

BNSF RAILROAD GENERAL NOTES

- CONTRACTOR SHALL PERFORM ALL WORK IN ACCORDANCE WITH THE "BURLINGTON NORTHERN & SANTA FE UTILITY ACCOMMODATION POLICY, DATED APRIL 16, 2004".
- THE USE OF WATER UNDER PRESSURE, JETTING OR PUDDLING WILL NOT BE PERMITTED TO FACILITATE BORING, PUSHING OR JACKING OPERATIONS.
- CONTRACTOR SHALL PLAN, SCHEDULE AND CONDUCT ALL WORK ACTIVITIES SO AS NOT TO INTERFERE WITH THE MOVEMENT OF ANY TRAINS ON RCTC OR BNSF PROPERTY.
- WHEN WORK IS PERFORMED WITHIN TWENTY-FIVE (25) FEET OF THE CENTERLINE OF THE TRACK, RAILROAD FLAGGING WILL BE REQUIRED. SEE NOTE 6 BELOW. IN ADDITION, CONTRACTOR SHALL NOT PLACE OR STORE ANY EQUIPMENT OR MATERIALS WITHIN 25 FEET OF THE CENTERLINE OF THE TRACKS.
- CONTRACTOR SHALL CONTACT THE BURLINGTON NORTHERN SANTA FE (BNSF) ROADMASTER, DAVE GONZALES; PHONE NO. 909-386-4061, AT LEAST FIVE (5) WORKING DAYS (MONDAY THROUGH FRIDAY) BEFORE STARTING CONSTRUCTION.
- CONTRACTOR SHALL CONTACT THE BURLINGTON NORTHERN SANTA FE (BNSF) ROADMASTER, DAVE GONZALES; PHONE NO. 909-386-4061, AT LEAST TEN (10) WORKING DAYS (MONDAY THROUGH FRIDAY) IN ADVANCE OF WHEN FLAGGING SERVICES WILL BE REQUIRED. EACH TIME A FLAGGER IS CALLED, THE MINIMUM PERIOD OF BILLING SHALL BE THE EIGHT (8) HOUR BASIC DAY. THE COST OF FLAGGING SERVICES PROVIDED BY THE RAILWAY, WHEN DEEMED NECESSARY BY THE RAILWAY'S REPRESENTATIVE, WILL BE BORNE BY THE CONTRACTOR.
- DURING INSTALLATION OF THE CASING UNDER THE BNSF RIGHT-OF-WAY, CONTRACTOR SHALL MONITOR THE POTENTIAL GROUND SURFACE OR PAVEMENT MOVEMENT ALONG THE PROPOSED ALIGNMENT CROSSING THE METROLINK AND BNSF RAILROAD TRACKS. IF ANY DEFORMATION IN EXCESS OF 1/4" IS NOTED, WORK SHALL BE STOPPED AND CONTRACTOR SHALL IMMEDIATELY CALL THE BNSF ROADMASTER.

CONTRACTOR SHALL BE RESPONSIBLE FOR ANY MOVEMENT TO METROLINK AND BNSF RAILROAD TRACKS DUE TO BORE AND JACK CONSTRUCTION OPERATIONS. ANY DAMAGE TO SAID TRACKS AS A RESULT OF CONTRACTOR'S OPERATIONS SHALL BE REPAIRED BY CONTRACTOR TO THE SATISFACTION OF THE BNSF AT NO ADDITIONAL COST TO THE OWNER OR TO THE BNSF.

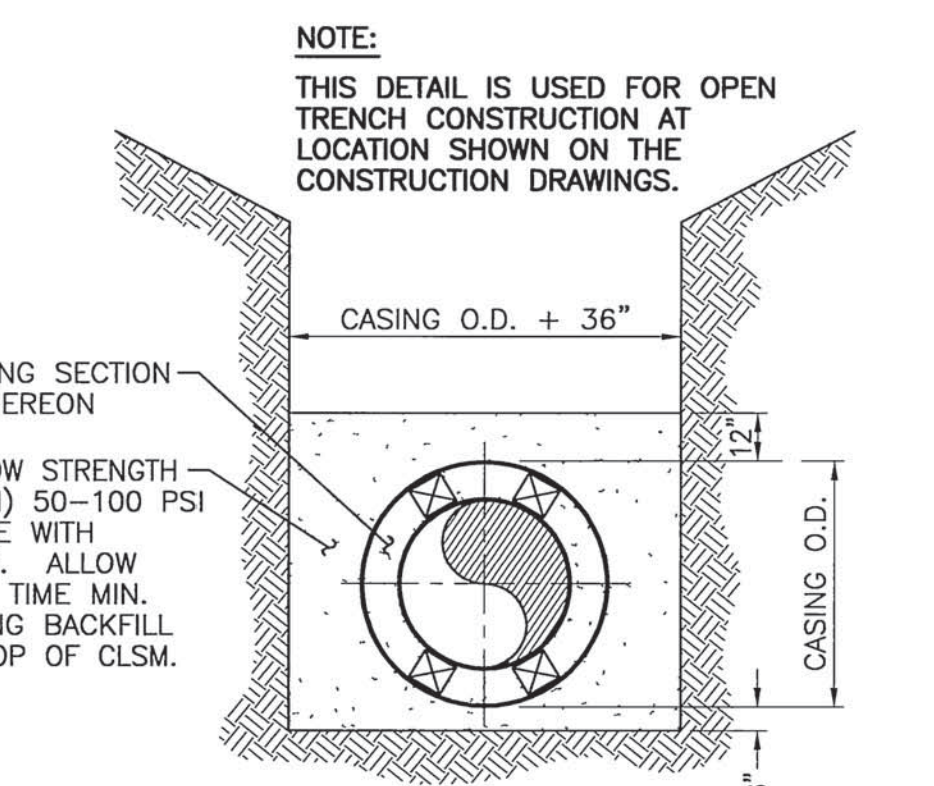
CONTRACTOR SHALL RETAIN THE SERVICES OF A STATE OF CALIFORNIA LICENSED LAND SURVEYOR TO PERFORM ALL SURFACE ELEVATION MONITORING. SAID SERVICES SHALL, AS A MINIMUM, INCLUDE SETTING HUBS, NAILS WITH TINS OR OTHER TEMPORARY REFERENCE POINTS OVER THE CENTERLINE OF PIPE AT CENTERLINE OF THE TRACK, AND AT 10 FEET EACH SIDE OF THE TRACKS. THE REFERENCE POINTS SHALL BE MONITORED PRIOR TO CONSTRUCTION, DAILY AS THE BORING AND JACKING PROGRESSES AND 2 WEEKS, 6 MONTHS AND 12 MONTHS AFTER BORING AND JACKING IS COMPLETE.

A LETTER REPORT FROM THE SURVEYOR SHALL BE SUBMITTED TO BNSF STATING METHODOLOGY AND MONITORING RESULTS, WITHIN SEVEN (7) DAYS OF THE COMPLETION OF THE PIPE JACKING. THE REPORT SHALL BE SENT TO GREG ROUSSEAU OF BNSF AT 740 EAST CARNEGIE DRIVE, SAN BERNARDINO, CALIFORNIA.

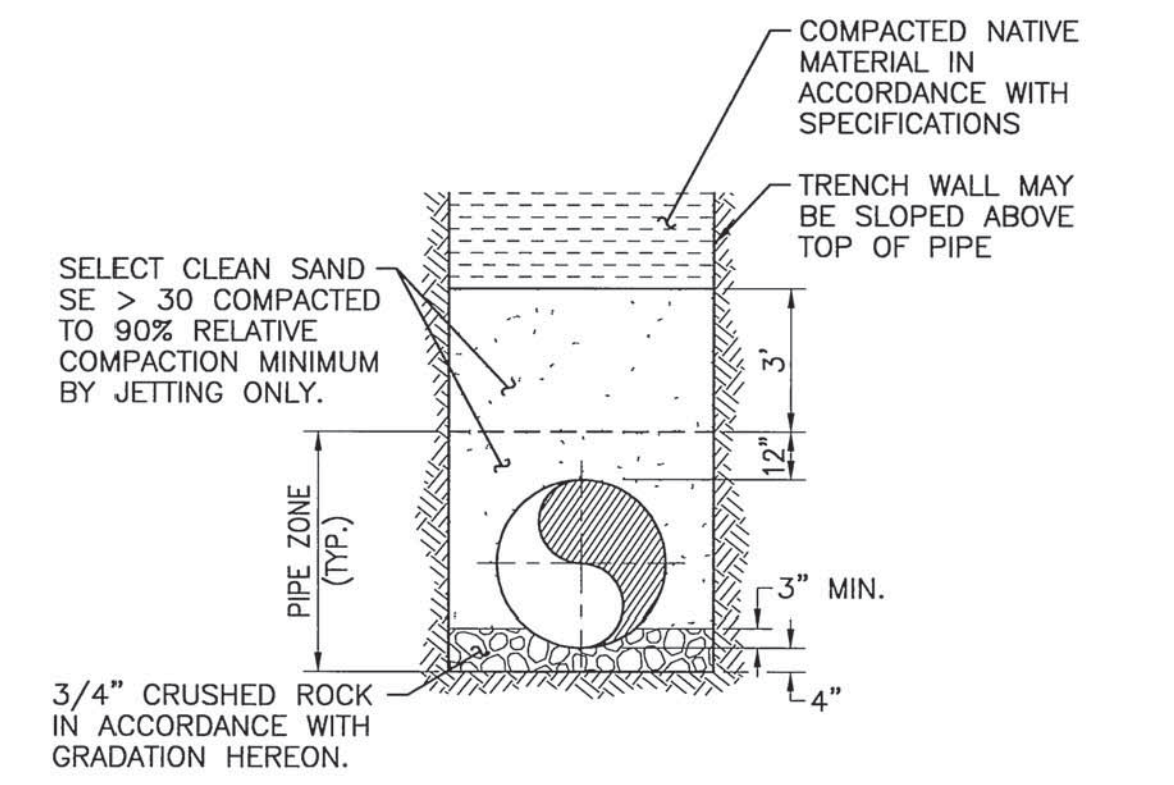
8. A SAFETY ORIENTATION COURSE SHALL BE COMPLETED BY ALL WORKERS PRIOR TO ENTERING RAILROAD PROPERTY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONDUCT THE SAFETY TRAINING AND IMPLEMENTATION OF A SAFETY PROGRAM FOR ITS EMPLOYEES. TRAINING MATERIALS ARE AVAILABLE ON THE WEB SITE: www.contractororientation.com. THE CONTRACTOR MUST COMPLY WITH ALL FEDERAL, STATE AND LOCAL SAFETY REGULATIONS.

