Drainage Report

2226 Fleetwood Drive, Jurupa Valley, CA

Prepared for

HYB Group
1601 Hastings Heights Lane
Pasadena, CA 91107

Prepared by

Samuel Jacoby, PE
Cannon Corporation
16842 Von Karman Avenue, Suite 150
Irvine, CA 92606
949-777-1597

April 15, 2025

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2. PROJECT DESCRIPTION:

The purpose of this report is to document existing and proposed drainage quantities as part of the review and approval of the Preliminary Plan. The project is currently going through the entitlement review with the City of Jurupa Valley as filed under case number MA23090 (SDP23053).
Located along the east side of Fleetwood Drive (on the north-south section, immediately south of Via Ricardo, HYB Group proposes to rough grade the site in advance of future development and this report presents the future hydrology and hydraulic conditions.

3. GENERAL INFORMATION

Address/General	2226 Fleetwood Drive 11.4686 Acres (499,140 sf)			
Project Area	Pervious		Impervious	
	Area (acres or sq ft)	Percentage	Area (acres or sq ft)	Percentage
Pre-Project Conditions	499,140	100%	0	0%
Post-Project Conditions	248,913	49.9%	250,227	50.1%

4. EXISTING CONDITIONS

The existing site is an undeveloped parcel. Remnants of prior development can be seen from aerial photographs, but at the time of this report, no impervious areas exist on the project site. Generally, the site drains from northwest to southeast, before eventually draining east towards the Santa Ana River adjacent to the site.

Pursuant to updated geotechnical explorations and Memo dated February 3, 2025, two additional borings we analyzed in the area where the infiltration galleries are proposed. These borings, identified in the Memo as B-8 and B-9, were deemed feasible locations for infiltration. The minimum design infiltration rate is 8.35 in/hr. See WQMP Report, Appendix 3 for further discussion.

5. PROPOSED CONDITIONS

The project proposes to redevelop the site for industrial use as a tire recycling plant. The stormwater runoff from the impervious areas of this site will remain onsite and discharge to the current point of compliance, generally, the existing drainage paths will be maintained.

6. HYDROLOGY / METHODOLOGY:

The proposed site is divided into three (3) sub areas accounting for onsite drainage. The pre-development and post-development conditions are analyzed using the AES Rational Method and the results are presented in Section 7.
The runoff from the impervious areas is collected and conveyed to two (2) proprietary infiltration galleries, and since there is an increase in impervious area, the water quality volume is required for this development. This will be achieved through infiltration of the runoff within the galleries.

7. CONCLUSION

The proposed site will remain hydraulically/hydrologically like proposed conditions due detainment of the overall runoff.

Anticipated site discharges are summarized below. See supporting calculations in Attachment 4:

Drainage Areas	Area (ac)	Q_{100} (cfs)
Pre-Development	9.73	12.8
Post-Development	9.73	3.45

8. LIST OF ATTACHMENTS

ATTACHMENT 1. PROJECT EXHIBITS
ATTACHMENT 2. SOIL TYPE
ATTACHMENT 3. RAINFALL DATA
ATTACHMENT 4. EXISTING AND PROPOSED RATIONAL AES ANALYSIS

Attachment 1. PROJECT EXHIBITS

CITY OF JURUPA VALLEY

CALIFORNIA

ROUGH GRADING PLANS

FOR

2226 FLEETWOOD DRIVE

GP22-036

GENERAL GRADING NOTES

1. APPROVAL OF THESE PLANS BY THE CITY ENGINEER DOES NOT AUTHORIZE ANY WORK TO BE PERFORMED UNTIL A PERMIT HAS BEEN ISSUED.
2. THE APPROVAL OF THIS PLAN OR ISSUANCE OF A PERMIT BY THE CITY DOES NOT AUTHORIZE THE SUBDIVIDER AND/OR OWNER TO VIOLATE ANY FEDERAL, STATE, COUNTY, OR CITY LAWS, ORDINANCES, REGULATIONS, OR POLICIES.
3. ALL GRADING SHALL CONFORM TO THE 2019 CALIFORNIA BUILDING CODE AS AMENDED BY THE CITY OF JURUPA VALLEY'S ORDINANCE NUMBER 2019-18.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SURVEY MONUMENTS AND/OR VERTICAL CONTROL BENCHMARKS WHICH ARE DISTURBED OR DESTROYED BY CONSTRUCTION. A LAND SURVEYOR SHALL REPLACE SUCH MONUMENTS WITH APPROPRIATE MONUMENTS. A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FILED AS REQUIRED BY THE PROFESSIONAL LAND SURVEYORS ACT, SECTION 8771 OF THE BUSINESS AND PROFESSIONS CODE OF THE STATE OF CALIFORNIA. IF ANY VERTICAL CONTROL IS TO BE DISTURBED OR DESTROYED, THE CITY OF JURUPA VALLEY MUST BE NOTIFIED, IN WRITING, AT LEAST THREE (3) DAYS PRIOR TO THE CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE COST OF REPLACING ANY VERTICAL CONTROL BENCHMARKS DESTROYED BY THE CONSTRUCTION.
5. ALL PROPERTY CORNERS, GRADING BOUNDARIES AND ALL CONSERVATION AREAS/LEAST SENSITIVE AREA (LSA) DETERMINED BY THE ENVIRONMENTAL PROGRAMS DEPARTMENT (EPD) SHALL BE CLEARLY DELINEATED AND STAKED IN THE FIELD PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION/GRADING.
6. ALL WORK UNDER THIS PERMIT SHALL BE LIMITED TO WORK WITHIN THE PROPERTY LINES. ALL WORK WITHIN THE ROAD RIGHT-OF-WAY WILL REQUIRE SEPARATE PLANS AND A SEPARATE REVIEW-APPROVAL (PERMIT) FROM THE TRANSPORTATION DEPARTMENT.
7. ALL GRADING SHALL BE DONE UNDER THE SUPERVISION OF A SOILS ENGINEER IN CONFORMANCE WITH THE RECOMMENDATIONS OF THE PRELIMINARY SOILS INVESTIGATION PREPARED BY ENVIRONMENTAL GEOTECHNOLOGY LABORATORY, INC. DATED OCTOBER 31, 2022.
8. COMPACTED FILL TO SUPPORT ANY STRUCTURES SHALL COMPLY WITH SECTION 1803.5.8. PROJECTS WITHOUT A PRELIMINARY SOILS REPORT SHALL INCLUDE DETAILED SPECIFICATIONS IN ACCORDANCE WITH SECTIONS 1803.2 AND 1803.5 PREPARED BY THE ENGINEER OF RECORD.
9. THE CONTRACTOR SHALL NOTIFY THE BUILDING AND SAFETY DEPARTMENT AT LEAST 24 HOURS IN ADVANCE TO REQUEST FINISH LOT GRADE AND DRAINAGE INSPECTION. THIS INSPECTION MUST BE APPROVED PRIOR TO BUILDING PERMIT FINAL INSPECTION FOR EACH LOT.
10. PER SECTION 4216 OF THE GOVERNMENT CODE, THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT, TWO (2) DAYS PRIOR TO DIGGING AT 1-800-422-4133.
11. PRIOR TO GRADING, A MEETING SHALL BE SCHEDULED WITH THE CITY OF JURUPA VALLEY'S PROGRAM MANAGER PRIOR TO COMMENCEMENT OF GRADING OPERATIONS.

CUT/FILL

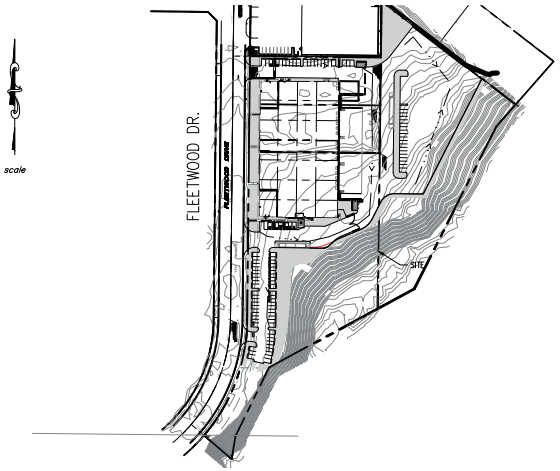
1. MAXIMUM CUT AND FILL SLOPE SHALL BE 2:1, HORIZONTAL TO VERTICAL.
2. NO FILL SHALL BE PLACED ON EXISTING GROUND UNTIL THE GROUND HAS BEEN CLEARED OF WEEDS, TOPSOIL AND OTHER DELETERIOUS MATERIAL. FILLS SHOULD BE PLACED IN THIN LIFTS (8-INCH MAX OR AS RECOMMENDED IN THE SOILS REPORT), COMPACTED AND TESTED THROUGHOUT THE GRADING PROCESS UNTIL FINAL GRADES ARE ATTAINED. ALL FILLS ON SLOPES STEEPER THAN 5:1, HORIZONTAL TO VERTICAL, AND A HEIGHT GREATER THAN FIVE (5) FEET SHALL BE KEYED AND BENCHED INTO FIRM NATURAL SOIL FOR FULL SUPPORT. THE BENCH UNDER THE TOE MUST BE TEN (10) FEET WIDE MINIMUM.
3. THE SLOPE STABILITY FOR CUT AND FILL SLOPES OVER THIRTY (30) FEET IN VERTICAL HEIGHT, OR CUT SLOPES STEEPER THAN 2:1 HAVE BEEN VERIFIED WITH A FACTOR OF SAFETY OF AT LEAST 1.5.
4. NO ROCK OR SIMILAR IRREDUCIBLE MATERIAL WITH A MAXIMUM DIMENSION GREATER THAN TWELVE (12) INCHES SHALL BE BURIED OR PLACED IN FILLS CLOSER THAN TEN (10) FEET TO THE FINISHED GRADE.

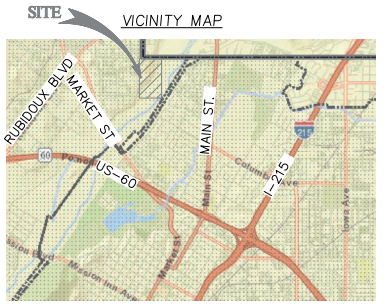
COMPLETION OF WORK NOTES

1. FOR ROUGH GRADING PLANS, A REGISTERED CIVIL ENGINEER SHALL PREPARE FINAL COMPACTION REPORT/GRADING REPORT AND IT SHALL BE SUBMITTED TO THE DEPARTMENT OF BUILDING AND SAFETY FOR REVIEW AND APPROVAL. THE REPORT SHALL INCLUDE BUILDING FOUNDATION DESIGN PARAMETERS, EXPANSION INDEX, DESIGN ALTERNATIVES (IF IE > 20), WATER SOLUBLE SULFATE CONTENT, CORROSIVITY AND REMEDIAL MEASURE IF NECESSARY.
2. FOR ROUGH GRADING PLANS, EXCEPT FOR NON-TRACT SINGLE RESIDENTIAL ROUGH GRADING, THE COMPACTION REPORT SHALL INCLUDE THE SPECIAL INSPECTION VERIFICATIONS LISTED ON TABLE 1705.6 OF THE 2019 CALIFORNIA BUILDING CODE.
3. FOR ROUGH GRADING, IN ADDITION TO OBTAINING ALL REQUIRED INSPECTIONS AND APPROVAL OF ALL FINAL REPORTS, ALL SITES PERMITTED FOR ROUGH GRADE ONLY SHALL PROVIDE VEGETATIVE COVERAGE (100%) OR OTHER MEANS OF SITE STABILIZATION APPROVED BY ENVIRONMENTAL COMPLIANCE DIVISION, PRIOR TO RECEIVING A ROUGH GRADE PERMIT FINAL SIGNATURE.
4. FOR PRECISE GRADING, A REGISTERED CIVIL ENGINEER SHALL SUBMIT TO THE BUILDING AND SAFETY DEPARTMENT WRITTEN FINAL CERTIFICATION OF COMPLETION OF GRADING IN ACCORDANCE WITH THE APPROVED GRADING PLAN PRIOR TO THE REQUEST OF PRECISE GRADING INSPECTION.

DRAINAGE, EROSION/DUST CONTROL

1. DRAINAGE ACROSS PROPERTY LINES SHALL NOT EXCEED THAT WHICH EXISTED PRIOR TO GRADING. EXCESS OR CONCENTRATED DRAINAGE SHALL BE CONTAINED ON SITE OR DIRECTED TO AN APPROVED DRAINAGE FACILITY. EROSION OF THE GROUND IN THE AREA OF DISCHARGE SHALL BE PREVENTED BY INSTALLATION OF NON-EROSIVE DOWN DRAINS OR OTHER DEVICES.
2. THE CONTRACTOR SHALL PROVIDE A PAVED SLOPE INTERCEPTOR DRAIN ALONG THE TOP OF CUT SLOPES WHERE THE DRAINAGE PATH IS GREATER THAN FORTY (40) FEET TOWARDS THE CUT SLOPE.
3. THE CONTRACTOR SHALL PROVIDE FIVE (5) FEET WIDE BY ONE (1) FOOT HIGH BERM ALONG THE TOP OF ALL FILL SLOPES STEEPER THAN 3:1, HORIZONTAL TO VERTICAL.
4. THE GROUND SURFACE IMMEDIATELY ADJACENT TO THE BUILDING FOUNDATION SHALL BE SLOPED AWAY FROM THE BUILDING AT A SLOPE OF NOT LESS THAN ONE UNIT VERTICAL IN 20 UNITS HORIZONTAL (5% SLOPE) FOR A MINIMUM DISTANCE OF TEN (10) FEET MEASURED PERPENDICULAR TO THE FACE OF THE FOUNDATION.
5. NO OBSTRUCTION OF NATURAL WATER COURSES SHALL BE PERMITTED.
6. DURING ROUGH GRADING OPERATIONS AND PRIOR TO CONSTRUCTION OF PERMANENT DRAINAGE STRUCTURES, TEMPORARY DRAINAGE CONTROL (BEST MANAGEMENT PRACTICES, BMPs) SHALL BE PROVIDED TO PREVENT PONDING WATER AND DRAINAGE TO ADJACENT PROPERTIES.
7. DUST CONTROL SHALL BE CONTROLLED BY WATERING OR OTHER APPROVED METHODS.
8. CONSTRUCTION DUSTS SUBJECT TO PM10 FUGITIVE DUST MITIGATION SHALL COMPLY WITH AQMD RULE 403.1.
9. ALL EXISTING DRAINAGE COURSES AND STORM DRAIN FACILITIES SHALL CONTINUE TO FUNCTION. PROTECTIVE MEASURES AND TEMPORARY DRAINAGE PROVISIONS MUST BE USED TO PROTECT ADJOINING PROPERTIES DURING GRADING OPERATIONS.
10. FOR ALL SLOPES EQUAL TO OR GREATER THAN THREE (3) FEET IN VERTICAL HEIGHT ARE REQUIRED TO BE PLANTED WITH AN APPROVED DROUGHT-TOLERANT GROUND COVER AT A MINIMUM SPACING OF 12" ON CENTER OR AS APPROVED BY THE ENGINEER OF RECORD OR THE REGISTERED LANDSCAPE ARCHITECT AND DROUGHT-TOLERANT SHRUBS SPACED AT NO MORE THAN 10' ON CENTER, OR TREES SPACED NOT TO EXCEED 20' ON CENTER, OR A COMBINATION OF SHRUBS AND TREES NOT TO EXCEED 15' IN ADDITION TO THE GRASS OR GROUND COVER. SLOPES THAT REQUIRE PLANTING SHALL BE PROVIDED WITH AN IN-GROUND IRRIGATION SYSTEM EQUIPPED WITH AN APPROPRIATE BACKFLOW DEVICE PER C.P.C. CHAPTER 6. THE SLOPE PLANTING AND IRRIGATION SYSTEM SHALL BE INSTALLED AS SOON AS POSSIBLE UPON COMPLETION OF ROUGH GRADING. ALL PERMANENT SLOPE PLANTING SHALL BE ESTABLISHED AND IN GOOD CONDITION PRIOR TO SCHEDULING PRECISE GRADE INSPECTION.





NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

1. CONSTRUCTION SITE BMPs FOR THE MANAGEMENT OF STORM WATER AND NON-STORMWATER DISCHARGES SHALL BE DOCUMENTED ON THE GRADING PLAN. ARRANGEMENTS SHALL BE MADE BY THE DEVELOPER TO RETAIN THE SWPPP ON THE JOBSITE THROUGHOUT THE TIME OF CONSTRUCTION. THE IMPLEMENTATION AND MAINTENANCE OF THE SITE BMPs IS REQUIRED TO MINIMIZE JOBSITE EROSION AND SEDIMENTATION. ARRANGEMENTS SHALL BE MADE BY THE DEVELOPER TO MAINTAIN THOSE BMPs THROUGHOUT THE TIME OF CONSTRUCTION.
2. EROSION CONTROL BMPs SHALL BE IMPLEMENTED AND MAINTAINED TO PREVENT AND/OR MINIMIZE THE ENTRAINMENT OF SOIL IN RUBOFF FROM DISTURBED SOIL AREAS ON CONSTRUCTION SITES.
3. SEDIMENT CONTROL BMPs SHALL BE IMPLEMENTED AND MAINTAINED TO PREVENT AND/OR MINIMIZE THE TRANSPORT OF SOIL FROM THE CONSTRUCTION SITE.
4. GRADING SHALL BE PHASED TO LIMIT THE AMOUNT OF DISTURBED AREA EXPOSED TO THE EXTENT FEASIBLE.
5. AREAS THAT ARE CLEARED AND GRADED SHALL BE LIMITED TO ONLY THE PORTION OF THE SITE THAT IS NECESSARY FOR CONSTRUCTION. THE CONSTRUCTION SITE SHALL BE LIMITED TO ONLY THE PORTION OF THE SITE THAT IS NECESSARY FOR CONSTRUCTION. THE CONSTRUCTION SITE SHALL BE MANAGED TO MINIMIZE THE EXPOSURE TIME OF DISTURBED SOIL AREAS THROUGH PHASING AND SCHEDULING OF GRADING AND THE USE OF TEMPORARY AND PERMANENT SOIL STABILIZATION.
6. IF DISTURBED, SLOPES (TEMPORARY OR PERMANENT) SHALL BE STABILIZED IF THEY WILL NOT BE WORKED WITHIN 21 DAYS. DURING STORM SEASON, ALL SLOPES SHALL BE STABILIZED PRIOR TO PREDICTED STORM EVENTS. CONSTRUCTION SITES SHALL BE REVEGETATED AS EARLY AS FEASIBLE AFTER SOIL DISTURBANCE.
7. STOCKPILES OF SOIL SHALL BE PROPERLY CONTAINED TO ELIMINATE OF REDUCE SEDIMENT TRANSPORT FROM THE SITE OR STREETS, DRAINAGE FACILITIES OR ADJACENT PROPERTIES VIA RUNOFF, VEHICLE TRACKING, OR WIND.
8. CONSTRUCTION SITES SHALL BE MAINTAINED IN SUCH A CONDITION THAT A STORM DOES NOT CARRY WASTES OR POLLUTANTS OFF THE SITE. DISCHARGES OTHER THAN STORMWATER (NON-STORMWATER DISCHARGES) ARE PROHIBITED, EXCEPT AS AUTHORIZED BY AN INDIVIDUAL NPDES PERMIT, THE STATEWIDE GENERAL PERMIT-CONSTRUCTION ACTIVITY. POTENTIAL POLLUTANTS INCLUDE BUT ARE NOT LIMITED TO: SOIL OR LIQUID CHEMICAL SPILLS; WASTES FROM PAINTS, STAINS, SEALANTS, SOLVENTS, DETERGENTS, GLUES, LIME, PESTICIDES, HERBICIDES, FERTILIZERS, WOOD PRESERVATIVES, AND ASBESTOS FIBERS, PAINT FLAKES OR STUCCO FRAGMENTS, FUEL, OILS, LUBRICANTS, AND HYDRAULIC, RADIATOR OR BATTERY FLUIDS, CONCRETE AND RELATED CUTTING OR CURING RESIDUES; FLOATABLE WASTES; WASTES FROM ENGINE/EQUIPMENT STEAM CLEANING OR CHEMICAL DEGREASING; WASTES FROM STREET CLEANING; AND SUPER-CHLORINATED POTABLE WATER FROM LINE FLUSHING AND TESTING. DURING CONSTRUCTION, DISPOSAL OF SUCH MATERIALS SHOULD OCCUR IN A SPECIFIED AND CONTROLLED TEMPORARY AREA ONSITE PHYSICALLY SEPARATE FROM POTENTIAL STORMWATER RUNOFF, WITH ULTIMATE DISPOSAL IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REQUIREMENTS.
9. RUNOFF FROM EQUIPMENT AND VEHICLE WASHING SHALL BE CONTAINED AT CONSTRUCTION SITE AND MUST NOT BE DISCHARGED TO RECEIVING WATERS OR LOCAL STORM DRAIN SYSTEM.
10. APPROPRIATE BMPs FOR CONSTRUCTION-RELATED MATERIALS, WASTES, SPILLS OR RESIDUES SHALL BE IMPLEMENTED TO ELIMINATE OR REDUCE TRANSPORT FRO THE SITE TO STREETS, DRAINAGE FACILITIES, OR ADJOINING PROPERTIES BY WIND OR RUNOFF.
11. ALL CONSTRUCTION CONTRACTORS AND SUBCONTRACTOR PERSONNEL ARE TO BE TRAINED IN THE IMPLEMENTATION AND USE OF THE REQUIRED BMPs AND GOOD HOUSEKEEPING MEASURE FOR THE PROJECT SITE AND ANY ASSOCIATED CONSTRUCTION STAGING AREAS AND ALL TRAINING DOCUMENTATION SHALL BE MAINTAINED IN THE SWPPP.
12. DISCHARGING CONTAMINATED GROUNDWATER PRODUCED BY DEWATERING GROUNDWATER THAT HAS INFILTRATED INTO THE CONSTRUCTION SITE IS PROHIBITED. DISCHARGING OF CONTAMINATED SOILS VIA SURFACE EROSION IS ALSO PROHIBITED. DISCHARGING NON-CONTAMINATED GROUNDWATER PRODUCED BY DEWATERING ACTIVITIES MAY REQUIRE A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT FROM THE REGIONAL WATER QUALITY CONTROL BOARD.
13. BMPs SHALL BE MAINTAINED AT ALL TIMES. IN ADDITION, BMPs SHALL BE INSPECTED PRIOR TO PREDICTED STORM EVENTS AND FOLLOWING STORM EVENTS.
14. AT THE END OF EACH DAY OF CONSTRUCTION ACTIVITY, ALL CONSTRUCTION DEBRIS AND WASTE MATERIALS SHALL BE COLLECTED AND PROPERLY DISPOSED OF IN TRASH OR RECYCLE BINS.

DECLARATION OF ENGINEER OF RECORD

I HEREBY DECLARE THAT THE DESIGN OF THE IMPROVEMENTS AS SHOWN ON THESE PLANS COMPLIES WITH PROFESSIONAL ENGINEERING STANDARDS AND PRACTICES. AS THE ENGINEER IN RESPONSIBLE CHARGE OF DESIGN OF THESE IMPROVEMENTS, I ASSUME FULL RESPONSIBLE CHARGE FOR SUCH DESIGN.
I UNDERSTAND AND ACKNOWLEDGE THAT THE PLAN CHECK OF THESE PLANS BY THE CITY OF JURUPA VALLEY IS A REVIEW FOR THE LIMITED PURPOSE OF ENSURING THAT THE PLANS COMPLY WITH CITY PROCEDURES, APPLICABLE POLICIES AND ORDINANCES. THE PLAN CHECK IS NOT A DETERMINATION OF THE TECHNICAL ADEQUACY OF THE DESIGN OF THE IMPROVEMENTS. SUCH PLAN CHECK DOES NOT, THEREFORE, RELIEVE ME OF MY RESPONSIBILITY FOR THE DESIGN OF THESE IMPROVEMENTS. AS ENGINEER OF RECORD (EOR), I AGREE TO INDEMNIFY AND HOLD THE CITY OF JURUPA VALLEY, THE JURUPA VALLEY HOUSING AUTHORITY, AND THE JURUPA VALLEY COMMUNITY SERVICES DISTRICT (CSD), ITS OFFICERS, AGENTS AND EMPLOYEES HARMLESS FROM ANY AND ALL LIABILITY OF CLAIMS, DAMAGES OR INJURIES TO ANY PERSON OR PROPERTY WHICH MIGHT ARISE FROM THE NEGLIGENT ACTS, ERRORS OR OMISSIONS OF THE ENGINEER OF RECORD. I HAVE READ AND INFORMED THE PROJECT APPLICANT/DEVELOPER THAT APPROVAL OF THESE PLANS DO NOT RELIEVE THEM FROM THE REQUIREMENTS OF THE CONDITIONS OF APPROVAL (ATTACHED HEREIN OR IN OTHER APPROVED IMPROVEMENT PLANS).

I ALSO HEREBY DECLARE THAT I HAVE COMPARED THESE PLANS WITH ALL APPLICABLE ADA TITLE II AND TITLE 24 REQUIREMENTS FOR DISABILITY ACCESS FOR THIS PROJECT, AND THESE PLANS ARE IN FULL COMPLIANCE WITH THOSE REQUIREMENTS.

NAME _____ DATE _____

R.C.E. #74309 (EXP. 06/30/2023)

ENGINEER'S NOTICE TO CONTRACTORS

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY THE SEARCH OF AVAILABLE RECORDS. THESE LOCATIONS ARE APPROXIMATE AND SHALL BE CONFIRMED IN THE FIELD BY THE CONTRACTOR, SO THAT ANY NECESSARY ADJUSTMENT CAN BE MADE IN ALIGNMENT AND/OR GRADE OF THE PROPOSED IMPROVEMENT. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT ANY UTILITY FACILITIES SHOWN AND ANY OTHER FACILITIES NOT OF RECORD OR NOT SHOWN ON THESE PLANS.
THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE INVITING BIDS" OF THE BID DOCUMENTS.

DEVELOPER:
HYB, LLC
ATTENTION: HOVEL BABIKIAN
1601 HASTINGS HEIGHTS LANE
PASADENA, CA 91107
PHONE: 626-825-1817

APN:
178-350-024, -029, -030

SITE AREA:
6.25 ACRES

GEOTECHNICAL REPORT:
ENVIORNMENTAL GEOTECHNOLOGY LABORATORY, INC
11819 GOLDRING ROAD, SUITE A
ARCADIA, CA 91006
626-263-3588
RYAN JONES, GE 2852

REPORT DATE 10/31/22
EGL PROJECT: 22-257-004L

ENGINEER/SURVEYOR:
CANNON
ATTENTION: SAMUEL JACOBY
16842 VON KARMAN AVENUE, SUITE 150
IRVINE, CA 92606
PHONE: 949-581-0255

GEOTECHNICAL REVIEW:
THESE GRADING PLANS HAVE BEEN REVIEWED BY ME OR UNDER MY DIRECTION AND CONFORM TO THE RECOMMENDATIONS MADE IN THE SOILS REPORT/GEOTECHNICAL REPORT ENTITLED "REPORT OF GEOTECHNICAL INVESTIGATION, PROPOSED INDUSTRIAL WAREHOUSE BUILDING AND ASSOCIATED STRUCTURES, APN: 178-350-024, 029, & 030, 2240 FLEETWOOD DRIVE, CITY OF JURUPA VALLEY, COUNTY OF RIVERSIDE CALIFORNIA, EGL PROJECT NU: 22-257-004L" PREPARED BY ENVIRONEMNETAL GEOTECHNOLOGY LABORATORY, INCL., DATED 10/31/2022

STAMP

SOILS ENGINEER'S NAME _____ LICENSE NO. _____

ENVIORNMENTAL GEOTECHNOLOGY LABORATORY, INC
11819 GOLDRING ROAD, SUITE A
ARCADIA, CA 91006
626-263-3588
RYAN JONES, GE 2852

REPORT DATE 10/31/22
EGL PROJECT: 22-257-004L

AS-BUILT CERTIFICATION

CIVIL ENGINEER CERTIFICATION

I HEREBY CERTIFY THAT AS THE ENGINEER IN RESPONSIBLE CHARGE OF WORK FOR THIS PROJECT, I HAVE SUPERVISED THE ENGINEERING WORK AS SHOWN ON THESE PLANS TO DETERMINE GENERAL COMPLIANCE WITH PLANS AND SPECIFICATIONS, AND THAT THE COMPLETED CONSTRUCTION IS IN CONFORMANCE WITH THESE PLANS.

I ALSO CERTIFY THAT ALL DESIGN CHANGES MADE DURING CONSTRUCTION, ALL INFORMATION AS REQUIRED BY THE CITY OF JURUPA VALLEY GRADING ORDINANCE, AND ALL RECOMMENDATIONS FROM THE SOILS ENGINEERING AND ENGINEERING GEOLOGY REPORTS PREPARED FOR THIS PROJECT HAVE BEEN INCORPORATED IN THESE PLANS.

CIVIL ENGINEER OF RECORD: _____ NAME _____ SEAL

INDEX MAP

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CONSTRUCTION NOTES

* ROUGH GRADING IS BASED ON FUTURE GRADES (SEPARATE PERMIT) AND AND ADJUSTED TO FUTURE SUBGRADES. PAVEMENT SECTIONS PER APPROVED GEOTECHNICAL REPORT (TI=4.5, TI=6, AND TI=7) HAVE BEEN CONSIDERED ALONG WITH COORDINATED PAD SECTIONS BASED ON STRUCTURAL AND GEOTECHNICAL CONSIDERATIONS. THE IMPROVEMENTS DEPICTED HEREON ARE FOR REFERENCE ONLY.

(1) PAD AREA FOR FUTURE BUILDING.
(2) FUTURE FIRE LANES

* CONTRACTOR TO PROVIDE LAY BACK VERTICAL CUTS/FILLS FOR ROUGH GRADING PER APPROVED GEOTECHNICAL REPORT

CITY OF JURUPA VALLEY ENGINEERING DEPARTMENT APPROVED BY:	CITY OF JURUPA VALLEY ENGINEERING DEPARTMENT RECOMMENDED BY:
PAUL TOOR, CITY ENGINEER DATE RCE 46281	TINA YORK, DEVELOPMENT SERVICES MANAGER DATE RCE 46367

NO WORK SHALL BE DONE ON THIS SITE UNTIL BELOW AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE.
Underground Service Alert
Call: TOLL FREE
1-800
227-2600
TWO WORKING DAYS BEFORE YOU DIG

8930 LIMONITE AVE
JURUPA VALLEY, CA 92509
TEL: (951) 332-6464
EMAIL: ENGINEERING@JURUPAVALLEY.ORG

IMPORTANT NOTE:
THE GRADING AND/OR IMPROVEMENT PLANS ARE APPROVED FOR A PERIOD OF TWO (2) YEARS FROM THE DATE SIGNED BY THE CITY ENGINEER. AFTER THE TWO (2) YEAR PERIOD HAS LAPSED, THE ENGINEER OF RECORD MAY BE REQUIRED TO SUBMIT AND PROCESS FOR CITY ENGINEER APPROVAL, UPDATED PLANS THAT COMPLY WITH THE MOST CURRENT CITY STANDARDS, PRACTICES, AND POLICIES.

MARK	DATE	INITIAL	DESCRIPTION	REC.	APPR	DATE
		E.O.R.	REVISION			

BENCHMARK:
B.M. NO. M.L.-4-64 NAVD 1988 COUNTY OF RIVERSIDE AT THE NE CORNER OF THE HALL AVE BRIDGE #56-419, OVER HWY (60), 246.0' SW OF 28TH AVE, 15.0' S. OF HALL AVE AT THE NE END OF THE RAIL ABUTMENT AND 2.0' HIGHER THAN THE SIDEWALK, A BRASS DISK SET IN THE TOP OF A 1.0' X 2.0' CONCRETE POST AND MARKED M.L.-4-64.
ELEVATION = 857.288 FEET

BASIS OF BEARING:
THE BEARING OF N 00°35'51" E ALONG THE CENTERLINE OF FLEETWOOD AVENUE PER PMB 247/69-71, CITY OF JURUPA VALLEY, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA.

REGISTERED PROFESSIONAL ENGINEER SAMUEL V. JACOBY C74309 EXP.6/30/25 CIVIL STATE OF CALIFORNIA

Cannon
16842 Von Karman Avenue, Suite 150
Irvine, CA 92606
P 949.753.8111 F 949.753.0775

PLANS PREPARED UNDER THE SUPERVISION OF:

SAMUEL JOHN JACOBY, P.E. 4/5/2023
R.C.E. #74309 (EXP. 6/30/23) DATE

CITY OF JURUPA VALLEY

GRADING PLANS
HYB, LLC, – FLEETWOOD INDUSTRIAL
2240 FLEETWOOD DR.
ROUGH GRADE TITLE

ACCT. NO.

SHEET 1 OF 8

FOR: | W.O | CITY I. D. NO. GP22-036

ENGINEER NOTES TO CONTRACTOR

1. EXISTING FEATURES WITHIN THIS PLAN SET ARE TAKEN FROM ALTA SURVEY PREPARED BY DRC ENGINEERING, INC AND TOPOGRAPHIC SURVEY BY DRC ENGINEERING, INC AND INLAND AERIAL SURVEYS, INC., FLOWN 8/20/21
2. WORK WILL BE PERFORMED TO CONFORM WITH THE FOLLOWING SPECIFICATIONS. WHERE CONFLICTS EXIST BETWEEN ANY OF THESE, THE ENGINEER WILL CLARIFY WHICH SPECIFICATION GOVERNS.
   A. THE STANDARDS OF THE UNITED STATES DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION, AND THE RULES OF THE STATE OF CALIFORNIA DIVISION OF OCCUPATIONAL SAFETY AND HEALTH (CAL/OSHA).
   B. THE APPLICABLE SECTIONS OF THE LATEST EDITIONS OF THE STATE OF CALIFORNIA BUILDING STANDARDS CODE AND THE CALIFORNIA ACCESS COMPLIANCE ADVISORY REFERENCE MANUAL.
   C. THE APPLICABLE SECTIONS OF THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (THE "GREENBOOK").
   D. THE APPLICABLE SECTIONS OF THE LATEST EDITIONS OF THE CITY OF JURUPA VALLEY GRADING ORDINANCE, STANDARD SPECIFICATIONS, AND DETAILS FOR PUBLIC WORKS CONSTRUCTION.
   E. THE REQUIREMENTS OF ALL PERMITS ISSUED FOR WORK BY THE CITY OF JURUPA VALLEY.
   F. THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER AS NOTED IN THE PROJECT SOILS REPORT, AND ALL ADDENDUMS THERETO.
   G. THESE APPROVED PLANS AND DETAILS.
3. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SECURE ALL THE PERMITS NECESSARY TO PERFORM WORK PRIOR TO COMMENCING WORK, INCLUDING BUT NOT LIMITED TO WORK WITHIN THE PUBLIC RIGHT-OF-WAY, GRADING, TREE REMOVAL, AND UTILITY MODIFICATIONS.
4. THE CONTRACTOR MUST SUPPLY ALL EQUIPMENT, LABOR, AND MATERIALS NECESSARY TO PERFORM THE WORK AS SHOWN ON THE APPROVED PLANS.
5. IT WILL BE THE RESPONSIBILITY OF THE VARIOUS CONTRACTORS TO COORDINATE THEIR WORK SO AS TO ELIMINATE CONFLICTS AND WORK TOWARD THE GENERAL GOOD AND COMPLETION OF THE ENTIRE PROJECT.
6. ALL CONSTRUCTION ACTIVITY THAT DISRUPTS THE SMOOTH FLOW OF TRAFFIC OVER PUBLIC ROADS MAY REQUIRE A TRAFFIC CONTROL PLAN BY THE CITY LOS ANGELES.
7. ALL WORKMANSHIP AND MATERIALS FURNISHED BY THE CONTRACTOR MUST BE THE KIND AND QUALITY DESCRIBED IN THE SPECIFICATIONS AND SHALL BE FIRST CLASS THROUGHOUT. NEITHER FINAL ACCEPTANCE NOR FINAL PAYMENT BY THE OWNER WILL RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR FAULTY MATERIALS OR WORKMANSHIP.
8. THE CONTRACTOR MUST MAINTAIN THE WORK AREA IN A NEAT, SAFE, CLEAN, AND SANITARY CONDITION AT ALL TIMES TO THE SATISFACTION OF THE AGENCY HAVING JURISDICTION OVER THE AREA. STREETS MUST BE KEPT CLEAN OF DEBRIS, WITH DUST AND OTHER NUISANCES BEING CONTROLLED AT ALL TIMES. THE CONTRACTOR IS RESPONSIBLE FOR DUST CONTROL MEASURES AND COMPLIANCE WITH ALL SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT (AQMD) RULES AND REGULATIONS. ALL GRADING OPERATIONS MUST BE SUSPENDED DURING SECOND STAGE (OR WORSE) SMOG ALERTS BY AQMD. THE CONTRACTOR MUST ALSO BE RESPONSIBLE FOR ANY CLEANUP ON ADJACENT STREETS THAT ARE AFFECTED BY CONSTRUCTION. THE CONTRACTOR WILL PERIODICALLY OPERATE STREET SWEEPERS ON PAVED AREAS ADJACENT TO THE SITE.
9. WATER WILL BE APPLIED TO THE SITE TWICE DAILY DURING GRADING OPERATIONS IN COMPLIANCE WITH AQMD RULES FOR FUGITIVE DUST EMISSIONS.
10. THE CONTRACTOR MUST EXERCISE ALL NECESSARY CAUTION TO AVOID DAMAGE TO ANY EXISTING TREES, SURFACE IMPROVEMENTS, DRAINAGE STRUCTURES, WATER STRUCTURES, SEWER CLEANOUTS, MANHOLES, OR JUNCTION BOXES FOR UNDERGROUND ELECTRIC, GAS, TELEPHONE, CABLE, STORM, SANITARY, WATER, OR OTHER UTILITIES WHICH ARE TO REMAIN IN PLACE, AND MUST BEAR FULL RESPONSIBILITY FOR ANY DAMAGE THERETO.
11. THE UTILITIES INDICATED ON THESE PLANS ARE COMPILED FROM EXISTING PLANS, FIELD OBSERVATIONS, AND DATA PROVIDED BY INDIVIDUAL UTILITY COMPANIES. THE CONTRACTOR MUST CONTACT BOTH UNDERGROUND SERVICE ALERT (811) AND ANY AFFECTED UTILITY COMPANIES AT LEAST TWO WORKING DAYS PRIOR TO STARTING WORK TO REQUEST AND OBTAIN MARKINGS OF EXISTING UNDERGROUND FACILITIES. THE CONTRACTOR WILL COMPARE THESE MARKINGS WITH THE INFORMATION SHOWN ON THE PLANS AND MUST IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES. FAILURE OF THE CONTRACTOR TO NOTIFY THE ENGINEER OF A DISCREPANCY (SIZE, MATERIAL, OR ALIGNMENT) OR OF EVIDENCE OF A PREVIOUSLY UNKNOWN FACILITY WILL PROHIBIT THE CONTRACTOR FROM CLAIMING EXTRA WORK ASSOCIATED WITH THE FACILITY. EXISTING IRRIGATION LATERALS AND WIRING FOR LIGHTS, SIGNALS, AND MECHANICAL EQUIPMENT ARE NOT SHOWN ON THESE PLANS.
12. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OR PROPER RESETTING OF ALL EXISTING MONUMENTS AND OTHER SURVEY MARKERS. ANY SURVEY MONUMENTS DESTROYED BY THE CONTRACTOR MUST BE REPLACED IN ACCORDANCE WITH THE STATE LAND SURVEYORS' ACT.
13. THE CONTRACTOR WILL HIRE A LICENSED LAND SURVEYOR TO PROVIDE CONSTRUCTION STAKING IN ORDER TO ENSURE THE PROJECT IS CONSTRUCTED TO THE LINES AND GRADES INDICATED ON THE APPROVED PLANS.
14. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF THE REQUIRED INSPECTIONS WITH THE APPROPRIATE AGENCIES AND UTILITY COMPANIES.
15. IN CONFORMANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOBSITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT MUST APPLY CONTINUOUSLY AND WILL NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR WILL INDEMNIFY AND HOLD HARMLESS BOTH THE OWNER AND THE ENGINEER FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER OF RECORD.
16. THE CONTRACTOR MUST HAVE COPIES OF THE PLANS AND SPECIFICATIONS FOR THIS PROJECT ON-SITE AT ALL TIMES. THE CONTRACTOR MUST MAINTAIN A CURRENT, COMPLETE, AND ACCURATE RECORD OF ALL CHANGES WHICH DEVIATE FROM THE CONSTRUCTION AS PROPOSED IN THESE PLANS AND SPECIFICATIONS. THE CONTRACTOR MUST PROVIDE AS-BUILT INFORMATION AS TO THE EXACT LOCATION OF CHANGES FOR THE PURPOSE OF PROVIDING THE ENGINEER WITH A BASIS FOR RECORD DRAWINGS. NO CHANGES MUST BE MADE WITHOUT THE PRIOR APPROVAL OF THE ENGINEER AND THE AGENCIES HAVING JURISDICTION.
17. ANY CONSTRUCTION DONE WITHOUT APPROVED PLANS AND PERMITS AND PRIOR NOTIFICATION WILL BE REJECTED AT THE CONTRACTOR'S RISK AND EXPENSE.
18. SEPARATE DEMOLITION PERMITS ARE REQUIRED FOR ANY EXISTING STRUCTURES AND INFRASTRUCTURE TO BE REMOVED. DEBRIS CREATED BY DEMOLITION AND REMOVAL OPERATIONS WILL BECOME THE PROPERTY OF THE CONTRACTOR, UNLESS OTHERWISE NOTED, AND MUST BE DISPOSED OF AWAY FROM THE JOBSITE IN A MANNER AND AT A LOCATION ACCEPTABLE TO ALL RELEVANT AGENCIES.
19. EXISTING PAINTED RED CURB THAT IS REMOVED AND REPLACED MUST BE PAINTED RED PER THE LOCAL FIRE AUTHORITY REQUIREMENTS.
20. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN A MINIMUM SURFACE GRADE FOR POSITIVE DRAINAGE IN ALL PROPOSED PAVED AREAS. THE MINIMUM GRADE FOR ASPHALT IS 1.0% AND THE MINIMUM GRADE FOR CONCRETE IS 0.5%, UNLESS NOTED OTHERWISE.
21. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE GRADING QUANTITIES FOR THE ACTUAL LAND BALANCE, INCLUDING UTILITY TRENCH SPOIL. THE CONTRACTOR WILL IMPORT OR EXPORT MATERIAL AS NECESSARY TO COMPLETE THE PROJECT.
22. THE CONTRACTOR WILL SAW-CUT PAVEMENT AT CONSTRUCTION LIMITS WHERE REMOVED PAVEMENT IS LOCATED ADJACENT TO PAVEMENT TO REMAIN.
23. THE CONTRACTOR MUST PRESERVE ALL EXISTING SIGNS, MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES NOT IDENTIFIED FOR REMOVAL. IN THE EVENT THAT THEY ARE DAMAGED BY CONSTRUCTION, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REPLACE "IN KIND" SAID DEVICES TO THE SATISFACTION OF THE AGENCY HAVING JURISDICTION OVER THE ROADWAY. IF WORD, SYMBOL, OR ARROW MARKINGS ARE PARTIALLY DAMAGED, THE ENTIRE MARKING MUST BE REPLACED.
24. THE CONTRACTOR WILL RECYCLE MATERIALS AS FEASIBLE AND IN ACCORDANCE WITH THE CONSTRUCTION ACTIVITIES MANAGEMENT PLAN AND THE LOCAL GOVERNING AGENCY.
25. THESE PLANS DO NOT AUTHORIZE SITE DISTURBANCE BEYOND THE LIMITS OF CONSTRUCTION SHOWN.

