

CITY OF ALBUQUERQUE

Planning Department
Brennon Williams, Director



Mayor Timothy M. Keller

January 14, 2020

Dennis Lorenz, P.E.
Lorenz Design & Consulting
2501 Rio Grande NW
Albuquerque, NM 87104

**RE: EWS Manufacturing Bldg
10005 Cochiti Road SE
Grading & Drainage Plan
Engineer's Stamp Date: 12/20/19
Hydrology File: L20D056**

Dear Mr. Lorenz:

Based upon the information provided in your submittal received 12/23/2019, the Grading & Drainage Plan is approved for Building Permit.

Please attach a copy of this approved plan in the construction sets for Building Permit processing along with a copy of this letter. Prior to approval in support of Permanent Release of Occupancy by Hydrology, Engineer Certification per the DPM checklist will be required.

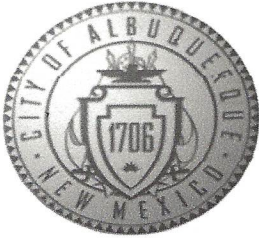
As a reminder, if the project total area of disturbance (including the staging area and any work within the adjacent Right-of-Way) is 1 acre or more, then an Erosion and Sediment Control (ESC) Plan and Owner's certified Notice of Intent (NOI) is required to be submitted to the Stormwater Quality Engineer (Dough Hughes, PE, jhughes@cabq.gov, 924-3420) 14 days prior to any earth disturbance.

Also as a reminder, please provide a Drainage Covenant for the proposed stormwater quality ponds per Chapter 17 of the DPM prior to Permanent Release of Occupancy. Please submit this on the 4th floor of Plaza de Sol. A \$25 fee will be required.

If you have any questions, please contact me at 924-3995 or rbrissette@cabq.gov.

Sincerely,

Renée C. Brissette, P.E. CFM
Senior Engineer, Hydrology
Planning Department



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 6/2018)

Project Title: EW'S MANUFACTURING Building Permit #: — Hydrology File #: —

DRB#: — EPC#: — Work Order#: —

Legal Description: LOTS 6-9 BLK 5 SKYLINE HEIGHTS ADDN

City Address: 10005 COCHITI RD SE

Applicant: LORENZ DESIGN + CONSULTING Contact: H. LORENZ

Address: 2501 RIO GRANDE NW

Phone#: 220 0869 Fax#: — E-mail: HENNISL@LORENZM.COM

Other Contact: — Contact: —

Address: —

Phone#: — Fax#: — E-mail: —

TYPE OF DEVELOPMENT: — PLAT (# of lots) — RESIDENCE — DRB SITE X ADMIN SITE

IS THIS A RESUBMITTAL? — Yes X No

DEPARTMENT — TRANSPORTATION X HYDROLOGY/DRAINAGE

Check all that Apply:

TYPE OF SUBMITTAL:

- ENGINEER/ARCHITECT CERTIFICATION
- PAD CERTIFICATION
- CONCEPTUAL G & D PLAN
- X GRADING PLAN
- X DRAINAGE REPORT
- DRAINAGE MASTER PLAN
- FLOODPLAIN DEVELOPMENT PERMIT APPLIC
- ELEVATION CERTIFICATE
- CLOMR/LOMR
- TRAFFIC CIRCULATION LAYOUT (TCL)
- TRAFFIC IMPACT STUDY (TIS)
- STREET LIGHT LAYOUT
- OTHER (SPECIFY) —
- PRE-DESIGN MEETING?

TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

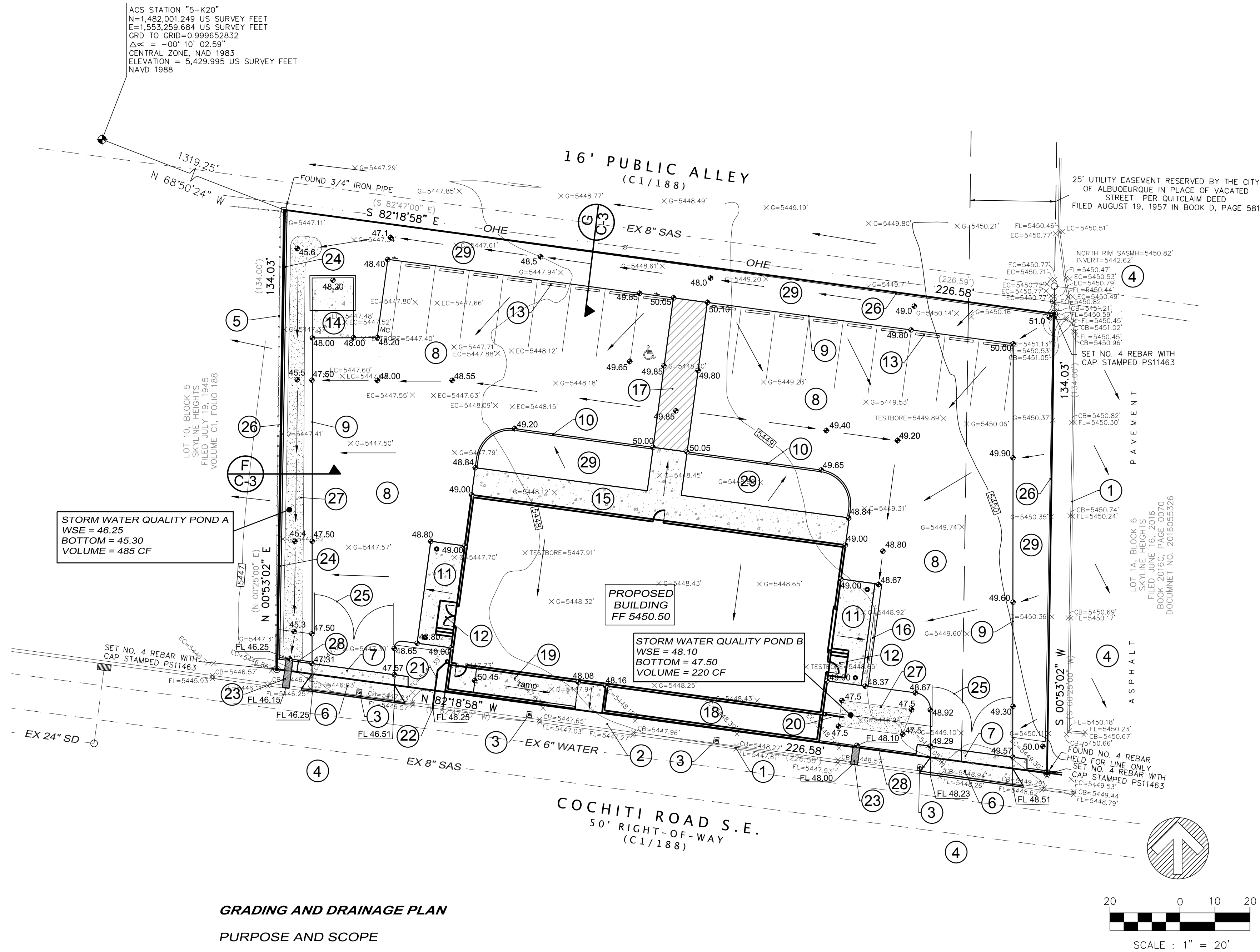
- X BUILDING PERMIT APPROVAL
- CERTIFICATE OF OCCUPANCY
- PRELIMINARY PLAT APPROVAL
- SITE PLAN FOR SUB'D APPROVAL
- SITE PLAN FOR BLDG. PERMIT APPROVAL
- FINAL PLAT APPROVAL
- SIA/ RELEASE OF FINANCIAL GUARANTEE
- FOUNDATION PERMIT APPROVAL
- GRADING PERMIT APPROVAL
- SO-19 APPROVAL
- PAVING PERMIT APPROVAL
- GRADING/ PAD CERTIFICATION
- WORK ORDER APPROVAL
- CLOMR/LOMR
- FLOODPLAIN DEVELOPMENT PERMIT
- OTHER (SPECIFY) —

