



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 02/2013)

Project Title: Shops-Cottonwood Commons Building Permit #: _____ City Drainage #: A14/D006
DRB#: _____ EPC#: _____ Work Order#: _____
Legal Description: A Portion of Lot 1-A, Riverwalk Marketplace
City Address: _____

Engineering Firm: Isaacson & Arfman, P.A. Contact: Fred C. Arfman
Address: 128 Monroe Street NE - Albuquerque, NM 87108
Phone#: (505) 268-8828 Fax#: _____ E-mail: freda@iacivil.com

Owner: _____ Contact: _____
Address: _____
Phone#: _____ Fax#: _____ E-mail: _____

Architect: Modulus Architects, Inc. Contact: Stephen Dunbar
Address: 220 Copper Ave. NW, Suite 350 - Albuquerque, NM 87102
Phone#: (505) 338-1499 Fax#: _____ E-mail: _____

Surveyor: Surv-Tek, Inc. / (Terra Land Surveys, LLC) () : Denotes As-built provider Contact: /Russ P. Hugg (Chris Medina)
Address: 9384 Valley View Drive NW - Albuquerque, NM 87114
Phone#: (505) 897-3366 Fax#: _____ E-mail: _____

Contractor: Hart Construction Contact: Andy Hart
Address: _____
Phone#: _____ Fax#: _____ E-mail: _____

TYPE OF SUBMITTAL:

- ☐ DRAINAGE REPORT
- ☐ DRAINAGE PLAN 1st SUBMITTAL
- ☐ DRAINAGE PLAN RESUBMITTAL
- ☐ CONCEPTUAL G & D PLAN
- ☐ GRADING PLAN
- ☐ EROSION & SEDIMENT CONTROL PLAN (ESC)
- ☒ ENGINEER'S CERT (HYDROLOGY)
- ☐ CLOMR/LOMR
- ☐ TRAFFIC CIRCULATION LAYOUT (TCL)
- ☐ ENGINEER'S CERT (TCL)
- ☐ ENGINEER'S CERT (DRB SITE PLAN)
- ☐ ENGINEER'S CERT (ESC)
- ☐ SO-19
- ☐ OTHER (SPECIFY) _____

