County of San Bernardino
LAND DEVELOPMENT
PRELIMINARY
APPROVAL
THE APPROVAL OF THIS REPORT SHALL NOT BE CONSTRUED TO BE A PERMIT FOR ANY DEVELOPMENT OR SITE IMPROVEMENT
By: Timothy Cheng (D8256)
Date: 08/23/2023 11:05:30 AM
This report has Preliminary Approval. Prior to Final Approval of the report, all outstanding comments and requirements shall be met.

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Preliminary Drainage Study

for

Circle K Store

Bloomington Area, San Bernardino County, California

Assessor's Parcel Number: 0250-101-76

Project Number: 2022-00073

Approved as noted:

1.) Final must show infiltration study

2.) Final must show basin drawdown requirements

3.) Site Plan in PROJ-2022-00073 needs to match the Drainage Exhibit Site Plan here in this report on pg 23 (please see drainage exhibit comment on pg 23) (Site Plan from PROJ-2022-00073 is also attached on pg 24 for reference. Please see attached Site Plan comments on pg 24)

Prepared for:
Shorecliff Capital, LLC
468 North Camden Drive
Beverly Hills, CA 92010

Prepared by:
Transtech Engineers, Inc.
413 Mackay Drive
San Bernardino, CA 92408
909-384-7464

August 31 2022
Revised: June 29, 2023
Project No. 210249

TRANSTECH

David B. Ragland, RCE 7/8/23

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1. INTRODUCTION

This report presents the design criteria, hydrologic conditions and hydrologic analysis for a proposed Circle K store, gas station and car wash project located on 3.97 acres at the northeast corner of San Bernardino Avenue and Cedar Avenue in the Bloomington area of San Bernardino County.

Shorecliff Capital, LLC has submitted an Application to the County of San Bernardino for a Conditional Use Permit (CUP) for a proposed Convenience Store, Gas Station, Car Wash, Drive-Through Restaurant, and Commercial Building. The convenience store is proposed to be 5,200 square feet (sf), the restaurant is proposed to be 4,400 sf, and the commercial building will be 8,000 sf. A total of 135 parking stalls will be provided including 6 handicap accessible and 1 clean air/vanpool/electric vehicle spaces. Landscaping will be provided primarily along the site perimeters and in parking areas and total 34,613 square-feet, or 20% of the site. The 5,200 square-foot convenience store with an attached 1,262 square-foot fully automated car wash, a fuel canopy with 10 fuel pumps (20 fueling positions) is located on the western 1.68 acres. East is the 4,330 square foot drive-thru restaurant with a 1410 square-foot office/ mezzanine and a 2-story 15,350 square-foot retail/office on the remaining 2.29 acres.

1.1 Site Description

The subject property is currently unimproved vacant land with no structural improvements. The vacant land was observed as tilled soils with chain link fencing and wood post surrounding the boundaries. Historical records review indicates the subject property has been unimproved or agricultural land since at least 1896. The surrounding area is a variety of new and dated residential developments with lots, sizes, and occupancies with scattered vacant lots. The surrounding properties in the immediate vicinity of the project site are:

North: Residences (1201-1285 West Miramont Street)
South: San Bernardino Avenue followed by a fruit stand (18743 San Bernardino Avenue) and residences (18707-18799 San Bernardino Avenue)
East: Residence (18804 San Bernardino Avenue)
West: Cedar Avenue, beyond which are residences (9688 Cedar Avenue; 9653-9689 Wisteria Court)

2. HYDROLOGIC CONDITIONS

Natural drainage on the project site tends to flow in a northeasterly to southwesterly direction. Natural slope across the site is approximately one percent. There are not any natural drainage courses on the site as flows tend to be sheet flow until reaching the adjacent streets along the south and west portions of the site. The adjacent streets are fully improved including curb and gutter along the project frontage except for a short portion along the southeasterly portion of the site that consists of and AC dike curb transition.

Stormwater flows from the site continue southerly along Cedar Avenue in curbs and gutters. There are no underground storm drain improvements in the immediate vicinity of the project site.

Site stormwater run on is not anticipated. The adjacent property to the north is single family residence with lots graded for stormwater flow to the streets. Drainage from adjacent property to the east flows southerly towards San Bernardino Avenue.

3. PROJECT DESCRIPTION AND PROPOSED STORM DRAIN

The proposed project storm drain system will collect runoff from the building roofs, parking areas and other impervious surfaces in an on-site storm drainage system primarily of surface flows. Storm water runoff will be conveyed as surface flow and directed to the perimeter landscaped areas of the project site. Flows will be discharged into a series of bio-retention basins located along the perimeter of the property. Project flows will accumulate in the bio-retention facilities until the design capture volume is reached. Overflow discharge from the

basins will be through parkway culverts discharging directly into the existing curbs and gutters of the adjacent streets.

3.1 Water Quality

The proposed project is subject to the County's water quality and NPDES requirements and recommendations provided in the San Bernardino County Stormwater Program "Technical Guidance Document for Water Quality Management Plans," effective date September 19, 2013. A separate Water Quality Management Plan (WQMP) will be prepared for the project. The project will be required to capture and infiltrate 100 percent of the water quality design capture volume (DCV). Hydrologic and hydraulic calculations for the proposed onsite underground storm drain and water quality system are included within the project Water Quality Management Plan.

4. FEMA FLOOD PLAIN

The project site lies within FEMA Zone X per FEMA Flood Insurance Rate Map (FIRM) panel 06071C8659H Dated August 8, 2008. Zone X are other areas and are areas determined to be outside the 0.2% annual chance floodplain. Per FEMA "the flood map for the selected area is number 06071C8659H. The flood map for this location has a status of "not printed". This means that the entire area of the panel is in a single flood zone, so FEMA chose to economize and not create a printable image for this location. However, the flood zone data is viewable on the interactive map below and you can print a map for your location using the "FIRMette" button". The FIRMette for this panel is included in the appendix identifying the panel area as Flood Zone X.

5. SOILS

The soils on the project site are comprised of the Tujunga loamy sand soils (TuB). The Tujunga series consists of very deep, somewhat excessively drained soils that formed in alluvium from granitic sources. Tujunga soils are on alluvial fans and floodplains, including urban areas. Slopes range from 0 to 12 percent.

The soils are somewhat excessively drained with negligible to low runoff and high saturated hydraulic conductivity. The soils are well drained with negligible to low runoff and moderately rapid permeability. The hydrologic soil group for these soils is A.

6. HYDROLOGY

The results of the onsite Rational Method hydrologic analysis are used herein to present the anticipated pre and post-development peak flow rate runoff conditions for the proposed project as follows:

25-Year Existing Conditions Peak flow Rate: 3.64 cfs
100-Year Existing Condition Peak Flow Rate: 6.73cfs
100-Year Developed Condition Peak Flow Rate: 12.91 cfs

The detention requirements for the proposed project are determined as follows:

1. Storm Water Detention – The detention basin will be sized to accept the differential or increase in runoff for a series of design year storms (2, 10, 25 and 100-year storms) between 90 percent of the pre-project development condition and the post-project development condition.

2. Pre-development peak flow rates are calculated in accordance with the *San Bernardino County Hydrology Manual* with the following exceptions:

    a. 2-year peak flow rates are calculated at 90 percent of the pre-development 2-year peak flow rate.
    b. 10-year peak flow rates are calculated using 5-year rainfall.
    c. 25-year peak flow rates are calculated using 10-year rainfall.

d. 100-year peak flow rates are calculated using 25-year rainfall and antecedent moisture content (AMC) II.