DATE SUBMITTED: 12.23.19 By: H. LORENZ

COA STAFF:

ELECTRONIC SUBMITTAL RECEIVED: —

FEE PAID: —



GRADING AND DRAINAGE PLAN

PURPOSE AND SCOPE

Pursuant to the Drainage Ordinance for the City of Albuquerque and the Development Process Manual, this Grading and Drainage Plan outlines the drainage management criteria for controlling developed runoff from the project site. The project consists of the design and construction of the EWS Manufacturing Building, located at 10005 Cochiti Road SE. The project includes a 5,500 square foot building with paving, landscaping, utility, grading, and drainage improvements to support the project. The purpose of this Plan is to support building permit approval. The scope of this plan is to present grading and drainage criteria for the safe management of excess runoff impacting the site from upstream drainage basins, and controlling excess runoff from the project site in a well-managed, non-erosive manner.

EXISTING CONDITIONS

The property is located at 10005 Cochiti Road SE, between Conchas Street and Altez Street SE. The site is partially developed. Historical records reveal that the site has been developed to serve many functions, from residential to commercial. Most recently the site was developed as a mobile home retail outlet. Evidence of previous development in the form of concrete slabs and utilities are present on the property. Site topography slopes to the southwest. All drainage flows from the east drain south to Cochiti. Flows along the north drain westward and do not appear to enter the site. Properties to the west drain away from the site. All flows from the site drain west within Cochiti Road to an existing drop inlet and 24-inch storm drain located approximately 50 feet west of the site.

As shown by the attached FIRM Panel the site does not lie within a mapped 100 year Flood Zone.

PROPOSED IMPROVEMENTS

As stated above, the project consists of the construction of a 5,500 square foot building with paving, landscaping, utility, grading, and drainage improvements. All onsite drainage flows will be routed overland within paved and landscaped swales. The AGIS - Sites historical record classifies the site as "Free Discharge".

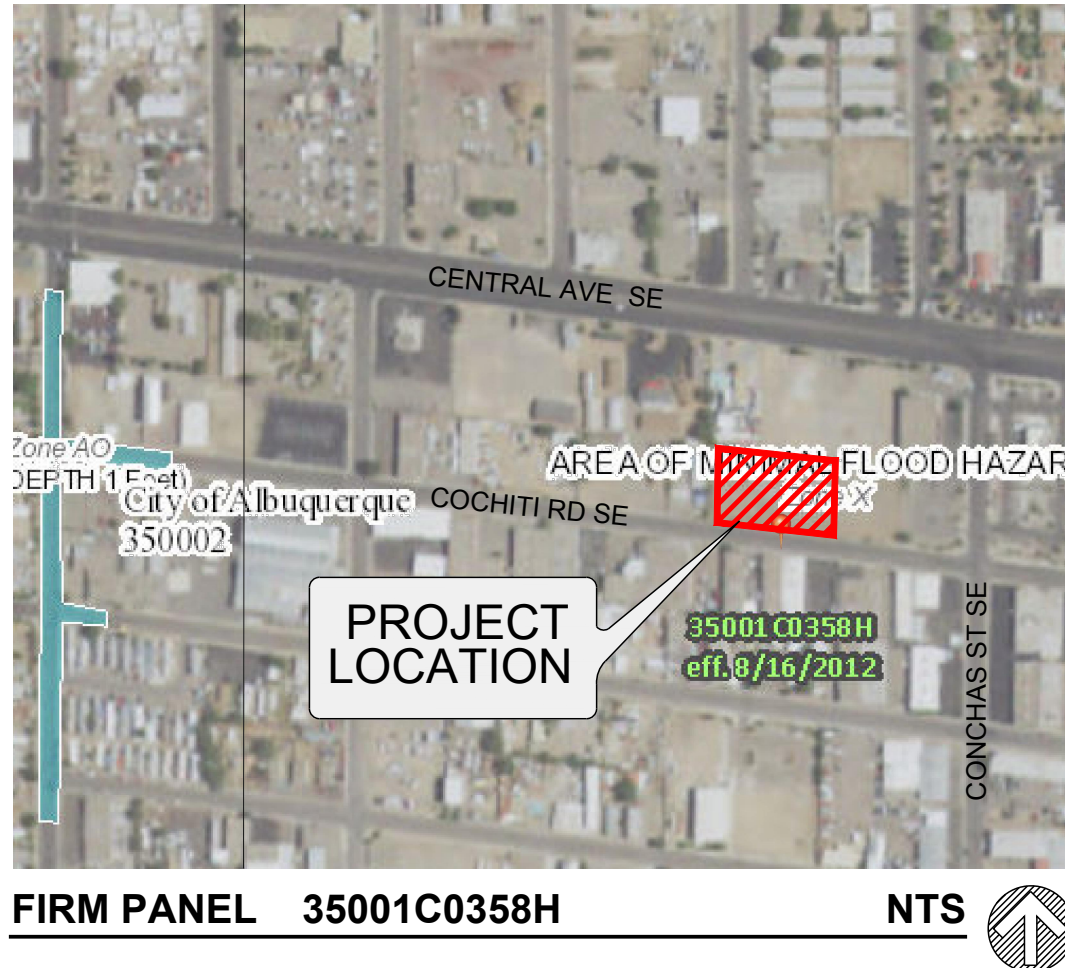
The site is divided into 3 drainage basins that discharge developed flows to Cochiti Road. The drainage basins are descibed as follows:

