RIVERSIDE CITY OF RIVERSIDE CALIFORNIA

PUBLIC WORKS DEPARTMENT

CONSTRUCTION LEGEND

CENTER LINE
RIGHT-OF-WAY LINE
SUBDIVISION BOUNDARY LINE
TOP OF SLOPE
TOE OF SLOPE
DIRECTION OF FLOW

SPECIFIC CONSTRUCTION NOTES

NUMBERS ABOVE 100 IN A HEXAGON ON THE PLAN REFER TO THE RESPECTIVE STANDARD DRAWING AND SHALL BE CONSTRUCTED ACCORDINGLY, UNLESS MODIFICATIONS ARE NOTED ON THE PLAN OR COVER SHEET BELOW. ANY NUMBER SHOWN BELOW THE STANDARD DRAWING NUMBER INDICATES THE SPECIFIC ALTERNATES TO BE CONSTRUCTED.

122 MOD — 60' OF REVERSE TAPER IS CONCRETE MEDIAN. 60' OF REVERSE TAPER IS PAVEMENT STRIPE.

S229, S230, M803 — RIVERSIDE COUNTY FLOOD CONTROL STANDARD DRAWINGS.

B7-11, 073-L2, 077-A2, 18-A1, ND60, ND83 — STATE OF CALIFORNIA BUSINESS AND TRANSPORTATION AGENCY, DEPARTMENT OF TRANSPORTATION STANDARD PLANS DATED MARCH, 1977.

A/13 DETAIL/SHEET, C-9, D-4 — SAN DIEGO REGIONAL STANDARD DRAWING.

⊙A PROPOSED ELEVATION – SEE TABLE ON SHEETS 3 AND 5
(601.00) EXISTING ELEVATION
800.00 PROPOSED ELEVATION

S — INSTALL NEW TRAFFIC SIGNS AS SHOWN ON PLANS

R/II — REMOVE ENTIRE TREE. CLASS IS SHOWN ON PLAN.
CLASS I 6" TO 18" DIA.
CLASS II OVER 18" TO 36" DIA.
CLASS III OVER 36" DIA.

T/I — TRANSPLANT PALM TREES TO LOCATION INDICATED ON PLAN OR WHERE DIRECTED BY THE PARK DEPARTMENT. SIZE CLASSES ARE THE SAME AS FOR TREE REMOVAL.

TEXTURED CONCRETE

REGRADE DRIVEWAY TO GRADES AND MATERIAL SHOWN ON PLAN, A.C. 2½" THICK.
PAVED DRAINAGE DITCH, A.C. 2½" THICK.
EXISTING A.C. PAVEMENT TO BE REMOVED.

△ 1A — EXISTING A.C. PAVEMENT TO BE REMOVED PRIOR TO CONSTRUCTION OF STRUCTURAL SECTION OF 0.42' A.C. OVER 0.45' CLASS 2 BASE.
△ 1B — CONSTRUCT STRUCTURAL SECTION OF 0.42' A.C. OVER CLASS 2 BASE.

△ 2A — EXISTING A.C. PAVEMENT TO BE REMOVED PRIOR TO CONSTRUCTION OF STRUCTURAL SECTION OF 0.30' A.C. OVER 0.60' CLASS 2 BASE.
△ 2B — CONSTRUCT STRUCTURAL SECTION OF 0.30' A.C. OVER 0.60' CLASS 2 BASE.

△ 3A — EXISTING A.C. PAVEMENT TO BE REMOVED PRIOR TO CONSTRUCTION OF STRUCTURAL SECTION OF 0.22' A.C. OVER 0.40' CLASS 2 BASE.
△ 3B — CONSTRUCT STRUCTURAL SECTION OF 0.40' A.C. OVER 0.60' CLASS 2 BASE.

4 — CONSTRUCT STRUCTURAL SECTION OF 0.45' A.C. OVER NATIVE SOIL.

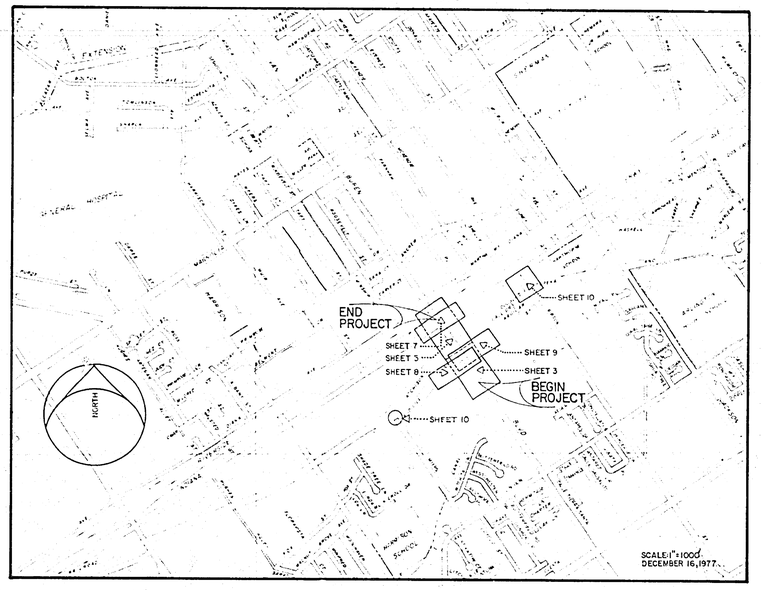
GENERAL CONSTRUCTION NOTES

1. CONSTRUCTION TO BE IN ACCORDANCE WITH THE STATE OF CALIFORNIA SPECIFICATIONS, JANUARY 1978.
2. EXACT LOCATIONS AND DEPTHS OF UNDERGROUND UTILITIES ARE UNKNOWN. THE LOCATIONS AND DEPTHS SHOWN ON THIS PLAN ARE FROM UTILITY RECORDS. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO LOCATE AND PROTECT ALL UTILITIES WHETHER OR NOT SHOWN ON PLAN. WHERE THE COVER TO THE TOP OF A UTILITY IS KNOWN IT IS SHOWN IN THE PROFILE. IF COVER IS UNKNOWN THE UTILITY IS SHOWN IN THE PROFILE BY: UTILITY NAME.
3. RIGHTS OF ENTRY HAVE BEEN OBTAINED FOR WORK SHOWN ON PRIVATE PROPERTY.
4. UNLESS OTHERWISE NOTED ON PLAN: ALL FILL SLOPES TO BE 2:1. SLOPES LESS THAN 2' HIGH ARE NOT NECESSARILY SHOWN ON THE PLAN. ALL CUT SLOPES LESS THAN 2' HIGH TO BE 2:1. ALL CUT SLOPES 2' HIGH OR HIGHER TO BE 1¾:1.
5. ALL ELEVATIONS SHOWN ON THE PLAN SHALL BE STAKED IN THE FIELD.
6. EXISTING UTILITIES SHOWN IN CONFLICT WITH PROPOSED STORM DRAIN FACILITIES WILL BE ABANDONED PRIOR TO CONSTRUCTION.
7. EXCAVATION TO INCLUDE REMOVAL OF ALL EXISTING UTILITIES AND OTHER IMPROVEMENTS ENCOUNTERED WITHIN THE EXCAVATION AREA.

△ REVISED STRUCTURAL SECTIONS PER APPENDIUM No.1 2/29/80

VAN BUREN UNDERPASS AT THE A.T.&S.F.

LENGTH = 1180 L.F.
T.I. = 10.5



PROJECT LOCATION PLAN

0' 500' 1000' 2000' 3000' 4000' 5000' 6000'

SCALE 1" = 1000'

EXISTING UNDERGROUND & TOPOGRAPHY LEGEND

EXISTING UNDERGROUND UTILITIES

SANITARY SEWER — 8"S
WATER LINE — 6"W
STORM DRAIN — 24" D
GAS LINE — 4"G
IRRIGATION LINE — 20" IRR
TELEPHONE CONDUIT — T
ELECTRICAL CONDUIT — E
STREET LIGHTING — SL
TRAFFIC SIGNAL — SIG
FIRE ALARM — F

EXISTING TOPOGRAPHY

BLOCK WALL
BOARD FENCE
WIRE FENCE
CHAIN LINK FENCE
TOP OF SLOPE
TOE OF SLOPE
DIRECTION OF FLOW

SANITARY SEWER MH
SANITARY SEWER CLEANOUT
STORM DRAIN MH
IRRIGATION VALVE
WATER MH
GAS MH
ELECTRIC MH
TELEPHONE MH OR VAULT
WATER METER
FIRE HYDRANT
SPRINKLER HEAD
VALVE
AIR VALVE
AIR VENT
POLE & GUY ANCHOR
ELECTRIC POLE
TELEPHONE POLE
JOINT USE POLE
PULL BOX
TRAFFIC SIGN
PARKING METER
FIRE ALARM BOX
STREET NAME SIGN
GAS METER
MAIL BOX
FAUCET
TELEPHONE RISER
WHEEL STOP
A.C. BERM
STEEL POST
WOOD POST
PEDESTRIAN PUSH BUTTON
RAILROAD TRACKS
RAILROAD SIGN
RAILROAD SIGNAL
STREET LIGHT & TRAFFIC SIGNAL ON MAST ARM
STREET LIGHT (UPRIGHT)
STREET LIGHT
TRAFFIC SIGNAL
TRAFFIC SIGNAL ON MAST ARM
TRAFFIC SIGNAL CONTROLLER
TRAFFIC SIGNAL PRESSURE DETECTOR
TRAFFIC SIGNAL LOOP DETECTOR

CONCRETE
ASPHALT
EP EDGE OF PAVEMENT
BUILDING
UNDERGROUND STRUCTURE
OVERHANGING STRUCTURE

CITRUS TREE
OR DECIDUOUS TREE
OR PALM TREE
OR SHRUBBERY
TREE STUMP
EVERGREEN TREE

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CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY	INT	DATE
PRINCIPAL ENGINEER		
~~PARK DEPARTMENT~~		
TRAFFIC DIVISION		
CHIEF PW ENGINEER		

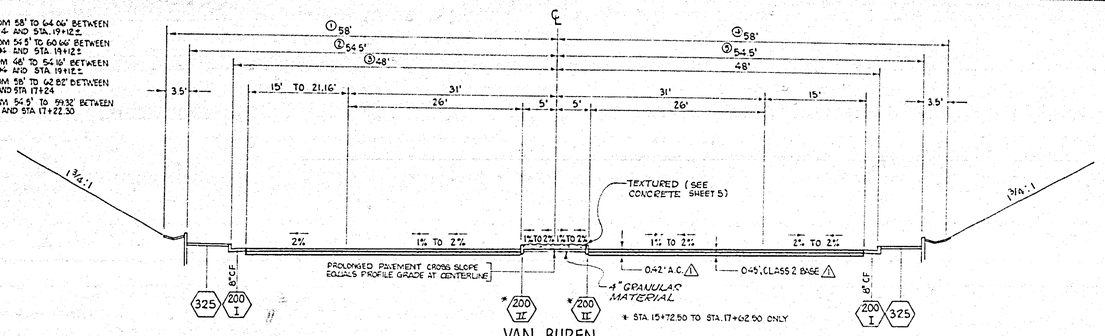
APPROVED BY: PUBLIC WORKS DIRECTOR
DATE

Van Buren Underpass
TITLE SHEET

DESIGNED BY DRAWN BY CHECKED BY

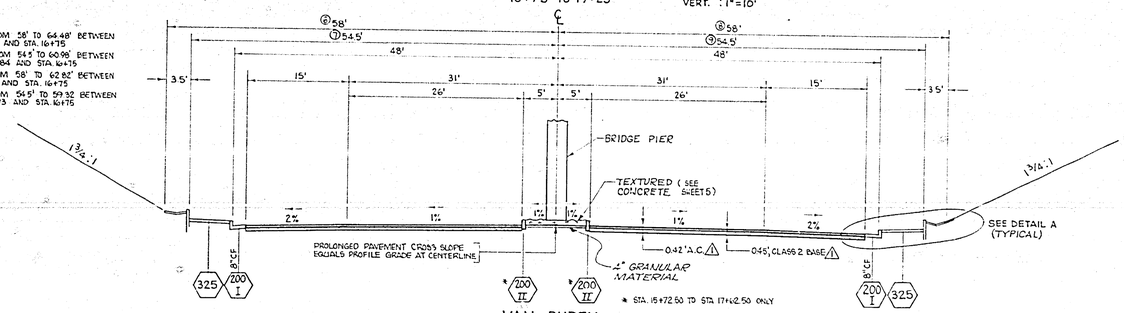
Issued for
ACCOUNT No. 30 575 224 07
DRAWING NUMBER
R-2039
SHEET 1 OF 45

① VARIES FROM 58' TO 64.66' BETWEEN STA. 18+15.94 AND STA. 19+12.2±
② VARIES FROM 54.5' TO 60.66' BETWEEN STA. 18+15.94 AND STA. 19+12.2±
③ VARIES FROM 48' TO 54.16' BETWEEN STA. 18+15.94 AND STA. 19+12.2±
④ VARIES FROM 58' TO 62.82' BETWEEN STA. 16+75 AND STA. 17+24
⑤ VARIES FROM 54.5' TO 59.32' BETWEEN STA. 16+75 AND STA. 17+22.50

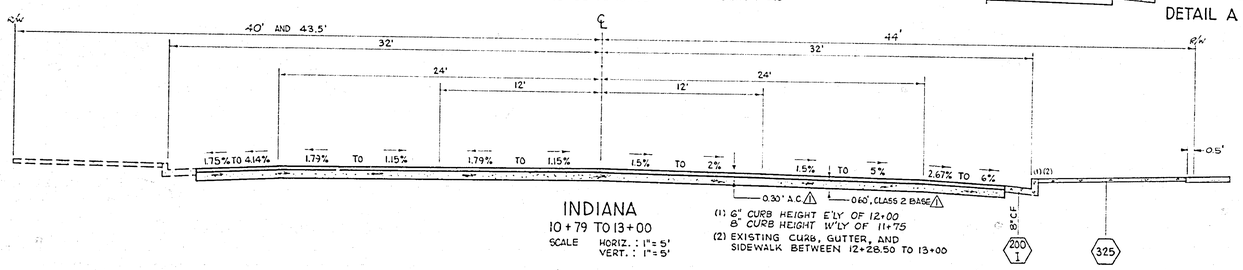


VAN BUREN
16+75 TO 19+25
SCALE HORIZ.: 1"=10'
VERT.: 1"=10'

⑥ VARIES FROM 58' TO 66.48' BETWEEN STA. 16+23 AND STA. 16+75
⑦ VARIES FROM 54.5' TO 60.98' BETWEEN STA. 16+26.84 AND STA. 16+75
⑧ VARIES FROM 58' TO 62.82' BETWEEN STA. 16+60 AND STA. 16+75
⑨ VARIES FROM 54.5' TO 59.32' BETWEEN STA. 16+60.93 AND STA. 16+75

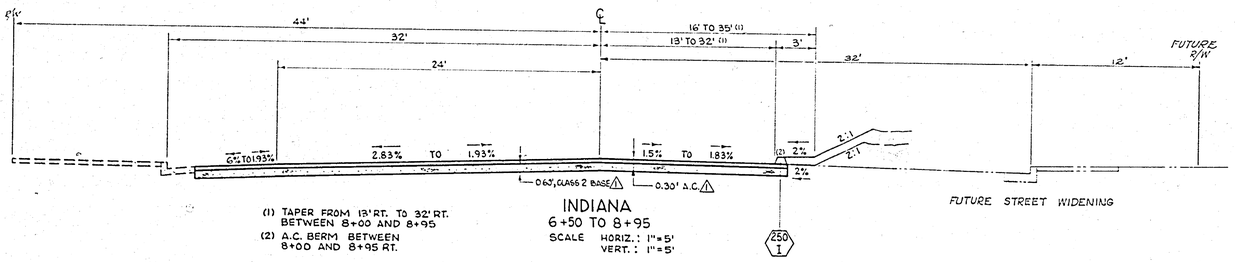


VAN BUREN
10+00 TO 16+75
SCALE HORIZ.: 1"=10'
VERT.: 1"=10'



INDIANA
10+79 TO 13+00
SCALE HORIZ.: 1"=5'
VERT.: 1"=5'

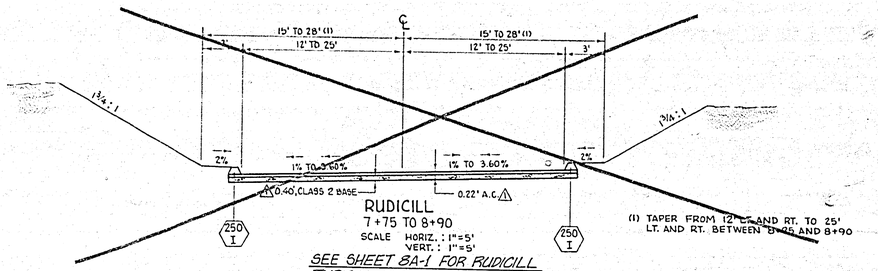
(1) 6" CURB HEIGHT E'LY OF 12+00
8" CURB HEIGHT W'LY OF 11+75
(2) EXISTING CURB, GUTTER, AND SIDEWALK BETWEEN 12+28.50 TO 13+00



(1) TAPER FROM 13' RT. TO 32' RT. BETWEEN 8+00 AND 8+95
(2) A.C. BERM BETWEEN 8+00 AND 8+95 RT.

INDIANA
6+50 TO 8+95
SCALE HORIZ.: 1"=5'
VERT.: 1"=5'

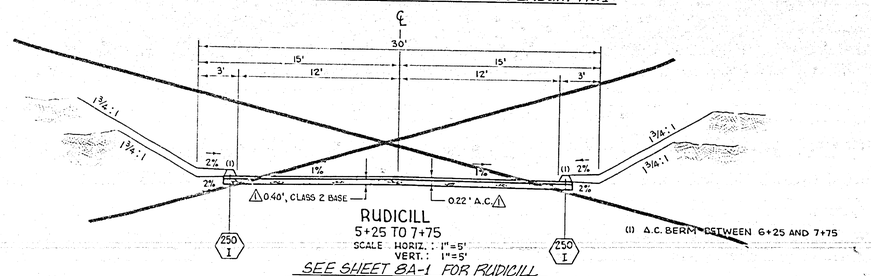
FUTURE STREET WIDENING



RUDICILL
7+75 TO 8+90
SCALE HORIZ.: 1"=5'
VERT.: 1"=5'

(1) TAPER FROM 12' LT. AND RT. TO 25' LT. AND RT. BETWEEN 8+00 AND 8+90

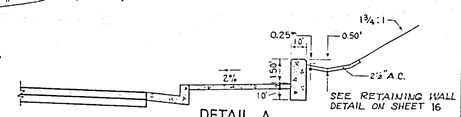
SEE SHEET 8A-1 FOR RUDICILL TYPICAL SECTIONS PER ADDENDUM NO. 1



RUDICILL
5+25 TO 7+75
SCALE HORIZ.: 1"=5'
VERT.: 1"=5'

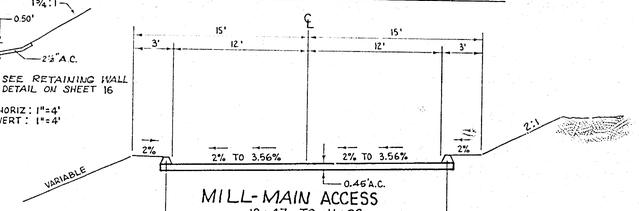
(1) A.C. BERM BETWEEN 6+25 AND 7+75

SEE SHEET 8A-1 FOR RUDICILL TYPICAL SECTIONS PER ADDENDUM NO. 1

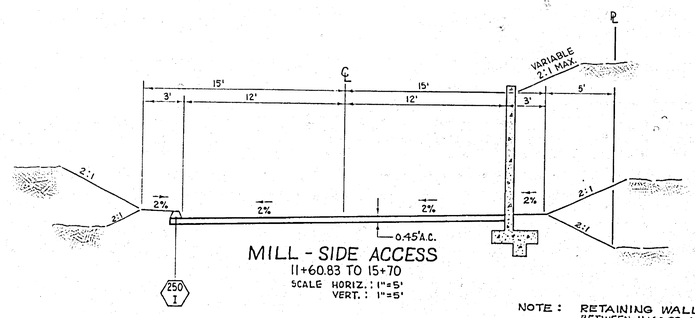


SEE RETAINING WALL DETAIL ON SHEET 16

DETAIL A
SCALE HORIZ.: 1"=4'
VERT.: 1"=4'



MILL-MAIN ACCESS
10+47 TO 11+32
SCALE HORIZ.: 1"=5'
VERT.: 1"=5'



MILL - SIDE ACCESS
11+60.83 TO 15+70
SCALE HORIZ.: 1"=5'
VERT.: 1"=5'

NOTE: RETAINING WALL BETWEEN 11+60.83 AND 12+62.50

MARK	REVISIONS	APPR	DATE
1	REVISED STRUCTURAL SECTIONS PER ADDENDUM NO. 1		2/29/80

DESIGNED BY RCH DRAWN BY S.K. CHECKED BY A.R.

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED	BY	DATE
PRINCIPAL ENGINEER		11/2/79
TRAFFIC DIVISION		10/30/79
CHIEF P. W. ENGINEER		1-2-80

APPROVED BY: PUBLIC WORKS DIRECTOR
DATE 1/8/80

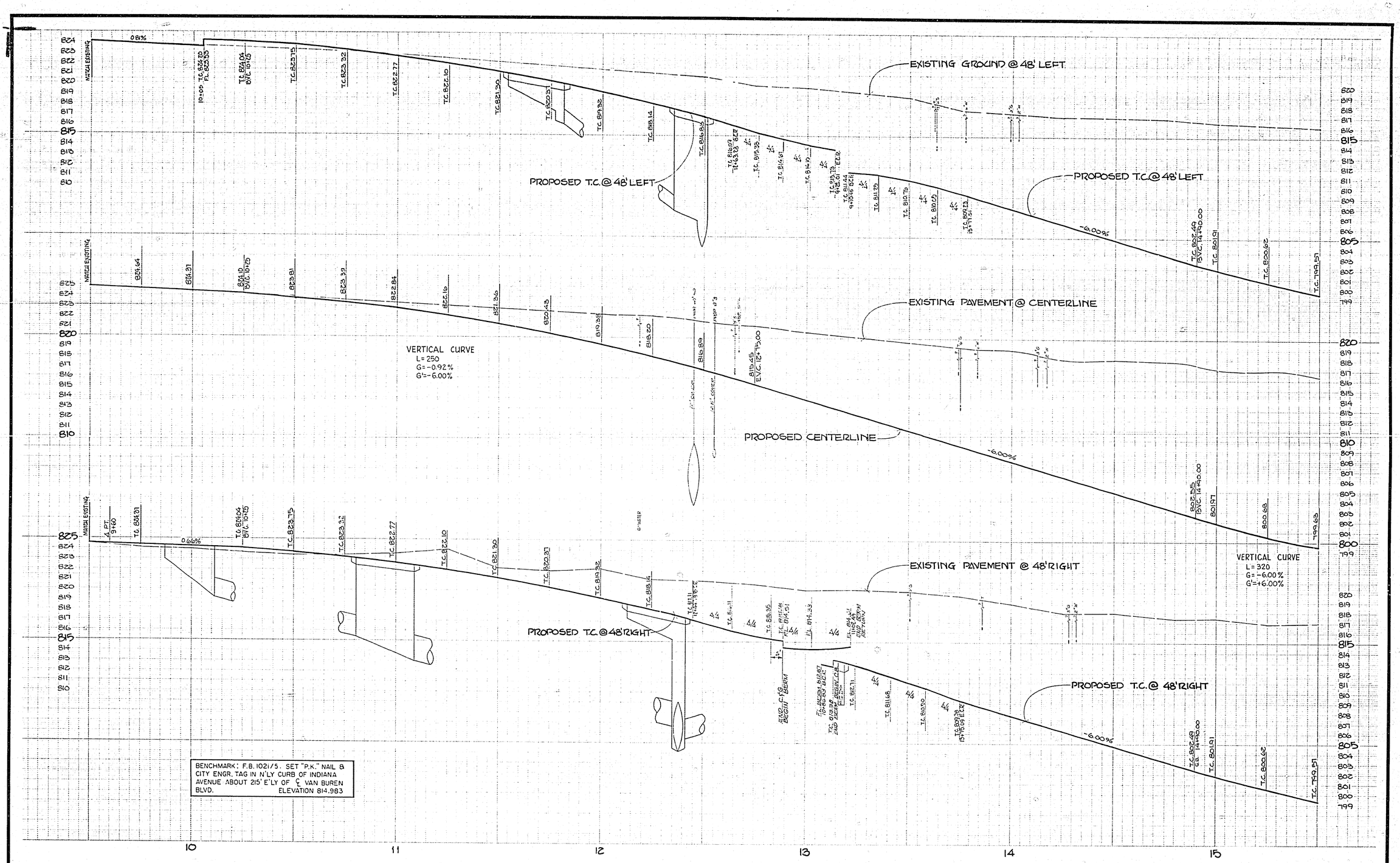
Van Buren Underpass
(TYPICAL SECTIONS)

HORIZ. SCALE: AS SHOWN VERT. SCALE: AS SHOWN

Indexed KKE
ACCOUNT NO. 53-570-224-07

R-2039

SHEET 2 OF 45



MARK	REVISIONS	APPR.	DATE

DESIGNED BY REH DRAWN BY CV. SK CHECKED BY DJR

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
PRINCIPAL ENGINEER		
PARK DEPARTMENT		
TRAFFIC DIVISION		
CHIEF PUB. WKS. ENGR.		

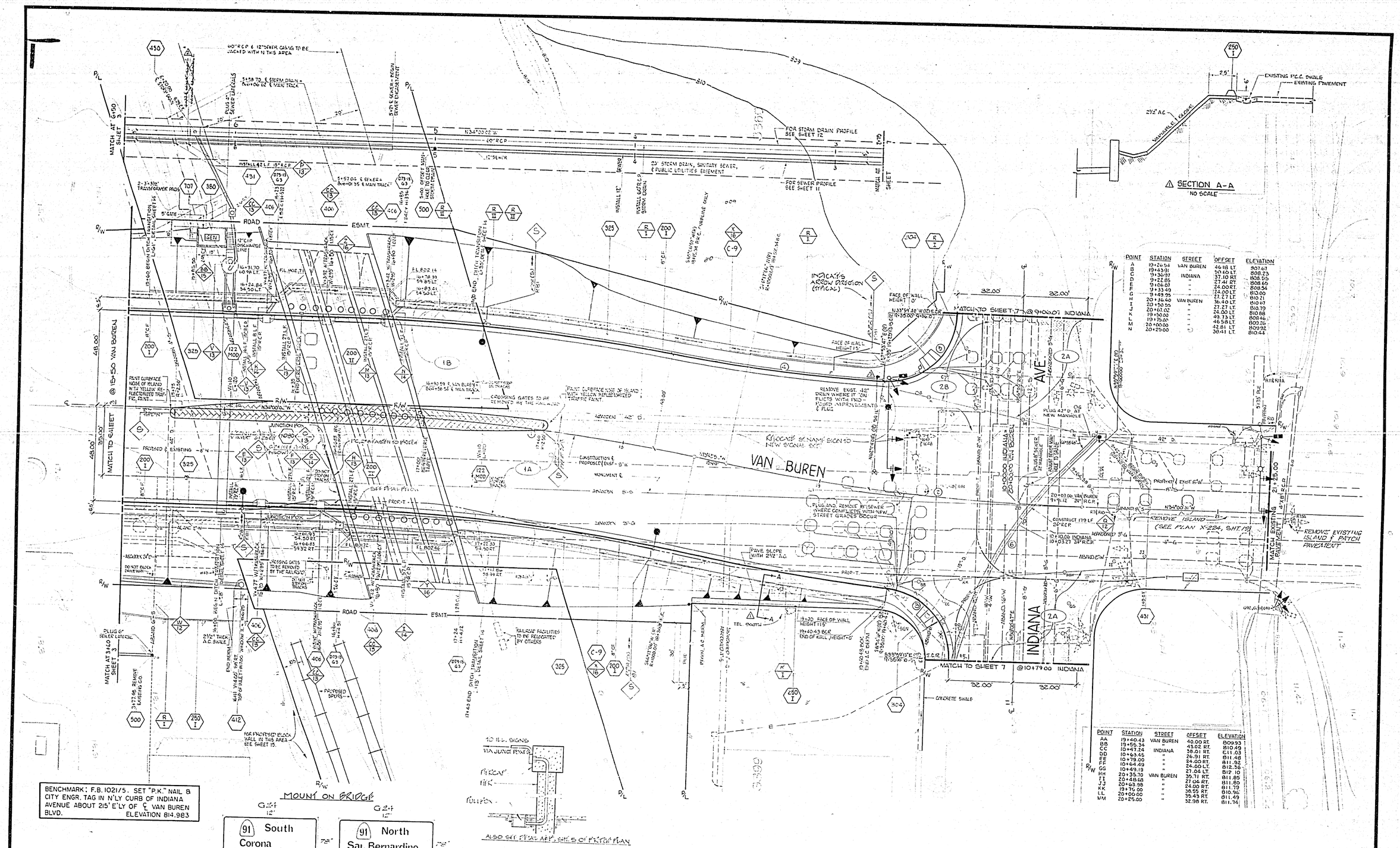
APPROVED BY
DIRECTOR OF PUBLIC WORKS
DATE 1/18/80

Van Buren Underpass
(VAN BUREN BLVD. PROFILES)

HORIZONTAL SCALE: 1"=20' VERTICAL SCALE: 1"=4'

INDEXED RAE

ACCOUNT No. 30 575 224 07
DRAWING NUMBER
R-2039
SHEET 4 OF 45



POINT	STATION	STREET	OFFSET	ELEVATION
A	19+24.54	VAN BUREN	46.18 LT.	807.67
B	19+43.91	"	50.60 LT.	808.23
C	19+36.91	INDIANA	37.10 RT.	808.65
D	9+22.85	"	27.41 RT.	808.65
E	9+06.07	"	24.00 RT.	808.54
F	9+33.49	"	124.00 LT.	810.00
G	9+49.95	"	21.27 LT.	810.21
H	20+36.60	VAN BUREN	36.40 LT.	810.67
I	20+50.55	"	27.27 LT.	810.39
J	20+67.02	"	24.00 LT.	810.68
K	19+50.00	"	49.73 LT.	808.46
L	19+75.00	"	46.58 LT.	809.26
M	20+05.00	"	42.81 LT.	809.92
N	20+29.00	"	38.41 LT.	810.41

POINT	STATION	STREET	OFFSET	ELEVATION
AA	19+40.43	VAN BUREN	40.00 RT.	809.93
BB	13+56.34	"	43.02 RT.	810.49
CC	10+47.24	INDIANA	38.01 RT.	811.03
DD	10+63.45	"	26.91 RT.	811.48
EE	10+79.00	"	24.00 RT.	811.92
FF	10+64.49	"	24.00 LT.	812.36
GG	10+49.19	"	27.04 LT.	812.10
HH	20+35.70	VAN BUREN	39.71 RT.	811.85
II	20+48.68	"	27.04 RT.	811.80
JJ	20+63.98	"	24.00 RT.	811.79
KK	19+75.00	"	38.55 RT.	810.96
LL	20+00.00	"	39.43 RT.	811.49
MM	20+25.00	"	32.98 RT.	811.74

BENCHMARK: F.B. 1021/5. SET "P.K." NAIL & CITY ENGR. TAG IN N'LY CURB OF INDIANA AVENUE ABOUT 215' E'LY OF ℄ VAN BUREN BLVD. ELEVATION 814.983

CURVE	Δ	R	T	L
1	10°17'08"	1000.00'	90.00'	179.92'
2	10°17'37"	1000.00'	90.07'	179.69'
3	84°46'31"	35.00'	31.92'	51.79'
4	7°13'10"	850.00'	53.75'	107.36'
5	91°53'27"	35.00'	56.18'	56.13'
6	45°30'00"	200.00'	82.84'	157.08'

MARK	REVISIONS	APPR.	DATE
1	REVISED PROP. IMPROVEMENTS (19+42 RT. TO 19+40.43 RT.) SEE SECTION A-A		2/11/80
2	RELOCATED EXISTING STORM DRAIN SEE SHEET 3 REDINAY		2/7/80
3	ADDED PROPOSED FIRE HYDRANT & SERVICE		3/4/80

DESIGNED BY [illegible] DRAWN BY JV S.K. CHECKED BY [illegible]

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY
PRINCIPAL ENGINEER
PARK DEPARTMENT
TRAFFIC DIVISION
CHIEF P. W. ENGINEER

APPROVED BY [signature]
PUBLIC WORKS DIRECTOR
DATE [illegible]

Van Buren Underpass
(VAN BUREN BLVD.)
STA. 15+50 to 21+25

HORIZ. SCALE: 1" = 20' VERT. SCALE: 1" = 2'

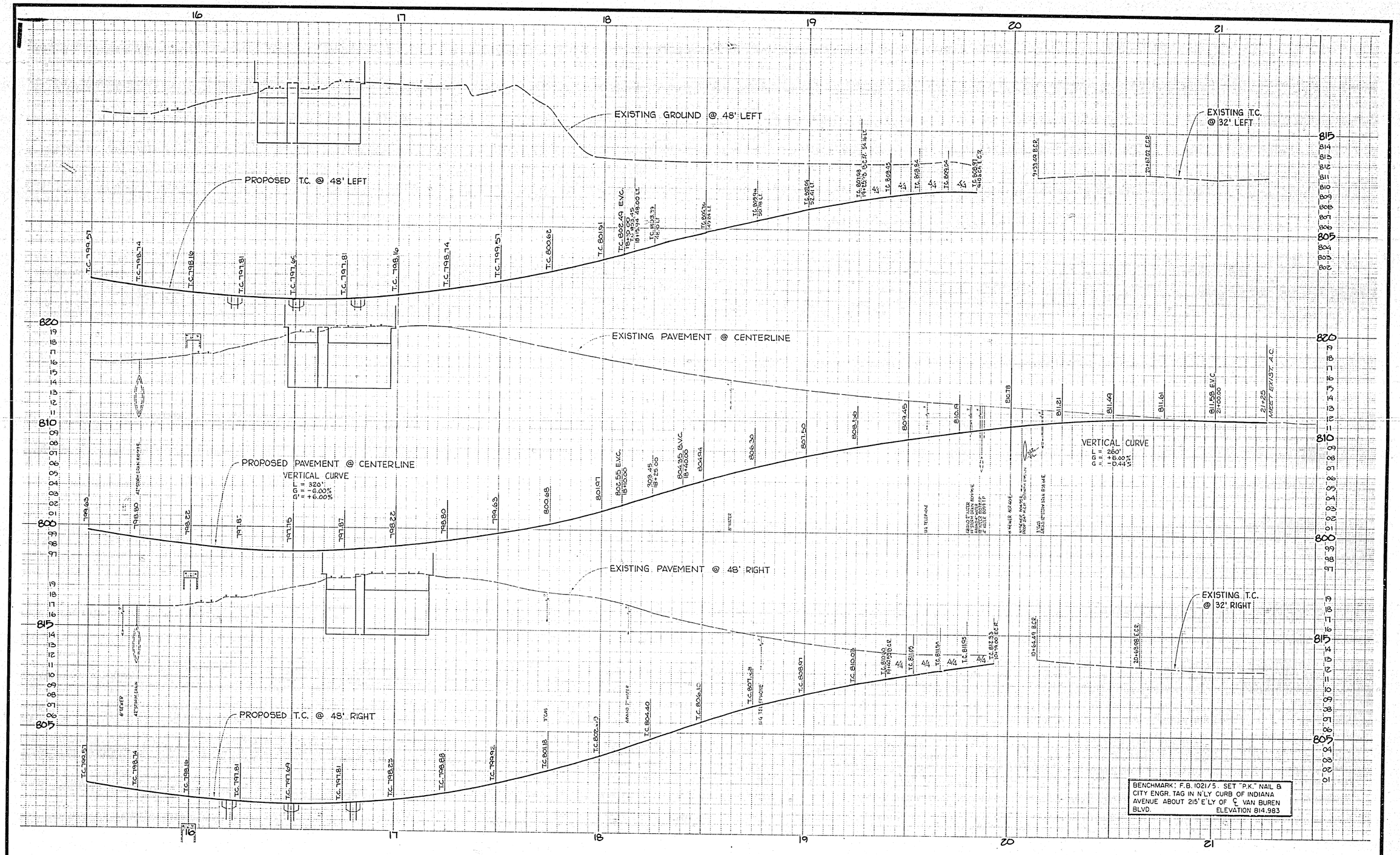
Indexed Rev

ACCOUNT NO. [illegible]

R-2039

SHEET 5 OF 45

FILE NO.



