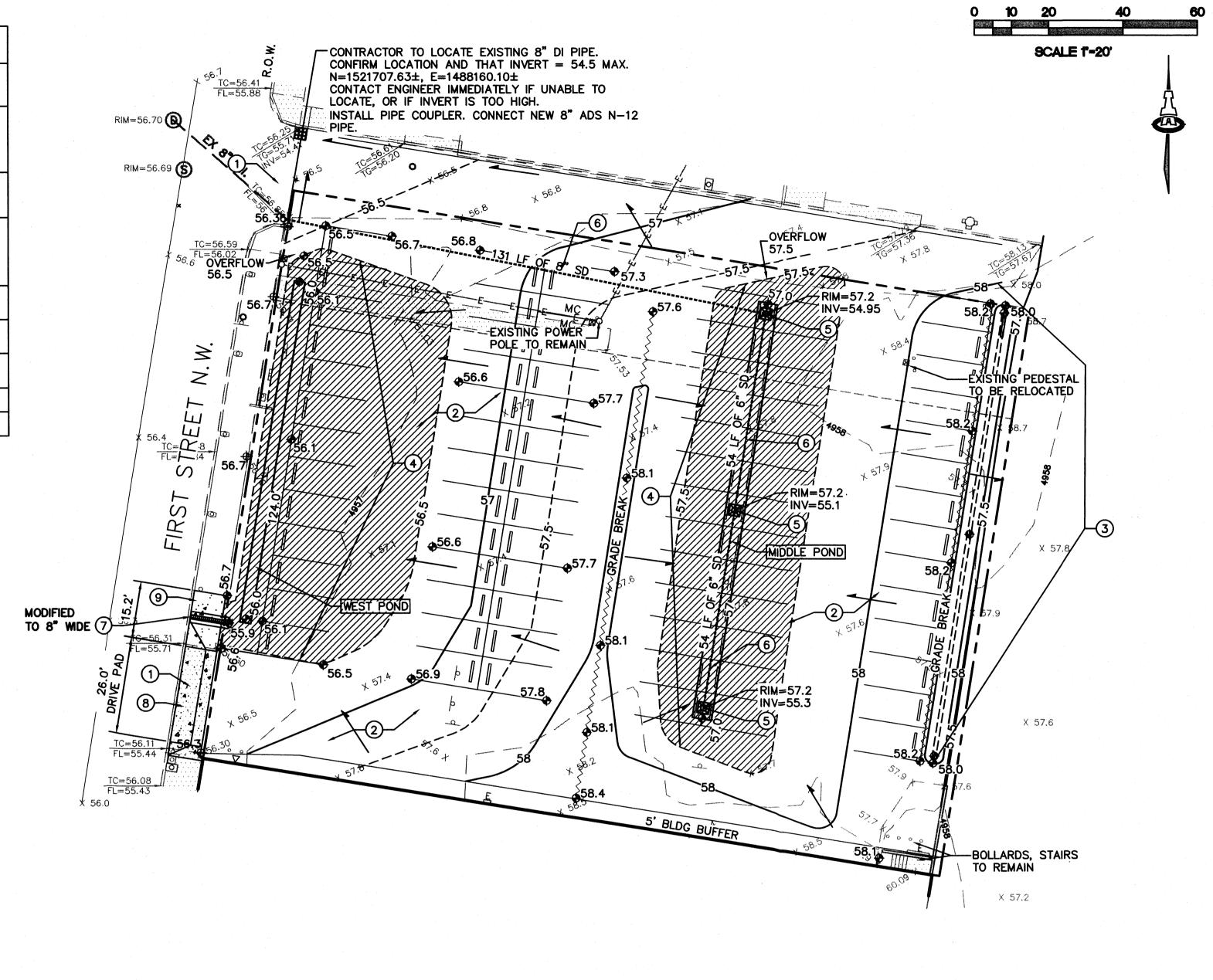
**INSPECTOR** 



# DRAINAGE PLAN CONCEPT

PER A PRE-DESIGN MEETING WITH C.O.A. HYDROLOGY, THE ALLOWABLE DISCHARGE RATE FOR THIS PROPERTY IS 2.75 CFS / ACRE. AT 0.71 ACRES, THIS PROPERTY'S ALLOWABLE DISCHARGE RATE = 1.96 CFS. THE PROPERTY WILL GENERATE APPROXIMATELY 3.19 CFS DURING A 100-YEAR 6-HOUR

