

PART 1 - GENERAL

1.01 DESCRIPTION

A. Following is an outline of operational specifications for the proposed parade route sound and lighting system.

B. Zone Functions

1. For the purpose of facilitating the audio requirements in areas of the park other than the parade route, the system will be capable of feeding 40 separate zones with selected audio information.
2. To service the 21 designated parade zones, the first 24 area zones will be set aside to serve the parade function. Three of the 24 parade zones are to be left idle for possible future expansion.
3. In each of the 40 audio zones, the audio operator may select a function consisting of:

BACKGROUND MUSIC,  
P.A.  
TAPE  
SPECIAL  
OFF

- a. In the case of the 24 parade zones, a fifth function or PARADE mode may be selected.
4. In the case of park P.A., an adjustable reduction on the background music level will be built into the system.
5. A dip switch matrix will be installed allowing the audio operator to preset any combination of zones to instantly execute a special function. (Fireworks, early park closing, etc.)
6. The monitor system will be capable of selecting any combination of system output lines for audio monitoring.
7. The separate functions for each zone will be mounted as switches on a rack-mounted panel. A LED will be included for each function on each panel to give the audio operator instant identification of each zone mode.
8. All BGM sources will have a rotary attenuator which controls music level calibrated to estimated park attendance.

C. Parade Functions

1. Each zone will have access to 24 separate audio sources.
2. In parade mode, the system will be capable of broadcasting 12 RF signals to floats while simultaneously reinforcing the same signal in any of the parade zones.
3. The zone control module will cross-fade between the audio sources it is programmed to receive.
4. The cross-fade is automatic, triggered by a signal originating from the float itself.
5. Each designated float will be capable of triggering the appropriate cross-fade in any and each parade zone.
6. The system will contain a console to provide manual override of analog functions.
7. The console will be capable of manually cross-fading each zone via a sliding fader.
8. Each of the 48 faders will have push button selection of all 24 audio sources with indication of selection.
9. The monitor system will be capable of selecting any combination of output lines from the console.
10. The console will be wired in parallel with the parade automation package.
11. The system will contain a visual display indicating the position of floats on the parade route.
12. The floats will transmit a signal to be received by a narrow-band reception pattern located at the extremities of each parade zone.
13. The broadcast information will be delivered to the decoding equipment in audio central and trigger the appropriate function of the automation package as well as indicate visually to the operator the float's position on the parade route.
14. The system will automatically execute all parade functions including music reinforcement, announcements, tape start/stop and the non-dim lighting functions.

15. The system will also include a simple console to manually override the non-dim lighting functions.
16. The lighting console will also inform the operator of the lighting zone mode.

#### D. Automation

1. The automation package will execute all switching of parade functions.
2. The operator will have the capability of deleting any combination of programmed cues instantaneously without disrupting the remainder of the parade which continues intact.
3. The system will be programmable to account for any parade configuration.
4. The system will be capable of operating the programmed parade in either direction.
5. Suggested interface:
  - a. analog functions . . . 0-+10 volts
  - b. digital functions . . . +6 volts on to  
0 volts off
  - c. plug configuration . . . Elco 8016 series
  - d. audio in/out . . . . . wire wrap blocks
6. All audio switching will be solid state, with the exception of feed control from 5 stack tape deck.

#### E. Physical

1. All low-level equipment to be housed in audio central located above Bank of America:
  - a. zone control modules
  - b. automation package
  - c. tape equipment
  - d. audio console/lighting console, etc.
2. Power amplifiers for zones 1-9 to be housed in sound room above Main Street Cinema.
3. Power amplifiers for zones 10-21 to be housed in the existing "Alice" sound room.

4. 91 speaker cabinets to be constructed and mounted in designated locations with high-level wiring to terminate in the appropriate power amplifier room.
5. Amplifier feeds to be run from audio central to appropriate amplifier rooms.
6. Lighting control cable to terminate in audio central.
7. Lighting fixtures to be installed in locations designated.
8. 120 psi minimum air supply and 30 amps AC power to be delivered to lighting fixture locations.
9. Speaker cabinet will be capable of producing 95 db SPL at center line of parade route.
10. Speaker cabinets will produce a 90° radial pattern.
11. Outdoor speaker cabinet design will be directed by W.E.D. as well as foam replacement of existing glass and wood slats where necessary.

#### F. Communications

1. Audio central will have a standard park telephone with at least two (2) lines for emergency accessibility.
2. Audio central operator will have two (2) Clear Com lines available to each of the seven lighting zone roof-top locations, both parade staging areas and the fireworks firing shack.

#### G. Parade Operation

1. On verbal cue from dispatcher, audio operator initiates parade system functions.
2. With initial lighting cue, the appropriate announcement is played preceding the arrival of parade.
3. Float one's broadcast signal trips the first zone antenna beginning the automatic sequence of sound reinforcement and lighting cues.
4. As the receiving antenna's pattern is broken by the float, the automation package translates the cue and calls up the appropriate lighting function, cross-fade, fade up or fade out (audio).

5. At any time, the operator can override the automation package and manually execute the necessary audio and lighting cues. The operator may also instantly delete any combination of cues from the automatic sequence.
6. After the last parade function has been executed, the operator restores the park zones to normal mode.

## PART 2 - PRODUCTS

### 2.01 MATERIALS

- A. Refer to other sections of this Project Manual for specific product and material requirements.

## PART 3 - EXECUTION

### 3.01 PARADE INSTALLATION

- A. Speaker installation/location (items denoted by (\*) indicates new speaker location):

<u>ZONE</u>	<u>SPEAKER</u>
*1	1 Center window above Mad Hatter-Existing Glass
*1	2 North Lincoln Story window-Existing Glass
*1	3 South Lincoln Story window-Existing Glass
*1	4 Center PBX window-Existing Glass
*2	1 Gable, east end Railroad Station-Existing Slats
*2	2 East center window, Railroad Station-Existing Glass
*2	3 West center window, Railroad Station-Existing Glass
*2	4 Gable, west end Railroad Station-Existing Slats
3	1 Roof above Tour Guides' entrance-Existing Wood Panel
*3	2 South 3rd floor window, City Hall-Existing Glass
*3	3 North 3rd floor window, City Hall-Existing Glass
*3	4 Window above Fire House door-Existing Glass
4	1 Slats above Emporium Annex
*4	2 Slats above south Emporium entrance

<u>ZONE</u>	<u>SPEAKER</u>
5	1 Slats above Egg House entrance
5	2 Slats above Preview Center entrance
6	1 Slats above Tobacco Shop
*6	2 Window above north Emporium entrance-Existing Glass
6	3 Slats above Jewelry Shop
6	4 Slats above Disneyana Shop
*7	1 Slats above Market House entrance
*7	2 Slats above Clocks & Watches
7	3 Slats above Hallmark Center
7	4 Slats above Carnation
*8	1 Window above Photo Salon-Existing Glass
8	2 South slats, Sunkist House
*8	3 Window above Silhouette Studio-Existing Glass
8	4 North slats, Sunkist House
*8	5 Center window, Information Center-Existing Glass
8	6 Slats above Candy Shop
*9	1 Window above Information Center entrance-Existing Glass
*9	2 Slats above Coke Corner entrance
*9	3 East grass area (new structure)
*9	4 West grass area (new structure)
10	1 Existing (2) pole speakers
*10	2 Slats above Plaza Inn entrance
11	1 Existing (2) pole speakers
*11	2 Under WED WAY at Tomorrowland entrance (2)
11	3 Existing (2) Castle Forecourt speakers
12	1 Existing (2) pole speakers
12	2 Existing (2) Castle Forecourt speakers
*12	3 Beside north Blockhouse, west of water in foliage
13	1 Existing (2) pole speakers
*13	2 Slats above Plaza Pavilion entrance
*14	1 New (2) pole speaker beside pool east side street
*14	2 New (2) pole speaker opposite #1 west side street
14	3 Existing (2) pole speakers in foliage north of stream
15	1 Existing (2) pole speakers in foliage west side street
15	2 Existing pole speaker Matterhorn Road corner, east side
15	3 Existing (2) pole speakers in foliage west side street
15	4 Existing pole speaker Matterhorn Road, east side.

