

## 1. INTRODUCTION AND EXECUTIVE SUMMARY

THIS PROPERTY, DESCRIBED AS SUBDIVISION OF TRACT 1-4, VISTA DEL NORTE, IS LOCATED IN THE NORTH PALM BEACH JUST SOUTH OF PASO DEL NORTE BLVD. AND EL PUERTO ROAD, AND WEST OF THE ADJACENT TO THE AMERICA NORTH DIVERSION CHANNEL. TRACT 1-4 IS CURRENTLY A VACANT TRACT CONSISTING OF 22,654 ACRES, AND IS PROPOSED TO BE SUBDIVIDED INTO 13 LOTS, RANGING IN SIZE FROM 0.5245 ACRES TO 4.3913 ACRES. THE TRACT IS ZONED M-2.

THIS FACILITY WAS IDENTIFIED ON A MASTER DRAINAGE PLAN TO ALLOW DISCHARGE OF THE RUNOFF FROM A REGIONAL DETENTION POND LOCATED ON TR U-1, WEST OF TR T-4.

ON TR U-1 (LAS LOMITAS BUSINESS PARK SUBDIVISION) THE STORM SEWER IS SIZED TO ACCOMMODATE RUNOFF FROM TR 1-4

THIS SUBMITTAL IS MADE IN SUPPORT OF SUBDIVISION PLAT, SITE PLAN FOR SUBDIVISION, GRADING PERMIT AND APPROVALS FOR CONSTRUCTION PURPOSES

## II. PROJECT DESCRIPTION

AS SHOWN BY THE VICINITY MAP, THE SITE IS LOCATED ON THE SOUTH SIDE OF PASSEO DEL NORTE BLVD. AND EL PUEBLO BLVD., WEST OF AND ADJACENT TO THE AMERICA NORTH DIVERSION CHANNEL AS SHOWN ON ZONE A1-65 PAGE D-1-16. THE CURRENT LEGAL DESCRIPTION IS TRACT T-4-VISIA DEL NORTE AS SHOWN BY PANEL 136 OF 825 OF THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAPS PUBLISHED BY FEMA FOR BERNALILLO COUNTY, NEW MEXICO, SEPTEMBER 20, 1996. THIS SITE DOES NOT LIE WITHIN A DESIGNATED FLOOD HAZARD ZONE. THE SITE DOES LIE ADJACENT TO THE NORTH DIVERSION CHANNEL, DESIGNATED AS BEING A FLOOD HAZARD ZONE A.

### III. EXISTING CONDITIONS

AT PRESENT, THIS SITE IS VACANT. THIS SITE GENERALLY SLOPES FROM THE NORTHEAST CORNER TO THE WEST AND THE SOUTHWEST. THIS SITE IS NOT SUBJECT TO OFFSITE FLOWS AS THE LANDS TO THE WEST AND SOUTH ARE MUCH LOWER IN ELEVATION THAN THIS SITE. THE NORTH DIRECTION CHANNEL IS LOCATED TO THE EAST. EL PASO ROAD AND THE RAILROAD TRACKS LOCATED NORTH OF THE SITE AT A LOWER ELEVATION THAN THE SITE, AND RUNOFF GENERATED FROM THE ROAD FLOWS TO THE NORTH AND WEST AND WILL NOT IMPACT THIS SITE.

THE LAND TO THE SOUTH HAD BEEN DEVELOPED INTO RESIDENTIAL LOTS, THE LAND TO THE WEST CURRENTLY VACANT, BUT IS IN THE PROCESS OF BEING DEVELOPED INTO INDUSTRIAL/COMMERCIAL LOTS.

#### IV. DEVELOPED CONDITIONS

THE TRACT WILL BE SUBDIVIDED INTO 13 LOTS RANGING IN SIZE FROM 0.5245 ACRES TO 4.3973 ACRES. THE TRACT WILL BE SERVED BY A PRIVATE PAVED ROADWAY EXTENDING FROM THE NORTHWEST CORNER OF THE TRACT THROUGH THE PROPERTY AND TERMINATING AT A CL-DE-SAC AT THE RAILROAD TRACKS SOUTH TO THE LOW SPOT (ROADWAY STATION 7+38.91) AND FROM THE CL-DE-SAC NORTH TO THE LOW SPOT. THE SUE WILL BE MASS GRADED TO DIRECT THE RUNOFF FROM THE LOTS TO THE ROADWAY. THE RUNOFF WILL BE INTERCEPTED BY A SERIES OF DRAINAGE DITCHES AND STORM SEWER PIPING TO DIRECT THE RUNOFF TO THE WEST PROPERTY LINE AS SHOWN ON THE GRADING AND DRAINAGE PLAN.

