INTRODUCTION AND PROJECT DESCRIPTION:
DOLORES GONZALES ELEMENTARY SCHOOL IS LOCATED AT 900 ATLANTIC AVE SW IN SOUTHWEST ALBUQUERQUE, EAST OF THE ZOOLOGICAL PARK AND SOUTH OF TINGLEY FIELD. THE PROPOSED SITE IS PRIMARILY IN THE EAST AREA OF CAMPUS. THE MAIN BUILDING OF THE CAMPUS WILL BE UNDERGOING RENOVATIONS UNDER A SEPARATE PROJECT. THE GOAL OF THIS PROJECT IS TO ADD TEMPORARY PORTABLES AND PAVING IMPROVEMENTS TO PROVIDE CLASSROOMS FOR THE DISPLACEMENT OF STUDENTS DURING CONSTRUCTION OF THE MAIN BUILDING. THE PORTABLES WILL BE ON SITE FOR A TEMPORARY DURATION OF 1 YEAR, AND THEN ALL PORTABLES WILL BE REMOVED FROM THE SITE. THE DRAINAGE CONCEPT FOR THIS PROJECT WILL BE THE CONTROLLED DISCHARGE OF DEVELOPED RUNOFF VIA WATER HARVESTING AREAS WITH EXCESS OVERFLOW) DISCHARGING TO PUBLIC RIGHT OF WAY VIA SIDEWALK CULVERT. AS SHOWN BY PANEL 333 OF 825 OF THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAPS PUBLISHED BY FEMA FOR BERNALILLO COUNTY, NEW MEXICO, AUGUST 16, 2012, THIS SITE DOES NOT LIE WITHIN A 100 YEAR DESIGNATED FLOOD HAZARD ZONE. THIS SUBMITTAL IS MADE IN SUPPORT OF GRADING AND PAVING PERMIT APPROVAL. THE EXISTING DRAINAGE PLAN FOR DOLORES GONZALES ELEMENTARY DATED DECEMBER 2000 (K-13, D31) UTILIZED FREE DISCHARGE OF RUNOFF TO EXISTING PUBLIC STORM DRAIN FACILITIES. IN 2011, THERE WAS AN ALLOWABLE PEAK DISCHARGE LIMITED TO 2.75 CFS/AC DUE TO LOCATION OF SITE. THEREFORE, FOR THIS SITE OF 0.954 AC THE ALLOWABLE DISCHARGE IS 2.62 CFS.

METHODOLOGY:
SECTION 22.2 OF THE CITY OF ALBUQUERQUE DPM WAS UTILIZED TO CALCULATE DESIGN FLOWS. THE PROCEDURE FOR 40 ACRE AND SMALLER BASINS WAS USED. THE 100-YEAR, 24 HOUR AND 0.2-HOUR STORM EVENTS WERE THE DESIGN STORMS COMPUTED FOR THE IMPROVEMENTS. THE SITE IS LOCATED IN PRECIPITATION ZONE 2 AS DESIGNATED IN TABLE A-1 OF THE DPM. ALL BASINS WERE DELINEATED USING AUTOCAD SOFTWARE TO DETERMINE AREAS. THE WEIR EQUATION WAS USED TO DETERMINE THE CAPACITY OF THE SIDEWALK CULVERT.

EXISTING CONDITIONS:
THE PROJECT AREA IS A COMBINATION OF ASPHALT WALKWAYS, PORTABLE BUILDINGS, AND COMPACTED SOIL. THE SITE IS CONTAINED IN BASINS 201, 202, AND 203. SEE TABLE 1 FOR THE EXISTING HYDROLOGIC CONDITIONS. BASIN 201 IS APPROXIMATELY 0.12 ACRES AND DRAINS TO THE SOUTHEAST CORNER OF THE PROPERTY. BASIN 202 IS APPROXIMATELY 0.68 ACRES AND DRAINS TO THE EAST AND SOUTHEAST CORNER OF THE PROPERTY. BASIN 203 IS APPROXIMATELY 0.15 ACRES AND DRAINS ALONG A SWALE ON THE SOUTH END OF THE PROPERTY. THE PORTABLES HAVE OPEN ROOF GUTTERS LOCATED AT EACH CORNER OF THE STRUCTURE. THE ROOF RUNOFF IS MOVING SEDIMENT FROM THE FOUNDATION AT THE RESPECTIVE CORNERS. THERE IS POOR DRAINAGE LEADING TO SURFACE PONDING.

