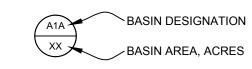


#### **LEGEND**



100 YEAR STORM, CFS

EXISTING SUB-BASIN BOUNDARY

PROPOSED SUB-BASIN BOUNDARY

DIRECTION OF DRAINAGE FLOW

PROPERTY LINE

110 GOLD AVE SOUTHEAST IS APPROXIMATELY 0.44 ACRES IN THE CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO. THIS LOCATION IS NEAR THE INTERSECTION OF BROADWAY BLVD AND GOLD AVE. THE INTENT FOR THIS PROPERTY IS TO BE USED AS AN OVERFLOW PARKING LOT TO SERVE THE HOTEL SITE LOCATED AT THE CORNER OF CENTRAL AND BROADWAY. THERE IS NO DESIGNATED 100-YR FLOOD ZONE SHOWN ON THE SITE.

#### **METHODOLOGY**

BACKGROUND

HYDROLOGY CALCULATIONS FOR THE SITE ARE PERFORMED IN ACCORDANCE WITH THE ALBUQUERQUE DEVELOPMENT PROCESS MANUAL (DPM) SECTION 22.2 USING THE RATIONAL METHOD TO CALCULATE PEAK FLOW RATES TO ENSURE ALL FLOW PATHS ARE SUFFICIENT TO CARRY FLOWS. THE REQUIRED WATER QUALITY VOLUME WAS CALCULATED BY MULTIPLYING THE IMPERVIOUS AREA BY THE FIRST FLUSH RUNOFF VALUE OF 0.26". ALL HYDROLOGIC AND HYDRAULIC CALCULATIONS CAN BE FOUND ON THIS SHEET.

#### **EXISTING CONDITIONS**

THE SITE, IN GENERAL, SLOPES FROM EAST TO NORTHWEST AT VARYING SLOPES FROM 1% - 5%. STORM WATER RUNOFF GENERATED BY THE EXISTING BUILDING AND PARKING AREA OF FLOW GENERALLY TO THE SOUTHWEST AND NORTHWEST. THE EXISTING CONDITION HAVE BEEN SPLIT INTO THREE SUB-BASINS TO INDICATE FLOWS GOING TO THE SOUTHWEST AND NORTHWEST.

SUB-BASIN EC1 IS 0.10 ACRES CONSISTING OF ALL DEVELOPED FLOWS. THE EXISTING FLOW IS 0.47 CFS THAT FLOWS FROM THE EAST TO THE NORTH WEST.

SUB-BASIN EC2 IS 0.305 ACRES. THIS SUB-BASIN CONSISTS OF THE EXISTING BUILDING AND CONCRETE PAD, IT ALSO HAS THE VACANT AREA BEHIND THE EXISTING BUILDING. THE FLOWS GO FROM THE EAST TO THE SOUTH WEST AND GENERATE 1.06 CFS. THE SITE RECEIVES OFFSITE RUNOFF FROM THE BUILDING LOCATED SOUTH OF THE SITE.

SUB-BASIN EC3 IS 0.03 ACRES. THE SUB-BASIN IS FULLY DEVELOPED LOCATED IN THE NORTH EAST CORNER OF THE SITE. THE FLOWS GENERATED ARE 0.15 CFS. FLOWS FROM THIS SUB-BASIN FLOW TO THE NORTH EAST.

#### **DEVELOPED CONDITIONS**

THE DRAINAGE INTENTION OF THE DEVELOPED CONDITIONS IS TO MATCH THE EXISTING DRAINAGE PATTERN. THE SITE HAS BEEN SPLIT INTO TWO DEVELOPED CONDITIONS SUB-BASINS. DEVELOPED FLOWS INCREASE SLIGHTLY BUT ARE CONSIDERED NEGLIGIBLE.

SUB-BASIN DC1 IS 0.175 ACRES CONSISTING OF THE NORTHERN PORTION OF THE PARKING AREA. THERE IS SOME LANDSCAPE ALONG THE SIDES OF THE SITE. STORM WATER RUN-OFF GENERATED BY THE PARKING AREA IS DIRECTED TO THE NORTHWEST AND INTO THE PROPOSED LANDSCAPE AREA. THE SUB-BASIN GENERATES 0.717 CFS AND IS INTENDED TO MATCH EXISTING CONDITIONS.

