



# City of Chico

Capital Project Services Department  
411 Main Street, 2nd Floor  
P.O. Box 3420  
Chico CA 95927  
FAX Number (530) 895-4899

## ADDENDUM TRANSMITTAL

Number of Pages (including this cover page) Eighty Eight (88)

Date: January 13, 2012

FROM:

TO:

Name City of Chico

Name All Planholders

Dept Capital Project Services

Co. \_\_\_\_\_

Phone Number (530) 879-6900

Fax \_\_\_\_\_

**SUBJECT: ADDENDUM NO.1 / STATE ROUTE 32 WIDENING (PHASE 1) –  
PROJECT No. 15010 – FROM EAST OF PARK AND RIDE LOT TO EL MONTE AVE**

**PROJECT NAME:** STATE ROUTE 32 WIDENING PROJECT (PHASE 1)  
PROJECT No. 15010

FROM EAST OF PARK AND RIDE LOT TO EL MONTE AVENUE

**BUDGET ACCOUNT No.:** MAJGC/15010-300-4150

**ADDENDUM NO. 1**

The contract plans and specifications for the above noted project are hereby modified as follows:

ITEM	PAGE/SHEET	DESCRIPTION OF CHANGE/INSTRUCTIONS
1	Plan Sheet X-1	Pavement Structural Section 5 has been removed.  Replace plan sheet X-1 with Revised X-1 dated 1-11-2012
2	Plan Sheet C-3	Minor Concrete (Textured Paving) Detail has been revised.  Replace plan sheet C-3 with revised C-3 dated 1-11-2012.
3	Plan Sheets U-2, U-3, Q-3	Irrigation crossover locations and sizes have been updated.  Replace plan sheets U-2, U-3, and Q-3 with revised U-2, U-3, and Q-3 dated 1-11-2012.
4	Plan Sheet SC-2	Construction Activities (Stage 3), Note 10 has been modified.  Replace plan sheet SC-2 with revised SC-2 dated 1-11-2012.
5	Plan Sheets LS-1.7, LS-1.10	Plant Reference Symbols G-1 have been replaced with S-18.  Replace plan sheets LS-1.7 and LS-1.10 with revised sheets LS-1.7 and LS-1.10 dated 1-11-2012.
6	Plan Sheets LS-2.0 through LS-2.8	Irrigation Plans have been revised.  Replace plan sheets LS-2.0 through LS-2.8 with revised LS-2.0 through LS-2.8 dated 1-11-2012.
7	Specification Cover Page	The Cover Page has been revised to show the new Bid Open Date of <b>January 24<sup>th</sup>, 2012</b>  Replace the Cover Page with the Revised Cover Page attached to this Addendum.

8	Notice to Contractor NC-1, NC-2	<p>The Notice to Contractor has been updated to shown the new Bid Open Date of <b>January 24<sup>th</sup>, 2012.</b></p> <p>Replace pages NC-1 and NC-2 with NC-1 A1 and NC-2 A1</p>
9	Special Provisions SP-199	<p>The fourth paragraph under Section 55 “Remove Tree” has been revised to read as follows:</p> <p>Attention is directed to “Precast Concrete Soundwall” of these special provisions. <b>The contractor shall not remove any trees until the Precast Concrete Soundwall layout is approved, the rough grading limits are staked, and the trees marked for removal are approved by the City. The contractor shall notify the Engineer immediately upon completion of the tree removal markings which must be at least one (1) week prior to the beginning of the scheduled tree removal work.</b></p> <p>Replace pages SP-199 and SP-200 with SP-199 A1 and SP-200 A1</p>
10	Special Provisions SP-266, SP-267	<p>The seventh, eighth, and tenth paragraph of Section 79 “Precast Concrete Soundwall” has been revised to read as follows:</p> <p><b><u>Safety</u></b> The Contractor shall be responsible for the observance of proper safety practices and the avoidance of damage to property by all personnel engages in the work. The contractor shall be responsible for maintaining the security and function of each existing fence (including pet containment and swimming pools) until the wall has been completed and accepted by the Engineer. <b>This may include furnishing and erecting temporary fences where no functional fence currently exists. The temporary fencing shall not be placed on private property. The Contractor shall implement the proper safety practices, including the erection of temporary fencing, immediately following the following the removal of the existing fence.</b></p> <p><b><u>Excess Quantities</u></b> The contractor shall furnish excess quantities of Precast Concrete Soundwall <del>and will be on-hand after to the City before</del> the completion of the project. This includes all materials (panels, posts, hardware, caps, etc) required to place a fully functional wall. <b>The extra Precast Concrete Wall materials shall include 25’-4” each of the 6’, 7’, 8’, 9’, and 10’ wall heights for a total of 126’-8” of excess quantity.</b> The excess quantities <del>should</del> <b>shall</b> be delivered by the Contractor to the City of Chico Municipal Services Center, 901 Fir Street, Chico, CA 95928. The Contractor shall coordinate the delivery of these materials with the Engineer. <b>Full compensation for Excess Quantities shall be included in the contract unit price paid for Precast Concrete Soundwall, and no additional payment will be allowed.</b></p> <p><b><u>C. PAYMENT</u></b> The contract price paid per square foot for Precast Concrete Soundwall shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in constructing the precast concrete soundwall including panels, posts, piers (post footings) with reinforcing steel, and panel caps, <b>temporary construction fencing, and Excess Quantities</b>, complete in place, including clearing and grubbing, excavation and backfill, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.</p> <p>Replace pages SP-265, SP-266, SP-267 and SP-268 with SP-265 A1, SP-266 A1, SP-267 A1, and SP-268 A1.</p>

<p>11</p>	<p>Special Provisions SP-283, SP-284</p>	<p>The second through sixth paragraphs under Section 87, "Miscellaneous Concrete Construction," have been revised to read as follows:</p> <p>Curb ramp detectable warning surface shall consist of raised truncated domes <del>constructed or</del> installed on curb ramps in conformance with the details shown on the plans and these special provisions. <del>At the option of the Contractor, the</del> detectable warning surface shall be prefabricated, <del>cast-in-place, or stamped into the surface of the curb ramp.</del> The color of the detectable warning surface shall be yellow conforming to Federal Standard 595B, Color No. 33538.</p> <p><b>Prefabricated detectable warning surface shall be Wet-Set ADA Std Replaceable Tactile Warning Surface Unit Manufactured by ADA Solutions, Inc., or approved equal.</b> Prefabricated detectable warning surface shall be in conformance with the requirements established by the Department of General Services, Division of State Architect and be attached in conformance with the manufacturer's recommendations. <b>Prior to installation, Contractor shall obtain approval from the Engineer for truncated dome material and dimensions.</b></p> <p><del>Cast-in-place and stamped detectable warning surfaces shall be painted in conformance with the provisions in Section 59-6, "Painting Concrete," of the Standard Specifications.</del></p> <p>The finished surfaces of the detectable warning surface shall be free from blemishes.</p> <p><del>Prior to constructing the cast-in-place or stamping the detectable warning surface, the Contractor shall demonstrate the ability to produce a detectable warning surface conforming to the details shown on the plans and these special provisions by constructing a 24" x 24" test panel.</del></p> <p>Replace pages SP-283 and SP-284 with SP-283 A1 and SP-284 A1</p>
<p>12</p>	<p>Special Provisions SP-286</p>	<p>The twenty-first paragraph of Section 87, "Miscellaneous Concrete Construction," have been revised to read as follows:</p> <p><b>Payment</b></p> <p>The contract price paid per cubic yard for Minor Concrete (Curb and Gutter), Minor Concrete (Median Curb), Minor Concrete (Retaining Curb), Minor Concrete (Sidewalk), and Minor Concrete (Curb Ramp), and Minor Concrete (Driveway), and Minor Concrete (Apron) shall include full compensation for furnishing all labor, materials including dowel and welded wire mesh, tools, equipment, and incidentals, and for doing all the work in constructing Minor Concrete (Curb and Gutter), Minor Concrete (Median Curb), Minor Concrete (Retaining Curb), Minor Concrete (Sidewalk), and Minor Concrete (Curb Ramp), and Minor Concrete (Driveway), and Minor Concrete (Apron), complete in place, as shown on the plans, and as specified in standard specifications and these special provisions, and as directed by the Engineer. <b>Full compensation for placing truncated domes shall be considered as included in the contract price for pedestrian ramps and no separate payment will be made.</b></p> <p>Replace pages SP-285 and SP-286 with SP-285 A1 and SP-286 A1</p>
<p>13</p>	<p>Special Provisions SP-301</p>	<p>The following revisions have been made to the Reduction Clause:</p> <p>A. Section 4-1.03B of the Standard Specifications shall not apply to Masonry measurement and bid items. The City reserves the right to increase or decrease the quantities in excess of 25% <del>and no additional compensation will be allowed therefor without adjustment to the contract unit price.</del></p> <p>Replace pages SP-301 and SP-302 with SP-301 A1 and SP-302 A1</p>

14	Special Provisions SP-304	<p>The following revisions have been made to the first paragraph of Section D, Mulch:</p> <ol style="list-style-type: none"> <li>1. Wood chip mulch shall be chipped tree branches and tree trunks, particle range of between <del>¾ inches to 2 inches, free of chipped diseased trees</del> <b>2 inches and 4 inches. On site trees may be used, as well as off site trees including material produced by tree removal companies. Chips from diseased trees shall not be acceptable. Prior to installation, provide a representative sample to the Engineer for City Urban Forester review and approval, one from each source.</b> Shredded redwood bark is not acceptable. Colored or dyed wood products are not acceptable. <b>Walk on bark is not acceptable.</b></li> </ol> <p>Replace pages SP-303 and SP-304 with SP-303 A1 and SP-304 A1</p>
15	Special Provisions SP-304	<p>The following revisions have been made to paragraphs 1 and 2 of Section E, Weed Control:</p> <ol style="list-style-type: none"> <li>1. Pre-planting: Use State of California allowed herbicides <del>Enide-(Upjohn), Dymid (Elanco Products Co.), Treflan, Eptan, Surflan aquamaster</del> or approved equal.</li> <li>2. Pre-Emergent: Use State of California allowed herbicides <del>Ronstar-milestone</del> or approved equal.</li> </ol> <p>Replace pages SP-303 and SP-304 with SP-303 A1 and SP-304 A1</p>
16	Special Provisions SP-313	<p>The following was added to Item b of the materials list:</p> <p>b. Satellite Controller/<b>metered electrical pedestal</b></p> <p>Replace pages SP-313 and SP-314 with SP-313 A1 and SP-314 A1</p>
17	Special Provisions SP-320, SP-321	<p>The following was added after Item Q, Lightning Arrestor, to the Materials List:</p> <p><b>R. Controller</b></p> <ol style="list-style-type: none"> <li>1. <b>Irrigation controllers shall be of the same type, manufacturer and sizes as indicated on the Drawings and/or as specified herein or approved by the City.</b></li> <li>2. <b>Irrigation controllers shall be compatible with the City of Chico Central Control Software</b></li> <li>3. <b>Controllers shall have the capability of communicating with Central Control by means of internet connection.</b></li> <li>4. <b>Controllers shall have capability to communicate with master valve/ flow sensing assembly</b></li> <li>5. <b>Controllers shall be '2 wire' type</b></li> <li>6. <b>Irrigation Satellite Controller shall be enclosed in the stainless steel customer compartment of the metered electrical pedestal and shall be vandal-resistant with a pre-wired terminal interface board, earth ground rod, electrical junction box, on/off switch, duplex receptacle and a ground fault interrupt circuit.</b></li> <li>7. <b>Controller shall have a five (5) year manufacturer's warranty.</b></li> <li>8. <b>Metered Electrical Pedestal</b> <ol style="list-style-type: none"> <li>a. <b>Metered Electrical Pedestal shall be of the same type, manufacturer and sizes as indicated on the Drawings and/or as specified herein or approved by the City.</b></li> <li>b. <b>Metered Electrical Pedestal shall have a customer compartment to house irrigation satellite controller assembly.</b></li> </ol> </li> </ol> <p>Replace pages SP-319, SP-320, SP-321 and SP-322 with SP-319 A1, SP-320 A1, SP-321 A1, and SP-322 A1.</p>

18	Special Provisions SP-323	<p>The following revisions have been made to paragraph 5 of Section D, Sleeving:</p> <ol style="list-style-type: none"> <li>5. Separate sleeves shall be provided for main line and lateral piping. <b>Separate conduits shall be provided for</b> 120V wiring, 24V wiring, telephone cable, communication cable, <b>and</b> sensor cable <del>and grounding wire.</del></li> </ol> <p>Replace pages SP-323 and SP-324 with SP-323 A1 and SP-324 A1.</p>
19	Special Provisions SP-324	<p>The following revisions have been made to Paragraph 14 of Section E, PVC Pipe:</p> <ol style="list-style-type: none"> <li>14. Install <del>a tracer wire</del> <b>detectable tape</b> twelve (12) inches below finish grade along the entire length of the main line run, including main line branches.</li> </ol> <p>Replace pages SP-323 and SP-324 with SP-323 A1 and SP-324 A1.</p>
20	Special Provisions SP-325	<p>The following revisions have been made to Paragraphs 2 and 3 of Section G, Connection to Telecommunications:</p> <ol style="list-style-type: none"> <li>2. Contractor is responsible to coordinate with the City of Chico to involve City of Chico <del>IT Parks</del> Department to obtain a telecommunication point of connection and for the connection of the controllers to phone. Contact <del>Earl Keene, Information Systems Analyst: 500-896-8400</del> <b>City of Chico Urban Forester at: (530) 896-7802</b></li> <li>3. Coordination of stubout from ATT and subsequent establishment of service to be done by the City of Chico. <del>Contact Earl Keene, Information Systems Analyst: 896-8400 for coordination.</del></li> </ol> <p>Replace pages SP-325 and SP-326 with SP-325 A1 and SP-326 A1.</p>
21	Special Provisions SP-328	<p>The following was added after Item P, Controller, to the Installation List:</p> <p style="text-align: center;"><b>Q. Controller</b></p> <ol style="list-style-type: none"> <li>1. <b>Install controller and metered electrical pedestal per plans</b></li> </ol> <p>Replace pages SP-327 and SP-328 with SP-327 A1 and SP-328 A1.</p>
22	Special Provisions SP 337	<p>The following revisions have been made to the Reduction Clause:</p> <ol style="list-style-type: none"> <li>A. Section 4-1.03B of the Standard Specifications shall not apply to Masonry measurement and bid items. The City reserves the right to increase or decrease the quantities in excess of 25% <del>and no additional compensation will be allowed therefor without adjustment to the contract unit price.</del></li> </ol> <p>Replace pages SP-337 and SP-338 with SP-337 A1 and SP-338 A1.</p>
23	Special Provisions SP-341	<p>The following revisions have been made to the Reduction Clause:</p> <ol style="list-style-type: none"> <li>A. Section 4-1.03B of the Standard Specifications shall not apply to Masonry measurement and bid items. The City reserves the right to increase or decrease the quantities in excess of 25% <del>and no additional compensation will be allowed therefor without adjustment to the contract unit price.</del></li> </ol> <p>Replace pages SP-341 and SP-342 with SP-341 A1 and SP-342 A1.</p>

24	Appendix Section 4 - Permits  EP-1 through EP-9	The Encroachment Permit included with the contract has been amended to include all pages in the permit.  Replace pages EP-1 through EP-9 with EP-1 A1 through EP-17 A1.
25	Contract Form  CF-4 through CF-9	Contract item number 45, 3" Conduit, has been deleted from the contract form.  Replace pages CF-4 through CF-9 with the attached CF-4 A1 through CF-9 A1.
26	Proposal Form  PF-4 through PF-9	Contract item number 45, 3" Conduit, has been deleted from the proposal form.  The quantity of item 44, 2" Conduit, has increased from 200 LF to 790 LF. The quantity of item 46, 6" Conduit, has increased from 200 LF to 430 LF. The quantity of item 129, Water Point of Connection, has increased from 1 EA to 2 EA. The quantity of item 130, Backflow Preventer Assembly, has increased from 1 EA to 2 EA. The quantity of item 131, Controller, has increased from 1 EA to 2 EA. The quantity of item 132, Flow Sensing Assembly, has increased from 1 EA to 2 EA. The quantity of item 133, Isolation Valves, has increased from 9 EA to 11 EA. The quantity of item 138, PVC Mainline, has increased from 7,400 LF to 8,300 LF. The quantity of item 140, Conduit, has increased from 6,600 LF to 8,000 LF. The quantity of item 142, Lighting Arrestor, has increased from 14 EA to 17 EA. The quantity of item 143, Pull Boxes, has increased from 15 EA to 22 EA.  Replace pages PF-4 through PF-9 with the attached PF-4 A1 through PF-9 A1.
27	Supplemental Project Information – General Cross Sections	General Cross Sections have been updated to insert missing sheets and to correct the sheet order. Sheets 1 through 6 of 14 for "B1" Line have been inserted into the General Cross Sections.  The updated General Cross Sections are now available through Brownies Digital Imaging and are posted on the City of Chico Website.

This addendum shall accompany each bid proposal submitted, shall become a part of the contract documents, and shall be acknowledged by the bidder by signing where indicated below.

\_\_\_\_\_  
Signature of Bidder

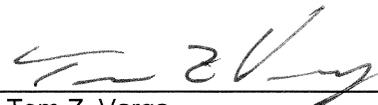
\_\_\_\_\_  
Date

NOTE: Attach Addendum to bid proposal

Attachments:

DISTRI:   CPSD/ENGR-SEC  
          O&MD/AA-Peacock  
          ALL PLAN HOLDERS  
          ALL COPIES OF SPECIFICATION

By



\_\_\_\_\_  
Tom Z. Varga  
Capital Project Services Director

PATH: V:\Chico-55-0131-SR32 Widening\CADD\Construction Support\DWG\NAME: sr32\_X1-X8\_Const  
 PLOT DATE: Jan 11, 2012-09:03:03am  
 CAD USER: eweeks

REVISION	DATE	BY	REASON
1	01/11/12	M. BROGAN	REVISED
2	01/11/12	M. BROGAN	REVISED

**NOTES:**

1. DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
2. FOR EXACT CURB/DIKE TYPE AND LIMITS, SEE LAYOUT AND CONSTRUCTION DETAIL SHEETS.
3. SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.
4. PLACE HMA DIKE ON MINIMUM OF 0.15' THICK HOT MIX ASPHALT (TYPE A).
5. PROFILE GRADE IS AT TOP OF DENSE GRADED HOT MIX ASPHALT.
6. SLOPE ROUNDING AS SHOWN OR AS DIRECTED BY THE ENGINEER. OMIT SLOPE ROUNDING ON SLOPES FLATTER THAN 4:1.
7. SEE LAYOUT SHEETS AND CONSTRUCTION DETAILS FOR EXACT LIMITS OF COLD FOAM IN-PLACE RECYCLING, HMA-A OVERLAY, AND HMA-O OVERLAY.
8. FOR STATIONS "B" 142+38.10 TO 143+50 AND "B1" 143+50 TO 143+61.64 SEE STRUCTURES PLANS.
9. SEE SHEETS L-5 THROUGH L-8 FOR EXACT LIMITS OF REMOVE CONCRETE AND OBLITERATE SURFACING.
10. SEE SOUND WALL SHEETS FOR LIMITS OF EXISTING CHAIN LINK FENCE REMOVAL.
11. WHERE OBLITERATE SURFACING IS SHOWN ADJACENT TO EXISTING PAVEMENT WHICH SHALL BE USED FOR THE PASSAGE OF PUBLIC TRAFFIC, THE CONTRACTOR SHALL SAWCUT AT THE NEW EDGE OF SHOULDER.

**LEGEND - TYPICALS ONLY**

- CFIPR
- OBLITERATE SURFACING
- FUTURE LANDSCAPING

**DESIGN DESIGNATION:**

STATE ROUTE 32  
 2020 ADT = 27,200 D = 55%  
 2030 ADT = 33,400 T = 5%  
 TI (10 YEARS) = 9.5 ESAL = 3,652,400  
 TI (20 YEARS) = 10.5 DHV = 3,170  
 R-VALUE = 19

**NON-STANDARD ABBREVIATIONS:**

- AP ANGLE POINT
- AFTS ALTERNATIVE FLARED TERMINAL SYSTEM
- BLDS BICYCLE LOOP DETECTOR SYMBOL
- BOW BACK OF WALK
- BOC BACK OF CURB
- C&G CURB AND GUTTER
- CFIPR COLD FOAM IN-PLACE RECYCLING
- CG&SW CURB, GUTTER & SIDEWALK
- C.O.C. CITY OF CHICO
- CR CURB RAMP
- FOW FACE OF WALK
- GB GRADE BREAK
- LG LIP OF GUTTER
- HMA-A HOT MIX ASPHALT (TYPE A)
- HMA-O HOT MIX ASPHALT (OPEN GRADED FRICTION COURSE)
- HMA OD HOT MIX ASPHALT OVERSIDE DRAIN
- OD OVERSIDE DRAIN
- PSE PUBLIC SERVICE EASEMENT
- Rem REMOVE
- RPM REMOVE PAVEMENT MARKING
- Saw SAWCUT
- SBTG STEEL-BACKED TIMBER GUARDRAIL

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	But	32	10.3/11.3	2	144

REGISTERED CIVIL ENGINEER  
 R.M. Brogan  
 No. 63854  
 Exp. 9/30/12  
 CIVIL  
 STATE OF CALIFORNIA

DECEMBER 22, 2011  
 PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

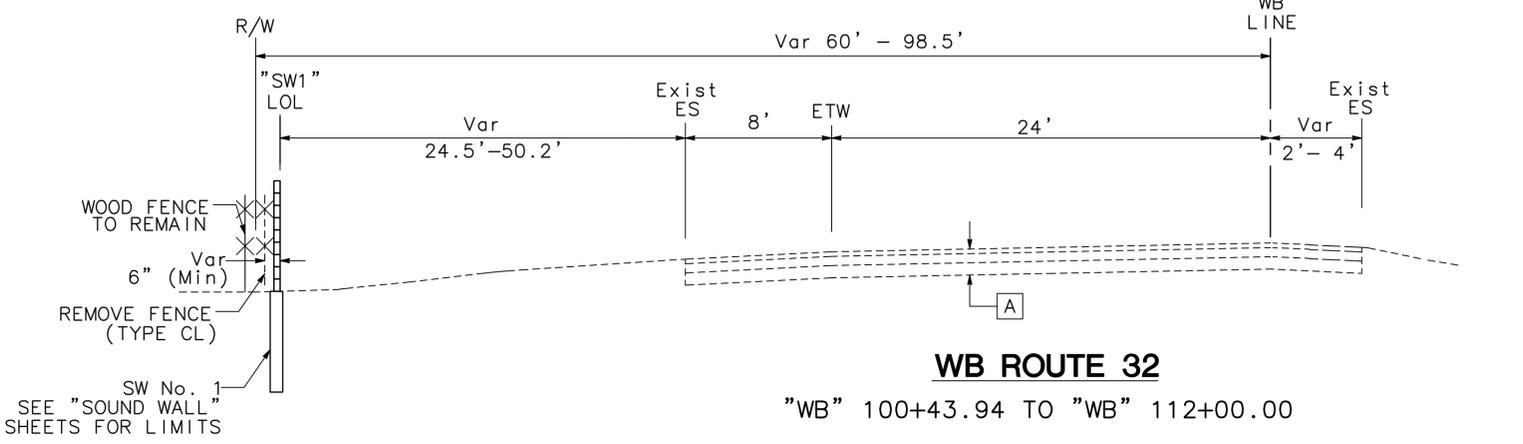
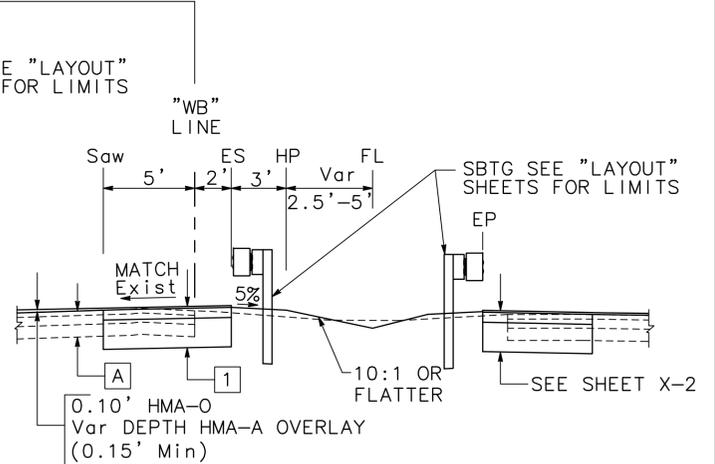
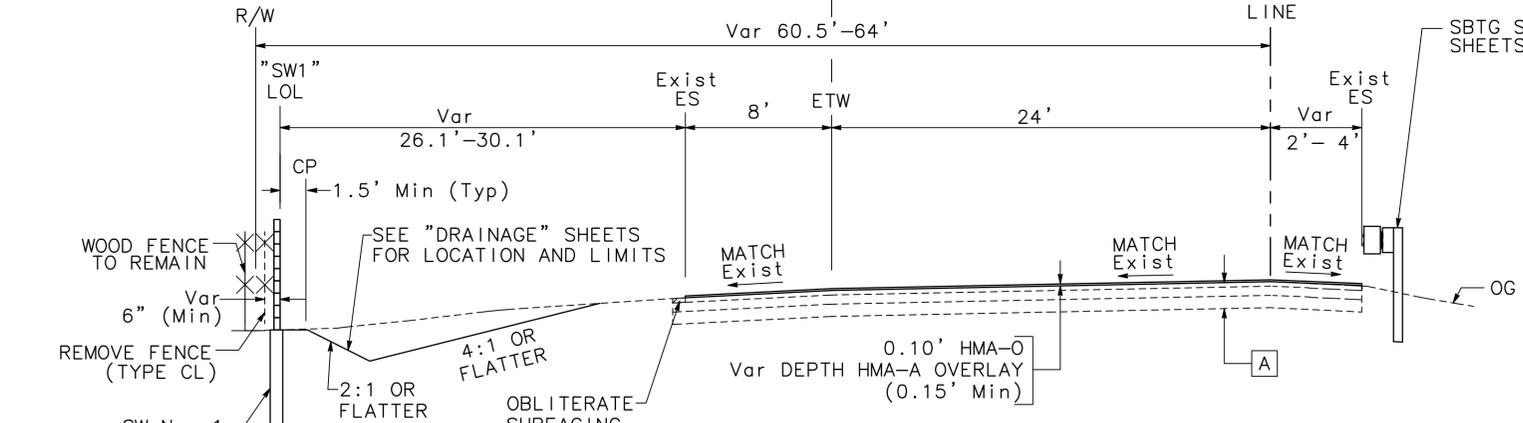
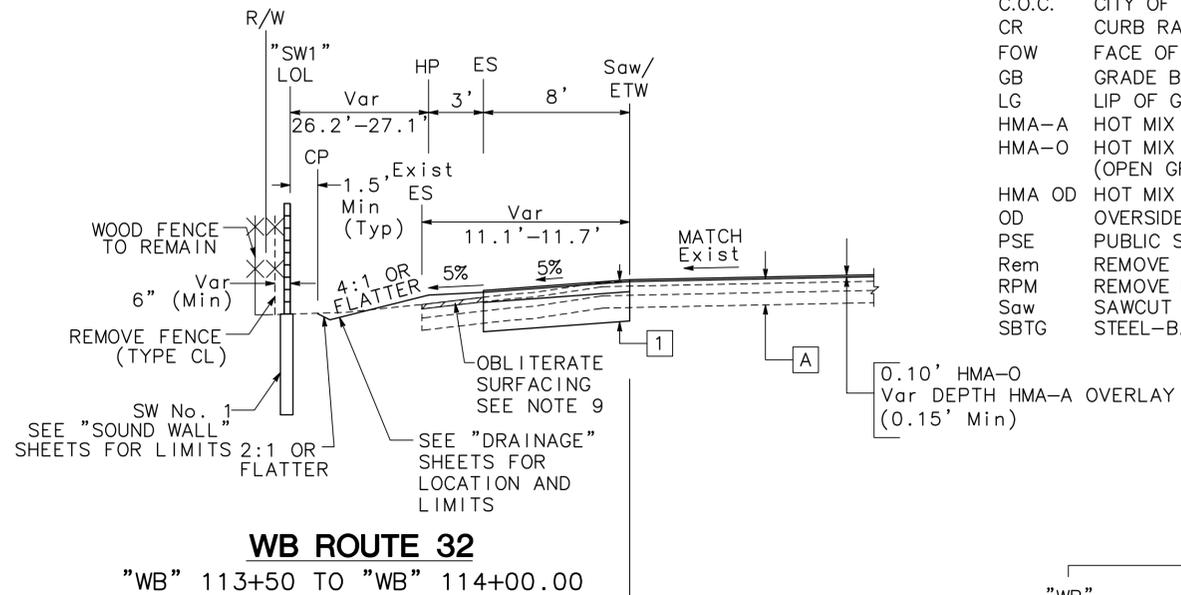
MARK THOMAS & CO., INC. 7300 FOLSOM BLVD STE 203 SACRAMENTO, CA 95826	CITY OF CHICO CAPITAL PROJECT SERVICES 411 MAIN STREET CHICO, CA 95927
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**STRUCTURAL SECTIONS:**

- 1 0.10' HMA-O  
0.55' HMA-A  
1.60' CLASS 2 AB
- 2 0.35' MINOR CONCRETE (SIDEWALK)  
0.50' CLASS 2 AB
- 3 0.50' CLASS 2 AB
- 4 0.25' MINOR CONCRETE (TEXTURED PAVING)  
0.25' CLASS 2 AB
- 5 ~~0.10' HMA-O  
1.25' HMA-A~~
- 6 0.35' HMA-A  
1.00' CLASS 2 AB
- 7 1.00' CFIPR
- 8 0.55' HMA-A  
1.60' CLASS 2 AB

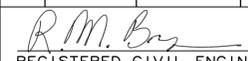
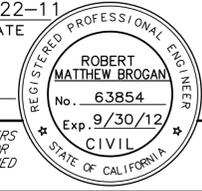
**EXISTING STRUCTURAL SECTION:**

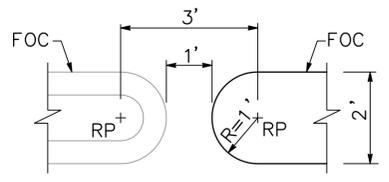
- |                                       |                                    |
|---------------------------------------|------------------------------------|
| A 0.25' AC<br>0.50' AB<br>0.67' AS    | C 0.25' AC<br>1.00' AB             |
| B 0.15' RHMA<br>0.65' HMA<br>1.80' AB | D 0.25' AC<br>0.67' AB<br>0.92' AS |



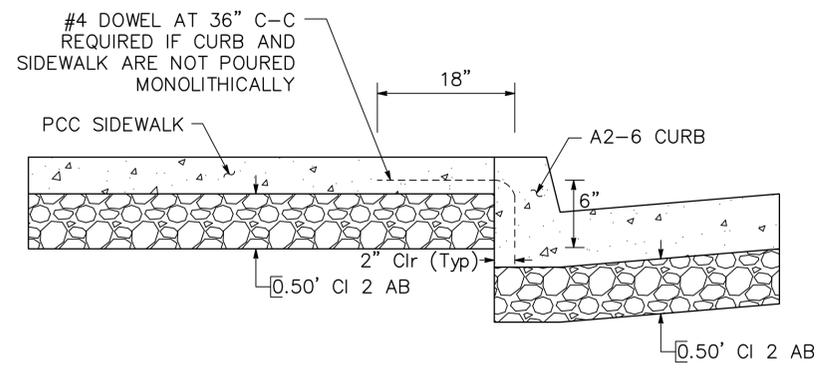
**TYPICAL CROSS SECTIONS**  
NO SCALE

X-1

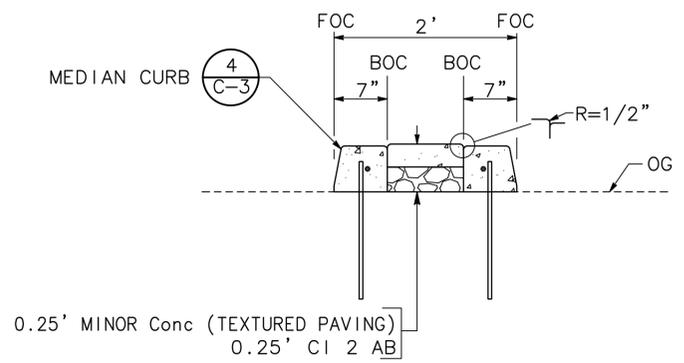
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	But	32	10.3/11.3	25	144
 REGISTERED CIVIL ENGINEER DATE			12-22-11 PLANS APPROVAL DATE		
DECEMBER 22, 2011 PLANS APPROVAL DATE					
MARK THOMAS & CO., INC. 7300 FOLSOM BLVD STE 203 SACRAMENTO, CA 95826			CITY OF CHICO CAPITAL PROJECT SERVICES 411 MAIN STREET CHICO, CA 95927		



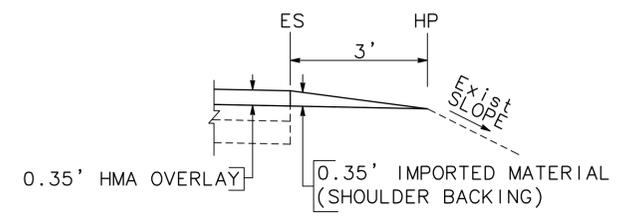
**1 MEDIAN JOINT DETAIL**  
NO SCALE



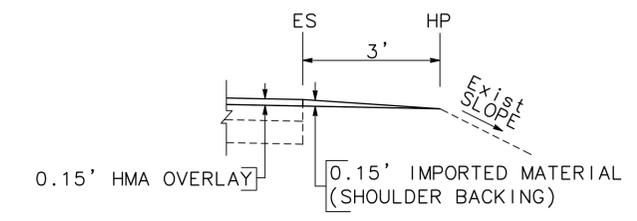
**MINOR CONCRETE (SIDEWALK)-WITHIN ACCESS CONTROL**



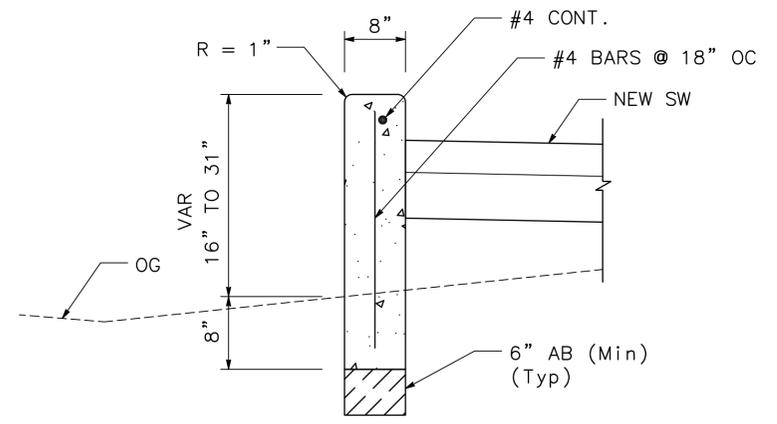
**2 MEDIAN DETAIL**  
NO SCALE



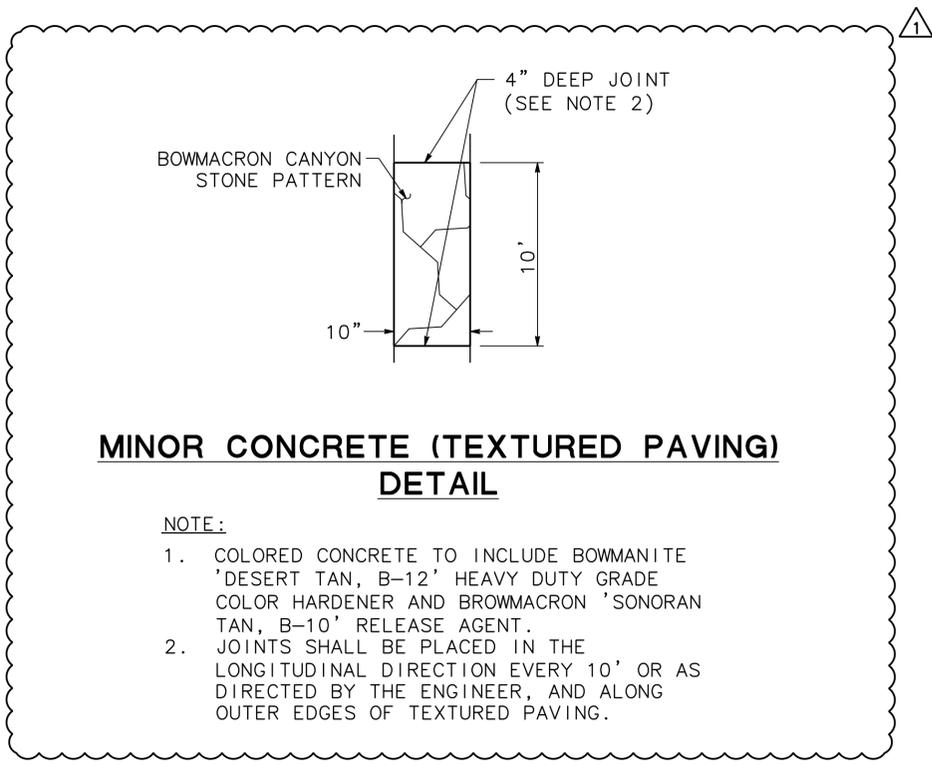
**SHOULDER BACKING  
PLACEMENT DETAIL  
(0.35' HMA OVERLAY)**



**SHOULDER BACKING  
PLACEMENT DETAIL  
(0.15' HMA OVERLAY)**

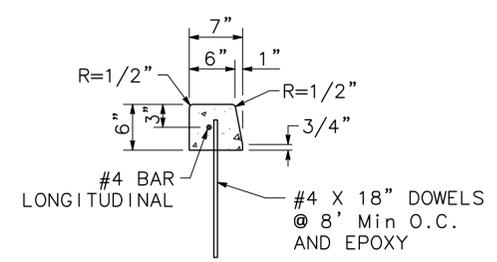


**3 MINOR CONCRETE (RETAINING CURB)**  
NO SCALE



**MINOR CONCRETE (TEXTURED PAVING)  
DETAIL**

- NOTE:**
1. COLORED CONCRETE TO INCLUDE BOWMANITE 'DESERT TAN, B-12' HEAVY DUTY GRADE COLOR HARDENER AND BROWMACRON 'SONORAN TAN, B-10' RELEASE AGENT.
  2. JOINTS SHALL BE PLACED IN THE LONGITUDINAL DIRECTION EVERY 10' OR AS DIRECTED BY THE ENGINEER, AND ALONG OUTER EDGES OF TEXTURED PAVING.