- Basin A drains to a landscaped Storm Water Quality Pond "A" located along the west lot line that discharges to Cochiti Road through a 24-inch sidewalk culvert.
- Basin B drains to Storm Water Quality Pond "B" that discharges to Cochiti Road through a 24-inch sidewalk culvert.
- Basin C consists of one-half of the building roof. Basin C drains by a 4" downspout and curb penetration to Cochiti Road.

First flush storage will be attained within the storm water quality ponds and landscaped areas. First flush calculations are provided on Sheet C-3. Construction will disturb an area of less than 1.0 acre, therefore a Storm Water Pollution Prevention Plan will not be required.

CALCULATIONS

The calculations are provided on Sheet C-3 that define the 100-year/6 hour design storm falling within the project area under existing and proposed conditions. The hydrology is per "Section 22.2, Part A, Development Process Manual, Vol 2", dated June 1997.

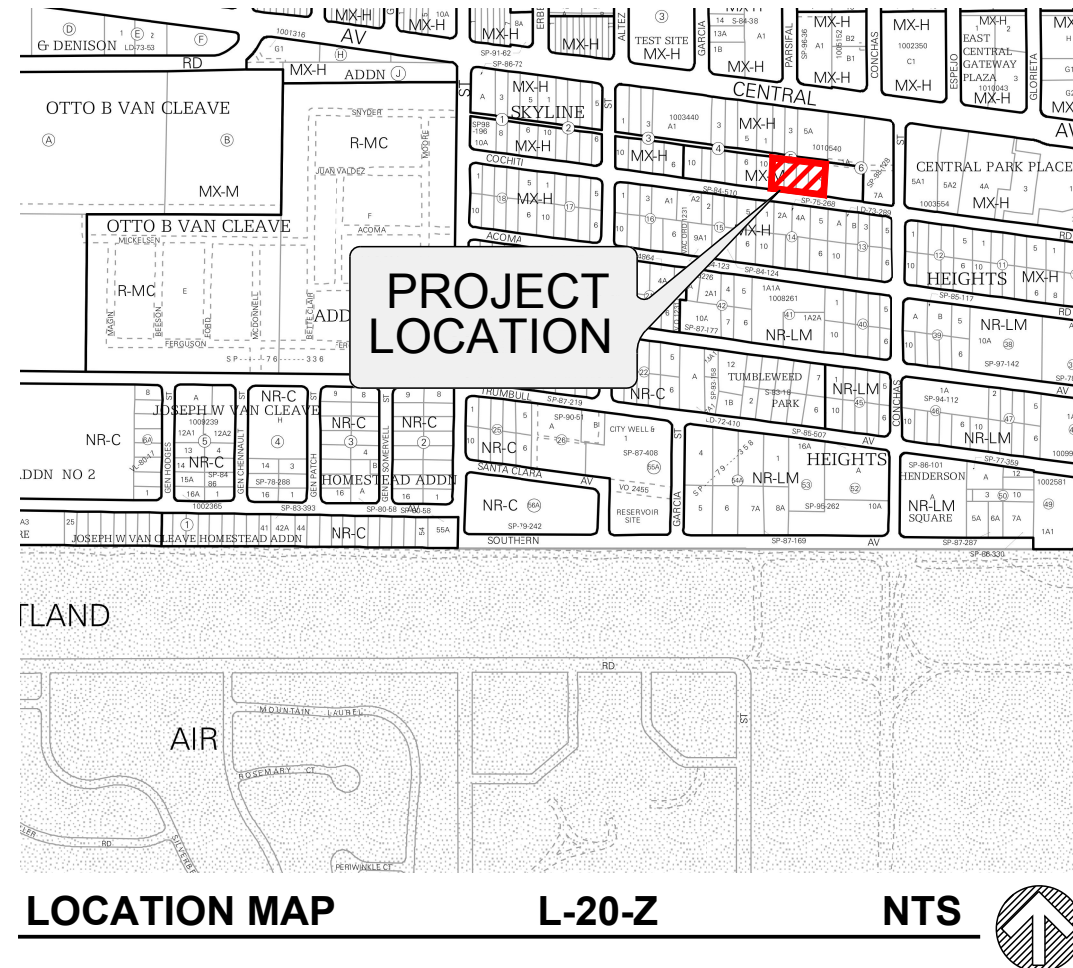


KEYED NOTES

- EXISTING CONCRETE CURB.
- EXISTING CONCRETE SIDEWALK.
- EXISTING WATER METER BOX. REMOVE SERVICE PER WATER AUTHORITY STANDARDS AT NEW DRIVEWAYS.
- EXISTING ASPHALT PAVEMENT.
- EXISTING WOOD FENCE.
- CONSTRUCT 24' DRIVEPAD PER COA STD DWG 2425.
- CONSTRUCT 3' WIDE ADA SIDEWALK AROUND DRIVEPAD.
- CONSTRUCT ASPHALT PAVEMENT. SEE DETAIL A/C-3.
- PROPOSED EDGE OF PAVEMENT. NO CURB.
- CONSTRUCT 6" CONCRETE CURB & GUTTER. SEE DETAIL C/C-3.
- CONSTRUCT CONCRETE PAVEMENT AT LOADING DOCK. SEE DETAIL B/C-3.
- CONSTRUCT CONCRETE STAIRS AT MAN DOOR. SEE SITE PLAN.
- INSTALL CONCRETE TIRE STOPS AT ALL PARKING SPACES.
- CONSTRUCT REFUSE ENCLOSURE. SEE SITE PLAN.
- CONSTRUCT CONCRETE SIDEWALK. SEE SITE PLAN.
- CONSTRUCT CONCRETE VALLEY GUTTER. SEE DETAIL E/C-3.
- INSTALL HANDICAPPED PARKING STRIPING AND SIGNAGE. SEE SITE PLAN.
- CONSTRUCT RAISED PLANTER. SEE SITE PLAN.
- CONSTRUCT ACCESSIBLE RAMP AT MAIN ENTRY. SEE SITE PLAN.
- INSTALL DOWNSPOUT EXTENSION. OUTFALL AT SIDEWALK CULVERT.
- CONSTRUCT 4" STORM DRAIN FROM DOWNSPOUT TO PROPERTY LINE.
- CONSTRUCT 4" CURB PENETRATION. SEE COA STD DWG 2235. SEE NOTICE TO CONTRACTOR ON SHEET C-3.
- CONSTRUCT 24-INCH SIDEWALK CULVERT PER COA STD DWG 2236.
- CONSTRUCT CONCRETE HEADER CURB. SEE DETAIL D/C-3.
- CONSTRUCT SECURITY GATE. SEE SITE PLAN.
- CONSTRUCT PERIMETER SECURITY FENCING. SEE SITE PLAN.
- CONSTRUCT LANDSCAPED STORM WATER QUALITY POND.
- CONSTRUCT CONCRETE HEADER CURB PER DETAIL D/C-3 ALONG BACK OF SIDEWALK. PROVIDE 24" BLOCKOUT AT SIDEWALK CULVERT.
- NEW LANDSCAPING. SEE LANDSCAPE PLAN.

GENERAL NOTES

