

UNIVERSITY OF CALGARY

Myths, Dreams and Realities

by

William C. Hales

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES  
IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE  
DEGREE OF MASTERS OF FINE ARTS

DEPARTMENT OF DRAMA

CALGARY, ALBERTA

AUGUST 1999

© William C. Hales 1999



National Library  
of Canada

Acquisitions and  
Bibliographic Services

395 Wellington Street  
Ottawa ON K1A 0N4  
Canada

Bibliothèque nationale  
du Canada

Acquisitions et  
services bibliographiques

395, rue Wellington  
Ottawa ON K1A 0N4  
Canada

*Your file Votre référence*

*Our file Notre référence*

The author has granted a non-exclusive licence allowing the National Library of Canada to reproduce, loan, distribute or sell copies of this thesis in microform, paper or electronic formats.

The author retains ownership of the copyright in this thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without the author's permission.

L'auteur a accordé une licence non exclusive permettant à la Bibliothèque nationale du Canada de reproduire, prêter, distribuer ou vendre des copies de cette thèse sous la forme de microfiche/film, de reproduction sur papier ou sur format électronique.

L'auteur conserve la propriété du droit d'auteur qui protège cette thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

0-612-55182-2

Canada

## ABSTRACT

This thesis documents the Lighting Design and Technical Production concepts, research, development and realization for the University of Calgary Drama Department's production of Electra.

## DEDICATION

This thesis is dedicated to the cast and crew of Electra and especially its director, Lawrence Leong. This project would not have been possible without their energy and enthusiasm. I would also like to dedicate this work to my family and to Wayne Dirkson and Gabe Prendergast, who started me on this path.

## TABLE OF CONTENTS

Approval page.....	ii
Abstract.....	iii
Dedication.....	iv
Table of Contents.....	v
List of Illustrations.....	vi
List of Photographs.....	vii
CHAPTER ONE: INTRODUCTION.....	1
CHAPTER TWO: CONCEPT DEVELOPMENT.....	2
CHAPTER THREE: PRE-PRODUCTION PERIOD.....	6
CHAPTER FOUR: FLYING DESIGN CONCEPT.....	14
CHAPTER FIVE: LIGHTING DESIGN.....	27
Lighting Cues.....	40
CHAPTER SIX: PRODUCTION PERIOD.....	60
CHAPTER SEVEN: FLYING SYSTEM.....	76
CHAPTER EIGHT: PERFORMANCES.....	97
Preshow Checklist.....	98
Flying Sequence.....	102
CHAPTER NINE: POST PRODUCTION.....	106
CHAPTER TEN: PRODUCTION REVIEW.....	112
CHAPTER ELEVEN: RESEARCH.....	115
NOTES.....	124
REFERENCES.....	126
APPENDIX A: Lighting.....	128
APPENDIX B: Budget.....	135
APPENDIX C: Production Schedule.....	138

## List of Illustrations

One to one rigging	16
Floating block rigging	17
Counterweight rigging	18
Traveller track on fly pipe rigging	20
Track on track - single purchase rigging	22
Track on track - double purchase rigging	23
Polydeuces' wing unit	63
Polydeuces' backplate unit	64
Polydeuces' wing deployment	65

All illustrations were drawn by William C. Hales

## List of Photographs

Lighting Cue 9	42
Lighting Cue 11.9	43
Lighting Cue 14.3	45
Lighting Cue 19	47
Lighting Cue 31	49
Lighting Cue 198	51
Lighting Cue 52	55
Lighting Cue 56	57
Flying System Rigging	79
Loft Block Assembly	80
Head Block Assembly	82
Arbour Assembly	84
Carabinier Swivel Assembly with the two safeties	87
Javier in harness (rear view)	89
Castor's Rolling Scaffold Unit with Lighting Instrument	95

All photographs were taken by William C. Hales

## Chapter 1

### Introduction

When I was assigned the duties of Technical Director and Lighting Designer for Electra, I had to look for reasons to make this project special and challenging for myself. There had to be a challenge in the production that would force me to stretch my skills. The obvious challenge would be performing two separate assignments on the production because I would then have to delegate my personal time and resources to achieve the results that both positions would demand. The task of performing both roles on one production would be a much greater challenge than fulfilling the duties separately on two different productions. This production presented the additional challenge of working with one less skilled person, as I would be working with myself in a sense.

The split focus I experienced will at times be very apparent, as this document will shift from one position to the other. This document will not follow a true chronological time line as I discuss and detail the events of the production. This split focus was very much what I felt as I worked both disciplines.

This would not be that unusual an experience for me as throughout my professional career I had worked on twenty-five productions of similar or larger size where I had performed another major duty as well as being the lighting designer. I felt that it was also important to push the limits of the theatre space, the materials available and my skills. Electra presented a great opportunity for technical challenges, with the flexibility of time, place and setting and the entrance of the gods - deus ex machina. There would be very little to be gained by playing it safe as a Technical Director or as a Lighting Designer.

## Chapter 2

### Concept Development

The Drama Department had assigned the creative team of Electra, with Lawrence Leong as director, Tasha Dyck as set and costume designer and Charleen Wilson as dramaturge. We were to create and mount a production of Electra that would be the final event for Euripidean scholars who were attending a conference in Banff. This production would be an added show in the schedule of the Drama Department's year. Our rehearsal period was to begin just before the end of the semester with our production period occurring after classes were finished. The production would run for six performances, including a preview and a final show for the members of the conference.

Preliminary discussions on Electra began between Lawrence, Tasha, Charleen and myself in early December at the end of the 1998 fall semester. We had to establish whether we were going to attempt a recreation of classic Greek theatre or to approach Electra as simply a text and story to place our own identity on. Lawrence quickly established that he was not interested in directing a 'Greek' play and was more interested in telling a story of revenge. I agreed with Lawrence and felt our next step was to determine a location in time and space for the play. We also discussed which translation to use with a preference for a newer translation by Kenneth McLeish. Charleen had been researching translations and felt this was the most accessible translation for a modern audience. Lawrence had put forward the proposal to set up a class for the winter semester that would consist of the company members. They would create a new adaptation by researching and compiling a text using existing translations.

This project would involve auditioning and selecting the cast in the first week of the winter semester. Lawrence, Charleen and the cast along with DJ Kelly and Christine Johns, the stage managers, would read, research and discuss several translations of Electra. The final

goal was a completed adaptation by the end of the semester. I felt this was an exciting process for the entire Electra company and the Drama Department. The opportunity for the company to workshop the play for four months would give us great deal of lead-time for the production in May of 1999.

Lawrence wanted to work a 'professional' style rehearsal period as he had just completed a position of Assistant to the Director on Theatre Calgary's A Christmas Carol. He felt there was a great opportunity to approach the production differently and that it would benefit the students involved. The change would be a switch from the Drama Department's traditional rehearsal period with rehearsals in the evening to a full day rehearsal. We proposed a change to a rehearsal period based on the Canadian Actors Equity Association - Professional Association of Canadian Theatre agreement. This would involve a major change in the production schedule, as we would not begin rehearsals until after the semester was completed.

Our production would try to follow the schedule that would be used by a professional theatre company. This would be a three-week rehearsal period in the rehearsal hall and a ten-day technical rehearsal period in the theatre. The rehearsal period would consist of a six-day week of seven-hour rehearsal days. We would have a setup period in the theatre of two weeks before the actors got onstage. The only exception I felt we should make was to not do the extended rehearsal days during the last week before opening. As Electra would play less than two hours in performance I felt we would not require the longer rehearsal days.

The change in the rehearsal period was going to be a challenge for the students. The longer rehearsal hours would require more concentration and stamina from the company but we felt it would be exciting, intensive and beneficial for all involved. We were unsure if our plans were going to be contrary to departmental policy and I was unsure how the staff would accept the change in plans. Fortunately this was to be a Reeve Theatre production.

During my tenure on the University Theatre Services staff I had seen how changes were resisted but I was sure we would not face this minor problem with Don Monty and Brian Kerby. We did feel that it was very important to attempt the change in procedure.

Our discussion turned to the approach and the look of the play. Lawrence felt the themes of revenge and passion were the motivating forces of the myth of Electra and Orestes' desire to kill their mother and her lover. Lawrence felt we could also convey that virtually all pre-Christian indigenous societies have a common mythology. The Greek god Apollo had counterparts in Roman (Sol), Celtic (Beli Mawr), Aztecan (Huitzilopochtli), Hindu (Dhanvantari) and Russian Slavic (Khors) and many other religions. He wanted the play to be set in a tightly knit community atmosphere and in a modern time period.

Several times and places were suggested; Sicily in the 1920's, rural Spain near the end of the 19th century and the present day barrios of East Los Angeles were among the major ideas tossed around over pasta and wine at Chianti's restaurant. We agreed to go away and read the play again, think about the ideas we had discussed and meet after the Christmas break. We would then discuss the play further and decide the direction we would take the play.

After our return to school after the Christmas break we began to refine our ideas. The Mexican concept had become the favorite as this setting defined the passion and the heat that Lawrence desired. Placing the play in Mexico gave credence to our belief in the universality of myths. Tasha and Lawrence began discussing set and costume designs, as we had to start to move quickly to meet the departmental deadlines. We also began discussing the role of the gods in the play and their importance in productions of Euripides' plays. I felt we had to create a spectacular entrance for Castor and Polydeuces. I put forward the idea of flying the gods based on the reference in the play to the gods sailing through the sky and parting the clouds. Lawrence was very excited by this prospect. I assured everyone that safety would be the highest priority and would take precedence over everything else.

Tasha was very willing to let me take responsibility for the look of the effect and limited her involvement to the costume design. She left the mechanics of the design to me. This meshed perfectly with the challenges I had hoped for in my graduate thesis project. I began to research methods that would work in the Reeve Theatre. Flying a performer in a flexible black box theatre would be a greater challenge than performing the same effect in a theatre with a fly tower. All the necessary technology and equipment for the effect had to be designed built and installed in the theatre space.

Lawrence and I tossed around a number of ideas. We agreed that we would like to do two different styles of flying. We quickly settled on a straight up and down movement for Polydeuces and a lateral flight for Castor. We felt that by flying in Polydeuces upstage we would focus the audience's attention and allow us to surprise the audience with Castor's entrance.

We felt we had a direction for the production. We hoped to approach the work of Euripides and the style of production in the Drama Department differently. Traditions were meant to be challenged if we were to stretch ourselves as artists.

## Chapter 3

### Pre-Production Period

The pre-production period for Electra involved the long range planning; allocations of the production budget, scheduling and getting the production built and ready to move in to the theatre. Don Monty had presented the production schedule to me but with our plans to change the rehearsal and the production period it was necessary to revise it. The schedule was based on Drama Departmental policy and historical precedent. Although we could change elements of the schedule we were locked into certain dates as they pertained to the scenery costume and prop shops. We were given a budget for the entire production of three thousand dollars to be allocated to each department as it was deemed necessary.

My main priority would be the costing and acquiring materials for the construction of the set. The breakdowns for the costumes would be the responsibility of Tasha and Lisa Roberts, wardrobe supervisor. They would present their proposed expenses for approval. Lawrence and Tasha had determined that the production would not use many props. The majority of these would require very little construction and expense. Werner Karsten, head of props, would cost these items. He presented a budget request that was acceptable.

Electra was the third of four productions that involved the Drama Department in the 1999 Winter Semester. Our build period was scheduled after Mary Stuart and before a co-production project, Slavs.

We proposed several changes to the production and rehearsal schedule. Lawrence wanted to work a rehearsal schedule that followed closely to the Canadian Actors Equity Association and Professional Association of Canadian Theatre's regulations. This involved a rehearsal schedule of seven-hour days six days a week beginning after the semester was completed. I drafted a master schedule for the rehearsal period in the Studio Theatre and the production

period in the Reeve Theatre. This schedule detailed the expectations for the cast and the crew for this extensive period. I submitted it to Professor Brian Smith, Producer, for approval. The change was approved and we moved forward with the audition process and establishment of the class.

I would not be directly involved in the class and the development of the script. I could not attend the class with the frequency that I would have liked because of prior commitments and a busy class and work schedule. I would be involved, though, with Lawrence on a daily basis as we quickly established a very good working relationship as we were constantly discussing the production. Lawrence had very solid ideas on how he wanted to approach the production. We exchanged ideas and concepts daily with every item approached openly and considered even if they were verging on the 'impossible'. I felt it was important not to say 'no' too quickly. I wanted to keep the process positive and allow Lawrence great flexibility in formulating his ideas for the production. I would consider everything and if it were too expensive or too challenging for our resources I would explain this and suggest alternatives, always building on the ideas that Lawrence had presented me.

Unfortunately Tasha's work commitments in Red Deer limited her involvement in this process. Many of Lawrence's and my discussions were 'on the spur of the moment' and would take place as soon as the ideas came to either of us. It was a shame that Tasha could not join in on these discussions. This would have improved the flow of ideas and information. We were experiencing difficulties in communication on the design level and it was hindering the production.

Early in the semester Charleen decided to drop out of the production. She would still work with the planning of the conference but would not serve as Dramaturge. She was replaced by Alex Day, a graduate student from the Humanities Department. This produced no major problems for myself. Alex quickly fit in with the company and brought many fresh insights and research about Greek history to the production. He also volunteered to serve as a

crewmember if he was needed.

Lawrence and Tasha were working towards a design for the set and the costumes, with several meetings and discussion. The work was progressing but it was going slowly with several deadlines approaching quickly. I tried to intervene and push the process along but there was very little I could do but constantly remind Tasha and Lawrence of the approaching deadlines and express my opinion when asked.

Lawrence and Tasha came to an agreement on the look of the wall unit and the look of the hill area and the groundplan. Lawrence had found a photograph of a column piece that was a Mexican calendar either Aztec or Maya. The period was not crucial but the look and feeling of the piece was very important to Lawrence. He felt this one piece would be very important in establishing the link between the past and the present for the inhabitants of the Peasant's house.

I called a design meeting for March 23 with Douglas McCullough, James Andrews and Barry Yzereef. I wanted Tasha and Lawrence to present and discuss the design with the faculty and have the artistic content approved. I had hoped that this discussion would finalize the design and we could complete the drawings and move into the construction of the production. Unfortunately, there had been a miscommunication. Martin, Lisa and Werner were present at the meeting. I had not invited them and had not planned for this meeting to be a production meeting. I had scheduled the production meeting for March 25.

We were not prepared for the questions that were posed, as we had not completed the technical drawings; we only had the model and reference photographs. We had experienced several problems getting a final design and I had hoped that this meeting would have been restricted to students and faculty. I had hoped that this session would be more of a graduate class than a meeting. Lawrence and Tasha were slightly unprepared for the questions that were asked. I was very frustrated coming out of this meeting and I realized that I would have

to explain my every decision and leave nothing to question. I was attempting to implement a change in the standard operating procedures for the department, changes that I felt had to be made to achieve our production's goals.

This would prove to be a very important lesson for me. I would have to maintain control of the weekly production meeting with a definite agenda. I could not afford to lose control of the meetings as I had seen other students do when I attended the meetings as the Stage Manager for the University Theatre Services. It would be important that the meetings would be a method to trade information and make sure that all members of the production knew what they needed to know.

After the design presentation Tasha gave Martin a diameter for the column piece. He began the build to duplicate the column piece from the photograph. This allowed us to begin the build period and get pieces built while Tasha completed her drawings for the wall unit and the boardwalk.

Tasha had wanted to cover the stage floor with corrugated cardboard to give the look of sand. Lawrence liked the look but was unsure if it would mute the sound of the actor's feet. Lawrence wanted to use a variation of flamenco dance for several of the Chorus' speeches. This would involve a considerable amount of foot stomping. He was concerned that the cardboard would muffle the sound as the chorus were not trained as flamenco dancers and did not possess the necessary strength or technique. My concern was to the durability and safety of the floor, especially as it became more worn and torn. I suggested that we do a test and see how the cardboard held up to being walked and danced on repeatedly.

I found several large pieces of double-sided corrugated cardboard and secured them to the Reeve stage floor. Katie Sanders, the choreographer for the production, danced on the pieces of cardboard wearing the style of shoes that would be worn by the Chorus. The cardboard was flattened out but did not tear under the repeated foot stomping and as it was

flattened it did not mute the sound by any noticeable amount. Tasha, Lawrence, Katie and I felt it would be workable from both an artistic and safety viewpoint. Tasha wanted very much the corrugated side of the cardboard to show through. Lawrence was unsure of the look and the sound that was produced if you dragged a foot across the corrugation. We agreed to go with the double sided but with areas of exposed corrugation.

Tasha completed the groundplan and front elevations and delivered the drawings to Martin. He checked the drawings and after a few questions that Tasha needed to answer he determined what materials were needed to construct the set. Martin gave the list of materials to me and I researched availability and prices from the University of Calgary's system suppliers. Martin had decided to use old flattage for the wall unit as it had a very irregular top line and was also to be very heavily textured. The materials allocated to the wall would be used to build new replacement flattage that would go into stock. The boardwalk unit would be built out of standard two by fours and two by ten-inch lumber that we would reclaim to stock after the production closed. We had hoped to use weathered barn wood for the boardwalk but I was unable to find a source of free distressed gray wood. It was decided to paint the new lumber to look weathered.

A list of materials with prices was given to Don Monty and the lumber order was placed with Davidson Enman. The only other major set budget allocation would be for scenic paint and texture material for the wall unit.

The only unusual item to locate was the corrugated cardboard as it was unavailable from any of the University of Calgary's system suppliers. I had purchased cardboard from Shippers Supply for a previous show that I had worked on in Edmonton. I phoned the Shippers Supply in Calgary and inquired about the availability of rolls of double-sided corrugated cardboard. We had to cover just less than fourteen hundred square feet of stage floor. The salesman informed me that they had six feet wide by two hundred and fifty feet long rolls in stock and on sale. This would cover fifteen hundred square feet I ordered a roll to be

delivered and arranged for a petty cash payment for the cardboard with Don Monty.

The roll of cardboard was delivered and it was discovered to have backing on only one side with the corrugation exposed. I had asked about double sided but had also enquired about continuous length on a roll. I had placed more emphasis on the need for continuous lengths during our telephone conversation so it must have been assumed that I wanted the single sided and he placed my order as such. The salesman had not told me that double-sided cardboard was only sold in flat sheets.

We discussed exchanging the roll for flat sheets but discovered that the sheets were substantially more expensive, were not in stock and had to be special ordered with a long delivery period. It was determined, with very little debate that we would use the single sided corrugated cardboard with the corrugation face up. Lawrence was comfortable with the decision and Tasha was happy because this was the look she wanted originally for the stage floor.

This was the only research and development that was required for the set construction. The wall unit was to be built in the scenery shop at the University Theatre and moved to the prop shop. It was necessary to move the completed wall unit quickly due to the rental obligations of the University Theatre. The shop doubles as the stage left backstage area when the University Theatre is in performance. Martin balanced his schedule and worked on the wall unit and boardwalk when the shop was free and carved the figures for the column piece when he was required to be quiet. The painting of the scenery would be accomplished in the property shop and onstage in the Reeve Primary Theatre.

The wall unit was completed quickly with the only major concern being how much of the wall would be climbed upon. Lawrence went to the shop, looked at the wall unit and decided the path that he would block Apollo to climb. The path was blocked and Martin reinforced the wall unit and built foot holds into the face of the wall.

The build period for the set was to be completed quite early in comparison with other productions because of Martin's holidays. This was not a problem but I had to co-ordinate the schedule around staff members being away from the university on personal business and short holidays.

The rehearsal period began immediately after the completion of classes. The company was to rehearse in the Studio Theatre from April 19 until April 30 with the company transferring to the Reeve Theatre on May 1.

In preparation for the start of rehearsals I went over several things with DJ Kelly and Chris Johns about procedures and information distribution. We were compressing the time frame of the rehearsal period and it was imperative to get the information from rehearsals to the staff, Tasha and myself. They would be responsible for all the scheduling of the actors' time with major concerns being final exams and costume fittings. It would also be their responsibility to make sure all extra rehearsal spaces had been booked. I had booked the Studio Theatre earlier in the semester but had not booked extra classrooms for scene work or chorus work. It was very important to have all spaces officially booked, as the rehearsal period would run concurrently with the dance festival season in the University Theatre.

The class had been successful and the script was in good shape. DJ and Chris had assembled and compiled all the work done by the company on their scenes and produced a working script. DJ planned to continue using the computer in rehearsal to record text changes, blocking and technical notes.

I had started to recruit '00' hour students for the crew but had only met with one, Jennifer Connolly. Jennifer needed virtually all her '00' hours and had only one commitment, a final exam, during the production period. She was willing to serve as an Assistant Stage Manager for the show and this had become very important. Chris was going to Saskatoon during the

production period and would not return until after the show had opened. I outlined the duties and expectations of the position and the importance of her role with the show. She would be responsible for the organization of everything backstage.

I produced a drawing of the groundplan with measurements from Tasha's for DJ, Chris and Jennifer to use to tape out the set outline in the rehearsal hall. Rehearsal props were assembled, rehearsal costumes were pulled and the company was ready to begin rehearsals.

## Chapter 4

### Flying Design Concept

Lawrence and I discussed the look of the entrances of the two gods and agreed that the effects should be different. The two gods in Electra are the Dioscuri, Castor and Polydeuces. Castor is the son of Leda and Tyndareus and the twin brother of Klytemnestra and the half brother of Polydeuces son of Zeus and Leda. Polydeuces is also the twin brother of Helen. We wanted the audience to be surprised and amazed by the entrance in the same way as the original audience sitting in the Greek amphitheatre. Through our research we had discovered that the Greek audiences expected a spectacular entrance of the gods, through the use of deus ex machina. We decided that the gods must fly.

There are many factors that must be considered when a performer is flown. The most important being safety. Whatever the effect would be it would be designed with safety as the utmost important consideration. No matter how wonderful the effect looks, if the performer's safety is compromised the effect is a failure.

We had to decide what was the look of the effect and how the flight would be incorporated into the play. The considerations were path of flight, amount of movement, whether the performer would remain in the air or land on the stage and would the performer have to come off the system.

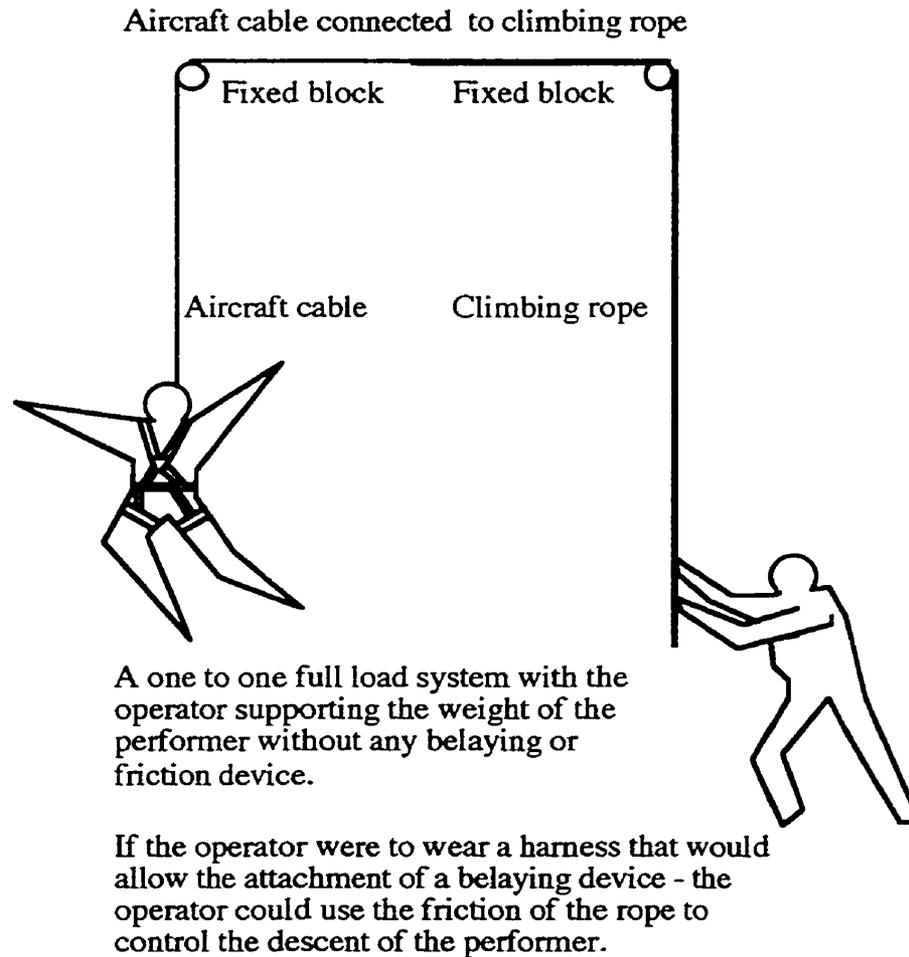
There are basically four movements that are possible when flying a performer. The motions are a simple descent to a landing by the performer, or a vertical ascent and descent with the performer returning to the starting point, a vertical ascent and descent that has lateral motion around a fixed point, and the same but from a moving point.

For all other movements it is important that the performer is secured in a harness that can

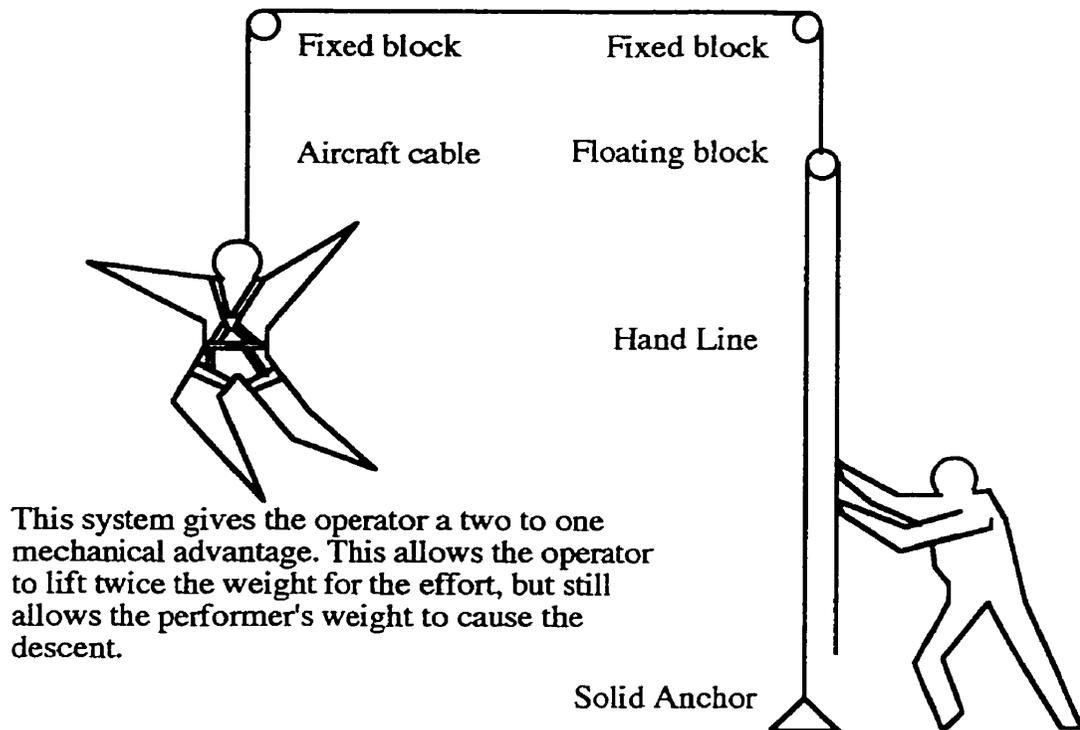
not be opened when it is under load. The harness must be secured to the lift line. This connection must also be secured and be unable to open when the system is under the load of the performer's weight. A connection system can be designed that will open quickly by the performer but only when there is not a load on the system. This style of system would not allow the actor to release the locking device when the performer is in the air. The device would be easily and quickly released once the performer's weight is supported by the stage floor. A safe, secure and comfortable harness is the primary building block in assembling a flying system.

The only exception for an actor being without a harness would be an effect that was simply swinging and climbing on a rope secured to a point above the stage. This is fine when that is the required effect but it does not offer any illusion and our goal was to present the illusion of gods descending into the mortal world.

The simple descent can be obtained by belaying the performer in to the stage using rock climbing methods and equipment. Having the performer descend from the grid with the operator simply controlling the rate of the descent could perform this. The performer would wear a harness that was connected to an aircraft cable that would pass through a loft block and would attach to a climbing rope. The operator could support the entire weight of the performer and use a belaying device attached to the operator's harness to control the descent. The belaying device would apply friction to the rope and would control the speed of the descent. The performer's own body weight would supply the force that caused the descent. This would be very safe and easy to perform but it would be extremely difficult to make an ascent, as it would require lifting the performer's entire weight.

