HYDROLOGY K17/D21 3 PLANS

K17/D21
3 PLANS

dean and hunt associates ltd
architects planners
telephone
505 255-4864
210 la veta n.e.
albuquerque
new mexico
87108
hal m. dean
a.i.a.
eugene l. hunt
a.i.a.

December 1, 1981

Mr. Bernie J. Montoya
City Hydrology
City of Albuquerque
123 Central Avenue, N.W.
Albuquerque, New Mexico

Subject: Highland Performing Arts Building
D&H Job #80-11

Dear Mr. Montoya:

Please be advised that during and after the construction of the Highland High School Performing Arts Building we had the opportunity to observe a positive drainage pattern drawing from and around the existing building to the retention pond on Jackson, S.E.

Please feel free to call on us if we can be of further assistance.

Thank you for your concern.

Sincerely,

Bill Weis

Bill Weis

BW:jeh

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

October 17, 1980

Mr. McMillan
Albuq. Public Schools
724 Maple St. S.E.
Albuquerque, N.M. 87125

RE: CONSTRUCTION PLANS FOR THE A.P.S. PROJECT AT THE INTERSECTION OF IVORY STREET AND HOOD ROAD IN RIO RANCHO

Dear Mr. McMillan:

I have had some conversation with Mr. Ray Trujillo, Architect for A.P.S., regarding the above project. I understand that following a standing agreement between the City and A.P.S., the City will be requested to review the construction plans for the referenced project. Such a review, under normal circumstances, would include review of the grading and drainage plan. Since this project will not affect any City of Albuquerque facilities, my section will refrain from making any comments to the construction plans.

I want, nevertheless, to appraise you of the fact that I have made an inspection in the field, and it is my impression that the architect would do well to address with his plans, two questions: a.) Protection of the property from erosion by the arroyo on the north side. b.) The safety aspects of the arroyo itself.

It would also be my recommendation that the plan prepared by Mr. Trujillo, be reviewed by the Chief Engineer for Rio Rancho, to insure that this development will not be injurious to downstream properties.

Very truly yours,

Bruno Conegliano
Asst. City Engineer-Hydrology

BC/tsl

cc: Ray Trujillo, Architect. A.I.A.
Mike Castillo, Chief Engineer, Rio Rancho Dev.
R. S. Heller, City Engineer
F. J. Aguirre, Asst. Hydrology Engineer

CITY OF ALBUQUERQUE

ALBUQUERQUE, NEW MEXICO

INTER-OFFICE CORRESPONDENCE October 16, 1980 REF. NO._____

TO: H. R. Orr, Principal Assistant/City Engineer

FROM: Fred J. Aguirre, Civil Engineer FJA

SUBJECT: REVIEW OF A.P.S. PLANS FOR THE PERFORMING ARTS CENTER

In reviewing the plans submitted to my office by A.P.S., I have found that the drainage requirements appear to have been incorporated on the site plans as an after thought, almost as a nuisance.

Foremost, I feel that the responsibility of the Code Enforcement Section should be the review of the design of the proposed improvements, which should be prepared and presented in a professional manner. I should not be compelled to proof-read the plans, which unfortunately, is all too often the case. After all, if the plans are not carefully prepared, not only is it difficult to review them, but most importantly they cannot be constructed as designed.

FA/tsl

Attachment

cc: R. S. Heller, City Engineer
B. Conegliano, Asst. City Engineer/Hydrology

DRAINAGE COMMENTS FOR
HIGHLAND HIGH SCHOOL
PERFORMANCE ARTS CENTER

1. No datum point provided on the grading plan.

2. The grading plan for the Fine Arts Center approved 9/14/79 and the grading plan submitted for review for the Performance Arts Center, done by the same architect, disagree on the following items:

   A. The property line location.
   B. The location of the west ponds.
   C. The location of the existing contours, even though the contours have the same configuration.
   D. The finish floor elevation.
   E. The North East curb return radius, one is 14', the other 25'.