EROSION CONTROL NOTES TO CONTRACTOR:

THE FOLLOWING BMPS AS OUTLINED IN, BUT NOT LIMITED TO, THE CALIFORNIA STORMWATER BEST MANAGEMENT PRACTICES HANDBOOK, NOVEMBER 2009, OR THE LATEST REVISED EDITION, MAY APPLY DURING THE CONSTRUCTION OF THIS PROJECT (ADDITIONAL MEASURES MAY BE REQUIRED IF DEEMED APPROPRIATE BY THE PROJECT ENGINEER OR THE BUILDING OFFICIAL)

EROSION CONTROL:

EC1 – SCHEDULING
EC2 – PRESERVATION OF EXISTING VEGETATION
EC3 – HYDRAULIC MULCH
EC4 – HYDROSEEDING
EC5 – SOIL BINDERS
EC6 – STRAW MULCH
EC7 – GEOTEXTILES & MATS
EC8 – WOOD MULCHING
EC9 – EARTH DIKES AND DRAINAGE SWALES
EC10 – VELOCITY DISSIPATION DEVICES
EC11 – SLOPE DRAINS
EC12 – STREAMBANK STABILIZATION
EC13 – RESERVED
EC14 – COMPOST BLANKETS
EC15 – SOIL PREPARATION\ROUGHENING
EC16 – NON-VEGETATED STABILIZATION

TEMPORARY SEDIMENT CONTROL

SE1 – SILT FENCE
SE2 – SEDIMENT BASIN
SE3 – SEDIMENT TRAP
SE4 – CHECK DAM
SE5 – FIBER ROLLS
SE6 – GRAVEL BAG BERM
SE7 – STREET SWEEPING AND VACUUMING
SE8 – SANDBAG BARRIER
SE9 – STRAW BALE BARRIER
SE10 – STORM DRAIN INLET PROTECTION
SE11 – ACTIVE TREATMENT SYSTEMS
SE12 – TEMPORARY SILT DIKE
SE13 – COMPOST SOCKS & BERMS
SE14 – BIOFILTER BAGS

WIND EROSION CONTROL

WE1 – WIND EROSION CONTROL

EQUIPMENT TRACKING CONTROL

TC1 – STABILIZED CONSTRUCTION ENTRANCE EXIT
TC2 – STABILIZED CONSTRUCTION ROADWAY
TC3 – ENTRANCE/OUTLET TIRE WASH

NON-STORMWATER MANAGEMENT

NS1 – WATER CONSERVATION PRACTICES
NS2 – DEWATERING OPERATIONS
NS3 – PAVING AND GRINDING OPERATIONS
NS4 – TEMPORARY STREAM CROSSING
NS5 – CLEAR WATER DIVERSION
NS6 – ILLICIT CONNECTION/DISCHARGE
NS7 – POTABLE WATER/IRRIGATION
NS8 – VEHICLE AND EQUIPMENT CLEANING
NS9 – VEHICLE AND EQUIPMENT FUELING
NS10 – VEHICLE AND EQUIPMENT MAINTENANCE
NS11 – PILE DRIVING OPERATIONS
NS12 – CONCRETE CURING
NS13 – CONCRETE FINISHING
NS14 – MATERIAL AND EQUIPMENT USE
NS15 – DEMOLITION ADJACENT TO WATER
NS16 – TEMPORARY BATCH PLANTS

WASTE MANAGEMENT & MATERIAL POLLUTION CONTROL

WM1 – MATERIAL DELIVERY AND STORAGE
WM2 – MATERIAL USE
WM3 – STOCKPILE MANAGEMENT
WM4 – SPILL PREVENTION AND CONTROL
WM5 – SOLID WASTE MANAGEMENT
WM6 – HAZARDOUS WASTE MANAGEMENT
WM7 – CONTAMINATION SOIL MANAGEMENT
WM8 – CONCRETE WASTE MANAGEMENT
WM9 – SANITARY/SEPTIC WASTE MANAGEMENT
WM10 – LIQUID WASTE MANAGEMENT

LEGEND AND ABBREVIATIONS

	EXISTING	PROPOSED
TRACT BOUNDARY		
PROPERTY LINE		
RIGHT-OF-WAY		
EASEMENT/SETBACK		
STREET CENTERLINE		
CURB		
CURB & GUTTER		
ROAD STRIPING		
FENCE	X	X
DAYLIGHT LINE		
100YR FLOODPLAIN BOUNDARY		
FLOWLINE		
DRAINAGE SWALE		
RETAINING WALL		
GRADE BREAK		
SLOPE		
CONTOURS		
WATER MAIN	W	W
RECLAIMED WATER LINE	RW	RW
SANITARY SEWER LINE	SS	SS
STORM DRAIN LINE	SD	SD
GAS LINE	G	G
ELECTRIC LINE	E	E
OVERHEAD WIRES	OH	OH
FIBER OPTICS	FO	FO
TELEPHONE	T	T
JOINT TRENCH	JT	JT
BIOFILTRATION AREA		
FIRE HYDRANT		
STREET LAMP		
STREET LAMP WITH MAST ARM		
STORM DRAIN INLET		
CURB INLET		
TREES		
POWER POLE		
SDMH		
SSMH		
SS CLEANOUT		
RIPRAP PROTECTION AT SD OUTLET		

ASPHALT CONCRETE	AC
BEGINNING CURVE	BC
BEGINNING OF CURB RETURN	BCR
BEGINNING POINT	BP
BEGIN VERTICAL CURVE	BVC
BOTTOM FACE OF CURB	BFC
CENTERLINE	CL / ℄
CURB RETURN	C.R.
DUCTILE IRON	DI
END CURVE	EC
END OF CURB RETURN	ECR
END POINT	EP
END VERTICAL CURVE	EVC
EXISTING GRADE	EG
EXISTING	(E)
FLOW LINE	FL / ℄
INVERT	INV
MEDIAN	MED
OPEN SPACE	OS
PUBLIC FACILITY	PF
PRIVATE ACCESS EASEMENT	PAE
PROPERTY LINE	PL / ℄
PUBLIC UTILITY EASEMENT	PUE
PUBLIC PEDESTRIAN EASEMENT	PPE
POINT OF REVERSE CURVE	PRC
POINT OF VERTICAL INTERSECTION	PVI
PROPOSED EDGE OF PAVEMENT	PROP. EP
RETAINING WALL	RTW
RECLAIMED WATER	RW
RIGHT OF WAY	ROW
STORM DRAIN	SD
STREET TREE EASEMENT	STE
SANITARY SEWER	SS
VERTICAL CURVE	VC
WATERLINE	WL
TOP OF CURB	TC
TOP OF GRATE	TG
BOTTOM OF WALL	BW
TOP OF WALL	TW
UNLESS NOTED OTHERWISE	U.N.O.

FLOOD MAPPING:

LAND PROPOSED FOR GROUGH GRADING IS WITHIN ZONE X, BY GRAPHIC PLOT, ACCORDING TO FIRM PANEL 06065C0045G, EFFECTIVE DATE: 8/28/2008

SCOPE OF WORK:

ROUGH GRADING AND EROSION CONTROL

EARTHWORK QUANTITIES:

CUT	3,379 CY
FILL	15,753 CY
IMPORT	12,403 CY
OVEREXCAVATION	7,979 CY
SHRINKAGE (10% ASSUMED)	797 CY
NET CUT	11,358 CY
NET FILL	24,529 CY
NET EXPORT	13,171 CY

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MARK	DATE	INITIAL	DESCRIPTION	REC.	APPR	DATE
		E.O.R.	REVISION			

BENCHMARK:
B.M. NO. M.L.-4-64 NAVD 1988 COUNTY OF RIVERSIDE AT THE NE CORNER OF THE HALL AVE BRIDGE #56-415, OVER HWY #60, 246.0' SW OF 28TH AVE, 15.0' S. OF HALL AVE AT THE NE END OF THE RAIL ABUTMENT AND 2.0' HIGHER THAN THE SIDEWALK, A BRASS DISK SET IN THE TOP OF A 1.0' X 2.0' CONCRETE POST AND MARKED M.L.-4-64.
ELEVATION = 857.288 FEET

BASIS OF BEARING:
THE BEARING OF N 00°35'51" E ALONG THE CENTERLINE OF FLEETWOOD AVENUE PER PMB 247/69-71, CITY OF JURUPA VALLEY, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA.

REGISTERED PROFESSIONAL ENGINEER — SAMUEL V. JACOBY — C74309 EXP.6/30/25 — CIVIL — STATE OF CALIFORNIA

Cannon
19842 Von Karman Avenue, Suite 150
Irvine, CA 92606
P 949.753.8111 F 949.753.0775

PLANS PREPARED UNDER THE SUPERVISION OF:
SAMUEL JOHN JACOBY, P.E.
R.C.E. #C74309 (EXP. 6/30/23)
4/5/2023
DATE

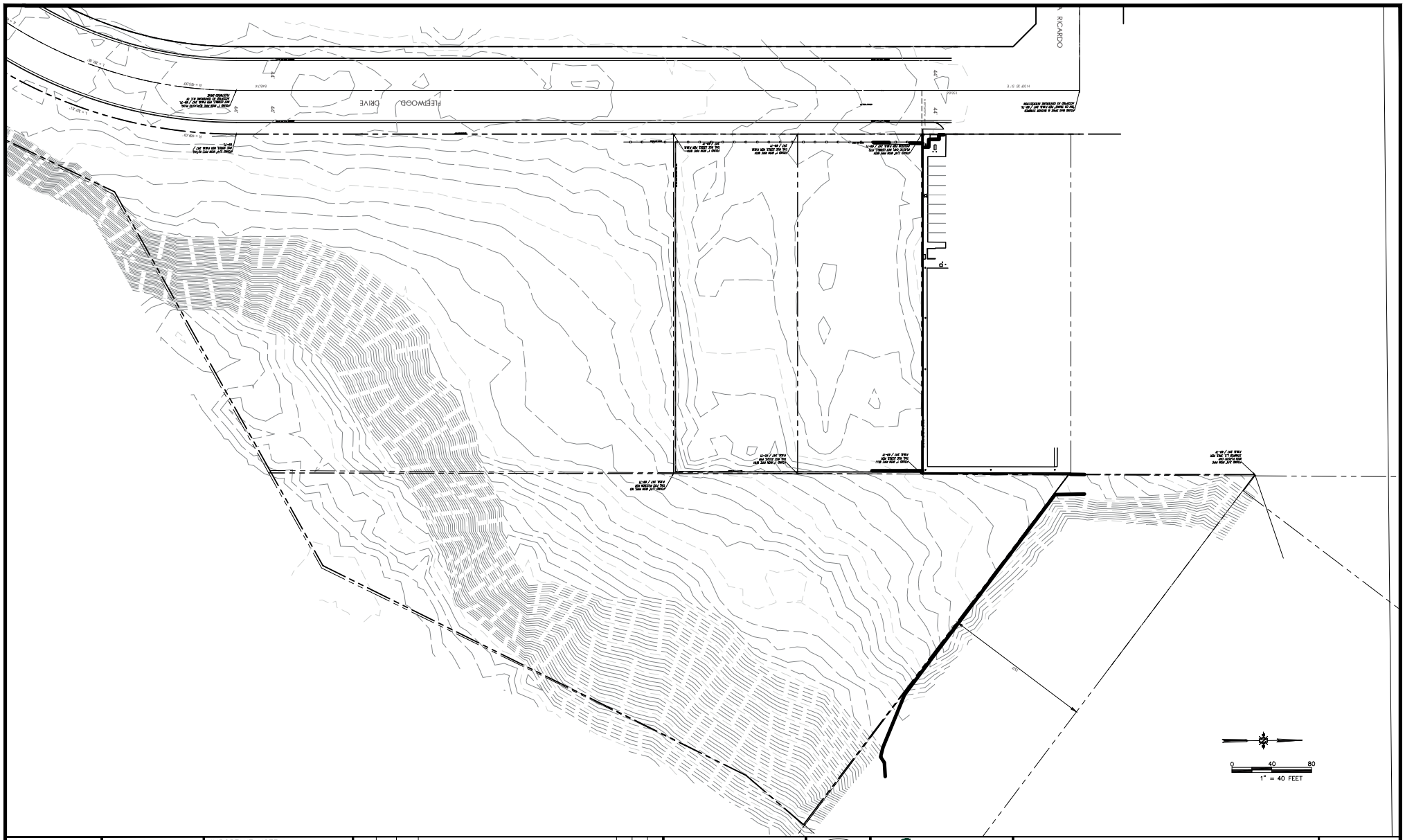
CITY OF JURUPA VALLEY

GRADING PLANS
HYB, LLC, – FLEETWOOD INDUSTRIAL
2240 FLEETWOOD DR.
NOTES

ACCT. NO.

SHEET 2 OF 8

FOR:
W.O
CITY I. D. NO.
GP22-036



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CITY OF JURUPA VALLEY

GRADING PLANS
HYB, LLC, – FLEETWOOD INDUSTRIAL
2240 FLEETWOOD DR.
EXISTING CONDITIONS PLAN

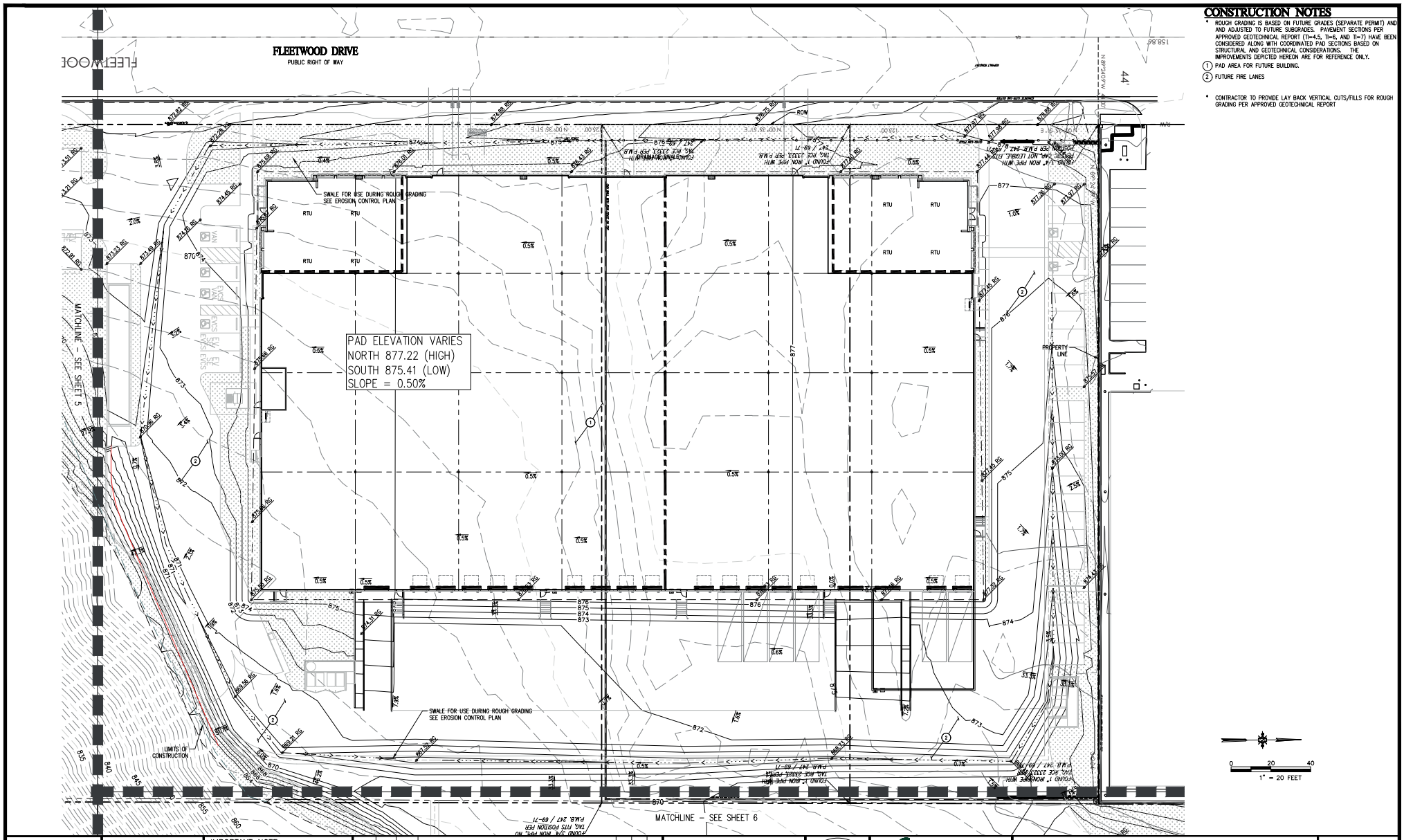
ACCT. NO.

SHEET 3 OF 8

FOR:

W.O

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GP22-036



CONSTRUCTION NOTES

- ROUGH GRADING IS BASED ON FUTURE GRADES (SEPARATE PERMIT) AND AND ADJUSTED TO FUTURE SUBGRADES. PAVEMENT SECTIONS PER APPROVED GEOTECHNICAL REPORT (TI=4.5, TI=6, AND TI=7) HAVE BEEN CONSIDERED ALONG WITH COORDINATED PAD SECTIONS BASED ON STRUCTURAL AND GEOTECHNICAL CONSIDERATIONS. THE IMPROVEMENTS DEPICTED HEREON ARE FOR REFERENCE ONLY.

(1) PAD AREA FOR FUTURE BUILDING.

(2) FUTURE FIRE LANES

- CONTRACTOR TO PROVIDE LAY BACK VERTICAL CUTS/FILLS FOR ROUGH GRADING PER APPROVED GEOTECHNICAL REPORT

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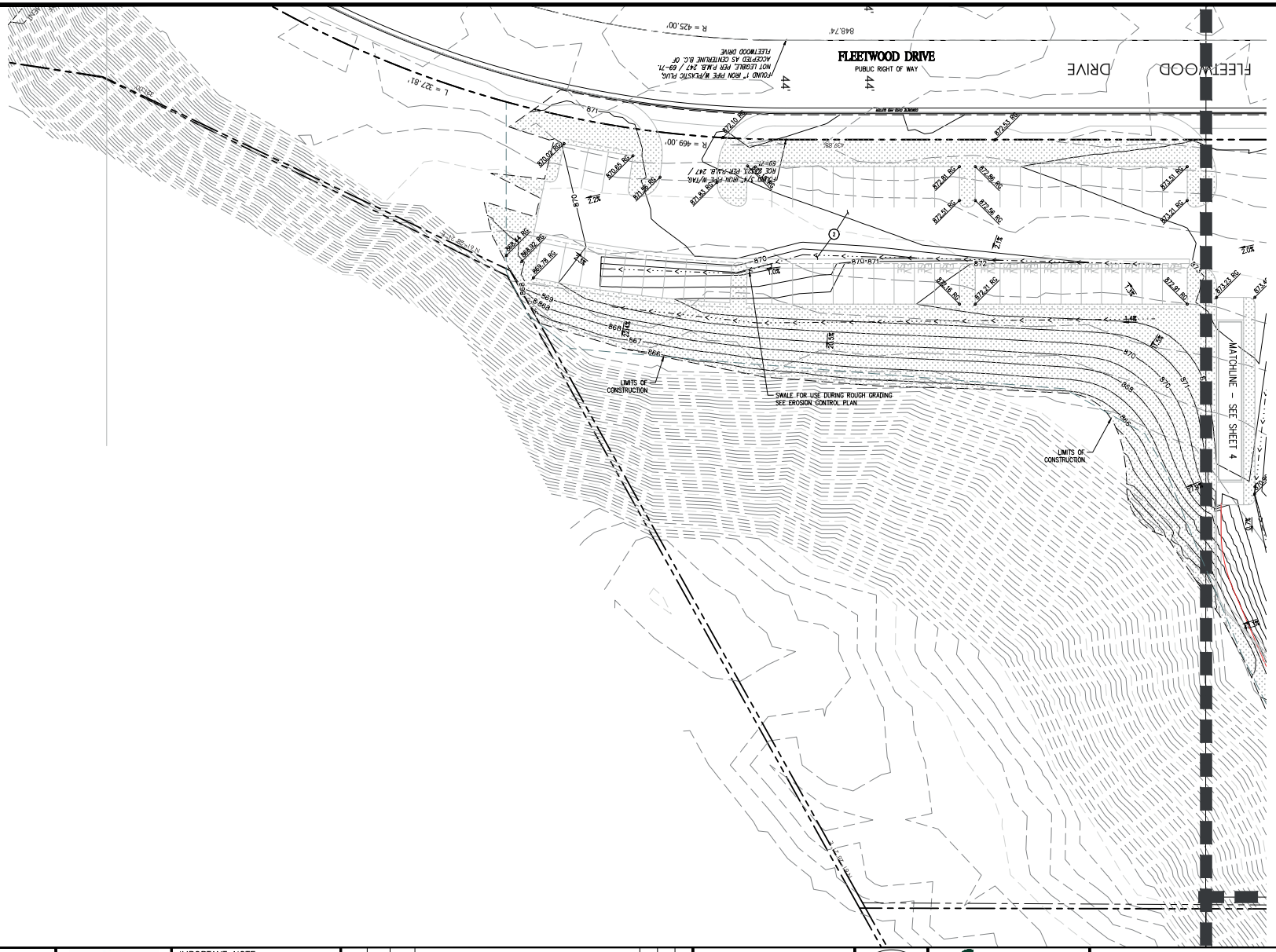
CITY OF JURUPA VALLEY

GRADING PLANS
HYB, LLC, – FLEETWOOD INDUSTRIAL
2240 FLEETWOOD DR.
ROUGH GRADING – NORTH

ACCT. NO.

SHEET 4 OF 8

FOR:
W.O
CITY I. D. NO.
GP22-036



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CIVIL
STATE OF CALIFORNIA

Cannon
19842 Von Karman Avenue, Suite 150
Irvine, CA 92606
P 949.753.8111 F 949.753.0775

PLANS PREPARED UNDER THE SUPERVISION OF:

SAMUEL JOHN JACOBY, P.E.
R.C.E. #C74309 (EXP. 6/30/23)

4/5/2023
DATE

CITY OF JURUPA VALLEY

GRADING PLANS
HYB, LLC, – FLEETWOOD INDUSTRIAL
2240 FLEETWOOD DR.
ROUGH GRADING PLAN – SOUTH

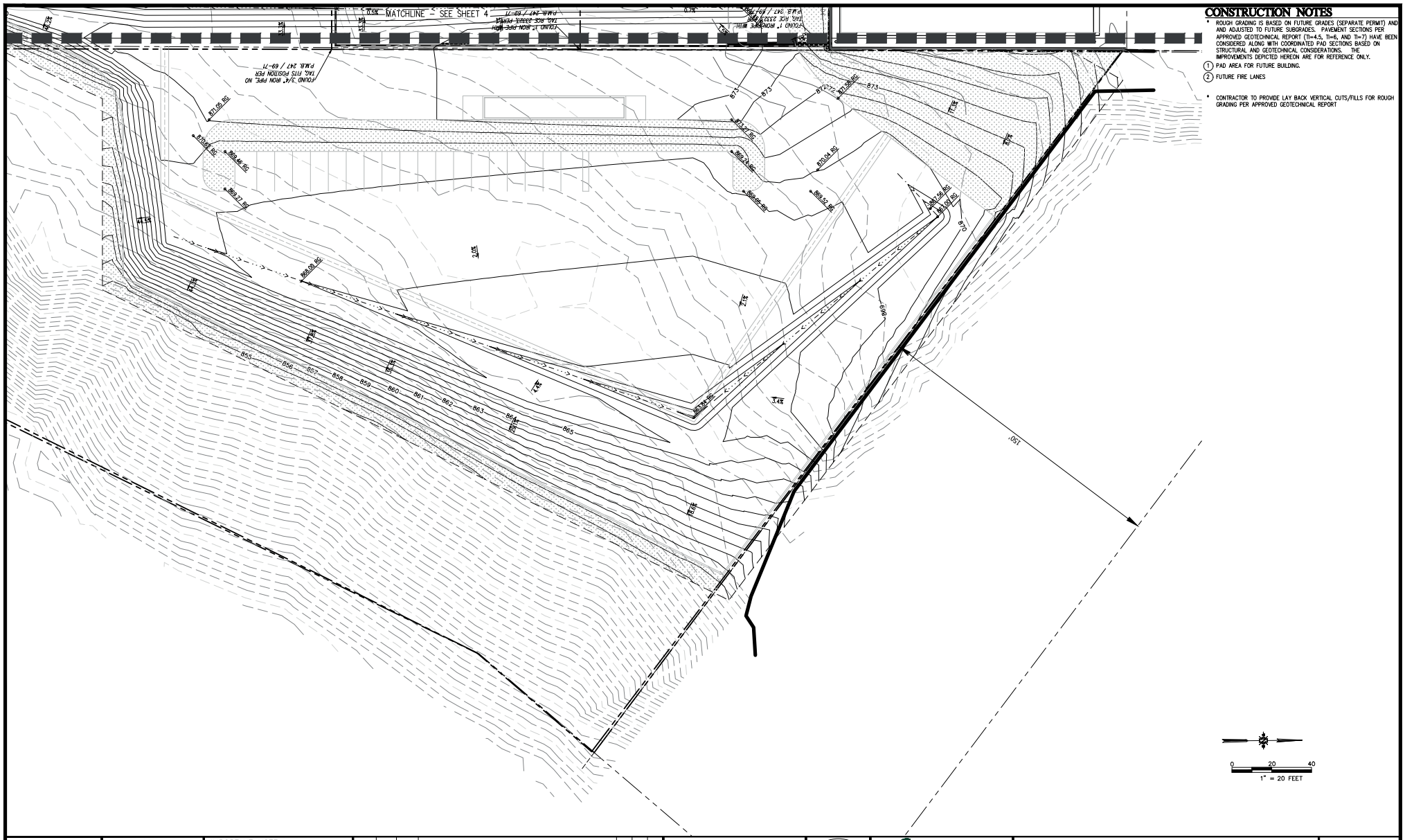
ACCT. NO.

SHEET 5 OF 8

FOR:

W.O

CITY I. D. NO.
GP22-036



CONSTRUCTION NOTES

- ROUGH GRADING IS BASED ON FUTURE GRADES (SEPARATE PERMIT) AND AND ADJUSTED TO FUTURE SUBGRADES. PAVEMENT SECTIONS PER APPROVED GEOTECHNICAL REPORT (TI=4.5, TI=6, AND TI=7) HAVE BEEN CONSIDERED ALONG WITH COORDINATED PAD SECTIONS BASED ON STRUCTURAL AND GEOTECHNICAL CONSIDERATIONS. THE IMPROVEMENTS DEPICTED HEREON ARE FOR REFERENCE ONLY.
- (1) PAD AREA FOR FUTURE BUILDING.
- (2) FUTURE FIRE LANES
- CONTRACTOR TO PROVIDE LAY BACK VERTICAL CUTS/FILLS FOR ROUGH GRADING PER APPROVED GEOTECHNICAL REPORT

NO WORK SHALL BE DONE ON THIS SITE UNTIL BELOW AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE.
Underground Service Alert
Call: TOLL FREE
1-800
227-2600
TWO WORKING DAYS BEFORE YOU DIG

8930 LIMONITE AVE
JURUPA VALLEY, CA 92509
TEL: (951) 332-6464
EMAIL: ENGINEERING@JURUPAVALLEY.ORG

IMPORTANT NOTE:
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MARK	DATE	INITIAL	DESCRIPTION	REC.	APPR	DATE
		E.O.R.	REVISION			

BENCHMARK:
B.M. NO. M.L.-4-64 NAVD 1988 COUNTY OF RIVERSIDE AT THE NE CORNER OF THE HALL AVE BRIDGE #56-415, OVER HWY #60, 246.0' SW OF 28TH AVE, 15.0' S. OF HALL AVE AT THE NE END OF THE RAIL ABUTMENT AND 2.0' HIGHER THAN THE SIDEWALK, A BRASS DISK SET IN THE TOP OF A 1.0' X 2.0' CONCRETE POST AND MARKED M.L.-4-64.
ELEVATION = 857.288 FEET

BASIS OF BEARING:
THE BEARING OF N 00°35'51" E ALONG THE CENTERLINE OF FLEETWOOD AVENUE PER PMB 247/69-71, CITY OF JURUPA VALLEY, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA.

REGISTERED PROFESSIONAL ENGINEER
SAMUEL J. JACOBY
C74309
EXP.6/30/25
CIVIL
STATE OF CALIFORNIA

Cannon
18462 Von Karman Avenue, Suite 150
Irvine, CA 92606
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R.C.E. #C74309 (EXP. 6/30/23)
4/5/2023
DATE

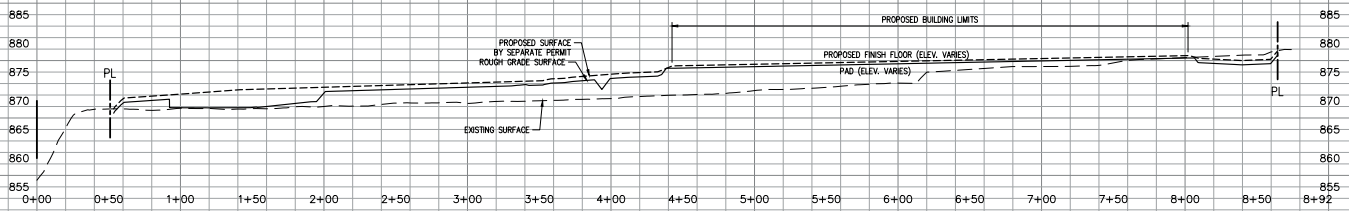
CITY OF JURUPA VALLEY

GRADING PLANS
HYB, LLC, – FLEETWOOD INDUSTRIAL
2240 FLEETWOOD DR.
ROUGH GRADING – EAST

ACCT. NO.

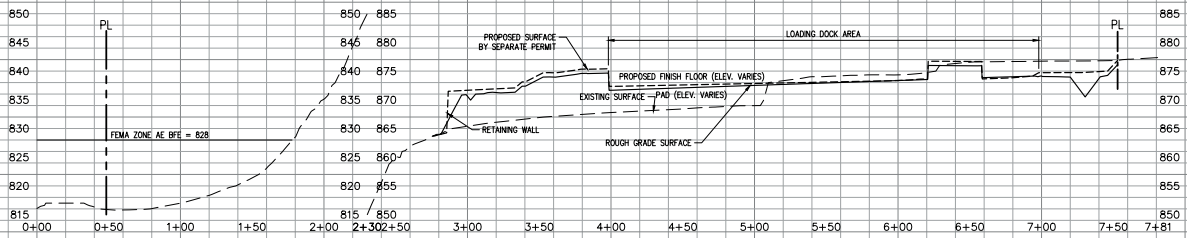
SHEET 6 OF 8

FOR:
W.O
CITY I. D. NO.
GP22-036



A – SECTION VIEW

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'

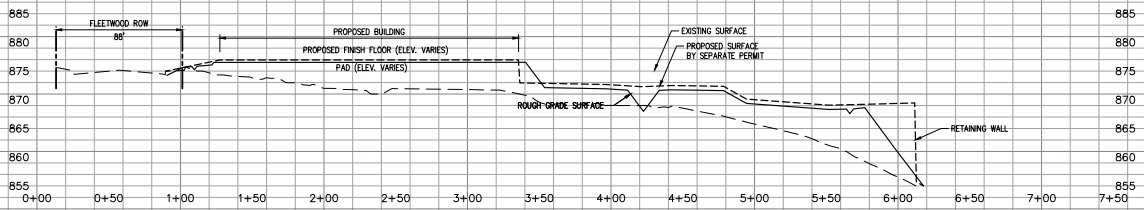


B – PROFILE VIEW

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'

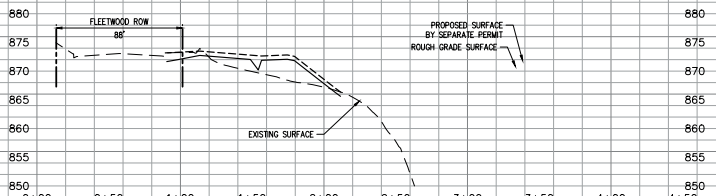
B – SECTION VIEWB – PROFILE VIEW

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'



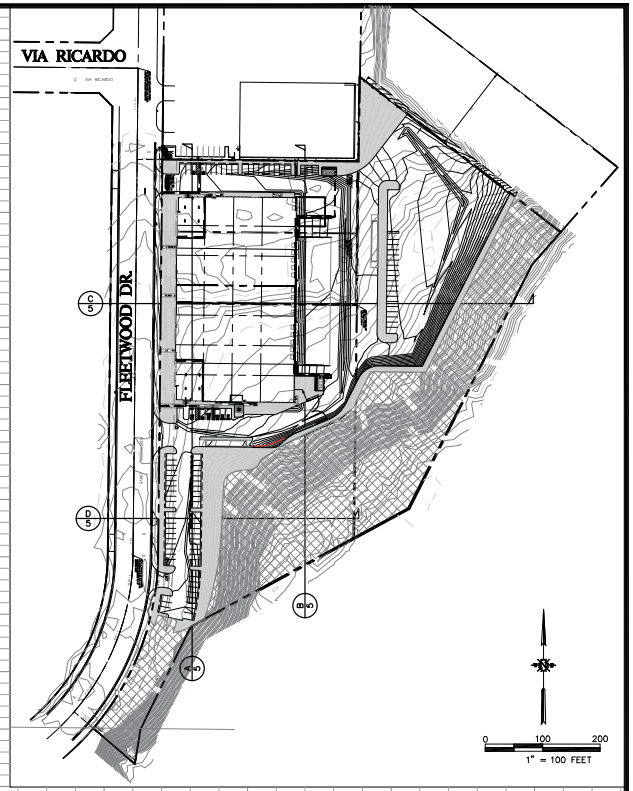
C – SECTION VIEW

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'



D – SECTION VIEW

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'



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REGISTERED PROFESSIONAL ENGINEER
SAMUEL J. JACOBY
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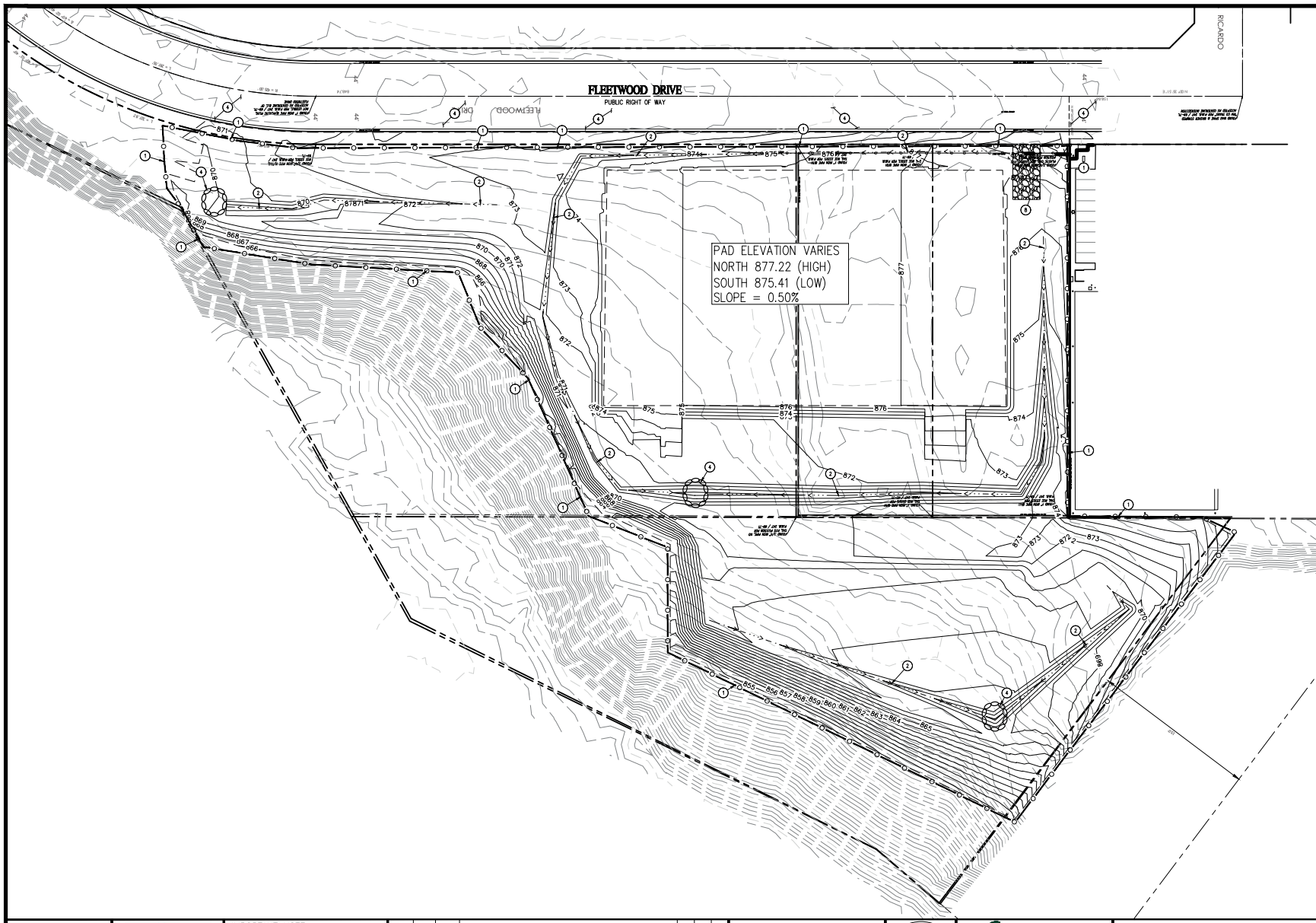
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SAMUEL JOHN JACOBY, P.E.
R.C.E. #C74309 (EXP. 6/30/23)
4/5/2023
DATE

CITY OF JURUPA VALLEY
GRADING PLANS
HYB, LLC, – FLEETWOOD INDUSTRIAL
2240 FLEETWOOD DR.
CROSS SECTIONS

ACCT. NO.
SHEET 7 OF 8

FOR:
W.O
CITY I. D. NO.
GP22-036



CONSTRUCTION NOTES

CASQA BMP #	DESCRIPTION	SYMBOL
①	SE-1 SILT FENCE WE-1 WIND EROSION	
②	EC-9 EARTH DIKE AND DRAINAGE SWALE	
③	SE-7 STREET SWEEPING & VACUUMING	
④	SE-2/SE-3 SEDIMENT BASIN SEDIMENT TRAP	
⑧	TC-1 STABILIZED CONSTRUCTION ENTRANCE (RELOCATE AS NECESSARY)	

ENGINEER'S NOTES:

1. SEE TITLE SHEET FOR ADDITIONAL EROSION CONTROL NOTES AS WELL AS SWPPP.
2. THE CONTRACTOR/QSP WILL INSPECT BMPS BEFORE, AFTER, AND EVERY 24 HOURS DURING EXTENDED STORM EVENTS OR AS DIRECTED IN THE SWPPP. THE CONTRACTOR/QSP WILL RECORD CONDITIONS OF THE BMPS AND ANY ACTIVITIES REQUIRED FOR MAINTAINING, REPLACING, OR REPAIRING BMPS. MONITORING INCLUDES MAINTAINING A FILE DOCUMENTING ONSITE INSPECTIONS, PROBLEMS ENCOUNTERED, CORRECTIVE ACTIONS, AND NOTES AND A REDLINE MAP OF REMEDIAL IMPLEMENTATION MEASURES. COPIES OF THESE REPORTS WILL BE KEPT ONSITE WITH THE SWPPP AND WILL BE AVAILABLE FOR REGIONAL WATER QUALITY CONTROL BOARD REVIEW.
3. THE NEED FOR EROSION CONTROL DEVICES DURING CONSTRUCTION WILL VARY ACCORDING TO THE SEASON AND ENVIRONMENTAL CONDITIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PLACE BMPS AS NECESSARY TO PREVENT EROSION AND CONTROL SEDIMENTATION.
4. TEMPORARY EROSION CONTROL DEVICES ARE TO BE MAINTAINED BY THE CONTRACTOR AND KEPT IN OPERATION UNTIL SUBSEQUENT PROJECT WORK ELIMINATES THEIR NEED. IT MAY BE NECESSARY TO MOVE, ADJUST, REPLACE, AND/OR CHANGE THE SHAPE OF THE EROSION CONTROL DEVICES DURING THE COURSE OF THE PROJECT. EROSION CONTROL MEASURES MUST NOT BE REMOVED WITHOUT APPROVAL FROM THE QUALIFIED SWPPP PRACTITIONER (QSP) OR INSPECTOR.
5. THE CONTRACTOR WILL BE RESPONSIBLE FOR COMPLIANCE WITH THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND FOR THE MAINTENANCE OF BMPS. ALL CONTRACTORS AND THEIR PERSONNEL WHOSE WORK CAN CONTRIBUTE TO OR CAUSE POLLUTION OF STORM WATER MUST BE MADE FAMILIAR WITH THIS EROSION CONTROL PLAN AND SWPPP. ADEQUATE TRAINING FOR IMPLEMENTATION OF THE MEASURES PRESENTED HEREIN MUST BE PROVIDED BY THE CONTRACTOR TO THEIR PERSONNEL.
6. EROSION CONTROL DEVICES MAY BE RELOCATED, DELETED, OR ADDITIONAL DEVICES AND BMPS MAY BE REQUIRED DEPENDING UPON THE ACTUAL SOIL CONDITIONS ENCOUNTERED. EROSION CONTROL DEVICES MAY BE PLACED AT THE DISCRETION OF THE QSP OR THE INSPECTOR.
7. CHANGES IN CONSTRUCTION OR CONDITIONS WHICH ARE NOT COVERED BY THIS PLAN SHOULD BE BROUGHT TO THE ATTENTION OF THE QSP. THE CONTRACTOR WILL BE RESPONSIBLE FOR UPDATING THE SWPPP WITH THE QSP AND THIS EROSION CONTROL PLAN AS REQUIRED TO ADDRESS THE CHANGING SITE CONDITIONS.
8. A STANDBY CREW FOR EMERGENCY WORK MUST BE AVAILABLE AT ALL TIMES. NECESSARY MATERIALS MUST BE AVAILABLE AND STOCKPILED AT ACCESSIBLE LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY BMPS WHEN RAIN IS IMMINENT.
9. ALL PROTECTIVE DEVICES DIRECTED TO BE INSTALLED MUST BE IN PLACE AT THE END OF EACH WORK DAY WHEN THE FIVE DAY RAIN PROBABILITY EXCEEDS 40%.
10. THE SWPPP MUST BE KEPT ONSITE DURING CONSTRUCTION ACTIVITY AND MADE AVAILABLE UPON REQUEST OF REPRESENTATIVES OF THE REGIONAL WATER QUALITY BOARD AND/OR THE LOCAL AGENCIES.
11. THIS PLAN OFFERS METHODS FOR CONTROL OF SOIL EROSION AND SEDIMENT DURING GRADING AND CONSTRUCTION OPERATIONS. NO WARRANTY IS STATED OR IMPLIED THAT, DURING A STORM EVENT, IMPLEMENTATION OF THESE METHODS WILL PREVENT DAMAGE AS A RESULT OF SOIL EROSION. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PROPER INSTALLATION OF BMPS AND THEREFORE RESPONSIBLE FOR ANY DAMAGE TO THE OWNER'S PROPERTY, ADJACENT PROPERTY, OR THE CONTRACTOR'S ONGOING WORK.
12. PRIOR TO STORM EVENTS, SOIL BINDER, STRAW MATTLE, OR OTHER EROSION CONTROL DEVICES MAY BE APPLIED AND SECURED TO DISTURBED OPEN AREAS DURING GRADING OPERATIONS, IF DETERMINED NECESSARY BY QSP.
13. EXPOSED GROUND AREAS THAT ARE PLANNED TO BE REWORKED AT DATES GREATER THAN ONE MONTH AFTER INITIAL GRADING SHALL BE TREATED WITH A SOIL BINDER OR SOWN WITH FAST-GERMINATING NATIVE GRASS SEED AND WATERED UNTIL VEGETATION BECOMES ESTABLISHED.
14. ALL ROADWAYS, DRIVEWAYS, SIDEWALKS, ETC. TO BE PAVED MUST BE COMPLETED AS SOON AS POSSIBLE. IN ADDITION, STRUCTURAL FOUNDATIONS MUST BE COMPLETED AS SOON AS POSSIBLE FOLLOWING BUILDING PAD CONSTRUCTION.
15. FIBER ROLLS OR SILT FENCING MUST BE INSTALLED PARALLEL TO GRADING CONTOURS.
16. AFTER A RAIN EVENT, ALL SILT AND DEBRIS MUST BE REMOVED FROM GRAVEL BAG CHEVRONS, DRAIN INLET PROTECTION DEVICES, CHECK DAMS, DE-SILTING BASINS, AND/OR OTHER SEDIMENT CONTROL DEVICES.
17. STREETS ADJACENT TO THE PROJECT SITE MUST BE SWEPT AT THE END OF EACH WORKING DAY TO REMOVE DIRT, DUST, MUD, AND CONSTRUCTION DEBRIS WHICH MAY HAVE ACCUMULATED FROM CONSTRUCTION ACTIVITIES.
18. REASONABLE CARE WILL BE TAKEN WHEN HAULING ANY EARTH, SAND, GRAVEL, STONE, DEBRIS, OR ANY HAZARDOUS SUBSTANCE OVER ANY PUBLIC STREET, ALLEY, OR OTHER PUBLIC PLACE. IMMEDIATE CLEAN UP MUST OCCUR SHOULD ANY MATERIAL BLOW, SPILL, OR TRACK OVER AND UPON SAID PUBLIC OR ADJACENT PRIVATE PROPERTY.
19. STABILIZED CONSTRUCTION ENTRANCES MUST BE INSTALLED PRIOR TO COMMENCEMENT OF GRADING. ALL CONSTRUCTION TRAFFIC ENTERING ONTO THE PAVED ROADS MUST CROSS THE STABILIZED CONSTRUCTION ENTRANCEWAY WHEN LEAVING THE SITE.
20. DURING CONSTRUCTION, THE CONTRACTOR MUST POND ALL RUNOFF TO NON-ERODIBLE LOCATIONS THROUGH THE USE OF DIKES TO PREVENT EROSION.
21. THE CONTRACTOR MUST CONSTRUCT TEMPORARY EROSION CONTROL MEASURES AS DIRECTED BY THE QSP TO CONTROL DRAINAGE WHICH HAS BEEN AFFECTED BY GRADING AND/OR TRENCHING OPERATIONS.
22. THE INSPECTOR MAY REQUIRE THE CONTRACTOR AT ANY TIME TO INSTALL AND/OR CONSTRUCT ADDITIONAL DRAINAGE STRUCTURES AS NECESSARY TO PREVENT OR CONTROL EROSION.