BASIN	AREA	LAND TREATMENT (%)				$Q_{E(100)}$	V_{100-24}	V_{100-24}
	ACRE	A	B	C	D	(CFS)	(AC-FT)	(CF)
201	0.1172	0	0	93.92	6.08	0.38	0.002	69.68
202	0.6839	0	0	90.35	9.35	2.24	0.049	2162.5
203	0.1531	0	0	100.00	0.00	0.48	0.002	96.15
TOTAL	0.9542					3.10	0.053	2328.3

Table 1: Existing Hydrology

G1 DRAINAGE REPORT
NTS

Private Drainage Facilities within City Right-of-Way
Notice to Contractor
(Special Order 19 ~ "SO-19")

1. An excavation permit will be required before beginning any work within City Right-Of-Way.
2. 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.
3. Two working days prior to any excavation, the contractor must contact **New Mexico One Call, dial "811"** [or (505) 260-1990] for the location of existing utilities.
4. Prior to construction, the contractor shall excavate and verify the locations of all obstructions. Should a conflict exist, the contractor shall notify the engineer so that the conflict can be resolved with a minimum amount of delay.
5. Backfill compaction shall be according to traffic/street use.
6. Maintenance of the facility shall be the responsibility of the owner of the property being served.
7. Work on arterial streets shall be performed on a 24-hour basis.

D1 SPECIAL ORDER 19 (SO-19)
NTS

PROPOSED CONDITIONS:
THE PROJECT INCLUDES REMOVING TWO PORTABLES OFF CAMPUS AND RELOCATING FIVE PORTABLES TO THE DIRT LOT ON THE SOUTHEAST AREA OF CAMPUS. SEE TABLE 2 FOR THE PROPOSED HYDROLOGIC CONDITIONS. THE PROPOSED SITE WILL INCLUDE APPROXIMATELY 975 SF (0.022 ACRES) INCREASE IN LAND TREATMENT D. THIS INCLUDES THE ASPHALT WALKWAYS ADDED FOR THE NEW PORTABLES.

BASIN	AREA	LAND TREATMENT (%)				$Q_{E(100)}$	V_{100-24}	V_{100-24}
	ACRE	A	B	C	D	(CFS)	(AC-FT)	(CF)
201	0.1172	0	0	93.92	6.08	0.38	0.002	69.68
202	0.6839	0	0	88.12	11.88	2.27	0.051	2236.1
203	0.1531	0	0	100.00	0.00	0.48	0.002	96.15
TOTAL	0.9542					3.13	0.055	2402.0

Table 2: Proposed Hydrology

WATER HARVESTING AREA 1
$V_1 = \frac{1}{3}(A_1 + A_2)(DEPTH)$
$= \frac{1}{3}(480 + 176)^2 = 656$ CF
WATER HARVESTING AREA 2
$V_2 = \frac{1}{3}(A_1 + A_2)(DEPTH)$
$= \frac{1}{3}(432 + 40)^2 = 472$ CF
$V_{TOTAL} = 656 + 472 = 1128$ CF $> \Delta V_{100}$

SIDEWALK CULVERT CAPACITY
$Q_{CAP} = 3.33(H)^{1.5} = 3.33(1.25)(0.67)^{1.5} = 2.27$ CFS
$Q_{CAP} = 2.27$ CFS $> \Delta Q_{100}$

VOLUME
$\Delta V_{100} = V_{100-PROPOSED} - V_{100-EXISTING}$
$= 2402.02 - 2328.33$
$= 73.69$ CF (INCREASE)

PEAK DISCHARGE
$\Delta Q_{100} = Q_{100-PROPOSED} - Q_{100-EXISTING}$
$= 3.13 - 3.10$
$= 0.03$ CFS (INCREASE)
$Q_{ALLOW} = 2.75$ CFS/AC * 0.9542 AC = 2.62 CFS

