

SACRAMENTO METROPOLITAN



Cable Cable Television Commission

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ROBERT E. SMITH
EXECUTIVE DIRECTOR

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March 11, 1985

Off-Agenda
Tuesday, March 12, 1985

APPROVED
BY THE CITY COUNCIL

To: Sacramento City Council

MAR 12 1985

From: Bob Smith, Executive Director
Sacramento Metropolitan Cable Television Commission

OFFICE OF THE
CITY CLERK

Subject: ADOPTION OF RESOLUTION FOR TECHNICAL MODIFICATIONS AND CLARIFICATIONS

The attached letter from Sacramento Cable Television requests technical modifications to the cable system design and certain other clarifications of the Franchise Documents as follows:

1. Change the dual cable 350 MHz system to a 550 MHz single cable design initially utilizing 450 hardware spaced to 550 MHz and ultimately retrofitted to the higher 550 MHz capacity upon certain conditions.
2. Make corresponding changes in the microwave distribution system to use AM microwave in a seven hub configuration rather than supertrunk, FM microwave, and four headends (also includes a substitution request for use of 60% braided shield drop cable which staff recommends processing later under the equipment substitution procedure).
3. Allocate up to 20 MHz of spectrum space for I-Net usage until 90% of capacity is obtained, at which time up to a 200 mile I-Net is required.
4. Allow adjustment of the mileage construction timetable to begin building the system throughout the Imposed Service Area rather than the confined geographical areas originally bid. Open a public access studio and begin basic training in Month 26 due to delay in construction start-up.
5. Secure a recommendation from the Commission to the various Departments of Public Works regarding underground construction in front yards rather than at the lip-of-the-gutter.
6. Utilize a major accounting firm to determine the commercial viability of the 24-hour news service prior to its initiation, rather than beginning the service and then commence a test period.
7. Eliminate the requirement for preconstruction photography.
8. Restate the original formula to specify the maximum dollar amount of revenues from Tier I rates to be used in paying copyright fees for distant signals.

Fiscal Appropriateness.

Sacramento Cable Television states their estimated \$100 million loan is in place, and are prepared to initiate construction by March 15th. However, by the attached letter, they indicate that it is necessary to reduce expenditures by approximately \$20 to \$30 million to make the Sacramento system a viable business enterprise.

Actual experience in urban markets has caused the company to change their original revenue/subscriber and pay to basic assumptions. Further, competition from VCR sales, MDS systems and video recordings are threatening the financial health of the Sacramento system by, among other factors, depressing the original penetration assumptions. Granting the technical changes requested, according to Sacramento Cable Television, will mitigate these adverse economic factors. In addition, with the design change, construction will occur simultaneously from multiple hubsites located throughout the Imposed Service Area rather than the limited geographical areas originally indicated.

In order to determine the necessity of granting such modifications, the Commission staff asked Touche Ross to review the reasonableness of these assumptions and the appropriateness of approving their request.

According to Touche Ross, whose final report will be distributed Tuesday, Sacramento Cable's request for changes in system design are reasonable.

- The company has lowered its penetration and revenue-per-subscriber projections. Based on Touche Ross' analysis of current urban markets' experience since the submission of the original proposal, the lower projections appear justified and reasonable.
- Given these new projections, the requested change in design will allow Sacramento Cable to maintain financial health and stability.
- The proposed changes in system design are sound economically, because they provide significant capital savings for the operator, without cut-backs in the range of programming and services available to subscribers.

Technical Appropriateness.

The technical modifications were submitted to Hammett & Edison, the Commission's Engineer, who determined whether or not the proposed system was as reliable, had sufficient capacity, and was as technically sound as the dual cable configuration originally bid. It is not possible to make a component by component comparison of the proposed 450/550 MHz system versus the dual cable 350 MHz system since they are entirely different designs and configurations. However, it is possible to review whether or not the proposed alternative system design is equivalent based upon the following overall factors:

1. Provides in every respect the same degree of reliability as the original proposed system.
2. Has the capacity to carry both the program services originally bid as well as sufficient capacity to carry all services that might be brought on line in the foreseeable future.
3. Is technically equal to or superior in signal quality at point of delivery as that originally bid.

The conclusions of Hammett & Edison, whose final report will also be distributed Tuesday, are as follows:

1. Reliability.

Subject to Sacramento Cable Television agreeing to the stipulations in the Hammett & Edison report on the Alternative System Design request of February 20th, and based on manufacturers' representation, Hammett & Edison concludes that the AM microwave system now proposed will provide reliability comparable to the combined FM and AM microwave system originally proposed.

2. System Capacity.

Subject to a successful frequency coordination study and ultimate licensing by the FCC, which Hammett & Edison believes to be likely, the capacity of the proposed system will be adequate for delivery of presently proposed and what they believe to be reasonably foreseeable future programming and other services.

3. Quality and Performance Characteristics.

Subject to Sacramento Cable Television agreeing to the stipulations in the Hammett & Edison report on the Alternative System Design and based on manufacturers' representation, Hammett & Edison concludes that the quality and performance characteristics of the 550 MHz single cable system will be equal to or better than the characteristics of the dual cable 400 MHz system originally proposed.

From staff's viewpoint, the new system provides the same overall reliability, capacity, and meets our technical standards and, therefore, it is recommended that you approve the design change. However, such approval should be conditioned upon the stipulations as outlined in the Hammett & Edison report.

Recommended Technical Modifications.

According to the Commission's Engineer, the equipment for the 550 MHz system is still unavailable as a standard production model, but will be very soon. Therefore, to ensure cable is delivered to the Sacramento subscriber as soon as possible, staff is recommending that the cable company be permitted to:

--- Initially construct the system utilizing 450 MHz hardware spaced at a 550 MHz design.

--- Mandated to upgrade to a 550 MHz system when it is:

Determined to be appropriate, in the sole discretion of the Commission, unless the company can demonstrate that it is:

(a) Unreliable;

(b) Unavailable in production quantities;

(c) Upgrade equipment is incompatible with existing amplifier housings; or

(d) Alternative technology is available which provides the capacity of 550 MHz.

With respect to the I-Net, staff finds that the 3,000 mile reserved spectrum space (up to 20 MHz) on the 450 MHz subscriber system is acceptable for I-Net usage as long as:

--- Up to a 200 mile separate I-Net loop is constructed when over a 30-day period, 90% of the existing 20 MHz capacity on the Subscriber Network is utilized; or

--- When an available user contract cannot be accommodated with this I-Net allocation on the Subscriber Network; and

--- The five video I-Net channels obligated to the Educational Consortium are, at all times, made available.

Clarifications.

1. Front Yard/Parkway Construction.

The company has asked that it be allowed to reduce construction costs by building a portion of the 1,000 miles of underground cable installation in front yards or parkways outside the street area. This issue has been discussed with Public Works on numerous occasions. However, the cable company is now managed by new personnel who earnestly believe that this issue should be evaluated again.

In addition, the company believes it is possible to pre-approve certain areas for front yard construction. It is conceivable that Public Works may agree that some areas can be so pre-approved.

Staff suggests that the Commission recommend that Public Works meet with the cable franchisee to discuss whether certain underground construction areas can be approved for front yard construction. It should be noted that the Public Works Departments are not bound to grant the cable company's request.

2. Preconstruction Photography.

Preconstruction photography was raised by the company as being unduly burdensome. This provision requires that the cable company video tape or record photographically in some way every street prior to construction. Such evidence is utilized in the Hearing Officer complaint process to prove whether or not the homeowner has suffered damages as a result of cable construction. We have no objection to leaving this requirement optional as long as the burden of proof during the hearing process or subsequent lawsuits is shifted entirely to the franchisee. Therefore, staff would recommend such a change.

3. 24-Hour News Service.

Under the existing agreement, three and a half years from now or when there are 100,000 subscribers, the cable company must provide a 24-hour local news channel unless, after placing it on the system for one year, it is proven to be commercially unsuccessful. Because of the start-up cost, the company wishes to be permitted to test the marketplace and have such a determination made prior to hiring personnel and initiation of the 24-hour local news channel. As you will recall, staff's analysis of the original bid expressed concern that because of the amount of news available in the Sacramento market this news service was marginal and consented to such a test of its removal. We have no objections to undertaking the test earlier as long as it is done by one of the Big Eight accounting firms. Further, it is recommended that the resolution provision regulating the associated staffing requirements be deleted. It is my view that if the test shows the local news service is not commercially viable, we ought to have the option of reviewing this matter every three years thereafter throughout the 20-year term.

Should you agree to approve these modifications, I have been assured that construction will commence in approximately seven to ten days and that it will occur throughout the Imposed Service Area. We are very pleased with the progress made by E. W. Scripps, Scripps-Howard Broadcasting and Sacramento Cable Television to date and particularly want to express our appreciation to Mike Callaghan, Gil Champagne and Dick Davis for the many hours of work that were necessary to reach agreement on all these issues.

It is, therefore, my recommendation that:

- (1) The City Council adopt the attached resolution reflecting approval of all technical changes and clarification of the Franchise Documents reported in this document.

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- (2) Once approved by the Sacramento City Council and Board of Supervisors that the Commission adopt a similar resolution with the additional provision of recommending that the respective Public Works Departments meet with the cable franchisee to discuss front yard, underground construction.
- (3) Each of the legislative bodies recommend to the City Councils of Folsom and Galt that they not object during the next 30 days to the adoption of the Commission's amended resolution.



BOB SMITH, Executive Director
Sacramento Metropolitan Cable
Television Commission

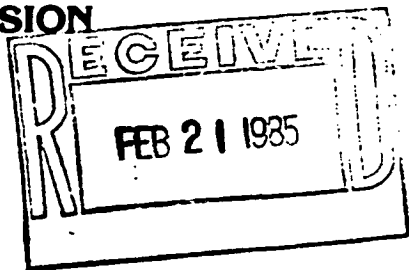
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Attachment

85-156

SACRAMENTO CABLE TELEVISION

4350 Pell Drive
Sacramento, CA 95838
(916) 927-2225



February 20, 1985

Bob Smith, Executive Director
Sacramento Metropolitan Cable Commission
700 "H" Street, Suite 2500
Sacramento, CA 95814

Dear Bob:

We are pleased with the progress which Scripps-Howard and the Commission have been able to achieve in bringing cable television to the residents of Sacramento City and County, Folsom and Galt. The recent signing of the trust grants is another indication of Scripps-Howard's commitment to the community and a major step in making cable a reality.

As you know, we have been conducting a comprehensive study of the design and operation of the Sacramento cable system. As a result of this study, we are proposing certain technical changes for evaluation and approval, as well as some clarifications in the franchise documents. With these in place, we have arranged our financing and are ready to begin construction in mid March.

1. Field-proven improvements in the bandwidth carrying capacity of coaxial cable have made it possible to carry as many as 62 video channels on a single 450 megahertz cable. A new technology is now planned for production that will expand the capacity to 77 channels at 550 megahertz. The system would be so designed and spaced that it would be capable of conversion to 550 megahertz when the need exists and 550 technology is proven reliable. These configurations will more than adequately support all services proposed in the franchise, as well as those that may be available in the foreseeable future.
2. This technical modification will make possible an alternate distribution technology. Originally, four essentially separate headends were proposed to serve the imposed area sequentially. The new method will place a single master headend in the downtown area, and distribute service via AML to a series of 7 hubs located throughout the service area. This modification will allow more areas to be served more quickly than we had proposed. For example, the City of Galt could receive service during the second year of construction.
3. The changes proposed above will enable us to reserve space on the single subscriber cable to provide

12-16 megahertz of space for institutional use throughout the entire 3,000 mile system, effectively multiplying the reach of the I-Net by a factor of 4. In addition, we would propose building a separate I-Net of up to 200 miles as need and commercial practicability dictate.

4. These changes in the design and construction sequence of the system will necessitate changes in the Census Tract Progression Tables and in the schedules for access training and the opening of access and local origination facilities. The entire system would, of course, still be completed well within a four year construction period.
5. The drop cable to be used in the system from the tap to the subscriber's home should be changed from quad shield cable to 60% braid cable. Our studies have shown that 60% braid cable is less costly, but will be equally as effective as quad shield in preventing ingress or egress in an environment like Sacramento's.

In addition to these technical changes, there are a few areas in the franchise where we would ask for clarification and confirmation:

1. The franchise calls for 24% of basic revenues to be spent on fees for the importation of distant signals. It is our understanding that this 24% applies to the \$2.00 rate, which equates to \$0.48 per subscriber per month throughout the franchise term.
2. The franchise gives us the right to use public easements. In underground construction areas, these easements generally run through the parkways. At the same time, the permitting authority requires us to build in the streets, a far more expensive method of placing underground cable and one not in normal use anywhere else in the country. We request the Commission to help us remove whatever impediments there are that prevent us from building in the parkways in areas where minimum disruption would be involved.
3. We have been photographing private parcels of property prior to construction. With the inspection and restoration standards we are working under, we see no need to continue this practice.
4. Our application called for a locally produced news program to be tested in the fifth year of the franchise, and to be

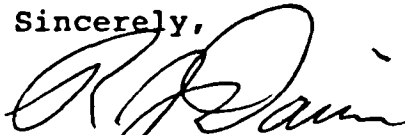
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Bob Smith
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continued only if commercially practicable. The test should be done in terms of an evaluation of need and potential commercial success in advance of the startup of the program.

5. As provided for in the Ordinance, the Commission needs to subordinate its claim on the assets of the system to those of our lenders.

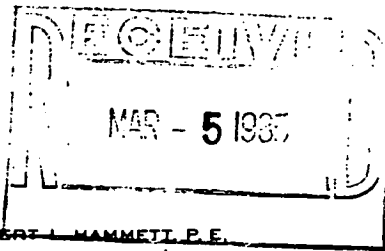
We are convinced that the requested technical changes and franchise clarifications are reasonable, technically and economically justifiable, and most importantly, will deliver the same high quality and quantity of services promised in the franchise. We look forward to your prompt evaluation and Commission approval so we can commence construction immediately.

Sincerely,



Richard J. Davis
General Manager

RJD:pg



HAMMETT & EDISON, INC.
CONSULTING ENGINEERS
RADIO AND TELEVISION

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March 4, 1985

FEDERAL EXPRESS

Mr. Robert E. Smith
Executive Director
Sacramento Metropolitan Cable
Television Commission
700 H Street, Room 2500
Sacramento, California 95801-1280

Dear Bob:

This letter will provide our recommendations in regard to the Sacramento Cable Television Alternative System Design Request of February 20, 1985. Subject to the stipulations and conditions which follow, it is our recommendation that the alternative system design for a 550 MHz single-cable system for Sacramento be approved.

550 MHz Plant Initially Activated To 450 MHz

Sacramento Cable Television (SCT) proposes a single-cable subscriber network with trunk and feeder amplifiers spaced for 550 MHz, but initially activated only to 450 MHz.

SCT has provided Hammett & Edison with amplifier specifications and calculations for various combinations of conventional push-pull, power-doubling, and feed-forward amplifier technologies. Based upon these technical specifications, and the stipulation by SCT that it will select as a minimum configuration a combination of active electronics meeting or exceeding a 46.7 dB carrier-to-noise ratio, a -57.8 dB cross-modulation ratio, and a -55.8 dB composite-triple-beat ratio at 550 MHz, the following technical performance is predicted at the most distant subscriber terminal:

	<u>At 450 MHz</u>	<u>At 550 MHz (when activated)</u>	<u>Resolution Minimum</u>
Carrier-to-noise ratio	47.9 dB	46.6 dB	45.4 dB
Cross-modulation ratio	-56.1	-55.9	-51.3
Composite-triple-beat ratio	-54.8	-54.0	-53.3

The above figures include the effects of the proposed AM microwave distribution system in the unfaded state. Because of the improved performance of power-doubling and feed-forward amplifiers, and the addition of two hubs to compensate for the reduced "reach" of a 550 MHz system compared to a 400 MHz system, it is possible to obtain an improvement in the net system performance.

Change to Master Hub Design

SCT now proposes a master hub design, utilizing AM microwave to distribute programs to six hubs. Five hubs would serve Sacramento City and County and Folsom, and a sixth hub would serve Galt. A single satellite receive-only facility would be installed at the downtown master hub, with microwave distribution of satellite signals to other hubs, as opposed to satellite receiving facilities at each hub. We have reviewed in detail the Hughes proposal for an 80-channel microwave system. We recommend accepting an all-AML microwave distribution system for the Sacramento system subject to the following conditions:

1. The Folsom and Galt paths must employ "space-combining" techniques to increase the effective transmit power, and must utilize at least 10-foot diameter transmit and receive antennas.
2. The Carmichael path, and any other path exceeding 10 miles, may be required to utilize space-combining techniques and 10-foot diameter transmit and receive antennas, if deemed necessary by Hammett & Edison.
3. A revised frequency coordination study must be performed, to correct for geographical coordinate errors in the initial study, and the apparent discrepancies in the frequency coordinator's data base for various broadcast microwave facilities in the 13 GHz band must be resolved to our satisfaction.
4. The frequency coordination study must successfully clear at least 53 six-MHz video channels plus spectrum for the FM broadcast band, and these channels be successfully licensed by the Federal Communications Commission. To this end, it is imperative that SCT immediately file for the cleared frequencies.
5. Each microwave receive site must employ hot-standby receiving facilities, with the appropriate switching capabilities. The master-hub must employ hot-standby equipment for those critical portions of the microwave transmitter which could cause a system-wide outage.
6. Tests must be conducted on the 20-mile Folsom path and the 24-mile Galt path for a summer period of up to three months, utilizing a strip chart recorder and the actual antennas which will be permanently installed, to verify that satisfactory path performance exists. In the event that

Hammett & Edison concludes that such tests reveal unacceptable reliability, SCT must agree to take mitigating measures, including installation of diversity receiving antennas, construction of a stand-alone headend or such other steps as deemed necessary by Hammett & Edison to insure satisfactory reliability.

Path Reliability Calculations

It is possible to estimate the reliability of a given microwave path if certain parameters are known. The model for estimating reliability due to multipath fading is based upon work by Barnett and Vigants of Bell Telephone Laboratories and considers frequency, path length, fade margin, intervening terrain, and climate. The fade margin is a measure by which the received signal, under normal (non-faded) conditions, exceeds the level necessary for a given signal-to-noise ratio. The model for estimating reliability due to rain attenuation is based upon the International Radio Consultative Committee (CCIR) model and Crane's model for effective path length. While these models for estimating reliability of a microwave system are in common usage, it should be realized that they are estimates.

For the Folsom microwave path a comparison has been made of the estimated reliability of the AM microwave system now proposed to the FM microwave system originally proposed, with the following results:

	<u>Original Proposal</u>	<u>Present Proposal</u>
Estimated reliability to 33.2 dB carrier-to-noise ratio ("signal outage" criteria)	>99.999% 0.01 hours/year 0.1 seconds/day	>99.999% 0.09 hours/year 0.9 seconds/day
Estimated reliability to 45.0 dB carrier-to-noise ratio	99.993% 0.65 hours/year 6.4 seconds/day	99.965% 3.3 hours 33 seconds/day
Estimated reliability to 45.4 dB carrier-to-noise ratio (Resolution minimum)	99.940% 5.3 hours/year 52 seconds/day	99.953% 4.1 hours/year 40 seconds/day

Some comments on the above numbers are appropriate. A fade margin of 40 dB or greater is considered desirable in a microwave system, and a system reliability figure of 99.99% is recommended by Electronics Industries Association Standard RS-250-B. While 99.99% reliability may appear to be extremely high, this still represents 53 minutes of outage per year, although the outage would not be expected to occur in a single 53-minute incident. Although the AM microwave system now proposed has an estimated reliability during deeper fades which is several times

worse than the originally-proposed FM microwave system, the AML system still exceeds the RS-250-B standard; it is our opinion that the difference is not significant. It is our judgment that, given the stipulations discussed above, the all-AML microwave distribution system is of comparable reliability to the microwave system originally proposed. Due to the use of high-power AML transmitters and space-combining techniques, the estimated reliability for the path to Galt improves over the original proposal.

We wish to clearly state that on the longer microwave paths, there is a possibility of a propagation anomaly referred to as "beam bending", which is not considered in the multipath and rain attenuation models. Beam bending may occur when the microwave signal passes through relatively stagnant air with different refractive indices, causing the beam to be refracted, or bent, from the expected path. Because there is no recognized model for predicting this phenomenon, we are conditioning our recommendation on the inclusion of path tests for Folsom and Galt, to be conducted at appropriate seasons.

