

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
FRA - 315 - 0.48
FORMERLY FRA-670-1.25 CONTRACT D
CITY OF COLUMBUS
FRANKLIN COUNTY
SPRING/SANDUSKY INTERCHANGE

NH-20(59)

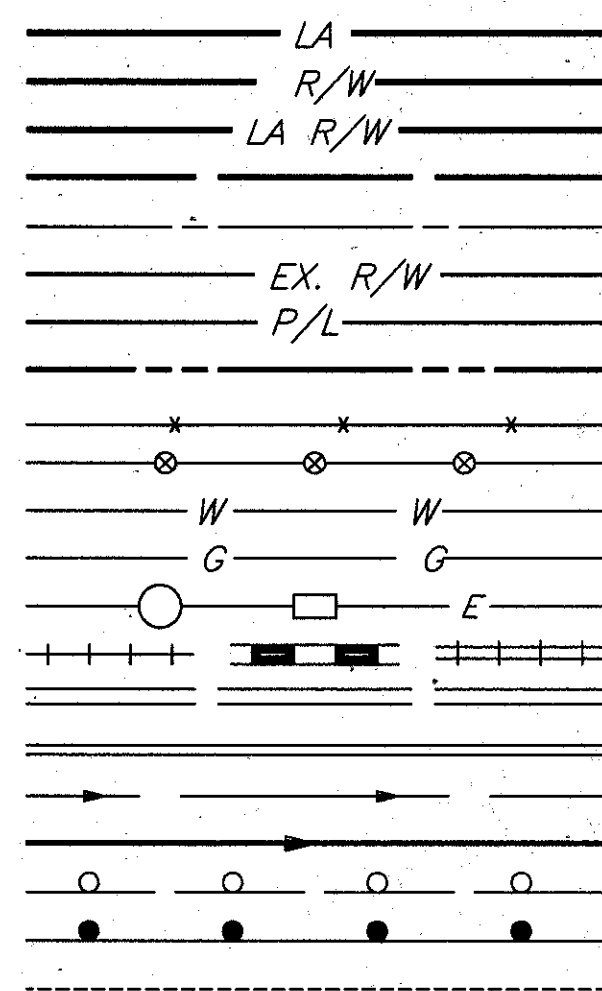
FRANKLIN COUNTY
FRA-315-0.48

OHIO
FHWA
REGION 5

1
163

CONVENTIONAL SIGNS

- LIMITED ACCESS
- PROPOSED R/W
- LIMITED ACCESS R/W
- PROPOSED EASEMENT
- CENTER LINE
- EXISTING R/W
- PROPERTY LINE
- CORPORATION LINE
- EXISTING FENCE
- PROPOSED FENCE
- WATER LINE
- GAS LINE
- UNDERGROUND ELECTRICAL
- RAILROADS
- EXISTING RETAINING WALL
- PAVED SHOULDERS
- EXISTING SEWER
- PROPOSED SEWER
- EXISTING GUARD RAIL
- PROPOSED GUARD RAIL
- CONSTRUCTION LIMITS



- VALVES
- EXISTING MANHOLES
- PROPOSED MANHOLES
- MANHOLES ADJUSTED TO GRADE
- MANHOLES REMOVED OR ABANDONED
- EXISTING INLETS OR CATCH BASINS
- PROPOSED INLETS OR CATCH BASINS
- CATCH BASINS ADJUSTED TO GRADE
- CATCH BASINS REMOVED OR ABAND.
- TREES AND STUMPS
- TREES AND STUMPS TO BE REMOVED
- TELEPHONE OR TELEGRAPH POLE
- LIGHT POLE
- POWER POLE
- WATER HYDRANT

INDEX OF SHEETS

TITLE SHEET	1	CROSS SECTIONS	29-37
SCHEMATIC PLAN	2	PAVEMENT SUMMARY OF QUANTITIES	38
TYPICAL SECTIONS	3-7	PAVEMENT DETAILS	39-43
GENERAL NOTES	8-9	MISCELLANEOUS DETAILS	44
CONSTRUCTION LAYOUT DATA	10	DRAINAGE SUMMARY OF QUANTITIES	45-47
MAINTENANCE OF TRAFFIC	11-14, 14A-14V	DRAINAGE DETAILS	48-53
GENERAL SUMMARY	15-17	SEWER PROFILES	54-57
SUB-SUMMARY	18	LIGHTING PLANS	58-67
CALCULATION SHEETS	19-22	TRAFFIC CONTROL PLANS	68-78
STORM WATER POLLUTION PREVENTION PLAN	23	APPROACH SLAB DETAILS	79-84
PLAN & PROFILE	24-26	STRUCTURES OVER 20' SPAN (4)	85-155
RAMP PROFILES	27-28	RETAINING WALLS	156-163

LINE DATA

BEGIN PROJECT	STA. 72+20.30
END PROJECT	STA. 95+75.00
TOTAL LENGTH OF PROJECT	2354.70 L.F. OR 0.446 MILES
BEGIN WORK	STA. 67+05
END WORK	STA. 95+77.99
TOTAL LENGTH OF WORK	2872.99 L.F. OR 0.544 MILES

SEE SHEET 2 FOR DESIGN EXCEPTIONS APPROVALS

UNDERGROUND UTILITIES

2 WORKING DAYS
BEFORE YOU DIG
CALL 800-362-2764 (TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY



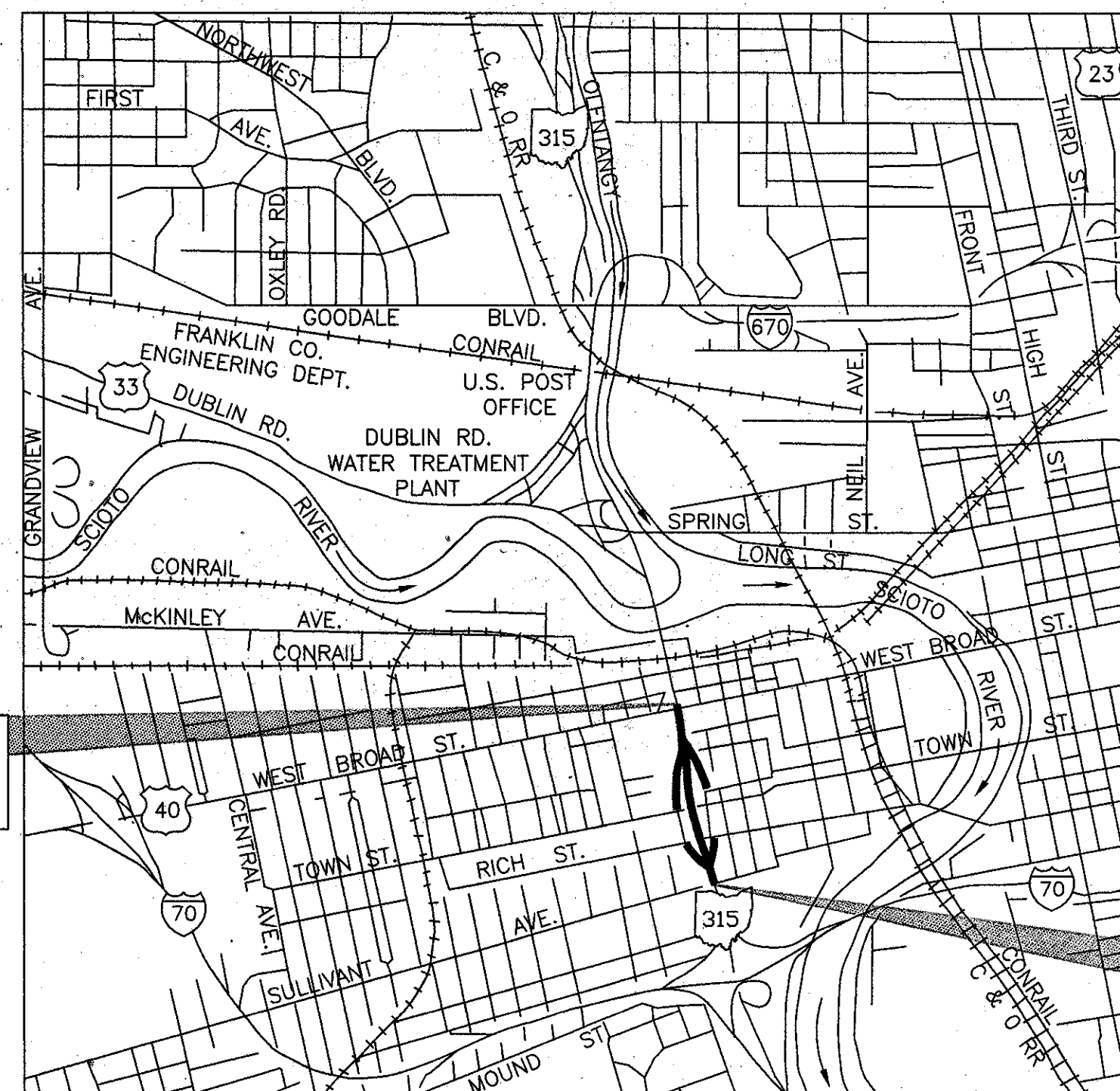
William E. Blatz 11-26-97

PLANS PREPARED BY
STILSON & ASSOCIATES, INC.
CONSULTING ENGINEERS
6121 HUNTLEY ROAD
COLUMBUS, OHIO 43229-1003

PROJECT FRA-315-0.48
DATE OF LETTING _____ CONTRACT NO. _____

DESIGN DESIGNATION DATA

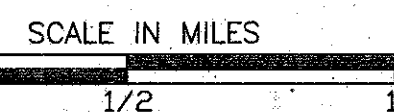
CURRENT A.D.T. (1984)	= 99,554
DESIGN YEAR A.D.T. (2004)	= 127,027
D.H.V.	= 8,257
D	65%
T	5%
DESIGN SPEED	55 M.P.H.
LEGAL SPEED	55 M.P.H.
CLASSIFICATION - URBAN	
OTHER FREEWAYS AND EXPRESSWAYS	



LOCATION MAP

LATITUDE: N 39°57'25"
LONGITUDE: W 83°01'07"

PORTION TO BE IMPROVED
STATE & FEDERAL ROUTES
OTHER ROADS & STREETS
RAILWAYS



SCALES

PLAN	0 25 50 100	VERTICAL	0 10 20
PROFILE HORIZONTAL	0 25 50 100	VERTICAL	0 10 20
CROSS SECTIONS HORIZONTAL	0 10 20	VERTICAL	0 10 20
PAVEMENT DETAILS	0 20 40		

STANDARD CONSTRUCTION DRAWINGS

NUMBER	DATE	NUMBER	DATE	NUMBER	DATE	NUMBER	DATE	NUMBER	DATE	NUMBER	DATE	NUMBER	DATE	NUMBER	DATE
BP-1.1	2-21-92	F-5	5-1-76	GR-5.1	10-30-92	MC-10	5-1-76	I-3A&B	4-1-80	TC-51.11	9-30-94	MT-95.32	8-25-89		
BP-2.1	10-28-94			GR-5.2	10-30-92	MC-11	8-1-78			TC-22.10	9-1-92	TC-51.12	1-3-94	MT-99.10	11-14-86
				GR-5.3	10-30-92			MH-1	12-18-84	TC-52.10	4-3-79	TC-52.20	4-3-79	MT-99.20	4-29-88
BP-2.2	2-21-92	GR-1.1	5-6-91	GR-8.1	1-31-94	CB-2-2A&B	5-1-79	MH-3	12-18-84	TC-31.21	9-1-92	TC-61.10	4-5-82	MT-105.10	7-1-92
BP-2.3	2-21-92	GR-1.2	10-30-92			CB-3A	5-1-79			TC-32.10	9-1-92	TC-61.10	4-5-82	MT-105.10	7-1-92
BP-3.1	2-21-92	GR-1.3	2-21-92	MC-1	6-13-69	CB-5	11-10-83			TC-32.11	9-1-92	TC-65.10	7-07-95	MT-105.11	7-1-92
BP-5.1	10-28-94	GR-2.1	5-6-91	MC-4	7-26-76	CB-6	5-1-79	TC-7.65	3-1-79	TC-7.65	3-1-79	TC-65.11	7-07-95	MT-299.50	12-12-88
BP-6.1	2-21-92	GR-2.2	10-30-92			CB-8	11-10-83	TC-9.10	4-24-80	TC-41.10	8-29-84	TC-65.12	7-07-95	AS-1-81	9-15-94
BP-7.1	10-30-92	GR-3.1	5-6-91	MC-6	1-30-84			TC-41.20	6-21-94	TC-41.20	6-21-94	BR-2-82	11-01-82		
BP-8.1	10-28-94	GR-3.2	5-6-91	MC-7	10-15-76			TC-18.24	4-25-79	TC-41.40	6-18-79	TC-71.10	9-10-91	EXJ-4-87	2-14-97
		GR-4.2	5-6-91					TC-21.10	9-1-92	TC-42.10	8-19-77	TC-72.20	2-26-82	GSD-1-96	2-12-97
F-1	11-10-83	GR-4.3	2-21-92	MC-9.3	10-30-92			TC-21.20	9-1-92	TC-42.20	3-26-79	MT-95.30	10-10-88	VPF-1-90	3-24-93
F-3	5-1-76	GR-4.4	2-21-92					TC-21.40	9-1-92	MT-95.31	10-10-88	PCB-91	4-24-92		

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THRU TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR OF TRANSPORTATION, IN ACCORDANCE WITH THE PROVISIONS OF SEC. 5511.02 OF THE REVISED CODE OF OHIO.

1997 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL, SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT DETOURS WILL BE PROVIDED AS INDICATED ON SHEETS 14A - 14V.

FOR THE CITY OF COLUMBUS

APPROVED _____
DATE _____ CITY ENGINEER

APPROVED _____
DATE _____ DIRECTOR OF PUBLIC SERVICE

APPROVED _____
DATE _____ DIRECTOR OF PUBLIC UTILITIES

FOR THE STATE OF OHIO

APPROVED _____
DATE _____ DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

BEGIN PROJECT
STA. 72+20.30
S.L.M. 0.48

END PROJECT
STA. 95+75.00
S.L.M. 0.93

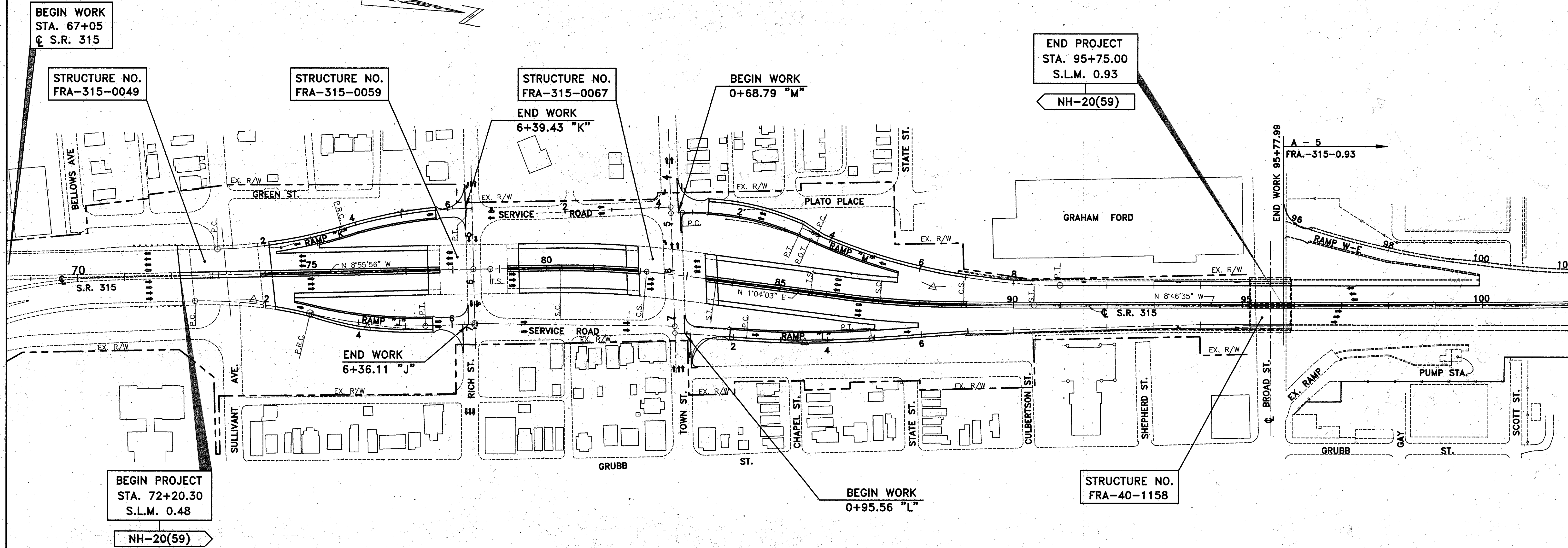
SUPPLEMENTAL SPECIFICATIONS

NUMBER	DATE	NUMBER	DATE
801	3-23-95		
815	7-17-95	910	7-17-95
816	4-21-97		
839	6-14-93		
		949	6-14-95

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED _____
DIVISION ENGINEER _____ DATE _____

SCHEMATIC PLAN



BEGIN PROJECT
STA. 72+20.30
S.L.M. 0.48

NH-20(59) →

END PROJECT
STA. 95+75.00
S.L.M. 0.93

← NH-20(59)

DESIGN EXCEPTIONS		
FACILITY	DESIGN FEATURE	FHWA APPROVAL DATE
S.R. 315	SHOULDER WIDTH	7/08/97
	HORIZONTAL LATERAL CLEARANCE	7/08/97
	HORIZONTAL STOPPING SITE DISTANCE	7/08/97
	SUPERELEVATION (RUNOFF LENGTH)	7/08/97

CENTERLINE REFERENCE MONUMENTS SHALL BE SET AFTER CONSTRUCTION BY A REGISTERED SURVEYOR CONTRACTED BY THE GENERAL CONTRACTOR AT THE FOLLOWING LOCATIONS: (SEE MONUMENT DETAIL MC-1)

S.R. 315 CENTERLINE		
LOCATION	OFFSET	
	LEFT	RIGHT
P.O.T. 71+00.00	68.0'	68.0'
P.O.T. 77+50.00	56.5'	56.5'
S.C. 80+30.28	56.5'	56.5'
S.T. 83+63.61	56.5'	56.5'
T.S. 85+65.88	56.5'	56.5'
S.C. 87+15.88	56.0'	90.0'
C.S. 88+94.01	74.0'	68.0'
P.O.T. 96+50.00	70.0'	70.0'

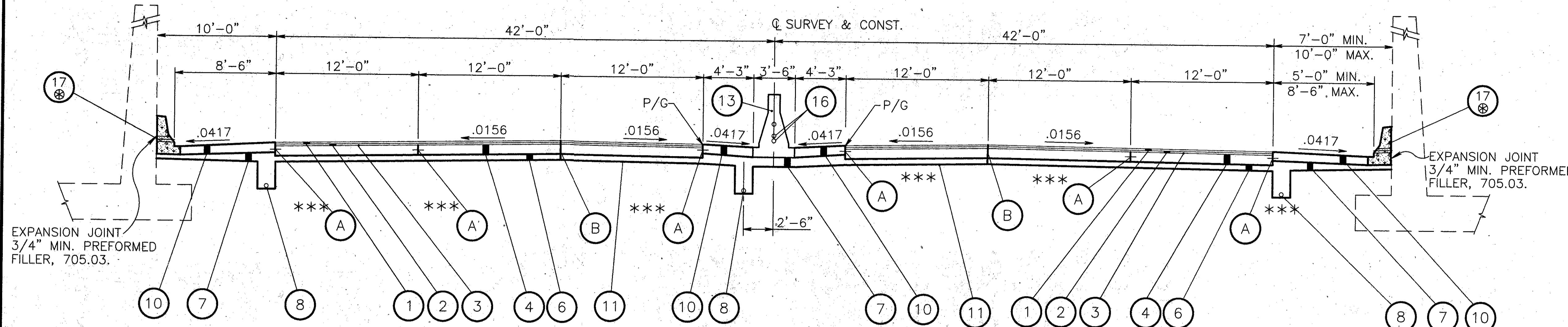
NOTE: FOR CURVE DATA & CENTERLINE REFERENCES SEE SHEET NO. 10

[PROJECT] - 15 TRANS/315-CV/SCHEMATIC.DWG - APR 03, 1996 - 13:35:28 - SCALE = 10:00

TYPICAL SECTIONS

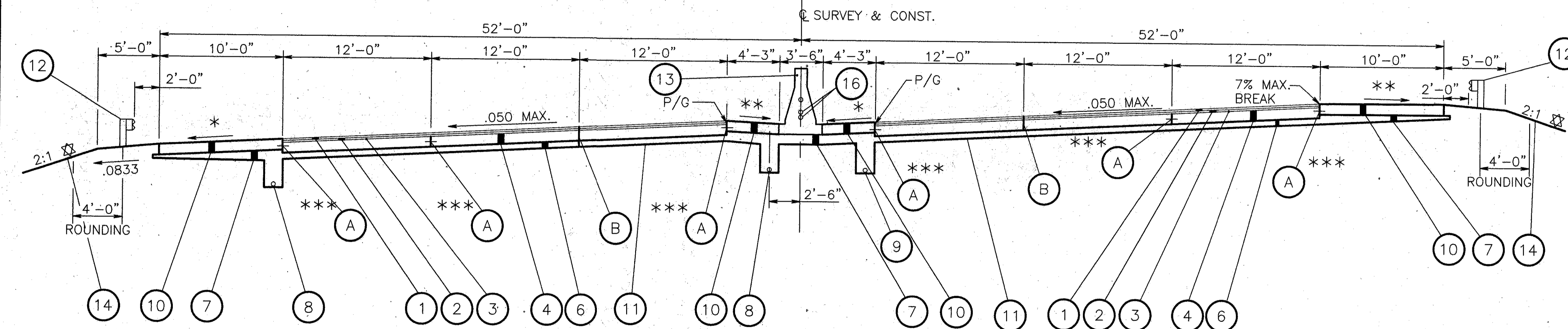
TYPE 446 ON 305

CALC. BY	FRANKLIN COUNTY	OHIO	3
DATE	FRA-315-0.48	FHWA	5
CHKD. BY		REGION	163
DATE			



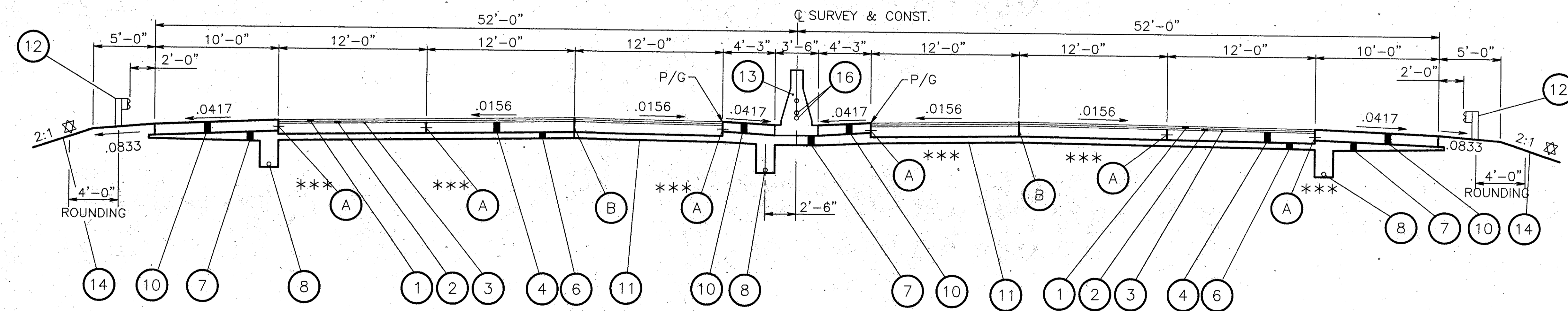
NORMAL SECTION "C"

STA. 90+44.01 TO STA. 95+01.54 = 457.53 L.F.
 STA. 95+01.54 TO STA. 95+75.00 = 73.46 L.F. (CONCRETE PIER WALL) SEE SHEET NO. 7



SUPERELEVATED SECTION "B"

STA. 79+41.38 TO STA. 81+73.34 = 231.96 L.F. (SUPERELEVATED OPPOSITE AS SHOWN.)
 STA. 85+65.88 TO STA. 90+44.01 = 478.13 L.F. (AS SHOWN)



NORMAL SECTION "A"

STA. 74+14.67 TO STA. 77+46.88 = 332.21 L.F.
 STA. 83+67.84 TO STA. 85+65.88 = 198.04 L.F.

- ⊛ UNLESS OTHERWISE SHOWN ON X-SECTIONS.
- * 0.0417 OR SUPERELEVATION RATE, WHICH-EVER IS GREATER
- ** VARIES 0.0417 TO 0.0208
- *** TIE BARS OR HOOK BOLTS SHOULD BE SPACED AT 30" INTERVALS. THE TIE BARS OR HOOK BOLTS ALONG THE JOINT BETWEEN THE MAINLINE AND THE 452 SHOULDER SHOULD BE PLACED SO THAT THEY WILL SPLIT THE VERTICAL INTERVAL WHERE THEY BOTH ABUT. FOR TIE BAR DETAIL SEE SHEET NO. 6.

⊛ NOTE: FOR WEEPHOLE EXTENSION DETAIL, SEE SHEET NO. 5

NOTE: FOR SHOULDER AND MEDIAN DETAILS, SEE SHEET NO. 6. FOR APPROACH SLAB TYPICAL SECTION SEE SHEET NO. 4.

NOTE: FOR TYPICAL UNDERDRAIN DEPTHS SEE DETAILS & NOTE ON SHEET NO. 6.

(A) STANDARD LONGITUDINAL JOINT

(B) STANDARD LONGITUDINAL JOINT WITHOUT TIE BARS (SEE PAVEMENT DETAILS FOR JOINT LAYOUT)

LEGEND

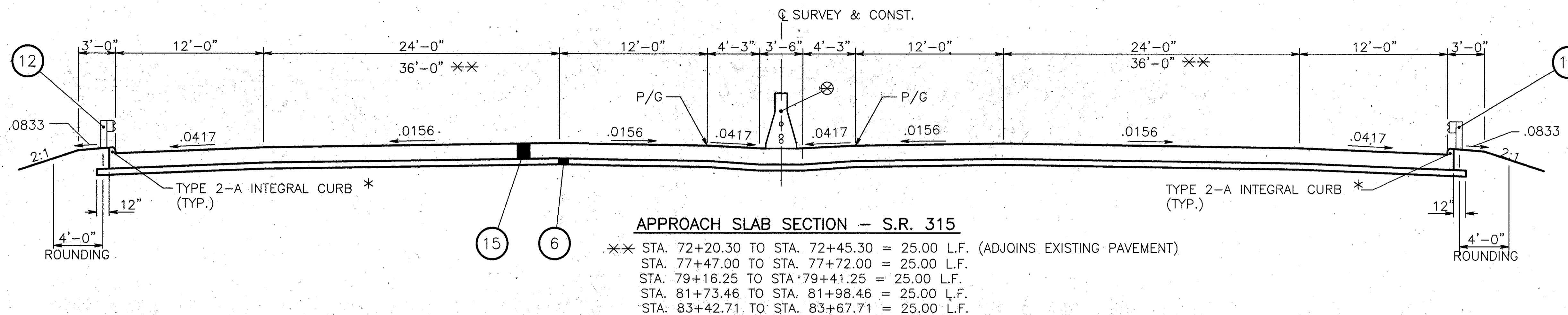
- (1) ITEM 446 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1
- (2) ITEM 446 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2
- (3) ITEM 407 TACK COAT (SEE GENERAL NOTES)
- (4) ITEM 305 10" CONCRETE BASE, AS PER PLAN (SEE GENERAL NOTES)
- (5) ITEM 305 8" CONCRETE BASE, AS PER PLAN (SEE GENERAL NOTES)
- (6) ITEM 304 6" AGGREGATE BASE, (SEE PROPOSAL NOTE)
- (7) ITEM 304 AGGREGATE BASE, DIMENSION AS SHOWN, (SEE PROPOSAL NOTE)
- (8) ITEM 605 6" PIPE UNDERDRAINS
- (9) ITEM 605 4" PIPE UNDERDRAINS, AS PER PLAN, SEE MEDIAN SHOULDER DETAIL II, SHT. NO. 6
- (10) ITEM 452 PLAIN CONCRETE PAVEMENT, DIMENSION AS SHOWN, AS PER PLAN. (SEE GENERAL NOTES)
- (11) ITEM 203 SUBGRADE COMPACTION
- (12) ITEM 606 GUARDRAIL, TYPE 5
- (13) ITEM 622 CONCRETE BARRIER, TYPE B-50
- (14) ITEM 659 SEEDING AND MULCHING, AS PER PLAN (SEE GENERAL NOTES)
- (15) ITEM 611 REINFORCED CONCRETE APPROACH SLAB (T=15")
- (16) ITEM 625 4" CONDUIT, 713.07, SEE TRAFFIC CONTROL PLANS
- (17) ITEM 622 CONCRETE BARRIER, TYPE D, AS PER PLAN
- (18) ITEM SPECIAL - SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS, 705.04 (SEE DETAIL - SHT. NO. 5.

[G] - I-70/VA HIGHWAY SR315-CO-VSS-TYP-LOWE - OCT 17, 1995 - 1551131 - SCALE = 6:51

TYPICAL SECTIONS

TYPE 611 ON 304

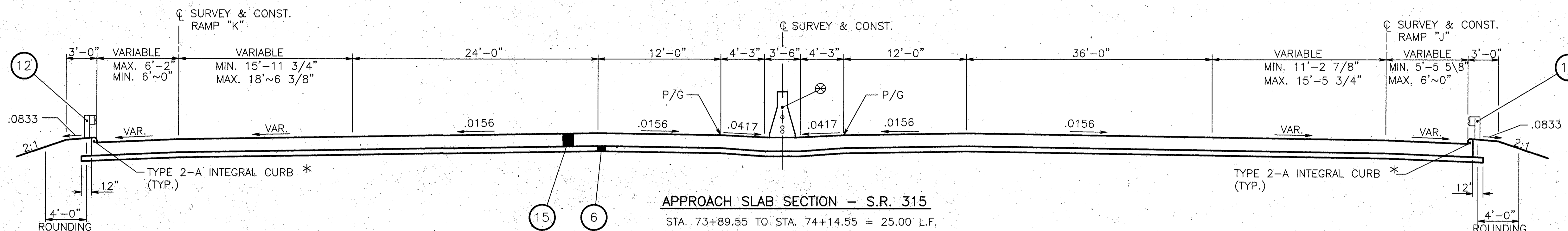
CALC. BY	FRANKLIN COUNTY	OHIO	4 163
DATE	FRA-315-0.48	FHWA REGION 5	
CHKD. BY			
DATE			



NOTE: ✕ COST OF INTEGRAL CURB TO BE INCLUDED WITH ITEM 611, REINF. CONC. APPROACH SLAB.

FOR LEGEND, SEE SHEET NO. 3.

⊗ 50" MEDIAN BARRIER ANCHORED TO CONCRETE APPROACH SLAB W/ NO. 8 EPOXY COATED STEEL BARS, 12" LONG, SPACED 4'-0" BETWEEN SUCCESSIVE BARS ON A STAGGERED PATTERN. SEE STD. DWG. MC-9.3.

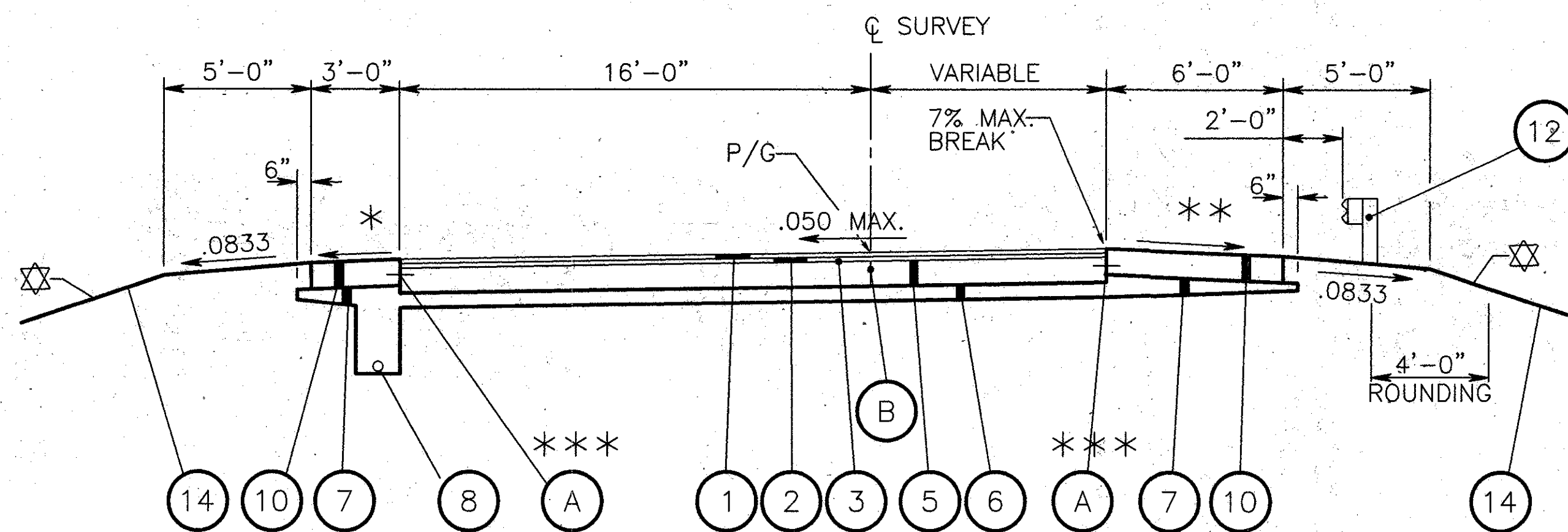


- EXISTING STRUCTURE LIMITS**
- STA. 72+45.17 TO STA. 73+89.67 (SULLIVANT AVE.)
 - STA. 77+71.88 TO STA. 79+16.38 (RICH ST.)
 - STA. 81+98.34 TO STA. 83+42.84 (TOWN ST.)
- PROPOSED STRUCTURE LIMITS**
- STA. 72+45.30 TO STA. 73+89.55 (SULLIVANT AVE.)
 - STA. 77+72.00 TO STA. 79+16.25 (RICH ST.)
 - STA. 81+98.46 TO STA. 83+42.71 (TOWN ST.)

[C] - \A\CVL\HIGHWAY\315-CO\SS-TYP2.DWG - OCT 18, 1995 - 08:53:09 - SCALE = 8.51

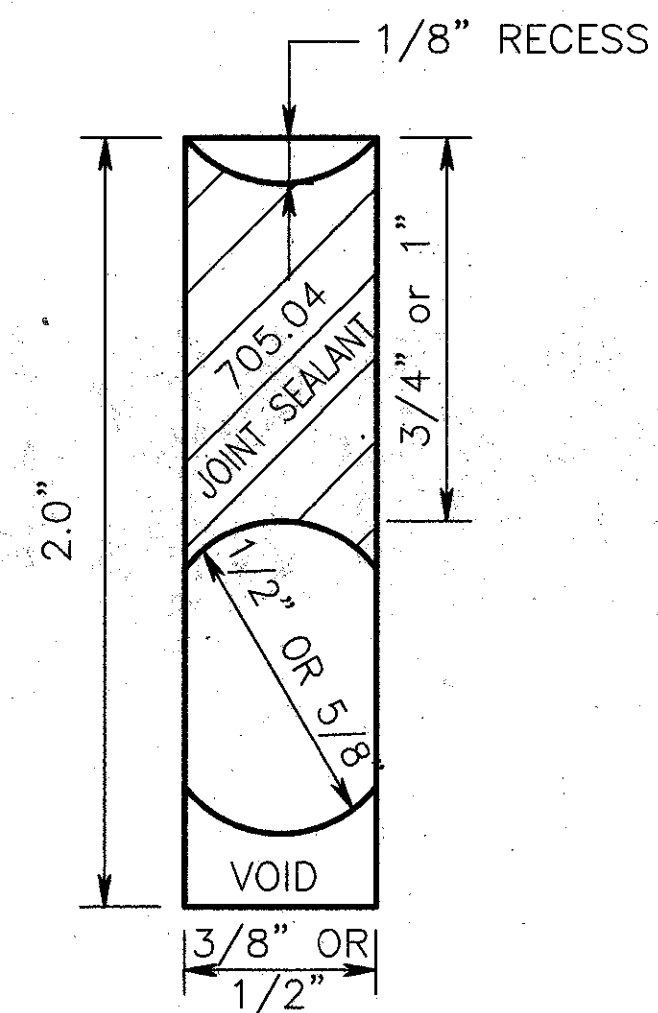
TYPICAL SECTIONS

TYPE 446 ON 305

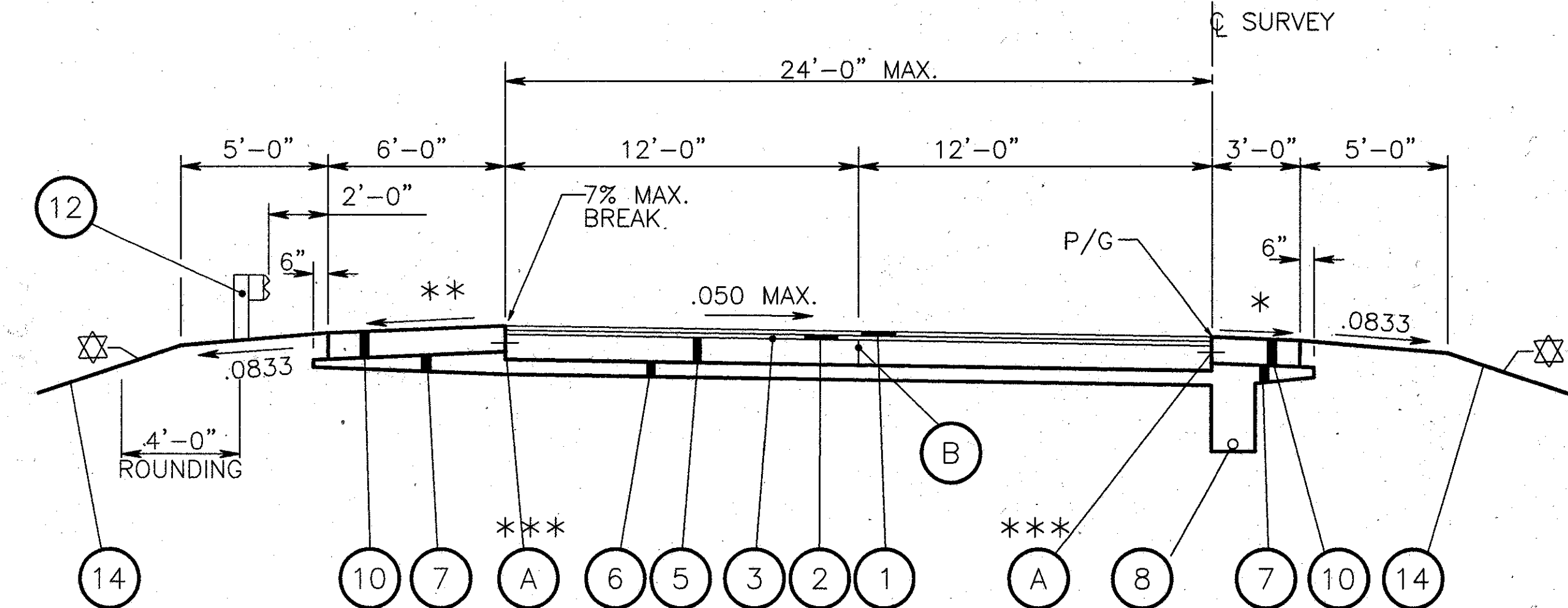


SUPERELEVATED SECTION "F"

RAMP "J" STA. 2+96.62 TO STA. 5+43.24
RAMP "J" STA. 5+43.24 TO STA. 6+23.00

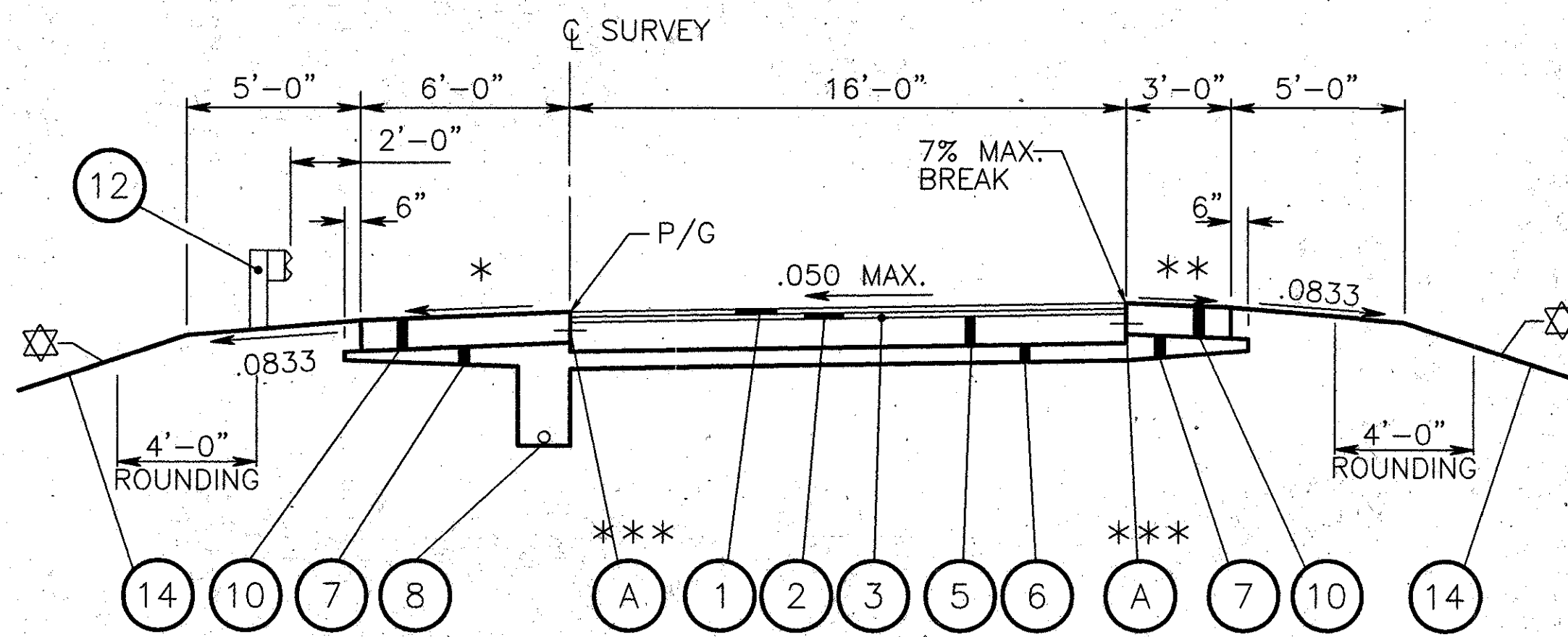


18 ITEM SPECIAL - SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS, 705.04 (SEE NOTE IN PROPOSAL)



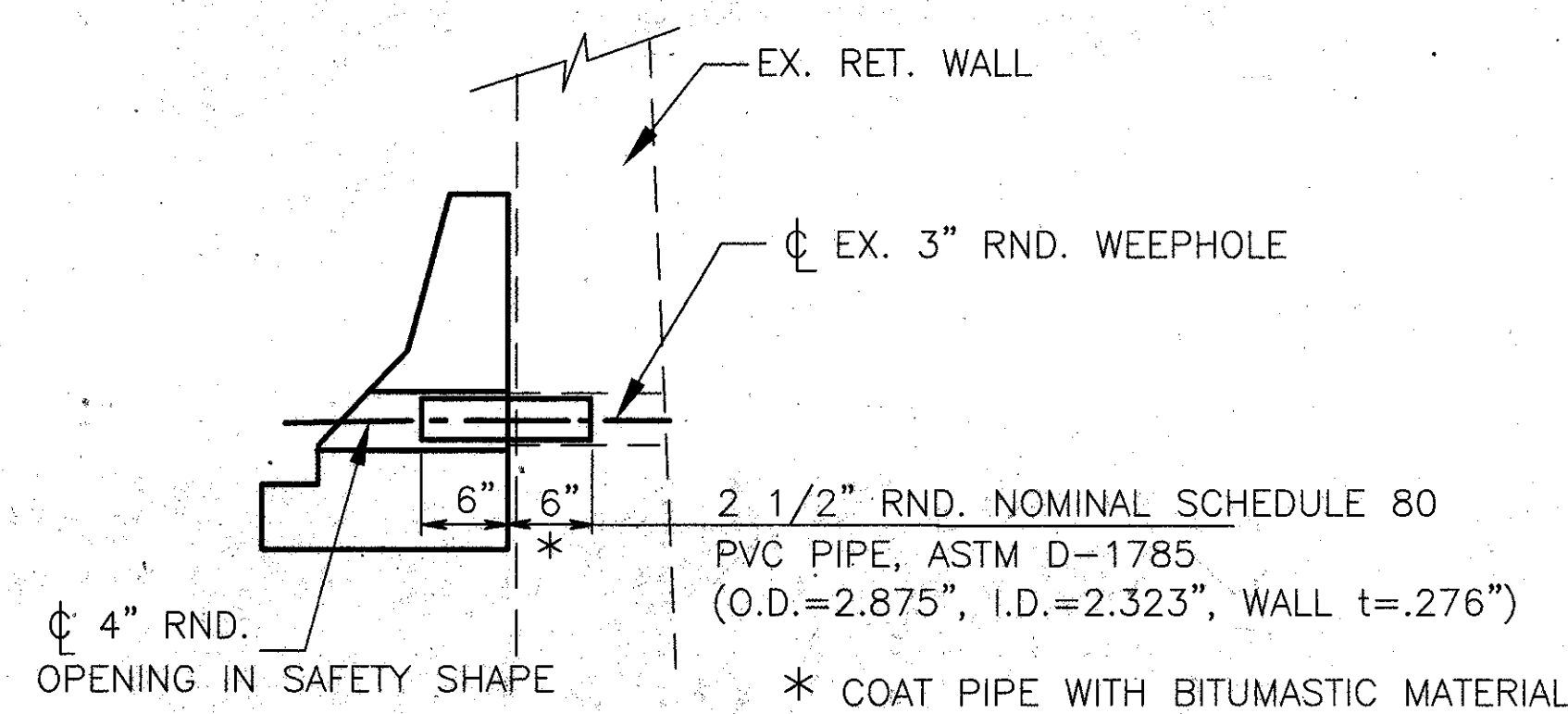
SUPERELEVATED SECTION "H"

RAMP "M" STA. 0+70.00 TO STA. 3+60.00



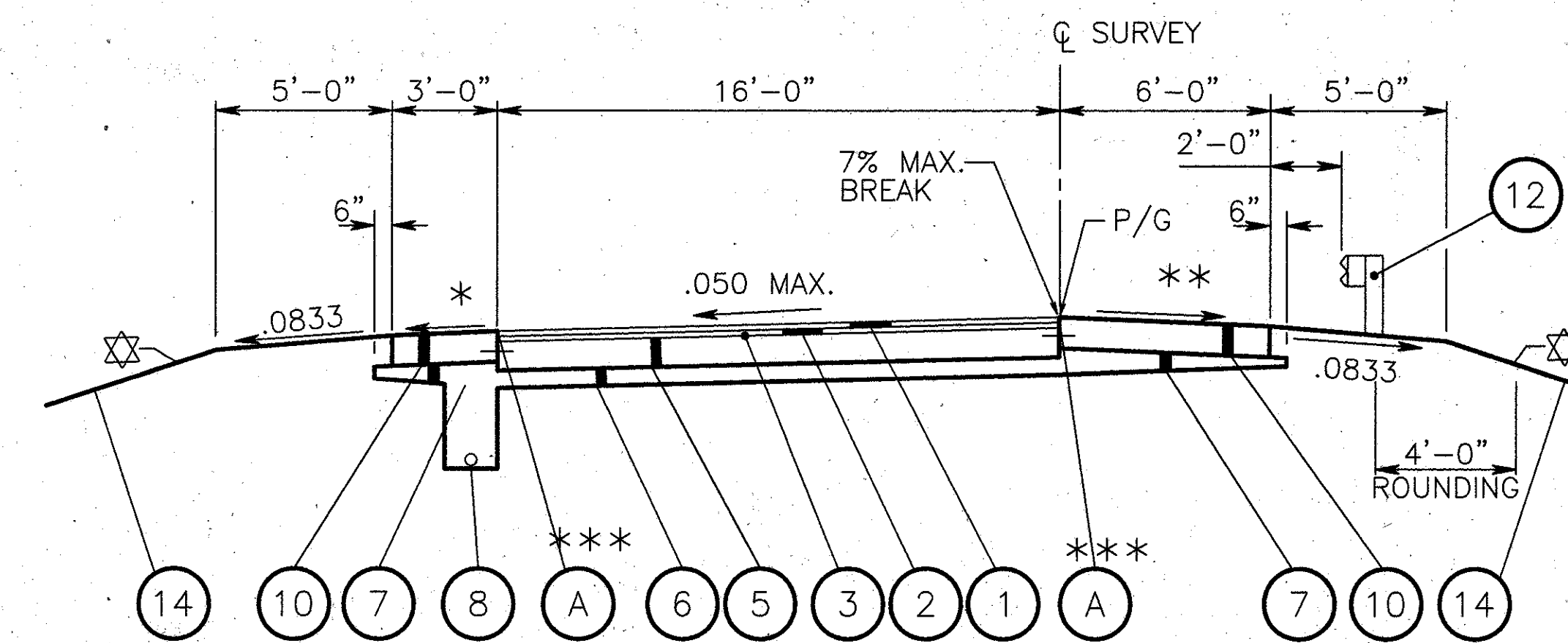
SUPERELEVATED SECTION "E"

RAMP "K" STA. 2+22.67 TO STA. 3+70.18
RAMP "K" STA. 3+70.18 TO STA. 6+38.00 (SUPERELEVATED OPPOSITE AS SHOWN.)
RAMP "M" STA. 3+60.00 TO STA. 5+56.95



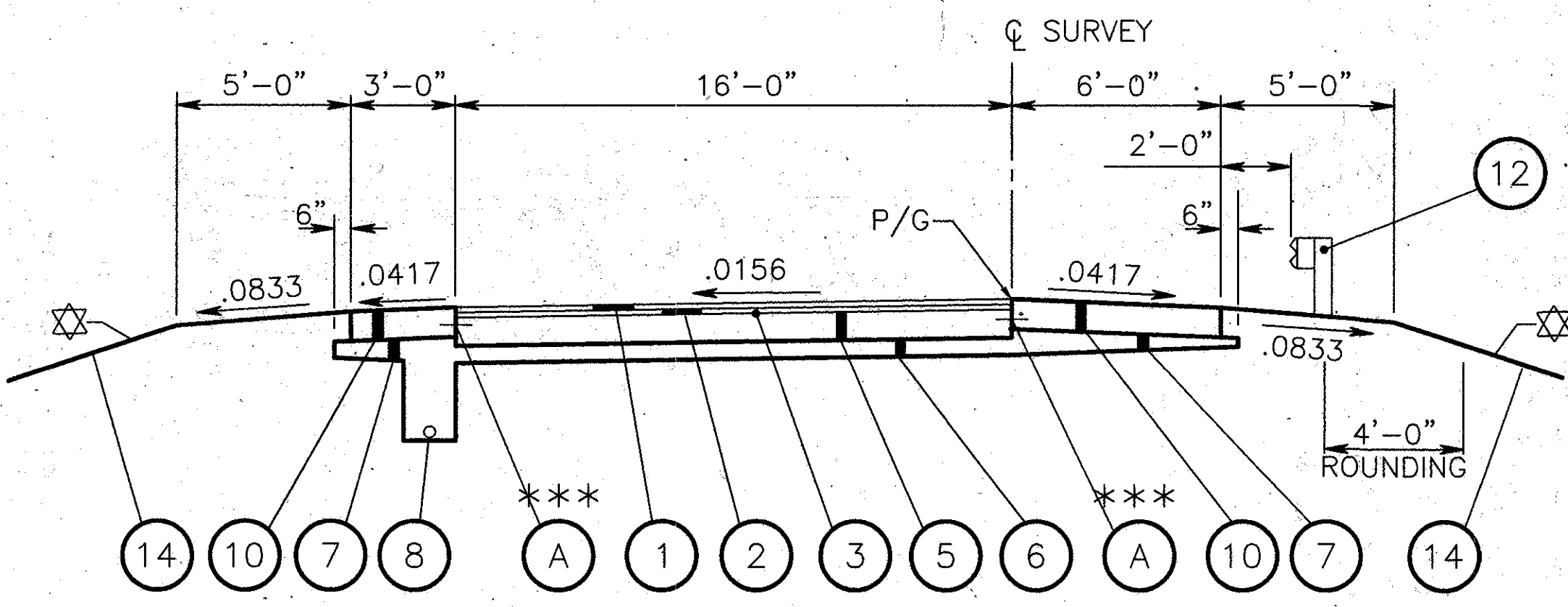
WEEPHOLE EXTENSION DETAIL

NOTE: COST OF WEEPHOLE EXTENSIONS SHALL BE INCLUDED IN THE COST PER LINEAL FOOT FOR ITEM 622, CONCRETE BARRIER, TYPE-D, AS PER PLAN.



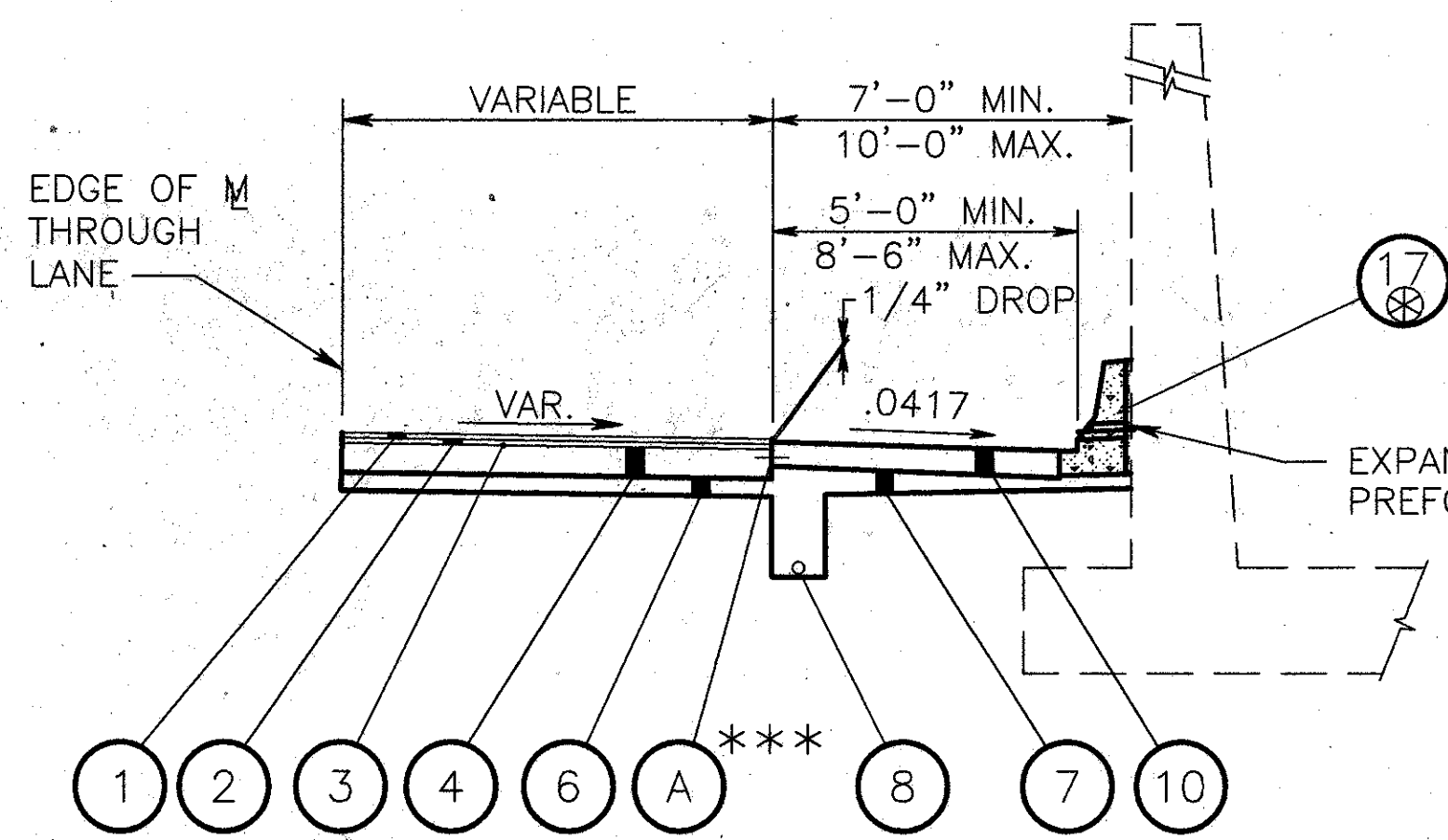
SUPERELEVATED SECTION "G"

RAMP "J" STA. 2+58.27 TO STA. 2+96.62 (SUPERELEVATED OPPOSITE AS SHOWN.)
RAMP "L" STA. 2+27.45 TO STA. 4+93.33



NORMAL SECTION "D"

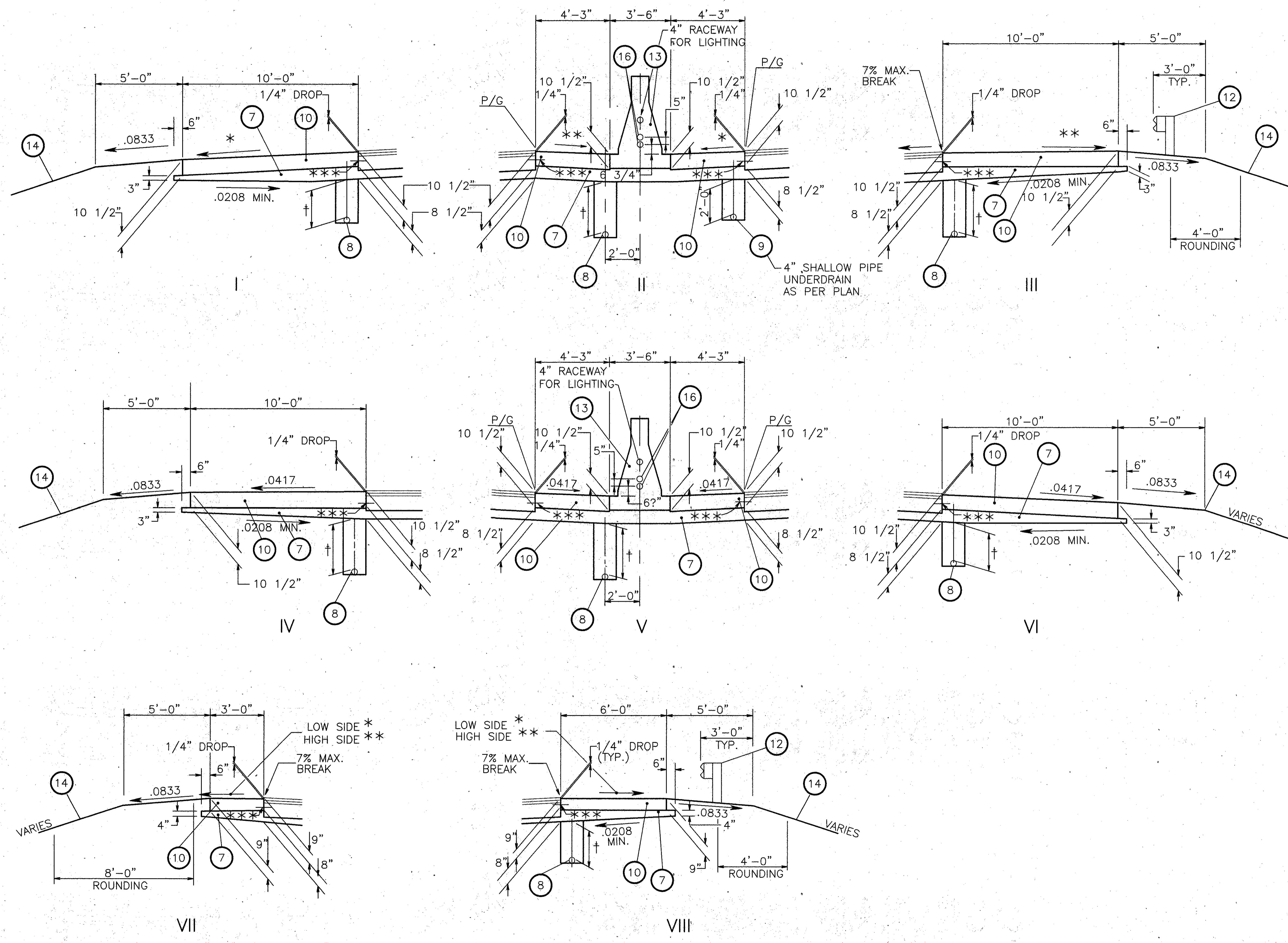
RAMP "L" STA. 1+07.00 TO STA. 2+27.45
RAMP "L" STA. 4+93.33 TO STA. 6+94.42



SPEED CHANGE LANE SECTION

STA. 87+51.00 TO STA. 91+00.00 LT. ⊕
STA. 88+06.50 TO STA. 94+00.00 RT.

- ⊗ FORESLOPE VARIES, SEE X-SECTIONS
- * 0.0417 OR SUPERELEVATION RATE WHICH EVER IS GREATER
- ** VARIES 0.0417 TO 0.0208
- ⊕ TRAFFIC FLOW REVERSED FROM STATIONING
- *** TIE BARS OR HOOK BOLTS SHOULD BE SPACED AT 30" INTERVALS. THE TIE BARS OR HOOK BOLTS ALONG THE JOINT BETWEEN THE MAINLINE AND THE 452 SHOULDER SHOULD BE PLACED SO THAT THEY WILL SPLIT THE VERTICAL INTERVAL WHERE THEY BOTH ABUT. FOR TIE BAR DETAIL SEE SHEET NO. 6.
- ⊗ NOTE: FOR WEEPHOLE EXTENSION DETAIL, SEE SHEET NO. 17
- NOTE: FOR SHOULDER AND MEDIAN DETAILS, SEE SHEET NO. 6 FOR APPROACH SLAB TYPICAL SECTION SEE SHEET NO. 4
- SEE SHEET NO. 3 FOR TYPICAL SECTIONS LEGEND
- NOTE: FOR TYPICAL UNDERDRAIN DEPTHS SEE DETAILS & NOTE ON SHEET NO. 6.

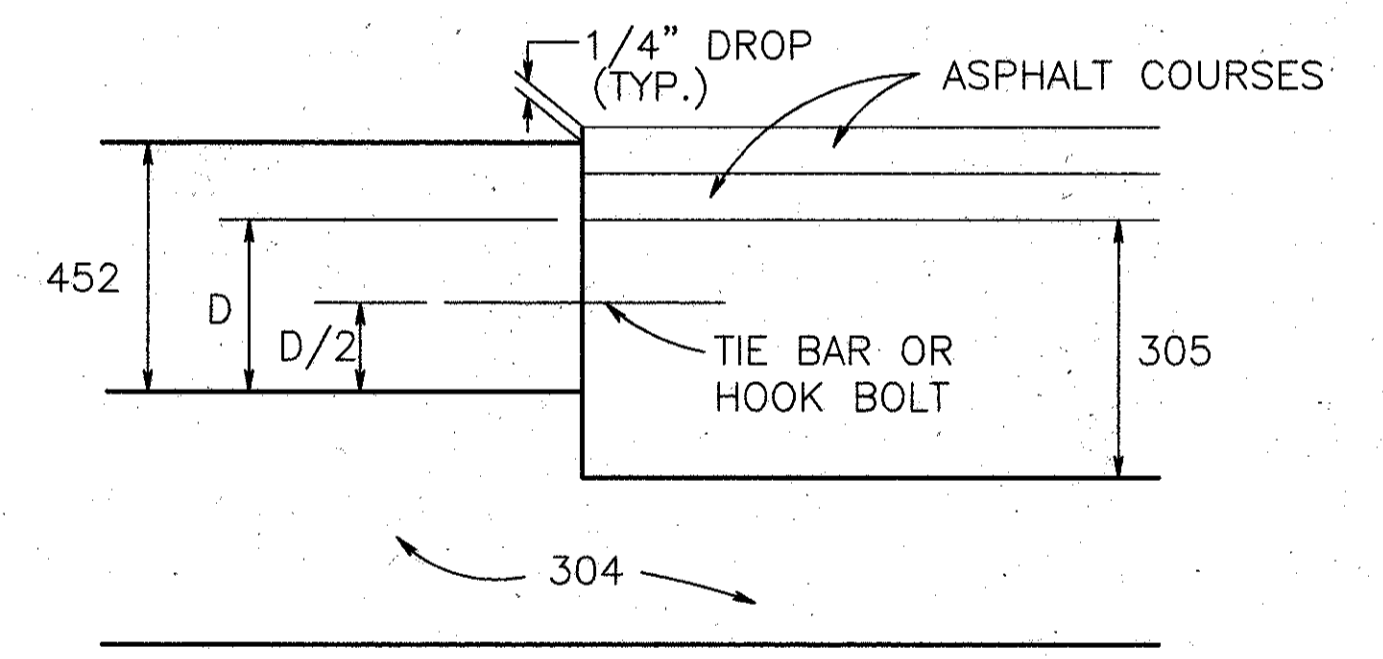


TYPICAL SECTION	APPLICABLE SHOULDER DETAIL		APPLICABLE MEDIAN SECTION DETAIL
	LT.	RT.	
A	IV	VI	V
B	I	III	II
C	IV	VI	V
D	VII	VIII	N/A
E	VIII	VII	N/A
F	VII	VIII	N/A
G	VII	VIII	N/A
H	VIII	VII	N/A

* 0.0417 OR SUPERELEVATION RATE, WHICHEVER IS GREATER
 ** VARIES 0.0417 TO 0.0208
 † PLACE UNDERDRAINS 50" DEEP IN CUTS, 30" IN FILLS.
 *** TIE BAR AND HOOK BOLT

NOTE: ALONG THE LONGITUDINAL JOINT BETWEEN THE MAINLINE CONCRETE BASE (ITEM 305) AND THE CONCRETE SHOULDERS (ITEM 452), THE TIE BARS OR HOOK BOLTS SHOULD BE PLACED SO THAT THE BARS OR BOLTS SPLIT THE VERTICAL INTERVAL WHERE THE BASE AND SHOULDER ABUT, AS PER THE TIE BAR DETAIL.

A 1/4" DROP WILL BE PROVIDED FROM THE MAINLINE PAVEMENT SURFACE TO THE CONCRETE SHOULDER SURFACE.



TIE BAR DETAIL

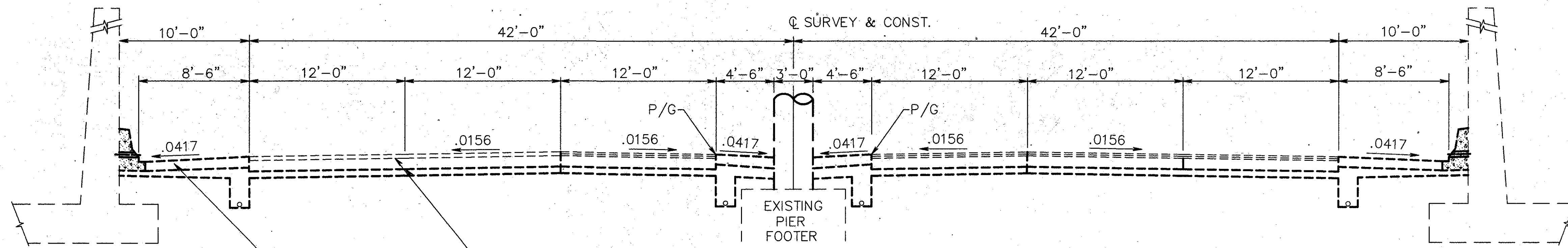
NOTE: FOR LEGEND SEE SHEET NO. 3.

[DAS] - I:\TRANS\SR315-CD\SS-TYP4.DWG - SEP 13, 1996 - 06:30:18 - SCALE = 3/8"

TYPICAL SECTIONS

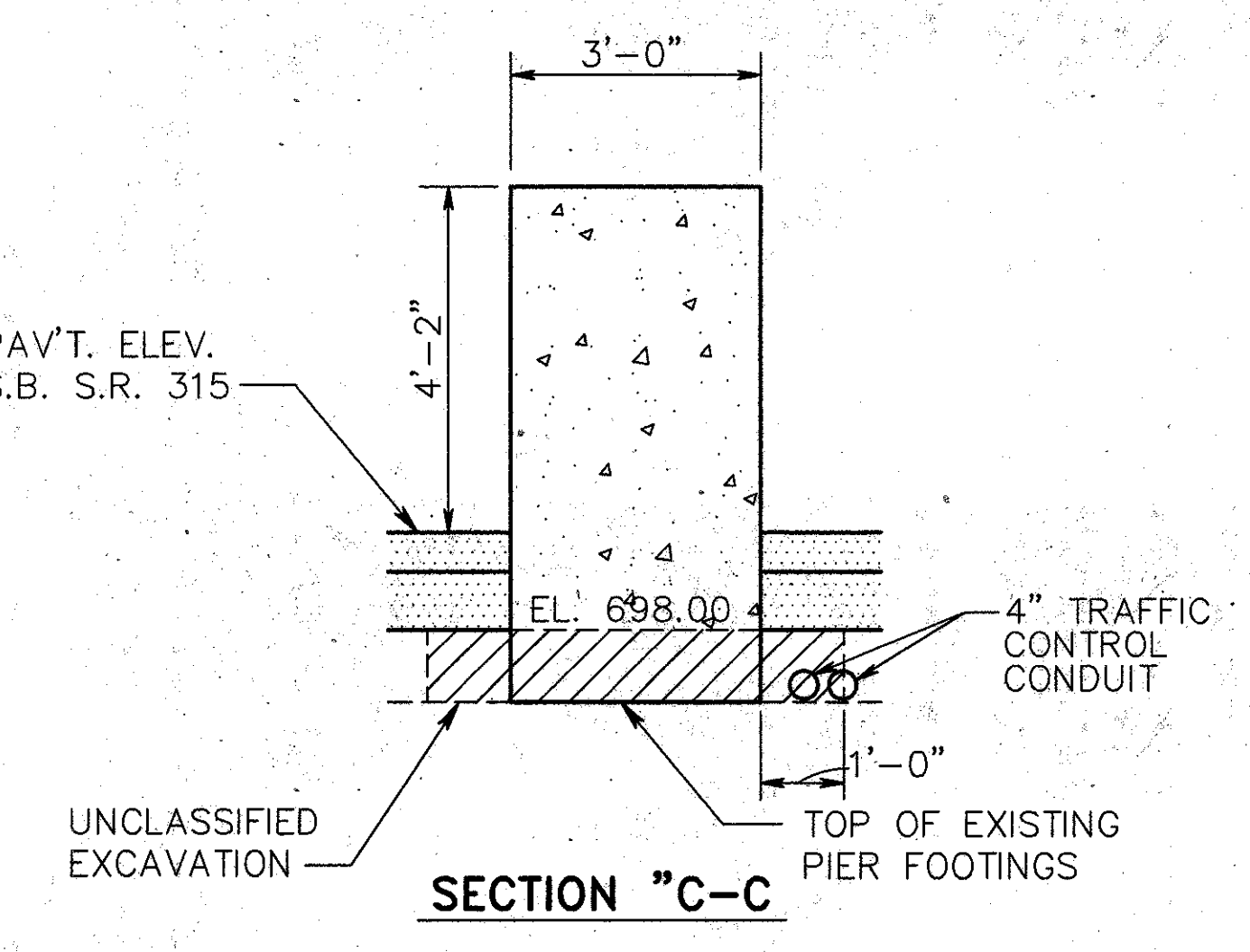
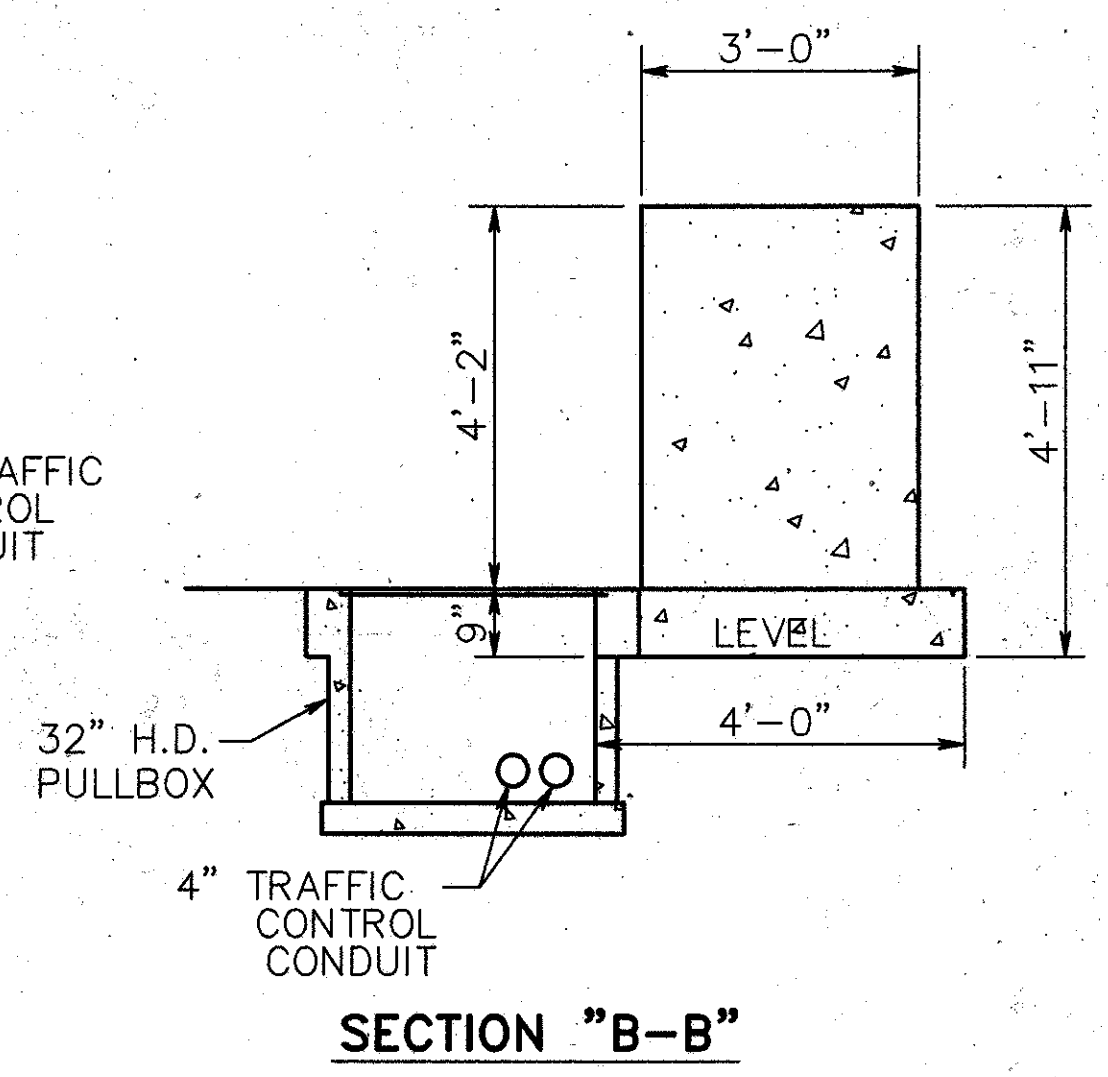
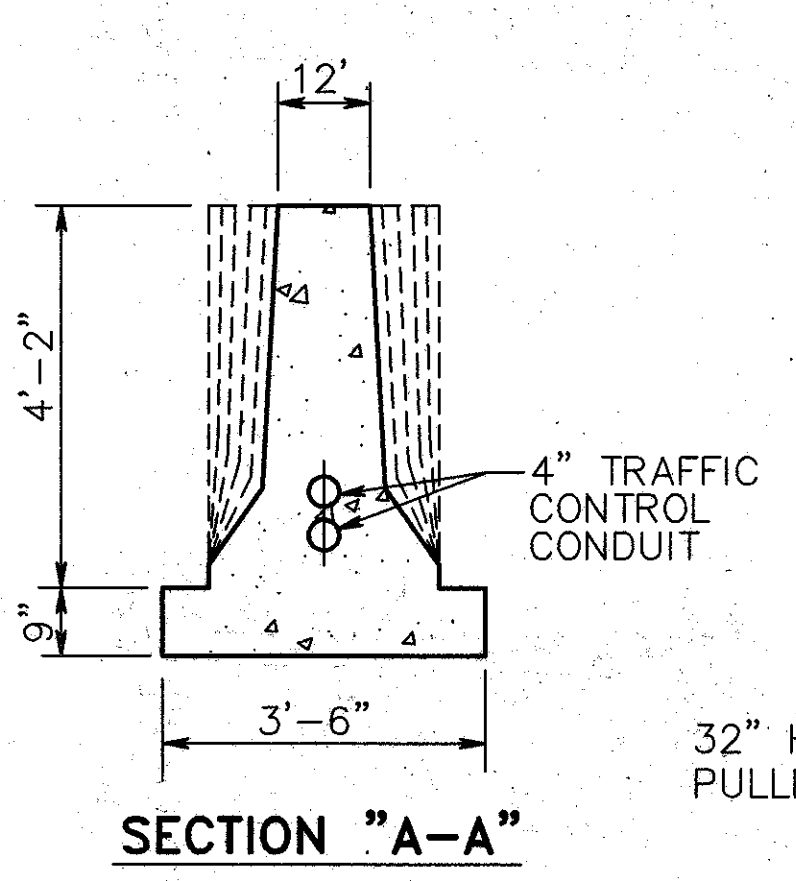
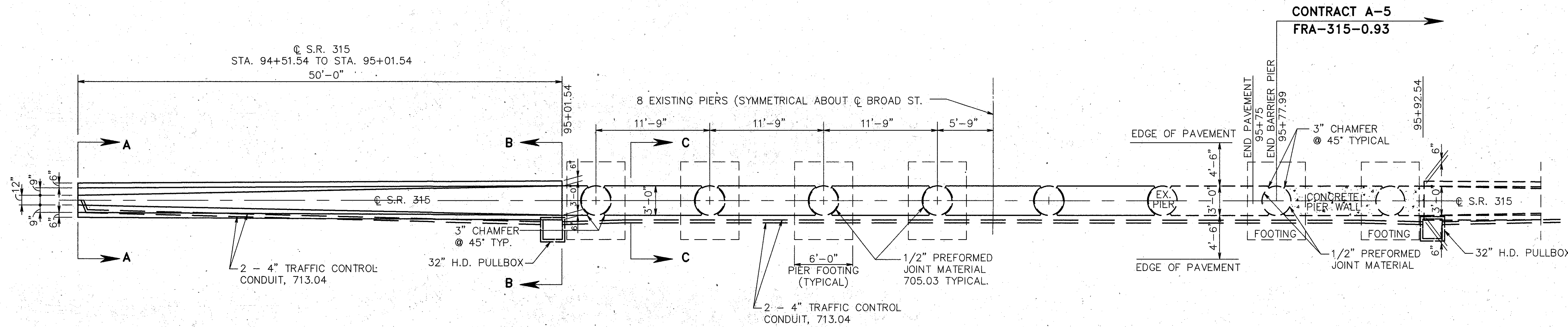
TYPE 446 ON 305

CALC. BY	FRANKLIN COUNTY	OHIO	7
DATE	FRA-315-0.48	FHWA REGION	5
CHKD. BY			163
DATE			



10" CONC. SHOULDERS
 EXISTING PAVEMENT, CONT. A-5
 3" ASPHALT CONCRETE
 10" CONCRETE BASE
 6" AGGREGATE BASE

S.R. 315
ADJOINING NORMAL SECTION PAVEMENT
 @ STA. 95+75



GENERAL NOTES

CALC. BY	FRANKLIN COUNTY	OHIO
DATE		8
CHKD. BY	FRA-315-0.48	FHWA REGION 5
DATE		163

GENERAL

UTILITY OWNERSHIP

THE FOLLOWING UTILITIES AND OWNERS ARE LOCATED WITHIN THE WORK LIMITS OF THIS PROJECT.

TELEPHONE: AMERITECH
150 EAST GAY STREET, RM. 6-C
COLUMBUS, OHIO 43215
TELE 223-8535

ELECTRIC: A E P
1 RIVERSIDE PLAZA, 14th FLOOR
COLUMBUS, OHIO 43215
TELE 464-7911

GAS: COLUMBIA GAS OF OHIO, INC.
939 WEST GOODALE BLVD.
COLUMBUS, OHIO 43212
TELE 460-2241

SANITARY SEWERS & STORM SEWERS: CITY OF COLUMBUS
DIVISION OF SEWERAGE & DRAINAGE
910 DUBLIN ROAD
COLUMBUS, OHIO 43215
TELE 645-8156

WATER: CITY OF COLUMBUS
DIVISION OF WATER
910 DUBLIN ROAD
COLUMBUS, OHIO 43215
TELE 645-7677

ELECTRIC: CITY OF COLUMBUS
DIVISION OF ELECTRICITY
910 DUBLIN ROAD
COLUMBUS, OHIO 43215
TELE 645-7294

UNDERGROUND UTILITIES

THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS OF THE UTILITY AS REQUIRED BY SECTION 153.64 ORC.

COOPERATION BETWEEN CONTRACTORS

THE CONTRACTOR IS ADVISED OF THE PRESENCE OF OTHER CONSTRUCTION CONTRACTS WITHIN THE WORK LIMITS OR THE VICINITY OF THIS PROJECT. THESE CONTRACTS MAY BE GOING ON CONCURRENTLY WITH THIS PROJECT AND CLOSE COOPERATION BETWEEN CONTRACTORS IS REQUIRED TO ENSURE THAT THE TRAFFIC MAINTENANCE OPERATIONS FOR EACH PROJECT ARE AT ALL TIMES COMPATIBLE. ANY CONFLICTS SHALL BE RESOLVED BY THE ENGINEER.

PLEASE NOTE THE FOLLOWING LIST OF ANTICIPATED CONCURRENT CONTRACTS:

PROJECT DESIGNATION

FRA-315-0.93 (FORMERLY KNOWN AS FRA-670-1.25, CONT. A-5)

ROUNDING OF CORNERS SHOWN ON CROSS SECTIONS

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS, APPLY TO ALL CROSS SECTIONS EVEN THOUGH OTHERWISE SHOWN ON THESE PLANS.

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR PLAN ITEMS LISTED IN THE GENERAL SUMMARY FOR ITEMS DESIGNATED BY PLAN NOTE UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED AT THE ENGINEER'S DISCRETION SHALL BE MADE A MATTER OF RECORD BY INCORPORATION INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

CONTROL SURVEY NOTE

THE CITY OF COLUMBUS CONTROL MONUMENTS AS REFERENCED ON THESE PLANS ARE AS SET BY THOMAS ENGINEERING AND SURVEYING COMPANY'S REPORT ON CONTROL SURVEY FOR INTERSTATE 670 DATED NOVEMBER 1982. COPIES OF WHICH ARE AVAILABLE AT THE CITY OF COLUMBUS DIVISION OF ENGINEERING AND CONSTRUCTION LOCATED AT 109 NORTH FRONT STREET.

OPEN BURNING

NO OPEN BURNING OF DEBRIS WILL BE PERMITTED IN CONNECTION WITH THE PROJECT WITHIN PERMANENT OR TEMPORARY RIGHT OF WAY.

CONSTRUCTION HOURS OF OPERATION

CONSTRUCTION HOURS TO BE LIMITED WITH NO CONSTRUCTION PERMITTED BETWEEN THE HOURS OF 11:00 P.M. AND 6:00 A.M.

SPILL MANAGEMENT

THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT POLLUTION TO ANY STREAMS OR WATERWAYS AS PER CMS 108.04. THE CONTRACTOR SHALL HAVE A PROGRAM OF IMMEDIATE DEBRIS REMOVAL TO BE IMPLEMENTED DURING CONSTRUCTION ACTIVITIES TO PREVENT THE ACCUMULATION OF UNSIGHTLY, DELETERIOUS AND POTENTIALLY POLLUTED DEBRIS FROM ENTERING THE RIVER.

JOINT SEALERS

ALL REFERENCES TO 705.01 OR 705.02, APPEARING ON STANDARD DRAWINGS OR ON THE PLANS, SHALL BE CONSIDERED TO READ 705.04.

USE OF FIRE HYDRANTS

THE CONTRACTOR SHALL MAKE THE PROPER ARRANGEMENTS WITH THE FIRE CHIEF, CITY OF COLUMBUS FIRE DEPARTMENT AND THE CITY OF COLUMBUS, DIVISION OF WATER FOR THE USE OF FIRE HYDRANTS WHEN USED FOR WORK PERFORMED UNDER THIS CONTRACT. BEFORE THE FINAL ESTIMATE IS PAID, THE CONTRACTOR SHALL SUBMIT EVIDENCE TO THE CITY OF COLUMBUS, DIVISION OF WATER STATING THAT HE AND HIS SUBCONTRACTORS HAVE PAID ALL COSTS ARISING FROM THE USE OF THE FIRE HYDRANTS.

CONSTRUCTION INITIATION

THE CONTRACTOR SHALL ADVISE THE DISTRICT COMMUNICATIONS OFFICER AT 614-469-0235 EXTENSION 261 OR BY FAX AT 614-469-0235 SEVEN DAYS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. THE PROJECT ENGINEER WILL PROVIDE ASSISTANCE/CLARIFICATION FOR ANY QUESTIONS.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION AND OPERATION OF ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

ROADWAY

MONUMENTS

MONUMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAILS AS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS AND AT THE LOCATIONS SHOWN ON SHEET No. 2.

LOCATION OF GUARDRAIL

THE LOCATIONS OF GUARDRAIL RUNS, AS SHOWN IN THESE PLANS, ARE SUBJECT TO ADJUSTMENT PRIOR TO FINAL ACCEPTANCE. THE ENGINEER SHALL BE SATISFIED THAT ALL INSTALLATIONS WILL AFFORD MAXIMUM PROTECTION FOR TRAFFIC.

ITEM 305 CONCRETE BASE, AS PER PLAN

THE SECOND SENTENCE IN 305.01(a) SHALL READ "LOAD TRANSFER DEVICES ARE REQUIRED AT ALL TRANSVERSE CONTRACTION, CONSTRUCTION, AND EXPANSION JOINTS."

ITEM 305 CONCRETE BASE JOINT SPACING

THE MAXIMUM JOINT SPACING SHALL BE 15'. JOINTS IN THE MAINLINE PAVEMENT SHALL MATCH THE JOINTS IN THE ITEM 452, PLAIN CONCRETE SHOULDERS.

ITEM 407 TACK COAT

THE RATE OF APPLICATION OF 407 TACK COAT SHALL BE SUBJECT TO ADJUSTMENT, AS DIRECTED BY THE ENGINEER. PLAN QUANTITIES INDICATE AVERAGE APPLICATION RATES OF 0.075 GALLONS PER SQUARE YARD OF TACK COAT FOR ESTIMATING PURPOSES ONLY.

ITEM 452 PLAIN CONCRETE PAVEMENT, AS PER PLAN

PLAIN CONCRETE PAVEMENT SHALL MEET THE REQUIREMENTS OF ITEM 452 AND THE STANDARD DRAWINGS BP-2.1 AND BP-2.2 WITH THE FOLLOWING EXCEPTIONS:

THE MAXIMUM SPACING BETWEEN CONTRACTION/EXPANSION JOINTS SHALL BE FIFTEEN (15) FEET AND SHALL BE NORMAL TO THE CENTERLINE OF PAVEMENT.

JOINTS IN MAINLINE SHALL MATCH THE ONES IN SHOULDER AS ONE CONTINUOUS JOINT (TRANSVERSE).

TRANSVERSE CONTRACTION/EXPANSION JOINTS SHALL BE CONSTRUCTED SUCH THAT THEY WILL FORM ONE CONTINUOUS JOINT WITH THE MAINLINE PAVEMENT.

ALL SHOULDER TRANSVERSE CONTRACTION/EXPANSION JOINTS SHALL BE DOWELED AS PER 451.08(B).

PAVEMENT SURFACE VARIATION SHALL NOT EXCEED 1/4" IN A 10' LENGTH OF PAVEMENT. ALL OTHER PROVISIONS OF 451.12 AS CALLED FOR IN 452.01 SHALL APPLY.

CONTRACTION AND/OR EXPANSION JOINTS

ALTHOUGH SPECIFIC LOCATIONS OF CERTAIN CONTRACTION AND EXPANSION JOINTS HAVE BEEN DETAILED ON THIS PLAN, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. PROVISION OF EXPANSION JOINTS AT ALL MAJOR STRUCTURES AND THE MAXIMUM SPACING BETWEEN CONTRACTION JOINTS SHALL, IN ALL CASES, BE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING BP-2.2 AND THE SPECIFICATIONS.

CONCRETE BARRIER, TYPE-D, AS PER PLAN

THE CONTRACTOR SHALL BE RESPONSIBLE FOR UNPLUGGING ALL EXISTING WEEP HOLES (134 EACH AS NEEDED IN EXISTING WALLS "H" AND "G") AND FOR EXTENDING THE WEEP HOLES THROUGH THE PROPOSED CONCRETE BARRIER, TYPE-D. ALL MATERIALS, LABOR, TOOLS AND INCIDENTALS NECESSARY FOR THIS WORK SHALL BE INCLUDED FOR PAYMENT WITH ITEM 622, CONCRETE BARRIER, TYPE-D, AS PER PLAN. (SEE WEEPHOLE EXTENSION DETAIL ON SHEET NO. 5)

GENERAL NOTES

CALC. BY: DLB	FRANKLIN COUNTY	OHIO	9
DATE: 6/95	FRA-315-0.48	FHWA REGION 5	163
CHKD. BY:			
DATE:			

EROSION CONTROL

ITEM 659, SEEDING AND MULCHING, AS PER PLAN

ALL SLOPES STEEPER THAN 3:1 SHALL BE SEEDED WITH CROWN VETCH (CORONILLA VARIA) AT THE RATE SPECIFIED UNDER 659.09. THE COST OF THE CROWN VETCH SHALL BE INCLUDED IN THE COST PER SQUARE YARD FOR ITEM 659 SEEDING AND MULCHING, AS PER PLAN.

TEMPORARY SOIL EROSION AND SEDIMENT CONTROL

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER, FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES.

207 TEMPORARY SEEDING AND MULCHING	3373	S.Y.
207 STRAW OR HAY BALES	152	EA.
207 TEMPORARY SLOPES DRAINS	100	L.F.
207 TEMPORARY BENCHES, DAMS & SEDIMENT BASINS	500	C.Y.
207 FILTER FABRIC FENCE	200	L.F.
601 TYPE C ROCK CHANNEL PROTECTION (WITHOUT FILTER)	50	C.Y.
659 COMMERCIAL FERTILIZER	0.15	TONS
659 REPAIR SEEDING AND MULCHING	843	S.Y.
659 WATER	8	M GAL.

THE CONTRACTOR IS DIRECTED TO DEVOTE SPECIAL ATTENTION TO KEEPING ALL WATER DRAINING TO THE PUMP STATION CLEAN OF DEBRIS.

ITEM 616 - DUST CONTROL

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE USED AT THE DIRECTION AND IN THE AMOUNTS REQUESTED BY THE ENGINEER FOR DUST CONTROL WITHIN THE LIMITS OF THE PROJECT.

.616 WATER	100	M GAL.
616 CALCIUM CHLORIDE	30	TON

WATERING AND MOWING PERMANENT SEEDED AREAS

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER TO PROMOTE GROWTH AND TO CARE FOR THE PERMANENT SEEDED AREAS, AS PER 659.09.

659 WATER (2 APPLICATIONS)	78.6	M GAL.
659 MOWING	40.9	M SQ.FT.

SEEDING

QUANTITIES FOR SEEDING ARE CALCULATED FOR THE SOIL AREAS BETWEEN THE RIGHT-OF-WAY FENCE LINES, BETWEEN THE RIGHT-OF-WAY LINES IN UNFENCED AREAS, AND WITHIN THE WORK LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT.

DRAINAGE

CROSSING AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE THE PLANS PROVIDE FOR PROPOSED CONDUIT TO BE CONNECTED TO, OR TO CROSS EITHER OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE HE STARTS TO LAY THE PROPOSED CONDUIT. IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT OR EXISTING APPURTENANCE TO BE CONNECTED TO DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE PROJECT ENGINEER SHALL BE NOTIFIED BEFORE THE CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS. IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE PROJECT ENGINEER SHALL BE NOTIFIED BEFORE THE CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE PERTINENT 603 CONDUIT ITEM.

EROSION CONTROL

ITEMS 601, 660 AND 670 ARE PROVIDED IN THESE PLANS FOR EROSION CONTROL. ROCK OF A STABLE NATURE WILL NOT BE REMOVED IN ORDER TO PLACE ANY OF THESE ITEMS & TURF OF A STABLE NATURE WILL NOT BE REMOVED IN ORDER TO PLACE 660 OR 670. THE ENGINEER SHALL CHECK AND NON-PERFORM QUANTITIES OR ADJUST LOCATIONS AND QUANTITIES FOR THESE ITEMS WHERE INDICATED BY FIELD CONDITIONS DURING CONSTRUCTION.

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT, AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE, AND THE CONTRACTOR ALONG WITH LOCAL REPRESENTATIVES SHALL MAKE AN INSPECTION OF THE EXISTING SEWERS WITHIN THE WORK LIMITS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCES SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTIONS SHALL BE KEPT IN WRITING BY THE STATE.

ALL NEW CONDUITS, INLETS, CATCH BASINS AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE STATE.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT PRICES BID FOR THE PERTINENT 603 CONDUIT ITEMS OF THE CONTRACT.

CONDUIT STRENGTH REQUIREMENTS

THE DESIGN PROCEDURE USED THROUGHOUT THIS PLAN FOR STRUCTURAL DESIGN OF CONDUIT IS THE WIDE TRENCH INSTALLATION SHOWN IN THE CONCRETE PIPE DESIGN MANUAL AVAILABLE FROM THE AMERICAN CONCRETE PIPE ASSOCIATION. ANY REVISIONS TO THE CONDUIT PROVIDED IN THIS PLAN MUST BE SELECTED BY USING THIS PROCEDURE.

ITEM SPECIAL, MISCELLANEOUS METAL

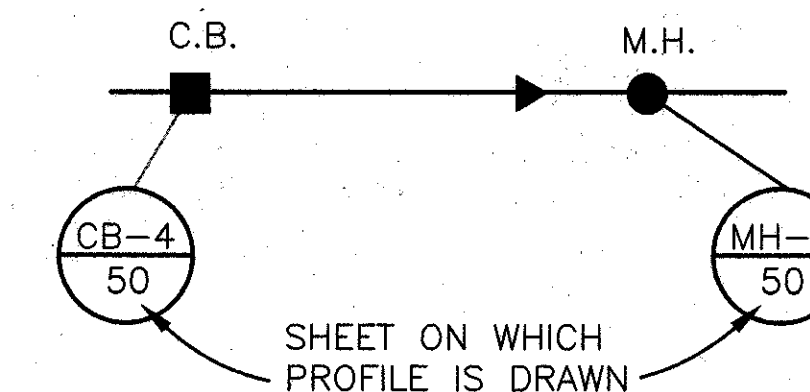
EXISTING CASTINGS MAY PROVE TO BE UNSUITABLE FOR REUSE, AS DETERMINED BY THE ENGINEER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CASTINGS OF THE REQUIRED TYPE, SIZE AND STRENGTH (HEAVY OR LIGHT DUTY) FOR THE PARTICULAR STRUCTURE IN QUESTION. ALL MATERIALS SHALL MEET ITEM 604 OF THE SPECIFICATIONS AND SHALL HAVE THE PRIOR APPROVAL OF THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

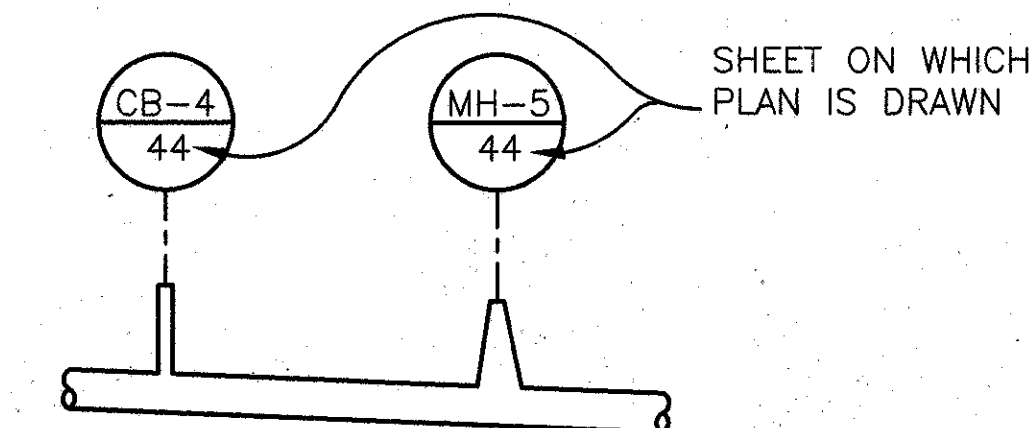
SPECIAL, MISCELLANEOUS METAL 2000 LBS.

THE CONTRACTOR IS CAUTIONED TO USE EXTREME CARE IN THE REMOVAL, STORAGE AND REPLACEMENT OF ALL EXISTING CASTINGS. CASTINGS DAMAGED BY THE NEGLIGENCE OF THE CONTRACTOR, AS DETERMINED BY THE ENGINEER, SHALL BE REPLACED WITH THE PROPER NEW CASTINGS AT THE EXPENSE OF THE CONTRACTOR.

LEGEND FOR DRAINAGE PLAN SHEETS



LEGEND FOR SEWER PROFILE SHEETS

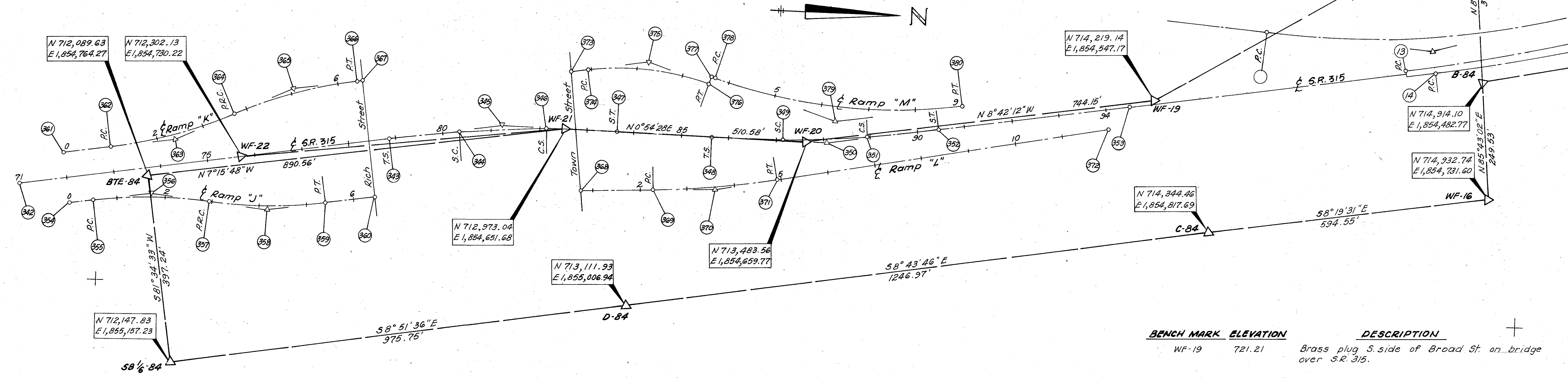
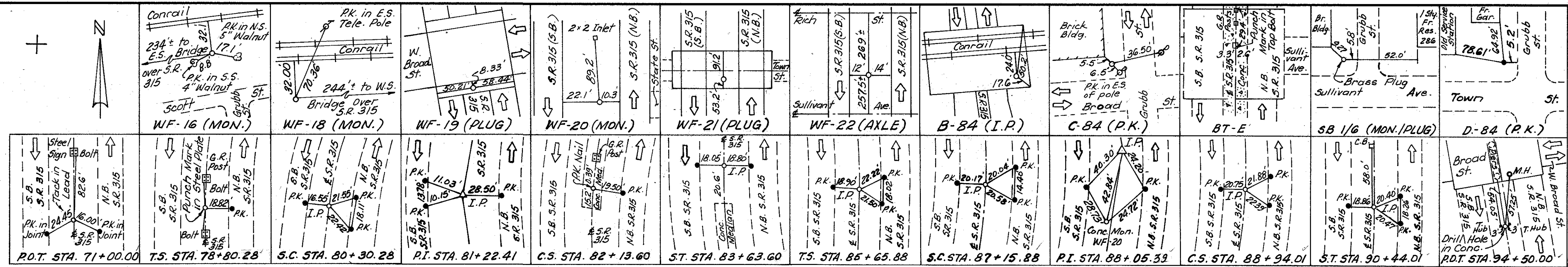


ITEM SPECIAL - PIPE CLEANOUT

THIS WORK SHALL CONSIST OF CLEANING OUT EXISTING SEWER PIPE THAT IS DETERMINED TO BE PLUGGED AND DISPOSING OF THE DEBRIS, AS DIRECTED BY THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

SPECIAL, PIPE CLEANOUT - 500 LIN.FEET



BENCH MARK	ELEVATION	DESCRIPTION
WF-19	721.21	Brass plug S. side of Broad St. on bridge over S.R. 315.
WF-20	712.41	Conc. monument in exist. S.R. 315 median, Sta. 87 + 60 ± (See WF-20 Reference Point).
WF-21	N/A	Brass plug in conc. median of S.R. 315 structure over Town St., Sta. 82 + 53 ±, 2.4' Rt. of C.
WF-22	724.25	Axle in exist. S.R. 315 earth median, Sta. 75 + 75 ±, 1.0' Lt. (See WF-22 Reference Point).
B.M. 28	714.81	Chisled "□" in N.W. corner of conc. wall at S. side of old school house. Sta. 90 + 66, 67' Rt. of S.R. 315.
B.M. 29	711.71	N.E. corner step (1 st step) of house at 657 Chapel St., Sta. 85 + 36, 211' Rt. of S.R. 315.
B.M. 30	708.89	N. side of steps (2 nd step) of house at 184 Sandusky St., Sta. 81 + 80, 150' Rt. of S.R. 315.
B.M. 31	709.95	Chisled "X" in conc. slab on W. side of house at S.E. corner of alley and Rich St., Sta. 77 + 39, 286' Rt. of S.R. 315.
B.M. 32	714.66	Chisled "□" on N.W. corner of conc. light pole base at Sunshine Park. Sta. 72 + 58, 200' Rt. of S.R. 315.

NOTE:
FOR RAMP C REFERENCE POINTS
SEE SHEETS 24 & 25.

POINT	DESCRIPTION	COORDINATES
342	71 + 00.00	N 711,832.56 E 1,854,804.43
343	78 + 80.28	N 712,603.38 E 1,854,683.27
344	80 + 30.28	N 712,751.85 E 1,854,661.93
345	81 + 22.41	N 712,842.57 E 1,854,645.68
346	82 + 13.60	N 712,934.67 E 1,854,649.36
347	83 + 63.60	N 713,084.66 E 1,854,650.19
348	85 + 65.88	N 713,286.90 E 1,854,653.96
349	87 + 15.88	N 713,436.89 E 1,854,654.79
350	88 + 05.39	N 713,526.37 E 1,854,658.42
351	88 + 94.01	N 713,614.55 E 1,854,642.82
352	90 + 44.01	N 713,763.07 E 1,854,621.88
353	94 + 50.00	N 714,164.27 E 1,854,559.94
354	0 + 00.00	N 711,939.74 E 1,854,842.24
355	0 + 50.00	N 711,989.13 E 1,854,834.48
356	1 + 74.00	N 712,111.63 E 1,854,815.23
357	2 + 96.62	N 712,234.98 E 1,854,827.90
358	4 + 20.62	N 712,358.33 E 1,854,840.57
359	5 + 43.24	N 712,480.82 E 1,854,821.32
360	6 + 49.11	N 712,585.41 E 1,854,804.88

POINT	DESCRIPTION	COORDINATES
361	0 + 00.00	N 711,922.97 E 1,854,735.55
362	1 + 00.00	N 712,021.75 E 1,854,720.03
363	2 + 36.00	N 712,156.10 E 1,854,698.91
364	3 + 70.18	N 712,279.22 E 1,854,641.13
365	5 + 06.18	N 712,402.33 E 1,854,583.34
366	6 + 40.36	N 712,536.68 E 1,854,562.23
367	6 + 52.43	N 712,548.61 E 1,854,560.35
368	0 + 74.56	N 713,009.33 E 1,854,771.92
369	2 + 27.45	N 713,162.09 E 1,854,765.57
370	3 + 60.60	N 713,295.13 E 1,854,760.05
371	4 + 93.33	N 713,426.11 E 1,854,736.11
372	12 + 00.00	N 714,121.27 E 1,854,609.07
373	0 + 53.79	N 712,972.28 E 1,854,519.45
374	0 + 78.07	N 712,996.27 E 1,854,515.64
375	2 + 07.82	N 713,124.41 E 1,854,495.29
376	3 + 32.83	N 713,247.99 E 1,854,534.78
377	3 + 32.83	N 713,252.86 E 1,854,519.54
378	3 + 70.00	N 713,288.27 E 1,854,530.86
379	6 + 39.83	N 713,545.29 E 1,854,613.00
380	9 + 00.00	N 713,811.96 E 1,854,571.83

LINE	BEARING
342-345	N 8°55'56" W
345-350	N 1°04'03" E
350-353	N 8°46'35" W
354-356	N 8°55'56" W
356-358	N 5°51'54" E
358-360	N 8°55'56" W
361-363	N 8°55'56" W
363-365	N 25°08'36" W
365-367	N 8°55'56" W
368-370	N 2°22'47" W

LINE	BEARING
370-372	N 10°21'22" W
373-375	N 9°01'35" W
375-376	N 17°43'25" E
377-379	N 17°43'25" E
379-380	N 8°46'35" W

	CURVE DATA								
	S.R. 315		Ramp "J"		Ramp "K"		Ramp "L"		Ramp "M"
PI.	81 + 224.1	88 + 05.39	1 + 74.00	4 + 20.62	2 + 36.00	5 + 06.18	3 + 60.60	2 + 07.82	6 + 39.83
Δ	9°59'59"	9°50'38"	14°47'50"	14°47'50"	16°12'40"	16°12'40"	7°58'35"	26°45'00"	26°30'00"
D	3°00'00"	3°00'00"	6°00'00"	6°00'00"	6°00'00"	6°00'00"	3°00'00"	10°30'00"	5°00'00"
R	1909.86	1909.86	954.93	954.93	954.93	954.93	1909.86	545.67	1145.92
Lc	183.32	178.13	246.62	246.62	270.18	270.18	265.88	254.76	530.00
T	242.13	239.51	124.00	124.00	136.00	136.00	133.15	129.75	269.83
E	2.20	2.08	8.02	8.02	9.64	9.64	4.64	15.21	31.34
Ls	150.00	150.00							
Θs	2°15'00"	2°15'00"							
LT	100.00	100.00							
ST	50.00	50.00							
Point	345	350	356	358	363	365	370	375	379

GENERAL NOTES — MAINTENANCE OF TRAFFIC

GENERAL

ALL TEMPORARY CONSTRUCTION SIGNING SHALL BE ORANGE COLORED, UNLESS SPECIFIED OTHERWISE IN THE PLANS, DIAMOND GRADE FLORESCENT, TYPE H (NEW).

ALL SIGNS NOT SEPARATELY ITEMIZED FOR PAYMENT SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR "ITEM 614-MAINTAINING TRAFFIC".

ALL EXISTING SIGNING REMOVED SHALL BE STORED ON SITE AND PICKED UP BY CITY OF COLUMBUS FORCES.

THE CONTRACTOR SHALL CONTACT THE CITY OF COLUMBUS, DIVISION OF TRAFFIC, FOR SCHEDULING ALL WORK INVOLVING THE CLOSURE TO TRAFFIC OF ANY LANE OR SHOULDER.

ITEM 614. MAINTENANCE OF TRAFFIC (GENERAL)

ALL TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED, MAINTAINED, AND REMOVED BY THE CONTRACTOR IN ACCORDANCE WITH ITEM 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR CONSTRUCTION AND MAINTENANCE OPERATIONS (CURRENT EDITION), COPIES OF WHICH ARE AVAILABLE FROM THE OHIO DEPARTMENT OF TRANSPORTATION, OFFICE OF TRAFFIC ENGINEERING, 25 SOUTH FRONT STREET, COLUMBUS, OHIO 43215.

THE TRAFFIC ENGINEERING AND PARKING DIVISION CONSTRUCTION COORDINATOR (645-6269) AND THE COLUMBUS PAVING THE WAY PROGRAM (645-3970) SHALL BE NOTIFIED A MINIMUM OF TEN (10) WORKING DAYS PRIOR TO STARTING WORK AND/OR PRIOR TO EACH PHASE OR MAJOR CHANGE IN TRAFFIC PATTERNS EITHER PERMANENT OR TEMPORARY WITHIN THE ROADWAY RIGHT-OF-WAY.

THE TRAFFIC ENGINEERING AND PARKING DIVISION SHALL LOCATE AND MARK ALL UNDERGROUND TRAFFIC CONTROL CABLES. THE DIVISION SYSTEM ENGINEER SHALL BE NOTIFIED (645-7790) AT LEAST 48 HOURS (6 WEEKS FOR SIGNAL REVISIONS AND/OR POLE RELOCATIONS) PRIOR TO THE BEGINNING OF ANY WORK WITHIN 300' OF THE SIGNALIZED INTERSECTION OF BROAD ST. AND S.R.-315 S-B RAMP OR WITHIN ANY POSTED AREA WHERE THE DIVISION HAS UNDERGROUND CABLE.

NO EXCAVATION SHALL BE MADE WITHIN FIVE FEET (5') OF ANY POLE THAT SUPPORTS TRAFFIC SIGNAL DISPLAYS OR SIGNS BY MAST ARM OR SIGNAL SPAN. EXCAVATION WITHIN EIGHT FEET (8') BUT MORE THAN FIVE FEET (5') SHALL REQUIRE ADDITIONAL SUPPORT (DOWN GUY, HEAD GUY, BASE GUY, ETC.). THE CONTRACTOR SHALL CONTACT THE DIVISION SYSTEM ENGINEER (614 645-7790) AT LEAST TWO (2) WORKING DAYS PRIOR TO SUCH EXCAVATION, SO THAT THE DIVISION MAY INSTALL SUCH SUPPORTS AT THE OWNER'S / CONTRACTING AGENCY'S EXPENSE.

ALL PERMANENT TRAFFIC CONTROLS NOT IN CONFLICT WITH THE TEMPORARY TRAFFIC CONTROLS SHALL BE MAINTAINED THROUGHOUT THIS PROJECT BY THE CONTRACTOR. PERMANENT TRAFFIC CONTROLS MAY BE TEMPORARILY RELOCATED, AS APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL ASSUME ALL LIABILITY FOR MISSING, DAMAGED AND IMPROPERLY PLACED SIGNS.

THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, REMOVE ANY AND ALL CONFLICTING TRAFFIC CONTROLS, I.E. SIGNING, PAVEMENT MARKINGS, RAISED PAVEMENT MARKERS, ETC....

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED, WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

ANY WORK DONE BY THE TRAFFIC ENGINEERING AND PARKING DIVISION, INCLUDING INSTALLATION, RELOCATION, REMOVAL AND / OR REPLACEMENT OF PERMANENT TRAFFIC CONTROL DEVICES AS A RESULT OF WORK DONE BY THE CONTRACTOR OR AS A RESULT OF THE NEGLIGENCE OF THE CONTRACTOR SHALL BE AT THE EXPENSE OF THE CONTRACTOR.

THE CONFIGURATION OF THE PORTABLE CONCRETE BARRIER THAT IS IN PLACE AT THE START OF THE PROJECT SHALL BE RESTORED UPON COMPLETION OF THE PROJECT.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY ENGINEER FOR THE MAINTENANCE OF TRAFFIC.

ITEM 404 - BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC 15 CU.YD.

ITEM 614. MAINTAINING TRAFFIC — BROAD STREET BRIDGE

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT OR THE COMPLETED PAVEMENT.

ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC BETWEEN NOVEMBER 30 AND APRIL 1. NOVEMBER 30 SHALL BE CONSIDERED TO CONSTITUTE AN INTERIM COMPLETION DATE AND LIQUIDATED DAMAGES SHALL BE ASSESSED IN ACCORDANCE WITH 108.07 FOR EACH CALENDAR DAY THAT ALL LANES ARE NOT OPEN AND AVAILABLE TO TRAFFIC.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE IN THE BROAD ST. MAINTAINANCE OF TRAFFIC. SEE SHEETS 14S THRU 14V.

SPEC, REBOUNDABLE TUBULAR PYLON, 48"	71 EACH
622, PORTABLE CONCRETE BARRIER	790 LIN. FT.
SPEC, PLASTIC SAFETY DRUM	232 EACH

AN EXISTING COAXIAL CABLE RUNS UNDER THE SIDEWALK ON THE NORTH SIDE OF BROAD STREET AND MUST BE MAINTAINED AT ALL TIMES. LIQUIDATED DAMAGES FOR OUTAGES CAUSED BY DAMAGE TO THE CABLE ARE AS FOLLOWS:

A) 7-9 AM; 4-6 PM WEEKDAYS	\$6000 / HOUR
B) 6-7 AM; 9 AM - 4 PM; 6-8 PM WEEKDAYS	\$2500 / HOUR
C) 6 AM - 8 PM WEEKDAYS AND HOLIDAYS	\$2500 / HOUR
D) 8 PM - 6 AM ANY DAY	\$750 / HOUR

SEQUENCE OF CONSTRUCTION — GENERAL

THIS PROJECT WILL BE CONSTRUCTED IN TWO SEPARATE PHASES WITH THE REQUIREMENTS AND LIMITATIONS AS INDICATED BELOW:

PHASE I — THE FIRST PHASE WILL REQUIRE THE COMPLETE CLOSURE OF S.R. 315, ALL RAMPS ON THE PROJECT, AND THE CLOSURE OF SULLIVANT AVENUE AND TOWN STREET AT S.R. 315. SOUTHBOUND S.R. 315 TRAFFIC HAS BEEN DETOURED BY EARLIER PROJECTS, BUT NORTHBOUND S.R. 315 TRAFFIC AND LOCAL DETOURS FOR SULLIVANT AVENUE AND TOWN STREET TRAFFIC WILL BE ACCOMPLISHED BY THE PHASE I DETOUR PLAN. THE REMOVAL AND SUBSEQUENT RECONSTRUCTION OF THE SLAB BRIDGES OVER SULLIVANT AVENUE AND TOWN STREET, AND THE RECONSTRUCTION OF RAMPS "J" AND "K" WILL BE REQUIRED DURING THIS PHASE. THE CONTRACTOR IS REQUIRED TO COMPLETE THE SULLIVANT AVENUE AND TOWN STREET BRIDGE CONSTRUCTION AND THE RECONSTRUCTION OF RAMPS "J" AND "K" IN A PERIOD OF 14 WEEKS FROM THE TIME THESE RAMPS ARE CLOSED TO TRAFFIC. AT THE END OF THE 14 WEEK PERIOD, BOTH SULLIVANT AVENUE AND WEST TOWN STREET, AND THE SULLIVANT AVENUE BRIDGE AND RAMPS "J" AND "K" SHALL BE FULLY OPENED TO TRAFFIC. LIQUIDATED DAMAGES WILL BE ASSESSED AT THE RATE OF \$5000 PER DAY FOR EACH DAY BEYOND THE 14 WEEK PERIOD THAT EITHER RAMP REMAINS CLOSED. EXTENSIONS OF TIME SHALL NOT BE GRANTED FOR DELAYS IN MATERIAL DELIVERY UNLESS SUCH DELAYS ARE INDUSTRY-WIDE, FOR LABOR STRIKES UNLESS SUCH STRIKES ARE AREA-WIDE AND FOR WEATHER EXCEPT IN CASES OF SITE SPECIFIC FLOODING OR SITE SPECIFIC WIND OR TORNADO DAMAGES. THERE SHALL BE NO EXTENSION OF TIME GRANTED FOR OTHER WEATHER-RELATED CONDITIONS, INCLUDING BUT NOT LIMITED TO, INCLEMENT WEATHER.

NO WORK WILL BE PERMITTED ON THE RICH STREET OR BROAD STREET BRIDGES DURING PHASE I, BUT ANY WORK ON S.R. 315, RAMPS "L" AND "M", OR RETAINING WALLS "G" AND "H", WHICH IS

NOT IN CONFLICT WITH THE PHASE I DETOUR PLAN, MAY BE ACCOMPLISHED DURING THIS PHASE. UPON COMPLETION OF THE SULLIVANT AVENUE AND TOWN STREET STRUCTURES, RAMPS "J" AND "K", AND THE PHASE II DETOUR SIGNING, THE RAMPS SHALL BE OPENED TO TRAFFIC.

PHASE II — THE SECOND PHASE WILL INCLUDE THE RICH STREET BRIDGE REPLACEMENT, THE BROAD STREET BRIDGE DECK REPLACEMENT, AND ALL PLAN ITEMS NOT COMPLETED IN PHASE I. THE BROAD STREET BRIDGE DECK REPLACEMENT WILL REQUIRE A TWO-STAGE CONSTRUCTION PROCEDURE IN ORDER TO MAINTAIN ONE LANE OF TRAFFIC IN EACH DIRECTION ON BROAD STREET DURING THE DECK REPLACEMENT. UPON COMPLETION OF THE PHASE II WORK, THE PHASE II DETOUR SIGNING WILL REMAIN IN PLACE, EXCEPT FOR THE RICH ST. DETOUR SIGNING, WHICH SHALL BE REMOVED.

SEQUENCE OF CONSTRUCTION — BROAD STREET BRIDGE

PHASE 1 — REDUCE TRAFFIC TO ONE LANE IN EACH DIRECTION, AS SHOWN IN THE PLANS. MAINTAIN TRAFFIC USING THE SOUTH SIDE OF THE BROAD STREET BRIDGE OVER SR-315 WHILE THE BACKWALLS, BRIDGE DECK AND APPROACH SLABS ARE REPLACED ON THE NORTH SIDE OF THE BRIDGE. TRAFFIC SHALL BE MAINTAINED BY THE USE OF TEMPORARY SIGNING AND STRIPING, DRUMS AND PORTABLE CONCRETE BARRIER. THROUGHOUT ALL PHASES OF CONSTRUCTION ON THIS BRIDGE, THE EXIT RAMP FROM SR-315 WILL BE CLOSED AND THE TRAFFIC SIGNAL FOR THE RAMP SHALL BE COVERED. OTHER TRAFFIC SIGNAL HEADS INSIDE THE WORK LIMITS MAY NEED TO BE ADJUSTED OR COVERED AT THE DISCRETION OF THE ENGINEER AND CITY OF COLUMBUS DIVISION OF TRAFFIC.

PHASE 2 — WHEN WORK IS COMPLETED ON THE NORTH SIDE OF THE BRIDGE IN PHASE 1, TRAFFIC SHOULD BE SHIFTED TO THE NORTH SIDE OF BROAD STREET IN ACCORDANCE WITH THE PLANS FOR PHASE 2. DURING PHASE 2, WORK SHALL BE COMPLETED TO REPLACE THE BACKWALLS, BRIDGE DECK AND APPROACH SLABS ON THE SOUTH SIDE OF THE BROAD STREET BRIDGE. UPON COMPLETION OF WORK ON THE BRIDGE, THE CONTRACTOR SHALL RESTORE ALL SIGNING, STRIPING AND SIGNALS TO THEIR CONDITION PRIOR TO THE PROJECT. THE TRAFFIC SIGNAL AT THE RAMP MAY REMAIN COVERED. OPENING WILL OCCUR ON ANOTHER PROJECT.

WORKING HOURS

THE FOLLOWING WORK IS TO BE ACCOMPLISHED DURING THE FOLLOWING HOURS:

7:00 PM TO 5:00 AM — MONDAY THROUGH THURSDAY
 7:00 PM FRIDAY TO 5:00 AM — MONDAY
 9:00 AM TO 3:00 PM — MONDAY THROUGH FRIDAY SHALL BE AT THE DIRECTION OF THE PROJECT ENGINEER AND THE CITY OF COLUMBUS, CONSTRUCTION COORDINATOR AT 645-6269.

INSTALLATION OF PORTABLE CONCRETE BARRIERS AND THE INSTALLATION OF OVERHEAD SIGN OVERLAYS AND NEW SIGN PANELS. THIS WORK SHALL ALSO REQUIRE THE USE OF A LAW ENFORCEMENT OFFICERS (WITH PATROL CARS) AND SIGNAGE (PER MT-95.30) IN ADVANCE OF THE WORK AREA.

UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR BE PERMITTED TO REDUCE THE NUMBER OF LANES, AS DESIGNATED ON THE PLANS, DURING THE PEAK HOURS OF:
 5:00 AM TO 9:00 AM — MONDAY THROUGH FRIDAY
 3:00 PM TO 7:00 PM — MONDAY THROUGH FRIDAY

LANE CLOSURES BEFORE THE ALLOWABLE TIME AND/OR FAILURE TO REOPEN ALL LANES TO TRAFFIC AS DESIGNATED ABOVE, SHALL SUBJECT THE CONTRACTOR TO LIQUIDATED DAMAGES AS SHOWN BELOW FOR EACH INFRACTION:

\$500.00 PER MINUTE FOR THE FIRST FIVE MINUTE PERIOD
 \$100.00 PER MINUTE FOR EACH MINUTE THEREAFTER

LIQUIDATED DAMAGES SHALL ACCUMULATE FOR EACH INFRACTION UNTIL THE CONTRACTOR RESTORES THE DESIGNATED NUMBER OF TRAVEL LANES AND HAS MOVED ALL CONSTRUCTION EQUIPMENT A MINIMUM DISTANCE OF 30 FEET FROM THE EDGE OF ALL TRAVELED LANES.

GENERAL NOTES – MAINTENANCE OF TRAFFIC

ITEM 614—LAW ENFORCEMENT OFFICER, WITH PATROL CAR.

IN ADDITION TO THE REQUIREMENTS OF 614 AND THE LATEST EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD), A UNIFORMED LAW ENFORCEMENT OFFICER AND OFFICIAL PATROL CAR WITH WORKING TOP MOUNTED EMERGENCY FLASHING LIGHTS SHALL BE PROVIDED FOR CONTROLLING TRAFFIC FOR THE FOLLOWING TASKS:

FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED.

DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

LAW ENFORCEMENT OFFICERS (L.E.O.'S) SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED. THE LEO'S ARE CONSIDERED TO BE EMPLOYED BY THE CONTRACTOR AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR ACTIONS. ALTHOUGH THEY ARE EMPLOYED BY THE CONTRACTOR, THE PROJECT ENGINEER SHALL HAVE CONTROL OVER THEIR PLACEMENT. THE OFFICIAL PATROL CAR SHALL BE A PUBLIC SAFETY VEHICLE AS REQUIRED BY THE OHIO REVISED CODE.

THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THESE SERVICES WITH: DEPUTY CHIEF, SERVICE DIVISION
COLUMBUS POLICE DEPARTMENT
COLUMBUS, OHIO 43215
TELE: (614) 645-4795

LAW ENFORCEMENT OFFICERS WITH PATROL CAR REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614 SPECIAL—LAW ENFORCEMENT OFFICER WITH PATROL CAR. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 614, LAW ENFORCEMENT OFFICER W/PATROL CAR 130 HOURS

THE HOURS PAID SHALL INCLUDE MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

IF THE CONTRACTOR WISHES TO UTILIZE LEO'S FOR FLAGGING AND TRAFFIC CONTROL OTHER THAN FOR THAT REQUIRED IN THESE PLANS, HE MAY DO SO AT HIS OWN EXPENSE. PAYMENT FOR THE EXCESS ABOVE THE CONTRACT REQUIREMENTS WILL BE INCLUDED UNDER ITEM 614 MAINTAINING TRAFFIC.

TEMPORARY WORK ZONE MARKINGS – BROAD STREET

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR TEMPORARY WORK ZONE PAVEMENT MARKINGS AND SIGNS PER THE REQUIREMENTS OF THE STANDARD CONSTRUCTION DRAWINGS: MT-99.10, MT-95.41. THE COST OF REMOVING ALL CONFLICTING MARKINGS SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC, LUMP SUM, UNLESS SEPARATELY ITEMIZED THE PLAN.

614, TEMPORARY LANE LINES, CLASS I, 642 PAINT	0.042 MI.
614, TEMPORARY CENTER LINES, CLASS I, 642 PAINT	0.822 MI.
614, TEMPORARY CHANNELIZING LINES, CLASS I, 642 PAINT	243 LIN. FT.
614, TEMPORARY EDGE LINES, CLASS I, 642 PAINT	0.361 MI.
614, TEMPORARY LANE ARROWS, CLASS I, 642 PAINT	3 EACH
614, TEMPORARY WORD "ONLY" ON PAVEMENT, 72", CLASS I, 642 PAINT	1 EACH
614, FLASHING ARROW PANEL, TYPE C	7 EACH
614, SIGN, FLAT SHEET, TYPE H	514 SQ. FT.

COVERING OF SIGNS

WHERE THE PLANS CALL FOR A PERMANENT SIGN TO BE COVERED, THE CONTRACTOR SHALL DO SO IN SUCH A MANNER AS TO AVOID DAMAGING THE PERMANENT SIGN WHEN THE COVER IS REMOVED. THE SIGN COVER SHALL BE A BLANK GREEN FLAT SIGN OF THE SAME MATERIAL AS THE EXISTING SIGN.

ITEM 622. PORTABLE CONCRETE BARRIER

IT IS ANTICIPATED THAT THE SAME BARRIER WILL BE USED IN VARIOUS PHASES OF CONSTRUCTION. MOVEMENT OF THE CONCRETE BARRIER BETWEEN PHASES SHALL BE ACCOMPLISHED IN ONE WORKING DAY. LAW ENFORCEMENT OFFICER, WITH PATROL CAR SHALL BE UTILIZED FOR PROTECTION OF VEHICULAR TRAFFIC UNTIL MOVEMENT OF THE BARRIER IS COMPLETE.

ITEM 622. DELINEATION OF PORTABLE CONCRETE BARRIER

PORTABLE CONCRETE BARRIER (PCB) SHALL BE DELINEATED WITH REFLECTORS AND OBJECT MARKERS. STEADY BURN WARNING LIGHTS ARE NOT REQUIRED ON PCB.