**4 MEDIAN CURB**  
NO SCALE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 Et Caltrans  
 J. PANGBURN  
 M. BROGAN  
 ROBERT MATTHEW BROGAN  
 USERNAME => \$USER  
 DGN FILE => \$REQUEST  
 BORDER LAST REVISED 7/2/2010



UNIT 0000

PROJECT NUMBER & PHASE

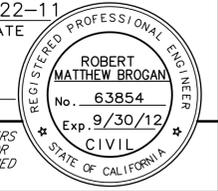
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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	But	32	10.3/11.3	46	144

*R.M. Brogan* 12-22-11  
 REGISTERED CIVIL ENGINEER DATE

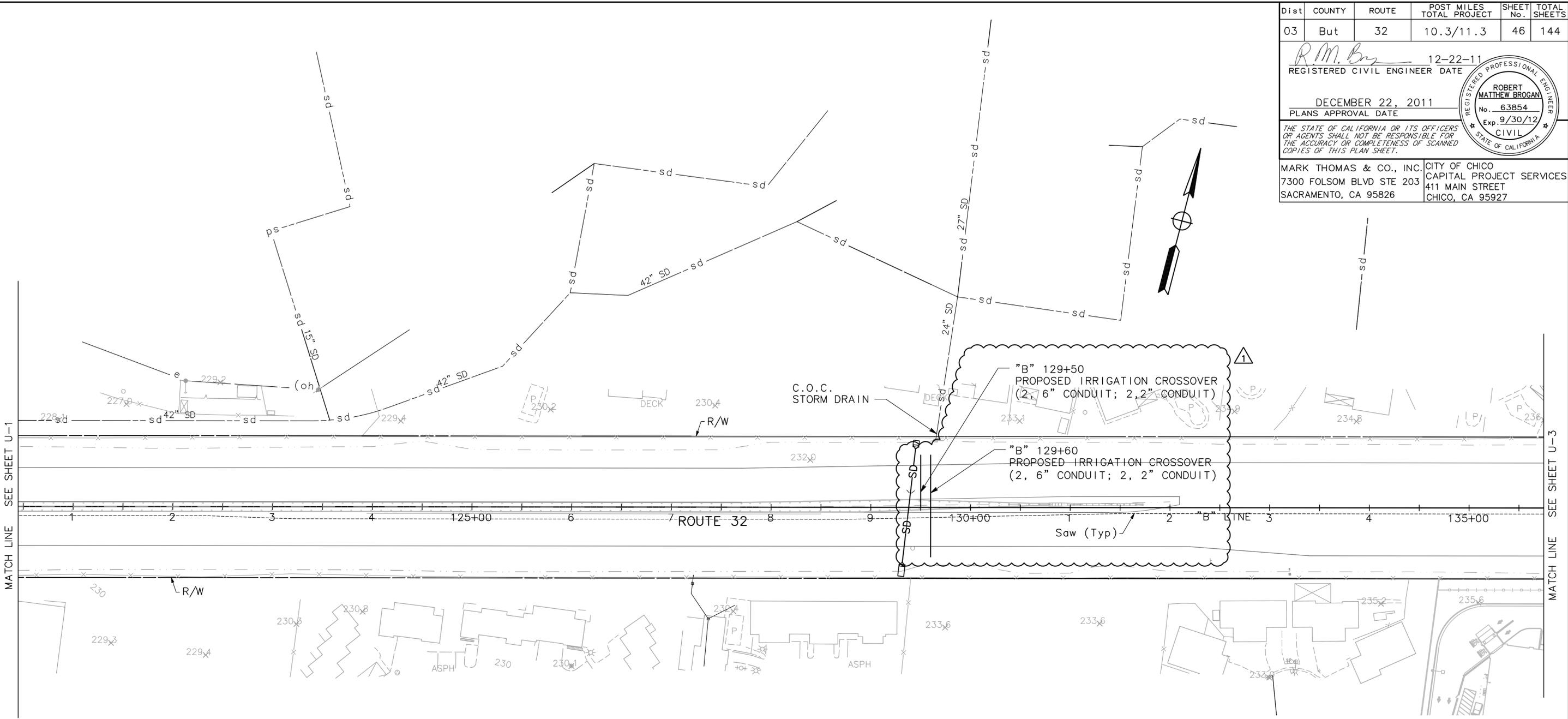
DECEMBER 22, 2011  
 PLANS APPROVAL DATE



THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

MARK THOMAS & CO., INC. CITY OF CHICO  
 7300 FOLSOM BLVD STE 203 CAPITAL PROJECT SERVICES  
 SACRAMENTO, CA 95826 411 MAIN STREET  
 CHICO, CA 95927

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	J. PANGBURN	REVISED BY	DATE REVISED
<b>Caltrans</b>	ROBERT MATTHEW BROGAN	CHECKED BY	M. BROGAN	△ EW	01/11/12



# UTILITY PLAN

SCALE: 1" = 50'

U-2

THIS PLAN ACCURATE FOR UTILITIES ONLY

LAST REVISION DATE PLOTTED => \$DATE  
 00-00-00 TIME PLOTTED => \$TIME

CAD USER: eweeks      PLOT DATE: Jan 11, 2012-09:05:54am      PATH: V:\Chico-55-0131-SR32 Widening\CADD\Construction Support\DWG\NAME: sr32\_U1-U4\_Const

**NOTES:**

1. SEE SHEET X-1 FOR ADDITIONAL NOTES.
2. EXTEND STEEL SLEEVES 1' MINIMUM BELOW GRADE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	But	32	10.3/11.3	47	144

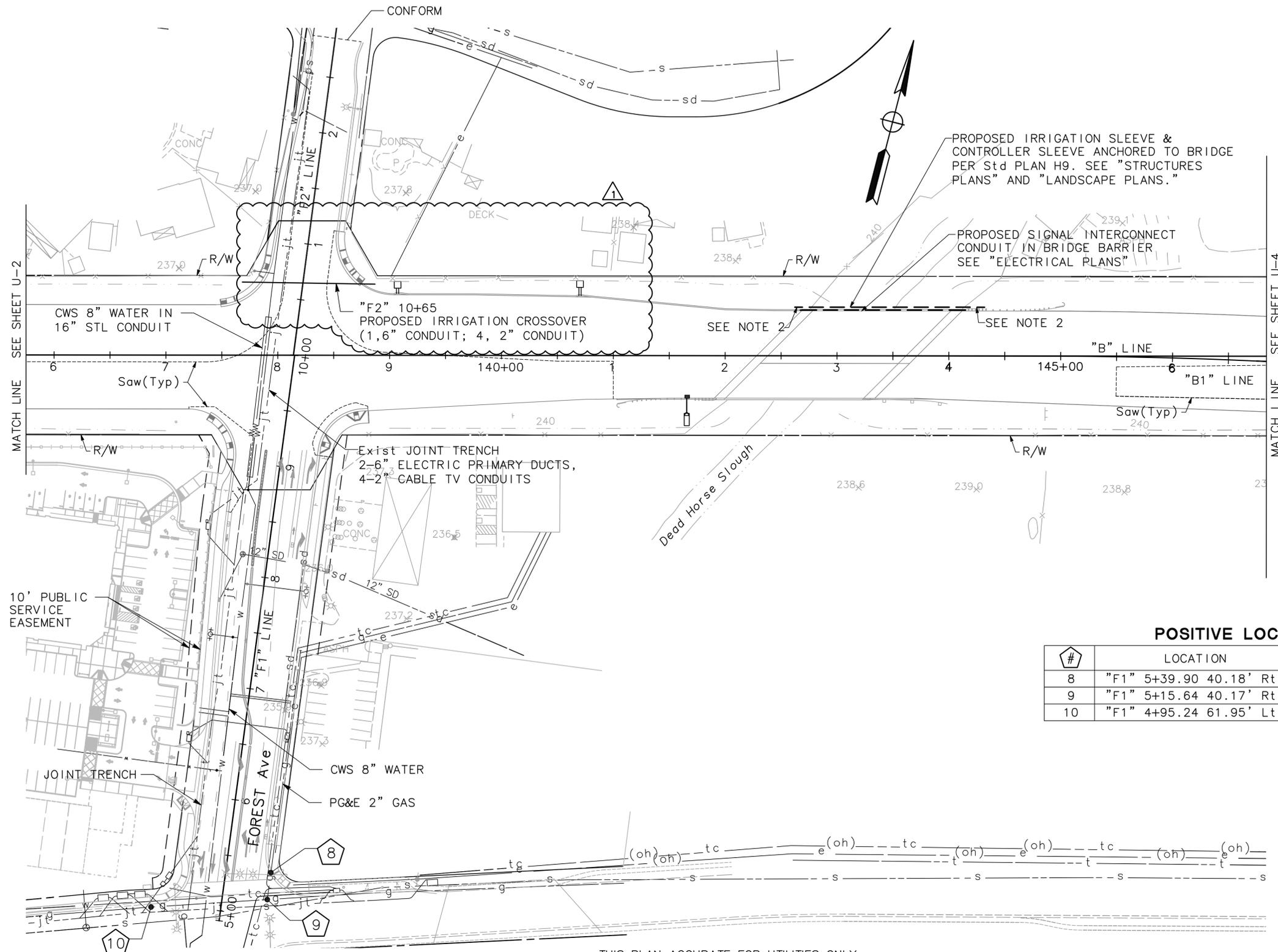
*R.M. Brogan* 12-22-11  
 REGISTERED CIVIL ENGINEER DATE

DECEMBER 22, 2011  
 PLANS APPROVAL DATE

ROBERT MATTHEW BROGAN  
 No. 63854  
 Exp. 9/30/12  
 CIVIL  
 STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

MARK THOMAS & CO., INC. CITY OF CHICO  
 7300 FOLSOM BLVD STE 203 CAPITAL PROJECT SERVICES  
 SACRAMENTO, CA 95826 411 MAIN STREET  
 CHICO, CA 95927



THIS PLAN ACCURATE FOR UTILITIES ONLY

**UTILITY PLAN**  
 SCALE: 1" = 50'

**U-3**

CAD USER: eweeks  
 PLOT DATE: Jan 11, 2012-09:09:20am  
 PATH: V:\Chico-55-0131-SR32 Widening\CADD\Construction Support\DWG\NAME: sr32\_SC2\_Const

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	REVISIONS	DATE
	ROBERT MATTHEW BROGAN	EW	01/11/12
	J. PANGBURN	REVISED BY	DATE REVISED
	CHECKED BY		
	DESIGNED BY		

**LEGEND:**

- STAGE 2 ROADWAY CONSTRUCTION
- STAGE 2A

**NOTES:**

1. REFER TO SPECIAL PROVISIONS FOR LIMITATIONS OF WORK PERIODS.
2. FOR ADDITIONAL CONSTRUCTION AREA SIGNS, SEE CONSTRUCTION AREA SIGN PLAN.
3. CONTRACTOR TO MAINTAIN PEDESTRIAN ACCESS AT ALL TIMES.
4. ANY WORK NOT SHOWN IN CONFLICT CAN BE PERFORMED CONCURRENTLY.

**CONSTRUCTION ACTIVITIES (STAGE 2):**

- ① CONSTRUCT EASTBOUND PAVEMENT ALONG SR 32.
- ② CONSTRUCT SHOULDER, MEDIAN IMPROVEMENTS, & PLACE LANDSCAPING.
- ③ PLACE STEEL BACKED TIMBER GUARDRAIL.
- ④ REPLACE BRIDGE BARRIER/RAILING & APPROACH SLAB ON SOUTH SIDE OF BRIDGE.
- ⑤ CONSTRUCT CURB RETURNS ALONG SOUTH LEG OF FOREST AVENUE.
- ⑥ CONSTRUCT MEDIAN ALONG SOUTH LEG OF FOREST AVENUE.

**CONSTRUCTION ACTIVITIES (STAGE 3) (NOT SHOWN BELOW):**

- ⑦ PLACE FINAL LIFT HMA (TYPE A).
- ⑧ PLACE OGFC.
- ⑨ PLACE FINAL STRIPING/SIGNAGE.
- ⑩ REMOVE TEMPORARY PAVING, IF REQUIRED.

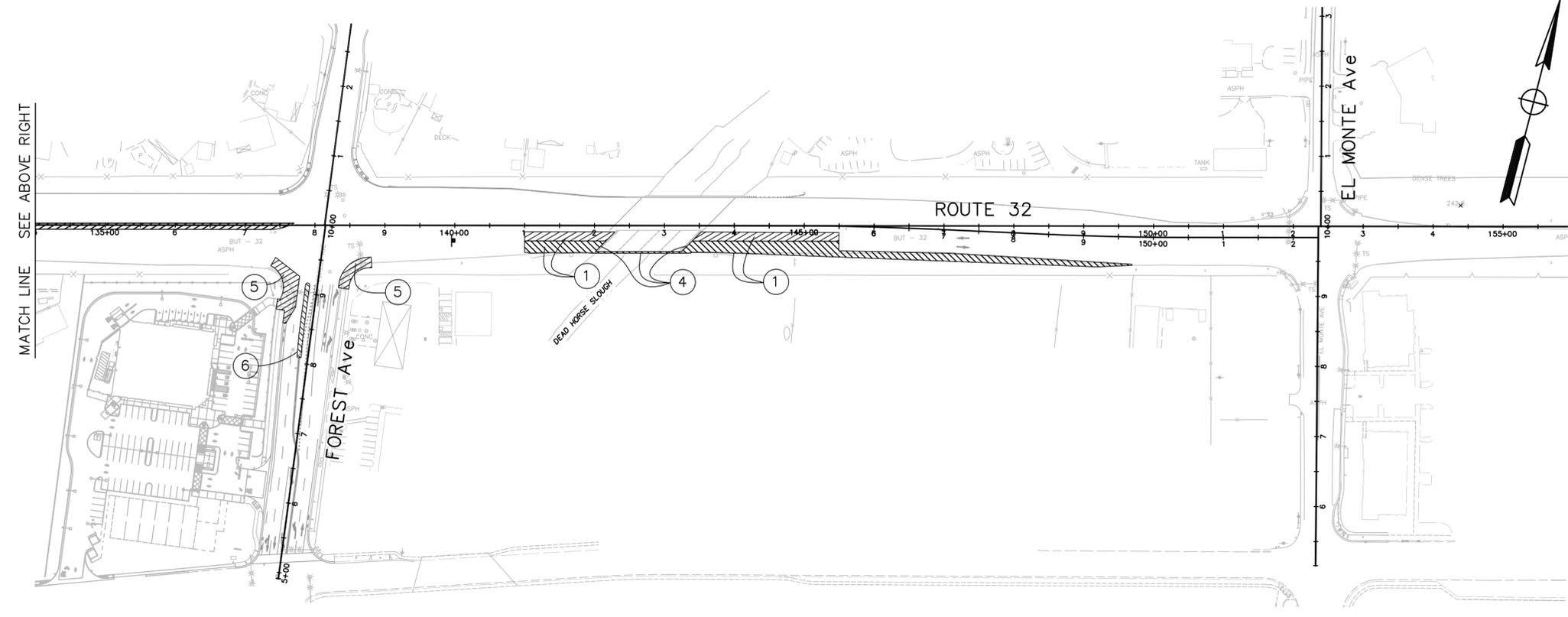
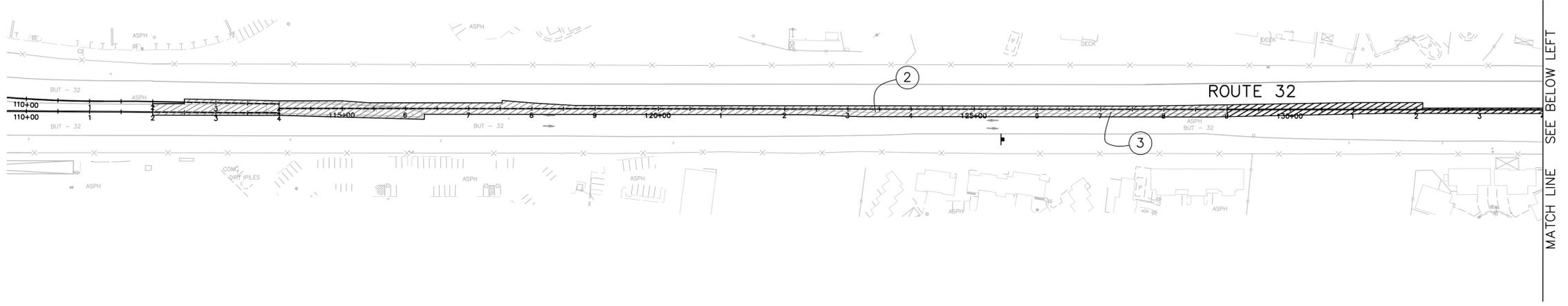
**TRAFFIC STAGE 2:**

1. SHIFT WEST BOUND TRAFFIC TO ROADWAY CONSTRUCTED IN STAGE 1.
2. ACTIVATE TEMPORARY SIGNAL AT FOREST AVENUE.
3. USE FLAGGING AND ONE WAY TRAFFIC CONTROL AS NECESSARY TO CONSTRUCT PAVEMENT CONFORM FROM STATIONS "B1" 149+00 TO "B1" 152+00.

**TRAFFIC STAGE 3:**

1. SHIFT TRAFFIC TO FINAL PAVEMENT.
2. PERFORM FINAL LIFTS WITH MOVING LANE CLOSURES.
3. TEMPORARY RAILING (TYPE K) SHALL BE PINNED WHEN CLEARANCE FROM BACK OF RAILING TO WORKZONE IS LESS THAN 2'.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	But	32	10.3/11.3	51	144
			REGISTERED CIVIL ENGINEER DATE		
			12-22-11		
			PLANS APPROVAL DATE		
			DECEMBER 22, 2011		
			REGISTERED PROFESSIONAL ENGINEER		
			ROBERT MATTHEW BROGAN		
			No. 63854		
			Exp. 9/30/12		
			CIVIL		
			STATE OF CALIFORNIA		
MARK THOMAS & CO., INC.			CITY OF CHICO		
7300 FOLSOM BLVD STE 203			CAPITAL PROJECT SERVICES		
SACRAMENTO, CA 95826			411 MAIN STREET		
			CHICO, CA 95927		



**STAGE CONSTRUCTION**  
**STAGE 2/STAGE 3**  
 SCALE: 1" = 100'

**SC-2**

LAST REVISION DATE PLOTTED => \$DATE  
 00-00-00 TIME PLOTTED => \$TIME

PATH: V:\Chico-55-0131-SR32 Widening\CADD\Construction Support\DWG\NAME: sr32\_01-03\_Const PLOT DATE: Jan 11, 2012-09:10:37am CAD USER: eweeks

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION



CONSULTANT FUNCTIONAL SUPERVISOR: ROBERT MATTHEW BROGAN

CALCULATED/DESIGNED BY: J. PANGBURN

CHECKED BY: M. BROGAN

REVISED BY: DATE REVISED: 01/11/12

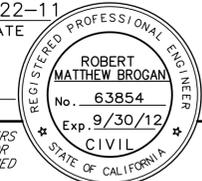
### MINOR CONCRETE

STATION LIMITS	CURB & GUTTER	CURB		TEXTURED PAVING	AB CL2 (N)	SIDEWALK	CURB RAMP	VEGETATION CONTROL	
		A2-6	MEDIAN						RETAINING
		CY	CY						CY
"B" 141+05.35 TO "B" 141+91.21								0.69	
"B" 144+12.12 TO "B" 144+99.62								0.69	
"B" 141+05.35 TO "B" 141+30.35								2.73	
"B" 144+12.12 TO "B" 144+37.12								2.73	
"B" 129+27.00 TO "B" 131+67.00								2.08	
"B" 129+69.00 TO "B" 131+67.00								1.72	
"EB" 111+92.00 TO "EB" 113+53.00								1.40	
"EB" 113+53.00 TO "B" 129+27.00								36.42	
"WB" 111+92.00 TO "WB" 113+62.00								1.48	
"WB" 111+92.00 TO "B" 129+69.00								37.20	
"F1" 8+09.00 TO "F1" 9+12.46				1.0	1.0				
"F1" 8+72.21 TO "F1" 8+90.33					3.2	2.3			
"F1" 8+90.33 TO "F1" 9+37.66					4.9	0.5	3.0		
"F1" 9+14.30 TO "F1" 9+59.66					12.0	5.9	2.6		
"F1" 8+08.00 TO "F1" 9+13.00		2.2							
"F1" 8+54.01 TO "F1" 9+39.48	5.8				2.4				
"F1" 9+14.30 TO "F1" 9+61.67	4.1				1.7				
"F2" 10+41.31 TO "F2" 10+66.34					3.9	1.9	0.9		
"F2" 10+85.87 TO "F2" 12+52.22					16.1	10.1	1.3		
"F2" 10+77.94 TO "F2" 10+83.49					1.5	0.2	0.9		
"F2" 10+98.06 TO "F2" 11+14.88					3.9	1.2	1.6		
"F2" 10+83.00 TO "F2" 12+00.00			7.0		1.7				
"F2" 10+69.47 TO "F2" 11+14.89	3.3				1.4				
"F2" 10+34.58 TO "F2" 12+52.22	14.1				5.7				
<b>TOTAL</b>	<b>27.3</b>	<b>2.2</b>	<b>7.0</b>	<b>1.0</b>	<b>59.4</b>	<b>22.1</b>	<b>10.3</b>	<b>87.14</b>	

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03	But	32	10.3/11.3	88	144

R.M. Brogan 12-22-11  
REGISTERED CIVIL ENGINEER DATE

DECEMBER 22, 2011  
PLANS APPROVAL DATE



MARK THOMAS & CO., INC. CITY OF CHICO  
7300 FOLSOM BLVD STE 203 CAPITAL PROJECT SERVICES  
SACRAMENTO, CA 95826 411 MAIN STREET  
CHICO, CA 95927

### IRRIGATION CROSSOVERS

LOCATION	6" CONDUIT	2" CONDUIT
	LF	LF
"B" 129+50	104	104
"B" 129+60	204	204
"F2" 10+65	119	476
<b>TOTAL</b>	<b>427</b>	<b>784</b>

### PRECAST CONCRETE SOUNDWALL

STATION LIMITS	AREA
	SF
"WB" 100+44 TO "B" 137+84 (Lt)	31971
"B" 129+34 TO "B" 134+72 (Rt)	4845
"B" 138+64 TO "B" 144+58 (Lt)	6777
"B" 144+68 TO "B" 152+10 (Lt)	7094
<b>TOTAL</b>	<b>50687</b>

## SUMMARY OF QUANTITIES

### Q-3

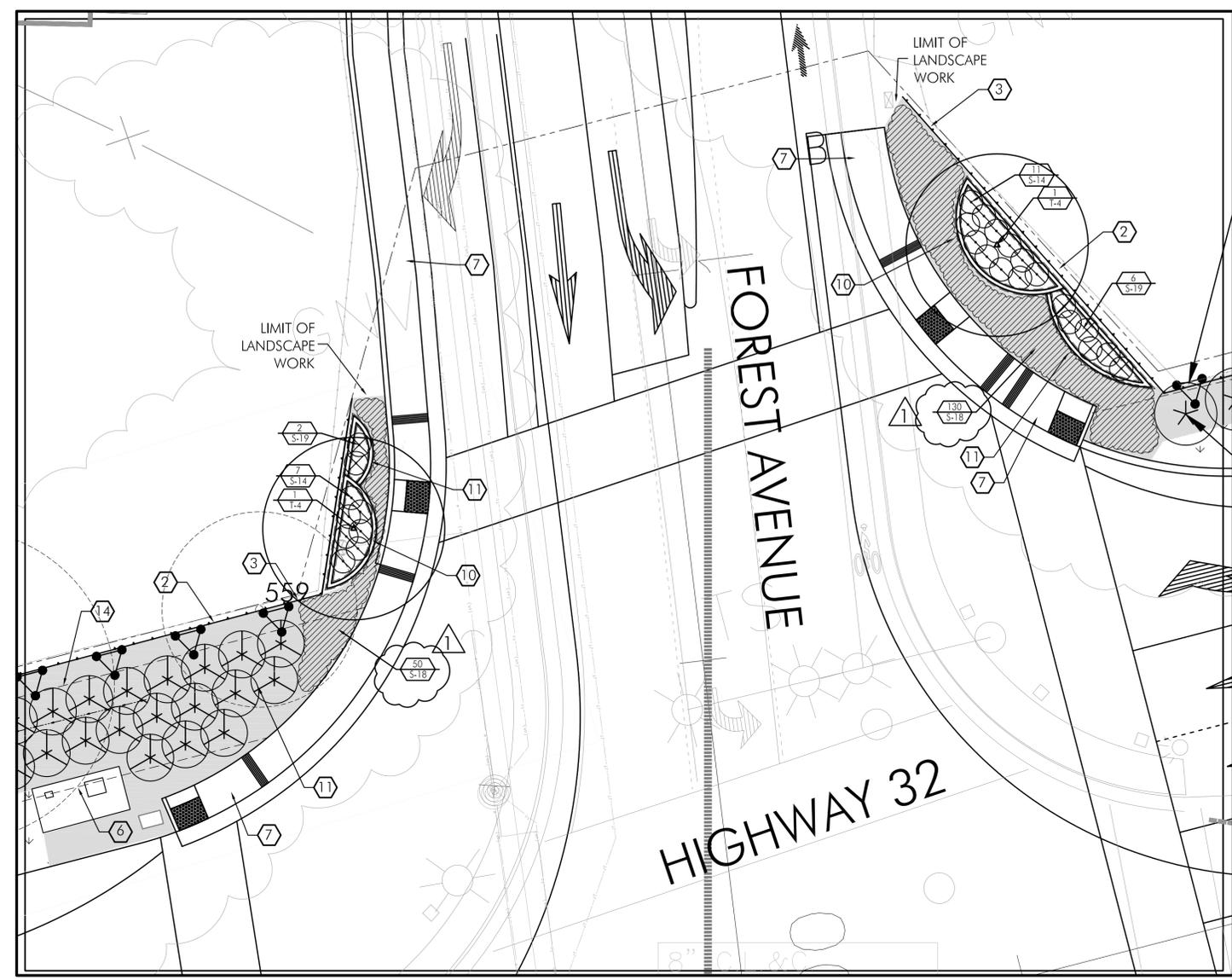
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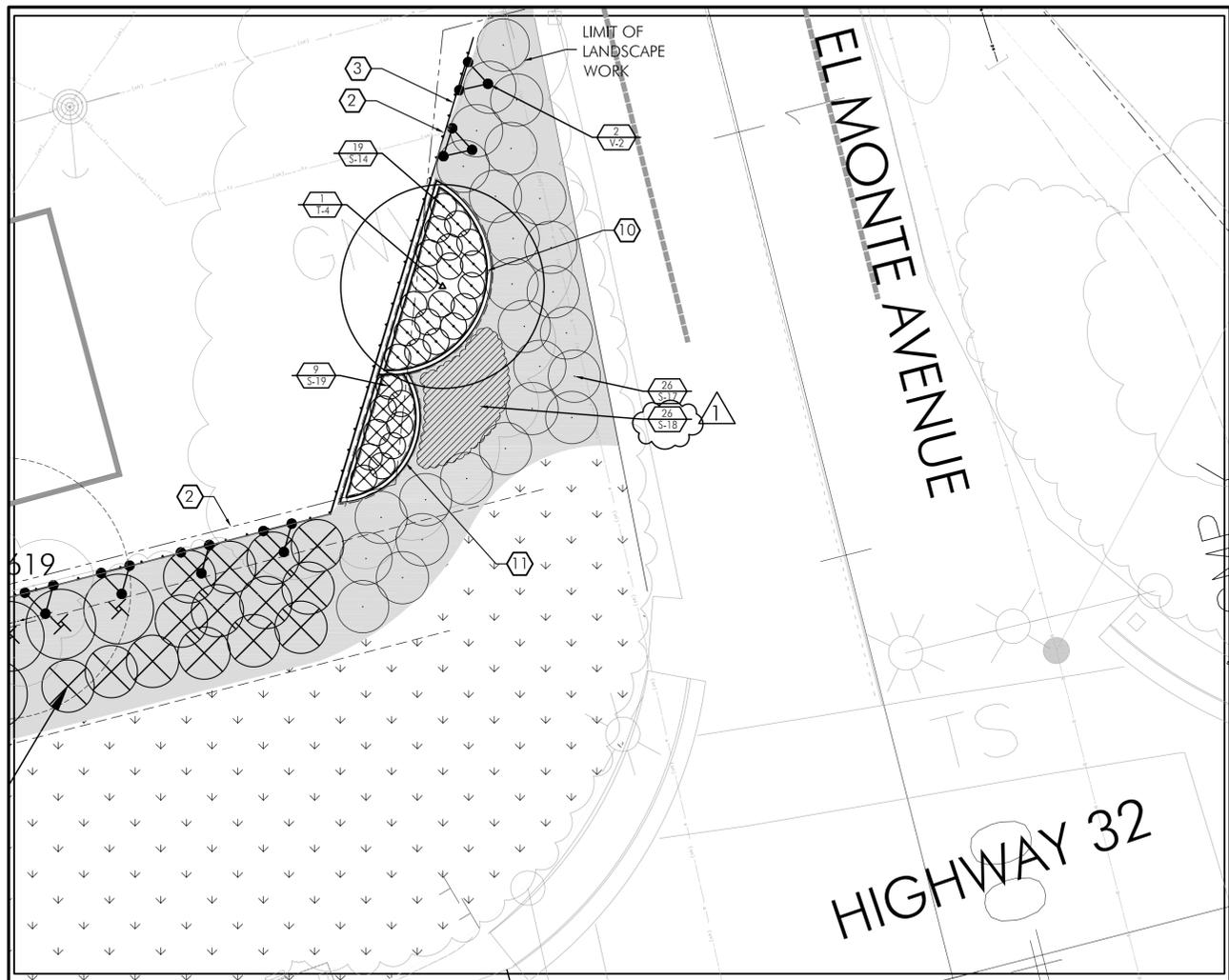
12-22-11  
 LICENSED LANDSCAPE ARCHITECT DATE  
 DECEMBER 22, 2011  
 PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.  
 BRIAN FIRTH LANDSCAPE ARCHITECT, INC. CITY OF CHICO  
 627 BROADWAY, SUITE 220 CAPITAL PROJECT SERVICES  
 CHICO, CALIFORNIA 95928 411 MAIN STREET  
 CHICO, CA 95927



SEE SHEET LS-1.0 FOR  
PLANTING LEGEND  
AND PLAN LEGEND

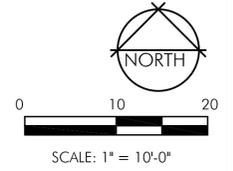


CORNER ENLARGEMENT: FOREST AVENUE AND  
HIGHWAY 32



CORNER ENLARGEMENT: EL MONTE AVENUE  
AND HIGHWAY 32

HIGHWAY 32-  
PHASE 1  
LANDSCAPE CONSTRUCTION  
AND PLANTING PLAN  
SHEET LS-1.7



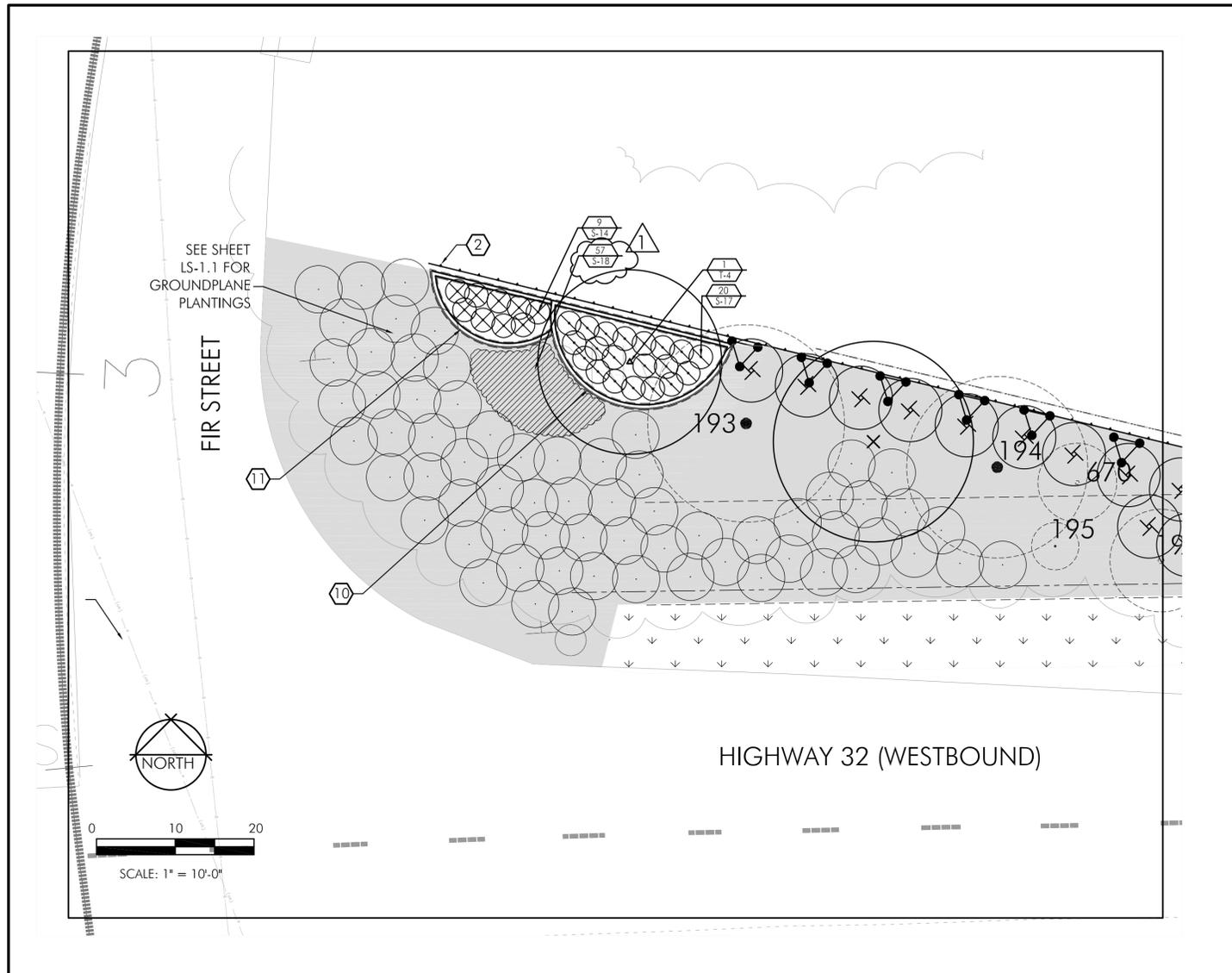
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 CONSULTANT - FUNCTIONAL SUPERVISOR  
 BRIAN FIRTH  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 B. FIRTH/ JBB  
 B. FIRTH  
 REVISED BY  
 DATE REVISED  
 BF/JBB  
 01-11-12