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

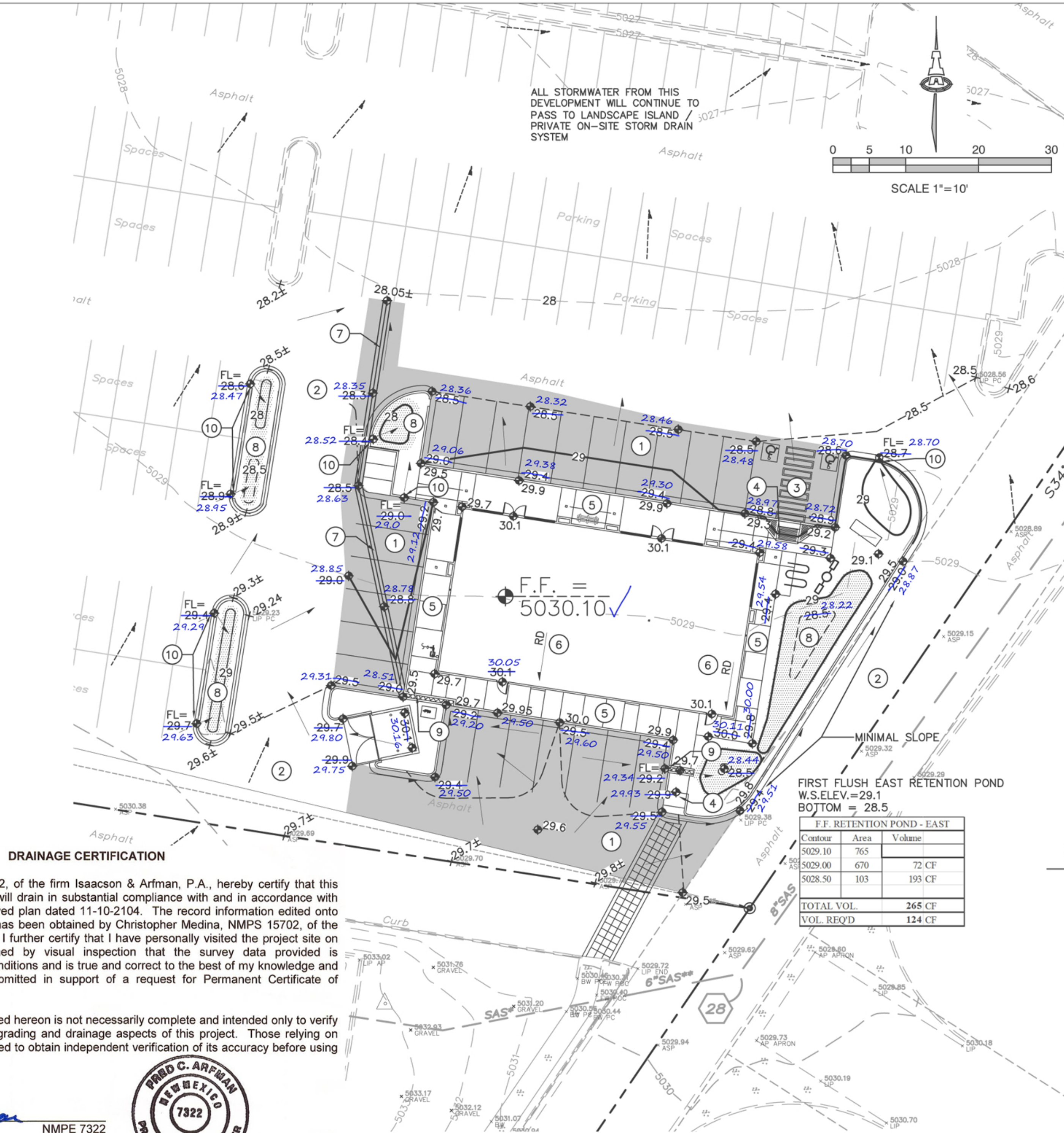
- ☐ SIA/FINANCIAL GUARANTEE RELEASE
- ☐ PRELIMINARY PLAT APPROVAL
- ☐ S. DEV. PLAN FOR SUB'D APPROVAL
- ☐ S. DEV. FOR BLDG. PERMIT APPROVAL
- ☐ SECTOR PLAN APPROVAL
- ☐ FINAL PLAT APPROVAL
- ☒ CERTIFICATE OF OCCUPANCY (PERM)
- ☐ CERTIFICATE OF OCCUPANCY (TCL TEMP)
- ☐ FOUNDATION PERMIT APPROVAL
- ☐ BUILDING PERMIT APPROVAL
- ☐ GRADING PERMIT APPROVAL
- ☐ PAVING PERMIT APPROVAL
- ☐ WORK ORDER APPROVAL
- ☒ GRADING CERTIFICATION
- ☐ SO-19 APPROVAL
- ☐ ESC PERMIT APPROVAL
- ☐ ESC CERT. ACCEPTANCE
- ☐ OTHER (SPECIFY) _____

WAS A PRE-DESIGN CONFERENCE ATTENDED: _____ Yes _____ No _____ Copy Provided

DATE SUBMITTED: February 11, 2015 By: Fred C. Arfman
Isaacson & Arfman, P.A.