24-HOUR EMERGENCY CONTACT

TBD

NAME PHONE

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REGISTERED PROFESSIONAL ENGINEER SAMUEL J. JACOBY C74309 EXP.6/30/25 CIVIL STATE OF CALIFORNIA

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Irvine, CA 92606
P 949.753.8111 F 949.753.0775

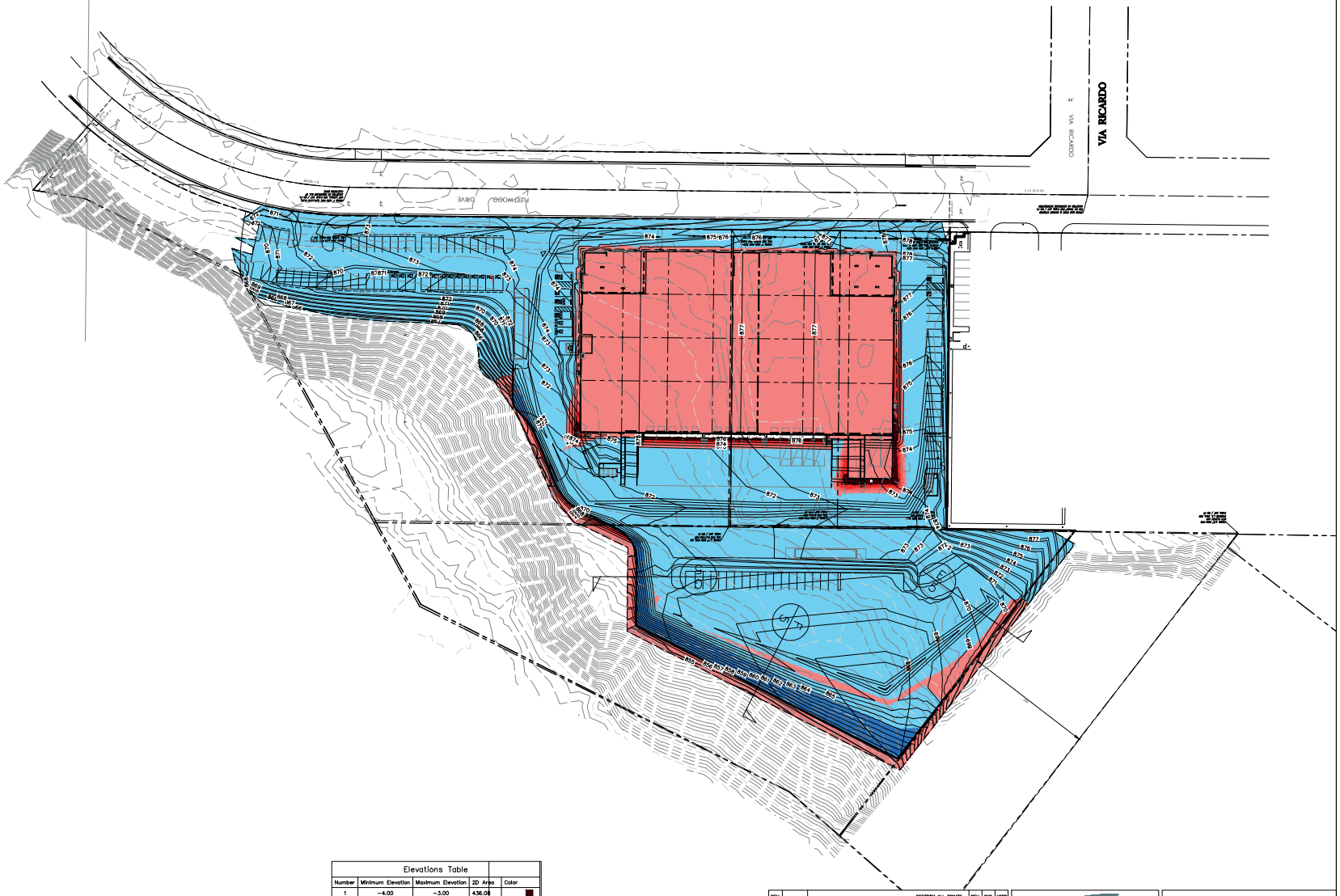
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4/5/2023
DATE

CITY OF JURUPA VALLEY
GRADING PLANS
HYB, LLC, – FLEETWOOD INDUSTRIAL
2240 FLEETWOOD DR.
EROSION CONTROL PLAN

ACCT. NO.

SHEET 8 OF 8

FOR: W.O CITY I. D. NO. GP22-036



Elevations Table				
Number	Minimum Elevation	Maximum Elevation	2D Area	Color
1	-4.00	-3.00	436.08	
2	-3.00	-2.00	3155.67	
3	-2.00	-1.00	7989.97	
4	-1.00	0.00	41179.00	
5	0.00	4.00	20110.18	
6	4.00	8.00	34508.04	
7	8.00	12.00	11575.16	
8	12.00	16.00	3999.47	

0 40 80
1 INCH =40 FEET

811
Know what's below.
Call before you dig.

REV. NO	DATE	REVISED	DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APPD BY

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16942 Von Karman Avenue, Suite 150
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P 949.753.8111 F 949.753.0735

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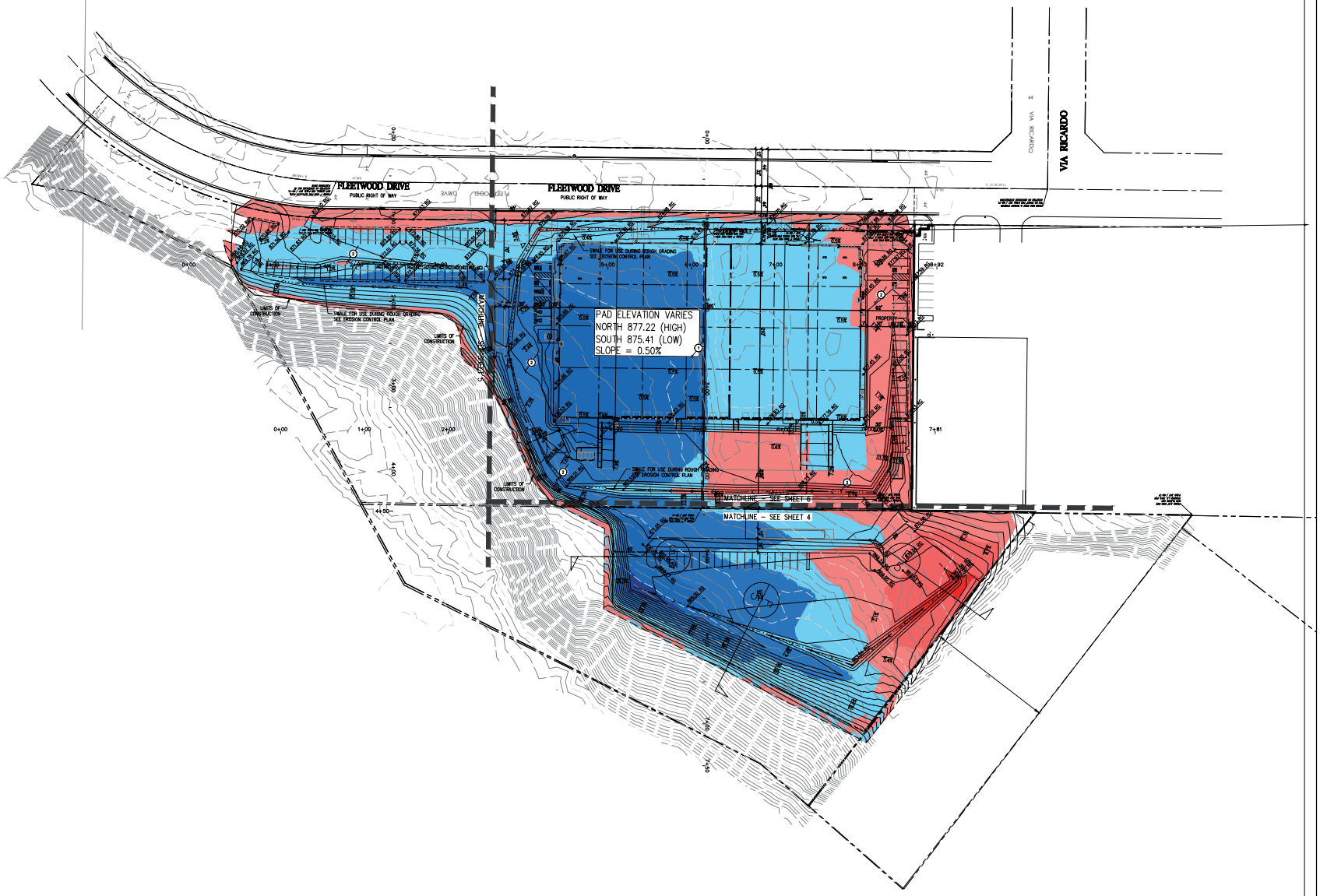
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ROUGH VS PROPOSED

XX

DRAWN BY	DATE	CA JOB NO.
XX	XX	XX
CHECKED BY	SCALE	SHEET
	X	EX1 OF X

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Elevations Table				
Number	Minimum Elevation	Maximum Elevation	2D Area	Color
1	-12.00	-9.00	0.00	
2	-9.00	-6.00	0.00	
3	-6.00	-3.00	2613.47	
4	-3.00	0.00	59936.00	
5	0.00	3.00	69327.40	
6	3.00	6.00	48007.62	
7	6.00	9.00	20402.79	
8	9.00	12.00	6.16	

0 40 80
1 INCH =40 FEET

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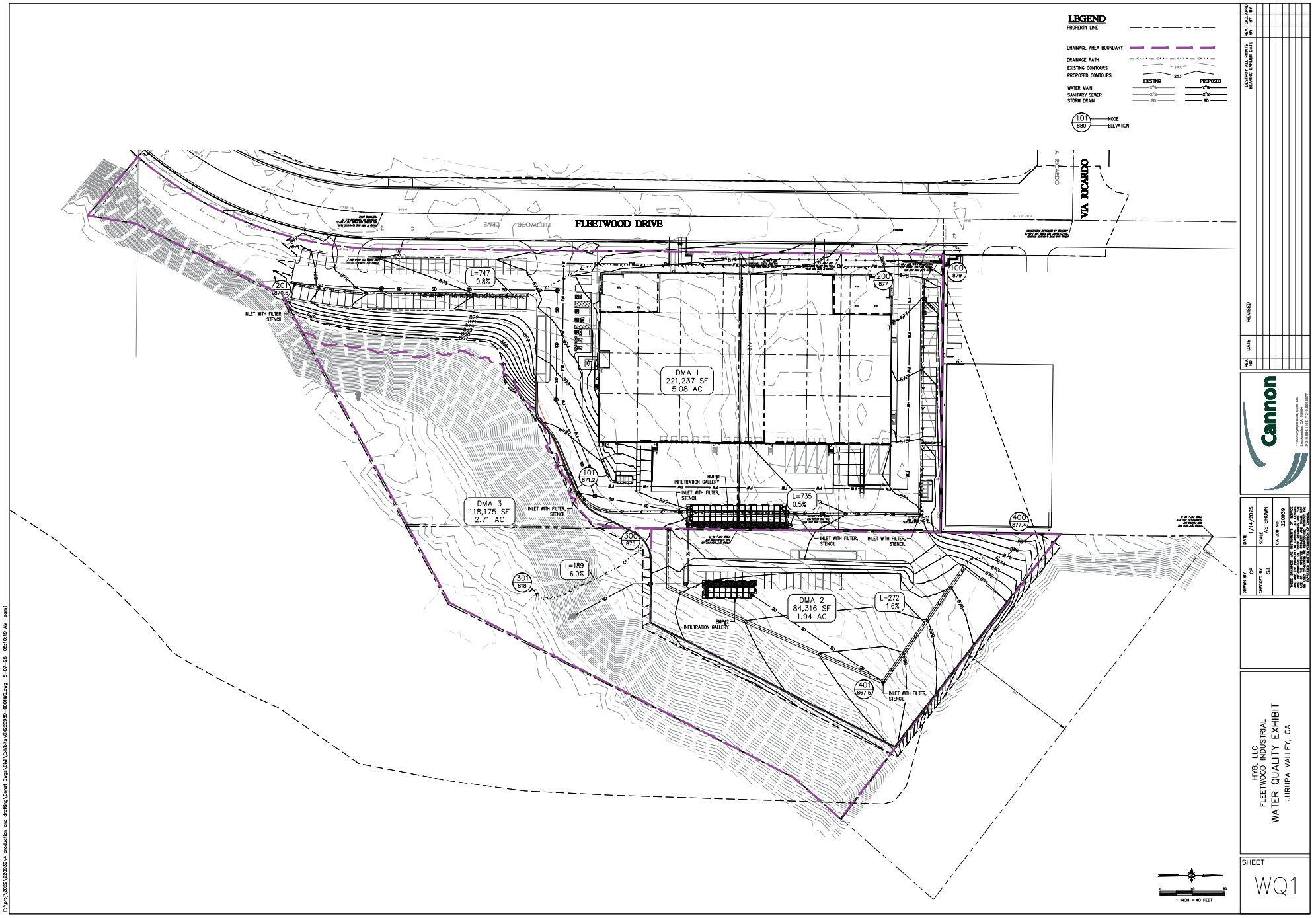
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EXISTING VS ROUGH

XX

DRAWN BY	DATE	CA JOB NO.
XX	XX	XX
CHECKED BY	SCALE	SHEET
	X	EW2 OF X

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REV NO	DATE	REVISED	REV BY	CKD/APPD BY
		DESTROY ALL PRINTS BEARING EARLIER DATE		

Cannon

DRAWN BY	DATE
CP	1/14/2025
CHECKED BY	SCALE
SJ	AS SHOWN
	CA JOB NO. 2209.39

HYB, LLC
FLEETWOOD INDUSTRIAL
WATER QUALITY EXHIBIT
JURUPA VALLEY, CA

SHEET
WQ1

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Flow Specifications

Description of filter opening	Percent Open (Based on Screen Dimensions)	Total Square Inches per Unit	Square Inches of Total Unobstructed Openings	Flow Rate (Cubic Feet per Second)
Skimmer protected By-Pass	100%	381.5	381.5	13.4 cfs
Coarse Screen 3/4" x 1-3/4" stainless steel flattened expanded	62%	231.0	143.2	6.2 cfs
Medium Screen 10x10 mesh stainless steel	56%	231.0	129.3	6.4 cfs
Fine screen 14 x 18 mesh stainless steel	68%	283.5	192.8	10.8
MAXIMUM THROAT FLOW RATE Total: 18.8 cfs		SCREEN TREATED FLOW RATE Total: 23.4 cfs		

FLOW RATES BASED ON UNOBSTRUCTED SCREEN OPENINGS

BOX MANUFACTURED FROM MARINE GRADE FIBERGLASS & GEL COATED FOR UV PROTECTION

5 YEAR MANUFACTURERS WARRANTY

PATENTED

ALL FILTER SCREENS ARE STAINLESS STEEL

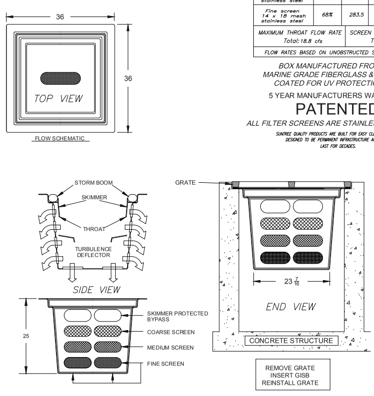
SUNTREE QUALITY PRODUCTS ARE BUILT FOR EASY CLEANING AND ARE DESIGNED TO BE PERMANENT INFRASTRUCTURE AND SHOULD LAST FOR DECADES.

EXCLUSIVE CALIFORNIA DISTRIBUTOR:
BIO CLEAN ENVIRONMENTAL SERVICE
P.O. BOX 869, OCEANSIDE, CA. 92049
TEL. 760-433-7640 FAX:760-433-3176
Email: info@biocleanenvironmental.net

SUNTREE TECHNOLOGIES
798 CLEARLAKE RD. SUITE #2
COCOA FL. 32922
TEL. 321-637-7552 FAX 321-637-7554

GRATE INLET SKIMMER BOX FOR FLORIDA DOT INLET STRUCTURES

DATE:	SCALE:SF = 15
DRAFTER: N.R.B.	UNITS =INCHES



REMOVE GRATE
INSERT GISB
REINSTALL GRATE

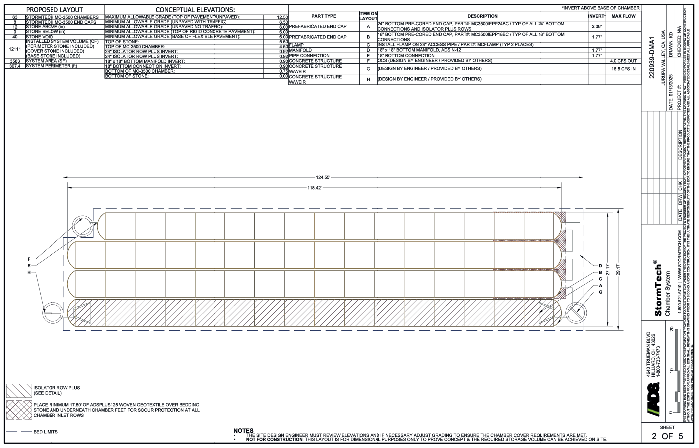
INLET FILTER (1) NTS

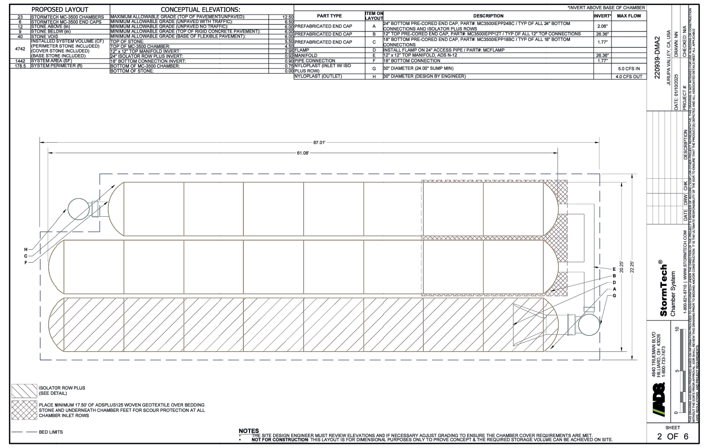


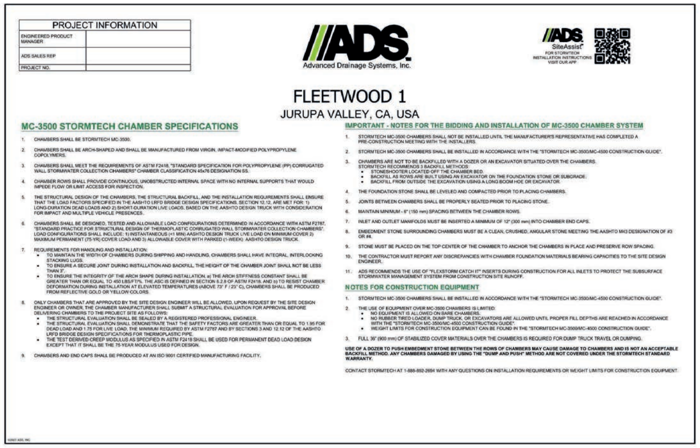
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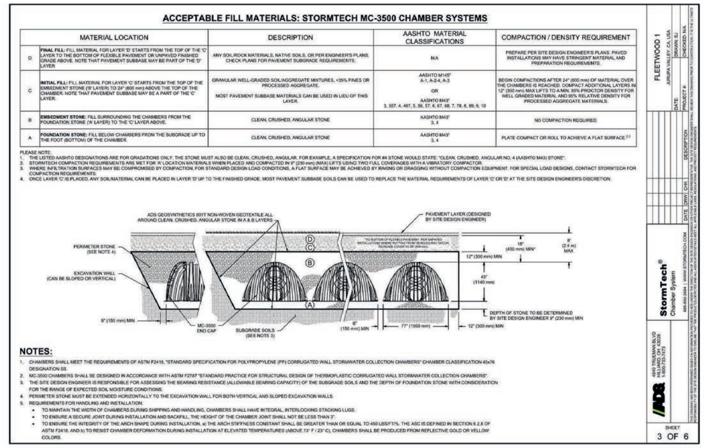
ALL DRAIN INLETS THAT DISCHARGE INTO AN EXISTING OR PROPOSED STORM DRAIN MUST BE LABELED TO DISCOURAGE ILLEGAL DUMPING OF POLLUTANTS WITH THE STENCIL ABOVE IN A VISIBLE AREA. 2 COATS MINIMIMUM.

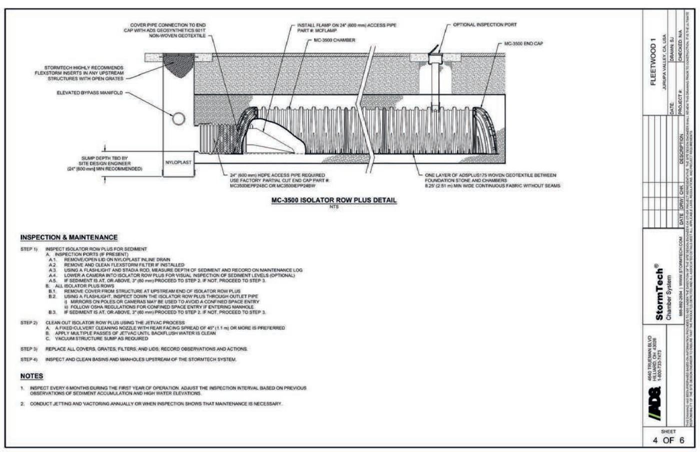
STORM INLET STENCIL (2) NTS

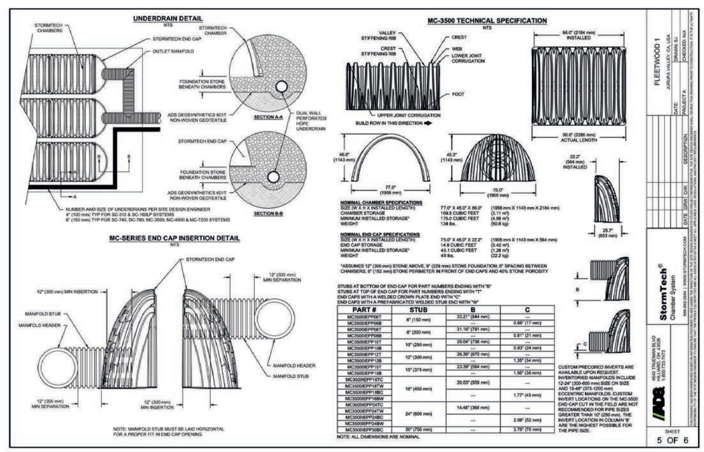












NO REV.	DATE	REVISED	REV. BY	CKD. BY	APRD BY

DESTROY ALL PRINTS BEARING EARLIER DATE

Cannon
11900 Olympic Blvd. Suite 530
Los Angeles, CA 90064
P 310.664.1166 F 310.664.8877

DRAWN BY: CP	DATE: 1/14/2025
CHECKED BY: SJ	SCALE: AS SHOWN
	CA JOB NO. 220939

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HYB, LLC
FLEETWOOD INDUSTRIAL
WATER QUALITY DETAILS
JURUPA VALLEY, CA

SHEET WQ2

HYB
FLEETWOOD INDUSTRIAL
PRELIM GRADING – LARGE FORMAT
2240 FLEETWOOD DR.
###

CX1
XX

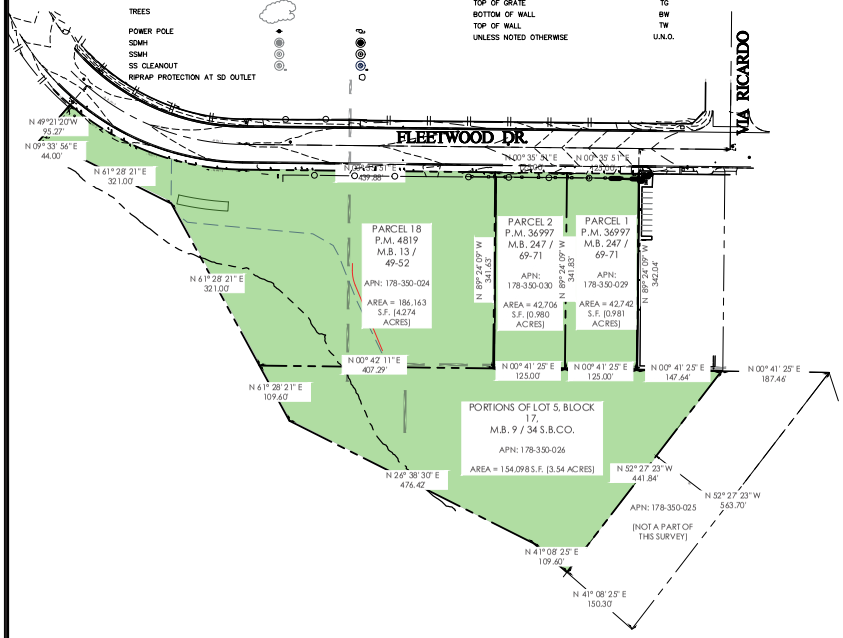
5/7/2025
AS SHOWN
2209.9

FLEETWOOD INDUSTRIAL
PRELIMINARY GRADING PLAN
2240 FLEETWOOD DRIVE
JURUPA VALLEY, RIVERSIDE COUNTY, CALIFORNIA

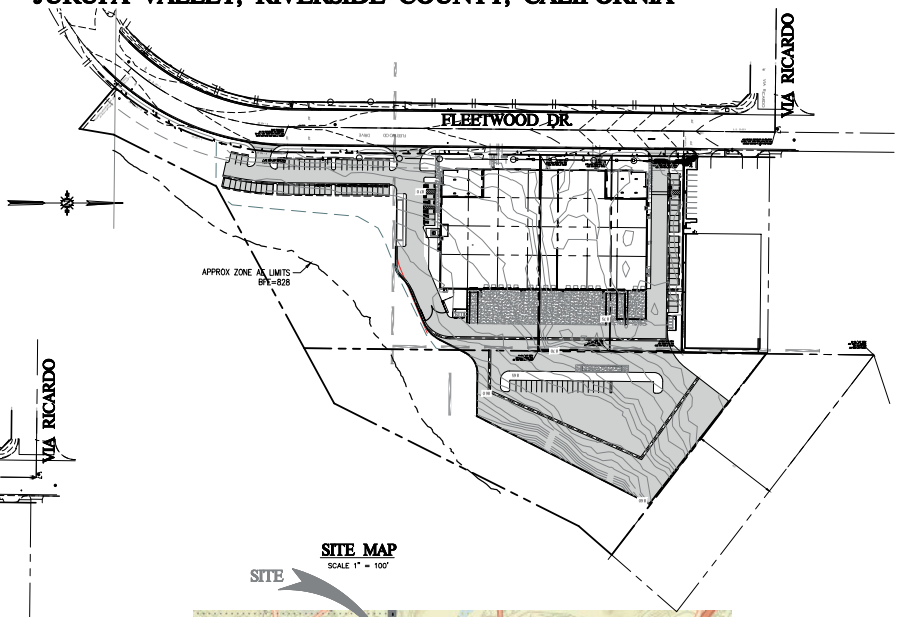
LEGEND AND ABBREVIATIONS

	EXISTING	PROPOSED
TRACT BOUNDARY		
PROPERTY LINE		
RIGHT-OF-WAY		
EASEMENT/SETBACK		
STREET CENTERLINE		
CURB		
CURB & GUTTER		
ROAD STRIPING		
FENCE	X	X
DAYLIGHT LINE		
100YR FLOODPLAIN BOUNDARY		
FLOWLINE		
DRAINAGE SWALE		
RETAINING WALL		
GRADE BREAK		
SLOPE		
CONTOURS		
WATER MAIN	W	W
RECLAIMED WATER LINE	RW	RW
SANITARY SEWER LINE	SS	SS
STORM DRAIN LINE	SD	SD
GAS LINE	G	G
ELECTRIC LINE	E	E
OVERHEAD WIRES	OH	OH
FIBER OPTICS	FO	FO
TELEPHONE	T	T
JOINT TRENCH	JT	JT
BIOFILTRATION AREA		
FIRE HYDRANT		
STREET LAMP		
STREET LAMP WITH MAST ARM		
STORM DRAIN INLET		
CURB INLET		
TREES		
POWER POLE		
SDMH		
SSMH		
SS CLEANOUT		
RIPRAP PROTECTION AT SD OUTLET		

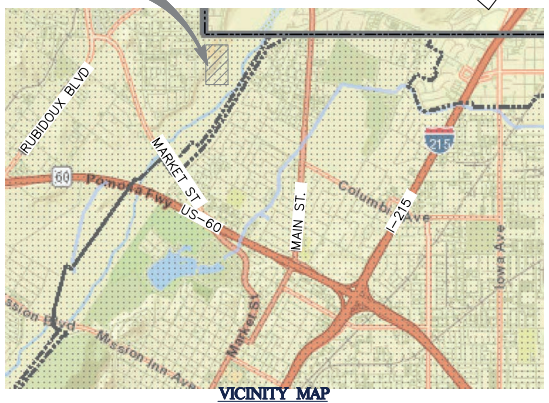
ASPHALT CONCRETE	AC
BEGINNING CURVE	BC
BEGINNING OF CURB RETURN	BCR
BEGINNING POINT	BP
BEGIN VERTICAL CURVE	BVC
BOTTOM FACE OF CURB	BFC
CENTERLINE	CL / ℄
CURB RETURN	C.R.
DUCTILE IRON	DI
END CURVE	EC
END OF CURB RETURN	EOR
END POINT	EP
END VERTICAL CURVE	EVC
EXISTING GRADE	EG
EXISTING	(E)
FLOW LINE	FL / ℄
INVERT	INV
MEDIAN	MED
OPEN SPACE	OS
PUBLIC FACILITY	PF
PRIVATE ACCESS EASEMENT	PAE
PROPERTY LINE	PL / ℄
PUBLIC UTILITY EASEMENT	PUE
PUBLIC PEDESTRIAN EASEMENT	PPE
POINT OF REVERSE CURVE	PRC
POINT OF VERTICAL INTERSECTION	PVI
PROPOSED EDGE OF PAVEMENT	PROP. EP
RETAINING WALL	RTW
RECLAIMED WATER	RW
RIGHT OF WAY	ROW
STORM DRAIN	SD
STREET TREE EASEMENT	STE
SANITARY SEWER	SS
VERTICAL CURVE	VC
WATERLINE	WL
TOP OF CURB	TC
TOP OF GRATE	TG
BOTTOM OF WALL	BW
TOP OF WALL	TW
UNLESS NOTED OTHERWISE	U.N.O.



PARCEL MERGER MAP
SCALE 1" = 100'



SITE MAP
SCALE 1" = 100'



VICINITY MAP
NOT TO SCALE

OWNER/DEVELOPER:
HYB, LLC
ATTENTION: HOVEL BABIKIAN
1601 HASTINGS HEIGHTS LANE
PASADENA, CA 91107
PHONE: 626-825-1817

ENGINEER/SURVEYOR:
CANNON
ATTENTION: SAMUEL JACOBY
16842 VON KARMAN AVENUE, SUITE 150
IRVINE, CA 92606
PHONE: 949-681-0255

UTILITIES:
WATER: EMWD
STORM DRAINAGE: CITY OF JURUPA VALLEY

APN:
178-350-022, -029, -030, -024

BASIS OF ELEVATION:
PROVIDED BY OWNER

BASIS OF BEARINGS:
PROVIDE BY OWNER

GEOTECHNICAL REPORT:
ENVIRONMENTAL GEOTECHNOLOGY LABORATORY, INC
11819 GOLDRING ROAD, SUITE A
ARCADIA, CA 91006
626-263-3588
RYAN JONES, GE 2852

REPORT DATE 10/31/22
EGL PROJECT: 22-257-004L

FLOOD MAPPING:
LAND DESCRIBED HEREIN IS WITHIN ZONE X, BY GRAPHIC PLOT, ACCORDING TO FIRM PANEL 06065C0045G, EFFECTIVE DATE: 8/28/2008

SITE AREA:
6.37 ACRES

EARTHWORK QUANTITIES:

CUT	3,379 CY
FILL	15,753 CY
IMPORT	12,403 CY
OVEREXCAVATION	7,979 CY
SHRINKAGE (10% ASSUMED)	797 CY
NET CUT	11,358 CY
NET FILL	24,529 CY
NET EXPORT	13,171 CY

Sheet List Table

Sheet Number	Sheet Title
1	PRELIMINARY GRADING TITLE SHEET
2	PRELIMINARY GRADING – NORTH
3	PRELIMINARY GRADING – SOUTH
4	PRELIMINARY GRADING – EAST
5	PRELIMINARY CROSS SECTIONS
6	FLEETWOOD DRIVE – STA 1+00 TO 10+87.81
7	DETAILS AND TYPICAL SECTION

NO WORK SHALL BE DONE ON THIS SITE UNTIL BELOW AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE.
Underground Service Alert
Call: TOLL FREE
1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

CITY OF JURUPA VALLEY
8930 LIMONITE AVE
JURUPA VALLEY, CA 92509
TEL: (951) 332-6464
EMAIL: ENGINEERING@JURUPAVALLEY.ORG

IMPORTANT NOTE:
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MARK	DATE	INITIAL	DESCRIPTION	REC.	APPR	DATE
		E.O.R.	REVISION			

BENCHMARK:
B.M. NO. M.L.-4-64 NAVD 1988 COUNTY OF RIVERSIDE AT THE NE CORNER OF THE HALL AVE BRIDGE #56-415, OVER HWY #60, 246.0' SW OF 28TH AVE, 15.0' S. OF HALL AVE AT THE NE END OF THE RAIL ABUTMENT AND 2.0' HIGHER THAN THE SIDEWALK, A BRASS DISK SET IN THE TOP OF A 1.0' X 2.0' CONCRETE POST AND MARKED M.L.-4-64.
ELEVATION = 857.288 FEET

BASIS OF BEARING:
THE BEARING OF N 00°35'51" E ALONG THE CENTERLINE OF FLEETWOOD AVENUE PER PMB 247/69-71, CITY OF JURUPA VALLEY, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA.

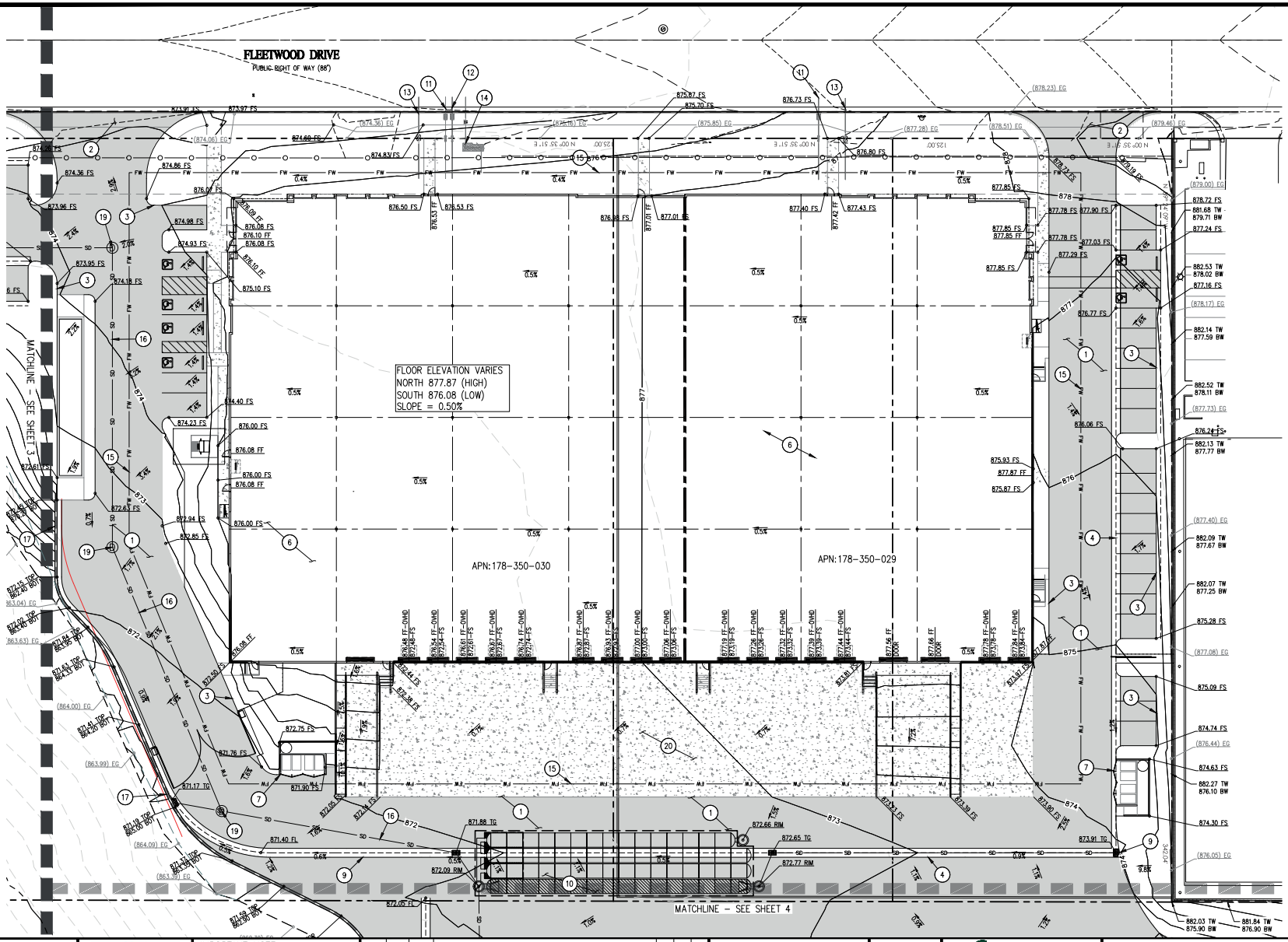
REGISTERED PROFESSIONAL ENGINEER SAMUEL J. JACOBY C74309 EXP.6/30/25 CIVIL STATE OF CALIFORNIA

Cannon
16842 Von Karman Avenue, Suite 150
Irvine, CA 92606
P 949.753.8111 F 949.753.0775

PLANS PREPARED UNDER THE SUPERVISION OF:
SAMUEL JOHN JACOBY, P.E.
R.C.E. #C74309 (EXP. 6/30/23)
5/7/2025
DATE

CITY OF JURUPA VALLEY
PRELIMINARY GRADING PLANS
HYB, LLC, – FLEETWOOD INDUSTRIAL
2240 FLEETWOOD DR.
PRELIMINARY GRADING TITLE SHEET

ACCT. NO.
SHEET 1 OF 7
FOR:
W.O
CITY I. D. NO.



