CITY OF ALBUQUERQUE

April 12, 2016

David Thompson, P.E.
Thompson Engineering Consultants, Inc.
PO Box 65760
Albuquerque, New Mexico 87193

Re: 201 Princeton SE
201 Princeton SE
Request for Permanent C.O. - Accepted
Engineer's Stamp dated: 4-17-15 (K16D082)
Certification dated: 4-5-15

Dear Mr. Thompson,

Based on the Certification received 4/6/2016 and photos received, is acceptable for permanent Certificate of Occupancy by Hydrology.

If you have any questions, you can contact me at 924-3695 or Totten Elliott at 924-3982.

PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

Sincerely,

Rita Harmon, P.E.
Senior Engineer, Hydrology
Planning Department.

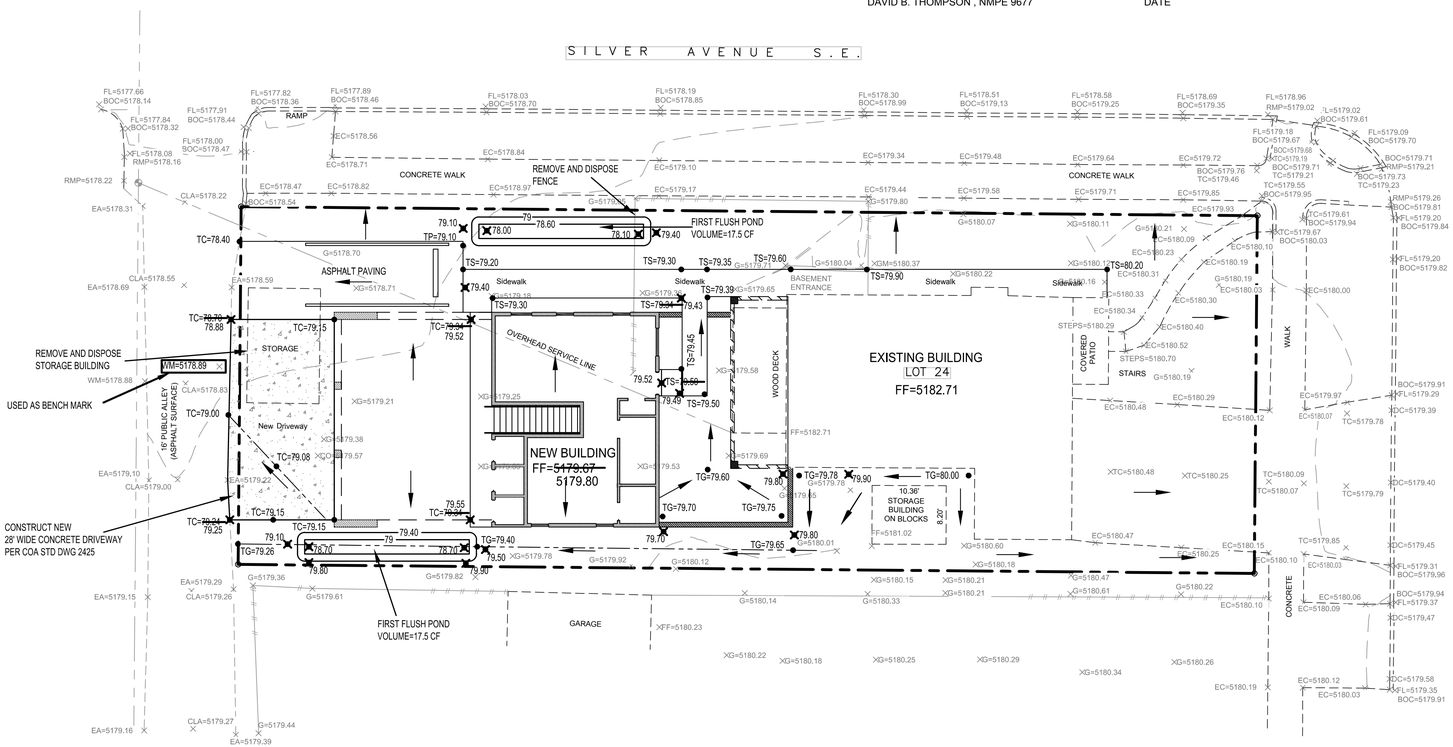
TE/RH
C: email, Cordova, Camille C.; Connor, Miranda, Rachel; Sandoval, Darlene M.; Blocker, Lois

DRAINAGE CERTIFICATION

I, DAVID B. THOMPSON, NMPE 9677, OF THE FIRM THOMPSON ENGINEERING CONSULTANTS, INC., HEREBY CERTIFY THAT THIS PROJECT HAS BEEN GRADED AND WILL DRAIN IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE APPROVED PLAN DATED 4-17-15. THE RECORD INFORMATION EDITED ONTO THE ORIGINAL DESIGN DOCUMENT HAS BEEN OBTAINED BY CHRIS DEHLER, NMPS 7923. I FURTHER CERTIFY THAT I HAVE PERSONALLY VISITED THE PROJECT SITE ON 4-1-16 AND HAVE DETERMINED BY VISUAL INSPECTION THAT THE SURVEY DATA PROVIDED IS REPRESENTATIVE OF ACTUAL SITE CONDITIONS AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS CERTIFICATION IS SUBMITTED IN SUPPORT OF A REQUEST FOR CERTIFICATE OF OCCUPANCY.