MARK	REVISIONS	APPR.	DATE

DESIGNED BY REH DRAWN BY SK CHECKED BY DLR

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
PRINCIPAL ENGINEER		
PARK DEPARTMENT		
TRAFFIC DIVISION		
CHIEF PUB. WKS. ENGR.		

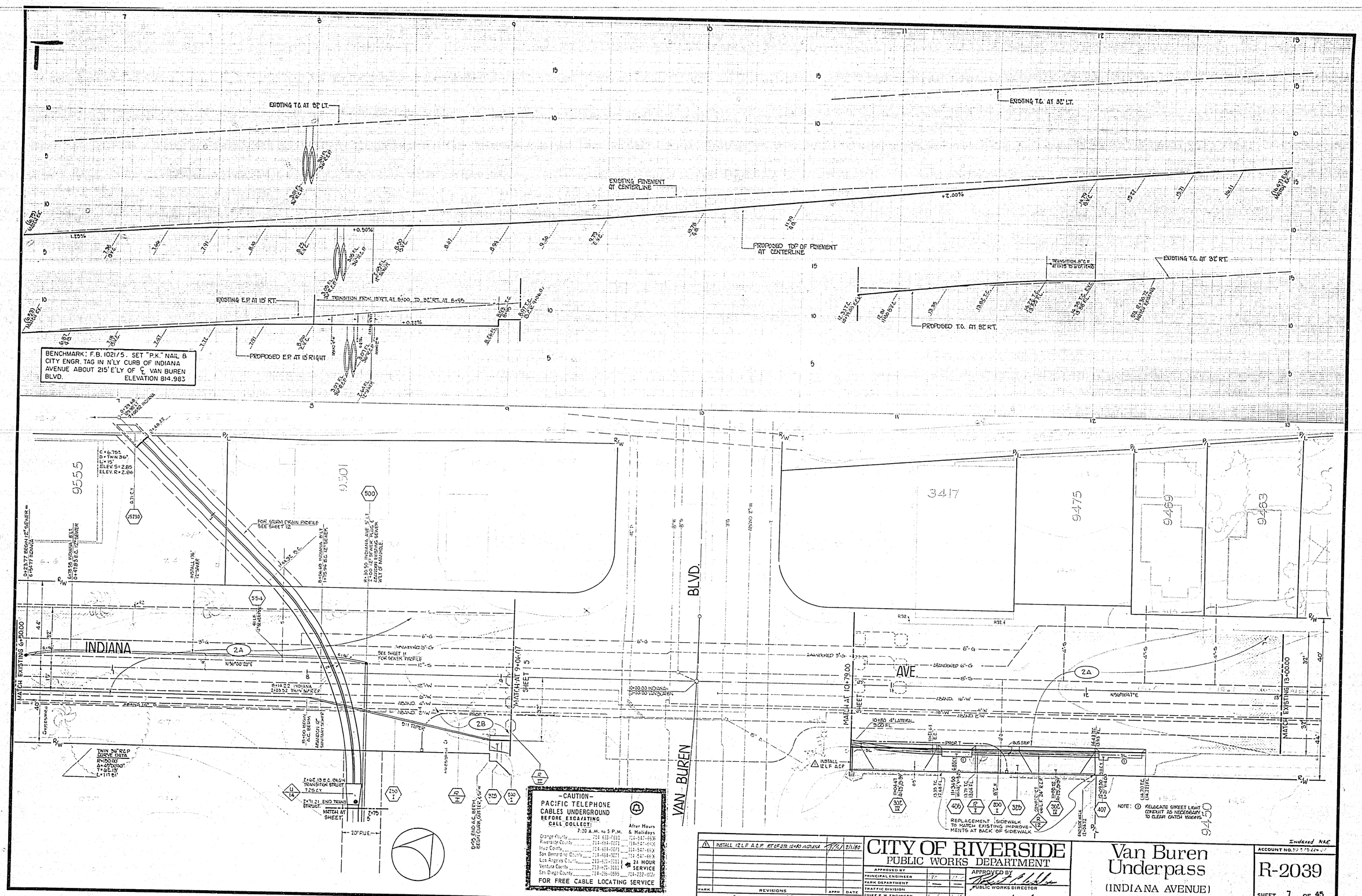
APPROVED BY [signature]
DIRECTOR OF PUBLIC WORKS
DATE 1/18/80

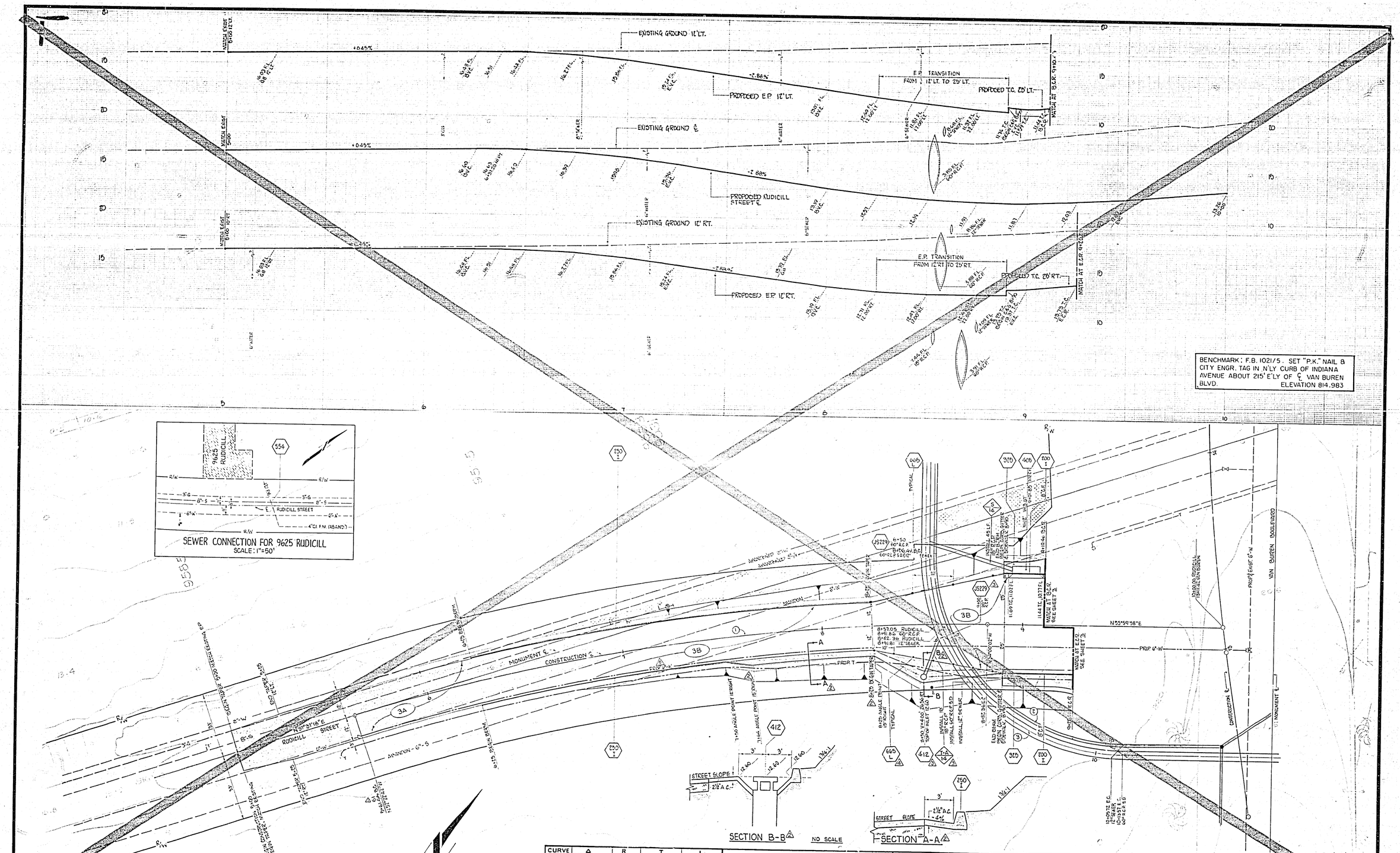
Van Buren Underpass

(VAN BUREN BLVD. PROFILES)

HORIZONTAL SCALE: 1"=20' VERTICAL SCALE: 1"=4'

Indexed RAE
ACCOUNT No. 30 575 224 07
DRAWING NUMBER
R-2039
SHEET 6 OF 45


EXISTING T.C. AT 32' LT.
EXISTING PAVEMENT AT CENTERLINE
PROPOSED TOP OF PAVEMENT AT CENTERLINE
EXISTING T.C. AT 32' RT.
EXISTING E.P. AT 18' RT.
TRANSITION FROM 18' RT. AT 5+00 TO 32' RT. AT 6+95
PROPOSED E.P. AT 18' RIGHT
PROPOSED T.C. AT 32' RT.
BENCHMARK: F.B. 1021/5. SET "P.K." NAIL & CITY ENGR. TAG IN N'LY CURB OF INDIANA AVENUE ABOUT 215' E'LY OF ℄ VAN BUREN BLVD. ELEVATION 814.983
INDIANA
AVE.
VAN BUREN
BLVD.
MATCH EXISTING 6+50.00
MATCH AT 9+06.07 SHEET 5
MATCH AT 10+79.00 SHEET 5
MATCH EXISTING 13+00.00
FOR STORM DRAIN PROFILE SEE SHEET 12
SEE SHEET H FOR SEWER PROFILE
TWIN 36" R.C.P. CURVE DATA
-CAUTION-
PACIFIC TELEPHONE CABLES UNDERGROUND BEFORE EXCAVATING CALL COLLECT:
7:30 A.M. to 5 P.M.
After Hours & Holidays
Orange County 714-633-0811 714-547-6563
Riverside County 714-684-0071 714-547-6563
Inyo County 714-684-0071 714-547-6563
San Bernardino County 714-884-0071 714-547-6563
Los Angeles County 213-626-3131
Ventura County 213-626-3131
San Diego County 714-299-0669 714-232-0021
24 HOUR SERVICE
FOR FREE CABLE LOCATING SERVICE
NOTE: ① RELOCATE STREET LIGHT CONDUIT AS NECESSARY TO CLEAR CATCH BASINS
REPLACEMENT SIDEWALK TO MATCH EXISTING IMPROVEMENTS AT BACK OF SIDEWALK
INSTALL 12 L.F. R.C.P. RT OF STA 10+80 INDIANA 7/11/80 2/1/80
REVISIONS
DESIGNED BY RCH DRAWN BY HV CHECKED BY DWP
CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT
APPROVED BY
PRINCIPAL ENGINEER
PARK DEPARTMENT
TRAFFIC DIVISION
CHIEF P.W. ENGINEER
APPROVED BY
PUBLIC WORKS DIRECTOR
DATE 11/1/80
Van Buren Underpass
(INDIANA AVENUE)
HORIZ. SCALE: 1" = 20'
VERT. SCALE: 1" = 4'
Indexed NRC
ACCOUNT NO. 10 5 75 224 207
R-2039
SHEET 7 OF 45
FILE NO.



CURVE	Δ	R	T	L
1	18°22'40"	1000.00'	161.77'	320.75'
2	90°00'00"	95.00'	95.00'	149.23'
3	90°00'00"	100.00'	100.00'	157.08'

MARK	REVISIONS	APPR	DATE
1	STA 5+61.06 CORRECTED TO 5+61.61	[illegible]	1/29/80
2	DITCH & BERM MODIFIED - ADDENDUM NO. 1		2/29/80
3	PIPE INLET, 24" RCP & JS229 RELOCATED - ADDENDUM NO. 1		2/29/80
4	TYPE 'L' MARKERS RELOCATED - ADDENDUM NO. 1	[illegible]	2/29/80
5	REVISED LOCATION OF PROP. 6" WATER LINE		3/6/80

DESIGNED BY RFH DRAWN BY TLV SK CHECKED BY ALR

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY
PRINCIPAL ENGINEER
PARK DEPARTMENT
TRAFFIC DIVISION
CHIEF P. W. ENGINEER

APPROVED BY [signature]
PUBLIC WORKS DIRECTOR
DATE 1/18/80

Van Buren Underpass
(RUDICILL STREET)

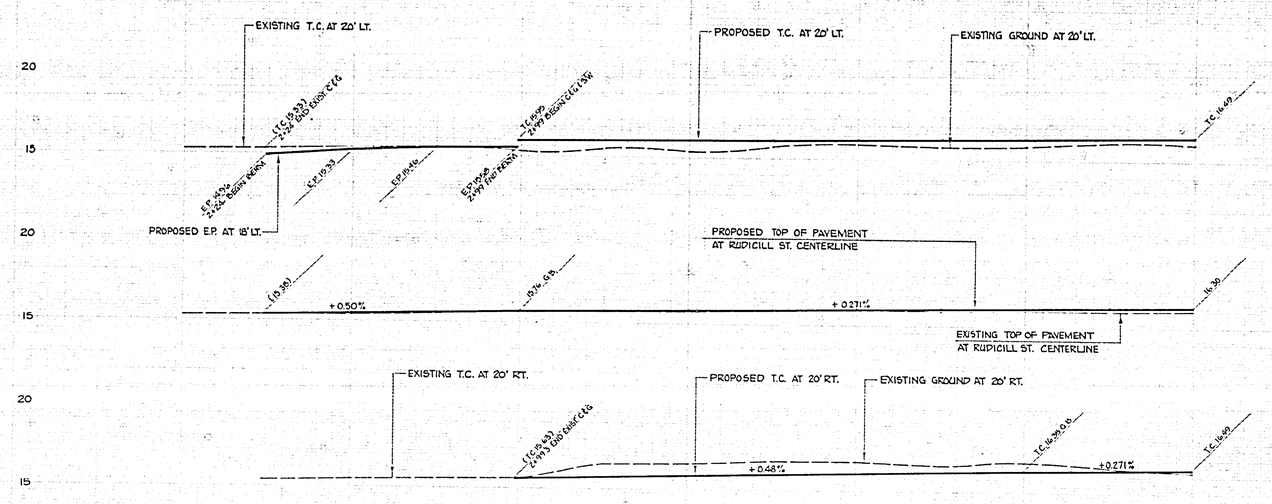
HORIZ. SCALE: 1" = 20' VERT. SCALE: 1" = 4'

Indexed KAC
ACCOUNT NO. [illegible]

R-2039

SHEET 8 OF 45

FILE NO.



BENCHMARK: F.B. 1021/5. SET "P.K." NAIL & CITY ENGR. TAG IN E'LY CURB OF VAN BUREN BLVD. NEAR STA. 9+00 ADJ. ELEV. 825.008
ELEVATION 825.015

CONSTRUCTION LEGEND

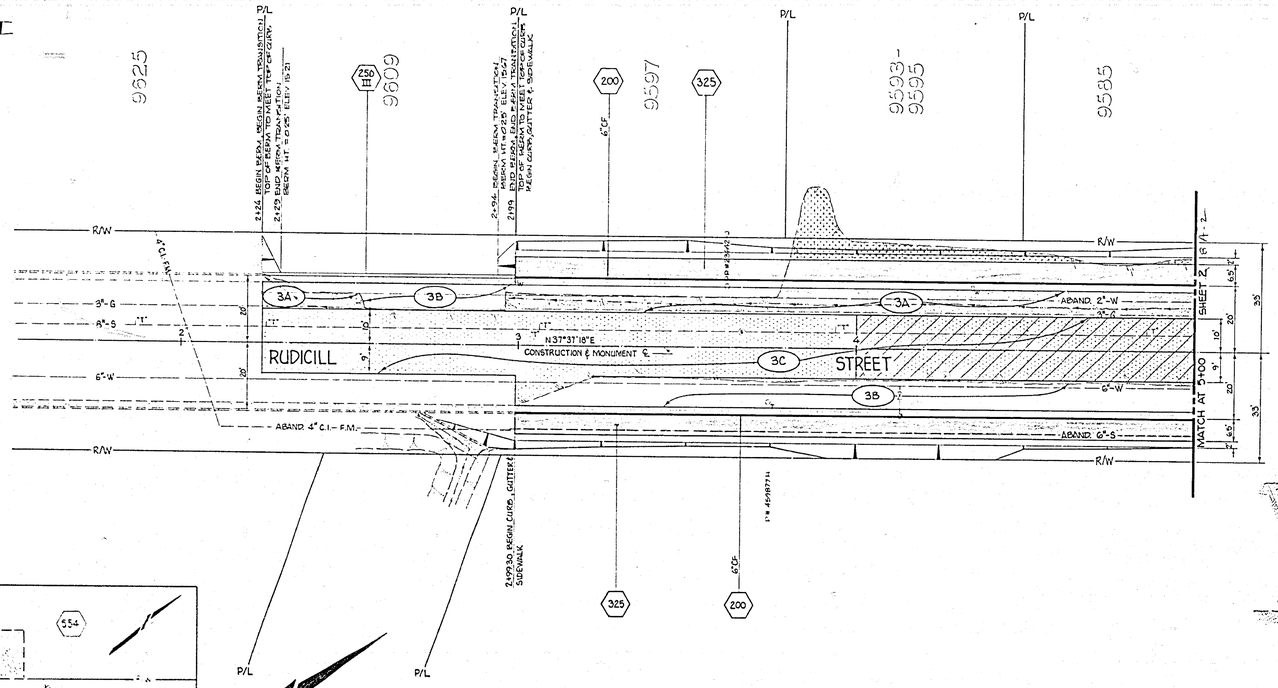
CENTER LINE	℄	TOP OF SLOPE	
RIGHT OF WAY LINE	R/W	TOE OF SLOPE	
SUBDIVISION LOT LINE	P/L	DIRECTION OF FLOW	

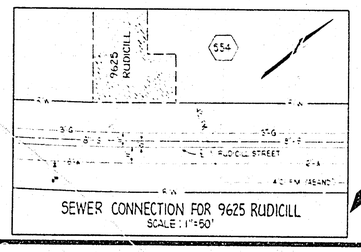
SPECIFIC CONSTRUCTION NOTES

(250) NUMBERS ABOVE 100 IN A HEXAGON ON THE PLAN REFER TO THE RESPECTIVE STANDARD DRAWING AND SHALL BE CONSTRUCTED ACCORDINGLY, UNLESS MODIFICATIONS ARE NOTED ON THE PLAN OR BELOW IN THESE NOTES. ANY NUMBER SHOWN BELOW THE STANDARD DRAWING NUMBER INDICATES THE SPECIFIC ALTERNATES TO BE CONSTRUCTED.

(15229) RIVERSIDE COUNTY FLOOD CONTROL STANDARD DRAWINGS

- EXISTING A.C. PAVEMENT TO BE REMOVED.
- (3A) EXISTING A.C. PAVEMENT TO BE REMOVED PRIOR TO CONSTRUCTION OF STRUCTURAL SECTION OF 0.22' A.C., OVER 0.40' CLASS 2 BASE.
- (3B) CONSTRUCT STRUCTURAL SECTION OF 0.22' A.C., OVER 0.40' CLASS 2 BASE.
- (3C) OVERLAY EXISTING A.C. PAVEMENT WITH A VARIABLE THICKNESS OF ASPHALT CONCRETE. MINIMUM OVERLAY TO BE 1½" THICK.
- PLACE PAVEMENT REINFORCING FABRIC.
- REGRADE DRIVEWAY TO GRADE AND MATERIALS SHOWN ON PLAN, A.C. 5" THICK. PAVED DRAINAGE DITCH, A.C. 2½" THICK.

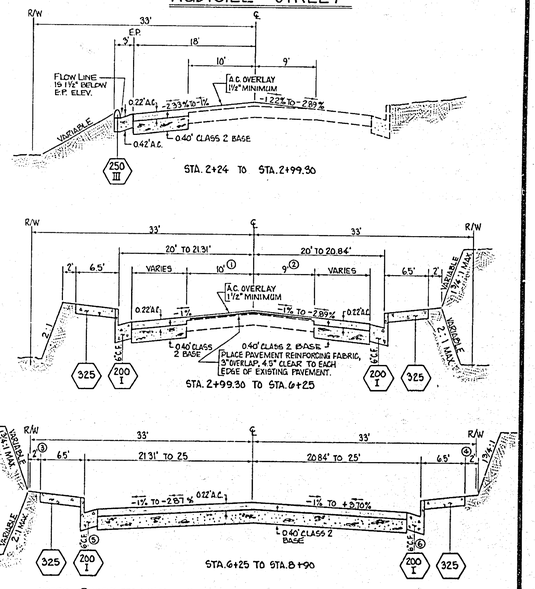




SEWER CONNECTION FOR 9625 RUDICILL
SCALE: 1"=50'

TYPICAL SECTIONS RUDICILL STREET

SCALE: HORIZ.: NO SCALE
VERT.: 1"=2"



NOTES
1. VARIES FROM 10' TO 11.74' BETWEEN STA. 5+61.61 AND STA. 6+25
2. VARIES FROM 9' TO 7.26' BETWEEN STA. 5+61.61 AND STA. 6+25
3. VARIES FROM 2' TO 3.5' BETWEEN STA. 8+75 AND STA. 8+90
4. VARIES FROM 2' TO 0.5' BETWEEN STA. 8+75 AND STA. 8+90
5. VARIES FROM 6" TO 8" BETWEEN STA. 8+25 AND STA. 8+50
6. VARIES FROM 6" TO 8" BETWEEN STA. 8+75 AND STA. 8+90

MARK	REVISIONS	APPR.	DATE

DESIGNED BY [illegible] DRAWN BY [illegible] CHECKED BY [illegible]

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

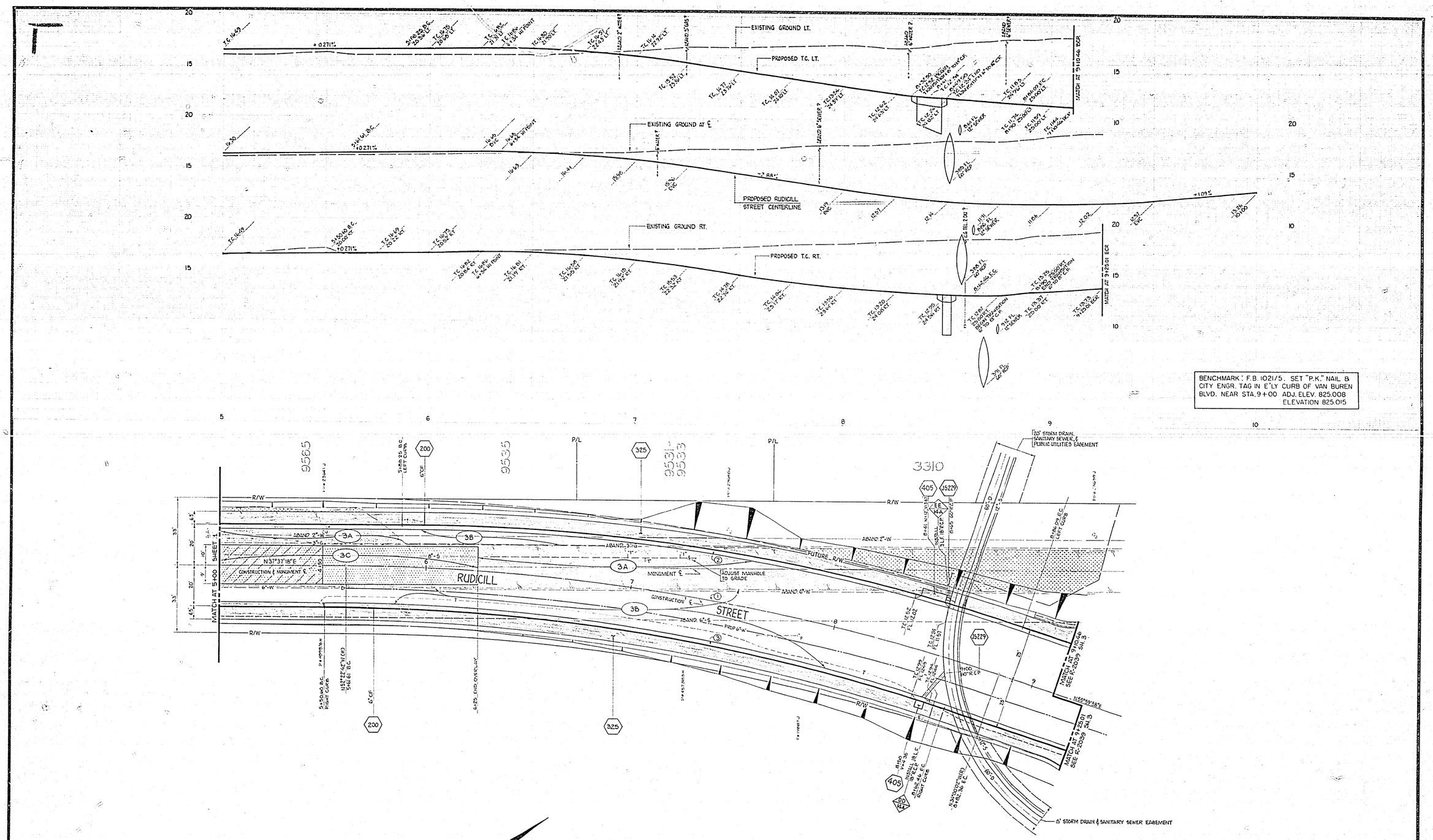
APPROVED BY		
PRINCIPAL ENGINEER	[illegible]	3/11/80
PARK DEPARTMENT	—	
TRAFFIC DIVISION	[illegible]	3/11/80
CHIEF ENGINEER		

APPROVED BY [illegible]
PUBLIC WORKS DIRECTOR
DATE 3/11/80

RUDICILL ST.
780' w'ly to 110' w'ly of ℄ Van Buren Blvd.

HORIZ. SCALE: 1" = 20' VERT. SCALE: 1" = 4'

Indexed RKE
ACCOUNT NO. 38-575-324-30
R-2039
SHEET 8A-1 OF 45
FILE NO.



CURVE	Δ	R	T	L
①	18°22'40"	1000'	161.77'	320.75'
②	18°22'40"	950'	153.68'	304.72'
③	18°22'40"	950'	153.68'	304.72'

MARK	REVISIONS	APPR.	DATE

DESIGNED BY [illegible] DRAWN BY [illegible] CHECKED BY [illegible]

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY
PRINCIPAL ENGINEER [illegible] 3/7/80
PARK DEPARTMENT
TRAFFIC DIVISION [illegible] 3/11/80
CHIEF P.W. ENGINEER

APPROVED BY
William D. [illegible]
PUBLIC WORKS DIRECTOR
DATE 3/13/80

RUDICILL ST.
780' w'ly to 110' w'ly of ℄ Van Buren Blvd

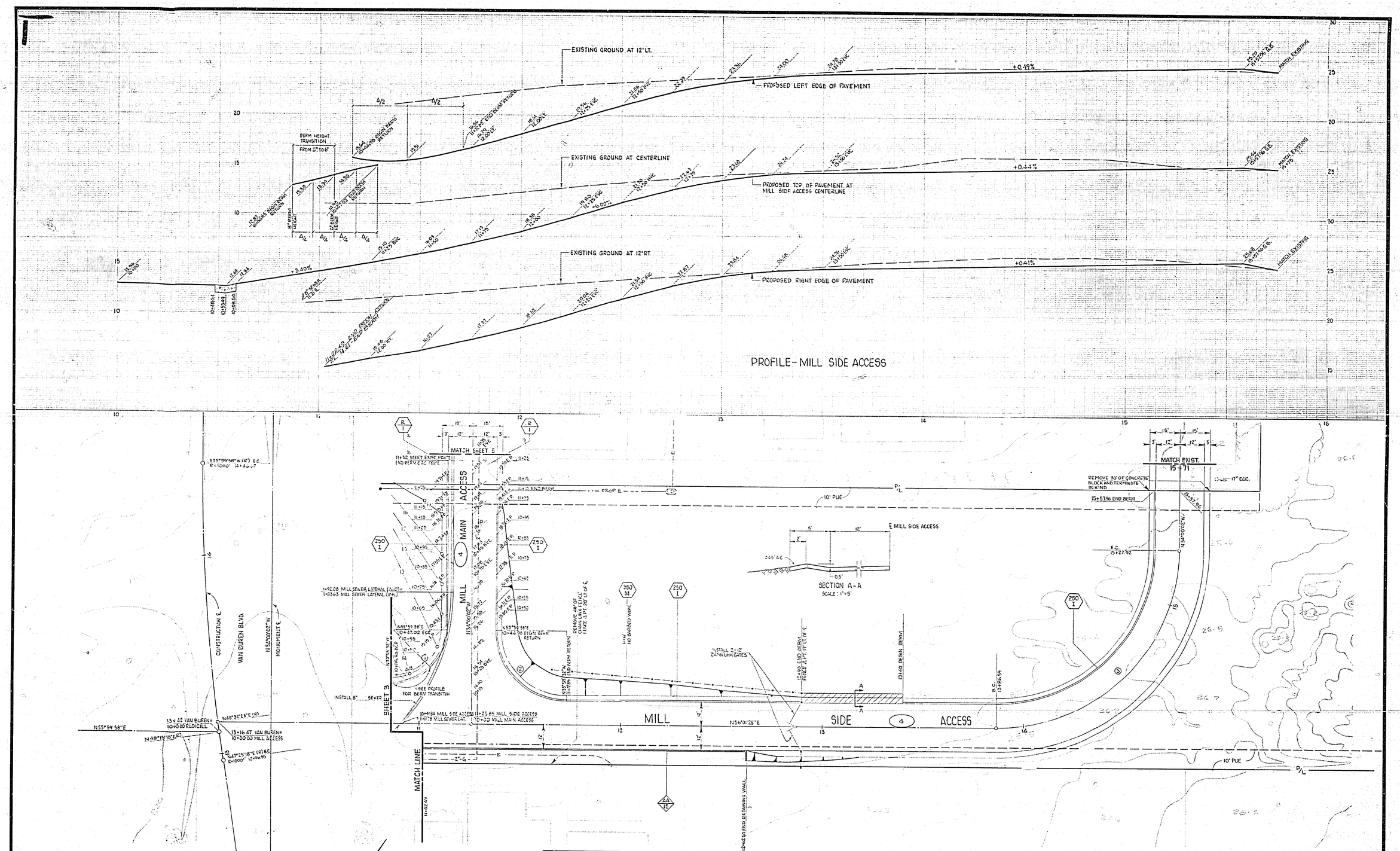
HORIZ. SCALE: 1" - 20' VERT. SCALE: 1" - 4'

Indexed NAE
ACCOUNT NO. 38-575-224-38

R-2039

SHEET 8A-2 OF 45

FILE NO.