<u>ZONE</u>	<u>SPEAKER</u>	
*16	1	New roof-top speaker above Castle rest room entrance
16	2	Existing pole speaker under Monorail track
16	3	Existing pole speaker in foliage, Castle wall west side
17	1	Existing pole speaker under Monorail track
17	2	Existing (2) pole speakers in grass island near dining
*17	3	New Pole (2) speakers in flower bed under Monorail track
18	1	Existing (2) pole speakers under Monorail track
*18	2	New (2) pole speakers, Storybook Rest Area
*19	1	New (2) pole speakers in foliage beside Caricature Stand
19	2	Existing (2) pole speakers in grass beside Motor Boats
*20	1	New (2) pole speakers in foliage beside Small World Stand
20	2	Existing (2) pole speakers in foliage beside west tickets
20	3	Existing (2) pole speakers, west side foliage
21	1	Existing (2) pole speakers, east side foliage
21	3	Existing (2) pole speakers, near west break area gate
*21	4	New (2) pole speakers in foliage north of Small World gate

1. (\*) indicates new speaker location
2. all slats to be replaced with foam
3. existing glass to be replaced with foam

B. All slats shall be replaced with foam.

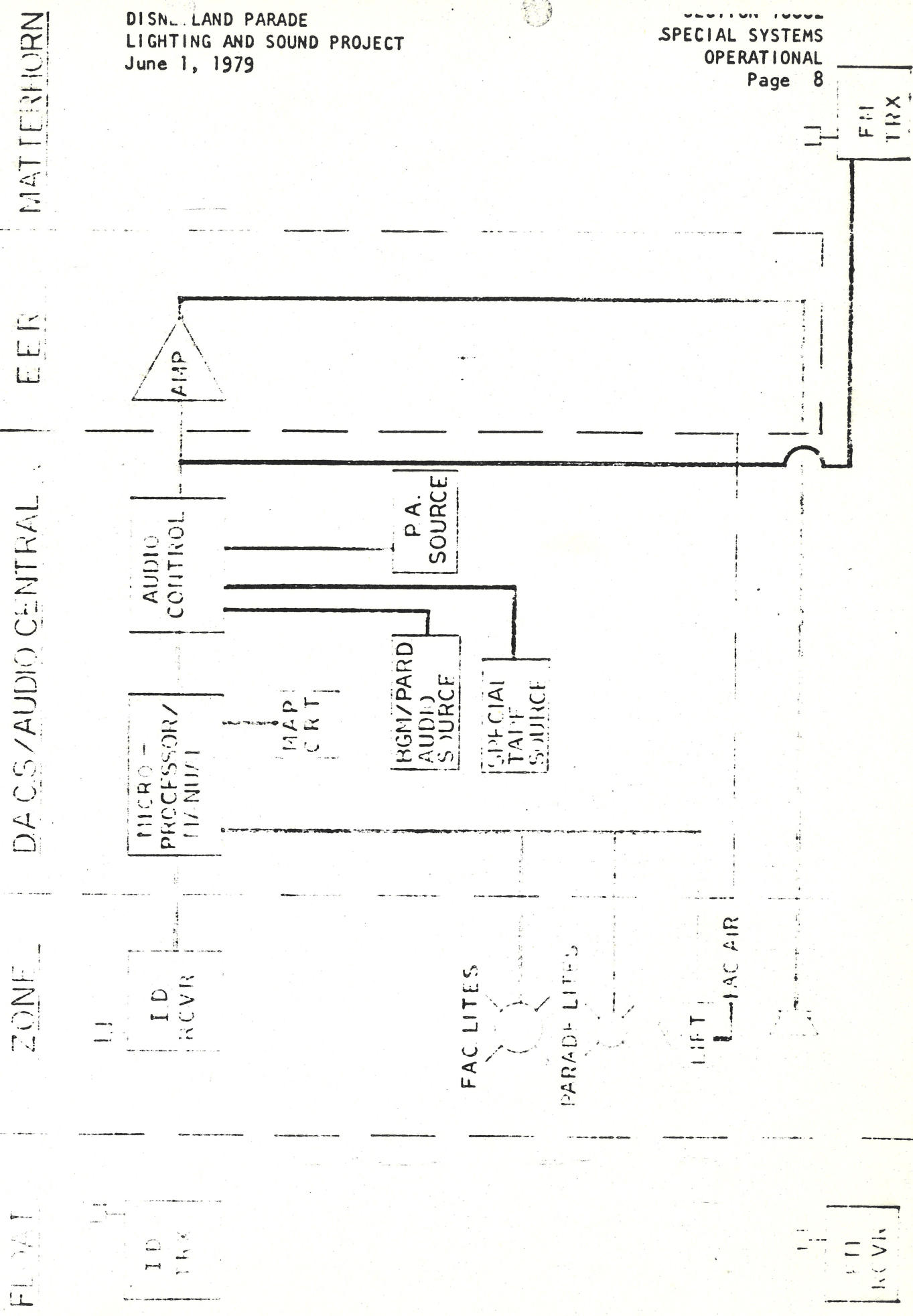
C. All existing glass shall be replaced with foam.

