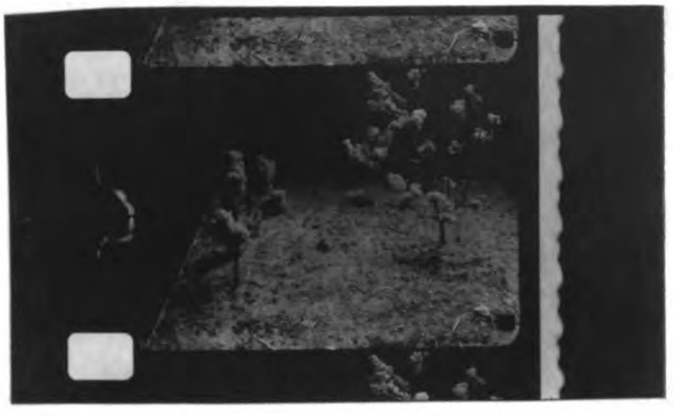


Figure 5.

The Vacant Lot

the first, constructed to the same scale, with similar physical characteristics. The first lot had been covered with rubbish, but the second lot appeared completely landscaped.

The design of the second model warrants some explanation because its realistic design was planned to be seen on television. To give the model the effect of grass, a green terry cloth was used. Shrubs, trees, hedges and bushes also had to be shown. Therefore, various colored sponges were cut up in shapes resembling these natural elements surrounding the landscaped home. Some of the sponges had to be dyed to match the needs of the monochrome scale. The house

and garage were scale miniatures made of cardboard and soft pine. This model is seen in Figure 6.

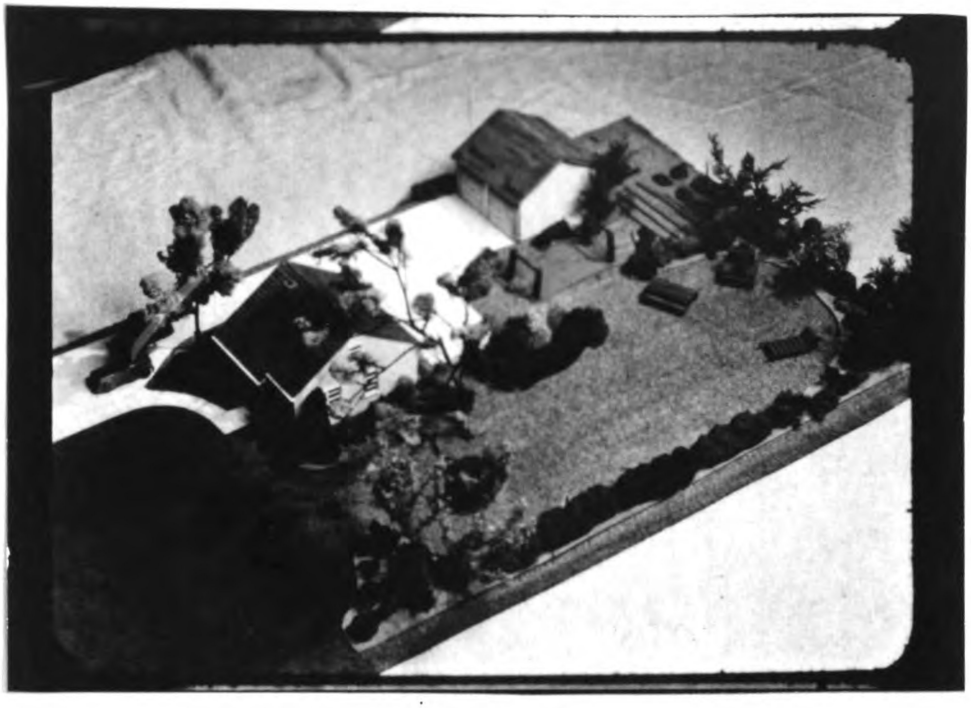


Figure 6.

The Completed Model

Visual aids. Two charts were used as visual aids in pointing up the discussion of use-areas. Chart Number One illustrated a house with a public area in front, a private family area on the side of the house and a service area at the rear. Chart Number Two was a graphic picture of the finished model. The two charts are illustrated in Figures 7 and 8, on Page 31.

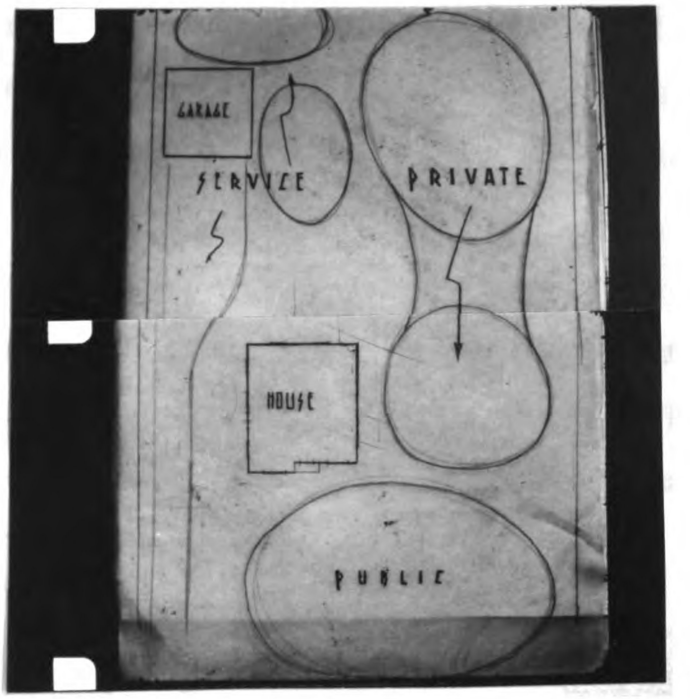


Figure 7.

Chart Number One

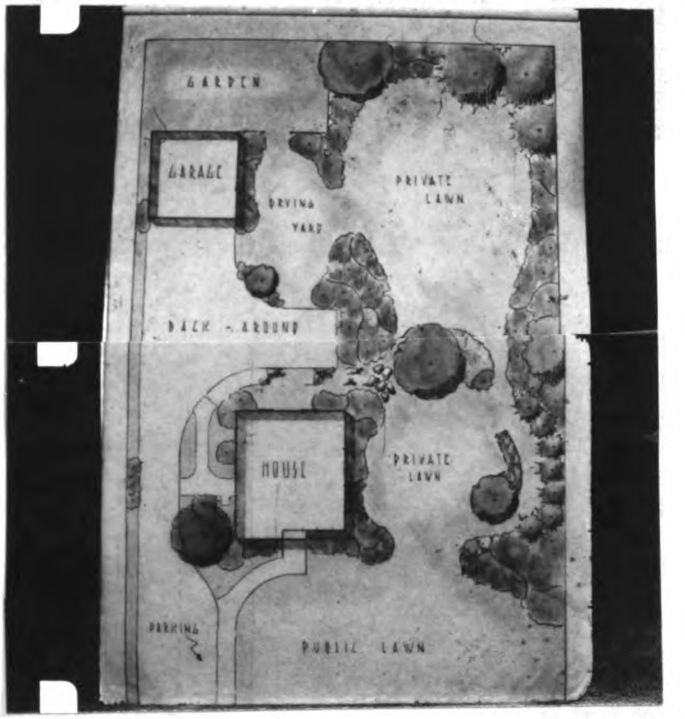


Figure 8.

Chart Number Two

The graphic arts prepared in the planning stage were cartoons, titles and flip cards. Twelve- by sixteen-inch cartoons combining explanation with humor added visual interest, and were attached to the office walls. An address card to be displayed by the talent was also prepared. The cartoons are shown here in Figures 9 through 16, along with the idea which they conveyed in the script. These illustrations are enlarged reproductions of the 16mm. film used in this production.

Figure 9.

"Bulldozer" Cartoon. Use of Bulldozer May Result in Destruction of Usable Features

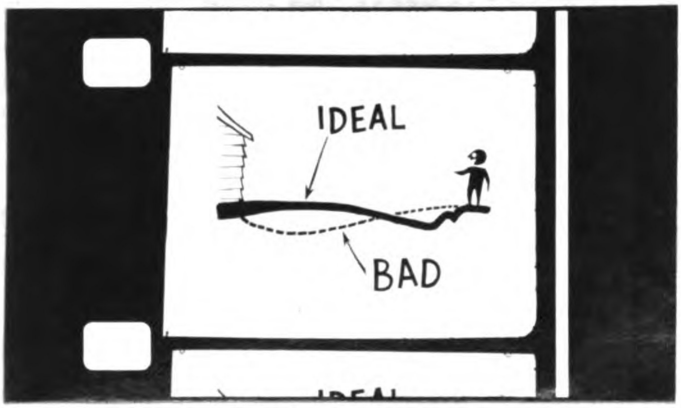


Figure 10.

"Drainage" Cartoon. Be Sure That Rain Water Drains <u>Away</u> From the House

Figure 11.

"House in Hole" Cartoon. Property Below Road Level Requires Grading and Filling

Figure 12.

"House on Fill" Cartoon. Plan Home on High Ground

Figure 13.

"Topsoil Cutaway" Cartoon. Ideal for Growing Plant Material

Figure 14.

"Topsoil" Cartoon. Insist That Topsoil be Saved

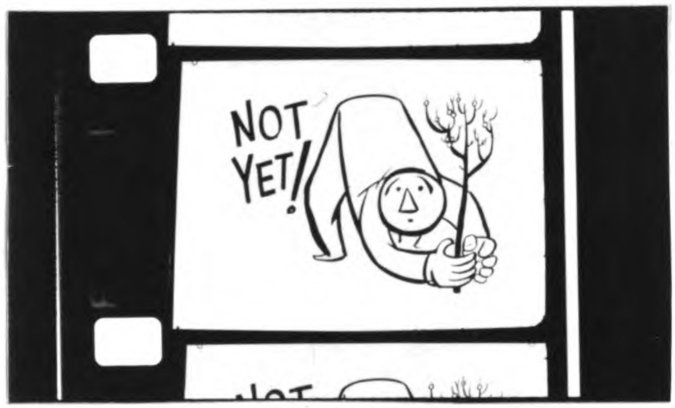


Figure 15.

"Not Yet" Cartoon. Plan Before Planting

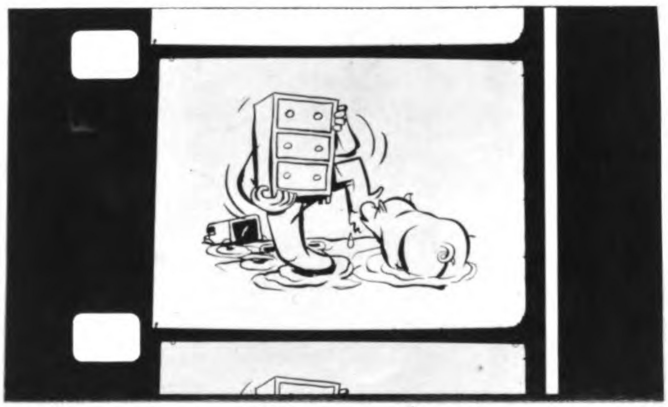
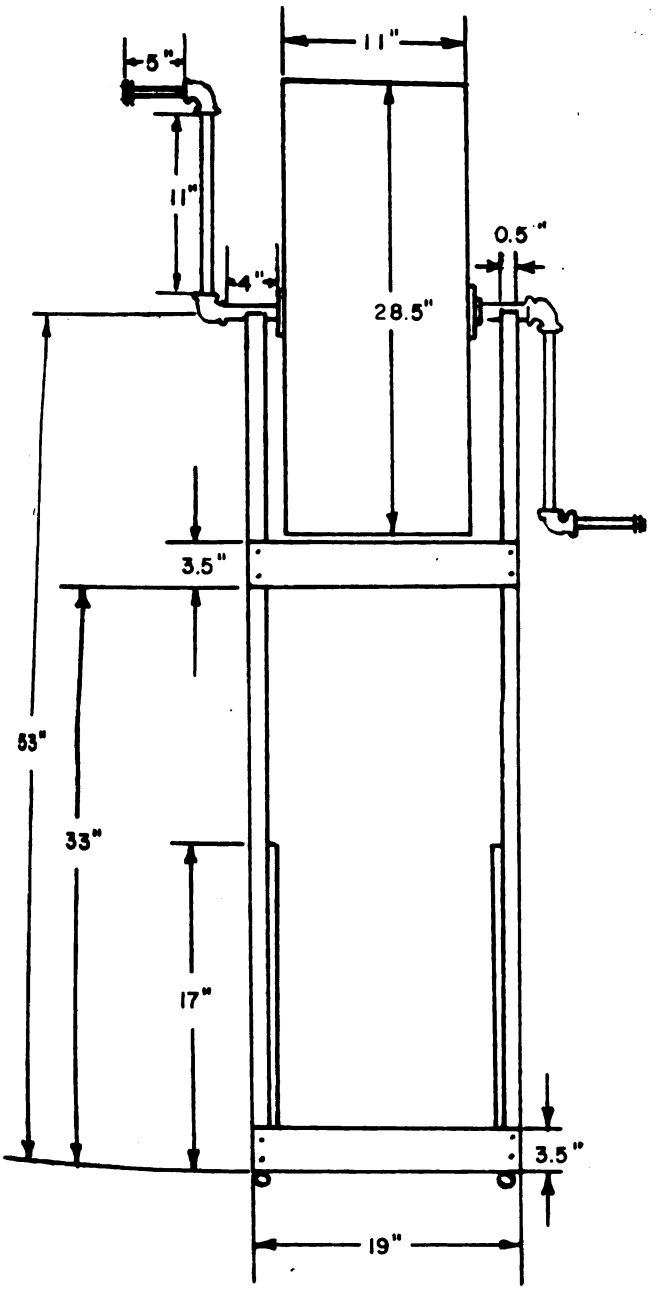


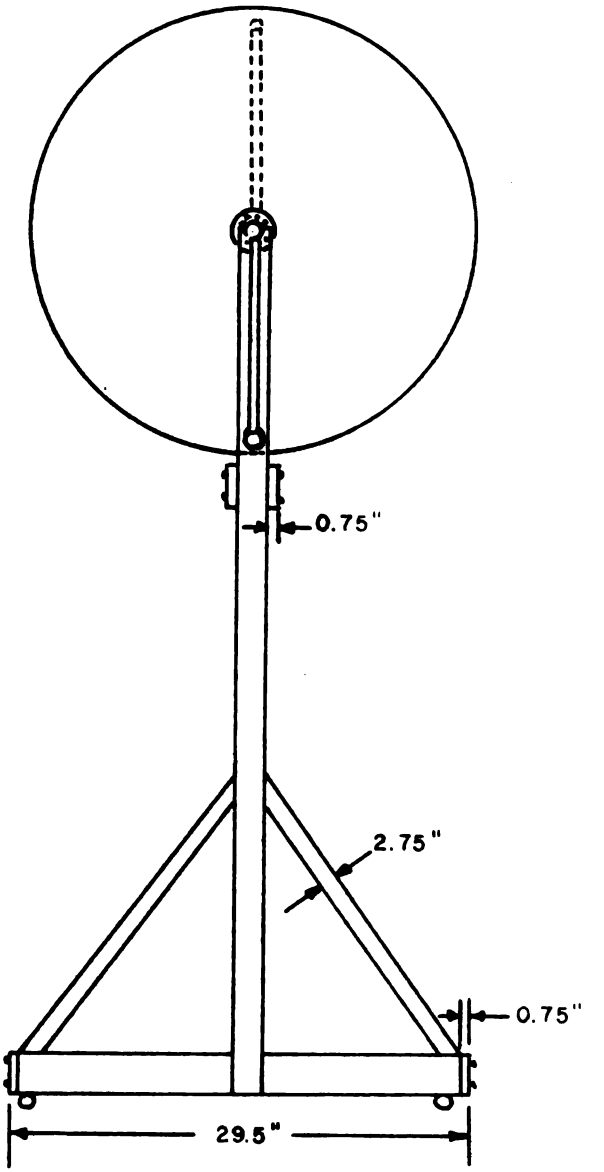
Figure 16.

"Mud" Cartoon. Walks and driveways Needed <u>Before</u> Moving In

The opening and closing titles were printed in twentieth century style brown lettering, on brown wrapping paper. This paper was pasted on a title rolling drum, which is illustrated in Plate B, on Page 36. The titles are shown in Figure 17, on Page 37, as they appeared in the opening.

TITLE ROLLER





scale 1" = 1'

Plate B.

Figure 17.

The Title Roller Acknowledgments

The shooting schedule breakdown. In the television rehearsal the specialist had difficulty in memorizing the prepared script. Because of this the director decided to divide the script into small segments for shooting. These averaged from eight to twenty seconds.

A shooting schedule breakdown was improvised from the television script. This breakdown is illustrated in Table II. The number on the left edge of the page is the order in which the scenes were shot; the next column is the shot number, as it appeared chronologically in the original script. The third column on the page lists the action and subject similarities. Under this heading, scenes which required the fewest changes in lighting, props and movement, were grouped together. The fourth column is the prop check. This served as an assurance to the director that although the scenes were broken down from their chronological order, they would match in physical content in the final editing of the picture. This breakdown also served as a guide in the editing.

In the arrangement of the shooting schedule, the scenes in which the specialist appeared in the picture were filmed first. The director felt that the specialist would communicate more effectively early in the shooting. A longer time than was originally planned was used in shooting the memorized scenes. The specialist was coached in his interpretation and in memorizing the script by a member of the production unit.

TABLE II

SHOOTING SCHEDULE BREAKDOWN
"LANDSCAPING YOUR HOME"

SHOOTING NUMBER	SCRIPT SHOT NUMBER	ACTION AND SUBJECT SIMILARITIES	PROP CHECK
1	3	Cox seated at his desk. (LIGHTING CHANGE)	
2	4	Cox rises and crosses from the desk to a bare lot.	Model #1 - Only trees are on the lot.
3	34	Cox moves from Model #2 back to his desk and sits.	Completed model, except for lawn furniture.
4	32	Cox at Model #2	Same as before.
5	6	Cox at Model #1.	Trees on the lot are barricaded.
6	8	Shot of Cox and Model #1.	Trees are barricaded.
7	16	Cox at Model #1.	House, garage and barricades are in. Debris is spread in the depression.
8	18	Same shot as before.	Same as before.
9	20	Same as before.	Same as before.
10	22	Same shot as before.	Same as before.
11	10	Cox at Model #1 moves to "Drainage Cutaway" Cartoon.	Trees are barricaded.
12	12	Same shot.	
13	14	Cox at "House in Hole" Cartoon moves to Model #1.	Trees are barricaded.

TABLE II (continued)

SHOOTING SCHEDULE BREAKDOWN
"LANDSCAPING YOUR HOME"

SHOOTING NUMBER	SCRIPT SHOT NUMBER	ACTION AND SUBJECT SIMILARITIES	PROP CHECK
14	25a	Cox at Model #1 moves towards the easel.	Barricades, house garage, debris, stakes and wide driveway on lot.
15	25b	Same shot.	
16	25c	Same shot.	
17	30	Cox moves from the easel to Model #2.	House, garage, concrete sidewalks and driveway, and trees.
18	27a	Cox at the easel.	First chart showing.
19	27b	Same shot.	
		(LIGHTING CHANGE)	
20	1	Model #1, undeveloped lot.	
21	5	CU same lot, Cox builds barricades.	
22	7		Model #1, barricades are in.
		(LIGHTING CHANGE)	
23	15	Same shot, Cox puts house in.	
24	23	Model #1.	House, garage, debris and barricades are in.
		(LIGHTING CHANGE)	
25	24	Same shot, except add sticks for driveway.	
		(LIGHTING CHANGE)	

TABLE II (continued)

SHOOTING SCHEDULE BREAKDOWN
"LANDSCAPING YOUR HOME"

SHOOTING NUMBER	SCRIPT SHOT NUMBER	ACTION AND SUBJECT SIMILARITIES	PROP CHECK
26	28	Model #2.	House, garage, sidewalk, driveway and lawn are in.
27	31	Same as before.	
28	35	Completed Model #2.	
		(LIGHTING CHANGE)	
29	9	"Bulldozer" Cartoon.	
30	11	"Drainage" Cartoon.	
31	13	"House in Hole" Cartoon, camera pans to "House on Fill" Cartoon.	
32	17	"Topsoil Cutaway" Cartoon. Camera pans to "Topsoil Pile" Cartoon.	
33	19	"Not Yet" Cartoon.	
34	21	"Mud" Cartoon.	
35	33	Address Card.	
		(LIGHTING CHANGE)	
36	26	Easel and Charts. First Chart, Cox points.	
37	29	Second Chart. Cox turns around.	
38	2	Open.	
39	36	Close.	

The shooting script. The final shooting script for "Landscaping Your Home" contained all the data on the blocking of camera shots and lenses, learned from the television rehearsal. The shooting order number was added from the shooting schedule breakdown. The script order number indicated the chronological order of the shot in relation to the order in which the script was put back together. This number was important in assembling the filmed shots into the final film. In the shooting script the lenses used for filming with the Auricon camera are listed at the right margin.

The director attempted to reproduce the shots used in the television rehearsal. However, there were more filmed shots than there had been television shots. This was because the director had divided some of the original TV shots into smaller segments, to overcome the memory problem.

The shooting script for "Landscaping Your Home" follows on Page 43. Under the "Video" column is the visual action, and the physical setting and description of the graphic arts. Under "Audio" appears the dialogue of the announcer and the specialist.

SHOOTING SCRIPT

"LANDSCAPING YOUR HOME"

Filmed on October 30, 1951, featuring Mr. Joseph Cox, Specialist in Landscape Architecture and Urban Planning, of the Michigan State College Landscape Architecture and Urban Planning Department.

TELEVISION REHEARSAL						AURICON CAMERA
Camera	Lens	Video	Film Shooting Order	Scene Script Order	Audio	Lens
#2	135mm.	Model of undeveloped lot.	20	1	Announcer: This, in case you don't recognize it, is a lot. Something you buy with the idea of someday building a house on it.	25mm.
		TITLE DRUM			MUSIC: Introduction up and under.	
#1	135mm.	Michigan State College presents "Design for Living"	38	2	Announcer: Michigan State College presents "Design for Living". The	40mm.

SHOOTING SCRIPT (continued)

"LANDSCAPING YOUR HOME"

TELEVISION REHEARSAL					AURICON CAMERA	
Camera	Lens	Video	Film Shooting Order	Scene Script Order	Audio	Lens
		"Landscaping Your Home" Cooperative Extension Service Landscape Architecture and Urban Planning Television Development Joseph T. Cox, Landscape Specialist			objective for this program is "Landscaping Your Home", and it is brought to you by the Cooperative Extension Service through the Department of Landscape Architecture and Urban Planning, and produced by the Television Development Service of Michigan State College. Mr. Joseph T. Cox, Landscape Specialist, is our consultant. Mr. Cox.	
#2	90mm.	Cox at desk. DOLLY IN.	1	3	Cox: A moment ago you saw an undeveloped lot. Perhaps	25mm.

SHOOTING SCRIPT (continued)

"LANDSCAPING YOUR HOME"

TELEVISION REHEARSAL					AURICON CAMERA	
Camera	Lens	Video	Film Shooting Order	Scene Script Order	Audio	Lens
					you own such a lot or maybe you have your house built, or perhaps you are somewhere in between those two stages. Anyway, we're going to try to help you to get your land to look its best. Let's take another look at that undeveloped lot.	
		Cox rises and moves to model table.	2	4	Our first interest is to preserve the desirable trees and other natural features which are on your lot.	25mm.
#1	135mm.	Tight shot of lot. Cox builds barricades.	21	5	We need to protect them from any kind of damage. We'll build barricades around these	25mm.

SHOOTING SCRIPT (continued)

"LANDSCAPING YOUR HOME"

TELEVISION REHEARSAL					AURICON CAMERA	
Camera	Lens	Video	Film Shooting Order	Scene Script Order	Audio	Lens
					trees for the excavation and construction period.	
		He points out two trees.			Notice that here on the lot I have put up barriers around these two trees.	
#2	90mm.	Shot of Cox at model.	5	6	To disturb the roots of these trees means trouble in their future growth. Avoid changing the soil level over the roots because if too much soil is added the trees will be smothered. If too much soil is removed, the roots will be exposed and the trees will eventually die.	25mm.
#1	135mm.	Shot of model. Cox points	22	7	The lower grounds can be left	25mm.

SHOOTING SCRIPT (continued)

"LANDSCAPING YOUR HOME"

TELEVISION REHEARSAL					AURICON CAMERA	
Camera	Lens	Video	Film Shooting Order	Scene Script Order	Audio	Lens
		out lower grounds. PAN DOWN LOSE TOP OF TREES AND BOTTOM EDGE OF MODEL.			intact. This not only saves the cost of bulldozing, but the area may be developed into a plant area later, or a lower lawn.	
#2	90mm.	Tight shot of Cox pointing.	6	8	It's extremely important to start planning early, so that you can save time and effort in developing the grounds to complement the house you build. Look at this.	40mm.
		SS. Cox points to cartoon on wall. (Bulldozer)				
#1	8½"	Shot of cartoon. TRUCK RIGHT.	29	9	During the process of construction, nine out of ten future home owners will order a bulldozer to level the	40mm.

SHOOTING SCRIPT (continued)

"LANDSCAPING YOUR HOME"

TELEVISION REHEARSAL					AURICON CAMERA	
Camera	Lens	Video	Film Shooting Order	Scene Script Order	Audio	Lens
					land, and what they are actually doing is destroying many natural, usable features already available on the lot.	
#2	90mm.	Cox still standing by model.	11	10	To plan carefully saves money and it also speeds up the finished appearance of the grounds. At this point it is well to think about problems of drainage, to assure that rain water is drained away from the home to one side or another.	25mm.
		Cox moves to cut-away drawing. SS.				
#1	8½"	Shot of cut-away drawing of drainage.	30	11	The land should slope away from the house like this, rather than towards the house.	40mm.

SHOOTING SCRIPT (continued)

"LANDSCAPING YOUR HOME"

TELEVISION REHEARSAL					AURICON CAMERA	
Camera	Lens	Video	Film Shooting Order	Scene Script Order	Audio	Lens
					(Ten second explanation of cutaway.) This will keep the water away from the foundation walls.	
#2	135mm.	Shot of Cox at side of model.	12	12	One of the problems often facing the home owner results from the land being below the level of the nearby road. In order to rectify this situation, a proper drainage system will have to be created near the road, so that a slope can be carried upward to the house. Here's what I mean.	25mm.
		Cox moves to cartoon. (Home in Hole)				

SHOOTING SCRIPT (continued)

"LANDSCAPING YOUR HOME"

TELEVISION REHEARSAL					AURICON CAMERA	
Camera	Lens	Video	Film Shooting Order	Scene Script Order	Audio	Lens
#1	8½"	SS. Cartoons (2). PAN TO House With Fill.	31	13	Avoid the effect of having the house look as if it is in a hole. If your property is below the road level, grading and filling in will be necessary.	40mm.
#2	90mm.	Cut to Cox. SS. Moving back to model. DOLLY BACK.	13	14	It is better to avoid this if possible by putting emphasis on early planning and site selection. Now let's take a look at the property again. First, let's build the house and garage.	40mm.
#1	135mm.	Tight shot of lot. Cox puts in house. (DIRECTOR'S NOTE: IF TIME PERMITS, EXPERIMENT WITH THIS.)	23	15	That was easy. Here we are with a newly-completed house. How are you going to make this	25mm.