DEPARTMENT OF WATER RESOURCES GENERAL NOTES

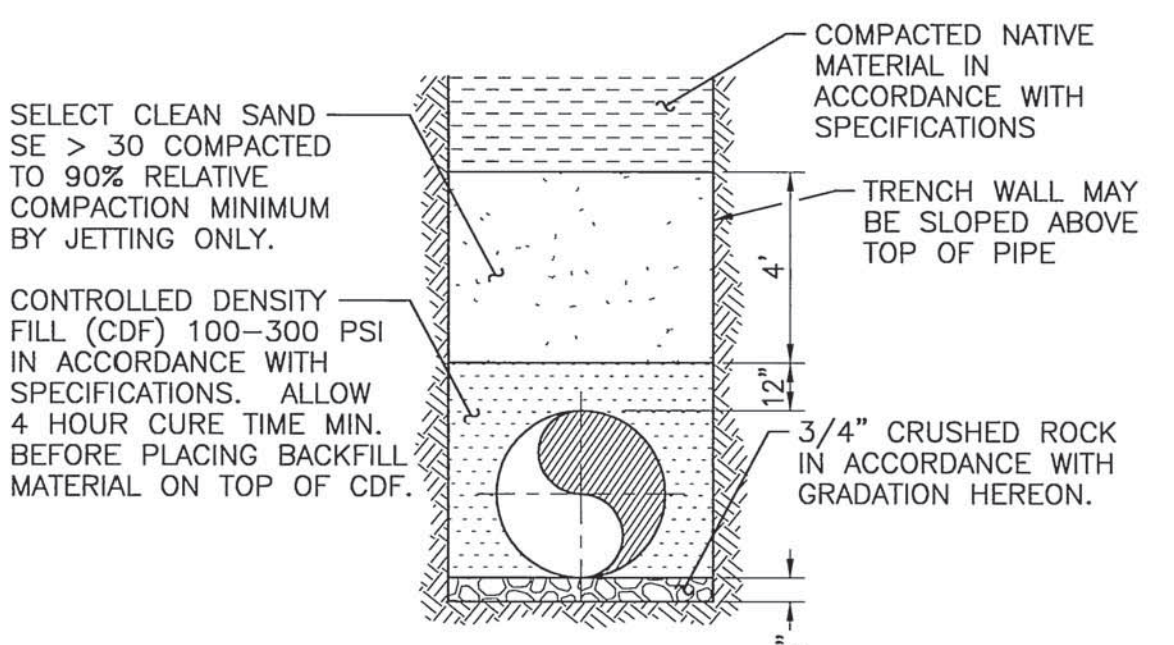
- A SEVEN (7) DAY ADVANCE NOTIFICATION IS REQUIRED PRIOR TO STARTING WORK WITHIN DEPARTMENT OF WATER RESOURCES RIGHT-OF-WAY. CONTACT THE DEPARTMENT OF WATER RESOURCES, DIVISION OF ENGINEERING, ENCROACHMENT PERMIT SECTION, SACRAMENTO, CALIFORNIA AT (800) 600-4397. THE SOUTHERN FIELD DIVISION SHALL BE SIMULTANEOUSLY NOTIFIED AT (661) 944-8500.
- EXCEPT AS OTHERWISE PROVIDED HEREIN, MEASURES SHALL BE TAKEN BY THE CONTRACTOR TO PROTECT IN PLACE ALL DWR FACILITIES AND APPURTENANCES, INCLUDING BUT NOT LIMITED TO COMMUNICATION AND CONTROL CABLES AND CATHODIC PROTECTION TEST STATIONS. THE PERMITEE AND CONTRACTOR WILL BE LIABLE FOR ALL DAMAGES TO DWR FACILITIES AND APPURTENANCES AS A RESULT OF THE CONSTRUCTION, AND FOR ANY OTHER DAMAGES OR LOSSES SUFFERED BY DWR OR ITS WATER CONTRACTORS, INCLUDING POWER, IRRIGATION, MUNICIPAL AND INDUSTRIAL WATER SUPPLY, AND COMMUNICATION LOSSES.
- COMMUNICATION AND CONTROL CABLES CONNECTED WITH THE OPERATION OF THE STATE WATER PROJECT ARE BURIED ALONG EITHER OR BOTH SIDES OF THE AQUEDUCT/PIPELINE WITHIN DEPARTMENT OF WATER RESOURCES RIGHT-OF-WAY, AS APPROXIMATELY DEPICTED ON THE DRAWING. PRIOR TO ANY EXCAVATION IN THIS AREA, THE CABLE(S) SHALL BE LOCATED AND EXPOSED BY POTHOLES IN THE PRESENCE OF A DEPARTMENT OF WATER RESOURCES FIELD DIVISION REPRESENTATIVE. CALL SOUTHERN FIELD DIVISION AT (661) 944-8500 AT LEAST SEVEN (7) DAYS IN ADVANCE FOR AN APPOINTMENT. ALL EXCAVATIONS WITHIN THREE (3) FEET OF THE CABLE(S) SHALL BE DONE USING HAND-HELD TOOLS ONLY.
- ENDS OF CASING PIPES SHALL BE SEALED WITH CASING END SEALS (LINK-SEAL OR DWR APPROVED EQUAL). THE CASING SEAL SHALL BE TESTED IN THE PRESENCE OF A DWR INSPECTOR TO VERIFY IT IS SEALED.
- DWR'S ONGOING OPERATIONS AND MAINTENANCE ACTIVITIES SHALL NOT BE DISRUPTED DURING CONSTRUCTION.
- ALL TRENCH EXCAVATION SHALL COMPLY WITH THE MOST CURRENT OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION STANDARDS. TRENCH BACKFILL SHALL BE PLACED IN NO GREATER THAN 4 INCH LIFTS, IF HAND COMPACTED, OR NO GREATER THAN 8 INCH LIFTS, IF POWER COMPACTED. TRENCH BACKFILL WITHIN DEPARTMENT OF WATER RESOURCES RIGHT-OF-WAY SHALL BE COMPACTED TO 95% RELATIVE COMPACTION (ASTM D1557).
- CONTRACTOR SHALL SUBMIT TO OWNER A LIST OF CONSTRUCTION EQUIPMENT IN EXCESS OF AASHTO H-20 LOADING, PROPOSED TO BE USED OVER DWR'S SANTA ANA PIPELINE, AT LEAST 30 DAYS PRIOR TO COMMENCING WORK WITHIN DWR'S RIGHT-OF-WAY. OWNER WILL PROVIDE COPY OF THE EQUIPMENT LIST FURNISHED BY CONTRACTOR TO DWR FOR REVIEW AND WRITTEN APPROVAL. CONTRACTOR SHALL SATISFY ALL DWR EQUIPMENT RESTRICTIONS PRIOR TO COMMENCING ANY WORK NEAR DWR FACILITIES.
- STAGING AND STORAGE OF SPOIL MATERIAL IS NOT ALLOWED WITHIN DWR'S RIGHT-OF-WAY.



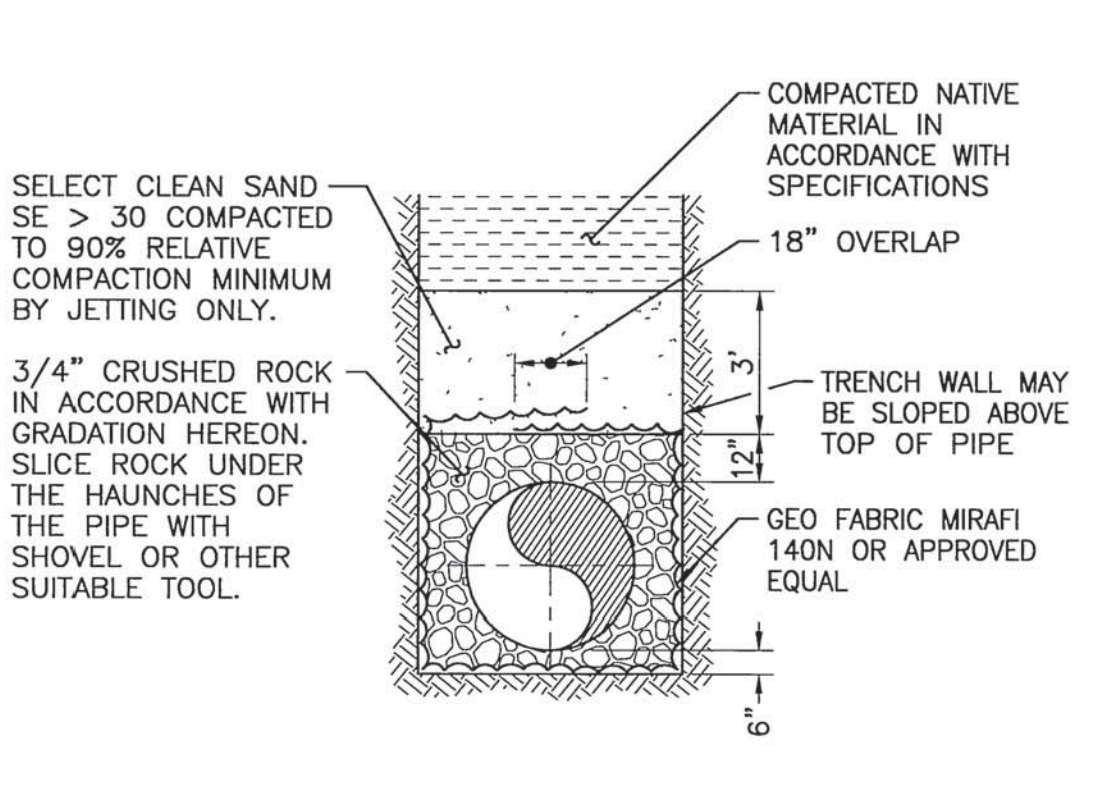
OPEN TRENCH/CASING DETAIL
STATION 143+70±
NOT TO SCALE



1.5 LOAD FACTOR
N.T.S.



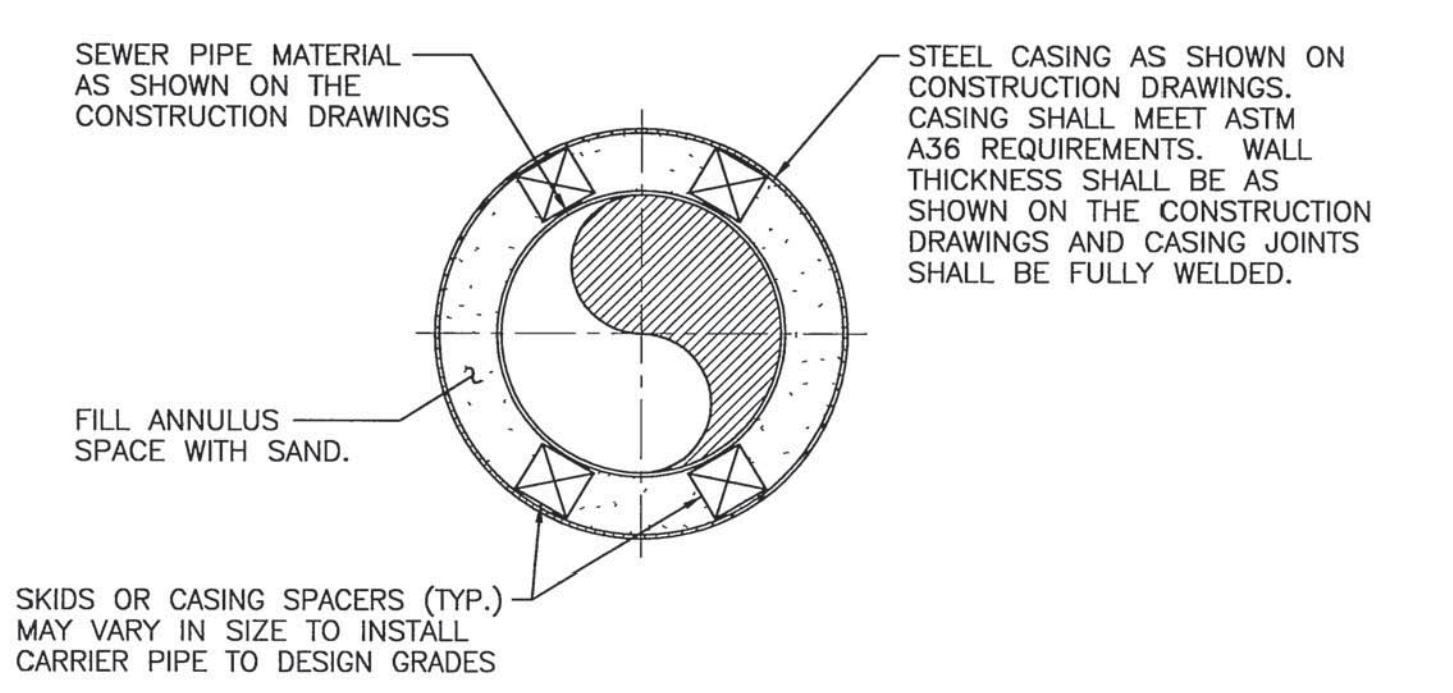
2.8 LOAD FACTOR
N.T.S.



