

COMMON COUNCIL - SPECIAL MEETING

MAY 11, 1987

Meeting to be called to order at 7:30 O'Clock P.M. by the Honorable James E. Dyer, Mayor

PLEDGE OF ALLEGIANCE TO THE FLAG

PRAYER

ROLL CALL

Council Members - Johnson, Sollose, DeMille, Philip, Godfrey, Flanagan, Zotos, Hadley, Rotello, Cassano, McManus, Gallo, Esposito, Charles, Boynton, Butera, DaSilva, Eriquez, Farah, Smith, Torian.

211

Present

0

Absent

NOTICE OF SPECIAL MEETING - To be held on the 11th day of May, 1987 at 7:30 O'Clock P.M. in the Common Council Chambers at City Hall, for the purpose of acting upon the following:

01 - COMMUNICATION - Emergency Repairs Easement for the Sunrise Ridge Condominiums.

PUBLIC SPEAKING SESSION

There being no further business to come before the Common Council, a motion was made by \_\_\_\_\_ and seconded by \_\_\_\_\_ for the meeting to be adjourned at \_\_\_\_\_ P.M.

CITY OF DANBURY

To: Members of the Common Council - City of Danbury

A special meeting of the Common Council \_\_\_\_\_ of the City of Danbury will be held on the 11th day of May \_\_\_\_\_ 1987 at 7:30 o'clock p.m., at the City Hall in said Danbury.

For the purpose of

1. Emergency Repairs Easement for the Sunrise Ridge Condominiums.

Dated at Danbury, this 8th day of May \_\_\_\_\_ 1987

\_\_\_\_\_  
 \_\_\_\_\_ *[Signature]* Mayor  
 \_\_\_\_\_ *[Signature]* Clerk

To the sheriff or any policeman of the City of Danbury:

You are hereby required to notify the above named member \_\_\_\_\_ of the Common Council of the City of Danbury of the special meeting of said board by leaving with or at the usual place of abode or place of business of such member not less than 24 hours before the hour specified for said meeting, a notice in form annexed, and to make due return thereof at the time of said meeting.

\_\_\_\_\_  
 \_\_\_\_\_ *[Signature]* Mayor

RETURN OF SERVICE

By virtue of the within warning, I have served Notice on each of the members of the Common Council of the City of Danbury, of the Special Meeting of said Board, each Notice duly signed by the Mayor and City Clerk, by leaving such written Notice with each of the following members of said Common Council, to-wit:

	<u>NAME</u>	<u>TIME</u>
1.	<del>Richard J. ...</del>	5:10 PM
2.	<del>...</del>	5:18
3.	<del>...</del>	5:28 PM
4.	<del>...</del>	5:40
5.	<del>...</del>	6:07 PM
6.	<del>...</del>	6:25 PM.
7.	L. T. Chandler, Jr	6:35 PM
8.	Eddie Miller	7:33
9.	Kristina McManus	7:38
10.	Donald Gollase	9:07
11.	W. Philip	9:24
12.	John DeWille	9:30 PM
13.	Miss Galla	9:45 pm
14.	Julius H. Hadley	9:56 p.m.
15.	Stephen Finigan	10:10 pm
16.	Severly B. Johnson	10:35 PM
17.	M. Carson	10:45 pm
18.	Gene E. ...	11:05
19.	Edward ...	08:15 AM
20.	Janet Butler	08:25 AM
21.	left inside front door 5/11/87 1045 hrs R. Fabel Patrolman #11	151 Shelter Rk

Each Notice so served upon each member, all having been done by me on this date 05/08/87.

Attest: MARK TROHALIS  
 Policemen of the City of  
 Danbury



# CITY OF DANBURY

155 DEER HILL AVENUE

DANBURY, CONNECTICUT 06810

JAMES E. DYER, MAYOR

COMMON COUNCIL

## REPORT

May 11, 1987

Honorable Mayor James E. Dyer  
Honorable Members of the Common Council

Re: Sunrise Ridge Condominiums - Emergency Repairs Easement

The committee appointed to review the request from Sunrise Ridge Condominiums for the City to condemn easements on the property owned by residents of Juniper Ridge met on May 7, 1987 at 7:30 P.M. in City Hall. Present at the meeting were Committee Members McManus and Johnson, Council Members Donald Sollose, Peter Philip and Edward Torian. Also attending was Assistant Corporation Counsel Les Pinter, together with the attorney for the Condominium Association, Ward Mazzucco and their Engineer, Mr. Marnicki. Also present were residents of Juniper Ridge and Sunrise Ridge.

Unfortunately, the City Engineer and Building Inspector were unable to attend the meeting. Although much information was submitted at the meeting, it was impossible for the committee to evaluate it without the professional input from the City staff. The committee does not feel it can reach a decision without the needed input, but due to the emergency status of the problem, is hesitant to further delay a decision by the full Council by scheduling another committee meeting.

The committee recommends that the Common Council members read the minutes of the committee meeting which are attached and to formulate any questions that they may have. The Mayor will be requested to schedule a special meeting and to ensure the attendance of the necessary City personnel including the City Engineer and the Building Inspector so that the full Council can make an informed decision. While formulating their concerns and questions, Council Members should be aware that the Assistant Corporation Counsel stresses that they should keep in mind two facts: 1. the City assumes more liability by entering into the condemnation procedure; and 2. the Condominium Association must show that they have exhausted all avenues in their attempt to rectify the situation.

The committee apologizes to the Common Council for its lack of a recommendation.

Respectfully submitted,

*Constance McManus*  
CONSTANCE McMANUS, Chairman

*Beverly B. Johnson*  
BEVERLY JOHNSON

*Joseph DaSilva*  
JOSEPH DaSILVA

## NAME

## ADDRESS

NAME	ADDRESS
Ward Mazzecco	301 Main St Danbury
RICHARD MARENICKI	PO BOX 130 SOUTH BURY CONN
Pat & Mark Brothers	38 PADANARAM AVE. #7, DANBURY
MARION LIBERATI	38 PADANARAM AVE #28 DANBURY
BILL COTE	38 PADANARAM AVE #37 DANBURY
Mary Stewenox	31 Juniper Ridge 06811
Don GIORRATANO	27 Juniper Ridge #06811
James <del>Morse</del>	27 Juniper Ridge Danb. 06811
A. CHAS. SETARO	33 JUNIPER RIDGE DR. CT 06811
Mary Sheen	18 Juniper Ridge Dr. CT 06811
Marilyn Moody	23 Juniper Ridge Dr.
LOU ADDESSI - #19	38 PADANARAM RD - DANBURY

NAME	ADDRESS
JOHN MOORE Joseph S. McCabe	38 PADANARAM AVE 34C, DANBURY 06811
Dewey Y. Moy	38 PADANARAM AVE - #5, DANBURY, 06811
Joseph P. Pesente Gary G. Patane	P.O. BOX 2132 DANBURY 06813
AUDREY C. MOORE	38 Padanaram Ave, A-11, Danbury 06810
Jacqueline + Jeremy Hutchings	38 PADANARAM AVE., 29C DANBURY 06811
Jeanne Burns	38 Padanaram Ave #4 Danbury
Deane Lyffe	38 Padanaram Ave #6 Danbury
Joe + Judy C. Torres	38 PADANARAM AVE #3A DANBURY
J. Gugliada	38 " " #36C "
Mary J. Principe	38 " " #10A #
JOHN J. MULSKI	14A

PINNEY, PAYNE, VAN LENTEN, BURRELL, WOLFE & DILLMAN, P.C.

ATTORNEYS AT LAW

26 WEST STREET

POST OFFICE BOX 650

DANBURY, CONNECTICUT 06813-0650

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A. SEARLE PINNEY  
BOBBY S. PAYNE\*  
THOMAS W. VAN LENTEN  
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JOHN M. DILLMAN  
WILLIAM S. STEELE, JR.  
JEFFREY B. SIENKIEWICZ  
TED D. BACKER\*\*

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COUNSEL  
THOMAS L. CHENEY

May 11, 1987

PLEASE REPLY TO:

\*ALSO ADMITTED IN VA  
\*\*ALSO ADMITTED IN D.C. AND NY

TO: HONORABLE COMMON COUNCIL MEMBERS OF  
THE CITY OF DANBURY

RE: Sunrise Ridge Condominiums/Juniper Ridge Condemnation

Dear Council Members:

Please be advised that I represent certain members of the Juniper Ridge Community, specifically, homeowners in close proximity to the Sunrise Ridge retaining wall. Attached are comments concerning the proposed condemnation.

Respectfully submitted,



Ted D. Backer

TDB:th  
attachments

## INTRODUCTION

The Common Council is presently considering the acquisition, through the exercise of the City's power of eminent domain, of the properties of various homeowners residing on Juniper Ridge Drive. Specifically, the proposed condemnation would entail the entry and exit of heavy construction equipment onto the properties so as to "repair" a retaining wall located in the Sunrise Ridge Condominium development. The proposed condemnation would serve to strip the wooded buffer area presently existing between the Sunrise Ridge Condominiums and the residents of Juniper Ridge Drive and essentially eradicate the backyards of the Juniper Ridge residents.