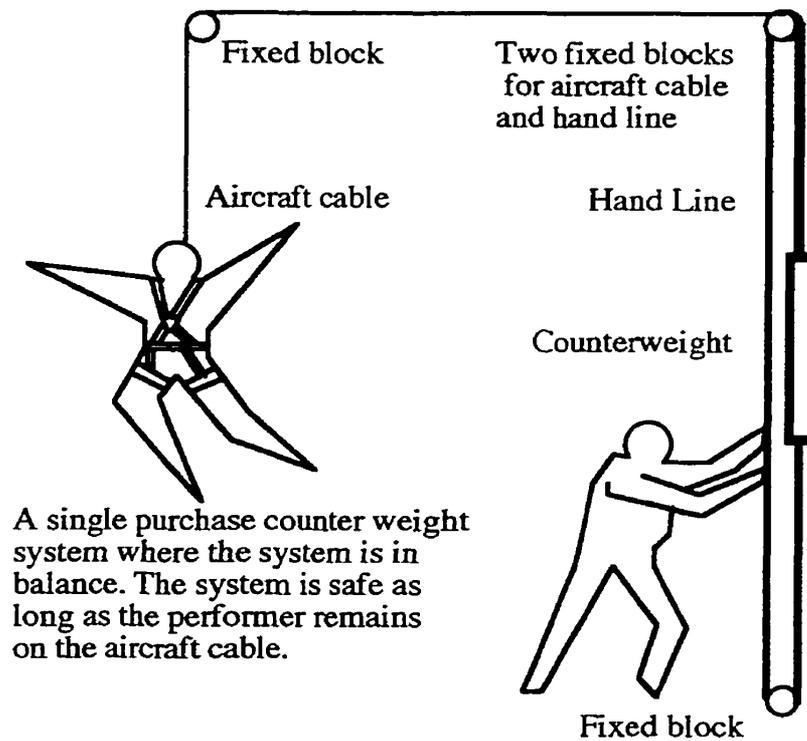


A floating pulley system could be installed between the operator and the loft block. This would aid in the ascent but would not be able to compensate for the entire weight of the performer. The weight of the performer would still have to be able to overcome the mechanical advantage created by the pulleys to produce a descent. This would still require the operator to lift the weight of the actor up to the grid, but with a two to one mechanical advantage. This system would allow the performer to land and go off the system safely, as the system would not be counter weighted.



A counter weight system would allow the performer to move up and down under total control. The system would require an arbor containing stage weights equal to the weight of the actor. In a counterweighted situation, the load has to be equal on both ends of the lift line so that gravity is acting on both ends and the system will be balanced. The system would be very safe and efficient as long as it was not in an out of weight situation without the counter weight being supported. When the performer was not on the lift line and the arbor weight was resting on the floor all would be safe. If the weight of the actor were on the floor the system would be out of balance with the counter weight suspended above the deck. This would still be acceptable as long as the actor remained on the line. If the actor were to come off the line there would be an out of weight situation that is dangerous and must be controlled carefully. The counter weight must be carefully lowered to fly out the unweighted lift line. If the performer has to remain on the floor and on the line, a device would be needed to support the weight when it was at the high trim position. This could be accomplished by installing a locking device. We had been challenged by a similar situation

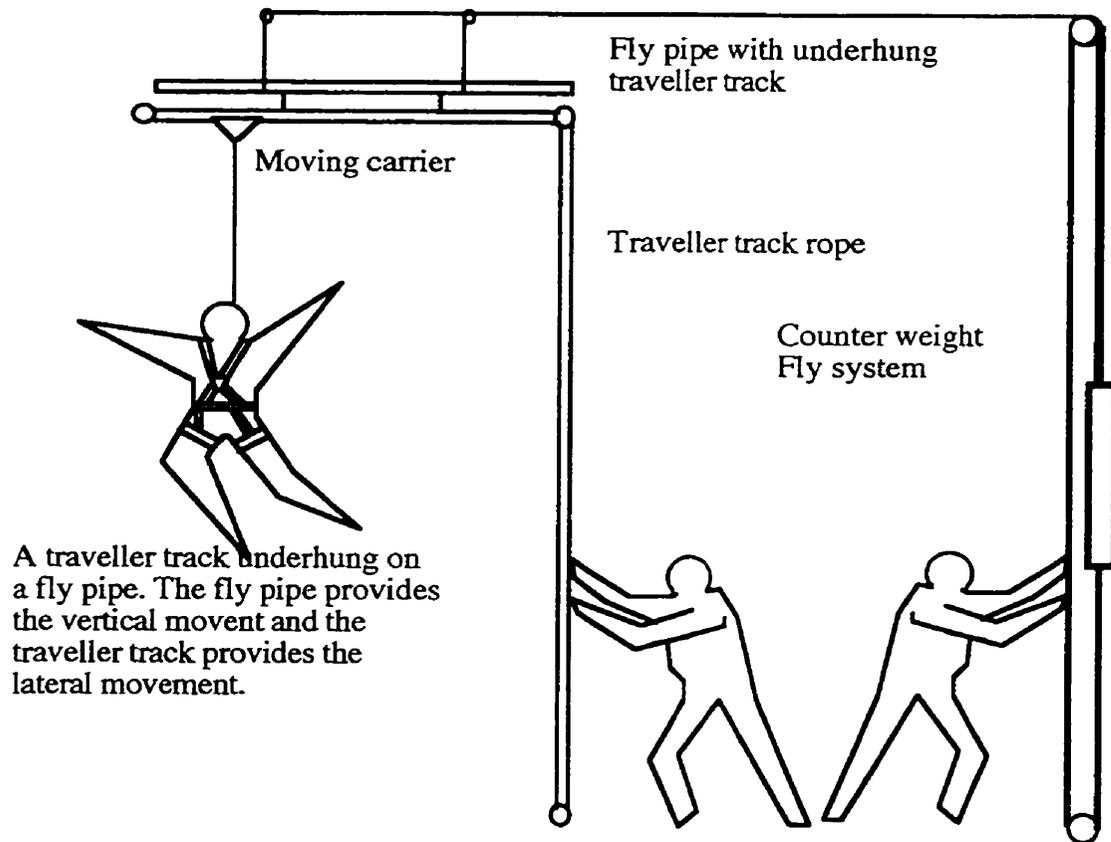
at Theatre Calgary. Tracy Nunnally, the Technical Director, had designed a device that was placed on the top of the arbor, slid over a pipe and locked in place with a hook. This secured the arbor until the lock was released and the arbor safely lowered to the deck. There are various ways to install a locking mechanism on a system. The design would depend on the counterweight system and the structure to which it is attached. The flying effect for Electra did not require the performer to leave the lifeline so we did not require a locking device.



More elaborate movement of the performer requires a more complicated system or more advanced choreography by the performer. The single line could be easily modified to allow movement in an arc around a single point. Using the performer's momentum to move within the arc of the swing could choreograph an aerial ballet. The operator would control the height of the flight by pulling up and down on the lift line. The system can be designed to use a counter weighted system but it would be best to keep the counter weight to no more than half the performer's weight. The operator would have to be strong enough to

compensate for the changing weight on the line because of the changes in momentum on the line. The system could also use pulleys to gain mechanical advantage that would be safer than counter weights but would require more rehearsal. This style of flying is usually used for fast movements, as it is dependent on building and using momentum of the performer and the system.

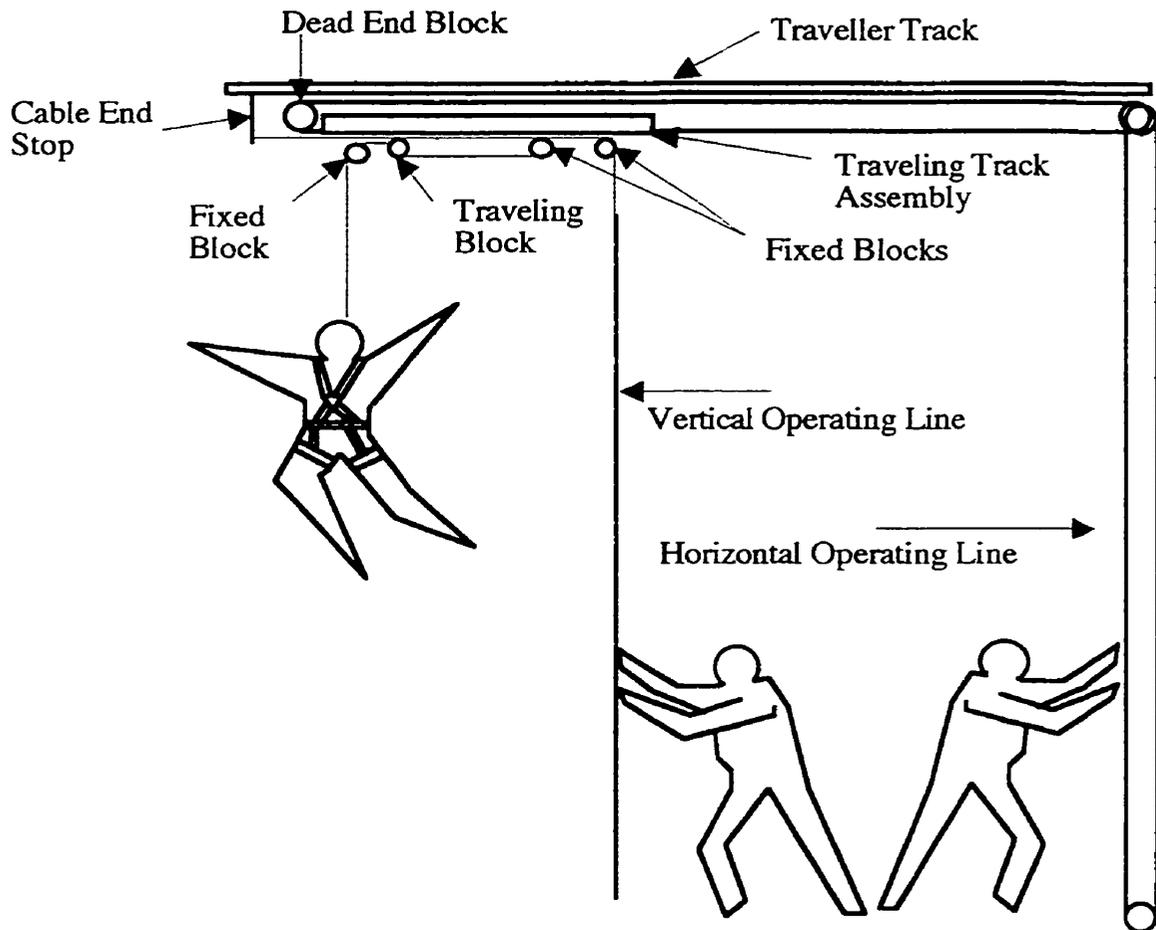
This movement can be accomplished and augmented by having the ability to move the point that suspends the performer. This places more emphasis on the operators and allows the performer to be concerned with body position and acting. The momentum required to make the moves would be provided by the moving of the point above the performer. The vertical lift and control can be provided by a counter weighted system such as a fly tower. The traveler track would be underhung from a fly pipe with the system being designed to allow the actor the ability to go on and off the system. A 'carpet hoist' can be designed to compensate for the changing weight of the system. This system requires two operators with one of the operators operating the counterweight system moving the fly pipe to control the vertical action of the performer. The second operator controls the horizontal movement using the traveler track. The performer would be suspended from a traveler track carrier that would move back and forth in the traveler track. The combination of the momentum of the carrier and the performer allows the flight to be controlled. As the performer would swing under the point, the operator would move the carrier to overhead of the performer to counteract the swing and stop the performer's motion.



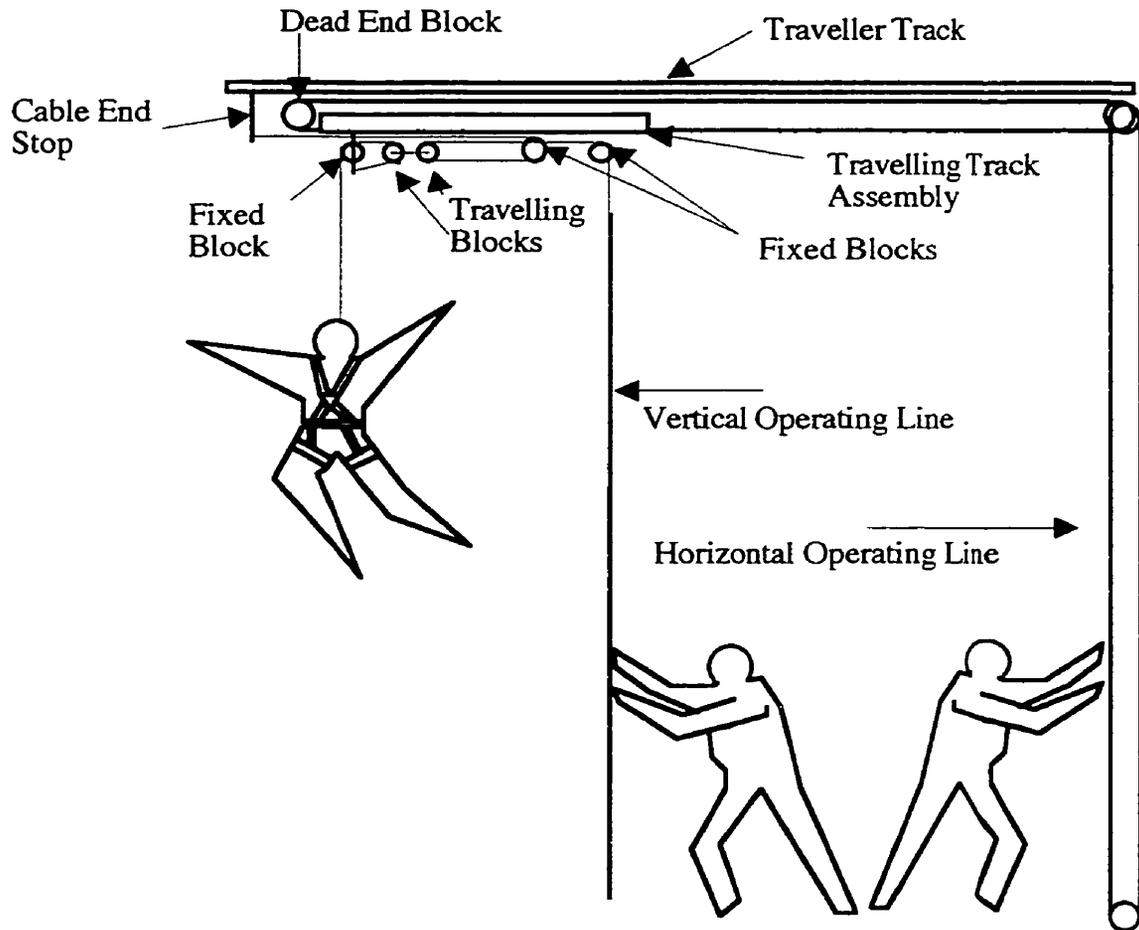
A 'carpet hoist' is simply a system where two adjacent fly pipes operate as one. The pipe that supports the performer has a bracket attached to the bottom of the arbor. This first pipe is weighted to the equipment, such as a traveler track, that is attached to the fly pipe. The bracket would lift the second arbor that is loaded to the weight of the performer. This system requires very skilled operators and must follow a sequence of steps to ensure the system is locked off when the performer is off the line.

The same system can be built without a fly tower by installing a track on track system. This system also requires two operators to move the performer. The system would consist of a traveler track containing a travelling track assembly from which the performer is suspended.

The first operator controls the lateral movement of the performer by moving the travelling track assembly back and forth along the traveler track. The travelling track assembly consists of a carrier that has a travelling pulley block between two fixed pulley blocks. The second operator controls the vertical movement of the performer by varying the distance between the floating block and the offstage fixed block. The maximum vertical distance of the flight is the length of the maximum distance between the fixed block and the floating block. The lowest point of the flight is achieved when the two blocks are closest; the highest point is when the blocks are at the maximum distance apart. This system gives the operator a two to one weight advantage allowing the operator to lift twice the weight.



If a greater length of vertical flight is required a block consisting of two pulleys can replace the travelling block. Each fixed block is connected to one of the floating blocks. This gives a maximum vertical flight that is two times the length of the travelling block assembly. This system is a single purchase system and does not give the operator any mechanical advantage.



Lawrence and I discussed the possible movements we felt we would like to see Castor and Polydeuces perform. We decided that Polydeuces would enter from upstage on a straight up and down descent with no lateral movement. Lawrence and I had decided that Polydeuces would not land on the deck and therefore the system would not be in an out of weight situation. There would be no need to install a locking device. It was hoped that this simple movement would be a very dignified entrance and would befit a god. We decided that it would appear upstage left of the wall unit that Tasha was designing. This would be the lower part of the wall unit and would provide the best visibility for the audience and the actors onstage. This would give them a clear sight line to Polydeuces. It would also allow us to use the Reeve Secondary Theatre as our loading and launch position and keep it masked

from the audience.

It would also have to be an effect I could build with the equipment I had on hand between the Reeve Theatre, University Theatre Services, my own personal gear and gear I could obtain from my connections in the Calgary professional theatre community. We did not have room in the budget, as it was delivered to us, to afford anything elaborate.

We wanted Castor's entrance to involve lateral movement as well as a vertical movement component. The only way we could accommodate this in the Reeve Theatre was to use a track on track system. I began to research available equipment to perform this flight. Theatre Calgary had the track and carrier but it could only provide us with the lateral movement of the performer. Hanging the track from a fly pipe controlled the vertical component of the flight. We could underhang the track from the ceiling of the Reeve and move Castor across the space at a constant height. This would involve building a launch platform at the height of the effect. This would limit the options of the flight path. The loading of an actor into a flying effect has to be done with safety being the first and foremost consideration. Safety could not be compromised to facilitate a quieter or masked loading. There would be no way to load a performer safely and mask this visually or audibly from the audience in the Reeve Primary Theatre.

The permanent arch separating the Reeve Primary from the Secondary eliminated any entrance from upstage, as the arch was too low. Any track we used would have to be hung low enough to pass under the arch. This would be very visible and would again reveal our intentions to the audience.

We needed the ability to lift the actor from a loading position off the floor and fly them out over the audience to playing position over the stage. We could accomplish this by placing a track that loaded at a position behind the main seating riser. We would then lift the performer to a pre flight position above and behind the majority of the audience. We could

then fly the performer over the centre aisle to a mid stage position. He would play the scene and then return over the audience to the loading area. The major consideration on an effect like this would be the perceived danger of placing the track over the audience. This was not a major concern for myself, as I would not hang a track that would not be safe. We planned the flight to take place over the centre aisle and with careful practice and flight choreography this would not create a problem. I had been involved in a flight over the audience for Peter Pan at the MacLab Theatre at the Citadel Theatre in Edmonton. We had flown Peter up the centre aisle without any mishaps. There was a concern for this flight path from Don Monty. I suggested to Lawrence that we change the path to over one of the aisles between the seating units. We chose the house left aisle because it would bring the second flight in on a diagonal to the flying position upstage.

Tracy Nunnally from Theatre Calgary suggested I get in contact with Rod Oswoy from Kootenay Highline Inc. in Cranbrook, British Columbia and inquire about renting his track on track system. Rod had purchased a system several years ago for a high school production of Peter Pan and was now recovering his original outlay by renting the system out. The system was complete with track, flying block carrier, rated rigging hardware, operation hardware and harnesses. It could easily be installed under the cat walk grid and supported from the roof.

The problem was money, as we did not have room in the budget for this effect. I could probably get a good deal from Rod, as we had a short run planned, if we provided transport for the equipment to and from Cranbrook.

We had hoped that I would receive the grant I had applied for earlier in the semester. I had expected to hear by April 1 whether I had been approved. I had planned to use this award to help defray some cost of special effects for the production. Unfortunately I was denied the grant for unknown reasons.

This was unfortunate news and resulted in a major change of plans for Lawrence and myself. We were unable to afford the rental for the Track on Track system but we would continue with the counter weighted system for Polydeuces. I had to come up with an alternate method for Castor's entrance.

It was fortunate that all other elements of the production were on schedule and progressing. This allowed me the opportunity to step back and analyze what was needed to accomplish our goals. Several times in my career, good ideas for productions had been challenged by circumstances - usually a shortage of resources - but it falls into the job description of the technical director to find answers. I had tried to solve the challenge of our choice for Castor's entrance by searching for additional funding. I had found no other source of funding through grants and chose not to seek private funds through fund raising. It was now my responsibility to find an answer that fit our resources and time frame. A common theory amongst theatre technicians is that all effects require a certain amount of 'theatrical ectoplasm'. The theory states that all effects are composed of time, skill, available materials (borrowed, stock or recycled from previous productions) and money that equal a certain area. If you have very little money, you will require more time, available materials, and skills to create the effect. I knew we did not have any money in the budget for this effect so it would have to be created out of materials on hand at the university and what I could borrow from my contacts. Lawrence and I were faced with the question of whether we still wanted to fly Castor or to create a different entrance. Lawrence was disappointed but felt as long as we could still provide some form of theatrical magic he would be happy. He wanted separation between the mortals and the gods onstage. This single choice provided me with a wide variety of options and I started to research and find a solution to this challenge of this large piece of 'theatrical ectoplasm'. The important item was I still had time available to work on the project. I would have to balance this commitment with everything else I still had to deal with concerning the production and my studies.

## Chapter 5

### Lighting Design

The lighting design for Electra was achieved in two parts, since the plot was due just as the rehearsal period began. I designed the general plot for coverage of the stage and would add the specials as I watched the rehearsal process. The general plot was designed by working from the ground plan of the set. I worked out a plot that would include front light for illumination and top light and gobo washes to provide shaping, mood and texture.

The main playing area was approximately sixty feet wide by twenty feet from the wall unit upstage to the pit downstage. This area was covered in cardboard and needed to be lit from edge to edge, although Lawrence was not going to use the outside edges as a playing area to any great degree. The wall was placed twenty feet upstage from the pit. I divided the stage into two rows of five areas across and one row of four areas across. The rows divided the stage in three lateral sections, the downstage row extended from the edge of the pit to approximately eight feet upstage. The second row overlapped the first on the downstage side and covered the stage up to the boardwalk. The third row covered the boardwalk and mound area, including the wall unit. The downstage and midstage rows ran the width of the stage with a centre area and two areas to each side. The upstage row divided the wall unit into quarters. Two Paralipspheres lighted each area, one from each side at a forty-five degree angle from an actor standing on stage. This was based on the method created by Stanley McClandless with one side being gelled in a warm colour and the other side gelled in a cool colour. I chose to use Roscolux 05 (Rose Tint) and Roscolux 65 (Daylight blue). I decided to use the Paralipspheres because as zooms they have a variable beam size that allows for lighting areas that are very even in size. The large number of Paralipspheres in the Reeve stock allowed me to be consistent in my groups in my general plot.

The general plot also consisted of straight on front light using eleven Altman Shakespeare

15° to 35° zoom ellipsoidals and two Altman Shakespeare 35° to 50° zoom ellipsoidals. The primary purpose of these instruments was to light the face and blend the warm and cool colours of the forty-five degree generals. This is a personal design choice, as I dislike when the sides of an actor's face are two different colours in a realistic lighting cue. This group was divided into rows of three, five and five with the row of three farthest from the stage. This row lit the pit area and blended into the second row of instruments. This row combined with the downstage area and midstage lights and blended the areas into one another when it was a full stage cue. The row closest to the stage consisted of three Altman Shakespeare 15° to 35° zoom ellipsoidals flanked on either end by two Altman Shakespeare 35° to 50° zoom ellipsoidals. This row blended the second and third rows of the forty-five degree front lights and lit the actors when they were up against the wall. I used the 35° to 50° on the outside edges to get some extra coverage on the upstage edge of the set. The upstage row of Paralipspheres covered four areas instead of five. I had very little light focussed there as Lawrence did not plan on using those areas but I wanted to be prepared. Originally I had designed five areas across on the wall but the converging angles of the Reeve Theatre made both offstage lighting positions into what I felt were too steep an angle.

I designed three rows of double hung top backlight. The downstage and midstage rows provided coverage on the pit and the main acting area. The upstage row was back light on the wall unit to give it depth and provide shadows on the forestage. Each area had two eight inch; one thousand-watt Fresnels focussed identically. I chose to do a cool colour wash using Roscolux #69 - Brilliant Blue and a warm/neutral colour Roscolux #54 - Special Lavender. The lavender gel is a very flexible color as it has a relatively high transmission rate and at low levels is neutral to slightly cool and at high levels is a warm colour. This was useful as I did not have the lighting instruments, circuits and dimmers to do a three colour top back light wash with cool, warm and neutral colours. The use of top light colour washes is preferable to control the mood and time of day of a scene. It reads very well on the scenery and the actors without affecting the front light that provides the visibility.

I decided to make use of a number of gobos in the design. Gobos are a piece of heat resistant material, usually metal or heat resistant glass. The material can be cut or etched with a design and placed in the gate of a lighting instrument that can be focussed. I had access to a number of metal gobos from stock and decided to use a number of 'breakup' patterns. The gobo simply blocks light where there is metal and allows light to pass through the cut openings. An ellipsoidal can be focussed to a sharp edge or thrown out of focus to provide a softer edge. This allows the designer to create a variety of patterns of light and dark on stage.

I used two sets of gobo washes to provide patterns, texture and modeling to the actors and the set. I used two rows of tip lights using Paralipspheres. The two rows of five areas across illuminated the areas downstage to midstage and midstage to the top of the wall. The sidelights were in two colours, warm light (Roscolux #30 - Light Salmon Pink) from stage left and cool (Roscolux #62 - Booster Blue) from stage right. The second gobo washes were diagonal backlight with cool (Roscolux #65 - Daylight Blue) from stage left and warm (Roscolux #30 - Light Salmon Pink) from stage right. The lighting instruments were hung and focussed at a forty-five degree angle from the centre of the lighting area. I chose to use the colours from the opposite side to the other gobo wash to provide more texture and colour modeling. The diagonal gobo wash also caught the top of the wall to add depth and shadows.

For both washes I used a variety of small breakup gobos in soft focus to give a mottled effect of shadows and light blended into each other. Budget restrictions kept me from buying new gobos. I wanted a soft look with no definite patterns on the stage. The Drama Department stock of breakup gobos provided a number of good choices. I chose gobos that had smaller cutouts and sharper edges to give the highest amount of texture.

I had hoped to have a front gobo wash to add texture and to break up the flatness of the front light but again I was short of equipment. I prefer to use as many gobos as possible in

my lighting designs to break up the beams of light into a variety of patterns and texture.

These groups of instruments were to provide the elements of the general wash that would illuminate the actors and the set. The general plot was designed before I went to Regina and was hung and focussed shortly after I returned to Calgary. The next part of the design was to plot the lighting instruments for the specials and the effects. Lawrence and I decided we would go for pasta and wine and discuss the lighting for Electra.

On Wednesday, April 28 Lawrence and I went to Chianti's Restaurant for supper and to work our way through the script discussing the look of the show and hopefully plot the cues. After a lovely supper and a bottle of wine we began to discuss the play. It became quickly apparent that Lawrence and I were very close in our ideas on how we wanted the show to look. We quickly worked through the script describing how we wanted the scene to look and bouncing ideas off each other. We both brought good visual images to the table and improved and built upon these ideas by discussion. Lawrence verbalized how he wanted the scene to look and I would expand on how we could physically achieve those looks, images, moods and feelings. We broke down the script and plotted the cues for each scene.

Lawrence and I had discussed compressing several days and several times of day into the design. It felt to both of us that the action of the play occurred over a couple of days although there were no definite references in the script. The general plot would provide the colours to set the mood and establish daytime and nighttime. We wanted to move in and out of real time on several sequences. Two of the Chorus' major speeches would play outside of reality and would have very special looks. We also wanted to establish some cues that would enhance the emotions onstage during sequences that played on the fringe of reality.

We made decisions on how theatrical, and hopefully magical, the god's scenes would look. A majority of the god's lighting would come from the floor and be focussed upwards. This would give the god's a larger than life look; psychologically it would affect the audience's

view of the gods, as it is an unnatural look in the real world.

We tossed around several ideas and began to settle on definite looks for specials and cues. I would start to plot the specials into the plot and hang and focus the instruments immediately. As we came up with a list of specials and cues, I felt I could accomplish all the decisions with the existing equipment but I had to prioritize the list.

We wanted a sunset effect to show time passing and establish a sense of passion, heat and blood lust.

A very shallow angle to match the angle of the setting sun was achieved by hanging a row of five Colortran 12° instruments on the lighting pipe farthest from the stage. The instruments were straight on to the stage and overlapped in soft focus to cover the stage. I gelled all the instruments with Roscolux #26 Light Red.

We decided that we needed a 'blazing' hot noon cue, this had to be a straight down top light cue. Since the top back light washes that were used in the general lighting plot were gelled in colours that would not work as bright daylight I had to add instruments. I hung four one thousand watts six inch open white Fresnels spaced evenly over the stage at the midstage line. These four instruments effectively washed the stage in bright white and added the feeling of heat when combined with a bright general cue.

Lawrence had decided that the pit area was going to be used extensively. The pit area was already covered with front light from the general wash so I added two Altman Shakespeare 35° to 50° zoom ellipsoidals at side light positions. The instrument from stage left was gelled in Roscolux #54 - Special Lavender. Stage right was gelled in Roscolux #62 - Booster Blue. These instruments provided light that added dimension to the actors and allowed me to blend the pit into the night time look. The centre pit stairs also became a major playing area; to provide coverage I hung and focussed two Colortran 20° instruments

on the step unit. The instruments were gelled Roscolux #60 - No Colour Blue from stage right and open white from stage left. The focus was very soft and blended into the front diagonal light. The hot spots were focussed at the top of the stair unit to provide extra illumination on the down stage centre acting area. I added a gobo wash in the pit with two instruments focussed on the front of the stage and two instruments focussed on the pit playing area. These instruments were focussed to provide maximum coverage of the pit and were quite soft in focus to help blend the look of the pit. The downstage row of top back light was focussed such that it covered the pit.

Lawrence had blocked the Chorus into the audience for a choral speech. Each member of the chorus would move into the audience and stand in an aisle facing the stage. I focussed a tight back light open white special using Colortran 12° ellipsoidals on each Chorus member. These instruments created a bright white halo effect on each performer. The audience left (stage right) special that covered the landing in the aisle was also used for the Old Man's entrance up the side ladder.

We had discussed that the Chorus' speeches should have a distinctive look. Lawrence had blocked the Chorus to come out of the audience and cross down to the stage. The Chorus was blocked to turn quickly and move menacingly toward the audience. I felt that low flat 'shinbuster' light would add to the threat that Lawrence wanted to evoke. I put two strip light units on the upper level of the pit and focussed the units so the top edges of the beams were at the top of the wall. I used only two of the three circuits in each unit and gelled the lights with Roscolux #60 - No Colour Blue and Roscolux #65 - Daylight Blue in an alternating pattern. The flat cool light produced large shadows on the wall unit that grew larger as the Chorus moved downstage.