3. The contours are difficult to read because of:

   A. Contours insufficiently or not labelled with the proper elevations.

   B. The shaded background used to designate the asphalt paving.

   C. Curb or fence lines are difficult to distinguish from the contour lines.

4. The cross-section on sheet C4 does not show the grade change nor does it show how this grade change will be maintained.

5. The slope of the proposed storm drain going in a Northeasterly direction from the Performing Arts Center is given in a 1/4" per ft.; this slope would require about 7.5' of drop in 360' (scaled from plans). However, the ground elevation of the point where the roof drain connects to the storm drain is approximately 122.5'; (the storm drain would have to be located below this elevation); the outlet elevation, where the catch basin is located, is also at 122.5'. The proposed design slope is in conflict with the "construction details" provided.

6. There were no engineering calculations provided for the proposed storm drain size or slope nor is there adequate construction detail.

7. Why is there a catch basin provided at the outlet?

8. There is no positive discharge planned for the proposed pond as required by the Interim Drainage Guidelines.

9. There is no balancing of the ponds with their respective drainage areas.

10. Why is the depth on the west pond being increased, when it appears that the Drainage Area is being reduced? Also, the proposed pond depth will not be acceptable to the City since it is too deep.

11. The required volume indications do not follow any standard hydrologic methods. The increase in the volume of runoff (in cubic ft.) after development, is obtained by multiplying the area (in sq. ft.) made impervious, by the factor 0.1 (in ft.). The factor 0.18 is used when it is necessary to obtain the total volume of runoff generated by any given site rather than the increase which follows the development of the land. Both factors are employed to evaluate the runoff volume by a storm with a probability of volume P = 0.01 (100 yrs. storm).

12. There are no pond volume calculations provided.

CITY OF ALBUQUERQUE

ALBUQUERQUE, NEW MEXICO

INTER-OFFICE CORRESPONDENCE

October 3, 1980

REF. NO._____

TO: H.R. Orr, Principal Assistant City Engineer

FROM: Fred J. Aguirre, Civil Engineer

SUBJECT: PRELIMINARY REVIEW OF HIGHLAND HIGH SCHOOL DRAINAGE AND GRADING PLAN

The following are my comments concerning the Highland High School grading and drainage plan:

(1) The required volume calculations are not in agreement with any standard hydrologic methods.

(2) I am unable to verify submitted pond volume calculations with the grading plan submitted.

(3) I am unable to follow the proposed and existing contours provided on the grading plan because of the poor detailing.

(4) The proposed pond depth appears to be five feet with no safety provisions provided.

(5) There are no calculations provided for the proposed storm drain or inlet.

(6) There is no positive discharge planned for the proposed pond as required by the Interim Drainage Guidelines.

(7) There is no balancing of the ponds with their respective drainage areas.

CITY OF ALBUQUERQUE

ALBUQUERQUE, NEW MEXICO

INTER-OFFICE CORRESPONDENCE September 30, 1980 REF. NO._____

TO: R. S. Heller, City Engineer

FROM: Bruno Conegliano, Assistant City Engineer, Hydrology

SUBJECT: PLANS SUBMITTED BY A.P.S. FOR REVIEW BY FRED AGUIRRE

A free hand sketch or drawing is not considered an "engineered design" for any type of earth moving project be it a roadway, a canal, or a grading project. Yet, when it comes to submitting drainage plans and provisions particularly if prepared by architects, anything goes.

Since our mandate is to insure that adequate drainage provisions are made in compliance with adopted policies (see attached section 6 AMAFCA Resolution 72-2) we cannot accept such a cavalier disposition.

This attitude is quite clearly evident in the plans submitted to us by the architect retained by A.P.S. which, in turn, causes the types of problems and complaints as those received by our office regarding the Truman Middle School, the Harper Road School, the El Dorado High School, etc. etc. etc. Since, in reviewing plans, we attempt to obtain a minimum level of compliance, in terms of construction details that can be constructed and verified, we have encountered the greatest resistance by architects, particularly if employed by A.P.S.

