

CITY OF ALBUQUERQUE



April 3, 2017

Richard J. Berry, Mayor

Genny Donart, P.E.
Isaacson & Arfman, P.A.
128 Monroe Street NE
Albuquerque, NM, 87108

RE: Holiday Park Parking Lot Expansion
Grading and Drainage Plan
Engineer's Stamp Date 3-31-2017 (File: G22D008)


Dear Mr. Donart:

Based upon the information provided in your submittal received 3-31-2017, the above referenced Grading and Drainage Plan is approved for grading permit and paving permit.

Please attach a copy of this approved plan in the construction sets when submitting for a building permit. Prior to Certificate of Occupancy release, Engineer Certification per the DPM checklist will be required.

If you have any questions, you can contact me at 924-3999.

Sincerely,


Shahab Biazar, P.E.
City Engineer, Planning Dept.
Development Review Services

MA/SB

PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov



City of Albuquerque

Planning Department
Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

Project Title: Holiday Park Parking Lot Expansion Building Permit #: _____ City Drainage #: G-22/

DRB#: _____ EPC#: _____ Work Order#: 758984

Legal Description: _____

City Address: Albuquerque, NM 87111

Engineering Firm: Isaacson & Arfman, P.A. Contact: Genny Donart

Address: 128 Monroe Street NE - Albuquerque, NM 87108

Phone#: (505) 268-8828 Fax#: _____ E-mail: gennyd@iacivil.com

Owner: City of Albuquerque Contact: _____

Address: P.O. Box 1293 - Albuquerque, NM 87103

Phone#: _____ Fax#: _____ E-mail: _____

Architect: Morrow Reardon Wilkinson Miller, Ltd Contact: _____

Address: 210 La Veta Drive NE - Albuquerque, NM 87108

Phone#: (505) 268-2266 Fax#: _____ E-mail: _____

Other Contact: _____ Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

Check all that Apply:

DEPARTMENT:

- ☒ HYDROLOGY/ DRAINAGE
☐ TRAFFIC/ TRANSPORTATION
☐ MS4/ EROSION & SEDIMENT CONTROL

TYPE OF SUBMITTAL:

- ☐ ENGINEER ARCHITECT CERTIFICATION
☐ CONCEPTUAL G & D PLAN
☒ GRADING PLAN
☐ DRAINAGE MASTER PLAN
☐ DRAINAGE REPORT
☐ CLOMR/LOMR
☐ TRAFFIC CIRCULATION LAYOUT (TCL)
☐ TRAFFIC IMPACT STUDY (TIS)
☐ EROSION & SEDIMENT CONTROL PLAN (ESC)
☐ OTHER (SPECIFY) _____