For the second major lighting effect for the Chorus we wanted to create a sense of madness. Lawrence and I felt that for this speech we could use a chase to add to the madness and the confusion. I decided to use four Altman Shakespeare 35° to 50° zoom ellipsoidals hung at

the diagonals from centre stage. Each instrument had a 'vertical bars' gobo in open white sharp focus. The four patterns overlapped each other and created a 'web' like pattern on the stage. These four instruments proved very versatile and were plotted into several cues when we wanted a sense of madness.

Several acting areas needed key lights to add emphasis. These were the 'column' piece, the door and boardwalk area, the door proper and the stage right area opposite of the column. Open white Colortran 12° instruments lighted these areas. The instruments were shuttered to the selected areas and put into soft focus.

The two audience aisles required lighting as Lawrence blocked most of the entrances to occur through the two walkways. The stage right - audience left aisle was used as an entrance way and required tight general lighting, which was provided by an open white Colortran 20°. The instrument was shuttered off the audience and illuminated the actor starting in the centre of the aisle at the edge of the pit. There was one special for the entrance of Orestes holding the head of Aegisthus. I hung another Colortran 20° instrument beside the open white special for the aisle and matched the focus. This instrument was gelled in Roscolux #26 - Light Red.

The stage left - audience right aisle was used less as a general entrance so it was lighted by two sets of specials. A pair of instruments was used to light Electra's nighttime entrance where she laments her life. I covered the aisle and the stage left section of the pit by the stair unit with two Colortran 20° instruments with breakup gobos in soft focus. The instruments were gelled in Roscolux #60 - No Colour Blue and #62 - Booster Blue. The other special covered Orestes as he stood on the two audience riser units and straddled the aisle while holding high the head of Aegisthus. I used a Colortran 20° instrument with no gel in tight sharp focus on the performer.

Lawrence and I wanted to underscore certain scenes with the 'blood lust' red light. We

used the red wash but felt we wanted even more control, so I added two specials that illuminated the actors and two focussed on the wall unit. We had liked the red on the wall but there were times we did not want to light the actors in red. I used two Parallipspheres with breakup gobos. I hung the instruments as far offstage as possible in the grid and just down stage of the wall unit. The instruments were shuttered tightly on the wall unit and thrown slightly out of focus. The extreme angle allowed us to have actors stand close to the wall but not be caught in the beam. The two instruments were gelled in Roscolux #26 - Light Red. We also chose to isolate the actors in a down centre stage pool of red light for the moment when they were grouped on the head of Aegisthus. These instruments were also used to light Pylades for his speech about the execution of Aegisthus. I used two instruments, a Colortran 20° from a low angle in the front of house from stage right and a Colortran 10° in the grid on the centre line. Both instruments were at shallow angles to the stage and as a result had rather large beam spread. The instrument from stage right illuminated the actors and the column piece. I used Roscolux #26 - Light Red to remain consistent with the other 'blood lust' lights.

Lawrence wanted Pylades' speech about the execution of Aegisthus to have the feel of a matador in a bullfight. I proposed to Lawrence that we light him in a series of hard edge circles of light that decreased in size as he moved to the climax of his speech. Lawrence agreed and I hung three Altman Shakespeare 15° to 35° zooms on the centre pipe below the grid catwalk and centered the beam on Pylades' spike mark. The largest circle was a straight down top light, with the next instrument hung just downstage, and it was a very steep front light, which produced a hard-edged circle. The largest circle was approximately ten feet and the second circle was approximately six feet across in diameter. The third was hung slightly farther out away from Pylades and was a tight circle of light that illuminated his entire body. The medium circle and the small circle were achieved by using irises in the instruments, as they would not zoom down to small enough circles. The overlapping beams allowed us to subtract slowly the larger beams and to shrink the light around Pylades as his speech reached the climax. We were also able to use the large circle for two of the dances that

involved the chorus circling Electra.

Lawrence decided to alter the opening of the play, by introducing the god Apollo. To our knowledge in all translations and adaptations of Euripides' Electra, the Peasant delivers the opening speech. In this speech he tells the events of Electra and Orestes' childhood that lead to their separation and Electra's banishment to the countryside. Lawrence chose to create a higher energy opening to the play, by establishing the events that lead up to death of Agamemnon, Electra and Orestes' father. He wanted to use a video montage that would play on the rear projection screen as young Electra and Orestes played as children. At the end of the video sequence Apollo would appear from behind the wall, climb over the wall and steal the children. The Old Man and Plyades save Orestes and young Electra is saved by Klytemnestra.

I decided to light a very dramatic entrance for Apollo by using several different instruments as he climbed over the wall. I built a small lighting tree upstage of the wall with three Parallipspheres focussed on the ladder upstage of the wall that Apollo was to climb. The lowest instrument on the tree was focussed to backlight the actor as he climbed the ladder. This instrument was gelled in Roscolux #60 - No Colour Blue. The second instrument was focussed slightly higher on the ladder and was coloured with Roscolux #26 - Light Red. The third instrument overlapped the second in focus and was gelled in Roscolux #23 - Orange. I wanted Apollo's first appearance to the audience to be very mysterious and cold and then quickly heat up as he established himself on the top of the wall. He was then illuminated from the front by an open white Altman Shakespeare 15° to 35° zoom that was hung and focussed so that the audience did not see the beam hit the stage. As the rest of the stage was very dark we wanted the audience to see Apollo 'floating' above the two children. Lawrence also wanted to establish Apollo's identity further by having him make the sun rise. I accomplished this the simplest way I knew by simply panning a light in an upward motion. I hung a Parallipsphere on a short lighting tree and placed it as far upstage in the Reeve Secondary as possible. This instrument was gelled with Roscolux #23 - Orange. The

instrument started the cue with the top of the beam just at the bottom of the rear projection screen. As the instrument faded up in intensity I would quickly and smoothly pan the instrument up until the top of the beam was near the top of the screen. The instrument would then be locked and would slowly fade out in the next cue. This would look like a 'symbolic' rising sun and would also serve as a strong hot background that would halo Apollo as he stood on the wall.

The entrance of Castor and Polydeuces also required dramatic lighting. I continued the concept of keeping the light source below the face of the god if possible. Early in my career another designer, Paul Morgan, had told me his theory that light from below caused the audience to perceive that the actor was above mankind because they appeared to be above the sun. I have always found this an interesting idea and thought this was a good opportunity to experiment with it.

As Polydeuces would appear first and travel downward into the audience's view I decided to keep it very simple and light him from a single low source. I placed a Parallipsphere on a floor stand just upstage of the wall and focussed it on the low trim flying position for Polydeuces. This instrument was focussed 'wingtip to wingtip' and full body. A second Parallipsphere was hung on the bottom of the lighting tree that was upstage of the wall and stage right of the ladder. This instrument was also focussed from 'wingtip to wingtip'; both instruments were ungelled and caused the metal wings to shine and shimmer as Polydeuces floated above the wall unit.

Three instruments illuminated Castor's entrance. On the rolling scaffold unit I mounted a one thousand-watt six-inch Fresnel that was focussed on the back of Castor and created a halo effect. Since the lighting instrument and Castor moved together through space on the scaffold unit it was a very dramatic effect and very simple. Unfortunately this light proved to be very hot and we could only safely keep it until the scaffold traveled to the wall. After the unit had stopped at the wall, we faded out the light for the safety and comfort of Mr. Woods. As the unit stopped at its spike position upstage of the wall unit, Castor was

illuminated from the side by a Parallipsphere mounted on a floor stand upstage left. Since Castor was blocked to remain motionless while he spoke I was able to shutter very tight to his body so as not to spill too much on the theatre wall. I had to vary slightly from my concept of keeping the light source below the face level of the gods. I hung a Colortran 20° in the grid to light Castor as he delivered his final speech. This instrument was also tightly shuttered to his body, as I did not want the audience to see the beam hit the stage floor. This would also help to make Castor appear to 'float through the air'. These two specials were also ungelled as I wanted to keep the gods as bright as possible. Combined with a generous amount of fog in the air upstage of the wall we created an effect of the gods flying through the clouds and into the lives of the mortals onstage.

Lawrence wanted two last specials to work with a piece of blocking he had planned. He wanted to establish Castor and Polydeuces' total control of the mortals by making Orestes and Plyades appear to fly up off the stage where they were laying face down. Lawrence wanted to achieve the same look, as people perceived the look of an alien abduction. This was simply accomplished by hanging two Colortran 20° instruments upstage of Orestes and Plyades. As they leaped up from the stage, they were illuminated so that they would be haloed in the audience's eyes. Both of these instruments were focussed tightly, and with a sharp edge and ungelled, to produce a bright white distinctive light.

I was able to accomplish all the goals that Lawrence and I had discussed at supper. We had also discussed a different way of cueing the production, because of the short rehearsal period and the demands of the setup period. I was only going to be able to see one run-through in the rehearsal hall. I proposed that we cue the show over the entire rehearsal period onstage and not have a long one-day level setting session.

I prefer to use this method when possible and have used it on several occasions when the production has a long production period in the theatre. The Electra production period presented such an opportunity as the company was onstage for ten days before the first

public performance.

We cued the play as the company worked through the play. Lawrence was excited to attempt this because he felt he would still need to work on the blocking, as the set was larger than the rehearsal hall. The blocking would be set in the hall but would be adjusted when the company got on the stage. I told Lawrence that I would always start the scene with the general lighting up at a safe level and I would watch the scene and start to build the cues. By working through the play in this manner I was able to see the scenes several times and adjust the lighting while Lawrence was able to work the scenes several times. I would keep a record of the cue placements and numbers and give DJ the information to plot into the prompt script. This would allow him the opportunity to concentrate on the rehearsal and the needs of the actors and Lawrence.

I would build the cues myself until the lighting board operator, Lydia Lau, joined us in rehearsals, then she would begin to run the computer and input my changes. The benefit of me inputting the information during the early rehearsal was that it would allow me to 'play' and become comfortable with the computer. When Lydia joined me, we were quickly able to establish an excellent working relationship as she learned the operation of the board.

The process was not without its problems. Unfortunately, Lawrence was forced to change the casting of Electra for the good of the company. The working relationship between Lawrence and Deleah Shand had become very bad and it was having negative repercussions on the entire company. Lawrence decided to remove Deleah from the role of Electra and replace her with Tara Warner from the Chorus. This necessary change set the acting and blocking back several days. The company had also lost several productive days in the rehearsal hall while dealing with the problem, and as a result the blocking of the play was not as established as we had hoped. The goal was to come out of the hall with the blocking set and documented and only minor changes and adjustments made on the stage. Lawrence was forced to concentrate on Tara's performance. Scenes were being worked very slowly

and blocking was constantly changing. This was to be my major problem as there were several of the nighttime scenes that required very specific isolation to illuminate the actor but not to destroy the mood.

The change caused a snowball effect. Lawrence was unsure of the blocking and the actors were allowed to experiment and change the blocking as they reworked the scenes. This caused a problem for me but there would have still been a problem if we had set the cues in a long cue session without the actors. Cueing changes would still have been needed.

We worked through the play scene by scene and roughed in the cues that were then given to DJ. I wanted DJ to begin calling the cues so that I would be able to listen to the calls on headset and decide if the cue needed changes in timings or in placement.

Lawrence decided that the company needed to run through the play several times to get the rhythms and timings and work on their consistency. While this was helpful for him and the company, it was causing problems for me. I was unable to implement the changes and corrections as quickly as I would have liked. I was forced to make rough notes and make the changes after the run through. I did this with the help of Lydia, but would have to wait for the next run through to see if they had worked.

It was suggested that we do a cue to cue rehearsal with the actors, and while it would be beneficial it may not have been the best use of our time on stage. Don Monty suggested that Lawrence and I come in without the actors and he would walk lights for us. We would simply look at and talk about each cue and make adjustments to the cues. This would allow Lawrence to make definite blocking notes to give to the actors. We did this on the Sunday morning before the play was to open. It was late in the schedule but it was incredibly beneficial. It allowed us to catch up on our communication and Lawrence was able focus on looking only at the lighting cues. He made blocking notes and I made cue adjustments that we worked with the cast during the afternoon rehearsal.

The changes and adjustments worked very well and the show began to look like what both of us had dreamed about at Chianti's Restaurant during our amazing lighting meeting. I had also become very comfortable with Lydia as my lighting operator and she was quickly establishing a good feel for the show. She passed on several small notes to me about the look and timing of some of the cues. This was to be very valuable to me as I was now beginning to concentrate on the flying and the backstage responsibilities that were assigned to me as crew chief.

We were moving closer to having a show, as the lighting cues were complete.

### Lighting Cues

- .1 A 'blackout' cue used to shut down the computer
- .2 All instruments are set at 15% to warm up the filaments
- .3 All instruments are set at 35% to enable us to do a lamp check for burnouts
  
- 1 A preshow cue with the emphasis on gobo washes on the wall and the stage floor with a slight emphasis on the column piece. House lights at Preshow level.
- 2 House lights fade to half
- 3 The house lights and the stage fade to a 'blackout' cue for the video cue

- 5 Lights up for the entrance of Apollo as he appears from behind the wall. A strong floor stand back light in blue lighting the actor as he begins to climb the ladder. Slight gobo wash on stage to light the young children lying on the forestage.
- 6 As Apollo's head appear the red floor stand backlights added.
- 6.5 As Apollo stands up a yellow floor stand back light is added to the red backlight. The blue backlight fades out.
- 7 The effect for the 'rising sun'. The manually operated cue upstage. A large circle of light appears on the rear projection screen.
- 8 As Apollo climbs over and down the wall the 'sunrise' specials fade out slowly. The stage is lit principally by the front 'madness gobo slashes' and the emphasis is on the centre midstage area.
- 9 As Apollo climbs back over the wall a restore to the wall specials to light him as he stands on the wall. The back 'madness' gobo slashes and the stair gobo illuminate young Electra as she stands at centre stage.



### Lighting Cue 9

- 9.5 Apollo's specials fade out and the doorway fades up as Electra enters to see young Electra.
- 10 The front 'madness' gobo slashes are added as Electra crosses to young Electra and the Chorus of women enters. The neutral backlight is added for illumination and mood.
- 11 The gobo washes are brought up as the dance begins. Cool back light is added at a lower level than the neutral back light and front light is added at a low level to light the dancers' faces.

- 11.9 The centre circular special fades up to highlight Electra falling to the ground as the Chorus exits with young Electra.



Lighting Cue 11.9

- 12 The special fades out to a full stage gobo wash at a very low level as Electra exits the stage.
- 12.5 The area lights fade up on the doorway for the entrance of the Peasant.
- 12.7 The stage left aisle entrance through the audience fades up for the entrance of Electra with the doorway

fading down slightly in intensity.

- 13 The playing area by the doorway fades up in intensity as Electra crosses to the Peasant and the aisle lights fade out. The general illumination of the stage rises in intensity as we begin the transition into real time nighttime from the fantasy world of Apollo's Prologue.
- 13.7 The doorway fades out as the Peasant exits and Electra is left onstage alone. She crosses to sit at the column piece so the focus is shifted to the 'hill' area.
- 14 The focus is pulled down to just the column as Electra exits the stage.
- 14.1 The lights fade up for the entrance of Plyades from the Reeve Theatre doors stage right and he crosses to the column piece. This cue is linked to Lighting Cue 14.3 that brings up the centre section of the wall unit for Orestes' entrance following Plyades' lead.



Lighting Cue 14.3

- 14.4 The stage left audience aisle and stage left area of the pit fade up for Electra's entrance. The wall unit fades down as Orestes and Plyades cross to far stage right to hide behind the end of the wall unit.
- 14.5 The column special fades up and the pit fades down as Electra sits on the column.
- 15 The general lights fade up for the start of the morning cue. A series of four cues are linked together. The farthest upstage row of neutral back light Fresnels fade up to 50% to backlight the wall unit and throw the

forestage into shadows. After a pause of five seconds Lighting Cue 16 adds the midstage row of back light fresnels fading up to 85% and the front light begins to fade in at a general low level. Lighting Cue 17 starts after a seven-second wait and brings up the bright general morning cue that lights the entire stage. Lighting Cue 18, after a ten-second pause, adds the open white top light 'noon' Fresnels to 85% as the Chorus enters.

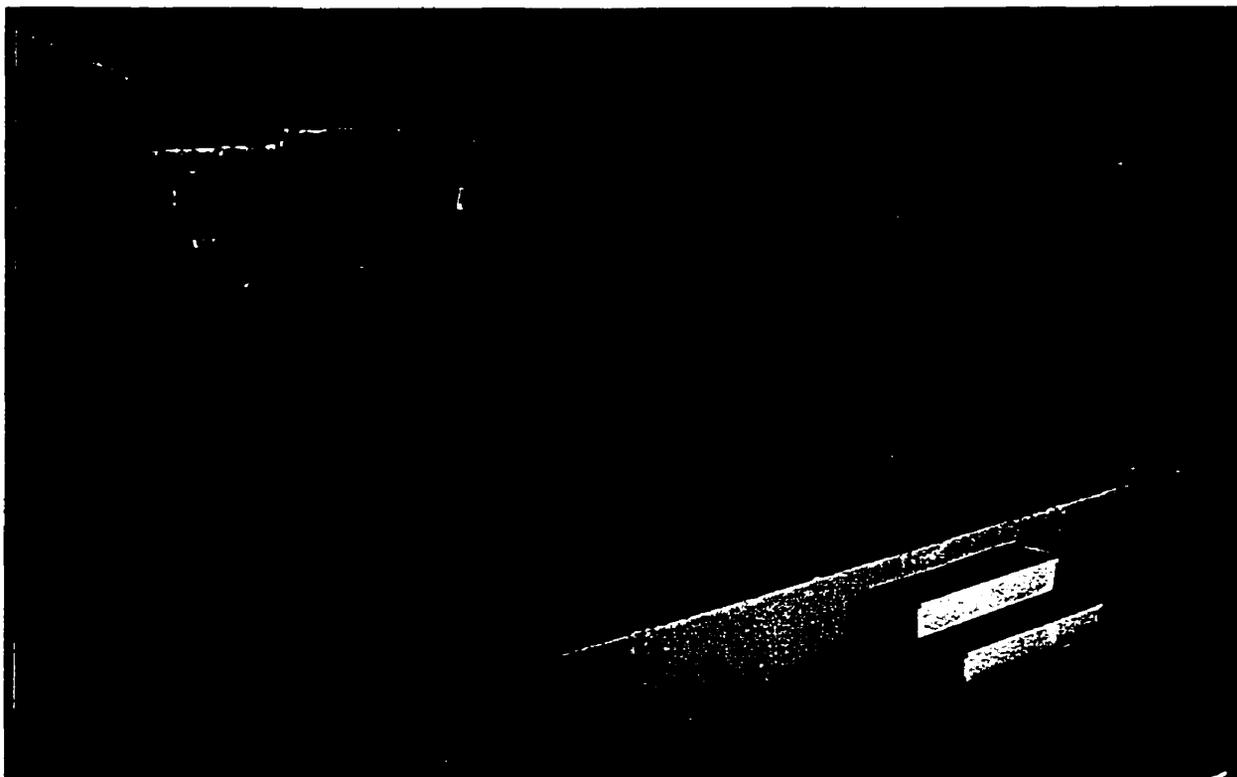
- 19 The lights fade down to the centre stage playing area for Electra's description of the death of her father and her banishment. The 'sunset' lights are brought into this cue to give a hint of the blood lust for revenge in Electra's mind.



### Lighting Cue 19

- 19.3 A slow cue pulls the focus down to the upstage centre area and isolates Electra even more as she becomes more introspective.
- 19.5 A cue restore to 'real time' on the Peasant's entrance with an emphasis on the stage right area in front of the doorway where Electra stops him.
- 26 Orestes speaks to the chorus, a real time daytime cue with a slight emphasis on the centre stage playing area.

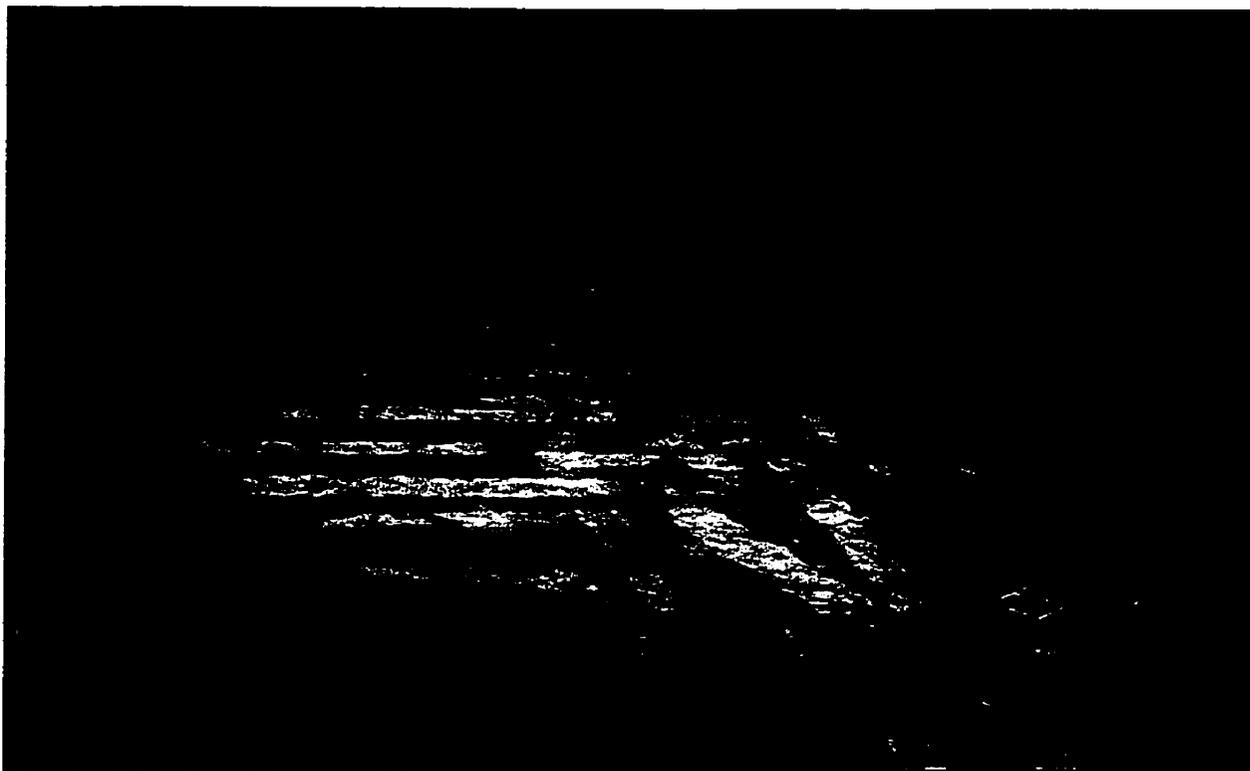
- 27 The lights snap up to the light the pit and the stage down as Orestes steps out of reality to talk to the audience.
- 27.5 The previous cue is restored as Orestes returns to the stage to address the Chorus.
- 28 The lights shift the focus to the doorway for the exit of the Peasant, Electra, Orestes and Plyades into the Peasant's house. This cue warms the aisle specials in the house for the Chorus.
- 29 The aisle specials fade up to full intensity to back light the chorus in the audience. The stage is lit only in blue back light.
- 30 A transition cue to illuminate the Chorus as they walk down from the audience and onto the stage. The aisle specials go out and cool front light up on the stage as the Chorus moves to a midstage position facing upstage.
- 31 A snap cue occurs as the Chorus turns. The strip lights in the pit fade up to 100%. This cue was designed to throw large shadows on the wall unit and to light the Chorus from below as they walked downstage and into the pit. The shadows on the wall unit grow in size as the Chorus moves toward the strip lights.



### Lighting Cue 31

- 32 As the Chorus' speech is completed they collapse onto the pit floor and the stage returns to a bright 'noon' cue. This cue was primarily top light as it covered a short period of time, before the next cue registered onstage.
- 33 The audience left landing aisle special fades up for the entrance of the Old Man as he climbed the ladder.
- 34 The aisle special fades out as the Old Man crosses down to the stage. More front light is added to the bright cue onstage with an emphasis on the pit.

- 35 The main playing area grows brighter and the pit fades down in intensity to shift the focus from the pit to the stage. This change occurs as the Old Man moves up to meet Electra entering from the doorway.
- 35.5 The centre stage area becomes brighter and slowly fades up to a suggestive level of the 'sunset revenge' red wash on the stage.
- 35.7 The lights fade to isolate the downstage playing area by fading the upstage generals.
- 36 The Old Man leads the prayer as they plot the death of Aegisthus and Klytemnestra. The focus is pulled down to the group kneeling downstage centre and the 'blood lust' special from stage right is added to full intensity.
- 37 The next transition cues start the 'swirling' light sequence. The neutral backlights fade in at a low level.
- 38 A return to the evening/early night cue is used for the exit of the Old Man, Orestes, Plyades and Electra as the Chorus moves into position for their speech.
- 198 This cue begins the 'swirling' madness sequence. It is a transition cue into the Chorus' speech, which we created by duplicating part of the previous Chorus speech by bringing the pit strip, lights up to light the Chorus from below. Lighting Cues 198 through #203 were run on Faders 'C' and 'D'.



Lighting Cue 198

199 This cue starts the 'swirling madness' cue for the Chorus' speech. Lighting Cue #199 was connected to Lighting Cue #200, which was a fade down to the four slash gobos that covered the centre stage area. The cue was a string of four lighting cues that were connected with the fourth cue of the sequence linked to the first cue of the sequence. The series of cues would run continuously until Faders 'C' and 'D' were cleared. The four lighting instruments went through a cycle of 100% to 25% to 50% to 75% to 100% and so on. This meant that there was always one instrument at one of those assigned levels. This

created a swirling circular motion on the Chorus. The members of the Chorus were blocked to find slashes of light and place themselves accordingly. After the sequence had begun Lydia had to load Lighting Cue # 39 into the memory sequence.

39 This cue marks the end of the Chorus' speech and the entrance of Electra. This cue was a copy of the transition cue into the 'swirling' chase sequence with the addition of the stage right audience aisle special to anticipate the entrance of Plyades. This was the one manual sequence in the performance. For Lighting Cue #38 Lydia had to hit the 'Go' button for Faders 'A' and 'B' and fade out Faders 'C' and 'D' manually. Her next step was to hit the 'Clear' button to stop the chase sequence. At the end of this sequence we were in the same lighting cue as the scene that led into the Chorus' speech.

39.5 The light shifts to the centre stage playing area as Plyades crossed from the stage right audience aisle to the centre of the stage. The aisle light goes out.

40 This cue fades up the three circles of white light centre stage that would light Plyades for his speech about the death of Aegisthus. The rest of the stage fades to black.

41 The largest circle of light that shrinks the circle around Plyades fades slowly.

- 42 A snap fade out of the medium sized circle of white light occurs and the red light is added from three instruments from three angles; high front, low front and a lower forty-five degree front angle from stage right.
- 43 The lights fade to the small circle of white light that leaves Pylades, Electra and the chorus in a large pool of red light.
- 44 A transition cue restores the dark evening 'real time' cue. This was a difficult transition sequence as Lawrence cut the Chorus' speech and dance that was to follow the story of Aegisthus' death.
- 47 The lights fade up on the stage right audience aisle for the entrance of Orestes holding the head of Aegisthus.
- 47.3 A snap cue brings up a light in the stage left audience aisle for Orestes as he crosses quickly to the jump up on the edge of the audience risers. He straddles the aisle holding the head up for all to see. The stage right audience aisle fades out as soon as he leaves the pool of light.
- 47.5 The aisle lights fade out and the stage fades up to a general nighttime cue with an emphasis on the centre third of the stage.

- 48 The downstage centre area fades and the red 'blood lust' light is added as Electra speaks to the head of Aegisthus.
- 50 This cue returns to dark evening 'real time' lighting as Orestes, Plyades and Electra prepare for the entrance of Klytemnestra by hiding the head in the Peasant's house.
- 50.5 A shift of focus occurs to the down stage right area of the stage as Electra and Orestes have a heated discussion. The light on the Chorus fades down as they watch the two argue.
- 51 The lights fade up in the pit area and return to a more even light on stage for Klytemnestra's entrance.
- 52 The lights fade out slowly on the pit with an emphasis on the centre stage area for the confrontation of Electra and Klytemnestra.



