Construction Progress Report, April 9th, 1975

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CONSTRUCTION PROGRESS REPORT

Prepared For
Board of Regents Meeting
April 9, 1975

1. General; All work activities are in general progressing on schedule. We lost a few days (6 days) in resolving the foundation problem on the Physical Plant building and will probably be delayed from 5 to 6 weeks on the Administration building as a result of the accident that occurred on 4/2/75. However, total project completion should not be affected to this extent.

2. Power Plant; Work activities are progressing well on the Power Plant. The slab has been poured, the two chillers have been placed inside the facility, the concrete block wall (temporary) and the brick work is nearing completion. In addition, the roof deck work has been started and is approximately 70% complete. The thru-wall flashing has been set for the chilled water and heating water supply and return lines.

3. Student Center; The Student Center is progressing on schedule. Slab steel has been placed in certain areas and pouring is scheduled within a few days. Also, the roof deck material is at jobsite and this work is scheduled to begin as soon as the weather permits. The elevator shaft has been drilled and cased and backfill operations have started.

4. Science/Math; The foundation and associated concrete work is progressing well---the structural steel is scheduled for shipment during the week of April 28th with erection to begin at steel arrival. The mechanical and electrical subcontractors are installing underslab piping and well ahead of the general contractor.

5. Physical Plant; Excavating, forming, tieing steel, and pouring spread footing work is in process on this facility. As previously mentioned, we lost a few days on this facility but the work is progressing at present without incident.

6. Site Work; Weather conditions have slowed this work the past week or two. However, the several work activities are progressing. For example, we have received a load of lighting standards, trenches have been dug with laying of conduit following, and storm sewer inlets are being formed and in some areas they have been poured. The natural gas line to the Power Plant is being installed and is due for completion and testing this week, weather permitting. In addition, subsoil work has been started on the access road to the Power Plant.

7. Graphics; Mr. Hermon Dyal (CRS-Houston) presented the exterior and interior graphics yesterday. We plan to present our final recommendations to the Board of Regents at the next scheduled meeting.
8. Contract Change No. 5; This change has been fully executed and accounts for a credit to the Owner in the amount of $3,275. To date, the original contract amount has now been reduced in the total amount of $37,889.

9. There are several proposed revisions under considerations that I would like to brief you on today.

These are:

1. R-4; Athletic Fields, $91,134 or $132,066 depending upon quantity of work required.

2. R-5; Curb and gutter @ $17,850.

3. R-21; Sound System for Student Center; Architect estimate @ $7,813; awaiting Contractor's proposal.

4. R-32; Shelf brackets @ $7,441; need approval.

5. R-35; Vault modifications; design in process.

6. R-45; Bookstore modifications; design in process.

7. R-46; Exposed aggregate @ $1,524 credit.

10. Campus Access Roads; A complete report will be provided on this subject at the next meeting.

11. Administration Bldg.; A complete documentation of the accident, from time of notification, is as follows:

4/2/75; At approximately 3:30 PM today, Mr. Walter Rusby called and advised that there had been an accident at the jobsite. Mr. Rusby informed me that the employee (Mr. Charles Hanks - employee of Beckner Corp. of Houston) had been taken to the hospital.

I went to the jobsite and observed the following:

a. Several truss members and columns had collapsed or partially collapsed between column lines 17 and 20 (see dwg. S6A) on the Administration building.

b. Several sheets of deck steel was and had been placed in this area on the top truss members.

b. A crane was at this building and it appeared to have been used to lift part of the damaged structure away from the injured man.
I called Dr. Stewart and advised him of my observations and suggested that he and Mr. Sawyer come to the jobsite. At approximately 4:45 PM they arrived and we walked the site. Mr. Sawyer advised that Dr. Stewart would contact appropriate Board of Regents members and inform them of the accident.