CONSTRUCTION NOTES

1. CONSTRUCT ASPHALT CONCRETE (AC) PAVEMENT, 0.40' AC OVER 0.50' AGGREGATE BASE COURSE
2. CONSTRUCT DRIVEWAY
3. CONSTRUCT CURB
4. CONSTRUCT LONGITUDINAL GUTTER
5. TRUCK SCALE PER BUILDING PLAN
6. BUILDING PER BUILDING PLANS
7. TRASH ENCLOSURE PER BUILDING PLANS
8. LANDSCAPE SWALE
9. STORMWATER INLET WITH FILTER, STENCIL
10. UNDERGROUND INFILTRATION GALLERY
11. DOMESTIC WATER CONNECTION, METER, RPPBA
12. IRRIGATION WATER CONNECTION, METER, RPPBA
13. SEWER MAIN CONNECTION
14. FIRE SERVICE, DCDA
15. FIRE LINE, CONCEPTUAL
16. STORM DRAIN
17. RETAINING WALL
18. STORM DRAIN WITH ENERGY DISSIPATER AT BOTTOM OF EXIST BLUFF
19. STORM DRAIN MANHOLE
20. CONSTRUCT PORTLAND CEMENT CONCRETE PAVEMENT (PCC), 6" PCC OVER 6" AGGREGATE BASE COURSE

LEGEND

EXISTING CONTOURS
PROPOSED CONTOURS

	EXISTING	PROPOSED
WATER MAIN	X"W	X"W
SANITARY SEWER	X"S	X"S
STORM DRAIN	SD	SD
FENCE		
IRON FENCE		

AC PAVING
CONCRETE WALKWAY
STRUCTURAL LOADING DOCK CONCRETE

NO WORK SHALL BE DONE ON THIS SITE UNTIL BELOW AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE.
Underground Service Alert
Call: TOLL FREE
1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

8930 LIMONITE AVE
JURUPA VALLEY, CA 92509
TEL: (951) 332-6464
EMAIL: ENGINEERING@JURUPAVALLEY.ORG

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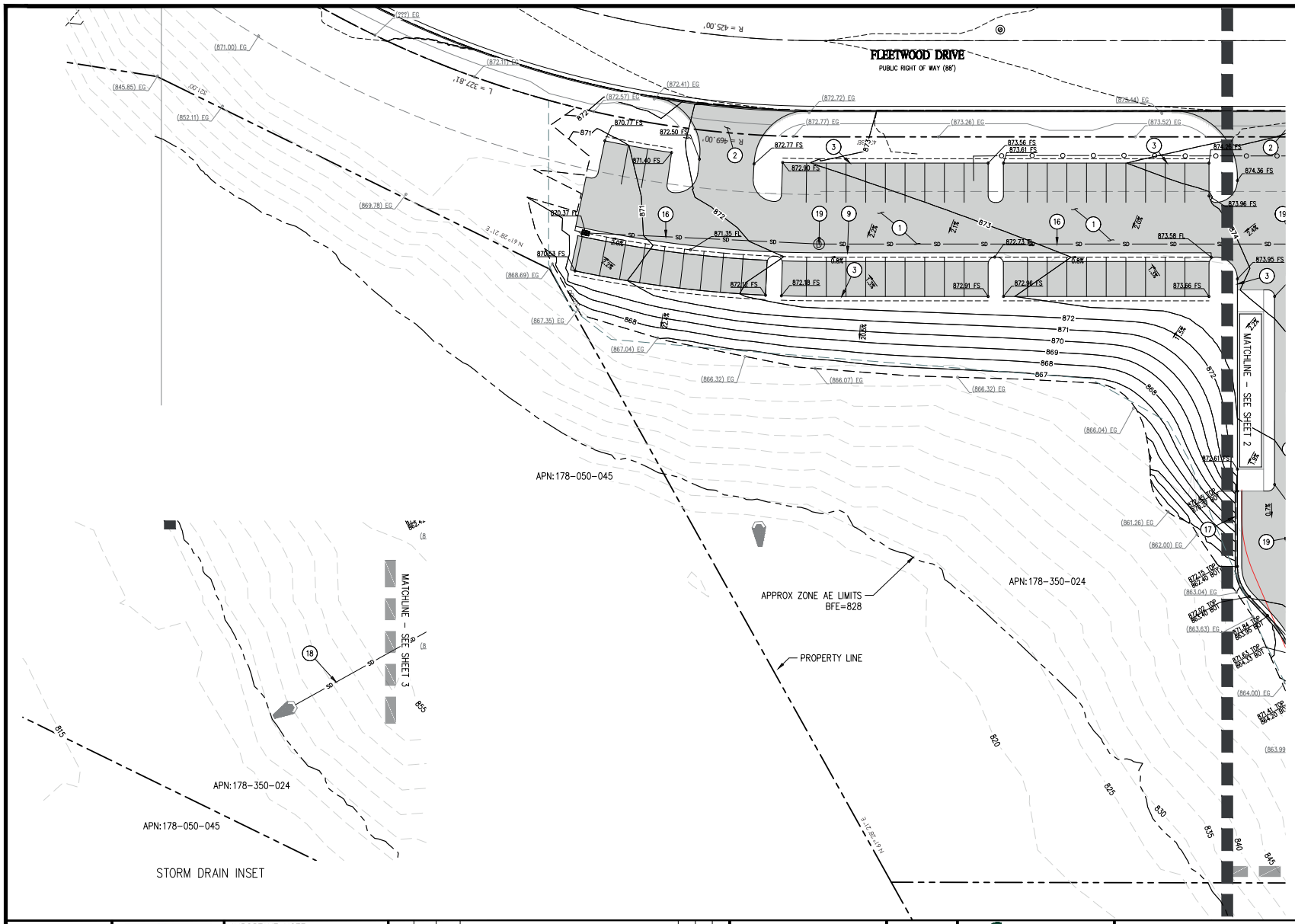
C74309
EXP.6/30/25
REGISTERED PROFESSIONAL ENGINEER
SAMUEL J. JACOBY
CIVIL
STATE OF CALIFORNIA

Cannon
19842 MacArthur Avenue, Suite 150
Irvine, CA 92606
P 949.753.8111 F 949.753.0775

PLANS PREPARED UNDER THE SUPERVISION OF:
SAMUEL JOHN JACOBY, P.E.
R.C.E. #C74309 (EXP: 6/30/23)
5/7/2025
DATE

CITY OF JURUPA VALLEY
PRELIMINARY GRADING PLANS
HYB, LLC, - FLEETWOOD INDUSTRIAL
2240 FLEETWOOD DR.
PRELIMINARY GRADING - NORTH

ACCT. NO.
SHEET 2 OF 7
FOR:
W.O
CITY I. D. NO.



CONSTRUCTION NOTES

1. CONSTRUCT ASPHALT CONCRETE (AC) PAVEMENT, 0.40' AC OVER 0.50' AGGREGATE BASE COURSE
2. CONSTRUCT DRIVEWAY
3. CONSTRUCT CURB
4. CONSTRUCT LONGITUDINAL GUTTER
5. TRUCK SCALE PER BUILDING PLAN
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19. STORM DRAIN MANHOLE
20. CONSTRUCT PORTLAND CEMENT CONCRETE PAVEMENT (PCC), 6" PCC OVER 6" AGGREGATE BASE COURSE

LEGEND

	EXISTING	PROPOSED
EXISTING CONTOURS		
PROPOSED CONTOURS		
WATER MAIN	X"W	X"W
SANITARY SEWER	X"S	X"S
STORM DRAIN	SD	SD
FENCE		
IRON FENCE		
AC PAVING		
CONCRETE WALKWAY		
STRUCTURAL LOADING DOCK CONCRETE		

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1-800
227-2600
TWO WORKING DAYS BEFORE YOU DIG

8930 LIMONITE AVE
JURUPA VALLEY, CA 92509
TEL: (951) 332-6464
EMAIL: ENGINEERING@JURUPAVALLEY.ORG

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REGISTERED PROFESSIONAL ENGINEER
SAMUEL J. JACOBY
C74309
EXP.6/30/25
CIVIL
STATE OF CALIFORNIA

Cannon
19842 MacArthur Avenue, Suite 150
Irvine, CA 92606
P 949.753.8111 F 949.753.0775

PLANS PREPARED UNDER THE SUPERVISION OF:
SAMUEL JOHN JACOBY, P.E.
R.C.E. #C74309 (EXP. 6/30/23)
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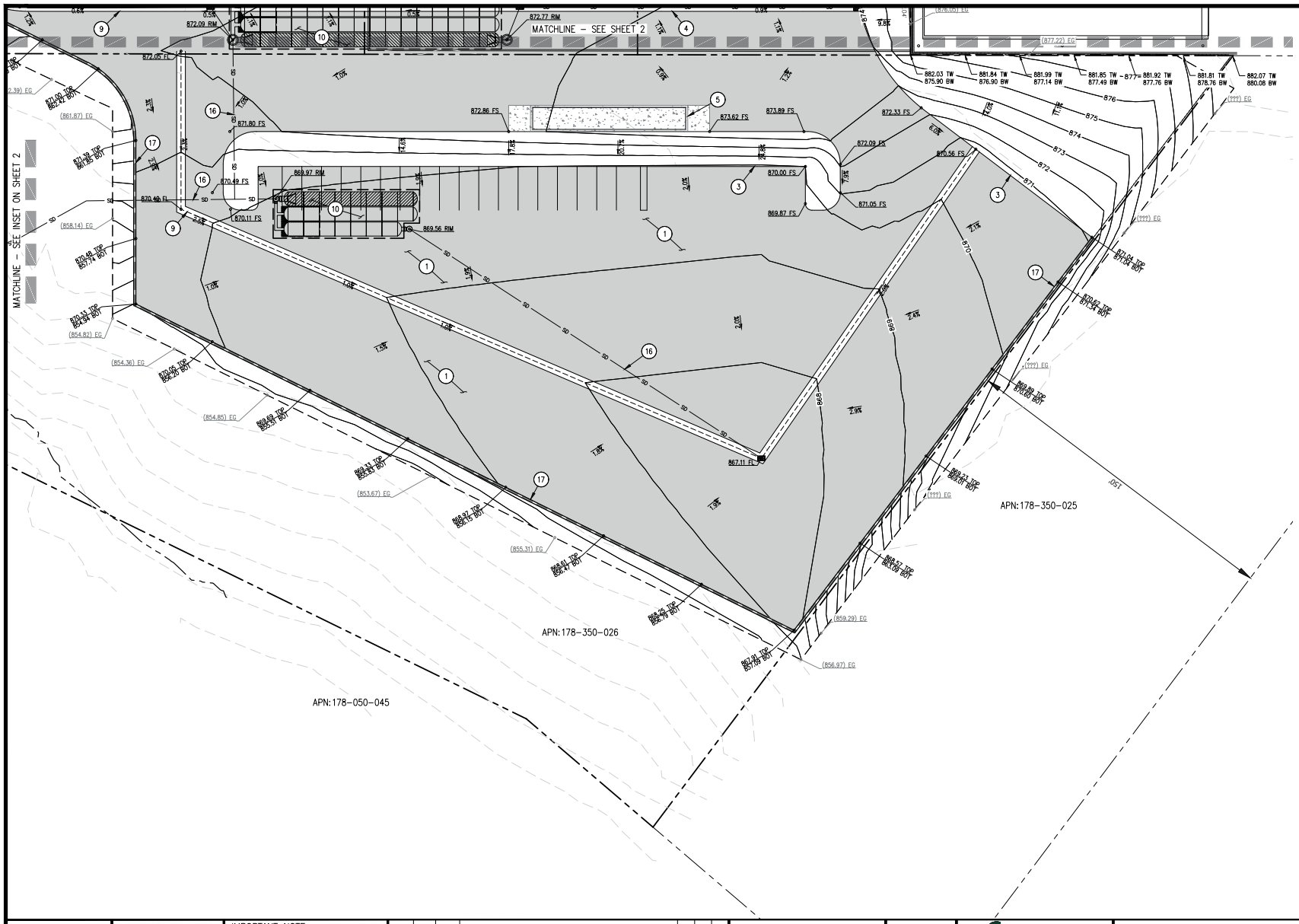
CITY OF JURUPA VALLEY

PRELIMINARY GRADING PLANS
HYB, LLC, – FLEETWOOD INDUSTRIAL
2240 FLEETWOOD DR.
PRELIMINARY GRADING – SOUTH

ACCT. NO.

SHEET 3 OF 7

FOR:
W.O
CITY I. D. NO.



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20. CONSTRUCT PORTLAND CEMENT CONCRETE PAVEMENT (PCC), 6" PCC OVER 6" AGGREGATE BASE COURSE

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	EXISTING	PROPOSED
EXISTING CONTOURS		
PROPOSED CONTOURS		
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SANITARY SEWER	X"S	X"S
STORM DRAIN	SD	SD
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REGISTERED PROFESSIONAL ENGINEER SAMUEL J. JACOBY C74309 EXP.6/30/25 CIVIL STATE OF CALIFORNIA

Cannon
19842 Von Karman Avenue, Suite 150
Irvine, CA 92606
P 949.753.8111 F 949.753.0775

PLANS PREPARED UNDER THE SUPERVISION OF:
SAMUEL JOHN JACOBY, P.E.
R.C.E. #C74309 (EXP. 6/30/25)
5/7/2025 DATE

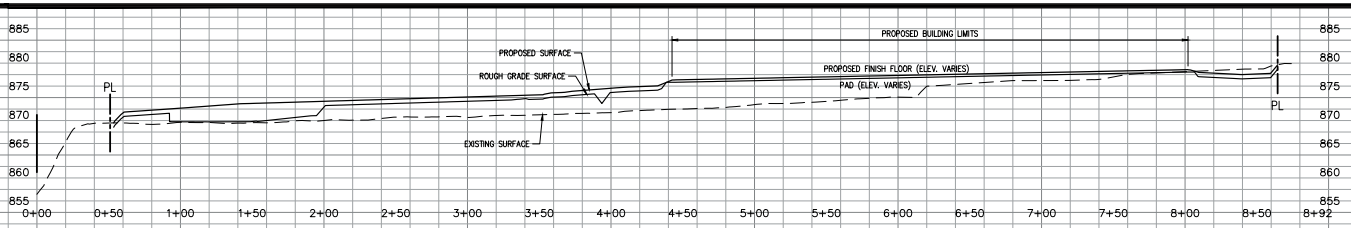
CITY OF JURUPA VALLEY

PRELIMINARY GRADING PLANS
HYB, LLC, – FLEETWOOD INDUSTRIAL
2240 FLEETWOOD DR.
PRELIMINARY GRADING – EAST

ACCT. NO.

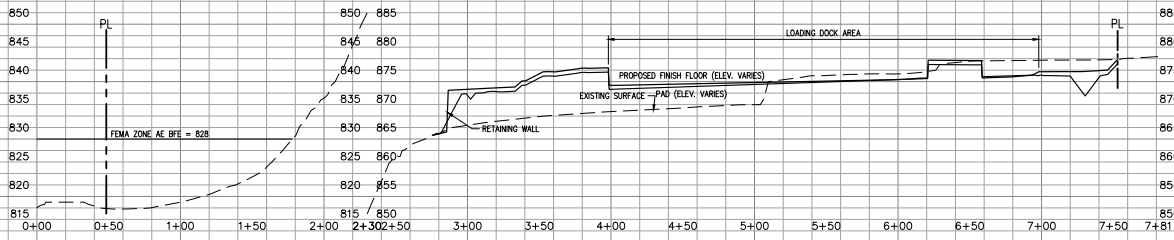
SHEET 4 OF 7

FOR: | W.O | CITY I. D. NO.



A – SECTION VIEW

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'

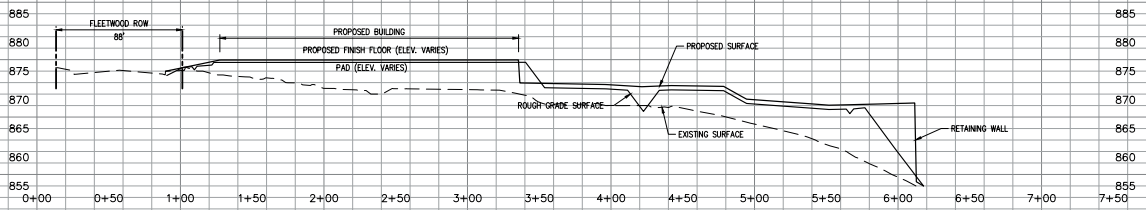


B – PROFILE VIEW

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'

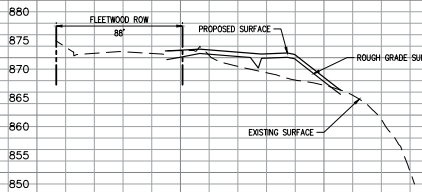
B – SECTION VIEWB – PROFILE VIEW

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'



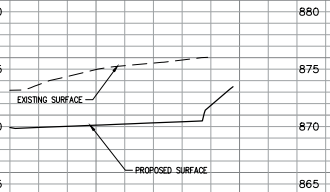
C – SECTION VIEW

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'



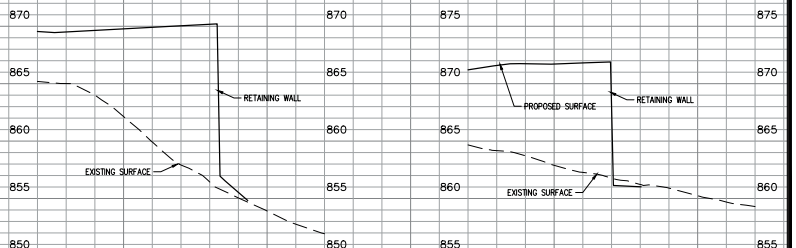
D – SECTION VIEW

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'



E – SECTION VIEW

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'

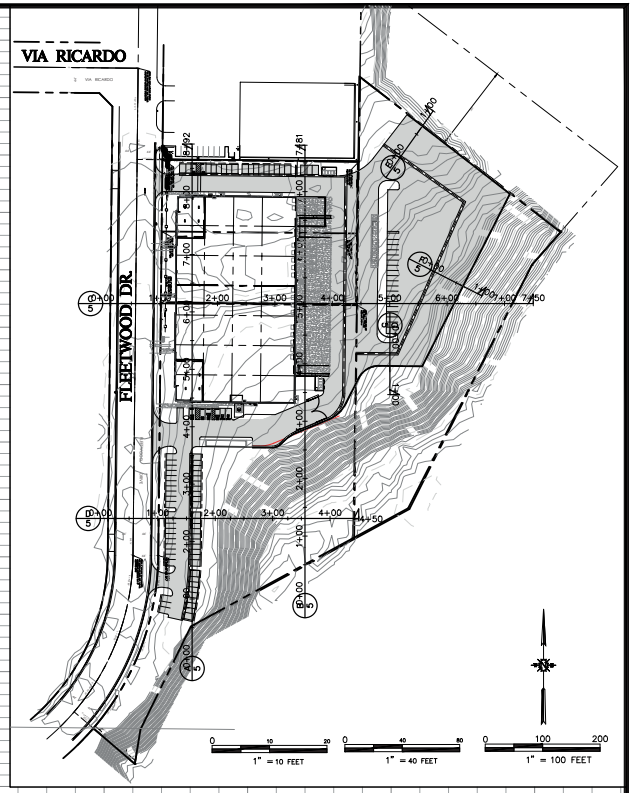


F – SECTION VIEW

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'

G – SECTION VIEW

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'



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Underground Service Alert
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1-800
227-2600
TWO WORKING DAYS BEFORE YOU DIG

8930 LIMONITE AVE
JURUPA VALLEY, CA 92509
TEL: (951) 332-6464
EMAIL: ENGINEERING@JURUPAVALLEY.ORG

IMPORTANT NOTE:
THE GRADING AND/OR IMPROVEMENT PLANS ARE APPROVED FOR A PERIOD OF TWO (2) YEARS FROM THE DATE SIGNED BY THE CITY ENGINEER. AFTER THE TWO (2) YEAR PERIOD HAS LAPSED, THE ENGINEER OF RECORD MAY BE REQUIRED TO SUBMIT AND PROCESS FOR CITY ENGINEER APPROVAL, UPDATED PLANS THAT COMPLY WITH THE MOST CURRENT CITY STANDARDS, PRACTICES, AND POLICIES.

MARK	DATE	INITIAL	DESCRIPTION	REC.	APPR	DATE
		E.O.R.	REVISION			

BENCHMARK:
B.M. NO. M.L.-4-64 NAVD 1988 COUNTY OF RIVERSIDE AT THE NE CORNER OF THE HALL AVE BRIDGE #56-415, OVER HWY #60, 246.0' SW OF 28TH AVE, 15.0' S. OF HALL AVE AT THE NE END OF THE RAIL ABUTMENT AND 2.0' HIGHER THAN THE SIDEWALK, A BRASS DISK SET IN THE TOP OF A 1.0' X 2.0' CONCRETE POST AND MARKED M.L.-4-64.
ELEVATION = 857.288 FEET

BASIS OF BEARING:
THE BEARING OF N 00°35'51" E ALONG THE CENTERLINE OF FLEETWOOD AVENUE PER PMB 247/69–71, CITY OF JURUPA VALLEY, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA.

REGISTERED PROFESSIONAL ENGINEER
SAMUEL J. JACOBY
C74309
EXP.6/30/25
CIVIL
STATE OF CALIFORNIA

Cannon
19842 Von Karman Avenue, Suite 150
Irvine, CA 92606
P 949.753.8111 F 949.753.0775

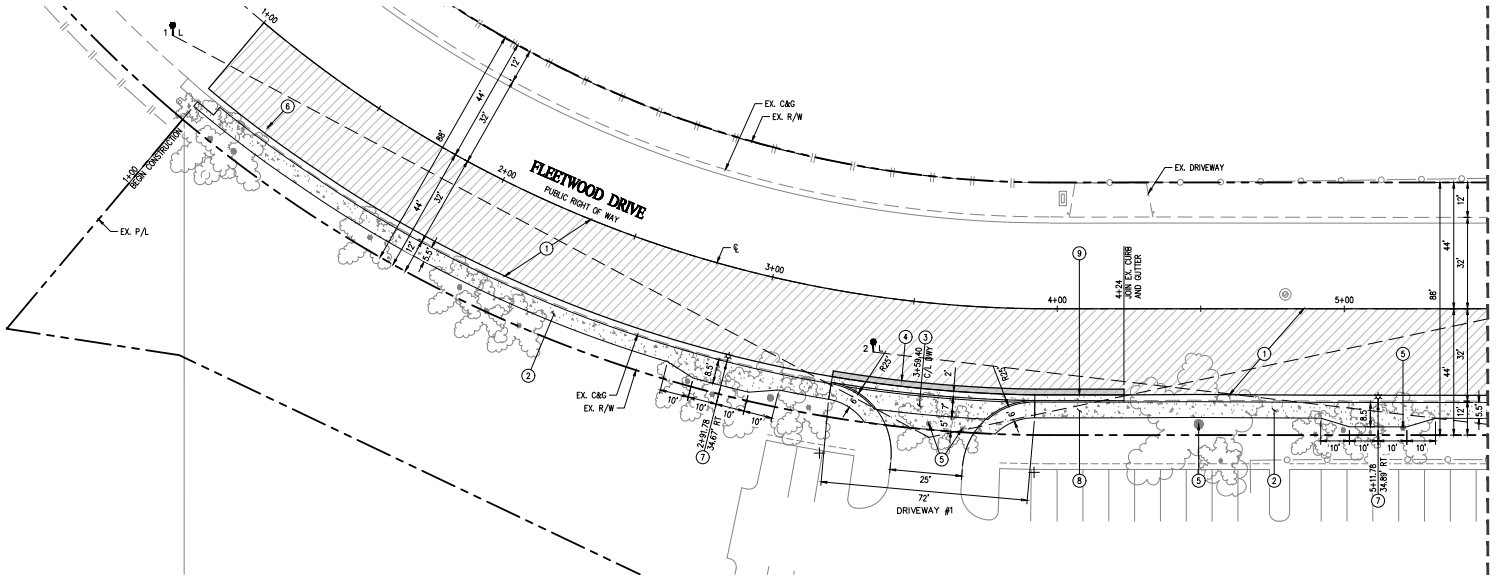
PLANS PREPARED UNDER THE SUPERVISION OF:
SAMUEL JOHN JACOBY, P.E.
R.C.E. #C74309 (EXP. 6/30/23)
5/7/2025
DATE

CITY OF JURUPA VALLEY
PRELIMINARY GRADING PLANS
HYB, LLC, – FLEETWOOD INDUSTRIAL
2240 FLEETWOOD DR.
PRELIMINARY CROSS SECTIONS

ACCT. NO.

SHEET 5 OF 7

FOR:
W.O
CITY I. D. NO.

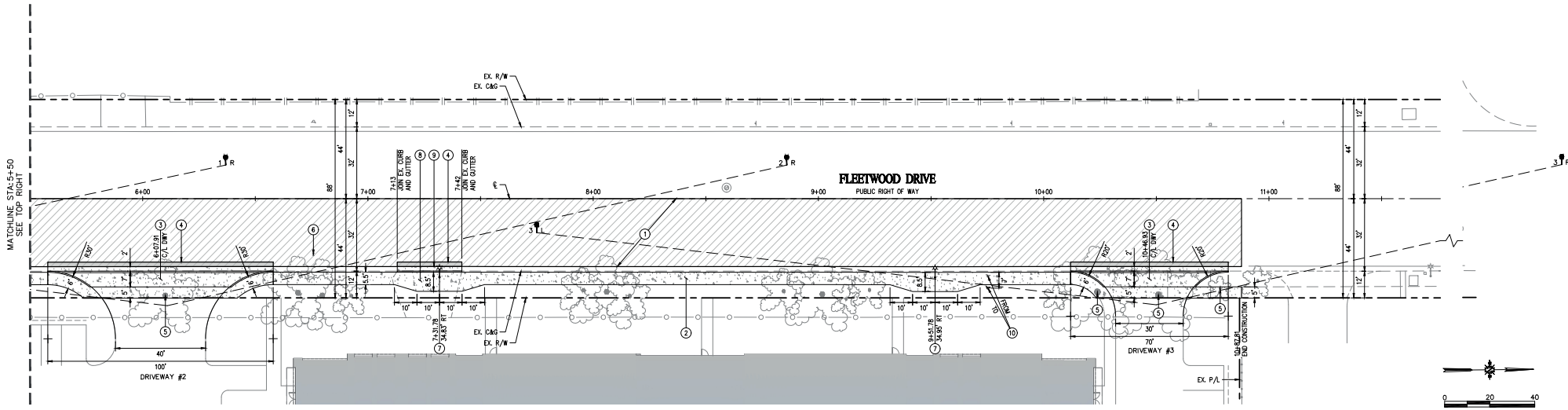


CONSTRUCTION NOTES

1. COLD MILL ASPHALT CONCRETE PAVEMENT TO DEPTH OF 2" AND INSTALL 2" ASPHALT CONCRETE PAVEMENT CLASS C2-PG-64-10.
2. CONSTRUCT 4" PCC SIDEWALK PER SPPWC STD. PLAN 112-2 AND 113-2.
3. CONSTRUCT 8" PCC COMMERCIAL DRIVEWAY PER COUNTY OF RIVERSIDE STD. NO. 207A, L AND R PER PLAN.
4. CONSTRUCT 2' WIDE FULL DEPTH ASPHALT CONCRETE PAVEMENT PER DETAIL 1 SHEET 7.
5. REMOVE EXISTING TREE.
6. ADJUST WATER VALVE TO GRADE.
7. INSTALL STREET LIGHT PER COUNTY OF RIVERSIDE STD. NO. 400 AND 1000.
8. REMOVE EXISTING DRIVEWAY.
9. CONSTRUCT 8" PCC CURB AND GUTTER PER COUNTY OF RIVERSIDE STD. NO. 201, TYPE A-8.
10. RELOCATE FIRE HYDRANT PER COUNTY OF RIVERSIDE STD. NO. 400 AND 701.

LEGEND

- COLD MILL AND OVERLAY PAVEMENT PER CN 1
- PCC PAVEMENT
- ASPHALT CONCRETE PAVEMENT
- SIGHT LINE
- #T L/R — DRIVEWAY # / LEFT SIGHT POINT OR RIGHT SIGHT POINT



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JURUPA VALLEY, CA 92509
TEL: (951) 332-6464
EMAIL: ENGINEERING@JURUPAVALLEY.ORG

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MARK	DATE	INITIAL	DESCRIPTION	REC.	APPR	DATE
		E.O.R.	REVISION			

BENCHMARK:
CITY OF RIVERSIDE BM ID GPS-51; ELEVATION = 816.084 FEET NAVD 88
DESCRIPTION: 2-1/2" BRASS DISK STAMPED "CITY OF RIVERSIDE GPS STATION 51 1991 CADMC" SET IN THE TOP OF A CATCH BASIN ALONG THE NORTHERLY CURB OF COLUMBIA AVENUE, 4 FEET EAST OF THE BCR OF THE NORTHEAST OF VAN STREET AT COLUMBIA AVENUE.
BASIS OF BEARING:
THE CENTERLINE OF FLEETWOOD DRIVE SHOWN AS NORTH 00°35'51" EAST PER PM NO. 36997 FILED IN BOOK 247, PAGES 89 THROUGH 91, INCLUSIVE, OF PARCEL MAPS IN THE OFFICE OF THE RIVERSIDE COUNTY RECORDER. ALL DISTANCES SHOWN ARE GROUND, UNLESS OTHERWISE NOTED. TO OBTAIN GRID DISTANCES DIVIDE BY A COMBINED SCALE FACTOR OF 1.00005180 DETERMINED LOCALLY AT "POINT 1"
"POINT 1"
N = 2315574.96, E = 6220241.76
ORTHOMETRIC ELEVATION 880.13 FEET

C74309
EXP.6/30/25
CIVIL

Cannon
16792 Von Karman Avenue, Suite 150
Irvine, CA 92606
P 949.753.8111 F 949.753.0775

PLANS PREPARED UNDER THE SUPERVISION OF:
SAMUEL JOHN JACOBY, P.E.
R.C.E. #C74309 (EXP. 6/30/25)
5/7/2025
DATE

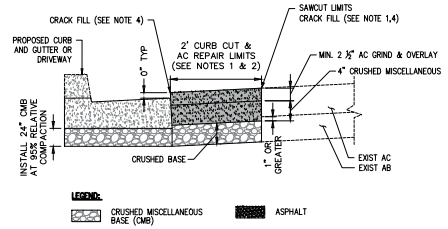
CITY OF JURUPA VALLEY

PRELIMINARY STREET IMPROVEMENT PLAN
HYB, LLC, – FLEETWOOD INDUSTRIAL
2240 FLEETWOOD DR.
FLEETWOOD DRIVE – STA 1+00 TO 10+87.81

ACCT. NO.

SHEET 6 OF 7

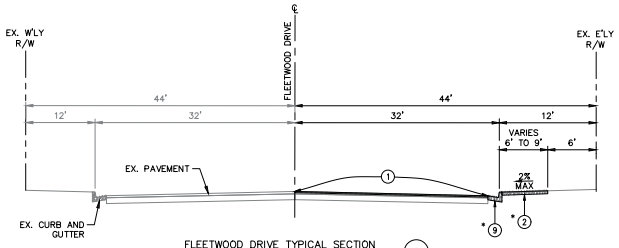
FOR:
W.O
CITY I. D. NO.



NOTES:

1. REMOVE EXISTING AC/AB 2 FOOT BEYOND THE LIP OF GUTTER TO DEPTH INDICATED HEREIN.
2. AC REPAIR LIMIT SHALL BE A MINIMUM OF 2 FEET BEYOND THE GUTTER, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
3. CONCRETE REMOVALS SHALL BE MADE TO THE NEAREST SCORE JOINT OR SAW CUT, IF SAID JOINT IS LESS THAN 4 FEET FROM WORK LIMITS.
4. ALL CRACKS SHALL BE COMPLETELY CLEANED PRIOR TO SLOT FILLING WITH ASPHALT

SLOT CUT DETAIL (1)
N.T.S.



FLEETWOOD DRIVE TYPICAL SECTION (2)
N.T.S.

* LOCATION PER PLAN

CONSTRUCTION NOTES

(1) COLD MILL ASPHALT CONCRETE PAVEMENT TO DEPTH OF 2" AND INSTALL 2" ASPHALT CONCRETE PAVEMENT CLASS C2-PG-64-10.

(2) CONSTRUCT 5' WIDE 4" PCC SIDEWALK PER SPPWC STD. PLAN 112-2 AND 113-2.

(9) CONSTRUCT 8" PCC CURB AND GUTTER PER COUNTY OF RIVERSIDE STD. NO. 201, TYPE A-8.

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"POINT 1"
N = 2315574.86, E = 6220241.76
ORTHOMETRIC ELEVATION 880.13 FEET

C74309
EXP.6/30/25
CIVIL

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PLANS PREPARED UNDER THE SUPERVISION OF:
SAMUEL JOHN JACOBY, P.E.
R.C.E. #74309 (EXP. 6/30/25)
5/7/2025
DATE

CITY OF JURUPA VALLEY

PRELIMINARY STREET IMPROVEMENT PLAN
HYB, LLC, – FLEETWOOD INDUSTRIAL
2240 FLEETWOOD DR.
DETAILS AND TYPICAL SECTION

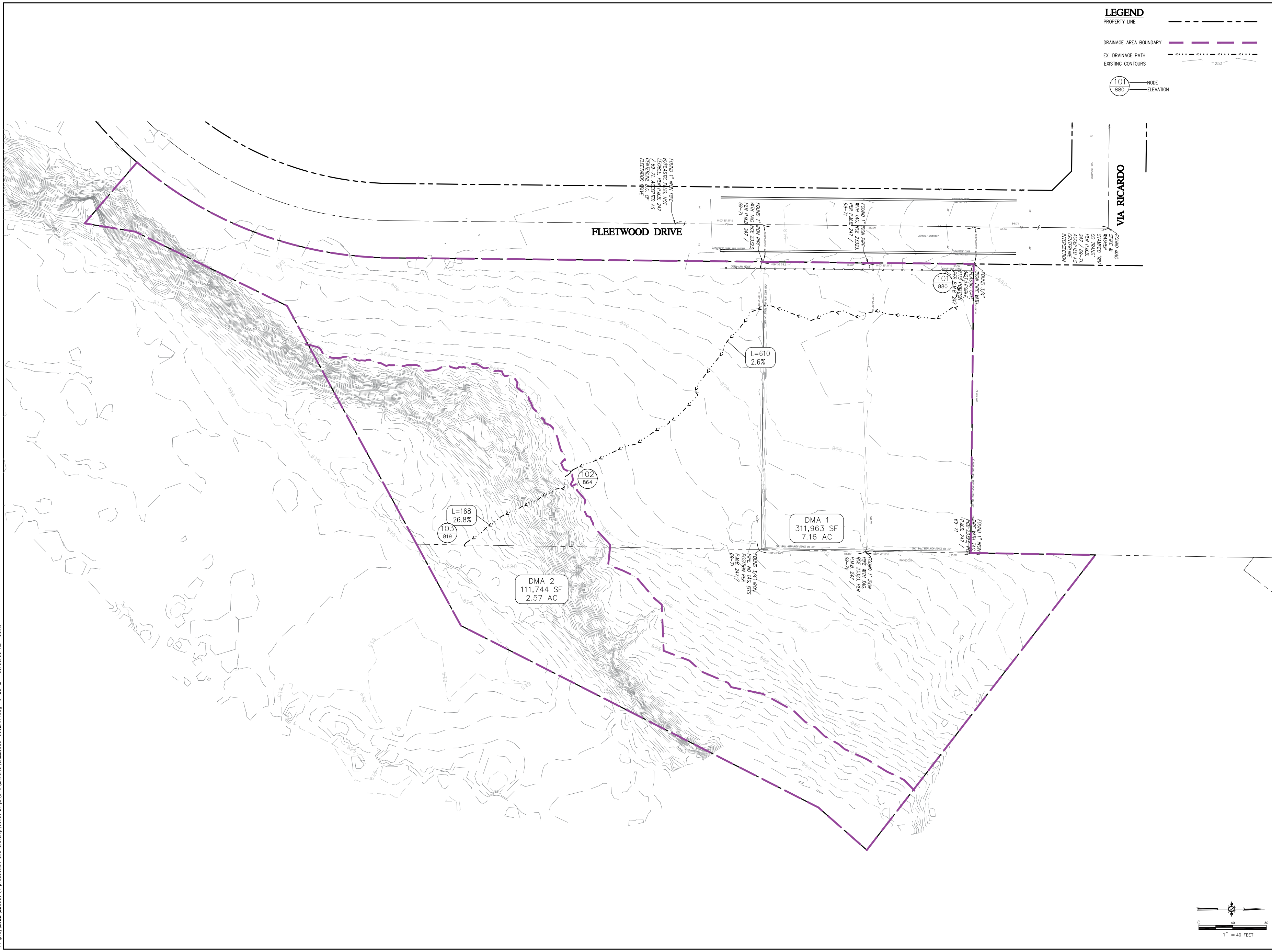
ACCT. NO.

SHEET 7 OF 7

FOR:

W.O

CITY I. D. NO.



REV. NO	DATE	REVISED	DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APRD. BY

Cannon
11900 Olympic Blvd, Suite 530
Los Angeles, CA 90064
P 310.664.1166 F 310.664.8877

DRAWN BY CP	DATE 3/7/2023
CHECKED BY SJ	SCALE AS SHOWN
	CA JOB NO. 220939

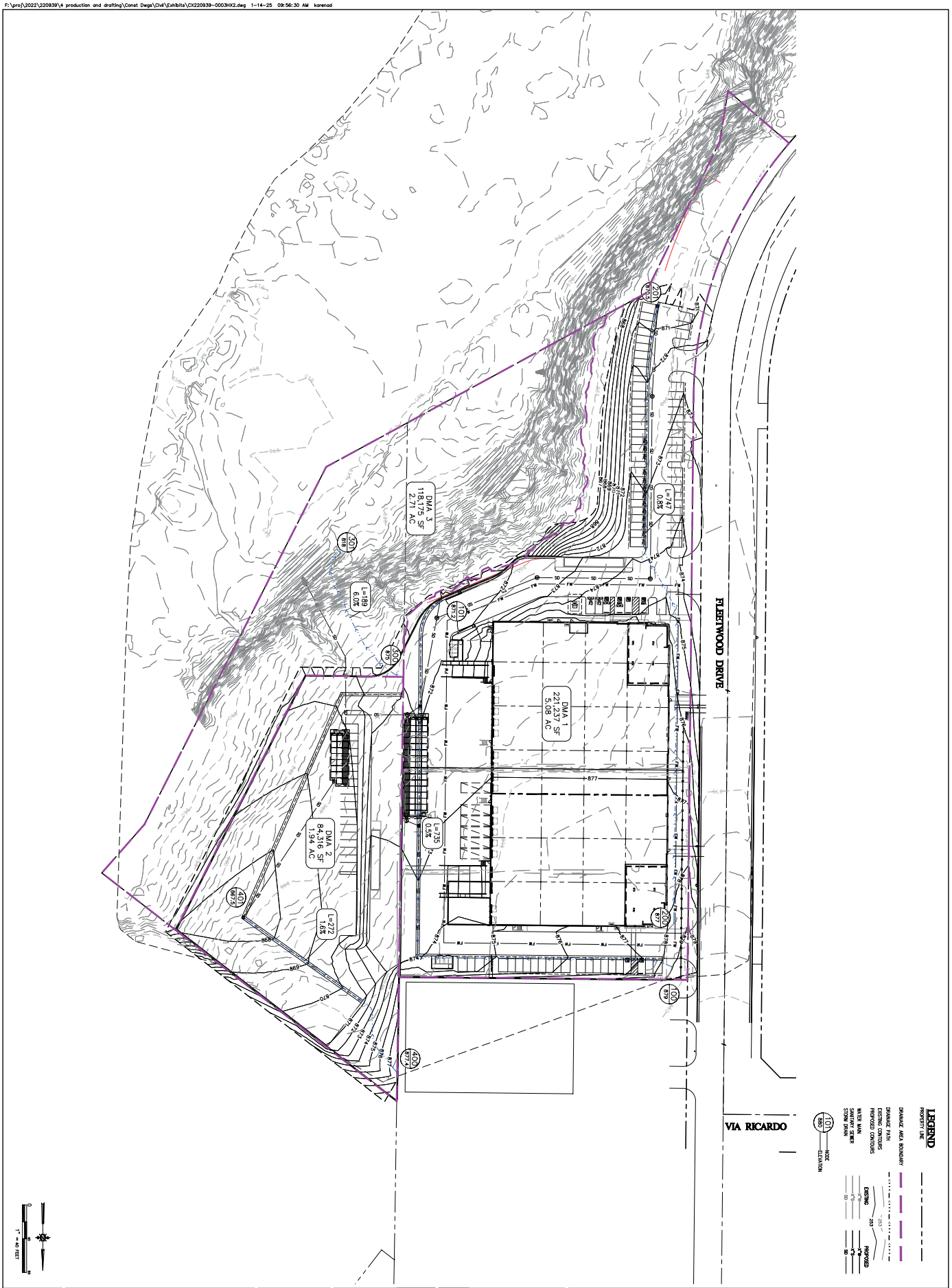
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HYB, LLC
FLEETWOOD INDUSTRIAL
EX. HYDROLOGY EXHIBIT
JURUPA VALLEY, CA

SHEET
HX1

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SHEET HX2

HYB, LLC
FLEETWOOD INDUSTRIAL
PR. HYDROLOGY EXHIBIT
JURUPA VALLEY, CA

DRAWN BY	DATE
CP	1/14/2025
CHECKED BY	SCALE
SJ	AS SHOWN
	CA JOB NO. 220939

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Cannon
11800 Olympic Blvd, Suite 530
Los Angeles, CA 90064
P 310.664.1165 F 310.664.8877

REV. NO	DATE	REVISED	DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD BY	APPD BY

Attachment 2. SOIL TYPE

Hydrologic Soil Group—Western Riverside Area, California
(fleetwood)



Map Scale: 1:2,330 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 30 60 120 180

Feet: 0 100 200 400 600

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 1:15,800.

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: Western Riverside Area, California
Survey Area Data: Version 15, Sep 6, 2022

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

Date(s) aerial images were photographed: Mar 17, 2022—Jun 12, 2022

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
DaD2	Delhi fine sand, 2 to 15 percent slopes, wind-eroded	A	5.7	21.6%
DmA	Dello loamy sand, poorly drained, 0 to 2 percent slopes	A/D	8.4	31.6%
RaB3	Ramona sandy loam, 0 to 5 percent slopes, severely eroded	C	9.7	36.7%
RaC2	Ramona sandy loam, 5 to 8 percent slopes, eroded	C	0.4	1.6%
TeG	Terrace escarpments		2.3	8.5%
Totals for Area of Interest			**26.5**	**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.

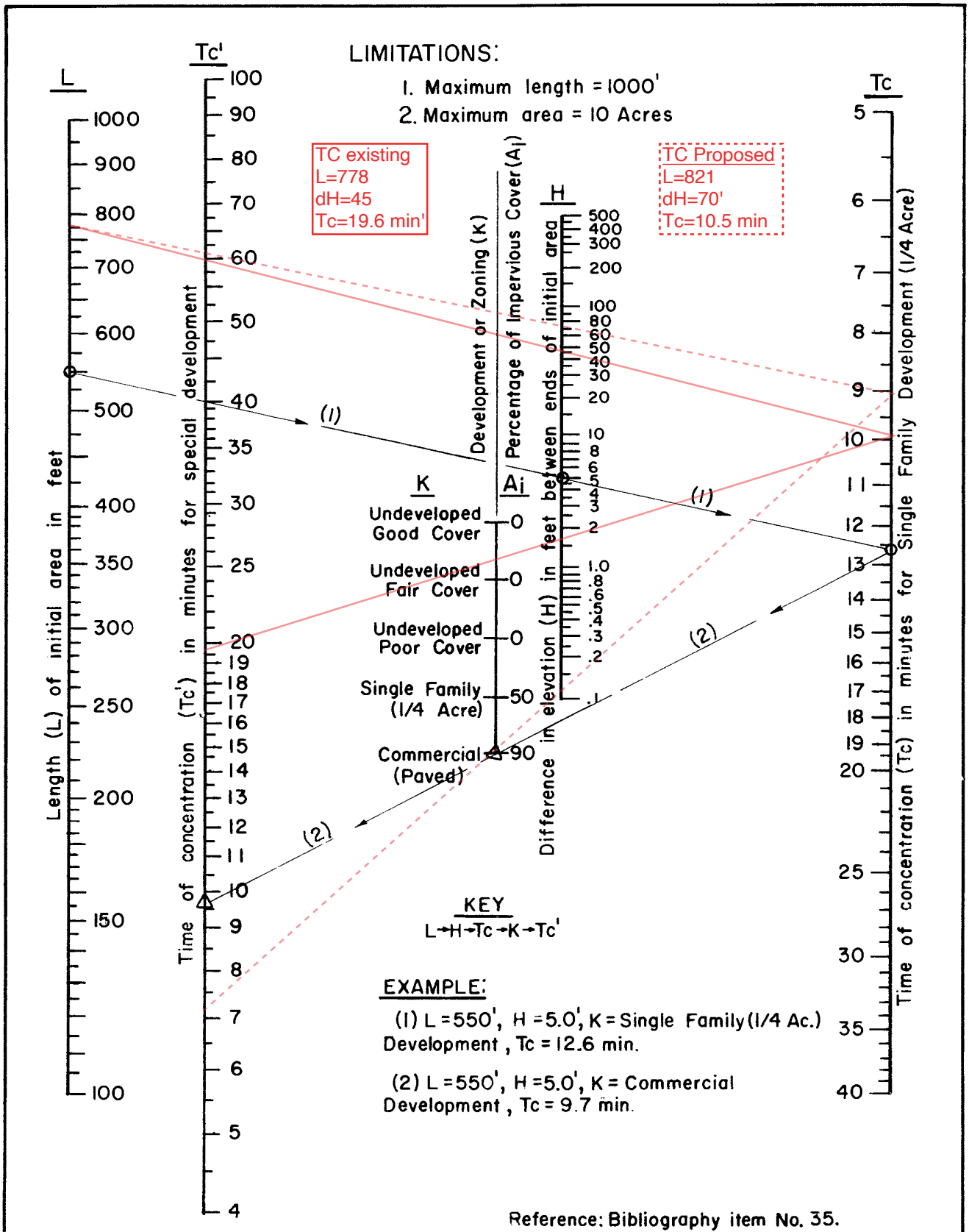
Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Attachment 3. RAINFALL DATA



Reference: Bibliography item No. 35.