- LDC recommends that the Owner obtain a Geotechnical Evaluation of the on-site soils prior to foundation/structural design.
- This Plan recommends positive drainage away from all structures to prohibit ponding of runoff which may cause structural settlement. Future alteration of grades adjacent to the proposed structures is not recommended.
- Irrigation within 10 feet of any proposed structure is not recommended. Introduction of irrigation water into subsurface soils adjacent to the structure could cause settlement.
- This Plan is prepared to establish on-site drainage and grading criteria only. LDC assumes no responsibility for subsurface analysis, foundation/structural design, or utility design.
- Local codes may require all footings to be placed in natural undisturbed soil. If the Contractor plans to place footings on engineered fill, a certification by a registered Professional Engineer will be required. If the contractor wishes LDC to prepare the Certification, we must be notified PRIOR to placement of the fill.
- LDC recommends that the Owner obtain the services of a Geotechnical Engineer to test and inspect all earthwork aspects of the project.
- The property boundary shown on this Plan is given for information only to describe the project limits. Property boundary information shown hereon does not constitute a boundary survey. A boundary survey performed by a licensed New Mexico Registered Professional Surveyor is recommended prior to construction.
- All spot elevations are finished grade or top of pavement, unless noted otherwise.
- See Site Plan for dimension control and location of all site improvements.



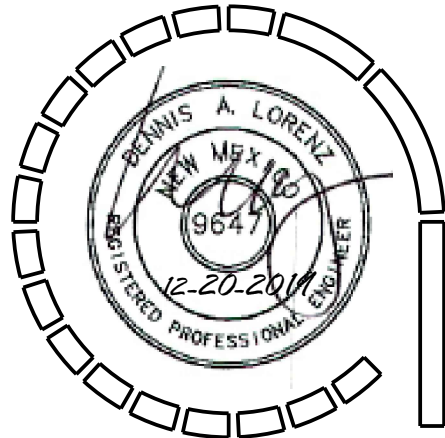
LEGEND

ITEM	EXISTING	PROPOSED
PROPERTY LINE	—	—
SPOT ELEVATION	× 75.5	01.5
CONTOUR W/ ELEVATION	— 5800 —	— 5800 —
DIRECTION OF FLOW		←
DRAIANGE BASIN DIVIDE		— — — —
TOP CURB/FLOWLINE	EX TC 75.75 EX FL 75.25	TC 75.75 FL 75.25
TOP WALL/FINSIH GRADE	EX TW 75.75 EX FG 75.25	TW 75.75 FG 75.25
CONCRETE CURB		— — — — —
UTILITY POLE		⊗
WATER METER		⊠
SANITARY SEWER		⊙ — 8" SAS —
STORM DRAIN		⊠ — 24" SD —
WATERLINE		— — 6" W — —
CONCRETE		▒

IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE DRAINAGE ORDINANCE, EFFECTIVE MAY 12, 2014, ALL NEW DEVELOPMENT PROJECTS ARE REQUIRED TO MANAGE THE RUNOFF WHICH OCCURS DURING THE 90TH PERCENTILE STORM EVENT. IN ORDER TO COMPLY WITH THIS CRITERIA, WHERE PRACTICAL, ALL SURFACE DRAINAGE SHALL BE ROUTED THROUGH LANDSCAPED AREAS BEFORE RELEASE INTO DOWNSTREAM DRAINAGE FACILITIES. THIS PLAN RECOMMENDS ALL LANDSCAPED AREAS BE DEPRESSED A MINIMUM OF 3-INCHES BELOW THE ADJACENT PAVED SURFACE TO RETAIN THE FIRST FLUSH RUNOFF.

