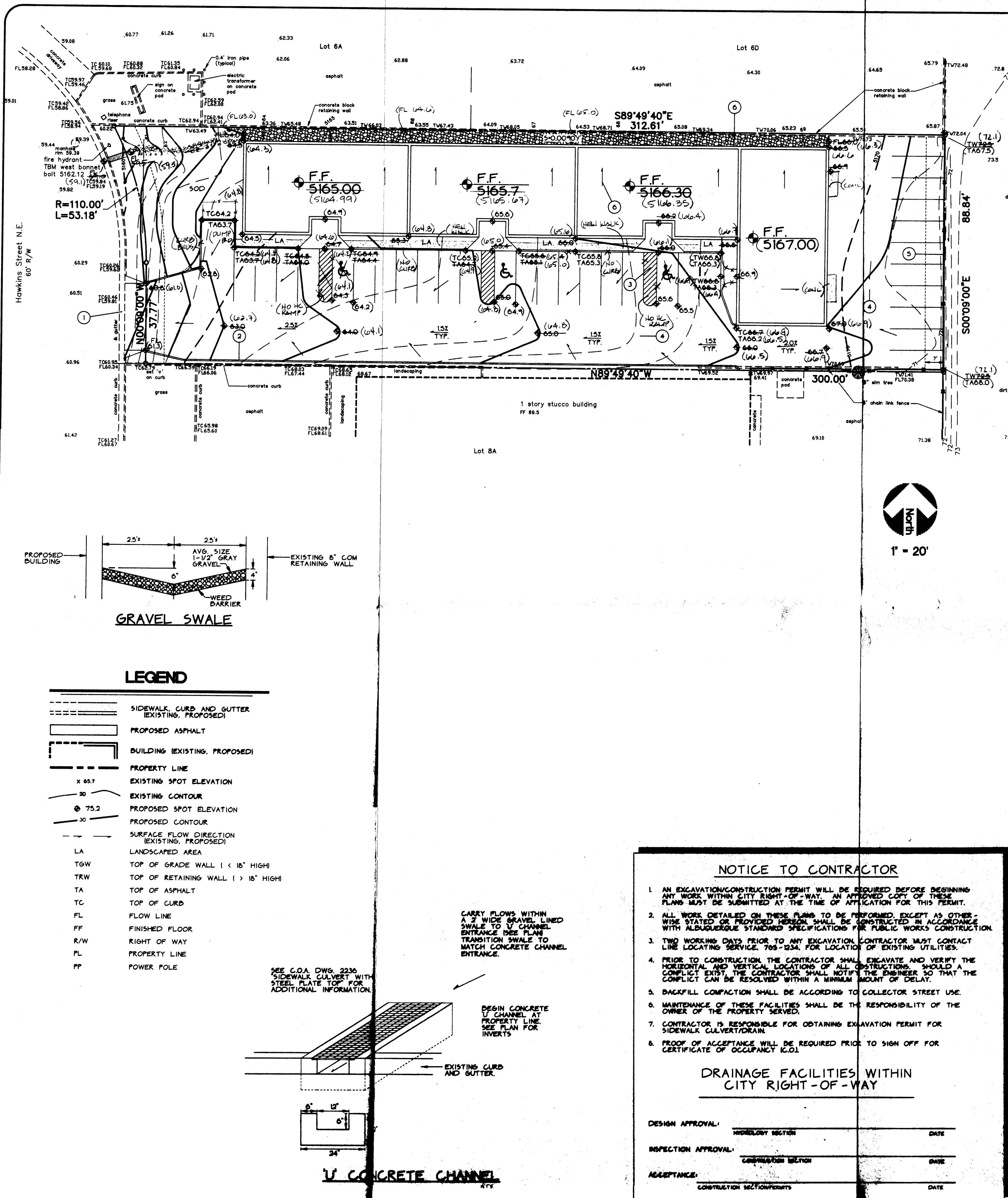


CL - D. WESCON V02 09/07/94 08:05:50



SCOPE:
The proposed improvements include a 8,800 SF (footprint) building area with adjacent concrete and asphalt paved walkways / parking areas, general site work and site grading.