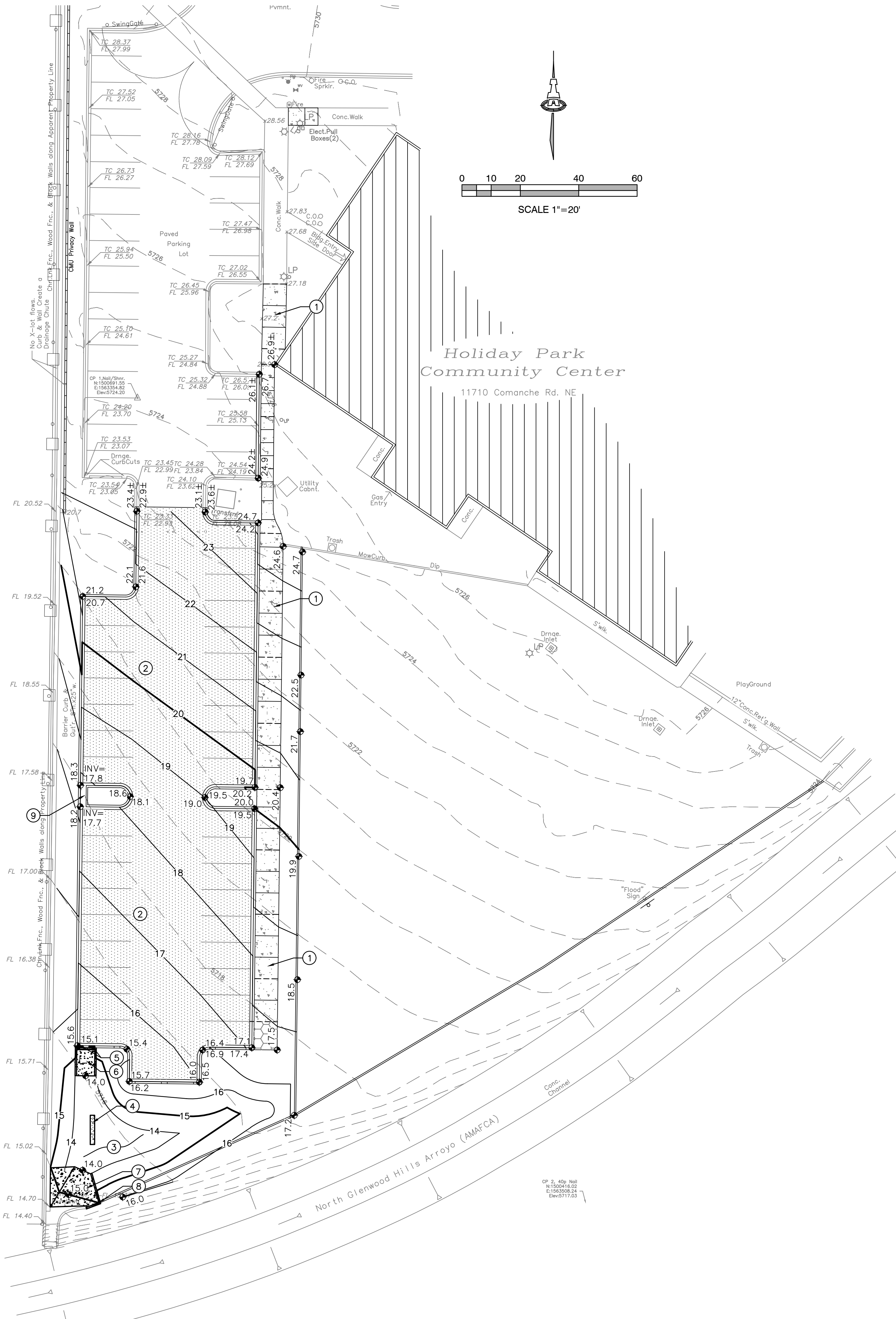
IS THIS A RESUBMITTAL?: ☐ Yes ☒ No

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

- ☐ BUILDING PERMIT APPROVAL
☐ CERTIFICATE OF OCCUPANCY
☐ PRELIMINARY PLAT APPROVAL
☐ SITE PLAN FOR SUB'D APPROVAL
☐ SITE PLAN FOR BLDG. PERMIT APPROVAL
☐ FINAL PLAT APPROVAL
☐ SIA/ RELEASE OF FINANCIAL GUARANTEE
☐ FOUNDATION PERMIT APPROVAL
☒ GRADING PERMIT APPROVAL
☐ SO-19 APPROVAL
☒ PAVING PERMIT APPROVAL
☐ GRADING/ PAD CERTIFICATION
☐ WORK ORDER APPROVAL
☐ CLOMR/LOMR
☐ PRE-DESIGN MEETING
☐ OTHER (SPECIFY) _____

DATE SUBMITTED: March 31, 2017 By: Genny Donart

COA STAFF: _____ ELECTRONIC SUBMITTAL RECEIVED: _____



LEGEND

- 5720 — EXISTING CONTOUR
- 20 — PROPOSED CONTOUR
- TC 81.9
FL 81.4 — EXISTING TOP OF CURB ELEVATION FLOWLINE
- 78.3 — PROPOSED SPOT ELEVATION
- PROPOSED CONCRETE
- PROPOSED INFILTRATION TRENCH

VICINITY MAP

KEYED NOTES

GENERAL NOTES, DETAILS, AND HYDROLOGY CALCULATIONS CAN BE FOUND ON SHEET 5.

