

June 12, 2020

Reza Amirrezvani
SSCW Companies
1830 N. 95th Avenue, Suite 106
Phoenix, AZ 85037
Phone: (602) 421-6717
Email: r.amirrezvani@superstarcarwashaz.com



Subject: Traffic Impact Statement – Super Star Car Wash – Mesa, Arizona

Dear Mr. Amirrezvani:

Y2K Engineering, LLC. {Y2K} has been retained to prepare a traffic impact statement for the proposed Super Star Car Wash located within the Safeway Center in the northwest corner of Signal Butte Road and Point Twenty-Two Boulevard/Warner Road in Mesa, Arizona. The original and approved masterplan for the site, The Point at Eastmark, did not include a car wash land use. A Super Star Car Wash is now proposed in the northeast corner of the site altering the proposed land uses in that location. **Figure 1** provides a project location map.

EXISTING CONDITIONS

SURROUNDING LAND USE

The proposed site for the Super Star Car Wash development is in the northeast corner of the Safeway Center (The Point at Eastmark) shopping center. The updated site plan depicts a retail building to west and a sit-down restaurant to the south.

ROADWAY NETWORK

Site access to the shopping center is from Signal Butte Road and Point Twenty-Two Boulevard. The Super Star Car Wash will primarily be accessed from the northern full access driveway on Signal Butte Road. The driveways and auxiliary lanes will be constructed as part of the Safeway Center mixed-use development. An aerial of the surrounding roadway network is depicted in **Figure 2**.

Signal Butte Road has recently been improved to a six-lane arterial roadway with three lanes and a bike lane in each direction divided by a center left-turn lane, adjacent to the site. Sidewalks are provided on both sides of the street. The posted speed limit adjacent to the site is 45 mph. Per the City of Mesa's Traffic Count Map, the 2019 daily traffic volume on Signal Butte Road, adjacent to the site, is 17,992 vehicles per day (vpd).



Point Twenty-Two Boulevard/Warner Road is a four-lane arterial roadway with two lanes and a bike lane in each direction divided by raised median adjacent to the shopping center. Sidewalks are provided on both sides of the street. West of Signal Butte Road, the roadway is named Point Twenty-Two Boulevard and travels through the Eastmark development from Signal Butte Road to Ellsworth Road. East of Signal Butte Road, the roadway is on the Warner Road alignment and terminates one mile east at Meridian Road. The posted speed limit adjacent to the site is 35 mph. Per the City of Mesa's Traffic Count Map, the 2019 daily traffic volume on Warner Road, east of Signal Butte Road, is 5,195 vehicles per day (vpd).

The intersection of **Signal Butte Road and Point Twenty-Two Boulevard** is four legged and controlled by a traffic signal. The eastbound approach consists of a dedicated left-turn lane, a through lane and a shared through/right-turn lane. The westbound approach consists of a dedicated left-turn lane, two through lanes, and a dedicated right-turn lane. The northbound and southbound approaches consist of a dedicated left-turn lane, three through lanes, a bike lane, and a dedicated right-turn lane.