D. The following line diagrams and drawings shall be utilized for lighting and sound installation locations.

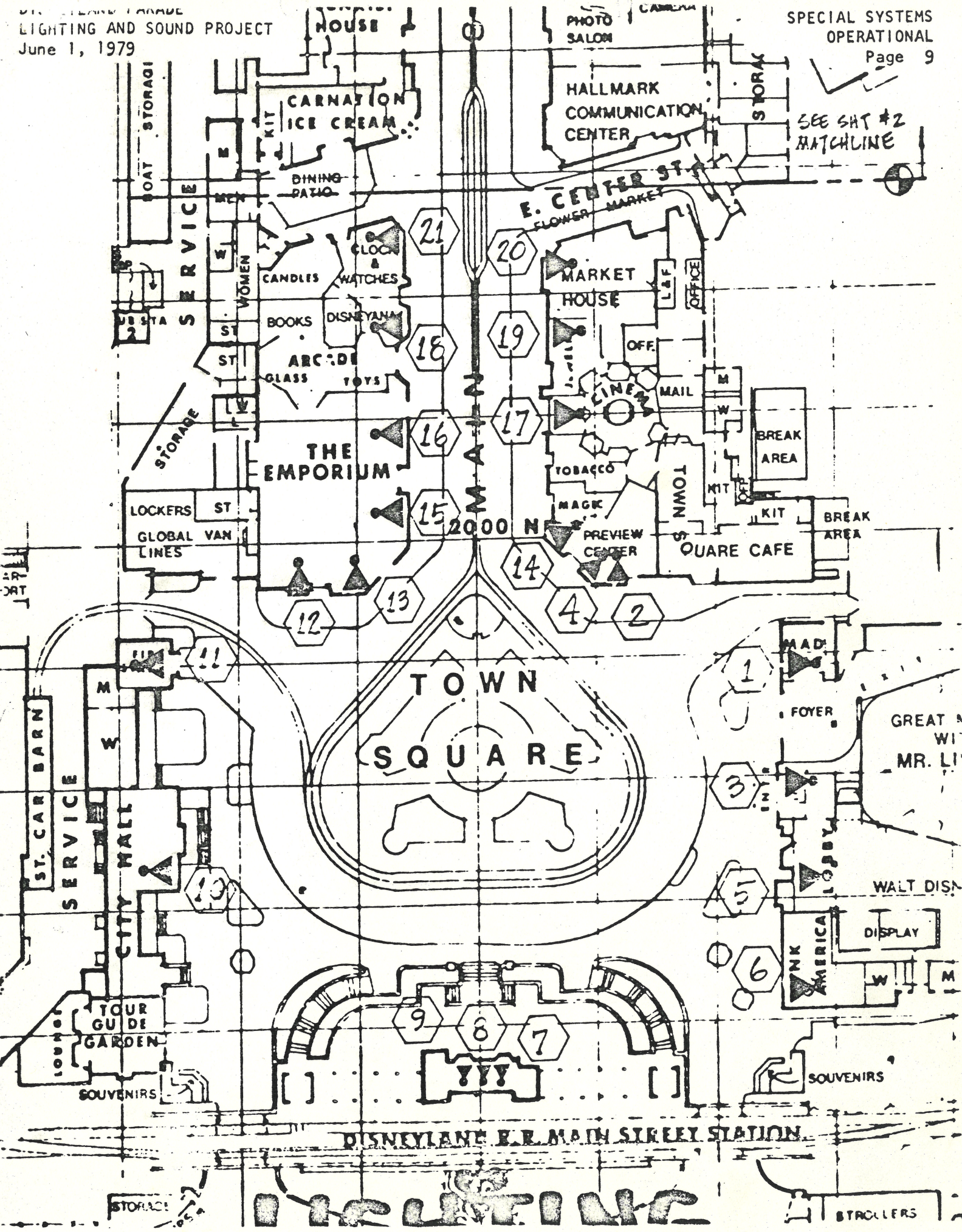
# DISNEYLAND PARADE ROUTE LIGHT & SOUND

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 SPECIAL SYSTEMS  
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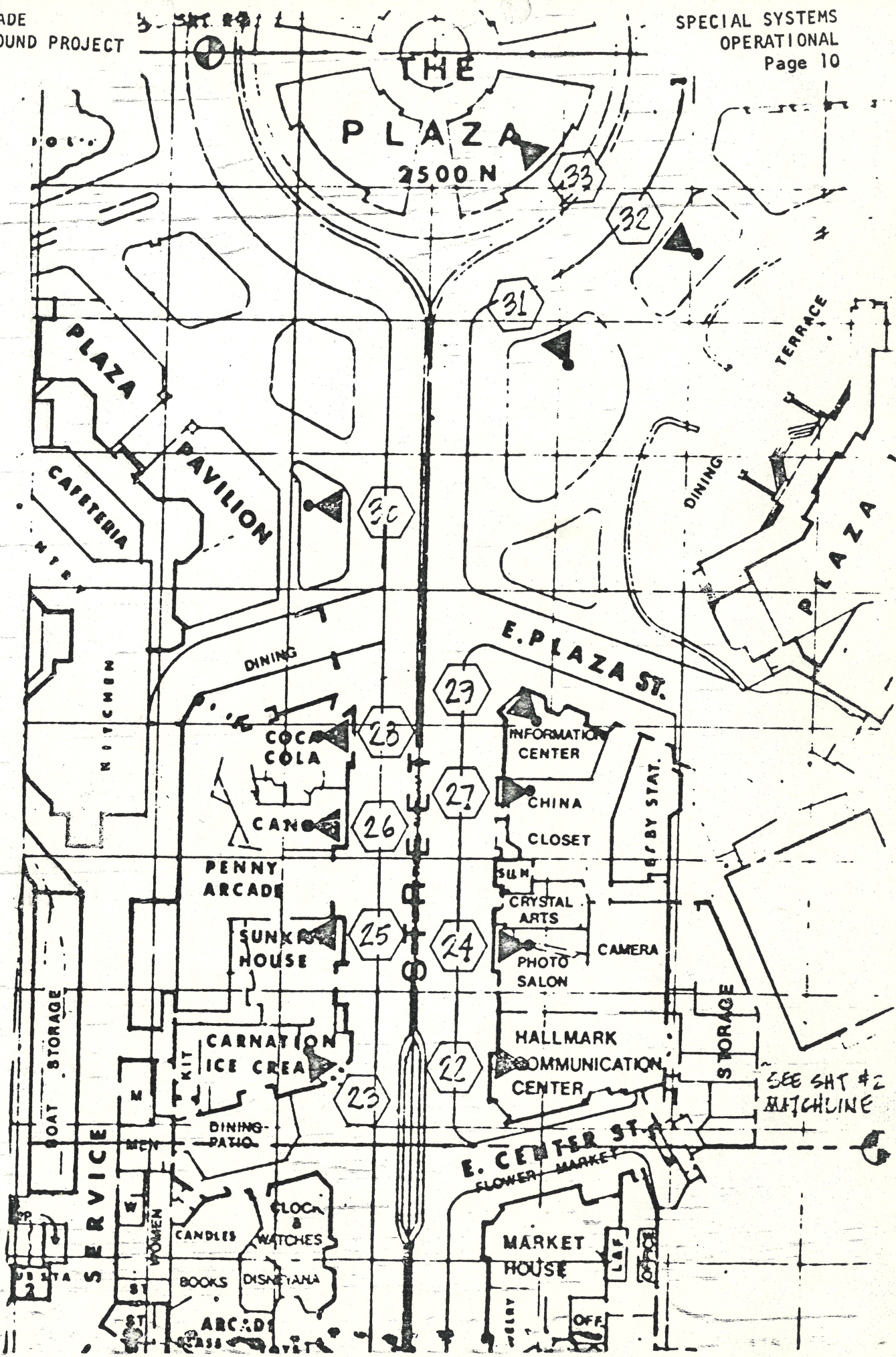


