

**WARNING:** ALL INDIVIDUALS INTERESTED IN BIDDING ON THIS PROJECT MUST OBTAIN THE FINAL PLANS AND SPECIFICATIONS FROM THE DEPARTMENT MANAGING THE PROJECT OR AS OTHERWISE STATED IN THE ADVERTISEMENT FOR BIDS FOR THE PROJECT. DO NOT USE THE PLANS AND SPECIFICATIONS POSTED ON THE CLERK OF THE BOARD'S WEBSITE FOR BIDDING ON THIS PROJECT.

# COUNTY OF SAN BERNARDINO DEPARTMENT OF PUBLIC WORKS

## REGIONAL PARKS DEPARTMENT

### PLANS FOR CONSTRUCTION ON

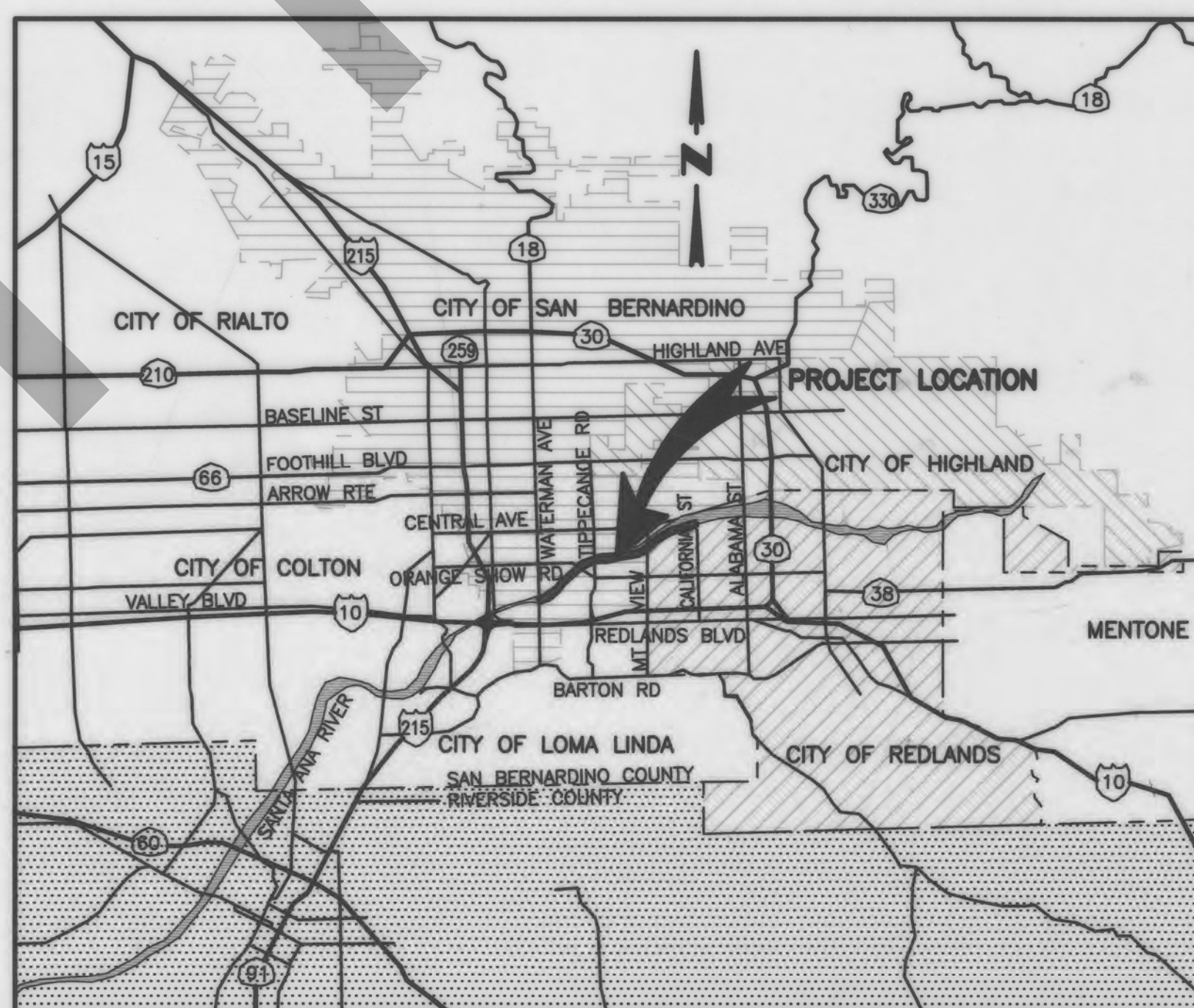
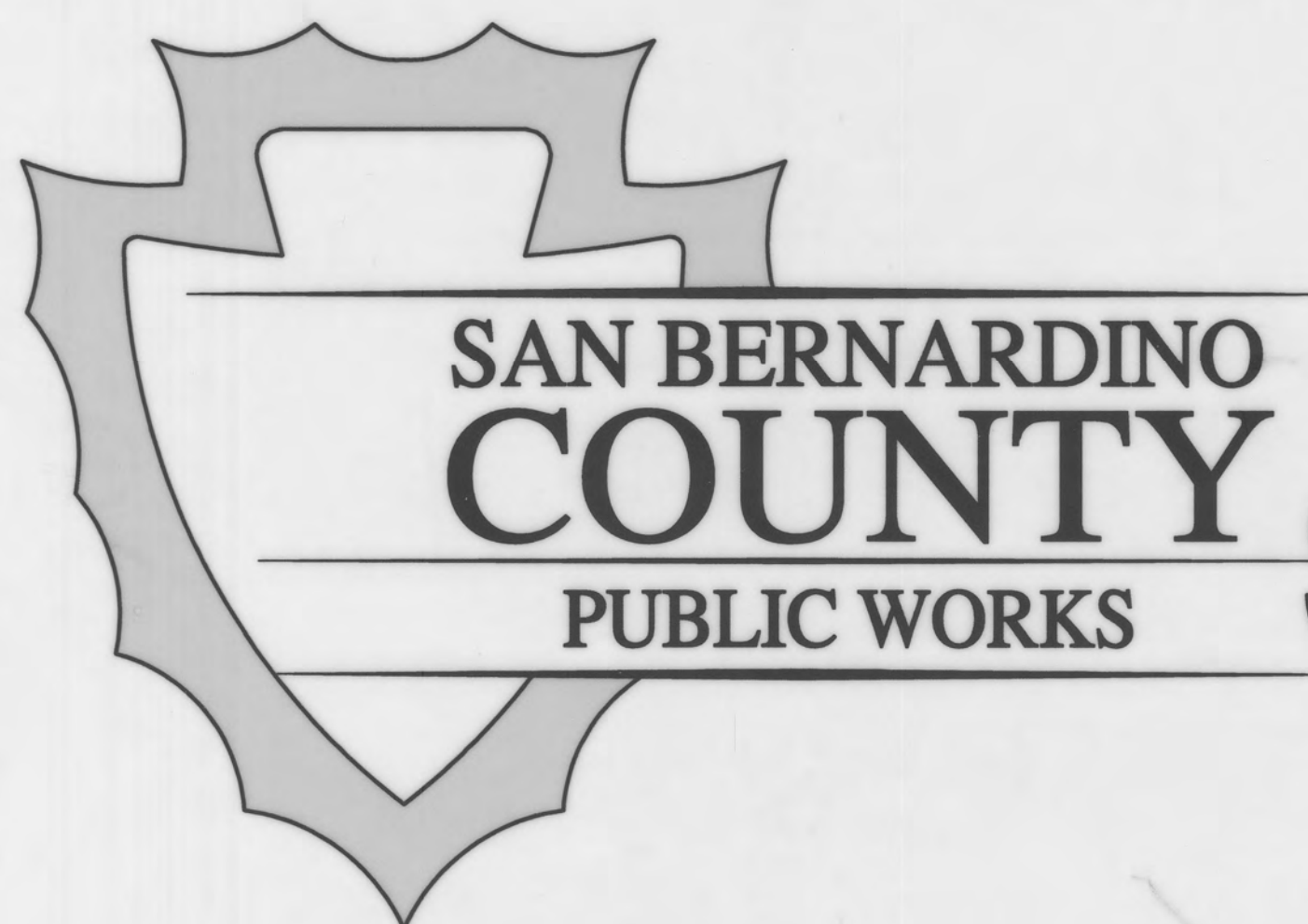
# SANTA ANA RIVER TRAIL - PHASE III

## WATERMAN AVENUE TO CALIFORNIA STREET

## AREA: CITIES OF SAN BERNARDINO AND REDLANDS

WORK ORDER NO. H13463 FEDERAL AID NO. STPLER-5954(083)

LENGTH = 3.5 MI.



