GRADING & DRAINAGE PLAN

THE BUSINESS PARK ZONED PROJECT IS LOCATED IN THE DEVELOPED SUNPORT PARK SUBDIVISION (AIRPORT AREA) APPROX. 2 MILES SOUTH OF THE DOWNTOWN CORE OF ALBUQUERQUE, NM. THE GRADING & DRAINAGE SCHEME HEREON IS IN COMPLIANCE WITH THE CITY OF ALBUQUERQUE FLOOD HAZARD ORDINANCE, AND THE CITY STORM DRAINAGE ORDINANCE. THE PLAN IS REQUIRED IN ORDER TO FACILITATE THE OWNER'S REQUEST FOR EXCAVATION AND GRADING & SUBSEQUENT BUILDING PERMIT. THE PLAN SHOWS:

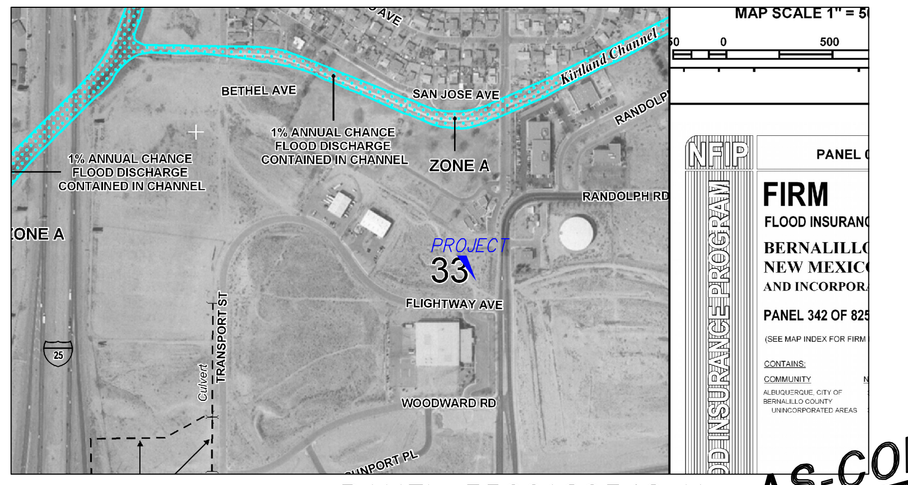
1. EXISTING CONTOURS, AND SPOT ELEVATIONS AND EXISTING DRAINAGE PATTERNS AND EXISTING IMPROVEMENTS: INCLUDING SURFACE UTILITIES/EASEMENTS.
2. PROPOSED IMPROVEMENTS: 85% IMPERVIOUS HOTEL SITE DEVELOPMENT, NEW GRADE ELEVATIONS, RETAINING WALLS, 2– DRIVE ENTRANCES, AND EROSION CONTROL.
3. CONTINUITY BETWEEN EXISTING AND PROPOSED ELEVATIONS.
4. QUANTIFICATION AND ANALYSIS OF UPSTREAM OFF–SITE FLOWS (IF APPLICABLE) PLUS THE DEVELOPED FLOWS GENERATED BY THE IMPROVEMENTS, INCLUDING PONDING REQUIREMENTS.

THE PURPOSE OF THE PLAN IS TO ESTABLISH CRITERIA FOR CONTROLLING STORM RUNOFF AND EROSION, AND ESSENTIALLY ALLOWING HISTORIC FLOWS TO CONTINUE TO DRAIN THROUGH THE PROPERTY. PRESENTLY, THE SITE IS BOUNDED ON ALL SIDES BY DEVELOPED PROPERTY. FLIGHTWAY AVENUE ON THE SOUTH IS AN IMPROVED ASPHALT MAJOR LOCAL ROADWAY MAINTAINED BY THE CITY OF ALBUQUERQUE. THE SITE CURRENTLY DRAINS AT APPROXIMATELY 7% TO TO THE WEST.

HISTORICAL SITE RUNOFF OUTFALL LOCATIONS WILL REMAIN UNCHANGED. THE SITE IS NOT IMPACTED ADVERSELY BY ANY OFF–SITE DRAINAGE FLOWS.