2.2 LOAD FACTOR
N.T.S.

3/4" CRUSHED ROCK BACKFILL GRADATION

SIEVE	% PASSING
1"	100%
3/4"	90%-100%
1/2"	55%-90%
3/8"	20%-55%
No.4	0%-10%
No.8	-

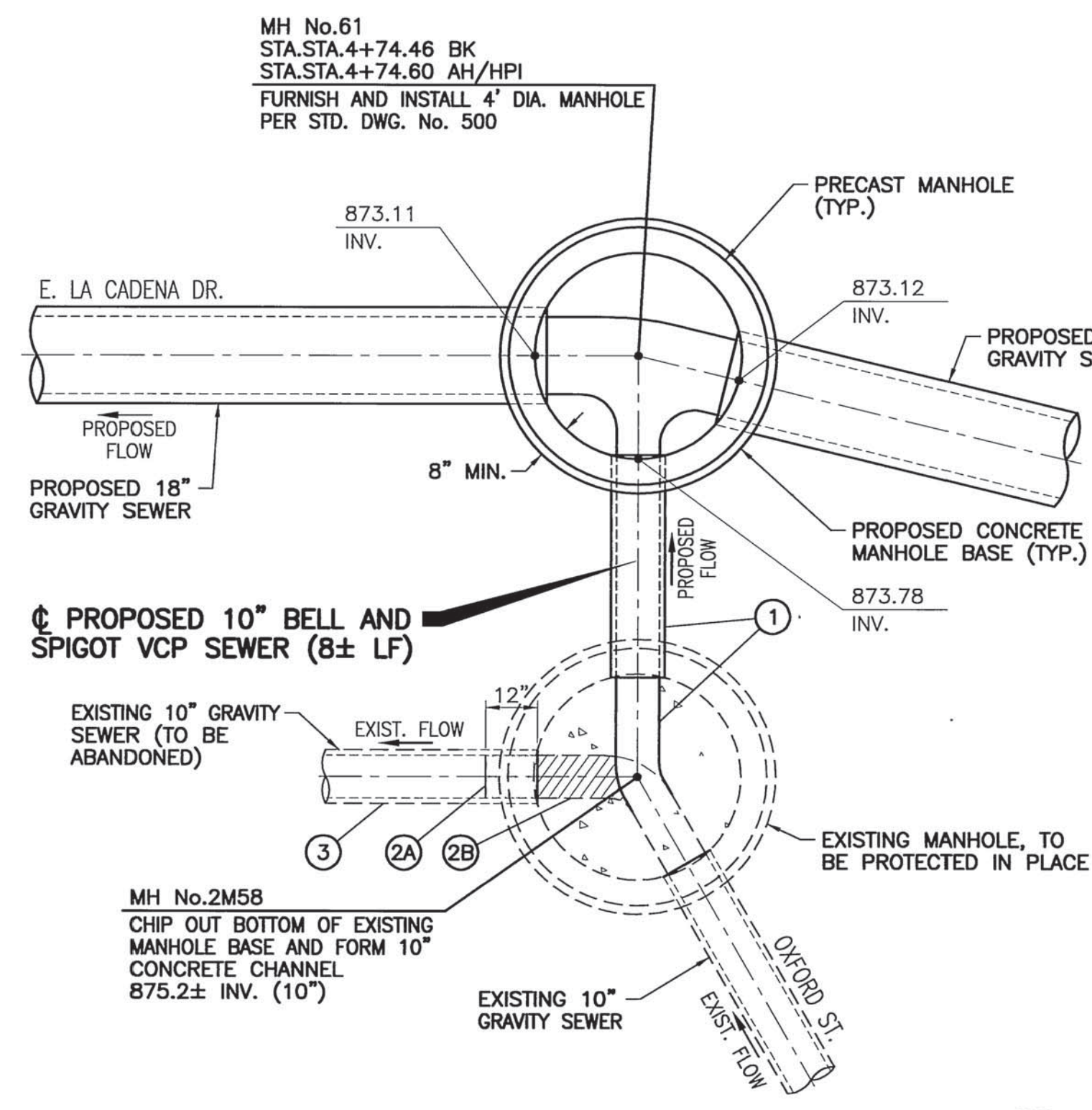


- NOTES:**
- CONTRACTOR SHALL SUBMIT FOR OWNER APPROVAL THE CASING SIZE, MATERIAL SPECIFICATIONS ALONG WITH CARRIER PIPE MANUFACTURER'S RECOMMENDATIONS FOR SKID OR CASING SPACER, AND METHOD OF INSTALLATION.
 - UNLESS OTHERWISE NOTED, CONTRACTOR SHALL BORE AND JACK CASING (AS LOCATED ON CONSTRUCTION DRAWINGS) IN ACCORDANCE WITH SPECIAL REQUIREMENTS SECTION OF THE SPECIFICATIONS. ANY VOIDS CREATED BY BORING AND JACKING SHALL BE FILLED BY PRESSURE GROUTING. FITTINGS FOR PRESSURE GROUTING VOIDS CREATED BY BORING SHALL BE PLACED EVERY 8' ALONG THE CASING. VOIDS SHALL BE GROUTED PRIOR TO INSTALLING THE NEXT SECTION OF CASING. ALL GROUTING SHALL BE COMPLETED AND THE OPEN ENDS OF THE CASING SHALL BE CAPPED AT THE END OF EACH WORK DAY.
 - ENDS OF THE CASING PIPE SHALL BE CLOSED AROUND THE CARRIER PIPE WITH A RUBBER END SEAL.
 - THE STEEL CASING THICKNESS SPECIFIED IS REQUIRED FOR THE CASING IN PLACE AND DOES NOT ACCOUNT FOR CONSTRUCTION LOADS. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE STRUCTURAL INTEGRITY OF THE CASING DURING CONSTRUCTION, AND THE METHOD OF INSTALLATION.
 - THE HORIZONTAL AND VERTICAL AS-BUILT LOCATION OF THE CASING PIPE SHALL BE IN ACCORDANCE WITH THE SPECIAL REQUIREMENTS SECTION OF THE SPECIFICATIONS AND SHALL BE APPROVED BY THE OWNER PRIOR TO INSTALLATION OF THE CARRIER PIPE.
 - CARRIER PIPE SHALL BE TESTED PRIOR TO FILLING ANNULUS SPACE.

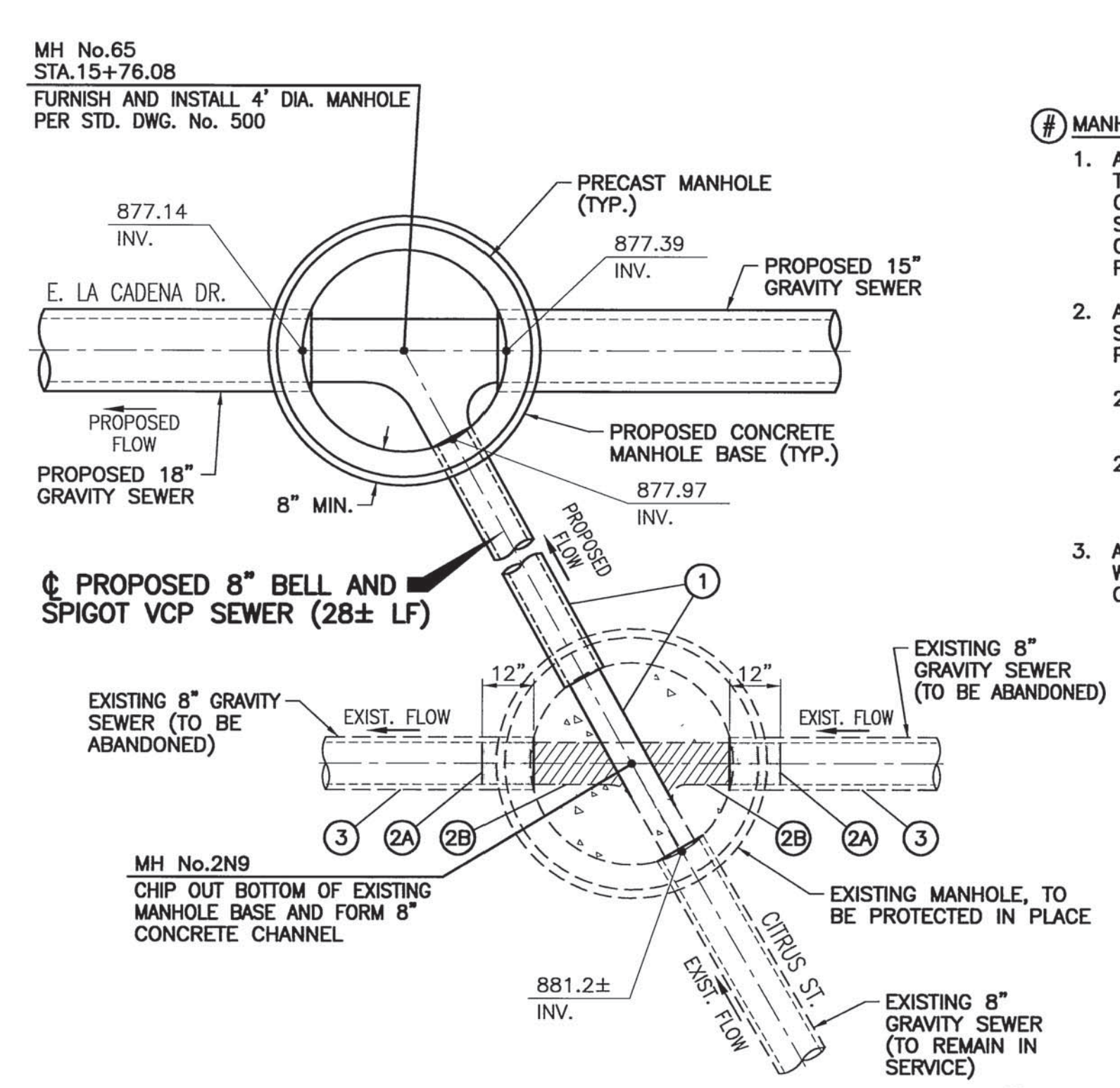
CASING SECTION DETAIL

NOT TO SCALE

OPEN TRENCH PIPE BEDDING DETAILS



MANHOLE CONNECTION AT STA.4+24.46
SCALE: 3/8"=1'-0"



MANHOLE CONNECTION AT STA.15+76.08
SCALE: 3/8"=1'-0"

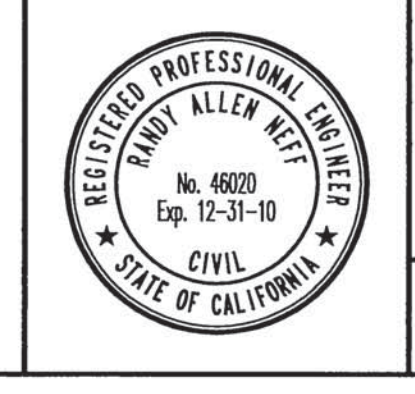
- MANHOLE CONNECTION NOTES:**
- AFTER PROPOSED SEWER IS INSTALLED, TESTED, AND ACCEPTED BY OWNER, CONTRACTOR SHALL BYPASS EXISTING SEWER FLOW, CONSTRUCT MANHOLE CHANNELS, AND INSTALL CONNECTION PIPING.
 - AFTER EXISTING SEWER LATERALS AND SEWER MAINS ARE CONNECTED TO THE PROPOSED SEWER:
 - INSTALL 12" LONG BRICK AND MORTAR PLUG
 - FILL EXISTING MANHOLE CHANNELS TO BE ABANDONED WITH CONCRETE.
 - ABANDON EXISTING SEWERS IN ACCORDANCE WITH THE SPECIAL REQUIREMENTS SECTION OF THE SPECIFICATIONS.

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

48 hours BEFORE excavation
1-800-227-2600
CALL Underground Service Alert

NOTE:
WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT PERMIT AND/OR A GRADING PERMIT HAS BEEN ISSUED.

THIS SHEET NOT TO BE SIGNED BY THE COUNTY



KRIEGER & STEWART INCORPORATED
3602 University Ave. - Riverside, CA. 92501 - 951-684-6900

APPROVED BY: *R. J. A. Nell*
REGISTERED ENGINEER No. 46020 DATE 01/05/10

MARK	REVISIONS	APPR.	DATE

DESIGNED BY: *RW* DRAWN BY: *PLD* CHECKED BY: *PLW*

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY: *[Signature]*
CITY ENGINEER
DATE: 2/14/10

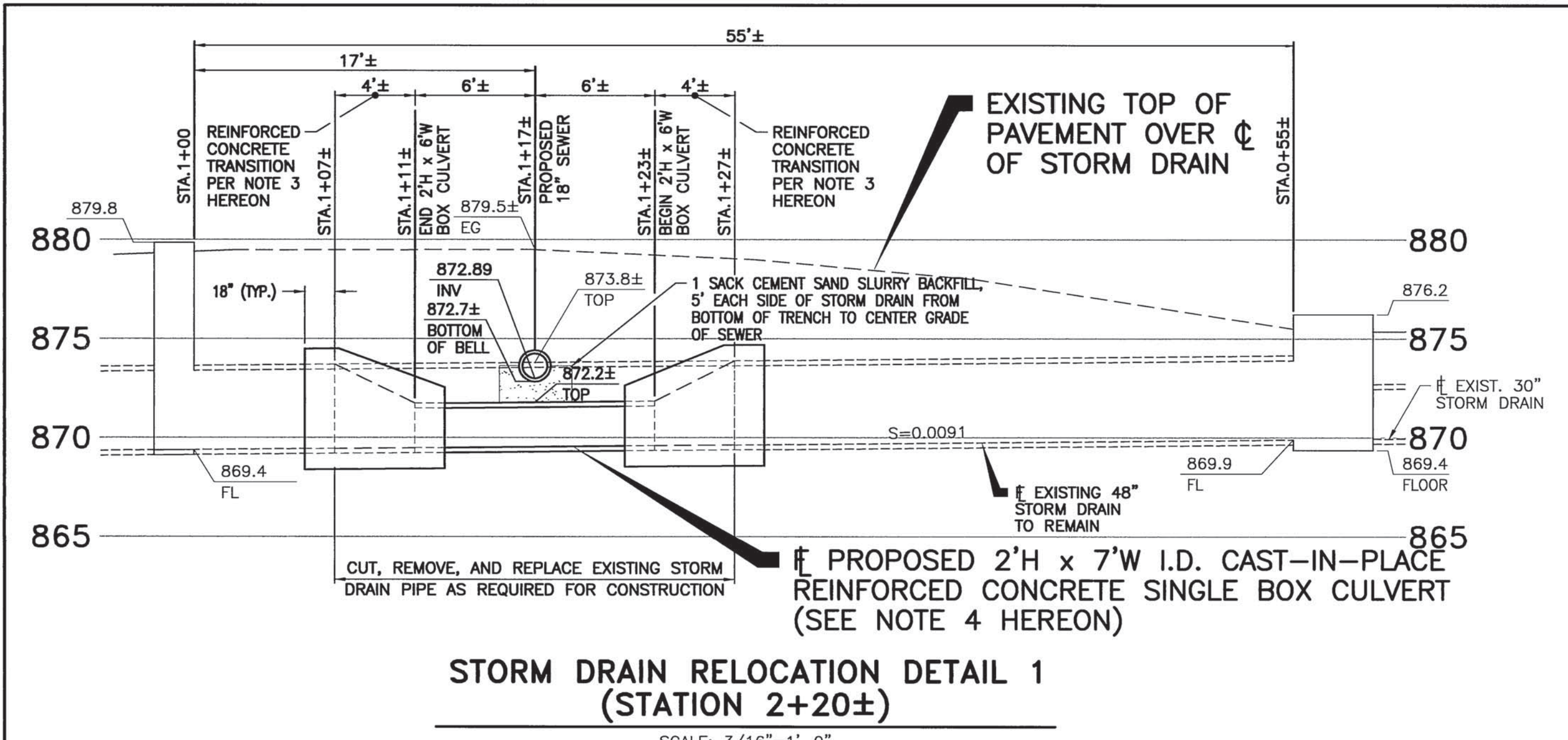
SEWER IMPROVEMENT PLAN
COMMUNITY OF HIGHGROVE CENTER STREET TRUNK SEWER

GENERAL CONSTRUCTION NOTES AND DETAILS

HORIZ. SCALE: N.T.S. VERT. SCALE: N.T.S.

