

## CITY PRESSURE CALCULATIONS

| WATER METER # ELEVATION STATIC PRESSURE | 1773.4<br>HIGH                          | SIZE        |                |      |
|---|---|-------------|----------------|------|
| SOURCE OF INFORMATION                   | on <u>steve</u> app                     | ELN         | MMP            |      |
| PHONE NUMBER                            | 780-4170                                |             |                |      |
| DATE OF INFORMATION                     | 8-14-90                                 |             |                |      |
|   | * | •           |                |      |
| H.G.L. MEAN ELEVATION                   | N 1880 (REQUIRE                         | D IF STATIC | PRESSURE UNKNO | OWN) |
| •                                       | •                                       |             |                |      |
| WATER METER                             |   |             |                |      |
| ELEVATION                               | (·) 1773.4<br>107 x                     | .433 =      | 46.33          |      |
| REMOTE CONTROL VALV                     | VE3                                     | SIZE        | 1/4"           |      |
| MAXIMUM DEMAND                          | 5.65                                    | G.P.M.      | •              |      |
| ELEVATION OF                            |   |             |                |      |
| HIGHEST HEAD                            | 1771                                    |             |                |      |
| PRESSURE @ R.C.V.                       | 12.64                                   | P.S.I.      |                |      |
| OTY. SIZE                               | ITEM                                    |             | 1751, LOS      | 5    |
|   | WATER METER                             |             | 1,2            |      |
|   | R. P. BACKFLOW DEVICE                   |             | 9              |      |
| ·1 2"                                   | GATE VALVES                             |             | 12             |      |
| N/A                                     | MASTER VALVE                            |             |                |      |
| NA                                      | PRESS. REG. (FALL OFF)                  |             |                |      |
| 175 1/2                                 | MAIN LINE                               |             | 1,24           |      |
| - 1                                     | MAIN LINE                               |             | -              |      |
| 1/4                                     | REMOTE CONTROL VALVE ASSE               | MBLY        | 4.5            |      |
|   | LATERAL LINE LOSS                       |             | 5.45           |      |
|   | LATERAL LINE LOSS                       |             | <u> </u>       |      |
|   | LATERAL LINE LOSS                       |             | <b></b>        |      |
|   | FITTINGS LOSS (10%)                     |             | .67            |      |
|   | ELEVATION CHANGE (+)                    |             | 0              |      |
| TOTAL SYSTEM LOSSES                     | :                                       |             | 23.26          |      |
| PRESSURE TO OPERATE                     |   |             | 20             |      |
|   |   |             |                |      |
| TOTAL PRESSURE REQU                     | HR <b>ED:</b>                           |             | 43,26          |      |
| LOWEST STATIC PRESSU                    | · · · · · · · · · · · · · · · · · · ·   |             | 46.33          | •    |
| PRE-SET REGULATED PR                    | RESSURE (IF REQUIRED):                  |             |                |      |

1. THIS SYSTEM IS DIAGRAMMATIC. ALL PIPE, VALVES, ETC. SHOWN WITHIN PAVED AREAS ARE FOR DESIGN CLARIFICATION ONLY AND SHALL BE INSTALLED IN PLANTING AREAS WHEREVER POSSIBLE.

IRRIGATION LEGEND

**♦ ♦ ▼** RAIN BIRD 1812-SAM-10' Q,T,H-LA

1812-10' Q,T,H-LA

1812-12' Q,T,H

1812-15' Q,T,H

12" P.U. TOP OF SLOPE

12" P.U. TOP OF SLOPE

12" P.U. TOP OF SLOPE

12" P.U. TOE OF SLOPE

12" P.U. TOE OF SLOPE

12" P.U. TOE OF SLOPE

1812-SAM-15' EST, SST

12" P.U. TOE OF SLOPE

12" P.U. TOP OF SLOPE

EFB SERIES BRASS REMOTE CONTROL VALVE (PLAN SIZED)

ISC-4 CONTROLLER, WALL MNT, WITHIN A LA MEUR 'V' ENCLOSURE WITH OPTIONS 'A' & 'B'.

SCH. 40 PVC ELECT. WIRE SLEEVES (2" DIA. TYP.) FOR LOW VOLTAGE UF SYSTEM

INSTALLATION AND FINAL LOCATION PER APPROVAL OF CITY PARK PROJECTS INSPECTOR, INCLUDING

SCH. 315 PVC MAIN LINE (2" DIA & LARGER) - 18" MIN. COVER (SCH. 40 PVC: 1-1/2" DIA. AND SMALLER)

T-113 LINE SIZED GATE VALVE WITH BRONZE TURNING HANDLE

44DLRC QUICK COUPLER WITH LOCKING RUBBER COVER

( APPROVED CL.200 PVC LATERALS (STARTING WITH 3/4" DIA.) - 12" MIN. COVER

CONTROLLER STATION NO.

DESIGN DEMAND

1812-SAM-12' Q,T,H

1812-SAM-15' Q,T,H

1812-SAM-22 O.H-SS

1812-22Q,H-SS

RAIN BIRD

(\_\_\_\_) APP'D

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**IRRIGATION NOTES** 

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RAIN BIRD

RAIN BIRD

RAINBIRD

RAIN BIRD

- 2. DO NOT WILLFULLY INSTALL THE SPRINKLER SYSTEM AS INDICATED ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN OBSTRUCTIONS OR GRADE DIFFERENCES EXIST AND SHOULD BE BROUGHT TO THE ATTENTION OF THE OWNER'S AUTHORIZED REPRESENTATIVE. IN THE EVENT THAT THIS NOTIFICATION IS NOT PERFORMED, THE CONTRACTOR MUST ASSUME FULL RESPONSIBILITY FOR REVISIONS NECESSARY.
- 3. SYSTEM DESIGN IS BASED ON MINIMUM OPERATING PRESSURE SHOWN AT EACH POINT OF CONNECTION WITH MAXIMUM GPM DEMAND SPECIFIED. IRRIGATION CONTRACTOR SHALL VERIFY ALL PRESSURES ON SITE PRIOR TO CONSTRUCTION TO OWNER'S CONSTRUCTION REPRESENTATIVE.
- 4. IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO FAMILIARIZE HIMSELF WITH ALL GRADE DIFFERENCES, LOCATION OF WALLS, RETAINING WALLS, CURBS, ETC. HE SHALL COORDINATE ALL HIS WORK WITH THE GENERAL CONTRACTOR AND OTHER SUB-CONTRACTORS FOR LOCATION OF PIPE SLEEVES THROUGH WALLS, UNDER ROADS, PAVING AND STRUCTURES.
- 5. MAINLINE FEEDER BETWEEN POINT OF CONNECTION, METER, AND BACKFLOW PREVENTER TO BE OF MATERIAL AS REQUIRED BY CURRENT WATER DISTRICT.
- 6. FINAL LOCATION OF THE AUTOMATIC CONTROLLER ENCLOSURE AND THE BACKFLOW PREVENTION DEVICE SHALL BE APPROVED BY THE CITY'S AND OWNER'S REPRESENTATIVE
- 7. IN ADDITION TO THE SLEEVES SHOWN ON THE PLAN, THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF ADDITIONAL SLEEVES OF SUFFICIENT SIZE UNDER ALL PAVED AREAS PRIOR TO PAVING UPON APPROVAL OF THE OWNER'S REPRESENTATIVE, IF REQUIRED TO OPERATE SYSTEMS.
- 8. IRRIGATION CONTRACTOR SHALL FLUSH ALL LINES AND ADJUST ALL HEADS FOR MAXIMUM PERFORMANCE AND TO PREVENT OVERSPRAY ONTO WALKS, STREETS, AND BUILDINGS AS MUCH AS POSSIBLE. THIS SHALL INCLUDE SELECTING THE BEST NOZZLE RADIUS TO FIT UNUSUAL SITE CONDITIONS FOR APPROVAL PURPOSES AT NO EXTRA
- 9. QUALITY CONTROL OBSERVATION SEQUENCES ARE FOUND IN THE SPECIFICATIONS.
- 10. CLEAN-UP ON A DAILY BASIS PER OWNER'S REPRESENTATIVE APPROVAL.

# PLAN CROSS REFERENCES

3.07 (PUMP RED'd)

FOR NOTES AND LEGEND, SEE SHEET L-2 FOR DETAILS, SEE SHEET L-6 FOR SPECIFICATIONS, SEE SHEET L- 9 FOR CORRESPONDING CONSTRUCTION FOR CORRESPONDING PLANTING

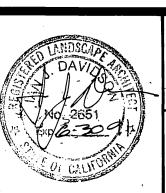
SEE SHEET L-5 SEE SHEET L-5

# **Underground Service Alert**



TWO WORKING DAYS BEFORE YOU DIG

PRIVATE ENGINEERING NOTE CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CON-TRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSI-BUILTY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CON-RACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS 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 DESIGN



PREPARED UNDER THE DIRECTION OF:

EXPIRATION DATE: \_\_\_\_

APPROVED BY:

REGISTERED CIVIL ENGINEER NO.\_\_\_\_\_

\_\_\_\_\_ DATE:\_\_\_\_

3880 Lemon Street, Suite 300 P.O. Box 493 Riverside, CA 92502 (714) 825-1082 FAX 714-686-5954

SCALE: NO SCALE

DATE: 7/12/90

RESIDUAL WATER PRESSURE:

J.F. Davidson Associates, Inc. ENGINEERING PLANNING SURVEYING ARCHITECTURE LANDSCAPE ARCHITECTURE 11200 S. Mt. Vernon Ave., Suite "D" 73-080 El Paseo, Suite 106 Colton, CA 92324. 73-080 El Paseo, Suite 106 Palm Desert, CA 92260 (619) 346-5691 FAX 619-340-0529 BENCH MARK:

CITY OF RIVERSIDE, CALIFORNIA TRAFFIC DIVISION CHIEF P. W. ENGR. (17.6 /-4-9) CHECKED BY APT DESIGNED BY A.M. DRAWN BY \_\_J.L.\_\_

DEPARTMENT OF PUBLIC WORKS APPROVED BY
PRINCIPAL ENGINEER | WA 1/2/91 | DATE | APPROVED BY PARK DEPARTMENT 14 12-7-90 DIRECTOR OF PUBLIC WORKS DATE 1/8/9/

IRRIGATION NOTES & LEGEND TRACT 21834-4 REVERSE FRONTAGE LANDSCAPE

**PATTERN** 

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. . .

. . .

- - -

. . .

90<sup>0</sup>,180<sup>0</sup>

90<sup>0</sup>,180<sup>0</sup>

END/SIDE STRIP

10' ADJ.

10' ADJ

12' ADJ

4X14/28

14' ADJ

.33,.43,65

.53,.70,1.05

.75.,1.0,1.50

.33,.43,.65

.53,.70,1.05

.75,1.0,1.5

.50,1.00

.67,1.33

(OR EQUAL) 1 REDUCED PRESS. BACKFLOW BY W.M.W.D. 1 WATER METER BY W.M.W.D. AT P.O.C.