## BACKGROUND

The history of the Sunrise Ridge Condominium development goes back to 1967. At that point in time and continuing until today, the residents of the Juniper Ridge Drive area have voiced concern over the deleterious impact the Sunrise Ridge Condominiums would have on their properties. These concerns have, however, been disregarded.

The concern of the Juniper Ridge Drive residents has been expressed through various means including correspondence, testimony at public hearings and court action. Charles Setaro of 33 Juniper Ridge Drive said prophetically, in 1972, that "The

land is totally undersirable ... and I, along with my neighbors, would bear the burden of property damage..."

The present proposal would constitute the realization of the fears that have been continuously expressed by the Juniper Ridge residents since 1967. The rights of the Juniper Ridge residents deserve to be protected and we urge the Common Council to do so by rejecting the proposal before it.

#### LAW

The contemplated condemnation would constitute an illegal act in that such would impermissibly serve to take property for a private rather than a public use.

The Connecticut and United States constitutions prohibit the taking of property for public use without just compensation. Conn. Const., Art 1, Section 11, U.S. Const., amend. V, XIV. The above cited constitutional sections are held by the courts "...to be a limitation on the exercise of the power of eminent domain; and to exclude the power of taking private property for a private use." Connecticut College v. Calvert, 87 Conn. 421, 424 (1913). "It is a well-settled principle of law that no law can confer upon an individual the right to take any property interest of his neighbor for his own private enhancement or gain, even though he may be willing to pay damages therefor." H.A. Bosworth & Son, Inc. v. Tamiola, 24 Conn. Sup. 328, 331 (1963)

The proposal confronting the Common Council lacks any vestige of the public purpose necessary to justify an exercise of the eminent domain power and condemnation under the present circumstances would have a substantial detrimental impact on the value of the properties directly affected as well as the properties as a whole in the Juniper Ridge Drive neighborhood.

In conclusion, the proposed condemnation should be rejected as effectuating the acquisition of private property for a private purpose. The law is clear that the property interest of one private party may not be taken by exercise of the power of eminent domain for the private benefit of another private party.

#### DEPRIVATION OF PROPERTY RIGHTS

The proposed condemnation would effectuate an extensive deprivation of the property rights of the homeowners residing contiguous to the condominium project. The condemnation would involve the placing of heavy construction equipment directly in the backyards of such homeowners for extensive periods of time. In addition, the homeowners would suffer a loss of the buffer zone between the properties. Further, the sloping of the grade required would potentially necessitate a permanent taking of the entire backyard areas of the homeowners.

Moreover, the entire Juniper Ridge area will suffer an adverse impact on property values.

UNCERTAINTY AS TO UTILITY OF CONDEMNATION ACTION

Given the scope of the detrimental impact on the homeowners of Juniper Ridge Drive, the Common Council should be loathe to approve such project that is, at best, a temporary measure. One of the touchstones of the right to exercise the power of eminent domain is that such action be necessary effectuate a public purpose. This determination of necessity cannot be made until all relevant factors and options are thoroughly considered.

Danbury, Connecticut

April 23, 1972

To: Mr. Gino Arconti, Mayor, City of Danbury

Mr. E. Merullo, Chairman, Planning Commission, City of Danbury

The undersigned residents of Juniper Ridge, Danbury, Connecticut, hereby request an opportunity to voice our opinions before the Planning Commission regarding the proposed Gas Light Terrace Apartment Project, scheduled to be located in close proximity to our homes.

Three years ago we publicly voiced our protests regarding the same, and the Zoning Board denied a request for a similar project on the same land due to its unsuitability. Our first knowledge of the board's unexplained reversal of decision on this matter was through a small article in the local newspaper.

We, the undersigned, being high tax payers and substantial property owners, hereby protest the action of the Zoning Board and the Planning Commission for the following reasons, which we feel were neglected in the decision to approve said project:

1. Potential traffic hazard presented by the already hazardous conditions on North Street, in the vicinity of the Danbury Shopping Center.
2. Detrimental conditions to homeowners on Juniper Ridge, in the areas of:
  - a. undermining our property in order to construct said project ( blasting, digging, etc. ).
  - b. subsequent devaluation of our property values.
3. Undesirable terrain of land site ( steep grade, ledge, etc. ).

We feel that in designating this particular strip of land ( 2.18 acres ) suitable for multiple dwellings, and singling out this one parcel for such a zone, our interests as property owners and taxpayers were completely disregarded.

We further feel that personal harassment to us would ensue, due to increased infringement upon our peace and contentment which has already been violated by the proximity of the Danbury Shopping Center and Interstate 84.

We hereby respectfully direct your attention to this matter, and will await a public hearing to more fully express our views.

We are prepared to do everything within our power to see that this gross error is corrected.

*Jack Gleason*



# CITY OF DANBURY

155 DEER HILL AVENUE

DANBURY, CONNECTICUT 06810

JAMES E. DYER, MAYOR

COMMON COUNCIL

## MINUTES

### Emergency Repairs Easement - Sunrise Ridge Condominiums - Council Committee

The meeting was called to order by Council Member Constance McManus, Chairperson of the Emergency Repairs Easement for the Sunrise Ridge Condominiums Common Council Committee. Also in attendance was Council Member Beverly Johnson, a member of the committee. The third committee member, Joseph DaSilva could not be present due to a previous commitment. Other Council Members present were Donald Sollose, Peter Philip and Edward Torian. Also attending was Assistant Corporation Counsel Les Pinter.

Mrs. McManus explained that the time element was very short. An item asking the Common Council to approve an emergency repairs easement appeared on the May Common Council agenda on May 5, 1987. Mrs. McManus read a letter from Attorney Ward Mazzucco asking for the easement, together with a proposed Resolution authorizing the City to take the necessary steps. Mrs. McManus explained that City Engineer Jack Schweitzer could not attend the meeting this evening but that she had spent the afternoon with Leo Null, the City's building inspector, who gave her several pictures of the problem. Mrs. McManus explained the pictures and what they determined. Mrs. McManus, in layman's terms, offered explanations concerning the wall, the earth, the platform and a metal type reinforcement running down the wall into the base. She said that there seems to be some differences of opinion concerning what is causing the wall to tilt. Some engineers feel that the wall and the base are tilting at the same angle. Leo Null feels that the reinforcement bar has failed and that the base may be shifting as well as the whole wall tilting and moving over. Mr. Null also showed her pictures of wooden steps showing that the steps are being undermined. Evidently water has not been able to get through. He went up to look at the tree line and rock wall on the Juniper Ridge property. This is also being undermined. He is very concerned about the whole thing and said that a couple of the boulders are sliding from the rock wall and have hit the fence. He is fearful that those properties on Juniper Ridge are going to lose half of their back yards.

Mrs. McManus then stated that as to the proposal now before the committee, she would allow everyone one in the room to ask questions or comment, but that order would have to be maintained. Mrs. McManus asked Attorney Ward Mazzucco, who brought in the proposal, to give his presentation. The committee waived the rules allowing everyone to speak.

Attorney Mazzuco thanked the committee for the opportunity to address them. Mr. Mazzuco introduced the President of the Sunrise Ridge Condominium Association, Joseph McCabe and Richard Marnicki, a professional licensed engineer. Mr. Mazzuco presented a map of the property. Mr. Mazzuco said that the Chair did an excellent job explaining the existing dangers, but added some additional items. He showed a picture of the wall and the danger it presented. He said that although no one is living in the units affected, anyone just walking close to the wall could be crushed. Also, there is good reason to believe that the Condominium's insurance policy would not cover the loss if the wall did crush the building.

Mr. Mazzuco submitted letters from Richard Marnicki dated May 2, 1987 and Dr. Clarence Welty dated May 7, 1987 regarding the wall, collaborating the urgency of the problem.

Mr. Mazzuco then turned his attention to the map he previously submitted and noted that the Sunrise Ridge Condominiums were at the bottom and noted other locations on the map. Basic problem is that the wall is moving toward the building. The question is how can this be repaired. How it can be repaired depends on what is wrong. Mr. Marnicki determined that the wall does not seem to be built the way it was originally designed and approved by the City. How much it deviates from the plan remains to be seen and requires some digging which no one is willing to do. Until the pressure can be relieved to a greater extent, no work can be done to determine what the ultimate repairs should be. At this point they are talking about emergency repairs to relieve pressure on the wall so that they can work with the City Engineer and the City Building Inspector to devise a long-term solution. Mr. Mazzuco went on to explain how one would relieve pressure from the wall. The only way is to dig from the Juniper Ridge area. Some access way must be made and the Luke F. Sweeney Company has allowed access through the lot it owns. This lot adjoins property owned by the Durgys. People are reluctant to allow construction equipment on their properties until they know more of what is involved.

