CITY OF ALBUQUERQUE

February 24, 2012

Fred C. Arfman, P.E.
Isaacson & Arfman, P.A.
128 Monroe St. NE
Albuquerque, NM 87108

Re: Lowes Subdivision Lot 3
Grading and Drainage Plan
Engineer's Stamp dated 2-8-12 (A14/D006B)

Dear Mr. Arfman,

Based upon the information provided in your submittal received 2-08-12 and the inlet analysis received 2/12, the above referenced plan is approved for Grading Permit and Building Permit. This project requires a Topsoil Disturbance Permit since it is disturbing ¾ of an acre or more and a National Pollutant Discharge Elimination System (NPDES) permit.

Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology. To obtain a CO, Engineer Certification of the Grading Plan per the DPM checklist is required.

Before phase II can receive a C.O. an Elevation Certificate must be submitted for review and approval. Also, the dumpster pad must drain into the SAS via a grease trap.

Hydrology is requesting that all proposed landscape areas are depressed to retain/infiltrate the moisture that falls on them.

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

Sincerely,

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

RER/CAC
C: File

PO Box 1293
Albuquerque
NM 87103
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A Transmittal From

Isaacson & Arfman, P.A.

Consulting Engineering Associates

TO: Curtis Cherne, PE, CFM
Principal Engineer, Planning Dept.
City of Albuquerque

DATE: 8 February 2012
JOB NO: 1899

FROM: Bryan Bobrick

REFERENCE: Lowe's Subdivision Lot 3 (A14 / D006B)

WE ARE SENDING YOU ATTACHED THE FOLLOWING ITEMS:
1 revised Drainage and Grading Plan submittal
Supplemental Photograph of existing PRIVATE storm drain inlets
2 Floodplain Development Permit Form's for Phases I and II

THIS INFORMATION IS TRANSMITTED:	
☐ As per your request	☐ For your files
☒ For your review and approval	☐ For your use
☐ For your information	☐ Please review and return
☐ For your attention	☐ For return to your files
☐ For your signature	☐ Please advise
☐	☐

COMMENTS: – e cfs? Capacity 2 c's → Y

Curtis,
Per the attached exhibit and photographs, there is a double 'C' inlet just downstream of the single 'C' inlet which we are calling to modify to a Type 'D'. Any trash which may have been captured at the upstream 'C' will now be captured at the downstream 'C' (ALL INLETS ARE PRIVATE).

We have included two Floodplain Permit Forms - one for each of the two phases. Our client understands that an Elevation Certification will be required for the Phase II building until the LOMR being prepared by Chuck Easterling is accepted (see keyed note 20). General Note regarding depressed landscaping has been added to the plan.

REF: LOWE'S SUBD. - LOT 3;

SUBJ: PRV'T STORM DRAIN
MODIFY EXST. SINGLE 'C' TO SINGLE 'D' INLET

EXISTING CONDITIONS: (FROM LOWE'S HOME IMPROVEMENT CENTER (A 14/D 14) BY WILSON & CO., DATED 12/20/01)