SCH. 40 PVC SLEEVE. EXTEND ENDS OF SLEEVES 12" BEYOND HARDSCAPE ABOVE - 18" MIN. COVER (PLAN SIZED)

90°,120°,180°

A/ L-8

- -

- -

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41 13

B/L-8

C/L-8 E/ Ļ-8

F/ **L-8** 

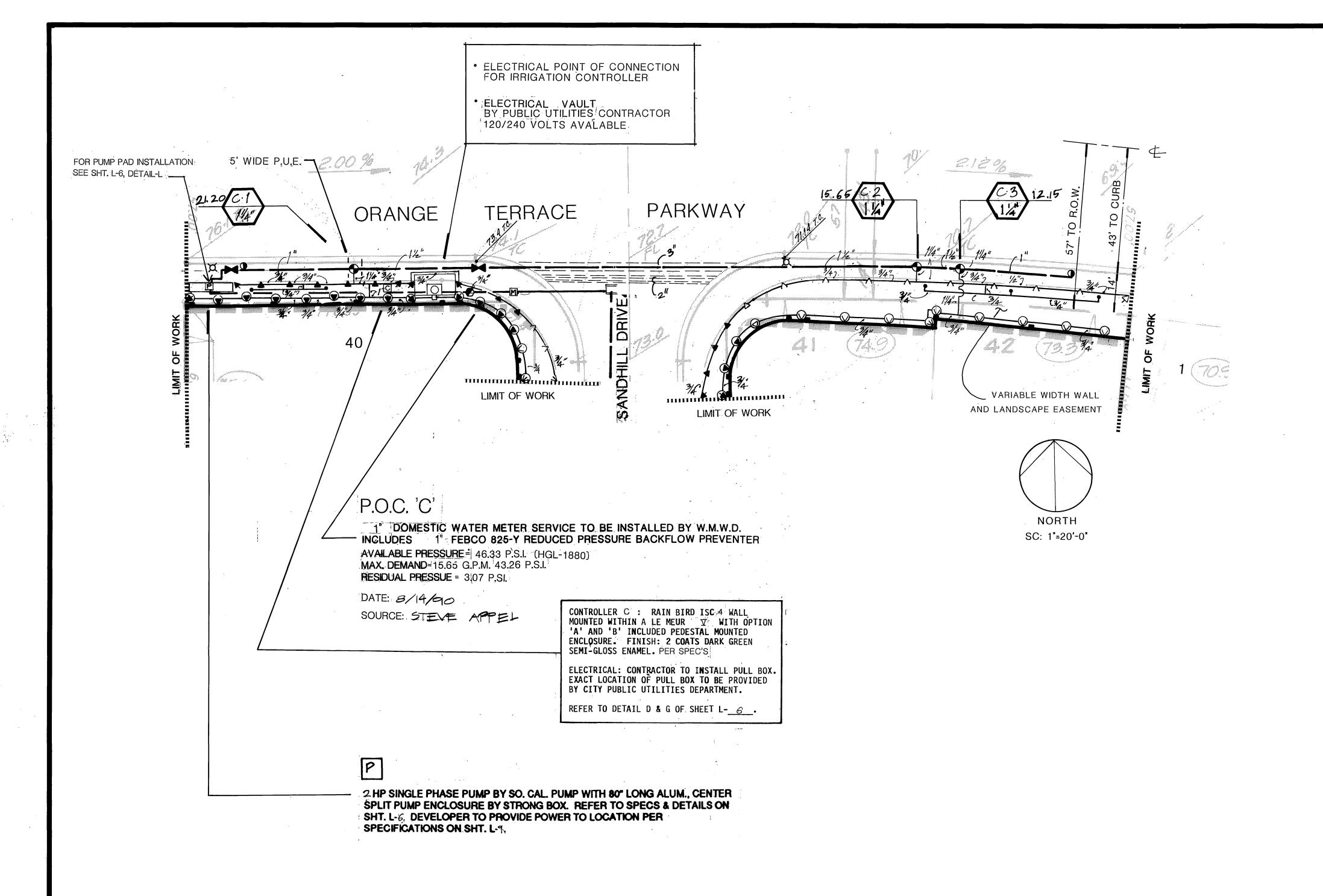
D/L-8

R-29221 SHEET <u>L-2</u> OF <u>10</u> FILE NO.:

PROJECT NO. 8911314

MDEXED 1-15-91 4+1

ORANGE TERRACE PKWY.



Electric Service Box (Pull Box), by others per Public Utilities plans.

Insulating bushing-by others per Public Utilities specs.

2" DB conduit per Public Utilities plans.

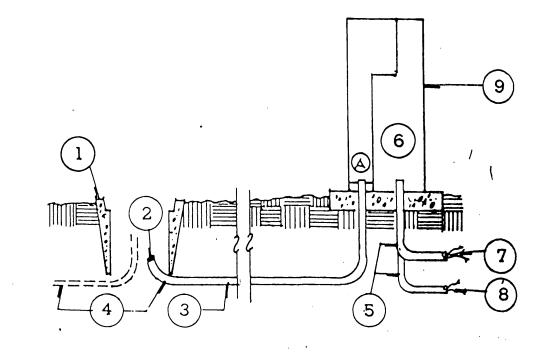
Service cables provided by Utilities Dept. Public Utilities Dept. will
make service connections in Metered Pedestal A and Pull Box, contractor

5. 1" IIDG conduit to be installed by contractor.

Contractor to make connection in customer load section and provide 2 - IU and 1 - 112 cu. THW wires to pump. Provide 2' of wire beyond end of

8. Contractor to make connection in customer load section and provide 2 - 112 cu. THW wires to controller. Provide 2' of wire beyond end of conduit and I.D. neutral.

9. Metered Pedestal to be installed by contractor per E.U.S.E.R.C. drawing #308 Fig. 2B.



CITY METER PEDESTAL FOR SERVICING CONTROLLERS AND/OR

PUMPS. REFER TO IRRIGATION DETAIL SHEET, L-6

# PLAN CROSS REFERENCE

FOR NOTES AND LEGEND, SEE SHEET L-2 FOR DETAILS, SEE SHEET L-6 FOR SPECIFICATIONS, SEE SHEET L-9 FOR CORRESPONDING CONSTRUCTION

SEE SHEET L- ち SEE SHEET L- ダ NOTE: (SHT'S L-3 CONTRACTOR TO PROVIDE 2 EXTRA PILOT WIRES TO END OF MAIN LINE. PIGTAIL & BUNDLE INSIDE A CONCRETE R.C.V BOX & STORE FOR FUTURE USE. SIZING OF LATERALS START WITH 3/4" - NO 1/2" CLASS 200 P.V.C. USED AS LATERAL LINES . ALL LINES SHALL BE TRENCHED. NO ABOVE GROUND IRRIGATION LINES ALLOWED.

**Underground Service Alert** 

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PREPARED UNDER THE DIRECTION OF: REGISTERED CIVIL ENGINEER NO.\_\_\_\_ p. \$50 9 PROVED BY:

P.O. Box 493 Riverside, CA 92502 (714) 686-0844 FAX 714-686-5954 SCALE: -1"=20'-0" BENCH MARK:

DATE: 09/02/88

J.F. Davidson Associates, Inc. 11200 S. Mt. Vernon Ave., Suite "D" 73-080 El Paseo, Suite 106 Colton, CA 92324 Palm Desert, CA 92260 (714) 825-1082 (619) 346-5691 3880 Lemon Street, Suite 300 FAX 619-340-0529

FOR CORRESPONDING PLANTING

PARK DEPARTMENT WH 12-7-90 REVISIONS APPR. DATE TRAFFIC DIVISION -CHIEF P. W. ENGR. RMC6 1-4-91 DESIGNED BY A.T. DRAWN BY\_ CHECKED BY\_

CITY OF RIVERSIDE, CALIFORNIA DEPARTMENT OF PUBLIC WORKS PRINCIPAL ENGINEER (19)

IRRIGATION PLAN TRACT 21834-4 REVERSE FRONTAGE LANDSCAPE ORANGE TERRACE PARKWAY

HORIZ. SCALE: 1"

PHASE 4

PROJECT NO. **8911314** R-2922L

SHEET <u>L-3</u> OF <u>10</u>

VERT. SCALE: 1" FILE NO.:

# PLANTING LEGEND

| SYMBOL       | ITEM NO.       | BOTANICAL NAME                             | COMMON NAME                    | SIZE               | COMMENTS   | DETAUIL             |
|--------------|----------------|--|--------------------------------|--------------------|--|---------------------|
| Trees        | T-1            | Lagerstroemia indica                       | Crape Myrtle 'Purple'          | 15 Gal.            | Plant at 30' OC Min.   | A,B,G               |
|              | <del>T 2</del> | Magnelia grandiflera<br>'Majestie Beauty'- | -Southern-Magnolia-            | <del>15 Gal.</del> | -Plant at 45' OC Min-  | - <del>A,B,G-</del> |
| Chuiba       |                |  |                                |                    |  |                     |
| Shrubs       | S-1            | Abelia grandiflora<br>'Edward Goucher'     | N.C.N.                         | 5 Gal.             | Plant at 48" OC  | С                   |
|              | S-2            | Raphiolepis indica<br>'Clara'              | White India Hawthorne          | 5 Gal.             | Plant at 36" OC  | F                   |
|              | S-3            | Raphiolepis indica<br>'Pink Lady'          | Pink Lady Hawthorne            | 5 Gal.             | Plant at 36" OC  | С                   |
|              | S-4            | Xylosma congestum<br>'Compacta'            | N.C.N.                         | 5 Gal.             | Plant at 48" OC  | С                   |
| <u>Vine</u>  | V-1            | Macfadyena unguis-catii                    | Cat's Claw                     | 5 Gal.             | Attach to walls per plan   | F                   |
| Groundcovers | G-2            | Trachelospermum<br>jasminoides             | Star Jasmine                   | Flats              | At 12" OC Triangulate  | E                   |
|              | G-3            |  | Medium Grind<br>Shredded Mulch |                    | 2" thick all planters<br>Source: Blue Ribbon<br>Landscape<br>Orange, California<br>(714)633-3666 | D                   |

(NOTE: Contractor shall remove 3" soil and replace with 2" of shredded mulch). F.G. shall be 3" below fin. surface, wherever mulch is installed.

# PLANTING NOTES

- 1. CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT OF SITE CONDITIONS WHICH PREVENT INSTALLATION PER PLANS AND SPECIFICATIONS.
- 2. CONTRACTOR SHALL BE LIABLE FOR REMOVING AND RE-INSTALLING IRRIGATION EQUIPMENT, AND REPLANTING AREAS WHICH ARE NOT INSTALLED PER PLAN AND SPECIFICATIONS.
- 3. REFER TO PLANTING SPECIFICATIONS FOR INSPECTION/CERTIFICATION SCHEDULE.
- 4. IRRIGATION SYSTEM SHALL BE INSTALLED PRIOR TO PLANT MATERIALS.
- 5. TREES AND SHRUBS SHALL BE PLANTED AFTER CONCRETE PLACEMENT, BUT NOT BEFORE IRRIGATION COVERAGE TEST NO. 1 HAS BEEN APPROVED. (SEE SPECIFICATIONS)
- 6. PLACE TREES BETWEEN IRRIGATION HEADS WHEREVER POSSIBLE.
- LANDSCAPE CONTRACTOR SHALL TAKE FOUR (4) SOIL SAMPLES FROM THE SITE AT LOCATIONS APPROVED BY THE PARK PROJECTS INSP. . THE SAMPLES SHALL BE TAKEN AT A DEPTH OF 12" AFTER ROUGH GRADING AND SUBMITTED TO AN APPROVED SOIL AND PLANT LABORATORY FOR AGRICULTURAL SUITABILITY TESTING. THE COST OF TESTING SHALL BE INCLUDED IN THE CONTRACTOR'S BID.
- 8. THE RECOMMENDATIONS OF THE SOIL REPORT SHALL SUPERSEDE THE SOIL PREPARATION AND BACKFILL MIX SPECIFICATIONS (SEE SPECIFICATIONS). THE CONTRACTOR SHALL SUBMIT A COPY OF ALL SOILS REPORTS TO THE PARK PROJECTS INSP. PRIOR TO MODIFICATION OF THESE SPECIFICATIONS.
- 9. SHREDDED MULCH INSTALLATION: INSTALL SHREDDED MULCH IN ALL SHRUB AND GROUNDCOVER AREAS PER SPECIFICATIONS, UNLESS OTHERWISE INDICATED ON PLANS.
- 10. CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS AND/OR REPLACEMENT OF ANY DAMAGED LANDSCAPE AREAS BEYOND THE LIMIT OF WORK, THAT IS A DIRECT RESULT OF THE LANDSCAPE CONSTRUCTION AND/OR HIS SUB-CONTRACTOR. REPLACEMENT ITEMS SHALL BE EXACT DUPLICATE OF ORIGINAL WORK OR PLANTS, UNLESS OTHERWISE APPROVED BY THE
- TT. WHEREVER GROUNDCOVER AREAS ARE ADJACENT TO TURF INSTALL CONCRETE MOWSTRIP OR HEADERBOARD AS INDICATED ON DRAWINGS
- 12. CLEAN-UP SHALL TAKE PLACE ON A DAILY BASIS UNLESS OTHERWISE APPROVED BY THE PARK PROJECTS INSP. .