The following has been done and/or notified:

a. Mr. Louis Hood (CRS) is leaving Houston and will arrive later this evening.

b. Mr. Walter Rusby advised Contractor to stop all erection work until further notice.

c. Mr. Oscar Brown notified the several insurance companies, Romac Steel, Inc., Pittsburg Testing Laboratories, and Beckner Corp. Each will have a representative on job later tonight or by tomorrow.

d. Mr. Brown advised his job superintendent that nothing should be disturbed at the location of the incident.

e. The Contractor employed a watchman for tonight.

f. A jobsite meeting is planned for tomorrow with all concerned parties as soon as the various representatives arrive.

At this time, no conclusions have been finalized. A full report will be provided when all considerations have been evaluated.

4/3/75: 1. Mr. Louis Hood (CRS-Houston) was at jobsite at 8:00 AM to begin his analysis of the accident.

2. A meeting has been set up for 10:30 AM Friday at the jobsite with all concerned parties to review and discuss the structural steel accident. The minutes of the meeting will be provided.

4/4/75: A jobsite meeting was conducted at 10:00 AM, Friday, April 4, 1975 to discuss the resolution of the Administration Building accident that occurred last Wednesday. Those present for the meeting were:
Several significant points were addressed at the meeting. These include:

1. That all concerned parties have had an opportunity to visit the site and observe the conditions and take whatever notes were necessary including the taking of pictures.

2. That the contract documents included adequate insurance to protect the Owner and the several contractors.

3. That corrective work relating to disassembly of steel and materials list to schedule refabrication of steel could begin.

4. That refabrication would take approximately 3 weeks - as a result, a total time lost of approximately 5 to 6 weeks delay is expected for this building. However, total project should not be affected to this extent.

5. That the Architect (Mr. Louis Hood; CRS-Houston) working with Beckner Steel Co., Romac Steel Co., Pittsburg Testing Laboratories, and Allen M. Campbell Co. would prepare a materials list for refabrication of steel. However, a complete list can only be made after the damaged steel is removed and the foundations have been investigated for possible damage.
There were no conclusions reached as to cause or circumstances that caused the accident. However, all concerned parties agreed that the work should proceed as quickly as possible and that the Owner was fully protected. A recording was made of the entire meeting and a transcript will be made available as soon as it is typed.

4/7/75: Contractor (Allen M. Campbell Co.) worked last Saturday preparing a materials list for Administration building. Also, talked to Louis Hood relative to the materials list—Mr. Hood will be at jobsite Wednesday (4/9/75) to further investigate the structure and to consult with the Contractor.

4/8/75: Several men were on jobsite (Administration bldg.) preparing structure for demolition. The erectors (Beckner Steel Co.) has been instructed by the Architect and Allen M. Campbell Co. personnel to make sure the structure is "sound" prior to demolition of the damaged area.

A copy of the transcript of the meeting of 4/4/75 is attached for your information. In addition, the Contractor has now (4/8/75) completed the preliminary materials list and provided this list to Romac Steel Co. for scheduling and fabrication of steel members.

Also attached is a listing of accident photographs that we have available should the need arise.

LJG/at
Attachments
cc: Dr. James H. Stewart, Jr.
     Mr. John R. Sawyer
     All Board Members

L. J. Grubbs, P.E.
Director of Physical Plant
and Resident Engineer
My idea for this get together would be principally for everyone to express whether they have had an opportunity to fully satisfy themselves as far as an investigation of the occurrence and visual inspections, pictures, or whatever they may require so that we can start cleaning up the mess and get ready to start building back. At this time, I would like for each one here to introduce themselves, and if you will speak up a little bit and any time during the meeting that you have something to say, just say your last name and make your statement, then it would be much easier to segregate on the tape. Bob, we will start with you and go around the room.