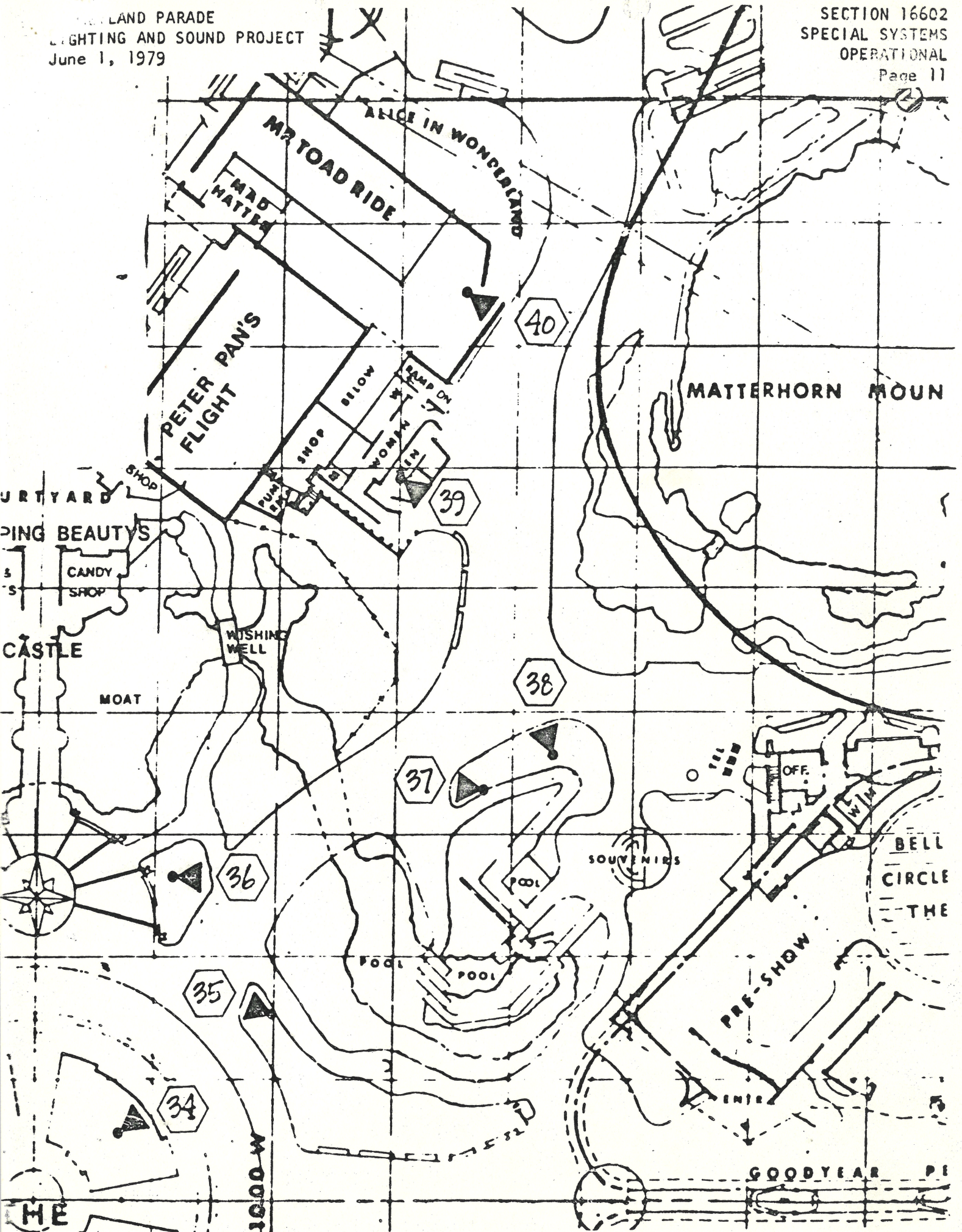


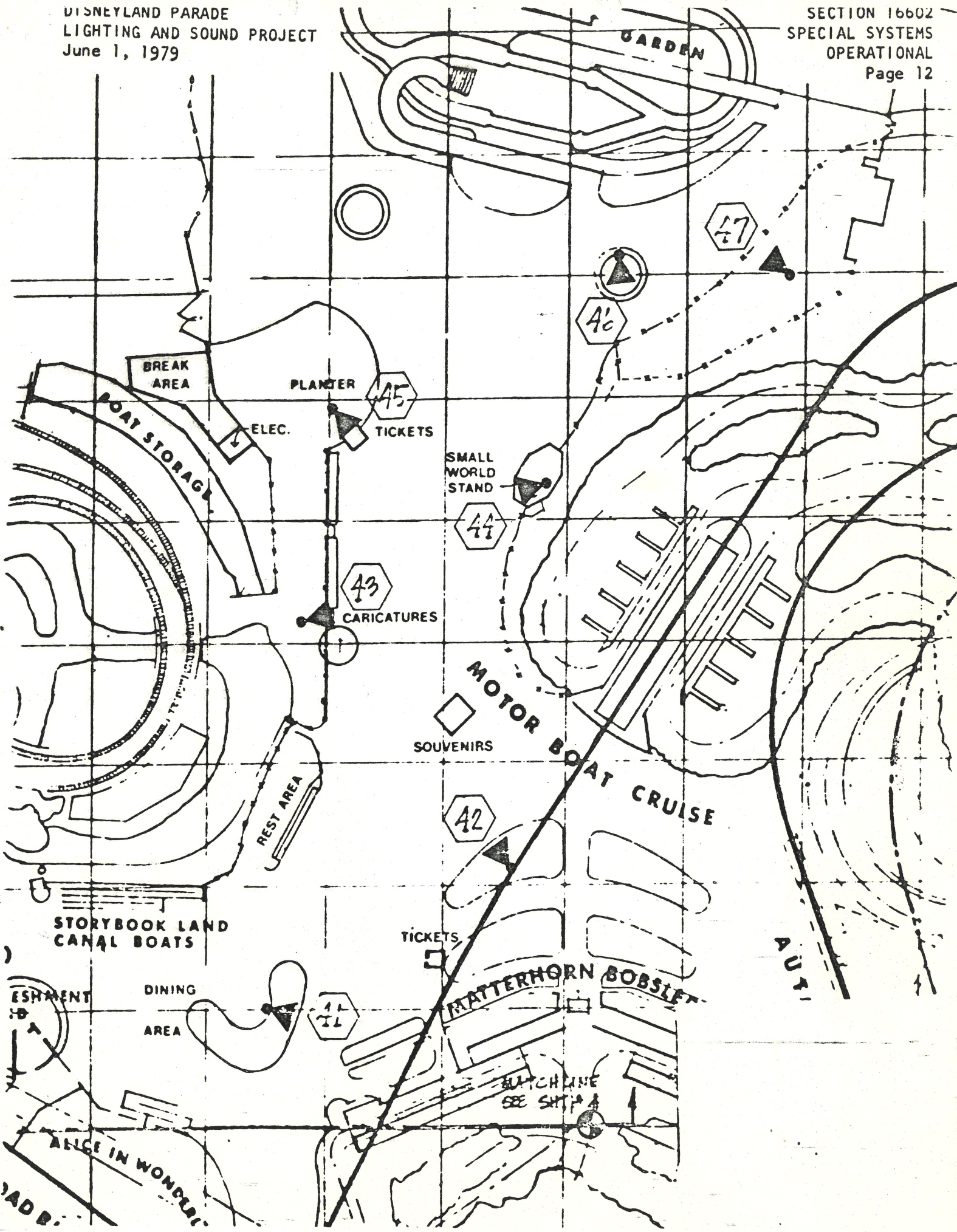
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MATCHLINE