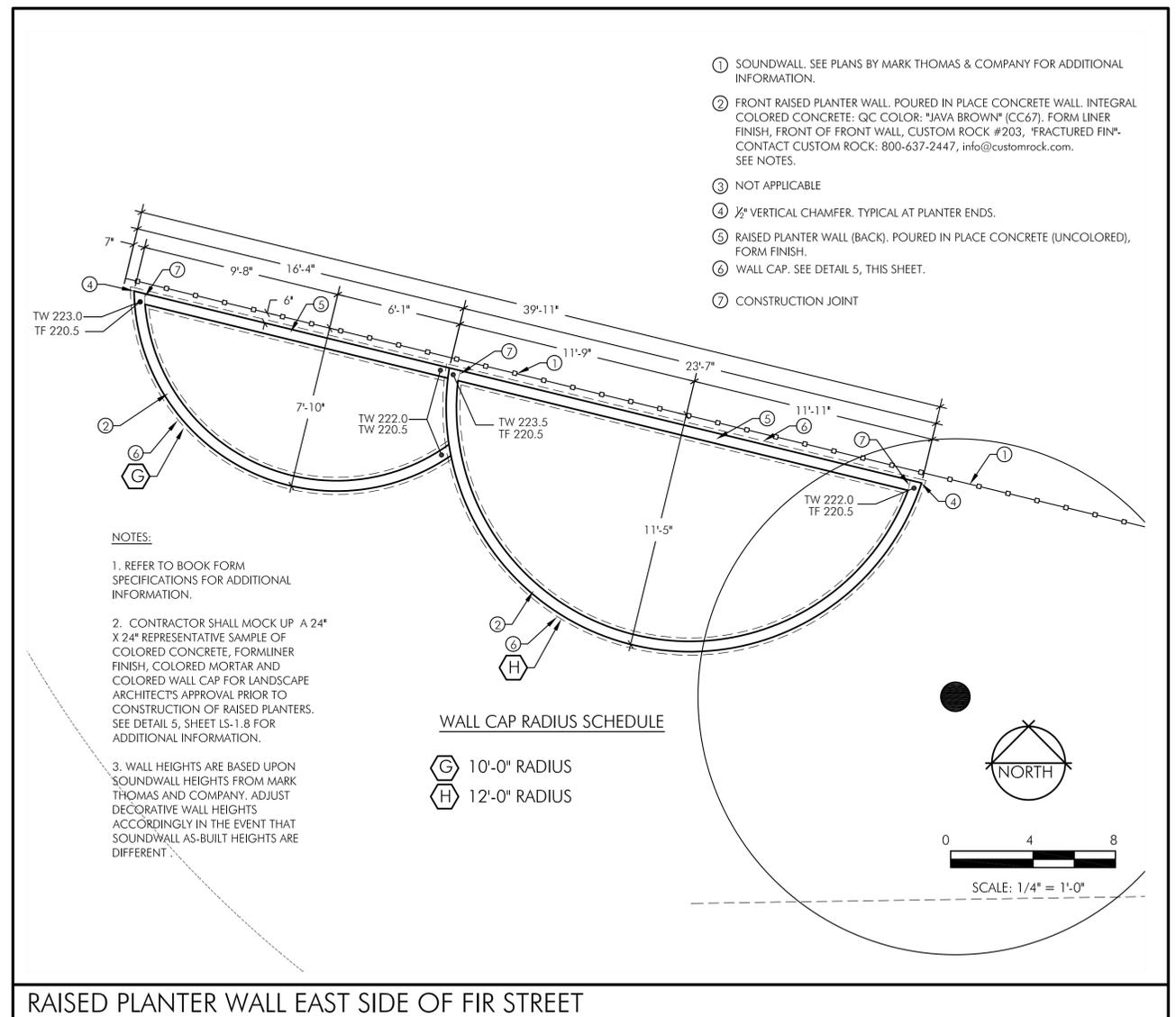
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	But	32	10.3/11.3	116	144
 LICENSED LANDSCAPE ARCHITECT DATE 12-22-11					
DECEMBER 22, 2011			PLANS APPROVAL DATE		
BRIAN FIRTH LANDSCAPE ARCHITECT, INC. 627 BROADWAY, SUITE 220 CHICO, CALIFORNIA 95928			CITY OF CHICO CAPITAL PROJECT SERVICES 411 MAIN STREET CHICO, CA 95927		

SEE SHEET LS-1.0 FOR  
PLANTING LEGEND  
AND PLAN LEGEND



## CORNER PLANTING ENLARGEMENT: FIR STREET AND HIGHWAY 32



## CORNER CONSTRUCTION ENLARGEMENT: FIR STREET AND HIGHWAY 32

HIGHWAY 32-  
PHASE 1  
LANDSCAPE  
CONSTRUCTION AND  
PLANTING PLAN  
SHEET LS-1.10

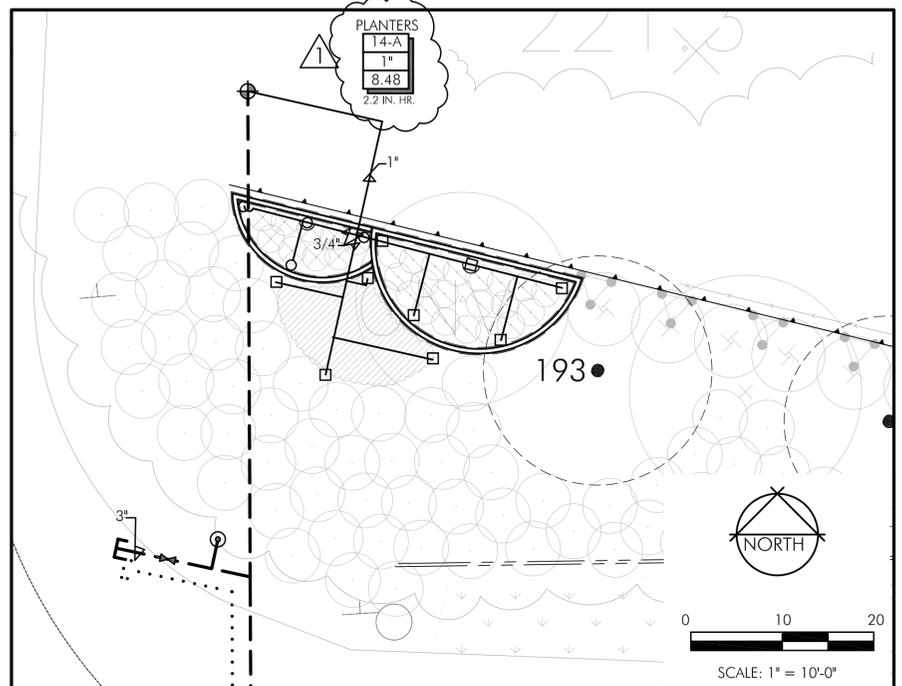
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 CONSULTANT: FUNCTIONAL SUPERVISOR  
 BRIAN FIRTH  
 CALCULATED/DESIGNED BY: B. FIRTH/JBB  
 CHECKED BY: B. FIRTH  
 REVISIONS: 01-11-12  
 REVISIONS: 01-11-12  
 REVISIONS: 01-11-12

**IRRIGATION NOTES**

1. THIS SYSTEM IS DESIGNED FOR A MAXIMUM DEMAND OF 40 GPM. AVERAGE STATIC PRESSURE IS 50 PSI AT THE POINT OF CONNECTION AND NO LESS THAN 5 PSI AT THE FARTHEST IRRIGATION EMITTER AND 30 PSI AT THE FARTHEST IRRIGATION SPRAY HEAD. CONTACT THE LANDSCAPE ARCHITECT IN THE EVENT THAT FIELD TESTED PRESSURE IS LESS THAN STATED, PRIOR TO CONSTRUCTION.
2. THE INTENT OF THIS IRRIGATION SYSTEM IS TO PROVIDE THE MINIMUM AMOUNT OF WATER REQUIRED TO SUSTAIN GOOD PLANT HEALTH. ADJUST CLOCK AS REQUIRED TO ACHIEVE THIS GOAL AS REQUIRED BY THE TIME OF YEAR. SEE SHEET LS-2.10 FOR SEASONAL IRRIGATION SCHEDULE. ADJUST AS REQUIRED FOR PLANT ESTABLISHMENT PERIOD.
3. THIS DRAWING IS DIAGRAMMATIC. IRRIGATION COMPONENTS SHOWN BENEATH PAVING, EXISTING TREE TRUNKS, OR PLANTINGS IS FOR GRAPHIC CLARITY ONLY. PLACE ALL PIPING, VALVES, AND OTHER IRRIGATION COMPONENTS WITHIN THE ADJACENT PLANTER EXCEPT WHERE PIPES CROSS PAVING. PLACE PIPING TO PREVENT CONFLICT WITH SUBSEQUENT PLANTING. REFER TO PLANTING PLAN. IRRIGATION VALVES SHALL BE GROUPED TOGETHER PER DETAIL 7, SHEET LS-2.8 AND LOCATED A MINIMUM OF 17 FEET FROM THE EDGE OF TRAVELLED WAY TO ALLOW ACCESS.
4. CONTRACTOR TO PROVIDE COMPLETE 'AS-BUILT' DRAWINGS TO CITY AT COMPLETION OF PROJECT.
5. TRENCH ALL MAIN LINES TO A DEPTH OF 18", TRENCH ALL LATERAL LINES TO A DEPTH OF 12". TRENCH ALL MAIN OR LATERAL LINES PER UTILITY PLAN AND CAL TRANS STANDARDS WHERE CROSSING UNDER PAVEMENT.
6. INSTALL SLEEVES WHERE SHOWN ON PLAN, PRIOR TO THE PLACEMENT OF PAVING. COORDINATE WITH PAVING CONTRACTOR.
7. ALL REMOTE CONTROL VALVES, QUICK COUPLER VALVES, AIR RELIEF VALVES, AND FLUSH VALVES SHALL BE INSTALLED IN PLANTER AND IN VALVE BOXES.
8. CONTRACTOR IS RESPONSIBLE FOR PROVIDING 120 VOLT POWER TO IRRIGATION CONTROLLER. IRRIGATION CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION AND HOOK-UP OF POWER TO THE CONTROLLER.
9. SEE SHEET LS-2.9 FOR SYSTEM CAPACITY DOCUMENTATION. SEE SHEET LS-2.10 FOR WATER USE DOCUMENTATION.
10. ALL PROPRIETARY SPECIFICATIONS MAY BE SUBSTITUTED WITH EQUAL OR BETTER EQUIPMENT BY ANOTHER MANUFACTURER UPON APPROVAL BY PROJECT LANDSCAPE ARCHITECT.
11. SEE DETAILS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.

**IRRIGATION LEGEND**

SYM.	MFGR.	DESCRIPTION	MODEL	REMARKS	DETAILS
⊗		WATER POINT OF CONNECTION A (CAL TRANS)		CONNECT TO EXISTING WATER METER DOWNSTREAM OF METER. VERIFY EXACT LOCATION IN FIELD. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS.	--
⊗	WILKINS STRONG BOX	BACKFLOW PREVENTER ASSEMBLY A	975 XL	REMOVE EXISTING BACKFLOW PREVENTER ASSEMBLY, ENCLOSURE AND PAD. VERIFY CONDITIONS IN FIELD. RETURN BACKFLOW PREVENTER AND ENCLOSURE TO THE CAL TRANS. INSTALL NEW 2" SIZE BACKFLOW PREVENTER PER DETAIL. PROVIDE AND INSTALL ENCLOSURE AND INSULATED BLANKET. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS.	1/LS-2.8
⊗	JOHN DEERE GREEN TECH	CONTROLLER A (CAL TRANS)	SAS-RM4-14/FRZ-DX/ PHB/ EMP-MT/ FAN/PMR/ FSAV-200B	REMOVE EXISTING CONTROLLER AND ENCLOSURE AND RETURN TO CAL TRANS. REMOVE AND DISPOSE OF OFF SITE THE EXISTING CONCRETE PAD. CONTRACTOR IS RESPONSIBLE TO CONTACT PGE FOR THE DISCONNECTION OF EXISTING POWER TO EXISTING ELECTRICAL PEDESTAL. CONTRACTOR TO REMOVE EXISTING PEDESTAL AND PAD. CONTRACTOR TO INSTALL NEW ENCLOSURE AND THEN TO CONTACT PGE FOR INSTALLATION OF NEW METER AND CONNECTION OF POWER. NEW CONTROLLER: 48 STATIONS (14 USED) 2-WIRE DECODER CONTROLLER WITH TDI TWO WIRE DECODER INTERFACE. INSTALL POTS COMMUNICATION WIRE IN 2" CONDUIT FROM CONTROLLER TO PHONE MODERN POINT OF CONNECTION (LOCATED ON THE WEST SIDE OF FOREST, APPROXIMATELY 200 FEET NORTH OF HIGHWAY 32 ON FOREST. VERIFY EXACT LOCATION IN FIELD). CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE CITY OF CHICO TO INVOLVE CITY OF CHICO PARK DEPARTMENT TO OBTAIN A TELECOMMUNICATION POINT OF CONNECTION AND FOR THE CONNECTION OF THE CONTROLLERS TO THE INTERNET. INSTALL 2-WIRE CABLE TO DECODER LOCATIONS USING TW-CAB-14 CABLE INSTALLED IN 2" CONDUIT. INSTALL 2-WIRE DECODERS AT REMOTE CONTROL VALVE LOCATIONS. INSTALL ONE DECODER WITH EACH REMOTE CONTROL VALVE. INSTALL 2-WIRE EARTH GROUND AT LOCATIONS SHOWN, NOT TO EXCEED 600' INTERVALS. INSTALL 2-WIRE COMPONENTS PER MANUFACTURER'S SPECIFICATIONS. PROVIDE ONE (1) PROMAX HAND HELD TRANSMITTER TO OWNER AT END OF MAINTENANCE PERIOD. CONTACT JOHN DEERE GREEN TECH: 800-427-0779 FOR TECHNICAL ASSISTANCE AND CONTROLLER CERTIFICATION. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE PRE-CONSTRUCTION MEETING WITH MANUFACTURER TO REVIEW 2-WIRE INSTALLATION REQUIREMENTS. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS.	2/LS-2.8 AND 6/LS-2.9
⊗	JOHN DEERE GREEN TECH	CONTROLLER B (CITY OF CHICO)	SAS-RM4-3/FRZ-DV/ PHB/ EMP-MT/ FAN/PMR/ FSAV-200B	CONTRACTOR TO INSTALL NEW ENCLOSURE AND THEN TO CONTACT PGE FOR INSTALLATION OF NEW METER AND CONNECTION OF POWER. NEW CONTROLLER: 48 STATIONS (3 USED) 2-WIRE DECODER CONTROLLER WITH TDI TWO WIRE DECODER INTERFACE. INSTALL POTS COMMUNICATION WIRE IN 2" CONDUIT FROM CONTROLLER TO PHONE MODERN POINT OF CONNECTION (LOCATED ON THE WEST SIDE OF FOREST, APPROXIMATELY 200 FEET NORTH OF HIGHWAY 32 ON FOREST. VERIFY EXACT LOCATION IN FIELD). CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE CITY OF CHICO TO INVOLVE CITY OF CHICO PARK DEPARTMENT TO OBTAIN A TELECOMMUNICATION POINT OF CONNECTION AND FOR THE CONNECTION OF THE CONTROLLERS TO THE INTERNET. INSTALL 2-WIRE CABLE TO DECODER LOCATIONS USING TW-CAB-14 CABLE INSTALLED IN 2" CONDUIT. INSTALL 2-WIRE DECODERS AT REMOTE CONTROL VALVE LOCATIONS. INSTALL ONE DECODER WITH EACH REMOTE CONTROL VALVE. INSTALL 2-WIRE EARTH GROUND AT LOCATIONS SHOWN, NOT TO EXCEED 600' INTERVALS. INSTALL 2-WIRE COMPONENTS PER MANUFACTURER'S SPECIFICATIONS. PROVIDE ONE (1) PROMAX HAND HELD TRANSMITTER TO OWNER AT END OF MAINTENANCE PERIOD. CONTACT JOHN DEERE GREEN TECH: 800-427-0779 FOR TECHNICAL ASSISTANCE AND CONTROLLER CERTIFICATION. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE PRE-CONSTRUCTION MEETING WITH MANUFACTURER TO REVIEW 2-WIRE INSTALLATION REQUIREMENTS. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS.	2/LS-2.8 AND 6/LS-2.9
⊗	JOHN DEERE GREEN TECH	FLOW SENSING ASSEMBLY A/ OPEN MASTER VALVE 2"	PER CONTROLLER A	INSTALL IN CARSON 1419 VALVE BOX AS PER MANUFACTURER'S SPECIFICATIONS	3/LS-2.8
⊗	JOHN DEERE GREEN TECH	FLOW SENSING ASSEMBLY B/ OPEN MASTER VALVE 2"	PER CONTROLLER B	INSTALL IN CARSON 1419 VALVE BOX AS PER MANUFACTURER'S SPECIFICATIONS	3/LS-2.8
⊗		PULL BOX	--	INSTALL IN GRAY CARSON 1419 (OR APPROVED EQUAL) VALVE BOX	5/LS-2.9
⊗		LIGHTNING ARRESTOR	TW-LA-1	INSTALL AT LOCATIONS DERIVED ON PLANS (NOT MORE THAN 600' MAXIMUM DISTANCE). CONTRACTOR TO PROVIDE AND INSTALL 8" L X 3/4" DIA. COPPER CLAD GROUND ROD PER MANUFACTURER'S SPECIFICATIONS AT EACH LOCATION.	6/LS-2.9
⊗	RAINBIRD	REMOTE CONTROL VALVE (SPRAY)	PEB	SIZE AS SHOWN. INSTALL VALVE AND DECODER WITHIN VALVE BOX, PER DETAIL. PROVIDE AND INSTALL GROUNDING FOR TWO-WIRE DECODERS PER MANUFACTURER'S SPECIFICATIONS (1 FOR EVERY 600 FEET).	2/LS-10 & 7/LS-2.8
⊗	RAINBIRD	REMOTE CONTROL VALVE (DRIP)			
⊗	RAINBIRD	FOR FLOWS OVER 20 GPM: MEDIUM FLOW COMMERCIAL CONTROL ZONE KIT WITH BASKET FILTER	XCZ-150-COM	INSTALL PER MANUFACTURER'S SPECIFICATIONS. SIZE PER FLOW (SEE DESCRIPTION COLUMN). INSTALL VALVE AND DECODER WITHIN VALVE BOX, PER DETAIL. PROVIDE AND INSTALL GROUNDING FOR TWO-WIRE DECODERS PER MANUFACTURER'S SPECIFICATIONS (1 FOR EVERY 600 FEET).	4 & 7/LS-2.8
⊗	RAINBIRD	FOR FLOWS 5-20 GPM: MEDIUM FLOW COMMERCIAL CONTROL ZONE KIT WITH BASKET FILTER	XCZ-100-B-COM		
⊗	RAINBIRD	FOR FLOWS LESS THAN 5 GPM: MEDIUM FLOW COMMERCIAL CONTROL ZONE KIT WITH BASKET FILTER	XCZ-075-PRF-BF		
⊗	NIBCO	ISOLATION VALVE	TI-7	SIZE PER PIPE. INSTALL WITHIN VALVE BOX, PER DETAIL.	5 & 7/LS-2.8
⊗	RAINBIRD	QUICK COUPLER VALVE	44-LRC	INSTALL WITHIN VALVE BOX PER DETAIL.	6 & 7/LS-2.8
⊗		PRESSURE MAINLINE	PVC SCHEDULE 40		3 & 4/LS-2.9
⊗		NON-PRESSURE LATERAL PIPE	PVC SCHEDULE 40. SIZE PIPES PER PLAN, 3/4" MIN. PIPE SIZE.		3 & 4/LS-2.9
⊗		CONDUIT	2" GRAY PVC SCH. 40		3 & 4/LS-2.9
⊗		SLEEVING	PVC SCHEDULE 40. PER PLANS BY MARK THOMAS COMPANY		3 & 4/LS-2.9
⊗		SCH. 40 PVC LATERAL SWING PIPE	SPX-FLEX 100	3/4" IPS PVC FLEX HOSE. LOW DENSITY POLYETHYLENE MATERIAL TUBING SHALL HAVE A WALL THICKNESS OF 0.098"-49" INSIDE DIAMETER	1 & 2/LS-2.9
⊗		EMITTER (SEE LEGEND, BELOW)			
1-8		VALVE NUMBER - CONTROLLER DESIGNATION			
1"		VALVE SIZE (WHERE APPLICABLE) USE FLOW PRECEDENT FOR DRIP VALVES			
8.48		FLOW IN GALLONS PER MINUTE			
2.2		PRECIPITATION RATE			



**CORNER ENLARGEMENT: FIR STREET AND HIGHWAY 32 WEST**

**SPRINKLER LEGEND**

SYMBOL	MFGR.	DESCRIPTION	MODEL	FLOW (GPM)	DETAIL
⊗	SALCO/RAINBIRD	EMITTER/ SWINGPIPE, SHRUBS - (SALCO PRO-SPEC EMITTERS WITH RAINBIRD SPX SERIES SWING PIPE AND SB SERIES FITTINGS)	SALCO PRO-SPEC EMITTER: SLV-PST-2 SWING PIPE: SPX-100 FITTINGS: SBE-050/ SBA-050/ SB-TEE (AS REQUIRED)	2 GPH PER EMITTER/ 4 GPH PER SHRUB BUBBLER ASSEMBLY (2 EMITTERS PER SHRUB)	1/LS-2.8
⊗	SALCO/RAINBIRD	EMITTER/ SWINGPIPE, VINES - (SALCO PRO-SPEC EMITTERS WITH RAINBIRD SPX SERIES SWING PIPE AND SB SERIES FITTINGS)	SALCO PRO-SPEC EMITTER: SLV-PST-2 SWING PIPE: SPX-100 FITTINGS: SBE-050/ SBA-050/ SB-TEE (AS REQUIRED)	2 GPH PER EMITTER/ 4 GPH PER VINE BUBBLER ASSEMBLY (2 EMITTERS PER VINE)	1/LS-2.8
⊗	SALCO/RAINBIRD	EMITTER/ SWINGPIPE, TREES - (SALCO PRO-SPEC EMITTERS WITH RAINBIRD SPX SERIES SWING PIPE AND SB SERIES FITTINGS)	SALCO PRO-SPEC EMITTER: SLV-PST-2 SWING PIPE: SPX-100 FITTINGS: SBE-050/ SBA-050/ SB-TEE (AS REQUIRED)	2 GPH PER EMITTER/ 8 GPH PER TREE BUBBLER ASSEMBLY (4 EMITTERS PER TREE)	2/LS-2.8
⊗	RAINBIRD	IRRIGATION HEAD	1812-SAM-PRS-8 (Q, T, H, TT, TQ, F)	26, 35, 52, 1.05	1/LS-10
⊗	RAINBIRD	IRRIGATION HEAD	1812-SAM-PRS-10(Q, T, H, TT, TQ, F)	39, 53, 79, 1.58	1/LS-10
⊗	RAINBIRD	IRRIGATION HEAD	1812-SAM-PRS-12 (Q, T, H, TT, TQ, F)	45, 67, 1.3, 2.6	1/LS-10
⊗	RAINBIRD	IRRIGATION HEAD	1812-SAM-PRS-15S (EST/ SST)	61, 1.21	1/LS-10

HIGHWAY 32-  
 PHASE 1  
 LANDSCAPE  
 IRRIGATION  
 PLAN  
 SHEET LS-2.0



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 CONSULTANT - FUNCTIONAL SUPERVISOR  
 B. FIRTH/ JBB  
 REVISOR BY  
 DATE REVISED  
 01-11-12

**IRRIGATION NOTES**

1. THIS SYSTEM IS DESIGNED FOR A MAXIMUM DEMAND OF 40 GPM. AVERAGE STATIC PRESSURE IS 50 PSI AT THE POINT OF CONNECTION AND NO LESS THAN 5 PSI AT THE FARTHEST IRRIGATION EMITTER AND 30 PSI AT THE FARTHEST IRRIGATION SPRAY HEAD. CONTACT THE LANDSCAPE ARCHITECT IN THE EVENT THAT FIELD TESTED PRESSURE IS LESS THAN STATED, PRIOR TO CONSTRUCTION.
2. THE INTENT OF THIS IRRIGATION SYSTEM IS TO PROVIDE THE MINIMUM AMOUNT OF WATER REQUIRED TO SUSTAIN GOOD PLANT HEALTH. ADJUST CLOCK AS REQUIRED TO ACHIEVE THIS GOAL AS REQUIRED BY THE TIME OF YEAR. SEE SHEET LS-2.10 FOR SEASONAL IRRIGATION SCHEDULE. ADJUST AS REQUIRED FOR PLANT ESTABLISHMENT PERIOD.
3. THIS DRAWING IS DIAGRAMMATIC. IRRIGATION COMPONENTS SHOWN BENEATH PAVING, EXISTING TREE TRUNKS, OR PLANTINGS IS FOR GRAPHIC CLARITY ONLY. PLACE ALL PIPING, VALVES, AND OTHER IRRIGATION COMPONENTS WITHIN THE ADJACENT PLANTER EXCEPT WHERE PIPES CROSS PAVING. PLACE PIPING TO PREVENT CONFLICT WITH SUBSEQUENT PLANTING. REFER TO PLANTING PLAN. IRRIGATION VALVES SHALL BE GROUPED TOGETHER PER DETAIL 7, SHEET LS-2.8 AND LOCATED A MINIMUM OF 17 FEET FROM THE EDGE OF TRAVELLED WAY TO ALLOW ACCESS.
4. CONTRACTOR TO PROVIDE COMPLETE AS-BUILT DRAWINGS TO CITY AT COMPLETION OF PROJECT.
5. TRENCH ALL MAIN LINES TO A DEPTH OF 18", TRENCH ALL LATERAL LINES TO A DEPTH OF 12". TRENCH ALL MAIN OR LATERAL LINES PER UTILITY PLAN AND CAL TRANS STANDARDS' WHERE CROSSING UNDER PAVEMENT.
6. INSTALL SLEEVES WHERE SHOWN ON PLAN, PRIOR TO THE PLACEMENT OF PAVING. COORDINATE WITH PAVING CONTRACTOR.
7. ALL REMOTE CONTROL VALVES, QUICK COUPLER VALVES, AIR RELIEF VALVES, AND FLUSH VALVES SHALL BE INSTALLED IN PLANTER AND IN VALVE BOXES.
8. CONTRACTOR IS RESPONSIBLE FOR PROVIDING 120 VOLT POWER TO IRRIGATION CONTROLLER. IRRIGATION CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION AND HOOK-UP OF POWER TO THE CONTROLLER.
9. SEE SHEET LS-2.9 FOR SYSTEM CAPACITY DOCUMENTATION. SEE SHEET LS-2.10 FOR WATER USE DOCUMENTATION.
10. ALL PROPRIETARY SPECIFICATIONS MAY BE SUBSTITUTED WITH EQUAL OR BETTER EQUIPMENT BY ANOTHER MANUFACTURER UPON APPROVAL BY PROJECT LANDSCAPE ARCHITECT.
11. SEE DETAILS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.

**SPRINKLER LEGEND**

SYMBOL	MFG/R	DESCRIPTION	MODEL	FLOW (GPM)	DETAIL
⊛	SALCO/ RAINBIRD	EMITTER/ SWINGPIPE, SHRUBS- (SALCO PRO-SPEC EMITTERS WITH RAINBIRD SPX SERIES SWING PIPE AND SB SERIES FITTINGS)	SALCO PRO-SPEC EMITTER: SLV-PST-2 SWING PIPE: SPX-100 FITTINGS: SBE-050/ SBA-050/ SB-TEE (AS REQUIRED)	2 GPH PER EMITTER/ 4 GPH PER SHRUB BUBBLER ASSEMBLY (2 EMITTERS PER SHRUB)	1/ LS-2.8
⊠	SALCO/ RAINBIRD	EMITTER/ SWINGPIPE, VINES- (SALCO PRO-SPEC EMITTERS WITH RAINBIRD SPX SERIES SWING PIPE AND SB SERIES FITTINGS)	SALCO PRO-SPEC EMITTER: SLV-PST-2 SWING PIPE: SPX-100 FITTINGS: SBE-050/ SBA-050/ SB-TEE (AS REQUIRED)	2 GPH PER EMITTER/ 4 GPH PER VINE BUBBLER ASSEMBLY (2 EMITTERS PER VINE)	1/ LS-2.8
⊞	SALCO/ RAINBIRD	EMITTER/ SWINGPIPE, TREES- (SALCO PRO-SPEC EMITTERS WITH RAINBIRD SPX SERIES SWING PIPE AND SB SERIES FITTINGS)	SALCO PRO-SPEC EMITTER: SLV-PST-2 SWING PIPE: SPX-100 FITTINGS: SBE-050/ SBA-050/ SB-TEE (AS REQUIRED)	2 GPH PER EMITTER/ 8 GPH PER TREE BUBBLER ASSEMBLY (4 EMITTERS PER TREE)	2/ LS-2.8
⊠ ⊠ ⊠ ⊠ ⊠	RAINBIRD	IRRIGATION HEAD	1812-SAM-PRS-8 (Q, T, H, TT, TQ, F)	.26, .35, .52, 1.05	1/ LS-10
⊙ ⊙ ⊙ ⊙ ⊙	RAINBIRD	IRRIGATION HEAD	1812-SAM-PRS-10(Q, T, H, TT, TQ, F)	.39, .53, .79, 1.58	1/ LS-10
⊙ ⊙ ⊙ ⊙ ⊙	RAINBIRD	IRRIGATION HEAD	1812-SAM-PRS-12 (Q, T, H, TT, TQ, F)	.65, .87, 1.3, 2.6	1/ LS-10
⊙ ⊙	RAINBIRD	IRRIGATION HEAD	1812-SAM-PRS-155 (EST/ SST)	.61, 1.21	1/ LS-10

Dist COUNTY ROUTE POST MILES TOTAL PROJECT SHEET No. TOTAL SHEETS  
 03 But 32 10.3/11.3 119 144

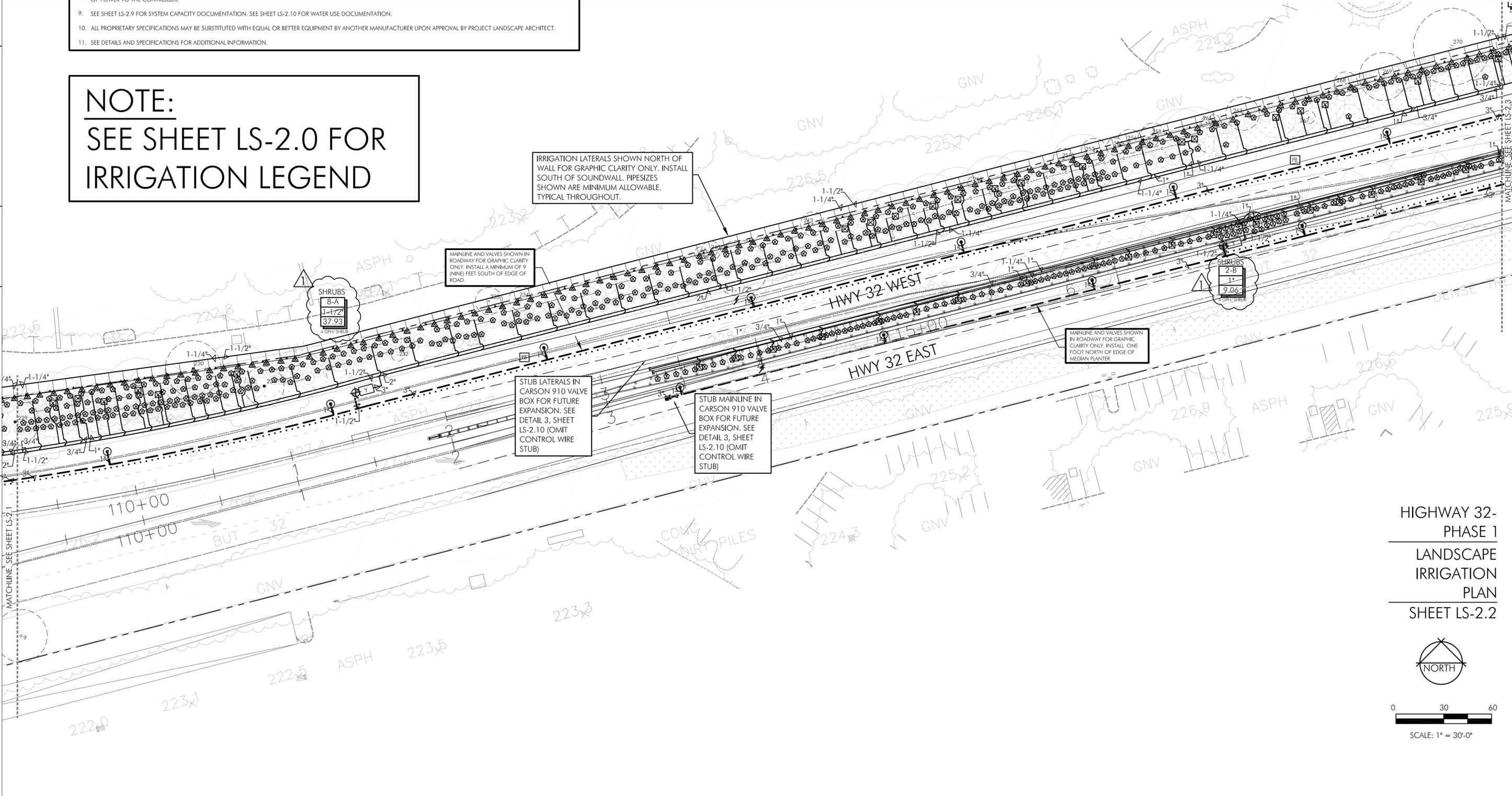
**B. Firth**  
 LICENSED LANDSCAPE ARCHITECT DATE 12-22-11

DECEMBER 22, 2011  
 PLANS APPROVAL DATE

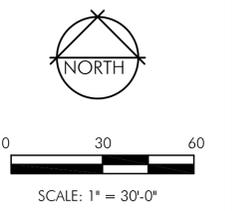
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

BRIAN FIRTH LANDSCAPE ARCHITECT, INC. CITY OF CHICO  
 627 BROADWAY, SUITE 220 CAPITAL PROJECT SERVICES  
 CHICO, CALIFORNIA 95928 CHICO, CA 95927

**NOTE:**  
 SEE SHEET LS-2.0 FOR IRRIGATION LEGEND



HIGHWAY 32-  
 PHASE 1  
 LANDSCAPE  
 IRRIGATION  
 PLAN  
 SHEET LS-2.2







**IRRIGATION NOTES**

1. THIS SYSTEM IS DESIGNED FOR A MAXIMUM DEMAND OF 40 GPM. AVERAGE STATIC PRESSURE IS 50 PSI AT THE POINT OF CONNECTION AND NO LESS THAN 5 PSI AT THE FARTHEST IRRIGATION EMITTER AND 30 PSI AT THE FARTHEST IRRIGATION SPRAY HEAD. CONTACT THE LANDSCAPE ARCHITECT IN THE EVENT THAT FIELD TESTED PRESSURE IS LESS THAN STATED, PRIOR TO CONSTRUCTION.
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3. THIS DRAWING IS DIAGRAMMATIC. IRRIGATION COMPONENTS SHOWN BENEATH PAVING, EXISTING TREE TRUNKS, OR PLANTINGS IS FOR GRAPHIC CLARITY ONLY. PLACE ALL PIPING, VALVES, AND OTHER IRRIGATION COMPONENTS WITHIN THE ADJACENT PLANTER EXCEPT WHERE PIPES CROSS PAVING. PLACE PIPING TO PREVENT CONFLICT WITH SUBSEQUENT PLANTING. REFER TO PLANTING PLAN. IRRIGATION VALVES SHALL BE GROUPED TOGETHER PER DETAIL 7, SHEET LS-2.8 AND LOCATED A MINIMUM OF 17 FEET FROM THE EDGE OF TRAVELLED WAY TO ALLOW ACCESS.
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11. SEE DETAILS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.