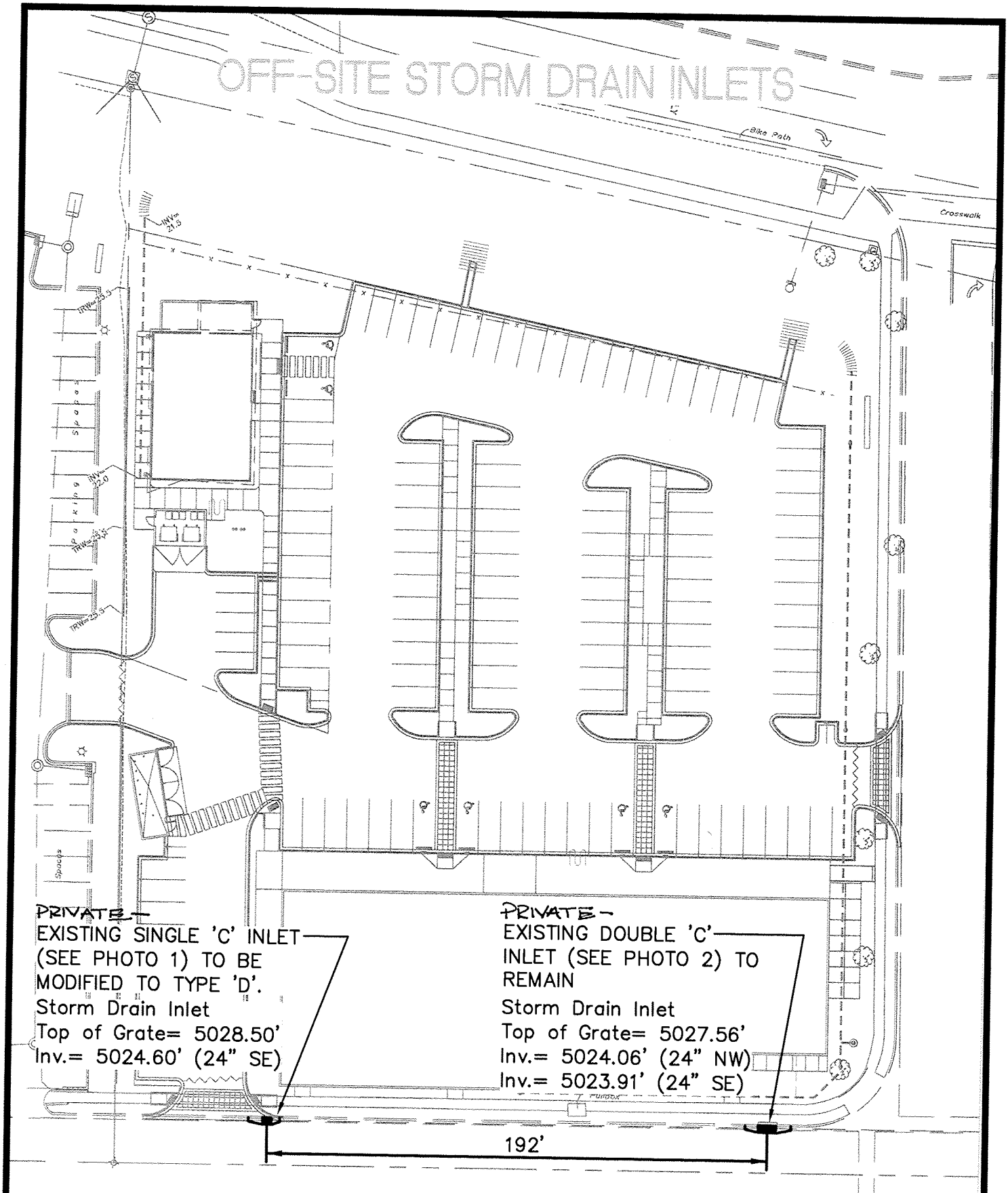
1. EXISTING PRIVATE STORM DRAIN / INLETS IN BASIN 4.
2. BASIN AREA: 7.14 AC.
   Q_{PEAK} = 28.7 CFS
   SLOPE (24 FT. WIDE) = 0.7%

A.P.	CONT. AREA (AC.)	Q_{100}	DEPTH OF FLOW (FT)	SLOPE OF ROAD (%)	CATCH BASIN CAPACITY (CFS)	Q BY-PASS (CFS)
CB-1	2.33	9.4	0.48	0.7	4.5 x 50% USE 2.3	7.1
CB-2	1.33	7.1+5.4=12.50	0.62	0.7	7.0	5.5
ENTR. ROAD	0.50	5.5+2.0=7.50	0.43	0.7	< 0.5' WATER BLOCK-OK	
REMAINING AREA	2.98	*	—	—	—	—

* REMAINING STORM WATER ARE EITHER ACCEPTED BY THE TWO CATCH BASINS TO THE EAST OR ALLOWED TO SURFACE FLOW INTO THE POND.

DPM PLATES 22.3, D-3, D-5 & D-6 WERE USED TO DERIVE THE VALUES IN THE ABOVE TABLE.

