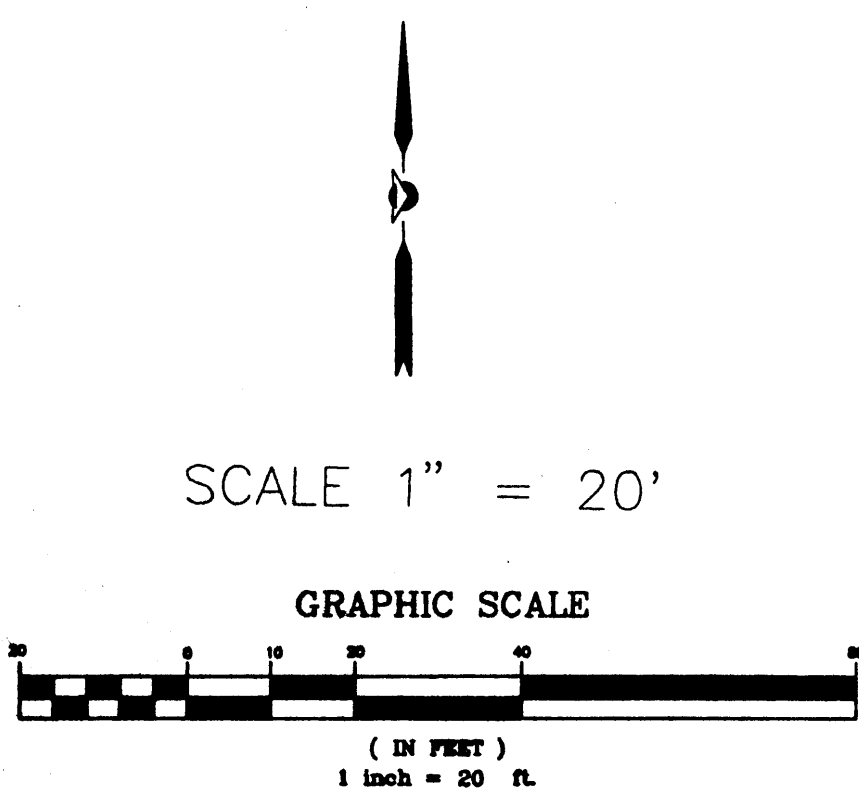


[illegible]