SUB-BASIN DC2 IS 0.263 ACRES CONSISTING OF THE SOUTHERN PORTION OF THE PARKING AREA. THERE IS SOME LANDSCAPE ALONG THE SIDES OF THE SITE. STORM WATER RUN-OFF GENERATED BY THE PARKING AREA IS DIRECTED TO THE SOUTHWEST AND INTO THE PROPOSED LANDSCAPE AREA. THE SUB-BASIN GENERATES 1.09 CFS AND IS INTENDED TO MATCH EXISTING CONDITIONS. THE SITE RECEIVES OFFSITE RUNOFF FROM THE BUILDING LOCATED SOUTH OF THE SITE.

THE WATER QUALITY TABLE LOCATED ON THIS SHEET THIS SHEET UNDER "HYDROLOGY CALCULATIONS" SUMMARIZES THE WATER QUALITY VOLUMES REQUIRED FOR DEVELOPED CONDITIONS. THERE ARE TWO WATER QUALITY PONDS ONSITE TO ACCOMMODATE DEVELOPED FLOWS. ONE IS LOCATED IN THE NORTHWEST CORNER. THIS POND IS SIZED AT 165.16 CU-FT. FLOWS FROM DC1 FLOW INTO THIS WATER QUALITY POND. THE SECOND WATER QUALITY POND IS LOCATED IN THE SOUTHWEST CORNER AND IS SIZED AT 248.21 CU-FT. FLOWS FROM DC2 FLOW INTO THIS WATER QUALITY POND.

## **Hydrology Calculations**

The following calculations are based on Albuquerque's Development Process Manual, Section 22.2

## Runoff Rate:

## Treatment Type Ares

Subbasin	Area <sub>A</sub> (ac)	Area <sub>B</sub> (ac)	Areac (ac)	Area <sub>D</sub> (ac)	Total (ac) 0.10	
EC1	0.00	0.00	0.00	0.10		
EC2	C2 0.00		0.239	0.085	0.324	
EC3	0.00	0.00	0.00	0.032	0.032	
DC1	0.00	0.043	0.00	0.131	0.174	
DC2 0.00		0.059	0.00	0.223	0.282	

## Peak Discharge values based on Zone 2 from Table A-9

 $Q_A = 1.56 \text{ cfs/ac}$   $Q_B = 2.28 \text{ cfs/ac}$   $Q_C = 3.14 \text{ cfs/ac}$   $Q_O = 4.70 \text{ cfs/ac}$ 

Peak Discharge calculation for a 100yr - 24hr storm event from equation A-10

 Subbasin
 Discharge (cfs)

 EC1
 0.47

 EC2
 1.15

 EC3
 0.15

EC1 0.47

EC2 1.15

EC3 0.15

Total EC 1.77

DC1 0.72

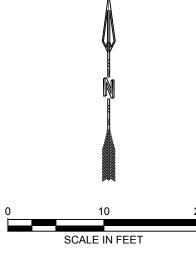
DC2 1.18

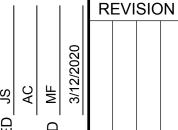
Total DC 1.90

## Water Quality

## Required Water Quality volume for first flush of 0.26"

Subbasin	Volume (cu. Ft.)
DC1	144.18
DC2	239.31
Total	383.49





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PARKING LOT AT 110 GOLD AVE SE, LBUQUERQUE, NM 87102