BENCHMARK: F.B. 1021/5. SET "P.K." NAIL & CITY ENGR. TAG IN N'LY CURB OF INDIANA AVENUE ABOUT 215' E'LY OF ℄ VAN BUREN BLVD. ELEVATION 814.983

CURVE	Δ	R	T	L
(1)	90°01'30"	27.00'	27.01'	42.42'
(2)	89°58'30"	30.00'	34.98'	54.96'
(3)	90°01'30"	90.00'	90.04'	141.41'

MARK	REVISIONS	APPR.	DATE

DESIGNED BY DEH DRAWN BY CHECKED BY DLR

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY
PRINCIPAL ENGINEER
PARK DEPARTMENT
TRAFFIC DIVISION
CHIEF P.W. ENGINEER

APPROVED BY
PUBLIC WORKS DIRECTOR
DATE 1/18/70

Van Buren Underpass
(BROOKHURST MILL ACCESS)

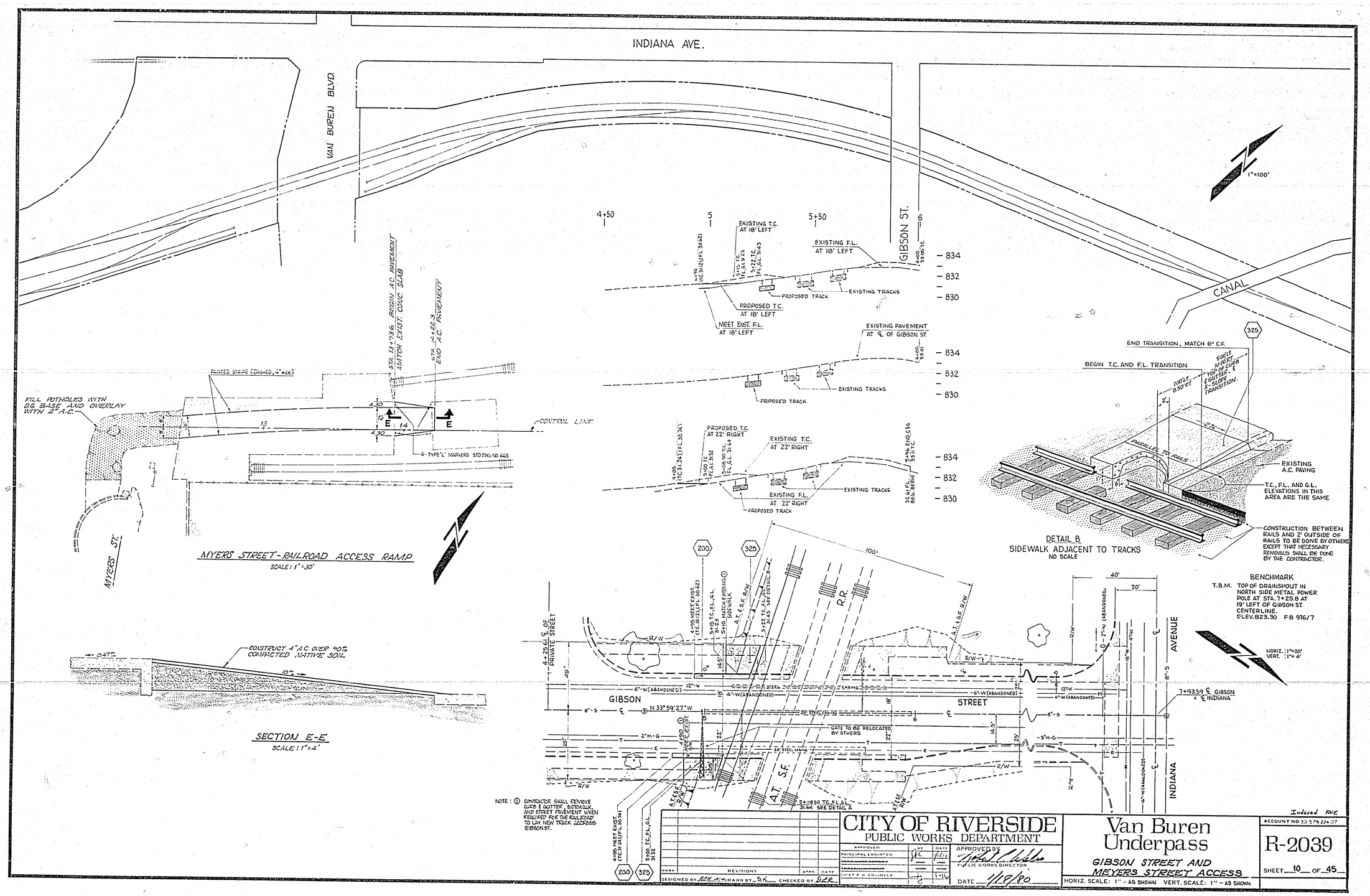
HORIZ. SCALE: 1" = 20' VERT. SCALE: 1" = 4'

Indexed RKF
ACCOUNT NO. 39 575 224 07

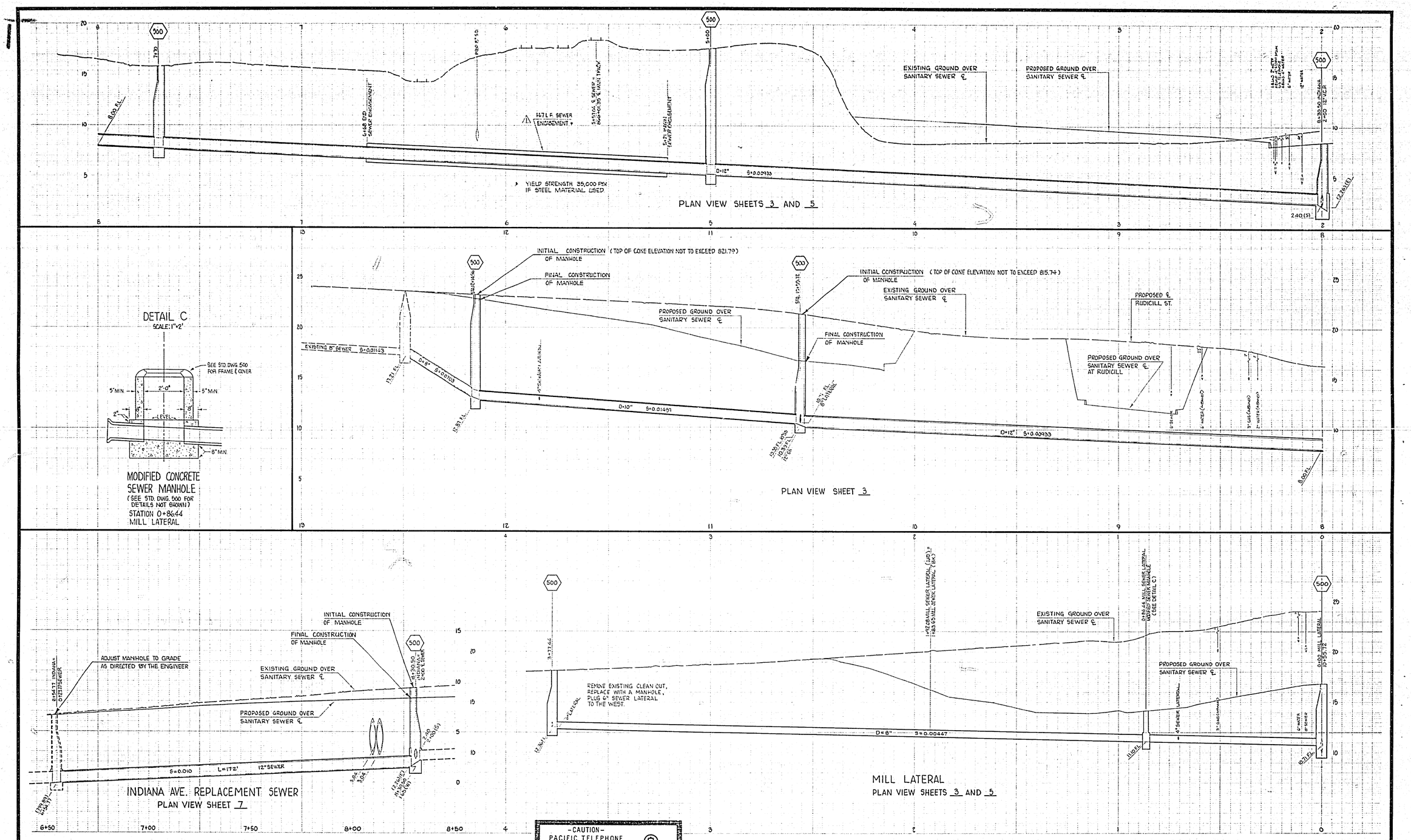
R-2039

SHEET 9 OF 45

FILE NO.



INDIANA AVE.
VAN BUREN BLVD.
GIBSON ST.
CANAL
1"=100'
4+50
5
5+50
6
EXISTING T.C. AT 18' LEFT
EXISTING F.L. AT 18' LEFT
PROPOSED TRACK
EXISTING TRACKS
PROPOSED T.C. AT 18' LEFT
MEET EXIST. F.L. AT 18' LEFT
EXISTING PAVEMENT AT ℄ OF GIBSON ST.
PROPOSED T.C. AT 22' RIGHT
EXISTING T.C. AT 22' RIGHT
EXISTING F.L. AT 22' RIGHT
834
832
830
STA. 13+93.6 BEGIN A.C. PAVEMENT MATCH EXIST. CONC. SLAB
STA. 14+22.3 END A.C. PAVEMENT
PAINTED STRIPE (DASHED, 4" WIDE)
FILL POTHOLES WITH D.G. BASE AND OVERLAY WITH 2" A.C.
CONTROL LINE
4-TYPE 'L' MARKERS STD DWG NO 665
MYERS ST.
MYERS STREET-RAILROAD ACCESS RAMP
SCALE: 1"=30'
CONSTRUCT 4" A.C. OVER 90% COMPACTED NATIVE SOIL
SECTION E-E
SCALE: 1"=4'
END TRANSITION, MATCH 6" C.F.
BEGIN T.C. AND F.L. TRANSITION
PARALLEL TO RAILS
EXISTING A.C. PAVING
T.C., F.L. AND G.L. ELEVATIONS IN THIS AREA ARE THE SAME
CONSTRUCTION BETWEEN RAILS AND 2' OUTSIDE OF RAILS TO BE DONE BY OTHERS EXCEPT THAT NECESSARY REMOVALS SHALL BE DONE BY THE CONTRACTOR.
DETAIL B
SIDEWALK ADJACENT TO TRACKS
NO SCALE
BENCHMARK
T.B.M. TOP OF DRAINSPOUT IN NORTH SIDE METAL POWER POLE AT STA. 7+25.8 AT 19' LEFT OF GIBSON ST. CENTERLINE. ELEV. 823.30 FB 976/7
HORIZ.: 1"=20' VERT.: 1"=4'
4+25.61 ℄ OF PRIVATE STREET
GIBSON
STREET
AVENUE
INDIANA
R.R.
A.T. S.F.
N 33°59'27"W
GATE TO BE RELOCATED BY OTHERS
7+93.59 ℄ GIBSON = ℄ INDIANA
NOTE: ① CONTRACTOR SHALL REMOVE CURB & GUTTER, SIDEWALK, AND STREET PAVEMENT WHEN REQUIRED FOR THE RAILROAD TO LAY NEW TRACK ACCROSS GIBSON ST.
CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT
APPROVED BY
PUBLIC WORKS DIRECTOR
DATE 1/18/80
Van Buren Underpass
GIBSON STREET AND MEYERS STREET ACCESS
HORIZ. SCALE: 1" = AS SHOWN VERT. SCALE: 1" = AS SHOWN
R-2039
SHEET 10 OF 45



BENCHMARK: F.B. 1021/5. SET "P.K." NAIL & CITY ENGR. TAG IN N'LY CURB OF INDIANA AVENUE ABOUT 215' E'LY OF ℄ VAN BUREN BLVD. ELEVATION 814.983

-CAUTION-
PACIFIC TELEPHONE CABLES UNDERGROUND
BEFORE EXCAVATING CALL COLLECT:

	7:30 A.M. to 5 P.M.	After Hours & Holidays
Orange County	714-635-6611	714-547-66.x
Riverside County	714-684-0071	714-547-66.x
Inyo County	714-684-0071	714-547-66.x
San Bernardino County	714-684-0071	714-547-66.x
Los Angeles County	213-621-3111	24 HOUR SERVICE
Ventura County	213-621-3111	
San Diego County	714-296-0595	714-232-0077

FOR FREE CABLE LOCATING SERVICE

MARK	REVISIONS	APPR.	DATE
1	INCREASED SEWER ENCASEMENT 44 L.F. AND ADDED NOTE		2/7/86

DESIGNED BY REH DRAWN BY P.K. CHECKED BY DLR

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
PRINCIPAL ENGINEER		
PARK DEPARTMENT		
TRAFFIC DIVISION		
CHIEF PUB. WKS ENGR.		

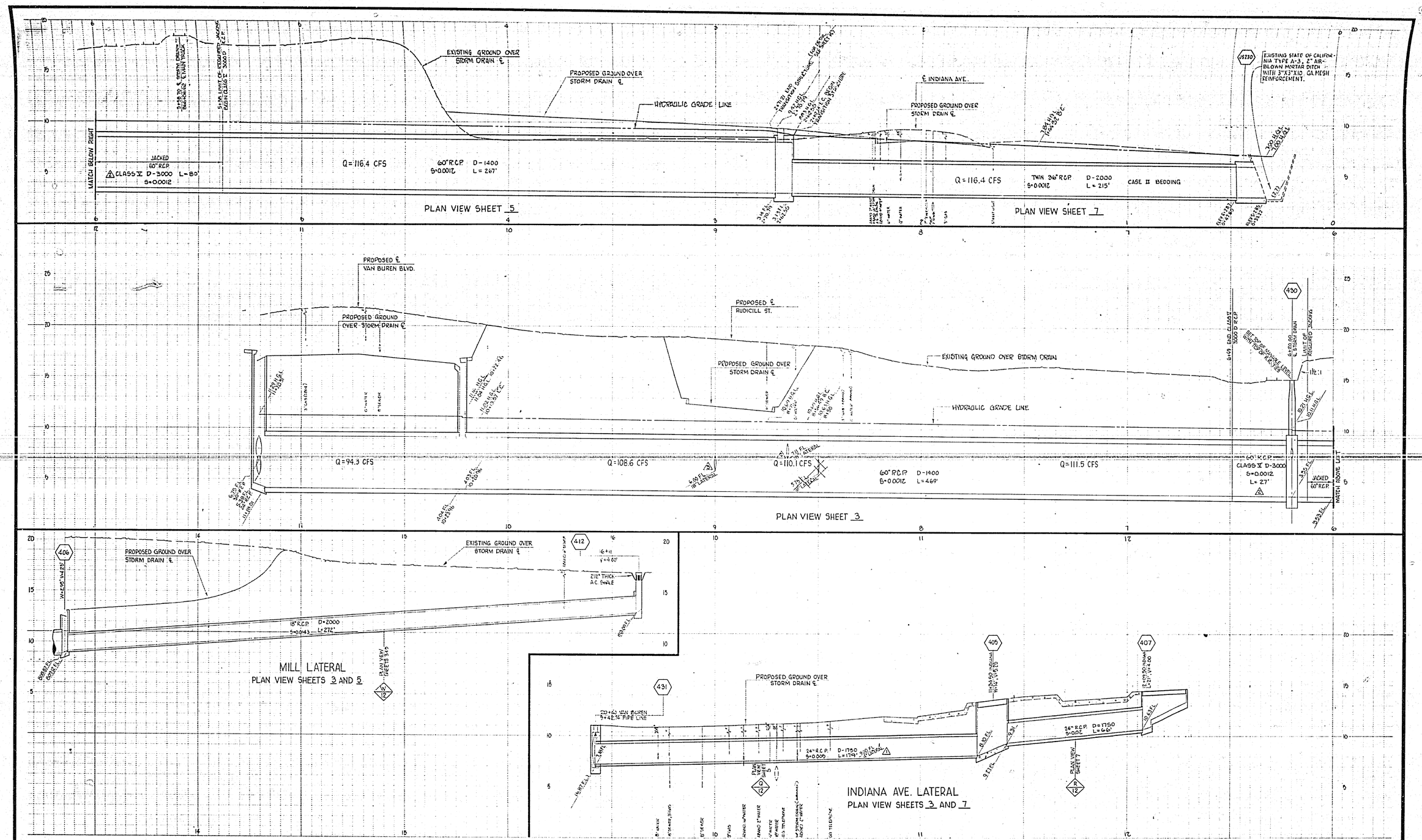
APPROVED BY [signature]
DIRECTOR OF PUBLIC WORKS
DATE 1/18/86

Van Buren Underpass
SEWER

SCALE: HORIZONTAL: 1"=20' VERTICAL: 1"=4'

Indexed RKE

ACCOUNT No. 30 575 224 07
DRAWING NUMBER
R-2039
SHEET 11 OF 45



BENCHMARK: F.B. 1021/5. SET "P.K." NAIL & CITY ENGR. TAG IN N'LY CURB OF INDIANA AVENUE ABOUT 215' E'LY OF ℄ VAN BUREN BLVD. ELEVATION 814.983

MARK	REVISIONS	APPR	DATE
1	ADDED 4" LATERAL 10+80 INDIANA LATERAL		2/1/80
2	REVISED GRADE FROM D-1400 TO CLASS V D-3000 FROM 5+38 TO 6+99		2/7/80
3	REVISED LOCATION OF INLET		2/15/80
4	REV. DESIGNATION NO.		3/6/80
5	REVISED LOCATION OF INLET PER ADDENDUM NO. 1		

DESIGNED BY: RCH CALC'D: DRAWN BY: DV S.R. CHECKED BY: DLR

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
PRINCIPAL ENGINEER		
MARK DEPARTMENT		
TRAFFIC DIVISION		
CHIEF PUB WKS ENGR		

APPROVED BY

DIRECTOR OF PUBLIC WORKS

DATE

Van Buren Underpass
(STORM DRAIN)

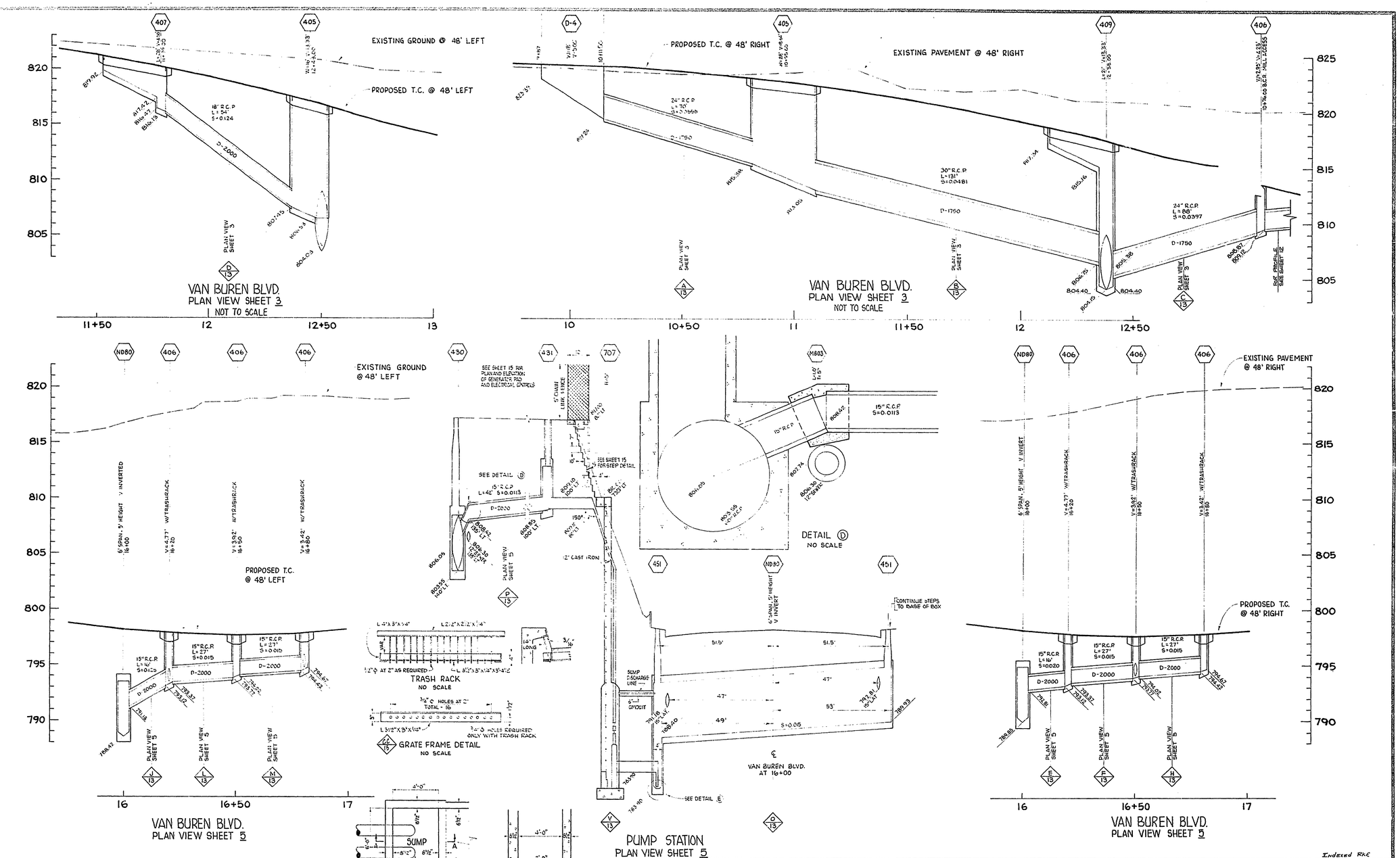
SCALE: HORIZONTAL: 1"=10' VERTICAL: 1"=4'

Indexed RKC

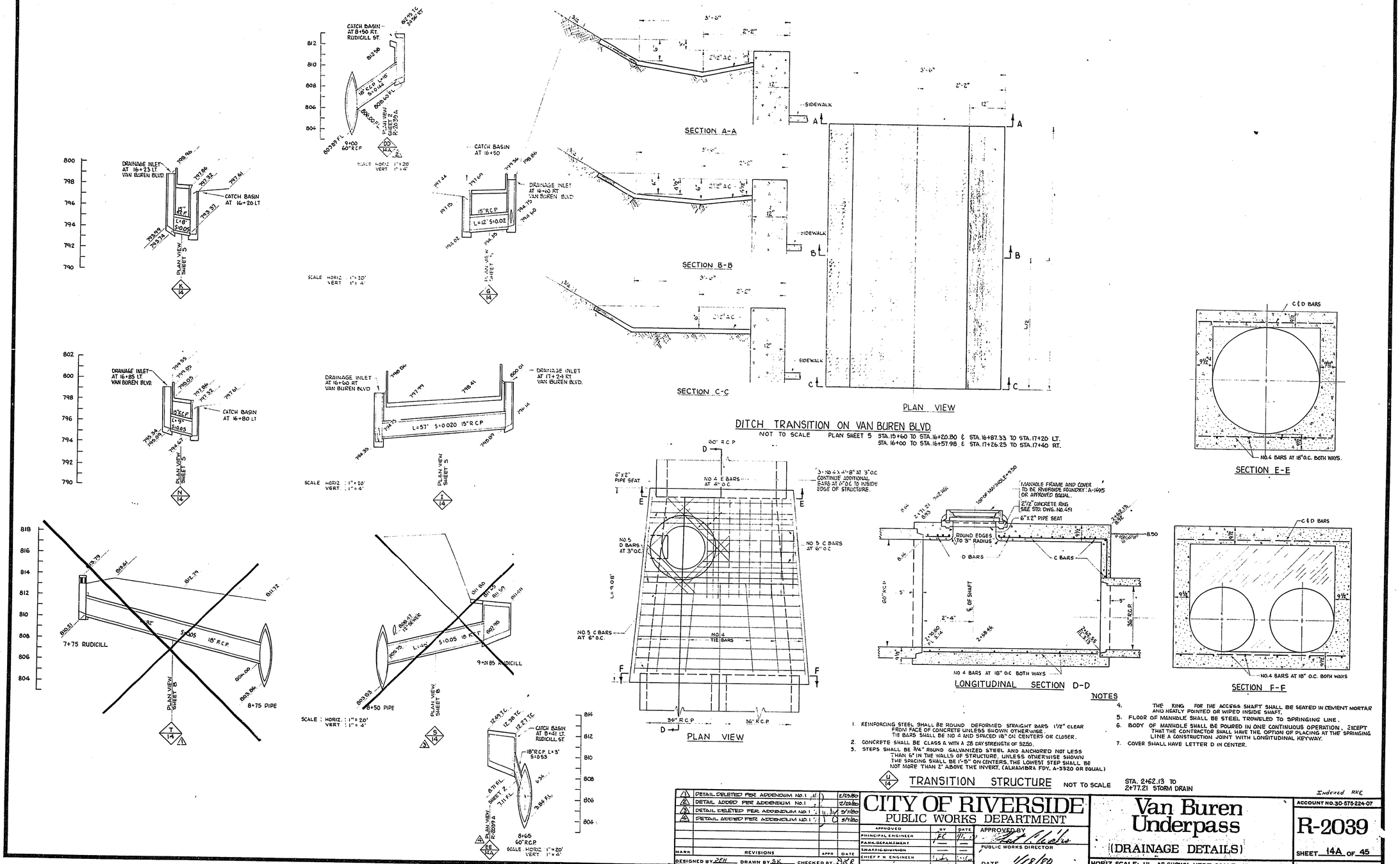
ACCOUNT No. 30 575 224-07

DRAWING NUMBER R-2039

SHEET 12A OF 45



CITY OF RIVERSIDE PUBLIC WORKS DEPARTMENT	Van Buren Underpass (DRAINAGE & PUMP STATION DETAILS)	Indexed RKE ACCOUNT NO 30 575 224 07	R-2039
	HORIZ. SCALE: 1" 20' VERT. SCALE: 1" 4'	SHEET 13 OF 45	



NOTES

1. REINFORCING STEEL SHALL BE ROUND DEFORMED STRAIGHT BARS 1½" CLEAR FROM FACE OF CONCRETE UNLESS SHOWN OTHERWISE. TIE BARS SHALL BE NO 4 AND SPACED 18" ON CENTERS OR CLOSER.
2. CONCRETE SHALL BE CLASS A WITH A 28 DAY STRENGTH OF 3250.
3. STEPS SHALL BE 3/4" ROUND GALVANIZED STEEL AND ANCHORED NOT LESS THAN 6" IN THE WALLS OF STRUCTURE, UNLESS OTHERWISE SHOWN. THE SPACING SHALL BE 1'-5" ON CENTERS. THE LOWEST STEP SHALL BE NOT MORE THAN 2' ABOVE THE INVERT. (ALHAMBRA FDY. A-3320 OR EQUAL.)
4. THE RING FOR THE ACCESS SHAFT SHALL BE SEATED IN CEMENT MORTAR AND NEATLY POINTED OR WIPED INSIDE SHAFT.
5. FLOOR OF MANHOLE SHALL BE STEEL TROWELED TO SPRINGING LINE.
6. BODY OF MANHOLE SHALL BE POURED IN ONE CONTINUOUS OPERATION, EXCEPT THAT THE CONTRACTOR SHALL HAVE THE OPTION OF PLACING AT THE SPRINGING LINE A CONSTRUCTION JOINT WITH LONGITUDINAL KEYWAY.
7. COVER SHALL HAVE LETTER D IN CENTER.