VICINITY MAP C-17

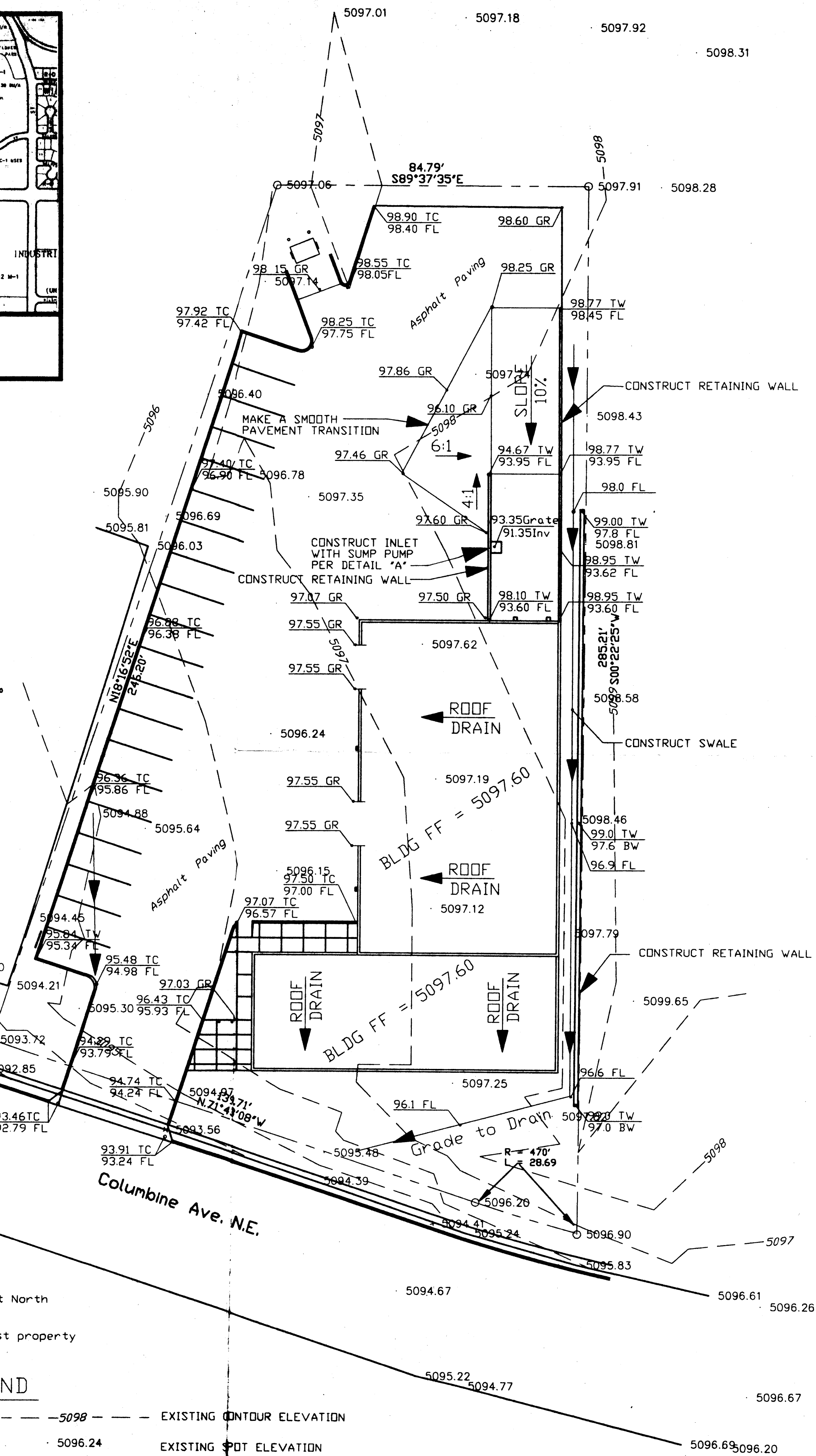


Elev. Bench Mark
5093.72

PROPERTY BENCHMARK
AMAFCA Brass Tablet stamped "NDC 7" located at North
Diversion Channel, South of Alameda Blvd. NE,
Elevation = 5062.60 feet MSLD
Temporary Bench Mark (T.B.M.) - At the southeast property
Corner a rebar with Elevation = 5101.52

LEGEND

-
- The diagram shows a cross-section of a curb and wall. On the left, a vertical line represents the curb and wall face. To its right, a sloped line represents the ground surface. A horizontal line at the top of the curb is labeled 'PROPOSED TOP OF CURB'. A horizontal line at the base of the wall is labeled 'PROPOSED BOTTOM OF WALL'. A horizontal line between the curb and wall is labeled 'PROPOSED FLOWLINE OF CURB'. A horizontal line at the top of the wall is labeled 'EXISTING POT ELEVATION'. A horizontal line at the base of the wall is labeled 'EXISTING CONTOUR ELEVATION'. A horizontal line at the bottom of the wall is labeled 'DIRECTION OF FLOW' with an arrow pointing to the right.
- | Feature | Elevation |
|----------------------------|-----------|
| PROPOSED GRADE ELEVATION | 96.43Gr |
| PROPOSED TOP OF CURB | 96.43 TC |
| PROPOSED FLOWLINE OF CURB | 95.93 FL |
| EXISTING CONTOUR ELEVATION | 5098 |
| EXISTING POT ELEVATION | 5096.24 |
| PROPOSED TOP OF WALL | 98.77 TW |
| PROPOSED BOTTOM OF WALL | 97.6 BW |



1. VICINITY MAP
2. GRADING AND DRAINAGE PLAN
3. FLOODMAP
4. DRAINAGE CALCULATIONS

EXITING CONDITIONS
AS SHOWN BY THE VICINITY MAP, THE SITE CONTAINS
APPROXIMATELY 0.76 ACRES AND IS LOCATED ON COLUMBINE
AVENUE NE, JUST EAST OF WASHINGTON STREET. THE SITE
CURRENTLY IS ZONED IP AND IS UNDEVELOPED. THE SITE
TOPOGRAPHY SLOPES FROM A NORTH TO SOUTH DIRECT AND DRAINS
TOWARDS COLUMBINE AVENUE. THE SITE IS SPARSELY COVERED
WITH NATIVE VEGETATION.

ACCORDING TO THE FLOOD INSURANCE RATE MAP, PANEL 35001C0136 D, DATED SEPTEMBER 20, 1996, THIS SITE DOES NOT LIE IN A DESIGNATED FLOODPLAIN.