The present site is an undeveloped commercial property which grades at approx. 4% to the west. Hawkins St. NE borders the site on the west. The properties to the north, east and south are developed commercial properties.

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 masses or around these improvements and methods of handling these flows to meet City of Albuquerque requirements for drainage management.
- The relationship of on-site improvements with existing neighboring property to insure an orderly transition between proposed and surrounding grades.

DRAINAGE PLAN CONCEPT: All flows will free discharge to Hawkins St. N.E. as they do currently. There will be two outlet points for these flows. First, the access drive will drain the south parking area. Second, the proposed gravel swale on the north side of the building will collect a 10' roof flow and a portion of the east parking area and release them into the landscaped (scd) area on the west side of the building where they will flow over the curb into Hawkins St. Retaining walls (design by others) will be constructed along the east and south property boundaries to achieve the finished grades shown.

GENERAL NOTES:
LEGAL: Lot 7A(1) Unit V, Interstate Industrial Tract, Albuquerque, New Mexico.
SURVEYOR: Fortbauer Surveying Co. - Ron Fortbauer, 1100 Alvarado Dr. NE, Albuquerque, NM 87110 - August 1994
B.M.: City of Albuquerque brass cap 8-D17A. Located in the vicinity of the southwest corner of the intersection of Jefferson and Ellison Streets NE - Elevation = 5145.55 (M.S.L.D.)
T.B.M.: West bonnet bolt of fire hydrant located near northwest property corner - Elevation = 5162.12 (M.S.L.D.)
SOILS: SCS Soil Survey of Bernalillo County indicates that the soil is Embudo (EmB): Hydrologic Soil Group 'B'.
FLOOD HAZARD: Per FEMA Boundary Map #9, the property does not lie within a flood zone.
OFF-SITE DRAINAGE: There is no off-site drainage onto this site.
EROSION CONTROL: The contractor is responsible for retaining on-site all sediment generated during construction by means of temporary earth berms or all fences at the low points on the west property line.

CALCULATIONS:
Calculations are based on the Drainage Design Criteria for Albuquerque, New Mexico, Section 22.2 DPM, Vol. 2, dated Jan. 1993.

AREA OF SITE: 28861 SF = 0.62 Ac.

ON-SITE

DEVELOPED FLOWS:		HISTORIC FLOWS:		EXCESS PRECIPITATION:	
On-Site Land Condition	On-Site Historic Flow Rate	Area	Flow Rate	Precip. Zone	Rate
Area a = 0 SF	Area a = 8715 SF	Area a = 8715 SF	8715 SF	Ea = 0.53	
Area b = 2636 SF	Area b = 8715 SF	Area b = 8715 SF	8715 SF	Eb = 0.78	
Area c = 1100 SF	Area c = 13431 SF	Area c = 13431 SF	13431 SF	Ec = 1.13	
Area d = 23125 SF	Area d = 0 SF	Area d = 0 SF	0 SF	Ed = 2.12	
Total Area = 26861 SF	Total Area = 28861 SF	Total Area = 28861 SF	28861 SF		

On-Site Weighted Excess Precipitation (100-Year, 6-Hour Storm)
Weighted E = $\frac{EaAa + EbAb + EcAc + EdAd}{Aa + Ab + Ac + Ad}$

Proposed E = 1.95 in. Historic E = 0.89 in.

On-Site Volume of Runoff: V360 = $\frac{E \cdot A}{12}$
Proposed V360 = 4360 CF Historic V360 = 1990 CF

On-Site Peak Discharge Rate: Qp = $\frac{QpAa + QpAb + QpAc + QpAd}{43,560}$
For Precipitation Zone 2
Qpa = 1.56 Qpb = 2.28 Qpc = 3.14 Qpd = 4.70
Proposed Qp = 2.7 CFS Historic Qp = 1.6 CFS

The proposed flows are divided into the following two basins:
1. Southern basin draining south asphalt paved parking area to Hawkins St. N.E.
2. Northern basin draining building, east paved parking area and gravel swale to Hawkins St. N.E.