A. 32" PORTABLE CONCRETE BARRIER WITHOUT GLARE SCREEN

1. THREE REFLECTORS SHALL BE MOUNTED ON THE FACE OF THE PCB WITH THE TOP OF THE MIDDLE REFLECTOR APPROXIMATELY 26 INCHES ABOVE THE BASE AND AT A MAXIMUM SPACING OF 25 FEET. THE REFLECTOR SHALL BE: CUBE CORNER PRISM, REFLEXITE SHEETING, OR 3-M DIAMOND GRADE SHEETING. THE REFLECTOR SHALL HAVE A MINIMUM OF AREA OF 7.5 SQUARE INCHES WITH NO DIMENSION LESS THAN 2-INCHES. THEY SHALL BE YELLOW IF ON THE LEFT SIDE OF TRAFFIC AND WHITE ON THE RIGHT. WHEN ADJACENT TO A REVERSIBLE TRAFFIC DIRECTION LANE, YELLOW AND WHITE REFLECTORS SHALL BE PAIRED BACK-TO-BACK.

2. TOP MOUNTED OBJECT MARKERS (9" x 15") WITH ORANGE REFLECTIVE SHEETING, TYPE H (730.192) SHALL BE MOUNTED MIDWAY BETWEEN THE FACE MOUNTED REFLECTORS. WHEN ADJACENT TO A REVERSIBLE TRAFFIC DIRECTION LANE OR BETWEEN OPPOSING TRAFFIC FLOWS, THEY SHALL BE MOUNTED IN PAIRS FACING TRAFFIC FROM EACH DIRECTION.

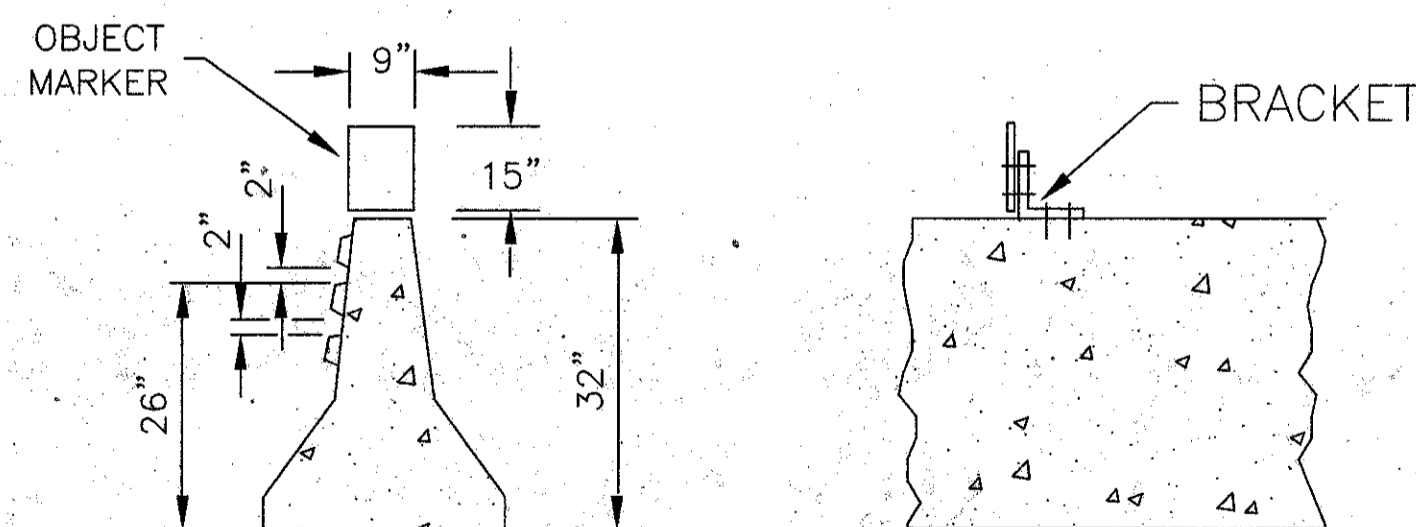
B. TAPERED END SECTIONS AND EXPOSED ENDS

1. OBJECT MARKERS (9" x 15") WITH ORANGE REFLECTIVE SHEETING, TYPE H, SHALL BE MOUNTED DIRECTLY ABOVE THE TOP SURFACE AT EACH END OF THE SECTION.

BARRIER REFLECTORS AND OBJECT MARKERS SHALL BE PAID FOR UNDER SEPARATE PAY ITEMS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 614 – OBJECT MARKERS	14 EACH
ITEM 614 BARRIER REFLECTOR, TYPE B	42 EACH



ITEM 614 – BARRIER REFLECTORS

REFLECTORS AND THEIR MOUNTING SHALL CONFORM TO ITEM 626 OF THE 1997 CONSTRUCTION AND MATERIAL SPECIFICATIONS EXCEPT THAT SPACING SHALL BE 25 FEET.

ITEM 614 PORTABLE CHANGEABLE MESSAGE SIGN, CLASS II, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND, WHEN NO LONGER NEEDED, REMOVE THE PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS).

EACH SIGN SHALL BE TRAILER MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM TO DIM THE SIGN DURING DARKNESS AND A TAMPER AND VANDALS PROOF ENCLOSURE. THE SIGNS SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLE SHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE LOOP FROM A LOCAL UTILITY COMPANY.

THE LOCATIONS AND MESSAGES SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION AND PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR TO ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS WILL BE OFF, FACING AWAY FROM ALL TRAFFIC AND SHALL DISPLAY ONE OR MORE HIGH INTENSITY YELLOW REFLECTIVE SHEETING SURFACES OF 9-INCH BY 15-INCH MINIMUM SIZE FACING TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ODOT AND THE CITY OF COLUMBUS, DIVISION OF TRAFFIC PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT AND TO REVISE SIGN MESSAGES, IF NECESSARY. THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC ALLOWING THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF 614.06 (C). THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC ACCRUED BY THE DEPARTMENT WILL BE DEDUCTED FROM MONIES DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS OWN CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24 HOURS PER DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE. THE REQUIREMENTS TO FURNISH, INSTALL, MAINTAIN AND REMOVE A PCMS UNIT ON THIS PROJECT SHALL NOT IN ANY WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES AS OUTLINED IN CMS 104.04.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE BID PER SIGN-MONTH FOR EACH ITEM 614 PORTABLE CHANGEABLE MESSAGE SIGN, CLASS II, AS PER PLAN AND SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

THE CONTRACTOR SHALL PROVIDE THREE (3) PORTABLE, CHANGEABLE MESSAGE SIGNS (PCMS). ONE SIGN IS REQUIRED FOR THE I-70 EASTBOUND TRAFFIC. ONE SIGN IS REQUIRED FOR THE I-70 WESTBOUND TRAFFIC AND ONE SIGN IS REQUIRED FOR THE I-71 NORTHBOUND TRAFFIC. EXACT LOCATIONS AND MESSAGES ARE, AS DIRECTED BY THE ENGINEER AND THE CITY OF COLUMBUS, DIVISION OF TRAFFIC. THESE PCMS ARE TO BE ERRECTED AT LEAST TWO (2) WEEKS IN ADVANCE OF THE CLOSURE OF STATE ROUTE 315. THE PCMS SHALL REMAIN IN PLACE UNTIL TWO (2) WEEKS AFTER CLOSURE, OR AS DIRECTED BY THE ENGINEER. THESE PCMS SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS.

THE COST OF THE PCMS SHALL BE AT THE UNIT PRICE QUOTED FOR:
614, PORTABLE CHANGEABLE MESSAGE SIGN 4 SIGN MONTH

GENERAL NOTES - MAINTENANCE OF TRAFFIC

CALC. BY	FRANKLIN COUNTY FRA-315-0.48	OHIO	13
DATE		FHWA REGION 5	
CHKD. BY			
DATE			

ITEM SPECIAL - REBOUNDABLE TUBULAR PYLON, 48 INCH

THIS ITEM SHALL CONSIST OF INSTALLING A TRAFFIC CHANNELIZING DEVICE IN THE LOCATIONS AS SHOWN IN THE PLANS.

QUANTITY:

THE BASE BID SHALL INCLUDE THE NUMBER INDICATED OF REBOUNDABLE TUBULAR 48 INCH PYLONS AS HEREIN SPECIFIED.

MATERIAL:

THE TUBES SHALL BE TUBULAR SHAPED LOW DENSITY, CO-EXTRUDED POLYETHYLENE WITH ULTRA VIOLET INHIBITORS, 48 INCHES IN LENGTH, AND A MINIMUM 3" DIAMETER.

COLOR:

THE TUBE COLOR SHALL BE ORANGE.

REFLECTIVE:

THE TUBULAR PYLON SHALL HAVE FOUR (4) 3 INCH WHITE TYPE G REFLECTORIZED BANDS AS PER 730.19, LOCATED AT 2 INCHES, 8 INCHES, 14 INCHES AND 20 INCHES RESPECTIVELY FROM THE TOP OF THE PYLON.

BASE:

THE SURFACE MOUNT ASSEMBLY SHALL BE A TWIST LOCK OR PIN LOCK DESIGN OF HI-IMPACT STYRENE, EPOXY MOUNTED AND EASILY REPLACEABLE.

REBOUNDABLE TUBULAR PYLONS TO BE APPROVED ARE EQUAL IN QUALITY, DESIGN AND PERFORMANCE TO SAFE-HIT CORPORATION, DESIGN NO. SH 348SMAOS OR CARSONITE INTERNATIONAL, DESIGN NO. SDC 204804.

METHOD OF MEASUREMENT:

THE METHOD OF MEASUREMENT WILL BE EACH IN PLACE WITH PAYMENT AS ITEM SPECIAL - REBOUNDABLE TUBULAR 48 INCH PYLON. THE COST OF FURNISHING, INSTALLING, AND REPLACING ANY DAMAGED TUBULAR MARKERS SHALL BE INCLUDED IN THIS ITEM.

ITEM SPECIAL, REPLACEMENT SIGN

FLAT SHEET SIGNS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT SIGNS SHALL BE NEW. OTHER MATERIALS MAY BE IN USED BUT GOOD CONDITION SUBJECT TO APPROVAL BY THE ENGINEER.

PAYMENT FOR THE NEW SIGNS SHALL BE MADE AT THE CONTRACT PRICE PER SQUARE FOOT FOR ITEM SPECIAL, REPLACEMENT SIGN, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF DAMAGED SIGNS, HARDWARE AND SUPPORTS, AND PROVIDING THE NECESSARY REPLACEMENT HARDWARE, SUPPORTS, ETC.

AN ESTIMATED QUANTITY OF 150 SQUARE FEET HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

ITEM SPECIAL, REPLACEMENT DRUM

DRUMS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT DRUMS SHALL BE NEW.

PAYMENT FOR THE NEW DRUMS SHALL BE MADE AT THE CONTRACT PRICE PER EACH FOR ITEM SPECIAL, REPLACEMENT DRUM, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF THE DAMAGED DRUM, AND PROVIDING AND MAINTAINING THE REPLACEMENT DRUM IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS FOR THE ORIGINAL DRUM.

AN ESTIMATED QUANTITY OF 75 EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

ADDITIONAL TEMPORARY TRAFFIC CONTROL

THE FOLLOWING ITEMS ARE TO BE USED WHEN IT HAS BEEN DETERMINED, BY THE ENGINEER, THAT ADDITIONAL TEMPORARY TRAFFIC CONTROL DEVICES, NOT SHOWN IN THESE PLANS ARE REQUIRED.

DRUMS, BARRICADES OR SIGNS AND PAVEMENT MARKINGS FURNISHED SHALL BE IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS FOR THE ORIGINAL.

SIGNS FURNISHED UNDER THIS ITEM SHALL BE INSTALLED COMPLETE IN PLACE INCLUDING SUPPORT AND MOUNTING HARDWARE.

PAVEMENT MARKINGS FURNISHED UNDER THIS ITEM SHALL INCLUDE INSTALLATION AND REMOVAL OF EXISTING TEMPORARY AND PERMANENT PAVEMENT MARKINGS.

ITEM SPECIAL - 614, PLASTIC SAFETY DRUM	250	EACH
ITEM 614 - TEMPORARY RAISED PAVEMENT MARKER	250	EACH
ITEM 614 - TEMPORARY PAVEMENT MARKINGS, SYMBOLS	12	EACH
ITEM 630 - GROUND MOUNTED SUPPORT, NO. 3 POST	30	LIN. FT.
ITEM 630 - SIGN SUPPORT ASSEMBLY, POLE MOUNTED	20	EACH
ITEM 614 - SIGN, FLAT SHEET, TYPE H	150	SQ. FT.
ITEM 614 - SIGN, TEMPORARY OVERLAY, TYPE H	200	SQ. FT.
ITEM 614 - SIGN, TEMPORARY EXTRUSHEET TYPE H	200	SQ. FT.
ITEM 630 - COVERING OF SIGN	100	SQ. FT.
ITEM 630 - REMOVAL OF GROUND MOUNTED SIGN AND STORAGE	20	EACH
ITEM 642 - REMOVAL OF PAVEMENT MARKING	500	LIN. FT.
ITEM 614 - PAVEMENT MARKING, PAINT	500	LIN. FT.
ITEM 614 - PAVEMENT MARKING, TAPE	500	LIN. FT.
ITEM 614 - FLASHING ARROW PANEL, TYPE C (PER DAY)	50	DAYS
ITEM 622 - PORTABLE CONCRETE BARRIER, 32 INCH	200	LIN. FT.
SPECIAL - REBOUNDABLE TUBULAR PYLON, 48 INCH	50	EACH
ITEM 614 - TYPE III BARRICADE (10 FEET LONG)	6	EACH
ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN	8	EACH

PAYMENT FOR THESE ITEMS SHALL BE AT THE CONTRACT UNIT PRICE INCLUDING ALL NECESSARY MATERIALS, PARTS, EQUIPMENT AND LABOR.

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED FOR SUCH ITEMS SHALL BE INCORPORATED INTO THE FINAL CHANGE ORDER GOVERNING THE COMPLETION OF THIS PROJECT.

ITEM 614 - TEMPORARY IMPACT ATTENUATOR (G.R.E.A.T. TYPE)

THIS WORK SHALL CONSIST OF FURNISHING IMPACT ATTENUATORS AS REQUIRED IN THE PLANS. THIS ITEM SHALL INCLUDE ALL RELATED HARDWARE, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER TO CONSTRUCT COMPLETE AND FUNCTIONAL G.R.E.A.T. IMPACT ATTENUATOR SYSTEMS. THE ATTENUATORS SHALL BE PLACED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND AT THE LOCATIONS SHOWN ON THE PLANS. THE IMPACT ATTENUATOR SHALL BE MANUFACTURED BY ENERGY ABSORPTION SYSTEMS, INC., ONE EAST WACKER DRIVE, CHICAGO, ILLINOIS 60601; TELEPHONE (312) 497-6750.

THE NOSE COVER OF THE ATTENUATOR SHALL MEET THE REQUIREMENTS OF STANDARD DRAWING MT-95.81.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSPECTING, REPAIRING, AND OTHERWISE RESTORING THE IMPACT ATTENUATOR IN ACCORDANCE WITH THE MANUFACTURER'S MAINTENANCE INSTRUCTIONS WHILE IT IS IN USE ON THE PROJECT. SUCH REPAIRS SHALL BE PERFORMED WITHIN 24 HOURS OF THE INCIDENT WHICH CAUSED DAMAGE TO THE PROJECT IN ADDITION TO ANY EXTRA UNITS SUPPLIED FOR THIS PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING ALL NECESSARY MATERIALS, LABOR, AND EQUIPMENT REQUIRED TO PERFORM THE ABOVE DESCRIBED RESTORATION OF THE ATTENUATOR.

AN ESTIMATED QUANTITY AS LISTED BELOW SHALL BE USED, AS DIRECTED BY THE ENGINEER, FOR USE IN THE ABOVE-MENTIONED RESTORATION ONLY WHEN IT IS DECIDED THAT MINOR OR MAJOR REPAIRS CANNOT BE PERFORMED IN A SAFE AND TIMELY MANNER:

ITEM 614 - TEMPORARY IMPACT ATTENUATOR (REPLACEMENT), G.R.E.A.T., TYPE, MODEL NO.200200NF6GCZ, UNI-DIRECTIONAL 1 EACH

FOR LOCATIONS OF THE ATTENUATORS SEE PLAN SHEETS. THESE TEMPORARILY LOCATED ATTENUATORS SHALL BE BID PER EACH PER THE FOLLOWING PAY ITEM DESCRIPTION:

ITEM 614 - TEMPORARY IMPACT ATTENUATOR, G.R.E.A.T., TYPE, MODEL NO.200200NF6GCZ, UNI-DIRECTIONAL

PAYMENT WILL INCLUDE ALL MATERIALS, EQUIPMENT AND LABOR TO FURNISH, INSTALL AND REMOVE THE TEMPORARY IMPACT ATTENUATOR AT ALL LOCATIONS SHOWN ON THE PLANS. THE TEMPORARY IMPACT ATTENUATORS SHOWN ON THE PLANS WILL BECOME THE PROPERTY OF THE CONTRACTOR AFTER CONSTRUCTION IS COMPLETE. IMPACT ATTENUATORS MAY BE REUSED IF INSTALLATION IS NOT APPROVED BY THE ENGINEER.

COORDINATION WITH THE COLUMBUS PAVING THE WAY PROGRAM (PTWP)

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES ON A WEEKLY BASIS. WHEN DETOURS ARE PLANNED, THE NOTIFICATION SHALL BE AT THE PRECONSTRUCTION MEETING OR 30 DAYS IN ADVANCE ONCE CONSTRUCTION HAS BEGUN. LANE AND RAMP CLOSURES FOR MORE THAN TWO WEEKS SHALL BE REPORTED AT LEAST TEN WORKING DAYS IN ADVANCE. LANE AND RAMP CLOSURES OF LESS THAN TWO (2) WEEKS DURATION AND MORE THAN TWO (2) DAYS SHALL BE REPORTED AT LEAST 3 WORKING DAYS IN ADVANCE. FOR SHORT TERM LANE AND RAMP CLOSURES (TWO (2) DAYS OR LESS) NOTIFICATION SHALL BE MADE AT LEAST ONE (1) WORKING DAY IN ADVANCE.

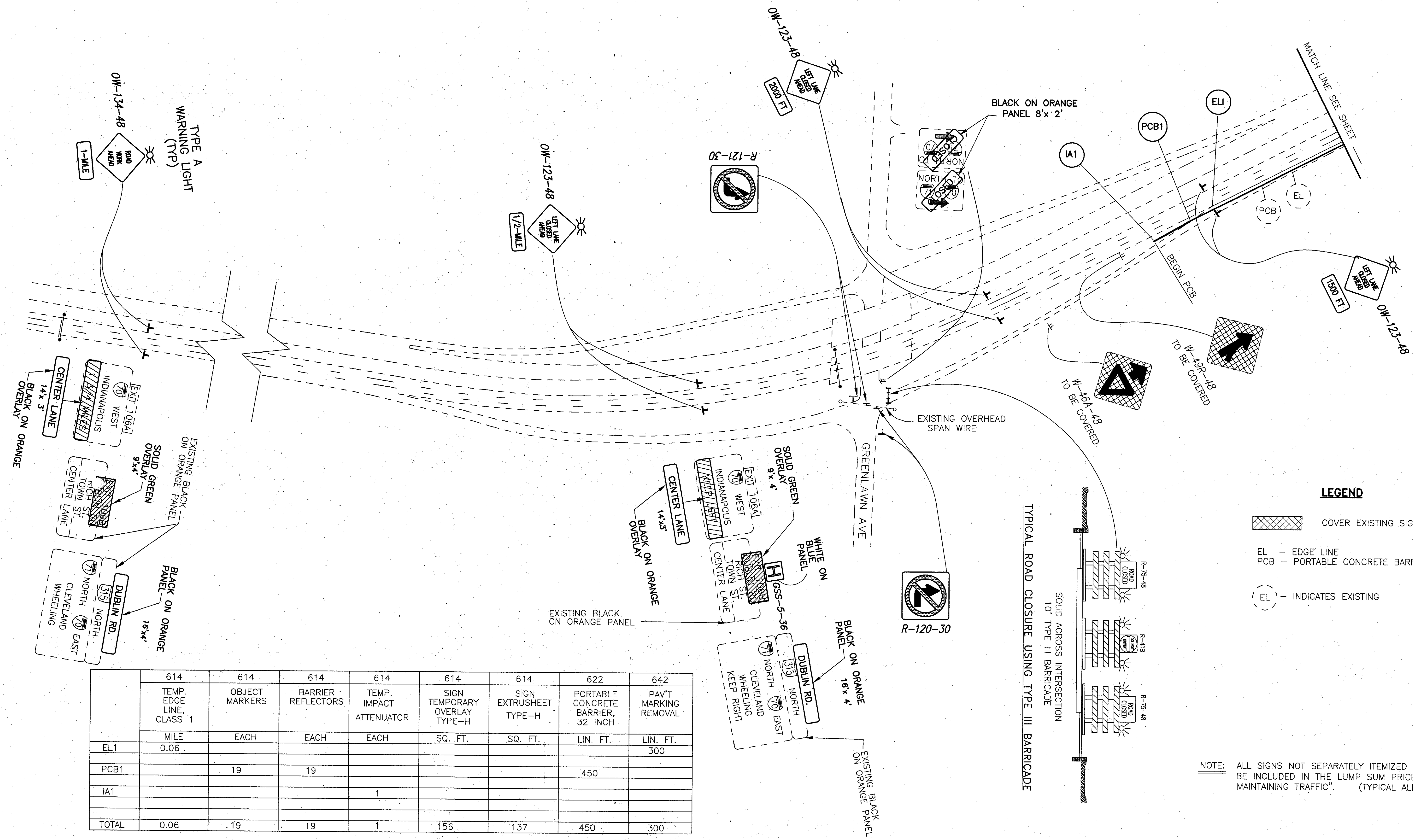
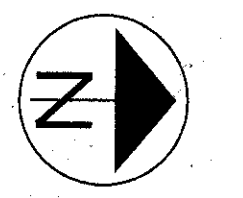
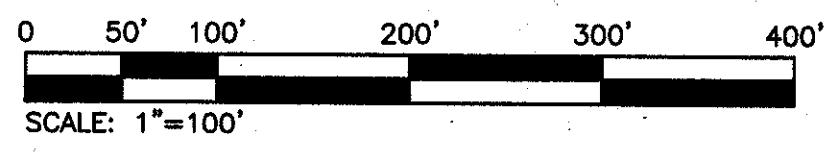
INFORMATION SHALL INCLUDE, BUT NOT BE LIMITED TO, ALL CONSTRUCTION ACTIVITIES THAT IMPACT TRAFFIC AT PRESENT AND IN THE NEXT 30 DAYS. THE REPORT SHALL BE OF A FORMAT APPROVED BY THE PROJECT ENGINEER OR ONE SUPPLIED BY PTWP. THE CONTRACTOR SHALL DESIGNATE AN INDIVIDUAL WHO WILL BE RESPONSIBLE TO PREPARE THIS REPORT AT THE PRECONSTRUCTION MEETING.

ANY UNFORESEEN IMPACT TO TRAFFIC SHALL BE REPORTED TO THE PROJECT ENGINEER AS SOON AS POSSIBLE.

THE PROJECT ENGINEER SHALL PROVIDE THIS INFORMATION TO THE PTWP PROGRAM. ALL CONSTRUCTION ACTIVITIES THAT INTERFERE WITH TRAFFIC SHALL BE REPORTED TO THE PTWP. THIS INFORMATION SHALL BE PROVIDED TO THE PROGRAM COORDINATOR AT (614) 645-3970, OR THE PROGRAM INFORMATION OFFICER AT (614) 645-6016 OR BY FAX AT (614) 645-5844.

SHEET NUMBER																		ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION		
11	12	13	14-A	14-B	14-C	14-D	14-E	14-F	14-G	14-I	14-J	14-K	14-L	14-M	14-N	14-O	14-P						14-R	
15																			404	35000	15	CU. YD.	BITUMINOUS CONCRETE, FOR MAINTAINING TRAFFIC	
	130																		614	11100	130	HOURL	LAW ENFORCEMENT OFFICER WITH PATROL CAR	
				1	1	2													614	12350	4	EACH	TEMPORARY IMPACT ATTENUATOR, G.R.E.A.T. TYPE	
		1																	614	12360	1	EACH	TEMPORARY IMPACT ANNTENUATOR (REPLACEMENT), G.R.E.A.T. TYPE	
	514	150																	614	12450	664	SQ. FT.	SIGN FLAT SHEET, TYPE H	
		200			156	192	681	155	202	208									614	12454	1794	SQ. FT.	SIGN TEMPORARY OVERLAY, TYPE H	
		200			137	146	188		304	218	64								614	12458	1257	SQ. FT.	SIGN EXTRUSHEET, TYPE H	
		250																	614	12800	250	EACH	TEMPORARY RAISED PAVEMENT MARKER	
	42				19	7	39												614	13302	107	EACH	BARRIER REFLECTOR, TYPE B	
	14				19	7	39												614	13350	79	EACH	OBJECT MARKER	
	4	8																	614	18601	12	SIGN MNTH	PORTABLE CHANGEABLE MESSAGE SIGN, CLASS II, AS PER PLAN (SEE SHEET. No. 12)	
	.042				0.06														614	20100	0.10	MILE	TEMPORARY LANE LINE, CLASS 1, 642 PAINT	
	.822																		614	21100	0.82	MILE	TEMPORARY CENTER LINE, CLASS I, 642 PAINT	
	.361				0.26	0.42					0.23								614	22100	1.54	MILE	TEMPORARY EDGE LINE, CLASS 1, 642 PAINT	
	243										1200	200							614	23200	2368	LIN. FT.	TEMPORARY CHANNELIZING LINE, CLASS 1, 642 PAINT	
																			614	25200	180	LIN. FT.	TEMPORARY TRANSVERSE LINE, CLASS-1, 642 PAINT	
	3																		614	30200	3	EACH	TEMPORARY LANE ARROW, CLASS I, 642 PAINT	
	1																		614	31200	1	EACH	TEMPORARY WORD ON PAVEMENT, 72", CLASS I, 642 PAINT	
		500																	614	98100	500	LIN. FT.	TEMPORARY PAVEMENT MARKING, MISC., PAINT	
		500																	614	98100	500	LIN. FT.	TEMPORARY PAVEMENT MARKING, MISC., TAPE	
		12																	614	98200	12	EACH	TEMPORARY PAVEMENT MARKINGS, MISC: SYMBOLS	
		150																	SPECIAL	61412500	150	SQ. FT.	SPECIAL -- REPLACEMENT SIGN (SEE SHEET NO. 13)	
		75																	SPECIAL	61412600	75	EACH	SPECIAL -- REPLACEMENT DRUM (SEE SHEET NO. 13)	
232		250																	SPECIAL	61412720	482	EACH	PLASTIC SAFETY DRUM	
71		50									40								SPECIAL	61412730	161	EACH	SPECIAL -- REBOUNDABLE TUBULAR PYLON, 48" (SEE SHEET NO. 13)	
		7																	SPECIAL	61412760	7	EACH	FLASHING ARROW PANEL, TYPE-C	
		6																	SPECIAL	61418000	6	EACH	MAINTAINING TRAFFIC, MISCELLANEOUS, TYPE III BARRICADE (10')	
		50																	SPECIAL	61418040	50	DAYS	MAINTAINING TRAFFIC, MISCELLANEOUS: FLASHING ARROW PANEL, TYPE-C	
790		200			450	180	900												200	622	40020	2720	LIN. FT.	PORTABLE CONCRETE BARRIER, 32"
		30																	630	03100	30	LIN. FT.	GROUND MOUNTED SUPPORT, NO. 3 POST	
		20																	630	79500	20	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	
		100																	630	83000	100	SQ. FT.	COVERING OF SIGN	
		20																	630	85000	20	EACH	REMOVAL OF GROUND MOUNTED SIGN AND STORAGE	
											6	6	8	2	2	5	1		630	89900	30	EACH	REMOVAL OF OVERLAY SIGN	
		500			300	800	200												642	30000	4220	LIN. FT.	REMOVAL OF PAVEMENT MARKING	

[AS] - I:\TRANS\SR315-00\MOT\GCA.DWG - NOV 24, 1997 - 10:34:27 - SCALE = 1:30



LEGEND

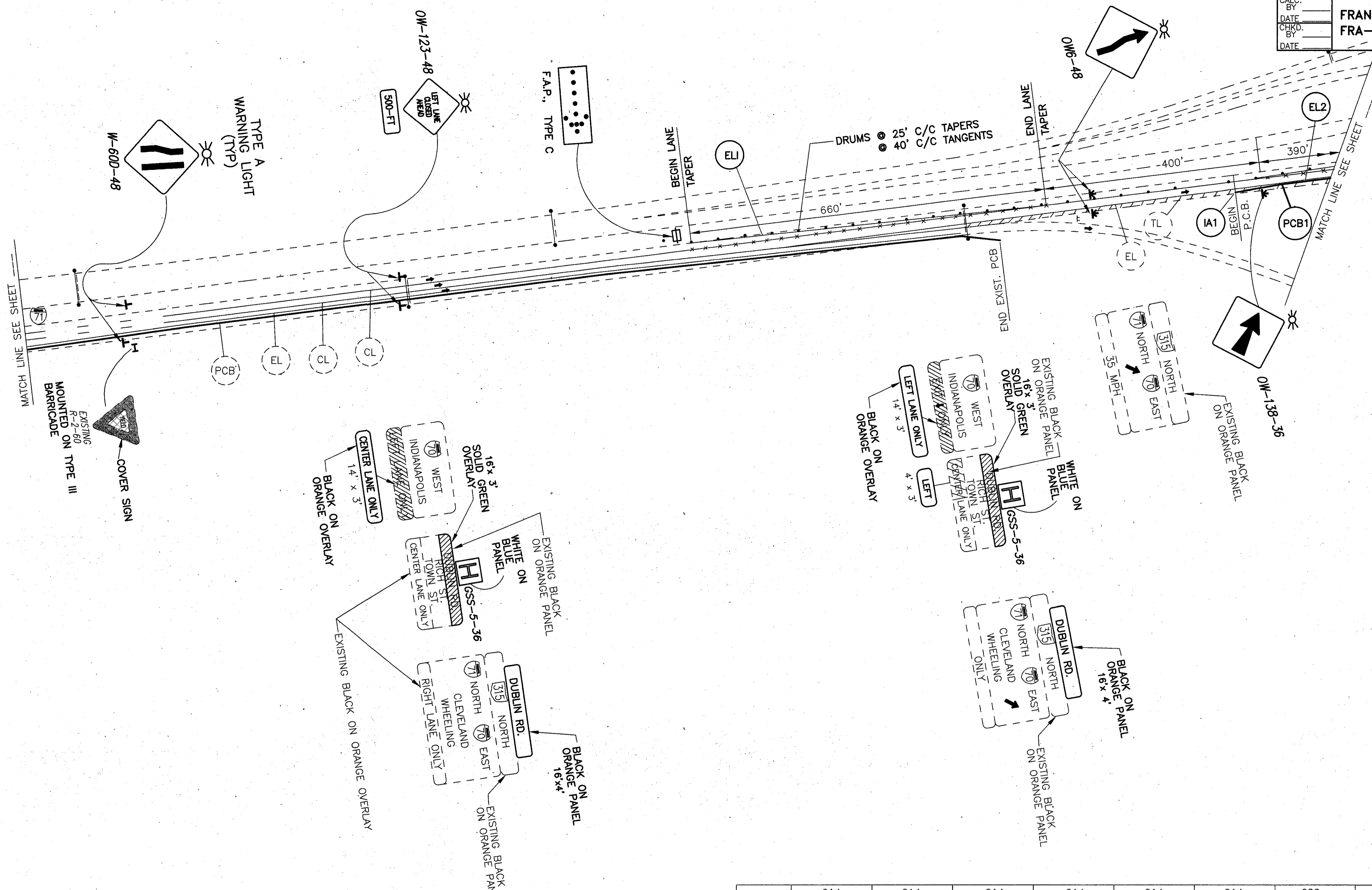
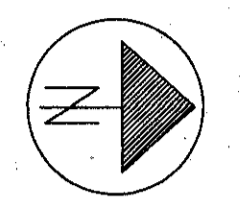
- COVER EXISTING SIGN
- EL - EDGE LINE
- PCB - PORTABLE CONCRETE BARRIER
- INDICATES EXISTING

NOTE: ALL SIGNS NOT SEPARATELY ITEMIZED FOR PAYMENT SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR "ITEM 614, MAINTAINING TRAFFIC". (TYPICAL ALL SHEETS)

	614	614	614	614	614	614	622	642
	TEMP. EDGE LINE, CLASS 1	OBJECT MARKERS	BARRIER REFLECTORS	TEMP. IMPACT ATTENUATOR	SIGN TEMPORARY OVERLAY TYPE-H	SIGN EXTRUSHEET TYPE-H	PORTABLE CONCRETE BARRIER, 32 INCH	PAV'T MARKING REMOVAL
	MILE	EACH	EACH	EACH	SQ. FT.	SQ. FT.	LIN. FT.	LIN. FT.
EL1	0.06							300
PCB1		19	19				450	
IA1				1				
TOTAL	0.06	19	19	1	156	137	450	300

QUANTITIES FOR PAVEMENT MARKINGS AND PCB LAYOUT ON THIS SHEET ARE APPROXIMATE ONLY. EXACT QUANTITIES WILL BE BASED ON FINAL FIELD MEASUREMENT. EXACT LOCATIONS ARE TO BE, AS DIRECTED BY THE ENGINEER.

[C66] - R:\TRANS\SR315-CO\NOT\DET07.DWG - OCT 17, 1997 - 10:44:56 - SCALE = 1:30.21



INDICATES PAV'T. MARKING REMOVAL

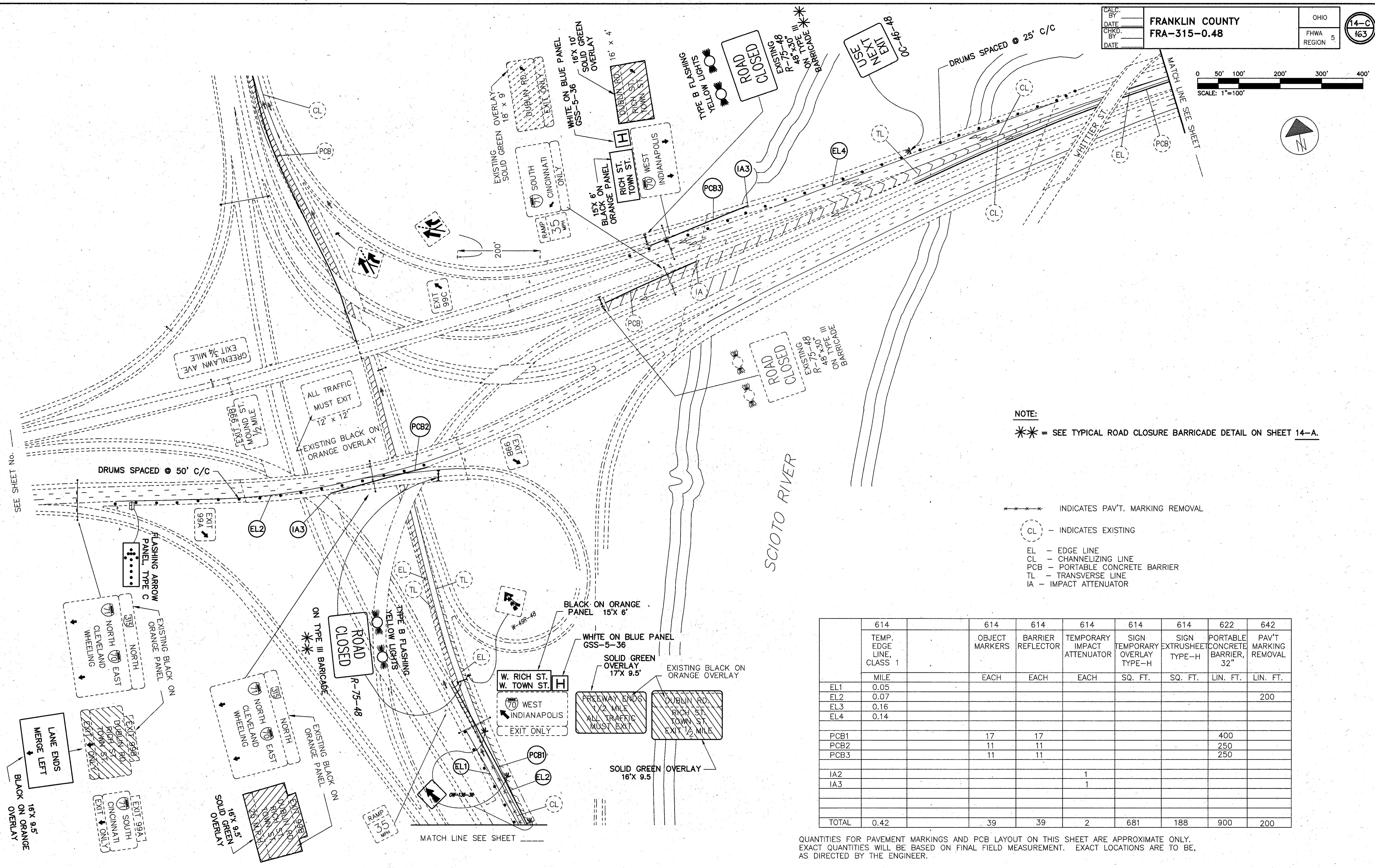
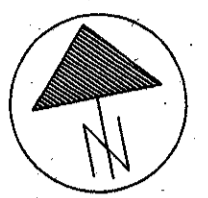
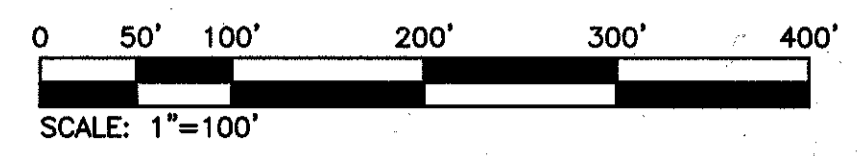
(CL) - INDICATES EXISTING

EL - EDGE LINE
CL - CHANNELIZING LINE
PCB - PORTABLE CONCRETE BARRIER
TL - TRANSVERSE LINE

	614	614	614	614	614	614	622	642
	TEMP. EDGE LINE, CLASS 1	TEMP. IMPACT ATTENUATOR	OBJECT MARKER	BARRIER REFLECTOR	SIGN TEMPORARY OVERLAY TYPE-H	SIGN EXTRUSHEET TYPE-H	PORTABLE CONCRETE BARRIER, 32 INCH	PAV'T MARKING REMOVAL
	MILE	EACH	EACH	EACH	SQ. FT.	SQ. FT.	LIN. FT.	LIN. FT.
EL1	0.23							650
EL2	0.03							150
PCB1			7	7			180	
IA1		1						
TOTALS	0.26	1	7	7	192	146	180	800

QUANTITIES FOR PAVEMENT MARKINGS AND PCB LAYOUT ON THIS SHEET ARE APPROXIMATE ONLY. EXACT QUANTITIES WILL BE BASED ON FINAL FIELD MEASUREMENT. EXACT LOCATIONS ARE TO BE, AS DIRECTED BY THE ENGINEER.

[C:\6] - I:\TRANS\SR315-CD\NOT\DET09.DWG - OCT 20, 1997 - 08:58:26 - SCALE = 1:30.21

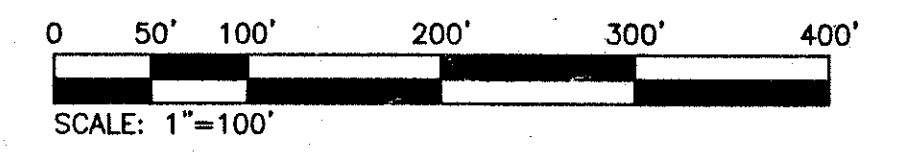


NOTE:
 * * = SEE TYPICAL ROAD CLOSURE BARRICADE DETAIL ON SHEET 14-A.

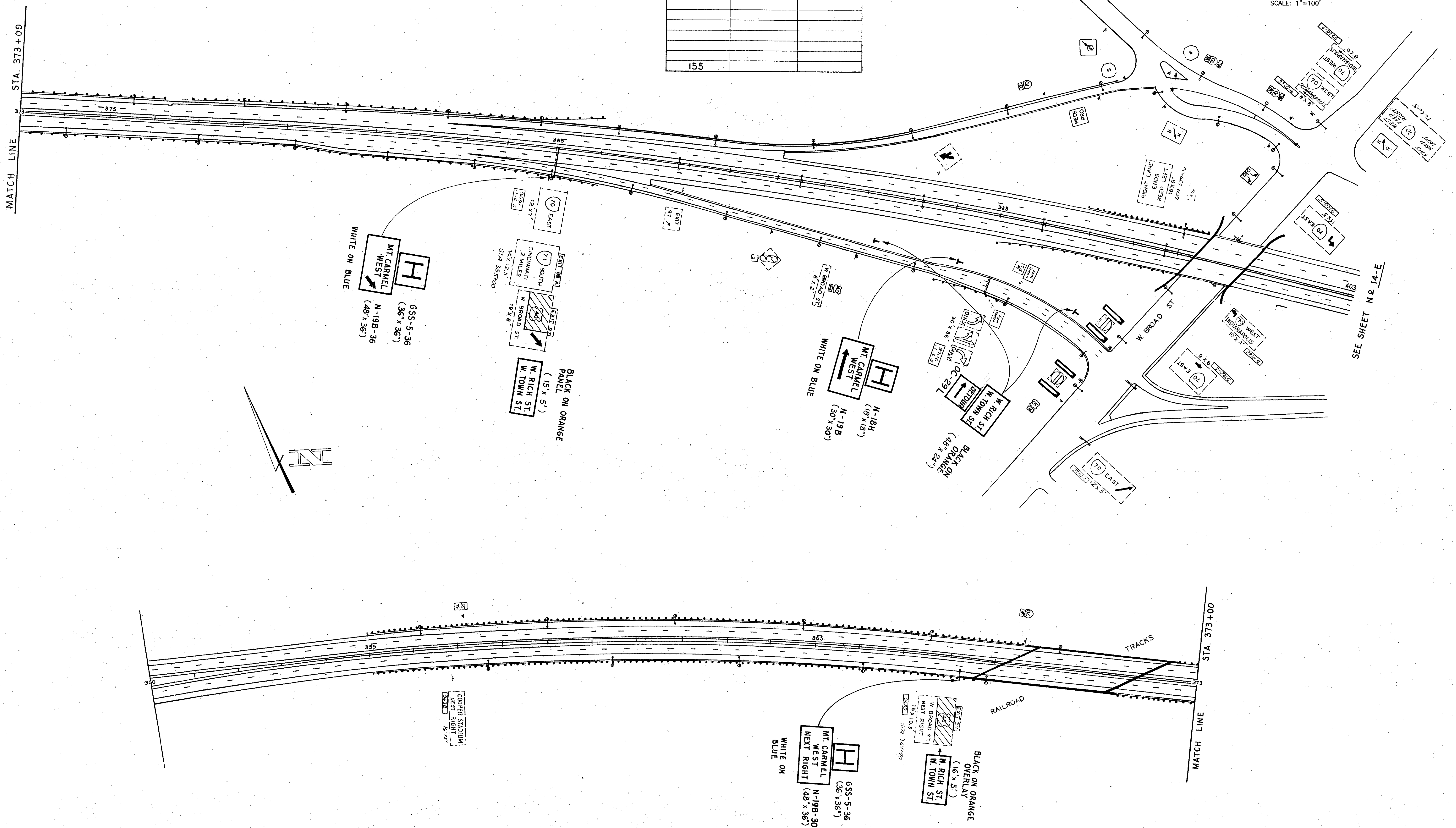
- INDICATES PAV'T. MARKING REMOVAL
- - INDICATES EXISTING
- EL - EDGE LINE
- CL - CHANNELIZING LINE
- PCB - PORTABLE CONCRETE BARRIER
- TL - TRANSVERSE LINE
- IA - IMPACT ATTENUATOR

	614		614	614	614	614	622	642	
	TEMP. EDGE LINE, CLASS 1		OBJECT MARKERS	BARRIER REFLECTOR	TEMPORARY IMPACT ATTENUATOR	SIGN TEMPORARY OVERLAY TYPE-H	SIGN EXTRUSHEET TYPE-H	PORTABLE CONCRETE BARRIER, 32"	PAV'T MARKING REMOVAL
	MILE		EACH	EACH	EACH	SQ. FT.	SQ. FT.	LIN. FT.	LIN. FT.
EL1	0.05								
EL2	0.07								200
EL3	0.16								
EL4	0.14								
PCB1			17	17				400	
PCB2			11	11				250	
PCB3			11	11				250	
IA2					1				
IA3					1				
TOTAL	0.42		39	39	2	681	188	900	200

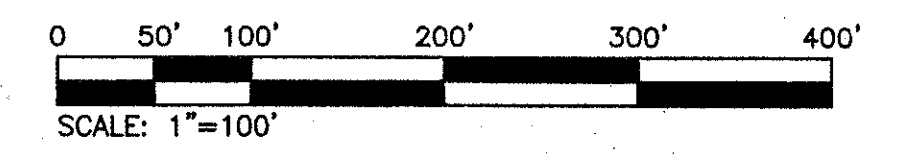
QUANTITIES FOR PAVEMENT MARKINGS AND PCB LAYOUT ON THIS SHEET ARE APPROXIMATE ONLY. EXACT QUANTITIES WILL BE BASED ON FINAL FIELD MEASUREMENT. EXACT LOCATIONS ARE TO BE, AS DIRECTED BY THE ENGINEER.



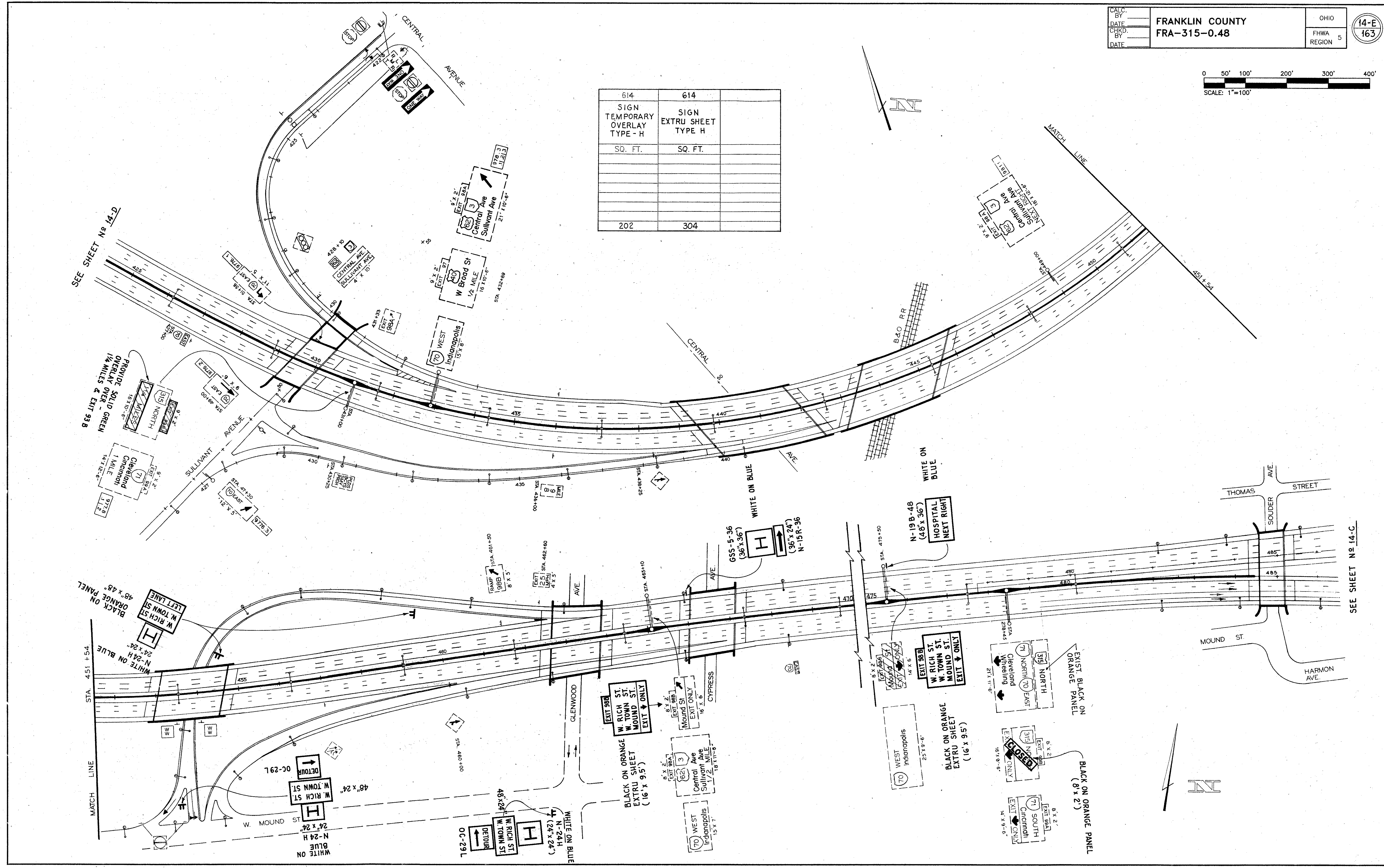
614		
SIGN TEMPORARY OVERLAY TYPE - H		
SQ. FT.		
155		



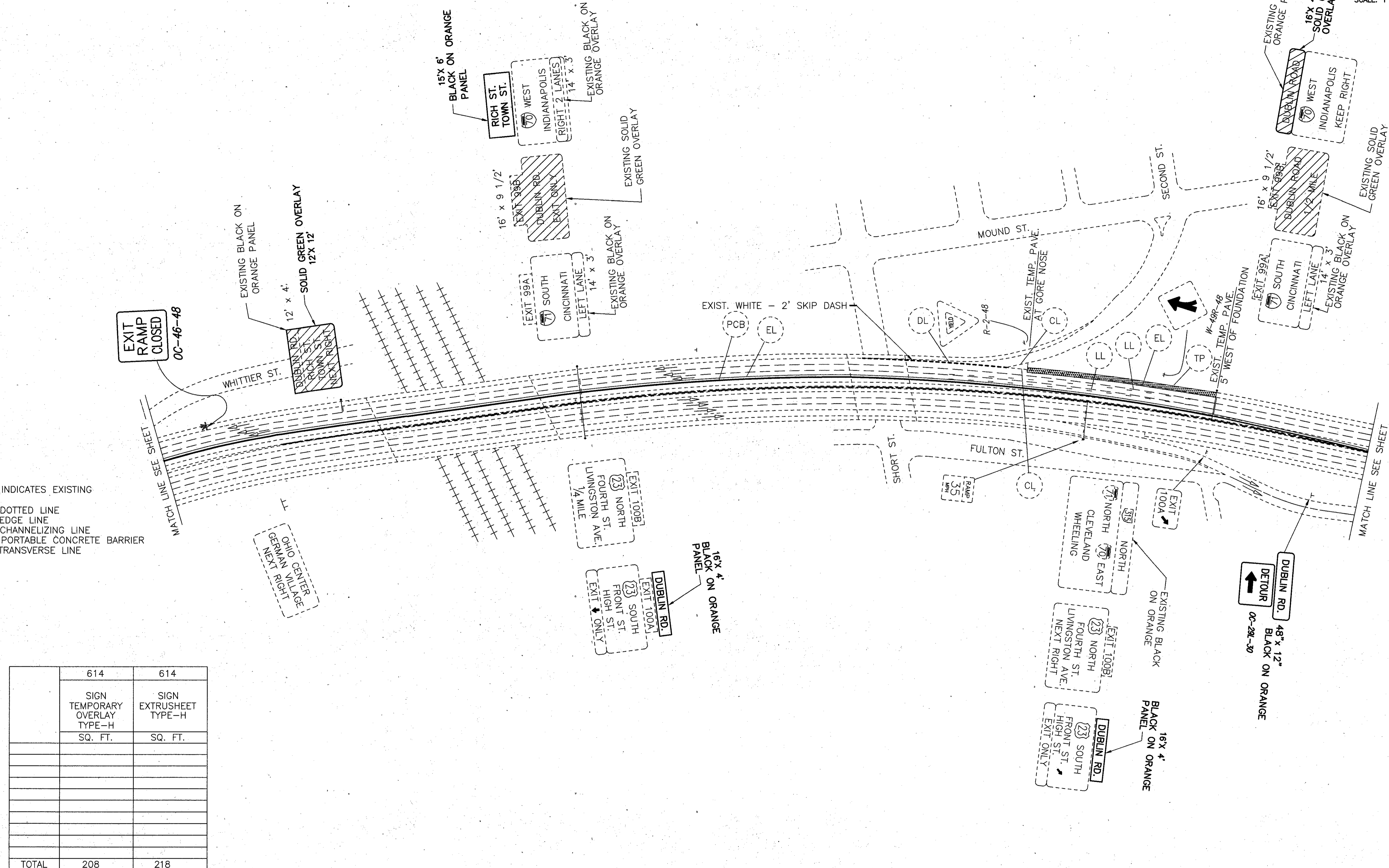
PHASE I - DETOUR PLAN



614	614	
SIGN TEMPORARY OVERLAY TYPE - H	SIGN EXTRU SHEET TYPE H	
SQ. FT.	SQ. FT.	
202	304	



PHASE I - DETOUR PLAN

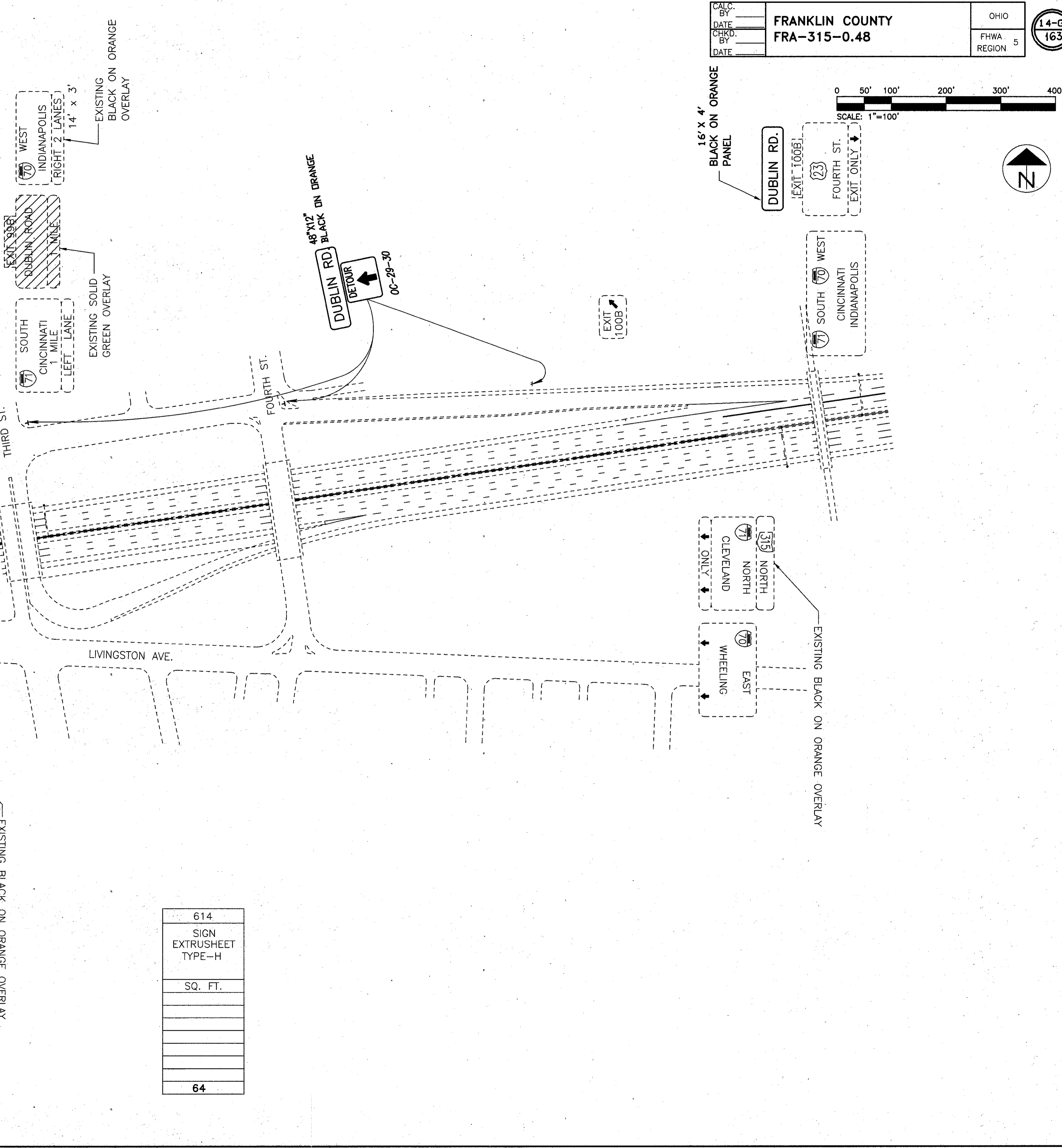
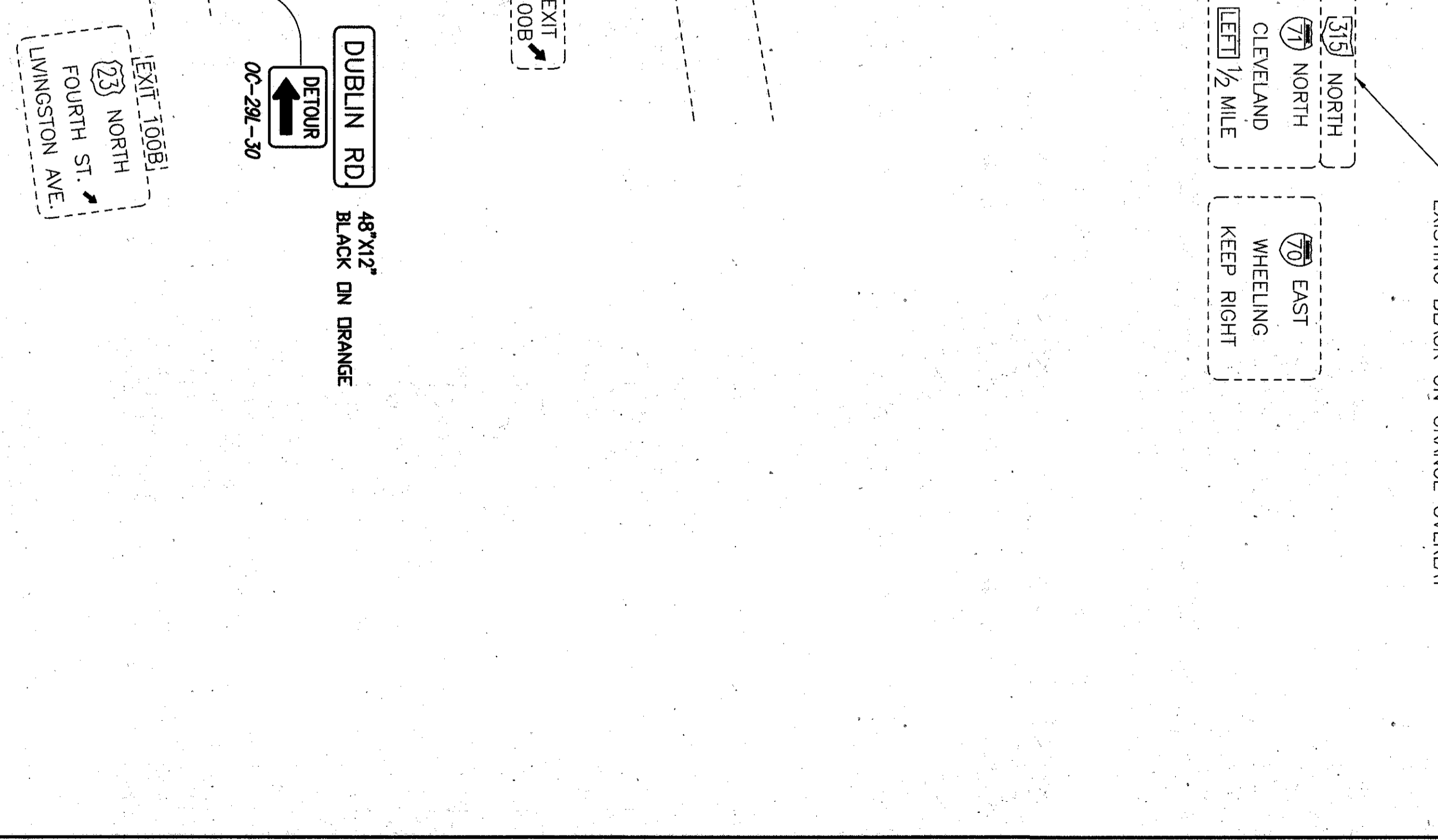
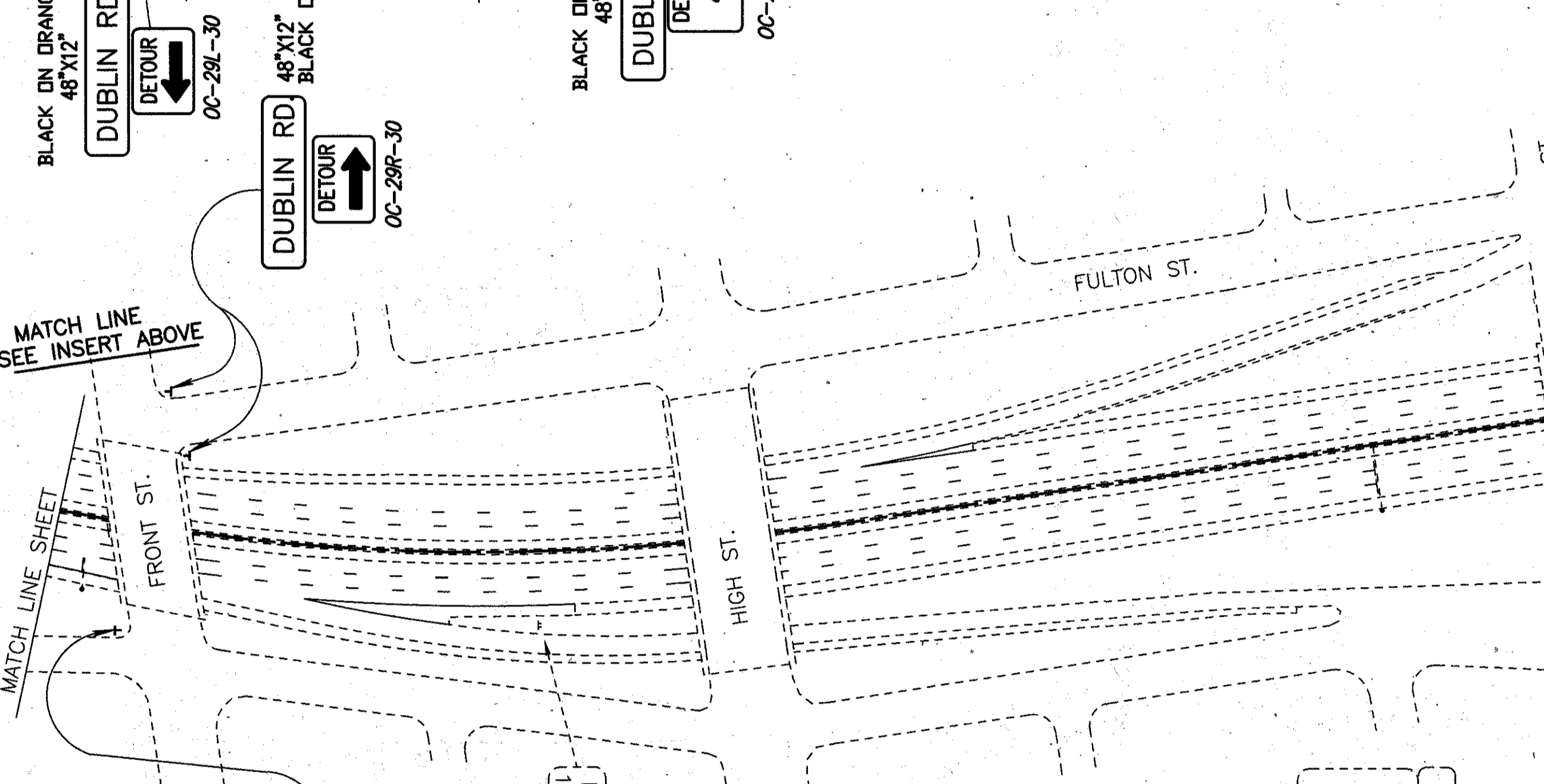
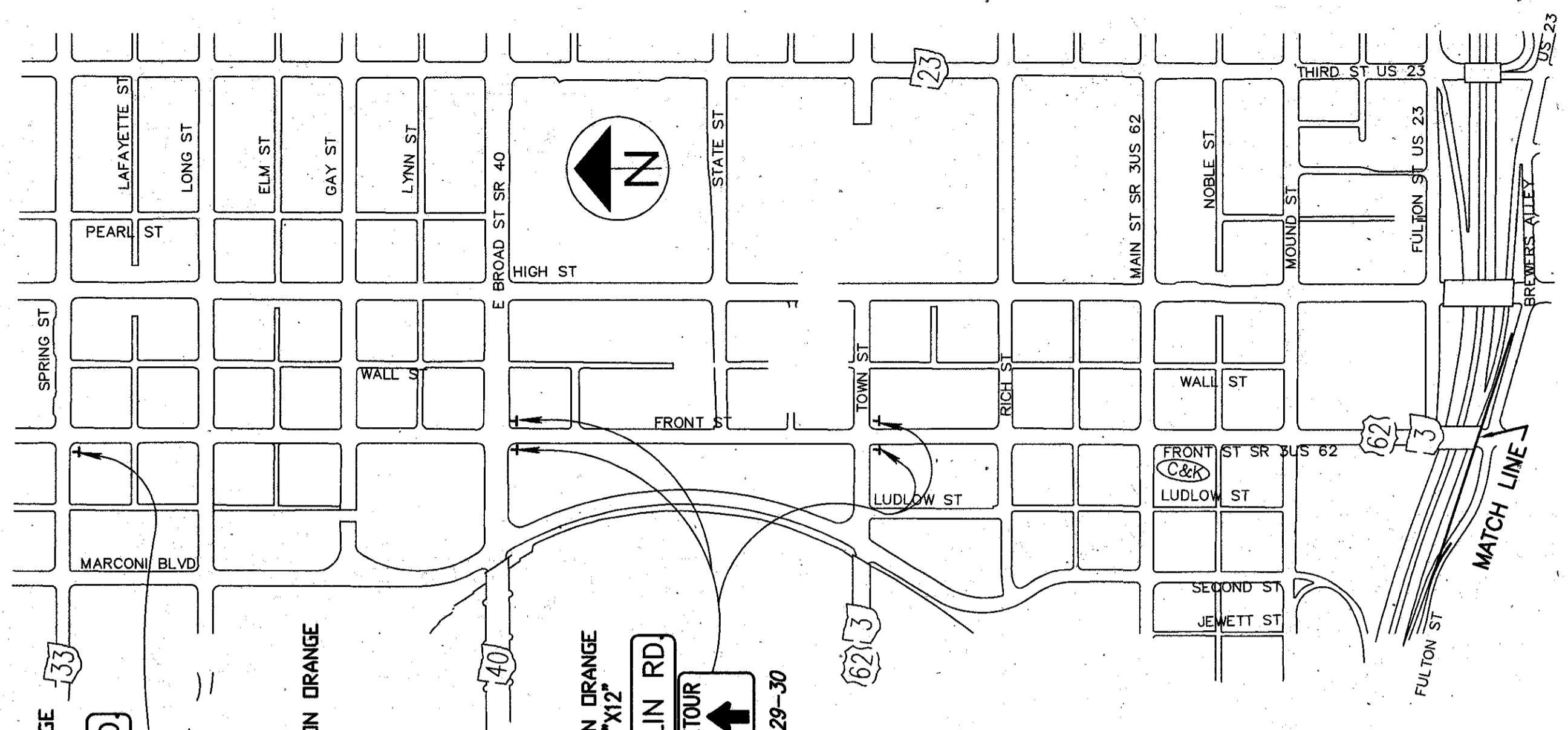


- CL - INDICATES EXISTING
- DL - DOTTED LINE
- EL - EDGE LINE
- CL - CHANNELIZING LINE
- PCB - PORTABLE CONCRETE BARRIER
- TL - TRANSVERSE LINE

	614	614
	SIGN TEMPORARY OVERLAY TYPE-H	SIGN EXTRASHEET TYPE-H
	SQ. FT.	SQ. FT.
TOTAL	208	218

[C:\GIS] - I:\TRANS\SRS315-CD\NOTA\DET03.DWG - OCT 20, 1997 - 14:27:18 - SCALE = 1:30.21

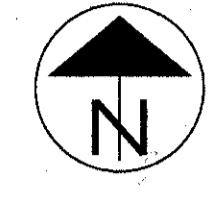
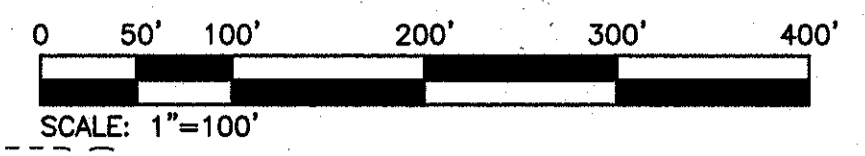
[C:\G1] - I:\TRANS\SR315-03\WOT\DETOUR.DWG - OCT 20, 1997 - 15:52:59 - SCALE = 1/320



CALC. BY: _____
 DATE: _____
 CHKD. BY: _____
 DATE: _____

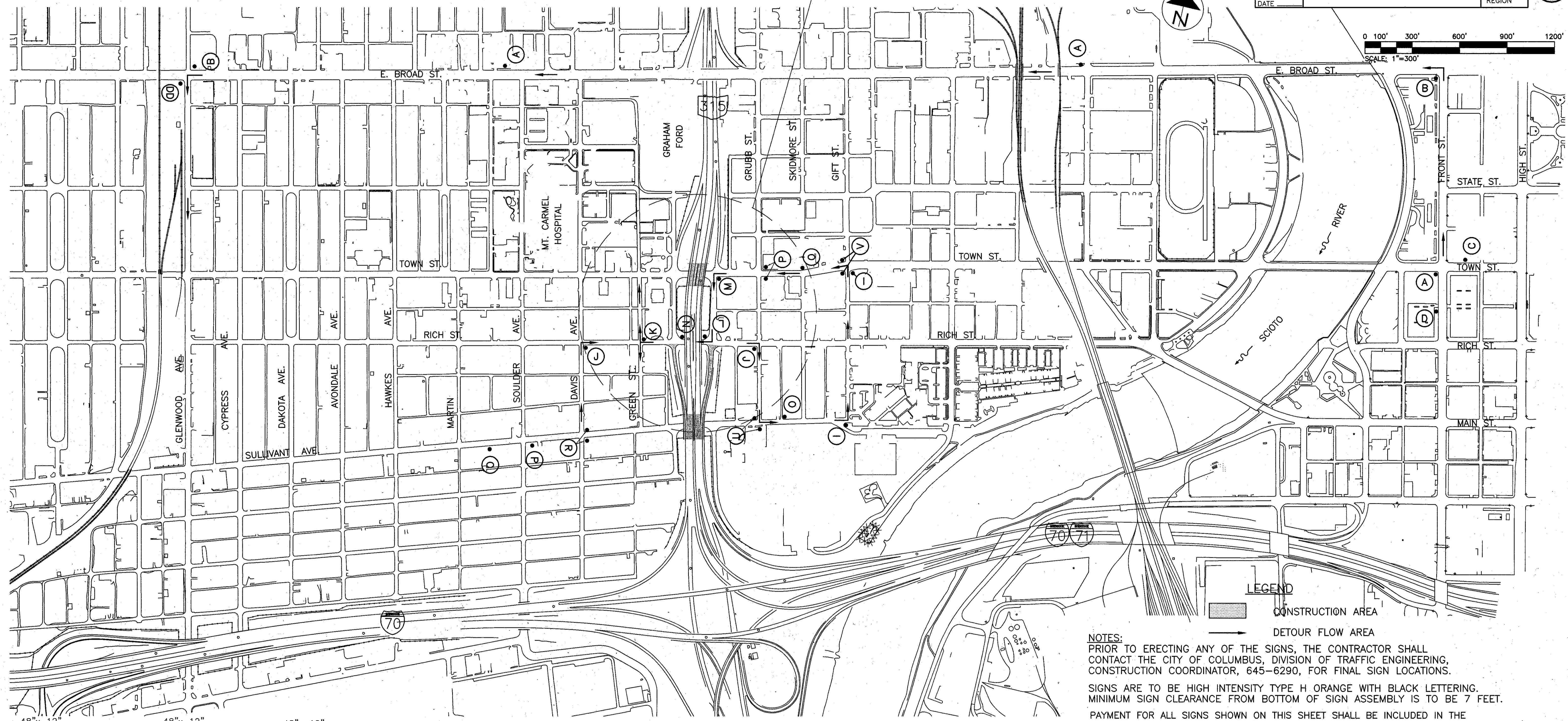
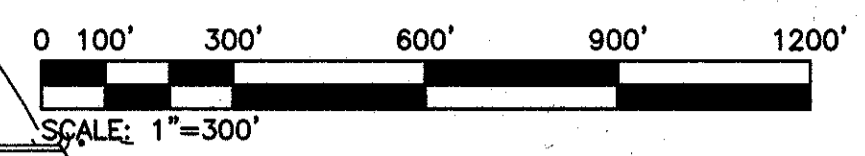
FRANKLIN COUNTY
 FRA-315-0.48

OHIO
 FHWA REGION 5
 14-G
 163



614
SIGN EXTRUSHEET TYPE-H
SQ. FT.
64

NOTE: FOR ADDITIONAL PHASE 1 DETAILS
SEE SHEET NO. 14-1

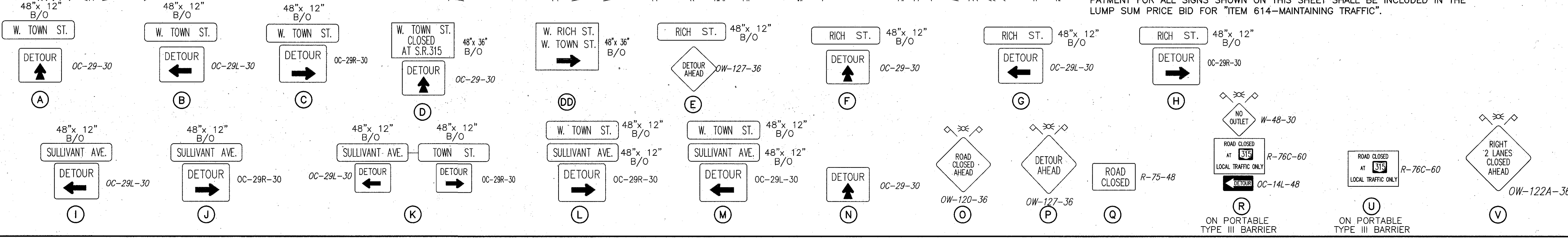


LEGEND
 [Hatched Area] CONSTRUCTION AREA
 [Arrow] DETOUR FLOW AREA

NOTES:
 PRIOR TO ERECTING ANY OF THE SIGNS, THE CONTRACTOR SHALL CONTACT THE CITY OF COLUMBUS, DIVISION OF TRAFFIC ENGINEERING, CONSTRUCTION COORDINATOR, 645-6290, FOR FINAL SIGN LOCATIONS.

SIGNS ARE TO BE HIGH INTENSITY TYPE H ORANGE WITH BLACK LETTERING. MINIMUM SIGN CLEARANCE FROM BOTTOM OF SIGN ASSEMBLY IS TO BE 7 FEET.

PAYMENT FOR ALL SIGNS SHOWN ON THIS SHEET SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR "ITEM 614-MAINTAINING TRAFFIC".



PHASE I DETOUR PLAN (DOWNTOWN SURFACE STREETS)

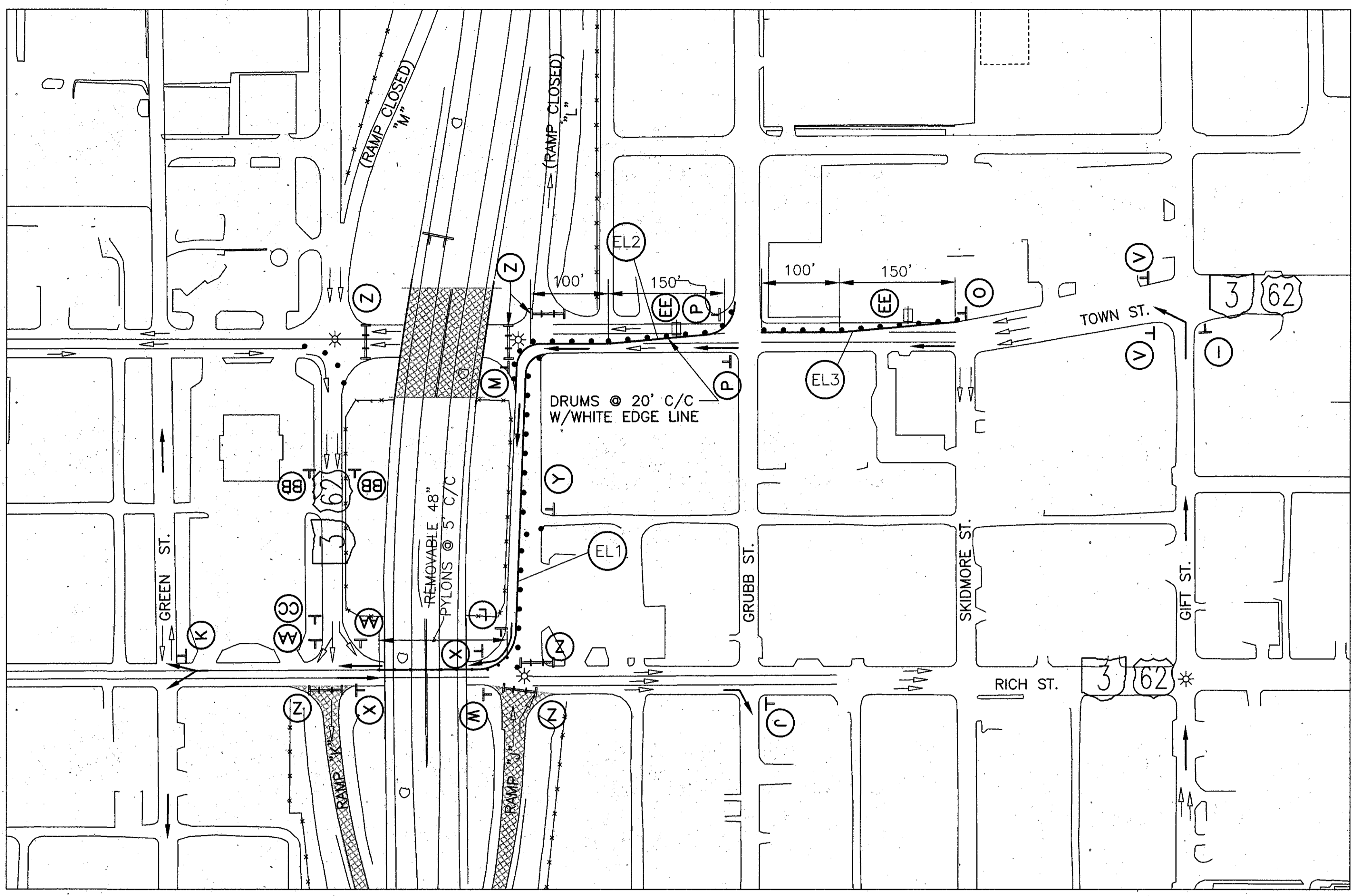
[C663] - I:\TRANS\SR315-CON\NOT\PH1\DETOUTR.DWG - OCT 22, 1997 - 15:28:34 - SCALE = 1:30



NOTES:
 SIGNS ARE TO BE HIGH INTENSITY TYPE H ORANGE WITH BLACK LETTERING. MINIMUM SIGN CLEARANCE FROM BOTTOM OF SIGN ASSEMBLY IS TO BE 7 FEET.
 PAYMENT FOR ALL SIGNS SHOWN ON THIS SHEET SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR "ITEM 614, MAINTAINING TRAFFIC".

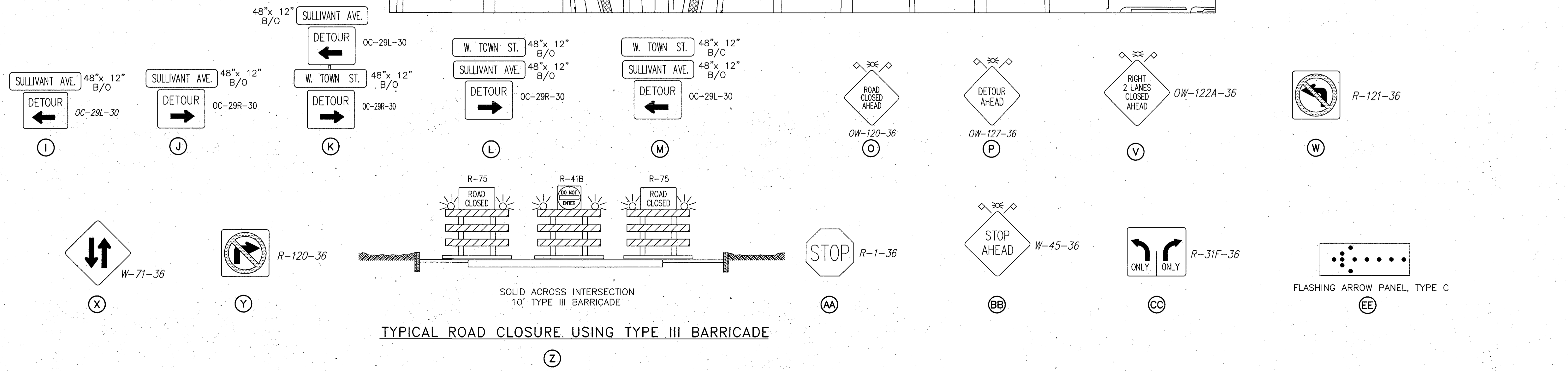
	614	614		
	TEMP. EDGE LINE, CLASS 1	SPECIAL REBOUNDABLE TUBULAR PYLON		
	MILE	EACH		
EL1	0.11	40		
EL2	0.07			
EL3	0.05			
TOTALS	0.23	40		

QUANTITIES FOR PAVEMENT MARKINGS AND PYLON LAYOUT ON THIS SHEET ARE APPROXIMATE ONLY. EXACT QUANTITIES WILL BE BASED ON FINAL FIELD MEASUREMENT. EXACT LOCATIONS ARE TO BE, AS DIRECTED BY THE ENGINEER.

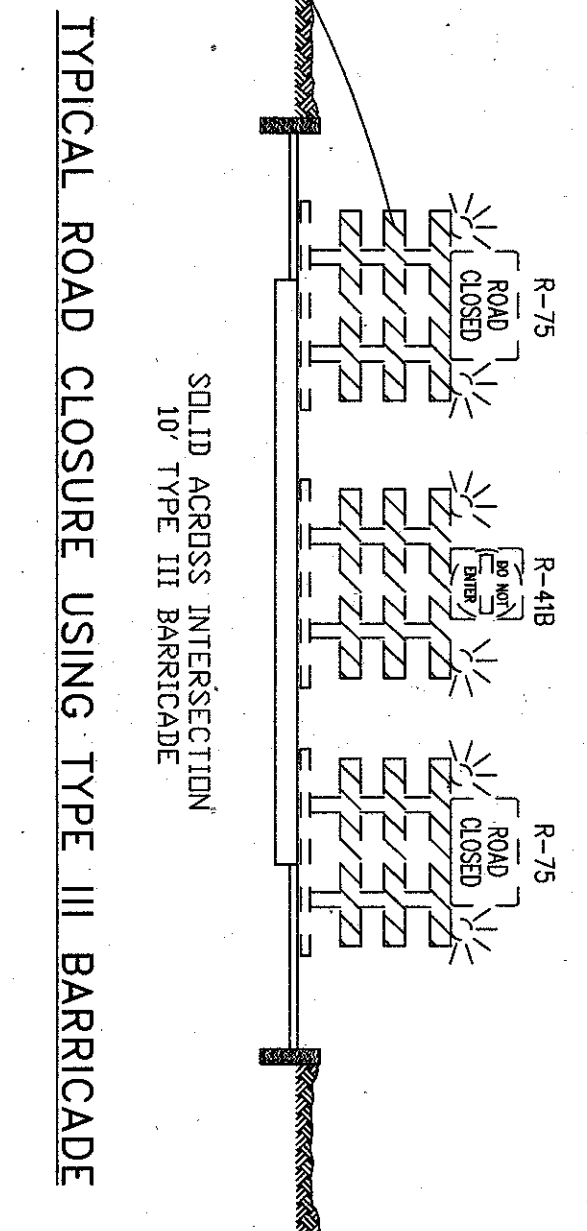
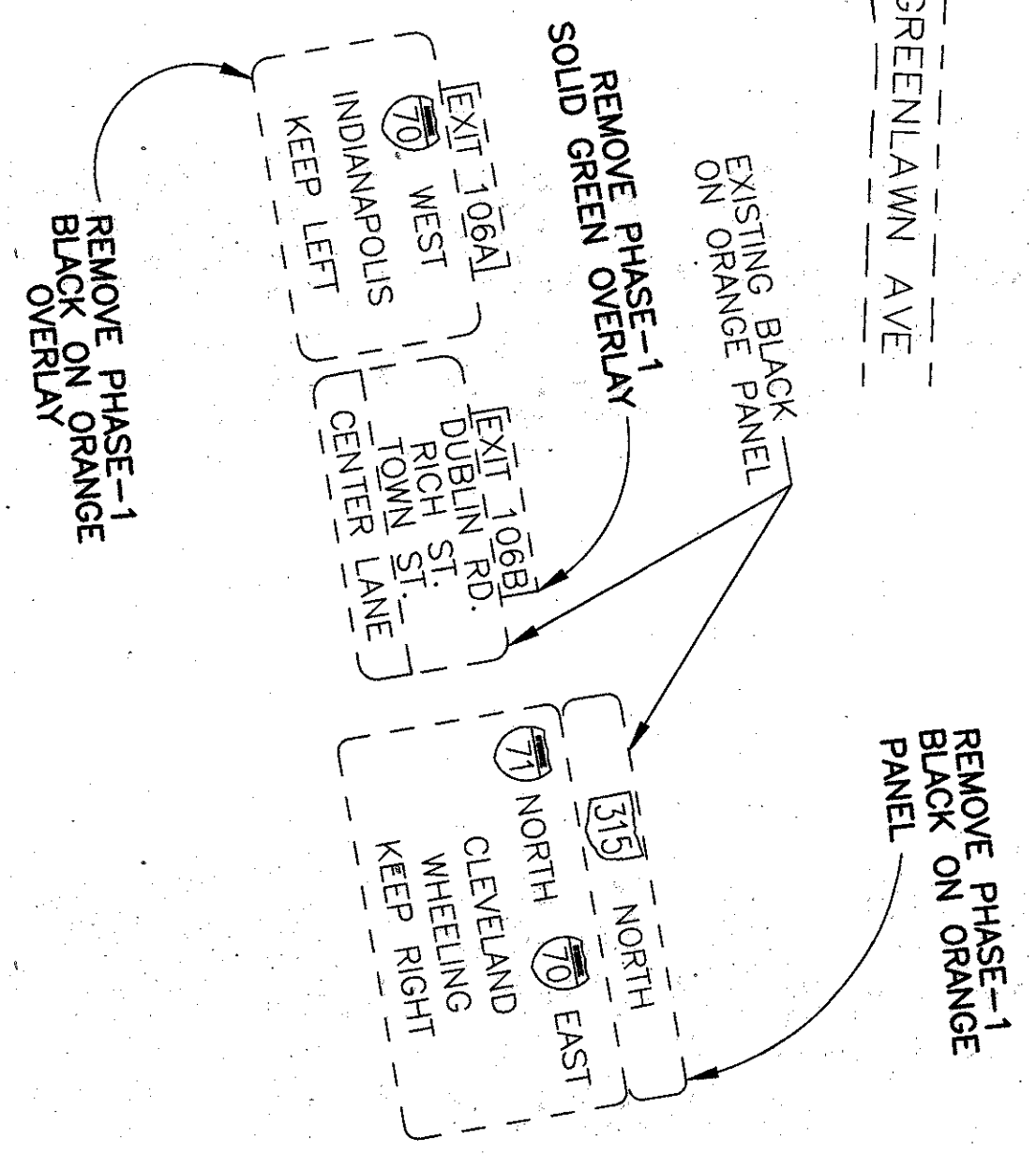
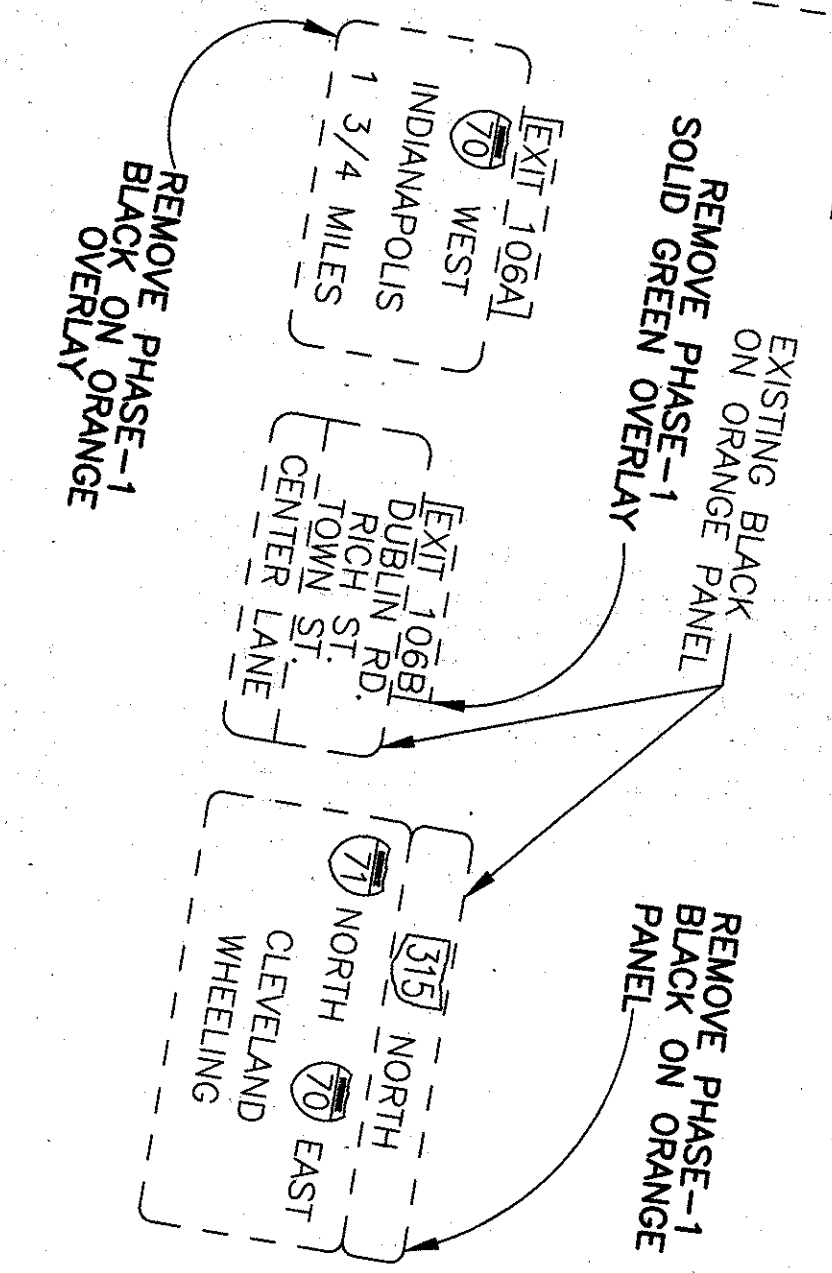
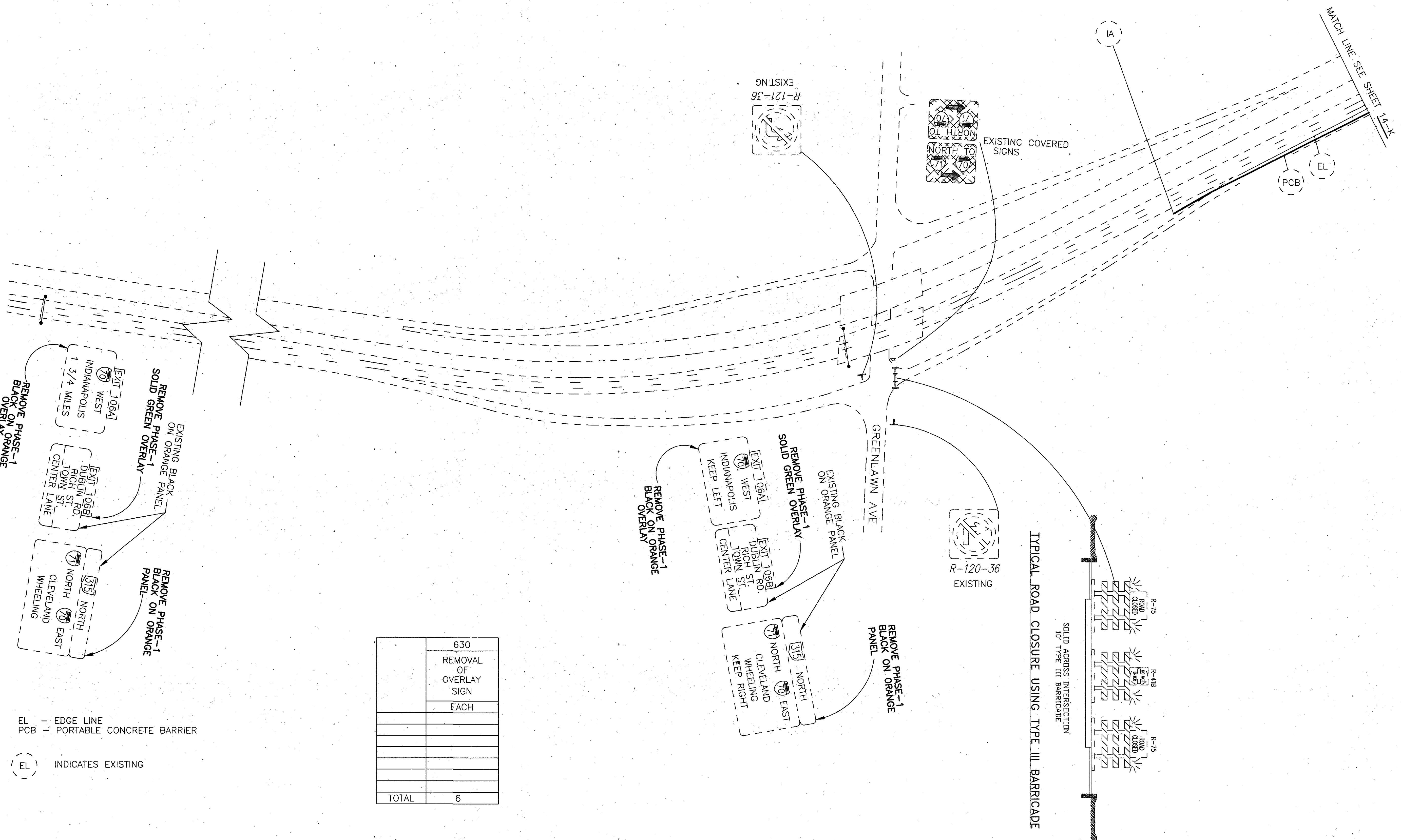
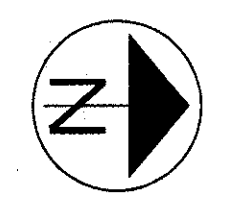


LEGEND

- CONSTRUCTION AREA
- EXISTING TRAFFIC FLOW
- DETOUR FLOW ARROW
- COVER EXISTING SIGNAL HEADS

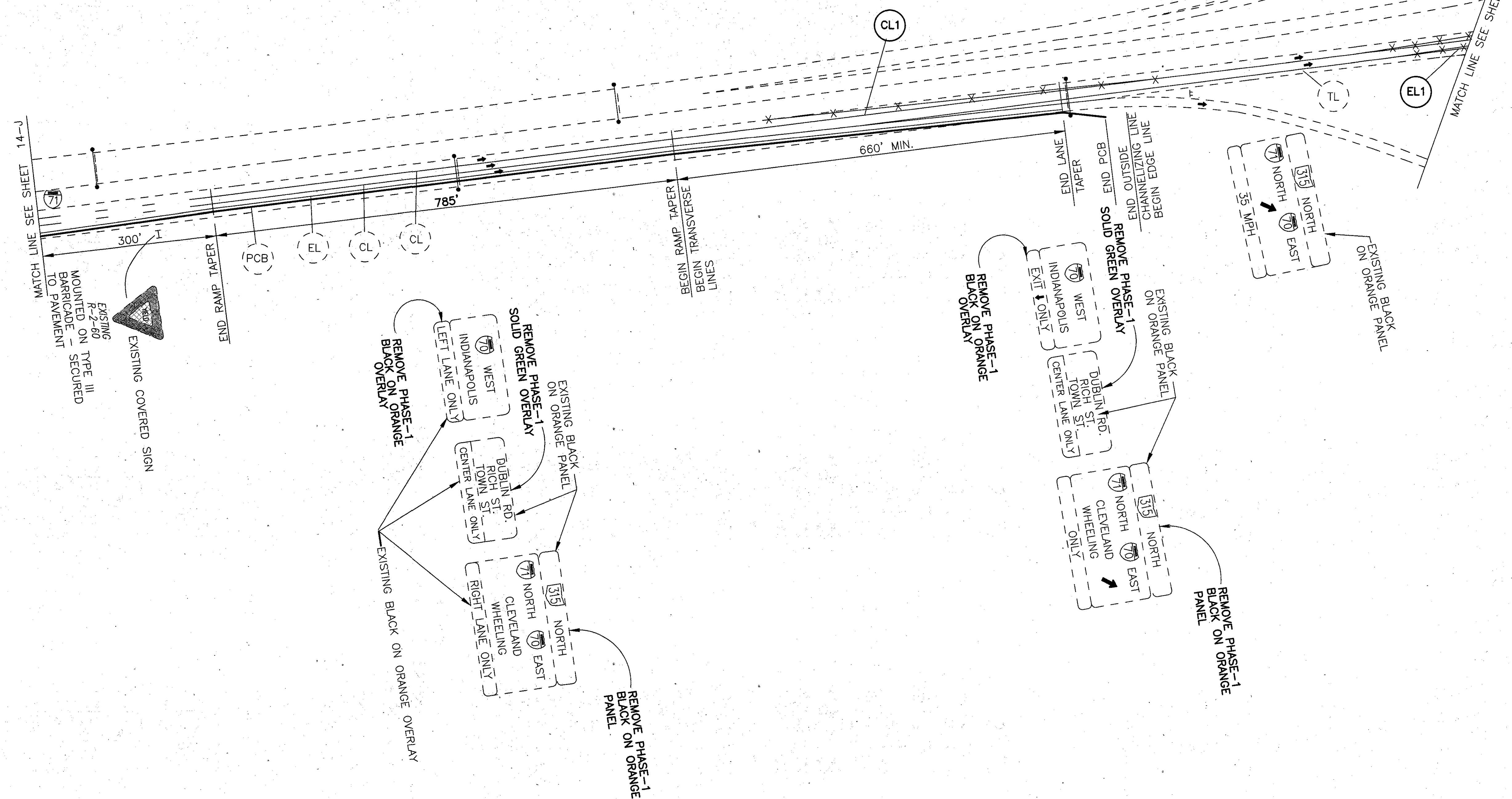
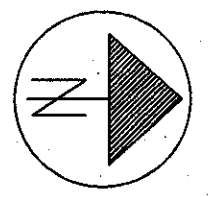


[C:\G1] - I:\TRANS\SR315-CD\NOT\PH1\DETOUR.DWG - OCT 20, 1997 - 16:52:22 - SCALE = 1:30



	630
REMOVAL OF OVERLAY SIGN	
EACH	
TOTAL	6

EL - EDGE LINE
 PCB - PORTABLE CONCRETE BARRIER
 (EL) INDICATES EXISTING

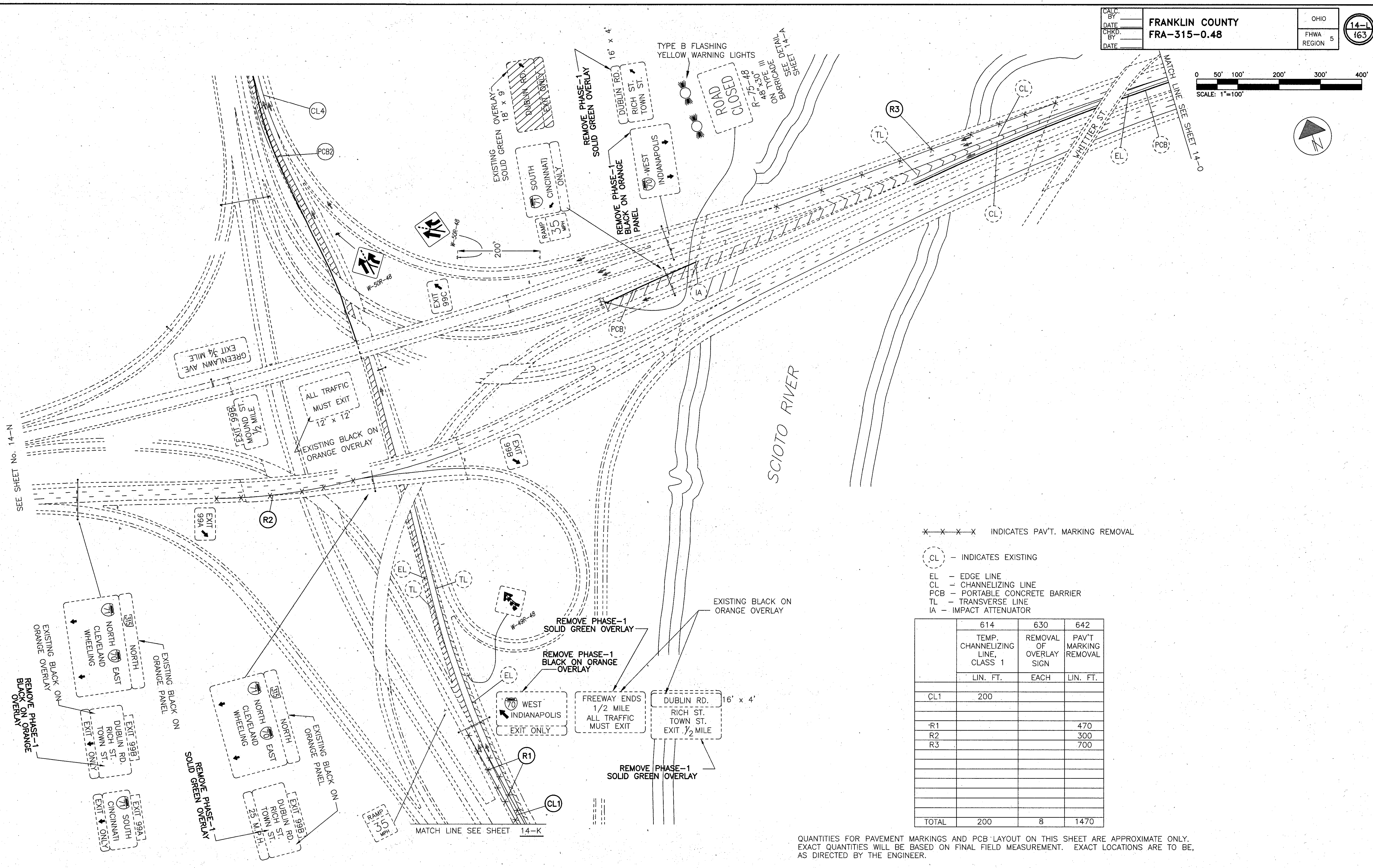
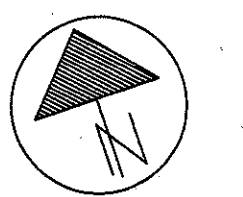
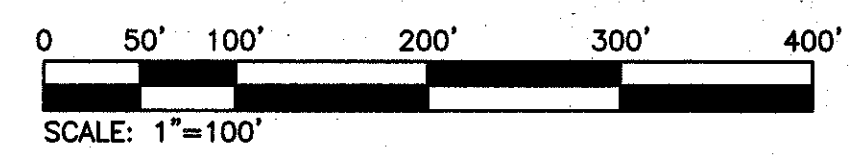


- X X X X INDICATES PAV'T. MARKING REMOVAL
- (CL) - INDICATES EXISTING
- EL - EDGE LINE
- CL - CHANNELIZING LINE
- PCB - PORTABLE CONCRETE BARRIER
- TL - TRANSVERSE LINE

	614	614	630	642
	TEMP. EDGE LINE, CLASS 1	TEMP. CHANNELIZING LINE, CLASS 1	REMOVAL OF OVERLAY SIGN	PAV'T MARKING REMOVAL
	MILE	LIN. FT.	EACH	LIN. FT.
EL1	0.03			150
CL1		1200		800
TOTALS	0.03	1200	6	950

QUANTITIES FOR PAVEMENT MARKINGS AND PCB LAYOUT ON THIS SHEET ARE APPROXIMATE ONLY. EXACT QUANTITIES WILL BE BASED ON FINAL FIELD MEASUREMENT. EXACT LOCATIONS ARE TO BE, AS DIRECTED BY THE ENGINEER.

[C:\61] - E:\TRANS\SR315-CO\WOT\DET01.DWG - OCT 20, 1997 - 09:05:28 - SCALE = 1:30.21



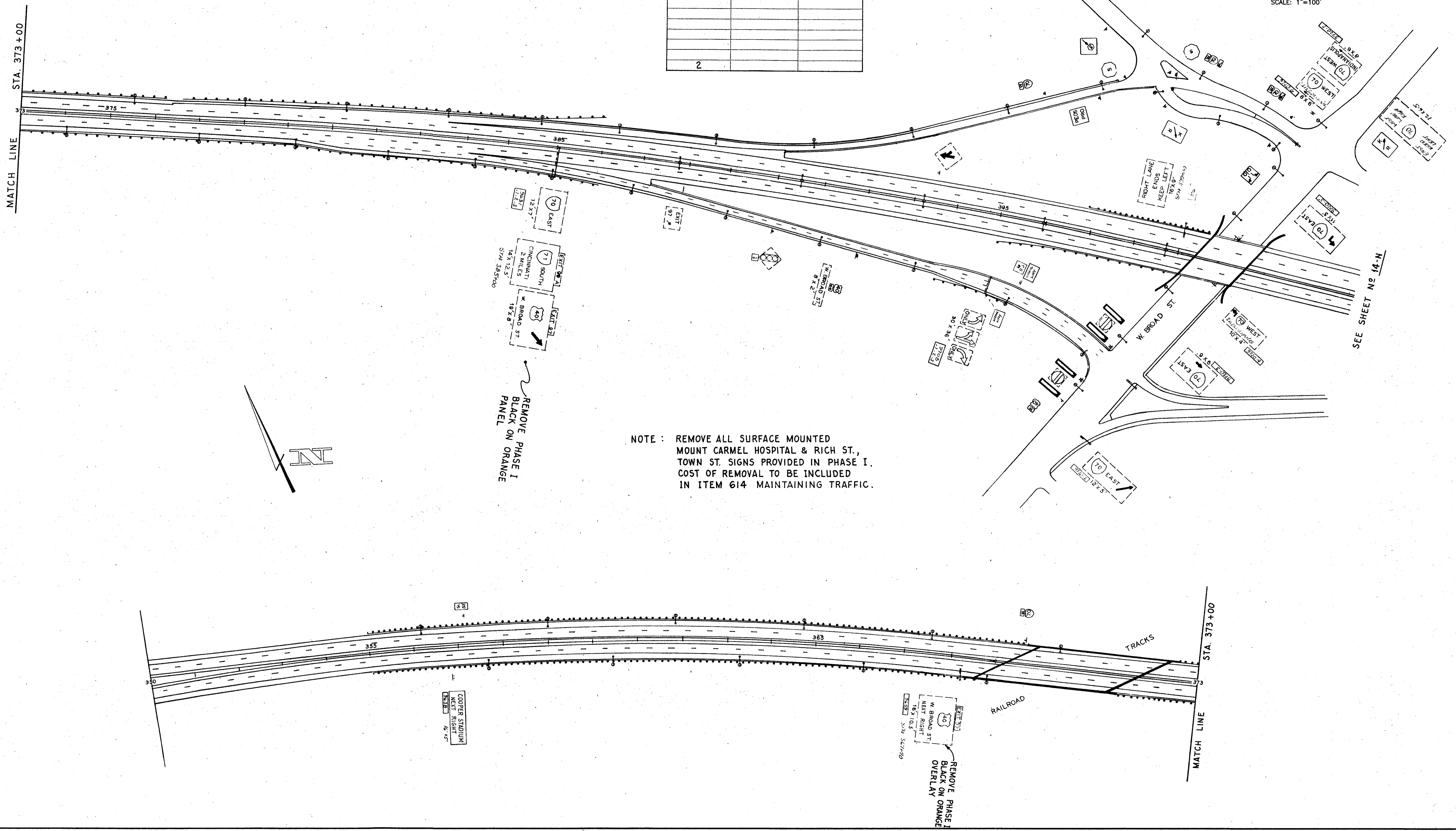
- × × × × INDICATES PAV'T. MARKING REMOVAL
- CL - INDICATES EXISTING
- EL - EDGE LINE
- CL - CHANNELIZING LINE
- PCB - PORTABLE CONCRETE BARRIER
- TL - TRANSVERSE LINE
- IA - IMPACT ATTENUATOR

	614	630	642
	TEMP. CHANNELIZING LINE, CLASS 1	REMOVAL OF OVERLAY SIGN	PAV'T MARKING REMOVAL
	LIN. FT.	EACH	LIN. FT.
CL1	200		
R1			470
R2			300
R3			700
TOTAL	200	8	1470

QUANTITIES FOR PAVEMENT MARKINGS AND PCB LAYOUT ON THIS SHEET ARE APPROXIMATE ONLY. EXACT QUANTITIES WILL BE BASED ON FINAL FIELD MEASUREMENT. EXACT LOCATIONS ARE TO BE, AS DIRECTED BY THE ENGINEER.

[C:\G7] - I:\TRANS\SR315-CO\NOT\DET02.DWG - OCT 20, 1997 - 09:50:20 - SCALE = 1:30.21

630		
REMOVAL OF OVERLAY SIGN		
EACH		
2		

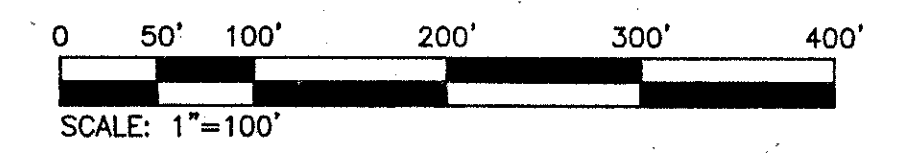


REMOVE PHASE I
BLACK ON ORANGE
PANEL

NOTE : REMOVE ALL SURFACE MOUNTED
MOUNT CARMEL HOSPITAL & RICH ST.,
TOWN ST. SIGNS PROVIDED IN PHASE I.
COST OF REMOVAL TO BE INCLUDED
IN ITEM 614 MAINTAINING TRAFFIC.

REMOVE PHASE I
BLACK ON ORANGE
OVERLAY

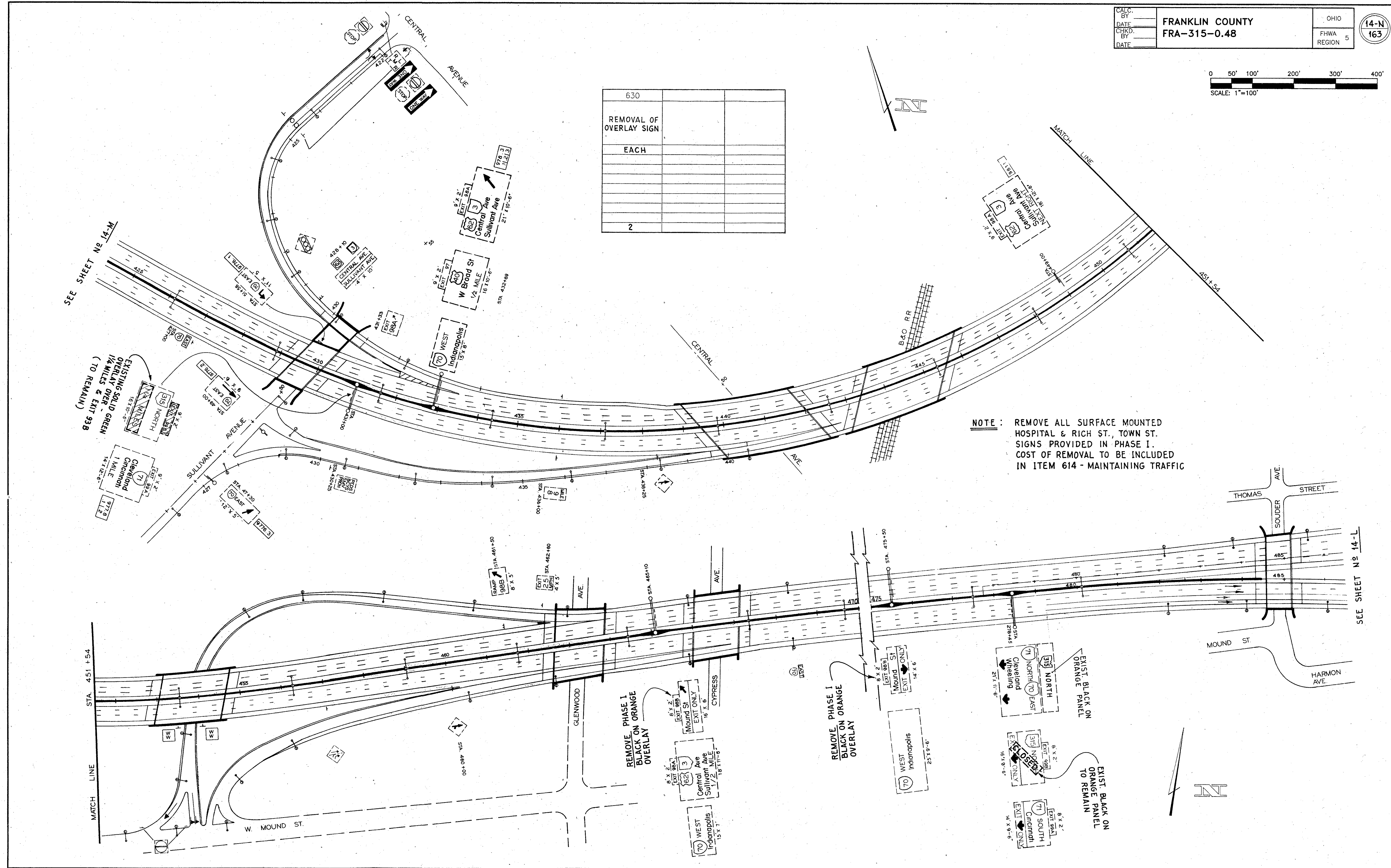
SEE SHEET NO 14-N



630		
REMOVAL OF OVERLAY SIGN		
EACH		
2		

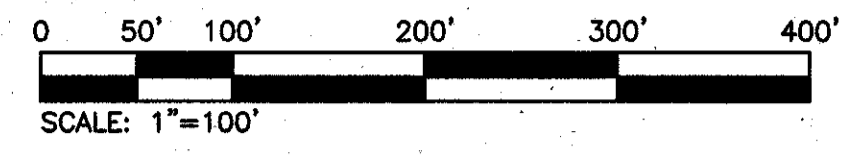
NOTE: REMOVE ALL SURFACE MOUNTED HOSPITAL & RICH ST., TOWN ST. SIGNS PROVIDED IN PHASE I. COST OF REMOVAL TO BE INCLUDED IN ITEM 614 - MAINTAINING TRAFFIC

PHASE II

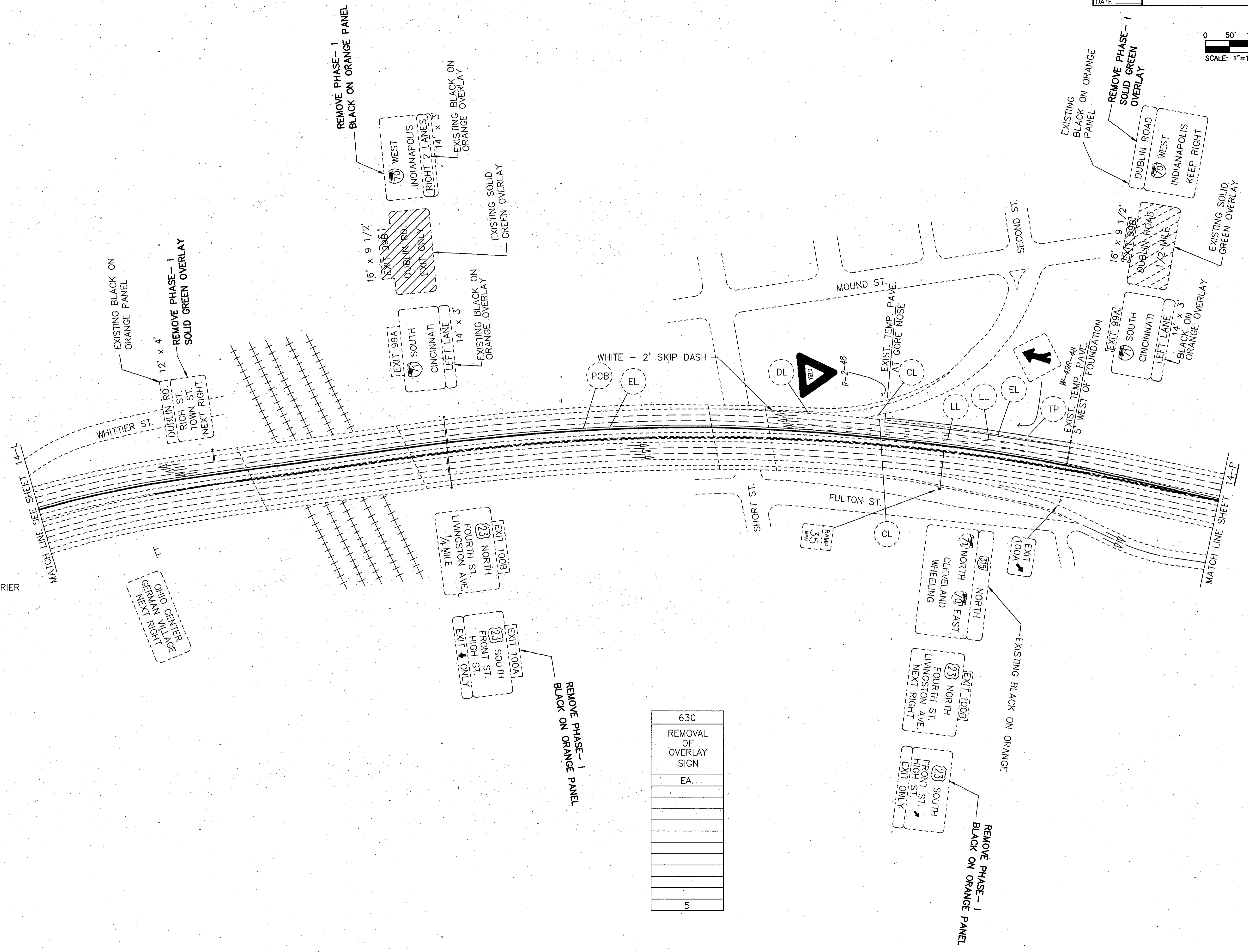


SEE SHEET No. 14-M

SEE SHEET No. 14-L

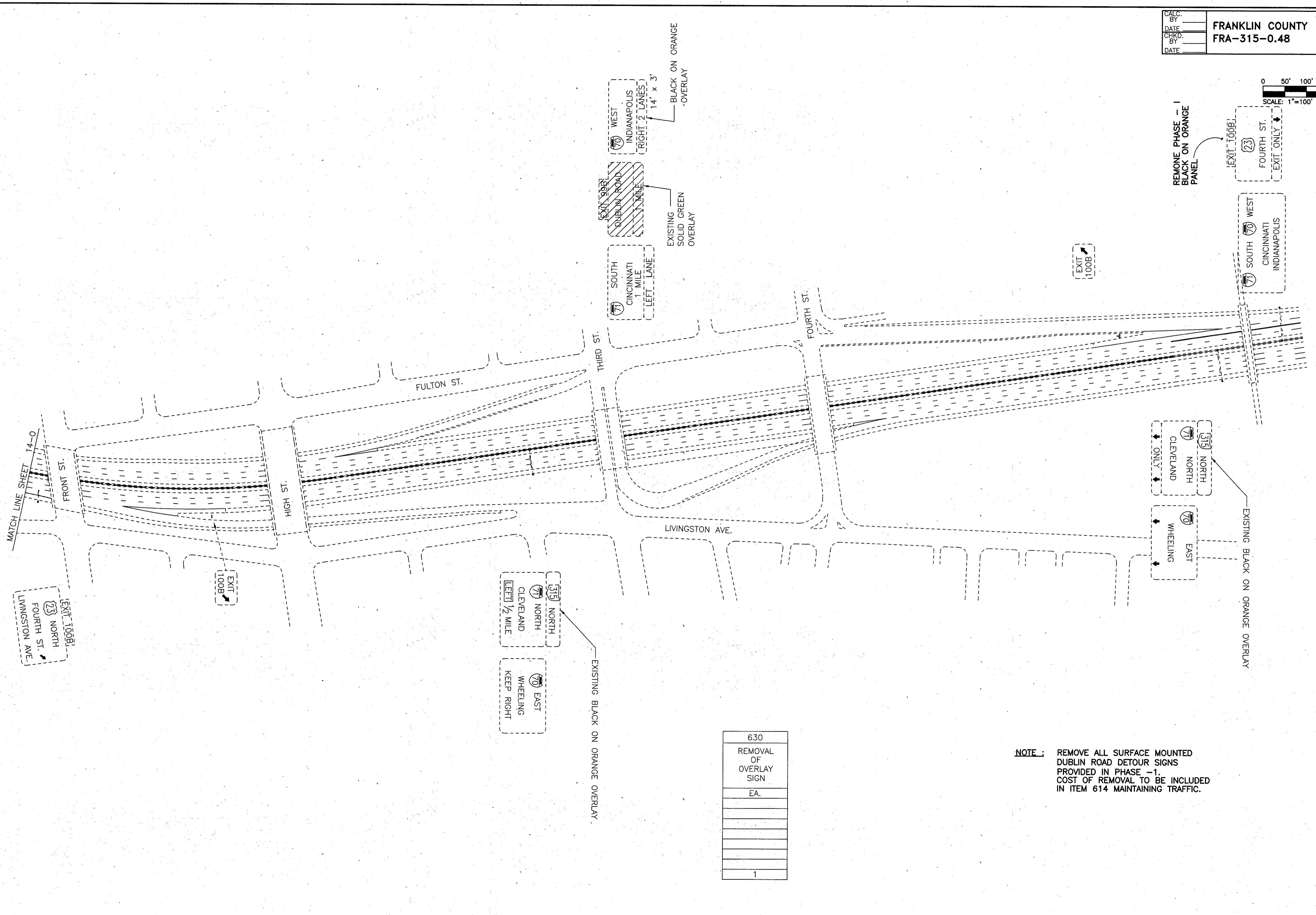
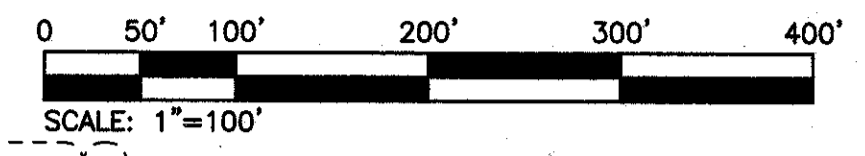


- CL - INDICATES EXISTING
- DL - DOTTED LINE
- EL - EDGE LINE
- CL - CHANNELIZING LINE
- PCB - PORTABLE CONCRETE BARRIER
- TL - TRANSVERSE LINE



630
REMOVAL OF OVERLAY SIGN
EA.
5

[C:\G6] - I:\TRANS\SRS315-CO\WOT\DET04.DWG - OCT 20, 1997 - 14:36:31 - SCALE = 1/30.21



EXISTING BLACK ON ORANGE OVERLAY

316 NORTH CLEVELAND ONLY

70 EAST WHEELING

EXIT 100B

EXIT 100B1

EXIT 100B2

WEST SOUTH CINCINNATI INDIANAPOLIS

WEST FOURTH ST. EXIT ONLY

EXISTING BLACK ON ORANGE OVERLAY

316 NORTH CLEVELAND LEFT 1/2 MILE

70 EAST WHEELING KEEP RIGHT

EXISTING BLACK ON ORANGE OVERLAY

EXISTING SOLID GREEN OVERLAY

EXIT 99B DUBLIN ROAD 1 MILE

14' x 3' BLACK ON ORANGE OVERLAY

WEST INDIANAPOLIS RIGHT 2 LANES

70 SOUTH CINCINNATI 1 MILE LEFT LANE

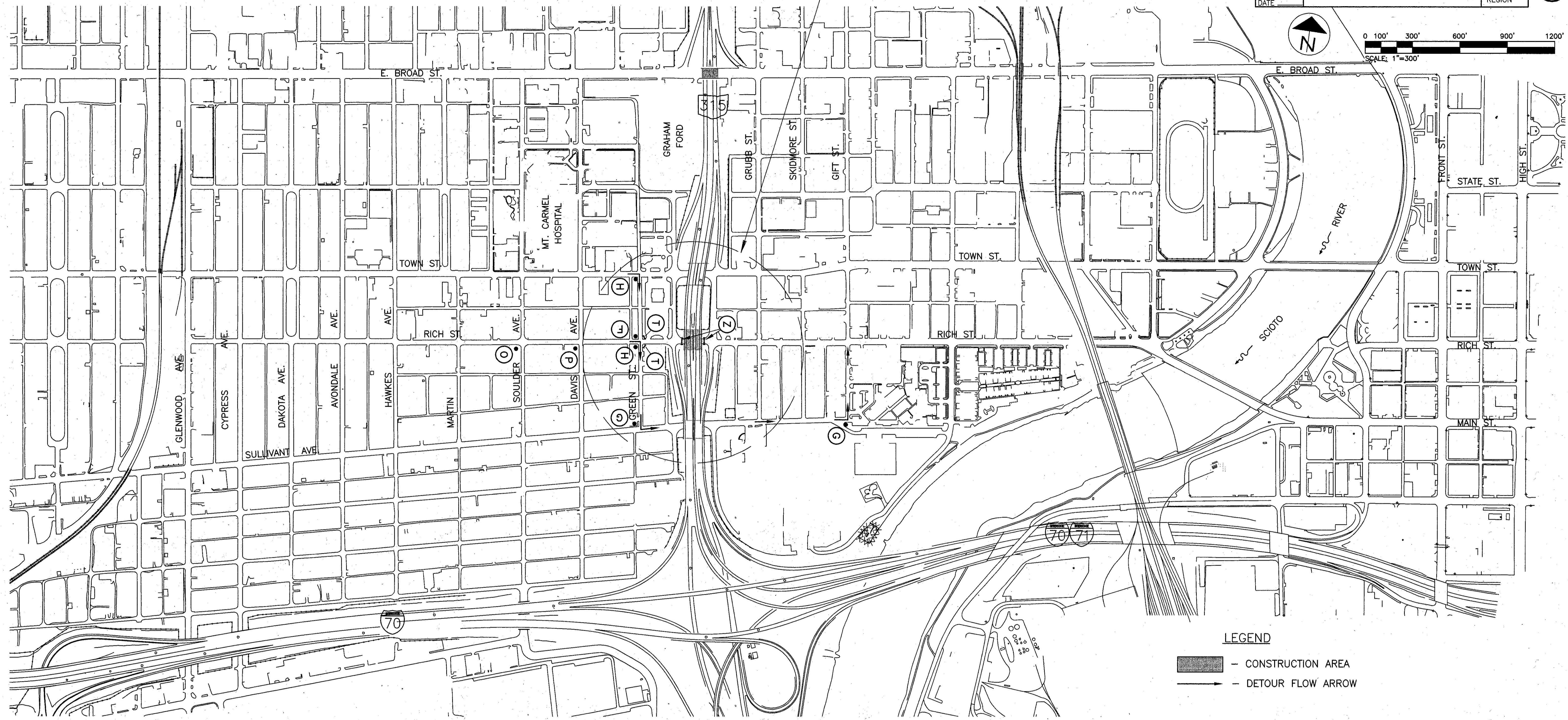
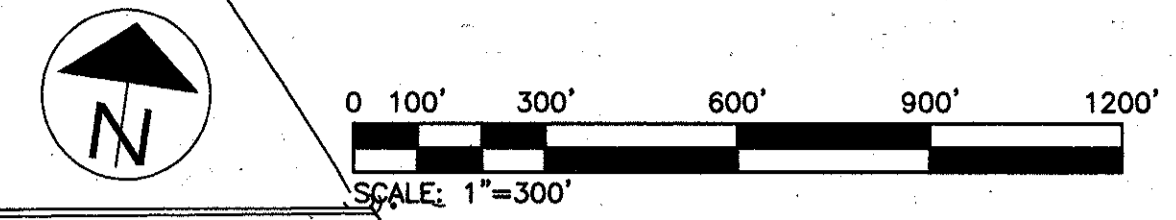
630
REMOVAL OF OVERLAY SIGN
EA.
1

NOTE : REMOVE ALL SURFACE MOUNTED DUBLIN ROAD DETOUR SIGNS PROVIDED IN PHASE -1. COST OF REMOVAL TO BE INCLUDED IN ITEM 614 MAINTAINING TRAFFIC.