Bob Grubbs: Bob Grubbs with Tyler State College.
Louis Hood: Louis Hood with Caudill, Rowlett and Scott.
Walter Rusby: Walt Rusby with CRS.
Raul Laffitte: Raul Laffitte with Romac Steel.
Tom Eastland: Tom Eastland with Beckner Steel Erection.
Bob Smith: Bob Smith with Employers Insurance of Texas.
Charles Beckner: Charles Beckner with Beckner Steel Erection.
Mike Marler: Mike Marler with Allen M. Campbell.
Larry Miller: General Adjustment Bureau - Larry Miller.
Harry C. Gear: Zetterlund Boynton Co. & Associates
Babe Hallmark: Babe Hallmark with Hibbs, Hallmark, Threlkeld, Inc.
Ron Gottshalk: Ron Gottshalk with Allen M. Campbell Company.
Oscar Brown: Oscar Brown, Allen M. Campbell Company.

We have taken all the data that we need. We have no objection in cleaning it up.

Would you insurance people make this statement also?

Have you made a take-off so far as quantities are concerned?

No.
Hood: We are doing a preliminary takeoff in getting these items that we know were damaged but we cannot tell the full extent of it until we get it in a more stable condition so we can look at it.

Hutto: In other words, you have made a partial take-off which you know has to be replaced.

Hood: That's right.

Hutto: Do you wish to make further explanations?

Hood: No.

Hutto: Would you like for me to.

Brown: Yes.

Hutto: We are independent adjusters representing the Aetna Insurance Company and I'm very glad to see that you have the best coverage that can be bought. It's a scheduled floaters policy, builders risk type which insures Tyler State College, Allen M. Campbell Company, and subcontractors as their interest may appear. It's got some exclusions. We have not found any real serious problems. We've got a deductible clause of $1,000, a few incidental matters which we can take up for a policy holder as time goes on. We are here fully to investigate what happened, why it happened, secure some written statements, take our pictures and have our engineer, Mr. Gear, who is with the Zetterlund Boyten & Associates, Dallas, Texas, who will ask you for your cooperation in furnishing him take-off material and various needs and engineering to furnish us with a report. We will make, as quickly as we can, a full detailed report to the Aetna Insurance Company setting up estimated reserves, scope of work, to the best of our engineer's ability, and the company reviews our reports and tells us what to do. We are not speaking on behalf of the Aetna Insurance Company. We are strictly independent adjusters. Ordinarily, we are right. Every once and a while we make a mistake. But I see no reason why your insurance situation wouldn't be sound. We do have some requirements. We need a copy, of course, of your contract with your subcontractor. We need a copy of your certificate of insurance that you have with other insurance companies. We would like to see what kind of coverage the subcontractors carry, with the hope of resolving the loss problems without any difficulty. But it takes a little work on our part, it takes the work on the part of our engineer and we ask that you prevail with us and give us what information we need so that we will be in a position to fully evaluate your loss and damage. Mr. Gear has been here since yesterday. He may have some additional remarks to make in this connection but I will let him make those. We have a local office here, Mr. Miller and Mr. Rasberry are local, subject to your call anytime you need us. I'll come down from Dallas if you need
Hutto: (Cont'd) me. This is primarily gathering together sufficient information to make a report to the insurance company. Please do not bind the Aetna Insurance Company on what I am saying here today. We are not through investigating the loss. We are just gathering the information for the benefit of the insurance company and we will level with you. We will tell you everything that comes to our attention that you need to know, that you would be interested in knowing and make the adjustment as easy and convenient as possible. To keep the continuity moving in the text of which I am speaking, I think Mr. Gear should make some comments at this time.

Gear: My name is Gear with Zetterlund Boyten Company and our service to the General Adjustment Bureau and this investigation concerns basically two factors. Number one was the reason for the occurrence and number two, the evaluation of the damage, the cost of replacement. In that connection, we, of course, are going to have to rely on the erectors. From what we can see of the progress here of this construction work we feel it's gone very well today. The point in question that comes to me is what did they do different in this particular instance than the procedure that they followed on the other structures. Something changed. It looks to me like somebody got the cart before the horse and the question there is the way these accidents occur. The reason for the study of these things is primarily to prevent a reoccurrence of. As far as anything beyond that why I think that's the matter for the insurance people-is not for us to say yes or whatever. So really that is the extent now. Getting into the cost phase of it of course we need the material takeoff, an inventory of the steel that is damaged and has to be removed and replaced. Our job in costing a job is like any other estimating operation, why we try to walk and trot paths and take standard cost for particular areas. In this particular case, there are certain things that we can see in addition to that, we have some latent damage that we can't see. And we are not going to know about those until you've actually removed some of these damaged parts that are in the way at the moment. Mr. Brown referred to anchor bolts and etc, you are going to find more than that so the thing we need to do in that direction is -- I know you people want to move as quickly as possible so we need to make a take-off as fast as we can move it. Mr. Laffitte, I think you need a bill of materials so you can expedite your fabricators and get it shipped in. Beyond that, why I think I would like to hear from the erection people as to what they think occurred.