LOCATION MAP

NOT TO SCALE

### CITY OF REDLANDS

ACCEPTED BY: Donald P. Young 4/14/2020  
DON YOUNG, P.E., DEVELOPMENT MANAGER, R.C.E. 49918 DATE

### CITY OF SAN BERNARDINO

ACCEPTED BY: Alex Qishta 4/6/2020  
ALEX QISHTA, P.E., DEPUTY DIRECTOR OF PUBLIC WORKS/CITY ENGINEER, R.C.E. 66702 DATE

### COUNTY OF SAN BERNARDINO

APPROVED BY: Brendon Biggs 4-2-2020  
BRENDON BIGGS, INTERIM DIRECTOR OF PUBLIC WORKS R.C.E. 57127 DATE

ACCEPTED BY: Beanta Davis 4/2/2020  
BEANTA DAVIS, DIRECTOR OF REGIONAL PARKS DATE

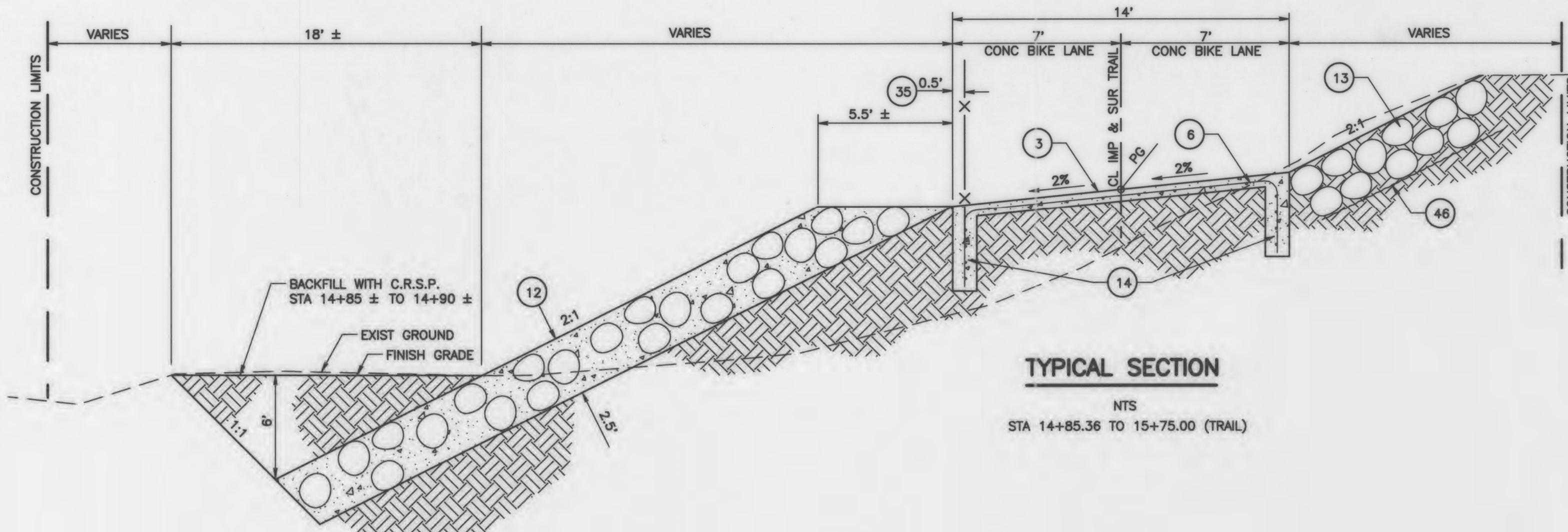
MARK	REVISIONS	APPR.	DATE

MARK	REVISIONS	APPR.	DATE

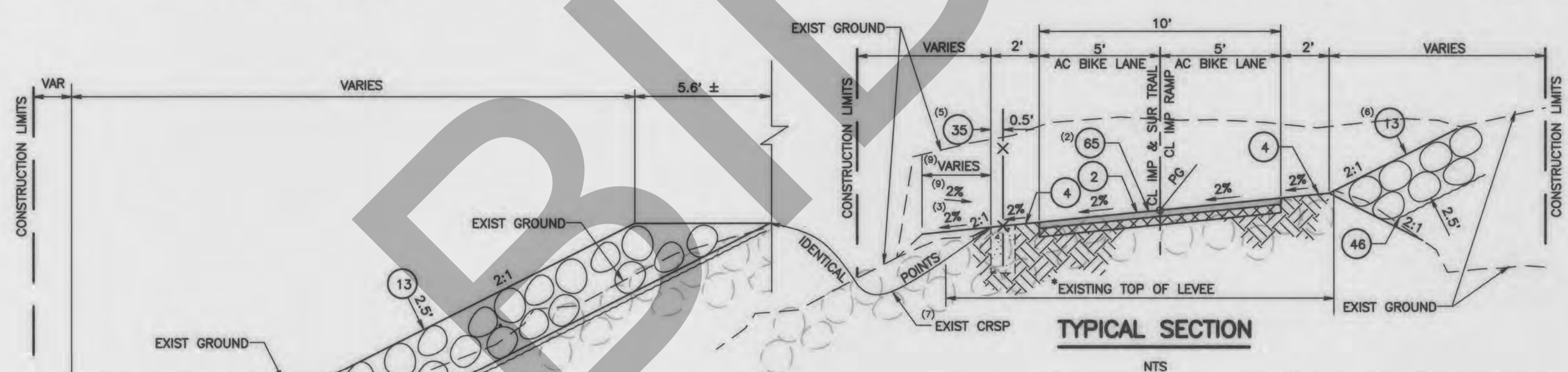
MARK	CHANGES	RESIDENT ENGINEER	DATE
	NO CHANGES		
FIELD CHANGES			SHT. NO. TOT. SHTS.
			1 38

All Change Items - A:\GIS Tool Phase III\113463\Drawings\113463\_008 - Final.dwg - MODIFIED 12/27/2019 10:43:30AM