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location, and scope to the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

1. **Conceptual Grading and Drainage Plan:** Required for approval of Site Development Plans greater than five (5) acres and Sector Plans
2. **Drainage Plans:** Required for building permits, grading permits, paving permits and site plans less than five (5) acres
3. **Drainage Report:** Required for subdivision containing more than ten (10) lots or constituting five (5) acres or more
4. **Erosion and Sediment Control Plan:** Required for any new development and redevelopment site with 1-acre or more of land disturbing area, including project less than 1-acre than are part of a larger common plan of development



DRAINAGE CERTIFICATION

I, Fred C. Arfman, NMPE 7322, of the firm Isaacson & Arfman, P.A., hereby certify that this project has been graded and will drain in substantial compliance with and in accordance with the design intent of the approved plan dated 11-10-2104. The record information edited onto the original design document has been obtained by Christopher Medina, NMPS 15702, of the firm Terra Land Surveys, LLC. I further certify that I have personally visited the project site on 02-07-15 and have determined by visual inspection that the survey data provided is representative of actual site conditions and is true and correct to the best of my knowledge and belief. This certification is submitted in support of a request for Permanent Certificate of Occupancy.

The record information presented hereon is not necessarily complete and intended only to verify substantial compliance of the grading and drainage aspects of this project. Those relying on this record document are advised to obtain independent verification of its accuracy before using it for any other purpose.

Fred C. Arfman
Fred C. Arfman
02-11-15
Date

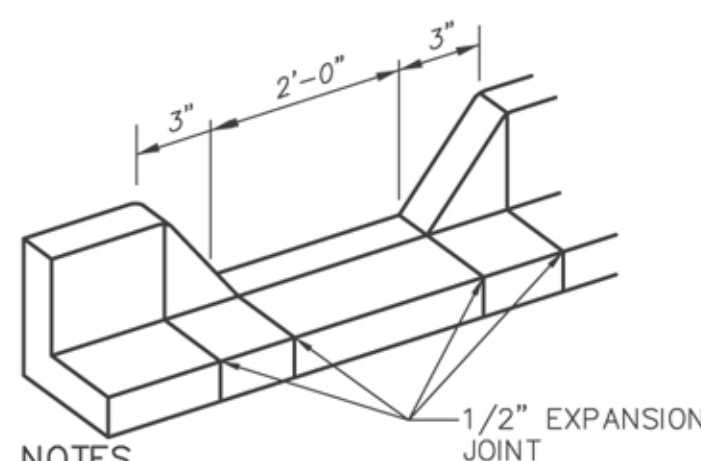
NMPE 7322



CALCULATIONS: 2076 - COTTONWOOD COMMONS : Sept. 24, 2014					
Based on Drainage Design Criteria for City of Albuquerque Section 22.2, DPM, Vol 2, dated Jan., 1993					
ON-SITE					
AREA OF SITE:	23457	SF	=	0.5	
100-year, 6-hour					
HISTORIC FLOWS:					
Area A	=	0	0%		
Area B	=	0	0%		
Area C	=	0	0%		
Area D	=	23457	100%		
Total Area	=	23457	100%		
DEVELOPED FLOWS:					
Area A	=	0	0%		
Area B	=	0	0%		
Area C	=	2346	10%		
Area D	=	21111	90%		
Total Area	=	23457	100%		
EXCESS PRECIP:					
Precip. Zone	1				
Ea	=	0.44			
Eb	=	0.67			
Ec	=	0.99			
Ed	=	1.97			
On-Site Weighted Excess Precipitation (100-Year, 6-Hour Storm)					
Weighted E	=	$\frac{EaAa + EbAb + EcAc + EdAd}{Aa + Ab + Ac + Ad}$			
Historic E	=	1.97 in.	Developed E	=	1.87 in.
On-Site Volume of Runoff: V360 = E*A / 12					
Historic V360	=	3851 CF	Developed V360	=	3659 CF
On-Site Peak Discharge Rate: Qp = QaAa + QbAb + QcAc + QdAd / 43,560					
For Precipitation Zone 1					
QpA	=	1.29	QpC	=	2.87
QpB	=	2.03	QpD	=	4.37
Historic Qp	=	2.4 CFS	Developed Qp	=	2.3 CFS