Temporary repairs would require, among other things, digging temporarily into the back yards which abut the wall. During the permanent solution it may be possible to build the back yards back up to their original heights and to finish them completely. At this point, he is not in a position to say if this would be temporary or permanent. It also cannot be determined how many feet into the yards they would have to go until they actually get into the field.

Mrs. McManus asked who built the "ship in a bottle" in response to a comment by Mr. Mazzuco. He said that the original wall was designed by a local engineer named Doug Watson. The builder in the late 1970's was B&G Incorporated who apparently went bankrupt. Frank Meyers took the project over. Paul Garafalo, then the building inspector, raised concerns over the safety of the wall. A private engineer certified in 1981 that the wall was "safe in all respects".

In 1983, Mr. Garafalo wrote a letter to Mr. Meyers Company stating that the wall still did not seem to be safe. No response was uncovered. The matter was not pursued. When Mr. Null became the building inspector he began to monitor the wall and saw that it was starting to lean further and further.

Councilman Sollose asked for the exact dates that it was noticed that the wall was buckling. Response was in the early 1980's. Mr. Garofalo monitored it in 1981-83 and that is as far as the written records go. Councilman Sollose asked if he stated how long it would last. Mr. Mazzucco said that he did not believe so. Mr. Garofalo was a building inspector, not an engineer and as such would not be able to make such a determination, but relied on what was on its face, a valid assurance from Meyer's engineer that the wall was safe. In the last several months, the Condominium Association learned of this through Mr. Null's efforts. This is the basic history of the wall and that there is a problem that needs a response.

Mr. Philip asked a question pertaining to that if digging was allowed in some fashion how much more pressure from the equipment could the wall stand.

Mr. Richard Marnicki said that this job would require a piece of equipment with approximately a 25-26 foot reach to come down from the top of this wall and excavate with a three yard bucket to start pulling it back up. This piece of equipment weighs between 50,000 - 60,000 pounds so it has to be kept back out of the influence of this wall, so the pressure does not intersect the vertical stem more than 1-2 feet above. You would have to stay very far back with this piece of equipment. The truck will also weigh approximately the same amount filled with dirt. Between the two of them, they would have to be put in the back yards, swing over and drive off. It might mean taking two pieces of equipment in and working from two sides in order to get this done and get it done quickly. He went on to express his concern over the urgency of getting this done and explained some construction aspects of the wall and reiterated problems already explained by Mrs. McManus and Mr. Mazzucco.

Mrs. McManus asked that if the bank is already starting to slide and you dig behind, then why won't the same thing happen that happened when Burger King was being excavated and large chunks began breaking off and making it worse. Mr. Marnicki stated that he had no knowledge of what happened at Burger King.

Mrs. McManus said that if you dig this great big hole and you've got all this pressure that has been building up and is not meeting the wall, but is in front of a hole and is already inclined to slide down, would not a good rain make the whole thing go into the hole? Mr. Marnicki stated that they would not be digging a straight cut through the back, that they would be starting at the top and making a slope out of it.

Mrs. McManus asked how far back a slope he was proposing.

Mr. Marnicki explained how the wall would buckle, the feet and the dimensions, etc., the recommended slope and how it would be done. Mr. Marnicki then responded to technical questions from committee members. Showing the map of the property, Mrs. McManus asked where the line would be drawn. Mr. Marnicki proceeded to show them and explained his ideas.

Mrs. Mary Stevenson asked if he was talking about going into her property in addition to the Durgy's property and if so, what is the feeling of the Durgys.

Mr. Marnicki responded yes, but due to the rustling of the map, his response is muffled. Comments are made here by unidentified

speakers about property lines. Mr. Marnicki continued to answer questions and refers to the map.

At 37.9 minutes into the tape, it goes blank. Side B of this tape resumes at 21.8 minutes with Joseph McCabe, President of the Sunrise Ridge Condominium Association and a unit owner in the affected Unit C speaking. He commented on the situation and when it began approximately four weeks ago about the Condominium Association learning of the danger from the building inspector. He stated that there are ten affected families who are paying mortgages for homes in which they cannot live. Also, personal insurance policies may not cover loss of personal possessions. He is more concerned with the welfare of the people involved. He recognized that the City is aware of the fact that this is a serious problem. After a conference with a private engineer they were assured that the wall is totally unsafe and could fail at any time. He then explained the steps that the Association had taken to correct the problem.

Mr. Marnicki stated that Mr. Null did not condemn these buildings without advice from another consultant, an engineer from Ridgefield.

Mrs. Mary Stevenson had a list of objections to the proposal, but stated that her heart goes out to the condominium owners and asked if there was a threat to the other units,

Mr. Marnicki stated that there is no way to determine how the wall will fall and went on to explain how it could happen. Mrs. Stevenson asked if there was a long-term proposal. Mr. Marnicki stated that they would restore the wall to the original contour that is there today, but since he did not have a topography map he could not comment. Mrs. Stevenson commented on the proposal given to her and Mr. Durgy and when it happened nine years ago they did not want it and they do not want it today. She spoke about the devaluation of her property which is for sale in the amount of perhaps \$20,000 - \$25,000. Mrs. McManus read into the record the list of Mrs. Stevenson's objections to the easement (a copy which is attached hereto and made a part hereof).

The next speaker was too far from the tape recorder and her comments were inaudible.

The next speaker was James Nourse who asked a question about telephone poles (this speaker also was almost inaudible) being pushed back. Marnicki stated that they would be temporarily relocated back up the bank further beyond the end of the bank and explained ways this could be done. Mr. Nourse asked about trucks driving over dry wells. Mr. Marnicki stated that if something gets broken it will be repaired at the expense of the contractor. Mr. Nourse stated that it sounds like the back of his property is going to be torn up, but that he also feels sorry for the condo owners.

Mr. A. Charles Setaro read a statement concerning the proposal and stated that he will not allow the equipment on his property and it is not his problem.

Mark Brothers spoke next but was also inaudible.

The engineer speaks about groundwater and that it will fail, but he cannot say where. Mrs. McManus stated that the Committee was at a disadvantage by not having its City Engineer present.

Mr. Torian spoke here, but his question and the comments by Mr. Marnicki were muffled by whispered conversations of committee members. Mr. Marnicki was apparently showing something on the map to Mr. Torian.

Next speaker's name was inaudible but he said he was a property owner and was a permanent accessway being proposed?

The answer was that the proposal was for a temporary right of way for emergency repairs until a final solution can be attained.

Next question and answer muffled by whispered conversations of committee members. Discussions followed between Engineer and members of the audience, but they were over-shadowed on the tape by other conversations.

Mrs. McManus stated that another meeting would be held when the City Engineer could attend and suggested that residents of Juniper Ridge should think about it and decide what they would want if the work had to be done, although she was not saying that the easement would be granted.

Mr. Setaro stated that the wall cannot be too fragile as jackhammers were on it. Mr. Marnicki explained that for 2½ days there was work being done to expose small holes in the wall to see what they could find out and to temporarily relieve the pressure. The jackhammer was hand held and was not impacting to cause the wall to fail.

Mr. Mazzucco summarized that they had heard objections from adjoining property owners and that the 38 families affected also are taxpayers and are not second class citizens. They face a million dollar loss. The building inspector has condemned the building and it is impossible to repair it from the front. He respectfully suggested that it was imprudent to continue the meeting and suggested that if a failure occurs during this period of delay there is an extremely serious multi-million dollar liability that someone is going to have to face. He felt that it was essential for the committee to consider this proposal at its earliest possible convenience. The City Engineer and Building Inspector have produced a horror story on what could happen if the wall fails. This critical need must be addressed as soon as possible and requested that the committee vote to approve condemnation of an easement to the extent necessary in the opinion of the City Engineer and Building Inspector to accomplish the emergency repairs.

Mrs. McManus asked if he had the building permit from the City Engineer and Building Inspector. He responded that he did not, but that they had the necessary plans on which they could issue the permit.

Mr. Marnicki commented on documents and cover letters (copies attached) and commented on same.

Mr. Nourse posed a question to Les Pinter, but he was speaking to softly, but I believe it pertained to an injunction.

Mrs. McManus stated that there would be no final action tonight but the Common Council would meet in a Special Meeting next week to address the issue.

The next two speakers were inaudible, but I believe the questions to be about liabilities and an injunction.

Mr. McCabe thanked the committee on the expediency of holding this meeting and thank other Council Members for attending. He said that he had spoken to Juniper Ridge residents and felt that lines were being drawn concerning neighborhoods. He felt that resentment goes back 9 years to the original developer. The condo owners are not developers and are not looking to expand, they are just looking to correct a construction default.

Marilyn Moody - stated that her heart goes out to the condo owners. She is a 25 year owner and did oppose it 9 years ago. The members of the Planning and Zoning Commissions did not serve them well.

Mrs. McManus stated that all members of the Planning Commission, Zoning Commission and Zoning Board of Appeals should be required once a year to visit the sites that have been damaged. Most complaints come from decisions made by those people and what they have done. The City is suffering from past mistakes.