## V. CALCULATIONS

CALCULATIONS ANALYZING THE SITE IN THE DEVELOPED CONDITION FOR THE 100-YEAR, 6-HOUR RAINFALL EVENT HAVE BEEN PREPARED FOR THIS PROJECT. THE PROCEDURE FOR 40 ACRES OR SMALLER BASINS, AS SET FORTH IN THE REVISION OF SECTION 22.2, HYDROLOGY, OF THE DEVELOPMENT PROCESS MANUAL, VOLUME 2, DESIGN CRITERIA, DATED JANUARY, 1993, HAS BEEN USED TO QUANTIFY THE PEAK RATE OF DISCHARGE AND VOLUME OF RUNOFF GENERATED.

THE SITE WAS SPLIT INTO 13 SUB-BASINS (IDENTIFIED AS SUB-BASIN 1-1 THROUGH SUB-BASIN 1-13). SUB-BASINS 1-1 THRU 1-7 ARE LOCATED ON THE EAST SIDE OF THE PROPOSED ROADWAY. SUB-BASINS 1-8 THRU 1-13 ARE LOCATED ON THE WEST SIDE OF THE PROPOSED ROADWAY. SUBPORTION OF THE RAILROAD RIGHT-OF-WAY AFTER THE PROPOSED IMPROVEMENTS ARE COMPLETE, THE RUNOFF GENERATED FROM SUB-BASIN 1-1 WILL CONTINUE TO RUN OFF SITE. THE RUNOFF FROM SUB-BASIN 1-8 (0.16 AC), LOCATED ON THE SOUTH PROPERTY LINE OF THE SITE, WILL ALSO CONTINUE TO RUN OFF-SITE FOLLOWING THE COMPLETION OF THE IMPROVEMENTS.

100% OF THE RUNOFF FROM SUB-BASIN 1-2 THROUGH SUB-BASIN 1-7 AND SUB-BASINS 1-9 THROUGH 1-13 WILL BE INTERCEPTED BY THE PROPOSED ROADWAY AND WILL BE DIRECTED TO THE NEAREST PROPERTY LINE AND TO THE DETENTION POND DESCRIBED ABOVE.

### SUMMARY OF DRAINAGE COMPUTATIONS, DEVELOPED (100YR/6HR

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### CATCH BASIN CALCULATIONS

USE STORAGE INLET DOUBLE "C", CURB OPENING = 6.5'  
 GRADING CAPACITIES FROM PLATE 22.3 0.6 - 0.9 IN  
 CURB INLET CAPACITIES FROM CHART TITLED CAPACITY OF CURB OPENING INLETS (ORIGIN UNKNOWN)

## PIPE CALCULATIONS

CATCH BASIN CALCULATIONS (CATCH OPENING = 0.5)  
 CATCH BASIN INLET DRAIN C/S = 0.5  
 DRAINING CAPACITIES FROM PUMP 22.0 DRAIN C/S  
 CATCH INLET CAPACITIES FROM CATCH TITLED CAPACITY OF CATCH OPENING ALLEYS (CATCH UNKNOWN)  
 DRAIN C/S  
 0.514 312.46 0.1 =  
 SUB-BASIN 1-6 = 7.15 C/S  
 SUB-BASIN 1-9 = 13.57 C/S  
 SUB-BASIN 1-10 = 13.57 C/S  
 COMMENT = 40.57 C/S

- 483.0 C/S -> 0 = 0.58 + 0.15 (DEPRESSIO GRANT) = 0.73  
 - CATCH OPENING CAPACITY + (DRAIN CAPACITY - 1.53) =>  
 - (0.43 C/S)/IT (6.5) + (172.5 C/S - 1.48 C/S) X 2 -> 28.41 C/S  
 01 OVERFLOW = 48.57 C/S - 28.41 C/S = 22.16 C/S  
 SUB-BASIN 1-11 = 5.84 C/S  
 SUB-BASIN 1-12 = 2.98 C/S  
 02 OVERFLOW = 22.16 C/S  
 COMMENT = 24.60 C/S

