HYDROLOGY K19/D32 3 PLANS

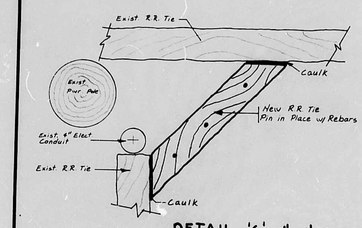
K19/D32

3 Plans

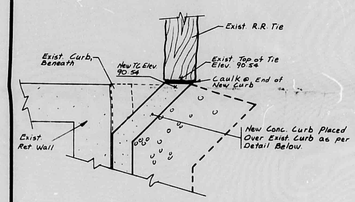
CITY OF ALBUQUERQUE

FEBRUARY, 1985
ARMSTRONG ENG., INC.

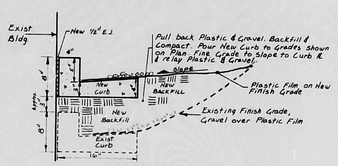
DRAINAGE IMPROVEMENTS FOR McDONALDS - WYOMING & CENTRAL



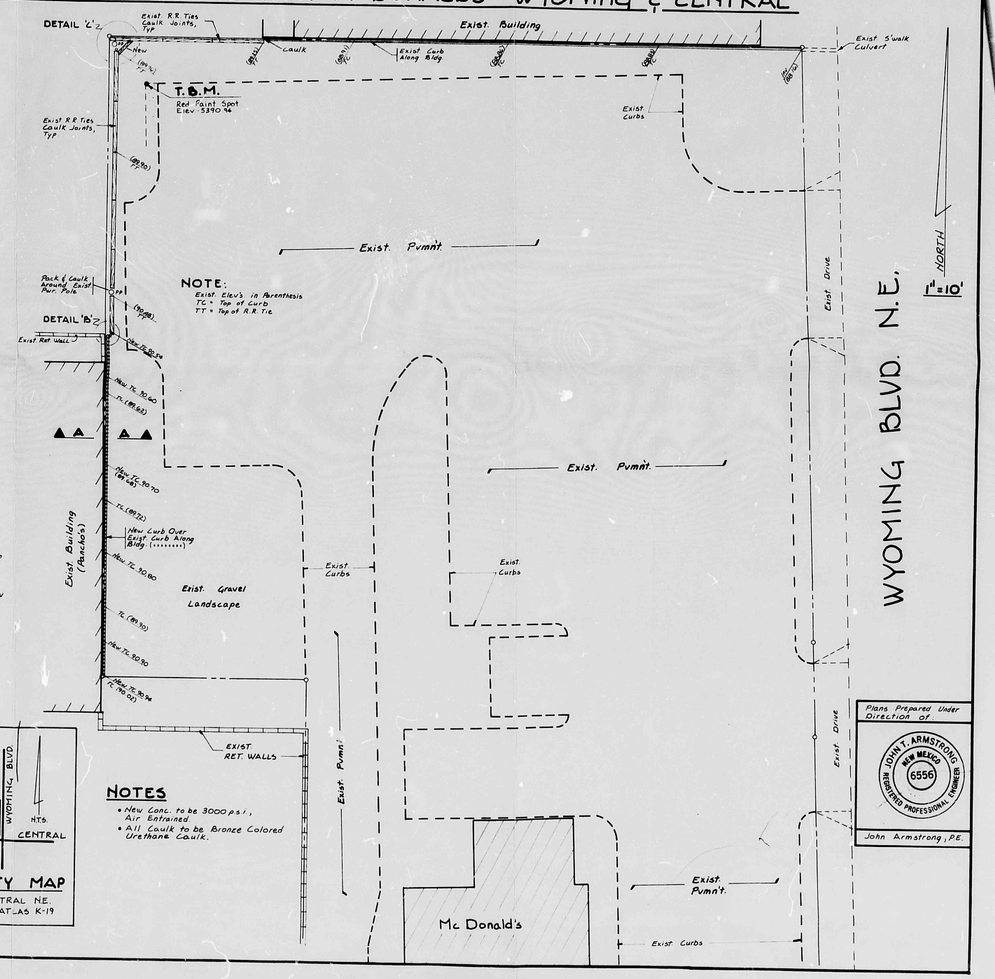
DETAIL 'C' 1" = 1'