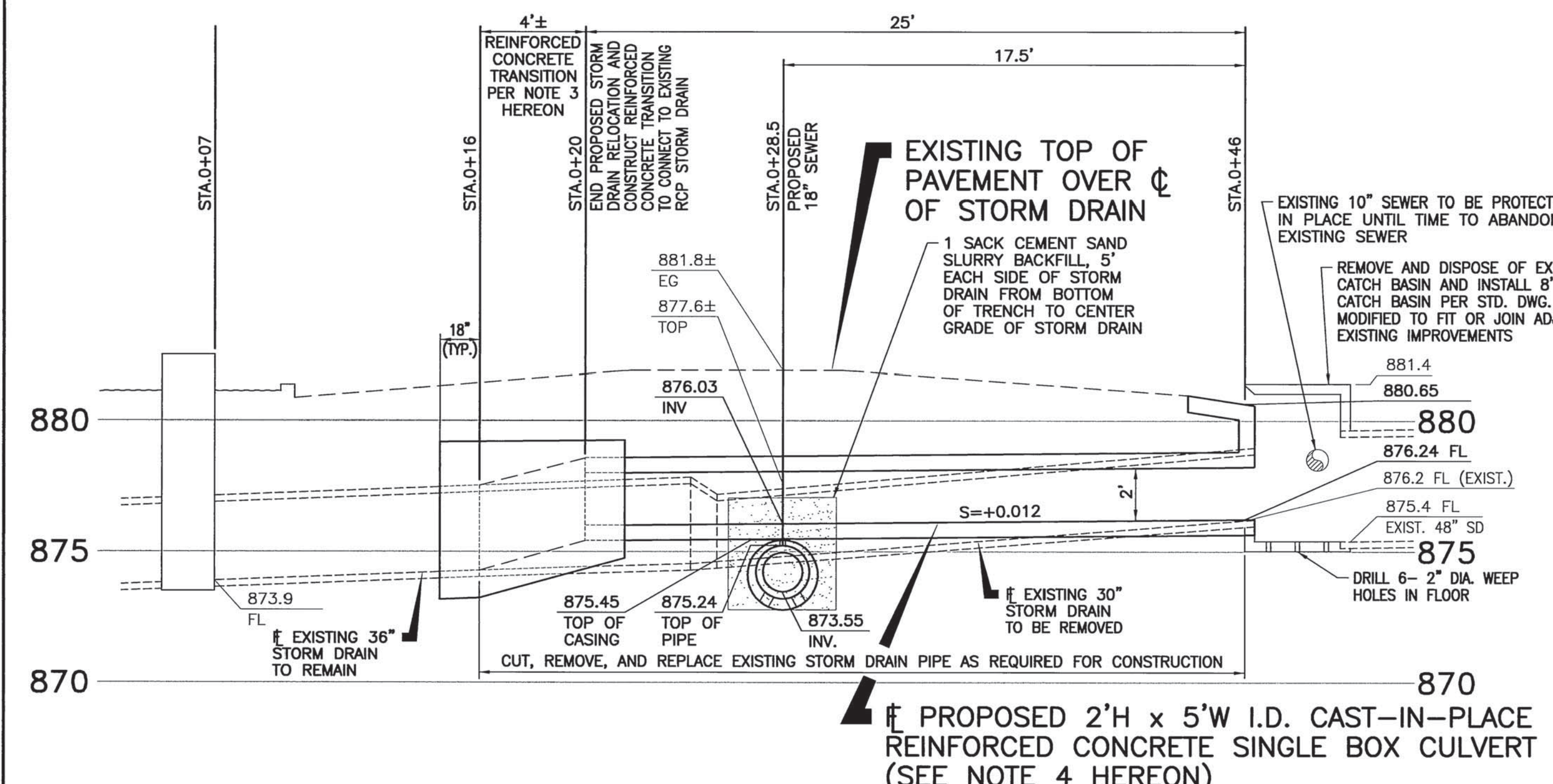
ACCT. No. W.D. No.
S-2075
SHEET 2 OF 18
FILE NO.:

DWG. NO.: 807-3762 FILE NO.: 807-3762 DATE: 12/23/09 PLOT DATE: 12/24/09 PLOT SCALE: 1"=1'



**STORM DRAIN RELOCATION DETAIL 1
(STATION 2+20±)**

SCALE: 3/16"=1'-0"



**STORM DRAIN RELOCATION DETAIL 2
(STATION 8+38±)**

SCALE: 1/4"=1'-0"

- NOTES:**
- CONTRACTOR SHALL FOLLOW THE CONSTRUCTION SEQUENCE AND ABANDONMENT PROCEDURES IN ACCORDANCE WITH THE SPECIFICATIONS.
 - INSTALL 18" BELL AND SPIGOT VCP CARRIER PIPE INSIDE CASING. REFER TO SHEET 2 FOR CASING DETAIL.
 - REINFORCED CONCRETE TRANSITION.
 - #5 REINFORCING BAR @ 12" O.C. EACH FACE EACH WAY.
 - CONCRETE SHALL BE 4,000 PSI MINIMUM.
 - THE CONCRETE TRANSITION WALL THICKNESS SHALL BE 10" MINIMUM AND SHALL OVERLAP EXISTING AND PROPOSED PIPE BY 1.5' MINIMUM.
 - THE INTERIOR TRANSITION SURFACE SHALL BE SMOOTH AND VARY UNIFORMLY BETWEEN THE EXISTING AND PROPOSED INVERTS.
 - CAST-IN-PLACE REINFORCED CONCRETE SINGLE BOX CULVERT IN ACCORDANCE WITH STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD DRAWINGS D80A AND D80B INCLUDED IN THE SPECIFICATIONS (4,000 PSI MINIMUM CONCRETE, AASHTO HS-20 TRAFFIC LOADS, MINIMUM).

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

0 1"

48 hours BEFORE excavation
1-800-227-2600
CALL Underground Service Alert

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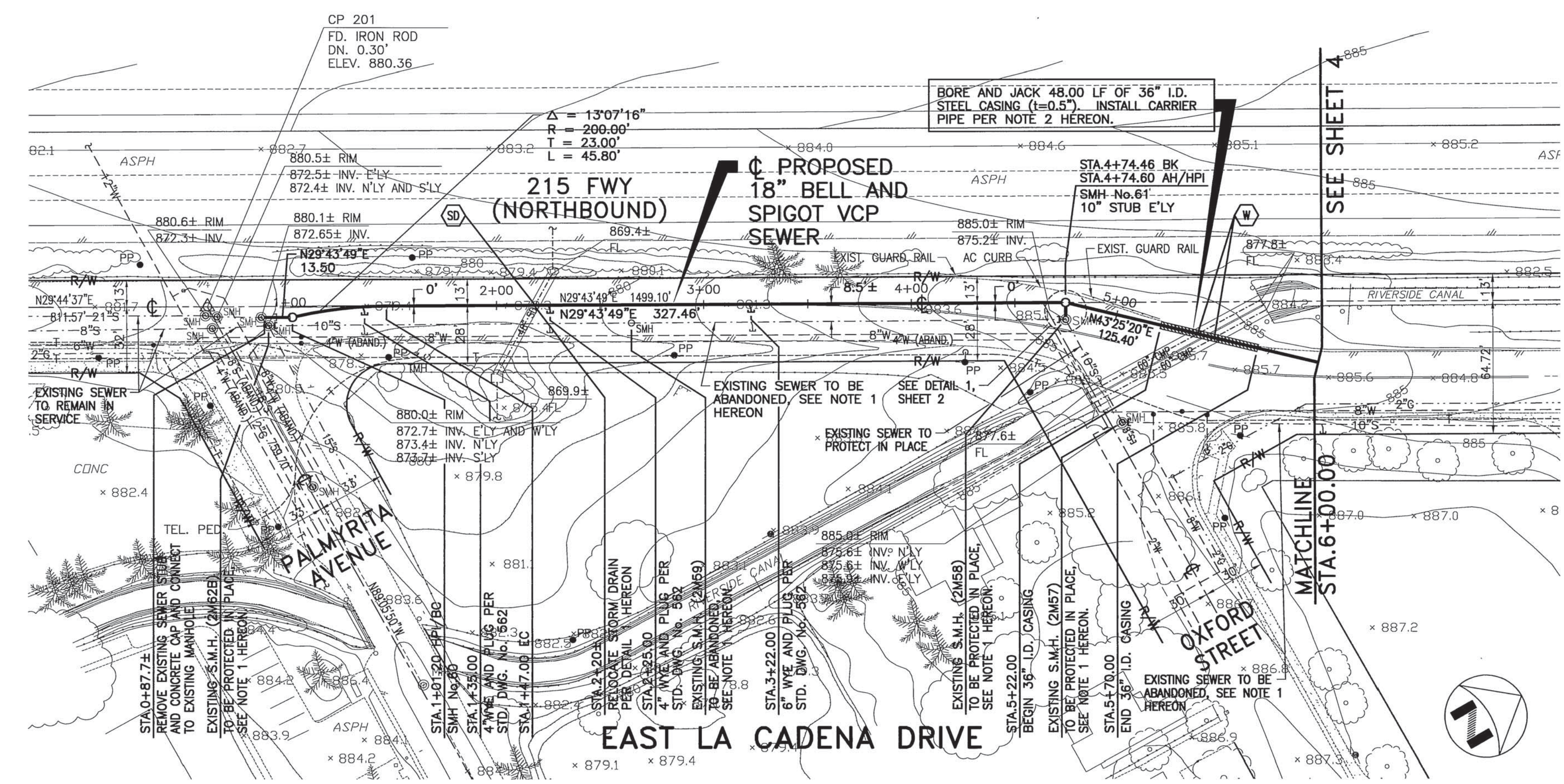
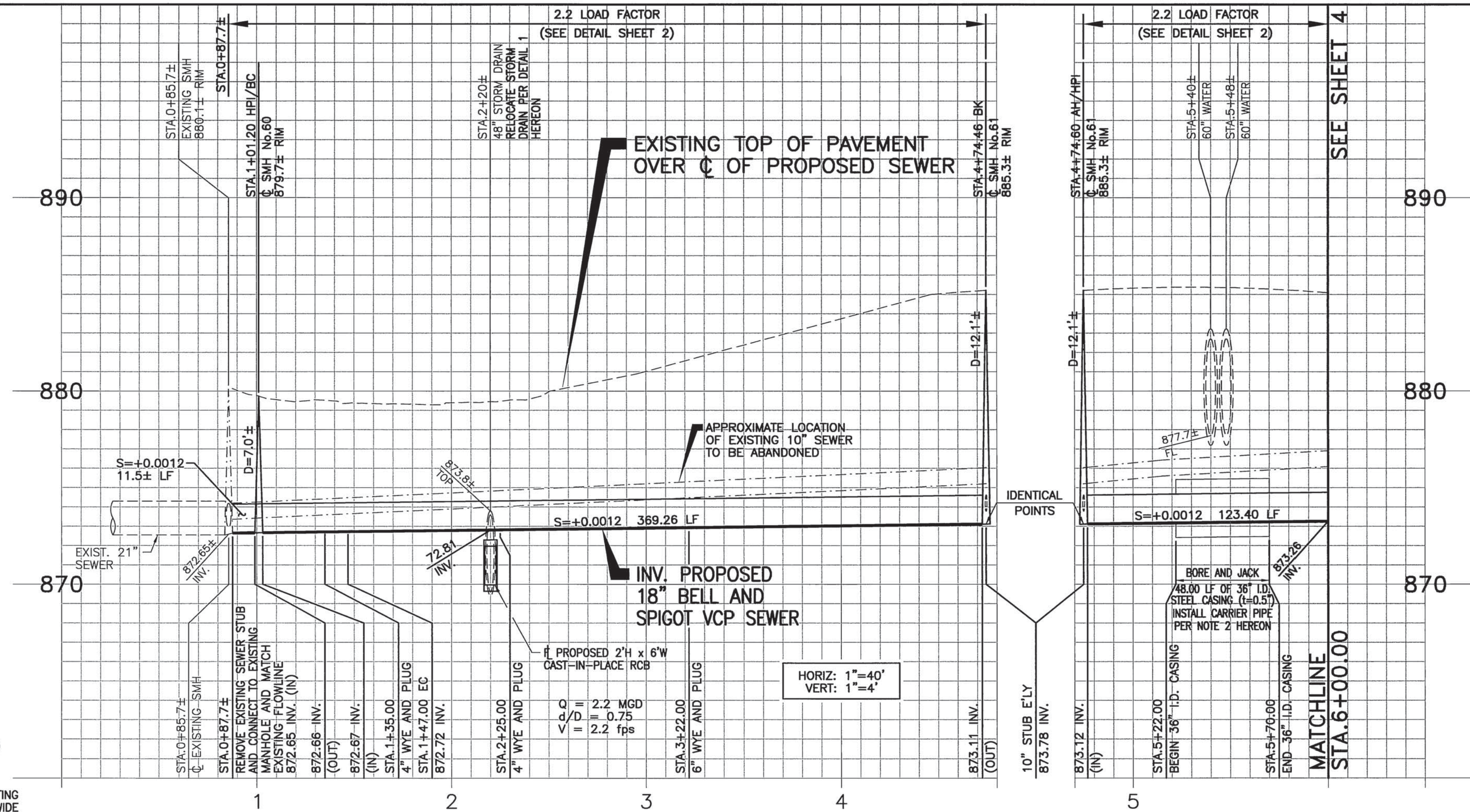
THE PRIVATE ENGINEER SIGNING THESE PLANS IS RESPONSIBLE FOR ASSURING THE ACCURACY AND ACCEPTABILITY OF THE DESIGN HEREON. IN THE EVENT OF DISCREPANCIES ARISING AFTER COUNTY APPROVAL OR DURING CONSTRUCTION, THE PRIVATE ENGINEER SHALL BE RESPONSIBLE FOR DETERMINING AN ACCEPTABLE SOLUTION AND REVISIONS TO THE PLANS FOR APPROVAL BY THE COUNTY.