Lighting Cue 52

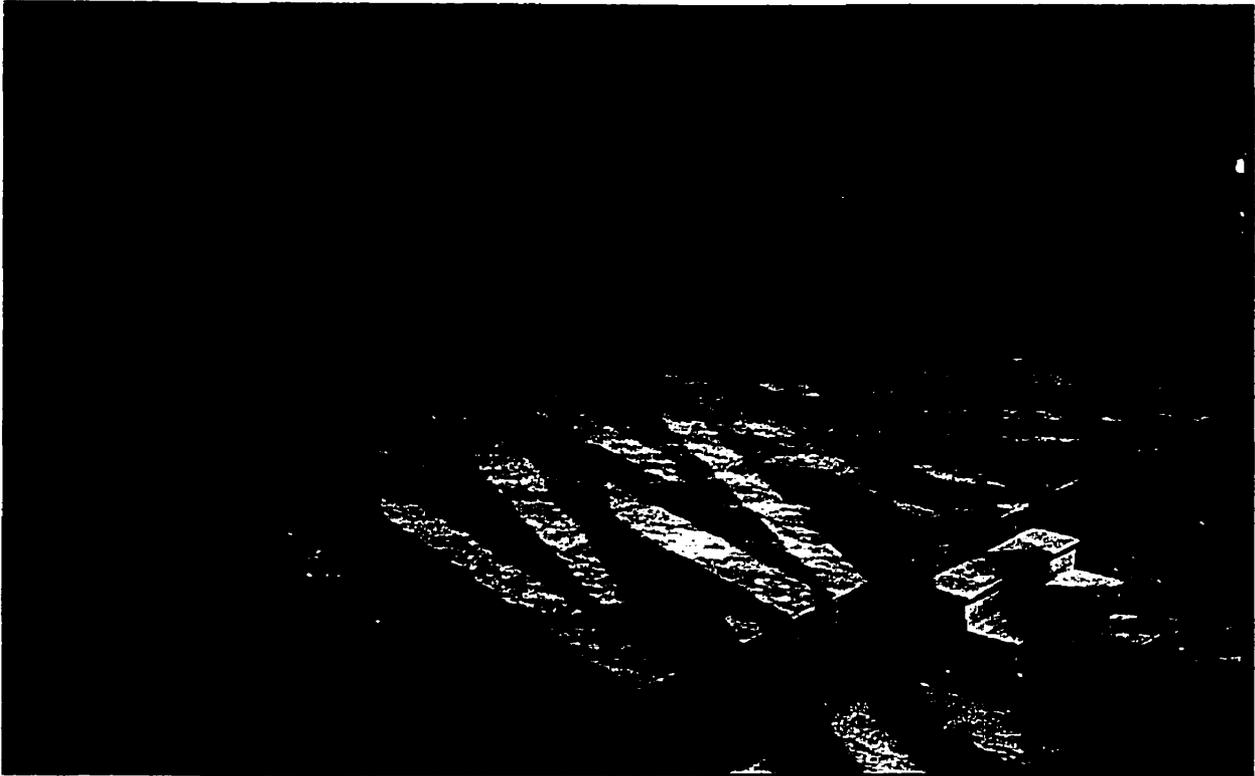
- 52.5 A sequence of cues follows Klytemnestra to stage left of the hill area and up to the wall as she addresses the Chorus.
- 52.6 The area upstage of the 'hill' fades down and the upstage centre area by the wall fades up as she continues to circle the members of the Chorus who are on the 'hill' area.
- 53 Lights fade up on the doorway entrance and fade down on the rest of the stage as Electra leads Klytemnestra into the Peasant's house. The blue back lights that light

the back of the wall unit fade up to full to make the house glow. The red gobo wash on the house begins to fade up.

54 The gobo slashes and the centre white light specials fade up as the Chorus passes the knife that will kill Klytemnestra to Electra. The red gobo wash on the house fades up in intensity.

55 As Electra crosses into the doorway with the knife the gobo slashes and the circle fade out. The doorway and the red gobo wall wash increase as the Chorus follows her to the door.

56 The downstage gobo slashes fade up as the Chorus turns downstage as they hear the offstage death screams of Klytemnestra.



Lighting Cue 56

- 57 The gobo slashes fade out and the red 'blood lust' lights fade up as the body of Klytemnestra is carried to downstage centre and laid down. The downstage area increases slightly in intensity as we start to come back to a reality-based cue as Electra and Orestes realize that they have just murdered their mother.
- 58 The edges of the stage fade slightly to isolate the body of Klytemnestra in the down stage area.
- 58.5 The red 'blood lust' specials fade out as Orestes and

Electra begin to mourn and repent.

59 The stage fades to only blue back light as the thunderstorm approaches. During this cue Lydia had a sequence of submaster flashes to simulate lightning. She tapped out a series of flashes alternating top lights and sidelight.

59.5 The entrance of Polydeuces from the grid, the front light special from the floor stand upstage of the wall fades up to full intensity. The back light on Castor's rolling platform increases up to 50% as he starts to roll onstage just as Polydeuces reaches his low trim position. The front cool acting lights are also added at a low level to give front illumination on the actors onstage.

60 The front special fades up to full as Castor's rolling unit reaches its final position. The backlight on the rolling platform faded out as it was very hot on the back of Geoff Woods. I would have like to keep it in the cue but even at a low level it was very uncomfortable for him. Two upstage floor mounted sidelights were also faded up to full intensity, one on Castor and the other on Polydeuces.

61 A bright white hard-edged special from upstage is snapped up to full on Orestes as Castor summons him to stand and hear his judgement.

Lydia executed this visual cue after a standby from DJ.

62 A bright white hard-edged special from upstage is snapped up to full on Plyades as Castor summons him to stand and hear his judgement. Orestes' light snaps out as he falls to the floor.

Lydia executed this visual cue after a standby from DJ.

63 Plyades' special snaps out as he falls to the floor.  
Visual Cue executed by Lydia after a standby from DJ

70 A general fading up of the stage occurs as Electra addresses Castor about her fate.

80 All general lights fade up to full as the Chorus turns downstage to address the audience.

90 The lights snap to a blackout on the Chorus' final word.

91 At the curtain call there is a general bright cue.

92 The lights return to the Preshow preset and the Houselights fade up as the audience exits

## Chapter 6

### Production Period

The production period of Electra was much longer than what I had dealt with before on professional productions of the same size. The major problem that had to be overcome was going to be the lack of personnel. Although we were excited about the opportunity to produce a show after the semester was complete, there were very few '00'-hour production students available. This would present a challenge getting the show ready to move in to the theatre. I had posted notices about calls for the setup and had discussions with Brian Kerby before he had left for Regina. Brian had given me a list of individuals who still needed hours to pass the class. These individuals would make up our running crew but were not readily available during the production period and setup. I also had to juggle the necessity of teaching students during the setup period and completing tasks more slowly or having to do the work myself and finding alternative methods. There would be some scrambling and asking for favors to achieve my goals. It was also at this time I was called by the University of Regina Drama Department and asked to come to Regina for a job interview. I would be gone for three days and the production schedule would have to be adjusted. I felt a certain amount of panic from the staff and concerns that we would not be able to complete the tasks. There was also a feeling of annoyance that their schedules had to be changed. I was positive that we would be fine with the new schedule as far as their sections of the production were concerned and chose to ignore the rumblings and proceed as planned.

The three-week production period would begin after the semester had ended and the Drama 510 class projects were completed. This would also coincide with the first week of rehearsals. Lawrence planned to work through the play as quickly as possible but did not have plans to run the play in the rehearsal hall during the first week. We would use the time to finish texturing the set in the shop and concentrate on preparing the theatre for the load in. I also had to juggle my schedule to deal with finishing assignments for classes and

preparing for the University of Regina job interview on four days notice.

The set had been completed for painting and had been moved to the property shop. We had made the decision that we had sufficient time to paint the wall unit after it was in place on stage. It had to be textured in the property shop due to the mess involved. We had arranged for rental of a ceiling texture sprayer and were going to use a mixture of snow texture pellets and latex paint to coat the wall unit.

Don Monty had picked up the sprayer and texture pellets from the rental company and I had been searching for cheap latex paint to use as a medium when combined with water. I had been unable to locate any inexpensive 'broken gallons' paint from paint or lumber stores but had a number of cans of latex paint in the basement of my home. I hoped that this was going to be enough paint to complete the project and set them aside to bring them into the shop. The only fault in this plan was forgetting to load them into my car and having to make a second trip home on the day that we planned to texture.

Douglas felt the wall would need several days to cure and set before it was moved into the theatre. We decided that we would texture on Monday morning. This originally would let the wall dry and cure for three days before the set was to be moved on Friday. When the load in was pushed back to the next Monday by my trip to Regina, I felt it was still best to continue with the schedule. This extra time would allow us the chance to fix any problems, if there were any. This was the first time Tasha and I had played with this method. I had used the texture sprayer before to do a 'wind blown snow' effects but that used water as the medium and not watered down latex paint.

We mixed several litres of the latex paint into a large bucket and achieved a very good neutral greyish beige colour. Douglas and Tasha felt this would make a good base colour for the wall. We added the snow texture following the directions on the bag and started to mix, adding paint and texture and mixing until we achieved a mixture that we felt would

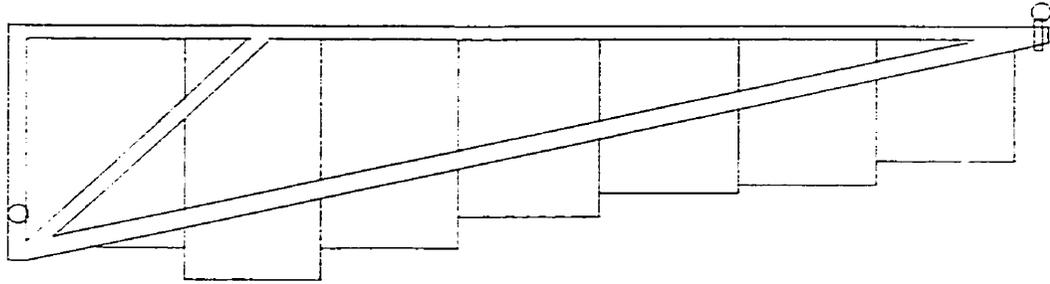
spray nicely. Douglas had to leave for a meeting shortly after we began the process. It was left up to Tasha and me to experiment and hopefully achieve a textured finish that Tasha was happy with.

I used the Genie Lift and starting spraying the mixture on the top of the wall and working downward keeping an even spray pattern. The texture mixture was very easy to use and any edges were easily blended in to give a seamless surface. Tasha observed the operation and gave me directions on which areas she wanted more texture and which areas she wanted just a light dusting to cover the flattage. The sprayer unit was quite heavy when it was full of mixture so I would work with the unit until it was half-empty. I would then pass the sprayer to Tasha and she would texture the lower part of the wall.

The process was very successful from the start and moved quickly. We were achieving a look that we both liked and decided that any more texture would not read any better and would only make the wall heavier and would take longer to dry. Once we had covered the entire structure, we cleaned up the rental unit and the shop area. The whole process took under three hours and used approximately half the amount of material we had estimated. We discovered one drawback. The rotary mahogany wallboard had a tendency to pull away from the flat-framing members when wet. We were fortunate that this did not cause any structural problems and added to the look of the wall. As the mixture dried the size of the gap between the covering and the frame decreased. If I use this method again it will be necessary to make sure the covering is firmly attached to the frame by making sure the entire length of the framing member is glued securely to the covering and not simply nailed.

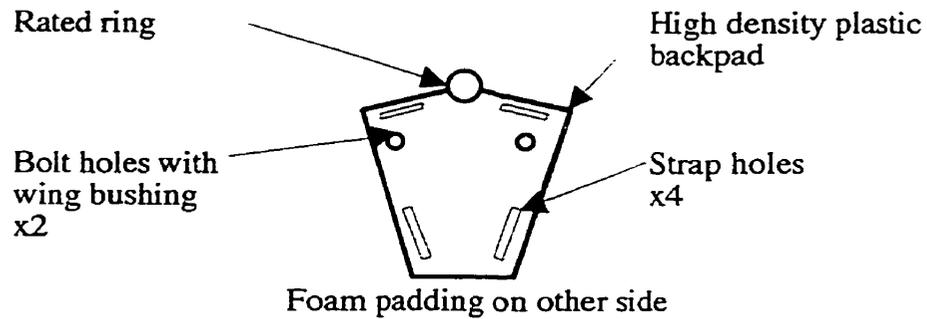
A major task that had to be accomplished before I left for Regina was the one element of the design that Tasha had left to me: the design of Polydeuces' wings that he would wear as he flew in from the grid. Lawrence and I had discussed a harder look than feathers and I felt we could achieve this by using galvanized sheet metal panels. These would be lightweight, rigid, and reflect the light to give a glowing effect and could be constructed out of materials

that were in the shop.

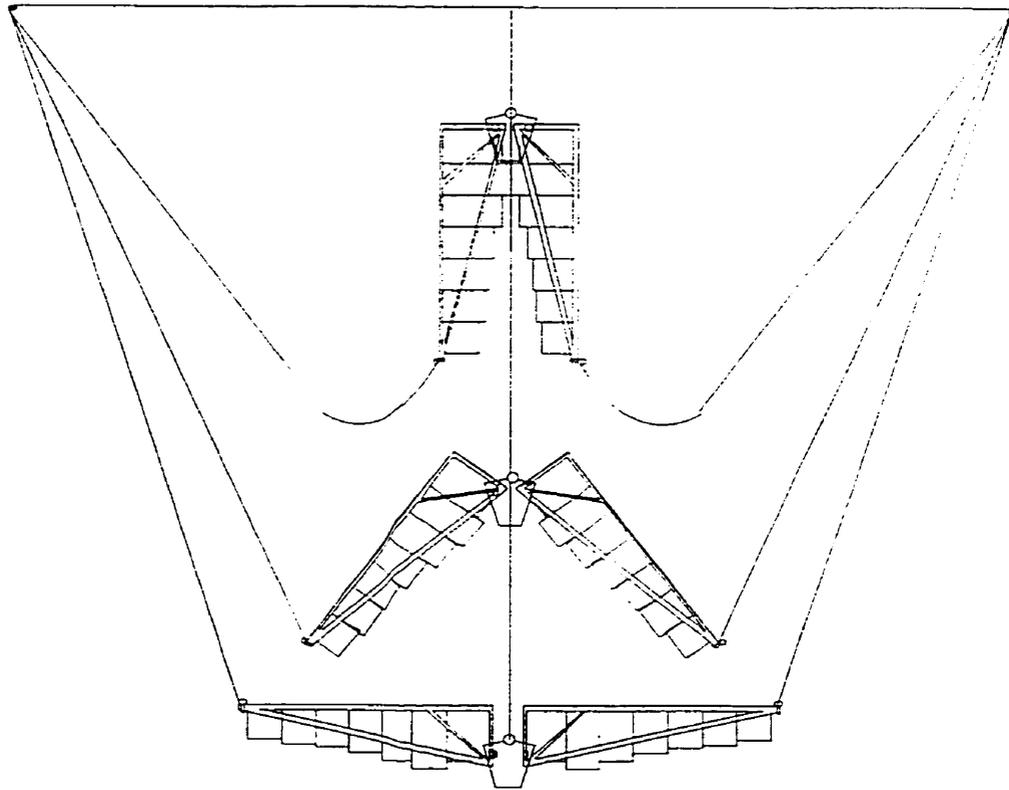


Wing unit (Rear view)- welded steel 1" tube frame  
with galvanized steel panels riveted to the frame.  
Rated lifting eyebolt on the wing tip  
Bolt hole for attaching to harness

The wings were a priority for me and I wanted to start on them as quickly as possible so they would be available for me to work with when I got back from Regina. I drafted a drawing for Werner Karsten, properties head, detailing how the wings should be constructed and attached to the actor. I had decided not to connect the wings directly to the actor's harness. This was to simplify the effect. The wings and the actor would be attached to the same lift line but the wings would bear none of the actor's weight. I would adjust the position of the ring on the back of the harness to match the ring on the back plate and secure the wings to the actor's body by means of webbing straps. The inspiration for the back plate came from a similar plate used to attach scuba tanks so a diver can wear them. The back plate was to be padded so it could be worn snugly and comfortably. The wings were simply attached to bolts that were allowed to spin freely in the back plate.



The wings would also move from a folded position with the wing tips pointing downward and then open to a position with the wings parallel to the stage floor as the actor descended. This would be accomplished by tying a black nylon line to each wing tip and then to spots on the grid. The loop of line would allow the wings to hang downward but when the line reached full extension it would pick up the wing tip. The harness and the lift line would support the weight of the wings until the static lines were taut. The weight of the wings would then be transferred to the static nylon lines. When the actor returned to the grid the weight would transfer back to the harness and the lift line and the wings would return to the 'folded' position. This would allow the performer to fit through a grid bay opening and be very dramatic in performance.



Wing deployment - as the actor descends on the centre lift line the wing tip static lines tighten and pick up the wings to the horizontal configuration as the performer continues to descend to the low trim position. As the performer flies upward the wings fold as the weight of the wings is transferred from the static lines to the harness and the lift line.

The design changed as Lawrence requested a change in the line of the wings to reflect a more cherubic softer image. I had designed a very straight hard-edged look that was more mechanical looking than angelic. Werner adjusted the drawings and suggested replacing the straps with a different method of attaching the wings to the harness. He suggested that a strap could be attached to the belt at the back of the harness. This strap would thread through an opening in the back of the costume and fit through a hole in the back plate and attach to a snap hook. His method was easier to build and he felt it would be more effective.

I allowed myself to be convinced, but this later proved to be a problem when the wing unit was fitted to the actor for the effect.

The next task was to prepare the stage for the load in. Lawrence had decided to use the pit as an acting area, and that necessitated the removal of the chairs. I scheduled a Wednesday work call to strike the black masking flats from *Mary Stuart* that had been used in the Drama 510 scenes. As I feared there were no students available to help, Don Monty, Martin Herbert and I struck the flats and stored them in the Reeve Secondary. There had been a discussion that the units would possibly be used in Slavs. I chose to leave the upstage pair of flats to provide some backstage masking stage right and to cover a permanent fire exit stage left. We also moved the stage management booth and audience right seating riser unit to allow the set to be moved from the property shop to the stage. After this task was completed I remained to strike the chairs from the pit. The chairs were stored then in the backstage area.

At this point I began to worry about the lack of student personnel to assist in the setup, as the '00' posting was not attracting any help. The prospect of relying solely on student volunteers was a bit disheartening and alternative methods had to be pursued. I had planned to start the lighting hang after the set was up and in place. I felt that with the staff available for the load in, we could have the wall unit up and in place in half a day and Martin would have the rest of the week to complete his work. We had planned to lay the cardboard floor as the last thing before the actors were allowed onstage. I felt confident that we could be on schedule and the stage would be ready; it was the lighting hang and focus I was concerned about. I had completed the general lighting plot before my trip to Regina and we would be ready to start hanging Monday afternoon. Brian Kerby would also be back from his show at the Globe Theatre in Regina. I was sure we could hang the design quickly but I was unsure about the focus. Since I was told that all work would have to be done during the day, and there would be no overtime for staff, I decided to ask for help outside the Department. Leslie Biles had agreed earlier to give me a hand if I needed it, and I gladly accepted her offer. I had been working with Scott Baier from Christie Lights on an outside project and

had asked him if he could help with the focus on Tuesday night of the next week. He agreed, and next I asked Matthew LaBrie and he quickly accepted. The Thursday night before I was to go to Regina I had been invited to the opening of March of the Falsettos at Alberta Theatre Projects. After the performance I went to the Auburn Saloon for the opening night party. While there, I managed to recruit Les Sanderson, head lighting technician for Theatre Calgary, Colin Cooper, stage carpenter for Theatre Calgary and Chris Sprague, head electrician for Honey I Shrunk The Kids - The TV Show for the focus. I also had four other professional technicians who said they would try to make the call. It was going to cost me beer and pizza for everyone, but it was a bargain. I left for Regina in much better spirits about the upcoming week.

The second production week began as planned with the set being moved from the property shop to onstage. The crew call consisted of Don Monty, Martin Herbert, Werner Karsten, Brian Kerby and myself. Three '00' students arrived to work: Corey Hogan, Katie Hoyda and Tim McRae. Since the wall unit was constructed in two very large and heavy sections it was decided to move the large stage right section of the wall directly to its position onstage. As Tasha and Douglas were going to paint the wall in place we laid black plastic on the stage to keep paint off the stage deck. Measurements were made and marked on the stage floor. The audience right risers had to move again as they had been moved back to their original positions for the 'Ickie' awards the previous Saturday. The set was then carefully lifted onto two triangular dollies and rolled into position very slowly and carefully. The wall unit was positioned and dropped into place and made safe with stage weights being placed on the stage braces. The smaller wall unit was then moved by the same method to a temporary storage position downstage of the large wall unit. We then quickly moved the 'castle flats' into the property shop so they could be painted for Slavs and returned the audience riser units to their proper positions. The small wall unit was then shifted to its proper position and secured to the large wall unit. The boardwalk units and the column piece were moved from the shop and placed in position. Stock riser units were brought from storage and were used to build the hill area. The hill area was placed stage left around the

column piece. Martin Herbert placed the units in a structurally safe and artistically pleasing formation. Tasha approved the construction and we secured the riser units together. We placed two riser units upstage of the door unit to provide a level access area backstage. The risers created a level walkway for the actors as they entered and exited the door. The major part of the setup was completed by noon as I had expected. We broke the crew for lunch. I plotted a copy of the lighting plot during the lunch break.

We began to hang the general lighting plot after lunch; two students, Corey Hogan and Katie Hoyda assisted us. Brian gave them a quick lesson on how to read the lighting plot and hang lighting instruments. At this point I had only the general lighting plot designed. Lawrence had not run the play and we had not sat down for a serious design meeting. We had one scheduled for Wednesday night. My goal was to have the general wash focussed by the time of the meeting. I would concentrate on the specials after our discussion and over the first few days of rehearsal in the theatre. The general light hang was completed as scheduled by Tuesday afternoon. I checked that the dimmer to channel patch was correctly inputted into the computer. The dimmer to channel assignment was properly patched in the lighting computer. I ran a test, with the help of Don Monty, and after finding some problems we corrected them.

The focus on Tuesday night went as well as I could have hoped. The general plot was designed based on five areas across the stage. With Leslie Biles running the lighting computer, I had Les Sanderson, Matthew LaBrie, Scott Baier, Colin Cooper and Chris Sprague focussing for me. Les would focus the first area and the other four would duplicate the focus on their assigned areas and I would check each area as I crossed the stage. They also provided excellent touch up notes from their point of view, as sometimes in calling a focus, you can miss shutter cuts and light spill on scenery.

The evening went extremely well as we focussed one hundred and one instruments in approximately two and half-hours. We had a beer and then headed to Boston Pizza for

pizza and a few more beers. It was money well spent, as now, I felt that I was ahead of schedule.

Lawrence and I were meeting for supper on Wednesday night to plot out the show; so Wednesday, during the day we moved ahead on completing several items. We hung the rear projection screen, installing masking in front of the booth and upstage of the door. We helped Martin finish the set; as it was his goal to complete everything by Wednesday afternoon, except laying the cardboard. This would allow Douglas and Tasha as much time as possible to paint the wall.

On Thursday, Brian Kerby and I started to hang and focus the lighting specials that Lawrence and I had plotted the previous evening. The first priority was to hang the specials that were placed under the centre catwalk of the grid. These instruments could only be hung by using the Genie Lift. I wanted to keep the Genie Lift off the cardboard covering the floor as much as possible to avoid leaving imbedded tracks. We hung and focussed the remaining specials in the lighting grid; however some of the instruments could only be roughed into place. These instruments could only be focussed after I had seen the blocking. My goal was to be ready to cue the show as Lawrence worked through the play.

The video shoot was planned and coordinated with Danjiel Margetic. Lawrence had plotted a number of simple shots involving actors from the company and video captures of children's style artwork as drawn by the actors. Danjiel required a few simple props, a sheet, chalk, crayons and the large drawing pads from the show. I arranged for the shoot to take place in the University Theatre lobby, as we wanted to use the flagstone floor as a backdrop. Danjiel would shoot and edit the tape and provide a finished version to us for the cueing session.

The last scenic element was the cardboard for the floor. We had done a test with a small section but we were unsure of how the cardboard would hold up to the stress and wear of

the actors working on stage. We had waited until the last day of the setup because we wanted to be sure the set painting was complete and that we were finished using the Genie Lift onstage. The weight of the lift would leave definite crushed cardboard tracks across the stage. Martin, Brian and myself laid the cardboard with Tasha making the artistic decisions. It was decided to lay the cardboard running across the stage and not downstage to upstage. This would give us the minimum number of seams. This would be preferable as an artistic choice, would be faster to install and would be able to resist the wear and tear. This meant that the 'grain' of cardboard would run up and down stage. As the cardboard had been purchased in one roll, six feet wide by two hundred and fifty feet long we started stage left and rolled out the cardboard across the stage. We decided that it would be best to start with the midstage piece. We measured to ensure that the cardboard would be laid down and fastened to the deck parallel to the front of the stage. The wall was twenty feet upstage from the edge of the pit. We installed the midstage row two feet from the edge of the stage. This allowed us to lay three rows with the upstage row running along the edge of the wall unit under the boardwalk. The front row would cover the front of the stage.

The cardboard had to be secure and not move under the actors' feet. Martin felt it would be best to tape the edges of the cardboard to each other. We used black gaffer's tape, which provided a very good bond. We decided against using double-sided carpet tape as we did not want to apply tape to the stage deck and it would be very difficult to work with and correct any errors. We joined the cardboard by spooling the black gaffers tape out with the sticky side facing up, lifting up the edge of the cardboard, slipping the tape under and pressing the cardboard down onto the tape so that half was adhering to the cardboard and half the width of the tape exposed. This would accomplish two things: the seams would be held together and it would provide a stronger edge to nail through. We would be able to nail through the cardboard and gaffers tape instead of only one layer of cardboard. The middle piece of cardboard was laid and secured in place, with the offstage edges being torn and feathered at an angle that Tasha liked. The roll was then spun around so the angle of the ripped edge was reversed. This allowed us to duplicate the angle without making a new cut

or tear. The cardboard was rolled out to its proper length, torn at the proper angle, and attached very carefully to the first piece. The edge was pressed down onto the exposed tape. We worked our way across the stage making sure the seam was flat. The procedure of applying the tape was repeated on the other edge of the cardboard.

Tasha and Lawrence had decided that since the pit was to be an acting area we would cover the front of the stage with the cardboard. It was also decided that the edge would have the cardboard bent over it. This would provide a better-looking edge than having a seam at the edge of the stage. The cardboard was carefully bent over the edge and secured. The front row was laid two feet from the front of the stage and the front of the stage was approximately thirty-two inches high. This allowed us four inches of cardboard that was nailed to the pit floor.

The platform structure was covered in small sections because of the irregular shape of the structure. We tried to hide the edges of the platforms as much as possible and to produce as many angled surfaces as we could. It was difficult to hold the cardboard down as we were not taping the pieces together and were attempting to use only nails. The nails were tearing through the cardboard so we began to back the edges with gaffers tape. This technique created a heavier, sturdier surface to nail through. We laid the cardboard so the grain of each piece was varied to each other, providing a more textured and shaped appearance.

A number of small changes and additions to the set were required once the actors had begun to work on set. I had expected that there would be several small changes as Lawrence moved the play from the rehearsal hall to the theatre space. We would have to work around the afternoon and evening rehearsal schedule as these notes were to be completed in the morning.

Geoff Woods had asked if his 'Old Man' character could enter through the audience by climbing over the railing on the main audience-seating riser. He wished to enter from the

backstage area and climb the stage left side of the audience riser. I was not convinced about this entrance; I did not like it for artistic reasons but I checked to find a way if it was possible. Don Monty and Brian Kerby did not want someone climbing over the railing. The railings are simply two inch by four inch lumber held together by bolts and are secure as hand rails but would not hold up to the stress of Geoff climbing over them. Lawrence was interested in Geoff performing this entrance so they persisted and I searched for another option. The safety railing on the stage right side of the audience riser is built differently than the opposite side. We determined that Geoff could safely slide under the railing and stand up on the landing without putting any stress on the railing. Martin installed a short ladder that was secured to the riser and to the floor. Everyone was pleased with the look of the entrance and with the safety aspects so we incorporated the entrance into the play.

Lawrence had determined in blocking the play that we needed three step units from the pit to the stage. One large unit was placed on the centre line and one in each corner of the pit. We pulled three step units from the stock stairs in the backstage area. They were positioned and secured to the floor with angle brackets and screws. Tasha and Douglas painted the units to blend into the cardboard.

We were required to install a safety rail on the audience side of the pit. The chairs in the pit had served as a safety barrier to stop audience members from falling into the pit as they entered the seating area. Since the chairs had been removed, we were required to do a railing. Don Monty took care of this installation and built a railing out of pipe, floor flanges and Kee Klamp elbow connectors and painted it black. The railings were built in two sections with openings at the centre and the corners of the pit.

The decision was also made to install more cardboard in the pit. This was a simple decision as the pit had taken on greater importance as a playing area during the rehearsal period. The actors were performing on the black painted area and it looked very strange in comparison to the stage. We did not have enough cardboard left on the roll to cover the pit and it had

become apparent that there were sections on the stage that would need to be replaced. After a check of the budget, I decided to order a second roll of cardboard from Shippers Supply Ltd. Don Monty picked up the roll and Martin installed the cardboard in the morning before the rehearsal.

The audio component of the production of Electra was very important and ultimately very successful but required an unusual setup. It is standard theatre practice to have the soundboard and operator in the audience for a musical that requires a live audio mix between the performers and the orchestra. The standard setup for a non-musical theatrical production is to keep the audio technician in the booth. The booth in the Reeve Theatre is in a very strange position in relationship to the playing area in the Reeve Primary, as it is off stage left and behind the stage.

Donovan Seidle had written original music that underscored all the chorus speeches, the gods' scenes and several other scenes. Lawrence felt it would be impossible to set audio levels for the underscoring, as the actors would not be absolutely consistent in their voice levels. A slight variation would be a problem and these variations would be very difficult to hear over the program monitor speakers in the booth. We had also decided to use a wireless microphone for Castor's speech to provide a more 'godlike' voice at the end of the play.. We wanted to process the voice through the Reeve Theatre's effects units and push the volume without feeding back.

Leaving the audio operator in the booth was not going to work for u because of the amount of music that was used as underscoring for the scenes and balancing the wireless microphone level to the other actor's voices. We asked to move the audio mixer and playback racks to the house mix position on the house right audience riser unit in front of the stage management booth.

In this position Ben Laird, the audio operator, could set the balance between the actors'

voice levels and the music. He could also closely monitor the level of Castor's microphone as this cue could change nightly. The sound would change depending on the size of the audience in the house, the placement of the microphone on his costume, or slight changes in Geoff Woods' performance.