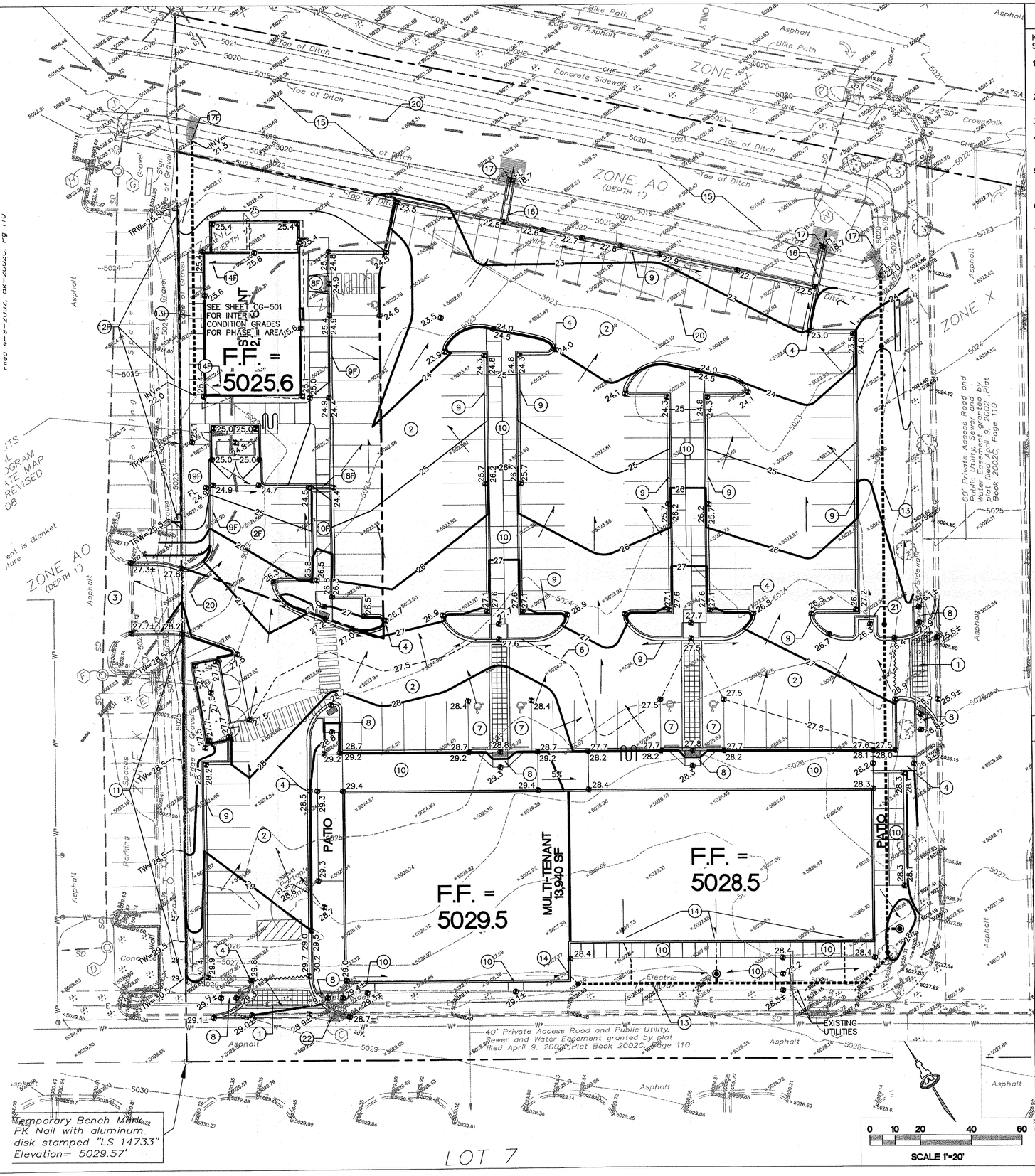
OFF-SITE STORM DRAIN INLETS



ISAACSON & ARFMAN, P.A.
Consulting Engineering Associates
Albuquerque, New Mexico
1899 CG-101.dwg Feb 08,2012

PROJECT Lowe's Subdivision - Lot 3

JOB NO. 1899 BY BJB DATE 02-08-12



KEYED NOTES

KEYED NOTES '#' REPRESENT FUTURE PHASE II CONSTRUCTION. SEE SHEET CG-501 FOR INTERIM GRADING.