SHOOTING SCRIPT (continued)

"LANDSCAPING YOUR HOME"

TELEVISION REHEARSAL					AURICON CAMERA	
Camera	Lens	Video	Film Shooting Order	Scene Script Order	Audio	Lens
		SS. Scatters debris around model.			house a home by adding the necessary landscaping features? There's one thing. Don't think for a moment that plaster, cement, nails and pieces of wood will grow fine landscape plants. This will have to be cleared away.	
#2	90mm.	Shot of Cox.	7	16	At this point we ought to mention that topsoil is the ideal soil for growing desirable plant material. This man has the right idea.	40mm.
#1	8½"	Cartoon of Topsoil.	32	17	Preserve this soil at the time any grading is done, so that you will have a supply	40mm.

SHOOTING SCRIPT (continued)

"LANDSCAPING YOUR HOME"

TELEVISION REHEARSAL					AURICON CAMERA	
Camera	Lens	Video	Film Shooting Order	Scene Script Order	Audio	Lens
		Pan to chart of Topsoil in Pile.			to bring back to the house for future plantings. Insist that your topsoil be stockpiled in an out-of-the-way part of the lot at the time of grading and excavation. This has to be done before any shrubbery can be grown on the property.	
#2	90mm.	Shot of Cox	8	18	It is at this point that most most people begin to think of planting trees and shrubs. This man has the wrong idea.	40mm.
#1	8½"	"Not Yet" Cartoon.	33	19	Actually, planning is the real beginning and setting of trees and shrubs is only the	40mm.

SHOOTING SCRIPT (continued)

"LANDSCAPING YOUR HOME"

TELEVISION REHEARSAL					AURICON CAMERA	
Camera	Lens	Video	Film Shooting Order	Scene Script Order	Audio	Lens
					means of carrying out the plan. The plant materials do not solve the problems themselves, but they are the means of tying the home and grounds together.	
#2	90mm.	Shot of Cox	9	20	If you are hoping to move into the house soon, another important problem is faced immediately; that is, the driveways and sidewalks.	25mm.
#1	8½"	Mud Cartoon	34	21	You may be moving in on a rainy day and you certainly don't want this to happen to you.	40mm.
#2	90mm.	Shot of Cox	10	22	You should have a system of	25mm.

SHOOTING SCRIPT (continued)

"LANDSCAPING YOUR HOME"

TELEVISION REHEARSAL					AURICON CAMERA	
Camera	Lens	Video	Film Shooting Order	Scene Script Order	Audio	Lens
					walks and a driveway that will meet your needs. Parking and turning space need adequate provision. Let's look at the home again and work out a planned arrangement for the driveways and sidewalk.	
#1	8½"	Tight shot of model as Cox puts in stakes (outlines narrow driveway).	24	23	Wooden stakes can be used to indicate outlines of driveways and sidewalk areas. These stakes will help form an adequate layout. It is likely the local or government housing agencies, who help to finance the home, will	25mm.

SHOOTING SCRIPT (continued)

"LANDSCAPING YOUR HOME"

TELEVISION REHEARSAL					AURICON CAMERA	
Camera	Lens	Video	Film Shooting Order	Scene Script Order	Audio	Lens
		Finish putting in stakes. Enlarges driveway. Puts in sidewalk.			assist with this important problem. (Stop.) At the time you are planning your driveway, you need to think of friends, who will be parking their cars; enlarge the driveway nearest the side of your house to provide parking for a couple of cars. You need to study the sidewalk possibilities leading to your home and plan so that guests won't have to walk across the front lawn. Notice that here the curved sidewalk extends beyond the	

SHOOTING SCRIPT (continued)

"LANDSCAPING YOUR HOME"

TELEVISION REHEARSAL					AURICON CAMERA	
Camera	Lens	Video	Film Shooting Order	Scene Script Order	Audio	Lens
					house to the driveway space.	
#2	135mm.	Side shot of garage (points out length of driveway).	25	24	Of course, if the garage was attached to the house it would eliminate a long expensive drive. This would provide more area in the back yard for other uses.	25mm.
#1	90mm.	Shot of Cox	14	25a	Now that we have the driveway and walk system organized it is time to think about the use areas of the property. The problem is to make the home appear neat and attractive, as impressions of you are gained by the public through the appearance of	25mm.

SHOOTING SCRIPT (continued)

"LANDSCAPING YOUR HOME"

TELEVISION REHEARSAL					AURICON CAMERA	
Camera	Lens	Video	Film Shooting Order	Scene Script Order	Audio	Lens
					your home.	
#2	90mm.	Shot of Cox	15	25b	Your family deserves a special place in the layout for private activities, outdoor eating facilities, a fireplace, and a place to invite friends or carry on necessary work. In addition, the use areas must satisfy your desires and living needs. The clothes line, the garage, the vegetable garden which make up the service area, must be added to the list.	40mm.
			16	25c	The organization will be logical with the service area	25mm.

SHOOTING SCRIPT (continued)

"LANDSCAPING YOUR HOME"

TELEVISION REHEARSAL					AURICON CAMERA	
Camera	Lens	Video	Film Shooting Order	Scene Script Order	Audio	Lens
					at the back, the private area at the side, and the public area at the front.	
		Same shot of Cox, moving to easel.			Now, let's look at the plan we've worked out, featuring these use areas.	
#1	135mm.	Tight shot of chart. With pointer, Cox points to front of house and public area.	36	26	Here is the house. This is the public area in front, the private family area at the side, and service or work area at the rear, screened from the street.	25mm.
#2	90mm.	Shot of Cox.	18	27a	This planning should precede any planting of shrubs or the location of permanent land-scape features. This kind of	25mm.

SHOOTING SCRIPT (continued)

"LANDSCAPING YOUR HOME"

TELEVISION REHEARSAL					AURICON CAMERA	
Camera	Lens	Video	Film Shooting Order	Scene Script Order	Audio	Lens
					planning is a must, if you really want to do a good job of landscaping your home.	
#1	90mm.	CU of Cox.	19	27b	Next the lawn can be put in to blanket the soil. The organization of plant areas can be arranged after the lawn is established. The lawn should precede the planting of new shrubbery or trees. This will hold the soil, and is necessary for further landscape development.	40mm.
#2	135mm.	Tight shot of Model #2.	26	28	Look what's happened to the lot. We have progressed so well that at this point the	25mm.

SHOOTING SCRIPT (continued)

"LANDSCAPING YOUR HOME"

TELEVISION REHEARSAL					AURICON CAMERA	
Camera	Lens	Video	Film Shooting Order	Scene Script Order	Audio	Lens
					house and lawn areas are complete, and we can begin to add shrubbery to complement the house and tie it to the grounds.	
#1	135mm.	Chart Number One.	37	29	Plantings will be arranged around the circular use areas which we have worked with before.	25mm.
		Flip to Chart Number Two. Cox points out as he goes.			Think of the plant materials as adding to the enclosure of the property. These will be the drifted masses of foliage which you will want to group in a logical and yet informal pattern.	

SHOOTING SCRIPT (continued)

"LANDSCAPING YOUR HOME"

TELEVISION REHEARSAL					AURICON CAMERA	
Camera	Lens	Video	Film Shooting Order	Scene Script Order	Audio	Lens
#2	90mm.	Cox moves to model from easel.	17	30	Let's look again at the model and begin to plant according to the plan.	25mm.
#1	135mm.	Tight shot of model as Cox puts in plants. (If time permits, Cox will add mistakes.)	27	31	The larger plants can be placed at the junction of these use areas with smaller growing shrubs in front. This will designate a separation of the large use areas. Where use areas come near to the border line, the plant materials will need to be selected for narrower but taller growth to provide screening. Arrange plants so that the larger ones are in the	25mm.

SHOOTING SCRIPT (continued)

"LANDSCAPING YOUR HOME"

TELEVISION REHEARSAL					AURICON CAMERA	
Camera	Lens	Video	Film Shooting Order	Scene Script Order	Audio	Lens
					background. Next come the medium height shrubs, and then the low-growing shrubs, which provide an edging for the lawn. Now we come to that tie-up between the house and grounds. Use tall shrubs or evergreens flanked by low spreading types to minimize the vertical corners as they join with the horizontal ground line. Under the windows use plants which will grow no higher than the window sill. These plants are organized to minimize the	

SHOOTING SCRIPT (continued)

"LANDSCAPING YOUR HOME"

TELEVISION REHEARSAL					AURICON CAMERA	
Camera	Lens	Video	Film Shooting Order	Scene Script Order	Audio	Lens
					height of the building.	
#2	90mm.	Shot of Cox at model.	4	32	You may want to achieve originality by using plants which will accent again the horizontal lawn surface. Avoid over-use of the pointed evergreens. These give the house the same appearance as many other homes in the neighborhood.	25mm.
#1	8½"	Address Card.	35	33	For basic information, our bulletins on shrubs and evergreens are available at the Landscape Architecture and Urban Planning Department of Michigan State College, East	40mm.

SHOOTING SCRIPT (continued)

"LANDSCAPING YOUR HOME"

TELEVISION REHEARSAL					AURICON CAMERA	
Camera	Lens	Video	Film Shooting Order	Scene Script Order	Audio	Lens
					Lansing, Michigan.	
#2	90mm.	Shot of Cox. Cox moves back to the desk.	3	34	In most instances you can also obtain the information from your local county extension agent, and also landscape architects and nurserymen. In this way you can obtain suggestions suitable for your locality. We have gone through the various steps of landscape planning from the time we started to develop the grounds.	25mm.
#1	135mm.	Shot of completed model.	28	35	Now a complete home grounds has evolved. The property with its landscape beautifi-	25mm.

SHOOTING SCRIPT (continued)

"LANDSCAPING YOUR HOME"

TELEVISION REHEARSAL					AURICON CAMERA	
Camera	Lens	Video	Film Shooting Order	Scene Script Order	Audio	Lens
					cation is the outcome of the diagrams of use areas and plants planned many months before.	
		Shot of Cox. PAN (?)			You can smile and feel gratified to see your accomplishment. The time, patience and work spent on your grounds will stimulate neighbors and friends to compliment you. They will tell you that yours has been a program that has created the desired results in a Design for Living.	
		TITLE DRUM.			MUSIC: Up and Under.	
#1	8½"	Michigan State College	39	36	Announcer: Michigan State	40mm.

SHOOTING SCRIPT (continued)

"LANDSCAPING YOUR HOME"

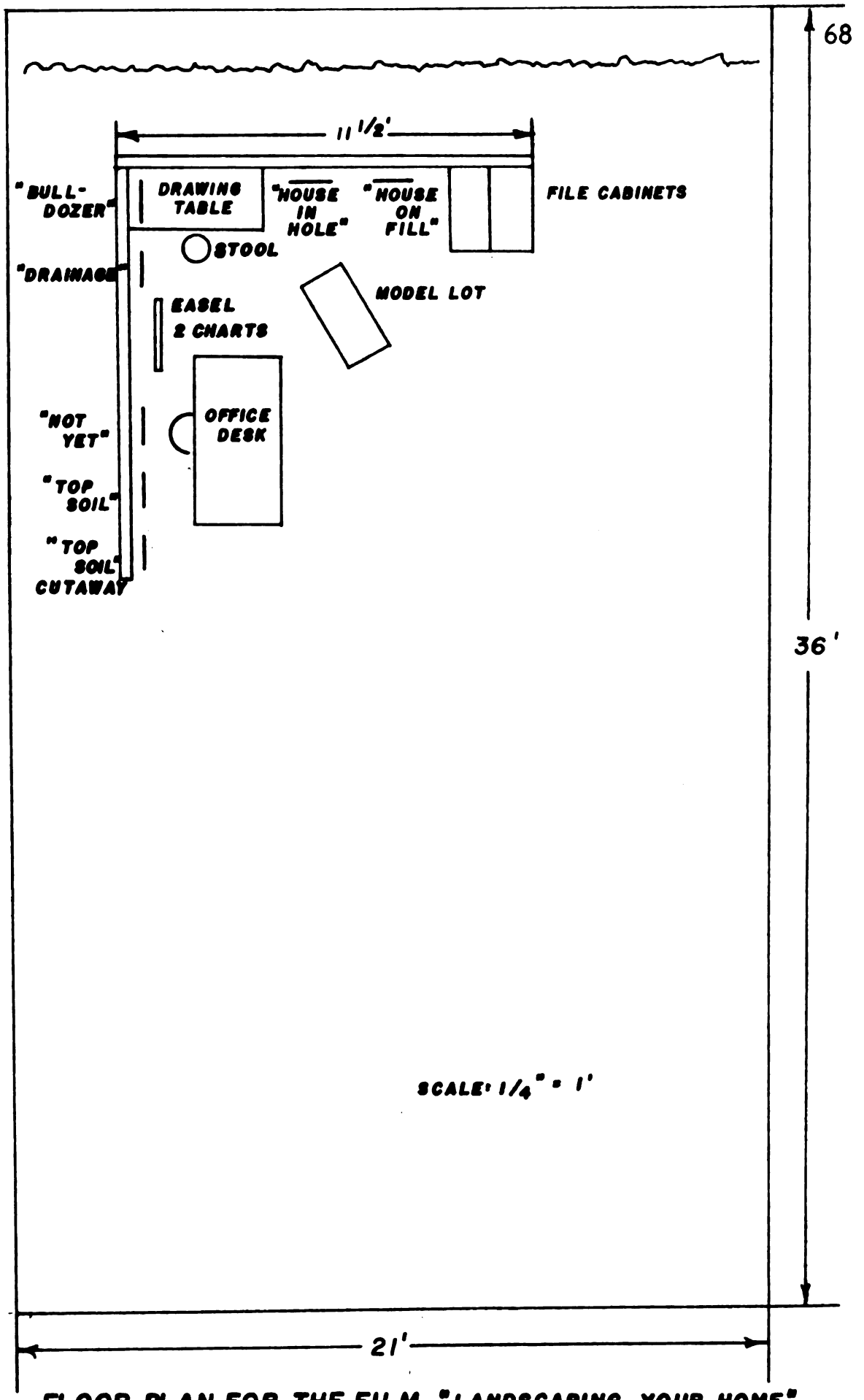
TELEVISION REHEARSAL					AURICON CAMERA	
Camera	Lens	Video	Film Shooting Order	Scene Script Order	Audio	Lens
		"Landscaping Your Home" Joseph T. Cox Landscape Specialist Cooperative Extension Service Landscape Architecture and Urban Planning Department Television Development "Design for Living" Michigan State College			College has just presented "Landscaping Your Home". Our consultant was Joseph T. Cox, Landscape Specialist. This program has been brought to you by the Cooperative Extension Service through the Department of Landscape Architecture and Urban Planning, and was produced by the Television Development Service. "Design for Living" comes to you from Michigan State College. MUSIC: Up and Out.	

FILMING

The shooting of "Landscaping Your Home" began on October 30, 1951. Two full days were allotted for the shooting. During the setting up of the set, as seen in Plate 1, the specialist memorized the lines of the scene which was first on the shooting schedule. Face powder was applied to the specialist's face, to help conceal his beard. It was the only form of makeup used.

Lighting. Eight lighting setups were planned according to the specific needs of each shot. The lighting contrasts were kept low to reduce the highlights and fill in the shadows. The scenic director had planned the lighting, but the final setups were left to the discretion of the cameraman.

The light plot used in the opening shot of the specialist seated at his desk is illustrated in Plate 2, Page 70. Basic fill light was arranged in the form of two 1500-watt diffused scoop lights at the right side of the camera, seven feet from the floor. Fill light is used to lower contrasts by filling in the shadows. A 1500-watt fresnel mounted on a pedestal eight feet high was placed several feet in front of and to the left of the camera, and served as a key light, or main point of illumination. Another 1500-watt fresnel was placed behind the talent on stage right. This light was seven feet high and acted as backlighting, or



FLOOR PLAN FOR THE FILM "LANDSCAPING YOUR HOME"

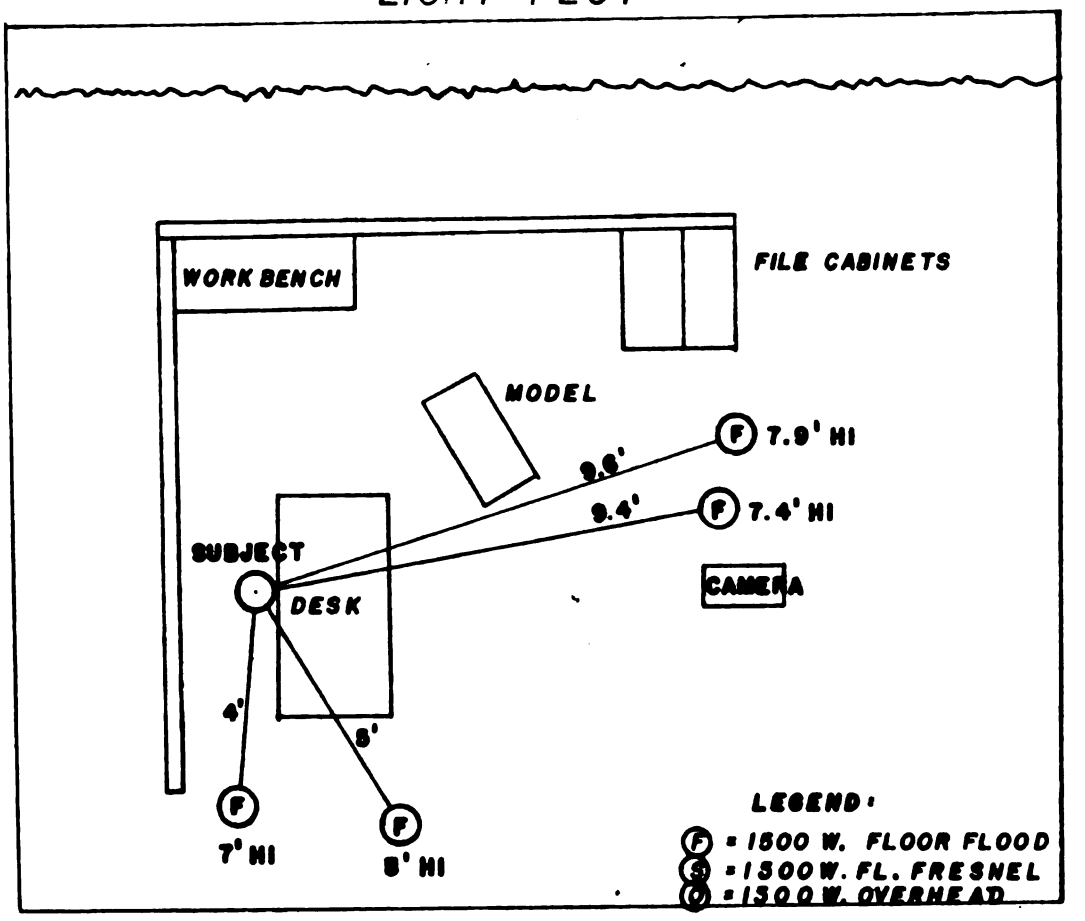
PLATE I.

a means of separating the head and side of the face from the background.

The second light plot (see Plate 3 on Page 70) was used for eighteen successive film shots. The problem of lighting was to eliminate shadows on the cartoons fastened to the flats, and to separate the specialist from the background. Two overhead scoop lights and one floor scoop, each 1500-watts and placed 8½ feet from the floor, were used as basic fill light on the left of the camera. Foundation light was achieved by placing two additional floor scoops of 1500-watts each, on the right side of the camera. For background separation and shadow balance, two 1500-watt fresnel spotlights were used as backlighting from stage right and stage left. Extra modeling light was provided by placing a 1500-watt floor scoop on stage right center. A 300-watt reflector floodlight was also used on stage right center, at waist level, to eliminate eye and chin shadow.

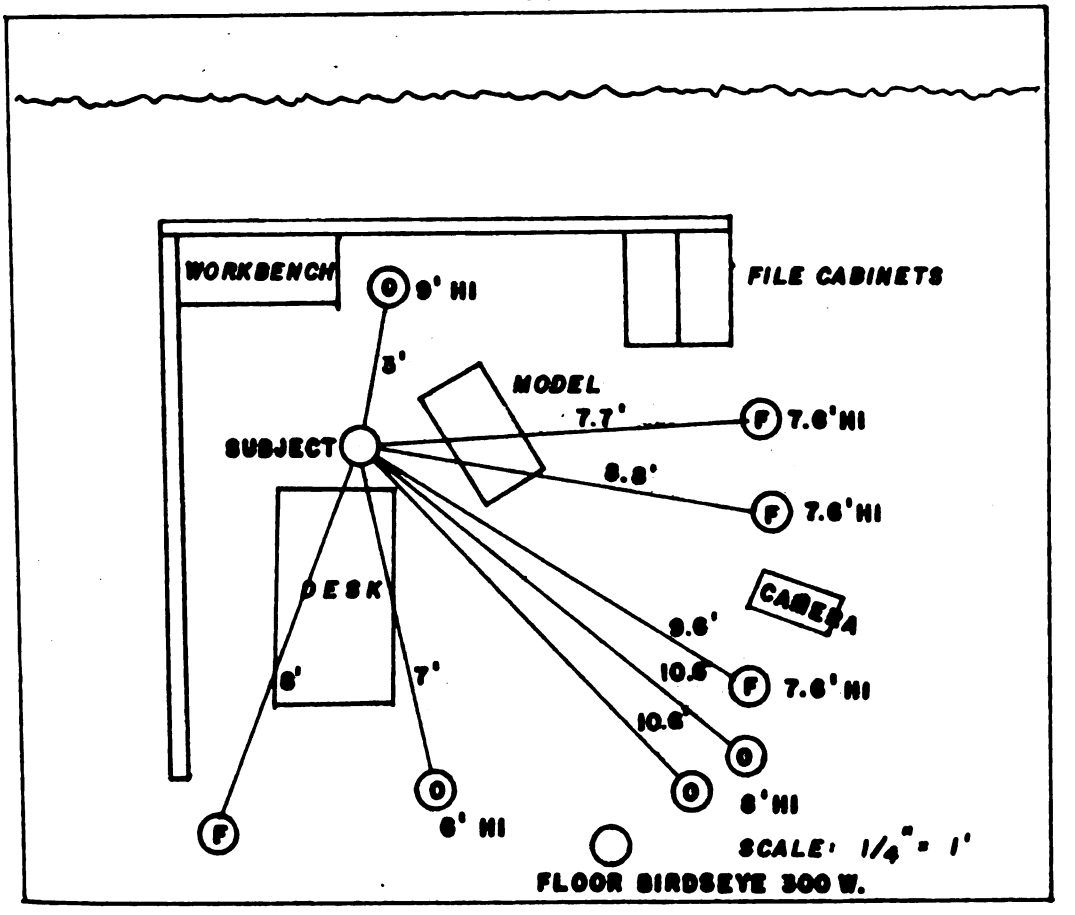
The next lighting change, illustrated in Plate 4 on Page 72, was made on Shot Twenty. For the next three shots the only area to be lit was Model Number One. For basic flat light, two 1500-watt scoops were placed flush at the right side of the model lot, and three feet above it. For backlight, a 1500-watt fresnel spotlight was used at a height of five feet, directly over the back right corner of the model. In shooting the partially landscaped lots, the same lighting was used as

LIGHT PLOT



"LANDSCAPING YOUR HOME"

PLATE 2.



"LANDSCAPING YOUR HOME"

PLATE 3.

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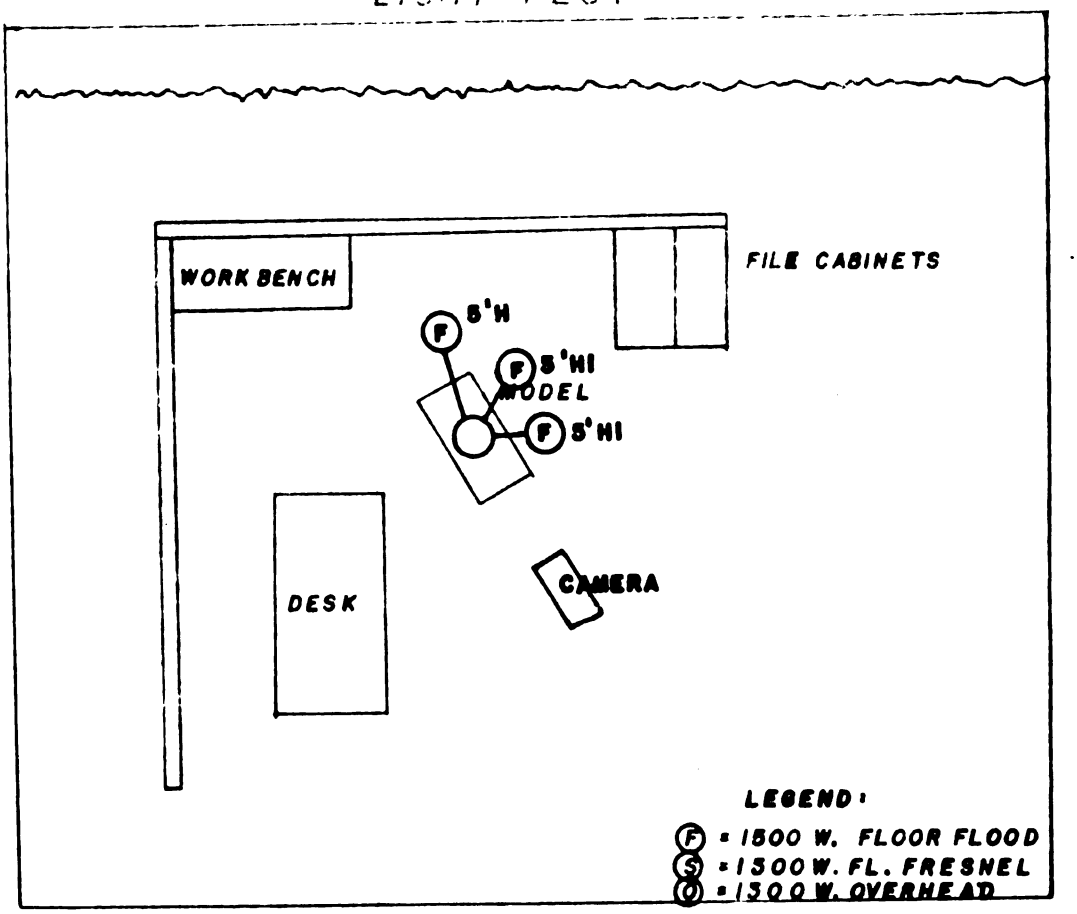
in the third light plot shown in Plate 4, but an additional reflector floodlight was placed below the back level of the model, pointing towards the backdrop, to add some degree of separation or rimming. (See Plate 5 on Page 72.)