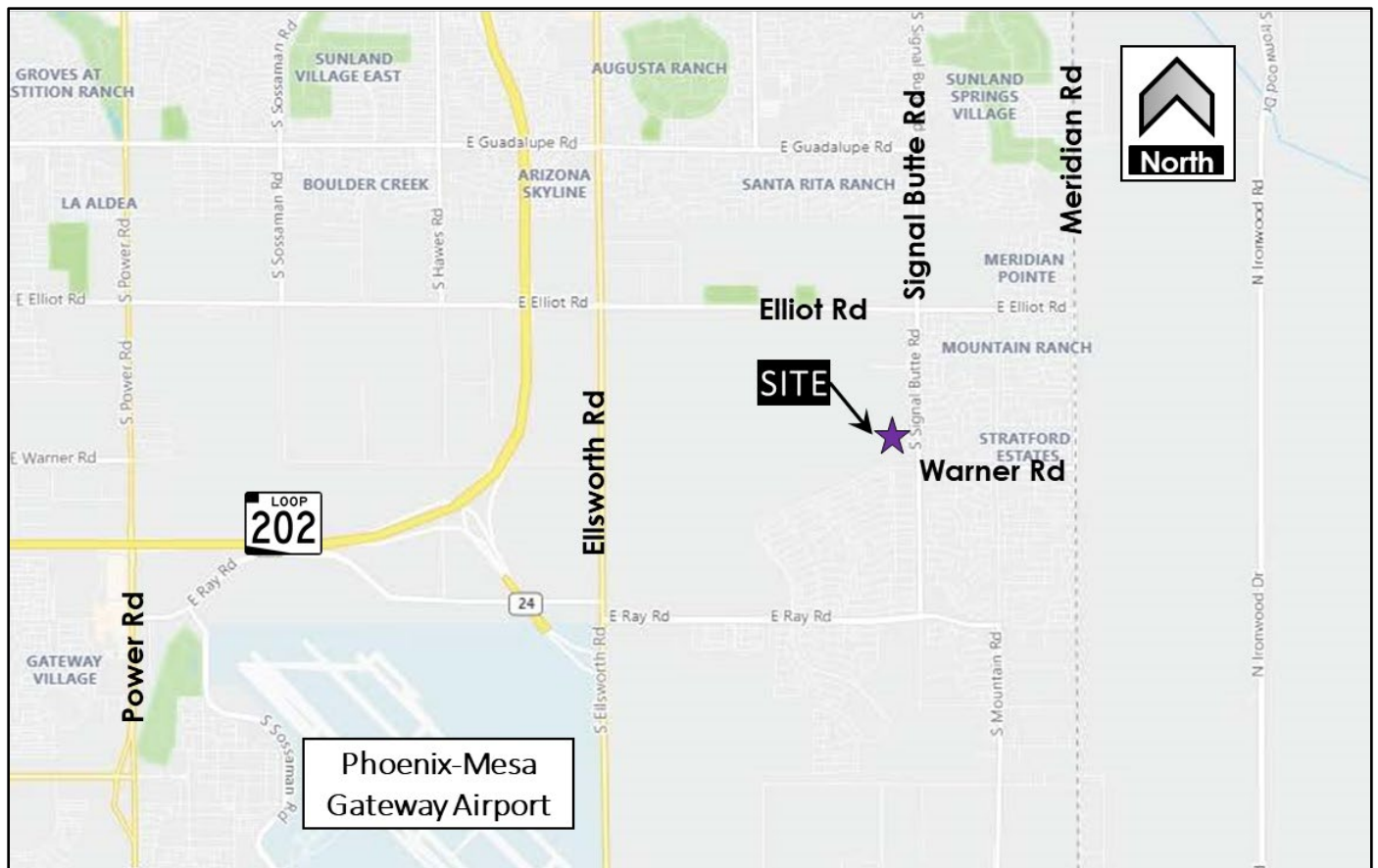


Figure 1: Project Location Map



Figure 2: Existing Lane Configuration and Stop Control

PROPOSED DEVELOPMENT

SITE LOCATON, LAND USE, AND ACCESS

The proposed Super Star Car Wash will be located within the Safeway Center in the northwest corner of Signal Butte Road and Point Twenty-two Boulevard/Warner Road in Mesa, Arizona. The original and approved masterplan for the site, The Point at Eastmark, did not include a car wash land use. A Super Star Car Wash is now proposed in the northeast corner of the site altering the proposed land uses in that location. The Super Star Car Wash will be an automated car wash facility with one 4,076 square-foot wash tunnel and parking for 24 covered vacuum stalls.

The car wash facility will operate from 7 AM to 8 PM seven days a week. During slow to moderate business traffic, there will be a minimum of 3 employees on staff with 5 employees during peak times.

Site access to the shopping center is from Signal Butte Road and Point Twenty-Two Boulevard. The Super Star Car Wash will primarily be accessed from the northern full access driveway on Signal Butte Road. The driveways and auxiliary lanes will be constructed as part of the Safeway Center mixed-use development.

The car wash queuing lane will have three automated pay stations. The queuing lane has space for approximately 11 vehicles (based on spacing of 25 feet) while advancing to the three pay stations. In addition, there is storage for approximately 9 vehicles between the pay stations and the entrance to the tunnel. As such, the plan provides a total stacking of 20 vehicles. Signs are proposed directing traffic through the Super Star Car Wash site to avoid cutting through the parking lot serving the restaurant to the south.

The site plan is attached to this traffic impact statement and is depicted in **Figure 3**. The Master Site Plan is depicted in **Figure 4**.