THERE IS AN OVERALL INCREASE OF 0.03 CFS AND 73.69 CF. THE SITE WILL DRAIN NORTH TO SOUTH WITH FLOWS BEING ROUTED THROUGH 2 PROPOSED WATER HARVESTING AREAS. THE WATER HARVESTING AREAS WILL BE CONNECTED BY A VALLEY SWALE. THE SWALE WAS NOT CONSIDERED AS STORAGE AREA. OVERFLOW GENERATED FROM WATER HARVESTING AREAS WILL BE RELEASED VIA PROPOSED SIDEWALK CULVERT AT 2.27 CFS WHICH IS LESS THAN THE ALLOWABLE DISCHARGE. RUNOFF WILL ENTER AN EXISTING PUBLIC STORM INLET ON 8TH ST AND SANTA FE AVE. THIS INLET IS CONNECTED TO A PUBLIC STORM DRAIN SYSTEM THAT SERVES THE AREA AND ULTIMATELY DISCHARGES TO THE BARELAS PUMP STATION OUTFALL.

SECTION 22.2 OF THE CITY OF ALBUQUERQUE DPM
ZONE 2
$P_{1440} = 2.75$ IN $P_{360} = 2.35$ IN $T_{0.2DAYS} = 3.95$ IN
$E_A = 0.53$ $E_B = 0.78$ $E_C = 1.13$ $E_D = 2.12$
$Q_{EA} = 1.56$ $Q_{EB} = 2.28$ $Q_{EC} = 3.14$ $Q_{ED} = 4.70$

EXISTING CONDITIONS

BASIN 201
A_A=0 AC A_B=0 AC A_C=0.11007 AC A_D=0.00713 AC A_{TOTAL}=0.1172 AC
WEIGHTED E = $(E_A{}^*A_A) + (E_B{}^*A_B) + (E_C{}^*A_C) + (E_D{}^*A_D) = 0.13949$ IN
$V_{100-6HR} = V_{WEI} =$ WEIGHTED E * $A_{TOTAL} = (0.13949\ IN)*(0.1172\ AC) = 0.001362$ AC-FT
$V_{100-24HR} = V_{1440} = V_{WEI} + A_C{}^*[P_{1440} - P_{360}] = 0.001362+0.00713*(2.75-2.35)(12IN/FT) = 0.000159$ AC-FT = 69.675 CF
$V_{100-10DAYS} = V_{10D} + A_C{}^*[P_{10DAYS} - P_{360}] = 0.001362+0.00713*(3.95-2.35)(12IN/FT) = 0.00231$ AC-FT = 100.715 CF
$Q_{100} = (Q_{EA}{}^*A_A) + (Q_{EB}{}^*A_B) + (Q_{EC}{}^*A_C) + (Q_{ED}{}^*A_D) = 0.379$ CFS

BASIN 202
A_A=0 AC A_B=0 AC A_C=0.61780 AC A_D=0.06394 AC A_{TOTAL}=0.6839 AC
WEIGHTED E = $(E_A{}^*A_A) + (E_B{}^*A_B) + (E_C{}^*A_C) + (E_D{}^*A_D) = 0.83379$ IN
$V_{100-6HR} = V_{WEI} =$ WEIGHTED E * $A_{TOTAL} = (0.83379\ IN)*(0.6839\ AC) = 0.047512$ AC-FT
$V_{100-24HR} = V_{1440} = V_{WEI} + A_C{}^*[P_{1440} - P_{360}] = 0.047512+0.00394*(2.75-2.35)(12IN/FT) = 0.04964$ AC-FT = 2162.464 CF
$V_{100-10DAYS} = V_{10D} + A_C{}^*[P_{10DAYS} - P_{360}] = 0.047512+0.00394*(3.95-2.35)(12IN/FT) = 0.05604$ AC-FT = 2440.986 CF
$Q_{100} = (Q_{EA}{}^*A_A) + (Q_{EB}{}^*A_B) + (Q_{EC}{}^*A_C) + (Q_{ED}{}^*A_D) = 2.24072$ CFS