For purposes of preliminary design, only the 25-year predeveloped and 100-year post developed conditions are analyzed herein.

7. DETENTION REQUIRMENTS

The proposed project will provide stormwater detention to attenuate the developed condition peak flow rate to no greater than 90 percent of pre-developed flow rate as follows:

90 percent 25-Year Existing Conditions Peak flow Rate: 3.28 cfs
100-Year Developed Condition Peak Flow Rate: 12.91 cfs

A reduction of 9.63 cfs will be necessary to meet the require storm water attenuation.

7.1 Determination of Detention Capacity Required

Detention of storm water flows will be provided prior to release offsite to the public storm drain system. The required detention capacity required for the project is calculated using the Small Area Unit Hydrograph procedure discussed in Section J of the County of San Bernardino Hydrology Manual. The procedure is applicable to watersheds whose time of concentration is less than 25 minutes.

The unit hydrograph corresponding to the rational method is a triangle with base 2Tc, and a peak occurring at time Tc*.(San Bernardino Hydrology Manual)* To present a more conservative analysis, the duration is increased and the base is extended to 3Tc.

Modified Rational Method Required Storage Vol. = 3/2 Tc ($Q_{Incremental}$)

Stormwater Mitigation

$V = 3/2(\Delta Q)(Tc)(60)$
$\Delta Q = 9.63$ cfs
$Tc = 11.53$

$V = 1.5(9.63)(11.53)(60) = 9{,}993$ cf

Total Volume of Onsite Bio-retention Basins for Mitigation = 27,695 cf (Per P-WQMP)

8. HYDRAULIC CALCULATIONS

Hydraulic calculations for proposed onsite storm drainage facilities will be prepared with the final storm drain design and specifications.

9. CONCLUSION

The development of the proposed project will increase the 100-year peak flow rate of 6.73 cubic feet per second to 12.91 cubic feet per second. The existing flow from the project towards Cedar Avenue is 6.73 cfs. The proposed development will discharge 12.91 cfs to Cedar Avenue. An increase of 6.2 cfs. Street flow calculations for Cedar Avenue indicate a design flow capacity of 51.2 cubic feet per second at a flow depth of .67 feet or to the top of curb elevation. Adding the proposed project flow increase of 6.2 cfs to 51.2 cfs of street flow, the street flow depth would be .68 feet. (See Appendix B) The flow depth is well within the street right of way.

Furthermore, as indicated above, the project will provide stormwater detention to attenuate the developed condition peak flow rate to less than 90 percent of the pre-developed peak flow rate. The incorporation of at least 9,993 cubic feet of stormwater storage will attenuate the peak flow rate as required.

The proposed project's storm drain runoff will be discharging into existing stormwater drainage facilities that are maintained by the County of San Bernardino.

The onsite storm drain system will collect runoff in curbs and gutters and flows will be conveyed to the water quality bio-retention basins. The water quality design capture volume will be detained and infiltrated into the underlying soils During storm events greater than the water quality storm, once the water quality volume has been attained, stormwater will overflow and be released through parkway culverts into the curb and gutter along San Bernardino Avenue and Cedar Avenue.

REFERENCES

Advanced Engineering Software, "Rational Method Analysis Model," version 18.2, 2012.

Advanced Engineering Software, "Pipe-Flow Hydraulics Computer Software Package," version 19.0, 2012.

Brater, E.F. and King, "Handbook of Hydraulics, Sixth Ed.," McGraw Hill, 1976.

County of San Bernardino, Department of Public Works "Hydrology Manual," August 1986.

County of San Bernardino, Transportation Flood Control Water Resources Division, "Master Drainage Study," November, 2004.

Moore and Twining Associates, Inc., "Geotechnical Investigation Proposed Circle K Store," June 5, 2020.

Partner Engineering and Science, Inc., "Phase 1 Environmental Site Assessment Report," May 6, 2016.

Sitetech, Inc. "Drainage Study and Hydraulic Calculations for Royston – Bed and Breakfast" September 11, 2020.

APPENDIX A
Pre and Post Hydrology Calculations

```
 ************************************************************************
             RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
          (Reference: 1986 SAN BERNARDINO CO. HYDROLOGY CRITERION)
         (c) Copyright 1983-2012 Advanced Engineering Software (aes)
             Ver. 18.2  Release Date: 05/08/2012  License ID 1542

                           Analysis prepared by:

                         Transtech Engineers, Inc.
                              413 Mackay Drive
                          San Bernardino, CA 92408


 ------------------------------------------------------------------------
   FILE NAME: BLOOM.DAT
   TIME/DATE OF STUDY: 16:06 06/01/2022
 ========================================================================
   USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
 ========================================================================
                     --*TIME-OF-CONCENTRATION MODEL*--

   USER SPECIFIED STORM EVENT(YEAR) =  100.00
   SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
   SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.95
   *USER-DEFINED LOGARITHMIC INTERPOLATION USED FOR RAINFALL*

   SLOPE OF INTENSITY DURATION CURVE(LOG(I;IN/HR) vs. LOG(Tc;MIN)) = 0.6000
   USER SPECIFIED 1-HOUR INTENSITY(INCH/HOUR) = 1.3700

   *ANTECEDENT MOISTURE CONDITION (AMC) III ASSUMED FOR RATIONAL METHOD*

   *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
      HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
      WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
 NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
 ===  =====  =========  =================  ======  ===== ====== ===== =======
   1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0313 0.167 0.0150

   GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
     1. Relative Flow-Depth =  0.00 FEET
        as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
     2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
   *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
    OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
   *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED
```

Existing Condition 100-Year Storm

```
 ************************************************************************
   FLOW PROCESS FROM NODE     10.00 TO NODE     20.00 IS CODE =  21
 ------------------------------------------------------------------------
   >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
   >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
 ========================================================================
   INITIAL SUBAREA FLOW-LENGTH(FEET) =   681.00
   ELEVATION DATA: UPSTREAM(FEET) =   1141.00  DOWNSTREAM(FEET) =   1134.00
```

```
   Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
   SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =   23.970
   * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.376
   SUBAREA Tc AND LOSS RATE DATA(AMC III):
    DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap      SCS   Tc
        LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
   NATURAL FAIR COVER
   "GRASS"                    A        3.97      0.50     1.000    70   23.97
   SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.50
   SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.000
   SUBAREA RUNOFF(CFS) =      6.73
   TOTAL AREA(ACRES) =      3.97   PEAK FLOW RATE(CFS) =      6.73
```

