

March 9, 2018

J. Graeme Means, P.E.
High Mesa Consulting Group
6010 B Midway Park Blvd NE
Albuquerque, NM 87109

RE: Hotel Albuquerque NW Parking Lot
2000 Bellamah Ave NW
Grading Plan
Engineer's Stamp Date: 3/7/18
Hydrology File: J13D066

Dear Mr. Means:

PO Box 1293

Albuquerque

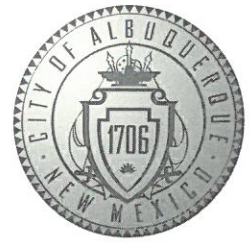
NM 87103

www.cabq.gov

Based on the information provided in your submittal received on 3/7/18, this plan cannot be approved for Grading or Paving Permit until the following are corrected:

1. Each pond needs to be sized for the impervious area draining to it. Many of the ponds are undersized for the impervious area draining to them and one pond is oversized, but receives very little runoff (Area1 Pond). Can more runoff be directed into the Area1 Pond to meet the requirement?
2. Please recheck the first flush requirement calculation. For redevelopment, it should be calculated as $\text{Volume} = 0.26''/12 \times 44,302\text{SF}$.
3. Quantify the volume of first flush runoff that bypasses the first flush ponds and state on plans.
4. If the first flush runoff cannot be retained onsite, payment of fee-in-lieu will be required for the bypass amount at a rate of \$8/CF.
5. A Bernalillo County Private Facility Drainage Covenant is required for the stormwater quality ponds. The original notarized form, exhibit A (legible on 8.5x11 paper), and recording fee (\$25, payable to City of Albuquerque) must be turned into DRC (4th, Plaza del Sol) for routing. Please contact Charlotte LaBadie (clabadie@cabq.gov, 924-3996) or Madeline Carruthers (mtafoya@cabq.gov, 924-3997) regarding the routing and recording process for covenants.

CITY OF ALBUQUERQUE



If you have any questions, please contact me at 924-3695 or dpeterson@cabq.gov.

Sincerely,

A handwritten signature in dark ink, appearing to read 'D. Peterson', is written over a faint, large watermark of the word 'ALBUQUERQUE'.

Dana Peterson, P.E.
Senior Engineer, Planning Dept.
Development Review Services

PO Box 1293

Albuquerque

NM 87103

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DRAINAGE PLAN

I. INTRODUCTION AND EXECUTIVE SUMMARY

THIS PROJECT, WITHIN THE OLD TOWN AREA OF ALBUQUERQUE, REPRESENTS A MODIFICATION TO AN EXISTING SITE WITHIN AN INFILL AREA. THE EXISTING SITE IS DEVELOPED AS THE SHERATON OLD TOWN COMPLEX THAT INCLUDES THE EXISTING HOTEL BUILDING AND ASSOCIATED SITE IMPROVEMENTS. PROPOSED IMPROVEMENTS AT THE NORTHWEST CORNER OF THE SITE CONSIST OF MODIFICATIONS TO THE EXISTING PARKING LOT LAYOUT, INCLUDING THE REMOVAL / REPLACEMENT OF EXISTING PAVED PARKING AND THE INTRODUCTION OF ADDITIONAL LANDSCAPED PARKING LOT ISLANDS. THE DRAINAGE CONCEPT FOR THIS PROJECT WILL BE TO REDUCE THE RUNOFF GENERATED BY THE SITE AND TO CAPTURE AND TREAT ONSITE THE FIRST FLUSH OF RUNOFF FROM THE PAVED PARKING LOT. THIS WILL BE ACCOMPLISHED VIA ONSITE WATER HARVESTING IN THE NEW LANDSCAPED IMPROVEMENTS.

THIS SUBMITTAL IS MADE IN SUPPORT OF GRADING AND PAVING PERMIT APPROVAL WITHIN THE JURISDICTION OF THE CITY OF ALBUQUERQUE, AND TO ALSO SUPPORT A RELATED SITE DEVELOPMENT PLAN ADMINISTRATIVE AMENDMENT.

II. PROJECT DESCRIPTION

AS SHOWN ON THE VICINITY MAP, THE SITE IS LOCATED AT THE SOUTHEAST CORNER OF THE INTERSECTION OF RIO GRANDE BLVD NW AND BELLAMAH AVE NW. THE SITE IS DEVELOPED AS A HOTEL BUILDING WITH CONVENTION SPACE, ASSOCIATED PAVED PARKING AND LANDSCAPING. THE NORTHWEST CORNER OF THE SITE IS CURRENTLY DEVELOPED AS AN EXISTING PARKING LOT. THE CURRENT LEGAL DESCRIPTION IS TRACTS A, B AND D, SHERATON OLD TOWN INN COMPLEX. AS SHOWN BY PANEL 331 OF 825 OF THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAPS PUBLISHED BY FEMA FOR BERNALILLO COUNTY, NEW MEXICO, REVISED AUGUST 16, 2012, THE NORTHWEST CORNER OF THE SITE DOES NOT LIE WITHIN A DESIGNATED FLOOD HAZARD ZONE. THIS SITE IS CURRENTLY ALLOWED FREE DISCHARGE FROM THE PARKING LOT VIA SURFACE RUNOFF TO EXISTING PERIMETER LANDSCAPE BUFFERS BEFORE DRAINING TO THE PUBLIC RIGHT OF WAYS OF RIO GRANDE BLVD AND BELLAMAH AVE NW.

III. BACKGROUND DOCUMENTS

THE PREPARATION OF THIS PLAN RELIED UPON THE FOLLOWING DOCUMENTS:

- DRAINAGE MASTER PLAN FOR SHERATON OLD TOWN PREPARED BY HIGH MESA CONSULTING GROUP, NMPW 8547, DATED 06–23–2014. THE 2014 DMP ESTABLISHED THE DRAINAGE BASINS FOR THE DEVELOPED SITE, AS WELL AS DRAINAGE AND STORMWATER CONTROL GUIDELINES AND CRITERIA FOR EACH BASIN OF THE SITE. THIS PROJECT LIES WITHIN BASIN E AS ESTABLISHED IN THE 2014 DMP.
- PARTIAL TOPOGRAPHIC SURVEY UPDATE OF TRACTS A, B AND D, SHERATON OLD TOWN INN COMPLEX PREPARED BY HIGH MESA CONSULTING GROUP, NMPS 11184, DATED 02–05–2018. THE SUBJECT SURVEY PROVIDES THE BASIS FOR THE EXISTING CONDITIONS OF THE PROJECT SITE AS DEPICTED BY THIS SUBMITTAL.