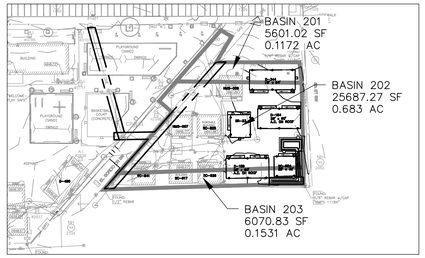
BASIN 203
A_A=0 AC A_B=0 AC A_C=0.1531 AC A_D=0 AC A_{TOTAL}=0.1531 AC
WEIGHTED E = $(E_A{}^*A_A) + (E_B{}^*A_B) + (E_C{}^*A_C) + (E_D{}^*A_D) = 0.17300$ IN
$V_{100-6HR} = V_{WEI} =$ WEIGHTED E * $A_{TOTAL} = (0.17300\ IN)*(0.1531\ AC) = 0.00221$ AC-FT
$V_{100-24HR} = V_{1440} = V_{WEI} + A_C{}^*[P_{1440} - P_{360}] = 0.0022+0^*(2.75-2.35)(12IN/FT) = 0.0022$ AC-FT = 96.15 CF
$V_{100-10DAYS} = V_{10D} + A_C{}^*[P_{10DAYS} - P_{360}] = 0.0022+0.*(3.95-2.35)(12IN/FT) = 0.0022$ AC-FT = 96.15 CF
$Q_{100} = (Q_{EA}{}^*A_A) + (Q_{EB}{}^*A_B) + (Q_{EC}{}^*A_C) + (Q_{ED}{}^*A_D) = 0.48073$ CFS

PROPOSED CONDITIONS

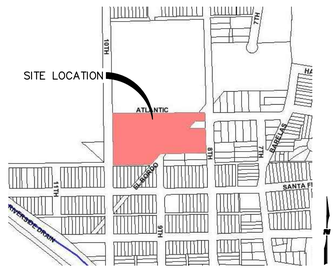
BASIN 201
A_A=0 AC A_B=0 AC A_C=0.11007 AC A_D=0.00713 AC A_{TOTAL}=0.1172 AC
WEIGHTED E = $(E_A{}^*A_A) + (E_B{}^*A_B) + (E_C{}^*A_C) + (E_D{}^*A_D) = 0.13949$ IN
$V_{100-6HR} = V_{WEI} =$ WEIGHTED E * $A_{TOTAL} = (0.13949\ IN)*(0.1172\ AC) = 0.001362$ AC-FT
$V_{100-24HR} = V_{1440} = V_{WEI} + A_C{}^*[P_{1440} - P_{360}] = 0.001362+0.00713*(2.75-2.35)(12IN/FT) = 0.000159$ AC-FT = 69.675 CF
$V_{100-10DAYS} = V_{10D} + A_C{}^*[P_{10DAYS} - P_{360}] = 0.001362+0.00713*(3.95-2.35)(12IN/FT) = 0.00231$ AC-FT = 100.715 CF
$Q_{100} = (Q_{EA}{}^*A_A) + (Q_{EB}{}^*A_B) + (Q_{EC}{}^*A_C) + (Q_{ED}{}^*A_D) = 0.379$ CFS

BASIN 202
A_A=0 AC A_B=0 AC A_C=0.60265 AC A_D=0.08125 AC A_{TOTAL}=0.6839 AC
WEIGHTED E = $(E_A{}^*A_A) + (E_B{}^*A_B) + (E_C{}^*A_C) + (E_D{}^*A_D) = 0.85324$ IN
$V_{100-6HR} = V_{WEI} =$ WEIGHTED E * $A_{TOTAL} = (0.85324\ IN)*(0.6839\ AC) = 0.04863$ AC-FT
$V_{100-24HR} = V_{1440} = V_{WEI} + A_C{}^*[P_{1440} - P_{360}] = 0.04863+0.08125^*(2.75-2.35)(12IN/FT) = 0.05133$ AC-FT = 2236.193 CF
$V_{100-10DAYS} = V_{10D} + A_C{}^*[P_{10DAYS} - P_{360}] = 0.04863+0.08125^*(3.95-2.35)(12IN/FT) = 0.05946$ AC-FT = 2590.105 CF
$Q_{100} = (Q_{EA}{}^*A_A) + (Q_{EB}{}^*A_B) + (Q_{EC}{}^*A_C) + (Q_{ED}{}^*A_D) = 2.2742$ CFS