1/14 TRANSITION STRUCTURE NOT TO SCALE

STA. 2+62.13 TO 2+77.21 STORM DRAIN

MARK	REVISIONS	APPR	DATE
1	DETAIL DELETED PER ADDENDUM No.1		2/15/80
2	DETAIL ADDED PER ADDENDUM No.1		2/15/80
3	DETAIL DELETED PER ADDENDUM No.1		2/15/80
4	DETAIL ADDED PER ADDENDUM No.1		2/15/80

DESIGNED BY ZEH DRAWN BY SK CHECKED BY DKR

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED	BY	DATE
PRINCIPAL ENGINEER	FC	11-13
PARK DEPARTMENT	—	—
TRAFFIC DIVISION	—	—
CHIEF P. W. ENGINEER	[illegible]	[illegible]

APPROVED BY [signature] PUBLIC WORKS DIRECTOR

DATE 11/13/80

Van Buren Underpass
(DRAINAGE DETAILS)

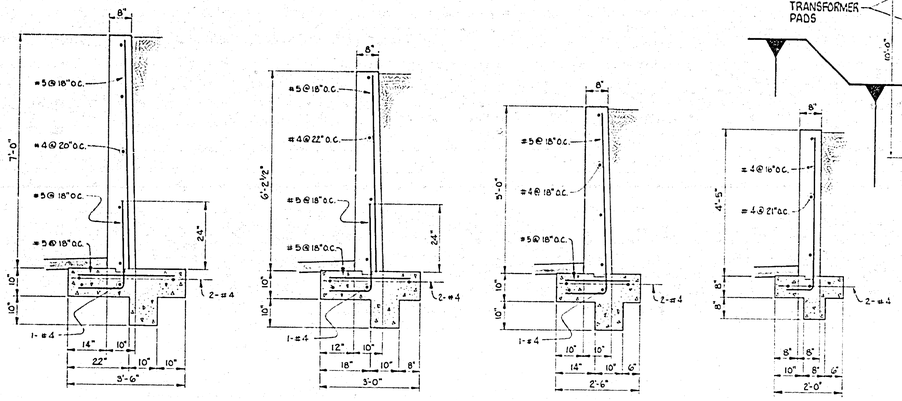
HORIZ. SCALE: 1" = AS SHOWN VERT. SCALE: 1" = AS SHOWN

Indexed RKE

ACCOUNT NO. 30-575-224-07

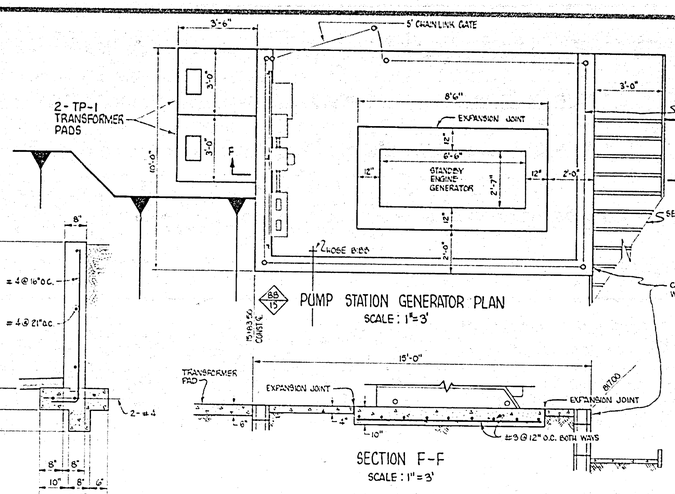
R-2039

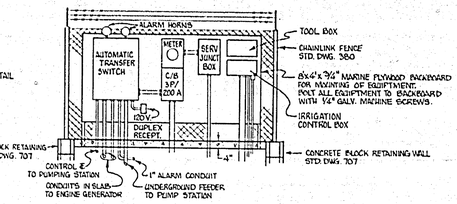
SHEET 14A OF 45



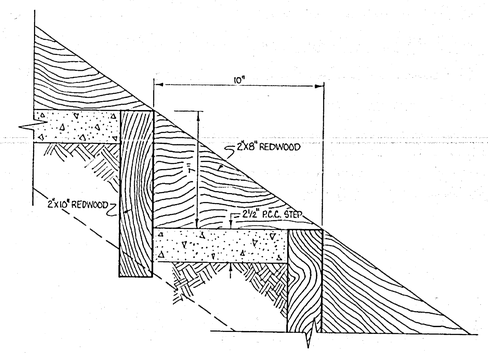
SECTIONS
RETAINING WALL @ MILL SIDE ACCESS
SCALE: HORIZ.: 1"=2'
VERT.: 1"=2'

NOTE: FOR WEEP HOLE AND WEAKENED PLANE DETAILS, SEE SHEET 16

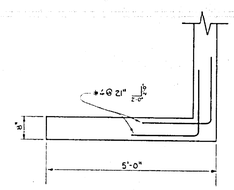




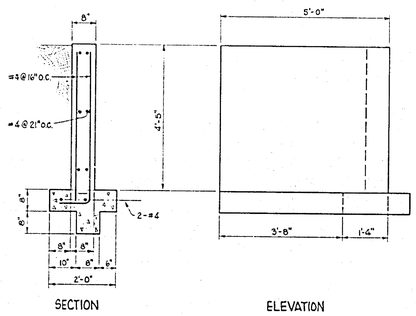
CONTROL PANEL ELEVATION
SCALE: 1"=3'



STEP DETAIL
NO SCALE

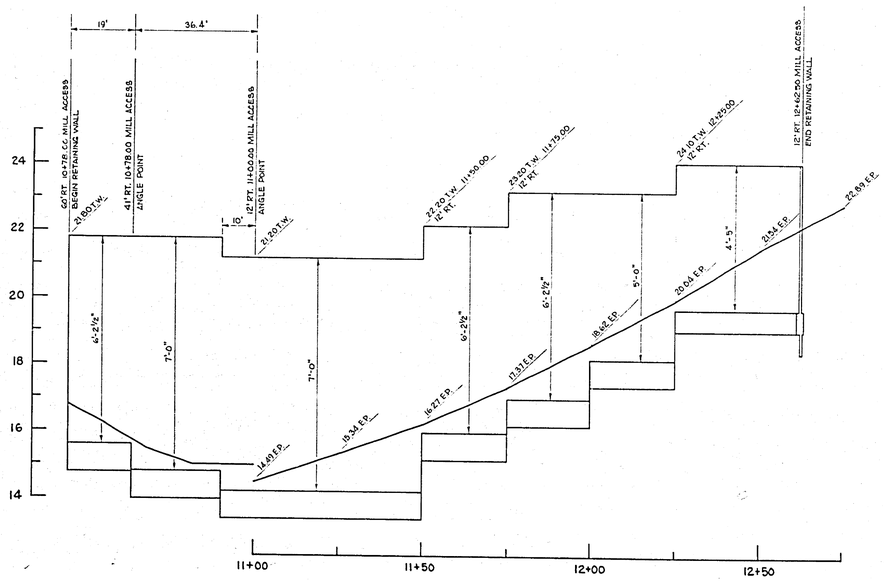


PLAN



SECTION ELEVATION

RETURN WALL @ MILL SIDE ACCESS
SCALE: 1"=2' STA. 12+62.50



4A/15 RETAINING WALL @ MILL SIDE ACCESS
SCALE: HORIZ.: 1"=20'
VERT.: 1"=2'

MARK	REVISIONS	APPD	DATE

DESIGNED BY CWS DRAWN BY S.K. CHECKED BY DJR

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED	BY	DATE
PRINCIPAL ENGINEER		
[illegible]		
[illegible]		
CHIEF P. A. ENGINEER		

APPROVED BY [illegible]
PUBLIC WORKS DIRECTOR
DATE 1/18/80

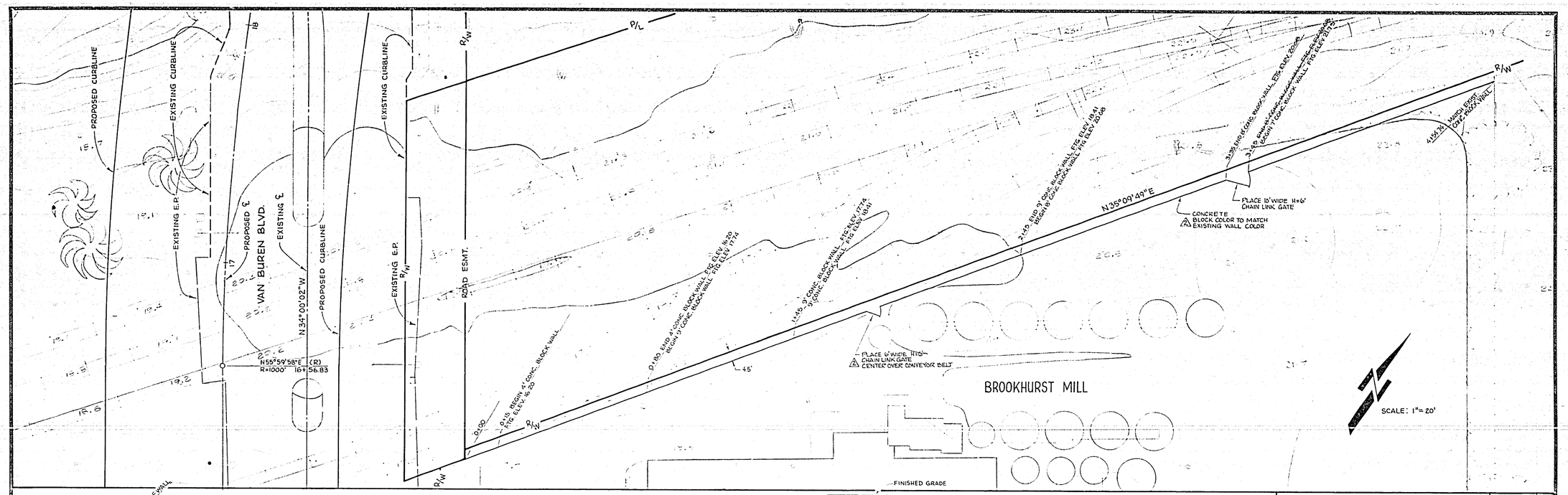
Van Buren Underpass
(RETAINING WALL, GENERATOR PLAN & ELEVATION)

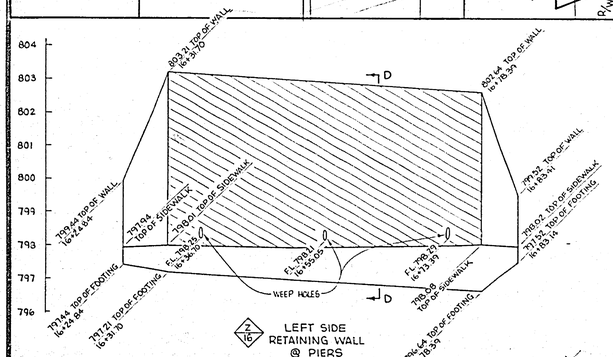
HORIZ. SCALE: 1" = AS SHOWN VERT. SCALE: 1" = AS SHOWN

Indexed RKE
ACCOUNT NO 30 575 224 07

R-2039

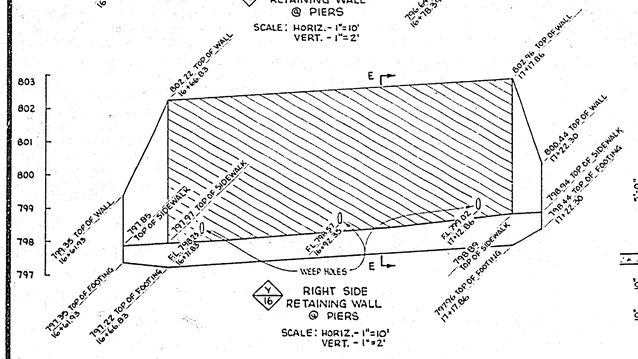
SHEET 15 OF 45





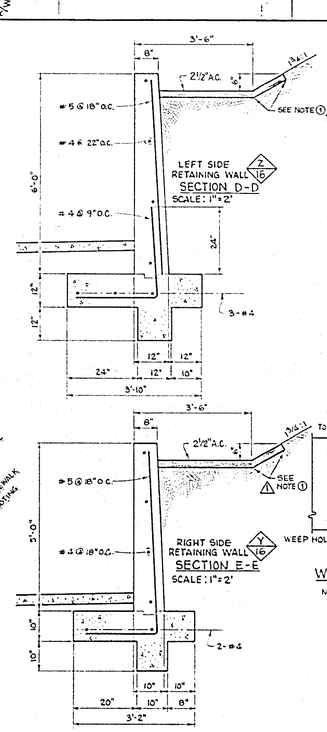
LEFT SIDE RETAINING WALL @ PIERS

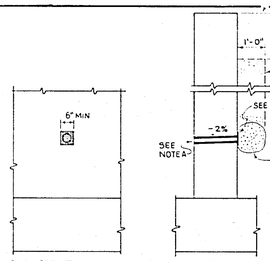
SCALE: HORIZ.- 1"=10' VERT. - 1"=2'



RIGHT SIDE RETAINING WALL @ PIERS

SCALE: HORIZ.- 1"=10' VERT. - 1"=2'





WEEP HOLE AND PERVIOUS BACKFILL

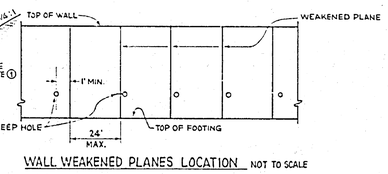
NOTES:

A. 4"ϕ DRAINS WHERE SHOWN ON PLAN. EXPOSED WALL DRAINS SHALL BE LOCATED 3"± ABOVE FINISHED GRADE.

B. 6" SQUARE ALUMINUM OR GALVANIZED STEEL WIRE 4 MESH HARDWARE CLOTH (MIN. WIRE DIAMETER 0.03") ANCHOR FIRMLY TO BACKFACE.

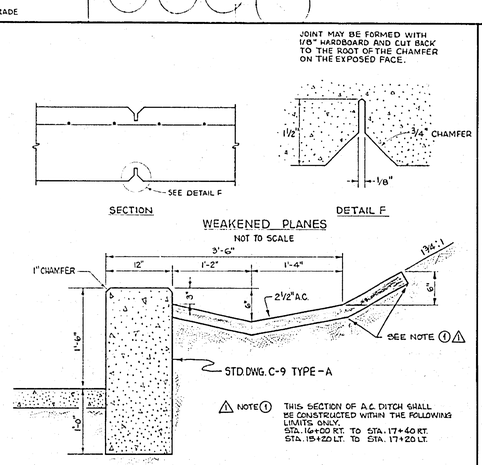
C. ONE CUBIC FOOT PERVIOUS BACKFILL MATERIAL IN AN ENGINEERED FILTER FABRIC, SUCH AS MIRAFI OR EQUAL.

D. PERVIOUS BACKFILL MATERIAL CONTINUOUS BEHIND WALL OR ABUTMENT.



WALL WEAKENED PLANES LOCATION NOT TO SCALE

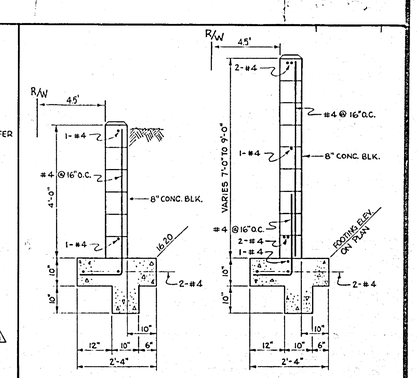
NOTE: USE ON ALL WALLS EXCEPT AS NOTED OTHERWISE



RETAINING WALL IN BACK OF SIDEWALK BETWEEN RUDICILL AND INDIANA

SCALE: 1"=1'

PER DETAIL A, SHEET 2



CONCRETE BLOCK WALL ALONG SANTA FE / BROOKHURST R/W

SCALE: 1"=2'

Indexed RKE

MARK	REVISIONS	APPR	DATE
1	ADDED NOTE 1		2/11/80
2	ADDED CHAIN LINK GATES PER ADDENDUM NO 1		2/25/80

DESIGNED BY RKH DRAWN BY S.K. CHECKED BY S.R.

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED	BY	DATE
PRINCIPAL ENGINEER		
PARK SUPERINTENDENT		
LANDSCAPE ARCHITECT		
CHIEF P.W. ENGINEER		

APPROVED BY: PUBLIC WORKS DIRECTOR

DATE 1/28/80

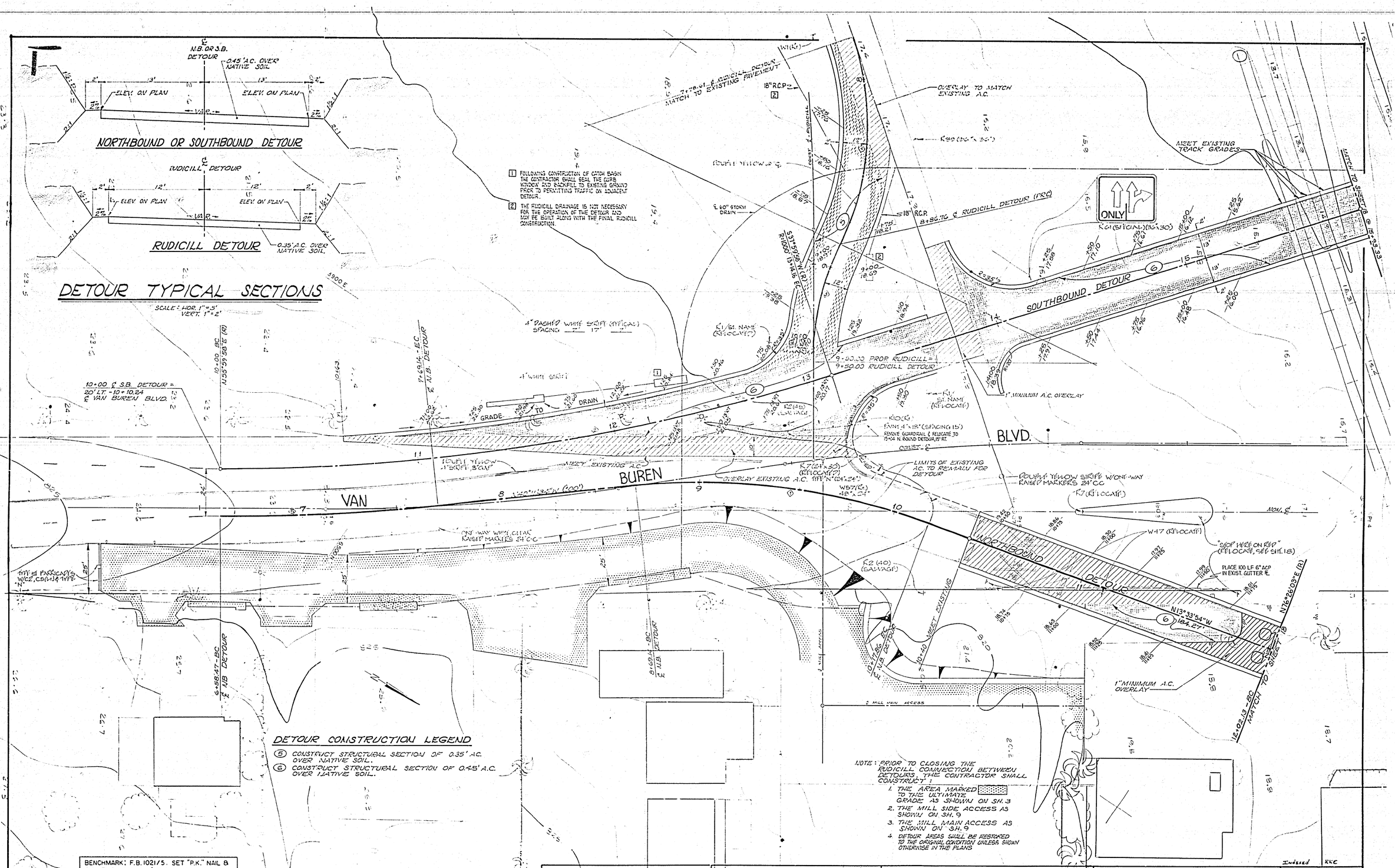
Van Buren Underpass
(RETAINING WALL DETAIL)

HORIZ. SCALE: 1" = AS SHOWN VERT. SCALE: 1" = AS SHOWN

ACCOUNT NO. 43-4-24-224-37

R-2039

SHEET 16 OF 45



CURVE DATA

INDEX	R	Δ	T	L
1	320'	26°37'40"	75.73'	148.72'
2	1000'	18°00'00"	158.38'	314.16'
3	140'	25°52'55"	32.17'	63.24'
4	140'	44°15'33"	56.93'	108.15'
5	1024'	6°11'32"	55.39'	110.67'

MARK	REVISIONS	APPR	DATE

DESIGNED BY GKW DRAWN BY SKM CHECKED BY DLR

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY
PRINCIPAL ENGINEER
PARK MAINTENANCE
TRAFFIC DIVISION
CHIEF P.W. ENGINEER

APPROVED BY
PUBLIC WORKS DIRECTOR
DATE 1/18/80

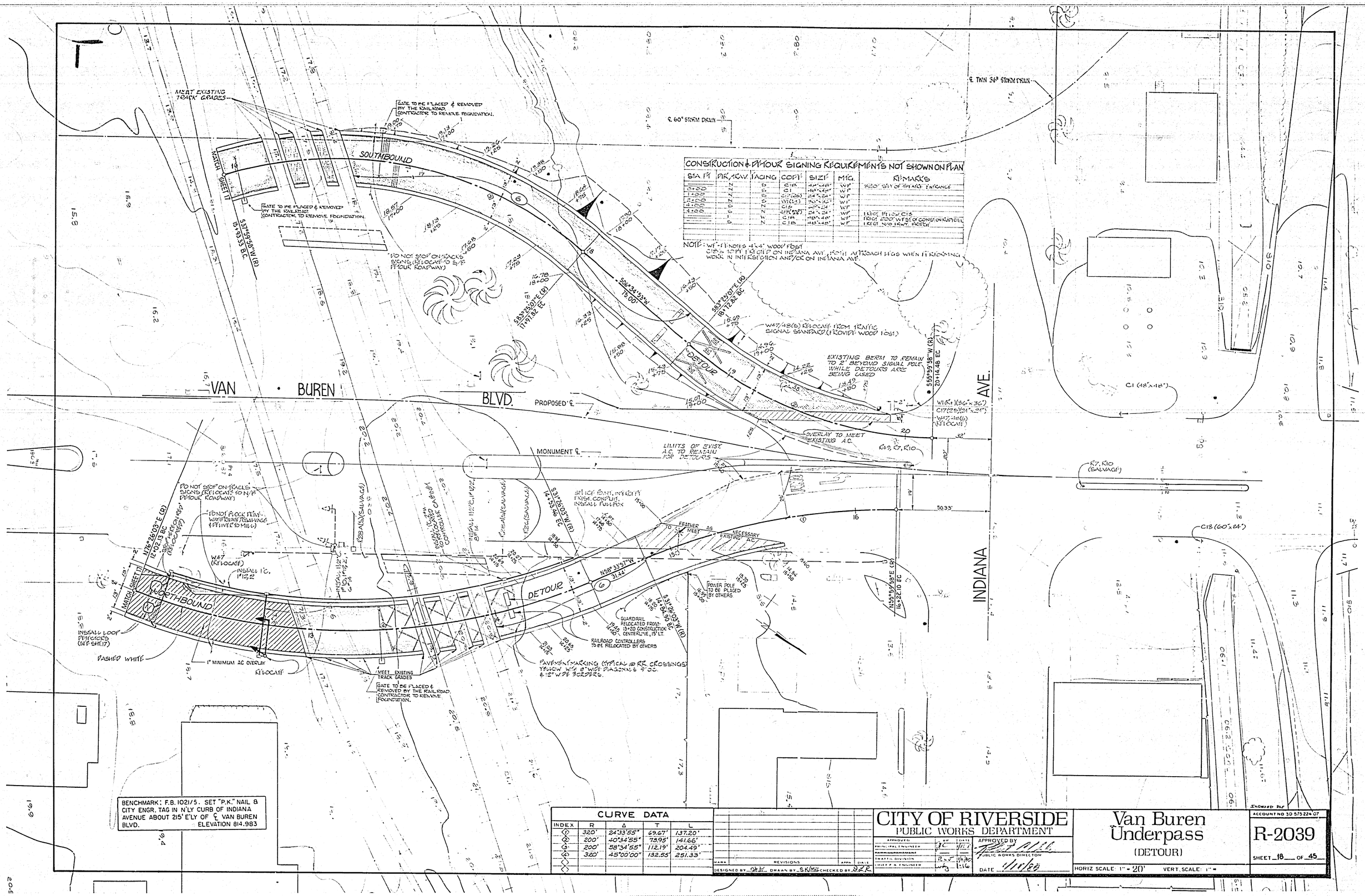
Van Buren Underpass
(DETOUR)

HORIZ. SCALE: 1" = 20' VERT. SCALE: 1" =

Indexed RKC
ACCOUNT NO 30 575 224 07

R-2039

SHEET 17 OF 45



CONSTRUCTION & DETOUR SIGNING REQUIREMENTS NOT SHOWN ON PLAN

STA.	DIR.	REF.	FACING	COPY	SIZE	MTG.	REMARKS
0+00				C18	48"x48"	WP	820' S/O OF THEATER ENTRANCE
1+00				C1	48"x48"	WP	
2+00				C17(25)	24"x24"	WP	
3+00				W18(L)	36"x36"	WP	
4+00				C18	48"x48"	WP	
4+00				C17(25)	24"x24"	WP	
				C18	48"x48"	WP	(REQ. FLOW) C18
				C18	48"x48"	WP	(REQ. 200' W/S OF CONSTRUCTION) C18
							(REQ. N/B HWY. PATCH)

NOTE: WP-11 NOTES 4"x4" WOOD POST
C18's TO BE LOCATED ON INDIANA AVE. FOR APPROACH HIGS WHEN PERFORMING WORK IN INTERSECTION AND/OR ON INDIANA AVE.

CURVE DATA

INDEX	R	Δ	T	L
1	320'	24°33'55"	69.67'	137.20'
2	200'	40°34'55"	73.95'	141.66'
3	200'	58°34'55"	112.19'	204.49'
4	320'	45°00'00"	132.55'	251.33'
5				
6				

MARK	REVISIONS	APPR.	DATE

DESIGNED BY GLH DRAWN BY SKM CHECKED BY DLR

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED	BY	DATE
PRINCIPAL ENGINEER	JC	1/11/80
ADMINISTRATOR		
TRAFFIC DIVISION	R.S.	1/11/80
CHIEF P.A. ENGINEER	Lutz	1-11-80

APPROVED BY
PUBLIC WORKS DIRECTOR
DATE 1/11/80

Van Buren Underpass
(DETOUR)

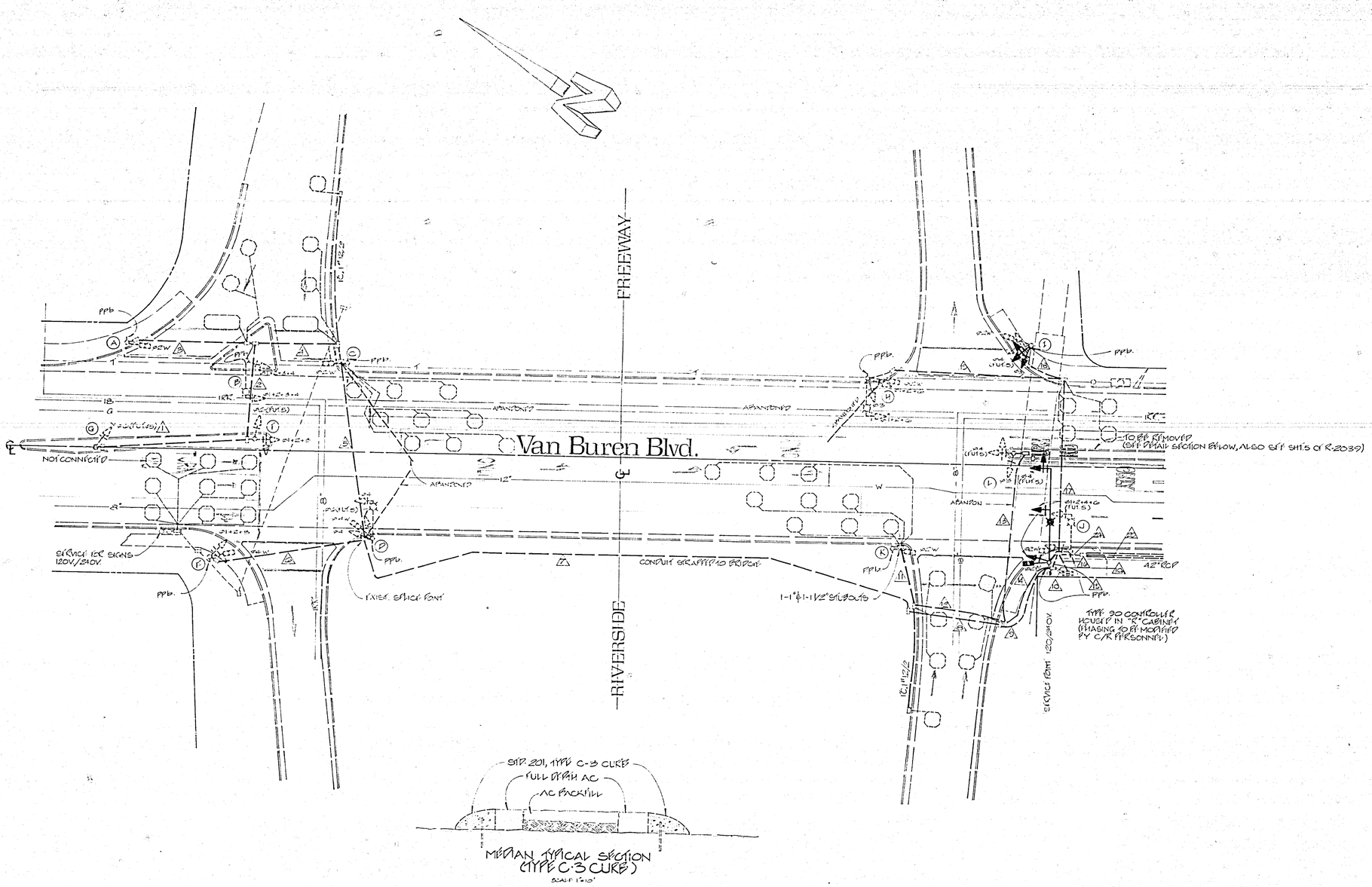
HORIZ. SCALE: 1" = 20' VERT. SCALE: 1" =

INDEXED PLT

ACCOUNT NO 30 575 224 07

R-2039

SHEET 18 OF 45



MARK	REVISIONS	APPR.	DATE

DESIGNED BY [illegible] DRAWN BY MH CHECKED BY [illegible]

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY
PRINCIPAL ENGINEER
TRAFFIC DIVISION
CHIEF P. & ENGINEER
PUBLIC UTILITIES

APPROVED BY
PUBLIC WORKS DIRECTOR
DATE 1/28/80

Van Buren Underpass

TRAFFIC SIGNALS AT VAN BUREN BLVD., INDIANA AVE. RIVERSIDE FRWY. & A.T.S.F. CROSSING

SCALE: 1" = 20'

INDEXED R&E

ACCOUNT NO 20-575-224-07

X-224

SHEET 19 OF 45

R-2039

CONDUCTOR SCHEDULE

CONDUIT RUNS

FUNCTION	CONDUCTORS SIZE	INSULATION	1	2	3	4	5	6	*7	△	*8	*9	10	10A	11	12	13
NEW HEADS																	
Φ1+6	#14	T.W.															
1+2																	
1+2+6																	
1+2+4+6 (Fut 5)																	
1+2+3+4 (Fut 5)																	
6 (Fut 5)			3	3		3	3		3		3	3	3				
1+2+3				3		3	3	3	3		3	3	3				
1+2+3+4						3	3		3		3	3	3				
3																	3
4									3		3	3	3				
4 (Fut 5)																	3
6																	
PED. HEADS																	
Φ2W					2	2	2		2		2	2	4		2	2	
4W								2	2		2	2	2				
6W																	
PED PUSH BUTTONS																	
Φ2W					1	2	3		3		3	3	11		1	1	
4W								1	2		2	2	2				
6W													3				
SPARES			3	3	3	3	3	3	3		3	3	15		3	3	3
DETECTOR CABLE	#14/2	P.E.															
Φ6 (Fut 5)						1	2		2		2	2	2				
1														1			
2														7	2	2	
2																	
2														2			
3							1		1		1	1	3	6		1	
4							2	2	4		4	4	5		1	1	
6														6	1	1	
RR. PRE-EMPT	#14																
12 V. COMMON					1	1	1	1	1		1	1	1		1	1	
120 V. COMMON	#10		1	1	1	1	1	1	1		1	1	1		1	1	1
SIGNAL SERVICE	#8	T.H.W.											2				
LUMINAIRES						2	2		2		2	2					
INTERCONNECT																	
TOTALS	#14	T.W.	6	9	7	17	18	10	25		25	25	50		7	7	9
	#14/2	P.E.				1	5	2	7		7	7	10		4	4	
	#12	T.W.															
	#10	T.W.	1	1	1	1	1	1	1		1	1	1		1	1	1
	#8	T.H.W.				2	2		2		2	2	2				
			(EXIST)	(EXIST)	(EXIST)	(EXIST)	(EXIST)	(EXIST)	(EXIST)		(EXIST)	(EXIST)	(EXIST)	(EXIST)	(ABAN)	(EXIST)	(ABAN)
CONDUIT SIZE			1½"	1½"	1½"	2"	3"	1½"	3"		3"	3"	3"	2"	1½"	1½"	1½"

FUNCTION	14	15	16	17	18	19	20	20A	21	22	23	24	25	26	27	28	29	30	31
NEW HEADS																			
Φ1+6			3				3	3		3	3	3	3	3	3				
1+2			3				3	3		3	3								
1+2+6		—	3	3		3													
1+2+4+6 (Fut 5)			3																
1+2+3+4 (Fut 5)			10				10	10		5		5	5			5	5	5	
6 (Fut 5)																			
1+2+3																			
1+2+3+4																			
3	3		3	3		3													
4																			
4 (Fut 5)	3		3	3	3														
6			6				6	6		3		3				3	3		
PED. HEADS																			
Φ2W	2		6	2	4	2	4	4		2	2	2				2	2		
4W																			
6W			2				2	2		2	2					12			
PED PUSH BUTTONS																			
Φ2W	1	7		2	1	1	4	4		2		1				2	1		
4W																			
6W		3					3	3	1	1									
SPARES	3	3		3	3	3	6	6	3	3	3	3	3	3	3	3	3	3	
DETECTOR CABLE																			
Φ6 (Fut 5)																			
1							1	1		1		1	1	1	1				
2	2						5	5		1		1	1			2	2	2	2
2			1	1															
2		2					2	2		2		2	2	1					
3	2	1					1	1	1										
4	1																		
6	1	5					5	5		3						2	2		
RR. PRE-EMPT			2				2	2		2		2	2	2					
12 V. COMMON	1	1		1	1	1	1	1	1	1	1	1							
120 V. COMMON	1	1		1	1	1	1	1		1	1	1	1	1	1	1	1	1	
SIGNAL SERVICE																			
LUMINAIRES		2		2		2	2	2		2	2	2				2	2	2	
INTERCONNECT							■									■	■		
TOTALS #14 T.W.	13	14	44	17	12	13	44	44	4	27	11	20	13	8	6	17	14	9	
#14/2 P.E.	6	8		1			14	14	1	7		4	4	2	1	4	4	2	2
#12 T.W.																			
#10 T.W.	1	1		1	1	1	1	1		1	1	1	1	1	1	1	1	1	
#8 T.H.W.		2		2		2	2	2		2	2	2				2	2	2	
	(EXIST)	(EXIST)	(EXIST)	(EXIST)	(EXIST)	(EXIST)	(EXIST)	(EXIST)	(ABAN)	(EXIST)	(EXIST)	(EXIST)	(EXIST)	(ABAN)	(ABAN)	(ABAN)	(EXIST)	(ABAN)	(ABAN)
CONDUIT SIZE	2"	2½"	2	1½	1½"	1½"	2½-3	3"	3"	3"	3"	2½"	2½"	2"	1½"	2"	2"	2"	2"

* 1. RUNS 7, 8, 9 AND A PORTION OF 10 HAVE #10 CONDUCTORS IN PLACE OF #14 AS SHOWN

CONSTRUCTION NOTES:

(1) CONTRACTOR SHALL REUSE EXISTING DETECTOR CABLES FOR NEW DETECTOR LOOP INSTALLATION FOR N/B VAN BUREN APPROACH LANES. DO NOT REMOVE CABLE IF NOT UTILIZED FOR THIS PROJECT

(2) CONDUIT RUNS 26 AND 27 SHALL REMAIN OPERABLE FOR DETOUR ROUTING. THE ENGINEER WILL NOTIFY THE CONTRACTOR WHEN SAID RUNS CAN BE ABANDONED.

(3) *INTERCONNECT CABLE SHALL BE AS RECOMMENDED BY THE MANUFACTURER. CABLE SHALL CONTAIN A MINIMUM OF 3 SPARE CONDUCTORS

(4) EXISTING CONDUCTORS IN RUNS 24 & 25 SHALL BE WITHDRAWN TO CONTROLLER AND REPLACE WITH NEW CONDUCTORS, EXCEPT DETECTOR LOOP LEAD-IN CABLES.

(5) NEW CONDUCTORS FOR PHASE 1 QUEUE DETECTOR LOOPS, PHASE 6 VEHICLE, PHASE 2 PED. PUSH BUTTON, PED. COMMON, PHASE 2 PED., INTERCONNECT, AND ADDITIONAL LEAD-IN FOR PHASE 6 DETECTOR LOOPS SHALL BE ADDED IN APPROPRIATE CONDUIT RUNS (SEE PLANS) AND IN CONDUIT RUN 20A NOT SHOWN ON CONDUCTOR SCHEDULE.