CITY OF RIVERSIDE, CALIFORNIA

# STAMPED CONCRETE (DRY SHAKE)

SECTION 03355 - STAMPED CONCRETE (DRY SHAKE)

## PART 1 - GENERAL 1.01 RELATED DOCUMENTS:

The General and Special Provisions of the Specification as well as the "Standard Specifications for Public Works Construction", current addition, shall apply except as modified herein.

## 1.02 SCOPE OF WORK:

Exterior slabs as shown on drawings forming Cement, finish

Placing of sleeves and drain lines under slabs

## 1.03 QUALITY ASSURANCE:

The work shall be performed by qualified personnel trained to obtain the textured finish specified herein. The contractor shall provide written evidence to the Park Department that the installer for this work has satisfactorily completed at least three installations.

## 1.04 SAMPLE POUR:

The contractor shall provide a sample pour on site of sufficient size, minimum 10 S.F., to demonstrate the required stamped concrete work, including dust-on color, wax curing and finishing compounds. A minimum period of 28 days will be required for adequate curing of the sample pour prior to inspection. Stamped concrete work shall not be performed prior to the inspection and written approval of the sample by the Park Projects Inspector. If not approved, additional sample panels will be required until approval is achieved. All other portions of the stamped concrete work shall match the color and finish of the approved sample pour.

## 1.05 DEFECTIVE WORK:

Defective sections shall be removed and replaced. Inconsistencies in color will be considered as defective work. No extension of time will be allowed for correcting defective work.

## 1.06 INSPECTIONS:

Inspections are required. Contractor shall call for inspection a minimum of 48 hours (two working days) prior to need.

The contractor shall call for inspection at specific steps in the construction process including those points in time when:

1) All sleeve and drainline installation is complete, but prior to backfill of trenches.

2) All form work is placed and all subgrade work is complete, but prior to pour Contractor shall notify the Park Projects Inspector, (714) 782-5223, a

minimum of 48 hours prior to pouring any concrete.

Any work covered prior to inspection shall be opened to view by the Contractor at his expense if so directed by the inspector

## PART 2 - MATERIALS

2.01' All materials shall conform to Section 201 of the Standard Specifications. except as modified in the following subsections. 2.02 CONCRETE:

Concrete shall conform to Concrete Class Use Table, Section 201-1, of the Standard Specifications and shall be a 5-sack mix, with a maximum 4-inch slump, 2,000 pounds per square inch ultimate compressive strength at 28 days. No admixtures will be allowed. 4" THICK SLABON GRADE

## 2.03 DRY SHAKE COLOR:

The required color shall be: A-50-P SLATE - GRAY by L. M. Scofield, or City approved equal.

# PART 3 - EXECUTION

# 3.01 GENERAL:

All work shall conform to the requirements of Section 303 of the Standard Install concrete and cement finish work true to lines, dimensions and

Color conditioning dust-on shall be added to the concrete using the dry shake Method 'A' per Std. Spec's Section 303-6.3.1.

# 3.02 PLACING CONCRETE

Transport, place and spread in a manner to prevent segregation of aggregate. Reinforcing shall be supported by metal or plastic chairs: concrete supports shall not be used. Reference Section 303-1.7.1, 303-6.2.

# 3.03 CONCRETE FINISH:

While the concrete is still in the plastic stage of set, the forming tools shall be applied to make the patterned surface. The pattern used shall be: ASHLAR SLATE BOMACRON

All per Standard Spec's Section 303-6.4.

After finishing, apply color hardener. A pigmented, heavy duty wax curing and finishing compound shall be applied. The wax compound in the matching color shall be applied

uniformly in accordance with manufacturer's printed instructions. The sealed surface shall be polished using a fine brush which removes

residual dust from the surface. Protect all finished concrete from graffiti. Contractor shall be responsible for providing concrete watchmen. A graffitied finish will not

Remove and replace defective concrete with new materials. Permission to patch any defective area shall not be a waiver of the Park and Recreation

Department's right to require complete removal of defective work if patching does not restore quality and appearance of work. No advertising impression, stamp, or mark of any description other than

## the specified pattern will be permitted in the cement finish. 3.04 CURING:

Per Standard Specification Section 303-6.5.

# END OF SECTION

07/06/90

FAX 714-686-5954

BENCH MARK:

MH/0447o/c

# PLAN CROSS REFERENCES

FOR NOTES AND LEGEND, SEE SHEET L-4 FOR DETAILS, SEE SHEET L-7#8 FOR SPECIFICATIONS, SEE SHEET L-FOR CORRESPONDING | PRICETION SEE SHEET L-3 FOR CORRESPONDING CONSTRUCTION SEE SHEET L-5

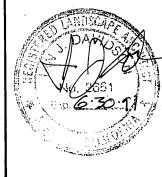
# **Underground Service Alert**



TWO WORKING DAYS BEFORE YOU DIG

PRIVATE ENGINEERING NOTE

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CON-TRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSI-BILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. AND CONSTRUCTION CON-RACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS 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 DESIGN



PREPARED UNDER THE DIRECTION OF:

REGISTERED CIVIL ENGINEER NO.\_\_\_\_ EXPIRATION DATE: \_\_\_\_\_ DATE: \_\_\_\_ APPROVED BY:

SCALE: NO SCALE

7/12/90

J.F. Davidson Associates, Inc. ENGINEERING PLANNING SURVEYING ARCHITECTURE LANDSCAPE ARCHITECTURE 11200 S. Mt. Vernon Ave., Suite "D" 73-080 El Paseo, Suite 106 Palm Desert, CA 92260 Colton, CA 92324 Riverside, CA 92502 (714) 686-0844

FAX 619-340-0529

DEPARTMENT OF PUBLIC WORKS PRINCIPAL ENGINEER WWW. 1/2/11 PARK DEPARTMENT JH 12-7-90 APPR. DATE TRAFFIC DIVISION CHIEF P. W. ENGR. | 1-1-91 CHECKED BY APT DESIGNED BY A.M. DRAWN BY J.L

APPROVED BY
INCIPAL ENGINEER | DATE | APPROVED BY DIRECTOR OF PUBLIC WORKS LANNING DEPT. May 12-7-70

PLANTING NOTES AND LEGEND PROJECT NO. 8911314 TRACT 21834-4 R-2922 l REVERSE FRONTAGE LANDSCAPE

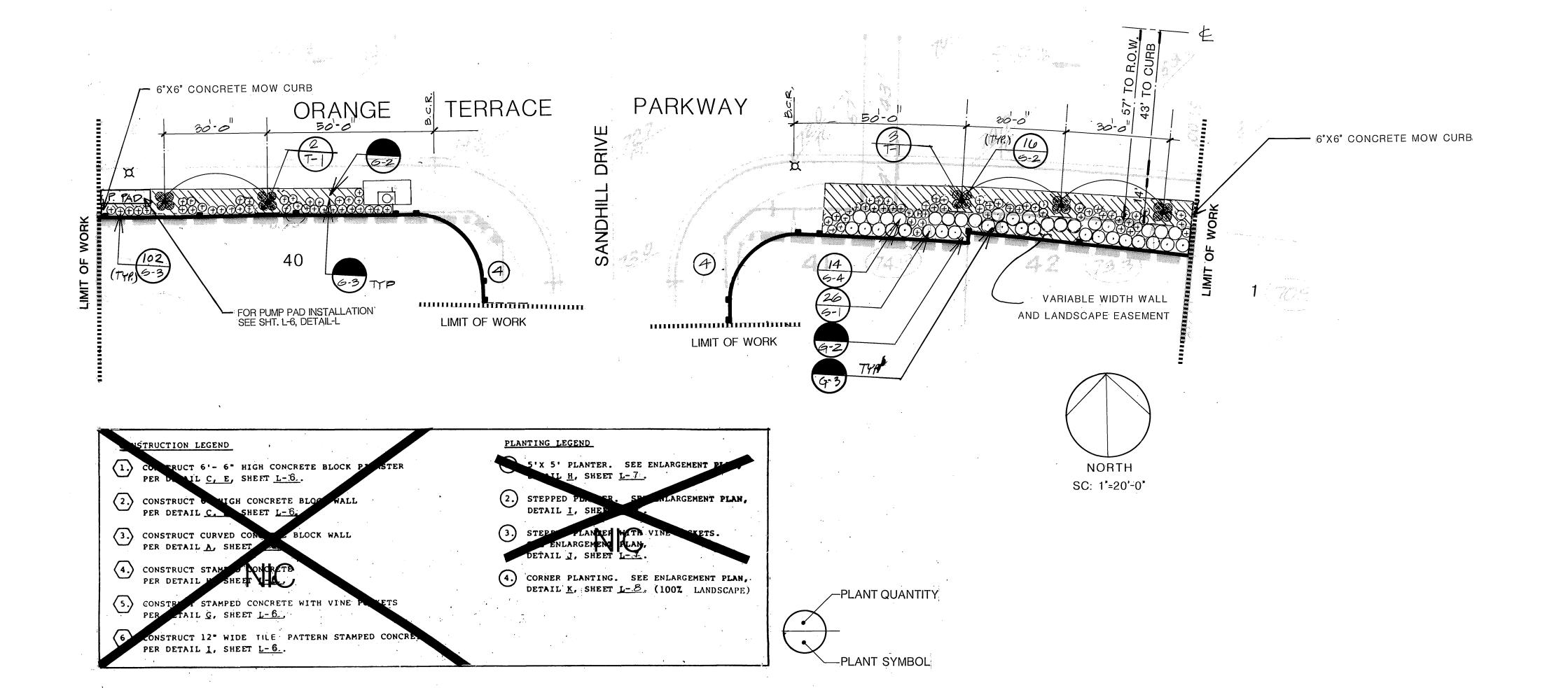
ORANGE TERRACE PKWY.