Existing Condition 25-Year Storm

```
------------------------------------------------------------------------------
   FILE NAME: BLOOM.DAT
   TIME/DATE OF STUDY: 16:34 06/28/2023
 ==============================================================================
   USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
 ==============================================================================
                     --*TIME-OF-CONCENTRATION MODEL*--

   USER SPECIFIED STORM EVENT(YEAR) =   25.00
   SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
   SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.95
   *USER-DEFINED LOGARITHMIC INTERPOLATION USED FOR RAINFALL*

   SLOPE OF INTENSITY DURATION CURVE(LOG(I;IN/HR) vs. LOG(Tc;MIN)) = 0.6000
   USER SPECIFIED 1-HOUR INTENSITY(INCH/HOUR) = 1.0600

   *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

   *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
      HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
      WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
 NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
 ===  =====  =========  =================  ======  ===== ====== ===== =======
   1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0313 0.167 0.0150

   GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
     1. Relative Flow-Depth =  0.00 FEET
        as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
     2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
   *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
    OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
   *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

 ******************************************************************************
   FLOW PROCESS FROM NODE     10.00 TO NODE     20.00 IS CODE =  21
 ------------------------------------------------------------------------------
   >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
   >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
 ==============================================================================
   INITIAL SUBAREA FLOW-LENGTH(FEET) =   681.00
   ELEVATION DATA: UPSTREAM(FEET) =   1141.00  DOWNSTREAM(FEET) =   1134.00

   Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
   SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =   23.970
   *  25 YEAR RAINFALL INTENSITY(INCH/HR) =  1.838
```

```
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap      SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "GRASS"                     A        3.97      0.82     1.000    50   23.97
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.82
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.000
  SUBAREA RUNOFF(CFS) =      3.64
  TOTAL AREA(ACRES) =      3.97   PEAK FLOW RATE(CFS) =      3.64
```

Developed Condition 100-Year

```
****************************************************************************
  FLOW PROCESS FROM NODE    10.00 TO NODE    20.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   819.00
  ELEVATION DATA: UPSTREAM(FEET) =   1141.00  DOWNSTREAM(FEET) =   1134.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =   11.530
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.686
  SUBAREA Tc AND LOSS RATE DATA(AMC III):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap      SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  COMMERCIAL                  A        3.97      0.74     0.100    52   11.53
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.74
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.100
  SUBAREA RUNOFF(CFS) =     12.91
  TOTAL AREA(ACRES) =      3.97   PEAK FLOW RATE(CFS) =     12.91
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =        4.0  TC(MIN.) =     11.53
  EFFECTIVE AREA(ACRES) =      3.97  AREA-AVERAGED Fm(INCH/HR)=  0.07
  AREA-AVERAGED Fp(INCH/HR) =  0.74  AREA-AVERAGED Ap = 0.100
  PEAK FLOW RATE(CFS)   =      12.91
============================================================================
============================================================================
  END OF RATIONAL METHOD ANALYSIS
```

APPENDIX B
Hydraulic Calculations

```
 ************************************************************************
                HYDRAULIC ELEMENTS - I  PROGRAM PACKAGE
         (C) Copyright 1982-2012 Advanced Engineering Software (aes)
             Ver. 19.0  Release Date: 06/01/2012  License ID 1542

                          Analysis prepared by:

                        Transtech Engineers, Inc.
                             413 Mackay Drive
                         San Bernardino, CA 92408


 ------------------------------------------------------------------------
   TIME/DATE OF STUDY: 10:34 06/09/2022
 ========================================================================
  Problem Descriptions:
   CEDAR AVENUE STREET FLOW


 ************************************************************************
 >>>>STREETFLOW MODEL INPUT INFORMATION<<<<
 ------------------------------------------------------------------------
     CONSTANT STREET GRADE(FEET/FEET) = 0.010000
     CONSTANT STREET FLOW DEPTH(FEET) =    0.67
     AVERAGE STREETFLOW FRICTION FACTOR(MANNING) = 0.015000
     CONSTANT SYMMETRICAL STREET HALF-WIDTH(FEET) =   40.00
     DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   10.00
     INTERIOR STREET CROSSFALL(DECIMAL) = 0.020000
     OUTSIDE  STREET CROSSFALL(DECIMAL) = 0.020000
     CONSTANT SYMMETRICAL CURB HEIGHT(FEET) =   0.67
     CONSTANT SYMMETRICAL GUTTER-WIDTH(FEET) =   2.00
     CONSTANT SYMMETRICAL GUTTER-LIP(FEET) =  0.03125
     CONSTANT SYMMETRICAL GUTTER-HIKE(FEET) =  0.16700
     FLOW ASSUMED TO FILL STREET EVENLY ON BOTH SIDES
 ========================================================================
     STREET FLOW MODEL RESULTS:
 ------------------------------------------------------------------------
     STREET FLOW DEPTH(FEET) =  0.67
     HALFSTREET FLOOD WIDTH(FEET) =   25.59
     HALFSTREET FLOW(CFS) =   26.61
     AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.95
     PRODUCT OF DEPTH&VELOCITY =    2.65
 ========================================================================

  Problem Descriptions:
   CEDAR AVENUE STREET FLOW


 ************************************************************************
```

```
>>>>STREETFLOW MODEL INPUT INFORMATION<<<<
----------------------------------------------------------------------------
    CONSTANT STREET GRADE(FEET/FEET) = 0.010000
    CONSTANT STREET FLOW(CFS) =   57.40
    AVERAGE STREETFLOW FRICTION FACTOR(MANNING) = 0.015000
    CONSTANT SYMMETRICAL STREET HALF-WIDTH(FEET) =   40.00
    DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   10.00
    INTERIOR STREET CROSSFALL(DECIMAL) = 0.020000
    OUTSIDE  STREET CROSSFALL(DECIMAL) = 0.020000
    CONSTANT SYMMETRICAL CURB HEIGHT(FEET) =   0.67
    CONSTANT SYMMETRICAL GUTTER-WIDTH(FEET) =   2.00
    CONSTANT SYMMETRICAL GUTTER-LIP(FEET) =  0.03125
    CONSTANT SYMMETRICAL GUTTER-HIKE(FEET) =  0.16700
    FLOW ASSUMED TO FILL STREET EVENLY ON BOTH SIDES
============================================================================
    STREET FLOW MODEL RESULTS:
----------------------------------------------------------------------------
    NOTE: STREET FLOW EXCEEDS TOP OF CURB.
          THE FOLLOWING STREET FLOW RESULTS ARE BASED ON THE ASSUMPTION
          THAT NEGLIBLE FLOW OCCURS OUTSIDE OF THE STREET CHANNEL.
          THAT IS, ALL FLOW ALONG THE PARKWAY, ETC., IS NEGLECTED.
    STREET FLOW DEPTH(FEET) =  0.68
    HALFSTREET FLOOD WIDTH(FEET) =   26.05
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    4.12
    PRODUCT OF DEPTH&VELOCITY =    2.80
============================================================================
```