This agency, represented by Mr. Ernie Blumenthal, has gotten into the habit of bypassing both Fred Aguirre and myself, and successfully obtaining from Rip Orr either the granting of approval or the exercising of pressure for an expeditious acceptance of the design (?) submitted. The latest memo from Rip, is an example of the undue pressure and interferance that my office is receiving. Since, from reading the memorandum, it is apparent that Rip has looked at the attached drawings C-2, C-4 and the "computation sheets", I ask for your review of said drawings. Please advise if you find said drawings acceptable for the provision of drainage facilities such as conveyance of the runoff to the ponding areas, definition of the ponding volumes, contributing drainage areas, drainage of the ponds to the street, in compliance with the interim design memorandum and protection from settlement of Jackson Street S.E.

The recent memorandum by Fred reflects his discomfort with the conditions discussed above. I think he deserves a reply and I think we should receive direction from you on how we should proceed in terms of reviewing A.P.S. facilities and inspecting them after they are constructed.

BC/tsl

CITY OF ALBUQUERQUE

ALBUQUERQUE, NEW MEXICO

INTER-OFFICE CORRESPONDENCE September 29, 1980 REF. NO._____

TO: Fred Aguirre, Civil Engineer

FROM: H. R. Orr, Principal Assistant City Engineer HRO

SUBJECT: DRAINAGE PLAN - PERFORMING ARTS CENTER - HIGHLAND HIGH SCHOOL

In an effort to avoid delays as experienced in the past by APS in the review and approval of building plans, Ernie Blumenthal left with me three sets of plan sheets, C-2 and C-4 plus a computation sheet all prepared by Architect Gene Hunt. Two sets are herewith forwarded for your review prior to approval.

Meanwhile plan check is in progress at the other check points of the One Stop Center.

The on-site storm sewer design is by Claude Lyons. The new building roof drainage is collected into the on-site storm sewer line.

Note that the existing building and associated paved parking (located adjacent to and just north of Zuni) which now drains into Zuni Road is being removed and the area being regraded and repaved to drain to the proposed detention pond.

Your review should be completed by October 2, 1980 and report returned to me or to Gene Hunt or to Ernie Blumenthal.

HRO/fs
Enclosures
cc - Ernie Blumenthal

September 29, 1980

File Note - APS Sites - Drainage

In discussion this morning Ernie Blumenthal left with me 3 sets of 2 plan sheets for the Performing Arts Center at Highland High School. Two are separately being sent to Fred Aguirre.

Regarding other sites, Tom Mann is working on drainage corrections at 3 sites, namely, Chelwood, Apache and Arroyo del Oso.

At Chelwood School (Constitution and Chelwood) Ernie thinks the handicapped ramp is now completed and, if so, he will pursue arrangements for an APS contractor to build the previously agreed pond. Also, at Chelwood a previously approved/constructed pond is now filled and needs to be cleaned by APS maintenance crews.

At that school Tom Mann is addressing an overflow of storm water onto Chelwood at a location north of the nearest buildings to Chelwood.

At Truman School on the S.W. Mesa, APS will have to re-excavate a former pond and construct some wall to intercept flow now passing off-site through fences to R-1 property. Site is not known to be in violation of prior building plan approval. Maintenance and Operations Section of APS is responsible for these corrections.

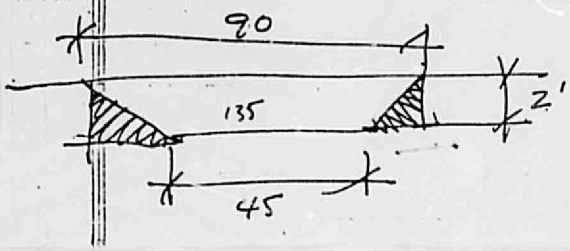
HRO/fs HRO

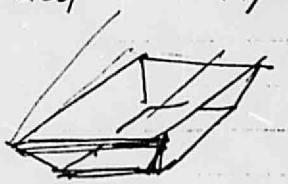
cc - Richard Heller
Bruno Conegliano
Fred Aguirre

	New	Existing
Building Area:	14,532 S.F.	
Existing Parking		16,875 SF
Adding Parking	13,900 SF	
Net Impervious New	28,432 SF	

RECEIVED
SEP 26 1980
CITY ENGINEER

Volume of Retention Pond =
0.18 X 28,432 = 0.1 X 5117.76 = 512 cf.
Provided = 16,200 cf.