PROJECT DATA

PROPERTY ADDRESS:
10005 COCHITI ROAD SE
ALBUQUERQUE, NEW MEXICO
LEGAL DESCRIPTION:
LOT 6-A, BLOCK 5, SKYLINE HEIGHTS SUBDIVISION, BEING A REPLAT OF LOTS 6-9, BLOCK 5, SKYLINE HEIGHTS SUBDIVISION ALBUQUERQUE, NEW MEXICO
SURVEY:
ALL PROJECT SURVEYING BY THE SURVEY OFFICE, LLC. NOVEMBER 2019



LORENZ
DESIGN & CONSULTING, LLC
Civil Engineering | Construction Management

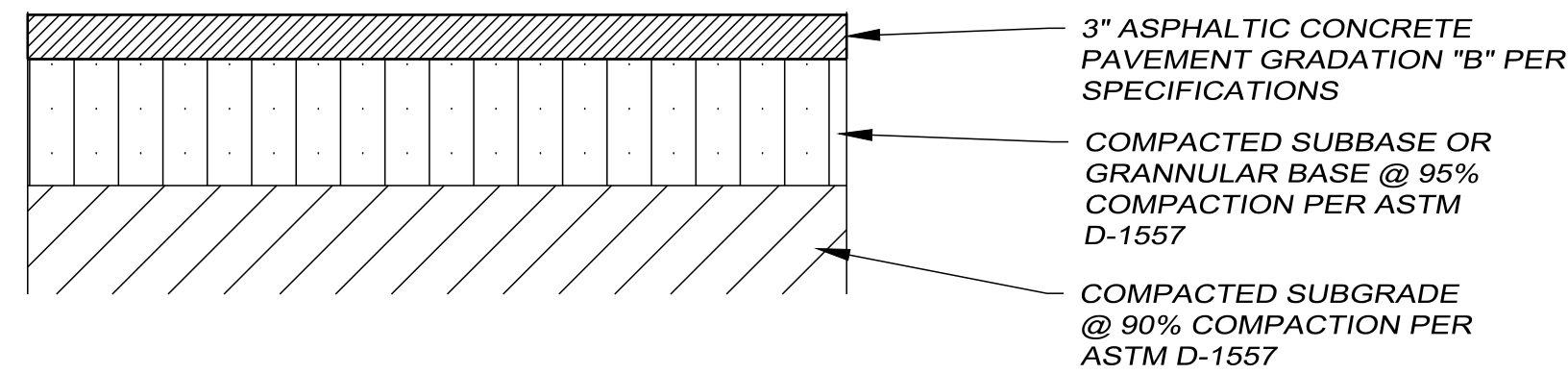
2501 Rio Grande Blvd NW, Suite A
Albuquerque, New Mexico 87104
Ph: 505-855-6058 Fax: 505-242-6655

GRADING & DRAINAGE PLAN

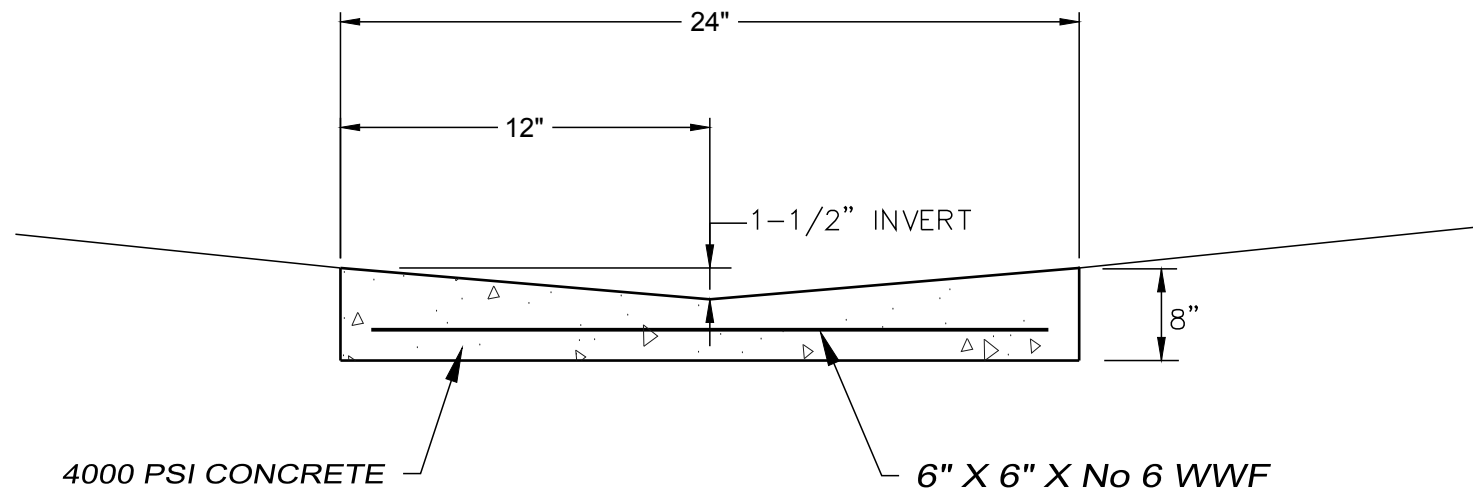
EWS MANUFACTURING BUILDING
10005 COCHITI ROAD SE
ALBUQUERQUE, NEW MEXICO
SANDERS & ASSOCIATES ARCHITECTS, P.C. 6000 ROGERS AVE. N.E. ALBUQUERQUE N.M. 87110 (505) 255-5040 FAX (505) 255-5040