- 30.06 C/S -> 0 = 0.60 + 0.15 (DEPRESSIO GRANT) = 0.65  
 - (0.86 C/S)/IT (6.5) + (100 - 1.50) X 2 -> 21.66 C/S  
 02 OVERFLOW = 30.06 C/S - 21.66 C/S = 8.28 C/S  
 01 SIA 340.00 0.1 =  
 SUB-BASIN 1-2 = 10.6 C/S  
 SUB-BASIN 1-3 = 8.61 C/S  
 SUB-BASIN 1-4 = 8.61 C/S  
 COMMENT = 28.23 C/S

- 75.50 D = 0.46 + 0.15 (DEPRESSIO GRANT) = 0.61  
 - (0.33 C/S)/IT (6.5) + (65 C/S - 1.15 C/S) X 2 -> 15.55 C/S  
 03 OVERFLOW = 75.50 C/S - 15.55 C/S = 6.99 C/S  
 01 SIA 71.50 0.1 =  
 SUB-BASIN 1-4 = 10.6 C/S  
 SUB-BASIN 1-5 = 8.61 C/S  
 SUB-BASIN 1-6 = 8.61 C/S  
 COMMENT = 6.99 C/S

- 31.70 C/S -> 0 = 0.44 + 0.15 (DEPRESSIO GRANT) (USE 0.70) AVAILABLE  
 - (0.51 C/S)/IT (6.5) + (14.0 C/S - 2.10 C/S) X 2 -> 30.43 C/S  
 04 OVERFLOW = 30.43 C/S - 31.70 C/S = 11.27 C/S  
 01 SIA 11.27 0.1 =  
 SUB-BASIN 1-4 = 10.6 C/S  
 SUB-BASIN 1-5 = 8.61 C/S  
 SUB-BASIN 1-6 = 8.61 C/S  
 COMMENT = 11.27 C/S

05 SIA 0.00 0.1 =  
 SUB-BASIN 1-4 = 10.6 C/S  
 SUB-BASIN 1-5 = 8.61 C/S  
 SUB-BASIN 1-6 = 8.61 C/S  
 COMMENT = 11.27 C/S

06 SIA 0.00 0.1 =  
 SUB-BASIN 1-4 = 10.6 C/S  
 SUB-BASIN 1-5 = 8.61 C/S  
 SUB-BASIN 1-6 = 8.61 C/S  
 COMMENT = 11.27 C/S

07 SIA 0.00 0.1 =  
 SUB-BASIN 1-4 = 10.6 C/S  
 SUB-BASIN 1-5 = 8.61 C/S  
 SUB-BASIN 1-6 = 8.61 C/S  
 COMMENT = 11.27 C/S

08 SIA 0.00 0.1 =  
 SUB-BASIN 1-4 = 10.6 C/S  
 SUB-BASIN 1-5 = 8.61 C/S  
 SUB-BASIN 1-6 = 8.61 C/S  
 COMMENT = 11.27 C/S

09 SIA 0.00 0.1 =  
 SUB-BASIN 1-4 = 10.6 C/S  
 SUB-BASIN 1-5 = 8.61 C/S  
 SUB-BASIN 1-6 = 8.61 C/S  
 COMMENT = 11.27 C/S

10 SIA 0.00 0.1 =  
 SUB-BASIN 1-4 = 10.6 C/S  
 SUB-BASIN 1-5 = 8.61 C/S  
 SUB-BASIN 1-6 = 8.61 C/S  
 COMMENT = 11.27 C/S

11 SIA 0.00 0.1 =  
 SUB-BASIN 1-4 = 10.6 C/S  
 SUB-BASIN 1-5 = 8.61 C/S  
 SUB-BASIN 1-6 = 8.61 C/S  
 COMMENT = 11.27 C/S

12 SIA 0.00 0.1 =  
 SUB-BASIN 1-4 = 10.6 C/S  
 SUB-BASIN 1-5 = 8.61 C/S  
 SUB-BASIN 1-6 = 8.61 C/S  
 COMMENT = 11.27 C/S

13 SIA 0.00 0.1 =  
 SUB-BASIN 1-4 = 10.6 C/S  
 SUB-BASIN 1-5 = 8.61 C/S  
 SUB-BASIN 1-6 = 8.61 C/S  
 COMMENT = 11.27 C/S

14 SIA 0.00 0.1 =  
 SUB-BASIN 1-4 = 10.6 C/S  
 SUB-BASIN 1-5 = 8.61 C/S  
 SUB-BASIN 1-6 = 8.61 C/S  
 COMMENT = 11.27 C/S

15 SIA 0.00 0.1 =  
 SUB-BASIN 1-4 = 10.6 C/S  
 SUB-BASIN 1-5 = 8.61 C/S  
 SUB-BASIN 1-6 = 8.61 C/S  
 COMMENT = 11.27 C/S