ADJUST EXISTING CONDUITS TO A MINIMUM OF 30" BELOW PROPOSED GRADE; SEE PLAN R-2099, SHEET 5&7 THIS CONTRACT. THIS WORK SHOULD BE COORDINATED WITH STREET IMPROVEMENTS

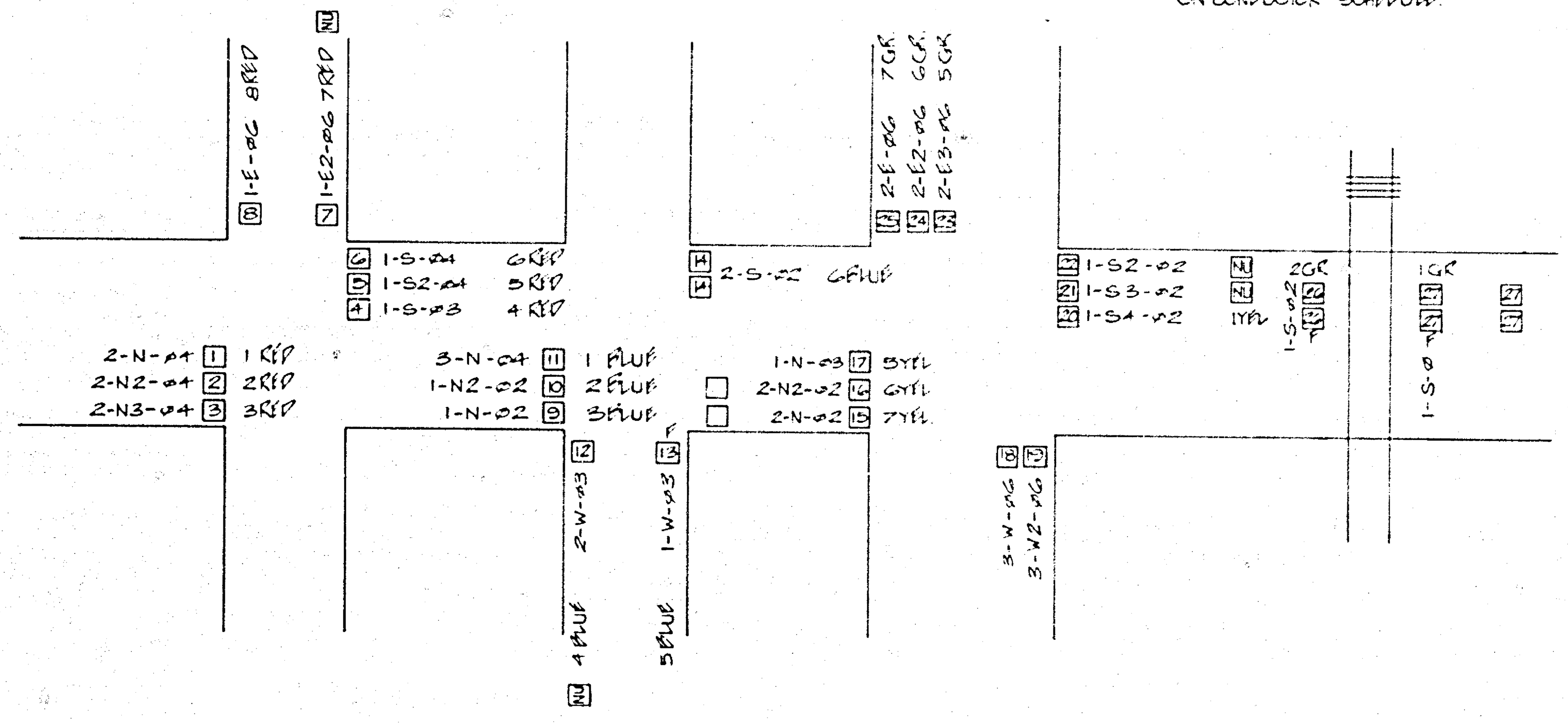
EQUIPMENT SCHEDULE

LOCATION	STANDARD	VEHICLE HEADS: HEAD	VEHICLE HEADS: MOUNTING	VEHICLE HEADS: BACK PLATE	PEDESTRIAN HEADS: HEAD	PEDESTRIAN HEADS: MOUNTING	PPB	LUMINAIRE WATTAGE	INT ILLUM STREET NAME SIGN
A	TYPE 1				1W2C	TP-1-T	1		
B	TYPE 17	1W3C(12")	MAS	1				400W	
		1W3C	SV-1-T	1			1		
C	TYPE 1				1W2C	TP-1-T	1		
D	TYPE 17	1W3C (12")	MAS	1				400W	
		2W3C	SV-2-T	1	1W2C	SP-1-T	1		
E	TYPE 1	1W3C(RY,12"GA)	TV-1-T	1	1W2C	SP-1-T	1		
F	TYPE 1	1W3C	TV-2-T	2					
		1W3C(RY,12"GA)							
G	TYPE 1	1W3C	TV-1-T	1					
H	TYPE 17	1W3C (12")	MAS	1	1W2C	SP-1-T	1	400W	
		2W3C	SV-2-T	1					
I	TYPE 1	2W3C	TV-2-T	1	1W2C	SP-1-T	1		
		1(RY,12"GA)							
J	24-3-7 35'MA,12'LA	*1W3C (12")	MAS	1	1W2C	SP-1-T	1	400W	
		1W3C (12")	MAS	1					
		1W3C	SV-1-T						
K	TYPE 1				1W2C	TP-1-T	1		
L	TYPE 1	1W3C(RY,12"GA)	TV-2-T	1					
		1W3C		1					
M	TYPE 17	1W3C (12")	MAS	1				1000W	
		1W3C	SV-1-T	1	1W2C	SP-1-T	1		
N	TYPE 1	2W3C	TV-2-T	2	1W2C	SP-1-T	1		
O	68J10618	1W3C(12")	MAS	1				400W	
		1W3C	SV-1-T	1	1W2C	SP-1-T	1		
P	TYPE 1	1W5C	TV-1-T	1					
		(RYG-12"YGA)							
Q	TYPE 16	1W3C (12")	MAS	1					
		1W3C (12")	SV-1-T	1					
R	TYPE 17	**1W5C (12")	MAS	1				1000W	
		(RY,12"Y&GA)							
		1W3C	SV-1-T	1					
S	TYPE 1	2W3C	TV-2T	2	1W2C	SP-1-T	1		
T	68J10618	1W3C (12")	MAS	1				400W	
		1W3C	SV-1-T	1	2W2C	SP-2-T	1		
U	Ped Post						1		
V	Type 26-3-10 45'MA,15'LA	**1W5C(12")	MAS	1				1000W	
		1W3C(12")	MAS	1					
		2W3C	SV-2-TD	2					
W	PPB/POST						1		
X	PPB/POST						1		

LOCATION	REMARKS
I	Salvage all existing vehicle indications, including framework. Install indications from Loc (L)
J	Salvage exist. Type 17 Std, Relocate all equip. to new Std. Provide & install PV indication as shown.
L	Relocate Standards to location (C) Sht.22 X-461, Relocate all equip. to Location (I)
O	Adjust Std. to new grade. Remove exist. foundation.
P	Adjust Std. to new grade. Remove exist. foundation.
Q	Relocate Std. & equip as shown on detour plan R-2039 sht.17&18; Salvage Std. & equip. when detour is terminated.
R	Salvage exist. Std. & SV-1-T mtg. Veh. head. Relocate PV head & Luminaire to new 26 Std.
S	Relocate Std. & PPB to Location (E) Sht.22, X-461. Relocate other equip. to new 26 Std., modify framework to SV-2-TD mtg.
U	Install pedestrian post & push button from location (X)
V	Provide & install Std., Mas head & PPB. Install PV head and Luminaire from loc (R) and equip. from Loc (S)
X	Relocate PPB & POST to location (U)

** 4 SECTION, PROGRAMMED VISIBILITY HEAD, RED, GREEN AND YELLOW BALL, GREEN AND YELLOW ARROWS.

EXISTING DETECTOR & LEAD-IN DESIGNATIONS



MARK	REVISIONS	APPR	DATE

DESIGNED BY [illegible] DRAWN BY [illegible] CHECKED BY [illegible]

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY: PRINCIPAL ENGINEER; PARK DEPARTMENT; TRAFFIC DIVISION; CHIEF P. W. ENGINEER; PUBLIC UTILITIES

APPROVED BY [illegible]
PUBLIC WORKS DIRECTOR
DATE [illegible]

Van Buren Underpass

TRAFFIC SIGNALS AT VAN BUREN BLVD., INDIANA AVE. RIVERSIDE FRWY. & A.T.S.F. CROSSING

SCALE: 1" = 20'

Indexed Rkc

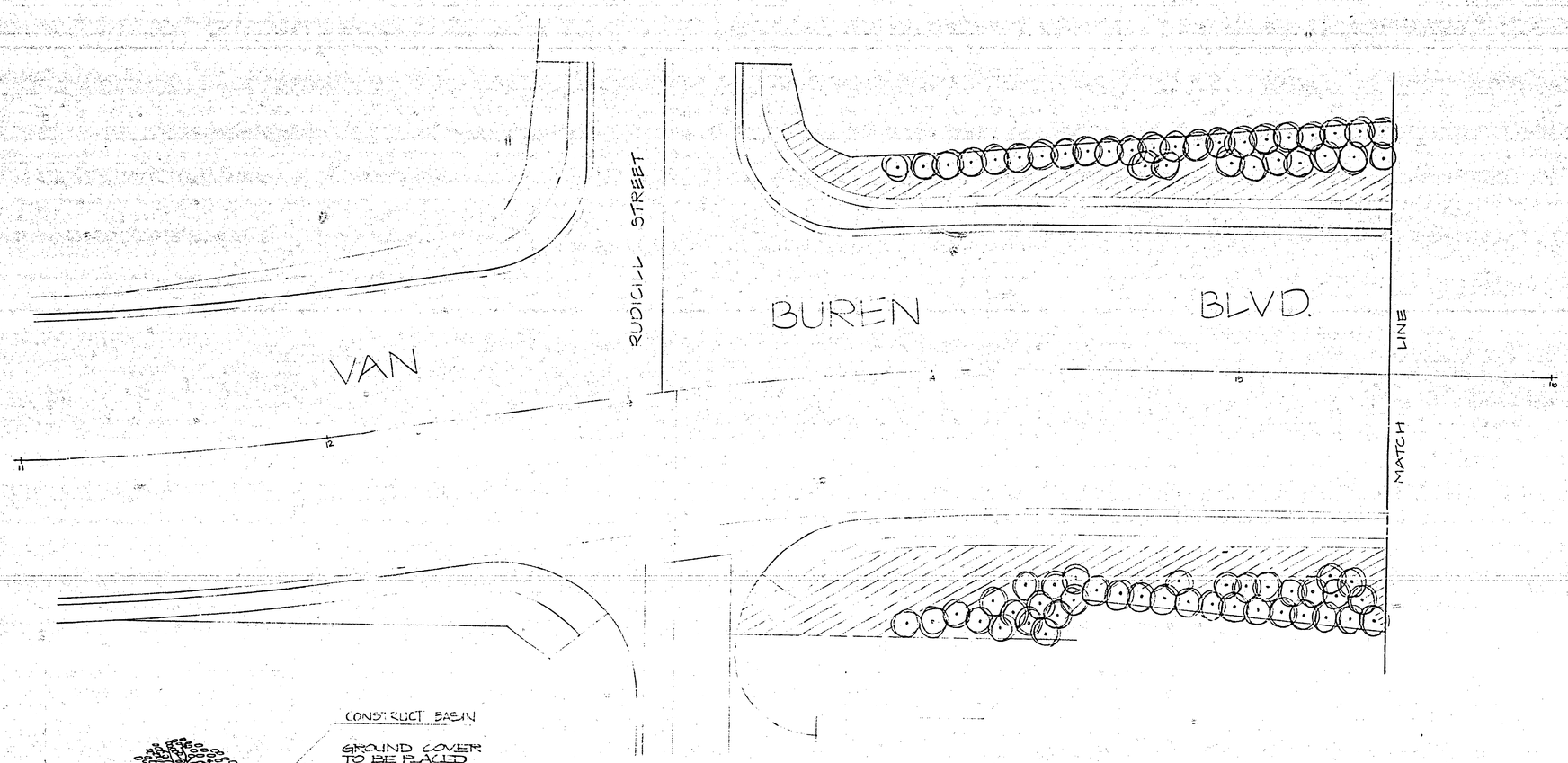
ACCOUNT NO. 30-575-224-07

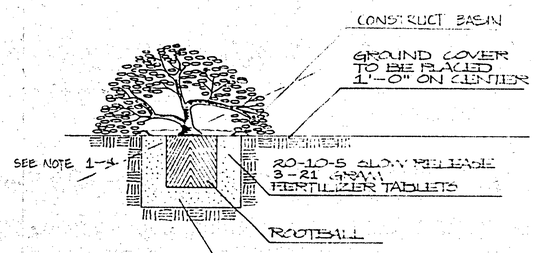
X-224

SHEET 21 OF 45

FILE NO.

R-2039





NOTE

1. PLANTING DETAIL TO BE ADJUSTED ON SLOPES SO THAT AXIS OF SHRUB REMAINS PERPENDICULAR WITH THE FINISH GRADE.

SHRUB PLANTING DETAIL

MARK	REVISIONS	APPR	DATE

DESIGNED BY ___ DRAWN BY ___ CHECKED BY ___

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

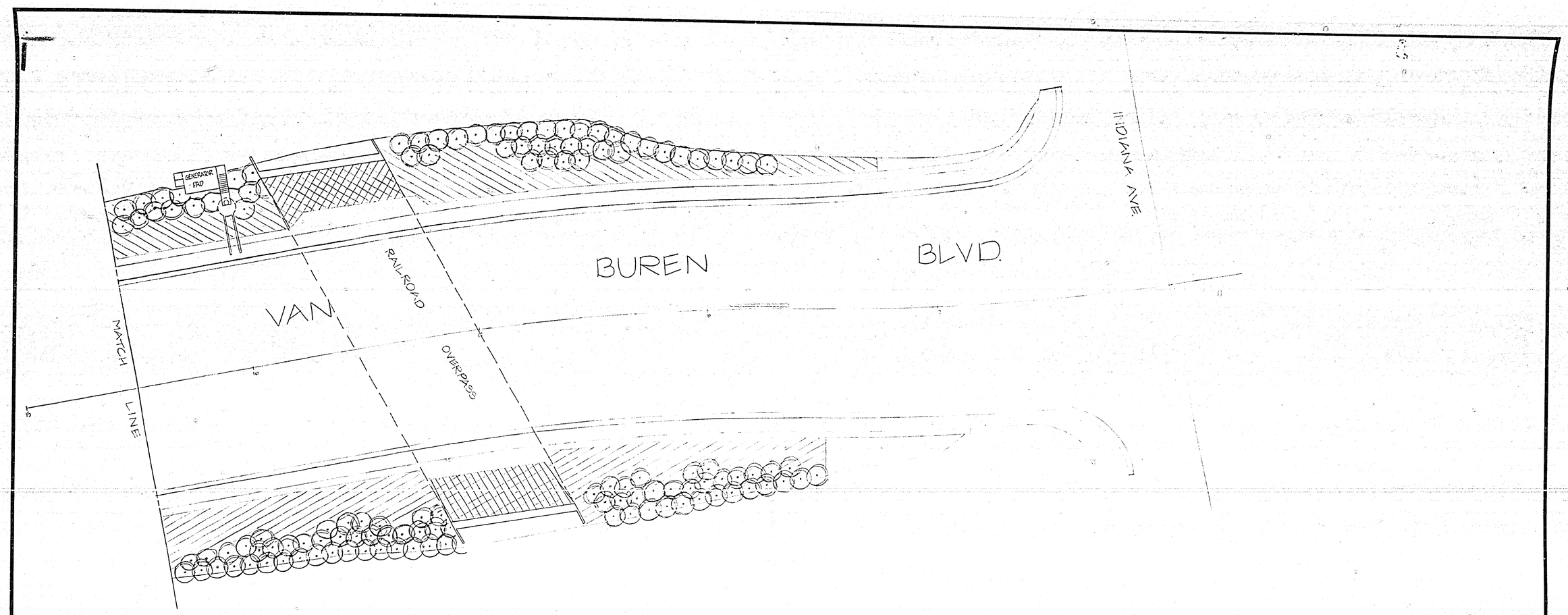
APPROVED BY
PRINCIPAL ENGINEER
PARK DEPARTMENT
TRAFFIC DIVISION
CHIEF P.W. ENGINEER

APPROVED BY
PUBLIC WORKS DIRECTOR
DATE 1/18/88

Van Buren Underpass
LANDSCAPING PLAN

HORIZ. SCALE: 1" - 20' VERT. SCALE: 1" -

INDEXED RLC
ACCOUNT NO. 30-575-224-07
R-2039
SHEET 23 OF 45
FILE NO.



BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY	SYMBOLS
TECOMARIA * CAPENSIS	CAPE HONEYSUCKLE	5 GAL	200	
MYOPORUM * PARVIFOLIUM	MYOPORUM	FLAT	160	12" O.C.
HEDERA * HELIX	ENGLISH IVY	FLAT	30	12" O.C.

* NOTES

1. PREPARATION OF AREAS INDICATED ON PLANS FOR GROUND COVER SHALL INCLUDE APPLICATION OF AN APPROVED PRE-EMERGENT CHEMICAL ACCORDING TO MANUF. SPECS. THE PRE-EMERGENT SHALL BE APPLIED AT THE FOLLOWING INTERVALS:
   A. BEFORE PLANTING
   B. BEGINNING OF MAINTENANCE PERIOD
   C. END OF MAINTENANCE
2. THE PRE-EMERGENT SHALL BE APPLIED UNDER THE INSPECTION OF THE CITY PARK INSPECTOR.

MARK	REVISIONS	APPR	DATE
1	[illegible]	DWD	2/4/80

DESIGNED BY [illegible] DRAWN BY [illegible] CHECKED BY

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

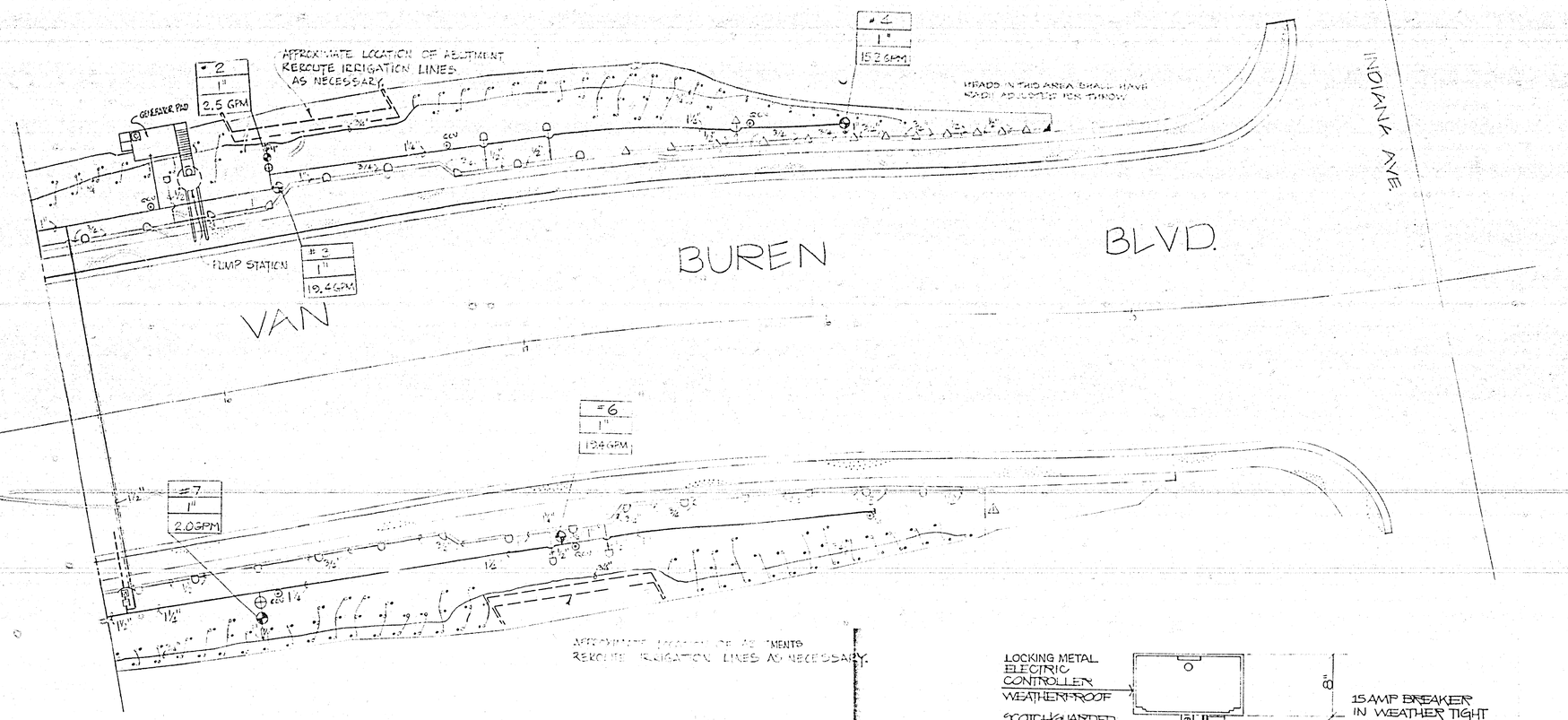
APPROVED BY
PRINCIPAL ENGINEER
PARK DEPARTMENT
TRAFFIC DIVISION
CHIEF P.W. ENGINEER

APPROVED BY [signature]
PUBLIC WORKS DIRECTOR
DATE 1/18/80

Van Buren Underpass
LANDSCAPING PLAN

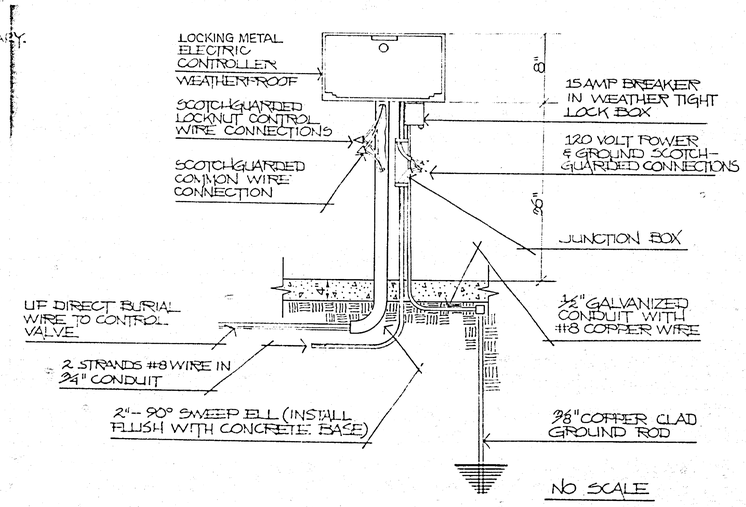
HORIZ. SCALE: 1" = 20' VERT. SCALE: 1" =

Indexed RKE
ACCOUNT NO 30 575 224 07
R-2039
SHEET 24 OF 45
FILE NO.



IRRIGATION LEGEND

symbol	description	nozzle	radius	gpm	psi	pattern
	TORO 316-10-02 STREAM ROTOR SHRUB HEAD		21'	2.88	35	360°
	TORO 308-10-02 " " " "		21'	1.38	35	180°
	TORO 304-10-02 " " " "		21'	.70	35	90°
	TORO 550-12-08 STREAM SHRUB HEAD		16'	1.2	30	180°
	TORO 550-12-04 " " "		16'	.8	30	90°
	EIN-TAL SELF REGULATING EMITTER (2 GPH.)					
	TORO 216-06-04 REMOTE CONTROL VALVE		—	—	—	—
	TORO 473-13 3/4" QUICK COUPLER WITH VINYL LOCKING COVER					
	1½" PRESSURE TYPE BACKFLOW PREVENTER					
M	1½" WATER METER					
	1" PRESSURE REGULATING VALVE - TYPE B					
	1" AMIAD 120 MESH FILTER					
	MAIN LINE (SCH 40 PVC)					
	1½" MAIN LINE (SCH 40 PVC) IN 3" SLEEVE (SCH 40 PVC)					
	LATERAL LINE (CLASS 200 PVC)					
	LATERAL DRIP LINE EIN-TAL MODULAR FLEXTUBING					
	¾" MAIN DRIP LINE (POLYETHYLENE PIPE)					
C	RAINBIRD RC-8A (PEDESTAL) AUTOMATIC CONTROLLER					
+	HOSE BIBB					

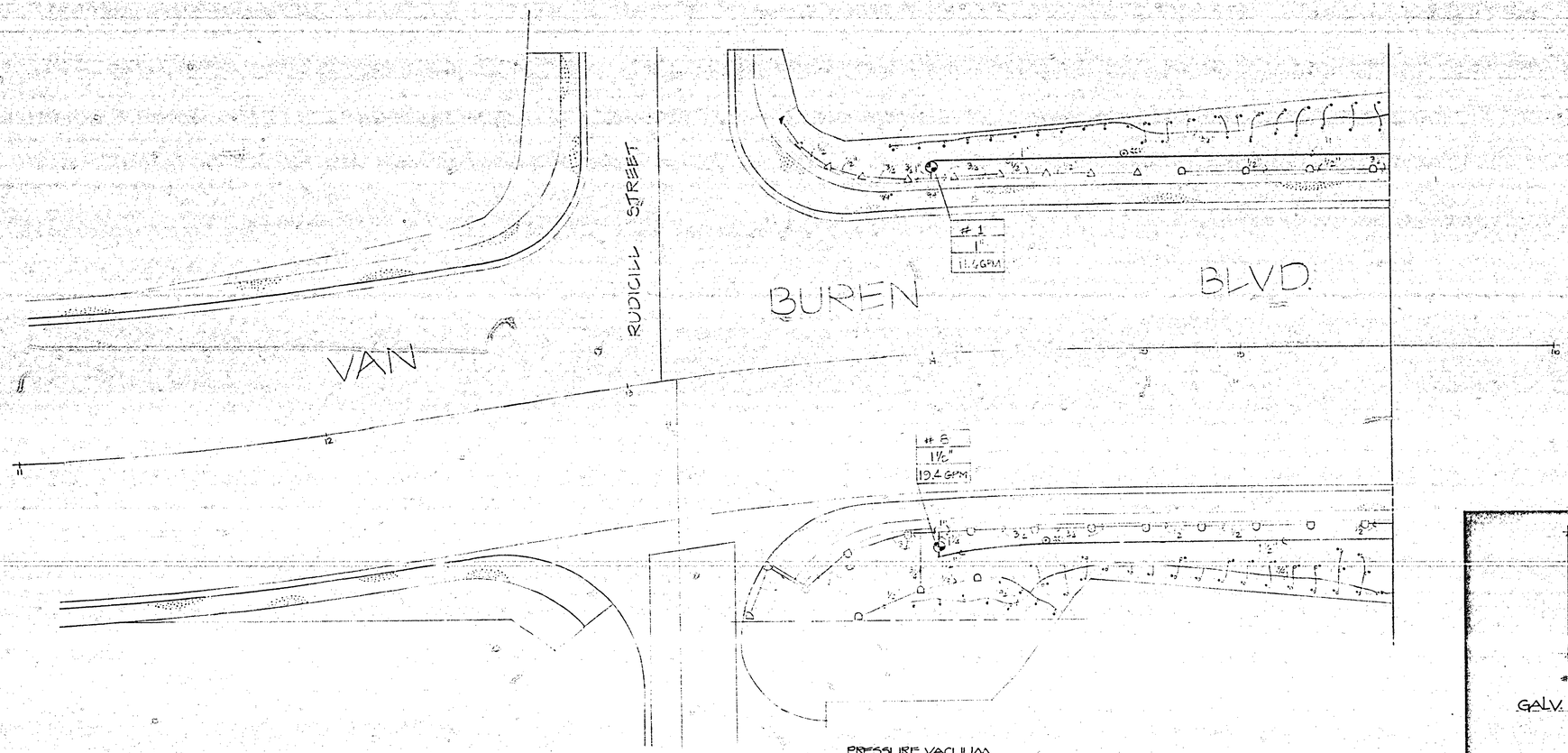


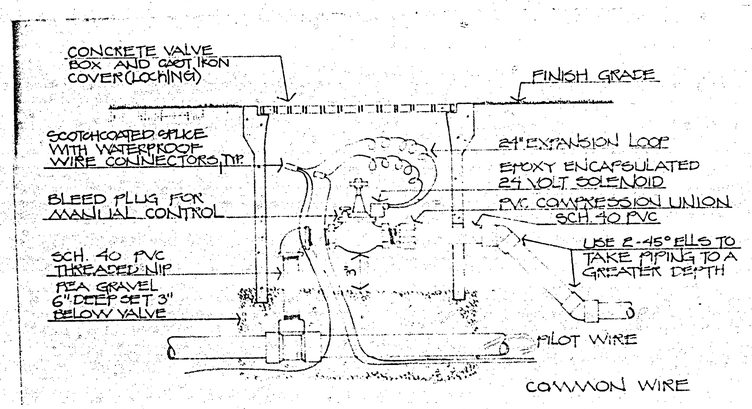
CONTROL DETAIL

CONTROLLER TO BE COORDINATED WITH ELECTRICAL.

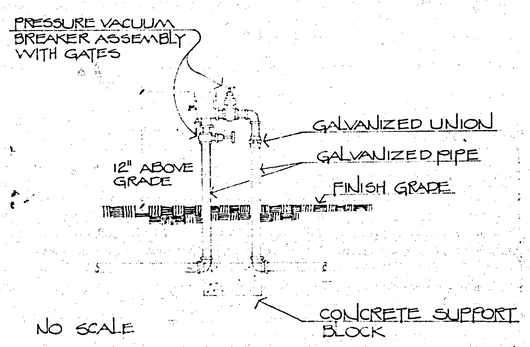
STATIC PRESSURE = 57 P.S.I.