Another minor change in lighting, illustrated in Plate 6 on Page 73, was made in Scene Twenty-five, to get more shadow on the driveway layout of small sticks. One of the 1500-watt scoops was moved to the left side of the lot, and a 1500-watt fresnel was placed seven feet from the model, to act as keylighting.

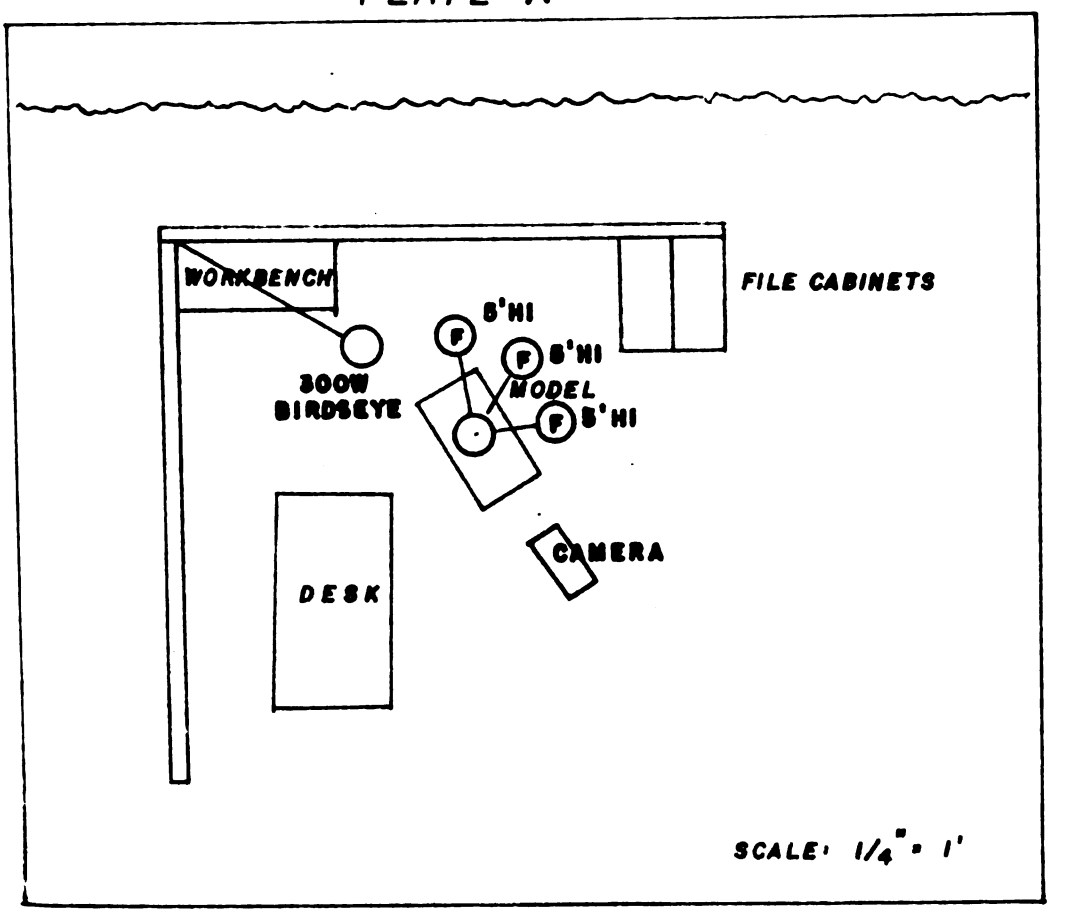
The cartoons and cards were removed from the flats for closeup shots. The cards were placed on an easel. The only lighting used was a 1500-watt scoop light at the right of the camera, five feet from the floor. Plate 7, on Page 73, illustrates this setup. The lighting used to illuminate the charts was like that used on the cartoons, except that an additional 1500-watt scoop light was placed at the left side of the camera. Plate 8, on Page 74, is a diagram of this setup. To light the title roller, one less scoop light was utilized than had been used on the charts. (See Plate 9, on Page 74.)

LIGHT PLOT



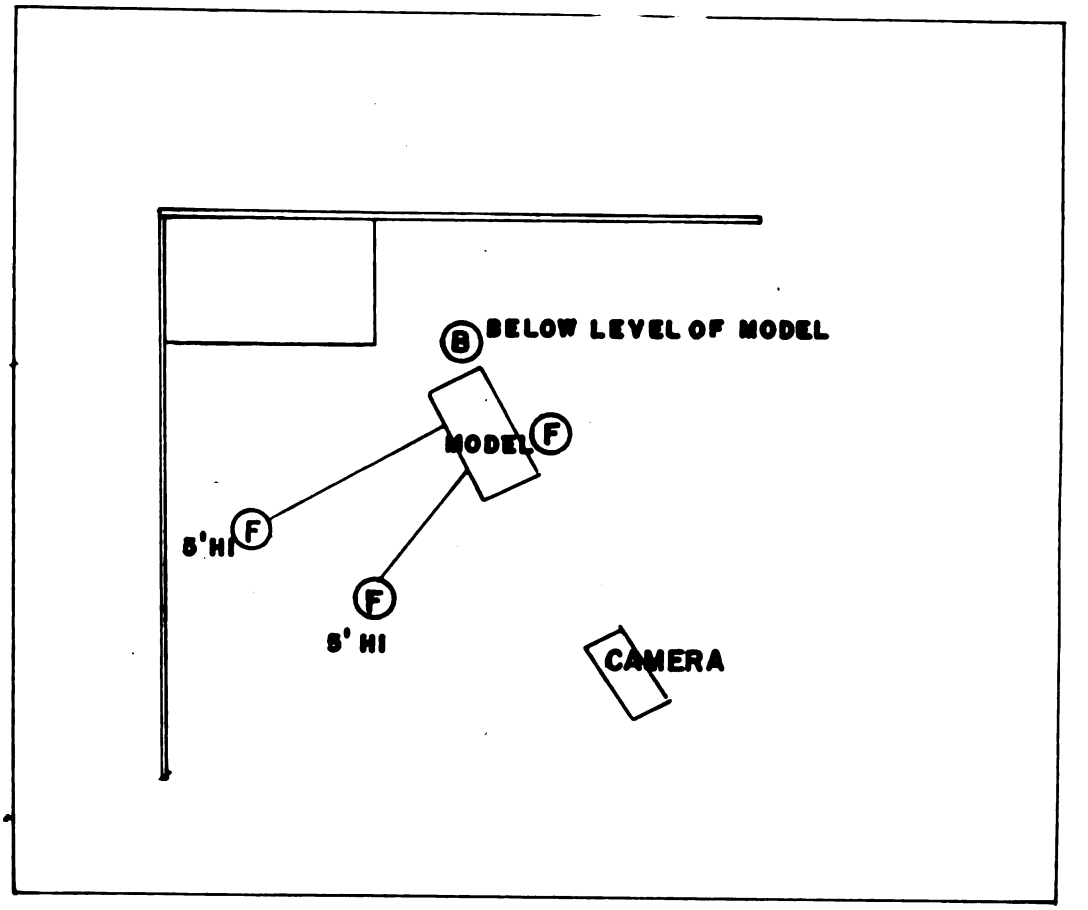
"LANDSCAPING YOUR HOME"

PLATE 4.

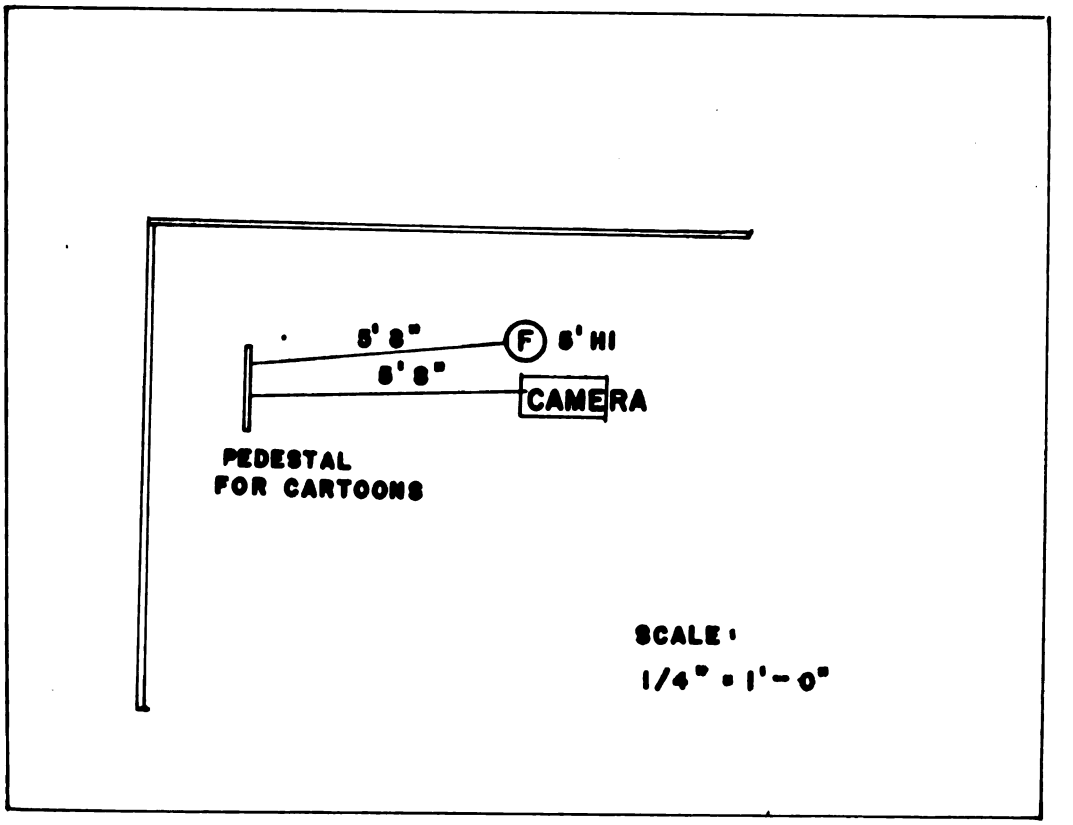


"LANDSCAPING YOUR HOME"

PLATE 5.



LIGHTING - PLATE NO. 6



LANDSCAPING YOUR HOME
LIGHTING - PLATE NO. 7

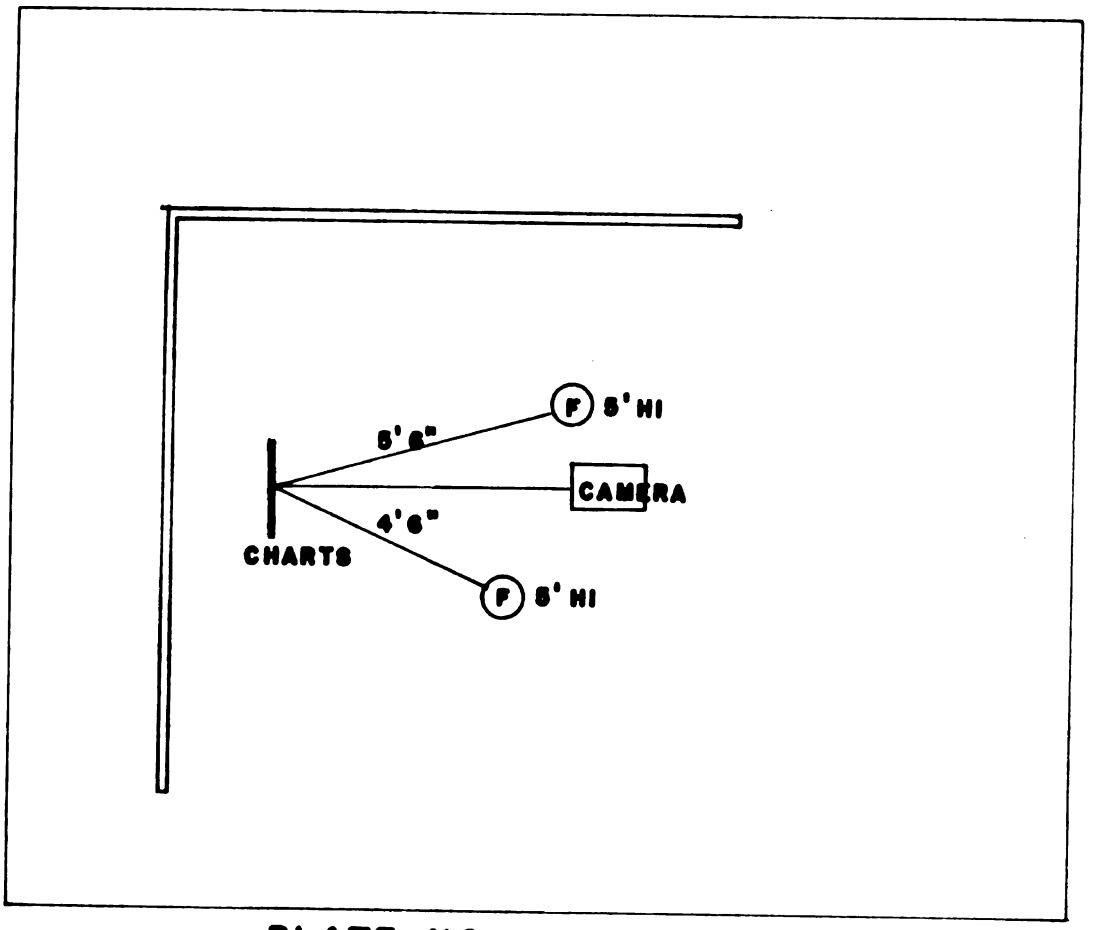


PLATE NO. 8

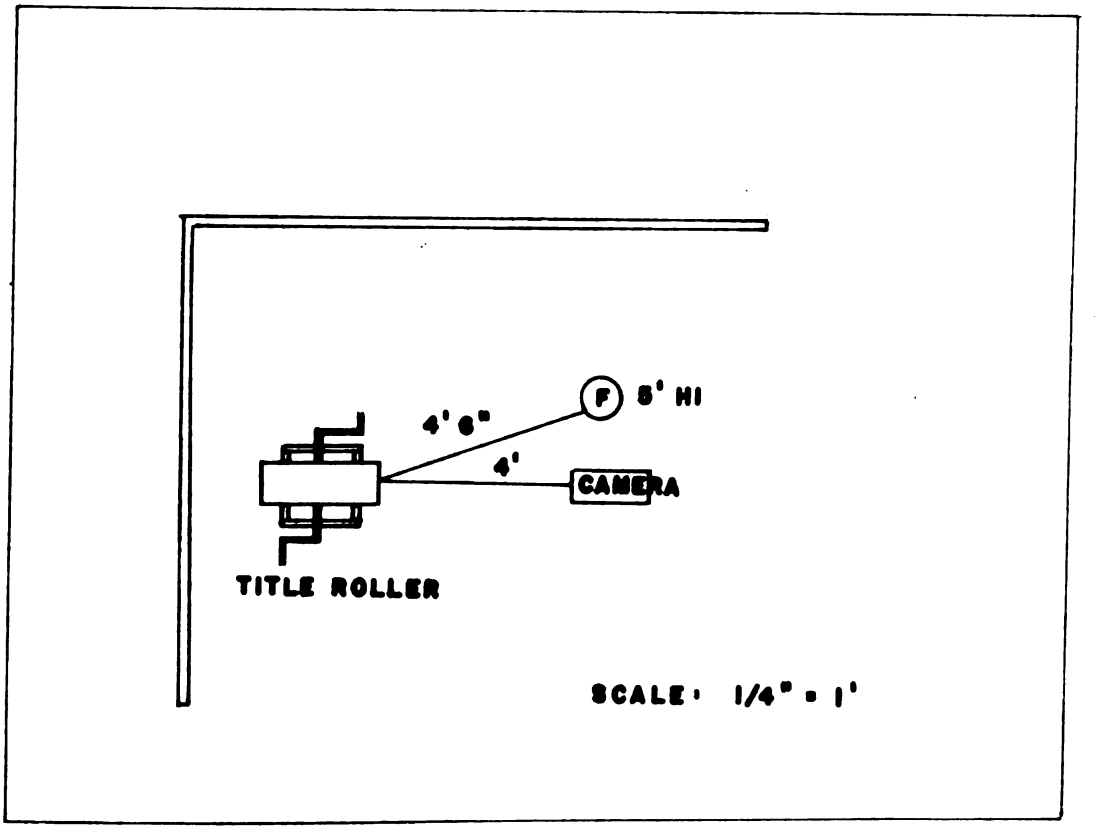


PLATE NO. 9
LANDSCAPING YOUR HOME

Directing. The director checked the composition of each shot for proper framing, and to be sure that the picture was similar to that of the television rehearsal. He also coordinated the functions of each production member, and showed the specialist, in the preliminary blocking of this film, what he wanted.

An example of the directing problems is seen in Shot Number Two. The seated specialist said, "Let's take another look at that undeveloped lot", pushed away from the desk, rose, walked to the model of the lot, and continued his discussion. The problem here was, when should the specialist speak - during action or while he was standing still? If he talked only when standing still, how would his action be motivated? This problem was met by having the dialogue motivate the action physically and photographically.

In the shots of the lots the closeups left the talent out of the picture. The director had the specialist read his lines from the script, out of camera view, while he built on the lot. Once again the problem was, which comes first - the action or the dialogue, or should they have appeared simultaneously? In this instance the dialogue came first, then action which was supplemented by more dialogue.

For the filming of the titles, the director had to coordinate the timing of the title drum, the announcer who paced his lines according to the title frame and the audio man who was feeding the music from the studio console.

Still another problem in directing was to match the action and the arrangement of the props and models in each scene. The shooting schedule breakdown was used to check this. As mentioned previously, this schedule had all the action and subject similarities grouped together, and also contained a prop check for each shot in its respective shooting order. To alleviate the problem of matching the props on the models, each prop was outlined on the model.

Camera techniques. The camera technique used in the opening shot consisted of a camera dolly in from a long shot to a closeup, to give the viewer the effect of coming closer to the subject. In filming the next eighteen shots, the specialist moved around from the desk to the model, to the cartoons, to the easel and then back to the desk. There were no long shots in this film, but the majority of medium shots were included in this eighteen-shot sequence.

In the first three shots of the undeveloped lot, the cameraman attempted to shoot within the edges of the model. In the next shots, the house, the garage, the debris and the barricades had been placed on the model. In order to include the tops of the house and garage, the cameraman had to shoot off the lot.

Some of the cartoons included at various points in the specialist's talk were filmed consecutively. Other cartoons were shot to compare one with the other. For example,

the two related cartoons on topsoil were placed side-by-side on a pedestal, with one cartoon in the camera frame. On the "take", the camera was simply held still for several seconds on the framed cartoon, and then panned smoothly across to the contrasting cartoon. The same method was used to present the two house cartoons.

During the filming of this show the assistant director kept a running record of all the pertinent data on the camera, lighting and sound setups. This data sheet served as a time-saver because it contained the necessary data for re-shooting. For example, after Shot Twenty-eight, the 25mm. lens of the Auricon camera was changed for the 40mm. lens. Eight shots later it was discovered that the viewfinder mattes had not been changed. These eight shots had to be repeated because the exposed shots were framed with the 25mm. matte instead of the 40mm. matte which should have been in the viewfinder. Refilming these shots was simple, because all the data from the preliminary shots was merely taken from the data sheet. Table III, the Shooting Data Sheet of "Landscaping Your Home", follows on Page 78. Note that the majority of shots used were closeups.

TABLE III

SHOOTING DATA SHEET
"LANDSCAPING YOUR HOME"

Script Shot Number	3	4	34	32	6	8	16	18	20	22
Sound Track Exposure	16	16	16	16	16	16	16	16	16	16
Volume Indicator Peak	9	9	9	9	9	9	9	9	9	9
Shot Description	MLS	MLS	MLS	MLS	MLS	CU	CU	CU	MLS	MLS
Lighting Setup	2	2	2	2	2	2	2	2	2	2
Mike Distance from Subject	16"	16"	16"	16"	16"	16"	16"	16"	16"	16"
Distance of Subject from Camera	9'6" 5'6"	8'6" 11'2"	12'	12'	12'	9'5"	9'5"	9'5"	9'5"	11'6"
Lens Focal Length	25	25	25	25	25	40	40	40	25	25
Lens Opening F-	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Weston Meter Reading	15	15	15	15	15	15	15	15	15	15
Time in Seconds	19	14	24	17	18	11	9	7	8	18
Film Footage	12'	8'	15'	10'	13'	8'	6'	5'	6'	11'
Emulsion Speed	32	32	32	32	32	32	32	32	32	32

TABLE III (continued)

SHOOTING DATA SHEET
"LANDSCAPING YOUR HOME"

Script Shot Number	10	12	14	25a	25b	25c	30	27a	27b	1
Sound Track Exposure	16	16	16	16	16	16	16	16	16	16
Volume Indicator Peak	9	9	9	9	9	9	9	9	9	9
Shot Description	MLS	MLS	MLS	MLS	CU	MLS	MLS	MLS	CU	CU
Lighting Setup	2	2	2	2	2	2	2	2	2	3
Mike Distance from Subject	16"	16"	16"	16"	16"	16"	16"	16"	16"	16"
Distance of Subject from Camera	11'6" 13'	13' 16'	13'6" 15'	11'6"	9'4"	10'6" 14'6"	14'	13'2"	10'6"	3' 6'5"
Lens Focal Length	25	25	25	25	40	25	25	25	40	25
Lens Opening F-	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	8
Weston Meter Reading	15	15	15	15	15	15	15	15	15	80
Time in Seconds	16	24	13	18	25	15	7	16	20	10
Film Footage	10'	15'	8'	11'	16'	13'	5'	10'	13'	6'
Emulsion Speed	32	32	32	32	32	32	32	32	32	32

TABLE III (continued)

SHOOTING DATA SHEET
"LANDSCAPING YOUR HOME"

Script Shot Number	5	7	15	23	24	28	31	35	9	11
Sound Track Exposure	16	16	16	16	16	16	16	16	16	16
Volume Indicator Peak	9	9	9	9	9	9	9	9	9	9
Shot Description	CU	CU	MCU	MCU	CU	CU	CU	CU	CU	CU
Lighting Setup	3	3	4	4	5	3	3	3	6	6
Mike Distance from Subject	16"	16"	16"	16"	16"	16"	16"	16"	16"	16"
Distance of Subject from Camera	4'4" 5'5"	4'	4'6"	5'6" 7'11"	3'5" 4'7"	6'	5'6"	5'6"	5'8"	5'8"
Lens Focal Length	25	25	25	25	25	25	25	25	40	40
Lens Opening F-	8	8	8	8	4.5	10	8	8	5	5
Weston Meter Reading	80	80	80	80	25	125	80	80	30	30
Time in Seconds	40	13	34	2:12	13	15	1:26	33	15	10
Film Footage	25'	9'	20'	81'	9'	10'	63'	21'	10'	7'
Emulsion Speed	32	32	32	32	32	32	32	32	32	32

TABLE III (continued)

SHOOTING DATA SHEET
"LANDSCAPING YOUR HOME"

Script Shot Number	13	17	19	21	35A	33	26	29	2	36
Sound Track Exposure	16	16	16	16		16	16	16	16	16
Volume Indicator Peak	9	9	9	9		9	9	9	9	9
Shot Description	CU	CU	CU	CU		CU	CU	CU	CU	CU
Lighting Setup	6	6	6	6		6	7	7	7	7
Mike Distance from Subject	16"	16"	16"	16"	16"	16"	16"	16"	16"	16"
Distance of Subject from Camera	5'8"	5'8"	5'8"	5'8"	8'	5'8"	5'8"	5'8"	4'	4'
Lens Focal Length	40	40	40	40	25	40	25	25	40	40
Lens Opening F-	5	5	5	5	6.3	5	9	9	7	7
Weston Meter Reading	30	30	30	30	50	30	100	100	60	60
Time in Seconds	11	20	16	7		12	11	27	35	43
Film Footage	7	13	10	5		8	8	17	23	28
Emulsion Speed	32	32	32	32	32	32	32	32	32	32

75						
	35	15	51	100		
	35	53	32	90	5	40
		58	43	90	5	

Film processing and editing. The reversal film was sent to the Eastman Kodak Company for processing. They shipped the positive to a laboratory where a duped negative and a work print were made. The negative, the work print and the master print were returned to Michigan State College for editing.

The film editor divided and cut the work print into takes, and arranged them in script order in a film barrel. The scene board illustrated in Figure 18 was used to identify each take. The bad takes were then discarded, and the

Figure 18.

The Scene Board

frames showing the scene board were removed from the good takes. These were spliced together in the order in which they appeared in the script. The work print was then run off on the television closed-circuit system for continuity. The scenes were tightened by cutting the beginnings and endings right up to the sound track. A "Take, Footage and Timing" Sheet recording the length of each scene was used in the editing. This is illustrated in Table IV.

TABLE IV

TAKE, FOOTAGE AND TIMING SHEET
"LANDSCAPING YOUR HOME"

SCENE	TAKE	FOOTAGE BEGIN.	FOOTAGE END.	/SHOT	TIMING /SHOT	TIMING TOTAL
REEL 1						
3	1	10			:18	
3	2	23	35	12	:19	:19
4	1	36	45		:14	
4	2	46	54	8	:14	:33
34	1	55	70	15	:24	:57
32	1	71	79		:12	
32	2	80	87		:10	
32	3	88	99	11	:17	1:14
6	1	100			:07	
6	2	105	118	13	:18	1:32
8	1	119			:05	
8	2	123	131	8	:11	1:43
16	1	132	138	6	:09	1:52
18	1	139	144	5	:07	1:59
20	1	145	151		:08	
20	2	152	158	6	:08	2:07
22	1	159	170	11	:18	2:25
10	1	171	181	10	:16	2:41
12	1	182	198		:24	
REEL 2						
12	2	11	26	15	:24	3:05
14	1	27	37		:14	
	2	38	46	8	:13	3:18

TABLE IV (continued)

TAKE, FOOTAGE AND TIMING SHEET
"LANDSCAPING YOUR HOME"

SCENE	TAKE	FOOTAGE BEGIN.	FOOTAGE END.	FOOTAGE /SHOT	TIMING /SHOT	TIMING TOTAL
25A	1	47	58	11	:18	3:36
25B	1	59	68		:08	
	2	69	79		:15	
	3	80	96	16	:25	4:01
25C	1	97	107	13	:15	4:16
30	1	108	113	5	:07	4:23
27A	1	114	124	10	:16	4:39
27B	1	125	138	13	:20	4:59
1	1	139	146	7	:10	
1	2	147	153	6	:10	5:09
5	1	154	182		:47	
REEL 3						
	2	11	36	25	:40	5:49
7	1	37	45		:13	
	2	46	55	9	:13	6:02
15	1	56	76	20	:34	6:36
23	1	77	158	81	2:12	8:48
24	1	159	168	9	:13	9:01
28	1	169	178		:14	
	2	179	189	10	:15	9:16
REEL 4						
31	1	11	64	53	1:26	10:42
35	1	65	86	21	:33	
WRONG MATTE	2	87	108	21	:33	11:15

TABLE IV (continued)

TAKE, FOOTAGE AND TIMING SHEET
"LANDSCAPING YOUR HOME"

SCENE	TAKE	FOOTAGE BEGIN.	FOOTAGE END.	FOOTAGE /SHOT	TIMING /SHOT	TIMING TOTAL
9	1	109	120	11	:16	11:31
11	1	122	130	8	:11	11:42
13	1	131	139	8	:12	11:54
17	1	140	154	14	:22	12:16
19	1	155	166		:17	
	2	167	177	10	:17	12:33
21	1	178	183	5	:10	12:43
33	1	184	193	9	:14	12:57
26	1	194				11:15
REEL 5						
9	2	11	21	10	:15	11:30
11	2	22	29		:11	
	3	30	37		:10	
	4	38	45	7	:10	11:40
13	2	46	53	7	:11	11:51
17	2	54	67	13	:20	12:11
19	3	68	78	10	:16	12:27
21	2	79	84	5	:07	12:34
33	2	85	93	8	:12	12:46
26	1	94	102	8	:11	12:57
29	1	103	120	17	:27	13:24
2	1	121	145		:37	
36	2	146	169	23	:35	13:59

ANALYSIS

A brief explanation of this study is necessary before examining the methods used in the film production of "Landscaping Your Home". Since this project was pioneering in a relatively new field, the trial and error course was followed in checking the methods to be used. While it was hoped that some of these methods would be successful, it was also expected that there would be errors in a project of this kind. Mainly, these errors were due to the lack of information on preparing films for television, and to the limitations of the equipment used in these productions. In each successive film the methods found to be satisfactory were used again and improved upon. Likewise, the errors of the previous films were discussed by the production staff, and an effort was made to avoid them. To understand the component parts of these methods, they are shown here in relation to their effectiveness in the final film.