**SPRINKLER LEGEND**

SYMBOL	MFG'R	DESCRIPTION	MODEL	FLOW (GPM)	DETAIL
	SALCO/RAINBIRD	EMITTER/ SWINGPIPE, SHRUBS - (SALCO PRO-SPEC EMITTERS WITH RAINBIRD SPX SERIES SWING PIPE AND SB SERIES FITTINGS)	SALCO PRO-SPEC EMITTER: SLV-PST-2 SWING PIPE: SPX-100 FITTINGS: SBE-050/ SBA-050/ SB-TEE (AS REQUIRED)	2 GPH PER EMITTER/ 4 GPH PER SHRUB BUBBLER ASSEMBLY (2 EMITTERS PER SHRUB)	1/LS-2.8
	SALCO/RAINBIRD	EMITTER/ SWINGPIPE, VINES - (SALCO PRO-SPEC EMITTERS WITH RAINBIRD SPX SERIES SWING PIPE AND SB SERIES FITTINGS)	SALCO PRO-SPEC EMITTER: SLV-PST-2 SWING PIPE: SPX-100 FITTINGS: SBE-050/ SBA-050/ SB-TEE (AS REQUIRED)	2 GPH PER EMITTER/ 4 GPH PER VINE BUBBLER ASSEMBLY (2 EMITTERS PER VINE)	1/LS-2.8
	SALCO/RAINBIRD	EMITTER/ SWINGPIPE, TREES - (SALCO PRO-SPEC EMITTERS WITH RAINBIRD SPX SERIES SWING PIPE AND SB SERIES FITTINGS)	SALCO PRO-SPEC EMITTER: SLV-PST-2 SWING PIPE: SPX-100 FITTINGS: SBE-050/ SBA-050/ SB-TEE (AS REQUIRED)	2 GPH PER EMITTER/ 8 GPH PER TREE BUBBLER ASSEMBLY (4 EMITTERS PER TREE)	2/LS-2.8
	RAINBIRD	IRRIGATION HEAD	1812-SAM-PRS-8 (Q, T, H, TT, TQ, F)	26, 35, 52, 1.05	1/LS-10
	RAINBIRD	IRRIGATION HEAD	1812-SAM-PRS-10 (Q, T, H, TT, TQ, F)	39, 53, 79, 1.58	1/LS-10
	RAINBIRD	IRRIGATION HEAD	1812-SAM-PRS-12 (Q, T, H, TT, TQ, F)	65, 87, 1.3, 2.6	1/LS-10
	RAINBIRD	IRRIGATION HEAD	1812-SAM-PRS-155 (EST/ SST)	61, 1.21	1/LS-10

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	But	32	10.3/11.3	122	144

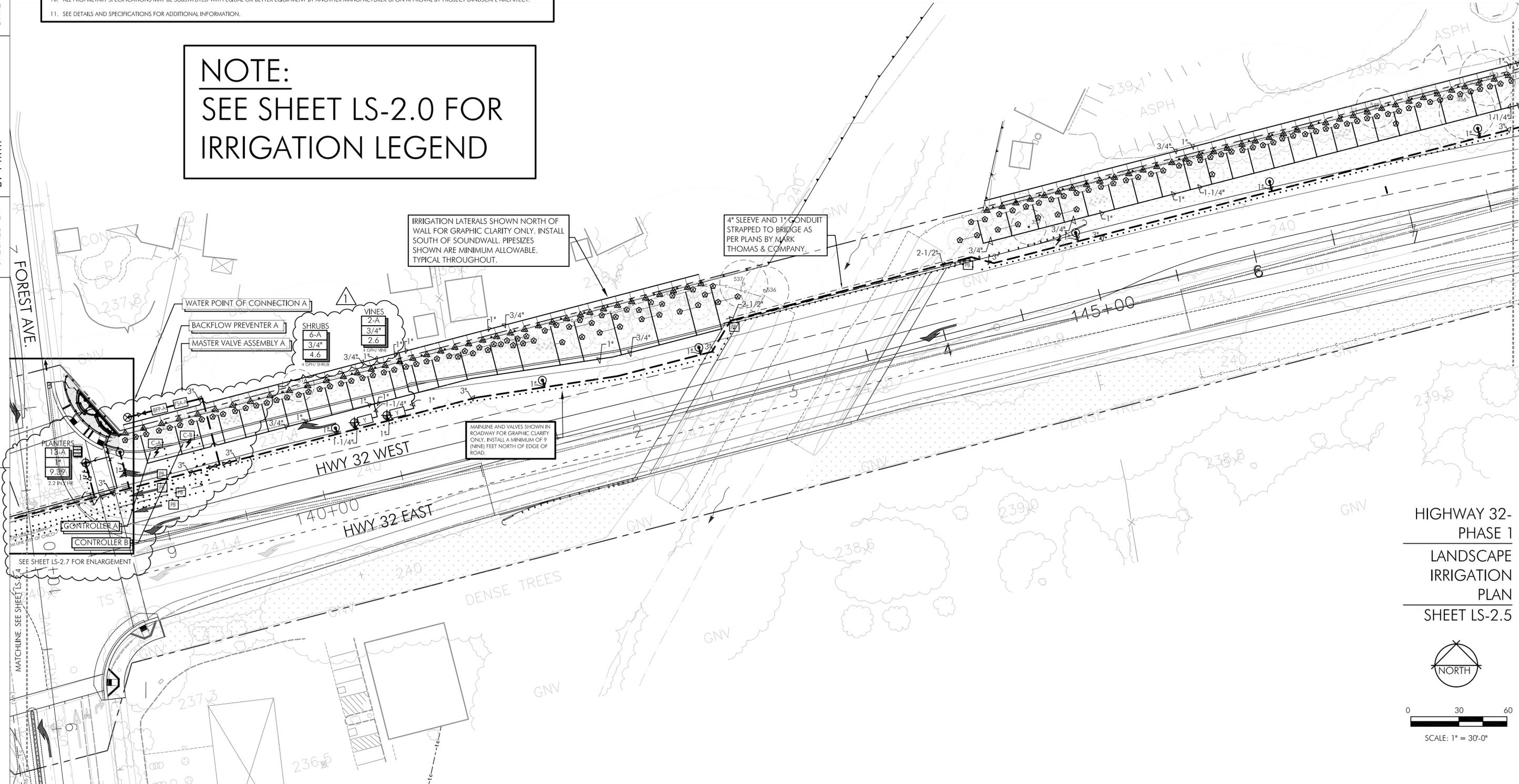
**B. Firth**  
12-22-11  
LICENSED LANDSCAPE ARCHITECT DATE

DECEMBER 22, 2011  
PLANS APPROVAL DATE

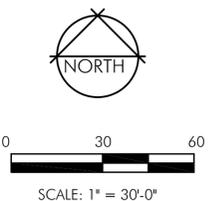
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

BRIAN FIRTH LANDSCAPE ARCHITECT, INC. CITY OF CHICO  
627 BROADWAY, SUITE 220 CAPITAL PROJECT SERVICES  
CHICO, CALIFORNIA 95928 411 MAIN STREET  
CHICO, CA 95927

**NOTE:**  
SEE SHEET LS-2.0 FOR IRRIGATION LEGEND



HIGHWAY 32-  
PHASE 1  
LANDSCAPE  
IRRIGATION  
PLAN  
SHEET LS-2.5



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

CONSULTANT FUNCTIONAL SUPERVISOR  
BRIAN FIRTH

DESIGNED BY  
B. FIRTH/JBB

CHECKED BY  
B. FIRTH

REVISIONS

NO.	DESCRIPTION	DATE
1	REVISED BY B.F./JBB	01-11-12

USERNAME => \$USER  
DGN FILE => \$REQUEST

RELATIVE BORDER SCALE IS IN INCHES

UNIT 0000

PROJECT NUMBER & PHASE

0300000261

LAST REVISION DATE PLOTTED => \$DATE  
00-00-00 TIME PLOTTED => \$TIME

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	But	32	10.3/11.3	123	144

12-22-11  
 LICENSED LANDSCAPE ARCHITECT DATE  
 DECEMBER 22, 2011  
 PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

BRIAN FIRTH LANDSCAPE ARCHITECT, INC. CITY OF CHICO  
 627 BROADWAY, SUITE 220 CAPITAL PROJECT SERVICES  
 CHICO, CALIFORNIA 95928 411 MAIN STREET  
 CHICO, CA 95927



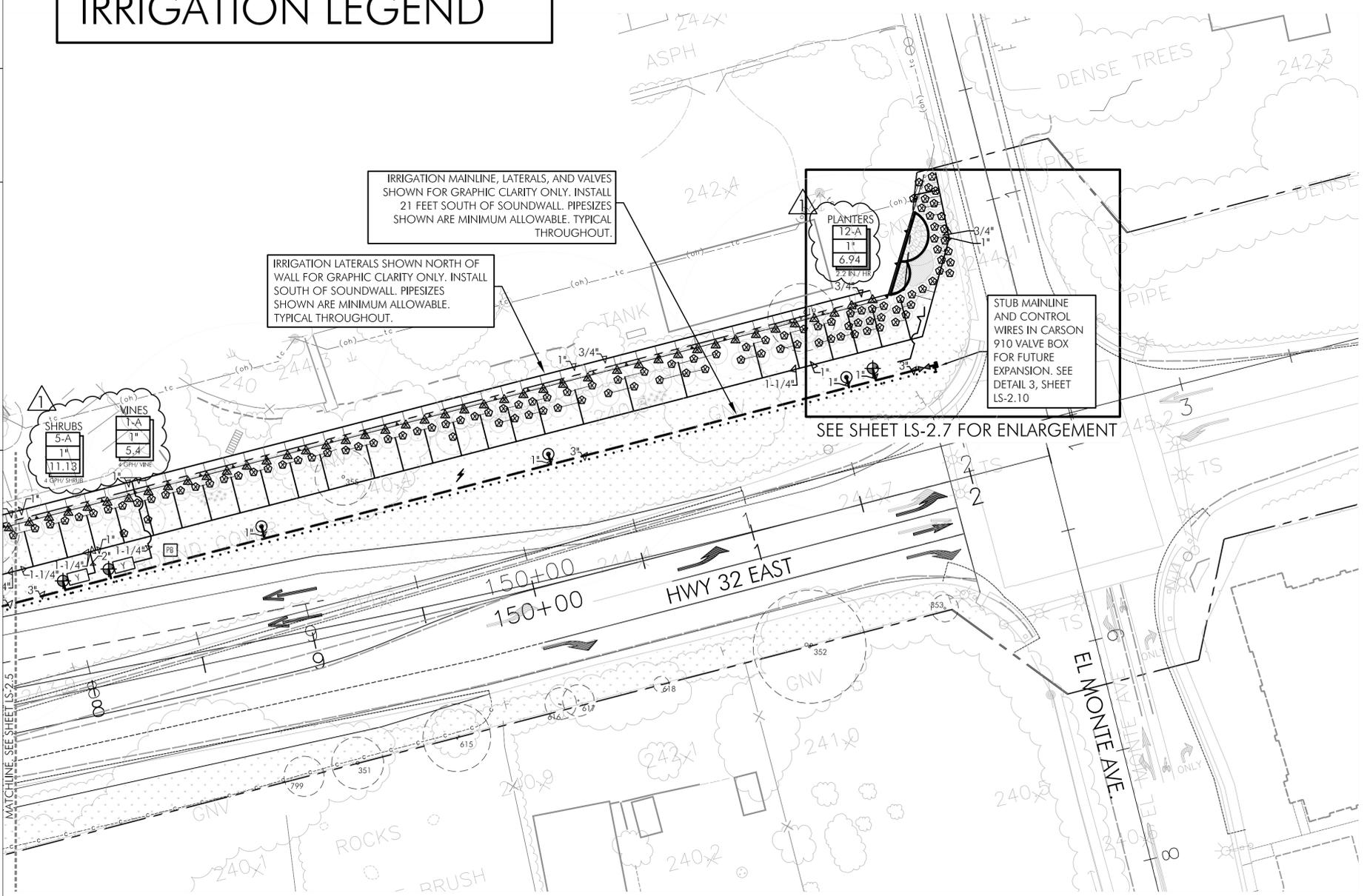
### IRRIGATION NOTES

- THIS SYSTEM IS DESIGNED FOR A MAXIMUM DEMAND OF 40 GPM. AVERAGE STATIC PRESSURE IS 50 PSI AT THE POINT OF CONNECTION AND NO LESS THAN 5 PSI AT THE FARTHEST IRRIGATION EMITTER AND 30 PSI AT THE FARTHEST IRRIGATION SPRAY HEAD. CONTACT THE LANDSCAPE ARCHITECT IN THE EVENT THAT FIELD TESTED PRESSURE IS LESS THAN STATED, PRIOR TO CONSTRUCTION.
- THE INTENT OF THIS IRRIGATION SYSTEM IS TO PROVIDE THE MINIMUM AMOUNT OF WATER REQUIRED TO SUSTAIN GOOD PLANT HEALTH. ADJUST CLOCK AS REQUIRED TO ACHIEVE THIS GOAL AS REQUIRED BY THE TIME OF YEAR. SEE SHEET LS-2.10 FOR SEASONAL IRRIGATION SCHEDULE. ADJUST AS REQUIRED FOR PLANT ESTABLISHMENT PERIOD.
- THIS DRAWING IS DIAGRAMMATIC. IRRIGATION COMPONENTS SHOWN BENEATH PAVING, EXISTING TREE TRUNKS, OR PLANTINGS IS FOR GRAPHIC CLARITY ONLY. PLACE ALL PIPING, VALVES, AND OTHER IRRIGATION COMPONENTS WITHIN THE ADJACENT PLANTER EXCEPT WHERE PIPES CROSS PAVING. PLACE PIPING TO PREVENT CONFLICT WITH SUBSEQUENT PLANTING. REFER TO PLANTING PLAN. IRRIGATION VALVES SHALL BE GROUPED TOGETHER PER DETAIL 7, SHEET LS-2.8 AND LOCATED A MINIMUM OF 17 FEET FROM THE EDGE OF TRAVELLED WAY TO ALLOW ACCESS.
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- SEE SHEET LS-2.9 FOR SYSTEM CAPACITY DOCUMENTATION. SEE SHEET LS-2.10 FOR WATER USE DOCUMENTATION.
- ALL PROPRIETARY SPECIFICATIONS MAY BE SUBSTITUTED WITH EQUAL OR BETTER EQUIPMENT BY ANOTHER MANUFACTURER UPON APPROVAL BY PROJECT LANDSCAPE ARCHITECT.
- SEE DETAILS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.

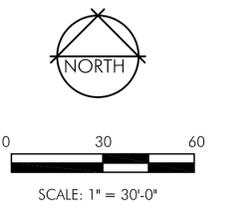
### SPRINKLER LEGEND

SYMBOL	MFG'R	DESCRIPTION	MODEL	FLOW (GPM)	DETAIL
	SALCO/RAINBIRD	EMITTER/ SWINGPIPE, SHRUBS- (SALCO PRO-SPEC EMITTERS WITH RAINBIRD SPX SERIES SWING PIPE AND SB SERIES FITTINGS)	SALCO PRO-SPEC EMITTER: SLV-PST-2 SWING PIPE: SPX-100 FITTINGS: SBE-050/ SBA-050/ SB-TEE (AS REQUIRED)	2 GPH PER EMITTER/ 4 GPH PER SHRUB BUBBLER ASSEMBLY (2 EMITTERS PER SHRUB)	1/LS-2.8
	SALCO/RAINBIRD	EMITTER/ SWINGPIPE, VINES- (SALCO PRO-SPEC EMITTERS WITH RAINBIRD SPX SERIES SWING PIPE AND SB SERIES FITTINGS)	SALCO PRO-SPEC EMITTER: SLV-PST-2 SWING PIPE: SPX-100 FITTINGS: SBE-050/ SBA-050/ SB-TEE (AS REQUIRED)	2 GPH PER EMITTER/ 4 GPH PER VINE BUBBLER ASSEMBLY (2 EMITTERS PER VINE)	1/LS-2.8
	SALCO/RAINBIRD	EMITTER/ SWINGPIPE, TREES- (SALCO PRO-SPEC EMITTERS WITH RAINBIRD SPX SERIES SWING PIPE AND SB SERIES FITTINGS)	SALCO PRO-SPEC EMITTER: SLV-PST-2 SWING PIPE: SPX-100 FITTINGS: SBE-050/ SBA-050/ SB-TEE (AS REQUIRED)	2 GPH PER EMITTER/ 8 GPH PER TREE BUBBLER ASSEMBLY (4 EMITTERS PER TREE)	2/LS-2.8
	RAINBIRD	IRRIGATION HEAD	1812-SAM-PRS-8 (Q, T, H, TT, TQ, F)	26, 35, 52, 1.05	1/LS-10
	RAINBIRD	IRRIGATION HEAD	1812-SAM-PRS-10(Q, T, H, TT, TQ, F)	39, 53, 79, 1.58	1/LS-10
	RAINBIRD	IRRIGATION HEAD	1812-SAM-PRS-12 (Q, T, H, TT, TQ, F)	65, 87, 1.3, 2.6	1/LS-10
	RAINBIRD	IRRIGATION HEAD	1812-SAM-PRS-15S (EST/ SST)	61, 1.21	1/LS-10

**NOTE:**  
SEE SHEET LS-2.0 FOR IRRIGATION LEGEND

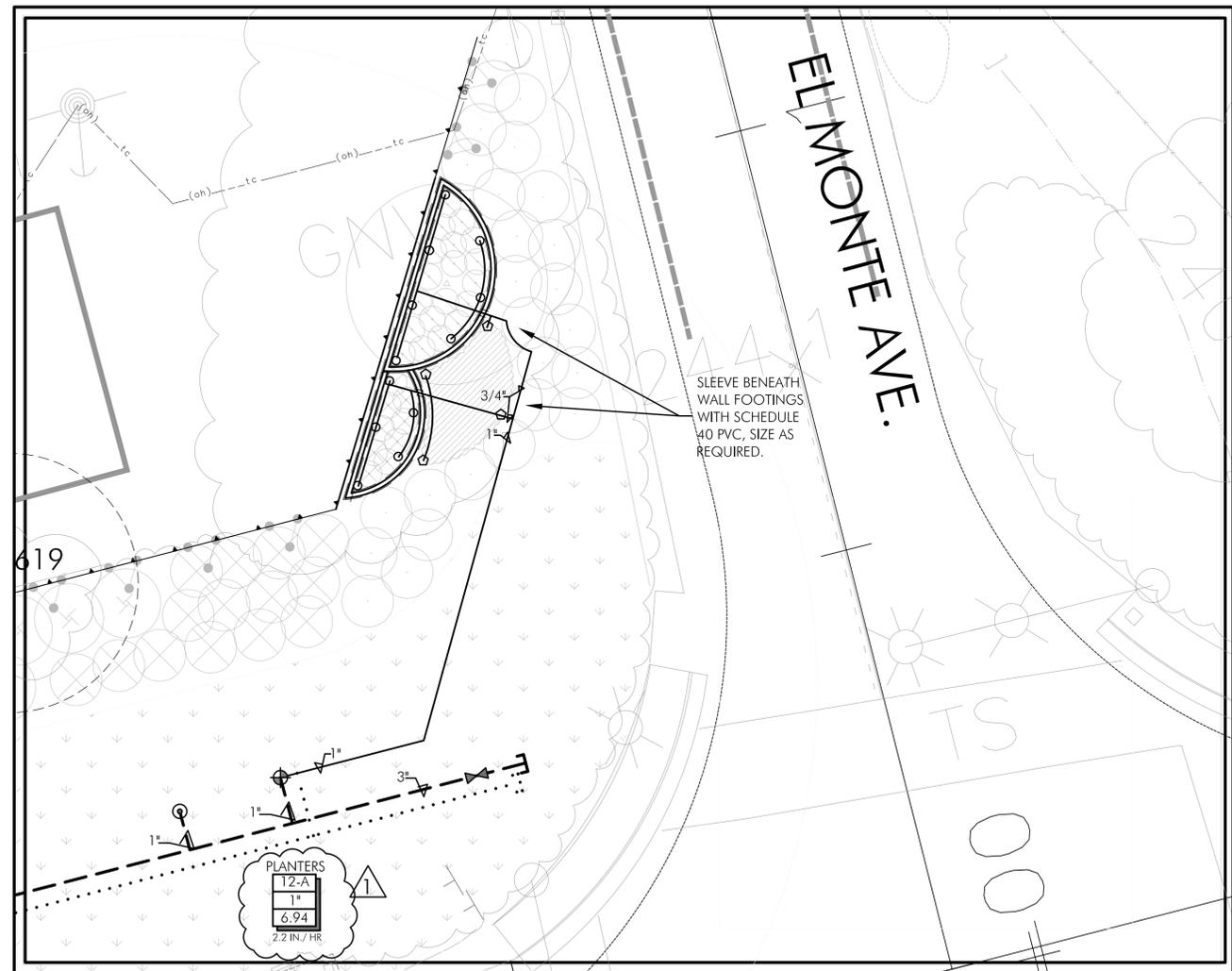
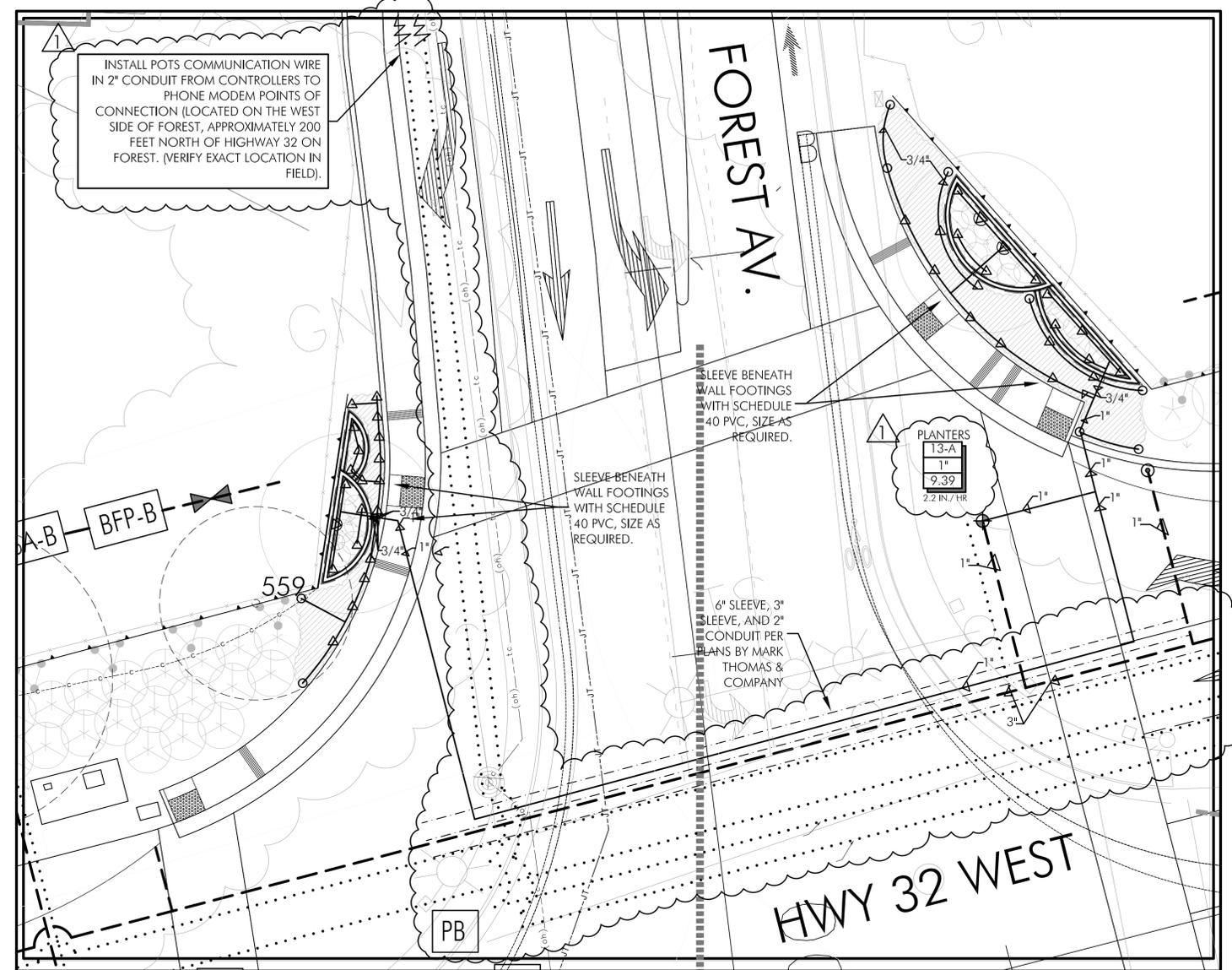


HIGHWAY 32-  
PHASE 1  
LANDSCAPE  
IRRIGATION  
PLAN  
SHEET LS-2.6



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 CONSULTANT FUNCTIONAL SUPERVISOR  
 BRIAN FIRTH  
 REVISIONS:  
 01-11-12  
 REVISED BY: BF/JBB  
 DATE: 01-11-12  
 CHECKED BY: B. FIRTH  
 DESIGNED BY: B. FIRTH/JBB

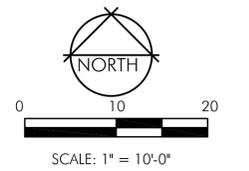
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	But	32	10.3/11.3	124	144
 LICENSED LANDSCAPE ARCHITECT DATE 12-22-11					
DECEMBER 22, 2011 PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					
BRIAN FIRTH LANDSCAPE ARCHITECT, INC. 627 BROADWAY, SUITE 220 CHICO, CALIFORNIA 95928			CITY OF CHICO CAPITAL PROJECT SERVICES 411 MAIN STREET CHICO, CA 95927		



**CORNER ENLARGEMENT: FOREST AVENUE AND HIGHWAY 32**

**NOTE:**  
SEE SHEET LS-2.0 FOR IRRIGATION LEGENDS AND NOTES

HIGHWAY 32- PHASE 1  
LANDSCAPE IRRIGATION  
PLAN  
SHEET LS-2.7



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 CONSULTANT - FUNCTIONAL SUPERVISOR  
 BRIAN FIRTH  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 B. FIRTH/JBB  
 REVISED BY  
 DATE REVISED  
 01-11-12  
 BF/JBB

**SECTION VIEW**

- 10" DIAMETER PLASTIC VALVE BOX WITH BOLT DOWN LOC KIT. HEAT BRANDED 'QC' ON TOP
- MANUFACTURED TRIPLE SWING JOINT, KBI MODEL TSA-1000-TT OR APPROVED EQUAL
- PVC SCHEDULE 80 TEE
- PVC CLASS 315 OR SCHEDULE 40 MAINLINE, SIZE PER PLAN
- 3/4" CRUSHED ROCK, 6" MINIMUM DEPTH
- 1/4" GALVANIZED WIRE CLOTH
- #4 X 30" REBAR, SECURE TO QUICK COUPLER VALVE WITH STAINLESS STEEL HOSE CLAMPS AND SCREWS (TYP. 2 PLCS.)
- SAND BACKFILL, 6" ABOVE AND BELOW MAIN LINE
- NATIVE SUBGRADE
- PVC SCHEDULE 80 NIPPLE, LENGTH AS NEEDED
- STAINLESS STEEL HOSE CLAMP WITH STAINLESS STEEL SCREWS (TYP. 2 PLCS.)

NOTE:  
 ALL NON "O" RING THREADED CONNECTIONS SHALL RECEIVE MIN. 3 WRAPS OF TEFLON TAPE.

1 FINISH GRADE  
 2 SET TOP OF BOX ABOVE FINISH GRADE: 3-1/2" ABOVE FINISH GRADE. LANDSCAPE AREAS RECEIVING WOOD CHIP MULCH. 1/2" ABOVE FINISH GRADE IN AREAS RECEIVING HYDROSEED  
 3 QUICK COUPLING VALVE WITH LOCKING RUBBER COVER; SET VALVE HEIGHT SO QUICK COUPLER KEY CLEARS VALVE BOX.  
 4 SET VALVE BOX 12" FROM EDGE OF PLANTING AREA  
 5 CURB, HEADER OR PAVING WHERE APPLICABLE

QUICK COUPLER VALVE 6

**TOP VIEW**

- CENTER VALVE BOX OVER REMOTE CONTROL VALVE TO FACILITATE SERVICING VALVE.
- SET BOXES PARALLEL TO EACH OTHER AND PERPENDICULAR TO EDGE OF HIGHWAY OR SIDEWALK (WHERE APPLICABLE)
- AVOID HEAVILY COMPACTING SOIL AROUND VALVE BOXES TO PREVENT COLLAPSE AND DEFORMATION OF VALVE BOX SIDES.
- INSTALL VALVE BOX EXTENSION BY VALVE BOX MANUFACTURER AS REQUIRED TO COMPLETELY ENCLOSE VALVE ASSEMBLY.

17" FROM EDGE OF TRAVELLED WAY / 9" FROM EDGE OF ASPHALT

**SECTION VIEW**

- TRIM VALVE BOX TO PROVIDE 1" CLEARANCE OVER PIPE
- 1/4" GALVANIZED WIRE CLOTH PLACED ABOVE GRAVEL
- REMOTE CONTROL DRIP VALVE ASSEMBLY; SIZE AND MODEL PER PLAN
- LOCKING WATERPROOF WIRE CONNECTOR, MODELS TKHP LV-9000, DS-400 OR APPROVED EQUAL
- PLASTIC VALVE BOX WITH LOCKING COVER. CARSON MODEL 1220-12 OR APPROVED EQUAL. SEE SPECIFICATIONS.
- FINISH GRADE
- 3-1/2" ABOVE FINISH GRADE LANDSCAPE AREAS RECEIVING WOOD CHIP MULCH. 1/2" ABOVE FINISH GRADE IN AREAS RECEIVING HYDROSEED
- PVC SCHEDULE 40 LATERAL LINE, PROVIDE 18" LENGTH PRIOR TO FIRST FITTING
- SCHEDULE 80 PVC UNION, T x T (TYP. 2 PLCS.)
- SCHEDULE 40 PVC ELBOW, S x T
- 2-WIRE DECODER CABLE, RAINMASTER MODEL: TW-CAB-14 OR APPROVED EQUAL. PROVIDE MINIMUM 18" COILED EXTRA IN VALVE BOX
- SCHEDULE 40 PVC NIPPLE, LENGTH AS REQUIRED
- PVC SCHEDULE 40 OR CLASS 315 MAINLINE. 18" MINIMUM COVER. SEE SPECIFICATIONS.
- 3/4" CRUSHED ROCK, 6" DEPTH
- SCHEDULE 80 PVC TEE (S x S x S)
- (4) COMMON BRICKS FOR VALVE BOX SUPPORT
- PVC SCHEDULE 40 CONDUIT; SIZE AS NEEDED. SEE SPECIFICATIONS.
- PVC SCHEDULE 40 CONDUIT SWEEP, COUPLED BOTH ENDS
- 17" FROM EDGE OF TRAVELLED WAY, 9 FEET FROM EDGE OF ASPHALT.
- 2 WIRE DECODER, RAINMASTER TW-D-1, 1 PER REMOTE CONTROL VALVE, TYPICAL.
- VALVE IDENTIFICATION TAG. SEE BOOK FORM SPECIFICATIONS.

NOTE:  
 1. ALL SLIP FITTINGS TO BE PRIMED AND GLUED.  
 2. ONE VALVE PER BOX  
 3. INSTALL MINIMUM OF 12" FROM STRUCTURES OR HARDSCAPE.  
 4. INSTALL IN PLANTER BEDS WHERE POSSIBLE.  
 5. PLACE VALVE BOX AT RIGHT ANGLES TO STRUCTURES OR HARDSCAPE.  
 6. USE MIN. 3 WRAPS OF TEFLON TAPE AT EACH THREADED CONNECTION.  
 7. SEE IRRIGATION PLANS FOR LIGHTNING ARRESTOR/ GROUNDING LOCATIONS. SEE IRRIGATION LEGEND, SHEET IS-2.0 FOR ADDITIONAL INFORMATION

REMOTE CONTROL VALVE (DRIP) 4

**SECTION VIEW**

- 8" DIAMETER SCHEDULE 40 PVC PIPE, LENGTH AS REQUIRED
- 3/4" CRUSHED ROCK, 6" MINIMUM DEPTH
- GATE VALVE 2-1/2" AND SMALLER WITH BRONZE CROSS HANDLE. SEE SPECIFICATIONS.
- PVC SCHEDULE 40 OR CLASS 315 MAIN LINE AS PER PLANS
- PVC SCHEDULE 40 COUPLER
- PVC SCHEDULE 80 T.O.E. NIPPLE
- 1/4" GALVANIZED WIRE CLOTH
- WRAP ALL PVC PIPE EXPOSED TO CRUSHED ROCK WITH 20MIL CORROSION RESISTANT TAPE.
- SAND BACKFILL, 6" ABOVE AND BELOW MAIN LINE
- FINISH GRADE
- SET TOP OF BOX ABOVE FINISH GRADE: 3-1/2" ABOVE FINISH GRADE LANDSCAPE AREAS RECEIVING WOOD CHIP MULCH. 1/2" ABOVE FINISH GRADE IN AREAS RECEIVING HYDROSEED
- ALLOW 3" BETWEEN TOP OF THE INTERIOR VALVE BOX COVER AND PVC PIPE.
- GREEN PLASTIC VALVE BOX WITH BOLT DOWN LOC-KIT; CARSON MODEL 910 OR APPROVED EQUAL

NOTE:  
 1. GATE VALVES 2-1/2" AND SMALLER SHALL BE THREADED.  
 2. WHEN THE MAIN LINE IS TERMINATED AT THE VALVE, EXTEND MAIN LINE 48" BEYOND VALVE BOX AND CAP.

**CUSTOMER ENCLOSURE (BACK VIEW)**

**SECTION VIEW**

- STAINLESS STEEL METER PEDESTAL AND CONTROLLER ENCLOSURE.
- CSA SUBASSEMBLY; SEE PLANS AND SPECIFICATIONS
- 1" PVC SCHEDULE 40 CONDUIT WITH POTS TELEPHONE CABLE AS PER ATT SPECIFICATIONS
- METER SOCKET WITH TEST BLOCKS
- LOAD CENTER
- IRRIGATION CONTROLLER, MODEL PER PLANS AND SPECIFICATIONS
- POURED CONCRETE BASE; 6" MINIMUM THICKNESS. EXTEND 6" BEYOND OUTSIDE DIMENSIONS OF ENCLOSURE WITH 1/2% SLOPE FOR DRAINAGE.
- 120V POWER SUPPLY IN CONDUIT PER N.E.C.
- STAINLESS STEEL MOUNTING BASE IN CONCRETE
- UNDERGROUND SERVICE BY PGE. CONTRACTOR TO PROVIDE AND INSTALL SWEEP AND RISER PER N.E.C.
- METER VIEWING WINDOW, 2" X 4"
- 3/8" STAINLESS ANCHOR BOLTS (TYPICAL)
- 3" PVC SCHEDULE 40 CONDUIT FOR REMOTE CONTROL VALVE WIRES. EXTEND 18" MINIMUM BEYOND CONCRETE PAD.
- CONTROL WIRES IN CONDUIT TO VALVES.
- FINISH GRADE
- SET CONCRETE PAD ABOVE FINISH GRADE: 1/2" IN SEED, 3-1/2" IN SHRUB PLANTERS
- PVC SCHEDULE 40 CONDUIT; 3" MINIMUM SIZE TO 18" BEYOND CONCRETE PAD THEN SIZE PER PLAN

NOTE:  
 1. SERVICE PEDESTAL SHALL CONFORM TO PG&E SPECIFICATIONS.  
 2. ELECTRIC WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR.  
 3. CONTRACTOR RESPONSIBLE TO COORDINATE WITH PGE AND THE CITY OF CHICO

CONTROLLER 2

**PLAN VIEW**

**SECTION VIEW**

- NORMALLY OPENED MASTER VALVE, INSTALL DOWNSTREAM OF BACKFLOW PREVENTER (SEE PLANS AND SPECIFICATIONS)
- TEE MOUNTED FLOW SENSOR (SEE PLANS AND SPECIFICATIONS)
- PVC SCHEDULE 40 OR CLASS 315 MAINLINE
- 2-WIRE DECODER CABLE, RAINMASTER MODEL: TW-CAB-14 OR APPROVED EQUAL. PROVIDE MINIMUM 18" COILED EXTRA IN VALVE BOX
- WATERPROOF CONNECTIONS 3M MODEL DBR-6 OR APPROVED EQUAL. (NOTE POLARITY ON SENSOR TO SENSOR CABLE HOOKUP.)
- GREEN PLASTIC VALVE BOX WITH BOLT DOWN LOC-KIT; CARSON MODEL 1419 OR APPROVED EQUAL.
- PVC SCHEDULE 80 UNION, S S (TYP. 2 PLCS.)
- PVC SCHEDULE 80 NIPPLE, T.O.E.; SIZE PER VALVE SIZE, 3" MINIMUM LENGTH (TYP. 2 PLCS.)
- PVC SCHEDULE 80 NIPPLE, T.O.E.; SIZE PER VALVE SIZE, 3" MINIMUM LENGTH (TYP. 2 PLCS.)
- PVC SCHEDULE 80 NIPPLE, T.O.E.; SIZE PER VALVE SIZE, 3" MINIMUM LENGTH (TYP. 2 PLCS.)
- 2" PVC SCHEDULE 40 CONDUIT AND 2-WIRE CABLE FROM FLOW SENSOR AND MASTER VALVE TO CONTROLLER. INSTALL PULL BOXES AT CHANGES IN DIRECTION AND AS NEEDED
- PVC REDUCER COUPLINGS (S x S), SIZE PER PIPE SIZE
- (4) COMMON BRICKS FOR VALVE BOX SUPPORT
- VALVE BOX EXTENSION
- 3/4" CRUSHED ROCK; 6" MINIMUM DEPTH
- 1/4" GALVANIZED WIRE CLOTH
- VALVE BOX. CARSON 1419 OR EQUAL, COLOR: GREEN.
- FINISH GRADE. TOP OF VALVE BOX TO BE 3-1/2" ABOVE FINISH GRADE AT LANDSCAPE AREAS RECEIVING WOOD CHIP MULCH. 1/2" ABOVE FINISH GRADE IN AREAS RECEIVING HYDROSEED
- 2, #20 FOIL SHIELD W/ DRAIN BLACK JACKET, DIRECT BURIAL BLACK, WHITE. ALLOW 2' OF EXTRA CABLE. (EV-CAB-SEN)

NOTE:  
 1. FLOW SENSOR MUST BE INSTALLED WITH INSERT (TOP) POSITIONED VERTICALLY AND BODY (TEE) POSITIONED HORIZONTALLY.  
 2. INSTALL FLOW SENSOR CABLE IN 1 1/4" CONDUIT FROM FLOW SENSOR TO CONTROLLER ENCLOSURE.