APPENDIX C
Maps

NOAA Atlas 14, Volume 6, Version 2
Location name: Bloomington, California, USA*
Latitude: 34.0781°, Longitude: -117.3958°
Elevation: 1138.38 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**0.114** (0.095-0.138)	**0.147** (0.123-0.179)	**0.192** (0.160-0.234)	**0.230** (0.189-0.282)	**0.282** (0.224-0.358)	**0.323** (0.251-0.419)	**0.366** (0.277-0.487)	**0.411** (0.303-0.563)	**0.474** (0.335-0.679)	**0.525** (0.358-0.779)
10-min	**0.163** (0.136-0.198)	**0.211** (0.176-0.257)	**0.276** (0.229-0.336)	**0.330** (0.271-0.405)	**0.404** (0.321-0.514)	**0.463** (0.360-0.601)	**0.524** (0.397-0.698)	**0.589** (0.434-0.807)	**0.680** (0.480-0.973)	**0.753** (0.513-1.12)
15-min	**0.197** (0.164-0.239)	**0.256** (0.213-0.310)	**0.334** (0.277-0.406)	**0.399** (0.328-0.489)	**0.489** (0.388-0.621)	**0.560** (0.435-0.727)	**0.634** (0.481-0.844)	**0.712** (0.525-0.976)	**0.822** (0.580-1.18)	**0.911** (0.620-1.35)
30-min	**0.293** (0.244-0.356)	**0.380** (0.316-0.462)	**0.496** (0.412-0.604)	**0.593** (0.488-0.728)	**0.727** (0.578-0.924)	**0.833** (0.648-1.08)	**0.943** (0.715-1.25)	**1.06** (0.780-1.45)	**1.22** (0.863-1.75)	**1.35** (0.923-2.01)
60-min	**0.427** (0.356-0.518)	**0.554** (0.461-0.673)	**0.723** (0.600-0.880)	**0.864** (0.710-1.06)	**1.06** (0.842-1.35)	**1.21** (0.943-1.58)	**1.37** (1.04-1.83)	**1.54** (1.14-2.12)	**1.78** (1.26-2.55)	**1.97** (1.34-2.93)
2-hr	**0.626** (0.521-0.759)	**0.805** (0.669-0.977)	**1.04** (0.863-1.27)	**1.24** (1.02-1.52)	**1.50** (1.19-1.91)	**1.71** (1.33-2.22)	**1.92** (1.46-2.56)	**2.15** (1.58-2.95)	**2.46** (1.74-3.52)	**2.71** (1.84-4.01)
3-hr	**0.782** (0.651-0.948)	**1.00** (0.834-1.22)	**1.29** (1.07-1.57)	**1.53** (1.26-1.88)	**1.85** (1.47-2.36)	**2.11** (1.64-2.73)	**2.36** (1.79-3.15)	**2.63** (1.94-3.61)	**3.00** (2.12-4.29)	**3.29** (2.24-4.89)
6-hr	**1.11** (0.924-1.34)	**1.42** (1.18-1.73)	**1.83** (1.52-2.23)	**2.16** (1.78-2.65)	**2.61** (2.07-3.32)	**2.95** (2.30-3.84)	**3.31** (2.51-4.40)	**3.67** (2.70-5.03)	**4.16** (2.94-5.95)	**4.55** (3.10-6.74)
12-hr	**1.48** (1.23-1.80)	**1.91** (1.59-2.32)	**2.46** (2.04-2.99)	**2.90** (2.39-3.57)	**3.50** (2.78-4.45)	**3.95** (3.08-5.14)	**4.41** (3.35-5.88)	**4.88** (3.60-6.70)	**5.52** (3.90-7.90)	**6.01** (4.10-8.91)
24-hr	**1.98** (1.76-2.28)	**2.58** (2.28-2.98)	**3.35** (2.95-3.87)	**3.96** (3.47-4.62)	**4.79** (4.05-5.77)	**5.41** (4.49-6.66)	**6.04** (4.89-7.61)	**6.68** (5.27-8.65)	**7.54** (5.70-10.2)	**8.20** (6.00-11.4)
2-day	**2.41** (2.13-2.78)	**3.19** (2.82-3.69)	**4.21** (3.71-4.87)	**5.03** (4.40-5.87)	**6.14** (5.20-7.40)	**6.99** (5.80-8.60)	**7.86** (6.36-9.90)	**8.74** (6.89-11.3)	**9.94** (7.52-13.4)	**10.9** (7.96-15.2)
3-day	**2.58** (2.28-2.97)	**3.47** (3.07-4.00)	**4.64** (4.09-5.37)	**5.60** (4.90-6.53)	**6.92** (5.86-8.34)	**7.94** (6.59-9.77)	**8.99** (7.28-11.3)	**10.1** (7.94-13.0)	**11.6** (8.75-15.6)	**12.7** (9.32-17.8)
4-day	**2.76** (2.44-3.18)	**3.76** (3.32-4.34)	**5.07** (4.47-5.87)	**6.16** (5.39-7.18)	**7.66** (6.48-9.23)	**8.83** (7.33-10.9)	**10.0** (8.13-12.6)	**11.3** (8.90-14.6)	**13.0** (9.87-17.6)	**14.4** (10.5-20.1)
7-day	**3.15** (2.79-3.64)	**4.34** (3.83-5.00)	**5.90** (5.20-6.83)	**7.20** (6.30-8.39)	**8.99** (7.61-10.8)	**10.4** (8.63-12.8)	**11.9** (9.60-14.9)	**13.4** (10.5-17.3)	**15.5** (11.7-20.9)	**17.2** (12.6-24.0)
10-day	**3.43** (3.03-3.95)	**4.74** (4.19-5.47)	**6.48** (5.71-7.50)	**7.92** (6.93-9.24)	**9.93** (8.41-12.0)	**11.5** (9.55-14.2)	**13.1** (10.7-16.6)	**14.9** (11.7-19.3)	**17.3** (13.1-23.3)	**19.2** (14.0-26.8)
20-day	**4.15** (3.68-4.79)	**5.78** (5.11-6.67)	**7.97** (7.03-9.22)	**9.80** (8.57-11.4)	**12.4** (10.5-14.9)	**14.4** (11.9-17.7)	**16.5** (13.4-20.8)	**18.8** (14.8-24.3)	**21.9** (16.6-29.6)	**24.5** (17.9-34.2)
30-day	**4.91** (4.35-5.66)	**6.85** (6.05-7.90)	**9.45** (8.34-10.9)	**11.6** (10.2-13.6)	**14.7** (12.5-17.7)	**17.2** (14.3-21.1)	**19.8** (16.0-24.9)	**22.6** (17.8-29.2)	**26.5** (20.0-35.7)	**29.7** (21.7-41.4)
45-day	**5.86** (5.19-6.76)	**8.12** (7.18-9.37)	**11.2** (9.86-12.9)	**13.8** (12.0-16.1)	**17.4** (14.8-21.0)	**20.4** (16.9-25.1)	**23.5** (19.0-29.6)	**26.9** (21.2-34.8)	**31.7** (24.0-42.7)	**35.6** (26.1-49.7)
60-day	**6.85** (6.07-7.90)	**9.40** (8.32-10.9)	**12.9** (11.4-14.9)	**15.8** (13.8-18.5)	**20.0** (16.9-24.1)	**23.4** (19.4-28.8)	**27.0** (21.9-34.0)	**30.9** (24.4-40.0)	**36.5** (27.6-49.2)	**41.2** (30.1-57.4)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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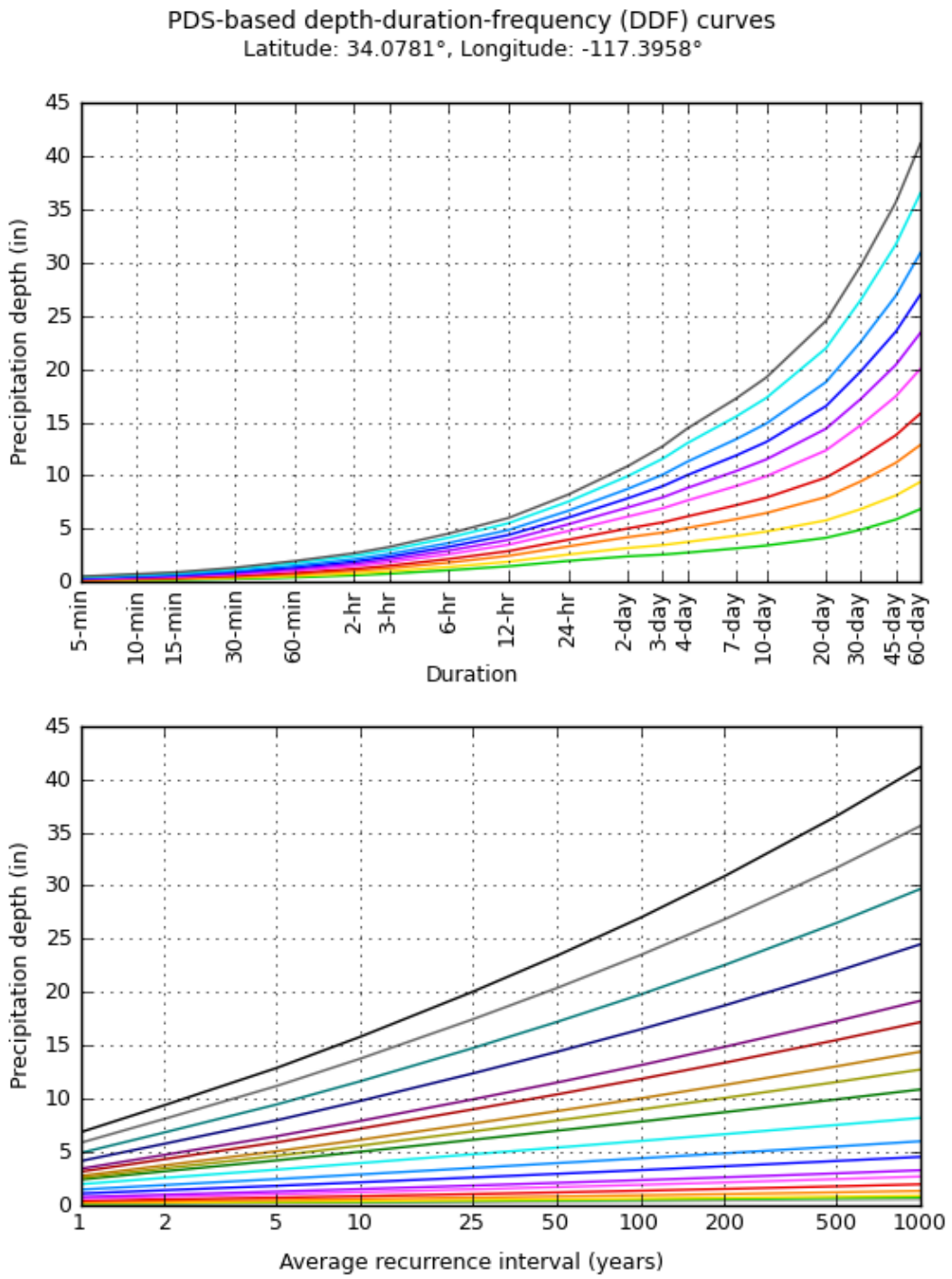
PF graphical