The television rehearsal served satisfactorily as a means of viewing the entire program on the television screen, before the filming. As a result of this rehearsal, many of the visual problems were foreseen and corrected, such as the selection of the most desirable shot, the proper centering of the talent, the most effective use of visual aids and models, and staging.

Time and money were saved by using the television camera show as a rehearsal before the first foot of film was shot.

The trial and error with the live cameras helped to familiarize the film production staff with the program content and the talent, the best use of equipment, and many of the production problems.

One of the more important problems which showed up in the television rehearsal was that of the specialist's difficulty in communicating while adhering to a memorized script. His talk on landscaping was broken up and stiff, which was in direct opposition to his natural and informal style of speaking. To overcome this problem, the film production script was broken down into small segments which could be easily memorized. While this breakdown method is an accepted technique in the average Hollywood film production, it was unsatisfactory in its application to this film.

Before this film, the specialist had had no formal training in straight memory presentation or acting. Consequently, although his own speaking style was incorporated into the writing of the script, the specialist did not deliver these lines in his own natural manner of talking. While the script gave better control of the timing of the film, the disadvantage was that it impeded the specialist's delivery. It is interesting to note that this same man has done some informal live television shows since the production of "Landscaping Your Home", and that they were quite satisfactory.

One unsatisfactory aspect of the television rehearsal was that the director and assistant director were involved in complex technical details, and at times the visual motivation, action, sound and content communication could not be given proper attention.

The method used in writing the script was unsatisfactory, because the final result tended to impose a restraint on the specialist. Forgetting the specialist for a moment, the methods used in writing the script were adequate. The technique of asking the specialist questions, and then using the words of his own answers, proved satisfactory. The content of the script was factual, and contained a message of value to the home owner who would view the program on his television receiver. In view of what has been said about the unsatisfactory and the adequate aspects of the script, a question is posed here. Would the trained actor have presented this show more effectively? This problem could be answered in another study if the script listed the business, or detailed the action for an actor to follow. Possibly an additional secretary at the preliminary conference could have recorded the specialist's movements as he spoke, and included them under the "Video" portion of the script.

Visual aids in the form of cartoons played a very important part in this film. They emphasized the program material and added visual meaning to the dialogue. These cartoons (seen in Figures 9 through 16 on Pages 32 to 34) were a help to the production because they combined the factors

of humor and fact. These cartoons were tacked to a blue flat which appeared to be light gray on the film, and therefore served as a satisfactory setting for the film. The two scale models were adequate as visual aids in presenting the "before" and "after" approach of this film. The models were designed in colors that looked natural in the gray scale, and added much visual interest. To outline the projected driveway on the models, miniature white sidewalk stakes were used. These failed to achieve their purpose, because they were "washed out" by the lighting on the lot. Perhaps stakes of a darker color would have given more satisfactory results.

The one graphic that was not satisfactory was the address card, which was filmed on a stand. In the first place, the message appeared crowded, as can be seen in Figure 19.

Figure 19.

The "Source of Additional Information" Card Was Too Dark and Appeared Crowded

While the type font is satisfactory for use on television, the message should have been divided between two cards. As this card reads now, the words "Landscape" and "Michigan" would not

be seen on some home receivers, because of the masking. In the second place, the lighting of this card appeared too dark on the final film. In shooting all of the visual aids and graphic arts on the stand, only one light reading was taken. Comparing this card with the cartoons in Figures 9 through 16, on Page 32, it becomes obvious that a separate light reading was necessary.

Most of the visual aids in the film were satisfactory because they were planned in aspect ratio. The ratio of picture height to its width is known as aspect ratio. The standard television picture aspect ratio used is three to four, because it is most pleasing to the eye for long periods of viewing.[19] The charts which were used were not in aspect ratio. They were the specialist's own visual aids, for use in public lectures. To get the proper picture of the charts, it was necessary for the cameraman to include the top half first, and then pan to the bottom half of the chart. This is shown in Figures 7 and 8, on Page 31. Notice the keystoning of the top frame in each chart. This was because the camera shot the top of the charts at an angle, and then panned down. Notice that there is no keystoning in the bottom frame of the charts, because the camera was directly in line with the charts at that point. To get completely satis-

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19 Morton G. Sherage and Joseph J. Roche, Video Handbook (New York: William F. Boyce, 1951), p. 79.

factory effects with visual aids, they should be designed in the aspect ratio.

In this film, the title roller did not prove entirely satisfactory. The brown wrapping paper on which the titles were printed appeared wrinkled and unattractive. This did not show up in the television rehearsal. There is no indication of why this should have been true, except perhaps a difference in lighting. Another unsatisfactory aspect of the title roller was the difficulty in controlling the roll. The handle of the roller was bulky and could not be turned smoothly. A long time was taken in the rehearsals, trying to practice this control. There was no way of stopping the roller as each title group appeared in the frame of the camera viewer during the filming, although in the TV rehearsal the person turning the drum could watch the monitor, for framing. These problems might have been circumvented by designing a mask in aspect ratio for the camera and the man operating the roller, to use as a guide in lining up the title in frame. The roller could be improved by adding a set of reduction gears or belts on pulleys, for control.

The use of face powder to serve as makeup was unsatisfactory. During the filming the specialist's beard became pronounced. A skin-colored talc was used to cover the resulting dark shadows on the specialist's face. However, in the final film, his beard is very obvious.

The shooting script appeared to be satisfactory. With it, a series of shots were set up to match those used in the television rehearsal. Also, the shooting script served as an effective method of controlling the timing of each shot. This also made a satisfactory guide for the film editing.

In the shooting schedule breakdown, scenes with a similar subject and action were grouped together, saving time and labor in shooting the film. Moreover, this gave the director a prop check in all the scenes.

Six out of the eight lighting setups seemed satisfactory in achieving low contrasts, picture depth and clear definition. This favorable lighting was used on the models, the special effects, and the closeups of the models. The two exceptions are the lighting plots illustrated in Plates 2 and 3 on Page 70, of scenes in which the specialist appeared on camera.

What applies to TV lighting is in most cases applicable to films for TV.[20] The lighting on the models met the requirements set up in the CBS Television Staging and Lighting Practices, by Richard O'Brien. This book states that backlight intensity should be 1½ times that of the baselight.[21] Baselight is a foundation lighting that covers the general working areas, including backgrounds.

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20 John H. Battison, Movies for TV (New York: The MacMillan Company, 1950), p. 232.

21 Richard S. O'Brien, CBS Television Staging and Lighting Practices (New York: Society of Motion Picture and TV Engineers, 1950), p. 255.

In analyzing Plates 4 and 5, two floods are at the side of the model, a fresnel is used as a backlight, and a 300-watt reflector flood light is used as an indirect light source. The baselight looks stronger than the backlight, but if the model is divided in half, the backlight projected on the front of the lot is stronger than the baselight. Parmelee substantiates this lighting theory in the Television Engineering magazine for January, 1952, in which he states: "Backlighting provides separation between foreground material and backing, and adds depth and enhances general appearance....Back to front light of 1½:1 should not be exceeded."[22]

In view of what has been said about baselight, and upon examining the lighting setups in Plates 2 and 3 on Page 70, the techniques used here seem to be unsatisfactory. The front lighting tended to dominate, which hardened the features of the specialist and caused high contrasts, as can be seen in Figure 20. Another possible cause for the intense highlight in these scenes was that the Eastman Kodak Company in Chicago had advised using an emulsion speed of 32 in determining the stop on the camera lens. However, when the film was developed and a duped negative made, the processing laboratory advised using an emulsion speed of 40. They felt that the 32 speed might have caused an over-exposure of the film. The writer

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22 C. Dan Parmelee, "Video Studio Techniques", Television Engineering, 3:8-11, January, 1952.

Figure 20.

The Front Lighting Tended To Dominate

sent four sample scenes to the Berndt-Bach Company technical staff, to check this. They suggested that some of the trouble was due to the final processing of the film. That is, the light used in printing was not properly adjusted to the difference in light level between scenes and grain structure. If this is true, perhaps the lighting setups would not be considered totally unsatisfactory.

A satisfactory permanent record of all pertinent camera, lighting and sound data was achieved in the shooting data sheet, which is illustrated in Table III, on Page 78. This sheet served as a time-saving device in reshooting eight scenes, when the framing mat in the camera viewfinder was not switched to match the lens which was changed. How-

ever, the shooting data sheet was not designed to describe all of the problems. Therefore, while the statistics are valuable as a checking aid, a written description of filming, lighting and sound problems experienced by each technician would give a more thorough picture of the production.

Because of the many sound changes from shot to shot, it becomes obvious that the decision to record the sound over cartoons with the talent off the set, was unsatisfactory. The sound that was recorded close to the flats differed from that off the set. The number of sound changes pointed up the need for having all sound recorded on the same set location, the same measured mike distance, placement and angle, in adjacent scenes in the final film. Another reason for the sound changes was that the specialist spoke much more clearly in the scenes when he was reading, off camera, than in the scenes in which he was facing the camera. In the final assembling of the film this change in speech pattern from shot to shot was very noticeable.

Environmental noises, such as the building elevator and overhead exhaust fans which could be heard on the sound amplifier, were successfully overcome by turning them off for the filming. The crackling sound of a chart being turned was eliminated by bringing the volume down and cutting the dialogue during the changing of the chart. There was a noticeable distortion in sound on one complete reel, which made the reel unusable for use in the film. No definite

reason for this distortion has been established. The Berndt-Bach Company, who received a sample clip of this distortion, were at a loss to determine the cause. They suggested an increase in the sound exposure and volume indicator. However, the sound exposure and volume indication was the same for all of the reels.

A further unsatisfactory production technique showed up in the visual aids, which lost some of their impact because there was no subtle motivation for their use. For example, the address card broke in abruptly over the dialogue and picture of the specialist. A photographic dissolve would have solved this problem of cause and effect, but this technique is not possible when using the Auricon camera and reversal film.

Another unsatisfactory production method was apparent in the opening and closing of each scene. The specialist appeared static in the beginning and closing of scenes. Some action at these points would have helped in the editing. Action in scenes showing the talent standing at the side of the models, reciting lines, would have added visual interest.

Some of the methods used in editing this film appeared satisfactory, and are worth mentioning here. First, the lining up of all the scenes in a film barrel according to their script order, and then assembling them, worked well. The film barrel protected the film from scratches and dirt particles. The twenty-six picture frames allowed in the

editing at the opening of each scene before the sound track appeared, were satisfactory, as were the twenty-eight frames of the picture after the sound track at the end of each scene.

In the use of the camera, the centering of the subject in the majority of shots was satisfactory, as was the rhythm in the panning of two sets of double cartoons. The achievement of movement through dollying the camera in and then out was also satisfactory. Some of the camera techniques were not successful. For instance, the failure of the "attention-getter" in the opening shot to achieve its purpose was not completely due to bad sound. While the idea was good, the picture composition tended to confuse, rather than to attract. (See Figure 1, Page 25.) The picture was supposed to represent a bare lot, but the camera was too close and the edges of the lot didn't show. Filming the lots would have been simpler had they been in the television aspect ratio. It was impossible to achieve any angle shot, or elevation low shots, because of the limitations of the camera tripod. Finally, filming the scene board from a distance proved to be unsatisfactory, because the relatively small printing was difficult to read in the editing. Closeups of the scene board would have been more satisfactory.

In the first film, a dupe negative was ordered with the release print and the master print, all in the first processing. When the work print was edited a number of sound distortions were found which made the film unusable. Consequently,

the money that had been expended for the master and release prints was wasted.

CHAPTER IV

THE FILM, "THIS IS OUR WAY"

The second in the series of film programs pertained to Agricultural Economics. Following the procedure used in the discussion of the last film, this chapter is organized into three sections. These are referred to as (1) Planning, (2) Filming and (3) Analysis.

PLANNING

The script conference. A conference was attended by the specialist in Agricultural Economics and the production staff. The specialist presented one of his more popular talks to the group. As he spoke, the scenic designer and the director prepared an outline of visual aids showing the key ideas and statistical facts to be illustrated. There was no need for a writer in this film, because the show was built around the specialist's talk, which was already organized. At this conference the director outlined the necessity for visual movement and pointing up subject content with graphic arts.

Whenever the specialist gave this talk before an audience he started by asking them to remove their shoes. To adopt a similar pattern in the film, a cartoon showing a pile of shoes was used as the "attention-getting" opening shot. The announcer's voice in the background said, "These are shoes.

Do you own a pair of shoes?" This opening shot is illustrated in Figure 21.

Figure 21.

Opening Shot of a Pile of Shoes

After listening to the agricultural economist speak, the members of the staff felt that the content of his talks would be suitable for an informational film. The director decided to tape record this talk during the television rehearsal and transcribe the tape into a shooting script for the film. This method was described in Chapter Two.

A title for the Agricultural Economics show was discussed at the preliminary conference. Since the main subject matter was an explanation of the American way of life, the specialist suggested, "This is Our Way". It was agreed that this title suited the idea of Free Enterprise. The purpose of this film was to illustrate that Free Enterprise is one of our basic rights, and must be preserved.

The program content. A summary of the program content is given here to explain some of the methods used in this production. The specialist first reviewed the luxuries we enjoy, and the percentage of natural resources, wealth and population, in comparison with the rest of the world. He reviewed the reasons why our forefathers sought economic, social and political freedom. The characteristics of Free Enterprise were analyzed as (1) the right to own property, (2) the right to choose a profession, (3) the right to make a profit, (4) the right to adjust prices and (5) the right of competition. Then came a recapitulation of the progress made in the United States as compared with that in Russia and England.

The format. The film was planned with a format similar to that of the landscaping show. The opening cartoon of a pile of shoes was accompanied by the announcer's voice in the background. This was followed by the musical theme and the title acknowledgments. The economic specialist was introduced seated at a desk, as seen in Figure 30, on Page 147. The presentation was one of direct communication, and visual aids presenting an array of statistics and ideas on economics. These were illustrated by cartoons tacked on the flats. After covering the content of fourteen illustrations, the consultant returned to his desk and ended with a relevant quote from Emerson. The closing followed with a musical theme which came up and then faded under the announcer's voice speaking the

closing credits which appeared simultaneously on the film frame.

The physical setting. The setting for this program was planned with the basic idea of lowering color contrasts by avoiding extreme whites or blacks in the planning of sets and props. The set properties were selected to resemble the office of an agricultural economist. Visual aids were tacked to flats to facilitate their use during the film.

The visual aids. Simplicity and immediate understanding, large print and broad humor were needed in planning the visual aids. Ten cartoons and charts were planned with a yellow background and blue-gray lettering. Four additional cartoons were shot separately, and did not appear on the set. The designer planned these fourteen cartoons to represent ideas in the program. These cartoons shared frames with the specialist, and were not seen on a closeup. Therefore, the size of the cartoons was twice that of the cartoons used in the first film. Some of these cartoons and the visual ideas they portray are shown here.

Figure 22.

"The Individual is Supreme" Cartoon

Figure 23.

"Build a Better Mousetrap and the World Will Beat a Path to Your Door"

Figure 24.

"We Have the Right to Own Property"

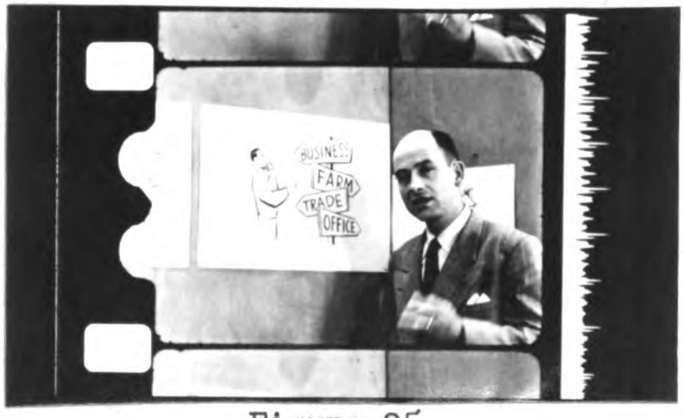


Figure 25.

"You Have the Right to Choose Your Own Profession"

Figure 26.

"We Are a Profit System"

Figure 27.

"Prices Serve a Very Definite Function"

Figure 28.

"We Have Competition"

Additional cartoons and charts used are indicated on the shooting script.

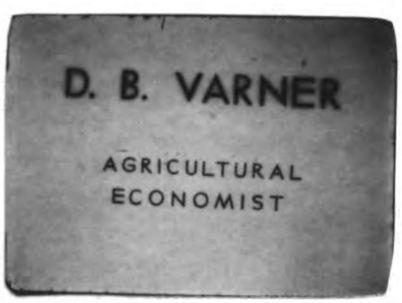
For this production the title roller was discarded and slides were introduced. These slides were made from 35mm. film "stills" of the titles which had been printed in stylized black lettering on twelve-inch by sixteen-inch white poster board. The 35mm. film was cut into individual strips and mounted on two-inch by two-inch slide frames. The gray was controlled by overdeveloping the film. These slides are shown in Figure 29, on Page 106.

A special unit consisting of a variac transformer and two slide projectors was designed to project the slides for filming. Turning the variac clockwise faded in the lamp in the slide projector at the right of the camera shown in Plate 10, on Page 107. Turning the dimmer counter-clockwise faded out the first projector and faded in the second, giving a dissolve effect. The projectors were placed as close together as operating them would permit. The camera was placed ten inches behind the projectors, and directly in line with the projected image. This setup is illustrated in Plate 10, on Page 107.

The filming of the titles was accomplished by projecting the slides on a small two-foot-square screen. The 25mm. lens was used for filming most of this show, except for the slides, where a 63mm. lens was used. In filming these titles, the director utilized the television technique of cueing each

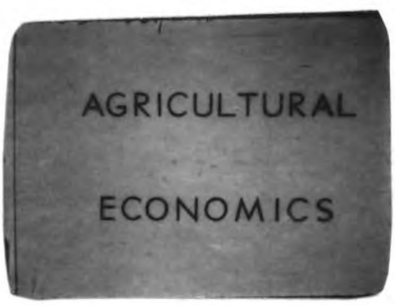
Slide 1.

Slide 2.

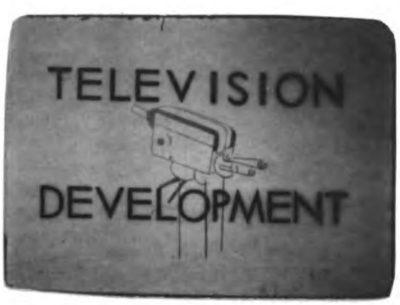


Slide 3.

Slide 4.



Slide 5.



Slide 6.

Slide 7.

Figure 29.

The Title Slides

FILMING TITLE SLIDES, "THIS IS OUR WAY"

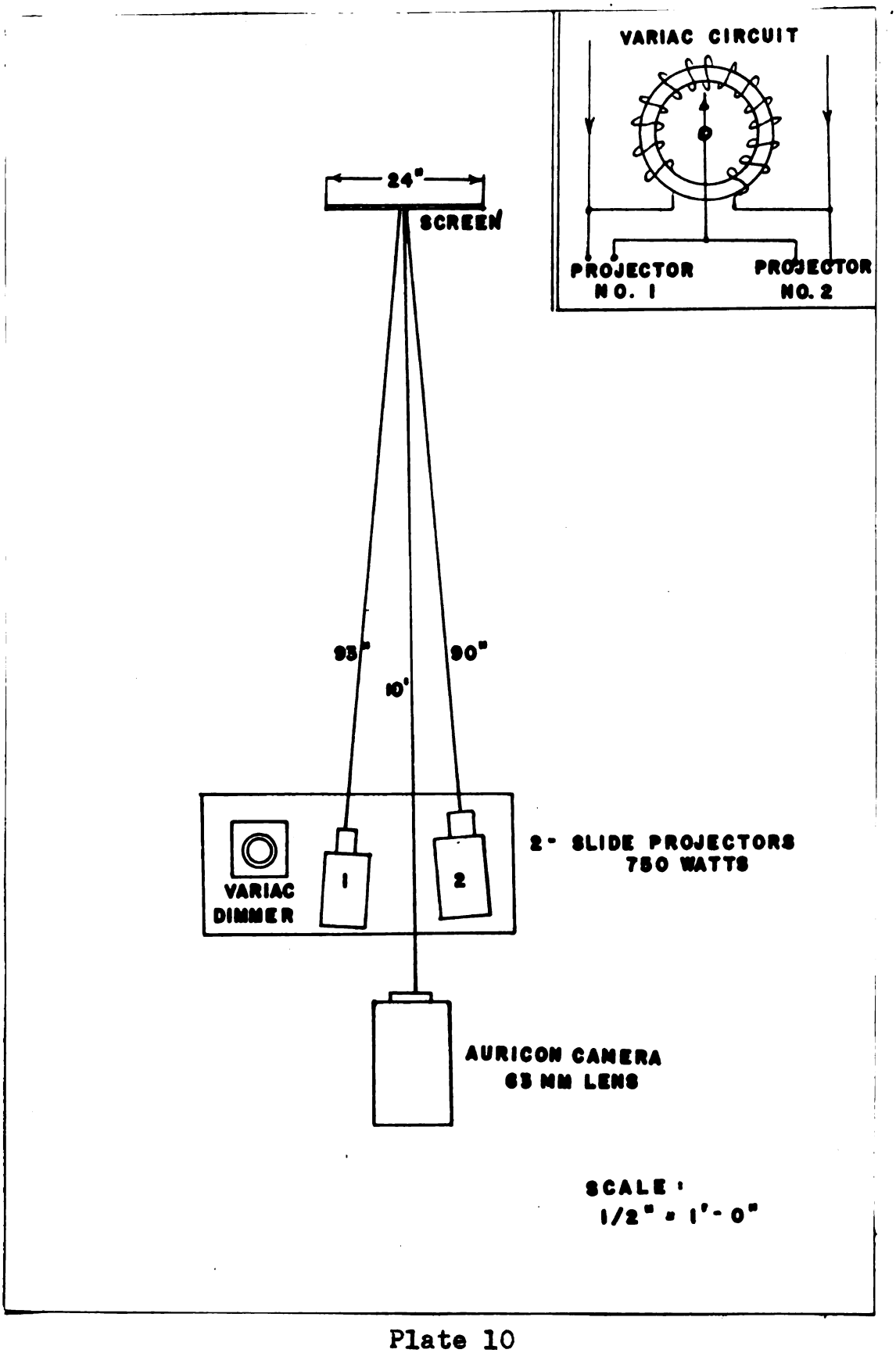


Plate 10

member of the film unit through earphones. The announcer in the announce booth; the audio man at the turntables and monitor, ready with the music to be fed into the Auricon camera amplifier; the cameraman, ready to roll his camera on the small screen; the sound director, awaiting his cue to open his sound exposure and volume indicator to program level; the scenic designer, operating the variac; and his crew operating the slide projectors; all were coordinated by the director in filming the titles of the opening and closing of this program.

The shooting script. Timings were made of the four television rehearsals of this show, and noted on the non-script blocking sheet, which is shown in Table I, on Page 16. The major areas, camera shots and lenses were determined, and the rehearsals also served as a general orientation of the talent to the problems of making a film for television. As mentioned in Chapter Two, the decision was made to shoot this film in chronological order straight from the script recorded in the television rehearsal. In the fourth rehearsal, the specialist's talk was recorded and adapted as a shooting script. The main reason for shooting this film almost straight from the transcribed script was that the specialist built up to an enthusiastic level of communication in explaining economic concepts, which would have been difficult to duplicate if broken up into tiny segments.

The shooting script for "This is Our Way" contained a "Video" column on the left, describing the visual action, the subject, the object, the graphic arts and the slides. The next column was the timing of the dress rehearsal. The shot number was listed in a third column. Under the "Audio" column on the right appeared all voiced or musical sound. The shooting script is shown here.

SHOOTING SCRIPT

SERIES: "A DESIGN FOR LIVING"

PROGRAM: "THIS IS OUR WAY"

Filmed on November 19, 1951, featuring Mr. D. B. Varner,* Specialist in Agricultural Economics, of the Department of Agricultural Economics of Michigan State College.

Video	Shot No.	TV Timing	Audio
	1		Announcer: These are shoes. Do you own a pair of shoes? (End)
		:05	MUSIC: Theme up and under.
Slide: MICHIGAN STATE COLLEGE		:20	Announcer: Michigan State College presents
Slide: "DESIGN FOR LIVING"			"Design for Living". The objective for this program is the American way
Slide: "THIS IS OUR WAY"	2		of life, "This is Our Way", and it is brought to you by the
Slide: COOPERATIVE EXTENSION SERVICE		:30	Cooperative Extension Service at Michigan State College in cooperation with the
Slide: DEPARTMENT OF AGRICULTURAL ECONOMICS			Department of Agricultural Economics.
		:33	This production is under the supervision of the
Slide: TELEVISION DEVELOPMENT			Television Development Service.

* Note: In the script, Mr. Varner is referred to as "Woody".