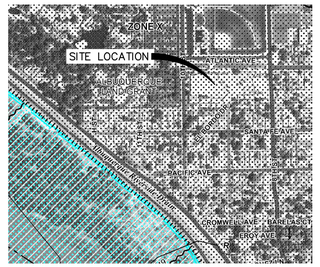
BASIN 203
A_A=0 AC A_B=0 AC A_C=0.1531 AC A_D=0 AC A_{TOTAL}=0.1531 AC
WEIGHTED E = $(E_A{}^*A_A) + (E_B{}^*A_B) + (E_C{}^*A_C) + (E_D{}^*A_D) = 0.17300$ IN
$V_{100-6HR} = V_{WEI} =$ WEIGHTED E * $A_{TOTAL} = (0.17300\ IN)*(0.1531\ AC) = 0.00221$ AC-FT
$V_{100-24HR} = V_{1440} = V_{WEI} + A_C{}^*[P_{1440} - P_{360}] = 0.0022+0^*(2.75-2.35)(12IN/FT) = 0.0022$ AC-FT = 96.15 CF
$V_{100-10DAYS} = V_{10D} + A_C{}^*[P_{10DAYS} - P_{360}] = 0.0022+0.*(3.95-2.35)(12IN/FT) = 0.0022$ AC-FT = 96.15 CF
$Q_{100} = (Q_{EA}{}^*A_A) + (Q_{EB}{}^*A_B) + (Q_{EC}{}^*A_C) + (Q_{ED}{}^*A_D) = 0.48073$ CFS



G7 BASIN MAP
1" = 100'