RCFC & WCD

HYDROLOGY MANUAL

TIME OF CONCENTRATION FOR INITIAL SUBAREA

PLATE D-3

RAINFALL INTENSITY–INCHES PER HOUR

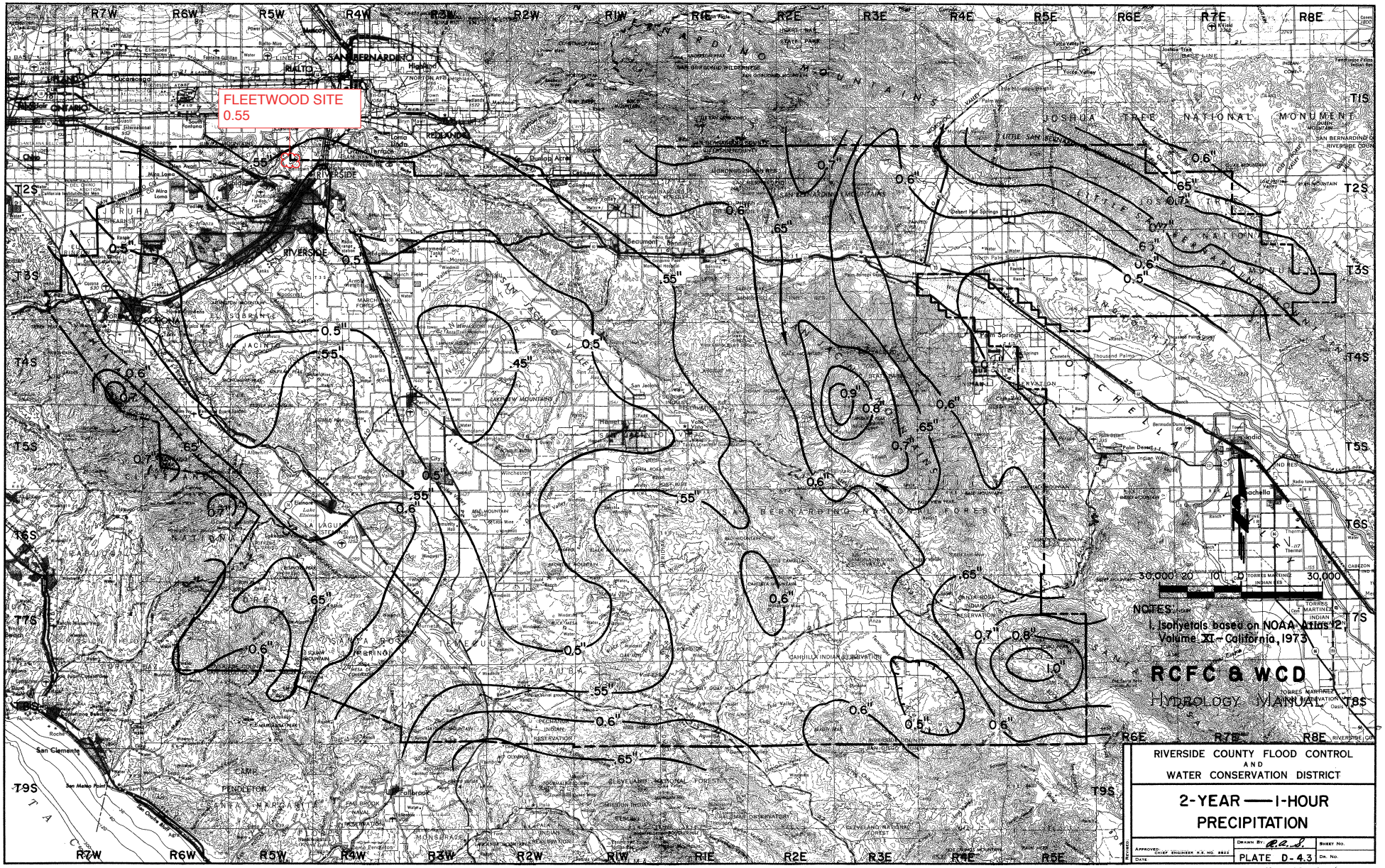
RIVERSIDE			RIVERSIDE (FOOTHILL AREAS)			RUBIDOUX			SAN JACINTO			SUN CITY		
DURATION MINUTES	FREQUENCY 10 YEAR	100 YEAR	DURATION MINUTES	FREQUENCY 10 YEAR	100 YEAR	DURATION MINUTES	FREQUENCY 10 YEAR	100 YEAR	DURATION MINUTES	FREQUENCY 10 YEAR	100 YEAR	DURATION MINUTES	FREQUENCY 10 YEAR	100 YEAR
5	2.75	3.92	5	3.14	4.71	5	3.18	4.71	5	2.81	4.16	5	3.25	4.85
6	2.48	3.55	6	2.84	4.26	6	2.87	4.26	6	2.56	3.79	6	2.95	4.40
7	2.28	3.26	7	2.61	3.91	7	2.64	3.91	7	2.37	3.51	7	2.72	4.06
8	2.12	3.03	8	2.42	3.63	8	2.45	3.63	8	2.22	3.29	8	2.53	3.78
9	1.99	2.84	9	2.27	3.41	9	2.30	3.41	9	2.09	3.10	9	2.38	3.55
10	1.88	2.68	10	2.14	3.21	10	2.17	3.21	10	1.98	2.94	10	2.25	3.36
11	1.78	2.54	11	2.03	3.05	11	2.06	3.05	11	1.89	2.80	11	2.14	3.19
12	1.70	2.42	12	1.94	2.91	12	1.96	2.91	12	1.81	2.68	12	2.04	3.05
13	1.62	2.32	13	1.86	2.78	13	1.88	2.78	13	1.74	2.58	13	1.96	2.92
14	1.56	2.23	14	1.78	2.67	14	1.80	2.67	14	1.68	2.48	14	1.88	2.81
15	1.50	2.14	15	1.71	2.57	15	1.74	2.57	15	1.62	2.40	15	1.81	2.71
16	1.45	2.07	16	1.66	2.48	16	1.68	2.48	16	1.57	2.32	16	1.75	2.62
17	1.40	2.00	17	1.60	2.40	17	1.62	2.40	17	1.52	2.25	17	1.70	2.54
18	1.36	1.94	18	1.55	2.33	18	1.57	2.33	18	1.48	2.19	18	1.65	2.46
19	1.32	1.88	19	1.51	2.26	19	1.52	2.26	19	1.44	2.13	19	1.60	2.39
20	1.28	1.83	20	1.46	2.20	20	1.48	2.20	20	1.40	2.08	20	1.56	2.33
22	1.22	1.74	22	1.39	2.08	22	1.41	2.08	22	1.34	1.98	22	1.48	2.21
24	1.16	1.66	24	1.32	1.99	24	1.34	1.99	24	1.28	1.90	24	1.41	2.11
26	1.11	1.58	26	1.27	1.90	26	1.28	1.90	26	1.23	1.82	26	1.36	2.03
28	1.06	1.52	28	1.22	1.82	28	1.23	1.82	28	1.19	1.76	28	1.30	1.95
30	1.02	1.46	30	1.17	1.76	30	1.19	1.76	30	1.15	1.70	30	1.26	1.88
32	.99	1.41	32	1.13	1.70	32	1.14	1.70	32	1.11	1.64	32	1.21	1.81
34	.96	1.37	34	1.09	1.64	34	1.11	1.64	34	1.08	1.59	34	1.18	1.76
36	.93	1.32	36	1.06	1.59	36	1.07	1.59	36	1.05	1.55	36	1.14	1.70
38	.90	1.29	38	1.03	1.54	38	1.04	1.54	38	1.02	1.51	38	1.11	1.66
40	.87	1.25	40	1.00	1.50	40	1.01	1.50	40	.99	1.47	40	1.08	1.61
45	.82	1.17	45	.94	1.41	45	.95	1.41	45	.94	1.39	45	1.01	1.51
50	.77	1.11	50	.88	1.33	50	.90	1.33	50	.89	1.31	50	.96	1.43
55	.73	1.05	55	.84	1.26	55	.85	1.26	55	.85	1.25	55	.91	1.36
60	.70	1.00	60	.80	1.20	60	.81	1.20	60	.81	1.20	60	.87	1.30
65	.67	.96	65	.77	1.15	65	.78	1.15	65	.78	1.15	65	.83	1.25
70	.64	.92	70	.73	1.10	70	.74	1.10	70	.75	1.11	70	.80	1.20
75	.62	.88	75	.71	1.06	75	.72	1.06	75	.72	1.07	75	.77	1.15
80	.60	.85	80	.68	1.02	80	.69	1.02	80	.70	1.04	80	.75	1.12
85	.58	.83	85	.66	.99	85	.67	.99	85	.68	1.01	85	.72	1.08
SLOPE = .550			SLOPE = .550			SLOPE = .550			SLOPE = .500			SLOPE = .530		

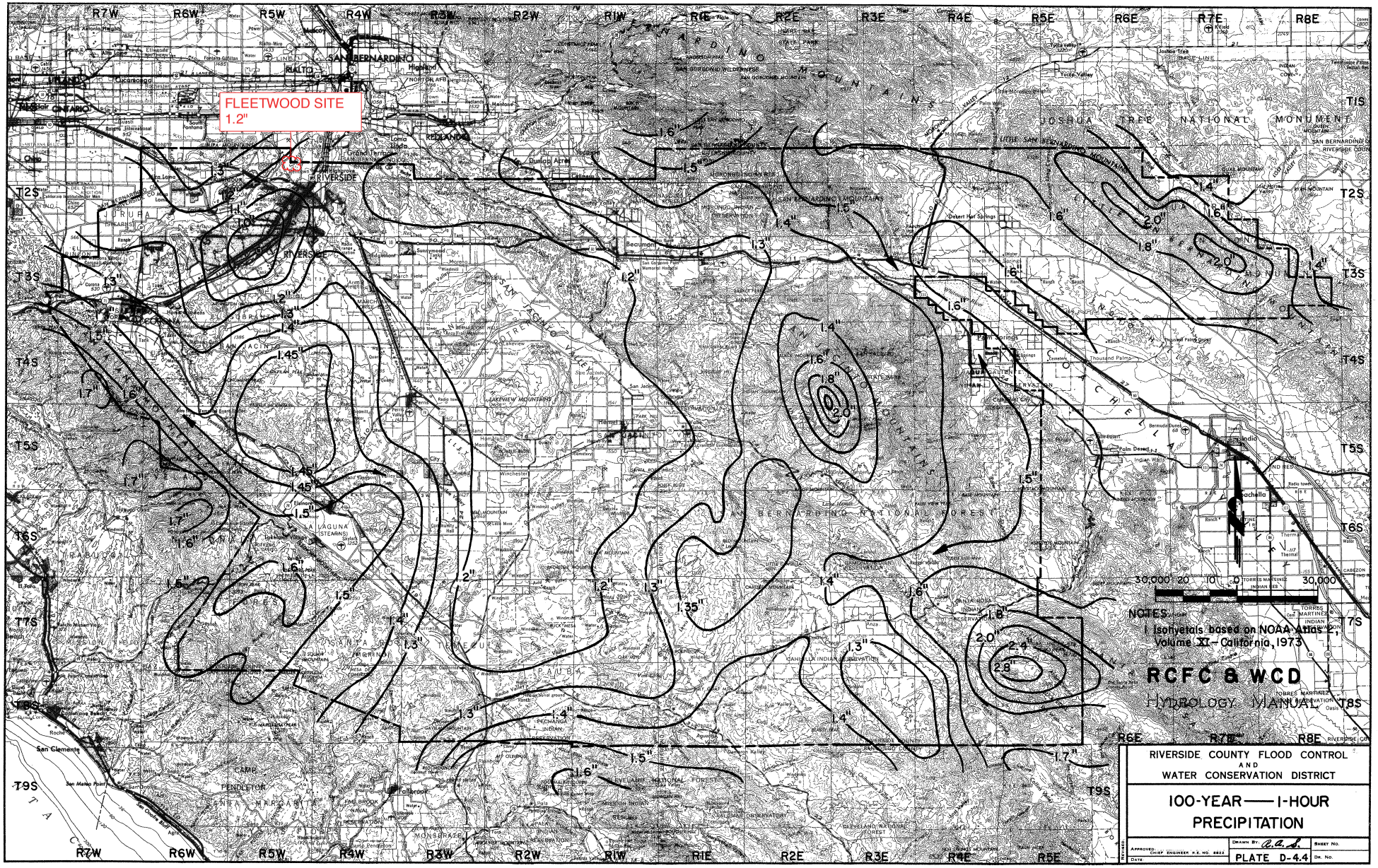
RCFC & WCD

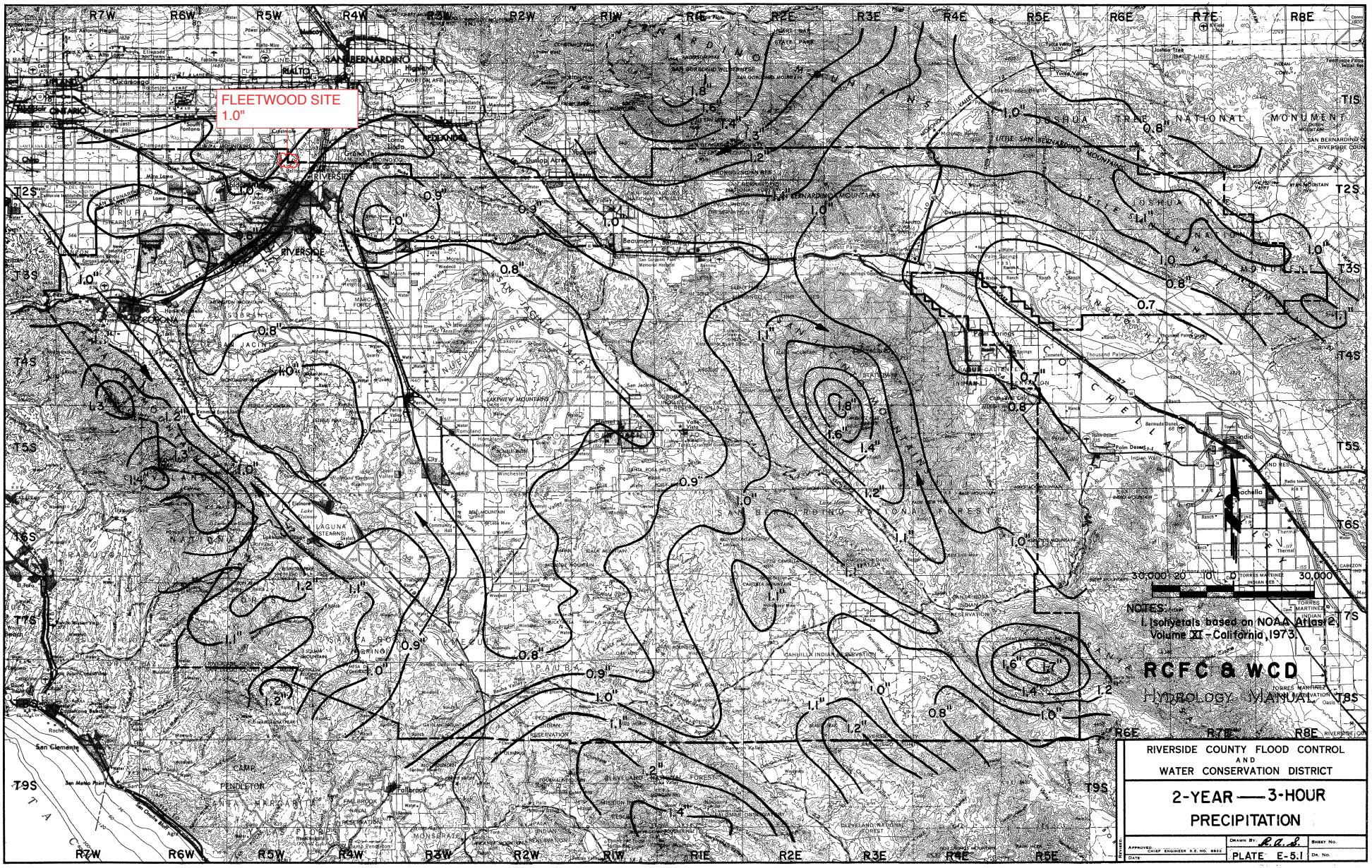
HYDROLOGY MANUAL

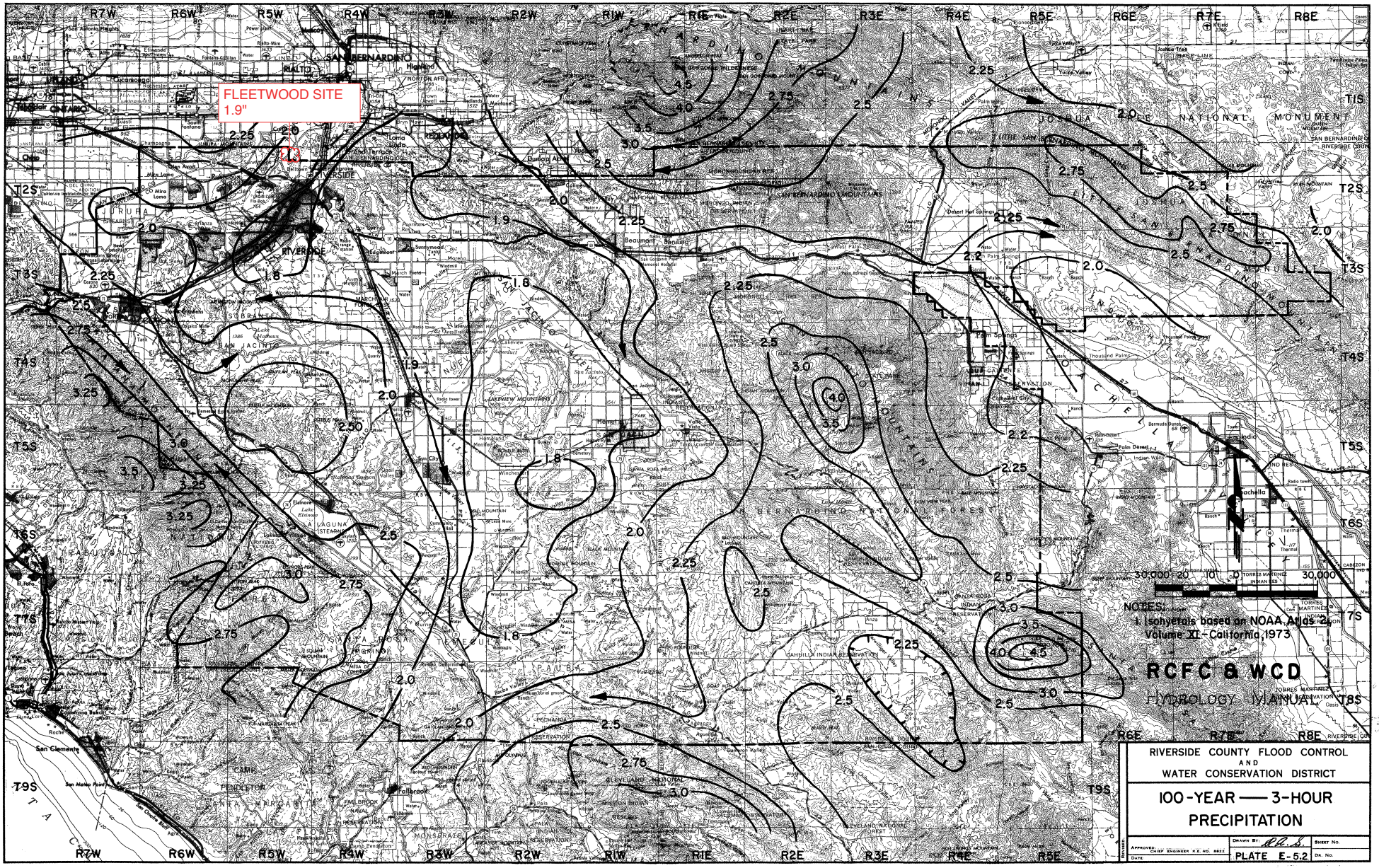
STANDARD INTENSITY–DURATION CURVES DATA

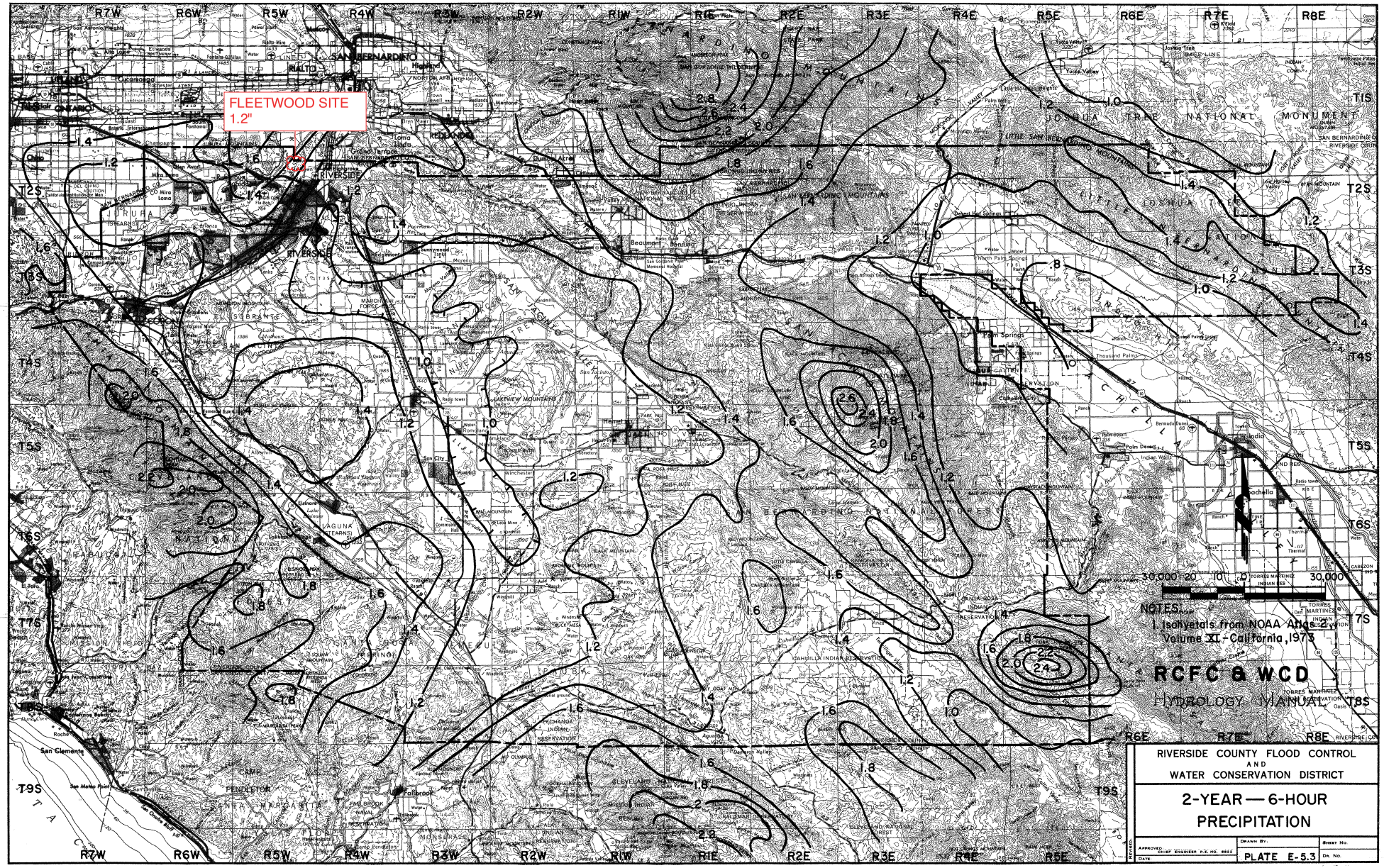
PLATE D-4.1(5 of 6)

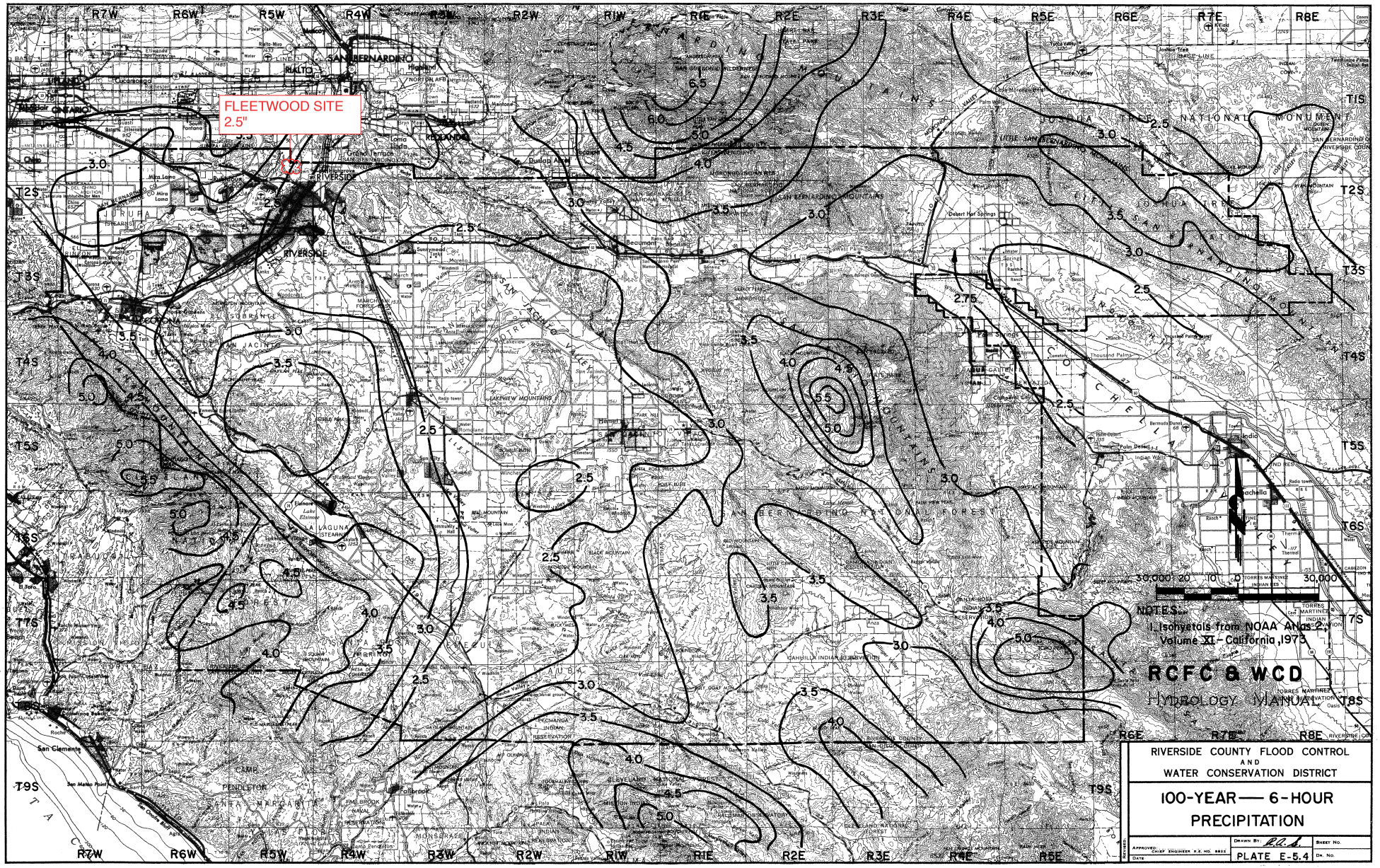

FLEETWOOD SITE
0.55
NOTES:
1. Isohyetals based on NOAA Atlas 2, Volume XI - California, 1973
RCFC & WCD
HYDROLOGY MANUAL
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
2-YEAR — 1-HOUR PRECIPITATION
PLATE D-4.3

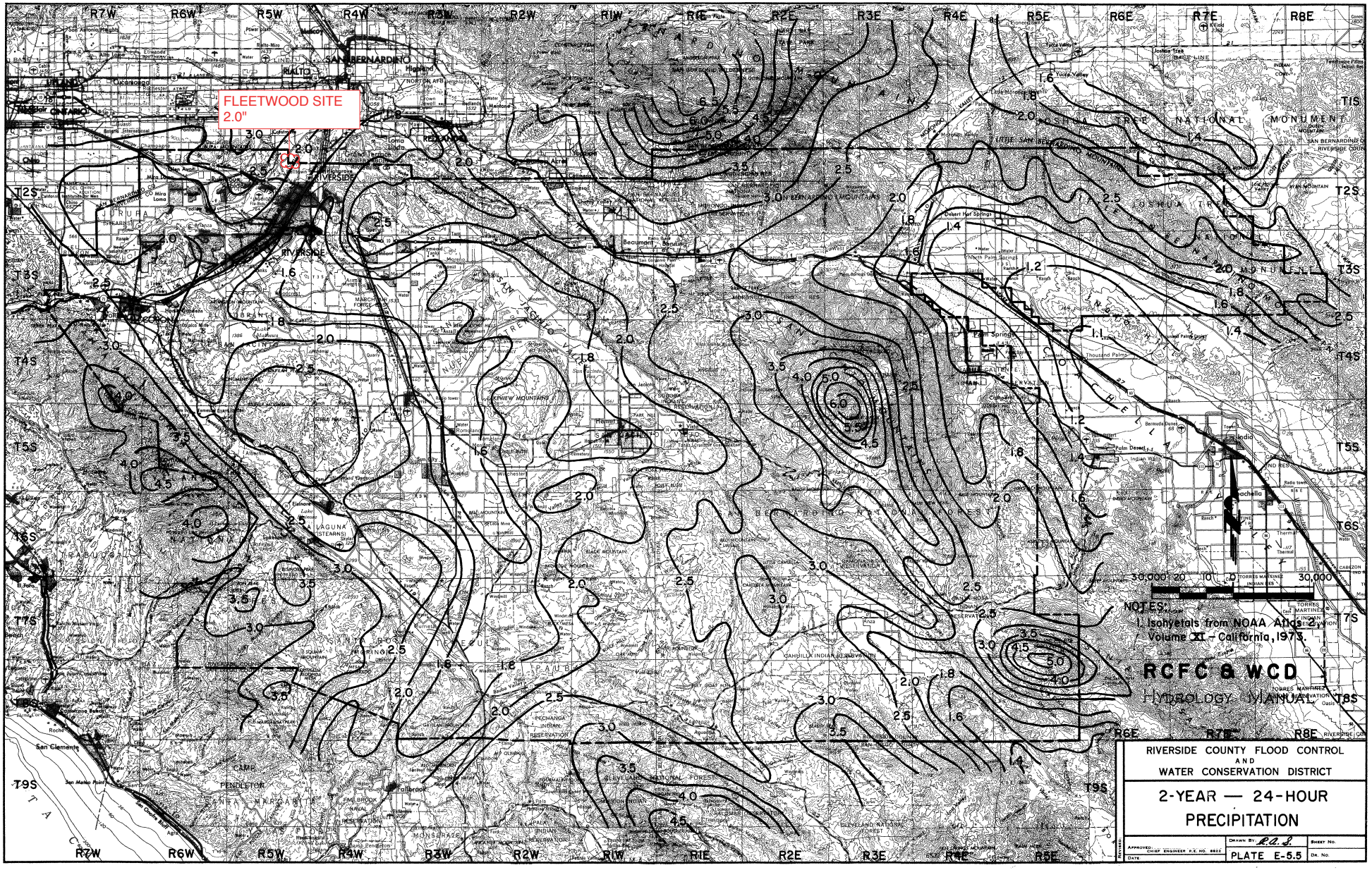

FLEETWOOD SITE
1.2"
NOTES:
1. Isohyetals based on NOAA Atlas 2, Volume XI - California, 1973
RCFC & WCD
HYDROLOGY MANUAL
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
100-YEAR — 1-HOUR PRECIPITATION
PLATE D-4.4

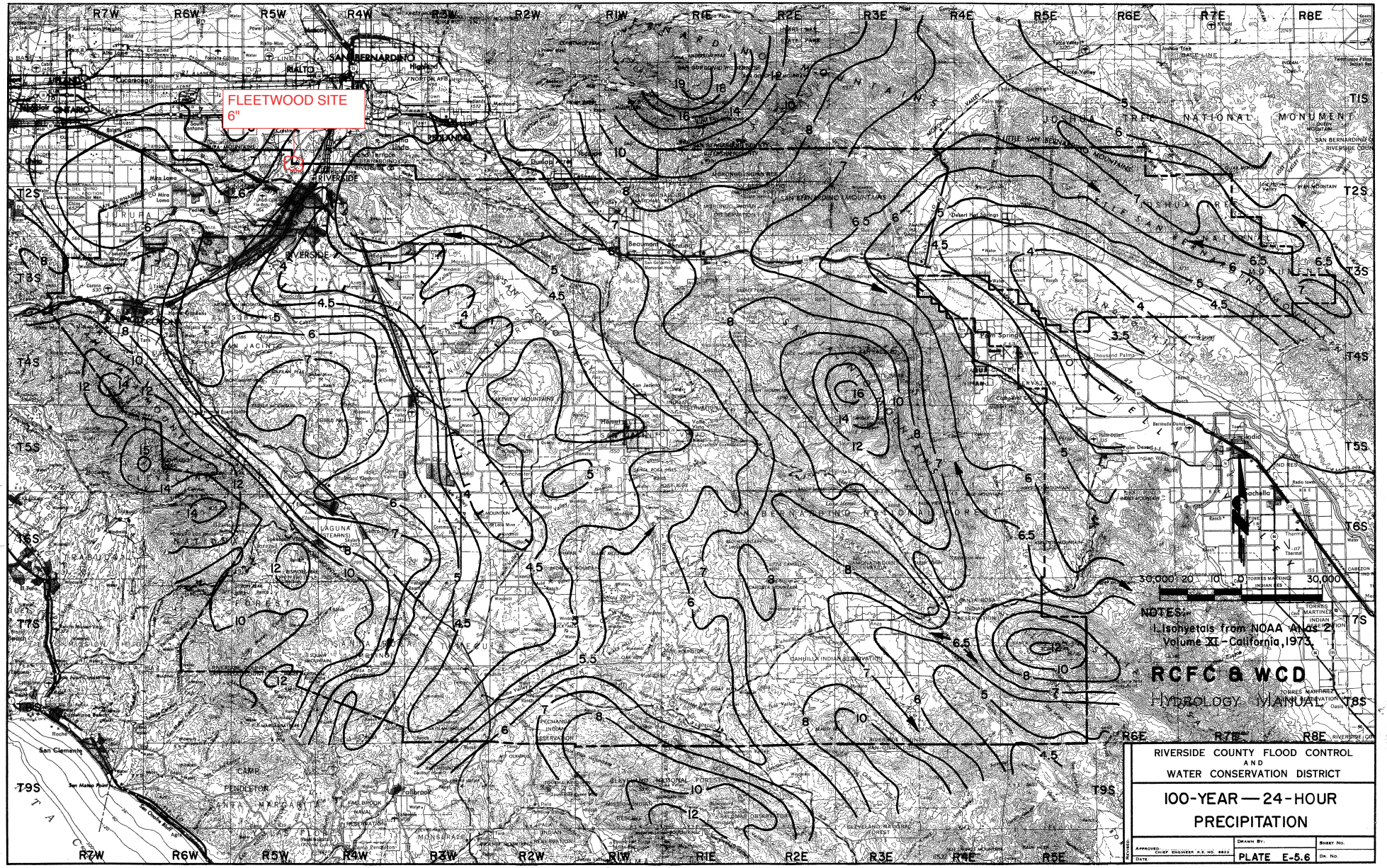

FLEETWOOD SITE
1.0"
NOTES:
1. Isohyetals based on NOAA Atlas 2, Volume XI - California, 1973.
RCFC & WCD
HYDROLOGY MANUAL
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
2-YEAR — 3-HOUR PRECIPITATION
PLATE E-5.1

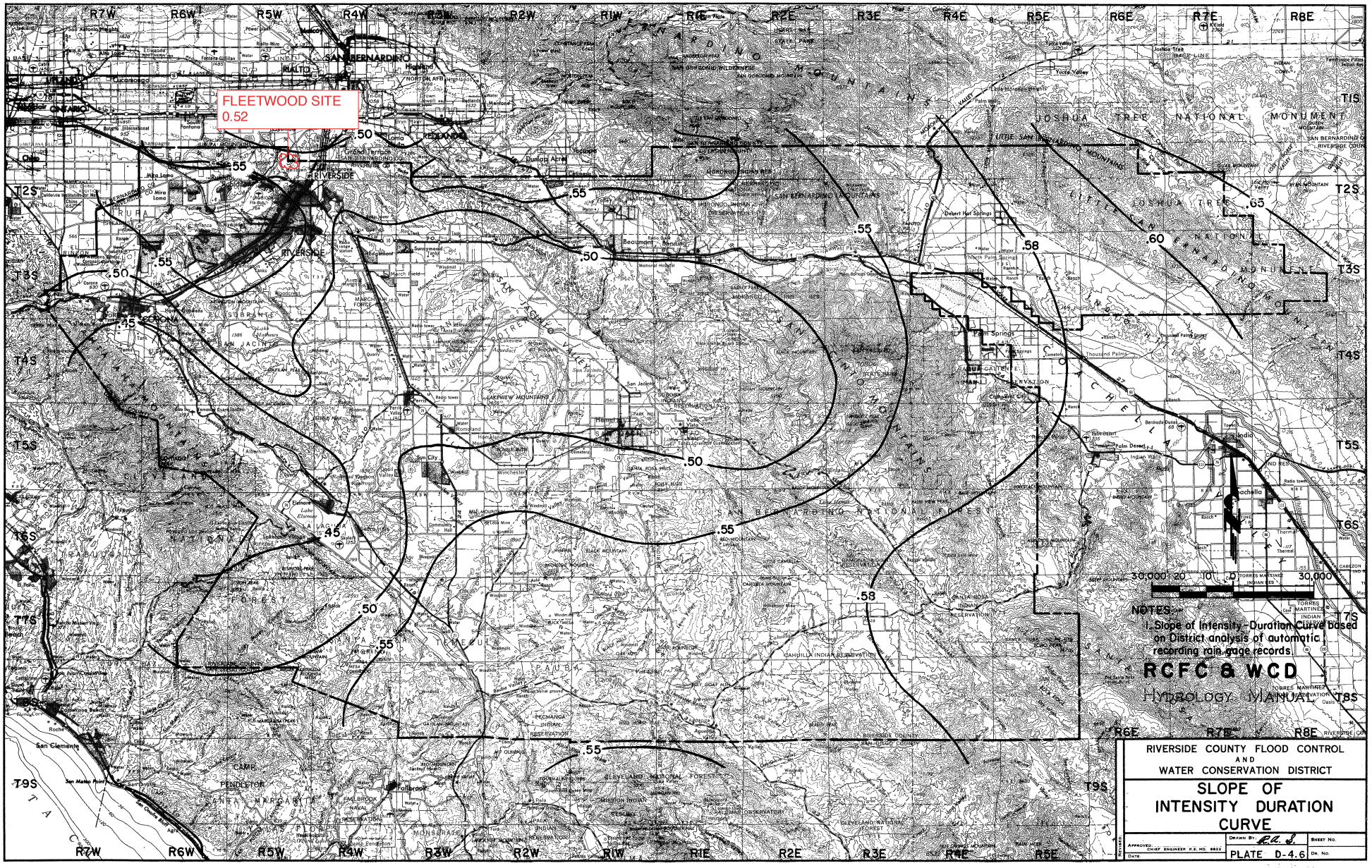

FLEETWOOD SITE
1.9"
NOTES:
1. Isohyetals based on NOAA Atlas 2, Volume XI - California, 1973
RCFC & WCD
HYDROLOGY MANUAL
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
100-YEAR — 3-HOUR PRECIPITATION
PLATE E-5.2


FLEETWOOD SITE
1.2"
NOTES
1. Isohyetals from NOAA Atlas 2, Volume XI - California, 1973
RCFC & WCD
HYDROLOGY MANUAL
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
2-YEAR — 6-HOUR PRECIPITATION
PLATE E-5.3


FLEETWOOD SITE
2.5"
NOTES:
1. Isohyetals from NOAA Atlas 2,
Volume XI - California, 1973
RCFC & WCD
HYDROLOGY MANUAL
RIVERSIDE COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT
100-YEAR — 6-HOUR
PRECIPITATION
PLATE E-5.4


FLEETWOOD SITE
2.0"
NOTES:
1. Isohyetals from NOAA Atlas 2, Volume XI - California, 1973.
RCFC & WCD
HYDROLOGY MANUAL
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
2-YEAR — 24-HOUR PRECIPITATION
PLATE E-5.5


FLEETWOOD SITE
6"
NOTES:
1. Isohyetals from NOAA Atlas 2,
Volume XI - California, 1973.
RCFC & WCD
HYDROLOGY MANUAL
RIVERSIDE COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT
100-YEAR — 24-HOUR
PRECIPITATION
PLATE E-5.6


FLEETWOOD SITE
0.52
.50
.55
.45
.58
.60
.65
SAN BERNARDINO
RIVERSIDE
RIALTO
Palm Springs
Beaumont
Banning
Hemet
San Jacinto
Indio
Coachella
JOSHUA TREE NATIONAL MONUMENT
SAN BERNARDINO MOUNTAINS
SAN JACINTO MOUNTAINS
SAN BERNARDINO NATIONAL FOREST
CLEVELAND NATIONAL FOREST
CAHUILLA INDIAN RESERVATION
AGUA CALIENTE INDIAN RESERVATION
SAN MANUEL INDIAN RESERVATION
SOBOBA INDIAN RESERVATION
PECHANGA INDIAN RESERVATION
SANTA ANA RIVER
SAN JACINTO RIVER
SANTA MARGARITA RIVER
SAN DIEGUITO RIVER
SAN JUAN CREEK
SAN MATEO CREEK
SAN MATEO POINT
San Clemente
Fallbrook
Temecula
Murrieta
Lake Elsinore
Corona
Norco
Perris
Moreno Valley
Riverside
Redlands
Yucaipa
Calimesa
Banning
Beaumont
Cabazon
Desert Hot Springs
Cathedral City
Rancho Mirage
Palm Desert
Indian Wells
La Quinta
Bermuda Dunes
Thousand Palms
Mecca
Thermal
Oasis
Valerie
Romoland
Homeland
Winchester
Sun City
Menifee
Wildomar
Lake Mathews
Woodcrest
Mira Loma
Jurupa Mountains
Box Spring Mountains
Lakeview Mountains
Santa Rosa Plateau
Agua Tibia Mountains
Pechanga
Rincon
Aguanga
Anza
Idyllwild
Mountain Center
Warner Springs
Julian
Santa Ysabel
Ramona
Lake Henshaw
Vista
Escondido
Valley Center
Pauma Valley
Pala
Rainbow
Fallbrook
Bonsall
Oceanside
Camp Pendleton
Camp Joseph H. Pendleton
Twentynine Palms
Yucca Valley
Joshua Tree
Morongo Valley
Whitewater
Desert Center
Chiriaco Summit
Eagle Mountain
Iron Mountain
Little San Bernardino Mountains
Orocopia Mountains
Chocolate Mountains
Salton Sea
Torres Martinez Indian Reservation
30,000 20 10 0 30,000
NOTES:
1. Slope of Intensity-Duration Curve based on District analysis of automatic recording rain gage records.
RCFC & WCD
HYDROLOGY MANUAL
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
SLOPE OF INTENSITY DURATION CURVE
PLATE D-4.6

Attachment 4. EXISTING AND PROPOSED RATIONAL AES ANALYSIS

FLOOD HYDROGRAPH ROUTING PROGRAM
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014
Study date: 05/07/25

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fleetwood dma1 routing 100-24

Program License Serial Number 6414

********** HYDROGRAPH INFORMATION **********

From study/file name: 939pr10024100.rte
**********HYDROGRAPH DATA**********
Number of intervals = 290
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 4.158 (CFS)
Total volume = 2.490 (Ac.Ft)
Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

****

++
Process from Point/Station 1.000 to Point/Station 1.010
**** RETARDING BASIN ROUTING ****

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 290
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 0.00(Ft.)