SHOOTING SCRIPT "THIS IS OUR WAY" (continued)

Video	Shot No.	TV Timing	Audio
Slide: D. B. VARNER		:43	Mr. D. B. Varner, Agricultural Economist, is our consultant. Mr. Varner...
DISSOLVE TO STUDIO		:51	MUSIC: Out. STUDIO: In.
	3		VARNER: You were asked a moment ago if you owned a pair of shoes. Such a question as this in this country of ours - this land of plenty - is almost ridiculous, isn't it? But that's just the point we want to make with you. You see, a thing so commonplace as shoes, we take for granted. Yet, for more than half the people in the world today, a pair of
DOLLY IN			shoes is an item of the first type of luxury. We take a lot for granted in this country of ours...electricity with which we light our homes, the heat with which we heat our houses, the food in the pantry, the clothing you wear. All of these things, they're commonplace. We take them
			for granted. Yes. They simply belong. They're a part of our way of living.

SHOOTING SCRIPT "THIS IS OUR WAY" (continued)

Video	Shot No.	TV Timing	Audio
DOLLY BACK TO WAIST SHOT			Varner: Yes, we're a prosperous land. There's no question about it. There's no denying it.
VARNER GETS UP			You ask how prosperous? Perhaps we ought to take a look at the record.
PERCENTAGE CHART ON WALL AND VARNER			You see, in this land of ours, where we have only seven percent of the population and only seven percent of the natural resources, we have amassed thirty-five percent of all the wealth in the world.
DOLLY			That's truly a remarkable record. I know a lot of people would say, "So what? We have thirty-five percent of the wealth in the world. So what?"
SITS DOWN ON CORNER OF DESK			I think it deserves a little better treatment than that. You see, this didn't merely happen. It didn't just come by chance or by accident, but rather as a result of some rather concrete effort on the part of a lot of people. And I think it would do us well if we could cast our attention for the moment, into some of the background of how this

SHOOTING SCRIPT "THIS IS OUR WAY" (continued)

Video	Shot No.	TV Timing	Audio
DOLLY IN			system of ours, this land of plenty, developed. Perhaps it would do well if we looked back some two hundred years ago at these colonies, these thirteen colonies which were later to become the United States of America. You see, the people in these colonies came here as refugees. People from a lot of different lands, and they came for a lot of different reasons. Some of them came because they didn't feel they had enough political freedom, others thought they didn't have enough social freedom, and others came because of a lack of economic freedom. They were, for the most part, certainly refugees. But they had a few things in common. In the first place they were a courageous people, they were an adventuresome lot, or else they wouldn't have been in this new land, and they were people who had a pretty keen sense of what was right and what was wrong. You see,

SHOOTING SCRIPT "THIS IS OUR WAY" (continued)

Video	Shot No.	TV Timing	Audio
			they came out of a land where we would have said the conditions were intolerable - highly intolerable - and they thought so, too.
		2:50	Under the conditions that they left in their mother lands, they found that if they wanted to be a farmer it was necessary to get a permit from the feudal lords. If they wanted to be a businessman, they had to get a permit from the king, and they had to pay a rather handsome fee for it. If they were a laboring man, they found that they barely had enough to live on, the wages were so very low. And above all else, the predominant theory of the day was that the state was supreme, (End)
"STATE SUPREME" CARTOON			
	4		...that the individual was subordinate. It was felt that the job of the individual was to make the state strong and powerful and rich.
LIMBO CARTOON		3:34	<u>Varner</u>: Now, this was not the only kind of thinking that was going on in these days. There was a school

SHOOTING SCRIPT "THIS IS OUR WAY" (continued)

Video	Shot No.	TV Timing	Audio
			of thought developing, and rather rapidly, too. Perhaps the leader
DOLLY BACK TO INCLUDE DESK			in this new school of thought, the revolutionary notion as to how a nation ought to be organized, how society ought to be put together for the business of earning a living, this school of thought was led by a man named Adam Smith.
	4A		Varner: Adam Smith was a Scotsman, and quite a scholar. He pulled together the thinking of himself and his contemporaries in a book which has become quite important to us.
DOLLY IN TO BOOK			It's a book called, The Wealth of Nations.
			Now you see, this book was published, this Wealth of Nations, in the year 1776 which was, as you will recall, the year of our Declaration of Independence.
DOLLY BACK TO INCLUDE WOODY			Now Mr. Smith, in writing this book, laid out many new notions. But among those that are most important to us in the development of our system here in America were some

SHOOTING SCRIPT "THIS IS OUR WAY" (continued)

Video	Shot No.	TV Timing	Audio
			that I'd like to mention to you. He said that in the first place, if a nation is really to prosper and its people do well, then we should recog-
"INDIVIDUAL SUPREME" CARTOON	5	4:52	nize that it's the individual that's supreme. It's the individual that's important and the state should be subordinate.
WOODY, CHEST SHOT	6	5:00	And in keeping with this thought he then said that if this be so, then we should let each individual pursue his own selfish goals, and in so doing, he would contribute the maximum amount of good to the community as a whole. He would say if a man wants to become rich, let him try to become rich. That's his own right. But in doing so, he can only become rich if he provides a good or a service that someone else is willing to buy and to pay for.
"MOUSE TRAP" CARTOON	7	5:20	It's nothing more than that old adage that we know so well here, "Build a better mousetrap and the world will beat a path to your door". That's a

SHOOTING SCRIPT "THIS IS OUR WAY" (continued)

Video	Shot No.	TV Timing	Audio
			principle Adam Smith lay down 175 years ago.
WOODY	8	5:30	Varner: He went beyond this. He said that if we're really going to take advantage of what we have in a nation, we ought to let each individual do that job which he excels at. In other words, let's have a division of labor. Let's let that man specialize in making shoes if he makes shoes best...or in carriages, if he makes carriages best.
FOLLOW TO "PRODUCTION" CHART			And look how far we've gone in that, here in America today. Not only do we find one huge plant devoting all
DOLLY IN TO CARTOON			of its entire output to one product, but we find one individual specialing at one single operation on the
DOLLY BACK			production line. Now that's specialization as we know it here in America. I like to mention these points to you. I know we've gone a long way back, 175-80 years. Yet, I think it's important for us to get our bearing as to how this system of ours de-
WOO DY SITS DOWN AT DESK			veloped. You see, the thinking that

SHOOTING SCRIPT "THIS IS OUR WAY" (continued)

Video	Shot No.	TV Timing	Audio
			went on in the minds of Adam Smith and his people at this time certainly must have had a great deal of bearing on the thinking of our forefathers who drew up the Declaration of Independence and our Constitution and our Bill of Rights, because among the many interesting things we find in our Declaration of Independence, is one very pertinent statement.
TRUCK DOLLY IN			It says that each individual is entitled to the right to life, liberty and the pursuit of happiness. The right to liberty is essentially a political right. The right to the pursuit of happiness is a combination of many rights. But the right to life, you see, is basically an economic right. And this is what we'd like to talk to you about today, how our people have been organized to pursue and to take advantage of this right to life. You see, our forefathers could have selected any one of a number of economic organizations.

SHOOTING SCRIPT "THIS IS OUR WAY" (continued)

Video	Shot No.	TV Timing	Audio
			There's a caste system that they practice in India. You're born into a trade or profession, very difficult to get away from. You could be in a militaristic organization where each person is assigned a mission. But our founding fathers selected none of these. They said, "We'll take the Free Enterprise system.
DOLLY BACK	9	7:35	We hear a great deal about this, this Free Enterprise system, the American way, the capitalistic system - they all mean the same. I think perhaps we ought to go back and review some of the fundamental characteristics of this Free Enterprise system. And perhaps we can do this best by taking a look at four or five of these points we'd like to show you. In the first place, one fundamental right or distinction of the Free Enterprise
"PROPERTY" CARTOON			system is that we have the right to own property. You can own your home, you can own your farm, or your place of business. You can own property in your own right. This is a distinctive

SHOOTING SCRIPT "THIS IS OUR WAY" (continued)

Video	Shot No.	TV Timing	Audio
			characteristic of the American Free Enterprise system.
WOODY			Now, the second such point I think we ought to recognize as a characteristic of Free Enterprise is that you have the right to choose your own
"PROFESSION" CARTOON			profession. You can enter any enterprise that you want to enter. You can be a doctor, a lawyer, a businessman, a farmer. You can be a laborer. You have the right of choice. The government does not tell you what
WOODY			you must do. I think that's important. And that's a second characteristic of this Free Enterprise system.
"PROFIT" CARTOON			Varner: Now, the third thing we'd like to mention is that we are a profit system. We work for profit in this system of ours. We can't deny it. Profit is not a curse word. It's a good American word. Without
WOODY			profit we'd be without the Free Enprise system. You see, there are people who work for something other than profit, of course. The Clergy - a good example. They work to render

SHOOTING SCRIPT "THIS IS OUR WAY" (continued)

Video	Shot No.	TV Timing	Audio
			a service to their fellow-man. But by and large, people produce in this nation of ours, in order to reap a profit. We cannot do without profit if we want to maintain the Free Enterprise system.
"PRICE" CARTOON			Now, the fourth characteristic of this system of ours is simply this: We have a price system that performs a very definite function. Prices tell the producer what it is that he ought to produce. If you're a potato farmer, prices tell you that you ought to produce more or less. If the price rises, naturally you feel that you should increase your production. If the price falls, if
WOODY			you're smart, you cut your production of potatoes. And so it goes through business, and it goes right across the board in this Free Enterprise system. Prices serve a very definite function.
"COMPETITION" CARTOON			Now the fifth characteristic of the Free Enterprise system, and equally important, is that we have competi-

Video	Shot No.	TV Timing	Audio
			tion. Price competition, sure. For example, if one merchant marks his price down, his competitor across the street knows that he, too, must mark his price down. And so we get price competition. We
WOODY			get competition between products. Let's see if a new automobile manufacturer devises a new gadget how quickly his competitors have to put this same gadget on theirs, or an improvement. Competition. Yes, these are five of the important points in distinguishing our Free Enterprise system. Perhaps there are many others. But at least we can get these five fixed clearly in our minds.
	10a	9:42	Now, I know you would like to ask a question now. So what? We have come a long ways. We have made some progress. Just how far have we gone? How good has this Free Enterprise system been to us? Let's take a look at some figures. In the first place, let's make some

SHOOTING SCRIPT "THIS IS OUR WAY" (continued)

Video	Shot No.	TV Timing	Audio
"COMPARATIVE PRODUCTS" CARTOON			comparisons between some common commodities produced by three major nations today...the United States of America, Russia and Great Britain.
	10		Varner: You see, automobiles are a necessity for us, they're not a luxury. We have one for each four persons in our country. Yet, in Russia, they have only one for 252 persons, and in England they have one for each twenty-two persons. Radios, we have one, two, three to the home. We find we have one radio for each three persons in the United States of America. In Russia, they have only one for forty-five persons. And in Great Britain, one for five. If we want to look at another measure, how about electricity? That's certainly a very, very important commodity today. We produce forty-six percent of all the electric power today that is produced around the world. Russia produces only six
VARNER MOVES			

SHOOTING SCRIPT "THIS IS OUR WAY" (continued)

Video	Shot No.	TV Timing	Audio
			percent, and Great Britain, five percent.
			Yes, we have made tremendous progress. No denying it. You want to take a look at another record?
"PER CAPITA INCOME" CARTOON			Let's look at this one...Per Capita Income. The year 1947. We use those prices as a guide. Dollars that will buy the same quantity of goods. In the year 1850, every man, woman and child in this country of ours earned an average of $243 per person. One hundred years later, in the year 1950, every man, woman and child earned an average of $1473 per person. Real economic progress.
WOODY MOVES TO			Let's go beyond this and let's take a look at another record. You might ask a question, "Well, isn't it just possible that other nations do as well as we? Let's take a look at what we could do if we were in Russia today, comparing what one week's wages would buy there compared to what it would buy in the United

SHOOTING SCRIPT "THIS IS OUR WAY" (continued)

Video	Shot No.	TV Timing	Audio
			States.
"WEEK'S WAGES" CARTOON			An average week's wages in the United States, if it were all invested in bread, we could buy 400 pounds of bread. If you were in Russia, you could buy only twenty-three pounds of bread. If you were to invest your week's wages in the United States in milk, 275 quarts, and in Russia, only fifteen. Or beef, high though it is. You could buy eighty-one pounds of beef in the United States, and only eight pounds in Russia.
WOODY			Yes, I think the record is perfectly clear. That we have made tremendous progress in the United States of America. The Free Enterprise system has been good to us.
WOODY MOVES	10b		Yet, there is something else we should think about. We could lose this Free Enterprise system. We could lose the freedoms that we enjoy. And certainly, among the many achievements of our system, we must recognize that freedom is the

SHOOTING SCRIPT "THIS IS OUR WAY" (continued)

Video	Shot No.	TV Timing	Audio
			greatest of them all. Freedom to belong to any political party we choose, freedom to belong to any religious concern, freedom of the press, freedom of assembly. You see, all that we have seen here today, the record we have seen, this is merely the result of a system of freedoms. We dare not lose the freedoms that we now have.
			And I want to caution you that we can lose them. We can lose them quickest of all by simply realizing and saying to ourselves that we are too busy to take advantage of our opportunity to be good citizens.
MOVES TO DESK CORNER			We must concern ourselves with the problems of the day. There are problems. This is our country. This is our world.
			Let me remind you, and I suggest to you that you memorize a very short and meaningful poem written by Ralph Waldo Emerson many years ago.
DOLLY IN		13:35	He said, simply, "For what avail the plow or sail, or land, or life, if

SHOOTING SCRIPT "THIS IS OUR WAY" (continued)

Video	Shot No.	TV Timing	Audio
			freedom fail".
			MUSIC: Up and under.
Slide: MICHIGAN STATE COLLEGE	11	13:50	Announcer: Michigan State College has presented
Slide: "THIS IS OUR WAY" Slide: D. B. VARNER			"This is Our Way", a film feature. Our consultant was D. B. Varner, Agricultural Economist.
		14:00	This program has been brought to
Slide: COOPERATIVE EXTENSION SERVICE			you by the Cooperative Extension Service at Michigan State College,
Slide: DEPARTMENT OF AGRICULTURAL ECONOMICS			in cooperation with the Department of Agricultural Economics.
Slide: TV DEVELOPMENT		14:05	The production was under the supervision of the Television Development Service.
Slide: "DESIGN FOR LIVING"		14:10	"Design for Living" comes to you
Slide: MICHIGAN STATE COLLEGE		14:13	from Michigan State College.
		14:15	MUSIC: Up and out.

FILMING

This film was produced on November 19, 1951. Less than two days was required for the shooting. Since the first film results had indicated that face powder was an unsatisfactory makeup, a natural blush pancake makeup was applied to the specialist's face.

Lighting. Lighting for long sequences in which the specialist moved about in three or four areas presented one major problem. That was, how to light the areas closest to the flats where the specialist stood using the visual aids. Eighteen reflector floodlights, nine on each flat, were placed directly against the flat, reflecting downward. This set up a solid border of backlight, eliminating practically all the shadow on the flats. This backlight was kept constant throughout the lighting setups, in scenes in which the specialist appeared.

The general aim was to achieve a flatness in lighting, to balance the modeling of the face, and to bring out the dimensional qualities of the physical objects. A cursory look at the Lighting Setups Numbers One, Three and Four (Plates 11 and 12 on the following pages) for this film, reveals an abundance of light used. The purpose of this lighting load was to achieve an over-all basic foundation light, consistent in all areas covered by the specialist.

LIGHT PLOTS NUMBERS ONE AND THREE

"THIS IS OUR WAY"

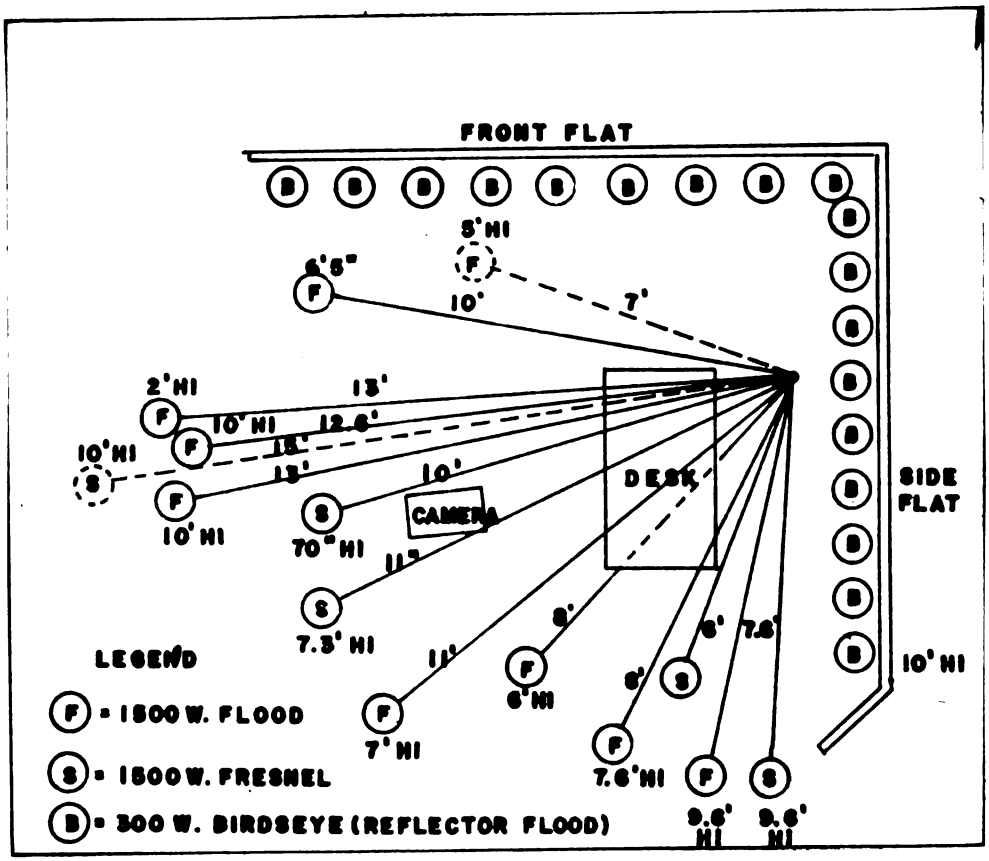


Plate 11

LIGHT PLOT NUMBER FOUR

"THIS IS OUR WAY"

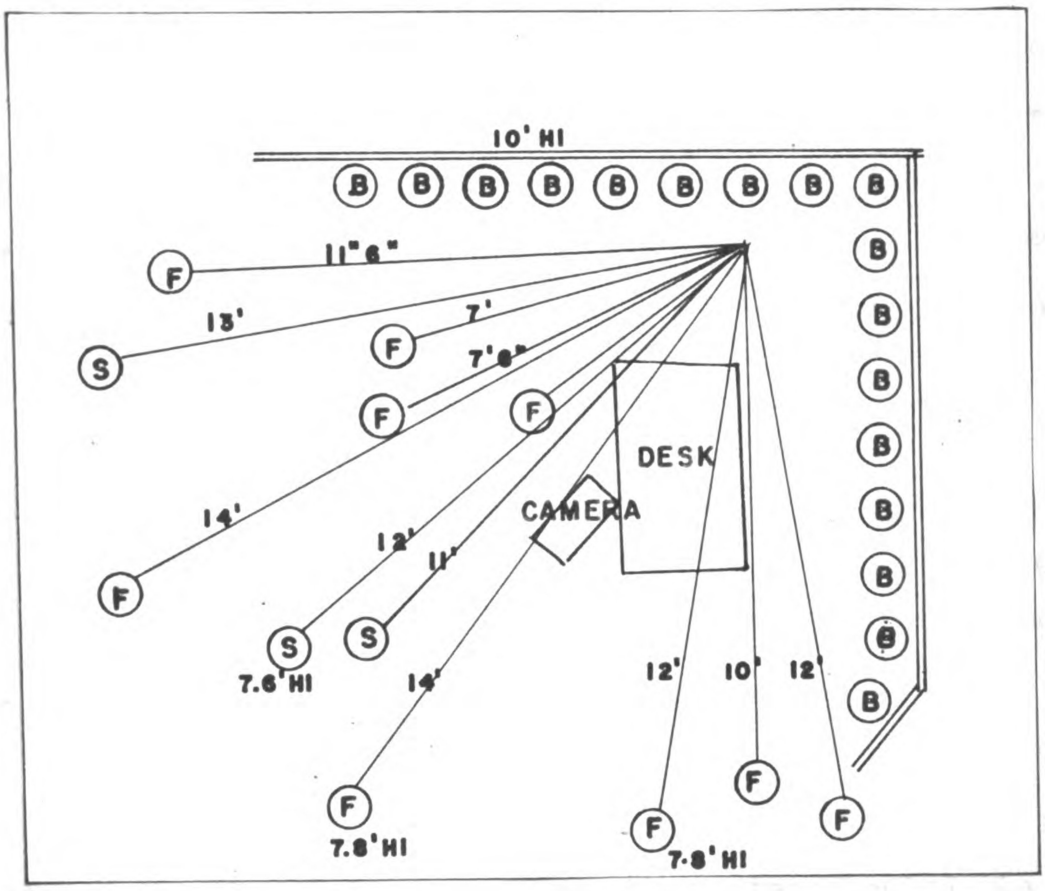


Plate 12

In Lighting Setup Number One (Plate 11) a high key light was arranged using two 1500-watt fresnels, one seventy inches and the other eighty-seven inches from the floor, and placed at the right of the camera. The first was ten feet and the second was eleven feet from the subject. Four fill lights set up on the left of the fresnels, each 1500-watt floods, were eleven feet high. Modeling light was attained by using three 1500-watt floor floods facing the stage left side of the specialist. Two additional fresnels were utilized as cross backlights. These lights also acted as rim lights, and helped to separate the specialist from the background.

The purpose of Lighting Setup Number Two (Plate 13) was to light the pedestal for the off-set cartoons. Two 1500-watt flood lights, fifty-seven inches in height, were used. The right flood was twenty-eight and the left flood was thirty-three inches away from the easel holding the cartoons.

Lighting Setup Number Three (Plate 11) was much like Setup Number One, with additional overhead lights added because of the change in area from center stage behind the desk to stage left. Two floods fourteen feet overhead were used for side modeling. More foundation and key light were added with one floodlight five feet high and seven feet from the subject. Another 1500-watt fresnel was used as additional key lighting in the new area at stage left. A fill light was added to fill in the highlights and shadows on stage left.

LIGHT PLOT NUMBER TWO

"THIS IS OUR WAY"

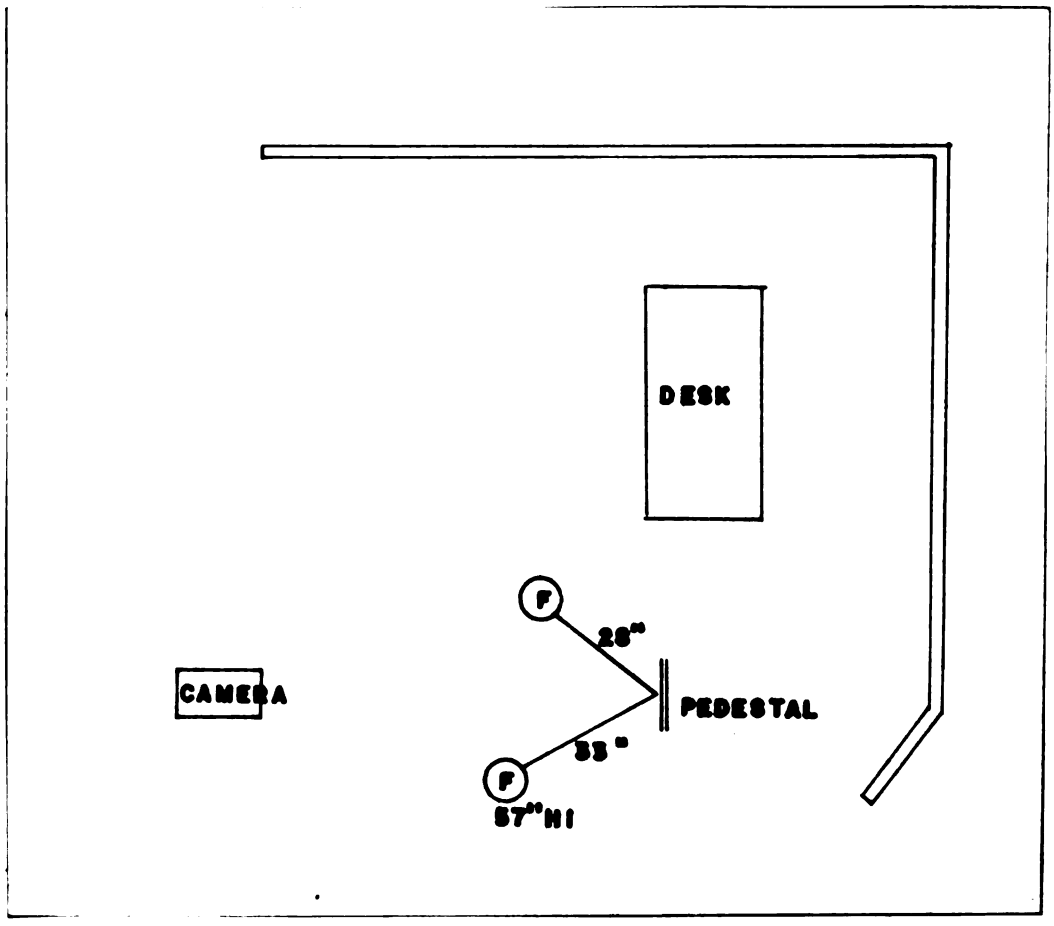


Plate 13

In Lighting Setup Number Four, the major foundation lighting was shifted to stage right. Four 1500-watt flood lamps were placed left of the camera for fill light. Another flood left of the camera was used as a modeling light, placed behind a 1500-watt fresnel. Behind the camera, and seven-feet-six-inches high, was the key light for the scene. At the right of the camera were placed four more basic foundation lights. This setup is seen in Plate 12, on Page 130.

THE LIGHTING LEGEND THROUGHOUT THIS THESIS IS STANDARDIZED AS FOLLOWS:

F = 1500-Watt Floodlight

S = 1500-Watt Fresnel

B = 300-Watt Birdseye (Reflector Flood)

Camera techniques. In planning the filming of this program, the director attempted to simulate a television show. The method used was to establish long sequences, varying them by dollying in to closeups, or dollying back to medium shots. No full-length shots were used. The inter-cutting technique of television, that is, switching from one camera to another, was simulated by cutting from the specialist to cartoons which were shot off the set and edited into the sequence. The dialogue on the sound track of the cartoons was that of the specialist.

Any deviations from the regular shooting script in filming, were due to the limitations of the 200-foot film magazine of the Auricon camera. If the shot ended with unexposed film left in the camera, the shot selected to follow matched the leftover footage, and not the script. The other exceptions to the straight filming were the titles and the opening shot, which were filmed at the end of the show.