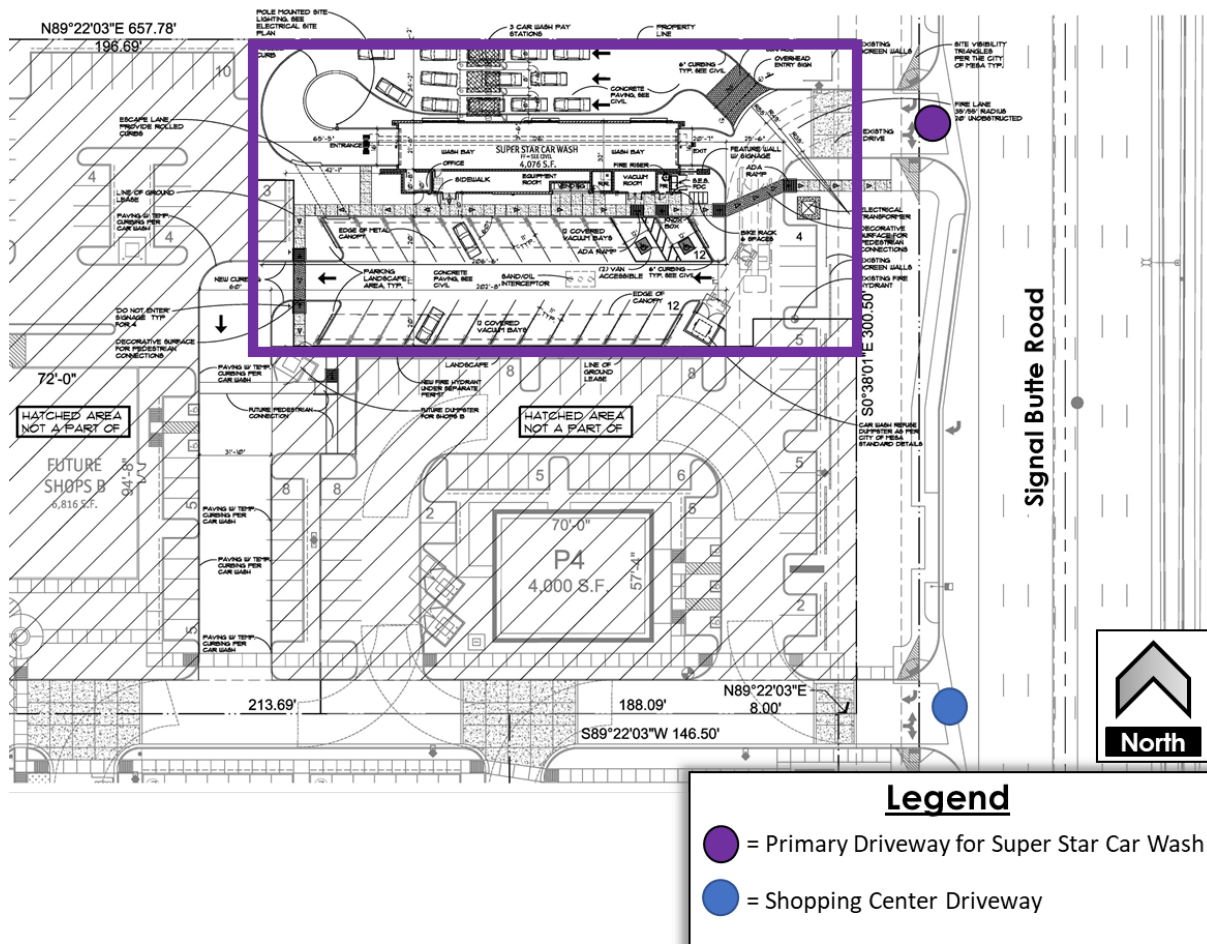
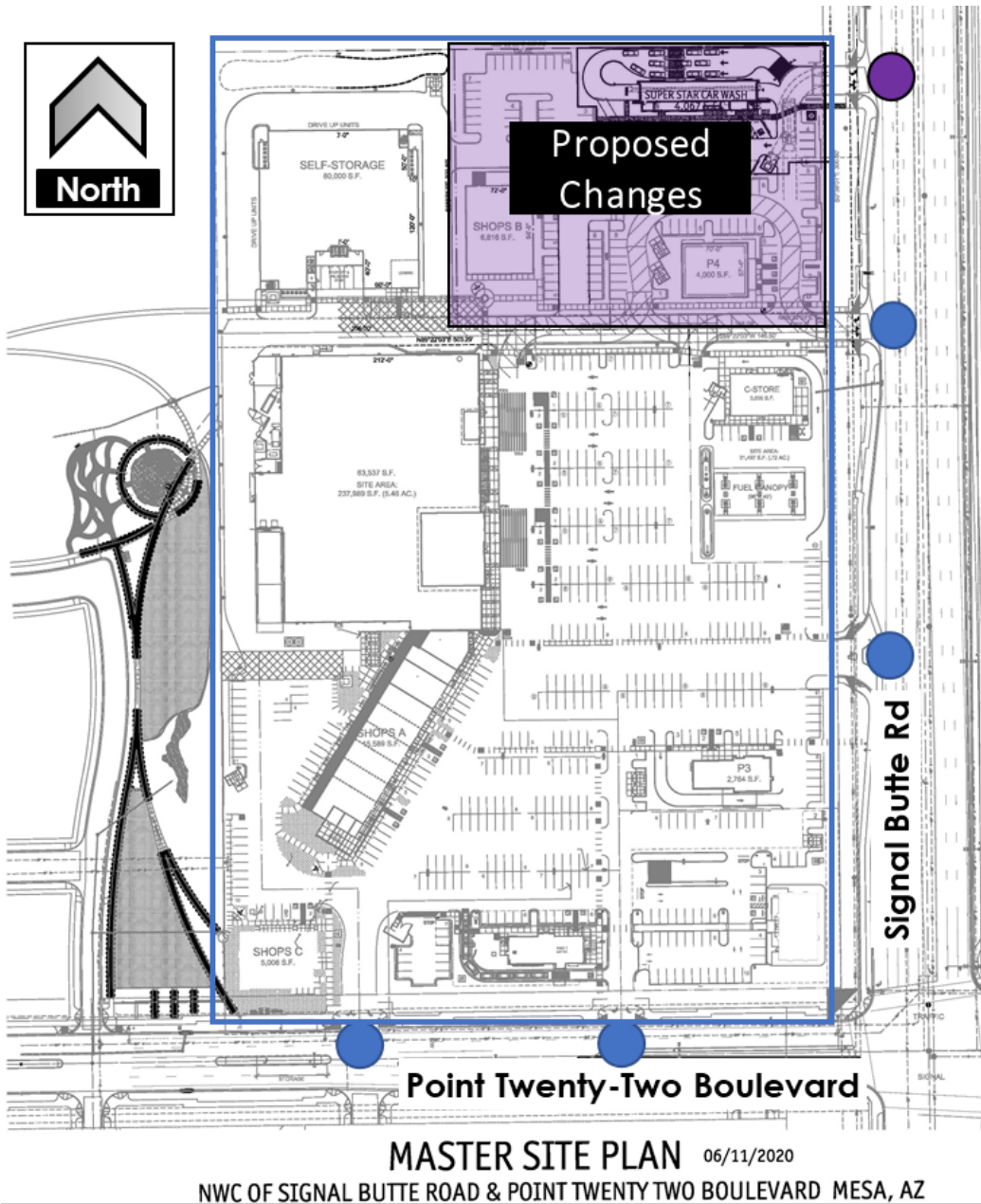


Figure 3: Super Star Car Wash Site Plan



Legend

- = Primary Driveway for Super Star Car Wash
- = Shopping Center Driveway

Figure 4: Master Site Plan



TRIP GENERATION

The trip generation for the project was estimated utilizing the Institute of Transportation Engineers’ (ITE) *Trip Generation Manual, 10th Edition*. ITE’s *Trip Generation Manual, 10th Edition* contains data collected by various transportation professionals for a wide range of different land uses. The data summarized in the manual include average rates and equations that have been established correlating the relationship between an independent variable that describes the development size and generated trips for each categorized land use. The manual provides information for daily and peak hour trips. Land Use Category (LUC) 948, Automated Car Wash, best fits the proposed development.

The ITE *Trip Generation Manual, 10th Edition* does not provide data for the daily and AM peak hour for the Automated Car Wash land use. Therefore, only the weekday PM peak hour is reported, which is expected to be more than the AM peak hour. Per the Super Star Car Wash, the maximum peak hour vehicles expected is 50 vehicles on a weekday afternoon and 75 during the Saturday peak at 11:00 AM.

The weekday generated trips for the proposed Super Star Car Wash are summarized in **Table 1**. The estimated trips provided by the Super Star Car Wash are greater than those estimated by the ITE *Trip Generation Manual*, and therefore were utilized to estimate the peak hour trips.

Table 1: Super Star Car Wash Trip Generation – Weekday

DESCRIPTION OF LAND USE			VEHICLE GENERATED TRIPS		
			Weekday PM Peak Hour		
LAND USE	ITE LUC	SIZE	Enter	Exit	Total
Super Star Car Wash ¹	948	1 Car Wash Tunnel	39	39	78
Super Star Car Wash ²			50	50	100

1. Source: ITE’s *Trip Generation Manual, 10th Edition*. The average rate and directional distributions are provided below:
 Weekday PM Average Rate: 77.50 In: 50%, Out: 50%

2. Estimate provided from Super Star Car Wash

TRIP GENERATION COMPARISON

The original and approved masterplan for the site, The Point at Eastmark, did not include a car wash land use. A Super Star Car Wash is now proposed in the northeast corner of the site altering the proposed land uses in that location. A trip generation comparison was prepared for the northeast corner of the site to determine the difference in trips between the two overall site plans. The trip generation for the other land uses was estimated utilizing the Institute of Transportation Engineers’ (ITE) *Trip Generation Manual, 10th Edition*. ITE’s *Trip Generation Manual, 10th Edition*.