sheet

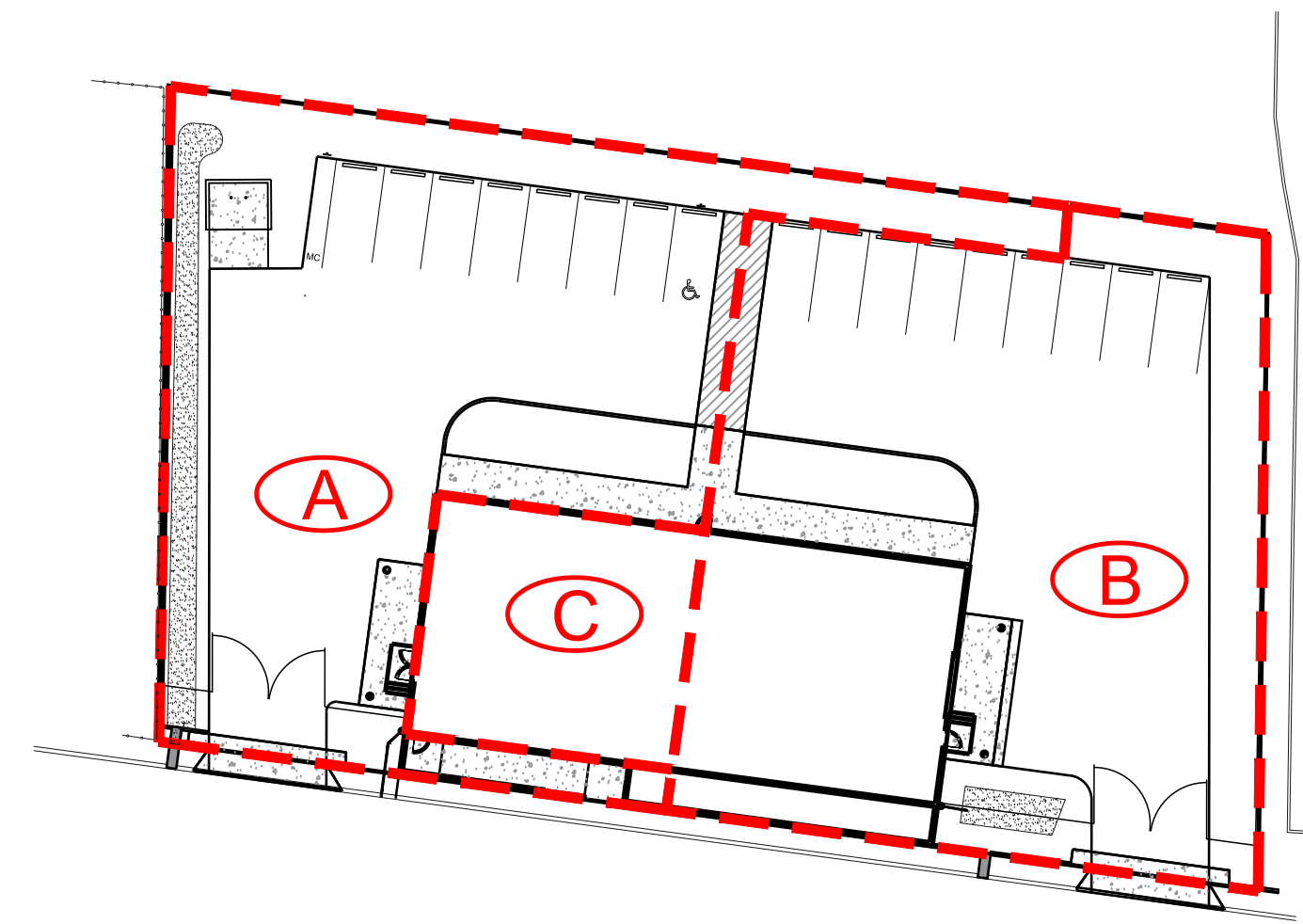
C-2



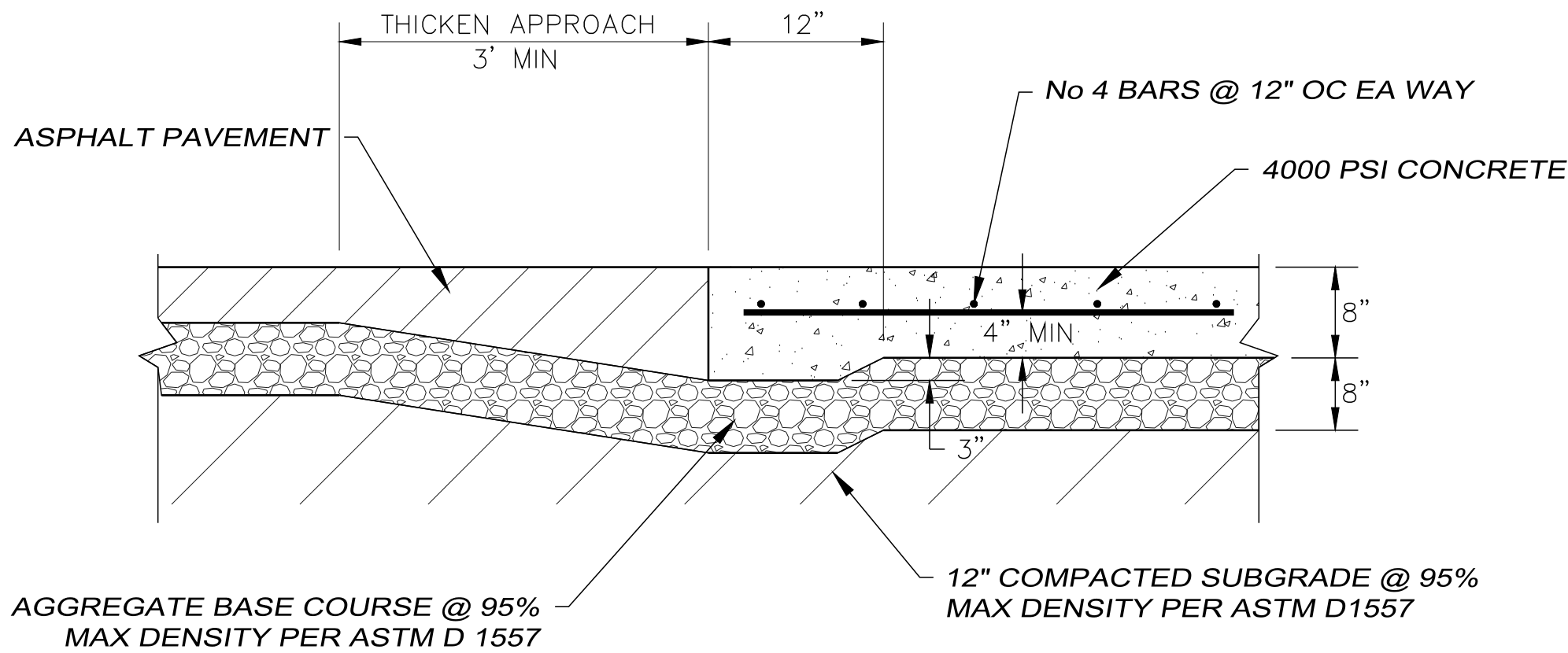
ASPHALT PAVEMENT SECTION
Not to Scale



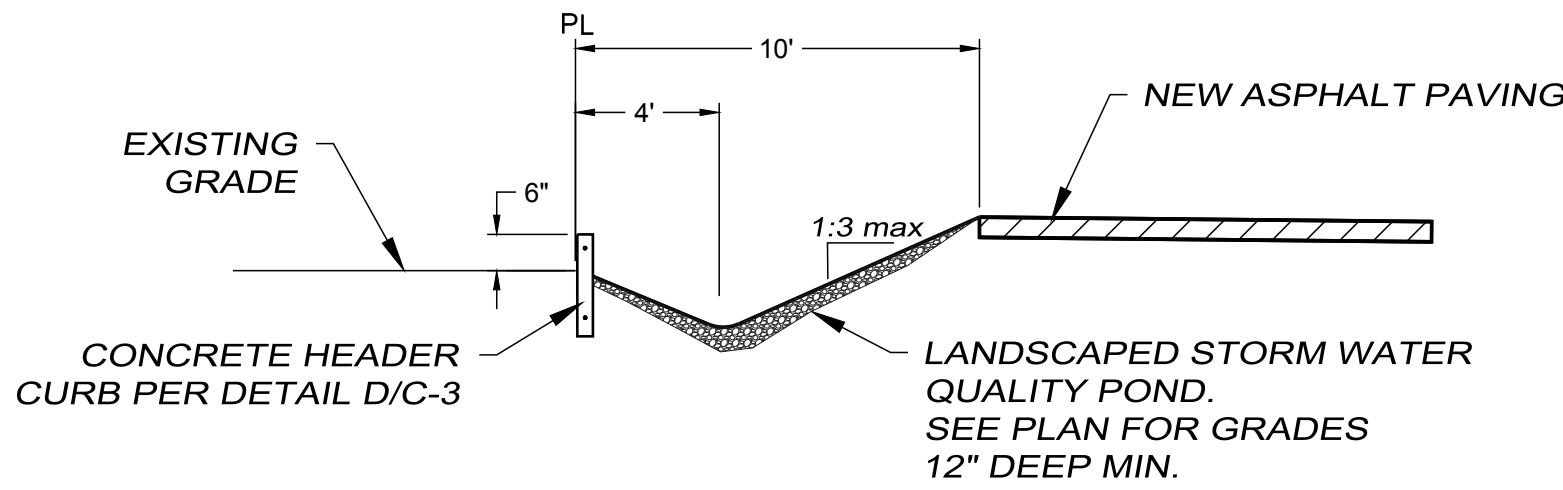
VALLEY GUTTER DETAIL
Not to Scale



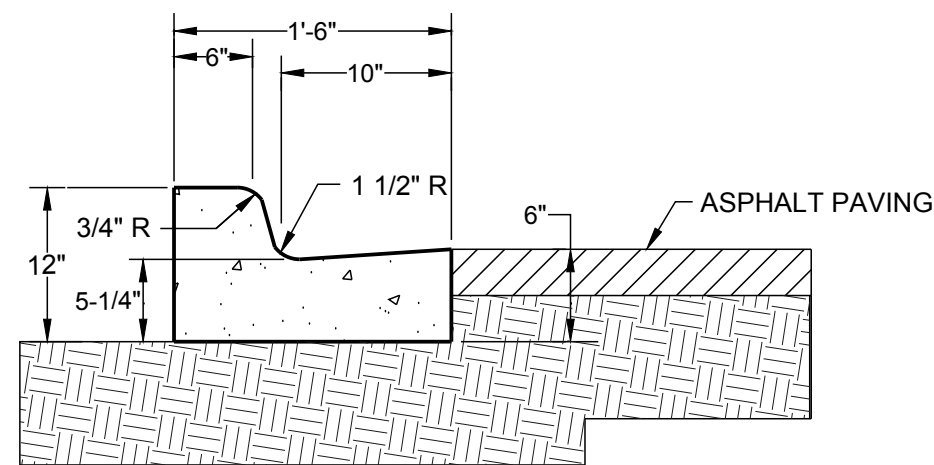
ONSITE DRAINAGE BASIN MAP
NOT TO SCALE



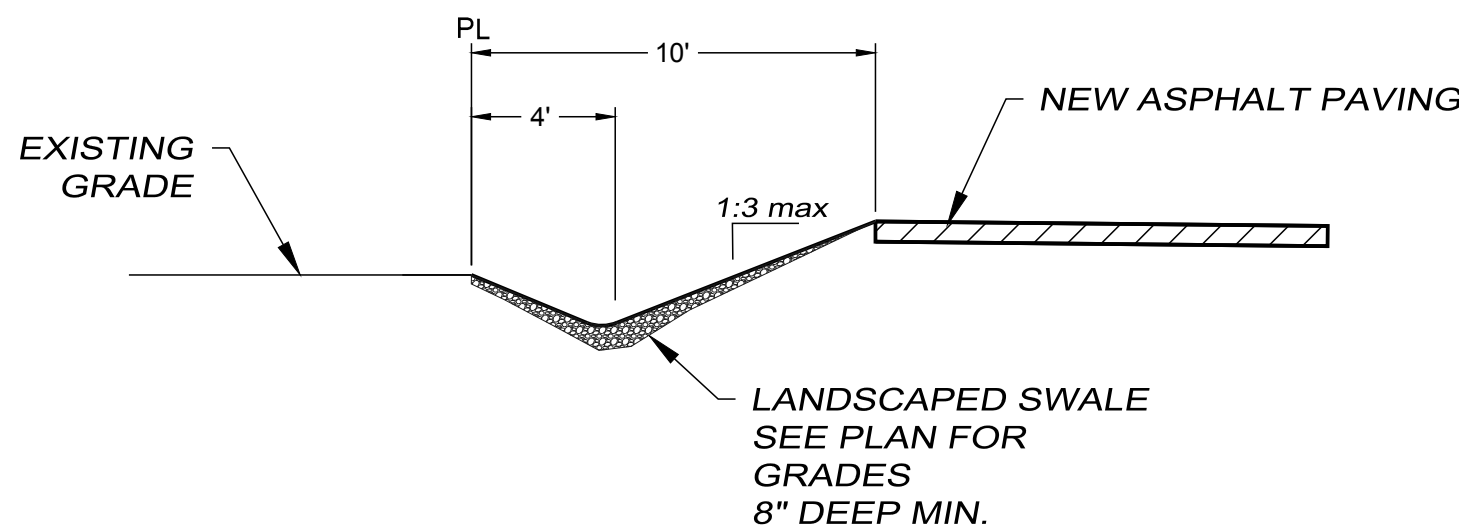
CONCRETE PAVEMENT SECTION
Not to Scale



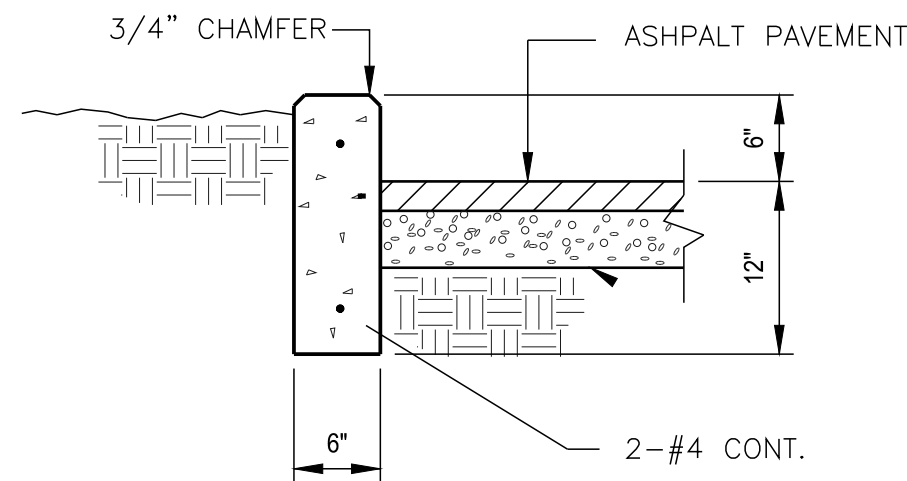
POND SECTION
Not to Scale



CURB & GUTTER DETAIL
Not to Scale



SWALE SECTION
Not to Scale



HEADER CURB DETAIL
Not to Scale

**Private Drainage Facilities within City Right-of-Way
Notice to Contractor**
(Special Order 19 ~ "50-19")

1. An excavation permit will be required before beginning any work within City Right-Of-Way.
2. 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.
3. Two working days prior to any excavation, the contractor must contact **New Mexico One Call, dial "811"** [or (505) 260-1990] for the location of existing utilities.
4. Prior to construction, the contractor shall excavate and verify the locations of all obstructions. Should a conflict exist, the contractor shall notify the engineer so that the conflict can be resolved with a minimum amount of delay.
5. Backfill compaction shall be according to traffic/street use.