FREE DISCHARGE OF DEVELOPED FLOW IS ACCEPTABLE SINCE DOWNSTREAM CAPACITY EXISTS WITHIN THE OVERALL MASTERPLAN FOR THE SUNPORT PARK REGIONAL AREA. RUNOFF WILL NOT BE ALLOWED TO CONCENTRATE AT THE WEST PROPERTY BOUNDARY. THE OVERALL BASIN SHALL DRAIN TO THE SW TO THE EXPANDED SIDEWALK CULVERT(S) LOCATED AT THE SW CORNER, WITH THE ROUTING OF SITE RUNOFF THRU DEPRESSED LANDSCAPING AREAS.

Scale: 1" = 20'



FIRM MAP

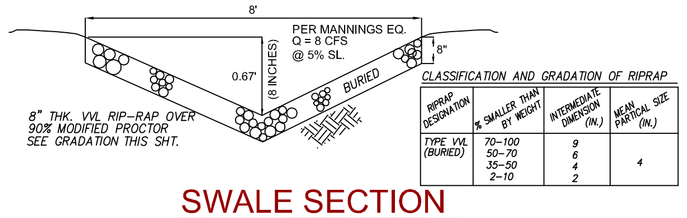
PANEL 35001C0342 H

AS-CONSTRUCTED

I, PHILIP W. CLARK, PROFESSIONAL ENGINEER, REGISTERED IN ACCORDANCE WITH THE LAWS IN THE STATE OF NEW MEXICO, DO HEREBY CERTIFY THAT THE GRADING AND DRAINAGE IMPROVEMENTS INDICATED ON THE PLAN WERE CONSTRUCTED AS SHOWN, AND COMPLIES WITH THE DESIGN INTENT OF THE APPROVED PLAN.

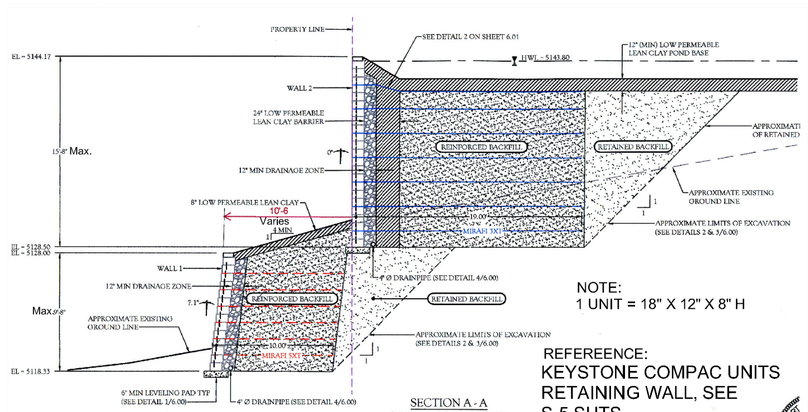
SEE GRADES, SHEET 2 10/12/23

PHILIP W. CLARK, P.E. #10265



SWALE SECTION

NO SCALE



NOTE:
1 UNIT = 18" X 12" X 8" H

REFEREENCE:
KEYSTONE COMPAC UNITS RETAINING WALL, SEE S-5 SHTS.

RPCC RETAINING WALL SECTION

NO SCALE

CALCULATIONS

DESIGN CRITERIA

NOTE: THIS SITE IS PART OF THE SUNPORT PHASE 1 MASTER DRAINAGE PLAN BY ANDREWS, ASBURY & ROBERT, INC DATED 1996 AND HAS FREE DISCHARGE INTO FLIGHTWAY AVE.
HYDROLOGIC METHODS PER CHAPTER 6, HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL (DPM) 2020 EDITION FOR CITY OF ALBUQUERQUE.
DISCHARGE RATE: Q=QPEAK x AREA.."Peak Discharge Rates For Small Watersheds"
VOLUMETRIC DISCHARGE: VOLUME = EWeighted x AREA
P100–6 Hr= 2.29 In., Zone 2, TC = 12 Min.
DESIGN STORM: 100–YEAR/6–HOUR, 10–YEAR/6–HOUR [ ] = 10 YEAR VALUES