DRAINAGE COMMENTS FOR
HIGHLAND HIGH SCHOOL
PERFORMING ARTS CENTER

1. No datum point provided on the grading plan.

2. The grading plan for the Fine Arts Center approved 9/14/80 and the grading plan submitted for review for the Performing Arts Center, done by the same architect, disagree on the following items:

   A. The property line location.
   B. The location of the west ponds.
   C. The location of the existing contours, even though the contours have the same configuration.
   D. The finish floor elevation.
   E. The North East curb return radius, one is 14', the other 25'.

3. The contours are difficult to read because of:

   A. Insufficient or lack of contour elevations.
   B. The shaded background used to designate the ashpalt paving.
   C. The same alignment of the contours with the fence and curb lines.

4. The cross-section on sheet C4 does not show the grade change nor does it show how this grade change will be maintained.

5. The proposed storm drain slope from the Performing Arts Center grading plan indicates a ½" drop per foot of run which would require about 7.5' of drop in 360' (scaled from plans). However, the grade over the point where the roof drain will connect to the storm drain is at approximately 122.5' elevation (obviously the storm drain would be located below this elevation) and the outlet elevation where the catch basin is located on the plans is at approximately 122.5'. The proposed design slope is in conflict with the "construction details" provided.

6. There were no engineering calculations provided for the proposed storm drain size or slope nor is there adequate construction detail.

7. Why is their a catch basin provided at the outlet?

8. There is no positive discharge planned for the proposed pond as required by the Interim Drainage Guidelines.

9. There is no balancing of the ponds with their respective drainage areas.

10. Why is the depth on the west pond being increased, when it appears that the Drainage Area is being reduced? Also, this proposed pond depth will not be acceptable to the City, too deep.

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PERFORMING ARTS CENTER

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5. The proposed storm drain slope from the Performing Arts Center grading plan indicates a ¼" drop per foot of run which would require about 7.5' of drop in 360' (scaled from plans). However, the grade over the point where the roof drain will connect to the storm drain is at approximately 122.5' elevation (obviously the storm drain would be located below this elevation) and the outlet elevation where the catch basin is located on the plans is at approximately 122.5'. The proposed design slope is in conflict with the "construction details" provided.

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9. There is no balancing of the ponds with their respective drainage areas.

10. Why is the depth on the west pond being increased, when it appears that the Drainage Area is being reduced? Also, this proposed pond depth will not be acceptable to the City, too deep.

11. The required volume calculations are not in agreement with any standard hydrologic methods. The Factor .1 when multiplied by the impervious area created will determine the increased volume runoff for a 1% frequency storm. On the other hand the factor 0.18 multiplied by the developed area will give you the total volume of runoff of the site for the same frequency storm. These are two independent factors.

12. There are no pond volume calculations provided.

DRAINAGE COMMENTS FOR
HIGHLAND HIGH SCHOOL
PERFORMING ARTS CENTER

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CITY OF ALBUQUERQUE

ALBUQUERQUE, NEW MEXICO

INTER-OFFICE CORRESPONDENCE September 18, 1980 REF. NO._____

TO: H. R. Orr, Principal Assistant City Engineer

FROM: Fred J. Aguirre, Civil Engineer FJA

SUBJECT: ALBUQUERQUE PUBLIC SCHOOLS CONSTRUCTION PLANS

As I indicated to you in our conversation of August 29, 1980, I would like to be relieved from the responsibility of reviewing and approving all drainage plans involving the Albuquerque Public Schools. This would also include subsequent field inspections for purposes of obtaining a Certificate of Occupancy.

In the past I have reviewed plans submitted by APS and have found myself required to approve plans which I do not feel are in compliance with City adopted design standards. Additionally, very important engineering data and construction details have been lacking from these plans. Professionally, I feel I can no longer approve plans in this manner.