6. Maintenance of the facility shall be the responsibility of the owner of the property being served.
7. Work on arterial streets may be required on a 24-hour basis.
8. Contractor must contact Augie Armijo at (505) 857-8607 and Construction Coordination at 924-3416 to schedule an inspection.

SIDEWALK CULVERT CAPACITY

SWQ PONDS A and B DISCHARGE TO COCHITI AVE THROUGH 24 INCH SIDEWALK CULVERTS

BASIN A Q100 = 1.32 cfs
BASIN B Q100 = 1.51cfs

CULVERT CAPACITY IS DETERMINED BY THE WEIR EQUATION:

$Q = CLH^{3/2}$
 $L = 24" = 2.0'$
 $H = 0.67 FT$
 $C = 2.50$
 $Q_{max} = 2.74 cfs$

CULVERT CAPACITY EXCEEDS Q100 FOR EACH BASIN

FIRST FLUSH CRITERIA

By ordinance the site is required to retain the 90th percentile rainfall depth. In order to comply with this criterion, where practical, all surface areas will be routed through landscaped areas before release to downstream public drainage facilities. In addition to the volume within the landscaped areas, excess runoff will be routed through 2 Water Quality Ponds that drain by sidewalk culverts located at Cochiti Avenue. Storage in excess of the 90th percentile rainfall will be provided as illustrated below.

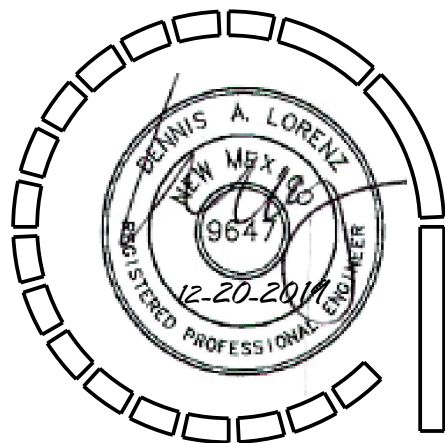
90 th percentile depth	0.44"
Less initial abstraction	0.10"