[C:\6] - E:\TRANS\SFR315-CP\NOTA\DETOUR.DWG - OCT 13, 1997 - 15:33:28 - SCALE = 1:30.21

NOTE: FOR ADDITIONAL PHASE II DETAILS
SEE SHEET No. 14-R

CALC. BY	FRANKLIN COUNTY	OHIO	14-Q 163
DATE	FRA-315-0.48	FHWA REGION 5	
CHKD. BY			
DATE			



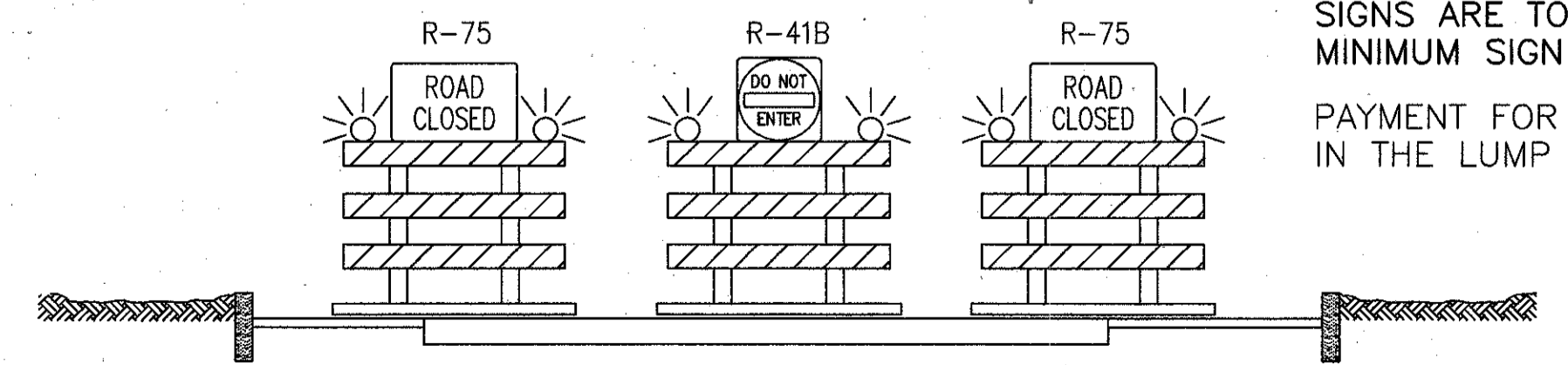
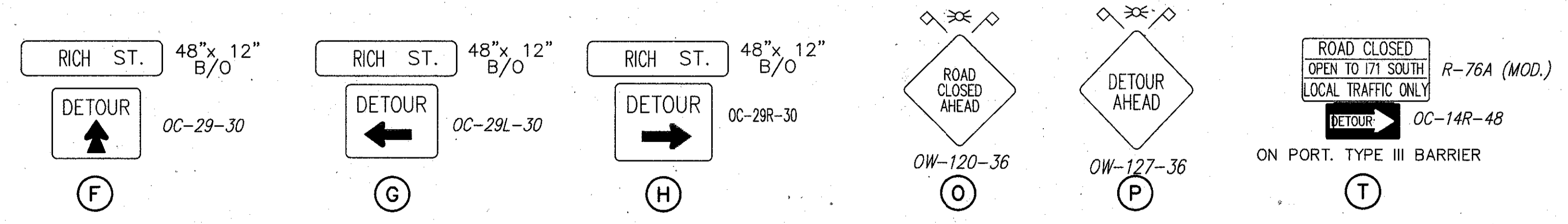
LEGEND

- CONSTRUCTION AREA
- DETOUR FLOW ARROW

NOTES:
PRIOR TO ERECTING ANY OF THE SIGNS, THE CONTRACTOR SHALL CONTACT THE CITY OF COLUMBUS, DIVISION OF TRAFFIC ENGINEERING, CONSTRUCTION COORDINATOR, 645-6290, FOR FINAL SIGN LOCATIONS.

SIGNS ARE TO BE HIGH INTENSITY TYPE H ORANGE WITH BLACK LETTERING. MINIMUM SIGN CLEARANCE FROM BOTTOM OF SIGN ASSEMBLY IS TO BE 7 FEET.

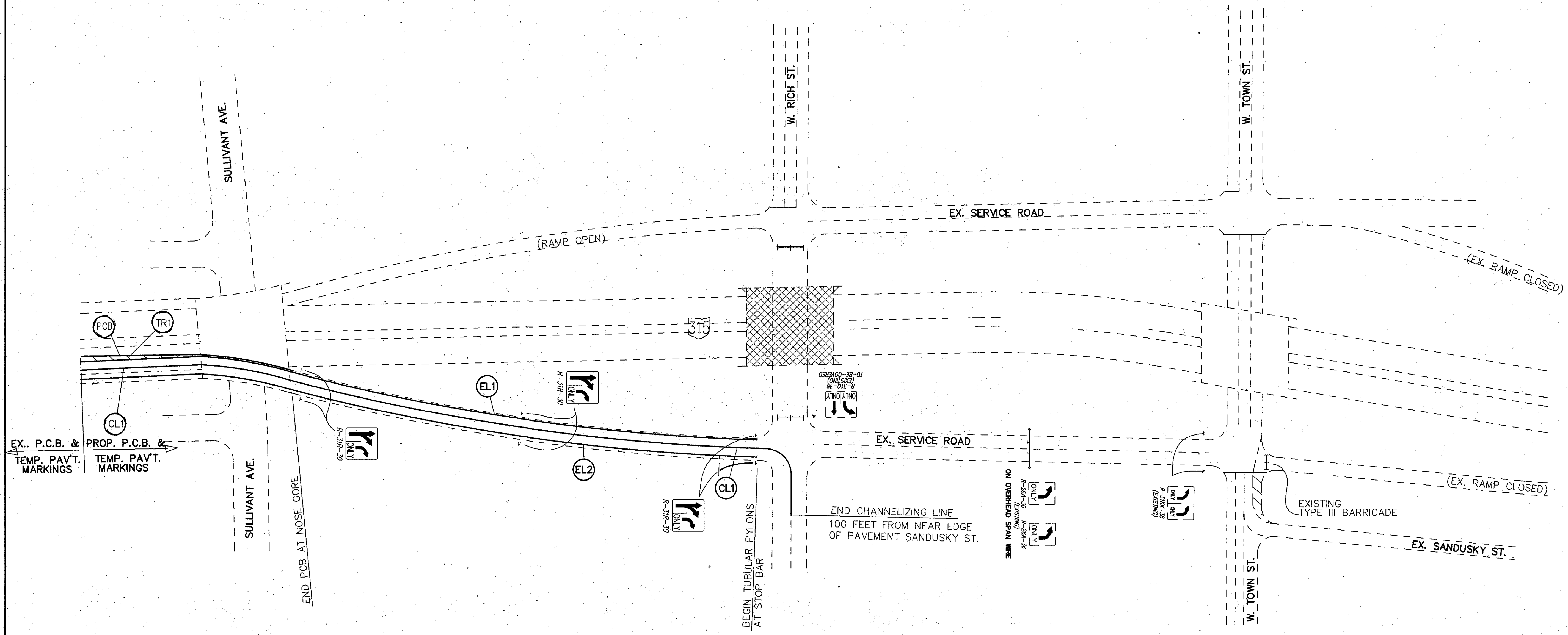
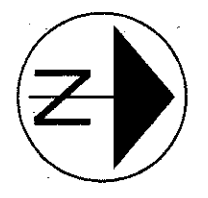
PAYMENT FOR ALL SIGNS SHOWN ON THIS SHEET SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR "ITEM 614-MAINTAINING TRAFFIC."



TYPICAL ROAD CLOSURE USING TYPE III BARRICADE

(Z)

[G6] - I:\TRANS\9315-CO\NOT\PH2DETOUR.DWG - OCT 08, 1997 - 15:44:10 - SCALE = 1:30



	614	614	614	622
	TEMP. CHANNELIZING LINE, CLASS 1	TEMP. EDGE LINE, CLASS 1	TEMP. TRANSVERSE LINE, CLASS 1	PORTABLE CONCRETE BARRIER 32"
	LIN. FT.	MILE	LIN. FT.	LIN. FT.
EL1		0.12		
EL2		0.12		
CL1	725			
TR1			180	
PCB				200
TOTAL	725	0.24	180	200

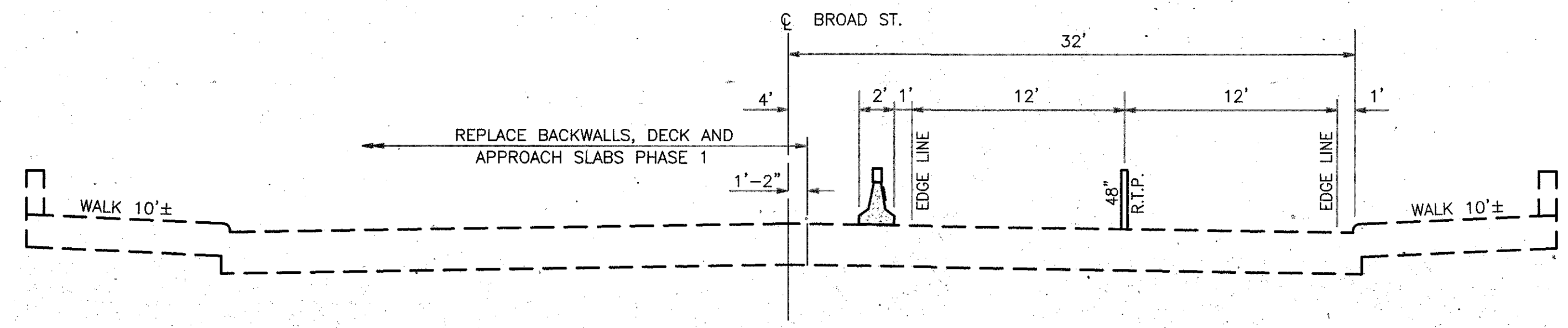
LEGEND

- CONSTRUCTION AREA
 EL - EDGE LINE
 CL - CHANNELIZING LINE
 PCB - PORTABLE CONCRETE BARRIER
 TL - TRANSVERSE LINE

NOTES:
 PRIOR TO ERECTING ANY OF THE SIGNS, THE CONTRACTOR SHALL CONTACT THE CITY OF COLUMBUS, DIVISION OF TRAFFIC ENGINEERING, CONSTRUCTION COORDINATOR, 645-6290, FOR FINAL SIGN LOCATIONS.
 SIGNS ARE TO BE HIGH INTENSITY TYPE H ORANGE WITH BLACK LETTERING. MINIMUM SIGN CLEARANCE FROM BOTTOM OF SIGN ASSEMBLY IS TO BE 7 FEET.
 PAYMENT FOR ALL SIGNS SHOWN ON THIS SHEET SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR "ITEM 614--MAINTAINING TRAFFIC."

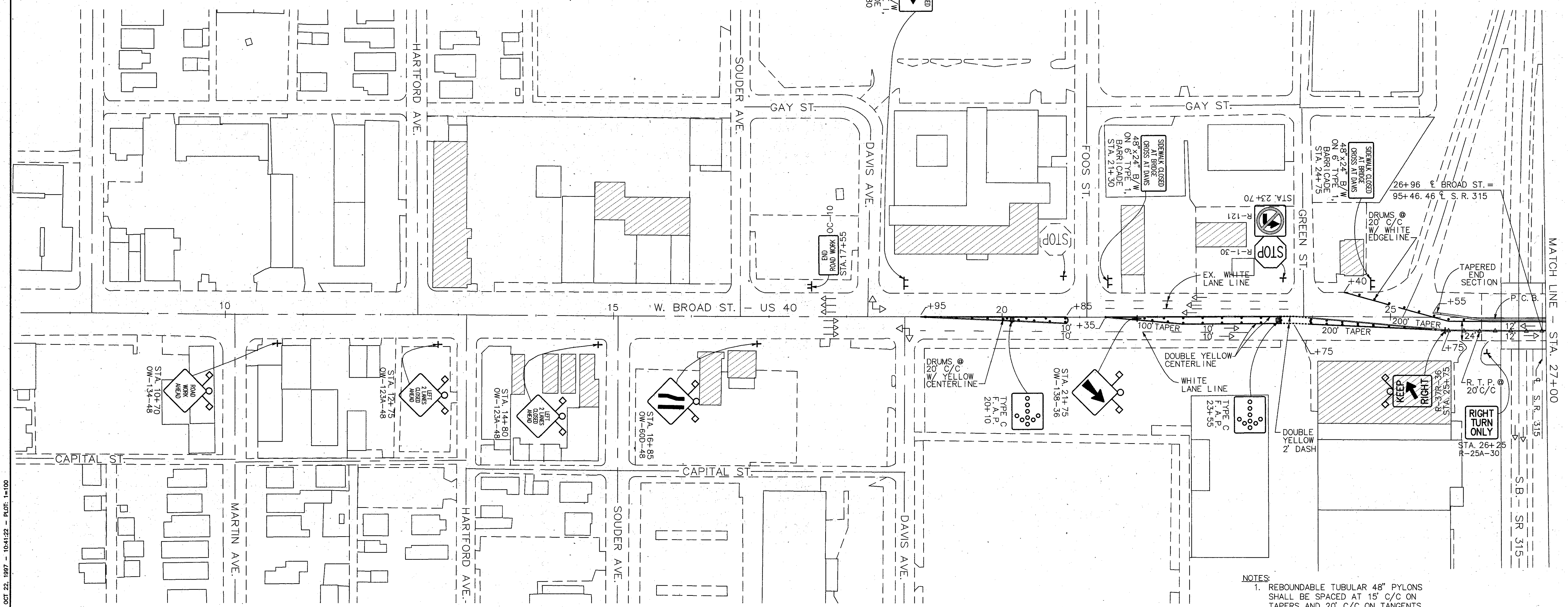
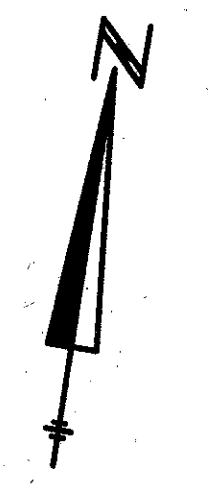
QUANTITIES FOR PAVEMENT MARKINGS AND PCB LAYOUT ON THIS SHEET ARE APPROXIMATE ONLY. EXACT QUANTITIES WILL BE BASED ON FINAL FIELD MEASUREMENT. EXACT LOCATIONS ARE TO BE, AS DIRECTED BY THE ENGINEER.

[C:\g6] - I:\TRANS\SR315-CD\NOT\DET1.DWG - NOV 20, 1997 - 09:28:54 - SCALE = 1:30.21



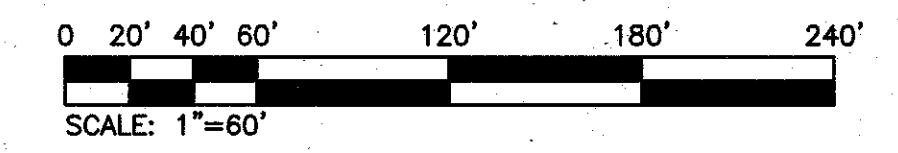
PHASE 1 - BROAD STREET BRIDGE SECTION

- LEGEND**
- BUILDING
 - DRUM: 6' RADII
20' TAPERS
25' TANGENTS
 - P.C.B. - PORTABLE CONCRETE BARRIER
 - F.A.P. - FLASHING ARROW PANEL
 - REBOUNDABLE TUBULAR 48" PYLON (R.T.P.)

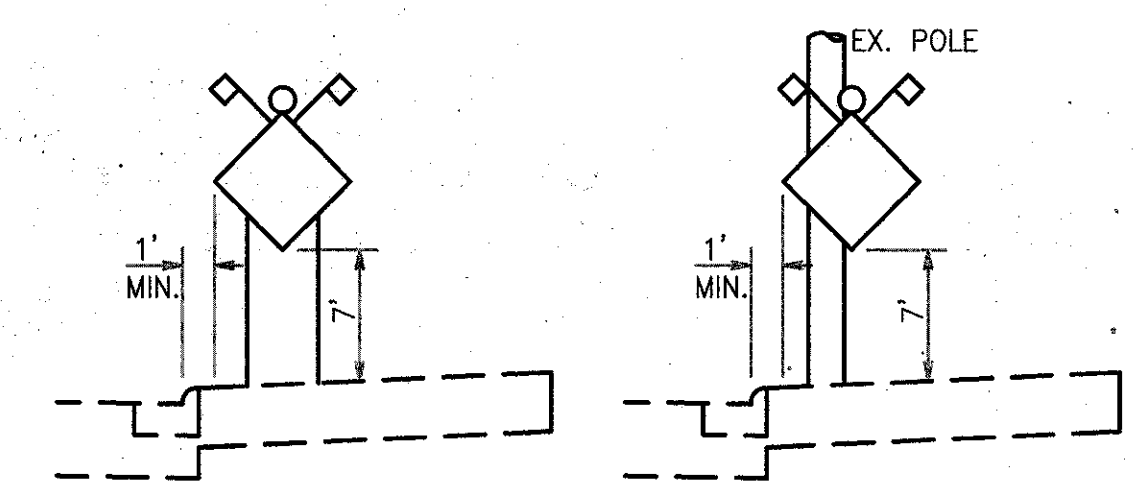
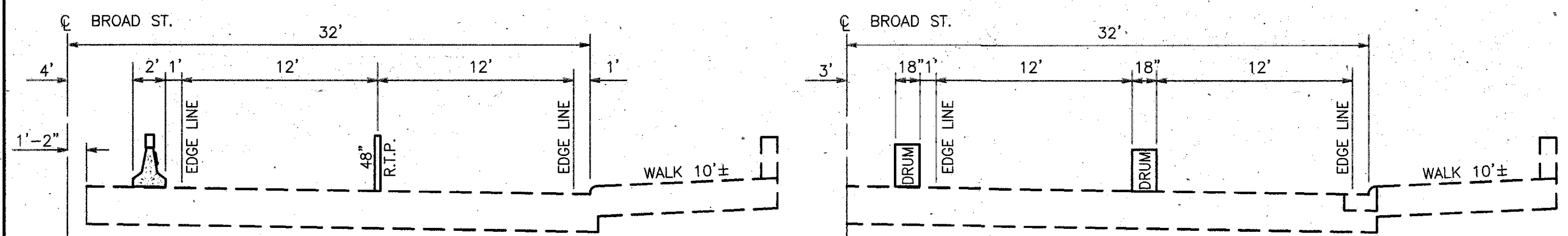


BROAD ST. BRIDGE
MAINTENANCE OF TRAFFIC
PHASE 1

- NOTES:**
- REBOUNDABLE TUBULAR 48" PYLONS SHALL BE SPACED AT 15' C/C ON TAPERS AND 20' C/C ON TANGENTS.
 - FOR BROAD ST. M.O.T. ESTIMATED QUANTITIES SEE GENERAL NOTES, SHEETS 11 & 12.
 - UPON COMPLETION OF THE PROJECT, RESTORE ALL PERMANENT PAVEMENT MARKINGS TO THEIR CURRENT LOCATION WITH THERMOPLASTIC MARKINGS. COST TO BE INCLUDED IN LUM SUM ITEM 614 MAINTAINING TRAFFIC.



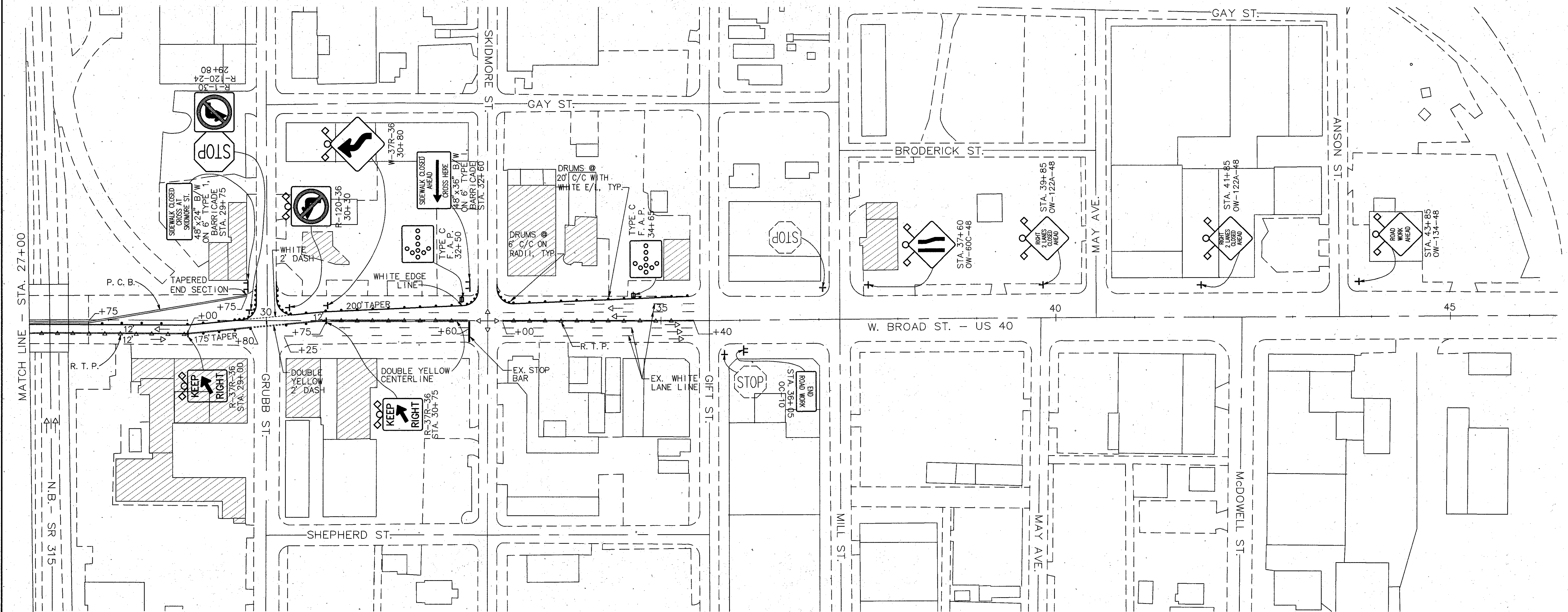
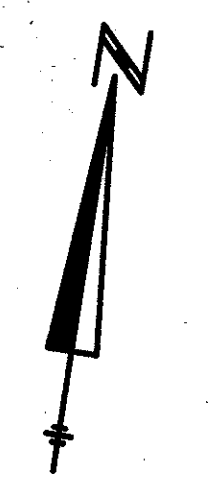
C:\TRANSPORT\SR315-CO\MOT\BSB-PH1A.DWG - OCT 22, 1997 - 10:41:22 - PLOT: 1=100



TYPICALS

NOTE: IF STEEL DRUMS ARE USED FOR MOUNTING SIGNS, THEY SHALL BE REFLECTORIZED, WELL BALLASTED AND HAVE SECURED LIDS.

- LEGEND**
- BUILDING
 - DRUM: 6' RADII
20' TAPERS
25' TANGENTS
 - F.A.P. - FLASHING ARROW PANEL
 - P.C.B. - PORTABLE CONCRETE BARRIER
 - REBOUNDABLE TUBULAR 48\"/>

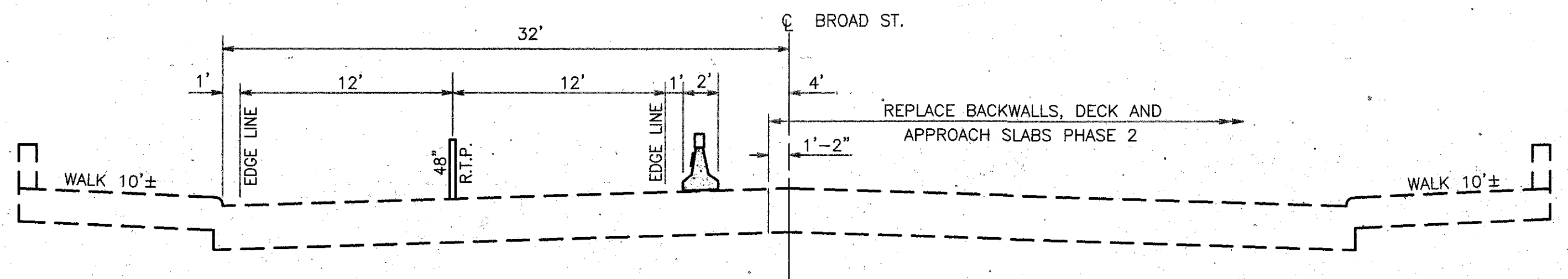


**BROAD ST. BRIDGE
MAINTENANCE OF TRAFFIC
PHASE 1**

- NOTES:**
- REBOUNDABLE TUBULAR 48\"/>
 - FOR BROAD ST. M.O.T. ESTIMATED QUANTITIES SEE GENERAL NOTES, SHEETS 11 & 12.
 - UPON COMPLETION OF THE PROJECT, RESTORE ALL PERMANENT PAVEMENT MARKINGS TO THEIR CURRENT LOCATION WITH THERMOPLASTIC MARKINGS. COST TO BE INCLUDED IN LUM SUM ITEM 614 MAINTAINING TRAFFIC.



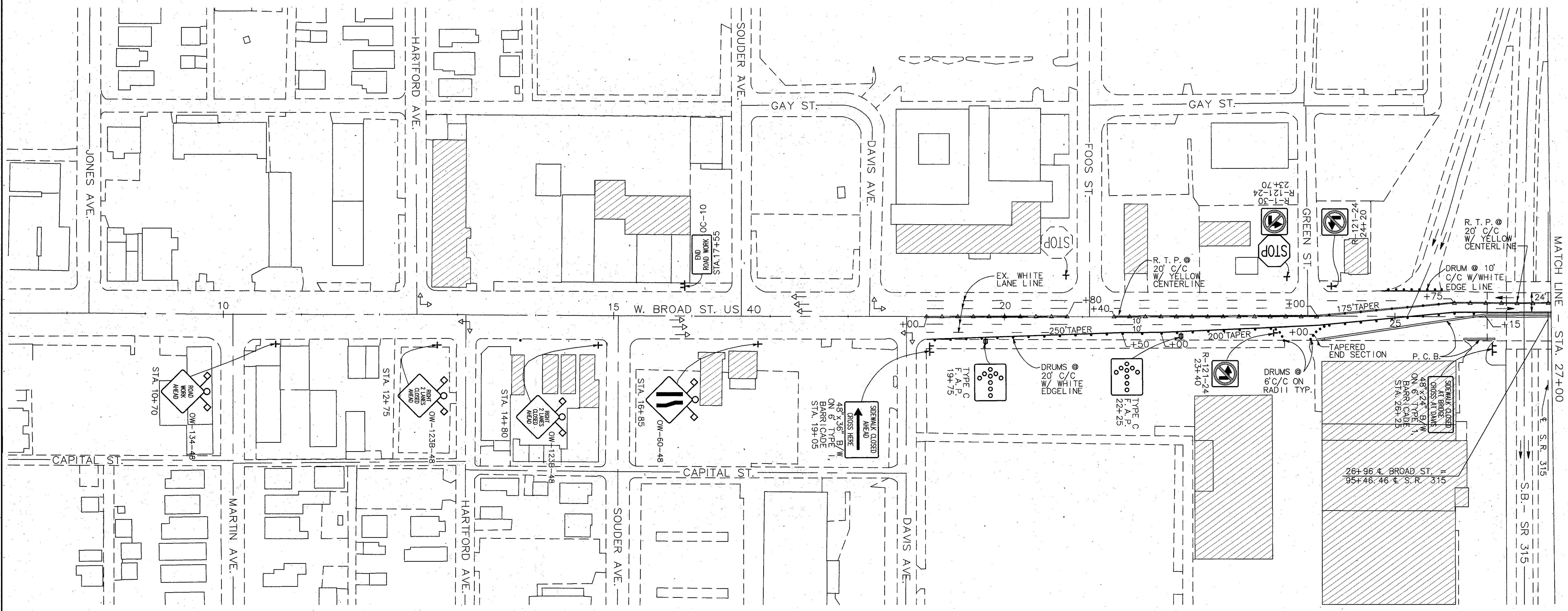
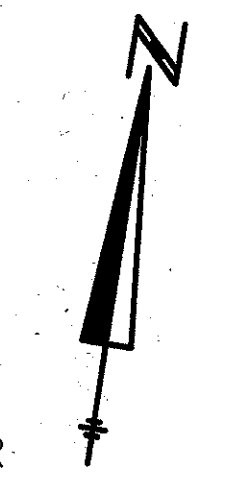
C:\XCP\TRANS\SR315-CD\MOT\ESP-FHIB.DWG - OCT 22, 1987 - 14:16:08 - PLOT: 1=100



PHASE 2 - BROAD STREET BRIDGE SECTION

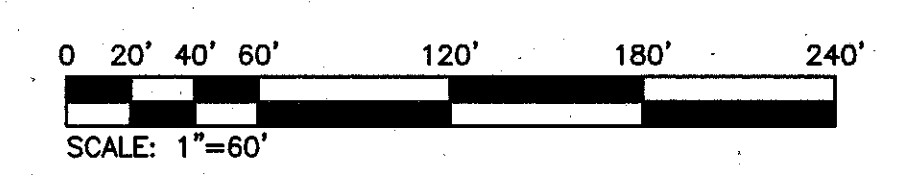
LEGEND

- BUILDING
- DRUM
- F.A.P. - FLASHING ARROW PANEL
- P.C.B. - PORTABLE CONCRETE BARRIER
- REBOUNDABLE TUBULAR 48" PYLON (R.T.P.)

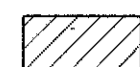




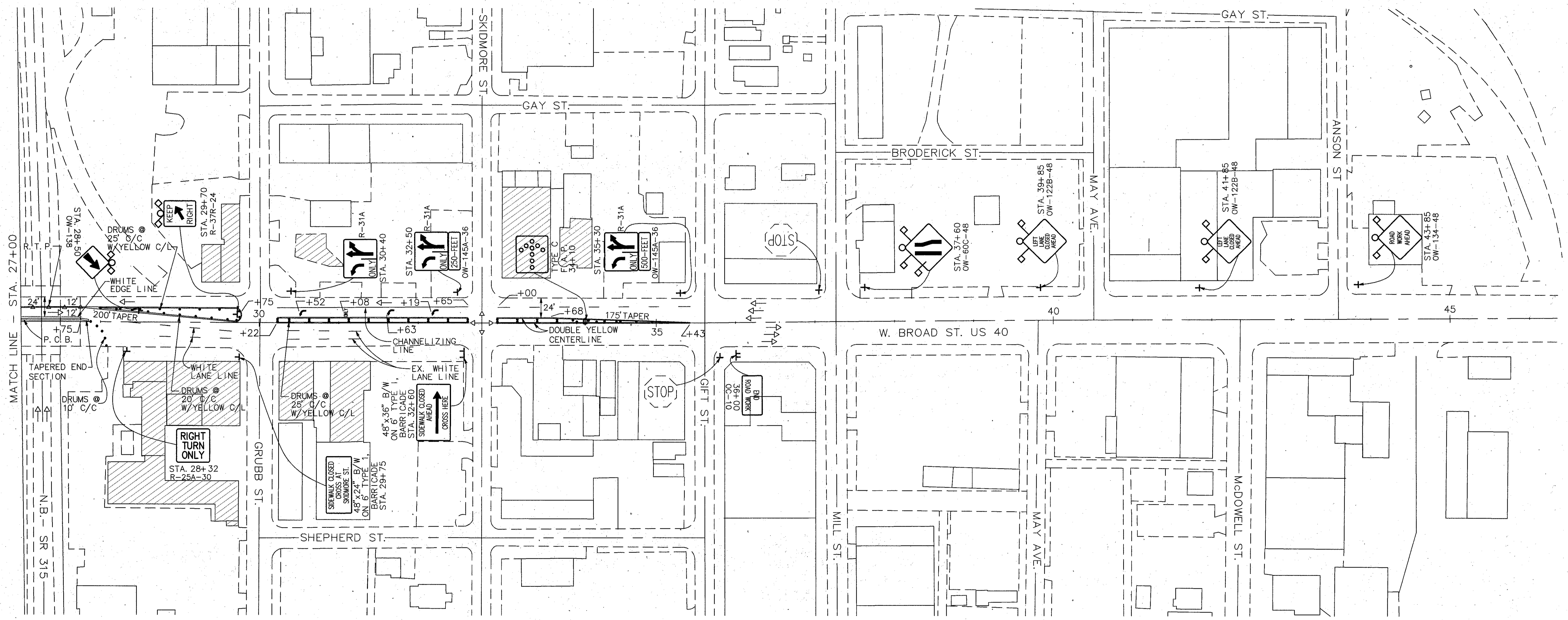
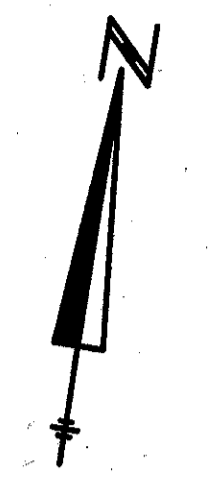
BROAD ST. BRIDGE MAINTENANCE OF TRAFFIC PHASE 2

- NOTES:**
- REBOUNDABLE TUBULAR 48" PYLONS SHALL BE SPACED AT 15' C/C ON TAPERS AND 20' C/C ON TANGENTS.
 - FOR BROAD ST. M.O.T. ESTIMATED QUANTITIES SEE GENERAL NOTES, SHEETS 11 & 12.
 - UPON COMPLETION OF THE PROJECT, RESTORE ALL PERMANENT PAVEMENT MARKINGS TO THEIR CURRENT LOCATION WITH THERMOPLASTIC MARKINGS. COST TO BE INCLUDED IN LUM SUM ITEM 614 MAINTAINING TRAFFIC.



[XXX] \TRANS\SR315-CD\MOI\SSB-PH2A.DWG - OCT 22, 1997 - 14:12:42 - PLOT: 1=100

- LEGEND**
-  - BUILDING
 -  - DRUM
 - P.C.B. - PORTABLE CONCRETE BARRIER
 -  - REBOUNDABLE TUBULAR 48" PYLON (R.T.P.)
 - F.A.P. - FLASHING ARROW PANEL



BROAD ST. BRIDGE MAINTENANCE OF TRAFFIC PHASE 2

- NOTES:**
1. REBOUNDABLE TUBULAR 48" PYLONS SHALL BE SPACED AT 15' C/C ON TAPERS AND 20' C/C ON TANGENTS.
 2. FOR BROAD ST. M.O.T. ESTIMATED QUANTITIES SEE GENERAL NOTES, SHEETS 11 & 12.
 3. UPON COMPLETION OF THE PROJECT, RESTORE ALL PERMANENT PAVEMENT MARKINGS TO THEIR CURRENT LOCATION WITH THERMOPLASTIC MARKINGS. COST TO BE INCLUDED IN LUM SUM ITEM 614 MAINTAINING TRAFFIC.



[X:\TRANS\315-CO\MOT\BSB-PH2B.DWG - OCT 22, 1997 - 14:05:54 - PLOT: 1=100

E.P.A. = END POST ASSEMBLY
 C.P.A. = CORNER POST ASSEMBLY
 I.A.P.A. = INTERMEDIATE ANCHOR POST ASSEMBLY

SHEET NO.	REF. NO.	STATION AND OFFSET		TYPE OF ASSEMBLY	607 FENCE CLT	202 FENCE REMOVED (CLT)
		FROM	TO			
		CODE	LIN. FT.			
48	1-F	73+83 ±, 67.0'± LT. @ ABUT.	73+78, 135.0' LT. @ S.R. 315	E.P.A.	68	68
		73+78, 135.0' LT. @ S.R. 315	4+00, LT. @ RAMP "K"	C.P.A.	203	203
	2-F	73+95 ±, 74.0'± RT. @ ABUT.	74+00, 135.0' RT. @ S.R. 315	E.P.A.	61	61
		74+00, 135.0' RT. @ S.R. 315	4+00, RT. @ RAMP "J"	C.P.A.	188	188
49	3-F	4+00, LT. @ RAMP "K"	4+66, 45' LT. @ RAMP "K"	C.P.A.	70	70
		4+66, 45' LT. @ RAMP "K"	4+70, 64' LT. @ RAMP "K"	C.P.A.	19	19
		4+70, 64' LT. @ RAMP "K"	6+21, 46' LT. @ RAMP "K"	E.P.A.	162	162
	4-F	4+00, RT. @ RAMP "J"	6+04, 61' RT. @ RAMP "J"	E.P.A.	212	212
	5-F	79+17, 54'± LT. @ ABUT.	79+17, 102'± LT. @ S.R. 315	E.P.A.	48	48
		79+17, 102' LT. @ S.R. 315	80+00, LT. @ S.R. 315	C.P.A.	83	83
50	6-F	79+17, 54'± RT. @ ABUT.	79+17, 101.5'± RT. @ S.R. 315	E.P.A.	48	48
		79+17, 101.5' RT. @ S.R. 315	80+00, RT. @ S.R. 315	C.P.A.	83	83
	7-F	80+00, LT. @ S.R. 315	81+85, 114'± LT. @ S.R. 315	C.P.A.	196	196
		81+85, 114'± LT. @ S.R. 315	81+92, 54'± LT. @ ABUT.	E.P.A.	61	61
	8-F	80+00, RT. @ S.R. 315	82+02, 100.5'± RT. @ S.R. 315	C.P.A.	192	192
		82+02, 100.5'± RT. @ S.R. 315	82+03, 54'± RT. @ ABUT.	E.P.A.	47	47
51	9-F	0+88, 51'± LT. @ "M"	1+75, LT. @ "M"	E.P.A.	95	-
	10-F	1+35, 64.5'± RT. @ "L"	2+00, RT. @ "L"	E.P.A.	65	65
	11-F	1+75, LT. @ "M"	4+85±, 164'± LT. @ "M"	I.A.P.A.-C.P.A.	343	-
		4+85±, 164'± LT. @ "M"	5+31.5±, 52'± LT. @ "M"	C.P.A.	120	-
		5+31.5±, 52'± LT. @ "M"	6+88±, 86.5'± LT. @ "M"	C.P.A.	152	-
52		6+88±, 86.5'± LT. @ "M"	6+99±, 12.5'± LT. @ "M"	E.P.A.	74	-
		2+50, 22.0'± LT. @ "M"	6+99±, 12.5'± LT. @ "M"	-	-	465
	12-F	2+00, RT. @ "L"	89+00, RT. @ S.R. 315	I.A.P.A. (2)	502	502
52	13-F	89+00, RT. @ S.R. 315	90+40±, 114.5'± RT. @ S.R. 315	C.P.A.	140	140
		90+40, 114.5'± RT. @ S.R. 315	90+40±, 62' RT. @ S.R. 315	E.P.A.	53	53
TOTALS TO GENERAL SUMMARY					3285	2966

EARTHWORK & SEEDING & MULCHING

SHEET NO.	203		659
	EXCAVATION NOT INCLUDING EMBANKMENT	EMBANKMENT	SEEDING & MULCHING AS PER PLAN
	CU. YD.	CU. YD.	SQ. YD.
24	1943	521	7821
25	3426	1429	10375
26	1253	12	-
TOTAL	6622 *	1962 *	18196

ITEM 659 - SEEDING & MULCHING, AS PER PLAN

SEEDING & MULCHING (FROM TABLE) 18196 SQ. YD.
 DEDUCT FOR DITCH EROSION PROTECTION 1197 SQ. YD.
 DEDUCT FOR REINFORCED SODDING + 136 SQ. YD.
 TOTAL SEEDING & MULCHING = 16863 SQ. YD. *

ITEM 659-COMMERCIAL FERTILIZER

SEEDING & MULCHING (FROM TABLE) = 18196 SQ. YD.
 18196 SQ.YD. X 20/1000 X 9/2000 = 1.64 TONS *

ITEM 659-WATER (2 APPLICATIONS) (240 GAL./1000 S.F.)

SEEDING & MULCHING (FROM TABLE) = 18196 SQ. YD.
 (18196 SQ.YD. X 9 X 240) 2 = 78.6 MGALS. **
 1000 X 1000

ITEM 203-PROOF ROLLING

SUBGRADE COMPACTION (FROM TABLE = 29,227 SQ. YD.
 29,227 SQ.YD. / 3000 S.Y. PER HOUR = 9.7 HOURS *

ITEM 659-MOWING

SEEDING & MULCHING (FROM TABLE) = 18196 SQ. YD.
 (18196 SQ.YD. X 9 X .25 / 1000 = 40.9 MSQ. FT. **

NOTES: * TO GENERAL SUMMARY
 ** TO GENERAL NOTES

SHEET NO.	203	
	SUBGRADE COMPACTION	
	SQ. YD.	
39	3937	
40	4577	
41	3774	
42	8732	
43	8207	
TOTAL	29,227	

SHEET NO. 39

SOUTHBOUND S.R.315

(STA. 72+20.30 TO STA. 72+45.30) = 25.00 L.F.

1-P
ITEM 611
(1.75' + 4.25' + 48.0' + 10.5') x 25.0' / 9 = 179.2 S.Y.

ITEM 304
65.5' x 25.0' x .5 = 818.75 CU.FT. / 27 = 30.3 C.Y.

ITEM 203
64.5' x 25.0' = 1612.5 S.F. / 9 = 179.2 S.Y.

NORTHBOUND S.R.315

(STA. 72+20.30 TO STA. 72+45.30) = 25.00 L.F.

2-P
ITEM 611 (SAME AS 1-P) = 179.2 S.Y.

ITEM 304 (SAME AS 1-P) = 30.3 C.Y.

ITEM 203 (SAME AS 1-P) = 179.2 S.Y.

1-B
ITEM 622 - CONCRETE BARRIER, TYPE B-50
(STA. 72+20.30 TO STA. 72+45.30) = 25.0 L.F.

SOUTHBOUND S.R.315

(STA. 74+14.67 TO STA. 76+00.00) = 185.33 L.F.

3-P
ITEM 203
(6' + 36') x 185.33' = 7783.9 S.F.
10' x 84.0' = 840.0
2.4 sq.in. x 400 = 960.0
25' x 13.0' = 325.0
(APP.SLAB AREA) 66.5' x 25' = 1662.5
11571.4 S.F. / 9 = 1285.7 S.Y.

ITEM 304
(APP.SLAB AREA) 67.5' x 25' x .5 = 843.75 CU.FT.
36' x 185.33' x .5 = 3335.94
18.5' x 13.0' x .5 = 120.25
4.48 S.F. x 185.33' = 830.28
5.04 S.F. x 84.0' = 423.36
2.4 sq.in. x 400 x .5 = 480.00
3.25 S.F. x 12.5' = 40.63
6074.21 CU.FT. / 27 = 225.0 C.Y.

ITEM 305 (10")
36' x 185.33' = 6671.9 S.F.
18.5' x 13.0' = 240.5
6912.4 S.F. / 9 = 768.0 S.Y.

ITEM 407
(FROM ITEM 305) = 768.0 S.Y. x 0.075 GAL./S.Y. = 57.6 GAL.

ITEM 452
4.25' x 185.33' = 787.7 S.F.
10.0' x 84.0' = 840.0
2.4 sq.in. x 400 = 960.0
7.0' x 12.0' = 84.0
2671.7 S.F. / 9 = 296.9 S.Y.

ITEM 446 (1 1/4") - SURFACE COURSE, TYPE-1
(FROM ITEM 305) = 6912.4 S.F. x 1.25" / 12 x 27 = 26.7 C.Y.

ITEM 446 (1 3/4") - INTERMEDIATE COURSE, TYPE-2
(FROM ITEM 305) = 6912.4 S.F. x 1.75" / 12 x 27 = 37.3 C.Y.

ITEM 413 - SAWING & SEALING ASPH. CONC. PAV'T. JOINTS
185.33' / 17' x 36' = 392.5 L.F.

ITEM SPECIAL - PRESSURE RELIEF JOINT, TYPE-A = 70.0 L.F.

ITEM 611 (T=15")
25.0' x 66.5' / 9 = 184.7 S.Y.

2-B

ITEM 622 - CONCRETE BARRIER, TYPE-B50
(STA. 73+89.67 TO STA. 76+00.00) = 210.33 L.F.
(DEDUCT INLET) = -20.00
190.33 L.F. = 190.33 L.F.

NORTHBOUND S.R.315

(STA. 74+14.67 TO STA. 76+00.00) = 185.33 L.F.

4-P
ITEM 203
(APP.SLAB AREA) 74' x 25' = 1850.0 S.F.
(6' + 36') x 185.33' = 7783.9
3.2 sq.in. x 400 = 1280.0
10.0' x 139.92' = 1399.2
6' x 36.5' = 219.0
12532.1 S.F. / 9 = 1392.5 S.Y.

ITEM 304
(APP.SLAB AREA) 75' x 25' x .5 = 937.50 CU.FT.
36' x 185.33' x .5 = 3335.94
3.2 sq.in. x 400 x .5 = 640.00
4.48 S.F. x 185.33' = 830.28
5.04 S.F. x 139.92' = 705.20
3.25 S.F. x 36.5' = 118.63
6567.55 CU.FT. / 27 = 243.2 C.Y.

ITEM 305 (10")
36' x 185.33' = 6671.9 S.F.
3.2 sq.in. x 400 = 1280.0
7951.9 S.F. / 9 = 883.5 S.Y.

ITEM 407
(FROM ITEM 305) = 883.5 S.Y. x 0.075 GAL./S.Y. = 66.3 GAL.

ITEM 452
4.25' x 185.33' = 787.7 S.F.
10.0' x 139.92' = 1399.2
6.0' x 36.50' = 219.0
2405.9 S.F. / 9 = 267.3 S.Y.

ITEM 446 (1 1/4") - SURFACE COURSE, TYPE-1
(FROM ITEM 305) = 7951.9 S.F. x 1.25" / 12 x 27 = 30.7 C.Y.

ITEM 446 (1 3/4") - INTERMEDIATE COURSE, TYPE-2
(FROM ITEM 305) = 7951.9 S.F. x 1.75" / 12 x 27 = 43.0 C.Y.

ITEM 413 - SAWING & SEALING ASPH. CONC. PAV'T. JOINTS
[(185.33' / 17' x 36')] + [(42' / 17' x 32')] = 472.0 L.F.

ITEM SPECIAL - PRESSURE RELIEF JOINT, TYPE-A = 77.5 L.F.

ITEM 611 (T=15")
25.0' x 74' / 9 = 205.6 S.Y.

RAMP "K"

(STA. 2+22.67 TO STA. 4+00.00) = 177.33 L.F.

5-P
ITEM 203
(6' + 16') x 177.33' = 3901.3 S.F.
3' x 86.5' = 259.5
4160.8 S.F. / 9 = 462.3 S.Y.

ITEM 304
16' x 177.33' x .5 = 1418.64 CU.FT.
3.25 S.F. x 177.33' = 576.32
1.75 S.F. x 86.5' = 151.38
2146.34 CU.FT. / 27 = 79.5 C.Y.

ITEM 305 (8")
16' x 177.33' = 2837.3 S.F. / 9 = 315.3 S.Y.

ITEM 407
(FROM ITEM 305) = 315.3 S.Y. x 0.075 GAL./S.Y. = 23.6 GAL.

ITEM 452

6' x 177.33' = 1064.0 S.F.
3' x 86.50' = 259.5
1323.5 S.F. / 9 = 147.1 S.Y.

ITEM 446 (1 1/4") - SURFACE COURSE, TYPE-1
(FROM ITEM 305) = 2837.3 S.F. x 1.25" / 12 x 27 = 11.0 C.Y.

ITEM 446 (1 3/4") - INTERMEDIATE COURSE, TYPE-2
(FROM ITEM 305) = 2837.3 S.F. x 1.75" / 12 x 27 = 15.3 C.Y.

ITEM 413 - SAWING & SEALING ASPH. CONC. PAV'T. JOINTS
190' / 17' x 16' = 179.0 L.F.

RAMP "J"

(STA. 2+58.27 TO STA. 4+00.00) = 141.73 L.F.

6-P
ITEM 203
25' x 141.73' = 3543.3 S.F.
(0' + 8' / 2) x 100.0' = 400.0
3943.3 S.F. / 9 = 438.1 S.Y.

ITEM 304
16' x 141.73' x .5 = 1133.84 CU.FT.
(0' + 8' / 2) x 100.0' x .5 = 200.00
1.75 S.F. x 141.73' = 248.03
3.25 S.F. x 141.73' = 460.62
2042.49 CU.FT. / 27 = 75.6 C.Y.

ITEM 305 (8")
16' x 141.73' = 2267.7 S.F. / 9 = 252.0 S.Y.

ITEM 407
(FROM ITEM 305) = 252.0 S.Y. x 0.075 GAL./S.Y. = 18.9 GAL.

ITEM 452
(3' + 6') x 141.73' = 1275.6 S.F. / 9 = 141.7 S.Y.

ITEM 446 (1 1/4") - SURFACE COURSE, TYPE-1
(FROM ITEM 305) = 2267.7 S.F. x 1.25" / 12 x 27 = 8.8 C.Y.

ITEM 446 (1 3/4") - INTERMEDIATE COURSE, TYPE-2
(FROM ITEM 305) = 2267.7 S.F. x 1.75" / 12 x 27 = 12.2 C.Y.

ITEM 413 - SAWING & SEALING ASPH. CONC. PAV'T. JOINTS
140' / 17' x 16' = 132.0 L.F.

ITEM 202 - REMOVAL QUANTITIES

1-R (PAV'T.) 25' x 48' / 9 = 133.3 S.Y.

2-R (PAV'T.) 25' x 48' / 9 = 133.3 S.Y.

3-R (PAV'T.) 187' x (31' + 37' / 2) = 6358.0 S.F.
(APPR. SLAB) 25' x (52' + 54' / 2) = 1325.0
7683.0 S.F. / 9 = 853.7 S.Y.

(CURB) STA. 74+16 TO 76+00, LT. = 184.0 L.F.

4-R (PAV'T.) 183' x (35.5' + 30' / 2) = 5993.3 S.F.
42.5' x (11' + 19' / 2) = 637.5
118' x (18.5' + 10' / 2) = 1681.5
(APPR. SLAB) 25' x 62' = 1550.0 S.F.
9862.3 S.F. / 9 = 1095.8 S.Y.

(CURB) STA. 74+75 TO 76+00, RT. = 125.0 L.F.

5-R (PAV'T.) 190' x 16' = 3040 S.F.
2.1 Sq.In. x 400 = 840
3880 S.F. / 9 = 431.1 S.Y.

(CURB) STA. 1+86 TO 4+00, LT. & RT. = 200' + 185' = 385.0 L.F.

6-R (PAV'T.) 180' x 16' = 2880 S.F.
140' x 4' = 560
3440 S.F. / 9 = 382.2 S.Y.

(CURB) STA. 2+08 TO 4+00, LT. & RT. = 130' + 192' = 322.0 L.F.

[65] - PAVES-CALC-CONV-CALC-IMP - SEP 13, 1988 - 09:24:15 - SCALE = 1.00

ITEM 413 - SAWING & SEALING ASPH. CONC. PAV'T. JOINTS
205.50' / 17'X 36' = 435.0 L.F.

ITEM SPECIAL - PRESSURE RELIEF JOINT, TYPE-A (50' + 50') = 100.0 L.F.

ITEM 611 (T=15") (25' + 25') x 52.5' / 9 = 291.7 S.Y.

NORTHBOUND S.R. 315
(STA. 80+00.00 TO STA. 81+73.34) = 173.34 L.F.
(STA. 83+67.84 TO STA. 84+00.00) = 32.16 L.F.
205.50 L.F.

2-P
ITEM 203 (SAME AS 1-P) = 1479.0 S.Y.

ITEM 304 (SAME AS 1-P) = 259.0 C.Y.

ITEM 305 (SAME AS 1-P) = 822.0 S.Y.

ITEM 407 (SAME AS 1-P) = 61.7 GAL.

ITEM 452 (SAME AS 1-P) = 325.4 S.Y.

ITEM 446 (1 1/4") - SURFACE COURSE, TYPE-1 (SAME AS 1-P) = 28.5 C.Y.

ITEM 446 (1 3/4") - INTERMEDIATE COURSE, TYPE-2 (SAME AS 1-P) = 40.0 C.Y.

ITEM 413 - SAWING & SEALING ASPH. CONC. PAV'T. JOINTS (SAME AS 1-P) = 435.0 L.F.

ITEM SPECIAL - PRESSURE RELIEF JOINT, TYPE-A (50' + 50') = 100.0 L.F.

ITEM 611 (T=15") (SAME AS 1-P) = 291.7 L.F.

1-B
ITEM 622 - CONCRETE BARRIER, TYPE B-50
(STA. 80+00.00 TO STA. 81+98.34) = 198.34 L.F.
(STA. 83+42.84 TO STA. 84+00.00) = 57.16 L.F.
(DEDUCT INLET) = -20.00 L.F.
235.50 L.F. = 235.5 L.F.

RAMP "M"
(STA. 0+70.79 TO STA. 1+75.00) = 104.21 L.F.

3-P
ITEM 203 ((ROLLED 6.1 sq.in. x 400)+(92.5'+ 94' x .5)+(41.5' x 33')) / 9 = 433.6 S.Y.

ITEM 304
6.1 sq.in. x 400 x .5 = 1220.0 CU.FT.
41.5' x 24' x .5 = 498.0
41.5' x (6.5'+ 3.5') x (.33 + .67 / 2) = 207.5
1925.5 CU.FT. / 27 = 71.3 C.Y.

ITEM 305 (8")
6.1 sq.in. x 400 = 2440.0 S.F.
41.5' x 24' = 996.0
3436.0 S.F. / 9 = 381.8 S.Y.

ITEM 407 (FROM ITEM 305) = 381.8 S.Y. x 0.075 GAL./ S.Y. = 28.6 GAL.

ITEM 452 (6' + 3') x 41.5' / 9 = 41.5 S.Y.

ITEM 446 (1 1/4") - SURFACE COURSE, TYPE-1 (FROM ITEM 305) = 3436.0 S.F. x 1.25" / (12 x 27) = 13.3 C.Y.

ITEM 446 (1 3/4") - INTERMEDIATE COURSE, TYPE-2 (FORM ITEM 305) = 3436.0 S.F. x 1.75" / (12 x 27) = 18.6 C.Y.

ITEM 413 - SAWING & SEALING ASPH. CONC. PAV'T. JOINTS (106' / 17') x 24' = 150.0 L.F.

1-C
ITEM 609 - TYPE 6 CURB, AS PER PLAN
92.5' + 94' = 186.5 L.F.

1-S ITEM 608 - CONCRETE WALK CURB RAMPS 42'X 5' = 210.0 S.F. = 1 EA.

3-S ITEM 608 - CONCRETE WALK CURB RAMPS 45.5'X 5.5' = 250.3 S.F. = 1 EA.

RAMP "L"
(STA. 0+95.56 TO STA. 2+00.00) = 104.44 L.F.

4-P
ITEM 203 ((ROLLED 7.8 sq.in. x 400)+(109'+ 124' x .5)+(8' x 25')) / 9 = 381.8 S.Y.

ITEM 304
7.8 sq.in. x 400 x .5 = 1560.0 CU.FT.
8' x 16' x .5 = 64.0
8' x (6.5'+ 3.5') x (.33 + .67 / 2) = 40.0
1664.0 CU.FT. / 27 = 61.6 C.Y.

ITEM 305 (8")
7.8 sq.in. x 400 = 3120.0 S.F.
8' x 16" = 128.0
3248.0 S.F. / 9 = 360.9 S.Y.

ITEM 407 (FROM ITEM 305) = 360.9 S.Y. x 0.075 GAL./ S.Y. = 27.1 GAL.

ITEM 452 (6' + 3') x 8.0' / 9 = 8.0 S.Y.

ITEM 446 (1 1/4") - SURFACE COURSE, TYPE-1 (FROM ITEM 305) = 3248.0 S.F. x 1.25" / 12 x 27 = 12.5 C.Y.

ITEM 446 (1 3/4") - INTERMEDIATE COURSE, TYPE-2 (FROM ITEM 305) = 3248.0 S.F. x 1.75" / 12 x 27 = 17.5 C.Y.

ITEM 413 - SAWING & SEALING ASPH. CONC. PAV'T. JOINTS (104' / 17') x 16' + 41' + 22' + 8' = 169.0 L.F.

2-C
ITEM 609 - TYPE 6 CURB, AS PER PLAN
109' + 124' = 233.0 L.F.

2-S ITEM 608 - CONCRETE WALK CURB RAMPS 20' x 5' = 100.0 S.F. = 1 EA.

ITEM 202 - REMOVAL QUANTITIES

1-R (PAV'T.) (APPR. SLAB) 170'+ 39' X 24' = 5016 S.F.
25'X 36' X 2 = 1800
6816 S.F. / 9 = 757.3 S.Y.

(CURB) STA. 80+00 TO 84+00, LT. = 195.5'+ 67.5' = 263.0 L.F.

2-R (PAV'T.) (APPR. SLAB) 171.5'+ 29' X 24' = 4812 S.F.
25'X 36' X 2 = 1800
6612 S.F. / 9 = 734.7 S.Y.

(CURB) STA. 80+00 TO 84+00, RT. = 198'+ 50' = 248.0 L.F.

3-R (PAV'T.) 12.1 Sq.In. X 400 / 9 = 537.8 S.Y.

(CURB) STA. 0+70 TO 1+75, LT.& RT. = 136'+ 116' = 252.0 L.F.

(CONC. WALK) 133' X 5' = 665 S.F.

4-R (PAV'T.) 8.40 Sq.in. X 400 / 9 = 373.3 S.Y.

(CURB) STA. 0+96 TO 2+00, LT.& RT. = 118.5'+ 122.5' = 241.0 L.F.

5-R (CONC. WALK) 25' X 5' = 125.0 S.F.

6-R (CONC. WALK) 20' X 5' = 100.0 S.F.

SHEET NO. 42
SOUTHBOUND S.R. 315
(STA. 84+00.00 TO STA. 89+00.00) = 500.00 L.F.

1-P
ITEM 203 (6'+ 36') x 500' = 21000.0 S.F.
10' x 349.34' = 3493.4
(DECEL.AREA) 10.0 sq.in. x 400' = 4000.0
8' x 144' = 1152.0
29645.4 S.F. / 9 = 3293.9 S.Y.

ITEM 304
36' x 500' x .5 = 9000.0 CU.FT.
10.0 sq.in. x 400 x .5 = 2000.0
5.04 S.F. x 349.34' = 1760.7
4.48 S.F. x 500' = 2240.0
3.84 S.F. x 144' = 553.0
15553.7 CU.FT. / 27 = 576.1 C.Y.

ITEM 305 (10")
36' x 500' = 18000.0 S.F.
10.0 sq.in. x 400 = 4000.0
22000.0 S.F. / 9 = 2444.4 S.Y.

ITEM 407 (FROM ITEM 305) = 2444.4 S.Y. x 0.075 GAL./S.Y. = 183.3 GAL.

ITEM 452
10.0' x 349.34' = 3493.40 S.F.
4.25' x 457.00' = 1942.25
(4.25' + 3.25') / 2 x 43.0' = 161.25
8.25' x 144.00' = 1188.00
6784.90 S.F. / 9 = 753.9 S.Y.

ITEM 446 (1 1/4") - SURFACE COURSE, TYPE-1 (FROM ITEM 305) = 22000.0 S.F. x 1.25" / (12 x 27) = 84.9 C.Y.

ITEM 446 (1 3/4") - INTERMEDIATE COURSE, TYPE-2 (FROM ITEM 305) = 22000.0 S.F. x 1.75" / (12 x 27) = 118.8 C.Y.

ITEM 413 - SAWING & SEALING ASPH. CONC. PAV'T. JOINTS [(148' / 17') x 0.5(39'+ 15')] + [(500' / 17') X 36'] = 1294.0 L.F.

1-B
ITEM 622 - CONCRETE BARRIER, TYPE B-50 (STA. 84+00.00 TO STA. 89+00.00) = 500.0 L.F.
(DEDUCT INLET) = -20.0 L.F.
480.0 L.F. = 480.0 L.F.

2-B
ITEM 622 - CONCRETE BARRIER, TYPE D, AS PER PLAN (STA. 6+82.00 TO STA. 7+02.00 RAMP "M") = 20.0 L.F.

NORTHBOUND S.R.315
(STA. 84+00.00 TO STA. 89+00.00) = 500.00 L.F.

2-P
ITEM 203 (6'+ 36') x 500' = 21000.0 S.F.
(10' x 398.51')+(13'+ 0'/2) x 94' = 4596.1
(ACCEL. AREA) 5.35 sq.in. x 400' = 2140.0
6' x 102' = 612.0
28348.1 S.F. / 9 = 3149.8 S.Y.

ITEM 304
36' x 500' x .5 = 9000.0 CU.FT.
(ACCEL. AREA) 5.35 sq.in. x 400 x .5 = 1070.0
5.04 S.F. x 398.51' = 2008.5
4.48 S.F. x 500.00' = 2240.0
3.25 S.F. x 102.00' = 331.5
(13'+ 0')/2 x 94' x 0.5 = 305.5
14955.5 CU.FT. / 27 = 553.9 C.U.

ITEM 305 (10")
36' x 500' = 18000.0 S.F.
5.35 sq.in. x 400 = 2140.0
20140.0 S.F. / 9 = 2237.8 S.Y.

ITEM 407 (FROM ITEM 305) = 2237.8 S.Y. x 0.075 GAL./S.Y. = 167.8 GAL.

ITEM 452
4.25' x 457.0' = 1942.25 S.F.
4.25' + 3.25' / 2 x 43.0' = 161.25
10' x 398.51' = 3985.10
13'+ 0' / 2 x 94.0' = 611.00
6' x 102' = 612.00
7311.60 S.F. / 9 = 812.4 S.Y.

[163] - R:\MSW\315-CO\PAV-CALC.DWG - SEP 13, 1998 - 09:35:51 - SCALE = 1:00

ITEM 446 (1 1/4") - SURFACE COURSE, TYPE-1
 (FROM ITEM 305) = 20140.0 S.F. x 1.25" / (12 x 27) = 77.7 C.Y.

ITEM 446 (1 3/4") INTERMEDIATE COURSE, TYPE-2
 (FROM ITEM 305) = 20140.0 S.F. x 1.75" / (12 x 27) = 108.8 C.Y.

ITEM 413 - SAWING & SEALING ASPH. CONC. PAV'T. JOINTS
 (102' / 17) x (25' + 15) / 2 + (500' / 17) x 36' = 1178.8 L.F.

RAMP "M"
 (STA. 1+75.00 TO STA. 5+56.95) = 381.95 L.F.

3-P
 ITEM 203
 (6' + 24' + 3') x 157.83' = 5208.39 S.F.
 (33' + 25') / 2 x 50.00' = 1450.00
 (6' + 16' + 3') x 174.12' = 4353.00
 11011.4 S.F. / 9 = 1223.5 S.Y.

ITEM 304
 24' x 157.83' x .5 = 1893.96 CU.FT.
 (24' + 16') / 2 x 50.0' x .5 = 500.00
 16' x 174.12' x .5 = 1392.96
 3.25 S.F. x 281.95' = 916.34
 [(6.5' + 8.5') / 2] x 100.0' x [(1.33 + .67) / 2] = 375.00
 1.75 S.F. x 381.95' = 668.40
 5746.7 CU.FT. / 27 = 212.8 C.Y.

ITEM 305 (8")
 24' x 157.83' = 3787.9 S.F.
 (24' + 16') / 2 x 50.0' = 1000.0
 16' x 174.12' = 2785.9
 7573.8 S.F. / 9 = 841.5 S.Y.

ITEM 407
 (FROM ITEM 305) = 841.5 S.Y. x 0.075 GAL./S.Y. = 63.1 GAL.

ITEM 452
 6' x 281.95' = 1691.7 S.F.
 (6' + 8') / 2 x 100.0' = 700.0
 3' x 381.95' = 1145.9
 3537.6 S.F. / 9 = 393.1 S.Y.

ITEM 446 (1 1/4") - SURFACE COURSE, TYPE-1
 (FROM ITEM 305) = 7573.8 S.F. x 1.25" / (12 x 27) = 29.2 C.Y.

ITEM 446 (1 3/4") - INTERMEDIATE COURSE, TYPE-2
 (FROM ITEM 305) = 7573.8 S.F. x 1.75" / (12 x 27) = 40.9 C.Y.

ITEM 413 - SAWING & SEALING ASPH. CONC. PAV'T. JOINTS
 [(157.83' / 17) x 24'] + [(50' / 17) x 20'] + [(174.12' / 17) x 16'] = 445.5 L.F.

RAMP "L"
 (STA. 2+00.00 TO STA. 5+94.42) = 394.42 L.F.

4-P
 ITEM 203
 (3' + 16' + 6') x 300.0' = 7500.0 S.F.
 (16' + 6') x 94.42' = 2077.2
 9577.2 S.F. / 9 = 1064.1 S.Y.

ITEM 304
 16' x 394.42' x .5 = 3155.4 CU.FT.
 1.75 S.F. x 300.0' = 525.0
 3.25 S.F. x 394.42' = 1281.9
 4962.3 CU.FT. / 27 = 183.8 C.Y.

ITEM 305 (8")
 16' x 394.42' = 6310.72 S.F. / 9 = 701.2 S.Y.

ITEM 407
 (FROM ITEM 305) = 701.2 S.Y. x 0.075 GAL./S.Y. = 52.6 GAL.

ITEM 452
 3' x 300.0' = 900.0 S.F.
 6' x 394.42' = 2366.5
 3266.5 S.F. / 9 = 362.9 S.Y.

ITEM 446 (1 1/4") - SURFACE COURSE, TYPE-1
 (FROM ITEM 305) = 6310.72 S.F. x 1.25" / (12 x 27) = 24.3 C.Y.

ITEM 446 (1 3/4") - INTERMEDIATE COURSE, TYPE-2
 (FROM ITEM 305) = 6310.72 S.F. x 1.75" / (12 x 27) = 34.1 C.Y.

ITEM 413 - SAWING & SEALING ASPH. CONC. PAV'T. JOINTS
 395' / 17' x 16' = 372.0 L.F.

ITEM 202 - REMOVAL QUANTITIES

1-R (PAVT) 500' x 24' = 12000 S.F.
 7.6 Sq.in. x 400 = 3040
 15040 S.F. / 9 = 1671.1 S.Y.

(CURB) STA. 84+00 TO 87+49.34, LT. = 350.0 L.F.

2-R (PAVT.) 500' x 24' = 12000 S.F. / 9 = 1333.3 S.Y.

(CURB) STA. 84+00 TO 88+67 = 467.0 L.F.

3-R (PAVT.) 528' x 16' = 8448 S.F. / 9 = 938.7 S.Y.

(CURB) STA. 1+75 TO 7+00, LT. & RT. (495' + 386') = 881.0 L.F.

4-R (PAVT.) 340' x 16' = 5440 S.F.
 157' x (32' + 15.58') / 2 = 3735
 9175 S.F. / 9 = 1019.4 L.F.

(CURB) STA. 2+00 TO 7+00, LT. & RT. (460' + 496') = 956.0 L.F.

5-R (PAVT) 350' x 25' = 8750 S.F.
 3.0 SQ. IN. x 400 = 1200
 9950 S.F. / 9 = 1105.6 L.F.

(CURB) 124' + 240' + 328' = 692 L.F.
 (CONC. WALK) (100' + 215') x 5' = 1575 S.F.

SHEET NO. 43

SOUTHBOUND S.R.315
 (STA. 89+00.00 TO STA. 95+75.00) = 675.00 L.F.

1-P
 ITEM 203
 (6' + 36') x 675.0' = 28350.0 S.F.
 (DECEL.AREA) 2.95 sq.in. x 400 = 1180.0
 10.0' x 675.0' = 6750.0
 36280.0 S.F. / 9 = 4031.1 S.Y.

ITEM 304
 (DECEL.AREA) 2.95 sq.in. x 400 x .5 = 590.0 CU.FT.
 36.0' x 675.0' x .5 = 12150.0
 4.48 S.F. x 675.0' = 3024.0
 3.84 S.F. x 675.0' = 2592.0
 2.0' x 675.0' x .25 = 337.5
 18693.5 CU.FT. / 27 = 692.4 C.Y.

ITEM 305 (10")
 36.0' x 675.0' = 24300.0 S.F.
 2.95 sq.in. x 400 = 1180.0
 25480.0 S.F. / 9 = 2831.1 S.Y.

ITEM 407
 (FROM ITEM 305) = 2831.1 S.Y. x 0.075 GAL./S.Y. = 212.3 GAL.

ITEM 452
 4.25' x 675.0' = 2868.8 S.F.
 8.0' x 675.0' = 5400.0
 8268.8 S.F. / 9 = 918.8 S.Y.

ITEM 446 (1 1/4") - SURFACE COURSE, TYPE-1
 (FROM ITEM 305) = 25480.0 S.F. x 1.25" / (12 x 27) = 98.3 C.Y.

ITEM 446 (1 3/4") - INTERMEDIATE COURSE, TYPE-2
 (FROM ITEM 305) = 25480.0 S.F. x 1.75" / (12 x 27) = 137.6 C.Y.

ITEM 413 - SAWING & SEALING ASPH. CONC. PAV'T. JOINTS
 (675' / 17' x 36') + 60' = 1490.0 L.F.

1-B
 ITEM 622 - CONCRETE BARRIER, TYPE-B50
 (STA. 89+00.00 TO STA. 95+75.00) = 675.00 L.F.
 DEDUCT (2) INLETS = -40.00
 635.00 L.F. = 635.0 L.F.

2-B
 ITEM 622 - CONCRETE BARRIER, TYPE-D, AS PER PLAN = 675.0 L.F.

NORTHBOUND S.R.315
 (STA. 89+00.00 TO STA. 95+75.00) = 675.00 L.F.

2-P
 ITEM 203
 (6' + 36') x 675.0' = 28350.0 S.F.
 ACCEL. AREA (15.58' + 0') / 2 x 500.0' = 3895.0
 SHOULDER 6.5' x 109' = 708.5
 (8' + 7.0') / 2 x 15.0' = 112.5
 " 7.0' x 286.33' = 2004.3
 " (7' + 10') / 2 x 89.67' = 762.2
 " 10.0' x 175.0' = 1750.0
 37582.5 S.F. / 9 = 4175.8 S.Y.

ITEM 304
 36' x 675.0' x .5 = 12150.0 CU.FT.
 ACCEL. AREA (15.58' + 0') / 2 x 500.0' x .5 = 1947.5
 SHOULDER 4.48 S.F. x 675.0' = 3024.0
 " 3.36 S.F. x 109.0' = 366.2
 " 3.14 S.F. x 15.0' = 47.1
 " 2.90 S.F. x 286.33' = 830.4
 " 3.61 S.F. x 89.67' = 323.7
 " 4.34 S.F. x 175.0' = 759.5
 19448.4 CU.FT. / 27 = 720.3 C.Y.

ITEM 305 (10")
 36.0' x 675.0' = 24300.0 S.F.
 ACCEL. AREA (15.58' + 0') / 2 x 500 = 3895.0
 28195.0 S.F. / 9 = 3132.8 S.Y.

ITEM 407
 (FROM ITEM 305) = 3132.8 S.Y. x 0.075 GAL./S.Y. = 235.0 GAL.

ITEM 452
 4.25' x 675.0' = 2868.8 S.F.
 6.50' x 109.0' = 708.5
 (6' + 5') / 2 x 15.0' = 82.5
 5.0' x 286.33' = 1431.7
 (5' + 8') / 2 x 89.67' = 582.9
 8.0' x 175.0' = 1400.0
 7074.4 S.F. / 9 = 786.0 C.Y.

ITEM 446 (1 1/4") - SURFACE COURSE, TYPE-1
 (FROM ITEM 305) = 28195.0 S.F. x 1.25" / (12 x 27) = 108.8 C.Y.

ITEM 446 (1 3/4") - INTERMEDIATE COURSE, TYPE-2
 (FROM ITEM 305) = 28195.0 S.F. x 1.75" / (12 x 27) = 152.3 C.Y.

ITEM 413 - SAWING & SEALING ASPH. CONC. PAV'T. JOINTS
 [(675' / 17') x 36'] + [(500' / 17') x (15.58' + 0') / 2] = 1658.0 L.F.

3-B
 ITEM 622 - CONCRETE BARRIER, TYPE-D, AS PER PLAN
 (STA. 90+09.00 TO STA. 95+75.00) = 566.0 L.F.

ITEM 202 - REMOVAL QUANTITIES

1-R (PAVT.) 675' x 24' = 16200 S.F.
 2.95 Sq.in. x 400 = 1180
 17380 S.F. / 9 = 1931.1 S.Y.

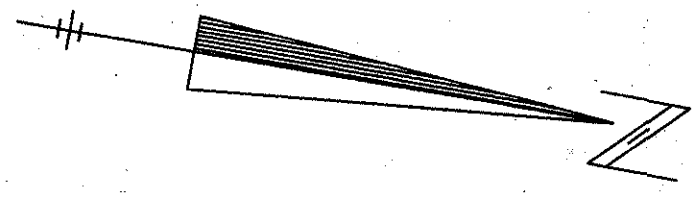
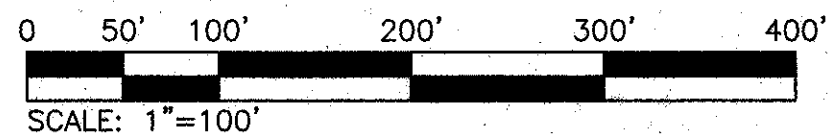
(CURB) STA. 89+00 TO 95+75, LT. = 675.0 L.F.

2-R (PAVT.) 500' x 24' = 12000 S.F.
 675' x (15.58' + 0') / 2 = 3895
 20095 S.F. / 9 = 2232.8 S.Y.

(CURB) STA. 89+00 TO 95+75, RT. = 675.0 L.F.

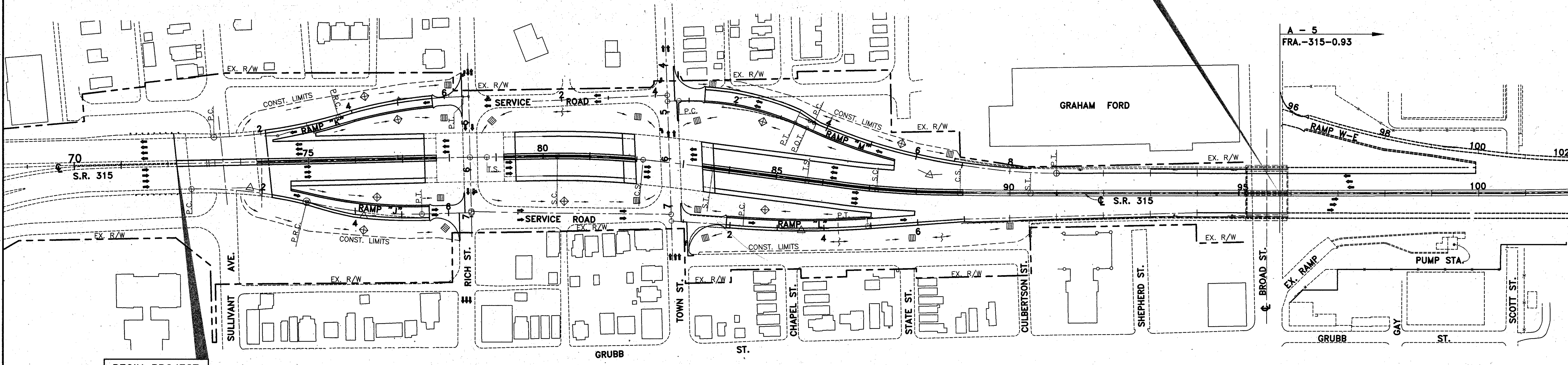
[40] - F:\WORK\315-CO\PAV-CALC.DWG - SEP 13, 1998 - 09:52:38 - SCALE = 1:50

SCHEMATIC PLAN



END PROJECT
STA. 95+75.00
S.L.M. 0.93
NH-20(59)

BEGIN PROJECT
STA. 72+20.30
S.L.M. 0.48
NH-20(59)



U.S.G.S. QUADRANT NO. 3952.5 - W8252.5/7.5
SOUTHWEST COLUMBUS, OHIO
LONGITUDE : 83° - 01' - 07" *
LATITUDE : 39° - 57' - 25" *

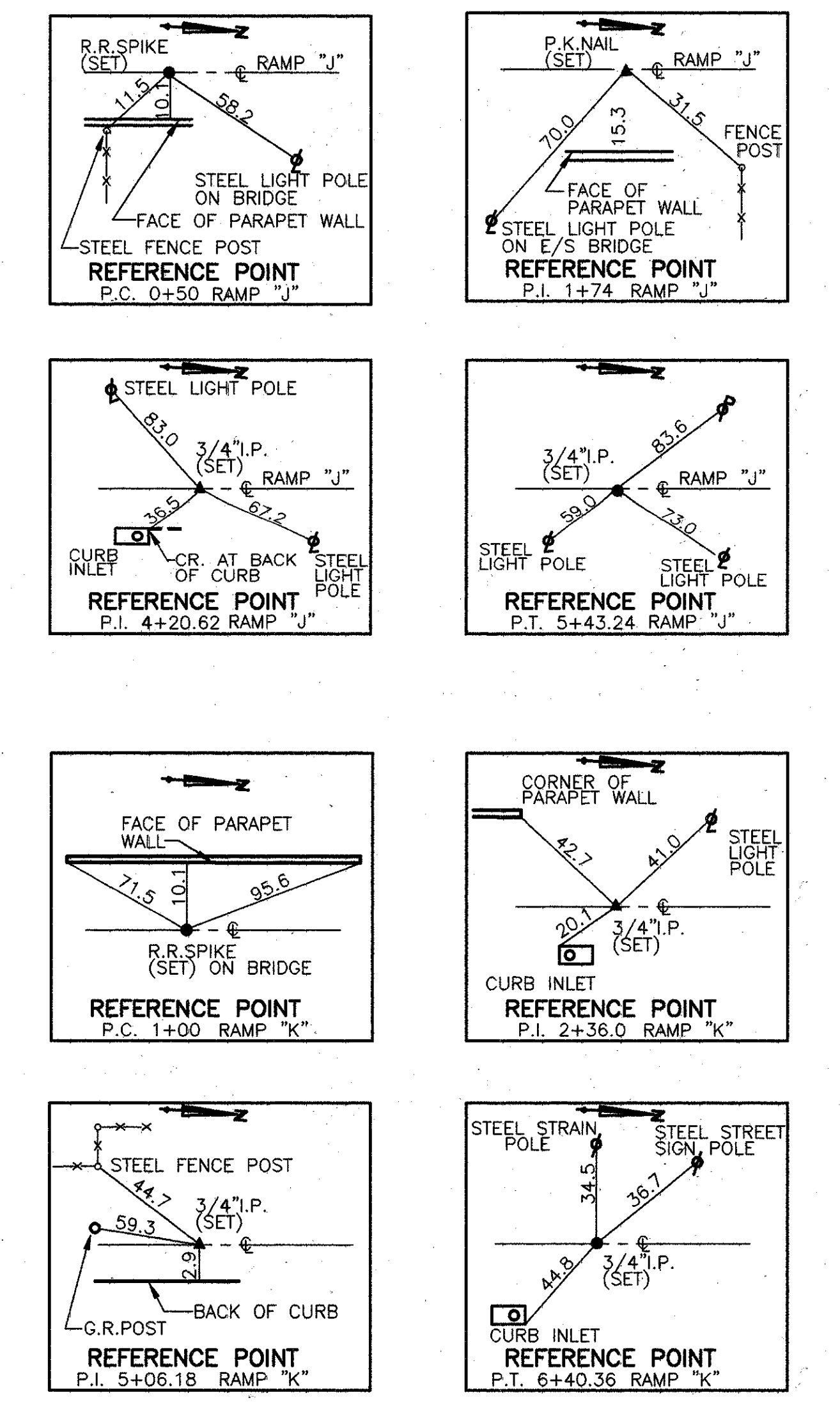
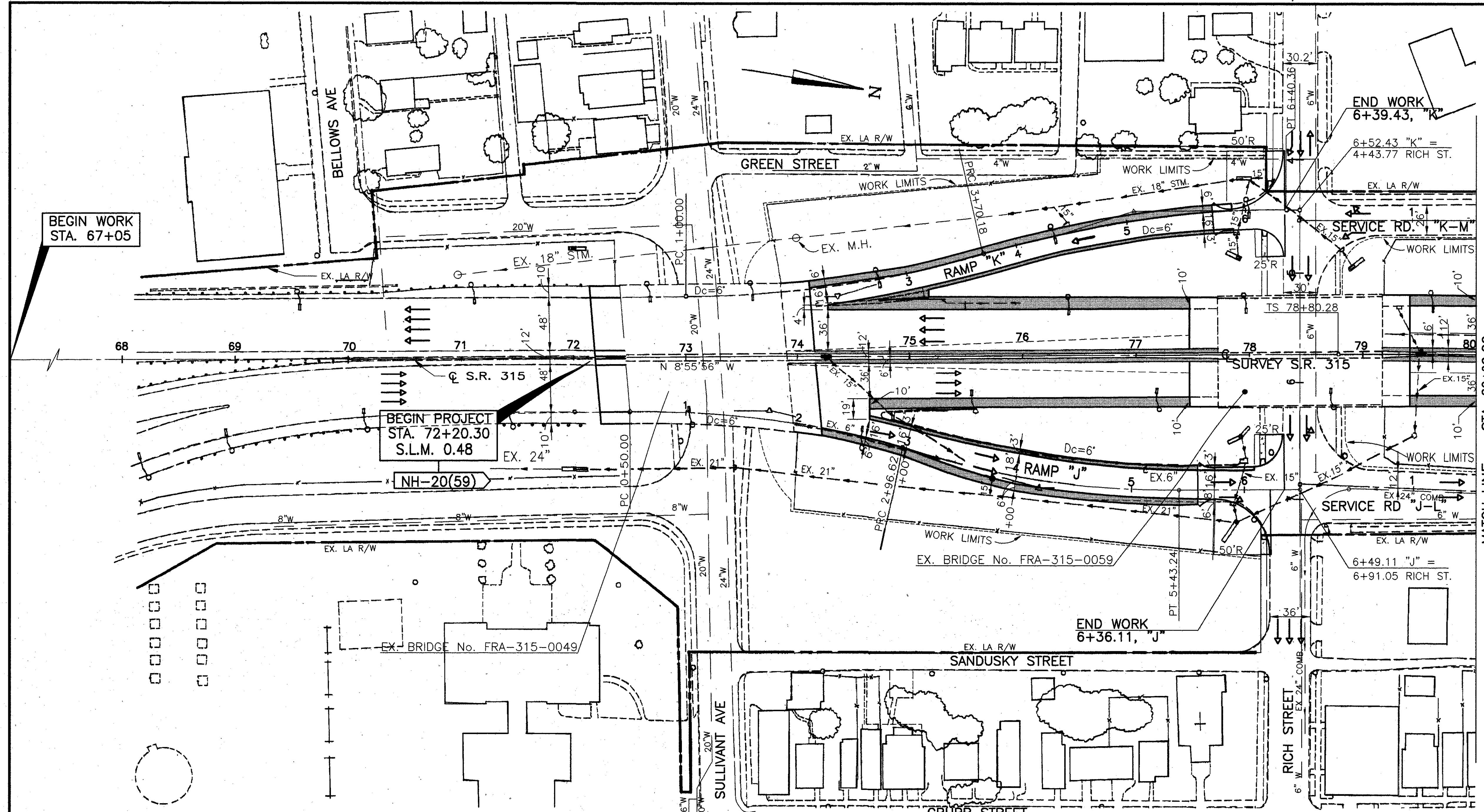
* LONGITUDE & LATITUDE TO APPROXIMATE CENTER OF PROJECT

PROJECT DATA	
TOTAL AREA OF EXISTING R.O.W.	17.5 ± AC.
AREA TO UNDERGO EXCAVATION FILLING OR GRADING	11.0 ± AC.
RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE	0.7 - 0.9
RUNOFF COEFFICIENT FOR POST CONSTRUCTION SITE	0.7 - 0.9
SOIL DATA	SEE SOIL PROFILE
SUBSEQUENT RECEIVING WATER	SCIOTO RIVER

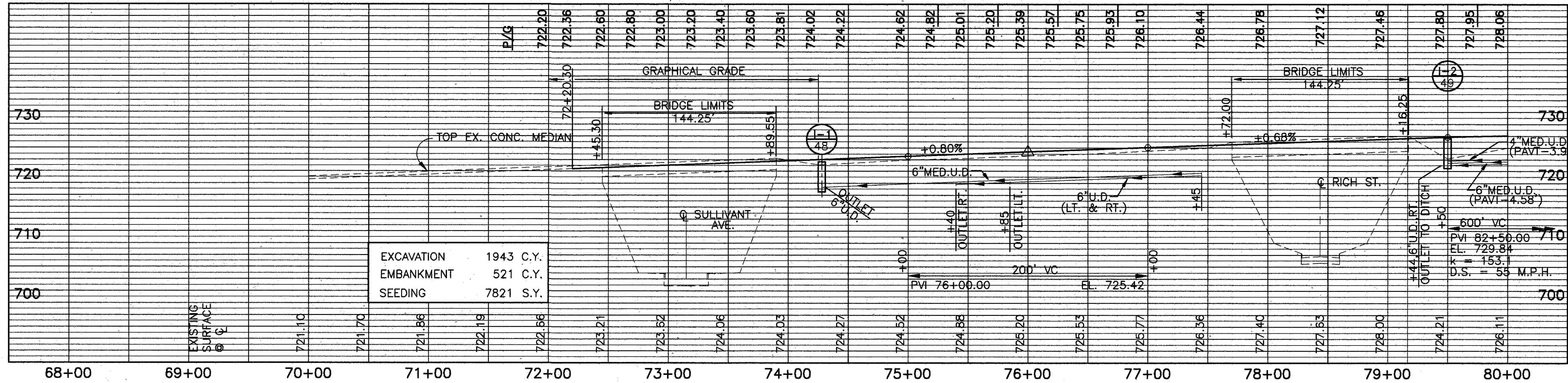
- LEGEND**
- ▤ CATCH BASIN -W/ 8 BALES STRAW OR HAY EACH
 - ◊ BALE DITCH CHECK - 5 BALES EACH

PROJECT DESCRIPTION
THIS PROJECT CONSISTS OF THE RECONSTRUCTION OF EXISTING S.R. 315 FOUR LANE FACILITY TO A SIX LANE DIVIDED FREEWAY ON THE EXISTING ALIGNMENT BETWEEN SULLIVANT AVE. AND BROAD ST., INCLUDING THE RECONSTRUCTION OF RAMPS "J" & "K" TO RICH ST. AND RAMPS "L" & "M" FROM TOWN ST. IN THE CITY OF COLUMBUS.

ESTIMATED QUANTITIES			
LOCATION	SIDE	STRAW OR HAY BALES	
		EACH	
AT DITCH CHECKS		40	
AT ALL CATCH BASINS		112	
TOTAL TO GENERAL NOTES		152	



NOTE: ALL REFERENCE POINT DIMENSIONS ARE IN FEET.



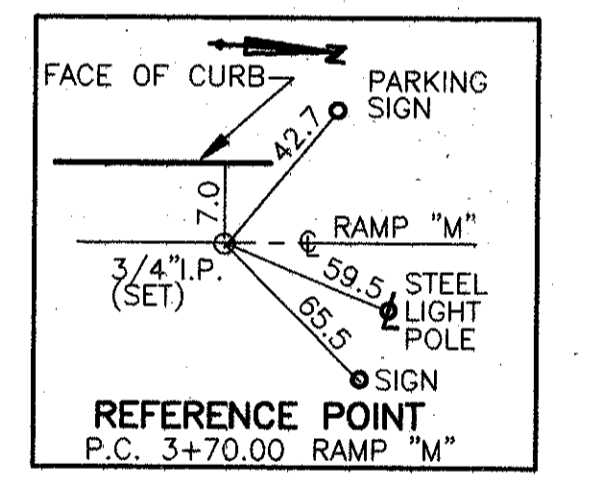
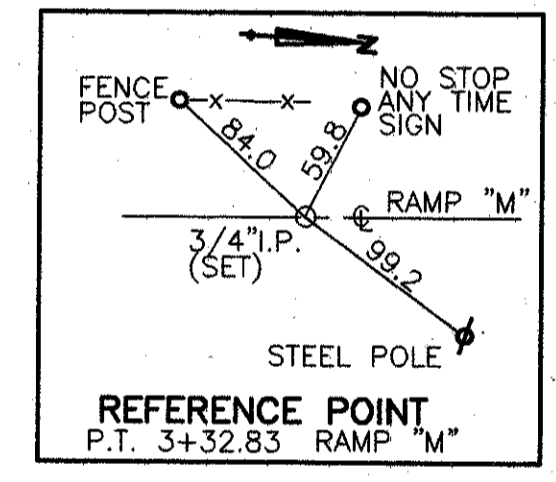
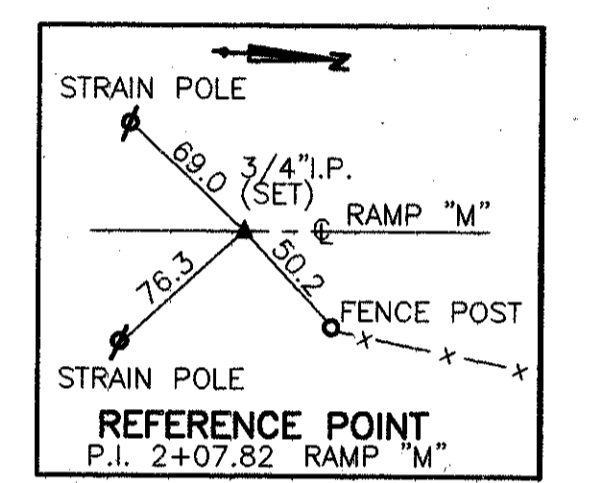
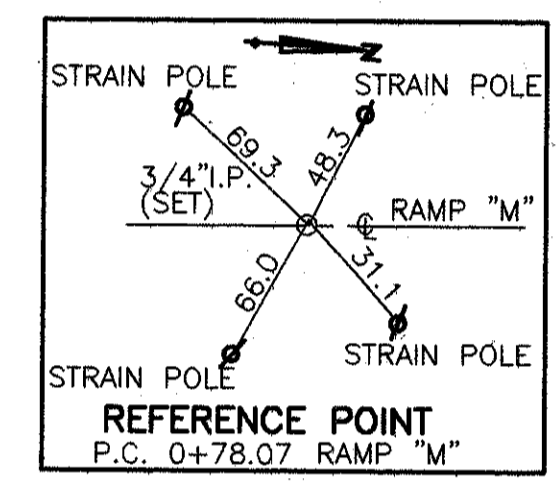
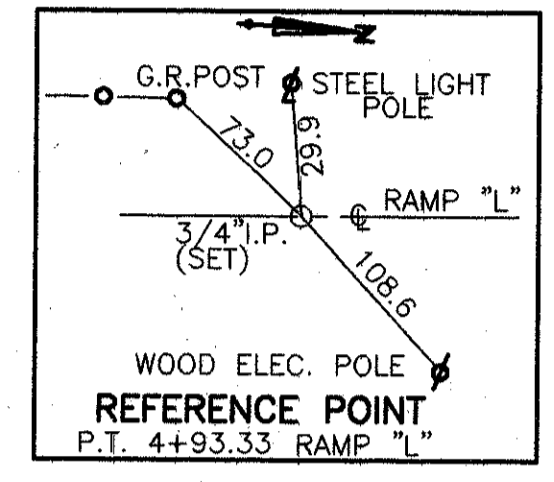
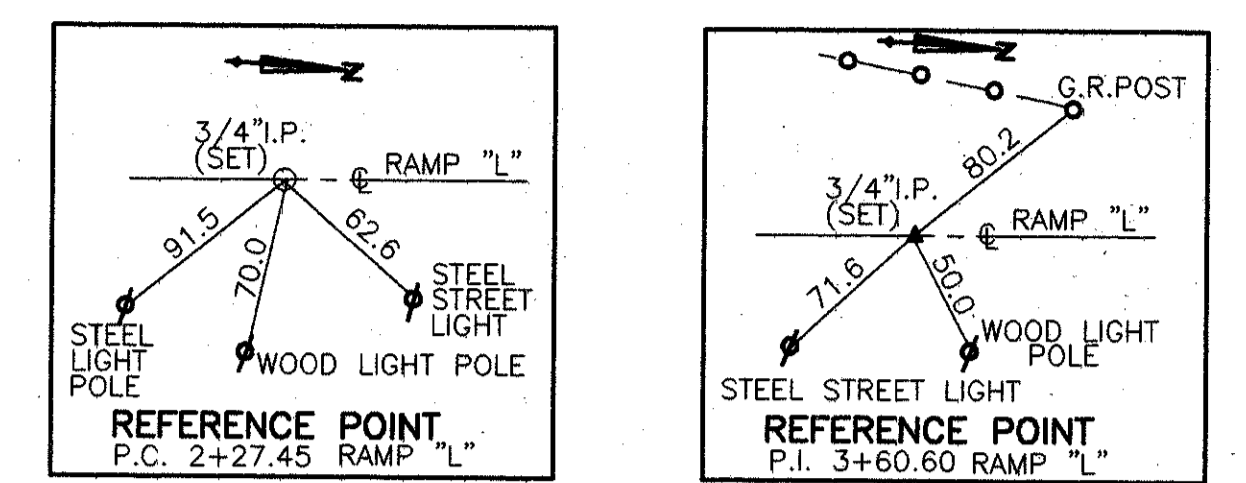
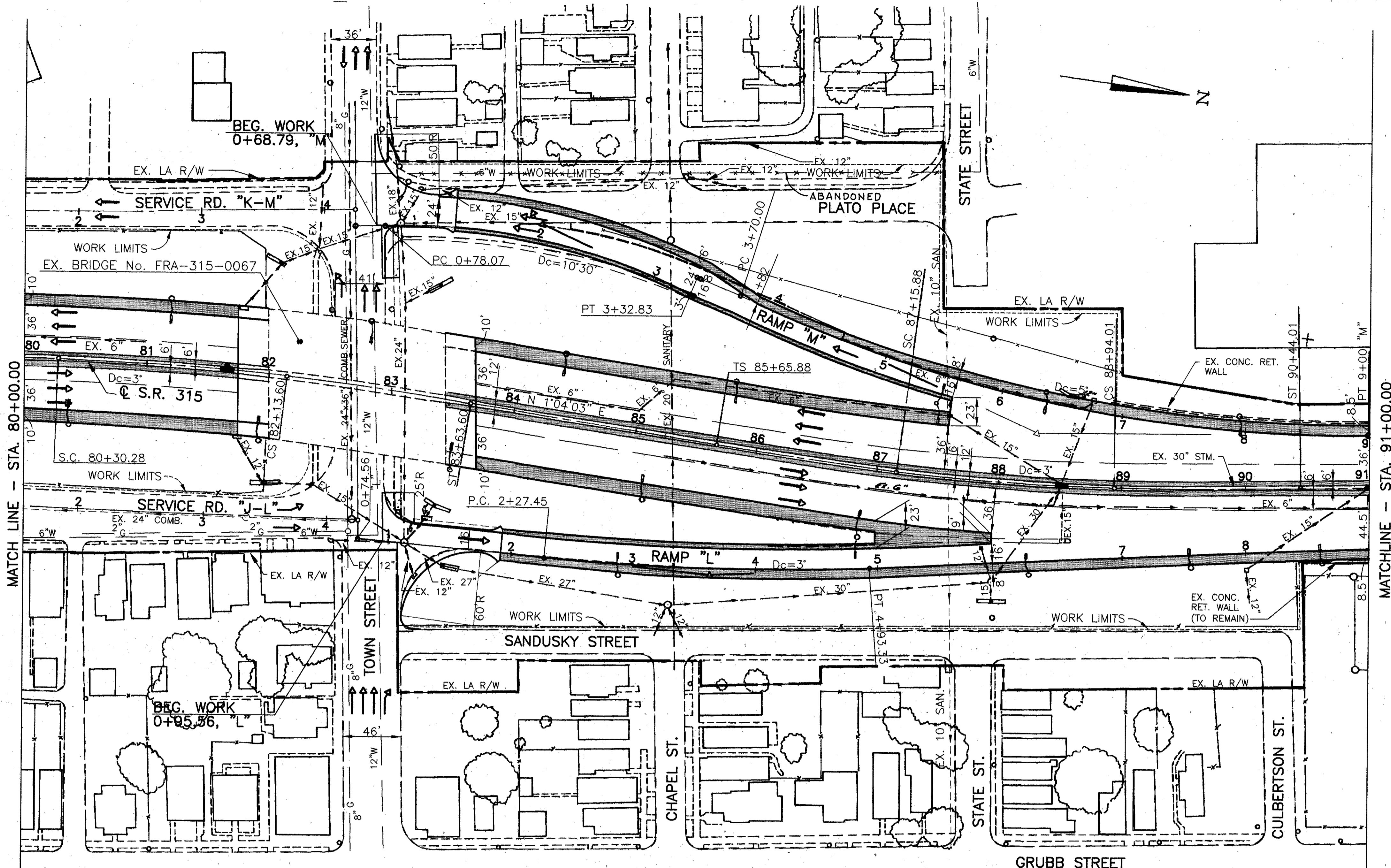
EXCAVATION	1943 C.Y.
EMBANKMENT	521 C.Y.
SEEDING	7821 S.Y.

- NOTES:**
- FOR S.R. 315 & RAMP C CURVE DATA SEE SH. NO. 10
 - FOR RAMPS "J" & "K" PROFILE, SEE SH. NO. 27
 - FOR PROPOSED DRAINAGE DETAILS, GUARDRAIL & FENCING SEE SH. NO'S. 48-53.
 - FOR PAVEMENT DETAILS SEE SH. NO'S. 39-43.

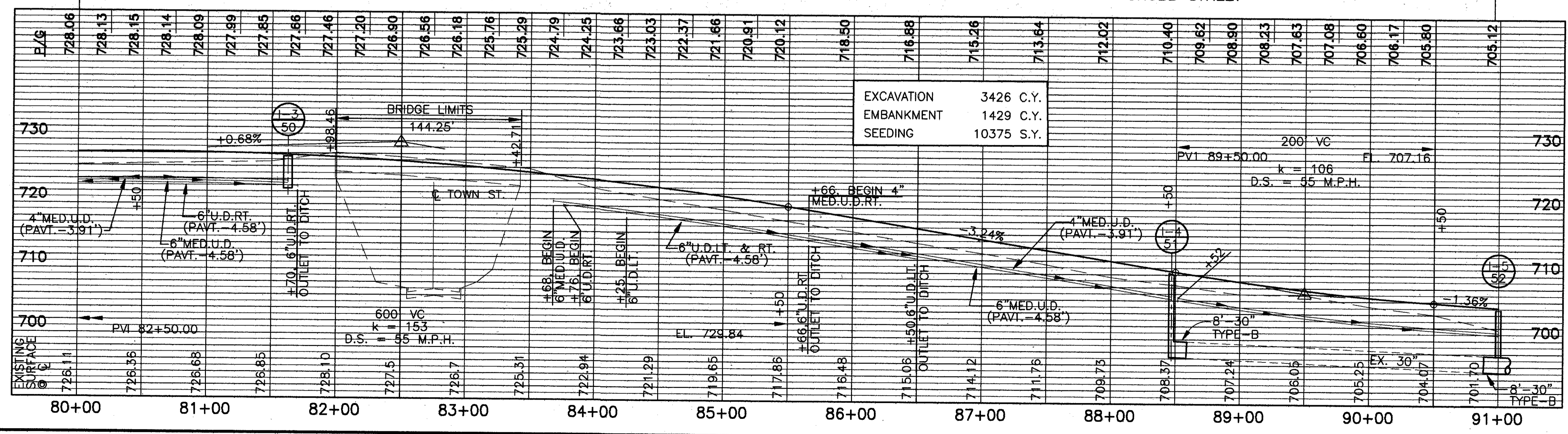
LEGEND:

PAVED SHOULDER

[G48] - I:\CIVIL\HIGHWAY\SR315-GD\SS-P&P.DWG - OCT 23, 1995 - 09:39:01 - SCALE = 1:30



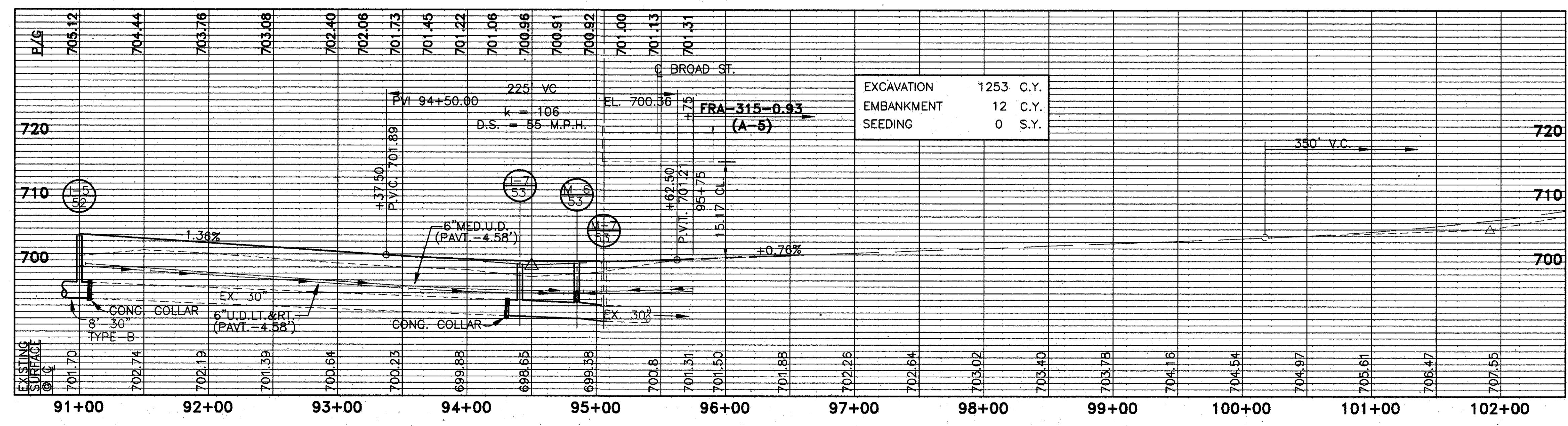
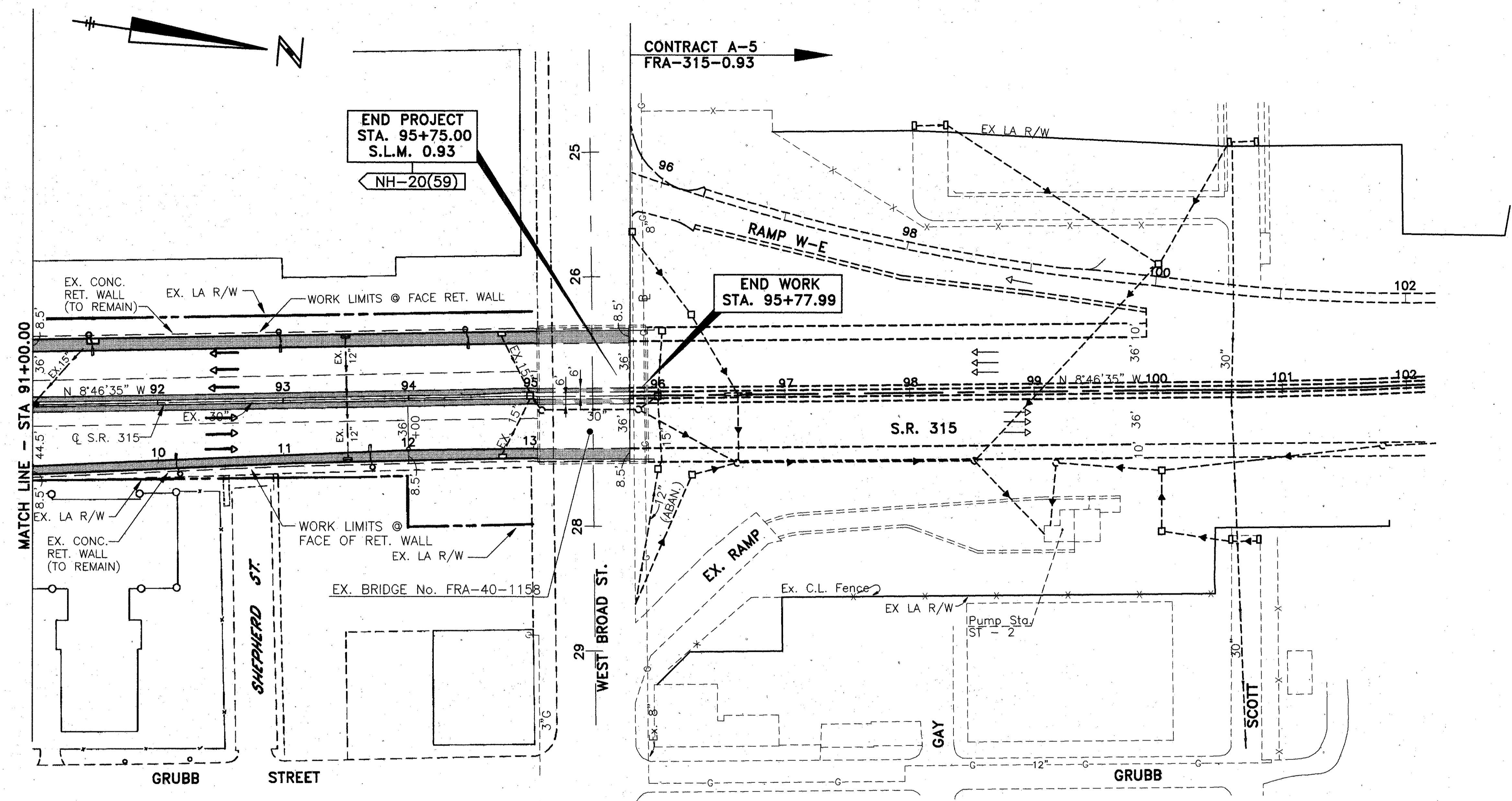
NOTE: ALL REFERENCE POINT DIMENSIONS ARE IN FEET.



- NOTES:**
- FOR S.R. 315 & RAMP Q CURVE DATA SEE SH. NO. 10
 - FOR RAMPS "L" & "M" PROFILE, SEE SH. NO. 28
 - FOR PROPOSED DRAINAGE DETAILS, GUARDRAIL & FENCING SEE SH. NO'S. 48-53.
 - FOR PAVEMENT DETAILS SEE SH. NO'S. 39-43.

LEGEND:

PAVED SHOULDER



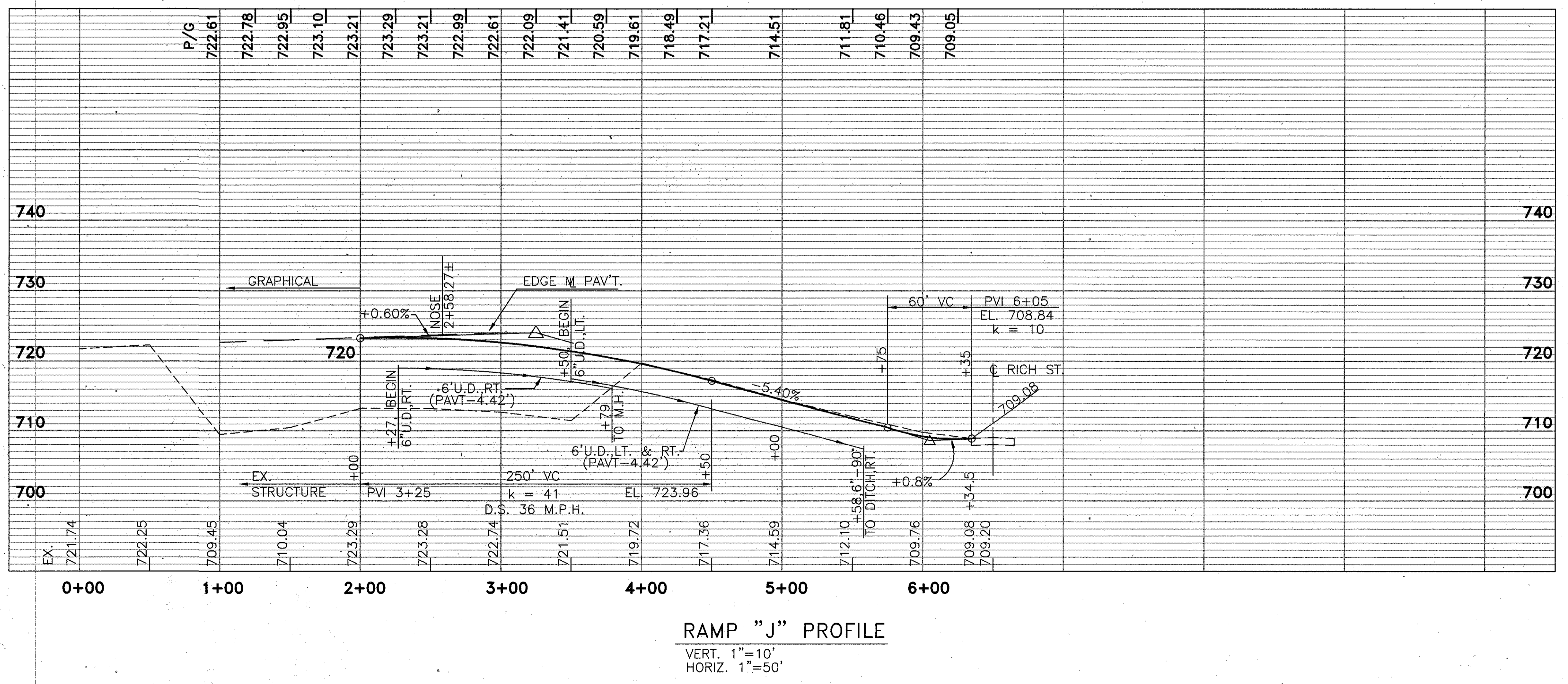
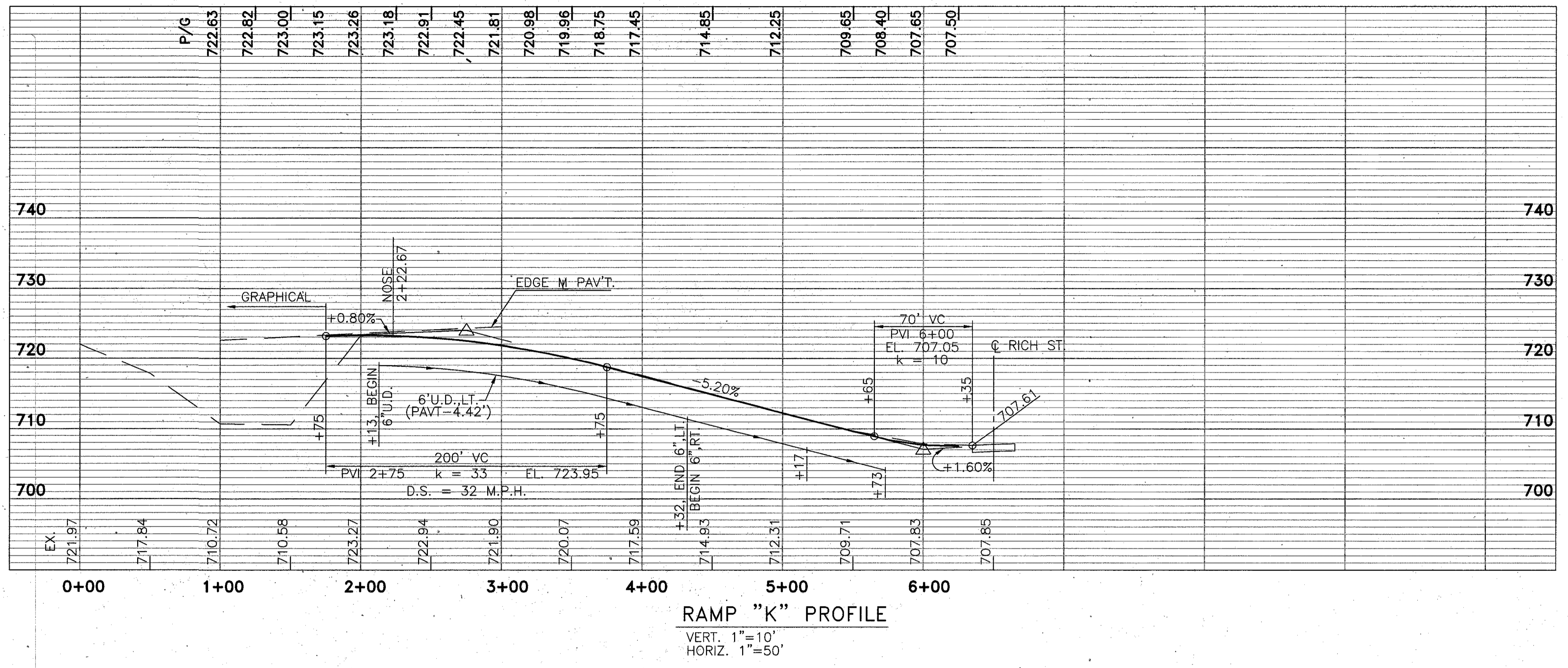
EXCAVATION 1253 C.Y.
 EMBANKMENT 12 C.Y.
 SEEDING 0 S.Y.

- NOTES:**
- FOR PROPOSED DRAINAGE DETAILS, GUARDRAIL & FENCING SEE SH. NO'S. 48-53.
 - FOR PAVEMENT DETAILS SEE SH. NO'S. 39-43.