Table 2 and **Table 3** summarize the trip generation for the affected corner of the original and proposed site plans respectively. **Table 4** provides a trip generation comparison.



Table 2: Weekday PM Peak Hour Trip Generation for NEC of Original Site Plan

DESCRIPTION OF LAND USE				Trip Generation PM Peak		
Land Use	ITE LUC	SIZE		Enter	Exit	Total
P4. Fast Food Restaurant w. Drive Through	934	2.4	KSF	41	37	78
Shops B: Shopping Center	820	12	KSF	22	24	46
P5. Fast Food Restaurant w. Drive Through	934	3	KSF	51	47	98
Total				114	108	222

Table 3: Weekday PM Peak Hour Trip Generation for NEC with Proposed Super Star Car Wash

DESCRIPTION OF LAND USE				Trip Generation PM Peak		
Land Use	ITE LUC	SIZE		Enter	Exit	Total
P4. High Turnover Sit-Down Restaurant	932	4	KSF	24	15	39
Shops B: Shopping Center	820	6.816	KSF	12	14	26
Super Star Car Wash	-	1 CarWash Tunnel		50	50	100
Total				86	79	165

Table 3: Weekday PM Peak Hour Trip Generation Comparison

Northeast Corner of Safeway Center Scenario	Weekday PM Peak Hour		
	Enter	Exit	Total
Original Site Plan	114	108	222
Proposed Site Plan with Super Star Car Wash	86	79	165
Difference	-28	-29	-57

The proposed site plan with the Super Star Car Wash will generate 57 less trips during the PM peak hour than the land uses included with the original master site plan.

QUEUING

A separate entrance is provided on-site for the car wash queuing lane, which will have three automated pay stations. The queuing lane has space for approximately 11 vehicles (based on spacing of 25 feet) while advancing to the three pay stations. In addition, there is storage for approximately 9 vehicles between the pay stations and the entrance to the tunnel. As such, the plan provides a total stacking of 20 vehicles. Further, the car wash tunnel itself can hold multiple vehicles. The pay stations are able to process up to 80 vehicles an hour, and the tunnel is able to process 130 vehicles per hour. Therefore, significant stacking of vehicles is not expected, and ample storage is provided per the site plan. Similar automated car washes in the local area were observed with queues less than ten vehicles during the peak times.



There will be three pay stations (XPT Terminals). Each XPT terminal is capable of processing up to 80 cars per hour. Customers will enter the XPT lanes to select the level of wash service desired and complete the payment transaction. There will be attendants to assist the customer through this process. Additionally, Super Star Car Wash sells Unlimited Car Wash Monthly plans. Their experience at other existing locations is that nearly 50% of their customers purchase and use these plans. When these plan members utilize the car wash, the payment process is quick as the XPT scanner automatically reads their RFID tag.

Once the customers exit the pay terminal towards the car wash tunnel, there are vehicle sensors built into the concrete that monitor the order of the vehicles as they leave the pay terminals and merge into the car wash tunnel. The wash tunnel is capable of processing up to 130 cars per hour and still deliver the desired optimal washing quality. There will be an attendant to guide the customer onto the conveyor and provide instructions for the safe and efficient movement of the vehicle through the car wash while the customer remains inside their vehicle.

After exiting the wash tunnel, the customer has the option to park at the vacuum stations. There will be attendants in this area to guide the customer in and out of the vacuum stations safely. In the car wash Industry's Express model, approximately 25% of the customers that go through the wash tunnel will stop and vacuum their cars.

PRINCIPAL FINDINGS

- Per the Super Star Car Wash, the maximum peak hour vehicles expected is 50 vehicles on a weekday afternoon and 75 vehicles during the Saturday peak at 11:00 AM.
- The proposed site plan with the Super Star Car Wash will generate 57 less trips during the PM peak hour than the land uses included on the original master site plan.
- A separate entrance is provided on-site for the car wash queuing lane, which will have three automated pay stations. The queuing lane has space for approximately 11 vehicles (based on spacing of 25 feet) while advancing to the three pay stations. In addition, there is storage for approximately 9 vehicles between the pay stations and the entrance to the tunnel. As such, the plan provides a total stacking of 20 vehicles. Further, the car wash tunnel itself can hold multiple vehicles. The pay stations are able to process up to 80 vehicles an hour, and the tunnel is able to process 130 vehicles per hour. Therefore, significant stacking of vehicles is not expected, and ample storage is provided per the site plan. Signs are proposed directing traffic through the Super Star Car Wash site to avoid cutting through the parking lot serving the restaurant to the south.

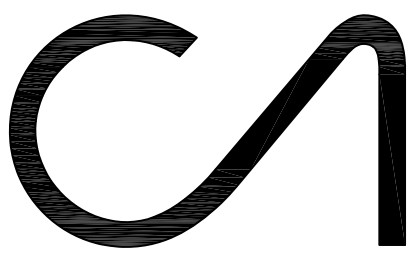
Sincerely,
Y2K Engineering, LLC.

A handwritten signature in black ink that reads 'Kelly S. Fletcher'.

Kelly S. Fletcher, PE
Senior Traffic Engineer



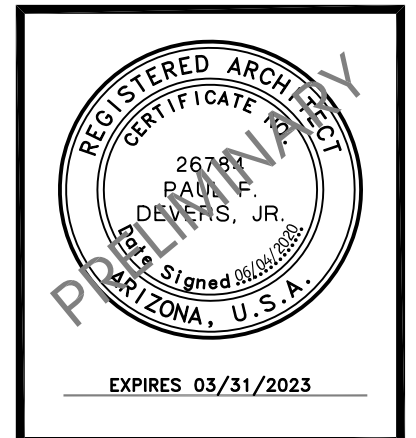
**ATTACHMENT A:
SITE PLANS**



CAWLEY ARCHITECTS

730 N. 52nd St. Ste. 203
Phoenix, Arizona 85008
P 602.393.5060

CawleyArchitects.com



SUPERSTAR CAR WASH

NWC SIGNAL BUTTE ROAD AND POINT TWENTY TWO BOULEVARD
MESA, AZ

DATE
DRC SUBMITTAL 3-13-2020
DR SUBMITTAL 4-15-2020
DR COMMENTS 6-04-2020

NOTICE OF ALTERNATE BILLING CYCLE:
This contract allows the owner to require submission of billing or estimates in billing cycles other than thirty days. A written description of such other billing cycle applicable to this project is available from the owner or the owner's designated agent (see owner's telephone number and address on cover sheet) and the owner or its designated agent shall provide this written description upon request.