NOAA Atlas 14, Volume 6, Version 2

Created (GMT): Fri May 27 20:57:32 2022

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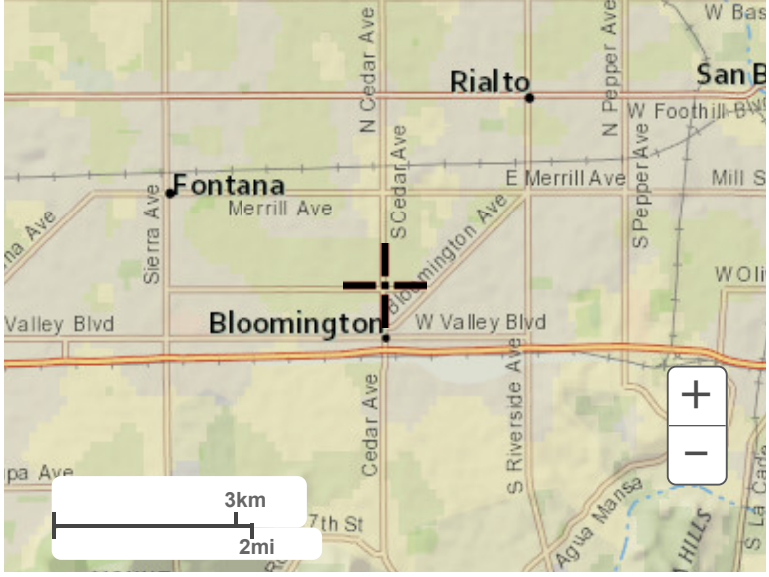
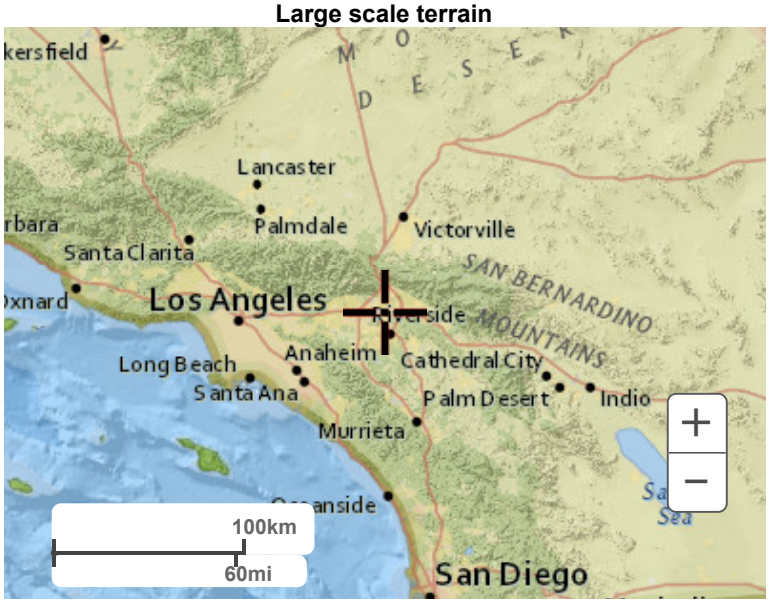
Maps & aerials

Small scale terrain



Large scale terrain



Large scale map

Large scale aerial

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US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer

Map Scale: 1:1,370 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 20 40 80 120

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Lines

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Points

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Bernardino County Southwestern Part, California
Survey Area Data: Version 13, Sep 13, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 11, 2020—Nov 15, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
TuB	Tujunga loamy sand, 0 to 5 percent slopes	A	7.2	100.0%
Totals for Area of Interest			**7.2**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