I understand that there may be issues here of which I am not aware. However, as things stand now, I feel it is best for all concerned that I be bypassed in regards to APS construction and the plans be submitted and approved by you directly. By the same token, I feel that field inspections should not be conducted by this office and we should instead accept the certification of the certified architect or engineer responsible for the plans.

I hope you will give due consideration to this request.

FJA/fs

cc - Bruno Conegliano
R. S. Heller

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

November 14, 1979

Mr. Ernie Blumenthal, Jr.
Coordinator of Construction
Albuquerque Public Schools
P. O. Box 25704
Albuquerque, New Mexico 87125

Re: Taylor Ranch Elementary School

Dear Mr. Blumenthal:

Pursuing the Drainage Plan review for subject site, and the conversation yesterday, we will clear the building plans for drainage you submitted for permit, while jointly we address the following concerns:

1. Off site flows, if any.
2. Modification of the site grading plan to convey all storm water to the collection storage pond as practical.
3. Field examination and design modifications to convey to the drainage channel in a non-erosive manner.

If this is agreeable to you, please indicate below and provide us with a copy of this letter.

Yours very truly,

Richard S. Heller

Richard S. Heller
City Engineer

HRO/RSH/fs

Agreed:

E. H. Blumenthal, Jr.

CITY OF ALBUQUERQUE

ALBUQUERQUE, NEW MEXICO

INTER-OFFICE CORRESPONDENCE October 1, 1980 REF. NO._____

TO: Bruno Conegliano, Assistant Hydrology Engineer

FROM: Richard S. Heller, City Engineer RSH

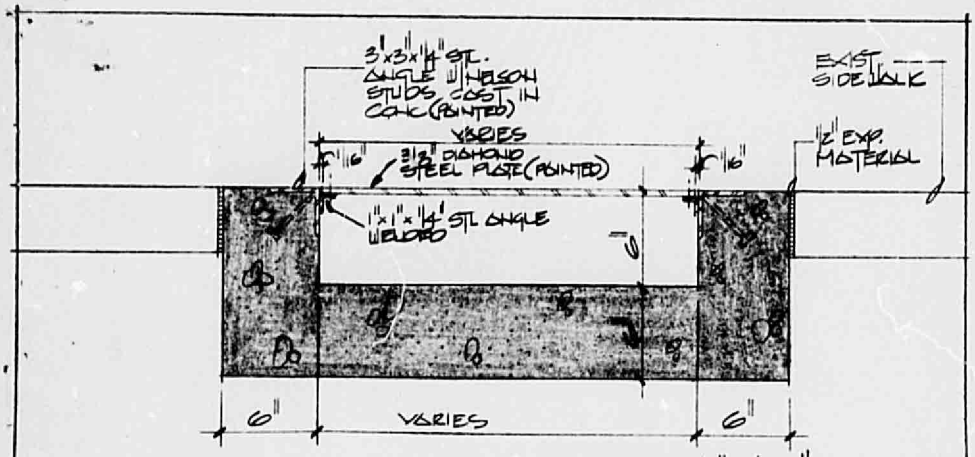
SUBJECT: Plans Submitted by APS

I have reviewed your memorandum of September 30, 1980 and find that your review of the plans submitted by APS may be warranted and corrections and concerns may be vital to the drainage improvements and policies of the City.

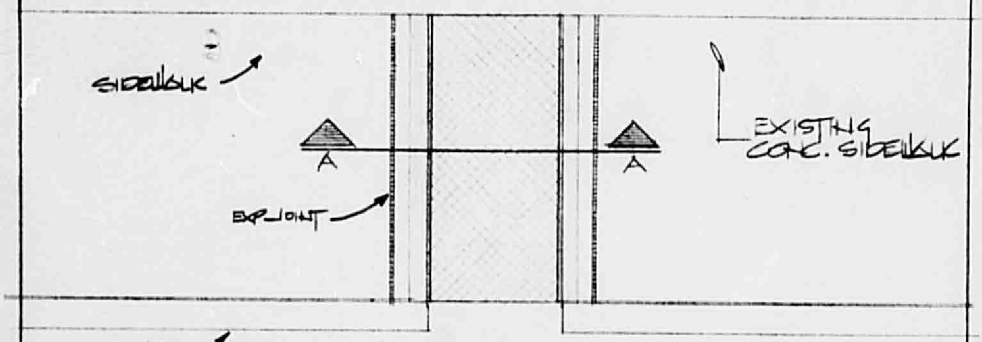
I find though that Mr. Orr's letter of transmittal has given Mr. Aguirre full and complete review over these plans. Please check the last sentence of Paragraph 1 which states "2 sets are herewith forwarded for your review prior to approval". Therefore, all of your concerns should be addressed by Mr. Aguirre. I feel that your memorandum was somewhat premature in light of reading Mr. Orr's instructions to Mr. Aguirre. I am forwarding a copy of this memorandum to Mr. Orr for his review and a copy of your memorandum to me for his review, but I do feel that Mr. Orr's memorandum has given Fred Aguirre total control of the project and its checking and should not really be a big problem because we do have enough time to respond prior to their asking for a building permit.