1/4/89	CITY OF RIVERSIDE PUBLIC WORKS DEPARTMENT	Van Buren Underpass IRRIGATION PLAN	R-2039
-H HH	1/18/88	HORIZ. SCALE: 1" = 20' VERT. SCALE: 1" =	SHEET 25 OF 45 FILE NO

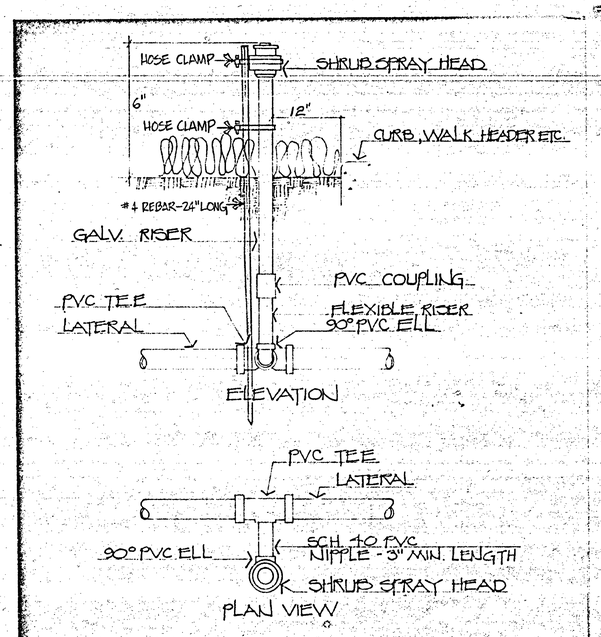




REMOTE CONTROL VALVE

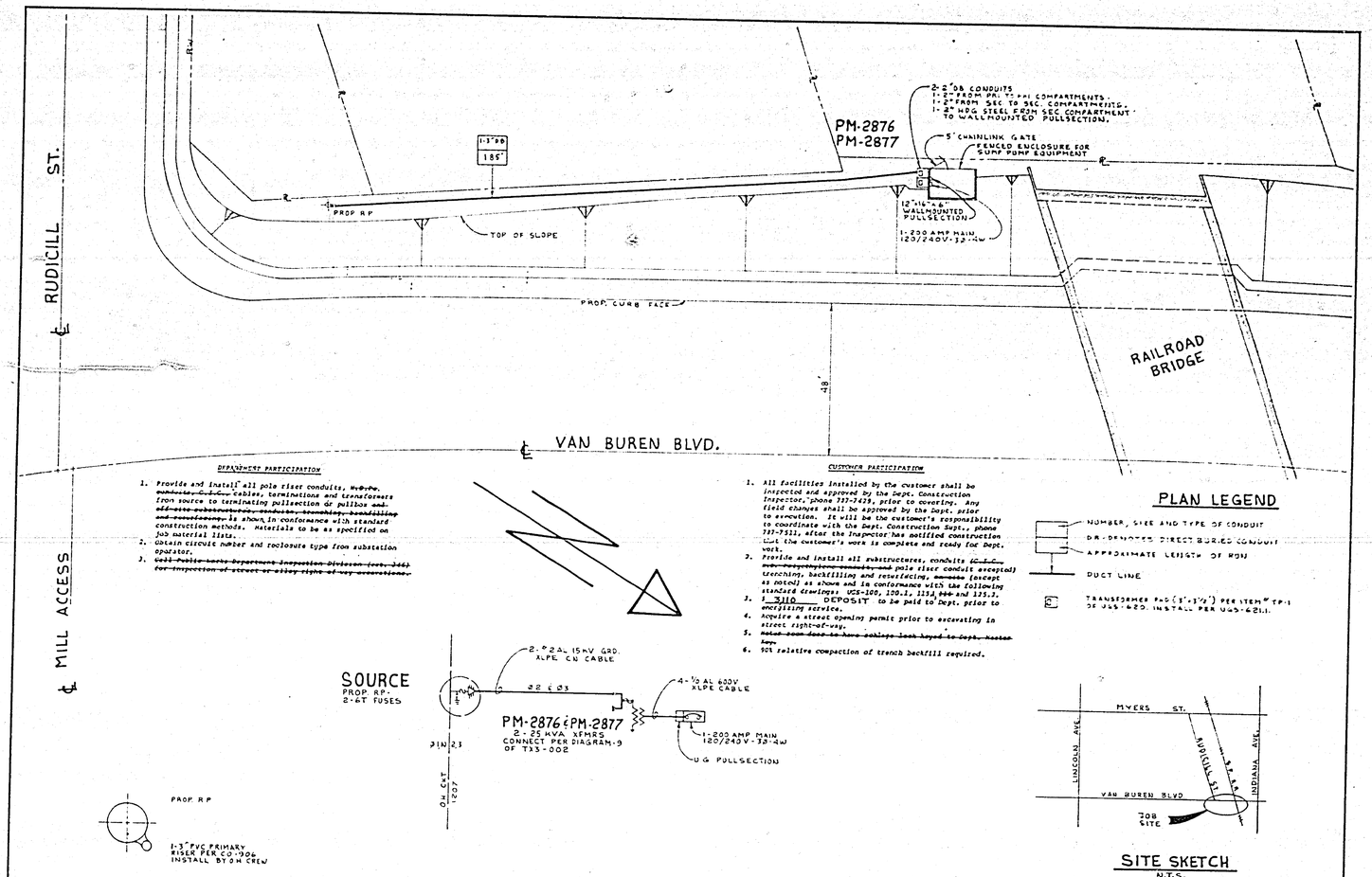


PRESSURE VACUUM BREAKER

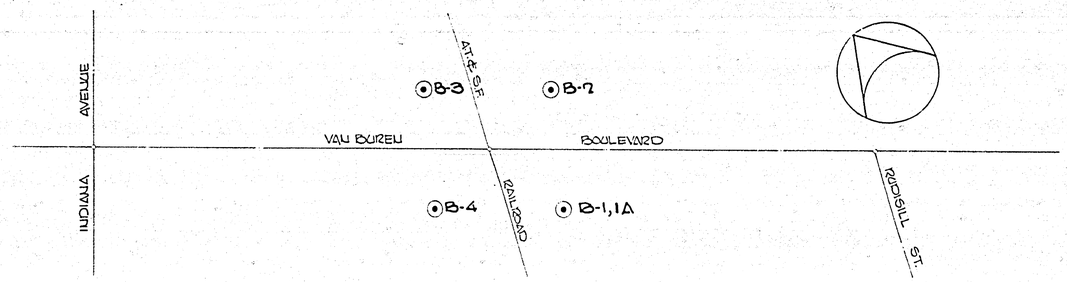


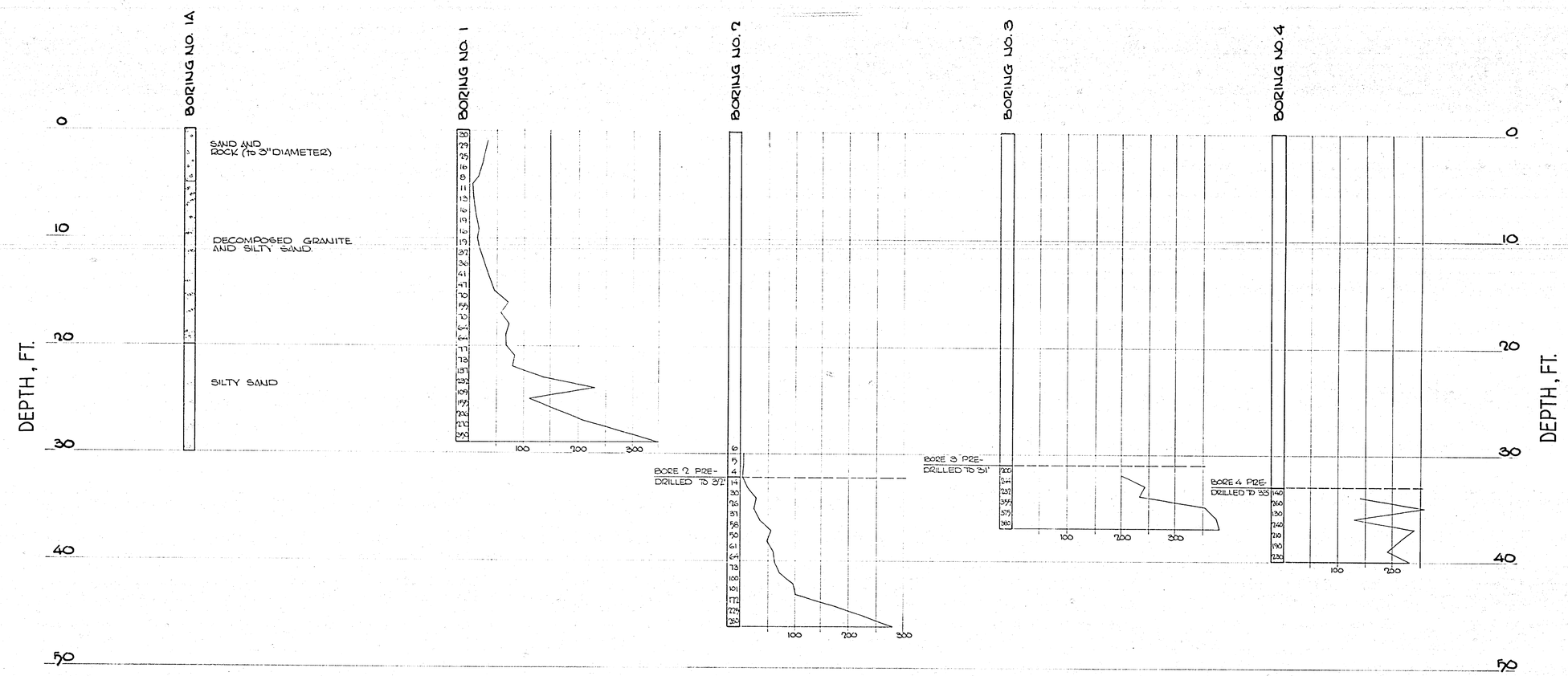
SHRUB SPRAY HEAD DETAIL

HH HH	CITY OF RIVERSIDE PUBLIC WORKS DEPARTMENT APPROVED BY: [illegible] CITY PUBLIC WORKS DIRECTOR DATE 1/18/80	Van Buren Underpass IRRIGATION PLAN HORIZ. SCALE: 1" = 20' VERT. SCALE: 1" =	Indexed RKC ACCOUNT NO 30-575224-07 R-2039 SHEET 26 OF 45 FILE NO.



CITY OF RIVERSIDE PUBLIC WORKS DEPARTMENT	Van Buren Underpass	Indexed RKC ACCOUNT NO 30 575 224 07 R-2039
APPROVED BY PRINCIPAL ENGINEER PROJECT ENGINEER CHIEF P.W. ENGINEER APPROVED BY PUBLIC WORKS DIRECTOR DATE 11/18/80	HORIZ SCALE: 1" = 20' VERT SCALE: 1" =	SHEET 27 OF 46 FILE NO.





DRIVING WEIGHT 140 LBS.

DROP HEIGHT 30 INCHES

NUMBERS ON BORINGS 1 THROUGH 4 REPRESENTS BLOWS PER FOOT PENETRATION.

Indexed RKC

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

LOG OF TEST BORINGS FOR
VAN BUREN BLVD.
UNDERPASS

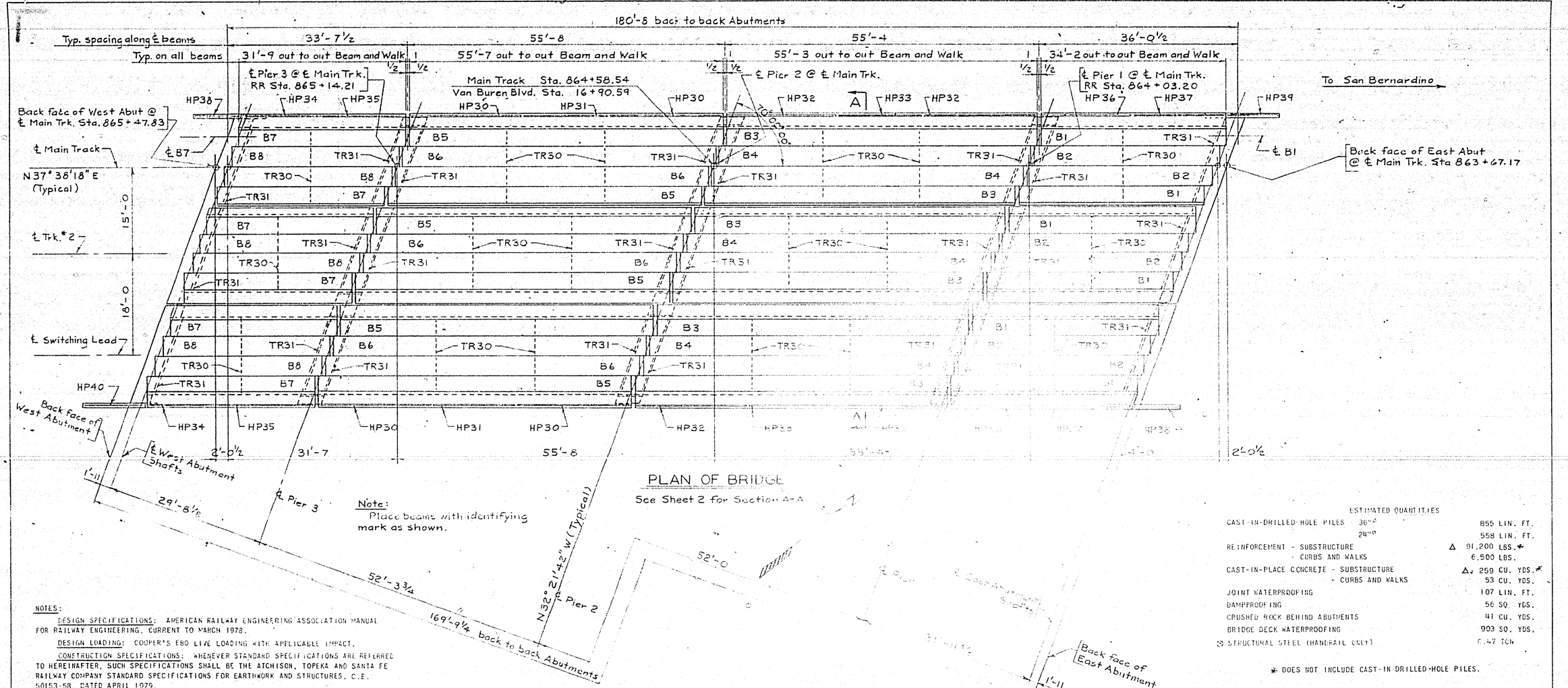
R-2039

SHEET 28 OF 45

HORIZ. SCALE: 1" = 50' VERT. SCALE: 1" = 5'

FILE NO.

1/18/80



PLAN OF BRIDGE

See Sheet 2 for Section A-A

Note: Place beams with identifying mark as shown.

ESTIMATED QUANTITIES

CAST-IN-DRILLED-HOLE PILES 36"ø	855 LIN. FT.
24"ø	558 LIN. FT.
REINFORCEMENT - SUBSTRUCTURE	Δ 91,200 LBS.*
- CURBS AND WALKS	6,500 LBS.
CAST-IN-PLACE CONCRETE - SUBSTRUCTURE	Δ 259 CU. YDS.*
- CURBS AND WALKS	53 CU. YDS.
JOINT WATERPROOFING	107 LIN. FT.
DAMPPROOFING	56 SQ. YDS.
CRUSHED ROCK BEHIND ABUTMENTS	41 CU. YDS.
BRIDGE DECK WATERPROOFING	903 SQ. YDS.
⊗ STRUCTURAL STEEL (HANDRAIL ONLY)	0.47 TON

* DOES NOT INCLUDE CAST-IN-DRILLED-HOLE PILES.

NOTES:

DESIGN SPECIFICATIONS: AMERICAN RAILWAY ENGINEERING ASSOCIATION MANUAL FOR RAILWAY ENGINEERING, CURRENT TO MARCH 1978.

DESIGN LOADING: COOPER'S E80 LIVE LOADING WITH APPLICABLE IMPACT.

CONSTRUCTION SPECIFICATIONS: WHENEVER STANDARD SPECIFICATIONS ARE REFERRED TO HEREINAFTER, SUCH SPECIFICATIONS SHALL BE THE ATCHISON, TOPEKA AND SANTA FE RAILWAY COMPANY STANDARD SPECIFICATIONS FOR EARTHWORK AND STRUCTURES, C.E. 50153-58, DATED APRIL 1979.

STRUCTURE EXCAVATION AND BACKFILL: STRUCTURE EXCAVATION AND BACKFILL FOR ABUTMENTS SHALL BE IN ACCORDANCE WITH SECTION 3 OF THE STANDARD SPECIFICATIONS.

CAST-IN-DRILLED-HOLE CONCRETE PILES: CAST-IN-DRILLED-HOLE CONCRETE PILES SHALL BE IN ACCORDANCE WITH SECTION 5 OF THE STANDARD SPECIFICATIONS.

REINFORCEMENT: PLACEMENT OF REINFORCEMENT SHALL BE AS PER SECTION 6 OF THE STANDARD SPECIFICATIONS. THE MINIMUM CONCRETE COVER ON REINFORCEMENT SHALL BE TWO INCHES EXCEPT WHERE SHOWN OTHERWISE ON THE PLANS.

CAST-IN-PLACE CONCRETE: ALL CONCRETE AND CONCRETE WORK SHALL BE AS PER SECTION 6 OF THE STANDARD SPECIFICATIONS.

ALL CONCRETE SHALL BE AIR-ENTRAINED CONTAINING NOT LESS THAN 4 PERCENT NOR MORE THAN 6 PERCENT AIR BY VOLUME AND SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3500 p.s.i. MAXIMUM SIZE OF COARSE AGGREGATE SHALL BE ONE INCH.

ALL HORIZONTAL CONSTRUCTION JOINTS SHALL BE CLEANED BY ABRASIVE BLAST CLEANING METHODS TO THE EXTENT THAT CLEAN AGGREGATE IS EXPOSED BEFORE FRESH CONCRETE IS PLACED AGAINST THE JOINT.

THE CONTACT SURFACE OF THE BEAMS WHERE CURBS AND WALKS ARE TO BE CAST, AFTER ABRASIVE BLAST CLEANING, SHALL BE COATED WITH DELTA AS15-18 A&B LIQUID TYPE EPOXY AFTER WHICH THE CONCRETE SHALL BE DEPOSITED WHILE THE EPOXY IS STILL TACKY.

BRIDGE SEATS SHALL BE FINISHED LEVEL WITH A WOOD FLOAT.

THE TOP SURFACE OF WALKS SHALL BE GIVEN A BROOM FINISH TRANSVERSE TO THE LONGITUDINAL AXIS OF THE BEAMS.

ALL OTHER CONCRETE SURFACES SHALL BE FINISHED IN ACCORDANCE WITH SECTIONS 51-1.18A AND 51-1.18B OF THE STANDARD SPECIFICATIONS, STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION.

THE RAINCROSS SYMBOL OF THE CITY OF RIVERSIDE SHALL BE CAST IN BOTH ENDS OF THE THREE PIER CAPS IN ACCORDANCE WITH THE CITY'S PLANS.

THE DATE OF THE CONSTRUCTION YEAR SHALL BE CAST IN THE SUBSTRUCTURE CONCRETE AS DIRECTED BY THE ENGINEER.

JOINT WATERPROOFING: THE CONSTRUCTION JOINT BETWEEN THE ABUTMENT CAP AND THE PARAPET WALL SHALL BE WATERPROOFED ON THE DIRT SIDE AS PER PARAGRAPH 6.14 OF SECTION 6 OF THE STANDARD SPECIFICATIONS.

DAMPPROOFING: THE DIRT SIDE OF ABUTMENTS AND WINGWALLS SHALL BE DAMPPROOFED AS PER PARAGRAPH 6.13 OF SECTION 6 OF THE STANDARD SPECIFICATIONS.

CRUSHED ROCK BEHIND ABUTMENTS: CRUSHED ROCK SHALL BE AS PER PARAGRAPH 6.12.2 OF SECTION 6 OF THE STANDARD SPECIFICATIONS.

ANCHOR RODS: ANCHOR RODS ON BRIDGE SEATS SHALL BE EITHER CAST IN PLACE OR SET WITH NON SHRINK GROUT IN PREFORMED HOLES. DRILLED HOLES WILL NOT BE PERMITTED. ANCHOR RODS MUST BE WITHIN 1/4" OF PLAN LOCATION OR BEAMS WILL NOT FIT.

BONDING AREAS: ALL CONCRETE AREAS ON BRIDGE SEATS AND PRESTRESSED CONCRETE BEAMS WHICH ARE TO RECEIVE EPOXY MATERIALS SHALL BE ABRASIVE BLAST CLEANED AND SHALL BE DUST FREE.

BEARING PAD ADHESIVE: CLEAN TOP AND BOTTOM SURFACES OF BEARING PADS WITH METHYL ETHYL KETONE TO REMOVE ALL TRACES OF MOLD RELEASE AGENTS. WHEN MATING SURFACES ARE CLEAN AND DRY, DELTA AS23-18 A&B GEL TYPE EPOXY SHALL BE APPLIED TO A 5 MIL THICKNESS ON THE BRIDGE SEAT AND THE BOTTOM SIDE OF THE BEARING PAD AND THEN THE PAD SHALL BE SET AND HELD IN THE PROPER LOCATION ON THE BRIDGE SEAT UNTIL THE EPOXY TAKES ITS INITIAL SET.

MORTAR FOR SETTING BEAMS: JUST BEFORE SETTING BEAMS, MORTAR CONSISTING OF EQUAL PARTS BY VOLUME OF DELTA AS23-18 A&B GEL TYPE EPOXY AND DRY SILICA SAND MIXED IN ACCORDANCE WITH MANUFACTURER'S DIRECTIONS SHALL BE SPREAD ON TOP OF BEARING PADS TO A THICKNESS OF APPROXIMATELY 1/8 INCH IN ORDER TO OBTAIN UNIFORM BEARING. SCRAPE EXCESS MORTAR FROM AROUND BEARING PADS AFTER BEAMS ARE SET.

PRECAST PRESTRESSED CONCRETE BEAMS: BEAMS SHALL BE SET IN THE PROPER LOCATION USING CARE NOT TO DAMAGE CONCRETE MEMBERS. AFTER BEAMS ARE SET, LIFTING LOOPS SHALL BE BURNED OFF ONE INCH BELOW THE SURFACE OF THE CONCRETE AND THE RESULTING RECESSES SHALL BE PATCHED WITH EPOXY MORTAR AS USED FOR SETTING BEAMS.

TIE RODS: BEFORE THE EPOXY MORTAR ON THE BEARING PADS HAS TAKEN INITIAL SET, THE TIE RODS SHALL BE PLACED THROUGH THE BEAMS AND THE NUTS SHALL BE TIGHTENED TO PULL THE BEAMS TOGETHER AS MUCH AS POSSIBLE AFTER WHICH THE THREADS SHALL BE BURRED SUFFICIENTLY TO PREVENT THE NUTS FROM LOOSENING.

BEAM KEYWAYS: AFTER TIE RODS ARE TIGHTENED AND THREADS ARE BURRED, BOTTOM AND ENDS OF KEYWAYS SHALL BE SEALED AS NECESSARY TO PREVENT GROUT LOSS. THE KEYWAYS SHALL THEN BE FILLED WITH EPOXY GROUT CONSISTING OF ONE PART DELTA AS15-18 A&B LIQUID TYPE EPOXY, TWO PARTS DRY SILICA SAND AND TWO PARTS 1/4" - 3/8" DRY PEA GRAVEL BY VOLUME. THE SAND AND GRAVEL MUST BE CLEAN AND DRY. IF THE SAND AND GRAVEL ARE NOT OBTAINED BAGGED, ARRANGEMENTS MUST BE MADE TO KEEP THEM DRY.

WHERE A VERTICAL OFFSET OCCURS AT ADJACENT BEAMS, THE OFFSET SHALL BE SMOOTHED WITH SAND-EPOXY GROUT HAVING A SLOPE NOT GREATER THAN 1:2 IN 12.

BRIDGE DECK WATERPROOFING: BRIDGE DECK WATERPROOFING SHALL BE AS PER SECTION 11 OF THE STANDARD SPECIFICATIONS.

BEFORE THE ASPHALTIC PANELS ARE PLACED, THE WATERPROOFING STOPS SHALL BE BOLTED TO THE BACK OF THE PARAPET WALLS TO RETAIN THE ENDS OF THE WATERPROOFING MEMBRANE AND THE ASPHALTIC PANELS.

HANDRAIL: HANDRAIL PANELS ON THE WALKS AND WINGWALLS SHALL BE ERECTED TRUE TO LINE AND GRADE.

DELTA EPOXYS ARE MADE BY:
DELTA PLASTICS COMPANY
7449 AVENUE 304
VISALIA, CALIF. 93277

⊗ Rev. 1/80 WEH
Δ Rev. 3/80 WEH

1-34'-2, 1-55'-3, 1-55'-7 and 1-31'-9 prestressed concrete spans under 3 tracks on CIDH concrete piles, 70°00'00" Left skew. Walk and handrail both sides.

SHEET 1
Indexed RKE

B.E.S. 3100

THE A.T. & S.F. RY. COMPANY

BR. 16.4, THIRD DIST., LOS ANGELES DIV.

GENERAL PLAN

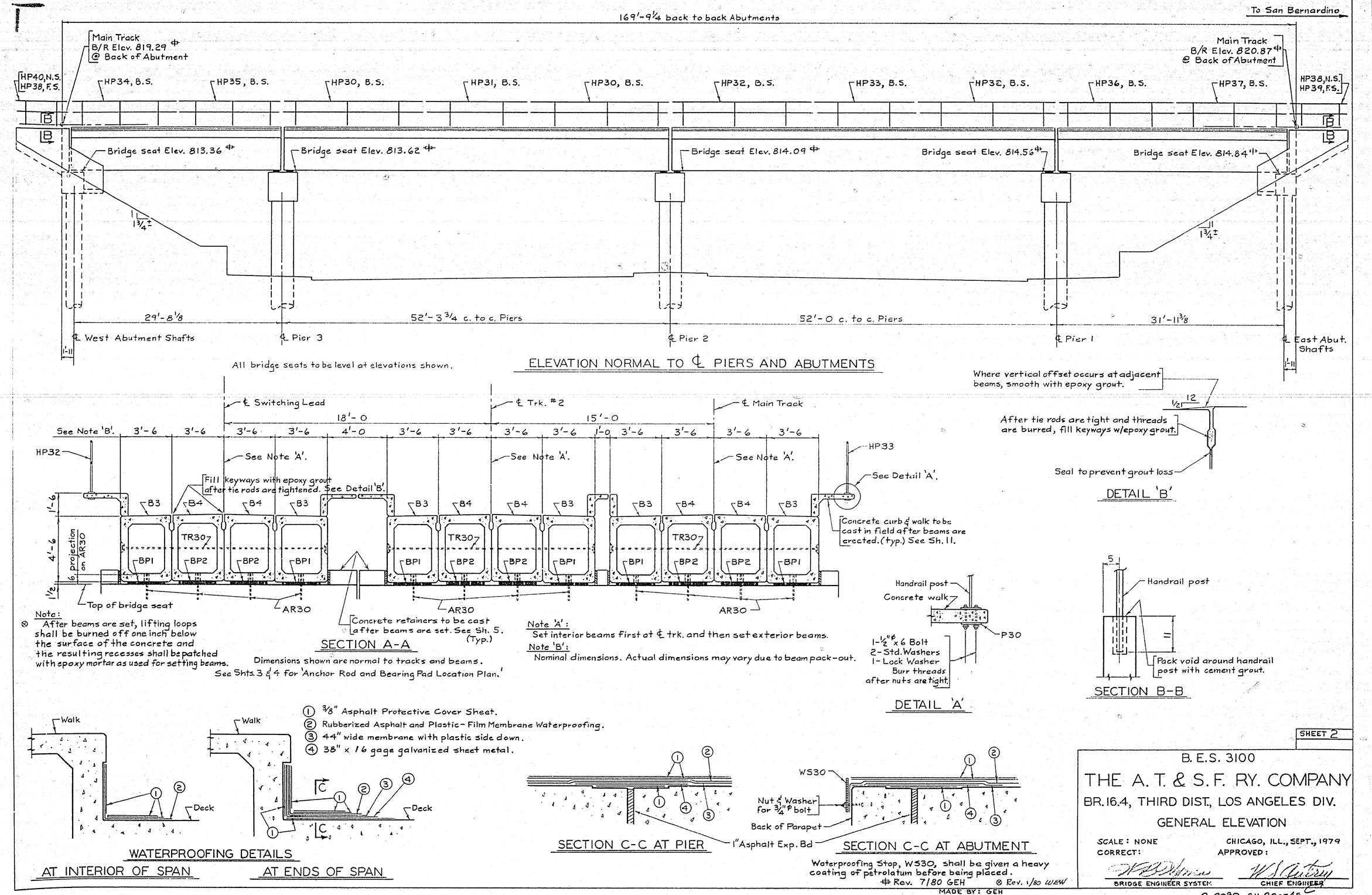
SCALE: NONE — CHICAGO, ILL., SEPT, 1979

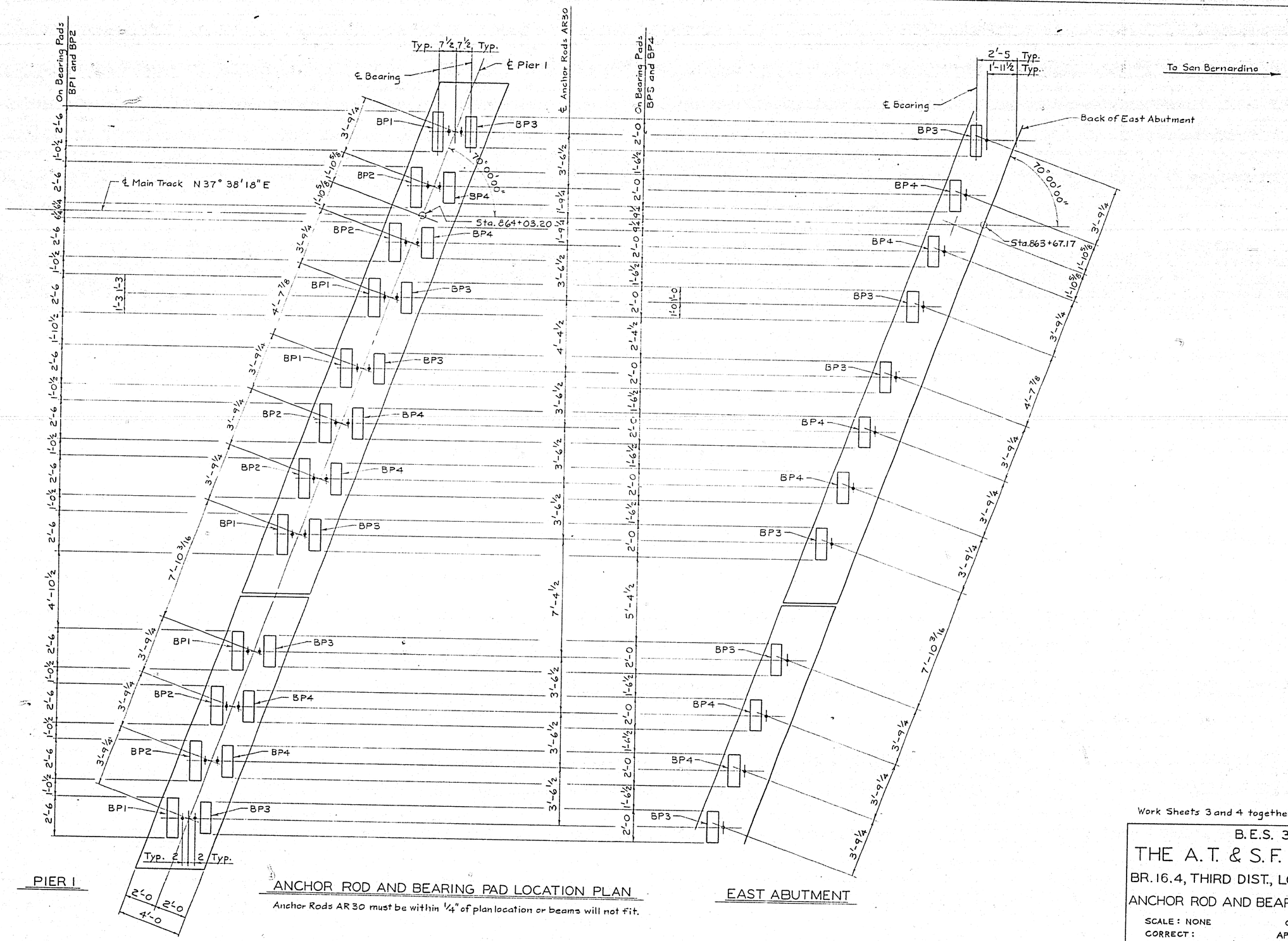
CORRECT: — APPROVED:

BRIDGE ENGINEER SYSTEM — CHIEF ENGINEER

MADE BY: GEH
CHECKED BY: [illegible]
EXAMINED BY: [illegible]

R-2039 — SH. 29 OF 46


169'-9¼ back to back Abutments
To San Bernardino
Main Track
B/R Elev. 819.29 ⌖
@ Back of Abutment
Main Track
B/R Elev. 820.87 ⌖
@ Back of Abutment
HP40, N.S.
HP38, F.S.
HP34, B.S.
HP35, B.S.
HP30, B.S.
HP31, B.S.
HP30, B.S.
HP32, B.S.
HP33, B.S.
HP32, B.S.
HP36, B.S.
HP37, B.S.
HP38, N.S.
HP39, F.S.
Bridge seat Elev. 813.36 ⌖
Bridge seat Elev. 813.62 ⌖
Bridge seat Elev. 814.09 ⌖
Bridge seat Elev. 814.53 ⌖
Bridge seat Elev. 814.84 ⌖
1 / 1¾±
29'-8⅛
52'-3¾ c. to c. Piers
52'-0 c. to c. Piers
31'-11⅜
℄ West Abutment Shafts
℄ Pier 3
℄ Pier 2
℄ Pier 1
℄ East Abut. Shafts
1'-11
All bridge seats to be level at elevations shown.
ELEVATION NORMAL TO ℄ PIERS AND ABUTMENTS
℄ Switching Lead
℄ Trk. #2
℄ Main Track
18'-0
15'-0
See Note 'B'.
3'-6
4'-0
1'-0
See Note 'A'.
HP32
HP33
See Detail 'A'.
Fill keyways with epoxy grout after tie rods are tightened. See Detail 'B'.
B3
B4
TR30
BP1
BP2
1'-6
4'-6
6" projection on AR30
1½
Top of bridge seat
AR30
Concrete retainers to be cast after beams are set. See Sh. 5. (Typ.)
Concrete curb & walk to be cast in field after beams are erected. (typ.) See Sh. 11.
Note:
⊗ After beams are set, lifting loops shall be burned off one inch below the surface of the concrete and the resulting recesses shall be patched with epoxy mortar as used for setting beams.
SECTION A-A
Dimensions shown are normal to tracks and beams.
See Shts. 3 & 4 for 'Anchor Rod and Bearing Pad Location Plan.'
Note 'A':
Set interior beams first at ℄ trk. and then set exterior beams.
Note 'B':
Nominal dimensions. Actual dimensions may vary due to beam pack-out.
Where vertical offset occurs at adjacent beams, smooth with epoxy grout.
½
12
After tie rods are tight and threads are burred, fill keyways w/epoxy grout.
Seal to prevent grout loss
DETAIL 'B'
Handrail post
Concrete walk
P30
1-½"ϕ x 6 Bolt
2-Std. Washers
1-Lock Washer
Burr threads after nuts are tight.
DETAIL 'A'
5
Handrail post
Pack void around handrail post with cement grout.
SECTION B-B
Walk
Deck
① ⅜" Asphalt Protective Cover Sheet.
② Rubberized Asphalt and Plastic-Film Membrane Waterproofing.
③ 44" wide membrane with plastic side down.
④ 38" x 16 gage galvanized sheet metal.
C
WATERPROOFING DETAILS
AT INTERIOR OF SPAN
AT ENDS OF SPAN
SECTION C-C AT PIER
1" Asphalt Exp. Bd
WS30
Nut & Washer for ¾"ϕ bolt
Back of Parapet
SECTION C-C AT ABUTMENT
Waterproofing Stop, WS30, shall be given a heavy coating of petrolatum before being placed.
⌖ Rev. 7/80 GEH
⊗ Rev. 1/80 WEW
MADE BY: GEH
CHECKED BY: PWr
EXAMINED BY: CCG
SHEET 2
B. E. S. 3100
THE A. T. & S. F. RY. COMPANY
BR. 16.4, THIRD DIST., LOS ANGELES DIV.
GENERAL ELEVATION
SCALE: NONE
CHICAGO, ILL., SEPT., 1979
CORRECT:
APPROVED:
BRIDGE ENGINEER SYSTEM
CHIEF ENGINEER
R-2039 SH. 30 OF 45



ANCHOR ROD AND BEARING PAD LOCATION PLAN

Anchor Rods AR 30 must be within ¼" of plan location or beams will not fit.