KEYED NOTES

- SEE ARCHITECTURAL FOR SITE PAVING DETAILS.
- CONSTRUCT NEW PAVING AT ELEVATIONS SHOWN. SEE ARCHITECTURAL FOR EXTENTS AND PAVING DETAILS.
 - THIS PROPERTY (EXISTING CONDITION) IS MINIMALLY SLOPED TO DRAIN (SHEETFLOW). AREAS SHOWN SHADED (SEE LEGEND) IDENTIFY APPROXIMATE EXTENT OF ASPHALT REMOVE / REPLACE BASED ON AVAILABLE TOPOGRAPHIC DATA. CONTRACTOR TO FIELD VERIFY THAT NO BIRDBATHS WILL BE CREATED BY THIS CONSTRUCTION. REMOVE / REPLACE ADDITIONAL ASPHALT AS NEEDED TO ENSURE POSITIVE DRAINAGE.
 - EXISTING PAVING TO REMAIN. CONTRACTOR SHALL FIELD VERIFY POSITIVE DRAINAGE AND ELIMINATE ANY EXISTING BIRDBATHS WHERE NECESSARY. SEE KEYED NOTE 1.1.
 - CONSTRUCT HANDICAP PARKING AREA AT ELEVATIONS SHOWN. SLOPE WITHIN HANDICAP PARKING AREA TO MEET ADA REQUIREMENTS. MAX. SLOPE = 2% IN ANY DIRECTION.
 - CONSTRUCT 1:12 (MAX.) RAMP TO ADA STANDARDS. SEE ARCHITECTURAL FOR DETAILS.
 - CONSTRUCT CONCRETE PEDESTRIAN WALKS AT ELEVATIONS SHOWN.
 - PROPOSED ROOF DISCHARGE LOCATION.
 - CONSTRUCT 2' WIDE CONCRETE ALLEY GUTTER AT GRADES SHOWN.
 - CONSTRUCT FIRST FLUSH RETENTION PONDS WITHIN LANDSCAPED AREAS SHOWN (EXTENTS SHOWN DOT-HATCHED). NO PONDING SHALL OCCUR WITHIN 10' OF THE BUILDING.
 - CONSTRUCT 12' WIDE (BOTTOM WIDTH) COVERED SIDEWALK CULVERT PER C.O.A. STD. DWG 2236. SEE DETAIL THIS SHEET FOR WEST SIDEWALK CULVERT CONFIGURATION.
 - PROVIDE 2' WIDE CURB OPENING AT FLOWLINE ELEVATIONS SHOWN. DEPRESS LANDSCAPING TO 0.5" BELOW FLOWLINE. SEE DETAIL THIS SHEET.



GENERAL NOTES

- EDGES NOT SPECIFICALLY DIMENSIONED SHALL BE SHAPED WITH A 3/8" EDGING TOOL.

CURB OPENING

SCALE: N.T.S.