PROPOSED CONDITIONS
AS SHOWN BY THE PLAN, THE PROJECT CONSISTS OF THE
DEVELOPMENT OF A OFFICE/WAREHOUSE BUILDING. THE PLAN
SHOWS THE CONTOURS AND ELEVATIONS REQUIRED TO PROPERLY
GRADE THE REQUIRED PAVING AND DRAINAGE IMPROVEMENTS. ALL
DRAINAGE FLOWS WILL BE MANAGED ONSITE AND DISCHARGED TO
CITY STREET. ALL DRIVEWAYS AND PARKING AREAS
WILL BE PAVED. LANDSCAPING IS TO BE PROVIDED PER ZONING
REQUIREMENTS.

A LOADING DOCK IS ALSO PROPOSED AT THE NORTHEAST CORNER OF THE BUILDING SITE. DUE TO THE HEIGHT REQUIREMENTS OF A 48" DOCK, MAKING IT FEASIBLE TO GRAVITY DRAIN THE DOCK TO COLUMBINE AVENUE, NORTH OF DOCK AREA, MAJOR EATHWORK. SINCE THE CITY ORDINANCE DOES NOT ALLOW RETENTION PONDING A SUMP PUMP IS PROPOSED TO DRAIN THE DOCK AREA OUT TO COLUMBINE AVENUE. AN INLET WILL BE CONSTRUCTED IN THE LOADING DOCK IN WHICH THE SUMP PUMP WILL BE LOCATED, A FLOAT SWITCH WILL BE INCLUDED IN THE PUMP TO AUTOMATICALLY DRAIN THIS AREA IN ANY STORM EVENT

THE CALCULATIONS WHICH APPEAR HEREON, ANALYZE BOTH THE EXISTING AND DEVELOPED CONDITIONS FOR THE YEAR 6 HOUR RAINFALL RUNOFF FOR PEAK FLOW AND STORM DURATION FOR VOLUME REQUIREMENTS. THE PROCEDURE FOR 40 ACRE AND SMALLER BASINS AS SET FORTH IN THE REVISION OF SECTION 22.7 HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL, VOLUME 2, DESIGN CRITERIA, DATED JANUARY 1993. THIS D.P.M. PROCEDURE IS USED FOR ANALYZING ONSITE FLOWS.

DOWNSTREAM CAPACITY
THE RICHFIELD PARK SUBDIVISION IMPROVEMENTS WERE
CONSTRUCTED IN 1987. THE DRAINAGE MANAGEMENT CRITERIA
FOR THE PROJECT WAS ESTABLISHED BY THE "DRAINAGE REPORT
FOR RICHFIELD PARK", PREPARED BY ESPEY, HUSTON & ASSOC.
INC. IN AUGUST OF 1986. IN THE REPORT, ALL LOTS ARE
REQUIRED TO DISCHARGE INTO THE PUBLIC STREET SYSTEM WHICH
CONVEYS RUNOFF TO THE EXISTING AMAFCA CHANNEL LOCATED
ALONG THE WEST BOUNDARY OF RICHFIELD PARK, TRACT D-1.
THE PROJECT WAS BUILT IN PHASES IN ACCORDANCE WITH THE
PHASING PLAN OUTLINED IN THE APPROVED DRAINAGE REPORT.
PHASES 1 AND 13 WERE COMPLETED FIRST. INTERIM
PAVED CHANNELS WERE CONSTRUCTED TO CONVEY RUNOFF FROM
THE PUBLIC STREETS TO THE AMAFCA CHANNEL.

EROSION CONTROL
TEMPORARY EROSION CONTROL WILL BE REQUIRED DURING THE CONSTRUCTION PHASE TO PROTECT DOWNSTREAM PROPERTY AND IMPROVEMENTS FROM SEDIMENT AND UNCONTROLLED RUNOFF. AS SHOWN ON THE ATTACHED MAP, THE PLAN, AND PROPERTY EROSION CONTROL MEASURES WILL BE PROVIDED ALONG THE SOUTH PROJECT BOUNDARIES TO HOLD RUNOFF DURING CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROPERLY MAINTAIN THESE FACILITIES DURING THE CONSTRUCTION PHASE OF THE PROJECT.