IV. EXISTING CONDITIONS

THE PROJECT SITE IS LOCATED AT THE NORTHWEST CORNER OF THE OVERALL SITE AND IS WHOLLY CONTAINED WITHIN BASIN E AS DEFINED BY THE 2014 DRAINAGE MASTER PLAN. THE PROJECT SITE CONSISTS OF EXISTING PAVED PARKING AND LIMITED LANDSCAPING IMPROVEMENTS. THE BASIN CURRENT DRAINS FROM SOUTHEAST TO NORTHWEST, SURFACE DRAINING ACROSS THE PARKING LOT TO AN EXISTING LANDSCAPE BUFFER AT THE NORTH AND WEST PERIMETER OF THE SITE. OVERFLOW FROM THE LANDSCAPE BUFFER SURFACE DISCHARGES INTO THE RIO GRANDE BLVD AND BELLAMAH AVE NW RIGHT–OF–WAYS AT AN ALLOWABLE (EXISTING) DISCHARGE RATE OF 4.3 CFS/AC.

THERE ARE NO OFFSITE FLOWS IMPACTING THE PROJECT SITE. BASIN F TO THE EAST AND BASIN D TO THE SOUTH EXHIBIT PARALLEL TOPOGRAPHY TO THE EXISTING BASIN E AND DISCHARGE TO THE PUBLIC RIGHT OF–WAY DIRECTLY.

V. DEVELOPED CONDITIONS

THE PROPOSED PROJECT AREA IS WHOLLY CONTAINED WITHIN DRAINAGE BASIN E AS DEFINED BY THE 2014 DRAINAGE MASTER PLAN. THE PROPOSED IMPROVEMENTS CONSIST OF REMOVAL AND REPLACEMENT OF EXISTING ASPHALT PAVED PARKING LOT WITH NEW PAVED PARKING AND DEPRESSED LANDSCAPED ISLANDS. THE PROPOSED PAVED IMPROVEMENTS WILL DRAIN FROM SOUTHEAST TO NORTHWEST, MAINTAINING THE DRAINAGE PATTERN OF THE EXISTING PARKING LOT. RUNOFF WILL DRAIN TO THE NEW DEPRESSED LANDSCAPED AREAS TO THE MAXIMUM EXTENT PRACTICABLE IN ORDER TO CAPTURE AND MITIGATE THE FIRST FLUSH OF RUNOFF GENERATED BY THE PROPOSED IMPERVIOUS PAVEMENT. THE EXISTING LANDSCAPED BUFFERS AT THE PERIMETER OF THE NORTH AND WEST EDGES OF THE SITE WILL BE MAINTAINED TO MITIGATE RUNOFF FROM THE NEW PARKING.

THERE WILL BE A DECREASE IN RUNOFF GENERATED BY THE SITE DUE TO REPLACING IMPERVIOUS PAVED AREA WITH NEW DEPRESSED LANDSCAPED WATER HARVESTING ISLANDS.

AS PER THE EXISTING CONDITION, THERE ARE NO OFFSITE FLOWS THAT IMPACT THE PROJECT SITE.

VI. GRADING PLAN

THE GRADING PLAN SHOWS 1.) EXISTING AND PROPOSED GRADES INDICATED BY SPOT ELEVATIONS AND CONTOURS AT 1’–0” INTERVALS, 2.) THE LIMIT AND CHARACTER OF THE EXISTING AND PROPOSED IMPROVEMENTS, AND 3.) CONTINUITY BETWEEN EXISTING AND PROPOSED GRADES. AS SHOWN BY THIS PLAN, THE PROPOSED IMPROVEMENTS WILL MAINTAIN THE CURRENT DRAINAGE PATTERN OF THE SITE, DISCHARGING DEVELOPED RUNOFF TO NEW LANDSCAPED ISLAND WATER HARVESTING AREAS AND PERIMETER LANDSCAPED BUFFERS TO MITIGATE RUNOFF BEFORE RELEASING TO THE ADJACENT PUBLIC RIGHT–OF–WAYS.

VII. FIRST FLUSH

THE FIRST FLUSH GENERATED BY THE PROPOSED IMPROVEMENTS (V_{ff} = 1000 CF) WILL BE CAPTURED AND MITIGATED IN THE NEW DEPRESSED LANDSCAPED ISLANDS PROPOSED IN THIS PROJECT (V_{ret} TOTAL = 1570 CF), THEREBY MEETING THE CITY FIRST FLUSH ORDINANCE REQUIREMENTS. ADDITIONALLY, THE EXISTING LANDSCAPED BUFFERS AT THE NORTHERN AND WESTERN PERIMETER OF THE SITE WILL CONTINUE TO MITIGATE AND TREAT RUNOFF FROM THE PARKING LOT AS A WATER QUALITY BENEFIT.

VIII. EROSION CONTROL PLAN

PER COORDINATION WITH THE CITY OF ALBUQUERQUE STORMWATER QUALITY ENGINEER, THE REMOVAL AND REPLACEMENT OF EXISTING ASPHALT PAVEMENT QUALIFIES AS ‘PARKING LOT MAINTENANCE’ AND THEREFORE THIS PROJECT DOES NOT MEET THE CRITERIA REQUIRING A SEPARATE SEDIMENT EROSION CONTROL PLAN OR STORM WATER POLLUTION PREVENTION PLAN.

IX. CALCULATIONS

THE CALCULATIONS CONTAINED HEREON ANALYZE THE EXISTING AND DEVELOPED CONDITIONS FOR THE 100–YEAR, 6–HOUR RAINFALL EVENT FOR THE PROJECT SITE. THE PROCEDURE FOR 40 ACRE AND SMALLER BASINS, AS SET FORTH IN THE REVISION OF SECTION 22.2, HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL, VOLUME 2; DESIGN CRITERIA, DATED JANUARY 1993, HAS BEEN USED TO QUANTIFY THE PEAK RATE OF DISCHARGE AND VOLUME OF RUNOFF GENERATED. AS DEMONSTRATED BY THESE CALCULATIONS, THERE WILL BE A REDUCTION IN RUNOFF GENERATED DUE TO REPLACING IMPERVIOUS AREA WITH LANDSCAPED PERVIOUS AREA. EXISTING DEPRESSED LANDSCAPED AREA WATER HARVESTING CALCULATIONS WERE ALSO PERFORMED USING THE END–AREA METHOD; THESE CALCULATIONS DEMONSTRATE THAT THE EXISTING LANDSCAPED ISLANDS WILL HAVE SUFFICIENT CAPACITY (1,570 CF) TO CAPTURE AND MITIGATE THE FIRST FLUSH GENERATED (1000 CF).