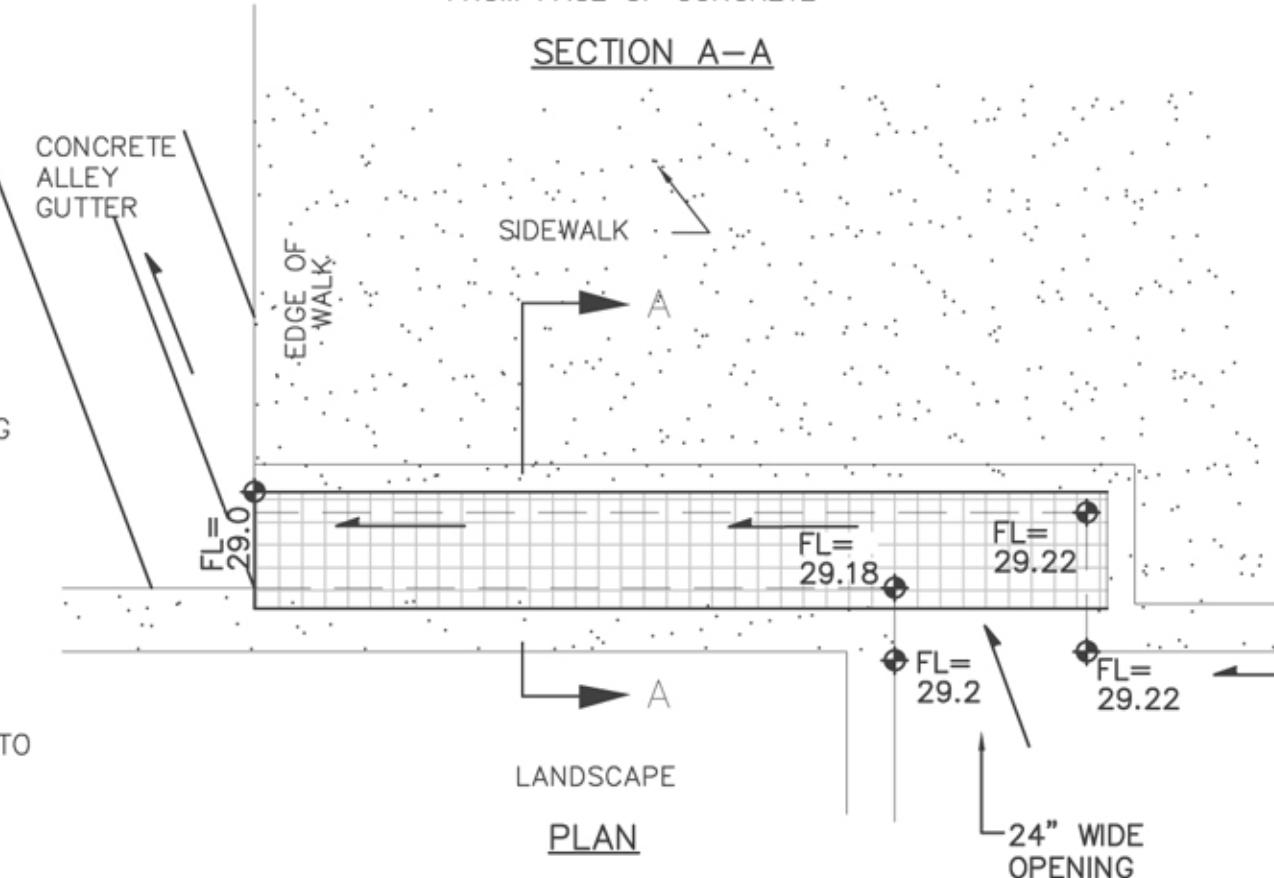
WELD 1/8" THICK, 3/8" MIN. DIAMETER OVER ALL SCREWS. COMPLETELY COVER SCREW HEADS. GRIND EDGES SMOOTH.

FOR SECURING PLATE USE 1"x5" S.S. ROD ANCHOR, "RED HEAD MULTI-SET II SRM-38 ANCHOR" OR APPROVED EQUAL. INSTALL PER MANUFACTURER'S INSTRUCTIONS AT MAX. 24" O.C., A MINIMUM OF 2 PER SIDE AND ONE WITHIN 6" OF EACH END.

3/8" CHECKERED STEEL PLATE. ALL EXPOSED EDGES TO BE REINFORCED WITH A #4 REBAR WELDED TO UNDERSIDE OF PLATE.

USE NO. 3 DEFORMED BAR DOWELS. SPACE DOWELS AT 18" O.C. MAXIMUM. 1-1/2" MINIMUM FROM FACE OF CONCRETE

SECTION A-A



SIDEWALK CULVERT

SCALE: N.T.S.