THIS SHEET NOT TO BE SIGNED BY THE COUNTY



KRIEGER & STEWART INCORPORATED
3602 University Ave. • Riverside, CA 92501 • 951-884-8900

APPROVED BY *Ricky A. Neff*
REGISTERED ENGINEER No. 46020 DATE 01/05/10



**CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT**

APPROVED BY:	BY:	DATE:	APPROVED BY:
INSPECTION	PH	1/5/10	<i>[Signature]</i>
SURVEYOR	MS	1/12/10	CITY ENGINEER
TRAFFIC DIVISION	EL	2-3-10	DATE: 2/4/10
SEWER	PA	1/13/10	

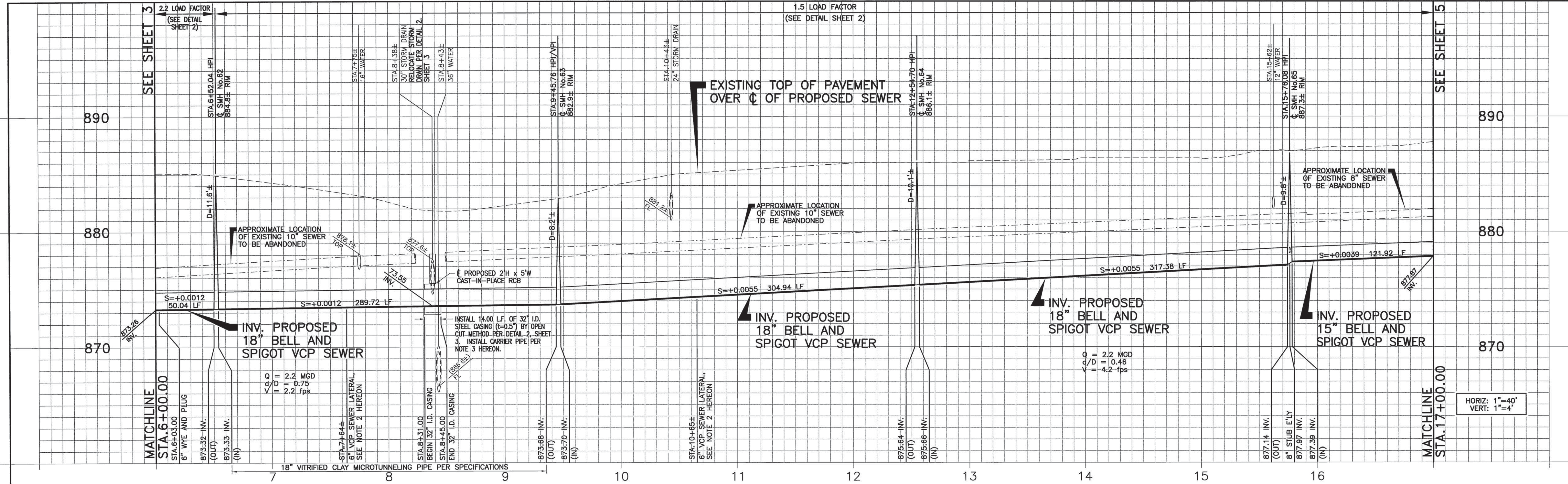
**SEWER IMPROVEMENT PLAN
COMMUNITY OF HIGHGROVE CENTER STREET TRUNK SEWER
EAST LA CADENA DRIVE**

PLAN AND PROFILE STA.0+87.7± TO STA.4+74.6 BK
STA.4+74.60 AH TO STA.6+00.00

HORIZ. SCALE: 1"=40'
VERT. SCALE: 1"=4'

ACCT. No. W.O. No. S-2075
SHEET 3 OF 18
FILE NO.:

DWG. NO.: 807-3753 FILE NO.: 807-37 UPDATE BY: JGS PROJ. ENG.: BRN PLOT DATE: 01/04/10 PLOT TIME: 3:05PM PLOT SCALE: 1"=1'



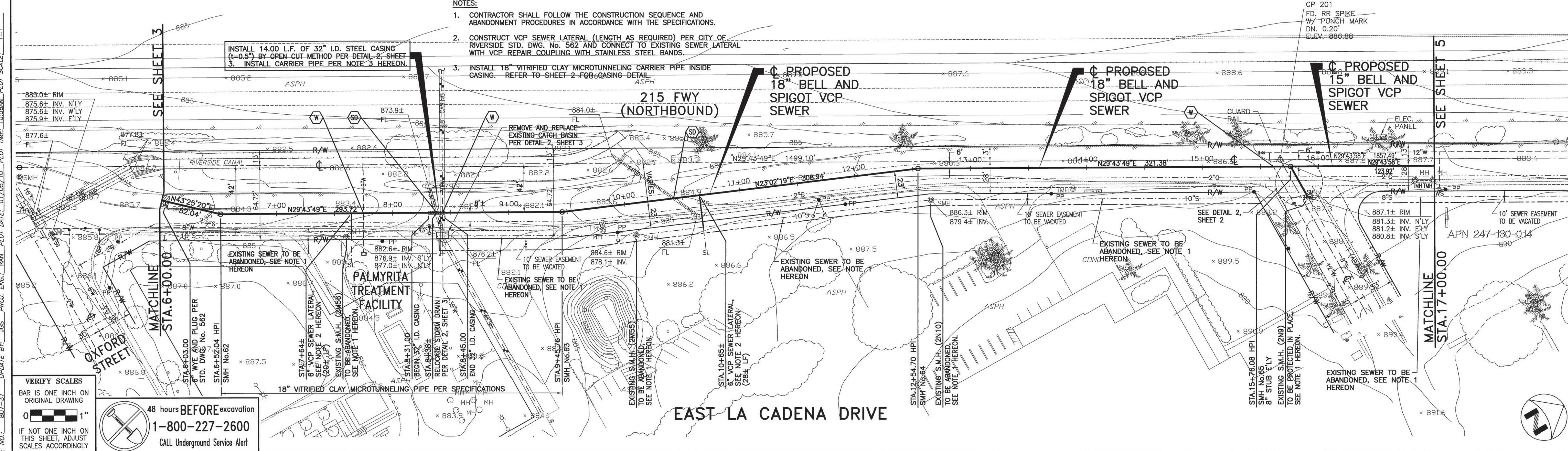
Q = 2.2 MGD
 C/D = 0.75
 V = 2.2 fps

Q = 2.2 MGD
 C/D = 0.46
 V = 4.2 fps

HORIZ: 1"=40'
 VERT: 1"=4'

- NOTES:
- CONTRACTOR SHALL FOLLOW THE CONSTRUCTION SEQUENCE AND ABANDONMENT PROCEDURES IN ACCORDANCE WITH THE SPECIFICATIONS.
 - CONSTRUCT VCP SEWER LATERAL (LENGTH AS REQUIRED) PER CITY OF RIVERSIDE STD. DWG. No. 562 AND CONNECT TO EXISTING SEWER LATERAL WITH VCP REPAIR COUPLING WITH STAINLESS STEEL BANDS.
 - INSTALL 18" VITRIFIED CLAY MICROTUNNELING CARRIER PIPE INSIDE CASING. REFER TO SHEET 2 FOR CASING DETAIL.

INSTALL 14.00 L.F. OF 32" I.D. STEEL CASING (t=0.5") BY OPEN CUT METHOD PER DETAIL 2, SHEET 3. INSTALL CARRIER PIPE PER NOTE 3 HEREON.



VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 0 1"
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

48 hours BEFORE excavation
 1-800-227-2600
 CALL Underground Service Alert

NOTE:
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THE PRIVATE ENGINEER SIGNING THESE PLANS IS RESPONSIBLE FOR ASSURING THE ACCURACY AND ACCEPTABILITY OF THE DESIGN HEREON. IN THE EVENT OF DISCREPANCIES ARISING AFTER COUNTY APPROVAL OR DURING CONSTRUCTION, THE PRIVATE ENGINEER SHALL BE RESPONSIBLE FOR DETERMINING AN ACCEPTABLE SOLUTION AND REVISING THE PLANS FOR APPROVAL BY THE COUNTY.

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KRIEGER & STEWART INCORPORATED
 3602 University Ave • Riverside, CA. 92501 • 951-684-6900

APPROVED BY: *Randy A. Neff*
 REGISTERED ENGINEER No. 46020 DATE 01/05/10

MARK	REVISIONS	APPR.	DATE

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY:	BY:	DATE:	APPROVED BY:
PH	PH	1/11/10	<i>[Signature]</i>
INSPECTION	48	2/3/10	
SURVEYOR			
TRAFFIC DIVISION		2-3-10	
		2/11/10	

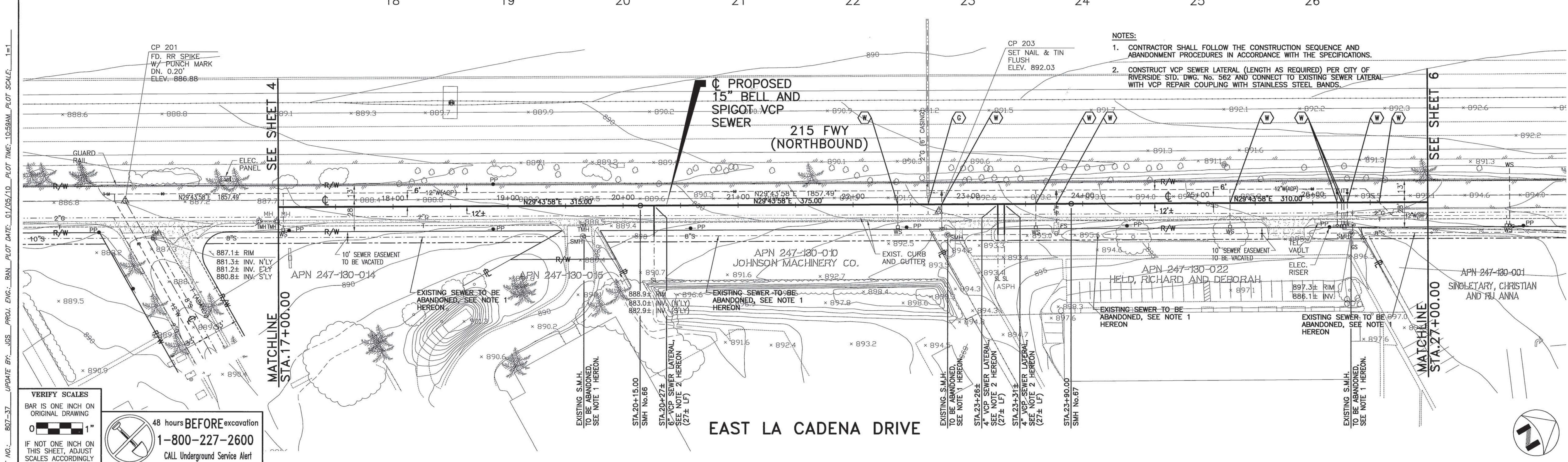
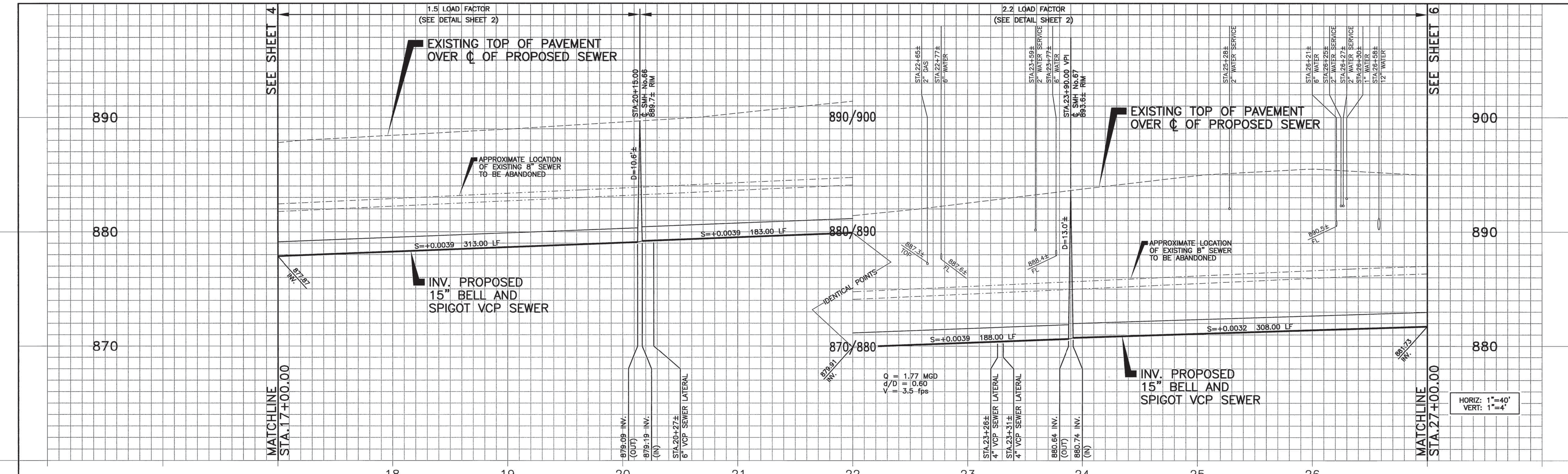
DATE: 2/4/10

SEWER IMPROVEMENT PLAN
 COMMUNITY OF HIGHGROVE CENTER STREET TRUNK SEWER
EAST LA CADENA DRIVE
PLAN AND PROFILE
 STA.6+00.00 TO STA.17+00.00

ACCT. No. W.O. No. **S-2075**
 SHEET 4 OF 18

HORIZ. SCALE: 1"=40' VERT. SCALE: 1"=4' FILE NO.:

DWG. NO.: 807-3764 UPDATE BY: JGS_PROJ. ENG.: RAN_PLOT DATE: 01/05/10_PLOT TIME: 10:58AM_PLOT SCALE: 1"=1'



VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
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KRIEGER & STEWART INCORPORATED
3602 University Ave. • Riverside, CA. 92501 • 951-684-6900

APPROVED BY: *Randy A. Hester*
REGISTERED ENGINEER No. 46020 DATE 01/05/10

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY:	BY:	DATE:	APPROVED BY:
PRINCIPAL ENGINEER	AB	1/2/10	<i>[Signature]</i>
INSPECTION SUPERVISOR		1/2/10	
TRAFFIC DIVISION		2-3-10	
		1/2/10	