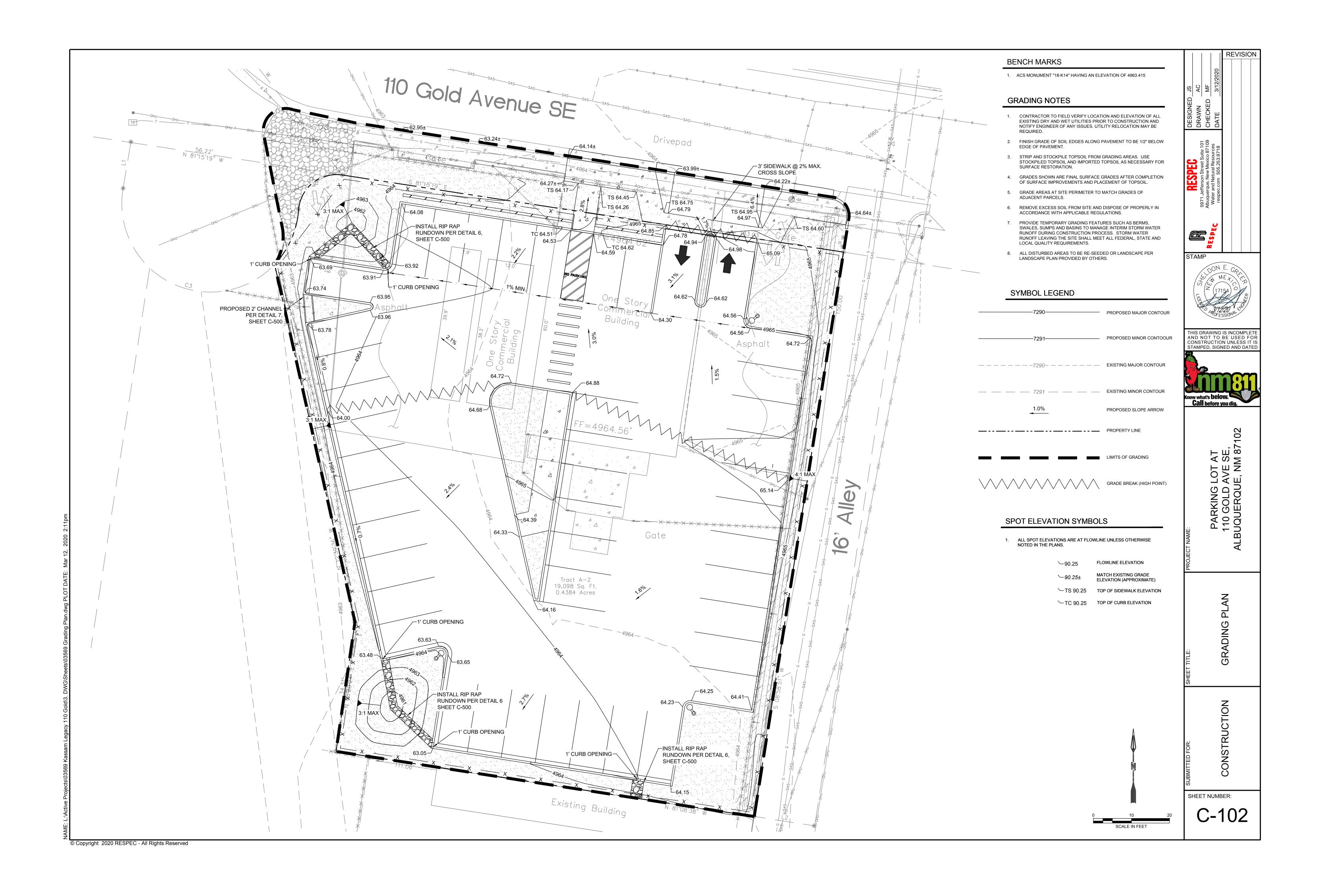
DRAINAGE PLAN

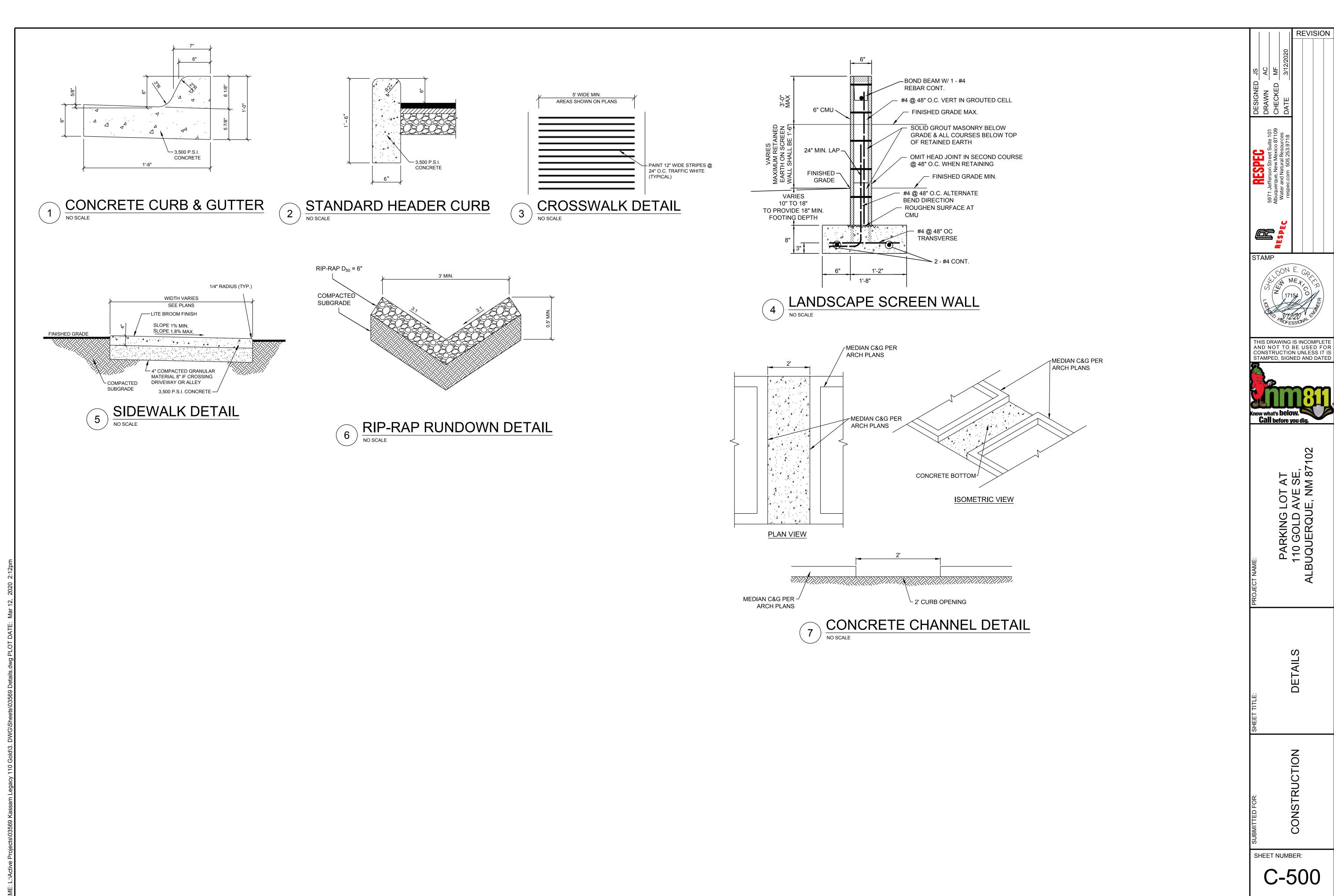
CONSTRUCTION

SHEET NUMBER:

C-101

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# LANDSCAPE LEGEND

	SYMB.	QTY	SIZE (INSTALL)	COMMON/BOTANICAL	MATURE HXW	WATER USE	COVER (EA.)	TOTAL
			Trees					
0		2	2+ Trunks w/ 2"+ Combined Cal.	Desert Willow Chilopsis linearis	2Ø' × 25'	L	625	1250
•	Joseph Land	1	2"+ <i>C</i> al	Texas Red Oak <i>Quercus buckleyi</i>	40' × 40'	M	1600	1600
Z	\$ • (	$\begin{cases} 2 \end{cases}$	2"+ Cal	Chinese Pistache Pistachia chinensis	40' × 30'	М	300	1800
	300	1	2+ Trunks w/ 2"+ Combined Cal.	Chaste Tree Vitex agnus-castus	20' × 20'	M	400	400
2	5	6	Total Trees			Total <sup>-</sup>	Tree Coverage:	5050
	$\sim$		Shrubs & Groundo	covers				
		4	5 Gal	Curl-Leaf Mountain Mahogany Cercocarpus ledifolius	15' × 15'	Low+	225	900
		4	5 Gal	Sotol Dasylirion wheeleri	5' x 5'	RW	25	100