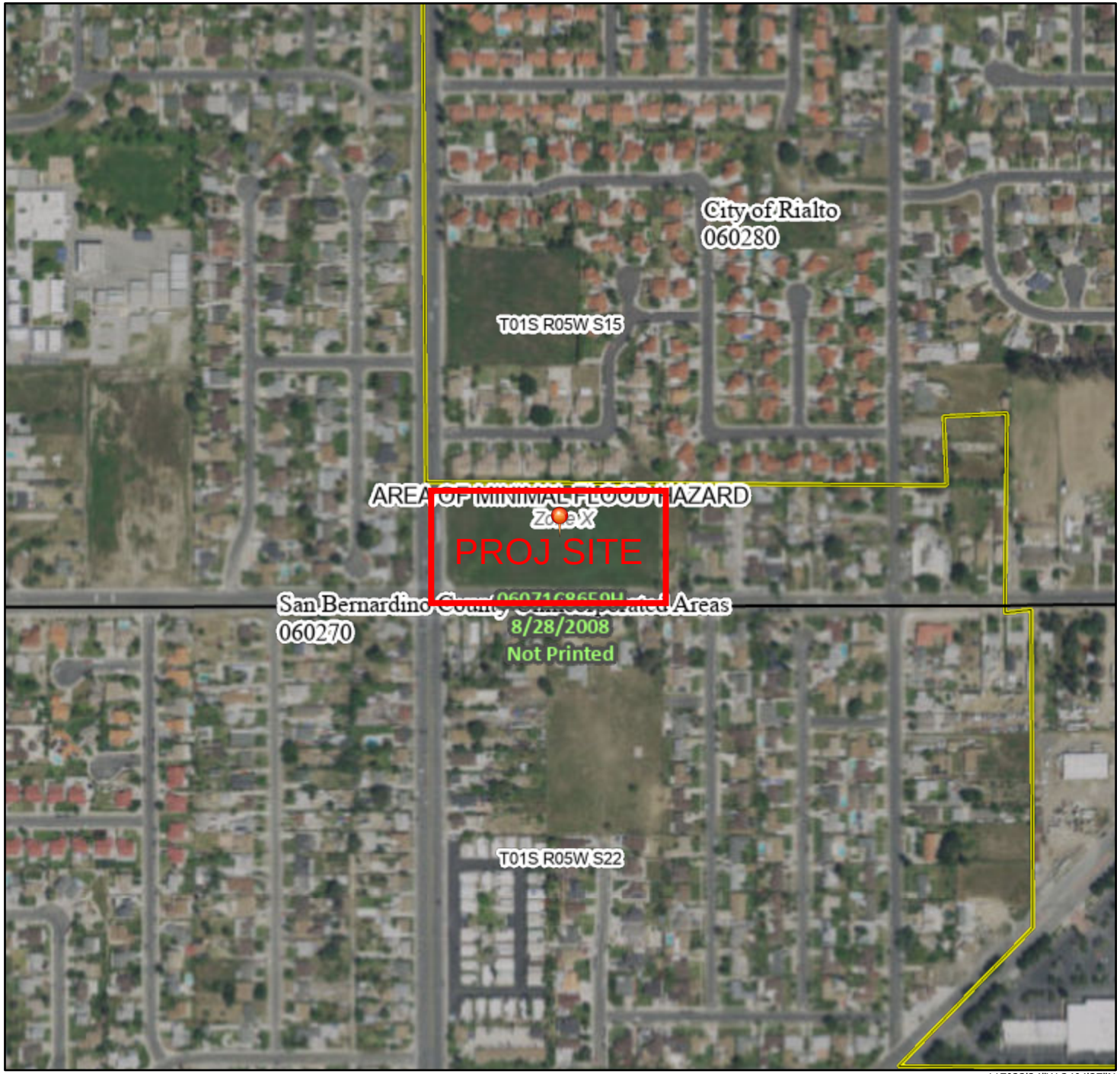
Component Percent Cutoff: None Specified

Tie-break Rule: Higher

National Flood Hazard Layer FIRMette

FEMA

117°24'2"W 34°4'56"N



117°23'24"W 34°4'27"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 4/24/2023 at 5:32 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

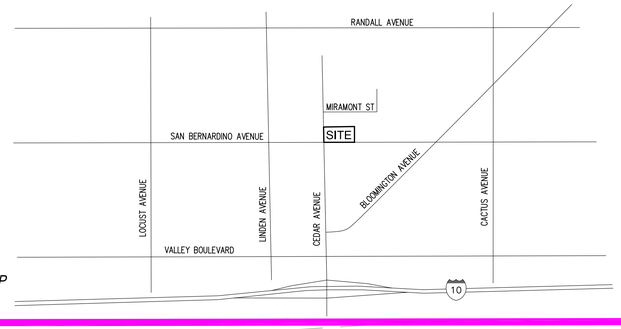
This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

SINGLE FAMILY RESIDENTIAL

BLOCK WALL W/ WOOD FENCE HEIGHT: 8'
(GROUND ELEVATION VARIES)

FENCE LIES 1.6' WEST OF LINE — SOUTH FACE OF BLOCK WALL LIES 0.5' NORTH OF LINE

VICINITY MAP
NO SCALE



NODE 10
ELEV 1141

L=681'
EXIST

VACANT LOT

S00°09'05"E 333.28' (M)

FEN

SINGLE FAMILY RESIDENTIAL

SITE AREA
173,059 S.F.
3.973 AC

CEDAR AVENUE

SAN BERNARDINO AVENUE

Q=3.64 CFS
25 EX

Q=6.7 CFS
100 EX

NODE 20
ELEV 1134

UGE

W

G

NORTH
SCALE: 1" = 20'

20' 0' 20' 40' 80'
GRAPHIC SCALE: 1" = 20'

REGISTERED PROFESSIONAL ENGINEER
DAVID B. RAGLAND
REG. NO. 35985
CIVIL
STATE OF CALIFORNIA

DAVID B. RAGLAND R.C.E. 35985 DATE

TRANSTECH
413 MACKAY DRIVE.
SAN BERNARDINO, CA. 92408
(909) 384-7464

SAN BERNARDINO COUNTY

CIRCLE K STORE
HYDROLOGY MAP
EXISTING CONDITION

DRAWN BY:	DATE:	SCALE:	SHEET:	JOB NO.
D.R.	07/05/2023	AS SHOWN	1 OF 1	210249

Updated Site Plan in PROJ-2022-00073 must show these basins

NODE 10
ELEV 1141

FLOW LENGTH TO OUTLET AT NODE 20
L=819'

BIO-RETENTION BASIN
1,677 CF

BIO-RETENTION BASIN
3,695 CF

VEGETATED SWALE FOR OVERFLOW FROM DMA D

BLOCK WALL W/ WOOD FENCE HEIGHT: 8' (GROUND ELEVATION VARIES)

(E) 8 FT. BLOCK WALL WITH WOOD FENCE

(E) PROPERTY LINE

(N) TRASH ENCLOSURE

SOUTH FACE OF BLOCK WALL LIES 1' NORTH OF LINE

CURB OPENING FOR OVERFLOW

CONNECT TO EXIST SEWER

(N) VACUUM

(N) CLEARANCE BAR

(N) PAY STATION

(N) TRANSFORMER

(N) MENU & PREPARE FOR CAR WASH" INSTRUCTIONS

JENSEN PRECAST CLARIFIER

DMA B
14,660 SF

CAR WASH
1,262 SF

C-STORE
5,200 S.F.

(N) DRYER TIMER

DMA D
28,048 SF

FUTURE TRASH/RECYCLE ENCLOSURE
500 SF

BLDG B
5,676 S.F.

LOADING

SEWER MAIN

BLDG A
15,350 S.F.