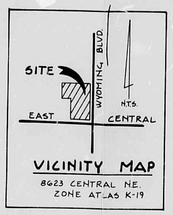


DETAIL 'B' 1" = 1'



SECTION A-A 1" = 1'





VICINITY MAP
8623 CENTRAL NE
ZONE ATLAS K-19

NOTES

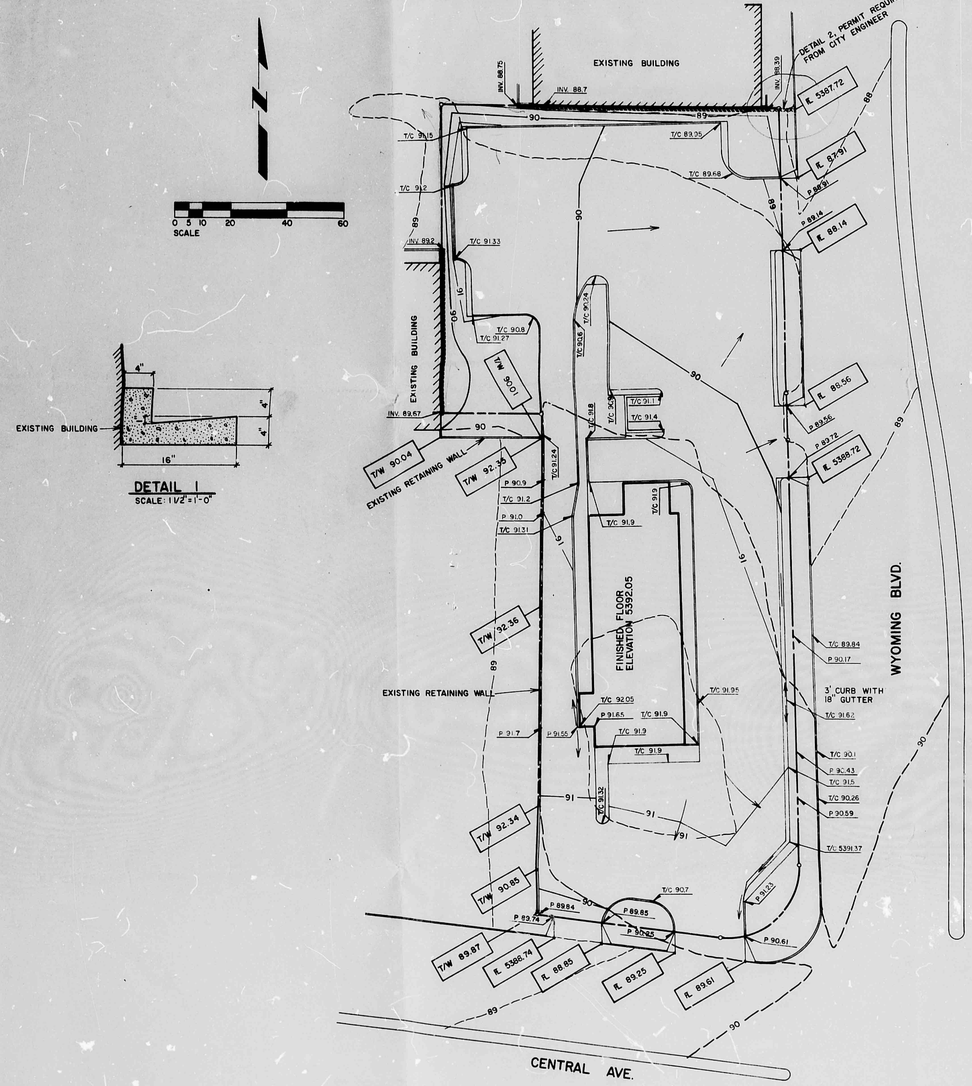
- New Conc. to be 3000 psi, Air Entrained
- All Caulk to be Bronze Colored Urethane Caulk.