		9	5 Gal	Bear Grass Nolina macrocarpa	5' x 6'	RW	36	324
						Total S	hrub Coverage:	1324

SYMB.	QTY		TYPE	
	5040	SF	Landscape Gravel A with Filter Fabric  3/4" Gray Gravel	
	685	SF	Oversize Landscape Gravel / No Filter Fabric 2-4" Angular Cobble/RipRap	
			Concrete See site plan	
			Asphalt Parking Areas and Drivelanes See site plan	
			Stormwater Management Depression	

# SHRUB PLANTING KEYED NOTES

- SHRUB LOCATION, SPECIES, AND CONDITION AS PER PLAN.
- INSTALL WITH TOP OF ROOT BALL FLUSH WITH SUBGRADE (BOTTOM OF MULCH) 3. USE WOOD CHIP MULCH OVER ROOTBALL, FEATHERED TO A 2" DEPTH AND HELD BACK 2"
- 4. 2" HIGH imes 8" WIDE BERM
- 5. BACKFILL PER SPECIFICATIONS. LIGHTLY TAMP IN LIFTS AND WATER-IN TO ELIMINATE VOIDS
- AND AIR POCKETS. 6. UNDISTURBED NATIVE SOIL.
- SCARIFY AND LOOSEN EDGES OF PLANTING PIT. 8. MULCH - SEE PLANTING PLAN. 3" DEPTH UNLESS OTHERWISE NOTED.