STAMPED CONCRETE SPECIFICATIONS

FILE NO.:

INDEXED 1-15-91 4+1

SHEET <u>L-4</u> OF <u>1</u>(



# PLAN CROSS REFERENCE

FOR NOTES AND LEGEND, SEE SHEET L-4 FOR DETAILS, SEE SHEET L-7 & L-8 FOR SPECIFICATIONS, SEE SHEET L- 10 FOR CORRESPONDING IRRIGATION PLAN SEE SHEET L-3

Underground Service Alert

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IN CONNECTION WITH THE PERFORMANCE OF WORK ON TWO ALLEGED. IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT. EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN

PREPARED UNDER THE DIRECTION OF: DATE: 09/02/88

J.F. Davidson Associates, Inc. ENGINEERING PLANNING SURVEYING ARCHITECTURE LANDSCAPE ARCHITECTURE 11200 S. Mt. Vernon Ave., Suite "D" 73-080 El Paseo, Suite 106 Colton, CA 92324 Palm Desert, CA 92260 Riverside, CA 92502 (714) 825-1082 (619) 346-5691 (714) 686-0844 FAX 714-686-5954 FAX 619-340-0529 SCALE: 1"=20'-0" BENCH MARK:

CITY OF RIVERSIDE, CALIFORNIA DEPARTMENT OF PUBLIC WORKS PARK DEPARTMENT

APPROVED BY

BY

DATE

PARK DEPARTMENT

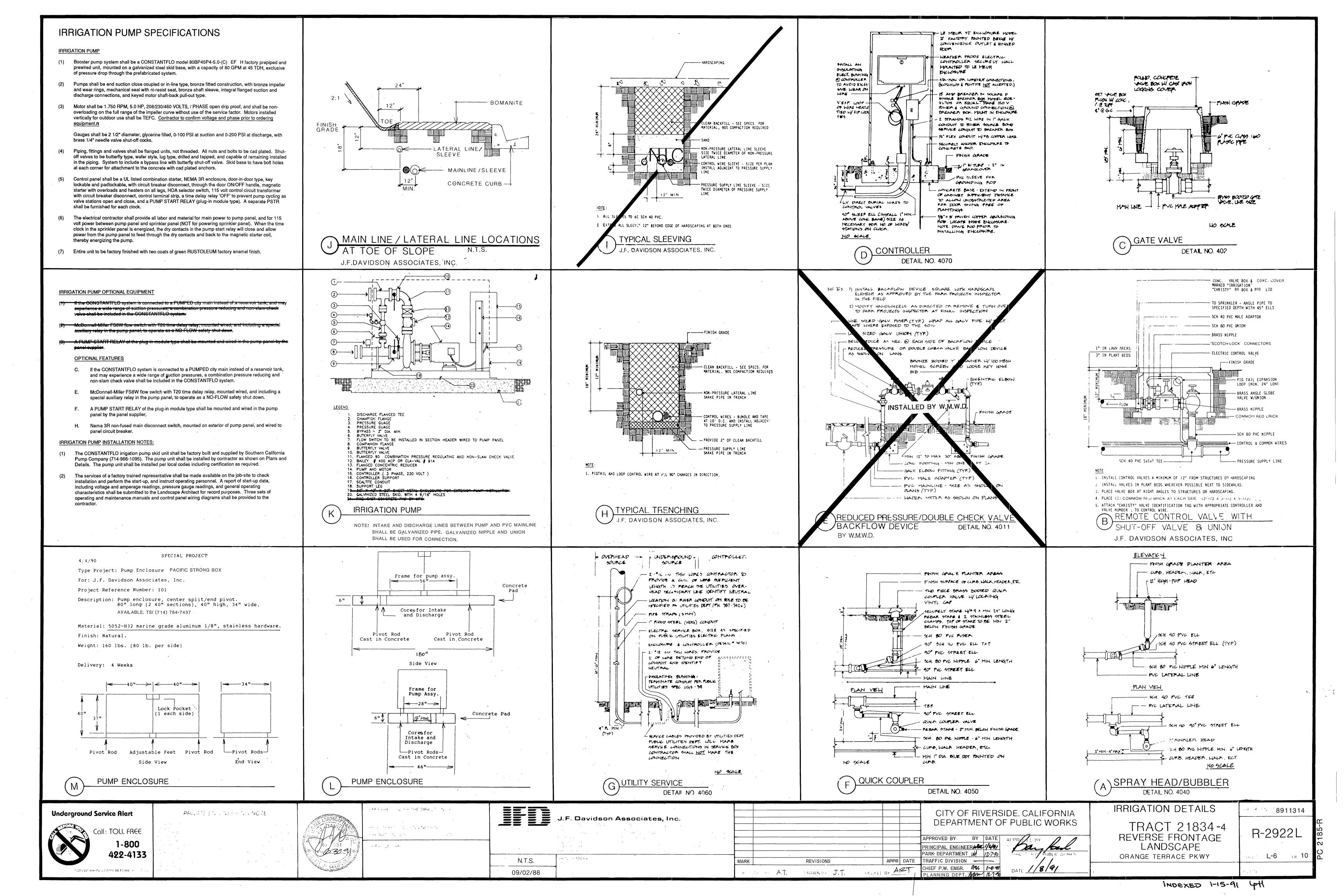
BY

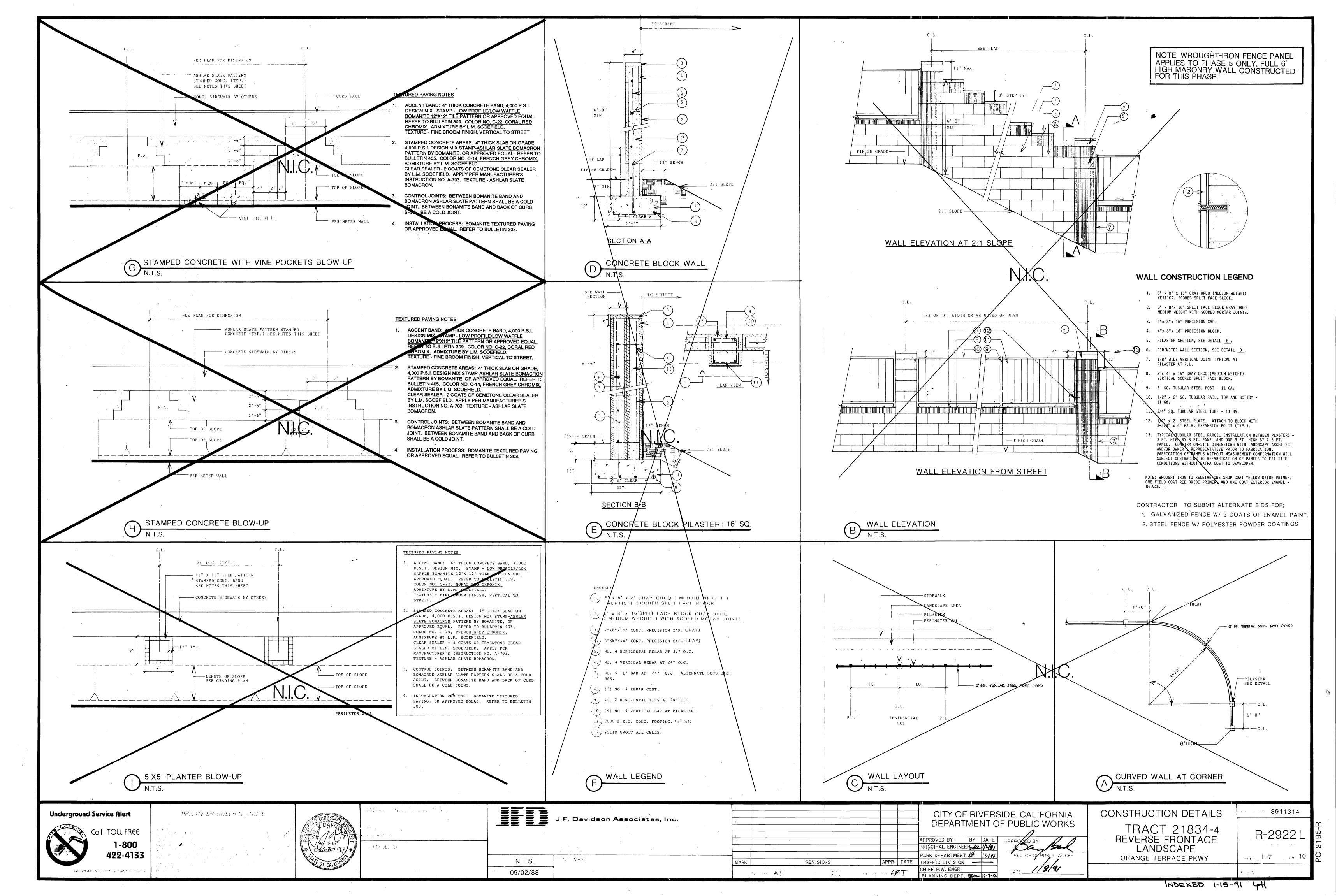
12.7.90 APPR. DATE TRAFFIC DIVISION DESIGNED BY\_\_\_\_\_ DRAWN BY\_\_\_\_ CHECKED BY\_

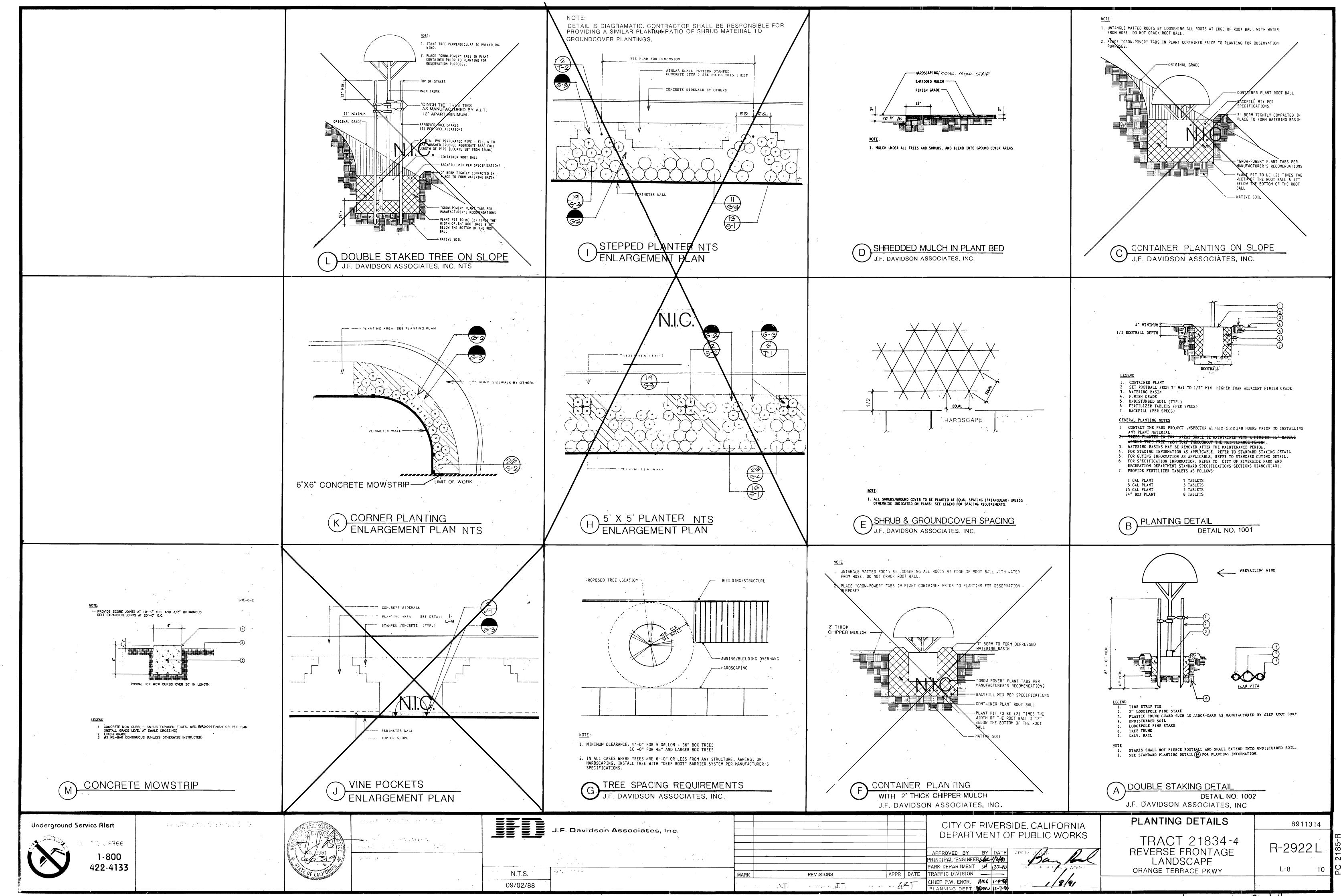
HORIZ. SCALE: 1"

CONSTRUCTION/PLANTING PLAN PROJECT NO. 8911314 TRACT 21834-4 R-2922 L REVERSE FRONTAGE LANDSCAPE SHEET <u>L-5</u> OF 10 ORANGE TERRACE PARKWAY

PHASE 4







# 1.01 RELATED DOCUMENTS:

The provisions of the "Standard Specifications for Public Works Construction\*, current edition, shall apply except as modified herein.