Plans Prepared Under Direction of

JOHN T. ARMSTRONG
NEW MEXICO
6556
REGISTERED PROFESSIONAL ENGINEER NO.

John Armstrong, P.E.

CITY OF ALBUQUERQUE



CITY ZONE ATLAS MAP NO. K-19

LEGAL DESCRIPTION:

TRACT C OF THE MESA VERDE ADDITION AS FILED IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO COUNTY, NEW MEXICO, MARCH 11, 1981.

NOTE:

ALL FINISH PAVING GRADES (P) ARE 0.5' LOWER THAN TOP OF CURB GRADES (TC) UNLESS OTHERWISE NOTED.

APPROVED FOR DRAINAGE
6-16-81
DATE
SIGNATURE TITLE
ADVISE DRAINAGE INSPECTOR WHEN GRADING EXECUTED

CITY HYDROLOGY SECTION

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

JOHN T. ARMISTEAD NEW MEXICO 6556 REGISTERED PROFESSIONAL ENGINEER
6/8/81

BENCH MARK:

BRASS CAP ON SOUTHWEST CORNER IN CURB AT INTERSECTION OF CENTRAL AVE. AND WYOMING BLVD. CITY OF ALBUQUERQUE CATUM - 6K20 ELEVATION 5390.69'

NOTES:

1. GEN. CONTRACTOR TO VISIT SITE PRIOR TO START OF CONSTRUCTION AND NOTIFY McDONALD'S OF ANY DISCREPENCIES.

LEGEND

	PROPOSED ELEV.
	EXISTING ELEV.
T/C	TOP OF CURB
P	FINISH PAVING GRADE
%	PER CENT & DIRECTION OF FLOW
FF	FINISH FLOOR
℄ 89.61	FLOW LINE ELEVATION
T/W 92.34	TOP OF WALL ELEVATION
	DETAIL 1
xxxxxxxxxxxx	DETAIL 2, CITY STANDARD SIDEWALK CULVERT WITH STEEL PLATE TOP, DRAWING NO. K-16, PERMIT REQUIRED FROM CITY ENGINEER.
—91—	EXISTING CONTOUR
—91—	PROPOSED CONTOURS

No.	REVISION	DESCRIPTION	BY	DATE
1	REVISED FOR NEW DRIVE, RELOCATE TRASH AREA		LGD	5-5-81

APPROVALS

Regional/District Mgr. — Date
Construction Dept. — Date
Operations Dept. — Date

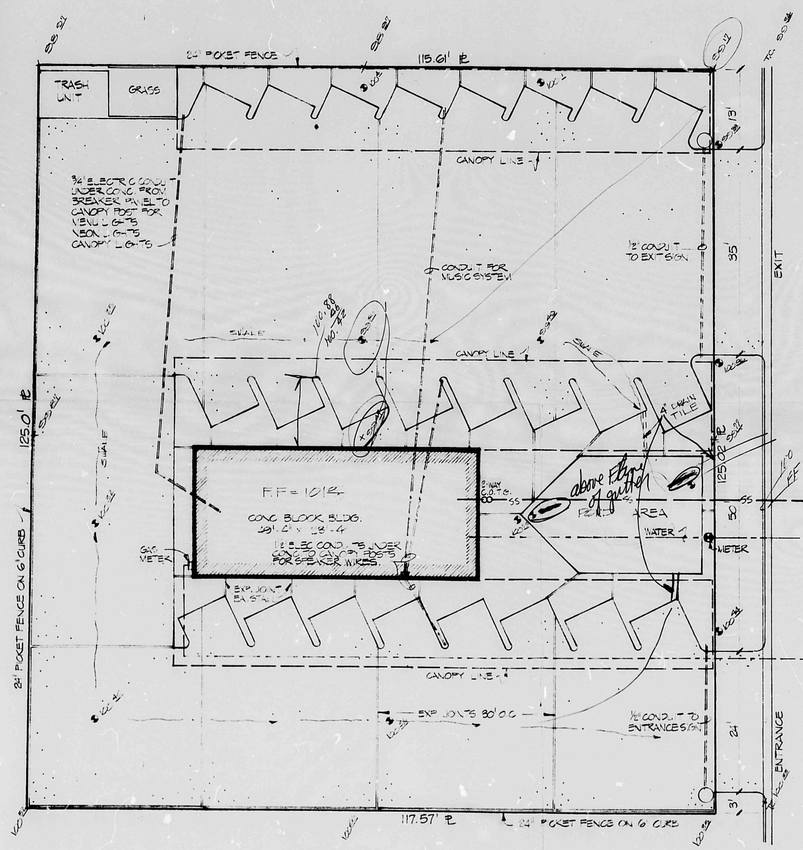
JOB SITE
8623 CENTRAL NE
STREET ADDRESS
ALBUQUERQUE NEW MEXICO
CITY STATE
BERNALILLO
COUNTY