X. CONCLUSIONS

THE FOLLOWING CONCLUSIONS HAVE BEEN ESTABLISHED AS A RESULT OF THE EVALUATIONS CONTAINED HEREIN:

- THE PROPOSED IMPROVEMENTS WILL MAINTAIN THE EXISTING DRAINAGE PATTERN FOR THE PROJECT SITE.
- THE PROPOSED IMPROVEMENTS WILL RESULT IN A REDUCTION IN THE DEVELOPED RUNOFF GENERATED BY THE SITE.
- PER THE 2014 DRAINAGE MASTER PLAN FOR THE SITE, BASIN E (IN WHICH THIS PROJECT IS WHOLLY CONTAINED) IS ALLOWED 4.3 CFS/AC DISCHARGE TO THE PUBLIC RIGHT–OF–WAYS; THE PROPOSED DEVELOPED AREA WILL GENERATE 4.25 CFS/AC, MEETING THE ALLOWABLE RATE.
- FIRST FLUSH ORDINANCE REQUIREMENTS WILL BE MET BY DISCHARGING RUNOFF INTO DEPRESSED LANDSCAPED ISLANDS TO THE MAXIMUM EXTENT PRACTICABLE (V_{ret} TOTAL = 1570 CF > V_{ff} = 1000 CF)
- THE PROPOSED IMPROVEMENTS WILL NOT ADVERSELY IMPACT DOWNSTREAM PROPERTIES OR DOWNSTREAM DRAINAGE CONDITIONS.
- PER COORDINATION WITH THE COA STORM WATER QUALITY ENGINEER, THIS PROJECT DOES NOT MEET THE CRITERIA NECESSARY TO BE SUBJECT TO AN EPA NPDES PERMIT AND WILL NOT REQUIRE A SEPARATE EROSION AND SEDIMENT CONTROL PLAN.

CALCULATIONS

I. SITE CHARACTERISTICS

- A. PRECIPITATION ZONE = **2**
- B. P_{100, 6 HR} = P₃₀₀ = **2.35 IN**
- C. TOTAL PROJECT AREA (A_T) = **49,470 SF**
1.2 AC

D. LAND TREATMENTS

EXISTING LAND TREATMENT		
LAND TREATMENT	AREA (SF/AC)	%
A		
B	890 SF	2
C	0.02 AC	
D	48,580 SF	93
	1.12 AC	

DEVELOPED LAND TREATMENT		
LAND TREATMENT	AREA (SF/AC)	%
A		
B	5,168 SF	10
C	6.12 AC	
D	44,302 SF	85
	1.02 AC	

II. HYDROLOGY

A. EXISTING CONDITION

1. **100-YR, 6-HR STORM**
- a. VOLUME
- E_w = (E_AA_A + E_BA_B + E_CA_C + E_DA_D) / A_T
- E_w = (0.53*0.00) + (0.78*0.02) + (1.13*0.00) + (2.12*1.12) / 20 = **2.10 IN**
- V_{100, 6 HR} = (E_w / 12) A_T = (2.10 / 12) / 20 = 0.2100 = **AC-FT = 9,150 CF**
- b. PEAK DISCHARGE
- Q_p = Q_{RA}A_A + Q_{RA}A_B + Q_{RA}A_C + Q_{RA}A_D
- = (1.56 * 0.00) + (2.28 * 0.02) + (3.14 * 0.00) + (4.70 * 1.12) = **Q_p = 5.3 CFS**

B. DEVELOPED CONDITION

1. **100-YR, 6-HR STORM**
- a. VOLUME
- E_w = (E_AA_A + E_BA_B + E_CA_C + E_DA_D) / A_T
- E_w = (0.53*0.00) + (0.78*0.12) + (1.13*0.00) + (2.12*1.02) / 20 = **1.98 IN**
- V_{100, 6 HR} = (E_w / 12) A_T = (1.98 / 12) / 20 = 0.1980 = **AC-FT = 8,620 CF**
- b. PEAK DISCHARGE
- Q_p = Q_{RA}A_A + Q_{RA}A_B + Q_{RA}A_C + Q_{RA}A_D
- = (1.56 * 0.00) + (2.28 * 0.12) + (3.14 * 0.00) + (4.70 * 1.02) = **Q_p = 5.1 CFS**
- Q_{DEV} = 5.1 CFS / 1.2 AC = **Q_{DEV} = 4.25 CFS/AC**
- Q_{DEV} = 4.25 CFS/AC < Q_{ALLOW} = 4.3 CFS/AC; OK

C. COMPARISON

1. **100-YR, 6-HR STORM**
- a. VOLUME
- ΔV_{100, 6 HR} = 8620 - 9150 = **-530 CF** (DECREASE)
- b. PEAK DISCHARGE
- ΔQ₁₀₀ = 5.1 - 5.3 = **-0.2 CFS** (DECREASE)

D. FIRST FLUSH REQUIREMENT CALCULATION

- a. VOLUME
- V_{FF} GENERATED = (E_{FF} / 12) A_T = (0.26 / 12) / 1.02 = **0.0221 AC-FT = 1000 CF**

E. DEVELOPED FIRST FLUSH RETENTION PONDING VOLUME

1. NW CORNER LANDSCAPE AREA (AREA 1)				
EXISTING RETENTION POND VOLUME BY ELEVATION				
ELEVATION (FT)	AREA (SF)	VOLUME (CF)	Σ VOLUME (CF)	
60.7	30			
61.0	880	137	137	
61.7	1,730	913	1,050	

2. NORTH LANDSCAPE ISLAND - WEST (AREA 2)				
EXISTING RETENTION POND VOLUME BY ELEVATION				
ELEVATION (FT)	AREA (SF)	VOLUME (CF)	Σ VOLUME (CF)	
61.7	100			
62.1	450	110	110	

3. NORTH LANDSCAPE ISLAND - EAST (AREA 3)				
EXISTING RETENTION POND VOLUME BY ELEVATION				
ELEVATION (FT)	AREA (SF)	VOLUME (CF)	Σ VOLUME (CF)	
62.2	50			
62.6	395	90	90	

4. WEST LANDSCAPED EDGE (AREA 4)				
EXISTING RETENTION POND VOLUME BY ELEVATION				
ELEVATION (FT)	AREA (SF)	VOLUME (CF)	Σ VOLUME (CF)	
60.3	135			
60.7	405	110	110	