DMA G
36,412 SF

PARKWAY CULVERT

DMA A
17,745 SF

PART OF PARCEL
0250-101-76-0000

29005 SF
DMA C

SEWER MAIN

RAISED FUELING AREA PAD TO PREVENT STORM WATER RUN-ON

FUEL CANOPY
152' x 43'
DS=10

C.B. & DEAD END SUMP

C.B. & DEAD END SUMP

(N) BIKE RACK

(N) PROPERTY LINE

SITE AREA
173,059 S.F.
3.973 AC

REMAINDER PARCEL
0250-101-76-0000
2.29 AC

DMA F
22,758 SF

DMA E
24,431 SF

8" SEWER

BIO-RETENTION BASIN
6,528 CF

BIO-RETENTION BASIN
4,731 CF

BIO-RETENTION BASIN
4,457 CF

BIO-RETENTION BASIN
3,332 CF

BIO-RETENTION BASIN
3,275 CF

NODE 20
ELEV 1134

OUTLET 1
PROJECT DISCHARGE LOCATION
Q=12.9 CFS
100 DEV

CONNECT TO PROPOSED SEWER EXTENSION

651.18' (M)

S00°09'05"E 333.28' (M)

CEDAR AVE

SAN BERNARDINO AVE

(E) CURB, GUTTER & SIDEWALK

(E) R-O-W

(E) AIR & WATER

(E) FIRE HYDRANT

(E) TRAFFIC SIGNAL

(E) SIGNS TO BE REMOVED

(E) R-O-W

(E) CURB & GUTTER

(E) POWER POLE & OVERHEAD ELECTRIC LINES

(N) VENT STAND

(E) FENCE TO BE REMOVED

(N) 10X20' LOADING

(N) MONUMENT SIGN

(E) EXISTING CURB, SIGN, & TRAFFIC SIGNAL BOX TO BE REMOVED

(E) POWER POLE & OVERHEAD ELECTRIC LINES

(E) FIRE HYDRANT

(E) POWER POLE & OVERHEAD ELECTRIC LINES

(E) FIRE HYDRANT

NORTH
SCALE: 1" = 20'

20' 0' 20' 40' 80'
GRAPHIC SCALE: 1" = 20'

REGISTERED PROFESSIONAL ENGINEER
DAVID B. RAGLAND
REG. NO. 35985
CIVIL
STATE OF CALIFORNIA

DAVID B. RAGLAND R.C.E. 35985 DATE

TRANSTECH
413 MACKAY DRIVE.
SAN BERNARDINO, CA. 92408
(909) 384-7464

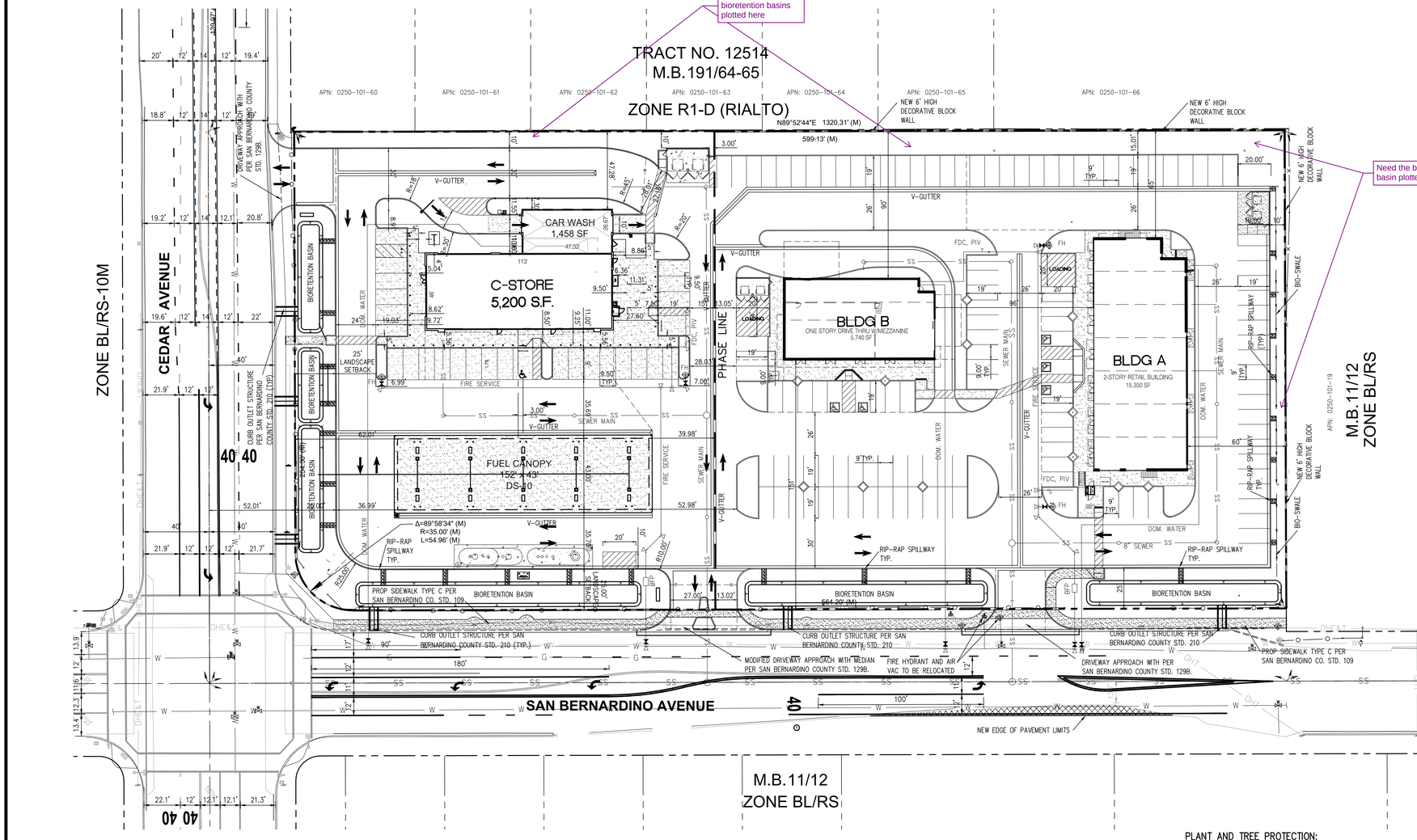
SAN BERNARDINO COUNTY

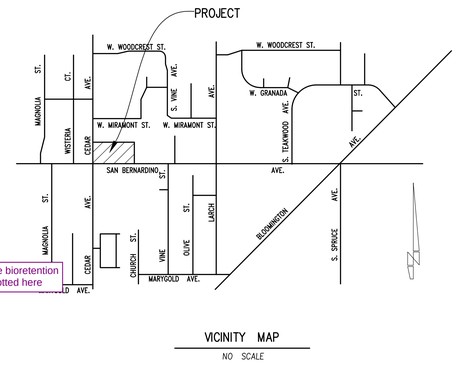
CIRCLE K STORE
HYDROLOGY MAP
PROPOSED CONDITION

DRAWN BY:	DATE:	SCALE:	SHEET:	JOB NO.
D.R.	07/05/2023	AS SHOWN	1 OF 1	210249

Site Plan in PROJ-2022-00073 - Reference Only
(Uploaded 7-18-23)

OFFICIAL USE ONLY





VICINITY MAP
NO SCALE

LEGAL DESCRIPTIONS:

Parcel 1:
That portion of the South one-half of Lot 324, according to map showing subdivision of lands belonging to the Semi-Tropic Land and Water Co., in the County of San Bernardino, State of California, as per map recorded in Book 11, Page 12 of Maps, in the Office of the County Recorder of said County, described as follows:

Beginning at the Southeast corner of the West one-quarter of the South one-half of said Lot 324, said point being distant 299.94 feet Easterly measured along the South line of said Lot 324 from the Southwest corner of said Lot; thence Easterly along said South line to the Southwest corner of land conveyed to W. L. Jackley, et al, by deed recorded August 9, 1961 in Book 5505, Page 211 of Official Records; thence North along the West line of said Jackley property, 318.34 feet to the North line of said South one-half of Lot 324; thence Westerly along said North line to the East line of said West one-quarter of the South one-half; thence Southerly along said East Line 318.03 feet to the point of beginning.