EXISTING CONDITIONS A&B

TOTAL AREA = 1.88 ACRES, WHERE EXCESS PRECIP. (AVG.) =0.71 In. [0.23]
PEAK DISCHARGE, Q100 = 4.5 CFS [1.8], WHERE UNIT PEAK DISCHARGE 'B' = 2.4 CFS/AC. [0.95]
THEREFORE: VOLUME 100 = 4845 CF [1570]

DEVELOPED CONDITIONS – HOTEL

DETERMINE LAND TREATMENTS, PEAK DISCHARGE AND VOLUMETRIC DISCHARGE FOR STUDY AREA

	AREA	LAND TREAT'T	Q Peak	E
UNDEVELOPED	--- Ac.	A	1.71[0.41]	0.62[0.15]
LANDSCAPING / Harvesting	0.1 Ac.(6%)	B	2.36[0.95]	0.80[0.30]
GRAVEL & COMPACTED SOIL	0.2 Ac.(11%)	C	3.05[1.59]	1.03[0.48]
ROOF – PAVEMENT	1.5 Ac.(83%)	D	4.34[2.71]	2.33[1.51]
	1.80 Ac.			

THEREFORE: $E_{Weighted}$ = 2.0 In. &
Q100 = 7.3 CFS VOLUME 100 = 13068 CF±

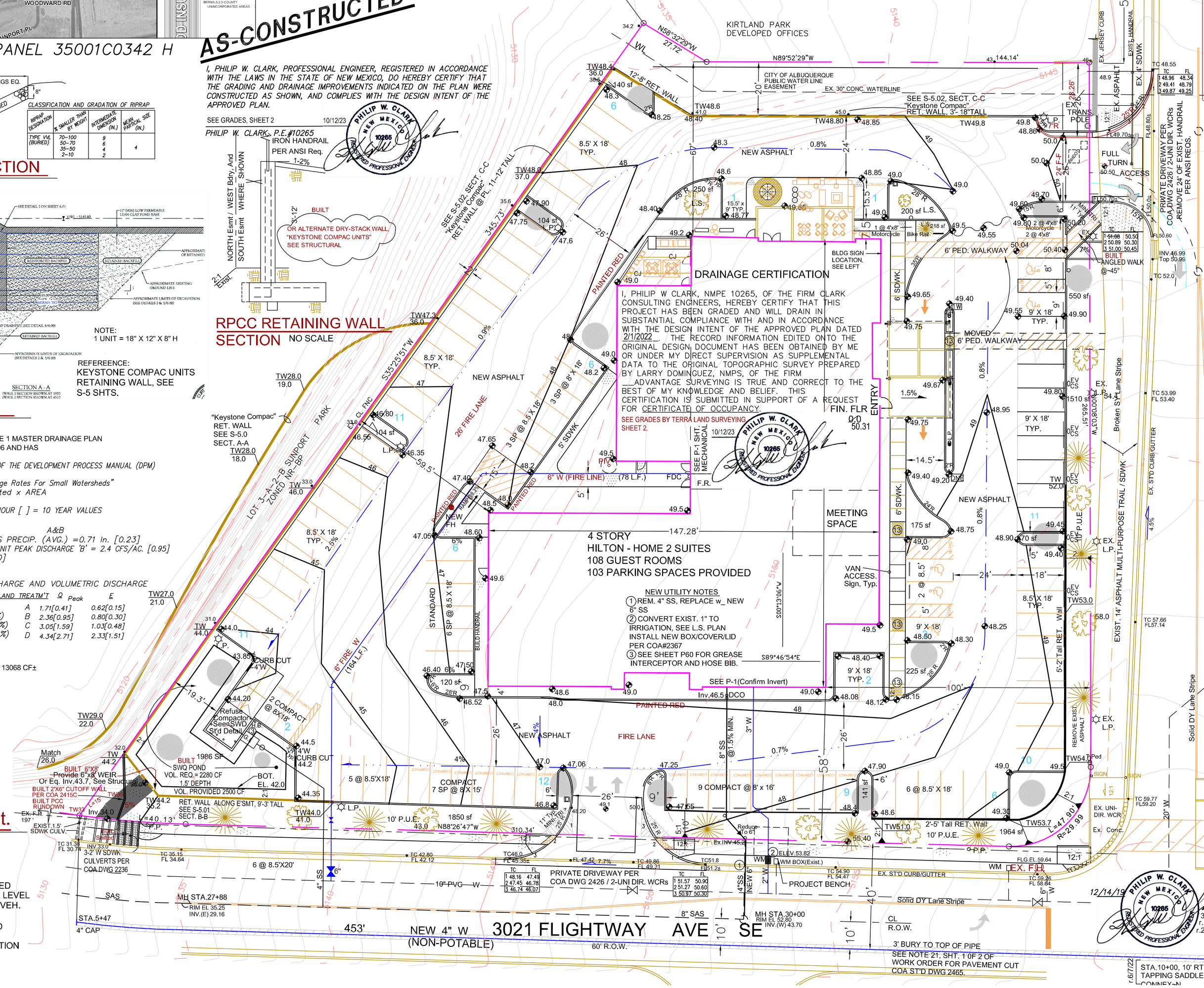
WATER QUALITY STORM EVENT
FIRST FLUSH - TOTAL SITE, 0.42"/12 X 1.5 X43560
= 2287 CF