Owner For:
McDonald's Corporation
McDonald's Plaza
Oak Brook, Illinois 60521
U.S. Headquarters
Vice Pres. of Architecture And Construction

McDonald's

Drawn by: LGD
Date Drawn: 1-23-81
Scale: 1" = 20'-0"
Corporate Drawing No.:
Regional/District Drawing No.: PSD 83
Sheet No. C3

CITY OF ALBUQUERQUE



ENCHANTMENT ENGINEERING Inc.
3240-C JUAN TABO N.E.
ALBUQUERQUE, N.M.

DRAINAGE CALCULATIONS:

AREA UNDER CONSIDERATION = 0.54 ACRES
NATURAL RUNOFF COEFFICIENT = 0.45
EXISTING SLOPE = 2.0%
TIME OF CONCENTRATION (TC) = 15 MIN
INTENSITY = 100/TC = 4.4 in/hr.
100 YEAR - 6 HOUR PRECIPITATION = 2.5 in
UNDEVELOPED RUNOFF = 0.45 × 0.54 × 4.4 = 0.67 cfs
VOLUME OF NATURAL RUNOFF = 0.45 × 2.5 × 1/12 × 2.5 = 0.051 ac-ft.

DEVELOPED:
ROOF AREA = 0.026 ac. - C = .85 (FLAT)
PAVED AREA = 0.502 ac. - C = .92
POND AREA = 0.012 ac. - C = .45
ASSUME MAX. INTENSITY = 5.4 in/hr

RUNOFF = 5.4 (0.026 × .85 + 0.502 × .92 + 0.012 × .4) = 1.6 cfs
ROOF PAVING POND

VOLUME OF RUNOFF =
2.5 × 1/12 (0.026 × .85 + 0.502 × .92 + 0.012 × .4) 0.063 ac-ft

TOTAL POND VOLUME = 0.226 ac. FT.

X EXISTING ELEVATION
● FINISHED ELEVATION

PLOT PLAN

SCALE 1" = 10'

TRACT 'A', MESA VERDE ADDITION
125 WYOMING BLVD., NE

DESIGN DATA

BUILDING CONST TYPE	III-1
ZONING	C-2
GROUP OCCUPANCY	B
SEISMIC ZONE	1
ROOF LIVE LOAD	20 PSF
WIND LOAD	25 PSF

NOTES
POSTS FOR ENTRANCE AND EXIT SIGNS TO BE 2½" I.D. STEEL PIPES SET IN 12" x 12" x 12" CONC. FOOTINGS & EXTENDED A MIN. OF 30" ABOVE SURFACE

CONTRACTOR TO TIE BOTH DRIVES TO STREET W/ CONC. APRONS.