A good example of the camera technique used is seen in the shooting script marginal directions of Scene 4A, on Page 115. The camera dollied back from a medium closeup to a medium shot of the specialist, as he moved from the back to the front of his desk. He picked up a book and the camera dollied in to a closeup of the book, then dollied back to a medium closeup of the specialist at the desk. These movements were predetermined, measured and chalk-marked on the studio floor. During these movements, the assistant cameraman

adjusted the focussing mechanism of the camera.

As previously mentioned, the characteristics in the design of the cartoons were simplicity and easy recognition. These characteristics were important because none of the visual aids fastened to the background were filmed on closeups, alone. The specialist and the visual aids shared the frame throughout the film, in order to maintain a constant eye contact type of communication between speaker and viewer.

Three cartoons on the easel were shot as full closeups, but these were visual punctuation of the political concepts described by the speaker. For example, while the specialist was seen "on camera" saying that the state was supreme and the individual was subordinate, a cartoon was intercut into the frame, depicting a huge state towering over a tiny individual. Similarly, when the speaker stated that the individual was supreme and the state subordinate, a cartoon was again inserted in full closeup, as a visual punctuation of the idea, showing a tall individual towering over a tiny state. In each of these intercuts, the specialist continued to speak, without attempting to motivate the cuts. In the actual shooting, the camera stopped at these cuts, and the cartoons were shot separately on an easel.

The camera position was changed only when there was a wide panning movement of the camera out of its ninety degree angle to the flats. To avoid keystoning of the wall cartoons (wide at one end and narrow at the other), and to get a frontal

shot of both specialist and cartoons without any serious distortion, the camera was moved into a new position. The operation of the slide projectors also presented the problem of avoiding a keystone effect, in which one side of the picture is wider than the other. Keystoning was caused by placing the projector at an angle to the screen. The angle can hardly be avoided when using two slide projectors side by side.

Another problem with the slide projectors was in the matching of the slide titles. In the process of dissolving from one projector to the other, there is an instant when both slides are projected on the screen. This superimposition pointed up any defect in the mounting of the slides. By re-mounting some of the slides and trying various speeds of dissolving, some of the defects were reduced.

The data sheet of this production follows in Table V. This sheet, illustrated here, contains the statistics of the filming, lighting and sound recording. It also serves as a means of understanding better the analysis of the methods used in the production of this film.

TABLE V

SHOOTING DATA SHEET
"THIS IS OUR WAY"

Shooting Order	1	2	3	4	5	6	7
Number Script Order	3	4A	6	4	5	7	8
Sound Track Exposure	15	15	15	15	15	15	15
Volume Indicator Peak	8	8	8	8	8	8	8
Shot Description	Chest	Chest to CU	Chest	CU	CU	CU	MLS
Mike Distance from Subject	16"	16"	16"	16"	16"	16"	16"
Distance of Subject From Camera	11'6" 12'6"	7'-12' 4'-7'	7'	3'6"	3'6"	3'6"	9'-11' 7'6"-9'6", 5'6"
Lens Focal Length	25	25	25	25	25	25	25
Lens Opening F-	5	5	5	16	16	16	5
Weston Meter Reading	25	25	25	200	200	200	25
Time in Seconds or Minutes	2:47	:50	:29	:07	:04	:12	2:09
Film Footage	103	33	19	7	4	9	80
Lighting Diagram	1	1	1	2	2	2	1
Emulsion Speed	40	40	40	40	40	40	40

TABLE V (continued)

SHOOTING DATA SHEET
"THIS IS OUR WAY"

Shooting Order	8	9	10	11	12	13
Number Script Order	9	10	10A	2	11	1
Sound Track Exposure	15	15	15	15	15	15
Volume Indicator Peak	8	8	8	8	8	8
Shot Description	MLS	MS	MS	CU	CU	CU
Mike Distance from Subject	16"	16"	16"	16"	16"	16"
Distance of Subject From Camera	9'-7'6" 7'	9'-12' 8'6"-4'	8'6"- 9'6"-10'	10'	10'	6'9"
Lens Focal Length	25	25	25	63	63	63
Lens Opening F-	5.6	5.6	6.3	9	9	2.5
Weston Meter Reading	28	28	50	98	98	400
Time in Seconds or Minutes	2:32	1:25	2:30	:40	:40	:05
Film Footage	93	54	93	26	27	4
Lighting Diagram	3	4	4			5
Emulsion Speed	40	40	40	40	40	40

Sound recording. The sound director operating the amplifying unit encountered problems similar to those in shooting the first film. One of the sound team's significant problems in this film was to keep a balanced volume while the talent moved about in various studio areas. Some of these areas were extremely difficult to follow with a sound boom. The boom man had to follow the specialist, who moved along the wall flats pointing to the visual aids which were arranged as seen in Plate 15. However props imposed a barrier to the microphone tripod (as seen in Plate 14). It was also a problem for the boom man to stay out of the picture, keeping his microphone within head distance of the specialist when the camera was dollied back for medium long shots.

Film processing and editing. The reversal film was sent to Eastman Kodak, but no duped negative or work print was made of the master print. In this show there were very few scenes to cut, and the majority of the scenes were shot in the order of the script. Therefore, the editor preferred to edit the master print which was returned from Eastman Kodak. This master print was then divided into respective film takes in the order of the script, as was done in the first film. The bad takes and frames showing the scene board were discarded. Then, using the Take, Footage and Timing Sheet (seen in Table VI, on Page 142), the good takes were spliced,

FLOOR PLAN "THIS IS OUR WAY"

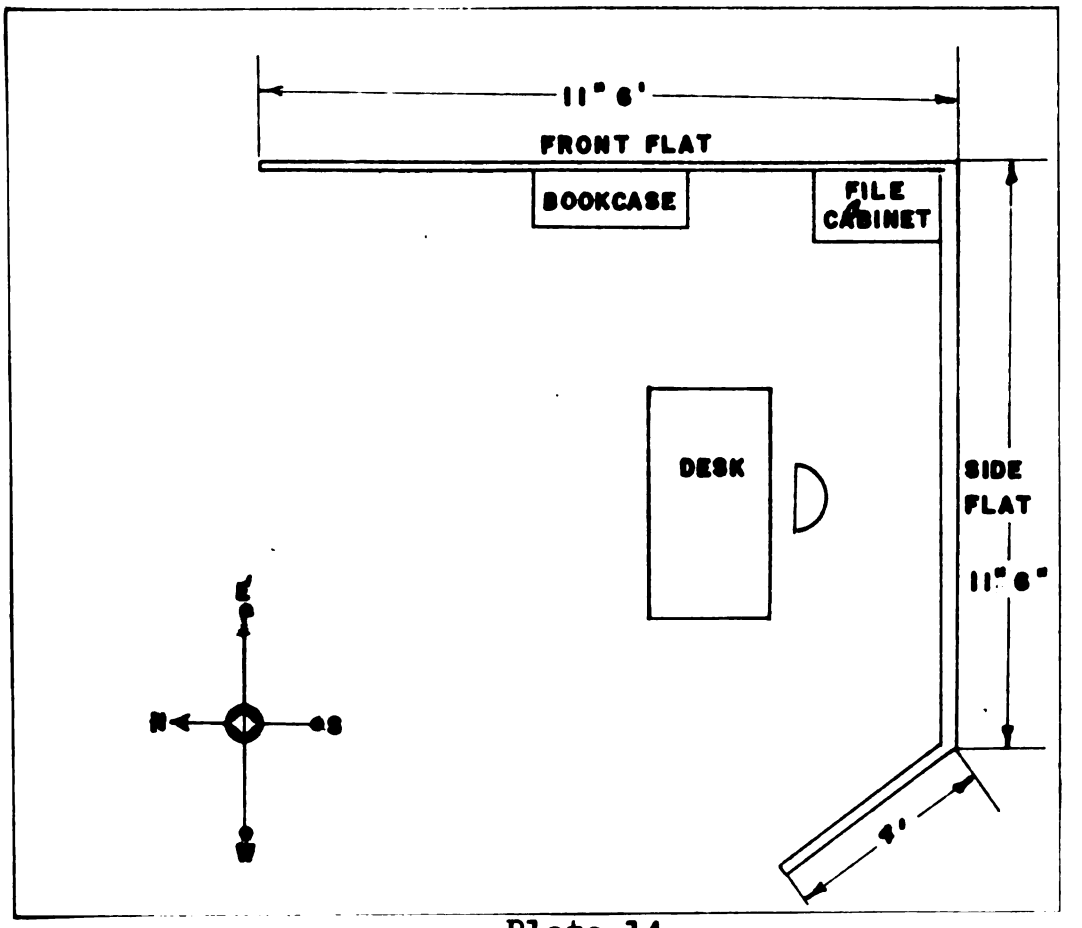


Plate 14

GRAPHICS "THIS IS OUR WAY"

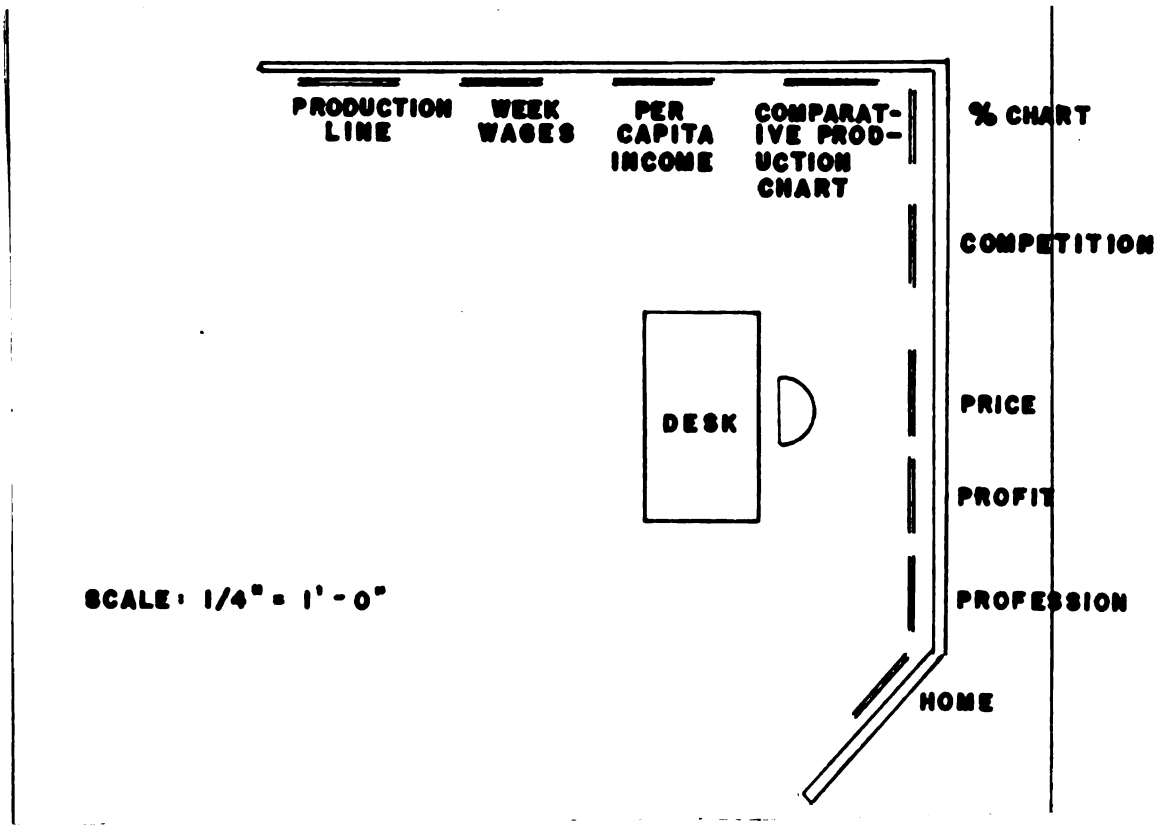


Plate 15

TABLE VI

TAKE, FOOTAGE AND TIMING SHEET
"THIS IS OUR WAY"

SCENE	TAKE	FOOTAGE BEGIN.	FOOTAGE END.	FOOTAGE /SHOT	FOOTAGE TOTAL	TIMING APPROX.	TIMING /SHOT	TIMING TOTAL
REEL 1								
3		11	114	103	0:00	2:46	2:47	0:00
4A	1	115	148	33	136	1:07	:50	3:37
6	1	149	168	19	155	:21	:29	4:06
4	1	169	176	7	162	:08	:07	4:13
5	1	177	182	5		:07	:05	
	2	183	187	4	166		:04	4:17
7	1	188				:10	:10	
REEL 2								
	2	6	15	9	175		:12	4:29
8	1	16	96	80	255	2:05	2:09	6:38
9	1	97	191	94		2:07	2:33	
REEL 3								
9	2	6	99	93	348		2:32	9:10
10B	1	100	154	54	402	1:30	1:25	10:35
10A	1	11	104	93	495	2:20	2:30	13:05
2	1	105	134	29		:40	:41	
2	2	135					:10	
2	3	145	171	26	521		:40	13:45
REEL 4								
11	1	10				:40	:25	
	2		55				:40	
	3	56					:09	
	4	64	91	27	548		:40	14:25
1	1	92					:04	
	2	97	101	4	552		:05	14:30

tightened up and run off on the television closed-circuit system for continuity of picture and sound. Finally, the edited master was sent off to the laboratory. From this master a duped negative was made, and then release prints were made.

ANALYSIS

In this second film some of the difficulties and the pitfalls of the first film were avoided. New methods were introduced and tried, again through trial and error. Once again these methods are examined in their component parts, and for their effectiveness in making a film for television.

The live television rehearsal made it possible to preview this production, as the final film would eventually appear on the television monitor. Problems not anticipated in planning stage were observed, such as (1) the framing of the talent and visual aid on the same closeup shot, (2) the means of keeping the mike boom and operator out of the picture while maneuvering into four areas on the set, (3) the use of backlight banks to separate the talent from the cartoons on the backdrop, and (4) the movement of the camera into proper position to avoid keystoning of the visual aids on the backdrop. Furthermore, a satisfactory script was made by recording the dialogue of the final television rehearsal. Also, a non-script television blocking sheet was successfully used in the TV rehearsal to accurately time each shot. This timing was later copied on the final script at corresponding points of identification.

The television rehearsal appeared inadequate as a means of detecting the sound variations due to changes in mike placement which showed up on the final sound track of this film. In

the television rehearsal there were no interruptions for reel changes, repositioning of the cameras, or recording of sound off the set. These were necessary in the filming because of the limitations of using one camera capable of shooting only two hundred feet of film before reloading. Unless the most extreme caution is taken, sound variations are unavoidable. On this point, Gibson says, "On interior locations great preparation and care must be taken to insure proper acoustics. Various forms of sound baffles must be hung and tested to insure quality and sound reproduction."[23] Offenhauser, in his thorough treatment of this topic in 16mm. Sound Motion Pictures states that 16mm. single system equipment is used to a limited extent because "the sound quality is so inconsistent and so poor compared with the quality from double system sound recording...."[24]

The television rehearsal did not reveal the fact that the inter-cutting of cartoons was out of rhythm and tempo with the camera movements. Inter-cutting is a means of pointing up ideas by quick flashes of visual aids that are parallel or in opposition to key ideas.[25] While the continuity of the tele-

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23 Henry Clay Gibson, Films in Business and Industry (New York: McGraw-Hill Book Company, Inc., 1947), p. 207.

24 William H. Offenhauser, Jr., 16mm. Sound Motion Picture (New York: Interscience, Inc., 1949), p. 164.

25 Hoyland Bettinger, Television Techniques (New York: Harper and Brothers, 1947), p. 92.

vision rehearsal went unnoticed, the inter-cutting of the cartoons over key ideas in the film appeared abrupt and unmotivated. This inter-cutting method was out of step with the rest of the production, which used dollying movements.

The method of obtaining a film shooting script by recording the "Audio" of the television rehearsal was satisfactory in several respects. First, the recorded script eliminated the time and cost of a writer, and second, it eliminated the problems encountered in the first show which had been brought about by having the specialist memorize a prepared script. Of course, the effectiveness of this method would depend upon the quality of the television rehearsal. The only forms used to prepare the television show were an outline of visual aids, and a non-script blocking sheet. (Table I, Page 16.)

The physical setting seemed adequate, specifically in making use of cartoons to point up economic ideas. Here were visual aids presented in an unobtrusive manner. Simplification was the key in portraying each idea clearly and succinctly.

Again, the blue flat, registering in a light gray, was a satisfactory background. However, in some scenes the background seemed cluttered because of the background visual aids. Battison says, "Avoid anything which has a lot of complicated lines in it; in other words, a busy background."[26] The

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26 John H. Battison, Movies for TV (New York: The MacMillan Company, 1950), p. 255.

cluttered background was the exception rather than the general rule in this film. Wherever the specialist's head was framed against the bare background flat, as in Figure 30, the picture appeared uncluttered. (See Figure 24, on Page 103, for an example of a cluttered background.)

Figure 30.

The Specialist Framed Before
The Bare Background Flat

Photographing the slides projected on a screen was a satisfactory title-making technique. This method was an improvement over the title roller used in the previous film. Lettering and backgrounds seemed fairly uniform. In adapting a variac transformer to the two slide projectors, the

effect of a dissolve was relatively good, and is cited as an example of the ingenuity shown in devising better methods for the projection of slide titles.

The titles were photographed from a white backing with black letters, and the film was overdeveloped to register a gray background with black lettering. These titles were then mounted on two-inch by two-inch slide frames. The trial and error necessary to determine the point at which the camera and the two slide projectors could operate at the maximum point of efficiency, required time. Mainly, the dissatisfaction with this method of projecting the slides was due to the time spent in setting up the equipment. Another unsatisfactory feature which was noted was the tendency of the projected slide to cause a keystone effect. This problem was solved to some extent by placing the slide projectors as close to each other as possible.

Several minor aspects of the variac also appeared unsatisfactory. The slow dissolve of the variac transformer resulted in dimming the light intensity between each new slide, causing a choppy effect of brightness and darkness on the film. The shading engineer in a television station would have his hands tied to the dials at this point in the film. The dissolve effect exaggerated any faults in the letter spacing and the mounting, because one line would be superimposed over another in the variac fade. A final source of dissatisfaction was the slanted appearance of some of the slides,

caused by the looseness of the slide projector carriages.

The two banks of background lights seemed satisfactory as a method of backlighting in this film. Eighteen reflector floodlights illuminated the background. These were used to separate the specialist from the visual aids on the flats and to bring out lighting uniformity in all the areas with a broad range of gray contrast. The general lighting layout of this film served satisfactorily in lighting long sequence shots with suitable light in each area. This can be attributed to two factors. One, the use of key light, fill light and background light tended to add more dimension and modeling than had the flat foundation lighting of the previous film. On this point the United States Department of Agriculture Television Report says, "Contrary to the theory that television could reproduce only flat (front) lighting, it was found that back and side and other model lighting, improve picture quality in the same degree for television as for large screen projection."[27] The second change which may have been responsible for the better picture quality was that the emulsion speed used in determining the F- number on the lenses was changed from 32 to 40, at the request of the processing laboratories.

The shooting data sheet was used to good effect in

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27 Tom Noone, Maynard A. Speece, Kenneth M. Gapen, Television Report, Films, Section I., (Radio and Television Service, Office of Information, United States Department of Agriculture, 1950), p. 8.

this film, in recording all pertinent camera, sound and lighting data. At the top of the page was the only actual scene record of the shooting order and the script order of this film. (See "Shooting Script", "This is Our Way", Page 110.

In the previous film the specialist's beard had become pronounced, even with a powder covering. Pancake makeup was substituted for face powder in this film, and it seemed to give the desired results.

This film was shot in the script order, much like a continuous television show, with long sequences and dollying in and out for movement. This has been acknowledged as a satisfactory technique in making television films. "Producers of television films, in their use of the camera, their sets, lighting, direction and acting, imitate the procedures of the television studio, not those of the film studio",[28] according to Irving Pichel, a Hollywood movie director.

Dollying is not absolutely standard in films for television. This is best illustrated in the Groucho Marx show, "You Bet Your Life", filmed especially for television. The Marx show is filmed continuously for an hour, of which thirty minutes is edited for air time on televi-

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28 Irving Pichel, "Films for Television", Hollywood Quarterly, Vol. V, No. 4, Summer, 1951, p. 363-372.

vision. "All cameras are tripod mounted. No dollies are used at any time. The four cameras that are 'on' afford sufficient variety of angle to enable the film cutter to edit a smooth show. Dispensing with dollies is in deference to Groucho, who finds any movement between him and the audience disconcerting."[29] The significance here is that few stock formulas have been made standard for television shows.

The precautions taken to achieve high fidelity sound recording in this film seem not to have been adequate. The sound varied in level between the scenes shot on the set and the scenes shot off the set. Possibly this problem could have been eliminated by keeping the microphone in the same location and at the same angle for all of the sound recording.

To some extent, the absence of monotony can be attributed to the specialist's style of communication. His personal enthusiasm seemed to help him to build a high level of contact. However, it was primarily the movements of the camera which gave the viewer a feeling of action. This technique of utilizing camera movements made it possible to shoot the film in long chronological sequences, and gave the final film the appearance of a standard live television show.

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29 Leigh Allen, "Filming 'You Bet Your Life' Television Show", American Cinematographer, March, 1952., p. 114, 115, 124-126.

In addition, the continuous shooting required much less time than the sequence breakdown method of the last film.

Satisfactory effects were achieved through the use of several camera techniques. The camera distances were predetermined and marked on the floor, and the camera was kept in focus while it was dollied. The chalk marks aided the cameraman's assistant in gauging the distances for focussing the lens while the camera moved, and the cameraman was able to set his lenses for the proper depth of focus, no matter how far or near he moved his camera. These techniques are used successfully in filming the "I Love Lucy" television show, according to an article in the American Cinematographer, which states:

> "...each camera operator has a major responsibility. He must get each take right the first time - every time. Of course, he can hardly miss, considering the careful preparation that went into the filming phase of the production beforehand. Focus was carefully measured and noted for each camera position; chalk marks were placed conspicuously on the stage floor...."[30]

The centering of the specialist and the visual aids on the same frame was a satisfactory technique used in this film produced for television. In this way the key speaker appeared on camera throughout the film, with the exception of the cartoons which were inter-cut. However, the use of the

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30 Leigh Allen, "Filming the 'I Love Lucy' Show", American Cinematographer, January, 1952., p. 22-24.

static front shot of the specialist was not too good, because it lacked interest. This type of shot had had to be used because of the limitations of the equipment. The Auricon camera is limited to forward and backward dollies. There is no way to boom up or down, or truck (track) to either side in a moving shot, which are basic film techniques. Nicoll says, "Fundamentally, the camera serves as the eye of the observer with the result that, although we remain seated in our chairs, we truly seem to move while the film displays to us, now a direct shot, now one taken from above, now one from below."[31] Manvell adds that a film is "...a collection of camera angles selected and purposely limited within the frame."[32]

The quality of the sound in each sequence or individual scene of "This is Our Way" was satisfactory, although the sound from sequence to sequence did not match in the final assembling. Each word was heard clearly, and with a minimum of distortion. During the filming the microphone had been kept at an average distance of sixteen inches from the speaker. In the sound accompanying the titles, the music was successfully blended into the background under the announcer's voice.

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31 Allardyce Nicoll, Film and Theatre, (New York: Thomas M. Crowell Company, 1936), p. 74.

32 Roger Manvell, Film (London: Penguin Books, Ltd., 1946), p. 40.

The sound of this show dominated the visual picture. This is not good television practice, because, "Television", as stated by two critics, "is a visual medium, not a sound program with pictures added."[33] In this film the specialist talked on economics and illustrated factual data. However, it would not be unreasonable to say that the dialogue in itself seemed complete and continuous enough to be used as a radio program. The visual element was subordinate to the sound. This is not an uncommon factor of informational films, according to Lindgren, who clearly states the problem:

> "The great temptation to which [informational] films too often succomb, is to say nearly everything through the commentary and to leave the minimum to the picture....Such films are sometimes basically little more than illustrated lectures, the visual illustrations being at some points highly effective, at others, merely stop-gaps."[34]

The final phase of production of this film was the editing. There were fewer scenes, since most of the film was shot straight and in long sequences; and for this reason less time was required in the editing than had been necessary in the first film. It seemed economically wise to edit the master print first and then make a duplicate negative and release prints from that, to avoid the error of the first film, of ordering these extra prints and possibly finding them unsatisfactory.

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33 Edward Stasheff and Rudy Bretz, The Television Program (New York: A. A. Wyn, Inc., 1951), p. 24.

34 Ernest Lindgren, The Art of the Film (George Allen and Unwin, Limited - London, 1948), p. 111.

CHAPTER V

THE FILM, "36 MILLION ACRES"

Last in the series of shows was a program on conservation. Like the preceding chapters, this chapter is organized into three sections referred to as (1) Planning, (2) Filming and (3) Analysis.

PLANNING

The program conferences. At a meeting between the production staff and the conservation specialist, the latter played a tape recording of one of his lectures and simultaneously showed some of his unusual collection of slides on conservation. This recording illustrated the slides shown. Those present at the conference agreed that this show would be suitable for television. However, there was some question about the effect of the slides in recording them in the monochromatic gray scale, since they were in color.

The slides were tested for low color contrasts on the television closed-circuit system, and the extemporaneous talk was planned around those which were selected. The purpose of the film, decided at this meeting, was to promote understanding, appreciation and proper use of natural resources in Michigan.

No script was prepared for this show. The main preparation was in the selection of the slides, and the specialist was depended upon to integrate these slides into his main theme. It was planned that while the slides were filmed, the specialist would narrate freely on the sound track without being confined to a script. This differed from the methods used in the previous films.

The program content. An extensive account of the content is given here, since there was no script used in the film. Fifty-two slides were used to portray the visual content. Linking the title with the subject matter, the specialist explained that Michigan contained thirty-six million acres, which, divided among the population, allots six acres to each resident. Of these six acres, three are used as forest land, and three as farm land. The specialist went on to show slides of the Great Lakes, the state forests and the farms and factories of Michigan. These were presentations of the natural resources, recreation areas and production facilities. They illustrated the factors which might make life more secure for a little boy shown in the opening slide. (See Figure 31.)

A great deal of this land has been destroyed by wind and water. The specialist went on to explain (1) how institutions are devising new ways to conserve the soil, (2) how legumes are planted and then plowed under to build up

Figure 31.

The Opening Shot

soil fertility and yields, (3) the method of contour strip farming that has been tried and found effective, (4) how recreation areas are used to replace noise, dirt and confusion with swimming, sunshine and fresh air, and (5) how forests are made available for hunting, canoeing, fishing, camping and industrial uses.

The title of this film was selected to embody the entire conservation program in the land areas of Michigan. Since there are thirty-six million acres in this state, the title was "36 Million Acres".

The format. This show used a slide of a little boy as an "attention-getting" opening shot. (See Figure 31.) As this opening slide appeared "on camera", the announcer's voice was heard asking, "Do you know someone like this? What does he mean to you"? This was followed by the theme music, titles, and the opening credits. Then, the specialist was introduced, seated on the corner of a desk, beside a slide projector, as seen in Figure 32. After a very brief preface to his talk, the camera dollied back, and the main body of the show cut to slides and was projected on a screen. The last slide was the same as the opening one, showing the little boy. The purpose behind this was to emphasize the importance of conservation to the generation of tomorrow.