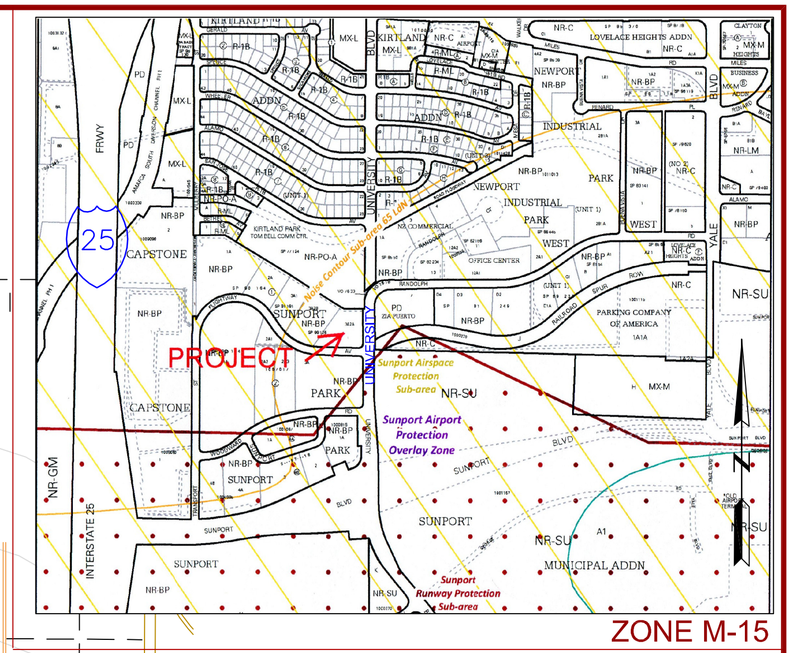
RECOMMENDATION:
1. ROUTE BASIN THRU DEPRESSED LANDSCAPE AREAS.
2. SEE NOTE 4.

WEIR CALC.
Q = CLH$^{3/2}$ WHERE: C=2.7
THEN: L = 8' H= 6" Q = 7.3 CFS
or Provide 4 SF NOTCH EQUIVALENT

PROJECT DATA Cont.

FIRE 1 - ALBUQ. FIRE RESCUE NOTES
-BUILDING HEIGHT, 58 FEET
- OCCUPANCY TYPE, 'R'
- ACCESS GRADE FOR APPARATUS <10%
- STANDPIPE SYSTEM SHALL BE INSTALLED W/IN THE BUILDING WHERE THE FLOOR LEVEL OF HIGHEST STORY IS >30' ABOVE THE VEH. ACCESS LEVEL
- PREMISE ID: ADDRESS TO BE PROVIDED PER FD ORD 505.1
- THE SPRINKLER & STANDPIPE CONNECTION SHALL BE A COMBINATION