EAST ABUTMENT

Work Sheets 3 and 4 together.

SHEET 3
Indexed RKE

B.E.S. 3100

THE A.T. & S.F. RY. COMPANY

BR. 16.4, THIRD DIST., LOS ANGELES DIV.

ANCHOR ROD AND BEARING PAD LOCATION

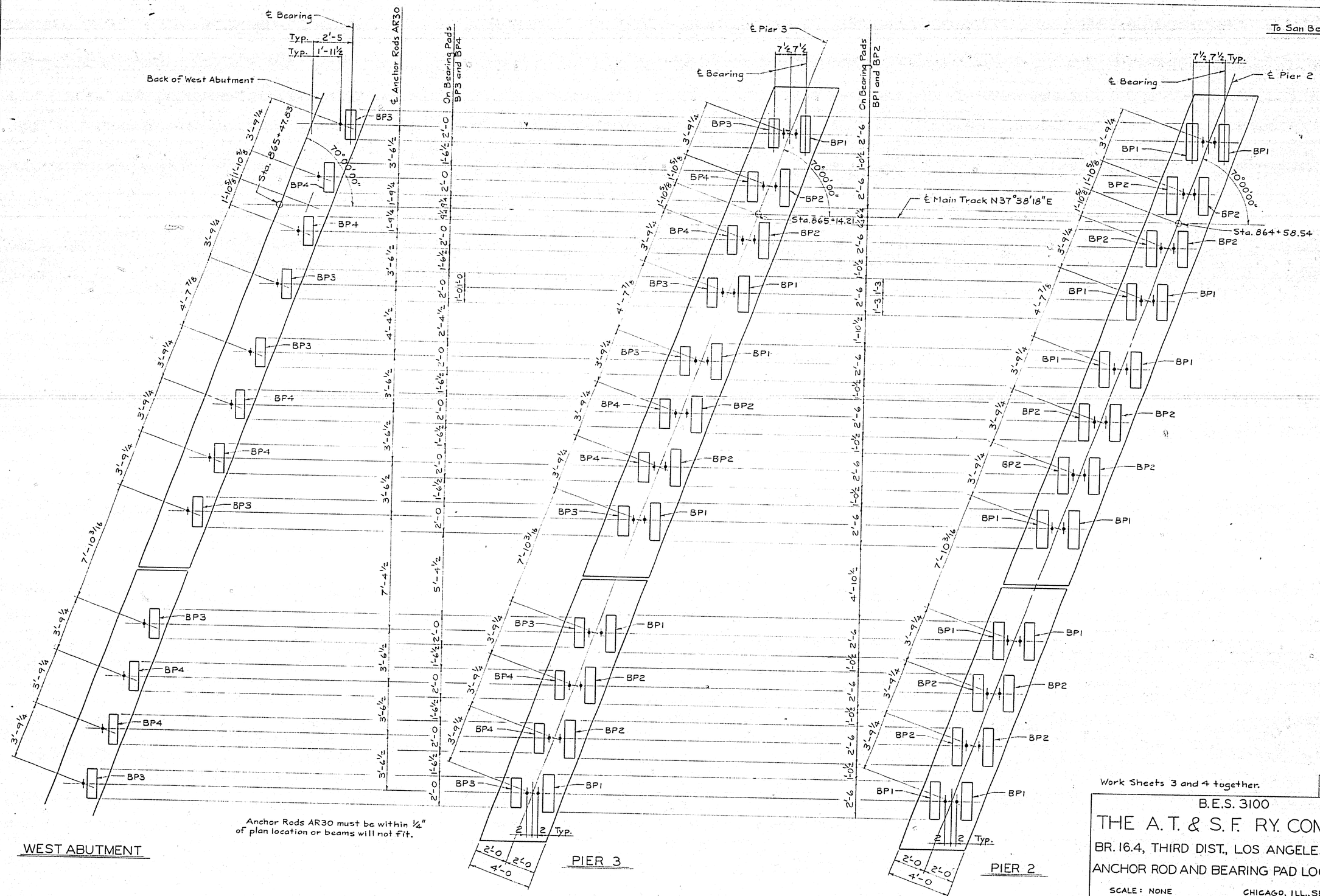
SCALE: NONE
CORRECT:
BRIDGE ENGINEER SYSTEM

CHICAGO, ILL., SEPT., 1979
APPROVED:
CHIEF ENGINEER

MADE BY: GEH
CHECKED BY: PHS
EXAMINED BY: CEG

R-2039

SH. 31 OF 45



ANCHOR ROD AND BEARING PAD LOCATION PLAN

Work Sheets 3 and 4 together.

SHEET 4

B.E.S. 3100

THE A. T. & S. F. RY. COMPANY

BR. 16.4, THIRD DIST., LOS ANGELES DIV.

ANCHOR ROD AND BEARING PAD LOCATION

SCALE: NONE

CHICAGO, ILL., SEPT., 1979

CORRECT: BRIDGE ENGINEER SYSTEM

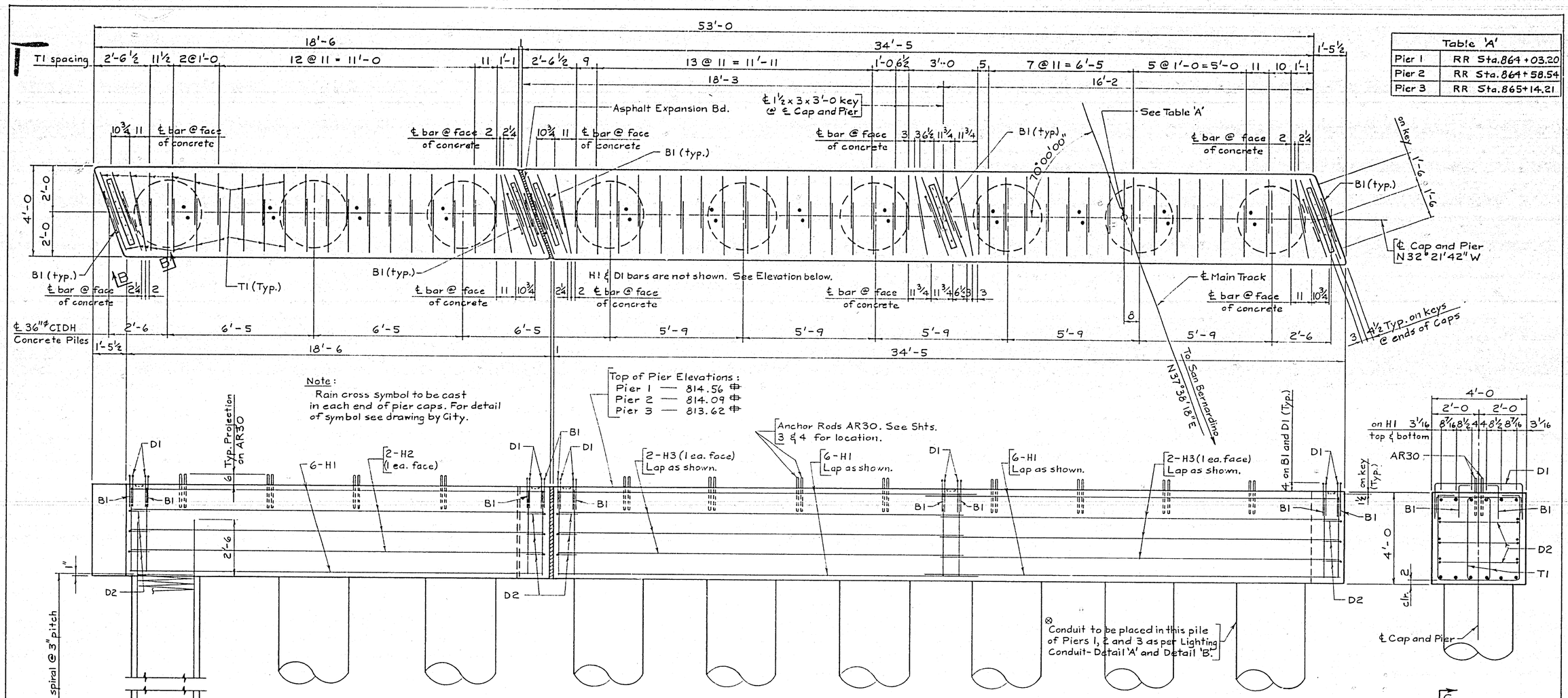
APPROVED: CHIEF ENGINEER

MADE BY: GEH
CHECKED BY: PW
EXAMINED BY: CCG

R-2039

SH. 32 OF 45

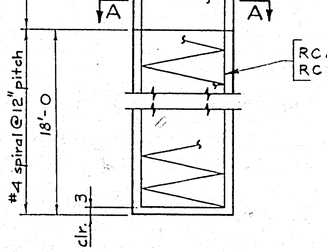
Table 'A'	
Pier 1	RR Sta. 864+03.20
Pier 2	RR Sta. 864+58.54
Pier 3	RR Sta. 865+14.21



PIERS 1, 2 AND 3

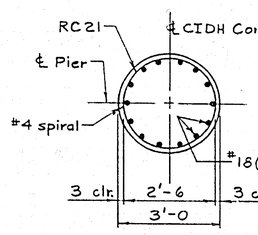
(View looking west)

T1 not shown. See Plan above.

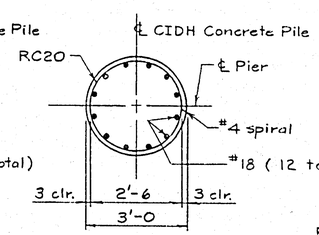


TYPICAL SHAFT

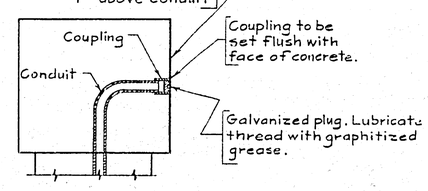
Pile Tip Elevations	
Pier 1	⊕ 768.5
Pier 2	⊕ 764.1
Pier 3	⊕ 767.6



SECTION A-A FOR PIER 2

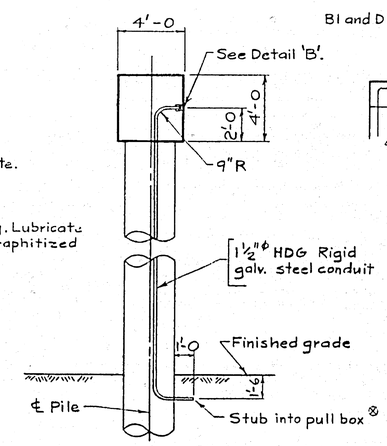


SECTION A-A FOR PIERS 1 AND 3



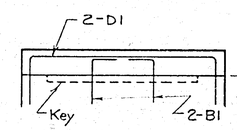
DETAIL 'B'

Note: Detail 'B' to be located on street side of Piers 1 and 3 and on both sides of Pier 2. ⊗

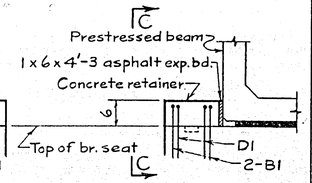


LIGHTING CONDUIT-DETAIL 'A'

B1 and D1 are cast in Pier cap.



VIEW C-C



VIEW B-B

CONCRETE RETAINER DETAIL AT PIERS

Note: Concrete retainer to be cast after beams are set.

SHEET 5

B.E.S. 3100

THE A.T. & S.F. RY. COMPANY

BR. 16.4, THIRD DIST., LOS ANGELES DIV.

PIERS 1, 2 AND 3

SCALE: NONE

CHICAGO, ILL., SEPT., 1979

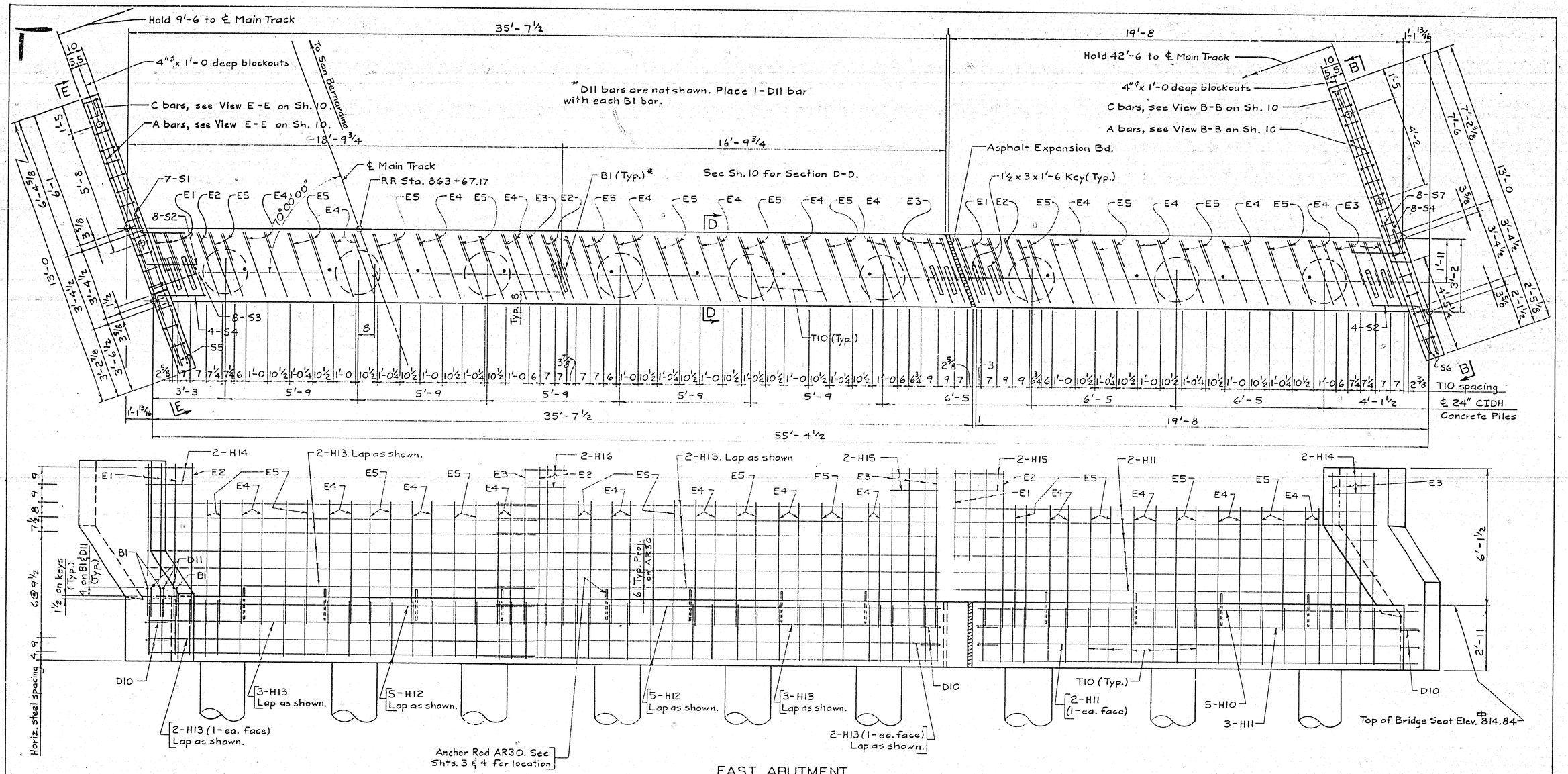
CORRECT: BRIDGE ENGINEER SYSTEM

APPROVED: CHIEF ENGINEER

⊕ Rev. 7/80 GEH ⊗ Rev. 1/80 WEH

MADE BY: GEH
CHECKED BY: PHE
EXAMINED BY: CEG

R-2089 Sh. 33 of 45



EAST ABUTMENT

Note:
Details not shown or noted are similar to those shown for West Abutment on Sh. 8.
East Abutment Pile Tip Elev. 780.9.⊕ See Sh. 8.

Work Sheets 6, 7 and 10 together.

SHEET 6

B.E.S. 3100

THE A. T. & S. F. RY. COMPANY

BR. 16.4, THIRD DIST., LOS ANGELES DIV.

EAST ABUTMENT

SCALE: NONE
CORRECT:

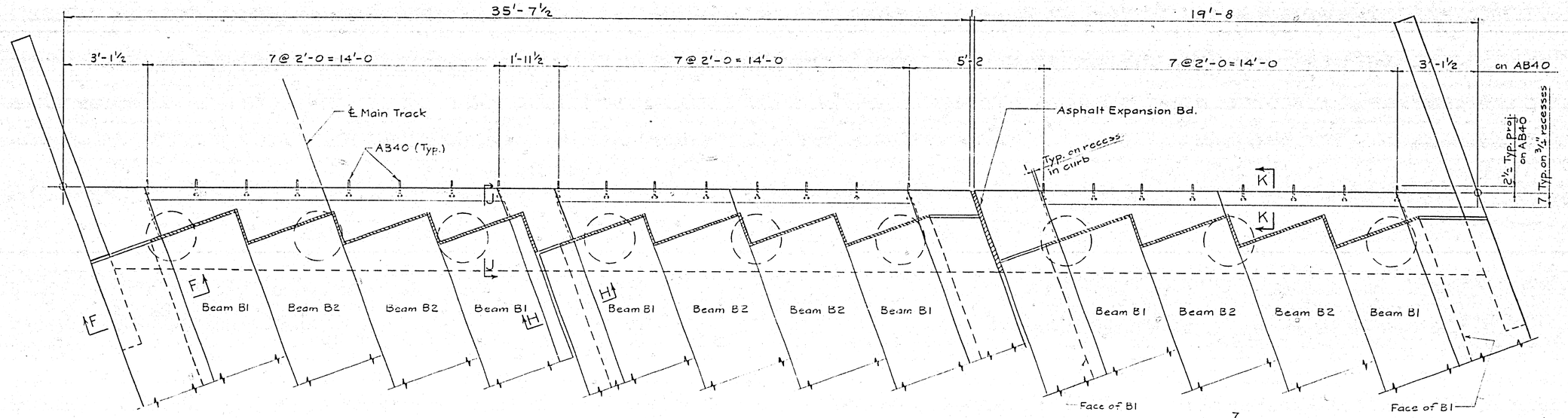
CHICAGO, ILL., SEPT., 1979
APPROVED:

BRIDGE ENGINEER SYSTEM — CHIEF ENGINEER

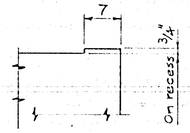
⊕ Rev. 7/80 GEH

MADE BY: GEH
CHECKED BY: PHS
EXAMINED BY: CEG

R-2039 SH. 34 OF 45

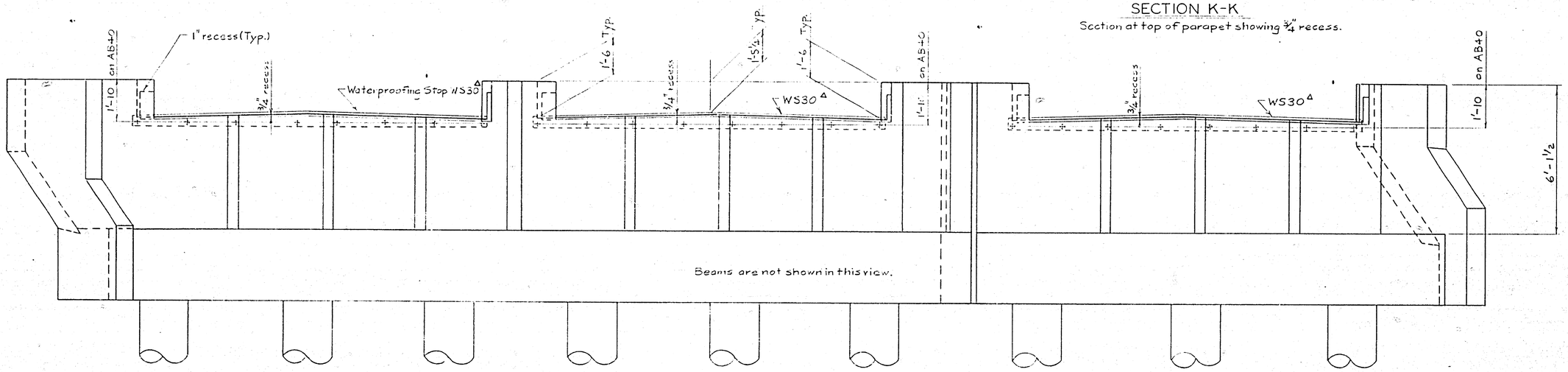


Note:
Dimensions on parapet wall may vary. Cast parapet wall after beam curbs and walks are in place so that top of parapet is level with top of beams and walks and steps in parapet wall are in line with face of curbs.

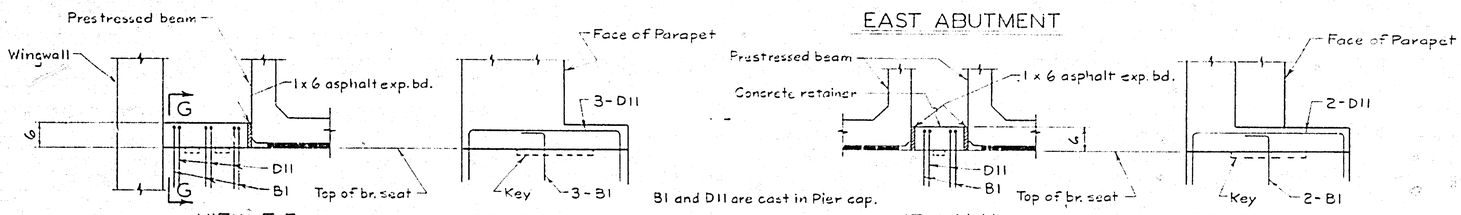


SECTION K-K
Section at top of parapet showing ¾" recess.

△ Waterproofing Step WS30 shall be given a heavy coating of petrolatum before being placed in position. After WS30 is in position and nuts have been tightened, burr threads on bolts.



EAST ABUTMENT



VIEW F-F | SECTION G-G | VIEW H-H | SECTION J-J

CONCRETE RETAINER DETAIL

Note: Concrete retainer to be cast after beams are set.

Note
Concrete retainers are not shown for remaining locations
Details are to be similar to those shown here.

Work Sheets 6, 7 and 10 together.

SHEET 7
Indexed RKC

B.E.S. 3100

THE A.T. & S.F. RY. COMPANY

BR. 16.4, THIRD DIST., LOS ANGELES DIV.

EAST ABUTMENT

SCALE: NONE | CHICAGO, ILL., SEPT., 1979

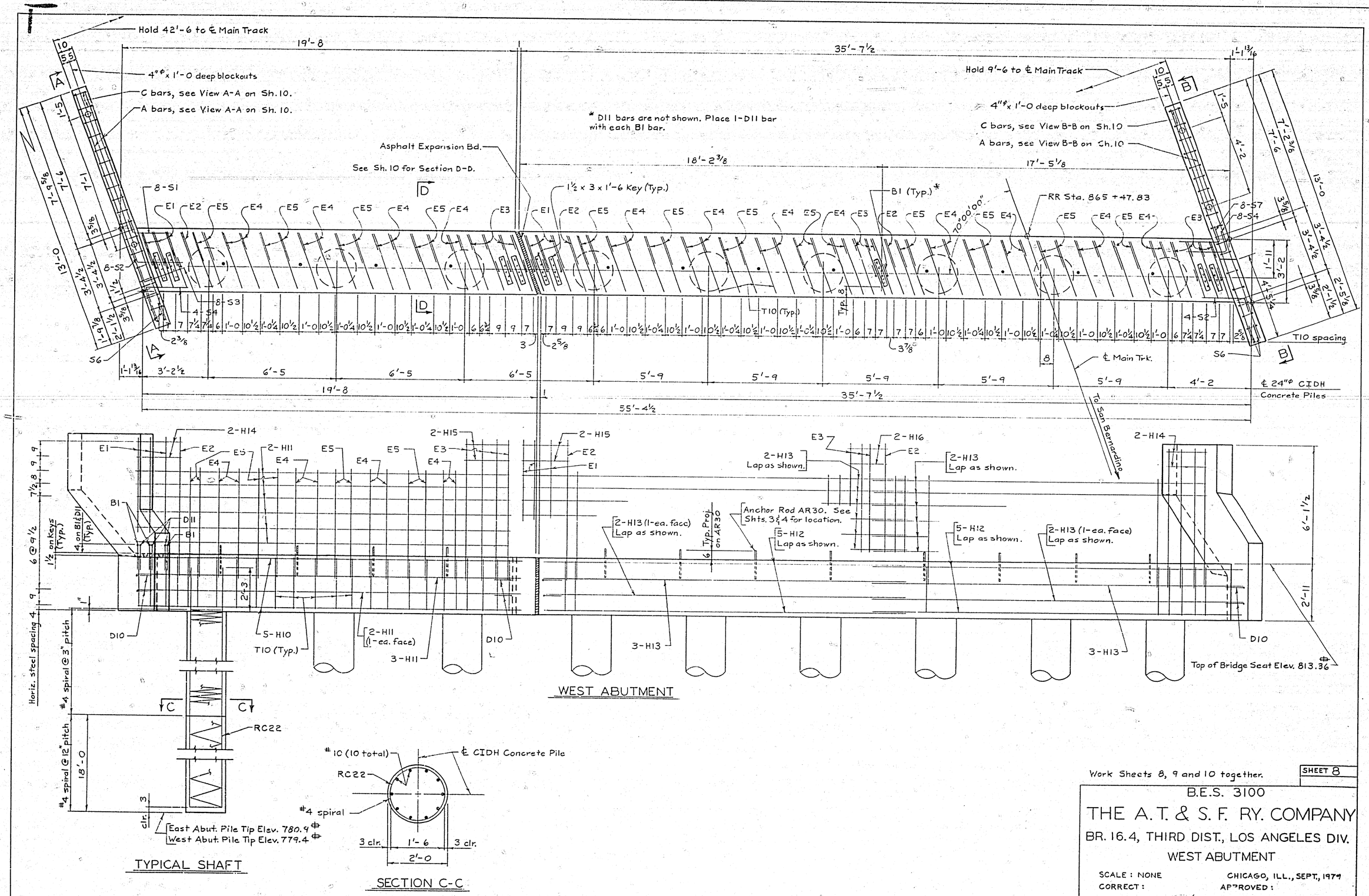
CORRECT: | APPROVED:

BRIDGE ENGINEER SYSTEM | CHIEF ENGINEER

MADE BY: GEH
CHECKED BY: RKC
EXAMINED BY: CES

R-2039

SH. 35 OF 45



Work Sheets 8, 9 and 10 together.

SHEET 8

B.E.S. 3100

THE A. T. & S. F. RY. COMPANY

BR. 16.4, THIRD DIST., LOS ANGELES DIV.

WEST ABUTMENT

SCALE : NONE

CHICAGO, ILL., SEPT., 1979

CORRECT :

APPROVED :

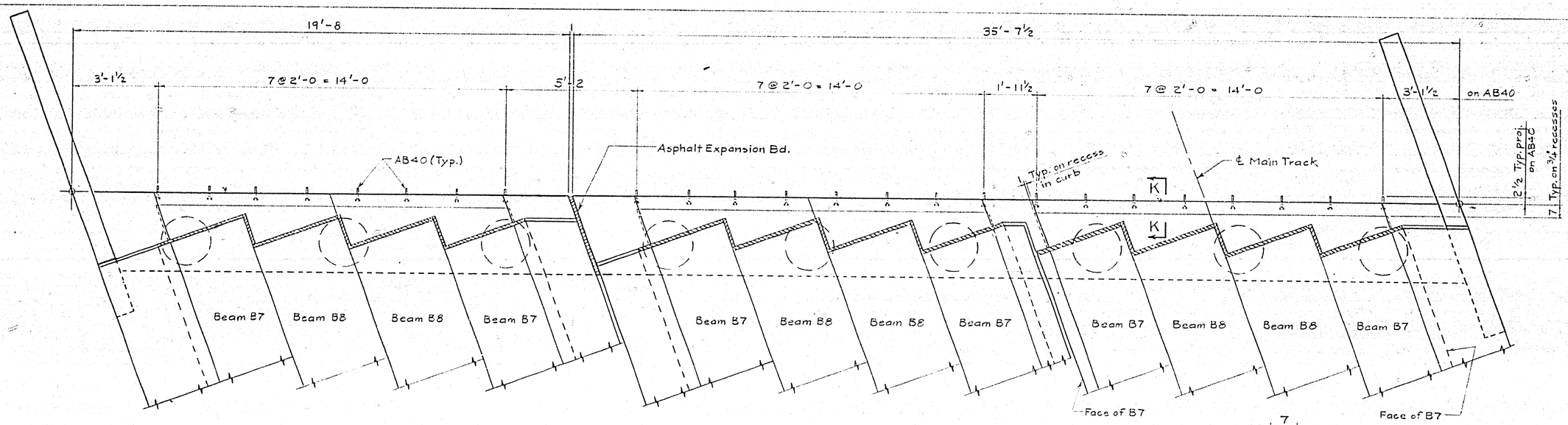
BRIDGE ENGINEER SYSTEM

CHIEF ENGINEER

Rev. 7/80 GEH

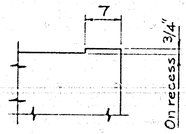
MADE BY: GEH
CHECKED BY: PG
EXAMINED BY: CEG

R-2039 SH. 36 OF 45

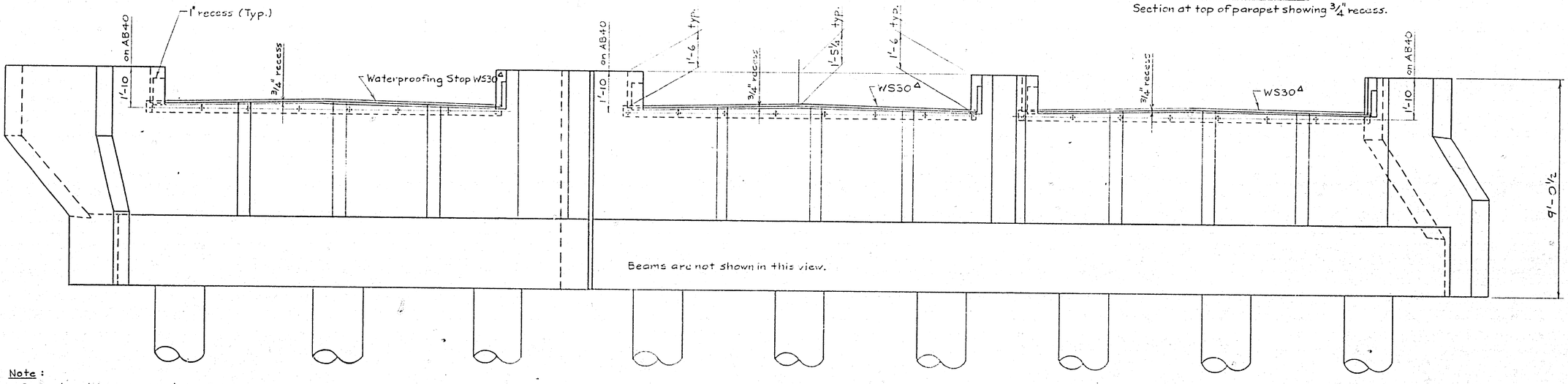


[4] Waterproofing Stop WS30 shall be given a heavy coating of petrolatum before being placed in position. After WS30 is in position and nuts have been tightened, burr threads on bolts.

Note:
Dimensions on parapet wall may vary. Cast parapet wall after beam curbs and walks are in place so that top of parapet is level with top of beams and walks and steps in parapet wall are in line with face of curbs.



SECTION K-K
Section at top of parapet showing ¾" recess.



Note:
Concrete retainers are not shown. Details for concrete retainers are to be similar to those shown for East Abutment on Sheet 7.

WEST ABUTMENT

Work Sheets 8, 9 and 10 together.

SHEET 9
Indexed RKE

B.E.S. 3100

THE A. T. & S. F. RY. COMPANY

BR. 16.4, THIRD DIST., LOS ANGELES DIV.