THE RECORD INFORMATION PRESENTED HEREON IS NOT NECESSARILY COMPLETE AND INTENDED ONLY TO VERIFY SUBSTANTIAL COMPLIANCE OF THE GRADING AND DRAINAGE ASPECTS OF THIS PROJECT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE USING IT FOR ANY OTHER PURPOSE.

DAVID B. THOMPSON , NMPE 9677 — DATE 4-5-16



VICINITY MAP K-16-Z

DRAINAGE PLAN:

LEGAL DESCRIPTION: LOT 24, BLOCK 18, UNIVERSITY HEIGHTS

SITE AREA: 0.1636 ACRES

FLOOD HAZARD STATEMENT: F.E.M.A. FLOODWAY BOUNDARY AND FLOODWAY MAP DATED AUGUST 16, 2012 (PANEL NO. 35001C0353H) INDICATES A FLOOD HAZARD ZONE X WHICH IS AN AREA PROTECTED BY LEVEES FROM THE 1% ANNUAL CHANCE FLOOD.

EXISTING DRAINAGE CONDITIONS:

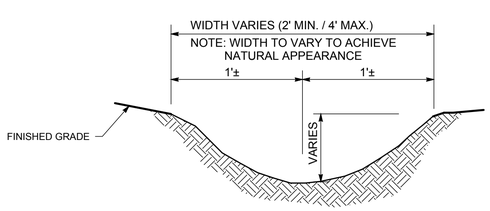
CURRENTLY THE LOT HAS A HOME AND TWO STORAGE BUILDINGS. THE LOT DRAINS TO PRINCETON DRIVE, SILVER AVENUE, AND THE ALLEY IN THE BACK. THE LOT CURRENTLY HAS FREE DISCHARGE TO THE SURROUNDING STREETS. THE EXISTING PEAK RUNOFF TO THE SURROUNDING STREETS IS 0.59 CFS.

THE DRAINAGE ANALYSIS FOR THIS SITE IS IN ACCORDANCE WITH SETION 22 OF THE CITY OF ALBUQUERQUE DEVELOPMENT PROCESS MANUAL (DPM), ENTITLED "DRAINAGE, FLOOD CONTROL, AND EROSION CONTROL." THE DESIGN STORM USED FOR BOTH UNDEVELOPED AND DEVELOPED CONDITIONS IS THE 100-YEAR, 6-HOUR STORM EVENT FOR RUNOFF. THE SITE IS LOCATED IN ZONE 2 SO THE 100-YEAR, 6-HOUR STORM EVENT IS 2.35 INCHES. UNDER EXISTING CONDITIONS THE LOTS INCLUDE LAND TREATMENTS A, B, AND C.

DEVELOPED DRAINAGE CONDITIONS:

THIS PROJECT INVOLVES THE ADDITION OF A TWO STORY BUILDING TO THE BACK OF THE LOT. THE BUILDING INCLUDES A CARPORT AND THREE ONE-BEDROOM APARTMENTS. THERE IS A SMALL COURTYARD AREA BETWEEN THE EXISTING BUILDING AND THE NEW BUILDING. THE ADDITIONAL IMPERVIOUS IMPROVEMENTS WILL DRAIN TO THE SURROUNDING STREETS SIMILAR TO HOW THE LOT DRAINS UNDER EXISTING CONDITIONS. THE ROOF OF THE NEW BUILDING IS SPLIT SO THAT HALF OF THE ROOF DRAINS TO THE NORTH AND HALF OF THE ROOF DRAINS TO THE SOUTH. A SWALE WILL BE DUG ALONG THE SOUTH SIDE OF THE NEW ADDITION TO ENSURE THAT RUNOFF IS DIRECTED TO THE PUBLIC ALLEY ON THE WEST SIDE OF THE LOT. THE REMAINDER OF THE NEW ADDITION WILL DRAIN NORTH TO SILVER AVENUE. SINCE THE ROOF OF THE NEW BUILDING DRAINS BOTH NORTH AND SOUTH, THE PONDING VOLUME REQUIRED TO HOLD THE FIRST FLUSH OF 0.34 INCHES IS 17.5 CUBIC-FEET. A SMALL DEPRESSION OR PONDING AREA THAT IS 0.4 FEET IN DEPTH WILL BE LOCATED ALONG THE SWALE ON THE SOUTH SIDE OF THE NEW BUILDING AND A SECOND PONDING AREA THAT IS 0.4 FEET IN DEPTH WILL BE LOCATED IN THE LANDSCAPED AREA ON THE NORTH SIDE OF THE NEW BUILDING. THESE TWO POND AREAS ARE SIZED TO RETAIN THE FIRST FLUSH VOLUME OF 17.5 CUBIC-FEET.