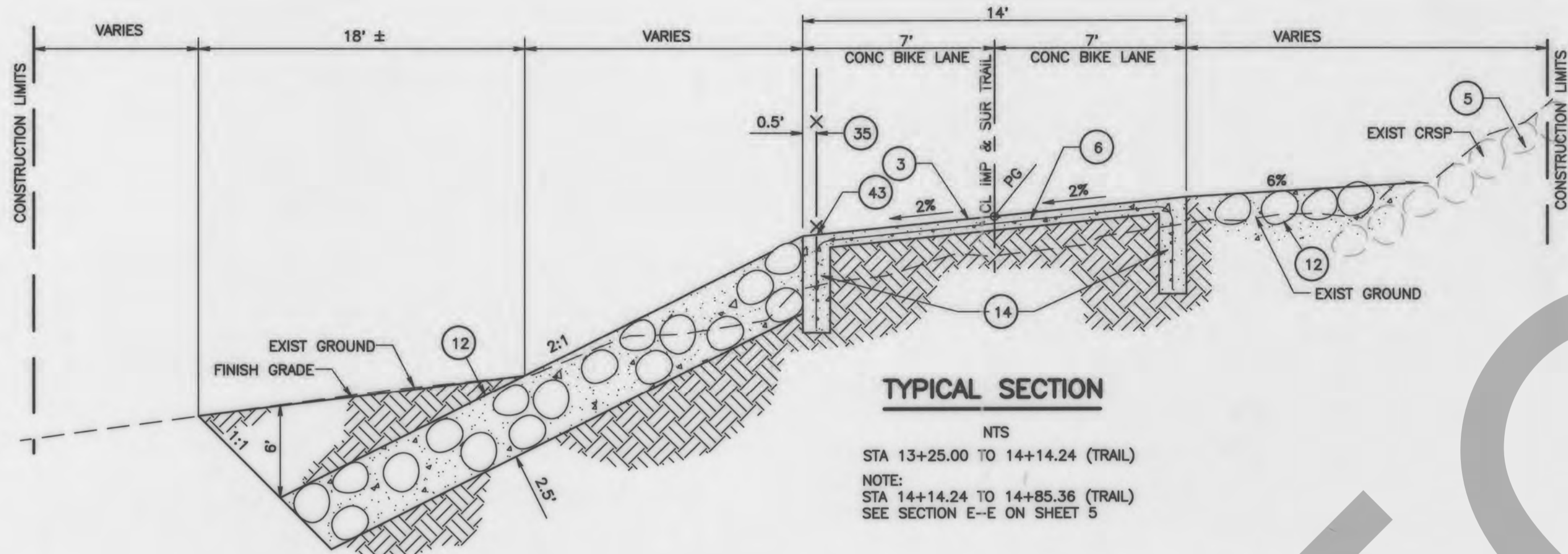




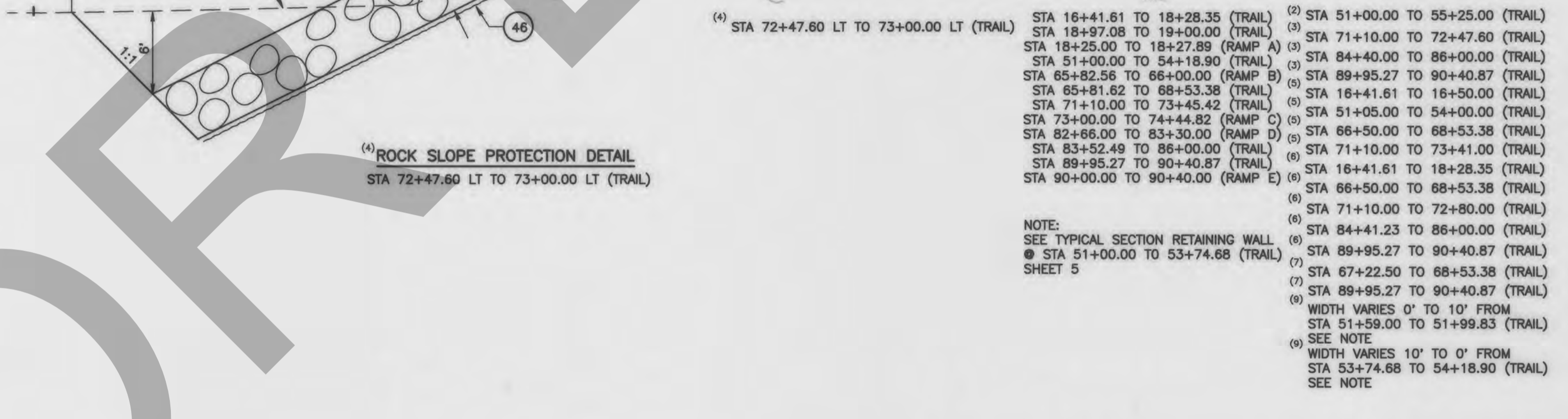
**TYPICAL SECTION**  
NTS  
STA 14+85.36 TO 15+75.00 (TRAIL)



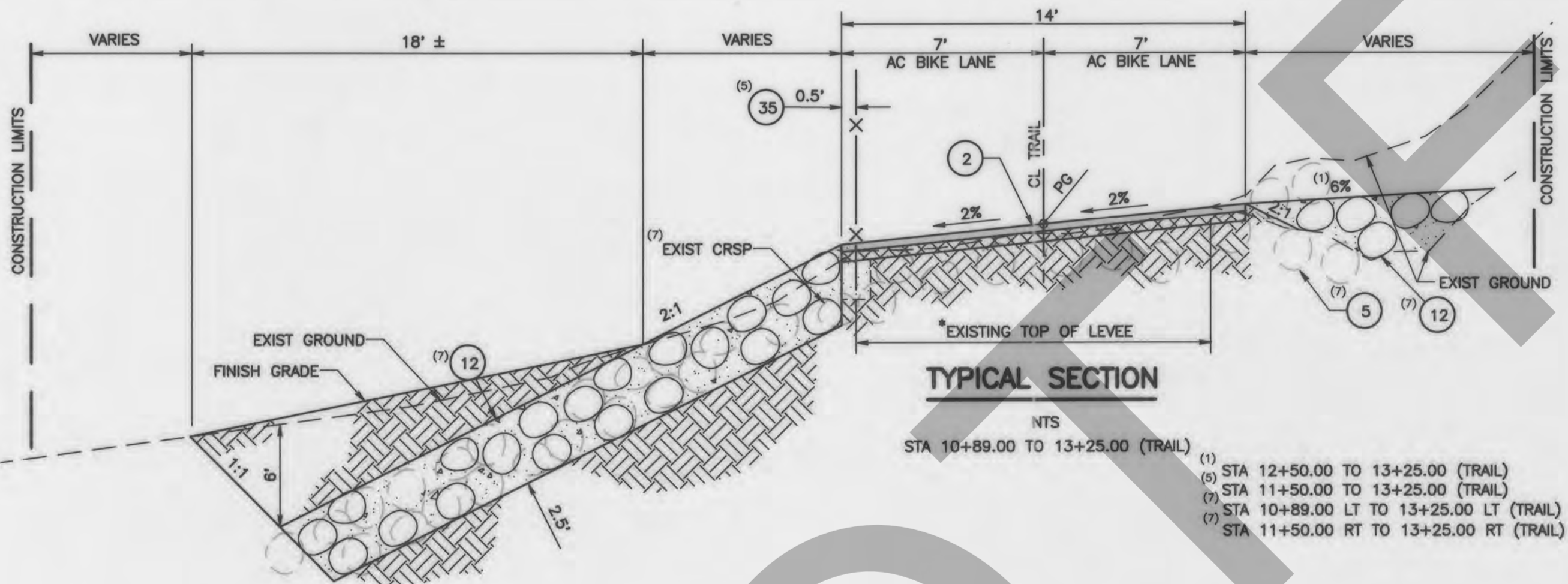
**TYPICAL SECTION**  
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STA 72+47.60 LT TO 73+00.00 LT (TRAIL)