Tower Required for Galt

Because of the increased length of the path to Galt, the proposed receive antenna height on the Galt water tower will be insufficient to provide at least one Fresnel zone clearance. Accordingly, the Galt hub will require a tower of sufficient height to place the receive antenna at least 105 feet above ground level. Greater height would be required in the event space diversity reception is deemed necessary. The requirement for a tower at Galt may make it impractical to serve Galt during the second year of construction, as was suggested by SCT. It should likewise be noted that, if space-diversity reception is deemed necessary for Folsom, construction of a moderate height tower at the Folsom hub would probably be required.

Adequate System Capacity at 450 MHz

The revised channel line-up submitted by SCT proposes carriage of 52 video channels. Three more channels should be considered as committed for Channel 29 in Sacramento and Channels 58 and 64 in Stockton, which hold FCC construction permits and would be entitled to mandatory carriage. Three additional video channels should be considered as reserved to meet the requirements for 20 MHz of institutional carriage on the subscriber network. Activation of the 550 MHz single-cable system to 450 MHz would provide a 60 video channel capability, and would accommodate the 52 immediately-needed video channels, the three channels reserved for future local television broadcast stations, and three channels for institutional use.

Capability of Microwave System to Support 550 MHz Cable Distribution System

The Compucon frequency coordination study dated February 25, 1985, indicated that 53 video channels plus the FM broadcast spectrum could be licensed in Sacramento. Although this study must be redone to correct multiple errors in site

coordinates and power levels, we consider it likely that Community Antenna Relay Service (CARS) microwave frequencies to support at least 53 video channels plus the FM broadcast band can ultimately be obtained. In the event additional microwave frequencies for future channel expansion cannot be obtained when needed, up to 16 microwave channels could be made available by the following techniques:

- A. Utilize direct off-air pick-up at each hub of all local television stations. This could free up to nine microwave channels.
- B. Utilize direct off-air pick-up at each hub of all FM broadcast signals. This could free up to three microwave channels.
- C. Locally generate at each hub cable channel 14 (AP Sports News), cable channel 15 (AP Sports Scores), cable channel 29 (Channel Directory), and cable channel 44 (Financial News/Stock Reports/Local Time and Weather). This could free up to four microwave channels.

Assuming that at least 53 microwave channels have been licensed, by adopting the above techniques it would be possible to support up to a 69-channel cable system. Thus, it appears that there are immediately available sufficient microwave frequencies to support a fully-loaded 450 MHz, 60-channel, cable system. When system activation to 550 MHz, or 77 channels, is triggered, between 61 and 77 microwave channels would be required. Present FCC Rules for CARS microwave stations allow up to 71 six-MHz channels. It is conceivable that up to 80 channels would be possible with an FCC waiver, although we consider it unlikely that a waiver for the top nine channels of the E-Group CARS frequencies could be obtained.

We thus conclude that the SCT proposal to utilize all AML microwave for downstream distribution has a theoretical capacity to support a 77 channel cable system. Whether or not at least 61 microwave channels could be licensed at some future date, when the full 550 MHz capacity is needed, would depend on the state of the microwave spectrum at that future date.

Possible interference from mobile users. The 13 GHz CARS band is shared with the Television Auxiliary Broadcast Service. Because this service includes mobile users, it is possible that occasional interference may be received. We do not consider this to be a significant threat, and FCC Rule Section 74.602(f) requires TV pick-up stations using the 13 GHz band to protect community antenna relay stations.

Hub Return Interconnect Capacity

SCT has indicated to us that the alternative system design will utilize 30 MHz supertrunk returns from each hub (including Galt). While this represents much less return interconnect capacity than originally proposed, it is our judgment that this will still provide sufficient capacity to support the foreseeable return interconnect needs for the subscriber network.

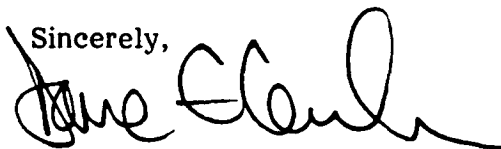
Amplifier Pedestals. Conversion to a single-cable design would allow use of smaller amplifier pedestals and enclosures, but could require up to 17 percent more such pedestals, depending upon the ultimate amplifier configuration adopted. An equipment substitution request would be required for the smaller pedestals.

Equipment Substitution Requests

The SCT alternative system design request will require equivalency findings for all active electronics, set-top converters, and taps and directional couplers. Based upon the preliminary data for the 450 MHz and 550 MHz Magnavox and Scientific Atlanta electronics supplied to us, we do not anticipate difficulty in reaching an equivalency finding for these items.

In regard to the SCT proposal to substitute 60% braid drop cable for the quad shield drop cable originally bid, SCT has informally indicated to us that the reference to a simple 60% braid drop cable in its February 20 alternative system design request was in error. The reference should have been to a 67% braid-plus-foil drop cable. Provided SCT agrees to utilize only messengered cable for aerial drops, we believe a finding of equivalency could be made. Upon receipt of a specific drop cable equivalency request, we will make a detailed evaluation.

Sincerely,



Dane E. Ericksen

ac

Touche Ross & Co.

March 4, 1985

Mr. Robert E. Smith
Executive Director
Sacramento Metropolitan
Cable Commission
700 H Street
Sacramento, California 95814

Dear Mr. Smith:

In response to your request, Touche Ross & Co. has analyzed financial aspects of the proposed changes in Sacramento Cable Television's system design. Based on this analysis, we have three principal conclusions:

- Sacramento Cable's new financial projections reflect lower basic penetration and lower revenue per subscriber (non-inflated) than the projections submitted with the franchise proposal. The downward revisions appear warranted, based on the experience of urban cable markets since the original proposal.
- Given the new projections, some financial relief is necessary for Sacramento Cable to achieve financial health. The proposed system design changes will contribute materially. However, the projected rate of return remains low in comparison to expectations in the industry.
- The proposed changes in system design are sound economically, because they provide significant capital savings for Sacramento Cable, without cutbacks in the range of programming and services available to subscribers.

Each of these points is discussed below.

Revised Projections

The financial projections submitted with the franchise proposal of Cablevision of Sacramento (Sacramento Cable's predecessor) indicated an average basic penetration of 58.5% over the life of the franchise, and an average monthly revenue per subscriber of about \$36. In our review of the franchise proposals in 1983, we indicated that Cablevision's assumptions appeared relatively optimistic. We suggested, for example, that if basic penetration only reached 50%, there would be pressure on Cablevision to raise rates to earn a more acceptable rate of return.

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Executive Director
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We stated in our 1983 report that it is difficult to project penetration and revenue accurately for a twenty-year period. This observation still applies. However, additional evidence has accumulated in the past eighteen months that underscores the relative optimism of Cablevision's original projections.

Cablevision's original proposal included a unique marketing approach of low basic rates and pay services packaging to induce multi-pay sales. Cablevision's Boston build was just underway at the time of the proposal, and the system's initial success was somewhat supportive of Cablevision's projections. The early experience in Boston showed 56% penetration and \$31 monthly revenue per subscriber.

However, the Boston system subsequently experienced a lower basic penetration rate and pay services disconnections (which have been typical of many urban systems), so that more recent results do not appear as favorable. The system reportedly had 43% basic penetration and about \$30 monthly revenue per subscriber in late 1984.

In fact, the marketing and financial results in almost all new-build urban cable systems have fallen well below the operator's franchise proposal projections. Exhibit 1 on the following page displays key market indicators for several urban systems. Many of these systems were still in the development phase and these data were generally not publicly available at the time of Cablevision's proposal in 1983.

The data in Exhibit 1 indicate the following:

- Basic penetration in many new-build urban systems is generally in the 30% to 45% range, with only a limited number of systems achieving 45% or better.
- The pay-to-basic ratio tends to stabilize under 2.0 in most systems (that is, an average of less than two pay services are sold for each basic subscriber).
- The average monthly revenue per subscriber is \$30 or slightly higher in some urban markets, but is under \$30 in most (at 1984 rates).

Sacramento Cable has now revised the original Cablevision projections downward to the following levels:

Mr. Robert E. Smith
 Executive Director
 Sacramento Metropolitan
 Cable Commission
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EXHIBIT 1

KEY MARKET INDICATORS ON RECENT URBAN CABLE BUILDS*

<u>Franchise</u>	<u>Build Status</u>	<u>Basic Penetration</u>	<u>Pay-to-Basic Ratio</u>	<u>Monthly Revenue per Subscriber</u>
Cincinnati (includes suburbs)	Nearly Complete	42%	1.8	\$30
Dallas	Nearly Complete	32%	1.8	\$31
Denver	Nearly Complete	33%	1.9	\$27
Minneapolis	Mid-Build	34%	1.8	\$29
Multnomah County (Portland suburbs)	Mid-Build	44%	1.6	\$26
Pittsburgh	Complete	46%	1.4	\$29
Portland	Complete	38%	1.3	\$27
Southwest Suburbs (Minneapolis)	Complete	45%	1.6	\$27
Tucson	Mid-Build	39%	2.0	\$30

*As of late 1984. The information was compiled from various published sources, supplemented by inquiries to selected regulatory and company officials. The data shown are rounded.

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Executive Director
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- Basic penetration at system maturity is projected at 48%.
- The projected pay-to-basic ratio is about 2.2 in the initial years, declining to about 1.7 later in the franchise term.
- The projected monthly revenue per subscriber is about \$31 (non-inflated). This projection reflects the lower pay-to-basic ratio, partially offset by somewhat higher initial rates than the original proposal.

These downward revisions appear warranted based on the recent experience of other urban cable systems.

Projected Financial Health

The financial success of a cable television operation is particularly sensitive to basic penetration, the pay-to-basic ratio, and the amount of monthly revenue per subscriber. Relatively small changes in any of these factors can have a significant impact on the profitability of a system.

One indicator of profitability is an internal rate of return measure which we described in our November, 1983 report on the franchise proposals. Cablevision's projected internal rate of return based on the proposal pro formas was about 17% for the twenty-year franchise term.*

Sacramento Cable's new projections imply a twenty-year internal rate of return of approximately 7%, if no cost inflation and no increases from the initial rates are assumed (consistent with the assumptions established for the franchise proposals). These projections include capital savings associated with the changes in system design. Without the associated savings the rate of return would be approximately 2% lower.

*All of the rate of return figures included in this report assume residual value of the system at the end of the franchise term.

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Sacramento Cable will have the ability to raise its rates in the future to improve profitability. The company's projections that are appended to this letter assume rate increases every two years. With these assumed increases (in excess of cost inflation), the projected return increases to about 13%. This projected return is comparatively low in relation to expectations in the industry. Sacramento Cable may, of course, earn a higher return if penetration should exceed the current projections.

The savings associated with the system redesign thus contribute materially to the potential financial health of the system, but will not create unreasonably high profits.

Economics of Changes in System Design

Cost savings associated with three changes in system design are reflected in the projections appended to this letter:

- A change from a dual 400 MHz system to a single 450 MHz cable, designed for an upgrade to a 550 MHz system. Sacramento Cable estimates about \$14.8 million savings associated with this change.
- Reconfiguration from four proposed headends to a single headend with AML distribution to seven hubs. Sacramento Cable estimates about \$2.2 million savings associated with this change.
- Elimination of the proposed 734 mile institutional network, with space on the residential network dedicated to institutional use, and future development of a smaller institutional network as commercial practicality dictates. Sacramento Cable estimates about \$3.5 million savings associated with this change.

Touche Ross & Co. cannot comment on the technical effects of these changes. From an economic standpoint, however, the changes generally preserve the range of programming and services originally proposed, and make business sense for the operator.

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Various industry studies published in the past eighteen months have indicated that dual cable is not necessary either to fulfill viewer preferences or to maximize revenues for the operator. The initial 450 MHz system will be able to accommodate the proposed broadcasting signals, a fully diverse spectrum of the satellite programming currently available, initial access and local origination requirements, and limited band-width for institutional uses. The capability to upgrade to 550 MHz provides the capacity necessary to accommodate new satellite services and expanded community or institutional uses in the future.

The revised plan for institutional services is also reasonable from an economic standpoint. While data on the profitability of the institutional services currently offered by cable operators nationally are difficult to obtain, it appears that there are very few currently profitable cable institutional networks. The common characteristic of the few systems that appear to be profitable is that they serve a dense concentration of high volume data users.

The most sound business approach to institutional network development is to construct the capacity when and where sufficient demand develops. Separate network capacity that is constructed well before it is appreciably used is uneconomical because of the accumulation of interest costs associated with construction financing. The revised plan provides capacity on the residential network for institutions who may wish to use the network in the near-term, while providing for longer term development of additional capacity as the demand develops.

In summary, the proposed changes in system design provide savings for Sacramento Cable that are reasonable in light of the current business outlook for cable in urban markets, while retaining the capacity necessary to serve residential and institutional needs.

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We appreciate this opportunity to assist the Commission to assess Sacramento Cable's request for franchise revisions. Should you have any questions regarding our report please contact Mr. Jay C. Smith at (503) 243-6333.

Very truly yours,

Touche Ross & Co.

APPENDIX

REVISED FINANCIAL PROJECTIONS OF
SACRAMENTO CABLE TELEVISION

(March 1, 1985)

APPENDIX

REVISED FINANCIAL PROJECTIONS OF SACRAMENTO CABLE TELEVISION

(March 1, 1985)

The projections in this appendix were compiled by Sacramento Cable Television. Touche Ross & Co. was not responsible for the compilation. Some of the assumptions included in the projections will not materialize and unanticipated events and circumstances may occur. Therefore, the actual results achieved during the projection period will vary from the projections.

Touche Ross & Co. did compare the revised projections to the projections included with Cablevision's franchise proposal. Several key assumptions have been revised from the original 1983 assumptions, including the following:

- Market factors
 - Homes passed has been decreased.
 - Basic penetration has been decreased.
 - Pay-to-basic penetration has been decreased.
 - Rates have been increased.
 - Revenue per subscriber has been decreased (non-inflated).
- Capital expenditures
 - Plant expenditure savings have been included to reflect the proposed changes in system design.
 - Converter unit costs have been increased.
- Operating expenses
 - Staffing has been held constant, effectively increasing the ratio of staff per subscriber (because fewer subscribers are assumed).
 - Unit costs for reconnections have been increased.
 - Unit costs for converter maintenance have been increased.
 - Sales commission rates have been increased.
 - Billing costs have been increased.
 - Bad debts allowance rate has been increased.

Sacramento Cable has presented supporting information for these revised assumptions, and we believe that the revisions are generally reasonable. However, to test the sensitivity of the revised projections to changes in cost assumptions from the 1983 assumptions, we applied a financial model we developed during the franchising process. This model retains Cablevision's original cost assumptions. We adjusted basic penetration, pay-to-basic penetration, rates, and plant expenditures to the revised levels, but left all other cost assumptions at the original level.

The results of this test indicate that the cost assumption revisions have relatively little impact on Sacramento Cable's projected rate of return. The primary factors causing the revised 1985 projection to be less profitable than the 1983 projections are the downward revisions in basic penetration, pay-to-basic penetration, and revenue per subscriber.

Sacramento Cable's revised projections appear on the following pages. These projections assume no cost inflation, but do assume rate increases every two years.

SACRAMENTO
FINANCIAL PRO FORMAS

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SCHEDULE G.1	SYSTEM SUBSCRIBER GROWTH (assumptions utilized for both original and revised franchise models)
SCHEDULE G.2	SYSTEM REVENUE DETAIL (assumptions utilized for both original and revised franchise models)
SCHEDULE G.3	SYSTEM OPERATING EXPENSE DETAIL (assumptions utilized for both original and revised franchise models)
SCHEDULE G.4	ANTICIPATED CAPITAL EXPENDITURES/ DEPRECIATION (original franchise model)
SCHEDULE G.4A	ANTICIPATED CAPITAL EXPENDITURES/ DEPRECIATION (revised franchise model)
SCHEDULE G.5	FINANCIAL STATEMENTS (original franchise model)
SCHEDULE G.5A	FINANCIAL STATEMENTS (revised franchise model)

SACRAMENTO - FINANCIAL PRO-FORMA
 6.1 ANTICIPATED SYSTEM GROWTH

DESCRIPTION	YR. 1	YR. 2	YR. 3	YR. 4	YR. 5	YR. 6	YR. 7	YR. 8	YR. 9	YR. 10	YR. 11	YR. 12	YR. 13	YR. 14	YR. 15	YR. 16	YR. 17	YR. 18	YR. 19	YR. 20
HOUSEHOLDS	325100	331100	337100	343100	349100	355100	361100	367100	373100	379100	385100	391100	397100	403100	409100	415100	421100	427100	433100	439100
HOMES PASSED	54325	143485	222730	312120	320946	337538	343538	349538	355538	361538	367538	373538	379538	385538	391538	397538	403538	409538	415538	421538
ENDING SUBSCRIBERS	23615	64811	102717	146678	157462	162018	164898	167778	170658	173538	176418	179298	182178	185058	187938	190818	193698	196578	199458	202338
AVG. SUBSCRIBERS	11808	44213	83764	124698	152078	159740	163458	166338	169218	172098	174978	177858	180738	183618	186498	189378	192258	195138	198018	200898

AVG. SUBS DETAIL																				

BASIC ONLY	945	3537	6701	9976	7604	7987	8173	8317	8461	8605	8749	8893	9037	9181	9325	9469	9613	9757	9901	10045
FAMILY ONLY	945	3537	8376	12470	19769	20766	22864	23287	25383	25815	26247	26679	27111	27543	27975	28407	28839	29271	29703	30135
FAMILY - 1 PAY	3306	12380	23454	34915	56266	59104	67018	68199	69379	70560	71741	72922	74103	75283	76464	77645	78826	80007	81187	82368
FAMILY - 2 PAY	590	2211	4188	6235	3041	3195	3269	3327	3384	3442	3500	3557	3615	3672	3730	3788	3845	3903	3960	4018
PACKAGE 1	4723	17485	33506	49879	56266	59104	55576	56553	55842	56792	57743	58693	59644	60594	61544	62495	63445	64396	65346	66296
PACKAGE 2	708	2633	4188	6235	6083	6390	4904	4990	5077	5163	5249	5336	5422	5509	5595	5681	5768	5854	5941	6027
PACKAGE 3	590	2211	3351	4988	3041	3195	1635	1663	1692	1721	1750	1779	1807	1836	1865	1894	1923	1951	1980	2009
GUIDES	1181	4421	8376	12470	15207	15974	16346	16634	16922	17210	17498	17786	18074	18362	18650	18938	19226	19514	19802	20090
F.H.	59	221	419	623	760	799	817	832	846	860	875	889	904	918	932	947	961	976	990	1004
SECONDARY SETS	3547	13264	25129	37409	39538	41532	42499	43248	43997	44745	45494	46243	46992	47741	48490	49238	49987	50736	51485	52233
RENTIES	2066	7737	14659	21822	26612	27955	29605	29109	29613	30117	30621	31125	31629	32133	32637	33141	33645	34149	34653	35157
PAY PER VIEW	0	0	8376	12470	15207	15974	16346	16634	16922	17210	17498	17786	18074	18362	18650	18938	19226	19514	19802	20090

% OF PENETRATION																				
END SUBS/HOMES PASSED	43.5%	45.2%	46.1%	47.0%	48.0%	48.0%	48.0%	48.0%	48.0%	48.0%	48.0%	48.0%	48.0%	48.0%	48.0%	48.0%	48.0%	48.0%	48.0%	48.0%
AVG SUBS/HOMES PASSED	21.7%	30.8%	37.6%	40.0%	46.4%	47.3%	47.6%	47.6%	47.6%	47.6%	47.6%	47.6%	47.6%	47.6%	47.6%	47.6%	47.6%	47.6%	47.6%	47.6%
AVG PAY/HOMES PASSED	18.3%	25.9%	30.8%	32.8%	38.0%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%
AVG PAY/AVG SUBS	84.0%	84.0%	82.0%	82.0%	82.0%	82.0%	81.0%	81.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%

% OF SERVICE LEVELS																				
BASIC ONLY	8.0%	8.0%	8.0%	8.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
FAMILY ONLY	8.0%	8.0%	10.0%	10.0%	13.0%	13.0%	14.0%	14.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
FAMILY - 1 PAY	28.0%	28.0%	28.0%	28.0%	37.0%	37.0%	41.0%	41.0%	41.0%	41.0%	41.0%	41.0%	41.0%	41.0%	41.0%	41.0%	41.0%	41.0%	41.0%	41.0%
FAMILY - 2 PAY	5.0%	5.0%	5.0%	5.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
PACKAGE 1	40.0%	40.0%	40.0%	40.0%	37.0%	37.0%	34.0%	34.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%
PACKAGE 2	6.0%	6.0%	5.0%	5.0%	4.0%	4.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
PACKAGE 3	5.0%	5.0%	4.0%	4.0%	2.0%	2.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
GUIDES	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
F.H.	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
SECONDARY SETS	30.0%	30.0%	30.0%	30.0%	26.0%	26.0%	26.0%	26.0%	26.0%	26.0%	26.0%	26.0%	26.0%	26.0%	26.0%	26.0%	26.0%	26.0%	26.0%	26.0%
RENTIES	17.5%	17.5%	17.5%	17.5%	17.5%	17.5%	17.5%	17.5%	17.5%	17.5%	17.5%	17.5%	17.5%	17.5%	17.5%	17.5%	17.5%	17.5%	17.5%	17.5%
PAY PER VIEW	-	-	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%