Figure 32.

Introduction of the Specialist

At the end of the show, the specialist was again seen "on camera" while he briefly summed up the content of the show. The musical theme, titles and the announcer followed.

The physical setting. No attempt was made to design an elaborate set for this film, because the talent was seen for only about a minute and a half during the entire program. The basic set was made up of the two light blue flats used in the two previous films. Props were also limited to a bare minimum. In the film, the specialist sat informally on the corner of a desk, with one hand placed on a slide projector, as seen in Figure 32.

The title slides. The titles for this film were made in the same manner as those of the last film. Slides were projected on a screen and photographed. Again the variac transformer was used to control the two slide projectors. The filming of the titles was speeded up because most of the problems that had required a great deal of time in the last film, in setting up, were now solved.

Only three new title slides were needed for this film, since the only changes were the film title, the specialist's name and his department in the college. The opening and closing credit titles of the "Design for Living" series were used, as illustrated in Figure 33. The same artist lettered the twelve-inch by sixteen-inch white poster board with black twentieth century lettering to match the previous titles.

Slide 1.

Slide 4.

Slide 2.

Slide 5.

Slide 3.

Slide 6.

Slide 7.

Figure 33.

The Title Slides

These were then photographed on 35mm. film and overdeveloped to lower the contrast of white and black. The film was then cut and mounted on two-inch by two-inch slides. The finished slides appeared in shades of gray and black.

The specialist's slides. Selecting the slides most suitable for this show was another step in the planning stage. One hundred and twenty slides, on various phases of conservation, were previewed on the closed-circuit television system. Slides that were too dark or too light, poorly defined, not properly centered, too high or too low in contrast, were eliminated.

The special effects. In the television rehearsal of this show, noises caused in operating the slide projectors presented a problem. It was decided that for the film the specialist's voice would not be recorded in the same room with the projectors. However, it was necessary for the specialist to see each of the slides on the screen, as he talked. To solve this problem, a special effect was introduced, using the live television camera, and moving all of the film equipment out of the studio, with the exception of the microphone.

The special effect was arranged as diagrammed in Plate 16, which can be seen on the following page. Seated in the studio at a microphone stationed in front of a television monitor, was the specialist. The Auricon camera, the slide projectors,

A SPECIAL EFFECT

"36 MILLION ACRES"

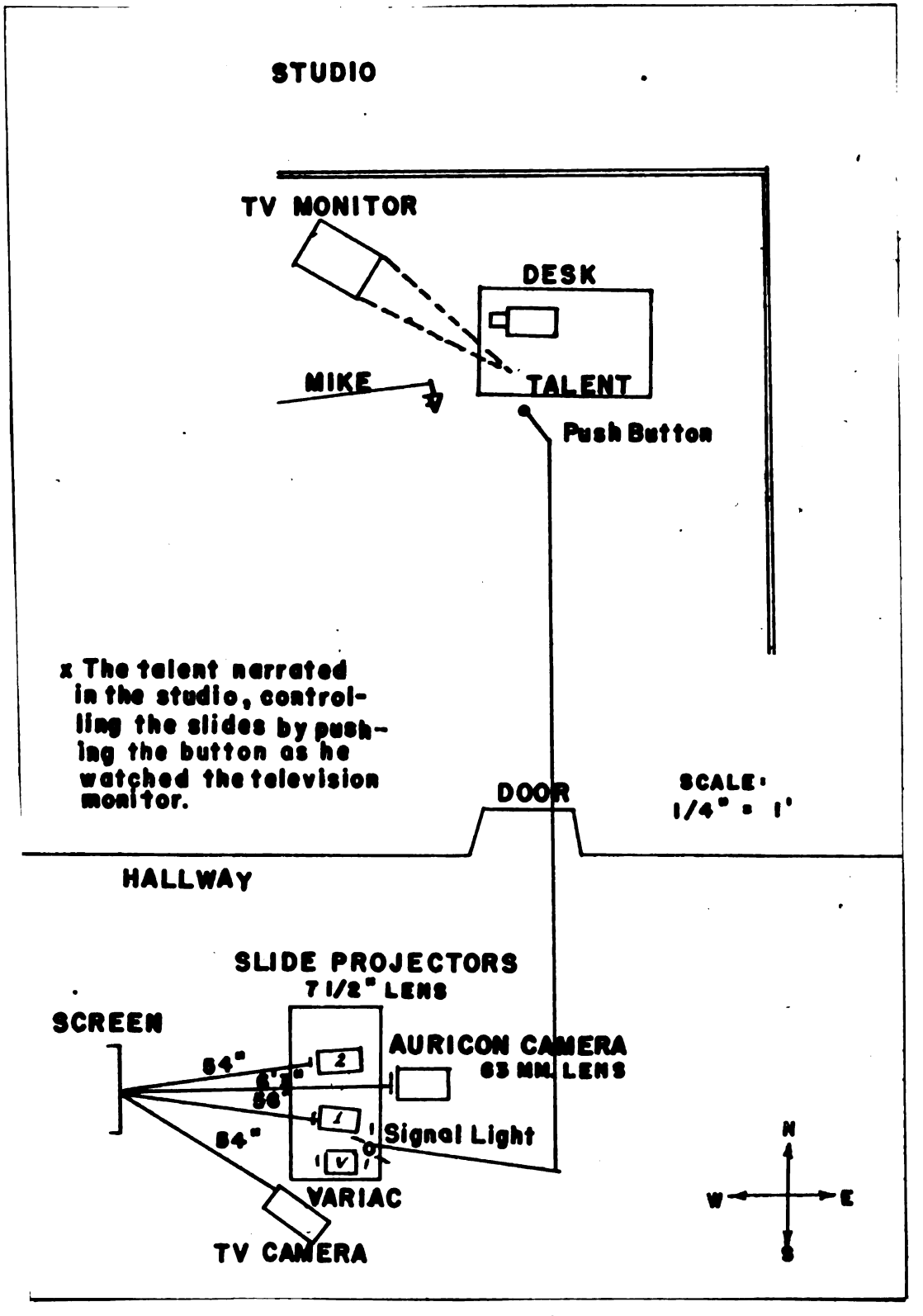

Plate 16

the variac transformer and the screen, were set up in a hall outside the studio. The television camera televised the slides as they were projected. The final picture was seen on the television monitor in the studio. To coordinate the slide changes, the specialist had a signal button in his hand which flashed a light to the variac operator in the hall, who changed the slide on cue. In other words, the specialist was able to speak at his normal rate of speed and control the slides, while the Auricon camera filmed the slides projected on a screen outside the studio. At the same time the camera was also recording the speaker's voice inside the studio.

The slide schedule. In the television rehearsal of this film, the specialist was found to be fairly accurate in using the allotted time for his talk. As mentioned earlier, the specialist controlled the speed of the slide changes, so the director's responsibility was one of coordination. There was no need for blocking or staging shots, with the exception of the introductory and closing scenes of the specialist "on camera", because all the shots were slides.

Since there was no script used in this film, the director and the assistant director designed a slide schedule to be used in the film production. This schedule was used in four television rehearsals, to determine the aggregate timing. As in the last film, the director decided

that the specialist and the film production staff could use the extra rehearsal time to advantage, mainly to save film footage and time on retakes in the shooting of the show.

The cumulative timing on the slide schedule was used as a check in the final film. When the specialist was ahead of time, he was able to add to some of his talk, and when he was behind time, he cut some of the dialogue about each slide. The slide schedule is illustrated in Table VII, as a method used in the production of this film. Note that the four columns on the left side of the page are the four timings of the television show. The title at the right side is the name of each slide, and the order number in which it appeared in the film.

The slide schedule was also used to coordinate the work of the projector crews. All the odd-numbered slides were given to one crew, all the even-numbered slides were given to the other crew. Each projector was operated alternately, using the variac transformer. From the slide schedule, the projector crews learned the chronological order of each slide. The slides were not marked, but were identified by their titles on the slide schedule.

TABLE VII

SLIDE SCHEDULE
"36 MILLION ACRES"

TELEVISION REHEARSAL TIMINGS 1st	2nd	3rd	4th		SLIDE TITLE
1:45	2:01	1:40	1:50	1.	Lake Michigan
1:55	2:14	1:55	2:08	2.	Lighthouse
2:08	2:25	2:07	2:22	3.	Forest
2:24	2:42	2:26	2:37	4.	Farm country
2:40	2:57	2:38	2:52	5.	Farm
2:50	3:10	2:45	2:58	6.	Detroit
3:04	3:27	3:10	3:15	7.	Iron mine
3:15	3:45	3:20	3:35	8.	Copper mine
3:28	3:57	3:28	3:43	9.	Oil tanks
3:43	4:15	3:38	4:01	10.	Lumber
4:03	4:35	4:00	4:16	11.	Wheat fields
4:13	4:50	4:10	4:31	12.	Livestock
4:32	5:03	4:26	4:44	13.	Boy and calf
4:55	5:15	4:55	5:00	14.	Corrosion
5:12	5:31	5:15	5:20	15.	Good crops
5:23	5:40	5:24	5:32	16.	Legumes
5:31	5:48	5:28	5:38	17.	Contour farming
5:44	5:58	5:50	5:55	18.	Non-farm land
6:03	6:15	6:07		19.	Big city
6:15	6:31	6:21	6:25	20.	Factory worker
6:24	6:40	6:28	6:31	21.	Stenographer

TABLE VII (continued)

SLIDE SCHEDULE
"36 MILLION ACRES"

TELEVISION REHEARSAL TIMINGS				SLIDE TITLE	
1st	2nd	3rd	4th		
6:30	6:50	6:35	6:39	22.	House wife
6:39	7:00	6:42	6:50	23.	Recreation area sign
6:56	7:12	6:57	7:00	24.	Swimming
7:16	7:27	7:17	7:20	25.	North Michigan
7:28	7:45	7:27	7:30	26.	State Forest sign
7:40	8:00	7:32	7:38	27.	National Forest sign
7:50	8:20	7:38	7:48	28.	Logging truck
8:00	8:30	7:53	8:02	29.	Second growth forest
8:15	8:44	8:08	8:23	30.	Trout fishing
8:30	8:53	8:20	8:36	31.	Boy fishing
8:40	9:02	8:30	8:48	32.	Canoeing
8:56	9:20	8:45	9:08	33.	Meal preparation
9:05	9:26	8:53	9:16	34.	Broiling steaks
9:13	9:34	9:00	9:18	35.	Camping
9:25	9:43	9:12	9:32	36.	Highway
9:35	9:53	9:20	9:40	37.	Dogs
9:40	9:58	9:25	9:53	38.	Bird watcher
9:54	10:07	9:35	10:00	39.	Duck on nest
10:15	10:28	9:53	10:20	40.	Church
10:28	11:05	10:05	10:35	41.	Falls

TABLE VII (continued)

SLIDE SCHEDULE
"36 MILLION ACRES"

TELEVISION REHEARSAL TIMINGS				SLIDE TITLE
1st	2nd	3rd	4th	
10:36	11:15	10:23	10:43	42. Miner's Castle
10:45	11:32	10:38	10:58	43. Lake on the Clouds
11:00	11:35	11:10	11:15	44. Presque Isle
11:12	11:44	11:15	11:23	45. Fish
11:20	11:50	11:25	11:32	46. Trees
11:43	12:14	11:52	11:58	47. Brockway Drive
12:00	12:25	12:08	12:14	48. Isle Royal
12:16	12:38	12:23	12:31	49. Cabin
12:30	12:53	12:31	12:41	50. Moose
12:43	13:05	12:40	12:52	51. Fawn
		12:55	13:05	52. Boy
			13:20	END OF SLIDES

FILMING

On December 9, 1951, the shooting of "36 Million Acres" began, with two days allotted for the filming. Because of the specialist's ruddy complexion, makeup was not necessary. As in the other films, the Western Electric microphone 639B was placed in the studio with the specialist.

Lighting. The one lighting setup and the floor plan used for this film are shown in Plates 17 and 18, on Page 168. The lighting setup for the opening and closing shot of the specialist was arranged to allow a darker background behind the specialist, because of his white hair. (See Figure 34.)

Figure 34.

A Closeup of the Specialist

FLOOR PLAN, "36 MILLION ACRES"

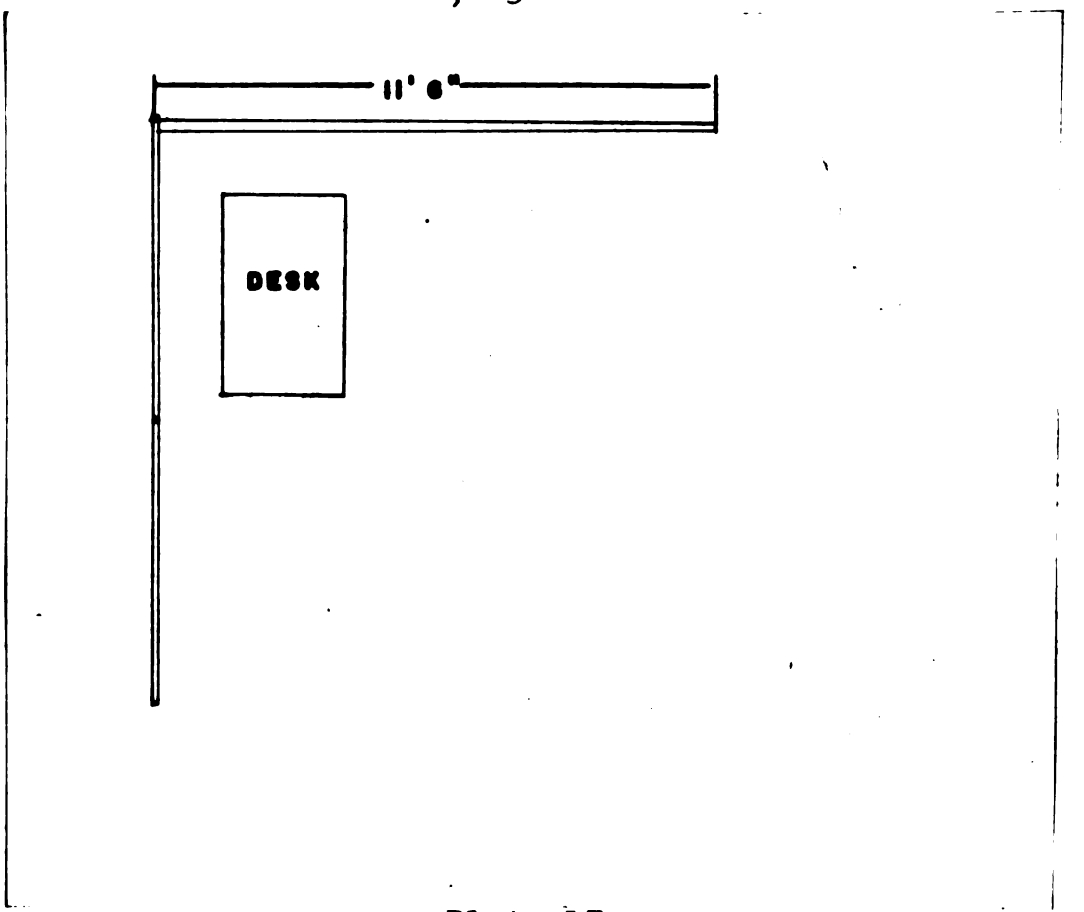

Plate 17

LIGHTING, "36 MILLION ACRES"

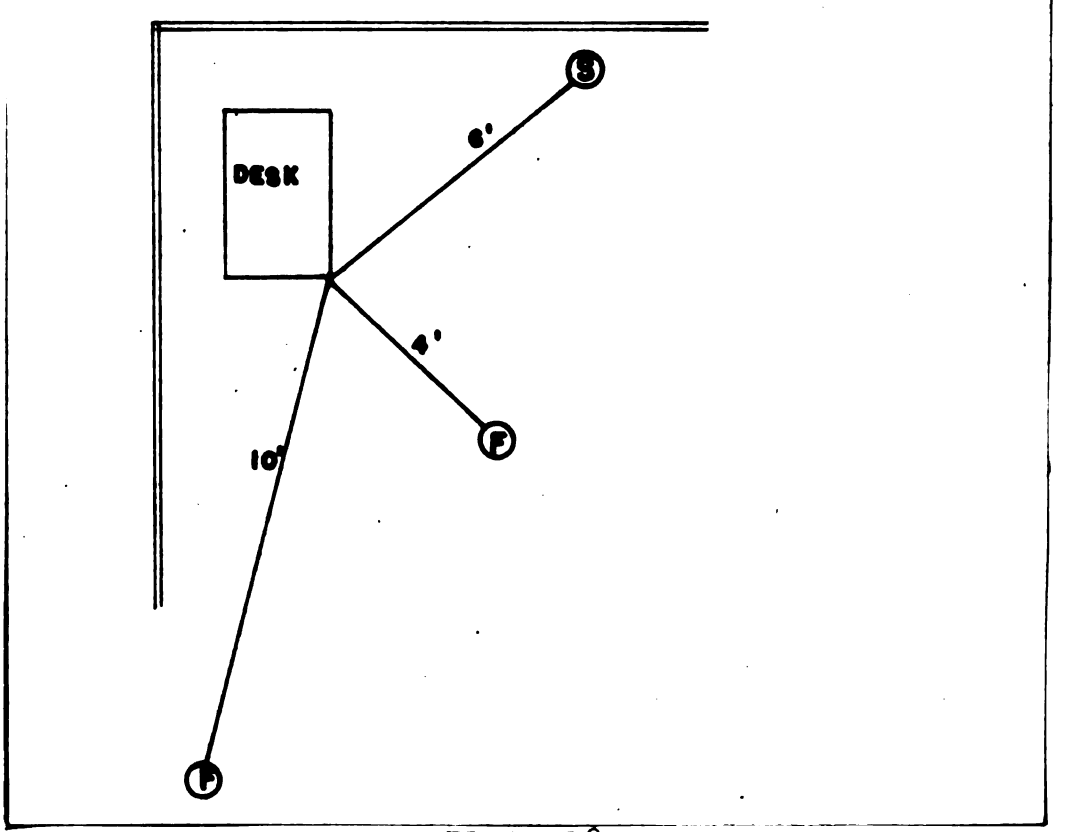

Plate 18

Two floor floods were used as basic light. One was placed four feet away from the specialist, pointed towards him from stage left. The other flood light was placed ten feet away, and was directed towards the specialist from stage right. A fresnel floor flood was placed upstage left, six and one-half feet behind the specialist and was used as a backlight.

Camera techniques. For the opening shot of the specialist, the camera was dollied back from a closeup to a medium shot. This shot was planned as a transition, to motivate the picture slides which followed. The camera distance from the subject was measured and chalk-marked on the studio floor to achieve proper centering, focussing and smooth movement. While the cameraman dollied back, keeping the specialist centered in the frame and attempting to avoid weaving, the assistant cameraman adjusted the focus with the camera movement.

In filming the conservation slides, the camera was placed in a stationary position, directly behind the two projectors, as in shooting the titles of "This Is Our Way". During the rehearsal, the light exposure of every slide was observed by the cameraman. Since each slide's light exposure differed, an average point between the highest and lowest readings was selected as the basis of exposure. The lens F- number was then determined by this middle read-

ing, for all the slides in each scene. Only the first slide (shown in Figure 31, Page 157), of the little boy, was given an individual light reading and F- number, because it was shot separately.

The organization of the slides was important. The director had assigned two crew members to each slide projector. One crew handled the odd-numbered slides and the other, the even-numbered slides. When slides appeared in the wrong order in the final takes, the director called for re-takes. Avoiding finger prints, inserting the slides right-side-up, keeping the slide carriage still until the projector was off, and inserting the correct slide in proper order were problems that were corrected by rehearsals and re-takes. When two slide projectors were used to project the slides on the screen, the dissolved image from one slide to another did not always line up correctly. However, the cameraman was able to eliminate this problem by shooting within the border of the two overlapping slide frames.

Each grouping of slides was determined by the capacity of the 200-foot reel. Scene IA was the opening slide of the little boy. Three takes were necessary for this. Scene IB was the opening titles, and it also required three takes before being acceptable. The situation here was similar to the problem of filming the titles in "Landscaping Your Home".

Dissolving from one slide projector to the other left the image of the last slide long enough to show up any fault in lettering in the next successive slide. Keystoning of the frame on the screen was a problem here, because of the angle at which the projectors were arranged in relation to the screen. Scene Two was the opening shot of the specialist on camera. Then, in Scene Three, the slides 1-22 on conservation were projected. This scene lasted for five minutes, and was acceptable on the first take. In Scene Four, which included slides 23-45, four takes were necessary because of the slide crew problems previously mentioned. Scenes Five and Six included the slides 46-52, and were filmed without any additional re-takes. Once the projectors were lined up, the closing titles in Scene Seven were filmed on the first take.

Directing. The directing of this film was similar to that of a television show. The director communicated with the crew members by use of headphones. However, once the camera began to roll, the director was silent and the specialist signalled the crew. The director's role in this film was that of coordinating of technicians, rather than of organizing, blocking and staging of talent and shots.

A data sheet was also recorded for this film. In a comparison between the figures of this sheet and the data sheet of the last film, some changes are evident. While

the sound exposures were kept at fifteen for all the shots in both films, the volume indication for this film was ten, as compared with eight of the last film. Notice also that the 63mm. lens was used for all of the shots of the slides, but the two shots of the specialist "on camera" were filmed using the 40mm. lens. This data sheet, Table VIII, follows, on Page 173.

Film editing. Editing this film was less complex than the previous film. It had only eight scenes as compared, for example, with the first film which had thirty-eight scenes. Again, the reversal stock was sent to Eastman Kodak in Chicago after exposure. The work print was also found unnecessary in this film, because of the limited number of scenes. After the reversal master print was returned, it was divided into corresponding scenes and stored in the film barrel for assembling. The scene boards and unwanted takes were then discarded. All the good scenes were assembled in order, and run off on the television system. The following sheet in Table IX, Page 174, was the Take, Footage and Timing Sheet of the film, "36 Million Acres".

TABLE VIII

SHOOTING DATA SHEET
"36 MILLION ACRES"

SHOT NUMBER	3	4	5	2	6	1A	1B	7
SOUND TRACK EXPOSURE	15	15	15	15	15	15	15	15
VOLUME INDICATOR PEAK	10	10	10	10	10	10	10	10
SHOT DESCRIPTION	CU	CU	CU	CU	CU	CU	CU	CU
MIKE DISTANCE FROM SUBJECT	16"	16"	16"	16"	16"	16"	16"	16"
DISTANCE OF SUBJECT FROM CAMERA	6'3"	6'3"	6'3"	19'2"-9'8"	19'2"-9'8"	6'3"	6'3"	6'3"
LENS FOCAL LENGTH	63	63	63	40	40	63	63	63
LENS OPENING F-	4	5	3.5	2.2	2.2	2.2	2.2	2.2
WESTON METER READING	18	25	13	5	5	5	5	5
TIME IN SECONDS OR MINUTES	5 min.	4 min. 42 sec.	1 min. 50 sec.	1 min.	32 sec.	7 sec.	40 sec.	43 sec.
FILM FOOTAGE	184'	183½'	70'	38'	21'	7'	28'	28'
EMULSION SPEED	40	40	40	40	40	40	40	40

TABLE IX

TAKE, FOOTAGE AND TIMING SHEET
"36 MILLION ACRES"

		FOOTAGE				TIMING		
SCENE	TAKE	BEGIN.	END.	/SHOT	TOTAL	APPROX.	/SHOT	TOTAL
3	1	11	195	184	184	5:00	5:00	5:00
REEL 2 4	1	11				4:40		
	2	18	195	187			4:45	
REEL 3 4	3	12	97				2:20	
4A	1	98	172	74			1:55	
REEL 4 4	4	11	183	172	356		4:42	9:42
REEL 5 5	1	11	81	70	426	1:48	1:50	11:32
2	1	82	120	38	464	1:05	1:00	12:32
6	1	121	142	21	485	:30	:32	13:04
1A	1	143	151	8		:05	:07	
	2	152	157				:08	
	3	158	165	7	492		:07	13:11
1B	1	165	190			:40	:40	
REEL 6 1B	2	11						
	3	14	42	28	520		:40	13:51
7	1	43	71	28	548		:43	14:34

ANALYSIS

Use of the television film camera to preview the conservation slides in selecting those most favorable for use, appeared satisfactory in the production of this show. The director and the cameraman were able to see each slide approximately as it would finally appear when projected over the television system. Some concessions were made because there were only one hundred and twenty slides from which to choose.

Some of the slides which were selected in this preview, and which did not appear satisfactory in the film are shown in Figures 35-38. Figure 35 is a duck on a nest.

Figure 35.

Duck on a Nest

There is hardly any contrast in this picture, and the effect is lost. Figure 36, a shot of canoeing, is too dark. When this shot appeared on the television tube, the video gain had to be raised. In Figure 37, the "State Forest" sign has a "busy" background. The significance of the lettering

is lost because of the map in the background.

Figure 36.

Canoeing

Figure 37.

The Significance of the Lettering is Lost

In Figure 38, called "Trout Fishing", the subject is not centered. Because of the masking around the average television monitor, a poorly centered shot means that some part of the picture will be lost.

Use of the television live camera to transmit a remote picture to the monitor viewed by the specialist was a satisfactory special effect used in this film. To

Figure 38.

Trout Fishing

operate the slide projectors which were noisy, and to record the specialist's voice at the same time using single system sound, required planning. By using the television camera, the specialist was able to see the slide as it was projected, and to talk extemporaneously about the slide without any sound problems. This special effect eliminated the noise of the slide projectors from the sound track.

One unsatisfactory aspect of the special effect was in the dissolve of the variac transformer. In the final film, the dissolve effect appeared too slow. In Figures 39 to 41 we see an example of this slow dissolve. The specialist was talking about the fish, and then switched to a discussion of the forests. In Figure 39 we see the fish. Then, in Figure 40, we see the fish in the trees for a few seconds, and finally, in Figure 41, the trees minus the fish. The problem here may have been in the bulk of the

Figure 39.

The Fish

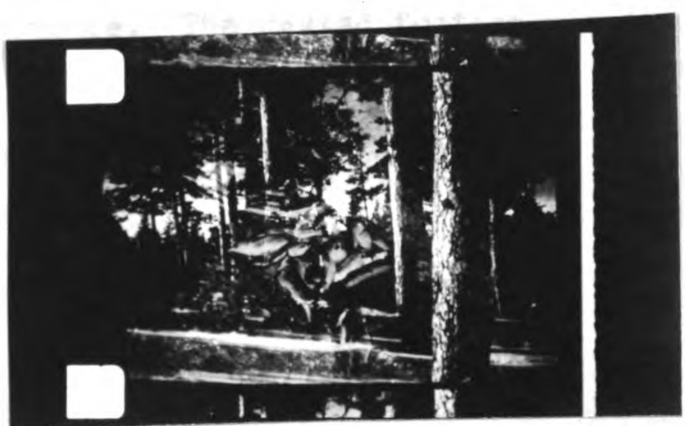

Figure 40.