*EXIST. DEPRESSED LANDSCAPING - NORTH EDGE = 60 CF

**NEW LANDSCAPED ISLAND = 40 CF

5. EXISTING DEPRESSED LANDSCAPING - (AREA 5)				
EXISTING RETENTION POND VOLUME BY ELEVATION				
ELEVATION (FT)	AREA (SF)	VOLUME (CF)	Σ VOLUME (CF)	
61.1	145			
61.5	385	110	110	

F. CONTRIBUTING IMPERVIOUS AREA TO FIRST FLUSH RETENTION ‘PONDS’

AREA #1	AREA #2	AREA #3
AMPERV. 1 = 0.17 AC	AMPERV. 2 = 0.14 AC	AMPERV. 3 = 0.13 AC
VMPERV. FF = 160 CF	VMPERV. FF = 130 CF	VMPERV. FF = 125 CF
V100-YR. AREA 1 = 1,070 CF	V100-YR. AREA 2 = 1,150 CF	V100-YR. AREA 3 = 1000 CF
VFF RETAINED AREA 1 = 1,050 CF	VFF RETAINED AREA 2 = 110 CF	VFF RETAINED AREA 3 = 90 CF

AREA #4	AREA #5
AMPERV. 4 = 0.32 AC	AMPERV. 5 = 0.32 AC
VMPERV. FF = 305 CF	VMPERV. FF = 280 CF
V100-YR. AREA 4 = 2,460 CF	V100-YR. AREA 5 = 2,310 CF
VFF RETAINED AREA 4 = 210 CF	VFF RETAINED AREA 5 = 110 CF

RETAINED FIRST FLUSH FROM IMPERVIOUS AREAS

V_{FF} RETAINED PROJECT = V_{FF}RET AREA 1 + V_{FF}RET AREA 2 + V_{FF}RET AREA 3 + V_{FF}RET AREA 4 + V_{FF}RET AREA 5

V_{FF} RETAINED PROJECT = 1,050 + 110 + 90 + 210 + 110 = **1,570 CF** > V_{FF} GENERATED = **1000 CF**; OK

LEGEND

AC	AIR CONDITIONER
AL	AREA LIGHT
ASPH	ASPHALT PAVEMENT
BLDG	BUILDING
BOH	BUILDING OVERHANG
C&G	CURB & GUTTER
C	COMMUNICATIONS LINE
C/PM	COMMUNICATIONS LINE BY PAINT MARK
CCAB	COMMUNICATIONS CABINET
CC	COMMUNICATIONS CONDUIT
CDP	CONCRETE DRIVE PAD
CF	CRUSHER FINES
CHC	CONCRETE HEADER CURB
CLD	CENTERLINE DOOR
CLDD	CENTERLINE DOUBLE DOOR
CMU	CONCRETE MASONRY UNIT WALL
CO	SANITARY SEWER CLEANOUT
COP	CURB OPENING
CSW	CONCRETE SIDEWALK
DCO	DOUBLE SANITARY SEWER CLEANOUT
E/PM	ELECTRIC LINE BY PAINT MARK
EA	EDGE OF ASPHALT
EBB	ELECTRIC BREAKER BOX
EC	ELECTRIC CONDUIT
EPB	ELECTRIC PULLBOX
FH	FIRE HYDRANT
FL	FLOWLINE
FLC	FIRE LINE CONNECTION
G/PM	GAS LINE BY PAINT MARK
G	GAS LINE
GLM	GAS LINE MARKER
GR	GAS PRESSURE REGULATOR
GRV	GRAVEL
GS	GAS SERVICE
CVB	GAS VALVE BOX
HCS	HANDICAPPED PARKING SIGN
ICB	IRRIGATION CONTROL BOX
INV	INVERT
IVB	IRRIGATION VALVE BOX
LV	LAUNDRY VENT
LMH	MANHOLE
MLP	METAL LIGHT POLE
MR	METAL RAMP
OH(1)	OVERHEAD COMMUNICATIONS (# OF LINES)
OH(3)	OVERHEAD ELECTRIC (# OF LINES)
PB	WHEEL STOP
PI	PAINTED PARKING LOT ISLAND
PRV	PRESSURE RELIEF VALVE
PS	PAINTED PARKING STRIPE
RR	RIVER ROCKS
RRT	LANDSCAPING RAILROAD TIES
SAS	SANITARY SEWER
SD	STORM DRAIN
SDI	STORM DRAIN INLET
SDMH	STORM DRAIN MANHOLE
SGP	STEEL GUARD POST
SG	ELECTRIC SIGNAL GEAR
SWC	SIDEWALK CULVERT
SPD	SPEED BUMP
STW	STUCCO WALL
SW	SIDEWALK
TA	TOP OF ASPHALT
TC	TOP OF CURB
TCO	TOP OF CONCRETE
TG	TOP OF GRATE
TPB	TRAFFIC PULLBOX
TRN	ELECTRIC TRANSFORMER
TSG	TRAFFIC SIGNAL
TSPB	TRAFFIC SIGNAL PULLBOX
TY	TYPICAL
TV/PM	CABLE TELEVISION LINE BY PAINT MARK
TV	CABLE TELEVISION CABINET
TYCAB	CABLE TELEVISION CABINET
TYR	CABLE TELEVISION RISER
UNK	UNKNOWN
W	WITH
W/PM	WATER LINE BY PAINT MARK
WCR	CONCRETE WHEELCHAIR RAMP
WDF	WOOD FENCE
WF	WATER FAUCET
WHB	WATER HOT BOX
WLP	WOOD LIGHT POLE
WMB	WATER METER BOX
WP	WOOD POLE
WPP	WOOD POWER POLE
WVB	WATER VALVE BOX
0.5%	TREE TRUNK DIAMETER

	DECIDUOUS TREE
	SMALL DECIDUOUS TREE
	CONIFEROUS TREE
	SMALL CONIFEROUS TREE
	SHRUB
	SMALL SHRUB
	BOULDER
	PAINTED UTILITY MARKER
	STUMP
	YUCCA
	IRRIGATION VALVE BOX

CONSTRUCTION NOTES:

- ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED UNDER CONTRACT SHALL, EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HEREON, BE CONSTRUCTED IN ACCORDANCE WITH THE NEW MEXICO STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION – 1987, PUBLISHED BY THE NEW MEXICO CHAPTER AMERICAN PUBLIC WORKS ASSOCIATION. (REVISED 12/06).
- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM, 811, FOR DESIGNATION (LINE–SPOTTING) OF EXISTING UTILITIES.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INTERPRETATIONS IT MAKES WITHOUT FIRST CONTACTING THE ENGINEER AS REQUIRED ABOVE.
- 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.
- ALL CONSTRUCTION WITHIN PUBLIC RIGHT–OF–WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND PROCEDURES.
- UTILITY INFORMATION SHOWN HEREON IS BASED UPON ONSITE SURFACE EVIDENCE, CITY OF ALBUQUERQUE AND ABOVE DISTRIBUTION MAPS, AND UTILITY LINE–SPOTS PROVIDED BY ONPOINT UTILITY LOCATING SERVICES, SITE UTILITY REPORT DATED 09–19–2013. IN ADDITION, UTILITY LINE–SPOTS WERE REQUESTED VIA THE NEW MEXICO ONE CALL SERVICE (TICKET NO. 201309298). UTILITY LINES THAT APPEAR ON THESE DRAWINGS ARE SHOWN IN AN APPROXIMATE MANNER ONLY, AND SUCH LINES MAY EXIST WHERE NONE ARE SHOWN. IF ANY SUCH EXISTING LINES ARE SHOWN, THE LOCATION IS BASED UPON INFORMATION PROVIDED BY THE OWNER OF SAID UTILITY, AND THE INFORMATION MAY BE INCOMPLETE, NOT MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES. THE ENGINEER HAS CONDUCTED ONLY PRELIMINARY INVESTIGATION OF THE LOCATION, DEPTH, SIZE, OR TYPE OF EXISTING UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES. THIS INVESTIGATION IS NOT CONCLUSIVE, AND MAY NOT BE COMPLETE. THEREFORE, THE ENGINEER MAKES NO REPRESENTATION PERTAINING THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFOR. THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATION OF ANY UTILITY LINE, PIPELINE, OR UNDERGROUND UTILITY LINE IN OR NEAR THE AREA OF THE WORK IN ADVANCE OF AND DURING EXCAVATION WORK. THE 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. IN PLANNING AND CONDUCTING EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES.
- THE DESIGN OF PLANTERS AND LANDSCAPED AREAS IS NOT PART OF THIS PLAN. ALL PLANTERS AND LANDSCAPED AREAS ADJACENT TO THE BUILDING(S) SHALL BE PROVIDED WITH POSITIVE DRAINAGE TO AVOID ANY PONDING ADJACENT TO THE STRUCTURE. FOR CONSTRUCTION DETAILS, REFER TO LANDSCAPING PLAN.
- THE GRADES INDICATED ON THIS PLAN ARE FINISHED GRADES UNLESS OTHERWISE INDICATED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LEAVING SUBGRADE AT ELEVATIONS THAT SHALL ACCOMMODATE PROPOSED IMPROVEMENTS AS INDICATED ON THE PLANS INCLUDING, BUT NOT LIMITED TO, SURFACE DRAINAGE STRUCTURES, PAVING AND LANDSCAPING SURFACING.

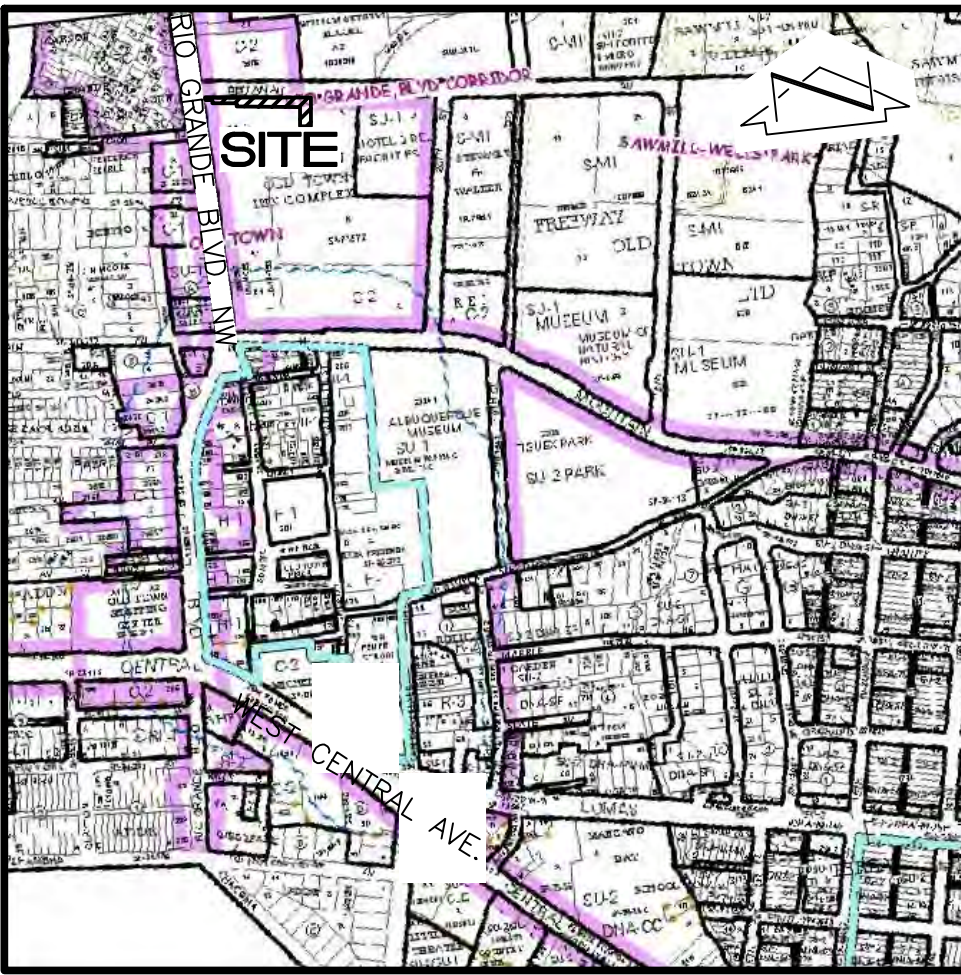
EROSION & SEDIMENT CONTROL MEASURES:

- THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES INTO PUBLIC RIGHT–OF–WAY OR ONTO PRIVATE PROPERTY.
- 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.
- SPOILS FROM THE PROJECT SHALL NOT BE DEPOSITED OR STORED IN THE STREET OR ROADWAY.
- SPOILS SHALL BE STAGED ON THE UPSTREAM SIDE OF TRENCHES WHEN TRENCHING IS REQUIRED.
- THE CONTRACTOR SHALL CLEAN AND REMOVE ALL FUGITIVE DUST, SOIL, AND DEBRIS RESULTING FROM THIS PROJECT FROM THE STREET AT THE END OF EACH DAY.
- CONTRACTOR SHALL LEAVE THE AREA IMMEDIATELY BEHIND THE CURB DEPRESSED TO CONTAIN NUISANCE FLOWS AND SEDIMENT.
- CONCRETE TRUCKS SHALL BE SENT BACK TO THE PLANT FOR WASHING; THE WASHING OF CONCRETE TRUCKS SHALL NOT BE PERMITTED WITHIN THE PUBLIC RIGHT–OF–WAY.
- WHEN APPLICABLE, CONTRACTOR SHALL SECURE ‘TOPSOIL DISTURBANCE PERMIT’ FROM THE CITY AND/OR FILE A NOTICE OF INTENT (N.O.I.) WITH THE EPA PRIOR TO BEGINNING CONSTRUCTION.
- UNLESS FINAL STABILIZATION IS OTHERWISE PROVIDED FOR, ANY AREAS OF EXCESS DISTURBANCE (TRAFFIC ACCESS, STORAGE YARD, EXCAVATED MATERIAL, ETC.) SHALL BE RE–SEEDED ACCORDING TO CITY OF ALBUQUERQUE SPECIFICATION 1012 ‘MISCELLANEOUS SEEDING’. THIS WILL BE CONSIDERED INCIDENTAL TO CONSTRUCTION, THEREFORE, NO SEPARATE PAYMENT WILL BE MADE.
- PROTECT EXISTING STORM DRAIN FACILITIES FROM SEDIMENT AS REQUIRED.

INDEX OF DRAWINGS

SHEET DESCRIPTION

C–001	COVER SHEET, DRAINAGE PLAN AND CALCULATIONS
VF–101	PARTIAL TOPOGRAPHIC SURVEY UPDATE
C–101	PAVING SITE PLAN/TRAFFIC CIRCULATION LAYOUT
C–102	GRADING PLAN
C–103	PAVING SECTIONS AND DETAILS



VICINITY MAP
SCALE: 1" = 750'

J–13



F.I.R.M.

SCALE: 1" = 500'

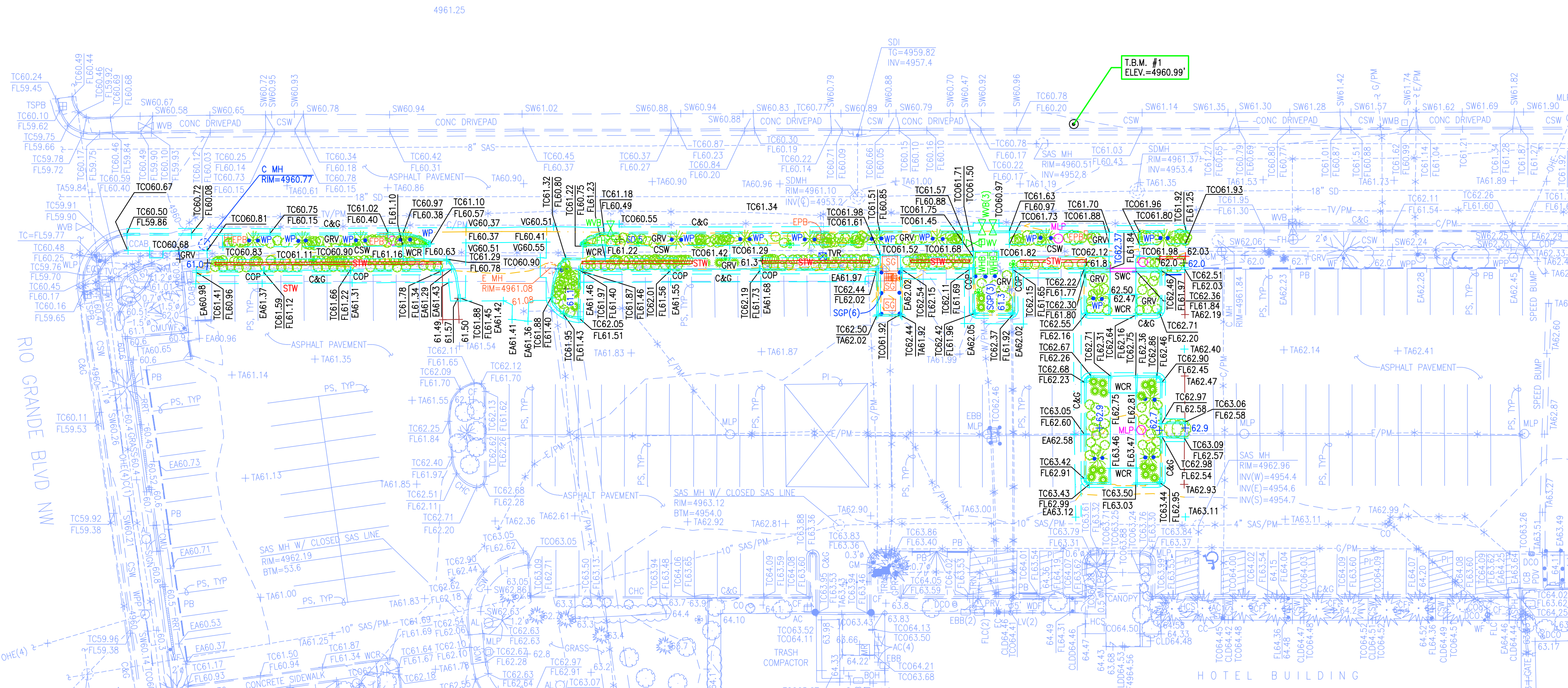
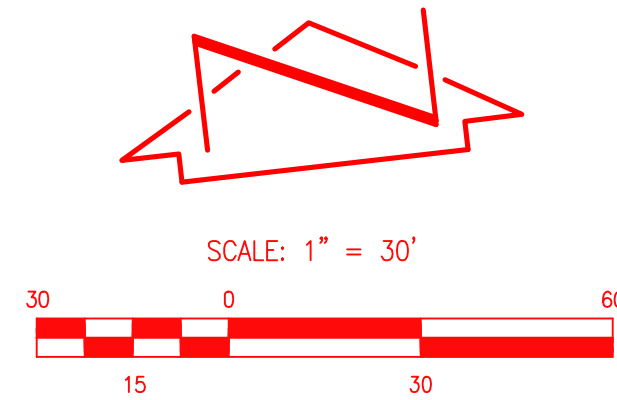
PANEL 331 of 825

DATED 08–16–2012

BENCHMARKS

PROJECT BENCHMARK

AN AGRS BRASS DISK STAMPED “5–J13A”, SET FLUSH WITH TOP OF CURB, AT THE NORTHWEST QUADRANT OF THE INTERSECTION OF MOUNTAIN ROAD N.W. AND NINETEENTH STREET N.W. ELEVATION = 4960.499 FEET (NAVD



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TEMPORARY BENCHMARK #1 (T.B.M.)