Donald Sollose asked if the wall has to be replaced, what type of wall would replace it. Mr. Marnicki stated that a retaining wall cast in concrete similar to the existing one there now or a double wall. He explained what this is and other types that could be used. Mr. Sollose asked how long it would take to build a new wall. Mr. Marnicki explained the procedures involved in replacing the wall.

Mr. Nourse spoke at this point, but again is speaking too softly. I believe he is asking about compensation. Mrs. McManus responded to Mr. Nourse, but her response is inaudible.

Mr. Don Giarratano spoke about the original wall and this wall being the second wall. Committee members are speaking here and overshadow his comments.

Mr. Pinter commented about the City Building Inspector's job, that he is not an engineer but does have expert input.

Mrs. McManus asked Mr. Pinter that if the condemnation does occur, the Common Council would want it in writing just what compensation the Juniper Ridge residents would get, and who would be responsible if the condo owners were unable to compensate.

Mr. Pinter stated that the City would make up the difference and then put a lien on the property or would require the Condominium Association to make just compensation.

Next speaker is inaudible but I believe he was speaking about liens on the property and who would determine what just compensation is.

Mrs. McManus asked if the Common Council could specify additional compensation. Mr. Pinter responded yes.

Further discussions followed regarding compensations.

Mr. Setaro asked who would determine if the condo owners have enough equity in their property to take care of all charges or liens against them. Mrs. McManus responded that the City would.

Mrs. McManus stated that the committee cannot come up with a

finding because the proper City personnel was not at the meeting.

The Common Council will hold a special meeting requiring the City Engineer and the Building Inspector to be present. Discussion following regarding the call of the special meeting.

A discussion followed concerning roping-off the property.

Mrs. Johnson made a motion to adjourn at 10:00 P.M. Seconded by Mrs. McManus. Motion carried unanimously.

THIS TRANSCRIPT WAS TYPED BY A  
TYPIST NOT ATTENDING THE MEETING.

May 8, 1987

TO: Members of the Mayor's Council - City of Danbury

SUBJECT: Emergency Condemnation for Retaining Wall Repair at Sunrise Ridge Condominiums

As a resident of Sunrise Ridge Condominiums who purchased a home in good faith over four years ago, I feel like a victim of bad luck and circumstance. The community which I have enjoyed being a part of is now split apart, the clubhouse where I used to entertain friends is now a condemned building, and the newspapers continue to print negative information about my home. I have been assessed \$4,000 for the repair of the retaining wall and I could lose everything else I have worked for in my lifetime through lawsuits from neighboring residents and/or liens from the City of Danbury.

In addition to these serious problems, it is now becoming apparent to all of us at Sunrise Ridge that the City government which we have always supported may choose to ignore its fiduciary responsibility to protect our life safety.

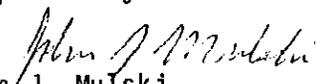
Based on the information presented by the qualified structural engineer assigned to the project, it has been established that the retaining wall was not built to original specifications, was not built with the input of a soil engineer (as is standard procedure) and was constructed with no apparent concern for health and safety.

Despite these gross errors in workmanship, the construction of the wall was approved as "safe" and "in accordance to design specifications" by an engineer appointed by the City of Danbury. It is clear that a life threatening situation which now affects 38 families is the direct result of mismanagement within an agency of the city government.

The purpose of this letter is not to assign blame or point fingers. History has shown that sometimes the best way to improve our lives is to learn from mistakes made in the past. We can only accept what has happened and move forward.

It is hoped that the current administration will recognize its responsibility to resolve this problem immediately before it reaches catastrophic proportions. Regardless of how things have worked in the past, we need the help of the City of Danbury today. The proposal before you to condemn a small section of land and provide the easement necessary for urgently needed repairs represents our only hope for the future. Please don't let us down.

Respectfully submitted

  
John J. Mufski  
Unit #14-A

May 7, 1987

TO: COUNCIL MEMBER CONNIE MC MANUS  
FROM: MARY STEVENSON, 31 JUNIPER RIDGE DR., DANBURY  
RE: SUNRISE CONDOMINIUMS REPAIRS EASEMENT

I respectfully submit the following objections to the request by Sunrise Condominiums for an easement on my property at 31 Juniper Ridge, Danbury:

1. I question the legality of assigning easement rights to gain access to private property when no public hazard exists and does not serve the public's interest.
2. My property currently is listed on the real estate market for sale. A purchase offer has been submitted but is not under contract yet. Withdrawal of this offer due to the publicity of this proposal would force me to consider legal action.

It would be unlikely that the property could be relisted with the presence of heavy equipment and the probable loss of wooded area resulting in severe financial loss to me.

Additionally, stripping the already skimpy buffer of trees would adversely affect my property value for years to come. Current devaluated estimate is \$20 - 25,000.

The residents of Juniper Ridge have been subjected to developers from the back of the ridge and now we are being asked to agree to an invasion from the front of our properties.

The loss of trees over the years due to development has resulted in severe noise pollution from the nearby North St. shopping center. One prospective buyer of our property commented on the nauseating odor from Burger King.

Now we face further devaluation of our properties in an effort to protect the financial investment of private individuals.

While my sympathies rest with these individuals I find it unfair to ask me to accept the financial burden of repairing their property. I think they need to look further to recoup their loss.

Sincerely,

*Mary Stevenson*



# CITY OF DANBURY

155 DEER HILL AVENUE

DANBURY, CONNECTICUT 06810

JAMES E. DYER, MAYOR

ENGINEERING DEPARTMENT  
203-797-4641

May 5, 1987

JOHN A. SCHWEITZER, JR.  
City Engineer

Mr. Leo Null  
Building Inspector  
City of Danbury  
155 Deer Hill Avenue  
Danbury, CT 06810

Dear Mr. Null:

Sunrise Ridge  
Retaining Wall  
Padanaram Avenue

We have taken a very preliminary review of Richard J. Marnicki, P. E. May 1, 1987 repair plan for the above referenced retaining wall.

This preliminary review indicated a number of items that will have to be addressed before we can begin a detailed review. The following is a list of questions or information needed in order to continue our review:

1. A set of plans stamped by a Connecticut Professional Engineer.
2. Will the existing soils permit the slopes indicated on the plans?
3. What is geo webb? Provide specifications, details, and uses for this product? What happens to this product if there is any soil movement?
4. Will the remaining portion of the cutoff retaining wall support the proposed loading? Portions of this wall have begun rotation, has this fact been taken into consideration in the design? Has this rotation taken place in the stem of the wall only or has the stem and footing rotated? Where are the calculations for this proposed revision to the existing retaining wall?
5. Proposed construction activity has been proposed on property of others, have rights been obtained? Sloping is proposed on property of others, have rights been obtained?

(continue page 2)

Mr. Leo Null, Building Inspector  
RE: Sunrise Ridge, Retaining Wall, Padanaram Avenue

May 5, 1987

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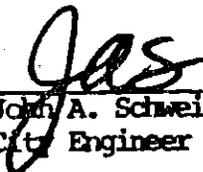
6. The construction plan is based upon excavation from above the wall, are there alternative plans if access can not be obtained above the wall?

7. The sanitary sewer between Juniper Ridge and Padanaram Road on the south side of the Burger King property should be located to ensure that the proposed construction does not jeopardize this sanitary sewer.

8. If the existing wall is close to failure, has any of this failure occurred below the proposed cutoff point on the wall?

The above information is necessary before a detailed review can begin. During the detailed review additional requests for information and questions may arise.

Very truly yours,

  
\_\_\_\_\_  
John A. Schweitzer, Jr.  
City Engineer

JAS/dms

c: Basil Friscia

RICHARD J. MARNICKI, P.E.  
STRUCTURAL ENGINEER  
P.O. BOX 130  
SOUTHBURY, CONNECTICUT 06488  
TELEPHONE (203) 264-8131

May 2, 1987

Mr. Joe McCabe  
Sunrise Ridge Condominium Association  
38 Padanaram Avenue #17-A  
Danbury, Connecticut 06811

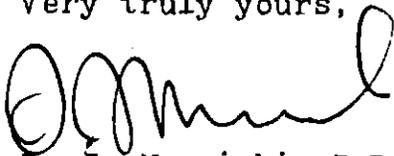
Dear Joe:

At this time this wall has no safety factor for over turn and sliding. Based upon as built conditions and observed location of reinforcing and the existing conditions, I recommend that remedial actions be undertaken immediately to remove the soil behind the wall.

Attached are Drawings S1 thru S4 which indicate the scope of work which should be used to obtain the services of a qualified site contractor to perform the necessary work to stabilize this existing retaining wall.

If you have any questions or comments, please feel free to contact me at my office.