DISNEYLANE E.R. MAIN STREET STATION

STROLLERS

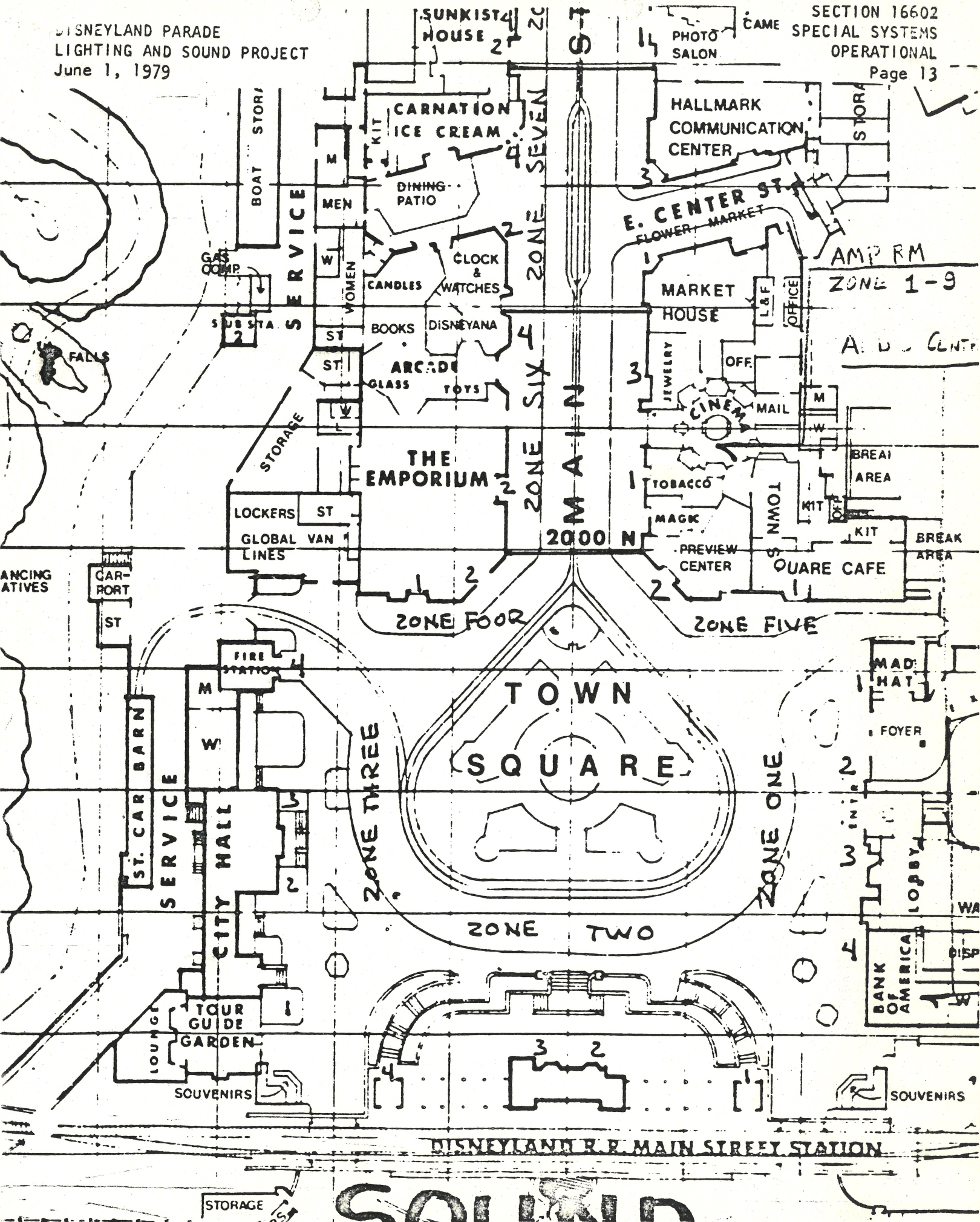


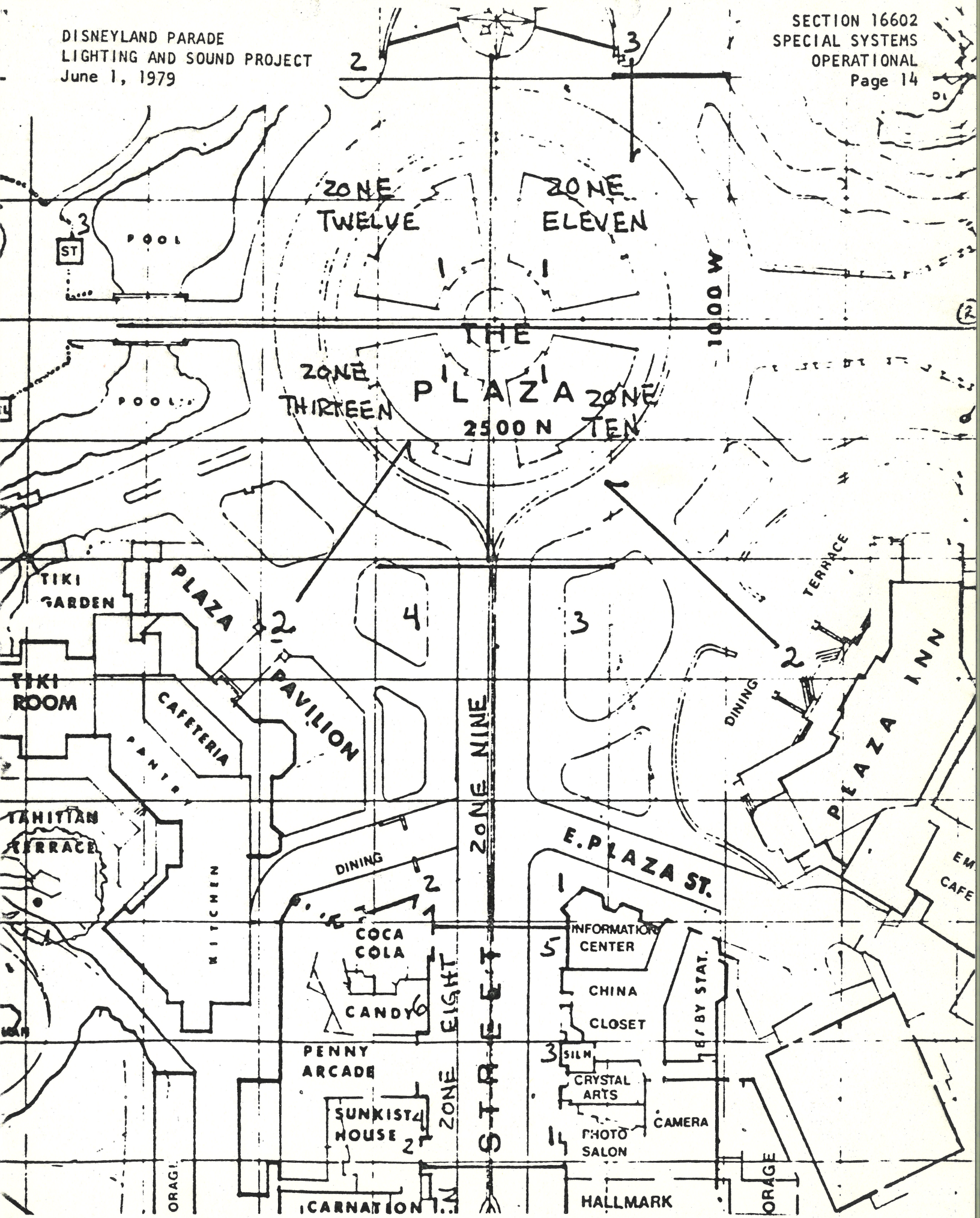




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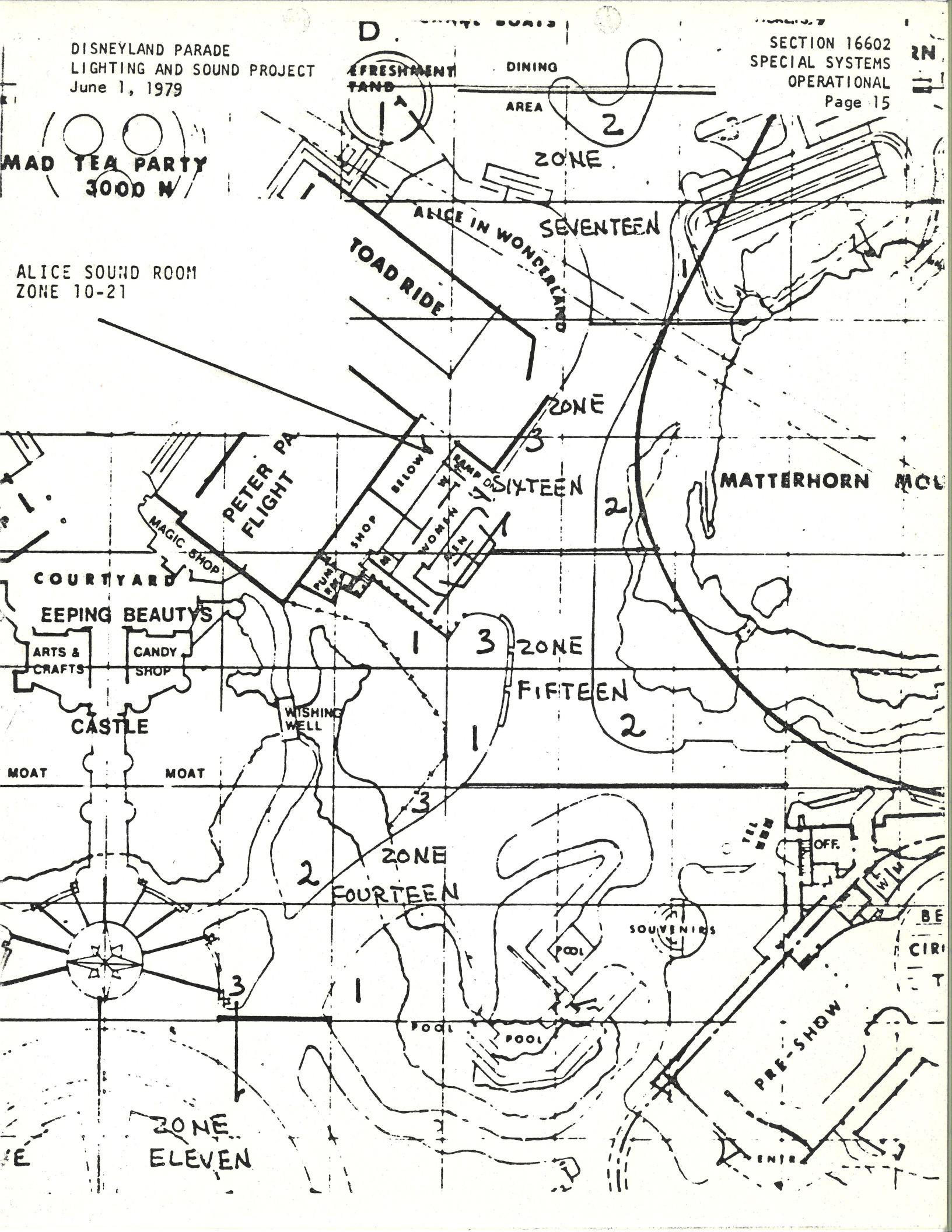