WEST ABUTMENT

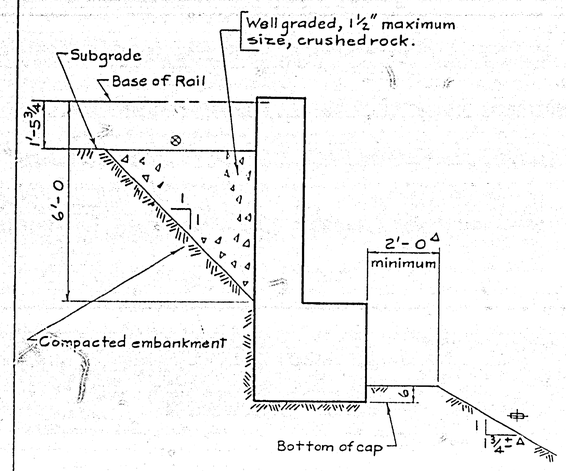
SCALE: NONE
CORRECT:
BRIDGE ENGINEER SYSTEM

CHICAGO, ILL., SEPT., 1979
APPROVED:
CHIEF ENGINEER

MADE BY: GEH
CHECKED BY: [illegible]
EXAMINED BY: CEG

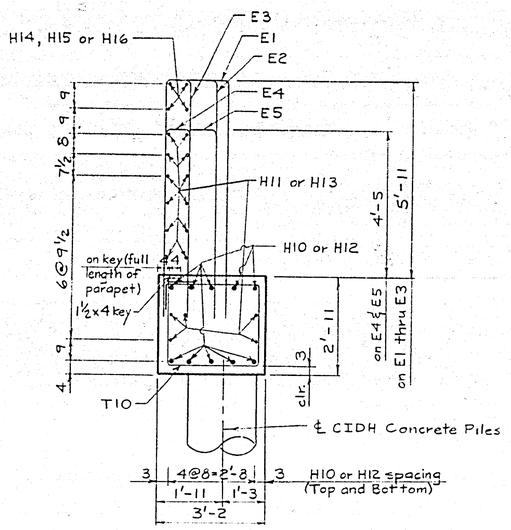
R-2039

SH. 37 OF 45



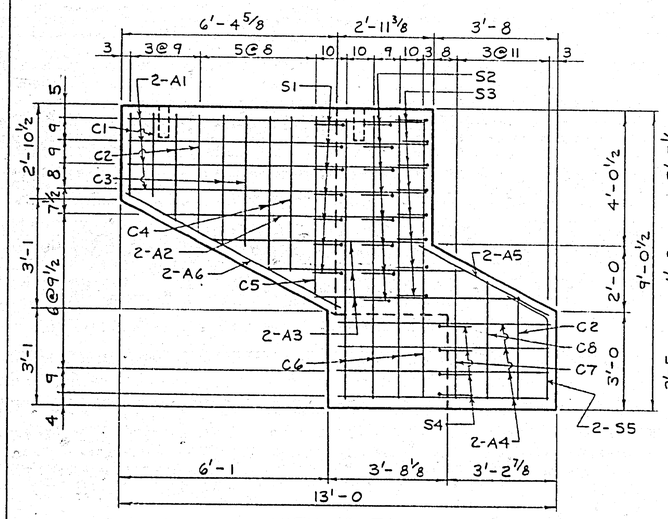
HEAD OF BANK DETAIL ALONG ℄ TRACK

Δ Normal to roadway

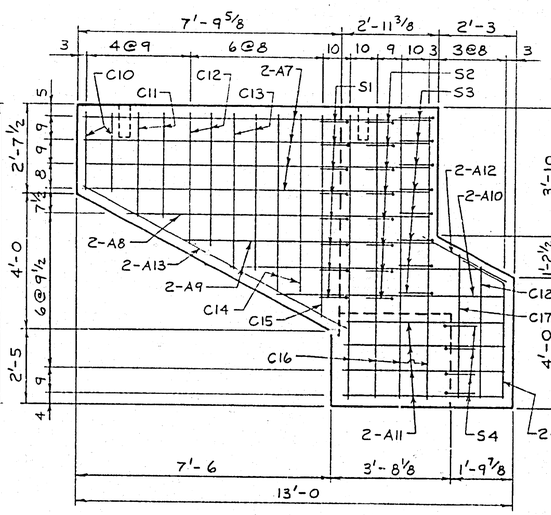


SECTION D-D

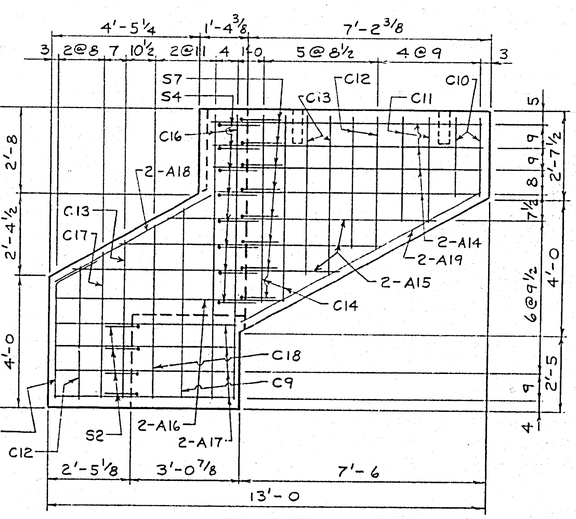
For location of Views A-A, B-B and E-E and Section D-D, see Sheets 6 and 8.



VIEW E-E



VIEW A-A



VIEW B-B

Work Sheets 6, 7 and 10 together.
Work Sheets 8, 9 and 10 together.

SHEET 10

B.E.S. 3100

THE A. T. & S. F. RY. COMPANY

BR. 16.4, THIRD DIST., LOS ANGELES DIV.

ABUTMENTS

SCALE: NONE
CHICAGO, ILL., SEPT., 1979

CORRECT: W. B. Hyman
BRIDGE ENGINEER SYSTEM

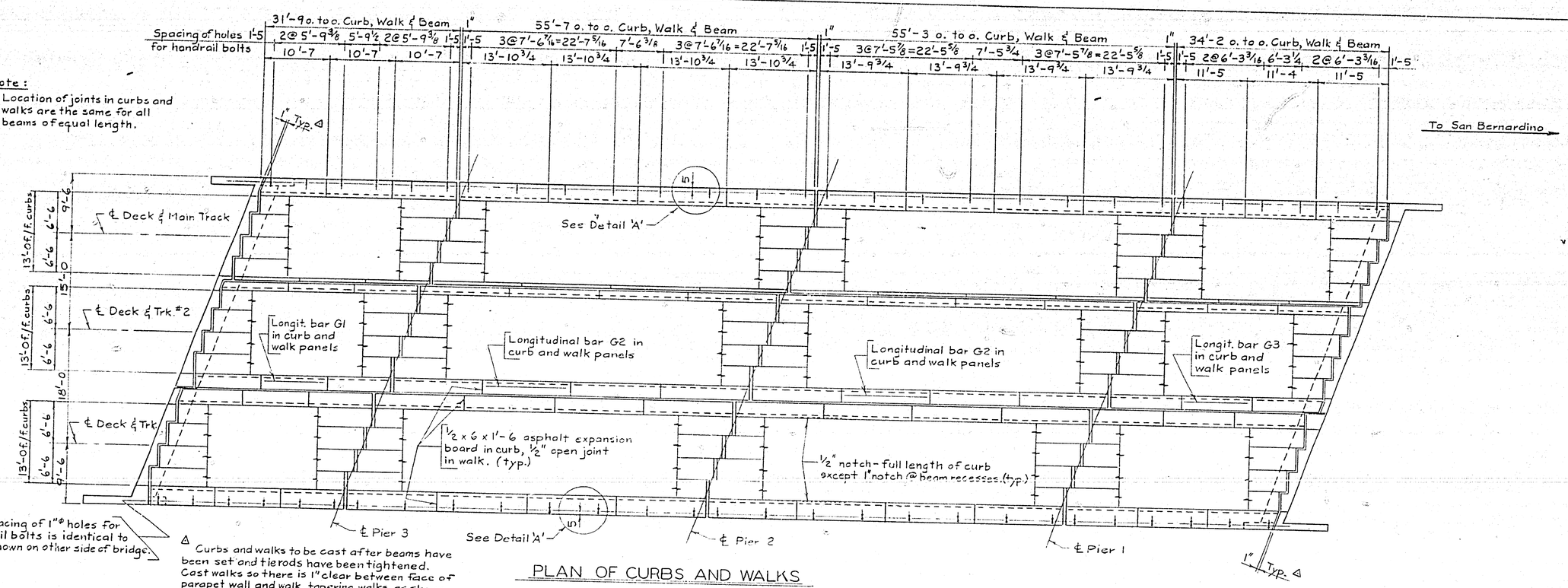
APPROVED: W. S. Autrey
CHIEF ENGINEER

⊕ Rev. 7/80 GEH ⊗ Rev. 1/80 WBH

MADE BY: GEH
CHECKED BY: PHG
EXAMINED BY: CEG

R-2039 SH. 38 OF 45

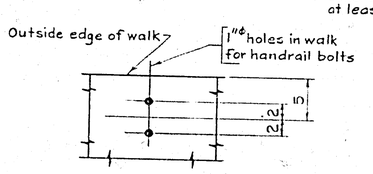
Note:
Location of joints in curbs and walks are the same for all beams of equal length.



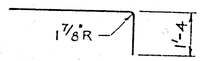
△ Curbs and walks to be cast after beams have been set and tierods have been tightened. Cast walks so there is 1" clear between face of parapet wall and walk, tapering walks as shown. Burn C bars as required to maintain 1½" of covering concrete. Fan W bars as required, making sure to get at least one W bar outside of handrail bolt holes.

PLAN OF CURBS AND WALKS

See Sheet 2 for erection of handrail panels.



DETAIL 'A'

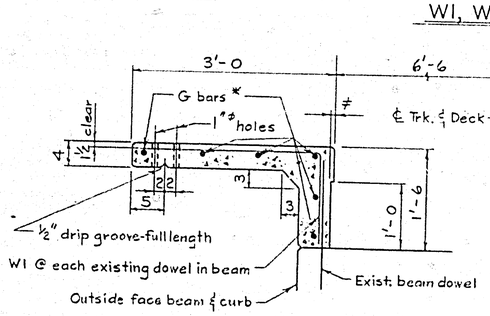


W1, W2 AND W3

≠ Notch in curb to be ½" except at ends of beams where notch is to be 1" within limits of recesses in beams.

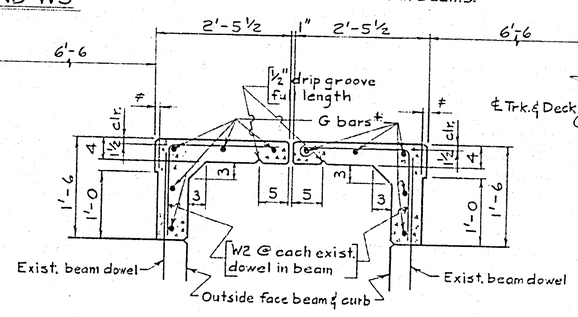
REINFORCING STEEL FOR CURBS AND WALKS				
NO.	MARK	SIZE	LENGTH	SHAPE
87	G1	#4	10'-3	STRAIGHT
232	G2	#4	13'-6	do
87	G3	#4	11'-0	do
358	W1	#5	4'-0	SEE DETAIL
358	W2	#5	3'-5	do
179	W3	#5	2'-4	do

FOR REINFORCEMENT MATERIAL AND FABRICATION NOTES, SEE SHEET 12.

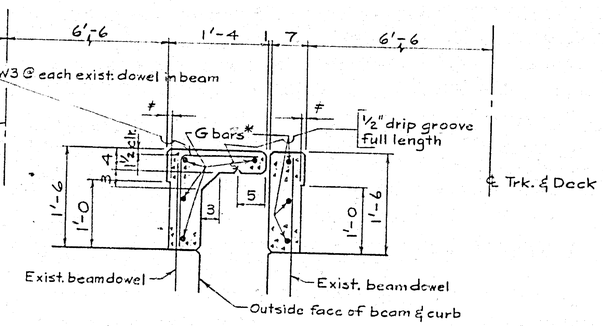


Note:
Place W1 so as to miss 1"ϕ holes in walk.

TYPICAL SECTION THRU EXTERIOR CURB AND WALK



TYPICAL SECTION THRU WIDE INTERIOR CURB AND WALKS



TYPICAL SECTION THRU NARROW INTERIOR CURB AND WALK

* Use G1 bars for curb and walk panels on 31'-9 beams.
Use G2 bars for curb and walk panels on 55'-7 and 55'-3 beams.
Use G3 bars for curb and walk panels on 34'-2 beams.

SHEET 11
Endorsed RWC

B.E.S. 3100

THE A.T. & S.F. RY. COMPANY

BR. 16.4, THIRD DIST., LOS ANGELES DIV.

CURB AND WALK DETAILS

SCALE: NONE
CORRECT: R B Thomas
BRIDGE ENGINEER SYSTEM

CHICAGO, ILL., SEPT., 1979
APPROVED: W S Andrews
CHIEF ENGINEER

MADE BY: GEH
CHECKED BY: MG
EXAMINED BY: CEG

R-2039

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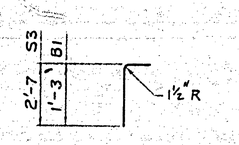
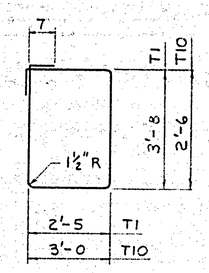
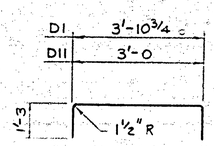


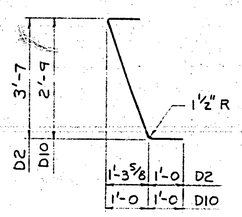
B1 AND S3



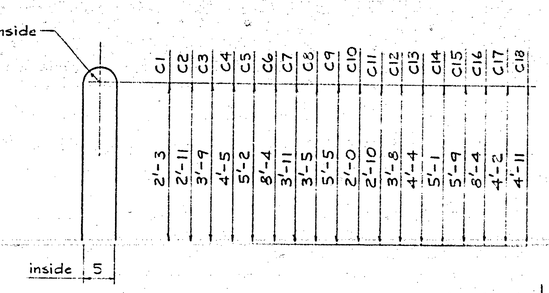
T1 AND T10



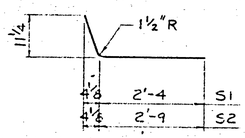
D1 AND D11



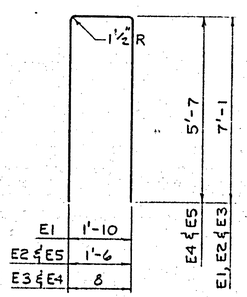
D2 AND D10



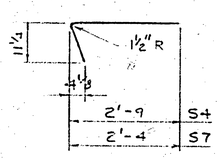
C1 THRU C18



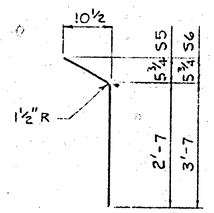
S1 AND S2



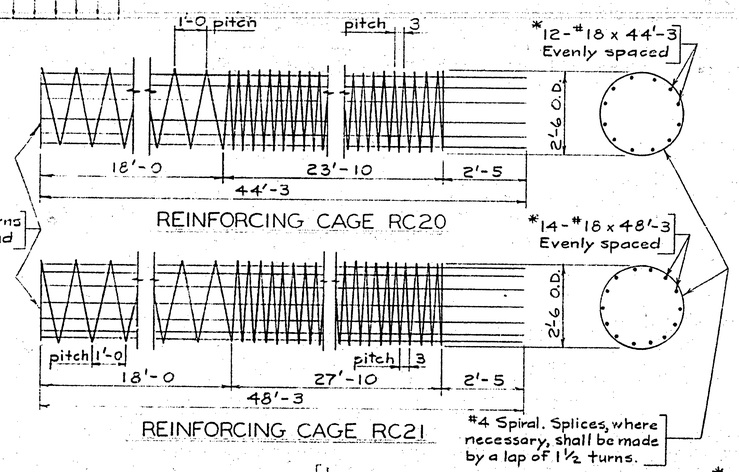
E1 THRU E5

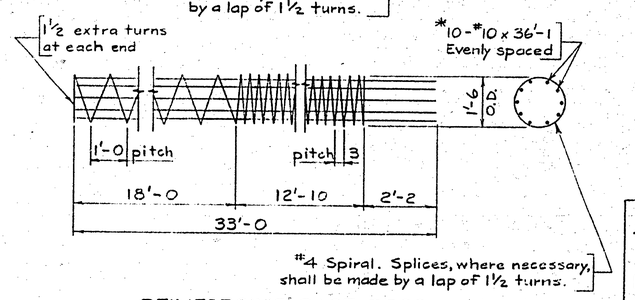


S4 AND S7



S5 AND S6





REINFORCING CAGE RC22

REINFORCING STEEL REQUIRED

TOTAL	E.ABUT.	W.ABUT.	PIER 1	PIER 2	PIER 3	MARK	SIZE	LENGTH	SHAPE
8	8	-	-	-	-	A1	#4	9'-0	STRAIGHT
2	2	-	-	-	-	A2	#4	8'-2	do
6	5	-	-	-	-	A3	#4	6'-6	do
8	8	-	-	-	-	A4	#4	6'-3	do
2	2	-	-	-	-	A5	#4	4'-6	do
2	2	-	-	-	-	A6	#4	7'-6	do
8	-	8	-	-	-	A7	#4	10'-5	do
2	-	2	-	-	-	A8	#4	9'-2	do
4	-	4	-	-	-	A9	#4	7'-9	do
2	-	2	-	-	-	A10	#4	7'-0	do
8	-	8	-	-	-	A11	#4	4'-7	do
2	-	2	-	-	-	A12	#4	3'-0	do
2	-	2	-	-	-	A13	#4	9'-0	do
16	8	8	-	-	-	A14	#4	8'-1	do
12	6	6	-	-	-	A15	#4	7'-10	do
4	2	2	-	-	-	A16	#4	7'-2	do
16	8	8	-	-	-	A17	#4	5'-0	do
4	2	2	-	-	-	A18	#4	5'-6	do
4	2	2				A19	#4	6'-6	do
88	14	14	20	20	20	B1	#4	1'-9	SEE DETAIL
2	2	-	-	-	-	C1	#4	5'-2	SEE DETAIL
3	3	-	-	-	-	C2	#4	6'-6	do
2	2		-	-	-	C3	#4	8'-2	do
2	2	-	-	-	-	C4	#4	9'-6	do
1	1		-	-	-	C5	#4	11'-0	do
4	4	-	-	-	-	C6	#4	17'-4	do
1	1	-	-	-	-	C7	#4	8'-6	do
1	1	-	-	-	-	C8	#4	7'-6	do
2	1	1	-	-	-	C9	#4	11'-6	do

REINFORCING STEEL REQUIRED (CONT'D.)

TOTAL	E.ABUT.	W. ABUT.	PIER 1	PIER 2	PIER 3	MARK	SIZE	LENGTH	SHAPE
6	2	4	-	-	-	C10	#4	4'-8	SEE DETAIL
6	2	4	-	-	-	C11	#4	6'-4	do
9	3	6	-	-	-	C12	#4	8'-0	do
8	3	5	-	-	-	C13	#4	9'-4	do
6	2	4	-	-	-	C14	#4	10'-10	do
1	-	1		-	-	C15	#4	12'-2	do
8	2	6	-	-	-	C16	#4	17'-4	do
3	1	2	-	-	-	C17	#4	9'-0	do
2	1	1	-	-	-	C18	#4	10'-6	do
30	-	-	10	10	10	D1	#4	6'-4	SEE DETAIL
36	-	-	12	12	12	D2	#4	5'-10	do
16	8	8	-	-	-	D10	#4	4'-11	do
28	14	14	-	-	-	D11	#4	5'-6	do
12	6	6	-	-	-	E1	#4	16'-0	do
8	5	3	-	-	-	E2	#4	15'-8	do
20	9	11	-	-	-	E3	#4	14'-10	do
48	24	24	-	-	-	E4	#4	11'-10	do
48	24	24	-	-	-	E5	#4	12'-8	do
108	-	-	36	36	36	H1	#9	18'-2	STRAIGHT
18	-	-	6	6	6	H2	#4	18'-2	do
36	-	-	12	12	12	H3	#4	17'-7	do
20	10	10	-	-	-	H10	#7	19'-4	do
34	17	17	-	-	-	H11	#4	19'-4	do
40	20	20	-	-	-	H12	#7	18'-7	do
68	34	34	-	-	-	H13	#4	18'-2	do
16	8	8	-	-	-	H14	#4	2'-9	do
16	8	8	-	-	-	H15	#4	2'-3	do
8	4	4	-	-	-	H16	#4	1'-8	do
15	7	8	-	-	-	S1	#4	3'-4	SEE DETAIL
24	12	12	-	-	-	S2	#4	3'-9	do
16	8	8	-	-	-	S3	#4	3'-7	do
24	12	12	-	-	-	S4	#4	3'-9	do
2	2	-	-	-	-	S5	#4	3'-7	do
6	2	4	-	-	-	S6	#4	4'-7	do
16	8	8	-		-	S7	#4	3'-4	do
396	-	-	132	132	132	T1	#4	13'-4	SEE DETAIL
136	68	68	-	-	-	T10	#4	12'-2	do
18	-	-	9	-	9	RC20	REINFORCING CAGE		do
9	-	-	-	9	-	RC21	REINFORCING CAGE		do
18	9	9	-	-	-	RC22	REINFORCING CAGE		do

NOTES:

MATERIAL: REINFORCEMENT SHALL BE AS PER A.S.T.M. DESIGNATION: A615 OR A617, GRADE 40 FOR #4 AND #5 BARS AND GRADE 60 FOR #6 BARS AND LARGER.

SPIRAL REINFORCEMENT FOR REINFORCING CAGES SHALL BE HOT ROLLED DEFORMED BARS AS PER A.S.T.M. DESIGNATION: A615 OR A617, GRADE 40.

FABRICATION: FABRICATION OF REINFORCEMENT SHALL BE AS PER CHAPTER 7 OF THE C.R.S.I. MANUAL OF STANDARD PRACTICE.

REINFORCING BARS AND CAGES SHALL BE IDENTIFIED BY THE FABRICATOR WITH THE APPLICABLE MARK SHOWN ON THE REINFORCING STEEL LISTS.

REINFORCING STEEL DETAILS

All dimensions shown (except on bars C1 thru C18) are out to out of bars.

Note:
Each reinforcing cage shall have at least 3 spiral spacer bars.

*No splicing of vertical steel in spiral cage is permitted. Bars must be full length.

SHEET 12
Indexed Rec

B.E.S. 3100

THE A. T. & S. F. RY. COMPANY

BR. 16.4, THIRD DIST., LOS ANGELES DIV.

REINFORCING STEEL DETAILS

SCALE: NONE — CHICAGO, ILL., SEPT., 1979

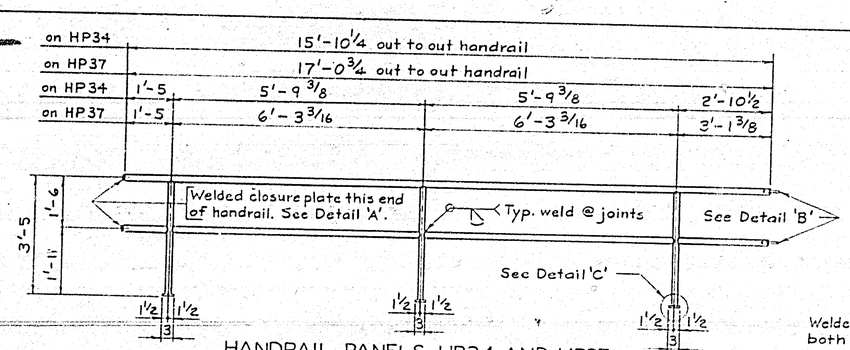
CORRECT: — APPROVED:

BRIDGE ENGINEER SYSTEM — CHIEF ENGINEER

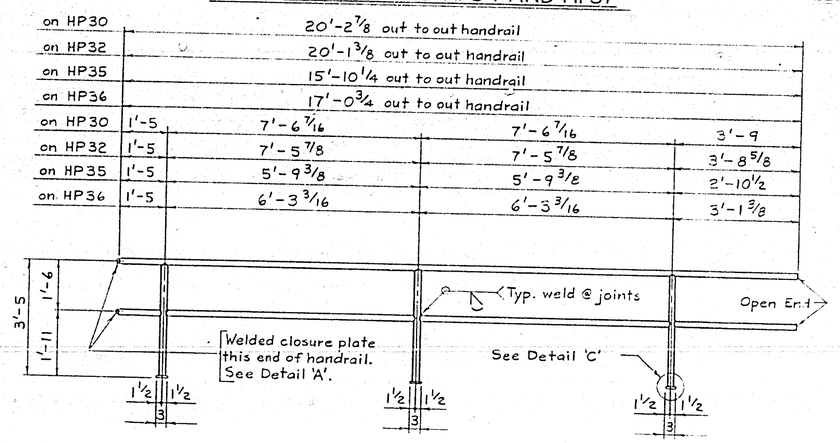
MADE BY: GEH
CHECKED BY: PJS
EXAMINED BY: EEG

R-2039

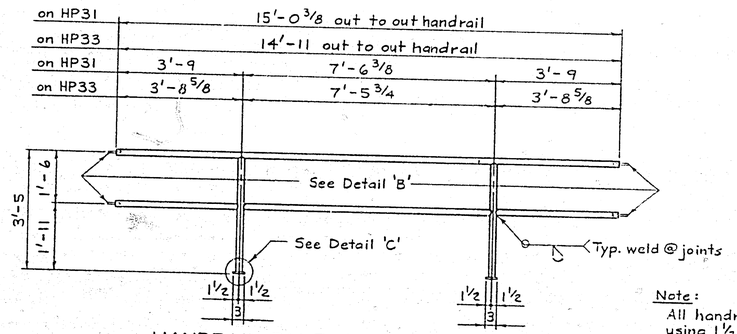
SH. 40 OF 45



HANDRAIL PANELS HP34 AND HP37

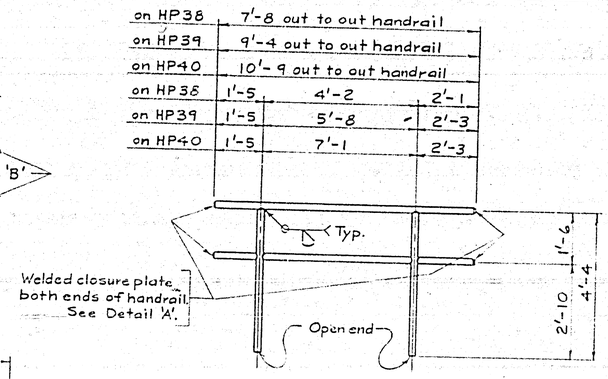


HANDRAIL PANELS HP30, HP32, HP35 AND HP36

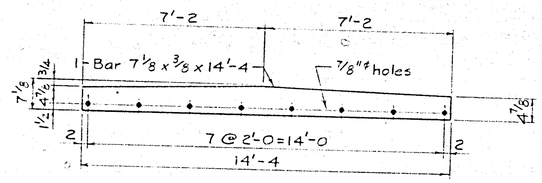


HANDRAIL PANELS HP31 AND HP33

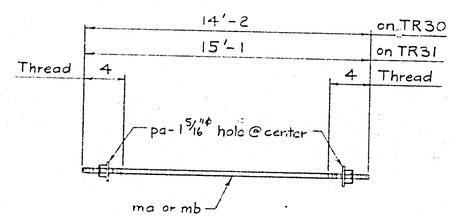
Note:
All handrail panels to be fabricated using 1 1/2"φ standard black pipe, A.S.T.M. A53.



HANDRAIL PANELS HP38, HP39 AND HP40



WATERPROOFING STOP WS30



TIE ROD TR30

1-Bar 1 1/4"φ x 14'-2 ~ ma
2-Std. Hex. Nuts, 1 1/4"φ tap
2-Bars 4 3/4 x 3/8 x 0'-4 3/4 ~ pa

TIE ROD TR31

1-Bar 1 1/4"φ x 15'-1 ~ mb
2-Std. Hex. Nuts, 1 1/4"φ tap
2-pa

REQUIRED NO.	DESCRIPTION	MARK
	STRUCTURAL STEEL	
96	1-1/4"□ X 1'-6 BAR	
4	HANDRAIL PANEL, SEE DETAIL	AR30
2	do	HP30
4	do	HP31
2	do	HP32
2	do	HP33
2	do	HP34
2	do	HP35
2	do	HP36
2	do	HP37
1	do	HP38
1	do	HP39
56	PLATE, SEE DETAIL	HP40
18	TIE ROD, SEE DETAIL	P30
24	do	TR30
6	WATERPROOFING STOP, SEE DETAIL	TR31
		WS30
	MISCELLANEOUS	
112	1/2"□ X 6" MACHINE BOLT, HEX. HEAD AND NUT	
48	3/4"□ X 6-1/2" MACHINE BOLT, HEX. HEAD	AB40
48	HEX. NUT FOR 3/4"□ MACHINE BOLT	
224	STANDARD CUT WASHER FOR 1/2"□ BOLT	
48	STANDARD CUT WASHER FOR 3/4"□ BOLT	
112	LOCK WASHER FOR 1/2"□ BOLT	
24	ELASTOMERIC BEARING PAD, SEE DETAIL	BP1
24	do	BP2
24	do	BP3
24	do	BP4

NOTES:

MATERIAL: PLATES AND BARS SHALL MEET THE REQUIREMENTS OF A.S.T.M. DESIGNATION: A36.

STANDARD WEIGHT BLACK PIPE FOR HANDRAIL PANELS SHALL MEET THE REQUIREMENTS OF A.S.T.M. DESIGNATION: A53.

MACHINE BOLTS AND NUTS SHALL MEET THE REQUIREMENTS OF A.S.T.M. DESIGNATION: A307, GRADE A.

LAMINATED ELASTOMERIC BEARING PADS SHALL MEET THE REQUIREMENTS OF THE ATCHISON, TOPEKA AND SANTA FE RAILWAY COMPANY SPECIFICATION C.E. 50153-59, DATED OCTOBER 1978.

FABRICATION: FABRICATION, WORKMANSHIP AND WELDING SHALL BE IN ACCORDANCE WITH CHAPTER 15, PART 3, OF THE AMERICAN RAILWAY ENGINEERING ASSOCIATION MANUAL.

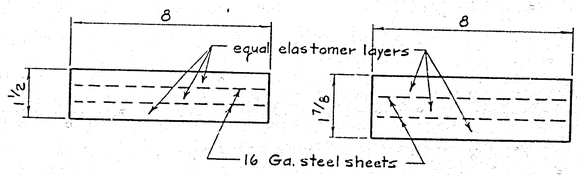
OPEN HOLES: AS NOTED.

SHOP PAINT: NONE

THE FABRICATOR SHALL PROVIDE 1/4"□ VENT HOLES IN THE BOTTOM OF PIPE HANDRAILING ELEMENTS AS NECESSARY FOR THE GALVANIZING PROCESS.

GALVANIZING: ALL MATERIAL LISTED ON THIS SHEET, EXCEPT ELASTOMERIC BEARING PADS, IS TO BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH A.S.T.M. DESIGNATION: A123 OR A153, AS APPLICABLE.

AFTER GALVANIZING, ALL ELEMENTS SHALL BE FREE OF FINS, ABRASIONS, ROUGH OR SHARP EDGES, AND OTHER SURFACE DEFECTS, AND NUTS SHALL BE TAPPED 0.030" OVERSIZE TO PERMIT NUT ROTATION ON THREADED ELEMENTS.



1-Pad 8 x 1 1/2 x 2'-6 ~ BP1
1-Pad 8 x 1 1/2 x 2'-0 ~ BP3
1-Pad 8 x 1 7/8 x 2'-6 ~ BP2
1-Pad 8 x 1 7/8 x 2'-0 ~ BP4

LAMINATED ELASTOMERIC BEARING PADS

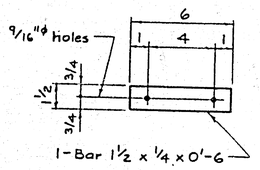
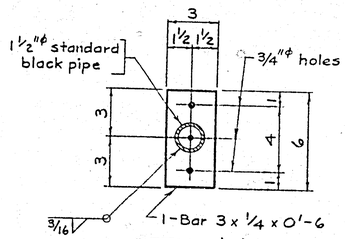
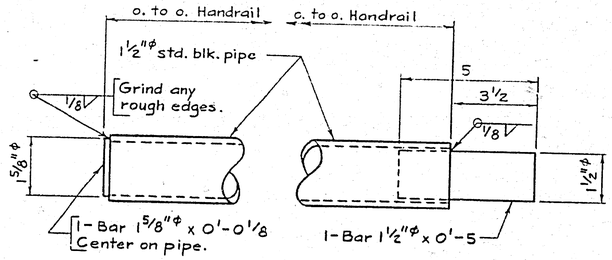


PLATE P30



DETAIL 'C'

Base plate for handrail post.



DETAIL 'A'

DETAIL 'B'

MADE BY: GEH
CHECKED BY: PLC
EXAMINED BY: CEG

SHEET 13
Indexed RKC

B.E.S. 3100

THE A.T. & S.F. RY. COMPANY

BR. 16.4, THIRD DIST., LOS ANGELES DIV.

STEEL AND MISCELLANEOUS DETAILS

SCALE: NONE
CHICAGO, ILL., SEPT., 1979

CORRECT:
BRIDGE ENGINEER SYSTEM

APPROVED:
CHIEF ENGINEER

R-2039

SH. 41 OF 45