



MICHIGAN

DEPARTMENT OF STATE HIGHWAYS

November 8, 1971

To: S. F. Cryderman
Engineer of Transportation Planning

From: Max N. Clyde

Subject: Noise Impact on Community Building and Pleasant Ridge Recreation Area, due to proposed I 696 Extension. Research Project 71 TI-74, Research Report No. R-793 (EV No. 10)

This is in response to a letter to H. E. Stafseth, dated August 19, 1971, from H. F. DeSimone, Assistant Secretary for Environment and Urban Systems, Department of Transportation, relative to the status of the Oakland County I 696 Section 4 (f) determination. The following specifically refers to the letter attachment titled, "Detailed Comments, Section 4 (f), I 696, Oakland County, Michigan," II d. 3(a) and (b), concerning the impact of noise on the Pleasant Ridge Recreation Area Community Building activities and also potential noise reduction methods.

Three photographs of the site are attached showing: 1) north and west exterior walls of the main building; 2) a view of the building's main meeting room, having a capacity of 130 persons and occupying part of the north portion of the building and, 3) a view of the swimming pool and bathhouse on the south side of the building.

Impact on Interior Activities

Paragraph II. d. 3(a) of the comments requests consideration of the noise impact on activities within the building. To provide some insight into the nature of these activities a copy of the 1971 fall program, for Pleasant Ridge recreations, is attached. Not all the activities in the schedule take place inside the building but some are of the indoor type and of a nature requiring relatively low noise levels - on the order of 45 to 55 dBA.

Unfortunately, current noise simulation programs are not sufficiently developed to provide realistic noise level predications for a site of the geometric complexity found here. However, an engineering estimate indicates an L10 value of about 75 dBA impinging on the building exterior. This, therefore, indicates a need for a 25 dBA attenuation from outside to inside.

The building walls are of concrete block construction and should provide the necessary attenuation, but the window areas will require some form of treatment. Mr. Robert McCann, Recreation Director, states that the windows are normally closed as the building is fully air-conditioned. Based on the assumption that the windows may remain closed it is feasible to provide acoustical treatment which will bring their noise attenuation capability

up to a par with the block walls. One effective treatment would be to replace the present windows with glass blocks; however, if it is desired or necessary to retain see-through visibility then a multi-pane treatment would be required.

Impact on Outdoor Activities

Outdoor activities can be assumed to be the usual football, baseball or softball, volleyball, swimming, lounging, picnicing, etc. There are no established or suggested criteria for acceptable noise levels for such activities and it is, therefore, difficult to assess the impact of traffic noise. Further complicating the problem at this time is the fact that present outdoor activities are taking place in an area which falls within the proposed I 696 right-of-way. The location of replacement land is not finalized as yet so an impact estimate is not appropriate. However, if the replacement land falls to the south of the community building and swimming pool, the impact from expressway traffic will be greatly reduced. Outdoor activities could be enhanced by a visual screen to reduce headlight glare and to increase privacy.

Other Considerations

Mr. Louis Barry, City Manager of Pleasant Ridge, stated that the MDSH consultant Vilican, Lehman Associates, Inc., has suggested erection of an 8-ft high serpentine brick wall along the north border of the recreation area. Such a wall, if properly constructed and landscaped, could improve area esthetics and privacy and eliminate the need for window treatment on the building. It is, therefore, worthy of further consideration.

The comments include reference to a narrower right-of-way and to the use of walls adjacent to the roadway rather than slopes. We cannot comment on the narrower right-of-way except that no benefit of significance is foreseen from a few less feet of right-of-way and it could reduce the noise treatment options available to the Department.

Slope treatment adjacent to the roadway will absorb some of the noise and prevent sound reflecting into the recreation area. Vertical walls, on the other hand (depressed construction), will effect more attenuation than slopes but unless these walls have absorbent surfaces reflections into adjacent areas can occur. Research on the matter of absorbent wall surfaces is continuing but no acceptable method has yet been attained.

The project plans indicate that the roadway will be depressed in the subject area. This depression will decrease noise levels but ramp and service road traffic may offset the reductions.

Finally, in the matter of roadside plantings, it should be understood that while plantings may improve area esthetics and possibly effect some slight psychological attenuation of adverse subjective reaction to noise, vegeta-

tion is not recommended for noise reduction. To achieve any significant noise attenuation, in the range of 10 to 20 dBA, would require at least a 100-ft belt of very dense growth with a center height of 40 to 50 feet. For many reasons this is totally impractical on this project.