1. CONSTRUCT NEW SITE ACCESS WITH WATERBLOCK TO ELEVATIONS SHOWN. PROVIDE SMOOTH RIDING TRANSITION TO EXISTING. SEE ARCHITECTURAL FOR DETAILS.
2. CONSTRUCT NEW PAVING AT ELEVATIONS SHOWN. SEE ARCHITECTURAL FOR EXTENTS AND PAVING DETAILS.
3. EXISTING PAVING TO REMAIN.
4. CONSTRUCT RAMP WITH GUARDRAILS TO TRANSITION TO EXISTING CONCRETE WALK AT 1:12 MAX. SLOPE. SEE ARCHITECTURAL FOR DETAILS.
5. SPOT ELEVATIONS WITHIN FLOWLINE REPRESENT FLOWLINE UNLESS NOTED. ADD 0.5' TYPICAL FOR TOP OF ADJACENT CURB OR WALK ELEVATIONS.
6. ONE-HALF FOOT DESIGN CONTOURS (0.5') SHOWN DASHED THIS AREA TO CLARIFY GRADING CONCEPT.
7. CONSTRUCT HANDICAP PARKING AREA AT ELEVATIONS SHOWN. SLOPE WITHIN HANDICAP PARKING AREA TO MEET ADA REQUIREMENTS. MAX. SLOPE = 2% IN ANY DIRECTION.
8. CONSTRUCT 1:12 (MAX.) RAMP TO ADA STANDARDS. SEE ARCHITECTURAL FOR DETAILS.
9. CONSTRUCT CONCRETE MEDIAN CURB AND GUTTER. SEE SHEET CG-501 FOR DETAIL.
10. CONSTRUCT CONCRETE PEDESTRIAN WALKS AND PATIOS AT ELEVATIONS SHOWN.
11. CONSTRUCT GARDEN WALL (MAXIMUM RETAINING = 30") WITHIN PROPERTY TO ACHIEVE GRADES SHOWN. TOP OF WALL VARIES – SEE PLAN. (DESIGN BY OTHERS).
12. CONSTRUCT GARDEN WALL (MAXIMUM RETAINING = 30") WITHIN PROPERTY TO ACHIEVE GRADES SHOWN. TOP OF WALL ELEVATION = 5024.9 TYPICAL. (DESIGN BY OTHERS).
13. CONSTRUCT NEW STORM DRAIN SYSTEM. SEE CG-501 DETAILS.
14. ALL ROOF DISCHARGE TO BE PIPED DIRECTLY TO STORM DRAIN SYSTEM. SEE ARCHITECTURAL AND PLUMBING PLAN(S) FOR ROOF DRAIN LOCATIONS AND SIZES. EXTEND ROOF DRAINS TO STORM DRAIN USING WATERTIGHT FITTINGS.
15. EXISTING DETENTION POND WITH CONTROLLED DISCHARGE TO ALAMEDA PUBLIC STORM DRAIN SYSTEM. TOP OF LANDSCAPE MATERIAL TO BE AT 5018.7 PER ORIGINAL DESIGN. REESTABLISH ALL SLOPES AND RESEED ALL DISTURBED AREAS.
16. CONSTRUCT 2' WIDE (BOTTOM WIDTH) CONCRETE RUNDOWN. SEE CG-501 FOR DETAIL.
17. CONSTRUCT 4.0' WIDE F.F. ROCK SWALE AT PIPE OUTLET (2 LOCATIONS) AND 10' WIDE X 10' LONG X 12" DEEP F.F. ROCK PAD AT BOTTOM OF CONCRETE RUNDOWN (2 LOCATIONS). SEE GENERAL NOTE 'I' AND SHEET CG-501.
18. INSTALL THREE (3) 4" DIA. PIPES THROUGH WALK TO PASS FLOW. SLOPE @ 2%. SEE CG-501 FOR DETAIL.
19. PROVIDE SHALLOW WATER HARVESTING AREA (12" MAX.) TO COLLECT MINOR FLOW, UTILIZE FOR LANDSCAPING AND RELEASE EXCESS TO PAVEMENT.
20. EXISTING FLOODPLAIN LIMIT (ZONE AO 1' DEPTH). ELEVATION CERTIFICATE REQUIRED FOR PHASE II BUILDING.
21. PROVIDE 12" WIDE OPENING IN CURB TO PASS MINOR FLOW TO LANDSCAPE.
22. MODIFY EXISTING STORM DRAIN INLET TO C.O.A. TYPE 'D' PER C.O.A. STD. DWG. 2206. MATCH RIM ELEVATION.