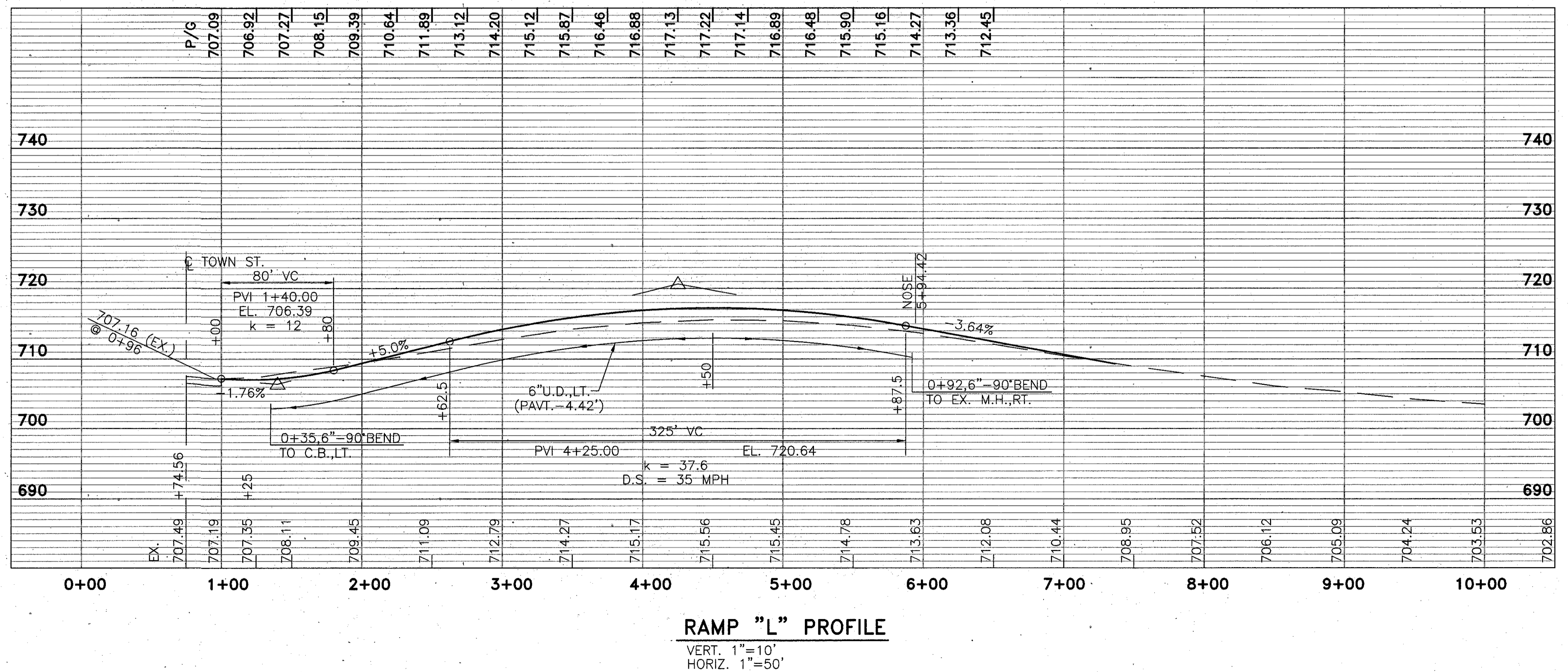
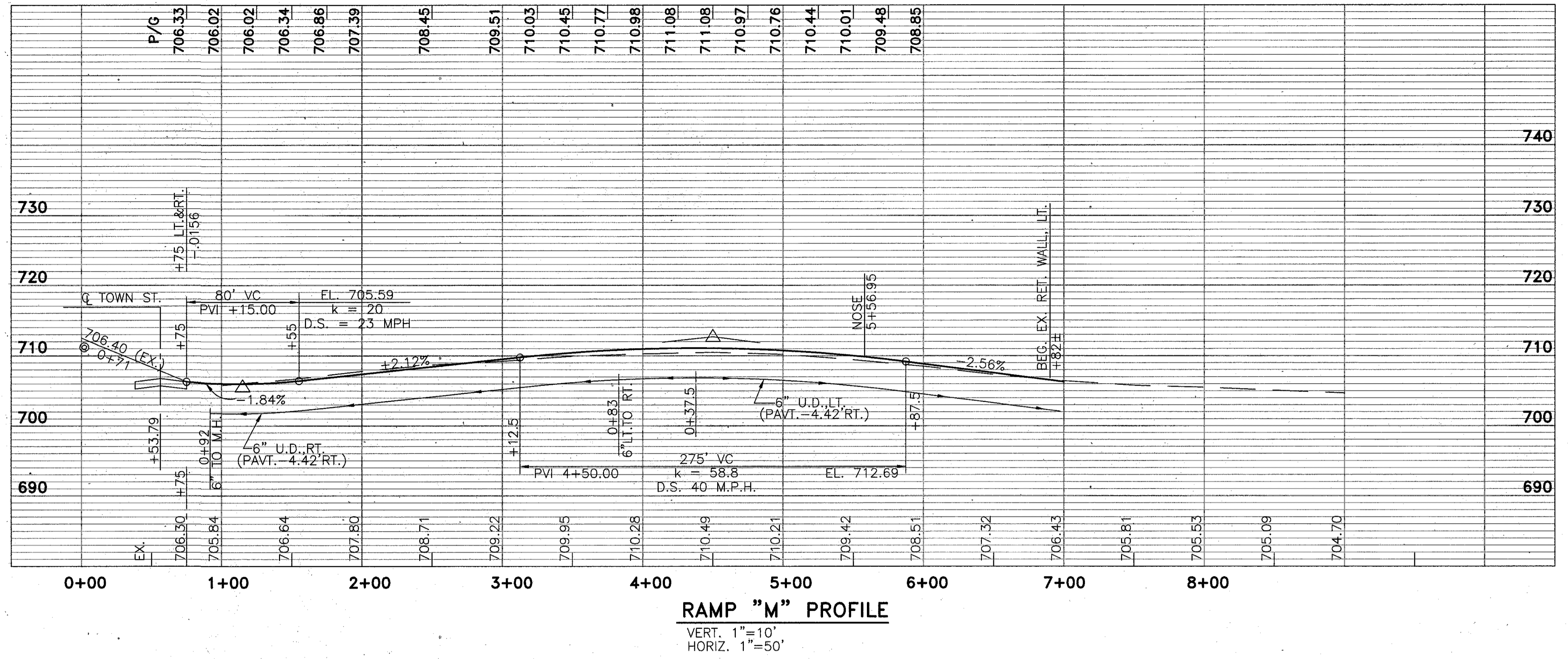
LEGEND:

PAVED SHOULDER

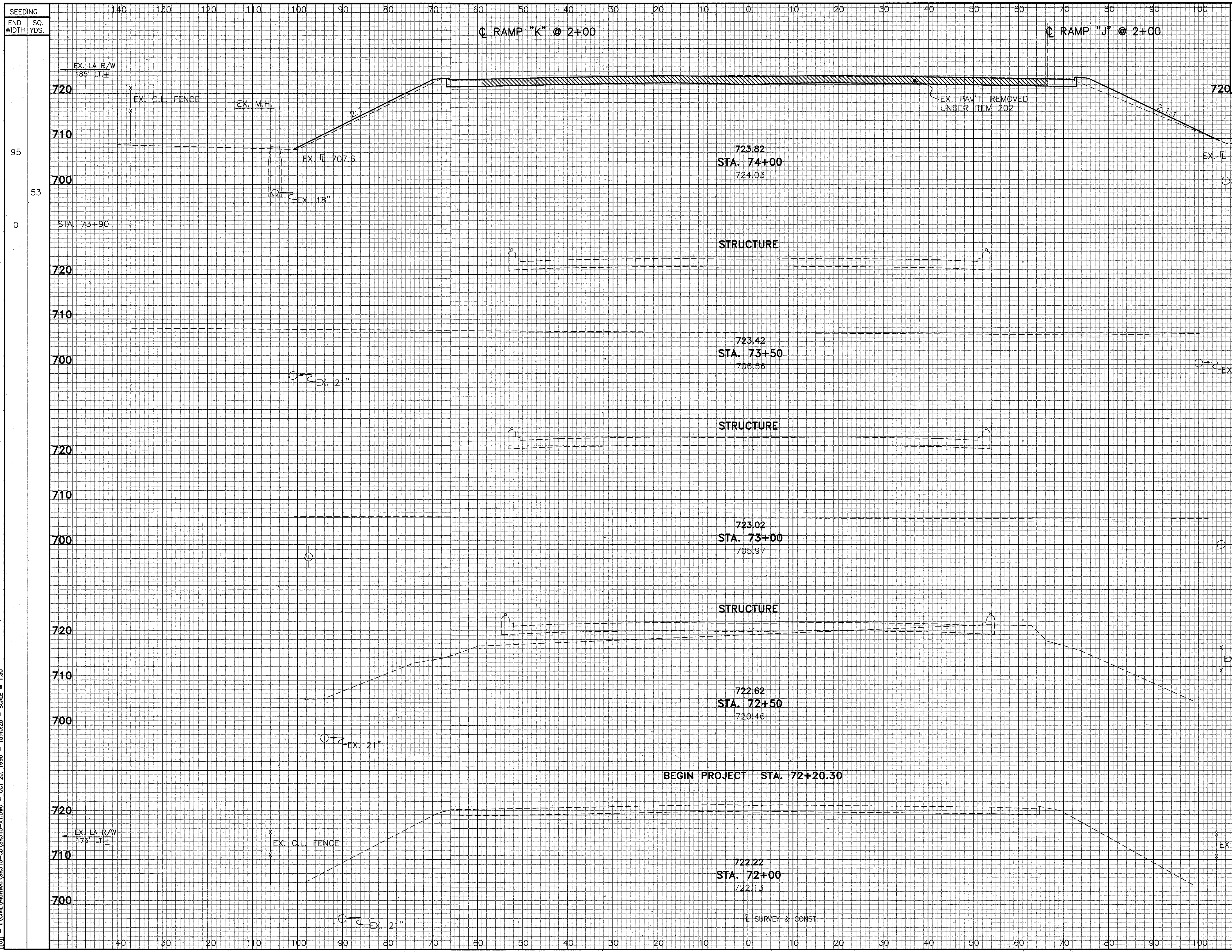
[G:\03] - \A\C\H\HIGHWAY\SR315-CD\SS-PLAN.DWG - OCT 23, 1995 - 1001:53 - SCALE = 1:30



[[6]] - I:\CIVIL\HIGHWAY\SR315-CD\PROP-PRF1.DWG - OCT 19, 1995 - 10:16:18 - SCALE = 65:10



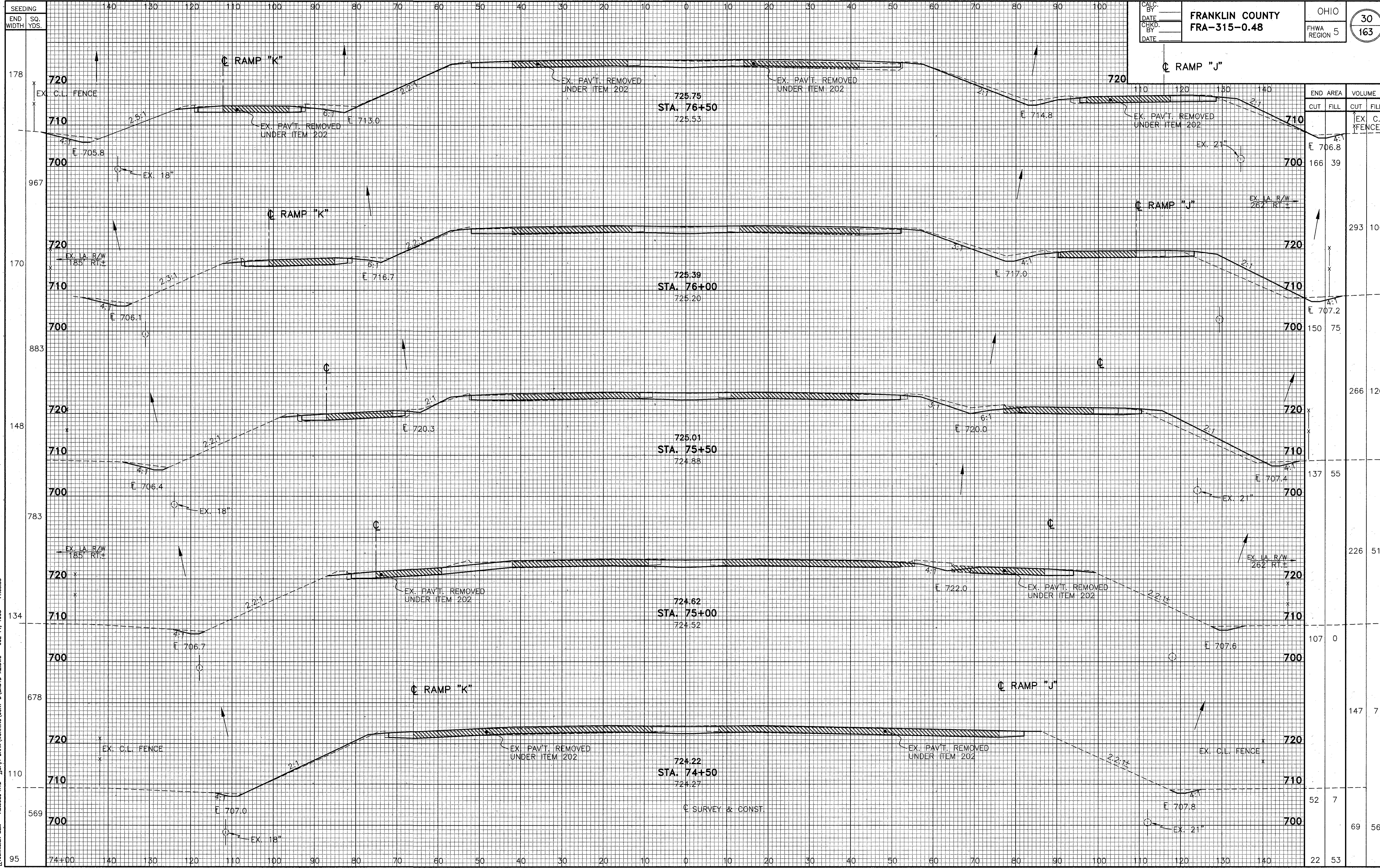
[G] - I:\CIVIL\HIGHWAY\315-CD\AMP-PRF2.DWG - OCT 19, 1995 - 10:20:19 - SCALE = 65:10



END AREA		VOLUME	
CUT	FILL	CUT	FILL
22	53	4	10
0	0		

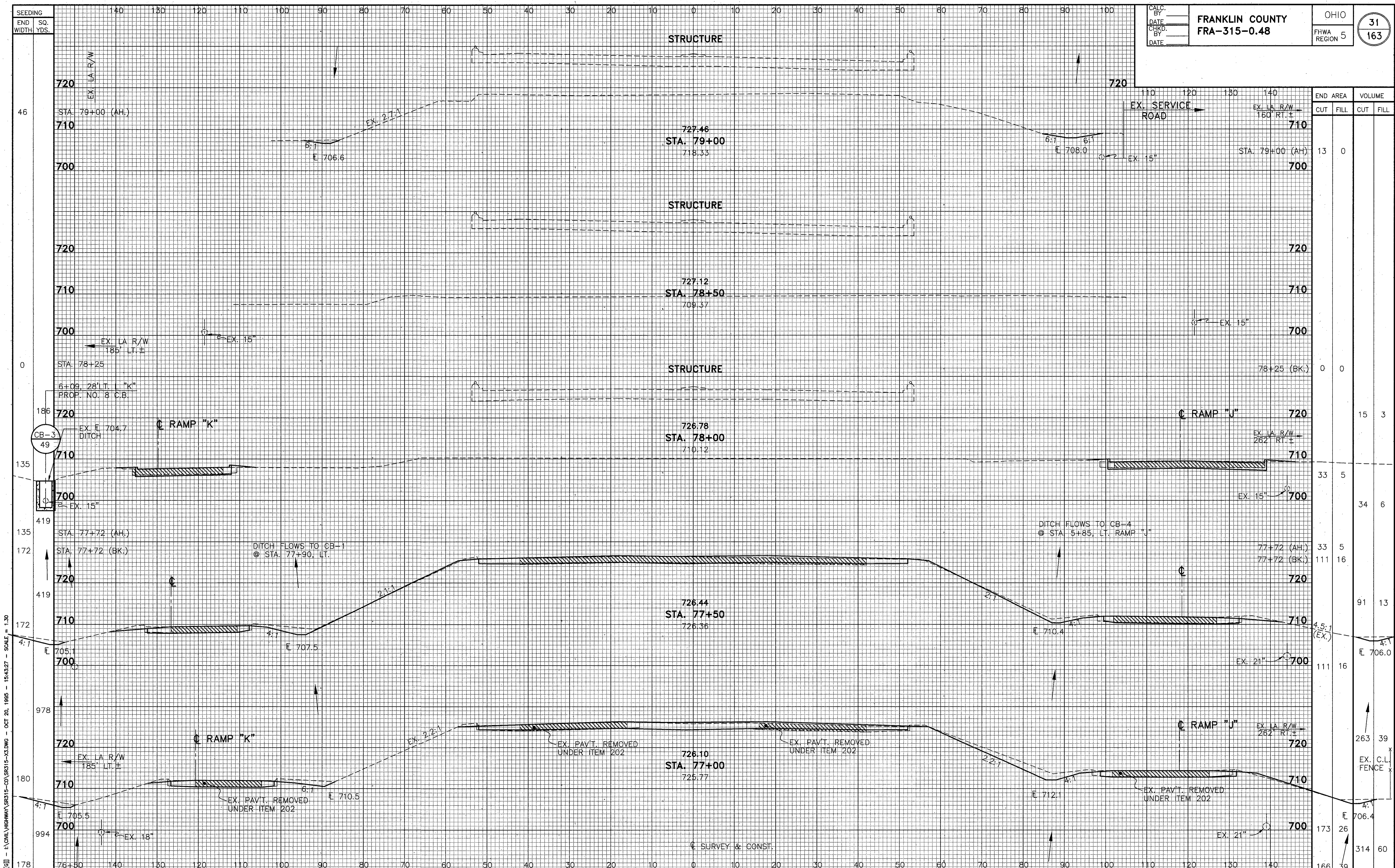
[07] - I:\CIVIL\HIGHWAY\SR315-00\SR315-X1.DWG - OCT 20, 1995 - 15:40:25 - SCALE = 1:30

CROSS SECTIONS STA. 72+00 TO STA. 74+00



Technician BLM - AutoCad R12 - J:\C:\V-DRAW\WORKING\COMF-D\SRS315-X2.DWG - JUL 11, 1995 - 11:08:55

CROSS SECTIONS STA. 74+50 TO STA. 76+50

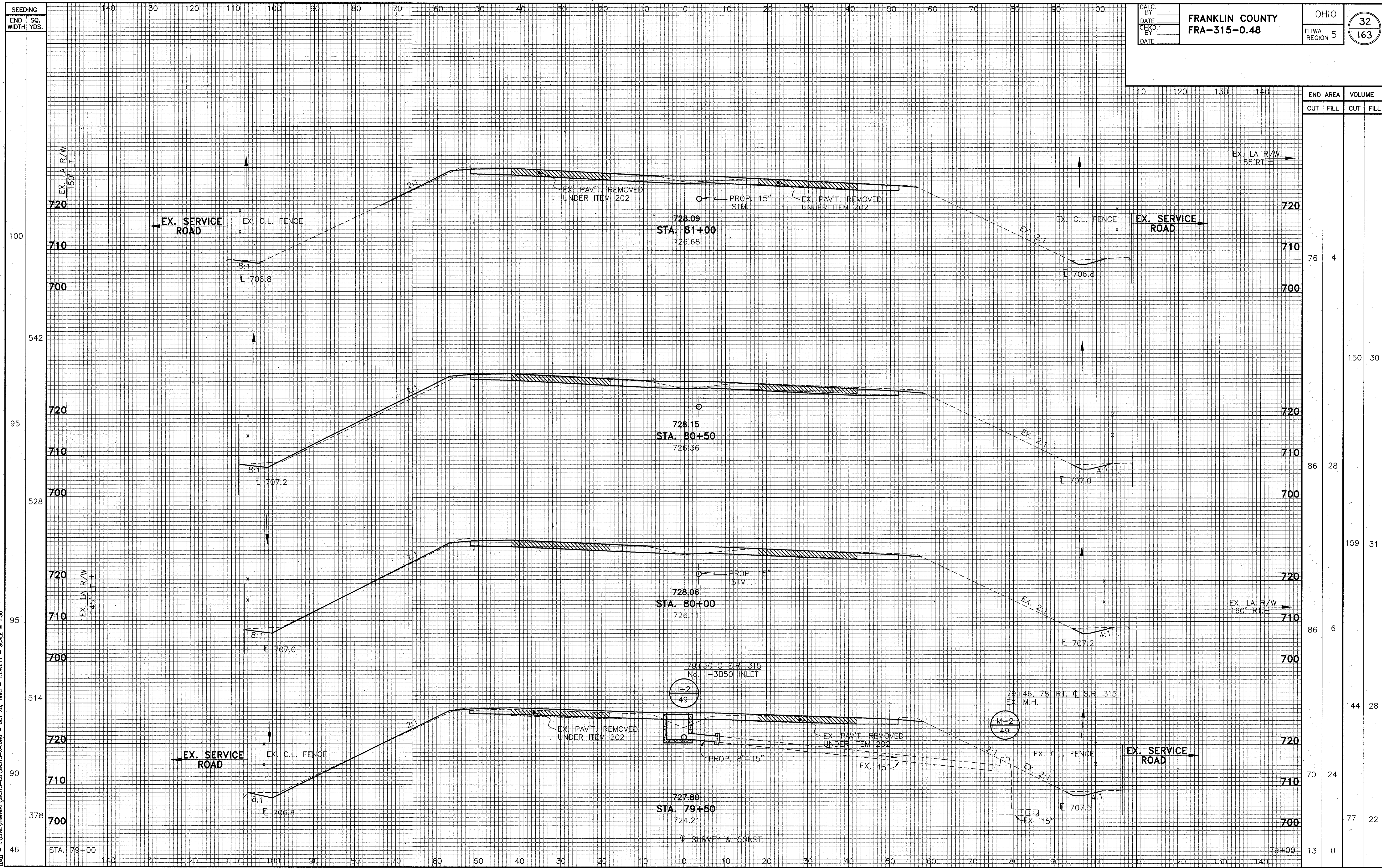


CALC. BY		FRANKLIN COUNTY FRA-315-0.48	OHIO
DATE			FHWA REGION 5
CHKD. BY			31
DATE			163

[C] - I:\CWA\HIGHWAY\SR315-04\SR315-X3.DWG - OCT 20, 1995 - 15:43:27 - SCALE = 1:30

STATION	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
79+00 (AH.)	13	0		
78+25 (BK.)	0	0		
78+00			15	3
77+72 (BK.)	33	5		
77+72 (AH.)	33	5		
77+50	91	13		
77+00	111	16	34	6
76+50	173	26	263	39
76+50	166	39	314	60

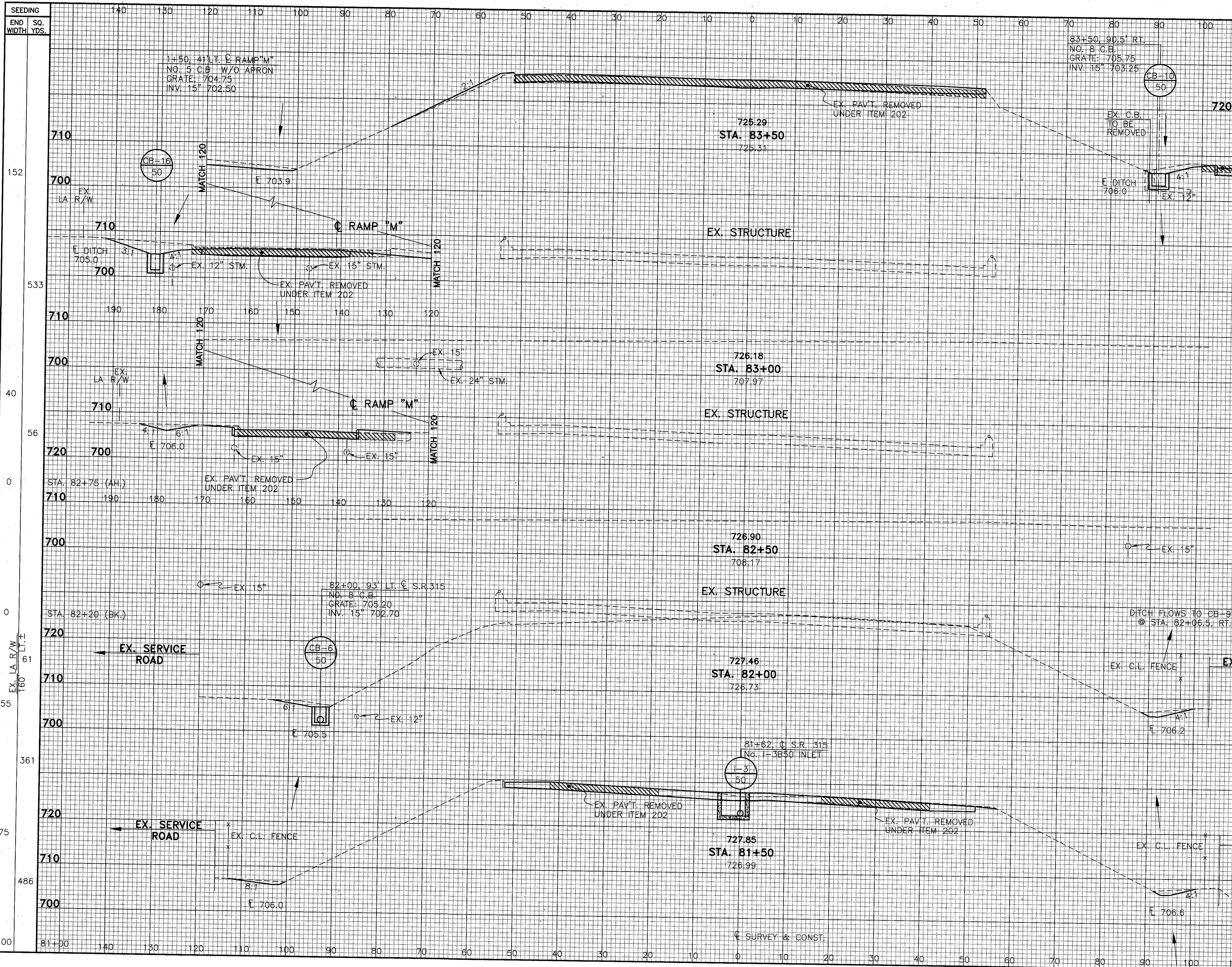
CROSS SECTIONS STA. 77+00 TO STA. 79+00



STATION	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
79+00	13	0		
79+50	77	22		
80+00	86	6	159	31
80+50	86	28	150	30
81+00	76	4		

[G] - I:\CIVIL\HIGHWAY\SR315-04\SR315-04.DWG - OCT 20, 1995 - 15:45:11 - SCALE = 1:30

CROSS SECTIONS STA. 79+50 TO STA. 81+00

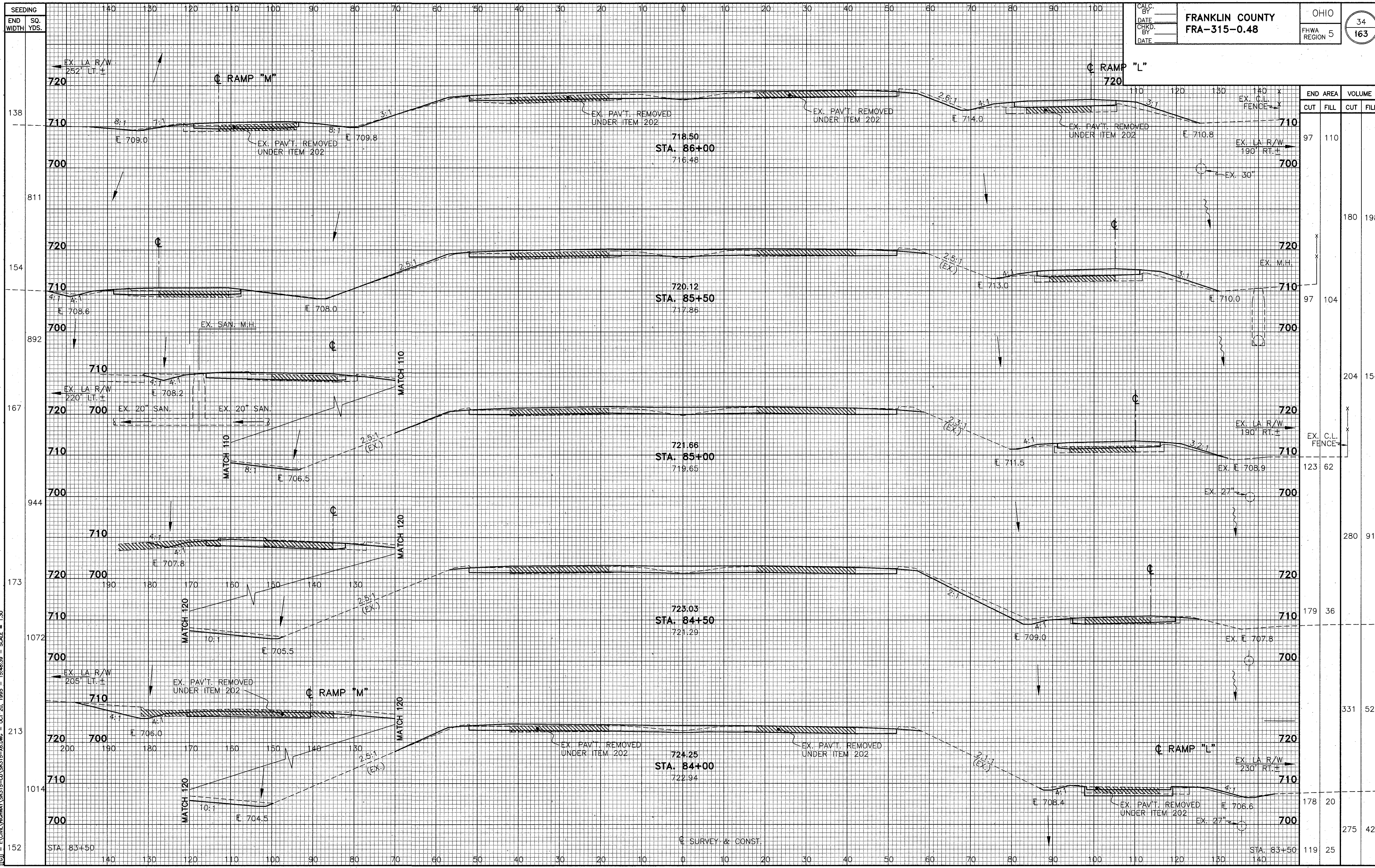


CALC. BY	FRANKLIN COUNTY	OHIO	33
DATE	FRA-315-0.48	FHWA REGION 5	163
CHKD. BY			
DATE			

END AREA	VOLUME	
	CUT	FILL
119	25	
124	44	
15	22	
7	10	
0	0	
0	0	
0	0	
6	0	
16	0	
97	0	
89	0	
153	4	
76	4	

[G] - I:\CIVIL\HIGHWAY\SR315-KS.DWG - OCT 20, 1995 - 15:46:58 - SCALE = 1:30

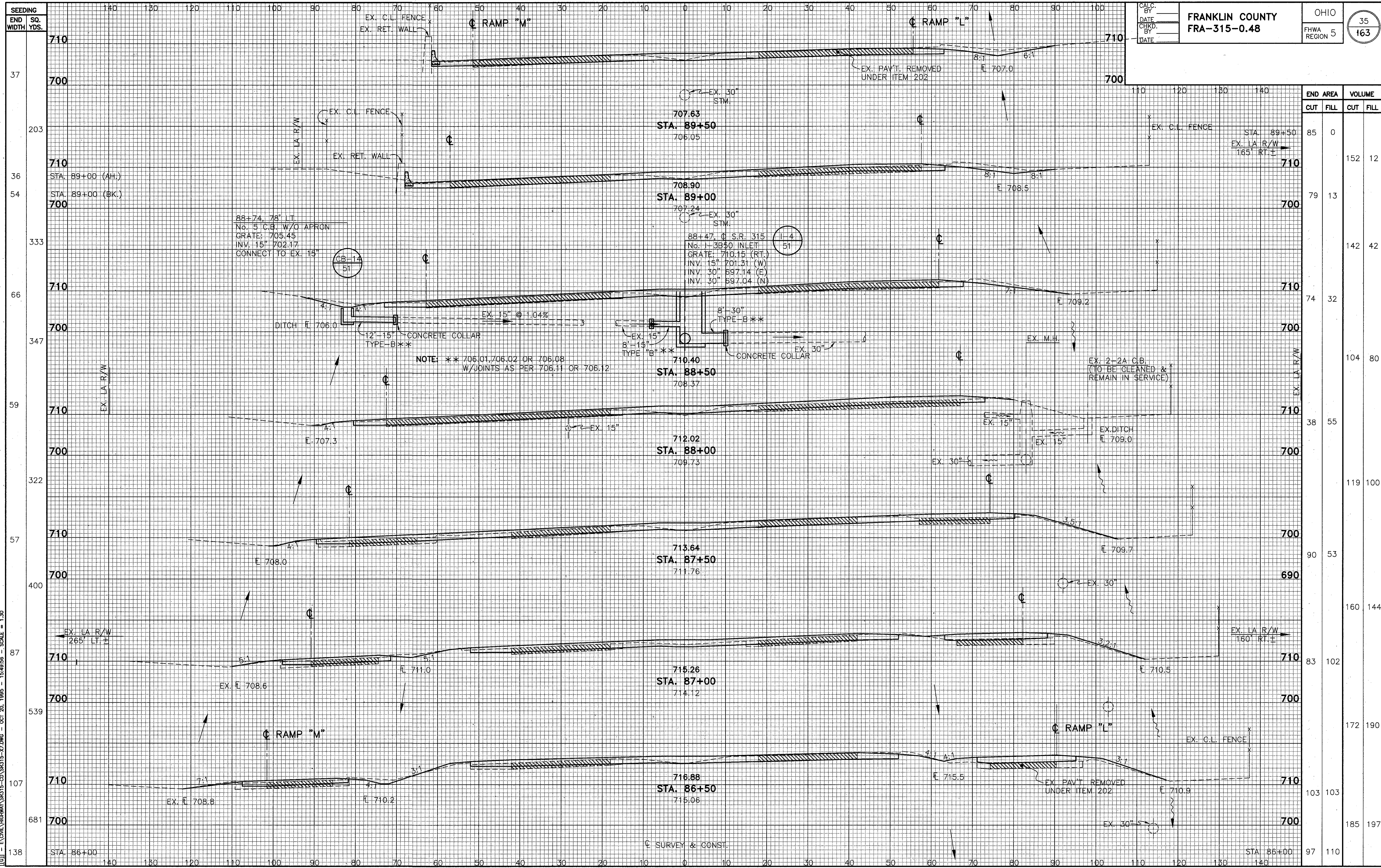
CROSS SECTIONS STA. 81+50 TO STA. 83+50



END AREA	VOLUME	
	CUT	FILL
97	110	
97	104	180
123	62	204
179	36	154
178	20	91
119	25	280
		36
		52
		42
		25

CROSS SECTIONS STA. 84+00 TO STA. 86+00

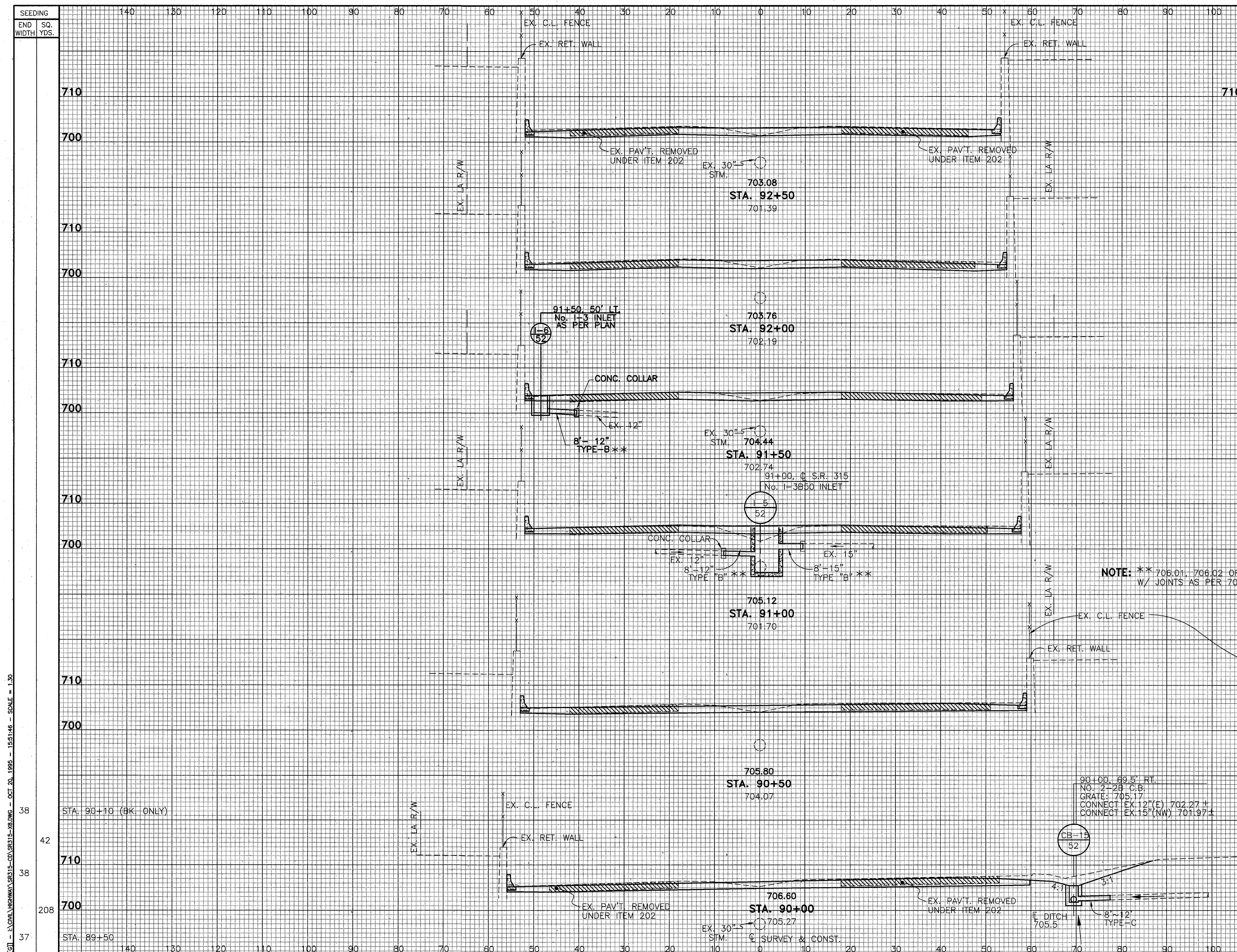
[0] - L:\COM\HIGHWAY\SR315-00\SR315-06.DWG - OCT 20, 1995 - 15:48:39 - SCALE = 1:30



END STA.	START STA.	CUT	FILL	VOLUME
89+50	89+50	85	0	152 12
89+00	89+00	79	13	142 42
88+50	88+50	74	32	104 80
88+00	88+00	38	55	119 100
87+50	87+50	90	53	160 144
87+00	87+00	83	102	172 190
86+50	86+50	103	103	185 197
86+00	86+00	97	110	

[02] - A: CIVIL HIGHWAY/SR315-CD/SR315-X7.DWG - OCT 20, 1995 - 15:49:56 - SCALE = 1:30

CROSS SECTIONS STA. 86+50 TO STA. 89+50



CALC. BY _____ DATE _____ CHKD. BY _____ DATE _____	FRANKLIN COUNTY FRA-315-0.48	OHIO FHWA REGION 5	36 163
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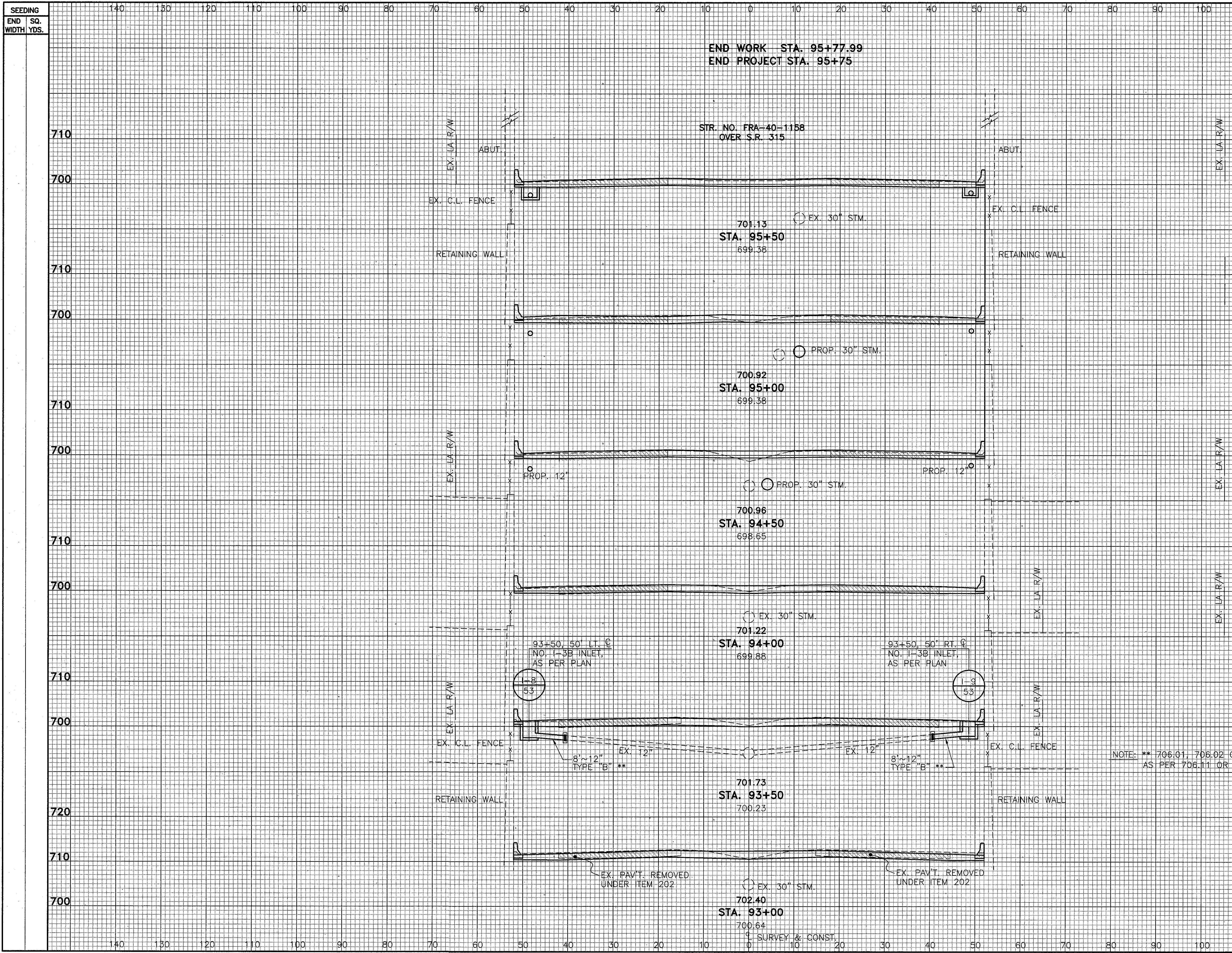
END STA.	SQ. WIDTH	END AREA		VOLUME	
		CUT	FILL	CUT	FILL
710					
700		84	0		
710					167 0
700		96	0		
710					146 0
700		62	0		
710					107 8
700		54	9		
710					133 8
700		90	0		
710					70 0
700		70	0		
710					4 0
700		39	0		
710					30 0
700		123	0		
710					193 0
700		85	0		

NOTE: ** 706.01, 706.02 OR 706.08
W/ JOINTS AS PER 706.11 OR 706.12

90+00, 69.5' RT.
NO. 2-28 C.B.
GRATE: 705.17
CONNECT EX. 12"(E) 702.27 ±
CONNECT EX. 15"(NW) 701.97 ±

[07] - 1/4" CIVIL HIGHWAY SB315-0.48 SB315-0.48.DWG - OCT. 20, 1995 - 1553146 - SCALE = 1/32

CROSS SECTIONS STA. 90+00 TO 92+50



CALC. BY	FRANKLIN COUNTY	OHIO	37 163
DATE	FRA-315-0.48	FHWA REGION 5	
CHKD. BY			
DATE			

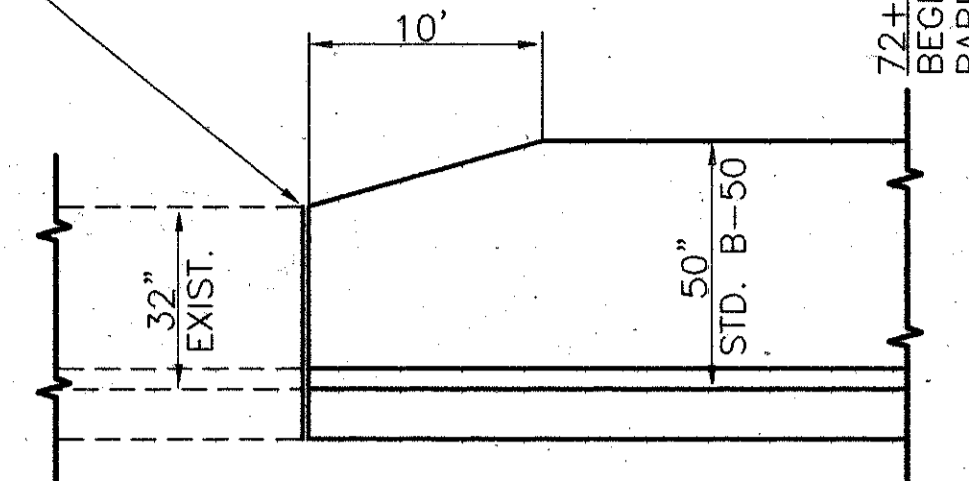
STATION	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
95+75 (BK. ONLY)	73	0		
95+50	73	0	68	0
95+00	62	0		
94+50	56	2	109	2
94+00	72	0		
93+50	70	0	131	0
93+00	75	0		
92+50	84	0	147	0

Technician: BLM - AutoCad R12 - J:\A-DRAW\WORKING\CONF-0\SRS315-XS.DWG - JUL 11, 1995 - 11:13:55

NOTE: ** 706.01, 706.02 OR 706.08 W/JOINTS AS PER 706.111 OR 706.12

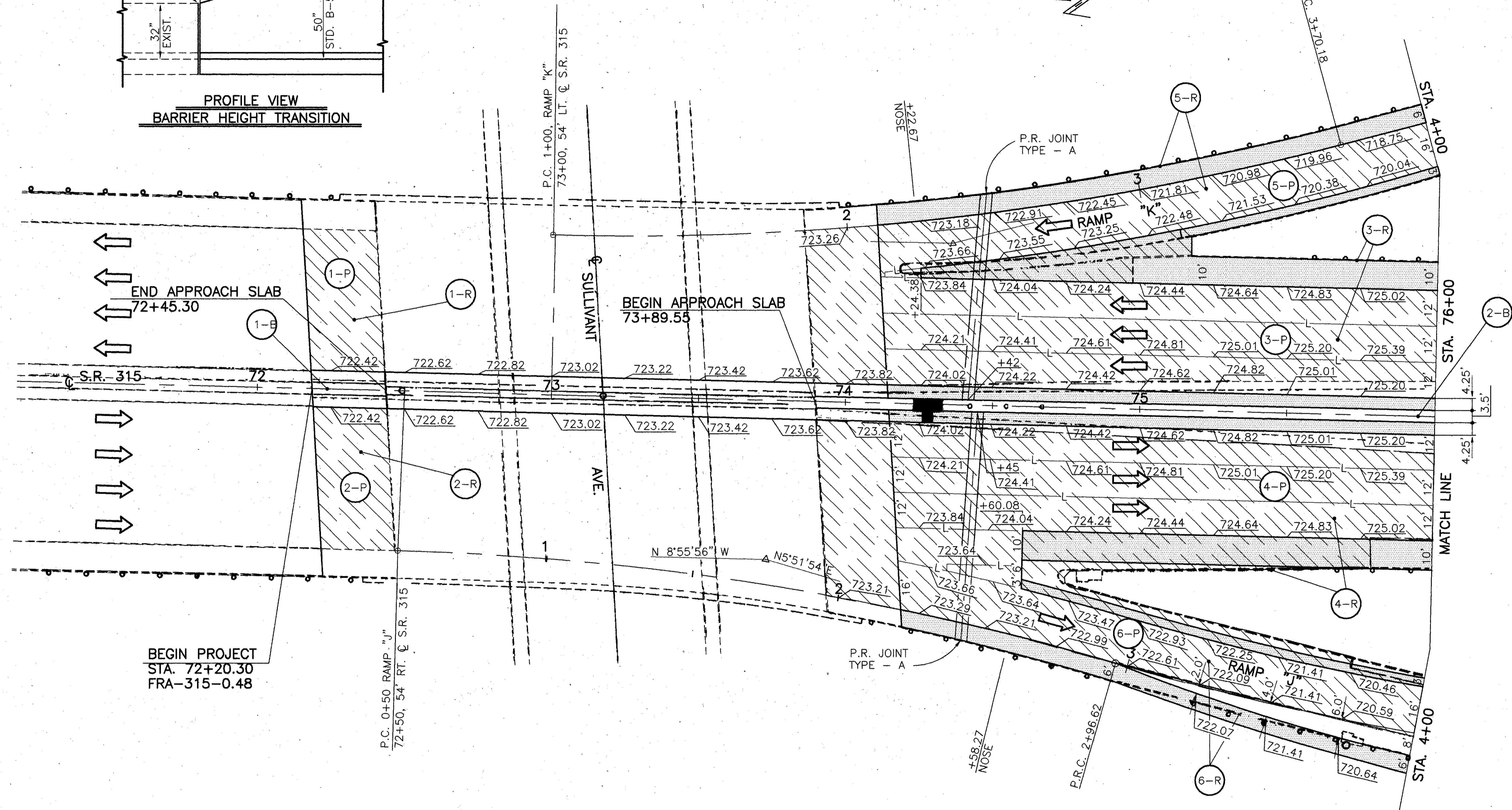
CROSS SECTIONS STA. 93+00 TO STA. 95+50

EXPANSION JOINT
3/4" MIN. PREFORMED
FILLER 705.03



PROFILE VIEW
BARRIER HEIGHT TRANSITION

CALC. BY	FRANKLIN COUNTY	OHIO	39
DATE	FRA-315-0.48	FHWA	163
CHKD. BY		REGION	5
DATE			



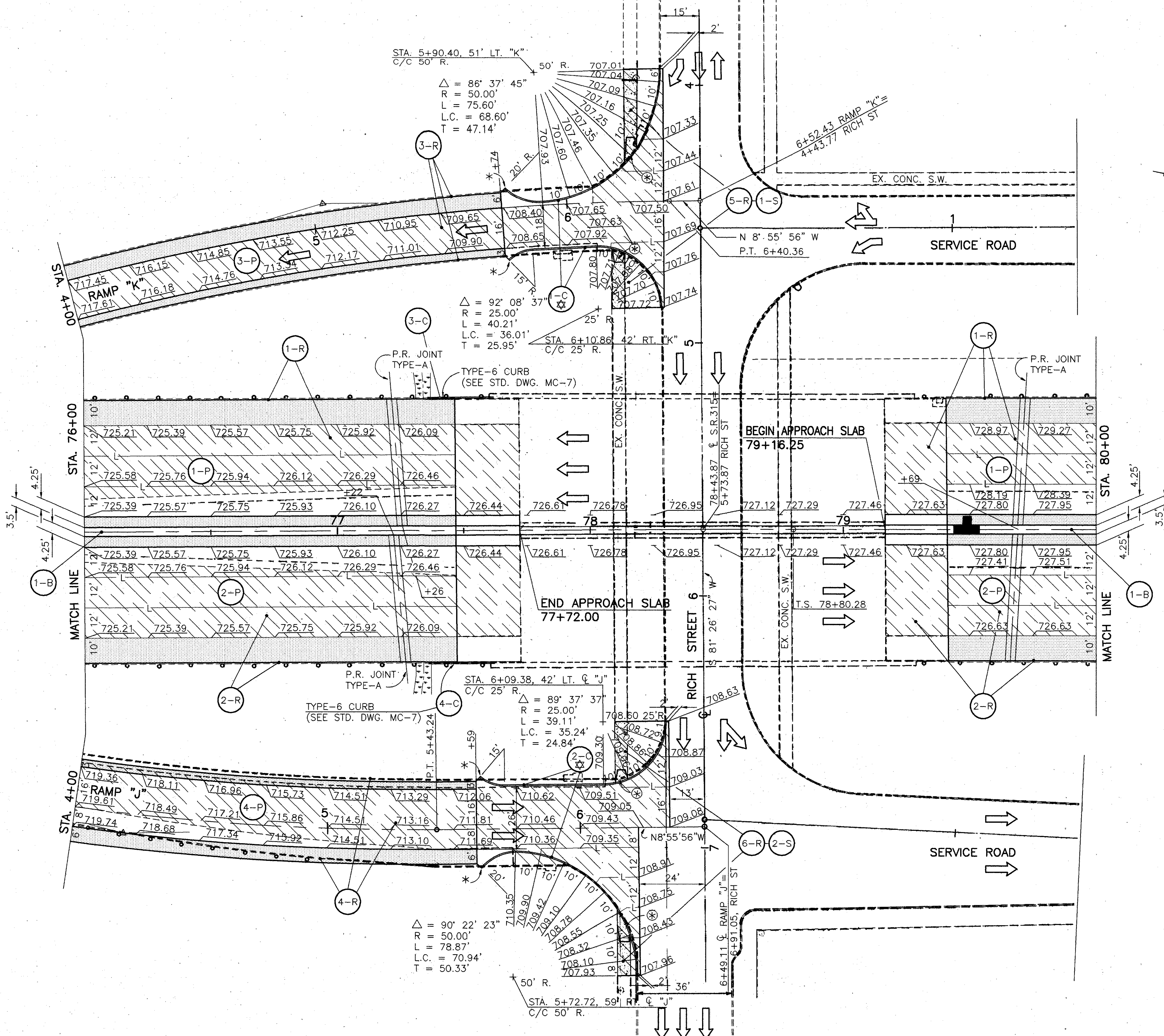
BEGIN PROJECT
STA. 72+20.30
FRA-315-0.48

LEGEND

- ITEM 452 - SHOULDER
- ITEM 202 - PAVEMENT REMOVAL

FOR SUB-SUMMARY OF QUANTITIES
SEE SHEET NO. 38.
SEE SHT. # 48 FOR DRAINAGE DETAILS


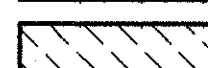
[AIST] - I:\TRANS\8315-CD\PAV-DETT.DWG - SEP 13, 1996 - 10:49:59 - SCALE = 1:30



NOTES:

- ALL ELEVATIONS ALONG PROPOSED CURB ARE AT THE FACE OF CURB.
- * TAPER CURB HEIGHT FROM 6" TO 0" IN 10'-0"
- ⊕ CURB RAMP, TYPE-2
- ☆ CURB-TYPE 6, AS PER PLAN (SEE DETAIL SHT.# 44.)

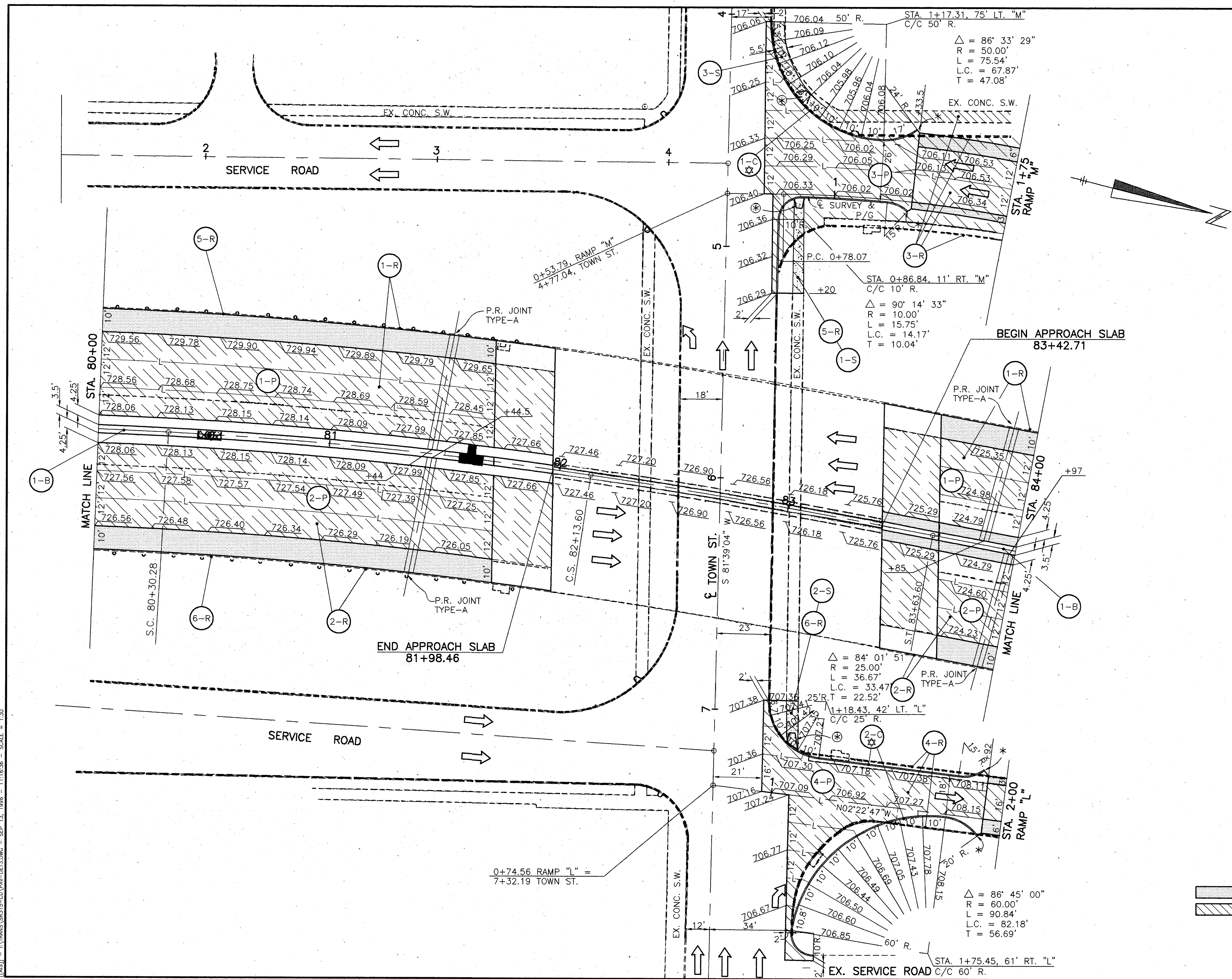
LEGEND

-  ITEM 452 - SHOULDER
-  ITEM 202 - PAVEMENT & WALK REMOVAL

FOR SUB-SUMMARY OF QUANTITIES
SEE SHT. NO. 38.

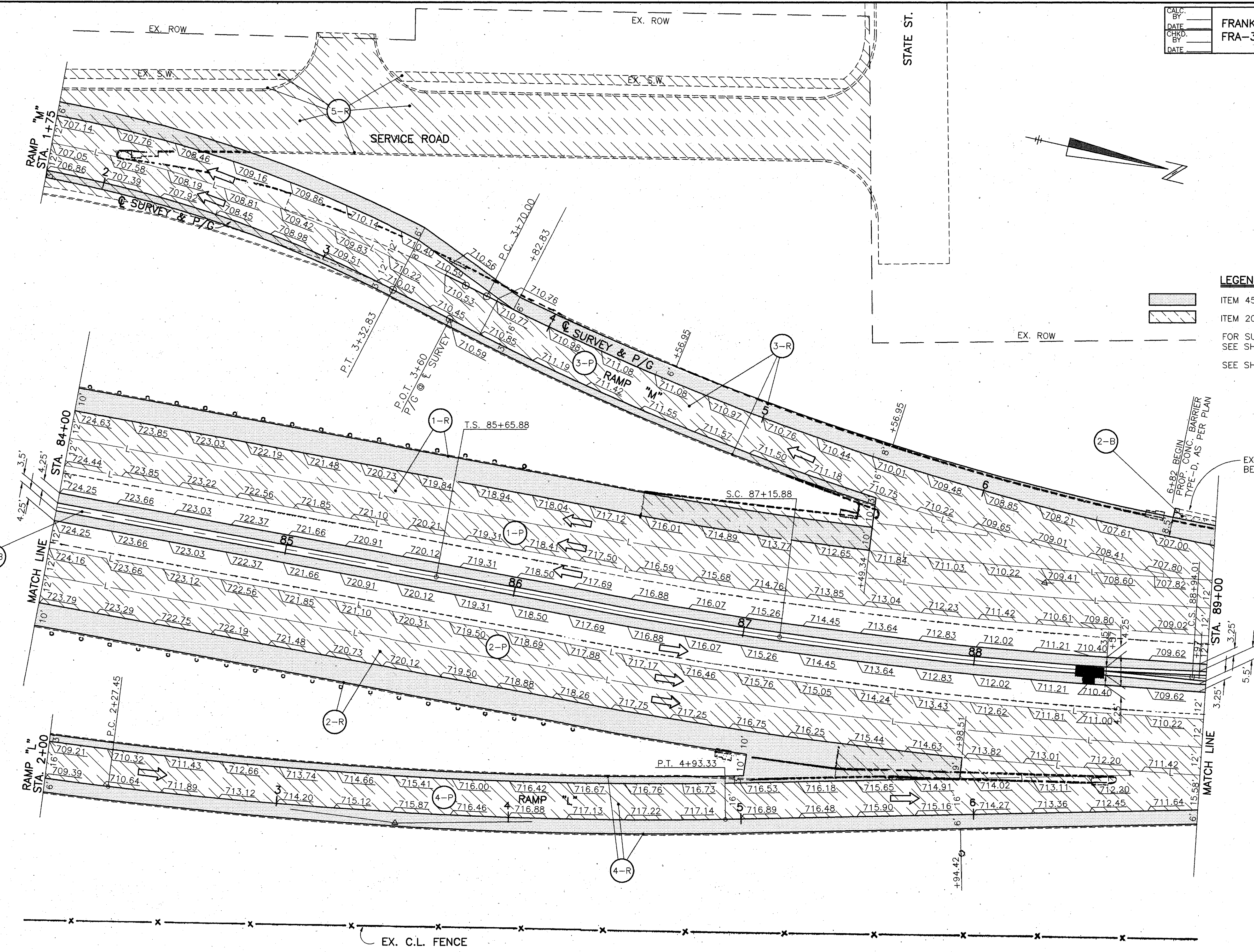
SEE SHT.# 49 FOR DRAINAGE DETAILS

[AS] - TRANS(SR315-CD)PAV-DRT2.DWG - SEP 13, 1986 - 10:55:10 - SCALE = 1:30



- NOTES:**
- ALL ELEVATIONS ALONG PROPOSED CURB ARE AT THE FACE OF CURB.
 - * TAPER CURB HEIGHT FROM 6" TO 0" IN 10'-0"
 - ⊗ CURB RAMP, TYPE-2
 - ☆ CURB-TYPE 6, AS PER PLAN (SEE DETAIL SHT.# 44.)
 - FOR SUB-SUMMARY OF QUANTITIES SEE SHEET NO. 38.
- LEGEND**
- [Hatched Pattern] ITEM 452 - SHOULDER
 - [Diagonal Line Pattern] ITEM 202 - PAVEMENT & WALK REMOVAL
- SEE SHT.# 50 FOR DRAINAGE DETAILS

[AUST] - I:\TRANS\SB315-CD\PAV-DETAILS.DWG - SEP 13, 1998 - 11:16:36 - SCALE = 1:30



LEGEND

ITEM 452 - SHOULDER

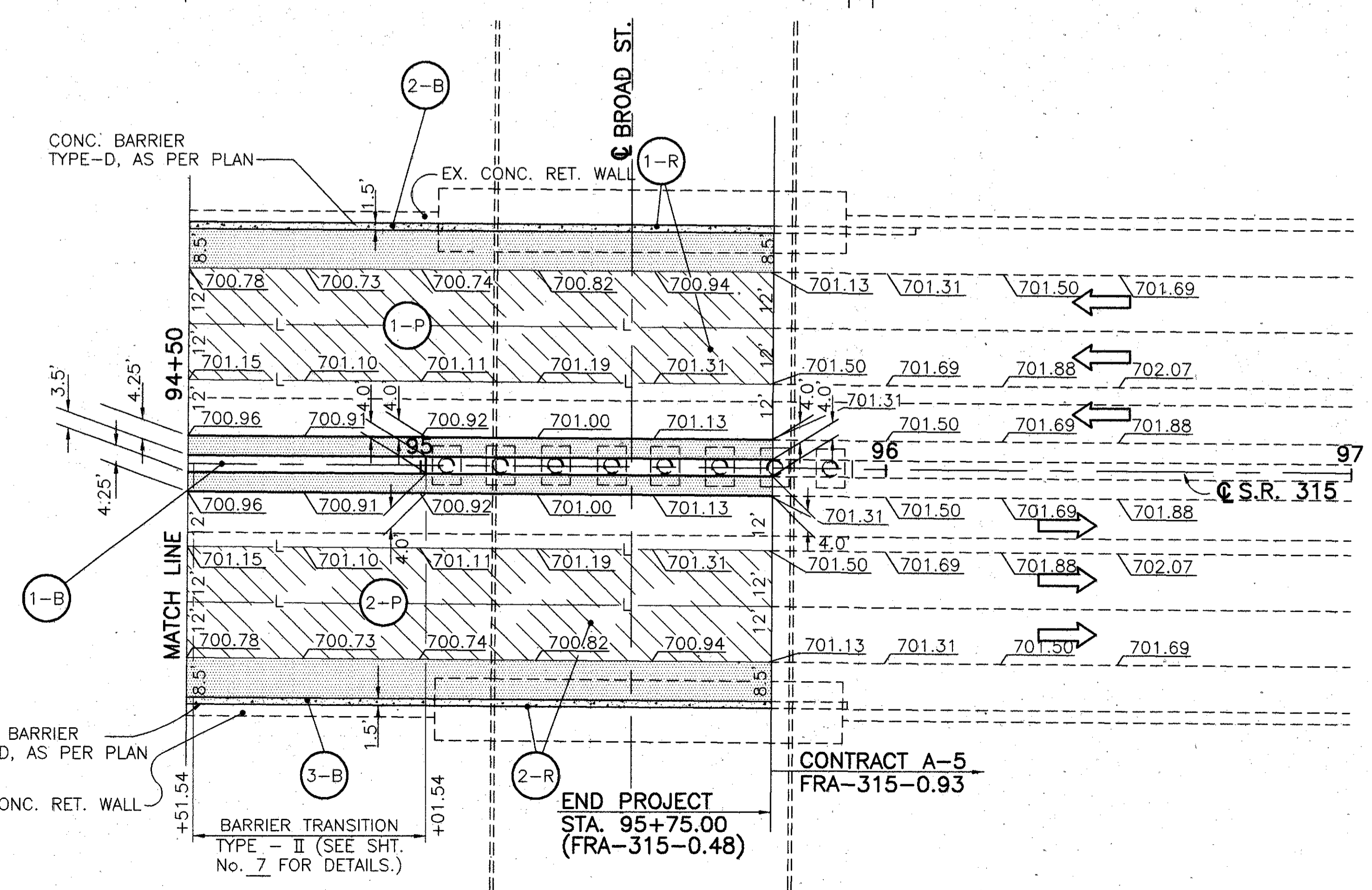
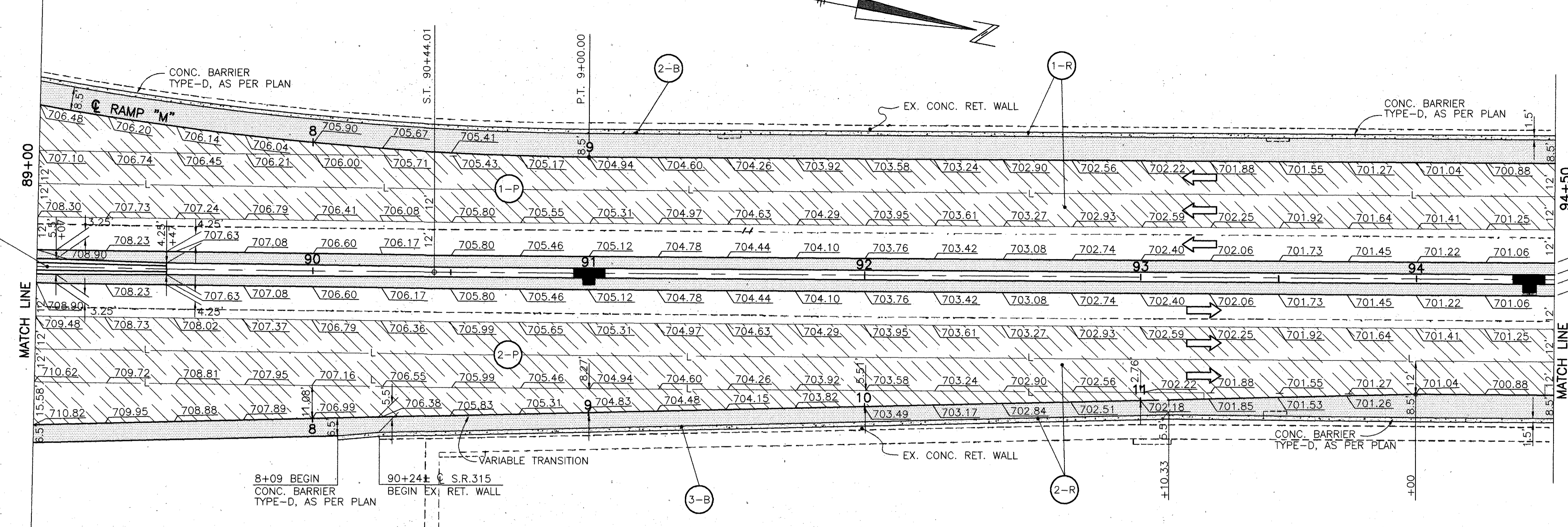
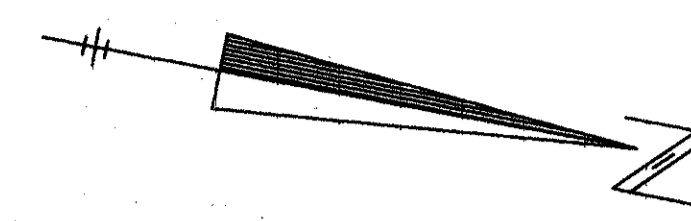
ITEM 202 - PAVEMENT & WALK REMOVAL

FOR SUB-SUMMARY OF QUANTITIES
SEE SHEET NO. 38.

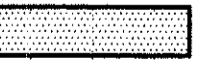
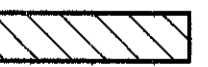
SEE SHEET No. 51 FOR DRAINAGE DETAILS

EX. CONC. RET. WALL
BEGIN @ 6+82, LT.

[C] - 1A CIVIL HIGHWAY SR315-CD PAV-DET4.DWG - OCT. 19, 1995 - 15:05:42 - SCALE = 1:30



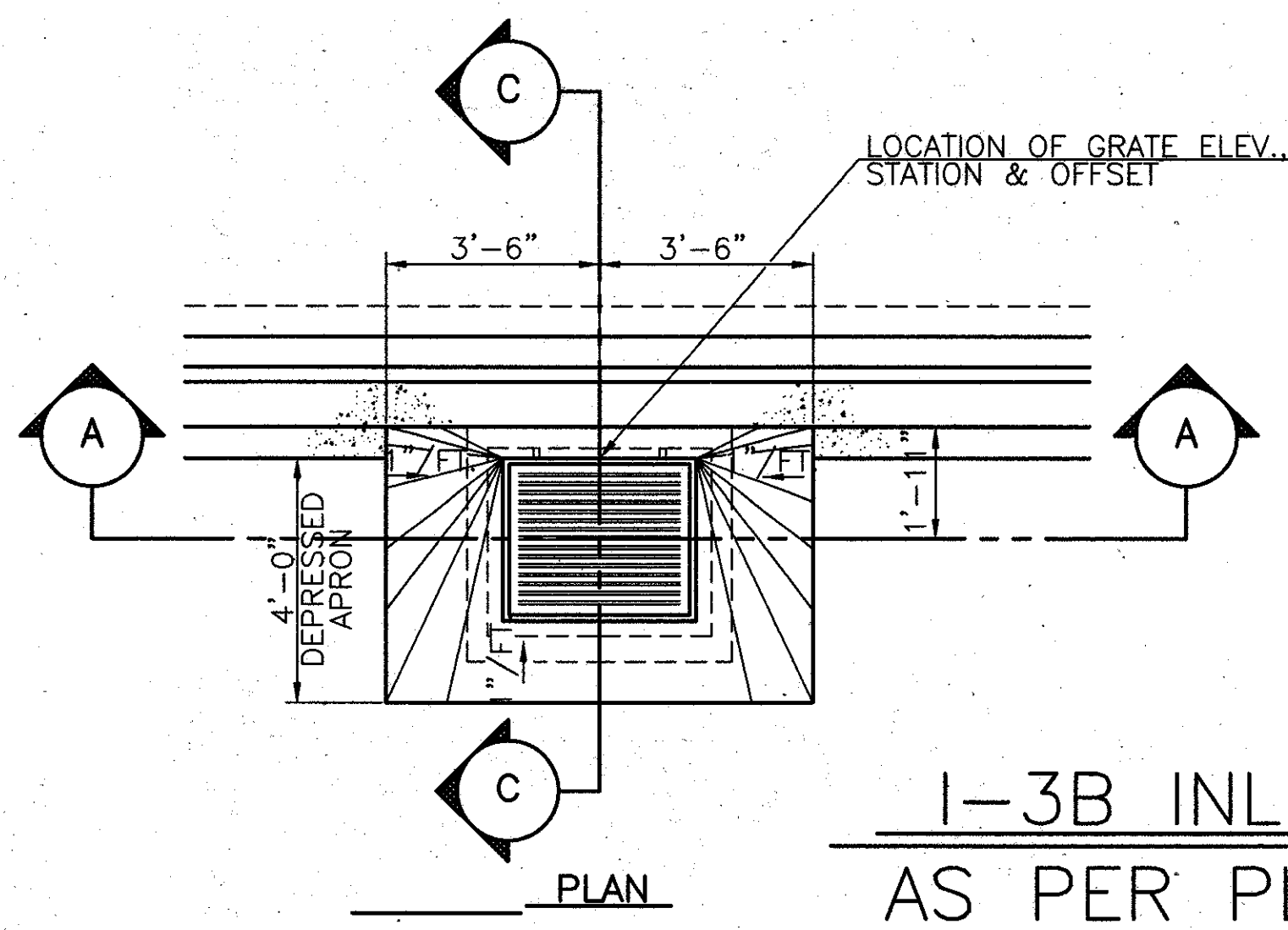
LEGEND

 ITEM 452 - SHOULDER
 ITEM 202 - PAVEMENT REMOVAL

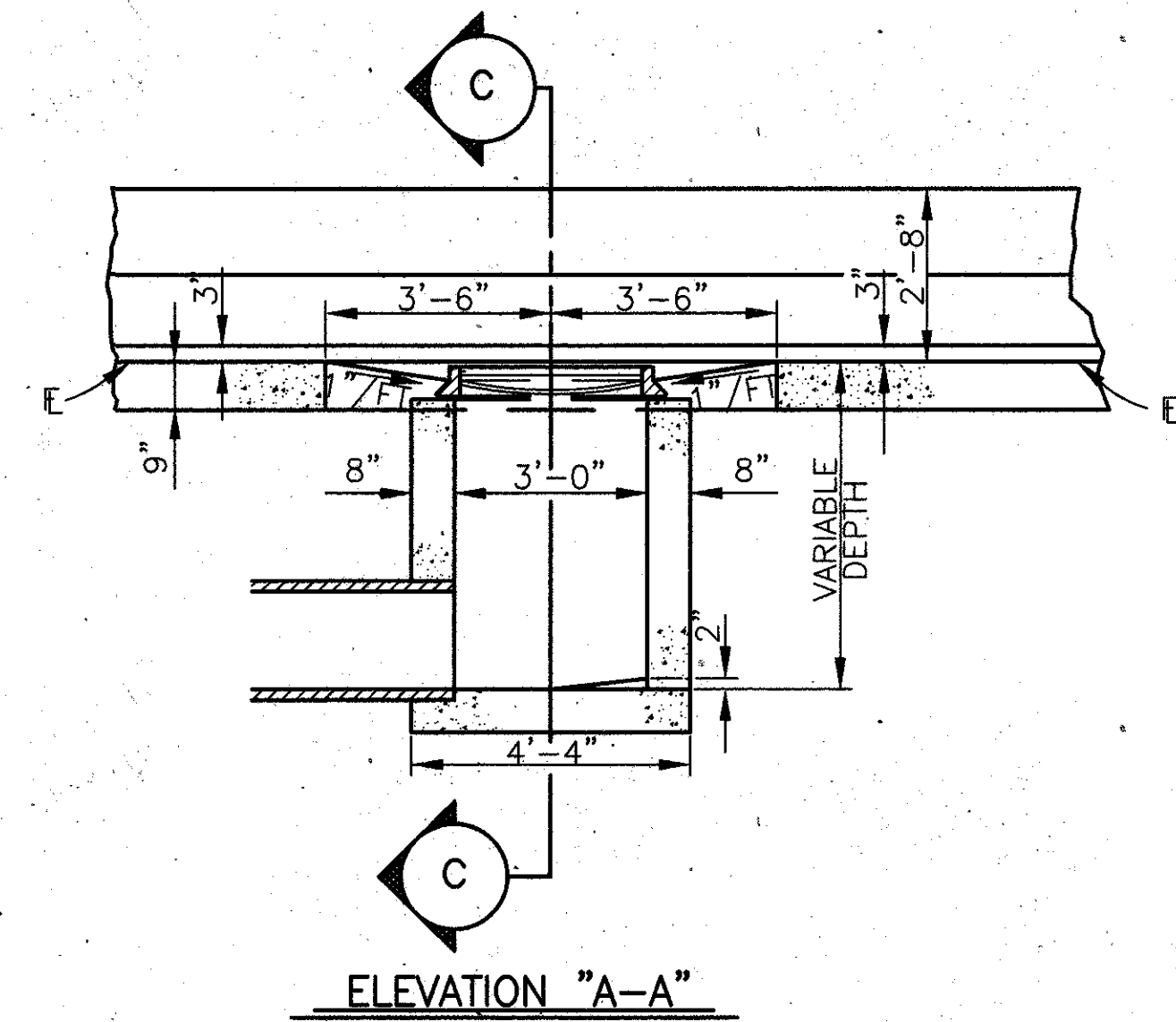
FOR SUB-SUMMARY OF QUANTITIES
SEE SHEET NO. 38.

SEE SHT. # 52&53 FOR DRAINAGE DETAILS

[G1] - I:\CDM\HIGHWAY\SR315-CD\PAV-DET5.DWG - OCT 19, 1995 - 15:14:04 - SCALE = 1:30



I-3B INLET
AS PER PLAN

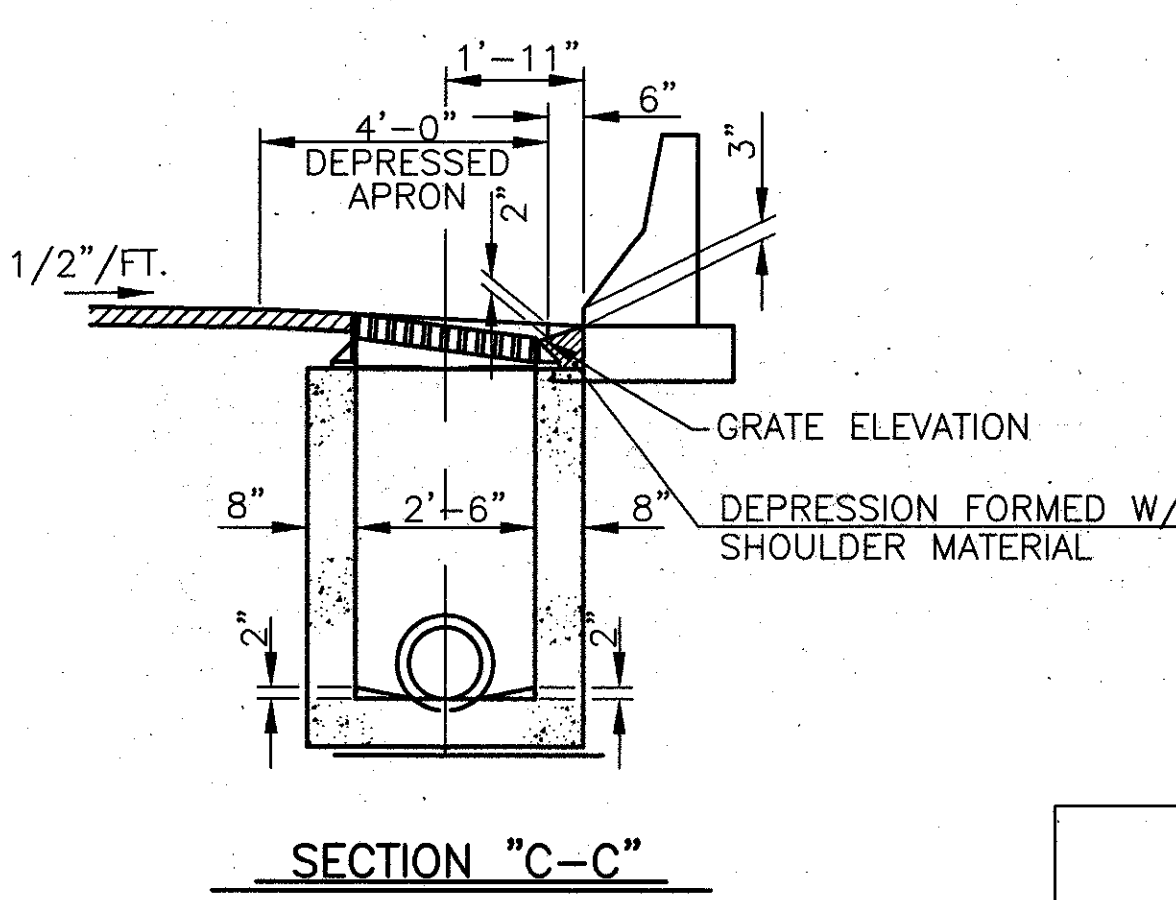


ELEVATION "A-A"

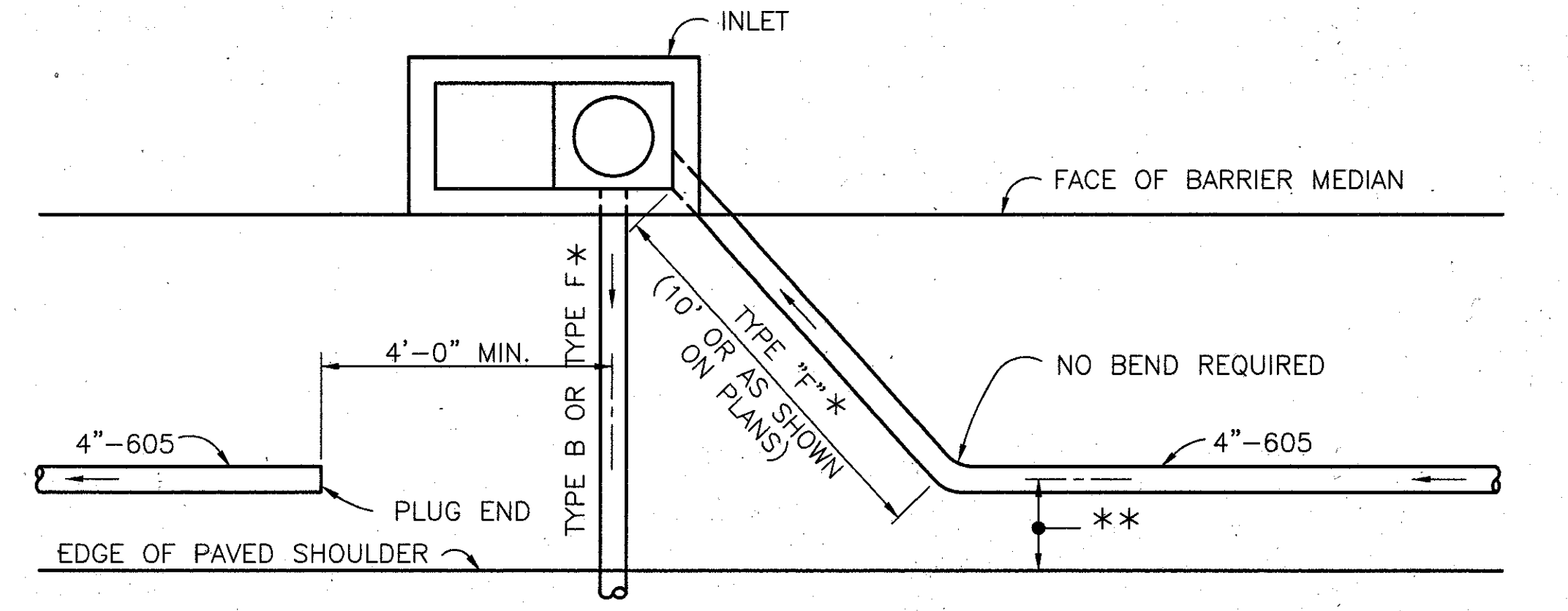
NOTES

FRAMES AND GRATES SHALL CONFORM WITH THE REQUIREMENTS SET FORTH ON ODOT STANDARD DRAWING I-3A & B.
BEARING AREAS OF FRAME AND GRATE SHALL BE SO FITTED AND FINISHED AS TO PROVIDE A FIRM AND EVEN SEAT FOR ALL PORTIONS OF THE GRATE IN THE FRAME. NO PROJECTIONS SHALL EXIST ON BEARING AREAS OF EITHER CASTING AND THE GRATE SHALL SEAT IN ITS FRAME WITHOUT ROCKING. FRAME AND GRATE SHALL BE FITTED, MATCHED AND MARKED BEFORE DELIVERY TO THE PROJECT.
CONCRETE CAST-IN-PLACE TO BE CLASS "C".
BRICK OR CONCRETE BLOCK SIDE WALLS SHALL BE 8 INCHES NOMINAL THICKNESS.
PAVEMENT - THE PORTION BLOCKED OUT OF THE PAVEMENT AND THE CONCRETE BARRIER SHALL BE PLACED AFTER THE CASTING HAS BEEN SET, BUT SHALL BE PAID FOR AS PART OF THE PAVEMENT. NO DEDUCTIONS IN PAVEMENT OR CONCRETE BARRIER QUANTITIES SHALL BE MADE BECAUSE OF CASTINGS.
IF A SKEWED PIPE PROTRUDES MORE THAN 2 INCHES INSIDE A WALL, THE PIPE SHALL BE TRIMMED FLUSH AND FINISHED TO PRODUCE A NEAT APPEARANCE.

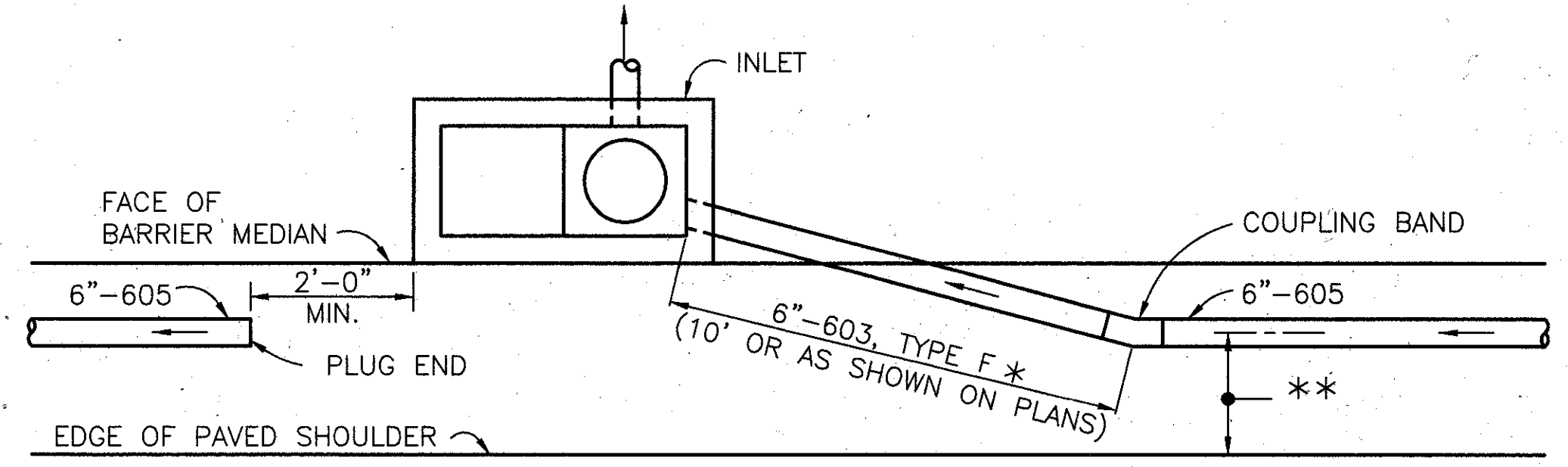
NOTES:
WHEN UNDERDRAINS CROSS A TRANSVERSE LINE, A 10' MIN. LENGTH OF 6" CLASS F * PIPE SHALL BE USED TO SPAN THE TRENCH UNLESS THE CROSSING IS 2 FEET OR MORE ABOVE THE TOP OF THE GRANULAR BACKFILL.
* 707.17 NON-PERFORATED, ASTM 3034 SDR 35 OR SS931 OR SS 944
** DISTANCE AS SHOWN ON TYPICAL SECTIONS.



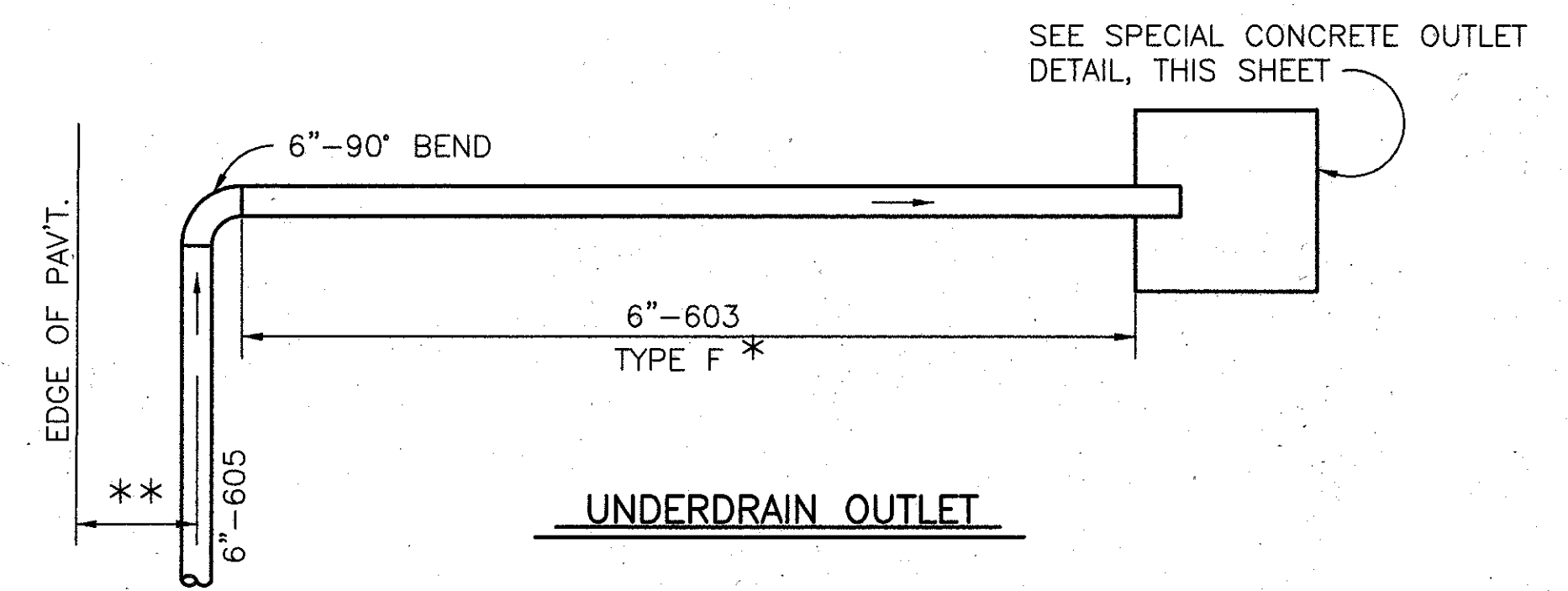
SECTION "C-C"



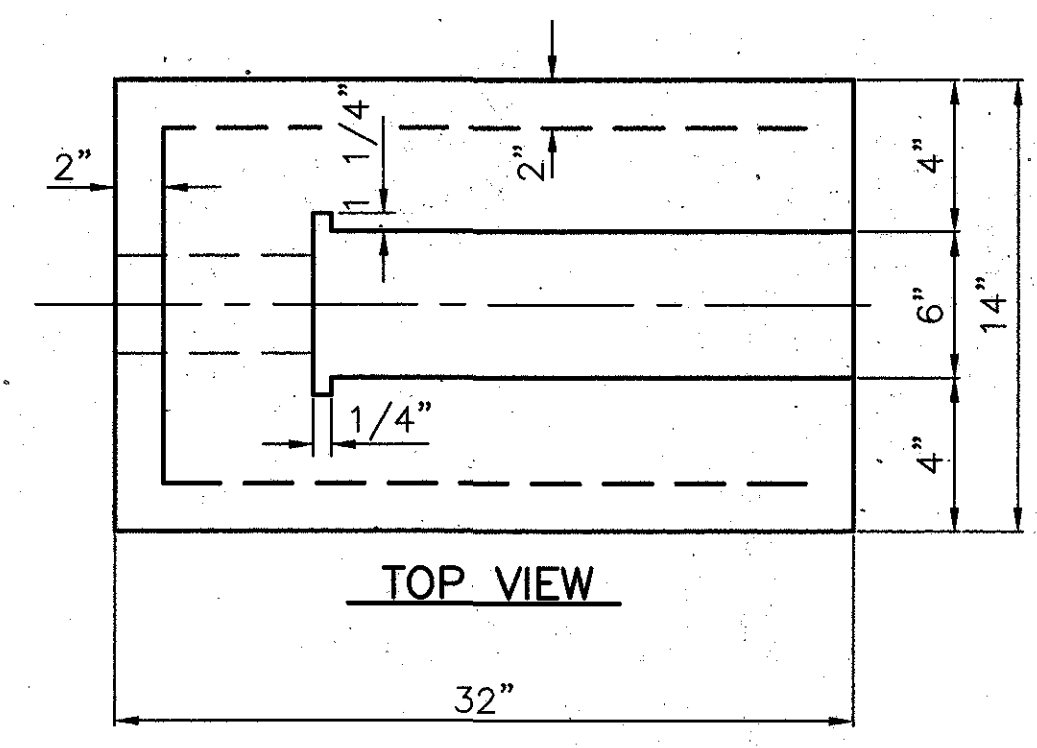
UNDERDRAIN OUTLET



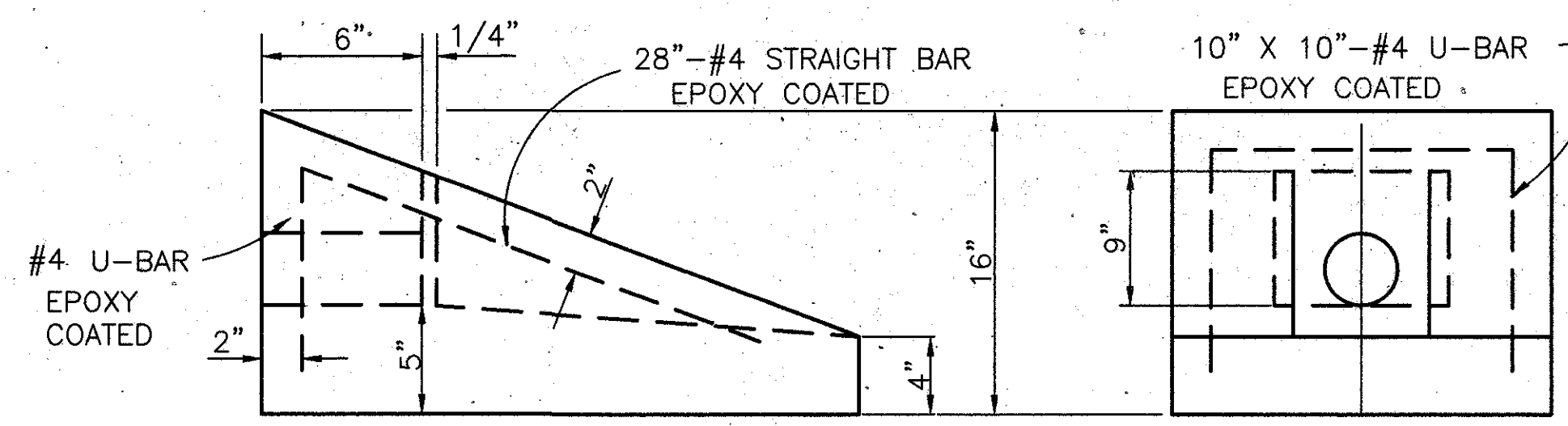
UNDERDRAIN OUTLET



UNDERDRAIN OUTLET



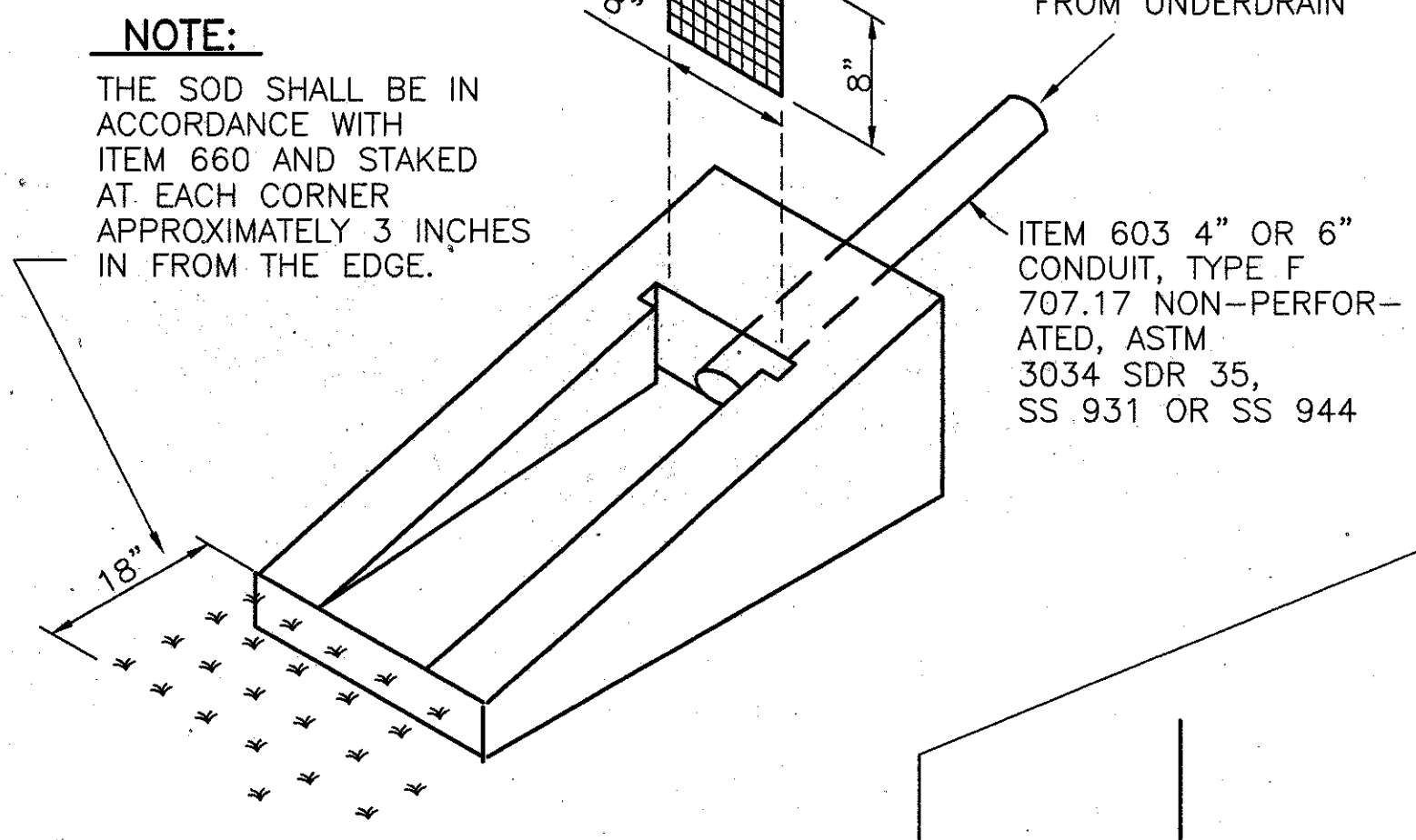
TOP VIEW



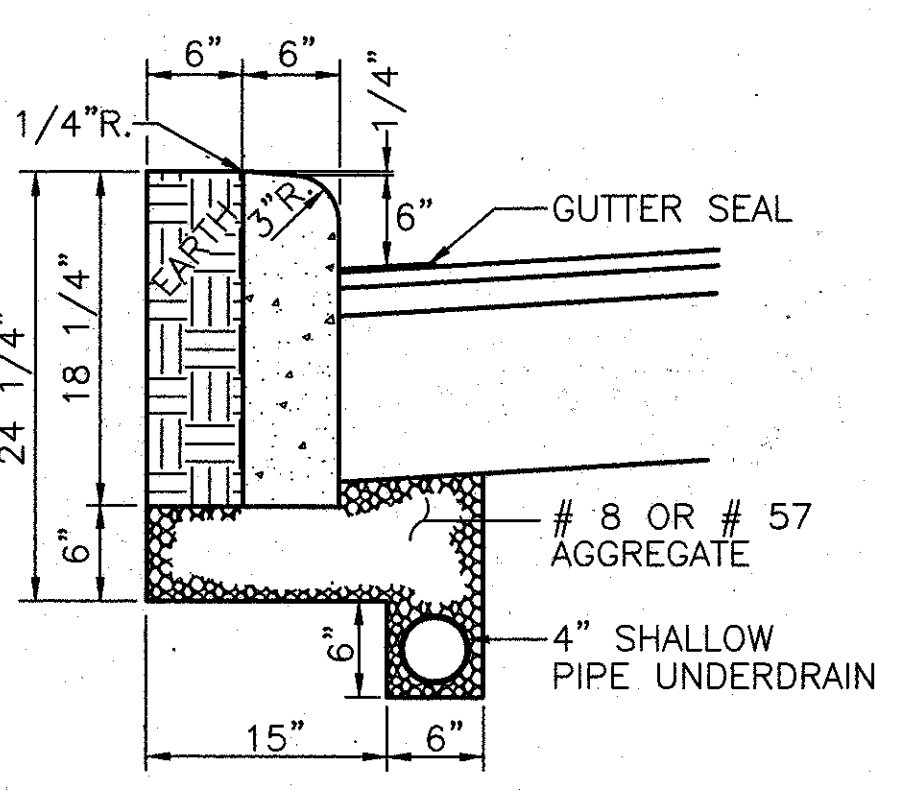
SIDE VIEW

FRONT VIEW

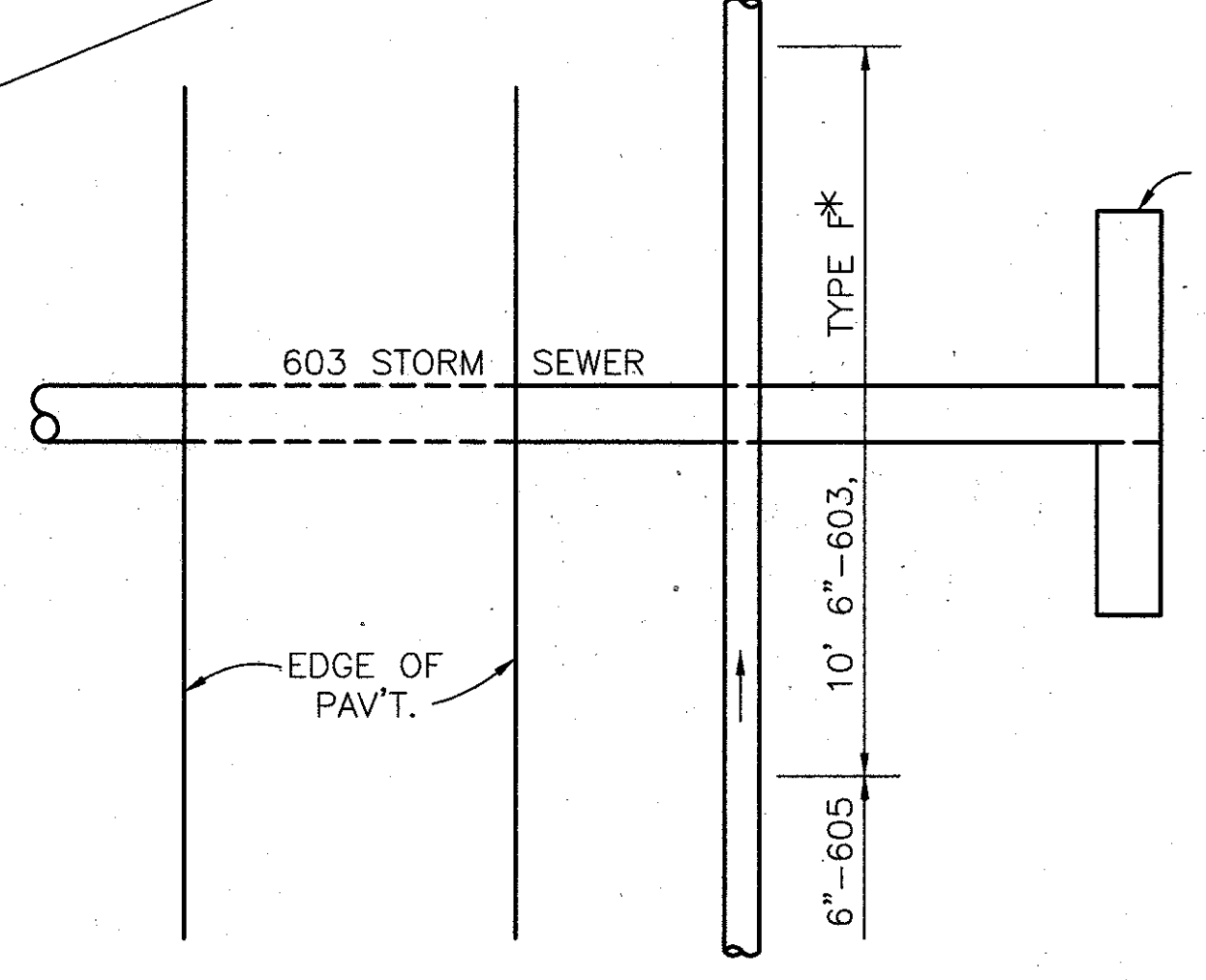
ITEM 604-PRECAST REINFORCED CONCRETE OUTLET



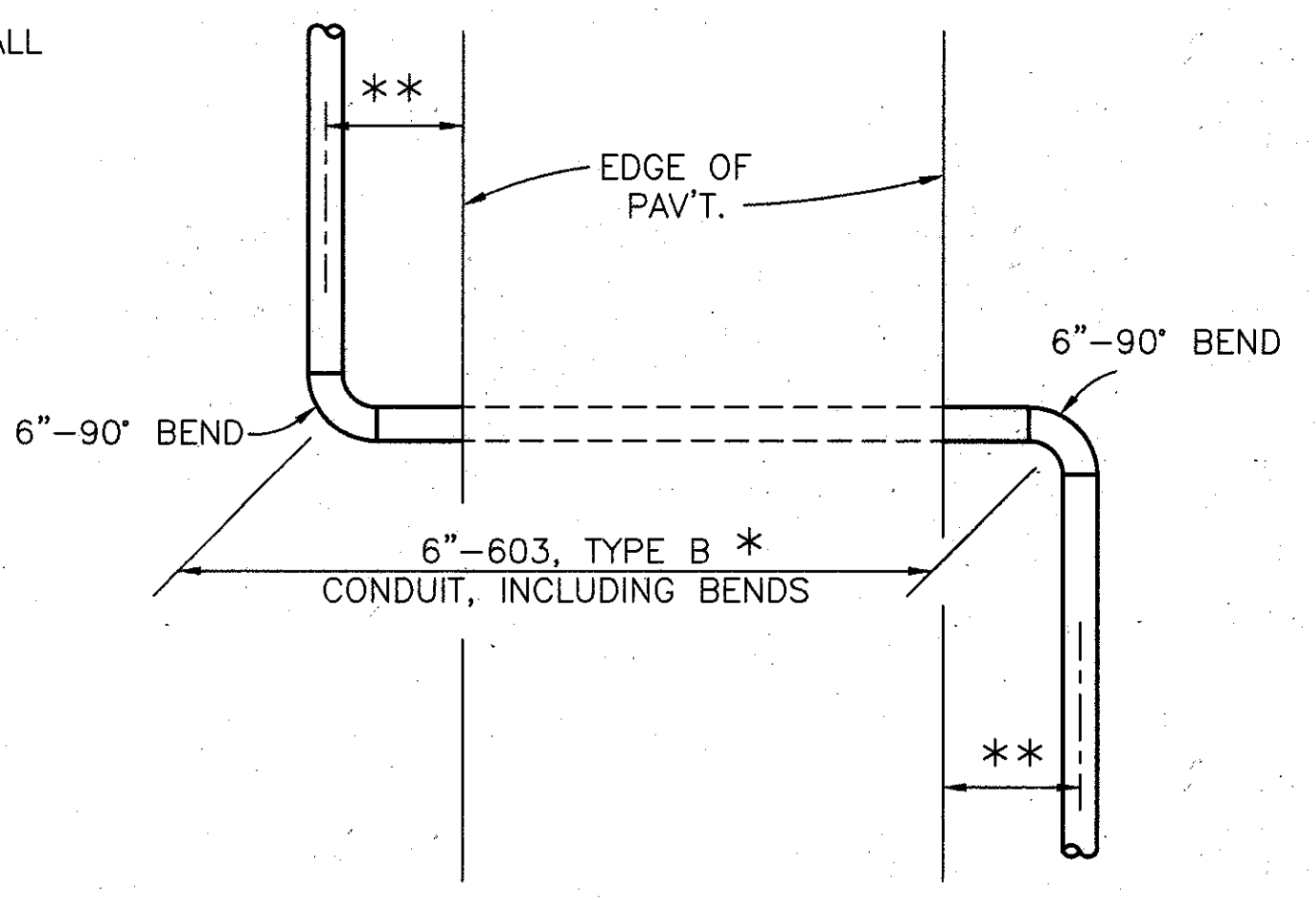
NOTE:



ITEM 609 CURB, TYPE 6 AS PER PLAN AND
ITEM 605 4' SHALLOW PIPE UNDERDRAIN AS PER PLAN



UNDERDRAIN CROSSOVER



UNDERDRAIN CROSSOVER

[AS] - I:\TRANS\SR315-CD\DETAILS.DWG - SEP 13, 1996 - 10:06:19 - SCALE = 1:30

SUB-SUMMARY

* 707.17 NON-PERFORATED ASTM 3034,
SDR 35 OR SS931 OR SS944

** 706.01, 706.02 OR 706.08
W/JOINTS PER 706.11 OR 706.12

⊙ 706.02 OR 706.08
W/JOINTS PER 706.11 OR 706.12

CALC.
BY:
DATE:
CHKD.
BY:
DATE:

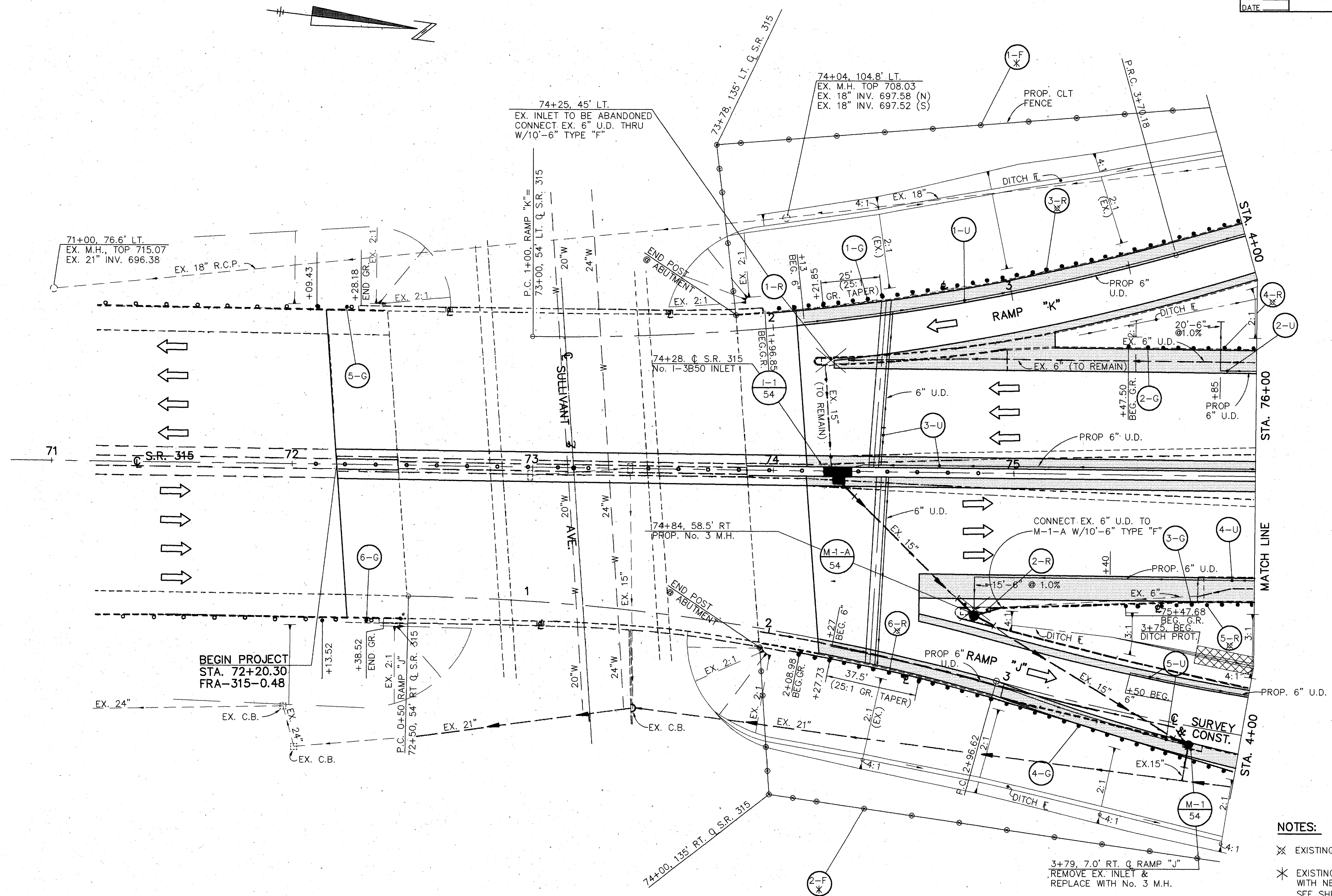
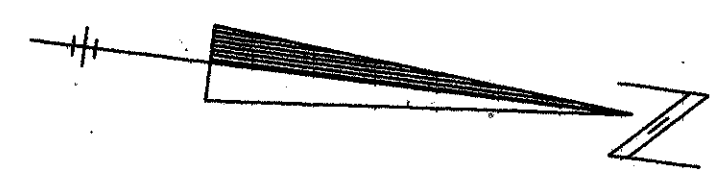
FRANKLIN COUNTY
FRA-315-0.48

OHIO
FHWA
REGION 5

47
163

SHT. NO.	REF. NO.	LOCATION	SIDE	202			603						604				605				606															
				PIPE REMOVED OVER 24"	CATCH BASIN OR INLET REMOVED	GUARDRAIL REMOVED	TYPE "B" **	TYPE "B" **	TYPE "B" ⊙	TYPE "F" *	I-3B50 INLET	I-3B INLET AS PER PLAN	NO. 2-2B CATCH BASIN	NO. 3 MANHOLE W/JOINTS AS PER 706.11	MANHOLE ADJUSTED TO GRADE	SHALLOW PIPE UNDERDRAINS	SHALLOW PIPE UNDERDRAINS	GUARDRAIL TYPE-5	ANCHOR ASSEMBLY TYPE-E	'BRIDGE TERMINAL ASSEMBLY TYPE 1																
																					L.F.	EA.	L.F.	EA.	L.F.	EA.	L.F.	EA.	L.F.	EA.	L.F.	EA.	L.F.	EA.	L.F.	EA.
																					12"	15"	30"	6"	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.
1-5	91+00, S.R. 315	-				8	8																													
1-6	91+50, 50' LT., S.R. 315	LT.				8																														
CB-15	90+00, 69.5' RT., S.R. 315	RT.				8	8																													
1-U	7+00 TO 11+00, RAMP "M"	LT.																																		
2-U	89+00 TO 93+00, S.R. 315	LT.																																		
3-U	89+00 TO 91+00, S.R. 315	RT.																																		
4-U	8+50 TO 11+00, RAMP "L"	RT.																																		
1-G	6+98.60 TO 8+11.10, RAMP "L"	RT.																																		
1-R	7+99, 15' RT.	RT.		1																																
1-7	94+41.54, S.R. 315	-										53																								
1-8	93+50, 50' LT. S.R. 315	LT.				8																														
1-9	93+50, 50' RT. S.R. 315	RT.				8																														
I-14,I-10,I-15	94+15 TO 95+50, 50' LT. S.R.315	LT.				143																														
I-16,I-11,I-17	94+15 TO 95+50, 50' RT. S.R.315	RT.				143																														
I-12	94+89.5, 2.0' LT. S.R. 315	LT.				8							6																							
I-13	94+89.5, 2.0' RT. S.R. 315	RT.				8						8																								
M-6	94+85.5, 11' RT. S.R. 315	RT.				8																														
M-7	95+05.87, 12.2' RT. S.R. 315	RT.										23																								
1-U	93+00 TO 95+75, S.R. 315	LT.																																		
2-U	93+00 TO 95+75, S.R. 315	LT.																																		
3-U	94+89.5 TO 94+75, S.R. 315	RT.																																		
4-U	93+00 TO 94+75, S.R. 315	RT.																																		
1-R	94+89.5, S.R. 315	-		24																																
2-R	95+00 TO 96+28, S.R. 315	L&R																																		
TOTALS TO GENERAL SUMMARY					24	2	238		342		30			92	120			2	11		1	1	1			200	1862		100		1	1				

[C] - I:\CIVIL\HIGHWAY\SR315-CD\SR315-SS.DWG - OCT 19, 1995 - 15:59:08 - SCALE = 1:30

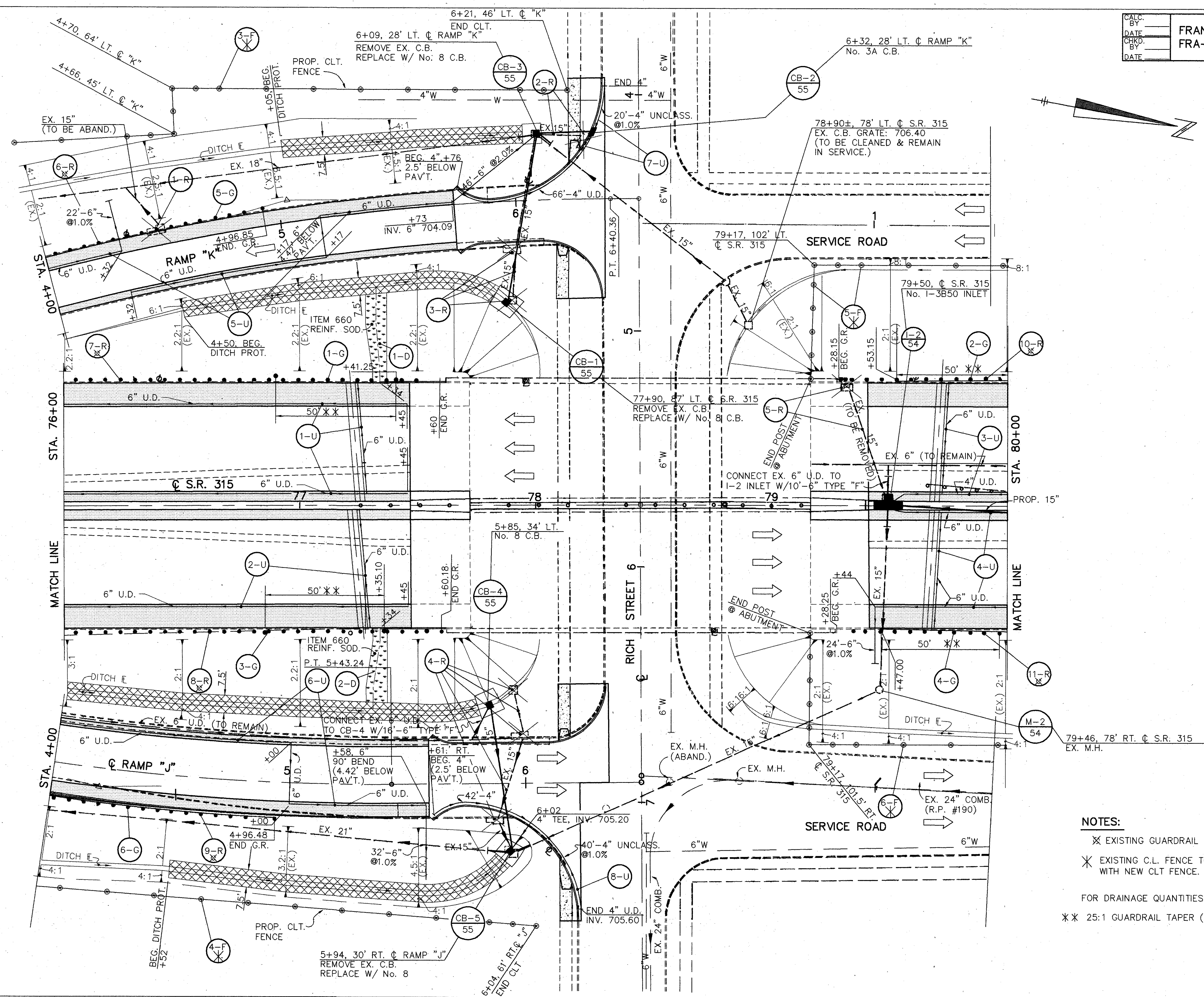


BEGIN PROJECT
STA. 72+20.30
FRA-315-0.48

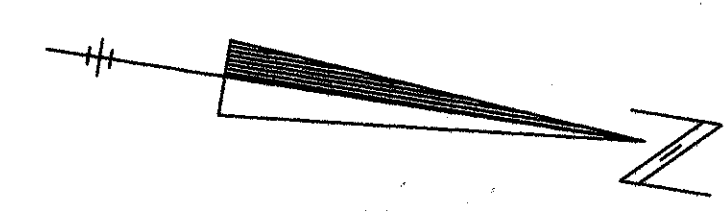
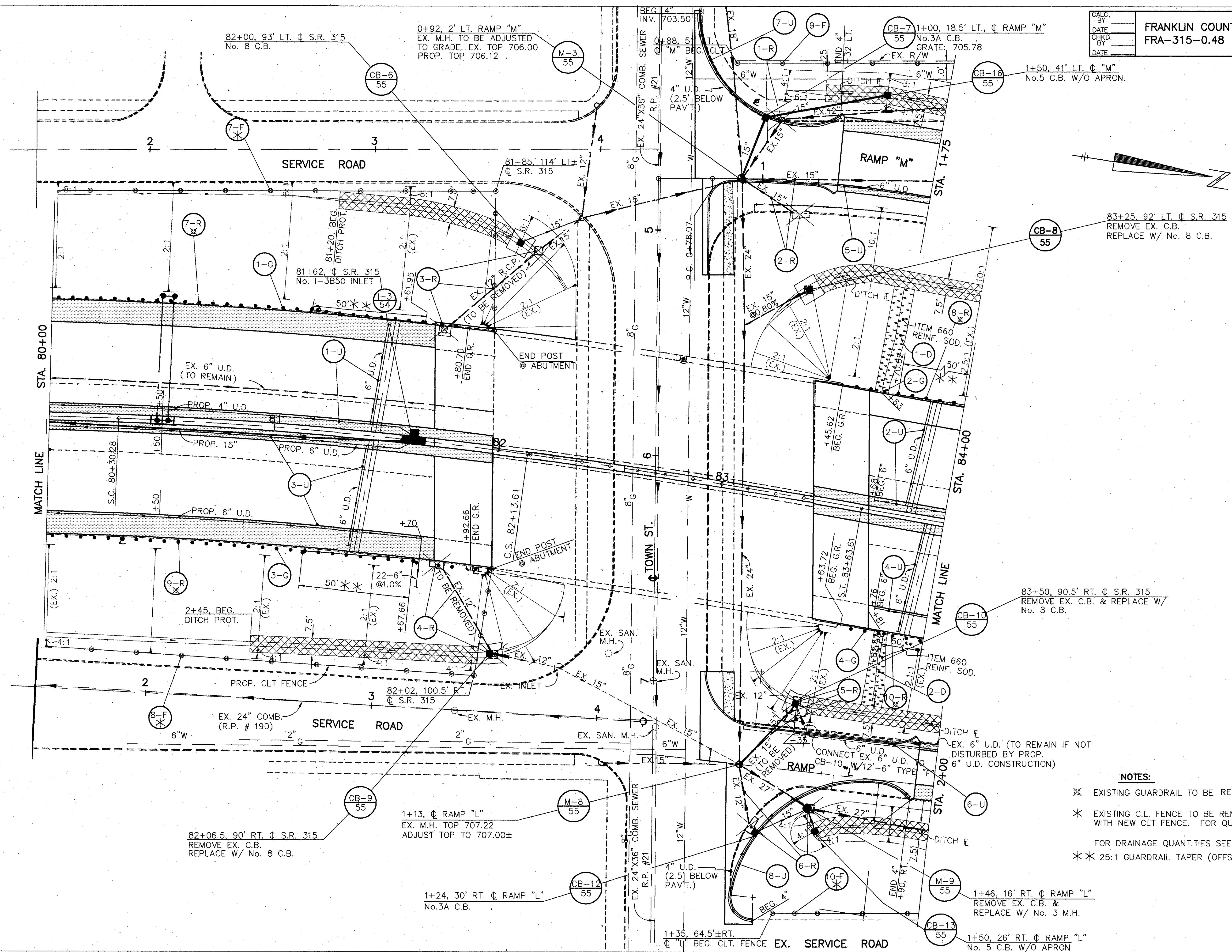
- NOTES:**
- ⊗ EXISTING GUARDRAIL TO BE REMOVED & REPLACED.
 - ✱ EXISTING C.L. FENCE TO BE REMOVED & REPLACED WITH NEW C.L.T. FENCE. FOR FENCE QUANTITIES SEE SHEET NO. 18.

FOR DRAINAGE QUANTITIES SEE SUB-SUMMARY SHEET NO. 45.

[[6.6]] - I:\CIVIL\HIGHWAY\SR315-CD\DRAIN.DWG - OCT 23, 1995 - 10:34:32 - SCALE = 1:30



[G] - I:\CIVIL\HIGHWAY\SR315-CD\DRAIN2.DWG - OCT 20, 1995 - 08:56:17 - SCALE = 1:30



83+25, 92' LT. C. S.R. 315
REMOVE EX. C.B.
REPLACE W/ No. 8 C.B.

83+50, 90.5' RT. C. S.R. 315
REMOVE EX. C.B. & REPLACE W/
No. 8 C.B.

- NOTES:**
- ✕ EXISTING GUARDRAIL TO BE REMOVED & REPLACED.
 - * EXISTING C.L. FENCE TO BE REMOVED & REPLACED WITH NEW CLT FENCE. FOR QUANTITIES SEE SHEET No. 18.
 - FOR DRAINAGE QUANTITIES SEE SUB-SUMMARY SHEET No. 46.
 - * * 25:1 GUARDRAIL TAPER (OFFSET 52' TO 54' FROM C. S.R. 315)

1+46, 16' RT. C. RAMP "L"
REMOVE EX. C.B. &
REPLACE W/ No. 3 M.H.

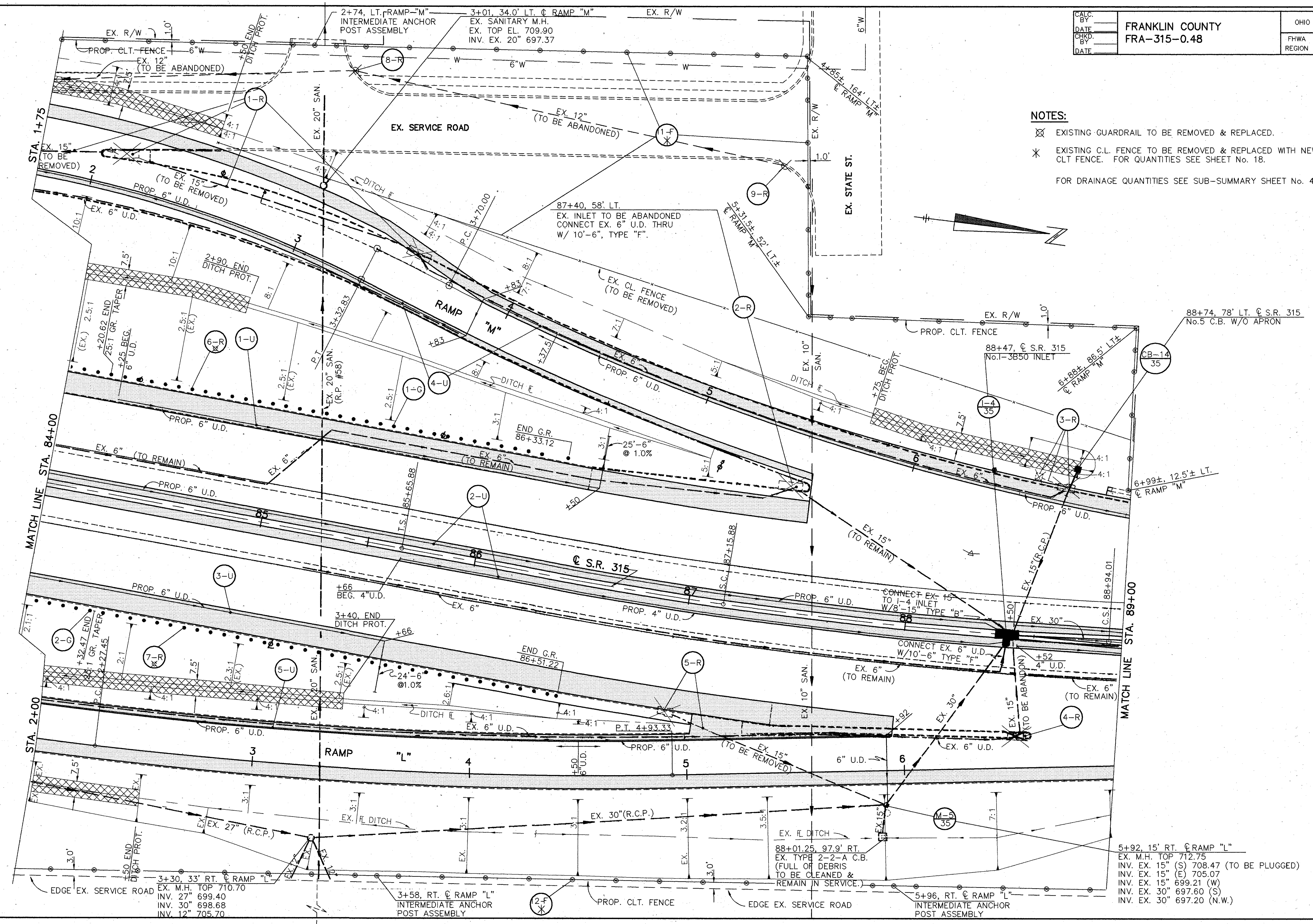
1+50, 26' RT. C. RAMP "L"
No. 5 C.B. W/O APRON

[G] - I:\CIVIL\HIGHWAY\SR315-CD\DRAIN3.DWG - OCT 20, 1995 - 09:30:52 - SCALE = 1:30

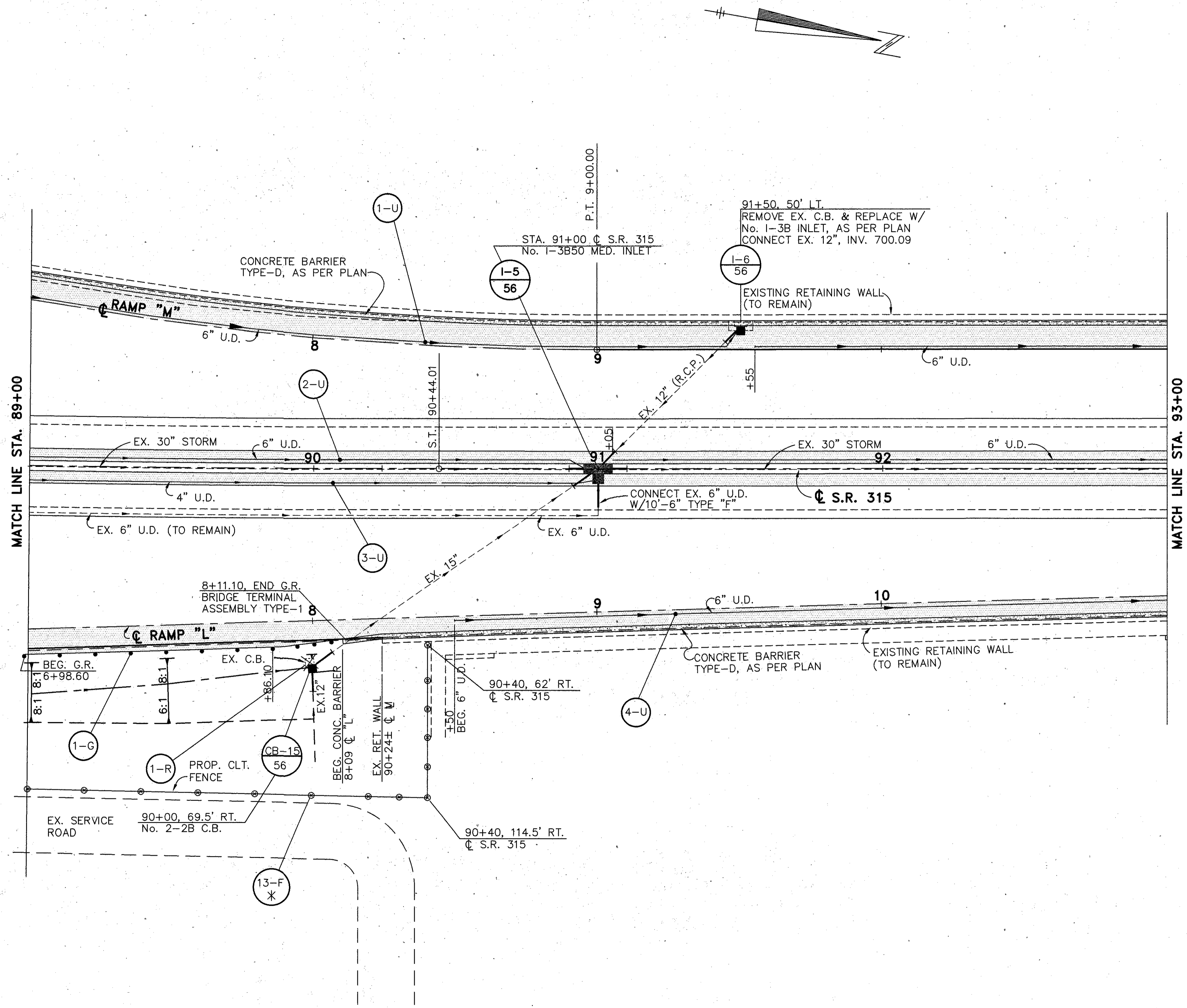
NOTES:

- ⊗ EXISTING GUARDRAIL TO BE REMOVED & REPLACED.
- * EXISTING C.L. FENCE TO BE REMOVED & REPLACED WITH NEW CLT FENCE. FOR QUANTITIES SEE SHEET No. 18.