- CONSTRUCT PEDESTRIAN WALK AT ELEVATIONS SHOWN. ALL WALKS TO BE ADA ACCESSIBLE (5% MAX. SLOPE, 2% MAX. CROSS-SLOPE) UNLESS NOTED.
- NEW ASPHALT PAVEMENT WITH CONCRETE CURB AND GUTTER AT ELEVATIONS SHOWN.
- CONSTRUCT FIRST FLUSH RETENTION POND AT ELEVATIONS SHOWN.
- INSTALL PERCOLATION TRENCH WITHIN EACH FIRST FLUSH RETENTION POND PER DETAIL ON SHEET 4.
- CONSTRUCT 2 - 2' WIDE CURB OPENING TO PASS CONCENTRATED FLOW PER DETAIL ON SHEET 4.
- CONSTRUCT 6' WIDE CONCRETE U-CHANNEL FROM CURB OPENINGS TO BOTTOM OF FIRST FLUSH POND PER DETAIL ON SHEET 4.
- CONSTRUCT 4" THICK CONCRETE PAD AT POND OUTLET.
- MONOLITHIC 6" HEADER CURB.
- CONSTRUCT 2' WIDE CONCRETE U-CHANNEL TO CONNECT DRAINAGE ACROSS THE MEDIAN PER DETAIL ON SHEET 4.

DRAINAGE INFORMATION

THE PROPOSED PROJECT IS AN EXTENSION OF THE EXISTING PARKING LOT FOR THE HOLIDAY PARK COMMUNITY CENTER.

THE NEW PARKING AREA IS EXTENDED SOUTH FROM THE EXISTING END OF THE PARKING LOT. THE PROPOSED AREA IS CURRENTLY TURF WITH AN APPROXIMATELY 3% SLOPE DRAINING TO THE SOUTHWEST. THE SITE DISCHARGES TO AN EXISTING CONCRETE RUNDOWN INTO AMAFCA'S NORTH GLENWOOD HILLS ARROYO.

THE PROPOSED PARKING AREA WILL CONTINUE TO DRAIN TO THE SOUTHWEST CORNER OF THE SITE. CURB CUTS AND A CONCRETE RUNDOWN DIRECT WATER FROM THE PARKING LOT TO A POND SUFFICIENT TO HOLD THE 370 CU. FT. FIRST FLUSH STORMWATER GENERATED. THIS POND OVERFLOWS TO THE EXISTING CONCRETE RUNDOWN.

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128 Monroe Street N.E.
Albuquerque, New Mexico 87108
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MRWM
LANDSCAPE ARCHITECTS
mrwmla.com 505 268 2266

CITY OF ALBUQUERQUE
STRATEGIC PLANNING AND DESIGN
PARKS AND RECREATION DEPARTMENT

HOLIDAY PARK PARKING LOT EXPANSION
GRADING & DRAINAGE PLAN

Design Review Committee

City Engineer Approval

Ms./Day/Yr.

Ms./Day/Yr.

City Project No.

Zone Map No.

Sheet

758984

G-22-Z

3 of 8

AS-BUILT INFORMATION

CONTRACTOR	DATE
Sta. 1'-622' a Brass Cap 2.5' behind	

BENCH MARKS

CONTRACTOR	DATE
Sta. 1'-622' a Brass Cap 2.5' behind	

SURVEY INFORMATION

NO.	BY	DATE

ARCHITECTURAL SEAL

NO.	DATE	BY

REVISIONS

NO.	DATE	BY

REMARKS

NO.	DATE	BY

DESIGNED BY: GLD
DATE: 3/30/2017

DRAWN BY: GLD
DATE: 3/30/2017

CHECKED BY: XXX
DATE: 3/30/2017

MICRO-FILM INFORMATION

CONTRACTOR	DATE
Sta. 1'-622' a Brass Cap 2.5' behind	

100% FOR CONSTRUCTION

DATE: MARCH 30, 2017

HOLIDAY PARK PARKING

PROJECT# 758984

RECORD DRAWINGS

DATE: XX/XX/2017

CIVIL GENERAL NOTES

A.
THE CONTRACTOR SHALL ABIDE BY ALL STATE,
LOCAL, AND FEDERAL LAWS, CODES, RULES AND
REGULATIONS WHICH APPLY TO THE CONSTRUCTION
OF THESE IMPROVEMENTS, INCLUDING EPA AND ADA
REQUIREMENTS.