The architectural design and data presented in these documents is an instrument of service provided by Cawley Architects.
All discrepancies found in these documents or conflicts between these documents and actual field conditions shall be reported to Cawley Architects for resolution prior to commencement of the work.
Discrepancies between bid amounts and these documents shall be reported to the General Contractor prior to commencement of work.

Project: 19155P
A1.1

SITE DATA

PROJECT:	SUPER STAR CAR WASH
ADDRESS:	NWC SIGNAL BUTTE ROAD AND POINT TWENTY TWO BOULEVARD MESA, AZ 85212
DEVELOPER:	SUPERSTAR CAR WASH 1830 N. 95TH AVENUE SUITE-106 PHOENIX, ARIZONA 85037 PHONE: 602.421.6717 CONTACT: REZA AMIRREZVANI
SCOPE:	A NEW 4,076 S.F. SUPERSTAR EXPRESS CAR WASH PROVIDING PROFESSIONAL AND AUTOMATED SERVICES
LEGAL DESCRIPTION:	SEE CIVIL
ASSESSOR PARCEL NO.:	312-08-967
ZONING:	PC
SITE AREA:	+/- 32,637 S.F. +/- 0.75 ACRES
BUILDING AREA:	4,076 S.F. GROSS
STORIES:	SINGLE STORY
LOT COVERAGE:	12.5 %
LANDSCAPE AREA:	6,941 S.F.
LANDSCAPE COVERAGE:	21.3 %
OCCUPANCY:	B
CONSTRUCTION TYPE:	V-B
ALLOWABLE AREA:	36,000 S.F. (SINGLE STORY)
SLOPE DEPTH:	1/4" PER 1'-0" MIN.
SCREENING HEIGHT:	50" MAX.
BUILDING HEIGHT:	25'-4"

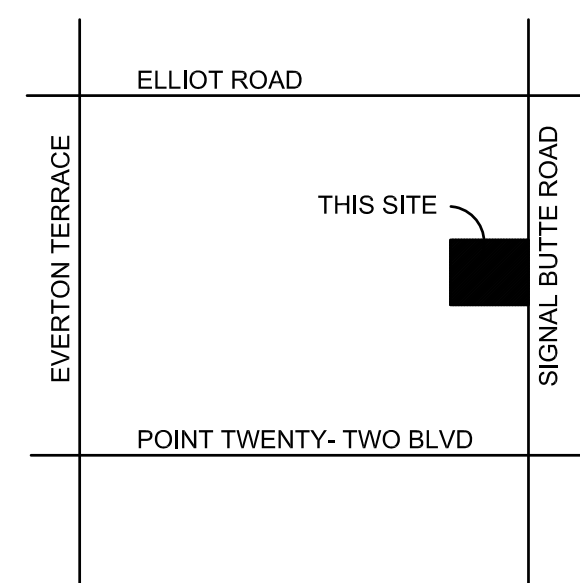
PARKING CALCULATIONS

AREA CALC.	TOTALS		
OFFICE / VENDING / RESTROOM	350 S.F.		
EQUIPMENT AREA	649 S.F.		
WASH BAY	2,750 S.F.		
VACUUM	200 S.F.		
FIRE RISER	60 S.F.		
SES	67 S.F.		
TOTAL:	4,076 S.F.		
REQUIRED PARKING CALCULATIONS			
OCCUPANCY	S.F.	FACTOR	TOTAL
B-CAR WASH	4,076 S.F.	1 SPACE / 375 SQ. FT.	10.8
TOTAL REQUIRED			12
PARKING PROVIDED			
TOTAL REGULAR SPACES			26
TOTAL ACCESSIBLE SPACES			2
TOTAL COVERED SPACES (INCLUDING ACCESSIBLE SPACE)			24
TOTAL SPACES (NON-COVERED)			4
TOTAL SPACES ON SITE			28

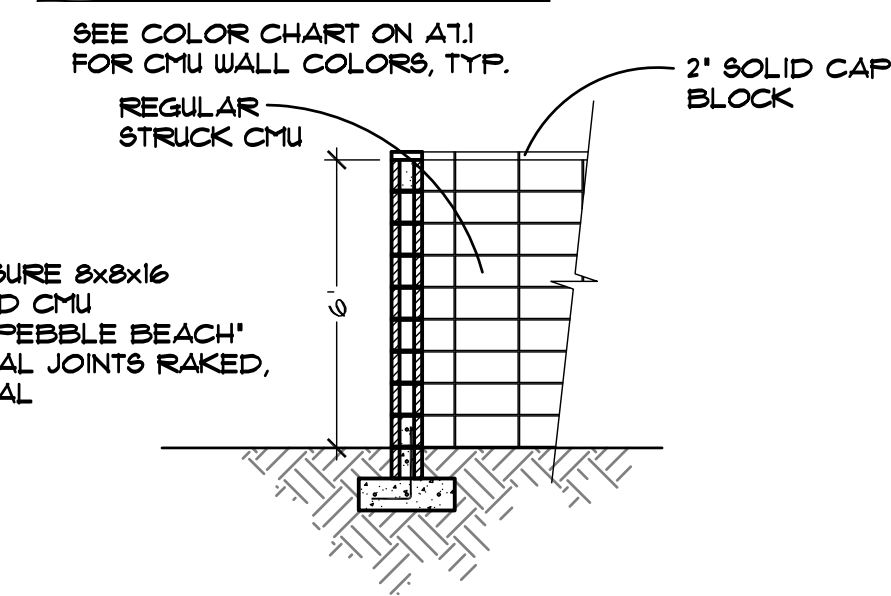
LEGEND

- PROPERTY LINE
- - - EASEMENT / SETBACK LINE
- - - CAR OVERHANG, MEASURED FROM FACE OF CURB AS DIMENSIONED ON SITE PLAN
- 6' CURB
- SITE WALL
- ▨ SALT FINISH CONCRETE SIDEWALK
- ▨ PAINT STRIPING ON PAVEMENT
- ⊕ NEW FIRE HYDRANT
- ⊕ EXISTING FIRE HYDRANT
- ⊕ FDC FIRE DEPARTMENT CONNECTION
- ▲ ACCESSIBLE ROUT / PATH OF TRAVEL
- ⊕ FIRE RISER