FOR DRAINAGE QUANTITIES SEE SUB-SUMMARY SHEET No. 46.



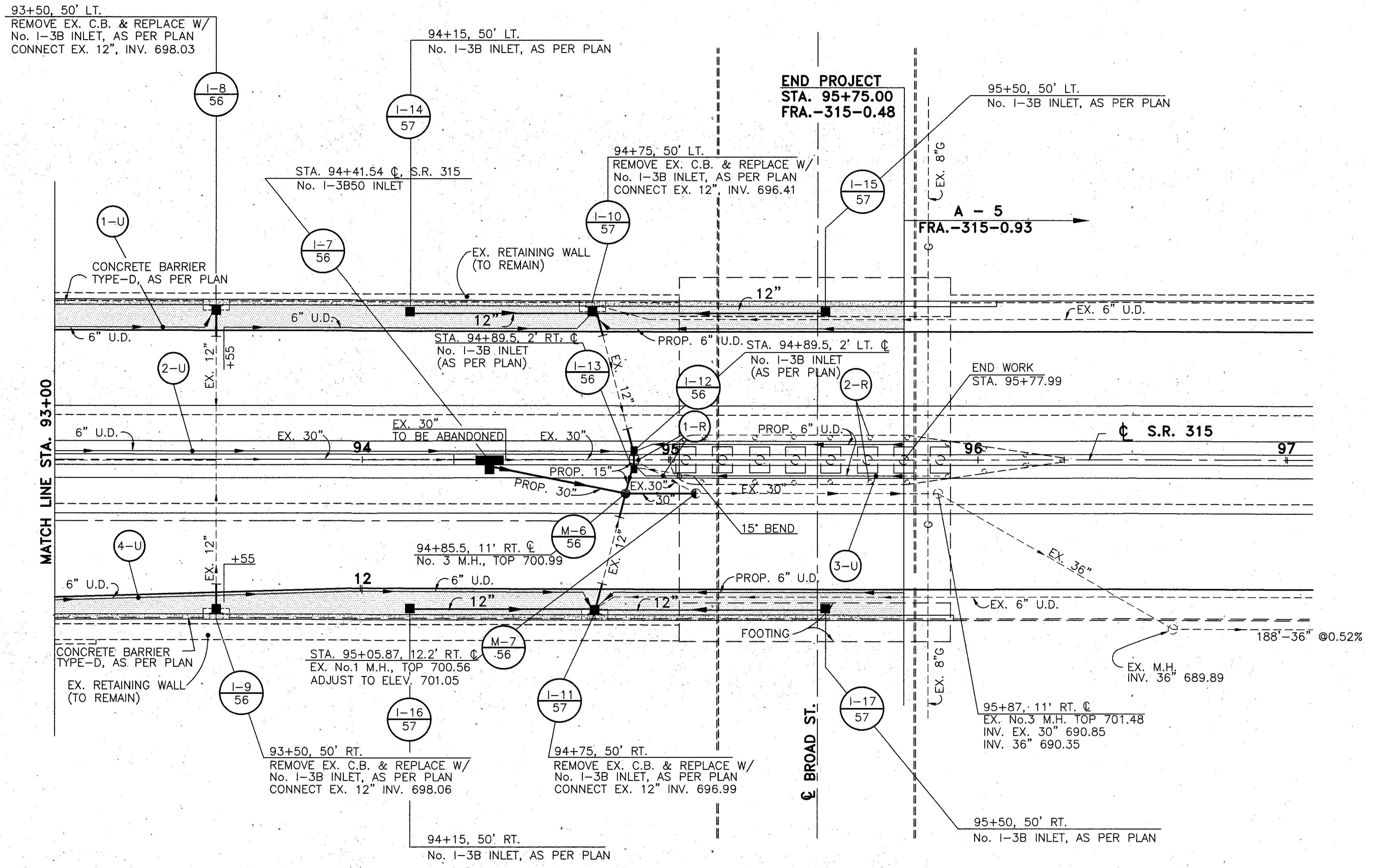
[ANS] - I:\TRANS\SP315-CD\DRAIN.DWG - SEP 13, 1996 - 10:28:27 - SCALE = 1:30



NOTES:

- * EXISTING C.L. FENCE TO BE REMOVED & REPLACED WITH NEW CLT FENCE. FOR QUANTITIES SEE SHEET No. 18.
- FOR DRAINAGE QUANTITIES SEE SUB-SUMMARY SHEET No. 47.

[[G]] - I:\CIVIL\HIGHWAY\SR315-CD\DRAINS.DWG - OCT 20, 1995 - 11:32:18 - SCALE = 26:04



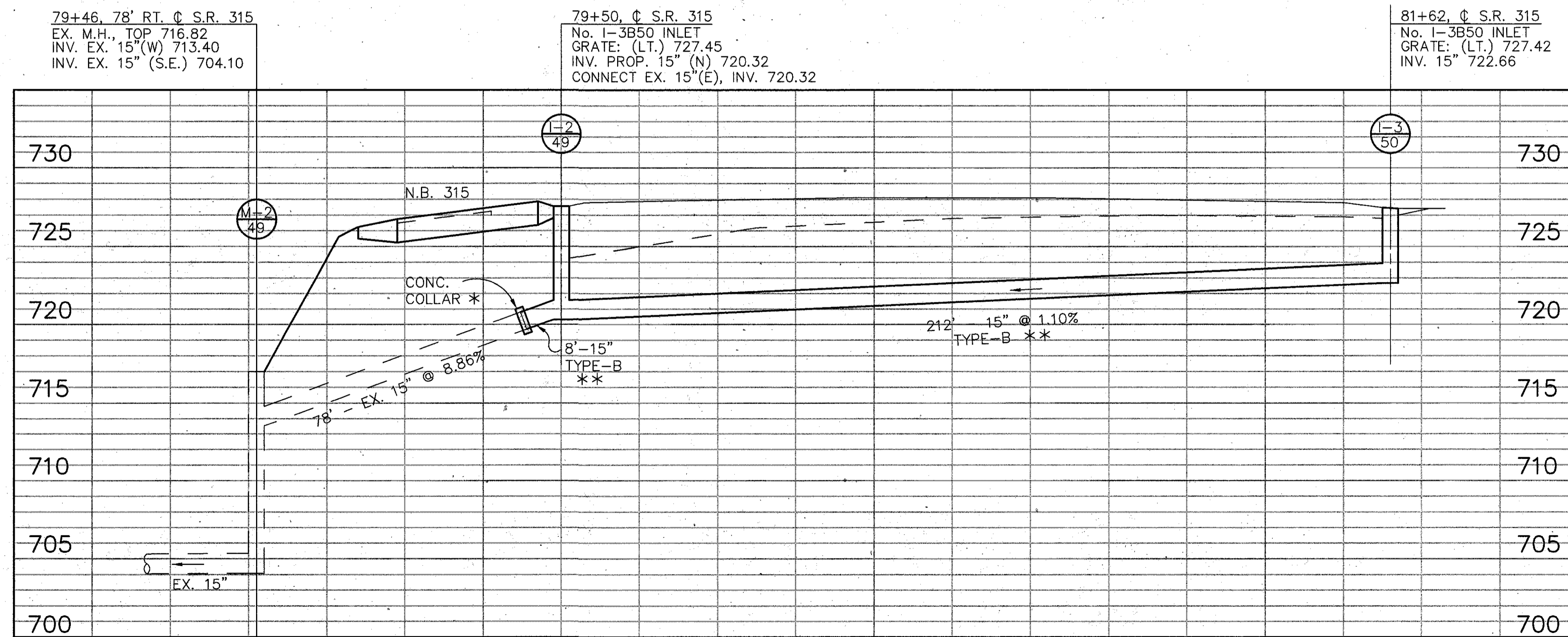
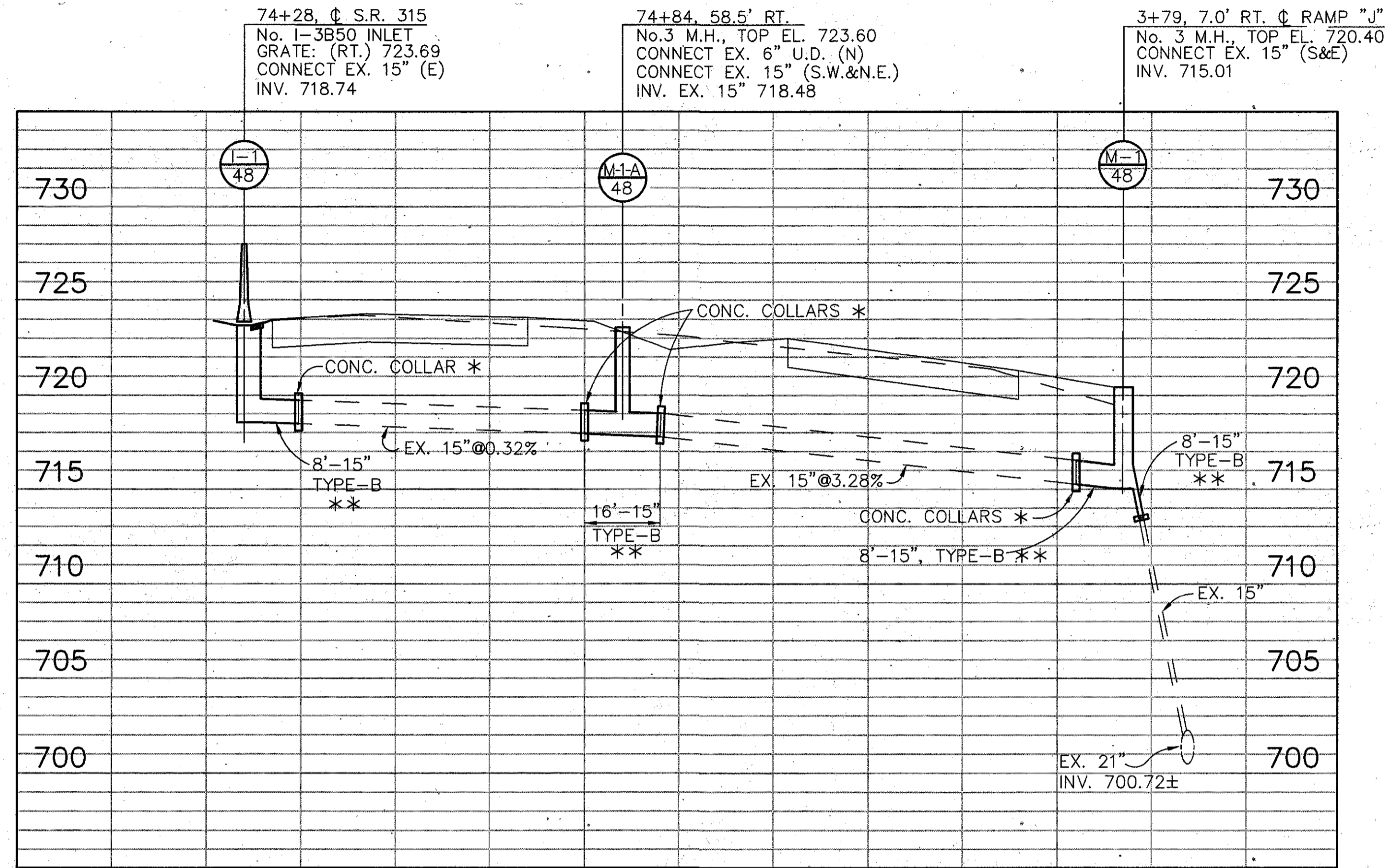
NOTES:
FOR DRAINAGE QUANTITIES SEE SUB-SUMMARY SHEET No. 47.

[C] - I:\CIVIL\HIGHWAY\SR315-CD\DRAIN6.DWG - OCT 20, 1995 - 15:14:29 - SCALE = 26.04

STORM SEWER PROFILE

SCALE: 1" = 5' VERT.
1" = 20' HOR.

CALC. BY	FRANKLIN COUNTY FRA-315-0.48	OHIO FHWA REGION 5	54 163
DATE			
CHKD. BY			
DATE			

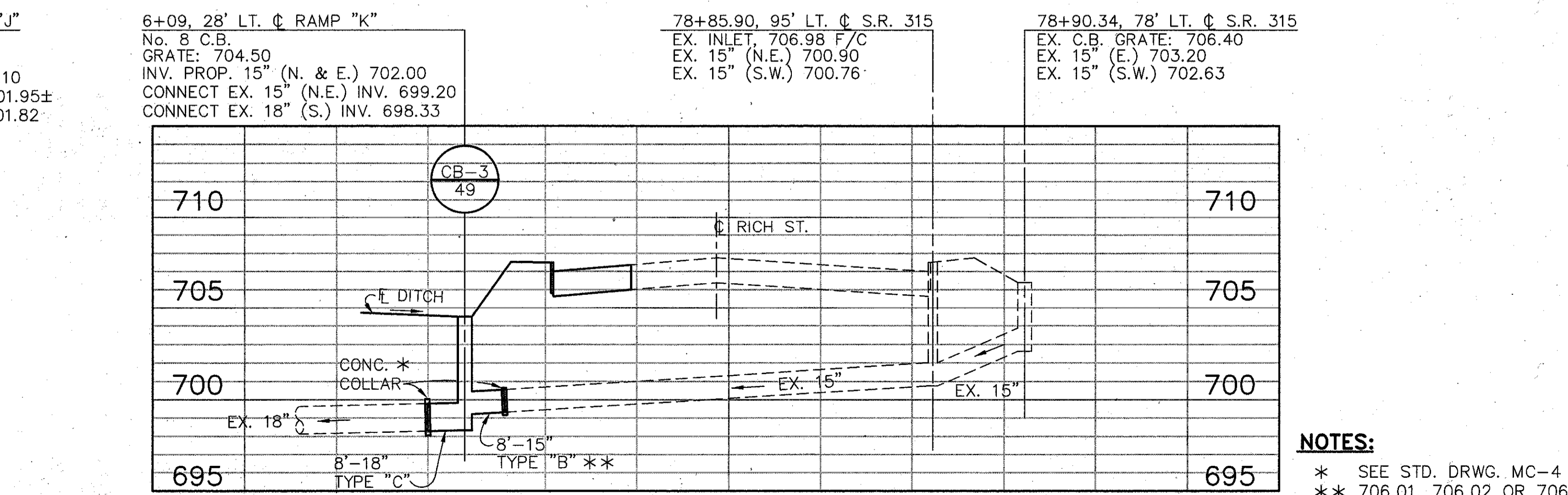
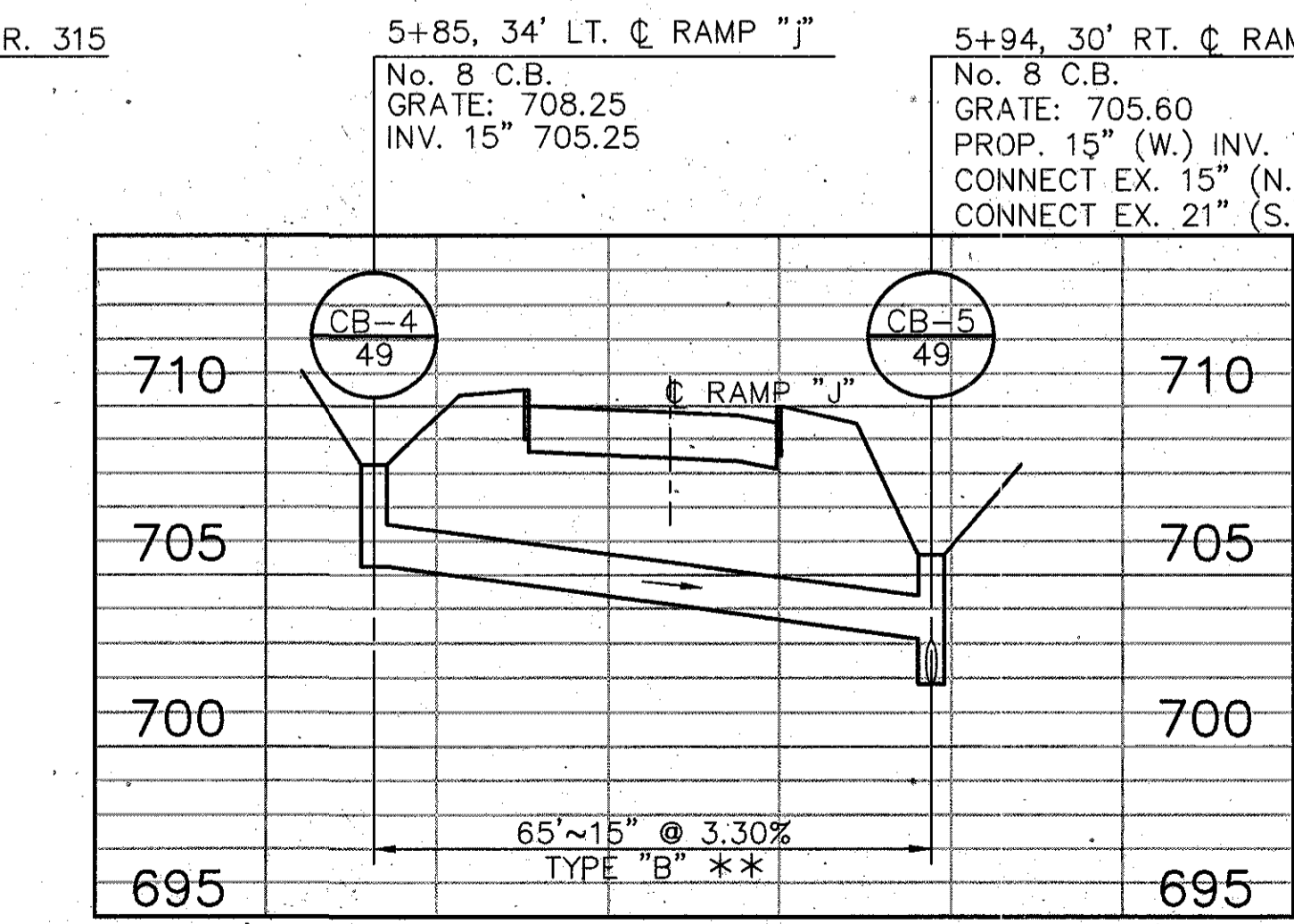
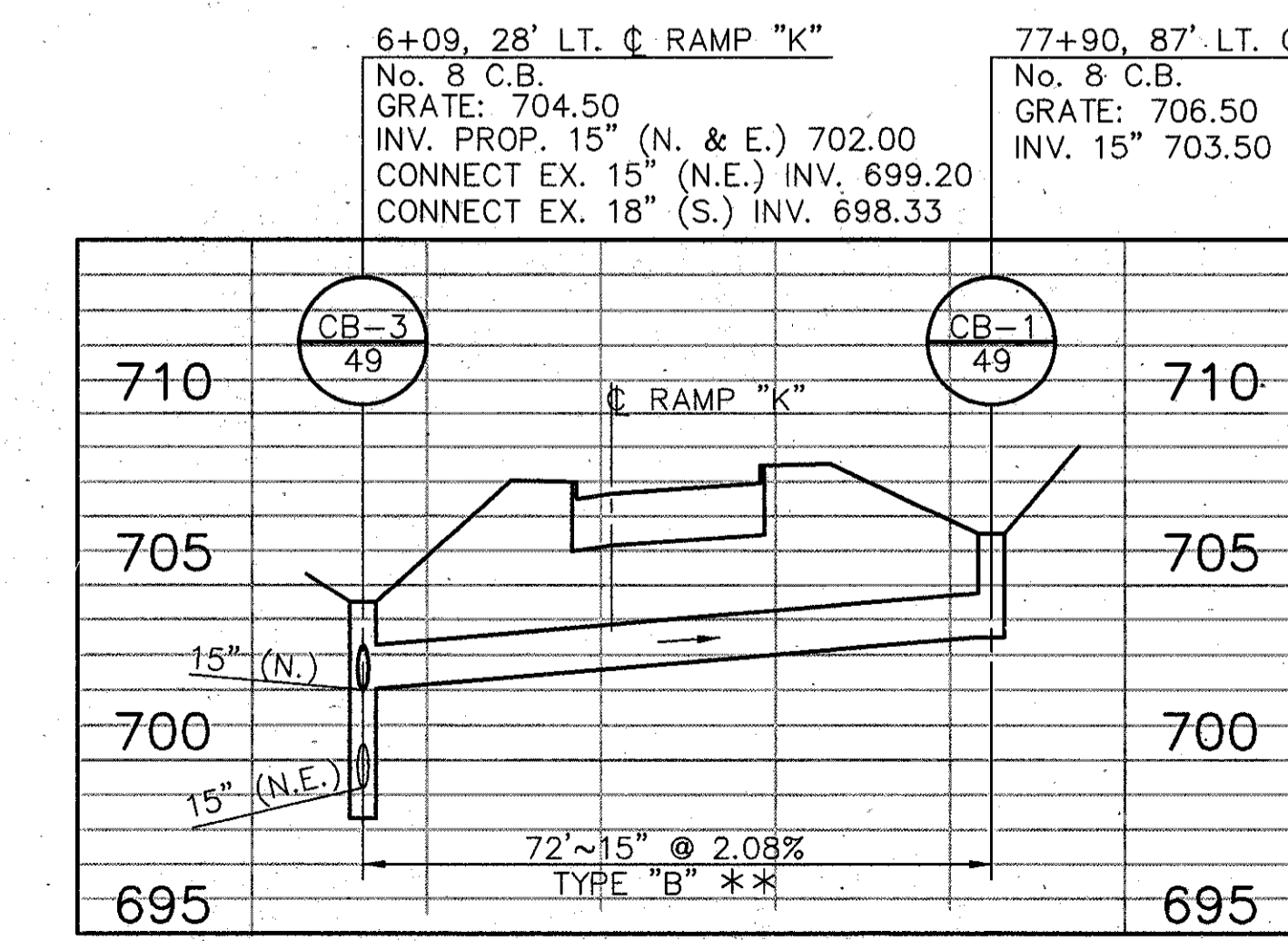
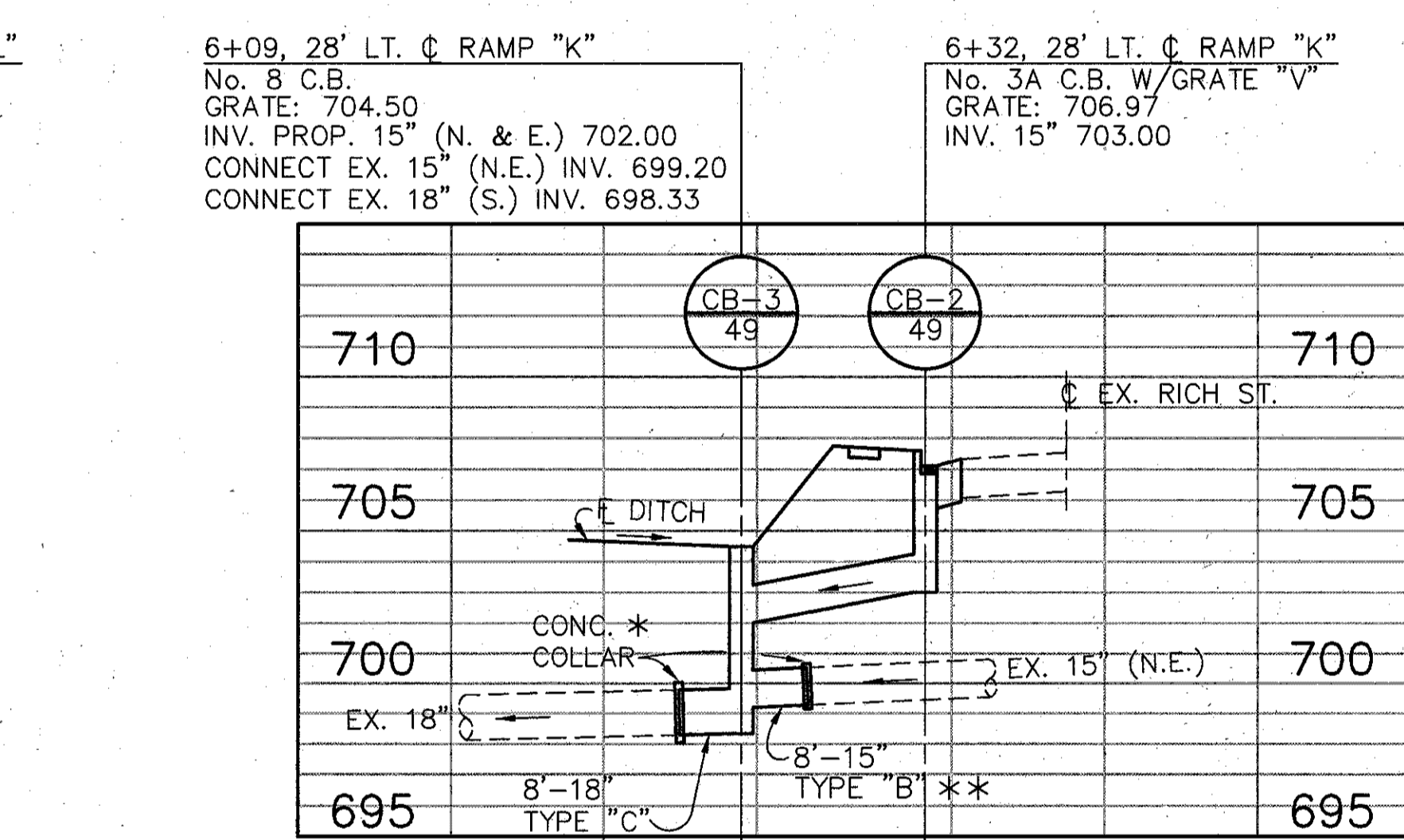
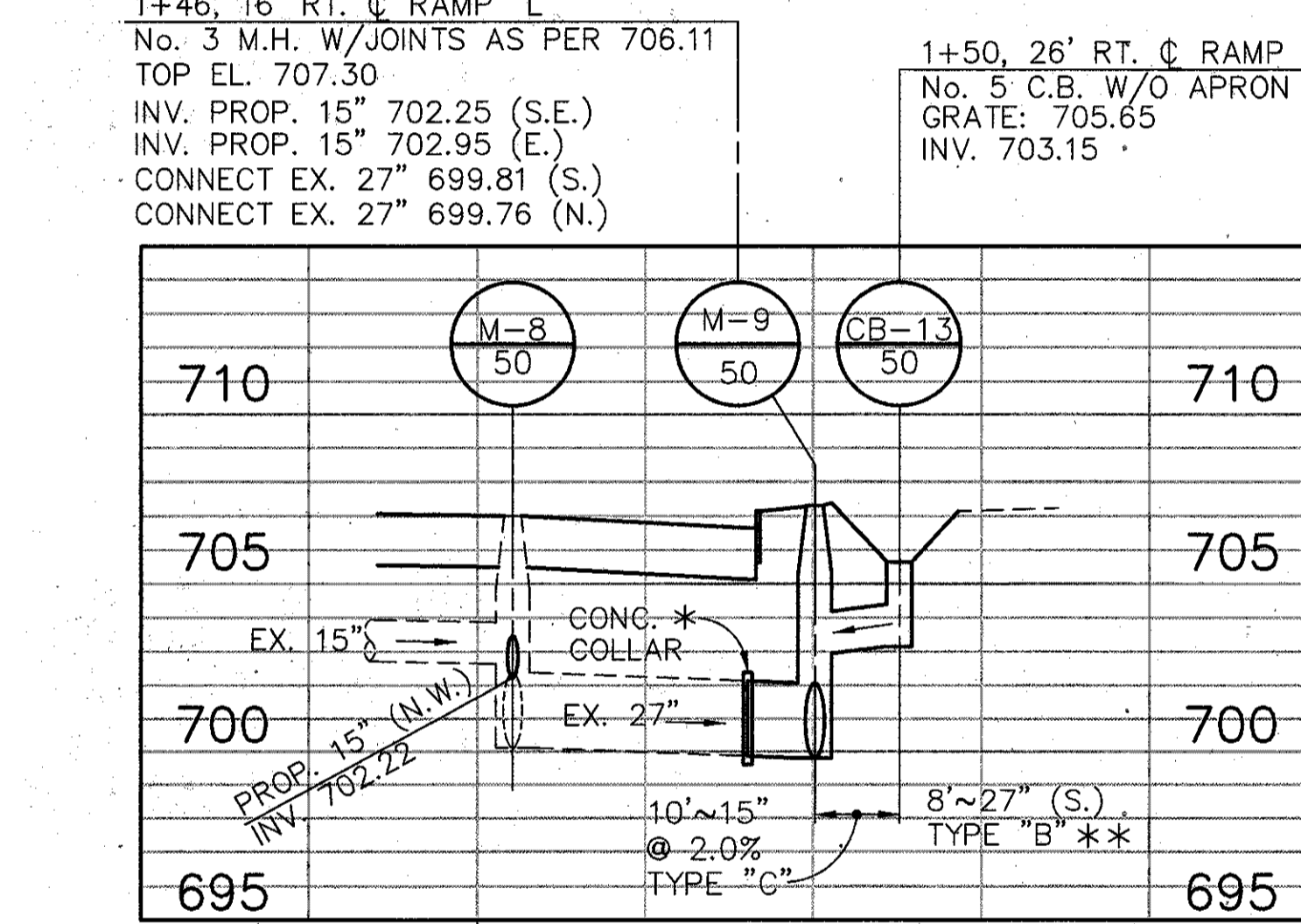
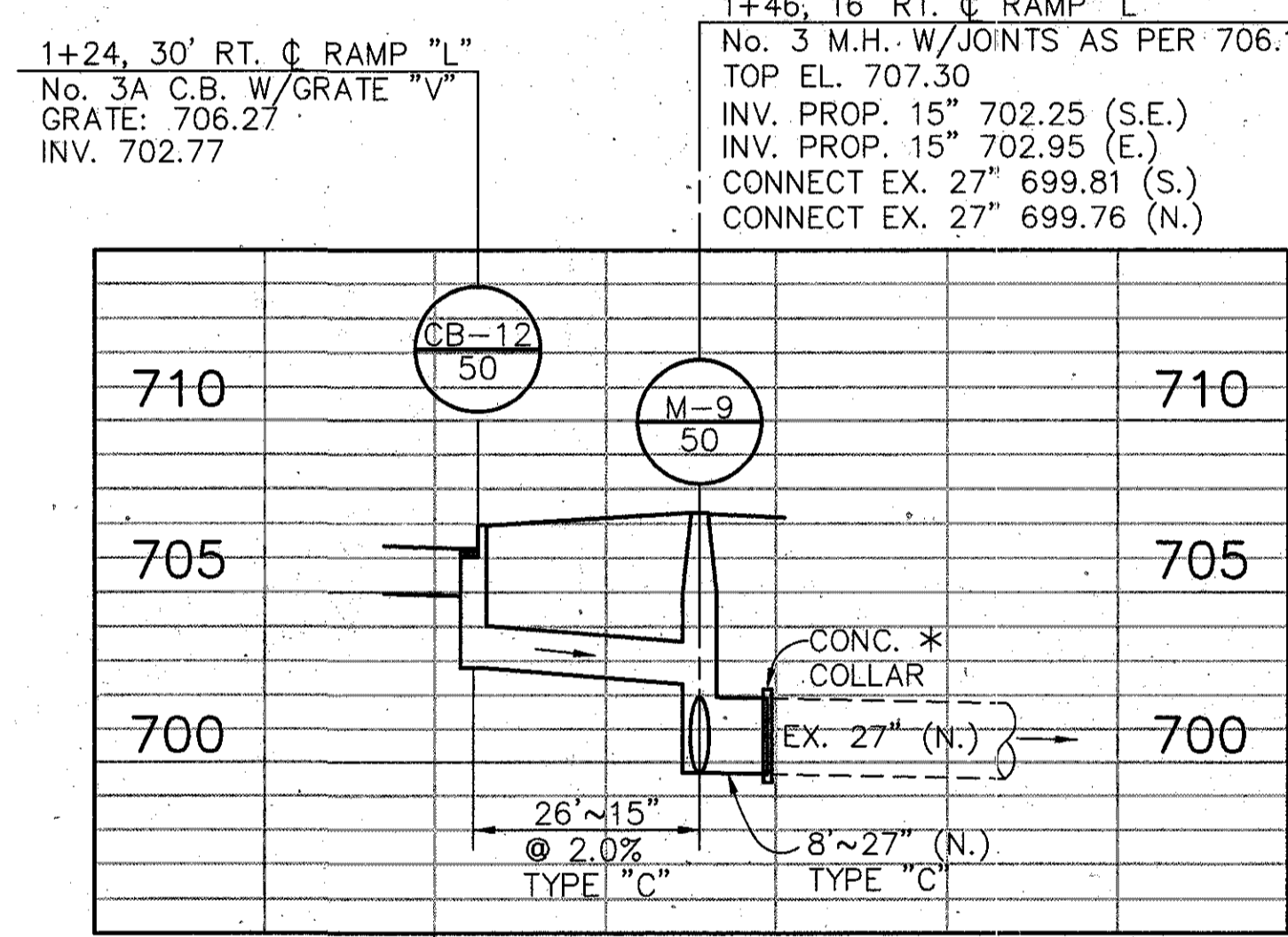
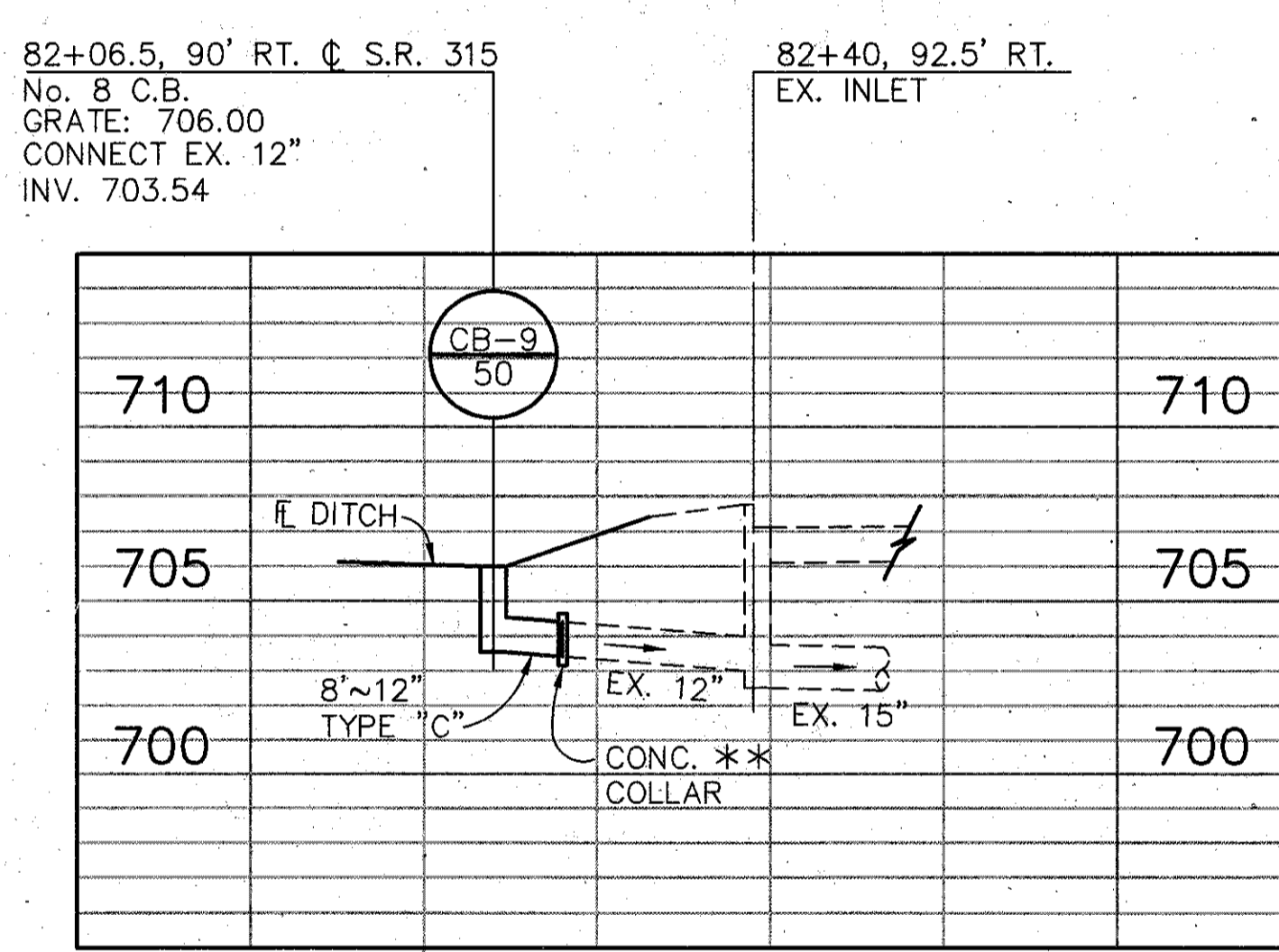
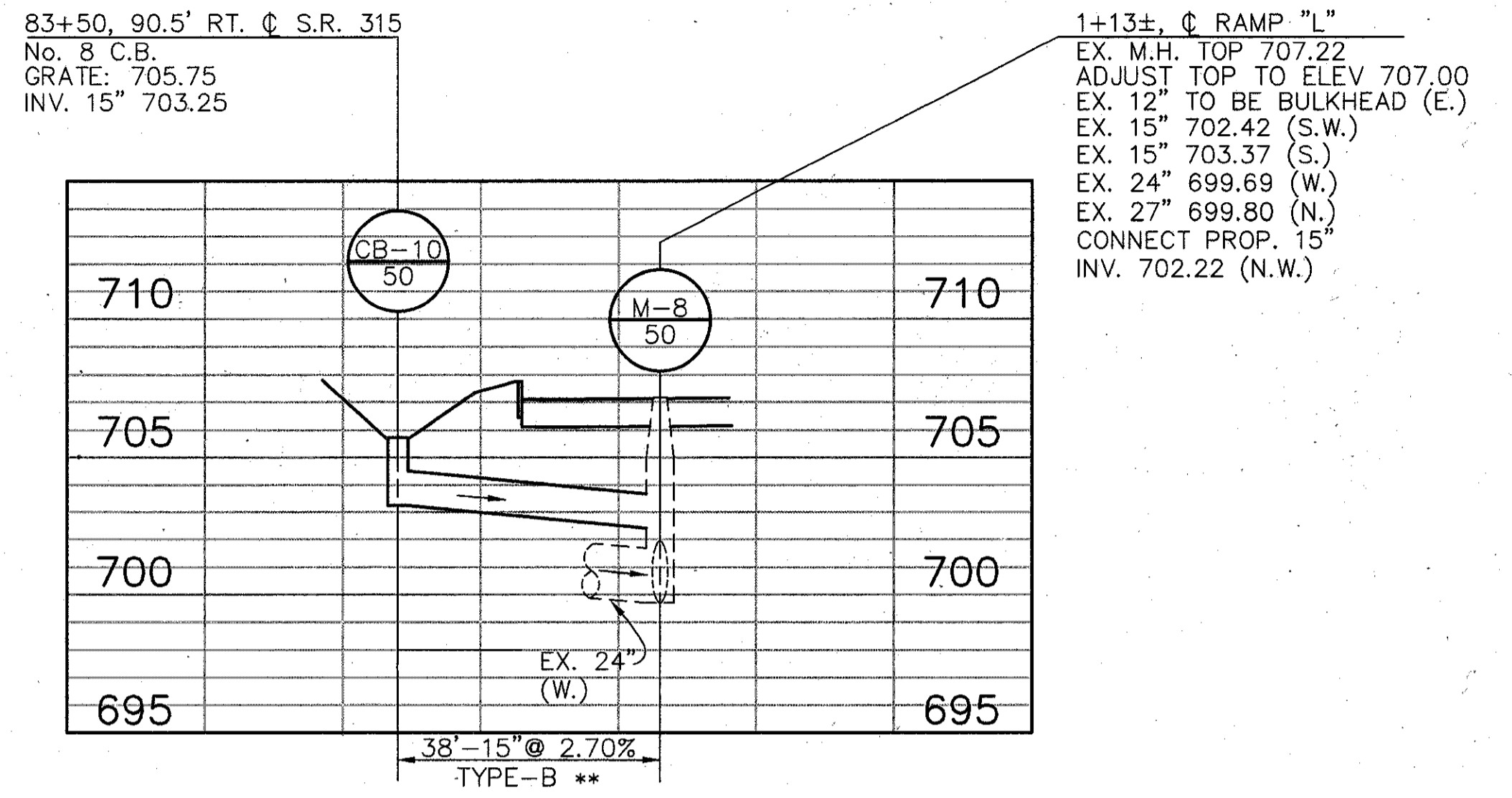
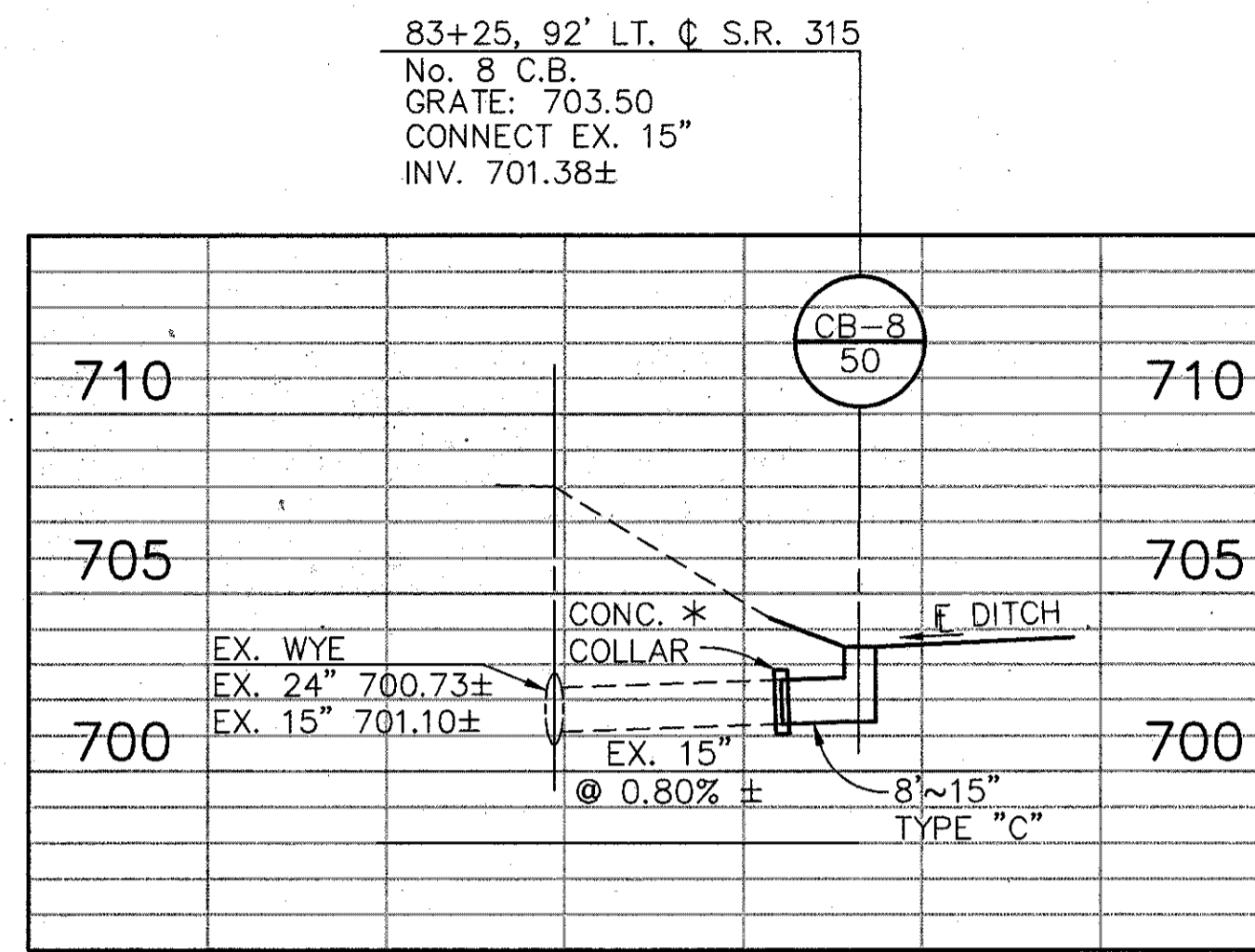
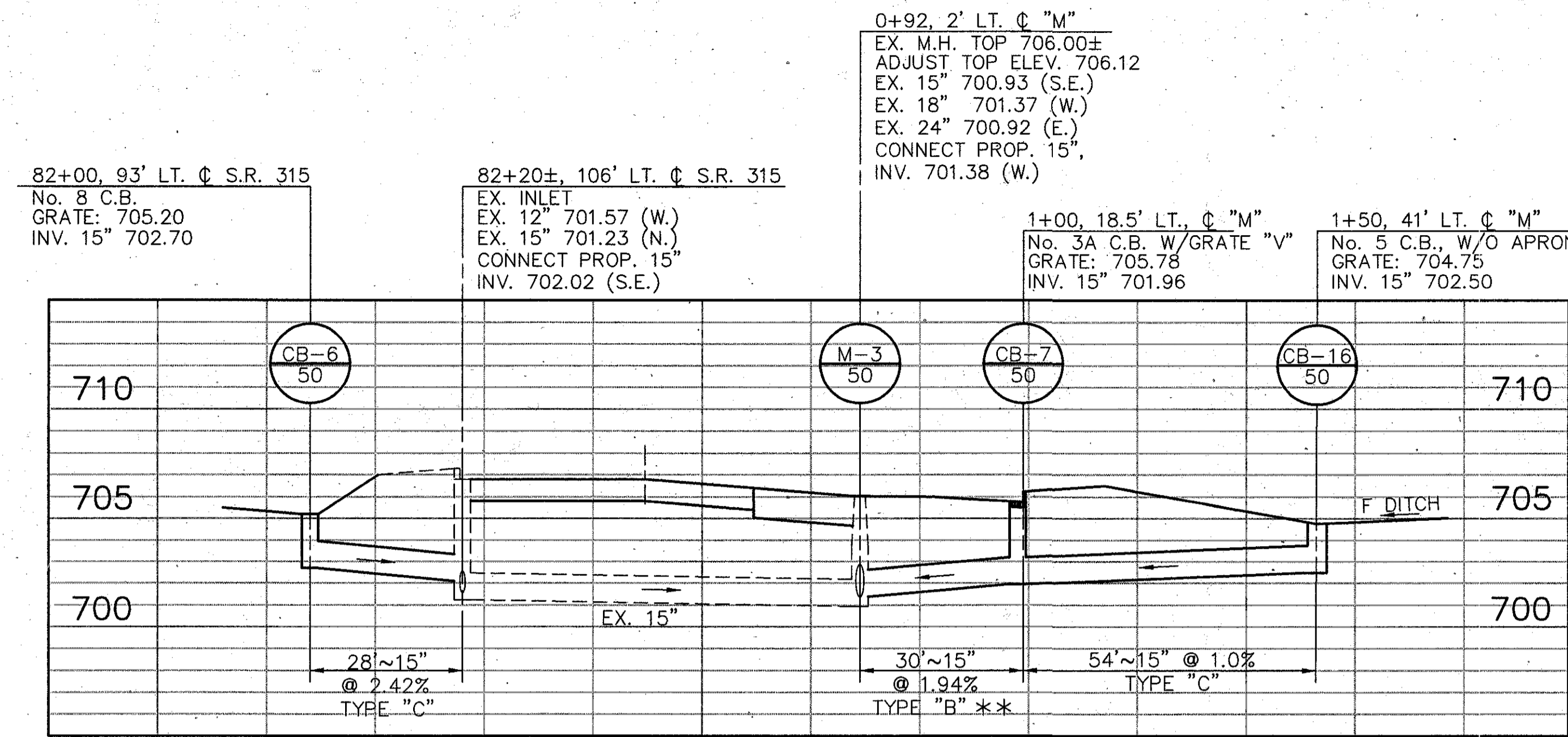


- NOTES:**
- * SEE STD. DRWG. MC-4
 - ** 706.01, 706.02 OR 706.08
W/JOINTS AS PER 706.11 OR 706.12

[C] - I:\CIVIL\HIGHWAY\315-CO\SIM-PREF2.DWG - OCT 20, 1995 - 15:35:22 - SCALE = 26.04

STORM SEWER PROFILE

SCALE: 1" = 5' VERT.
1" = 20' HOR.

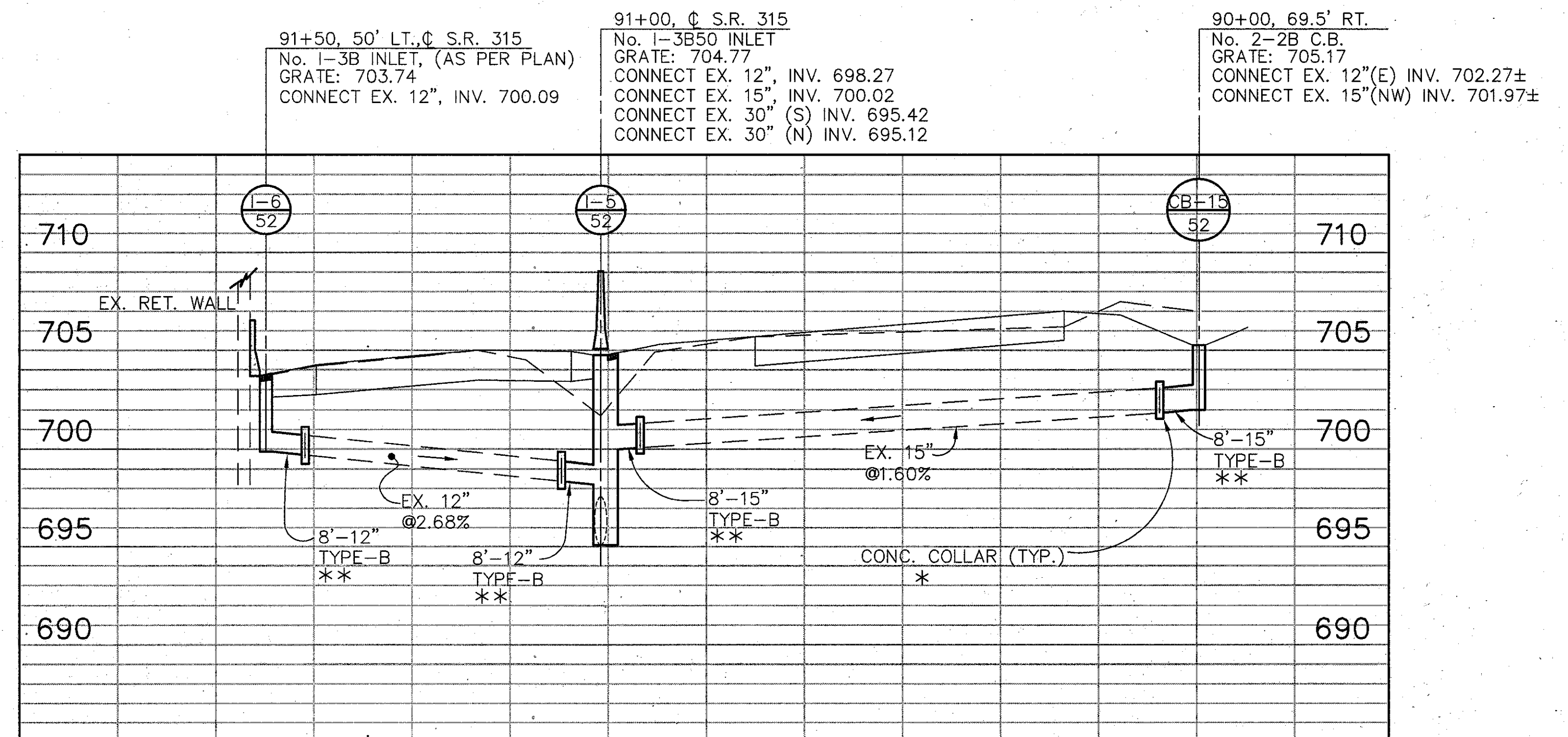
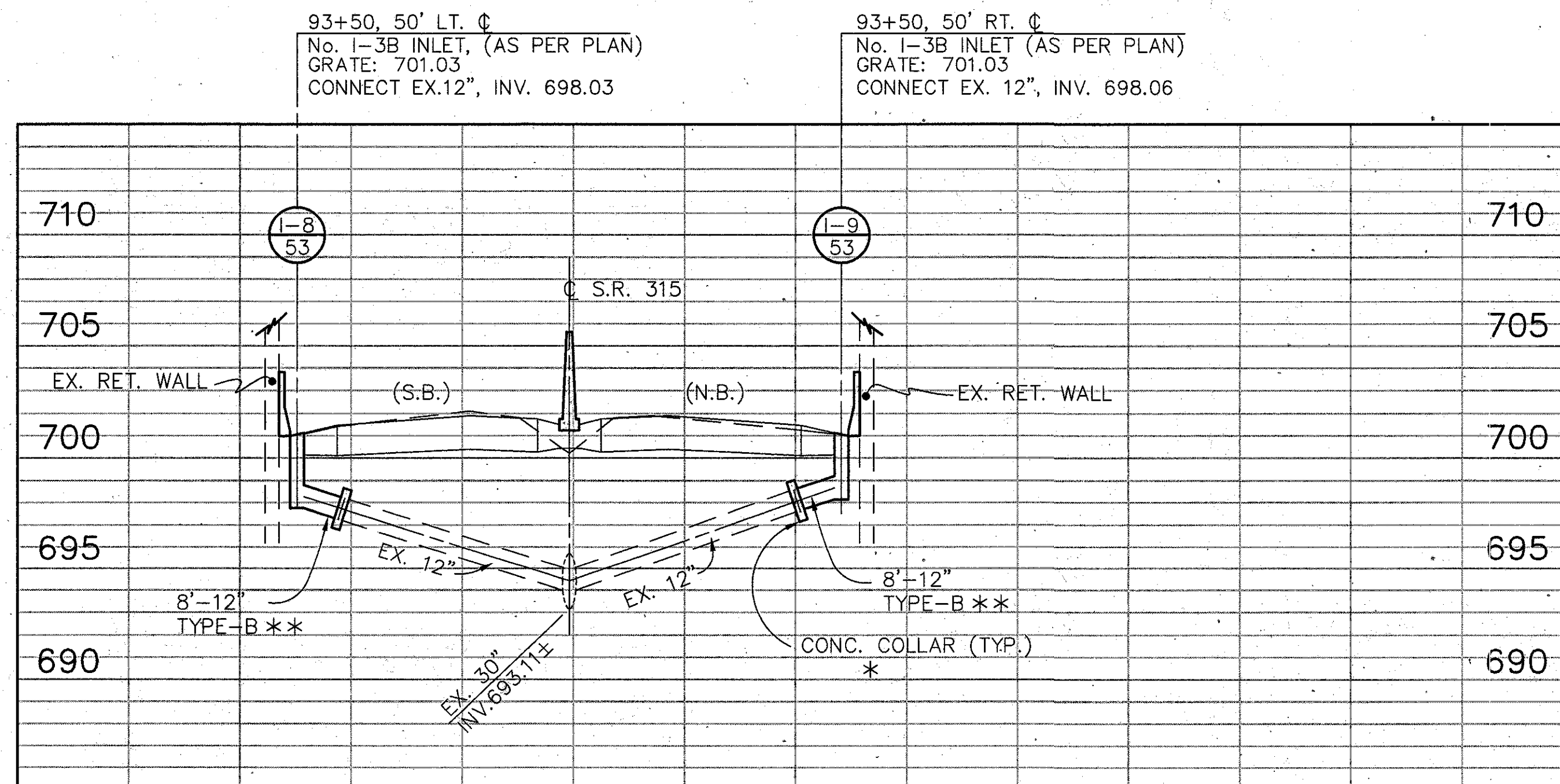
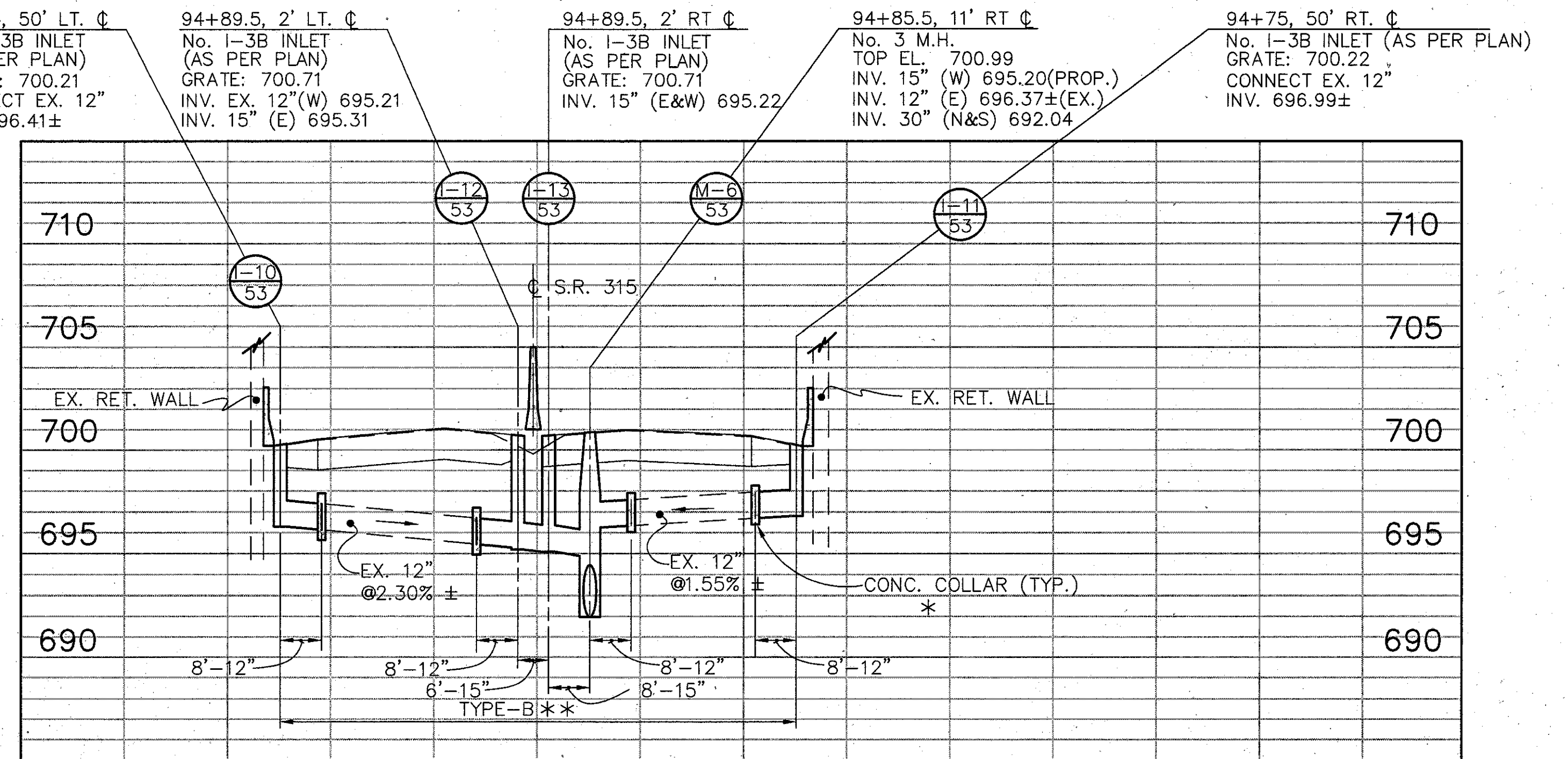
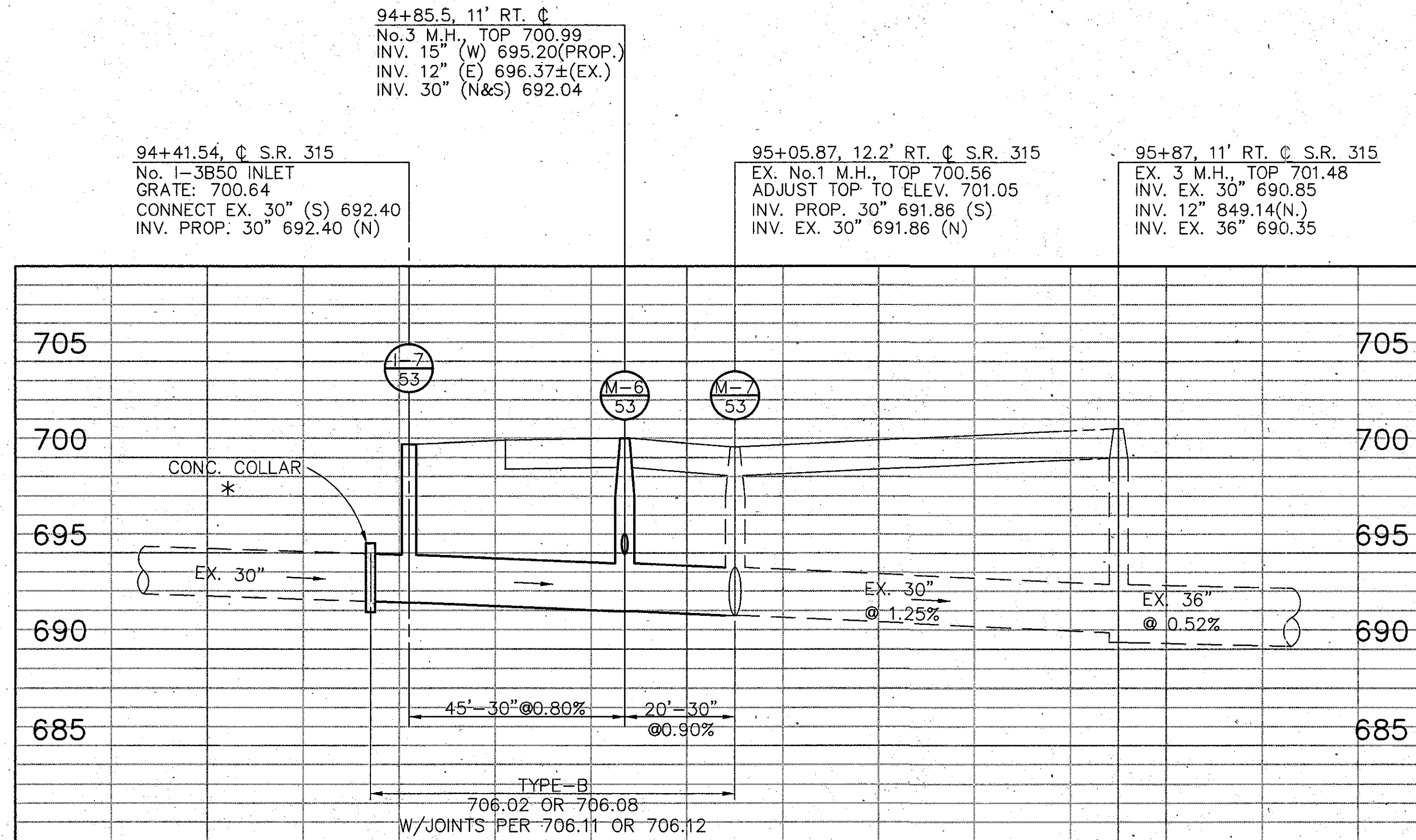


NOTES:
* SEE STD. DRWG. MC-4
** 706.01, 706.02 OR 706.08 W/JOINTS AS PER 706.11 OR 706.12.

[C01] - I:\CIVIL\HIGHWAY\SR315-CD\STM-PRF3.DWG - OCT. 20, 1995 - 15:36:05 - SCALE = 26.04

STORM SEWER PROFILE

SCALE: 1" = 5' VERT.
1" = 20' HOR.



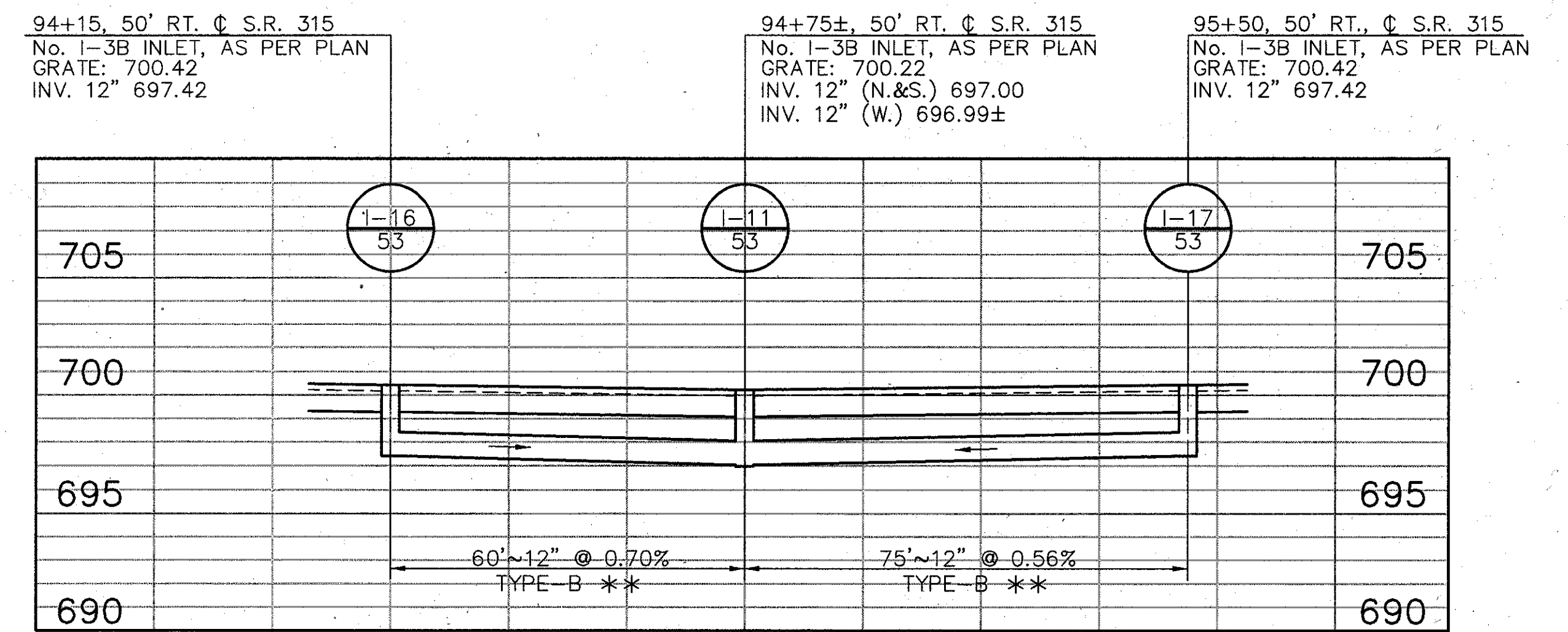
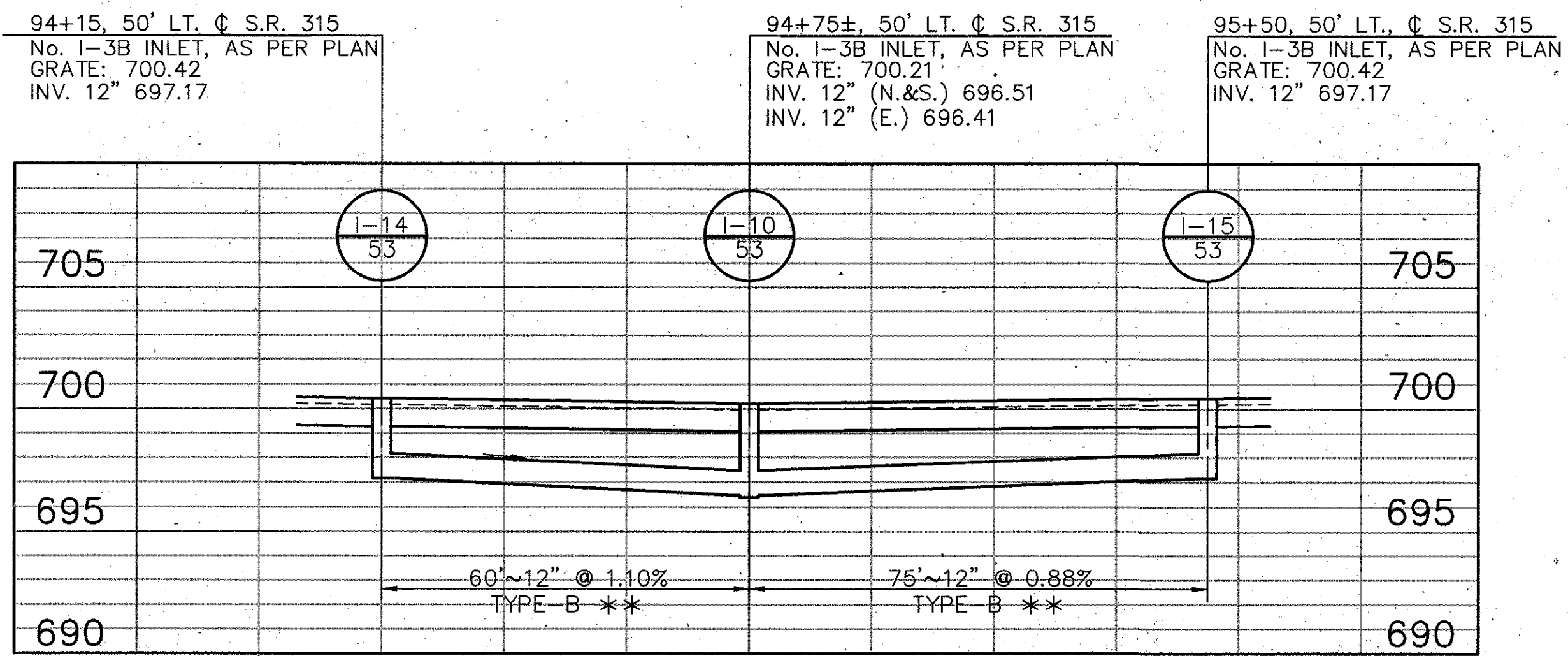
- NOTES:**
- * SEE STD. DRWG. MC-4
 - ** 706.01, 706.02 OR 706.08
W/JOINTS AS PER 706.11 OR 706.12

[07] - A:001 HIGHWAY 3015-CO-STM-PREF. DWG - OCT. 20, 1995 - 15:54:54 - SCALE = 26.04

STORM SEWER PROFILE

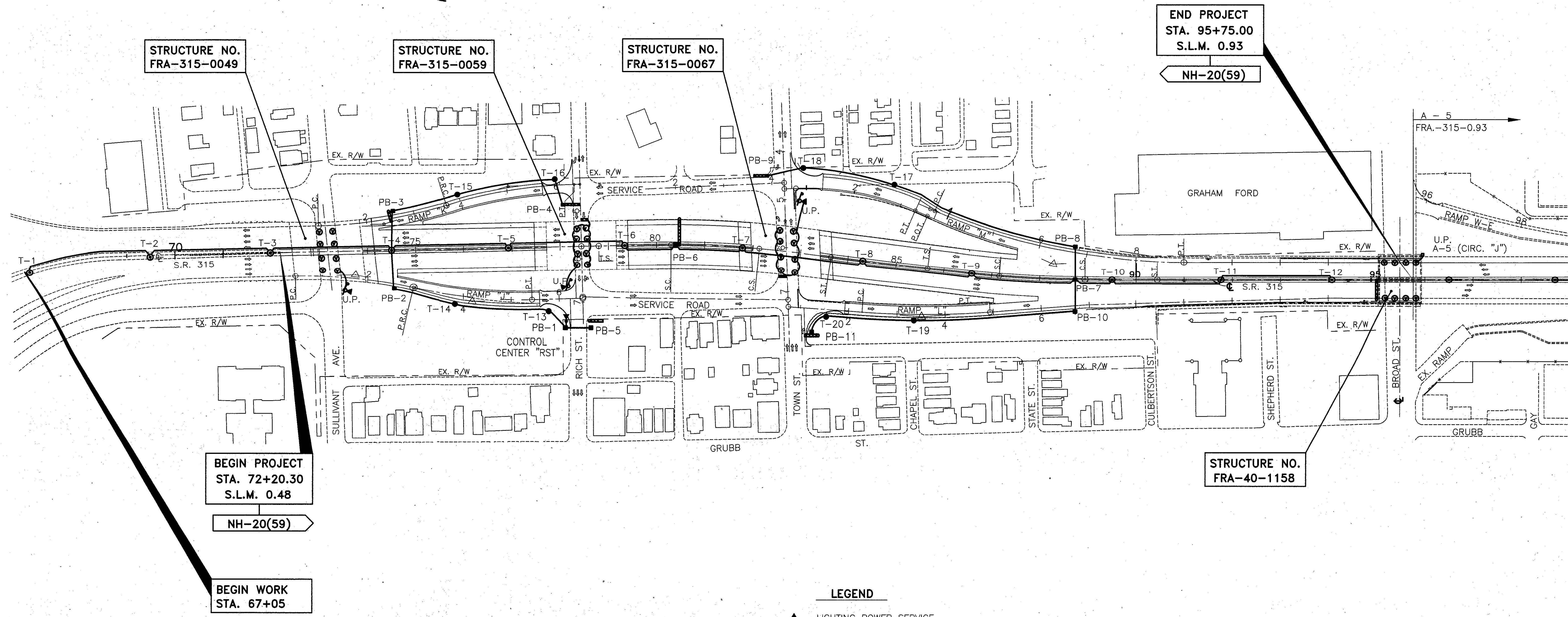
SCALE: 1" = 5' VERT.
1" = 20' HOR.

CALC. BY	FRANKLIN COUNTY FRA-315-0.48	OHIO
DATE		FHWA REGION 5
CHKD. BY		57 163
DATE		



NOTES:
SEE STD. DRWG. MC-4
** 706.01, 706.02 OR 706.08
W/JOINTS AS PER 706.11
OR 706.12.

LIGHTING SCHEMATIC PLAN



STRUCTURE NO.
FRA-315-0049

STRUCTURE NO.
FRA-315-0059

STRUCTURE NO.
FRA-315-0067

END PROJECT
STA. 95+75.00
S.L.M. 0.93
NH-20(59)

BEGIN PROJECT
STA. 72+20.30
S.L.M. 0.48
NH-20(59)

BEGIN WORK
STA. 67+05

STRUCTURE NO.
FRA-40-1158

- LEGEND**
- ▲ LIGHTING POWER SERVICE
 - 200 WATT H.P.S. LUMINAIRE AND POLE
 - ⊙ 400 WATT H.P.S. LUMINAIRE AND POLE
 - ⊕ UNDERPASS LUMINAIRE (U.P. INDICATES SERVICE TO UNDERPASS LIGHTING)
 - PULLBOX (18" SQUARE OR MEDIAN)
 - CIRCUIT CABLE
 - ▨ ILLUMINATED OVERHEAD SIGN

LIGHTING GENERAL NOTES

UTILITIES

SEE SHEET NO. 8

625 - POWER SERVICE, AS PER PLAN

THE POWER SUPPLYING AGENCY FOR THIS PROJECT IS -
CITY OF COLUMBUS
DIVISION OF ELECTRICITY
910 DUBLIN ROAD
COLUMBUS, OHIO 43215
614 647-7098

THE PROJECT WILL RECEIVE 480 VOLT SINGLE PHASE TWO WIRE SECONDARY SERVICE ONE SIDE GROUNDED FROM THE CITY OF COLUMBUS, DIVISION OF ELECTRICITY.

HIGHWAY LIGHTING			
STANDARD CONSTRUCTION DRAWINGS			
NUMBER	DATE	NUMBER	DATE
HL-10.11	5-1-87	HL-50.11	5-1-87
HL-10.12	5-1-87	HL-50.21	5-1-87
HL-10.13	5-1-87	HL-60.11	5-1-87
HL-20.13	5-1-87	HL-60.12	5-1-87
HL-20.11	5-1-87	HL-60.31	5-1-87
HL-20.31	5-1-87	HL-30.33	5-1-87
HL-30.11	5-1-87		
HL-30.21	5-1-87		
HL-40.10	5-1-87		

625.07 - 713.11 LUMINAIRES

IN ADDITION TO THE REQUIREMENTS OF THE DEPARTMENT'S CONSTRUCTION AND MATERIAL SPECIFICATIONS, CONVENTIONAL, STYLE B, TYPE II, 200 WATT, 480 VOLT LUMINAIRES SHALL BE GENERAL ELECTRIC M-400R2 TEST #7317, COOPER OVD TEST #766503, AMERICAN ELECTRIC SERIES 126 TEST #AE38491, OR EQUAL AS APPROVED BY THE ENGINEER.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH ITEM 625 - " LUMINAIRE, STYLE B, TYPE II, 200 WATT HIGH PRESSURE SODIUM, 480 VOLT, AS PER PLAN."

713.14 - LAMPS

HIGH PRESSURE SODIUM LAMPS SHALL BE GENERAL ELECTRIC "LUCALOX", OSRAM SYLVANIA "LUMALUX", PHILIPS "CERAMALUX", OR EQUAL APPROVED BY THE ENGINEER.

UNDERDRAINS FOR PULL BOXES

REFERENCE IS MADE TO THE STANDARD DRAWINGS FOR DETAILS OF DRAINING PULL BOXES. UNDERDRAINS FOR PULL BOXES SHALL BE USED AS DIRECTED BY THE ENGINEER AND SHALL BE PROVIDED WHERE THE LENGTH REQUIRED FOR A SATISFACTORY OUTLET DOES NOT EXCEED APPROXIMATELY 20 FEET. AN ESTIMATED QUANTITY OF 50 LINEAR FEET OF ITEM 603, 4" CONDUIT TYPE E IS INCLUDED IN THE LIGHTING GENERAL SUMMARY FOR THIS PURPOSE.

ELECTRICAL SERVICE FOR ILLUMINATED SIGNS

THE PAY ITEMS IN THE LIGHTING GENERAL SUMMARY INCLUDE THE PULL BOX OR JUNCTION BOX ADJACENT TO EACH LIGHTED SIGN AND THE ELECTRICAL SERVICE CONNECTIONS LEADING INTO THE BOX, INCLUDING CABLE SPLICE KITS IN THE PULL BOX OR JUNCTION BOX. QUANTITIES FOR ELECTRICAL SERVICE FROM THE CONNECTIONS IN THE PULL BOX OR JUNCTION BOX TO THE SIGN ARE INCLUDED IN THE TRAFFIC CONTROL GENERAL SUMMARY.

ITEM SPECIAL - SERVICE TO UNDERPASS LIGHTING

THIS ITEM SHALL CONSIST OF PROVIDING COMPLETE ELECTRICAL SERVICE, EXCEPT FOR LUMINAIRES AND STRUCTURAL GROUNDING, FOR AN UNDERPASS LIGHTING SYSTEM ON A BRIDGE. THE INSTALLATION WORK SHALL INCLUDE CONDUITS, CONDUIT GROUNDING, MOUNTINGS, FITTINGS, JUNCTION BOXES, CABLES, AND ALL INCIDENTALS NECESSARY TO COMPLETE, READY FOR USE, THE SERVICE AS DETAILED.

THE LUMP SUM PRICE BID FOR "ITEM SPECIAL - SERVICE TO UNDERPASS LIGHTING" SHALL INCLUDE PAYMENT FOR ALL EQUIPMENT, LABOR, AND MATERIALS NECESSARY TO COMPLETE THE WORK AS SPECIFIED. COMPONENT PARTS NOT SPECIFICALLY MENTIONED BUT REQUIRED FOR SATISFACTORY OPERATION OF THIS ITEM SHALL BE FURNISHED AND CONSIDERED PAID FOR AS PART OF THE ITEM.

PADLOCK AND KEYS

PADLOCKS FURNISHED SHALL BE EITHER BRASS OR BRONZE, EQUAL TO MASTER NO. 48KA OR WILSON BOHANNAN 660A, AND SHALL BE KEYED IN ACCORDANCE WITH SPECIFICATION 631.08, PARAGRAPH 3. PAYMENT SHALL BE INCLUDED IN THE BID FOR THE ITEM(S) BEING LOCKED.

ITEM 625 - LUMINAIRE, UNDERPASS, TYPE II, 55 WATT LOW PRESSURE SODIUM, 480 VOLT, AS PER PLAN

THE LUMINAIRE SHALL BE A LOW PRESSURE SODIUM 55 WATT FLOODLIGHT SUITABLE FOR 480 VOLT OPERATION. THE LUMINAIRE HOUSING SHALL BE CONSTRUCTED OF EXTRUDED (.093" MINIMUM THICKNESS) OR CAST ALUMINUM WITH END PLATES OF FORMED ALUMINUM SECURED TO EXTRUSIONS TO FORM A SEALED UNIT. SILICONE SEALER SHALL BE APPLIED WHERE REQUIRED TO INSURE WATER-TIGHT INTEGRITY. THE LUMINAIRE'S EXTERNAL HARDWARE SHALL BE NON-CORROSIVE STAINLESS STEEL OR CADMIUM PLATED. THE REFLECTOR SHALL BE OF SPECULAR FINISH ALUMINUM WITH A MINIMUM REFLECTION FACTOR OF 80%.

THE LENS SHALL BE OF CLEAR .125" THICK POLYCARBONATE MATERIAL. THE TRUNION (YOKE) SHALL BE 3/16" MINIMUM THICKNESS, ZINC PLATED STEEL FEATURING TWO LOCKING BOLTS HOLDING FIXTURE FIRMLY IN POSITION AFTER AIMING ADJUSTMENT. THE BALLAST SHALL BE 55W, 480 VOLT REACTOR TYPE. THE UNIT SHALL BE UL LISTED FOR WET LOCATIONS.

INCOMING LEAD CABLE GLAND SHALL BE SUITABLE FOR 3/8" TO 7/16" DIAMETER TYPE SJ CORD WIRE SIZE. THE LUMINAIRE SHALL BE SUPPLIED COMPLETE WITH 55W SOX LAMP. THE LUMINAIRE SHALL BE THE APPROVED EQUAL IN APPEARANCE, QUALITY AND DESIGN TO PHILIPS #34314 OR VERTA RAY VL 0113.

625.07 - 713.13 UNDERPASS LUMINAIRES (BROAD STREET)

UNDERPASS LUMINAIRES SHALL BE AMERICAN ELECTRIC "SIDELITE" SERIES 582 TEST #AE20811, COOPER/CROUSE HINDS "WALL LIGHT" TEST #WPK15SXX, GENERAL ELECTRIC "VERSAFLOOD II WALLLIGHTER" TEST #8578, OR HOLOPHANE "WALLPACK II" TEST #33263, UNDERPASS UNIT OR EQUAL APPROVED BY THE ENGINEER, AND SHALL BE FURNISHED WITH AN INTEGRAL FUSE HOLDER AND 10- AMPERE FUSE. THE INTEGRAL HIGH PRESSURE SODIUM BALLAST SHALL BE OF A REGULATOR TYPE RATED FOR 480 VOLTS, 100 WATTS.

PAYMENT FOR ALL MATERIAL DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT BID FOR EACH ITEM 625 - "LUMINAIRE, UNDERPASS, 480 VOLT, 100 WATT HIGH PRESSURE SODIUM," AT THE UNIT PRICE BID FOR EACH.

ITEM 625 - LOW MAST LIGHT POLE

THE ROUND, TAPERED STEEL POLE SHALL INCLUDE SHAFT HANDHOLE, ANCHOR BASE, BOLT COVERS, SHEPHERD'S CROOK CONFIGURATION BRACKET ARM AND TO BE CAPABLE OF MOUNTING TO LIGHT POLE FOUNDATION TYPE B-50 BARRIER MEDIAN. THE POLE SHALL PROVIDE A LUMINAIRE NOMINAL MOUNTING HEIGHT OF 50' ABOVE THE PAVEMENT. THE LOW MAST LIGHT POLE SHALL BE HOLOPHANE "POLE-STAR SYSTEM", POLE NO H3719 OR EQUAL APPROVED BY THE ENGINEER.

ITEM 625 - LUMINAIRE, LOW MAST, 480 VOLT

THE LUMINAIRES SHALL BE AS SPECIFIED FOR HIGH MAST LUMINAIRES IN SECTION 713.21 OF THE CONSTRUCTION AND MATERIALS SPECIFICATIONS EXCEPT THAT THE LUMINAIRE ARRAYS AND ASSOCIATED ILLUMINATION TEST AREAS ARE HEREBY WAIVED. IN ADDITION, THE LUMINAIRES FOR LOW MAST LIGHTING SHALL MEET THE FOLLOWING REQUIREMENTS.

SYMMETRIC, TYPE V, LUMINAIRES FOR LOW MAST LIGHTING MAY BE HOLOPHANE "HMST" TEST #36383, OR GENERAL ELECTRIC "HM" TEST #6312, OR COOPER "HAL" TEST #48381.

IN ADDITION, OTHER LUMINAIRES WILL BE CONSIDERED IF THE DESIGNED INTENSITY AND THE UNIFORMITY ARE PROVIDED USING THE DESIGNED POLE LOCATIONS AND THE DESIGNED NUMBER AND TYPE OF FIXTURES PER POLE.

ITEM 625.22 HIGH VOLTAGE TEST

A LUMP SUM FOR PERFORMING THE HIGH VOLTAGE TEST REQUIRED BY THE ODOT CONSTRUCTION AND MATERIALS SPECIFICATIONS HAS BEEN INCLUDED IN THE GENERAL SUMMARY.

IFP - ELECTRIC VEHICLE PLANS - FOR CO. 1995 - 10/24/95 - SCALE - 0.0

EXISTING LIGHTING GENERAL NOTES

625.03 - POWER SERVICE

THE POWER SUPPLYING AGENCIES FOR THIS PROJECT ARE:

CITY OF COLUMBUS
DIVISION OF ELECTRICITY (MELP)
910 DUBLIN ROAD
COLUMBUS, OHIO 43215
(614) 645-7627

PULLBOX REMOVED, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF REMOVING AN EXISTING PULLBOX WHICH SHALL THEN BE PROPERLY DISPOSED OF. THE RESULTING OPENING SHALL THEN BE BACKFILLED TO GRADE WITH SUITEABLE COMPACTED SOIL AND RESTORED TO MATCH THE SURROUNDING AREA

PAYMENT WILL BE MADE FOR EACH ITEM 202 *CONCRETE PULLBOX REMOVED AS PER PLAN

LUMINAIRE REMOVED, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF THE REMOVAL AND DISPOSAL OF AN EXISTING LUMINAIRE.

THE LUMINAIRE SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF OFF THE PROJECT SITE.

PAYMENTS WILL BE MADE AT THE UNIT PRICE BID FOR EACH ITEM 202 LUMINAIRE REMOVED AND SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, AND INCIDENTALS REQUIRED TO COMPLETE THE WORK SATISFACTORILY.

LIGHT POLE REMOVED AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF THE REMOVAL AND DISPOSAL OF AN EXISTING LIGHT POLE.

THE LIGHT POLE, INCLUDING THE BRACKET ARMS, TRANSFORMER BASE, AND POLE AND BRACKET CABLES IN THE POLE SHALL BECOME THE PROPERTY OF THE CONTRACTOR FOR PROPER DISPOSAL OFF THE PROJECT SITE.

PAYMENT WILL BE MADE AT UNIT PRICE BID FOR EACH "ITEM 202 LIGHT POLE REMOVED" AND SHALL BE FULL COMPENSATION FOR ALL LABOR, AND INCIDENTALS REQUIRED TO COMPLETE THE WORK SATISFACTORILY.

LIGHT POLE FOUNDATION REMOVED, AS PER PLAN

THIS ITEM OF WORK WILL CONSIST OF REMOVING AN EXISTING LIGHT POLE FOUNDATION TO A MINIMUM OF ONE FOOT BELOW FINISHED GRADE, BACK-FILLING THE RESULTING DEPRESSION WITH COMPACTED SOIL AND RESTORING THE DISTURBED AREA

PAYMENT WILL BE MADE FOR EACH ITEM 202 *LIGHT POLE FOUNDATION REMOVED, AS PER PLAN*

BRACKET ARM REMOVED, AS PER PLAN

THE ITEM OF WORK SHALL CONSIST OF REMOVING THE BRACKET ARM FROM AN EXISTING LIGHT POLE. THE EXISTING WIRING SHALL BE REMOVED FROM THE POLE. THE POLE SHALL BE LEFT IN PLACE TO SUPPORT THE OVERHEAD POWER LINE WHICH IS ATTACHED THERETO.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH ITEM 202 BRACKET ARM REMOVED*

POWER SERVICE REMOVED AS PER PLAN

THIS ITEM SHALL CONSIST OF REMOVING THE EXISTING SERVICE EQUIPMENT AND SUPPORTING POLE. THE MATERIAL REMOVED SHALL BE PROPERLY DISPOSED OF. THE INCOMING POWER WILL BE DISCONNECTED BY THE SERVING POWER COMPANY.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID FOR EACH SERVICE REMOVED.

ITEM SPECIAL MAINTAIN EXISTING LIGHTING AND TEMPORARY LIGHTING, AS PER PLAN.

EXISTING ROADWAYS WHICH ARE TO REMAIN OPEN TO TRAFFIC DURING CONSTRUCTION OF THIS PROJECT AND WHICH ARE LIGHTED SHALL HAVE THE LIGHTING MAINTAINED AS DESCRIBED HERIN.

BEFORE ANY WORK IS STARTED IN THE IMMEDIATE VICINITY OF ANY EXISTING LIGHTING CIRCUITS, REPRESENTING OF THE STATE, THE MAINTAINING AGENCY AND THE CONTRACTOR SHALL MAKE A VISUAL INSPECTION OF THE EXISTING ROADWAY LIGHTING CIRCUITS TO BE MAINTAINED, DURING THIS INSPECTION, A WRITTEN RECORD OF THE CONDITION OF THE EXISTING LIGHTING SHALL BE MADE BY THE STATE'S REPRESENTATIVE. THIS WRITTEN REPORT SHALL NOTE INDIVIDUAL LUMINAIRES WHICH ARE NOT IN WORKING ORDER, INDIVIDUAL POLES WHICH ARE NOT STANDING, AND INDIVIDUAL CIRCUITS WHICH ARE NOT IN WORKING ORDER. THE COMPLETED REPORT SHALL BE SIGNED BY THE REPRESENTATIVES OF THE STATE, THE MAINTAINING AGENCY AND THE CONTRACTOR.

IF, AS A RESULT OF THIS INSPECTION, IT IS DETERMINED THAT THE CONDITION OF THE EXISTING SYSTEM IS BELOW THAT REQUIRED FOR THE SAFETY OF THE TRAVELING PUBLIC, THEN THE MAINTAINING AGENCY SHALL MAKE REPAIRS NECESSARY TO RETURN THE SYSTEM TO AN ACCEPTABLE CONDITION. FOLLOWING THESE REPAIRS, THE SYSTEM SHALL AGAIN BE INSPECTED AND A REPORT MADE AND SIGNED AS OUTLINED HERIN.

WHEN THE EXISTING IS AN ACCEPTABLE CONDITION, IT SHALL BE TURNED OVER TO THE CONTRACTOR WHO SHALL THEN BE REQUIRED TO MAINTAIN THE EXISTING LIGHTING TO THE CONDITION OUTLINED IN THIS REPORT WITH THE EXCEPTION OF KNOCKDOWNS DUE TO TRAFFIC ACCIDENTS.

REPLACEMENT OF KNOCKED DOWN UNITS SHALL BE DONE ONLY WHEN THE ENGINEER HAS DETERMINED THAT THE REPLACEMENT OF THE KNOCKED DOWN UNIT IS NECESSARY AND SHALL BE PAID SEPARATELY ON A UNIT BASIS.

BETTERMENTS SHALL BE COVERED IN ITEMS OF WORK PERTAINING TO THE CONSTRUCTION OF PERMANENT IMPROVEMENTS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATE TEMPORARY LIGHTING FOR THE TEMPORARY ROADS AS SHOWN ON THE PLANS.

SHOULD THE CONTRACTOR DESIRE THE REMOVAL OF THE EXISTING LIGHTING BEFORE THE NEW LIGHTING IS OPERATIONAL, THE CONTRACTOR SHALL THEN BE RESPONSIBLE FOR ADEQUATE TEMPORARY LIGHTING OF THAT PORTION OF THE EXISTING ROADWAY AFFECTED BY THE REMOVAL OF THE EXISTING LIGHTING.

PRIOR TO INSTALLING SUCH LIGHTING, THE CONTRACTOR SHALL PREPARE AND SUBMIT FOUR (4) SETS OF THE TEMPORARY LIGHTING PLAN TO THE DIRECTOR FOR REVIEW AND APPROVAL.

THIS PLAN SHALL SHOW LOCATION OF POLES, LENGTH OF BRACKET ARMS, STYLE OF LUMINAIRES, MOUNTING HEIGHT, WIRING METHODS AND OTHER PERTINANT INFORMATION. THE TEMPORARY LIGHTING SHALL PROVIDE AN AVERAGE INITIAL INTENSITY OF 1.2 FOOTCANDELS WITH AN AVERAGE TO MINIMUM UNIFORMITY NOT TO EXCEED 4:1. MOUNTING HEIGHT FOR TEMPORARY LUMINAIRES SHALL NOT BE LESS THAN 27 FEET AND MINIMUM OVERHEAD CONSTRUCTION SHALL NOT BE LESS THAN GRADE "A" FOR STRENGTH REQUIREMENTS AS DEFINED BY THE NATIONAL ELECTRIC SAFETY CODE. WOOD POLES WITH OVERHEAD WIRING MAY BE USED. HOWEVER, TEMPORARY LIGHTING SHALL MEET FEDERAL AND STATE SAFETY CRITERIA IF BREACKAWAY POLES ARE USED TO MEET THESE CRITERIA, THEN UNDERGROUND WIRING SHALL BE USED. RECONDITIONED OR USED MATERIALS MAY BE FURNISHED FOR TEMPORARY LIGHTING.

ALL MATERIALS NECESSARY TO COMPLETE THE TEMPORARY LIGHTING SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. WHEN NO LONGER NEEDED, THE TEMPORARY LIGHTING INSTALLATION SHALL BE REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR.

THE MAINTAINING AGENCY WILL PAY FOR ELECTRICAL ENERGY CONSUMED BY EXISTING POWER SERVICES AND BY PROPOSED PERMANENT POWER SERVICES AFTER ACCEPTANCE. THE CONTRACTOR WILL PAY FOR ELECTRICAL ENERGY, INSTALLATION, REMOVAL AND MAINTENANCE OF ANY TEMPORARY POWER SERVICES.

THE LUMP SUM PRICE BID FOR ITEM SPECIAL "TEMPORARY LIGHTING, AS PER PLAN" SHALL INCLUDE PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO PROVIDE TEMPORARY LIGHTING FOR THE TEMPORARY ROADS AS SHOWN IN THE PLANS.

THE LUMP SUM PRICE BID FOR ITEM SPECIAL " MAINTAIN EXISTING LIGHTING" SHALL INCLUDE PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIALS AND INCIDENTALS NECESSARY TO MAINTAIN THE EXISTING LIGHTING AS SPECIFIED HERIN.

THE UNIT PRICE BID FOR ITEM SPECIAL "REPLACEMENT OF EXISTING LIGHTING UNIT" SHALL BE FULL PAYMENT FOR THE REPLACEMENT OF AN EXISTING LIGHTING UNIT WHICH HAS BEEN KNOCKED DOWN AFTER THE AFOREMENTIONED INSPECTION AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO PROVIDE A REPLACEMENT FOR SUCH UNIT.

UTILITIES NOTIFICATION

AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS IN ANY AREA WHICH MAY INVOLVE UNDERGROUND FACILITIES, THE CONTRACTOR SHALL NOTIFY PROJECT ENGINEER, THE REGISTERED UNDERGROUND UTILITY PROTECTION SERVICES AND THE OWNERS OF ALL UNDERGROUND UTILITY FACILITIES.

SAFETY NOTE

THE CONTRACT INVOLVES WORK ON LIGHTING CIRCUITS WHICH ARE MAINTAINED BY THE CITY OF COLUMBUS, DIVISION OF ELECTRICITY. THE CONTRACTOR SHALL CONFORM TO THE DIVISION OF ELECTRICITY'S EXISTING SAFETY POLICY, COPIES OF WHICH ARE AVAILABLE FROM THE DIVISION OF ELECTRICITY.

PRIOR TO PERFORMING ANY WORK ON ANY PART OF A LIGHTING CIRCUIT WHICH COULD AFFECT THE DIVISION OF ELECTRICITY, OR ANOTHER CONTRACTOR, THE CONTRACTOR SHALL NOTIFY THE OTHER CONTRACTOR AND THE DIVISION OF ELECTRICITY AT 645-7627 HE AGAIN SHALL CALL THE DIVISION OF ELECTRICITY OR OTHER CONTRACTORS THAT SAME DAY WHEN HE IS CLEAR OF THAT WORK.

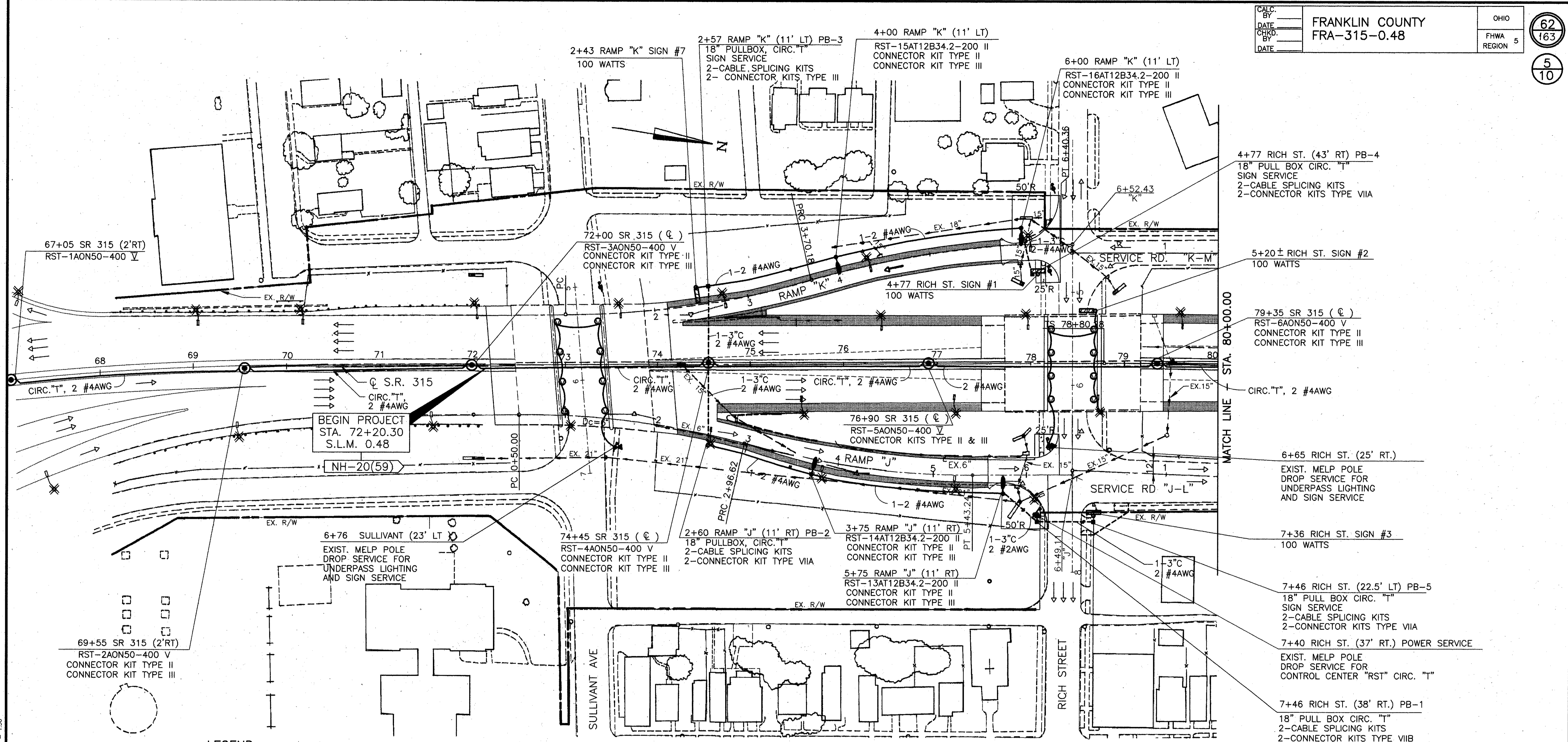
GENERAL SUMMARY

LIGHTING QUANTITIES

CALC. BY	FRANKLIN COUNTY	OHIO	60 163
DATE	FRA-315-0.48	FHWA REGION 5	3 10
CHKD. BY			
DATE			

SHEET NUMBERS														ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SHEET NO.
2	5	6	7																
														625	10500	12	EACH	LIGHT POLE, MISC.: LOW MAST LIGHT POLE DESIGN AON50, AS PER PLAN	59
														625	04300	8	EACH	LIGHT POLE DESIGN AT12B34.2	
														625	27270	12	EACH	LUMINAIRE, LOW MAST SYMMETRIC, HIGH PRESSURE SODIUM, 713.11 (400 WATT), 480 VOLT.	
														625	27500	8	EACH	LUMINAIRE, UNDERPASS, 480 VOLT, 100 WATT HIGH PRESSURE SODIUM	
														625	27600	24	EACH	LUMINAIRE, MISC.: UNDERPASS, TYPE II 55 WATT LOW PRESSURE SODIUM, 480 VOLT, AS PER PLAN	59
														625	27600	8	EACH	LUMINAIRE, MISC.: STYLE B, TYPE II, 200 WATT HIGH PRESSURE SODIUM, 480 VOLT, AS PER PLAN	59
														625	14000	8	EACH	LIGHT POLE FOUNDATION, 24" X 6" DEEP	
														625	14306	9	EACH	MEDIAN LIGHT POLE FOUNDATION, 10' DEEP	
														625	14500	3	EACH	LIGHT POLE FOUNDATION, MISC. MEDIAN LIGHT POLE FOUNDATION, AS PER PLAN	65
														625	32000	24	EACH	GROUND ROD	
														625	30700	9	EACH	PULL BOX, 713.08, 18"	
														625	31500	2	EACH	MEDIAN PULL BOX (TYPE B-50 BARRIER)	
														625	25500	557	LIN FT	CONDUIT, 3" 713.04	
														625	29002	2377	LIN FT	TRENCH, 24" DEEP	
														625	23200	6974	LIN FT	NO. 4 AWG 5000 VOLT DISTRIBUTION CABLE	
														625	24100	1924	LIN FT	1 1/2" DUCT CABLE WITH TWO NO. 4 AWG 5000 VOLT CABLES	
														625	23400	1944	LIN FT	NO. 10 AWG POLE AND BRACKET CABLE	
														625	00500	20	EACH	CONNECTOR KIT, TYPE II	
														625	00600	22	EACH	CONNECTOR KIT, TYPE III	
														625	00900	1	EACH	CONNECTOR KIT, TYPE V	
														625	00800	1	EACH	CONNECTOR KIT, TYPE VI	
														625	01000	12	EACH	CONNECTOR KIT, TYPE VII A	
														625	01004	4	EACH	CONNECTOR KIT, TYPE VII B	
														625	01100	4	EACH	CONNECTOR KIT, TYPE VII C	
														625	01500	18	EACH	CABLE SPLICING KIT	
														625	34001	4	EACH	POWER SERVICE, AS PER PLAN	59
														625	37001	LUMP		SERVICE TO UNDERPASS LIGHTING, AS PER PLAN	59
														625	38000	LUMP		HIGH VOLTAGE TEST	
														202	75400	47	EACH	LIGHT POLE REMOVED	
														603	00400	50	LIN. FT.	4" CONDUIT, TYPE E	

[[P]] - I:\CVL\HIGHWAY\SR315-AS\VR-05-46.DWG - JUL 27, 1995 - 14:45:10 - SCALE = 1:30



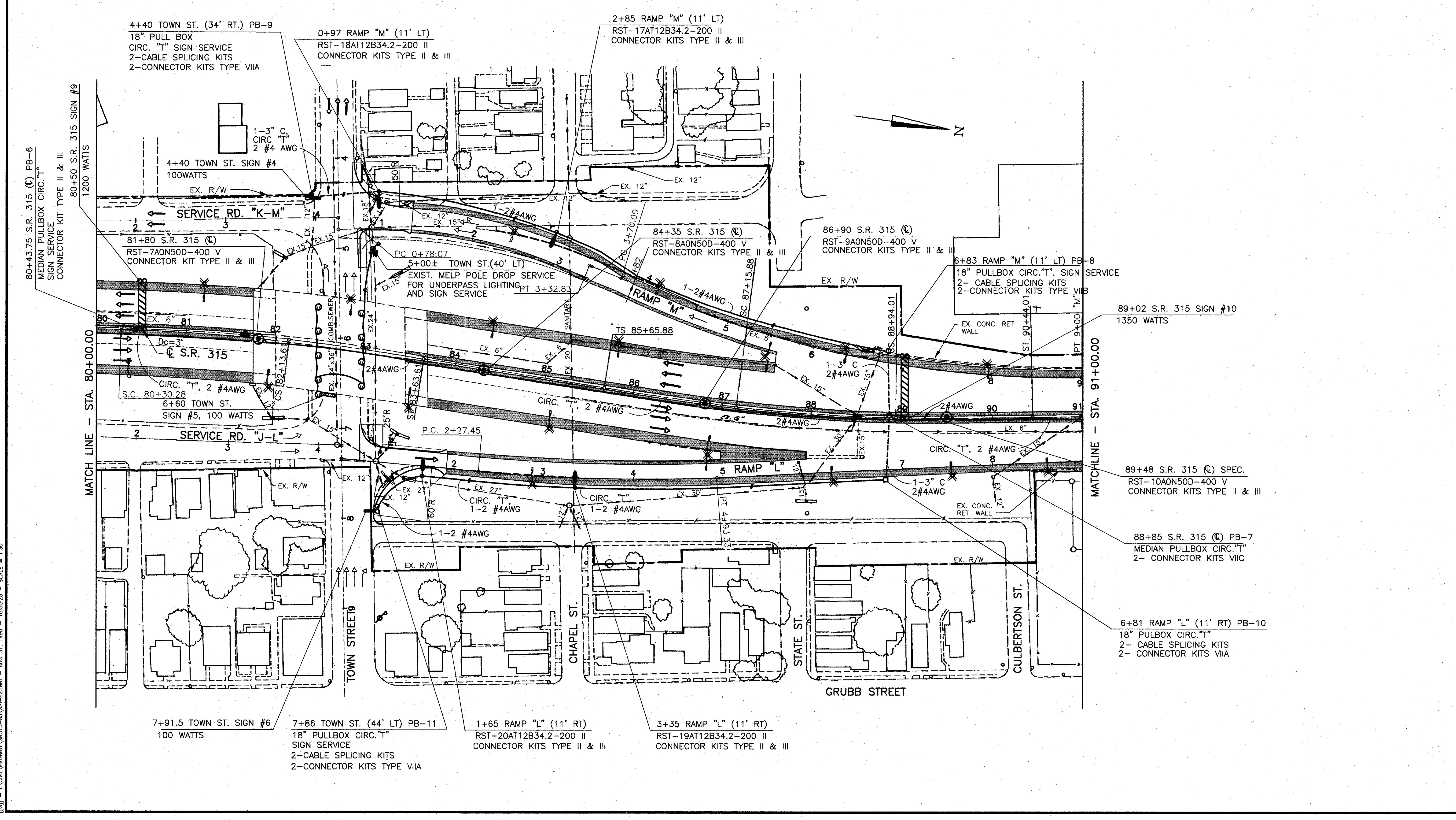
LEGEND

- MEDIAN LOW MAST TOWER - 400 WATT
- LIGHT POLE & LUMINAIRE - 200 WATT
- 96+50 S.R. - 315, 15' LT. (STA. LOCATION AND OFFSET FROM PAV'T EDGE)
- BRD-K-3 AT15B41.7 - 310 II (POLE AND LUMINAIRE DESCRIPTION)
- IES DISTRIBUTION TYPE
- LAMP WATTAGE
- LUMINAIRE MOUNTING HEIGHT
- BRACKET (B-SINGLE, BB-DOUBLE, N-POST TOP)
- BRACKET ARM LENGTH (O-POST TOP)
- BASE (A-ANCHOR, AT-ALUMINUM TRANSFORMER, ST-STEEL TRANSFORMER)
- POLE NUMBER
- CIRCUIT IDENTIFICATION
- CONTROL CENTER IDENTIFICATION

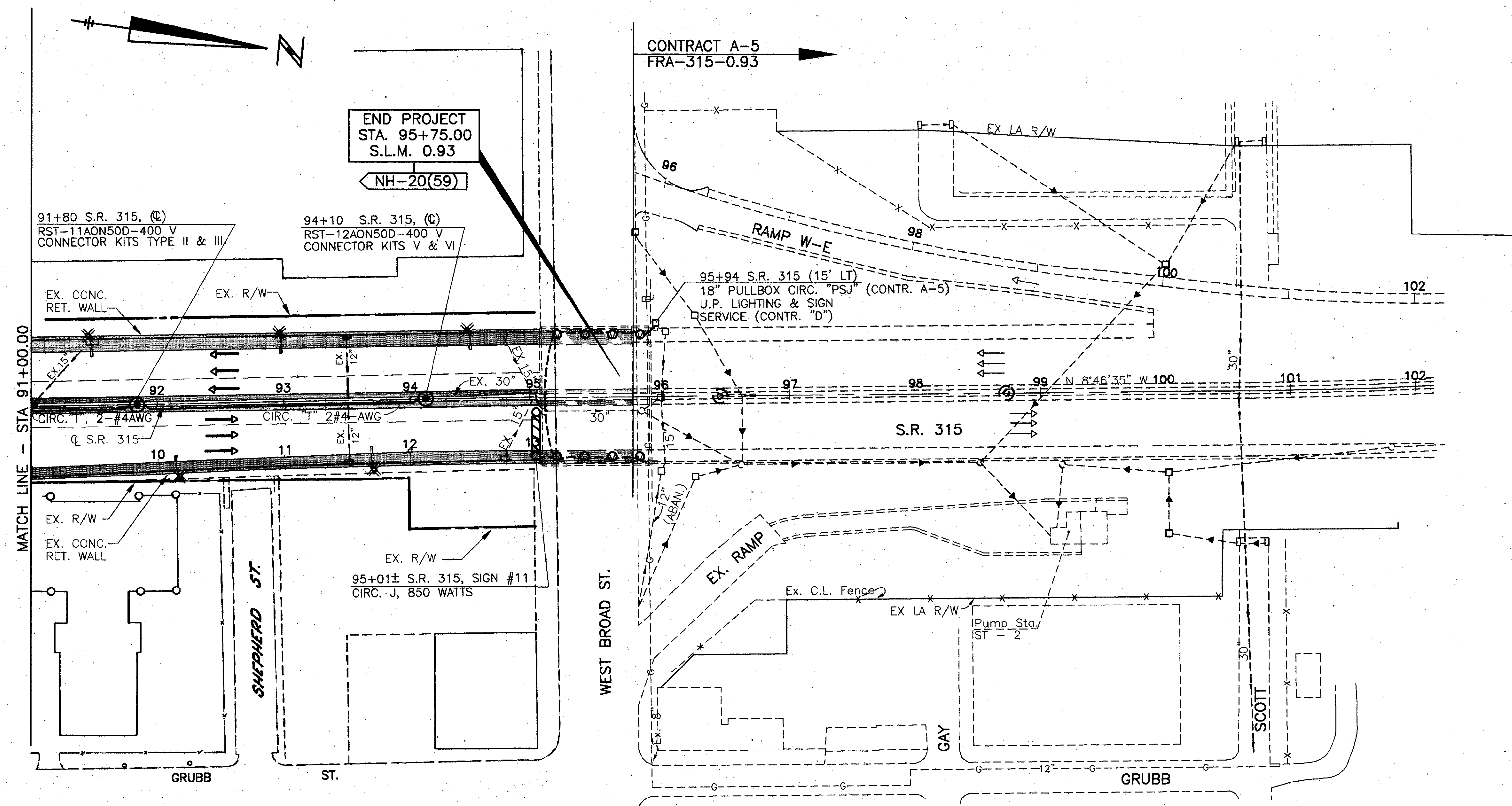
CONTROL CENTER DATA

POWER SERVICE	TYPE OF POWER	CONNECTED LOAD	ENCLOSURE SIZE	SERVICE CONDUCTOR SIZE	CIRCUIT			MAINTAINING AGENCY
					I.D.	LOAD AMPS	FUSE SIZE	
"RST"	480 VOLT 2-WIRE GROUND NEUTRAL	17.6	60 AMP	4	"T"	17.6	30 AMPS	CITY OF COLUMBUS

[48] - L:\TRANS\SR315-AS\SS-EI.DWG - OCT 27, 1997 - 09:53:06 - SCALE = 1:30



[G:] - I:\CADD\HIGHWAY\315-45\SS-EZ.DWG - AUG. 31, 1995 - 10:50:25 - SCALE = 1:30

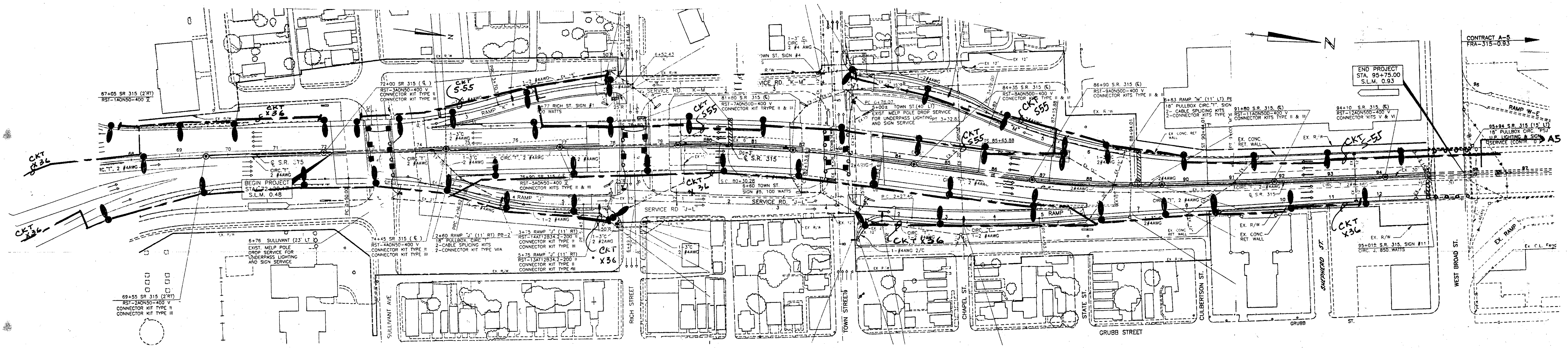


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LEGEND

- ◡ POLE TO BE REMOVED
- UNDERPASS LIGHT TO BE REMOVED

LIGHTING SUB-SUMMARY				
ITEM	EXT.	TOTAL	UNIT	DESCRIPTION
625E	40010	1	EA	REPLACEMENT OF EXISTING LIGHTING UNIT
202E	75301	1	EA	PULLBOX REMOVED, AS PER PLAN
202E	75507	51	EA	LUMINAIRE REMOVED, AS PER PLAN
202E	98100	51	EA	BRACKET REMOVED AS PER PLAN
202E	75401	49	EA	LIGHT POLE REMOVED, AS PER PLAN
202E	75501	49	EA	LIGHTPOLE FOUNDATION REMOVED AS PER PLAN
202E	75511	1	EA	POWER SERVICE REMOVED, AS PER PLAN
		14	EA	UNDERPASS LIGHT REMOVED

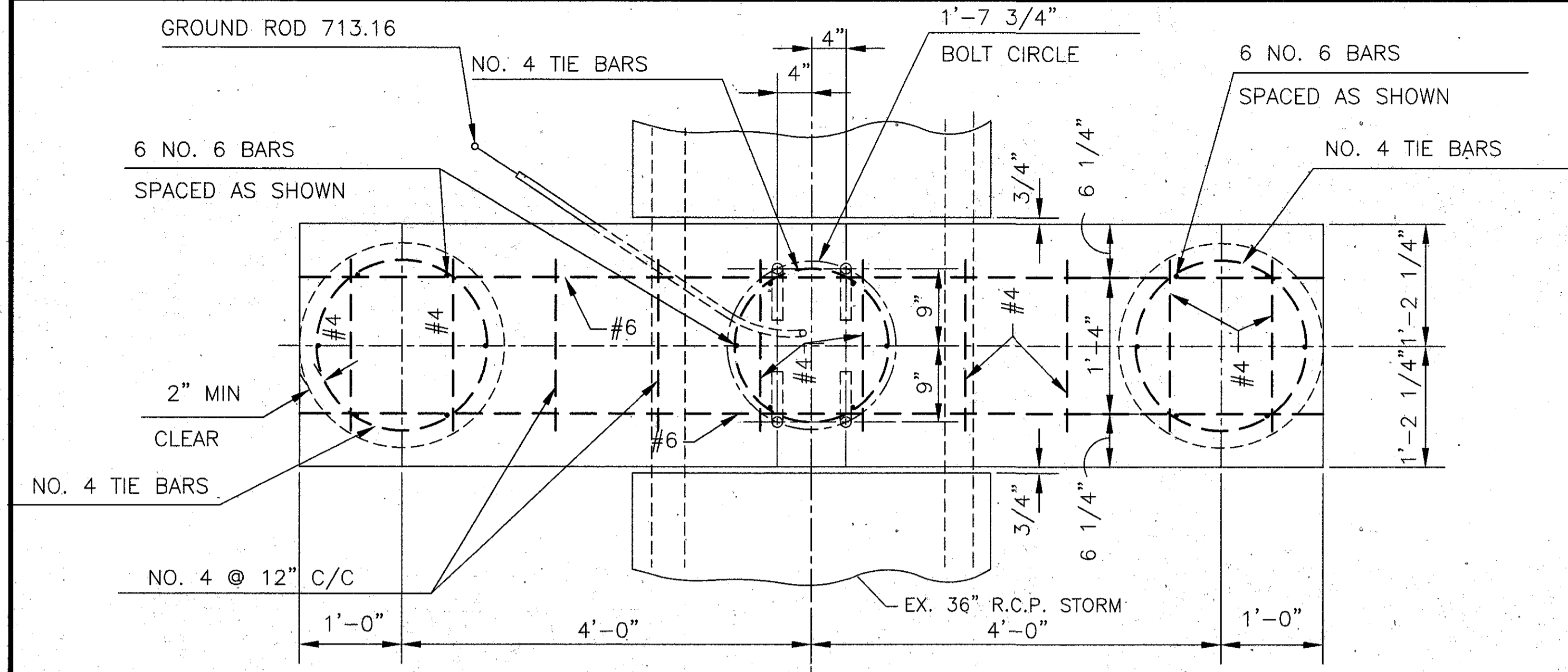


EXISTING CONTROL SITE LOCATION
 X36 - SUNSHINE PARK
 OFF OF SCIOTO BLVD
 W/OF I70, E/OF SR315

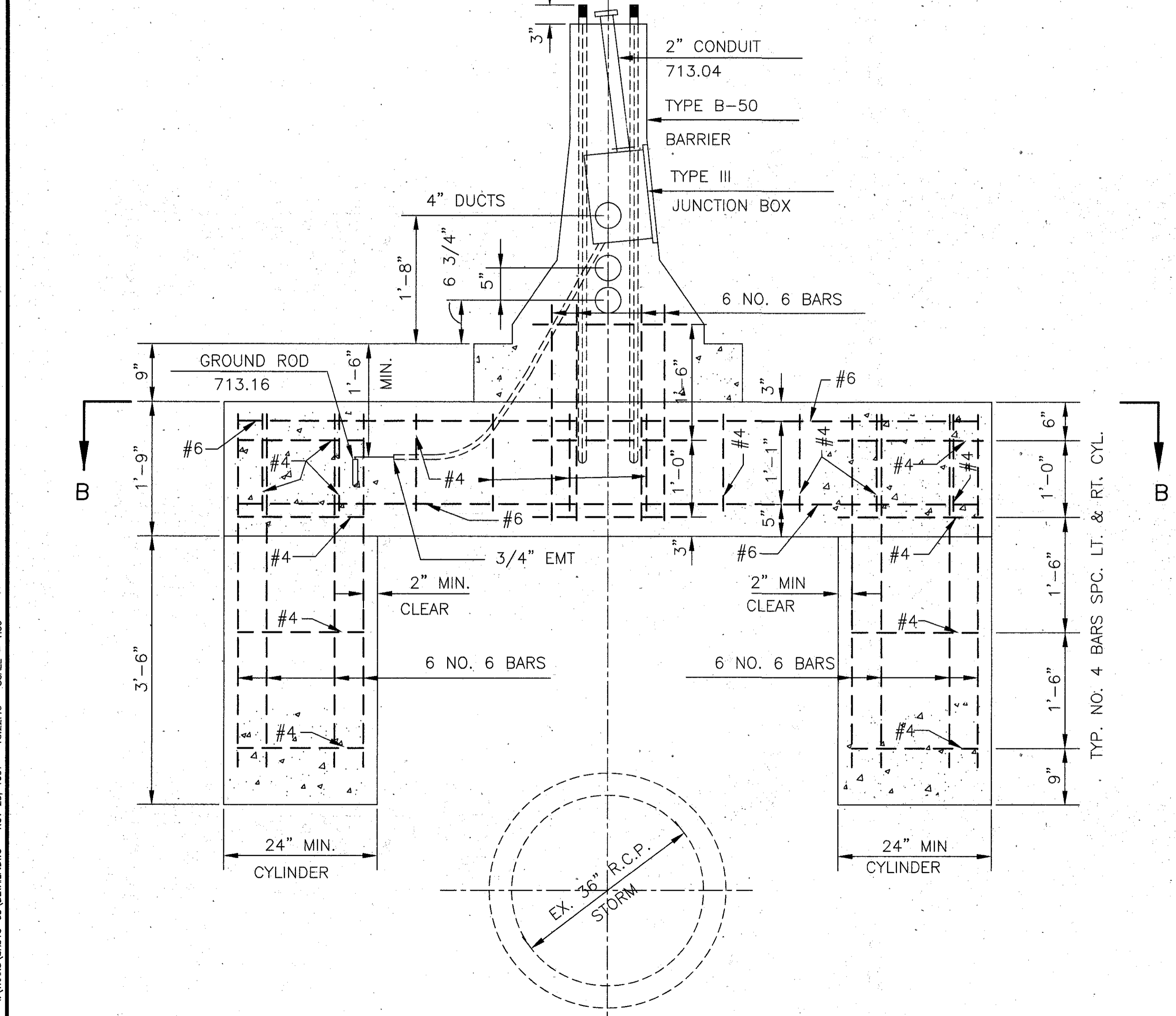
S-55 - E/S OF SR315
 AT PUMP STATION W/OF BROAD ST.
 (REMOVED BY "A5")

UNGROUND
 240/240

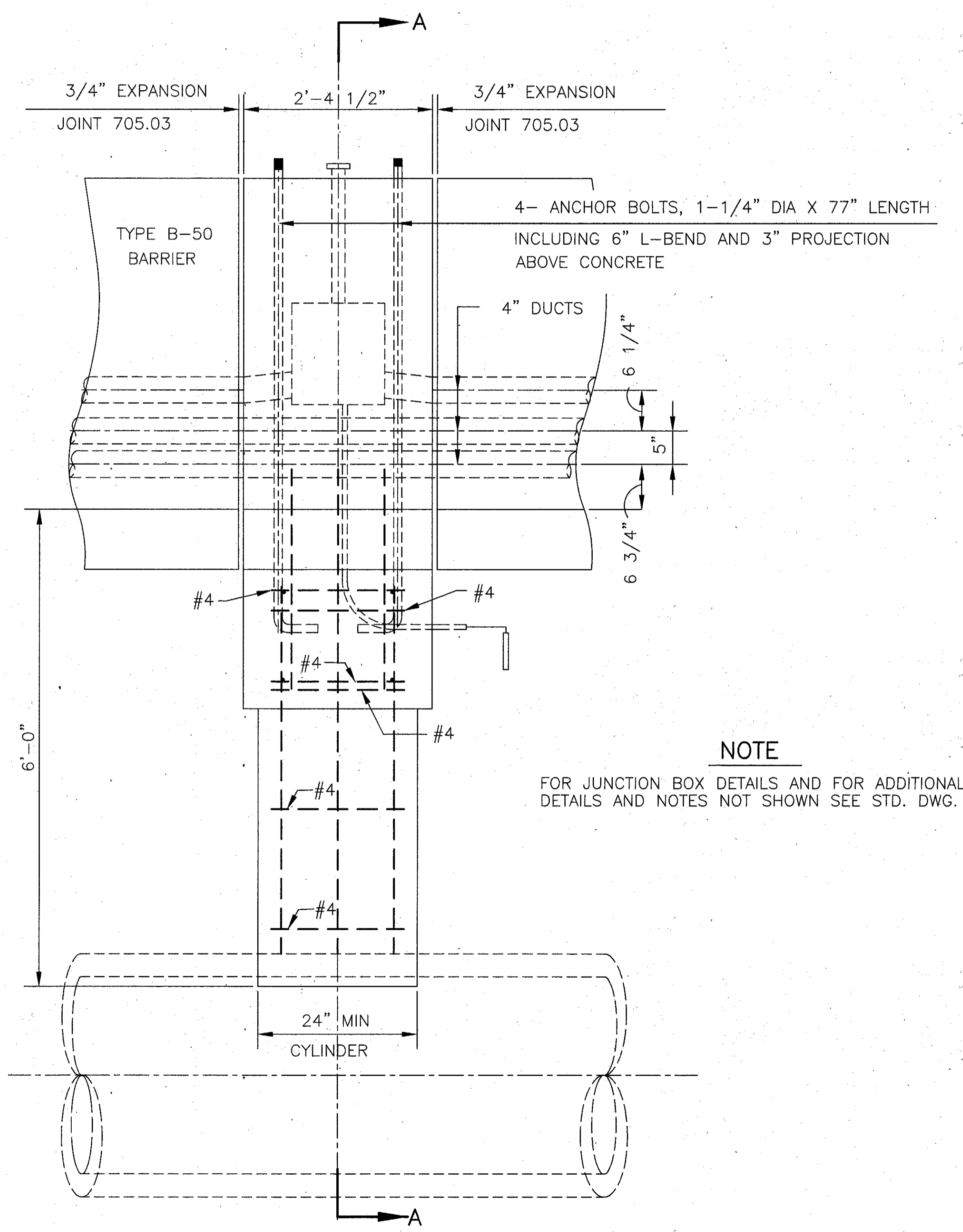
CIRCUIT LOCATIONS MAY NOT BE SHOWN CORRECTLY
 FIELD VERIFY BEFORE DOING EXCAVATION IN ANY AREA