Source: Sacramento Cable Television

SACRAMENTO - FINANCIAL PRO FORMA
6.2 ANTICIPATED REVENUE DETAIL

DESCRIPTION	YR. 1	YR. 2	YR. 3	YR. 4	YR. 5	YR. 6	YR. 7	YR. 8	YR. 9	YR. 10	YR. 11	YR. 12	YR. 13	YR. 14	YR. 15	YR. 16	YR. 17	YR. 18	YR. 19	YR. 20	TOTAL
REVENUE PER SUB (MONTH)																					
BASIC ONLY	2.0	2.0	4.0	4.0	6.0	6.0	8.0	8.0	10.0	10.0	12.0	12.0	12.0	14.0	14.0	14.0	16.0	16.0	16.0	16.0	
FAMILY ONLY	10.0	10.0	12.0	12.0	14.0	14.0	16.0	16.0	18.0	18.0	20.0	20.0	20.0	22.0	22.0	22.0	24.0	24.0	24.0	24.0	
FAMILY - 1 PAY	21.0	21.0	23.0	23.0	27.0	27.0	30.0	30.0	32.0	32.0	35.0	35.0	35.0	37.0	37.0	37.0	40.0	40.0	40.0	40.0	
FAMILY - 2 PAY	32.0	32.0	34.0	34.0	40.0	40.0	44.0	44.0	46.0	46.0	50.0	50.0	50.0	53.0	53.0	53.0	56.0	56.0	56.0	56.0	
PACKAGE 1	29.5	29.5	31.5	31.5	33.5	33.5	35.5	35.5	37.5	37.5	39.5	39.5	39.5	41.5	41.5	41.5	43.5	43.5	43.5	43.5	
PACKAGE 2	39.5	39.5	41.5	41.5	43.5	43.5	45.5	45.5	47.5	47.5	49.5	49.5	49.5	51.5	51.5	51.5	53.5	53.5	53.5	53.5	
PACKAGE 3	48.5	48.5	50.5	50.5	52.5	52.5	54.5	54.5	56.5	56.5	58.5	58.5	58.5	60.5	60.5	60.5	62.5	62.5	62.5	62.5	
GUIDES	1.0	1.0	1.2	1.2	1.5	1.5	1.5	1.5	1.5	1.5	1.8	1.8	1.8	1.8	1.8	1.8	2.0	2.0	2.0	2.0	
F.M.	2.0	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.5	3.5	3.5	3.5	3.5	3.5	4.0	4.0	4.0	4.0	
SECONDARY SETS	6/10	6/10	6/10	6/10	8/12	8/12	8/12	8/12	8/12	8/12	8/12	8/12	8/12	10/14	10/14	10/14	10/14	10/14	10/14	10/14	
RENTIES	3.0	3.0	3.0	3.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
PAY PER VIEW : EVENTS	-	-	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	
INSTALLATION	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	-	-	-	-	-	-	-	-	-	-	-	-	
ADVERTISING	-	-	2.7	5.2	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	
REVENUE - ANNUAL																					
(000'S OMIT)																					
BASIC ONLY	18	85	322	479	547	575	785	798	1015	1033	1260	1281	1301	1542	1567	1591	1846	1873	1901	1929	21748
FAMILY ONLY	90	474	1206	1796	3321	3489	4394	4471	5483	5576	6299	6403	6507	7271	7385	7499	8306	8430	8554	8678	105582
FAMILY - 1 PAY	661	3120	6473	9637	18230	19150	24126	24551	26442	27095	30131	30627	31123	33426	33950	34474	37836	38403	38970	39537	508162
FAMILY - 2 PAY	180	849	1709	2544	4460	4534	4726	4757	4868	4900	5099	5134	5169	5336	5372	5409	5594	5622	5661	5700	39623
PACKAGE 1	1327	6261	12665	18854	22619	23960	23675	24092	25129	25557	27378	27821	28271	30176	30649	31122	33118	33614	34111	34606	494997
PACKAGE 2	267	1257	2086	3104	3175	3335	2677	2725	2893	2943	3118	3169	3221	3404	3457	3511	3703	3758	3814	3869	59486
PACKAGE 3	273	1287	2030	3023	1916	2013	1069	1088	1147	1167	1228	1248	1269	1333	1354	1375	1442	1464	1485	1507	28718
GUIDES	11	53	121	180	274	288	294	299	305	310	378	384	390	397	402	409	461	468	475	482	6381
F.M.	1	5	10	15	27	29	30	30	31	31	37	37	38	39	39	40	46	47	48	48	626
SECONDARY SETS	337	1433	2714	4040	4745	4984	5100	5190	5280	5369	5459	5549	5639	6302	6400	6499	6598	6697	6796	6895	102926
RENTIES	60	279	528	786	1277	1342	1373	1397	1777	1807	1837	1868	1898	2314	2350	2386	2422	2459	2495	2531	33186
PAY PER VIEW	0	0	314	1122	1369	1438	1471	1497	1523	1549	1575	1601	1627	1653	1678	1704	1730	1756	1782	1808	27197
INSTALLATION	671	1608	2196	2487	736	716	329	279	0	0	0	0	0	0	0	0	0	0	0	0	9022
ADVERTISING	0	0	226	648	1141	1290	1351	1388	1357	1366	1312	1333	1355	1377	1399	1420	1442	1464	1485	1507	22049
DIMER	-	-	50	135	250	400	400	450	450	450	450	450	450	450	450	450	450	450	450	450	7085
TOTAL REVENUE	3896	16661	32650	48850	61087	64551	68799	70612	74879	76153	82553	83905	85258	92020	93452	94889	101994	103505	105027	106547	1466688

Source: Sacramento Cable Television

SACRAMENTO - FINANCIAL PRO-FORMA
6.3 OPERATING EXPENSES

NOTE: COSTS REPRESENT FRANCHISE APPLICATION UNLESS FOOTNOTED (*)

DESCRIPTION	YR. 1	YR. 2	YR. 3	YR. 4	YR. 5	YR. 6	YR. 7	YR. 8	YR. 9	YR. 10	YR. 11	YR. 12	YR. 13	YR. 14	YR. 15	YR. 16	YR. 17	YR. 18	YR. 19	YR. 20	TOTAL
CATEGORY-PLANT																					
(000'S OMIT)																					
SALARIES	376	955	1593	2238	3600	3817	3907	3996	4086	4176	4266	4355	4445	4535	4626	4714	4804	4894	4983	5073	75447
OVERTIME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
EMPLOYEE BENEFITS	98	248	414	582	938	992	1016	1039	1062	1086	1109	1133	1156	1179	1202	1226	1249	1272	1296	1319	19616
MAINT. DISTRIBUTION	51	181	338	494	580	595	611	626	641	656	671	687	702	717	732	747	763	779	793	808	12172
DROP MATERIALS	-	-	-	-	843	927	951	976	1000	1024	1049	1073	1097	1121	1146	1170	1194	1219	1243	1267	17300
MAINT. CONVERTERS	-	28	154	267	396	436	448	459	471	482	493	505	516	528	539	551	562	573	586	596	8590
POLE & SITE RENT	8	96	193	289	338	340	341	343	345	346	348	349	351	353	354	356	357	359	361	362	6189
MAINT. H.E. MICROWAVE	10	15	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	385
SYSTEM POWER	52	345	682	999	1173	1203	1234	1265	1296	1326	1357	1388	1418	1449	1480	1511	1541	1572	1603	1634	24548
SHOP UTILITIES	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	720
VEHICLE EXPENSE	100	277	454	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	11541
MAINT. COMPUTER	29	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	1131
RENT	48	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	1416
PROFESSIONAL SERV.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
OTHER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
TOTAL PLANT	808	2331	4014	5685	8492	9126	9324	9520	9717	9912	10109	10306	10501	10698	10895	11091	11286	11484	11681	11875	179055

Source: Sacramento Cable Television

SACRAMENTO - FINANCIAL PRO-FORMA
6.3 OPERATING EXPENSES

NOTE: COSTS REPRESENT FRANCHISE APPLICATION UNLESS FOOTNOTED (1)

DESCRIPTION	YR. 1	YR. 2	YR. 3	YR. 4	YR. 5	YR. 6	YR. 7	YR. 8	YR. 9	YR. 10	YR. 11	YR. 12	YR. 13	YR. 14	YR. 15	YR. 16	YR. 17	YR. 18	YR. 19	YR. 20	TOTAL	
CATEGORY-ORINATION																						
(000'S OMIT)																						
SALARIES	1765	1765	1765	1765	1765	1765	1765	1765	1765	1765	1765	1765	1765	1765	1765	1765	1765	1765	1765	1765	35300	
OVERTIME	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	600	
EMPLOYEE BENEFITS	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188	3760	
RENT	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	1000	
MAINT-EQUIP.	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	500	
VEHICLE-ETP.	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	620	
COMMON CARRIER	12	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	468	
LOCAL O MATERIALS:																						
TAPE STOCK	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	600	
MISC. SUPPLIES	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	400	
SATELLITE SIGNALS:																						
INDEPENDENTS																						
OTHER	0	81	345	854	1271	1916	2912	2451	2493	2530	2581	2439	2988	3836	3084	3133	3749	3807	3863	3920	3978	51041
PAY CABLE	0	822	3515	6889	10307	12889	13620	14517	14723	15779	16068	17419	17704	17989	19416	19718	20022	21521	21840	22116	22421	309355
PROGRAM MATERIAL:																						
FILM SERVICE																						
OTHER-NON-AUTOM.	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
AUTO. PRDG.	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	2500	
PROMOTION LOGACCESS	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	600	
DIRECT GRANT-COMM.	500	531	1005	1496	1825	1916	1961	1996	2030	2065	2099	2134	2168	2203	2238	2272	2307	2342	2376	2411	37875	
DIRECT GRANT-INSTIT.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
OTHER:																						
PRDG. ACQUIS.	-	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	1900	
MISCELL.	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	2800	
GUIDES	0	51	191	342	538	821	863	883	898	913	929	1260	1281	1301	1322	1342	1704	1730	1756	1792	1928	21765
STAFF SUPPORT-COMM.	35	44	251	374	456	479	490	499	508	516	525	534	542	551	559	568	577	585	594	603	9290	
TOTAL ORINATION	3935	7184	11919	16544	20463	21448	22860	23169	24326	24717	26000	27199	27594	29134	29548	30873	32500	32944	33356	33859	480374	

* REFLECTS SUBSCRIBER REVENUE ADJUSTMENTS

Source: Sacramento Cable Television

SACRAMENTO - FINANCIAL PRO-FORMA
6.3 OPERATING EXPENSES

NOTE: COSTS REPRESENT FRANCHISE APPLICATION UNLESS FOOTNOTED (1)

DESCRIPTION	YR. 1	YR. 2	YR. 3	YR. 4	YR. 5	YR. 6	YR. 7	YR. 8	YR. 9	YR. 10	YR. 11	YR. 12	YR. 13	YR. 14	YR. 15	YR. 16	YR. 17	YR. 18	YR. 19	YR. 20	TOTAL	
CATEGORY-6.5.A.																						
(000'S OMIT)																						
SALARIES	450	749	1076	1344	1565	1632	1662	1692	1722	1752	1782	1812	1842	1872	1902	1932	1962	1992	2022	2059	32779	
OVERTIME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
EMPLOYEE BENEFITS	101	165	226	296	344	359	366	372	379	386	392	399	403	412	419	425	432	438	445	452	7211	
LIGHT/HEAT/POWER	60	135	275	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	5520	
VEHICLE EXP.	12	27	46	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	1172	
RENT	120	270	450	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	11040	
TRAVEL/ENT.	10	30	40	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	930	
CONTRIB./UNES/SUBS	5	12	20	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	496	
PROFESS. SERV.	10	23	38	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	921	
STATIONERY/SUPPLIES	5	10	20	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	545	
BILLING/MAILING	0	50	212	402	599	1095	1150	1177	1596	1624	1652	1679	1707	1735	1762	1790	1818	1845	1873	1900	1928	27594
POSTAGE/FREIGHT	11	24	40	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	976	
ADVERTISE/PROMOTION	465	1110	1721	2331	1520	1250	1277	1304	1331	1358	1385	1412	1439	1466	1493	1520	1547	1574	1601	1628	28740	
TELEPHONE	80	180	300	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	7360	
OFFICE EXP.	5	10	20	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	545	
INS./BONDING	18	60	67	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	1655	
BAD DEBTS	0	136	588	1143	1709	2158	2259	2408	2450	2621	2665	2889	2937	3984	3221	3271	3321	3370	3423	3476	3729	52338
START-UP EXP.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
PROPERTY TAXES	81	285	533	780	916	940	964	988	1012	1036	1060	1084	1108	1132	1156	1180	1204	1228	1256	1276	19219	
FRANCHISE FEES	0	195	833	1633	2443	3054	3228	3440	3501	3744	3808	4128	4195	4263	4401	4473	4744	5100	5175	5251	5327	73336
COPYRIGHT FEES	0	60	254	352	523	638	671	687	699	711	723	735	747	759	771	783	795	807	820	832	844	13211
SERVICES PURCHASED	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	300	
RENT. FEES	0	132	563	1103	1650	2063	2180	2324	2365	2529	2572	2788	2834	2880	3108	3156	3205	3445	3496	3547	3599	49539
SALES COMMISSION	0	622	1124	1483	1860	583	472	483	494	504	515	526	537	548	558	569	580	591	602	615	620	13886
TRAINING	40	40	40	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	545	
MISCELL.	250	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	9750	
TOTAL 6.5.A.	2226	7184	11428	15751	16140	16357	17004	17677	18393	18683	19580	19880	21177	21119	21428	21736	22119	23037	23361	23678	359580	

* REFLECTS SUBSCRIBER, REVENUE ADJUSTMENTS

Source: Sacramento Cable Television

SACRAMENTO - FINANCIAL PRO-FORMA

NOTE: COSTS REPRESENT FRANCHISE APPLICATION UNLESS FOOTNOTED (*)

6.4 ANTICIPATED CAPITAL EXPENDITURES - ORIGINAL FRANCHISE MODEL

DESCRIPTION	YR. 1	YR. 2	YR. 3	YR. 4	YR. 5	YR. 6	YR. 7	YR. 8	YR. 9	YR. 10	YR. 11	YR. 12	YR. 13	YR. 14	YR. 15	YR. 16	YR. 17	YR. 18	YR. 19	YR. 20	TOTAL

(000'S OMIT)																					
ANTENNAS/TOWERS	209	184									209	184									786
REGIONAL INTERCON.		150										150									300
HEAD END	4000	2350	650								4000	2300	650								13950
EARTH STATION	300	700									300	700									2000
DISTRIBUTION	19905	26274	26291	26285	2707	2707	2707	2707	2707	2707	2792	2847	2864	2858	2707	2707	2707	2707	2707	2707	142600
DROPS	1800	2822	4100	3964	960	900	900	900	900	900	850	850	850	850	850	850	850	850	850	850	26646
CONVERTERS	175	297	349	396	122	169	186	204	225	247	255	250	241	225	235	242	248	252	255	255	4828
BUILDING																					0
LEASEHOLD IMP.																					0
FURN. & FIXTURES	465	465				200	200	200	200	130		200	200	200	200	130		200	200	200	3390
LAND																					0
LOCAL O EQUIP.	597	250	250								597	250	250								2194
TEST EQUIP./INVENT.	150	150	30	30							150	150	60								720
VEHICLES																					0
PRE-OP ENG.	80	40									80	40									240
PAY CABLE RELATED *	3600	4175	5400	4600	4000	3900	3900	3900	3900	3900	3900	3900	3900	3900	3900	3900	3900	3900	3900	3900	80275
CAPITALIZED OVERHEAD																					0
CAPITALIZED FRANCHISE	1050																				1050
CAPITALIZED GRANTS	321	550	550	600							321	550	550	600							4042

TOTAL CAPITAL	32652	38407	37620	35875	7789	7876	7893	7911	7932	7884	13454	12371	9565	8633	7892	7829	7705	7909	7912	7912	283021

CUM. CAPITAL	32652	71059	108679	144554	152343	160219	168112	176023	183955	191839	205293	217664	227229	235862	243754	251583	259288	267197	275109	283021	

* REFLECTS CAPITAL ADJUSTMENTS

Source: Sacramento Cable Television

SACRAMENTO - FINANCIAL PRO-FORMA

NOTE: COSTS REPRESENT FRANCHISE APPLICATION UNLESS FOOTNOTED (*)

6.4A ANTICIPATED CAPITAL EXPENDITURES - REVISED FRANCHISE MODEL

DESCRIPTION	YR. 1	YR. 2	YR. 3	YR. 4	YR. 5	YR. 6	YR. 7	YR. 8	YR. 9	YR. 10	YR. 11	YR. 12	YR. 13	YR. 14	YR. 15	YR. 16	YR. 17	YR. 18	YR. 19	YR. 20	TOTAL	
(000'S OMIT)																						
ANTENNAS/TOWERS	209	184									209	184									786	
REGIONAL INTERCON.		150											150									300
HEAD END *	2925	1275	625								4000	2300	650								11775	
EARTH STATION	300	700									300	700									2000	
DISTRIBUTION *	21368	23859	23320	11883	2707	2707	2707	2707	2707	2707	2792	2847	2864	2858	2707	2707	2707	2707	2707	2707	124275	
DROPS *	1800	2822	4100	3964	960	900	900	900	900	900	850	850	850	850	850	850	850	850	850	850	26646	
CONVERTERS	175	297	349	396	122	169	186	204	225	247	255	250	241	225	235	242	248	252	255	255	4828	
BUILDING																					0	
LEASEHOLD IMP.																					0	
FURN. & FIXTURES	465	465				200	200	200	200	130		200	200	200	200	130		200	200	200	3390	
LAND																					0	
LOCAL O EQUIP.	597	250	250								597	250	250								2194	
TEST EQUIP./INVENT.	150	150	30	30							150	150	60								720	
VEHICLES																					0	
PRE-OP ENG.	80	40									80	40									240	
PAY CABLE RELATED *	3600	4175	5400	4600	4000	3900	3900	3900	3900	3900	3900	3900	3900	3900	3900	3900	3900	3900	3900	3900	80275	
CAPITALIZED OVERHEAD																					0	
CAPITALIZED FRANCHISE	1050																				1050	
CAPITALIZED GRANTS	321	550	550	600							321	550	550	600							4042	
TOTAL CAPITAL	33040	34917	34624	21473	7789	7876	7893	7911	7932	7884	13454	12371	9565	8633	7892	7829	7705	7909	7912	7912	262521	
CUM. CAPITAL	33040	67957	102581	124054	131843	139719	147612	155523	163455	171339	184793	197164	206729	215362	223254	231083	238788	246697	254609	262521		