B.
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
CURRENT EDITION OF THE CITY OF ALBUQUERQUE
STANDARD SPECIFICATIONS FOR PUBLIC WORKS (COA
SPEC.) .

C.
NO WORK SHALL BE PERFORMED WITHOUT THE
APPROPRIATE PERMITS. THE CONTRACTOR IS SOLELY
RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS
FOR THE PROJECT PRIOR TO COMMENCING
CONSTRUCTION, OR PRIOR TO OCCUPANCY, AS
APPROPRIATE. IF PERMITS ARE DELAYED OR ISSUED
WITH CONDITIONS, THE CONTRACTOR SHALL NOTIFY
THE OWNER AND ARCHITECT IMMEDIATELY.

D.
COORDINATE WORK WITH SITE PLAN, UTILITY PLAN,
DEMOLITION PLAN, AND LANDSCAPE PLAN.

E.
IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD
VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF
ALL EXISTING OBSTRUCTIONS, AND CONDITION OF ALL
EXISTING INFRASTRUCTURE PRIOR TO CONSTRUCTION.
REPORT ALL DISCREPANCIES TO THE ARCHITECT AND
VERIFY THE ARCHITECT INTENT BEFORE PROCEEDING.

F.
THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE
FOR SITE SAFETY.

G.
THE CONTRACTOR SHALL MAINTAIN RECORD
DRAWINGS ON SITE AT ALL TIMES. THE CONTRACTOR
SHALL NOT SCALE DRAWINGS. ONLY WRITTEN
DIMENSIONS OR KEYED NOTES SHALL BE USED.

H.
CONTRACTOR SHALL OBTAIN ALL REQUIRED
INSPECTIONS OF THE WORK. CONTRACTOR SHALL
REGULARLY UPDATE OWNER AND ARCHITECT
REGARDING THE STATUS OF THE INSPECTIONS.

I.
CONSTRUCTION ACTIVITY SHALL BE LIMITED TO THE
PROPERTY AND/OR PROJECT LIMITS. ANY DAMAGE
TO ADJACENT STRUCTURES RESULTING FROM THE
CONSTRUCTION PROCESS SHALL BE REPAIRED OR
REPLACED AT THE CONTRACTOR'S EXPENSE.
CONTRACTOR SHALL BE RESPONSIBLE FOR
DOCUMENTING EXISTING CONDITIONS PRIOR TO
CONSTRUCTION.

J.
CONSTRUCTION EQUIPMENT SHALL NOT OBSTRUCT
DRIVEWAYS. EQUIPMENT SHALL ONLY OBSTRUCT
DESIGNATED TRAFFIC LANES IF APPROPRIATE
BARRICAADING PERMITS HAVE BEEN OBTAINED. THE
CONTRACTOR SHALL NOT STORE ANY EQUIPMENT OR
MATERIAL IN THE RIGHT-OF-WAY.

K.
THE CONTRACTOR SHALL PROVIDE A CONSTRUCTION
TRAFFIC CONTROL AND SIGNING PLAN THAT
CONFORMS TO THE LATEST EDITION OF THE "MANUAL
OF UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD)
AND LOCAL REQUIREMENTS. THE CONTRACTOR
SHALL OBTAIN BARRICAADING PERMITS FROM THE
APPROPRIATE AUTHORITIES PRIOR TO ANY
CONSTRUCTION WORK ON OR ADJACENT TO EXISTING
STREET.