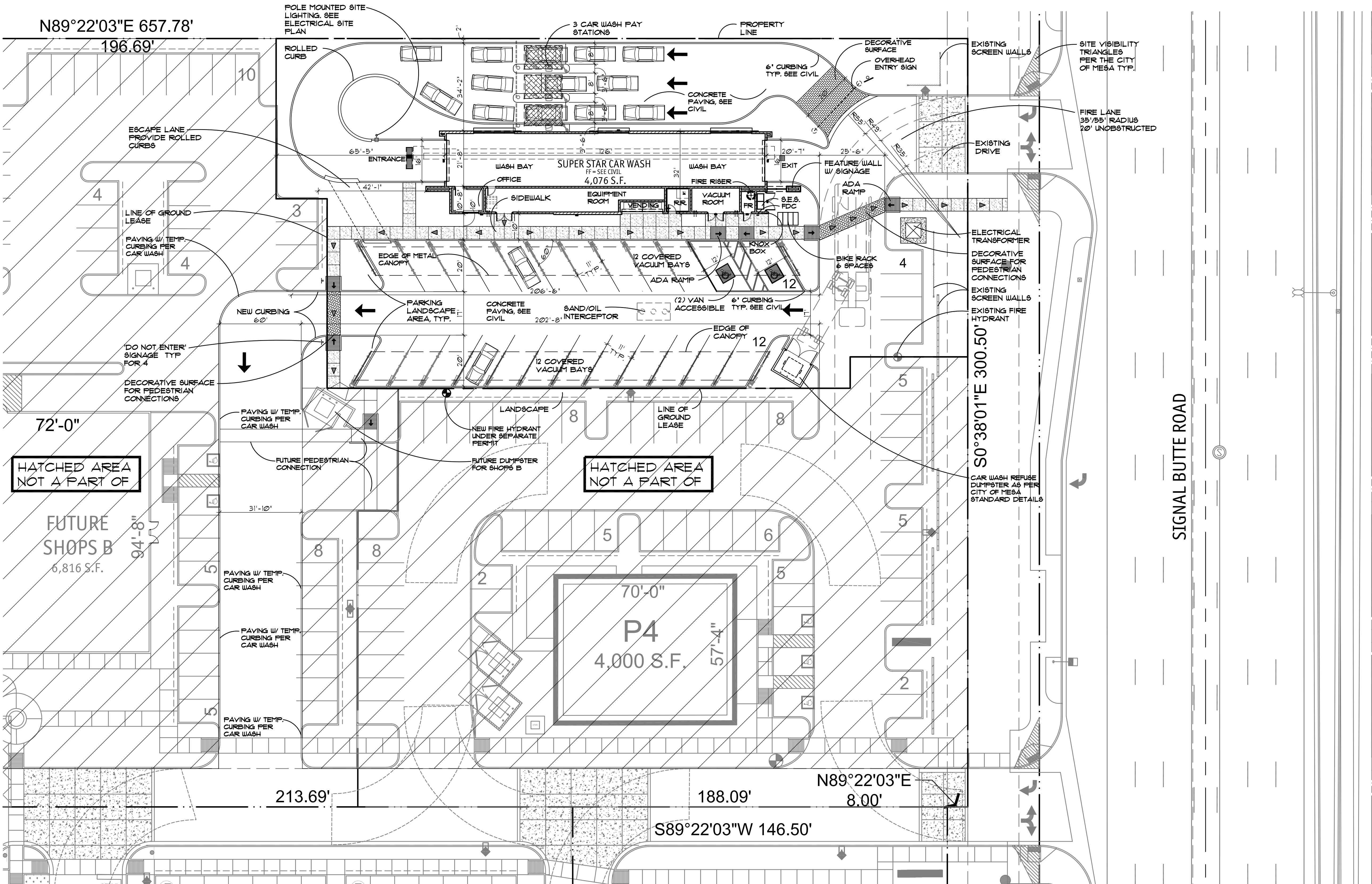
VICINITY MAP N.T.S.