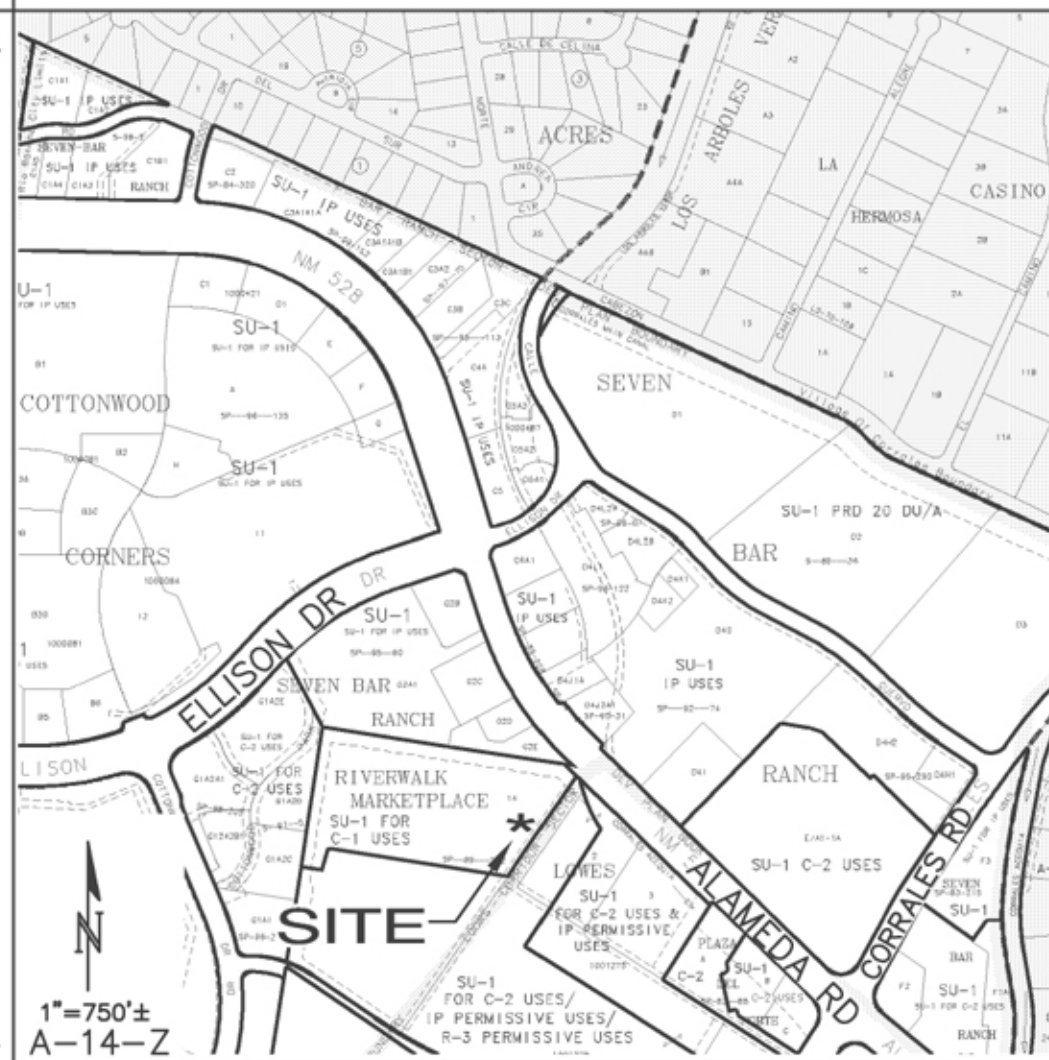
GENERAL NOTES

- ALL WORK DETAILED ON THESE PLANS AND PERFORMED UNDER THIS CONTRACT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT. WHERE APPLICABLE, CITY OF ALBUQUERQUE AND NMDOT STANDARDS APPLY.
- 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.
- ALL SUBGRADE, OVEREXCAVATION, BACKFILL, AND FILL SHALL BE PLACED AND / OR COMPACTED PER THE GEOTECHNICAL REPORT AND CITY OF ALBUQUERQUE SPECIFICATIONS.
- THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS FOR THE PROJECT PRIOR TO COMMENCING CONSTRUCTION, AND PRIOR TO OCCUPANCY, AS APPROPRIATE.
- COORDINATE WORK WITH SITE PLAN AND UTILITY PLAN.
- 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'S INTENT BEFORE PROCEEDING.
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SITE SAFETY.
- CONTRACTOR SHALL OBTAIN ALL REQUIRED INSPECTIONS OF THE WORK.
- 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.
- ALL TRASH, DEBRIS, & SURFACE VEGETATION SHALL BE CLEARED AND LEGALLY DISPOSED OF OFFSITE.
- 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 THICKNESS.
- IF FIELD GRADE ADJUSTMENTS ARE REQUIRED, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT.
- MINIMUM SLOPES SHALL BE 1% UNLESS OTHERWISE NOTED.
- 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. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF NECESSARY DRY UTILITY ADJUSTMENTS.
- ADJUST ANY RIMS OF EXISTING UTILITY FEATURES AS NECESSARY TO MATCH NEW GRADES. UTILITIES IN PAVED AREAS SHALL BE HS-25 TRAFFIC RATED.
- 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. BUILDING PAD ELEVATION SHALL BE ±0.05' FROM PLAN ELEVATION.
- WHERE GRADES BETWEEN NEW AND EXISTING ARE SHOWN AS 'MATCH' OR '±', TRANSITIONS SHALL BE SMOOTH.