* REFLECTS CAPITAL ADJUSTMENTS

Source: Sacramento Cable Television

SACRAMENTO - FINANCIAL PRO-FORMA
 6.5 FINANCIAL STATEMENTS - ORIGINAL FRANCHISE MODEL

DESCRIPTION	YR. 1	YR. 2	YR. 3	YR. 4	YR. 5	YR. 6	YR. 7	YR. 8	YR. 9	YR. 10	YR. 11	YR. 12	YR. 13	YR. 14	YR. 15	YR. 16	YR. 17	YR. 18	YR. 19	YR. 20	TOTAL
INCOME STATEMENT																					
(000'S OMIT)																					
REVENUE	3896	16661	32650	48850	61087	64551	68799	70012	74879	76153	82553	83905	85258	92020	93452	94889	101994	103505	105027	106547	1466688
OPERATING EXP. (NET)	7969	16699	27361	37980	45297	46931	49188	50366	52436	53312	56489	57385	58272	60951	61871	63700	66505	67465	68398	69412	1017987
OPERATING INCOME	-4073	-38	5289	10870	15790	17620	19611	19646	22443	22841	26064	26520	26986	31069	31581	31189	35489	36040	36629	37135	448701
DEPRECIATION	1482	4671	8104	11424	13571	14298	14584	14677	14645	14722	14907	15056	15097	15043	15086	14543	13096	11476	9835	8969	245286
INTEREST (132)	1697	5090	8375	11384	12999	13330	13537	13685	13714	13575	13519	13515	13200	12260	10759	8984	6683	3726	1067	-	191099
PRE-TAX INCOME	-7252	-9799	-11190	-11938	-10780	-10000	-8510	-8716	-5916	-5456	-2362	-2051	-1311	3766	5736	7662	15710	20038	25727	28166	12316
INCOME TAX	3336	4508	5147	5491	4959	4604	3915	4009	2721	2510	1087	943	603	-1732	-2639	-3525	-7227	-9585	-11834	-12956	-5665
ITC	2612	3073	3010	2870	623	630	631	633	635	631	1076	990	765	691	631	626	616	633	633	633	22642
NET INCOME	-1304	-2218	-3033	-3577	-5198	-4774	-3964	-4074	-2560	-2315	-199	-118	57	2725	3728	4763	9099	11886	14526	15843	29293
CASH FLOW STATEMENT																					
CASH FLOW	-4073	-38	5289	10870	15790	17620	19611	19646	22443	22841	26064	26520	26986	31069	31581	31189	35489	36040	36629	37135	448701
INTEREST	1697	5090	8375	11384	12999	13330	13537	13685	13714	13575	13519	13515	13200	12260	10759	8984	6683	3726	1067	-	191099
CAPITAL EXPEND.	32652	38407	37620	35875	7789	7876	7893	7911	7932	7884	13454	12371	9565	8633	7892	7829	7705	7909	7912	7912	283021
OTHER	5000																				5000
ENDING CASH	-43422	-43535	-40706	-36389	-4998	-3586	-1819	-1950	797	1382	-909	634	4221	10176	12930	14376	21101	24405	27650	29223	-30419
EQUITY CONTRIB.	17400	17400	16300	14560	2000	1400	720	800	-	-	360	-	-	-	-	-	-	-	-	-	30440
CUMUL. EQUITY	17400	34800	51100	65660	67660	69060	69780	70580	70580	70580	70940	70940	70940	70940	70940	70940	70940	70940	59640	30440	
DEBT	26100	26100	24450	21840	3000	2100	1080	1200	-750	-1400	540	-600	-4250	-10200	-12900	-14400	-21000	-24500	-16410	-	0
CUMUL. DEBT	26100	52200	76650	98490	101490	103590	104670	105870	105120	103720	104260	103660	99410	89210	76310	61910	40910	16410	0	0	

Source: Sacramento Cable Television

SACRAMENTO - FINANCIAL PRO-FORMA
 6.5A FINANCIAL STATEMENTS - REVISED FRANCHISE MODEL

DESCRIPTION	YR. 1	YR. 2	YR. 3	YR. 4	YR. 5	YR. 6	YR. 7	YR. 8	YR. 9	YR. 10	YR. 11	YR. 12	YR. 13	YR. 14	YR. 15	YR. 16	YR. 17	YR. 18	YR. 19	YR. 20	TOTAL
INCOME STATEMENT																					
(000'S OMIT)																					
REVENUE	3896	16661	32650	48850	61087	64551	68799	70012	74879	76153	82553	83905	85258	92020	93452	94889	101994	103505	105027	106547	1466688
OPERATING EXP. (NET)	7969	16699	27361	37980	45297	46931	49188	50366	52436	53312	56489	57385	58272	60951	61871	63700	66505	67465	68398	69412	1017987
OPERATING INCOME	-4073	-38	5289	10870	15790	17620	19611	19646	22443	22841	26064	26520	26986	31069	31581	31189	35489	36040	36629	37135	448701
DEPRECIATION	1477	4527	7725	10465	12131	12859	13145	13238	13206	13282	13522	13778	13874	13821	13864	13272	11858	10417	9355	8969	224785
INTEREST (13%)	1712	4984	7999	10273	11209	11392	11439	11400	11159	10665	10236	9794	8956	7428	5257	2716	685	-	-	-	137304
PRE-TAX INCOME	-7262	-9549	-10435	-9868	-7550	-6631	-4973	-4992	-1922	-1106	2306	2948	4156	9820	12460	15201	22946	25623	27274	28166	86612
INCOME TAX	3341	4393	4800	4539	3473	3050	2288	2296	884	509	-1061	-1356	-1912	-4517	-5732	-6992	-10555	-11787	-12546	-12956	-39841
ITC	2643	2793	2770	1718	623	630	631	633	635	631	1076	990	765	691	631	626	616	633	633	633	21001
NET INCOME	-1278	-2363	-2865	-3611	-3454	-2951	-2054	-2063	-403	34	2321	2582	3009	5994	7359	8035	13007	14469	15361	15843	67772
CASH FLOW STATEMENT																					
CASH FLOW	-4073	-38	5289	10870	15790	17620	19611	19646	22443	22841	26064	26520	26986	31069	31581	31189	35489	36040	36629	37135	448701
INTEREST	1712	4984	7999	10273	11209	11392	11439	11400	11159	10665	10236	9794	8956	7428	5257	2716	685	0	0	0	137304
CAPITAL EXPEND.	33040	34917	34624	21473	7789	7876	7893	7911	7932	7884	13454	12371	9565	8633	7892	7829	7705	7909	7912	7912	262521
OTHER	5000																				5000
ENDING CASH	-43825	-39939	-37334	-20876	-3208	-1648	279	335	3352	4292	2374	4355	8465	15008	18432	20644	27099	28131	28717	29223	43876
EQUITY CONTRIB.	17560	16000	14920	8400	1200	680	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUMUL. EQUITY	17560	33560	48480	56880	58080	58760	58760	58760	58760	58760	58760	58760	58760	58760	58760	58760	42260	14160	-14640	-43840	
DEBT	26340	24000	22380	12600	1800	1020	-300	-300	-3400	-4200	-2400	-4400	-8500	-15000	-18400	-20700	-10540	-	-	-	0
CUMUL. DEBT	26340	50340	72720	85320	87120	88140	87840	87540	84140	79940	77540	73140	64640	49640	31240	10540	0	0	0	0	

Source: Sacramento Cable Television

RESOLUTION NO.

ADOPTED BY THE SACRAMENTO CITY COUNCIL ON DATE OF

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SACRAMENTO APPROVING AN ALTERNATE SYSTEM DESIGN FOR SACRAMENTO METROPOLITAN CABLE TELEVISION SYSTEM SUBJECT TO CERTAIN CONDITIONS AND MAKING CERTAIN CHANGES IN THE CABLE FRANCHISE RESOLUTION.

WHEREAS, this COUNCIL adopted its Resolution No. 83-920 on November 22, 1983 ("the Franchise Resolution") authorizing the SACRAMENTO METROPOLITAN CABLE TELEVISION COMMISSION ("the COMMISSION") to offer a cable television franchise to CABLEVISION OF SACRAMENTO; and

WHEREAS, pursuant to its Resolution No. 83-023, the COMMISSION did offer such a franchise and it was accepted; and

WHEREAS, the COMMISSION and this COUNCIL have from time to time amended certain provisions of the aforesaid Resolutions including approving a transfer of control of the franchisee and a change of name to SACRAMENTO CABLE TELEVISION ("the FRANCHISEE"); and

WHEREAS, pursuant to the provisions of Section II A 2 of the Franchise Resolution, as amended (Alternative System Design), the FRANCHISEE has submitted a proposed revision of the design of the system, a copy of which is attached hereto and incorporated herein by reference as Exhibit "A"; and

WHEREAS, the COMMISSION has retained an engineer to study, evaluate and analyze the proposed revision of the design; and

WHEREAS, the engineer has reported to the COMMISSION and this COUNCIL on the matter of the proposed revision's equality to or superiority to the original design contained in the Application, a copy of which is attached hereto and incorporated herein by reference as Exhibit "B"; and

WHEREAS, the COUNCIL and the COMMISSION find it appropriate to amend certain provisions of the Franchise Resolution in order to clarify the rights, duties, and obligations of the COMMISSION, the COUNTY, the CITIES, and the FRANCHISEE; and

WHEREAS, the COMMISSION and this COUNCIL have conducted a properly noticed public hearing to receive additional evidence concerning the proposed amendments to the Franchise Resolution and revision of the design; and

WHEREAS, the COMMISSION and this COUNCIL have duly considered the proposed revision of the design, together with the report, evaluation and analysis of the COMMISSION's engineer and such other and additional evidence as has come before it in the noticed public hearing; and

WHEREAS, this COUNCIL desires to adopt certain amendments to the Franchise Resolution and to approve the proposed revision of the design upon the terms and subject to the conditions hereinafter set forth;

NOW THEREFORE BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF SACRAMENTO THAT:

1. Subparagraph b. (1) of Section II A 2 of the Franchise Resolution is hereby amended and restated to read as follows:

"(1) A certification by the Chief Executive Officer of the Franchisee stating in clear and unequivocal terms that, to the best of his knowledge and belief, the proposed revision of the design is in all aspects, including but not limited to quality, anticipated useful life and performance characteristics, equal to or superior to the design set forth in the Application in that:

a. the quality and performance characteristics of each aspect of the signal under the proposed system design, as delivered to the ultimate user, will be of at least the same quality and performance characteristics (including without limitation consideration of its strength, definition, integrity and discreteness) as the corresponding aspect of the signal which would have been so delivered under the design specified in the Application; and

b. the reliability of each aspect of the signal under the proposed system design, as delivered to the ultimate user, will be of at least the same degree of reliability (including without limitation consideration of the influence of atmospheric, topographic and competitive signal factors which may reasonably be anticipated to be found within the

franchise area or any portion of it during the franchise term) as the corresponding aspect of the signal which would have been so delivered under the design specified in the Application; and

c. the capacity of the system will be such as to be capable of delivery of such volumes of programming and other services to the community, as to both existing and reasonably foreseeable future programming and services, as the COUNTY and the CITY acting jointly have determined is necessary, appropriate and in the best interests of the Sacramento community; and"

2. This COUNCIL finds and determines, based upon all of the evidence presented and available to it, that the FRANCHISEE has shown by clear and convincing evidence that the proposed revision of the design, in its ultimate configuration, is in all aspects, including but not limited to quality, anticipated useful life and performance characteristics, equal to or superior to the design set forth in the Application in that:

a. the quality and performance characteristics of each aspect of the signal under the proposed system design, as delivered to the ultimate user, will be of at least the same quality and performance characteristics (including without limitation consideration of its strength, definition, integrity and discreteness) as the corresponding aspect of the signal which would have been so delivered under the design specified in the Application; and

b. the reliability of each aspect of the signal under the proposed system design, as delivered to the ultimate user, will be of at least the same degree of reliability (including without limitation consideration of the influence of atmospheric, topographic and competitive signal factors which may reasonably be anticipated to be found within the franchise area or any portion of it during the franchise term) as the corresponding aspect of the signal which would have been so delivered under the design specified in the Application; and

c. the capacity of the system will be such as to be capable of delivery of such volumes of programming and other services to the community, as to both existing and reasonably foreseeable future programming and services, as this COUNCIL has determined is necessary, appropriate

and in the best interests of the Sacramento community.

3. This COUNCIL hereby approves the FRANCHISEE's proposed revision of the design of the system as set forth in the attached Exhibit "A", and hereby incorporates such revision into the Franchise Resolution and, to the extent that it is expressly inconsistent with the design of the system as set forth in the Application, the provisions of Exhibit "A" hereto shall prevail over the terms of the Application and the Franchise Resolution, PROVIDED THAT the foregoing approval shall in no way operate to relieve the FRANCHISEE to any degree whatsoever of its obligation to meet and comply strictly with each and every technical test, review and specification as set forth in the Franchise Resolution including without limitation signal testing, Federal Communications Commission standards, technical standards and equipment substitution procedures, unless such technical test, review or specification is expressly altered, amended or deleted herein.

4. This COUNCIL hereby expressly finds and determines that it would not have approved the temporary use of a four hundred fifty (450) megahertz system as set forth in Exhibit "A" but for the assurance of the FRANCHISEE of the installation of a five hundred fifty (550) megahertz system as soon as it is, in the judgement of this COUNCIL and as hereinafter provided, reliable in accordance with the terms hereof. Accordingly, by the filing of a Certificate of Acknowledgement and Undertaking hereto as required by Paragraph 21 d. of this Resolution below, the FRANCHISEE, the named owners thereof and SCRIPPS HOWARD BROADCASTING COMPANY do hereby agree to accomplish the purposes hereof and to require the installation of the five hundred fifty (550) megahertz system described in Exhibit "A" hereto in accordance with Section VI E hereof, or such other system design as may be from time to time approved by the COUNTY and the CITY acting jointly pursuant to Sections II A 2 and VI E 24 of the Franchise Resolution.

5. Section VI A 1 of the Franchise Resolution is hereby amended and restated to read as follows:

"1. Subscriber Network. The Subscriber Network shall:

a. Consist of one cable with a frequency spectrum of 5-550 megahertz with:

(1) at least four (4) six (6) megahertz channels upstream within a frequency spectrum

of 5-30 megahertz; and

(2) at least seventy-seven (77) six (6) megahertz video channels downstream within a frequency spectrum of 50-550 megahertz, provided that pursuant to the provisions of Paragraph 19 of this Section VI below, the FRANCHISEE may initially activate the system to four hundred fifty (450) megahertz.

..."

6. The second paragraph of Section VI B 3 of the Franchise Resolution is hereby amended and restated to read as follows:

"The FRANCHISEE shall utilize the Subscriber Network Cable to provide Home Entertainment; Educational; and Home Non-Entertainment Services in four tiers or packages as follows:

..."

7. Section VI of the Franchise Resolution is hereby amended by adding a new Section E thereto after the existing Section D as follows:

"E. TEMPORARY ACTIVATION OF SYSTEM AND CONDITIONS UPON ULTIMATE ACTIVATION

19. The Upgrade Order. The FRANCHISEE shall be permitted initially to activate the system only to four hundred fifty (450) megahertz, providing thereby not less than sixty-two (62) video channels. The COMMISSION may meet from time to time to consider the need for additional spectrum capacity beyond the capability of the system at four hundred fifty (450) megahertz. The COMMISSION shall give the FRANCHISEE written notice of the time, date, place, and purpose of any such meeting in accordance with Section 5.50.024 of the Ordinance. The FRANCHISEE shall be permitted at such meeting to address all matters which are the subject of such notice. If the COMMISSION determines, in accordance with the foregoing provisions and in its sole discretion, that there is a need for additional spectrum capacity, the COMMISSION shall issue and mail to the FRANCHISEE the upgrade order as hereinafter defined. It is the intention of the

COUNTY and the CITY acting jointly, the COMMISSION, the FRANCHISEE, and the named owners thereof to upgrade the system to its ultimate activation level of five hundred fifty (550) megahertz at the earliest possible date, but in no event more three hundred sixty-five (365) days after the issuance by the COMMISSION of an order (the "upgrade order") to the FRANCHISEE to upgrade the system to its ultimate activation level of five hundred fifty (550) megahertz, subject to the right of the FRANCHISEE to establish non-reliability pursuant to Paragraph 21 below.

20. Franchisee's Establishment of Non-reliability. The COMMISSION may at any time during the term of the franchise and in its sole discretion, but not more than once within any twenty-four (24) consecutive months during such term, after notice to the FRANCHISEE pursuant to Section 5.50.024 of the Ordinance, issue an upgrade order to the FRANCHISEE causing the upgrade of the system to its ultimate activation level of five hundred fifty (550) megahertz, subject ONLY to the right of the FRANCHISEE to establish non-reliability pursuant to Paragraph 21 below.

21. Non-Reliability Defined. Upon the issuance of an upgrade order by the COMMISSION pursuant to Paragraphs 19 and 20 above, the FRANCHISEE may forestall the application of its obligation to upgrade the level of activation of the system to five hundred fifty (550) megahertz ONLY by establishing, at a hearing to be held within ninety (90) days after the issuance of such an order, by clear and convincing evidence that one or more of the following conditions have been met and continue to exist:

a. The mean time to failure for a five hundred fifty (550) megahertz amplifier manufactured by the manufacturer of the FRANCHISEE's four hundred fifty (450) megahertz amplifiers (the "FRANCHISEE's manufacturer") is LESS than the mean time to failure for any four hundred fifty (450) megahertz amplifier theretofore installed by the FRANCHISEE in the system. The "mean time to failure" for amplifiers of FRANCHISEE's manufacturer shall be determined only by

reference to published statistics of FRANCHISEE's manufacturer available to the cable industry generally.

b. The average number of service calls related to system failure per plant mile in all five hundred fifty (550) megahertz systems throughout the country shall be MORE THAN the average number of service calls related to system failure per plant mile in all four hundred fifty (450) megahertz systems throughout the country, when the maximum statistical inaccuracy derived from the applicable sampling technique is assumed and excluded from consideration. The "average number of service calls related to system failure... throughout the country" shall be determined only by reference to published figures, generally accepted within the cable industry, and based upon generally accepted statistical sampling techniques.

c. The FRANCHISEE's manufacturer has not installed MORE than three thousand (3,000) miles of five hundred fifty (550) megahertz system plant which has been operating for at least twenty-four (24) consecutive months.

d. The FRANCHISEE's manufacturer has not installed at least one system with at least eight hundred (800) miles of five hundred fifty (550) megahertz system plant which has been operating for at least twenty-four (24) consecutive months.

e. The FRANCHISEE's manufacturer is unable to guarantee that the FRANCHISEE's manufacturer can deliver as a standard production item five hundred fifty (550) megahertz amplifiers which meet the reliability standard set forth in subparagraph a. above (provided that such data is available), meaning that FRANCHISEE's manufacturer can deliver at least five thousand (5,000) such five hundred fifty (550) megahertz amplifiers per month for a period of at least twenty four (24) consecutive months.

f. The installation of five hundred fifty (550)

megahertz amplifiers would require a complete replacement of the then existing amplifier housings.

22. Disputes Regarding Reliability. Upon receipt of notice from the FRANCHISEE that the FRANCHISEE asserts the non-reliability of a five hundred fifty (550) megahertz system, the COMMISSION shall establish a hearing for the purpose of receiving the FRANCHISEE's evidence of non-reliability referred to in Paragraph 21 above. Upon receipt of such evidence, if the COMMISSION finds and determines that the FRANCHISEE has established by clear and convincing evidence that a five hundred fifty (550) megahertz system is not reliable pursuant to the provisions of Paragraph 21 above, the upgrade order shall forthwith be null and void. If the COMMISSION finds and determines that the FRANCHISEE has NOT established by clear and convincing evidence that a five hundred fifty (550) megahertz system is not reliable pursuant to the provisions of Paragraph 21 above, the COMMISSION shall thereupon issue an order confirming its upgrade order and its finding of the lack of the FRANCHISEE's establishment of non-reliability (the "reliability order"). Thereupon, the FRANCHISEE shall have thirty (30) days to give written notice to the COMMISSION that the FRANCHISEE is submitting the matter of the COMMISSION's reliability order to arbitration pursuant to the provisions of Paragraph 23 below. If the FRANCHISEE fails to give such a notice in a timely fashion, the COMMISSION's reliability order shall become final and binding upon the FRANCHISEE.

23. Arbitration Proceedings. With respect to any arbitration proceeding conducted pursuant to the provisions of Paragraph 22 of this Section VI, the arbitration panel shall be selected, the hearing scheduled within the time prescribed, notice given, the hearing conducted, decision made and costs divided in the manner prescribed by Sections 5.50.830 through 5.50.840, inclusive, of the Ordinance. The questions which may be submitted to the arbitration panel and the jurisdiction of the arbitration panel shall be limited to the following:

- a. The interpretation of the provisions of the Franchise Documents solely in relation to the

decision required by b. below; and

b. Whether or not the FRANCHISEE established before the COMMISSION by clear and convincing evidence that a five hundred fifty (550) megahertz system is not reliable under one or more of the tests set forth in Paragraph 21 above.

The determination of the arbitration panel shall be final, binding and conclusive upon the parties, and shall not be subject to judicial review or vacation except on the grounds set forth in Section 1286.2 of the Code of Civil Procedure.

24. Alternative Technology . Notwithstanding the provisions of this Section E of this Section VI, the FRANCHISEE may apply at any time under the provisions of Section II A 2 of this Resolution for a revision of the design of the system to accomplish the purposes hereof by means of alternative technology. Nothing in this Paragraph shall be construed to limit or diminish the discretion of the COUNTY and the CITY acting jointly under the aforementioned section in its consideration of such a proposed alternative system design."