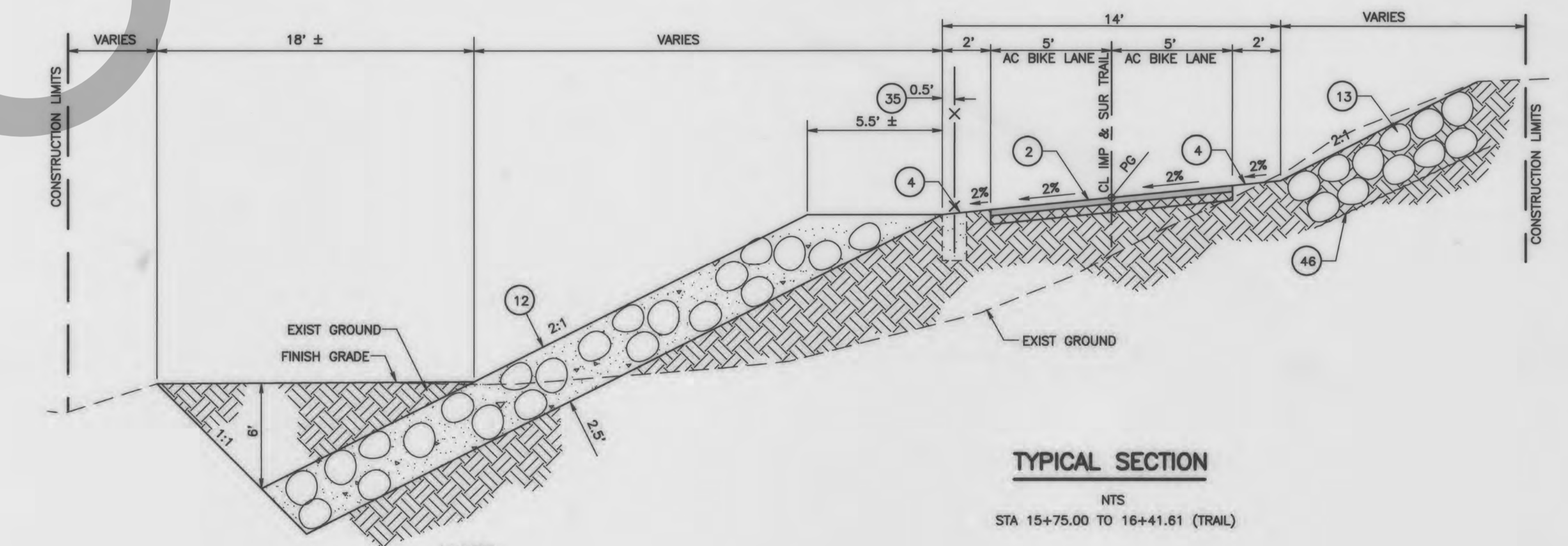
**TYPICAL SECTION**  
NTS  
STA 13+25.00 TO 14+14.24 (TRAIL)  
NOTE:  
STA 14+14.24 TO 14+85.36 (TRAIL)  
SEE SECTION E-E ON SHEET 5



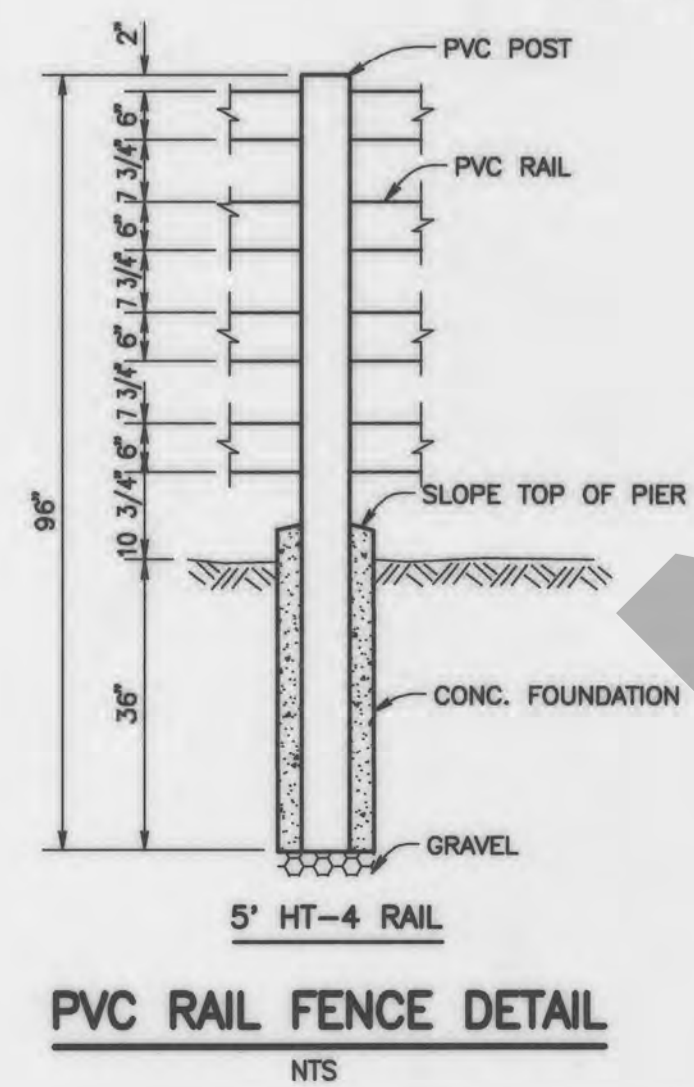
**ROCK SLOPE PROTECTION DETAIL**  
STA 72+47.60 LT TO 73+00.00 LT (TRAIL)



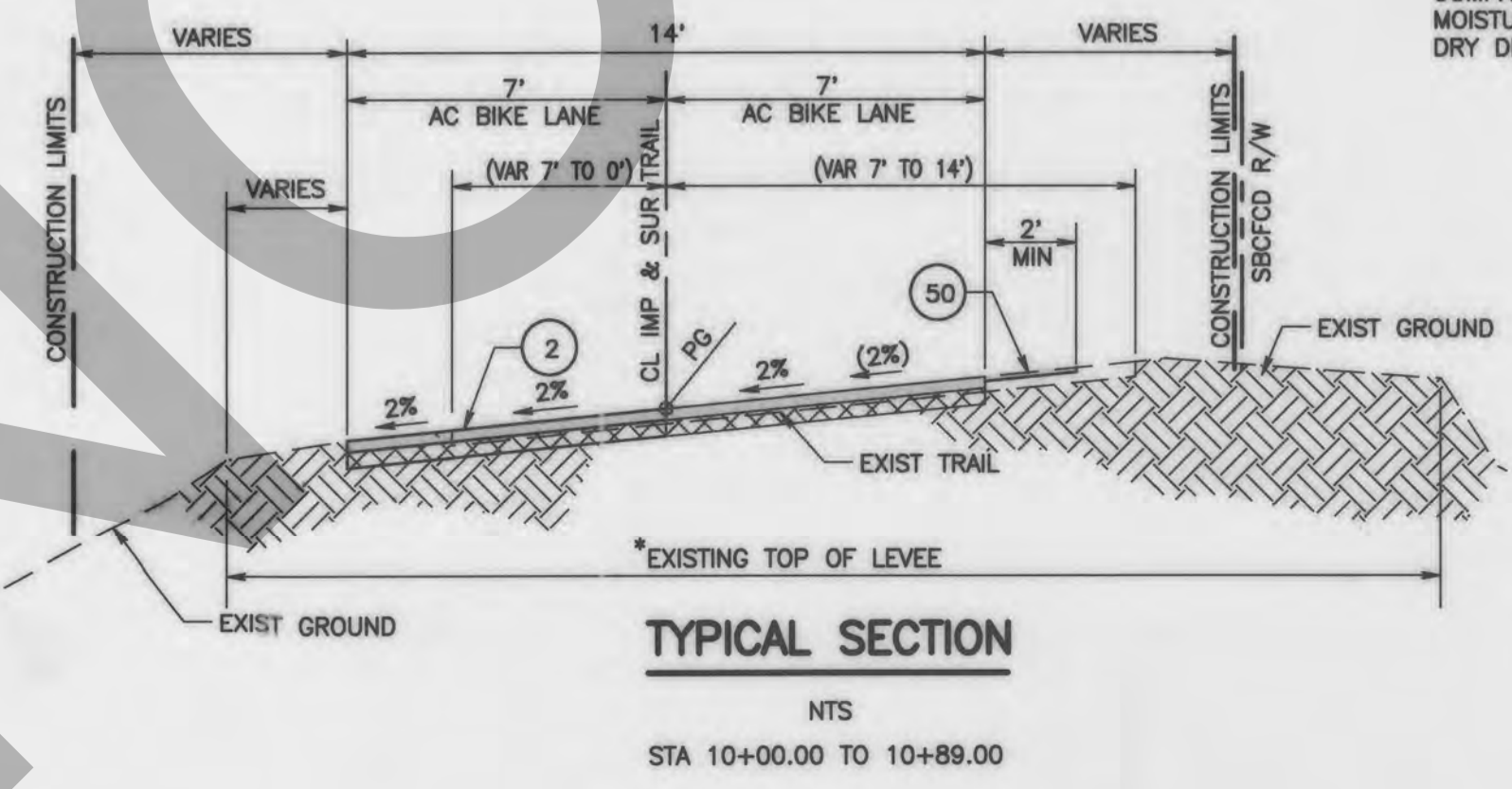
**TYPICAL SECTION**  
NTS  
STA 10+89.00 TO 13+25.00 (TRAIL)  
(1) STA 12+50.00 TO 13+25.00 (TRAIL)  
(2) STA 11+50.00 TO 13+25.00 (TRAIL)  
(3) STA 10+89.00 LT TO 13+25.00 LT (TRAIL)  
(4) STA 11+50.00 RT TO 13+25.00 RT (TRAIL)