SHRUB PLANTING DETAIL

# TREE PLANTING KEYED NOTES

- TREE LOCATION, SPECIES, AND CONDITION AS PER PLAN. REMOVING EXISTING SOIL (FROM NURSERY) AS NEEDED TO EXPOSE ROOT FLARE. INSTALL WITH ROOT FLARE FLUSH WITH SUBGRADE (BOTTOM OF MULCH) INSTALL TREE PLUMB. REMOVE WIRE BASKET, WOOD BOX, PLASTIC, TWINE, AND/OR ROPE
- PRIOR TO BACKFILL. REMOVE BURLAP EXCEPT FROM BOTTOM OF ROOT BALL. SCARIFY AND LOOSEN EDGES OF PLANTING PIT.
- 5. BACKFILL PER SPECIFICATIONS, LIGHTLY TAMP IN LIFTS AND WATER-IN TO ELIMINATE VOIDS AND AIR POCKETS. 6. UNDISTURBED NATIVE SOIL UNDER ROOTBALL TO PREVENT SETTLING.
- INSTALL WOOD CHIP ORGANIC MULCH OVER ROOTBALL AND BELOW DRIP LINE. GENERALLY, MULCH SHOULD BE HELD 4" BACK FROM TREE TRUNK
- 8. 4" HIGH X 16" WIDE COBBLE BERM AT DRIP LINE. 9. MULCH - SEE PLANTING PLAN

## TREE PLANTING

TREE PLANTING DETAIL

LANDSCAPE CALCULATIONS

APPLICABLE REGULATION(S)

TOTAL LOT AREA (ACRES)

TOTAL LOT AREA (SF)

BUILDING AREA (SF)

ZONING

Ø.44 GROUNDCOYER (% - REQ) 19166 GROUNDCOYER (SF - REQ) GROUNDCOVER (SF - PROV.) 19,166 PARKING LOT AREA (SF)

IDO 14-16-5-6 AND PART 6-6-2 OF ROA 1994

NR-LM: LIGHT MANUFACTURING

SCALE: 1" = 20'-0"

NET LOT AREA (SF) REQUIRED LANDSCAPE (%) REQ. PARKING LANDSCAPE 10% (SF) REQUIRED LANDSCAPE (SF) 2875 PROY. PARKING LANDSCAPE (SF) LANDSCAPE PROVIDED (SF) 5725 REQ. PARKING TREES (1/10 SPOTS) PROV. PARKING TREES

YEGETATIVE COYER (% - REQ) 75*.*Ø VEGETATIVE COVER (SF - REQ) 4294 COOL SEASON GRASS (SF) VEGETATIVE COVER (SF - PROV.) COOL SEASON GRASS (% OF LANDSCAPE)

110 Gold Avenue SE

| B' x 70 = 1050 9F |
| Edge Landscape Buffer

15' x 20 = 300 SF Edge Landscape Buffer

Parking Boundary

# ) SHEET KEYED NOTES

#### CODE DESCRIPTION

30' x 23 = 690 SF Edge Landscape Buffer

STREET TREES

Trees Required: 5 Trees Provided: 5

PROPOSED CURB OPENING. SEE CIVIL/SITE PLAN. PROPOSED CMU WALL, SEE CIVIL/SITE PLAN. WATER AND ELECTRICAL FOR IRRIGATION, SEE CIVIL/UTILITY PLAN TYPICAL II'XII' CLEAR SIGHT TRIANGLE, LANDSCAPING AND SIGNAGE WILL NOT INTERFERE WITH CLEAR SIGHT REQUIREMENTS. THEREFORE

SIGNS, WALLS, TREES, AND SHUBBERY BETWEEN 3 AND 8 FEET TALL (AS MEASURED FROM THE GUTTER PAN) WILL NOT BE ACCEPTABLE IN

THE CLEAR SIGHT TRIANGLE

Landscape Linear Frontage: 109'