Very truly yours,



R. J. Marnicki, P.E.

RJM/lmm

cc: Messrs. Ward Mazzucco  
Leo Null ✓

*full copy*

RICHARD J. MARNICKI, P.E.  
STRUCTURAL ENGINEER  
P.O. BOX 130  
SOUTHURY, CONNECTICUT 06488  
TELEPHONE (203) 264-8131

May 2, 1987

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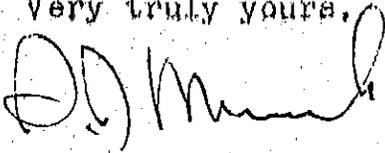
Dear Joe:

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If you have any questions or comments, please feel free to contact me at my office,

Very truly yours,



R. J. Marnicki, P.E.

RJM/lmm

cc: Messrs. Ward Mazzucco  
Leo Null

DR. CLARENCE WELTI, P.E., P.C.

GEOTECHNICAL ENGINEERING

227 Williams Street - P. O. Box 397  
Glastonbury, CT 06033

(203) 633-4623

May 7, 1987

Richard Marnicki  
P.O. Box 130  
Southbury, CT 06488

Re: Retaining Wall Failure  
Load Relief & Possible Reconstruction

Dear Richard:

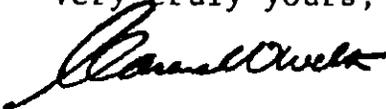
Regarding the above it is recommended that the slope be excavated to 1.5:1 slope, starting from about 2 feet inside the wall and about 7'± above top of footing. The 1.5:1 slope should extend onto neighboring properties to provide the temporary relief for the wall.

The 1.5:1 slope should be protected with GEO-WEB GRID containment and a total of 8" of 3/4" stone to minimize sloughing.

The above load relief would be satisfactory for 1 to 2 years to permit construction of a supplemental retaining wall (in front of the existing wall).

In summary the above initial effort must be considered an emergency step to avoid a wall collapse with ensuing building collapse . The action should include a minimum of secondary measures in order to expedite the effort.

Very truly yours,



Clarence Welti, P.E.

CW:n

PROJECT: \_\_\_\_\_  
SUBJECT: \_\_\_\_\_  
DATE: \_\_\_\_\_ BY: *DW*

RETAINING WALL DESIGN

*D. WATSON 1977 0226 DESIGN*

DESCRIPTION: SUNRISE R.

DESIGN DATA

Soil Bearing Press =	4,000 psf	FOOTING:	
Active Fluid Press =	45 pcf	Ftg/Soil Friction =	0.70
Passive Pressure =	250 pcf	f <sub>c</sub> Concrete =	3,000
Soil Density =	110 pcf	F <sub>y</sub> Reinforcement =	60,000 psi

WALL LOADING CONDITIONS

Slope of Backfill =	2:1	Design Fluid Pressure =	0 psf
(horiz:vert, @ level)		(Corrected for liquid)	
Surcharge over Top =	0 psf	Surcharge over Heel =	0 psf
Shall Surcharge be used in retaining Moment? Yes/No			

Soil Ht over Toe =	24 in	Axial Load on Stem =	0
Wall Ht above Soil =	2 ft	Load @ Wall Above Soil =	0 psf

ADJACENT FOOTING LOAD:

Footing Load =	0 plf	Width of Footing =	12 ft
Spread Footing? (Yes/No)		Ftg. Dist. from Wall =	12 ft
		Depth of Bearing Below Soil @ Rear F.O.W. =	0 ft

UNIFORM LOAD (Added) =	0 plf	Bottom Above T.O.F. =	0.00 ft
		Top Above T.O.F. =	02.00 ft

WALL & FOOTING GEOMETRY

RETAINED HEIGHT (above T.O.F.) =	14 ft	Footing Thickness =	24 in
Toe Width =	4.16 ft	Key Depth =	0 in
Stem Width =	2.00 ft	Key Width =	0 in
Heel Width =	5.33 ft	Toe / Key Dist. =	0 ft

FOOTING WIDTH = 11.49 ft

STABILITY SUMMARY

SOIL PRESSURE @ TOE =	4,000 psf	4,000 = ALLOW
SOIL PRESSURE @ HEEL =	0 psf	EXCEEDS ALLOWABLE
FACTOR OF SAFETY: Overturning =	1.66	> 1.5, --- OK
FACTOR OF SAFETY: Sliding =	0.37	( 1.5, ---) Rercheck
ONE-WAY SHEAR AT TOE SIDE OF STEM =	( 1 )	OK
ONE-WAY SHEAR AT HEEL SIDE OF STEM =	( 1 )	OK

PROJECT: \_\_\_\_\_  
SUBJECT: \_\_\_\_\_  
DATE: \_\_\_\_\_ BY: RSM

RETAINING WALL DESIGN

DEJONGH LETTER 5/2/91  
But steel @ d = 13"

DESCRIPTION: SUNRISE R.

DESIGN DATA

Soil Bearing Press #	4,000 psf	FOOTING	
Active Fluid Press #	45 pcf	Ftg/Soil Friction #	0
Passive Pressure #	250 pcf	f <sub>1c</sub> - Concrete #	3,000 psi
Soil Density #	112 pcf	F <sub>y</sub> - Reinforcement #	60,000 psi

WALL LOADING CONDITIONS

Slope of Backfill #	2:1	Design Fluid Pressure #	0 psf
(horiz:vert, @ Level)		(Corrected for slope)	
Surcharge over Toe #	40 psf	Surcharge over Heel #	40 psf
Shall Surcharge be used in Resisting Moment? (Y=1, N=0)			

Soil Ht over Toe #	24 in	Axial Load on Stem #	12 kips
Wall Ht above Soil #	2 ft	Load @ Wall Above Soil #	0 psf

ADJACENT FOOTING LOAD:

Footing Load #	0 plf	Width of Footing #	0 ft
Spread Footing? (Y=1, N=0)	0	Ftg. Dist. from Wall #	0 ft
		Depth of Bearing Below Soil @ Rear F.O.W. #	0 ft

UNIFORM LOAD (Added) #	0 plf	Bottom Above T.O.F. #	0.00 ft
		Top Above T.O.F. #	0.20 ft

WALL & FOOTING GEOMETRY

RETAINED HEIGHT (above T.O.F.) #	14 ft	Footing Thickness #	4 ft
Toe Width #	5 ft	Key Depth #	0 ft
Stem Width #	1.50 ft	Key Width #	4 ft
Heel Width #	14 ft	Toe / Key Dist. #	0 ft
FOOTING WIDTH #	10.25 ft		

STABILITY SUMMARY

SOIL PRESSURE @ TOE #	5,210 psf	4,000 = allowable
SOIL PRESSURE @ HEEL #	0 psf	EXCEEDS ALLOWABLE

PROJECT: \_\_\_\_\_

SUBJECT: \_\_\_\_\_

DATE: \_\_\_\_\_

BY: \_\_\_\_\_

## RETAINING WALL DESIGN

WATSON WALL 7.5 HIGHT 2/1 SLOPE

&gt; DESCRIPTION: SUNNYSIDE R.

&gt; DESIGN DATA

Soil Bearing Press =	4,000	pcf	FOOTING	
Active Fluid Press =	45	pcf	Ftg/Soil Friction	0.50
Passive Pressure =	250	pcf	f <sub>cs</sub> Concrete	1.20
Soil Density =	110	pcf	Fy of Reinforcement	50,000

&gt; WALL LOADING CONDITIONS

Slope of Backfill =	2:1	Design Fluid Pressure =	24.6 psf
(horizontal, 0#Level)		(Corrected for Slope)	

Surcharge over Toe =	40	psf	Surcharge over Heel =	0
Shall Surcharge be used in Resisting Moment? (Y=1, N=0)				

Soil Ht over Toe =	24	in	Axial Load on Stem =	0
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Wall Ht above Soil =	6	ft	Load @ Wall above Soil =	0
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ADJACENT FOOTING LOAD			Width of Footing =	0
Footing Load =	0	plf	Ftg. Dist. from Wall =	0
Spread Footing? (Y=1, N=0)	0		Depth of Bearing Below Soil @ Rear F.O.W. =	0

UNIFORM LOAD (Added) =	0	plf	Bottom Above T.O.F. =	0.00
			Top Above T.O.F. =	0.00

WALL &amp; FOOTING GEOMETRY

> RETAINED HEIGHT =	7.5	ft	> Footing Thickness =	24	in
(above T.O.F.)			> Key Depth =	0	ft

> Toe Width =	4.16	ft	> Key Width =	24	in
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> Stem Width =	2.00	ft	> Toe / Key Dist. =	0	ft
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> Heel Width =	5.33	ft			
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FOOTING WIDTH =	11.49	ft			
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I- STABILITY SUMMARY

SOIL PRESSURE @ TOE =	1,474	psf	4,000 = Allow
SOIL PRESSURE @ HEEL =	676	psf	

FACTOR OF SAFETY : Overturning =	3.90	>= 1.5	OK
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FACTOR OF SAFETY : Sliding =	1.50	>= 1.5	OK
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ONE-WAY SHEAR AT TOE SIDE OF STEM =	( )	OK
-------------------------------------	-----	----

ONE-WAY SHEAR AT HEEL SIDE OF STEM =	( )	OK
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PROJECT: \_\_\_\_\_  
SUBJECT: \_\_\_\_\_

DATE: \_\_\_\_\_

BY: \_\_\_\_\_

RETAINING WALL DESIGN

DECONALT WALL C-8 2/1

DESCRIPTION: SUNRISE R.