Initial basin depth = 0.00 (Ft.)
Initial basin storage = 0.00 (Ac.Ft)
Initial basin outflow = 0.00 (CFS)

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
1.000	0.042	0.350	0.041	0.043
2.000	0.110	0.350	0.109	0.111
3.000	0.173	0.350	0.172	0.174

4.000	0.226	0.350	0.225	0.227
5.000	0.262	3.450	0.250	0.274
5.500	0.278	3.450	0.266	0.290
6.000	0.300	3.450	0.288	0.312

Hydrograph Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 1.0 2.08 3.12 4.16	Depth (Ft.)
0.083	0.13	0.00	0.000	O | | | |	0.01
0.167	0.19	0.01	0.001	OI | | | |	0.03
0.250	0.20	0.02	0.003	OI | | | |	0.06
0.333	0.28	0.03	0.004	O I | | | |	0.10
0.417	0.32	0.05	0.006	O I | | | |	0.14
0.500	0.32	0.06	0.008	O I | | | |	0.18
0.583	0.32	0.08	0.010	O I | | | |	0.23
0.667	0.33	0.09	0.011	O I | | | |	0.27
0.750	0.33	0.11	0.013	O I | | | |	0.30
0.833	0.40	0.12	0.014	O I | | | |	0.34
0.917	0.44	0.14	0.016	|O I | | | |	0.39
1.000	0.45	0.15	0.019	|O I | | | |	0.44
1.083	0.37	0.17	0.020	|OI | | | |	0.48
1.167	0.33	0.18	0.021	|OI | | | |	0.51
1.250	0.33	0.19	0.022	|OI | | | |	0.53
1.333	0.33	0.19	0.023	|OI | | | |	0.56
1.417	0.33	0.20	0.024	|OI | | | |	0.58
1.500	0.33	0.21	0.025	|OI | | | |	0.60
1.583	0.33	0.22	0.026	|OI | | | |	0.62
1.667	0.33	0.22	0.027	|OI | | | |	0.63
1.750	0.33	0.23	0.027	|OI | | | |	0.65
1.833	0.40	0.24	0.028	|O I | | | |	0.67
1.917	0.45	0.25	0.030	|O I | | | |	0.70
2.000	0.45	0.26	0.031	|O I | | | |	0.74
2.083	0.45	0.27	0.032	| OI | | | |	0.77
2.167	0.45	0.28	0.033	| OI | | | |	0.80
2.250	0.45	0.29	0.035	| OI | | | |	0.82
2.333	0.45	0.30	0.036	| OI | | | |	0.85
2.417	0.45	0.31	0.037	| OI | | | |	0.87
2.500	0.45	0.31	0.038	| OI | | | |	0.90
2.583	0.53	0.32	0.039	| O I | | | |	0.93
2.667	0.57	0.34	0.040	| O I | | | |	0.96
2.750	0.58	0.35	0.042	| O I | | | |	1.00
2.833	0.58	0.35	0.044	| O I | | | |	1.02
2.917	0.58	0.35	0.045	| O I | | | |	1.04
3.000	0.58	0.35	0.047	| O I | | | |	1.07
3.083	0.58	0.35	0.048	| O I | | | |	1.09
3.167	0.58	0.35	0.050	| O I | | | |	1.11
3.250	0.58	0.35	0.051	| O I | | | |	1.14
3.333	0.58	0.35	0.053	| O I | | | |	1.16
3.417	0.58	0.35	0.054	| O I | | | |	1.18
3.500	0.58	0.35	0.056	| O I | | | |	1.21
3.583	0.58	0.35	0.058	| O I | | | |	1.23
3.667	0.58	0.35	0.059	| O I | | | |	1.25
3.750	0.58	0.35	0.061	| O I | | | |	1.27
3.833	0.65	0.35	0.062	| O I | | | |	1.30
3.917	0.70	0.35	0.065	| O I | | | |	1.33
4.000	0.70	0.35	0.067	| O I | | | |	1.37

4.083	0.70	0.35	0.070	O I				1.40
4.167	0.70	0.35	0.072	O I				1.44
4.250	0.70	0.35	0.074	O I				1.48
4.333	0.78	0.35	0.077	O I				1.52
4.417	0.82	0.35	0.080	O I				1.56
4.500	0.82	0.35	0.083	O I				1.61
4.583	0.82	0.35	0.087	O I				1.66
4.667	0.82	0.35	0.090	O I				1.70
4.750	0.82	0.35	0.093	O I				1.75
4.833	0.90	0.35	0.097	O I				1.80
4.917	0.94	0.35	0.101	O I				1.86
5.000	0.95	0.35	0.105	O I				1.92
5.083	0.79	0.35	0.108	O I				1.98
5.167	0.71	0.35	0.111	O I				2.02
5.250	0.70	0.35	0.114	O I				2.06
5.333	0.78	0.35	0.116	O I				2.10
5.417	0.82	0.35	0.119	O I				2.15
5.500	0.83	0.35	0.123	O I				2.20
5.583	0.90	0.35	0.126	O I				2.26
5.667	0.94	0.35	0.130	O I				2.32
5.750	0.95	0.35	0.134	O I				2.39
5.833	0.95	0.35	0.138	O I				2.45
5.917	0.95	0.35	0.143	O I				2.52
6.000	0.95	0.35	0.147	O I				2.58
6.083	1.03	0.35	0.151	O I				2.65
6.167	1.07	0.35	0.156	O I				2.73
6.250	1.07	0.35	0.161	O I				2.81
6.333	1.07	0.35	0.166	O I				2.89
6.417	1.07	0.35	0.171	O I				2.96
6.500	1.07	0.35	0.176	O I				3.05
6.583	1.15	0.35	0.181	O I				3.15
6.667	1.19	0.35	0.187	O I				3.26
6.750	1.20	0.35	0.193	O I				3.37
6.833	1.20	0.35	0.198	O I				3.48
6.917	1.20	0.35	0.204	O I				3.59
7.000	1.20	0.35	0.210	O I				3.70
7.083	1.20	0.35	0.216	O I				3.81
7.167	1.20	0.35	0.222	O I				3.92
7.250	1.20	0.45	0.227	O I				4.03
7.333	1.28	0.81	0.231	O I				4.15
7.417	1.32	1.03	0.234	O I				4.22
7.500	1.32	1.16	0.235	O I				4.26
7.583	1.40	1.25	0.236	OI				4.29
7.667	1.44	1.33	0.237	OI				4.32
7.750	1.44	1.38	0.238	OI				4.33
7.833	1.52	1.43	0.239	OI				4.35
7.917	1.56	1.48	0.239	OI				4.36
8.000	1.57	1.52	0.240	OI				4.38
8.083	1.72	1.58	0.240	OI				4.40
8.167	1.81	1.66	0.241	OI				4.42
8.250	1.81	1.73	0.242	O				4.45
8.333	1.81	1.77	0.242	O				4.46
8.417	1.81	1.79	0.243	O				4.46
8.500	1.81	1.80	0.243	O				4.47
8.583	1.89	1.83	0.243	O				4.48
8.667	1.93	1.87	0.244	O				4.49
8.750	1.94	1.90	0.244	O				4.50
8.833	2.02	1.93	0.244	OI				4.51
8.917	2.06	1.98	0.245	O				4.53
9.000	2.06	2.02	0.245	O				4.54

9.083	2.22	2.07	0.246	|	|	O|I	|	4.56
9.167	2.30	2.16	0.247	|	|	OI	|	4.58
9.250	2.31	2.22	0.248	|	|	|O	|	4.60
9.333	2.38	2.28	0.248	|	|	|OI	|	4.62
9.417	2.43	2.34	0.249	|	|	|OI	|	4.64
9.500	2.43	2.38	0.250	|	|	| O	|	4.65
9.583	2.51	2.42	0.250	|	|	| OI	|	4.67
9.667	2.55	2.47	0.251	|	|	| O	|	4.68
9.750	2.55	2.51	0.251	|	|	| O	|	4.70
9.833	2.63	2.55	0.252	|	|	| OI	|	4.71
9.917	2.67	2.60	0.252	|	|	| OI	|	4.72
10.000	2.68	2.63	0.252	|	|	| O	|	4.74
10.083	2.14	2.53	0.251	|	|	I O	|	4.70
10.167	1.85	2.28	0.248	|	|	I |O	|	4.62
10.250	1.82	2.08	0.246	|	|	I O|	|	4.56
10.333	1.82	1.96	0.245	|	|	I O|	|	4.52
10.417	1.82	1.89	0.244	|	|	IO |	|	4.50
10.500	1.82	1.86	0.244	|	|	IO |	|	4.49
10.583	2.20	1.93	0.244	|	|	O I	|	4.51
10.667	2.41	2.10	0.246	|	|	O I	|	4.57
10.750	2.43	2.25	0.248	|	|	|OI	|	4.61
10.833	2.43	2.33	0.249	|	|	|OI	|	4.64
10.917	2.43	2.38	0.250	|	|	| O	|	4.65
11.000	2.43	2.40	0.250	|	|	| O	|	4.66
11.083	2.36	2.40	0.250	|	|	| O	|	4.66
11.167	2.32	2.37	0.249	|	|	|IO	|	4.65
11.250	2.31	2.34	0.249	|	|	|IO	|	4.64
11.333	2.31	2.33	0.249	|	|	|O	|	4.64
11.417	2.31	2.32	0.249	|	|	|O	|	4.64
11.500	2.31	2.32	0.249	|	|	|O	|	4.63
11.583	2.16	2.28	0.248	|	|	IO	|	4.62
11.667	2.07	2.20	0.248	|	|	IO	|	4.60
11.750	2.07	2.14	0.247	|	|	IO	|	4.58
11.833	2.14	2.13	0.247	|	|	O	|	4.57
11.917	2.18	2.14	0.247	|	|	O	|	4.58
12.000	2.19	2.16	0.247	|	|	O	|	4.58
12.083	2.73	2.30	0.249	|	|	|O I	|	4.63
12.167	3.02	2.56	0.252	|	|	| O I|	|	4.71
12.250	3.05	2.78	0.254	|	|	| O I|	|	4.78
12.333	3.13	2.92	0.256	|	|	| O I	|	4.83
12.417	3.17	3.02	0.257	|	|	| OI	|	4.86
12.500	3.17	3.09	0.258	|	|	| OI	|	4.88
12.583	3.33	3.16	0.259	|	|	| OI	|	4.91
12.667	3.41	3.26	0.260	|	|	| |OI	|	4.94
12.750	3.42	3.33	0.261	|	|	| |OI	|	4.96
12.833	3.50	3.39	0.261	|	|	| | O	|	4.98
12.917	3.54	3.45	0.262	|	|	| | OI	|	5.00
13.000	3.54	3.45	0.263	|	|	| | OI	|	5.02
13.083	3.93	3.45	0.265	|	|	| | O I	|	5.08
13.167	4.14	3.45	0.269	|	|	| | O I|		5.21
13.250	4.16	3.45	0.273	|	|	| | O I|		5.36
13.333	4.16	3.45	0.278	|	|	| | O I|		5.51
13.417	4.16	3.45	0.283	|	|	| | O I|		5.62
13.500	4.16	3.45	0.288	|	|	| | O I		5.73
13.583	3.31	3.45	0.290	|	|	| |IO	|	5.77
13.667	2.86	3.45	0.287	|	|	| I | O	|	5.71
13.750	2.81	3.45	0.283	|	|	| I | O	|	5.62
13.833	2.81	3.45	0.279	|	|	| I | O	|	5.52
13.917	2.81	3.45	0.274	|	|	| I | O	|	5.38
14.000	2.81	3.45	0.270	|	|	| I | O	|	5.25

14.083	3.11	3.45	0.266	|	|	|	I| O	|	5.14
14.167	3.28	3.45	0.265	|	|	|	|IO	|	5.09
14.250	3.30	3.45	0.264	|	|	|	|IO	|	5.05
14.333	3.22	3.45	0.262	|	|	|	I O	|	5.01
14.417	3.18	3.36	0.261	|	|	|	IO	|	4.97
14.500	3.18	3.28	0.260	|	|	|	IO	|	4.94
14.583	3.18	3.23	0.259	|	|	|	O	|	4.93
14.667	3.18	3.21	0.259	|	|	|	O	|	4.92
14.750	3.18	3.19	0.259	|	|	|	O	|	4.92
14.833	3.10	3.17	0.259	|	|	|	IO	|	4.91
14.917	3.06	3.13	0.258	|	|	|	IO	|	4.90
15.000	3.05	3.09	0.258	|	|	|	O|	|	4.89
15.083	2.98	3.06	0.257	|	|	|	IO|	|	4.87
15.167	2.94	3.01	0.257	|	|	|	IO|	|	4.86
15.250	2.93	2.98	0.256	|	|	|	O |	|	4.85
15.333	2.85	2.94	0.256	|	|	|	IO |	|	4.83
15.417	2.81	2.89	0.255	|	|	|	IO |	|	4.82
15.500	2.81	2.85	0.255	|	|	|	O |	|	4.81
15.583	2.50	2.76	0.254	|	|	|	I O |	|	4.78
15.667	2.33	2.60	0.252	|	|	|I O |	|	4.73
15.750	2.32	2.48	0.251	|	|	|I O |	|	4.69
15.833	2.32	2.40	0.250	|	|	|IO |	|	4.66
15.917	2.32	2.36	0.249	|	|	|IO |	|	4.65
16.000	2.32	2.34	0.249	|	|	|IO |	|	4.64
16.083	1.16	2.07	0.246	|	I	O|	|	|	4.55
16.167	0.54	1.51	0.239	| I |	O	|	|	|	4.37
16.250	0.47	1.05	0.234	| I	O	|	|	|	4.23
16.333	0.47	0.79	0.231	| I O |		|	|	|	4.14
16.417	0.47	0.64	0.229	| IO |		|	|	|	4.09
16.500	0.47	0.57	0.229	| IO |		|	|	|	4.07
16.583	0.40	0.51	0.228	| O |		|	|	|	4.05
16.667	0.36	0.45	0.227	| IO |		|	|	|	4.03
16.750	0.35	0.40	0.227	| IO |		|	|	|	4.02
16.833	0.35	0.38	0.226	| O |		|	|	|	4.01
16.917	0.35	0.37	0.226	| O |		|	|	|	4.01
17.000	0.35	0.36	0.226	| O |		|	|	|	4.00
17.083	0.51	0.39	0.226	| O |		|	|	|	4.01
17.167	0.59	0.46	0.227	| OI |		|	|	|	4.04
17.250	0.60	0.52	0.228	| O |		|	|	|	4.06
17.333	0.60	0.56	0.228	| O |		|	|	|	4.07
17.417	0.60	0.58	0.229	| O |		|	|	|	4.07
17.500	0.60	0.59	0.229	| O |		|	|	|	4.08
17.583	0.60	0.59	0.229	| O |		|	|	|	4.08
17.667	0.60	0.59	0.229	| O |		|	|	|	4.08
17.750	0.60	0.60	0.229	| O |		|	|	|	4.08
17.833	0.52	0.58	0.229	| O |		|	|	|	4.07
17.917	0.48	0.54	0.228	| IO |		|	|	|	4.06
18.000	0.48	0.51	0.228	| O |		|	|	|	4.05
18.083	0.48	0.50	0.228	| O |		|	|	|	4.05
18.167	0.48	0.49	0.228	| O |		|	|	|	4.04
18.250	0.48	0.48	0.228	| O |		|	|	|	4.04
18.333	0.48	0.48	0.227	| O |		|	|	|	4.04
18.417	0.48	0.48	0.227	| O |		|	|	|	4.04
18.500	0.48	0.48	0.227	| O |		|	|	|	4.04
18.583	0.40	0.46	0.227	| O |		|	|	|	4.04
18.667	0.36	0.42	0.227	| IO |		|	|	|	4.02
18.750	0.35	0.39	0.226	| IO |		|	|	|	4.01
18.833	0.28	0.36	0.226	| O |		|	|	|	4.00
18.917	0.23	0.35	0.225	|IO |		|	|	|	3.99
19.000	0.23	0.35	0.225	|IO |		|	|	|	3.97

19.083	0.31	0.35	0.224	O				3.96
19.167	0.35	0.35	0.224	O				3.96
19.250	0.35	0.35	0.224	O				3.96
19.333	0.43	0.35	0.224	OI				3.97
19.417	0.47	0.35	0.225	OI				3.98
19.500	0.48	0.35	0.226	OI				3.99
19.583	0.40	0.37	0.226	OI				4.01
19.667	0.36	0.38	0.226	O				4.01
19.750	0.35	0.37	0.226	O				4.01
19.833	0.28	0.35	0.226	O				4.00
19.917	0.24	0.35	0.225	IO				3.99
20.000	0.23	0.35	0.224	IO				3.97
20.083	0.31	0.35	0.224	O				3.96
20.167	0.35	0.35	0.224	O				3.96
20.250	0.35	0.35	0.224	O				3.96
20.333	0.35	0.35	0.224	O				3.96
20.417	0.35	0.35	0.224	O				3.96
20.500	0.35	0.35	0.224	O				3.96
20.583	0.35	0.35	0.224	O				3.96
20.667	0.35	0.35	0.224	O				3.96
20.750	0.35	0.35	0.224	O				3.96
20.833	0.28	0.35	0.224	O				3.96
20.917	0.24	0.35	0.223	IO				3.94
21.000	0.23	0.35	0.222	IO				3.93
21.083	0.31	0.35	0.222	O				3.92
21.167	0.35	0.35	0.222	O				3.92
21.250	0.35	0.35	0.222	O				3.92
21.333	0.28	0.35	0.221	O				3.91
21.417	0.24	0.35	0.221	IO				3.90
21.500	0.23	0.35	0.220	IO				3.89
21.583	0.31	0.35	0.219	O				3.88
21.667	0.35	0.35	0.219	O				3.87
21.750	0.36	0.35	0.219	O				3.87
21.833	0.28	0.35	0.219	O				3.87
21.917	0.24	0.35	0.218	IO				3.86
22.000	0.23	0.35	0.218	IO				3.84
22.083	0.31	0.35	0.217	O				3.83
22.167	0.35	0.35	0.217	O				3.83
22.250	0.36	0.35	0.217	O				3.83
22.333	0.28	0.35	0.217	O				3.83
22.417	0.24	0.35	0.216	IO				3.81
22.500	0.23	0.35	0.215	IO				3.80
22.583	0.23	0.35	0.215	IO				3.78
22.667	0.23	0.35	0.214	IO				3.77
22.750	0.23	0.35	0.213	IO				3.75
22.833	0.23	0.35	0.212	IO				3.74
22.917	0.23	0.35	0.211	IO				3.72
23.000	0.23	0.35	0.210	IO				3.71
23.083	0.23	0.35	0.210	IO				3.69
23.167	0.23	0.35	0.209	IO				3.68
23.250	0.23	0.35	0.208	IO				3.66
23.333	0.23	0.35	0.207	IO				3.65
23.417	0.23	0.35	0.206	IO				3.63
23.500	0.23	0.35	0.206	IO				3.62
23.583	0.23	0.35	0.205	IO				3.60
23.667	0.23	0.35	0.204	IO				3.59
23.750	0.23	0.35	0.203	IO				3.57
23.833	0.23	0.35	0.202	IO				3.56
23.917	0.23	0.35	0.202	IO				3.54
24.000	0.23	0.35	0.201	IO				3.52

24.083	0.09	0.35	0.200	I	O	|	|	|	3.50
24.167	0.01	0.35	0.197	I	O	|	|	|	3.46
24.250	0.00	0.35	0.195	I	O	|	|	|	3.42
24.333	0.00	0.35	0.193	I	O	|	|	|	3.37
24.417	0.00	0.35	0.190	I	O	|	|	|	3.32
24.500	0.00	0.35	0.188	I	O	|	|	|	3.28
24.583	0.00	0.35	0.185	I	O	|	|	|	3.23
24.667	0.00	0.35	0.183	I	O	|	|	|	3.19
24.750	0.00	0.35	0.181	I	O	|	|	|	3.14
24.833	0.00	0.35	0.178	I	O	|	|	|	3.10
24.917	0.00	0.35	0.176	I	O	|	|	|	3.05
25.000	0.00	0.35	0.173	I	O	|	|	|	3.01
25.083	0.00	0.35	0.171	I	O	|	|	|	2.97
25.167	0.00	0.35	0.169	I	O	|	|	|	2.93
25.250	0.00	0.35	0.166	I	O	|	|	|	2.89
25.333	0.00	0.35	0.164	I	O	|	|	|	2.85
25.417	0.00	0.35	0.161	I	O	|	|	|	2.81
25.500	0.00	0.35	0.159	I	O	|	|	|	2.78
25.583	0.00	0.35	0.156	I	O	|	|	|	2.74
25.667	0.00	0.35	0.154	I	O	|	|	|	2.70
25.750	0.00	0.35	0.152	I	O	|	|	|	2.66
25.833	0.00	0.35	0.149	I	O	|	|	|	2.62
25.917	0.00	0.35	0.147	I	O	|	|	|	2.58
26.000	0.00	0.35	0.144	I	O	|	|	|	2.55
26.083	0.00	0.35	0.142	I	O	|	|	|	2.51
26.167	0.00	0.35	0.140	I	O	|	|	|	2.47
26.250	0.00	0.35	0.137	I	O	|	|	|	2.43
26.333	0.00	0.35	0.135	I	O	|	|	|	2.39
26.417	0.00	0.35	0.132	I	O	|	|	|	2.36
26.500	0.00	0.35	0.130	I	O	|	|	|	2.32
26.583	0.00	0.35	0.128	I	O	|	|	|	2.28
26.667	0.00	0.35	0.125	I	O	|	|	|	2.24
26.750	0.00	0.35	0.123	I	O	|	|	|	2.20
26.833	0.00	0.35	0.120	I	O	|	|	|	2.16
26.917	0.00	0.35	0.118	I	O	|	|	|	2.13
27.000	0.00	0.35	0.115	I	O	|	|	|	2.09
27.083	0.00	0.35	0.113	I	O	|	|	|	2.05
27.167	0.00	0.35	0.111	I	O	|	|	|	2.01
27.250	0.00	0.35	0.108	I	O	|	|	|	1.97
27.333	0.00	0.35	0.106	I	O	|	|	|	1.94
27.417	0.00	0.35	0.103	I	O	|	|	|	1.90
27.500	0.00	0.35	0.101	I	O	|	|	|	1.87
27.583	0.00	0.35	0.099	I	O	|	|	|	1.83
27.667	0.00	0.35	0.096	I	O	|	|	|	1.80
27.750	0.00	0.35	0.094	I	O	|	|	|	1.76
27.833	0.00	0.35	0.091	I	O	|	|	|	1.73
27.917	0.00	0.35	0.089	I	O	|	|	|	1.69
28.000	0.00	0.35	0.087	I	O	|	|	|	1.66
28.083	0.00	0.35	0.084	I	O	|	|	|	1.62
28.167	0.00	0.35	0.082	I	O	|	|	|	1.58
28.250	0.00	0.35	0.079	I	O	|	|	|	1.55
28.333	0.00	0.35	0.077	I	O	|	|	|	1.51
28.417	0.00	0.35	0.075	I	O	|	|	|	1.48
28.500	0.00	0.35	0.072	I	O	|	|	|	1.44
28.583	0.00	0.35	0.070	I	O	|	|	|	1.41
28.667	0.00	0.35	0.067	I	O	|	|	|	1.37
28.750	0.00	0.35	0.065	I	O	|	|	|	1.34
28.833	0.00	0.35	0.062	I	O	|	|	|	1.30
28.917	0.00	0.35	0.060	I	O	|	|	|	1.27
29.000	0.00	0.35	0.058	I	O	|	|	|	1.23

29.083	0.00	0.35	0.055	I O	|	|	|	1.19
29.167	0.00	0.35	0.053	I O	|	|	|	1.16
29.250	0.00	0.35	0.050	I O	|	|	|	1.12
29.333	0.00	0.35	0.048	I O	|	|	|	1.09
29.417	0.00	0.35	0.046	I O	|	|	|	1.05
29.500	0.00	0.35	0.043	I O	|	|	|	1.02
29.583	0.00	0.34	0.041	I O	|	|	|	0.97
29.667	0.00	0.32	0.039	I O	|	|	|	0.92
29.750	0.00	0.30	0.036	I O	|	|	|	0.87
29.833	0.00	0.29	0.034	I O	|	|	|	0.82
29.917	0.00	0.27	0.032	I O	|	|	|	0.77
30.000	0.00	0.26	0.031	IO	|	|	|	0.73
30.083	0.00	0.24	0.029	IO	|	|	|	0.69
30.167	0.00	0.23	0.027	IO	|	|	|	0.65
30.250	0.00	0.21	0.026	IO	|	|	|	0.61
30.333	0.00	0.20	0.024	IO	|	|	|	0.58
30.417	0.00	0.19	0.023	IO	|	|	|	0.55
30.500	0.00	0.18	0.022	IO	|	|	|	0.52
30.583	0.00	0.17	0.020	IO	|	|	|	0.49
30.667	0.00	0.16	0.019	IO	|	|	|	0.46
30.750	0.00	0.15	0.018	IO	|	|	|	0.43
30.833	0.00	0.14	0.017	IO	|	|	|	0.41
30.917	0.00	0.14	0.016	IO	|	|	|	0.39
31.000	0.00	0.13	0.015	O	|	|	|	0.37
31.083	0.00	0.12	0.015	O	|	|	|	0.35
31.167	0.00	0.11	0.014	O	|	|	|	0.33
31.250	0.00	0.11	0.013	O	|	|	|	0.31
31.333	0.00	0.10	0.012	O	|	|	|	0.29
31.417	0.00	0.10	0.012	O	|	|	|	0.27
31.500	0.00	0.09	0.011	O	|	|	|	0.26
31.583	0.00	0.09	0.010	O	|	|	|	0.24
31.667	0.00	0.08	0.010	O	|	|	|	0.23
31.750	0.00	0.08	0.009	O	|	|	|	0.22
31.833	0.00	0.07	0.009	O	|	|	|	0.21
31.917	0.00	0.07	0.008	O	|	|	|	0.19
32.000	0.00	0.06	0.008	O	|	|	|	0.18
32.083	0.00	0.06	0.007	O	|	|	|	0.17
32.167	0.00	0.06	0.007	O	|	|	|	0.16
32.250	0.00	0.05	0.006	O	|	|	|	0.15
32.333	0.00	0.05	0.006	O	|	|	|	0.15
32.417	0.00	0.05	0.006	O	|	|	|	0.14
32.500	0.00	0.05	0.005	O	|	|	|	0.13
32.583	0.00	0.04	0.005	O	|	|	|	0.12
32.667	0.00	0.04	0.005	O	|	|	|	0.12
32.750	0.00	0.04	0.005	O	|	|	|	0.11
32.833	0.00	0.04	0.004	O	|	|	|	0.10
32.917	0.00	0.03	0.004	O	|	|	|	0.10
33.000	0.00	0.03	0.004	O	|	|	|	0.09
33.083	0.00	0.03	0.004	O	|	|	|	0.09
33.167	0.00	0.03	0.003	O	|	|	|	0.08
33.250	0.00	0.03	0.003	O	|	|	|	0.08
33.333	0.00	0.03	0.003	O	|	|	|	0.07
33.417	0.00	0.02	0.003	O	|	|	|	0.07
33.500	0.00	0.02	0.003	O	|	|	|	0.07
33.583	0.00	0.02	0.003	O	|	|	|	0.06
33.667	0.00	0.02	0.002	O	|	|	|	0.06
33.750	0.00	0.02	0.002	O	|	|	|	0.06
33.833	0.00	0.02	0.002	O	|	|	|	0.05
33.917	0.00	0.02	0.002	O	|	|	|	0.05
34.000	0.00	0.02	0.002	O	|	|	|	0.05

34.083	0.00	0.02	0.002	O	|	|	|	|	0.04
34.167	0.00	0.01	0.002	O	|	|	|	|	0.04
34.250	0.00	0.01	0.002	O	|	|	|	|	0.04
34.333	0.00	0.01	0.002	O	|	|	|	|	0.04
34.417	0.00	0.01	0.001	O	|	|	|	|	0.03
34.500	0.00	0.01	0.001	O	|	|	|	|	0.03
34.583	0.00	0.01	0.001	O	|	|	|	|	0.03
34.667	0.00	0.01	0.001	O	|	|	|	|	0.03
34.750	0.00	0.01	0.001	O	|	|	|	|	0.03
34.833	0.00	0.01	0.001	O	|	|	|	|	0.03
34.917	0.00	0.01	0.001	O	|	|	|	|	0.02
35.000	0.00	0.01	0.001	O	|	|	|	|	0.02
35.083	0.00	0.01	0.001	O	|	|	|	|	0.02
35.167	0.00	0.01	0.001	O	|	|	|	|	0.02
35.250	0.00	0.01	0.001	O	|	|	|	|	0.02
35.333	0.00	0.01	0.001	O	|	|	|	|	0.02
35.417	0.00	0.01	0.001	O	|	|	|	|	0.02
35.500	0.00	0.01	0.001	O	|	|	|	|	0.02
35.583	0.00	0.01	0.001	O	|	|	|	|	0.02
35.667	0.00	0.01	0.001	O	|	|	|	|	0.01
35.750	0.00	0.00	0.001	O	|	|	|	|	0.01
35.833	0.00	0.00	0.001	O	|	|	|	|	0.01
35.917	0.00	0.00	0.001	O	|	|	|	|	0.01
36.000	0.00	0.00	0.000	O	|	|	|	|	0.01
36.083	0.00	0.00	0.000	O	|	|	|	|	0.01
36.167	0.00	0.00	0.000	O	|	|	|	|	0.01
36.250	0.00	0.00	0.000	O	|	|	|	|	0.01
36.333	0.00	0.00	0.000	O	|	|	|	|	0.01
36.417	0.00	0.00	0.000	O	|	|	|	|	0.01
36.500	0.00	0.00	0.000	O	|	|	|	|	0.01
36.583	0.00	0.00	0.000	O	|	|	|	|	0.01
36.667	0.00	0.00	0.000	O	|	|	|	|	0.01
36.750	0.00	0.00	0.000	O	|	|	|	|	0.01
36.833	0.00	0.00	0.000	O	|	|	|	|	0.01
36.917	0.00	0.00	0.000	O	|	|	|	|	0.01
37.000	0.00	0.00	0.000	O	|	|	|	|	0.01
37.083	0.00	0.00	0.000	O	|	|	|	|	0.01
37.167	0.00	0.00	0.000	O	|	|	|	|	0.01
37.250	0.00	0.00	0.000	O	|	|	|	|	0.00
37.333	0.00	0.00	0.000	O	|	|	|	|	0.00
37.417	0.00	0.00	0.000	O	|	|	|	|	0.00
37.500	0.00	0.00	0.000	O	|	|	|	|	0.00
37.583	0.00	0.00	0.000	O	|	|	|	|	0.00
37.667	0.00	0.00	0.000	O	|	|	|	|	0.00
37.750	0.00	0.00	0.000	O	|	|	|	|	0.00
37.833	0.00	0.00	0.000	O	|	|	|	|	0.00
37.917	0.00	0.00	0.000	O	|	|	|	|	0.00
38.000	0.00	0.00	0.000	O	|	|	|	|	0.00
38.083	0.00	0.00	0.000	O	|	|	|	|	0.00

**********HYDROGRAPH DATA**********

Number of intervals = 457
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 3.450 (CFS)
Total volume = 2.490 (Ac.Ft)

Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

****

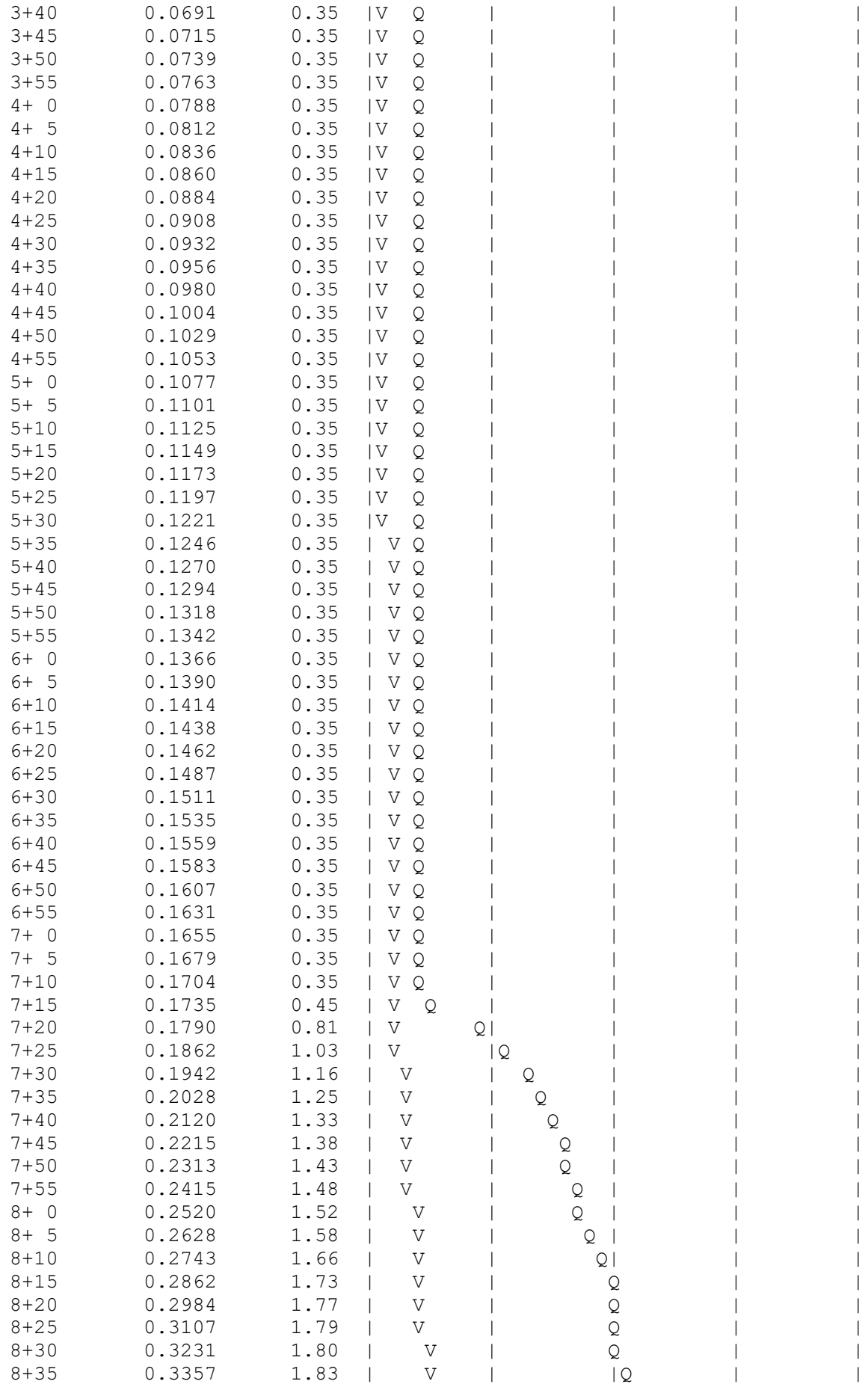
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Process from Point/Station 1.000 to Point/Station 1.010
**** PRINT CURRENT HYDROGRAPH ****

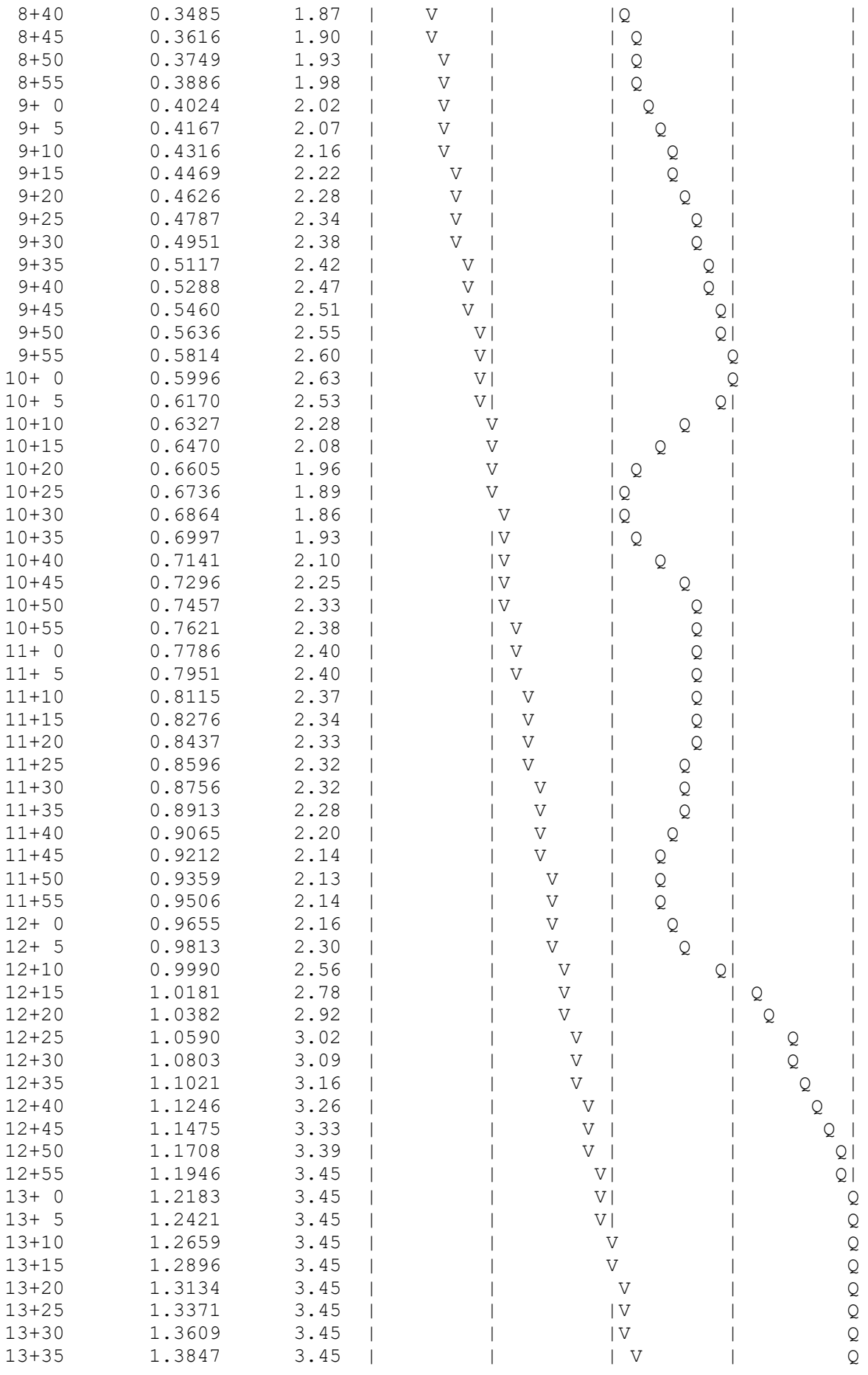
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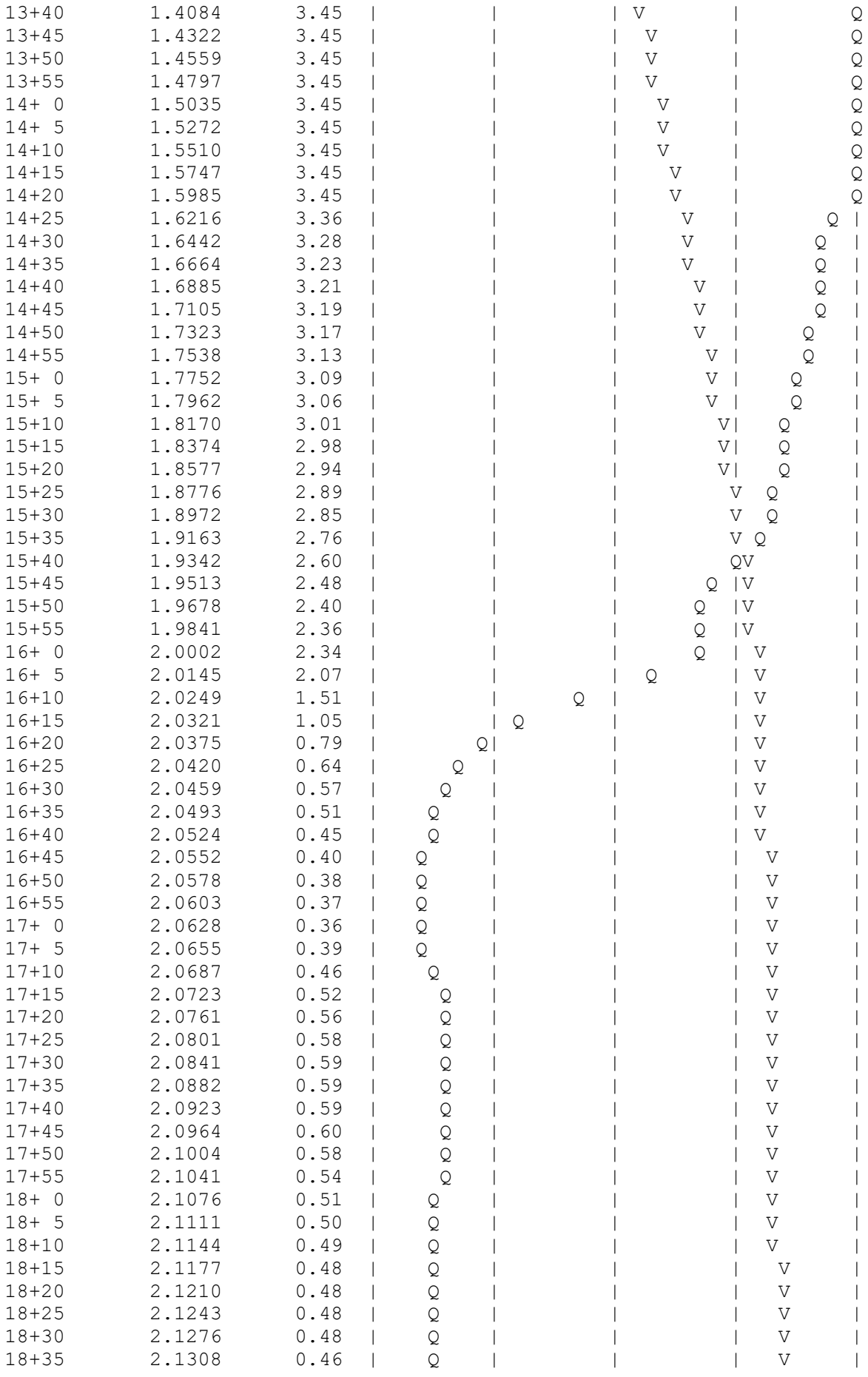
P R I N T O F S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals (CFS)