A MAG NAIL SET IN CONCRETE, IN THE NORTHEASTERN PORTION OF THE SITE, AS SHOWN ON THIS SHEET. ELEVATION = 4960.99 FEET (NAVD 1988)

TEMPORARY BENCHMARK #2 (T.B.M.)

A A NAIL WITH TIN STAMPED "LS 11808", SET IN CONCRETE SIDEWALK IN THE NORTHEAST CORNER OF THE INTERSECTION OF 19th ST NW AND BELLAMAH AVE NW, NOT SHOWN. ELEVATION = 4960.66 FEET (NAVD 1988)

NOTES

1. A PARTIAL TOPOGRAPHIC SURVEY UPDATE WAS PERFORMED IN FEBRUARY, 2018. THIS IS NOT A BOUNDARY SURVEY, BOUNDARY INFORMATION SHOWN IS FOR INFORMATION ONLY AND IS BASED UPON THE SURVEY EFFORT PRPEARED BY THIS FIRM AND SIGNED NOVEMBER 06, 2013.
2. SCREENED INFORMATION TAKEN FROM THE 2013 SURVEY EFFORT PREPARED BY THIS FIRM AND IS FOR INFORMATION PURPOSES ONLY.
3. ALL DISTANCES ARE GROUND DISTANCES.
4. SITE LOCATED WITHIN PROJECTED SECTION 18, TOWNSHIP 10 NORTH, RANGE 3 EAST, N.M.P.M.
5. THIS TOPOGRAPHIC AND UTILITY SURVEY HAS BEEN PREPARED BASED UPON NAVD 88 DATUM. PREVIOUS SURVEYS AND ABCWUA/CITY OF ALBUQUERQUE RECORD DRAWINGS OF THIS AREA HAVE BEEN CONDUCTED BASED UPON NGVD 29 DATUM. SPECIAL CARE SHOULD BE EXERCISED WHEN COMPARING ELEVATIONS FROM THIS SURVEY TO CURRENT AND PREVIOUS SURVEYS, PLANS AND AS-BUILT DOCUMENTS.
9. THE MAJORITY OF THE PROPERTY SURVEYED HEREON HAS A SHADED ZONE X DESIGNATION WHICH IS FURTHER DESCRIBED AS "AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD". ALSO, ALONG THE EASTERN PROPERTY LINE OF TRACTS B AND D, SHERATON OLD TOWN INN COMPLEX, THERE IS A ZONE AH (EL 4959) DESIGNATION WHICH IS FURTHER DESCRIBED AS "SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD; FLOOD DEPTHS OF 1 TO 3 FEET (USUALLY AREAS OF PONDING); BASE FLOOD ELEVATIONS DETERMINED" BASED UPON REVIEW OF THE NATIONAL FLOOD INSURANCE PROGRAM, FLOOD INSURANCE RATE MAPS, PANEL 331 OF 825, DATED AUGUST 16, 2012.