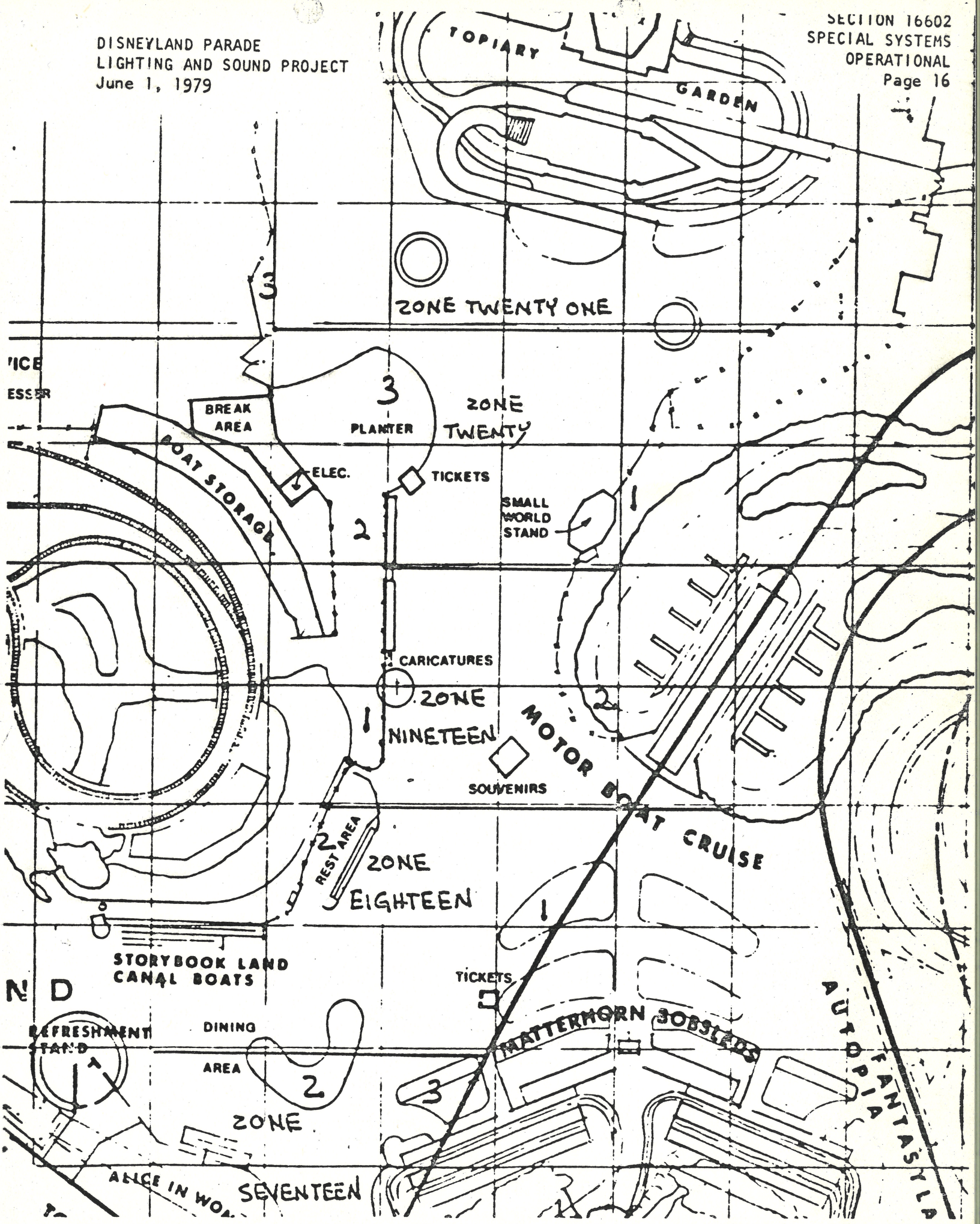
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MAD TEA PARTY  
3000 W

ALICE SOUND ROOM  
ZONE 10-21







PART 1 - GENERAL

1.01 DESCRIPTION

- A. Purpose of this system is to improve show lighting for night time parades, special events and to provide a system capable of performing over the next several years at an acceptable technical and creative standard.
- B. A further improvement is to centralize all parade route lighting control in audio central and eliminate local control switching boxes through out the park. Seven zones of area and show lighting control will be a manual and fully automatic scheme of operation.
- C. The goal and objective is directed towards improving Theme Park appearance by installing "hide-a-way" pneumatic assemblies which would be activated just prior to each special event or parade.

1.02 RELATED DOCUMENTS SPECIFIED ELSEWHERE:

- A. Drawings of lighting locations along parade route: Section 16602.

1.03 SUBMITTALS

- A. Submit two copies of shop drawings and manufacturers product data for all lighting fixtures and related devices. Include illustrations, catalog cuts, instructions for installation and maintenance data. Manufacturer's name or trademark shall be on each sheet.
- B. Submit manufacturer's standard warranty for all items covering a period of one year effective from the date of Owner's final acceptance. Warranty shall state clearly all conditions for which the warranty is valid.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. The fixture type shall be a SHALDA Series 364 PAR64 outdoor lamp, installed with a D/L fabricated snoot with gel frame holder. Newly purchased fixtures will be installed, supplemented by existing fixtures in good working condition. (212) fixtures are proposed for (47) locations.

PART 3 - EXECUTION

### 3.01 INSTALLATION

A. Interface with Theme Park lighting:

Centralize control of area lighting currently distributed among switching systems through out the park. (For events such as the electrical parade or candle-light procession.)

- (1) Route control for area lighting in seven zones to master control panel in audio central.
- (2) Interface area lighting with audio automation package.

B. Upgrade control of route show lighting:

Provide a technical and creative standard.

- (1) Control show lighting in seven zones, one for every three audio zones.
- (2) Route control for each zone back to master control panel.
- (3) Design and fabricate master control panel to be installed in audio central.
- (4) Interface with automation package.

C. Fabricate and install pneumatic assemblies:

To raise and foldback lighting fixtures at each location, and improve upon past appearances of the presence of parade lighting.

- (1) Utilize existing work drawings from WDW Engineering for roof installation assemblies.
- (2) Design T-bar tree lifts for planter installations.
- (3) Route air lines to all locations.
- (4) Interface pneumatic control with automation package.

NOTE: Area lighting controls, pneumatic controls and show lighting controls to be installed in manual master control panel configuration (B3).

D. Relocate lighting positions and fixtures:

Evaluate field angles and beam power.

- (1) Relocate to prime lighting locations.
- (2) Add or change to typical PAR64 1000W fixtures through out parade route.

E. Automation package:

Interface control

(3) Support relocation and fixture position with required electrical specifications.

(1) Interface with processor hardware for automated lighting control in seven zones.

(2) Coordinate technical interface and programming specifications.

(3) Review hardware specifications with audio effort.

F. Location:

1. Prime locations are spotted and referenced on parade route diagram drawings in Section 16602.

END OF SECTION

PART I - GENERAL

1.01 DESCRIPTION

- A. The work of this section of the project shall be to provide a microprocessor-based automated control system that will track the progress of floats in a parade, and execute the associated light and sound cues. The system shall accept signals (contact closures) from a sensor system not part of this equipment and shall generate control signals for a lighting and audio system that also is not part of this equipment.
- B. Hardware from an existing lighting system already proven in the field shall be used modified and re-packaged as required. New software shall be developed.
- C. The scope of this section shall include design, development and manufacture of the system. It shall also include project management, on-site system check-out and field service. Installation shall be by Owner.

1.02 QUALITY ASSURANCE

A. Manufacturer's Requirements:

- 1. The manufacturer or his authorized representative shall furnish personnel thoroughly familiar with the system for a two week on-site (in Anaheim, California) checkout for the purpose of de-bugging all software or hardware problems. All costs of time, travel, food, lodging and other incidentals shall be borne by the manufacturer or supplier.

1.03 SUBMITTALS

DEFINED  
IN  
P.O.

- \* A. The manufacturer shall submit two copies each of complete system documentation. This shall include operating program listings, a system block diagram, technical write-ups on each functional block, complete channel assignments, readable detailed schematics with a complete parts list for each card, and a wire list for the integrated system. All source and object codes, both custom and proprietary must be included.
- B. The manufacturer shall submit two copies of manuals for complete operation and maintenance.
- C. The manufacturer shall also submit a list of recommended spares with current pricing.

(i.e. NOTES IN LOOSE-LEAF

^ BINDERS PER P.O.)

#### 1.04 WARRANTY

- A. Manufacturer shall furnish a warranty for the system valid for Anaheim. Warranty shall be for a period of one year starting at the time the system is placed into operation and accepted.
- B. The warranty shall state clearly all conditions for which it is valid.

#### PART 2 - PRODUCTS

##### 2.01 SYSTEM HARDWARE REQUIREMENTS.

###### A. General:

1. System shall be capable of controlling 48 analog points.
2. 272 digital points.
3. System shall have a minimum of a 1000 cue capacity.
4. Cues shall be accessible in any random order.
5. CRT display available to display all cues.
6. Line printer interface shall be included. Line printer function to be print-out of cue program. *needed VART*
7. Magnetic storage medium to be floppy disk.
8. Manual override panel to be fabricated to operate all control output functions if necessary.
9. System output to be multi-pin connectors.