Dist 03 COUNTY But ROUTE 32 POST MILES TOTAL 10.3/11.3 SHEET No. 125 TOTAL SHEETS 144

12-22-11  
 LICENSED LANDSCAPE ARCHITECT DATE

DECEMBER 22, 2011  
 PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

BRIAN FIRTH LANDSCAPE ARCHITECT, INC. CITY OF CHICO CAPITAL PROJECT SERVICES  
 627 BROADWAY, SUITE 220 411 MAIN STREET  
 CHICO, CALIFORNIA 95928 CHICO, CA 95927

**TOP VIEW METER BASE**

BACK CUSTOMER ENCLOSURE FRONT  
 CIRCUIT BREAKER CUSTOMER SIDE UTILITY SERVICE

30" 18" 2.5"

STAINLESS STEEL BASE FOR CONCRETE

HIGHWAY 32- PHASE 1  
 LANDSCAPE IRRIGATION  
 DETAILS

BACKFLOW PREVENTER ASSEMBLY 1

**SECTION VIEW**

**PLAN VIEW**

- REDUCED BACKFLOW PREVENTER, WILKINS 975XL OR APPROVED EQUAL (SIZE PER PLANS)
- UNION (TYPICAL)
- 4" CONCRETE PAD: SET 3-1/2" ABOVE FINISH GRADE LANDSCAPE AREAS RECEIVING WOOD CHIP MULCH. 1/2" ABOVE FINISH GRADE IN AREAS RECEIVING HYDROSEED
- FINISH GRADE
- PVC SCHEDULE 40 OR CLASS 315 MAINLINE, SIZE AND TYPE PER PLAN
- WRAP ALL BURIED GALVANIZED PIPE AND FITTINGS WITH 20MIL CORROSION PROTECTION TAPE.
- PVC SCHEDULE 40 ADAPTER/BUSHING (MPT X SLIP)
- STRONG BOX ENCLOSURE; SIZE AND MODEL PER PLAN
- SCHEDULE 40 GALVANIZED PIPE AND FITTINGS

NOTE:  
 1. INSTALL WITH INSULATED BACKFLOW BLANKET; SIZE AS REQUIRED.  
 2. PROVIDE LOCK KEYS TO CITY OF CHICO SPECIFICATIONS



CAPITAL PROJECT SERVICES DEPARTMENT  
PUBLIC WORKS PROJECT

NOTICE TO CONTRACTORS  
GENERAL AND SPECIAL PROVISIONS  
PROPOSAL AND CONTRACT  
FOR

**STATE ROUTE 32 WIDENING PROJECT (PHASE 1)  
PROJECT NO. 15010  
FROM EAST OF PARK AND RIDE LOT TO EL MONTE AVENUE**

**BUDGET ACCOUNT NO. MAJGC/15010-300-4150**

For use in connection with:

- (1) State of California  
Department of Transportation  
STANDARD SPECIFICATIONS May 2006
- (2) City of Chico  
STANDARD PLANS  
CONSTRUCTION SPECIFICATIONS

Prepared By or Under the Supervision of:

Robert Greenlaw R.C.E. 62529  
License Expiration Date: December 31, 2011



**BID OPEN DATE: ~~January 19<sup>th</sup>, 2012~~  
January 24<sup>th</sup>, 2012**

**CITY OF CHICO**  
CAPITAL PROJECT SERVICES DEPARTMENT  
CHICO, CALIFORNIA

NOTICE TO CONTRACTORS – PUBLIC WORKS PROJECT

STATE ROUTE 32 WIDENING PROJECT (PHASE 1)  
PROJECT NO. 15010  
FROM EAST OF PARK AND RIDE LOT TO EL MONTE AVENUE  
(Project Title)

MAJGC/15010-300-4150  
(Budget Account No.)

**NOTICE INVITING BIDS** - The City of Chico will receive sealed bids for the above public works project at the Capital Project Services Department, located at the Chico Municipal Center, 2nd Floor, 411 Main Street, Chico, CA 95928 (Mailing Address: P. O. Box 3420, Chico, CA 95927), until 4:00 PM **JANUARY 24th, 2012**, at which time they will be publicly opened and read aloud. A planholders list or, once the results have been determined by staff, bid results, may be obtained at the following City website address: [www.chico.ca.us](http://www.chico.ca.us). On the Home page, click Departments, Capital Project Services, Projects to Bid.

**GENERAL WORK DESCRIPTION** – The work, in general, to be done under this contract consists of roadway widening, pavement rehabilitation and overlay of existing roadway, bridge widening, drainage improvements, signal modifications, soundwalls, steel-backed timber guardrail, landscaping, and all necessary appurtenances, all in conformance with the attached contract specifications and the details as shown on the contract plans entitled:

**STATE ROUTE 32 WIDENING PROJECT (PHASE 1)**  
**PROJECT NO. 15010**  
**FROM EAST OF PARK AND RIDE LOT TO EL MONTE AVENUE**

**BIDDERS INFORMATION** – Bid documents (plans and specifications) and supplemental information (Cross-Sections, Geotechnical Reports, Storm Water Pollution Prevention Plan, Bridge As-built information, Bridge Foundation Report with Addendums, and Bridge Design Hydraulic Study Report) may be obtained for a NONREFUNDABLE FEE, plus delivery (if mailed), through Brownie's Digital Imaging, 1322 V Street, Sacramento, CA 95818. Phone: 916-443-1322. Fax: 916-442-5305. Email: [central@browniesrepro.com](mailto:central@browniesrepro.com). Inquire with the Planwell department.

Bid documents and supplemental information, shipping and handling charges are determined by Brownie's. Bid documents and supplemental information are also posted on the City of Chico website at [www.chico.ca.us](http://www.chico.ca.us), click Departments, Capital Project Services, Projects to bid. Cross-Sections, Geotechnical Reports, Storm Water Pollution Prevention Plan, Bridge As-built information, Bridge Foundation Report with Addendums, and Bridge Design Hydraulic Study Report are provided for informational purposes only. All addenda will be posted through Brownie's Digital Imaging and will also be posted on the City of Chico website. Planholders list is only available through Brownie's Digital Imaging. Contractors will only be listed on the Planholders list if they have purchased through Brownie's Digital Imaging.

Bid documents and supplemental information may be examined at the Capital Project Services Department, located at the Chico Municipal Center, 2<sup>nd</sup> Floor, 411 Main Street, Chico, CA. Copies of all bid documents and supplemental information are to be requested and obtained through Brownies Digital Imaging. Technical questions should be directed to the City Capital Project Services Department at (530) 879-6931, Fax (530) 895-4899. Responses to questions will be addressed in combination with the designer and contract manager as appropriate. Questions and Requests for Information will not be responded to beginning 7 calendar days prior to bid opening.

**BID SUBMITTAL REQUIREMENTS** - Bidders may only submit their bids on proposal forms provided by the City. **Bids must be submitted in a sealed envelope plainly marked on its outside with the project title, City budget account number (see above), the bid opening date and bid opening time.** Each bid must be accompanied by cash, a certified or cashier's check, or a bid bond in favor of the CITY OF CHICO in an amount equal to at least ten percent (10%) of the amount bid, such guaranty to be forfeited should the bidder to whom the contract is awarded fail to enter into the contract.

**BID AWARD PROVISIONS; REJECTION** - An award of bid, if a bid is awarded, will be made to the lowest responsible bidder whose bid complies with the City's requirements within **seventy- five (75) days** of the bid opening date. The City reserves the right, in its sole discretion, to reject any bid which fails to meet bid requirements in any respect, to reject all bids for any reasons whatsoever and to waive minor irregularities in any bid.

In addition to its right to accept or reject any and all bids, the City reserves the right in its sole discretion to base the award of bid on the inclusion of any, all, or none of the additive or alternate bid items, included in the bid proposal.

**INSURANCE; BONDS REQUIRED** - The bidder to whom a contract is awarded will be required to furnish to the City evidence of insurance coverage(s) and performance/labor and materials bonds in full compliance with the provisions of the contract documents.

**OUT OF STATE VENDORS** - Since the City is required to pay the California use tax on goods purchased from an out of state vendor, out of state vendors who do not pay California sales tax, directly or subject to a California State Use Tax Permit, must include the use tax in the bid total. The use tax shall be calculated based on the sales tax rate applicable in the City of Chico at the time the bid is prepared.

**LICENSING REQUIREMENTS** - At the time the City awards the contract for this project, the Contractor shall possess either a Class A Contractor License or a combination of classes required by the categories and types of work included in this contract

**PREVAILING WAGES: PAYMENT REQUIRED** - Prevailing State wages are required to be paid to members of each craft or classification performing work on this project. A copy of the current State Prevailing Wage Determination for this project is on file in the Capital Project Services Department at 411 Main Street, 2nd Floor. (State prevailing wages are also available on the Internet at [http://www.dir.ca.gov/DLSR/statistics\\_research.html](http://www.dir.ca.gov/DLSR/statistics_research.html) ).

**APPRENTICESHIP STANDARDS** - In accordance with the provisions of Part 7, Chapter 1, Article 2, Section 1777.5 of the Labor Code of the State of California, the prime contractor shall be responsible for fully complying with the provisions of this Section, as well as any regulations adopted by the Director of Industrial Relations, for all apprenticeable crafts or trades, and shall also assure compliance by his/her sub-contractors with respect to such apprenticeable crafts or trades.

**PAYMENT RETENTIONS; SUBSTITUTION OF SECURITIES** - Ten percent (10%) will be withheld from each progress payment made to the contractor for work performed and will be held until completion of the work, its acceptance and the expiration of the period provided by law for filing liens by laborers or materialmen. In accordance with the provisions of Section 22300 of the Public Contract Code of the State of California, securities may be substituted for the monies which the City withholds, or the Contractor may request that retention be paid to an escrow agent.

**PUBLISH DATE: DECEMBER 23rd, 2011**

v) Root pruning shall be done by the Certified Arborist, Certified Tree Workers under the general guidance of the Certified Arborist or the contractor under the direct supervision of the Certified Arborist.

If roots two (2) inches in diameter or larger are accidentally damaged, the contractor shall notify the Engineer immediately. The Engineer, in consultation with the Urban Forester, will take appropriate action to repair or mitigate the damage. The contractor shall be responsible for paying all costs incurred by the city to repair or mitigate the damage caused as a result of the contractor's negligence.

Where roots cannot be cut without adversely affecting the tree, hardscape improvements may be modified with the approval of the Engineer to accommodate the tree or tree roots. Curb, gutter and sidewalk improvements shall be constructed in accordance with Chico Standard Plan S-2A, "Curb, Gutter and Sidewalk Installation at Trees."

## **B. MEASUREMENT AND PAYMENT**

Maintenance of trees as described herein, as shown on the Plans and as directed by the Engineer, including tree trimming, root pruning, 4" chip mulch and the services of the Certified Arborist shall be considered to be included in the payment for other work items included in the contract and no additional compensation shall be made. Full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for all the work involved in placing 4-inch Chip Mulch shall be included in the payment for other work items included in the contract and no additional compensation shall be made. Measurement and payment for Construction Fence (Temporary fence (Type ESA)) as shown on the plans shall be as described in Temporary fence (Type ESA) of these Special Provisions.

## **55. REMOVE TREE**

### **A. DESCRIPTION OF WORK**

Remove Tree shall conform to the provisions in Section 16 "Clearing and Grubbing" and Section 7-1.13 "Disposal of Material Outside the Highway Right of Way" of the Standard Specifications and these Special Provisions.

Remove Tree work shall consist of removing trees with diameter breast heights of 4-inches or greater; smaller trees shall be covered under clearing and grubbing.

Attention is directed to "Biological Monitoring Program" of these special provisions regarding the potential nesting of migratory birds.

Attention is directed to "Precast Concrete Soundwall" of these special provisions. **The contractor shall not remove any trees until the Precast Concrete Soundwall layout is approved, the rough grading limits are staked, and the trees marked for removal are approved by the City. The contractor shall notify the Engineer immediately upon completion of the tree removal markings which must be at least one (1) week prior to the beginning of the scheduled tree removal work.**

The Contractor is hereby notified that quantity of "Remove Tree" as listed in the contract documents may change. Increases or decreases in the quantity, regardless of the magnitude of the change, does **not** constitute a change requiring a change order, a change in the scope of work, or a change in the character of the work. The Contractor shall be paid the unit price quoted in the contract for the actual quantities used.

All roots of trees to be removed shall be cleared to a point not less than two (2) feet below the surface. Root voids shall be backfilled to the original ground elevation with native material and shall be jetted into place. All portions of trees shall be removed from the public right of way. Stumps shall be ground out, to protect the roots of remaining trees.

To avoid impacts on nesting non-special-status migratory birds and raptors and Swainson's hawks, the contractor will either:

- Conduct tree removal activities outside the nesting season for Swainson's hawk and non-special-status migratory birds and raptors. Potential nest trees will be removed after the young have fledged and prior to nest-building activities in the subsequent breeding season. Trees will be removed from September 16 through February 29.
- If tree removal activities are to take place after January 31 and before September 15, a qualified wildlife biologist shall be hired to conduct focused nest surveys for active Swainson's hawk and non-special-status migratory bird and raptor nests. If an active nest is found during the preconstruction survey, construction will cease within a setback/buffer zone determined by the qualified biologist or until September 1 or until it has been determined by a qualified biologist that the nest is no longer active. If no active nests are found on the project site, construction can proceed without any further mitigation.

The contractor shall schedule the tree removal operations as to complete them in a timely and workman-like manner. Trees to be removed shall be removed in their entirety before moving on to other items of work. The contractor shall not, under any circumstance, leave trees partially removed. If the contractor partially removes trees resulting in unsightly conditions, the Engineer may order an immediate action to complete the work at no additional cost to the City.

#### **B. MEASUREMENT**

Remove Tree shall be determined by the actual count removed.

#### **C. PAYMENT**

The contract unit price paid per each for Remove Tree shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in Remove Tree, complete in place, including conforming to all biological requirements, excavation, stump removal, and disposal, and tree trimming, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer. Compensation for removal of trees with diameter breast heights of less than 4-inches shall be included in "Clearing and Grubbing", and no additional payment will be allowed.

### **56. WATERING**

#### **A. DESCRIPTION OF WORK**

Developing a water supply and applying watering shall conform to the provisions in Section 17, "Watering," of the Standard Specifications and these special provisions.

Precast Concrete Soundwall, consisting of reinforced concrete panels and supports, shall be an Artisan Precast Cedarcrete Wall or approved equal. The Contractors attention is directed to the supplemental information included with this contract, which includes detailed drawings and specifications for the Artisen Precast Soundwalls.

Any requests for approved equivalent material shall be submitted in writing two calendar weeks prior to the date of bid opening. The City will respond as to whether the request is approved no later than 1 week prior to the Bid Opening.

**General Construction Provisions**

The Contractor is responsible for laying out the wall, including angle points, and for clearing all trees and underbrush which may be in-line with the wall. The Contracto shall provide a competent crew with a minimum of three workers focused on the wall placement at all times throughout the duration of the wall placement.

The Contractor shall layout the alignment of the proposed soundwalls in the field a minimum of 5 days prior to any clearing and grubbing, or tree removal for the Precast Soundwall construction. The Contractor shall coordinate a field meeting with the Engineer, City representatives, and the precast concrete soundwall representative to review the wall alignment in the field. Limits of tree removal and clearing and grubbing will be directly affected by the wall alignment, and shall be approved by the Engineer. Upon approval of the clearing limits, tree removal limits, and soundwall location, the Contractor may proceed with installation of the soundwall.

Trimming of existing trees is required for the construction of the soundwall. Attention is directed to “Clearing and Grubbing” of these Special Provisions.

To reduce the impact of construction noise during construction, the contractor shall install the soundwalls prior to any paving or grading operations.

Contractor can refer to manufacturer’s specification or contact them at:

Artisan Precast, Inc.:  
Contact: Christopher Miller  
1180 S. Beverly Drive, Suite 608  
Los Angeles, CA 90035

Phone:(800) 511-2747  
Fax: (310) 556-3201

**Submittals**

The Contractor shall provide the Engineer with a Certificate of Compliance from the manufacturer in conformance with the provisions in Section 6-1.07, “Certificates of Compliance,” of the Standard Specifications. The Certificate of Compliance shall certify that the precast concrete soundwall conforms to the contract plans and specifications, conforms to the

prequalified design and material requirements, and was manufactured in conformance with the approved quality control programs.

The Precast Concrete Soundwall shall be installed in conformance with the manufacturer's installation instructions.

The Precast Concrete Soundwall shall be Davis color 6130 "Cocoa" at 4 pounds per 94 pound sack, or approved equal.

Clearing and Grubbing shall be performed by the Contractor in advance of precast concrete soundwall installation. Attention is directed to "Clearing and Grubbing" of these special provisions.

The contractor, if requested, will provide working drawings indicating all information necessary for the precast wall elements. The drawings shall illustrate the shape and dimension of precast components; the size, quantity and details of the reinforcing steel; the quantity, type, size and details of connection and lifting hardware (if needed); the size and location of drain openings, and any additional details necessary. Drawings shall bear the seal of a registered professional engineer.

#### **Quality Assurance**

The contractor shall engage an experienced Installer who has experience with architectural precast wall projects with the same materials and similar scope of this project. All materials must be trademarked by Artisan Precast, or approved equal, manufactured in the United States.

#### **Safety**

The Contractor shall be responsible for the observance of proper safety practices and the avoidance of damage to property by all personnel engages in the work. The contractor shall be responsible for maintaining the security and function of each existing fence (including pet containment and swimming pools) until the wall has been completed and accepted by the Engineer. **This may include furnishing and erecting temporary fences where no functional fence currently exists. The temporary fencing shall not be placed on private property. The Contractor shall implement the proper safety practices, including the erection of temporary fencing, immediately following the following the removal of the existing fence.**

#### **Excess Quantities**

The contractor shall furnish excess quantities of Precast Concrete Soundwall ~~and will be on hand after to~~ **the City before** the completion of the project. This includes all materials (panels, posts, hardware, caps, etc) required to place a fully functional wall. **The extra Precast Concrete Wall materials shall include 25'-4" each of the 6', 7', 8', 9', and 10' wall heights for a total of 126'-8" of excess quantity.** The excess quantities ~~should~~ **shall** be delivered by the Contractor to the City of Chico Municipal Services Center, 901 Fir Street, Chico, CA 95928. The Contractor shall coordinate the delivery of these materials with the Engineer. **Full compensation for Excess Quantities shall be included in the contract unit price paid for Precast Concrete Soundwall, and no additional payment will be allowed.**

#### **B. MEASUREMENT**

Precast Concrete Soundwall will be measured by the square foot of the area of wall projected on a vertical plane between the elevation lines shown on the plans and length of wall (including the exposed posts).

### **C. PAYMENT**

The contract price paid per square foot for Precast Concrete Soundwall shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in constructing the precast concrete soundwall including panels, posts, piers (post footings) with reinforcing steel, and panel caps, **temporary construction fencing, and Excess Quantities**, complete in place, including clearing and grubbing, excavation and backfill, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

## **80. STEEL STRUCTURES**

### **A. DESCRIPTION OF WORK**

Construction of steel structures shall conform to the provisions in Section 55, "Steel Structures," of the Standard Specifications and these special provisions.

Attention is directed to "Welding" in Section 8, "Materials," of these special provisions.

### **MATERIALS**

#### **ROTATIONAL CAPACITY TESTING PRIOR TO SHIPMENT TO JOB SITE**

Rotational capacity tests shall be performed on all lots of high-strength fastener assemblies prior to shipment of these lots to the project site. Zinc-coated assemblies shall be tested after all fabrication, coating, and lubrication of components has been completed. One hardened washer shall be used under each nut for the tests.

The requirements of this section do not apply to high-strength cap screws or high-strength bolts used for slip base plates.

Each combination of bolt production lot, nut lot, and washer lot shall be tested as an assembly.

A rotational capacity lot number shall be assigned to each combination of lots tested. Each shipping unit of fastener assemblies shall be plainly marked with the rotational capacity lot number.

Two fastener assemblies from each rotational capacity lot shall be tested.

The following equipment, procedure, and acceptance criteria shall be used to perform rotational capacity tests on and determine acceptance of ASTM A 325 long bolts. Fasteners are considered to be long bolts when full nut thread engagement can be achieved when installed in a bolt tension measuring device:

A. Long Bolt Test Equipment:

1. Calibrated bolt tension measuring device with adequate tension capacity for the bolts being tested.
2. Calibrated dial or digital torque wrench. Other suitable tools will be required for performing Steps 7 and 8 of the Long Bolt Test Procedure. A torque multiplier may be required for large diameter bolts.
3. Spacer washers or bushings. When spacer washers or bushings are required, they shall have the same inside diameter and equal or larger outside diameter as the appropriate hardened washers conforming to the requirements in ASTM Designation: F 436.
4. Steel beam or member, such as a girder flange or cross frame, to which the bolt tension measuring device will be attached. The device shall be accessible from the ground.

B Long Bolt Test Procedure:

1. Measure the bolt length. The bolt length is defined as the distance from the end of the threaded portion of the shank to the underside of the bolt head.
2. Install the nut on the bolt so that 3 to 5 full threads of the bolt are located between the bearing face of the nut and the underside of the bolt head. Measure and record the thread stickout of the bolt. Thread stickout is determined by measuring the distance from the outer face of the nut to the end of the threaded portion of the shank.
3. Insert the bolt into the bolt tension measuring device and install the required number of washers, and additional spacers as needed, directly beneath the nut to produce the thread stickout measured in Step 2 of this procedure.
4. Tighten the nut using a hand wrench to a snug-tight condition. The snug tension shall not be less than the Table A value but may exceed the Table A value by a maximum of 2 kips.

Table A

High-Strength Fastener Assembly Tension Values to Approximate Snug-Tight Condition	
Bolt Diameter (inches)	Snug Tension (kips)
1/2	1
5/8	2
3/4	3
7/8	4
1	5
1-1/8	6
1-1/4	7
1-3/8	9
1-1/2	10

5. Match-mark the assembly by placing a heavy reference start line on the face plate of the bolt tension measuring device which aligns with (1) a mark placed on one corner of the nut and (2) a radial line placed across the flat on the end of the bolt or on the exposed portions of the threads of tension control bolts. Place an additional mark on the outside of the socket that overlays the mark on the nut corner such that this mark will be visible while turning the nut. Make an additional mark on the face

1. Imprinting uncured concrete with an approved drainage inlet marker concrete stamp
2. Producing stamped concrete surfaces that are free from blemishes

## **B. MEASUREMENT AND PAYMENT**

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in furnishing and installing drainage inlet markers, shall be considered as included in the contract unit price paid for Drainage Inlet and no additional compensation will be allowed therefore.

## **86. SLOPE PROTECTION**

### **A. DESCRIPTION OF WORK**

Slope protection shall be placed or constructed in conformance with the provisions in Section 72, "Slope Protection," of the Standard Specifications.

Rock slope protection fabric must be Class 8.

### **B. MEASUREMENT**

Rock Slope Protection (Backing No. 2, Method B) and Rock Slope Protection (Light, Method B) shall be measured by the cubic yard.

Rock Slope Protection Fabric shall be measured by the square yard.

### **C. PAYMENT**

The contract price paid per cubic yard for Rock Slope Protection (Backing No. 2, Method B) and Rock Slope Protection (Light, Method B) and per square foot for Rock Slope Protection Fabric shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all work involved in Rock Slope Protection and Rock Slope Protection Fabric, including excavation and backfill of areas to receive Rock Slope Protection and Rock Slope Protection Fabric, as shown on the plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer.

## **87. MISCELLANEOUS CONCRETE CONSTRUCTION**

### **A. DESCRIPTION OF WORK**

Minor Concrete (Curb and Gutter), Minor Concrete (Median Curb), Minor Concrete (Retaining Curb), Minor Concrete (Sidewalk), Minor Concrete (Curb Ramp), Minor Concrete (Textured Paving), shall conform to the provisions in Section 73, "Concrete Curbs and Sidewalks," of the Standard Specifications and these special provisions.

Curb ramp detectable warning surface shall consist of raised truncated domes ~~constructed or~~ installed on curb ramps in conformance with the details shown on the plans and these special provisions. ~~At the option of the Contractor, the detectable warning surface shall be prefabricated, cast-in-place, or stamped into the surface of the curb ramp.~~ The color of the

detectable warning surface shall be yellow conforming to Federal Standard 595B, Color No. 33538.

**Prefabricated detectable warning surface shall be Wet-Set ADA Std Replaceable Tactile Warning Surface Unit Manufactured by ADA Solutions, Inc., or approved equal.** Prefabricated detectable warning surface shall be in conformance with the requirements established by the Department of General Services, Division of State Architect and be attached in conformance with the manufacturer's recommendations. **Prior to installation, Contractor shall obtain approval from the Engineer for truncated dome material and dimensions.**

~~Cast-in-place and stamped detectable warning surfaces shall be painted in conformance with the provisions in Section 59-6, "Painting Concrete," of the Standard Specifications.~~

The finished surfaces of the detectable warning surface shall be free from blemishes.

~~Prior to constructing the cast-in-place or stamping the detectable warning surface, the Contractor shall demonstrate the ability to produce a detectable warning surface conforming to the details shown on the plans and these special provisions by constructing a 24" x 24" test panel.~~

The manufacturer shall provide a written 5-year warranty for prefabricated detectable warning surfaces, guaranteeing replacement when there is defect in the dome shape, color fastness, sound-on-cane acoustic quality, resilience, or attachment. The warranty period shall begin upon acceptance of the contract.

Full compensation for constructing or furnishing and installing curb ramp detectable warning surfaces shall be considered as included in the contract price paid per cubic yard for minor concrete (curb ramp) and no separate payment will be made therefor.

Aggregate for minor concrete (textured paving) shall conform to the grading specified for fine aggregate in Section 90-3.03, "Fine Aggregate Grading," of the Standard Specifications. Aggregate for grout shall conform to the following grading:

Sieve Sizes	Percentage Passing
No. 4	100
No. 8	90 - 100
No. 16	60 - 100
No. 30	35 - 70
No. 50	15 - 35
No. 100	2 - 15

A sample of sufficient size, of each type and color of the textured paving, to demonstrate the textured paving, including color hardener, curing and finishing compounds, for both grouted and ungrouted finishes, shall be submitted to the Engineer for written approval.

Textured paving shall not be placed on the project prior to approval by the Engineer of the samples prepared and submitted by the Contractor. Welded wire fabric, of the size and type shown on the plans and conforming to the provisions in Section 52, "Reinforcement," of the Standard Specifications, shall be placed in the textured paving areas as shown on the plans.

Aggregate base shall be Class 2 and shall conform to the provisions in Section 26, "Aggregate Bases," of the Standard Specifications.

The respective pattern types and colors of concrete for textured paving shall be placed at the locations shown on the plans, struck off and compacted until a layer of mortar is brought to the surface. The concrete shall be screeded to the required grade and cross section and floated to a uniform surface.

Floor color hardener shall be applied to the plastic surface of the concrete by the "dry-shake" method using a minimum of 60 pounds of hardener per 100 square feet. Hardener shall be applied in 2 applications, shall be wood-floated after each application, and shall be trowelled only after the final floating. The resultant color of the floor hardener shall closely conform to the colors specified on the plans for the respective areas.

The forming tools for the textured paving shall be applied to form the patterned surfaces while the concrete is still in the plastic stage of set.

Textured paving areas shall be cured by the curing compound method. The curing compound shall be curing compound (6) conforming to the provisions in Section 90-7.01B, "Curing Compound Method," of the Standard Specifications.

The textured paving shall be grouted in the minor concrete areas shown on the plans. The grout shall be placed after initial curing of that portion of the textured paving. The grout shall be spread over the textured concrete surface and consolidated by methods recommended by the grout manufacturer and approved by the Engineer. Surplus grout shall be removed by a squeegee and damp burlap rag or by other approved methods before the curing seal is applied to the grouted areas.

Curing seal and other deleterious substances shall be removed from the impressions in the textured areas, to receive the grout, before the grout is placed. Cleaning and removal methods shall not stain or discolor those portions of the textured paving to remain exposed after grouting. Methods of cleaning the impressions in textured areas to be grouted shall be approved by the Engineer.

#### **B. MEASUREMENT**

Minor Concrete (Curb and Gutter), Minor Concrete (Median Curb), Minor Concrete (Retaining Curb), Minor Concrete (Sidewalk), Minor Concrete (Textured Paving), and Minor Concrete (Curb Ramp) shall be measured by the cubic yard.

#### **C. PAYMENT**

The contract price paid per cubic yard for minor concrete (textured paving) shall include full compensation for furnishing all labor, materials (including welded wire fabric, where required, and aggregate base), tools, equipment, and incidentals, and for doing all the work involved in constructing textured paving, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

The contract price paid per cubic yard for Minor Concrete (Curb and Gutter), Minor Concrete (Median Curb), Minor Concrete (Retaining Curb), Minor Concrete (Sidewalk), and

Minor Concrete (Curb Ramp) shall include full compensation for furnishing all labor, materials including dowel and welded wire mesh, tools, equipment, and incidentals, and for doing all the work in constructing Minor Concrete (Curb and Gutter), Minor Concrete (Median Curb), Minor Concrete (Retaining Curb), Minor Concrete (Sidewalk), and Minor Concrete (Curb Ramp) complete in place, as shown on the plans, and as specified in standard specifications and these special provisions, and as directed by the Engineer. **Full compensation for placing truncated domes shall be considered as included in the contract price for pedestrian ramps and no separate payment will be made.**

## **88. MISCELLANEOUS IRON AND STEEL**

### **A. DESCRIPTION OF WORK**

Miscellaneous iron and steel shall conform to the provisions in Section 75, "Miscellaneous Metal," of the Standard Specifications .

### **B. MEASUREMENT**

Miscellaneous Iron and Steel shall be measured by the pound.

### **C. PAYMENT**

The contract price paid per pound for Miscellaneous Iron and Steel shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in Miscellaneous Iron and Steel, as shown on the plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer.

## **89. MARKERS AND DELINEATORS**

### **A. DESCRIPTION OF WORK**

Markers and delineators shall conform to the provisions in Section 82, "Markers and Delineators," of the Standard Specifications and these special provisions.

Markers and delineators on flexible posts shall conform to the provisions in "Prequalified and Tested Signing and Delineation Materials" of these special provisions. Flexible posts shall be made from a flexible white plastic which shall be resistant to impact, ultraviolet light, ozone, and hydrocarbons. Flexible posts shall resist stiffening with age and shall be free of burns, discoloration, contamination, and other objectionable marks or defects which affect appearance or serviceability.

Retroreflective sheeting for metal and flexible target plates shall be the retroreflective sheeting designated for channelizers, markers, and delineators conforming to the requirements in ASTM Designation: D 4956-95 and in conformance with the provisions in "Prequalified and Tested Signing and Delineation Materials" of these special provisions.

### **B. MEASUREMENT**

Object Markers (Type L-1 and Type K-1), Highway Post Markers, and Delineators (Class 1) shall be measured per each.

### **C. MEASUREMENT**

The contract unit price paid per each Object Marker (Type L-1 and Type K-1), Highway Post Markers, and Delineator (Class 1) shall include full compensation for furnishing all labor,

- C. Protect work and materials from damage due to construction operations by other contractors and trades and by vandalism. Maintain protection during installation and maintenance period.

#### SAMPLES AND TESTS

- A. The City Inspector reserves the right to take and analyze samples of materials for conformity to specifications at any time; the Contractor shall furnish samples upon request by City Inspector . Rejected materials shall be immediately removed from the site at the Contractor's expense. Cost of testing of materials not meeting specifications shall be paid by the Contractor.

#### GUARANTEE AND REPLACEMENT

- A. Guarantee: All plant material and other materials 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. Any plant found to be dead or not in a satisfactory or healthy condition due to faulty materials, workmanship, or improper maintenance as determined by the City Inspector, shall be replaced by the Contractor at his expense.
- B. Replacement: Any materials found to be dead, missing or not in a satisfactory or healthy condition during the maintenance period shall be replaced immediately. The Engineer shall be the sole judge as to the condition of material. Material to be replaced within the guarantee period shall be replaced by the Contractor within fifteen (15) days of written notification by the City Inspector. All replacement materials and installation shall comply to the Drawings and the Specifications.

#### REDUCTION CLAUSE

- A. Section 4-1.03B of the Standard Specifications shall not apply to Masonry measurement and bid items. The City reserves the right to increase or decrease the quantities in excess of 25% **and no additional compensation will be allowed therefor without adjustment to the contract unit price.**

#### PROPRIETARY CLAUSE

- A. Proprietary brand names are shown for illustrative purposes only. Equal products will be considered by the City and may be used by the contractor upon approval by the City.

## PART 2 - PRODUCTS

### GENERAL

- A. All materials shall be of standard, approved and first-grade quality and shall be in prime condition when installed and accepted. Any commercially processed or packaged material shall be delivered to the site in the original unopened container bearing the manufacturer's guaranteed analysis. The Contractor shall supply the Engineer with a sample of all supplied materials accompanied by analytical data from an approved laboratory source illustrating compliance of bearing the manufacturer's guaranteed analysis.

### PRODUCTS

#### A. Soil Amendment

1. Nitrogen Stabilized Shavings: 0.56 to 0.84% N based on dry weight for fir bark mulch, treated with relative form of nitrogen (NH<sub>3</sub>).
  - a. Particle Size: 95% - 100% passing 6.35 mm standard sieve.  
80% - 100% passing 2.33 mm standard sieve.
  - b. Salinity: The saturation extract conductivity shall not exceed 3.5 millimeters/centimeter at 25 degrees (25°) centigrade as determined by saturation extract method.
  - c. Iron Content: Minimum 0.08% dilute acid soluble Fe on dry weight basis.
  - d. Ash: 0 - 6.0% (dry weight)

#### B. Fertilizer

1. Planting Pit Fertilizer: Shall be Gro-Power Plus (bacteria included) with soil penetrant and shall consist of the following percents by weight:

5%	nitrogen
3%	phosphoric acid
1%	potash
50%	humus
15%	humic acid

2. Planting Tablets: Slow-release 21 gram tablets as manufactured by Agriform or approved equal, containing the following percentages of nutrients by weight:

20%	nitrogen
10%	phosphoric acid
5%	potash

C. Plant Material

1. The plant material indicated on the Drawings by the listed names shall conform to "Standard Plant Names", second edition, except for names not covered therein, the established customs of the nursery trade is followed. All plants shall be true to name, above one of each bundle or lot shall be tagged with the name and size of the plant, in accordance with the standards of practice recommended by the American Association of Nurserymen. All plant materials shall meet the specifications of Federal, State and County laws, requiring observation for plant diseases and insect infestations. Plants shall be symmetrical, typical for variety and species, sound, healthy, vigorous, free from plant diseases, insect pests or other eggs, and shall have healthy, normal root systems, while filling their containers, but not to the point of being root bound. Use only plant materials that are first class representative of the species and cultivars specifies and that conform to all State and local laws governing the sale, transportation and observation of plant materials. Plants shall have straight, single trunks, unless otherwise specified on the plans. Those specified to be multi-trunk shall have at least three (3) main leaders from the base. Any and all plants that have any encircling roots (not root bound) shall have root balls lightly slashed on a minimum of three (3) sides to stop encircling root growth. The height and spread of all plant materials shall be measured with branches in their normal position. Sizes of plants shall be as stated on the plant list, five and fifteen (5 & 15) gallon can container stock shall have been grown in that container not less than six (6) months, but shall not have been overgrown in the containers so as to have become root bound.
  
2. The size of the plants will correspond with that normally expected for species and variety of commercially available nursery stock or as specified in the Special Conditions or Drawings. The minimum acceptable size of all plants, measured before pruning with the branches in normal position, shall conform with the measurements, if any, specified on the Drawings in the list of plants to be furnished. Plants larger in size than specified may be used with the approval of the Engineer, but if the use of larger plants is approved, the ball of earth or spread of roots for each plant will be increased proportionally. Plant material shall conform to the following Specifications for container stock:

Refer to Plant Legend for species-(Plant symbol shown)

TREES

<u>SIZE</u>	<u>TYPE</u>	<u>SPECIES</u>	<u>HEIGHT</u>	<u>SPREAD</u>	<u>CALIPER</u>
15 Gal.	slow growing	T-1,T-2T-3,T-6.	7-8'	24-30"	¾-1"
15 Gal.	tall growing	T-5	8-10'	30-36"	1-1 ¼"

SHRUBS

<u>SIZE</u>	<u>TYPE</u>	<u>SPECIES</u>	<u>HEIGHT</u>	<u>SPREAD</u>
-------------	-------------	----------------	---------------	---------------

1 Gal. low growing	S-12,S-17,S-18	8-10"	6-8"
5 Gal. low growing	S-2,5,8,9,10,11,13,14,16	15-18"	15-18"
5 Gal. tall growing	S-1,3,4,6,7,15,	24-30"	15-18"

3. All plants not conforming to the requirements herein specified, shall be considered defective and such plants, whether in place or not, shall be marked as rejected and immediately removed from the site of the work and replaced with new plants at the Contractor's expense. The plants shall be of the species, variety, size and condition specified herein or as shown on the Drawings. Under no conditions will there be any substitution of plants or sizes listed on the plans, except with the expressed written approval of the Engineer.
4. At no time shall trees or plant materials be pruned, trimmed or topped prior to delivery and any alteration of their shape shall be conducted only with the approval and when in the presence of the Engineer and/or as noted on the Planting Specifications.
5. Nursery Grown and Collected Stock
  - a. Plant materials shall conform with the best edition of ANSI Z60.1- American Standard for Nursery Stock.
  - b. Grown under climatic conditions similar to those in locality of project.
  - c. Container-grown stock in vigorous, healthy condition, not root bound or with root system hardened off.
  - d. Use only liner stock plant material which is well established in removable containers or formed homogeneous soil sections.