<hr/>	
Total retained depth	034"

Site Area Type D = 0.51 ac.
Storage requirement = $Ad(0.34") = 0.51 \text{ ac}(43,560 \text{ sf/ac})(0.34"/12"/ft) = 629 \text{ cf}$

First flush storage to be provided within the landscaped Water Quality Ponds.

WQ Pond A Volume = 485 cf
WQ Pond B Volume = 220 cf
Total storage provided = 705 cf

PROJECT HYDROLOGY								
EWS MANUFACTURING BUILDING								
AHYMO								
ZONE:	3							
P ₆ HOUR	2.60							
P ₁₀ DAY	4.90							
EXISTING CONDITIONS								
BASIN	AREA (ac)	A (ac)	B (ac)	C (ac)	D (ac)	E	Q (cfs)	VOL (ac ft)
SITE	0.69	0.00	0.00	0.64	0.05	1.37	2.46	0.079
PROPOSED CONDITIONS								
BASIN	AREA (ac)	A (ac)	B (ac)	C (ac)	D (ac)	E	Q (cfs)	VOL (ac ft)
SITE	0.69	0.00	0.07	0.11	0.51	2.04	3.12	0.117
A	0.30	0.00	0.04	0.06	0.20	1.95	1.32	0.049
B	0.33	0.00	0.03	0.05	0.25	2.07	1.51	0.057
C	0.06	0.00	0.00	0.00	0.06	2.36	0.30	0.012



LORENZ
DESIGN & CONSULTING, LLC
Civil Engineering | Construction Management

2501 Rio Grande Blvd NW, Suite A
Albuquerque, New Mexico 87104
Ph: 505-885-6688 Fax: 505-242-6655

SITE DETAILS

EWS MANUFACTURING BUILDING
10005 COCHITI ROAD SE
ALBUQUERQUE, NEW MEXICO

SANDERS & ASSOCIATES ARCHITECTS, P.C. 6000 ROGERS AVE. N.E. ALBUQUERQUE N.M. 87110 (505) 255-5040 FAX (505) 255-5040

sheet

C-3