The work of this section shall include the furnishing of all labor materials, equipment and services necessary to provide complete operating irrigation systems, including 120 volt electrical service to the controller, all as shown on the drawings and as specified.

## B. Related Work Specified Elsewhere:

Site Clear and Grub Selected Site Demolition 02111 Electrical

## 1.03 SUBMITTALS:

Contractor shall submit a complete materials list for approval by the City prior to performing any work. Catalog data and full descriptive literature must be submitted whenever the use of items different than those specified is requested. Notarized certificate must be submitted by plastic pipe and fitting manufacturer indicating that material complies with specifications, unless material has been previously approved.

## Material list shall be submitted using the following format:

| I t en | Description          | Manufacturer | Model No. |
|--------|----------------------|--------------|-----------|
| 1      | Pressure Supply Line | Lasco        | Sch. 40   |
| 2      | Lawn Head            | Rainbird     | 2400      |
| etc.   | etc.                 | etc.         | etc.      |

## B. "Record" Prints:

(1) Record accurately on one set of blue-line prints all changes in the work constituting departures from the original contract drawings, including changes in pressure and non-pressure line locations.

- (2) The changes and dimensions shall be recorded in a legible and workmanlike manner to the satisfaction of the City. Prior to final inspection of work, submit record prints to City for
- (3) Dimension from two permanent points of reference (buildings, monuments, sidewalks, curbs, pavement, etc. Data to be shown on record prints shall be recorded day-to-day as the project is being installed.

## (4) Show locations and depths of the following items:

- b. Routing of sprinkler pressure lines (dimension maximum 100 feet along routing).
- c. Gate valves.
- d. Sprinkler control valves.
- e. Quick coupling valves.
- f. Routing of control wires.
- g. Related equipment (as may be directed).
- (5) Maintain record prints onsite at all times.

- A. Inspections will be required for:
- (1). Pressure test of irrigation main line. (2) Coverage test.
- (3) Final inspection/start of maintenance.
- (4) Final acceptance. B. Inspection Requests:

Contractor shall notify the Park Projects Inspector in advance for requesting all inspections as follows:

Pressure supply line installation and testing - 36 hours (1-1/2

working days) System layout - 36 hours (1-1/2 working days) Coverage tests - 36 hours (1-1/2 working days) Final Inspection - 48 hours (two working days)

When inspections have been conducted by other than the Park Projects Inspector, the Contractor shall show evidence of when and by whom these inspections were made.

No inspection will commence without "record" prints. In the event the Contractor calls for an inspection without up to date \*record\* prints, without completing previously noted corrections, or without preparing the system for inspection, the inspection will be cancelled and the Contractor back charged for the direct costs of all City personnel time and consultant time lost.

# C. Closing in uninspected work:

Do not allow or cause any of the work of this section to be covered up or enclosed until it has been inspected, tested and approved by

# D. Coverage test:

When the sprinkler system is completed, Contractor shall perform a coverage test in the presence of the City to determine if the water coverage for planting areas is complete and adequate. This test must be accepted by the City before planting can commence.

# E. Hydrostatic test:

- (1) Prior to the installation of any valves, all pressure lines shall be tested under a hydrostatic pressure of 150 psi for a period of not less than two hours, with all ends of lines capped and the line fully charged with water after all air has been expelled from the line
- (2) All hydrostatic tests shall be made in the presence of the City. No pressure line shall be backfilled until it has been inspected, tested, approved in writing, and the mainline and valve locations have been noted on the "as-built" record
- (3) Contractor shall furnish necessary force pump and all other test

## 1.05 TURNOYER ITEMS:

## A. Controller Charts:

- (1) Record prints must be approved by City before charts are
- (2) Provide one controller chart (of the maximum size controlle door will allow) for each automatic controller. Chart shall show the area covered by controller.
- (3) The chart is to be a reduced copy of the actual "record" print. In the event the controller sequence is not legible when the
- print is reduced, it shall be enlarged to a readable size. (4) Chart shall be marked with a different color to show the area of
- coverage for each station. (5) When completed and approved, the chart shall be hermetically sealed between two pieces of plastic, each piece being minimum 20 mils in thickness. Chart shall be installed in the controller enclosure using velcro fasteners.
- (6) Controller charts shall be completed prior to final inspection.

# B. Operation and Maintenance Manuals:

Within 10 calendar days prior to acceptance of construction, prepare and deliver to the City all required descriptive materials, properly prepared in two individually bound copies of the operation and maintenance manual. The manual shall describe the material installed and shall be in sufficient detail to permit operating personnel identify, operate, and maintain all equipment. Spare parts lists and related maufacturer's information shall be included for each equipment item installed. Each complete, bound manual shall include

- (1) Index sheet stating Contractor's address and telephone number including names and addresses and telephone numbers of local
- (2) Complete operating and maintenance instructions on all major

## C... Materials to be furnished:

## (1) Supply as part of this contract the following items:

- a. 4% additional sprinkler heads of each type and spray
- b. Two (2) wrenches for disassembly and adjustment of each type sprinkler head installed.
- c. Two keys for each automatic controller.
- d. Two couplers with a 3/4" bronze hose bib, bent nose type with hand wheel and two coupler keys.
- e. One valve box cover key.
- f. "As-built" record drawings.
- Remove and turn over backflow device valve handles.
- h. Documentation of Water Department's inspection and acceptance of backflow device.
- D. The above items shall be turned over to the City at the conclusion of the project - final inspection.

The entire sprinkler system, including all work done under this contract, shall be guaranteed against all defects and fault of material and workmanship for a period of one (1) year following the filing of the Notice of Completion. All materials used shall carry a manufacturer's guarantee of one (1) year.

Should any problem with the irrigation system be discovered within the guarantee period, it shall be corrected by the Contractor at no additional expense to the City within ten (10) calendar days o receipt of written notice from the City. When the nature of the repairs as determined by the City constitute an emergency (e.g. broken pressure line) the City may proceed to make repairs at t Contractor's expense. Any and all damages to existing improvement resulting either from faulty materials or workmanship, or from the necessary repairs to correct same, shall be repaired to the satisfaction of the City by the Contractor, all at no additional cost

# B. Form of Guarantee:

Guarantee shall be submitted on Contractors own letterhead as

# GUARANTEE FOR SPRINKLER ERRIGATION SYSTEM

We hereby guarantee that the sprinkler irrigation system we have furnished and installed is free from defects in materials and workmanship, and the work has been completed in accordance with the drawings and specifications, ordinary wear and tear and unusual abuse, or neglect excepted, and that the work, materials, and equipment as installed will fulfill the requirements of the guarantee included in the specifications. We agree to repair or replace any or all of our work, together with any other adjacent work which may be displaced by so doing, that may prove to be defective in its workmanship or materials within a period of one (1) year from date of acceptance of the above named project by the City of Riverside, California, at no additional cost to the City. We shall make such repairs or replacements within 10 calendar days following written notification by the City. When the immediate repair or replacement of the work is necessary to ensure the public safety and welfare, which would be endangered by continued usage of the facility, such circumstance will be deemed an operational emergency. In the event of such an emergency after the City contacts our firm and after authorizing 24 hours to initiate repairs, if we fail to initiate and filigently complete such repairs in a timely manner, the Director may direct City forces to perform such functions as he may deem necessary to correct the work and immediately place the facility back in operational condition. If such procedure is implemented, we shall bear all expenses incurred by the City. In all cases, the judgement of the Director shall be final in determining whether an operational emergency exists. In the event of our failure to make such repairs or replacements within the time specified after receipt of written notice from the City (other than an operational emergency), we authorize the City to proceed to have said repairs or replacements made at our expense and we will pay the costs and charges therefore upon demand.

ADDRESS: C. After the system has been completed, the Contractor shall instruct

the Parks Department Representative in the operation and maintenance

of the system and shall furnish a complete set of operating

D. Any settling of trenches which may occur during the one-year period following acceptance shall be repaired to City's satisfaction by the Contractor without any additional expense to the City. Repairs shall include the complete restoration of all damage to planting, paving or

other improvements of any kind as a result of the work.

## PART 2 - HATERIALS

All materials shall-conform with Section 212 of the Standard Specification except as modified herein.

## 2.02 PIPE AND FITTINGS

## A. Pipe - General:

- (1) Pressure supply lines 2 inches in diameter and up to 8 inches in diameter shall be either Class 315 solvent weld PVC or Class 200' rubber gasket type PVC. Solvent weld and ring type pipe shall not be used together on the same pressure supply line.
- (2) Pressure supply lines 1-1/2 inches in diameter and smaller shall be minimum schedule 40 PVC.
- (3) Non-pressure lines shall be minimum Class 200 PVC.

Amend Standard Specifications Section 212-2.1.2 to read: "All steel pipe shall be hot-dipped galvanized,...., and add: "All fittings for steel pipe shall be 250 pound rated galvanized malleable from, banded pattern. Pipe sizes indicated on the drawings are nominal inside diameter, unless otherwise noted.

PART 3 - EXECUTION

All, work shall conform with Section 308 of the Standard Specifications

except as modified herein. No work of this section other than sleeving

under pavement shall commence prior to the completion and acceptance of

Connections to or the installation of the water supply shall be at the locations shown on the drawings. Kinor changes caused by actual

Contractor shall provide electrical service as necessary and make

Prior to all work of this section, carefully inspect the installed

work of all other trades and verify that all such work is complete to

the point where this installation may properly commence. Yerify that

irrigation system may be installed in strict accordance with all

pertinent codes and regulations, the original design, the referenced

In the event any equipment or methods indicated on the drawings or in

specifications is in conflict with local codes, immediately notify

the inspector prior to installing. If this notification is not provided, the Contractor shall assume full responsibility for the

Before starting work of this section, the contractor shall obtain the written acceptance of the City of the fine grades, and written

authorization for the work of this section to proceed. Contractor is

to keep within the specified material depths with respect to finish

grade. Failure to obtain such written acceptance may subject the contractor to adjusting the grades or depth of lines in order to

achieve acceptable depths of cover, all as directed by the City and

Make all necessary measurements in the field to ensure precise fit of

items in accordance the original design. Contractor shall coordinate

the installation of all irrigation materials with all other work.

Special attention shall be given to coordination of piping locations versus tree and shrub locations and sleeve locations versus pavement

times. Upon completion of work, transfer all as-built information on

changes and dimensions to reproducible sepia prints. The changes and

dimensions shall be recorded in a legible and workmanlike manner, to

(1) Add the following to Standard Specifications Section 308-2.2:

(2) Amend Standard Specifications Section 308-2.2.2) to read: Water

Dig trenches and support pipe continuously on bottom of ditch.

Where lines occur under paved areas, depth dimensions shall be

lines continuously pressurized - minimum 18 inches, maximum 24

inches. (These measurements are to be from subgrade elevation

read: Lateral sprinkler lines - minimum 12 inches and maximum

Where it is necessary to excavate adjacent to existing trees,

the contractor shall avoid injury to trees and tree roots.

Excavation in areas where 2-inch and larger roots occur shall be

done by hand. All roots 2 inches and larger in diameter shall

be tunneled under and shall be heavily wrapped with wet burlap

to prevent scarring or drying. Where trenching machine is run close to trees having roots smaller than 2 inches in diameter,

the wall of the trench adjacent to the tree shall be hand

trimmed, making a clean cut through the roots. Roots 1 inch and

larger in diameter shall be painted with two coats of tree seal

or approved equal. Trenches adjacent to trees shall be closed

damaged or removed as a result of the contractor's operations shall be reconstructed by the contractor to the same dimensions.

except for pavement thickness, and with the same type materials used in the original work. Trench resurfacing shall be 1 inch

greater in thickness than existing pavement. Concrete pavement

shall be removed and replaced in "full panels" with no

horizontal dimension less than five (5) feet. Contractor shall

review the planned limits and lines of concrete removal and

replacement with the Park Projects Inspector prior to sawcutting

Amend Standard Specifications Section 308-2.2 to read: Backfill

shall be uniformly tamped in 4-inch layers under and around the pipe

for the full width of the trench and the full length of the pipe.