#### D. Mulch

1. Wood chip mulch shall be chipped tree branches and tree trunks, particle range of between ~~¾ inches to 2 inches, free of chipped diseased trees~~ **2 inches and 4 inches. On site trees may be used, as well as off site trees including material produced by tree removal companies. Chips from diseased trees shall not be acceptable. Prior to installation, provide a representative sample to the Engineer for City Urban Forester review and approval, one from each source.** Shredded redwood bark is not acceptable. Colored or dyed wood products are not acceptable. **Walk on bark is not acceptable.**

#### E. Weed Control

1. Pre-planting: Use State of California allowed herbicides ~~Enide (Upjohn), Dymid (Elanco Products Co.), Treflan, Eptan, Surflan aquamaster~~ or approved equal.
2. Pre-Emergent: Use State of California allowed herbicides ~~Ronstar~~ **milestone** or approved equal.

#### F. Imported Top Soil

1. Imported topsoil material shall be of friable sandy-loam texture free of refuse, roots, heavy or stiff clays, rocks over 1" in diameter , 15% by volume rock between 1/8" and 1", sticks, other deleterious matter.
2. Imported topsoil acidity range (Ph) shall be between 6.5 to 7.5, containing a minimum of 5% and a maximum of 20% organic matter.

submittal by a color highlight, the manufacturer, model number and description of materials and equipment to be used, including but not limited to the following:

- a. Backflow Preventer
  - b. Satellite Controller/**metered electrical pedestal**
  - c. Flow Sensing Assembly
  - d. Isolation Valves
  - e. Remote Control Valves (Spray)
  - f. Remote Control Valves (Drip)
  - g. 2 Wire Decoders
  - h. Quick Coupler Valves
  - i. PVC Main Line
  - j. PVC Lateral Pipe
  - k. Conduit
  - l. PVC and HDPE Sleeves
  - m. PVC Solvent Cement and Primer
  - n. Hand Held Remotes
  - o. Lightning Arrestor
  - p. Pull Boxes
  - q. Swing Pipe Assembly
  - r. Emitters
  - s. Irrigation Head
  - t. 2 Wire Decoder Wire
  - u. Water Proof Wire Connectors
  - v. Valve Boxes
3. The contractor shall provide additional submittals as required for products not listed above but which are used on site. Approval of submittals is required before installation.
  4. Equipment or materials installed or furnished without prior approval of the City of Chico shall be rejected and the Contractor shall be required to remove such materials from the site at his own expense.
  5. Approval of any item, alternate or substitute indicates only that the product or products apparently meet the requirements of the Drawings and Specifications based on the information or samples submitted.

#### B. Record Drawings

1. Maintain on site, separate from documents used for construction, one complete set of Contract Documents as Record Documents or As Built Drawings. Keep documents current. Do not permanently cover work until information is recorded. These record drawing must be kept for all portions of the project that may be built differently that the plans define.

2. Include all Change Orders.
3. Where reference dimensions are required in the individual specification section, measure reference dimensions from at least two (2) reference points that will be easily identifiable in the finished work.
4. Prior to Contract Closeout, obtain from the City of Chico Project Manager a reproducible copy of the drawings. Using technical drafting pen, duplicate information contained on the Record Drawings maintained on site.
5. Label each sheet "Record Drawing". On the first sheet, the Contractor or resident superintendent shall execute the following statement:

Having reviewed this document and all attachments, I affirm that, to the best of my knowledge, the information presented here is true and accurate.

Signed \_\_\_\_\_ Date \_\_\_\_\_  
Position \_\_\_\_\_

6. The Contractor shall dimension from two (2) permanent points of reference, building corners, sidewalks, or road intersections, etc., the location of the following items:
  - a. Satellite Controller Assembly
  - b. Isolation Valves
  - c. Quick Coupler Valves
  - d. Remote Control Valves
  - e. Routing of irrigation pressure lines; dimension maximum 100' along routing and at turns in direction (Note Depth)
  - f. Routing of remote control wires
  - g. Main Line, Lateral and Electrical Sleeves at both ends (Note Depth)
  - h. Other related equipment as directed by the City of Chico.
7. On or before the date of the final observation, the Contractor shall deliver the corrected and completed reproducible as-built plan and digital media to the City of Chico. Delivery of these shall not relieve the Contractor of the responsibility of furnishing required information that may be omitted from the plans or digital media. Reproducible plans or digital media may be obtained for said use from the Engineer.

#### OBSERVATION SCHEDULE

Normal progress observations shall be requested by the Contractor from the City as per observations listed in specifications SECTION 20 – EROSION CONTROL AND HIGHWAY PLANTING.

#### G. PVC Threaded Nipples:

1. PVC Schedule 80 nipples shall be produced from extruded stock grade PVC compounds. No molded nipples shall be used.
  - a. PVC Schedule 80 nipples shall be made from NSF approved PVC compound conforming to ASTM D1784, Cell Classification 12454B

#### H. Remote Control Valves

1. Remote control valves shall be of the same type, manufacturer and sizes as indicated on the Drawings and/or as specified herein or approved by the Engineer.
2. Remote control valves shall have a glass-filled nylon construction with a flow control and manual bleed capability
3. Remote control valves shall be in the normally closed position unless otherwise noted.

#### I. Identification Tags

1. Backflow history tags shall be manufactured of a .010" tear-resistant polyester base with a write-on coating and will be 2-1/2" x 2-3/4 inch in size. Backflow history tags shall be white with black, fade-resistant printing.
2. Remote control valve tags shall be Christy Model ID-STD-Y 2, manufactured from polyurethane Behr Desopan, with a reinforced attachment hole and will be 2-1/4" x 2.3/4" in size. Valve identification tags shall be yellow in color with double sided stamped Satellite Controller Assembly designation and valve designation.

#### J. Irrigation Heads

1. All irrigation heads shall be of the same size, type and deliver the same rate of precipitation with the diameter (or radius) of throw, pressure, and discharge as shown on the plans and/or specified herein, or approved by the City of Chico.
2. Bubblers shall be pressure compensating.
3. All irrigation heads of similar functions shall be of common manufacture and shall be marked with the manufacturer's name and model identification in a position where they may be identified without being removed from the system.

#### K. Valve Boxes

1. Remote Control Valve Boxes for valve sizes 1-1/2" and 2" shall be green rectangular valve boxes 17-3/8" x 23-7/8" x 12", Carson model 1220-4 with a T-cover and Bolt-Down Loc Kit or approved equal.
  2. Remote Control Valves Boxes for valve sizes 1" shall be green rectangular valve boxes 17-3/8" x 23-7/8" x 12" Carson model 1220-4 with a T-cover and Bolt-Down Loc Kit or approved equal.
  3. Remote Control Valve Box Extensions shall be of the same manufacturer of the valve box or approved equal.
  4. Electrical Pull Boxes and Wire Splice Boxes shall be gray rectangular 14-1/2" x 19-1/2" x 12-1/4", Carson model 1419-4 with a gray T-cover and Bolt-Down Loc Kit (with bolt) or approved equal.
  5. All remote control valve boxes, quick coupler valve boxes, electrical pull boxes and wire splice boxes shall be located in shrub planters unless otherwise shown on the Drawings or specified by the City of Chico.
- L. 2 Wire Decoder Cable
1. 2 wire decoder cable to be Rainmaster TW-CAB-14.
- M. Flow Sensor Communication Wire
1. Flow Sensor Communication wire shall be Rainmaster EV-CAB-SEN
- N. Control Wire Conduit
1. Conduit shall be gray PVC Schedule 40
  2. Conduit pull tape shall be woven polyester flat tape with lubrication.
- O. Emitter
1. SALCO PRO-SPEC EMITTER: SLV-PST-2
- P. Swingpipe
1. Rainbird SWING PIPE: SPX-100 with Rainbird FITTINGS: SBE-050/ SBA-050/ SB-TEE (AS REQUIRED)
- Q. Lightning Arrestor
1. Rainmaster model TW-LA-1
- R. **Controller**
1. **Irrigation controllers shall be of the same type, manufacturer and sizes as indicated on the Drawings and/or as specified herein or approved by the City.**
  2. **Irrigation controllers shall be compatible with the City of Chico Central Control Software**

3. **Controllers shall have the capability of communicating with Central Control by means of internet connection.**
4. **Controllers shall have capability to communicate with master valve/ flow sensing assembly**
5. **Controllers shall be '2 wire' type**
6. **Irrigation Satellite Controller shall be enclosed in the stainless steel customer compartment of the metered electrical pedestal and shall be vandal-resistant with a pre-wired terminal interface board, earth ground rod, electrical junction box, on/off switch, duplex receptacle and a ground fault interrupt circuit.**
7. **Controller shall have a five (5) year manufacturer's warranty.**
8. **Metered Electrical Pedestal**
  - a. **Metered Electrical Pedestal shall be of the same type, manufacturer and sizes as indicated on the Drawings and/or as specified herein or approved by the City.**
  - b. **Metered Electrical Pedestal shall have a customer compartment to house irrigation satellite controller assembly.**

### **PART 3 - EXECUTION**

#### INSPECTION OF SITE

##### A. Site Conditions

1. All scaled dimensions are approximate. Prior to the start of work the Contractor shall meet with the Site Contractor to review and approve "turn over conditions" of the project area.
  - a. The Contractor shall be responsible to report discrepancies between Contract Documents and "take over conditions" to the City of Chico prior to start of work.
  - b. Discrepancies not reported shall become the Contractor's responsibility.
2. The Contractor shall check and verify all site water and electrical services and notify the City of Chico if site conditions have changed from those specified in the drawings.
3. The Contractor shall carefully check all grades to satisfy him that he may safely proceed before starting work on the irrigation system.
4. The contractor shall obtain permits and call for inspections as required by local codes and regulation. All installations shall conform to local codes and accepted construction practices.

#### PREPARATION

##### A. Physical Layout

1. Locations on Drawings are diagrammatic and approximate only and shall be changed and adjusted as necessary and as directed by City of Chico to meet existing conditions and obtain complete water coverage.
2. The Contractor shall install, repair, and/or extend the system as shown on the Drawings, and as necessary to carry out the intent of the Drawings and Specifications.

## INSTALLATION

### A. Trenching

1. Dig trenches straight and support pipe continuously on bottom of trench. Lay pipe to an even grade. Trenching excavation shall follow layout indicated on the Drawings and as noted.
2. Provide for a minimum of eighteen (18) inches cover for all pressure lines.
3. Provide for a minimum of twelve (12) inches cover for all non-pressure lines.
4. Provide for a minimum of eighteen (18) inches cover for all control wiring.
5. For all pressure lines, non-pressure lines and control wiring under auto traffic areas, refer to Engineer's plans.
6. Trench width shall be as needed to provide a minimum horizontal clearance between pipes and edges of trench.
7. No pipe shall be laid directly over another pipe.
8. See contract documents for vertical and horizontal pipe separation requirements.

### B. Backfilling

1. The trenches shall not be backfilled, except for center loading, until all required tests are performed. All debris shall be removed prior to placement of backfill. Trenches shall be carefully backfilled with the materials approved for backfilling. Backfill shall be mechanically compacted in six (6) inch lifts to a dry density equal to adjacent undisturbed soil in landscaped areas. Backfill shall conform to adjacent grades without dips, sunken areas, humps or other surface irregularities.
2. Backfill main lines with a minimum of 6" of sand below piping and 6" of sand above the piping.
3. Backfill lateral lines with approved backfill material or approved imported soil. Backfill material shall be free from organic materials, large clods of earth or rocks larger than one (1) inch diameter, trash, debris, rubbish, broken cement, asphalt material or other objectionable substances.
4. If settlement occurs and subsequent adjustments in pipe, valves, sprinklers heads, lawn or planting, or other construction are necessary, the Contractor will make all the required adjustments without cost to the City of Chico.

### C. Trenching and Backfilling Under Paving

1. Trenches located under areas where paving, asphaltic concrete or concrete shall be installed, shall be backfilled with sand, a layer six (6) inches below the pipe and six (6) inches above the pipe and compacted in layers to 95% compaction, using manual or mechanical tamping devices. All trenches shall be left flush with the adjoining grade.
2. Generally piping under existing walks is done by jacking, boring or hydraulic driving, but where any cutting or breaking of sidewalks and/or concrete is necessary, it shall be done and replaced by the Contractor as part of the Contract cost. Permission to cut or break sidewalks and/or concrete shall be obtained from the City of Chico in writing. No hydraulic driving shall be permitted under concrete paving.

#### D. Sleeving

1. Sleeving, where indicated on plans shall be installed for irrigation pressure main line pipe, non-pressure lateral pipe and electrical wiring that crosses pavement, walkways, paths, concrete, and other hardscape elements as needed whether shown on drawing or not.
2. Install irrigation and electrical sleeving as needed whether or not indicated on the Drawings. Contractor shall coordinate the installation of sleeving with the work of other trades. Sleeving shall extend a minimum of six (6) inches past hardscape.
3. Irrigation sleeving shall be placed on the Dead Horse Slough Bridge. Sleeving shall extend a minimum of twelve (12) inches below finished grade.
4. Sleeves shall be at least the minimum size depicted on but in all cases shall be sized so as to easily accommodate piping and/or control wiring as called for in the drawings leaving a minimum of 25% void space inside sleeve.
  - a. The contractor shall be responsible to verify sleeving sizes based on field verification of pipe and wire crossings.
5. Separate sleeves shall be provided for main line and lateral piping. **Separate conduits shall be provided for 120V wiring, 24V wiring, telephone cable, communication cable, and sensor cable and ~~grounding wire~~.**
6. Sleeves shall have both ends capped during installation to prevent dirt and debris from entering the sleeve.
7. Identify location of sleeve ends from two permanent points of reference and show on as-built plans.

## E. PVC Pipe

1. Routing of irrigation pipe as indicated on the Drawings is diagrammatic. Install lines and various assemblies to conform to the details shown on the drawings.
2. Install irrigation main line a minimum of five (5) feet from tree locations to avoid conflict with mature rooting systems.
3. Install no multiple assemblies on plastic lines. Provide each assembly with its own outlet.
4. Install all assemblies specified herein in accordance with respective detail. In absence of detail Drawings or specifications pertaining to specific items required to complete work, perform such work in accordance with best standard practice with prior approval of the City of Chico.
5. PVC pipe and fittings shall be thoroughly cleaned of dirt, dust and moisture before installation. Installation shall be as recommended by the pipe and fitting manufacturer.
6. PVC pipe shall be installed so that there will be a small amount of excess length in the pipe to compensate for contraction and expansion of the pipe. This shall be accomplished by "snaking" the pipe in the trench during installation.
7. Center load pipe with small amounts of backfill to prevent arching and slopping under pressure. Leave joints exposed for inspection during testing.
8. No water shall be permitted in the pipe until inspections have been completed and a period of at least 24 hours has elapsed for solvent weld setting and curing.
9. Plastic to metal connections shall be made with plastic male adapters and female metal adapter, hand tightened, plus one turn with a strap wrench. Teflon tape or approved equal shall be used on all threaded PVC to metal joints.
10. Solvent Weld Joint: Solvent weld pipe ends using solvent recommended by pipe manufacturer only.
11. Threaded joints shall be wrapped with Teflon tape as per manufacturer's instructions.
12. Flush all debris out of pipe prior to installing valves and heads.
13. In changing main line and lateral pipe depth, 45° elbows shall be used.
14. Install ~~a tracer wire~~ **detectable tape** twelve (12) inches below finish grade along the entire length of the main line run, including main line branches.

15. Trenching under and around existing trees shall be in accordance with the Tree Protection measures outlined in "Maintenance of Trees" of these special provisions.

F. Line Clearance

1. Irrigation lines shall have a minimum horizontal and vertical clearance of four (4) inches from each other. Parallel lines shall not be installed directly over one another.
2. Horizontal and vertical clearance of irrigation lines from lines from other trades shall be as per local codes and regulations.
3. Line clearances shall be inspected and approved by the City of Chico prior to backfilling trenches.

G. Connection to Telecommunications

1. Communication wire from controller to ATT box Point of Connection is to be POTS wiring. Communication is to be installed within conduit and is recommended to be installed by an electrical contractor.
2. Contractor is responsible to coordinate with the City of Chico to involve City of Chico ~~IT~~ Parks Department to obtain a telecommunication point of connection and for the connection of the controllers to phone. Contact ~~Earl Keene, Information Systems Analyst: 500-896-8400~~ City of Chico Urban Forester at: (530) 896-7802
3. Coordination of stubout from ATT and subsequent establishment of service to be done by the City of Chico. ~~Contact Earl Keene, Information Systems Analyst: 896-8400 for coordination.~~

H. Electric Remote Control Valves

1. Install as per details and manufacturer's specifications.
2. Install where shown on Drawings. Locate valve boxes twelve (12) inches from, and perpendicular to walk, curb, header board, etc., for easy access.
3. Install one (1) remote control valve per valve box. Provide extension units as required so as valve is protected by adjacent native soil. Install valve boxes in shrub planting areas whenever possible.
4. Provide eighteen (18) inch expansion loop at all electrical connections within control valve boxes.

5. Install a T.Christy I.D. tag on all valves identifying the Satellite Controller Assembly and station number of the valve. Attach the identification tag to the valve stem using a nylon cable tie.

I. Two Wire Decoder Cable

1. Install control wiring in the same trench and along the same route as the pressure supply line whenever possible.
2. Decoder Cable shall be installed in PVC Schedule 40 conduit.
3. Provide an eighteen (18) inch expansion curl in valve boxes, pull boxes and splice boxes.
4. Decoder Cable shall be field tested to verify continuity.
5. Two Wire Decoder Cable Splices allowed only on runs of more than 500 feet except where otherwise indicated on the drawings.
6. An expansion curl shall be provided within three (3) feet of each wire connection. Expansion curl shall be of eighteen (18) inches in length at each splice connection and at each remote control valve, so that in case of repair, the valve bonnet or splice may be brought to the surface without disconnection of the control wires.
7. All splices shall be made in either a valve box or a splice box.
8. All control wire splices shall be made with waterproof connectors that use a mechanical clamp.
9. Use one waterproof connector per splice.

J. Conduit

1. Install remote control wire in PVC Schedule 40 conduit.
2. The ends of the conduits, whether shop or field cut, shall be reamed to removed burrs and rough edges. Cuts shall be made square and true.
3. Install conduit couplers on pipe ends when in direct contact with remote control wires.
4. The ends of the conduit shall be capped until the pulling of wiring is started. Conduit shall be free of soil and debris.
5. Conduit bends, except factory bends, shall have a radii of not less than six times the inside diameter of the conduit.
6. Install pull boxes at changes in direction.
7. Install pull boxes every 150' along the conduit route. Remote control valve boxes, pull boxes used for changes in direction and splice boxes may be used to satisfy this requirement.
8. Install pull tape in conduit for use in pulling subsequent wires..

#### K. Valve Boxes

1. Install valve boxes in shrub planter areas as indicated.
2. Install valve boxes as per details unless otherwise noted on plans.
3. Do not install more than three (3) valve boxes in any one single group.

#### L. Electrical Pull Boxes

1. Install electrical pull boxes at wire splice locations and as per details.
2. Install pull boxes at changes in direction and depth.
3. Install pull boxes every 150' along the conduit route.

#### M. Irrigation Heads

1. Install irrigation heads as detailed on the Drawings. Irrigation heads to be installed in this work shall be as per approved submittals.
2. Irrigation heads shall be installed plumb and vertical to finish grade unless otherwise noted on plan.
3. Replace all clogged nozzles with new nozzles.
4. Spacing of heads shall not exceed the maximum indicated on the Drawings. In no case shall the spacing exceed 95% of the maximum radius stated by the manufacturer.
5. Adjust radii and arch to obtain head to head coverage and to prevent over spray onto hardscape, buildings, signs, etc.
6. Swing joints shall be in accordance with the details and approved submittals.
7. Swing joints for heads shall be the same size as the inlet opening of the sprinkler body.
8. Add additional heads as needed to provide head to head coverage with no additional cost to the Engineer.

#### N. Emitters

1. Install per plans

#### O. Swing pipe

1. Install per plans
- P. Lightning Arrestor
1. Install per plans
- Q. Controller**
- 1. Install controller and metered electrical pedestal per plans**

#### SYSTEM ADJUSTMENT

- A. The Contractor shall flush and adjust all irrigation heads for optimum performance and to prevent over-spray onto walks, windows, roadways, and buildings.
- B. If it is determined that adjustments in the irrigation equipment shall provide proper and more adequate coverage, the Contractor shall make such adjustments after written approval by the City of Chico. Adjustments shall include changes in head locations, nozzle size and degrees of arc as required without additional contract costs.
- C. If it is determined that any irrigation equipment is improperly installed, the contractor shall reinstall the equipment to conform to contract documents.
- D. All irrigation heads shall be set perpendicular to finished grades unless otherwise designated on the Drawings.

#### TESTING OF THE IRRIGATION SYSTEM

- A. The Contractor shall request the presence of the City of Chico at least two (2) working days in advance of observation.
- B. Open Trench pipe observation.
- C. Emitter Test
  1. The initial emitter function test shall be performed prior to plant material installation.
  2. Perform a emitter function test in the presence of the City of Chico to determine if the water coverage for plant materials is complete and adequate.
  3. Furnish all materials and perform all work required to correct any inadequacies of coverage due to deviations from the Drawings or where the system has been willfully installed as indicated on the Drawings, when it is obviously inadequate without bringing this to the attention of the City of Chico.

#### WATER AUDIT

1. An audit will be performed per AB 1881 the State water conservation ordinance.

## COORDINATION

Coordinate with all other trades whose work relates to unit masonry installation for placing all required reinforcements, fasteners, anchor, accessories, etc.

## SUBMITTALS

- A. Submit for Engineer's written approval two (2) representative samples of each unit specified.
- B. Submit manufacturer's certificate that units meet or exceed material specifications.
- C. Submit 6 (six) copies of Manufacturer's Specifications for each unit specified.

## REDUCTION CLAUSE

- B. Section 4-1.03B of the Standard Specifications shall not apply to Masonry measurement and bid items. The City reserves the right to increase or decrease the quantities in excess of 25% ~~and no additional compensation will be allowed therefor~~ without adjustment to the contract unit price.

## PROPRIETARY CLAUSE

- A. Proprietary brand names are shown for illustrative purposes only. Equal products will be considered by the City and may be used by the contractor upon approval by the City.

## PRODUCTS

### MASONRY MORTAR

- A. ASTM C-270, Type M, consisting of one (1) part cement and three (3) parts sand with quarter (1/4) part lime.
- B. LATICRETE 3701 Grout and Mortar Admix.
- C. Mortar compressive strength at 28 days shall be 3000 PSI.

### RAISED PLANTER WALL CAPS

- A. Per plans and manufacturer's specifications
- B. LATICRETE 3701 Grout and Mortar Admix.
- C. Grout compressive strength at 28 days shall be 3000 PSI.

## CONCRETE:

1. Section 90 – Portland Cement Concrete of the Standard Specifications and these Special Provisions

### **PART 3 - EXECUTION**

#### GENERAL

- A. Supply anchor devices as indicated on the Drawings and as required to install materials as specified in other sections of work.
- B. Cut units where required with a power saw or order units pre-cut from manufacturer.
- C. Construct masonry construction to the full thickness indicated on the Drawings, using unit sizes as indicated.
- D. Establish lines, levels, and coursing. Protect from disturbances.

#### COURSING

- A. Install units in pattern as indicated on the Drawings.
- C. Maintain unit courses to uniform width. Make vertical and horizontal joints equal and of uniform thickness.

#### PLACING AND BONDING

- A. Lay units in full bed of mortar properly jointed with other work.
- B. Install full mortar coverage of vertical and horizontal face of joints. Maintain uniform joint width of 3/8" - 1/2", depending on nominal unit sizes. Cut joints flush and tool slightly concave.
- C. Fully bond intersections and external and internal corners.
- D. Do not shift or tap units after mortar has taken initial set. Where adjustment must be made remove mortar and replace.
- E. Remove excess mortar.

#### RAISED PLANTER WALL CAPS

- A. Install raised planter wall Caps, or approved equal as per Manufacturer's Specifications.

- B. Provide complete forms of such strength and construction as to prevent any spread, shifting, or settling when concrete is deposited, and tight enough to avoid any leakage or washing out of cement mortar.
- F. Submit to project Landscape Architect a 24 inch square mock up of raised planter wall with colored concrete and form liner finish for approval. Additional samples may be required if sample does not adequately conform to requirements

#### JOB CONDITIONS

- A. Temperature: All concrete design mixes and methods of protecting concrete shall be resubmitted to the City of Chico for review when the following temperatures are anticipated:
  - 1. The temperature is below 40° F, or when conditions indicate that the temperature will fall below 40° F within seventy-two (72) hours.
  - 2. The placing temperature of the concrete is, or anticipated to be, above 80° F.

#### COORDINATION

- A. Secure all pipe sleeves, anchors and bolts, including those for angle frames, inserts, ties and other materials in connection with concrete construction, in position before concrete is placed.
- B. Make cutting and/or patching made necessary by failure or delay in complying with these requirements at no cost to the Owner.

#### FORM CONSTRUCTION TOLERANCES

- A. Set form to required grades and lines, rigidly braced and secured. Install sufficient quantity of forms to allow continuous progress of work so that forms can remain in place at least twenty-four (24) hours after concrete placement.
- B. Check completed form work for grade and alignment to following tolerances:
  - 1. Top of forms not more than one-eighth (1/8) inch in ten (10) feet vertical elevation.
  - 2. Vertical face on longitudinal axis not more than one-fourth (1/4) inch in ten (10) feet horizontal width.

#### REDUCTION CLAUSE

- C. Section 4-1.03B of the Standard Specifications shall not apply to Masonry measurement and bid items. The City reserves the right to increase or decrease the quantities in excess of 25% ~~and no additional compensation will be allowed therefor~~ without adjustment to the contract unit price.

## PROPRIETARY CLAUSE

- A. Proprietary brand names are shown for illustrative purposes only. Equal products will be considered by the City and may be used by the contractor upon approval by the City.

## PART 2 PRODUCTS

### CONCRETE REINFORCEMENT

- 1. Section 52 – Reinforcement of the Standard Specifications and these Special Provisions.
- 2. Reinforcing Bars: Deformed billeted steel bars, ASTM A-615, grade 40 or grade 60.

- B. Tie Wires: Black annealed, ASTM A-82 minimum 16 gauge.

### CONCRETE FORM MATERIALS

- A. Forms for exposed Finish Concrete: Form concrete surfaces which will be unexposed with plywood, lumber, metal or other acceptable material. Provide lumber dressed on at least two (2) edges and on one side for tight fit that is fir or pine, No. 2 common or better.
- B. Chamfer Exposed Corners and Edges: Chamfer exposed corners and edges as indicated on Drawings using wood chamfer strips fabricated to produce uniform smooth lines and tight edge joints.
- C. Radius Exposed Corners: Apply concrete radius tooled edges to exposed concrete corners as dimensioned and sized on Drawings.
- D. Rough Hardware: Pipe, conduit, bolts, anchors, etc., as indicated on Drawings or needed shall be furnished and set.
- E. Chamfer Horizontal Reveal: Chamfer concrete wall horizontal reveals, as indicated on Drawings, using wood chamfer strips fabricated to produce uniform smooth lines and tight edge joints.
- F. Form liners: as indicated on plans

### CONCRETE

- 1. Section 90 – Portland Cement Concrete of the Standard Specifications and these Special Provisions

**ENCROACHMENT PERMIT**

TR-0120 (REV 6/200)

Permit No. <b>0311-NMC1011</b>	
Dist/Co/Rte/PM <b>03-BUT-32-10.3/11.3</b>	
Date <b>December 22, 2011</b>	
Fee Paid <b>\$ Exempt</b>	Deposit <b>\$ N/A</b>
Performance Bond Amount (1) <b>\$ N/A</b>	Payment Bond Amount (2) <b>\$ N/A</b>
Bond Company	
Bond Number (1)	Bond Number (2)

In compliance with (Check one):

- Your application of December 22, 2011
- Utility Notice No. \_\_\_\_\_ of \_\_\_\_\_
- Agreement No. \_\_\_\_\_ of \_\_\_\_\_
- R/W Contract No. \_\_\_\_\_ of \_\_\_\_\_

TO:

City of Chico  
P.O. Box 3420  
Chico, CA 95927  
Attn: Bob Greenlaw  
(530)879-6930

Ref No. Caltrans EA: 031E490

, PERMITTEE

and subject to the following, PERMISSION IS HEREBY GRANTED to:

Widen State Highway 32 from Two (2) lanes to Four (4) lanes from Park & Ride Lot to El Monte Ave in the city of Chico as per attached approved plans and specifications. Work includes but is not limited to Drainage Improvements, Steel-Backed Timber Guardrail, landscape planting, and precast soundwall.

Notwithstanding General Provision #6, work hours and lane closure durations are approved as provided in the attached specifications.

Notwithstanding General Provision #4, your contractor must obtain a Permit (Double Permit) to perform the work authorized. No fee/deposit is required at the time of application for the Double Permit.

-----Continue on Page 2-----

THIS PERMIT IS NOT A PROPERTY RIGHT AND DOES NOT TRANSFER WITH THE PROPERTY TO A NEW OWNER.

The following attachments are also included as part of this permit (Check applicable):

- Yes     No    General Provisions
- Yes     No    Utility Maintenance Provisions
- Yes     No    Special Provisions **TRAFFIC CONTROL**
- Yes     No    A Cal-OSHA permit, if required: Permit No. \_\_\_\_\_
- Yes     No    As-Built Plans Submittal Route Slip for Locally Advertised Projects
- Yes     No    Storm Water Pollution Protection Plan

In addition to fee, the permittee will be billed actual costs for:

- Yes     No    Review
- Yes     No    Inspection
- Yes     No    Field work

(If any Caltrans effort expended)

Yes     No    The information in the environmental documentation has been reviewed and considered prior to approval of this permit.

This permit is void unless the work is completed before December 31, 2012

This permit is to be strictly construed and no other work other than specifically mentioned is hereby authorized. No project work shall be commenced until all other necessary permits and environmental clearances have been obtained

Jim Rogers, RE, D-3 Chico  
(530) 895-5245 Office, (530)521-4540 Cell  
cc: Stan Richins, Sutter/Sierra Maint. Region  
Andy Poliquin, Permit Inspector  
Rebecca Mowry, Project Manager

APPROVED:

JODY JONES, District Director

BY:

*Bruce D. Capaul*  
BRUCE D. CAPAUL, Chief-Encroachment Permits Branch

**ADA Notice**

For individuals with sensory disabilities, this document is available in alternate formats. For information call (916) 653-3657 or TDD (916) 654-3880 or write Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.

PERMISSIONS Conditions Continued:

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Permittee shall contact Resident Engineer Jim Rogers at Cell (530)521-4540, SEVEN (7) working days prior to commencing work, to arrange a pre-job meeting. A 24-hour notification before restarting work shall be strictly adhered to. All work shall be conducted and completed to the satisfaction of Caltrans representative. Immediately following completion of the work permitted herein, the Permittee shall fill out and mail the Notice of Completion attached to this Permit.

STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION  
ENCROACHMENT PERMIT GENERAL PROVISIONS  
TR-0045 (REV. 05/2007)

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1. **AUTHORITY:** The Department's authority to issue encroachment permits is provided under, Div. 1, Chpt. 3, Art. 1, Sect. 660 to 734 of the Streets and Highways Code.
2. **REVOCATION:** Encroachment permits are revocable on five days notice unless otherwise stated on the permit and except as provided by law for public corporations, franchise holders, and utilities. These General Provisions and the Encroachment Permit Utility Provisions are subject to modification or abrogation at any time. Permittees' joint use agreements, franchise rights, reserved rights or any other agreements for operating purposes in State highway right of way are exceptions to this revocation.
3. **DENIAL FOR NONPAYMENT OF FEES:** Failure to pay permit fees when due can result in rejection of future applications and denial of permits.
4. **ASSIGNMENT:** No party other than the permittee or permittee's authorized agent is allowed to work under this permit.
5. **ACCEPTANCE OF PROVISIONS:** Permittee understands and agrees to accept these General Provisions and all attachments to this permit, for any work to be performed under this permit.
6. **BEGINNING OF WORK:** When traffic is not impacted (see Number 35), the permittee shall notify the Department's representative, two (2) days before the intent to start permitted work. Permittee shall notify the Department's Representative if the work is to be interrupted for a period of five (5) days or more, unless otherwise agreed upon. All work shall be performed on weekdays during regular work hours, excluding holidays, unless otherwise specified in this permit.
7. **STANDARDS OF CONSTRUCTION:** All work performed within highway right of way shall conform to recognized construction standards and current Department Standard Specifications, Department Standard Plans High and Low Risk Facility Specifications, and Utility Special Provisions. Where reference is made to "Contractor and Engineer," these are amended to be read as "Permittee and Department representative."
8. **PLAN CHANGES:** Changes to plans, specifications, and permit provisions are not allowed without prior approval from the State representative.
9. **INSPECTION AND APPROVAL:** All work is subject to monitoring and inspection. Upon completion of work, permittee shall request a final inspection for acceptance and approval by the Department. The local agency permittee shall not give final construction approval to its contractor until final acceptance and approval by the Department is obtained.
10. **PERMIT AT WORKSITE:** Permittee shall keep the permit package or a copy thereof, at the work site and show it upon request to any Department representative or law enforcement officer. If the permit package is not kept and made available at the work site, the work shall be suspended.
11. **CONFLICTING ENCROACHMENTS:** Permittee shall yield start of work to ongoing, prior authorized, work adjacent to or within the limits of the project site. When existing encroachments conflict with new work, the permittee shall bear all cost for rearrangements, (e.g., relocation, alteration, removal, etc.).
12. **PERMITS FROM OTHER AGENCIES:** This permit is invalidated if the permittee has not obtained all permits necessary and required by law, from the Public Utilities Commission of the State of California (PUC), California Occupational Safety and Health Administration (Cal-OSHA), or any other public agency having jurisdiction.
13. **PEDESTRIAN AND BICYCLIST SAFETY:** A safe minimum passageway of 4' shall be maintained through the work area at existing pedestrian or bicycle facilities. At no time shall pedestrians be diverted onto a portion of the street used for vehicular traffic. At locations where safe alternate passageways cannot be provided, appropriate signs and barricades shall be installed at the limits of construction and in advance of the limits of construction at the nearest crosswalk or intersection to detour pedestrians to facilities across the street. Attention is directed to Section 7-1.09 Public Safety of the Department Standard Specifications.
14. **PUBLIC TRAFFIC CONTROL:** As required by law, the permittee shall provide traffic control protection warning signs, lights, safety devices, etc., and take all other measures necessary for traveling public's safety. While providing traffic control, the needs and control of all road users [motorists, bicyclists and pedestrians, including persons with disabilities in accordance with the Americans with Disabilities Act of 1990 (ADA)] shall be an essential part of the work activity.  
  
Day and night time lane closures shall comply with the California Manual on Uniform Traffic Control Devices (Part 6, Temporary Traffic Control), Standard Plans, and Standard Specifications for traffic control systems. These General Provisions are not intended to impose upon the permittee, by third parties, any duty or standard of care, greater than or different from, as required by law.
15. **MINIMUM INTERFERENCE WITH TRAFFIC:** Permittee shall plan and conduct work so as to create the least possible inconvenience to the traveling public; traffic shall not be unreasonably delayed. On conventional highways, permittee shall place properly attired flagger(s) to stop or warn the traveling public in compliance with the California Manual on Uniform Traffic Control Devices (Chapter 6E, Flagger Control).
16. **STORAGE OF EQUIPMENT AND MATERIALS:** The storage of equipment or materials **is not** allowed within State highway right-of-way, **unless specified** within the Special Provisions of this specific encroachment permit. If Encroachment Permit Special Provisions allow for the storage of equipment or materials within the State right of way, the equipment and material storage shall comply with Standard Specifications, Standard Plans, Special Provisions, and the Highway Design Manual. The clear recovery zone widths must be followed and are the minimum desirable for the type of facility indicated below: freeways and expressways - 30', conventional highways (no curbs) - 20', conventional highways (with curbs) - 1.5'. If a fixed object cannot be eliminated, moved outside the clear recovery zone, or modified to be made yielding, it should be shielded by a guardrail or a crash cushion.
17. **CARE OF DRAINAGE:** Permittee shall provide alternate drainage for any work interfering with an existing drainage facility in compliance with the Standard Specifications, Standard Plans and/or as directed by the Department's representative.
18. **RESTORATION AND REPAIRS IN RIGHT OF WAY:** Permittee is responsible for restoration and repair of State highway right of way resulting from permitted work (State Streets and Highways Code, Sections 670 et. seq.).

