



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-7644

December 24, 1986

Chris Weiss
Weiss-Hines Engineering, Inc.
1100 Alvarado, NE
Albuquerque, New Mexico 87110

RE: REVISED DRAINAGE PLAN FOR LOT 15 BALLOON FIELD INDUSTRIAL PARK
(E-17/D22H) ENGINEER'S REVISION BLOCK DATED DECEMBER 4, 1986

Dear Chris:

Based on the information provided on your resubmittal of December 5, 1986, the above referenced drainage plan is approved for Building Permit.

Please attach a copy of this approved plan to the construction plans prior to Hydrology sign-off. Also, please advise your client that a separate permit is required for construction within the City Right-of-Way.

If I can be of further assistance, please feel free to call me at 768-2650.

Cordially,

Roger A. Green
for Bernie J. Montoya, C.E.
Engineering Assistant

BJM/bsj

PUBLIC WORKS DEPARTMENT

ENGINEERING GROUP

Walter Nickerson, P.E., City Engineer

Telephone (505) 768-2500

AN EQUAL OPPORTUNITY EMPLOYER

SCOPE:

The proposed improvements are comprised of an office building, paved access, parking areas, and landscaped areas. The site is located at the corner of Kircher Blvd. and Balloon Park Road, Lot 15 in the Balloon Field Industrial Park.

The present site is an undeveloped one acre parcel bordered on the north by Bear Arroyo, on the west by an existing commercial site, and by streets on the remaining sides. The lot will be graded to direct flows onto Balloon Park Road for eventual drainage into the Bear Arroyo, as shown on the approved Master Drainage Plan for Balloon Field Industrial Park.

The intent of this plan is to show:

- Grading relationships between the existing ground elevations and proposed finished elevations in order to facilitate positive drainage to designated discharge points.
- The extent of proposed site improvements, including buildings, walks and pavement.
- The flow rate/volume of rainfall runoff across or around these improvements and methods of handling these flows to meet City requirements for drainage management.
- The relationship of onsite improvements with existing neighboring property to insure an orderly transition between proposed and surrounding grades.

GENERAL NOTES:

LEGAL: Lot 15, Balloon Field Industrial Park, Albuquerque, New Mexico.

SURVEYOR: Clausen and Associates, Inc., Albuquerque, New Mexico.

B.M.: Manhole rim at intersection of Kircher and Singer Blvds. Elevation = 5144.07'.

T.B.M.: Top of curb at Fire Hydrant at southwest corner of site. Elevation = 5147.75'.

SOILS: Soil Type "Bm", Hydrologic Soil Group "B".

FLOOD HAZARD: Site is not located within a flood hazard zone, as shown on FEMA Map #16.

OFF-SITE DRAINAGE: No off-site flows affect the site. The site is on the highest side of the industrial park and is isolated from cross flows, due to the arroyo on the north and adjoining streets on the east.

EROSION CONTROL: Contractor will be responsible for containing any sediment flows generated during construction by erecting a fabric silt fence (refer to detail) over low points of the site boundary.

CALCULATIONS: Calculations are based on the City of Albuquerque I.P.N. Manual, Vol. II for the 100 year-6 hour storm, using the Rational Formula to compare the existing and proposed runoff rates.

RATIONAL METHOD- Q = CIA

Area of site: 43,725 sq. ft. = 1.0038 Ac.

Run-off Coefficient:

Existing site:
Undeveloped Area = 43,725 ft²

Developed Site:
Roof Area = 3,200 ft²
Landscaped Area = 10,000 ft²
Paved Area = 29,925 ft²

$$C_u = \frac{43,560(0.40)}{43,725} = 0.40$$

$$C_r = \frac{3,200(0.95)}{43,725} = 0.07$$

$$C_l = \frac{10,000(0.25)}{43,725} = 0.06$$

$$C_p = \frac{29,925(0.95)}{43,725} = 0.65$$

$$\text{Composite } C = 0.40$$

$$\text{Master Drainage Plan Coefficient} = 0.90$$

Rainfall Intensity:

$$I = \frac{1}{T} \left(\frac{6.84}{T} \right)^{0.51} = 4.70" \text{ per hour}$$

$$\text{where } T = 2.2(TPM 22.2 D-1)$$

$$T_c = 10 \text{ minutes}$$

$$Q_{100} = (0.40)(4.70)(1) = 2 \text{ cfs}$$

$$Q_{100} = (0.78)(4.70)(1) = 4 \text{ cfs}$$

$$Q_{100} = (2)-(4) = 2 \text{ cfs (increase)}$$

Site will discharge onto Balloon Park Road from the southwest corner of the site. All downstream facilities have adequate carrying capacities—street channels and the inlet into the Bear Arroyo. Therefore, free discharge for Lot 15 is acceptable.