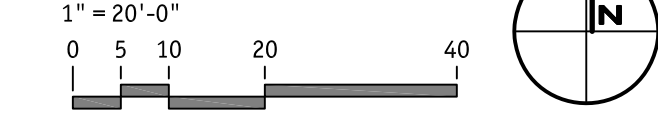
TRASH ENCLOSURE WALL

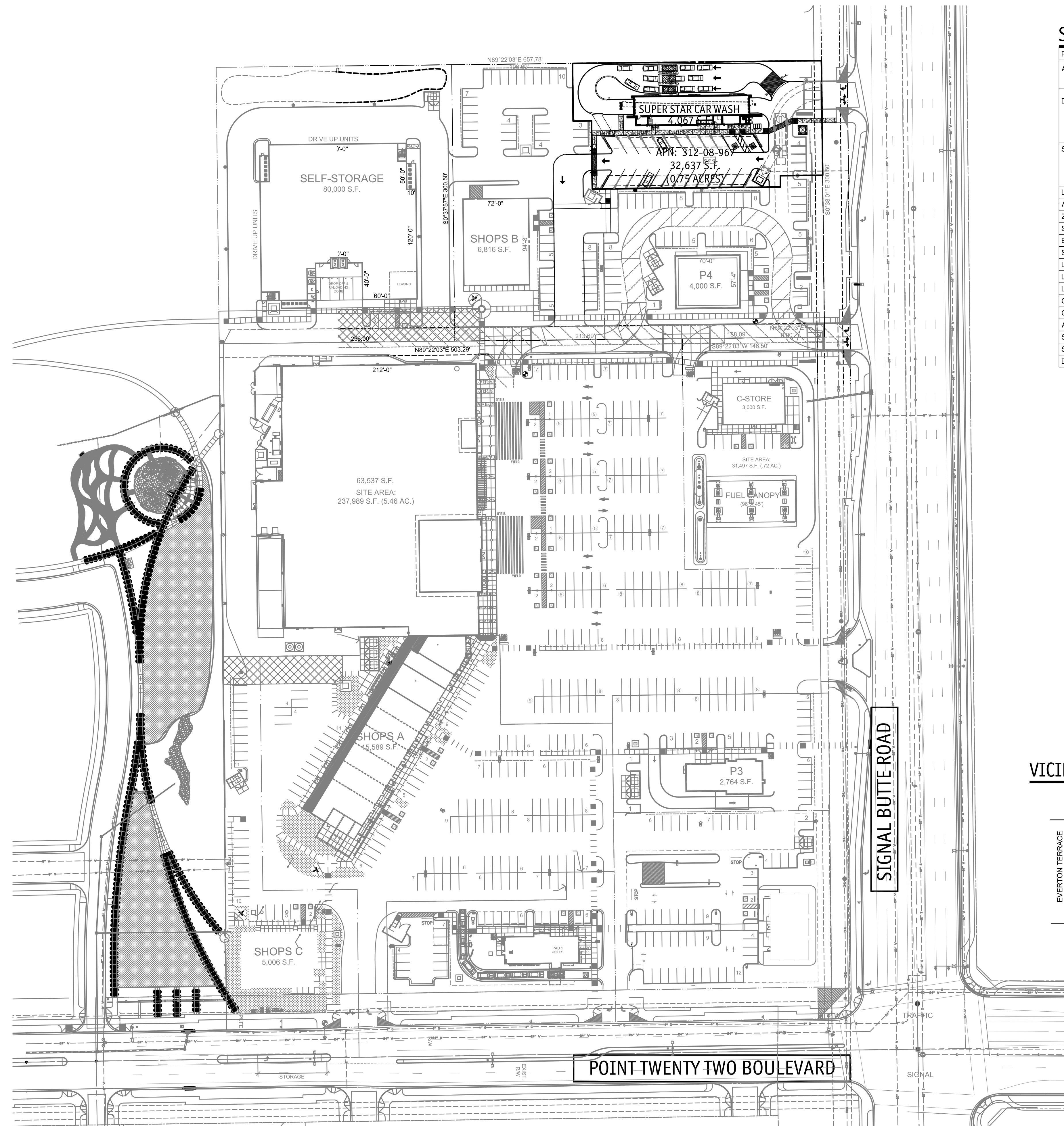


TRASH ENCLOSURE 8x8x16 STACKED BOND CMU TRENDSTONE 'PEBBLE BEACH' ALL HORIZONTAL JOINTS RAKED, SEE STRUCTURAL



SITE PLAN

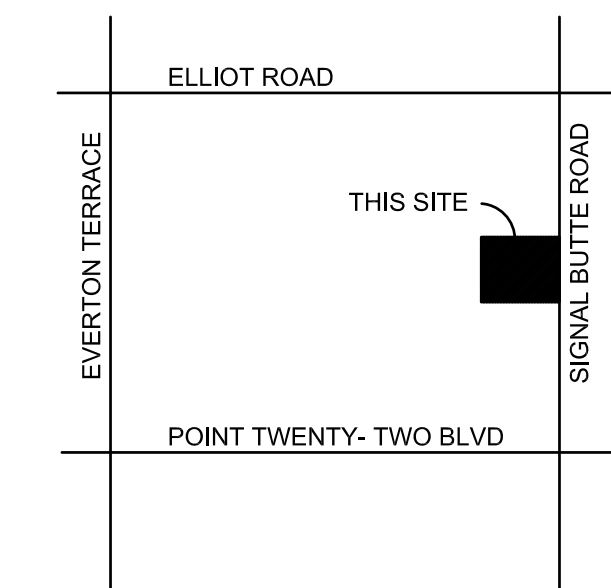




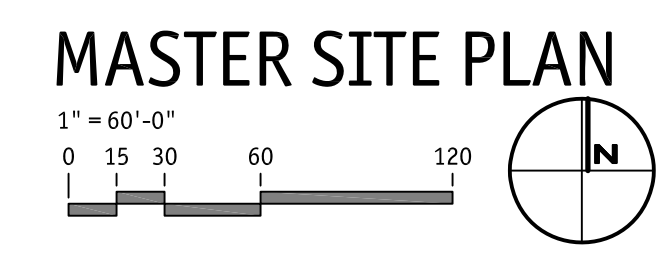
SUPER STAR SITE DATA

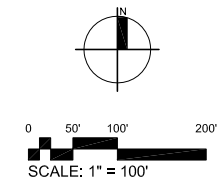
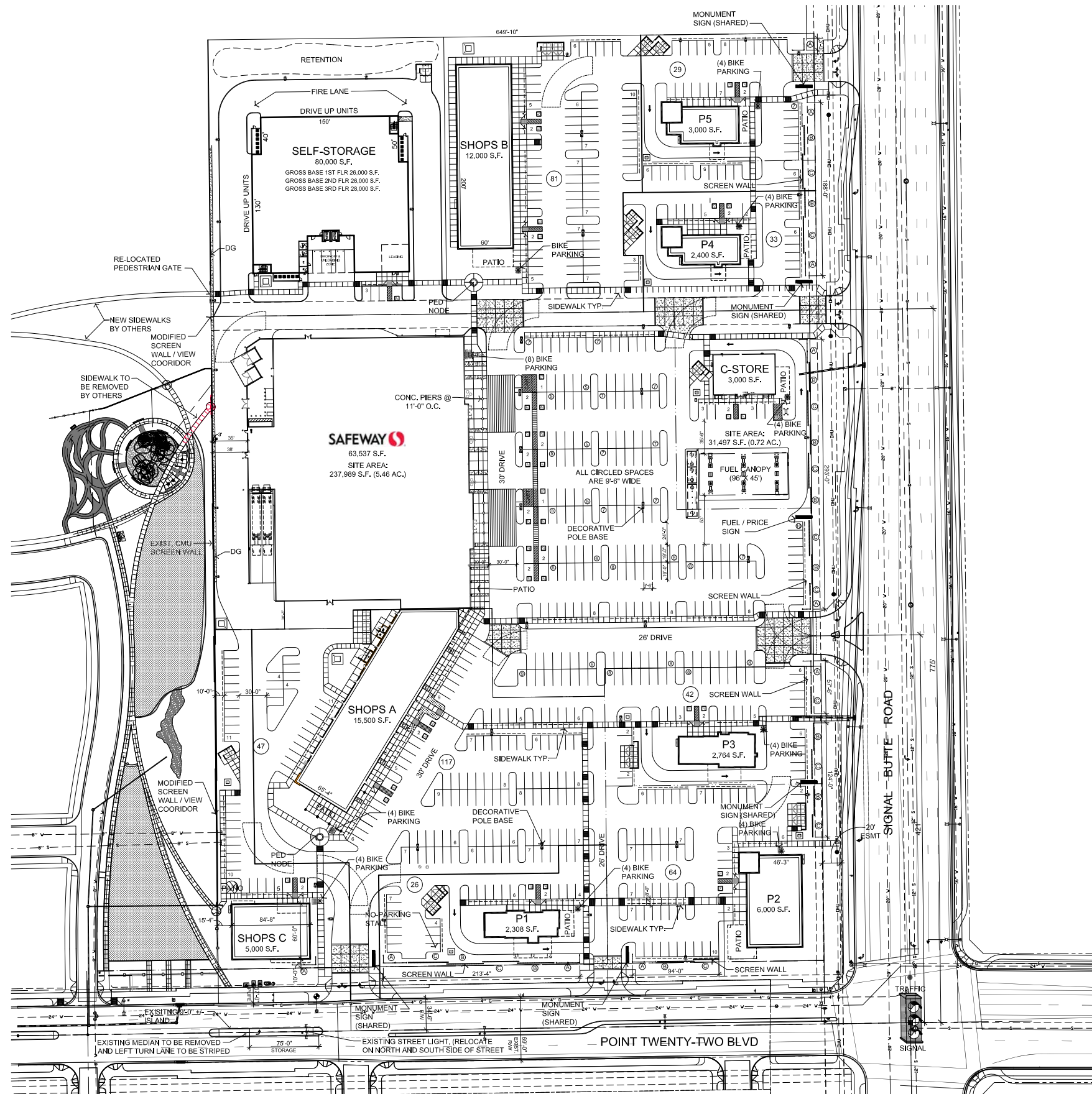
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VICINITY MAP N.T.S.

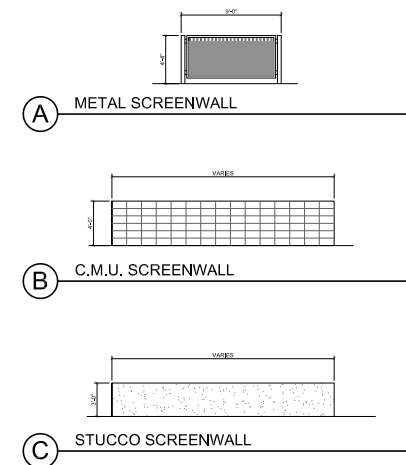


MASTER SITE PLAN 06/11/2020
NWC OF SIGNAL BUTTE ROAD & POINT TWENTY TWO BOULEVARD MESA, AZ





SCREEN WALL LEGEND

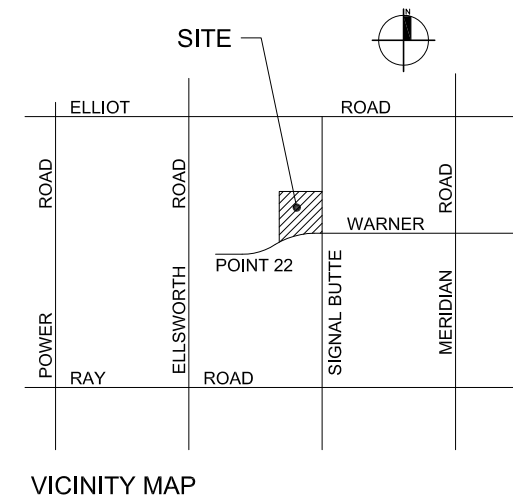


PROJECT DATA - PHASE I

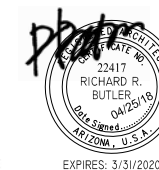
Zoning:	LC
APN#:	--
Gross Site Area:	629,956 S.F. (14.46 AC.)
Building Area:	140,937 S.F.
Coverage:	28%
Proposed Building Height:	45 feet max.