19. **RIGHT OF WAY CLEAN UP:** Upon completion of work, permittee shall remove and dispose of all scraps, brush, timber, materials, etc. off the right of way. The aesthetics of the highway shall be as it was before work started.
20. **COST OF WORK:** Unless stated in the permit, or a separate written agreement, the permittee shall bear all costs incurred for work within the State right of way and waives all claims for indemnification or contribution from the State.
21. **ACTUAL COST BILLING:** When specified in the permit, the Department will bill the permittee actual costs at the currently set hourly rate for encroachment permits.
22. **AS-BUILT PLANS:** When required, permittee shall submit one (1) set of folded as-built plans within thirty (30) days after completion and approval of work in compliance with requirements listed as follows:
1. Upon completion of the work provided herein, the permittee shall send one vellum or paper set of As-Built plans, to the State representative. Mylar or paper sepia plans are not acceptable.
  2. All changes in the work will be shown on the plans, as issued with the permit, including changes approved by Encroachment Permit Rider.
  3. The plans are to be stamped or otherwise noted AS-BUILT by the permittee's representative who was responsible for overseeing the work. Any original plan that was approved with a State stamp, or Caltrans representative signature, shall be used for producing the As-Built plans.
  4. If As-Built plans include signing or striping, the dates of signing or striping removal, relocation, or installation shall be shown on the plans when required as a condition of the permit. When the construction plans show signing and striping for staged construction on separate sheets, the sheet for each stage shall show the removal, relocation or installation dates of the appropriate staged striping and signing.
  5. As-Built plans shall contain the Permit Number, County, Route, and Post Mile on each sheet.
  6. Disclaimer statement of any kind that differ from the obligations and protections provided by Sections 6735 through 6735.6 of the California Business and Professions Code, shall not be included on the As-Built plans. Such statements constitute non-compliance with Encroachment Permit requirements, and may result in the Department of Transportation retaining Performance Bonds or deposits until proper plans are submitted. Failure to comply may also result in denial of future permits, or a provision requiring a public agency to supply additional bonding.
23. **PERMITS FOR RECORD PURPOSES ONLY:** When work in the right of way is within an area under a Joint Use Agreement (JUA) or a Consent to Common Use Agreement (CCUA), a fee exempt permit is issued to the permittee for the purpose of providing a notice and record of work. The Permittee's prior rights shall be preserved without the intention of creating new or different rights or obligations. "Notice and Record Purposes Only" shall be stamped across the face of the permit.
24. **BONDING:** The permittee shall file bond(s), in advance, in the amount set by the Department. Failure to maintain bond(s) in full force and effect will result in the Department stopping of all work and revoking permit(s). Bonds are not required of public corporations or privately owned utilities, unless permittee failed to comply with the provision and conditions under a prior permit. The surety company is responsible for any latent defects as provided in California Code of Civil Procedures, Section 337.15. Local agency permittee shall comply with requirements established as follows: In recognition that project construction work done on State property will not be directly funded and paid by State, for the purpose of protecting stop notice claimants and the interests of State relative to successful project completion, the local agency permittee agrees to require the construction contractor furnish both a payment and performance bond in the local agency's name with both bonds complying with the requirements set forth in Section 3-1.02 of State's current Standard Specifications before performing any project construction work. The local agency permittee shall defend, indemnify, and hold harmless the State, its officers and employees from all project construction related claims by contractors and all stop notice or mechanic's lien claimants. The local agency also agrees to remedy, in a timely manner and to State's satisfaction, any latent defects occurring as a result of the project construction work.
25. **FUTURE MOVING OF INSTALLATIONS:** Permittee understands and agrees to relocate a permitted installation upon notice by the Department. Unless under prior property right or agreement, the permittee shall comply with said notice at his sole expense.
26. **ARCHAEOLOGICAL/HISTORICAL:** If any archaeological or historical resources are revealed in the work vicinity, the permittee shall immediately stop work, notify the Department's representative, retain a qualified archaeologist who shall evaluate the site, and make recommendations to the Department representative regarding the continuance of work.
27. **PREVAILING WAGES:** Work performed by or under a permit may require permittee's contractors and subcontractors to pay appropriate prevailing wages as set by the Department of Industrial Relations. Inquiries or requests for interpretations relative to enforcement of prevailing wage requirements are directed to State of California Department of Industrial Relations, 525 Golden Gate Avenue, San Francisco, California 94102.
28. **RESPONSIBILITY FOR DAMAGE:** The State of California and all officers and employees thereof, including but not limited to the Director of Transportation and the Deputy Director, shall not be answerable or accountable in any manner for injury to or death of any person, including but not limited to the permittee, persons employed by the permittee, persons acting in behalf of the permittee, or for damage to property from any cause. The permittee shall be responsible for any liability imposed by law and for injuries to or death of any person, including but not limited to the permittee, persons employed by the permittee, persons acting in behalf of the permittee, or for damage to property arising out of work, or other activity permitted and done by the permittee under a permit, or arising out of the failure on the permittee's part to perform his obligations under any permit in respect to maintenance or any other obligations, or resulting from defects or obstructions, or from any cause whatsoever during the progress of the work, or other activity or at any subsequent time, work or other activity is being performed under the obligations provided by and contemplated by the permit.
- The permittee shall indemnify and save harmless the State of California, all officers, employees, and State's contractors, thereof, including but not limited to the Director of Transportation and the Deputy Director, from all claims, suits or actions of every name, kind and description brought for or on account of injuries to or death of any person, including but not limited to the permittee, persons employed by the permittee, persons acting in behalf of the permittee and the public, or damage to property resulting from the performance of work or other activity under the permit, or arising out of the failure on the permittee's part to perform his obligations under any permit in respect to maintenance or any other obligations, or resulting from defects or obstructions, or from any cause whatsoever during the progress of the work, or other activity or at any subsequent time, work or other activity is being performed under the obligations provided by and contemplated by the permit, except as otherwise provided by statute.

The duty of the permittee to indemnify and save harmless includes the duties to defend as set forth in Section 2778 of the Civil Code. The permittee waives any and all rights to any type of expressed or implied indemnity against the State, its officers, employees, and State contractors. It is the intent of the parties that the permittee will indemnify and hold harmless the State, its officers, employees, and State's contractors, from any and all claims, suits or actions as set forth above regardless of the existence or degree of fault or negligence, whether active or passive, primary or secondary, on the part of the State, the permittee, persons employed by the permittee, or acting on behalf of the permittee.

For the purpose of this section, "State's contractors" shall include contractors and their subcontractors under contract to the State of California performing work within the limits of this permit.

29. **NO PRECEDENT ESTABLISHED:** This permit is issued with the understanding that it does not establish a precedent.

30. **FEDERAL CIVIL RIGHTS REQUIREMENTS FOR PUBLIC ACCOMMODATION:**

A. The permittee, for himself, his personal representative, successors in interest, and assigns as part of the consideration hereof, does hereby covenant and agree that:

1. No person on the grounds of race, color, or national origin shall be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities.

2. That in connection with the construction of any improvements on said lands and the furnishings of services thereon, no discrimination shall be practiced in the selection and retention of first-tier subcontractors in the selection of second-tier subcontractors.

3. That such discrimination shall not be practiced against the public in their access to and use of the facilities and services provided for public accommodations (such as eating, sleeping, rest, recreation), and operation on, over, or under the space of the right of way.

4. That the permittee shall use the premises in compliance with all other requirements imposed pursuant to Title 15, Code of Federal Regulations, Commerce and Foreign Trade, Subtitle A. Office of the Secretary of Commerce, Part 8 (15 C.F.R. Part 8) and as said Regulations may be amended.

5. That in the event of breach of any of the above nondiscrimination covenants, the State shall have the right to terminate the permit and to re-enter and repossess said land and the land and the facilities thereon, and hold the same as if said permit had never been made or issued.

31. **MAINTENANCE OF HIGHWAYS:** The permittee agrees, by acceptance of a permit, to properly maintain any encroachment. This assurance requires the permittee to provide inspection and repair any damage, at permittee's expense, to State facilities resulting from the encroachment.

32. **SPECIAL EVENTS:** In accordance with subdivision (a) of Streets and Highways Code Section 682.5, the Department of Transportation shall not be responsible for the conduct or operation of the permitted activity, and the applicant agrees to defend, indemnify, and hold harmless the State and the city or county against any and all claims arising out of any activity for which the permit is issued.

The permittee understands and agrees to comply with the obligations of Titles II and III of the Americans with Disabilities Act of 1990 in the conduct of the event, and further agrees to indemnify and save harmless the State of California, all officers and employees thereof, including but not limited to the Director of Transportation, from any claims or liability arising out of or by virtue of said Act.

33. **PRIVATE USE OF RIGHT OF WAY:** Highway right of way shall not be used for private purposes without compensation to the State.

The gifting of public property use and therefore public funds is prohibited under the California Constitution, Article 16.

34. **FIELD WORK REIMBURSEMENT:** Permittee shall reimburse State for field work performed on permittee's behalf to correct or remedy hazards or damaged facilities, or clear debris not attended to by the permittee.

35. **NOTIFICATION OF DEPARTMENT AND TMC:** The permittee shall notify the Department's representative and the Transportation Management Center (TMC) at least 7 days before initiating a lane closure or conducting an activity that may cause a traffic impact. A confirmation notification should occur 3 days before closure or other potential traffic impacts. In emergency situations when the corrective work or the emergency itself may affect traffic, TMC and the Department's representative shall be notified as soon as possible.

36. **SUSPENSION OF TRAFFIC CONTROL OPERATION:** The permittee, upon notification by the Department's representative, shall immediately suspend all lane closure operations and any operation that impedes the flow of traffic. All costs associated with this suspension shall be borne by the permittee.

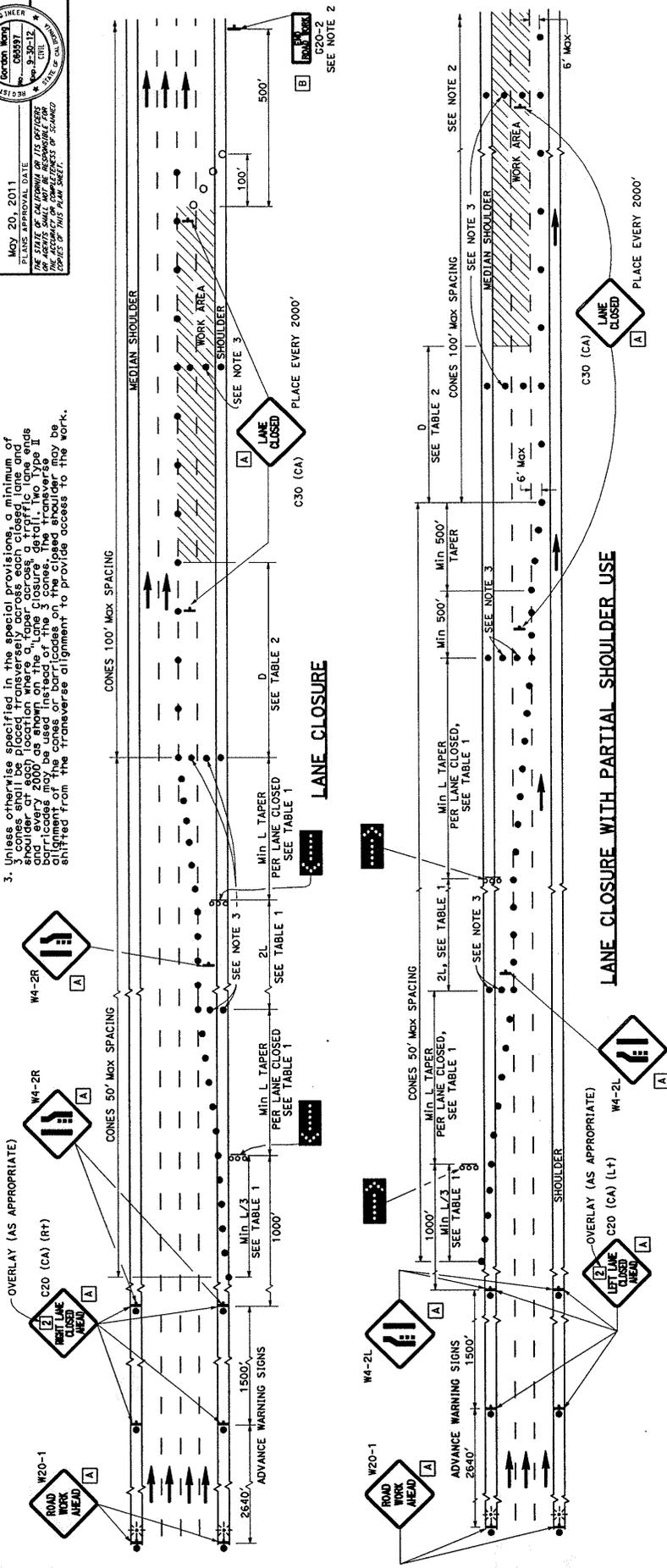
37. **UNDERGROUND SERVICE ALERT (USA) NOTIFICATION:** Any excavation requires compliance with the provisions of Government Code Section 4216 et. seq., including, but not limited to notice to a regional notification center, such as Underground Service Alert (USA). The permittee shall provide notification at least 48 hours before performing any excavation work within the right of way.

DIST COUNTY ROUTE SHEET TOTAL PROJECT NO. SHEETS

REGISTERED CIVIL ENGINEER  
 May 20, 2011  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS  
 IN THE ACCURACY OF COMPLETENESS OF DRAWING  
 COPIES OF THIS PLAN SHEET.

PROFESSIONAL ENGINEER  
 Gordon Mery  
 No. 00597  
 Exp. 3-31-12  
 STATE OF CALIFORNIA

- NOTES:**
- California codes are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.
  - A C2D-2 "END ROAD WORK" sign, as appropriate, shall be placed at the ends of work area is obvious or ends within a larger project's limits.
  - Unless otherwise specified in the special provisions, a minimum of 3 cones shall be placed across the road to close a lane and every 2000' as shown on the "Lane Closure" detail. Two Type II barricades may be used instead of the 3 cones. The transverse alignment of the cones and barricades may be shifted from the transverse alignment to provide access to the work.



**TABLE 2**

APPROACH SPEED	Min D	DOWNGRADE Min D *		
		-3%	-6%	-9%
mph	ft	ft	ft	ft
55	495	520	553	593
60	570	598	638	686
65	645	682	728	785
70	730	771	825	891

\* USE ON SUSTAINED DOWNGRADE STEEPER THAN -3 PERCENT AND LONGER THAN 1 MILE.

**TABLE 1**

APPROACH SPEED	Min L	Min 2L	Min L/2	Min L/3	Min L/3
mph	ft	ft	ft	ft	ft
55	660	1320	330	220	220
60	720	1440	360	240	240
65	780	1560	390	260	260
70	840	1680	420	280	280

\* USE L FOR LANE WIDTHS LESS THAN OR EQUAL TO 12'.

- LEGEND**
- TRAFFIC CONE
  - TRAFFIC CONE (OPTIONAL TAPER)
  - ⌋ TEMPORARY SIGN
  - ⌋ FLASHING ARROW SIGN (FAS)
  - ⌋ FAS SUPPORT OR TRAILER
  - DIRECTION OF TRAVEL
  - ⌋ PORTABLE FLASHING BEACON
- SIGN PANEL SIZE (MIN)**
- A 48" x 48"
  - B 48" x 24"

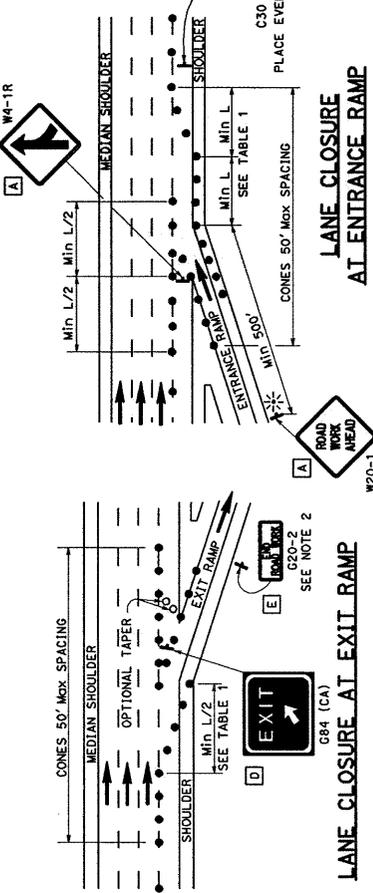
STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

**TRAFFIC CONTROL SYSTEM  
 FOR LANE CLOSURE ON  
 FREEWAYS AND EXPRESSWAYS**

NO SCALE

**T10**

DISTRICT COUNTY ROUTE TOTAL SHEETS SHEET NO. TOTAL SHEETS  
 REGISTERED CIVIL ENGINEER  
 May 20, 2011  
 APPROVAL DATE  
 THIS PLAN IS FOR THE USE OF THE CONTRACTOR AND SHALL BE THE RESPONSIBILITY FOR THE ACCURACY OF THIS PLAN SHEET.  
 REGISTERED PROFESSIONAL ENGINEER  
 Gordon M. ...  
 No. C63387  
 Exp. 3-30-12  
 STATE OF CALIFORNIA



**TABLE 1**

APPROACH SPEED	Min	2L	Min	Min	Min
	L	L/2	L/2	L/3	L/3
55 mph	660	330	330	220	220
60 mph	720	360	360	240	240
65 mph	780	390	390	260	260
70 mph	840	420	420	280	280

\* USE L FOR LANE WIDTHS LESS THAN OR EQUAL TO 12'

**TABLE 2**

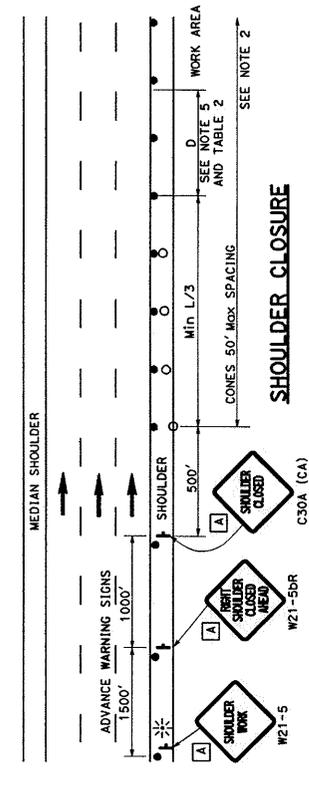
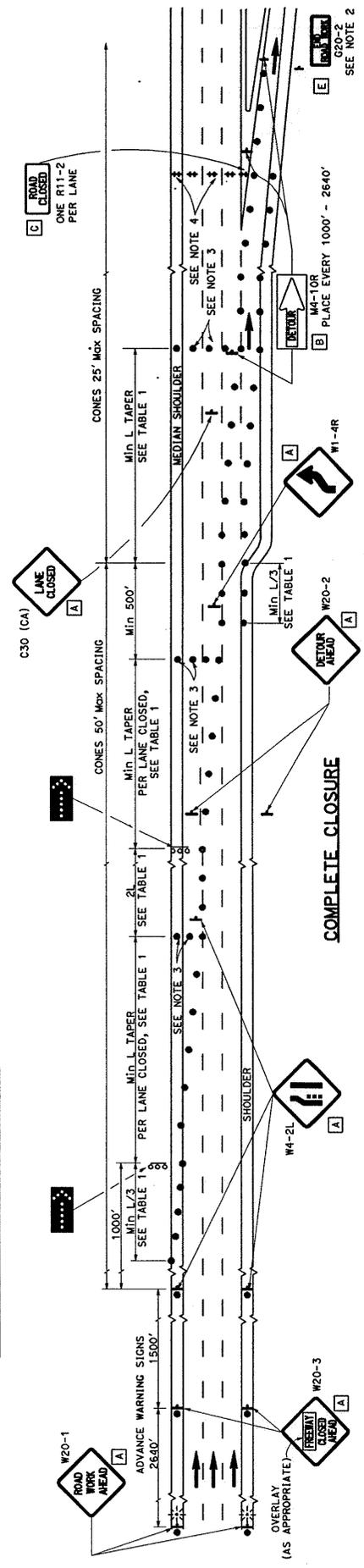
APPROACH SPEED	Min	Downgrade	Min	D *
55 mph	495	-3%	-6%	-9%
60 mph	570	-3%	-6%	-9%
65 mph	645	-3%	-6%	-9%
70 mph	720	-3%	-6%	-9%

\* USE ON SUSTAINED DOWNGRADE STEEPER THAN -3 PERCENT AND LONGER THAN 1 MILE.

**SIGN PANEL SIZE (MIN)**

A	48" x 48"
B	48" x 18"
C	48" x 30"
D	54" x 48"
E	48" x 24"

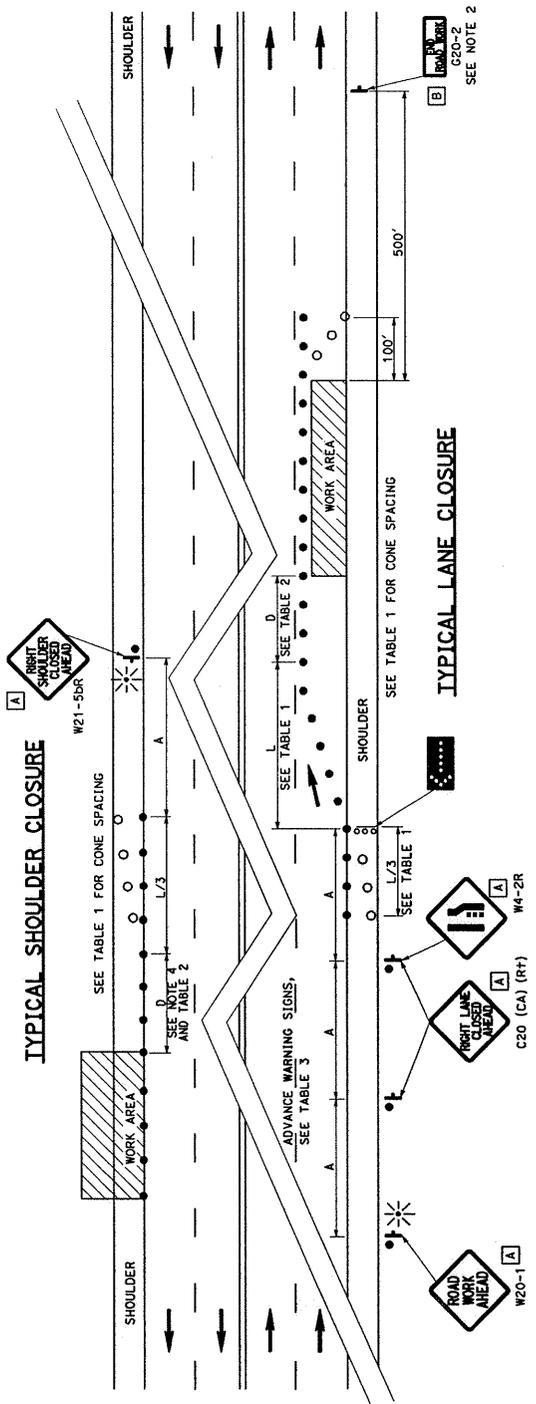
- LEGEND**
- TRAFFIC CONE
  - TRAFFIC CONE (OPTIONAL TAPER)
  - TEMPORARY SIGN
  - BARRICADE
  - FLASHING ARROW SIGN (FAS)
  - FAS SUPPORT OR TRAILER
  - DIRECTION OF TRAVEL
  - PORTABLE FLASHING BEACON



- NOTES:**
- California codes are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.
  - A G20-2 "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane closure, unless the end of work area is obvious or ends within a larger project's limits.
  - Unless otherwise specified in the special provisions, a minimum of 3 cones shall be placed transversely across each closed lane and shoulder at each location where a taper across a traffic lane ends and every 200' as shown on the plan. The cones shall be placed at the end of the taper and at the end of the transverse alignment of the cones or barricades on the closed shoulder may be shifted from the transverse alignment to provide access to the work.
  - A minimum of two Type II barricades shall be placed across each closed lane and shoulder at the location shown every 200' within the complete closure. The transverse alignment of the barricades on the closed shoulder may be shifted from the transverse alignment to provide access to the work.
  - When work area is beyond the shoulder.

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**TRAFFIC CONTROL SYSTEM  
 FOR LANE AND  
 COMPLETE CLOSURES ON  
 FREEWAYS AND EXPRESSWAYS**  
 NO SCALE  
**T10A**

DISTRICT COUNTY ROUTE  
 TOTAL PROJECT NO. SHEETS  
 REGISTERED CIVIL ENGINEER  
 PROFESSIONAL ENGINEER  
 Gordon Mory  
 C65597  
 EXPIRES 9-30-12  
 MAY 20, 2011  
 IN THIS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS  
 OR AGENTS SHALL NOT BE RESPONSIBLE FOR  
 THE CONTENTS OF THIS PLAN SHEET.



**TABLE 3**  
DISTANCE BETWEEN SIGNS

ROAD TYPE	Min A (ft)
URBAN (SPEED 25 mph OR LESS)	100
URBAN (SPEED 30 mph OR MORE)	350
RURAL	500
EXPRESSWAY / FREEWAY	SEE NOTE 3

**TABLE 2**  
DOWNGRADE

APPROACH SPEED	Min D	-3%		-6%		-8%	
		ft	ft	ft	ft	ft	ft
25 AND BELOW	155	158	165	173			
30	200	205	215	227			
35	250	257	271	287			
40	305	315	333	354			
45	360	378	400	427			
50	425	446	474	507			
OVER 50							SEE NOTE 3

\* USE ON SUSTAINED DOWNGRADE STEEPER THAN -3 PERCENT AND LONGER THAN 1 MILE.

**TABLE 1**

APPROACH SPEED	* Min L	* Min L/3	Max Spacing of Cones
20 AND BELOW	80	30	20
25	125	45	25
30	180	60	30
35	245	85	35
40	320	110	40
45	400	140	45
50	500	200	50

\* USE L FOR LANE WIDTHS LESS THAN OR EQUAL TO 12'.  
SEE NOTE 3

**SIGN PANEL SIZE (Min)**

- A 36" x 36"
- B 36" x 18"

**LEGEND**

- TRAFFIC CONE
- TRAFFIC CONE (OPTIONAL TAPER)
- ⊥ TEMPORARY SIGN
- ← DIRECTION OF TRAVEL
- ⚡ FLASHING ARROW SIGN (FAS)
- ⊞ FAS SUPPORT OR TRAILER
- ⊞ PORTABLE FLASHING BEACON

**NOTES:**

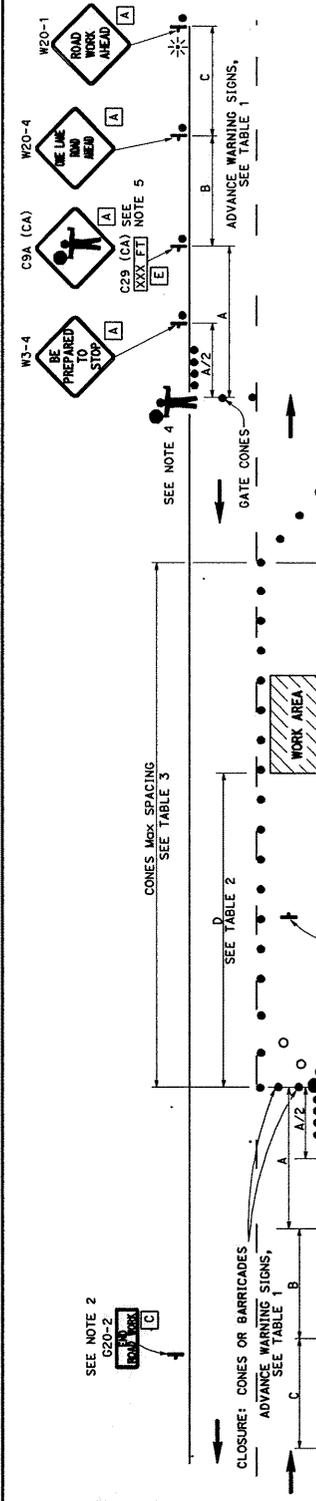
1. California codes are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.
2. A G20-2 "END ROAD WORK" sign, as appropriate, placed at the end of the lane closure unless the end of work area is obvious, or ends within a larger project's limits.
3. For approach speeds over 50 mph, use the Traffic Control System for Lane Closure on Freeways and Expressways plan for lane closure specific requirements.
4. D is longitudinal buffer space and is optional only when work area is beyond the shoulder or clear recovery zone where there is no shoulder.

T11



Dist COUNTY ROUTE TOTAL PROJECT SHEET NO. PROJECT SHEETS

REGISTERED CIVIL ENGINEER  
 Gordon Mery  
 CDS937  
 9-30-12  
 REGISTERED PROFESSIONAL ENGINEER  
 STATE OF CALIFORNIA  
 MAY 20, 2011  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS  
 DO NOT WARRANT OR ASSUME ANY LIABILITY  
 FOR THE ACCURACY OF ANY INFORMATION OR  
 COPIES OF THIS PLAN SHEET.



**TABLE 1**  
DISTANCE BETWEEN SIGNS

ROAD TYPE	Min A (ft)	Min B (ft)	Min C (ft)
URBAN (SPEED 25 MPH OR LESS)	100	100	100
URBAN (SPEED 30 MPH OR MORE)	350	350	350
RURAL	500	500	500
EXPRESSWAY / FREEWAY	1000	1500	2640

**TABLE 2**

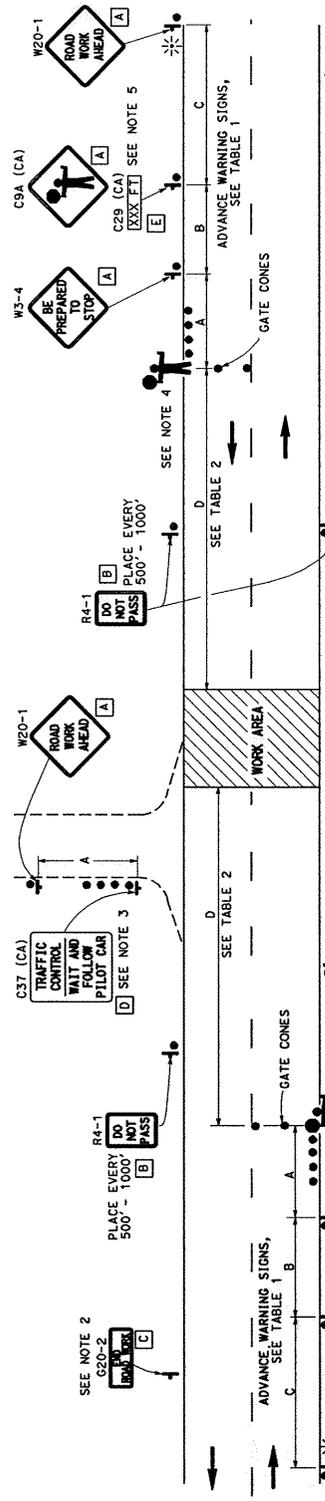
APPROACH SPEED	Min D	Downgrade Min D *
mph	ft	ft
25 AND BELOW	155	-3% -6% -9% ft ft ft
30	205	158 165 173
35	250	205 215 227
40	305	267 271 287
45	360	315 333 354
50	425	378 400 427
55	495	446 474 507
60	570	520 553 593
65	645	682 728 785

\* USE ON SUSTAINED DOWNGRADE STEEPER THAN -3% PERCENT AND LONGER THAN 1 MILE.

**TABLE 3**  
CONES Max SPACING

POSTED SPEED	ft
20 mph	20
25 mph	25
30 mph	30
35 mph	35
40 mph	40
45 mph	45
50 mph	50
55 mph	55
60 mph	60
65 mph	65

**TYPICAL LANE CLOSURE WITH REVERSIBLE CONTROL**



**TYPICAL ROAD CLOSURE WITH REVERSIBLE CONTROL**

- NOTES:**
- California code are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.
  - A G20-2 "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane control unless the end of work area is obvious, or ends within a larger project's limits.
  - When a pilot car is used, place a C37 (CA) sign at all intersections within traffic control area. Where vehicular traffic can not effectively self-regulate, at least one flagger shall be used at each intersection within traffic control area.
  - Flagger should stand in a conspicuous place, facing traffic at all times, be visible to approaching traffic as well as workers. Engineer will determine if additional advance flaggers is required.
  - When flagger is not visible from this location place a C29 (CA) sign.
  - Traffic cones or barricades may be placed on the optional taper as shown. Barricades shall be Type I, II, or III.

- SIGN PANEL SIZE (MINIMUM)**
- |   |           |                         |
|---|-----------|-------------------------|
| A | 48" x 48" | SPEED OF 45 MPH OR MORE |
| B | 36" x 36" | SPEED LESS THAN 45 MPH  |
| C | 48" x 36" | SPEED OF 45 MPH OR MORE |
| D | 36" x 24" | SPEED LESS THAN 45 MPH  |
| E | 48" x 24" | SPEED OF 45 MPH OR MORE |
| F | 36" x 18" | SPEED LESS THAN 45 MPH  |
| G | 36" x 42" |                         |
| H | 36" x 9"  |                         |

- LEGEND**
- TRAFFIC CONE
  - TRAFFIC CONE (OPTIONAL TAPER)
  - ⬇ TEMPORARY SIGN
  - ➡ DIRECTION OF TRAVEL
  - ⚡ PORTABLE FLASHING BEACON
  - 👤 FLAGGER

**TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON TWO LANE CONVENTIONAL HIGHWAYS**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

NO SCALE

T13

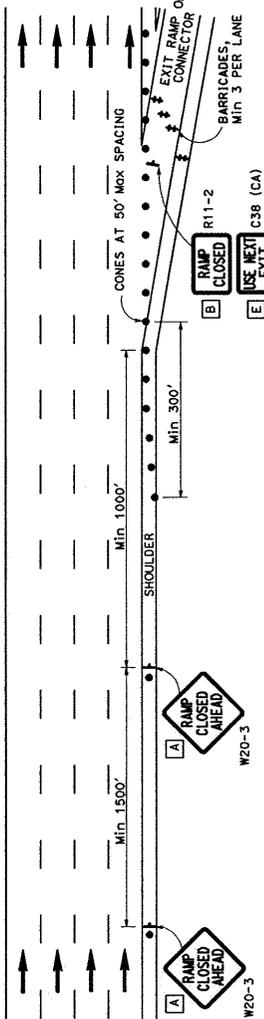
REGISTERED CIVIL ENGINEER  
 DATE: MAY 20, 2011  
 PROJECT: [REDACTED]  
 SHEET NO. [REDACTED] OF [REDACTED] SHEETS

- LEGEND**
- TRAFFIC CONE
  - † TEMPORARY SIGN
  - ‡ BARRICADES
  - DIRECTION OF TRAVEL
  - ↔ TURN ARROW

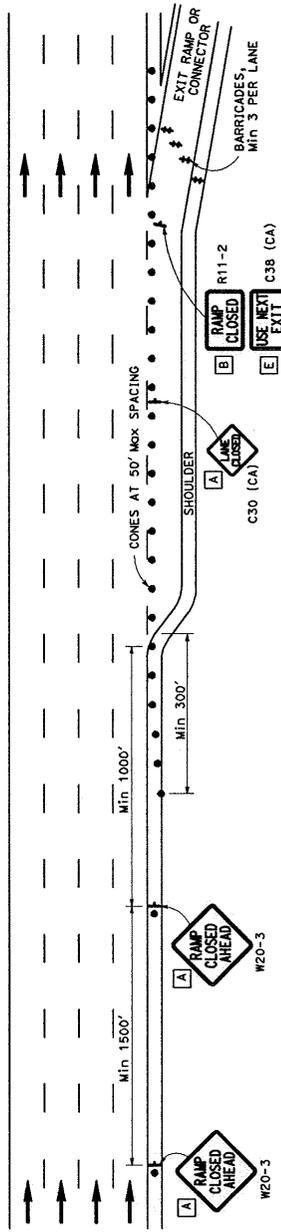
**SIGN PANEL SIZE (Min)**

A	48" x 48"
B	48" x 30"
C	36" x 36"
D	48" x 48" - SPEED OF 45 MPH OR MORE 36" x 36" - SPEED LESS THAN 45 MPH
E	48" x 36"

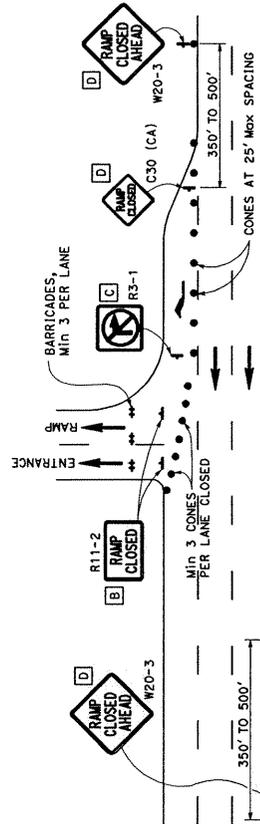
**TYPICAL RAMP CLOSURES**



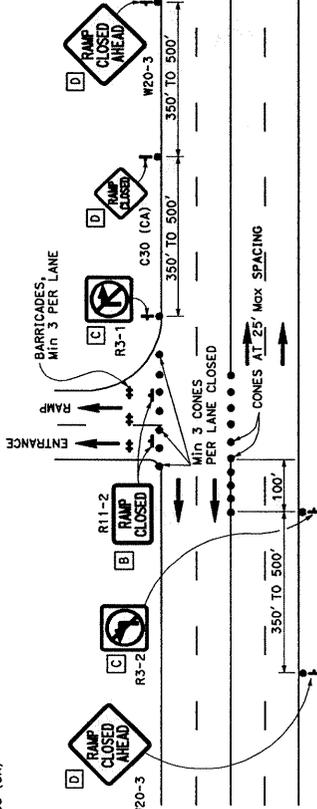
**EXIT RAMP OR CONNECTOR**



**EXIT RAMP OR CONNECTOR WITH ADDITIONAL LANE**



**ENTRANCE RAMP WITHOUT TURNING POCKETS**



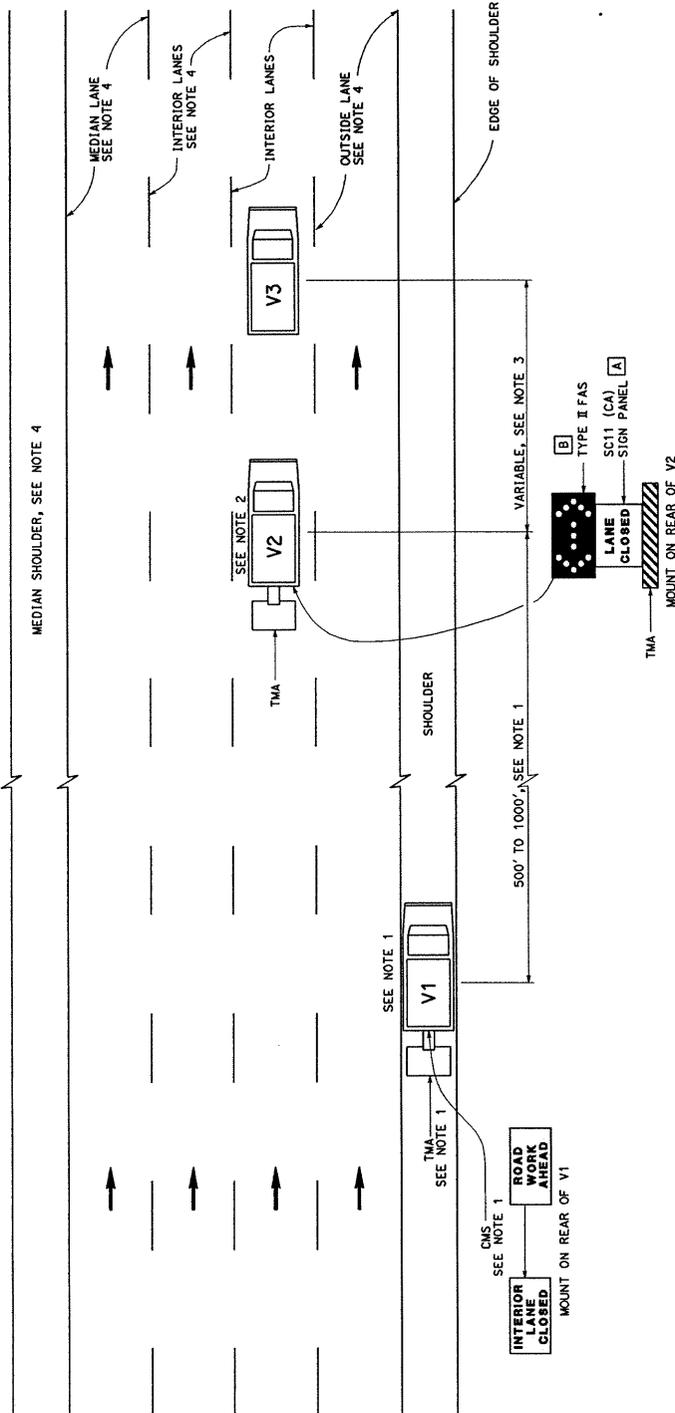
- NOTES:**
- California codes are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.
  - The existing "EXIT" sign in the gore area shall be covered during ramp closures.