Materials shall be sufficiently damp to permit thorough compaction,

free of voids. Backfill shall be compacted to dry density equal to

Flooding in lieu of tamping is not allowed without specific prior written approval of the Soils Engineer and the Park Projects

Under no circumstances shall the wheels of any vehicle not designed

General: Add the following to Standard Specifications Section

(1) Piping under existing pavement may be installed by jacking,

(2) Cutting or breaking of existing pavement is not permitted except

(3) Carefully inspect all pipe and fittings before installation,

with all markings up for visual inspection and verification.

(4) Contractor shall install concrete thrust blocking per the

(5) Parallel lines shall not be installed directly over one another. Provide a minimum of 12" horizontal separation for all

(6) For plastic-to-metal connections, work the metal connections

plastic-to-metal connections, except where noted otherwise.

(7) All piping under pavement shall be sleeved using schedule 40 PVC sleeves. Each line shall be separately sleeved.

first. Use a non-hardening pipe dope on all threaded

boring, or hydraulic driving. However, no hydraulic driving is

as approved by Park Projects Inspector. When approved, all

necessary repairs and replacements will be made at no additional

removing all dirt, scale and burrs and reaming; install pipe

manufacturer's recommendations at all changes of direction and

for the purpose of soils compaction be used to compact backfill.

permitted under asphaltic concrete pavement.

adjacent undisturbed soil and shall conform to adjacent grades.

(5) Permanent Resurfacing: Add the following to Standard Specifications Section 308-5.1: All surface improvements

(3) Amend Standard Specifications Section 308-2.2, paragraph 3) to

(4) Add the following to Standard Specifications Section 308-2.2:

F. Contractor shall maintain record drawing blueprint on site at all

the satisfaction of the Park Projects Inspector.

site conditions shall be made at no additional cost to the City.

Add the following to Standard Specifications Section 308-5.1:

120V connection to the irrigation controllers.

standards, and the manufacturer s recommendations.

cost of all revisions necessary to comply with code.

at no additional cost to the City.

E. Coordination with work of other trades:

installation to-avoid conflicts.

considered below subgrade.

for piping under pavement.)

within 24 hours.

for removal work.

cost to the City.

parallel lines.

terminal points of pressure pipe.

3.03 PIPE INSTALLATION:

all grading work specified in Section 02210.

B. Electrical Service:

D. Grades:

3.02 TRENCHING AND BACKFILLING:

Add the following to Standard Specifications Section 212-2.1.3: All plastic pipe shall bear the following markings: manufacturer's name, nominal pipe size, schedule or class, type of material, pressure rating in PSI, MSF seal of approval, and date of extrusion.

Amend Standard Specification Section 212-2.1.3 to read: All plastic pipe fittings shall be standard weight schedule 40 and shall be injection molded of an improved PVC fitting compound. All threaded plastic fittings shall have injection molded threads. No cut threads will be accepted on PVC pipe and fittings. All tees and ells shall be manufactured in injection molds that are side gated. All threaded nipples shall be standard weight schedule 80 with molded threads.

Amend first sentence of Standard Specification Section 212-2.1.4 to read: "All rubber gasket PYC pipe, couplings, and fittings shall conform to ASTM D 2241 Type 1, Grade 1, 2000-PSI design stress"; and add the following to the section: "Couplings, rubber gaskets, and fittings shall be as approved by the pipe manufacturer. Ring-type rubber gasket couplings shall permit a five (5) degree deflection of the pipe at each coupling (2-1/2 degrees each side) without exfiltration or infiltration, cracking or breaking.

Add the following to Standard Specifications Section 212-2.1.6: Fittings for A.C.P. connection laterals shall be cast from tees and bossed couplings except as follows:

- (1) Double strap service clamps with rubber seals and flat bronze straps may be used for connections of 50 percent or less than the diameter of pipe.
- (2) Tapped A.C.P. couplings with brass inserts may be used for connections of 3/4, 1, 1-1/4, 1-1/2 and 2 inches.

# 2.03 YALVES AND VALVE BOXES:

## A. Manual Control Valves:

B. Remote Control Valves:

Add the following to Standard Specifications Section 212-2.2.3: Anti-siphon-type valves shall be all bronze with swivel-type replaceable seating members and an approved vacuum breaker as an integral part of assembly.

Add the following to Standard Specifications Section 212-2.2.4: Valves shall be spring-loaded, self-cleaning, packless diaphram activated, of a normally closed type. Valves shall be of the same manufacturer and series as the automatic controller.

steel molded in epoxy to form one integral unit, and shall be 24 volt A.C., 2.0 watt maximum (2" and smaller valves). Yalve shall close against flow without chatter and with minimum

Valve solenoid shall be corrosion-proof and constructed of stainless

Yalve shall be completely serviceable in the field without removing valve body from line.

Add the following to Standard Specifications Section 212-2.2.6:

Quick coupling valves shall have locking vinyl cover and shall be 1°

c. Quick-Coupling Valves:

D. Gate Yalves: All gate valves shall be capable of withstanding a minimum working pressure of not less than 150 ps1.

# E. Valve Boxes:

Add the following to Standard Specifications Section 212-2.2.7: All remote control valve boxes shall be rectangular concrete boxes with non-hinged locking cast-iron covers. Yalve station number shall be stenciled in two-inch-high )2°) numerals on cover-using epoxy resin base paint of a contrasting color. Gate valve boxes shall be round concrete boxes with non-hinged locking cast iron covers marked either "Gate Yalve" or "G. Y." with letters cast or tooled in the cover.

2.04 BACKFLOW PREVENTER:

Add the following to Standard Specifications Section 212-2.3: The backflow prevention unit shall be a reduced pressure type vacuum breaker of the size, manufacture, and model number as indicated on the drawings. If not indicated, the device shall be the same size as the water service and the manufacturer and model number shall be as approved by the City.

# 2.05 ELECTRICAL MATERIALS

# A. Conduit:

Amend Standard Specifications Section 212-3.2.1 to read: Conduit below paying shall be schedule 40 PVC of sufficient size to carry all proposed wiring. Wiring shall be in a separate sleeve.

Add the following to Standard Specifications Section 212-3,2,2:

All common wire shall be white with a colored stripe. Stripe color shall be different for each controller installed. All control wire shall be of one color other than white or green. A different color control wire shall be used for each controller installed,

# C. Electrical Service:

Materials for electrical service shall comply with the standard specifications, governing utility agency standards, and requirements of all applicable codes.

# 2.06 CONTROLLER UNIT

Add the following to Standard Specifications Section 212-3.3:

Controllers shall be wall mounted type, as indicated on the drawings, with a heavy duty watertight case and locking hinged cover.

# 2.07 IRRIGATION HEADS:

J.F. Davidson Associates, Inc.

All irrigation heads shall be as shown on the plans and shall conform with. Section 212-2.4 of the Standard Specifications.

# CITY OF RIVERSIDE, CALIFORNIA

APPROVED BY DATE APPROVED BY PRINCIPAL ENGINEER / 1/2/5/ PARK DEPARTMENT NA 12-7-90 ĎIRECTOR OF ⊅UBLIC WORKS TRAFFIC DIVISION

TRACT 21834-4 LANDSCAPE

TWO WORKING DAYS BEFORE YOU DIG

Underground Service Alert

Call: TOLL FREE

# PRIVATE ENGINEERING NOTE

## ONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSI-OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CON-RACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY. REAL OR ALLEGE. N CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT XCEPTING LIABILITY ARISING-FROM THE SOLE NEGLIGENCE OF DESIG



PREPARED UNDER THE DIRECTION OF:

REGISTERED CIVIL ENGINEER NO.\_\_\_\_\_ EXPIRATION DATE: \_\_\_ \_ DATE: \_\_ APPROVED BY:

SCALE: NO SCALE

DATE: 7/12/90

ENGINEERING PLANNING SURVEYING ARCHITECTURE LANDSCAPE ARCHITECTURE 3880 Lemon Street, Suite 300 Riverside, CA 92502 (714) 686-0844 FAX 714-686-5954 BENCH MARK:

11200 S. Mt. Vernon Ave., Suite "D" 73-080 El Paseo, Suite 106 Colton, CA 92324 Palm Desert, CA 92260 (714) 825-1082 (619) 346-5691 FAX 619-340-0529

CHIEF P. W. ENGR. 14,6 1-4-96 CHECKED BY ART DESIGNED BY A.M. DRAWN BY J.L. LANNING DEPT. 10000

DEPARTMENT OF PUBLIC WORKS

REVERSE FRONTAGE ORANGE TERRACE PKWY.

connection to its service line. B. Plastic Pipe: Add the following to Standard Specifications Section

(8) Do not install multiple assemblies ("manifold") on plastic

lines. Provide each equipment assembly (e.g. RCV, quick

coupler, gate valve, head, backflow device) with its own

(1) Exercise care in handling, loading, unloading and storing plastic pipe and fittings, store plastic pipe and fittings under cover until ready to install; transport plastic pipe on a vehicle with a bed long enough to allow pipe to lay flat, avoid undue bending and an concentrated external load.

(2) 360° applicators shall be used to apply primer and solvent on pipe sizes 2-1/2 inches and larger.

## .3.04 BACKFLOW INSTALLATION: BY W.M.W.D.

3.05 YALVE AND YALVE BOX INSTALLATION:

3.07 CONTROLLER INSTALLATION:

Add the following to Standard Specifications Section 308-5.3: Install-backflow assemblies at locations approved in the field by the Park Projects Inspector and at heights required by local codes.

Amend Standard Specifications Section 308-5.3 to read: Valves shall be the same size as the pipeline in which they are installed unless otherwise specified on plans. Valves shall be installed a minimum of three feet in horizontal distance apart, each with its own connection to the pressure

Amend Standard Specifications Section 308-5.3 to read: Install quick couplers and valve boxes per Parks and Recreation Department standard

Add the following to Standard Specifications Section 308-5.3: Valves shall be installed in shrub areas whenever possible. No valves or valveboxes shall be installed within a designated athletic playing field.

# 3.06 SPRINKLER HEAD INSTALLATION: Amend Standard Specifications Section 308-5.4.1 to read: Sprinkler heads

## shall be installed as designated on the drawings and per Parks and Recreation standard details.

Add the following to Standard Specifications Section 308-5.3: The controller location, as shown on the plans, is diagrammatic. The final location of the controller shall be as approved by the Park Projects Inspector before installation. The Contractor shall coordinate the electrical service with this location. The controller shall be wall mounted within a Le Meur vandal resistent enclosure, unless noted otherwise on the plan. Controller enclosure shall be located in shrub areas and/or adjacent to other hardscape items. Enclosure shall be painted with two coats of paint, color as approved; submit samples. A 4° thick concrete slab for maintenance access shall be provided, size approximately 15 sq. ft., line, grade and dimensions as directed by the

Following establishment of the turf, the irrigation system shall be programmed to operate during the periods of minimal use of the project area (i.e., 11:00 p.m. through 6:00 a.m.).

Add the following to Standard Specifications Section 308-5.5: All splice connections shall occur in a valve box. All wire runs between the valve and the controller shall be a continuous run with no splices unless noted otherwise on the plan.

All low voltage wiring splices shall be made-up as soldered connections, wrapped with a minimum of two (2) layers of electrical tape and sealed with Scotch-coat. Scotch-lok, Uni-pack, Penn-tite, or other similar type connectors are not acceptable.