SECTION B-B

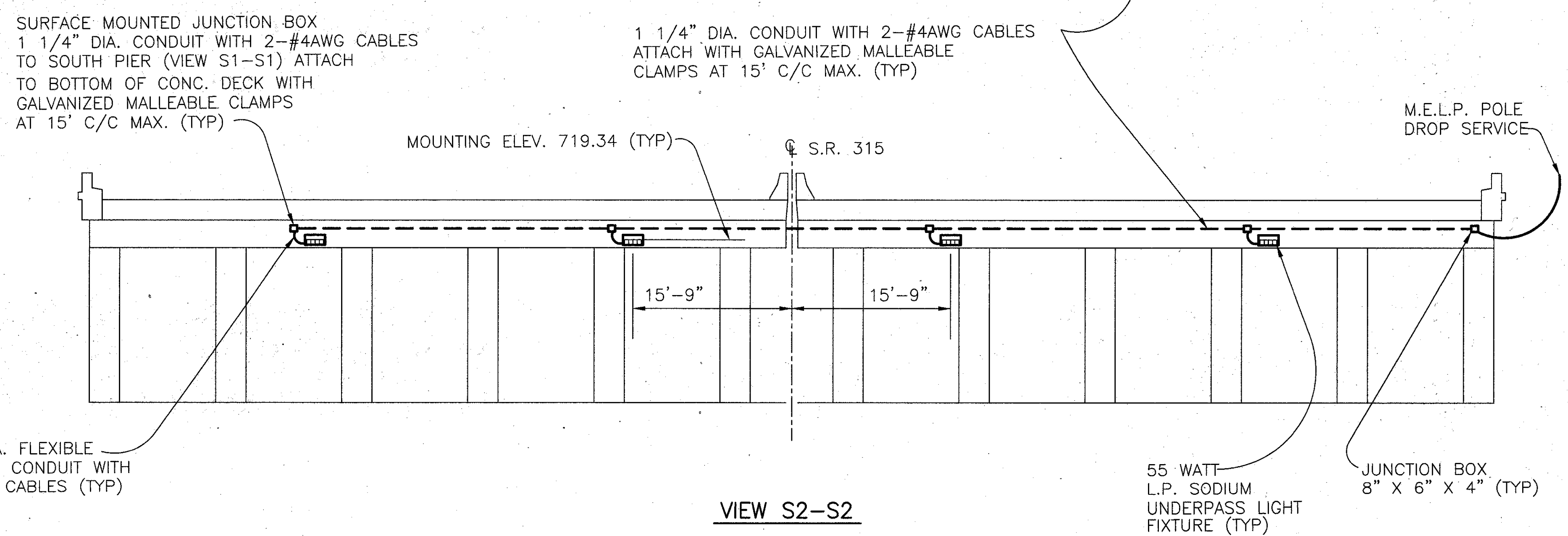
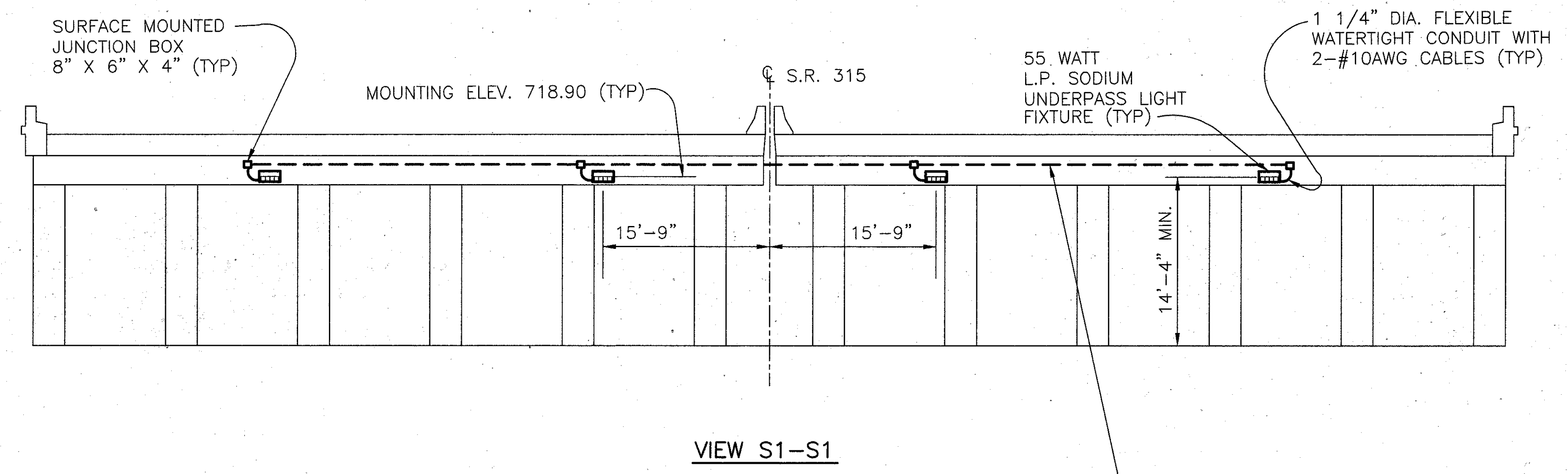
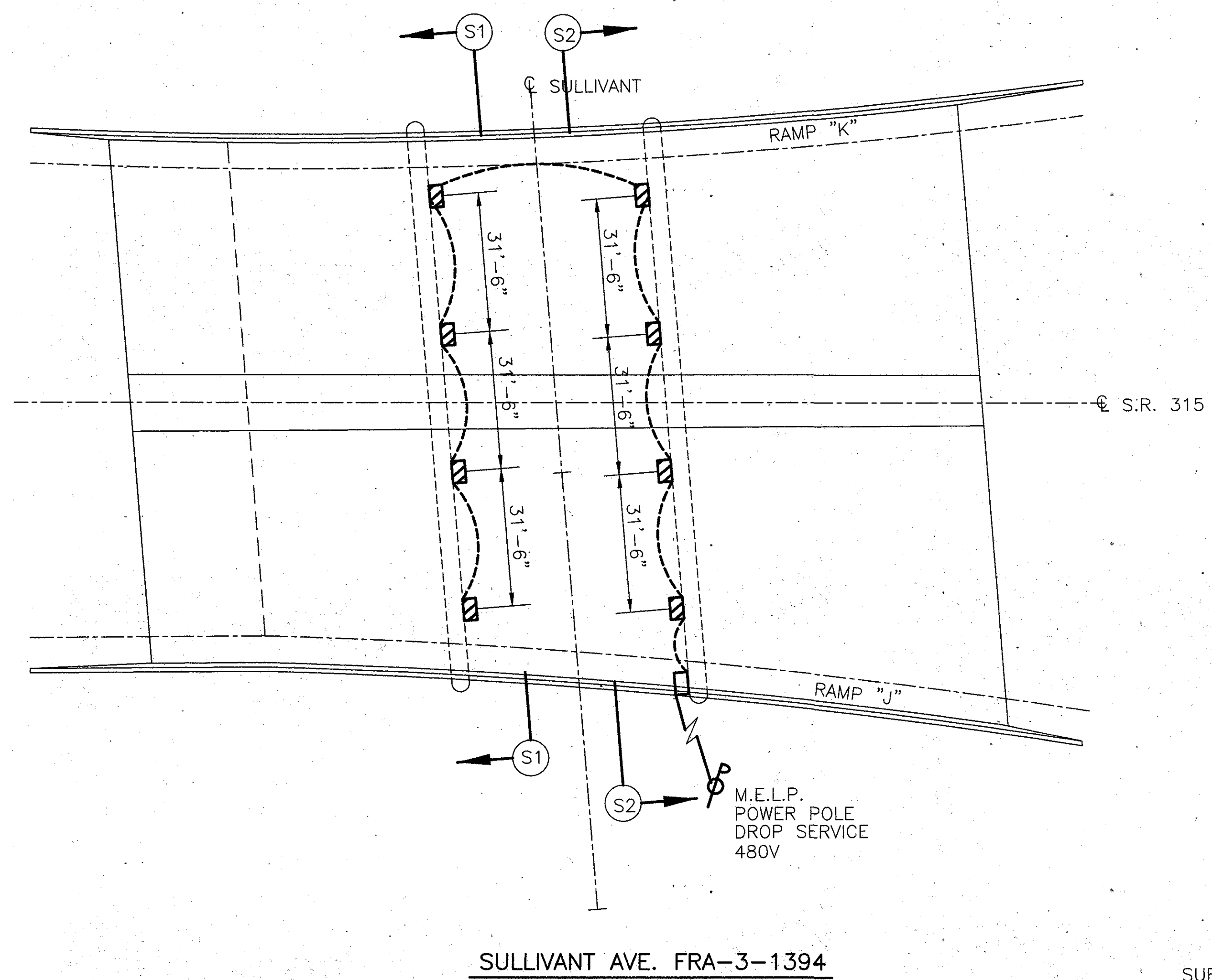


SECTION A-A



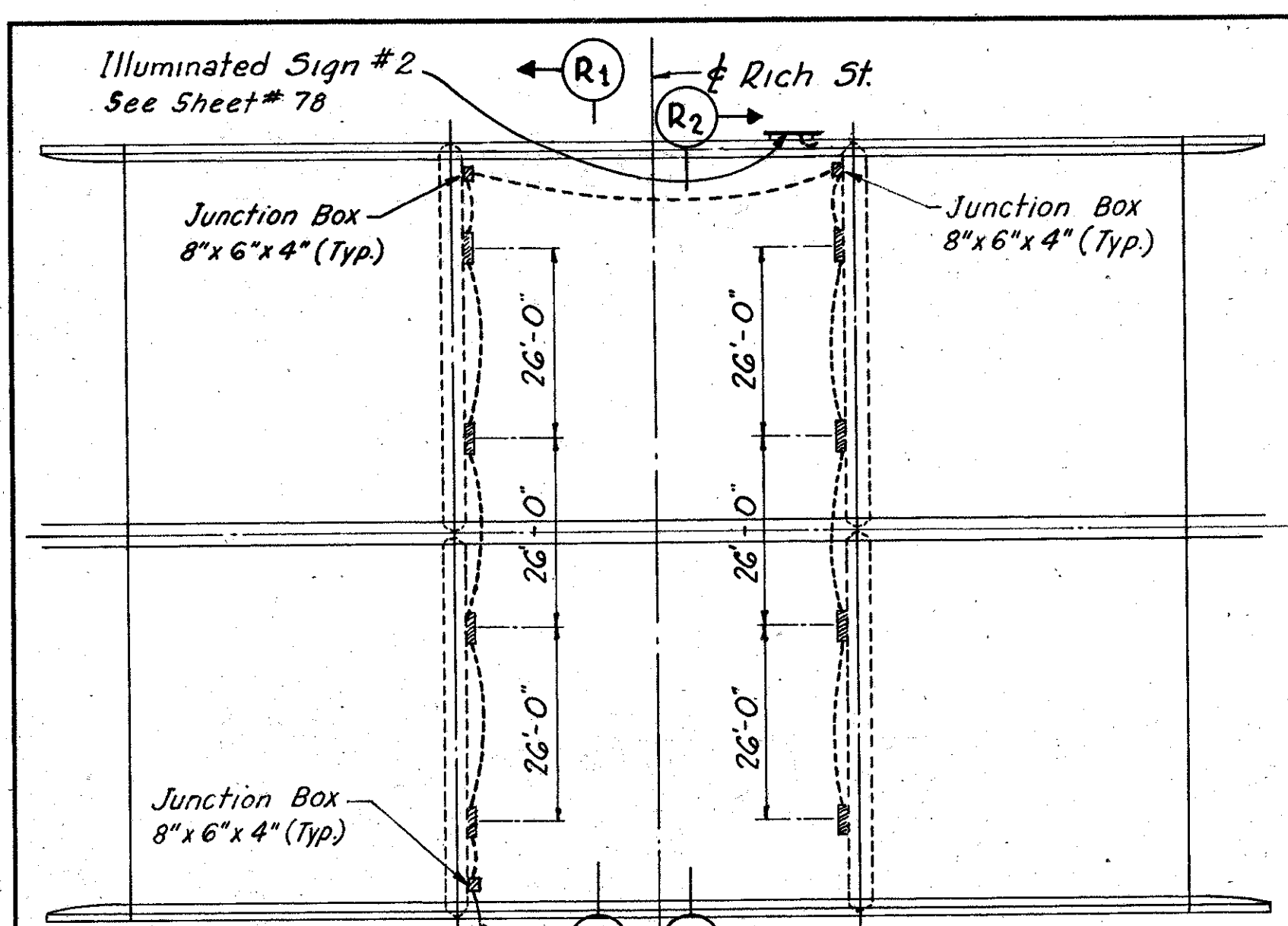
NOTE
FOR JUNCTION BOX DETAILS AND FOR ADDITIONAL
DETAILS AND NOTES NOT SHOWN SEE STD. DWG. HL=20.13

[C:\MS1] - I:\TRANS\SB315-CD\DETAIL.DWG - NOV 25, 1997 - 16:22:46 - SCALE = 1:30

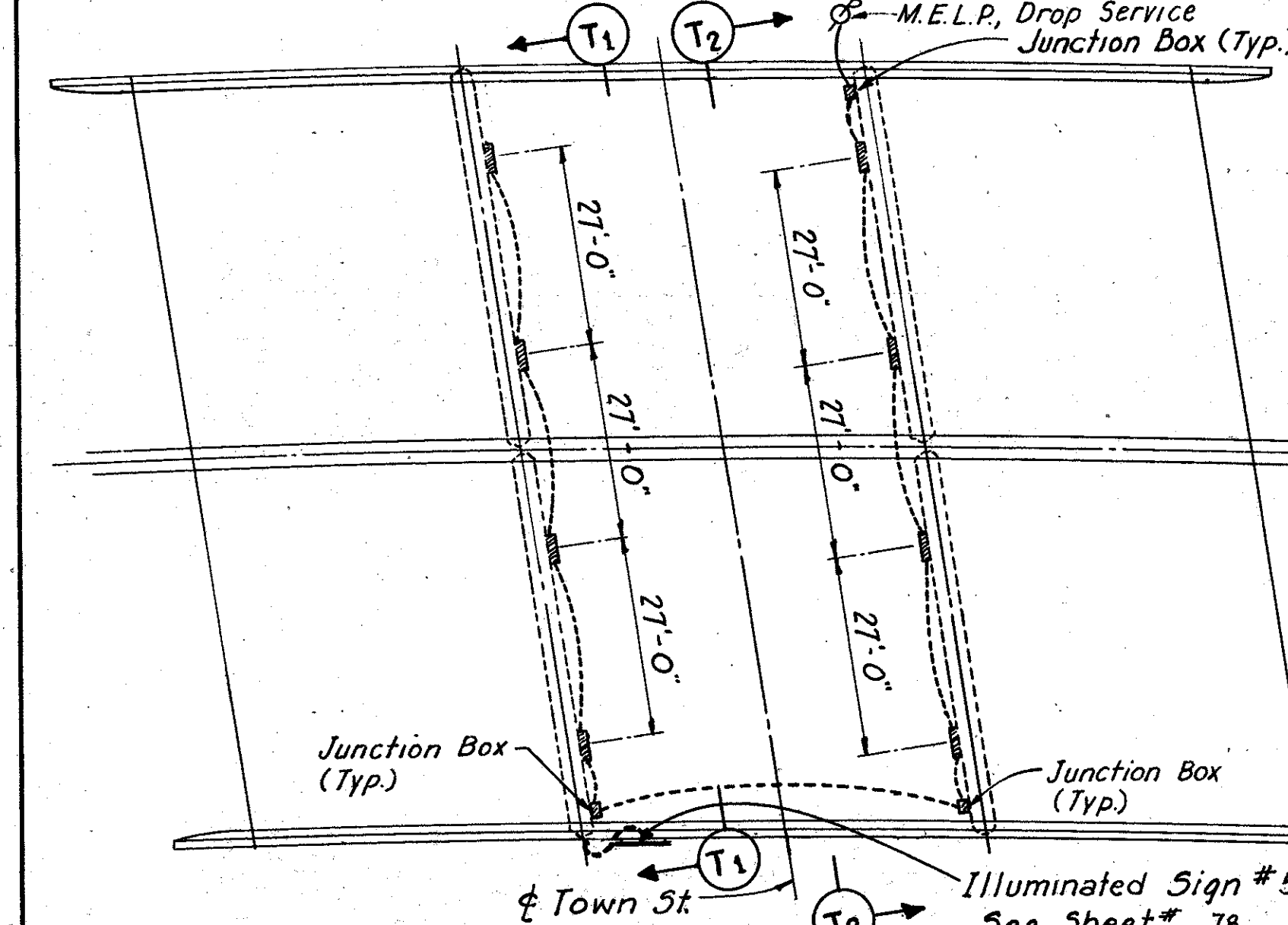


[46] - I:\TRANS\SR315-CD\UNDER-LIDWG - NOV 25, 1997 - 16:24:36 - SCALE = 1:30

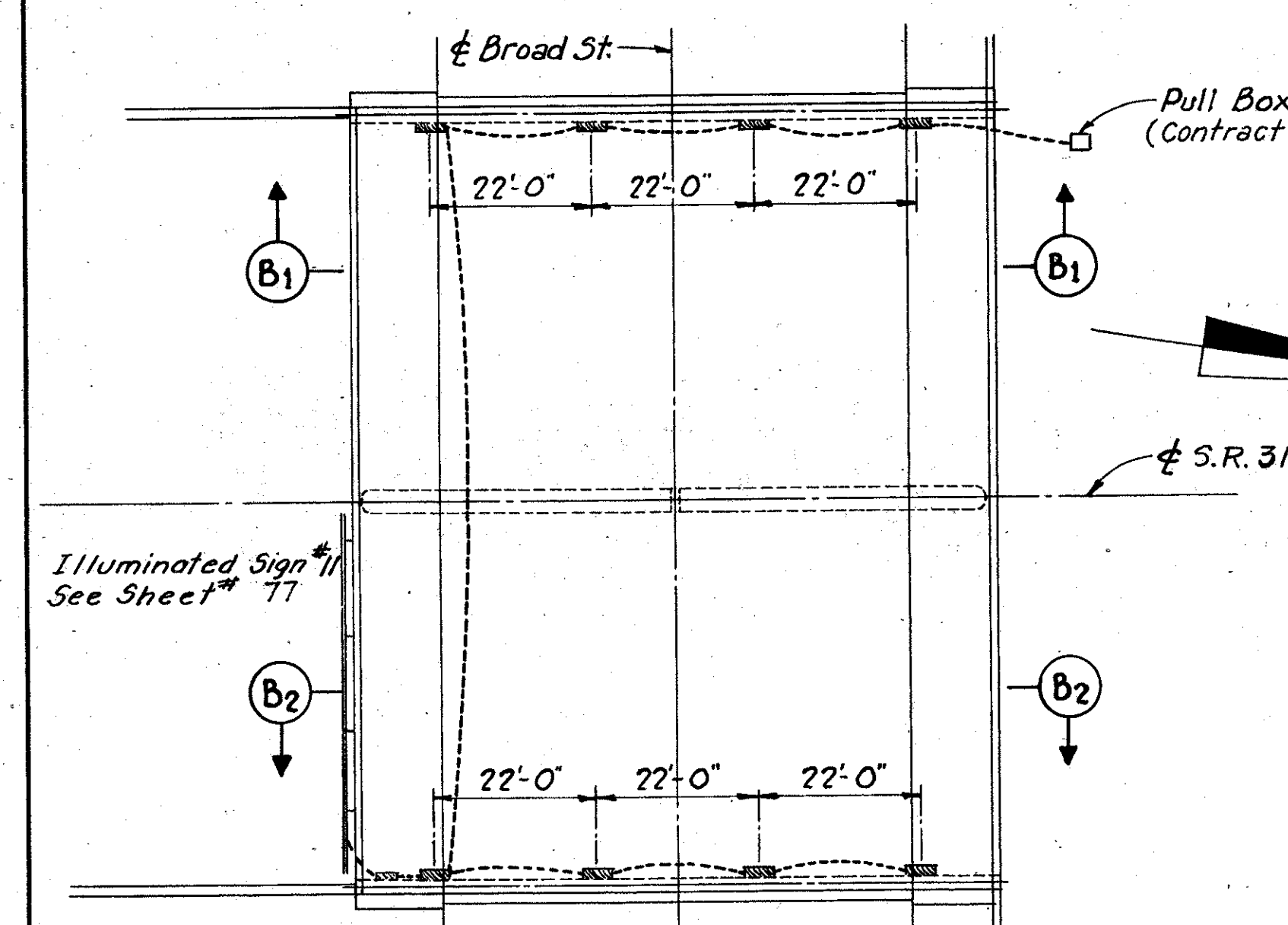
**FRANKLIN COUNTY
FRA-315 0.48N**



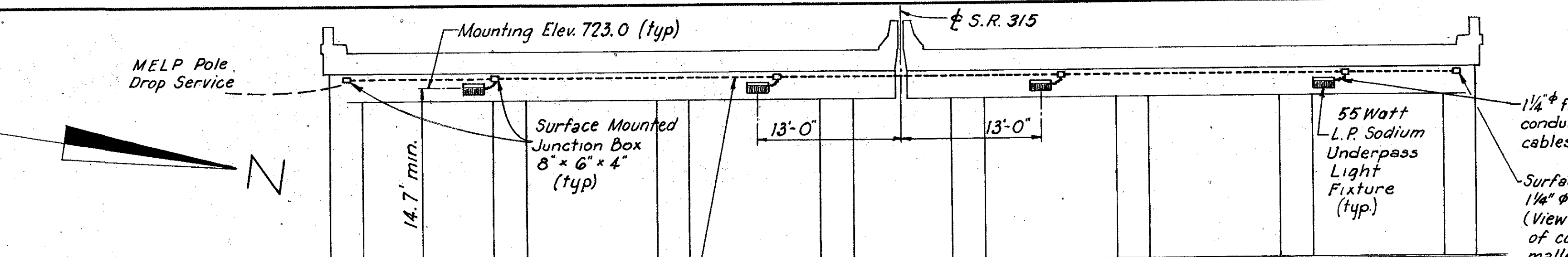
RICH STREET FRA-315-0049



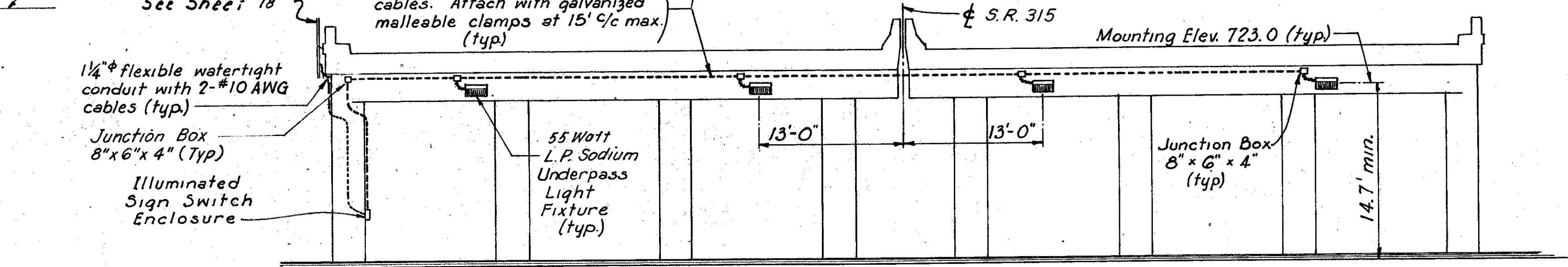
TOWN STREET FRA-315-0067



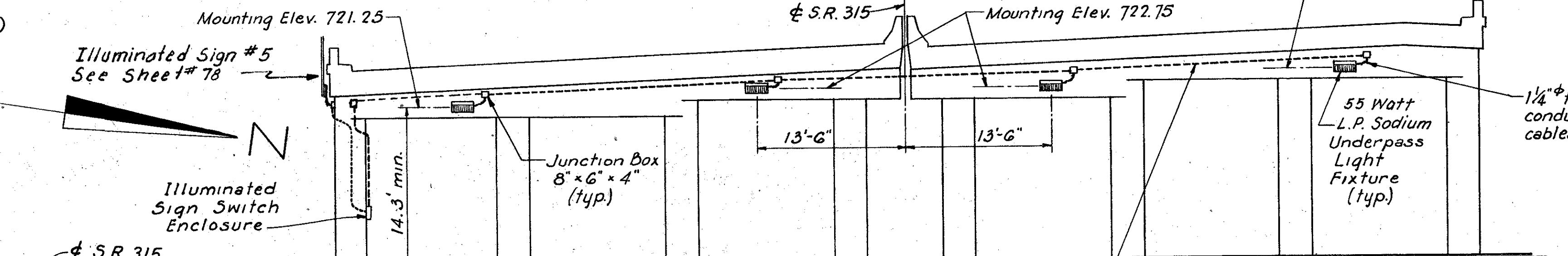
BROAD STREET FRA-40-1158



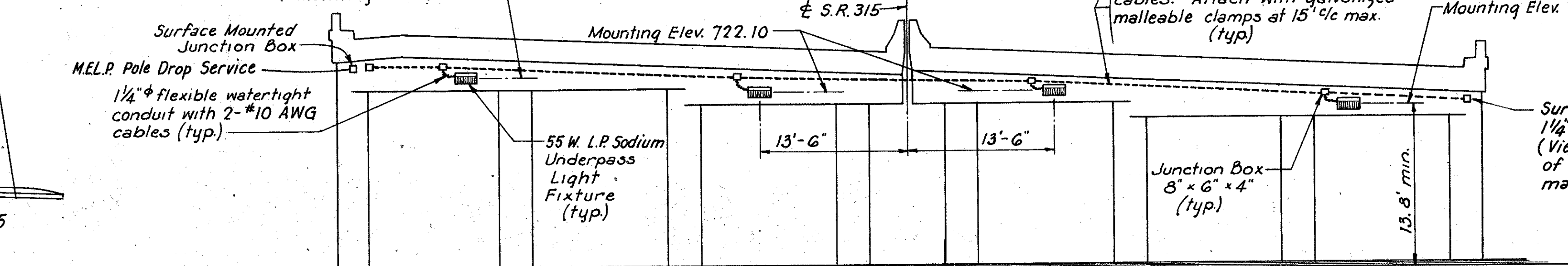
VIEW R1-R1



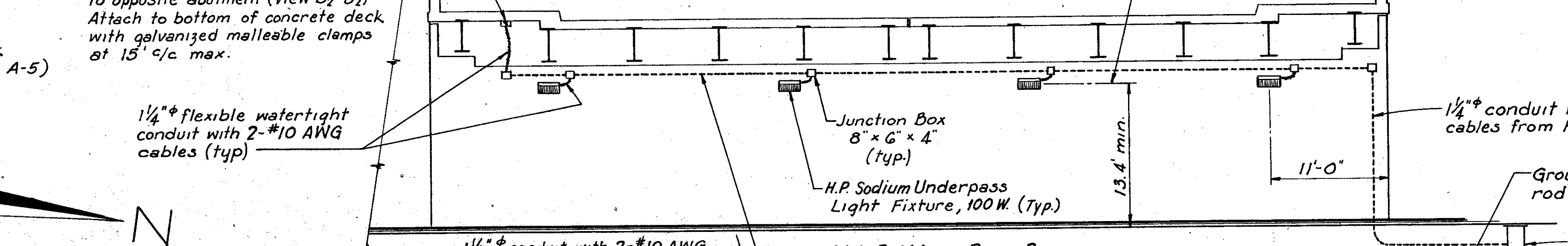
VIEW R2-R2



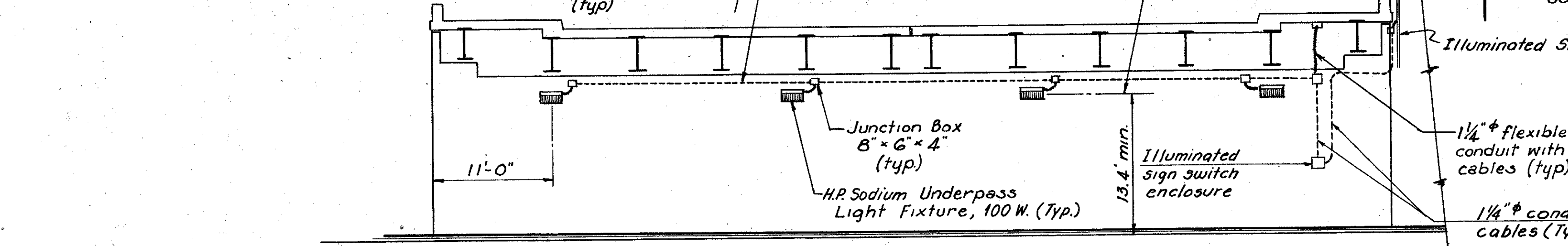
VIEW T1-T1



VIEW T2-T2



VIEW B1-B1



VIEW B2-B2

NOTES

Junction Boxes - All junction boxes shall be as per Item 713.10. Payment shall be included in the unit price bid Lump Sum for Item 625 - Service to Underpass Lighting as per plan.

Conduit - All conduit shall be Type III as per Item 713.04.

Illuminated Sign - For details of illuminated signs see Sheets 77 & 78.

Underpass Lighting - Item 625 includes the installation of all electrical equipment on the bridges from the existing MELP poles (Sullivan, Rich and Town Streets) or from the adjacent Roadway Pullbox (Broad Street). The existing underpass luminaires, conduits, cables and attachments at Rich, Sullivan & Town Streets shall be removed by the Contractor and shall become his property. The cost of removal is included in the unit price bid Lump Sum for Item 625 - Service to Underpass Lighting as per plan.

STILSON & ASSOCIATES,
CONSULTING ENGINEERS
CLEVELAND, OHIO COLUMBUS, OHIO WHEELING, W. VA.

**UNDERPASS LIGHTING
- SCHEMATIC -**

FRANKLIN COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
#1	#1		VB			

TRAFFIC CONTROL GENERAL SUMMARY

 CALC. BY _____
 DATE _____
 CHKD. BY _____
 DATE _____

FRANKLIN COUNTY
FRA-315-0.48

 OHIO
 FHWA REGION 5

 68
 163

SHEET NUMBERS

SHEET NUMBERS										"F" PARTICIPATION			ITEM	ITEM EXT.	TOTALS	UNIT	DESCRIPTION	SHT. No.					
										69	70												
														22	620	10300	22	EACH	DELINEATOR, TYPE C, POST MOUNTED				
														4	620	11000	4	EACH	DELINEATOR, TYPE C, BRACKET MOUNTED				
														5	620	15300	5	EACH	DELINEATOR, TYPE D, POST MOUNTED				
														162	621	00100	162	EACH	RAISED PAVEMENT MARKER				
														11	625	32000	11	EACH	GROUND ROD				
														28	626	00100	28	EACH	BARRIER REFLECTOR, TYPE A				
														69	626	00200	69	EACH	BARRIER REFLECTOR, TYPE B				
														45	630	03100	45	LIN FT	GROUND MOUNTED SUPPORT, NO. 3 POST				
														245	630	04100	245	LIN FT	GROUND MOUNTED SUPPORT, NO. 4 POST				
														99	630	06400	99	LIN FT	GROUND MOUNTED SUPPORT, S4 X 7.7 BEAM				
														5	630	09000	5	EACH	BREAKAWAY BEAM CONNECTION				
														1	630	31100	1	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-9.10, DESIGN 1, 7' ARM				
														3	630	31200	3	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-9.10, DESIGN 2, 9' ARM				
														2	630	31200	2	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-9.10, DESIGN 2, 11' ARM				
														1	630	36000	1	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-7.65, DESIGN 6, 60' SPAN				
														1	630	47000	1	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-7.65, DESIGN 8, 74' SPAN				
														4	630	77000	4	EACH	OVERPASS STRUCTURE MOUNTED SIGN SUPPORT, TYPE TC-18.24				
														2	630	79500	2	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED				
														178	630	80102	178	SQ FT	SIGN, FLAT SHEET, TYPE G				
														1970	630	80204	1970	SQ FT	SIGN, EXTRUSHEET, TYPE G				
																	5	630	85000	5	EACH	REMOVAL OF GROUND MOUNTED SIGNS AND STORAGE	
														5	630	87400	5	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL				
														2	630	89800	2	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-9.10				
														1	630	89802	1	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-7.65				
														1	630	89806	1	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-18.24				
														3	631	70100	3	EACH	BALLAST WIRING ENCLOSURE, TYPE "B"				
														3	631	71000	3	EACH	BALLAST WIRING ENCLOSURE MOUNTING BRACKET				
														11	631	84000	11	EACH	SIGN SERVICE				
														12	631	84300	12	EACH	SIGN WIRED				
														4	631	84400	4	EACH	SIGN WIRED, OVERPASS STRUCTURE MOUNTED				
														11	631	85100	11	EACH	DISCONNECT SWITCH WITH ENCLOSURE, TYPE X				
														3	631	85500	3	EACH	SWITCH ENCLOSURE MOUNTING BRACKET ASSEMBLY				
														2	631	87100	2	EACH	BALLAST, TYPE CMRI-100-480, REMOTE				
														6	631	87102	6	EACH	BALLAST, TYPE CMRI-100-480, INTEGRAL				
														2	631	87200	2	EACH	BALLAST, TYPE CMRI-175-480, REMOTE				
														6	631	87202	6	EACH	BALLAST, TYPE CMRI-175-480, INTEGRAL				
														2	631	87300	2	EACH	BALLAST, TYPE CMRI-250-480, REMOTE				
														6	631	87302	6	EACH	BALLAST, TYPE CMRI-250-480, INTEGRAL				
														8	631	89100	8	EACH	MERCURY VAPOR LUMINAIRE, TYPE TC-31.21 WITH 100 WATT LAMP				
														8	631	89200	8	EACH	MERCURY VAPOR LUMINAIRE, TYPE TC-31.21 WITH 175 WATT LAMP				
														8	631	89300	8	EACH	MERCURY VAPOR LUMINAIRE, TYPE TC-31.21 WITH 250 WATT LAMP				
																	2.36	644	00100	2.36	MILE	EDGE LINE	
														1.48	644	00200	1.48	MILE	LANE LINE				
														2888	644	00400	2888	LIN FT	CHANNELIZING LINE				
																	75	644	00500	75	LIN FT	STOP LINE	
														302	644	00600	302	LIN FT	CROSSWALK LINES				
														428	644	00700	428	LIN FT	TRANSVERSE LINE				
														8	644	01300	8	EACH	LANE ARROW				
														3	644	01400	3	EACH	WORD ON PAVEMENT, 72"				

(16-24-1) - CONSULT HIGHWAY DEPARTMENT - DEPT. OF HIGHWAYS - BUREAU OF ROAD CONSTRUCTION - BUREAU OF ROAD CONSTRUCTION

TRAFFIC CONTROL NOTES

625 POWER SUPPLY FOR SIGN LIGHTING

ELECTRIC POWER SHALL BE OBTAINED FROM THE CITY OF COLUMBUS, DIVISION OF ELECTRICITY AT THE LOCATION INDICATED ON THE PLANS. POWER SUPPLIED SHALL BE 480 VOLTS.

858 ENCLOSURE PADLOCKS

DISCONNECT SWITCH ENCLOSURES FURNISHED IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 858.08 SHALL INCLUDE A PADLOCK EQUAL TO MASTER NO. 4BKA OR WILSON BOHANNON 660, WITH LOCK BODY OF BRONZE OR BRASS, AND KEYING IN ACCORDANCE WITH THE FOREGOING SPECIFICATION.

620 DELINEATORS, BY TYPE, FLEXIBLE POST MOUNTED, AS PER PLAN

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING DELINEATORS AS SPECIFIED. THE REFLECTORS SHALL BE EITHER TYPE C OR D AND SHALL BE APPROXIMATELY 3" BY 6" WITH A MINIMUM AREA OF 18 SQUARE INCHES. THE REFLECTOR SHALL BE REFLECTIVE SHEETING BONDED DIRECTLY TO THE DELINEATOR POST (NOT SCREWED OR BOLTED).

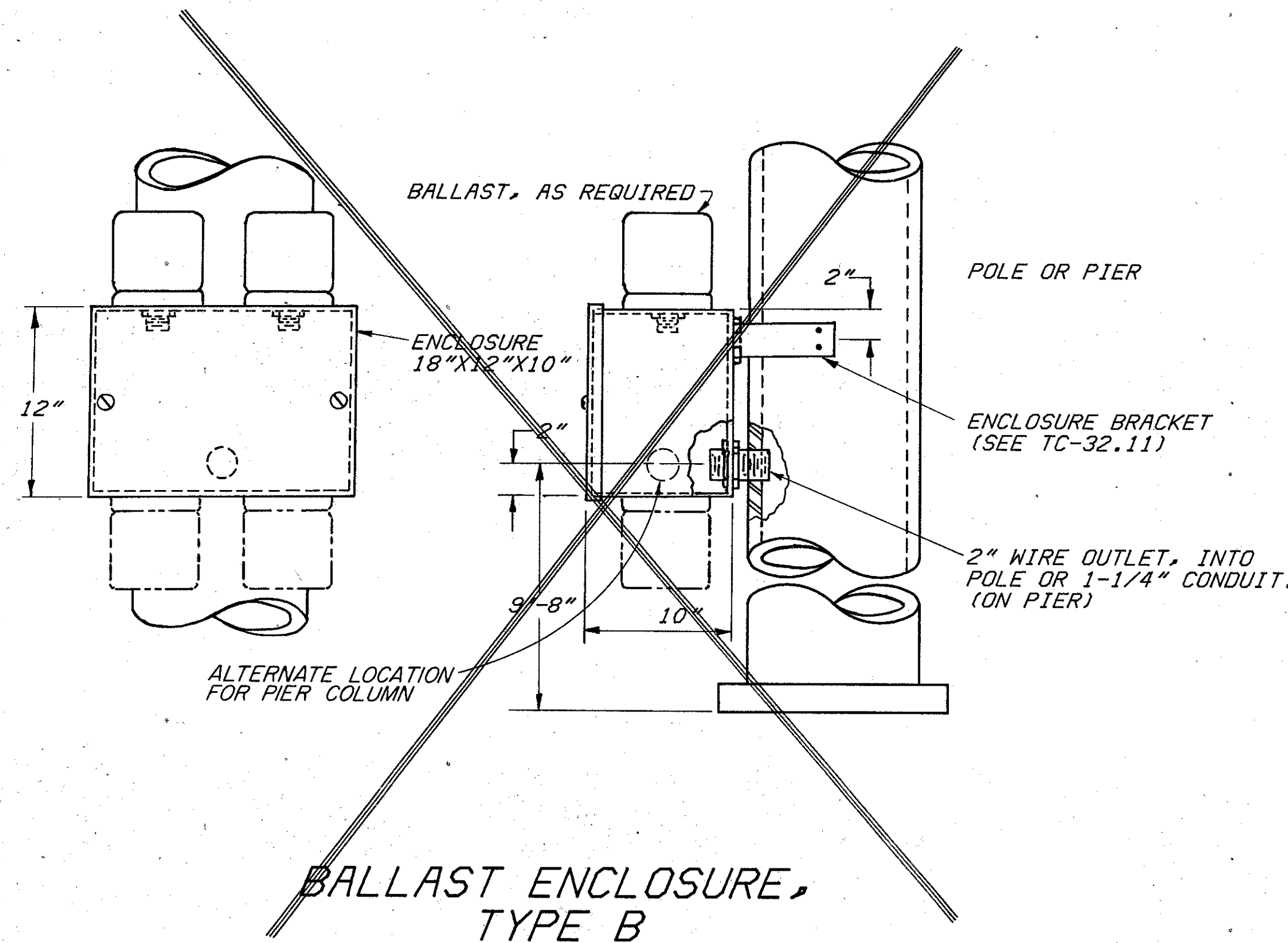
THE FLEXIBLE POSTS SHALL BE WHITE NON-METALLIC, ULTRAVIOLET RESISTANT, AND DESIGNED TO WITHSTAND REPEATED AUTOMOBILE IMPACTS AT 55 MPH AND RETURN TO A VERTICAL POSITION WITH LITTLE OR NO DAMAGE TO THE VEHICLE. THE POSTS SHALL BE CAPABLE OF BEING HAND DRIVEN. WHERE ADVERSE SOIL CONDITIONS CAUSE THE DELINEATOR POST TO EXCEED 1/4" PER FOOT OUT OF PLUMB IN ANY DIRECTION, THE CONTRACTOR MAY DRIVE A PILOT SHAFT BEFORE DRIVING THE POST.

FLEXIBLE DELINEATOR POSTS SHALL BE ONE OF THE FOLLOWING DESIGNS OR APPROVED EQUAL:

- DESIGN 1. FLEXIBLE POST SHALL BE MANUFACTURED FROM LEXAN WITH A 24" LENGTH OF NO. 1 STEEL DRIVE POST BOLTED TO THE BOTTOM OF THE FLEXIBLE PORTION. THE TOTAL LENGTH OF THE COMPOSITE POST SHALL BE 78". THE WIDTH OF THE POST SHALL BE 3.25".
- DESIGN 2. FLEXIBLE POST SHALL BE MANUFACTURED FROM FIBERGLASS REINFORCED PLASTIC WITH A T-CROSS-SECTION. THE POST SHALL BE 72" LONG AND 3.60" WIDE.
- DESIGN 3. FLEXIBLE POST SHALL BE MANUFACTURED FROM FIBERGLASS REINFORCED PLASTIC WITH A CURVED CROSS-SECTION. THE POST SHALL BE 72" LONG AND 3.60" WIDE.
- DESIGN 4. FLEXIBLE POST SHALL BE MANUFACTURED FROM FIBERGLASS REINFORCED PLASTIC WITH A CURVED CROSS-SECTION. THE POST SHALL BE 72" LONG AND 3.25" IN WIDTH. THESE POSTS MAY BE INSTALLED BY THE CONTRACTOR IN LIEU OF DESIGNS 1, 2 OR 3 WHEN DELINEATORS WOULD BE PLACED BEHIND GUARDRAIL. THESE POSTS SHALL BE INSTALLED ON THE FRONT OF THE WOODEN GUARDRAIL BLOCKOUTS FACING APPROACHING TRAFFIC BY INSTALLING EITHER TWO 5/16" DIAMETER BY 1-1/2" LONG, ZINC COATED LAG SCREWS WITH ZINC COATED 5/16" FLAT WASHERS OR TWO 5/16" DIAMETER BY 1-1/2" LONG, ZINC COATED INDENTED HEX WASHERHEAD LAG SCREWS.

PAYMENT WILL BE AT THE CONTRACT UNIT PRICE FOR EACH DELINEATOR WHICH SHALL INCLUDE FURNISHING AND INSTALLING THE POST AND ALL NECESSARY HARDWARE, LABOR AND EQUIPMENT.

620 EACH DELINEATORS, TYPE , FLEXIBLE POST MOUNTED, AS PER PLAN



~~631 MERCURY VAPOR LUMINAIRE, TYPE TC-31.21, WITH VAP. WATT LAMP, AS PER PLAN~~
MERCURY VAPOR LUMINAIRES FOR SIGNS ON THIS PROJECT SHALL BE ERECTED ON TOP MOUNTED FIXTURES AS SHOWN ON THIS SHEET.

630 REMOVAL OF GROUND MOUNTED SIGN AND STORAGE
SIGNS INDICATED FOR REMOVAL SHALL BE STORED ON THE PROJECT FOR PICKUP BY THE CITY OF COLUMBUS, DIVISION OF TRAFFIC ENGINEERING.

TRAFFIC CONTROL STANDARD CONSTRUCTION DRAWINGS

TC-7.65	3-01-79	TC-22.20	9-01-92	TC-51.12	1-03-94
TC-9.10	4-24-80	TC-31.21	9-01-92	TC-51.11	9-30-94
TC-18.24	4-25-79	TC-32.10	9-01-92	TC-52.10	4-03-79
TC-21.10	9-01-92	TC-32.11	9-01-92	TC-52.20	4-03-79
TC-21.20	9-01-92	TC-41.10	8-29-84	TC-61.10	4-05-82
TC-21.40	9-01-92	TC-41.20	6-21-94	TC-65.10	7-07-95
TC-22.10	9-01-92	TC-41.40	6-18-79	TC-65.11	7-07-95
		TC-42.10	8-19-77	TC-65.12	7-07-95
		TC-42.20	3-26-79		
				TC-71.10	9-10-91
				TC-72.20	2-26-82

REFERENCES TO SUPPLEMENTAL SPECIFICATIONS 857, 858, 859, 957, 958, 959 AND 861/961 ON THE TRAFFIC CONTROL STANDARD CONSTRUCTION DRAWINGS IN THESE PLANS SHALL BE CONSIDERED TO READ AS RESPECTIVE REFERENCES TO ITEMS 630, 631, 632, 633, 730, 731, 732 AND 733.

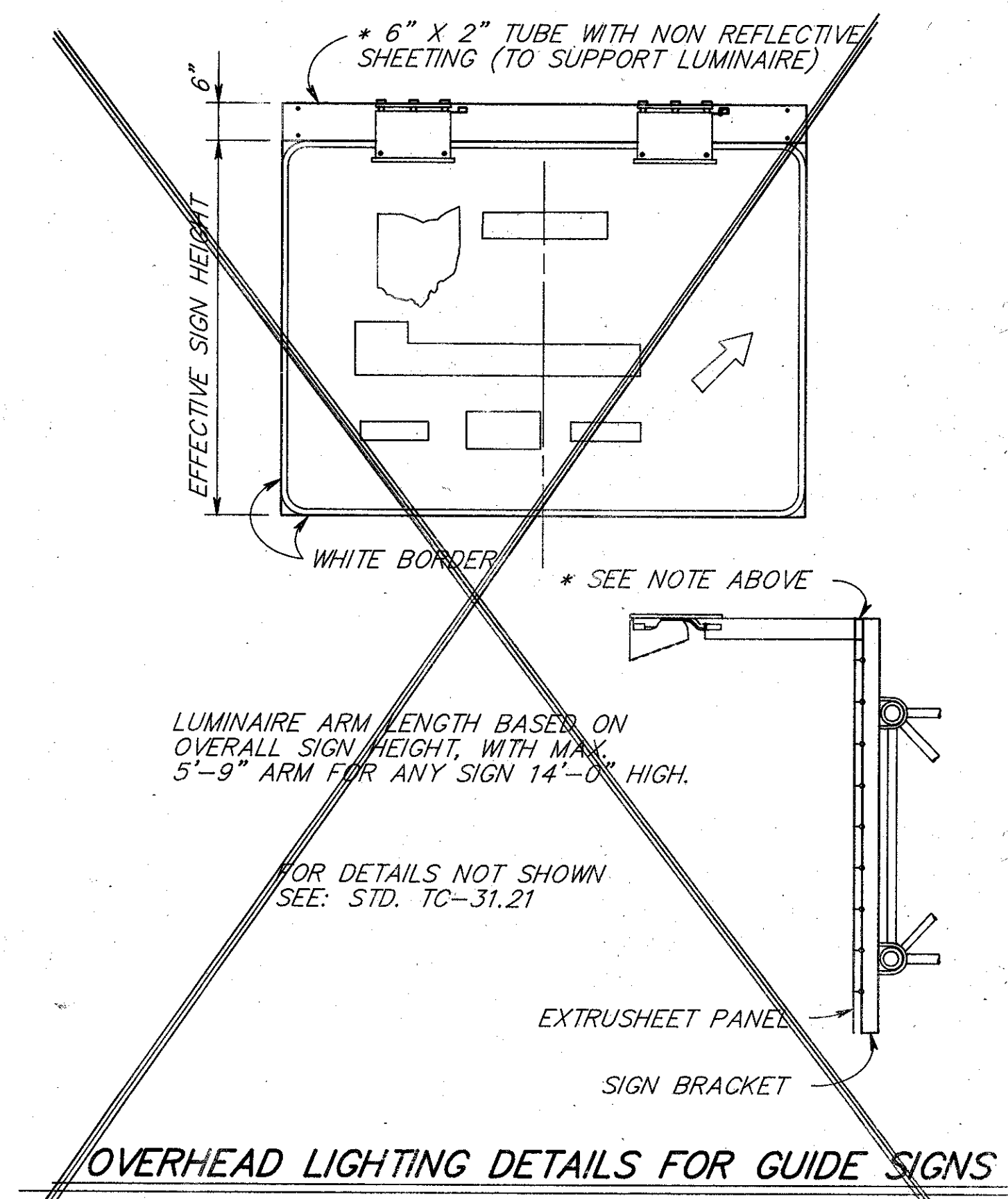
PRE-MARKING INSPECTION

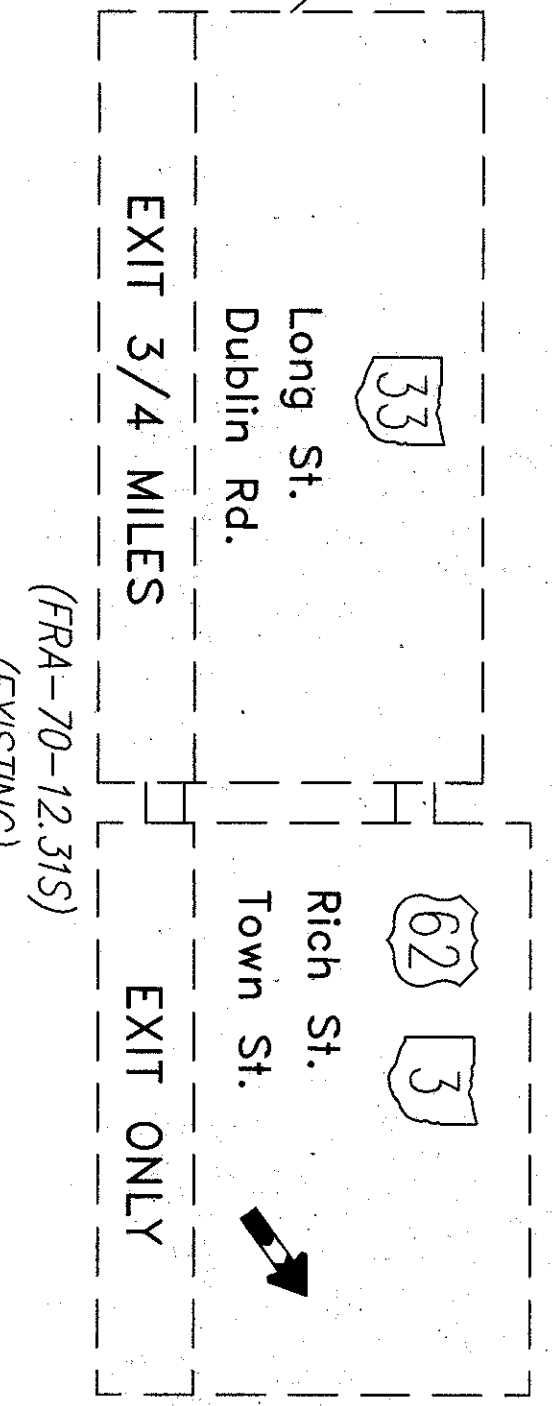
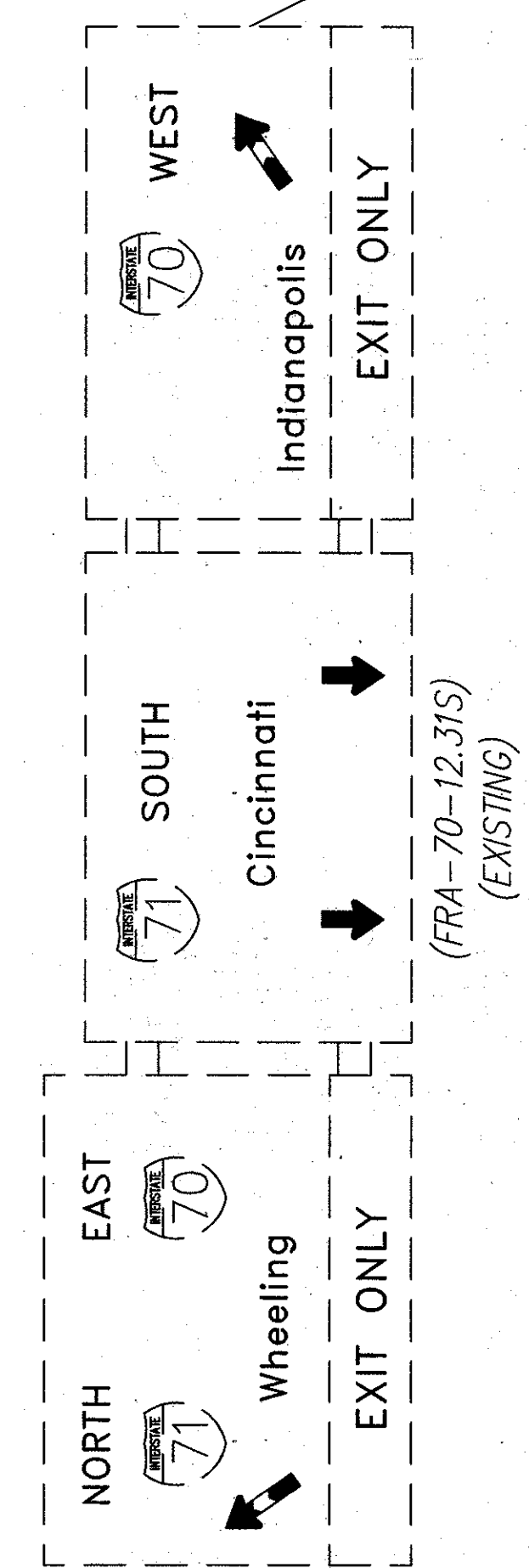
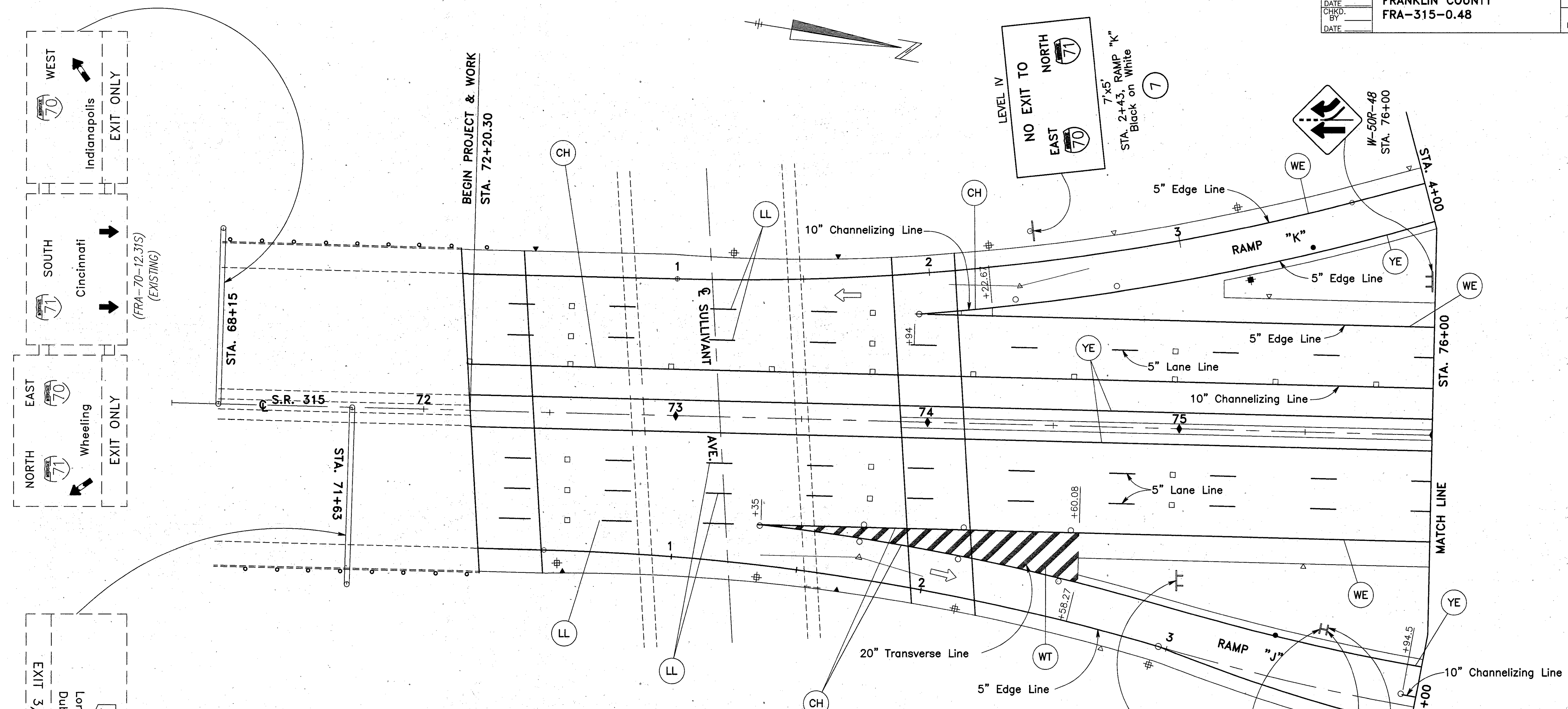
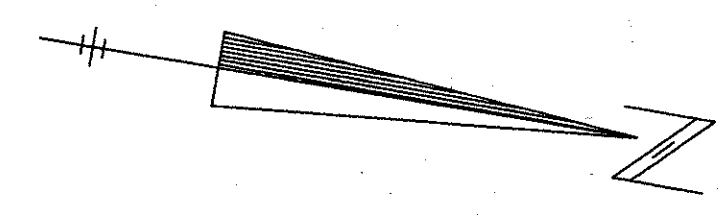
THE CONTRACTOR SHALL NOTIFY THE CITY OF COLUMBUS, DIVISION OF TRAFFIC ENGINEERING, AT LEAST TWO (2) WORKING DAYS PRIOR TO THE PLACEMENT OF THE PRE-MARKING FOR PERMANENT PAVEMENT MARKING SO THAT A REPRESENTATIVE OF THE DIVISION CAN BE PRESENT TO INSPECT THE WORK AND INSURE ACCURACY (PHONE # 614-222-7790).

644.01 - PAVEMENT MARKING MODIFICATIONS

IN ADDITION TO 641.08 GENERAL SPECIFICATIONS, THE FOLLOWING LINE WIDTH MODIFICATIONS SHALL APPLY AS PER TABLE SHOWN:

ITEM	DESCRIPTION	O.D.O.T. WIDTH	COLUMBUS WIDTH	REMARKS
641.08	EDGE LINES	4"	5"	
641.08	LANE LINES	4"	5"	
641.08	CENTER LINES	4"	5"	
641.08	CHANNELIZING LINES	8"	10"	
641.08	STOP LINES	24"	20"	
641.08	CROSSWALK LINES	12"	10"	
641.08	TRANSVERSE LINES	24"	20"	

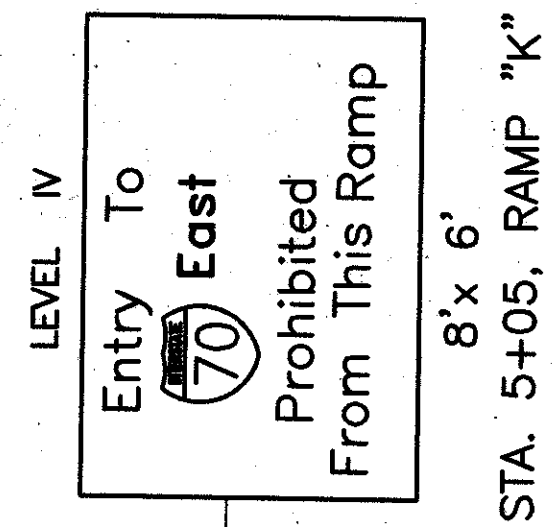
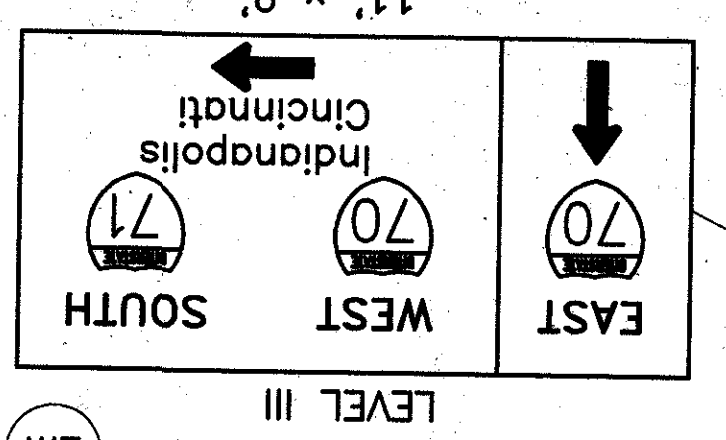
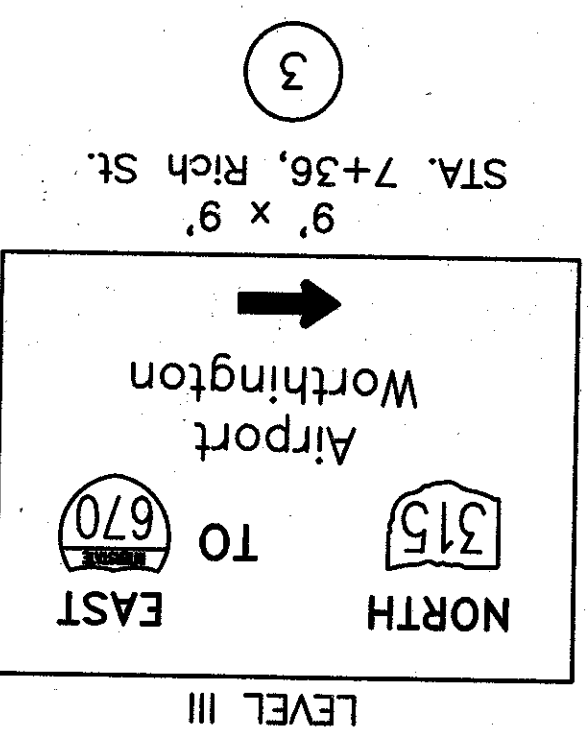
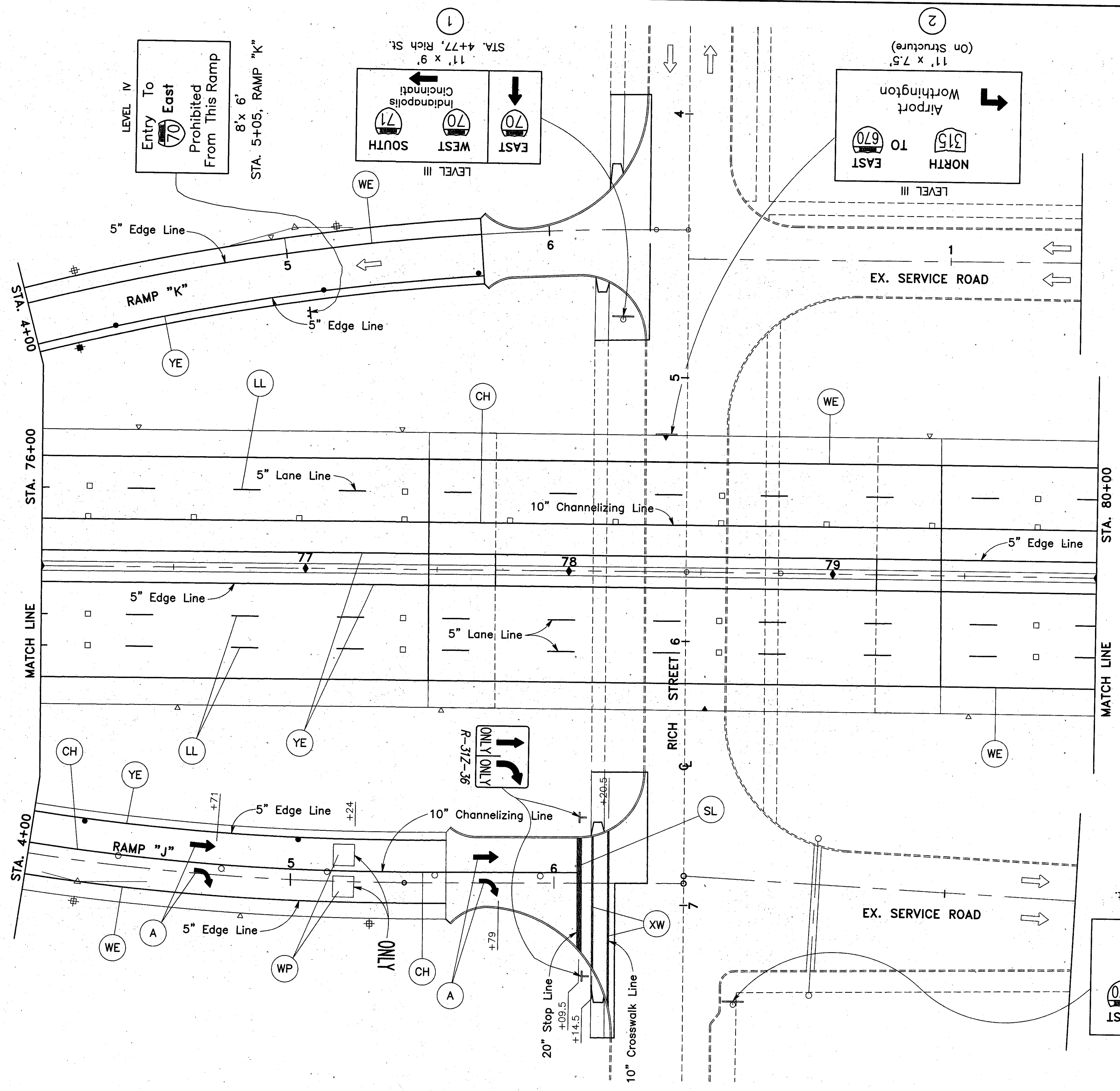
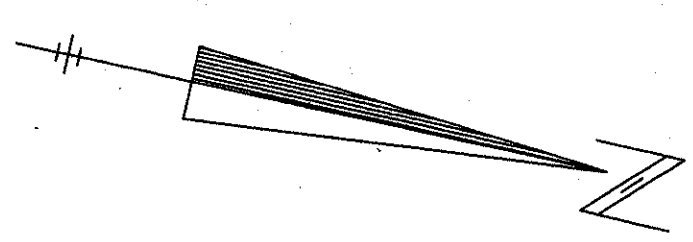




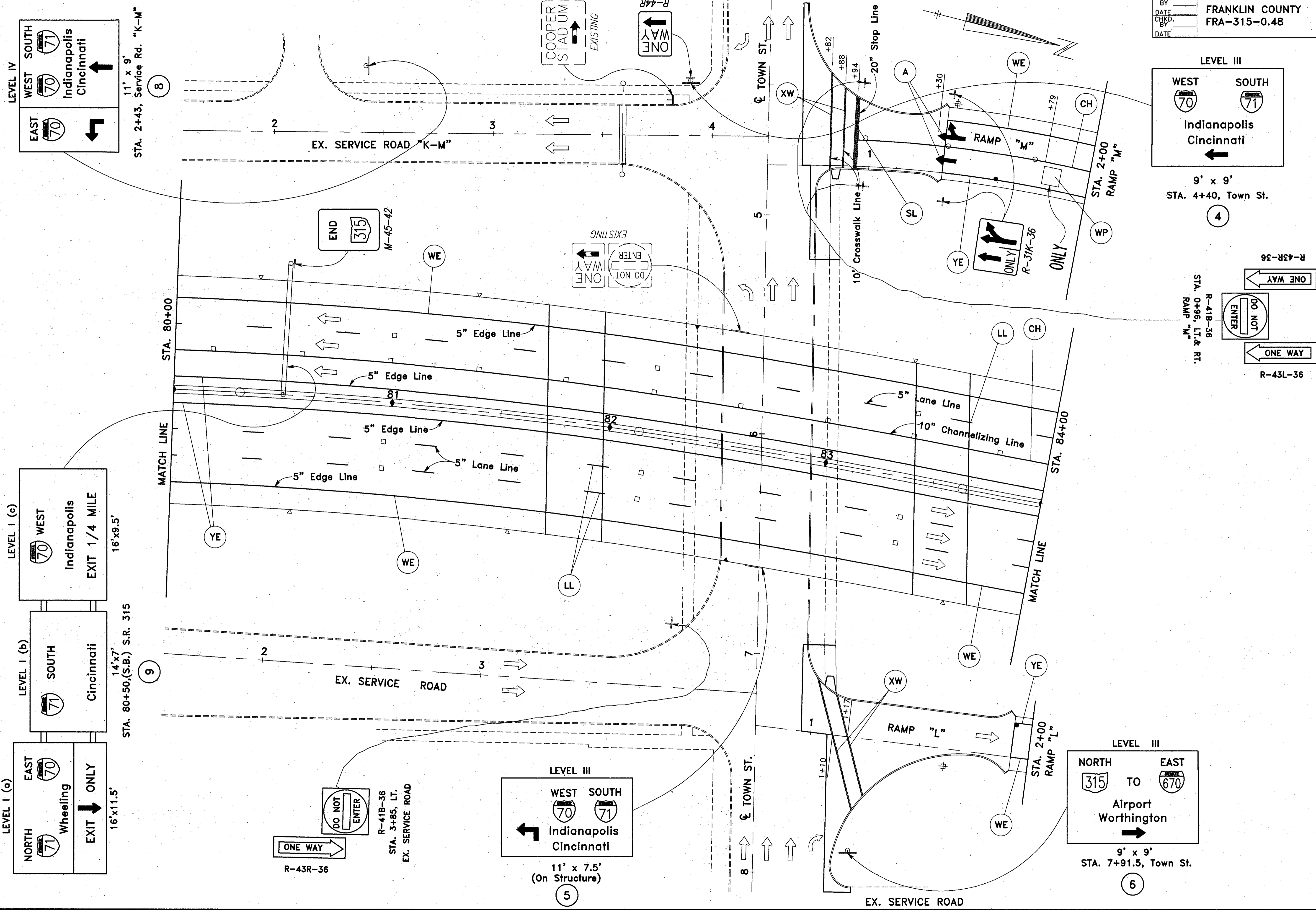
LEGEND

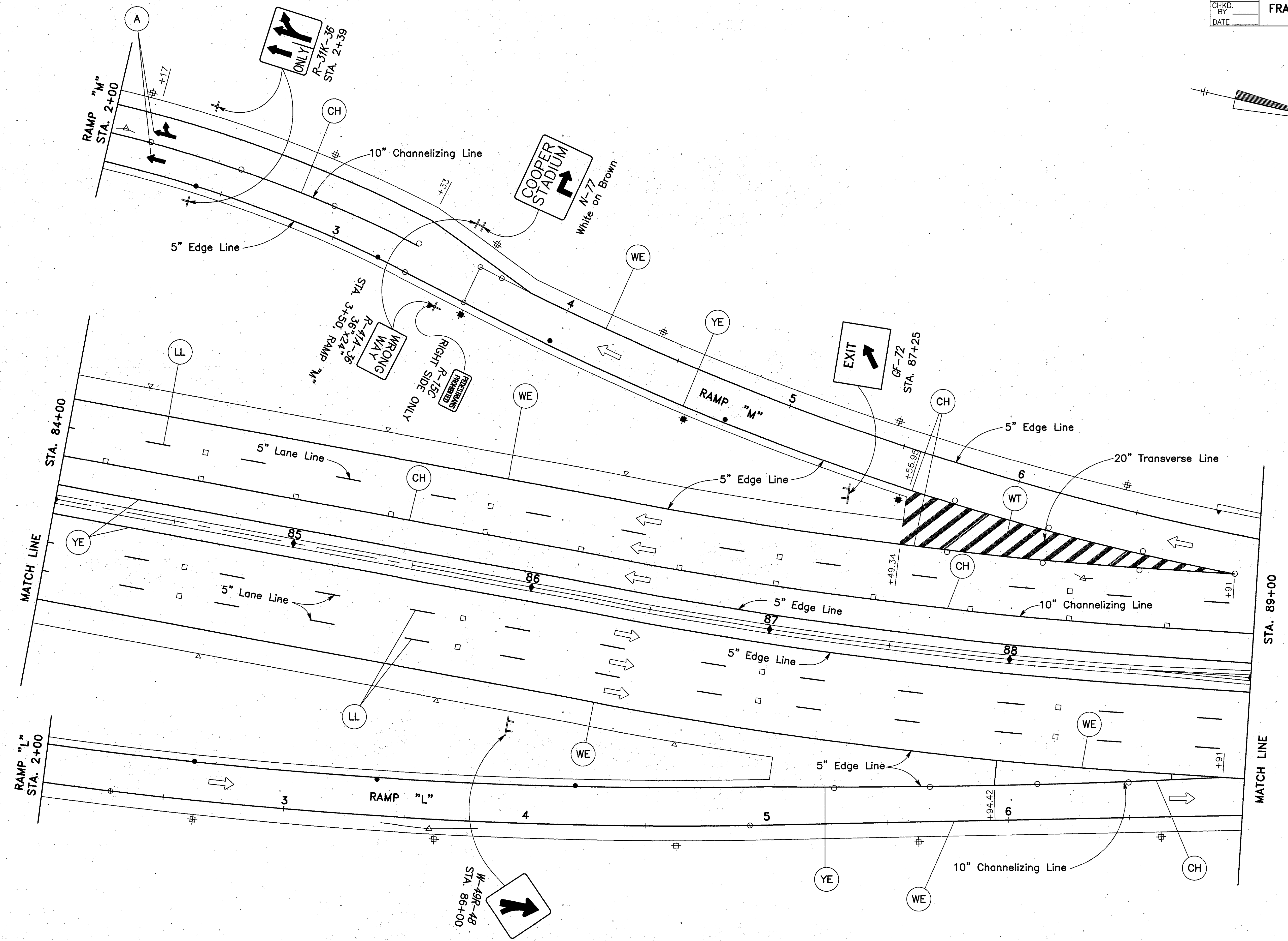
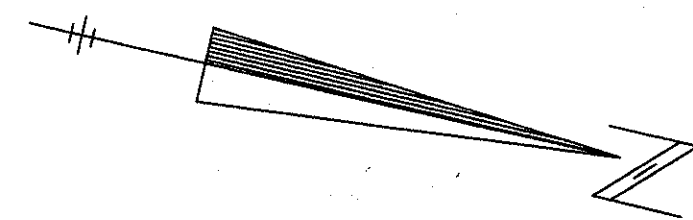
- | | |
|-----------------------------------|--|
| (LL) Lane Line, 5" Dashed White | # Type "C" Delineators, Colorless |
| (WE) Edge Line, 5" White | # Type "D" Delineators, Yellow |
| (WT) Transverse Line, 20" White | □ 1-Way Raised Pavement Marker, White |
| (YE) Edge Line, 5" Yellow | ○ 2-Way Raised Pavement Marker, White/Red |
| (DLS) Double Line, 5" Solid White | ● 2-Way Raised Pavement Marker, Yellow/Red |
| (SL) Stop Line, 20" White | △ Barrier Reflectors, Type A |
| (XW) Crosswalk Line, 10" White | ▲ Barrier Reflectors, Type B |
| (A) Lane Arrow, White | |
| (WP) Word on Pavement, 72" White | |
| (CH) Channelizing Line, 10" White | |

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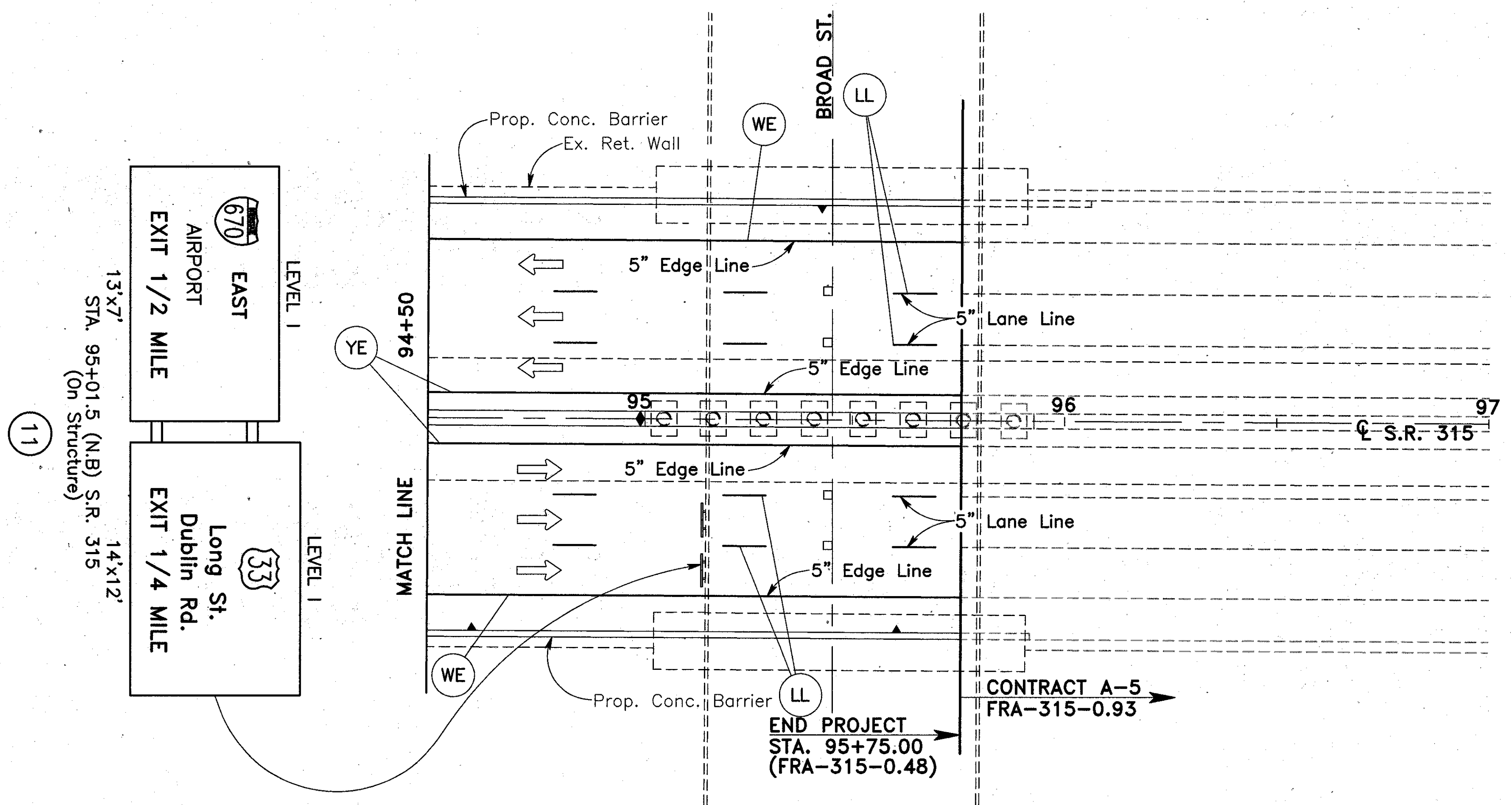
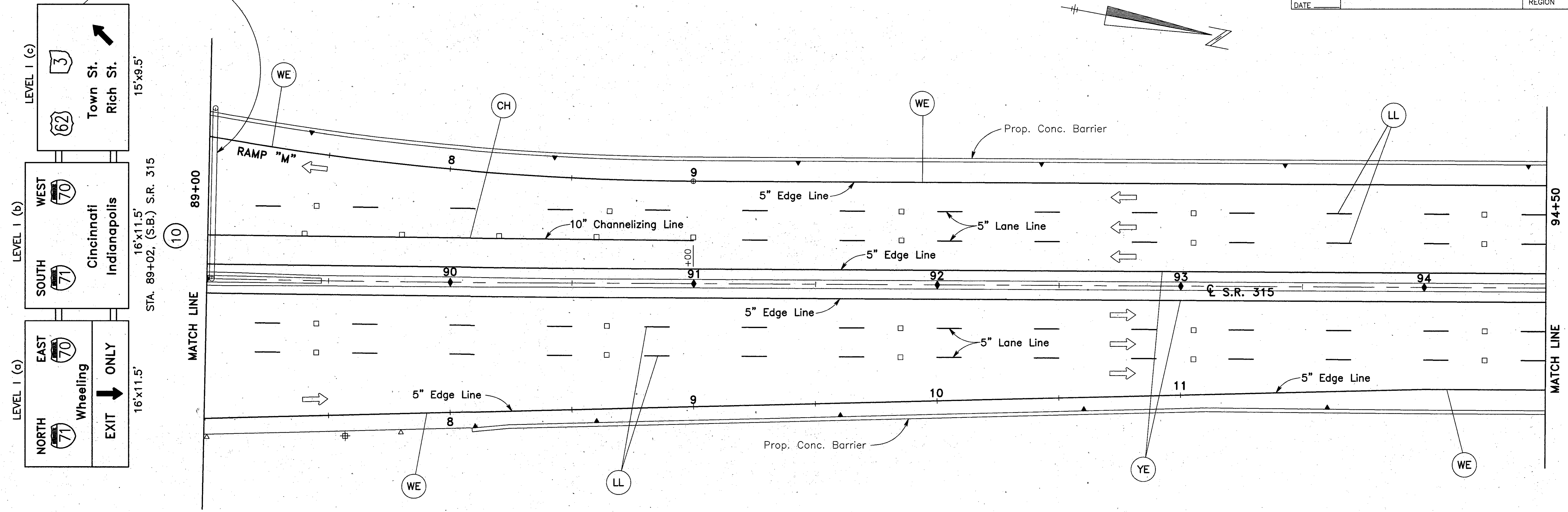
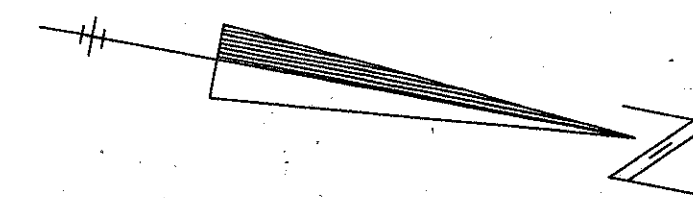


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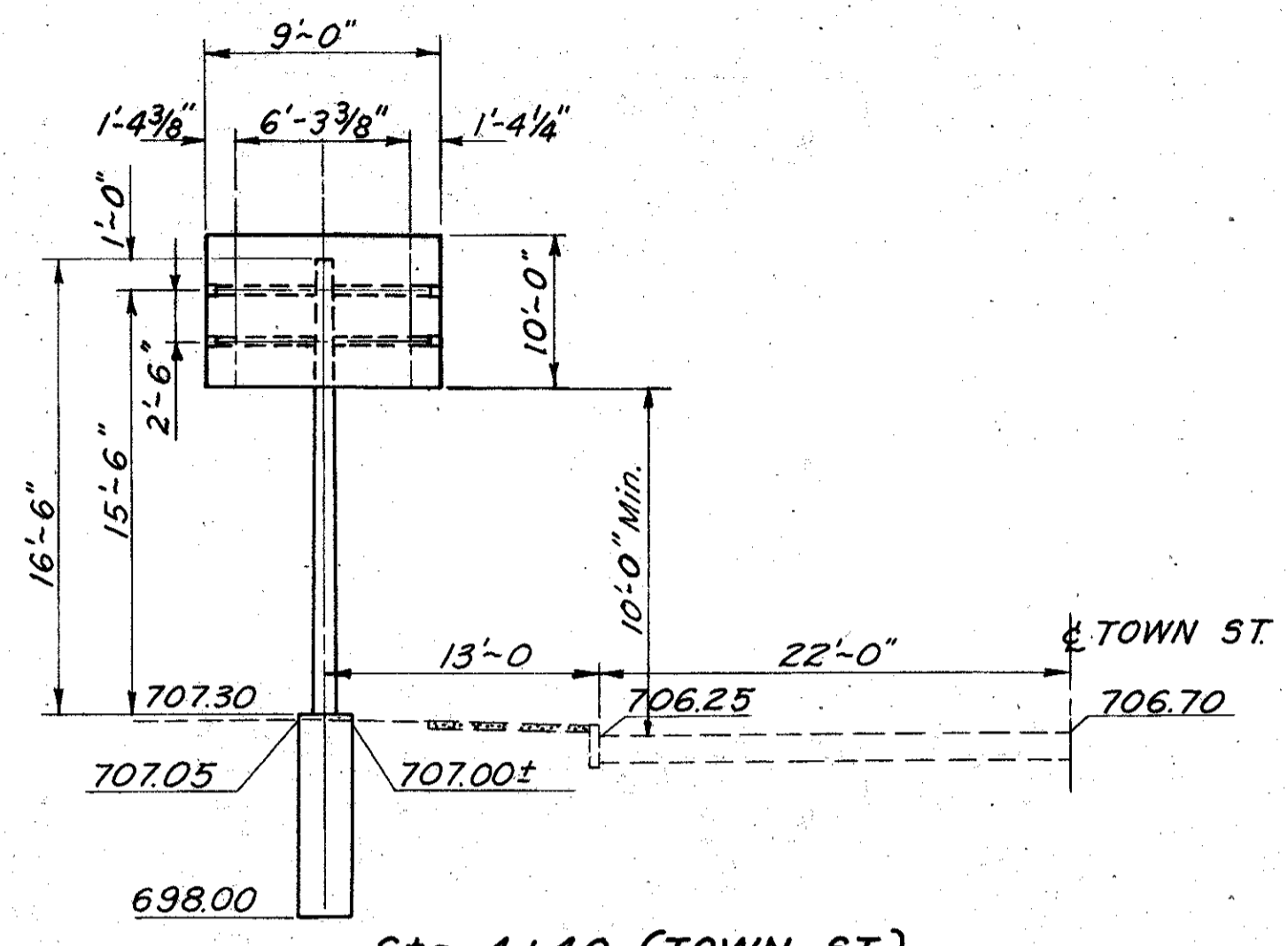




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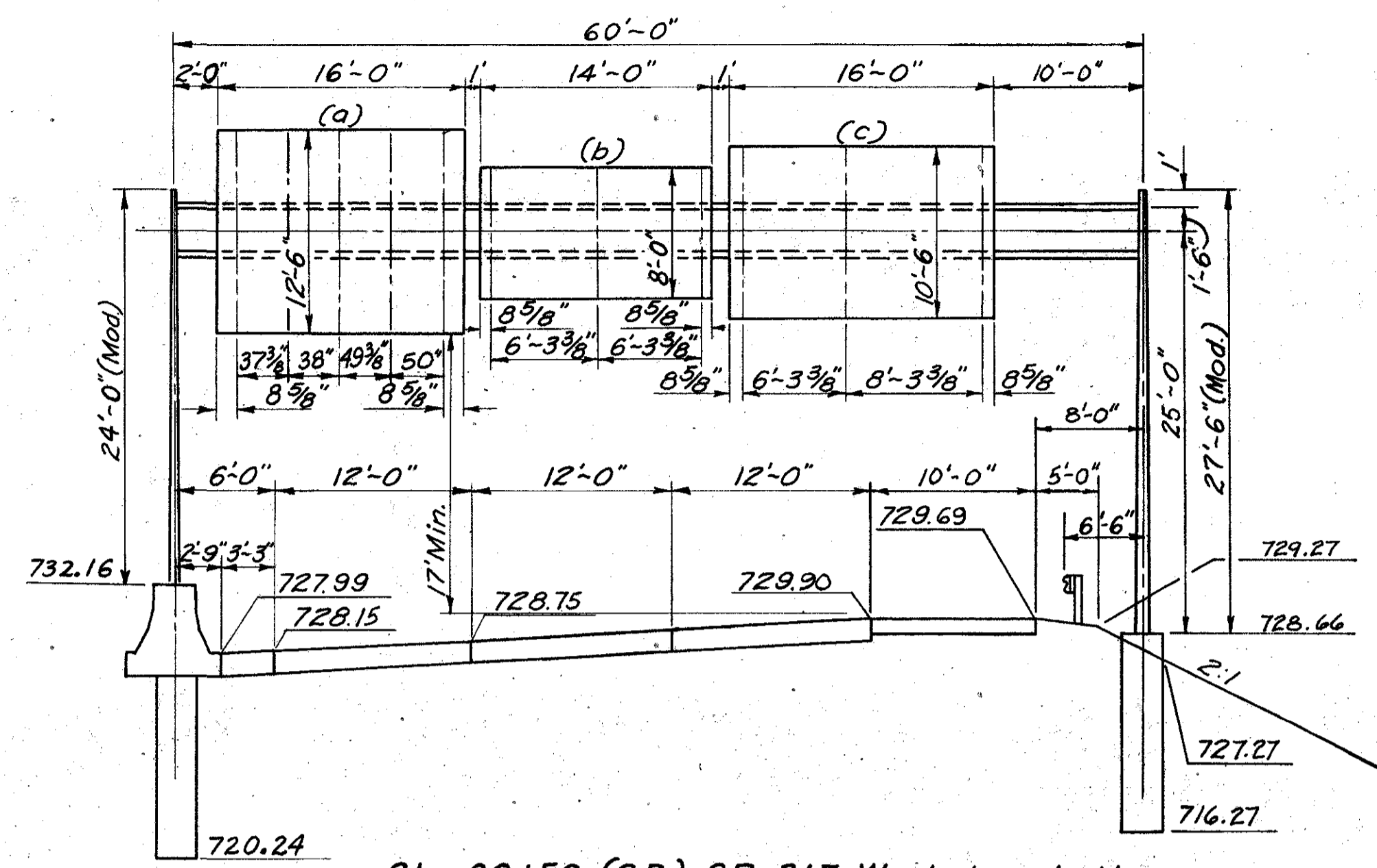


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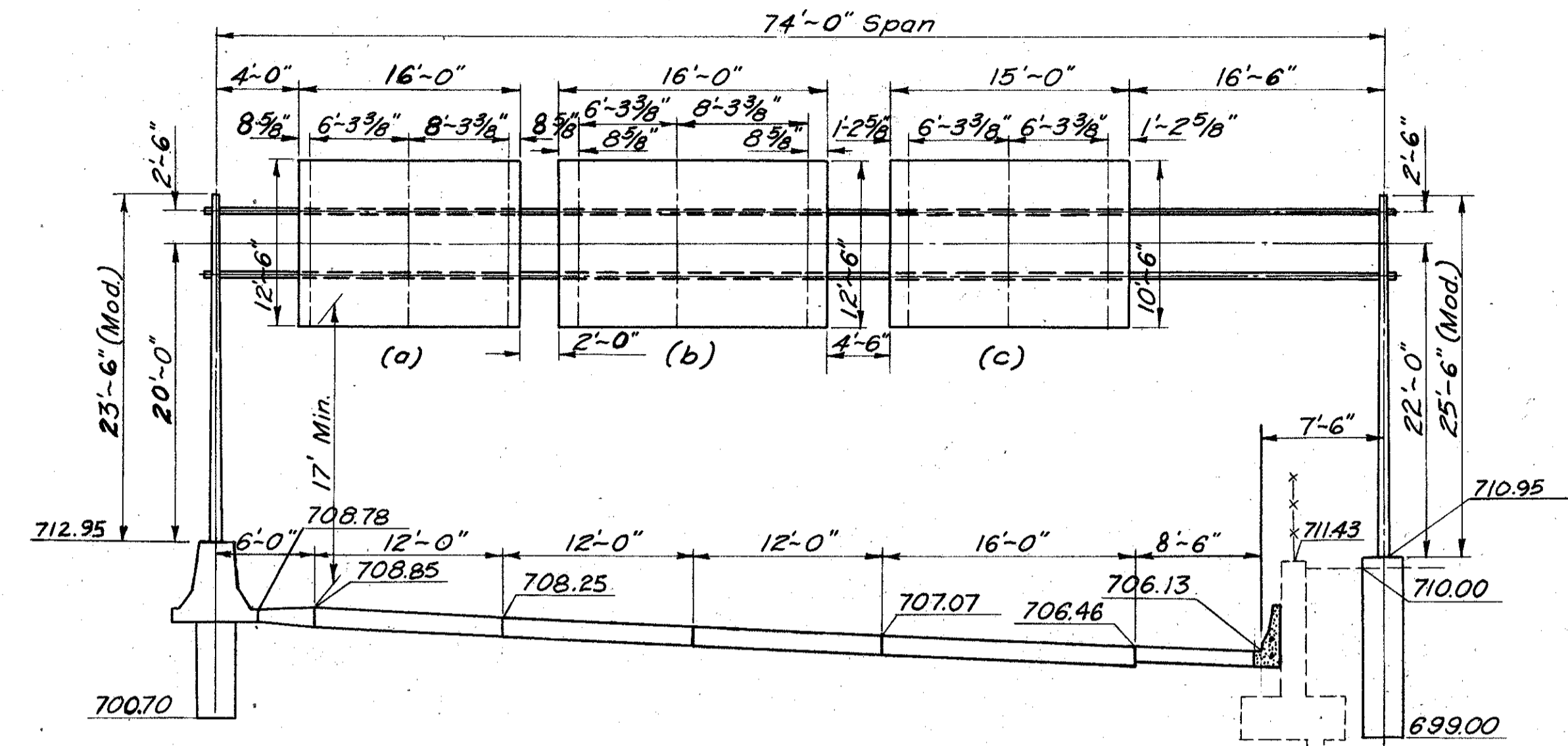
Sta. 4+40 (TOWN ST.)
④

- T.C. - 9.10, Design N#2,
(2) 10'-0" Z BRACKETS
(1) M.V. LUMINAIRE w/100 W/LAMP
(1) BALLAST CMRI-100-480 V.



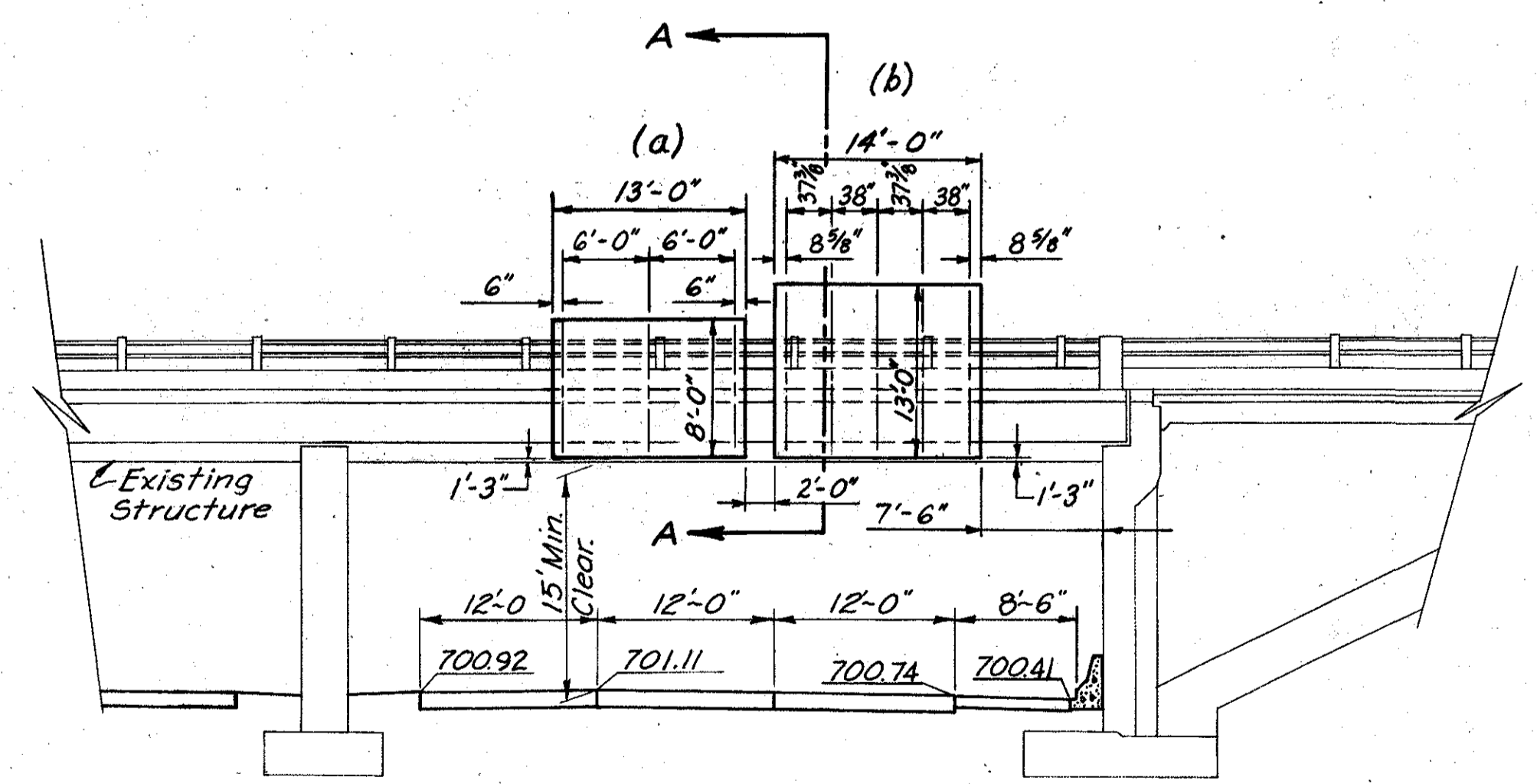
Sta. 80+50 (S.B.) S.R. 315 West Innerbelt
⑨

- T.C. - 7.65 Design N#6, 60'-0" Span
(a) (3) 12'-6" Z BRACKETS
(2) M.V. LUMINAIRE w/250 W/LAMPS
(2) BALLAST CMRI-250-480 V.
(b) (3) 8'-0" Z BRACKETS
(2) M.V. LUMINAIRE w/175 W/LAMPS
(2) BALLAST CMRI-175-480 V.
(c) (3) 10'-6" Z BRACKETS
(2) M.V. LUMINAIRE w/175 W/LAMPS
(2) BALLAST CMRI-175-480 V.



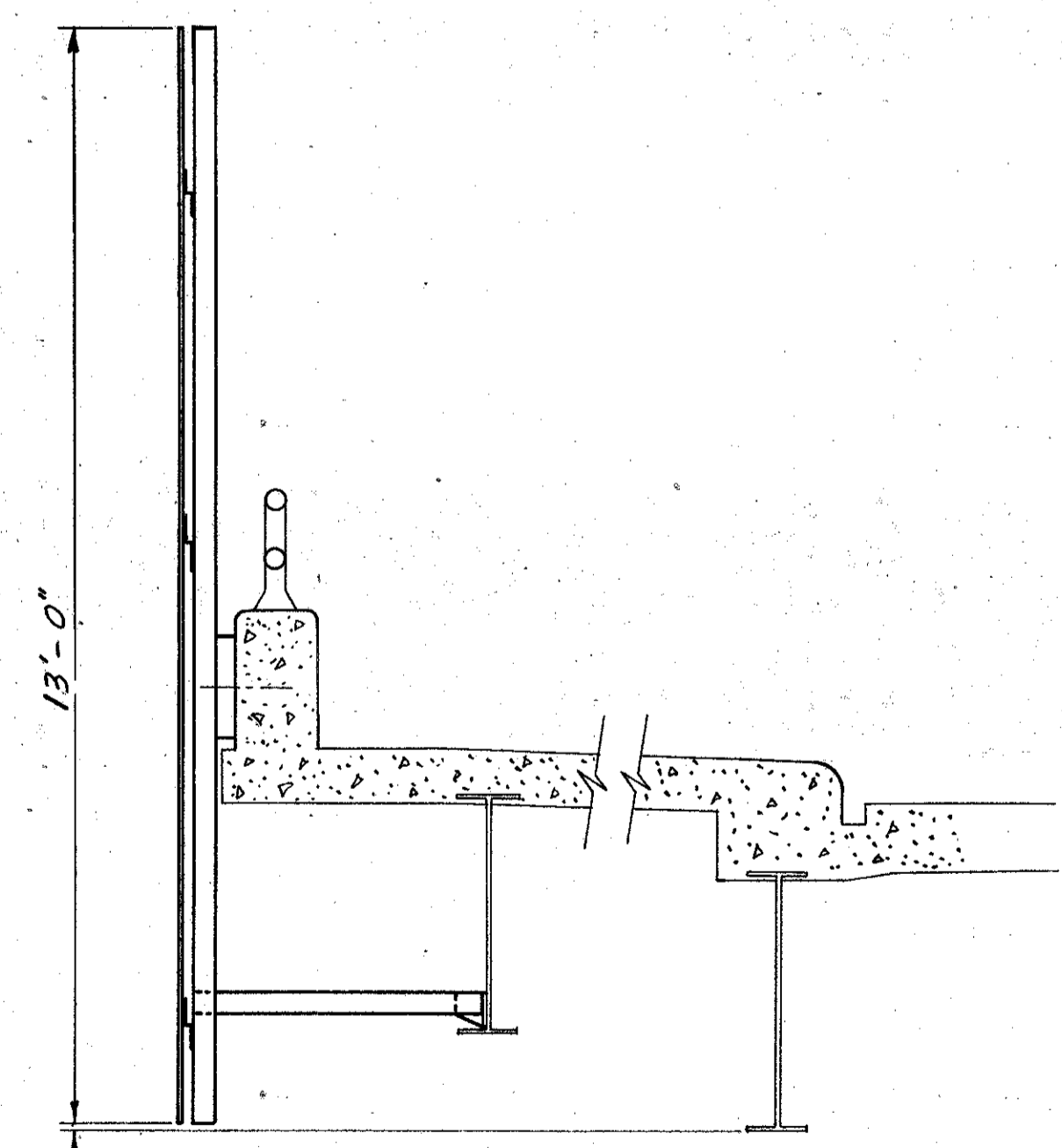
Sta. 89+02 S.R. 315 (S.B.) West Innerbelt
⑩

- T.C. - 7.65, Design N# 8, 74'-0" Span
(a) & (b) (3) 12'-6" Z BRACKETS
(2) M.V. LUMINAIRE w/250 W/LAMPS
(2) BALLAST CMRI-250-480 V.
(c) (3) 10'-6" Z BRACKETS
(2) M.V. LUMINAIRE w/175 W/LAMPS
(2) BALLAST CMRI-175-480 V.

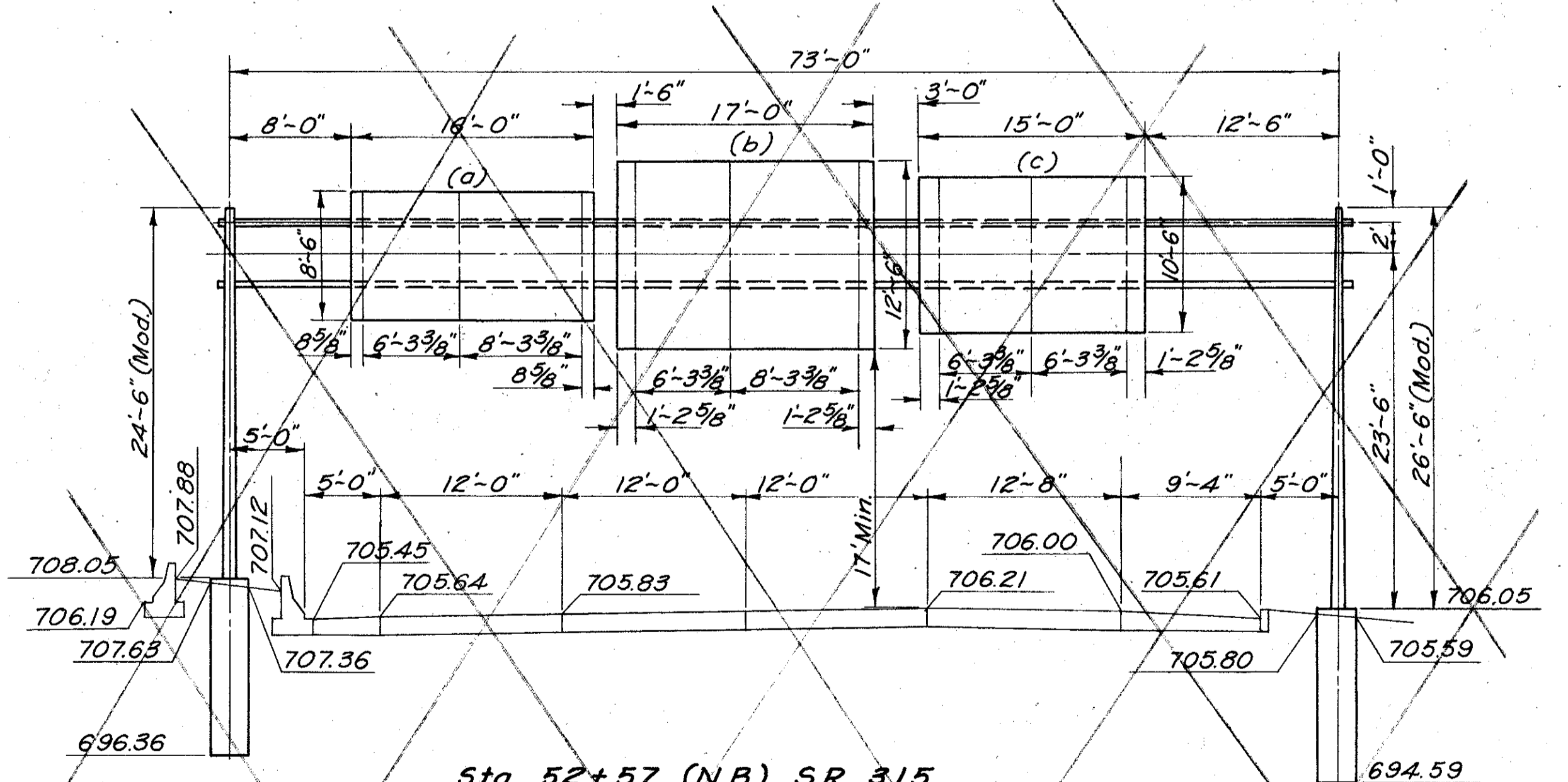


Sta. 95+01.5±
S.R. 315 (N.B.) On Structure @ Brood St.
⑪

- (a) (3) 8'-0" Z BRACKETS
(2) M.V. LUMINAIRE w/175 W/LAMPS
(2) BALLAST CMRI-175-480 V.
(b) (3) 13'-0" Z BRACKETS
(2) M.V. LUMINAIRE w/250 W/LAMPS
(2) BALLAST CMRI-250-480 V.

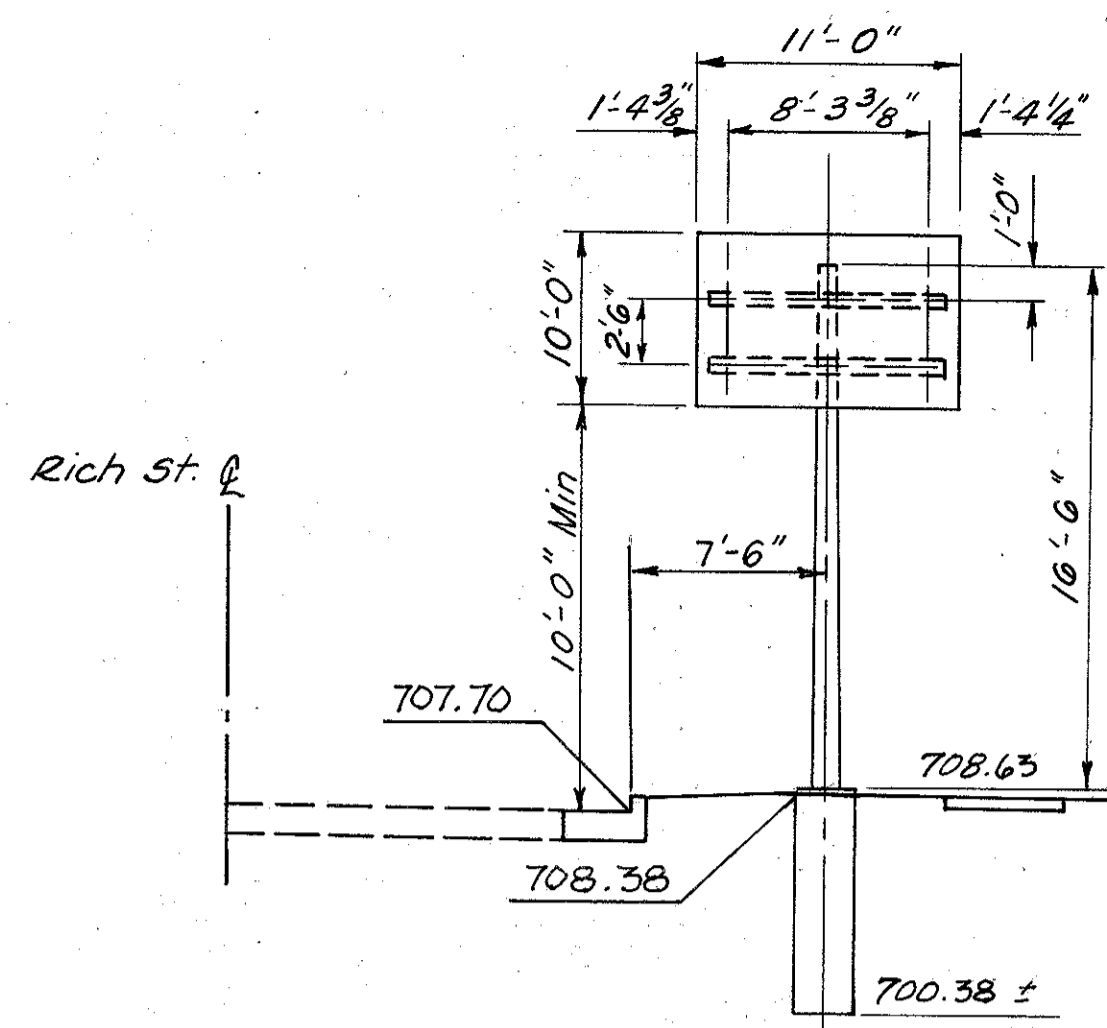


SECTION "A-A"



Sta. 52+57 (N.B.) S.R. 315
⑨7

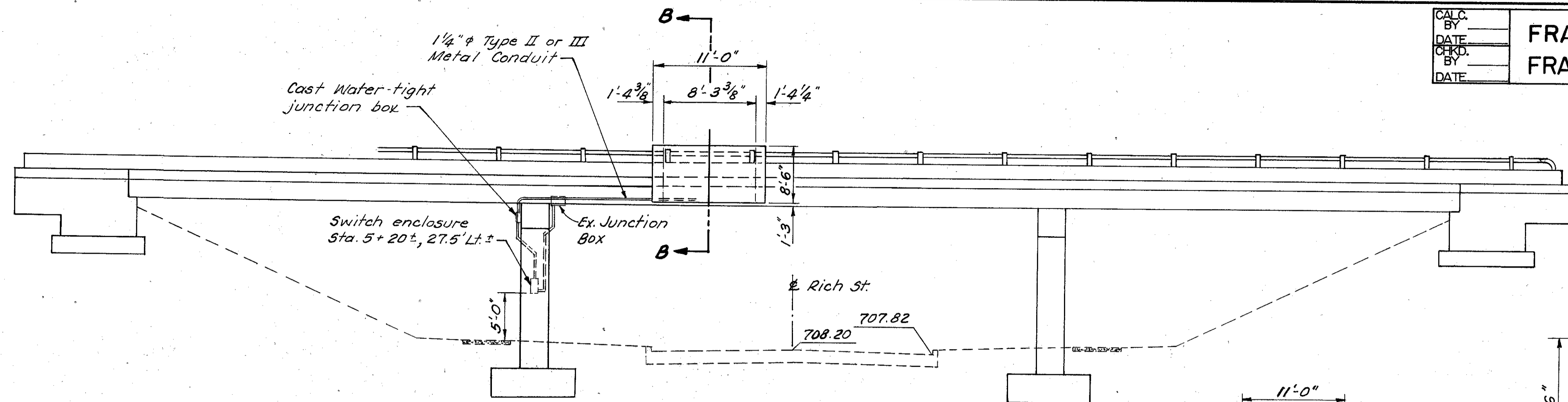
- 816-7.6 Design N# 2 (Mod) 73' Span
(a) (2) 175 Watt Lamps
(b) (2) 250 Watt Lamps
(c) (2) 175 Watt Lamps



STA. 4+77, RICH ST.
T.C.-9.10, DESIGN NO. 2

1

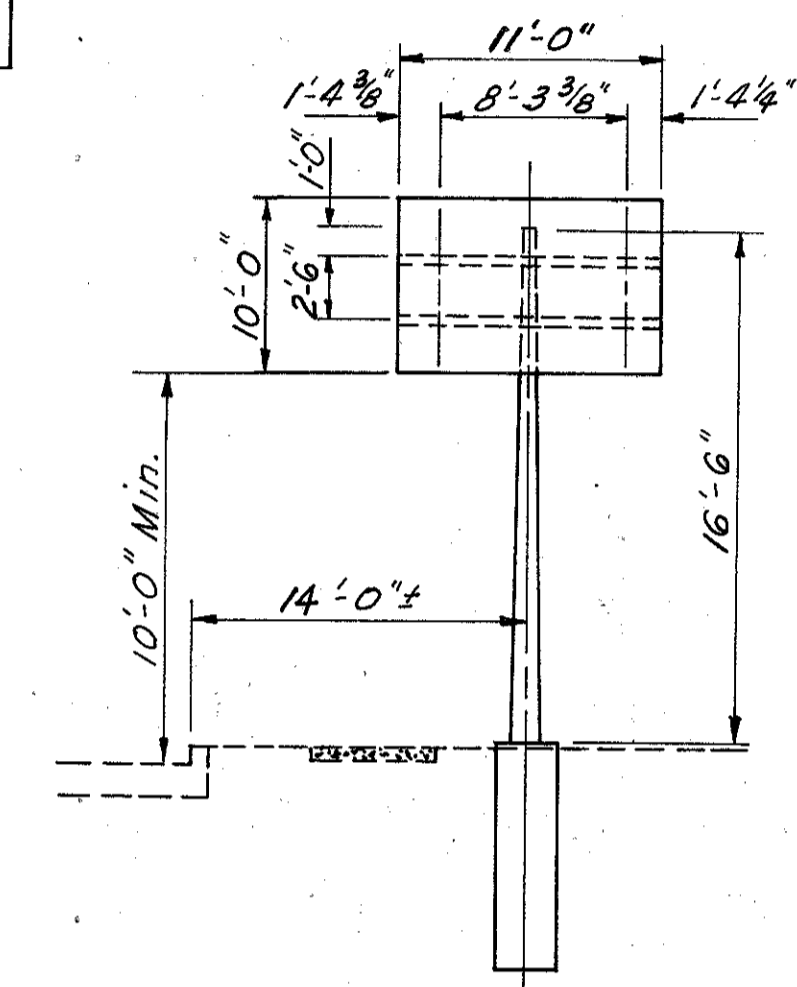
- (1) M.V. LUMIN. W/100 W/LAMP
- (2) 10'-0" Z BRACKETS
- (1) BALLAST CMRI-100-480V



STA. 5+20, RICH ST.
T.C.-18.24 STRUCTURE MOUNTED SIGN

2

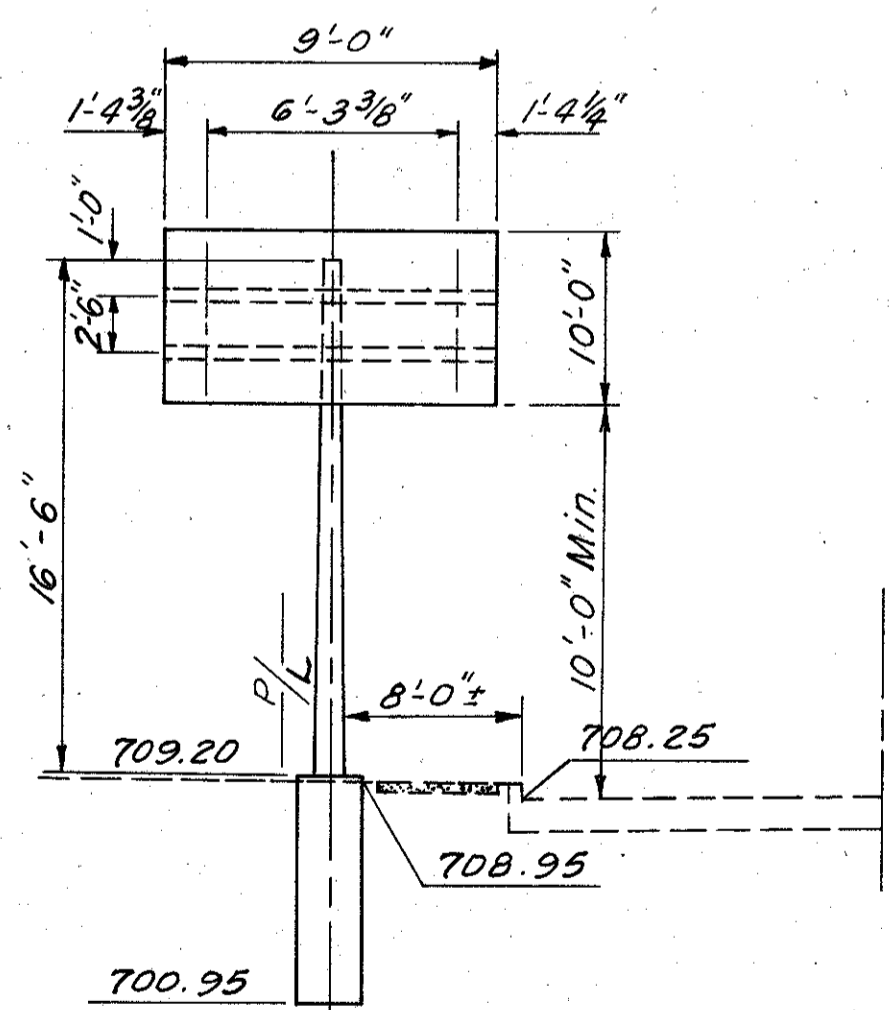
- (2) 8'-6" Z BRACKETS
- (1) M.V. LUMIN. W/100 W/LAMP
- (1) BALLAST CMRI-100-480V



STA. 2+43, SERVICE RD. "K-M"
T.C.-9.10, DESIGN NO. 2

3

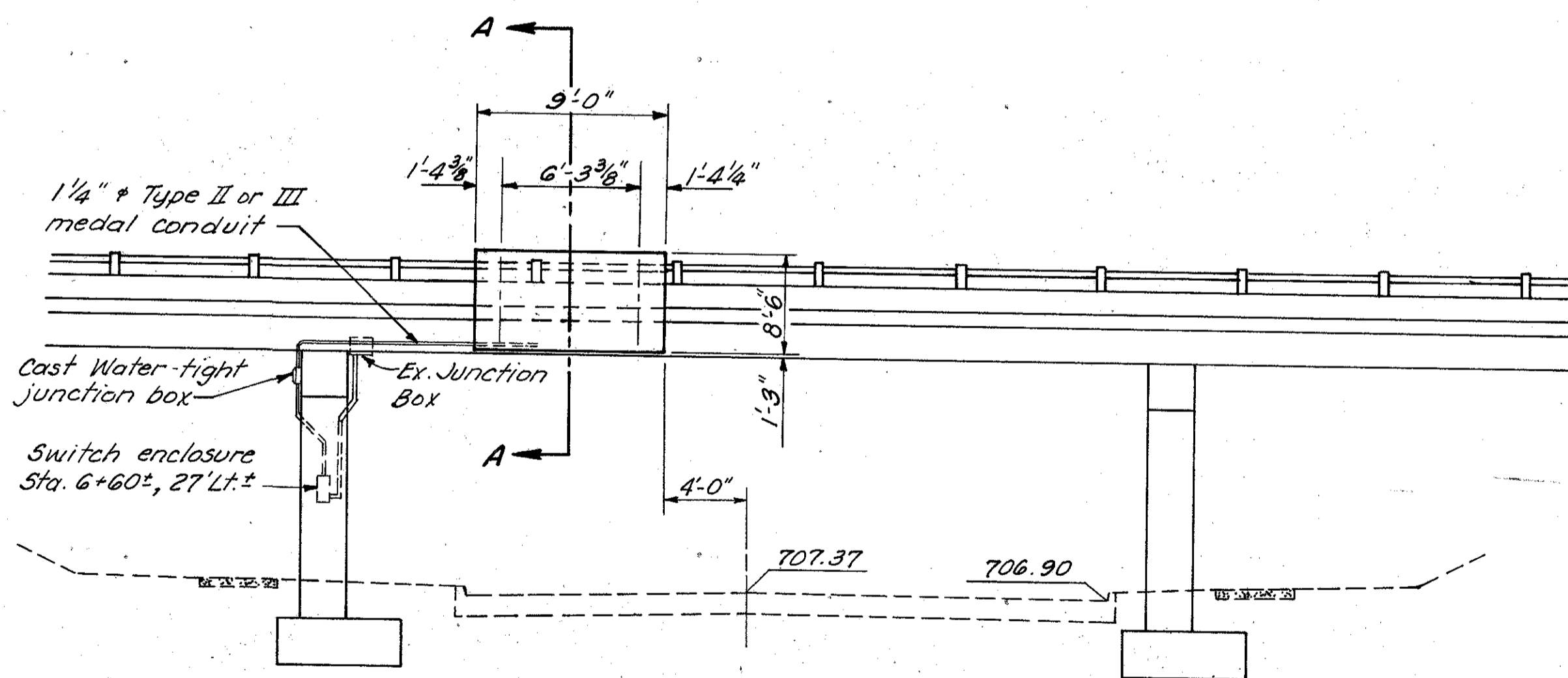
- (2) 10'-0" Z BRACKETS
- (1) M.V. LUMIN. W/100 W/LAMP
- (1) BALLAST CMRI-100-480V



STA. 7+36, RICH ST.
T.C.-9.10, DESIGN NO. 2

3

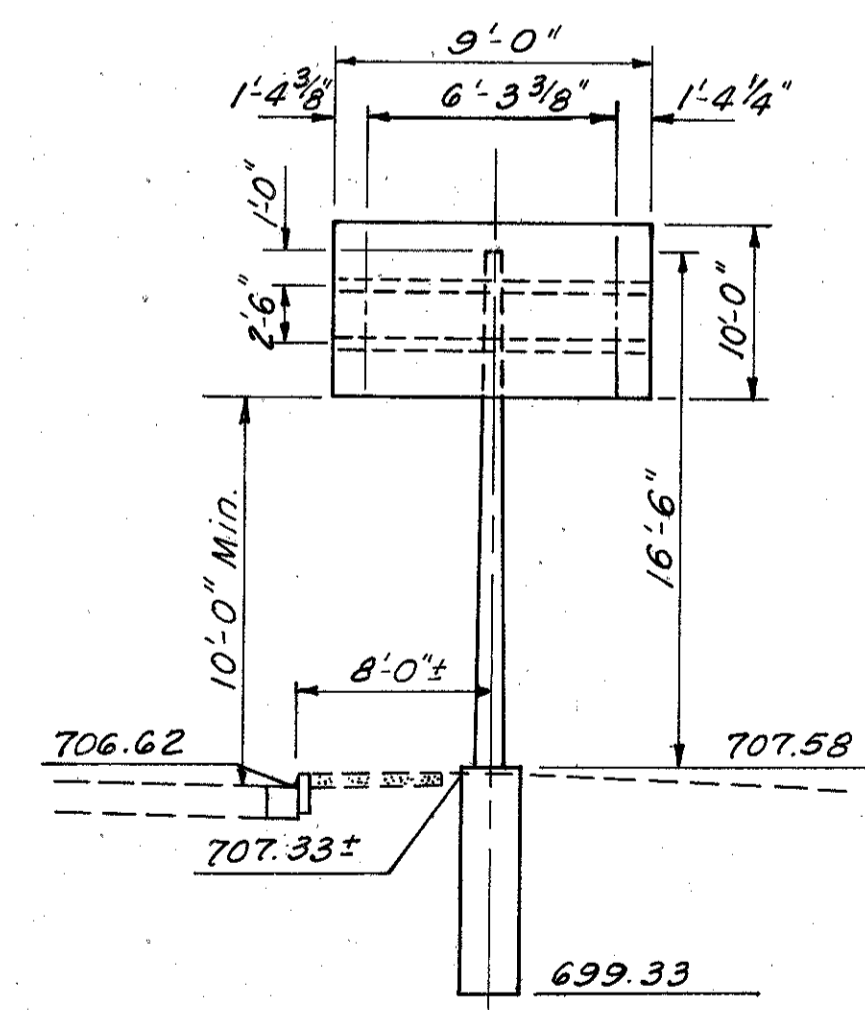
- (2) 10'-0" Z BRACKETS
- (1) M.V. LUMIN. W/100 W/LAMP
- (1) BALLAST CMRI-100-480V



STA. 6+60, TOWN ST.
T.C.-18.24 STRUCTURE MOUNTED SIGN

5

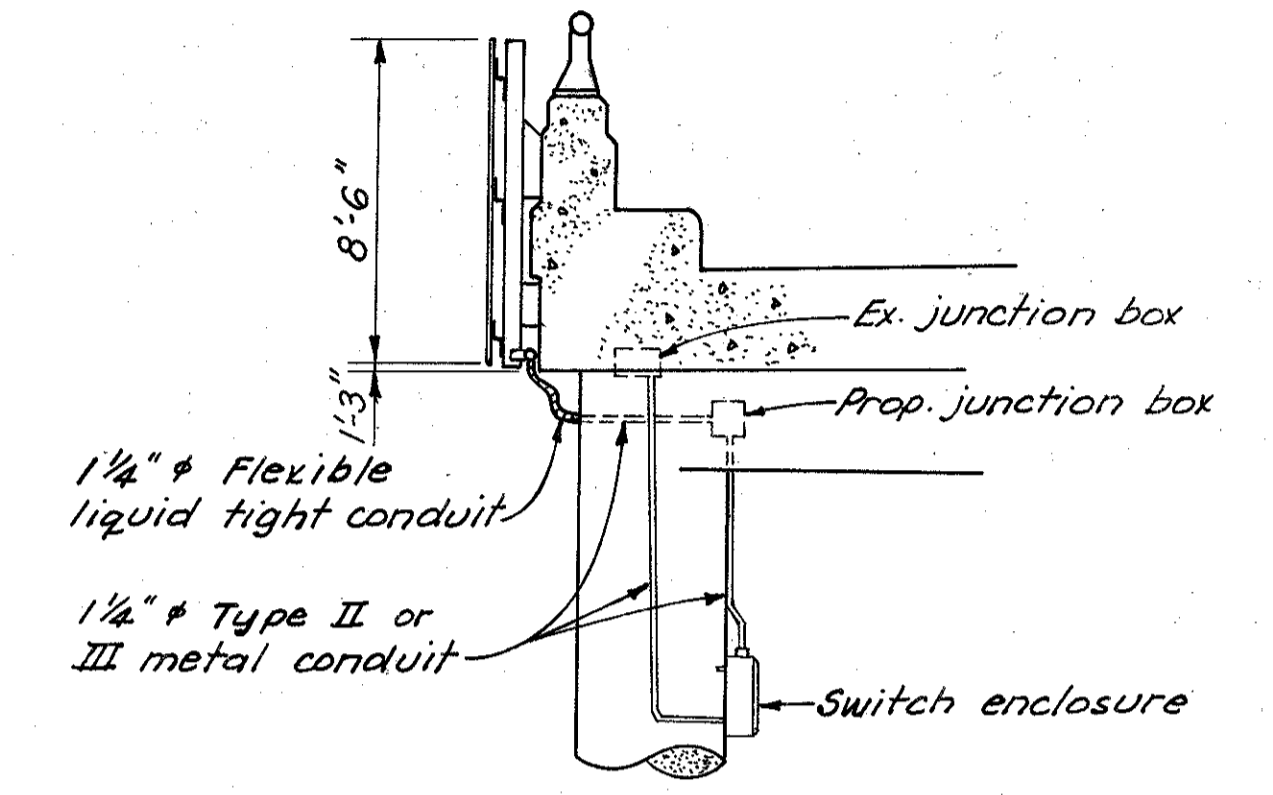
- (2) 8'-6" Z BRACKETS
- (1) M.V. LUMIN. W/100 W/LAMP
- (1) BALLAST CMRI-100-480V



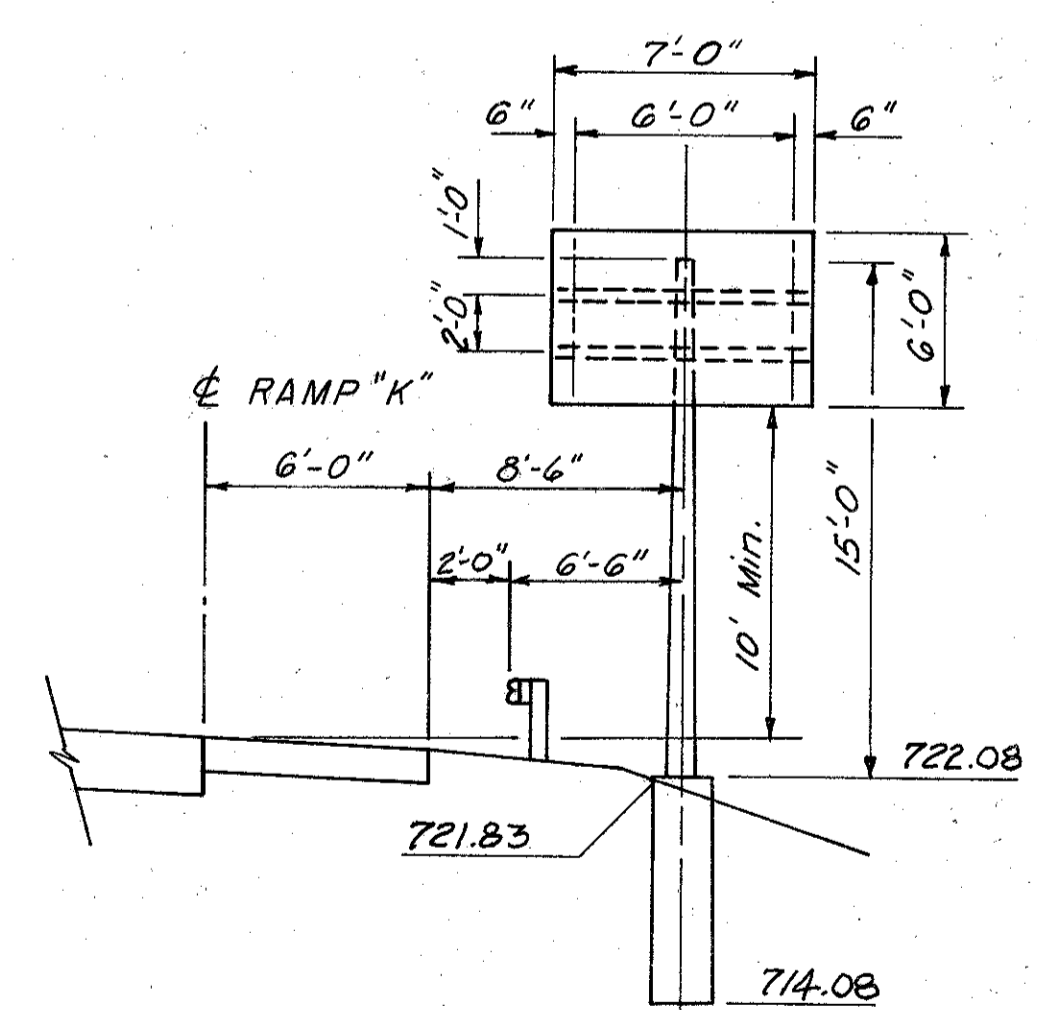
STA. 7+91.5, TOWN ST.
T.C.-9.10, DESIGN NO. 2

6

- (2) 10'-0" Z BRACKETS
- (1) M.V. LUMIN. W/100 W/LAMP
- (1) BALLAST CMRI-100-480V



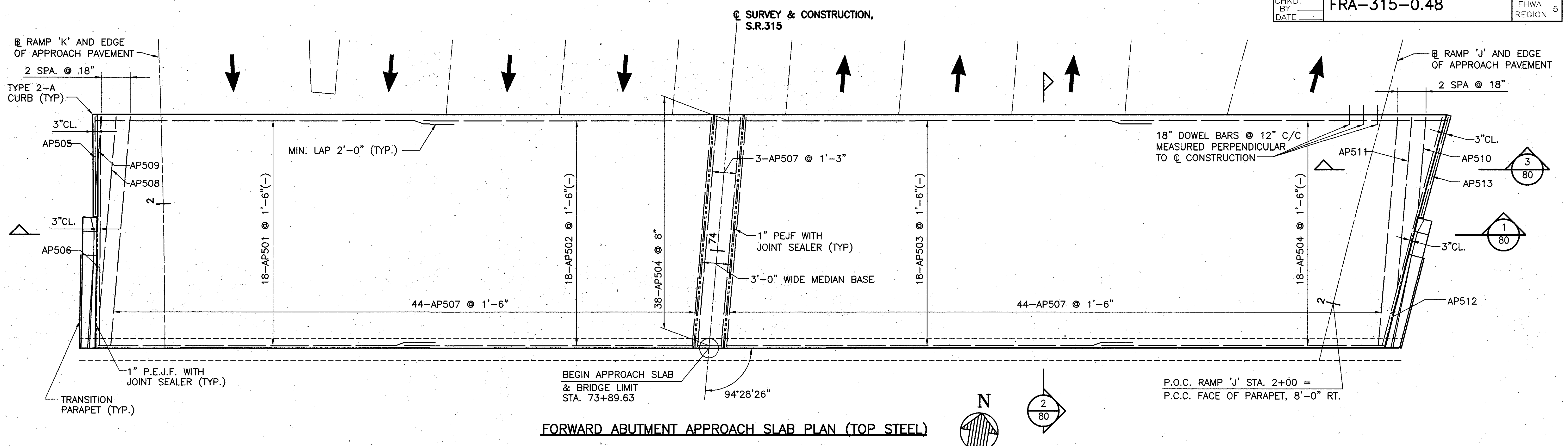
SECTION A-A & SECTION B-B



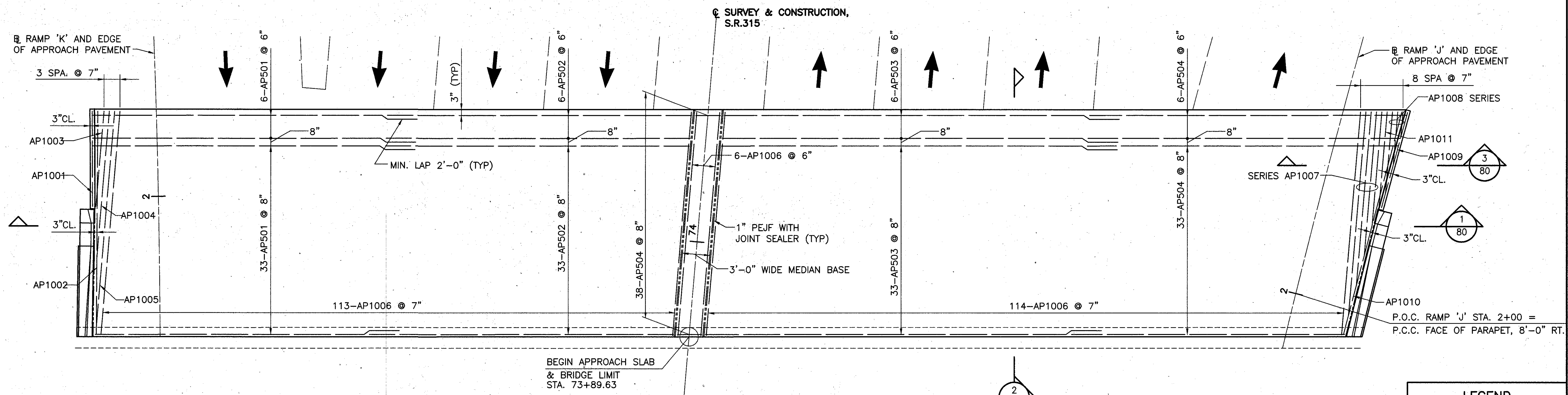
STA. 2+43, RAMP "K"
T.C.-9.10, DESIGN NO. 1

7

- (2) 6'-0" Z BRACKETS
- (1) M.V. LUMIN. W/100 W/LAMP
- (1) BALLAST CMRI-100-480V



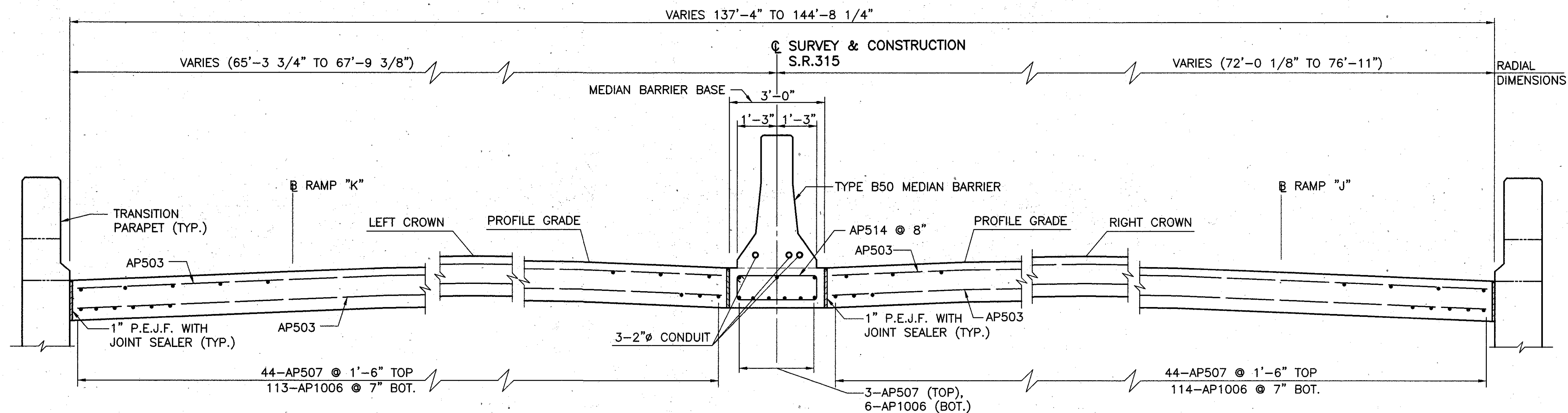
FORWARD ABUTMENT APPROACH SLAB PLAN (TOP STEEL)



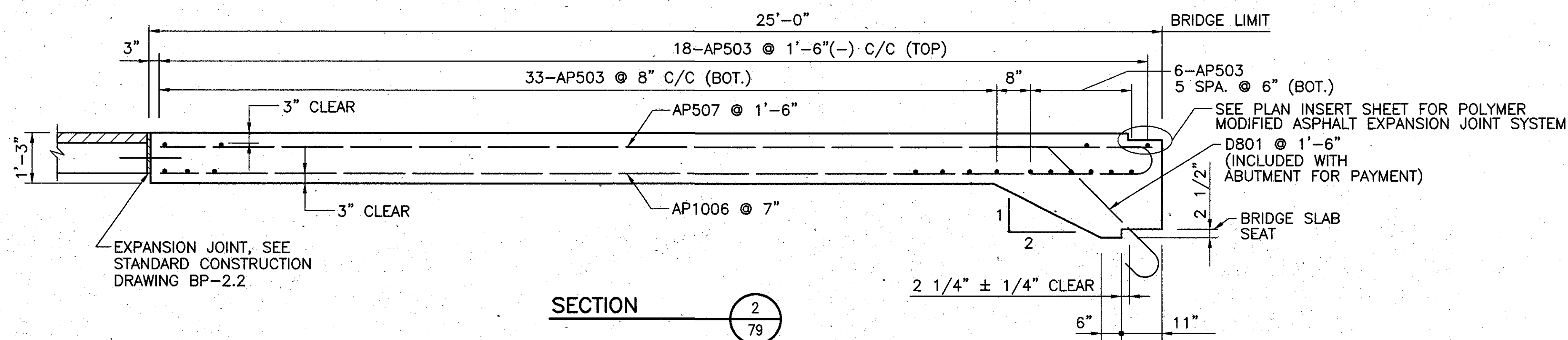
FORWARD ABUTMENT APPROACH SLAB PLAN (BOTTOM STEEL)

LEGEND	
CL	- CLEAR
TYP	- TYPICAL
EF	- EACH FACE
NF	- NEAR FACE
FF	- FAR FACE
C/C	- CENTER TO CENTER
CJ	- CONSTRUCTION JOINT
PEJF	- PREFORMED EXPANSION JOINT FILLER
SPA	- SPACING
EXISTING STRUCTURE	
NEW STRUCTURE	

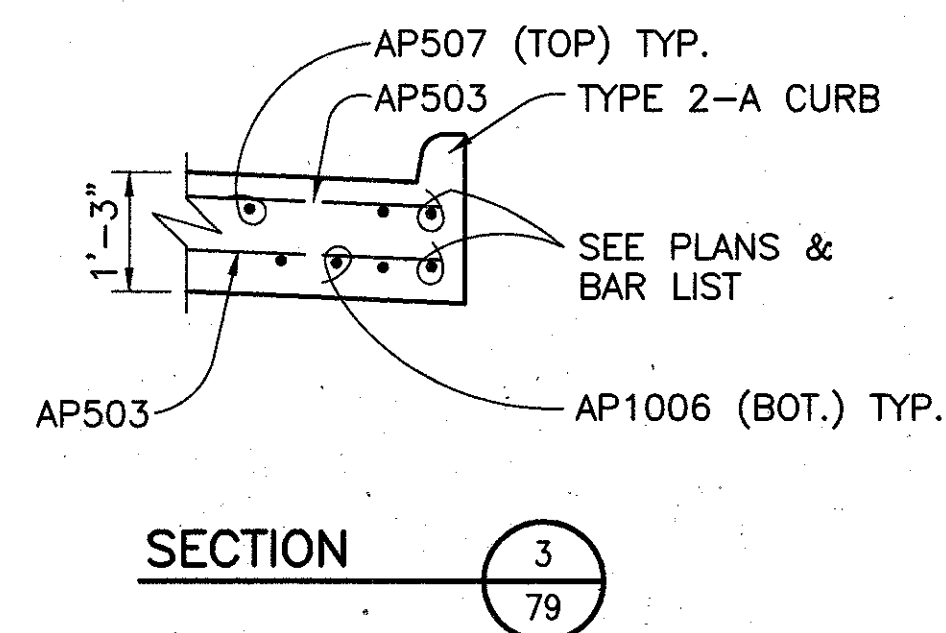
[C:\J:\STRUCT\92313143\CONTRCTD\SA-APPR.DWG - OCT 31, 1997 - 10:05:22 - PLOT: 1=20



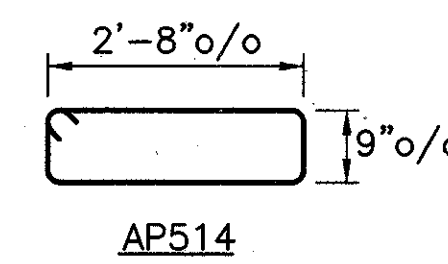
SECTION 1
79



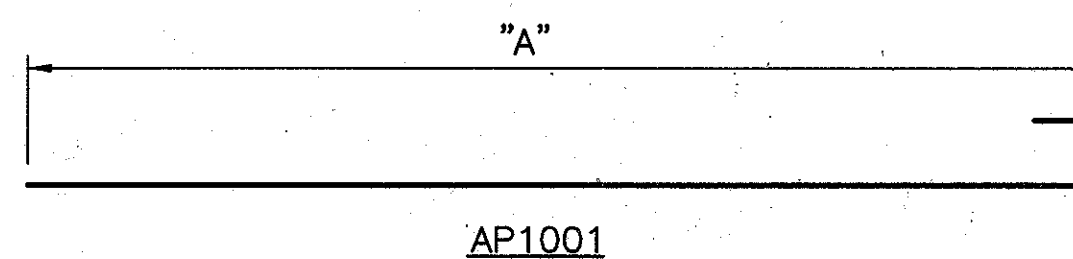
SECTION 2
79



SECTION 3
79



AP514



AP1001

NOTES:

- REFER TO STANDARD DRAWING AS-1-81 FOR OTHER APPROACH SLAB DETAILS.
- PAYMENT FOR THE LONGITUDINAL AND TRANSVERSE EXPANSION JOINT, INCLUDING DOWEL BARS, PREFORMED EXPANSION JOINT FILLER AND JOINT SEALER, IS INCLUDED IN THE PRICE BID PER SQUARE YARD FOR THE APPROACH SLAB.
- PAYMENT FOR THE MEDIAN BARRIER BASE IS INCLUDED IN THE PRICE BID PER SQUARE YARD FOR THE APPROACH SLAB. AN ALLOWANCE OF 17.0 SQUARE YARDS IS INCLUDED IN ITEM 611, REINFORCED CONCRETE SLAB, AS PER PLAN FOR THIS PURPOSE.
- REINFORCING STEEL MEDIAN BARRIER BASE DETAILS FOR THE REAR ABUTMENT ARE THE SAME AS THOSE SHOWN FOR THE FORWARD ABUTMENT.
- THE REAR ABUTMENT APPROACH SLAB IS NOT DETAILED. REINFORCING BARS ARE PER STANDARD DRAWING EXCEPT FOR AP1002 BARS. PLACEMENT FOR AP1002 BARS IS SIMILAR TO THAT SHOWN FOR AP1001 BAR AT FORWARD ABUTMENT APPROACH SLAB.