NOTICE TO CONTRACTOR

- An excavation/construction permit will be required before beginning any work within City right-of-way. An approved copy of these plans must be submitted at the time of application for this permit.
- All work detailed on these plans to be performed, except as otherwise stated or provided hereon, shall be constructed in accordance with Albuquerque Interim Standard Specifications for Public Works Construction.
- Two working days prior to any excavation, contractor must contact Line Locating Service, 765-1234, for location of existing utilities.
- Prior to construction, the contractor shall excavate and verify the horizontal and vertical locations of all obstructions. Should a conflict exist, the contractor shall notify the engineer so that the conflict can be resolved within a minimum amount of delay.
- Backfill compaction shall be according to COLLECTOR street use.
- Maintenance of these facilities shall be the responsibility of the Owner of the property served.
- Contractor is responsible for obtaining excavation permit for sidewalk culvert/drain.
- Proof of acceptance will be required prior to sign off for Certificate of Occupancy (C.O.).

DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY

DESIGN APPROVAL: *Benny J. Montoya* 12/18/86 Date

INSPECTION APPROVAL: Construction Section Date

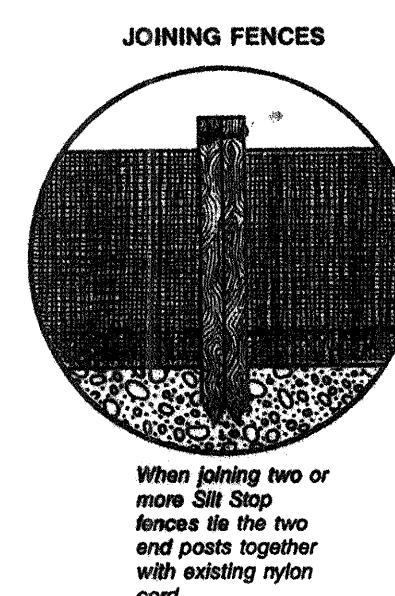
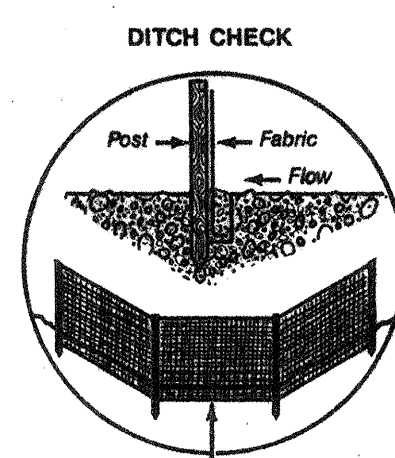
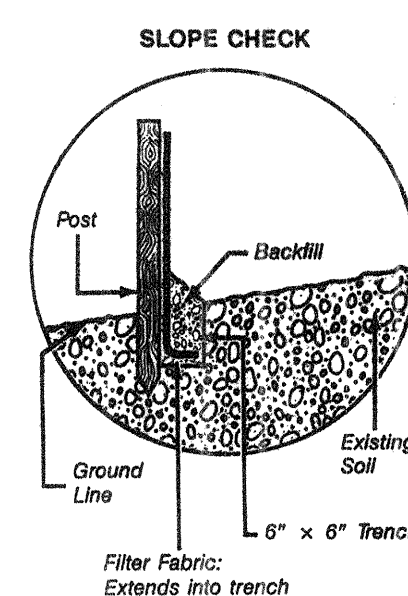
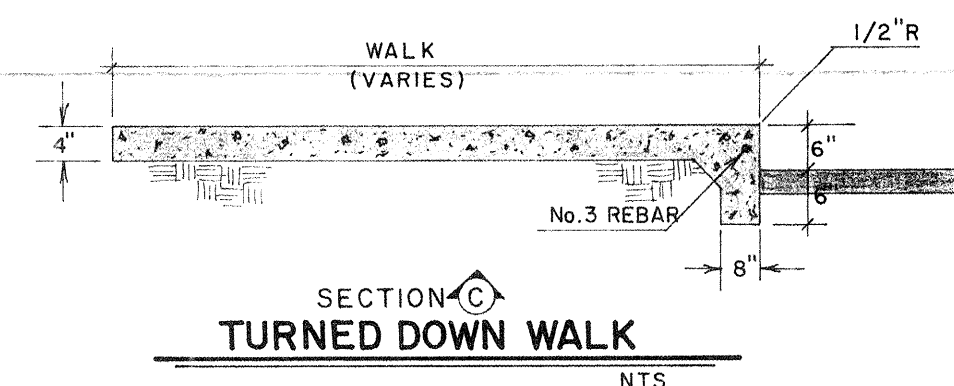
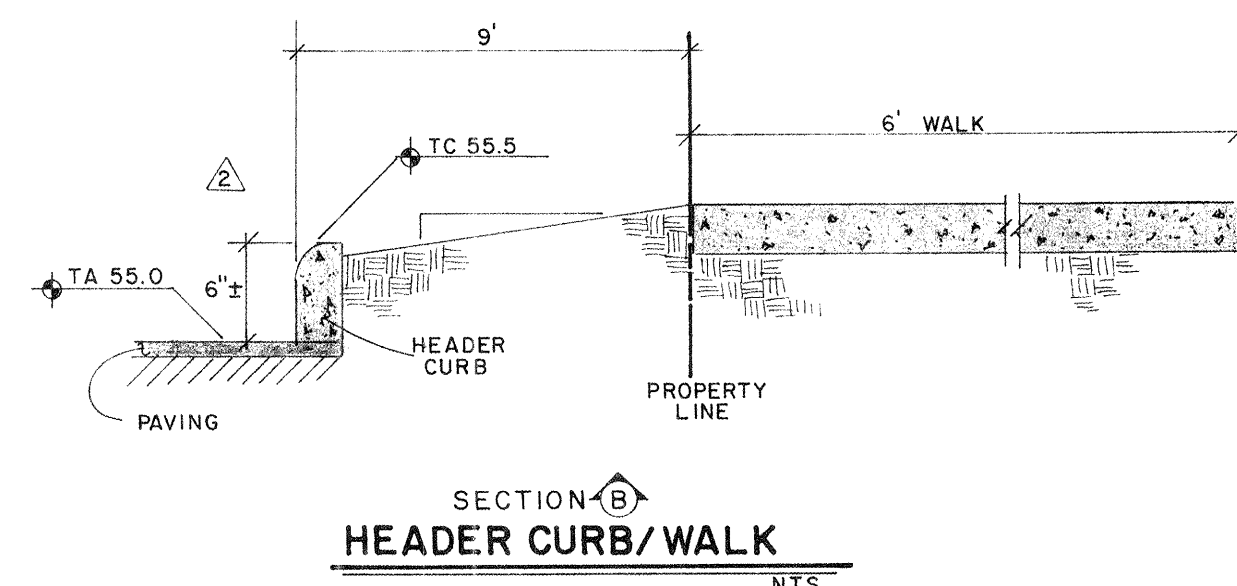
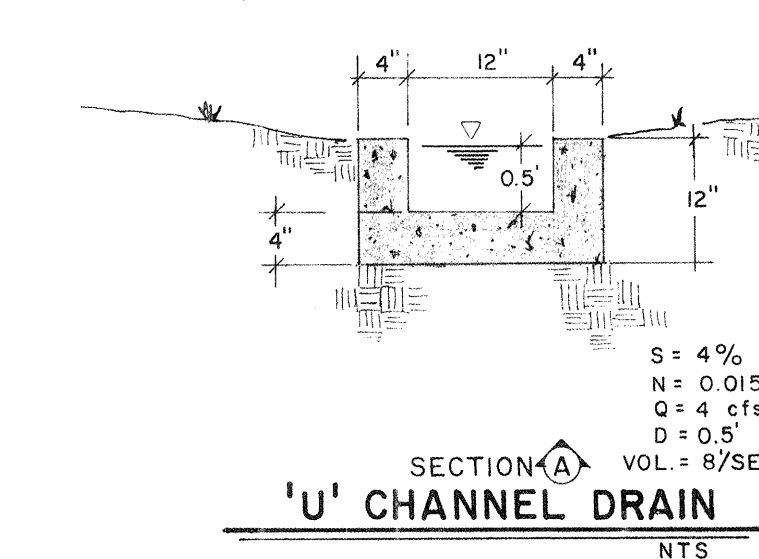
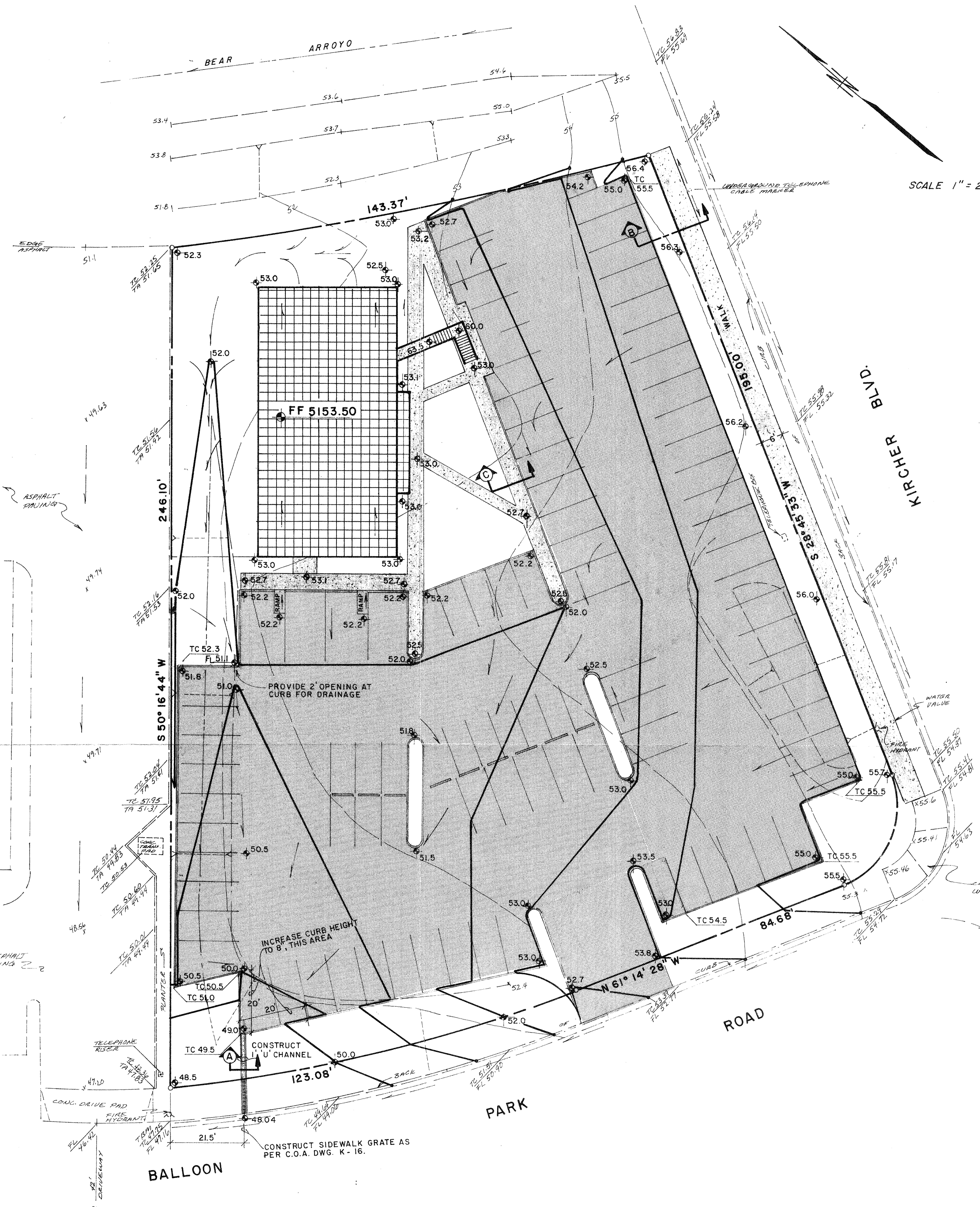
ACCEPTANCE: Construction Section/Permits Date