RSH/fs

xc - H. R. Orr



A-A SECTION: 1 1/2" = 1'-0"



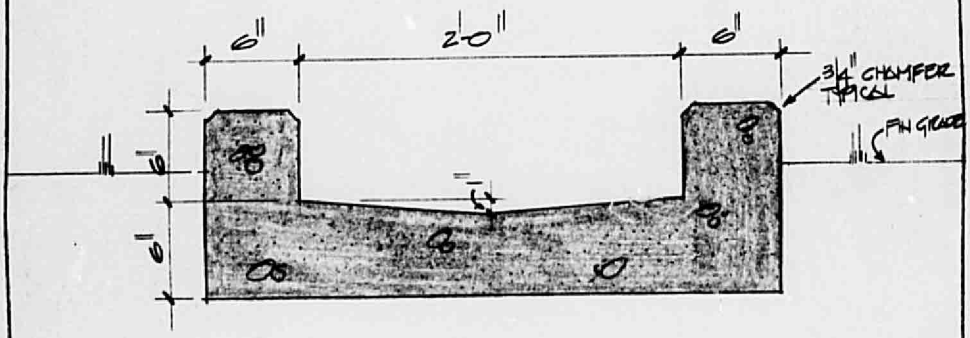
PLAN: SECTION 1'-0"

DRAINAGE TROUGH AT CONC. SIDEWALK

CITY HYDROLOGY

Any deletions or modifications to this drainage plan must require prior approval from City Hydrology section prior to final inspection.

PERFORMING ARTS CENTER AND RENOVATIONS FOR HIGHLAND HIGH SCHOOL	JOB NO: 80:11 DRAWN BY: B.W. CHECKED BY: E.L.H. DATE: 10:28:80	DEAN HUNT AND ASSOCIATES LIMITED	SHEET NO: SK-12



CITY HYDROLOGY SECTION

Any deletions or modifications to this drainage plan must receive prior approval from City Hydrology Section prior to final inspection.

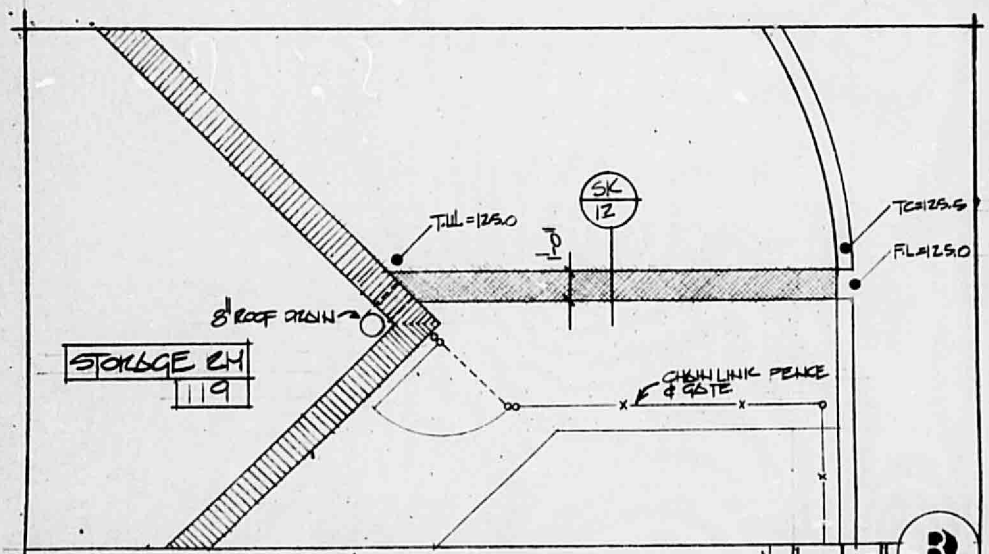
DRAINAGE TROUGH SECTION 1/2" = 1'-0"