- ALL EROSION PROTECTION TO BE FRACTURED FACE ROCK (F.F. ROCK); 6" AVG. DIA. ANGULAR FACED ROCK PLACED OVER GEOTEX 501 NON-WOVEN GEOTEXTILE (O.E.).
- ENGINEER RECOMMENDS THAT OWNER MAINTAIN EROSION PROTECTION ELEMENTS. 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.
- MEASURES REQUIRED FOR EROSION AND SEDIMENT CONTROL SHALL BE INCIDENTAL TO THE PROJECT COST.
- 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), AND/OR NMDOT STANDARD SPECIFICATIONS FOR PUBLIC WORK (SECOND PRIORITY).
- 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.

LEGEND

- EXISTING SPOT ELEVATION
- EXISTING CONTOUR
- PROPOSED SPOT ELEVATION
- PROPOSED CONTOUR
- FLOW ARROW - PROPOSED CONDITION
- FLOW ARROW - EXISTING CONDITION
- FLOW LINE
- FINISHED FLOOR
- GRADE BREAK HIGH POINT
- APPROX. LIMITS OF ASPHALT REMOVE / REPLACE
- LIMITS OF FIRST FLUSH RETENTION POND

VICINITY MAP



PROJECT DATA

PROPERTY: THE AREA TO BE DEVELOPED IS A PREVIOUSLY DEVELOPED ASPHALT PARKING LOT PROPERTY WITH ASSOCIATED LANDSCAPED ISLANDS LOCATED WITHIN C.O.A. VICINITY MAP A-14. THE SITE IS BOUND TO THE NORTH, WEST, SOUTH AND EAST BY DEVELOPED COMMERCIAL PROPERTY.

PROPOSED IMPROVEMENTS: THE PROPOSED IMPROVEMENTS INCLUDE AN 3,800 SF(±) COMMERCIAL RETAIL WITH ASSOCIATED ASPHALT PAVED PARKING AND LANDSCAPING.

LEGAL: A PORTION OF LOT 1-A, RIVERWALK MARKETPLACE, CITY OF ALBUQUERQUE BERNALILLO COUNTY, NEW MEXICO

SURVEYOR: SURV-TEK
RUSS HUGG - NMPS#9750
9384 VALLEY VIEW DRIVE
ALBUQUERQUE, NM 87114
505-897-3366

BENCHMARK: VERTICAL DATUM FOR THIS PROJECT IS BASED UPON ALBUQUERQUE CONTROL SURVEY MONUMENT "NM-448-N12", HAVING A PUBLISHED ELEVATION OF 5,028.132 FEET (NAVD 1988).