GENERAL NOTES

A. COORDINATE WORK WITH SITE PLAN AND UTILITY PLAN.

B. ALL TRASH, DEBRIS, & SURFACE VEGETATION SHALL BE CLEARED AND LEGALLY DISPOSED OF OFFSITE.

C. FINAL GRADES 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.

D. MINIMUM SLOPES SHALL BE 1% UNLESS OTHERWISE NOTED.

E. 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. ALL UTILITIES SHOULD BE FIELD VERIFIED AND LOCATED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. 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.

F. THE ENVIRONMENTAL PROTECTION AGENCY REQUIRES A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) FOR PROJECTS WHERE CONSTRUCTION ACTIVITIES (INCLUDING OTHER LAND-DISTURBING ACTIVITIES) DISTURB ONE ACRE OR MORE (BY OTHERS).

G. ADJUST RIMS OF EXISTING UTILITY FEATURES AS NECESSARY TO MATCH NEW GRADES, TYPICAL.

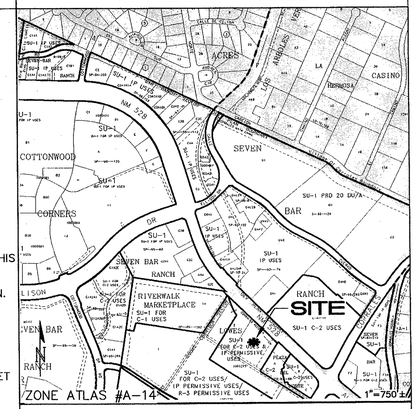
H. WHERE NEW GRADES ARE SHOWN AS 'MATCH' OR '±', TRANSITIONS TO EXISTING INFRASTRUCTURE SHALL BE SMOOTH, SHALL ALLOW FOR POSITIVE DRAINAGE AS INTENDED ON PLAN AND SHALL MEET ADA REQUIREMENTS.

I. ALL PERMANENT EROSION PROTECTION TO BE 12" DEPTH OF 6" AVG. DIA. FRACTURED FACED ROCK (F.F. ROCK) OVER GEOTEX 50 NON-WOVEN GEOTEXTILE.

J. OWNER SHALL MAINTAIN EROSION PROTECTION ELEMENTS. ENGINEER RECOMMENDS THAT OWNER INSPECT SITE YEARLY AND AFTER EACH RAINFALL TO MAINTAIN GRADES, IDENTIFY NEW AREAS OF EROSION AND INSTALL ADDITIONAL EROSION PROTECTION AS NEEDED BASED ON ACTUAL OCCURRENCES.

K. LANDSCAPED AREAS SHALL BE DEPRESSED TO RETAIN MOISTURE THAT FALLS ON THEM FOR INFILTRATION. DO NOT DEPRESS LANDSCAPING WITHIN 10' OF BUILDING.

GENERAL NOTES



PROJECT INFORMATION

PROPERTY: THE SITE IS AN UNDEVELOPED PROPERTY ZONED 'SU-1 FOR C-2 USES & IP PERMISSIVE USES' LOCATED WITHIN C.O.A. VICINITY MAP A-14. THE SITE IS BOUND TO THE NORTH BY N.M. STATE HIGHWAY 528, AND TO THE WEST, SOUTH AND EAST BY DEVELOPED COMMERCIAL PROPERTY.