CITY ENGINEER
DATE 2/14/10

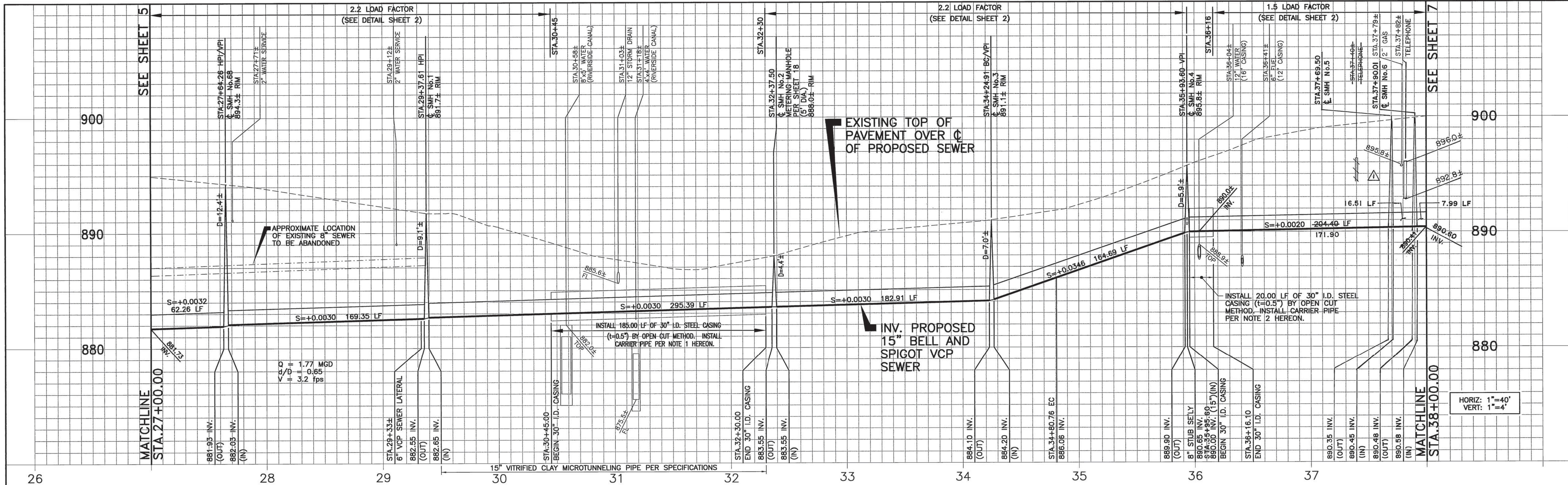
SEWER IMPROVEMENT PLAN
COMMUNITY OF HIGHGROVE CENTER STREET TRUNK SEWER
EAST LA CADENA DRIVE
PLAN AND PROFILE
STA.17+00.00 TO STA.27+00.00

HORIZ. SCALE: 1"=40' VERT. SCALE: 1"=4'

ACCT. No. W.O. No.
S-2075
SHEET 5 OF 18
FILE NO.:

DWG. NO.: 807-3785 FILE NO.: 807-37 UPDATE BY: JGS PROJ. ENG.: JGS PLAN DATE: 01/05/10 PLOT TIME: 10:59AM PLOT SCALE: 1"=1'



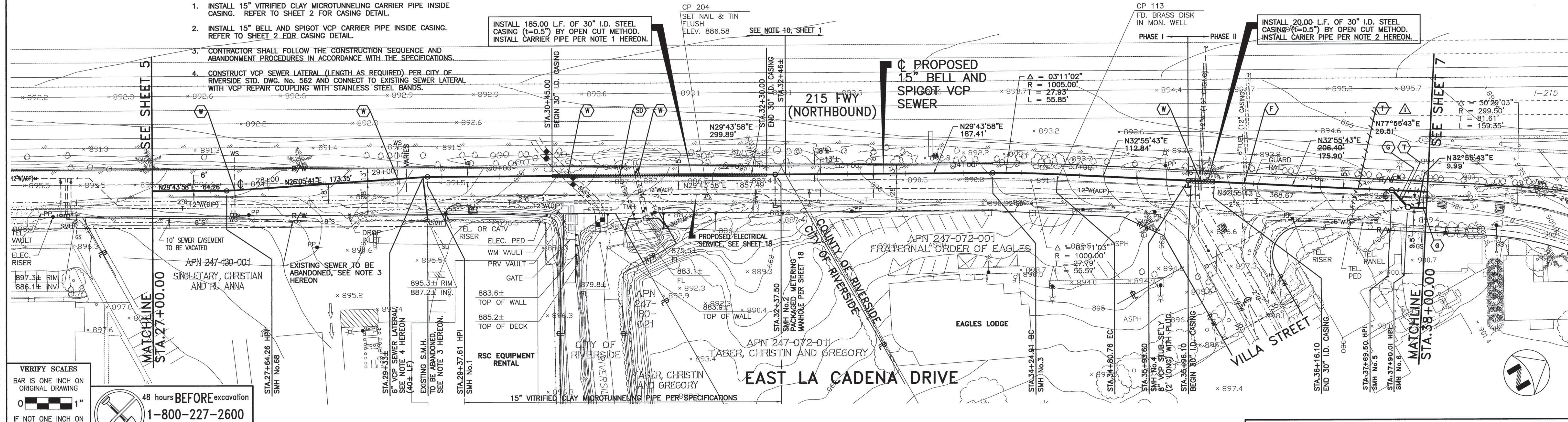


NOTES:

1. INSTALL 15" VITRIFIED CLAY MICROTUNNELING CARRIER PIPE INSIDE CASING. REFER TO SHEET 2 FOR CASING DETAIL.
2. INSTALL 15" BELL AND SPIGOT VCP CARRIER PIPE INSIDE CASING. REFER TO SHEET 2 FOR CASING DETAIL.
3. CONTRACTOR SHALL FOLLOW THE CONSTRUCTION SEQUENCE AND ABANDONMENT PROCEDURES IN ACCORDANCE WITH THE SPECIFICATIONS.
4. CONSTRUCT VCP SEWER LATERAL (LENGTH AS REQUIRED) PER CITY OF RIVERSIDE STD. DWG. No. 562 AND CONNECT TO EXISTING SEWER LATERAL WITH "VCP" REPAIR COUPLING WITH STAINLESS STEEL BANDS.

INSTALL 185.00' L.F. OF 30" I.D. STEEL CASING (t=0.5") BY OPEN CUT METHOD. INSTALL CARRIER PIPE PER NOTE 1 HEREON.

INSTALL 20.00' L.F. OF 30" I.D. STEEL CASING (t=0.5") BY OPEN CUT METHOD. INSTALL CARRIER PIPE PER NOTE 2 HEREON.

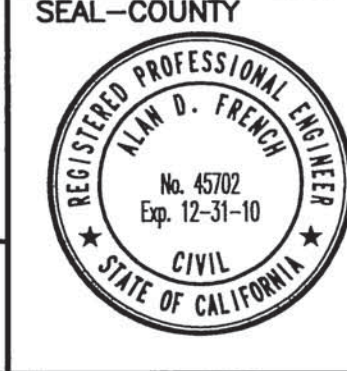


VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

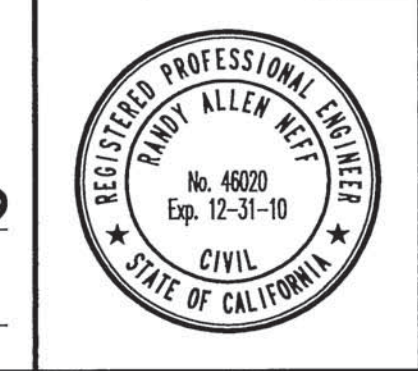
48 hours BEFORE excavation
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 CALL Underground Service Alert

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COUNTY OF RIVERSIDE
 TRANSPORTATION DEPARTMENT
 APPROVED BY: *Alan French* 2-11-10
 ALAN D. FRENCH DATE
 RECOMMENDED: *Alan French* 02-10-10
 DATE



KRIEGER & STEWART INCORPORATED
 3602 University Ave. • Riverside, CA. 92501 • 951-884-6900

APPROVED BY: *Randy A. Neff*
 REGISTERED ENGINEER No. 46020 DATE 01/05/10

MARK	REVISIONS	APPR.	DATE
Δ	REVISED SEWER ALIGNMENT AND PROFILE PER CONTRACTOR'S POTHOLE DATA	<i>[Signature]</i>	2-3-10

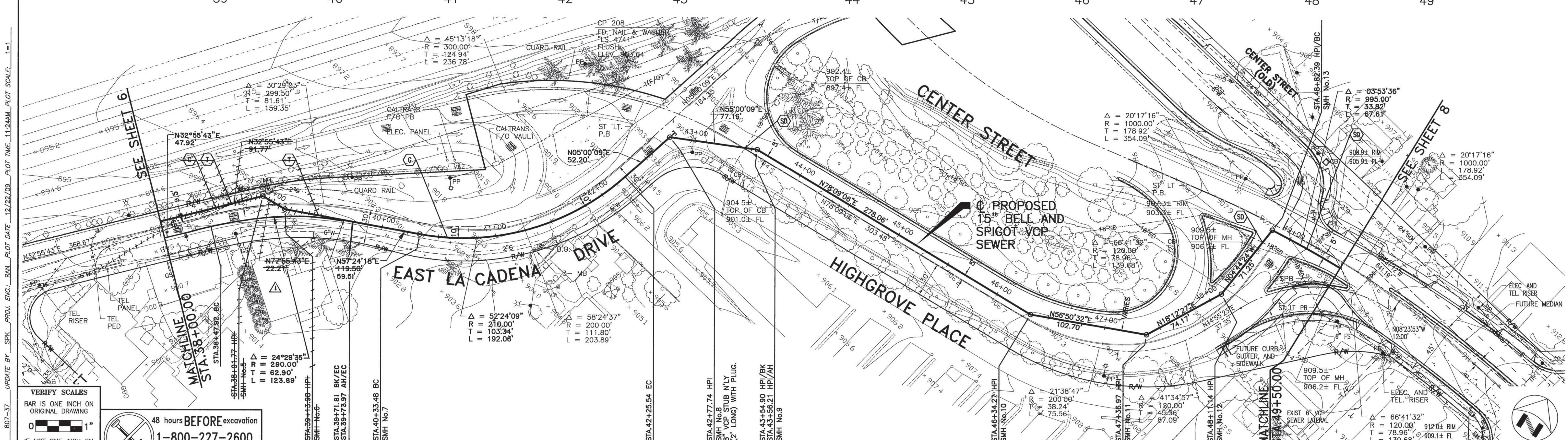
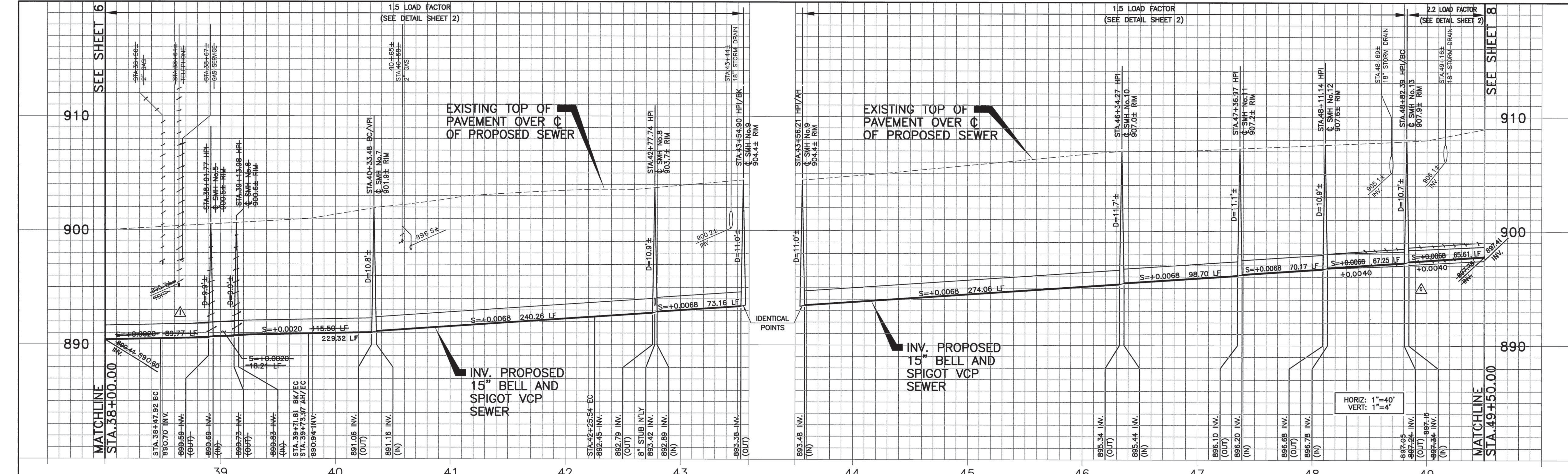
CITY OF RIVERSIDE, CALIFORNIA
 PUBLIC WORKS DEPARTMENT

APPROVED BY: *[Signature]* DATE: 2-3-10
 PRINCIPAL ENGINEER
 INSPECTION: *[Signature]* DATE: 2/3/10
 SURVEYOR
 TRAFFIC DIVISION: *[Signature]* DATE: 2/3/10

APPROVED BY: *[Signature]* DATE: 2/4/10
 CITY ENGINEER

MS 4234	IP 090075	W.O. 10-00009
SEWER IMPROVEMENT PLAN		
COMMUNITY OF HIGHGROVE CENTER STREET TRUNK SEWER		
EAST LA CADENA DRIVE		
PLAN AND PROFILE		
STA.27+00.00 TO STA.38+00.00		
HORIZ. SCALE: 1"=40'	VERT. SCALE: 1"=4'	FILE NO.:
ACCT. No. S-2075		W.O. No.
SHEET 6 OF 18		

DWG. NO.: 807-3766 FILE NO.: 807-37 UPDATE BY: JGS PROJ. ENG.: RAN PLOT DATE: 01/04/10 PLOT TIME: 3:10PM PLOT SCALE: 1"=1'



VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

48 hours BEFORE excavation
1-800-227-2600
CALL Underground Service Alert

NOTE:
WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT PERMIT AND/OR A GRADING PERMIT HAS BEEN ISSUED.