DESIGN DATA

Soil Bearing Press = 4,000 psf  
Active Fluid Press = 45 pcf  
Passive Pressure = 250 pcf  
Soil Density = 110 pcf

FOOTINGS

f<sub>cg</sub>/Soil Friction = 3.00  
f<sub>cg</sub> = Concrete = 3,000 psi  
F<sub>y</sub> = Reinforcement = 60,000 psi

WALL LOADING CONDITIONS

Slope of Backfill = 2:1  
(horiz:vert, 0=Level)

Design Fluid Pressure = 64 psf  
(Corrected for Slope)

Surcharge over Toe = 40 psf  
Shall Surcharge be used in Resisting Moment? Y=1, N=0

Surcharge over Heel = 40 psf

Soil Ht over Toe = 24 in

Axial Load on Stem = 0

Wall Ht above Soil = 2 ft

Load on Wall Above Soil = 0

ADJACENT FOOTING LOAD

Footing Load = 0 plf  
Spread Footing? Y=1, N=0

Width of Footing = 10 ft  
Ftg. Dist. from Wall = 0  
Depth of Bearing Below Soil @ Rear Ftg. W. = 0

UNIFORM LOAD (Added)

= 0 plf

Bottom Above T.O.P. = 2.20 ft  
Top Above T.O.P. = 0.00 ft

WALL & FOOTING GEOMETRY

RETAINED HEIGHT (above T.O.P.) = 6.8 ft

Footing Thickness = 2 ft

Toe Width = 5 ft

Key Depth = 0

Stem Width = 1.25 ft

Key Width = 0

Heel Width = 4 ft

Toe / Key Dist. = 0

FOOTING WIDTH = 10.25 ft

STABILITY SUMMARY

SOIL PRESSURE @ TOE = 1,225 psf ; 4,000 (Allow)  
SOIL PRESSURE @ HEEL = 508 psf  
FACTOR OF SAFETY : Overturning = 3.00 >= 1.5 (OK)  
FACTOR OF SAFETY : Sliding = 1.52 >= 1.5 (OK)

PROJECT: \_\_\_\_\_  
SUBJECT: \_\_\_\_\_  
DATE: \_\_\_\_\_ BY: *lm*

RETAINING WALL DESIGN

WATSON WALL 4.4 HIGH 1/2/1 SLU

> DESCRIPTION: SUNRISE R.

> DESIGN DATA

Soil Bearing Press = 4,000 psf (FOOTING)  
Active Fluid Press = 45 psf (Ftg/Soil) Friction  
Passive Pressure = 250 psf (Concrete)  $\phi = 0.02$   
Soil Density = 110 pcf (Reinforcement)  $\phi = 0.02$

> WALL LOADING CONDITIONS

Slope of Backfill = 1.5 : 1 Design Fluid Pressure at  
(horiz:vert, @ Level) (Corrected for Slope)  
Surcharge over Toe = 40 psf Surcharge over Heel  
Shall Surcharge be used in Resisting Moment? Yes, No  
Soil Ht. over Toe = 24 in Axial Load on Stem  
Wall Ht. above Soil = 21 ft Load @ Wall Above Soil  
ADJACENT FOOTING LOAD : Width of Footing  
Footing Load = 0 pif Ftg. Dist. from Wall  
Spread Footing? Depth of Bearing Below  
Yes, No? --- 0 Soil @ Rear F.O.W.  
UNIFORM LOAD (Added) = 0 pif Bottom Above T.O.F.  
Top Above T.O.F.

WALL & FOOTING GEOMETRY

> RETAINED HEIGHT = 4.4 ft > Footing Thickness  
(above T.O.F.) > Key Depth  
> Toe Width = 4.16 ft > Key Width  
> Stem Width = 2.00 ft > Toe / Key Dist.  
> Heel Width = 5.33 ft  
FOOTING WIDTH = 11.49 ft

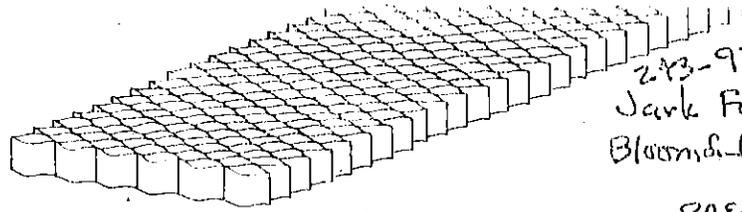
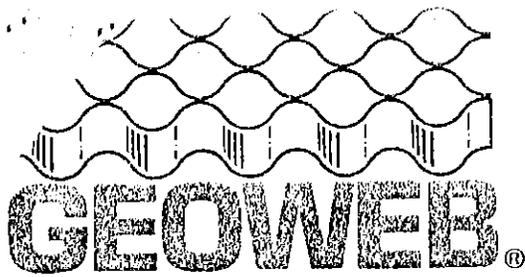
STABILITY SUMMARY

SOIL PRESSURE @ TOE = 1,239 psf : 4,000 psf Allow

SOIL PRESSURE @ HEEL = 504 psf

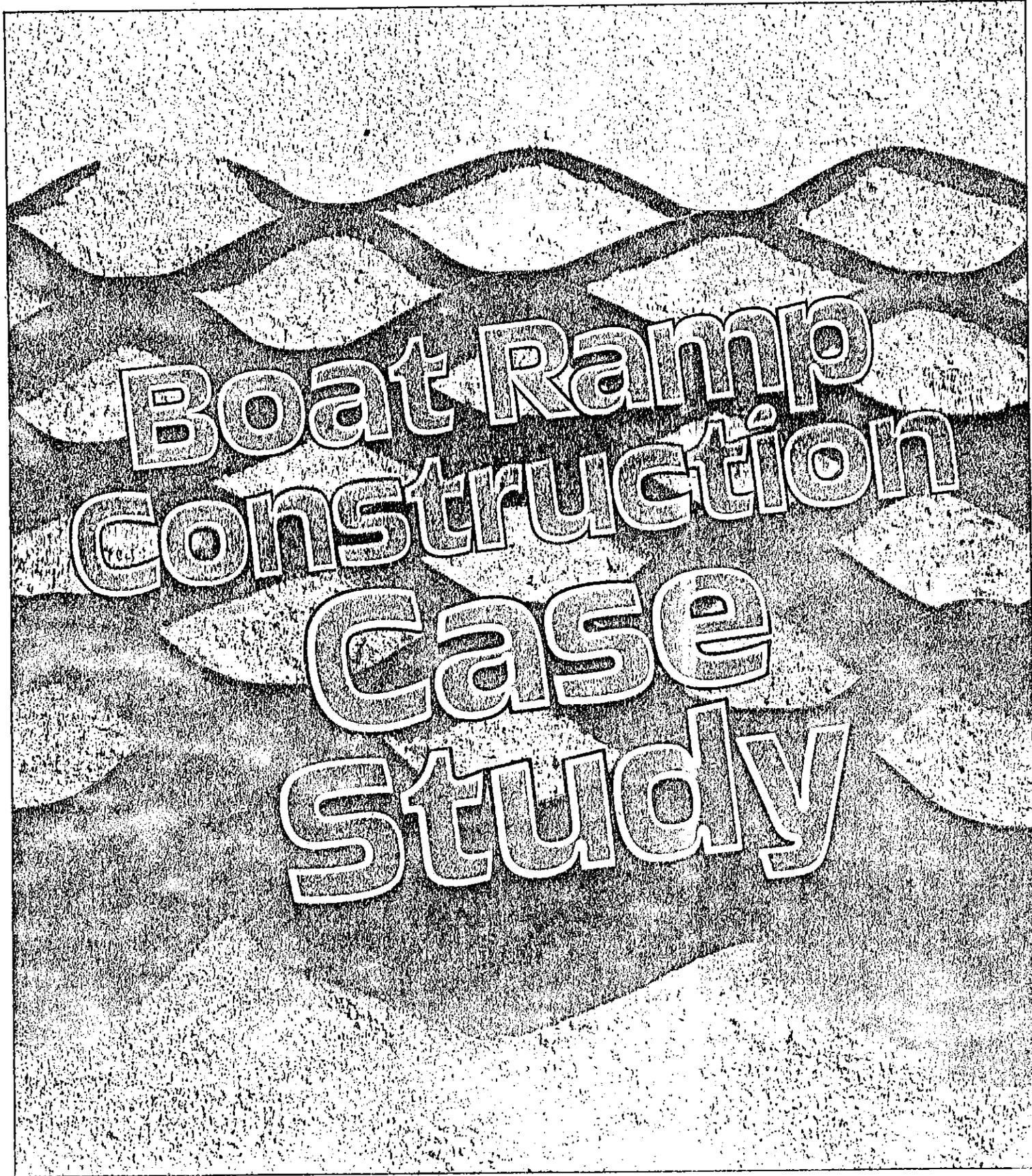
FACTOR OF SAFETY : Overturning = 4.47 > 1.5 OK

FACTOR OF SAFETY : Sliding = 1.52 > 1.5 OK



213-9719  
Jack Farrelly  
Bloomfield

GRID CONFINEMENT SYSTEM PRECAST  
N.Y.