PERFORMING ARTS CENTER AND RENOVATIONS FOR HIGHLAND HIGH SCHOOL

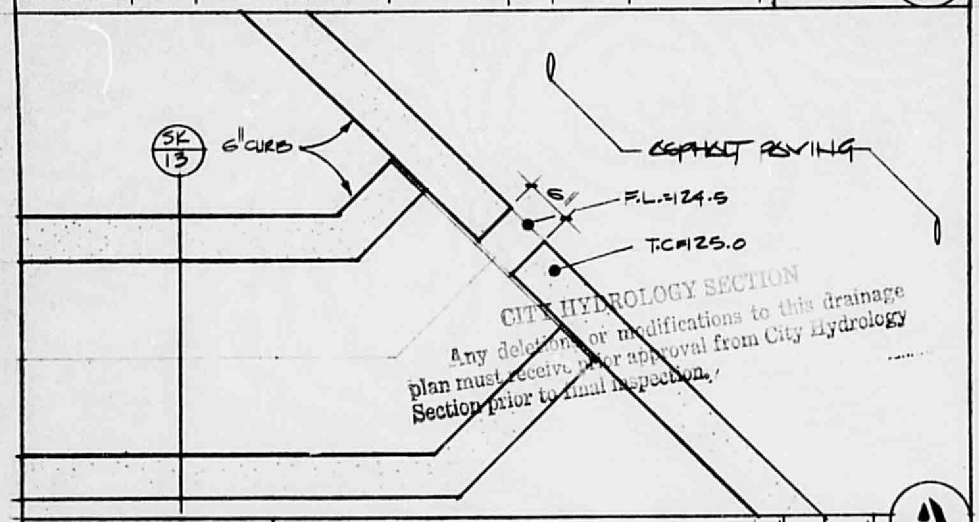
JOB NO: 80:11
DRAWN BY: BJ
CHECKED BY: ELH
DATE: 10-28-80

DEAN / HUNT AND ASSOCIATES LIMITED

SHEET NO: SK-13



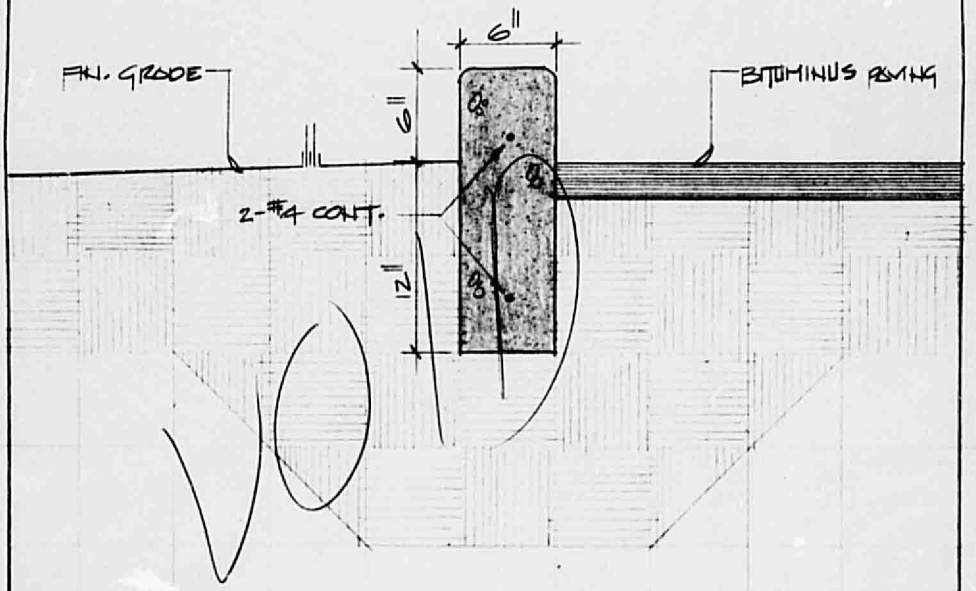
ENLARGED PLAN SHOWING DRAINAGE TROUGH 1/4"=1'-0" B