SEAL-COUNTY
REGISTERED PROFESSIONAL ENGINEER
ALAN D. FRENCH
No. 45702
Exp. 12-31-10
CIVIL
STATE OF CALIFORNIA

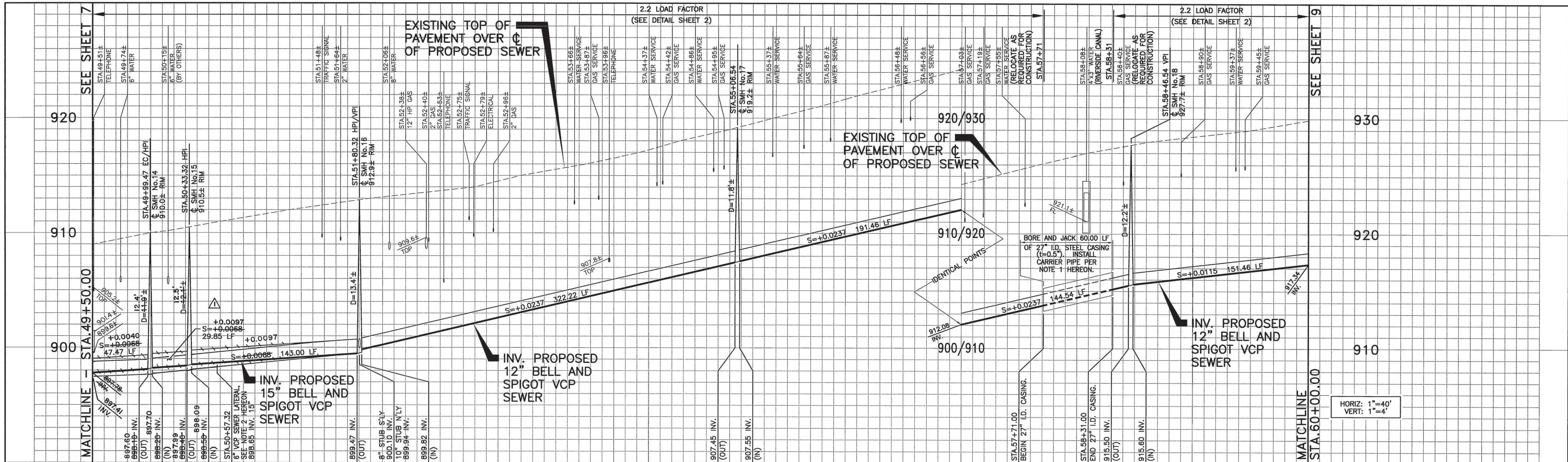
COUNTY OF RIVERSIDE
TRANSPORTATION DEPARTMENT
APPROVED BY:
Alan French 2-11-10
ALAN D. FRENCH DATE
RECOMMENDED DATE 02-10-10

REGISTERED PROFESSIONAL ENGINEER
RANDY ALLEN WEST
No. 46020
Exp. 12-31-10
CIVIL
STATE OF CALIFORNIA

KRIEGER & STEWART INCORPORATED
3602 University Ave • Riverside, CA 92501 • 951-684-6900
APPROVED BY: *R. J. A. Napp*
REGISTERED ENGINEER No. 46020 DATE 01/05/10

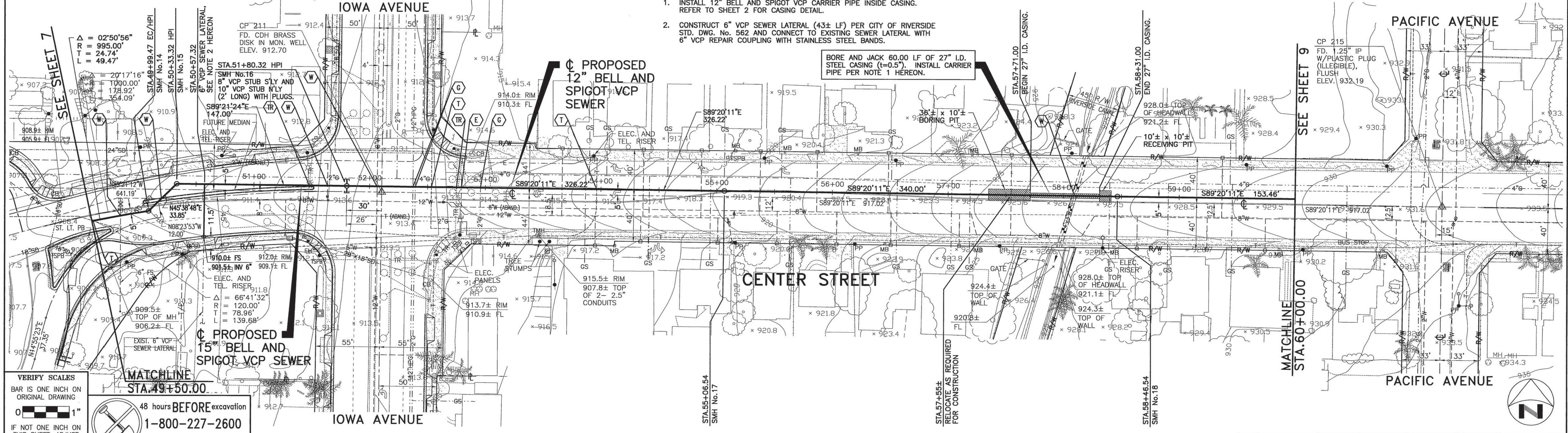
CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
APPROVED BY: *[Signature]*
BY: *[Signature]* DATE: 1/31/10
INSPECTION SURVEYOR
TRAFFIC DIVISION
SEWER

MS 4234 IP 090075 W.O. 10-00009
SEWER IMPROVEMENT PLAN
COMMUNITY OF HIGHGROVE CENTER STREET TRUNK SEWER
EAST LA CADENA DRIVE AND HIGHGROVE PLACE
PLAN AND PROFILE
STA.38+00.00 TO STA.43+54.90 BK
STA.43+56.21 AH TO STA.49+50.00
S-2075
SHEET 7 OF 18
FILE NO.:



50 51 52 53 54 55 56 57 58 59

- NOTE:
1. INSTALL 12" BELL AND SPIGOT VCP CARRIER PIPE INSIDE CASING. REFER TO SHEET 2 FOR CASING DETAIL.
 2. CONSTRUCT 6" VCP SEWER LATERAL (43± LF) PER CITY OF RIVERSIDE STD. DWG. No. 562 AND CONNECT TO EXISTING SEWER LATERAL WITH 6" VCP REPAIR COUPLING WITH STAINLESS STEEL BANDS.



VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 0 1"

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SEAL-COUNTY
 COUNTY OF RIVERSIDE
 TRANSPORTATION DEPARTMENT
 APPROVED BY:
 Alan French 2-11-10
 ALAN D. FRENCH
 RECOMMENDED
 DATE 02/10/10

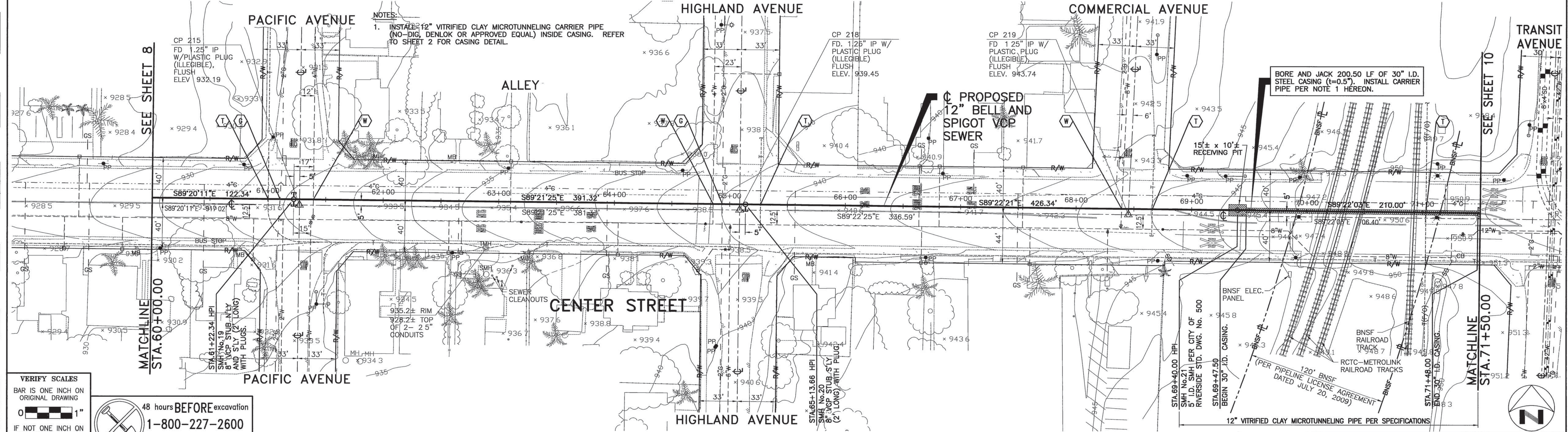
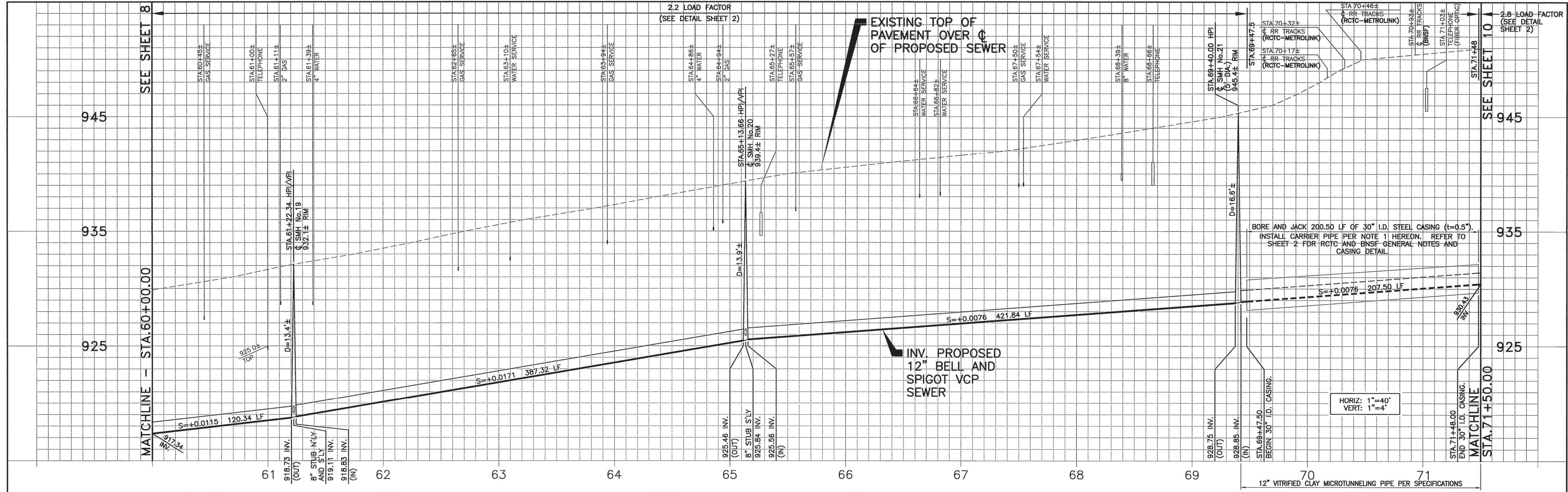
KRIEGER & STEWART INCORPORATED
 3602 University Ave. • Riverside, CA 92501 • 951-884-8900
 APPROVED BY: R. A. Neff
 REGISTERED ENGINEER No. 46020 DATE 01/05/10

CITY OF RIVERSIDE, CALIFORNIA
 PUBLIC WORKS DEPARTMENT
 APPROVED BY: [Signature]
 DATE 2/14/10

MS 4234 IP 090075 W.O. 10-00009
 SEWER IMPROVEMENT PLAN
 COMMUNITY OF HIGHGROVE CENTER STREET TRUNK SEWER
 CENTER STREET
 PLAN AND PROFILE
 STA. 49+50.00 TO STA. 60+00.00
 SHEET 8 OF 18
 HORIZ. SCALE: 1"=40'
 VERT. SCALE: 1"=4'

DWG. NO.: 807-37-28B FILE NO.: 807-37 UPDATE BY: SPK PROJ. ENG.: BAN_PLOT DATE: 12/22/09_PLOT TIME: 11:28AM_PLOT SCALE: 1"=1'

DWG. NO. 807-3789 FILE NO. 807-37 UPDATE BY: SPK PROJ. ENG.: RAN PLOT DATE: 12/22/09 PLOT TIME: 11:32AM PLOT SCALE: 1"=1'



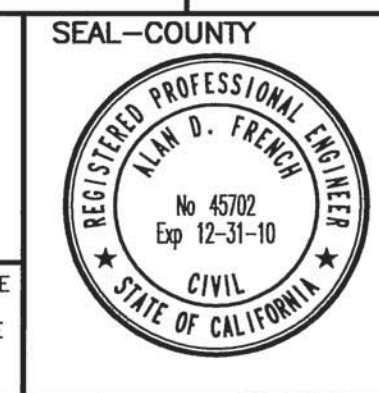
VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 0 1"

 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

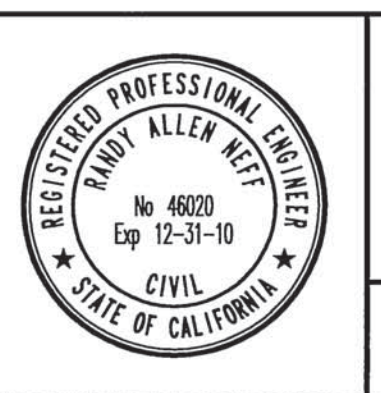
48 hours BEFORE excavation
 1-800-227-2600
 CALL Underground Service Alert

NOTE:
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SEAL-COUNTY
 COUNTY OF RIVERSIDE
 TRANSPORTATION DEPARTMENT
 APPROVED BY:
Alan French 2-11-10
 ALAN D. FRENCH DATE
 RECOMMENDED DATE 02-10-10