Flow depth = 0.43' Channel depth = 0.5' OK

GRAVEL 'V' DITCH CAPACITY (TO UNDERWALK CULVERT)

Slope	Depth	Velocity
5:1	0.38	1.7
0.03	0.38	5.12

Flow depth = 0.38' Channel depth = 0.5' OK

CONCRETE 'V' CHANNEL CAPACITY (TO HAWKINS ST.)

Slope	Depth	Velocity
0.8500'	0.23	6.48
0.015	0.23	6.48

Flow depth = 0.23' Channel depth = 0.5' OK

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 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 UTILITIES. 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/RAIN.
- PROOF OF ACCEPTANCE WILL BE REQUIRED PRIOR TO SIGN OFF FOR CERTIFICATE OF OCCUPANCY I.C.O.I.

DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY

DESIGN APPROVAL: _____ DATE: _____
INSPECTION APPROVAL: _____ DATE: _____
ACCEPTANCE: _____ DATE: _____

U CONCRETE CHANNEL

KEYNOTES

- CONSTRUCT 24" WIDE CONC. DRIVE APRON AS SHOWN. PROVIDE SMOOTH RIDING TRANSITION.
- CONSTRUCT CURB / RETAINING WALL AS REQUIRED ALONG SOUTH PROPERTY LINE TO ACHIEVE FINISHED GRADES SHOWN. DESIGN BY OTHERS.
- WARP ASPHALT TO MATCH TOP OF WALK FOR HANDICAP ACCESS AT EACH ENTRANCE. SEE ARCHITECTURAL.
- CARRY FLOWS WITHIN A SHALLOW SWALE TO DISCHARGE TO HAWKINS ST. NE AS SHOWN.
- CONSTRUCT RETAINING WALL ALONG EAST PROPERTY LINE AS SHOWN. SEE ARCHITECTURAL FOR ADDITIONAL INFO. DESIGN BY OTHERS.
- ALL ROOF FLOWS TO BE TAKEN TO NORTH OF BUILDING WHERE THEY WILL DISCHARGE TO HAWKINS ST. NE VIA A GRAVEL SWALE. SEE CALCULATIONS AND DETAIL THIS SHEET.
- EXTEND GRAVEL SWALE FROM BUILDING TO CONCRETE CHANNEL ENTRANCE (SEE CALC.).
- CONSTRUCT UNDERWALK DRAIN FROM PROPERTY LINE TO FLOWLINE OF CURB AND GUTTER. SEE DETAIL THIS SHEET.
- EXISTING SWALE / DRAIN EAST OF PROPERTY LINE PREVENTS ANY FLOWS FROM ENTERING PROPERTY. OFFSITE FLOWS ARE CARRIED SOUTH TO PONDING OFFSITE PONDING AREA.

ON THE WEEK OF AUGUST 29, 1994, I INSPECTED LOT 7A(1) UNIT V, INTERSTATE INDUSTRIAL TRACT, BERNALILLO COUNTY, NEW MEXICO. AT THAT TIME, IT APPEARED THAT NO GRADING, FILLING OR EXCAVATION HAD OCCURRED THEREON SINCE THE PREPARATION OF THE EXISTING CONTOUR MAP USED IN THE PREPARATION OF THIS PLAN.

Christopher L. Weiss 9-1-94
DATE

VICINITY MAP #D-17-Z

FEMA MAP #9

C.L. WEISS ENGINEERING, INC.

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(505) 266-3444

Revisions
7-12-95 A.S. PAINT

HAWKINS ST. OFFICE / WAREHOUSE WESCON

Scale: 1" = 20' Drawn By: DJB Checked By: CLW Job Number: _____ Date: SEPT 1994

DRAINAGE AND GRADING PLAN

C-1
SH. 1 OF 1