Beckner: My name is Charles Beckner and I was in Houston at the time of the accident and I'll have to let my foreman, Mr. Tom Eastland, who was in charge of the project at this time for our company report.
Eastland: My name is Tom Eastland and I'm with Beckner Steel Erection and as far as any difference in the procedure on the Administration Building and the other buildings that had been erected, it was that the particular area of the damage was long span joists which hadn't occurred yet in the other buildings. I don't know if the following buildings have them or not but these were the first ones that occurred in this project to date and they are much more limber, they are twice as long as the other joists and almost approximately the same weight and they can't stand alone and they have to be tied in and welded which we did as we do in all erection procedure for long span. Was the cause the question, Mr. Gear?

Gear: Yes, now, my observation of the long span joists, it appears to me that they weren't tied in. They were tied in on one end but they weren't tied in on the other so the question I was wondering is they were hoisting roof deck material up there, steel deck, and where were they going to put it?

Eastland: It went on the third floor, and it had to be guided down through the roof to get to the third floor.

Gear: Wasn't that operating a little prematurely? Let's say that placing the long span joists, must have been premature that created somewhat of a hazard in trying to thread the needle, so to speak.

Eastland: Well, the erection had been begun on the building and the sheet metal deck wasn't on the job - wasn't delivered. It was delivered with no plans. I got the actual physical plans from the fabricator yesterday, Mike Marler. Mike Marler, four or five days ago? I don't know the date. Do you know the date, Mike? Mike Marler gave me what he had gotten over the phone and wrote it in on his plans as far as lengths and so forth and where they went and at that time that was all complete and we were on this other end and we had no plans, we did not know where to put it or how it went and they were supposedly going to be sent on an airplane and when they weren't, Mike got on a phone and wrote them in. But by then all that was up. And this is why we had to come in and put them in afterwards.

Gear: The thing that I was talking about in my observation of a long span was the fact that the installation had not been completed. They weren't welded in place and they didn't have the bridging in place. Now, had you had the bridging in place you couldn't possibly have threaded that steel decking through those openings. You would have had to come in through the side of the building.

Eastland: Right. Did you see the deck that we put in from the side of the building in that area?
I couldn't identify it. I saw something over there near the columns.

On the third floor, every bundle of joists on that building is right by the columns and right by the girders in the strongest part of the building and what's in the side is all we could get in the side. You saw the two bundles, I'm sure, you can walk down the road. From that point we had to come in from the top or not come in at all. We didn't have the plans to put it in when we had just the third floor up. As a matter of fact we didn't have the deck when that portion of the third floor was up.

If you had had your plans before you put it up would you have used a different technique?

Our standard technique is to set a floor, put all the joists, and all the angles, deck, everything that we have and have plans for. There is some small bracing down there that I leave out because it's easier to carry on the ground than it is to put in one big pile and carry up on the building. As far as the heavy things that have to be set with a crane, we always try to do one floor and complete it, another floor and complete it, and then the roof complete it. We don't have to guy anything down through that way.

Let me ask you one other question as a matter of explanation, what happened in the failure? What caused it to collapse? Did the bundled steel, was it resting on one of the long span joists?

It hit the long span joist. It wasn't a big jolt. But it did bump one of the long span joists.

Of course there was nothing to supply stiffness to the joists. There was no bridging in there. No ties.