## Add the following to Standard Specifications Section 308-5.6.2: Centerload all plastic pipe prior to pressure testing. Amend Standard Specifications Section 308-5.6.2 to read: Pressure test the mains

3.09 FINISHING AND TESTING:

any planting operations commence. 3.10 COMPLETION CLEANING: Add the following to Standard Specifications Section 308: Upon completion of the work, Contractor shall smooth all ground surfaces, remove excess

minimum 2 hours at 150 PSI. Add the following to Standard Specifications

Section 308/5.6.2: The entire system shall be operating properly before

## materials, rubbish, debris, etc., sweep adjacent streets, curbs, gutters. walkways and trails, and remove construction equipment from the premises. END OF SECTION

INDEXED 1-15-91 4H

IRRIGATION SPECIFICATIONS ROJECT NO. 8911314 R-29221

SHEET L-9 OF 10

## PART 1 - GENERAL

## 1.01 RELATED DOCUMENTS:

The provisions of the "Standard Specifications for Public Horks Construction" shall apply except as modified herein.

The work required is indicated on the drawings and includes, but is not necessarily limited to: soil preparation; finish grading (as distinguished from fine grading per Section 02210); planting trees; guying and staking trees; planting shrubs and groundcover; hydroseeding turf soil erosion control; maintenance; plant establishment; guarantees; and

The Contractor shall notify the Park Projects Inspector upon completion of fine grading and prior to commencement of soil preparation work. The City will observe agronomic soils tests for all planting areas after completion of fine grading and prior to start of soil preparation work. Tests will be performed by an approved agronomic soils testing laboratory and will include a fertility and suitability analysis with written recommendations for soil preparation, planting backfill mix, auger hole requirements, and post plant fertilization program. The soils report recommendations shall take precedence over the minimum amendment and fertilizer application rates specified herein only when they exceed the specified minimums Contractor shall allow a minimum two week period for the soils testing work commencing upon acceptance of the fine grading work per Section 02210 by the Park Projects Inspector.

- A. All trees installed under the contract shall be guaranteed against any and all poor, inadequate or inferior materials and/or workmanship for a period of one (1) year following final acceptance.
- B. During the guarantee period, any material found to be dead, missing, or in poor condition shall be replaced by the contractor within ten (10) days of written notification. Park and Recreation Department shall be the sole judge as to the condition of the material.
- C. Replacement shall be made in accordance with City standards.
- D. Material and labor involved in replacing plant material shall be provided by the contractor at no additional cost to the City.

Inspections will be required. The Contractor shall contact the Park Projects Inspector at least 48 hours (2 working days) in advance of an anticipated inspection. An inspection will be required at each of the

- A. Upon completion of fine grading and prior to commencement of soil preparation, for acceptance of fine grading work and taking of soils
- B. Inspection of completed finish grading work following soil amendment
- When container plants and/or bare root stock are spotted for planting, but before planting holes are excavated.
- D. When planting and all other indicated or specified work has been
- E. During application of pre-emergent chemical.
- F. At start of plant establishment period.
- G. . At end of the plant establishment period, prior to final acceptance of the project for maintenance by the City, this acceptance for maintenance will be confirmed in writing by the Park and Recreation

The following written certifications are required to be submitted to the Park Projects Inspector upon delivery of the respective materials

Total Quantity of commercial fertilizers, by type Total Quantity of soil amendments and conditioners, by type Total Quantity of seed, by type Total Quantity of mulch Total Quantity of iron sulphate

# 1.07 PLANT ESTABLISHMENT PERIOD:

The length of the Plant Establishment Period shall be A MINIMUM see also Subsection 3.08 of this OF ONE (1) YEAR. section regarding start of plant establishment period.

# PART 2 - MATERIALS

# 2.01 GENERAL:

All materials shall conform with Section 212 of the Standard Specifications except as modified herein.

# 2.02 FERTILIZER, SOIL AMENDMENTS AND CONDITIONERS:

# Add the following to Standard Specifications Section 212-1.2.3:

A. Planting Tablets: Tightly compressed long-lasting, slow-release fertilizer tablets weighing 21 grams, with a potential acidity of not more than 5 percent by weight and having an analysis of 20-10-5 derived from the sources listed in the following guaranteed analysis:

# GUARANTEED ANALYSIS

7.0% water soluble nitrogen -13.0% water insoluble nitrogen

Available Phosphoric Acid (P<sub>2</sub>O<sub>5</sub>). . . . . . . . . . . . . . . 101 Derived from calcium phosphate

Combined Calcium (Ca). . . . . . . . . . . . . . . . . . 2.6% Derived from calcium phosphates

Derived from ferrous sulfate

Commercial fertilizer shall bear the manufacturer's guaranteed statement of analysis and shall meet the following minimum requirements: 16% nitrogen, 6% phosphoric acid, and 8% potash.

C. Organic Soil Amendment:

Shall be type 1 organic soil amendment, wood based product, nitrogen stabilized

D. Soil Conditioners:

Add to Standard Specifications, new Section 212-1.2.6: <u>Inorganic conditioners</u> shall be agricultural grade gypsum, soil sulfur and iron sulfate. Iron sulphate shall be ferric sulphate or ferrous sulphate in pelleted or granular form containing not less than 18.5% iron, expressed as metallic iron, and shall be registered as an agricultural mineral with the State Department of Agriculture in compliance with Article 2 "Fertilizing Materials", Section 1030 of the Agriculture Code.

dd the following to Standard Specifications Section 212-1.3: PJ Bluegrass (50% 'Rugby' 50% Un-Hulled Bermuda (Certified (Note: For applications in May through September, Usa Hu

udd the following to Standard Specifications Section 212–1.3:

All water used shall be potable domestic water as drawn from the City pressure main. See General Provisions section 7-8.5 regarding construction meter and charges for water drawn from City fire

# Seed: Turf seed mines specified.

Single super phosphate 0-18-0.

Mulch: Fiber shall be produced from cellulese such as wood pulp or similar organic material and shall be of such character that it will disperse into a uniform slurry when mixed with water. The fiber shall be of such character that when used to the applied mixture, an absorptive or porous mat, but not a membrane, will result on the surface of the ground. Materials which inhibit germination or growth shall not be present in the

rom Robinson Fertilizer Company 714/538-3575.

12 (+Iron) resin coated prills, Agriform,

A. Add the following to Standard Specifications Section 212-1.4.1:

All plants shall be true to name, and one of each bundle or lot shall be tagged with the name and size of plants in accordance with the standards of practice recommended by the American Association of Nurserymen. The root condition of plants furnished in containers shall be determined by removal of earth from the roots of not less than two plants nor more than 2% of the total number of plants of each species or variety except when container-grown plants are from several different sources; in which case, the roots of not less than two plants of each species or variety from each source shall be checked by the Park Projects Inspector at his option. The selection of plants to be checked will be made by the Park Projects Inspector.

All plants rendered unsuitable for planting shall be considered as samples, and replacements shall be provided at no additional cost. In case the sample plants are found to be defective, the entire lot or lots of plants represented by the defective samples will be

- Amend the Standard Specifications Section 212-1.4.2 and 212.1.4.3 All trees and shrubs supplied by contractor shall be of the specified standard height and diameter set by the American Standard for Mursery Stock. The height of the trees shall be measured from the root crown to the last division of the terminal leader and the diameter shall be measured six (6) inches above the crown roots. The trees shall stand erect without support.
- C. Add to Standard Specifications, new Section 212-1.4.6: Rooted cuttings will also be acceptable.
- D. Bare root stock shall conform to the American Nurseryman's Association standards. Minimum caliper shall be two (2) inch diameter and minimum height shall be twelve (12) feet.

Add the following to the Standard Specifications Section 212:

- Top soil shall be free of noxious weed seed and shall be of a loam characteristic, fertile and friable.
- B. Hood shavings shall be leached nitrogen fortified and shall be free of foreign matter. C. Soil used for backfill of planting pits for container plants shall be

enriched using the following blend per cubic yard (agronomic soil test recommendations to be reviewed prior to soil mixing) 2 lbs. Iron sulphate

40% wood shavings 2 lbs. commercial fertilizer Bare root stock backfill shall consist of 10% wood shavings and 90% site soil with fertilizer and soil conditioners as specified for

All soil backfill shall be bulk mixed, not individually mixed at each plant pit.

# 2.07 HEADERS, STAKES AND TIES:

- A. Add the following to Standard Specifications Section 212-1.5.3:
- (1) Tree stakes shall be straight-grained lodgepole pine, or City approved equal. Stakes shall be free from knots, checks, split. or disfigurements.
- (2) Tree ties shall be made from tire casing, 22" long by 3/4" wide. fastened to tree stake with two galvanized 5d roofing nails each.
- Add the following new section to Standard Specifications Section 212-1.5(d), Concrete Curbing Concrete shall be 5 sack mix with a maximum slump test of four inches (4"). Provide sufficient concrete forming and stakes (maximum 3' o.c.) to provide continuous line

# 2.08 JUTE NETTING:

Jute netting shall be new and shall be of uniform, plain-weave, flame-retardant mesh. The mesh shall be dyed green and shall be made from unbleached single jute yarn. The yarn shall be of loosely twisted construction and shall not vary in thickness by more than one-half its normal diameter. Jute netting shall be furnished in rolled strips and 'shall meet the following requirements:

Hidth - 48 inches, with a tolerance of one inch wider or

Minimum 78 warp ends per width of roll.

tolerance of 5 percent heavier or lighter.

Minimum 41 weft ends per yard of length. Height shall average 1.22 pounds per linear yard, with a

PART 3 - EXECUTION

# 3.01 GENERAL:

All work shall conform with Section 308 of the Standard Specification except as modified herein.

## 3.02 HEED CONTROL MEASURES

- Add the following to Standard Specifications Section 308-2.4:
- A. Upon completion of all fine grading work per Section 02210 Grading, and prior to soil preparation, perform weed control measures as
- 1. Irrigate all areas designated to be planted for a minimum of 10 minutes per setting, two settings per day for seven days to
- germinate all weed seed possible. 2. Apply a contact weed killer and allow sufficient time to obtain
- complete kill of all weeds germinated.
- Repeat step one above.

# Repeat step two above.

3.03 SOIL PREPARATION Add the following to Standard Specifications Section 308-2.3:

- A. All fine grading and mounding per Section 02210 and weed control measures shall be completed prior to soil preparation.
- B. This work shall not commence until the agronomic soils test has been completed. Should 30 calendar days elapse between completion of soil preparation and commencement of planting, all areas shall be prepared
- C. Planting areas with slopes 3:1 and steeper shall <u>not</u> be soil prepared. In lieu of soil preparation, such slopes will require fertilizer tablets for all plantings per Section 3.05, c. below. all planting areas with gradients less than 3:1, a layer of soi amendments shall be spread and rototilled into the soil to a minimum depth of 4 inches, or as recommended by the soils report, so that the soil shall be loose, friable, and free from rocks, sticks, and other
- D. The following soil amendments shall be added per 1,000 square feet to all planting areas with gradients less than 3:1 (agronomic soil test recommendations shall take precedence where these minimum amounts are
- 6 cubic yards organic amendment.
- (2) 15 pounds commercial fertilizer
- (3) 100 pounds gypsum.
- (4) Soil sulfur per soils report

## 3.04 FINISH GRADING:

The Contractor shall finish grade all planting areas filling as needed or removing surplus dirt, raking to remove all rocks and debris over 1 inch in diameter, and floating to a smooth uniform grade. All areas shall slope to drain. Flow lines shall be established to existing roads, curbs swales, and/or a sidewalks as shown on the plans and as directed. All fill material placed within the top 12" from finish grade elevations in

All landscape areas shall be finish graded, (as distinguished from fine grading specified in Section 02210) to "dress out", maintain, and/or re-establish finish grades and flow lines as approved prior to amending the soil. Contractor shall call for inspection upon completion of finish grading work. Contractor shall not proceed with planting work until finish grades have been inspected and accepted by the Park Projects

Add new section to the Standard Specifications: 308-4.6(f) Jute

All slopes areas exceeding 3:1 shall receive jute netting. Metting shall also be provided during the maintenance period, when and as directed by the Park Projects Inspector, along flow lines and other locations where erosion is evident. Jute netting shall be installed loosely, up and down the slope. The installed netting shall fit the soil surface contour and shall be held in place by 9-inch long, 'll-gage (minimum) steel wire staples driven vertically into the soil at approximately 24-inch spacing. Jute netting strips shall overlap along the sides at least 6 inches. Ends of strips shall be buried into the soil at least 6 inches. Lap all ends of rolls a minimum of 24".