**TYPICAL SECTION**  
NTS  
STA 15+75.00 TO 16+41.61 (TRAIL)



**PVC RAIL FENCE DETAIL**  
NTS



**TYPICAL SECTION**  
NTS  
STA 10+00.00 TO 10+89.00

**SPECIAL SUBGRADE COMPACTION NOTE**

FROM STATION 10+00.00 TO STATION 14+85.36 THE SUBGRADE SHOULD BE COMPACTED TO AT LEAST 90% MAXIMUM DRY DENSITY +/- 2% OF OPTIMUM MOISTURE CONTENT AND AGGREGATE BASE COURSE COMPACTED TO 95% MAXIMUM DRY DENSITY +/- 2% OF OPTIMUM MOISTURE CONTENT (PER ASTM D1557).

**NOTE**

\*ALL CONSTRUCTION ACCESS IS LIMITED TO EXISTING TOP OF LEVEES OR CONSTRUCTION LIMITS AS SHOWN ON PLANS  
(#) = CONSTRUCTION NOTE STATION RANGE OR SUB-NOTE

**CONSTRUCTION NOTES:**

- 2 PLACE (0.25" THK) ASPHALT CONCRETE OVER (0.35" THK) CLASS 2 AGGREGATE BASE
- 3 PLACE (0.5" THK) PCC PAVEMENT.
- 4 PLACE 2" GRADED DIRT SHOULDER.
- 5 PROTECT IN PLACE.
- 6 PLACE REINFORCING BARS #4@18" BOTH WAYS. SEE CUT-OFF WALL DETAIL ON SHEET 5.
- 12 PLACE C.R.S.P. (1/4 TON, METHOD A).
- 13 PLACE R.S.P. (1/4 TON, METHOD B).
- 14 CONSTRUCT CUT OFF-WALL PER DETAIL SHEET 5.
- 35 INSTALL 6" (TYPE CL-6) CHAIN LINK FENCE PER CALTRANS STD PLAN RSP A85.
- 43 CONSTRUCT POST POCKET PER CALTRANS STD PLAN B11-47 AND DETAILS ON SHEET 5.
- 46 PLACE FILTER FABRIC PER TYPICAL SECTIONS ON SHEETS 3, 4 & 5 AND SPECIAL PROVISIONS.
- 46 COLD PLANE 0.10' THK EXISTING AC SURFACE AND OVERLAY 0.10' THK TYPE A AC.

MARK	REVISIONS	DATE

MARK	REVISIONS	DATE

MARK	CHANGES	RESIDENT ENGINEER	DATE

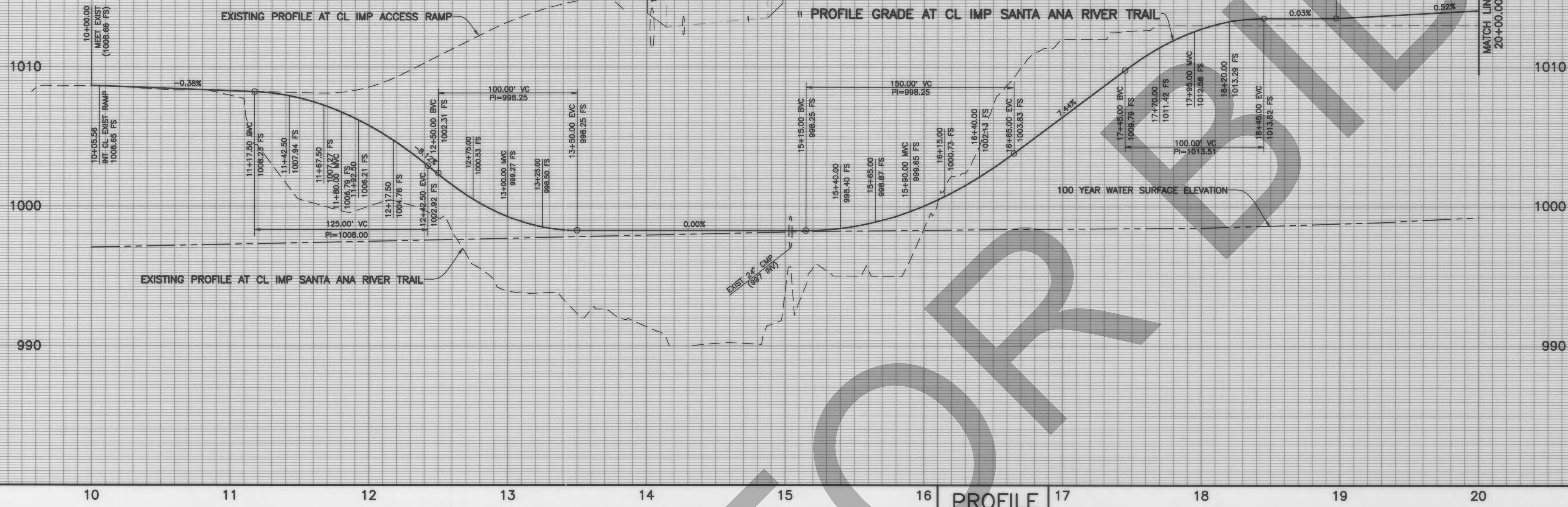


COUNTY OF SAN BERNARDINO DEPARTMENT OF PUBLIC WORKS			
DESIGNED BY: WCH	DRAWN BY: WCH/CBB	CHECKED BY: PA	RECOMMENDED BY: <i>[Signature]</i> 3/31/2020
SUBMITTED BY: <i>[Signature]</i>		DATE: 12-12-19	
ANDY SILAÓ, P.E. DESIGN ENGINEER		MERVAT N. MIKHAL, P.E. TRANSPORTATION DESIGN DIVISION CHIEF	

CITY OF REDLANDS PUBLIC WORKS DEPARTMENT				
DESIGNED BY:	CHECKED BY:	DATE:	4/14/2020	0000-XX-0/0
DRAWN BY:	GOUTAM DOBEY, P.E.	DATE:		
CHECKED BY:	R.C.E. 75646	DATE:		
SANTA ANA RIVER TRAIL PHASE III TYPICAL SECTIONS & MISCELLANEOUS DETAILS				
JL. REF.	W.O. NO.	SCALE	SHT. NO.	TOT. SHTS.
JL 10766	H13463	AS SHOWN	3	38