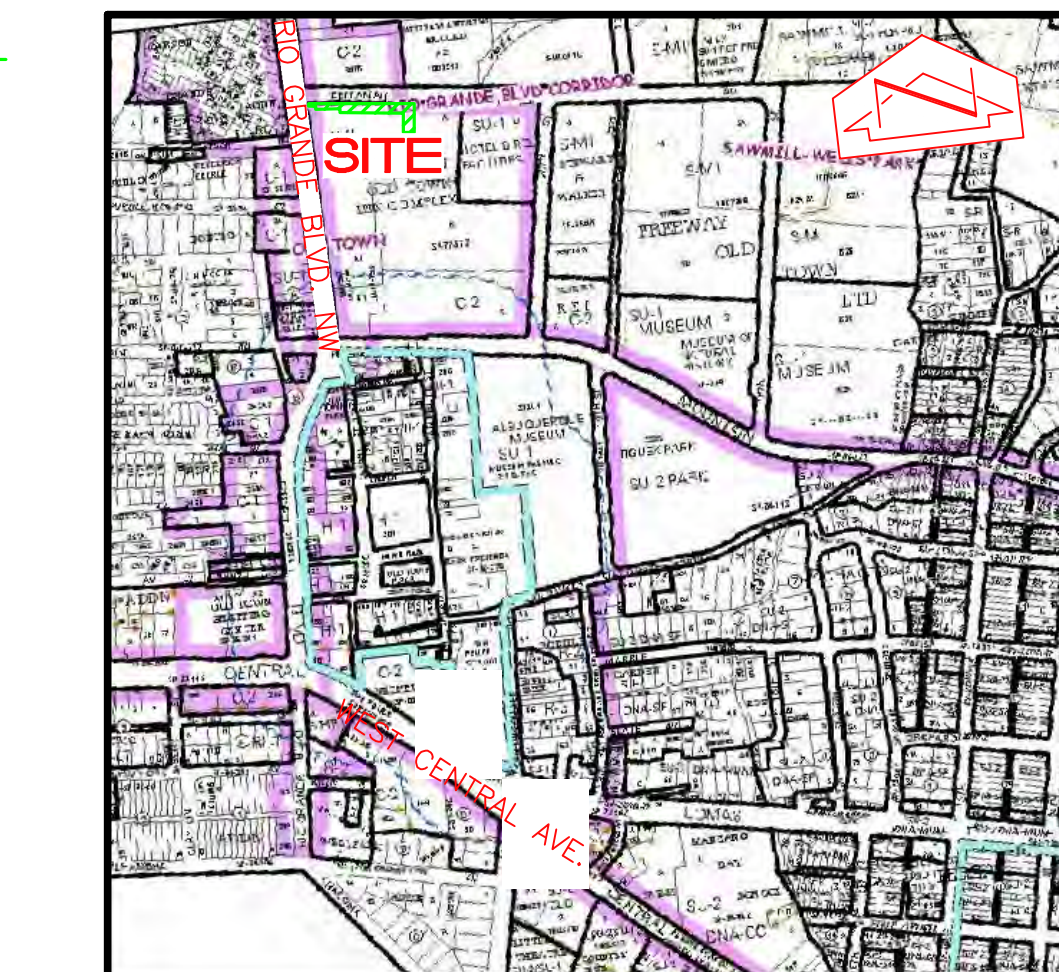
CONTROL SURVEY NOTE

A CONTROL SURVEY WAS CONDUCTED AT AN ADJACENT SITE ON SEPTEMBER 10, 2013 AND VERIFIED ON FEBRUARY 01, 2018. CONTROL WAS PROJECTED ONTO THE SUBJECT SITE UTILIZING RTK GPS OBSERVATIONS COMBINED WITH GEOID COAJUL08 TO ESTABLISH HORIZONTAL POSITIONS BASED UPON NAD 83/NAVD 88 DATUM. THE RTK OBSERVATIONS WERE USED TO ESTABLISH THE TEMPORARY BENCHMARKS AT THE PROJECT SITE. THE POINTS OBSERVED HAVE BEEN QUALITY CONTROLLED FOR RELATIVE ACCURACY. AN AGRS CONTROL STATION AND A SEPARATE HORIZONTAL CONTROL STATION IN THE VICINITY OF THE PROJECT WERE OBSERVED IN ORDER TO PROVIDE REFERENCE TIES TO THE SITE. THE CONTROL STATION USED TO PROJECT FROM GRID TO GROUND FOR THIS PROJECT IS THE PROJECT BENCHMARK "5-J13A".

LEGEND

AC	AIR CONDITIONER
AL	AREA LIGHT
ASPH	ASPHALT PAVEMENT
BLDG	BUILDING
BOH	BUILDING OVERHANG
C&G	CURB & GUTTER
C	COMMUNICATIONS LINE
C/PM	COMMUNICATIONS LINE BY PAINT MARK
CCAB	COMMUNICATIONS CABINET
CC	COMMUNICATIONS CONDUIT
CDP	CONCRETE DRIVE PAD
CF	CRUSHER FINES
CHC	CONCRETE HEADER CURB
CLD	CENTERLINE DOOR
CLDD	CENTERLINE DOUBLE DOOR
CMU	CONCRETE MASONRY UNIT WALL
CO	SANITARY SEWER CLEANOUT
COP	CURB OPENING
CSW	CONCRETE SIDEWALK
DCO	DOUBLE SANITARY SEWER CLEANOUT
E/PM	ELECTRIC LINE BY PAINT MARK
EA	EDGE OF ASPHALT
EBB	ELECTRIC BREAKER BOX
EC	ELECTRIC CONDUIT
EPB	ELECTRIC PULLBOX
FL	FIRE HYDRANT
FLC	FIRE LINE CONNECTION
C/PM	GAS LINE BY PAINT MARK
G	GAS LINE
GLM	GAS LINE MARKER
GPR	GAS PRESSURE REGULATOR
GRV	GRAVEL
GS	GAS SERVICE
GVB	GAS VALVE BOX
HCS	HANDICAPPED PARKING SIGN
ICB	IRRIGATION CONTROL BOX
INV	INVERT
IRV	IRRIGATION VALVE BOX
LV	LAUNDRY VENT
MH	MANHOLE
MLP	METAL LIGHT POLE
MR	METAL RAMP
OH(1)	OVERHEAD COMMUNICATIONS (# OF LINES)
OH(3)	OVERHEAD ELECTRIC (# OF LINES)
PI	PAINTED PARKING LOT ISLAND
PRV	PRESSURE RELIEF VALVE
PS	PAINTED PARKING STRIPE
RR	RIVER ROCKS
RTR	LANDSCAPING RAILROAD TIES
SAS	SANITARY SEWER
SD	STORM DRAIN
SDI	STORM DRAIN INLET
SDMH	STORM DRAIN MANHOLE
SGP	STEEL GUARD POST
SG	ELECTRIC SWITCH GEAR
SWC	SIDEWALK CULVERT
SPD	SPEED BUMP
STW	STUCCO WALL
SW	SIDEWALK
TA	TOP OF ASPHALT
TC	TOP OF CURB
TCO	TOP OF CONCRETE
TG	TOP OF GRATE
TPB	TRAFFIC PULLBOX
TRN	ELECTRIC TRANSFORMER
TSC	TRAFFIC SIGNAL
TSPB	TRAFFIC SIGNAL PULLBOX
TYP	TYPICAL
TV/PM	CABLE TELEVISION LINE BY PAINT MARK
TVCAB	CABLE TELEVISION CABINET
TVR	CABLE TELEVISION RISER
UNK	UNKNOWN
W/	WITH
W/PM	WATER LINE BY PAINT MARK
WDF	WOOD FENCE
WCR	CONCRETE WHEELCHAIR RAMP
WF	WOOD FAUCET
WHB	WATER HOT BOX
WLP	WOOD LIGHT POLE
WMB	WATER METER BOX
WP	WOOD POLE
WPP	WOOD POWER POLE
WVB	WATER VALVE BOX
0.5"	TREE TRUNK DIAMETER

	DECIDUOUS TREE
	SMALL DECIDUOUS TREE
	CONIFEROUS TREE
	SMALL CONIFEROUS TREE
	SHRUB
	SMALL SHRUB
	BOULDER
	PAINTED UTILITY MARKER
	STUMP
	YUCCA
	IRRIGATION VALVE BOX



VICINITY MAP
SCALE: 1" = 750'

J-13

FEDERAL EMERGENCY MANAGEMENT AGENCY



F.I.R.M.
SCALE: 1" = 500'

PANEL 331 of 825
DATED 08-16-2012

SURVEYORS CERTIFICATION

I, Charles G. Cala, Jr., New Mexico Professional Surveyor No. 11184, do hereby certify; that this Partial Topographic Survey Update and the actual survey on the ground upon which it is based were performed by me or under my direct supervision; that the survey shows all easements made known to me by this owner, utility companies, or other parties expressing an interest; that this survey meets the Minimum Standards for Surveying in New Mexico, and that it is true and correct to the best of my knowledge and belief.

Charles G. Cala, Jr., NMPS 11184



2/5/2018
Date

SURVEYED BY	NO.	DATE	BY	REVISIONS	JOB NO.
E.J.S.					2017.060.2
E.J.S.					02-2018
C.G.C.					VF-101