# Boat Ramp Construction Case Study

# GEOWEB® Grid Confinement System

## BOAT RAMP CONSTRUCTION CASE STUDY

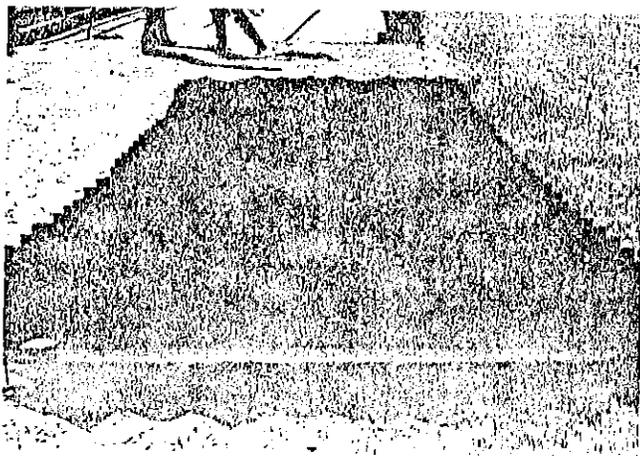
- Objective:** Improve the existing natural sand boat launch area.
- Client:** Oneida County Forestry Department, Rick Rollman, County Forest Administrator.
- Installer:** Wisconsin Conservation Corps.
- Site:** Boat ramp at the Highway O crossing of the Wisconsin River in Oneida County, Wisconsin.
- Date:** September 20, 1984
- Specified Product:** GEOWEB 8-8 Grid Confinement System

With increased usage and fluctuating water levels, a natural sand boat launch was no longer adequate. Due to frequent use, vehicles often got stuck in the sand.

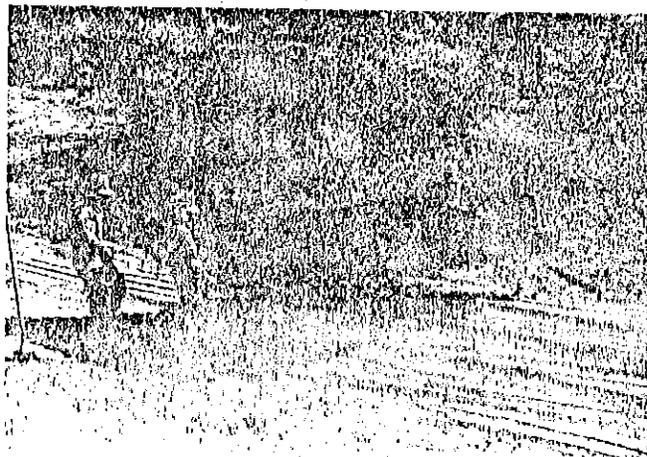
The GEOWEB 8-8 Grid Confinement System was specified to confine a road gravel fill. The gravel by itself would tend to wash out with wave action, but when confined in the three dimensional cells of the GEOWEB, would provide a strong, stable ramp with a natural appearance.

Developed by the U.S. Army Corps of Engineers Waterways Experiment Station, this system is unique in that strength or stabilization by confinement is achieved by a series of three dimensional cells, which when expanded into position have the appearance of a large honeycomb, one of nature's most efficient structures.

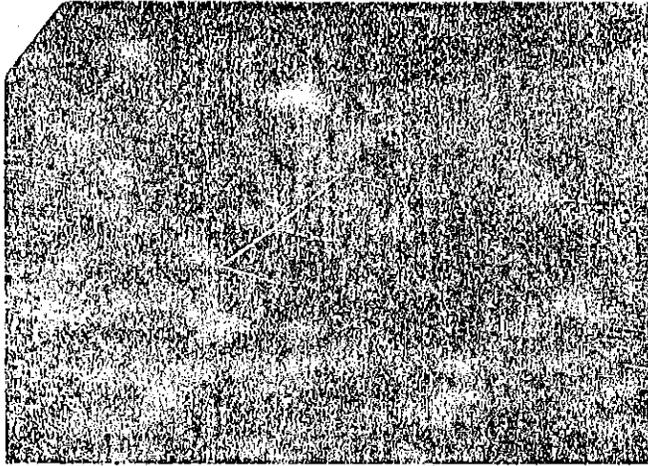
With one front end loader operator and 4 men, 5 sections of 8' x 20' GEOWEB were placed and filled. The 40' long 20' wide boat ramp was completed in 3 hours. This boat ramp is used over 2000 times per year.



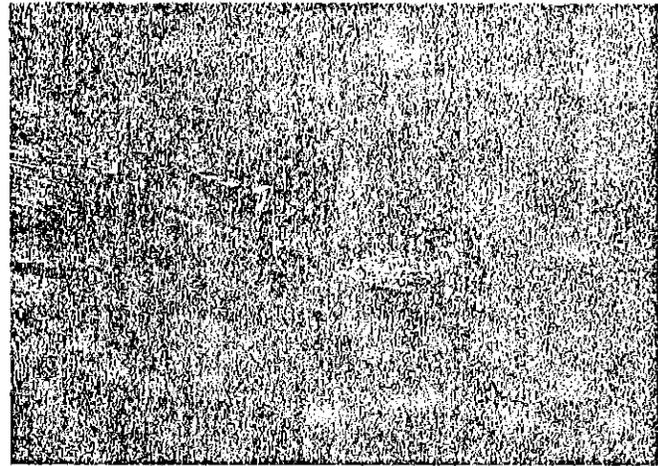
For underwater installations, the patented GEOWEB stretcher frame is used to accurately position the GEOWEB and ballast it to the river bottom. The GEOWEB is stretched over the frame to the full 8' x 20' x 8" size.



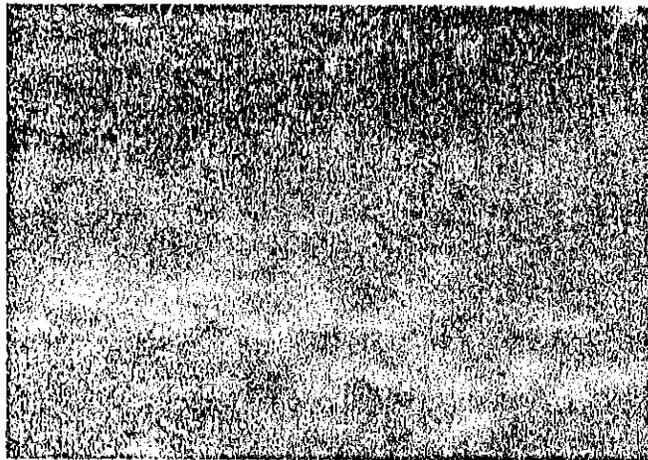
The 114 pound GEOWEB and 37 pound frame are carried down the ramp.



The frame is turned over so that the GEOWEB is resting on the river bottom.



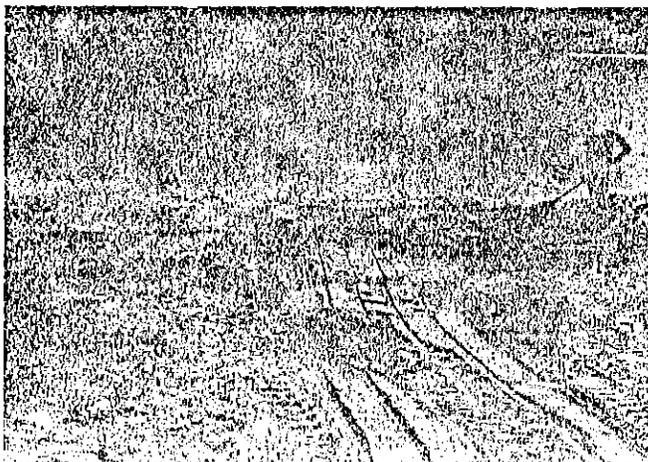
A front end loader is used to fill the GEOWEB with 3/4" or less washed rock. With the GEOWEB filled, the stretcher frame is easily removed and the same procedure is repeated with the next section and so on.



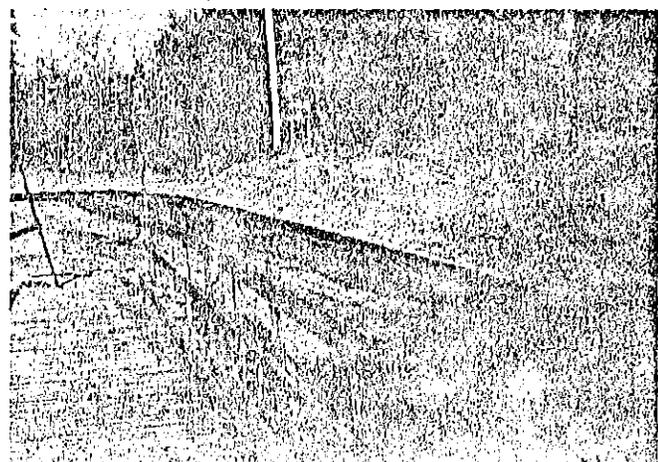
With three sections in place, the fill is over the top of the GEOWEB cells by approximately 2 inches. This allows for compaction and protects the cells from the cleats on the tracks of the front end loader.