The Fish in the Trees

Figure 41.

The Trees Without the Fish

knob of the variac control, so that the superimposure was too long for transition purposes.

The television rehearsal was satisfactory for this film. It served as a preview in integrating the entire production as it would finally appear on film. The rehearsal served to perfect the performance of the technical crew, and also presented an opportunity to work out a successful method for filming the slides. Rehearsing the show four times gave the director an accurate timing on each slide sequence. The wasted footage was then kept down to a minimum, because most of the production problems had been worked out in the television rehearsals.

The method of using the extemporaneous talk was satisfactory. Having the specialist speak extemporaneously captured his natural style of speaking. A script was completely avoided, since the specialist had spoken many times on each of the slides used, and there was little risk of "fluffs" or the need for retakes.

The method of photographing the title slides projected on a screen was satisfactory in comparison with the title roller used in the film, "Landscaping Your Home". However, there had been some inadequacies in the preparation of the slides. Dissolving from one slide to another retained the image of the last slide long enough for the image to conflict with the next successive slide. Had the slides

been prepared and planned for a matched dissolve, where the lines would have covered each other, this technique might have been successful, but such was not the case. The result was that some of the opening titles in the film (seen in Figure 33, Page 160) appeared slanted. The problem of keystoning, where the frames appeared wider at one end than at the other, was overcome to some extent by shooting within the frame. Again, in the dissolve from one title slide to another, the final film appeared to lack smooth transition. This can be attributed to the dissolve which faded from light to neutral and then light again, causing the video gain to rise and fall rapidly. What was needed here was a dissolve with a fairly constant light source.

Using slides for the presentation of facts for television seemed satisfactory in this film. Giving due consideration to the fact that each slide was a static picture, continuity and movement were nonetheless achieved. The use of fifty-two slides in 730 seconds averaged about twelve seconds for each slide. The average shot length for a film feature, according to Spottiswoode, is thirteen seconds.[35] The interest and movement were developed by quick changing of slides.

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35 Raymond Spottiswoode, Film and Its Techniques, (Berkeley and Los Angeles: University of California Press, 1951), p. 110.

The use of kodachrome slides in the production was not completely satisfactory. While the pictorial value of the majority of the slides is unquestioned (as can be seen in the samples of satisfactory shots shown in Figures 42, 43, 44, 45 and 46 on the following pages), the wide area of light density caused striking contrasts in the final film. Striking contrasts are not compatible with the low contrast range of the television iconoscope. In Movies for TV Battison advises, "...use films which have a lower density contrast range...."[36] The specialist felt that if he were ever called upon to do another film for television, using slides, he would use black and white slides. He felt that some of his best color shots lost their effect when they were reproduced for monochromatic showing on television.

In the slide schedule, with its four cumulative timings taken during the television rehearsals, was found an apparently satisfactory means of controlling this entire production. Since no script was used, this schedule (seen in Table VIII on Page 173) became the visual cue sheet for both the director and the slide crews.

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36 John H. Battison, Movies for TV (New York: The MacMillan Company, 1950), p. 51.

Figure 42.

Second Growth Forest

Figure 43.

Boy Fishing

Figure 44.

Dogs

Figure 45.

Miner's Castle

Figure 46.

Lake On the Clouds

The one lighting setup used in the film appeared satisfactory in putting into use front, back and side lighting to achieve a balanced gray contrast. (This setup can be seen in Plate 18 on Page 168.) With the basic light coming from either side of the specialist, and the backlight coming directly behind him, the slightly darker background needed to set off the specialist's light hair was achieved. This is illustrated in Figure 34 on Page 167. As Gurin of NBC states, "...the importance of

separating the most important element of picture interest from the surrounding backgrounds cannot be overemphasized. This effect can be achieved with the proper use of spotlights by backlighting".[37]

The sound recording was satisfactory in this production. There was hardly any distortion or noticeable rise in gain level between shots, but there were also none of the problems of movement which had been in the other films. The major problem of the noise factor had been solved in the television rehearsal by moving the camera and the slide projectors out of the studio, and recording the specialist's voice from within the studio.

Photographing slide pictures projected on a screen appeared to be a satisfactory technique in producing this film for television. The best resolution was in the close-ups, and the slides with a wide band of grays. (Samples of some of the satisfactory slides can be seen in Figures 42-46 on Pages 182 and 183.) While the majority of the slides were satisfactory, some were too bright, or too dark. Figure 47, a shot of northern Michigan, was too bright for use on television broadcasting, because of the shading problem it would present to the video engineer.

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37 H. S. Gurin, "Lighting Methods for Television Studios", Journal of the Society of Motion Picture Engineers, December, 1950, p. 576-589.

Figure 47.

Northern Michigan

In Figures 48 and 49, two pictures are shown of the bird watchers. The better picture is a frame cut from the film

Figure 48.

The Better Picture of
The Bird Watchers

halfway into the dissolve, or when the variac knob was three-quarters of the way into a complete turn. The less satisfactory picture of the bird watchers was taken when the dissolve turn was complete. The problem here was not in the picture content of the slides, because they had been

Figure 49.

The Less Satisfactory Picture
of the Bird Watchers

pre-tested on the television system and found acceptable. It was in their wide light contrast when projected.

In the film rehearsal, before each slide was shot, the cameraman had observed the light reading of each slide in the sequence. The average reading that fell between the maximum and minimum of all of the slides was used in determining the F- setting of the camera. This method was obviously unsatisfactory, because the light densities exceeded the brightness range for television films. According to Eastman Kodak, the effective brightness range should not exceed thirty to one. That means that the brightest and darkest portions of the picture should be within this ratio. To solve the problem in this film, the slides could have been grouped together according to similar densities, and then filmed. However, this would have upset the continuity of the production. Had time permitted, remaking

the slides would probably have been the most satisfactory solution.

A satisfactory method used in filming the slides was in having the cameraman shoot within the border of the projected picture. In this way, the risk of poor framing because of keystoning of the slides on the screen was eliminated. By shooting within the frames, the cameraman used his viewfinder matte for framing the picture.

The method used in organizing the slides was unsatisfactory, which resulted in the necessity for a number of film retakes. The wrong slides were projected occasionally, breaking the continuity of the specialist's organized talk. The problem here might have been solved by numbering each slide to correspond with a number on the slide schedule.

The methods used in the editing of this film appeared satisfactory. With only seven film scenes to edit, less time was required than had been needed in either of the previous films. Again, as in the film, "This is Our Way", a saving was initiated by the film director, by carefully editing the master print, and eliminating the cost of a duped negative and work print. Of course, had prints of this film been needed, a duped negative would have been necessary.

CHAPTER VI

SUMMARY AND CONCLUSIONS

This study was undertaken because very little research has been done on the subject of making films for television. With newly-opened television channels now available to educators, there is an increasing need for informational films made especially for television, and for information on the methods of making these films. This study was made as a part of the research program in Television Development at Michigan State College.

The purpose of this study was to analyze the methods used in the production of three informational films for television. The procedure followed was to report on the methods used in these productions, and then to examine the strengths and weaknesses of these methods. The conclusions arrived at in this chapter are based on the production of the three films, and the use of a single system sound recording Auricon camera.

The significant methods used in each film are summarized here under classifications of "satisfactory" and "unsatisfactory". The means of classifying these methods was based, in part, on the discussions at the production staff meetings when these films were previewed on the closed-circuit television system. The author's background as an

assistant film director in a television station and as a technician in a film processing company served to aid him in additional judgments.

In the film, "Landscaping Your Home", the following were found to be satisfactory:

The television rehearsal served as a means of viewing the entire show before the filming. Employing visual aids in the form of cartoons gave visual meaning to the dialogue. The use of two landscaped models served to present a "before" and "after" type of show. The designing and use of a shooting schedule helped to save time and labor in the filming. Drafting a shooting script served as a means of matching the shots of the TV rehearsal and the film, and as a method of checking the timing of the film. The arrangement of backlight to baselight ratio at 1½:1 resulted in low contrasts and clear resolution on the models. Designing the flats and models in the gray scale for best television reproduction was a final satisfactory method used.

In the same film, the following were found to be unsatisfactory:

The use of a memorized script imposed a restraint on the specialist. Crowded lettering and inadequate lighting lessened the impact of the address card. Charts and models were not planned in aspect ratio. The title roller needed a system of pulleys to slow down and control its movement. Front lighting without backlight balance caused high con-

trasts on the specialist. Changes in the location of the sound recording equipment resulted in tone changes from shot to shot on the film. Similarly, reading lines "off camera" and then reciting them "on camera" resulted in a noticeable change in speech pattern from shot to shot. Action which was needed for good editing was not planned in filming the openings and closings of each shot. The "attention-getter" lost its effect because the sound and the picture quality were poor. Having the dupe negative and release print made at the same time that the master was processed resulted in a loss of money, because one reel with bad sound distortion made the production useless. Visual aids were introduced abruptly, and lacked motivation. The filming of scene boards in long shots made the numbers difficult to read on 16 mm. film.

In the time intervening between the filming of the first and second shows, a number of methods used in the first show were changed in planning the production of "This is Our Way". The memorized script, short scenes, the script breakdown, the title roller, front flat lighting and the processing of the dupe and print at the same time as the master print, were discarded in the second film.

The methods retained from the first show were the TV rehearsal, the shooting of the majority of the shots in closeups, the use of visual aids to point up ideas clearly, the use of balanced lighting between the backlight to base-

light and the setting planned for the gray scale.

In the film, "This is Our Way", the following were also found to be satisfactory:

The show was now built around the talent instead of around the script. The rehearsal provided the means of taping the "Audio" for use in making up a shooting script from the specialist's prepared talk. The framing of talent and visual aids in the same closeup was also made possible with the television rehearsal. Titles were made by photographing slides projected on a screen. Lighting was improved upon by using banks of reflector floodlights to separate the specialist from the visual aids on a background flat. Shooting the film in chronological order with long sequences, and dollying in and out gave the film the appearance of a live television show. More movement than in the first show was achieved by dollying in for closeups and backing out for medium shots. Camera distances were predetermined and chalk marked on the floor for the dollying of the camera.

In this second film, the following were found to be unsatisfactory:

The television rehearsal was inadequate as a means of detecting sound variations due to changes in mike placement, which showed up on the final sound track. The same angle and location of the microphone was not used for all the sound

recording, which resulted in sound level variations from shot to shot. Use of charts and cartoons behind the specialist's head cluttered up the background. Motivation was needed for the method of intercutting cartoons over the regular picture to point up ideas. Use of the static front shot lacked interest. In addition, the method of projecting title slides invariably resulted in keystoning.

The third film differed almost completely from the others in its type of presentation. The major portion of the third film was made up of slides on the subject of conservation. The specialist was seen "on camera" only in the opening and closing shots. The method used in the second film, of filming long sequences, was used again in the third film.

In the film "36 Million Acres", the following were found to be satisfactory:

The utilizing of the television film camera to preview the slides on conservation showed them approximately as they would appear on the final film. The live television camera was used to transmit pictures from slides projected on a screen outside of the studio, so that the specialist could see the pictures on a monitor inside the studio. The television rehearsal made it possible to reconstruct the entire production as it would appear on film. Extemporaneous speaking captured the natural style of the specialist, who was unhampered by a script. Slides were used to present

pictorial facts, to good effect on television. Application of the use of back, front and side lighting achieved the proper results in gray contrast. The slide schedule, with four television rehearsal timings, served to give control to the actual filming. Sound recording using single system sound proved to be adequate when there was no movement. The best picture reproduction in the slides was found in closeups. Shooting within the border of the picture frame avoided uneven overlapping of the slides. Finally, because of the few scenes, and as a economic measure, the master print was processed, previewed and then edited.

In the third film, the following were found to be unsatisfactory:

Slides that had low contrasts lost their effect on the television system, and looked very flat and lifeless. Slides that were too dark required a high video gain. Slides with lettering and "busy" backgrounds lost their impact. Slides in which the subject was improperly centered could not be seen on some receivers, because of the masking. The slow dissolve that was achieved by the use of the variac transformer caused the final film to appear choppy. In filming the slides an average light reading was taken, resulting in some cases in an excess over the 30:1 brightness to darkness range considered the maximum satisfactory contrast range for the television tube.

This was a pioneering project in a relatively new field. Therefore, many of the methods were determined by trial and error. Each film turned out to be an improvement over the previous one. This improvement was achieved by incorporating the satisfactory methods and techniques found into each successive film. The most satisfactory methods found in each of these films are suggested here for further use in producing informational films for television, using talent such as the extension specialists in these films who were experienced speakers.

A television rehearsal serves as a means of viewing a show before filming. The most desirable shot for use in the film may be selected at this viewing. This rehearsal indicates the efficient use of visual aids and props. It gives the director greater control over the sound and picture for the eventual filming, and serves as a means of avoiding wasted footage on the film.

However, the television rehearsal is not absolutely necessary. The equipment necessary for even a closed-circuit operation is extremely costly, and the lack of it need not prevent efficient production of films for television. For example, if television equipment is not available, the films can be blocked out to resemble a television show by using a horizontal angle lens, a Televiewer, or by simply using the viewfinder of the Auricon camera for a "dry" run, instead

of the live TV camera.

Visual aids should be used wherever possible to give visual emphasis to the dialogue. Animation of factual data is the most desirable method of illustration. However, in presenting these visual aids, motivation is extremely important.

When the specialist is used as the talent in an informational film for television, the film should center around the talent and the program content. The talent should not be forced to adapt his talk to a formal script. Spontaneity is achieved in retaining the specialist's natural manner of speaking.

In filming the opening and closing of a scene, action is needed to facilitate the work of editing. This is true particularly when using single system sound recording.

The technique of dollying in and dollying out in long sequences gives movement to the scene, in a manner similar to that of the television show.

The following methods should be avoided in producing an informational film for television:

Avoid the use of a memorized script if the performer is not an actor. The specialist will need complete freedom to talk on his subject matter. It is significant that since the time this study was initiated, no individual has had to memorize a script (with the exception of persons in

dramatic performances) in the Television Development program of Michigan State College.

Recording of sound in a variety of locations on a set may result in a number of unsatisfactory tone changes when the picture is finally assembled.

Avoid having a dupe negative or release prints made up when the master print is sent for processing, until the master has been previewed.

During the writing of this thesis the writer came across several problems which might make interesting studies for further research. These problems are:

1. The determination of a standard lighting procedure for films for television.

2. The comparative impact of an informational show given by a specialist, and by a trained actor using a script prepared from a specialist's recorded dialogue.

3. An investigation into the problem of keystoning in the filming of slides and visual aids.

4. Various methods of presenting titles on films for television.

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BIOGRAPHY

Fox, Jack Jacob. Mr. Fox was born on June 21, 1920, in New York City. At the age of two he entered an orphanage in Brooklyn; and when he was six years old, he was transferred to Homecrest, an orphanage in Yonkers, New York. He lived there for ten years, while attending Yonkers schools. In 1936, Mr. Fox graduated from Saunders Trade School, and went on to work as an instrument repair man for the Great Eastern Oil Company in Brooklyn, and then as a technician for the Light-olier Company in New York City.

In January, 1942, Mr. Fox was inducted into the United States Army, where he was trained in air conditioning and refrigeration for tropical areas. After this he was transferred to British Guiana, where he spent twenty-seven months. In 1944 Mr. Fox was promoted to Staff Sergeant, and was returned to the United States to serve as a chief clerk at the Lake Placid Club, a rehabilitation center for war prisoners.

At the end of World War Two, Mr. Fox returned to high school. He graduated from Bay Ridge Evening High School in 1946, with an academic diploma. He then enrolled at Michigan State College, and received his B.A. in Radio and Advertising in 1950. During one of his undergraduate years Mr. Fox was a counselor in a men's dormitory.

While attending the graduate school at Michigan State College, Mr. Fox held a graduate assistantship in the Department of Speech, Dramatics and Radio Education. He also worked for Capital Film Service in East Lansing, and as Assistant Film Director for Station WJIM-TV in Lansing.

Mr. Fox is a past treasurer of Pi Kappa Delta, ex-president of the Radio Guild, and a charter member of Tau Epsilon Lambda, the television honorary.

The work included in this thesis represented eleven months' research in television and films, in partial fulfillment toward the degree of Master of Arts in the field of Speech, Dramatics and Radio Education at Michigan State College.

Mr. Fox and his wife, Judith, have a young daughter, Dana Ellen Consuela, who was born as this thesis neared its completion in the summer of 1952.

GLOSSARY

Amplifying unit. An electronic instrument used to increase the volume of sound.

Angle shot. A view taken from the camera either above or below eye level of the subject, or not directly in line with the subject.

Announce booth. A sound-proof cubicle from which the announcer reads his copy over a microphone for broadcast transmission.

Aspect ratio. An accepted ratio in television and films for the most pleasing frame of width to height, which is 4:3.

Audio. The common accepted term for the sound portion of film and television transmission.

Audio control board. A system of switches and knobs by which the sound from the microphone, turntables and film chain are controlled for transmission.

Auricon camera. A single system sound recording camera, "blimped" or soundproofed, equipped for 16mm. film, which has a three-lens turret, a single lens turret and a viewfinder. The Auricon is equipped to run on batteries or standard voltage, and has a 200-foot reel capacity. (Auricon Pro.)

Background separation. A means of separating the subject from the background by backlighting.

Backlighting. A light placed at the back of the stage, facing the camera, lighting the back of the head and shoulders of the subject, thus separating him from the background.

Baselight. An overall light, directed from the camera side towards the subject.

Birdseye floodlight. A trade term referring to reflector floodlights. These lights are conical in shape and silvered on the sides so that the light flood comes only through the wide base end.

Blimp. A sound-proof casing around the camera that cancels out all of the internal noises of the camera mechanism, which would otherwise be picked up by the microphones during the shooting of film.

GLOSSARY (continued)

Blocking. The preliminary working out of movement in a television show. Usually this is done by the director before the rehearsal of each scene.

Boom. A long metallic arm used to suspend the microphone over the heads of the talent, keeping it out of the frame of the camera.

"Busy" background. Too much detail in a background which causes the subject to lose some of its effectiveness.

Chest shot. A shot of the talent from the waistline up, and including some significant detail in the background.

Clapstick. (Also called "Clapperboard") Two pieces of wood, hinged together which, when struck, cause a sharp indication on the sound track for the purpose of synchronizing the picture and the sound before or after a take, to facilitate the editing.

Clip. A short length of film cut from a larger accumulation of film footage.

Closed-circuit system. The system on which the program is fed from the camera to the monitor without being broadcast.

Closeup. (CU) This shot is usually used to point up a detail by getting as close as possible to the object.

Closing credits. A listing of titles, performers and production staff.

Console. The complete unit that houses the sound input and output of the studio.

Cover shot. The cover shot covers the main action and movement. It serves as a reserve shot to which the director can return if other shots are unfavorable.

"Crawl". A title rolling drum, controlled by gears and pulleys, which moves slowly.

Crosslighting. Lighting that comes from the side of the stage, crossing diagonally. This lighting is used for modeling or giving roundness to the talent or object.

GLOSSARY (continued)

Data sheet. A statistical recapitulation of all the camera, lighting and sound data in the film production.

Depth of focus. The distance from the camera, in a specified area, at which the subject is most clearly seen.

Dimmer control. A resistance device which is used to adjust the voltage of a lamp by raising or lowering the intensity.

Dissolve. Two shots superimposed over each other so that as the second one begins to appear, the first one fades out and finally disappears.

Dolly. (Verb) To move the camera.from one place to another. Also known as "trucking".
(Noun) The wheel-mounted tripod base of the camera.

"Dry" rehearsal. A studio rehearsal done without the use of cameras.

Dupe negative. A duplicate negative film printed from a positive print, which is used for reproducing additional positive prints.

Editing. The joining, splicing and juxtaposing of scenes, to make up the complete film, in which the unsatisfactory footage is removed.

Effective brightness. The average overall brilliance of the television image.

Emulsion speed. The sensitivity of film to light, and the speed at which an image is formed on the film.

Emulsion. A thin coating covering the celluloid base of the film, which is sensitive to light.

Field camera monitor. Each camera has a monitor which shows its individual picture.

Fill light. A frontal type of lighting used to fill in the shadows, thus lowering contrasts.

Film barrel. A metallic or plastic cylinder lined with a soft cloth, in which edited pieces of film are placed, to avoid the scratching of emulsions, and to keep the film free from dust particles.

GLOSSARY (continued)

Film camera chain. A complete unit used to present films on television, made up of a projector and an iconoscope.

Flat. Flat sections of canvas stretched on a frame, to represent a wall or background for scenes.

Flip cards. Printed or hand-lettered cards used to present a message by having the cards fall consecutively.

Flat lighting. A front lighting, supported by little cross or backlighting, which does not afford much contrast or modeling of the subject.

Fine grain film. A type of film the structure of which is most satisfactory for the recording of sound.

"Fluffs". Errors in acting, lines or directions, or any phase of production.

Fluorescent slimlines. A type of floodlight made up of fluorescent tubes in a pan-like reflector.

F- number. This number signifies the camera aperture. It is arrived at by dividing the diameter of the opening by the focal length.

Footage. The way in which a film is measured, and the standard of length.

Font. A description of the type face.

Format. The structure of a show.

Foundation light. A general overall illumination, having no character of its own.

Frame. (Verb) To line up the subject in the viewfinder, precisely as desired.
(Noun) One complete picture.

Fresnel. The name of a spotlight with a simple lens optical system providing a beam which can be focussed between ten and forty-five degrees.

Gain level. The control of volume peaks on an average below one hundred.

GLOSSARY (continued)

Grain structure. The structural characteristic of film, which is either coarse or fine grains.

Graphic arts. Lettering, titling, illustrative material and photographic copy.

Gray contrasts. The color range in which the picture is seen in the television image.

Gray scale. A graduated scale of gray colors to compare the reproduction of natural colors on the television screen.

Horizontal angle lens. A piece of celluloid on which is inscribed angles representing the various lenses of a television camera.

Iconoscope. A cathode mosaic which is used in the film camera chain.

Inter-cutting. In television, this is a switching from camera to camera. It is also a means of pointing up ideas by quick flashes of visual aids, which correspond with the key ideas.

Key light. The main point of illumination in a scene.

Keystoning. The wedge-shaped distortion of a picture frame, making it appear wide at one end and narrow at the other.

Large-screen projection. Projection on theatre-sized screens.

Lens focal length. That characteristic of a lens which determines the field viewed by the lens.

Light reading. The illumination level indicated on a light meter.

Light density. The quality or degree of light on a film.

Limbo. A shot used in television, using little or no background, but identified by some object related to the show.

Long shot. (LS) A shot taken from a long distance to provide a complete view of the subject in a background.

Masking. A border around the home television set, blocking out some of the picture.

GLOSSARY (continued)

Master print. In reversal film, the original print which is processed becomes the master. From this dupe negatives and release prints are made.

Master monitor. A screen on which is seen the picture which is to be aired. The light contrasts on this monitor are controlled by the shading engineer.

Matched dissolve. The superimposition of a picture over another which it matches in shape, after which the first picture fades away.

Matte. A framing unit placed in a viewfinder, to correspond with thelens in the camera.

Medium long shot. (MLS) Almost a full shot, with only the feet cut off.

Medium shot. (MS) A camera shot which shows the subject from the knees up.

Modeling light. Lighting from the side which adds roundness and depth to the face.

Monochromatic scale. A graduated scale of one color. This scale, which is used in films, corresponds to the gray scale used in television.

Mosaic. The sensitive surface of a camera tube, usually made of some light-sensitive photo-electric material.

"On camera". Appearing in the picture.

Overhead grid. A system of overhead railings to which lights were attached.

Panning. A slow swinging of the camera in any direction.

Picture composition. The appearance of the subject in the picture frame.

Processing. Developing and printing the film in the laboratory.

Remote picture. A picture taken outside the studio.

Release prints. Distribution prints made from the dupe negative.

GLOSSARY (continued)

Reversal film. A film which after exposure is processed to produce a positive image on the same film rather than on the customary negative image.

Rimming. Light used from behind an object to produce depth by making it stand out from its background by rimming it with light.

SS. Abbreviation for "Same Shot".

Scene Board. An identification unit that is shot before each scene showing the scene, shot, take and title of the production.

Scoop light. A type of light which looks similar to a scoop in shape. It provides general light, rather than spot light.

Shading. The control of the video signal which determines the contrasts on the television tube.

Shadow balance. The elimination of extreme contrasts in shadows.

Shooting script. The script used to shoot the final production. It contains all cues, camera angles, and shots used.

Shot. The smallest breakdown in the production of a film.

Single system sound recording. The simultaneous recording of sound and picture on one piece of film.

Slide. A title or picture on a single 35mm. film frame projected into the camera.

Sound head. The part of a projector which contains a photoelectric cell beam focussed on the sound track.

Sound track. A narrow band along one side of a sound film, which carries the sound record.

Sound track exposure. The voltage fed from the amplifying unit to the sound track.

Splice. A joining between two pieces of film.

Start-and-stop rehearsal. A rehearsal which is started and stopped for correction of poor shots, composition and continuity.

GLOSSARY (continued)

Stills. Photographic or other illustrative materials which may be used in a television broadcast.

Switching unit. A device used to control the picture which is to be aired, from among all of the cameras.

Take. An exposure of film.

Televiewer. A device which reproduces by means of a lens, the scene as it would appear through the television camera lens.

Tight shot. (TS) A shot which includes only that physical part desired by the director.

Title rolling drum. A moving cylinder on whose convex surface printing appears. The "drum" moves in front of a stationary camera, bringing the wording into view.

Titles. Any titles used on a program. These can be motion picture film, cards, or slides.

Tripod dollies. A type of three-legged camera support used to hold field cameras, and move them from place to place.

Truck. To dolly in parallel motion with a moving figure. For example, to follow a person walking down the street.

Turntables. Units on which electrical transcriptions are played and fed into the audio console.

Uni-directional microphone. A microphone which responds to sound from one direction only.

Variac transformer. An auto transformer unit which was used as a dissolving device for slide projectors.

Video. Pertaining to that which is seen.

Video gain. The signal on the television monitor in which the brightness or darkness is controlled by the video engineer.

GLOSSARY (continued)

Viewfinder. An optical device on the camera which provides an image approximating that which is formed by the lens on the film. The parallax viewfinder referred to here is defined as follows: It is adjusted so that the viewfinder and the lens converge on an axis. Compare the viewfinder to a pair of eyes focussed on an object. When you close either eye, the object appears to have moved. Actually, the observer has moved.

Visual aids. Charts, props, models and cartoons used to emphasize the talk visually.

Volume indicator. A meter which shows the total variations in volume during a program, expressed in decibels.

Waist shot. (WS) A shot which includes the subject from the waistline to the top of the head.

Weaving. Unwanted lateral motion of the film in the camera or projector, or of the camera itself.

Work print. The print produced from the original camera negative. All editing work is done on this work print.