GENERAL NOTES

IT IS THE INTENT OF THIS PLAN TO COMPLY WITH APPLICABLE CITY WATER CONSERVATION LANDSCAPING AND WATER WASTE ORDINANCE PLANTING RESTRICTION APPROACH. WASTE PROVISIONS OF THE WATER CONSERVATION LANDSCAPING AND WATER WASTE

LANDSCAPE MAINTENANCE SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER. THE PROPERTY OWNER SHALL MAINTAIN STREET TREES IN A LIVING, HEALTHY, AND ATTRACTIVE

APPROVAL OF THIS PLAN DOES NOT CONSTITUTE OR IMPLY EXEMPTION FROM WATER WASTE PROVISIONS OF THE WATER CONSERVATION LANDSCAPING AND WATER WASTE ORDINANCE. WATER MANAGEMENT IS THE SOLE RESPONSIBILITY OF THE PROPERTY OWNER.

ALL LANDSCAPING WILL BE IN CONFORMANCE WITH THE CITY OF RIO RANCHO ZONING CODES, LAND-USE ORDINANCES, AND WATER CONSERVATION LANDSCAPING AND WATER WASTE ORDINANCE. IN GENERAL, WATER CONSERVATIVE, ENVIRONMENTALLY SOUND LANDSCAPE PRINCIPLES WILL BE FOLLOWED IN DESIGN AND INSTALLATION.

GRAY GRAVEL OVER FILTER FABRIC TO A MINIMUM DEPTH OF 3" SHALL BE PLACED IN ALL LANDSCAPE AREAS WHICH ARE NOT DESIGNATED TO RECEIVE NATIVE SEED OR OTHER HATCHED GROUNDCOVER AREA. ALL GRAVEL SHALL BE PLACED .5"-1" LOWER THAN ADJACENT HARD SURFACES.

PRIOR TO CONSTRUCTION, LANDSCAPE CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITY LINES. IN CASE OF A DISCREPANCY BETWEEN UTILITIES INDICATED ON PLAN AND ACTUAL FIELD VERIFICATION, CONTRACTOR SHALL CEASE WORK AND NOTIFY LANDSCAPE ARCHITECT IMMEDIATELY FOR DIRECTIONS ON HOW TO PROCEED.

POSITIVE DRAINAGE AWAY FROM ALL STRUCTURES IS TO REMAIN AFTER ALL LANDSCAPE WORK IS COMPLETED.

# IRRIGATION NOTES:

1424

IRRIGATION SYSTEM MAINTENANCE AND OPERATION SHALL BE THE SOLE RESPONSIBILITY OF THE OWNER. IT SHALL BE THE OWNERS RESPONSIBILITY TO ENSURE THAT FUGITIVE WATER DOES NOT LEAVE THE SITE DUE TO OVERWATERING OR MALFUNCTIONING EQUIPMENT.

ALL ON-SITE PLANT MATERIAL, NEW AND EXISTING, SHALL BE IRRIGATED BY COMPLETE, AUTOMATIC DRIP IRRIGATION WITH SUBTERRANEAN LATERALS. TREES SHALL RECEIVE ONE (1) NETAFIM SPIRAL (50' LENGTH) WITH 3 LOOPS AT A FINAL RADIUS OF 4.5' FROM TREE TRUNK, PINNED IN PLACE. NETAFIM SHALL HAVE EMITTERS 12" O.C. WITH A FLOW OF .6 GPH. SHRUBS TO RECEIVE (2) 1.0 GPH DRIP EMITTERS. DRIP AND BUBBLER SYSTEMS TO 18.75 BE TIED TO 1/2" POLYPIPE WITH FLUSH CAPS AT EACH END.

RUN TIME PER EACH SHRUB DRIP VALVE WILL BE APPROXIMATELY 15 MINUTES PER DAY. TREE DRIP VALVE SHALL RUN 1.5 HOURS, 3 TIMES PER WEEK. RUN TIME WILL BE ADJUSTED ACCORDING TO THE SEASON.

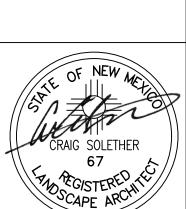
POINT OF CONNECTION FOR IRRIGATION SYSTEM IS UNKNOWN AT CURRENT TIME AND WILL BE COORDINATED IN THE FIELD. IRRIGATION WILL BE OPERATED BY AUTOMATIC CONTROLLER.