8. Section II A 6 a. of the Franchise Resolution is hereby amended by deleting therefrom the first sentence thereof.

9. Section III of the Franchise Resolution is hereby amended by deleting therefrom Paragraph 8 thereof.

10. Section VI A 2 of the Franchise Resolution is hereby amended and restated to read as follows:

"2. Institutional Usage of Subscriber Network and Institutional Network.

a. Institutional Usage of Subscriber Network. The FRANCHISEE shall utilize up to twenty (20) megahertz of the Subscriber Network for institutional uses until such time as the Institutional Network is constructed pursuant to subparagraph b. hereof. Subsequent to the construction of the Institutional Network, the FRANCHISEE may, but shall not be required to utilize the aforementioned portion of the Subscriber Network for institutional services.

b. Institutional Network. The FRANCHISEE shall, from time to time hereafter, as required below, immediately begin construction of an Institutional Network, consisting of one (1) institutional cable which shall cover approximately two hundred (200) miles within the Imposed Service Area and with at least forty-nine (49) six (6) megahertz video channels within a frequency spectrum of 30-400 megahertz, at such time as the institutional usage of the Subscriber Network results in either of the following conditions:

(1) For a period of at least thirty (30) days, at least ninety percent (90%) of the FRANCHISEE's data channels on the Subscriber Network which may be utilized for institutional purposes pursuant to subparagraph a. above are utilized between the hours of 8:00 a.m. and 5:00 p.m. on business days Monday through Friday, or

(2) A bona fide contract for the utilization of institutional services at commercially reasonable rates has been offered to the FRANCHISEE and, if accepted, when added to the then existing institutional usage of the Subscriber Network, the total of such existing and additional Institutional usage would exceed the twenty (20) megahertz band of the Subscriber Network which may be utilized for institutional purposes pursuant to subparagraph a above.

In the event of the occurrence of condition (1) or (2) above, the FRANCHISEE shall construct a segment of the Institutional Network as may be necessary to relieve conditions (1) and (2) above, as the case may be, but in no event less than forty (40) miles or such less distance as the COMMISSION may in its sole discretion approve. Notwithstanding the foregoing sentence, the FRANCHISEE shall, upon the occurrence of condition (1) or (2) above, construct such first segment of the Institutional Network capable of delivery of all of the then existing institutional usage of the Subscriber Network. After construction of the first segment of the Institutional Network, the FRANCHISEE shall not

thereafter, without the further express permission of the COMMISSION, utilize any additional portion of the Subscriber Network for institutional usage.

Nothing contained in this Paragraph 2 shall be deemed or construed to reduce or diminish to any extent whatsoever the obligations of the FRANCHISEE to make available certain spectrum space to the Sacramento County Corporation for Educational Telecommunications (SCCET), also known as the Educational Consortium, for institutional usages pursuant to the Application or any contract by and between the FRANCHISEE and SCCET which may now or hereafter exist."

11. Section VI D 14 of the Franchise Resolution is hereby amended by adding the following sentence to the end thereof:

"The foregoing obligation shall be subject, in all respects, to the provisions of Paragraph A 2 of this Section VI."

12. Section V A 10 a. of the Franchise Resolution is hereby amended by deleting therefrom the words "...twentieth (20th)..." and substituting therefor the words "...twenty-sixth (26th)...".

13. Subparagraph a. of Section V B 17 of the Franchise Resolution is hereby amended by deleting therefrom the words "...commencement of the second year..." and substituting therefor the words "...twenty-sixth (26th) month...".

14. Paragraph 1 of Section III of the Franchise Resolution is hereby amended by adding a new subparagraph c. thereto after the existing subparagraph b. as follows:

"c. The FRANCHISEE shall, within sixty (60) days after the notification by the COMMISSION of the approval of an Alternative System Design pursuant to Section II A 2 of this Resolution, submit a revised Construction Activation Table and a revised Census Tract Progression Table which (i) take into account the effect of the alternative system design and (ii) provide for the completion of the system within the times set forth in Section 5.50.410 of the Ordinance. Thereafter, all references in this Resolution to the Construction Activation Table or the Census Tract Progression Table shall be deemed to have

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reference to the revised tables, as applicable, and the FRANCHISEE shall continue to be bound by the terms of this Section III as such terms then apply to such revised tables."

15. Subparagraph d. (1) of Section VI B 4 of the Franchise Resolution is hereby amended and restated to read as follows:

"(1) During each year of the franchise, the Franchisee shall be expressly permitted to reduce the number of distant channels cablecast upon the system to the extent, and only to the extent, that, in the next preceding franchise year, the actual expenditures for copyright fees on distant signal channels shall not have averaged less than an amount equal to the lesser of: (1) 24.778% of the Basic Service Revenues of the system as determined herein, or (2) five dollars and ninety-five cents (\$5.95) for each person and/or entity who has been a subscriber to some or all of the home entertainment, educational and home non-entertainment services contained within the Basic tier as defined by Paragraph B 3 a of Section VI of this Resolution during the franchise year. To the extent that such expenditures in any year shall be less than the aforementioned amount, the amount of the difference shall be set aside in a copyright fee reserve. When the level of funds in such reserve added to the aforementioned amount shall be sufficient to pay the copyright fees for an additional distant signal channel, said channel shall be restored to the system until said copyright fee reserve shall be exhausted."

16A. Subparagraph b. of Paragraph 8 of Section IV of the Franchise Resolution hereby amended by deleting therefrom the second full sentence thereof and substituting in lieu thereof as follows:

"At all times during the term of the franchise that the Franchisee is obligated to provide 'The Sacramento Channel', the Franchisee shall employ personnel to be utilized by such channel in such numbers and in such functional categories as may be necessary to achieve all of the quantitative and qualitative performances required of the Franchisee pursuant to this subparagraph b. and subparagraphs c. and d. of this Paragraph 8 of this Resolution."

16B. Subparagraph (b) of Paragraph 20 of Section V C of the Franchise Resolution is hereby amended by deleting therefrom

the second full sentence thereof.

17. Subparagraphs e, f, and g of Paragraph 8 of Section IV of the Franchise Resolution are hereby deleted in their entirety.

18. Paragraph 8 of Section IV of the Franchise Resolution is hereby amended by adding a new subparagraph e. thereto as follows:

"e. Notwithstanding the provisions of subparagraph b. above, the Franchisee may initiate a determination of the economic feasibility of The Sacramento Channel in advance of its activation, by filing with the Commission, not less than ninety (90) days in advance of the date upon which it reasonably anticipates having obtained one hundred thousand (100,000) subscribers and in any event on or before the date upon which it obtains eighty thousand (80,000) subscribers, an application for pre-activation economic feasibility determination. Thereupon, the Commission shall select and retain an expert which shall be one of the so-called 'Big Eight' accounting firms, the cost of which shall be borne entirely by the Franchisee without consideration of any other amounts paid by Franchisee to the Commission under the Franchise Documents, for the purpose of estimating, by such means and techniques as said experts shall deem advisable, the 'Revenues' reasonably anticipated to be derived and the 'Costs' reasonably anticipated to be incurred (as those terms are defined in subparagraph b. above) during the first year of operation of the Sacramento Channel. The report of the aforesaid experts shall be submitted jointly to the Franchisee and to the Commission within sixty (60) days after submission of the application by the Franchisee. Upon submission of the report of the estimation of Revenues and Costs, the Franchisee may reduce, pursuant to subparagraph b. above, (i) the hours per day, and/or (ii) the days per week, and/or (iii) the number or types of personnel required by this paragraph to the extent required to prevent Costs from exceeding Revenues, provided that, if the aforesaid study should result in the complete elimination of the Sacramento Channel, the Commission shall be entitled to, but not required to, similarly retain such experts (at the expense of the Franchisee) at intervals of not less than every three (3) years thereafter for the balance of the franchise term for the purpose of determining whether a change in circumstances within the market would enable the introduction of the Sacramento Channel."

19. Paragraph 20 of Section V of the Franchise Resolution is hereby amended by adding thereto a new subparagraph (c) as follows:

"(c) Notwithstanding the provisions of subparagraph (b) above, the Franchisee may initiate a determination of the economic feasibility of The Sacramento Channel in advance of its activation, by filing with the Commission, not less than ninety (90) days in advance of the date upon which it reasonably anticipates having obtained one hundred thousand (100,000) subscribers and in any event on or before the date upon which it obtains eighty thousand (80,000) subscribers, an application for pre-activation economic feasibility determination. Thereupon, the Commission shall select and retain an expert which shall be one of the so-called 'Big Eight' accounting firms, the cost of which shall be borne entirely by the Franchisee without consideration of any other amounts paid by Franchisee to the Commission under the Franchise Documents, for the purpose of estimating, by such means and techniques as said experts shall deem advisable, the 'Revenues' reasonably anticipated to be derived and the 'Costs' reasonably anticipated to be incurred (as those terms are defined in subparagraph (b) above) during the first year of operation of the Sacramento Channel. The report of the aforesaid experts shall be submitted jointly to the Franchisee and to the Commission within sixty (60) days after submission of the application by the Franchisee. Upon submission of the report of the estimation of Revenues and Costs, the Franchisee may reduce, pursuant to subparagraph (b) above, (i) the hours per day, and/or (ii) the days per week, and/or (iii) the number or types of personnel required by this paragraph to the extent required to prevent Costs from exceeding Revenues, provided that, if the aforesaid study should result in the complete elimination of the Sacramento Channel, the Commission shall be entitled to, but not required to, similarly retain such experts (at the expense of the Franchisee) at intervals of not less than every three (3) years thereafter for the balance of the franchise term for the purpose of determining whether a change in circumstances within the market would enable the introduction of the Sacramento Channel."

20. Section III of the Franchise Resolution is hereby amended by adding thereto a new Paragraph 8 as follows:

"8. Burden of Proof in Construction Disputes . If (i) the FRANCHISEE should in the course of the construction of the system elect to place underground cable plant in the public utility easement in front yards upon private property where there was, at the time of the FRANCHISEE's election, space available for the installation of such plant at the lip of the curb of the gutter within the public roadway, or (ii) the FRANCHISEE should fail, neglect or refuse to take pre-construction photography of the condition of any private property upon which underground construction is to occur, the FRANCHISEE shall have the burden of proof as to the condition of the private property prior to the initiation of such construction in any subsequent complaint resolution, arbitration or judicial procedure between the FRANCHISEE and the private property owner. It is expressly agreed by the parties hereto that the private property owner is the intended third party beneficiary of the FRANCHISEE's contractual obligations and promises under this Paragraph 8."

21. The provisions of this Resolution shall not be effective for any purpose unless and until:

a. The Board of Directors of the COMMISSION adopts a Resolution amending its Resolution 83-023, adopted on November 22, 1983, to include provisions identical to the amendments made to Resolution No. 83-920 of this COUNCIL by this Resolution; and

b. The Board of Supervisors of the COUNTY OF SACRAMENTO adopts a Resolution amending its Resolution No. 83-1450, adopted November 22, 1983, to include provisions identical to the amendments made to Resolution No. 83-920 of this COUNCIL by the adoption of this Resolution; and

c. The City Council of the City of Folsom and the City Council of the City of Galt have each adopted a Resolution approving the adoption of this Resolution within thirty (30) days from the date hereof; and

d. The FRANCHISEE, the named owners thereof and SCRIPPS-HOWARD BROADCASTING COMPANY have approved, accepted and agreed to the provisions of this Resolution for themselves, their successors, assigns and guarantors by submitting a Certificate of Acknowledgement and Undertaking in a form identical to that attached as

Resolution No. 85-_____

Exhibit "C" hereto.

ON A MOTION by Council Member _____,
seconded by Council Member _____, the
foregoing resolution was passed and adopted this 7th day of
March, 1985, by the following vote, to wit:

AYES:

NOES:

ABSENT:

Mayor

ATTEST: _____

City Clerk

RESOLUTION NO. 85-196

ADOPTED BY THE SACRAMENTO CITY COUNCIL ON DATE OF

APPROVED
BY THE CITY COUNCIL

MAR 12 1985

OFFICE OF THE
CITY CLERK

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SACRAMENTO APPROVING AN ALTERNATE SYSTEM DESIGN FOR SACRAMENTO METROPOLITAN CABLE TELEVISION SYSTEM SUBJECT TO CERTAIN CONDITIONS AND MAKING CERTAIN CHANGES IN THE CABLE FRANCHISE RESOLUTION.

WHEREAS, this COUNCIL adopted its Resolution No. 83-920 on November 22, 1983 ("the Franchise Resolution") authorizing the SACRAMENTO METROPOLITAN CABLE TELEVISION COMMISSION ("the COMMISSION") to offer a cable television franchise to CABLEVISION OF SACRAMENTO; and

WHEREAS, pursuant to its Resolution No. 83-023, the COMMISSION did offer such a franchise and it was accepted; and

WHEREAS, the COMMISSION and this COUNCIL have from time to time amended certain provisions of the aforesaid Resolutions including approving a transfer of control of the franchisee and a change of name to SACRAMENTO CABLE TELEVISION ("the FRANCHISEE"); and

WHEREAS, pursuant to the provisions of Section II A 2 of the Franchise Resolution, as amended (Alternative System Design), the FRANCHISEE has submitted a proposed revision of the design of the system, a copy of which is attached hereto and incorporated herein by reference as Exhibit "A"; and

WHEREAS, the COMMISSION has retained an engineer to study, evaluate and analyze the proposed revision of the design; and

WHEREAS, the engineer has reported to the COMMISSION and this COUNCIL on the matter of the proposed revision's equality to or superiority to the original design contained in the Application, a copy of which is attached hereto and incorporated herein by reference as Exhibit "B"; and

WHEREAS, the COUNCIL and the COMMISSION find it appropriate to amend certain provisions of the Franchise Resolution in order to clarify the rights, duties, and obligations of the COMMISSION, the COUNTY, the CITIES, and the FRANCHISEE; and

WHEREAS, the COMMISSION and this COUNCIL have duly considered the proposed revision of the design, together with the report, evaluation and analysis of the COMMISSION's engineer and such other and additional evidence as has come before it; and

WHEREAS, this COUNCIL desires to adopt certain amendments to the Franchise Resolution and to approve the proposed revision of the design upon the terms and subject to the conditions hereinafter set forth;

NOW THEREFORE BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF SACRAMENTO THAT:

1. Subparagraph b. (1) of Section II A 2 of the Franchise Resolution is hereby amended and restated to read as follows:

"(1) A certification by the Chief Executive Officer of the Franchisee stating in clear and unequivocal terms that, to the best of his knowledge and belief, the proposed revision of the design is in all aspects, including but not limited to quality, anticipated useful life and performance characteristics, equal to or superior to the design set forth in the Application in that:

a. the quality and performance characteristics of each aspect of the signal under the proposed system design, as delivered to the ultimate user, will be of at least the same quality and performance characteristics (including without limitation consideration of its strength, definition, integrity and discreteness) as the corresponding aspect of the signal which would have been so delivered under the design specified in the Application; and

b. the reliability of each aspect of the signal under the proposed system design, as delivered to the ultimate user, will be of at least the same degree of reliability (including without limitation consideration of the influence of atmospheric, topographic and competitive signal factors which may reasonably be anticipated to be found within the franchise area or any portion of it during the franchise term) as the corresponding aspect of the signal which would have been so delivered under the design specified in the Application; and

c. the capacity of the system will be such as to be capable of delivery of such volumes of programming and other services to the community, as to both existing and reasonably foreseeable future programming and services, as the COUNTY and the CITY acting jointly have determined is necessary, appropriate and in the best interests of the Sacramento community; and"

2. This COUNCIL finds and determines, based upon all of the evidence presented

and available to it, that the FRANCHISEE has shown by clear and convincing evidence that the proposed revision of the design, in its ultimate configuration, is in all aspects, including but not limited to quality, anticipated useful life and performance characteristics, equal to or superior to the design set forth in the Application in that:

a. the quality and performance characteristics of each aspect of the signal under the proposed system design, as delivered to the ultimate user, will be of at least the same quality and performance characteristics (including without limitation consideration of its strength, definition, integrity and discreteness) as the corresponding aspect of the signal which would have been so delivered under the design specified in the Application; and

b. the reliability of each aspect of the signal under the proposed system design, as delivered to the ultimate user, will be of at least the same degree of reliability (including without limitation consideration of the influence of atmospheric, topographic and competitive signal factors which may reasonably be anticipated to be found within the franchise area or any portion of it during the franchise term) as the corresponding aspect of the signal which would have been so delivered under the design specified in the Application; and

c. the capacity of the system will be such as to be capable of delivery of such volumes of programming and other services to the community, as to both existing and reasonably foreseeable future programming and services, as this COUNCIL has determined is necessary, appropriate and in the best interests of the Sacramento community.

3. This COUNCIL hereby approves the FRANCHISEE's proposed revision of the design of the system as set forth in the attached Exhibit "A", and hereby incorporates such revision into the Franchise Resolution and, to the extent that it is expressly inconsistent with the design of the system as set forth in the Application, the provisions of Exhibit "A" hereto shall prevail over the terms of the Application and the Franchise Resolution, PROVIDED THAT the foregoing approval shall in no way operate to relieve the FRANCHISEE to any degree whatsoever of its obligation to meet and comply strictly with each and every technical test, review and specification as set forth in the Franchise Resolution including without limitation signal testing, Federal Communications Commission standards, technical standards and equipment substitution procedures, unless such technical test, review or specification is expressly altered, amended or deleted herein.

4. This COUNCIL hereby expressly finds and determines that it would not have approved the temporary use of a four hundred fifty (450) megahertz system as set forth in Exhibit "A" but for the assurance of the FRANCHISEE of the installation of a five hundred fifty (550) megahertz system as soon as it is, in the judgement of this COUNCIL and as hereinafter provided, reliable in

accordance with the terms hereof. Accordingly, by the filing of a Certificate of Acknowledgement and Undertaking hereto as required by Paragraph 21 d. of this Resolution below, the FRANCHISEE, the named owners thereof and SCRIPPS HOWARD BROADCASTING COMPANY do hereby agree to accomplish the purposes hereof and to require the installation of the five hundred fifty (550) megahertz system described in Exhibit "A" hereto in accordance with Section VI E hereof, or such other system design as may be from time to time approved by the COUNTY and the CITY acting jointly pursuant to Sections II A 2 and VI E 24 of the Franchise Resolution.

5. Section VI A 1 of the Franchise Resolution is hereby amended and restated to read as follows:

"1. Subscriber Network. The Subscriber Network shall:

a. Consist of one cable with a frequency spectrum of 5-550 megahertz with:

(1) at least four (4) six (6) megahertz channels upstream within a frequency spectrum of 5-30 megahertz; and

(2) at least seventy-seven (77) six (6) megahertz video channels downstream within a frequency spectrum of 50-550 megahertz, provided that pursuant to the provisions of Paragraph 19 of this Section VI below, the FRANCHISEE may initially activate the system to four hundred fifty (450) megahertz.

" ..."

6. The second paragraph of Section VI B 3 of the Franchise Resolution is hereby amended and restated to read as follows:

"The FRANCHISEE shall utilize the Subscriber Network Cable to provide Home Entertainment; Educational; and Home Non-Entertainment Services in four tiers or packages as follows:

" ..."

7. Section VI of the Franchise Resolution is hereby amended by adding a new Section E thereto after the existing Section D as follows:

"E. TEMPORARY ACTIVATION OF SYSTEM AND CONDITIONS UPON ULTIMATE ACTIVATION

19. The Upgrade Order. The FRANCHISEE shall be permitted initially to activate the system only to four hundred fifty (450) megahertz, providing thereby not less than sixty-two (62) video channels. The COMMISSION may meet from time to time to consider the need for

additional spectrum capacity beyond the capability of the system at four hundred fifty (450) megahertz. The COMMISSION shall give the FRANCHISEE written notice of the time, date, place, and purpose of any such meeting in accordance with Section 5.50.024 of the Ordinance. The FRANCHISEE shall be permitted at such meeting to address all matters which are the subject of such notice. If the COMMISSION determines, in accordance with the foregoing provisions and in its sole discretion, that there is a need for additional spectrum capacity, the COMMISSION shall issue and mail to the FRANCHISEE the upgrade order as hereinafter defined. It is the intention of the COUNTY and the CITY acting jointly, the COMMISSION, the FRANCHISEE, and the named owners thereof to upgrade the system to its ultimate activation level of five hundred fifty (550) megahertz at the earliest possible date, but in no event more three hundred sixty-five (365) days after the issuance by the COMMISSION of an order (the "upgrade order") to the FRANCHISEE to upgrade the system to its ultimate activation level of five hundred fifty (550) megahertz, subject to the right of the FRANCHISEE to establish non-reliability pursuant to Paragraph 21 below.

20. Franchisee's Establishment of Non-reliability. The COMMISSION may at any time during the term of the franchise and in its sole discretion, but not more than once within any twenty-four (24) consecutive months during such term, after notice to the FRANCHISEE pursuant to Section 5.50.024 of the Ordinance, issue an upgrade order to the FRANCHISEE causing the upgrade of the system to its ultimate activation level of five hundred fifty (550) megahertz, subject ONLY to the right of the FRANCHISEE to establish non-reliability pursuant to Paragraph 21 below.