This move was accepted quickly, with no resistance, as it would be beneficial for everyone. The Reeve audio system had been replaced the previous summer and Don Monty felt this was a perfect opportunity to test the system. Don Monty, Brian Kerby, Ben Laird and DJ Kelly moved the equipment and connected the audio system. The system was booted up and tested. There were just a couple of connectors improperly labeled, but the system performed the required tasks. Don was very happy with the 'shakedown' of the system.

Commedia delivered the video projector and playback deck. The unit was tested and we discovered that the projector had to be elevated about eight feet to project the image high enough on the screen to be seen above the wall unit. This was done to avoid keystoneing of the image, which would occur if we angled the projector upward. Keystoneing occurs when the beam hits the screen at an angle and the image is not a rectangle but a trapezoid. We corrected this by placing the projector on a large property box to keep the lens parallel to the plane of the screen. The unit was placed slightly stage left of the centre line to allow the image to appear on the rear projection screen behind the low section of the wall unit.

At this point everything except the entrance of the gods had been incorporated into the rehearsal setup and we were working towards a merging of the acting and the technical elements of Electra.

We began to bring the crewmembers into the production with Lydia Lau, lighting operator, Benjamin Laird, audio operator, and Amy Lippold, Reyna Giroux and Nadene Schuster as the wardrobe and makeup crew. Jennifer Connolly, the assistant stage manager, and myself assigned back stage tasks to Amy, Reyna and Nadene.

Jennifer would be stationed upstage of the wall unit and control that area, working with Reyna and Nadene on costume changes. Jennifer would also cue the actors for their entrances and their offstage sound effects. She operated the Rosco fogger for the entrance of the gods' cue. The major technical cue for Jennifer, Reyna and Nadene was the operation of Castor's rolling scaffold unit.

Amy was to assist me on the 'sun rise' lighting effect and then to monitor the backstage area behind the lighting booth during the performance. She also reset props during the show and returned them to storage or preset position when they were no longer needed in the performance. After Javier's last scene as the Peasant, she stayed with him through the putting on of his harness to the end of the flying effect acting as his dresser and monitoring his mood.

I would only deal with the video projector and the 'rising sun' effect at the top of the performance and the flying effect.

## Chapter 7

### Flying System

The entrance of the gods was the major technical effect that we had to deal with in Electra. According to my research into traditional Greek theatre, and especially in Euripides plays, the entrance of the gods was a huge moment in the play, and the audiences expected magic. Lawrence and I felt that we had to recreate this feeling for a modern audience. This was to be the biggest challenge I encountered on this production. We had hoped to fly both gods but as this was not possible due to budget restraints we had decided that Polydeuces would be the only god to fly. Since his character was mute in the script we felt he needed the sensational entrance. My research also revealed that there was always a separation between the gods and the rest of the characters; traditionally the gods would appear on the roof of the Peasant's dwelling in Electra. Lawrence and I decided to keep both gods upstage of the wall. This was fortunate as I decided that we had to fly Polydeuces in from the Reeve Secondary, as there was no way to mask the loading perch in the Reeve Primary. The open grid would not allow us to surprise the audience as we would have been seen and heard as we prepared the descent.

I had almost all the equipment in stock at the University Theatre, which I needed to do a single line counterweight descent, and ascent. It would be a variation of the system that I designed and installed for the flying scenery in Good Night Desdemona Good Morning Juliet. My major concern was the loft block as I wanted something heavier than the Ultimate Block pulleys, (with the lighting c-clamp removed) that I had used. These blocks were questionable in their rating and designed for rope and not aircraft cable. The size of the groove was too big and the size of the circumference of the pulley was too small. I had felt, if necessary, that they could work as they had for Good Night Desdemona Good Morning Juliet. I decided to look for alternates since I was flying an individual and not scenery.

I invited Ron Clark to come in to look at the situation and listen to some of my ideas. Ron is a stage manager at the Jack Singer Concert Hall and has also been involved in flying performers and rigging in unusual circumstances. I explained what I had planned and what we were hoping to achieve with the effect. We went up to the grid and looked around tossing ideas back and forth. Ron felt that my plan was good but he felt I had to find another sheave to use for my loft block. He suggested that I borrow a sheave that Tracy Nunnally had removed from the Jubilee Auditorium and had repaired to remove a very loud squeak. It was designed to use the same size of wire rope that I was planning on using. I phoned Tracy at Theatre Calgary and he said I could borrow the sheave and he also agreed to come in to check my setup as we had planned. I picked up the sheave and started to build the system.

For the effect to work effectively and safely the loft block point had to be solid and not move. In the grid I had no structural steel that I could attach directly to and the only structure I felt I could trust was the roof trusses of the Reeve. Since the grid was attached to these trusses I was sure they could take the load. I was going to rig off two points; four points would have been preferable but I did not have access to four points or to four roundslings. I used the two roundslings that I own and have trusted my own life to several times.

The roundslings are Kevlar strands inside a nylon sleeve. They are rated to hold six thousand pounds but since I would have to use them choked, the rating would be reduced to four thousand eight hundred pounds. I was still confident that this gave me a large safety margin. I had hoped to use them in a basket configuration that would have increased the load rating to twelve thousand pounds. Unfortunately they were too short and the resulting angle from the point to the block would be too shallow and would decrease the working load of the system. The shallow angle would have negated the additional amount of strength gained by using the basket configuration. I hoped to keep as close to a sixty-degree sling angle as possible; a ninety-degree angle would have been the best. This was not possible

because of the distance between the roof trusses. The total rating of the system would always be very safe as there would be virtually no shock on the system as all the moves planned were slow and smooth.

The two slings would be wrapped around the top of the roof truss units, as this was the strongest point I could access. To get up to this point I needed to use the Upright 35 personnel lift from the Rozsa Centre to reach the roof safely. The lift at full extension allowed me to reach the roof truss. The roundslings were threaded through and choked tightly so they would not shift. To the end of each loop I attached a 1/4" wire rope sling using a 3/8" Crosby shackle. The wire rope sling was attached to a rated turnbuckle at the other end. The turnbuckles were 3/8" forged jaw end opening with a safe working load of twelve hundred pounds. The turnbuckle was attached to the block and would allow the loft block to be leveled and to adjust the angle to keep it as close to sixty degrees as possible. All the equipment used to take the weight of the system had to be rated materials to construct a safe system. I could not afford to take the chance of working with unrated hardware.



### Flying System Rigging

The sheave that I had borrowed from Tracy had to be mounted to a structural piece. The sheave was designed to sit on the grid of a fly house but it could be safely used underhung. I found a three foot section of "C" channel steel 4" deep and 1.5" wide with a 3/16" web in Martin's shop. I felt this was more than sufficient to support the sheave. I drilled four holes

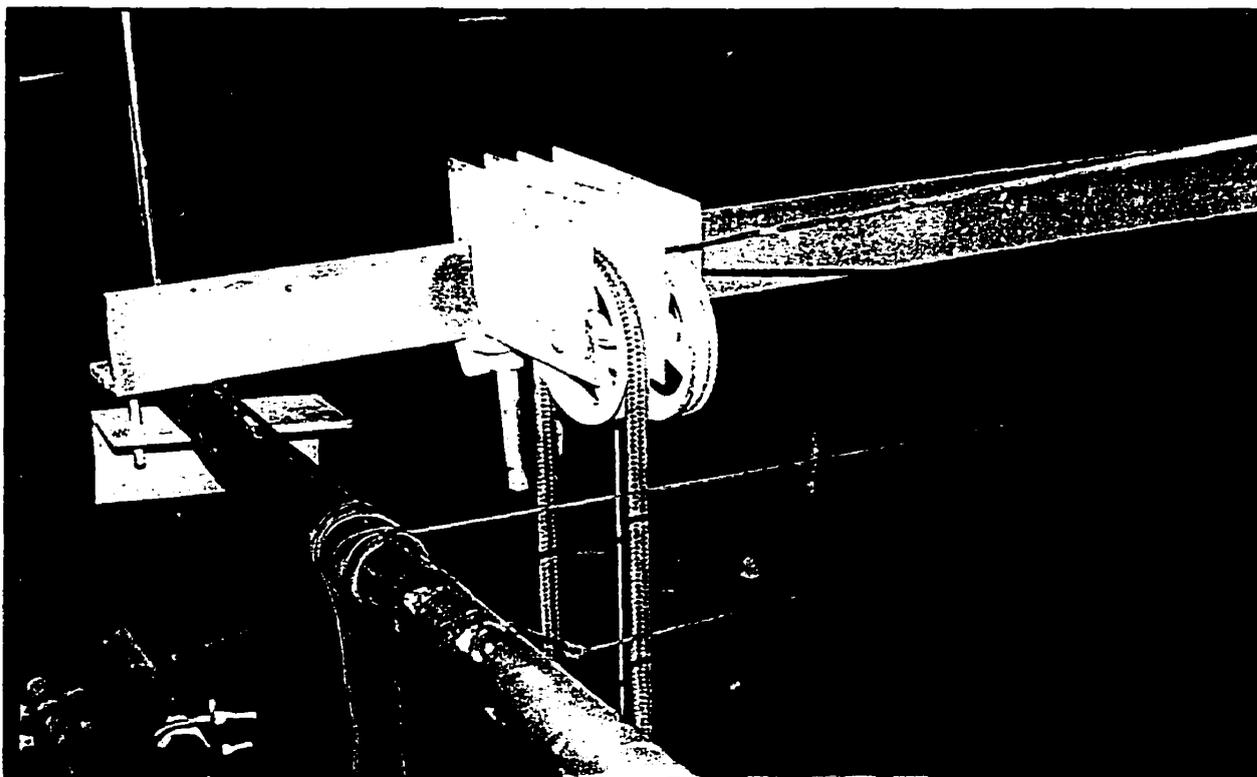
through the web in the steel and attached the sheave with 3/8" grade 8 bolts. The next step was to provide the attachment points for the tumbuckles. I drilled two holes in the middle of the web of the "C" channel three inches from either end and placed a 5'16" shouldered rated eyebolt. Since the slings would be coming off the loft block at an angle less than ninety degrees I needed to use shouldered eyebolts to prevent the eyebolt from twisting. I had a pair of these eyebolts from a previous setup; they are rated for only seven hundred and eighty pounds at a sixty-degree sling angle. I would have preferred to use 3/8" eyebolts to keep the system ratings close to consistent. Unfortunately, I was building the system on a Sunday and did not have access to purchase the heavier hardware and it was necessary to complete the installation. This would be the weak point in the loft block assembly. I felt I was still within a safe working load, as Javier weighed one hundred and forty pounds in costume with the wings.



Loft Block Assembly

After I had flown the loft block assembly and leveled it I had to ensure that it was stable and would not move during the operation. I bridled off downward from two unrated eyebolts that were mounted on the web of the "C" channel. The four cables ran off on approximately forty-five degree angles both downward and laterally. The cables were attached to turnbuckles that were chained to the grid pipes. I felt I could get by with using some unrated hardware for economical reasons, as these points would not be weight bearing but simply providing tension for alignment. I roughed in the tension on the loft block; I would leave the fine-tuning of the block until I had the lift cable in place. If I had had rated hardware in stock I would have used it, simply to add to the safety of the system.

The next item to be built was the head block assembly that consisted of the steel used to support the two head blocks for the lift line and the hand line. I based the design on the one that I had used on Good Night Desdemona Good Morning Juliet with one major change. I had to find a heavier gauge of steel for this assembly. I had noticed a definite deflection in the previous setup and wanted to make sure this would not happen this time. I found a long length of "L" steel in the properties shop, which was much heavier than the original piece. This piece of steel was 5/16" thick with 4" legs. For Good Night Desdemona Good Morning Juliet I had sandwiched the two lengths of steel across the entire opening of the grid. For the Electra setup I was short of material to double the entire span. I decided that the steel was heavy enough to afford a sandwich system only at the grid pipes.



Head Block Assembly

I had invited Tracy Nunnally to come to the Reeve Theatre to inspect and consult on the installation. I felt that Tracy's experience and knowledge of flying performers is among the best in North America. He has worked on many installations with Theatre Calgary and Down Stage Right Rigging and with many other fine technicians such as Delbert Hall and Flying By Foy. As I was in the process of fabricating this unit Tracy Nunnally arrived and we walked through and inspected what I had done up to that point. He felt that the loft block assembly was good but had some suggestions on the head block assembly. I was planning to use two blocks that were designed to be underhung on "I" beams. I had used these units in the University Theatre to fly a dancer in the Dance Department's production of Mainstage a couple of years earlier. I knew that they were more than sufficient to take the weight. I had hoped to mount the blocks so the force would be directed downward and I could modify the mounting bracket to simplify attaching the block to the steel "L" piece.

Tracy felt that this was not a good idea and we discussed the way the block was designed and where the forces were to be exerted on the system. The best solution that we came up with was to cut into the leg of the steel "L" piece and to use the mounting system of the block as it was designed. Methods of cutting the steel were discussed and we decided that drilling and cutting a hole in the steel was better than using a cutting torch. Heating the steel to that degree would cause the steel to weaken. Tracy felt that we would still be within safe limits, but I preferred the method that would not cause any structural change. I made measurements to determine where the hole would have to be placed to allow the head block assembly to line up with the loft block assembly. With the steel "L" piece marked I spent an extra hour and a half cutting the steel but it did make for a much more solid connection between the block and the steel. The next step was to mount the head block assembly to the grid. I laid the large piece across the opening in the grid and secured the two sandwich pieces to the pipes.

The next step was to install the arbor unit that would contain the counterweights that would balance the system to the actor's weight. In the earlier model I had used a system of wrapping chains around the stage weights and attaching the chains to the lift line. This time I was dealing with much more weight and it was necessary to keep the weights in a more stable stack. I had discovered a piece of equipment that Tim Clinton had built for an elevator unit that had been used in a previous Drama Department production. The elevator had been rebuilt and this arbor had been replaced. It was structurally strong enough to hold the weight required and more if necessary. The only concern I had was the weld on the ring that was used to attach the lift line. Tracy and I decided that it would be safer to wrap the arbor with a rated chain and attach the lift line to the chain instead of the ring. The lift line was attached to the chain with two shackles and the hand line was attached to the welded rings on the top and the bottom of the arbor. As the hand line was not bearing any of the weight of the system, the welded rings were sufficient. The arbor was then blocked up on two small riser units to allow it to be above the deck pulley. This pulley was screwed to the deck with four 1.5" #8 screws. The deck pulley was also non-weight bearing so it needed only be

fastened down so it would not move. I used a length of 1" black rope for the hand line that ran from the top of the arbor up to the pulley. The line continued through the pulley and down to the deck pulley and up to attaches to the bottom of the arbor.



Arbour Assembly

The lift line was 1/8" aircraft cable coated with a black rubber covering. The cable was rated for a safe working load of four hundred pounds, which again was a safe margin for the operation. The cable was terminated in a loop with a thimble and secured by three Nicopress sleeves that were swaged. The swaged Nicopress sleeves created a permanent non-removable friction clamp on the wire rope. The manufacturer considers the use of one sleeve sufficient but to add to the safety factor I pressed three sleeves on each end of the cable. The sleeves were pressed and checked with the Go/No Go gauge; the pressed sleeve had to fit properly in the gauge gap. If the sleeve did not fit the swaging tool had to be adjusted and the sleeve pressed again. The tool was adjusted properly and the sleeves passed the test.

The first cable that I used in the system was in place and I placed the wings on the system and ran the line up and down. As I was running my hand on the cable I felt a sharp pain in my hand. There was a broken strand of wire protruding through the black rubber coating on the cable. This indicated to me that the cable had undergone some form of stress at some point and was damaged. I removed the cable from the system and cut it off before the broken strand. I carefully inspected the cable before I returned it to stock. The remaining length of cable passed all the required visual tests I could perform. There were no more visible broken strands, kinks or flat spots on the cable. In my haste I had made the mistake of not performing this test before installing the first cable. I found a new cable that was long enough, checked it thoroughly, found no imperfections and swaged both ends of the cable.

With the cable in place running from the arbor through the head block and loft block and to the wing unit, I tensioned the stabilizer cables on the loft block so the line ran straight and true. This was accomplished by tightening the turnbuckles so all the line had roughly the same amount of tension on each. This kept the loft block in a consistent position.

After a few tests flying the wings in and out to check the system, I threaded black nylon line through the openings in the wing tips and tied the lines off to the grid. The first test flights with the wings opening, as the black nylon lines reached their static lengths were very poor.

The wings caused the back plate to pitch forward and skew. I realized that the only problem was that the wings were not heavy enough. I attached a pipe to the lower part of the back plate. This lowered the centre of gravity of the wing unit and the wings flew in straight. I adjusted the lengths of the black nylon lines until the wings were level at the trim height of the effect.

The next problems to correct were the spinning of the wings and the fact that the wing tips crossed when they were in the folded position. I had expected the wings to spin as they flew in and out because I was using a single line. The aircraft cable is 7 x 19, Seal, preformed, galvanized Extra Improved Flow Steel, independent wire rope core with a right regular lay. The cable is composed of 7 groups of 19 strands of wire wrapped clockwise around a small wire core that rotates in a counter clockwise direction. This clockwise wrapping causes the cable to spin as it moves through a sheave. I had hoped that the short flight distance and the static lines on the wing tips would eliminate this problem. I had a problem with spin when I flew the dancer in Mainstage, but the choreographer liked the spin so we made no attempt to correct it. The static lines did not help, as they did not take weight until the flight was almost complete. Tracy had said I could borrow his rescue spinner, a device that would rotate opposite of the spin of the cable. It was an item from the Mountain Equipment Co-op Rescue catalogue. Unfortunately we could not locate the spinner and an alternate source, Richard Gregson, was out of the country. I ordered a spinner from Mountain Equipment Co-op, which had to be shipped from Vancouver. This was poor planning by my part as I should have foreseen the problem and tried to get one sooner. We were close to budget limitations and it was unlike Tracy to lose a piece of his rigging equipment. I had depended too much on this fact and the effect was now behind schedule. We could only wait until the spinner arrived but there were still items that had to be finished before it was safe to make a flight.



Carabinier Swivel Assembly with the two safeties

The perch had to be constructed. I wanted there to be as safe a loading and unloading area as possible. Javier would not be able to get into the harness from the grid catwalk. It would be necessary for him to be in the open bay to get attached to the line. Don Monty volunteered to come in on the actor's day off to help me build the perch. We located a

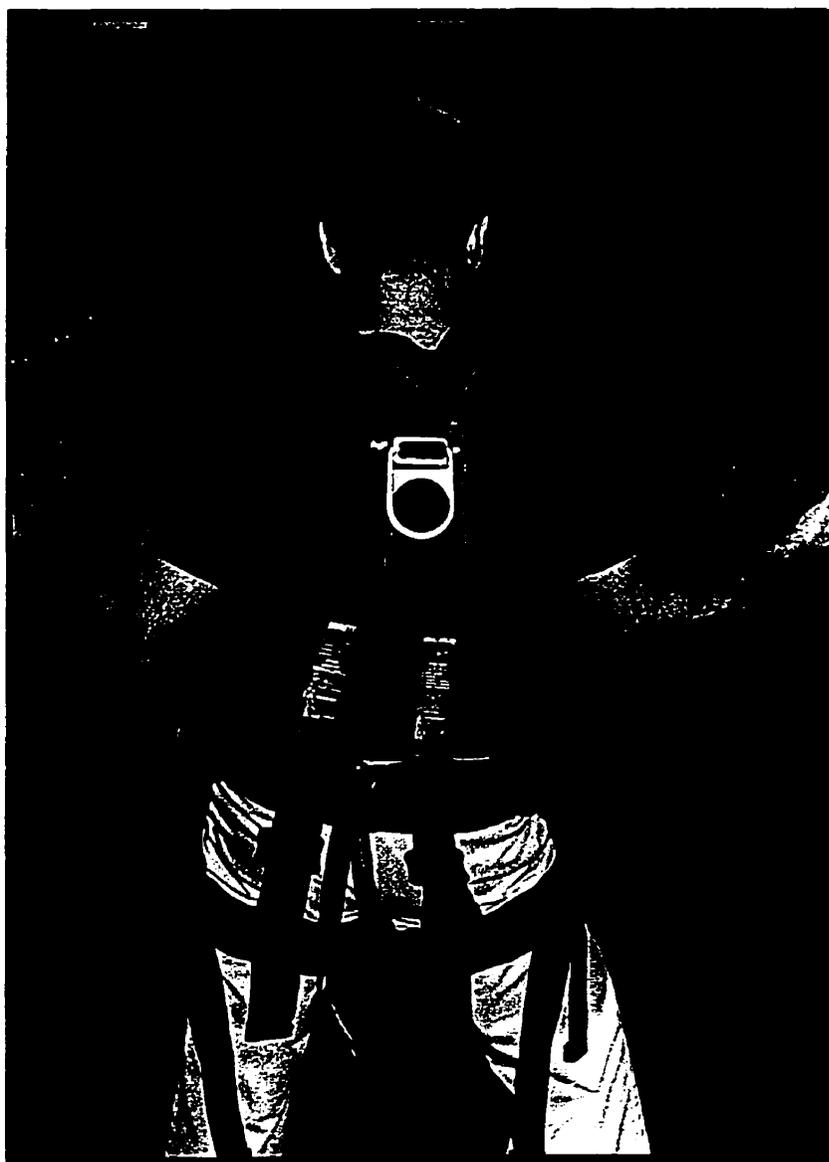
platform that was of proper size. We then laid pipes across the lighting pipes and lashed them in place and then placed two pipes on the upper grid rail. We used a combination of Kee Klamps and wedge clamps to secure them in place. These served as hand rails for Javier to use for security and to guide himself into place once he was connected to the aircraft cable. With the addition of a blue running light, Clearcom headset and my Sure-Stop Shock Absorber/Lanyard in place as a safety, the perch was complete. We were ready for the spinner to make a test flight.

At this point we were behind my schedule for the working of the flying effect. I knew Javier and Lawrence were eager to see the effect but I did not want to attempt it until I was sure it would work and be totally safe. Total safety was always the priority in this effect. I could only assure them that the effect would work and we should concentrate on making sure the rest of the show was ready.

The spinner arrived Monday morning before the Wednesday opening. This was too late, but we were committed to making the effect work. I was to take the first test flight to ensure that the system was safe. I am also heavier than Javier is by sixty pounds, so I felt this was a good test of the system. Don Monty wanted me to install a safety line that would be a positive stop on the system that would not allow the performer to reach the floor. We used a heavy black dynamic rope tied back to the grid. This rope would stretch slightly in a fall situation and absorb the shock of the fall. This rope terminated in a figure eight-knot loop that is used in climbing; this knot would tighten and never become untied in a stressed fall situation. The loop was then attached to the harness with a locking carabinier.

I put on my fall restraint full body safety harness that I had purchased last year from Surety Manufacturing and Testing Ltd. in Edmonton. This is a full body fall restraint harness with a controlled descent ring located on the back of the harness. This is a government approved and industry standard unit; one I have used to ensure my safety and life when working on high rigging calls. With the assistance of Don Monty and Brian Kerby, I clipped into the

lift line using a locking carabinier, spinner, locking carabinier combination. I made a descent to show Javier and Lawrence that the system was safe. I did not use the wing unit, as I wanted to adjust and fit it to Javier.



Javier in harness (rear view)

The next test was with Javier. I took sixty pounds of stage weights off the arbor and put Javier into the harness and adjusted it to fit him snugly. After the adjustments he felt it wasn't totally comfortable but said he wanted to try it, and we loaded in to the system to make the first flight. The flying crew was going to consist of Amy Lippold as his safety person, Brian Kerby on the arbor, and myself working behind Javier as I put him into the rig. We got Javier into the rig and eased him off the perch platform. During the descent he was very uncomfortable so Brian and I raised him back to the platform to find out what was wrong. He complained that the harness was very painful through the groin area. I inspected the leg loops to see if they had slipped out of position. They were still positioned properly, but Javier had not properly positioned himself in the harness and one of the leg loops was over one of his testicles. I explained that this would definitely cause him tremendous pain and he should adjust himself and we would try it again.

The second flight went better as Javier was comfortable in the harness. We still had a few problems to deal with before the effect would look good. Javier was pitching forward more than I thought was proper for the effect; this was corrected by adjusting his harness. I moved the back-lifting ring of the harness up higher; this solved the pitching forward. The descent was very close to the rear projection screen, with Javier putting his feet on to the track for the screen. Don and Brian were adamant that we move the screen upstage. I saw no problem with this as we were only using it for the video projection and the rising sun effect, neither of which would be affected greatly by moving the screen. The wing tips also crossed when the weight was not being supported by the wing tip pick up lines. We were able to work with this; it was difficult but I did not have time to fix this until the next day. The other problem was the lower attachment point on the wings. It was very difficult for me to attach it to the harness without cutting my hands on the very sharp edges of the wings. I would deal with this also the next day.

At this point, I was mad at myself for not sticking up and insisting on my original design for keeping the back plate tight to Javier's body. My design was more labour intensive and

Werner Karsten, properties master told me, that he could devise a method that was simpler to construct and would be just as effective. It was easier to build but proved not to work very well as it did not hold the back plate snugly to the back of the actor. As the back plate was loose and shifted under load it made it difficult to align the top ring with the lifting ring on the harness. The back plate would prove to be always loose during the flight and no amount of adjustment seemed to solve the problem. I feel that the original concept of straps holding the back plate would have allowed us more flexibility in adjusting the unit to the actor.

We conducted several more test flights to get Javier comfortable with the effect, checked our height, set our spikes and adjusted the height of the wings in their deployed position. At this point Javier was happy but a little sore and tired. The only major adjustment that we had to make on the harness comfort was to purchase Javier a pair of padded bicycle shorts.

As time was precious for everyone, we agreed with Lawrence to close the upstage masking so he could rehearse while Don, Brian and I moved the rear projection screen upstage. This involved using two Genie Lifts to move the track. We were fortunate that the University Theatre Services lift was available and we had access to it.

We were ready to put the effect into the show at the evening rehearsal. The first attempt was fairly smooth but the second was a failure as the wing tips crossed. The nylon static lines fouled and caused Javier to fly to his left and get hung up. We aborted the flight and Brian and I hauled Javier out. It was imperative that I fix the problem quickly. I was frustrated by the fact that we were behind schedule and I had taken so long getting the effect into the show.

The next morning I came in early to work on the wings. I folded back the sharp edges of the metal feathers and covered the edges with silver gaffers tape. Next I drilled two holes through the back plate and inserted two three-inch bolts that extended out the back of the unit. These bolts stopped the wings from closing past a certain point and would not allow

the tips to cross and the strings to tangle.

As it was now the Tuesday afternoon of the Preview performance, we concentrated only on the final scene in rehearsal. We ran the scene several times with the effect working properly and smoothly each time. We adjusted timings and cues and finally felt ready to do the show.

The entrance of Castor was another challenge that had to be met and solved. The original idea of the track on track flying system had been lost due to the funding problems. Lawrence and I had looked at alternatives; our first choice was a crane arrangement that would raise and swing Geoff Woods up and over the wall. I felt that this was a straightforward and easy answer to the effect. I began to research and design the apparatus by looking at the movement involved and how to achieve the effect. With each development a new challenge would become apparent, and more solutions and engineering would be required. It started as a simple lever 'teeter totter' design with a platform/basket on one end for the performer and a counterweighted end for the operator. Measurements of the area upstage of the wall proved that we did not have enough space to place the fulcrum at the centre of the boom arm. With the fulcrum off centre and the operator end being much shorter than the performer arm, a greater counterweight would be required. The prospect of a large out of weight situation was a problem. Unlike the flying apparatus, this out of weight situation would require the counterweights to be off the floor and secure when the system was not in use. This action would require either supporting the weights on another weight bearing structure or firmly securing the performer end to the deck. The next problem was involved in swinging the arm in a horizontal motion while always moving the performer vertically. There would be more structure involved to support and control the forces that would be generated by such a motion. My research and rough designs revealed that such a machine would be beyond my metal working skills. This device would be an extra budget expense that we could not afford and would require more time to perfect than was available. I also did not have a technician available with whom I felt comfortable operating this

difficult and potentially dangerous effect. All projects require a combination of time, talent and money; this project was going to exceed all these factors. I decided to look at alternatives that did not require a large amount of 'theatrical ectoplasm'.

The important visual effect of Castor's entrance was that it appears to be effortless: we hoped that he could 'float' into the scene with no body movement by the performer. My next choice was a form of elevator that would raise Geoff straight up from behind the wall to a position above the wall. A lack of planning on my part eliminated the in stock elevator that had been built for the Bacchae. It was stored in the trap room of the University Theatre and could not be removed in time. The elevator unit is a very well built but a very large and heavy unit. To remove it from the trap room requires removing the forestage platforms that cover the pit and removing the floor pieces that cover the deeper pit section. We would require a chain motor to lift the unit out of the storage area, an operation that would require four technicians about four to five hours to move the elevator and restore the stage area. The University Theatre had also laid the Masonite dance floor over the regular floor, adding more time to the operation. A little foresight and planning would have given me a backup option.