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**TRAFFIC CONTROL SYSTEM FOR RAMP CLOSURE**  
 NO SCALE

T14



DISTRICT COUNTY ROUTE TOTAL PROJECT SHEET NO. SHEETS  
 REGISTERED CIVIL ENGINEER  
 May 20, 2011  
 THE CITY OF CALIFORNIA  
 OR AGENTS SHALL NOT BE RESPONSIBLE FOR  
 ERRORS OR OMISSIONS OF THIS PLAN SHEET.



**MOVING LANE CLOSURE ON INTERIOR LANE OF MULTILANE HIGHWAYS**

**SIGN PANEL SIZE (min)**

- [A] 54" x 42"
- [B] 72" x 36"

**LEGEND**

- V1 SIGN VEHICLE
- V2 SHADOW VEHICLE
- V3 WORK/APPLICATION VEHICLE
- FLASHING ARROW SIGN (FAS) IN FLASHING DOUBLE ARROW MODE
- CMS CHANGEABLE MESSAGE SIGN
- TMA TRUCK-MOUNTED ATTENUATOR
- DIRECTION OF TRAVEL

**NOTES:**

1. A changeable message sign shall be mounted on the rear of sign vehicle V1. If traffic queues develop, sign vehicle V1 should be positioned upstream from the road closure. Sign vehicles V2 and V3 shall be positioned in the interior lanes. Sign vehicles are not available where sufficient shoulder width is available for sign vehicle V1 not to encroach traffic lane, a truck-mounted attenuator is optional for V1. Where sufficient shoulder width is not available, sign vehicle V1 may encroach into the traffic lane staying as close to the edge of shoulder as practicable.
2. When shadow vehicle V2 also performs as a work vehicle, V2 shall always be positioned as the last work vehicle. All sign panels and flashing arrow signs shall be visible at all times without obstructions.

3. The spacing between each work vehicle, and between a vehicle and the road closure, should be minimized to deter road user from driving in between. Where workers would be on foot in the work area, a stationary type lane closure (Standard Plan T10, T11 etc., as applicable) shall be used instead of this plan.
4. On a multilane freeway with 4 lanes or more in one direction, when work is being done closer to median than to the right shoulder, another shadow vehicle meets all sign vehicle V1 requirements should be positioned on median shoulder. This vehicle should be placed in addition to V1 and shall not replace V1. For moving lane closure, a vehicle and/or median lane of multilane highways, see Standard Plan T15.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

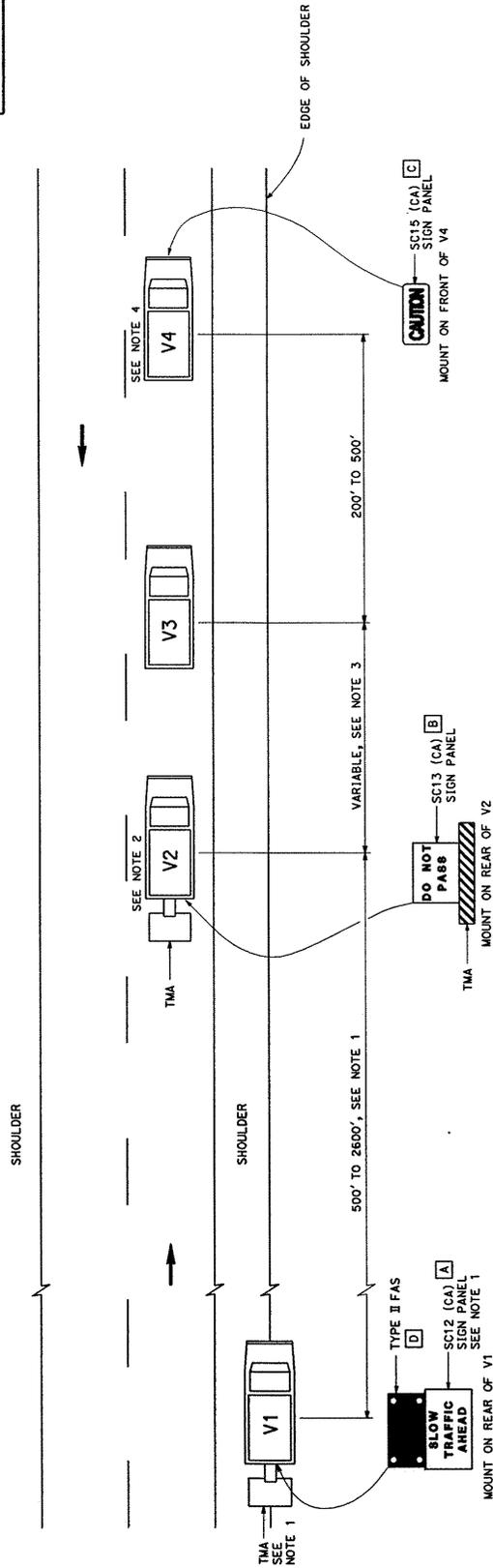
**TRAFFIC CONTROL SYSTEM FOR MOVING LANE CLOSURE ON MULTILANE HIGHWAYS**

NO SCALE

T16

DIST COUNTY ROUTE TOTAL PROJECT NO. SHEET TOTAL SHEETS

REGISTERED CIVIL ENGINEER  
 Gordon Berry  
 No. 005931  
 May 20, 2011  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA ON ITS OFFICERS  
 AND THE BOARD OF REGISTERED PROFESSIONAL ENGINEERS  
 RECEIVES AND APPROVES THE SIGNATURE OF COMPLETE EFFECT OF SIGNED  
 COPIES OF THIS PLAN SHEET.



**SIGN PANEL SIZE (MIN)**

- A 72" x 42"
- B 54" x 42"
- C 54" x 24"
- D 72" x 36"

**LEGEND**

- V1 SIGN VEHICLE
- V2 SHADOW VEHICLE
- V3 WORK/APPLICATION VEHICLE
- V4 SIGN VEHICLE
- TMA TRUCK-MOUNTED ATTENUATOR
- DIRECTION OF TRAVEL
- FLASHING ARROW SIGN (FAS) IN FLASHING CAUTION MODE

**NOTES:**

1. Either a changeable message sign or a SC12 (CA) "SLOW TRAFFIC AHEAD" sign and a Type I flashing arrow sign shall be mounted on the rear of sign vehicle V1. In traffic queues develop, sign vehicle V1 should position and work and shadow vehicles should pull over to allow vehicular traffic to pass. Sign vehicle V1 should be positioned where highly visible when shoulders are not available, where sufficient shoulder width is available for sign vehicle V1 not to encroach traffic lane, a truck mounted attenuator is optional for V1. Where sufficient shoulder width is not available, sign vehicle V1 may encroach into the traffic lane staying as close to the edge of shoulder as practicable.
2. When shadow vehicle V2 also performs as a work vehicle, the flashing arrow sign and flashing arrow signs shall be visible at all times without obstructions.
3. The spacing between each work vehicle, and between work vehicle and shadow vehicle should be minimized to deter road user from driving in between. This plan shall not be used for a permanent lane closure. Use a stationary type lane closure (Standard Plan T13) for this condition.
4. Sign vehicle V4 will not be required when the work and vehicles V2 and V3 are 2' or more from the centerline of the highway during the work or application operations.

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**TRAFFIC CONTROL SYSTEM  
 FOR MOVING LANE CLOSURE  
 ON TWO LANE HIGHWAYS**  
 NO SCALE

T17

-----  
**PLEASE READ THE ATTACHED PERMIT CAREFULLY  
BEFORE PROCEEDING WITH ANY WORK!**

**RECEIVED**

DEC 28 2011

CITY OF CHICO  
EDD / CPSD

**NOTE: THE CALTRANS INSPECTOR MUST BE NOTIFIED  
AS SPECIFIED BELOW PRIOR TO THE START OF ANY  
WORK TO ARRANGE A PRE-JOB MEETING. FAILURE TO  
NOTIFY THE INSPECTOR MAY RESULT IN CANCELLATION  
OF THE PERMIT.**

Notify Jim Rogers (530) 521-4540  
SEVEN (7) days prior to any  
work.

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION  
**NOTICE OF COMPLETION**  
TR-0128 (REV 06/01) CT #7541-5529-1

*Special Funded*

0311 Nmc 1011

PERMIT NO.

BUT 32

Co.

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Rte.

P.M.

Dear Sir or Madam:

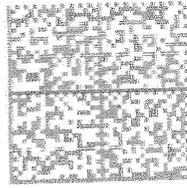
*All work authorized by the above-numbered permit was  
completed on \_\_\_\_\_ DATE*

\_\_\_\_\_  
SIGNATURE OF PERMITTEE

**ADA  
Notice**

For individuals with sensory disabilities, this document is available in alternate formats. For information call (916) 654-6410 or TDD (916) 654-3880 or write Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.

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OFFICE OF ENCROACHMENT PERMITS  
703 B STREET  
MARYSVILLE, CA 95901**

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**CONTRACTORS COMPENSATION SCHEDULE**  
**STATE ROUTE 32 WIDENING PROJECT (PHASE 1)**  
**PROJECT No. 15010**  
**FROM EAST OF PARK AND RIDE LOT TO EL MONTE AVENUE**  
**BUDGET ACCOUNT No. MAJGC/15010-300-4150**

ITEM NO.	P-F	DESCRIPTION	UNIT	QTY	UNIT PRICE	AMOUNT
1		PROGRESS SCHEDULE (CRITICAL PATH METHOD)	LS			
2		CONSTRUCTION SITE MANAGEMENT	LS			
3		STORM WATER POLLUTION PREVENTION PLAN	LS			
4		WATER POLLUTION CONTROL	LS			
5		STORM WATER ANNUAL REPORTS	EA			
6		CONSTRUCTION AREA SIGNS	LS			
7	P	TRAFFIC CONTROL SYSTEM	LS			
8		TYPE III BARRICADE	EA			
9		TEMPORARY PAVEMENT MARKING (PAINT)	SF			
10		TEMPORARY TRAFFIC STRIPE (PAINT)	LF			
11		CHANNELIZERS (SURFACE MOUNTED)	EA			
12		TEMPORARY PAVEMENT MARKER	EA			
13		PORTABLE CHANGEABLE MESSAGE SIGN	LS			
14		TEMPORARY RAILING (TYPE K)	LF			
15		TEMPORARY CRASH CUSION (TYPE ABSORB 350)	EA			
16		REMOVE YELLOW THERMOPLASTIC TRAFFIC STRIPE	LF			
17		OBLITERATE SURFACING	SY			
18		REMOVE FENCE	LF			
19		REMOVE FLARED END SECTION	EA			
20		REMOVE THERMOPLASTIC TRAFFIC STRIPE	LF			
21		REMOVE THERMOPLASTIC PAVEMENT MARKING	SF			
22		REMOVE PAVEMENT MARKER	EA			
23		REMOVE ROADSIDE SIGN	EA			
24		RELOCATE ROADSIDE SIGN	EA			
25		MODIFY INLET TO MANHOLE	EA			
26		COLD PLANE AC PAVEMENT (0.15 MAX)	SY			

**CONTRACTORS COMPENSATION SCHEDULE**  
**STATE ROUTE 32 WIDENING PROJECT (PHASE 1)**  
**PROJECT No. 15010**  
**FROM EAST OF PARK AND RIDE LOT TO EL MONTE AVENUE**  
**BUDGET ACCOUNT No. MAJGC/15010-300-4150**

ITEM NO.	P-F	DESCRIPTION	UNIT	QTY	UNIT PRICE	AMOUNT
27		REMOVE CONCRETE (CURB AND GUTTER)	LF			
28		REMOVE CONCRETE (SIDEWALK)	CY			
29		CLEAN BRIDGE DECK	SF			
30		REMOVE METAL BEAM GUARD RAILING	LF			
31		BRIDGE REMOVAL (PORTION)	LS			
32	P	CLEARING AND GRUBBING	LS			
33		REMOVE TREE	EA			
34	P	DEVELOP WATER SUPPLY	LS			
35		ROADWAY EXCAVATION	CY			
36		LEAD COMPLIANCE PLAN	LS			
37	F	STRUCTURE EXCAVATION (BRIDGE)	CY			
38	F	STRUCTURE BACKFILL (BRIDGE)	CY			
39		DITCH EXCAVATION	CY			
40		IMPORTED BORROW	CY			
41		IMPORTED MATERIAL (SHOULDER BACKING)	TON			
42		COMPOST (INCORPORATE)	SY			
43		EROSION CONTROL (HYDROSEED)	SF			
44		2" CONDUIT	LF			
45		<del>3" CONDUIT</del>	<del>LF</del>	<del>DELETED</del>	<del>DELETED</del>	<del>DELETED</del>
46		6" CONDUIT	LF			
47		CLASS 2 AGGREGATE BASE	CY			
48		AGGREGATE BASE (APPROACH SLAB)	CY			
49		HOT MIX ASPHALT	TON			
50		HOT MIX ASPHALT (OPEN GRADED FRICTION COURSE)	TON			
51		PLACE HOT MIX ASPHALT DIKE (TYPE C)	LF			
52		PLACE HOT MIX ASPHALT DIKE (TYPE E)	LF			

**CONTRACTORS COMPENSATION SCHEDULE**  
**STATE ROUTE 32 WIDENING PROJECT (PHASE 1)**  
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ITEM NO.	P-F	DESCRIPTION	UNIT	QTY	UNIT PRICE	AMOUNT
53		PLACE HOT MIX ASPHALT DIKE (TYPE F)	LF			
54		PLACE HOT MIX ASPHALT (MISC AREA)	SY			
55		COLD FOAM IN PLACE RECYCLING	SY			
56	P-F	FURNISH PILING (CLASS 90) (ALTERNATIVE X)	LF			
57		DRIVE PILE (CLASS 90) (ALTERNATIVE X)	EA			
58	P-F	FURNISH PILING (15" PRECAST PILE EXTENSION)	LF			
59		DRIVE PILE (15" PRECAST PILE EXTENSION)	EA			
60	F	STRUCTURAL CONCRETE, BRIDGE	CY			
61	F	STRUCTURAL CONCRETE, APPROACH SLAB (TYPE EQ)	CY			
62	F	STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	CY			
63		PAVING NOTCH EXTENSION	CF			
64	F	DRILL AND BOND DOWEL	LF			
65		DRILL AND BOND DOWEL (CHEMICAL ADHESIVE)	EA			
66		JOINT SEAL (MR 1/2")	LF			
67	P-F	BAR REINFORCING STEEL (BRIDGE)	LB			
68	F	TREAT BRIDGE DECK	SF			
69		FURNISH BRIDGE DECK TREATMENT MATERIAL	GAL			
70	P	PRECAST CONCRETE SOUNDWALL	SF			
71		FURNISH SINGLE SHEET ALUMINUM SIGN PANEL (0.063"- UNFRAMED)	SF			
72		FURNISH SINGLE SHEET ALUMINUM SIGN PANEL (0.080"- UNFRAMED)	SF			
73		FURNISH SINGLE SHEET ALUMINUM SIGN PANEL (0.063"-FRAMED)	SF			
74		ROADSIDE SIGN (ONE POST)	EA			
75		ROADSIDE SIGN (TWO POST)	EA			
76		INSTALL SIGN (STRAP AND SADDLE BRACKET METHOD)	EA			
77		18" APC	LF			
78		24" APC	LF			

**CONTRACTORS COMPENSATION SCHEDULE**  
**STATE ROUTE 32 WIDENING PROJECT (PHASE 1)**  
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**BUDGET ACCOUNT No. MAJGC/15010-300-4150**

ITEM NO.	P-F	DESCRIPTION	UNIT	QTY	UNIT PRICE	AMOUNT
79		18" AFES	EA			
80		24" AFES	EA			
81		DRAINAGE INLET	EA			
82		ROCK SLOPE PROTECTION (LIGHT, METHOD B)	CY			
83		ROCK SLOPE PROTECTION (BACKING No. 2, METHOD B)	CY			
84		ROCK SLOPE PROTECTION FABRIC	SY			
85		MINOR CONCRETE (MEDIAN CURB)	CY			
86		MINOR CONCRETE (RETAINING CURB)	CY			
87		MINOR CONCRETE (CURB & GUTTER)	CY			
88		MINOR CONCRETE (SIDEWALK)	CY			
89		MINOR CONCRETE (CURB RAMP)	CY			
90		MINOR CONCRETE (TEXTURED PAVING)	CY			
91		MISCELLANEOUS IRON AND STEEL	LB			
92		DELINEATOR	EA			
93		HIGHWAY POST MARKER	EA			
94		OBJECT MARKER	EA			
95		METAL BEAM GUARD RAILING (WOOD POST)	LF			
96		MINOR CONCRETE (VEGETATION CONTROL)	CY			
97	P-F	TUBULAR BICYCLE RAILING	LF			
98		DOUBLE METAL BEAM GUARD RAILING (WOOD POST)	LF			
99	P	STEEL-BACKED TIMBER GUARD RAILING	LF			
100	P	STEEL-BACKED TIMBER GUARD RAILING (DOUBLE SIDED)	LF			
101		TRANSITION RAILING (TYPE WB)	EA			
102		TERMINAL SYSTEM (TYPE CAT)	EA			
103		TERMINAL SYSTEM (TYPE CAT) BACKUP	EA			
104		ALTERNATIVE FLARED TERMINAL SYSTEM	EA			

**CONTRACTORS COMPENSATION SCHEDULE**  
**STATE ROUTE 32 WIDENING PROJECT (PHASE 1)**  
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**BUDGET ACCOUNT No. MAJGC/15010-300-4150**

ITEM NO.	P-F	DESCRIPTION	UNIT	QTY	UNIT PRICE	AMOUNT
105	F	CONCRETE BARRIER (TYPE 732R)	LF			
106	F	CONCRETE BARRIER (TYPE 732)	LF			
107		THERMOPLASTIC TRAFFIC STRIPE	LF			
108		THERMOPLASTIC PAVEMENT MARKING	SF			
109		PAVEMENT MARKER (RETRO-REFLECTIVE)	EA			
110		MAINTAINING EXISTING TRAFFIC MANAGEMENT SYSTEM ELEMENTS DURING CONSTRUCTION	LS			
111		SIGNAL AND LIGHTING (TEMPORARY)	LS			
112		INTERCONNECTION CONDUIT AND CABLE	LS			
113		MODIFY SIGNAL AND LIGHTING (LOCATION 1)	LS			
114		MODIFY SIGNAL AND LIGHTING (LOCATION 2)	LS			
115		RAISED PLANTER WALL CAP	LF			
116		RAISED PLANTER WALL FOOTING	LF			
117		FRONT RAISED PLANTER WALL	SF			
118		BACK RAISED PLANTER WALL	SF			
119		IMPORT TOPSOIL AND PLACEMENT	CY			
120		RAISED PLANTER BACKFILL	CY			
121		TREE PLANTING (15 GALLON SIZE, STAKED)	EA			
122		TREE PLANTING (15 GALLON SIZE, UN-STAKED)	EA			
123		SHRUB PLANTING (5 GALLON SIZE)	EA			
124		SHRUBS (1 GALLON SIZE)	EA			
125		VINES (1 GALLON)	EA			
126		WEED CONTROL	SF			
127		ROOT BARRIER	LF			
128		WOOD CHIP MULCH	CY			
129		WATER POINT OF CONNECTION	EA			
130		BACKFLOW PREVENTER ASSEMBLY	EA			

**CONTRACTORS COMPENSATION SCHEDULE**  
**STATE ROUTE 32 WIDENING PROJECT (PHASE 1)**  
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ITEM NO.	P-F	DESCRIPTION	UNIT	QTY	UNIT PRICE	AMOUNT
131		CONTROLLER	EA			
132		FLOW SENSING ASSEMBLY	EA			
133		ISOLATION VALVES	EA			
134		REMOTE CONTROL VALVES (SPRAY)	EA			
135		REMOTE CONTROL VALVES (DRIP)	EA			
136		2-WIRE DECODERS	EA			
137		QUICK COUPLER VALVES	EA			
138	P	PVC MAINLINE	LF			
139	P	PVC LATERAL LINES	LF			
140	P	CONDUIT	LF			
141		SLEEVING	LF			
142		LIGHTING ARRESTOR	EA			
143		PULL BOXES	EA			
144		SWING PIPE	LF			
145		EMITTERS	EA			
146		IRRIGATION HEAD	EA			
147		2 WIRE DECODER CABLE	LF			
148		WATER AUDIT	EA			
149		PLANT ESTABLISHMENT PERIOD	SF			
150		MOBILIZATION	LS			
<b>TOTAL BID</b>						

Notes: (a) Contractors must use this form to provide bids (no exceptions or alterations are permitted).  
(b) In order to be considered responsive, the bid schedule included in the proposal form must be filled out in its entirety. The City reserves the right to accept or reject any and all bids.

**CONTRACTORS PROPOSAL FORM FOR  
STATE ROUTE 32 WIDENING PROJECT (PHASE 1)  
PROJECT No. 15010  
FROM EAST OF PARK AND RIDE LOT TO EL MONTE AVENUE  
BUDGET ACCOUNT No. MAJGC/15010-300-4150**

ITEM NO.	P-F	DESCRIPTION	UNIT	QTY	UNIT PRICE	AMOUNT
1		PROGRESS SCHEDULE (CRITICAL PATH METHOD)	LS	1		
2		CONSTRUCTION SITE MANAGEMENT	LS	1		
3		STORM WATER POLLUTION PREVENTION PLAN	LS	1		
4		WATER POLLUTION CONTROL	LS	1		
5		STORM WATER ANNUAL REPORTS	EA	2		
6		CONSTRUCTION AREA SIGNS	LS	1		
7	P	TRAFFIC CONTROL SYSTEM	LS	1		
8		TYPE III BARRICADE	EA	14		
9		TEMPORARY PAVEMENT MARKING (PAINT)	SF	850		
10		TEMPORARY TRAFFIC STRIPE (PAINT)	LF	29000		
11		CHANNELIZERS (SURFACE MOUNTED)	EA	310		
12		TEMPORARY PAVEMENT MARKER	EA	570		
13		PORTABLE CHANGEABLE MESSAGE SIGN	LS	1		
14		TEMPORARY RAILING (TYPE K)	LF	6740		
15		TEMPORARY CRASH CUSION (TYPE ABSORB 350)	EA	8		
16		REMOVE YELLOW THERMOPLASTIC TRAFFIC STRIPE	LF	7820		
17		OBLITERATE SURFACING	SY	1360		
18		REMOVE FENCE	LF	5530		
19		REMOVE FLARED END SECTION	EA	2		
20		REMOVE THERMOPLASTIC TRAFFIC STRIPE	LF	4710		
21		REMOVE THERMOPLASTIC PAVEMENT MARKING	SF	700		
22		REMOVE PAVEMENT MARKER	EA	410		
23		REMOVE ROADSIDE SIGN	EA	15		
24		RELOCATE ROADSIDE SIGN	EA	2		
25		MODIFY INLET TO MANHOLE	EA	1		
26		COLD PLANE AC PAVEMENT (0.15 MAX)	SY	2800		

**CONTRACTORS PROPOSAL FORM FOR**  
**STATE ROUTE 32 WIDENING PROJECT (PHASE 1)**  
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**BUDGET ACCOUNT No. MAJGC/15010-300-4150**

ITEM NO.	P-F	DESCRIPTION	UNIT	QTY	UNIT PRICE	AMOUNT
27		REMOVE CONCRETE (CURB AND GUTTER)	LF	210		
28		REMOVE CONCRETE (SIDEWALK)	CY	9		
29		CLEAN BRIDGE DECK	SF	5980		
30		REMOVE METAL BEAM GUARD RAILING	LF	330		
31		BRIDGE REMOVAL (PORTION)	LS	1		
32	P	CLEARING AND GRUBBING	LS	1		
33		REMOVE TREE	EA	170		
34	P	DEVELOP WATER SUPPLY	LS	1		
35		ROADWAY EXCAVATION	CY	4790		
36		LEAD COMPLIANCE PLAN	LS	1		
37	F	STRUCTURE EXCAVATION (BRIDGE)	CY	196		
38	F	STRUCTURE BACKFILL (BRIDGE)	CY	82		
39		DITCH EXCAVATION	CY	1000		
40		IMPORTED BORROW	CY	8110		
41		IMPORTED MATERIAL (SHOULDER BACKING)	TON	120		
42		COMPOST (INCORPORATE)	SY	2840		
43		EROSION CONTROL (HYDROSEED)	SF	148000		
44		2" CONDUIT	LF	790		
45		3" CONDUIT	LF	89	DELETED	DELETED
46		6" CONDUIT	LF	430		
47		CLASS 2 AGGREGATE BASE	CY	9620		
48		AGGREGATE BASE (APPROACH SLAB)	CY	2		
49		HOT MIX ASPHALT	TON	11600		
50		HOT MIX ASPHALT (OPEN GRADED FRICTION COURSE)	TON	2450		
51		PLACE HOT MIX ASPHALT DIKE (TYPE C)	LF	39		
52		PLACE HOT MIX ASPHALT DIKE (TYPE E)	LF	400		

**CONTRACTORS PROPOSAL FORM FOR  
STATE ROUTE 32 WIDENING PROJECT (PHASE 1)  
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ITEM NO.	P-F	DESCRIPTION	UNIT	QTY	UNIT PRICE	AMOUNT
53		PLACE HOT MIX ASPHALT DIKE (TYPE F)	LF	50		
54		PLACE HOT MIX ASPHALT (MISC AREA)	SY	5		
55		COLD FOAM IN PLACE RECYCLING	SY	14200		
56	P-F	FURNISH PILING (CLASS 90) (ALTERNATIVE X)	LF	700		
57		DRIVE PILE (CLASS 90) (ALTERNATIVE X)	EA	16		
58	P-F	FURNISH PILING (15' PRECAST PILE EXTENSION)	LF	1596		
59		DRIVE PILE (15' PRECAST PILE EXTENSION)	EA	30		
60	F	STRUCTURAL CONCRETE, BRIDGE	CY	442		
61	F	STRUCTURAL CONCRETE, APPROACH SLAB (TYPE EQ)	CY	26		
62	F	STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	CY	18		
63		PAVING NOTCH EXTENSION	CF	120		
64	F	DRILL AND BOND DOWEL	LF	432		
65		DRILL AND BOND DOWEL (CHEMICAL ADHESIVE)	EA	130		
66		JOINT SEAL (MR 1/2")	LF	230		
67	P-F	BAR REINFORCING STEEL (BRIDGE)	LB	102342		
68	F	TREAT BRIDGE DECK	SF	5972		
69		FURNISH BRIDGE DECK TREATMENT MATERIAL	GAL	67		
70	P	PRECAST CONCRETE SOUNDWALL	SF	50700		
71		FURNISH SINGLE SHEET ALUMINUM SIGN PANEL (0.063"-UNFRAMED)	SF	91		
72		FURNISH SINGLE SHEET ALUMINUM SIGN PANEL (0.080"-UNFRAMED)	SF	120		
73		FURNISH SINGLE SHEET ALUMINUM SIGN PANEL (0.063"-FRAMED)	SF	21		
74		ROADSIDE SIGN (ONE POST)	EA	12		
75		ROADSIDE SIGN (TWO POST)	EA	1		
76		INSTALL SIGN (STRAP AND SADDLE BRACKET METHOD)	EA	3		
77		18" APC	LF	20		
78		24" APC	LF	120		

**CONTRACTORS PROPOSAL FORM FOR**  
**STATE ROUTE 32 WIDENING PROJECT (PHASE 1)**  
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ITEM NO.	P-F	DESCRIPTION	UNIT	QTY	UNIT PRICE	AMOUNT
79		18" AFES	EA	1		
80		24" AFES	EA	2		
81		DRAINAGE INLET	EA	2		
82		ROCK SLOPE PROTECTION (LIGHT, METHOD B)	CY	880		
83		ROCK SLOPE PROTECTION (BACKING No. 2, METHOD B)	CY	13		
84		ROCK SLOPE PROTECTION FABRIC	SY	1020		
85		MINOR CONCRETE (MEDIAN CURB)	CY	3		
86		MINOR CONCRETE (RETAINING CURB)	CY	7		
87		MINOR CONCRETE (CURB & GUTTER)	CY	27		
88		MINOR CONCRETE (SIDEWALK)	CY	22		
89		MINOR CONCRETE (CURB RAMP)	CY	11		
90		MINOR CONCRETE (TEXTURED PAVING)	CY	1		
91		MISCELLANEOUS IRON AND STEEL	LB	480		
92		DELINEATOR	EA	20		
93		HIGHWAY POST MARKER	EA	2		
94		OBJECT MARKER	EA	3		
95		METAL BEAM GUARD RAILING (WOOD POST)	LF	50		
96		MINOR CONCRETE (VEGETATION CONTROL)	CY	87		
97	P-F	TUBULAR BICYCLE RAILING	LF	288		
98		DOUBLE METAL BEAM GUARD RAILING (WOOD POST)	LF	200		
99	P	STEEL-BACKED TIMBER GUARD RAILING	LF	3520		
100	P	STEEL-BACKED TIMBER GUARD RAILING (DOUBLE SIDED)	LF	80		
101		TRANSITION RAILING (TYPE WB)	EA	2		
102		TERMINAL SYSTEM (TYPE CAT)	EA	2		
103		TERMINAL SYSTEM (TYPE CAT) BACKUP	EA	2		
104		ALTERNATIVE FLARED TERMINAL SYSTEM	EA	2		

**CONTRACTORS PROPOSAL FORM FOR  
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ITEM NO.	P-F	DESCRIPTION	UNIT	QTY	UNIT PRICE	AMOUNT
105	F	CONCRETE BARRIER (TYPE 732R)	LF	141		
106	F	CONCRETE BARRIER (TYPE 732)	LF	147		
107		THERMOPLASTIC TRAFFIC STRIPE	LF	30200		
108		THERMOPLASTIC PAVEMENT MARKING	SF	1950		
109		PAVEMENT MARKER (RETRO-REFLECTIVE)	EA	760		
110		MAINTAINING EXISTING TRAFFIC MANAGEMENT SYSTEM ELEMENTS DURING CONSTRUCTION	LS	1		
111		SIGNAL AND LIGHTING (TEMPORARY)	LS	1		
112		INTERCONNECTION CONDUIT AND CABLE	LS	1		
113		MODIFY SIGNAL AND LIGHTING (LOCATION 1)	LS	1		
114		MODIFY SIGNAL AND LIGHTING (LOCATION 2)	LS	1		
115		RAISED PLANTER WALL CAP	LF	340		
116		RAISED PLANTER WALL FOOTING	LF	340		
117		FRONT RAISED PLANTER WALL	SF	590		
118		BACK RAISED PLANTER WALL	SF	320		
119		IMPORT TOPSOIL AND PLACEMENT	CY	1660		
120		RAISED PLANTER BACKFILL	CY	75		
121		TREE PLANTING (15 GALLON SIZE, STAKED)	EA	88		
122		TREE PLANTING (15 GALLON SIZE, UN-STAKED)	EA	39		
123		SHRUB PLANTING (5 GALLON SIZE)	EA	1690		
124		SHRUBS (1 GALLON SIZE)	EA	620		
125		VINES (1 GALLON)	EA	590		
126		WEED CONTROL	SF	86800		
127		ROOT BARRIER	LF	1040		
128		WOOD CHIP MULCH	CY	790		
129		<b>WATER POINT OF CONNECTION</b>	<b>EA</b>	<b>2</b>		
130		<b>BACKFLOW PREVENTER ASSEMBLY</b>	<b>EA</b>	<b>2</b>		

**CONTRACTORS PROPOSAL FORM FOR**  
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**BUDGET ACCOUNT No. MAJGC/15010-300-4150**

ITEM NO.	P-F	DESCRIPTION	UNIT	QTY	UNIT PRICE	AMOUNT
131		CONTROLLER	EA	2		
132		FLOW SENSING ASSEMBLY	EA	2		
133		ISOLATION VALVES	EA	11		
134		REMOTE CONTROL VALVES (SPRAY)	EA	3		
135		REMOTE CONTROL VALVES (DRIP)	EA	14		
136		2-WIRE DECODERS	EA	17		
137		QUICK COUPLER VALVES	EA	55		
138	P	PVC MAINLINE	LF	8300		
139	P	PVC LATERAL LINES	LF	23000		
140	P	CONDUIT	LF	8000		
141		SLEEVING	LF	80		
142		LIGHTING ARRESTOR	EA	17		
143		PULL BOXES	EA	22		
144		SWING PIPE	LF	23000		
145		EMITTERS	EA	5050		
146		IRRIGATION HEAD	EA	83		
147		2 WIRE DECODER CABLE	LF	6600		
148		WATER AUDIT	EA	1		
149		PLANT ESTABLISHMENT PERIOD	SF	243000		
150		MOBILIZATION	LS	1		
<b>TOTAL BID</b>						

Notes: (a) Contractors must use this form to provide bids (no exceptions or alterations are permitted).  
(b) In order to be considered responsive, the bid schedule included in the proposal form must be filled out in its entirety. The City reserves the right to accept or reject any and all bids.