PROPOSED IMPROVEMENTS: THE PROPOSED IMPROVEMENTS INCLUDE A 14,000 SF(±) MULTI TENANT BUILDING AND A 2200 SF(±) RESTAURANT WITH ASSOCIATED ASPHALT PAVED ACCESS, PARKING AND LANDSCAPING.

LEGAL: LOT 3, LOWES SUBDIVISION, ALBUQUERQUE, NM

BENCHMARK: VERTICAL DATUM IS BASED UPON THE ALBUQUERQUE CONTROL STATION MONUMENT "NM-448-N12", ELEVATION = 5,026.132 FEET (NAVD 1988) AS PUBLISHED.

OFF-SITE: NO OFF-SITE DRAINAGE AFFECTS THIS PROPERTY.

FLOOD HAZARD: PER BERNALILLO COUNTY FIRM MAP #35001C0109G DATED SEPTEMBER 26, 2008, THE MAJORITY OF THE SITE IS LOCATED WITHIN FLOODZONE 'X' DESIGNATED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2-PERCENT-ANNUAL-CHANCE FLOODPLAIN. A PORTION OF THE NORTH AND WEST ENDS OF THE PROPERTY FALLS WITHIN FLOODZONE AO (DEPTH 1') DESIGNATED AS AREAS OF SHEET-FLOW SHALLOW FLOODING TO A DEPTH OF 1'.

DRAINAGE PLAN CONCEPT:

A PRIVATE STORM DRAIN SYSTEM WILL BE INSTALLED TO COLLECT ROOF DISCHARGE AND ROUTE TO THE EXISTING MASTER PLANNED DETENTION POND. THE REMAINDER OF THE SITE WILL SURFACE FLOW TO THE MASTER PLANNED DETENTION POND. CONTROLLED RUNOFF FROM THE POND IS PASSED TO THE EXISTING ALAMEDA STORM SEWER AT THE ALLOWABLE RATE.

LEGEND

——27——	PROPOSED CONTOUR – 1' INCREMENT
– – –27.5– –	PROPOSED CONTOUR – 0.5' INCREMENT
◆78.3	PROPOSED SPOT ELEVATION
→	FLOW ARROW
F.F.=XXXX.XX	FINISH FLOOR ELEVATION
◆78.3±	EXISTING ELEVATION (±) TO MATCH. PROVIDE SMOOTH TRANSITION.
▬▬▬	PROPOSED RETAINING WALL
∿∿∿	GRADE BREAK

FRED C. ARFMAN NEW MEXICO 7322 LICENSED PROFESSIONAL ENGINEER 6-25-12

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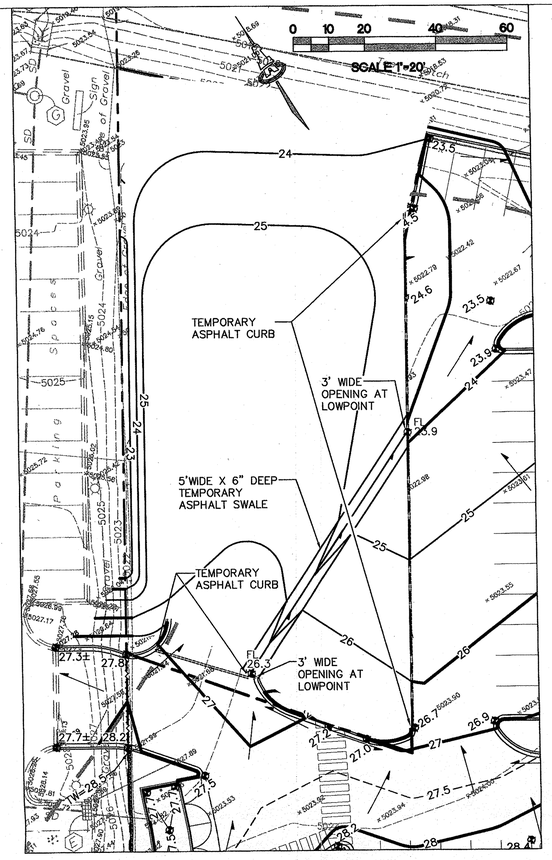
1899 CG-101.dwg Feb 08,2012