REINFORCING STEEL TABLE				
FORWARD APPROACH SLAB				
MARK	NUMBER	LENGTH	TYPE	"A"
AP501	57	35'-0"	ST	
AP502	57	33'-4"	ST	
AP503	57	40'-0"	ST	
AP504	57	37'-6"	ST	
AP505	1	10'-5"	ST	
AP506	1	22'-5"	ST	
AP507	91	24'-6"	ST	
AP508	1	20'-10"	ST	
AP509	1	7'-9"	ST	
AP510	1	9'-10"	ST	
AP511	1	18'-4"	ST	
AP512	1	25'-2"	ST	
AP513	1	10'-10"	ST	
AP514	38	7'-4"	BT	

AP1001	1	13'-3"	BT	11'-10"
AP1002	1	27'-3"	BT	25'-10"
AP1003	1	13'-4"	BT	11'-11"
AP1004	1	18'-11"	BT	17'-6"
AP1005	1	26'-4"	BT	24'-11"
AP1006	233	25'-11"	BT	24'-6"
	1 SER.	15'-3"	BT	13'-10"
AP1007	OF	TO		TO
	4	25'-3"	BT	23'-10"
	1 SER.	5'-6"	BT	4'-1"
AP1008	OF	TO		TO
	3	11'-8"	BT	10'-3"
AP1009	1	13'-8"	BT	12'-3"
AP1010	1	28'-0"	BT	26'-7"
AP1011	1	13'-4"	BT	11'-11"

REAR APPROACH SLAB (SEE NOTE 5)				
MARK	NUMBER	LENGTH	TYPE	"A"
AP501	228	33'-0"	ST	
AP502	2	10'-6"	ST	
AP503	89	24'-6"	ST	
AP514	38	7'-4"	BT	
AP1001	226	25'-11"	BT	24'-6"
AP1002	2	10'-6"	ST	

QUANTITIES				
FORWARD APPROACH SLAB				
ITEM	UNIT	TOTAL	DESCRIPTION	
611	S.Y.	389.9*	REINFORCED CONCRETE APPROACH SLABS (T=15")	
REAR APPROACH SLAB				
611	S.Y.	356.3*	REINFORCED CONCRETE APPROACH SLABS (T=15")	

ITEM 611 REINFORCED CONCRETE APPROACH SLAB(T=15"). AS PER PLAN: THE REINFORCING STEEL FOR THE APPROACH SLABS OF THIS STRUCTURE SHALL BE EPOXY COATED IN CONFORMANCE WITH 509.

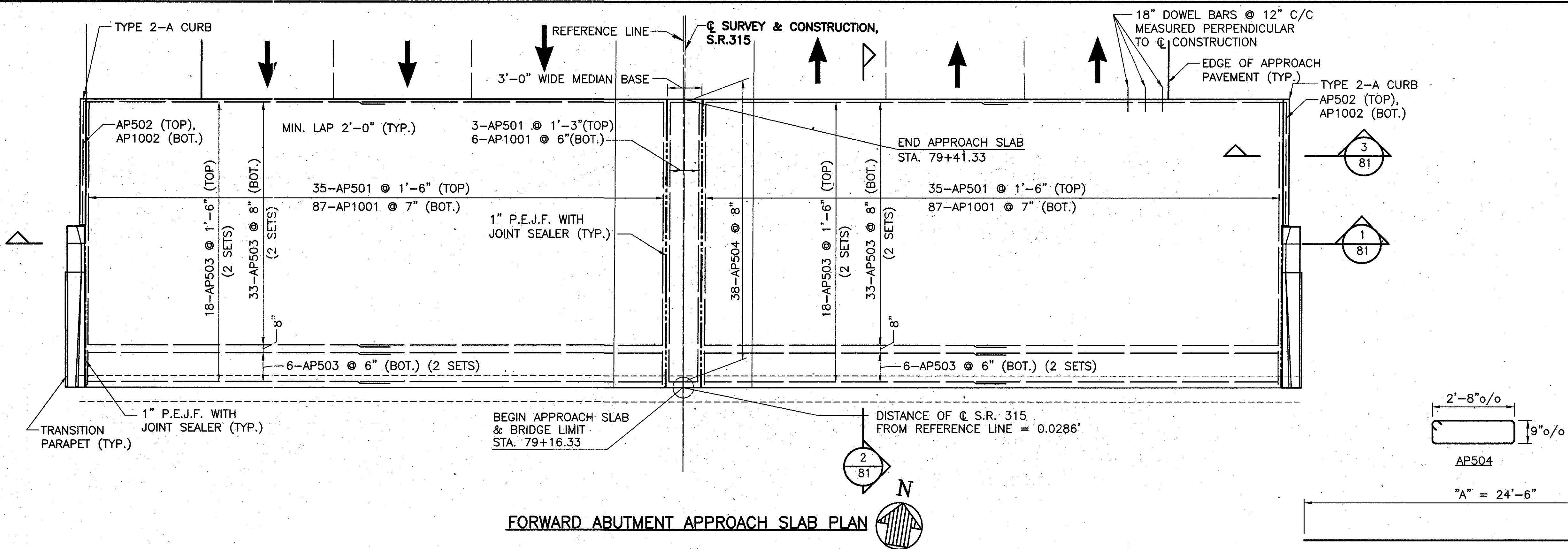
MATERIALS, LABOR AND INSTALLATION SHALL BE INCLUDED WITH APPROACH SLABS FOR PAYMENT.

* TO GENERAL SUMMARY SHEET 17

163

LEGEND

- CL - CLEAR
- TYP - TYPICAL
- EF - EACH FACE
- NF - NEAR FACE
- FF - FAR FACE
- C/C - CENTER TO CENTER
- CJ - CONSTRUCTION JOINT
- PEJF - PREFORMED EXPANSION JOINT FILLER
- SPA - SPACING
- EXISTING STRUCTURE
- NEW STRUCTURE



REINFORCING STEEL TABLE				
FORWARD APPROACH SLAB				
MARK	NUMBER	LENGTH	TYPE	"A"
AP501	73	24'-6"	STR	
AP502	2	10'-6"	STR	
AP503	228	26'-2"	STR	
AP504	38	7'-4"	BT	
AP1001	180	25'-11"	BT	24'-6"
AP1002	2	10'-6"	STR	

REAR APPROACH SLAB				
MARK	NUMBER	LENGTH	TYPE	"A"
AP501	73	24'-6"	STR	
AP502	2	10'-6"	STR	
AP503	228	26'-2"	STR	
AP504	38	7'-4"	BT	
AP1001	180	25'-11"	BT	24'-6"
AP1002	2	10'-6"	STR	

QUANTITIES			
FORWARD APPROACH SLAB			
ITEM	UNIT	TOTAL	DESCRIPTION
611	S.Y.	290.5*	REINFORCED CONCRETE APPROACH SLAB (T=15")

REAR APPROACH SLAB			
ITEM	UNIT	TOTAL	DESCRIPTION
611	S.Y.	290.5*	REINFORCED CONCRETE APPROACH SLAB (T=15")

ITEM 611 REINFORCED CONCRETE APPROACH SLAB (T=15") AS PER PLAN: THE REINFORCING STEEL FOR THE APPROACH SLABS OF THIS STRUCTURE SHALL BE EPOXY COATED IN CONFORMANCE WITH 509.

MATERIALS, LABOR AND INSTALLATION SHALL BE INCLUDED WITH APPROACH SLABS FOR PAYMENT.

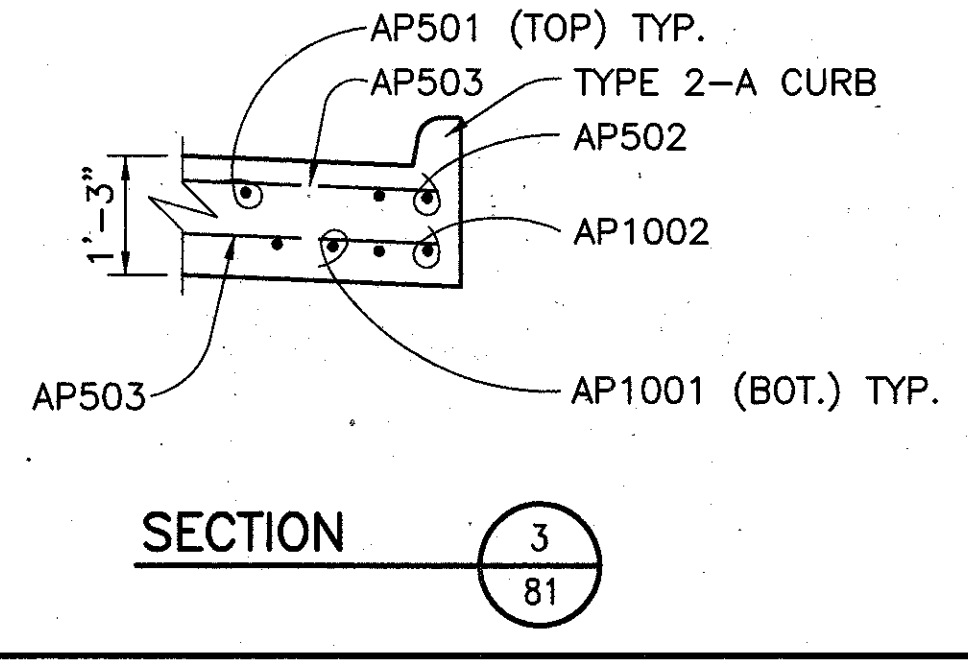
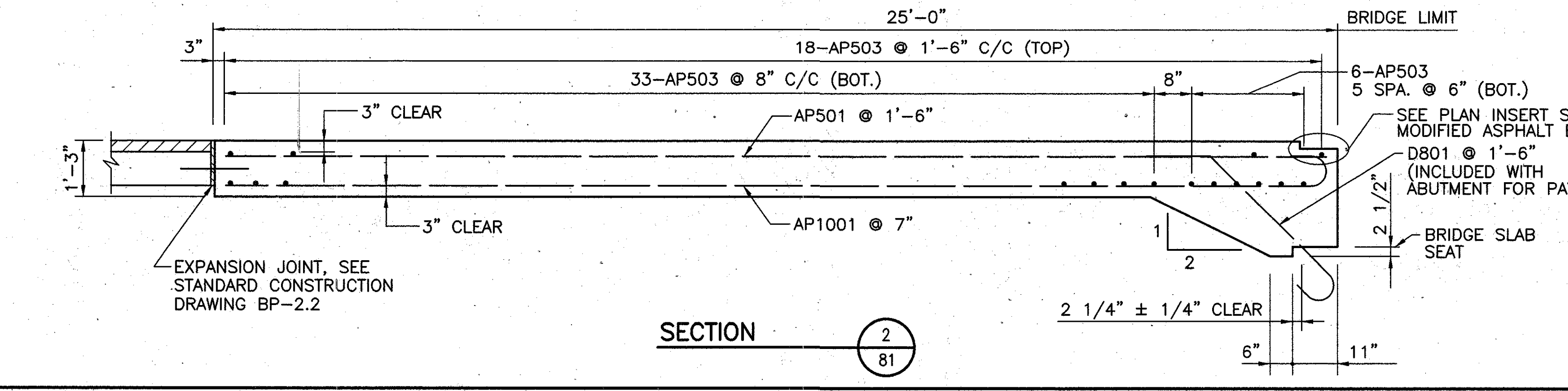
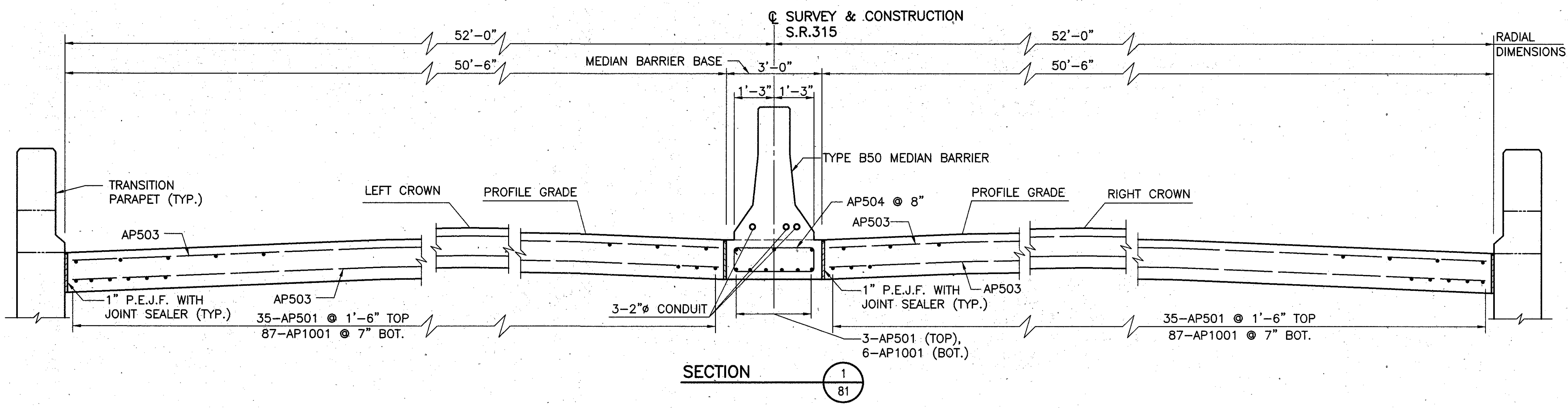
* TO GENERAL SUMMARY SHEET 17/163

NOTES:

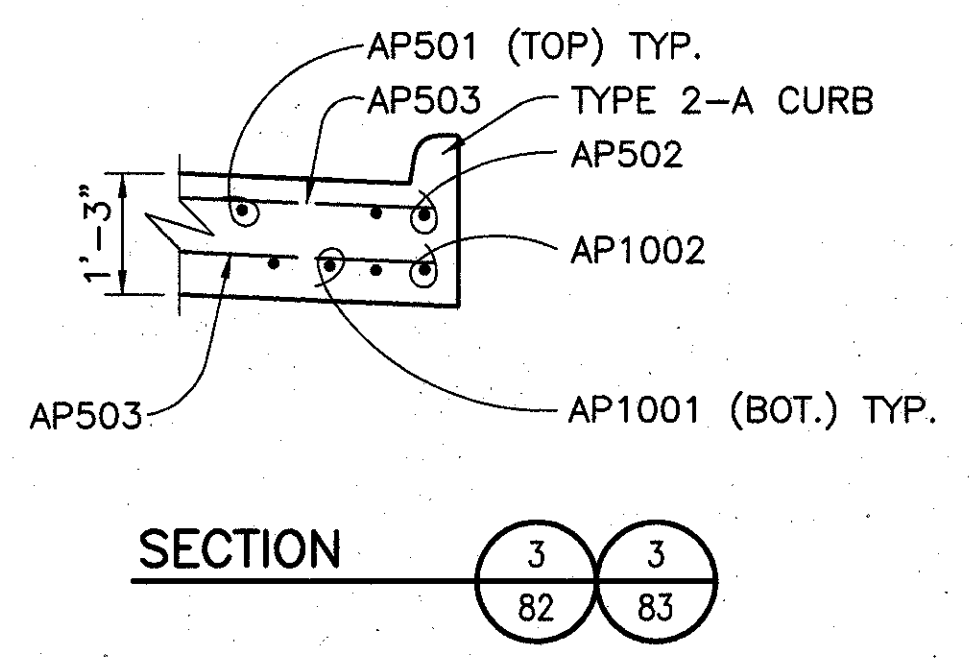
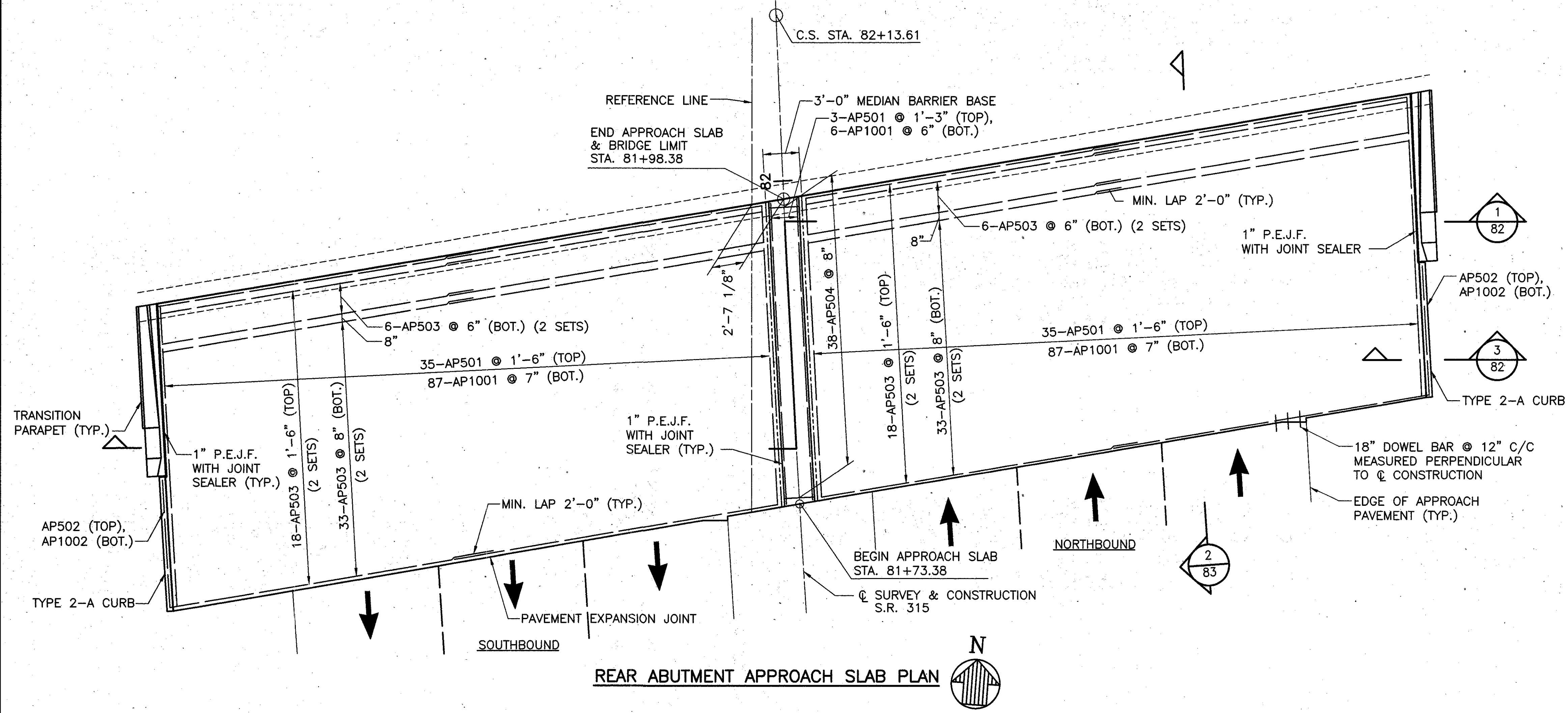
- REFER TO STANDARD DRAWING AS-1-81 FOR OTHER APPROACH SLAB DETAILS.
- PAYMENT FOR THE LONGITUDINAL AND TRANSVERSE EXPANSION JOINT, INCLUDING DOWEL BARS, PREFORMED EXPANSION JOINT FILLER AND JOINT SEALER, IS INCLUDED IN THE PRICE BID PER SQUARE YARD FOR THE APPROACH SLAB.
- PAYMENT FOR THE MEDIAN BARRIER BASE IS INCLUDED IN THE PRICE BID PER SQUARE YARD FOR THE APPROACH SLAB. AN ALLOWANCE OF 17.0 SQUARE YARDS IS INCLUDED IN ITEM 611, REINFORCED CONCRETE SLAB, AS PER PLAN FOR THIS PURPOSE.
- REINFORCING STEEL MEDIAN BARRIER BASE DETAILS FOR THE REAR ABUTMENT ARE THE SAME AS THOSE SHOWN FOR THE FORWARD ABUTMENT.

LEGEND

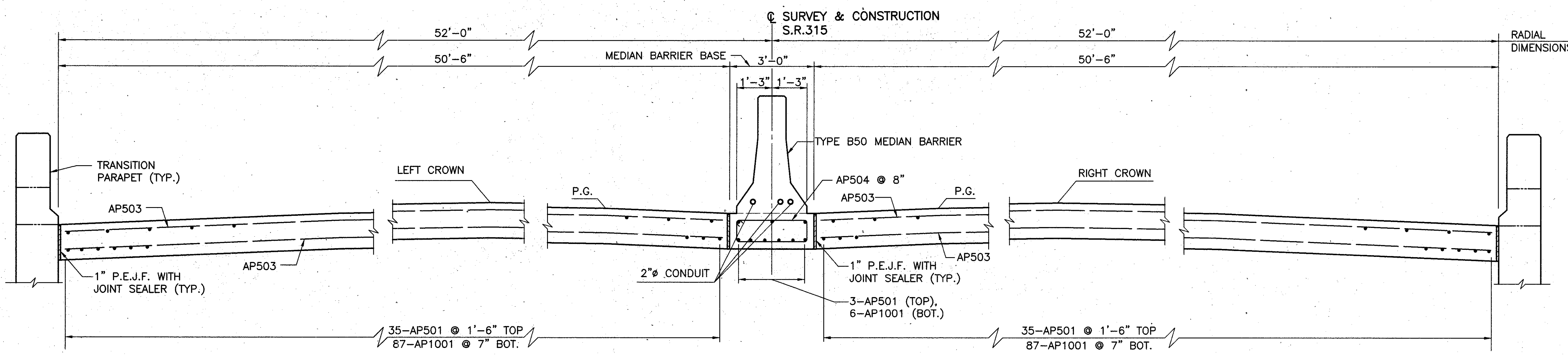
CL	- CLEAR
TYP	- TYPICAL
EF	- EACH FACE
NF	- NEAR FACE
FF	- FAR FACE
C/C	- CENTER TO CENTER
CJ	- CONSTRUCTION JOINT
PEJF	- PREFORMED EXPANSION JOINT FILLER
SPA	- SPACING
EXISTING STRUCTURE	
NEW STRUCTURE	



[PROJ] \A\STRUCT\92313143\CONTRACT\RS-APPR-S.DWG - OCT 31, 1997 - 11:40:12 - PLOT: 1-86



REAR ABUTMENT APPROACH SLAB PLAN

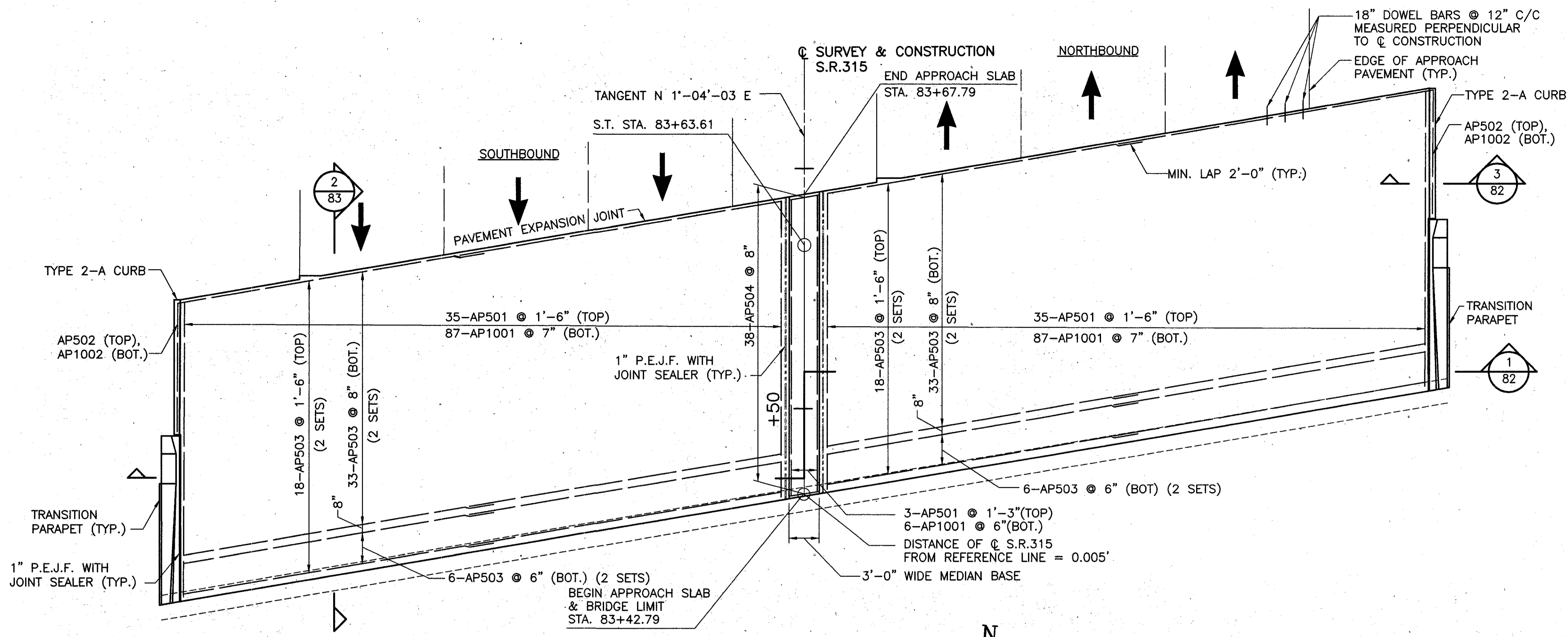


SECTION 1-1

LEGEND	
CL	- CLEAR
TYP	- TYPICAL
EF	- EACH FACE
NF	- NEAR FACE
FF	- FAR FACE
C/C	- CENTER TO CENTER
CJ	- CONSTRUCTION JOINT
PEJF	- PREFORMED EXPANSION JOINT FILLER
SPA	- SPACING
	EXISTING STRUCTURE
	NEW STRUCTURE

NOTE:
FOR ADDITIONAL NOTES, SEE SHEET 2/2

[COPY] STRUCTURE 2023 143 CONCRETE/STEEL REINFORCEMENT - OCT 31, 1997 - 10:01:17 - PLOT: 1-1



FORWARD ABUTMENT APPROACH SLAB PLAN

REINFORCING STEEL TABLE				
FORWARD APPROACH SLAB				
MARK	NUMBER	LENGTH	TYPE	"A"
AP501	73	24'-6"	STR	
AP502	2	10'-6"	STR	
AP503	228	26'-8"	STR	
AP504	38	7'-4"	BT	
AP1001	180	25'-11"	BT	24'-6"
AP1002	2	10'-6"	STR	

REAR APPROACH SLAB				
MARK	NUMBER	LENGTH	TYPE	"A"
AP501	73	24'-6"	STR	
AP502	2	10'-6"	STR	
AP503	228	26'-8"	STR	
AP504	38	7'-4"	BT	
AP1001	180	25'-11"	BT	24'-6"
AP1002	2	10'-6"	STR	

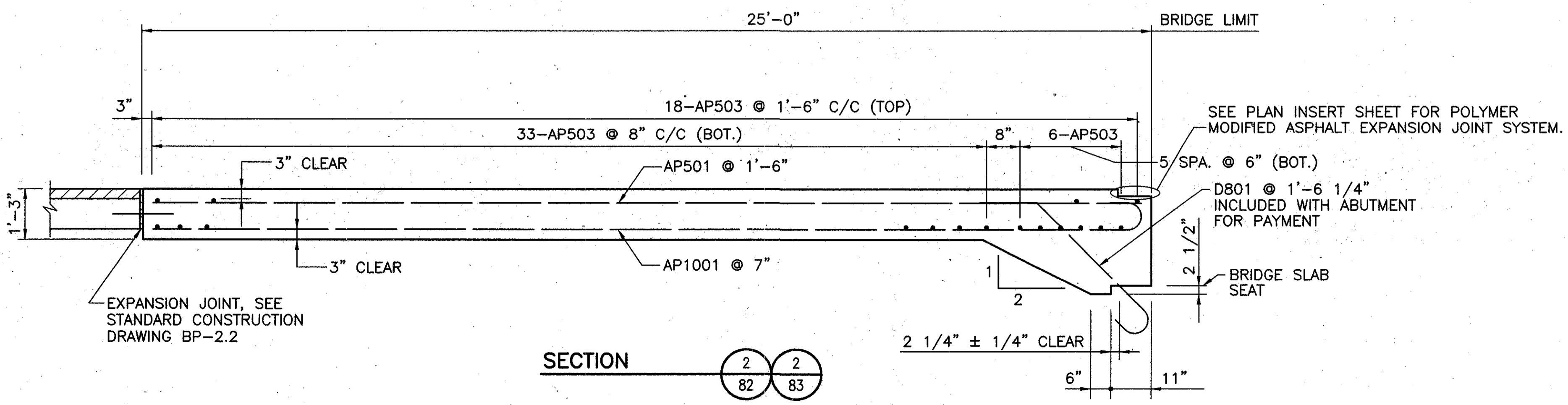
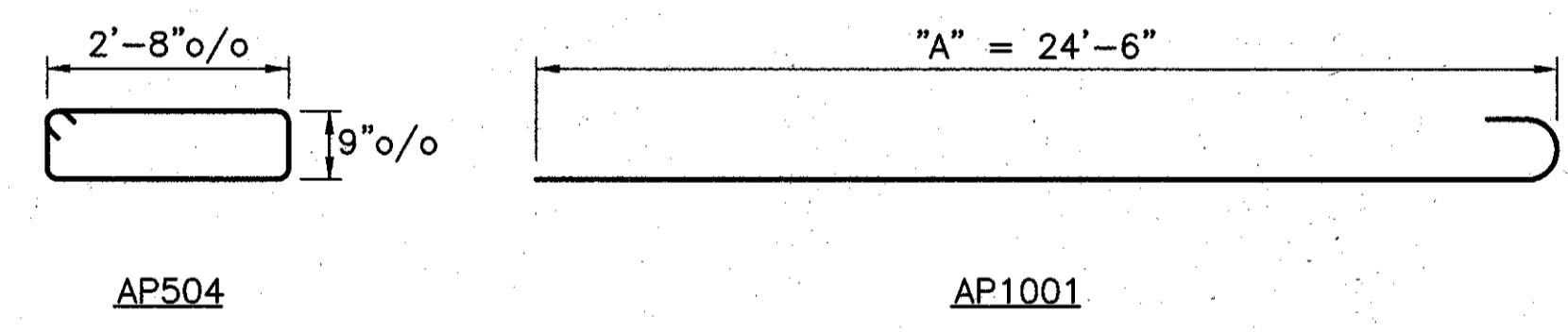
QUANTITIES			
FORWARD APPROACH SLAB			
ITEM	UNIT	TOTAL	DESCRIPTION
611	S.Y.	290.5*	REINFORCED CONCRETE APPROACH SLAB (T=15")

REAR APPROACH SLAB			
ITEM	UNIT	TOTAL	DESCRIPTION
611	S.Y.	290.5*	REINFORCED CONCRETE APPROACH SLAB (T=15")

ITEM 611 REINFORCED CONCRETE APPROACH SLAB(T=15"), AS PER PLAN. THE REINFORCING STEEL FOR THE APPROACH SLABS OF THIS STRUCTURE SHALL BE EPOXY COATED IN CONFORMANCE WITH 509.

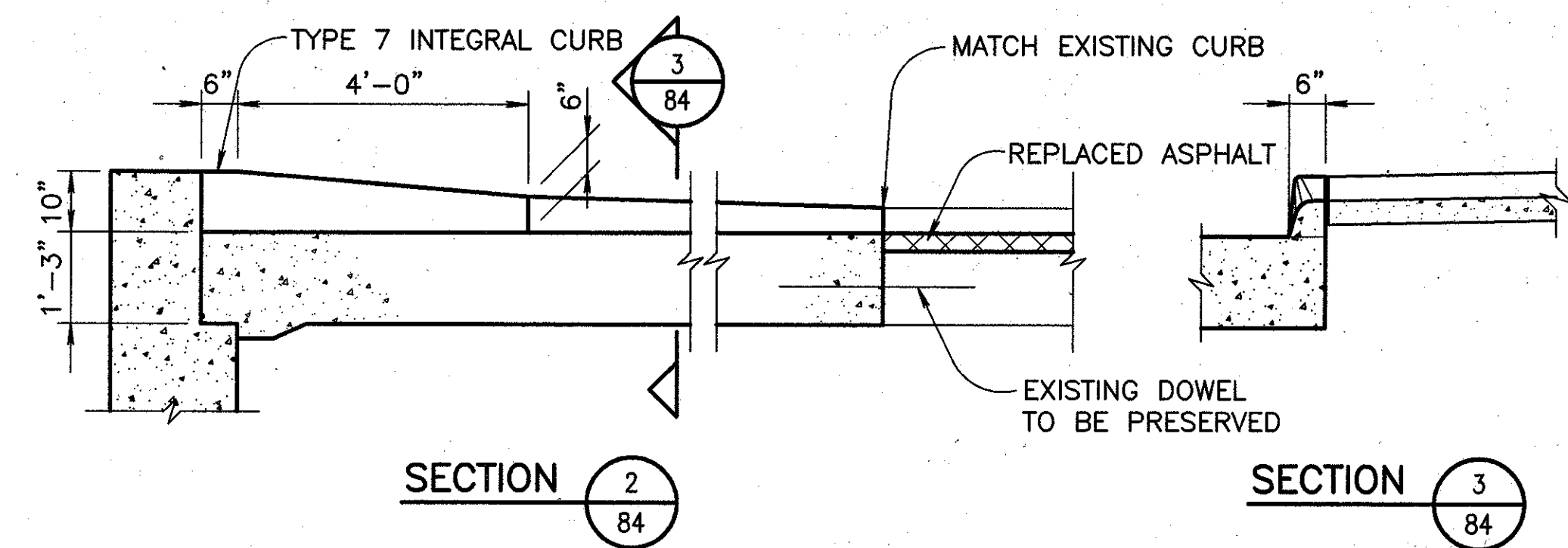
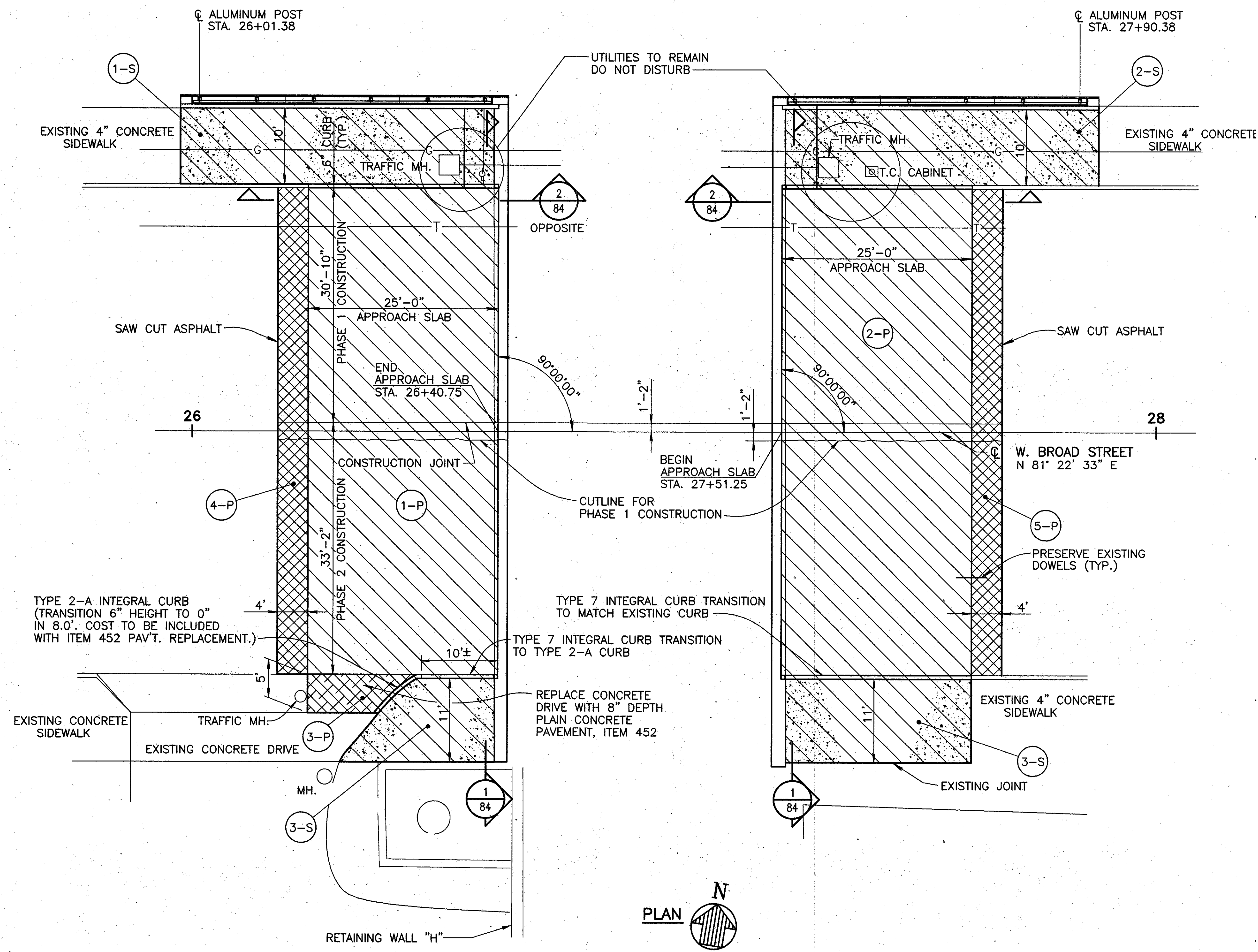
MATERIALS, LABOR AND INSTALLATION SHALL BE INCLUDED WITH APPROACH SLABS FOR PAYMENT.

* TO GENERAL SUMMARY SHEET 17/163



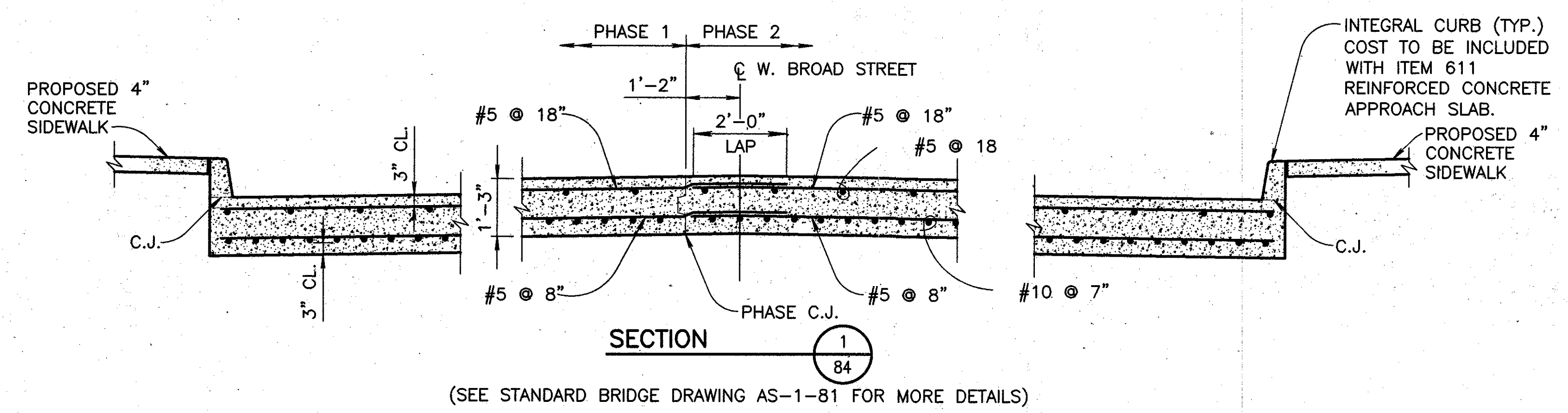
SECTION 2/82 2/83

- NOTES:
- REFER TO STANDARD DRAWING AS-1-81 FOR OTHER APPROACH SLAB DETAILS.
 - PAYMENT FOR THE LONGITUDINAL AND TRANSVERSE EXPANSION JOINT, INCLUDING DOWEL BARS, PREFORMED EXPANSION JOINT FILLER AND JOINT SEALER, IS INCLUDED IN THE PRICE BID PER SQUARE YARD FOR THE APPROACH SLAB.
 - PAYMENT FOR THE MEDIAN BARRIER BASE IS INCLUDED IN THE PRICE BID PER SQUARE YARD FOR THE APPROACH SLAB. AN ALLOWANCE OF 17.0 SQUARE YARDS IS INCLUDED IN ITEM 611, REINFORCED CONCRETE SLAB, AS PER PLAN FOR THIS PURPOSE.



SHEET NO.	PAVEMENT SUB-SUMMARY						
	ESTIMATED QUANTITIES						
	446	452	608	611	202		
	ASPHALT CONCRETE SURFACE COURSE TYPE-1	PLAIN CONCRETE PAVEMENT	4" CONCRETE WALK	REINFORCED CONCRETE APPROACH SLABS T=15"	PAVEMENT REMOVED	CONCRETE WALK REMOVED	APPROACH SLAB REMOVED
	C.Y.	S.Y.	S.F.	S.Y.	S.Y.	S.F.	S.Y.
1-P				177.8			177.8
2-P				177.8			177.8
3-P		6.4			6.4		
4-P	2.4						
5-P	2.4						
1-S			410				410
2-S			410				410
3-S			182				182
4-S			270				270
TOTAL*	5	6	1272	356	6	1272	356

* TO GENERAL SUMMARY



LEGEND	
	ITEM 202 - PAV'T. AND SIDEWALK REMOVAL
	ITEM 608 - 4" CONCRETE WALK
	ITEM 452 - 8" PLAIN PORTLAND CONCRETE PAV'T.
	REMOVE EX. ASPHALT (APPROX. 3") DOWN TO EX. CONC. BASE AND REPLACE WITH ITEM 446- ASPHALT CONC. SURFACE COURSE, TYPE-1
CL.	- CLEARANCE
C.J.	- CONSTRUCTION JOINT
EX.	- EXISTING
M.H.	- MANHOLE
PAV'T.	- PAVEMENT
TYP.	- TYPICAL
	EXISTING STRUCTURE
	NEW STRUCTURE

APPROACH SLAB DETAILS - BROAD STREET

GENERAL NOTES AND DETAILS FOR POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM

CALC. BY	FRANKLIN COUNTY FRA-315-0.48	OHIO	84A 163
DATE		FHWA REGION 5	
CHKD. BY			
DATE			

ITEM SPECIAL - POLYMER-MODIFIED ASPHALT EXPANSION JOINT SYSTEM

THIS ITEM WILL BE USED TO SEAL THE EXPANSION/CONTRACTION JOINTS AS PER THESE DETAILS AND THE MANUFACTURER'S REQUIREMENTS USING A POLYMER-MODIFIED ASPHALT SYSTEM. THE PRIME CONTRACTOR WILL OBTAIN THE SERVICES OF ONE OF THE FOLLOWING APPROVED APPLICATORS WHO WILL FURNISH AND INSTALL THE NEW BRIDGE EXPANSION JOINT SYSTEM AFTER ALL PAVING ON THE AFFECTED BRIDGE(S) HAS BEEN COMPLETED.

D.S. BROWN COMPANY P.O. BOX 158 300 E. CHERRY STREET N. BALTIMORE, OH 45872-0158 TEL: (419) 257-3561	LINEAR DYNAMICS, INC. RD #2 BOX 311 MUNCY, PA 17756 TEL: (717) 546-6041	INFRASTRUCTURE SYSTEMS, INC. 830 E. HIGGINS ROAD SUITE 111M CHICAGO, IL 60173-4792 TEL: (708) 706-9230
--	--	--

HARRIS SPECIALTY CHEMICALS, INC.
10245 CENTURION PARKWAY, N.
JACKSONVILLE, FL 32256
TEL: (904) 996-6000

MATERIALS:

BRIDGING PLATE:

MILD STEEL 1/8" OR 1/4" THICK PLATE, 8" WIDE OR 18 GAUGE ALUMINUM, 8" WIDE.

BINDER:

TYPE:	POLYMER MODIFIED ASPHALT
SOFTENING POINT:	180 DEGREES F. MIN.
FLOW:	3 mm. MAX. AT 140 DEGREES F.
PENETRATION:	9 mm. MAX. AT 77 DEGREES F. 1 mm. MIN AT 0 DEGREES F. ASTM D 3407
DUCTILITY:	40 cm. MIN. ASTM D 113
RESILIENCE:	60% MIN. AT 77 DEGREES F.
TENSILE ADHESION:	700% MIN.
SPECIFIC GRAVITY:	1.10 ± 0.05
POURING TEMP:	350 - 390 DEGREES F.

AGGREGATE:

TYPE: CRUSHED, DOUBLE WASHED, AND DRIED GRANITE OR BASALT

GRADATION: THE GRADATION OF THE AGGREGATE VARIES BY MANUFACTURER AND WILL BE AS PER THE MANUFACTURER'S RECOMMENDATIONS FOR THE SYSTEM BEING USED ON THIS PROJECT.

BACKER ROD:

THE BACKER SHALL BE A CLOSED CELL FOAM EXPANSION JOINT FILLER CAPABLE OF WITHSTANDING THE PLACEMENT TEMPERATURE OF THE POLYMER MODIFIED ASPHALT.

INSTALLATION PROCEDURES:

SAWING AND SURFACE PREPARATION:

AFTER ALL PAVING OPERATIONS ARE COMPLETE, THE OVERLAY IS TO BE TRANSVERSELY SAW CUT FULL DEPTH NO LESS THAN TWO INCHES DEEP (20" CENTERED OVER JOINT OPENING, UNLESS OTHERWISE NOTED). REMOVE ALL MATERIAL, INCLUDING WATER-PROOFING MATERIAL, BETWEEN SAW CUTS. THOROUGHLY CLEAN AND DRY EXPOSED CONCRETE, STEEL, AND CUT SURFACES USING COMPRESSED AIR AND A HOT COMPRESSED AIR (HCA) LANCE. THE LANCE MUST PRODUCE A FLAME RETARDED AIR STREAM TEMPERATURE OF 3000 DEGREES F. AT A VELOCITY OF 3,000 FEET PER SECOND WITH 15 PSIG CHAMBER PRESSURE. IF THERE IS AN INTERRUPTION DUE TO WEATHER OR OTHER CAUSES, THE OPERATION WILL BE REPEATED WITH THE HCA LANCE IMMEDIATELY BEFORE THE BINDER COAT OPERATION. ALSO, 6 INCHES OF THE ROAD SURFACE ON EITHER SIDE OF THE JOINT WILL BE DRIED SO THAT A SUITABLE SURFACE FOR BITUMEN ADHESION IS OBTAINED.

SEALING OF EXPANSION JOINT: (CONCRETE SLAB)

THE EXPANSION JOINT GAP IS TO BE SEALED AND A BRIDGING PLATE CENTERED ALONG IT. A VERY NARROW GAP WILL BE SEALED BY POURING HOT BINDER INTO THE GAP. GAPS OF 1/8" OR MORE WILL FIRST BE FILLED WITH AN APPROPRIATELY SIZED BACKER ROD. THE BACKER ROD WILL BE INSTALLED SO THAT IT IS BETWEEN 1/8" AND 1-1/8" BELOW THE TOP OF THE EXISTING GAP. THE GAP WILL THEN BE FILLED WITH BINDER.

BOND BREAKER:

SPREAD BINDER OVER SURFACE AREA WHERE THE METAL BRIDGING PLATE WILL BE PLACED. CENTER THE BRIDGING PLATE OVER THE EXISTING JOINT AND BED INTO THE HOT BINDER. BUTT JOINT THE BRIDGING PLATES TO ACCOMMODATE THE ENTIRE JOINT LENGTH. SPIKE HOLES WILL BE DRILLED AT 1 FOOT INTERVALS ALONG THE LONGITUDINAL CENTERLINE OF THE PLATES. SECURE BRIDGING PLATE WITH NAILS OR SPIKES. SEAL BUTT JOINTS WITH HOT BINDER AND ALLOW BINDER TO SETUP BEFORE NEXT OPERATION. WHEN ALUMINUM BRIDGING PLATES ARE USED, ONLY THE BINDER IS REQUIRED TO SECURE THE INDIVIDUAL PLATES.

BINDER COAT:

SEAL ALL PREPARED, EXPOSED SURFACES OF THE JOINT WITH BINDER. POUR THE HOT BINDER OVER THE FLOOR AREA OF THE JOINT AND SPREAD TO COAT ALL EXPOSED SURFACES. THE BINDER WILL BE A MINIMUM OF 1/32" THICK ON THE BOTTOM OF THE JOINT CAVITY, WITH POOLS OF GREATER THICKNESS WHERE SURFACE IRREGULARITIES EXIST. THE BINDER APPLICATION TEMPERATURE WILL BE BETWEEN 350 AND 390 DEGREES F. THE BINDER WILL NOT BE ALLOWED TO BE HEATED ABOVE 410 DEGREES F. NOR ALLOWED TO EXCEED 390 DEGREES F. FOR MORE THAN 1 HOUR. A DOUBLE JACKETED OIL MELTER WILL BE USED TO HEAT THE BINDER. THE MELTER WILL BE EQUIPPED WITH A CONTINUOUS AGITATION SYSTEM, TEMPERATURE CONTROLS, AND A CALIBRATED THERMOMETER. ALSO A SYSTEM FOR ACCURATELY MEASURING THE WEIGHTS OF THE BINDER AND THE AGGREGATE WILL BE REQUIRED.

BUILD-UP OF JOINT LAYERS:

AGGREGATE PREPARATION:

HEAT THE AGGREGATE TO A TEMPERATURE OF 275 TO 325 DEGREES F., WITH A SUITABLE ROTATING DRUM WITH ATTACHED HEAT SOURCE OR A HOT COMPRESSED AIR LANCE, TO REMOVE DUST AND MOISTURE.

AGGREGATE PROPORTION AND LAYER THICKNESS:

MIX THE AGGREGATE WITH THE BINDER SUCH THAT THE MINIMUM AGGREGATE CONTENT BY WEIGHT WILL BE 68%. THE HEATED AGGREGATE AND BINDER WILL BE COMBINED IN LAYERS, UNLESS PATENTED INSTALLATION REQUIRES DIFFERENTLY, NOT LESS THAN 1/2 OF AN INCH NOR EXCEEDING 2-1/2 INCHES. THE THICKNESS OF EACH LAYER CAN BE VARIED WITHIN THESE LIMITS, TO ACHIEVE THE REQUIRED JOINT THICKNESS (MIN. 2 INCHES). THE OBJECTIVE IS TO COAT EACH STONE AND FILL THE VOIDS WHILE AVOIDING AN EXCESS OF BINDER. THIS WILL ACHIEVE THE MAXIMUM CONTENT OF STONE CONSISTENT WITH ALL STONES BEING COATED WITH BINDER. RAKE THE MIXTURE TO MIX AND LEVEL.

THE TOP LAYER THICKNESS WILL VARY BETWEEN 1/2 INCH AND ONE (1) INCH. IN PREPARING THE TOP LAYER, THE RATIO OF AGGREGATE TO BINDER WILL BE APPROXIMATELY 6:1 BY WEIGHT. OVERFILL THE TOP LAYER AND COMPACT TO THE LEVEL OF THE ADJACENT SURFACES USING A ROLLER OR VIBRATORY PLATE COMPACTOR. IMMEDIATELY AFTER COMPLETION OF THE COMPACTION, POUR SUFFICIENT BINDER OVER THE JOINT TO FILL THE SURFACE VOIDS AND COAT THE SURFACE STONE. DUST THE FINISHED JOINT WITH A FINE, DRY AGGREGATE TO PREVENT TACKINESS.

MAINTENANCE OF TRAFFIC:

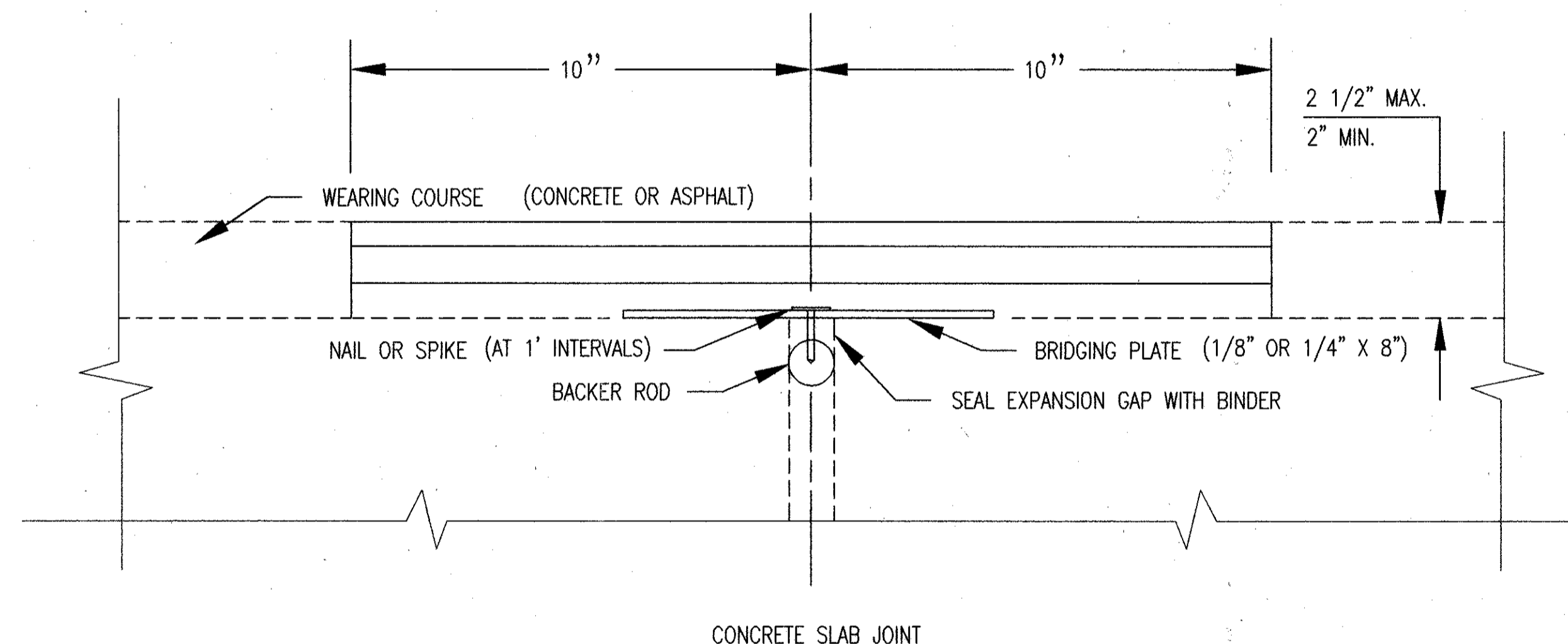
IF NECESSARY TO FACILITATE TRAFFIC MAINTENANCE, THE JOINT WILL BE INSTALLED IN TWO (2) HALF-WIDTH PHASES. DURING PHASE 1 APPROXIMATELY HALF OF THE TOTAL JOINT WILL BE INSTALLED. DURING PHASE 2, A MINIMUM OF TWO (2) INCHES OF THE PHASE 1 JOINT WILL BE REMOVED, AT OR NEAR THE CENTERLINE, WITH THE REMAINDER OF THE JOINT INSTALLED. IN ALL CASES, OPERATIONS WILL BE SCHEDULED SO THAT ALL LANES CAN BE OPEN TO TRAFFIC DURING ALL NON-WORKING HOURS.

TESTING:

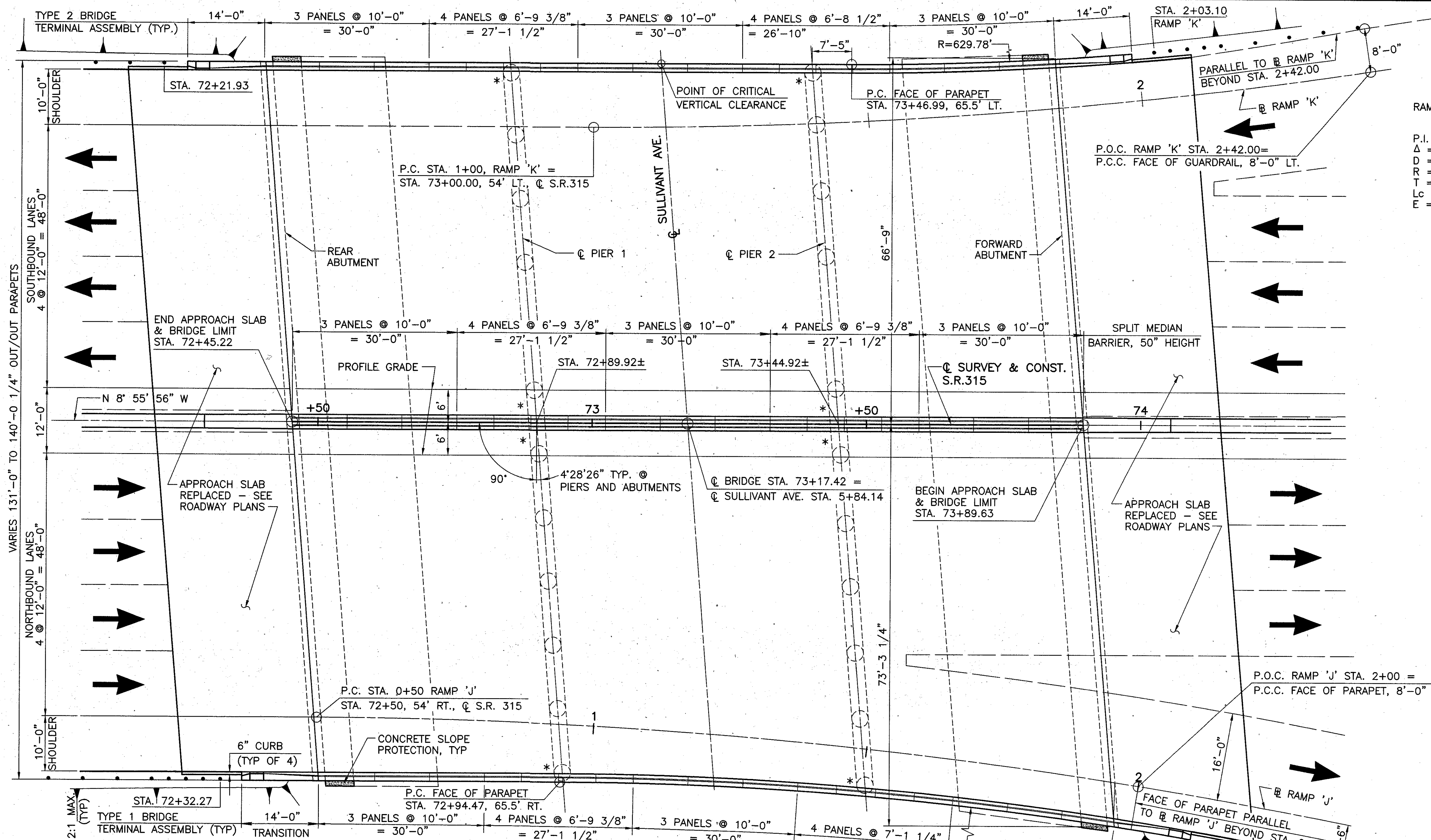
CERTIFICATION WILL BE SUPPLIED FOR EACH PROJECT SHOWING BINDER COMPLIANCE WITH REQUIRED PROPERTIES. A ONE QUART SAMPLE OF BINDER WILL BE RETRIEVED FROM EACH BRIDGE FOR FURTHER TESTING BY THE O.D.O.T TESTING LABORATORY.

PAYMENT:

PAYMENT FOR ALL THE ABOVE WILL BE AT THE UNIT PRICE BID PER LINEAR FOOT OF SEALED JOINT IN PLACE FOR ITEM SPECIAL 516 31300, POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM (2 INCHES THICK MIN.). THIS WILL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.



STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 8121 HUNTLEY ROAD, COLUMBUS, OHIO 43229					
POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM					
BRIDGE NOS. FRA-315-0049, FRA-315-0059, FRA-315-0067					
FRANKLIN COUNTY					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
MAM	MAM				



SULLIVANT AVE. BRIDGE CURVE DATA

RAMP J DATA:		EAST (J) FACE OF PARAPET DATA:		RAMP K DATA:		WEST (K) FACE OF PARAPET DATA:	
P.I. = STA. 1+74.00	Δ = 14° 47' 50"	Δ = 9° 00'	D = 8° 38' 47"	P.I. = STA. 2+36.00	Δ = 16° 12' 40"	Δ = 8° 31' 12"	D = 9° 05' 52"
D = 6° 00'	R = 954.93'	R = 662.65'	T = 124.00'	R = 954.93'	R = 629.78'	T = 46.91'	Lc = 93.65'
Lc = 246.62'	E = 8.02'	Lc = 104.09'	E = 9.64'	Lc = 270.18'	E = 9.64'		

BENCHMARK: B.M. 32 CHISELED □ ON NORTHWEST CORNER ON CONCRETE LIGHT POLE BASE AT SUNSHINE PARK. (U.S.G.S. DATUM)
STA. 72+58, 200' RIGHT OF C S.R. 315. EL. 714.66

TRAFFIC DATA

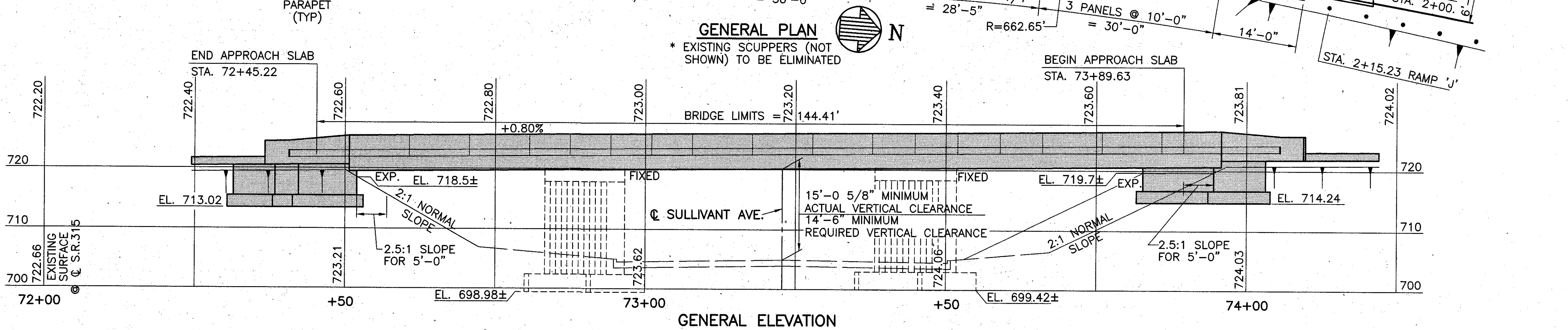
CURRENT ADT (1997): 99,554
DESIGN YEAR ADT (2017): 127,027
D.H.V.: 8257
D: 65%
PERCENTAGE TRUCKS: 5%
DESIGN SPEED: 55 M.P.H.
LEGAL SPEED: 55 M.P.H.
CLASSIFICATION: URBAN-OTHER FREEWAYS AND EXPRESSWAYS

EXISTING STRUCTURE

TYPE : 3 SPAN CONTINUOUS CONCRETE SLAB WITH REINFORCED CONCRETE SUBSTRUCTURE
SPANS : 44'-55'-44' C/C BEARINGS ALONG THE C S.R. 315
LOAD FREQUENCY RATING : CF 2000 (51) - (ADEQUATE FOR AASHTO ALTERNATE LOADING)
ROADWAY : VARIABLE
SKEW : 4'-28'-26" RIGHT FORWARD
SURFACE COURSE : BITUMINOUS CONCRETE 2 1/2"± THICK
APPROACH SLABS : AS-1-54, 25' LONG
ALIGNMENT : TANGENT
SUPERELEVATION : NONE

PROPOSED STRUCTURE

TYPE : NEW 3 SPAN CONTINUOUS REINFORCED CONCRETE SLAB SUPERSTRUCTURE SUPPORTED BY NEW REINFORCED CONCRETE ABUTMENT AND EXISTING REINFORCED CONCRETE PIERS
SPANS : 44'-0": 55'-0": 44'-0" C/C BEARINGS ALONG THE C S.R.315
DESIGN LOADING : HS20-44 AND THE ALTERNATE MILITARY LOADING
ROADWAY : VARIABLE
SKEW : 4'-28'-26" RIGHT FORWARD
WEARING SURFACE : MONOLITHIC CONCRETE - ONE INCH ASSUMED
APPROACH SLABS : AS-1-81, 25' LONG
ALIGNMENT : TANGENT
SUPERELEVATION : NONE (SEE SCREED PLAN)
STRUCTURE FILE NO. : 2514923
LATITUDE : N 39° 57' 14"
LONGITUDE : W 83° 01' 04"



GENERAL PLAN
* EXISTING SCUPPERS (NOT SHOWN) TO BE ELIMINATED

STILSON & ASSOCIATES, INC.
CONSULTING ENGINEERING AND ARCHITECTURE
6121 HUNTLEY ROAD, COLUMBUS, OHIO 43229

GENERAL PLAN AND ELEVATION
BRIDGE NO. FRA-315-0049
OVER SULLIVANT AVENUE
FRANKLIN COUNTY
STA. 72+45.22 TO STA. 73+89.63

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
TEU	GV		BRH	RKM	11/07/97	
				TDW	10/29/97	

[00] STRUCTURE 0313143 (CONTRACT) SA-PLAN.DWG - NOV 14, 1997 - 09:22:37 - PLOT: 1-120

ESTIMATED QUANTITIES

GENERAL BRIDGE NOTES

CALC. BY TEU DATE 9-97 CHKD. PHB BY DATE 10-97	FRANKLIN COUNTY FRA-315-0.48	OHIO FHWA REGION 5 86 163
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ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	R. ABUT. & WINGWALLS	F. ABUT. & WINGWALLS	PIERS	SUPER.	GENERAL
202	11203	LUMP	LUMP	PORTIONS OF STRUCTURE REMOVED, OVER 20' SPAN, AS PER PLAN					LUMP
202	23500	1950	SQ.YD.	WEARING COURSE REMOVED				1950	
202	30500	144.50	LIN.FT.	CONCRETE MEDIAN REMOVED				144.50	
202	30700	289	LIN.FT.	CONCRETE BARRIER REMOVED				289	
202	32800	172	SQ.YD.	CONCRETE SLOPE PROTECTION REMOVED	83	89			
SPECIAL	20270000	16	LIN.FT.	FILL AND PLUG EXISTING CONDUIT					16
202	75506	6	EACH	LUMINAIRE REMOVED				6	
202	98000	LUMP	LUMP	REMOVAL MISC.: DOWNSPOUTS AND CONNECTOR PIPING				LUMP	
503	11100	LUMP	LUMP	COFFERDAMS, CRIBS AND SHEETING	LUMP	LUMP			
503	21301	LUMP	LUMP	UNCLASSIFIED EXCAVATION, AS PER PLAN	LUMP	LUMP			
511	44100	133	CU.YD.	CLASS C CONCRETE, ABUTMENT NOT INCLUDING FOOTING	64	69			
511	46500	119	CU.YD.	CLASS C CONCRETE, FOOTING	58	61			
SPECIAL	51148000	1555	CU.YD.	HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE (DECK) (SEE PROPOSAL NOTE)				1555	
SPECIAL	51148020	74	CU.YD.	HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE (PARAPET) (SEE PROPOSAL NOTE)				74	
SPECIAL	51149000	LUMP	LUMP	HIGH PERFORMANCE CONCRETE, TRIAL MIX (SEE PROPOSAL NOTE)				LUMP	
SPECIAL	51149010	LUMP	LUMP	HIGH PERFORMANCE CONCRETE, TESTING (SEE PROPOSAL NOTE)				LUMP	
SPECIAL	51267500	897	SQ.YD.	SEALING OF CONCRETE SURFACES (SEE PROPOSAL NOTE)	30	33		834	
SPECIAL	51267502	570	SQ.YD.	SEALING OF CONCRETE SURFACES, EPOXY (SEE PROPOSAL NOTE)				570	
516	13600	24	SQ.FT.	1 INCH PREFORMED EXPANSION JOINT FILLER	12	12			
516	42600	272	LIN.FT.	ELASTOMERIC BEARING PAD, MISC.: 1" THICK x 7.75" WIDE	132	140			
518	21230	LUMP	LUMP	POROUS BACKFILL, WITH FILTER FABRIC	LUMP	LUMP			
518	40000	264	LIN.FT.	6" PERFORATED CORRUGATED PLASTIC PIPE	128	136			
518	40010	44	LIN.FT.	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	22	22			
SPECIAL	51911502	52	SQ.FT.	PATCHING CONCRETE STRUCTURE WITH TROWELABLE MORTAR (SEE PROPOSAL NOTE)				52	
601	21000	165	SQ.YD.	CONCRETE SLOPE PROTECTION *	80	85			
625	25400	433.23	LIN.FT.	CONDUIT, 2", 713.04				433.23	

* THIS ITEM INCLUDES THE CRUSHED AGGREGATE SLOPE PROTECTION AS SHOWN IN THE SIDE SLOPE OUTLET DETAIL.

SUGGESTED DEMOLITION PROCEDURE

- REMOVE THE EXISTING SURFACE WEARING COURSE, CONCRETE MEDIAN CURB AND SAFETY CURB AND RAILING ABOVE THE CONCRETE DECK SLAB.
- REMOVE THE LUMINAIRES AND SCUPPER DOWNSPOUTS AND CONNECTOR PIPING FROM THE PIER CAP AND COLUMNS.
- RELOCATE THE GUY WIRES AND/OR ELECTRIC FROM BELOW THE DECK AT PIER NO.1.
- PROVIDE SHORING FOR THE PIER CAP BEAMS THROUGHOUT THE DEMOLITION AND NEW CONSTRUCTION PHASES OF THIS PROJECT.
- REFER TO THE PIER NOTES ON SHEET 13/20 FOR SAWCUTTING THE PIER CAP BEAM AND SALVAGING THE STIRRUP REINFORCING.
- REMOVE THE EXISTING CONCRETE DECK SLAB. CARE SHALL BE TAKEN SO AS TO MINIMIZE THE TORSIONAL EFFECTS AND/OR DISTRESS TO THE PIER CAP BEAMS WHICH ARE TO BE INCORPORATED INTO THE NEW DECK.
- SAWCUT AND REMOVE THE UPPER 5'-0" PORTION OF THE EXISTING CONCRETE SLOPE PROTECTION AT EACH ABUTMENT.
- INSTALL TEMPORARY SHEETING TO PROTECT THE REMAINING EMBANKMENT IN FRONT OF THE ABUTMENTS.
- REMOVE THE EXISTING APPROACH SLABS.
- COMPLETELY REMOVE THE EXISTING ABUTMENT WALLS AND FOOTINGS. THEN COMPLETE THE REQUIRED EXCAVATION FOR THE ABUTMENTS.
- CONSTRUCT THE NEW ABUTMENTS, EMBANKMENT, BRIDGE DECK SLAB, PARAPETS, MEDIANS AND APPROACH SLABS.

STANDARD DRAWING REFERENCES

DESCRIPTION	DWG. NO.	SHT.	DATE
REINFORCED CONCRETE APPROACH SLAB	AS-1-81	1-3	9-15-94R
BRIDGE RAILING DEFLECTOR PARAPET TYPE	BR-1	2 OF 2	12-15-94R
CONTINUOUS SLAB BRIDGE	CS-1-93	1-3	6-30-95R

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1996, AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING

HS20-44 AND THE ALTERNATE MILITARY LOADING.

DESIGN DATA

HIGH PERFORMANCE CONCRETE-- COMPRESSIVE STRENGTH 4500 P.S.I. (SUPERSTRUCTURE)

CONCRETE CLASS C - COMPRESSIVE STRENGTH 4000 P.S.I. (SUBSTRUCTURE)

REINFORCING STEEL - ASTM A615, A616 OR A617 GRADE 60 MINIMUM YIELD STRENGTH 60,000 P.S.I.

DECK PROTECTION METHOD

EPOXY COATED REINFORCING STEEL.
2-1/2" CONCRETE COVER.
SEALING OF CONCRETE SURFACES.

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1" THICK.

SEALING OF CONCRETE SURFACES (EPOXY)

THE SEALING PRODUCT SELECTED SHALL BE COMPATIBLE WITH THE MORTAR PRODUCTS USED FOR THE SURFACE REPAIRS. CONTRACTOR SHALL SUBMIT SEALING PRODUCT MANUFACTURER'S CERTIFICATION OF COMPATIBILITY.

REMOVAL OF EXISTING STRUCTURE

WHEN NO LONGER NEEDED TO MAINTAIN TRAFFIC THE EXISTING SUPERSTRUCTURE SHALL BE REMOVED. ABUTMENTS AND WINGWALLS SHALL BE COMPLETELY REMOVED. PIER CAP SHALL BE REMOVED TO THE LIMITS SHOWN ON THE PIER PLANS.

PORTIONS OF STRUCTURE REMOVED, AS PER PLAN SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE, CONCRETE MEDIAN AND CONCRETE BARRIER REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. ALL WORK SHALL BE DONE IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

ITEM 503, UNCLASSIFIED EXCAVATION, AS PER PLAN

UNCLASSIFIED EXCAVATION SHALL BE IN ACCORDANCE WITH 503 EXCEPT THAT THE BACKFILL MATERIAL BEHIND THE ABUTMENTS SHALL BE 203 MATERIAL PLACED IN LIFTS NOT TO EXCEED A THICKNESS OF SIX (6) INCHES.

FOUNDATION BEARING PRESSURE

ABUTMENT FOOTINGS, AS DESIGNED, PRODUCE A MAXIMUM BEARING PRESSURE OF 1.6 TONS PER SQUARE FEET. THE ALLOWABLE BEARING PRESSURE IS 1.6 TONS PER SQUARE FOOT, WHICH CORRESPONDS TO THE ALLOWABLE BEARING PRESSURE FOR THE EXISTING ABUTMENTS AS PER THE ORIGINAL BRIDGE PLANS.

UTILITY LINES

ALL EXPENSE INVOLVED IN RELOCATION (INSTALLING) THE AFFECTED UTILITY LINES SHALL BE BORNE BY THE UTILITY(IES). PARTICULAR ATTENTION SHALL BE PAID TO THE TWO GUY WIRES UNDER THE DECK AT THE NORTH SIDE PIER NO. 1. THE CONTRACTOR AND UTILITY(IES) ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, AND 105.02.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD.

EXISTING BRIDGE PLANS ARE ON FILE FOR INSPECTION, IF NECESSARY, AT THE O.D.O.T. OFFICE OF STRUCTURAL ENGINEERING IN COLUMBUS, OHIO.

REPLACEMENT OF EXISTING REINFORCING STEEL

ANY EXISTING REINFORCING BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND WHICH ARE MADE UNUSABLE BY THE CONTRACTOR'S CONCRETE REMOVAL OPERATIONS SHALL BE REPLACED WITH NEW STEEL AT THE CONTRACTOR'S COST. ANY EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION SHALL BE REPLACED WITH NEW STEEL. COST OF ALL REINFORCING STEEL SHALL BE INCLUDED IN ITEM SPECIAL, HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE (DECK).

CONCRETE PARAPETS

AS SOON AS A CONCRETE SAW CAN BE OPERATED WITHOUT DAMAGING THE FRESHLY PLACED CONCRETE, 1 INCH DEEP CONTROL JOINTS SHALL BE SAWED INTO THE PERIMETER OF THE CONCRETE PARAPET. THE SAW CUT SHALL BE MADE IN THE COMPLETE CIRCUMFERENCE OF THE PARAPET, STARTING AND ENDING AT THE ELEVATION OF THE CONCRETE DECK. THE SAW CUTS SHALL BE PLACED AS SHOWN ON SHEET 1. THE USE OF AN EDGE GUIDE, FENCE, OR JIG IS REQUIRED TO INSURE THAT THE CUT JOINT IS STRAIGHT, TRUE, AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAW BLADE, A NOMINAL WIDTH OF 1/4 INCH. THE PERIMETER OF THE DEFLECTION CONTROL JOINT SHALL BE SEALED TO A MINIMUM DEPTH OF 1 INCH WITH A CAULKING MATERIAL CONFORMING TO FEDERAL SPECIFICATION, TT-S-00227E. REFER TO CMS PARAGRAPH 511.081 FOR ADDITIONAL PROVISIONS. THE BOTTOM ONE HALF INCH OF BOTH THE INSIDE AND OUTSIDE FACES OF THE PARAPET SHOULD BE LEFT UNSEALED TO ALLOW ANY WATER WHICH MAY ENTER THE JOINT TO ESCAPE.

CONCRETE MEDIAN BARRIER

SAWCUTS FOR THE CRACK CONTROL JOINTS SHALL BE MADE ON THE TRAFFIC AND TOP FACES ONLY.

CUT LINE CONSTRUCTION JOINT PREPARATION

SAWCUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1" DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. WHERE PRACTICABLE, THE EXISTING REINFORCING STEEL WHERE REQUIRED IN THE PLANS SHALL BE LEFT IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACE AND EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THE JOINT SURFACE AND EXPOSED REINFORCEMENT SHALL BE THOROUGHLY CLEANED OF ALL DIRT, DUST, OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. CONCRETE BONDING SURFACES SHALL BE WET WITHOUT FREE WATER AS CONCRETE IS PLACED.

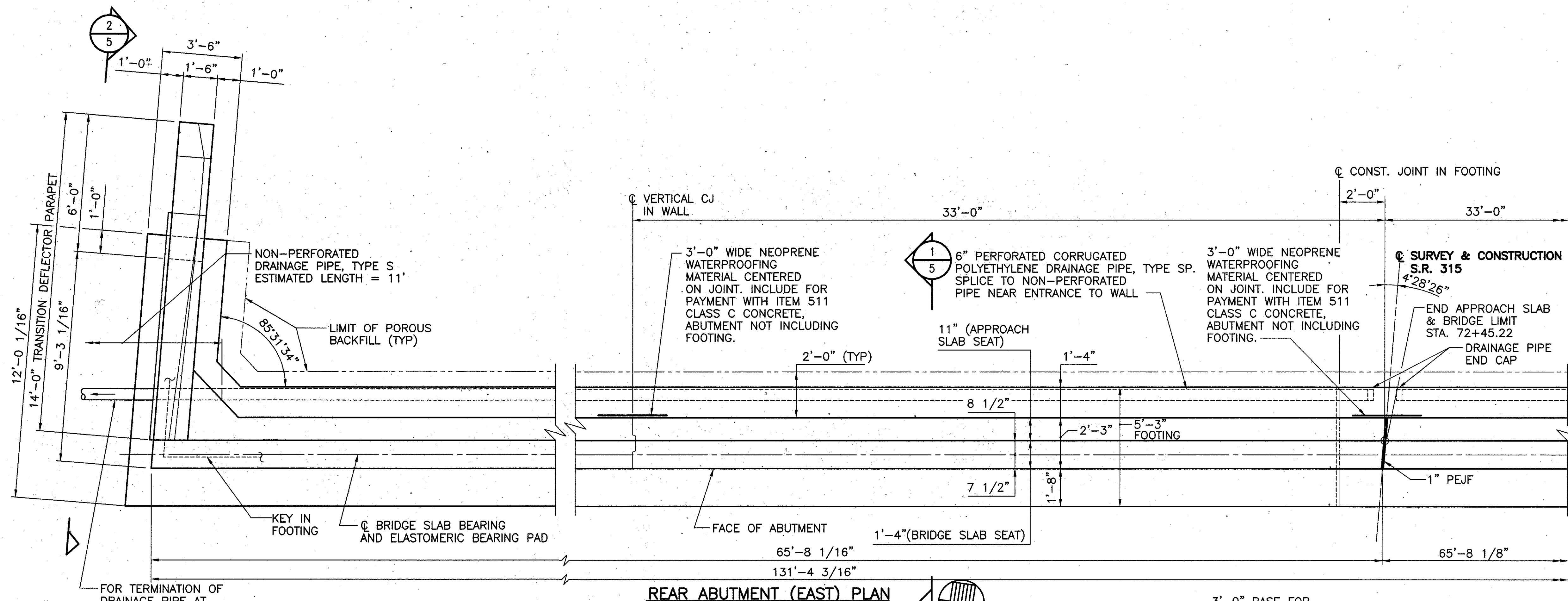
UNDERPASS LIGHTING

FOR UNDERPASS LIGHTING NOTES AND DETAILS SEE HIGHWAY SHEET 62/163

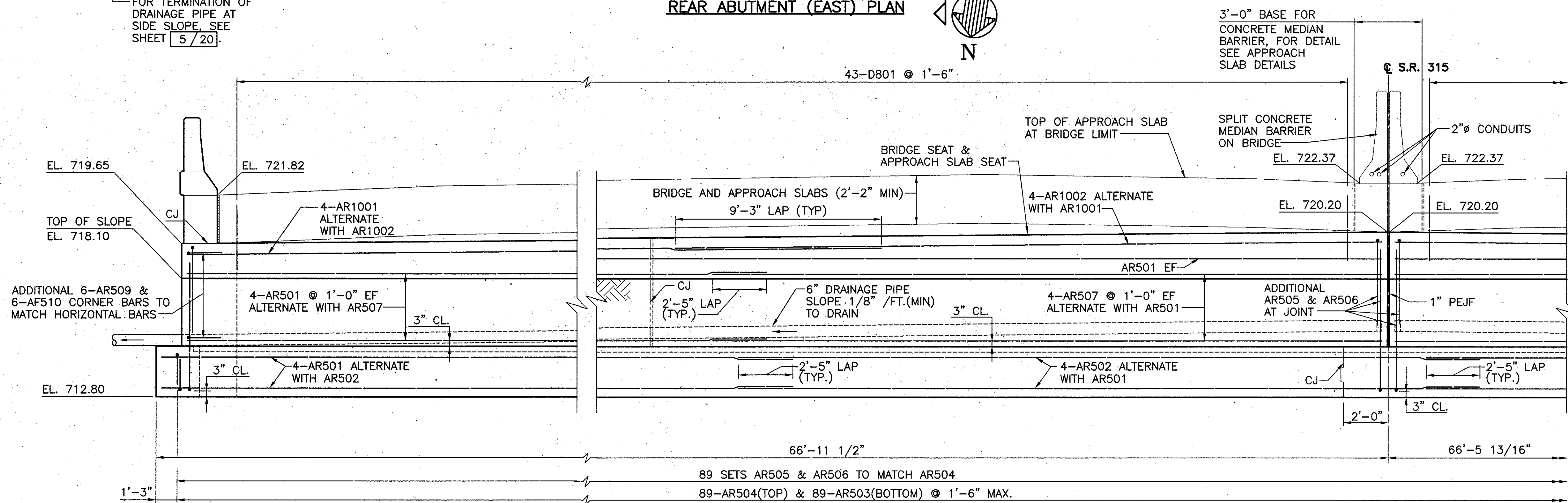
STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 9121 HUNTLEY ROAD, COLUMBUS, OHIO 43229						
ESTIMATED QUANTITIES AND GENERAL NOTES BRIDGE NO. FRA-315-0049 OVER SULLIVANT AVENUE FRANKLIN COUNTY STA. 72+45.22 TO STA. 73+89.63						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
TEU	RTP		PHB	RKM	11/07/97	
				TDW	10/29/97	

SUBSTRUCTURE-NOTES:

- POROUS BACKFILL WITH FILTER FABRIC, 2 FEET THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, TO ONE FOOT BELOW THE EMBANKMENT SURFACE, AND Laterally TO THE ENDS OF THE WINGWALLS.
- THE 3'-0" WIDE NEOPRENE WATERPROOFING MATERIAL SHALL BE CENTERED ON THE ABUTMENT EXPANSION AND CONSTRUCTION JOINTS AND SHALL EXTEND FROM TOP OF THE FOOTING UP TO THE BRIDGE SLAB SEAT.
- SAW CUT THE EXISTING CONCRETE SLOPE PROTECTION SHALL BE INCLUDED WITH ITEM 202 - CONCRETE SLOPE PROTECTION REMOVED, FOR PAYMENT.
- THE CRUSHED AGGREGATE FOR THE DRAINAGE PIPE TERMINATION SHALL BE INCLUDED WITH ITEM 601 CONCRETE SLOPE PROTECTION, FOR PAYMENT.
- THE CONCRETE BASE FOR THE MEDIAN CONCRETE BARRIER SHALL NOT BE ANCHORED INTO THE ABUTMENT. DOWEL BARS MARK D801 SHALL NOT BE INSTALLED WITHIN THE CONCRETE BASE LIMIT.



REAR ABUTMENT (EAST) PLAN



REAR ABUTMENT (EAST) ELEVATION

LEGEND	
CL	- CLEAR
TYP	- TYPICAL
EF	- EACH FACE
NF	- NEAR FACE
FF	- FAR FACE
C/C	- CENTER TO CENTER
CJ	- CONSTRUCTION JOINT
PEJF	- PREFORMED EXPANSION JOINT FILLER
SPA	- SPACING
EXISTING STRUCTURE	
NEW STRUCTURE	

STILSON & ASSOCIATES, INC.
CONSULTING ENGINEERING AND ARCHITECTURE
6121 HUNTLEY ROAD, COLUMBUS, OHIO 43229

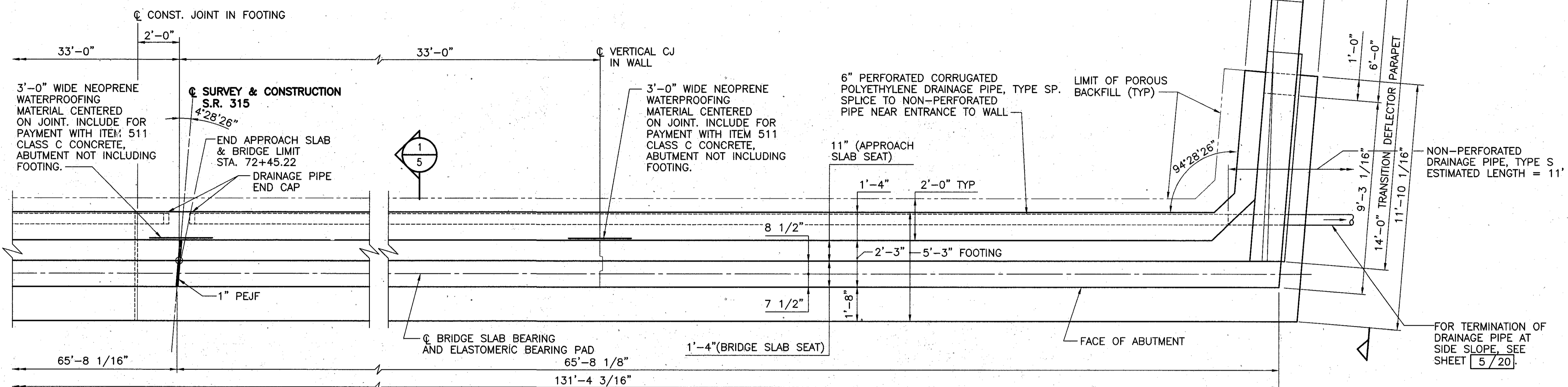
REAR ABUTMENT - EAST HALF DETAILS

BRIDGE NO. FRA-315-0049
OVER SULLIVANT AVENUE

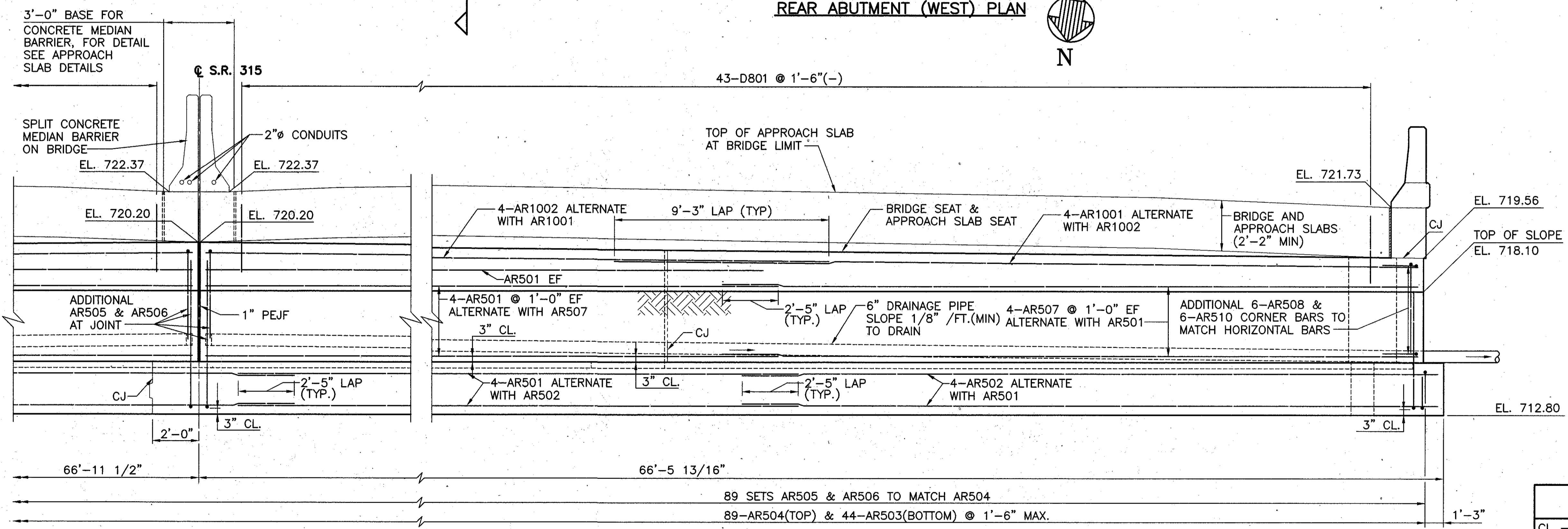
FRANKLIN COUNTY STA. 72+45.22 TO STA. 73+89.63

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
BRH	GV		TEU	RKM	11/07/97	
				TEU	10/29/97	

(001) STILSON & ASSOCIATES, INC. - NOV 14, 1997 - 082701 - PLAN 1-22



REAR ABUTMENT (WEST) PLAN

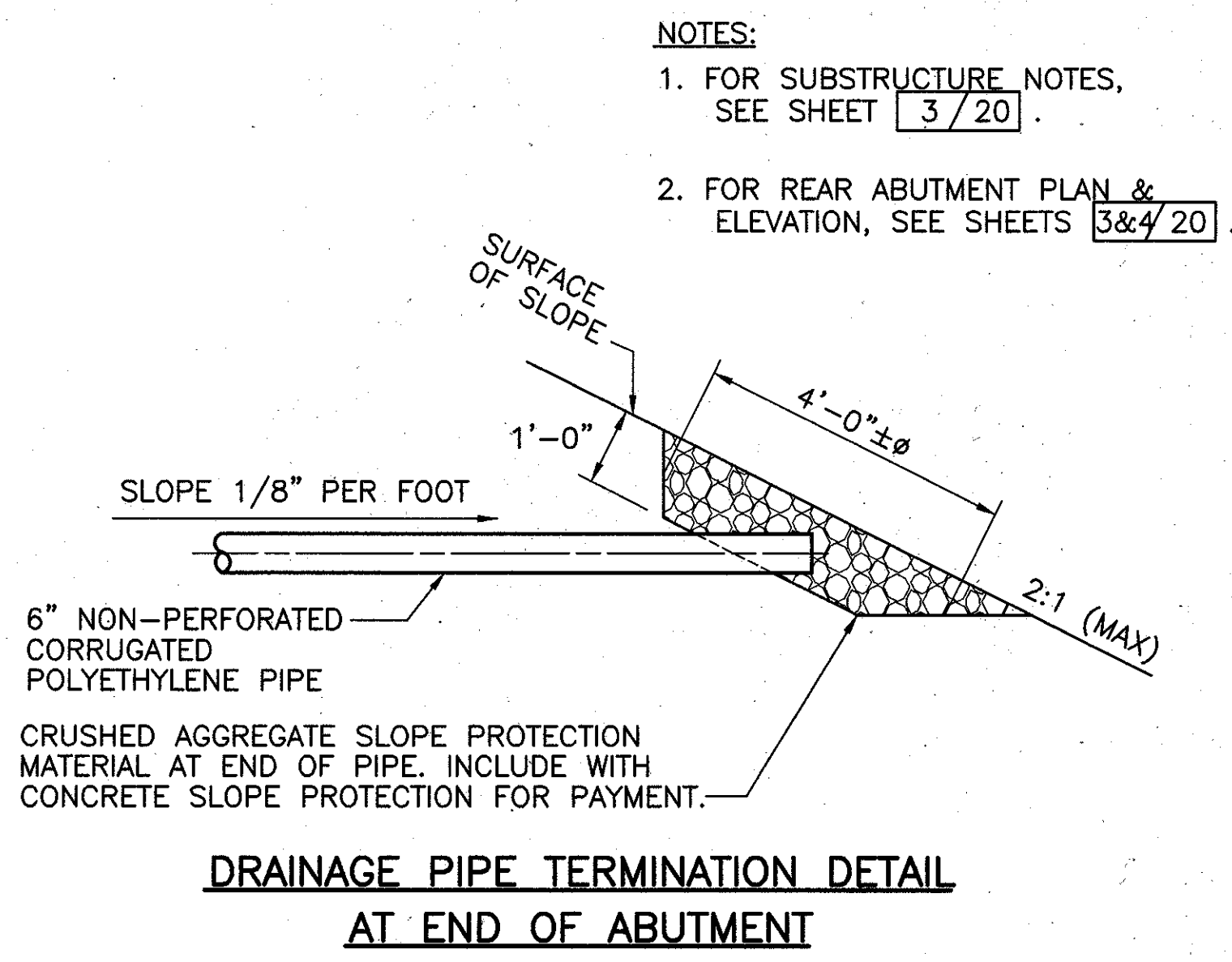
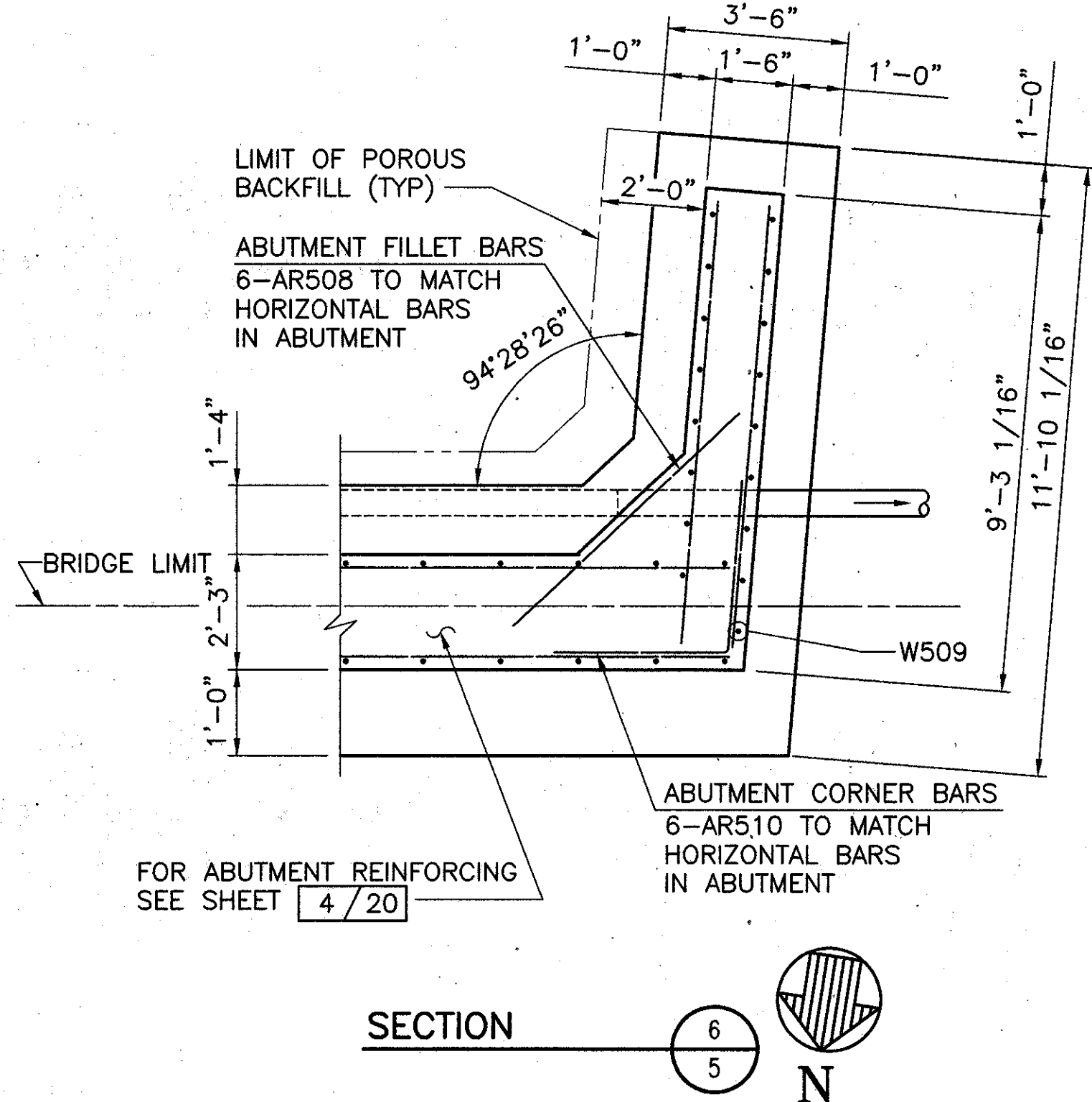
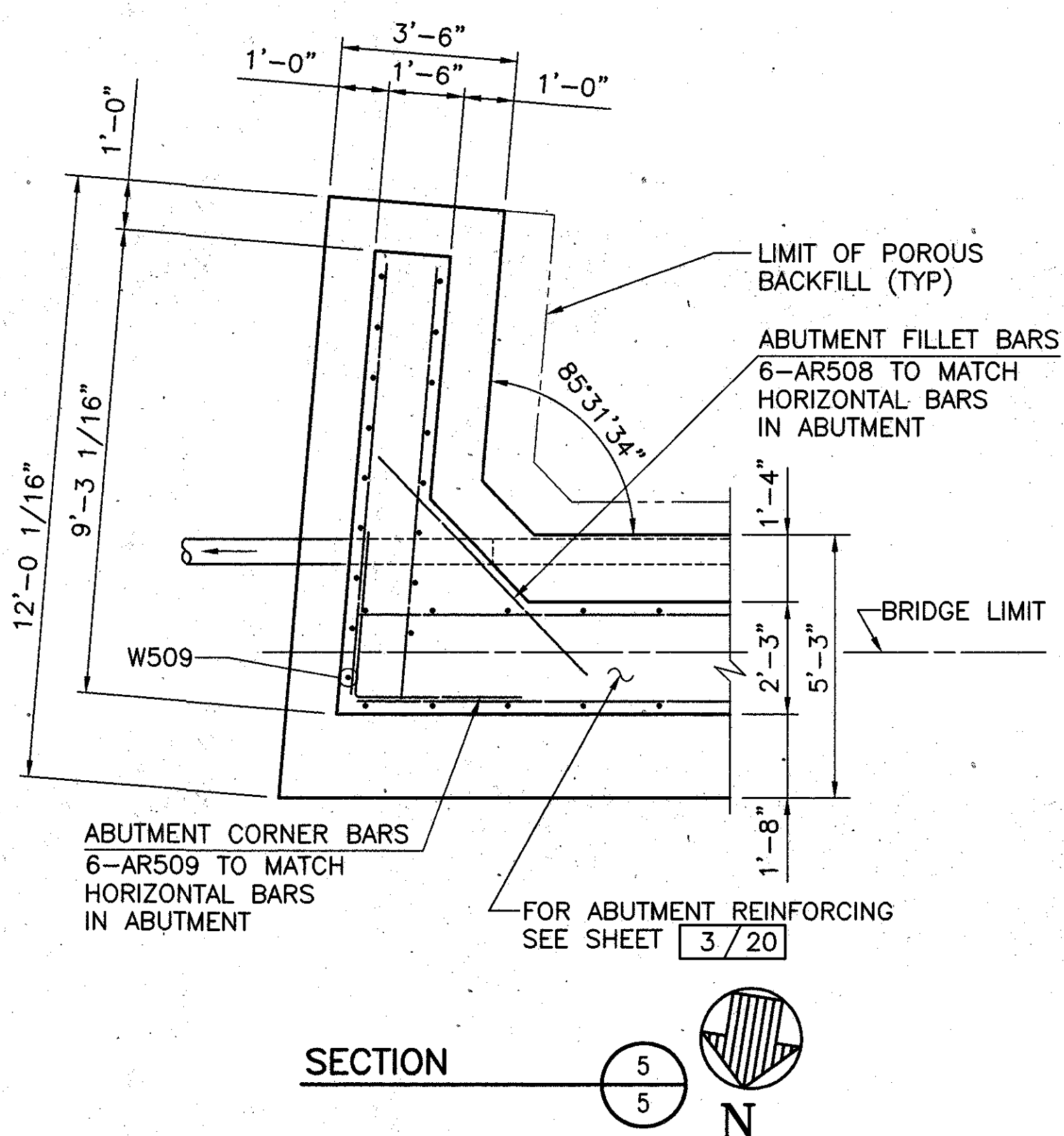
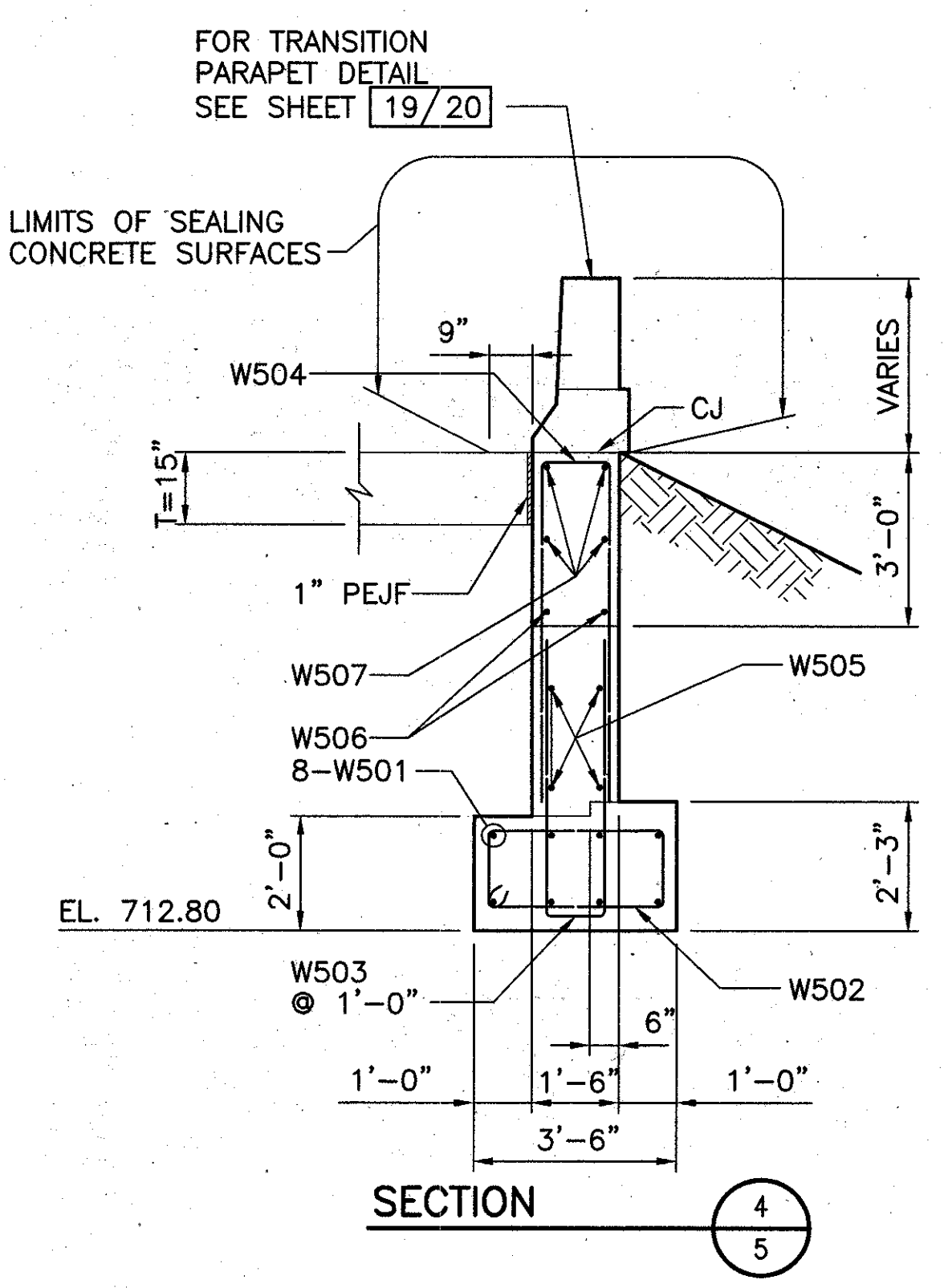
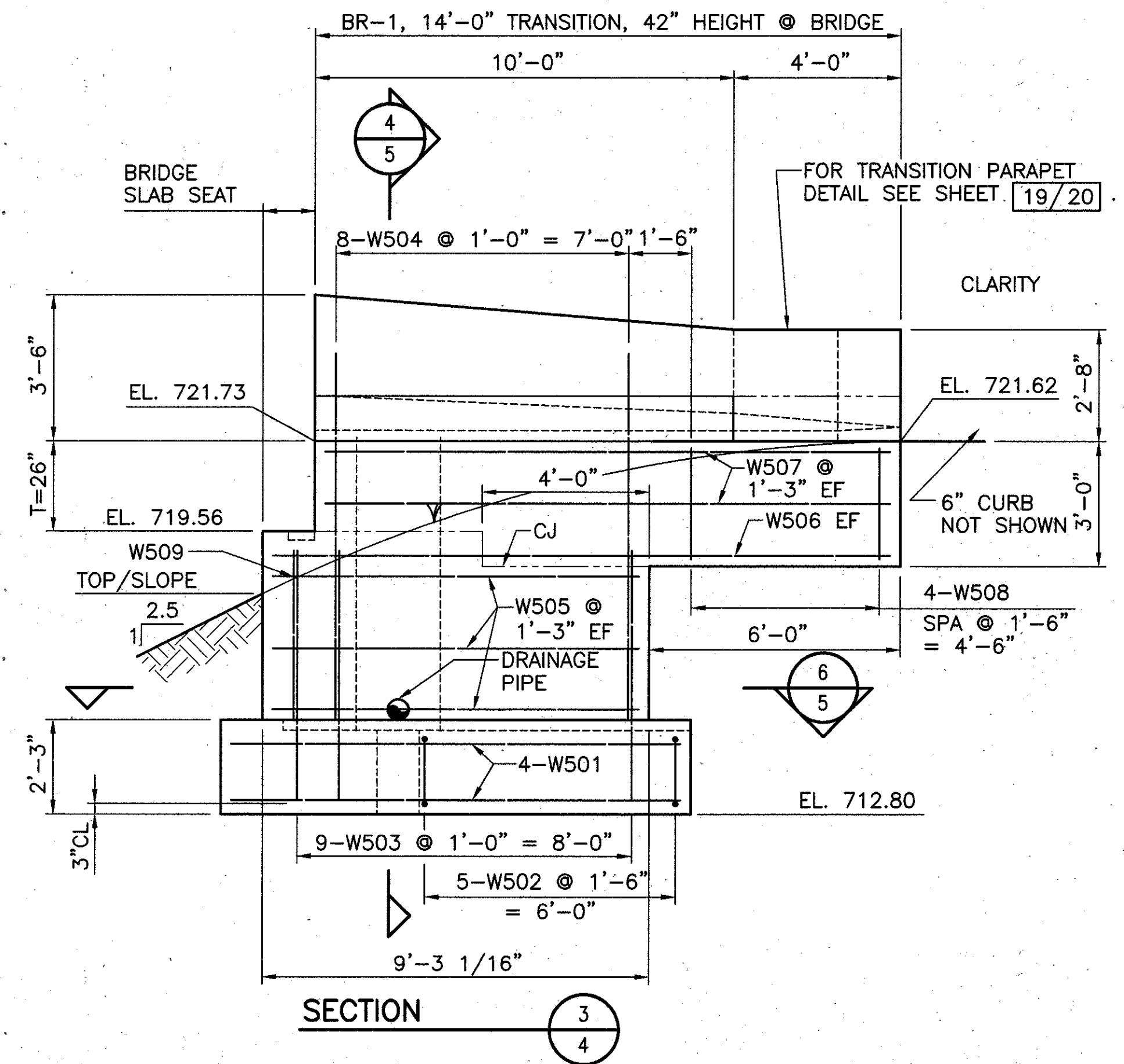
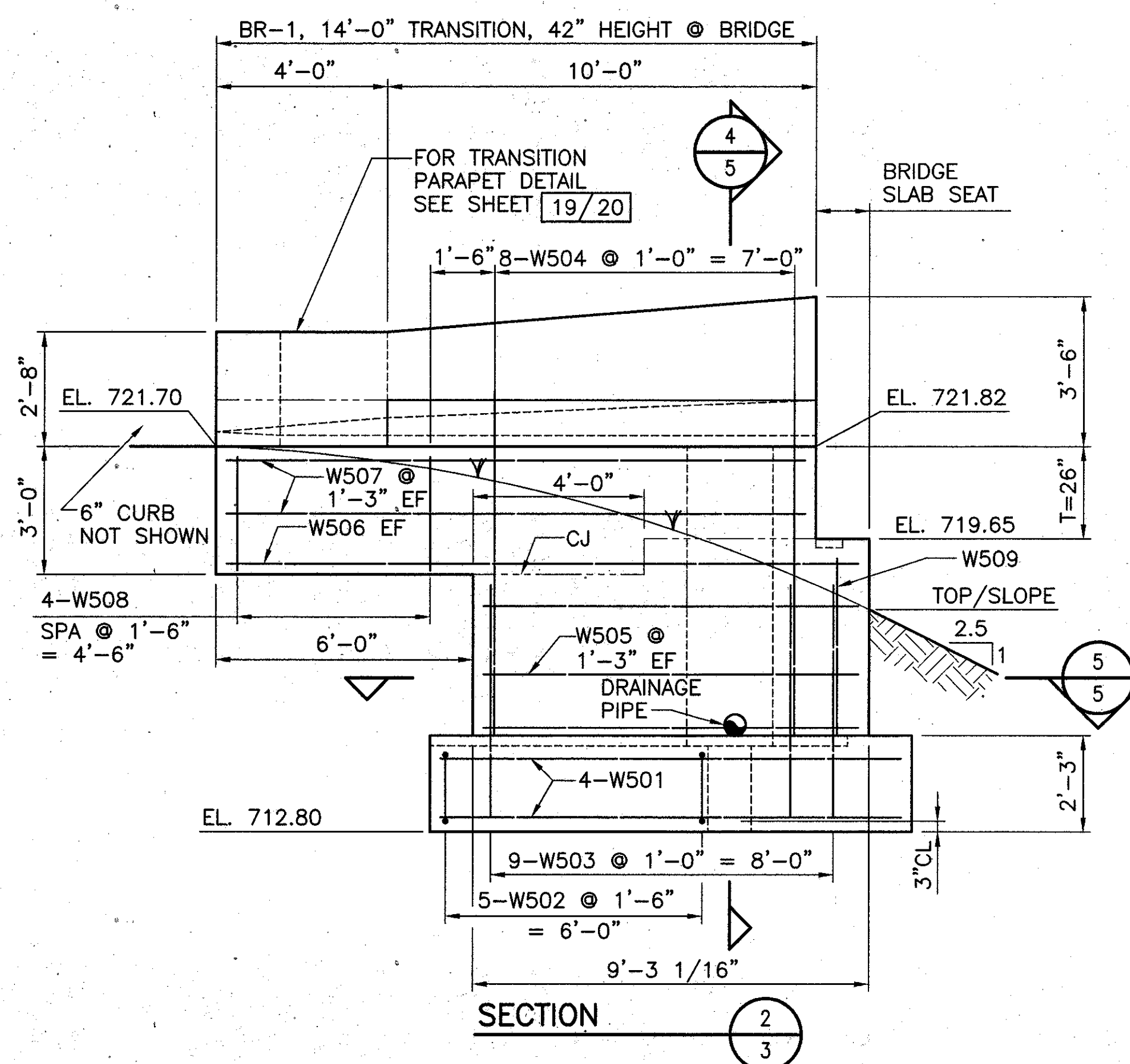
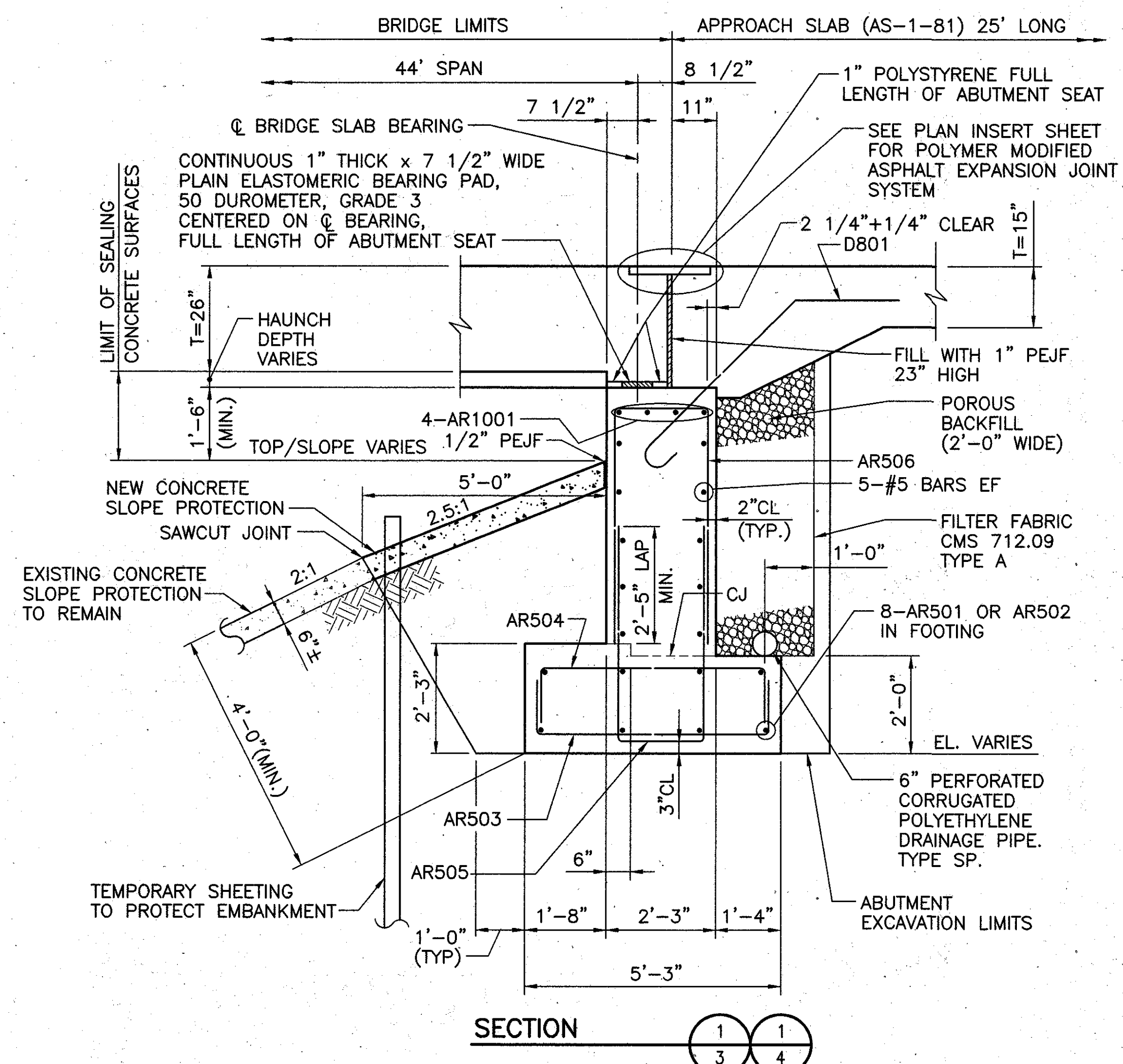


REAR ABUTMENT (WEST) ELEVATION

NOTE:
FOR SUBSTRUCTURE NOTES,
SEE SHEET 3/20.