DISCHARGE FROM THE IMPROVED PARKING LOT WILL BE DIRECTED AWAY FROM THE DRIVE AISLES. TWO DETENTION AREAS WILL BE CREATED TO STORE THE VOLUME IN EXCESS OF ALLOWABLE. THE WEST PONDING AREA WILL DISCHARGE 0.8 CFS TO 1ST STREET THROUGH A 8" WIDE SIDEWALK CULVERT. (SEE ADDITIONAL INFORMATION SUBMITTED WITH THIS PACKAGE FOR CULVERT AND PIPE CAPACITY CALCULATIONS.) 1.1 CFS FROM THE MIDDLE PONDING AREA WILL BE CAPTURED BY AREA DRAINS AND A 6" PIPE FOR ROUTING TO AN EXISTING 8" C.I. PUBLIC STORM DRAIN LOCATED AT THE NORTHWEST CORNER OF THE PROPERTY (S.O.19 PERMIT REQUIRED FOR PROPOSED CONNECTION). IF THIS PIPE IS UNABLE TO BE LOCATED IN THE FIELD, OR THE INVERT IS HIGHER THAN ANTICIPATED, THE CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY AT (505) 268-8828.

THE REQUIRED PONDING VOLUMES ARE: MIDDLE POND = 766 CF. PROVIDED PONDING = 1,254 CF WEST POND = 1,255 CF. PROVIDED PONDING = 1,257 CF

## GENERAL NOTES

- COORDINATE WORK WITH SITE PLAN
- ALL TRASH, DEBRIS, & SURFACE VEGETATION SHALL BE CLEARED AND LEGALLY DISPOSED OF OFFSITE.
- FINAL GRADES SHOWN REPRESENT TOP OF FINISH MATERIAL (I.E. TOP OF PAVEMENT MATERIAL, TOP OF LANDSCAPING MATERIAL, ETC.). CONTRACTOR SHALL GRADE, COMPACT SUBGRADE AND DETERMINE EARTHWORK ESTIMATES BASED ON ELEVATIONS SHOWN MINUS FINISH MATERIAL THICKNESSES.
- EXISTING UTILITY LINES ARE SHOWN IN AN APPROXIMATE MANNER ONLY AND MAY BE INCOMPLETE OR OBSOLETE. SUCH LINES MAY OR MAY NOT EXIST WHERE SHOWN OR NOT SHOWN. CONTRACTOR SHALL CONTACT NM-811 FOR UTILITY LINE SPOTS TWO WORKING DAYS PRIOR TO CONDUCTING SITE FIELD WORK. CONTRACTOR SHALL FIELD VERIFY AND LOCATE ALL UTILITIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES, PIPELINES, AND UNDERGROUND UTILITY LINES.
- ADJUST RIMS OF EXISTING UTILITY FEATURES AS NECESSARY TO MATCH NEW GRADES, TYPICAL.
- ALL NEW PAVEMENT SURFACES SHALL BE CONSTRUCTED WITH POSITIVE SLOPE AWAY FROM BUILDINGS.
- ENGINEER RECOMMENDS THAT OWNER INSPECT SITE YEARLY AND AFTER EACH RAINFALL TO IDENTIFY AREAS OF EROSION AND INSTALL EROSION PROTECTION AS NEEDED BASED ON ACTUAL OCCURRENCES.
- PER THE SURVEY: 'THIS IS NOT A BOUNDARY SURVEY, APPARENT PROPERTY CORNERS AND PROPERTY LINES ARE SHOWN FOR INFORMATION ONLY. BOUNDARY DATA SHOWN IS FROM PREVIOUS SURVEY REFERENCED HEREON'.