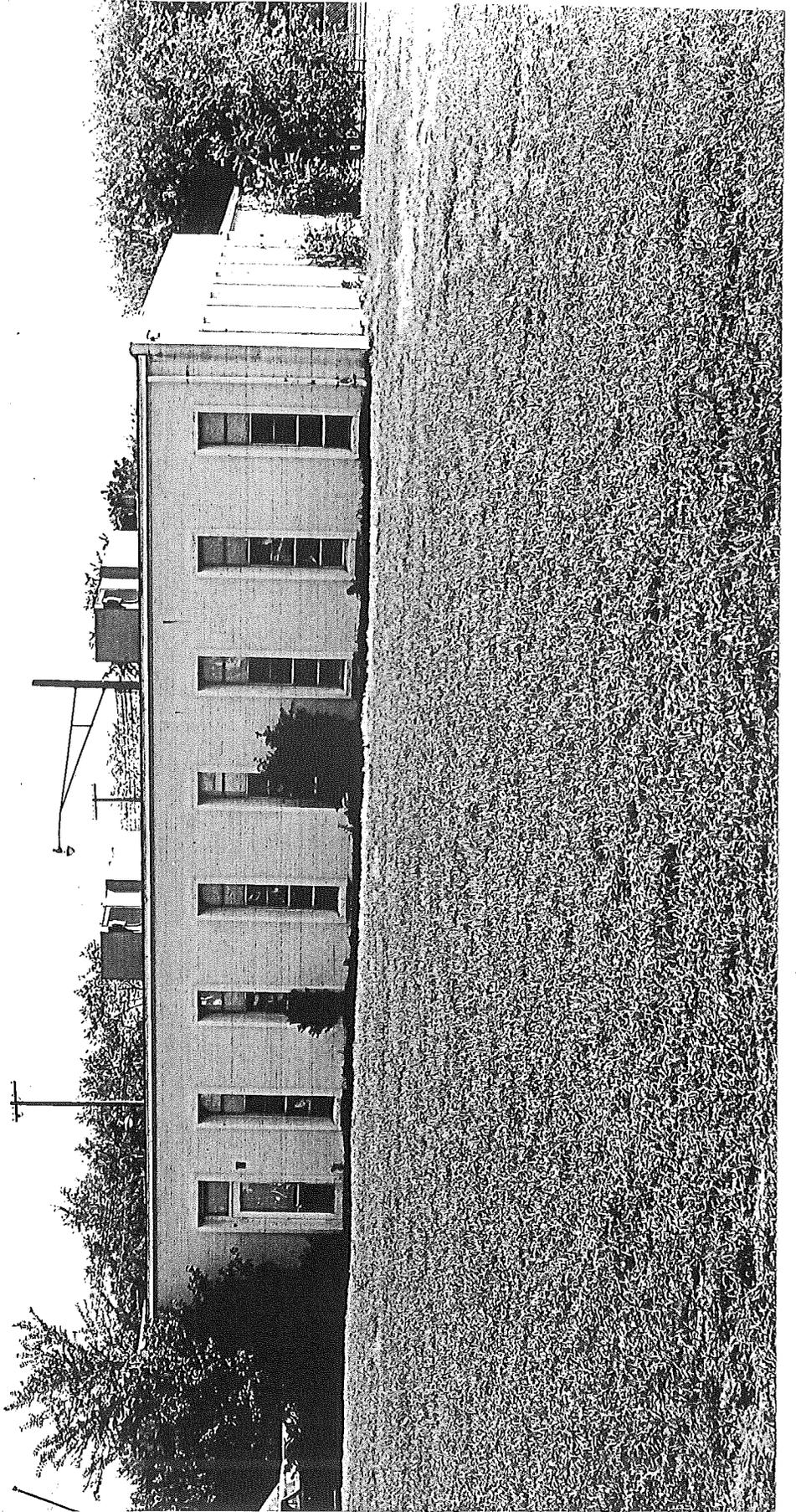
TESTING AND RESEARCH DIVISION

Max N. Clyde

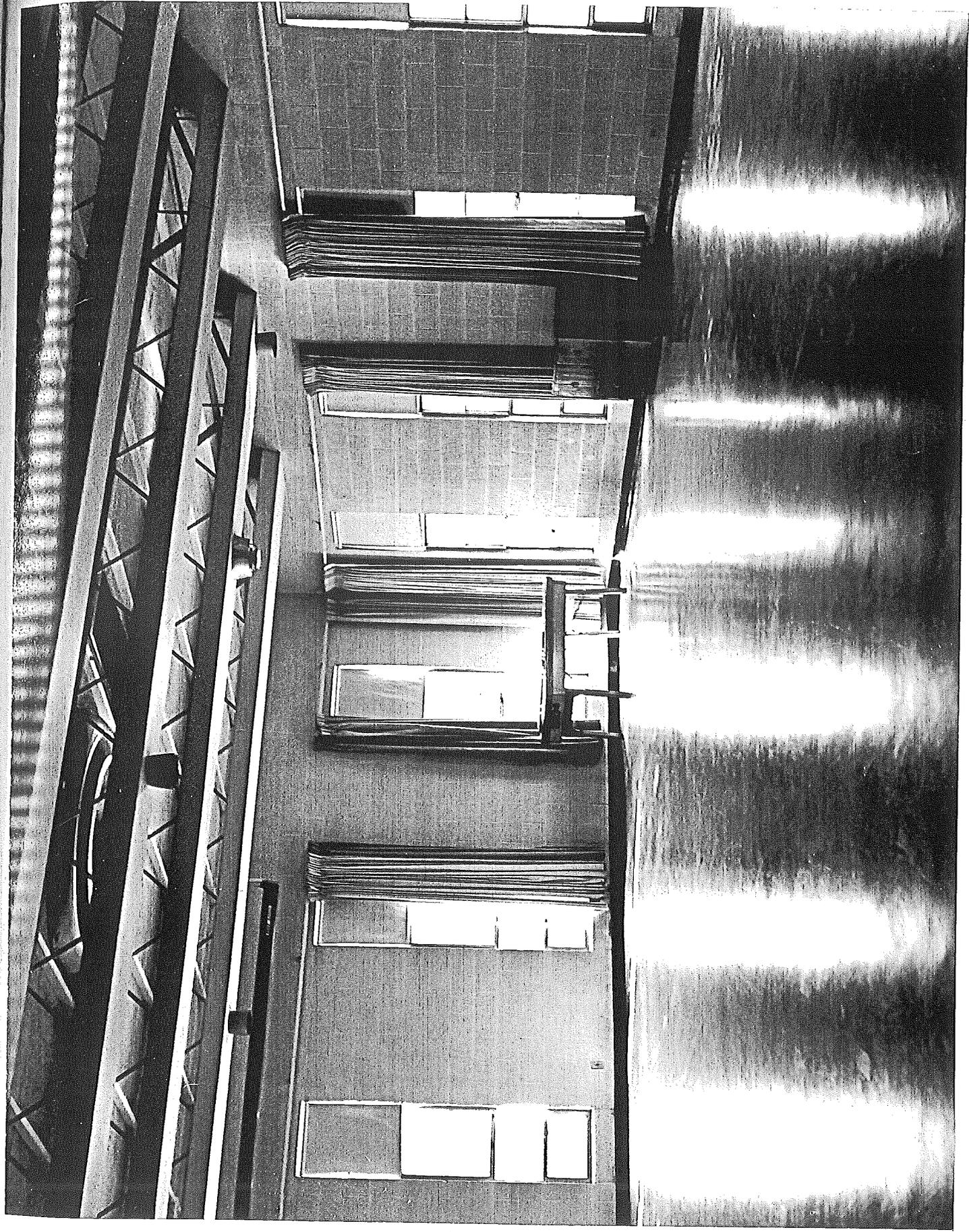
Engineer of Testing & Research

MNC:bf

cc: L. T. Oehler
G. Robert Adams
Jon Raad







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CITY OF PLEASANT RIDGE
DEPARTMENT OF RECREATION
4 RIDGE ROAD 542-7322

FALL PROGRAM - 1971

REGISTRATION INFORMATION:

Pre-Registration is recommended for all classes and will be taken at the Recreation Department, 4 Ridge Road, or by Mail on a first come - first served basis. No telephone registrations will be accepted.

Please make checks payable to "City of Pleasant Ridge."

BOY'S GAMES CLASS:

Basketball, dodgeball, relays and directed free play will be the fun and exercise to enjoy in this games class for boys in the second (2nd) through fourth (4th) grades. This twelve (12) week program will be at Roosevelt School Gym on Wednesdays at 3:45 p.m., starting September 29th. A \$2.00 pre-registration fee will be charged and all registration forms must be made at the Pleasant Ridge Recreation Dept. DO NOT take to Roosevelt School office.

WOMEN'S TRIMNASTIC CLASSES:

Again, we are offering two (2) Women's Trimnastic classes this fall for the woman who wishes to enjoy group fun and exercise.

- Monday Class ... Starts September 27 at 9:30 a.m.
- Wednesday Class ... Starts October 6 at 9:30 a.m.

A fee of \$7.00 will be charged for this twelve (12) week program. Leotards or tights without feet are recommended, but not required. If possible, all students are encouraged to join both classes for better results.

YOGA EXERCISE CLASSES:

Male or Female, from age 7 to 70, will have an opportunity to enjoy this well-planned eight (8) week activity.

- Thursday Class ... Starts September 30 at 10:00 a.m.
- Monday Class Starts October 4 at 7:30 p.m.

A \$15.00 pre-registration fee will be charged. Each class will have a maximum. Pre-registration will be on a first come - first served basis. Students may join either or both classes. Leotards or tights are recommended but not required. Students are required to bring their own floor mat or small non-skid rug to exercise upon.