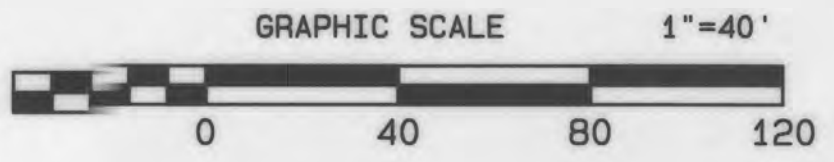
**PROFILE**  
SCALE: HORIZ 1"=40'  
VERT 1"=4'

CL CURVE DATA	Δ	R	L	T
A	7'46"37"	300'	40.63'	20.35'
B	27'55"51"	100'	48.75'	24.87'
C	42'18"31"	60'	44.31'	23.22'
D	8'41"17"	300'	45.49'	22.79'
E	24'37"11"	200'	85.94'	43.64'
F	3'15"07"	300'	17.03'	8.52'

- CONSTRUCTION NOTES:**
- 1 SAWCUT AND REMOVE EXISTING CONCRETE OR AC PAVEMENT.
  - 2 PLACE (0.25" THK) ASPHALT CONCRETE OVER (0.35" THK) CLASS 2 AGGREGATE BASE.
  - 3 PER TYPICAL SECTIONS ON SHEET 3.
  - 4 PLACE (0.5" THK) PCC PAVEMENT PER TYPICAL SECTIONS AND DETAILS ON SHEET 3, 4 & 5.
  - 5 PLACE 2" GRADED DIRT SHOULDER PER TYPICAL SECTION ON SHEET 3, 4 & 5.
  - 6 PROTECT IN PLACE.
  - 7 REMOVE EXISTING POST AND WIRE FENCE.
  - 8 REMOVE TREE.
  - 9 REMOVE EXISTING PIPE SWING GATE. SEE SPECIAL PROVISIONS.
  - 10 PLACE C.R.S.P. (1/4 TON, METHOD A) PER TYPICAL SECTION ON SHEET 3, 4 & 5.
  - 11 PLACE R.S.P. (1/4 TON, METHOD B.) PER TYPICAL SECTIONS ON SHEETS 3, 4 & 5.
  - 12 REMOVE AND DISPOSE OF INTERFERING PORTION OF EXISTING RAIL AND WIRE REVEIMENT FENCE.
  - 13 INSTALL 6" (TYPE CL-6) CHAIN LINK FENCE PER CALTRANS STD PLAN RSP AB5.
  - 14 CONNECT 4" PVC DRAIN PIPE AND EXTEND EXISTING BRIDGE ABUTMENT WEEP HOLE DRAIN.



**SPECIAL SUBGRADE COMPACTION NOTE**  
FROM STATION 10+00.00 TO STATION 14+85.36 THE SUBGRADE SHOULD BE COMPACTED TO AT LEAST 90% MAXIMUM DRY DENSITY +/- 2% OF OPTIMUM MOISTURE CONTENT AND AGGREGATE BASE COURSE COMPACTED TO 95% MAXIMUM DRY DENSITY +/- 2% OF OPTIMUM MOISTURE CONTENT (PER ASTM D1557).



MARK	CHANGES	RESIDENT ENGINEER	DATE
	NO CHANGES		

**FIELD CHANGES**



COUNTY OF SAN BERNARDINO  
DEPARTMENT OF PUBLIC WORKS

DESIGNED BY: WCH    DRAWN BY: WCH/CBB    CHECKED BY: PA    RECOMMENDED BY: *Andy Salas* 3/31/20

SUBMITTED BY: *Andy Salas* 12/12/19    DATE: 12/12/19

ANDY SALAS, P.E.  
DESIGN ENGINEER

**SANTA ANA RIVER TRAIL  
PHASE III**

WATERMAN AVE TO CALIFORNIA ST

PLAN AND PROFILE  
FROM STA 10+00 TO STA 20+00

J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHTS.
JL 10766	H13463	1" = 40'	6	38

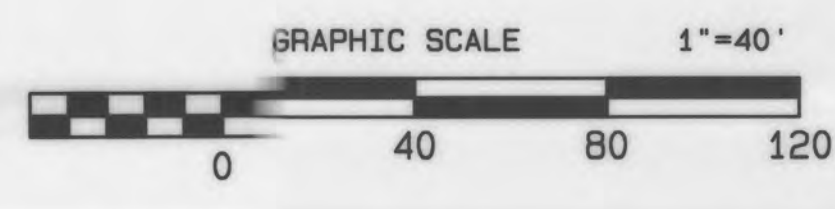
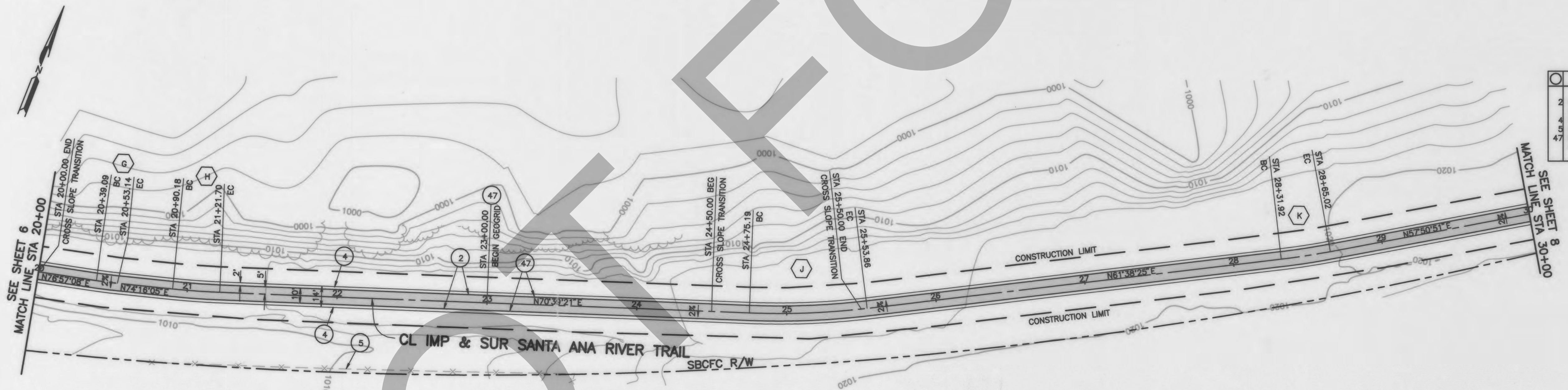
MARK	REVISIONS	APPR.	DATE



**PROFILE**  
SCALE: HORIZ 1"=40'  
VERT 1"=4'

CL CURVE DATA				
	Δ	R	L	T
G	2°41'03"	300'	14.05'	7.03'
H	3°36'44"	500'	31.52'	15.77'
J	9°00'56"	500'	78.68'	39.42'
K	3°47'34"	500'	33.10'	16.56'

- CONSTRUCTION NOTES:**
- 2 PLACE (0.25' THK) ASPHALT CONCRETE OVER (0.35' THK) CLASS 2 AGGREGATE BASE PER TYPICAL SECTIONS ON SHEETS 3, 4 & 5.
  - 4 PLACE 2' GRADED DIRT SHOULDER PER TYPICAL SECTION ON SHEETS 3, 4 & 5. PROTECT IN PLACE.
  - 47 PLACE (0.25' THK) ASPHALT CONCRETE OVER (0.50' THK) AGGREGATE BASE OVER GEOGRID. PER TYPICAL SECTIONS ON SHEET 3, 4 & 5 AND SPECIAL PROVISIONS.