VICINITY MAP

## **LEGEND**

### **EXISTING SPOT ELEVATION** PROPOSED SPOT ELEVATION AT TRANSITION TO EXISTING PROPOSED SPOT ELEVATION FLOW DIRECTION PROPOSED 1' CONTOUR - - 04.5 - - PROPOSED 0.5' CONTOUR FINISH FLOOR ELEVATION ----- GRADE BREAK EXISTING STORM DRAIN INLET

# **KEYED NOTES**

- EXISTING ACCESS DRIVE.
- NEW PAVED PARKING AT ELEVATIONS SHOWN. SEE GENERAL NOTE 'C'.

PROPOSED 6" DRAIN PIPE

- SHALLOW RETENTION PONDING AREA: DEPRESS LANDSCAPING 6" TO ELEVATIONS SHOWN. EXCESS FLOW WILL OVERFLOW TO
- 1. SHALLOW DETENTION PONDING AREA: DEPRESS GRAVEL 6" TO ELEVATIONS SHOWN. EXCESS FLOW WILL OVERFLOW TO NORTH.
- 5. ADS 8" IN-LINE DRAIN AT RIM ELEVATION SHOWN IN PLAN.
- CONSTRUCT PER IN-LINE DRAIN DETAIL ON THIS SHEET. 6. EXTEND PRIVATE STORM DRAIN (6" ADS N-12 PIPE) AT INVERT ELEVATIONS SHOWN TO NEW PUBLIC STORM DRAIN

INLET @ MINIMUM 0.4% SLOPE. MINIMUM COVER = 12".

- MODIFY SIDEWALK CULVERT PER COA STD DWG #2236 TO BE 8" WIDE. EXTEND 2' EAST OF SIDEWALK. WELD %" THICK, %" MIN. DIAMETER OVER ALL SCREWS. COMPLETELY COVER SCREW HEADS. GRIND EDGES SMOOTH. INV(E)=55.9, INV(W)=55.7
- CAREFULLY REMOVE AND DISPOSE OF EXISTING DRIVEPAD. REPLACE PER COA STD DWG #2425.
- CAREFULLY REMOVE AND DISPOSE OF EXISTING SIDEWALK. REPLACE PER COA STD DWG #2460.

# PROJECT DATA

PROPERTY: THE SITE IS CURRENTLY A DIRT PARKING LOT WITH PARKING BUMPERS PROVIDED TO DEFINE SPACES WITHIN CITY OF ALBUQUERQUE ZONE MAP J-14. THE SITE IS BOUND TO THE WEST BY 1ST STREET NW. TO THE NORTH AND SOUTH BY FULLY DEVELOPED COMMERCIAL BUILDINGS AND TO THE EAST THE AT&SF RAIL ROAD TRACKS.

PROPOSED IMPROVEMENTS: THE PROPOSED IMPROVEMENTS INCLUDE FINE GRADING AND GRAVEL PAVING TO DEFINE DRAINAGE AND IMPROVE THE PARKING SURFACE.

LEGAL: LOTS 1 THRU 5 AND 20 THRU 24 TOGETHER WITH A PORTION OF VACATED FRUIT AVENUE AND A PORTION OF VACATED 16' ALLEY BLOCK 16 FRANCISCO ARMIJO Y OTERO ADDITION CITY OF ALBUQUERQUE BERNALILLO COUNTY, NEW

ADDRESS: 702 1ST STREET NW

AREA: 0.7140 ACRE

BENCHMARK: AGRS BRASS CAP STAMPED "17-J14" LOCATED AT LOMAS AND 8TH STREET IN THE MEDIAN ON THE WEST SIDE OF THE INTERSECTION. ELEVATION=4957.484 (NAVD88)

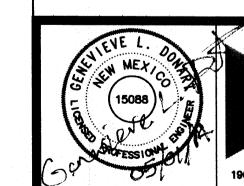
OFF-SITE: NO OFF-SITE FLOW IMPACTS THIS PROPERTY.