16 SIA 0.00 0.1 =  
 SUB-BASIN 1-4 = 10.6 C/S  
 SUB-BASIN 1-5 = 8.61 C/S  
 SUB-BASIN 1-6 = 8.61 C/S  
 COMMENT = 11.27 C/S

17 SIA 0.00 0.1 =  
 SUB-BASIN 1-4 = 10.6 C/S  
 SUB-BASIN 1-5 = 8.61 C/S  
 SUB-BASIN 1-6 = 8.61 C/S  
 COMMENT = 11.27 C/S

18 SIA 0.00 0.1 =  
 SUB-BASIN 1-4 = 10.6 C/S  
 SUB-BASIN 1-5 = 8.61 C/S  
 SUB-BASIN 1-6 = 8.61 C/S  
 COMMENT = 11.27 C/S

19 SIA 0.00 0.1 =  
 SUB-BASIN 1-4 = 10.6 C/S  
 SUB-BASIN 1-5 = 8.61 C/S  
 SUB-BASIN 1-6 = 8.61 C/S  
 COMMENT = 11.27 C/S

20 SIA 0.00 0.1 =  
 SUB-BASIN 1-4 = 10.6 C/S  
 SUB-BASIN 1-5 = 8.61 C/S  
 SUB-BASIN 1-6 = 8.61 C/S  
 COMMENT = 11.27 C/S

21 SIA 0.00 0.1 =  
 SUB-BASIN 1-4 = 10.6 C/S  
 SUB-BASIN 1-5 = 8.61 C/S  
 SUB-BASIN 1-6 = 8.61 C/S  
 COMMENT = 11.27 C/S

22 SIA 0.00 0.1 =  
 SUB-BASIN 1-4 = 10.6 C/S  
 SUB-BASIN 1-5 = 8.61 C/S  
 SUB-BASIN 1-6 = 8.61 C/S  
 COMMENT = 11.27 C/S

23 SIA 0.00 0.1 =  
 SUB-BASIN 1-4 = 10.6 C/S  
 SUB-BASIN 1-5 = 8.61 C/S  
 SUB-BASIN 1-6 = 8.61 C/S  
 COMMENT = 11.27 C/S

24 SIA 0.00 0.1 =  
 SUB-BASIN 1-4 = 10.6 C/S  
 SUB-BASIN 1-5 = 8.61 C/S  
 SUB-BASIN 1-6 = 8.61 C/S  
 COMMENT = 11.27 C/S

25 SIA 0.00 0.1 =  
 SUB-BASIN 1-4 = 10.6 C/S  
 SUB-BASIN 1-5 = 8.61 C/S  
 SUB-BASIN 1-6 = 8.61 C/S  
 COMMENT = 11.27 C/S

26 SIA 0.00 0.1 =  
 SUB-BASIN 1-4 = 10.6 C/S  
 SUB-BASIN 1-5 = 8.61 C/S  
 SUB-BASIN 1-6 = 8.61 C/S  
 COMMENT = 11.27 C/S

27 SIA 0.00 0.1 =  
 SUB-BASIN 1-4 = 10.6 C/S  
 SUB-BASIN 1-5 = 8.61 C/S  
 SUB-BASIN 1-6 = 8.61 C/S  
 COMMENT = 11.27 C/S

28 SIA 0.00 0.1 =  
 SUB-BASIN 1-4 = 10.6 C/S  
 SUB-BASIN 1-5 = 8.61 C/S  
 SUB-BASIN 1-6 = 8.61 C/S  
 COMMENT = 11.27 C/S

29 SIA 0.00 0.1 =  
 SUB-BASIN 1-4 = 10.6 C/S  
 SUB-BASIN 1-5 = 8.61 C/S  
 SUB-BASIN 1-6 = 8.61 C/S  
 COMMENT = 11.27 C/S

30 SIA 0.00 0.1 =  
 SUB-BASIN 1-4 = 10.6 C/S  
 SUB-BASIN 1-5 = 8.61 C/S  
 SUB-BASIN 1-6 = 8.61 C/S  
 COMMENT = 11.27 C/S

31 SIA 0.00 0.1 =  
 SUB-BASIN 1-4 = 10.6 C/S  
 SUB-BASIN 1-5 = 8.61 C/S  
 SUB-BASIN 1-6 = 8.61 C/S  
 COMMENT = 11.27 C/S