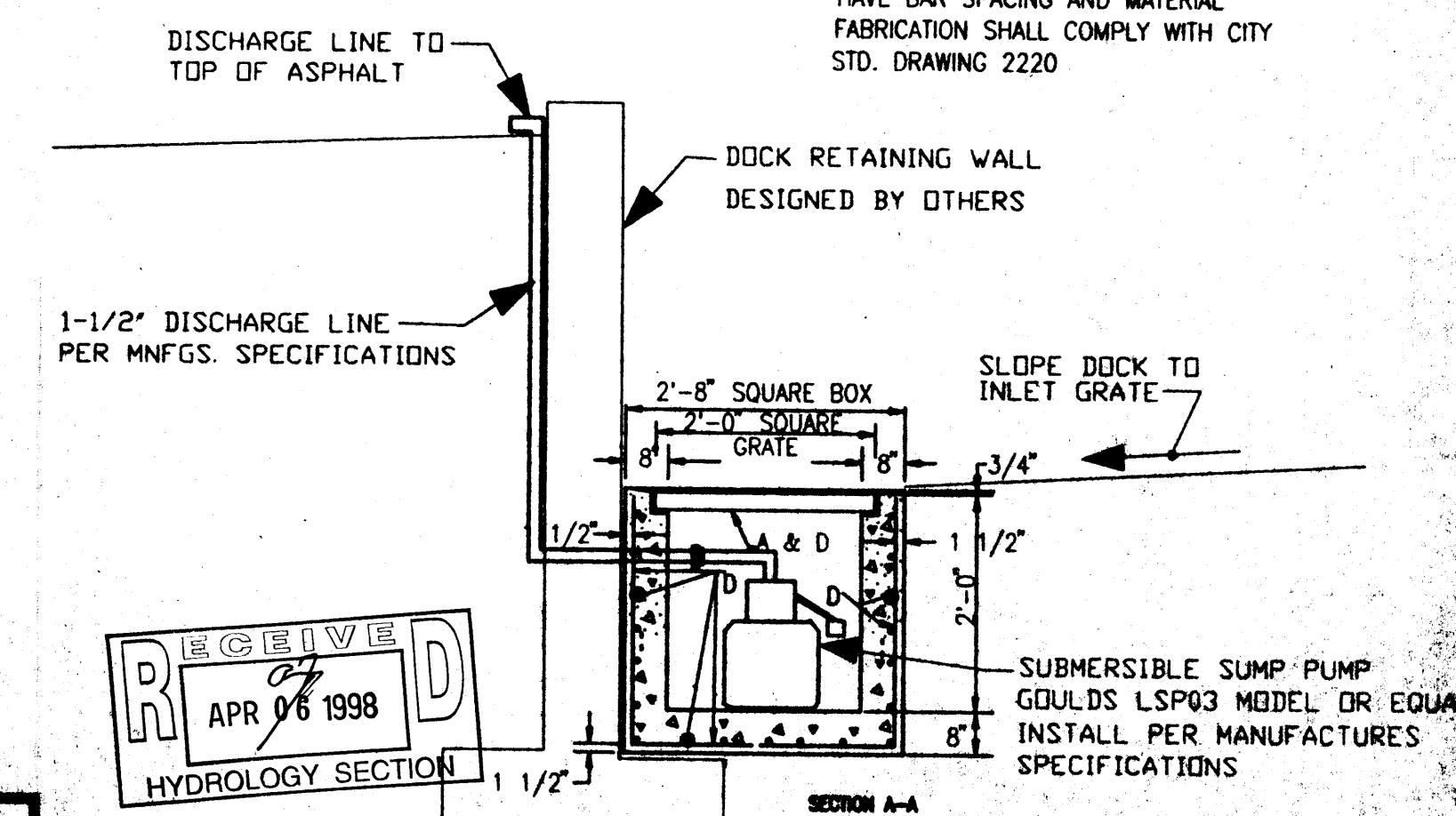
OFFSITE FLOWS
THE LOT IMMEDIATELY EAST OF THIS SITE IS CURRENTLY DEVELOPED, BASED ON A FIELD INSPECTION IT APPEARS THAT MOST OF THIS LOT WAS DESIGNED TO DRAIN TO THE FRONT AND TOWARDS COLUMBINE AVENUE. SWALES HAVE BEEN ADDED ALONG THE EAST SIDE OF THE BUILDING TO DIVERT FLOWS TO COLUMBINE AVENUE IN CASE ANY OFFSITE FLOWS SHOULD DRAIN TOWARDS THIS BUILDING.