RESUBMITTAL 12-4-86

- CHANGED OUTLET CHANNEL DEPTH
- SHIFT DRIVEWAY 7' TO THE WEST
- CHANGED HANDICAP RAMP
- ADD ENTRANCE SOUTH SIDE BUILDING
- ADD STEPS/WALK NORTHEAST SIDE OF BUILDING

CHRISTOPHER L. WEISS, P.E. DATE 12-5-86

RECEIVED
DEC 05 1986
HYDROLOGY SECTION



SILT FENCE DETAIL

LEGEND

- SIDEWALK, CURB & GUTTER (EXISTING, PROPOSED)
- PROPOSED ASPHALT
- BUILDING (EXISTING, PROPOSED)
- PROPERTY LINE
- EXISTING SPOT ELEVATION
- EXISTING CONTOUR
- PROPOSED SPOT ELEVATION
- PROPOSED CONTOUR
- SURFACE FLOW DIRECTION (EXISTING, PROPOSED)
- L.A. LANDSCAPED AREA
- T.G.W. TOP OF GRADE WALL (LESS THAN 10' HIGH)
- T.R.W. TOP OF RETAINING WALL (MORE THAN 10' HIGH)
- T.A. TOP OF ASPHALT
- T.C. TOP OF CURB
- F.L. FLOW LINE
- F.F. FINISHED FLOOR

CONSTRUCTION NOTES:

- Before construction, the Contractor shall check and verify pertinent figures shown hereon and shall make all applicable field measurements. Should any conflict, error or discrepancy be discovered, the contractor shall notify the Engineer at once to resolve the problem. It is recommended that the Contractor meet with the Engineer for a pre-design conference to discuss the scope of work and critical areas involved.
- The Contractor shall be responsible for following the plans using his best skill and attention. Any departure from the plans must be approved by the Engineer and the City Hydrology Department prior to construction.
- The Contractor shall check the site plan for locations of existing utilities within or adjacent to streets and shall take all necessary precautions and efforts to locate and protect these utilities. He shall give 48 hours notice to the Line Locating Service, 765-1234, for any work that may interfere with said utilities.