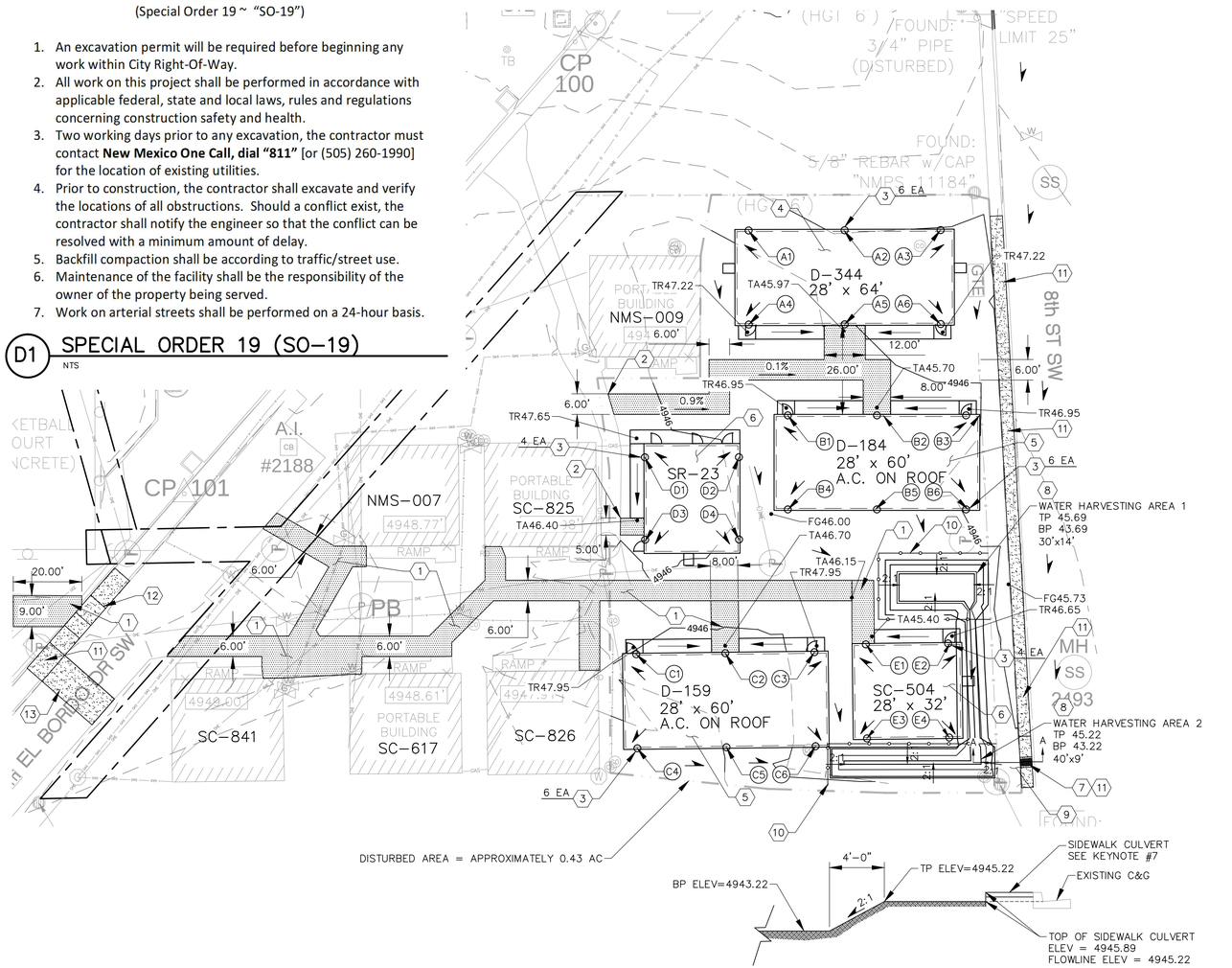


LOCATION
ZONE ATLAS MAP NO K-13



FLOOD INSURANCE RATE MAP
REFERENCE: FLOOD INSURANCE STUDY
PANEL 333 #35001C0333H

SOILS MAP
REFERENCE: HTTP://WEBSOILSURVEY.NRCS.USDA.GOV



SECTION A-A

A1 SITE/GRADING & DRAINAGE PLAN
1" = 20'

0 10' 20'

LEGAL DESCRIPTION:
TR A-1-A PLAT OF TRACT A-1-A
DOLORES GONZALESELEMENTARY SCHOOL CONT 4.6612 AC

PRIMARY BENCHMARK:
CONTROL STATION "ACS 8-L13"
THE STATION MARK IS A CITY OF ALBUQUERQUE SURVEY CONTROL 3-1/4 INCH ALUMINUM DISC RIVETED TO A PIPE 0.2 FEET ABOVE GROUND STAMPED "8-L13 1987". LOCATED 1.3 MILES SOUTHWEST OF DOWNTOWN ALBUQUERQUE. TO REACH THE STATION FROM THE INTERSECTION OF I-25 AND AVENIDA CESAR CHAVEZ SE, GO WEST ON AVENIDA CESAR CHAVEZ / BRIDGE BLVD. 1.05 MILES TO THE STATION ON THE RIGHT.
(CENTRAL ZONE)
X=1,481,518.262 Y=1,518,989.708 ELEV=4,956.034 (NAVD 88)
GROUND-TO-GRID FACTOR=1.0003169023

GENERAL NOTES

1. CONTRACTOR TO FIELD VERIFY LOCATION OF EXISTING UTILITIES. LOCATIONS ON TEHSE PLANS ARE APPROXIMATE AND HAVE NOT BEEN FIELD VERIFIED.
2. THE RAMPS AND/OR STAIRS WHICH EACH PORTABLE IS UTILIZING IN EXISTING CONDITIONS WILL BE USED IN PROPOSED CONDITIONS TO MINIMIZE COST OF PURCHASING NEW RAMPS.
3. CONTRACTOR TO CASS 505-235-8016, JASON RODRIGUEZ FOR INSPECTION AFTER CONSTRUCTION.
4. CONTRACTOR SHALL REPAIR ANY DAMAGE SIDEWALK.