L.
THE CONTRACTOR SHALL MAINTAIN ALL BARRICAADING
AND CONSTRUCTION SIGNING AT ALL TIMES. THE
CONTRACTOR SHALL VERIFY THE PROPER LOCATION
OF ALL BARRICAADING AT THE END AND BEGINNING OF
EACH DAY.

M.
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 FIVE 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. THE CONTRACTOR SHALL BE RESPONSIBLE
FOR COORDINATION OF NECESSARY DRY UTILITY
ADJUSTMENTS.

N.
FIVE WORKING DAYS PRIOR TO ANY EXCAVATION, THE
CONTRACTOR MUST CONTACT NM811 (811) FOR
LOCATION OF EXISTING UTILITIES.

O.
ALL SITE PREPARATION, GRADING OPERATIONS,
FOUNDATION CONSTRUCTION, AND PAVEMENT
INSTALLATION WORK SHALL BE CONSTRUCTED IN
ACCORDANCE WITH THE GEOTECHNICAL REPORT,
WHICH WILL BE PROVIDED BY THE OWNER OR
ARCHITECT. ALL OTHER WORK SHALL, UNLESS
OTHERWISE NOTED IN THE PLANS, BE CONSTRUCTED
IN ACCORDANCE WITH THE PROJECT SPECIFICATION
(FIRST PRIORITY),

P.
ALL TRASH, DEBRIS, & SURFACE VEGETATION SHALL
BE CLEARED AND LEGALLY DISPOSED OFF-SITE.

Q.
VIBRATORY COMPACTION SHALL NOT BE USED OVER
IN-PLACE UTILITIES.

R.
SOIL TESTING AND INSPECTION SERVICES DURING SITE
OPERATIONS ARE REQUIRED. CONTRACTOR SHALL
ALLOW TESTING LABS TO INSPECT AND APPROVE
COMPACTED SUBGRADES, BACKFILL, AND FILL LAYERS
BEFORE FURTHER CONSTRUCTION WORK IS DONE.
SHOULD COMPACTION TESTS INDICATE INADEQUATE
DENSITY, CONTRACTOR SHALL PROVIDE ADDITIONAL
COMPACTION AND TESTING AT THE CONTRACTOR'S
SOLE EXPENSE.

S.
CONTRACTOR SHALL PROVIDE CONSTRUCTION
STAKING. CONTRACTOR SHALL LOCATE AND
PRESERVE ALL BOUNDARY CORNERS AND REPLACE
ANY LOST OR DISTURBED CORNERS AT
CONTRACTOR'S SOLE EXPENSE. PROPERTY CORNERS
SHALL ONLY BE RESET BY A REGISTERED LAND
SURVEYOR.

T.
ADJUST ANY RIMS OF EXISTING UTILITY FEATURES AS
NECESSARY TO MATCH NEW GRADES. UTILITIES IN
PAVED AREAS SHALL BE HS-25 TRAFFIC RATED.

U.
CONTRACTOR SHALL COMPLY WITH LOCAL
REGULATIONS FOR RESEEDING OF DISTURBED AREAS.

GRADING GENERAL NOTES

A.
GRADING SHALL BE PERFORMED AT THE ELEVATIONS
AND IN ACCORDANCE WITH THE DETAILS SHOWN ON
THIS PLAN.

B.
PROPOSED SPOT AND CONTOUR ELEVATIONS SHOWN
REPRESENT TOP OF FINISH MATERIAL (I.E. TOP OF
CONCRETE, TOP OF CONCRETE BUILDING PAD, 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.