THE 100-YEAR, 6-HOUR RUNOFF UNDER DEVELOPED CONDITIONS IS 0.65 CFS, WHICH IS ONLY 0.06 CFS HIGHER THAN THE PEAK RUNOFF DURING EXISTING CONDITIONS. THEREFORE, THERE WILL BE A NEGLIGIBLE INCREASE IN RUNOFF TO BE COLLECTED BY THE STORM DRAIN IN SILVER AVENUE. RUNOFF FROM THIS LOT WILL NOT DRAIN SOUTH TO THE ADJACENT LOT.



TYPICAL EARTHEN SWALE DETAIL

100-YEAR HYDROLOGIC CALCULATIONS

BASIN #	AREA (acre)	LAND TREATMENT A (%)	B (%)	C (%)	D (%)	WEIGHTED E (in)	100-YEAR PRECIPITATION V (6-hr) (acre-ft)	V (6-hr) (cu-ft)	V(24-hr) (acre-ft)	V(24-hr) (cu-ft)	Q (cfs)
EXISTING CONDITIONS											
LOT	0.1636	0.00	27.30	27.40	45.30	1.48	0.02	881	0.02	988	0.59
TOTAL RUNOFF	0.16						0.02	881	0.02	988	0.59
PROPOSED CONDITIONS											
LOT	0.1636	0.00	18.70	18.70	62.60	1.68	0.02	1,000	0.03	1,149	0.65
TOTAL RUNOFF	0.16						0.02	1000	0.03	1149	0.65
EXCESS PRECIP.		0.53	0.78	1.13	2.12	E (in)					
PEAK DISCHARGE		1.56	2.28	3.14	4.7	Q (cfs)					

ZONE = 2
$P_{6,100}$ (in.) = 2.35
$P_{6,10}$ (in.) = 2.75
$P_{24,100}$ (in.) = 3.95

WEIGHTED E (in) = $(E_A)(\%A) + (E_B)(\%B) + (E_C)(\%C) + (E_D)(\%D)$

$V_{6,100}$ (acre-ft) = (WEIGHTED E)(AREA)/12

$V_{24,100}$ (acre-ft) = $V_{6,100} + (A_D)(P_{24,100} - P_{6,100})/12$

Q (cfs) = $(Q_A)(A_A) + (Q_B)(A_B) + (Q_C)(A_C) + (Q_D)(A_D)$

LEGEND

FL=5179.37	EXISTING FLOWLINE
BOC=5179.91	EXISTING BACK OF CURB
EC=5180.03	EXISTING EDGE OF CONCRETE
G=5180.29	EXISTING GROUND
EA=5178.59	EXISTING ASPHALT
FF=70.20	FINISHED FLOOR ELEVATION
TS=73.00	TOP OF SIDEWALK
TC=73.00	TOP OF CONCRETE
TP=73.00	TOP OF PAVEMENT
TG=73.00	TOP OF GROUND
	EXIST. MAJOR CONTOURS
	EXIST. MINOR CONTOURS
	FLOW DIRECTION
	PROPOSED SWALE
	BOUNDARY
79.70	NEW AS-BUILT ELEVATIONS

10' 5' 0 10'
SCALE: 1" = 10'

Thompson Engineering Consultants, Inc.
tecnm@yahoo.com
P.O. BOX 65760
ALBUQUERQUE, NM 87193
PHONE: (505) 271-2199
FAX: (505) 830-9246

DRAWN BY: DEM
CHECKED BY:
APPROVED BY:
FILE:
HORIZ. SCALE:
VERT. SCALE:
PROJECT:
DATE:

NO.	REVISION	BY	DATE

DAVID B. THOMPSON 9677 REGISTERED PROFESSIONAL ENGINEER

CITY/COUNTY REVIEW

DEPARTMENT	SIGN-OFF	DATE
WASTEWATER MGMT. DIV.		
WATER SERVICES		
SUBDIVISION ENG.		
STREETS		
TRAFFIC		

FOR CITY/COUNTY USE ONLY

LOT 24, BLOCK 18
UNIVERSITY HEIGHTS
201 PRINCETON DR. S.E.

GRADING AND DRAINAGE PLAN

SHEET No.

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