Except therefrom that portion conveyed to the County of San Bernardino by deed recorded January 14, 1994 as Instrument No. 94-018591 of Official Records.

Parcel 2:
The East 150 feet of the West one-quarter of the South one-half of Lot 324, according to map showing subdivision of lands belonging to the Semi-Tropic Land and Water Co., in the County of San Bernardino, State of California, as per map recorded in Book 11, Page 12 of Maps, in the Office of the County Recorder of said County.

Except therefrom that portion conveyed to the County of San Bernardino by deed recorded January 14, 1994 as
Instrument No. 94-018590 of Official Records.

Parcel 3:
The West one-quarter of the South one-half of Lot 324, according to maps showing subdivision of lands belonging to theSemi-Tropic Land and Water Co., in the County of San Bernardino, State of California, as per map recorded in Book 11, Page 12 of Maps, in the Office of the County Recorder of said County.

Except therefrom the East 150 feet thereof.
Also except therefrom those portions conveyed the County of San Bernardino by deed recorded January 14, 1994 as Instrument No. 94-018589 of Official Records.

ZONING CLASSIFICATION:

EXISTING ZONING: BL/RL-5 (BLOOMINGTON /RURAL LIVING – VALLEY REGION)

PROPOSED ZONING: BL/CN (BLOOMINGTON /COMMERCIAL – VALLEY REGION)

ASSESSOR PARCEL No:

0250-101-76

OWNER/APPLICANT:

SHORECLIFF CAPITAL LLC.
468 N. CAMDEN DRIVE, SUITE 300
BEVERLY HILLS, CA. 90210

ENGINEER:

TRANSTECH
413 MACKAY DRIVE
SAN BERNARDINO, CA. 92408
(909) 384-7464

SETBACKS

FRONT	25'
SIDE (STREET)	25'
SIDE (INTERIOR)	10' (ONLY ONE SIDE IS REQUIRED FOR EMERGENCY ACCESS)
REAR:	10'

PROPOSED BUILINGS "A" &"B"

PARCEL AREA	2.29 ACRES (99,831 S.F.)
BUILDING AREA	BUILDING "A" 7,675 S.F. (FIRST FLOOR) + 7,675 S.F. (SECOND FLOOR) = 15,350 S.F. BUILDING "B" 4,330 S.F. (FIRST FLOOR) = 1,410 S.F. (MEZZANINE)= 5,740 S.F.
TOTAL AREA	21,090 S.F.
LOT COVERAGE	12% (12,005 S.F. / 99,831)
PROPOSED HEIGHT	35' / 26';
PARKING REQUIREMENT	4,00 S.F. RESTAURANT SHELL ONLY (1:100) AND 17,090 S.F. RETAIL/OFFICE (1:250) 40+68=108 STALLS
PARKING PROVIDED	STANDARD SPACES 118 EA. ACCESSIBLE SPACES 5 EA. 123 SPACES TOTAL
REQUIRED LANDSCAPING	(20% OF LOT AREA) 99,831X0.2=19,966.2 S.F.
PROVIDED LANDSCAPING	(21% OF LOT AREA) 21,030 S.F.
LOADING SPACE	REQUIRED : 2 SPACES PROVIDED : 3 SPACES
BICYCLE PARKING	REQUIRED : 4 SPACES PROVIDED : 4 SPACES
REFUSE AND RECYCLE AREA	REQUIRED: 24 S.F. + 24 S.F. + 24 S.F. + 24 S.F. = 96 S.F. PROVIDED: 198 S.F. + 198 S.F. = 396 S.F.

PROPOSED BUILDING "C" STORE

PARCEL AREA	1.68 ACRES (73,214 S.F.)
BUILDING AREA	BUILDING "C" 5,200 S.F. / CARWASH 1,458 S.F.
TOTAL AREA	6,462 S.F.
LOT COVERAGE	8.82% (6,462 S.F. / 73,214)
PROPOSED HEIGHT	23' CARWASH 23'
PARKING REQUIREMENT	RETAIL @ 1 SPACE/250 S.F. 21 SPACES TOTAL
PARKING PROVIDED	STANDARD PARKING SPACE 23 EA, ACCESSIBLE PARKING SPACE 3 EA. – 26 TOTAL SPACES
REQUIRED LANDSCAPING	(20% OF LOT AREA) 73,214 X 0.2 = 14,643 S.F.
PROVIDED LANDSCAPING	(22.06%±) 16,149 S.F.
LOADING SPACE	REQUIRED : 1 SPACE PROVIDED : 1 SPACE
BICYCLE PARKING	REQUIRED : 2 SPACES PROVIDED : 2 SPACES
REFUSE AND RECYCLE AREA	REQUIRED: 24 S.F. + 24 S.F. = 48 S.F. PROVIDED: 99 S.F. + 99 S.F. = 198 S.F.

PLANT AND TREE PROTECTION:

IF NO PROTECT OR ENDANGERED TREES EXIST ON THE SITE STATE "NO PROTECTED PLANTS," OTHERISE SHOW THE LOCATION, SIZE, AND TYPE OF ALL NATIVE TREES.

UTILITIES:

SEWER RIALTO WATER SERVICES 150 S. PALM AVE. RIALTO, CA. 92376	(909) 820-2546
WATER WEST VALLEY WATER DISTRICT 855 WEST BASLINE LINE ROAD RIALTO, CA. 92376	(909) 875-1804
ELECTRIC SOUTHERN CALIFORNIA EDISON	(800) 655-4555
GAS SOUTHERN CALIFORNIA GAS CO.	(800) 427-2000
TELEPHONE AT&T	(800) 288-2020
CABLE SPECTRUM	(855) 243-8892
DISPOSAL BURRTEC DISPOSAL 1150 S. TIPPECANOE AVE. SAN BERNARDINO, CA. 92408	(909) 877-1596

LEGEND

- PROPOSED SEWER MAIN
- PROPOSED WATER MAIN
- PROPOSED FIRE SERVICE WATER MAIN
- EXISTING SEWER MAIN
- EXISTING WATER MAIN
- EXISTING GAS MAIN
- PROPOSED CONTOUR
- EXISTING CONTOUR
- TRASH ENCLOUSER
- F.H. FIRE HYDRANT
- SMH SEWER MANHOLE
- SCO SEWER CLEANOUT
- SDMH STORM DRAIN MANHOLE
- CONCRETE WALKWAY
- NEW A.C. PAVEMENT
- UNDERGROUND FUELING TANK

NORTH
SCALE: 1"= 30'
30' 0' 30' 60' 90'
GRAPHIC SCALE: 1" = 30'

REVISED 05/10/2023

DATE	REVISIONS	APP.

210249 SITE PLAN SBCO.DWG