The bolt in bridging that is for erection purposes. I assume that's what it's done. Now I know that's standard to have bolt- in bridging for erection purposes. In my experience, this is the only one I've seen one row down the top on a 60' long span.

Could I answer one question? My name is Charles Beckner and the standard procedure outlined by the Field Joists Institute for the erection of long span joists is that the ends are not to be welded until final alignment of the end be achieved. In a joist 60' long it is specified that the center row of bridging should be cross bracing. In this situation, we were provided with one horizontal top piece, not cross bracing from joists to joists.

Is that a deviation from the plans?
Beckner: I can't answer that question - whether it was a deviation from the plans or not.

Gear: The normal procedure is to x-it down a center line and you only had it in one plan then it would be a deviation.

Beckner: I would say it would be a deviation from the steel joist design specifications.

Gear: I wonder this - when something like this occurs when there is a deviation from the plans, how do handle that?

Beckner: Basically, we have the contract to perform the erection of the material and all that we provide is the labor and equipment but we do not provide any approval of shop drawings, design or anything of that nature.

Gear: Who has the responsibility for that supervision?

Beckner: I will have to say that that rests in the hands of the steel fabricators and the General Contractors, and the Architect. Unless anyone else has any other opinion?

Gear: Mr. Laffitte, would you give us the answer to that?

Laffitte: Well, these steel framing is actually a special design which is called system buildings and the type of bridging employed in there is called for on our drawings which we supply with steel and which we supply for approval to the Contractor and the Architect and that is the type of bridging that is practically used on this system construction and there is no x-bridging used on systems because it all has to be compatible weight. Other trades which are lighting ceilings, heating, ventilating, air-conditioning, partitions and that nature. So that is the type of bridging that is called for in the plans and the one that is utilized on this type of building all throughout the country.

Gear: I would have asked the Architect then to look that up and explain that to you. Do you agree with that procedure? Or is that in accordance with the specifications?

Hood: Mr. Gear, would you repeat the question or problem?

Gear: As I interpret Mr. Laffitte's answer, the question concerns the details of the center bracing on long span trusses and we gather that instead of having the x-bracing in there from member to member, they just provide one single member but Mr. Laffitte describes it as a system design rather than following the Steel Joist Institute, their specifications. Is this something you people signed off and agreed to? Did the Architect - in other words, you checked the specs, you checked the specs, and you signed off on the shop drawings.
Hood: That's correct. We did check the shop drawings.

Gear: Well, in checking of the shop drawings in finding that you do not have the x-bracing on the center span, what are your comments there?

Hood: As Mr. Laffitte said, this is a systems type building. They designed the building, and we approved it, or course, and we are satisfied that their design was okay.

Laffitte: To amplify a little bit on that, on the members that are 40' and over, there is one item that was missing in the procedures on the erection and my understanding (illegible) erector is the fact that we do provide a frame that is x-welded with two horizontal struts, one at the top and one at the bottom and an x which is intended to go on the first of the first to the second one long span of that nature and that is established to provide lateral stability during erection and then from there on it was the single strut from top continued. This is what I did not see stored. I do not find direct pieces of that shop built x-strut that should have been installed as a normal procedure during the ((illegible) course of bracing and material finish) ??

Gear: Without the x's in the horizontal plain, the x's in the vertical plain would have been ineffective if they had been installed.

Laffitte: What was that again?

Gear: My statement there was, if you had omitted your sway bracing or your x-bracing in the horizontal frame.

Laffitte: We had not omitted it, we provided it.

Gear: You provided it.

Laffitte: Yes, but it has not been installed.

Gear: If it had been installed and you had the single number bracing from truss to truss, or joists to joists, you would have had rigid construction through there.

Laffitte: Yes.

Gear: But as it is you have sort of a parallelogram or a webb device in there with no stability. It looks to me like we are heading back to something in the manner of an anchor plate which was omitted.