MARK	REVISIONS	DATE

MARK	CHANGES	RESIDENT ENGINEER	DATE
	NO CHANGES		

**FIELD CHANGES**

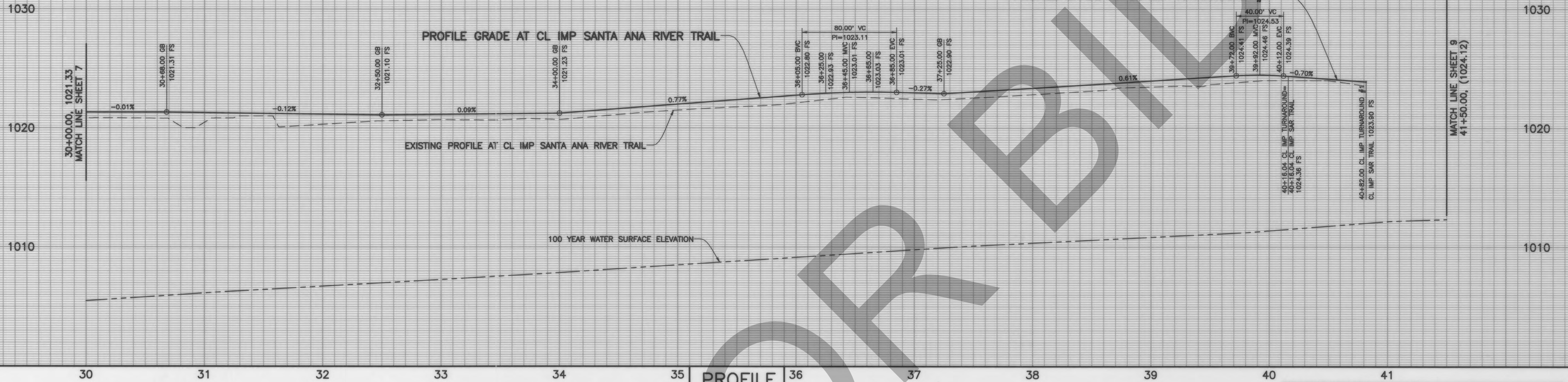


COUNTY OF SAN BERNARDINO DEPARTMENT OF PUBLIC WORKS			
DESIGNED BY: WCH	DRAWN BY: WCH/CBB	CHECKED BY: PA	RECOMMENDED BY: Mervat N. Mikhail, P.E. TRANSPORTATION DESIGN DIVISION CHIEF 3/31/2020
SUBMITTED BY: Andy Silao DESIGN ENGINEER		DATE: 12/22/19	

SANTA ANA RIVER TRAIL PHASE III WATERMAN AVE TO CALIFORNIA ST PLAN AND PROFILE FROM STA 20+00 TO STA 30+00				
J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHTS.
JL 10766	H13463	1" = 40'	7	38

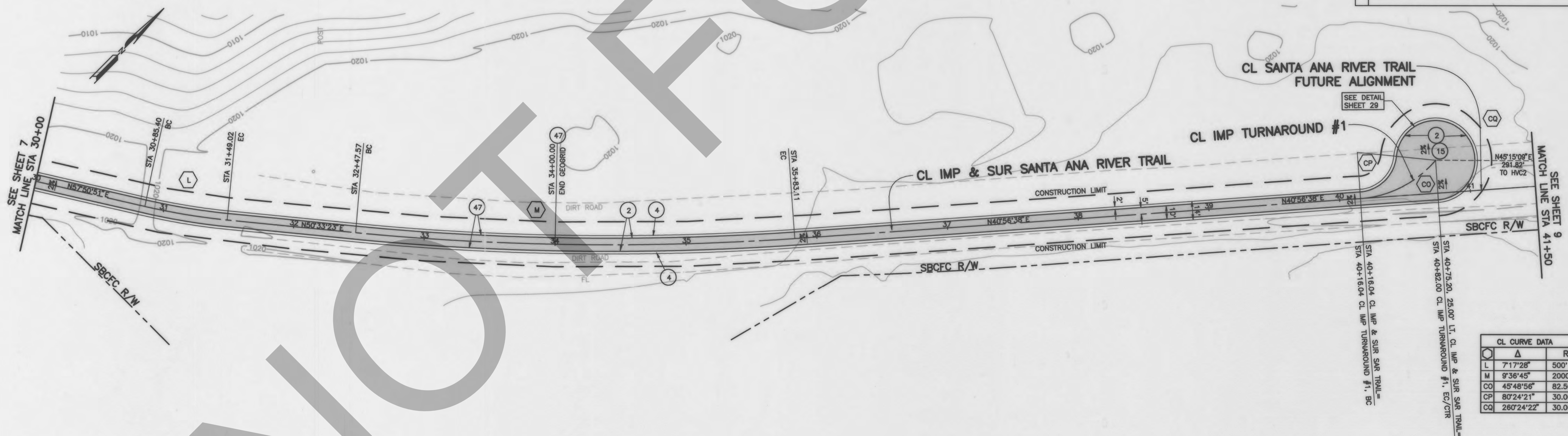
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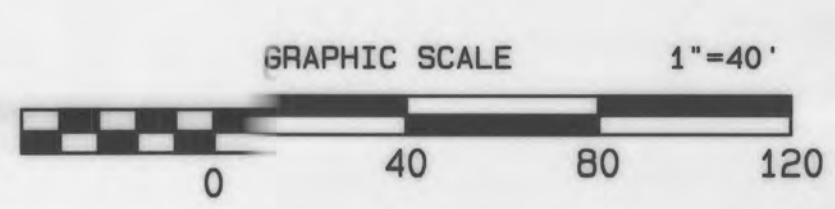
**PROFILE**  
SCALE: HORIZ 1"=40'  
VERT 1"=4'

- CONSTRUCTION NOTES:**
- PLACE (0.25' THK) ASPHALT CONCRETE OVER (0.35' THK) CLASS 2 AGGREGATE BASE PER TYPICAL SECTIONS ON SHEETS 3, 4 & 5.
  - PLACE 2' GRADED DIRT SHOULDER PER TYPICAL SECTION ON SHEETS 3, 4 & 5.
  - CONSTRUCT ASPHALT CONCRETE TURNAROUND AREA PER PLAN AND DETAILS ON SHEET 29.
  - PLACE (0.25' THK) ASPHALT CONCRETE OVER (0.50' THK) AGGREGATE BASE OVER GEOGRID. PER TYPICAL SECTIONS ON SHEET 3, 4 & 5 AND SPECIAL PROVISIONS.



**CL CURVE DATA**

Station	Δ	R	L	T
L	7'17"28"	500'	63.63'	31.86'
M	9'36"45"	2000'	335.54'	168.17'
CO	45'48"56"	82.50'	65.97'	34.86'
CP	80'24"21"	30.00'	42.10'	25.35'
CQ	260'24"22"	30.00'	136.35'	NA



MARK	REVISIONS	APPR.	DATE

COUNTY OF SAN BERNARDINO DEPARTMENT OF PUBLIC WORKS		<b>SANTA ANA RIVER TRAIL          PHASE III</b> WATERMAN AVE TO CALIFORNIA ST PLAN AND PROFILE FROM STA 30+00 TO STA 40+00	
DESIGNED BY: WCH DRAWN BY: WCH/CBB CHECKED BY: PA RECOMMENDED BY: <i>[Signature]</i> 3/31/20 4MERVAT N. MIKHAIL, P.E. TRANSPORTATION DESIGN DIVISION CHIEF	SUBMITTED BY: <i>[Signature]</i> 12-17-19 ANDY SILAO, P.E. DESIGN ENGINEER	J.L. REF. JL 10766 W.O. NO. H13463 PLAN SCALE 1" = 40' SHT. NO. 8 TOT. SHTS. 38	REGISTERED PROFESSIONAL ENGINEER MERVAT N. MIKHAIL No. 72136 CIVIL STATE OF CALIFORNIA
FIELD CHANGES MARK CHANGES NO CHANGES RESIDENT ENGINEER DATE		J.L. REF. W.O. NO. PLAN SCALE SHT. NO. TOT. SHTS.	