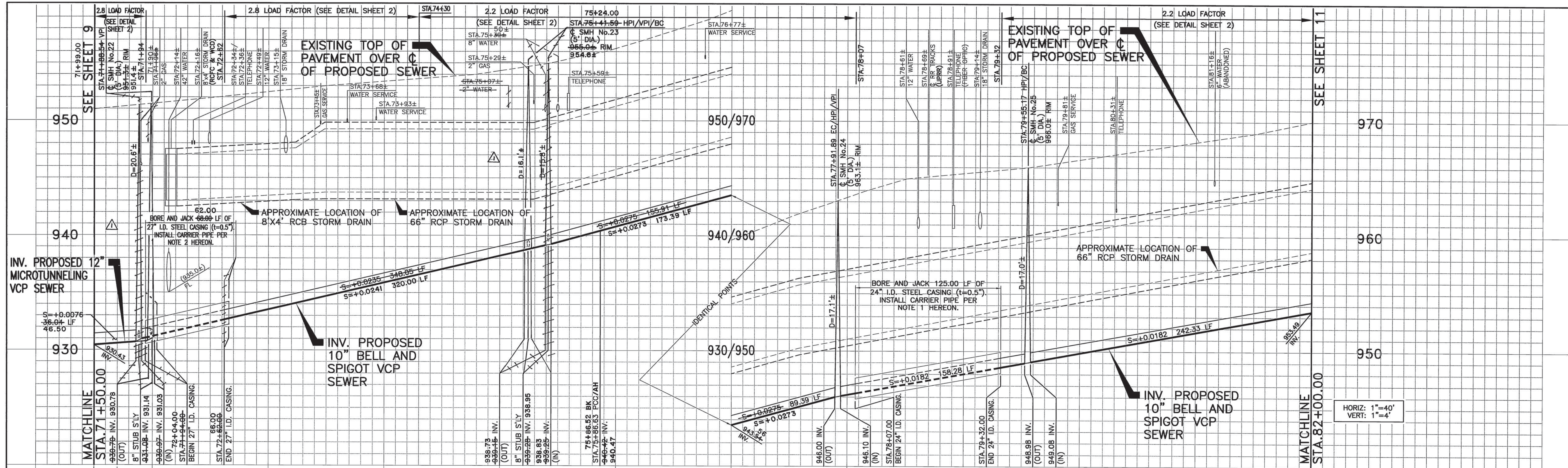
KRIEGER & STEWART INCORPORATED
 3602 University Ave. Riverside, CA 92501-951-684-6900
 APPROVED BY: *Randy A. Jeff*
 REGISTERED ENGINEER No. 46020 DATE 01/05/10

MARK	REVISIONS	APPR. DATE

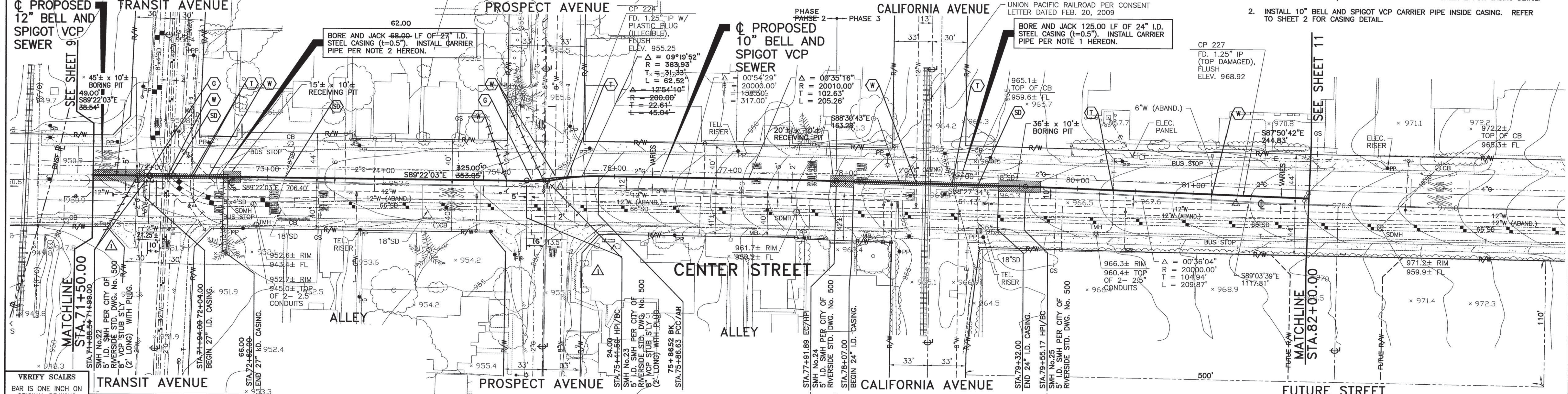
DESIGNED BY *RAN* DRAWN BY *YAD* CHECKED BY *MEM*

CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT			
APPROVED BY:	BY:	DATE:	APPROVED BY:
INSPECTION	<i>PA</i>	2/2/10	<i>[Signature]</i>
SURVEYOR	<i>PA</i>	2/2/10	CITY ENGINEER
TRAFFIC DIVISION	<i>PA</i>	1/13/10	DATE 2/4/10
SEWER	<i>PA</i>	1/13/10	

MS 4234	IP 090075	W.O. 10-00009
SEWER IMPROVEMENT PLAN		
COMMUNITY OF HIGHGROVE CENTER STREET TRUNK SEWER		
CENTER STREET PLAN AND PROFILE		
STA.60+00.00 TO STA.71+50.00		
HORIZ. SCALE: 1"=40'	VERT. SCALE: 1"=4'	FILE NO.: S-2075
		SHEET 9 OF 18



12" VITRIFIED CLAY MICROTUNNELING PIPE PER SPECIFICATIONS
 10" VITRIFIED CLAY MICROTUNNELING PIPE PER SPECIFICATIONS



TRANSIT AVENUE
 PROSPECT AVENUE
 CALIFORNIA AVENUE
 CENTER STREET
 ALLEY
 FUTURE STREET

VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 1" = 40' HORIZ.
 1" = 4' VERT.

48 hours BEFORE excavation
 1-800-227-2600
 CALL Underground Service Alert

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SEAL-COUNTY
 COUNTY OF RIVERSIDE
 TRANSPORTATION DEPARTMENT
 APPROVED BY:
Alan D. French 2/11/10
 ALAN D. FRENCH
 CIVIL ENGINEER
 No. 45022
 Exp. 12-31-10
 STATE OF CALIFORNIA

KRIEGER & STEWART INCORPORATED
 3602 University Ave. • Riverside, CA. 92501 • 951-684-6900

APPROVED BY: **R. A. Neff**
 REGISTERED ENGINEER No. 46020 DATE 01/05/10

CITY OF RIVERSIDE, CALIFORNIA
 PUBLIC WORKS DEPARTMENT

APPROVED BY: **[Signature]**
 BY: **[Signature]** DATE: **2/11/10**

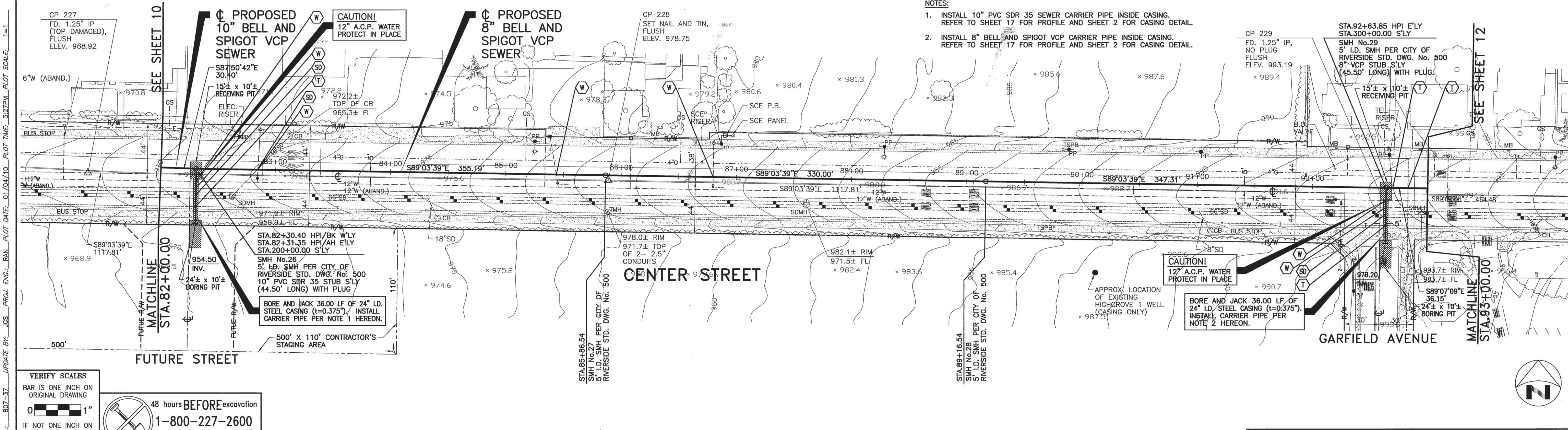
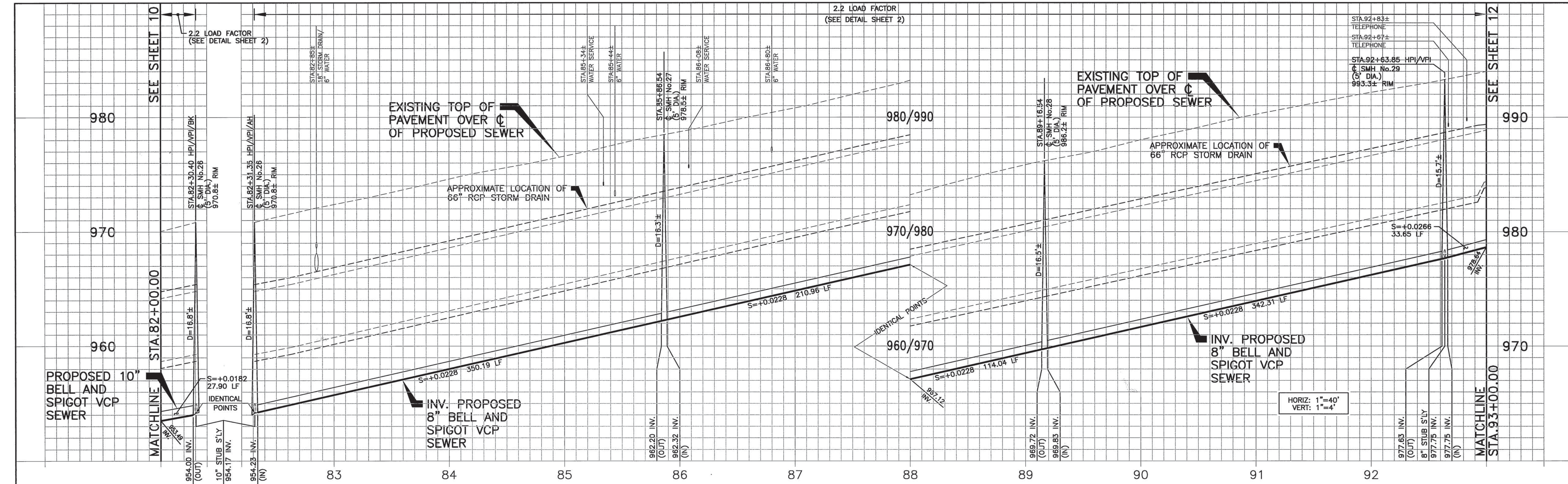
DESIGNED BY: **[Signature]** DRAWN BY: **[Signature]** CHECKED BY: **[Signature]**

MS 4234 IP 090075 W.O. 10-00009

SEWER IMPROVEMENT PLAN
 COMMUNITY OF HIGHGROVE CENTER STREET TRUNK SEWER
CENTER STREET
PLAN AND PROFILE
 STA.71+50.00 TO STA.82+00.00

ACCT. No. **S-2075**
 SHEET 10 OF 18
 FILE NO.:

DWG. NO.: 807-37s10 FILE NO.: 807-37 UPDATE BY: JGS PROJ. ENG.: BAN PLOT DATE: 01/05/10 PLOT TIME: 11:03AM PLOT SCALE: 1"=40'



VERIFY SCALES
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 0 1"

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SEAL-COUNTY
 COUNTY OF RIVERSIDE
 TRANSPORTATION DEPARTMENT
 APPROVED BY:
 Alan D. French 2-11-10
 ALAN D. FRENCH
 CIVIL
 RECOMMENDED
 DATE 02-10-10

KRIEGER & STEWART INCORPORATED
 3602 University Ave. • Riverside, CA. 92501 • 951-684-6900

APPROVED BY: *R. J. A. Neff*
 REGISTERED ENGINEER No. 46020 DATE 01/05/10

CITY OF RIVERSIDE, CALIFORNIA
 PUBLIC WORKS DEPARTMENT

APPROVED BY: *[Signature]*
 BY: *[Signature]* DATE: 1/19/10
 INSPECTION: *[Signature]* DATE: 2/1/10
 SURVEYOR: *[Signature]*
 TRAFFIC DIVISION: *[Signature]* DATE: 1/19/10
 CITY ENGINEER: *[Signature]* DATE: 2/1/10

MS 4234 IP 090075 W.O. 10-00009

SEWER IMPROVEMENT PLAN
 COMMUNITY OF HIGHGROVE CENTER STREET TRUNK SEWER
CENTER STREET
 PLAN AND PROFILE
 STA.82+00.00 TO STA.82+30.40 BK
 STA.82+31.35 AH TO STA.93+00.00

ACCT. No. W.O. No.
S-2075
 SHEET 11 OF 18

HORIZ. SCALE: 1"=40' VERT. SCALE: 1"=4' FILE NO.:

DWG. NO.: 807-37811 FILE NO.: 807-37 UPDATE BY: JGS PROJ. ENG.: RAN_PLOT DATE: 01/04/10 PLOT TIME: 3:27PM PLOT SCALE: 1"=1'