Laffitte: No. The tale from Mr. Eastland was he was lacking the deck drawing. He had the field drawing to proceed with.
Eastland: This is Tom Eastland. I had 3 pieces marked GFW-6 or least I think so. That's right, not shipped with the original shipment, two of them were right below the long span joists that you are talking about that get this x-frame and we left this material, the long span out so then we could guide this other through after it did arrive. Me and Mike Marler had a conversation as far as his judgement, I don't know whether he talked to someone in his office or what, was that we should leave down, get up all we could get up that would stay up and leave down the pieces that would interfere with the erection of the GFW 6 girders until we came back to do the tie-in area on the Science and Math. This is what we did.

Laffitte: Yeah, but I'm not talking about the missing girders, I'm talking about the fact that the x-bracing that is provided for the roof long span apparently is not installed.

Eastland: Those long spans aren't up.

Laffitte: Yeah, well, not now. They are down. The one's that are bent. Those aren't the one's I was talking about. I'm talking about the roof long span. That x-bracing on the first bay and the last bay and the spacing on the long span, that's the one I'm talking about. It shows on the plans.

Eastland: Those are still up and if you want me to show you what is and what isn't up - it is still laying out there. They were never erected. It might clarify what I'm saying.

Laffitte: Do you know which one I am talking about?

Eastland: Yes.

Laffitte: The two in front and the horizontal (illegible) the one that is intended to brace the long span.

(ALL MOVE TO THE PLANS)

Brown: Would the insurance representative from Mr. Beckner's insurance company like to comment.

Smith: This is Bob Smith and I am with Employers Casualty Company and we insure and represent Beckner Steel Erection Company and as far as I'm concerned we have completed our investigation. That's about all I'd like to say about. We do not need any more -- don't need to do anything else at the scene.
Brown: Then as far as you are concerned the damaged area can be cleaned up.

Smith: Yes Sir.

Brown: I believe that your Mr. Hutto?

Hutto: That's right.

Brown: We have expressed that as far as your part of it is concerned, we can start clearing up the damage, but possibly Mr. Gear might have something further on that. Is this correct?

Hutto: That is possible. First of all, as we, I, mentioned, we are strictly getting facts together now and we will make a report to the insurance company. Hopefully, next week sometimes we will have some figures available figures. Mr. Gear will continue to work with you in an effort to determine what caused it and how much it should cost in cooperation with you. I can't think of anything else that we would be interested in right at this time. Other than we would like to have a statement from the foreman of Beckner and one from the crane operator.

Brown: Mr. Eastland is the foreman. I don't know if the crane operator is available today or not.

Beckner: This is Charles Beckner. He is not available today but he can be made available if necessary, if necessary arrangements are made in time.

Hutto: Mr. Eastland is available today.

Beckner: Correct.

Hutto: We would like to get a statement from him as to what he saw and how it occurred. We have problems with our memories too. If we don't put it down in writing sometime we forget later what was said.

Brown: Mr. Gear, following this line of discussion that you and various ones had looking at the drawings, are you satisfied with this or would you like to go down to the job site with Mr. Beckner and his superintendent and any other interested parties and physically look at the damage to reconstruct what has happened?

Gear: Mr. Brown, I sure would like to take another look at the property and I'd like Tom's assistance in providing me with this list of these parts that were omitted and the problem that he had there in his normal erection sequence. Further than that, of course, we are after a bill of material. I would like to have made available to me, I don't need a complete set of specifications, but I would like to have the specs
Gear: (Cont'd) as relate to the structural as to the standards that they are following and also I guess I can have ample use of the prints that are here. I doubt that if its necessary to get another set of prints. I think Mr. Eastland, Tom, you have ample information in that direction.

Eastland: I have complete sets that I use that have been read and that we didn't have.

Gear: All right, sir. I would like to review that with you and incorporate that into my list of materials. Other than that, I think that will provide my basis of the report.

Gottshalk: Well, can we go ahead then and start removing steel say, Monday?

Gear: Oh, yes.