CITY HYDROLOGY SECTION
Any deletions or modifications to this drainage plan must receive prior approval from City Hydrology Section prior to final inspection.

RESTRICTED FLOW DETAIL @ CURB & DRAINAGE TROUGH 3/4"=1'-0" A

PERFORMING ARTS CENTER AND RENOVATIONS FOR HIGHLAND HIGH SCHOOL	JOB NO: 80:11 DRAWN BY: B.W. CHECKED BY: ELH DATE: 10-28-80	DEAN / HUNT AND ASSOCIATES LIMITED	SHEET NO: SK-14



CURB DETAIL

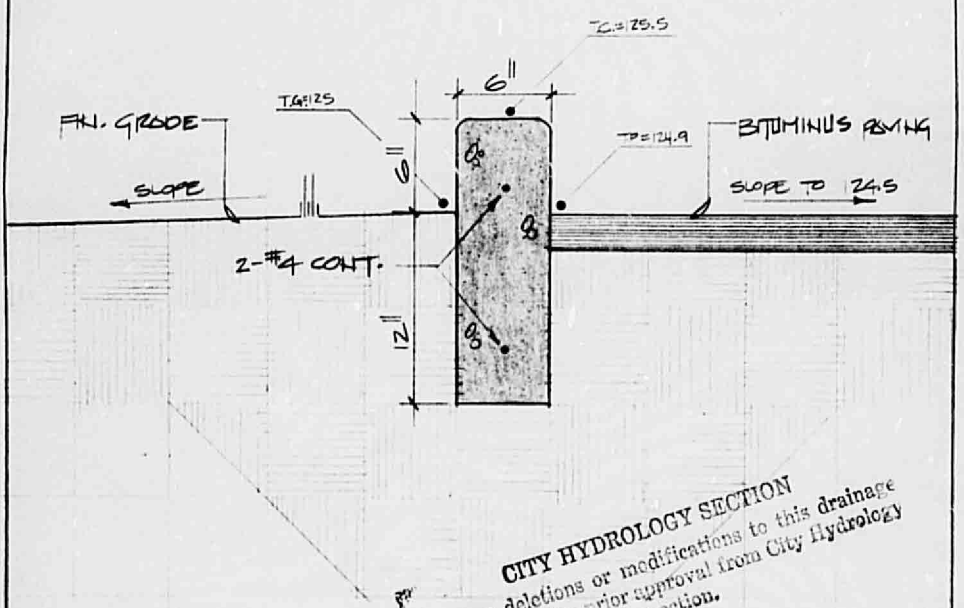
1/2" = 1'-0"

PERFORMING ARTS CENTER AND RENOVATIONS FOR HIGHLAND HIGH SCHOOL

JOB NO: 80:11
DRAWN BY: B.W.
CHECKED BY: E.H.
DATE: 0:28:80

DEAN HUNT AND ASSOCIATES LIMITED

SHEET NO: SK-15



CITY HYDROLOGY SECTION
Any deletions or modifications to this drainage plan must receive prior approval from City Hydrology Section prior to final inspection.

CURB DETAIL

1"=1'-0"

PERFORMING ARTS CENTER AND RENOVATIONS FOR HIGHLAND HIGH SCHOOL

JOB NO: 80:11
DRAWN BY: B.U.
CHECKED BY: E.H.M.
DATE: 0.28.80

DEAN HUNT AND ASSOCIATES LIMITED

SHEET NO: SK-15