For best compaction, the loader takes water from the river to saturate the fill material.



The shoulders of the ramp are filled in and the natural looking ramp is ready to use.



Rick Rollman, County Forest Administrator: "The GEOWEB seems to be performing very well. The boat landing received heavy use this fall and it worked well with favorable comments from users. We appreciate all your help and cooperation and we will be able to give GEOWEB an excellent recommendation from what we've seen so far".

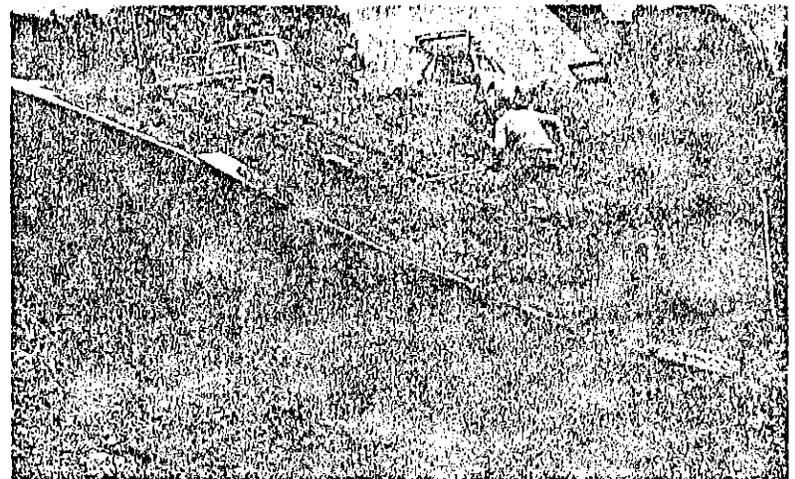
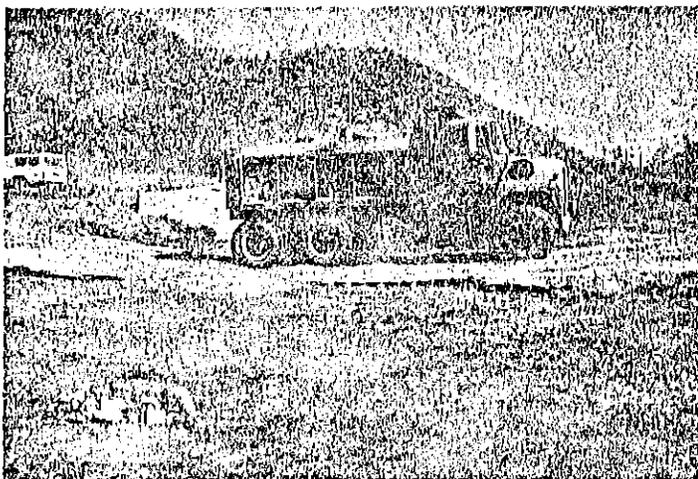
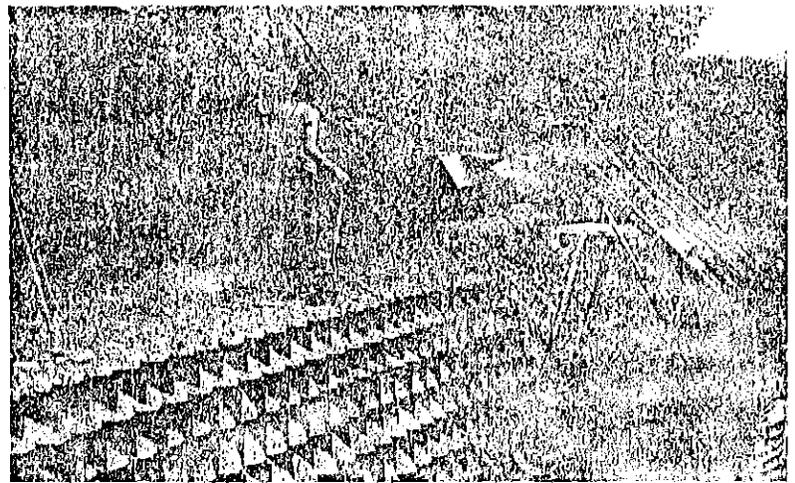
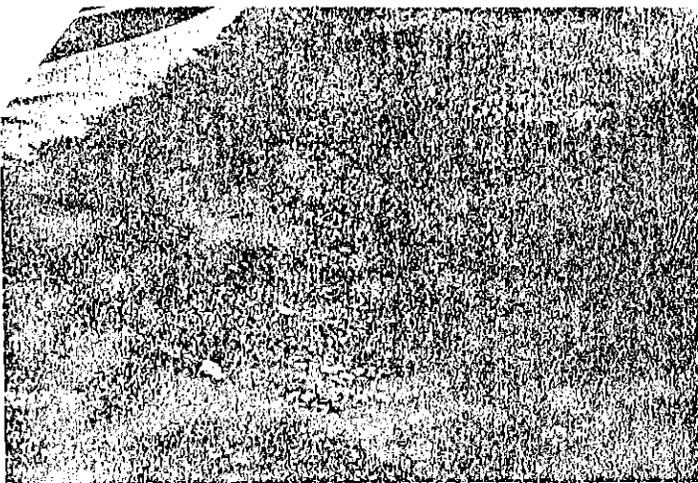
Lining

7002

140W .81/SY 40

# GEOWEB Additional Applications

Retaining Wall



Stream Crossings

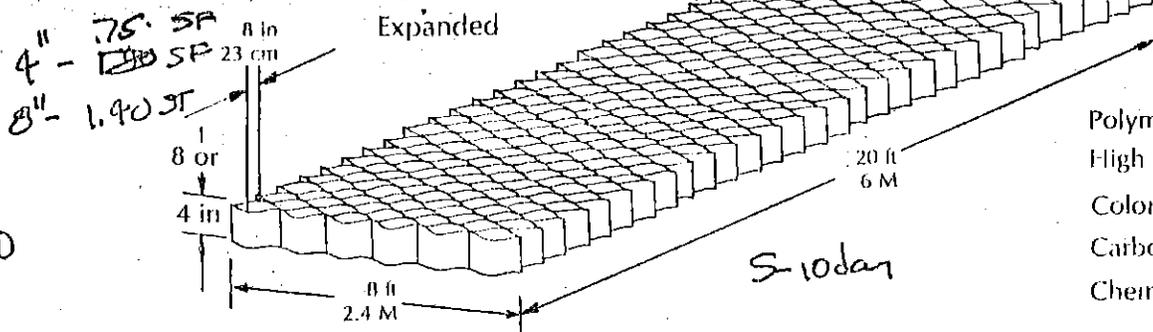
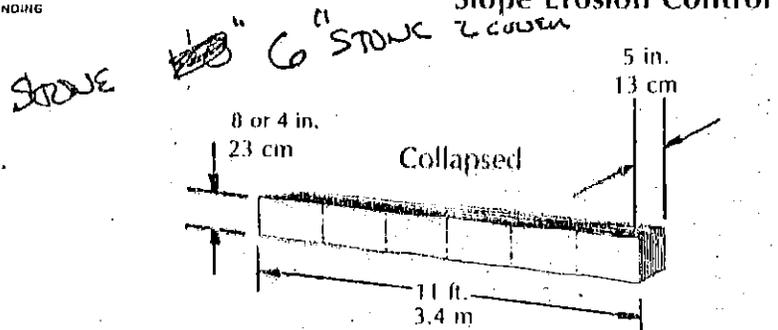
PATENT PENDING

Slope Erosion Control

## SPECIFICATIONS

### GEOWEB Structural Properties

- |                                   |                             |
|-----------------------------------|-----------------------------|
| 1. Expanded Dimension             | 8 ft. x 20 ft. x 8 or 4 in. |
| 2. Collapsed Dimension            | 11 ft. x 5 in. 8 or 4 in.   |
| 3. Panel Thickness Nominal        | 0.047 in.                   |
| 4. Weight                         | 114 and 57 lbs.             |
| 5. Cell Area                      | 41 in. <sup>2</sup>         |
| 6. Cell Seam Node Pitch           | 13 in.                      |
| 7. Welds/Seam                     | 7                           |
| 8. Seams Tensile Peel Strength    | 300 lbs.                    |
| 9. Installation Temperature Range | -16°F to 110°F              |



- Polymer Material: High Density Polyethylene
- Color: Black
- Carbon Black Content: 2%
- Chemical Resistance: Superior

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