Hutto: Bear in mind, gentlemen - this is Hutto speaking if you have your machine on, this is your property (laugh) and you can start moving it anytime you want to. It's up to us to be here and get the facts and information if we have to work on Saturday and Sunday, we'll be here. But this is your property, you proceed and go to work on it.

Brown: Well, we realize that, Mr. Hutto, but we do feel too that everyone should be given every opportunity to be satisfied that their investigation is complete before we would do that. Now the procedure, I guess you would call it, in taking the building down there is, I would say that 90% of the damaged pieces are readily visible. You can tell that from standing on the bank and looking at them. There may be some pieces in the air that, or on the ground, that are repairable or haven't suffered any great damage and in that line of thinking, would you want these pieces in doubt laid to one side for your further looking at rather than just putting them in the heap? Or there any pieces----

Hutto: If it runs into very much money we would like to see it. Also, the question of salvage. You've got some steel salvage. Afterall, we are paying a pretty good price for steel now so get the best price you can for the salvage steel and credit the loss.

Brown: The salvage -- normally that's where we get our beer money.

Everyone: (Laugh) (Laugh)

Hutto: Well, we sometimes forget to mention that to you but the company always reminds us of it so I'll just tell you about it.

Brown: Is there anyone else that would like to have the floor at this time?
Beckner: I would like to make one comment at this time if it doesn't prove any complications to anyone. I would like to be able to wait until Tuesday to remove the damaged members for one purpose. I have a consulting engineer that will represent my firm that wanted to take a visual look at it before we move anything.

Brown: I think that would be satisfactory. We have been talking Monday but I don't think one more day will be critical so we'll say Tuesday and you will make your arrangements to have your rig or whatever is required here for Tuesday.

Beckner: Yes, we will have the crane necessary to remove the damaged material.

Brown: Well, then, that gives everybody from now until Tuesday morning to make any further investigation, pictures, or whatever they might want. You've got the items that you requested of things that we can furnish you out of our office. Mr. Gear, if you want the section of the sub-system specifications, I think that we have ample copies of specifications in our office that we can furnish you.

Gear: Thank you, Mr. Brown. You've been a big help.

Brown: Mr. Hood, do you have anything further to add.

Hood: No.

Brown: Mr. Grubbs?

Grubbs: No Sir.

Brown: Mr. Rusby?

Rusby: No Sir.

Brown: Mr. Laffitte?

Laffitte: Yes, I would like to make one comment, number one is in relation to the missing parts or members, the missing parts or members are in the adjacent area, not in the area that actually was wrecked and also point out the fact that before you put any ties or loops into the steel members, it should be properly bridged and lack of the x-bridging - they would have a tremendously contributing factor in my opinion.

? : Is that the end of the statement?

? : (illegible)

Hutto: It might be well for you and Mr. Gear to take another visit down and look at some of these parts. It certainly would be well to clear up any misunderstanding now rather than at some later date.
To clarify - this is Eastland from Beckner - to clarify the adjacent missing pieces they prevented the erection of the pieces immediately beside the ones that did fall because they were below it. You know -

In the following bay. On a different column line and different bay completely. They are not under the area that collapsed. They are in the following bay.

I think that subject could probably be discussed better with the drawings and standing there looking at the structure. Do you agree with that, Mr. Gear?

Yes, I do, Mr. Brown.

And I think I suggested just a few minutes ago that we could adjourn on this meeting and interested parties could go to the site and further their inspection. Mr. Marler, do you have any comments?

No.

Well, Mr. Laffitte has told us that it would require approximately three weeks to replace the steel after we have given him the list of the pieces to be replaced so in order not to cause any more delay to the project than necessary, when we go to the site down there, I would like, if there are any pieces in doubt in anyone's mind whether it be Mr. Gear's or whoever, that there is a possibility that that piece is not damaged that we so designate that piece and in taking it down, we will lay those pieces to one side to where they can be looked at further.

But the take down will not start until Tuesday?

Right.

Very good. Very good.

Mr. Hood, I may ask you one thing if there are pieces that may be in doubt as to whether they could be re-used or repairs made on them, who, from your office, would be designated to do that or what is your thinking on that?