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A BRIDGE CLUBS:

Two (2) sessions of Bridge Clubs are offered to all Pleasant Ridge residents. Duplicate Bridge meets each Tuesday at 7:30 p.m. and evening Mixed Bridge Club meet on the 2nd and 4th Mondays of each month. For more information call Mrs. Ann Tremblay 751-7663, Duplicate Bridge or Mrs. Janet Fox 545-7338, Evening Mixed Bridge.

PRE- SCHOOL DANCE CLASSES:

This activity will be offered to three, four, and five year old girls and boys. Activities will consist of ballet, tap, sing-song, and dance routines. Students will be divided into the following classes:

New Students Wednesday at 9:30 a.m. starting Sept. 29th.

Experienced Students Wednesday at 10:15 a.m. starting Sept 29th.

A \$6.00 registration fee will be charged for this ten (10) week session.

BEGINNER'S BALLET CLASS:

This activity will be offered to children in the first through fourth grades. Class instruction will be geared for students with little or no experience. Class will start Friday, Oct. 1, at 3:45 p.m. A fee of \$5.00 will be charged for this ten (10) week session.

TAP DANCE CLASS:

This activity will be offered to all children interested in tap dance lessons. Class instruction will be for those with little or no experience. A fee of \$5.00 will be charged for this ten (10) week session. Class will start Wednesday, Sept. 29, at 3:45 p.m.

INTERMEDIATE BALLET CLASS:

This class is offered to students who have completed at least one (1) previous ten (10) week session. Class will start Saturday, October 2nd at 9:00 a.m. A \$6.00 registration fee will be charged for this ten (10) week session.

ADVANCE BALLET CLASS:

To qualify for the advance class a student must have completed at least two (2) previous ten (10) week sessions. These students will be placed in this class depending upon individual ability by the dance instructor. Try-out for class participation will be held on Saturday at 10:00 a.m. starting October 2nd, and continue for ten (10) weeks. A \$6.00 registration fee will be charged.

GUITAR CLASSES:

The fundamentals of basic guitar such as cord structures and learning to read notes will be emphasized in these classes. Lessons are \$8.00 for the ten (10) week session.

GUITAR CLASSES: (CONT'D)

Beginner's Class . . . Starts Tuesday, October 5, at 7:00 p.m.

Intermediate's Class . . . Starts Tuesday, October 5, at 8:00 p.m.

To qualify for the Intermediate class a student must have taken at least one (1) previous ten (10) week session or be placed in the class by the Guitar Instructor depending upon individual ability.

FLOWER ARRANGING CLASS:

This unique well-planned class will be offered on Tuesday at 1:00 p.m. A \$15.00 registration fee will be charged for this two (2) hour ten (10) week session. Starting October 5th.

MEN'S TOUCH FOOTBALL:

If enough interest is shown we will organize a men's Touch Football program this Fall. An initial meeting will be held at 4 Ridge, Thursday, September 23 at 7:30 p.m. If you are interested in a fun type activity, you might call Mr. Ken Ledford 542-9349 or Recreation Department 542-7322 for more information. We will need some help to implement this activity, so round up your active friends and join with us at the first meeting.

MEN'S BASKETBALL AND VOLLEYBALL PROGRAM:

If enough interest is shown, there will be an open league in both Men's Basketball and Volleyball with Huntington Woods and Berkley Recreation Department. An organization meeting is planned. Anyone interested in either or both of these activities please call the Recreation Department at 542-7322.

YOUNG PEOPLE'S PROGRAM:

During the Summer months, volunteer parents helped supervise our youth activities. At present, the Recreation Commission is providing their voluntary services to this much needed program. But, if this program is to be successful, we will need parental support. We encourage all Pleasant Ridge parents to help in this unique problem. If you are willing to help, and are interested in our youth, we invite you to join us on October 7, at 7:30 p.m. at 4 Ridge, to help plan and develop this activity.

BARRACUDA SWIM CLUB:

The Ferndale Barracuda Swim Club announces Winter A. A. U. Swimming. If you are a swimmer, we have the team with a coaching staff for boys and girls of all ages, or a full lesson program for beginners, advanced beginners and novice competitors. Program begins September 20. For information call, 543-0793, 398-5139 or 544-2601.

ENVIRONMENTAL, RESOURCES AND MAN:

Are you interested in learning about: brown outs, nutritionless foods, pesticide use, composting, recycling, detergent phosphates, uninvited food additives, over-packaging, home environmental hazards, and the future of the car? If so, then join this lecture-discussion series outlined world, national and local conditions relating to energy use, water and air pollution, food production, transportation, waste disposal and population problems. Six (6) weeks course starting week of September 27, on Thursday 7:15 - 9:15 p.m. No fee charged. For additional information call : 542-2535.

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