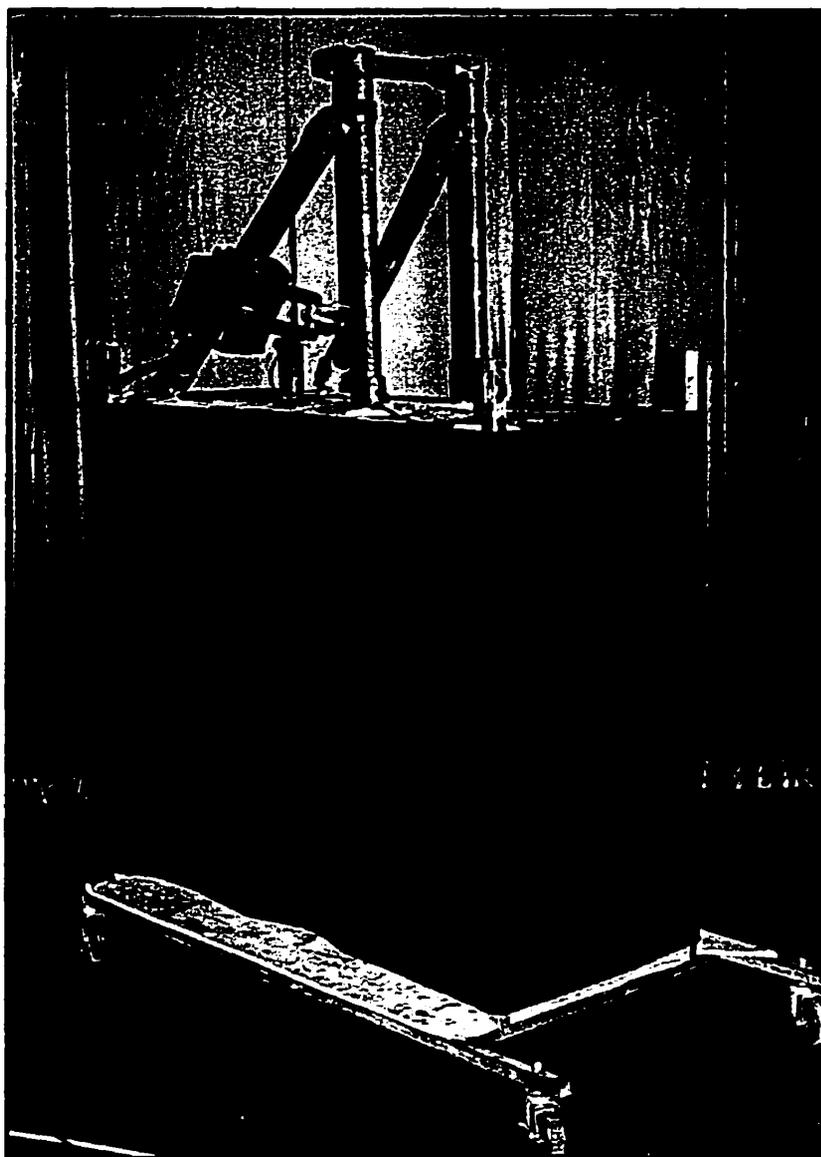
The next idea I began to work on was a variation of the elevator; an inclined plane with a platform for the actor that rolled up the ramp. I had hoped that it would be quickly built and a simple operation. I constructed a rather steep ramp using a frame built out of pipe and Kee Klamp connectors and secured a four foot by eight foot platform to the frame and floor. I adapted a small platform into a rolling counter rake with a track to maintain alignment as the unit moved upwards. I attached a rope through a pulley on the upper edge and rigged a temporary counter weight system to offset the weight of the actor. The forces of nature and physics again proved to offer more challenges than I had prepared for, as the system was unstable when it was in motion. The counter rake platform was out of balance and would pitch forward when the counter weight was moved. It was apparent that the castors would have to be enclosed in a track that would not allow them to lift off the guide tracks. An

encapsulated rack and pinion system or a system of connected castors that ran the length of the counter rake platform. The castors would be contained in a track that would not allow the rear end of the platform to lift. The counter weight again was a problem. It would be an out of weight system when the unit was not in use. The length of platform travel would be approximately twice the distance that was available for the movement of the arbor. The system necessitated double purchase rigging requiring at least twice the weight of the actor totaling at least four hundred pounds. The system would require a solid anchor point to lock the counter rake platform when not in use. The apparatus would also require two operators working in a carefully choreographed step by step operation. This project would require more time, skill and materials to complete than I had available.

At this point we were very close to the deadlines of the Preview performance. My final backup plan was to install a long staircase or ramp that would allow Geoff to walk into position. The effect could be made very theatrical with the addition of Rosco fog and back and side lighting. It would be a compromise but it would be a solution that would allow us to move forward.

I was ready to begin the installation of the stairs when Geoff came forward with an idea of using a small rolling road box that was in the Studio Theatre. We would use it to roll him onstage from stage left behind the low section of the wall. I agreed to look at the box and went down to the Studio Theatre. I saw a rolling section of scaffold that was used to hang and focus lighting instruments. I felt that this was a better solution as it was taller, had a large stable base and was equipped with large castors that would make the unit easy to move. The size of the platform would allow Geoff to appear from behind the large section of the wall stage right and move to centre stage up of the wall to deliver his speech. The platform was long enough to mount a six-inch, one thousand-watt Fresnel lighting instrument that would backlight him as he entered. We built a pipe framework that would allow him to secure himself safely to the platform. We masked the platform in black fabric so it would not be easily visible and removed the middle level of boards to make the unit

quieter. The operation of the effect required three technicians: Reyna and Nadene would push the unit into position and Jennifer would page the electric extension cable for the Fresnel. This simple cue was quickly mastered. We marked a trail in spike tape that could be followed and a final position for the unit.



Castor's Rolling Scaffold Unit with Lighting Instrument

We worked the entrance of both gods several times. Don Monty suggested that the crew change the movement of the scaffold as Castor entered. He suggested that they 'fishtail' the scaffold as it moved towards the wall. This gave a greater illusion of floating and concealed the lighting instrument behind Geoff more efficiently.

The Rosco fog machine also aided the illusion. I placed the machine upstage of the wall half way between the flying position and the final wall position. The machine was pointed upwards at a thirty-degree angle to direct the fog upward. I had used the machine many times and had discovered that if the jet of fog were directed through a small box fan placed directly in front of the nozzle, the fog would spread very quickly and cover a large area. This eliminated the tight cone of fog that was usually produced and revealed the location of the machine. This machine produces a high quantity of fog quickly and a burst lasting a few seconds completely filled the area upstage of the wall. This added to the mystery and covered some of the apparatus.

The god's entrance was a combination of lighting, ominous music, thunder sound effects, and fog. The moves were performed quickly with Polydeuces flying in to up stage left of the wall and were immediately followed by Castor's entrance from behind the stage left wall. The audience was subjected to a large amount of fast visual and audio stimulation that hopefully overwhelmed their senses and made the entrances appear to be more spectacular than they really were.

I was unable to see the entire effect from the front as I was concentrating on making sure that Javier's flight was smooth and safe. Lawrence said it was what he had hoped and dreamed of for the final scene. We rehearsed it until every one was happy and felt safe and confident.

Although both effects had taken longer than I had hoped to perfect, we were ready to present them to an audience.

## Chapter 8

### Performances

The safety of Javier was the first priority in the flying effect, for no matter how great an effect looks it is not worth risking the safety of a performer. With this as our guiding precedent, I decided I felt the safest if I was in charge of the flying effect. I did not want to delegate it to another student who did not have experience. I had worked on the flying of performers at Theatre Calgary for productions of A Christmas Carol and Into the Woods, and had attended the Flying Effects workshop at Theatre Calgary. I decided that since I would be on the running crew I would also assume the role of a stage carpenter. The stage carpenter's duties during the run of a production include the upkeep and maintenance of the set and ensure a safe performance space.

My show call for the performance began at 5:30 PM with a walk around of the set to check for holes in the cardboard covering the floor. If I determined that a spot was dangerous or simply unattractive, the piece was cut back to a stronger edge that was backed by black gaffer tape. A new piece of cardboard was slid underneath the existing cardboard floor and the edge was nailed down. There were several small ripped sections of floor that had to be replaced; most of these were around the 'hill' area and the edge of the stage. Don Monty and I had discovered that this was the preferred method of patching the stage covering. This technique produced a very durable edge that stayed in place and did not cause a tripping hazard for the actors. The sections that covered 'hill' area were simply covered by a new piece of cardboard; the new layers merely added to the texture of the scenic unit.

The second part of my pre-show check was a complete inspection of the flying rig and the harness. The checklist began on the floor.

### Preshow Checklist

1. Place a large piece of scrap cardboard directly below the loft block.
2. Inspect the lift line shackle to ensure that it is screwed tight in a closed position.
3. Inspect the chain and shackle connecting the arbor to the lift line.
4. Inspect the knots connecting the hand line to the top and bottom of the arbor.

With the floor checklist completed, I moved to the grid in the Reeve Secondary Theatre.

5. Test the four bolts that sandwich the steel 'L' pieces to the grid rail pipe.
6. Test the head block pulleys for tightness and position.
7. Sight down the steel to check for any hint of deflection in the steel 'L' piece.
8. Check the aircraft cable for safety. This was done both visually and by touch. Any kink in the cable or broken strands of wire protruding through the coating would have required the cable being replaced.
9. Spray the loft block with WD40 to lubricate the sheave to keep the movement smooth and quiet. The cardboard caught the excess drips and the over spray and prevented the development of any slippery spots on the deck.
10. Sight down the lift line to ensure the loft block is in alignment with the head

block.

11. Check the tension on the four stabilizer lines to ensure that the loft block is held in the proper position and is solid.
12. Inspect the Nico Press sleeves and the eye for wear.
13. Inspect the carabinier/spinner assembly and check that the top carabinier is closed completely.
14. Visually inspect the support cables and slings.
15. Inspect the wings, the d-ring and wing tip static lines.
16. Turn on the blue running light in grid.

This completed the checklist for the perch area and I returned to the deck.

17. Check to see if there are any more drips from the loft block. If the block has stopped dripping, strike the cardboard from the deck.
18. Go to the men's dressing room and inspect the safety harness for any wear or damage.

The rest of the running crew was called for 6:30 PM to begin the setup for the performance. Lydia Lau was the lighting operator and her first duty was to turn on the lighting interface, boot up the lighting computer and do a lamp warm up and then a lamp check. This involved bringing all the lighting instruments up to 25% intensity so that each instrument could be determined to be on or off. I did a visual check from the stage floor to determine if we had

any burned out instruments. We had several burnt out lamps during the run of the show. We had designated time before each performance so we had plenty of time to replace the burnt out bulbs with new bulbs.

The final step in the preshow setup was to do the backstage setup. This involved turning on the Rosco fog machine, the video machine and projector. The projector had warmed up and I cued up the videotape to the start of the sequence and reset the tape counter at zero. The piece of Masonite was then placed in front of the projector lens to stop the blue screen from showing on the rear projection screen. The next step was to plug in the 'sunrise' Parallipsphere to its assigned dimmer unit, loosen off the yoke knob and tip the instrument down into the pre cue position. The last step was to inform DJ Kelly, the stage manager, that I was set and ready to start the show and change into my black clothes.

At the five minute call I went to my 'places' call position upstage, put on my communications headset, climbed the step ladder, and did a visual check of the video machine to see that it was still cued at the proper spot in the tape. I checked in with DJ to confirm that I was on headset and that Amy was backstage with me ready for the opening sequence cues. The opening sequence involved the videotape being played during the black out at the top of the performance. The cue to start the tape was given by DJ but there was a visual cue to remove the Masonite shutter to allow the video beam to hit the rear projection screen. The video had a blue screen before the sequence began and Lawrence wanted the audience not to see this. It was a matter of timing to remove the Masonite just as the colour image changed. The sequence was forty-five seconds in duration. At the end of the sequence, the shutter was quickly replaced before the screen cut to static. DJ called out the sequence. I did not have to watch the screen or the counter and left my focus solely on making sure the Masonite slid into place properly. The videotape was stopped and then I quickly and quietly had to climb down the ladder to be in position for the 'rising' sun lighting cue (Lighting cue #7). Amy and I were positioned on either side of the Parallipsphere instrument, each with one hand on the front of the instrument and one on the

back. DJ called the cue and as the lamp came on, the instrument was swung upward quickly so that the beam of light moved up the rear projection screen. I held the instrument in place as Amy tightened the yoke knob. To ensure that the instrument did not slip we held it in position until the end of the 'out' cue. After the cue was complete, we locked down the instrument and since the instrument was not used in the show again, I unplugged it from the dimmer unit. This was an added precaution to ensure the instrument could not come on due to a mistake. I turned down the volume on my Clearcom, and placed my headset and belt pack back on the top of the property box that was used to lift the audio video cart. Amy and I quietly left the backstage position to our next positions.

My next responsibilities were at the beginning of the flying sequence. Amy and I waited until Javier had completed his last scene as the Peasant; after his exit he came to the men's dressing room to get into his safety harness. We helped him into his harness but did not tighten down the straps to allow Javier to move comfortably as he had to do an offstage scream during the murder of Aegthesius. After his scream Javier came back to get into his silver makeup.

After he was in makeup we waited for the entrance of Orestes. This was our cue to move up to the mechanical area beside the Reeve Secondary Theatre grid door. At this point I tightened down the harness and made sure that every strap was cinched down to as tight as possible and that the harness was comfortably positioned. Amy helped Javier into his silver robe and tabard. I pulled the back-lifting ring of the harness through the upper opening in the back of the robe. Next I pulled the sling that was attached to the waist belt at the back of the harness out through the lower opening of the robe. Amy checked Javier's makeup as I went out onto to the Reeve Secondary grid to check where we were in the show. During the first few performances we made our move to the perch on Klytemnestra's entrance. I felt this was a little early and we were unnecessarily out on the perch too long. We changed the move to later in her speech; this still allowed us to move at a safe pace and ensure the safety of all. I led the way out onto the grid and crossed to the back of the perch area and got on

headset. Javier followed and Amy brought up the rear, making sure that the door did not bang close.

**Flying sequence:**

- 1 Amy connected the fall restraint lanyard to the back lifting ring. Amy made sure that the lanyard passed under the top rail.
- 2 Javier stepped under the top rail and stepped out onto the perch platform using the two handrails to get himself properly positioned.
- 3 I guided Javier back to the hanging wings as Amy maintained physical contact and eye contact with Javier.
- 4 When Javier was in position I attached the locking carabinier that held the wing unit to his back-lifting ring of the harness. I made sure that the locking sleeve of the carabinier was completely tightened. The carabinier passed through both the harness ring and the back plate ring.
- 5 I connected the safety line locking carabinier to both rings.
- 6 I took the sling from the lower section of the harness and threaded it through the hole on the lower part of the back plate. I passed it under the bottom of the back plate through the hole again, pulled it tight and fastened the loop to the clip on the back of the harness.
- 7 I communicated to DJ that we were ready on the perch and that all was okay. Amy maintained contact with Javier and monitored him as I was behind him and could not look into his eyes.

- 8 At this point Brian Kerby had moved into position on the deck at the arbor and came on headset.
- 9 As DJ called Lighting Cue #58 I disengaged the fall restraint lanyard and passed it to Amy.
- 10 I played out the safety line down to form a loop behind Javier.
- 11 We moved Javier back and off the platform. He maintained contact with the handrails as he got his feet in position.
- 12 I communicated to Brian that Javier was off the platform and to maintain control of the arbor.
- 13 On 'Standby Flying' we were ready for the descent, with Javier in a pre flight descent position with his arms into his body and his feet pointed.
- 14 On 'Fly - go' Javier was lowered down to the set position. Brian and I both controlled the flight in, Brian by pulling down on the front hand line and myself by feeding the lift line downward. We both had spikes to mark Javier's 'in' position.
- 15 Brian maintained control of the hand line, as we did not have a locking mechanism on the arbor. We were very close to being in perfect balance with Javier's weight and the counterweight.
- 16 I maintained control of the safety line as it acted as a breasting line to control what little sway was produced by the descent. Amy and I also watched Javier

very closely as we had a prearranged 'bailout' signal. If Javier raised both his arms straight up above his head, it was the signal that Javier wanted to ascend. We never needed to implement this in performance.

- 17 The ascent after the curtain call was executed by Brian pulling down on the back hand line to bring down the arbor and I was pulling up on the safety line. I also pulled slightly upstage on the safety line as this moved Javier slightly back and made access to the perch platform much easier.
- 18 As Javier reached the platform he took hold of the handrails and moved himself forward to the platform.
- 19 When Javier was fully on the platform, Amy handed me the fall restraint lanyard and I attached it to the back-lifting ring of the harness.
- 20 I informed Brian that Javier 'was safe' and he could release control of the arbor.
- 21 I released the lower sling from the clasp on the back plate.
- 22 I released the safety line locking carabinier.
- 23 I released the lift line locking carabinier.
- 24 Amy helped Javier to duck under the grid rail and step off the platform to the grid catwalk.
- 25 Amy released the fall restraint lanyard and Javier was free.

- 26 Amy and I made the site 'safe' turned out the running light and exited the Reeve Secondary grid.
- 27 In the mechanical room area Javier got out of his tabard, robe and his harness. Amy carried the costume pieces and I carried the harness as we went down to the men's dressing room. The three of us discussed the flight and how everyone felt about it.
- 28 I did a visual inspection of the harness and then hung it up in the men's dressing room.

The post show check included another lamp check. After the audience had cleared the theatre, Lydia brought up the preshow lamp check cue and I checked for burnouts. Since we had a large number of burnouts during the production period I thought it best to do a quick check. If we had a number of bulbs to replace it would be best to be prepared to spend extra time the next day.

We had also had a problem with the Parallipspheres. If the bulb burned out because of a fingerprint smudge, it would blister and swell to a point where it would not fit through the opening in the reflector. The entire instrument would have to be replaced as it was necessary to take the Parallipsphere apart to remove the burnt out bulb and replace it with a new one.

Any burnouts were noted and the next item was to shut down the video equipment. I walked around inspecting the floor checking for ripped spots that would need to be repaired or replaced.

I had to remain with DJ to do a lock down of the Reeve, which consisted of making sure that all access doors to the Reeve were locked. During this walk around I also checked for any properties and costumes that had not been put away and for any fresh stage blood that

had not be cleaned up.

## Chapter 9

### Post Production

The strike of Electra followed immediately after the final performance on Sunday, May 16. The goal was to get the set out and the space prepared for the load in of Slavs, the next production in the Reeve Theatre. Don Monty and Martin Herbert were added to work with the members of the Electra company. To make the strike as quick and as efficient as possible a small amount of planning and organization was required. The cast was allowed to get out of costume and spend a little time in the lobby talking to the conference participants as the crew organized themselves.

Don Monty and Brian Kerby began by striking the onstage lighting equipment, the video setup and the audio equipment on the deck. The lighting hang was left untouched and would be dealt with during the setup of Slavs. One of the tasks that had to be completed first was the removal of the rear projection screen to save it from being damaged. I used the Genie Lift to go up to the traveler track and undo the ties from the carriers. I lowered the screen, with the help of Geoff Woods, to the top of one of the rolling property boxes in an attempt to keep it clean. Don Monty assembled a crew of students to help him fold it and return it safely to storage. Don then began to dismantle the audio system. He had hoped to leave the system in place but we had to free the audience right seating unit and stage manager's booth so we could move the set for Slavs into the theatre.

The running crew was required to strike and store their individual areas. Reyna and Nadene were in charge of collecting, sorting and hanging up the costumes in the men's dressing room ready for the wardrobe department to clean and put into storage. They were also responsible for collecting the specialty makeup and cleaning the dressing tables and the dressing rooms. Jennifer and Amy struck and stored the properties to the storage boxes and moved the boxes into the property shop. They also struck the props tables and cleaned the

backstage area behind the set doors. Ben shut down the audio system and struck the Clearcom headsets that were used during the performance.

It was very important that the audio setup be struck quickly and carefully from the house mix position. We had to clear the system to open up a passage to the prop shop to store the dismantled set pieces. We also had to be able to move the Slavs set onstage at the end of the strike. DJ, Ben and Alex Day assisted Don Monty in moving the system.

The rest of the cast and crew reported to Martin Herbert to strike the set. We had decided that very little of the set would be saved. The materials from the boardwalk would be salvaged and reused. The doors were struck and would be returned to storage. Lawrence Leong claimed the column piece as long as he got it out of the theatre space. All step units and stock risers were cleaned of hardware and nails and were returned to the storage areas. As the wall unit was textured, it was considered unusable in any further productions so it was destroyed, broken into small pieces and loaded into the dumpster. The cardboard from the floor was torn up and loaded into the dumpster. The majority of the strike was spent pulling all the nails out of the stage floor. Unfortunately when the cardboard was pulled up from the floor, the nails pulled through the cardboard and remained in the floor. The students spent most of the strike on their hands and knees pulling the nails using hammers, tack pullers, small pry bars and catspaws. The entire floor was checked to ensure that no nails were missed.

As the cast and crew worked on removing the set, I concentrated on removing the flying gear. First I removed the stage weights from the arbor and attached a safety line to the lift line. I proceeded up to the grid to untie the static lines that were attached to the wing tips. I also untied the black nylon lines that had been used as guidelines for the arbor and dropped the lines to the deck. On the deck the lift line was disconnected from the arbor and with the use of the safety line the wings were lowered to the floor. The locking carabinier/spinner assembly was unlocked and the wings were free of the lift line. I had to cut the end of the

cable, as the Nicopress cable loop would not fit through the loft block. After the end was cut off I was able to pull the line through the loft block and the head block and bring it to the floor. The hand line was untied from the arbor and pulled through the head block and fell to the floor. The return sheave for the hand line and the d-ring plates for the guidelines were unscrewed from the floor. All the flying equipment was loaded on a cart and pushed to the side. The wings were moved to the property shop and the masking flat and small platforms were returned to storage. The rest of the rigging was overhead so I decided to leave it until the following day. The Reeve Secondary would be unoccupied and I could disassemble the rest of the rig safely.

I joined the rest of the cast and crew on the strike. The set was virtually dismantled so the main priority was to prepare the space for the move in of the Slavs set and to do as many returns as possible. I enlisted Reyna and Norma to help return equipment that had been borrowed from the University Theatre. These items included the two strip light units, sand bags and the rigging equipment that had been used for the flying sequence.

After these items were returned to their proper storage spots, we returned to the Reeve. The strike was virtually complete as we were involved in a final clean up and sweep. The castle flats had been moved from the property shop and the side lighting booms were in place. This was as much preparation for Slavs as Don wanted to do on that day. We let the students leave and had a beer.

I returned the next day, Monday, to strike the remaining items from the Reeve Secondary. This involved a large number of very heavy pieces that I did not feel comfortable striking on Sunday as there were always people working below me. After classes had ended for the day in the Reeve Secondary I had Brian Kerby help me remove the perch platform and return it to the properties shop. The next step was to undo the four stabilizing cables from the loft block. The loft block assembly was hanging solely by the two main support cables. I asked Darrell Moore at University Theatre Services if I could borrow the Upright 35 personnel lift

to strike the remaining hardware that was unreachable by the Drama Department's Genie Lift. With the help of Darrell and Luke Dalghren, we moved the lift from the Rozsa Centre to the Reeve. Using the Upright 35, I was able to reach the roof of the Reeve Secondary. I placed the loft block assembly in the lift's basket and took the weight off the two support cables. I was able to disconnect the block assembly from the two slings, and pull the slings free from the roof truss units. Once the assembly was on the floor, Darrell and I returned the lift to the Rozsa Centre and I returned to disassemble the unit. The head block assembly was then dismantled and carried down from the grid. All remaining pipes that had been used for bracing and safeties were removed from the Reeve Secondary grid and returned to storage. The hardware was returned to the University Theatre, the sheave was returned to Tracy Nunnally at Theatre Calgary and my personal rigging gear was returned to my storage.

I had to do a final budget summation for the production. We were working in a total budget situation where all the expenses for the production had to total three thousand dollars. This style of budget management allowed for a flexible approach to allocating money to each area. This is the standard way of dealing with budgets for small theatre companies particularly when the budget is for materials and does not include a labour component.

Expenses were dealt with by two methods of payment. The first is payment by account to the University of Calgary system suppliers. This system requires University of Calgary purchase order numbers as the accounting office handles the payment for goods. The second form of payment is by petty cash. Payment by petty cash can be a very difficult way to control the budget expenditures, especially when several individuals are involved from different departments and there is not a detailed internal accounting process. Petty cash can be handled by having the individual pay for the product with their own money and seek reimbursement. The alternative is to advance the individual a petty cash float that is used to pay for the products.

Stephany Liu including all petty cash reimbursements handles the production accounts for the Drama Department. This caused a slight problem during the busy last two weeks of the budget period, as I was unable to get an accurate account of the status of the budget. I told all company members that they had to clear any expenses through me, as I had to balance their requests with the status of the staff's petty cash expenses. The only reports I received from the staff were verbal estimates of how much they had spent and what they felt were potential expenditures. Mileage claims were not included in these verbal estimates and I did not discover these until they were submitted to Stephany.

I did not establish my own system of accountability for petty cash and in hindsight this was a mistake. I should have created a system that requires all petty cash receipts to be submitted on a set day of the week to myself. I would check and tabulate the totals before going to Stephany for reimbursement. This would provide me with a much more accurate assessment of the budget's status.

The show came in slightly over the three thousand dollar budget because of the large number of petty cash expenses that occurred in the last few weeks of the production. I had approved a couple of expenditures that I would not have if I had had an accurate accounting of the budget. I would not have purchased carabinieri but would have used my own equipment, and I would not have approved the photographic diary and lobby display that Ben Laird produced for the production. We also received a late submission from Tara Warner for reimbursement for a hair cut and colour that was well over the expected cost. This was due to a problem involved with the colouring of her hair. The stylist needed to repeat the process several times to get the proper colour. We probably should not have been liable for this expense, as it should have been the responsibility of the stylist. Tara had paid for the work out of her pocket and I felt we could not ethically deny her reimbursement.

I feel that we did all we could to bring a production of this size in close to our budget. It is a difficult balancing act to accomplish artistic goals while working with in a dollar figure that

is based on part of an overall operating budget.

A budget expenditure sheet is included in the appendix section of this thesis. This budget includes an account of expenses that are charged to the production and to the department.

## Chapter 10

### Production Review

I feel that I achieved my goal of stretching myself as an artist. We attempted to do more with Electra on all levels of production. We did not play it safe. We took several chances and though we did not attain all of our dreams, we came as close as we could given our resources. Lawrence, Tasha and I, along with the rest of the company attempted to do more than was expected of us. Lawrence's decision to adapt and create his own English version of Euripides' text, his desire to rehearse under the rules of a professional contract and his willingness to take chances on stage pushed all of us to our full potential.

Electra was the first major production that I had been involved with from the first day of planning since I had taught at the University of Regina in 1994/5. During my tenure as Stage Manager for the University Theatre Services I had been involved in productions with the Dance Department but they were not of the size and scope of a major Drama Department production. My previous involvement on the Drama Department productions had been limited to setups and specific show related tasks usually involving rigging. Electra was also the first lighting design I have accomplished since the University of Regina. It was good to get back to working on a production that I truly cared about. I had discovered working in a road house situation like the University Theatre and the Rozsa Centre that too often you cared more about making sure the client was happy, even at the expense of your own job satisfaction. Working with the Electra company was an enjoyable, exciting and invigorating experience. I remembered what it was to care passionately about your art; the kind of passion that can sometimes blur your perspective on the show.

I accomplished my goals for the show within the parameters of time, money and resources. I was happy with my lighting design, which was a variation on my style that I have developed over the last twenty years: the basic concept of multi point general lighting with

light sources coming from at least eight angles in relationship to the actor and very stark and striking specials. I would have preferred to hang two more front gobo washes but I was restricted by the fact that I had already used most of the Reeve Theatre's lighting inventory. I felt I did justice lighting Tasha's set and costume design and I know I achieved Lawrence's wishes. My working relationship with Lawrence was one of the best of my career. We communicated well and respected each other's opinions and shared the same vision for the production.

The flying of Polydeuces was a major achievement that I was very pleased with, especially considering the tragic accident with the death of Owen Hart in Kansas City. Mr. Hart tragically died in the pursuit of a bigger, more dramatic and exciting entrance for a World Wrestling Federation event. In this incident the look of the effect was more important than the safety of the performer, something I find totally disgusting as a technician and artist. I do not know the cause of the accident, whether it was poor system design or attempting an effect that was not possible. The accident happened shortly after the close of Electra and it caused me to reflect on what I had done and whether I would ever attempt to fly a performer again. I realized that I have the skills to fly a performer and will probably accept the challenge again, but now I would be even more concerned about the safety factor.

My performance as a Technical Director was the one aspect of the production where I was not totally happy. I felt I should have been more active in the early phases of the show, and I wished that I had worked more closely with Tasha on the development of the design. I felt that had we discussed the design before the build period we would have scaled back the size of the wall unit. Once the unit was built and placed onstage in the Reeve Theatre I think most people felt it was too large a playing area. The size did cause blocking problems for Lawrence and hindered how the actors interacted on stage. The width of the playing area stretched the lighting design and affected how equipment was used and how lighting cues looked.

I would have also liked to have been more active in deciding how the set was to be built. I would have preferred to have taken the plans and done construction drawings, material break downs and cutting lists and compared them to Martin's findings. I have worked this system with several scenic carpenters for different professional theatre companies and it has proven successful. This method offers the advantage of two skilled technicians looking independently at the same drawings and sharing opinions on how a show should be built. I am not saying that Martin's choices were poor; on the contrary, he is an excellent carpenter and comparing my results to his would have been a great learning experience.

There are several areas that I still need to improve especially in the areas of metal working and scenic construction. An ability to weld would have helped in designing and building an effect for Castor's entrance. I will continue my education as a technician and one primary area will involve my improvement as a carpenter and a welder.

One of my skills is the ability to adjust to and accept other people's ideas. There are times when I have to follow my instincts and assert myself even more than I do. I have a wealth of experience from a long and successful career in Canadian theatre and am now in the position to begin training the next generation of technicians. The experience of working with a young and exciting company has been invigorating and will stay with me always.