LOWE'S SUBDIVISION, LOT 3

GRADING AND DRAINAGE PLAN

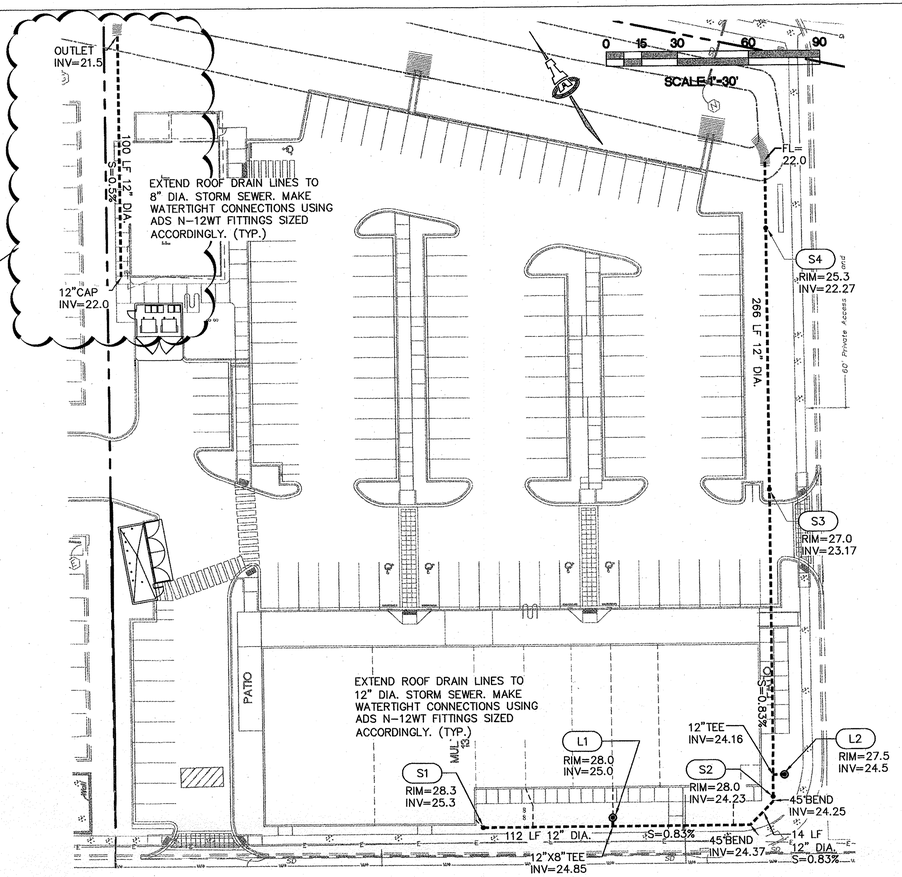
Date:	No.	Revision	Date	Job No.
01.24.12				1899
Drawn By: BJB				CG-101
Ckd By: FCA				SH. OF



1 PHASE II AREA: INTERIM GRADES

Scale: 1"=20'

PHASE II STORM DRAIN

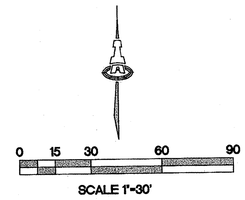


2 STORM DRAIN EXHIBIT

Scale: 1"=30'

LEGEND

- (L#) IN-LINE DRAIN: DOMED GRATE. SEE DETAIL THIS SHEET.
- (S#) IN-LINE DRAIN CLEANOUT: SOLID LID. SEE DETAIL THIS SHEET.