32 SIA 0.00 0.1 =  
 SUB-BASIN 1-4 = 10.6 C/S  
 SUB-BASIN 1-5 = 8.61 C/S  
 SUB-BASIN 1-6 = 8.61 C/S  
 COMMENT = 11.27 C/S

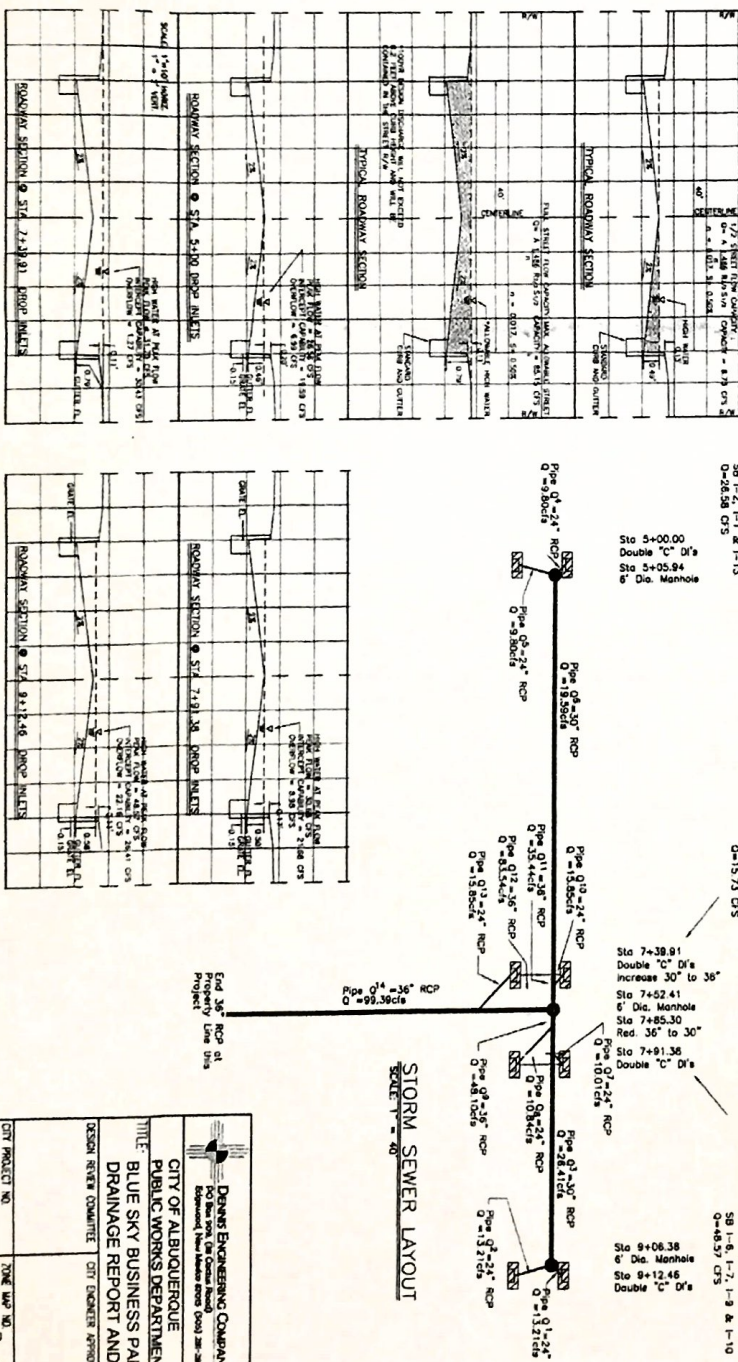
33 SIA 0.00 0.1 =  
 SUB-BASIN 1-4 = 10.6 C/S  
 SUB-BASIN 1-5 = 8.61 C/S  
 SUB-BASIN 1-6 = 8.61 C/S  
 COMMENT = 11.27 C/S


34 SIA 0.00 0.1 =  
 SUB-BASIN 1-4 = 10.6 C/S  
 SUB-BASIN 1-5 = 8.61 C/S  
 SUB-BASIN 1-6 = 8.61 C/S  
 COMMENT = 11.27 C/S

35 SIA 0.00 0.1 =  
 SUB-BASIN 1-4 = 10.6 C/S  
 SUB-BASIN 1-5 = 8.61 C/S  
 SUB-BASIN 1-6 = 8.61 C/S  
 COMMENT = 11.27 C/S

36 SIA 0.00 0.1 =<

STORM SEWER LAYOUT  
SCALE: 1" = 40'



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CITY PROJECT NO. \_\_\_\_\_ ZONE MAP NO. 0-1

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