###### B. Hardware items shall include the following:

1. A memory control panel with the controls to enter and display memory number, memory execution time, output channel number, state of output channel, order of floats, and order of zones; as well as necessary manual override. Operating panel shall be finished in black enamel. Operating components shall be identified with white silkscreen covered with clear textured seal or with engraved and filled legends.
2. An equipment rack to house necessary electronics and ELCO 8016 series connectors for all inputs and outputs. If equipment rack and memory control panel are not integral, 25' control interconnection cable with connectors shall be provided.

3. Input Circuitry shall accept 25 low voltage switch closures. Each circuit shall have a manual override switch which rejects the signal from the external sensor system and allows manual insertion of a signal.
4. Output Circuitry shall drive 272 switch circuits, 0 or +6 VDC at 1 MA, and 48 analog circuits, 0 to +10 VDC at 1 MA. 0V level of 72 of the switch circuits shall look like an open circuit so as to allow pull down resistors in the external audio matrix system to take the control signal to -6 VDC. 97 of these switch circuits (72 + 25) shall software generate a pulse of approximately .25 second. The order in which these pulses are generated shall be software controllable. The analog circuits shall have at least 65 steps. All other switch circuits (175) shall be called to a constant "on" or "off" condition as required.
5. Video display of the progress of the parade and the contents of the memories.
6. Storage of the memory information on "floppy-disk" which can be saved for recreating the parade at a later date or location.
7. Interface for future line printer.
8. A manual back-up control panel with power supplies independent of the memory control panel. Panel shall have 48 analog potentiometers and 272 high density manual switching devices such as a diode pin matrix (97 of which will be momentary contact type). Panel shall be similar in construction to the memory control panel and, if not, integral 25' control interconnection cable with connectors will be provided.
9. ELCO pin configurations and connectors shall be called out by WDW Engineering.

## 2.02 SYSTEM SOFTWARE REQUIREMENTS

### A. General:

1. Given that the operator has indicated to the system the following:
  - a. Parade float sequence.
  - b. Parade zone sequence.

Then the following should occur:

- c. When any float crosses the entry boundary receiver of any

particular zone, the pre-programmed cue #0 - 999 will be executed. Each cue for each zone will be separately available. Indication of a float crossing this boundary to control system will be a contact closure.

2. Maximum consideration in software design should be given to the future implementation of a unique float code I. D. System to replace the current "contact closure" method of float location I.D.
- B. Software items shall include the following:
1. Two diskettes, each containing the custom written operating program necessary to meet the intent of this project shall be provided. This program shall be "bootstrapped" into semiconductor memory every time the system is turned on, thus allowing future program changes.
  2. A diskette containing a program to duplicate the operating program onto blank diskettes shall also be provided.
  3. Software shall be provided to enable lineprinter use. ← Delete Per P.O.
  4. Since the operating program is being custom written for this project, it shall become the property of the purchaser. However, since the program will incorporate proprietary algorithms necessary to operate the hardware, a condition of the contract shall be that it must not be disclosed to others or used for purposes other than this or duplicate projects of the purchaser, without the written permission of the supplier.

## 2.03 SYSTEM FUNCTIONAL REQUIREMENTS

- A. System shall have a capacity of 1000 memories addressed by a two digit float code of 01 to 40 and a two digit zone code of 01 to 25.
- B. Each memory shall access the 24 x 48 matrix of audio switch outputs, 48 audio outputs, and 200 auxiliary switch outputs for lighting and miscellaneous function control. Refer to Section 16605, 2.01.
- C. When executed, the memory shall change the state of selected switch outputs and initiate the gradual change of state of selected analog outputs. The length of time of change of the analog outputs shall be by a pre-recorded fade time associated with the memory being executed. Any outputs not selected shall remain unchanged. Several cues can be executed, if necessary, within a short time period (2 - 3 seconds).

- D. System shall have the capability of entering the order of the float numbers. This order shall have the ability to be re-written at any time, including during the parade in the event that a float drops out, without disrupting the "on stage" show.
- E. System shall have the capability of entering the order of the zone numbers. This order shall have the capability of being easily reversed so that the parade can be run in one direction in the morning and the other direction in the afternoon. Reverse direction zone border changes shall be facilitated.
- F. System shall monitor 25 switch inputs, check the order of the floats, check the order of the zones, and keep track of which floats are in which zones. Upon receiving a closure of any of the switch inputs the system shall select and execute the proper memory. Parade status shall be retained on "floppy-disk" in case of power failure.
- G. System shall have the capability of overriding any memory or any output command.

#### 2.04 SYSTEM ENVIRONMENTAL REQUIREMENTS

- A. The system shall be operated from 115 VAC  $\pm$  10%, 60 Hz  $\pm$  1% well grounded source.
- B. The system shall be operated in an ambient temperature range of 10 to 40°C with a relative humidity of 20 - 80% without condensation.

### PART 3 - EXECUTION

#### 3.01 INSTALLATION

- A. Installation shall be by Owner and shall be in strict accordance with written instructions, specifications and drawings.
- B. All personnel shall cooperate fully to coordinate and complete all facets of the system properly and accurately and in accord with established schedules.

END OF SECTION



PART 1 - GENERAL

1.01 DESCRIPTION

- A. The audio control system shall provide a specialized audio routing and switching system for control of all background music, paging, special audio and parade operations. Automated control of parade audio switching shall be from a microprocessor system specified in another section. Control of the Park PA, Paging and Specialized functions are within the scope of this section.

1.02 QUALITY ASSURANCE

- A. Manufacturer's requirements.

1. The manufacturer or his authorized representative shall furnish personnel thoroughly familiar with the system for a two week on-site (in Anaheim, California) checkout for the purpose of de-bugging all hardware problems. All costs of time, travel, food, lodging and other incidentals shall be borne by the manufacturer or supplier.

1.03 SUBMITTALS

- A. The manufacturer shall submit two copies each of complete system schematics.
- B. The manufacturer shall submit two copies of manuals for complete operation and maintenance.
- C. The manufacturer shall also submit a list of recommended spares with current pricing.

1.04 WARRANTY

- A. Manufacturer shall furnish a warranty for the system valid for Anaheim. Warranty shall be for a period of two years starting at the time the system is placed into operation and accepted.
- B. The warranty shall state clearly all conditions for which it is valid.

PART 2 - PRODUCTS

2.01 SYSTEM HARDWARE REQUIREMENTS

A. General:

1. System shall be supplied in standard nineteen inch (19") rack mountable modules.
2. Necessary ventilation or silent fans shall be provided with modules if necessary.
3. System connections.
  - a. Input/output connections shall be screw or solder terminals.
  - b. Control inputs shall be ELCO 8016 series connectors; wiring schedule shall be called out by WDW Engineering.
  - c. All system modules within this section shall be supplied pre-wired.
4. All system control points shall be appropriately labeled.

B. Hardware system shall consist of the following:

1. Sixteen ARA-1612 main frames with a full compliment of modules (four ARA main frames modified to accept individual inputs into the last input on all 48 output cards).
2. Six ARA-1612PS power supplies.
3. Eight ARA-16120M output mixers (four ARA-16120M output mixers modified for individual PA mixing, insertion and switching).
4. 48 channels of simple shelving E.Q. (LF  $\pm$  12db & 100Hz H.F.  $\pm$  12 db @ 15KHz).
5. One encoding switch matrix with programmed push button operation.
6. One zone control panel with push button encoding for all 48 zones.
7. One computer encoding system to convert BERKEY COLOR TRAN system pulses to ARA Compatible BCD encoding.

C. System Electronic Requirements:

1. Distortion (40Hz to 15KHz)  $\geq$  .3% @ + 20dbm.
2. Cross talk (20Hz to 15KHz)  $\geq$  60db @ + 20dbm.
3. Noise (40Hz to 15KHz) -70db ref +8 dbm or better.

4. Response  $\pm$  1db 20Hz to 20KHz.
  5. All system audio inputs 15K ohms (balanced) or greater.
  6. All system audio outputs 150 ohms (balanced) or less.
- C. All components requiring interface to the BERKEY COLOR TRAN system shall be voltage and current compatible as defined in Section 16604 of this Project Manual.
  - D. All "remote control" functions shall be facilitated with a single contact closure.
  - E. The specified system shall conform to WDW Engineering drawings supplied.