Time(h+m)	Volume(Ac.Ft)	Q(CFS)	0	0.9	1.7	2.6	3.5
0+ 5	0.0000	0.00	Q				
0+10	0.0001	0.01	Q				
0+15	0.0003	0.02	Q				
0+20	0.0005	0.03	Q				
0+25	0.0008	0.05	Q				
0+30	0.0013	0.06	Q				
0+35	0.0018	0.08	Q				
0+40	0.0025	0.09	VQ				
0+45	0.0032	0.11	VQ				
0+50	0.0040	0.12	VQ				
0+55	0.0050	0.14	VQ				
1+ 0	0.0060	0.15	VQ				
1+ 5	0.0072	0.17	VQ				
1+10	0.0084	0.18	V Q				
1+15	0.0097	0.19	V Q				
1+20	0.0111	0.19	V Q				
1+25	0.0125	0.20	V Q				
1+30	0.0139	0.21	V Q				
1+35	0.0154	0.22	V Q				
1+40	0.0169	0.22	V Q				
1+45	0.0185	0.23	V Q				
1+50	0.0201	0.24	V Q				
1+55	0.0218	0.25	V Q				
2+ 0	0.0236	0.26	V Q				
2+ 5	0.0254	0.27	V Q				
2+10	0.0273	0.28	V Q				
2+15	0.0293	0.29	V Q				
2+20	0.0314	0.30	V Q				
2+25	0.0335	0.31	V Q				
2+30	0.0356	0.31	V Q				
2+35	0.0379	0.32	V Q				
2+40	0.0402	0.34	V Q				
2+45	0.0426	0.35	V Q				
2+50	0.0450	0.35	V Q				
2+55	0.0474	0.35	V Q				
3+ 0	0.0498	0.35	V Q				
3+ 5	0.0522	0.35	V Q				
3+10	0.0546	0.35	V Q				
3+15	0.0571	0.35	V Q				
3+20	0.0595	0.35	V Q				
3+25	0.0619	0.35	V Q				
3+30	0.0643	0.35	|V Q				
3+35	0.0667	0.35	|V Q				







18+40	2.1337	0.42	Q			V	
18+45	2.1363	0.39	Q			V	
18+50	2.1388	0.36	Q			V	
18+55	2.1412	0.35	Q			V	
19+ 0	2.1436	0.35	Q			V	
19+ 5	2.1460	0.35	Q			V	
19+10	2.1484	0.35	Q			V	
19+15	2.1509	0.35	Q			V	
19+20	2.1533	0.35	Q			V	
19+25	2.1557	0.35	Q			V	
19+30	2.1581	0.35	Q			V	
19+35	2.1607	0.37	Q			V	
19+40	2.1632	0.38	Q			V	
19+45	2.1658	0.37	Q			V	
19+50	2.1682	0.35	Q			V	
19+55	2.1706	0.35	Q			V	
20+ 0	2.1730	0.35	Q			V	
20+ 5	2.1754	0.35	Q			V	
20+10	2.1778	0.35	Q			V	
20+15	2.1802	0.35	Q			V	
20+20	2.1826	0.35	Q			V	
20+25	2.1850	0.35	Q			V	
20+30	2.1875	0.35	Q			V	
20+35	2.1899	0.35	Q			V	
20+40	2.1923	0.35	Q			V	
20+45	2.1947	0.35	Q			V	
20+50	2.1971	0.35	Q			V	
20+55	2.1995	0.35	Q			V	
21+ 0	2.2019	0.35	Q			V	
21+ 5	2.2043	0.35	Q			V	
21+10	2.2067	0.35	Q			V	
21+15	2.2092	0.35	Q			V	
21+20	2.2116	0.35	Q			V	
21+25	2.2140	0.35	Q			V	
21+30	2.2164	0.35	Q			V	
21+35	2.2188	0.35	Q			V	
21+40	2.2212	0.35	Q			V	
21+45	2.2236	0.35	Q			V	
21+50	2.2260	0.35	Q			V	
21+55	2.2284	0.35	Q			V	
22+ 0	2.2308	0.35	Q			V	
22+ 5	2.2333	0.35	Q			V	
22+10	2.2357	0.35	Q			V	
22+15	2.2381	0.35	Q			V	
22+20	2.2405	0.35	Q			V	
22+25	2.2429	0.35	Q			V	
22+30	2.2453	0.35	Q			V	
22+35	2.2477	0.35	Q			V	
22+40	2.2501	0.35	Q			V	
22+45	2.2525	0.35	Q			V	
22+50	2.2550	0.35	Q			V	
22+55	2.2574	0.35	Q			V	
23+ 0	2.2598	0.35	Q			V	
23+ 5	2.2622	0.35	Q			V	
23+10	2.2646	0.35	Q			V	
23+15	2.2670	0.35	Q			V	
23+20	2.2694	0.35	Q			V	
23+25	2.2718	0.35	Q			V	
23+30	2.2742	0.35	Q			V	
23+35	2.2766	0.35	Q			V	

```
   23+40       2.2791      0.35  |   Q     |         |         |     V   |
   23+45       2.2815      0.35  |   Q     |         |         |     V   |
   23+50       2.2839      0.35  |   Q     |         |         |     V   |
   23+55       2.2863      0.35  |   Q     |         |         |     V   |
   24+ 0       2.2887      0.35  |   Q     |         |         |     V   |
--------------------------------------------------------------------------
     ****************************HYDROGRAPH DATA****************************
               Number of intervals =   457
               Time interval =    5.0 (Min.)
               Maximum/Peak flow rate =        3.450 (CFS)
               Total volume =       2.490 (Ac.Ft)
          Status of hydrographs being held in storage
                     Stream 1  Stream 2  Stream 3  Stream 4  Stream 5
          Peak (CFS)      0.000     0.000     0.000     0.000     0.000
          Vol (Ac.Ft)      0.000     0.000     0.000     0.000     0.000
     ************************************************************************

     ------------------------------------------------------------------------


     ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
     Process from Point/Station        1.000 to Point/Station        1.010
     **** STORE OR DELETE CURRENT HYDROGRAPH ****
     ________________________________________________________________________
     Current stream hydrograph saved in file 939pr100rt10024.rte
     ****************************HYDROGRAPH DATA****************************
               Number of intervals =     0
               Time interval =    0.0 (Min.)
               Maximum/Peak flow rate =        0.000 (CFS)
               Total volume =       0.000 (Ac.Ft)
          Status of hydrographs being held in storage
                     Stream 1  Stream 2  Stream 3  Stream 4  Stream 5
          Peak (CFS)      0.000     0.000     0.000     0.000     0.000
          Vol (Ac.Ft)      0.000     0.000     0.000     0.000     0.000
     ************************************************************************

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U n i t H y d r o g r a p h A n a l y s i s

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0
Study date 05/07/25 File: 939pr10024100.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6414

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

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area 1 fleetwood, 100 proposed

DMA - 1

Drainage Area = 5.08(Ac.) = 0.008 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 5.08(Ac.) = 0.008 Sq. Mi.
Length along longest watercourse = 735.00(Ft.)
Length along longest watercourse measured to centroid = 197.00(Ft.)
Length along longest watercourse = 0.139 Mi.
Length along longest watercourse measured to centroid = 0.037 Mi.
Difference in elevation = 3.67(Ft.)
Slope along watercourse = 26.4000 Ft./Mi.
Average Manning's 'N' = 0.013
Lag time = 0.023 Hr.
Lag time = 1.36 Min.
25% of lag time = 0.34 Min.
40% of lag time = 0.54 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
5.08	2.00	10.16

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
5.08	6.00	30.48

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 2.000(In)
Area Averaged 100-Year Rainfall = 6.000(In)

Point rain (area averaged) = 6.000(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 6.000(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
5.080	95.00	0.900

Total Area Entered = 5.08(Ac.)

RI AMC2	RI AMC-3	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
95.0	98.0	0.026	0.900	0.005	1.000	0.005
					Sum (F) =	0.005

Area averaged mean soil loss (F) (In/Hr) = 0.005
Minimum soil loss rate ((In/Hr)) = 0.002
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.900

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)		Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	367.184	62.682	3.209
2	0.167	734.369	33.685	1.725
3	0.250	1101.553	3.634	0.186
			Sum = 100.000	Sum= 5.120

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.07	0.048	0.009	(0.043)	0.039
2	0.17	0.07	0.048	0.009	(0.043)	0.039
3	0.25	0.07	0.048	0.009	(0.043)	0.039
4	0.33	0.10	0.072	0.009	(0.065)	0.063
5	0.42	0.10	0.072	0.009	(0.065)	0.063
6	0.50	0.10	0.072	0.009	(0.065)	0.063
7	0.58	0.10	0.072	0.009	(0.065)	0.063
8	0.67	0.10	0.072	0.009	(0.065)	0.063
9	0.75	0.10	0.072	0.008	(0.065)	0.064
10	0.83	0.13	0.096	0.008	(0.086)	0.088
11	0.92	0.13	0.096	0.008	(0.086)	0.088
12	1.00	0.13	0.096	0.008	(0.086)	0.088
13	1.08	0.10	0.072	0.008	(0.065)	0.064
14	1.17	0.10	0.072	0.008	(0.065)	0.064
15	1.25	0.10	0.072	0.008	(0.065)	0.064
16	1.33	0.10	0.072	0.008	(0.065)	0.064

17	1.42	0.10	0.072	0.008	(0.065)	0.064
18	1.50	0.10	0.072	0.008	(0.065)	0.064
19	1.58	0.10	0.072	0.008	(0.065)	0.064
20	1.67	0.10	0.072	0.008	(0.065)	0.064
21	1.75	0.10	0.072	0.008	(0.065)	0.064
22	1.83	0.13	0.096	0.008	(0.086)	0.088
23	1.92	0.13	0.096	0.008	(0.086)	0.088
24	2.00	0.13	0.096	0.008	(0.086)	0.088
25	2.08	0.13	0.096	0.008	(0.086)	0.088
26	2.17	0.13	0.096	0.008	(0.086)	0.088
27	2.25	0.13	0.096	0.008	(0.086)	0.088
28	2.33	0.13	0.096	0.008	(0.086)	0.088
29	2.42	0.13	0.096	0.008	(0.086)	0.088
30	2.50	0.13	0.096	0.008	(0.086)	0.088
31	2.58	0.17	0.120	0.008	(0.108)	0.112
32	2.67	0.17	0.120	0.008	(0.108)	0.112
33	2.75	0.17	0.120	0.008	(0.108)	0.112
34	2.83	0.17	0.120	0.008	(0.108)	0.112
35	2.92	0.17	0.120	0.008	(0.108)	0.112
36	3.00	0.17	0.120	0.008	(0.108)	0.112
37	3.08	0.17	0.120	0.008	(0.108)	0.112
38	3.17	0.17	0.120	0.008	(0.108)	0.112
39	3.25	0.17	0.120	0.008	(0.108)	0.112
40	3.33	0.17	0.120	0.007	(0.108)	0.113
41	3.42	0.17	0.120	0.007	(0.108)	0.113
42	3.50	0.17	0.120	0.007	(0.108)	0.113
43	3.58	0.17	0.120	0.007	(0.108)	0.113
44	3.67	0.17	0.120	0.007	(0.108)	0.113
45	3.75	0.17	0.120	0.007	(0.108)	0.113
46	3.83	0.20	0.144	0.007	(0.130)	0.137
47	3.92	0.20	0.144	0.007	(0.130)	0.137
48	4.00	0.20	0.144	0.007	(0.130)	0.137
49	4.08	0.20	0.144	0.007	(0.130)	0.137
50	4.17	0.20	0.144	0.007	(0.130)	0.137
51	4.25	0.20	0.144	0.007	(0.130)	0.137
52	4.33	0.23	0.168	0.007	(0.151)	0.161
53	4.42	0.23	0.168	0.007	(0.151)	0.161
54	4.50	0.23	0.168	0.007	(0.151)	0.161
55	4.58	0.23	0.168	0.007	(0.151)	0.161
56	4.67	0.23	0.168	0.007	(0.151)	0.161
57	4.75	0.23	0.168	0.007	(0.151)	0.161
58	4.83	0.27	0.192	0.007	(0.173)	0.185
59	4.92	0.27	0.192	0.007	(0.173)	0.185
60	5.00	0.27	0.192	0.007	(0.173)	0.185
61	5.08	0.20	0.144	0.007	(0.130)	0.137
62	5.17	0.20	0.144	0.007	(0.130)	0.137
63	5.25	0.20	0.144	0.007	(0.130)	0.137
64	5.33	0.23	0.168	0.007	(0.151)	0.161
65	5.42	0.23	0.168	0.007	(0.151)	0.161
66	5.50	0.23	0.168	0.007	(0.151)	0.161
67	5.58	0.27	0.192	0.007	(0.173)	0.185
68	5.67	0.27	0.192	0.007	(0.173)	0.185
69	5.75	0.27	0.192	0.007	(0.173)	0.185
70	5.83	0.27	0.192	0.007	(0.173)	0.185
71	5.92	0.27	0.192	0.007	(0.173)	0.185
72	6.00	0.27	0.192	0.007	(0.173)	0.185
73	6.08	0.30	0.216	0.006	(0.194)	0.210
74	6.17	0.30	0.216	0.006	(0.194)	0.210
75	6.25	0.30	0.216	0.006	(0.194)	0.210
76	6.33	0.30	0.216	0.006	(0.194)	0.210

77	6.42	0.30	0.216	0.006	(0.194)	0.210
78	6.50	0.30	0.216	0.006	(0.194)	0.210
79	6.58	0.33	0.240	0.006	(0.216)	0.234
80	6.67	0.33	0.240	0.006	(0.216)	0.234
81	6.75	0.33	0.240	0.006	(0.216)	0.234
82	6.83	0.33	0.240	0.006	(0.216)	0.234
83	6.92	0.33	0.240	0.006	(0.216)	0.234
84	7.00	0.33	0.240	0.006	(0.216)	0.234
85	7.08	0.33	0.240	0.006	(0.216)	0.234
86	7.17	0.33	0.240	0.006	(0.216)	0.234
87	7.25	0.33	0.240	0.006	(0.216)	0.234
88	7.33	0.37	0.264	0.006	(0.238)	0.258
89	7.42	0.37	0.264	0.006	(0.238)	0.258
90	7.50	0.37	0.264	0.006	(0.238)	0.258
91	7.58	0.40	0.288	0.006	(0.259)	0.282
92	7.67	0.40	0.288	0.006	(0.259)	0.282
93	7.75	0.40	0.288	0.006	(0.259)	0.282
94	7.83	0.43	0.312	0.006	(0.281)	0.306
95	7.92	0.43	0.312	0.006	(0.281)	0.306
96	8.00	0.43	0.312	0.006	(0.281)	0.306
97	8.08	0.50	0.360	0.006	(0.324)	0.354
98	8.17	0.50	0.360	0.006	(0.324)	0.354
99	8.25	0.50	0.360	0.006	(0.324)	0.354
100	8.33	0.50	0.360	0.006	(0.324)	0.354
101	8.42	0.50	0.360	0.006	(0.324)	0.354
102	8.50	0.50	0.360	0.006	(0.324)	0.354
103	8.58	0.53	0.384	0.006	(0.346)	0.378
104	8.67	0.53	0.384	0.006	(0.346)	0.378
105	8.75	0.53	0.384	0.006	(0.346)	0.378
106	8.83	0.57	0.408	0.006	(0.367)	0.402
107	8.92	0.57	0.408	0.006	(0.367)	0.402
108	9.00	0.57	0.408	0.006	(0.367)	0.402
109	9.08	0.63	0.456	0.005	(0.410)	0.450
110	9.17	0.63	0.456	0.005	(0.410)	0.451
111	9.25	0.63	0.456	0.005	(0.410)	0.451
112	9.33	0.67	0.480	0.005	(0.432)	0.475
113	9.42	0.67	0.480	0.005	(0.432)	0.475
114	9.50	0.67	0.480	0.005	(0.432)	0.475
115	9.58	0.70	0.504	0.005	(0.454)	0.499
116	9.67	0.70	0.504	0.005	(0.454)	0.499
117	9.75	0.70	0.504	0.005	(0.454)	0.499
118	9.83	0.73	0.528	0.005	(0.475)	0.523
119	9.92	0.73	0.528	0.005	(0.475)	0.523
120	10.00	0.73	0.528	0.005	(0.475)	0.523
121	10.08	0.50	0.360	0.005	(0.324)	0.355
122	10.17	0.50	0.360	0.005	(0.324)	0.355
123	10.25	0.50	0.360	0.005	(0.324)	0.355
124	10.33	0.50	0.360	0.005	(0.324)	0.355
125	10.42	0.50	0.360	0.005	(0.324)	0.355
126	10.50	0.50	0.360	0.005	(0.324)	0.355
127	10.58	0.67	0.480	0.005	(0.432)	0.475
128	10.67	0.67	0.480	0.005	(0.432)	0.475
129	10.75	0.67	0.480	0.005	(0.432)	0.475
130	10.83	0.67	0.480	0.005	(0.432)	0.475
131	10.92	0.67	0.480	0.005	(0.432)	0.475
132	11.00	0.67	0.480	0.005	(0.432)	0.475
133	11.08	0.63	0.456	0.005	(0.410)	0.451
134	11.17	0.63	0.456	0.005	(0.410)	0.451
135	11.25	0.63	0.456	0.005	(0.410)	0.451
136	11.33	0.63	0.456	0.005	(0.410)	0.451

137	11.42	0.63	0.456	0.005	(0.410)	0.451
138	11.50	0.63	0.456	0.005	(0.410)	0.451
139	11.58	0.57	0.408	0.005	(0.367)	0.403
140	11.67	0.57	0.408	0.005	(0.367)	0.403
141	11.75	0.57	0.408	0.005	(0.367)	0.403
142	11.83	0.60	0.432	0.005	(0.389)	0.427
143	11.92	0.60	0.432	0.005	(0.389)	0.427
144	12.00	0.60	0.432	0.005	(0.389)	0.427
145	12.08	0.83	0.600	0.005	(0.540)	0.595
146	12.17	0.83	0.600	0.005	(0.540)	0.595
147	12.25	0.83	0.600	0.005	(0.540)	0.595
148	12.33	0.87	0.624	0.005	(0.562)	0.619
149	12.42	0.87	0.624	0.005	(0.562)	0.619
150	12.50	0.87	0.624	0.004	(0.562)	0.619
151	12.58	0.93	0.672	0.004	(0.605)	0.668
152	12.67	0.93	0.672	0.004	(0.605)	0.668
153	12.75	0.93	0.672	0.004	(0.605)	0.668
154	12.83	0.97	0.696	0.004	(0.626)	0.692
155	12.92	0.97	0.696	0.004	(0.626)	0.692
156	13.00	0.97	0.696	0.004	(0.626)	0.692
157	13.08	1.13	0.816	0.004	(0.734)	0.812
158	13.17	1.13	0.816	0.004	(0.734)	0.812
159	13.25	1.13	0.816	0.004	(0.734)	0.812
160	13.33	1.13	0.816	0.004	(0.734)	0.812
161	13.42	1.13	0.816	0.004	(0.734)	0.812
162	13.50	1.13	0.816	0.004	(0.734)	0.812
163	13.58	0.77	0.552	0.004	(0.497)	0.548
164	13.67	0.77	0.552	0.004	(0.497)	0.548
165	13.75	0.77	0.552	0.004	(0.497)	0.548
166	13.83	0.77	0.552	0.004	(0.497)	0.548
167	13.92	0.77	0.552	0.004	(0.497)	0.548
168	14.00	0.77	0.552	0.004	(0.497)	0.548
169	14.08	0.90	0.648	0.004	(0.583)	0.644
170	14.17	0.90	0.648	0.004	(0.583)	0.644
171	14.25	0.90	0.648	0.004	(0.583)	0.644
172	14.33	0.87	0.624	0.004	(0.562)	0.620
173	14.42	0.87	0.624	0.004	(0.562)	0.620
174	14.50	0.87	0.624	0.004	(0.562)	0.620
175	14.58	0.87	0.624	0.004	(0.562)	0.620
176	14.67	0.87	0.624	0.004	(0.562)	0.620
177	14.75	0.87	0.624	0.004	(0.562)	0.620
178	14.83	0.83	0.600	0.004	(0.540)	0.596
179	14.92	0.83	0.600	0.004	(0.540)	0.596
180	15.00	0.83	0.600	0.004	(0.540)	0.596
181	15.08	0.80	0.576	0.004	(0.518)	0.572
182	15.17	0.80	0.576	0.004	(0.518)	0.572
183	15.25	0.80	0.576	0.004	(0.518)	0.572
184	15.33	0.77	0.552	0.004	(0.497)	0.548
185	15.42	0.77	0.552	0.004	(0.497)	0.548
186	15.50	0.77	0.552	0.004	(0.497)	0.548
187	15.58	0.63	0.456	0.004	(0.410)	0.452
188	15.67	0.63	0.456	0.004	(0.410)	0.452
189	15.75	0.63	0.456	0.004	(0.410)	0.452
190	15.83	0.63	0.456	0.004	(0.410)	0.452
191	15.92	0.63	0.456	0.004	(0.410)	0.452
192	16.00	0.63	0.456	0.004	(0.410)	0.452
193	16.08	0.13	0.096	0.004	(0.086)	0.092
194	16.17	0.13	0.096	0.004	(0.086)	0.092
195	16.25	0.13	0.096	0.004	(0.086)	0.092
196	16.33	0.13	0.096	0.004	(0.086)	0.092

197	16.42	0.13	0.096	0.004	(0.086)	0.092
198	16.50	0.13	0.096	0.004	(0.086)	0.092
199	16.58	0.10	0.072	0.004	(0.065)	0.068
200	16.67	0.10	0.072	0.003	(0.065)	0.069
201	16.75	0.10	0.072	0.003	(0.065)	0.069
202	16.83	0.10	0.072	0.003	(0.065)	0.069
203	16.92	0.10	0.072	0.003	(0.065)	0.069
204	17.00	0.10	0.072	0.003	(0.065)	0.069
205	17.08	0.17	0.120	0.003	(0.108)	0.117
206	17.17	0.17	0.120	0.003	(0.108)	0.117
207	17.25	0.17	0.120	0.003	(0.108)	0.117
208	17.33	0.17	0.120	0.003	(0.108)	0.117
209	17.42	0.17	0.120	0.003	(0.108)	0.117
210	17.50	0.17	0.120	0.003	(0.108)	0.117
211	17.58	0.17	0.120	0.003	(0.108)	0.117
212	17.67	0.17	0.120	0.003	(0.108)	0.117
213	17.75	0.17	0.120	0.003	(0.108)	0.117
214	17.83	0.13	0.096	0.003	(0.086)	0.093
215	17.92	0.13	0.096	0.003	(0.086)	0.093
216	18.00	0.13	0.096	0.003	(0.086)	0.093
217	18.08	0.13	0.096	0.003	(0.086)	0.093
218	18.17	0.13	0.096	0.003	(0.086)	0.093
219	18.25	0.13	0.096	0.003	(0.086)	0.093
220	18.33	0.13	0.096	0.003	(0.086)	0.093
221	18.42	0.13	0.096	0.003	(0.086)	0.093
222	18.50	0.13	0.096	0.003	(0.086)	0.093
223	18.58	0.10	0.072	0.003	(0.065)	0.069
224	18.67	0.10	0.072	0.003	(0.065)	0.069
225	18.75	0.10	0.072	0.003	(0.065)	0.069
226	18.83	0.07	0.048	0.003	(0.043)	0.045
227	18.92	0.07	0.048	0.003	(0.043)	0.045
228	19.00	0.07	0.048	0.003	(0.043)	0.045
229	19.08	0.10	0.072	0.003	(0.065)	0.069
230	19.17	0.10	0.072	0.003	(0.065)	0.069
231	19.25	0.10	0.072	0.003	(0.065)	0.069
232	19.33	0.13	0.096	0.003	(0.086)	0.093
233	19.42	0.13	0.096	0.003	(0.086)	0.093
234	19.50	0.13	0.096	0.003	(0.086)	0.093
235	19.58	0.10	0.072	0.003	(0.065)	0.069
236	19.67	0.10	0.072	0.003	(0.065)	0.069
237	19.75	0.10	0.072	0.003	(0.065)	0.069
238	19.83	0.07	0.048	0.003	(0.043)	0.045
239	19.92	0.07	0.048	0.003	(0.043)	0.045
240	20.00	0.07	0.048	0.003	(0.043)	0.045
241	20.08	0.10	0.072	0.003	(0.065)	0.069
242	20.17	0.10	0.072	0.003	(0.065)	0.069
243	20.25	0.10	0.072	0.003	(0.065)	0.069
244	20.33	0.10	0.072	0.003	(0.065)	0.069
245	20.42	0.10	0.072	0.003	(0.065)	0.069
246	20.50	0.10	0.072	0.003	(0.065)	0.069
247	20.58	0.10	0.072	0.003	(0.065)	0.069
248	20.67	0.10	0.072	0.003	(0.065)	0.069
249	20.75	0.10	0.072	0.003	(0.065)	0.069
250	20.83	0.07	0.048	0.003	(0.043)	0.045
251	20.92	0.07	0.048	0.003	(0.043)	0.045
252	21.00	0.07	0.048	0.003	(0.043)	0.045
253	21.08	0.10	0.072	0.003	(0.065)	0.069
254	21.17	0.10	0.072	0.003	(0.065)	0.069
255	21.25	0.10	0.072	0.003	(0.065)	0.069
256	21.33	0.07	0.048	0.003	(0.043)	0.045

257	21.42	0.07	0.048	0.003	(	0.043)	0.045
258	21.50	0.07	0.048	0.003	(	0.043)	0.045
259	21.58	0.10	0.072	0.003	(	0.065)	0.069
260	21.67	0.10	0.072	0.003	(	0.065)	0.069
261	21.75	0.10	0.072	0.003	(	0.065)	0.069
262	21.83	0.07	0.048	0.003	(	0.043)	0.045
263	21.92	0.07	0.048	0.003	(	0.043)	0.045
264	22.00	0.07	0.048	0.003	(	0.043)	0.045
265	22.08	0.10	0.072	0.003	(	0.065)	0.069
266	22.17	0.10	0.072	0.003	(	0.065)	0.069
267	22.25	0.10	0.072	0.003	(	0.065)	0.069
268	22.33	0.07	0.048	0.003	(	0.043)	0.045
269	22.42	0.07	0.048	0.003	(	0.043)	0.045
270	22.50	0.07	0.048	0.003	(	0.043)	0.045
271	22.58	0.07	0.048	0.003	(	0.043)	0.045
272	22.67	0.07	0.048	0.003	(	0.043)	0.045
273	22.75	0.07	0.048	0.003	(	0.043)	0.045
274	22.83	0.07	0.048	0.003	(	0.043)	0.045
275	22.92	0.07	0.048	0.003	(	0.043)	0.045
276	23.00	0.07	0.048	0.003	(	0.043)	0.045
277	23.08	0.07	0.048	0.003	(	0.043)	0.045
278	23.17	0.07	0.048	0.003	(	0.043)	0.045
279	23.25	0.07	0.048	0.003	(	0.043)	0.045
280	23.33	0.07	0.048	0.002	(	0.043)	0.046
281	23.42	0.07	0.048	0.002	(	0.043)	0.046
282	23.50	0.07	0.048	0.002	(	0.043)	0.046
283	23.58	0.07	0.048	0.002	(	0.043)	0.046
284	23.67	0.07	0.048	0.002	(	0.043)	0.046
285	23.75	0.07	0.048	0.002	(	0.043)	0.046
286	23.83	0.07	0.048	0.002	(	0.043)	0.046
287	23.92	0.07	0.048	0.002	(	0.043)	0.046
288	24.00	0.07	0.048	0.002	(	0.043)	0.046

(Loss Rate Not Used)

Sum = 100.0 Sum = 70.6

Flood volume = Effective rainfall 5.88(In)
times area 5.1(Ac.)/[(In)/(Ft.)] = 2.5(Ac.Ft)
Total soil loss = 0.12(In)
Total soil loss = 0.050(Ac.Ft)
Total rainfall = 6.00(In)
Flood volume = 108454.0 Cubic Feet
Total soil loss = 2187.3 Cubic Feet

Peak flow rate of this hydrograph = 4.158(CFS)

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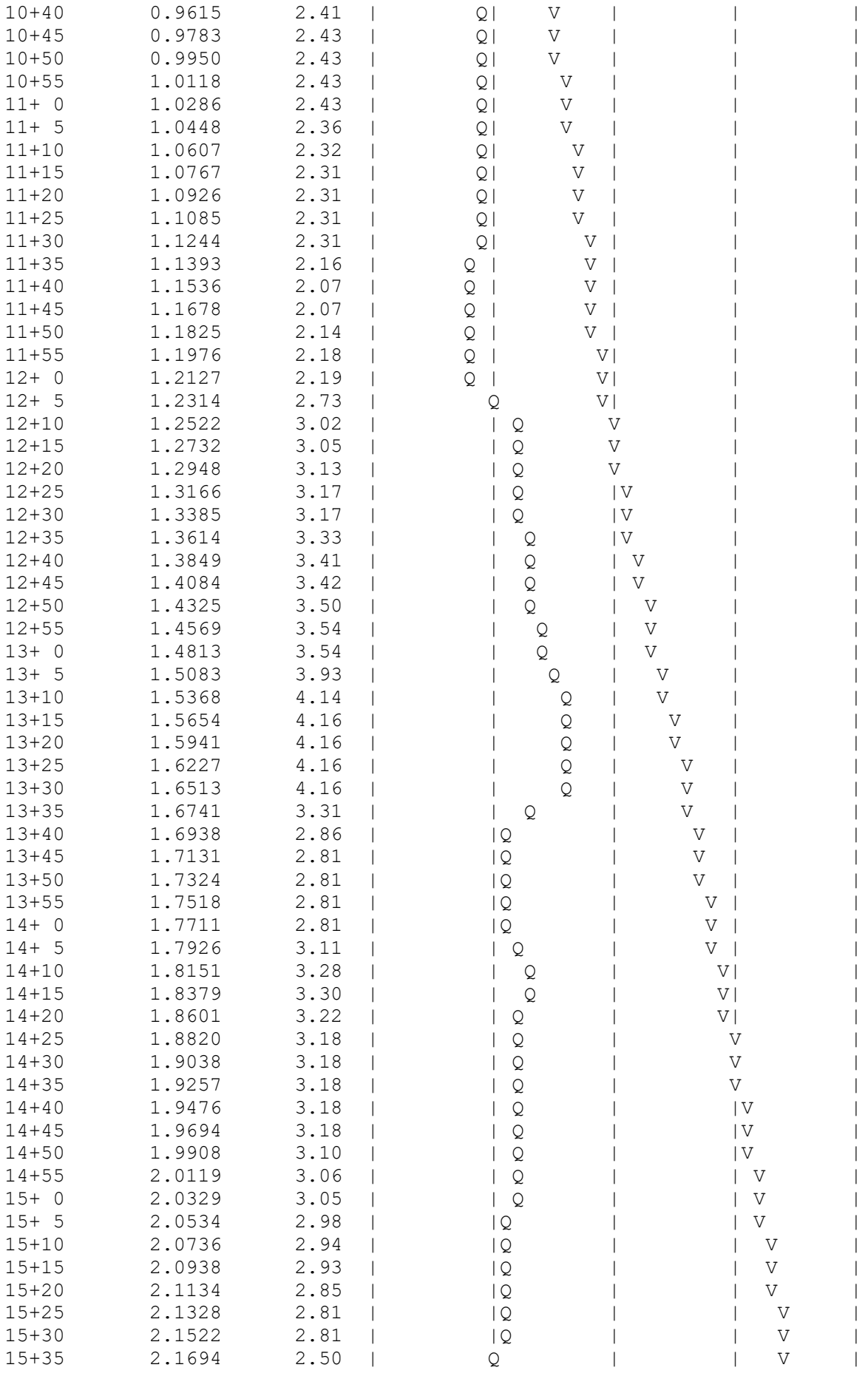
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0009	0.13	Q	|	|	|	|
0+10	0.0022	0.19	Q	|	|	|	|
0+15	0.0036	0.20	Q	|	|	|	|
0+20	0.0055	0.28	VQ	|	|	|	|
0+25	0.0077	0.32	VQ	|	|	|	|
0+30	0.0099	0.32	VQ	|	|	|	|
0+35	0.0122	0.32	VQ	|	|	|	|

0+40	0.0144	0.33	VQ	|	|	|	|
0+45	0.0167	0.33	VQ	|	|	|	|
0+50	0.0194	0.40	VQ	|	|	|	|
0+55	0.0225	0.44	VQ	|	|	|	|
1+ 0	0.0256	0.45	VQ	|	|	|	|
1+ 5	0.0281	0.37	VQ	|	|	|	|
1+10	0.0304	0.33	VQ	|	|	|	|
1+15	0.0327	0.33	VQ	|	|	|	|
1+20	0.0349	0.33	VQ	|	|	|	|
1+25	0.0372	0.33	VQ	|	|	|	|
1+30	0.0394	0.33	VQ	|	|	|	|
1+35	0.0417	0.33	VQ	|	|	|	|
1+40	0.0439	0.33	VQ	|	|	|	|
1+45	0.0462	0.33	VQ	|	|	|	|
1+50	0.0490	0.40	VQ	|	|	|	|
1+55	0.0520	0.45	VQ	|	|	|	|
2+ 0	0.0551	0.45	VQ	|	|	|	|
2+ 5	0.0582	0.45	VQ	|	|	|	|
2+10	0.0614	0.45	VQ	|	|	|	|
2+15	0.0645	0.45	|Q	|	|	|	|
2+20	0.0676	0.45	|Q	|	|	|	|
2+25	0.0707	0.45	|Q	|	|	|	|
2+30	0.0738	0.45	|Q	|	|	|	|
2+35	0.0774	0.53	|VQ	|	|	|	|
2+40	0.0814	0.57	|VQ	|	|	|	|
2+45	0.0853	0.58	|VQ	|	|	|	|
2+50	0.0893	0.58	|VQ	|	|	|	|
2+55	0.0932	0.58	|VQ	|	|	|	|
3+ 0	0.0972	0.58	|VQ	|	|	|	|
3+ 5	0.1012	0.58	|VQ	|	|	|	|
3+10	0.1051	0.58	|VQ	|	|	|	|
3+15	0.1091	0.58	|VQ	|	|	|	|
3+20	0.1131	0.58	|VQ	|	|	|	|
3+25	0.1170	0.58	|VQ	|	|	|	|
3+30	0.1210	0.58	|VQ	|	|	|	|
3+35	0.1250	0.58	| Q	|	|	|	|
3+40	0.1290	0.58	| Q	|	|	|	|
3+45	0.1329	0.58	| Q	|	|	|	|
3+50	0.1374	0.65	| Q	|	|	|	|
3+55	0.1422	0.70	| Q	|	|	|	|
4+ 0	0.1471	0.70	| Q	|	|	|	|
4+ 5	0.1519	0.70	| Q	|	|	|	|
4+10	0.1567	0.70	| Q	|	|	|	|
4+15	0.1615	0.70	| Q	|	|	|	|
4+20	0.1669	0.78	| VQ	|	|	|	|
4+25	0.1725	0.82	| VQ	|	|	|	|
4+30	0.1782	0.82	| VQ	|	|	|	|
4+35	0.1839	0.82	| VQ	|	|	|	|
4+40	0.1896	0.82	| Q	|	|	|	|
4+45	0.1953	0.82	| Q	|	|	|	|
4+50	0.2015	0.90	| Q	|	|	|	|
4+55	0.2080	0.94	| Q	|	|	|	|
5+ 0	0.2145	0.95	| Q	|	|	|	|
5+ 5	0.2200	0.79	| Q	|	|	|	|
5+10	0.2249	0.71	| QV	|	|	|	|
5+15	0.2297	0.70	| QV	|	|	|	|
5+20	0.2351	0.78	| Q	|	|	|	|
5+25	0.2407	0.82	| Q	|	|	|	|
5+30	0.2464	0.83	| Q	|	|	|	|
5+35	0.2527	0.90	| QV	|	|	|	|

5+40	0.2592	0.94	QV				
5+45	0.2657	0.95	QV				
5+50	0.2722	0.95	QV				
5+55	0.2788	0.95	QV				
6+ 0	0.2853	0.95	QV				
6+ 5	0.2924	1.03	Q				
6+10	0.2998	1.07	Q				
6+15	0.3072	1.07	Q				
6+20	0.3145	1.07	QV				
6+25	0.3219	1.07	QV				
6+30	0.3293	1.07	QV				
6+35	0.3373	1.15	QV				
6+40	0.3455	1.19	QV				
6+45	0.3537	1.20	QV				
6+50	0.3620	1.20	QV				
6+55	0.3702	1.20	QV				
7+ 0	0.3785	1.20	Q V				
7+ 5	0.3867	1.20	Q V				
7+10	0.3950	1.20	Q V				
7+15	0.4032	1.20	Q V				
7+20	0.4120	1.28	QV				
7+25	0.4211	1.32	QV				
7+30	0.4302	1.32	QV				
7+35	0.4398	1.40	Q V				
7+40	0.4497	1.44	Q V				
7+45	0.4597	1.44	Q V				
7+50	0.4702	1.52	QV				
7+55	0.4809	1.56	QV				
8+ 0	0.4917	1.57	QV				
8+ 5	0.5036	1.72	Q V				
8+10	0.5160	1.81	QV				
8+15	0.5285	1.81	QV				
8+20	0.5410	1.81	QV				
8+25	0.5535	1.81	QV				
8+30	0.5660	1.81	Q V				
8+35	0.5790	1.89	Q V				
8+40	0.5924	1.93	Q V				
8+45	0.6057	1.94	Q V				
8+50	0.6196	2.02	QV				
8+55	0.6337	2.06	Q V				
9+ 0	0.6479	2.06	Q V				
9+ 5	0.6632	2.22	Q V				
9+10	0.6790	2.30	QV				
9+15	0.6949	2.31	Q V				
9+20	0.7114	2.38	Q V				
9+25	0.7281	2.43	Q V				
9+30	0.7448	2.43	Q V				
9+35	0.7621	2.51	Q V				
9+40	0.7796	2.55	Q V				
9+45	0.7972	2.55	Q V				
9+50	0.8154	2.63	Q V				
9+55	0.8338	2.67	Q V				
10+ 0	0.8522	2.68	Q V				
10+ 5	0.8669	2.14	Q V				
10+10	0.8797	1.85	Q V				
10+15	0.8922	1.82	Q V				
10+20	0.9047	1.82	Q V				
10+25	0.9172	1.82	Q V				
10+30	0.9298	1.82	Q V				
10+35	0.9449	2.20	Q V				



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15+40       2.1854      2.33  |         Q|          |          |    V     |
15+45       2.2014      2.32  |         Q|          |          |    V     |
15+50       2.2174      2.32  |         Q|          |          |    V     |
15+55       2.2333      2.32  |         Q|          |          |    V     |
16+ 0       2.2493      2.32  |         Q|          |          |     V    |
16+ 5       2.2573      1.16  |    Q     |          |          |     V    |
16+10       2.2610      0.54  |  Q       |          |          |     V    |
16+15       2.2643      0.47  |Q         |          |          |     V    |
16+20       2.2675      0.47  |Q         |          |          |     V    |
16+25       2.2708      0.47  |Q         |          |          |     V    |
16+30       2.2740      0.47  |Q         |          |          |     V    |
16+35       2.2768      0.40  |Q         |          |          |     V    |
16+40       2.2792      0.36  |Q         |          |          |     V    |
16+45       2.2816      0.35  |Q         |          |          |     V    |
16+50       2.2841      0.35  |Q         |          |          |     V    |
16+55       2.2865      0.35  |Q         |          |          |     V    |
17+ 0       2.2889      0.35  |Q         |          |          |     V    |
17+ 5       2.2924      0.51  | Q        |          |          |     V    |
17+10       2.2964      0.59  | Q        |          |          |     V    |
17+15       2.3005      0.60  | Q        |          |          |     V    |
17+20       2.3047      0.60  | Q        |          |          |      V   |
17+25       2.3088      0.60  | Q        |          |          |      V   |
17+30       2.3129      0.60  | Q        |          |          |      V   |
17+35       2.3170      0.60  | Q        |          |          |      V   |
17+40       2.3211      0.60  | Q        |          |          |      V   |
17+45       2.3252      0.60  | Q        |          |          |      V   |
17+50       2.3288      0.52  | Q        |          |          |      V   |
17+55       2.3321      0.48  |Q         |          |          |      V   |
18+ 0       2.3354      0.48  |Q         |          |          |      V   |
18+ 5       2.3387      0.48  |Q         |          |          |      V   |
18+10       2.3420      0.48  |Q         |          |          |      V   |
18+15       2.3452      0.48  |Q         |          |          |      V   |
18+20       2.3485      0.48  |Q         |          |          |      V   |
18+25       2.3518      0.48  |Q         |          |          |      V   |
18+30       2.3551      0.48  |Q         |          |          |      V   |
18+35       2.3578      0.40  |Q         |          |          |      V   |
18+40       2.3603      0.36  |Q         |          |          |      V   |
18+45       2.3627      0.35  |Q         |          |          |      V   |
18+50       2.3646      0.28  |Q         |          |          |      V   |
18+55       2.3662      0.23  Q          |          |          |       V  |
19+ 0       2.3678      0.23  Q          |          |          |       V  |
19+ 5       2.3699      0.31  |Q         |          |          |       V  |
19+10       2.3723      0.35  |Q         |          |          |       V  |
19+15       2.3748      0.35  |Q         |          |          |       V  |
19+20       2.3777      0.43  |Q         |          |          |       V  |
19+25       2.3810      0.47  |Q         |          |          |       V  |
19+30       2.3843      0.48  |Q         |          |          |       V  |
19+35       2.3870      0.40  |Q         |          |          |       V  |
19+40       2.3895      0.36  |Q         |          |          |       V  |
19+45       2.3919      0.35  |Q         |          |          |       V  |
19+50       2.3938      0.28  |Q         |          |          |       V  |
19+55       2.3954      0.24  Q          |          |          |       V  |
20+ 0       2.3970      0.23  Q          |          |          |       V  |
20+ 5       2.3992      0.31  |Q         |          |          |       V  |
20+10       2.4016      0.35  |Q         |          |          |       V  |
20+15       2.4040      0.35  |Q         |          |          |       V  |
20+20       2.4064      0.35  |Q         |          |          |       V  |
20+25       2.4089      0.35  |Q         |          |          |       V  |
20+30       2.4113      0.35  |Q         |          |          |       V  |
20+35       2.4138      0.35  |Q         |          |          |       V  |
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20+40	2.4162	0.35	|Q	|	|	|	V |
20+45	2.4187	0.35	|Q	|	|	|	V |
20+50	2.4206	0.28	|Q	|	|	|	V |
20+55	2.4222	0.24	Q	|	|	|	V |
21+ 0	2.4238	0.23	Q	|	|	|	V |
21+ 5	2.4259	0.31	|Q	|	|	|	V |
21+10	2.4283	0.35	|Q	|	|	|	V|
21+15	2.4308	0.35	|Q	|	|	|	V|
21+20	2.4327	0.28	|Q	|	|	|	V|
21+25	2.4343	0.24	Q	|	|	|	V|
21+30	2.4359	0.23	Q	|	|	|	V|
21+35	2.4381	0.31	|Q	|	|	|	V|
21+40	2.4405	0.35	|Q	|	|	|	V|
21+45	2.4429	0.36	|Q	|	|	|	V|
21+50	2.4448	0.28	|Q	|	|	|	V|
21+55	2.4465	0.24	Q	|	|	|	V|
22+ 0	2.4481	0.23	Q	|	|	|	V|
22+ 5	2.4502	0.31	|Q	|	|	|	V|
22+10	2.4526	0.35	|Q	|	|	|	V|
22+15	2.4551	0.36	|Q	|	|	|	V|
22+20	2.4570	0.28	|Q	|	|	|	V|
22+25	2.4586	0.24	Q	|	|	|	V|
22+30	2.4602	0.23	Q	|	|	|	V|
22+35	2.4618	0.23	Q	|	|	|	V|
22+40	2.4634	0.23	Q	|	|	|	V|
22+45	2.4650	0.23	Q	|	|	|	V|
22+50	2.4666	0.23	Q	|	|	|	V|
22+55	2.4682	0.23	Q	|	|	|	V|
23+ 0	2.4698	0.23	Q	|	|	|	V|
23+ 5	2.4714	0.23	Q	|	|	|	V|
23+10	2.4730	0.23	Q	|	|	|	V|
23+15	2.4747	0.23	Q	|	|	|	V|
23+20	2.4763	0.23	Q	|	|	|	V|
23+25	2.4779	0.23	Q	|	|	|	V|
23+30	2.4795	0.23	Q	|	|	|	V|
23+35	2.4811	0.23	Q	|	|	|	V|
23+40	2.4827	0.23	Q	|	|	|	V|
23+45	2.4843	0.23	Q	|	|	|	V|
23+50	2.4859	0.23	Q	|	|	|	V|
23+55	2.4875	0.23	Q	|	|	|	V|
24+ 0	2.4891	0.23	Q	|	|	|	V|
24+ 5	2.4897	0.09	Q	|	|	|	V|
24+10	2.4898	0.01	Q	|	|	|	V|

U n i t H y d r o g r a p h A n a l y s i s

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Study date 05/07/25 File: 939pr100b1100.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6414

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

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fleetwood pr 100yr area 2

DMA - 2

Drainage Area = 1.94(Ac.) = 0.003 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 1.94(Ac.) = 0.003 Sq. Mi.
Length along longest watercourse = 272.00(Ft.)
Length along longest watercourse measured to centroid = 129.00(Ft.)
Length along longest watercourse = 0.052 Mi.
Length along longest watercourse measured to centroid = 0.024 Mi.
Difference in elevation = 4.35(Ft.)
Slope along watercourse = 84.4412 Ft./Mi.
Average Manning's 'N' = 0.013
Lag time = 0.011 Hr.
Lag time = 0.64 Min.
25% of lag time = 0.16 Min.
40% of lag time = 0.25 Min.
Unit time = 5.00 Min.
Duration of storm = 1 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
1.94	0.55	1.07

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
1.94	1.20	2.33

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 0.550(In)
Area Averaged 100-Year Rainfall = 1.200(In)

Point rain (area averaged) = 1.200(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 1.200(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
1.940	95.00	0.900

Total Area Entered = 1.94(Ac.)

RI AMC2	RI AMC-3	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
95.0	98.0	0.026	0.900	0.005	1.000	0.005
					Sum (F) =	0.005

Area averaged mean soil loss (F) (In/Hr) = 0.005
Minimum soil loss rate ((In/Hr)) = 0.002
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.900

Slope of intensity-duration curve for a 1 hour storm =0.5500

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	784.786	80.813	1.580
2	0.167	1569.571	19.187	0.375
		Sum = 100.000	Sum=	1.955

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	3.30	0.475	0.005	(0.428)	0.470
2	0.17	4.20	0.605	0.005	(0.544)	0.600
3	0.25	4.40	0.634	0.005	(0.570)	0.629
4	0.33	4.80	0.691	0.005	(0.622)	0.686
5	0.42	5.20	0.749	0.005	(0.674)	0.744
6	0.50	6.20	0.893	0.005	(0.804)	0.888
7	0.58	6.80	0.979	0.005	(0.881)	0.974
8	0.67	8.80	1.267	0.005	(1.140)	1.262
9	0.75	13.90	2.002	0.005	(1.801)	1.997
10	0.83	31.40	4.522	0.005	(4.069)	4.517
11	0.92	7.20	1.037	0.005	(0.933)	1.032
12	1.00	3.80	0.547	0.005	(0.492)	0.542
	(Loss Rate Not Used)					
Sum =	100.0				Sum =	14.3

Flood volume = Effective rainfall 1.20(In)