21. Non-Reliability Defined. Upon the issuance of an upgrade order by the COMMISSION pursuant to Paragraphs 19 and 20 above, the FRANCHISEE may forestall the application of its obligation to upgrade the level of activation of the system to five hundred fifty (550) megahertz ONLY by establishing, at a hearing to be held within ninety (90) days after the issuance of such an order, by clear and convincing evidence that one or more of the following conditions have been met and continue to exist:

a. The mean time to failure for a five hundred fifty (550) megahertz amplifier manufactured by the manufacturer of the FRANCHISEE's four hundred fifty (450) megahertz amplifiers (the "FRANCHISEE's manufacturer") is LESS than the mean time to failure for any four hundred fifty (450) megahertz amplifier theretofore installed by the FRANCHISEE in the system. The "mean time to failure" for amplifiers of FRANCHISEE's manufacturer shall be determined only by reference to published statistics of FRANCHISEE's manufacturer available to the cable

industry generally.

b. The average number of service calls related to system failure per plant mile in all five hundred fifty (550) megahertz systems throughout the country shall be MORE THAN the average number of service calls related to system failure per plant mile in all four hundred fifty (450) megahertz systems throughout the country, when the maximum statistical inaccuracy derived from the applicable sampling technique is assumed and excluded from consideration. The "average number of service calls related to system failure... throughout the country" shall be determined only by reference to published figures, generally accepted within the cable industry, and based upon generally accepted statistical sampling techniques.

c. The FRANCHISEE's manufacturer has not installed MORE than three thousand (3,000) miles of five hundred fifty (550) megahertz system plant which has been operating for at least twenty-four (24) consecutive months.

d. The FRANCHISEE's manufacturer has not installed at least one system with at least eight hundred (800) miles of five hundred fifty (550) megahertz system plant which has been operating for at least twenty-four (24) consecutive months.

e. The FRANCHISEE's manufacturer is unable to guarantee that the FRANCHISEE's manufacturer can deliver as a standard production item five hundred fifty (550) megahertz amplifiers which meet the reliability standard set forth in subparagraph a. above (provided that such data is available), meaning that FRANCHISEE's manufacturer can deliver at least five thousand (5,000) such five hundred fifty (550) megahertz amplifiers per month for a period of at least twenty four (24) consecutive months.

f. The installation of five hundred fifty (550) megahertz amplifiers would require a complete replacement of the then existing amplifier housings.

22. Disputes Regarding Reliability. Upon receipt of notice from the FRANCHISEE that the FRANCHISEE asserts the non-reliability of a five hundred fifty (550) megahertz system, the COMMISSION shall establish a hearing for the purpose of receiving the FRANCHISEE's evidence of non-reliability referred to in Paragraph 21 above. Upon receipt of such evidence, if the COMMISSION finds and determines that the FRANCHISEE has established by clear and convincing evidence that a five hundred fifty (550) megahertz system is not reliable pursuant to the provisions of Paragraph 21 above, the upgrade order shall

forthwith be null and void. If the COMMISSION finds and determines that the FRANCHISEE has NOT established by clear and convincing evidence that a five hundred fifty (550) megahertz system is not reliable pursuant to the provisions of Paragraph 21 above, the COMMISSION shall thereupon issue an order confirming its upgrade order and its finding of the lack of the FRANCHISEE's establishment of non-reliability (the "reliability order"). Thereupon, the FRANCHISEE shall have thirty (30) days to give written notice to the COMMISSION that the FRANCHISEE is submitting the matter of the COMMISSION's reliability order to arbitration pursuant to the provisions of Paragraph 23 below. If the FRANCHISEE fails to give such a notice in a timely fashion, the COMMISSION's reliability order shall become final and binding upon the FRANCHISEE.

23. Arbitration Proceedings . With respect to any arbitration proceeding conducted pursuant to the provisions of Paragraph 22 of this Section VI, the arbitration panel shall be selected, the hearing scheduled within the time prescribed, notice given, the hearing conducted, decision made and costs divided in the manner prescribed by Sections 5.50.830 through 5.50.840, inclusive, of the Ordinance. The questions which may be submitted to the arbitration panel and the jurisdiction of the arbitration panel shall be limited to the following:

- a. The interpretation of the provisions of the Franchise Documents solely in relation to the decision required by b. below; and
- b. Whether or not the FRANCHISEE established before the COMMISSION by clear and convincing evidence that a five hundred fifty (550) megahertz system is not reliable under one or more of the tests set forth in Paragraph 21 above.

The determination of the arbitration panel shall be final, binding and conclusive upon the parties, and shall not be subject to judicial review or vacation except on the grounds set forth in Section 1286.2 of the Code of Civil Procedure.

24. Alternative Technology . Notwithstanding the provisions of this Section E of this Section VI, the FRANCHISEE may apply at any time under the provisions of Section II A 2 of this Resolution for a revision of the design of the system to accomplish the purposes hereof by means of alternative technology. Nothing in this Paragraph shall be construed to limit or diminish the discretion of the COUNTY and the CITY acting jointly under the aforementioned section in its consideration of such a proposed alternative system design."

8. Section II A 6 a. of the Franchise Resolution is hereby amended by deleting

therefrom the first sentence thereof.

9. Section III of the Franchise Resolution is hereby amended by deleting therefrom Paragraph 8 thereof.

10. Section VI A 2 of the Franchise Resolution is hereby amended and restated to read as follows:

"2. Institutional Usage of Subscriber Network and Institutional Network.

a. Institutional Usage of Subscriber Network. The FRANCHISEE shall utilize up to twenty (20) megahertz of the Subscriber Network for institutional uses until such time as the Institutional Network is constructed pursuant to subparagraph b. hereof. Subsequent to the construction of the Institutional Network, the FRANCHISEE may, but shall not be required to utilize the aforementioned portion of the Subscriber Network for institutional services.

b. Institutional Network. The FRANCHISEE shall, from time to time hereafter, as required below, immediately begin construction of an Institutional Network, consisting of one (1) institutional cable which shall cover approximately two hundred (200) miles within the Imposed Service Area and with at least forty-nine (49) six (6) megahertz video channels within a frequency spectrum of 30-400 megahertz, at such time as the institutional usage of the Subscriber Network results in either of the following conditions:

(1) For a period of at least thirty (30) days, at least ninety percent (90%) of the FRANCHISEE's data channels on the Subscriber Network which may be utilized for institutional purposes pursuant to subparagraph a. above are utilized between the hours of 8:00 a.m. and 5:00 p.m. on business days Monday through Friday, or

(2) A bona fide contract for the utilization of institutional services at commercially reasonable rates has been offered to the FRANCHISEE and, if accepted, when added to the then existing institutional usage of the Subscriber Network, the total of such existing and additional Institutional usage would exceed the twenty (20) megahertz band of the Subscriber Network which may be utilized for institutional purposes pursuant to subparagraph a above.

In the event of the occurrence of condition (1) or (2) above, the FRANCHISEE shall construct a segment of the Institutional Network as may be necessary to relieve conditions (1) and (2) above, as the case may be, but in no event less than forty (40) miles or such less

distance as the COMMISSION may in its sole discretion approve. Notwithstanding the foregoing sentence, the FRANCHISEE shall, upon the occurrence of condition (1) or (2) above, construct such first segment of the Institutional Network capable of delivery of all of the then existing institutional usage of the Subscriber Network. After construction of the first segment of the Institutional Network, the FRANCHISEE shall not thereafter, without the further express permission of the COMMISSION, utilize any additional portion of the Subscriber Network for institutional usage.

Nothing contained in this Paragraph 2 shall be deemed or construed to reduce or diminish to any extent whatsoever the obligations of the FRANCHISEE to make available certain spectrum space to the Sacramento County Corporation for Educational Telecommunications (SCCET), also known as the Educational Consortium, for institutional usages pursuant to the Application or any contract by and between the FRANCHISEE and SCCET which may now or hereafter exist."

11. Section VI D 14 of the Franchise Resolution is hereby amended by adding the following sentence to the end thereof:

"The foregoing obligation shall be subject, in all respects, to the provisions of Paragraph A 2 of this Section VI."

12. Section V A 10 a. of the Franchise Resolution is hereby amended by deleting therefrom the words "...twentieth (20th)..." and substituting therefor the words "...twenty-sixth (26th)..."

13. Subparagraph a. of Section V B 17 of the Franchise Resolution is hereby amended by deleting therefrom the words "...commencement of the second year..." and substituting therefor the words "...twenty-sixth (26th) month..."

14. Paragraph 1 of Section III of the Franchise Resolution is hereby amended by adding a new subparagraph c. thereto after the existing subparagraph b. as follows:

"c. The FRANCHISEE shall, within sixty (60) days after the notification by the COMMISSION of the approval of an Alternative System Design pursuant to Section II A 2 of this Resolution, submit a revised Construction Activation Table and a revised Census Tract Progression Table which (i) take into account the effect of the alternative system design and (ii) provide for the completion of the system within the times set forth in Section 5.50.410 of the Ordinance. Thereafter, all references in this Resolution to the Construction Activation Table or the Census Tract Progression Table shall be deemed to have reference to the revised tables, as applicable, and the FRANCHISEE shall continue to be bound by the terms of this Section III as such terms then apply to such revised tables."

15. Subparagraph d. (1) of Section VI B 4 of the Franchise Resolution is hereby amended and restated to read as follows:

"(1) During each year of the franchise, the Franchisee shall be expressly permitted to reduce the number of distant channels cablecast upon the system to the extent, and only to the extent, that, in the next preceding franchise year, the actual expenditures for copyright fees on distant signal channels shall not have averaged less than an amount equal to the lesser of: (1) 24.778% of the Basic Service Revenues of the system as determined herein, or (2) five dollars and ninety-five cents (\$5.95) for each person and/or entity who has been a subscriber to some or all of the home entertainment, educational and home non-entertainment services contained within the Basic tier as defined by Paragraph B 3 a of Section VI of this Resolution during the franchise year. To the extent that such expenditures in any year shall be less than the aforementioned amount, the amount of the difference shall be set aside in a copyright fee reserve. When the level of funds in such reserve added to the aforementioned amount shall be sufficient to pay the copyright fees for an additional distant signal channel, said channel shall be restored to the system until said copyright fee reserve shall be exhausted."

16A. Subparagraph b. of Paragraph 8 of Section IV of the Franchise Resolution hereby amended by deleting therefrom the second full sentence thereof and substituting in lieu thereof as follows:

"At all times during the term of the franchise that the Franchisee is obligated to provide 'The Sacramento Channel', the Franchisee shall employ personnel to be utilized by such channel in such numbers and in such functional categories as may be necessary to achieve all of the quantitative and qualitative performances required of the Franchisee pursuant to this subparagraph b. and subparagraphs c. and d. of this Paragraph 8 of this Resolution."

16B. Subparagraph (b) of Paragraph 20 of Section V C of the Franchise Resolution is hereby amended by deleting therefrom the second full sentence thereof.

17. Subparagraphs e, f, and g of Paragraph 8 of Section IV of the Franchise Resolution are hereby deleted in their entirety.

18. Paragraph 8 of Section IV of the Franchise Resolution is hereby amended by adding a new subparagraph e. thereto as follows:

"e. Notwithstanding the provisions of subparagraph b. above, the Franchisee may initiate a determination of the economic feasibility of The Sacramento Channel in advance of its activation, by filing with the Commission, not less than ninety (90) days in advance of the date upon

which it reasonably anticipates having obtained one hundred thousand (100,000) subscribers and in any event on or before the date upon which it obtains eighty thousand (80,000) subscribers, an application for pre-activation economic feasibility determination. Thereupon, the Commission shall select and retain an expert which shall be one of the so-called 'Big Eight' accounting firms, the cost of which shall be borne entirely by the Franchisee without consideration of any other amounts paid by Franchisee to the Commission under the Franchise Documents, for the purpose of estimating, by such means and techniques as said experts shall deem advisable, the 'Revenues' reasonably anticipated to be derived and the 'Costs' reasonably anticipated to be incurred (as those terms are defined in subparagraph b. above) during the first year of operation of the Sacramento Channel. The report of the aforesaid experts shall be submitted jointly to the Franchisee and to the Commission within sixty (60) days after submission of the application by the Franchisee. Upon submission of the report of the estimation of Revenues and Costs, the Franchisee may reduce, pursuant to subparagraph b. above, (i) the hours per day, and/or (ii) the days per week, and/or (iii) the number or types of personnel required by this paragraph to the extent required to prevent Costs from exceeding Revenues, provided that, if the aforesaid study should result in the complete elimination of the Sacramento Channel, the Commission shall be entitled to, but not required to, similarly retain such experts (at the expense of the Franchisee) at intervals of not less than every three (3) years thereafter for the balance of the franchise term for the purpose of determining whether a change in circumstances within the market would enable the introduction of the Sacramento Channel."

19. Paragraph 20 of Section V of the Franchise Resolution is hereby amended by adding thereto a new subparagraph (c) as follows:

"(c) Notwithstanding the provisions of subparagraph (b) above, the Franchisee may initiate a determination of the economic feasibility of The Sacramento Channel in advance of its activation, by filing with the Commission, not less than ninety (90) days in advance of the date upon which it reasonably anticipates having obtained one hundred thousand (100,000) subscribers and in any event on or before the date upon which it obtains eighty thousand (80,000) subscribers, an application for pre-activation economic feasibility determination. Thereupon, the Commission shall select and retain an expert which shall be one of the so-called 'Big Eight' accounting firms, the cost of which shall be borne entirely by the Franchisee without consideration of any other amounts paid by Franchisee to the Commission under the Franchise Documents, for the purpose of estimating, by such means and techniques as said experts shall deem advisable, the 'Revenues' reasonably anticipated to be derived and the 'Costs' reasonably anticipated to be incurred (as those terms are defined in subparagraph (b) above) during the first year of operation of the Sacramento Channel. The report of the aforesaid experts shall be

submitted jointly to the Franchisee and to the Commission within sixty (60) days after submission of the application by the Franchisee. Upon submission of the report of the estimation of Revenues and Costs, the Franchisee may reduce, pursuant to subparagraph (b) above, (i) the hours per day, and/or (ii) the days per week, and/or (iii) the number or types of personnel required by this paragraph to the extent required to prevent Costs from exceeding Revenues, provided that, if the aforesaid study should result in the complete elimination of the Sacramento Channel, the Commission shall be entitled to, but not required to, similarly retain such experts (at the expense of the Franchisee) at intervals of not less than every three (3) years thereafter for the balance of the franchise term for the purpose of determining whether a change in circumstances within the market would enable the introduction of the Sacramento Channel."

20. Section III of the Franchise Resolution is hereby amended by adding thereto a new Paragraph 8 as follows:

"8. Burden of Proof in Construction Disputes . If (i) the FRANCHISEE should in the course of the construction of the system elect to place underground cable plant in the public utility easement in front yards upon private property where there was, at the time of the FRANCHISEE's election, space available for the installation of such plant at the lip of the curb of the gutter within the public roadway, or (ii) the FRANCHISEE should fail, neglect or refuse to take pre-construction photography of the condition of any private property upon which underground construction is to occur, the FRANCHISEE shall have the burden of proof as to the condition of the private property prior to the initiation of such construction in any subsequent complaint resolution, arbitration or judicial procedure between the FRANCHISEE and the private property owner. It is expressly agreed by the parties hereto that the private property owner is the intended third party beneficiary of the FRANCHISEE's contractual obligations and promises under this Paragraph 8."

21. Subparagraph d. of Paragraph 2. of Section II of the Franchise Resolution is hereby amended by deleting from the first sentence thereof the words "... at a noticed public hearing...".

22. The provisions of this Resolution shall not be effective for any purpose unless and until:

a. The Board of Directors of the COMMISSION adopts a Resolution amending its Resolution 83-023, adopted on November 22, 1983, to include provisions identical to the amendments made to Resolution No. 83-920 of this COUNCIL by this Resolution; and

b. The Board of Supervisors of the COUNTY OF SACRAMENTO adopts a Resolution amending its Resolution No. 83-1450, adopted November 22, 1983,

Resolution No. 85-_____

to include provisions identical to the amendments made to Resolution No. 83-920 of this COUNCIL by the adoption of this Resolution; and

c. The City Council of the City of Folsom and the City Council of the City of Galt have each adopted a Resolution approving the adoption of this Resolution within thirty (30) days from the date hereof; and

d. The FRANCHISEE, the named owners thereof and SCRIPPS-HOWARD BROADCASTING COMPANY have approved, accepted and agreed to the provisions of this Resolution for themselves, their successors, assigns and guarantors by submitting a Certificate of Acknowledgement and Undertaking in a form identical to that attached as Exhibit "C" hereto.

ON A MOTION by Council Member _____, seconded by Council Member _____, the foregoing resolution was passed and adopted this 12th day of March, 1985, by the following vote, to wit:

AYES:

NOES:

ABSENT:

Mayor

ATTEST: _____

City Clerk

TECHNICAL DESCRIPTION OF THE REVISED SYSTEM

A. C.A.T.V. Plant

The C.A.T.V. plant will consist of a single cable bi-directional 550 MHz system, initially activated to 450 MHz. The initial activation will provide for:

- 60 subscriber channels
- the FM band
- 16 MHz of downstream institutional loop capacity.

The system's technical performance will equal or exceed the performance criteria established in Form I of our franchise application. All trunk and line extender stations will be spaced at 550 MHz. All line splitters, couplers, and taps will have a band pass up to 550 MHz minimum. Conversion to 550 MHz operation will involve simply replacing plug-in type modular equipment.

The system's return capacity will operate in the 5-30 MHz spectrum and will be capable of providing four-six MHz video channels.

The trunk and distribution return capacity will be activated at the time of initial downstream activation. At the point in time that it is established that the bandwidth allocated to the institutional services is inadequate, we would then propose to build up to a 200 mile separate I-loop, activated at 450 MHz, as need and practicability dictate.

B. Headend Configuration

The headend will consist of a main standalone headend installed in our downtown location. An AML microwave system will be employed to distribute signals to seven hub receive sites located throughout the service area. It is anticipated that existing antenna mounting structures will be utilized, thereby avoiding the need to erect towers. Each AML hub receiver will be backed up by a "hot standby" receiver which will automatically activate in the event of main receiver failure, thereby assuring maximum reliability.

RH	PM	RS	DP		MK
EE	DE	RG	RC	DD	AC
FEB 26 1985					
File					

SACRAMENTO MICROWAVE SITES

TRANSMIT SITE

North Latitude 38° 34 min. 29 sec. ✓
 West Longitude 121° 29 min. 26 sec. ✓ 1230 N ST

RECEIVE SITES

1. North Latitude 38° 41 min. ¹⁹~~21~~ sec. ✓ RIO LINDA ✓
 West Longitude 121° 26 min. 53 sec.
2. North Latitude 38° 40 min. 13 sec. ✓ CARMICHAEL
 West Longitude 121° 18 min. 48 sec.
3. North Latitude 38° ~~40~~⁴¹ min. ~~48~~⁰¹ sec. ✓ FOLSOM
 West Longitude 121° 08 min. ~~21~~⁵⁸ sec.
4. North Latitude 38° 36 min. 10 sec. ✓ ARDEN
 West Longitude 121° 23 min. ~~33~~³² sec.
5. North Latitude 38° 30 min. 43 sec. ✓ CAMPBELL SOUP
 West Longitude 121° 29 min. 28 sec. TOWER
6. North Latitude 38° 24 min. 36 sec. ✓ (Elk Grove)
 West Longitude 121° 22 min. 02 sec.
7. North Latitude 38° ~~24~~¹⁵ min. ~~36~~⁰⁸ sec. ✓ (Galt)
 West Longitude 121° 18 min. ~~07~~²² sec.