## 2.02 SYSTEM FUNCTIONAL REQUIREMENTS

### A. Individual Zones:

1. Each "zone" (#1 - #48) shall be capable of the following modes of operation:
  - a. "Tape" (for special announcements etc. - - normally connected to a MAPO 5-stack reproducer).
  - b. "BGM/PA" (for background music with a reduced level music when P.A. function is operated. NOTE - P.A. announcements shall feed only those zones pre-selected to this mode.
  - c. "Parade" (zones #1 - #24 only) allows audio feed from Parade audio switching matrix to enter at point of zone E.Q.). (See drawing).
  - d. "Special" (for special audio feeds).
  - e. "Off" (No audio feed to zone).

### B. Logic conditions:

1. Any zone mode can be assigned at any time from the individual zone control switch panel.
2. A "Master preset programming matrix" shall be used to control any combination of zone modules simultaneously. Operation shall be by "Local" momentary push-buttons (as indicated in the drawings) or by a remote contact closure. All functions on this matrix system shall remain as commanded until receiving a pulse (remote or local) commanding another condition except "P.A."

3. "P.A." shall require a constant contact closure during operation. Releasing this closure shall strobe the "normal preset" causing all zones to revert to "normal."

#### 2.03 SYSTEM ENVIRONMENTAL REQUIREMENTS.

- A. The system shall be operated from 115 VAC  $\pm$  10%, 60 Hz  $\pm$  1% well grounded source.
- B. The system shall be operated in an ambient temperature range of 10 to 40°C with a relative humidity of 20 - 80% without condensation.

### PART 3 - EXECUTION

#### 3.01 INSTALLATION

- A. Installation shall be by Owner and shall be in strict accordance with written instructions, specifications and drawings.
- B. All personnel shall cooperate fully to coordinate and complete all facets properly and accurately and in accord with established schedules.

END OF SECTION

PART 1 - GENERAL

1.01 DESCRIPTION

- A. The Work of this Section shall be to provide a distribution system for the system Work specified in Section 16605 - of this Project Manual.

1.02 QUALITY ASSURANCE

A. Manufacturer's Requirements:

1. The manufacturer or his authorized representative shall make personnel that are thoroughly familiar with the system available for on-site consultation in Burbank or Anaheim, California during the development. Service shall be performed at no additional cost to Owner.
2. The manufacturer or his authorized representative shall furnish personnel thoroughly familiar with the system for a two week on-site (in Anaheim, California) checkout for the purpose of de-bugging all software or hardware problems. All costs of time, travel, food, lodging and other incidentals shall be borne by the manufacturer or supplier.

1.03 SUBMITTALS

- A. The manufacturer shall submit two copies each of complete system schematics, operating program listings and source and object codes.
- B. The manufacturer shall submit two copies of manuals for complete operation and maintenance.
- C. The manufacturer shall also submit a list of recommended spares with current pricing.

1.04 WARRANTY

- A. Manufacturer shall furnish a warranty for the system valid for Anaheim. Warranty shall be for a period of one year starting at the time the system is placed into operation and accepted.
- B. The warranty shall state clearly all conditions for which it is valid.

## PART 2 - PRODUCTS

### 2.01 SYSTEM HARDWARE REQUIREMENTS

A. Hardware to be supplied under this section shall be as follows:

1. All equipment racks (6' enclosed) for equipment in both this Section and Section 16605.
2. 188 dual patch points (376 Jacks).
3. 50 Series 90 distribution amplifiers.
4. 14 independant channels of compression/limiting.
5. One microphone pre-amp.
6. One multi-frequency test oscillator.
7. One 50 input mix-monitor system.
8. Attenuators and Meters as indicated on Drawings.
9. Wire wrap input and output terminal blocks with cross connect capability for all audio signals.

### 2.02 SYSTEM ELECTRONIC REQUIREMENTS

- A. Distortion (40Hz to 15KHz)  $\geq$  .3% @ + 20dbm.
- B. Cross talk (20Hz to 15KHz)  $\geq$  60 db @ + 20dbm.
- C. Noise (40Hz to 15KHz) -70db ref +8 dbm or better.
- D. Response  $\pm$  1db 20Hz to 20KHz.
- E. All system audio inputs  $\approx$  15K ohms (balanced) or greater.
- F. All system audio outputs  $\approx$  150 ohms (balanced) or less.

### 2.03 SYSTEM ENVIRONMENTAL REQUIREMENTS

- A. The system shall be operated from 115 VAC  $\pm$  10%, 60 Hz  $\pm$  1% well grounded source.
- B. The system shall be operated in an ambient temperature range of 10 to 40°C with a relative humidity of 20 - 80% without condensation.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. All equipment supplied under Section 16605 and this Section shall be mounted and wired into this system.
- B. Installation shall be by Owner and shall be in strict accordance with written instructions, specifications and drawings.
  - 1. The specified system shall conform to the following WDW Engineering drawings:
    - E-882 - One line signal diagram
    - E-883 - Audio Programming Panels
- C. All personnel shall cooperate fully to coordinate and complete all facets properly and accurately and in accord with established schedules.

END OF SECTION

PART 1 - GENERAL

1.01 DESCRIPTION

- A. The Work of this Section shall be to provide a TL 175 Telemetry System - a radio link which is intended for communicating approximately five (5) feet without causing interference with adjacent receivers operating on the same frequency, placed approximately 100 feet away.
- B. The radio shall not include the signal processing equipment for telemetry information to be transmitted. A single relay closure shall be provided on the receiver to indicate command "ON" status and appropriate adjustable time delay provided to preclude spurious signal closures.

1.02 QUALITY ASSURANCE

A. Manufacturer's Requirements:

- 1. The manufacturer or his authorized representative shall make personnel that are thoroughly familiar with the system available for on-site consultation in Burbank or Anaheim, California during the development. Service shall be performed at no additional cost to Owner.
- 2. The manufacturer or his authorized representative shall furnish personnel thoroughly familiar with the system for a two week on-site (in Anaheim, California) checkout for the purpose of de-bugging all problems. All costs of time, travel, food, lodging and other incidentals shall be borne by the manufacturer or supplier.

1.03 SUBMITTALS

- A. The manufacturer shall submit two copies each of complete system schematics.
- B. The manufacturer shall submit two copies of manuals for complete operation and maintenance.
- C. The manufacturer shall also submit a list of recommended spares with current pricing.

1.04 WARRANTY

- A. Manufacturer shall furnish a warranty for the system valid for Anaheim. Warranty shall be for a period of one year starting at the time the system is placed into operation and accepted.



- B. The warranty shall state clearly all conditions for which it is valid.

## PART 2 - PRODUCTS

### 2.01 SYSTEM REQUIREMENTS

#### A. General:

1. In operation, this transmitter shall be mounted on a slowly moving vehicle which shall provide +12V dc power.
2. A special antenna shall be installed, connected to the transmitter, and made to radiate down towards the road. The receiving antennas shall be specially designed to be buried in the road beneath the moving vehicle.
3. Standard 50 Ohms RG 58U coaxial cable shall be used to connect the antenna to the receiver. The cable should not be any longer than necessary and should not exceed 750 feet.
4. Whenever the moving vehicle passes over the buried receiver antenna, the radio signal shall be received and be sent to the receiver. The receiver shall then activate a relay, which shall provide a set of closure contacts.

#### B. System Requirements

1. Transmission Distance: Approximately 5 feet.
2. Operating Frequency: VHF Hi-Band. Exact frequency to be determined by customer.
3. Command Output: Relay Closure Contacts

#### C. WM 400X Transmitter Requirements

1. D.C. Power: +12 VDC, +1, -3, 335mA Max.
2. Size: 4 x 2.5 x 0.8 inches
3. Weight: 5 ounces
4. Connector: Mini-Microplug for Antenna
5. Controls: On - Off

D. WM 300X Receiver Requirements

1. Power: 115 Vac, 60 HZ
2. Size: 5.75 x 2.25 x 6.75 inches
3. Connector: (a) 2 pin connector for contact closure.  
(b) UHF, S0239 for Antenna
4. RF Sensitivity: 1uV for 30 db quieting
5. Antenna Input: 50 OHMS
6. Controls: Squelch, on-off

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Installation shall be by Owner and shall be in strict accordance with written instructions, specifications and drawings.
- B. All personnel shall cooperate fully to coordinate and complete all facets properly and accurately and in accord with established schedules.

END OF SECTION