PROFILE GRADE AT CL IMP TURNAROUND #2



**PROFILE**  
SCALE: HORIZ 1"=40'  
VERT 1"=4'

EP CURVE DATA

CP	Δ	R	L	T
CP	80°24'21"	30'	42.10'	25.35'
CQ	260°24'21"	30'	136.35'	NA

CL CURVE DATA

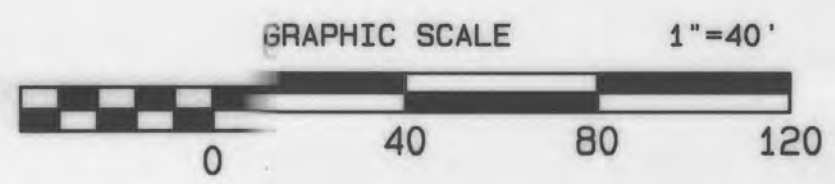
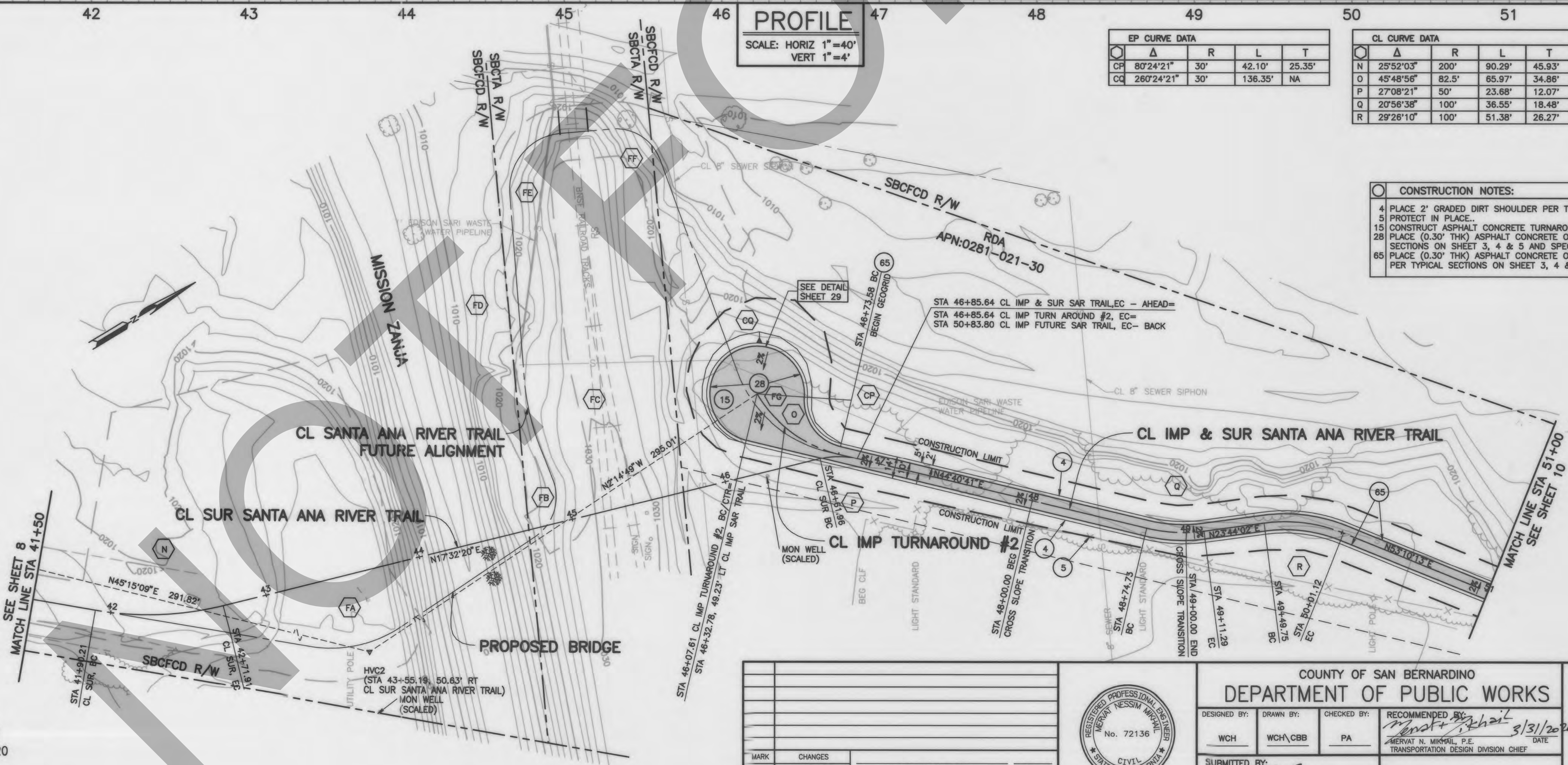
Q	Δ	R	L	T
N	25°52'03"	200'	90.29'	45.93'
O	45°48'56"	82.5'	65.97'	34.86'
P	27°08'21"	50'	23.68'	12.07'
Q	20°58'38"	100'	36.55'	18.48'
R	29°26'10"	100'	51.38'	26.27'

CL CURVE DATA - FUTURE ALIGNMENT

Q	Δ	R	L	T
FA	43°21'37"	80'	60.54'	31.80'
FB	77°58'08"	30'	40.82'	24.28'
FC	17°11'51"	150'	45.02'	22.68'
FD	24°52'03"	80'	34.72'	17.64'
FE	11°42'55"	35'	69.91'	54.36'
FF	74°48'16"	30'	39.17'	22.94'
FG	56°29'19"	80'	78.87'	42.98'

- CONSTRUCTION NOTES:**
- 4 PLACE 2' GRADED DIRT SHOULDER PER TYPICAL SECTION ON SHEET 3, 4 & 5.
  - 5 PROTECT IN PLACE.
  - 15 CONSTRUCT ASPHALT CONCRETE TURNAROUND AREA PER PLAN AND DETAILS ON SHEET 29.
  - 28 PLACE (0.30" THK) ASPHALT CONCRETE OVER (0.35" THK) AGGREGATE BASE PER TYPICAL SECTIONS ON SHEET 3, 4 & 5 AND SPECIAL PROVISIONS.
  - 65 PLACE (0.30" THK) ASPHALT CONCRETE OVER (0.50" THK) AGGREGATE BASE OVER GEOGRID PER TYPICAL SECTIONS ON SHEET 3, 4 & 5 AND SPECIAL PROVISIONS.

MARK	REVISIONS	DATE



MARK	CHANGES	RESIDENT ENGINEER	DATE
	NO CHANGES		

**FIELD CHANGES**



COUNTY OF SAN BERNARDINO  
DEPARTMENT OF PUBLIC WORKS

DESIGNED BY: WCH  
DRAWN BY: WCH/CBB  
CHECKED BY: PA  
RECOMMENDED BY: Mervat N. Mikhal, P.E., 3/31/20  
TRANSPORTATION DESIGN DIVISION CHIEF

SUBMITTED BY: Andy Silao, P.E., 12/18/19  
DESIGN ENGINEER

**SANTA ANA RIVER TRAIL  
PHASE III**

WATERMAN AVE TO CALIFORNIA ST  
PLAN AND PROFILE  
FROM STA 40+00 TO STA 51+00

J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHT'S.
JL 10766	H13483	1" = 40'	9	38

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