SONIC
DRIVE IN RESTAURANT
ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO
FOR SONIC INDUSTRIES
RT. 1 BOX 261
OKLAHOMA CITY, OK. 73111

SHEET 1 OF 11

CITY OF ALBUQUERQUE
THIS MICROIMAGE IS THE BEST POSSIBLE REPRODUCTION DUE TO THE POOR QUALITY OF THE ORIGINAL DOCUMENT

CITY OF ALBUQUERQUE

HYDROLOGY

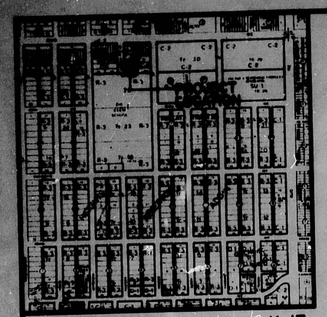
K17/D32

ONE PLAN

LIPPOLDS CAR CARE

K17 / D32

1 PLAN



VICINITY MAP K-17

SCALE: 1" = 800'

·LEGEND·

- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- 6222 EXISTING CONTOUR
- EXISTING CHAINLINK FENCE
- PROPERTY LINE

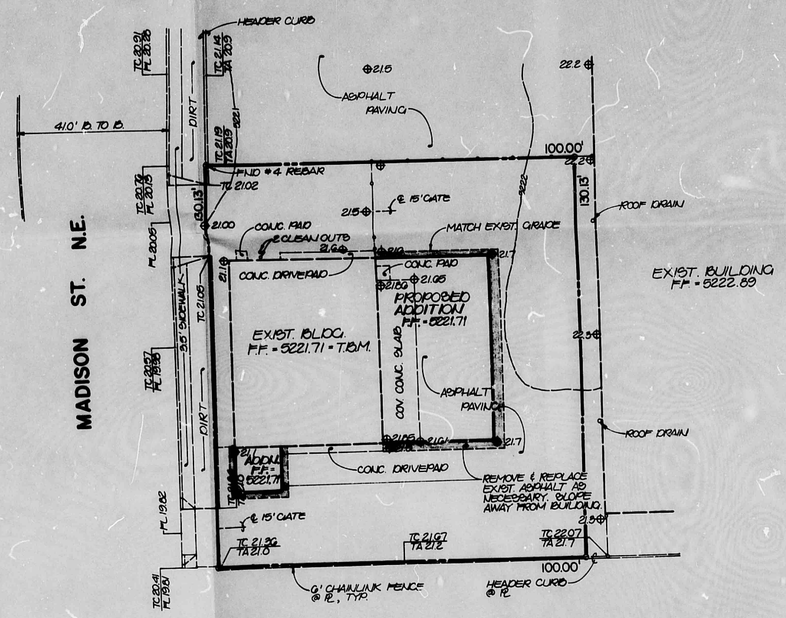
T.B.M.:

FINISHED FLOOR OF EXIST. BLDG., AS SHOWN.
ELEVATION: 6221.71 FEET (M.S.L.D.)

PROJECT BENCHMARK:

ACS BENCHMARK 1-J17. A SQUARE, CHISELED ON TOP OF CONCRETE CURB AT THE W.N.W. RETURN AT THE INTERSECTION OF MONROE ST. N.E. AND LOMAS BLVD. N.E. IN THE N.W. QUADRANT OF THE INTERSECTION.
ELEVATION: 6225.22 FEET (M.S.L.D.)

SCALE: 1" = 20'



DRAINAGE PLAN

The following items concerning the Lippolds Car Care Drainage Plan are contained hereon:

1. Vicinity Map
2. Grading Plan
3. Calculations

The proposed improvements, as shown by the Vicinity Map, are located on the east side of Madison Street N.E. between Lomas Boulevard N.E. and the Zia Elementary School. The site is currently developed as an automobile repair shop.

As shown by Plate K-17 of the Albuquerque Master Drainage Study, this site does not lie within a designated Flood Hazard Zone. At present, the site drains to Madison Street N.E. Madison Street drains from north to south to a dead end where the water exits the paved street into an existing concrete swale. This swale flows in a westerly direction and outfalls onto Jefferson Street N.E. This pattern of runoff is the existing pattern for the site and will not be altered by construction.