KEYNOTES

1. CONSTRUCT 2" ASPHALT. SEE DETAIL G4/C-501.
2. CONNECT TO EXISTING ASPHALT. SEE DETAIL F4/C-501.
3. CONSTRUCT CONCRETE PIER. SEE DETAIL G7/C-501. SEE PIER LOCATION TABLE.
4. INSTALL 64'x28' PORTABLE. SEE DETAIL A7/C-501.
5. INSTALL 60'x28' PORTABLE. SEE DETAIL C7/C-501.
6. INSTALL 32'X28' PORTABLE. SEE DETAIL E7/C-501.
7. CONSTRUCT 15"WIDE SIDEWALK CULVERT. SEE DETAIL A1/C-501. BOLTS TO BE TACK WELDED TO THE STEEL PLATE COVER AND TO EXTEND THE PLATE 2'-0" FROM THE BACK OF SIDEWALK.
8. CONSTRUCT POND. SIDE SLOPES ALL AROUND = 2:1 @ 24" DEPTH.
9. GRADE TO MATCH TOP OF POND ELEVATION.
10. INSTALL 4'-0"H CHAINLINK FENCE PER COA STD DWG 2252.
11. CONSTRUCT 4" PCC. SEE DETAIL F1/C-501. CONSTRUCT CURB AND GUTTER PER COA STD DWG 2415A AND 2415B. MATCH EXISTING
12. INSTALL ADA RAMP. SEE DETAIL F1/C-502
13. CONSTRUCT 4" PCC. SEE DETAIL F1/C-501.

PIER LOCATION TABLE

PIER #	NORTHING	EASTING	TOP PIER ELEV
A1	1483973.50	1518911.74	4945.55
A2	1483973.55	1518939.74	4945.55
A3	1483973.60	1518967.74	4945.55
A4	1483946.08	1518911.79	4945.55
A5	1483946.13	1518939.79	4945.55
A6	1483946.19	1518967.79	4945.55
B1	1483919.57	1518923.19	4945.28
B2	1483919.57	1518949.19	4945.28
B3	1483919.57	1518975.19	4945.28
B4	1483892.15	1518923.19	4945.28
B5	1483892.15	1518949.19	4945.28
B6	1483892.15	1518975.19	4945.28
C1	1483849.91	1518878.95	4946.28
C2	1483850.21	1518904.95	4946.28
C3	1483850.50	1518930.95	4946.28
C4	1483822.50	1518879.26	4946.28
C5	1483822.79	1518905.26	4946.28
C6	1483823.09	1518931.26	4946.28
D1	1483907.33	1518881.49	4945.98
D2	1483907.37	1518908.91	4945.98
D3	1483883.33	1518881.53	4945.98
D4	1483883.37	1518908.95	4945.98
E1	1483852.77	1518945.95	4944.98
E2	1483853.04	1518969.95	4944.98
E3	1483825.35	1518946.26	4944.98
E4	1483825.63	1518970.26	4944.98

LEGEND

- P — ELECTRICAL, POWER POLE
- E — ELECTRICAL, JUNCTION BOX
- (E) — ELECTRICAL, METER
- UTILITY, FIRE HYDRANT
- GV — UTILITY, GAS VALVE
- G — UTILITY, GAS METER
- G — UTILITY, GAS REGULATOR
- CO — UTILITY, SANITARY CLEANOUT
- WV — UTILITY, WATER VALVE
- W — UTILITY, WATER METER
- UTILITY, WATER FAUCET
- SITE, TRAFFIC SIGN

- BP — BOTTOM OF POND ELEVATION
- FG — FINISHED GRADE ELEVATION
- ME — MATCH EXISTING ELEVATION
- TA — TOP OF ASPHALT ELEVATION
- TP — TOP OF POND ELEVATION
- TR — TOP OF RAMP ELEVATION
- PROPOSED BASIN BOUNDARY
- PROPOSED 2" ASPHALT
- PROPOSED 4" PCC
- APPROXIMATE DISTURBED AREA
- FLOW ARROW

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FAX: 505-348-4155 SECOND FLOOR
www.wilsonco.com

ALBUQUERQUE PUBLIC SCHOOLS

SEAL

PROJECT NAME
DOLORES GONZALES ELEMENTARY SCHOOL PORTABLE RELOCATION

REV.	DATE	DESCRIPTION	BY

PROJECT NO:	1060005100
DESIGNED BY:	NBT
DRAWN BY:	JEM
CHECKED BY:	MJI
DATE:	MAR 2013

SHEET TITLE
SITE/GRADING & DRAINAGE PLAN

SHEET NO:
C-102

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