As far as we're concerned, any piece that may be damaged, we will have to have some means of satisfying ourselves that it would be structural sound to use it. Whether it would involve, say, a testing laboratory to check the welds on it, or x-ray them, I don't know just what it would take to prove it but we would have to have some proof that it is not structurally damaged and not always will visible inspection show you this. But, as stated earlier, perhaps 90% of it -
Hood: (Cont'd) -we won't have any proble with it. I feel that there will only be a few isolated pieces where you will have to ask for outside help to tell us whether or not they are deficient.

Brown: Then do you feel that that would be our responsibility as the General Contractor to have Pittsburg Lab or someone like that inspect these pieces and reject them or okay them for use, or okay minor field repair?

Hood: Yes.

Brown: That would be your determination on that? That would, Mr. Hutto, become a part of the overall cost -- is the reason I was bringing it up. Of course, you may take one piece, like one of those girders that's worth quite a bit of money and it may be it suffered some little damage and if I interpret Mr. Hood right, he would want Pittsburg Lab to check that, or certify, and recommend that it not be used or that certain repairs would be made to it.

Hutto: I can see where there might be cases where that would be important, but I think that would probably - that this architectural skill and your engineering skill and the engineering skill of these people, that should be resolved quite easily without somebody testing. But there might be a case where it would be needed.

Hood: Well, one of the things which we've turned back now. We have a steel frame that's collapsed. But there is also a sub-structure, a supporting structure under there. A visual inspection just won't tell you whether or not those bolts have yielded.

Hutto: We've got this latent proposition -

Hood: That's correct. That's what we're looking for. There are some places we will have to have the testing laboratory to go inside and look in there.

Hutto: You will have to approach that as you come to it.

Hood: That's correct.

Hutto: If it becomes a major problem, I would like to know about it. I'll find out soon enough.

Hood: Sure.

Hutto: Then on the labor its to be based on standard time. That's the way the loss figure should be prepared.

Brown: I beg your pardon, I didn't get that.
Hutto: The labor should be based on standard regular time.

Brown: Yes.

Hutto: No overtime. Business interruption will pay overtime but you seldom find business interruption on a loss like this.

Brown: Okay. Anyone else? Well, if there will be no further business to come forth in this meeting, I will entertain a motion to (illegible) (Laugh).
## Photos of Steel Collapse Area

**Location:** Tyler State College, Phase 1 - Administration Bldg.
**Collapse:** 3:00 P.M.
**Photos:** 4:00 P.M.

<table>
<thead>
<tr>
<th>Photo #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Directly under where man was trapped - (Between Col. Lines 18 and 19)</td>
</tr>
<tr>
<td>2</td>
<td>Facing West, looking up to where man was trapped (Between Col. Lines 18 and 19)</td>
</tr>
<tr>
<td>3</td>
<td>Looking North and up (Between Col. Lines 18 and 19)</td>
</tr>
<tr>
<td>4</td>
<td>Looking North (Between Col. Lines 18 and 19)</td>
</tr>
<tr>
<td>5</td>
<td>Facing East - Looking up at Col. #18.</td>
</tr>
<tr>
<td>6</td>
<td>Facing North - Looking at Column #18.</td>
</tr>
<tr>
<td>7</td>
<td>Facing North - Looking up. Col. Line #19 is on lefthand side of photo.</td>
</tr>
<tr>
<td>8</td>
<td>Looking West - Column #21 at &quot;Q&quot; is at extreme right of photo.</td>
</tr>
<tr>
<td>9</td>
<td>Looking West at Columns #22 through #16.</td>
</tr>
<tr>
<td>10</td>
<td>Looking East at the base of Column #18.</td>
</tr>
<tr>
<td>11</td>
<td>Looking East - Base of Column #17 in forefront.</td>
</tr>
<tr>
<td>12</td>
<td>Looking East on the North side of the building. Column #17 is in forefront.</td>
</tr>
</tbody>
</table>