1. PRECIPITATION ZONE = 2
2. DESIGN STORM = DEPTH (INCHES) AT 100-YEAR STORM
6-HOUR = 2.35 INCHES
10 DAY = 3.95 INCHES
3. PEAK DISCHARGE (CFS/ACRE) FIR 100-YEAR, ZONE 2, TABLE A-9
- Q = 1.56 CFS/ACRE SOIL UNCOMPACTED 'A'
Q = 2.28 CFS/ACRE LANDSCAPED 'B'
Q = 3.14 CFS/AC COMPACTED SOIL 'C'
Q = 4.70 CFS/ACRE IMPERVIOUS AREA 'D'
FOR WATERSHEDS LESS THAN OR EQUAL TO 40 ACRES

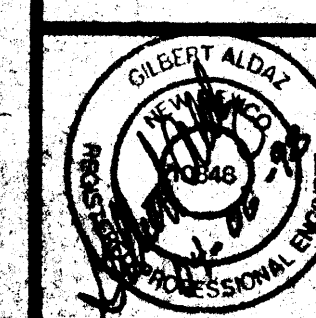
THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATION OF ANY PIPELINE, PIPELINE OR UNDERGROUND UTILITY LINE OR NEAR THE AREA THE WORK IN ADVANCE OF AND DURING EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES, PIPELINES, AND UNDERGROUND UTILITY LINES. THE CONTRACTOR IS RESPONSIBLE FOR EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH ALL STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES.

4. EXCESS PRECIPITATION, E (INCHES), 6 HOUR STORM, ZONE 2, TABLE A-B:
E = 0.53 INCHES SOIL UNCOMPACTED 'A'
E = 0.78 INCHES LANDSCAPED 'B'
E = 1.13 INCHES COMPACTED SOIL 'C'
E = 2.12 INCHES IMPERVIOUS AREA 'D'
5. EXISTING CONDITIONS ONSITE,
TREATMENT AREAC(ACRES)
A 0.75
B 0
C 0
D 0
TYPE 'A' SOILS SINCE UNDISTURBED
Q(EXISTING) = (1.56 X 0.75) = 1.17CFS EXISTING ONSITE FLOW
V(EXISTING-6HR) = ((0.53 X 0.75) / 12) X 43,560 = 1443CF
= 0.033AC-FT EXISTING ONSITE VOLUME
6. PROPOSED CONDITIONS ONSITE
TOTAL IMPERVIOUS AREA PROPOSED (INCLUDES ROOFS, PATIOS, SIDEWALKS, DRIVEWAYS) = 25,634 SF = 0.59AC
TOTAL IMP 'D' = 0.59AC(PROPOSED)
LANDSCAPED AREA 'B' = 7,036SF = 0.16AC
TREATMENT AREAC(ACRES)
A 0
B 0.16
C 0
D 0.59
Q(PROPOSED) = (2.28 X 0.16) + (4.70 X 0.59)
= 3.14CFS PROPOSED ONSITE FLOW
V(PROPOSED) = ((0.78 X 0.16) + (2.12 X 0.59)) / 12 =
= 0.115AC-FT PROPOSED ONSITE VOLUME = 4,993 CF
Q(INCREASE DUE TO THIS DEVELOPMENT) = 3.14 - 1.17 = 1.97CFS
V(INCREASE DUE TO THIS DEVELOPMENT) = 0.115AC-FT - 0.033AC-FT
= 0.082AC-FT = 3,572CF (6 HOUR VOLUME)
7. LOADING DOCK AREA CALCULATIONS:
DOCK AREA DRAINING TO INLET = (20'X 85') + (16'X 40')/2
+ (16'X16')/2 = 2148SF = 0.049ACRES
Q(PROPOSED) = (4.70 X 0.049) = 0.23CFS
V(PROPOSED) = (2.12 X 0.049)/12 = 0.009AC.FT = 377CF
0.1336CF = 1 GALLON
377CF = 2.821 GALLONS
- PUMP SPECIFICATIONS:
GOULDS SUBMERSIBLE SUMP PUMP MODEL LSP03/07
HEAD = 10 FEET, FLOW CAPACITY = 30GPM
TIME TO DRAIN DOCK = 2.821GALLONS/30GPM
= 94 MIN = 1.6 HOURS
MAXIMUM DEPTH OF FLOW AT DOCK FOR 100-YEAR EVENT:
377CF/(20' X 40')DOCK AREA = 0.47 FEET DEPTH.

- A. FRAME & GRATE.
B. NO. 4 BARS AT 6" O.C. EACH WAY
C. 2'-0" X 2'-0" SQUARE GRATE SHALL
HAVE BAR SPACING AND MATERIAL
FABRICATION SHALL COMPLY WITH CITY
STD. DRAWING 2220



FILE 98060



DRAINAGE AND GRADING PLAN
FOR
LOT 25, RICHFIELD INDUSTRIAL PARK
ALBUQUERQUE, NEW MEXICO

Aldax Engineering & Surveying, Inc.
1805 BLAIR DRIVE NE
ALBUQUERQUE, NEW MEXICO 87112 PH: (505)237-7456

DATE/REVISION

SHEET NUMBER