OFF-SITE: HISTORIC FLOW FROM THE SOUTH PORTION OF LOT-1A, RIVERWALK MARKETPLACE WILL CONTINUE TO PASS THROUGH THIS PROPERTY. MINOR GRADING WILL DIVERT THIS FLOW AROUND THE PROPOSED BUILDING WHICH WILL THEN RETURN TO THE HISTORIC FLOWPATHS.

FLOOD HAZARD: PER BERNALILLO COUNTY FIRM MAP #35001C0109H DATED AUGUST 16, 2012, THE SITE IS LOCATED WITHIN FLOODZONE 'X' DESIGNATED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2-PERCENT-ANNUAL-CHANCE FLOODPLAIN.

DRAINAGE PLAN CONCEPT:

PER THE CALCULATIONS, THE PROPOSED CONDITION WILL GENERATE SLIGHTLY LESS DISCHARGE (2.3 CFS VS- 2.4 CFS) THAN HISTORIC. THE SITE WILL CONTINUE TO DISCHARGE HISTORIC FLOWPATH TO AN EXISTING PRIVATE STORM DRAIN INLET SITUATED IN THE LANDSCAPE ISLAND TO THE NORTH.

FIRST FLUSH REQUIREMENTS

STORMWATER CONTROL MEASURES ARE REQUIRED TO PROVIDE MANAGEMENT OF 'FIRST FLUSH' (DEFINED AS THE 90TH PERCENTILE STORM EVENT OR 0.34" [0.44" LESS 0.1" FOR INITIAL ABSTRACTION] OF STORMWATER WHICH DISCHARGES DIRECTLY TO A PUBLIC STORM DRAINAGE SYSTEM).

THE PONDING VOLUME REQUIRED IS 0.34" * TYPE 'D' AREA: 0.34/12 * 21,111 SF (90% IMPERVIOUS) = 598 CF.

DUE TO THE EXISTING FULLY DEVELOPED CONDITIONS, C.O.A. HYDROLOGY HAS AGREED TO APPROVE THIS PLAN WITH THE ADDITION OF THE EAST FIRST FLUSH RETENTION POND ACCEPTING 1/2 OF THE PROPOSED ROOF DISCHARGE. CURB OPENINGS AND ADDITIONAL FIRST FLUSH RETENTION IS PROVIDED IN THE WEST MEDIAN ISLANDS.

STORM WATER FROM THE IMPERVIOUS AREAS SHALL, AS MUCH AS POSSIBLE, BE DIRECTED TO THESE CURB OPENINGS.



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SHOPS-COTTONWOOD COMMONS

GRADING & DRAINAGE PLAN

Date:	No. Revision:	Date:	Job No.
11-10-14			2076.
Drawn By:			CG-101
BUB			
Okd By:			SH. OF
FCA			



CITY OF ALBUQUERQUE



February 13, 2015

Fred C. Arfman, PE
Isaacson & Arfman, PA
128 Monroe St NE
Albuquerque, NM 87108

**Re: Shops-Cottonwood Commons
Grading and Drainage Plan
Permanent CO – Accepted
Engineer's Stamp dated: 11-10-14 (H19D080)
Certification dated: 2-11-15**

Dear Mr. Arfman,

Based upon the information provided in your submittal received 2/11/2015, the above referenced Certification received is acceptable for the release of Certificate of Occupancy by Hydrology.

PO Box 1293

If you have any questions, you can contact me at 924-3986 or Rudy Rael at 924-3977.

Albuquerque

Sincerely,

New Mexico 87103

Curtis Cherne, P.E.
Principal Engineer, Planning Dept.
Development and Review Services

www.cabq.gov

C: RR/CC
email