```
 times area       1.9(Ac.)/[(In)/(Ft.)] =       0.2(Ac.Ft)
Total soil loss =      0.00(In)
Total soil loss =     0.001(Ac.Ft)
Total rainfall =      1.20(In)
Flood volume =        8415.7 Cubic Feet
Total soil loss =          34.8 Cubic Feet
---------------------------------------------------------------------
 Peak flow rate of this hydrograph =      7.889(CFS)
---------------------------------------------------------------------
+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                    1 - H O U R    S T O R M
                 R u n o f f      H y d r o g r a p h
---------------------------------------------------------------------
             Hydrograph in   5   Minute intervals ((CFS))

---------------------------------------------------------------------
```

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0051	0.74	VQ				
0+10	0.0129	1.12	V Q				
0+15	0.0213	1.22	Q				
0+20	0.0304	1.32	QV				
0+25	0.0402	1.43	Q V				
0+30	0.0518	1.68	Q V				
0+35	0.0647	1.87	Q | V				
0+40	0.0810	2.36	Q| V				
0+45	0.1060	3.63	| Q		V		
0+50	0.1603	7.89	|		|	Q V	
0+55	0.1832	3.33	| Q		|	V	
1+ 0	0.1918	1.24	Q		|	V	
1+ 5	0.1932	0.20	Q		|	V	

U n i t H y d r o g r a p h A n a l y s i s

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Study date 05/07/25 File: 939pr100c24100.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6414

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

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fleetwood pr 100 area 3

DMA - 3

Drainage Area = 2.79(Ac.) = 0.004 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.79(Ac.) = 0.004 Sq. Mi.
Length along longest watercourse = 189.00(Ft.)
Length along longest watercourse measured to centroid = 50.00(Ft.)
Length along longest watercourse = 0.036 Mi.
Length along longest watercourse measured to centroid = 0.009 Mi.
Difference in elevation = 11.34(Ft.)
Slope along watercourse = 316.8000 Ft./Mi.
Average Manning's 'N' = 0.013
Lag time = 0.005 Hr.
Lag time = 0.30 Min.
25% of lag time = 0.08 Min.
40% of lag time = 0.12 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
2.79	2.00	5.58

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
2.79	6.00	16.74

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 2.000(In)
Area Averaged 100-Year Rainfall = 6.000(In)

Point rain (area averaged) = 6.000(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 6.000(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
2.790	62.00	0.000

Total Area Entered = 2.79(Ac.)

RI AMC2	RI AMC-3	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
62.0	79.6	0.249	0.000	0.249	1.000	0.249
					Sum (F) =	0.249

Area averaged mean soil loss (F) (In/Hr) = 0.249
Minimum soil loss rate ((In/Hr)) = 0.124
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.900

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1 0.083	1660.929	100.000	2.812
		Sum = 100.000	Sum= 2.812

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.07	0.048	(0.441)	0.043	0.005
2	0.17	0.07	0.048	(0.439)	0.043	0.005
3	0.25	0.07	0.048	(0.438)	0.043	0.005
4	0.33	0.10	0.072	(0.436)	0.065	0.007
5	0.42	0.10	0.072	(0.434)	0.065	0.007
6	0.50	0.10	0.072	(0.432)	0.065	0.007
7	0.58	0.10	0.072	(0.431)	0.065	0.007
8	0.67	0.10	0.072	(0.429)	0.065	0.007
9	0.75	0.10	0.072	(0.427)	0.065	0.007
10	0.83	0.13	0.096	(0.426)	0.086	0.010
11	0.92	0.13	0.096	(0.424)	0.086	0.010
12	1.00	0.13	0.096	(0.422)	0.086	0.010
13	1.08	0.10	0.072	(0.421)	0.065	0.007
14	1.17	0.10	0.072	(0.419)	0.065	0.007
15	1.25	0.10	0.072	(0.417)	0.065	0.007
16	1.33	0.10	0.072	(0.416)	0.065	0.007
17	1.42	0.10	0.072	(0.414)	0.065	0.007
18	1.50	0.10	0.072	(0.412)	0.065	0.007

19	1.58	0.10	0.072	(0.411)	0.065	0.007
20	1.67	0.10	0.072	(0.409)	0.065	0.007
21	1.75	0.10	0.072	(0.407)	0.065	0.007
22	1.83	0.13	0.096	(0.406)	0.086	0.010
23	1.92	0.13	0.096	(0.404)	0.086	0.010
24	2.00	0.13	0.096	(0.403)	0.086	0.010
25	2.08	0.13	0.096	(0.401)	0.086	0.010
26	2.17	0.13	0.096	(0.399)	0.086	0.010
27	2.25	0.13	0.096	(0.398)	0.086	0.010
28	2.33	0.13	0.096	(0.396)	0.086	0.010
29	2.42	0.13	0.096	(0.394)	0.086	0.010
30	2.50	0.13	0.096	(0.393)	0.086	0.010
31	2.58	0.17	0.120	(0.391)	0.108	0.012
32	2.67	0.17	0.120	(0.390)	0.108	0.012
33	2.75	0.17	0.120	(0.388)	0.108	0.012
34	2.83	0.17	0.120	(0.386)	0.108	0.012
35	2.92	0.17	0.120	(0.385)	0.108	0.012
36	3.00	0.17	0.120	(0.383)	0.108	0.012
37	3.08	0.17	0.120	(0.382)	0.108	0.012
38	3.17	0.17	0.120	(0.380)	0.108	0.012
39	3.25	0.17	0.120	(0.378)	0.108	0.012
40	3.33	0.17	0.120	(0.377)	0.108	0.012
41	3.42	0.17	0.120	(0.375)	0.108	0.012
42	3.50	0.17	0.120	(0.374)	0.108	0.012
43	3.58	0.17	0.120	(0.372)	0.108	0.012
44	3.67	0.17	0.120	(0.371)	0.108	0.012
45	3.75	0.17	0.120	(0.369)	0.108	0.012
46	3.83	0.20	0.144	(0.368)	0.130	0.014
47	3.92	0.20	0.144	(0.366)	0.130	0.014
48	4.00	0.20	0.144	(0.364)	0.130	0.014
49	4.08	0.20	0.144	(0.363)	0.130	0.014
50	4.17	0.20	0.144	(0.361)	0.130	0.014
51	4.25	0.20	0.144	(0.360)	0.130	0.014
52	4.33	0.23	0.168	(0.358)	0.151	0.017
53	4.42	0.23	0.168	(0.357)	0.151	0.017
54	4.50	0.23	0.168	(0.355)	0.151	0.017
55	4.58	0.23	0.168	(0.354)	0.151	0.017
56	4.67	0.23	0.168	(0.352)	0.151	0.017
57	4.75	0.23	0.168	(0.351)	0.151	0.017
58	4.83	0.27	0.192	(0.349)	0.173	0.019
59	4.92	0.27	0.192	(0.348)	0.173	0.019
60	5.00	0.27	0.192	(0.346)	0.173	0.019
61	5.08	0.20	0.144	(0.345)	0.130	0.014
62	5.17	0.20	0.144	(0.343)	0.130	0.014
63	5.25	0.20	0.144	(0.342)	0.130	0.014
64	5.33	0.23	0.168	(0.340)	0.151	0.017
65	5.42	0.23	0.168	(0.339)	0.151	0.017
66	5.50	0.23	0.168	(0.337)	0.151	0.017
67	5.58	0.27	0.192	(0.336)	0.173	0.019
68	5.67	0.27	0.192	(0.334)	0.173	0.019
69	5.75	0.27	0.192	(0.333)	0.173	0.019
70	5.83	0.27	0.192	(0.331)	0.173	0.019
71	5.92	0.27	0.192	(0.330)	0.173	0.019
72	6.00	0.27	0.192	(0.328)	0.173	0.019
73	6.08	0.30	0.216	(0.327)	0.194	0.022
74	6.17	0.30	0.216	(0.325)	0.194	0.022
75	6.25	0.30	0.216	(0.324)	0.194	0.022
76	6.33	0.30	0.216	(0.322)	0.194	0.022
77	6.42	0.30	0.216	(0.321)	0.194	0.022
78	6.50	0.30	0.216	(0.320)	0.194	0.022

79	6.58	0.33	0.240	(0.318)	0.216	0.024
80	6.67	0.33	0.240	(0.317)	0.216	0.024
81	6.75	0.33	0.240	(0.315)	0.216	0.024
82	6.83	0.33	0.240	(0.314)	0.216	0.024
83	6.92	0.33	0.240	(0.312)	0.216	0.024
84	7.00	0.33	0.240	(0.311)	0.216	0.024
85	7.08	0.33	0.240	(0.310)	0.216	0.024
86	7.17	0.33	0.240	(0.308)	0.216	0.024
87	7.25	0.33	0.240	(0.307)	0.216	0.024
88	7.33	0.37	0.264	(0.305)	0.238	0.026
89	7.42	0.37	0.264	(0.304)	0.238	0.026
90	7.50	0.37	0.264	(0.303)	0.238	0.026
91	7.58	0.40	0.288	(0.301)	0.259	0.029
92	7.67	0.40	0.288	(0.300)	0.259	0.029
93	7.75	0.40	0.288	(0.298)	0.259	0.029
94	7.83	0.43	0.312	(0.297)	0.281	0.031
95	7.92	0.43	0.312	(0.296)	0.281	0.031
96	8.00	0.43	0.312	(0.294)	0.281	0.031
97	8.08	0.50	0.360	0.293	(0.324)	0.067
98	8.17	0.50	0.360	0.292	(0.324)	0.068
99	8.25	0.50	0.360	0.290	(0.324)	0.070
100	8.33	0.50	0.360	0.289	(0.324)	0.071
101	8.42	0.50	0.360	0.288	(0.324)	0.072
102	8.50	0.50	0.360	0.286	(0.324)	0.074
103	8.58	0.53	0.384	0.285	(0.346)	0.099
104	8.67	0.53	0.384	0.284	(0.346)	0.100
105	8.75	0.53	0.384	0.282	(0.346)	0.102
106	8.83	0.57	0.408	0.281	(0.367)	0.127
107	8.92	0.57	0.408	0.280	(0.367)	0.128
108	9.00	0.57	0.408	0.278	(0.367)	0.130
109	9.08	0.63	0.456	0.277	(0.410)	0.179
110	9.17	0.63	0.456	0.276	(0.410)	0.180
111	9.25	0.63	0.456	0.274	(0.410)	0.182
112	9.33	0.67	0.480	0.273	(0.432)	0.207
113	9.42	0.67	0.480	0.272	(0.432)	0.208
114	9.50	0.67	0.480	0.270	(0.432)	0.210
115	9.58	0.70	0.504	0.269	(0.454)	0.235
116	9.67	0.70	0.504	0.268	(0.454)	0.236
117	9.75	0.70	0.504	0.266	(0.454)	0.238
118	9.83	0.73	0.528	0.265	(0.475)	0.263
119	9.92	0.73	0.528	0.264	(0.475)	0.264
120	10.00	0.73	0.528	0.263	(0.475)	0.265
121	10.08	0.50	0.360	0.261	(0.324)	0.099
122	10.17	0.50	0.360	0.260	(0.324)	0.100
123	10.25	0.50	0.360	0.259	(0.324)	0.101
124	10.33	0.50	0.360	0.258	(0.324)	0.102
125	10.42	0.50	0.360	0.256	(0.324)	0.104
126	10.50	0.50	0.360	0.255	(0.324)	0.105
127	10.58	0.67	0.480	0.254	(0.432)	0.226
128	10.67	0.67	0.480	0.253	(0.432)	0.227
129	10.75	0.67	0.480	0.251	(0.432)	0.229
130	10.83	0.67	0.480	0.250	(0.432)	0.230
131	10.92	0.67	0.480	0.249	(0.432)	0.231
132	11.00	0.67	0.480	0.248	(0.432)	0.232
133	11.08	0.63	0.456	0.246	(0.410)	0.210
134	11.17	0.63	0.456	0.245	(0.410)	0.211
135	11.25	0.63	0.456	0.244	(0.410)	0.212
136	11.33	0.63	0.456	0.243	(0.410)	0.213
137	11.42	0.63	0.456	0.242	(0.410)	0.214
138	11.50	0.63	0.456	0.240	(0.410)	0.216

139	11.58	0.57	0.408	0.239	(0.367)	0.169
140	11.67	0.57	0.408	0.238	(0.367)	0.170
141	11.75	0.57	0.408	0.237	(0.367)	0.171
142	11.83	0.60	0.432	0.236	(0.389)	0.196
143	11.92	0.60	0.432	0.235	(0.389)	0.197
144	12.00	0.60	0.432	0.233	(0.389)	0.199
145	12.08	0.83	0.600	0.232	(0.540)	0.368
146	12.17	0.83	0.600	0.231	(0.540)	0.369
147	12.25	0.83	0.600	0.230	(0.540)	0.370
148	12.33	0.87	0.624	0.229	(0.562)	0.395
149	12.42	0.87	0.624	0.228	(0.562)	0.396
150	12.50	0.87	0.624	0.226	(0.562)	0.398
151	12.58	0.93	0.672	0.225	(0.605)	0.447
152	12.67	0.93	0.672	0.224	(0.605)	0.448
153	12.75	0.93	0.672	0.223	(0.605)	0.449
154	12.83	0.97	0.696	0.222	(0.626)	0.474
155	12.92	0.97	0.696	0.221	(0.626)	0.475
156	13.00	0.97	0.696	0.220	(0.626)	0.476
157	13.08	1.13	0.816	0.219	(0.734)	0.597
158	13.17	1.13	0.816	0.217	(0.734)	0.599
159	13.25	1.13	0.816	0.216	(0.734)	0.600
160	13.33	1.13	0.816	0.215	(0.734)	0.601
161	13.42	1.13	0.816	0.214	(0.734)	0.602
162	13.50	1.13	0.816	0.213	(0.734)	0.603
163	13.58	0.77	0.552	0.212	(0.497)	0.340
164	13.67	0.77	0.552	0.211	(0.497)	0.341
165	13.75	0.77	0.552	0.210	(0.497)	0.342
166	13.83	0.77	0.552	0.209	(0.497)	0.343
167	13.92	0.77	0.552	0.208	(0.497)	0.344
168	14.00	0.77	0.552	0.207	(0.497)	0.345
169	14.08	0.90	0.648	0.206	(0.583)	0.442
170	14.17	0.90	0.648	0.204	(0.583)	0.444
171	14.25	0.90	0.648	0.203	(0.583)	0.445
172	14.33	0.87	0.624	0.202	(0.562)	0.422
173	14.42	0.87	0.624	0.201	(0.562)	0.423
174	14.50	0.87	0.624	0.200	(0.562)	0.424
175	14.58	0.87	0.624	0.199	(0.562)	0.425
176	14.67	0.87	0.624	0.198	(0.562)	0.426
177	14.75	0.87	0.624	0.197	(0.562)	0.427
178	14.83	0.83	0.600	0.196	(0.540)	0.404
179	14.92	0.83	0.600	0.195	(0.540)	0.405
180	15.00	0.83	0.600	0.194	(0.540)	0.406
181	15.08	0.80	0.576	0.193	(0.518)	0.383
182	15.17	0.80	0.576	0.192	(0.518)	0.384
183	15.25	0.80	0.576	0.191	(0.518)	0.385
184	15.33	0.77	0.552	0.190	(0.497)	0.362
185	15.42	0.77	0.552	0.189	(0.497)	0.363
186	15.50	0.77	0.552	0.188	(0.497)	0.364
187	15.58	0.63	0.456	0.187	(0.410)	0.269
188	15.67	0.63	0.456	0.186	(0.410)	0.270
189	15.75	0.63	0.456	0.185	(0.410)	0.271
190	15.83	0.63	0.456	0.185	(0.410)	0.271
191	15.92	0.63	0.456	0.184	(0.410)	0.272
192	16.00	0.63	0.456	0.183	(0.410)	0.273
193	16.08	0.13	0.096	(0.182)	0.086	0.010
194	16.17	0.13	0.096	(0.181)	0.086	0.010
195	16.25	0.13	0.096	(0.180)	0.086	0.010
196	16.33	0.13	0.096	(0.179)	0.086	0.010
197	16.42	0.13	0.096	(0.178)	0.086	0.010
198	16.50	0.13	0.096	(0.177)	0.086	0.010

199	16.58	0.10	0.072	(0.176)	0.065	0.007
200	16.67	0.10	0.072	(0.175)	0.065	0.007
201	16.75	0.10	0.072	(0.174)	0.065	0.007
202	16.83	0.10	0.072	(0.174)	0.065	0.007
203	16.92	0.10	0.072	(0.173)	0.065	0.007
204	17.00	0.10	0.072	(0.172)	0.065	0.007
205	17.08	0.17	0.120	(0.171)	0.108	0.012
206	17.17	0.17	0.120	(0.170)	0.108	0.012
207	17.25	0.17	0.120	(0.169)	0.108	0.012
208	17.33	0.17	0.120	(0.168)	0.108	0.012
209	17.42	0.17	0.120	(0.168)	0.108	0.012
210	17.50	0.17	0.120	(0.167)	0.108	0.012
211	17.58	0.17	0.120	(0.166)	0.108	0.012
212	17.67	0.17	0.120	(0.165)	0.108	0.012
213	17.75	0.17	0.120	(0.164)	0.108	0.012
214	17.83	0.13	0.096	(0.163)	0.086	0.010
215	17.92	0.13	0.096	(0.163)	0.086	0.010
216	18.00	0.13	0.096	(0.162)	0.086	0.010
217	18.08	0.13	0.096	(0.161)	0.086	0.010
218	18.17	0.13	0.096	(0.160)	0.086	0.010
219	18.25	0.13	0.096	(0.159)	0.086	0.010
220	18.33	0.13	0.096	(0.159)	0.086	0.010
221	18.42	0.13	0.096	(0.158)	0.086	0.010
222	18.50	0.13	0.096	(0.157)	0.086	0.010
223	18.58	0.10	0.072	(0.156)	0.065	0.007
224	18.67	0.10	0.072	(0.156)	0.065	0.007
225	18.75	0.10	0.072	(0.155)	0.065	0.007
226	18.83	0.07	0.048	(0.154)	0.043	0.005
227	18.92	0.07	0.048	(0.153)	0.043	0.005
228	19.00	0.07	0.048	(0.153)	0.043	0.005
229	19.08	0.10	0.072	(0.152)	0.065	0.007
230	19.17	0.10	0.072	(0.151)	0.065	0.007
231	19.25	0.10	0.072	(0.150)	0.065	0.007
232	19.33	0.13	0.096	(0.150)	0.086	0.010
233	19.42	0.13	0.096	(0.149)	0.086	0.010
234	19.50	0.13	0.096	(0.148)	0.086	0.010
235	19.58	0.10	0.072	(0.148)	0.065	0.007
236	19.67	0.10	0.072	(0.147)	0.065	0.007
237	19.75	0.10	0.072	(0.146)	0.065	0.007
238	19.83	0.07	0.048	(0.146)	0.043	0.005
239	19.92	0.07	0.048	(0.145)	0.043	0.005
240	20.00	0.07	0.048	(0.144)	0.043	0.005
241	20.08	0.10	0.072	(0.144)	0.065	0.007
242	20.17	0.10	0.072	(0.143)	0.065	0.007
243	20.25	0.10	0.072	(0.143)	0.065	0.007
244	20.33	0.10	0.072	(0.142)	0.065	0.007
245	20.42	0.10	0.072	(0.141)	0.065	0.007
246	20.50	0.10	0.072	(0.141)	0.065	0.007
247	20.58	0.10	0.072	(0.140)	0.065	0.007
248	20.67	0.10	0.072	(0.140)	0.065	0.007
249	20.75	0.10	0.072	(0.139)	0.065	0.007
250	20.83	0.07	0.048	(0.138)	0.043	0.005
251	20.92	0.07	0.048	(0.138)	0.043	0.005
252	21.00	0.07	0.048	(0.137)	0.043	0.005
253	21.08	0.10	0.072	(0.137)	0.065	0.007
254	21.17	0.10	0.072	(0.136)	0.065	0.007
255	21.25	0.10	0.072	(0.136)	0.065	0.007
256	21.33	0.07	0.048	(0.135)	0.043	0.005
257	21.42	0.07	0.048	(0.135)	0.043	0.005
258	21.50	0.07	0.048	(0.134)	0.043	0.005

259	21.58	0.10	0.072	(0.134)	0.065	0.007
260	21.67	0.10	0.072	(0.133)	0.065	0.007
261	21.75	0.10	0.072	(0.133)	0.065	0.007
262	21.83	0.07	0.048	(0.132)	0.043	0.005
263	21.92	0.07	0.048	(0.132)	0.043	0.005
264	22.00	0.07	0.048	(0.131)	0.043	0.005
265	22.08	0.10	0.072	(0.131)	0.065	0.007
266	22.17	0.10	0.072	(0.130)	0.065	0.007
267	22.25	0.10	0.072	(0.130)	0.065	0.007
268	22.33	0.07	0.048	(0.130)	0.043	0.005
269	22.42	0.07	0.048	(0.129)	0.043	0.005
270	22.50	0.07	0.048	(0.129)	0.043	0.005
271	22.58	0.07	0.048	(0.128)	0.043	0.005
272	22.67	0.07	0.048	(0.128)	0.043	0.005
273	22.75	0.07	0.048	(0.128)	0.043	0.005
274	22.83	0.07	0.048	(0.127)	0.043	0.005
275	22.92	0.07	0.048	(0.127)	0.043	0.005
276	23.00	0.07	0.048	(0.127)	0.043	0.005
277	23.08	0.07	0.048	(0.127)	0.043	0.005
278	23.17	0.07	0.048	(0.126)	0.043	0.005
279	23.25	0.07	0.048	(0.126)	0.043	0.005
280	23.33	0.07	0.048	(0.126)	0.043	0.005
281	23.42	0.07	0.048	(0.125)	0.043	0.005
282	23.50	0.07	0.048	(0.125)	0.043	0.005
283	23.58	0.07	0.048	(0.125)	0.043	0.005
284	23.67	0.07	0.048	(0.125)	0.043	0.005
285	23.75	0.07	0.048	(0.125)	0.043	0.005
286	23.83	0.07	0.048	(0.125)	0.043	0.005
287	23.92	0.07	0.048	(0.124)	0.043	0.005
288	24.00	0.07	0.048	(0.124)	0.043	0.005

(Loss Rate Not Used)

Sum = 100.0 Sum = 30.0

Flood volume = Effective rainfall 2.50(In)
times area 2.8(Ac.)/[(In)/(Ft.)] = 0.6(Ac.Ft)
Total soil loss = 3.50(In)
Total soil loss = 0.814(Ac.Ft)
Total rainfall = 6.00(In)
Flood volume = 25306.9 Cubic Feet
Total soil loss = 35459.0 Cubic Feet

Peak flow rate of this hydrograph = 1.696(CFS)

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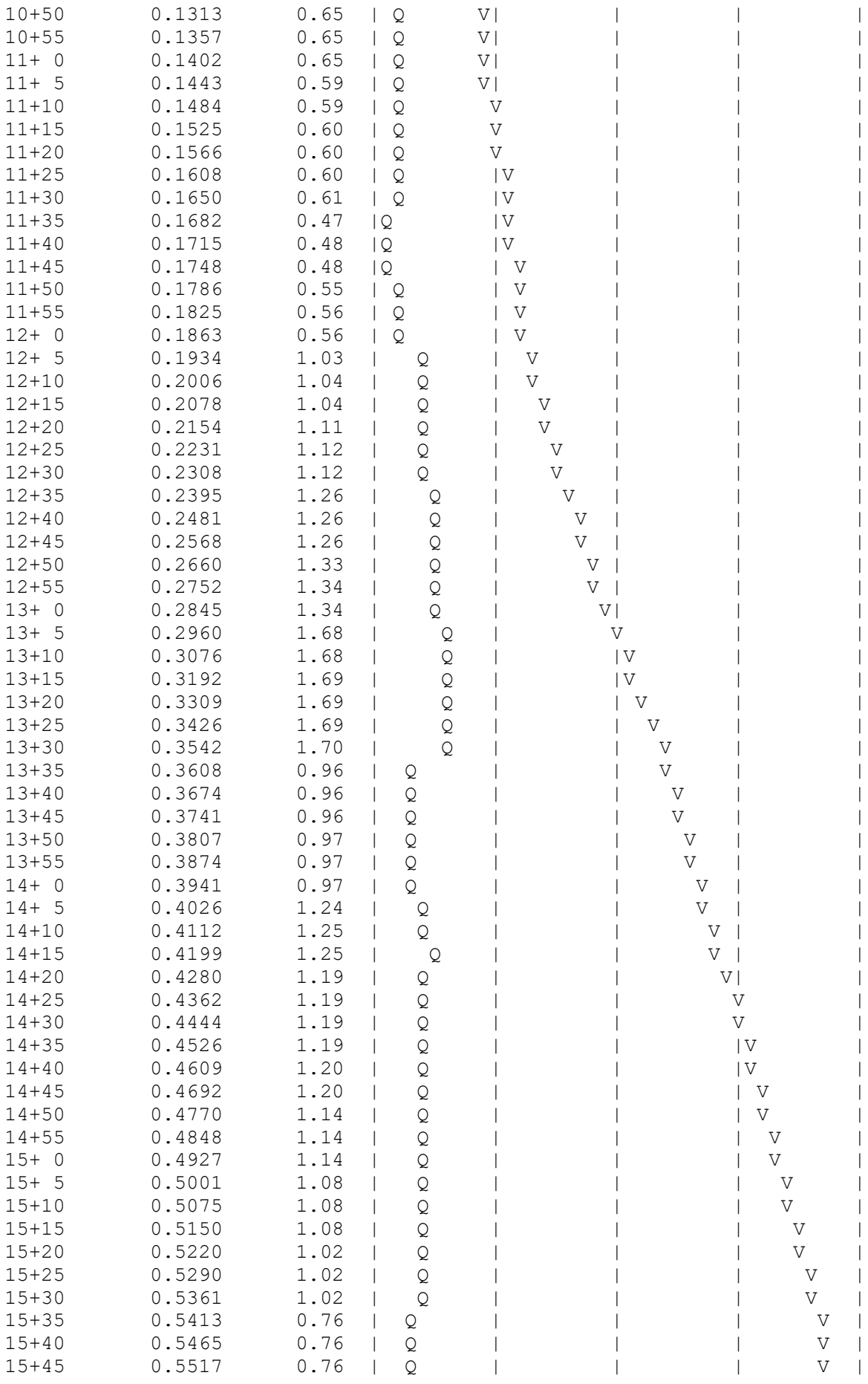
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0001	0.01	Q	|	|	|	|
0+10	0.0002	0.01	Q	|	|	|	|
0+15	0.0003	0.01	Q	|	|	|	|
0+20	0.0004	0.02	Q	|	|	|	|
0+25	0.0006	0.02	Q	|	|	|	|
0+30	0.0007	0.02	Q	|	|	|	|
0+35	0.0008	0.02	Q	|	|	|	|
0+40	0.0010	0.02	Q	|	|	|	|
0+45	0.0011	0.02	Q	|	|	|	|

0+50	0.0013	0.03	Q				
0+55	0.0015	0.03	Q				
1+ 0	0.0017	0.03	Q				
1+ 5	0.0018	0.02	Q				
1+10	0.0020	0.02	Q				
1+15	0.0021	0.02	Q				
1+20	0.0022	0.02	Q				
1+25	0.0024	0.02	Q				
1+30	0.0025	0.02	Q				
1+35	0.0027	0.02	Q				
1+40	0.0028	0.02	Q				
1+45	0.0029	0.02	Q				
1+50	0.0031	0.03	Q				
1+55	0.0033	0.03	Q				
2+ 0	0.0035	0.03	Q				
2+ 5	0.0037	0.03	Q				
2+10	0.0039	0.03	Q				
2+15	0.0040	0.03	Q				
2+20	0.0042	0.03	Q				
2+25	0.0044	0.03	Q				
2+30	0.0046	0.03	Q				
2+35	0.0048	0.03	Q				
2+40	0.0051	0.03	Q				
2+45	0.0053	0.03	Q				
2+50	0.0055	0.03	Q				
2+55	0.0058	0.03	Q				
3+ 0	0.0060	0.03	Q				
3+ 5	0.0062	0.03	Q				
3+10	0.0065	0.03	Q				
3+15	0.0067	0.03	Q				
3+20	0.0069	0.03	Q				
3+25	0.0072	0.03	Q				
3+30	0.0074	0.03	Q				
3+35	0.0076	0.03	Q				
3+40	0.0079	0.03	Q				
3+45	0.0081	0.03	Q				
3+50	0.0084	0.04	Q				
3+55	0.0086	0.04	Q				
4+ 0	0.0089	0.04	Q				
4+ 5	0.0092	0.04	Q				
4+10	0.0095	0.04	Q				
4+15	0.0098	0.04	Q				
4+20	0.0101	0.05	Q				
4+25	0.0104	0.05	Q				
4+30	0.0107	0.05	Q				
4+35	0.0111	0.05	Q				
4+40	0.0114	0.05	Q				
4+45	0.0117	0.05	Q				
4+50	0.0121	0.05	Q				
4+55	0.0125	0.05	Q				
5+ 0	0.0128	0.05	Q				
5+ 5	0.0131	0.04	Q				
5+10	0.0134	0.04	Q				
5+15	0.0137	0.04	Q				
5+20	0.0140	0.05	Q				
5+25	0.0143	0.05	Q				
5+30	0.0146	0.05	QV				
5+35	0.0150	0.05	QV				
5+40	0.0154	0.05	QV				
5+45	0.0158	0.05	QV				

5+50	0.0161	0.05	QV	|	|	|	|
5+55	0.0165	0.05	QV	|	|	|	|
6+ 0	0.0169	0.05	QV	|	|	|	|
6+ 5	0.0173	0.06	QV	|	|	|	|
6+10	0.0177	0.06	QV	|	|	|	|
6+15	0.0181	0.06	QV	|	|	|	|
6+20	0.0186	0.06	QV	|	|	|	|
6+25	0.0190	0.06	QV	|	|	|	|
6+30	0.0194	0.06	QV	|	|	|	|
6+35	0.0199	0.07	QV	|	|	|	|
6+40	0.0203	0.07	QV	|	|	|	|
6+45	0.0208	0.07	QV	|	|	|	|
6+50	0.0213	0.07	QV	|	|	|	|
6+55	0.0217	0.07	QV	|	|	|	|
7+ 0	0.0222	0.07	QV	|	|	|	|
7+ 5	0.0226	0.07	QV	|	|	|	|
7+10	0.0231	0.07	QV	|	|	|	|
7+15	0.0236	0.07	QV	|	|	|	|
7+20	0.0241	0.07	QV	|	|	|	|
7+25	0.0246	0.07	QV	|	|	|	|
7+30	0.0251	0.07	QV	|	|	|	|
7+35	0.0257	0.08	QV	|	|	|	|
7+40	0.0262	0.08	QV	|	|	|	|
7+45	0.0268	0.08	QV	|	|	|	|
7+50	0.0274	0.09	QV	|	|	|	|
7+55	0.0280	0.09	QV	|	|	|	|
8+ 0	0.0286	0.09	QV	|	|	|	|
8+ 5	0.0299	0.19	Q V	|	|	|	|
8+10	0.0312	0.19	Q V	|	|	|	|
8+15	0.0326	0.20	Q V	|	|	|	|
8+20	0.0339	0.20	Q V	|	|	|	|
8+25	0.0354	0.20	Q V	|	|	|	|
8+30	0.0368	0.21	Q V	|	|	|	|
8+35	0.0387	0.28	|QV	|	|	|	|
8+40	0.0406	0.28	|QV	|	|	|	|
8+45	0.0426	0.29	|QV	|	|	|	|
8+50	0.0451	0.36	|Q V	|	|	|	|
8+55	0.0476	0.36	|Q V	|	|	|	|
9+ 0	0.0501	0.37	|Q V	|	|	|	|
9+ 5	0.0536	0.50	| QV	|	|	|	|
9+10	0.0571	0.51	| QV	|	|	|	|
9+15	0.0606	0.51	| Q V	|	|	|	|
9+20	0.0646	0.58	| Q V	|	|	|	|
9+25	0.0686	0.59	| Q V	|	|	|	|
9+30	0.0727	0.59	| Q V	|	|	|	|
9+35	0.0772	0.66	| Q V	|	|	|	|
9+40	0.0818	0.66	| Q V	|	|	|	|
9+45	0.0864	0.67	| Q V	|	|	|	|
9+50	0.0915	0.74	| Q V	|	|	|	|
9+55	0.0966	0.74	| Q V	|	|	|	|
10+ 0	0.1018	0.75	| Q V	|	|	|	|
10+ 5	0.1037	0.28	|Q V	|	|	|	|
10+10	0.1056	0.28	|Q V	|	|	|	|
10+15	0.1076	0.28	|Q V	|	|	|	|
10+20	0.1096	0.29	|Q V	|	|	|	|
10+25	0.1116	0.29	|Q V	|	|	|	|
10+30	0.1136	0.30	|Q V	|	|	|	|
10+35	0.1180	0.64	| Q V |	|	|	|
10+40	0.1224	0.64	| Q V |	|	|	|
10+45	0.1268	0.64	| Q V |	|	|	|



15+50	0.5570	0.76	| Q	|	|	|	V |
15+55	0.5623	0.77	| Q	|	|	|	V |
16+ 0	0.5676	0.77	| Q	|	|	|	V|
16+ 5	0.5678	0.03	Q	|	|	|	V|
16+10	0.5679	0.03	Q	|	|	|	V|
16+15	0.5681	0.03	Q	|	|	|	V|
16+20	0.5683	0.03	Q	|	|	|	V|
16+25	0.5685	0.03	Q	|	|	|	V|
16+30	0.5687	0.03	Q	|	|	|	V|
16+35	0.5688	0.02	Q	|	|	|	V|
16+40	0.5690	0.02	Q	|	|	|	V|
16+45	0.5691	0.02	Q	|	|	|	V|
16+50	0.5692	0.02	Q	|	|	|	V|
16+55	0.5694	0.02	Q	|	|	|	V|
17+ 0	0.5695	0.02	Q	|	|	|	V|
17+ 5	0.5698	0.03	Q	|	|	|	V|
17+10	0.5700	0.03	Q	|	|	|	V|
17+15	0.5702	0.03	Q	|	|	|	V|
17+20	0.5705	0.03	Q	|	|	|	V|
17+25	0.5707	0.03	Q	|	|	|	V|
17+30	0.5709	0.03	Q	|	|	|	V|
17+35	0.5712	0.03	Q	|	|	|	V|
17+40	0.5714	0.03	Q	|	|	|	V|
17+45	0.5716	0.03	Q	|	|	|	V|
17+50	0.5718	0.03	Q	|	|	|	V|
17+55	0.5720	0.03	Q	|	|	|	V|
18+ 0	0.5722	0.03	Q	|	|	|	V|
18+ 5	0.5724	0.03	Q	|	|	|	V|
18+10	0.5725	0.03	Q	|	|	|	V|
18+15	0.5727	0.03	Q	|	|	|	V|
18+20	0.5729	0.03	Q	|	|	|	V|
18+25	0.5731	0.03	Q	|	|	|	V|
18+30	0.5733	0.03	Q	|	|	|	V|
18+35	0.5734	0.02	Q	|	|	|	V|
18+40	0.5736	0.02	Q	|	|	|	V|
18+45	0.5737	0.02	Q	|	|	|	V|
18+50	0.5738	0.01	Q	|	|	|	V|
18+55	0.5739	0.01	Q	|	|	|	V|
19+ 0	0.5740	0.01	Q	|	|	|	V|
19+ 5	0.5741	0.02	Q	|	|	|	V|
19+10	0.5743	0.02	Q	|	|	|	V|
19+15	0.5744	0.02	Q	|	|	|	V|
19+20	0.5746	0.03	Q	|	|	|	V|
19+25	0.5748	0.03	Q	|	|	|	V|
19+30	0.5750	0.03	Q	|	|	|	V|
19+35	0.5751	0.02	Q	|	|	|	V|
19+40	0.5752	0.02	Q	|	|	|	V|
19+45	0.5754	0.02	Q	|	|	|	V|
19+50	0.5755	0.01	Q	|	|	|	V|
19+55	0.5756	0.01	Q	|	|	|	V|
20+ 0	0.5757	0.01	Q	|	|	|	V|
20+ 5	0.5758	0.02	Q	|	|	|	V|
20+10	0.5759	0.02	Q	|	|	|	V|
20+15	0.5761	0.02	Q	|	|	|	V|
20+20	0.5762	0.02	Q	|	|	|	V|
20+25	0.5764	0.02	Q	|	|	|	V|
20+30	0.5765	0.02	Q	|	|	|	V|
20+35	0.5766	0.02	Q	|	|	|	V|
20+40	0.5768	0.02	Q	|	|	|	V|
20+45	0.5769	0.02	Q	|	|	|	V|

20+50	0.5770	0.01	Q	|	|	|	V|
20+55	0.5771	0.01	Q	|	|	|	V|
21+ 0	0.5772	0.01	Q	|	|	|	V|
21+ 5	0.5773	0.02	Q	|	|	|	V|
21+10	0.5775	0.02	Q	|	|	|	V|
21+15	0.5776	0.02	Q	|	|	|	V|
21+20	0.5777	0.01	Q	|	|	|	V|
21+25	0.5778	0.01	Q	|	|	|	V|
21+30	0.5779	0.01	Q	|	|	|	V|
21+35	0.5780	0.02	Q	|	|	|	V|
21+40	0.5782	0.02	Q	|	|	|	V|
21+45	0.5783	0.02	Q	|	|	|	V|
21+50	0.5784	0.01	Q	|	|	|	V|
21+55	0.5785	0.01	Q	|	|	|	V|
22+ 0	0.5786	0.01	Q	|	|	|	V|
22+ 5	0.5787	0.02	Q	|	|	|	V|
22+10	0.5789	0.02	Q	|	|	|	V|
22+15	0.5790	0.02	Q	|	|	|	V|
22+20	0.5791	0.01	Q	|	|	|	V|
22+25	0.5792	0.01	Q	|	|	|	V|
22+30	0.5793	0.01	Q	|	|	|	V|
22+35	0.5794	0.01	Q	|	|	|	V|
22+40	0.5795	0.01	Q	|	|	|	V|
22+45	0.5796	0.01	Q	|	|	|	V|
22+50	0.5797	0.01	Q	|	|	|	V|
22+55	0.5798	0.01	Q	|	|	|	V|
23+ 0	0.5799	0.01	Q	|	|	|	V|
23+ 5	0.5799	0.01	Q	|	|	|	V|
23+10	0.5800	0.01	Q	|	|	|	V|
23+15	0.5801	0.01	Q	|	|	|	V|
23+20	0.5802	0.01	Q	|	|	|	V|
23+25	0.5803	0.01	Q	|	|	|	V|
23+30	0.5804	0.01	Q	|	|	|	V|
23+35	0.5805	0.01	Q	|	|	|	V|
23+40	0.5806	0.01	Q	|	|	|	V|
23+45	0.5807	0.01	Q	|	|	|	V|
23+50	0.5808	0.01	Q	|	|	|	V|
23+55	0.5809	0.01	Q	|	|	|	V|
24+ 0	0.5810	0.01	Q	|	|	|	V