- A. Amend the Standard Specifications Section 308-4.5 to coordinate with Section 2.06 herein for specified backfill mix.
- B. Add the following to the Standard Specification Section 308-4.5:
- (1) Soil surrounding planting pit shall be in a friable condition
- (2) Backfill using specified soil mix to within 8" of finish grade. At this depth, place the plant fertilizer tablets Agriform 20-10-5, 21 grams each, or City approved equal. A minimum of 1 tablet for 1 gallon, 3 tablets for 5 gallons, 5 tablets for 15 gallons, and 8 tablets for a 24° box. Complete backfilling to finish grade.
- (3) Trees (other than relocated palms) shall be planted at such a depth that the crown roots bear the same relative position to finish grade as they did to the soils where they were grown. Backfill after planting shall be compacted carefully into place without injuring the roots of the tree or breaking up the ball of earth surrounding the roots.
- C. Add the following to Standard Specifications Section-308-4.7:

one per plant in lieu of soil preparation work.

- (1) On slopes exceeding 3:1 ratio, apply 5 gram Agriform tablets,
- (2) Mulch and fertilize groundcover areas using 1.5 cubic yards of wood shavings and 5 lbs. of the specified commercial fertilizer per 1,000 square feet. Repeat fertilization at 30 day intervals throughout the duration of the contract up to 4 applications, after which decrease frequency to once every 90 days.
- (3) All groundcover and bare dirt areas are to be treated with a pre-emergent chemical (subject to approval by the Park Inspector prior to application). Chemicals are to be applied by a licensed Pest Control Agent. This treatment shall be applied at the following times during the contract: a) before planting, b) at beginning of plant establishment period, and c) at end of plant establishment period. The Park Projects Inspector, (714) 782-5223, shall be given a minimum of 48 hours (2 working days) notice prior to each application. No chemicals shall be applied other than in the presence of the Inspector.

## 3.07 TREE STAKING:

Amend the Standard Specifications Section 308-4.6.1 and 308.4.6.2 to read: Stake trees per Park and Recreation Department standard detail.

Add the following to Standard Specifications Section 308-4.8.2, b

lixing of hydroseed slurry: Mixing shall be performed in a tank, wit built-in continuous agitation and recirculation system of sufficient operating capacity to produce a homogeneous slurry of fiber, M-Binder, Mertilizer and water in the designated unit proportions. 870 lbs./acre superphosphate 200 lb./acre as specified in Section 2.03

100 lbs./acre d s**y**opes exceeding 5:1 M-Binder Agricultural Grade Gy

With agitation system operating at part speed, later shall be added to the tank, good recirculation shall be established. Materials shall be added in such a manner that they are uniformly byended into the mixture in the following sequence:

Add binding agent - 1/2 acr Add 3 - 50 pound bales of fiber. Add seed - 1/2 acre requireme

When tank is 1/3 filled with V

Agitate mixture at full speed when the tank is half-filled with

Add remainder fiber requirement, 7 bales before tank is 3/4 full. Add remainder fertilizers, seed and gypsum. Slurry distribution should begin immediately. Area to be hydroseeded shall be moistened to just prior to application.

Application: Hydroseed slurry shall be applied under high pressure evenly and esult in a uniform coat on all areas to be treated. Care shall be exercised to assure that plants in place are not subjected to the dyrect force of the application. Slurry shall be immediately removed from walks, structures, plants, etc., that are inadvertently ill bare spots shall be reseeded by the Contractor within 10 days The Contractor shall be responsible for all reseeded area for as long after seeding as necessary until acceptable germination and stablishment is realized and approved by the City.

slurry shall not be sprayed on undesignated areas. Any slurry spined sprayed into areas other than those designated to receive spray shall e cleaned up at the Contractor's expense to the satisfaction of the City.

Add the following to Standard Specifications Section 308-4.9.5:

- A. It shall be the Contractor's responsibility to maintain a balanced watering program to ensure proper growth until final acceptance of
- Immediately after planting, apply water to each plant. Apply water in a moderate stream in the planting hole until the material about the roots is completely saturated from the bottom of the hole to the
- C. Apply water in sufficient quantities and as often as seasonal conditions require to keep the planted areas moist at all times, well below the root system of plants.

- (1) Contractor shall properly and completely maintain the irrigation system. A balanced water program shall be maintained to ensure proper germination and growth until final acceptance of the work. Plants which cannot be watered sufficiently with the
- irrigation system shall be watered by means of a hose. (2) All controllers are to have each station individually adjusted on a weekly basis. System shall be set considering the application rate each area is capable of receiving. The system shall operate on short intervals, with the cycle repeating at a later time to reduce runoff.

# 3.10 MAINTENANCE:

Amend the Standard Specifications Section 308-6 to read: All areas within the work limits of this contract shall be maintained by the contractor for the duration of the contract until final acceptance.

A. Criteria for Start of Plant Establishment Period:

3.11 START OF PLANT ESTABLISHMENT: Add the following to Standard Specifica-

- (1) The plant establishment period shall not start until all elements of the project that impact the landscape are completed in accordance with the contract documents. Projects will not be segmented into phases.
- (2) Permanent power to remote controllers shall be established.
- (3) The plant establishment period for the project shall not begin until after the first moving of the newly planted turf areas. New turf shall not be moved until attaining a minimum height of 2 inches. All turf shall be maintained at a moving height of

(4) Written acceptance of the City must be obtained to start the

- plant establishment period. (5) If the project maintenance fails to continuously meet standards required, the plant establishment period "day count" will be
- suspended and will not recommence until the Contractor has corrected all deficiencies. 3.12 MAINTENANCE TASKS: Add the following to Standard Specifications Section

# A. <u>General</u>:

During the contract period provide all watering, weeding, fertilizing and cultivation and spraying necessary to keep the plants in a healthy growing condition and to keep the planted areas neat, edged, and attractive. All shrubs planted by the contractor shall be pinched and pruned as necessary to encourage new growth and to eliminate rank sucker growth. Old wilted flowers and dead foliage shall be immediately pinched or cut off. Do not prune trees without written approval of the City.

## B. <u>Iron Chlorosis</u>:

After planting and during the plant establishment period, in the event that any plantings exhibit iron chlorosis symptoms, apply FE 138 Geigy or equivalent at manufacturer's recommended rates.

# C. Replacement Plantings:

During the plant establishment period, should the appearance of any planting installed by the Contractor indicate weakness, that plant shall be replaced immediately with a new, healthy plant. At the end of the plant establishment period, all plant materials shall be in a healthy, growing condition and spaced as indicated on the plans.

## D. <u>Fertilization</u>:

The Contractor shall apply commercial fertilizer to at a rate of 5 pounds per 1,000 square feet, at 30-day intervals, for 3 applications as a minimum, above and beyond the original soil preparation application.

## E. <u>Planting Establishment</u>:

All planting areas that do not show a prompt establishment of plant material shall be replanted at 10-day intervals until the plant material is established. If a good rate of growth has not been demonstrated within 30 days of first planting/hydroseeding, the Contractor shall be responsible to determine the appropriate horticultural practices necessary to obtain good growth. Contractor shall obtain agronomic soils testing of all areas not showing good growth and shall provide copies of the test results to the City to verify the appropriateness of all maintenance work performed. If additional soil amendments are needed, up to a maximum 25% beyond the application rate specified, such amendments shall be provided by the Contractor at no additional cost to the City.

## F. Grading and Drainage:

During the plant establishment period all flow lines shall be maintained to allow for free flow of surface water. Displaced material which interferes with drainage shall be removed and placed as directed. Low spots and pockets shall be graded to drain properly. Jute netting shall be installed at flow lines and other locations where erosion is evident, when directed by the Park Projects Inspector.

- (1) Damage to planting areas shall be repaired immediately and throughout the plant establishment period. Depressions caused by vehicles, bicycles, or foot traffic shall be filled and leveled. Replant damaged areas.
- (2) All paved areas shall be washed and maintained in a neat and clean condition at all times.
- (3) All subsurface drains and inlets shall be periodically cleared of debris, leaves and trash and flushed with clear water to avoid build up of silt and debris.
- (4) Debris and trash shall be removed from the site weekly at a

## G. <u>Disease and Pest Control</u>:

Add the following to Standard Specifications Section 308-6 Throughout the plant establishment period, all plants shall be maintained in a disease and pest free condition. A licensed pest control operator shall be retained by the Contractor to recommend and apply all pesticides, herbicides, and fungicides. Exterminate gophers, moles, and all other rodents, and repair damage.

## 3.13 END OF PLANT ESTABLISHMENT PERIOD:

- When the contractor believes he has completed the plant establishment period and the entire project is ready for final acceptance, he shall request inspection of the project. The City will inspect the project for final acceptance. Deficiencies noted during inspection shall extend the plant establishment period until all are corrected.
- B. All planting areas shall show a good rate of growth and shall be well established "filled in" plantings free of voids. Bare areas will be unacceptable. Contractor shall provide sod or plantings from flats as necessary to fill in all bare areas. Such sod or plantings shall be planted a minimum of 10 days prior to the end of the plant establishment period and shall have roots "knit-in" to the native

## C. Final acceptance shall occur only upon written acceptance of the project for maintenance by the City.

# 3.14 CLEAN UP:

Upon completion of the work, the Contractor shall smooth all ground surfaces; remove excess materials, rubbish, debris, etc.; sweep adjacent streets, curbs, gutters; wash down all walkways, and trails; and remove construction equipment from the premises.

# END OF SECTION

BJ/0020o/c 06/28/88

# Underground Service Alert



## PRIVATE ENGINEERING NOTE CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH

GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSI-ILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION F THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; HAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND IOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CON-RACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN ROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY REAL OR ALLEGE N CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJEC XCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIG PROFESSIONAL.



REGISTERED CIVIL ENGINEER NO.\_ **EXPIRATION DATE:** \_ DATE:\_ APPROVED BY:

PREPARED UNDER THE DIRECTION OF:



SCALE: NO SCALE

DATE: 7/12/90

3880 Lemon Street, Suite 300

BENCH MARK:

J.F. Davidson Associates, Inc. NGINEERING PLANNING SURVEYING ARCHITECTURE LANDSCAPE ARCHITECTURE 11200 S. Mt. Vernon Ave., Suite "D" Colton, CA 92324 Palm Desert, CA 92260 Riverside, CA 92502 (619) 346-5691 (714) 686-0844 FAX 619-340-0529 FAX 714-686-5954

73-080 El Paseo, Suite 106

PARK DEPARTMENT TRAFFIC DIVISION APPR. DATE CHIEF P. W. ENGR. CHECKED BY ART DESIGNED BY A.M. DRAWN BY J.L. ANNING DEPT. FOM 12-7-7

CITY OF RIVERSIDE, CALIFORNIA DEPARTMENT OF PUBLIC WORKS APPROVED BY DATE APPROVED BY PRINCIPAL ENGINEER / 1/3/41

DIRECTOR OF

UBLIC WORKS

TRACT 21834-4 REVERSE FRONTAGE LANDSCAPE ORANGE TERRACE PKWY.

PLANTING SPECIFICATIONS

# R-2922 L SHEET L-10 OF 10

ROJECT NO. 8911314

FILE NO.:

INDEXED 1-15-91 4