(former
 Elk Grove coord were 38 24 31
 121 24 04)

RH	PM	RS	DP		MK
EE	DE	RG	RC	DD	AC
FEB 26 1985					
File					

TWENTY-MILE PATH

EIGHTY-CHANNEL AML WITH SPACE-COMBINED TEN-FOOT ANTENNAS

TRANSMITTER OUTPUT (DBM/CHANNEL)			36.0
TRANSMITTER MULTIPLEXING			-12.0
TRANSMITTER WAVEGUIDE	50.0	FT. ELLIPTICAL	-1.9
TRANSMIT ANTENNA	10.0	FT.	48.8
FREE SPACE ATTENUATION	20.0	MILES	-144.8
RECEIVE ANTENNA	10.0	FT.	48.8
RECEIVER WAVEGUIDE	20.0	FT. ELLIPTICAL	-0.7
FIELD FACTOR			-2.0
RECEIVE CARRIER			-27.8
NOISE PER MHZ	-114.0		
4MHZ CORRECTION	6.0		
RECEIVER NOISE FIGURE	7.0		
RECEIVER THERMAL NOISE	-101.0		
RECEIVER CARRIER-TO-NOISE RATIO WITHOUT AGC			73.2
FADE MARGIN TO 48.8 CARRIER-TO-NOISE			24.4

STATISTICAL ESTIMATES

MULTIPATH FACTOR (A X B) = 0.25
 CCIR CLIMATE REGION = C

HOURS PER YEAR BELOW 48.8 DB CARRIER-TO-NOISE: MULTIPATH	2.0
HOURS PER YEAR BELOW 48.8 DB CARRIER-TO-NOISE: RAIN	0.7
TOTAL HOURS PER YEAR BELOW 48.8 DB CARRIER-TO-NOISE	2.7
PERCENTAGE RELIABILITY	99.969

RH	PM	RS	DP		MK
EE	DE	RG	RC	DD	AC
FEB 26 1995					
File					

V. MAGNAVOX SYSTEM CONCEPT

A.) GENERAL CONFIGURATION AND CONSIDERATIONS

The system configuration outlined herein is consistent with the information received regarding the Sacramento, California, project.

1.) Subscriber Distribution Network

a.) The system shall be a single trunk, single feeder configuration (STSF) and shall be designed and spaced at 550 MHz, but initially balanced and implemented with a frequency band between 50 and 450 MHz downstream. Two way operation shall be considered during design and initial turn on. Two-way operation shall be initiated by the installation of return amplifier modules. No rebalancing or interruption of the forward signal path is necessary when activating the return path.

b.) The initial 450 MHz implementation shall be capable of delivering 60 television channels plus the FM broadcast band.

c.) At some future date, to be determined by SCRIPPS-HOWARD, the system can be upgraded to 50 to 550 MHz downstream. After upgrade the system shall be capable of delivering

77 television channels plus the FM broadcast band.

- d.) The return system shall be capable of carrying 4 television channels within a 5 to 30 MHz bandpass.
- e.) A status monitoring and signal disconnect system will be implemented. This can be installed initially or retrofitted at a later date. The initial design shall be adaptable for this system.

B.) DESIGN CRITERIA1.) Subscriber Distribution Network

- | | <u>Forward</u> | <u>Return</u> |
|--|----------------|---------------|
| a.) System Spaced at: | 50 to 550 MHz | 5-30 MHz |
| b.) Number of TV Channels: | 60 | 4 |
| c.) Tap Level Specifications | | |
| (Forward Signals) : | | |
| 14 dBmV min. @ 550 MHz | | |
| 9 dBmV min. @ 54 MHz | | |
| 3 dB window | | |
| d.) Multiple Dwelling Tapping: | | |
| Serve multiple dwellings with 9 units or more with a 20 dBmV minimum level at 550 MHz and use either a two-way tap, splitter or directional coupler. | | |
| e.) Cable Type: COMSCOPE PIII | | |
| .875" Trunk | | |
| .625" Feeder | | |
| f.) Forward automatic gain and slope amplifiers shall be located at every trunk station. | | |
| g.) All trunk stations shall be designed for two-way operation and the use of Digital System Sentry. | | |

- h.) Power shall be supplied via a 60 volt RMS AC power supply at 15 amperes rated load. Design shall load each supply to a maximum of 80% rated capacity for any power supply location.
- i.) Return thermatic gain and slope control amplifier modules shall be spaced approximately every 15 dB of cable at 30 MHz.
- j.) Design shall be calculated at 68°F.
- k.) Noise and distortion variations due to temperature change calculated as follows:

Cable Attenuation*:

<u>@ 450 MHZ</u>	<u>@ 550 MHZ</u>
1.0120 dB/100 ft @ + 68°F	1.1420 dB/100 ft @ + 68°F
.9614 dB/100 ft @ + 20°F	1.0849 dB/100 ft @ + 20°F
1.0626 dB/100 ft @ +120°F	1.1990 dB/100 ft @ +120°F

Cable Spacing Requirements*:

1838'

	<u>@ 450 MHZ</u>	<u>@ 550 MHZ</u>
<u>+ 68°F Gain (dB)</u>	18.6	21.0
Spacing (ft)	1838	1838
<u>+ 20°F Gain (dB)</u>	17.7	20.0
<u>+120°F Gain (dB)</u>	19.6	22.1

* 1% per 10°F variance in ambient (Source = cable manufacturer.)

Performance specifications required @68°F
to meet minimum recommended specifications
over the temperature range of +20°F to
+120°F.

21 dB Spacing

C/Dist. -55.5 dB

C/Noise 46.5 dB

C.) SYSTEM OPERATING LEVELS1.) Subscriber Distribution Network550 MHz spaced, but 450 MHz balanceda.) Forward System - PD TRK, P-P BRG, P-P LEX

a.1 Trunk Amplifier Station:

	Output Level (Note 2)	32.5 dBmV
<i>6 dB slope</i>	Gain	21.0 dB
	Input Level (Note 1)	11.5 dBmV

a.2 Bridger Amplifier:

	Output Level (Note 3)	44.0 dBmV
<i>8 dB slope</i>	Gain	27.0 dB
	Input Level (Note 1)	17.0 dBmV

a.3 Line Extender Amplifiers, Operating
with 2 in Cascade (Note 4)

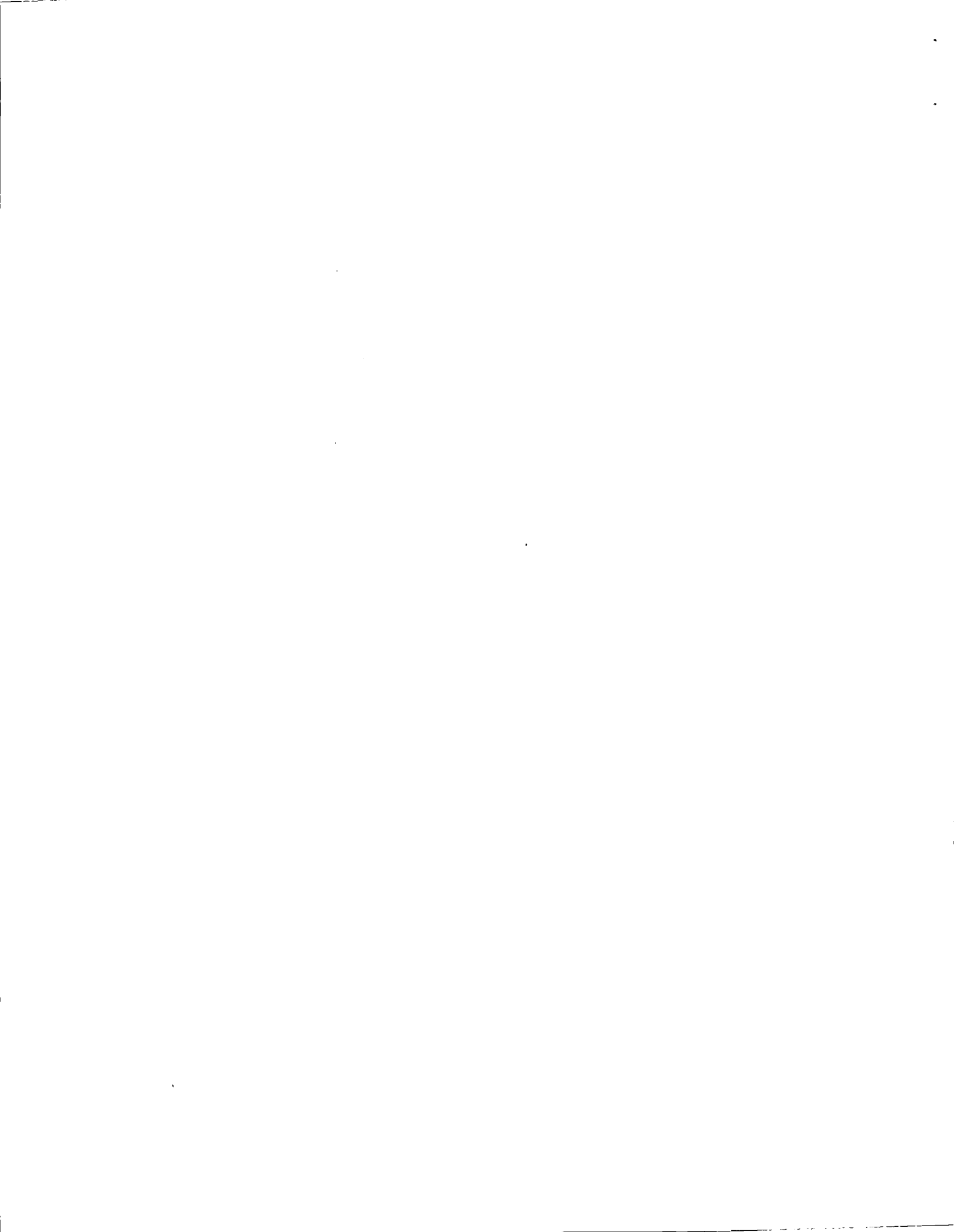
	Output Level (Note 3)	41.0 dBmV
	Gain	27.0 dB
	Input Level (Note 1)	14.0 dBmV

NOTES: (1) Design minimum level at 450 MHz.

(2) Levels include 6 dB incremental slope.

(3) Levels include 8 dB incremental slope.

(4) Line extender amplifiers are operated 3 dB
higher in level when used one in cascade.



D.) SYSTEM PERFORMANCE (Based on Levels of Section C)

MAGNAVOX guarantees the accuracy of the system specifications, as stated in the following sections, provided that the products not supplied by MAGNAVOX are of a sufficient quality to support the accuracy of the specifications as previously stated by MAGNAVOX, and that the construction, installation and operation of the system is in accordance with the standards of good engineering practices.

Special Considerations

MAGNAVOX considered the future of SCRIPPS-HOWARD'S applications in Sacramento by calculating system performance at both 450 MHz and 550 MHz implementations. The operating level shown can be used if a 450 or 550 MHz system is to be implemented. The system performances in the following section will be achieved as indicated for either 450 or 550 MHz.

The minimum expected performance is given along with the actual calculated performance. The minimum expected performance considers operation over the entire temperature extremes of +20 to +120°F.

The actual calculated performance is given by the computer printouts and is the expected performance at a 68°F balance temperature.

SCRIPPS-HOWARD should note the actual calculated performance far exceeds the minimum expected performance.

1.) Subscriber Distribution Network - 450 MHz:

The system performance shall be better than or equal to the stated values when operated at the levels and design criteria as listed in this proposal (sections B and C) and operational over the temperature swing from 20°F to +120°F, with a maximum of 20 Power DoublingTM trunk, 1 conventional push-pull bridger and 2 conventional push-pull line extender amplifiers in cascade.

	<u>FORWARD</u>
CARRIER-TO-NOISE RATIO	45.5 dB
CARRIER-TO-CROSS MODULATION	- 55.0 dB
CARRIER-COMPOSITE TRIPLE BEAT	- 53.0 dB
CARRIER-TO-DISCRETE SECOND ORDER	- 62.0 dB

SYSTEM: SACRAMENTO CA. - PD TRUNK / P-P BRIDGER / P-P LINE EXTENDER
 ** SPECIFICATIONS **

```

  //////////////////////////////////////
  DESIRED CHANNELS                60
  TRUNK SPACING                   21
  MAXIMUM BRIDGER GAIN            35
  MAXIMUM LINE EXTENDER GAIN     27
  ESTIMATED TRUNK CASCADE        20
  MAXIMUM LINE EXTENDER CASCADE   2
  TOP TEMPERATURE                 120
  LOW TEMPERATURE                 20
  DESIRED NOISE                   -46.5
  DESIRED CROSSMOD                -55.5
  DESIRED COMPOSITE BEAT         -55.5
  DESIRED SECOND ORDER            -62
  DESIRED THIRD ORDER             -65
  =====
  
```

** OPTIMUM OPERATING LEVELS **

```

  *****
  ITEM                TRUNK          BRIDGER          EXTENDER
  INPUT               11.5           17              14
  GAIN                21            27              27
  OUTPUT              32.5          44              41
  =====
  
```

TRUNK OPERATING BLOCK SLOPE = 6 DB
 FEEDER OPERATING BLOCK SLOPE = 8 DB
 AGC/ASC LOCATED EVERY 1 TRUNK STATION
 AGC LINE EXTENDERS LOCATED EVERY 0 STATION

** SYSTEM PERFORMANCE **

```

  *****
  TRUNK          BRIDGER          SYSTEM
  NOISE          -48.49           -48.37           -48.01
  CROSSMOD       -67.06           -61.5            -58.13
  COMPOSITE BEAT -66.06           -59.5            -56.72
  SECOND ORDER   -72.49           -70.17           -67.98
  THIRD ORDER    -78.98           -75.46           -72.96
  =====
  
```

DISTORTION AT 68 DEGREES TO MEET PERFORMANCE FROM 120 DEGEES TO 20 DEGREES.

** UNIT PERFORMANCE **

```

  *****
  TRUNK          BRIDGER          EXTENDER
  NOISE          -61.5           -64              -62
  CROSSMOD       -93.08           -68              -74
  COMPOSITE BEAT -92.08           -65              -74
  SECOND ORDER   -85.5           -74              -75
  THIRD ORDER    -105            -85              -91
  =====
  
```

55.5

37

68° chart

Chuck/Paul say this will be
MINIMUM combo they will
propose. Expect actually will go

MAGNAVOX UNIT/SYSTEM PERFORMANCE
02/15/85

PD TRK/PD BR/PD LE

SYSTEM LOCATION: PD TRK / P-P BRG / P-P LEX (450 MHZ)
XXXXXXXXXX TRUNK ONLY XXXXXXXXXXXXX ***** TOTAL SYSTEM *****
TRUNK C/NSE C/CTB C/2ND CHRMA C/NSE C/CTB C/2ND CHRMA
CSD

	C/NSE	C/CTB	C/2ND	CHRMA	C/NSE	C/CTB	C/2ND	CHRMA
1	61.50	92.08	85.50	0.00	56.26	60.12	69.75	0.00
2	58.49	86.06	82.49	0.00	55.12	59.90	69.64	0.00
3	56.73	82.54	80.73	0.00	54.22	59.69	69.53	0.00
4	55.48	80.04	79.48	0.00	53.48	59.49	69.42	0.00
5	54.51	78.10	78.51	0.00	52.84	59.28	69.31	0.00
6	53.72	76.52	77.72	0.00	52.29	59.09	69.21	0.00
7	53.05	75.18	77.05	0.00	51.79	58.90	69.11	0.00
8	52.47	74.02	76.47	0.00	51.35	58.71	69.01	0.00
9	51.96	73.00	75.96	0.00	50.95	58.52	68.91	0.00
10	51.50	72.08	75.50	0.00	50.59	58.34	68.82	0.00
11	51.09	71.25	75.09	0.00	50.25	58.17	68.73	0.00
12	50.71	70.50	74.71	0.00	49.93	57.99	68.64	0.00
13	50.36	69.80	74.36	0.00	49.64	57.82	68.55	0.00
14	50.04	69.16	74.04	0.00	49.37	57.66	68.46	0.00
15	49.74	68.56	73.74	0.00	49.11	57.49	68.38	0.00
16	49.46	68.00	73.46	0.00	48.86	57.33	68.29	0.00
17	49.20	67.47	73.20	0.00	48.63	57.17	68.21	0.00
18	48.95	66.97	72.95	0.00	48.42	57.02	68.13	0.00
19	48.71	66.50	72.71	0.00	48.21	56.87	68.05	0.00
20	48.49	66.06	72.49	0.00	48.01	56.72	67.97	0.00
21	48.28	65.64	72.28	0.00	47.82	56.57	67.90	0.00
22	48.08	65.23	72.08	0.00	47.64	56.43	67.82	0.00
23	47.88	64.85	71.88	0.00	47.46	56.28	67.75	0.00
24	47.70	64.48	71.70	0.00	47.29	56.14	67.68	0.00
25	47.52	64.12	71.52	0.00	47.13	56.01	67.61	0.00
26	47.35	63.78	71.35	0.00	46.98	55.87	67.54	0.00
27	47.19	63.45	71.19	0.00	46.82	55.74	67.47	0.00
28	47.03	63.14	71.03	0.00	46.68	55.61	67.40	0.00
29	46.88	62.83	70.88	0.00	46.54	55.48	67.33	0.00
30	46.73	62.54	70.73	0.00	46.40	55.35	67.27	0.00
31	46.59	62.25	70.59	0.00	46.27	55.22	67.20	0.00
32	46.45	61.98	70.45	0.00	46.14	55.10	67.14	0.00
33	46.31	61.71	70.31	0.00	46.02	54.98	67.08	0.00
34	46.19	61.45	70.19	0.00	45.90	54.86	67.01	0.00
35	46.06	61.20	70.06	0.00	45.78	54.74	66.95	0.00

POWER DOUBLING TRUNK
PUSH PULL BRIDGER
PUSH PULL LINE EXTENDERS

SYSTEM: SACRAMENTO, CA. - PD TRUNK / P-P BRIDGER / P-P LINE EXTENDER

*** Specifications ***

////////////////////////////////////		
Desired Channels	77	(550M HZ)
Trunk Spacing	21	
Maximum Bridger Gain	35	
Maximum Line Extender Gain	27	
Estimated Trunk Cascade	20	← 20 TR
Maximum Line Extender Cascade	2	
Top Temperature	120	
Low Temperature	20	
Desired Noise	- 46.5	
Desired Crossmod	- 55.5	
Desired Composite Beat	- 55.5	
Desired Second Order	- 62	
Desired Third Order	- 65	

*** Optimum Operating Levels ***

Item	Trunk	Bridger	Extender
Input	10	15.5	14
Gain	21	28.5	27
Output	31	44	41

Trunk Operating Block Slope = 8 DB
 Feeder Operating Block Slope = 10 DB
 ACC/ASC Located Every 1 Trunk Station
 ABC Line Extenders Located Every 0 Station

*** System Performance ***

	Trunk	Bridger	Extender
Noise	-46.99	46.93	46.77 → $\Sigma = 42.1$
Crossmod	-67.98	61.46	67.77 → $\Sigma = 49.9$
Composite Beat	-65.98	59.46	55.77 → $\Sigma = 40.7$
Second Order	-69.99	68.23	65.10
Third Order	-73.98	71.60	66.69

THESE ARE COMBINED VALUES

Distortion at 68 Degrees to Meet Performance From 120 Degrees to 20 Degrees.