FLOOD HAZARD: PER BERNALILLO COUNTY FIRM MAP #35001C0334G, THE SITE IS LOCATED WITHIN FLOODZONE 'X' UNSHADED) DESIGNATED AS AREAS DETERMINED TO BE OUTSIDE 500-YEAR FLOODPLAIN. FIRST STREET, ADJACENT TO THE PROPERTY, IS LOCATED WITHIN FLOODZONE 'AO' (DEPTH 1').

SURVEYOR:

ALDRICH LAND SURVEYING P.O. BOX 30701 ALBUQUERQUE, NEW MEXICO 87190 PHONE: 505-884-1990





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May 01,2014

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614 1ST STREET PARKING LOT IMPROVEMENTS

GRADING AND DRAINAGE PLAN

614 1ST STREET PARTNERS

10-21-13 **CG-101** BJB Ckd By:

-8" LOCKING, DOMED GRATE RIM ELEVATION ----(ADS#0899CGDL) SHOWN ON PLAN 8" NDS INLINE -DRAIN WITH 6" OUTLET (ADS#2708AG) <del>- 111 |</del> 6" DIA. N12WT FITTINGS AS REQ'D TO EXTEND TO TRUNK LINE

ADS N12WT FITTINGS AS-REQ'D TO CONNECT TO ADS N-12 STORM DRAIN MAIN. SEE DETAIL FOR PIPE DIAMETER.

SEE STORM DRAIN EXHIBIT

IN-LINE DRAIN: DOMED GRATE

SCALE: N.T.S. FCA J14-D016

Developed E On-Site Volume of Runoff: V360 = E\*A / 12 Developed V<sub>360</sub> = On-Site Peak Discharge Rate:  $Qp = Q_{pA}A_A + Q_{pB}A_B + Q_{pC}A_C + Q_{pD}A_D / 43,560$ For Precipitation Zone 2  $Q_{pA} = 1.56$  $Q_{\rm pD} = 4.70$ = 2.28 Developed Q<sub>p</sub>

On-Site Weighted Excess Precipitation (100-Year, 6-Hour Storm)

Weighted E =

AREA OF SITE:

5366 CF  $Q_{pC} = 3.14$ 

CALCULATIONS: 614 1st. Street Parking Lot: 3/12/2014

ON-SITE

SF

-

0

0

1555

29547

= 31102

0.71

Treatment SF % Precip. Zone

0%

0%

5%

95%

2.07 in.

3.30 CFS

**EXCESS PRECIP:** 

 $E_A = 0.53$ 

 $E_{\mathbf{B}} = 0.78$ 

 $E_{\rm C} = 1.13$ 

 $E_D = 2.12$ 

31102

**DEVELOPED FLOWS:** 

Area A

Area B

Area C

Area D

 $E_AA_A + E_BA_B + E_CA_C + E_DA_D$ 

 $A_A + A_B + A_C + A_D$ 

Total Area

100-year, 6-hour

Based on Drainage Design Criteria for City of Albuquerque Section 22.2, DPM, Vol 2, dated Jan., 1993

The overall site consists of 0.714003673094582 acre(s) located in Zone 2 which is designated as properties D. The 100-year, 6-hour historic discharge is 0 cfs. The proposed developed discharge is 3.3 cfs.

MIDDLE PONDING Area Volume Contour 4957.50 4425 590 1254 CF 1254 CF

**WEST PONDING** Area Volume Contour 4956.50 4754 4956.00 275 1257 CF 1257 CF TOTAL VOL.

4957.00 TOTAL VOL.

2511 CF

TOTAL PONDING