Parking Required:	
Anchor Retail (66,537 S.F. / 375 S.F.)	178 Spaces
General Retail (32,500 S.F. / 375 S.F.)	87 Spaces
Restaurant (6,000 S.F. / 75 S.F.)	80 Spaces
Restaurant w/drive thru (10,500 S.F. / 100 S.F.)	105 Spaces
Self Storage (26,000 S.F. / 900 S.F.)	29 Spaces
Total Parking Required:	479 Spaces
Total Bicycle Parking Required:	40 Spaces
Parking Provided:	661 Spaces
ADA Parking Required:	10 Spaces
ADA Parking Provided:	39 Spaces
Bicycle Parking Provided:	48 Spaces
SEASONAL Cart Parking:	2 Sections
Parking Ratio:	4.7 / 1,000 S.F.

PROJECT TEAM

Developer	Architect
Evergreen	Butler Design Group
2390 East Camelback Road, 410	5017 E. Washington St. Ste 107
Phoenix, Arizona 85016	Phoenix, Arizona 85034
Contact: Cameron Miller	Contact: Rick Butler
Ph: (602) 808.8600	Ph: (602) 957-1800



The Point at Eastmark
POINT TWENTY-TWO & SIGNAL BUTTE ROAD
 Mesa, Arizona



04-25-18
17090-ST17