*** Unit Performance ***

	Trunk	Bridger	Extender
Noise	60	65	63
Crossmod	94	67	73
Composite Beat	92	65	71
Second Order	83	73	71
Third Order	100	84	80

THIS CAN'T BE RIGHT!
 67.77 > 61.46!
 DE 57.8

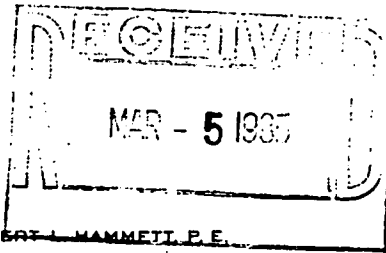
550 MHz

MAGNAVOX UNIT/SYSTEM PERFORMANCE
02/15/85

SYSTEM LOCATION: PD TRK / P-P BRG / P-P LEX (550 MHz)
XXXXXXXXXX TRUNK ONLY XXXXXXXXXXXXX ***** TOTAL SYSTEM *****
TRUNK C/NSE C/CTB C/2ND CHRMA C/NSE C/CTB C/2ND CHRMA
CSD

	C/NSE	C/CTB	C/2ND	CHRMA	C/NSE	C/CTB	C/2ND	CHRMA
1	60.00	92.00	83.00	0.00	56.35	58.78	66.70	0.00
2	56.99	85.98	79.99	0.00	54.79	58.59	66.60	0.00
3	55.23	82.46	78.23	0.00	53.65	58.41	66.50	0.00
4	53.98	79.96	76.98	0.00	52.74	58.23	66.40	0.00
5	53.01	78.02	76.01	0.00	51.99	58.05	66.31	0.00
6	52.22	76.44	75.22	0.00	51.36	57.88	66.22	0.00
7	51.55	75.10	74.55	0.00	50.80	57.71	66.12	0.00
8	50.97	73.94	73.97	0.00	50.31	57.54	66.04	0.00
9	50.46	72.92	73.46	0.00	49.86	57.38	65.95	0.00
10	50.00	72.00	73.00	0.00	49.46	57.22	65.87	0.00
11	49.59	71.17	72.59	0.00	49.09	57.06	65.78	0.00
12	49.21	70.42	72.21	0.00	48.76	56.91	65.70	0.00
13	48.86	69.72	71.86	0.00	48.44	56.76	65.62	0.00
14	48.54	69.08	71.54	0.00	48.15	56.61	65.54	0.00
15	48.24	68.48	71.24	0.00	47.87	56.46	65.46	0.00
16	47.96	67.92	70.96	0.00	47.61	56.32	65.39	0.00
17	47.70	67.39	70.70	0.00	47.37	56.18	65.31	0.00
18	47.45	66.89	70.45	0.00	47.14	56.04	65.24	0.00
19	47.21	66.42	70.21	0.00	46.92	55.90	65.17	0.00
20	46.99	65.98	69.99	0.00	46.71	55.76	65.10	0.00
21	46.78	65.56	69.78	0.00	46.51	55.63	65.03	0.00
22	46.58	65.15	69.58	0.00	46.32	55.50	64.96	0.00
23	46.38	64.77	69.38	0.00	46.14	55.37	64.89	0.00
24	46.20	64.40	69.20	0.00	45.97	55.24	64.82	0.00
25	46.02	64.04	69.02	0.00	45.80	55.12	64.76	0.00
26	45.85	63.70	68.85	0.00	45.64	55.00	64.69	0.00
27	45.69	63.37	68.69	0.00	45.48	54.87	64.63	0.00
28	45.53	63.06	68.53	0.00	45.33	54.75	64.57	0.00
29	45.38	62.75	68.38	0.00	45.18	54.64	64.51	0.00
30	45.23	62.46	68.23	0.00	45.04	54.52	64.44	0.00
31	45.09	62.17	68.09	0.00	44.91	54.40	64.38	0.00
32	44.95	61.90	67.95	0.00	44.77	54.29	64.33	0.00
33	44.81	61.63	67.81	0.00	44.64	54.18	64.27	0.00
34	44.69	61.37	67.69	0.00	44.52	54.07	64.21	0.00
35	44.56	61.12	67.56	0.00	44.40	53.96	64.15	0.00

POWER DOUBLING TRUNK
PUSH PULL BRIDGER
PUSH PULL LINE EXTENDER



HAMMETT & EDISON, INC.
 CONSULTING ENGINEERS
 RADIO AND TELEVISION

ROBERT L. HAMMETT, P. E.
 EDWARD EDISON, P. E.
 ROBERT P. SMITH
 F. PAUL MONACO
 DAVID J. PINION, P. E.

 RALPH G. GROVER
 DANE E. ERICKSEN, P. E.

BOX 68, INTERNATIONAL AIRPORT
 SAN FRANCISCO, CALIFORNIA 94128

 AREA CODE 415
 342-5208

 1400 ROLLINS ROAD
 BURLINGAME, CALIFORNIA 94010

March 4, 1985

FEDERAL EXPRESS

Mr. Robert E. Smith
 Executive Director
 Sacramento Metropolitan Cable
 Television Commission
 700 H Street, Room 2500
 Sacramento, California 95801-1280

Dear Bob:

This letter will provide our recommendations in regard to the Sacramento Cable Television Alternative System Design Request of February 20, 1985. Subject to the stipulations and conditions which follow, it is our recommendation that the alternative system design for a 550 MHz single-cable system for Sacramento be approved.

550 MHz Plant Initially Activated To 450 MHz

Sacramento Cable Television (SCT) proposes a single-cable subscriber network with trunk and feeder amplifiers spaced for 550 MHz, but initially activated only to 450 MHz.

SCT has provided Hammett & Edison with amplifier specifications and calculations for various combinations of conventional push-pull, power-doubling, and feed-forward amplifier technologies. Based upon these technical specifications, and the stipulation by SCT that it will select as a minimum configuration a combination of active electronics meeting or exceeding a 46.7 dB carrier-to-noise ratio, a -57.8 dB cross-modulation ratio, and a -55.8 dB composite-triple-beat ratio at 550 MHz, the following technical performance is predicted at the most distant subscriber terminal:

	<u>At 450 MHz</u>	<u>At 550 MHz</u> <u>(when activated)</u>	<u>Resolution</u> <u>Minimum</u>
Carrier-to-noise ratio	47.9 dB	46.6 dB	45.4 dB
Cross-modulation ratio	-56.1	-55.9	-51.3
Composite-triple-beat ratio	-54.8	-54.0	-53.3

The above figures include the effects of the proposed AM microwave distribution system in the unfaded state. Because of the improved performance of power-doubling and feed-forward amplifiers, and the addition of two hubs to compensate for the reduced "reach" of a 550 MHz system compared to a 400 MHz system, it is possible to obtain an improvement in the net system performance.

Change to Master Hub Design

SCT now proposes a master hub design, utilizing AM microwave to distribute programs to six hubs. Five hubs would serve Sacramento City and County and Folsom, and a sixth hub would serve Galt. A single satellite receive-only facility would be installed at the downtown master hub, with microwave distribution of satellite signals to other hubs, as opposed to satellite receiving facilities at each hub. We have reviewed in detail the Hughes proposal for an 80-channel microwave system. We recommend accepting an all-AML microwave distribution system for the Sacramento system subject to the following conditions:

1. The Folsom and Galt paths must employ "space-combining" techniques to increase the effective transmit power, and must utilize at least 10-foot diameter transmit and receive antennas.
2. The Carmichael path, and any other path exceeding 10 miles, may be required to utilize space-combining techniques and 10-foot diameter transmit and receive antennas, if deemed necessary by Hammett & Edison.
3. A revised frequency coordination study must be performed, to correct for geographical coordinate errors in the initial study, and the apparent discrepancies in the frequency coordinator's data base for various broadcast microwave facilities in the 13 GHz band must be resolved to our satisfaction.
4. The frequency coordination study must successfully clear at least 53 six-MHz video channels plus spectrum for the FM broadcast band, and these channels be successfully licensed by the Federal Communications Commission. To this end, it is imperative that SCT immediately file for the cleared frequencies.
5. Each microwave receive site must employ hot-standby receiving facilities, with the appropriate switching capabilities. The master-hub must employ hot-standby equipment for those critical portions of the microwave transmitter which could cause a system-wide outage.
6. Tests must be conducted on the 20-mile Folsom path and the 24-mile Galt path for a summer period of up to three months, utilizing a strip chart recorder and the actual antennas which will be permanently installed, to verify that satisfactory path performance exists. In the event that

Hammett & Edison concludes that such tests reveal unacceptable reliability, SCT must agree to take mitigating measures, including installation of diversity receiving antennas, construction of a stand-alone headend or such other steps as deemed necessary by Hammett & Edison to insure satisfactory reliability.

Path Reliability Calculations

It is possible to estimate the reliability of a given microwave path if certain parameters are known. The model for estimating reliability due to multipath fading is based upon work by Barnett and Vigants of Bell Telephone Laboratories and considers frequency, path length, fade margin, intervening terrain, and climate. The fade margin is a measure by which the received signal, under normal (non-faded) conditions, exceeds the level necessary for a given signal-to-noise ratio. The model for estimating reliability due to rain attenuation is based upon the International Radio Consultative Committee (CCIR) model and Crane's model for effective path length. While these models for estimating reliability of a microwave system are in common usage, it should be realized that they are estimates.

For the Folsom microwave path a comparison has been made of the estimated reliability of the AM microwave system now proposed to the FM microwave system originally proposed, with the following results:

	<u>Original Proposal</u>	<u>Present Proposal</u>
Estimated reliability to 33.2 dB carrier-to-noise ratio ("signal outage" criteria)	>99.999% 0.01 hours/year 0.1 seconds/day	>99.999% 0.09 hours/year 0.9 seconds/day
Estimated reliability to 45.0 dB carrier-to-noise ratio	99.993% 0.65 hours/year 6.4 seconds/day	99.965% 3.3 hours 33 seconds/day
Estimated reliability to 45.4 dB carrier-to-noise ratio (Resolution minimum)	99.940% 5.3 hours/year 52 seconds/day	99.953% 4.1 hours/year 40 seconds/day

Some comments on the above numbers are appropriate. A fade margin of 40 dB or greater is considered desirable in a microwave system, and a system reliability figure of 99.99% is recommended by Electronics Industries Association Standard RS-250-B. While 99.99% reliability may appear to be extremely high, this still represents 53 minutes of outage per year, although the outage would not be expected to occur in a single 53-minute incident. Although the AM microwave system now proposed has an estimated reliability during deeper fades which is several times

worse than the originally-proposed FM microwave system, the AML system still exceeds the RS-250-B standard; it is our opinion that the difference is not significant. It is our judgment that, given the stipulations discussed above, the all-AML microwave distribution system is of comparable reliability to the microwave system originally proposed. Due to the use of high-power AML transmitters and space-combining techniques, the estimated reliability for the path to Galt improves over the original proposal.

We wish to clearly state that on the longer microwave paths, there is a possibility of a propagation anomaly referred to as "beam bending", which is not considered in the multipath and rain attenuation models. Beam bending may occur when the microwave signal passes through relatively stagnant air with different refractive indices, causing the beam to be refracted, or bent, from the expected path. Because there is no recognized model for predicting this phenomenon, we are conditioning our recommendation on the inclusion of path tests for Folsom and Galt, to be conducted at appropriate seasons.

Tower Required for Galt

Because of the increased length of the path to Galt, the proposed receive antenna height on the Galt water tower will be insufficient to provide at least one Fresnel zone clearance. Accordingly, the Galt hub will require a tower of sufficient height to place the receive antenna at least 105 feet above ground level. Greater height would be required in the event space diversity reception is deemed necessary. The requirement for a tower at Galt may make it impractical to serve Galt during the second year of construction, as was suggested by SCT. It should likewise be noted that, if space-diversity reception is deemed necessary for Folsom, construction of a moderate height tower at the Folsom hub would probably be required.

Adequate System Capacity at 450 MHz

The revised channel line-up submitted by SCT proposes carriage of 52 video channels. Three more channels should be considered as committed for Channel 29 in Sacramento and Channels 58 and 64 in Stockton, which hold FCC construction permits and would be entitled to mandatory carriage. Three additional video channels should be considered as reserved to meet the requirements for 20 MHz of institutional carriage on the subscriber network. Activation of the 550 MHz single-cable system to 450 MHz would provide a 60 video channel capability, and would accommodate the 52 immediately-needed video channels, the three channels reserved for future local television broadcast stations, and three channels for institutional use.

Capability of Microwave System to Support 550 MHz Cable Distribution System

The Compucon frequency coordination study dated February 25, 1985, indicated that 53 video channels plus the FM broadcast spectrum could be licensed in Sacramento. Although this study must be redone to correct multiple errors in site

coordinates and power levels, we consider it likely that Community Antenna Relay Service (CARS) microwave frequencies to support at least 53 video channels plus the FM broadcast band can ultimately be obtained. In the event additional microwave frequencies for future channel expansion cannot be obtained when needed, up to 16 microwave channels could be made available by the following techniques:

- A. Utilize direct off-air pick-up at each hub of all local television stations. This could free up to nine microwave channels.
- B. Utilize direct off-air pick-up at each hub of all FM broadcast signals. This could free up to three microwave channels.
- C. Locally generate at each hub cable channel 14 (AP Sports News), cable channel 15 (AP Sports Scores), cable channel 29 (Channel Directory), and cable channel 44 (Financial News/Stock Reports/Local Time and Weather). This could free up to four microwave channels.

Assuming that at least 53 microwave channels have been licensed, by adopting the above techniques it would be possible to support up to a 69-channel cable system. Thus, it appears that there are immediately available sufficient microwave frequencies to support a fully-loaded 450 MHz, 60-channel, cable system. When system activation to 550 MHz, or 77 channels, is triggered, between 61 and 77 microwave channels would be required. Present FCC Rules for CARS microwave stations allow up to 71 six-MHz channels. It is conceivable that up to 80 channels would be possible with an FCC waiver, although we consider it unlikely that a waiver for the top nine channels of the E-Group CARS frequencies could be obtained.

We thus conclude that the SCT proposal to utilize all AML microwave for downstream distribution has a theoretical capacity to support a 77 channel cable system. Whether or not at least 61 microwave channels could be licensed at some future date, when the full 550 MHz capacity is needed, would depend on the state of the microwave spectrum at that future date.

Possible interference from mobile users. The 13 GHz CARS band is shared with the Television Auxiliary Broadcast Service. Because this service includes mobile users, it is possible that occasional interference may be received. We do not consider this to be a significant threat, and FCC Rule Section 74.602(f) requires TV pick-up stations using the 13 GHz band to protect community antenna relay stations.

Hub Return Interconnect Capacity

SCT has indicated to us that the alternative system design will utilize 30 MHz supertrunk returns from each hub (including Galt). While this represents much less return interconnect capacity than originally proposed, it is our judgment that this will still provide sufficient capacity to support the foreseeable return interconnect needs for the subscriber network.

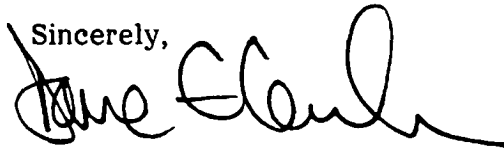
Amplifier Pedestals. Conversion to a single-cable design would allow use of smaller amplifier pedestals and enclosures, but could require up to 17 percent more such pedestals, depending upon the ultimate amplifier configuration adopted. An equipment substitution request would be required for the smaller pedestals.

Equipment Substitution Requests

The SCT alternative system design request will require equivalency findings for all active electronics, set-top converters, and taps and directional couplers. Based upon the preliminary data for the 450 MHz and 550 MHz Magnavox and Scientific Atlanta electronics supplied to us, we do not anticipate difficulty in reaching an equivalency finding for these items.

In regard to the SCT proposal to substitute 60% braid drop cable for the quad shield drop cable originally bid, SCT has informally indicated to us that the reference to a simple 60% braid drop cable in its February 20 alternative system design request was in error. The reference should have been to a 67% braid-plus-foil drop cable. Provided SCT agrees to utilize only messengered cable for aerial drops, we believe a finding of equivalency could be made. Upon receipt of a specific drop cable equivalency request, we will make a detailed evaluation.

Sincerely,



Dane E. Ericksen

ac

CERTIFICATE OF ACKNOWLEDGEMENT
AND UNDERTAKING

WHEREAS, the FRANCHISEE has requested that the COMMISSION approve certain technical changes to the design of the Sacramento cable television system, clarify the Franchise Documents with respect to additional issues, and assist it with respect to certain matters; and

WHEREAS, SCRIPPS-HOWARD BROADCASTING COMPANY, an Ohio corporation, is desirous of approving the amendments to the Franchise Resolution, as well as all other provisions contained in Resolution No. 85-_____;

NOW, THEREFORE, SCRIPPS-HOWARD BROADCASTING COMPANY, an Ohio corporation, for itself, its successors, assigns and guarantors, hereby unconditionally, irrevocably and without reservation approves, agrees to and accepts the amendments to the Franchise Resolution and all other provisions set forth in Resolution No. 85-_____ dated March _____, 1985. By the execution, delivery and filing of this Certificate, the undersigned further:

(1) To the extent provided in Section I-14 of the Franchise Resolution and its Certificate of Acceptance dated December 23, 1983, covenants and promises to faithfully undertake and perform each and every promise, covenant, commitment and undertaking contained in the Franchise Documents as amended by Resolution No. 85-_____;


(2) Represents and warrants that the execution and delivery of this Certificate has been duly authorized and approved by the Board of Directors of the undersigned;

(3) Represents and warrants that the person who has executed this Certificate is duly authorized to do so by all necessary corporate action; and

(4) Represents and warrants that the execution and delivery of this Certificate does not violate any provision of the Articles of Incorporation or Bylaws of the undersigned.

In witness whereof, this Certificate is executed effective March 4, 1985.

SCRIPPS-HOWARD BROADCASTING
COMPANY, an Ohio corporation

By: 
DONALD L. FERRIS,
Its President

CERTIFICATE OF ACKNOWLEDGEMENT
AND UNDERTAKING

WHEREAS, the FRANCHISEE has requested that the COMMISSION approve certain technical changes to the design of the Sacramento cable television system, clarify the Franchise Documents with respect to additional issues, and assist it with respect to certain matters; and

WHEREAS, the FRANCHISEE is desirous of approving the amendments to the Franchise Resolution, as well as all other provisions contained in Resolution No. 85-_____;

NOW, THEREFORE, the FRANCHISEE, for itself, its successors, assigns and guarantors, hereby unconditionally, irrevocably and without reservation approves, agrees to and accepts the amendments to the Franchise Resolution and all other provisions set forth in Resolution No. 85-_____ dated March _____, 1985. By the execution, delivery and filing of this Certificate, the undersigned further:

(1) Covenants and promises to faithfully undertake and perform each and every promise, covenant, commitment and undertaking contained in the Franchise Documents as amended by Resolution No. 85-_____;

(2) Represents and warrants that the execution and delivery of this Certificate has been duly authorized and approved by the general partners the undersigned;

(3) Represents and warrants that the person who has executed this Certificate is duly authorized to do so by all necessary action of the FRANCHISEE; and

(4) Represents and warrants that the execution and delivery of this Certificate does not violate any provision of the partnership agreement of the undersigned.

In witness whereof, this Certificate is executed effective March 4, 1985.

SACRAMENTO CABLE TELEVISION

By: Donald L. Perris
DONALD L. PERRIS,
President of SCRIPPS-HOWARD
CABLE COMPANY OF SACRAMENTO,
a Delaware corporation, a
partner of the FRANCHISEE

CERTIFICATE OF ACKNOWLEDGEMENT
AND UNDERTAKING

WHEREAS, the FRANCHISEE has requested that the COMMISSION approve certain technical changes to the design of the Sacramento cable television system, clarify the Franchise Documents with respect to additional issues, and assist it with respect to certain matters; and

WHEREAS, SCRIPPS-HOWARD CABLE COMPANY OF SACRAMENTO, a Delaware corporation, is desirous of approving the amendments to the Franchise Resolution, as well as all other provisions contained in Resolution No. 85-_____;

NOW, THEREFORE, SCRIPPS-HOWARD CABLE COMPANY OF SACRAMENTO, a Delaware corporation, for itself, its successors, assigns and guarantors, hereby unconditionally, irrevocably and without reservation approves, agrees to and accepts the amendments to the Franchise Resolution and all other provisions set forth in Resolution No. 85-_____ dated March ____, 1985. By the execution, delivery and filing of this Certificate, the undersigned further:

(1) Covenants and promises to faithfully undertake and perform each and every promise, covenant, commitment and undertaking contained in the Franchise Documents as amended by Resolution No. 85-_____;

(2) Represents and warrants that the execution and delivery of this Certificate has been duly authorized and approved by the Board of Directors of the undersigned;

(3) Represents and warrants that the person who has executed this Certificate is duly authorized to do so by all necessary corporate action; and

(4) Represents and warrants that the execution and delivery of this Certificate does not violate any provision of the Articles of Incorporation or Bylaws of the undersigned.

In witness whereof, this Certificate is executed effective March 4, 1985.

SCRIPPS-HOWARD CABLE COMPANY
OF SACRAMENTO, a Delaware
corporation

BY: Donald L. Ferris
DONALD L. PERRIS,
Its President

CERTIFICATE OF ACKNOWLEDGMENT
AND UNDERTAKING

WHEREAS, the FRANCHISEE has requested that the COMMISSION approve certain technical changes to the design of the Sacramento cable television system, clarify the Franchise Documents with respect to additional issues, and assist it with respect to certain matters; and

WHEREAS, RIVER CITY CABLEVISION, INC., a California corporation, is desirous of approving the amendments to the Franchise Resolution, as well as all other provisions contained in Resolution No. 85-_____;

NOW, THEREFORE, RIVER CITY CABLEVISION, INC., a California corporation, for itself, its successors, assigns and guarantors, hereby unconditionally, irrevocably and without reservation approves, agrees to and accepts the amendments to the Franchise Resolution and all other provisions set forth in Resolution No. 85-_____ dated March _____, 1985. By the execution, delivery and filing of this Certificate, the undersigned further:

(1) Covenants and promises to faithfully undertake and perform each and every promise, covenant, commitment and undertaking contained in the Franchise Documents as amended by Resolution No. 85-_____;

(2) Represents and warrants that the execution and delivery of this Certificate has been duly authorized and approved by the Board of Directors of the undersigned;

(3) Represents and warrants that the person who has executed this Certificate is duly authorized to do so by all necessary corporate action; and

(4) Represents and warrants that the execution and delivery of this Certificate does not violate any provision of the Articles of Incorporation or Bylaws of the undersigned.

In witness whereof, this Certificate is executed effective March 4, 1985.

RIVER CITY CABLEVISION, INC.,
a California corporation

By Ray T. Butler
RAYMOND T. BUTLER,
Its President