## Chapter 11

### Research

Fire Authorities in California found a corpse in a burnt out section of forest whilst assessing the damage done by a forest fire. The deceased male was dressed in a full wetsuit, complete with a dive tank, flippers and face mask. A post mortem examination revealed that the person died not from burns but from massive internal injuries. Dental records provided a positive identification. Investigators then set about determining how a fully clad diver ended up in the middle of a forest fire. It was revealed that, on the day of the fire, the person went for a diving trip off the coast - some 20 kilometers away from the forest. The firefighters, seeking to control the fire as quickly as possible, called in a fleet of helicopters with very large buckets. The buckets were dropped into the ocean for rapid filling, then flown to the forest fire and emptied. You guessed it. One minute our diver was making like Flipper in the Pacific, the next he was doing a breaststroke in a fire bucket 300m in the air. Apparently, he extinguished exactly 1.78m (5'10") of the fire. (1)

Myth, urban legend, fairy tale or simply a story passed from one individual to another with no one bothering to check the facts or even to determine if this was physically possible. Even in modern times stories of epic proportion and physical impossibilities are still passed by word of mouth or now more commonly by e-mail. The storyteller assures the listener or reader that the information is from a reputable source and is true. In truth, no scuba diver has ever been plucked from the waters of a mountain lake by a fire bomber and most likely never will be, but the story will continue to be told and will grow in scale and scope with each retelling. The story besides being unusual and interesting has an underlying moral to the listener - scuba diving is a dangerous sport and shouldn't be attempted by the average person.

Humans have always tried to explain what they do not understand in terms that they and others can understand. The odds against the creation of all life on earth are so

astronomically high that it is difficult to explain to the common person. The scientific community presents speculations and hypothesis but can this miracle be truly explained? In ancient times the answers were easier. Stories of gods and monsters and epic adventures provided all the answers. Truth and explanations could be found in stories of kings, gods and heroes, larger than life creations whose powers and skills were greater than the common persons, but powerful beings that could still be humbled.

As children our parents tell us fairy tales, unbelievable stories. We believe them because individuals whom we trust and respect for their wisdom tell them to us; we do not question the source - we just believe. The youngest child will quickly figure out the story of three pigs building houses isn't true or possible but that's not what is important. What is important for the child to learn from the story is that hard work will win out in the end and the resulting safety and security justifies the extra effort. The child also learns it is important for the strong and the prepared to protect those who do not prepare properly for the future.

The tradition of telling tales to explain the world is as old as mankind. Each and every civilization had their own myths and stories. The most prolific and complete are the legends of Greece. Greece was the centre of the ancient world and rose to great power based on its achievements in poetry, art, drama, architecture, science and philosophy. The fundamentals of many of today's philosophies can be traced directly backed to Greece, more so than any other ancient culture.

The beginning of time and space and the birth of mankind were explained to the masses in terms that they could comprehend.

The legendary poet Orpheus is said, in some account, to have believed that Time came first, existing from the very beginning but without a beginning. From Time came Chaos, a tremendous space containing Night, Mist, and the upper regions of the air, or Aether. At Time's command, the mist spun around the airy space with such a terrific speed that the mass, taking the shape of a huge egg, finally broke off in two halves. Love came from the

center of the egg, and the halves became Heaven and Earth.

According to Homer, Oceanus, personified as Ocean, a vast flood that encircled all the earth, both land and sea, was the beginning of everything.  
(2)

Scientific explanations can be equated to modern day mythology - answers to questions that are huge and difficult to comprehend, like the birth of the universe. The 'Big Bang Theory' suggests that 15 billion years ago all matter was compressed into one single atomic nucleus, known as the 'singularity'. An explosion trillions of degrees in temperature, a temperature that is almost impossible to comprehend, created not only subatomic particles but time and space also.

What exactly is a Greek myth? In the past, many solutions to this problem have been proposed, but in the course of time all have proved to be unsatisfactory. The most recent analyses stress that myth belongs to the general class of traditional tales. For example, Walter Burkert, the greatest living expert on Greek religion, has stated that 'myth is a traditional tale with secondary, partial reference to something of collective importance'.(3)

First, how traditional is a Greek myth? Second to what degree does Greek myth contain matter of collective importance? And finally, if myth is a traditional tale - what then is the difference between myth and other genres of traditional tales, such as the fairy-tale or the legend? (4)

In Bulfinch's *Mythology*, the question is asked, "Whence came these stories? Have they a foundation in truth, or are they simply dreams of the imagination?" Four theories are put forward. The Spiritual theory, Historical theory, Allegorical theory and the Physical theory. The Spiritual theory contends that all mythological legends are derived from the narratives of Scripture. There are many crossover stories but great proportions of mythological stories are not covered. The Historical theory depends on the belief that all persons mentioned in mythology are based on real human beings and have had their true adventures embellished and glorified. A third theory suggests that all myths are allegorical and symbolical, containing some moral, religious, historical or philosophical truth. These allegorical stories

came, over time and retelling, to be taken literally. The fourth theory contends that the elements of fire, air and water were the original objects of religious worship and the principal gods personified nature and governed over all elements of nature. The true essence of mythology can be found in a combination of these theories, and for mankind's desire to account for things that could not be explained. These stories of gods were passed on by word of mouth by poets and storytellers, the most famous being Homer, who was credited with the creation of the Iliad and the Odyssey. There is debate whether one, two or several writers wrote these stories but never the less, these stories are the bases of much of the mythology that was passed from one generation to the next.

Greek myths permeated Greek life, both private and public. In the well-documented society of Athens in the fifth century BC, for example, it is clear that a major part of education was learning and reciting poems on heroic subjects. Guests at drinking parties might entertain each other by reciting stories from myths, or they might listen to a professional performer, who would sing of the deeds of heroes while accompanying himself on the lyre. Private homes contained pottery vessels decorated with scenes from the adventures of the gods and heroes; these same vessels accompanied their owners to their grave. Scenes of myth were also woven into fine textiles.

Moving outside of the home, most of the great public religious festivals were linked with specific mythological incidents, and these were commemorated in the rites which marked such occasions. (5)

The festivals were rites of passage marking the arrival of the seasons, fertility, the passage from childhood to manhood and other rites that can be found in most cultures through out the world. The first major god to be celebrated was Dionysus, the god of wine. Leaping dances called dithyrambs were dances of abandonment accompanied by dramatic movements and songs.

As with all advanced civilizations the demand arose for more challenging entertainment with

greater production values and different ways of presenting the same stories. The wealth of Greek mythology presented the possibilities of many plots and story lines. Thespis, a director of the chorus was credited with playing the first character separate from the chorus. Dialogue joined with dancing and songs to form the first plays with defined characters and chorus. As the presentation form evolved with the first permanent dedicated performance spaces, play writing and the production of plays became a popular art form, with the plays being presented in competition.

A contest of plays in 535 BC arose when Pisistratus, the 'tyrant' whom the common people of Athens invested with power, brought a rustic Dionysian festival into the city. The 'theatre' was constructed to accommodate the dithyrambs and early plays, which comprised the major features of the democratic celebration. Unlike the vegetation spirit worshipped by the nobles, Dionysus the vegetation spirit was the property of all the people, and it was sound political strategy to celebrate his glory to the fullest extent

A politician, we see, shares honors with Thespis in launching the Greek theatre. Without Pisistratus drama might have long remained a crude affair. Moreover, without his efforts to counteract the social pretensions of the aristocracy by giving the people a race of heroes who transcended any single family, completely human characters would have entered the Greek theatre more slowly than they did. It was largely owing to him that the vogue of the Homeric epic was established in the city. (6)

Three great tragic playwrights were born out of the Greek competitions: Aeschylus, Sophocles and Euripides. While Aeschylus has been called 'The Father of Tragedy' and Sophocles was the darling of Greek society, recognized as a genius by his peers, Euripides was a rebel and an outcast. His plays lost out in most of the competition to plays that have been lost to the ages, but one must speculate that his work, though unpopular with the judges, had a greater effect on his fellow artists.

In some beautiful verses of the Suppliants, Euripides has one of his

characters say:

"The poet's self in gladness should bring forth  
His offspring, song; if he attains not this,  
He cannot from a heart distraught with pain  
Gladden his fellows: reason sayeth nay."

It seems that in the course of his life he more than once had experienced this feeling. His successes on the stage were in accord neither with his hopes nor with the greatness of his genius. From the time when he obtained his first chorus from the archon Callias, during a career of nearly fifty years, he won the first prize in fact but four times. Of eighty-eight dramas played during his lifetime, seventy-two did not secure the votes of the judges. Although he always kept aloof from public life, he had enemies whom the rather disdainful reserve of his character and the boldness of his views had made for him. Embittered by them, maltreated and derided by the comic poets, Euripides desired to escape from the attacks which were renewed relentlessly and which disturbed his life, now nearing an end. (7)

There are many stories detailing his unpopularity and his unhappy life; some are established facts and some are legends but one thing that comes through in the reading of his works is his personality and his views on his society and its mythologies. Electra is Euripides' version of the myth of the House of Atreus and the events that followed Agamemnon's return and death. The same plot line was the basis of Aeschylus' The Orestia and Sophocles' Electra.

Internal jealousies and hatred among its children that affected many generations plagued the House of Atreus. This history of hatred, revenge and jealous rage was the basis for Euripides' Electra.

The House of Atreus descended from Zeus and Pluto who gave birth to Tantalus. Tantalus and Dione gave birth to Niobe, Pelops and Broteas. Pelops and Hippodameia gave birth to the brothers Atreus and Thyestes. Pelops also fathered Chrysippus by a mysterious woman, possibly Axioche or Danais. Chrysippus was the favorite son of Pelops and this aroused the jealousy of his half brothers, Atreus and Thyestes, who murdered Chrysippus and tossed his body into a well. When Pelops learned of his sons' crime, he expelled all of his

seventeen sons and they spread across the Peloponnesus.

Atreus and Cleolla gave birth to Pleisthenes who fathered Agamemnon, Anaxiba and Menelaus with Aerope. Thyestes and Pelopeia, his daughter, gave birth to Aegisthus.

Agamemnon married Klytemnestra and gave birth to four children: daughters Chrysothemis, Electra and Iphigeneia and a boy Orestes.

Chrysothemis married Staphylus.

Electra, Iphigeneia and Orestes were to play an important role in the myth and the downfall of the family in Euripides' Electra.

A massive fleet was mustered for the attack on Troy with Agamemnon commanding the Mycenaeans' one hundred ships. Agamemnon went hunting and shot a stag and upon his return he boasted of his marksmanship and claimed that it was greater than the goddess, Artemis. Her feelings were hurt and she sent strong winds that prevented the fleet from sailing. The seer Calchas was consulted and said that the only way to appease the goddess was to sacrifice his daughter Iphigeneia, the fairest of his three daughters. Although the request was revolting, Agamemnon sent word to Klytemnestra that Iphigeneia was to be wed to the hero, Achilles. Klytemnestra sent Iphigeneia to the camp with the messengers for the wedding. Agamemnon lured Iphigeneia to the altar where he sacrificed her. Artemis is said to have saved Iphigeneia by substituting a stag at the last moment and spiriting Iphigeneia away to Tauris. The sacrifice placated the goddess and the winds shifted and the fleet sailed to Troy.

While Agamemnon was in Troy, Klytemnestra aligned herself with Aegisthus and plotted revenge on Agamemnon for the crime of murdering Iphigeneia. Agamemnon took Cassandra, the daughter of Priam, the king of Troy as his slave. The god Apollo was in love

with Cassandra and had given her the gift of prophecy, but when she refused him, he was unable to undo his gift but he placed another spell that decreed that no one would believe her prophecies. When Agamemnon took Cassandra, he incurred the wrath of Apollo.

Agamemnon returned from Troy with Cassandra as his spoils of war and was welcomed by Klytemnestra. Despite Cassandra's warnings, which no one believed, Agamemnon and Cassandra entered the palace where Klytemnestra and Aegisthus murdered them.

Klytemnestra and Aegisthus were then married and plotted to murder Orestes. Orestes was saved by either Electra or his nurse Cilissa and taken to the court of Strophius, the Phocian king who was married to Anaxibia, Agamemnon's sister.

Euripides varies from the widely accepted myth at this point and has Electra exiled to a rural backcountry and married to a peasant.

Euripides' Electra is a study in envy; madness, hatred and revenge as felt by mortal beings. Euripides brought the struggles out of the land of the gods and placed them on a human plain. Electra is living in a land of poverty that denies her birthright. The woman who killed her father, whom she loved dearly, is living in luxury and admired by the people of her country. The man who helped murder her father has assumed her father's role as a hero to the people and beloved as a kind and generous ruler. Electra's only salvation is their deaths, no matter what the cost. There is a passion that overwhelms all thoughts of the consequences of killing the rulers of a country, a single-minded passion that allows her to drive her brother to be a part of the bloody act. Euripides again rebels against the popular myth that had Orestes slaying both Klytemnestra and Aegisthus. Orestes may have held the knife, but it was Electra who drove him. Orestes' character is not the hero that avenges his father's death as foretold by the oracle of Delphi.

The role of the gods in the lives of this family is revealed at the end of the play, in the divine

intervention of Castor and Polydeuces.

The intervention of the Dioscuri at the close of Electra is more easily explained, for Castor and Pollux (Polydeuces) are the divine brothers of Klytemnestra, who has just fallen by the sword of Orestes, and the murder of their sister, to which they cannot be indifferent, may well have brought them to Argos. But, not to mention the allusion to affairs in Sicily, what various matters are jumbled together in the speech of the Dioscuri! There we find at the same time the condemnation of the part Apollo has played in forcing a son to kill his mother - the announcement of the burial of Aegisthus by the Argives and of Clytemenestra by the hands of Menelaus and Helen, who are about to arrive - the arrangement of the marriage of Pylades and Electra, who are to take the honest laborer with them - and the flight of Orestes, who is to go to Athens and there stand trial before the Areopagus, and after his acquittal is to settle down in Arcadia, in a town to which he is to give his name. There is nothing that is to happen to any of the people in play, the survivors as well as the dead that the Dioscuri do not know. The poet means to have them inform us of everybody's fate. (8)

Euripides turned the Greek myths that had been treated as sacred into the basis of plot lines and characters to get his own message across to his audience. Euripides was no longer satisfied to tell the same stories - he used these myths to discuss and examine human nature, to explore the psychology of humans - real people - not the urban legends of non-existent gods.

#### Notes

1. Mikkelson, Barbara and David P. "Corpus Crispy." Urban Legends Reference Page. 1995. < <http://www.snopes.com/horros/freakish/scuba.htm> > (10 July 1999).
2. Robinson, Herbert Spencer and Wilson Knox. Myths & Legends of all Nations. New York, NY.: Bantam books, 1970. 79 - 80

3. Bremmer, Jan., ed. Interpretations Of Greek Mythology. New Jersey: Barnes & Noble, 1987. 1
4. Bremmer, Jan., ed. Interpretations Of Greek Mythology. New Jersey: Barnes & Noble, 1987. 1
5. Burn, Lucilla. Greek Myths. British Museum Publications, 1991. 9
6. Gassner, John. Masters of the Drama. Dover Publications, Inc., 1939. 13
7. Decharme, Paul translated by James Loeb, A.B. Euripides and the Spirit of His Dramas. New York: The MacMillian Co. 1968. 9 - 10
8. Decharme, Paul translated by James Loeb, A.B. Euripides and the Spirit of His Dramas. New York: The MacMillian Co. 1968. 267

## References

Barthell Jr., Edward E. Gods and Goddesses of Ancient Greece. Miami, FL.: University of Miami Press, 1981

Bremmer, Jan - Editor. Interpretations of Greek Mythology. New Jersey. NJ.: Barnes & Noble Books, 1987.

Burn, Lucilla. Greek Myths. Austin, TX.: University of Texas Press, 1991.

Carter, Paul. Backstage Handbook - An Illustrated Almanac of Technical Information - 3rd Edition. Shelter Island, New York.: Broadway Press, 1994

Decharme, Paul translated by James Loeb, A.B. Euripides and the Spirit of His Dramas. New York, New York.: The MacMillian Co., 1968.

Euripides. translated by Grene, David and Lattimore, Richard .Euripides V: Electra, the Phoenician Women, the Bacchae (The Complete Greek Tragedies). Chicago, Il.: University of Chicago Press. 1969

Euripides. translated by McLeish, Kenneth. Euripidies - Plays IV. London.: Methuen, 1997

Euripides translated by Lembke, Janet and Reckford, Kenneth J. Euripides Electra. New York, New York.: Oxford University Press, 1994

Gassner, John. Masters of the Drama. New York, New York.: Dover Publications, Inc., 1939.

Glerum, Jay O. Stage Rigging Handbook 1st Edition. Carbondale, IL.: Southern Illinois University Press, 1987

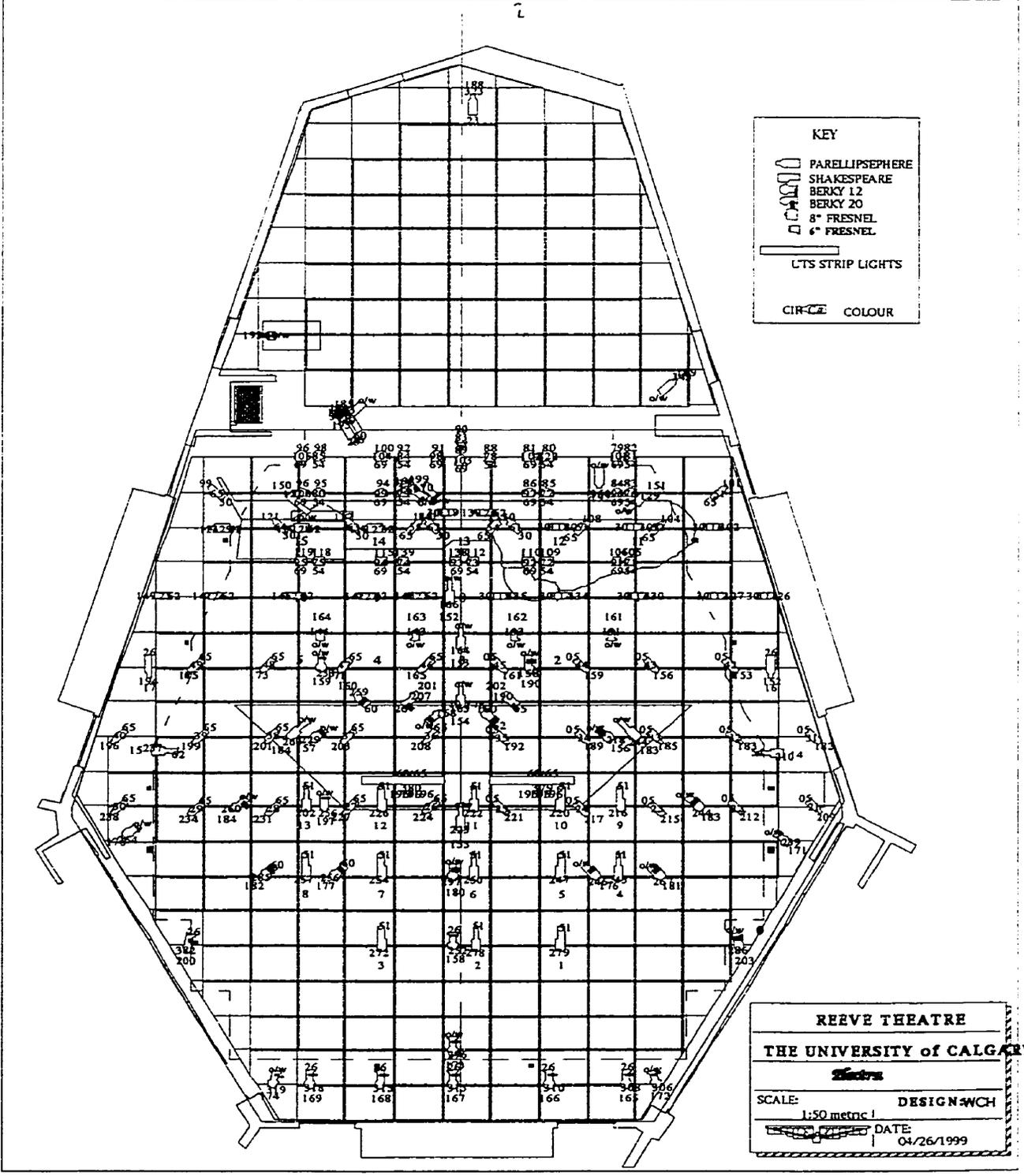
Newberry, W.G. (Bill). Handbook for Riggers - 2nd Edition. Calgary, Alberta.: Newberry Investments Co. Ltd., 1989

Palmer, Richard H. The Lighting Art. Englewood Cliffs, New Jersey.: Prentice-Hall, Inc., 1985

Pilbrow, Richard. Stage Lighting Design. New York, New York.: Design Press, 1997

Robinson, Hebert Spencer and Knox Wilson. Myths & Legends of all Nations. New York New York.: Bantam books, 1970.

Watson, Lee. Lighting Design Handbook. New York, New York.: McGraw-Hill Inc., 1990



KEY

- ▭ PARELLIPSEHERE
- SHAKESPEARE
- BERKY 12
- BERKY 20
- 8" FRESNEL
- 6" FRESNEL

— LTS STRIP LIGHTS

- - - - - CIRCE COLOUR

REEVE THEATRE

THE UNIVERSITY of CALGARY

*Electrical*

SCALE: 1:50 metric | DESIGN: WCH

DATE: 04/26/1999

### Electra Lighting Instrument Schedule

Instrument Type	#	Cir	Dim	Cha	Col	Group	Position	Notes
Striplight	144	379	379	195	60	Footlights - chorus special	top pit level	cover to top of wall
Striplight	143	380	380	196	65	Footlights - chorus special	top pit level	cover to top of wall
Shakespeare 35° - 50°	129	129	129	151	o/w	Slash gobo special wash	D/2 - cross pipe	Slash gobos - hard
Shakespeare 35° - 50°	118	122	122	150	o/w	Slash gobo special wash	K/2 - cross pipe	Slash gobos - hard
Shakespeare 35° - 50°	55	244	244	183	o/w	Slash gobo special wash	D/9	Slash gobo - hard
Shakespeare 35° - 50°	48	260	260	184	o/w	Slash gobo special wash	K/9	Slash gobos - hard
Strand 3380 Fresnel	76	143	143	163	o/w	'Noon' top light wash	I/6	SRC
Strand 3380 Fresnel	75	144	144	164	o/w	'Noon' top light wash	K/6	SR
Strand 3380 Fresnel	78	133	133	162	o/w	'Noon' top light wash	G/6	SLC
Strand 3380 Fresnel	79	131	131	161	o/w	'Noon' top light wash	E/6	SL
Shakespeare 15° - 35°	77	164	164	153	o/w	'Bullfight' wide circle special	H/6 - under catwalk pipe	hard focus - large circle
Shakespeare 15° - 35°	64	163	163	154	o/w	'Bullfight' medium special	H/9 - under catwalk pipe	hard focus - iris - medium
Shakespeare 15° - 35°	24	223	223	155	o/w	'Bullfight' tight special	H/11 - under catwalk pipe	hard focus - iris - small
Shakespeare 35° - 50°	43	237	237	15	62	Pit special - cool	N/10 cross pipe	focus on pit area
Shakespeare 35° - 50°	44	210	210	14	54	Pit special - warm/neutral	A/10 cross pipe	focus on pit area
Colortran 10°	1	319	319	174	o/w	Chorus audience special	L/19	tight focus on stair landing
Colortran 10°	2	318	318	169	26	Sunset wash	K/19	SR wall
Colortran 10°	4	313	313	167	26	Sunset wash	H/19	CS wall
Colortran 10°	5	310	310	166	26	Sunset wash	F/19	SLC wall
Colortran 10°	3	315	315	168	26	Sunset wash	I/19	SRC wall
Colortran 10°	6	308	308	165	26	Sunset wash	D/19	SL wall
Colortran 10°	7	306	306	172	o/w	Chorus audience special	C/19	tight focus on stair landing
Colortran 10°	23	264	264	175	o/w	Chorus audience special	N/12	tight focus on stair landing
Colortran 10°	25	239	239	171	o/w	Chorus audience special	A/12	tight focus on stair landing
Colortran 10°	8	296	296	173	o/w	Chorus audience special	H/18	tight focus on centre stair
Colortran 20°	14	286	286	203	o/w	Orestes 'head' special	B/15	focus as he stands on riser
Colortran 20°	60	168	168	179	o/w	Stage left aisle special	H/9 mid pipe	Wide area at stage left aisle
Colortran 20°	61	160	160	178	62	Electra entrance gobo special	G/9 mid pipe	small break up gobo - wide
Colortran 20°	15	285	285	182	60	Stair gobo - cool	L/13	break up gobo - soft focus
Colortran 20°	22	267	267	181	o/w	Stair gobo - warm	C/13	break up gobo - soft focus

### Electra Lighting Instrument Schedule

Instrument Type	#	Cir	Dim	Cha	Col	Group	Position	Notes
Colortran 20°	28	260	260	184	o/w	Slash gobo special wash	L/11	Slash gobos - hard
Colortran 20°	40	244	244	183	o/w	Slash gobo special wash	B/11	Slash gobos - hard
Colortran 20°	49	229	229	157	o/w	SL key acting area special	J/9	focus on Column area
Colortran 20°	54	218	218	156	o/w	SR key acting area special	D/9	focus SR of mid centre stage
Colortran 10°	68	233	233	159	o/w	Tight door special	K/7	focus on doors
Colortran 10°	30	256	256	197	o/w	Door/board walk special	K/11	focus front area of door
Colortran 20°	62	259	259	160	60	SR pit/stair special gobo	I/8	small break up gobo - soft
Colortran 20°	18	297	297	180	o/w	Stair gobo special	H/13	break up gobo - soft focus
Colortran 20°	156	259	259	160	60	SL stair special	D/13	Focus on centre pit step
Colortran 20°	157	297	297	180	o/w	SR Stair special	J/13	Focus on centre pit step
Parellipsphere	152	323	323	188	23	Sunrise - special	Secondary floor stand	Unit manually moved on cue
Parellipsphere	145	350	350	192	o/w	Polydukes front special	floor stand behind wall	focus wing tip to wing tip
Parellipsphere	150	343	343	189	o/w	Castor side light	up stage left floor stand	focus on final Castor position
Parellipsphere	146	349	349	193	o/w	Polydukes side special	Floor stand upstage of wall	focus wing tip to wing tip
Parellipsphere	147	353	353	185	60	Apollo - blue special	Floor stand upstage of wall	bottom unit
Parellipsphere	148	348	348	186	26	Apollo - red special	Floor stand upstage of wall	middle unit
Parellipsphere	149	347	347	187	23	Apollo orange special	Floor stand upstage of wall	top unit
Strand 3380 Fresnel	151	344	344	191	o/w	Castor back light	on Castor wagon unit	long cable
Shakespeare 15° - 35°	85	166	166	152	o/w	Apollo front light special	H/5	Focus on Apollo on wall
Colortran 10°	11	252	252	158	26	Red front special	H/15	Focus on down stage centre
Colortran 20°	65	190	190	202	65	Electra entrance gobo special	G/8	small break up gobo - soft
Colortran 20°	63	207	207	201	26	Orestes entrance special	H/8	Tight focus on aisle entrance
Colortran 10°	124	170	170	199	o/w	Plyades - jump special	H/1	Tight hard edge focus
Colortran 10°	123	169	169	198	o/w	Orestes - jump special	I/1	Tight hard edge focus
Parellipsphere	106	141	141	55	65	backlight diagonal cool	I/3	small break up gobo - soft
Parellipsphere	108	110	110	54	65	backlight diagonal cool	G/3	small break up gobo - soft
Parellipsphere	111	108	108	53	65	backlight diagonal cool	E/3	small break up gobo - soft
Parellipsphere	113	104	104	52	65	backlight diagonal cool	C/3	small break up gobo - soft
Parellipsphere	130	101	101	51	65	backlight diagonal cool	B/2	small break up gobo - soft
Parellipsphere	117	99	99	65	30	backlight diagonal warm	M/2	small break up gobo - soft

### Electra Lighting Instrument Schedule

Instrument	Type	#	Clr	Dim	Cha	Col	Group	Position	Notes
Parelliphsphere		102	121	121	64	30	backlight diagonal warm	K/3	small break up gobo - soft
Parelliphsphere		104	117	117	63	30	backlight diagonal warm	J/3	small break up gobo - soft
Parelliphsphere		107	113	113	62	30	backlight diagonal warm	H/3	small break up gobo - soft
Parelliphsphere		109	132	132	61	30	backlight diagonal warm	F/3	small break up gobo - soft
Pat 223 Fresnel		131	96	96	105	69	top cool	K/1	SR upstage
Pat 223 Fresnel		133	100	100	104	69	top cool	I/1	SRC upstage
Pat 223 Fresnel		136	89	89	103	69	top cool	H/1	CS upstage
Pat 223 Fresnel		138	81	81	102	69	top cool	F/1	SLC upstage
Pat 223 Fresnel		140	79	79	101	69	top cool	D/1	SL upstage
Pat 223 Fresnel		127	84	84	96	69	top cool	D/2	SL midstage
Pat 223 Fresnel		125	86	86	97	69	top cool	F/2	SLC midstage
Pat 223 Fresnel		135	91	91	98	69	top cool	H/1	CS midstage
Pat 223 Fresnel		121	94	94	99	69	top cool	I/2	SRC midstage
Pat 223 Fresnel		119	96	96	100	69	top cool	K/2	SR midstage
Pat 223 Fresnel		91	119	119	95	69	top cool	K/4	SR down stage
Pat 223 Fresnel		93	115	115	94	69	top cool	I/4	SRC down stage
Pat 223 Fresnel		95	138	138	93	69	top cool	H/4	CS down stage
Pat 223 Fresnel		97	110	110	92	69	top cool	F/4	SLC down stage
Pat 223 Fresnel		99	106	106	91	69	top cool	D/4	SL down stage
Pat 223 Fresnel		132	98	98	85	54	top neutral/warm	J/1	SR upstage
Pat 223 Fresnel		134	92	92	84	54	top neutral/warm	I/1	SRC upstage
Pat 223 Fresnel		142	90	90	83	54	top neutral/warm	H/1	CS upstage
Pat 223 Fresnel		139	80	80	82	54	top neutral/warm	E/1	SLC upstage
Pat 223 Fresnel		141	82	82	81	54	top neutral/warm	D/1	SL upstage
Pat 223 Fresnel		128	83	83	76	54	top neutral/warm	D/2	SL midstage
Pat 223 Fresnel		126	85	85	77	54	top neutral/warm	E/2	SLC midstage
Pat 223 Fresnel		137	88	88	78	54	top neutral/warm	G/1	CS midstage
Pat 223 Fresnel		122	93	93	79	54	top neutral/warm	I/2	SRC midstage
Pat 223 Fresnel		120	95	95	80	54	top neutral/warm	J/2	SR midstage
Pat 223 Fresnel		92	118	118	75	54	top neutral/warm	J/4	SR down stage