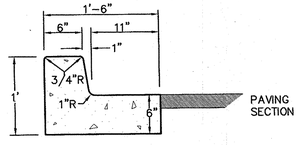


STORM DRAIN NOTES

A. INSTALL ALL STORM DRAIN INLETS AND PIPE PER MANUFACTURER'S SPECIFICATIONS.

B. ALL STORM DRAIN LINES AND FITTINGS TO BE ADS N-12WT WATERTIGHT O.A.E. UNLESS OTHERWISE NOTED.

C. STORM DRAIN SYSTEM WILL REQUIRE REGULAR MAINTENANCE TO ENSURE PROPER FUNCTIONING DURING STORM EVENTS. ENGINEER RECOMMENDS THAT PROPERTY OWNER PUT IN PLACE INSPECTION AND MAINTENANCE CRITERIA SCHEDULED TO OCCUR MONTHLY AND AFTER EACH STORM EVENT.

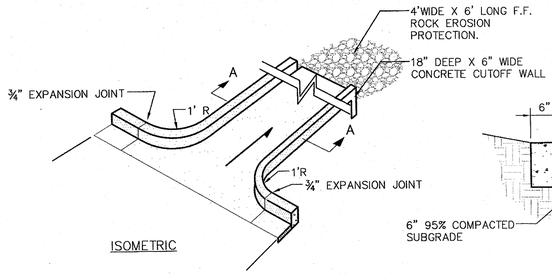


GENERAL NOTES

1. PROVIDE CONST. CONTROL JOINTS @ 6' O.C. MAX. AND 1/2" EXPANSION JOINTS @ 48' O.C. MAX
2. EDGES SHOULD BE REMOVED WITH 3/8" EDGING TOOL
3. MEDIAN C & G REQUIRE FULL FORM ON ALL FACES

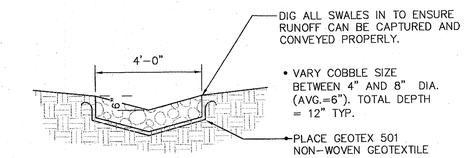
3 MEDIAN CURB AND GUTTER

Scale: N.T.S.



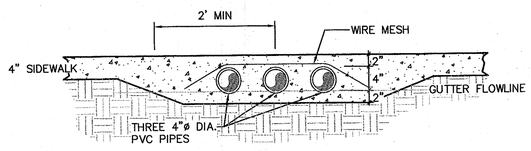
4 CONCRETE RUNDOWN

Scale: N.T.S.



5 FRACTURED FACE ROCK SWALE

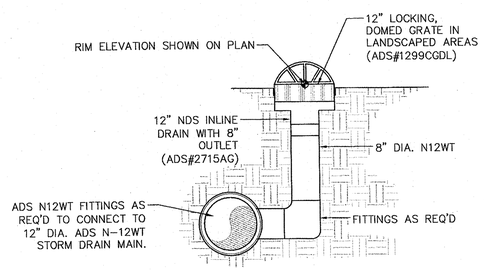
Scale: N.T.S.



N.T.S.

6 UNDERWALK PIPE DRAINS

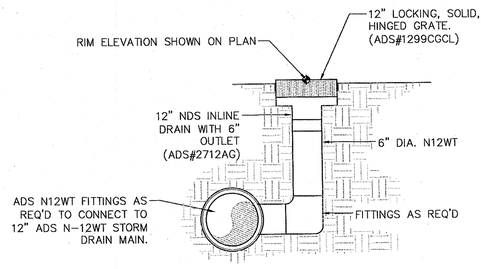
Scale: N.T.S.



7 IN-LINE DRAIN: DOMED GRATE

Scale: N.T.S.

SEE STORM DRAIN EXHIBIT (L#)



8 IN-LINE DRAIN CLEANOUT: SOLID LID

Scale: N.T.S.

SEE STORM DRAIN EXHIBIT (S#)

FRED C. ARFMAN NEW MEXICO 7322 LICENSED PROFESSIONAL ENGINEER 01.24.12

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LOWE'S SUBDIVISION, LOT 3

PAVING AND DRAINAGE DETAILS

Date:	No.	Revisions	Date	Job No.
01.24.12				1899
Drawn By: BJB				CG-501
Ckd By: FCA				SH. OF