5725 LOCATION OF CONTROLLER TO BE FIELD DETERMINED AND POWER SOURCE FOR

CONTROLLER TO BE PROVIDED BY OTHERS.

IRRIGATION MAINTENANCE SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER.

WATER AND POWER SOURCE SHALL BE THE RESPONSIBILITY OF THE DEVELOPER/BUILDER.

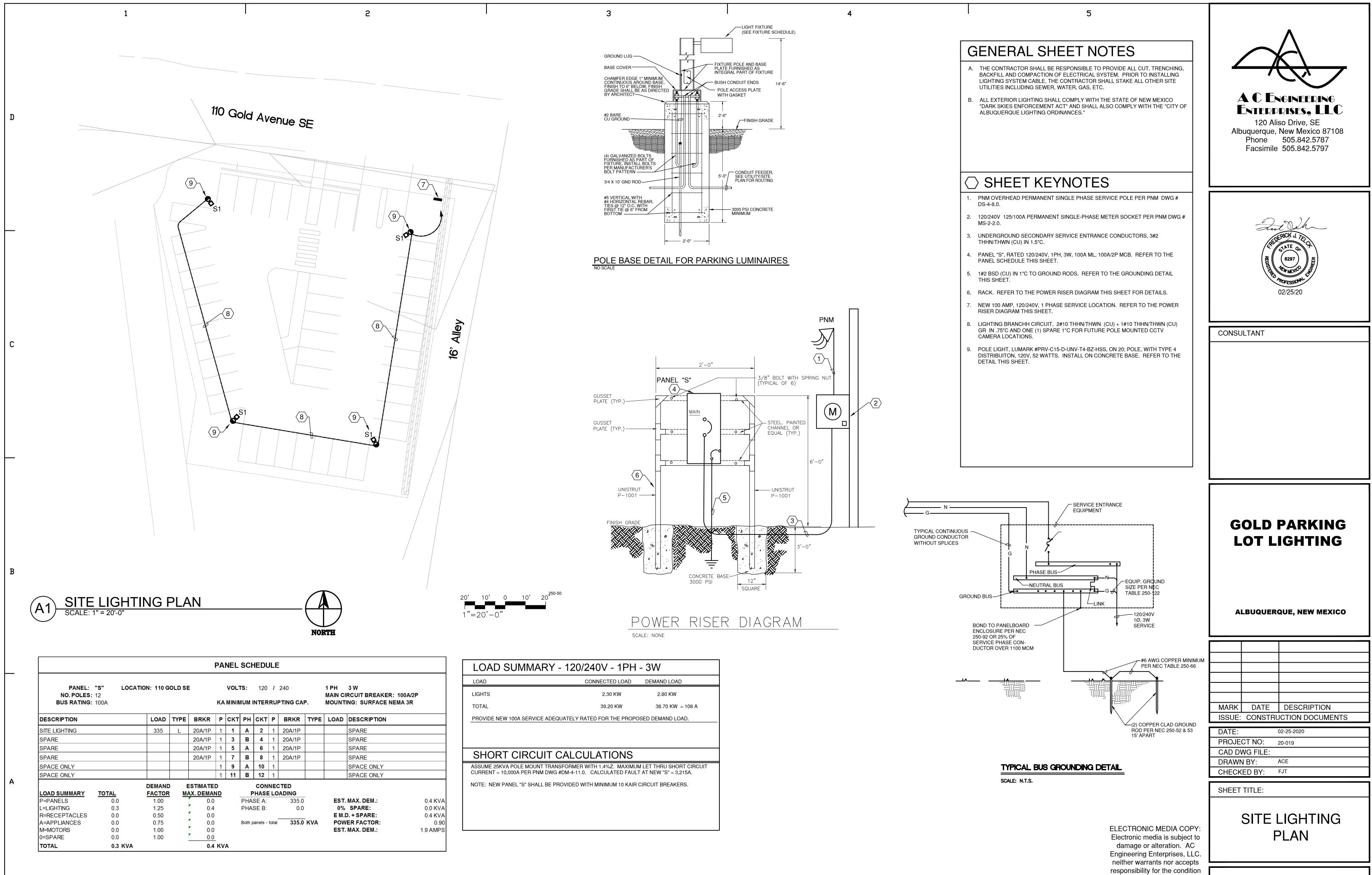


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