**Electra Lighting Instrument Schedule**

Instrument Type #	Cir	Dim	Cha	Col	Group	Position	Notes
Pat 223 Fresnel	139	74	54	top neutral/warm	I/4	SRC down stage	
Pat 223 Fresnel	112	73	54	top neutral/warm	G/4	CS down stage	
Pat 223 Fresnel	109	72	54	top neutral/warm	E/4	SLC down stage	
Pat 223 Fresnel	105	71	54	top neutral/warm	D/4	SL down stage	
Parellipsphere	82	145	62	side cool	K/5	small break up gobo - soft	
Parellipsphere	83	142	62	side cool	J/5	small break up gobo - soft	
Parellipsphere	116	139	62	side cool	H/3	small break up gobo - soft	
Parellipsphere	105	116	62	side cool	I/3	small break up gobo - soft	
Parellipsphere	103	120	62	side cool	K/3	small break up gobo - soft	
Parellipsphere	101	123	62	side cool	M/3	small break up gobo - soft	
Parellipsphere	90	126	30	side warm	A/5	small break up gobo - soft	
Parellipsphere	89	127	30	side warm	B/5	small break up gobo - soft	
Parellipsphere	88	130	30	side warm	D/5	small break up gobo - soft	
Parellipsphere	87	134	30	side warm	E/5	small break up gobo - soft	
Parellipsphere	86	135	30	side warm	G/5	small break up gobo - soft	
Parellipsphere	84	140	62	side cool	H/5	small break up gobo - soft	
Parellipsphere	80	149	62	side cool	N/5	small break up gobo - soft	
Parellipsphere	81	147	62	side cool	M/5	small break up gobo - soft	
Parellipsphere	114	102	30	side warm	R/3	small break up gobo - soft	
Parellipsphere	112	103	30	side warm	D/3	small break up gobo - soft	
Parellipsphere	110	107	30	side warm	E/3	small break up gobo - soft	
Parellipsphere	115	111	30	side warm	G/3	small break up gobo - soft	
Parellipsphere	45	196	65	cool 45	O/9	acting area # 10	
Parellipsphere	26	238	65	cool 45	O/11	acting area # 5	
Parellipsphere	66	175	65	cool 45	M/7	acting area # 14	
Parellipsphere	46	199	65	cool 45	M/9	acting area # 9	
Parellipsphere	27	234	65	cool 45	M/11	acting area # 4	
Parellipsphere	29	231	65	cool 45	K/11	acting area # 3	
Parellipsphere	47	201	65	cool 45	K/9	acting area # 8	
Parellipsphere	67	173	65	cool 45	K/7	acting area # 13	
Parellipsphere	69	171	65	cool 45	J/7	acting area # 12	

### Electra Lighting Instrument Schedule

Instrument Type	#	Cir	Dim	Cha	Col	Group	Position	Notes
Parellipsphere	50	203	203	37	65	cool 45	J/9	acting area # 7
Parellipsphere	31	227	227	27	65	cool 45	J/11	acting area # 2
Parellipsphere	51	208	208	36	65	cool 45	H/9	acting area # 6
Parellipsphere	70	165	165	46	65	cool 45	H/7	acting area # 11
Parellipsphere	33	224	224	26	65	cool 45	H/11	acting area # 1
Parellipsphere	71	161	161	45	05	warm 45	G/7	acting area # 14
Parellipsphere	52	192	192	35	05	warm 45	G/9	acting area # 10
Parellipsphere	37	217	217	24	05	warm 45	E/11	acting area # 4
Parellipsphere	53	189	189	34	05	warm 45	E/9	acting area # 9
Parellipsphere	72	159	159	44	05	warm 45	E/7	acting area # 13
Parellipsphere	73	156	156	43	05	warm 45	C/7	acting area # 12
Parellipsphere	56	185	185	33	05	warm 45	C/9	acting area # 8
Parellipsphere	39	215	215	23	05	warm 45	C/11	acting area # 3
Parellipsphere	74	153	153	42	05	warm 45	B/7	acting area # 11
Parellipsphere	57	183	183	32	05	warm 45	B/9	acting area # 7
Parellipsphere	41	212	212	22	05	warm 45	B/11	acting area # 2
Parellipsphere	42	209	209	21	05	warm 45	A/11	acting area # 1
Parellipsphere	58	182	182	31	05	warm 45	A/9	acting area # 6
Parellipsphere	35	221	221	25	05	warm 45	G/11	acting area # 5
Shakespeare 15° - 35°	16	257	257	8	51	front	K/13	SR mid stage
Shakespeare 15° - 35°	17	254	254	7	51	front	I/13	SRC mid stage
Shakespeare 15° - 35°	19	250	250	6	51	front	G/13	SC mid stage
Shakespeare 15° - 35°	20	247	247	5	51	front	E/13	SLC mid stage
Shakespeare 15° - 35°	21	245	245	4	51	front	D/13	SL mid stage
Shakespeare 15° - 35°	34	222	222	11	51	front	G/11	SC up stage
Shakespeare 35° - 50°	38	216	216	9	51	front	D/11	SL up stage
Shakespeare 35° - 50°	29	202	202	13	51	front	K/11	SR up stage
Shakespeare 15° - 35°	12	278	278	2	51	front	G/15	DSC pit and forestage
Shakespeare 15° - 35°	13	279	279	1	51	front	E/15	DSL pit and forestage
Shakespeare 15° - 35°	10	272	272	3	51	front	I/15	DSR pit and forestage

Electra Lighting Instrument Schedule

Instrument Type	#	Cir	Dim	Cha	Col	Group	Position	Notes
Shakespeare 15° - 35°	32	226	226	12	51	front	I/11	SRC up stage
Shakespeare 15° - 35°	36	220	220	10	51	front	E/11	SLC up stage
Colortran 20°	9	382	382	200	26	Low red column special	M/16 wall	focus on DSC and Column
Colortran 20°	153	158	158	190	o/w	Castor front special	G/7	focus on final Castor position
Parellipsphere	155	194	194	17	26	Wall gobo wash	N/7	Breakup gobo -soft focus
Parellipsphere	154	152	152	16	26	Wall gobo wash	B/7	Breakup gobo -soft focus

<u>Kind</u>	<u>Count</u>
Striplights	2
Shakespeare 15° - 35°	15
Shakespeare 35° - 50 °	8
Strand 3380 6" fresnel	5
Colortran 10°	15
Colortran 20°	15
Parellipsphere	65
Pat 223 Fresnel	30

**Production Costs**

<b><u>Category</u></b>	<b><u>Allocation</u></b>	<b><u>Spent by Department</u></b>	<b><u>Total</u></b>	<b><u>Balance</u></b>
Set	\$1,050.00	\$1,310.14	\$1,310.14	(\$260.14)
Props	\$300.00	\$91.33	\$91.33	\$208.67
Costumes	\$1,050.00	\$678.75	\$678.75	\$371.25
Makeup	\$50.00	\$316.94	\$316.94	(\$266.94)
Tech	\$200	\$300.49	\$300.49	(\$100.49)
Director	\$0.00	\$0.00	\$0.00	\$0.00
Design	\$0.00	\$0.00	\$0.00	\$0.00
Scripts	\$200.00	\$147.21	\$147.21	\$52.79
Stage Man.	\$0.00	\$154.63	\$154.63	(\$154.63)
Misc.	\$50.00	\$155.65	\$155.65	(\$105.65)
Xerox	\$100.00	\$0.00	\$0.00	\$100.00
<b><u>Totals</u></b>	<b><u>\$3,000.00</u></b>	<b><u>\$3,155.14</u></b>	<b><u>\$3,155.14</u></b>	<b><u>(\$155.14)</u></b>

**Production Expenses**

<b><u>Date</u></b>	<b><u>Description</u></b>	<b><u>Unit</u></b>	<b><u>Amount</u></b>
99-01-05	C. Wilson/shipping	Scripts	57.91
99-03-17	Canadian Actors	Stage Management	11.00
99-04-05	Shipper's Supply Inc	Set	79.72
99-04-08	Petty cash	Costume	137.36
99-04-13	Photocopy	Stage Management	89.30
99-04-09	Petty cash	Costume	81.60
99-04-09	Petty cash	Properties	19.25
99-04-05	Davidson Lumber	Set	511.52
99-04-09	Fanny's	Costume	14.56
99-04-13	Petty cash	Costume	36.25
99-04-13	Petty cash	Set	34.88
99-04-16	Petty cash	Costume	66.30
99-04-12	Fabricland	Costume	14.24
99-04-20	Petty cash	Set	92.71
99-04-19	Petty cash	Costume	30.71
99-04-22	Petty cash	Costume	30.94
99-04-22	Petty cash	Mileage	70.50
99-04-26	Petty cash	Costume	78.76
99-04-26	Petty cash	Properties	8.53
99-04-26	Petty cash	Stage Management	31.71
99-04-28	Petty cash	Properties	61.26
99-04-29	Petty cash	Costume/Hair/Mileage	196.43
99-04-23	Davidson Lumber	Set	101.12
99-05-05	B&E Electronics	Technical	44.94
99-05-05	B&E Electronics	Technical	44.94
99-05-06	David L. Jones	Costume	6.59
99-05-05	Casterland Inc.	Set	127.97
99-05-06	Petty cash	Stage Management	112.92
99-05-12	Petty cash	Properties/Costume	181.44
	Petty cash	Properties	2.29
99-04-20	Vnited Rentals	Set	38.52
99-05-12	Printing Services	79139	14.64
99-05-06	Com/Media	453376	30.00
	Com/Media	453219	8.00
	Com/Media	453228	8.00
	Com/Media	453361	28.00
	Com/Media	453382	125.00
99-05-10	Poster Squad	Cheque	42.80
99-04-16	Fargo Paint	Set	242.98
99-05-13	Petty cash	Reception	237.39
99-05-13	Printing Services	Printing	42.41
99-05-13	Shippers Supply Inc	Set	79.72
99-05-12	W.F. White	Technical	108.61
99-05-15	Petty cash	Set	102.00
99-05-16	Petty cash	Stage Management	85.15
99-05-09	Pettv cash	Hair/Mileage	120.51

**Set Materials Breakdown****Unit Breakdowns**

Boardwalk	2" x 10"	144'
	2" x 4"	50'
Column and Hill	1/4" ply	1
	3/4" ply	1
	1" x 2' x 8' (dense styro)	2
Wall	1" x 10"	100'
	skin ply	16
Door	1" x 10"	32'
	skin ply	2
	plexi (1/8" or 1/4") - 2' x 4'	2
Floor	cardboard	2000 square feet

**Total Order**

<b>Item</b>	<b>Quantity</b>	<b>Supplier</b>	<b>Price</b>
1" x 3"	300'	Davidson Enman	105.00
2" x 4"	50'	Davidson Enman	19.95
2" x 10"	144'	Davidson Enman	168.48
1/4" plywood (4' x 8')	1	Davidson Enman	24.25
3/4" plywood (4' x 8')	1	Davidson Enman	32.20
1/8" skin plywood (4' x 8')	18	Winsdor Plywood	233.82
1/8" plexiglass (2' x 4')	2	Totem Building	35.98
1" dense styrofoam (2' x 8')	2	Davidson Enman	16.50
6' x 250' roll of corrugated cardboard	1	Shippers Supply	149.00
		<b>TOTAL</b>	<b><u>807.18</u></b>

**Final Version**

**Electra Production Schedule**

**March - May 1999**

	<i>Sunday</i> Mar 14, 99	<i>Monday</i> Mar 15, 99	<i>Tuesday</i> Mar 16, 99	<i>Wednesday</i> Mar 17, 99	<i>Thursday</i> Mar 18, 99	<i>Friday</i> Mar 19, 99	<i>Saturday</i> Mar 20, 99
8							
9							
10							Electra - Design work and coming with Tasha.
11							
12							
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
All Day							

**Department of Theatre**

**University of Calgary**

**Calgary, Alberta**

**Final Version**

**Electra Production Schedule**

**March - May 1999**

	<i>Sunday</i> Mar 21, 99	<i>Monday</i> Mar 22, 99	<i>Tuesday</i> Mar 23, 99	<i>Wednesday</i> Mar 24, 99	<i>Thursday</i> Mar 25, 99	<i>Friday</i> Mar 26, 99	<i>Saturday</i> Mar 27, 99
8 :							
9 :							
10 :							
11 :							
12 :			Lunch with Tracy: Meet at Centre Discussion about flying and other magic				
1 :							
2 :							
3 :		Electra - Design Meeting: Design presentation Douglas, Barry, James, Brian K, Lawrence, Testa, Bill			Electra - Production Meeting		
4 :		Presentation and discussion of directorial and design concept. Discussion of budget and architecture					
5 :							
6 :							
7 :							
8 :							
9 :							
10 :							
11 :							
All Day				Electra - Set Construction build period:	Electra - Set Construction build period:	Electra - Set Construction build period:	

Final Version

Electra Production Schedule

March - May 1999

	Sunday Mar 28, 99	Monday Mar 29, 99	Tuesday Mar 30, 99	Wednesday Mar 31, 99	Thursday Apr 1, 99	Friday Apr 2, 99	Saturday Apr 3, 99
8							
9							
10							
11							
12							
1							
2							
3					Electra - Production Meeting		
4							
5							
6							
7							
8							
9							
10							
11							
All Day		Electra - Props build period: Electra - Costume build period: Electra - Set Construction build period.	Electra - Props build period: Electra - Costume build period: Electra - Set Construction build period.	Electra - Props build period: Electra - Costume build period: Electra - Set Construction build period.	Electra - Props build period: Electra - Costume build period: Electra - Set Construction build period.	Electra - Props build period: Electra - Costume build period: Electra - Set Construction build period.	Electra - Props build period: Electra - Costume build period: Electra - Set Construction build period.

**Final Version**

**Electra Production Schedule**

**March - May 1999**

	<i>Sunday</i> Apr 4, 99	<i>Monday</i> Apr 5, 99	<i>Tuesday</i> Apr 6, 99	<i>Wednesday</i> Apr 7, 99	<i>Thursday</i> Apr 8, 99	<i>Friday</i> Apr 9, 99	<i>Saturday</i> Apr 10, 99
8 :							
9 :							
10 :							
11 :							
12 :							
1 :							
2 :							
3 :					Electra - Production Meeting		
4 :							
5 :							
6 :							
7 :							
8 :							
9 :							
10 :							
11 :							
<b>All Day</b>		Electra - Props build period: Electra - Costume build period: Electra - Set Construction build period:	Electra - Props build period: Electra - Costume build period: Electra - Set Construction build period:	Electra - Props build period: Electra - Costume build period: Electra - Set Construction build period:	Electra - Props build period: Electra - Costume build period: Electra - Set Construction build period:	Electra - Props build period: Electra - Costume build period: Electra - Set Construction build period:	

**Department of Theatre**

**University of Calgary**

**Calgary, Alberta**

**Final Version**

**Electra Production Schedule**

**March - May 1999**

	<i>Sunday</i> Apr 11, 99	<i>Monday</i> Apr 12, 99	<i>Tuesday</i> Apr 13, 99	<i>Wednesday</i> Apr 14, 99	<i>Thursday</i> Apr 15, 99	<i>Friday</i> Apr 16, 99	<i>Saturday</i> Apr 17, 99
8							
9							
10							
11							
12							
1							
2							
3					Electra - Production Meeting		
4							
5							
6							
7							
8							
9							
10							
11							
<b>All Day</b>		Electra - Props build period: Electra - Costume build period: Electra - Set Construction build period.	Electra - Props build period: Electra - Costume build period: Electra - Set Construction build period.	Electra - Props build period: Electra - Costume build period: Electra - Set Construction build period.	Electra - Props build period: Electra - Costume build period: Electra - Set Construction build period.	Electra - Props build period: Electra - Costume build period: Electra - Set Construction build period.	510 Scenes Complete: Electra - Props build period: Electra - Costume build period: Electra - Set Construction build period: Electra - Set Construction build period: Classes End:

Final Version

Electra Production Schedule

March - May 1999

Sunday Apr 18, 99	Monday Apr 19, 99	Tuesday Apr 20, 99	Wednesday Apr 21, 99	Thursday Apr 22, 99	Friday Apr 23, 99	Saturday Apr 24, 99
8 :	Plaster wall unit in shop: plaster texture by hand	Plaster wall unit in shop: precast sprayer	Reeve work call: Pull chairs from pit	Wall unit casting:		
9 :	Rehearsal Schedule - Studio: 09:00 - Stage Management setup	Rehearsal Schedule - Studio: 09:00 - Stage Management setup	Reeve work call: Pull chairs from pit	Rehearsal Schedule - Studio: 09:00 - Stage Management setup	Rehearsal Schedule - Studio: 09:00 - Stage Management setup	Rehearsal Schedule - Studio: 09:00 - Stage Management setup
10 :	10:00 - Actor's call - company warmup	10:00 - Actor's call - company warmup	10:00 - Actor's call - company warmup	10:00 - Actor's call - company warmup	10:00 - Actor's call - company warmup	10:00 - Actor's call - company warmup
11 :	10:30 - Rehearsal	10:30 - Rehearsal	10:30 - Rehearsal	10:30 - Rehearsal	10:30 - Rehearsal	10:30 - Rehearsal
12 :	11:45 - Health break	11:45 - Health break	11:45 - Health break	11:45 - Health break	11:45 - Health break	11:45 - Health break
1 :	12:00 - Resume Rehearsal	12:00 - Resume Rehearsal	12:00 - Resume Rehearsal	12:00 - Resume Rehearsal	12:00 - Resume Rehearsal	12:00 - Resume Rehearsal
2 :	13:30 - Lunch	13:30 - Lunch	13:30 - Lunch	13:30 - Lunch	13:30 - Lunch	13:30 - Lunch
3 :	14:30 - Resume Rehearsal	14:30 - Resume Rehearsal	14:30 - Resume Rehearsal	14:30 - Resume Rehearsal	14:30 - Resume Rehearsal	14:30 - Resume Rehearsal
4 :	16:15 - Health break	16:15 - Health break	16:15 - Health break	16:15 - Health break	16:15 - Health break	16:15 - Health break
5 :	16:30 - Resume Rehearsal	16:30 - Resume Rehearsal	16:30 - Resume Rehearsal	16:30 - Resume Rehearsal	16:30 - Resume Rehearsal	16:30 - Resume Rehearsal
6 :	18:00 - End of Rehearsal	18:00 - End of Rehearsal	18:00 - End of Rehearsal	18:00 - End of Rehearsal	18:00 - End of Rehearsal	18:00 - End of Rehearsal
7 :	19:00 - Stage Management - post set, notes and daily rehearsal complete	19:00 - Stage Management - post set, notes and daily rehearsal complete	19:00 - Stage Management - post set, notes and daily rehearsal complete	19:00 - Stage Management - post set, notes and daily rehearsal complete	19:00 - Stage Management - post set, notes and daily rehearsal complete	19:00 - Stage Management - post set, notes and daily rehearsal complete
8 :	*** Check daily rehearsal schedule for specific work and calls ***	*** Check daily rehearsal schedule for specific work and calls ***	*** Check daily rehearsal schedule for specific work and calls ***	*** Check daily rehearsal schedule for specific work and calls ***	*** Check daily rehearsal schedule for specific work and calls ***	*** Check daily rehearsal schedule for specific work and calls ***
9 :						
10 :						
11 :						
AN Day	Electra - Props build period: Electra - Costume build period: Electra - Set Construction build period:	Electra - Props build period: Electra - Costume build period: Electra - Set Construction build period:	Electra - Props build period: Electra - Costume build period:	Bill in Regina: Electra - Props build period: Electra - Costume build period: Electra Final Light Plot due:	Bill in Regina: Electra - Props build period: Electra - Costume build period:	Bill in Regina:

Final Version

Electra Production Schedule

March - May 1999

	Sunday Apr 25, 99	Monday Apr 26, 99	Tuesday Apr 27, 99	Wednesday Apr 28, 99	Thursday Apr 29, 99	Friday Apr 30, 99	Saturday May 1, 99	
8		Setup Society; Lighting Hang; Strike unneeded	Setup Society; Lighting Hang; Complete hanging general plot	Lighting Hang; Finish focus on general plot	Lighting Hang; Hang special focus special and focus	Lay Floor and finish hanging doors; Begin rigging effects		
9		Rehearsal Schedule - Studio: 09:00 - Stage Management setup 10:00 - Actor's call accompany warmup 10:30 - Rehearsal 11:45 - Health break 12:00 - Resume Rehearsal 13:30 - Lunch 14:30 - Resume Rehearsal 16:15 - Health break 16:30 - Resume Rehearsal 18:00 - End of Rehearsal 19:00 - Stage Management - post set, notes about cost	Rehearsal Schedule - Studio: 09:00 - Stage Management setup 10:00 - Actor's call accompany warmup 10:30 - Rehearsal 11:45 - Health break 12:00 - Resume Rehearsal 13:30 - Lunch 14:30 - Resume Rehearsal 16:15 - Health break 16:30 - Resume Rehearsal 18:00 - End of Rehearsal 19:00 - Stage Management - post set, notes about	Rehearsal Schedule - Studio: 09:00 - Actor's call accompany warmup 10:30 - Rehearsal 11:45 - Health break 12:00 - Resume Rehearsal 13:30 - Lunch 14:30 - Resume Rehearsal 16:15 - Health break 16:30 - Resume Rehearsal 18:00 - End of Rehearsal 19:00 - Stage Management - post set, notes about	Rehearsal Schedule - Studio: 09:00 - Actor's call accompany warmup 10:30 - Rehearsal 11:45 - Health break 12:00 - Resume Rehearsal 13:30 - Lunch 14:30 - Resume Rehearsal 16:15 - Health break 16:30 - Resume Rehearsal 18:00 - End of Rehearsal 19:00 - Stage Management - post set, notes about	Rehearsal Schedule - Studio: 09:00 - Actor's call accompany warmup 10:30 - Rehearsal 11:45 - Health break 12:00 - Resume Rehearsal 13:30 - Lunch 14:30 - Resume Rehearsal 16:15 - Health break 16:30 - Resume Rehearsal 18:00 - End of Rehearsal 19:00 - Stage Management - post set, notes about	Rehearsal Schedule - Studio: 09:00 - Actor's call accompany warmup 10:30 - Rehearsal 11:45 - Health break 12:00 - Resume Rehearsal 13:30 - Lunch 14:30 - Resume Rehearsal 16:15 - Health break 16:30 - Resume Rehearsal 18:00 - End of Rehearsal 19:00 - Stage Management - post set, notes about	
10								
11								
12							Rehearsal Schedule Reeve: *** Move Rehearsal to Reeve Theatre if available ***	
1							12:00 - Stage Management setup 13:00 - Actor's call - Orientation followed by company warmup 13:30 - Rehearsal 14:45 - Health break 15:00 - Resume Rehearsal 16:30 - Lunch 17:30 - Resume Rehearsal 18:15 - Health break 18:30 - Resume Rehearsal 21:00 - End of Rehearsal 22:00 - Stage Management - post set, notes and daily rehearsal complete	
2								
3								
4		Paint Set	Paint Set	Lighting Meeting	Paint Set	Paint Set	Paint Set	
5							*** Check daily rehearsal schedule for specific work and calls ***	
6		Photo Shoot: Publicity photo about cost						
7								
8								
9								
10								
11								
All Day	Electra day off:	Electra - Props build period: Electra - Set painting period: Electra - Costume build period:	Electra - Props build period: Electra - Set painting period: Electra - Costume build period:	Electra - Props build period: Electra - Set painting period: Electra - Costume build period: Electra - No more additions:	Electra - Props build period: Electra - Set painting period: Electra - Costume build period:	Electra - Props build period: Electra - Set painting period: Electra - Costume build period:	Bill's day off	

Department of Theatre

University of Calgary

Calgary, Alberta

Final Version

Electra Production Schedule

March - May 1999

	Sunday May 2, 99	Monday May 3, 99	Tuesday May 4, 99	Wednesday May 5, 99	Thursday May 6, 99	Friday May 7, 99	Saturday May 8, 99
8 :							
9 :	Tech work on Flying - Bill and Tracy Nunnally: Day reserved for finishing tech work	Electra - Set Lighting Cues - Bill, Lawrence, DJ and Operator: Cueing costume over rehearsal. Add Lighting operator Orientation for Sound Operator - Ben and DJ Bill will notate the cues into script	Electra - Audio Cue Set: Donovan, Lawrence, Bill, Ben and DJ	Electra - TWAN: Tech work as necessary	Electra - TWAN: Tech work as necessary	Electra - TWAN Tech work as necessary	
10 :							
11 :							
12 :							
1 :		Electra Rehearsal Schedule - Reeve: 13:00 - Stage Management setup 14:00 - Actor's call for Company warmup 14:30 - Scene work or Run through Electr cueing over rehearsal 17:00 - Supper 18:00 - Work technical cues with actors 22:00 - End of day	Electra Rehearsal Schedule - Reeve: 13:00 - Stage Management setup 14:00 - Actor's call for Company warmup 14:30 - Scene work or Run through Electr cueing over rehearsal 17:00 - Supper 18:00 - Run through with Sound work lighting cues over top separately 22:00 - End of day	Electra Rehearsal Schedule - Reeve: 13:00 - Stage Management and Crew setup 14:00 - Actor's call for Company warmup 14:30 - Scene work or Run through Electr cueing over rehearsal Add projections 17:00 - Supper 18:00 - Run through with Lightes, Sound and Effects add wardrobe crew to watch run 22:00 - End of day	Electra Rehearsal Schedule - Reeve: 13:00 - Stage Management and Crew setup 14:00 - Actor's call for Costumes 15:00 - Run through with Costumes and Props 16:30 - Notes 17:00 - Supper 18:00 - Run through with available costumes 22:00 - End of day	Electra Rehearsal Schedule - Reeve: 13:00 - Stage Management and Crew setup 14:00 - Actor's call for Company warmup 14:30 - Scene work or Run through 17:00 - Supper 18:00 - Run through with Full technical 22:00 - End of day	
2 :							
3 :							
4 :							
5 :							
6 :							
7 :							
8 :							
9 :							
10 :							
11 :							
All Day	Electra day off:	Electra - Props build period: Electra - Costume build period:	Electra - Props build period: Electra - Costume build period:	Electra - Props build period: Electra - Costume build period:	Electra - Props build period: Electra - Costume build period:	Electra - Props build period: Electra - Costume build period: Electra - Props and Costumes Due:	Electra day off:

Department of Theatre

University of Calgary

Calgary, Alberta

Final Version

Electra Production Schedule

March - May 1999

	Sunday May 9, 99	Monday May 10, 99	Tuesday May 11, 99	Wednesday May 12, 99	Thursday May 13, 99	Friday May 14, 99	Saturday May 15, 99
8							
9			Wings refit.				
10							
11							
12	Electra Rehearsal Schedule - Rehe. 12:00 - Stage Management and Crew Call 12:30 - Actor's half hour call	Electra Rehearsal Schedule - Rehe. 12:00 - Stage Management and Crew Call 12:30 - Actor's half hour call					
1	13:00 - Actors onstage - work selected scenes 17:00 - Supper 18:00 - Company Call 18:30 - Half Hour Call 19:00 - Dress Rehearsal 21:00 - End of Day	13:00 - Actors onstage - work selected scenes 17:00 - Supper 18:00 - Company Call 18:30 - Half Hour Call 19:00 - Dress Rehearsal 21:00 - End of Day					
2			Work god's entrance:				
3							
4							
5							
6			Electra - Preview Performance: 18:00 - Stage Management and Crew Call 19:30 - Half Hour 20:00 - Preview Performance	Electra - Opening Performance: 18:00 - Stage Management and Crew Call 19:30 - Half Hour 20:00 - Opening Night Performance followed by reception	Electra - Performance: 18:00 - Stage Management and Crew Call 19:30 - Half Hour 20:00 - Performance	Electra - Performance: 18:00 - Stage Management and Crew Call 19:30 - Half Hour 20:00 - Performance	Electra - Performance: 18:00 - Stage Management and Crew Call 19:30 - Half Hour 20:00 - Performance
7							
8							
9							
10							
11							
All Day							

Department of Theatre

University of Calgary

Calgary, Alberta

**Final Version Electra Production Schedule March - May 1999**

	<i>Sunday</i> May 16, 99	<i>Monday</i> May 17, 99	<i>Tuesday</i> May 18, 99	<i>Wednesday</i> May 19, 99	<i>Thursday</i> May 20, 99	<i>Friday</i> May 21, 99	<i>Saturday</i> May 22, 99	
8 :								
9 :								
10:								
11:								
12:								
1 :								
2	Electra - Colloquium and Final Performance and Dinner: 14:00 - Crew Call - setup for Colloquium 15:00 - Presentations Christopher Marshall (Memorial University) - Ancient Greek Performance David Raeburn (Oxford) - Euripides 'Electra' on the Modern Stage Selma Goresch (Berkeley) - Trends in Modern Performances of Euripides 15:45 - Panel Discussion and Questions 16:00 - Present 16:15 - Performance followed by reception, drinks, theatre reset and bar-b-que							
3								
4								
5								
6								
7 :								
8 :								
9 :								
10:								
11:								
All Day								