VICINITY MAP

3021 UNIVERSITY BLVD. SE

NOTES

1. ALL WORK WITHIN THE RIGHT-OF-WAY SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECS. FOR PUBLIC WORKS CONSTRUCTION, 2020 EDITION.
2. AN EXCAVATION/CONSTRUCTION PERMIT IS REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY R.O.W. AN APPROVED COPY OF THIS PLAN MUST BE SUBMITTED AT THE TIME OF APPLICATION.
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. CONTRACTOR SHALL ENSURE THAT NO SITE SOILS/SEDIMENT OR SILT ENTER THE RIGHT-OF-WAYS DURING CONSTRUCTION, AND ALL NPDES, MS-4 PROCEDURES AND BMP (BEST MGMT PRACTICE) GUIDELINES ARE FOLLOWED. SEE REQUIRED SWPP PLAN.
5. REVEGETATE ALL AREAS DISTURBED DUE TO CONSTRUCTION PER CITY OF ALBUQ. SPEC. 1012, NATIVE SEED MIX USING HAY MULCH, FOR EAST SIDE APPLICATION, HATCHITA BLUE GRAMA DOMINANT MIX PER PARAGRAPH4.1.2.
6. MAXIMUM SITE GRADING WITHOUT EROSION PROTECTION: 2 HORIZONTAL TO 1 VERTICAL, 2:1, SLOPES < 4' TALL
7. ALL EARTHWORK PREPARATION AND SUBGRADE PREPARATION FOR BUILDING PAD AND PAVEMENT AREAS SHALL CONFORM TO THE RECOMMENDATIONS CONTAINED IN THE GEO-TECH REPORT.
PAVEMENT SECTION SHALL CONSIST OF 6" RPCC (REINFORCED PORTLAND CEMENT CONCRETE) OVER 8" SUBGRADE PREPARATION, 95% Modified Proctor. OR, 4" ASPHALT OVER 6" AGGREGATE BASE COURSE, NMDOT SPEC.
SEE / REF: 250105.E IN SPECS. FOR PAVING UPGRADE @ PORT COSHERE.

LEGEND

EXIST. SPOT ELEVATION	•24.0
EXIST. CONTOUR	5110
NEW SPOT ELEVATION	12.0 (ADD 5100 FOR MSL)
NEW CONTOUR	12
NEW SWALE	
DRAINAGE DIRECTION, EXISTING	
NEW P.C.C., CONCRETE	
FLOWLINE	FL
WATER BLOCK	
RIPRAP STONE TYP. VVL, 4" Avg. Dia.	8" BURY UNO — UNLESS NOTED OTHERWISE

PROJECT DATA

ZONED NR-BP GSF 67,500 BLDG FOOTPRINT 18,214, F.A.R.=0.22
TYPE V-A CONSTRUCTION - SPRINKLERED
FIRE FLOW REQUIRED 2375 GPM, 225' F.H. TO FARTHEST POINT

LEGAL DESCRIPTION

LOT 3-A-2-A, SUNPORT PARK
ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO

PROJECT BENCHMARK - On Flightway, SEE PLAN

TOP OF IRON WATER METER COVER (NE CORNER) MSL ELEVATION = 5153.82, AS TIED FROM ACS, I-25-30, NAVD 88, 5041.30 FEET.

TOPOGRAPHIC DESIGN SURVEY

PROVIDED BY ADVANTAGE SURVEYING, LLC, DATED APRIL 2019, AND SUPPLEMENTED SEPTEMBER, 2019 BY CCE.

AS-BUILT GRADES PROVIDED BY ANDREW MEDINA, P.S., SEPTEMBER 2023.

Clark Consulting Engineers
Edgewood, New Mexico 87015
Tele: (505) 281–2444 Cell/Txt: (505) 264–6042

DATE	REVISION
2/1/22	ADD Off-site R/W; & R/W Call-Outs Associated
10/26/21	MOV'D N. RET WALL, ADD' SPOTS Rev.PKG.+ CALCS.
3/23/20	REV. FIRE LINE. ADDED 4" NON-POTA.H20
10/10/19	SWAPPED ENTRANCE/ CANOPY & PATIO

LOT 3–A–2–A, BLOCK 1, SUNPORT PARK
ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO

ABQ AIRPORT LODGING, LLC

Grading & Drainage Plan / with SAS/H20 & Fire 1

DESIGNED BY: PWC	DRAWN BY: CCE	JOB #: PATEL_H2SH
CHECKED BY: PWC	START DATE: 9/12/19	FILE #: G/D

C 102