The Grading Plan shows 1) existing grades indicated by spot elevations and contours at 1' 0" intervals, 2) proposed grades indicated by spot elevations, 3) the limit and character of the existing improvements, 4) the limit and character of the proposed improvements, and 5) continuity between existing and proposed elevations. As shown by this plan, the proposed improvements include the construction of two building additions. These additions will require the removal of existing paved surfaces in order to permit this construction. Paving will be patched back against these additions once the construction is complete. Because of the nature of the proposed improvements, the runoff quantities and characteristics for this site will not be altered. In addition, the proposed improvements will not interfere with the offsite flows which enter this site from the existing roof drains which convey roof water from the existing building to the east. As in the present state, this offsite flow will be conveyed through the site and discharged to Madison Street N.E.

The Calculations which appear below analyze both the existing and developed conditions for the 100-year, 6-hour rainfall event. The Rational Method has been used for this analysis in accordance with the City of Albuquerque Development Process Manual, Volume II. As shown by these calculations, the proposed improvements will not increase the peak runoff from the site.

EROSION CONTROL MEASURES

1. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY. THIS CAN BE ACHIEVED BY CONSTRUCTING TEMPORARY BERMS AT THE PROPERTY LINES AND WETTING THE SOIL TO KEEP IT FROM BLOWING.

2. THE CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY SO THAT THE EXCAVATED MATERIAL IS NOT SUSCEPTIBLE TO BEING WASHED DOWN THE STREET.

CONSTRUCTION NOTES:

1. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE 765-1234, FOR LOCATION OF EXISTING UTILITIES.

2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT ERIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.

3. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.

4. ALL CONSTRUCTION WITHIN PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND PROCEDURES.

CALCULATIONS

Ground Cover Information

From SCS Bernalillo County Soil Survey, Plate 31:
EtC Embudo Tijeras Complex
Hydrologic Soil Group B

Rational Method

Discharge: $Q = CiA$
where C varies
$i = P_6 (6.84) T_c^{-0.51} = 4.86$ in/hr
$P_6 = 2.3$ in (DPM Plate 22.2D-1)
$T_c = 10$ min (minimum)
A = area, acres

Volume: $V = CP_6A(1/12)$
where C varies
$P_6 = 2.3$ in (DPM Plate 22.2D-1)
A = area, sf

Existing Condition

$A_{total} = 13{,}000$ sf $= 0.30$ Ac
$A_{IMP} = 13{,}00$ sf; % impervious = 100%
$C_{IMP} = 1.0$ (DPM Plate 22.2C-1)
$Q_{100} = CiA = 1.0\ (4.86)(0.30) = 1.5$ cfs
$V_{100} = CP_6A = 1.0\ (2.3/12)(13{,}000) = 2490$ cf

Developed Condition

$A_{total} = 13{,}000$ sf $= 0.30$ Ac
$A_{IMP} = 13{,}000$ sf; % impervious = 100%
$C_{IMP} = 1.0$ (DPM Plate 22.2C-1)
$Q_{100} = CiA = 1.0\ (4.86)(0.30) = 1.5$ cfs
$V_{100} = CP_6A = 1.0\ (2.3/12)(13{,}000) = 2490$ cf

Comparison

$\Delta Q_{100} = 1.5 - 1.5 = 0$ cfs
$\Delta V_{100} = 2490 - 2490 = 0$ cfs

RECEIVED AUG 10 1984 HYDROLOGY SECTION

APPROVED FOR DRAINAGE 8/28/84
SIGNATURE TITLE
ADVISE DRAINAGE INSPECTOR WHEN GRADING EXECUTED

JEFFREY G. MORTENSEN NEW MEXICO 8947 REGISTERED PROFESSIONAL ENGINEER 08-09-84

John Mann & Associates, Inc.
811 DALLAS, N.E. · ALBUQUERQUE · NEW MEXICO · 87110
ENGINEERS

NO.	DATE	BY	REVISIONS

DESIGNED BY: J.G.M.
DRAWN BY: L.B.D.
APPROVED: J.G.M.

JOB NO. 41191
DATE 8-84

GRADING & DRAINAGE PLAN
LIPPOLDS CAR CARE

K17/D32

FILE NO.
SHEET 1 OF 1