C.
IF FIELD GRADE ADJUSTMENTS ARE REQUIRED, THE
CONTRACTOR SHALL NOTIFY THE ARCHITECT.

D.
THE ENVIRONMENTAL PROTECTION AGENCY (EPA) AND
THE CITY OF ALBUQUERQUE REQUIRE A STORM
WATER POLLUTION PREVENTION PLAN (SWPPP), AN
NPDES PERMIT, AND AN EROSION AND SEDIMENT
CONTROL (ESC) PERMIT FOR PROJECTS WHERE
CONSTRUCTION ACTIVITIES MEET THE EPA THRESHOLD.
(SWPPP, NPDES PERMIT, AND ESC PLAN BY OTHERS.)
A CURRENT CITY-APPROVED ESC PERMIT MUST BE
INCLUDED WITH THE CONTRACTOR'S SUBMITTAL FOR A
ROUGH GRADING, GRADING, PAAVING, BUILDING, OR
WORK ORDER PERMIT. CONTRACTOR SHALL
COORDINATE WITH OWNER TO DETERMINE WHO WILL
PREPARE SWPPP AND INSPECT REQUIRED ELEMENTS.

E.
IF THE SITE IS SMALL ENOUGH NOT TO REQUIRE A
SWPPP/NPDES PERMIT (LESS THAN ONE ACRE), THE
CONTRACTOR SHALL STILL BE RESPONSIBLE FOR
USING EROSION AND SEDIMENT CONTROL BEST
MANAGEMENT PRACTICES (BMP'S) TO ENSURE THAT
NO SOIL ERODES FROM THE SITE ONTO ADJACENT
PUBLIC RIGHT-OF-WAY.

F.
MEASURES REQUIRED FOR EROSION AND SEDIMENT
CONTROL SHALL BE INCIDENTAL TO THE PROJECT
COST.

G.
ALL NEW PAVEMENT SURFACES SHALL BE
CONSTRUCTED WITH POSITIVE SLOPE AWAY FROM
BUILDINGS AND POSITIVE SLOPE TOWARD EXISTING
AND/OR PROPOSED DRAINAGE PATHS. PAVING AND
ROADWAY GRADES SHALL BE ±0.1' FROM PLAN
ELEVATIONS.

H.
WHERE GRADES BETWEEN NEW AND EXISTING ARE
SHOWN AS 'MATCH' OR '+', TRANSITIONS SHALL BE
SMOOTH.

I.
FOR ALL ACCESSIBLE ROUTES, MAXIMUM ALLOWABLE
CROSS SLOPE IS 2.0% AND MAXIMUM LONGITUDINAL
SLOPE WITHOUT RAMP IS 5.0%. FOLLOW ALL ADA
ACCESSIBILITY GUIDELINES OR CITY CODES,
WHICHEVER IS MORE STRINGENT.

J.
SIDESLOPES STEEPER THAN 3:1 BUT LESS THAN 2:1
MUST HAVE PERMANENT EROSION PROTECTION
INSTALLED, TYPICAL. NO SLOPE SHALL BE STEEPER
THAN 2:1.

K.
POND DESIGN PARAMETERS AND STORMWATER
CONTROL MEASURES SHOWN ON THIS PLAN - (TOP OF
POND, BOTTOM OF POND, SIZE OF ORIFICE, AREA OF
POND, ETC.) TO BE STRICTLY ADHERED TO FOR
CERTIFICATION PURPOSES. SEE DETAIL SHEET FOR
ADDITIONAL INFORMATION.

L.
POST-CONSTRUCTION MAINTENANCE FOR PRIVATE
STORMWATER FACILITIES WILL BE THE RESPONSIBILITY
OF THE FACILITIES OWNER. PERIODIC INSPECTION AND
CERTIFICATIONS OF THE FACILITIES MAY BE REQUIRED
BY THE CITY ENGINEER. ENGINEER RECOMMENDS THAT
OWNER INSPECT SITE YEARLY AND AFTER EACH
RAINFALL TO IDENTIFY NEW AREAS OF EROSION AND
INSTALL ADDITIONAL EROSION PROTECTION AS NEEDED
BASED ON ACTUAL OCCURRENCES.

M.
FOR ENGINEER'S CERTIFICATION OF SUBSTANTIAL
COMPLIANCE (FOR CERTIFICATE OF OCCUPANCY)
CONTRACTOR SHALL PROVIDE AN AUTOCAD FORMAT
AS-BUILT SURVEY PREPARED BY A LICENSED
SURVEYOR WHICH INCLUDES:

- AS-BUILT SPOT ELEVATIONS AT EACH DESIGN
SPOT ELEVATION SHOWN ON THE APPROVED PLAN;
- TOP AND BOTTOM ELEVATIONS AS REQUIRED TO
DEFINE THE PERIMETER OF PONDS (TO BE USED
BY ENGINEER TO CALCULATE AS-BUILT VOLUME
PROVIDED);
- POND OVERFLOW ELEVATIONS
- ALL CONSTRUCTION, INCLUDING DRAIN INLETS,
PIPES AND PONDS SHOWN ON THIS PLAN MUST BE
CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH
THE APPROVED PLAN IN ORDER TO RECEIVE
ENGINEER'S CERTIFICATION.

P.
GRADING OF FIRST FLUSH BASINS WILL BE INSPECTED
AS PART OF ENGINEER'S CERTIFICATION FOR
CERTIFICATE OF OCCUPANCY. DURING LANDSCAPING,
FIRST FLUSH BASINS WILL BE SMOOTHLY INTEGRATED
INTO LANDSCAPING WHILE MAINTAINING REQUIRED TOP
AND BOTTOM ELEVATION, VOLUME AND INLET /
OVERFLOW ELEVATIONS.

B.
ALL DRAINAGE RELATED CONCRETE INFRASTRUCTURE
SHALL BE CONSTRUCTED IN ACCORDANCE WITH COA
SPEC. SECTION 300.

E.
ADJUST ANY RIMS OR COVERS OF EXISTING UTILITY
FEATURES AS NECESSARY TO MATCH NEW GRADES.
RIMS AND COVERS IN PAVED AREAS SHALL BE
HS-25 TRAFFIC RATED.

DETAILS

GENERAL NOTES

1. EDGES NOT SPECIFICALLY DIMENSIONED SHALL
BE SHAPED WITH A 3/8" EDMGING TOOL.

CURB OPENING

SCALE: N.T.S.

'U' SHAPED CONC. CHANNEL

SCALE: N.T.S.

INFILTRATION PIT

SCALE: N.T.S.

INFILTRATION TRENCH

LOCATE CLAY LAYER BELOW SURFACE GRADE. MAY VARY BASED ON LOCATION OF INFILTRATION PIT.

SCALE: N.T.S.

CALCULATIONS

IONS:

Holiday Park :

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

ON-SITE

AREA OF SITE:

19189.4 SF = 0.4 Ac.

Historic Flows:

Developed Flows:

Excess Precipitation Zone 4

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

Weighted E = EAΔAA + EBΔAB + ECΔAC + EDΔAD

HAistoric E = 1.14 in. Developed E = 2.24 in.

On-site Volume of Runoff: V360 = E*A / 12

Historic V360 = 1818 CF Developed V360 = 3575 CF

On-site Peak Discharge Rate: Q= QpAΔAA+QpBΔAB+QpCΔAC+QpDΔAD / 43.560

For Precipitation Zone 4

QBΔA = 2.20 QC = 3.73

QHΔB = 2.92 QHΔD = 5.25

Historic QB = 1.3 CFS Developed QB = 2.1 CFS

The overall site consists of 0.440528007346189 acre(s) located in Zone 4 which is designated as properties D. The 100-year, 6-hour historic discharge is 1.3 cfs. The proposed developed discharge is 2.1 cfs.

BASIN NO. I DESCRIPTION

Area of basin flows = 19189 SF = 0.4 Ac.

The following calculations are based on Treatment areas as shown in table to the right

Sub-basin Weighted Excess Precipitation (see formula above)

Weighted E = 2.24 in.

Sub-basin Volume of Runoff(see formula above)

V360 = 3575 CF

Sub-basin Peak Discharge Rate:(see formula above)

QC = 2.1 cfs

FIRST FLUSH VOL. 370 CF

FIRST FLUSH

Contour Area Volume

15.00 1460

14.00 570

1015 CF

3990 CF

TOTAL VOL. 5005 CF

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MRWM

LANDSCAPE ARCHITECTS

mrvml