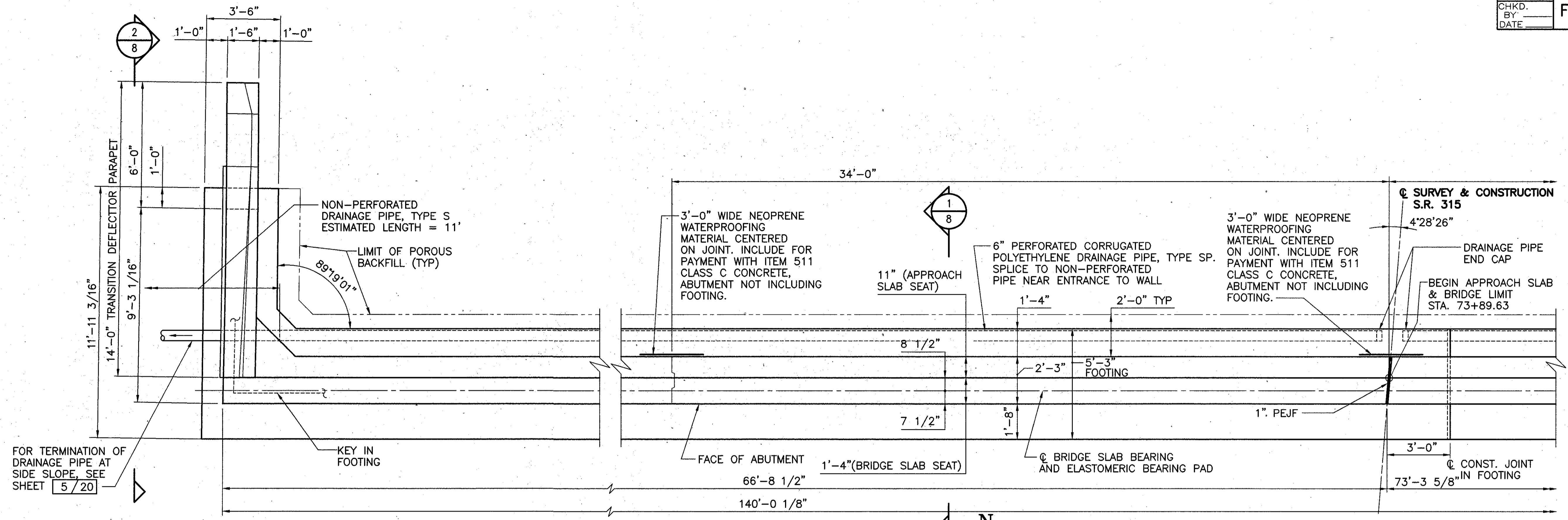
LEGEND		STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 8121 HUNTLEY ROAD, COLUMBUS, OHIO 43229										
CL - CLEAR	TYP - TYPICAL	REAR ABUTMENT - WEST HALF DETAILS BRIDGE NO. FRA-315-0049 OVER SULLIVANT AVENUE FRANKLIN COUNTY STA. 72+45.22 TO STA. 73+89.63										
EF - EACH FACE	NF - NEAR FACE											
FF - FAR FACE	C/C - CENTER TO CENTER											
CJ - CONSTRUCTION JOINT	PEJF - PREFORMED EXPANSION JOINT FILLER											
SPA - SPACING	EXISTING STRUCTURE											
NEW STRUCTURE												
DESIGNED	DRAWN							TRACED	CHECKED	REVIEWED	DATE	REVISED
BRH	GV								TEU	RKM	11/07/97	
										TDW	10/29/97	

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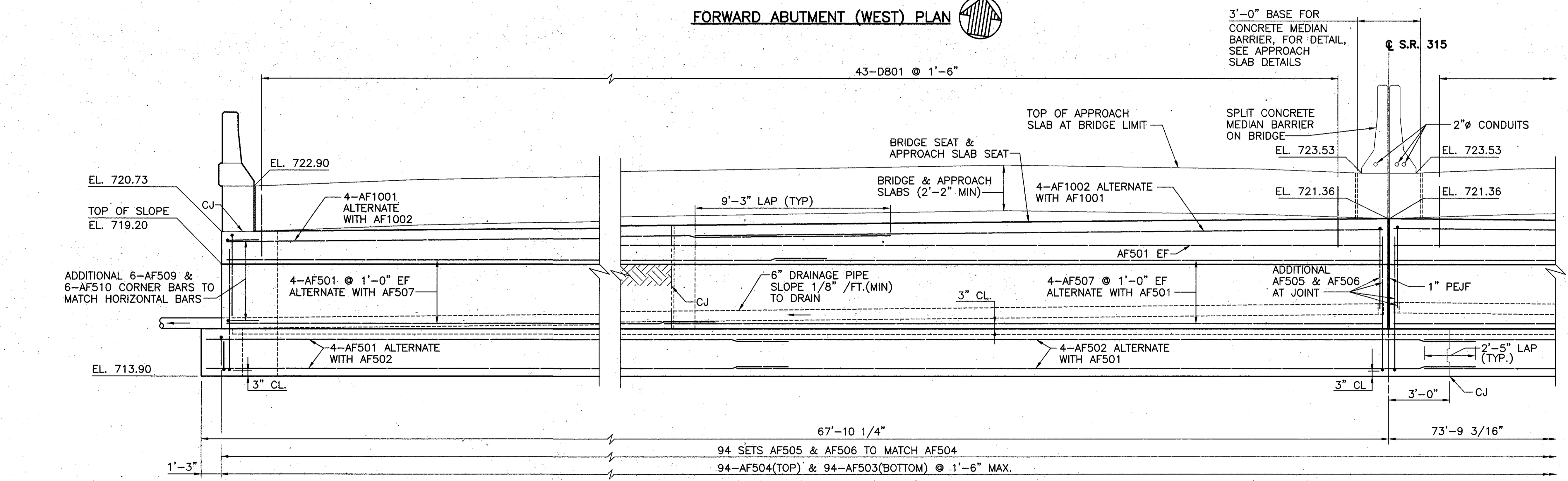


LEGEND		STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 8121 HUNTLEY ROAD, COLUMBUS, OHIO 43229						
CL - CLEAR	TYP - TYPICAL	REAR ABUTMENT DETAILS BRIDGE NO. FRA-315-0049 OVER SULLIVAN AVENUE FRANKLIN COUNTY STA. 72+45.22 TO STA. 73+89.63						
EF - EACH FACE	NF - NEAR FACE							
FF - FAR FACE	C/C - CENTER TO CENTER							
CJ - CONSTRUCTION JOINT	PEJF - PREFORMED EXPANSION JOINT FILLER							
SPA - SPACING	EXISTING STRUCTURE							
NEW STRUCTURE								
DESIGNED	DRAWN					TRACED	CHECKED	REVIEWED
BRH	GV						TEU	
								DATE
								REVISED

[09] STRUCT/2213145/CONCRETE/AS-ABUT.DWG - NOV 14, 1997 - 093259 - PLAN 1-32



FORWARD ABUTMENT (WEST) PLAN



FORWARD ABUTMENT (WEST) ELEVATION

LEGEND	
CL	- CLEAR
TYP	- TYPICAL
EF	- EACH FACE
NF	- NEAR FACE
FF	- FAR FACE
C/C	- CENTER TO CENTER
CJ	- CONSTRUCTION JOINT
PEJF	- PREFORMED EXPANSION JOINT FILLER
SPA	- SPACING
(Dashed line)	- EXISTING STRUCTURE
(Solid line)	- NEW STRUCTURE

STILSON & ASSOCIATES, INC.
CONSULTING ENGINEERING AND ARCHITECTURE
8121 HUNTLEY ROAD, COLUMBUS, OHIO 43229

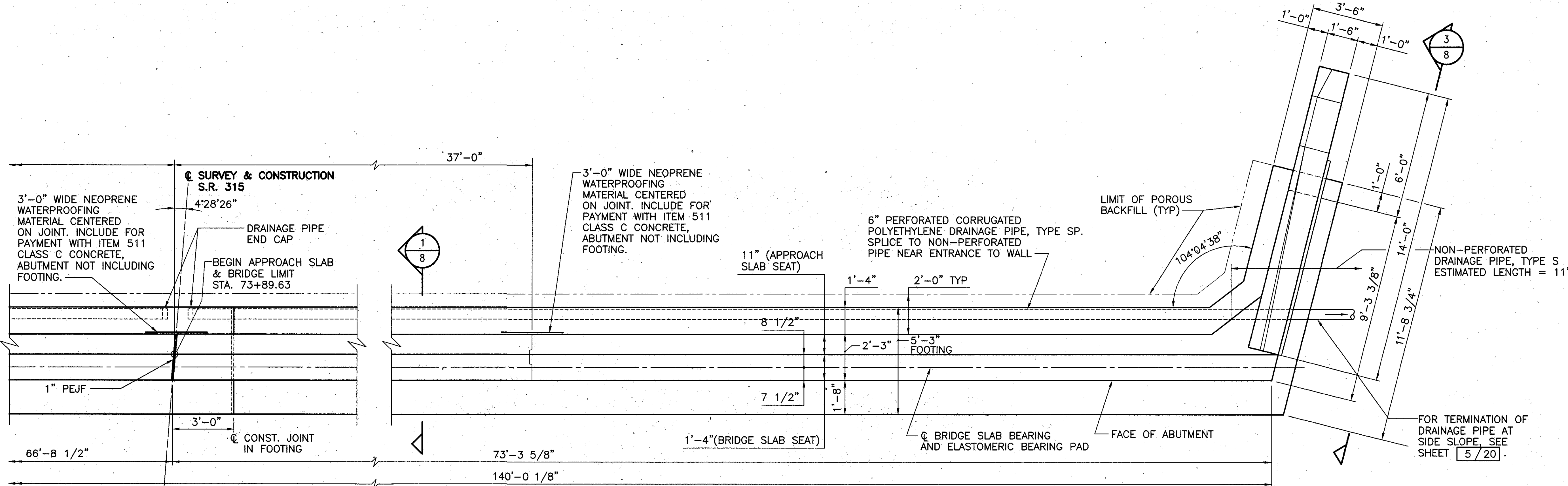
FORWARD ABUTMENT - WEST HALF DETAILS

BRIDGE NO. FRA-315-0049
OVER SULLIVANT AVENUE

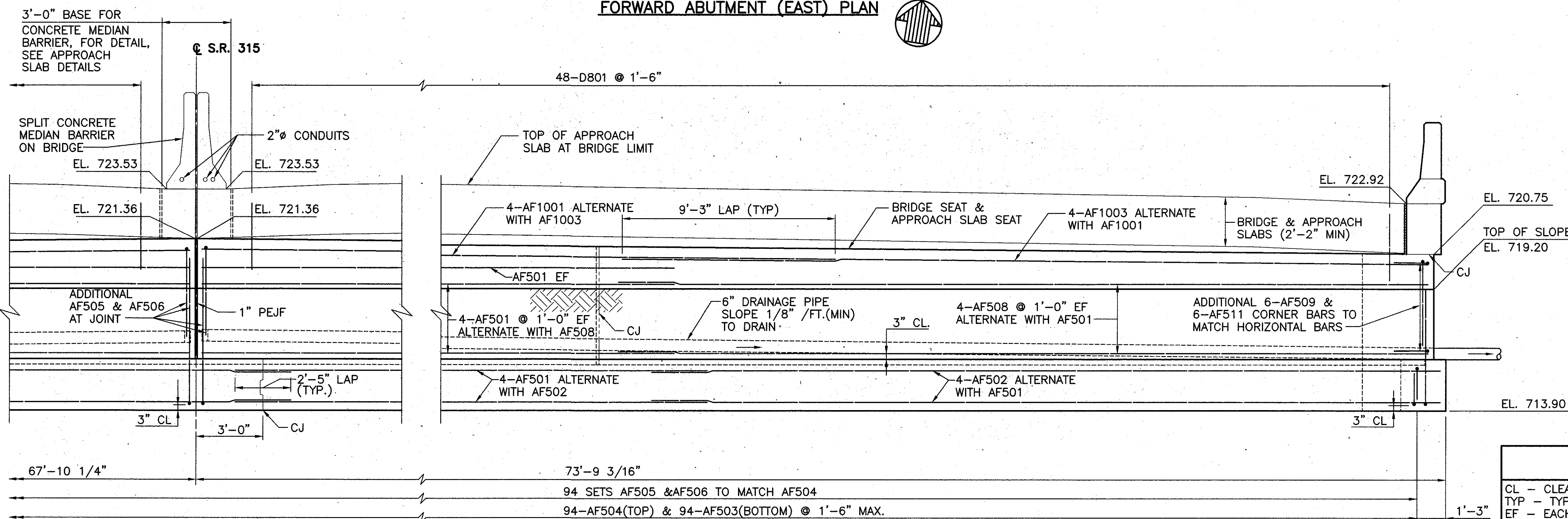
FRANKLIN COUNTY STA. 72+45.22 TO STA. 73+89.63

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
BRH	GV		TEU	RKM	11/07/97	
				TDW	10/29/97	

(10/97) STILSON & ASSOCIATES, INC. - SEP 18, 1997 - 15:30:51 - PLOT: 1-22



FORWARD ABUTMENT (EAST) PLAN



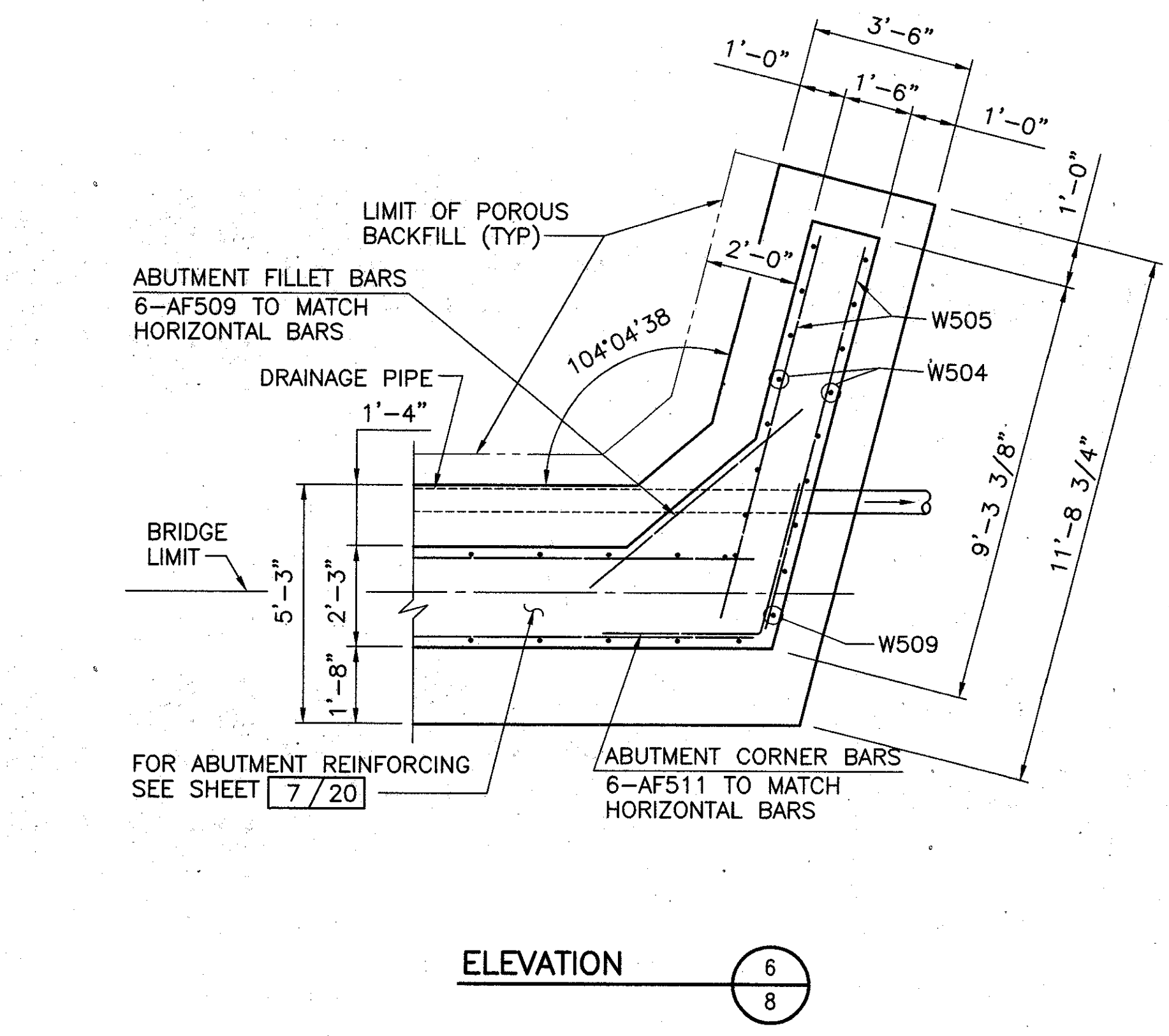
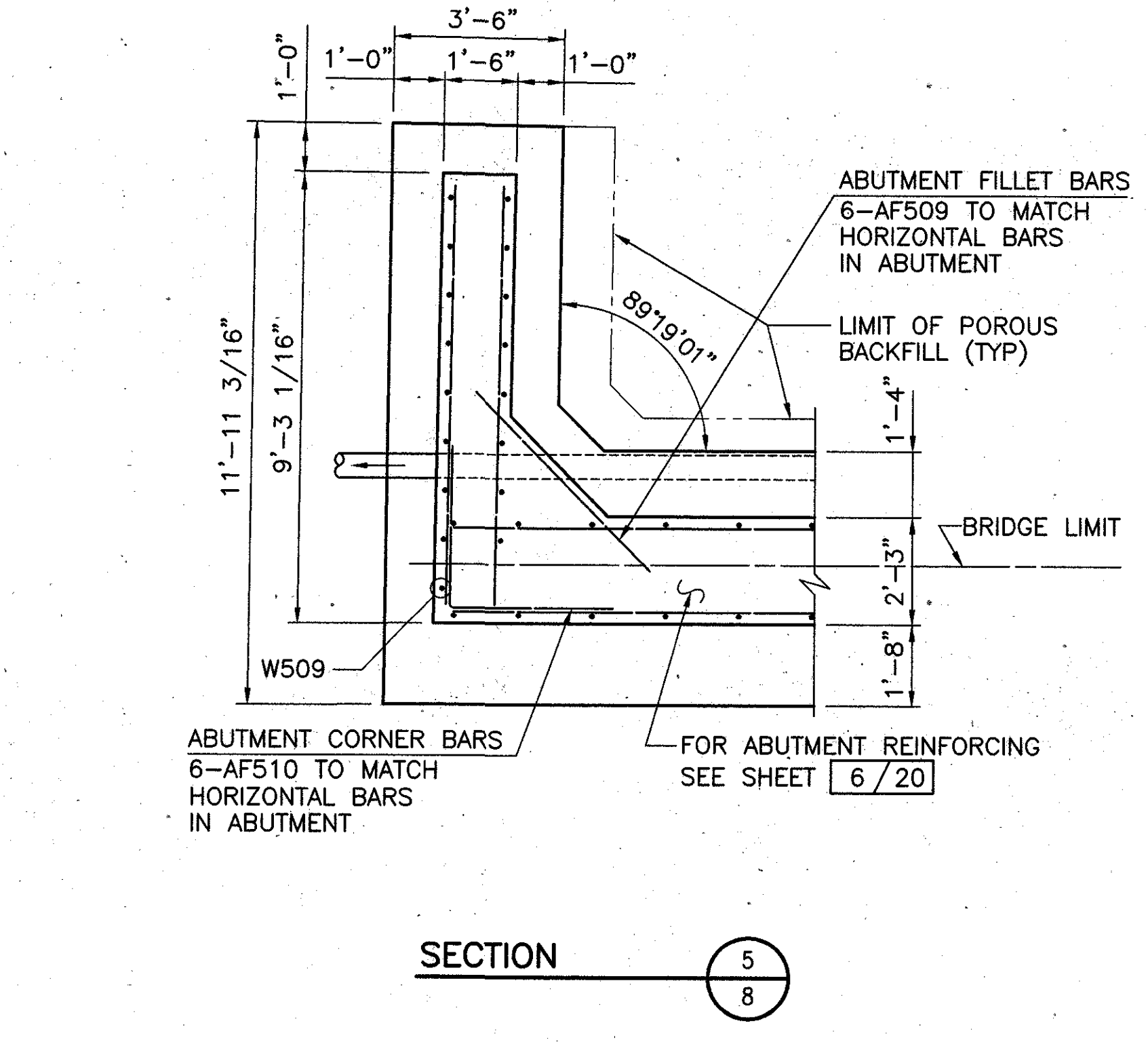
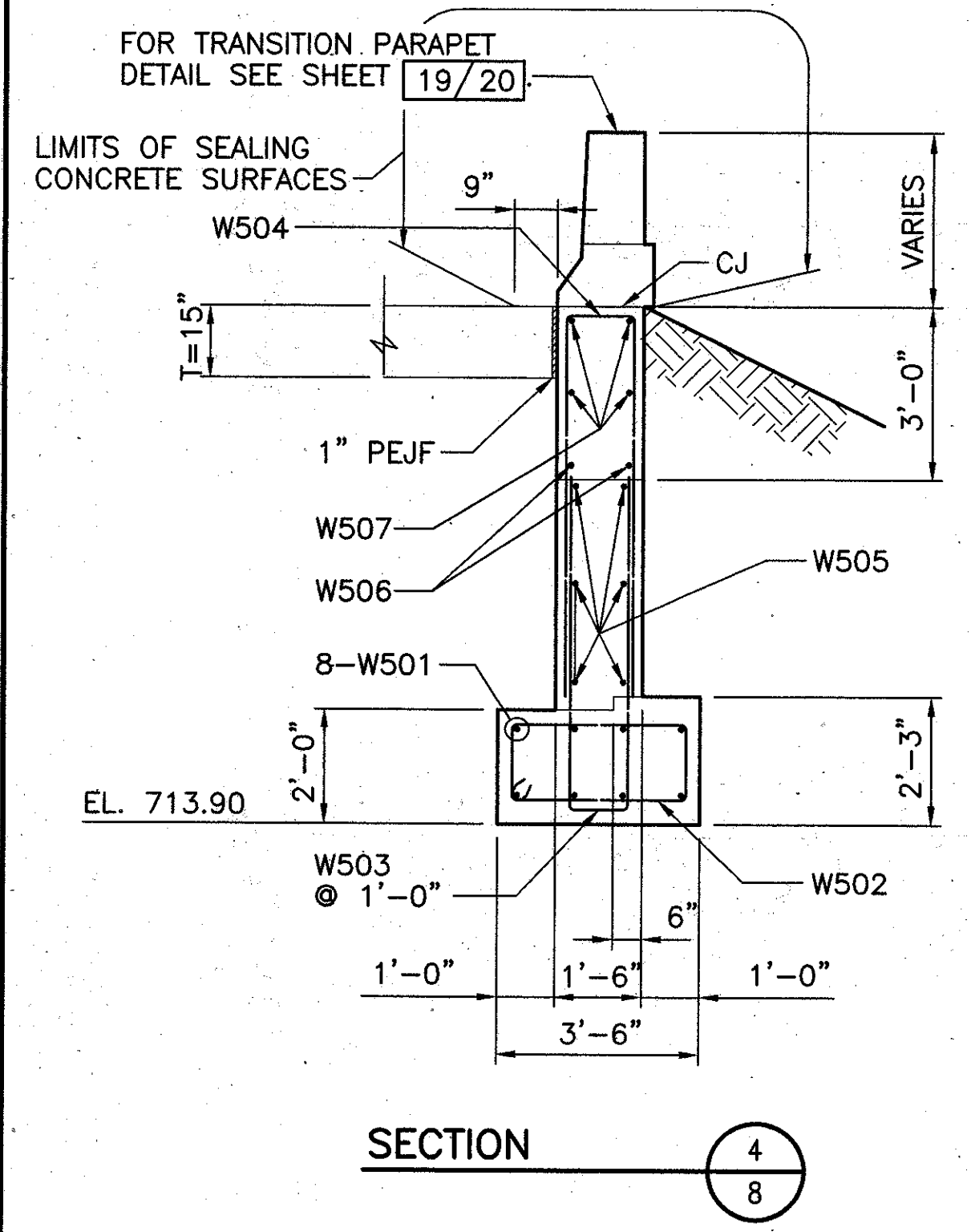
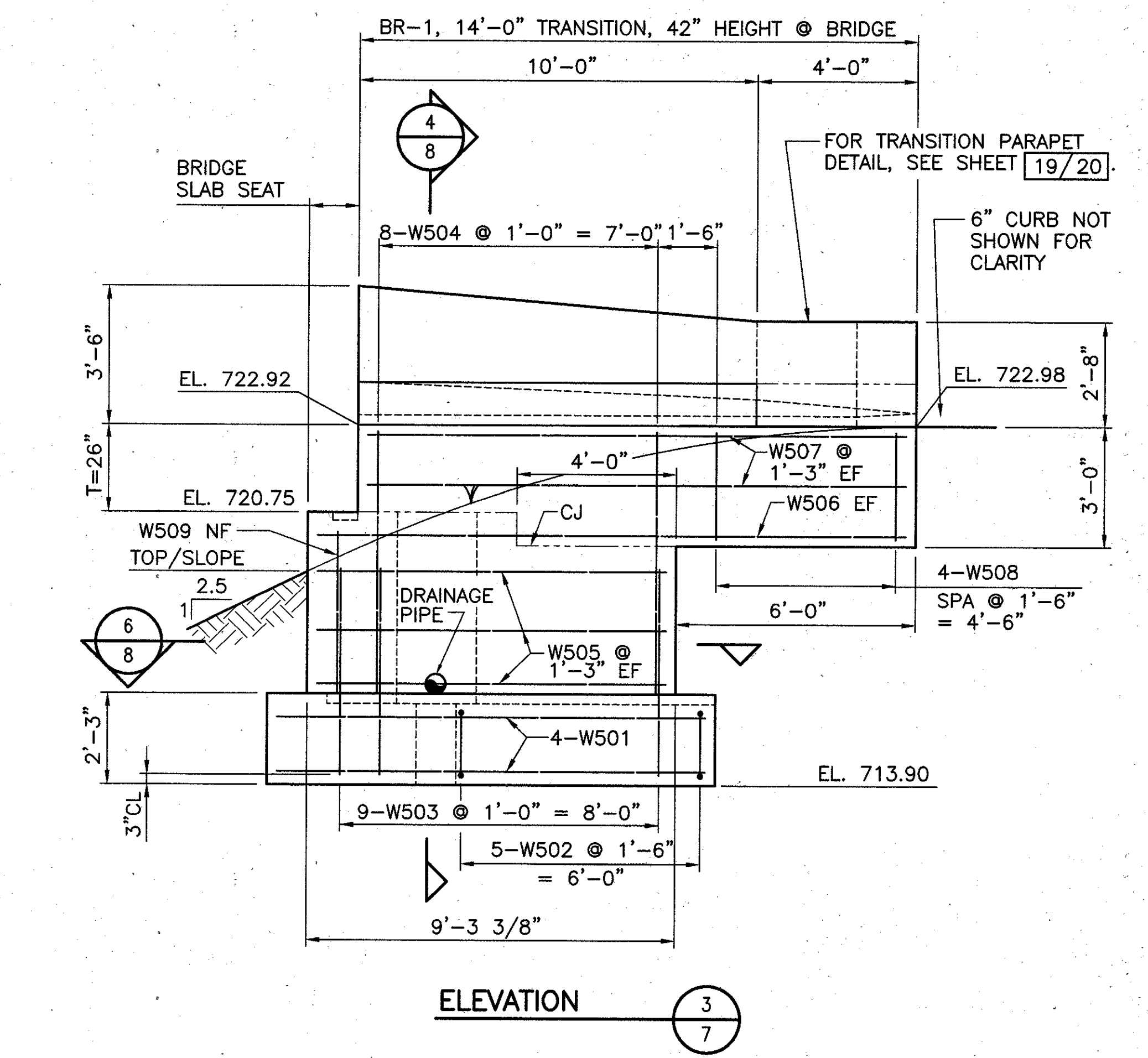
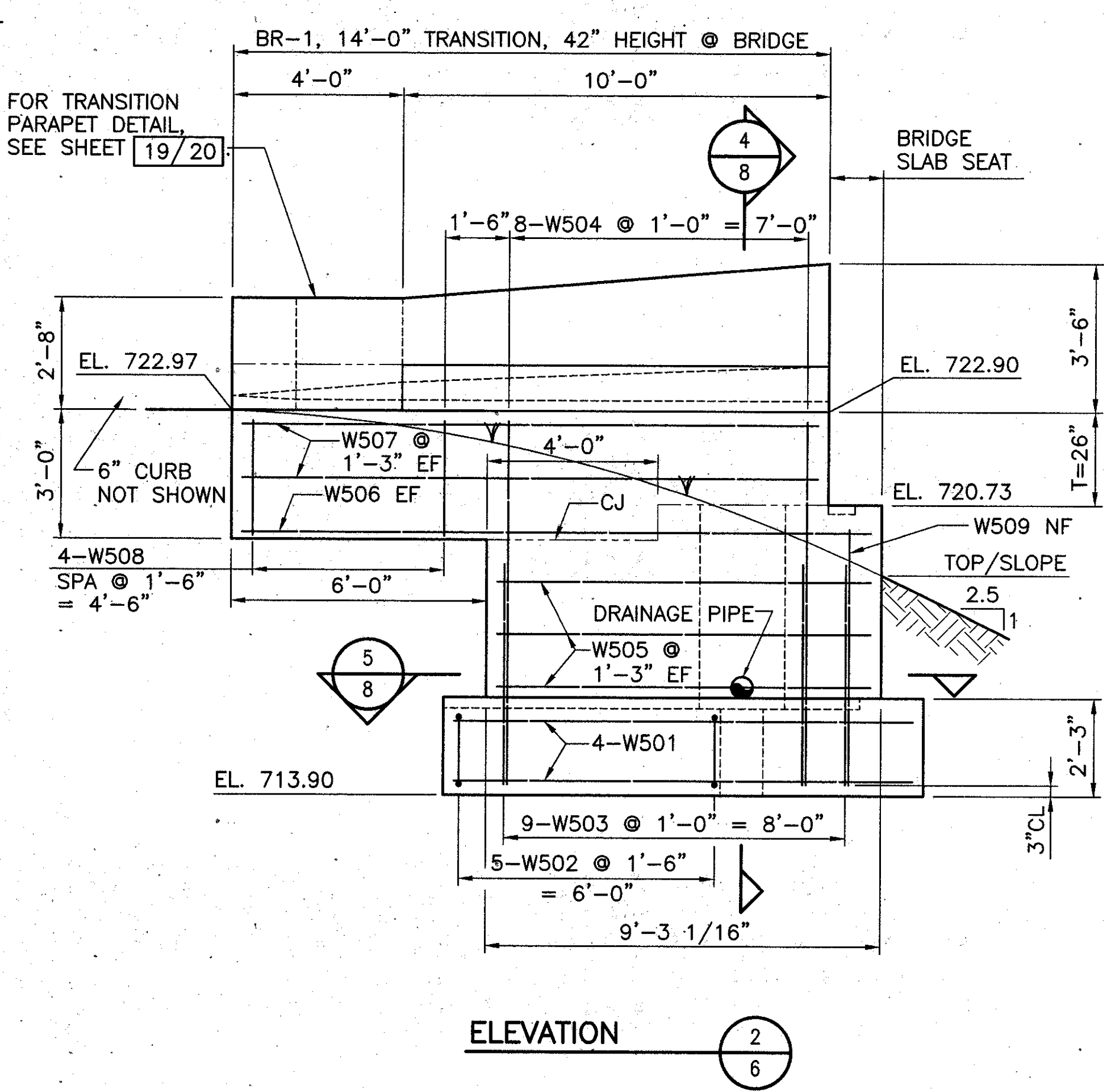
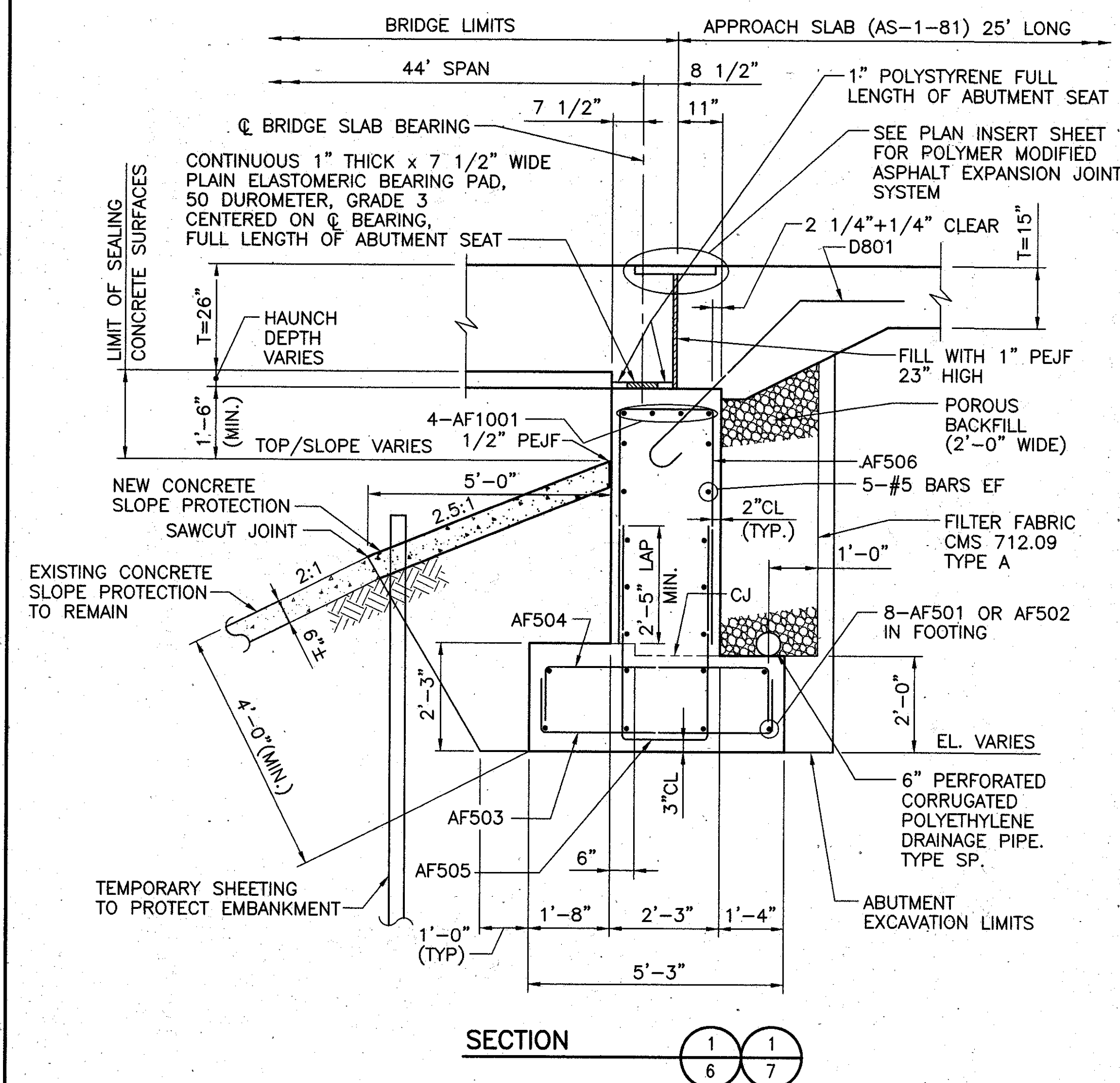
FORWARD ABUTMENT (EAST) ELEVATION

NOTE:
FOR SUBSTRUCTURE NOTES
SEE SHEET 3/20

LEGEND		STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 8121 HUNTLEY ROAD, COLUMBUS, OHIO 43229						
CL	- CLEAR	FORWARD ABUTMENT - EAST HALF DETAILS BRIDGE NO. FRA-315-0049 OVER SULLIVANT AVENUE FRANKLIN COUNTY STA. 72+45.22 TO STA. 73+89.63						
TYP	- TYPICAL							
EF	- EACH FACE							
NF	- NEAR FACE							
FF	- FAR FACE							
C/C	- CENTER TO CENTER							
CJ	- CONSTRUCTION JOINT							
PEJF	- PREFORMED EXPANSION JOINT FILLER							
SPA	- SPACING							
EXISTING STRUCTURE								
NEW STRUCTURE								

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
BRH	GV		TEU	RKM	11/07/97	
				TDW	10/29/97	

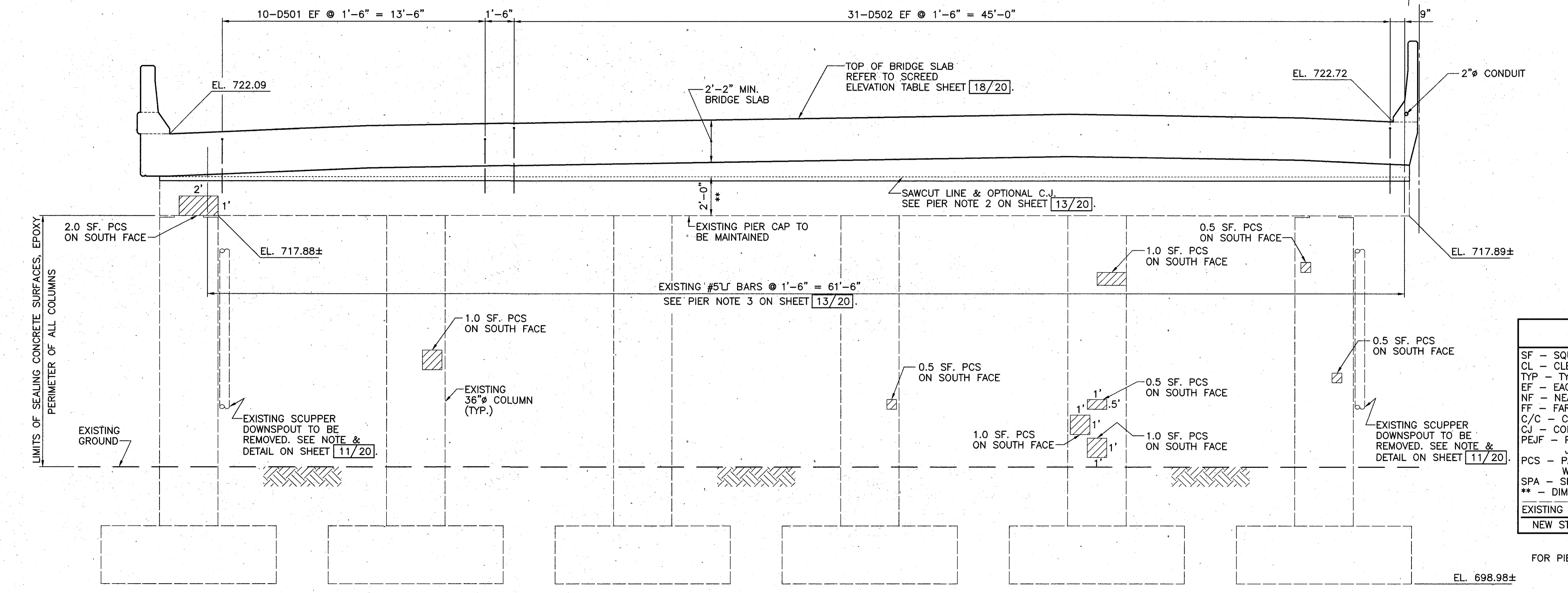
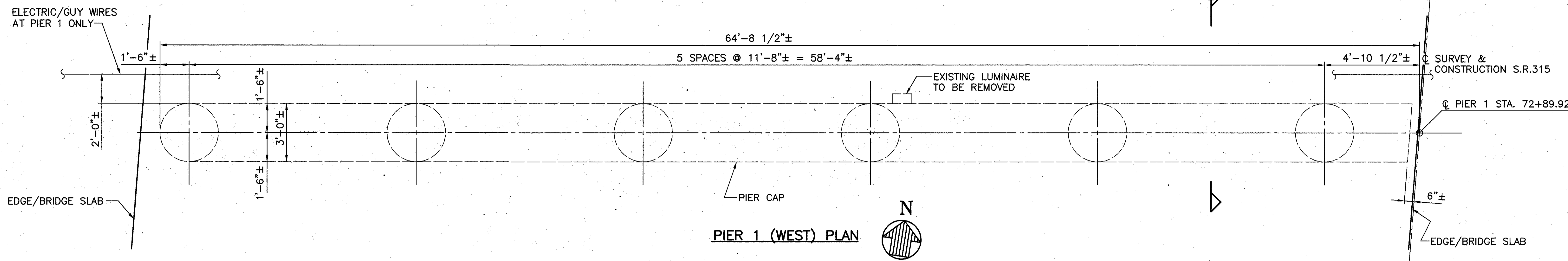
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- NOTES:**
1. FOR SUBSTRUCTURE NOTES, SEE SHEET 3/20.
 2. FOR FORWARD ABUTMENT PLAN & ELEVATION, SEE SHEETS 6&7/20.

LEGEND		STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 5121 HUNTLEY ROAD, COLUMBUS, OHIO 43229	
CL - CLEAR	TYP - TYPICAL	FORWARD ABUTMENT DETAILS BRIDGE NO. FRA-315-0049 OVER SULLIVANT AVENUE FRANKLIN COUNTY	
EF - EACH FACE	NF - NEAR FACE		
FF - FAR FACE	C/C - CENTER TO CENTER	FRA. 72+45.22 TO FRA. 73+89.63	
CJ - CONSTRUCTION JOINT	PEJF - PREFORMED EXPANSION JOINT FILLER	DESIGNED	DRAWN
SPA - SPACING		TRACED	CHECKED
EXISTING STRUCTURE		REVIEWED	DATE
NEW STRUCTURE		TEU	RKM 11/07/97
			TDW 10/29/97
			REVISED

[00]A:\STRUCT\931314\CONTRACT\SA-NR-ABUT.DWG - NOV 14, 1997 - 08:40:02 - PLOT: 1-32



LEGEND	
SF	- SQUARE FEET
CL	- CLEAR
TYP	- TYPICAL
EF	- EACH FACE
NF	- NEAR FACE
FF	- FAR FACE
C/C	- CENTER TO CENTER
CJ	- CONSTRUCTION JOINT
PEJF	- PREFORMED EXPANSION JOINT FILLER
PCS	- PATCHING CONCRETE STRUCTURE WITH TROWELABLE MORTAR
SPA	- SPACING
**	- DIMENSION TO SAWCUT LINE
EXISTING STRUCTURE	
NEW STRUCTURE	

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JULY 1997.

SUMMARY OF PCS QUANTITIES *	
	ESTIMATED QUANTITY
PIER 1	41 S. F.
PIER 2	11 S. F.
TOTAL	52 S. F.

INDICATES AREAS TO BE REPAIRED AS PER ITEM SPECIAL-PATCHING CONCRETE STRUCTURE WITH TROWELABLE MORTAR.

* ESTIMATED QUANTITY HAS BEEN INCREASED 15% OVER FIELD MARKED QUANTITY TO ALLOW FOR ADDITIONAL DETERIORATION AND EXTENSION OF POTENTIAL CONCRETE DETERIORATION.

PIER 1 (WEST) ELEVATION

FOR PIER NOTES SEE SHEET 13/20.

STILSON & ASSOCIATES, INC.
CONSULTING ENGINEERING AND ARCHITECTURE
8121 HUNTLEY ROAD, COLUMBUS, OHIO 43229

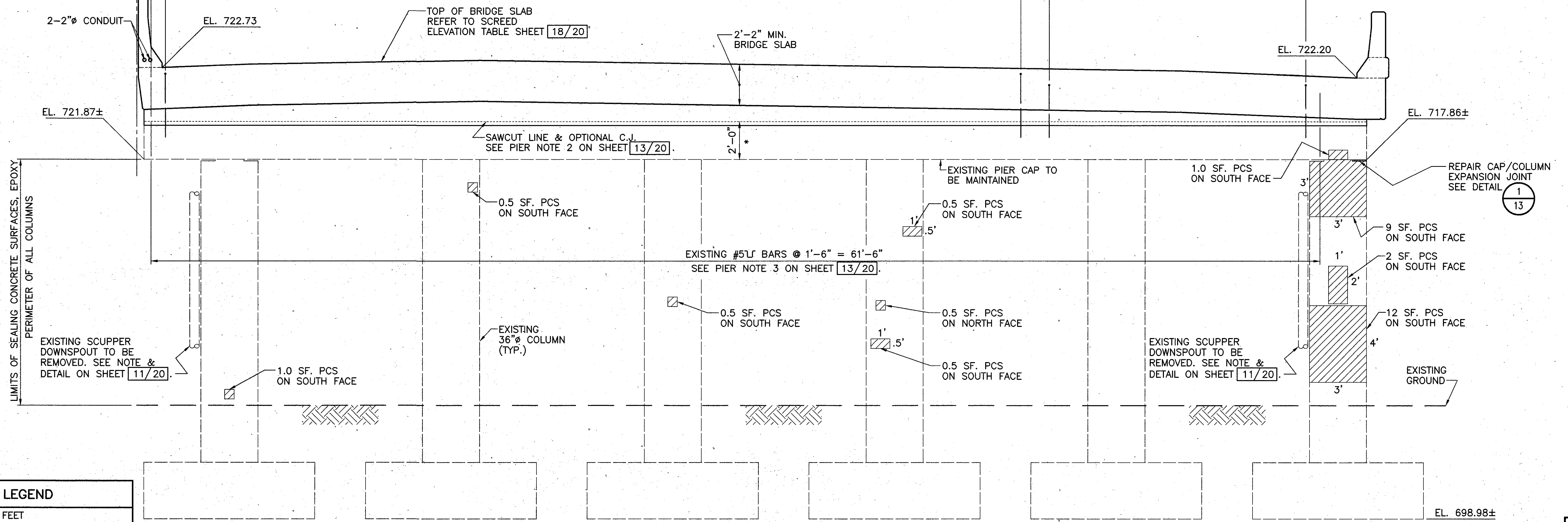
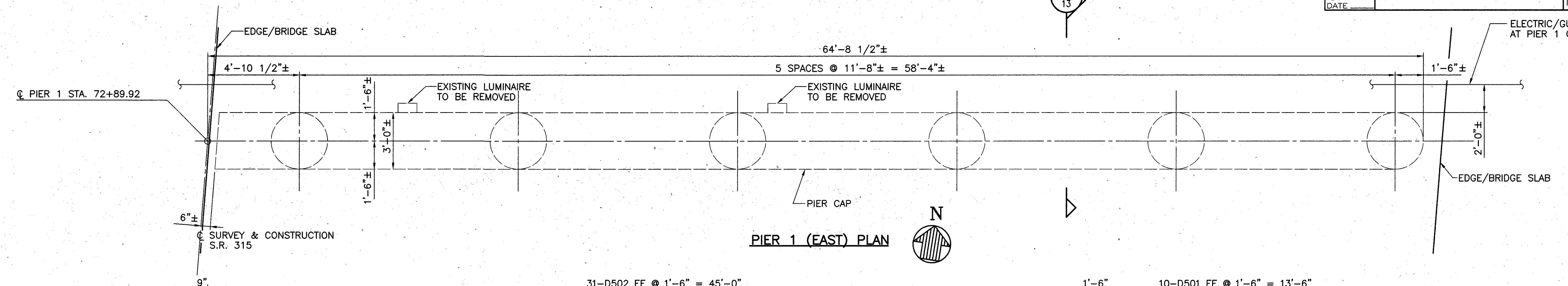
PIER 1 - WEST BENT DETAILS

BRIDGE NO. FRA-315-0049
OVER SULLIVANT AVENUE

FRANKLIN COUNTY STA. 72+45.22 TO STA. 73+89.63

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
TEU	GV		PHB	RKM	11/07/97	
				TDW	10/29/97	

[G:\J:\STRUCT\9231314\CONTRD\SASW-PIER.DWG - NOV 14, 1997 - 09:57:41 - PLOT: 1=32



LEGEND	
SF	- SQUARE FEET
CL	- CLEAR
TYP	- TYPICAL
EF	- EACH FACE
NF	- NEAR FACE
FF	- FAR FACE
C/C	- CENTER TO CENTER
CJ	- CONSTRUCTION JOINT
PEJF	- PREFORMED EXPANSION JOINT FILLER
PCS	- PATCHING CONCRETE STRUCTURE WITH TROWELABLE MORTAR
SPA	- SPACING
*	- DIMENSION TO SAWCUT LINE
EXISTING STRUCTURE	
NEW STRUCTURE	

INDICATES AREAS TO BE REPAIRED AS PER ITEM SPECIAL-PATCHING CONCRETE STRUCTURE WITH TROWELABLE MORTAR.

FOR SUMMARY OF PCS QUANTITIES SEE SHEET 9/20

FOR PIER NOTES SEE SHEET 13/20

STILSON & ASSOCIATES, INC.
CONSULTING ENGINEERING AND ARCHITECTURE
6121 HUNTLEY ROAD, COLUMBUS, OHIO 43229

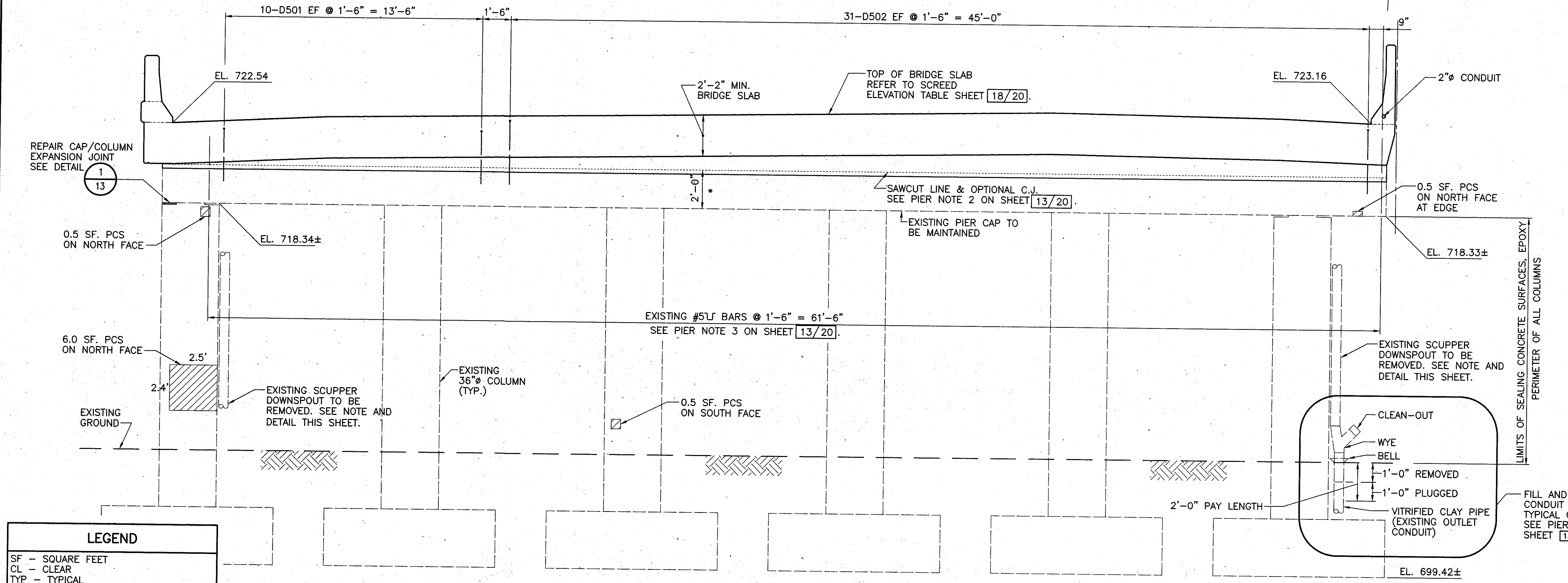
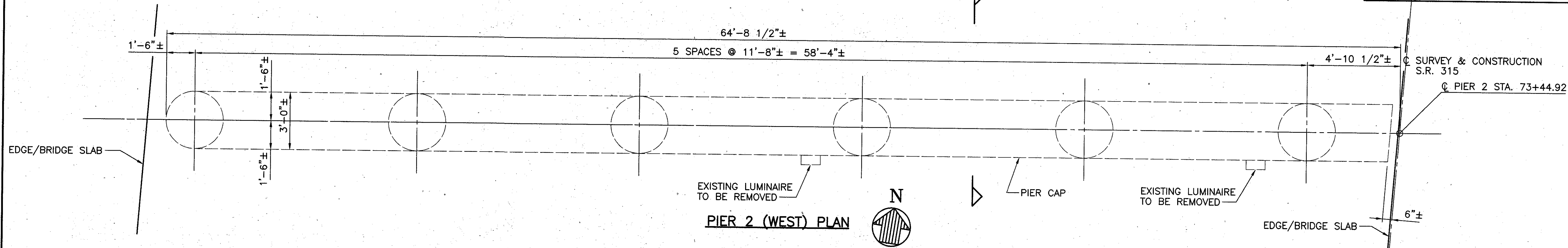
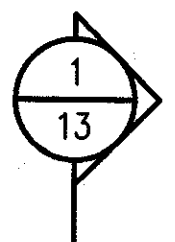
PIER 1 - EAST BENT DETAILS

BRIDGE NO. FRA-315-0049
OVER SULLIVANT AVENUE

FRANKLIN COUNTY STA. 72+45.22 TO STA. 73+89.63

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
TEU	GV		PHB	RKM	11/07/97	
				TDW	10/29/97	

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PIER 2 (WEST) ELEVATION

LEGEND	
SF	- SQUARE FEET
CL	- CLEAR
TYP	- TYPICAL
EF	- EACH FACE
NF	- NEAR FACE
FF	- FAR FACE
C/C	- CENTER TO CENTER
CJ	- CONSTRUCTION JOINT
PEJF	- PREFORMED EXPANSION JOINT FILLER
PCS	- PATCHING CONCRETE STRUCTURE WITH TROWELABLE MORTAR
SPA	- SPACING
*	- DIMENSION TO SAWCUT LINE
EXISTING STRUCTURE	
NEW STRUCTURE	

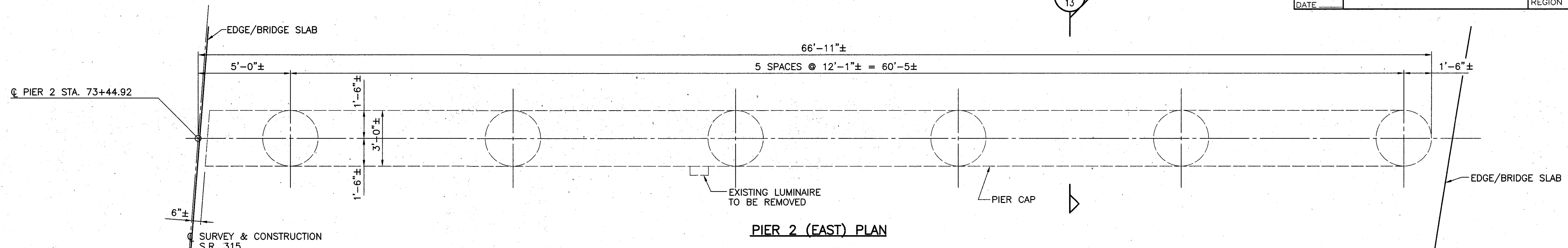
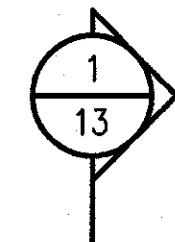
INDICATES AREAS TO BE REPAIRED AS PER ITEM SPECIAL-PATCHING CONCRETE STRUCTURE WITH TROWELABLE MORTAR.

FOR SUMMARY OF PCS QUANTITIES SEE SHEET **9/20**.

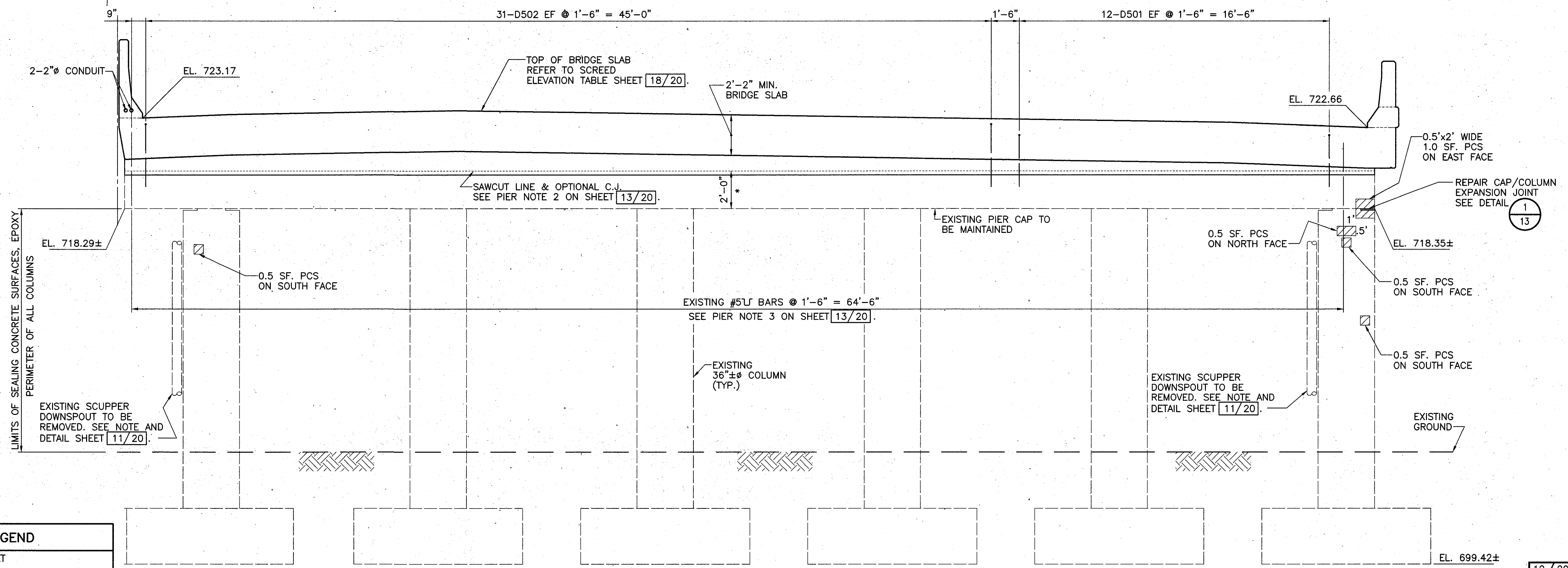
FOR PIER NOTES SEE SHEET **13/20**.

STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 6121 HUNTLEY ROAD, COLUMBUS, OHIO 43229					
PIER 2 - WEST BENT DETAILS BRIDGE NO. FRA-315-0049 OVER SULLIVANT AVENUE FRANKLIN COUNTY					
			STA. 72+45.22 TO STA. 73+89.63		
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
TEU	GV		PHB	RKM	11/07/97
				TDW	10/29/97

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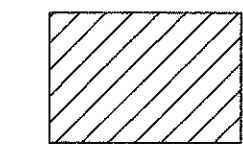


PIER 2 (EAST) PLAN



PIER 2 (EAST) ELEVATION

LEGEND	
SF	- SQUARE FEET
CL	- CLEAR
TYP	- TYPICAL
EF	- EACH FACE
NF	- NEAR FACE
FF	- FAR FACE
C/C	- CENTER TO CENTER
CJ	- CONSTRUCTION JOINT
PEJF	- PREFORMED EXPANSION JOINT FILLER
PCS	- PATCHING CONCRETE STRUCTURE WITH TROWELABLE MORTAR
SPA	- SPACING
*	- DIMENSION TO SAWCUT LINE
EXISTING STRUCTURE	
NEW STRUCTURE	



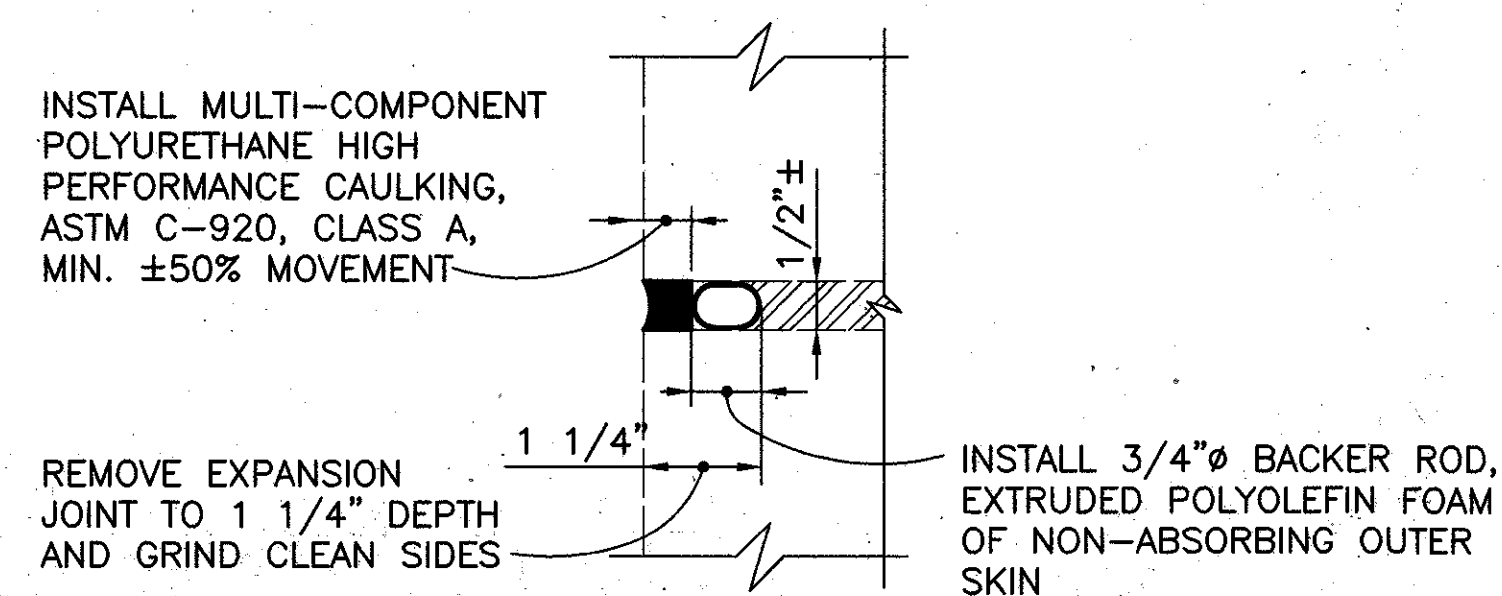
INDICATES AREAS TO BE REPAIRED AS PER ITEM SPECIAL-PATCHING CONCRETE STRUCTURE WITH TROWELABLE MORTAR.

FOR SUMMARY OF PCS QUANTITIES SEE SHEET 9/20.

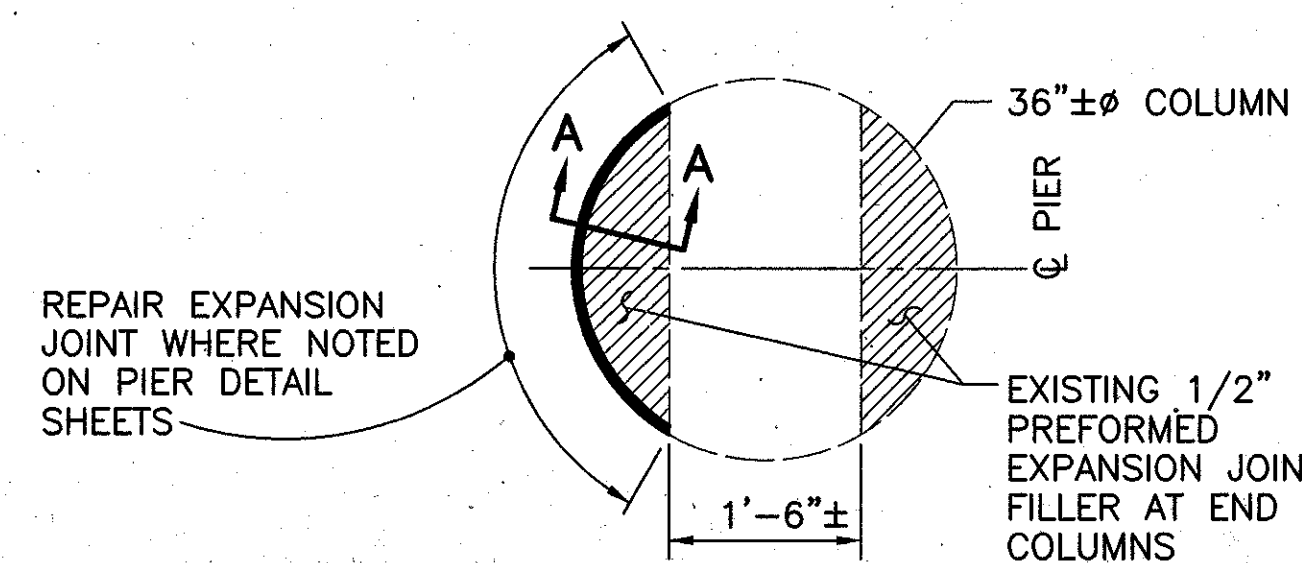
FOR PIER NOTES SEE SHEET 13/20.

STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 6121 HUNTLEY ROAD, COLUMBUS, OHIO 43229						
PIER 2 - EAST BENT DETAILS BRIDGE NO. FRA-315-0049 OVER SULLIVANT AVENUE						
FRANKLIN COUNTY				STA. 72+45.22 TO STA. 73+89.63		
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
TEU	GV		PHB	RKM	11/07/97	
				TDW	10/29/97	

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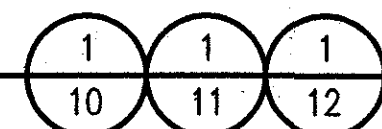


SECTION A-A



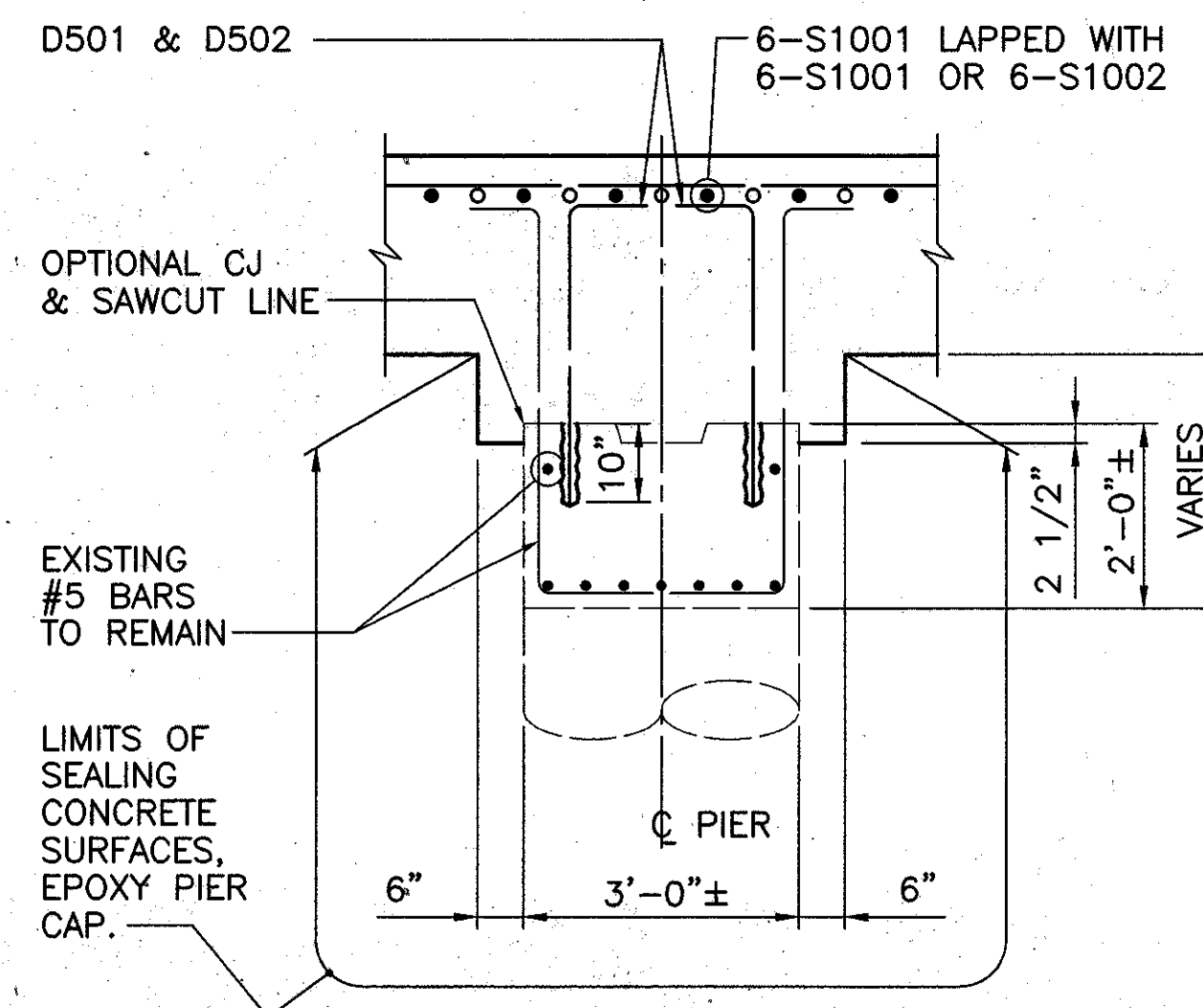
PLAN

TYPICAL CAP/COLUMN EXPANSION JOINT REPAIR DETAIL

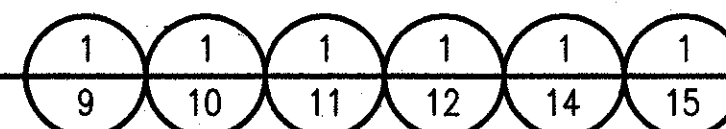


NOTE:

INCLUDE THE COST OF ALL LABOR, MATERIALS AND EQUIPMENT WITH ITEM SPECIAL, PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR.



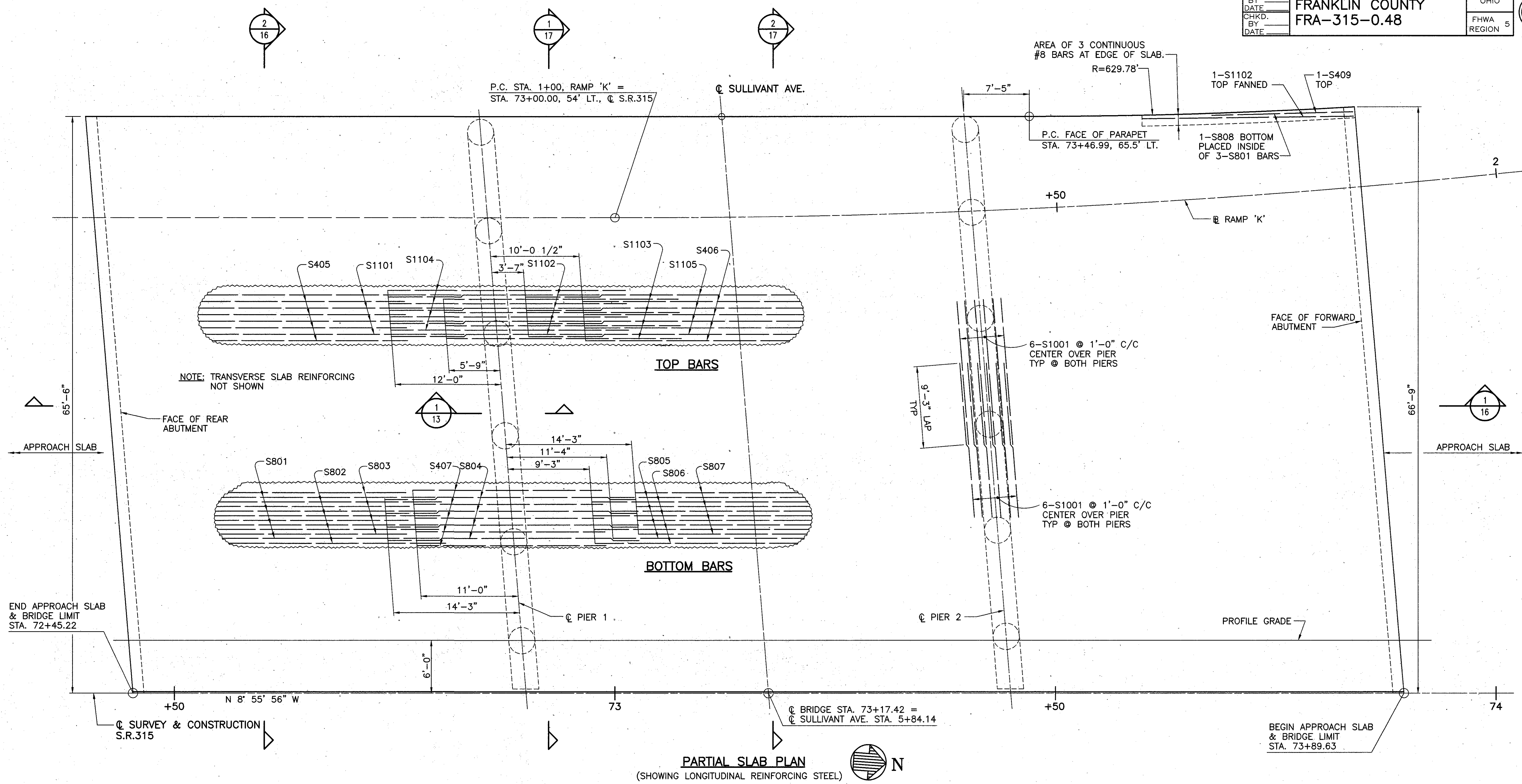
SECTION



PIER NOTES:

1. THE PIER CAP BEAMS SHALL BE ADEQUATELY SHORED AND SUPPORTED THROUGHOUT THE DEMOLITION AND NEW CONSTRUCTION PHASES OF THIS PROJECT.
2. THE DEPTH OF THE SAWCUT SHALL BE LESS THAN THE HORIZONTAL CLEARANCE TO THE VERTICAL #5 HAIRPIN BARS. THE SAWCUT WORK SHALL BE PAID FOR AS PART OF THE STRUCTURAL REMOVAL ITEM.
3. THESE HAIRPIN BARS ARE TO BE SALVAGED FOR INCORPORATION INTO THE NEW BRIDGE SLAB.
4. THE EXISTING SEWERS INTO WHICH THE DOWNSPOUTS EMPTY SHALL BE PLUGGED OR FILLED BELOW GRADE. SEE DETAIL SHEET 11/20. REMOVE EXISTING SCUPPER DOWNSPOUT PIPING OUTLET CONDUITS DOWN TO 1'-0" BELOW GRADE. PLUG ADDITIONAL LENGTH OF OUTLET CONDUIT WITH NON-SHRINK GROUT FOR A 1'-0" MINIMUM LENGTH OR PLUG WITH PRECAST VITRIFIED OR CONCRETE STOPPER AS PER CMS 202.09. INCLUDE WITH ITEM SPECIAL-FILL AND PLUG EXISTING CONDUIT FOR PAYMENT.
5. THE D501 AND D502 BARS ARE INCLUDED IN THE SUPERSTRUCTURE REINFORCING STEEL LIST.
6. FOR SUMMARY OF PCS QUANTITIES SEE SHEET 9/20.

<p>STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 8121 HUNTLEY ROAD, COLUMBUS, OHIO 43229</p>					
<p>PIER SECTIONS & DETAILS</p>					
<p>BRIDGE NO. FRA-315-0049</p>					
<p>OVER SULLIVANT AVENUE</p>					
FRANKLIN COUNTY				STA. 72+45.22 TO	
				STA. 73+89.63	
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
TEU	GV		PHB	RKM 11/07/97 TDW 10/29/97	

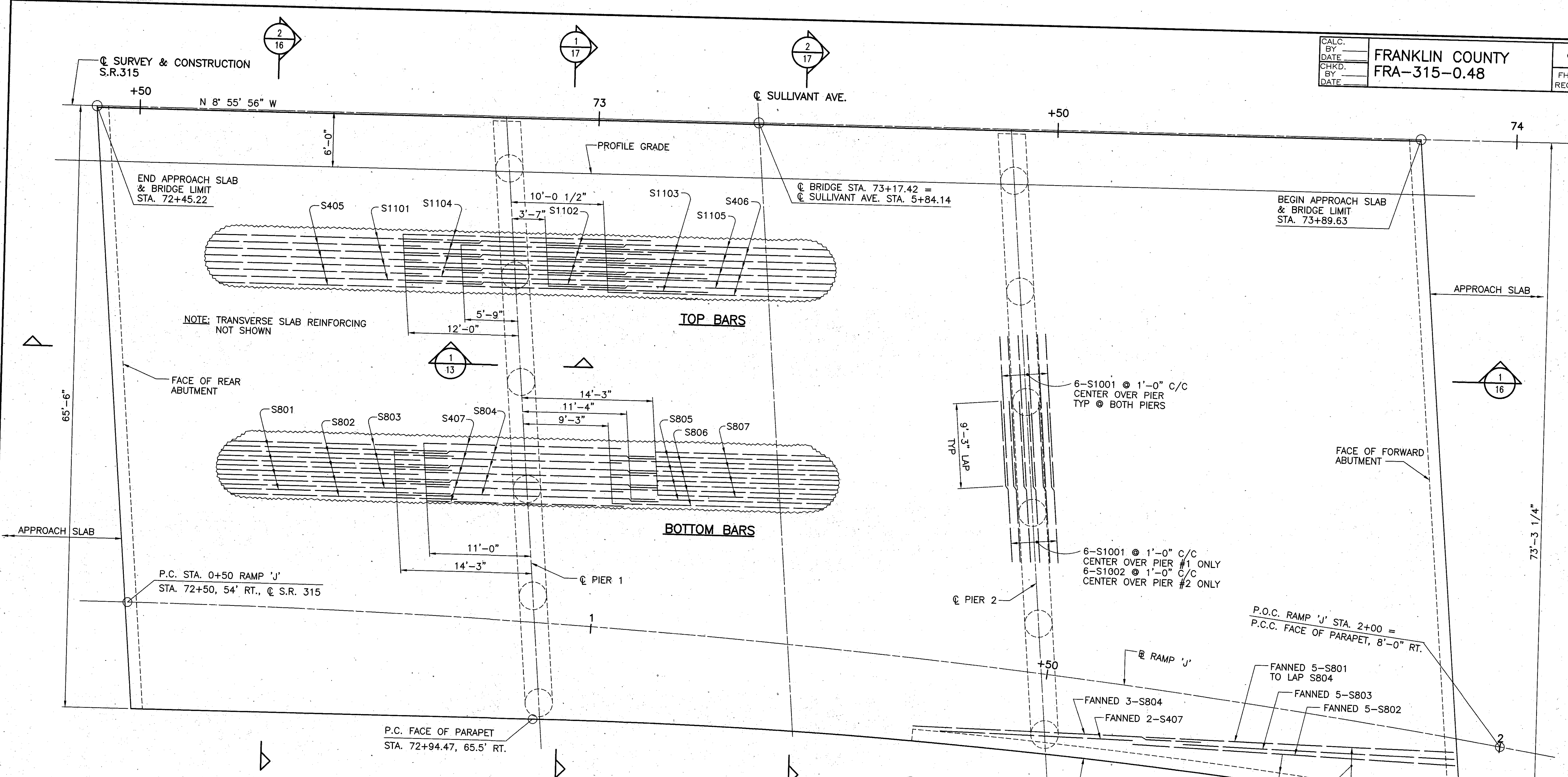


SUPERSTRUCTURE NOTES:

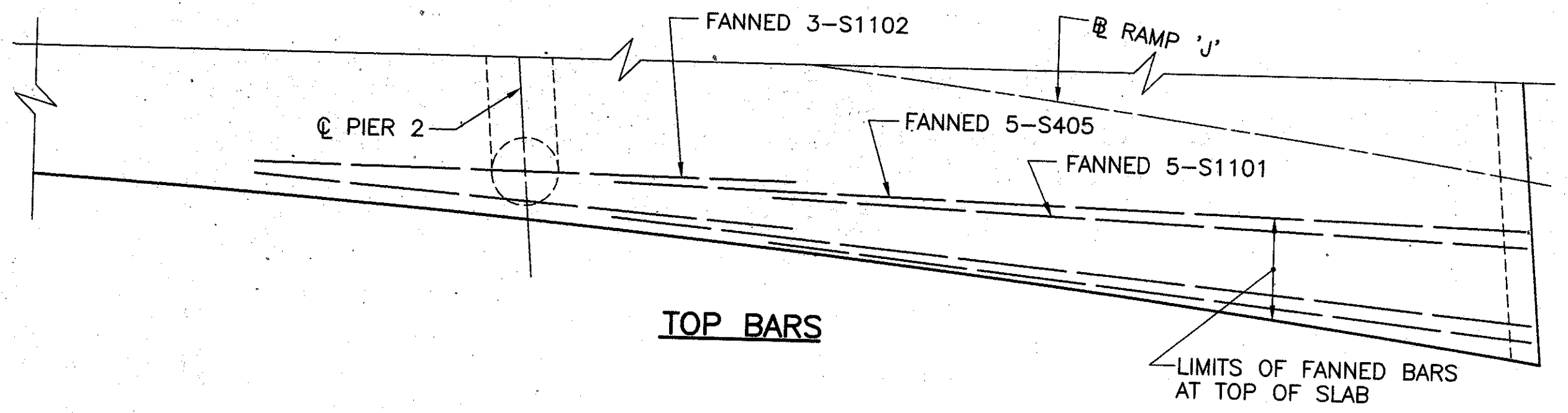
- TRANSVERSE BARS SHALL BE PLACED PARALLEL TO ϕ SLAB BEARING AT ABUTMENTS AND ϕ PIERS.
- FOR REQUIRED SLAB ELEVATIONS, SEE SCREED ELEVATION LOCATION PLAN AND TABLE, SHEET 18/20.
- FOR DEFLECTION CONTROL JOINTS SPACING IN PARAPETS AND SPLIT MEDIAN BARRIER, SEE GENERAL PLAN SHEET 1/20.
- FOR PARAPET AND SPLIT MEDIAN BARRIER REINFORCING DETAILS, SEE SHEET 19/20 DETAILS 5 & 6. LAP SPLICE S501 LONGITUDINAL BARS 2'-9" MINIMUM.
- FOR CROSS-SLOPE ON THESE TRANSVERSE SECTIONS SEE SCREED PLAN ON SHEET 18/20.
- SEE PARTIAL SLAB PLANS ON SHEETS 14&15/20 FOR TOP & BOTTOM FANNED REINFORCING BARS.
- S402 BARS WILL BECOME S410 TO S414 BARS AS THE DECK WIDENS. THE LIMITS OF EACH BAR ARE SHOWN IN THE LONGITUDINAL SECTION ON SHEET 16/20.

LEGEND		STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 6121 HUNTLEY ROAD, COLUMBUS, OHIO 43229						
CL - CLEAR		SUPERSTRUCTURE DETAILS						
TYP - TYPICAL								
EF - EACH FACE		BRIDGE NO. FRA-315-0049 OVER SULLIVANT AVENUE						
NF - NEAR FACE								
FF - FAR FACE		FRANKLIN COUNTY STA. 72+45.22 TO STA. 73+89.63						
C/C - CENTER TO CENTER								
CJ - CONSTRUCTION JOINT		DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
PEJF - PREFORMED EXPANSION JOINT FILLER		TEU	GV		BRH	RKM	11/07/97	
SPA - SPACING						TDW	10/29/97	
EXISTING STRUCTURE								
NEW STRUCTURE								

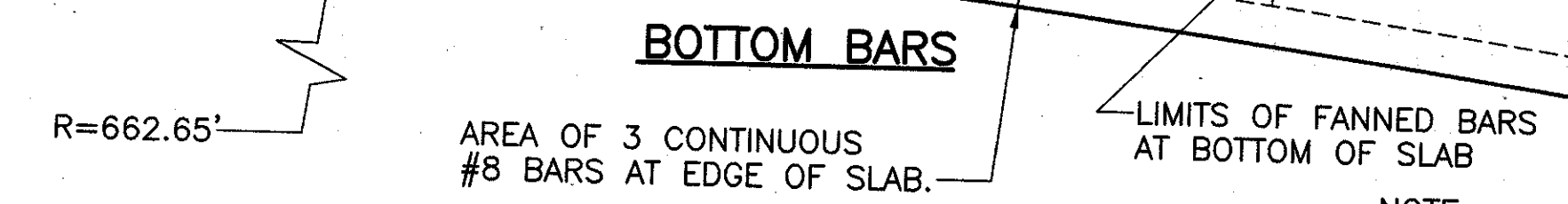
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PARTIAL SLAB PLAN
(SHOWING LONGITUDINAL REINFORCING STEEL)



TOP BARS

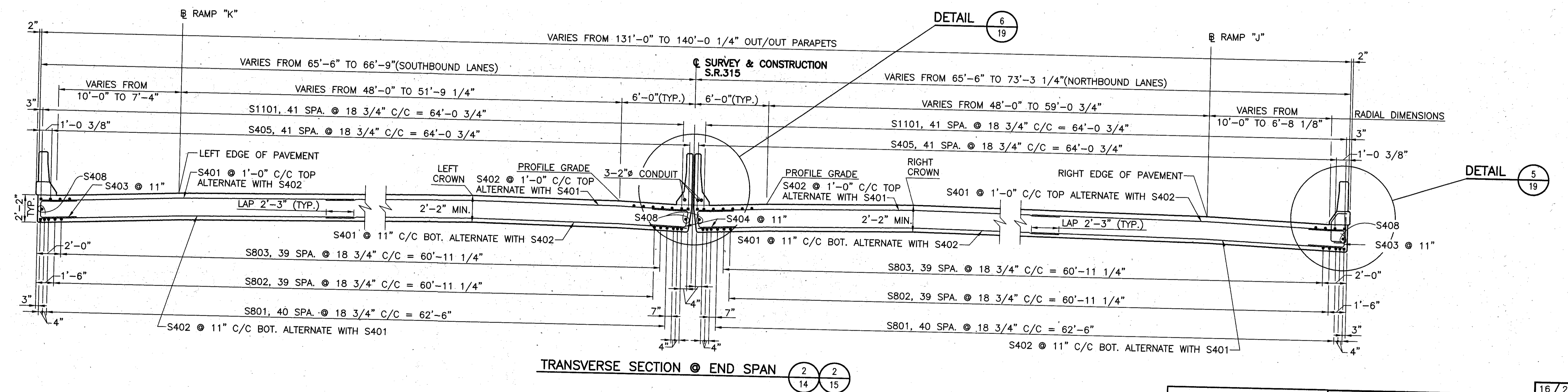
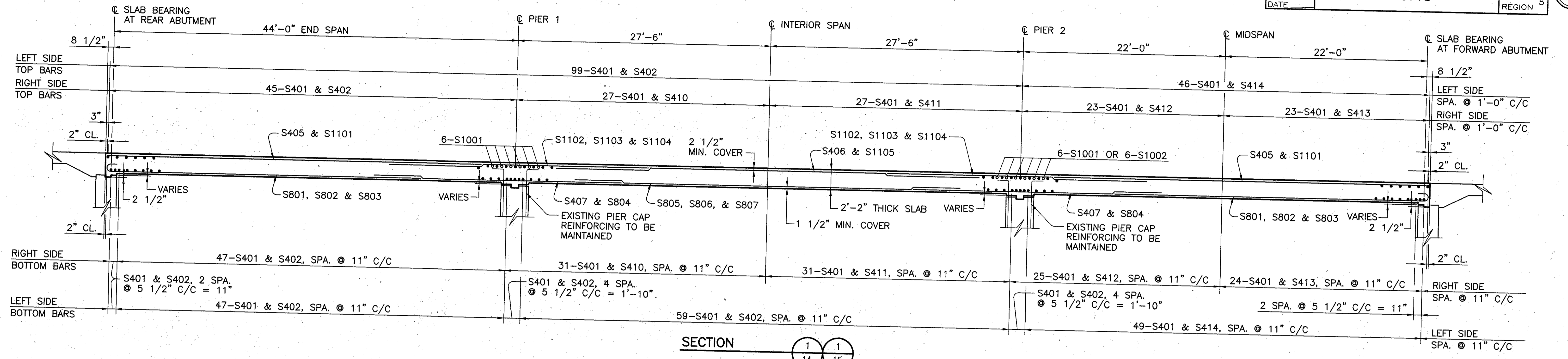


BOTTOM BARS

NOTE:
1. FOR SUPERSTRUCTURE NOTES SEE SHEET 14/20

LEGEND		STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 8121 HUNTLEY ROAD, COLUMBUS, OHIO 43229								
CL	- CLEAR	SUPERSTRUCTURE DETAILS BRIDGE NO. FRA-315-0049 OVER SULLIVANT AVENUE FRANKLIN COUNTY STA. 72+45.22 TO STA. 73+89.63								
TYP	- TYPICAL									
EF	- EACH FACE									
NF	- NEAR FACE									
FF	- FAR FACE									
C/C	- CENTER TO CENTER									
CJ	- CONSTRUCTION JOINT									
PEJF	- PREFORMED EXPANSION JOINT FILLER									
SPA	- SPACING									
EXISTING STRUCTURE										
NEW STRUCTURE										
DESIGNED	TEU						DRAWN	GV	TRACED	BRH
CHECKED	BRH						REVIEWED	RKM	DATE	11/07/97
								TDW	DATE	10/29/97

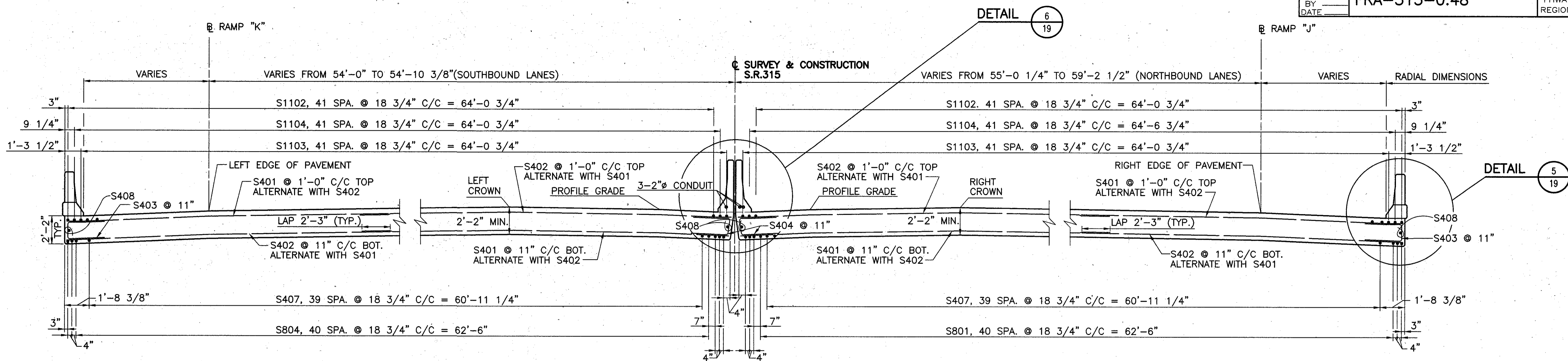
15/20
 10/29/97
 10:39:50 - PLOT: 1/64
 11/14/97
 10:39:50 - PLOT: 1/64
 11/14/97
 10:39:50 - PLOT: 1/64



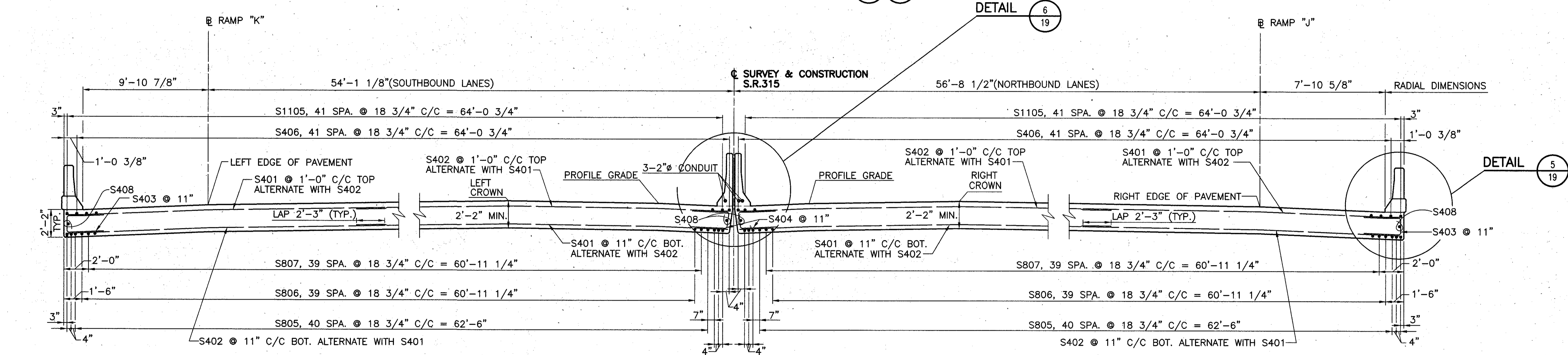
LEGEND		STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 8121 HUNTLEY ROAD, COLUMBUS, OHIO 43229					
CL	- CLEAR	SUPERSTRUCTURE DETAILS BRIDGE NO. FRA-315-0049 OVER SULLIVANT AVENUE FRANKLIN COUNTY STA. 72+45.22 TO STA. 73+89.63					
TYP	- TYPICAL						
EF	- EACH FACE						
NF	- NEAR FACE						
FF	- FAR FACE						
C/C	- CENTER TO CENTER						
CJ	- CONSTRUCTION JOINT						
PEJF	- PREFORMED EXPANSION JOINT FILLER						
SPA	- SPACING						
EXISTING STRUCTURE							
NEW STRUCTURE							
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED	
TEU	RTP		BRH	RKM	11/07/97		
				TDW	10/29/97		

NOTE:
1. FOR SUPERSTRUCTURE NOTES SEE SHEET 14/20.

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TRANSVERSE SECTION @ PIERS 1 1



TRANSVERSE SECTION @ MIDDLE-INTERIOR SPAN 2 2

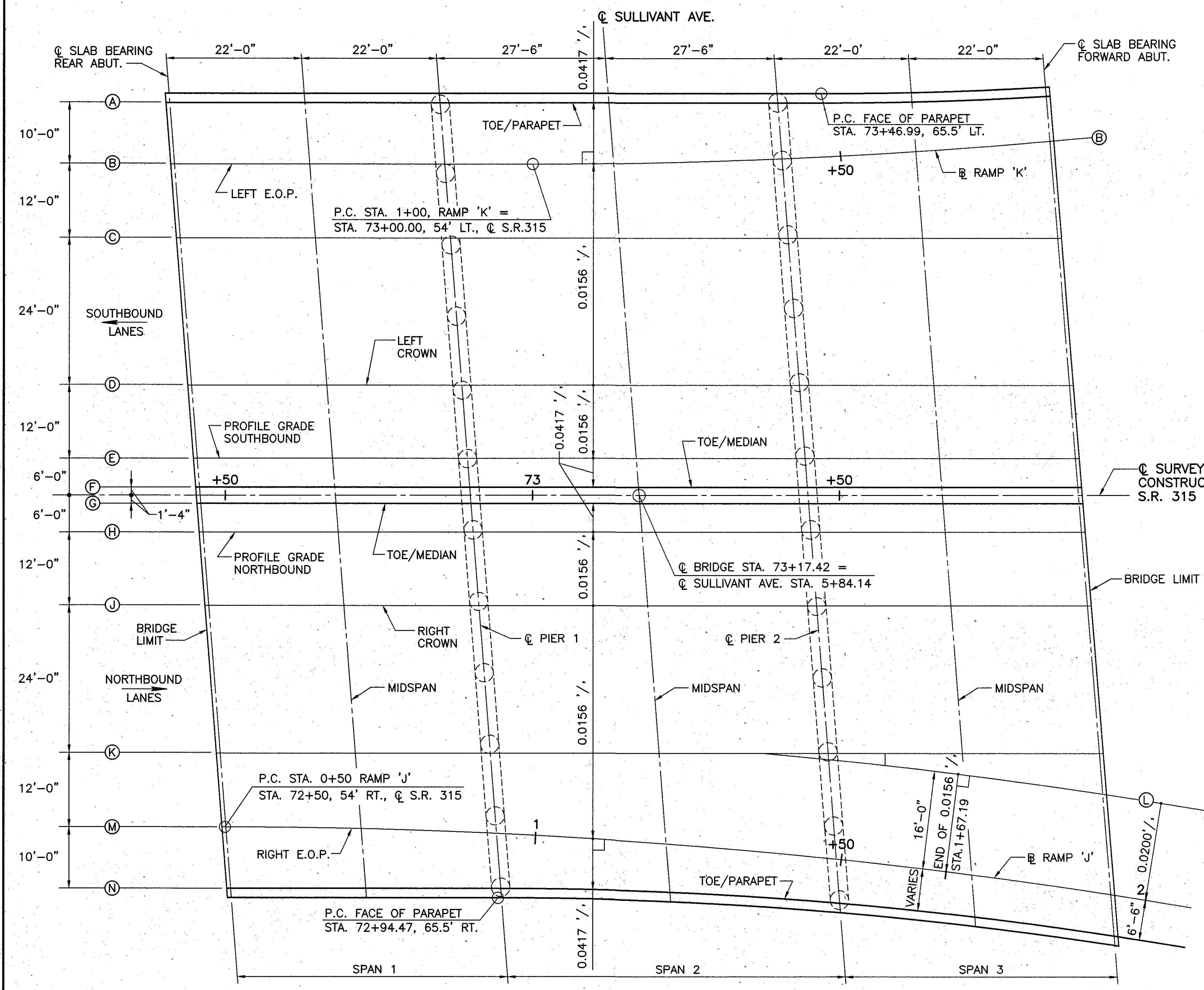
NOTE:
1. FOR SUPERSTRUCTURE NOTES, SEE SHEET 14/20.

LEGEND		STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 6121 HUNTLEY ROAD, COLUMBUS, OHIO 43229										
CL - CLEAR		SUPERSTRUCTURE DETAILS BRIDGE NO. FRA-315-0049 OVER SULLIVANT AVENUE FRANKLIN COUNTY STA. 72+45.22 TO STA. 73+89.63										
TYP - TYPICAL												
EF - EACH FACE												
NF - NEAR FACE												
FF - FAR FACE												
C/C - CENTER TO CENTER												
CJ - CONSTRUCTION JOINT												
PEJF - PREFORMED EXPANSION JOINT FILLER												
SPA - SPACING												
EXISTING STRUCTURE												
NEW STRUCTURE												
DESIGNED	DRAWN							TRACED	CHECKED	REVIEWED	DATE	REVISED
TEU	RTP								BRH	RKM	11/07/97	
										TDW	10/29/97	

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TABLE OF SCREED ELEVATIONS

SCREED LINE	SPAN 1 (SOUTH END)		SPAN 2 (INTERIOR)		SPAN 3 (NORTH END)		
	BRIDGE LIMIT REAR ABUTMENT	MIDSPAN	Q PIER 1	MIDSPAN	Q PIER 2	BRIDGE LIMIT FWD. ABUTMENT	
A	721.73	721.97	722.09	722.41	722.54	722.84	722.90
B	722.15	722.40	722.51	722.83	722.93	723.15	723.21
C	722.35	722.59	722.71	723.03	723.15	723.38	723.51
D	722.74	722.98	723.10	723.42	723.54	723.77	723.90
E	722.56	722.80	722.92	723.24	723.36	723.59	723.72
F	722.37	722.61	722.72	723.05	723.16	723.40	723.53
G	722.37	722.61	722.73	723.05	723.17	723.40	723.53
H	722.57	722.81	722.92	723.25	723.36	723.60	723.73
J	722.76	723.00	723.12	723.44	723.56	723.80	723.92
K	722.40	722.64	722.76	723.08	723.20	723.44	723.56
L	-----	-----	-----	-----	723.17	723.38	723.47
M	722.23	722.47	722.56	722.86	722.94	723.14	723.19
N	721.82	722.07	722.20	722.54	722.66	722.88	722.92



SCREED ELEVATION LOCATION PLAN

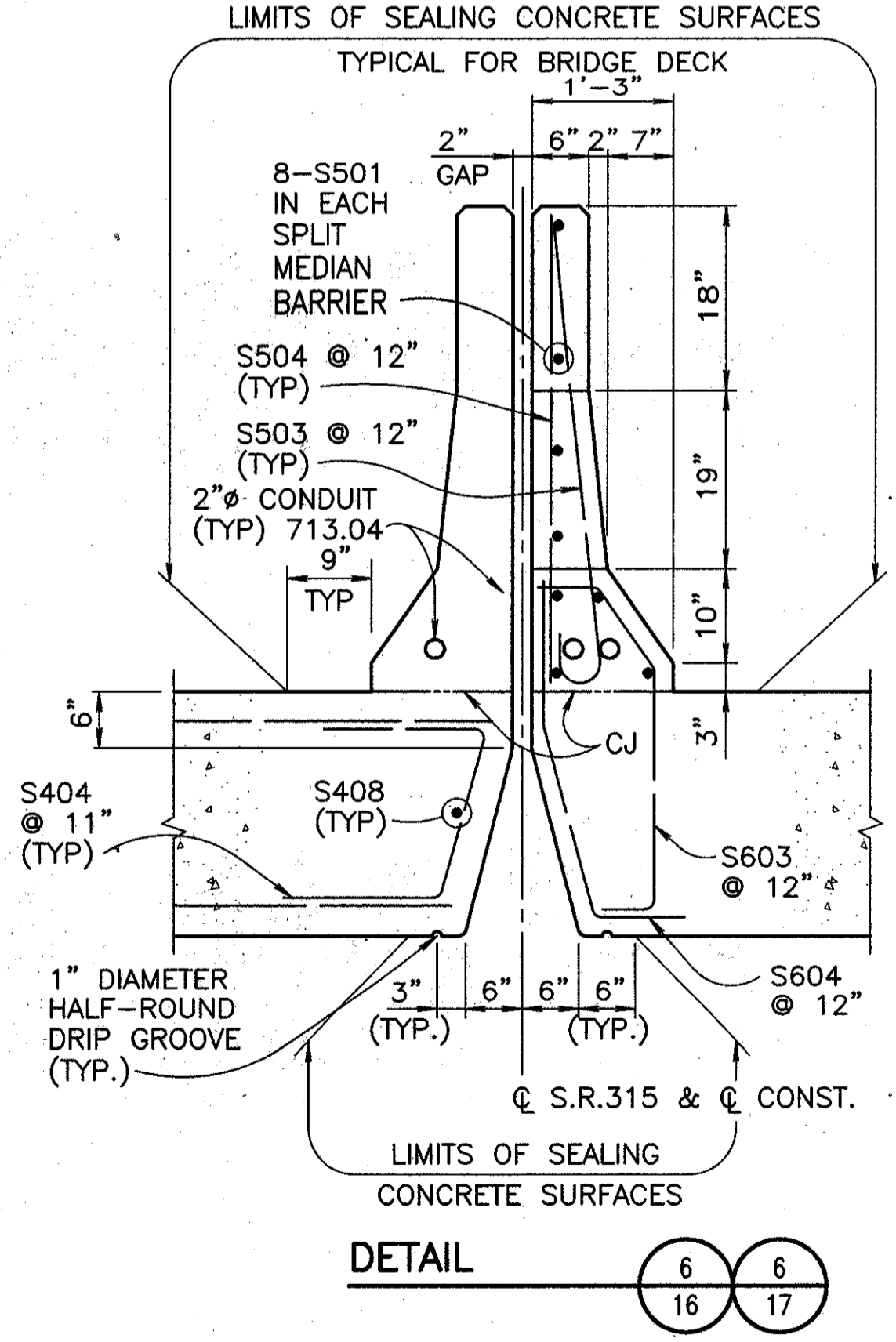
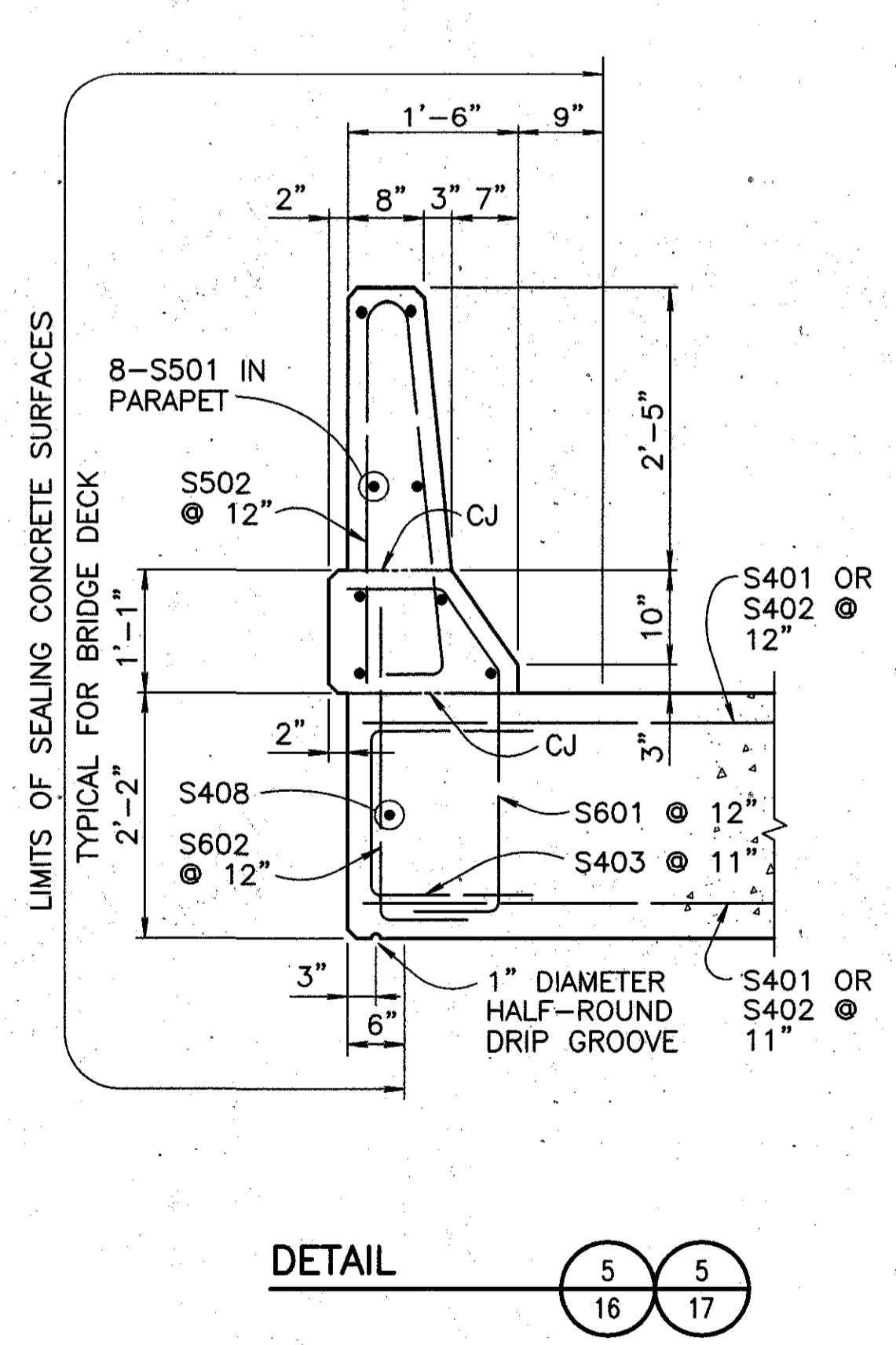
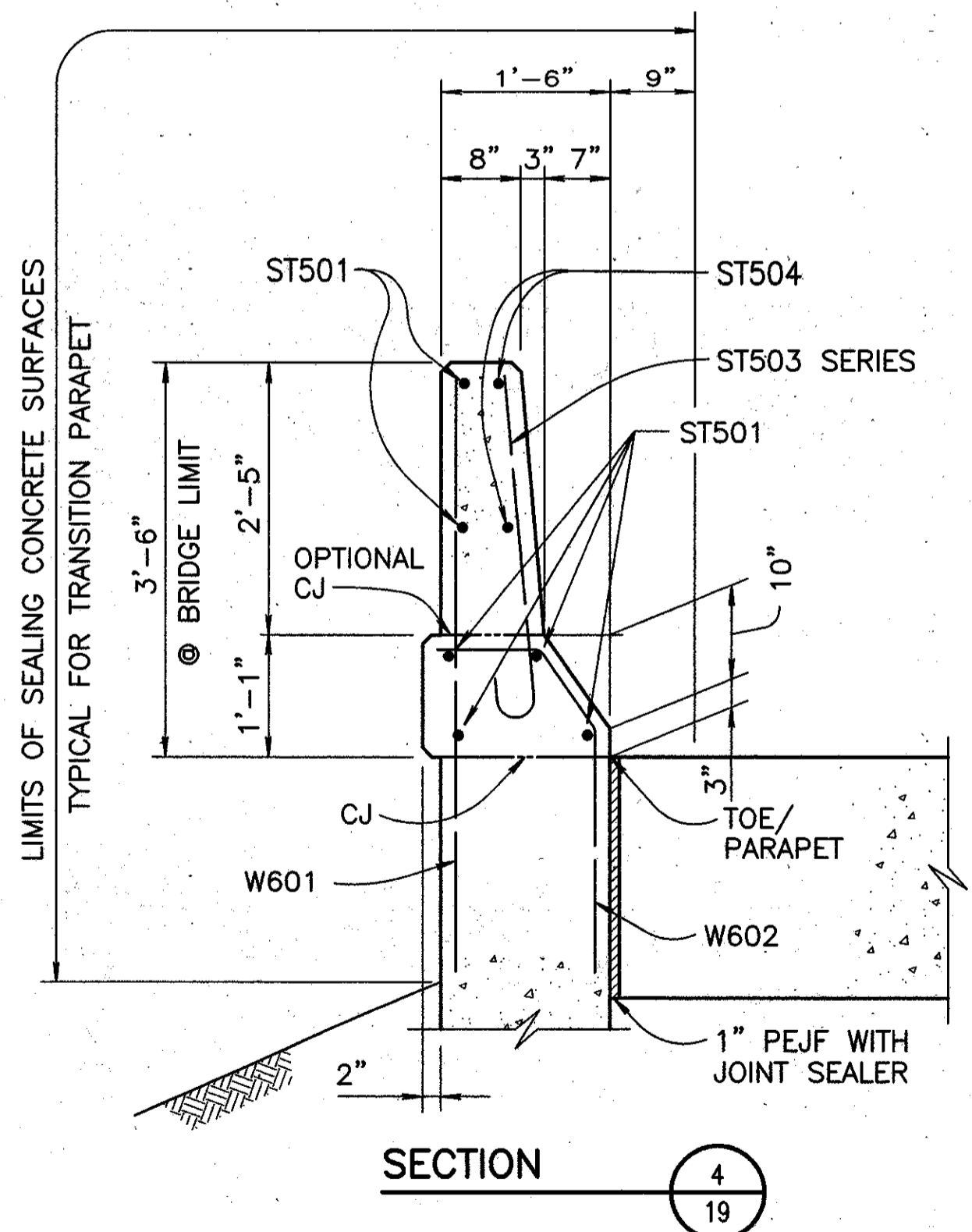
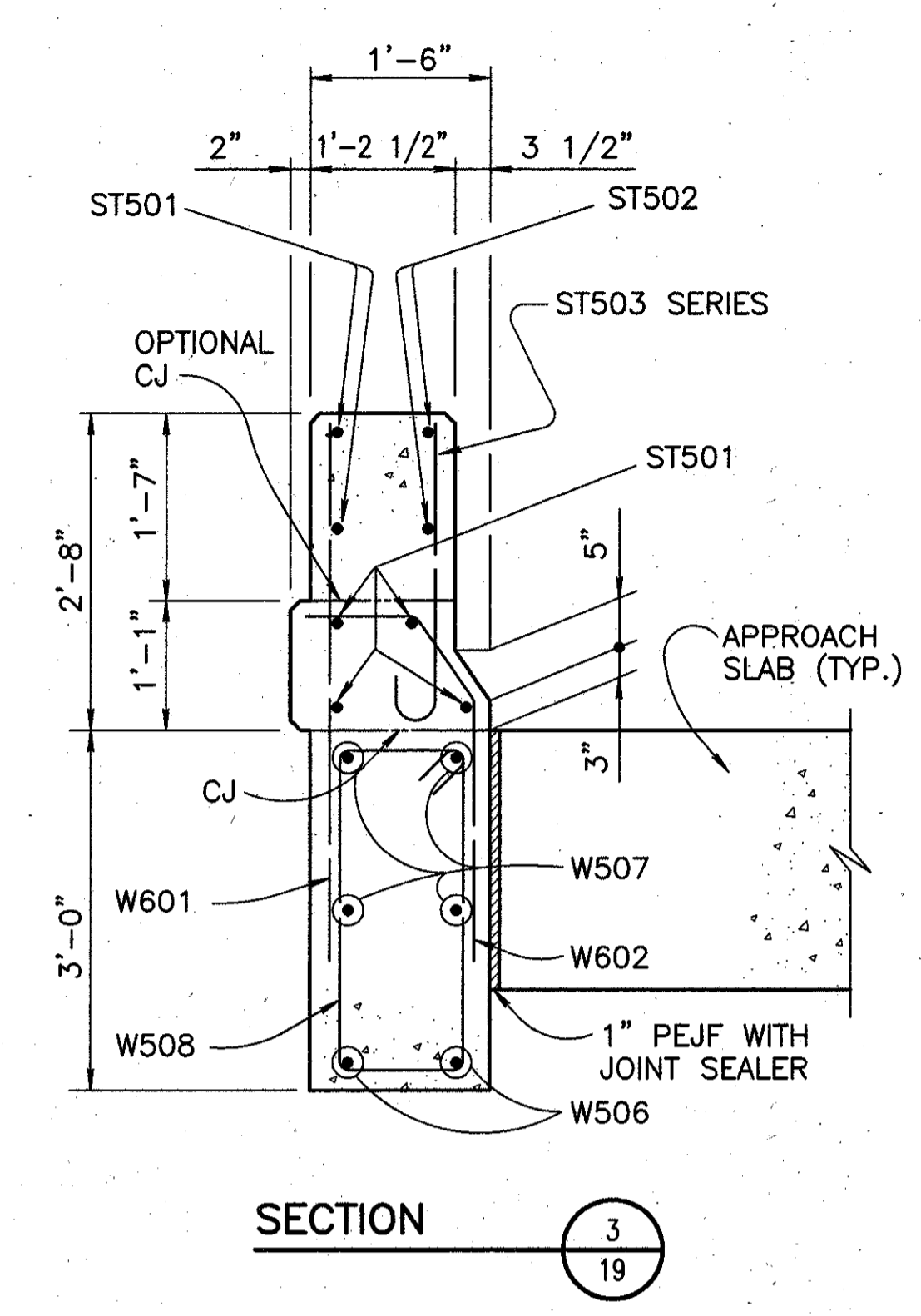
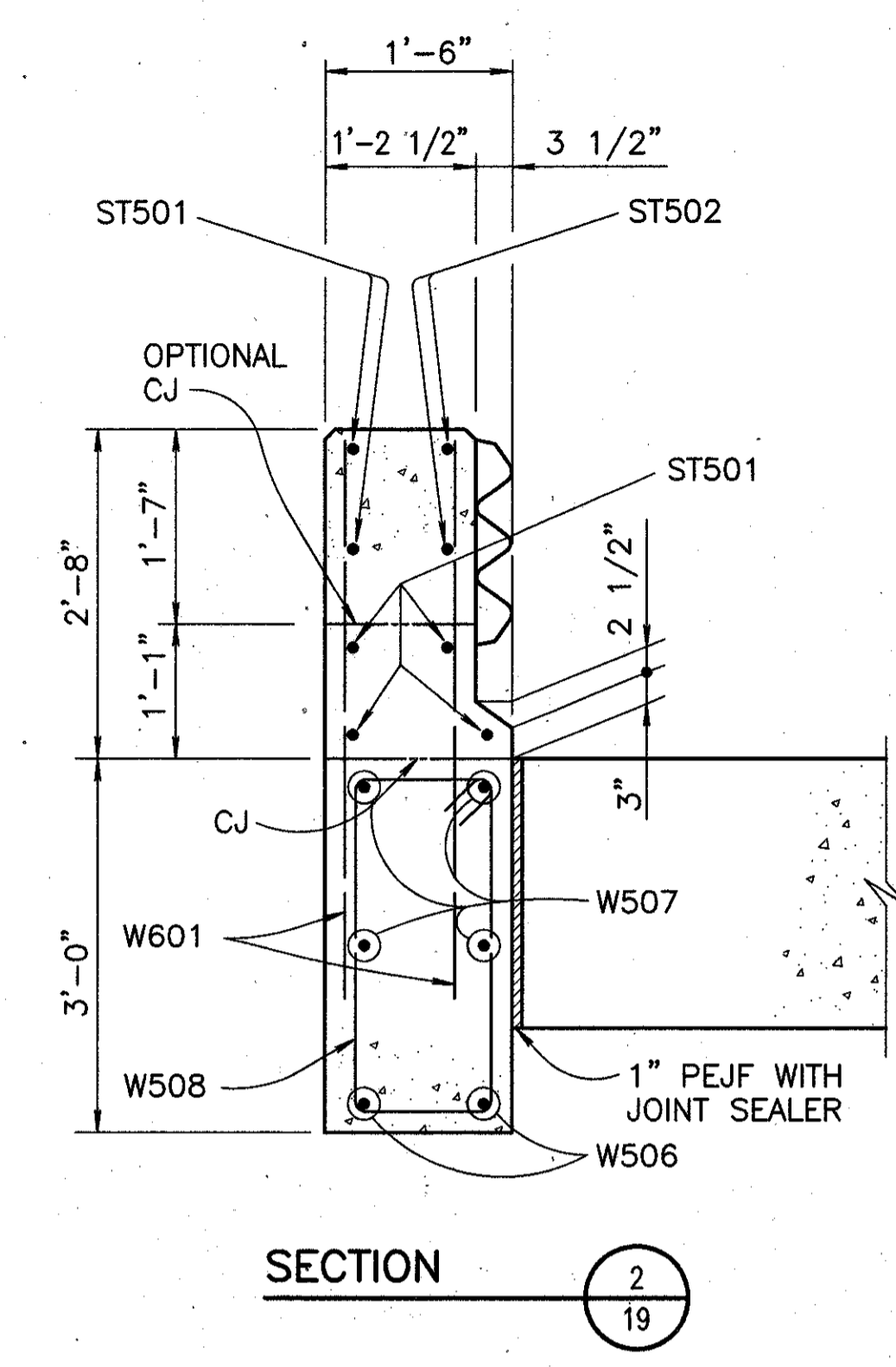
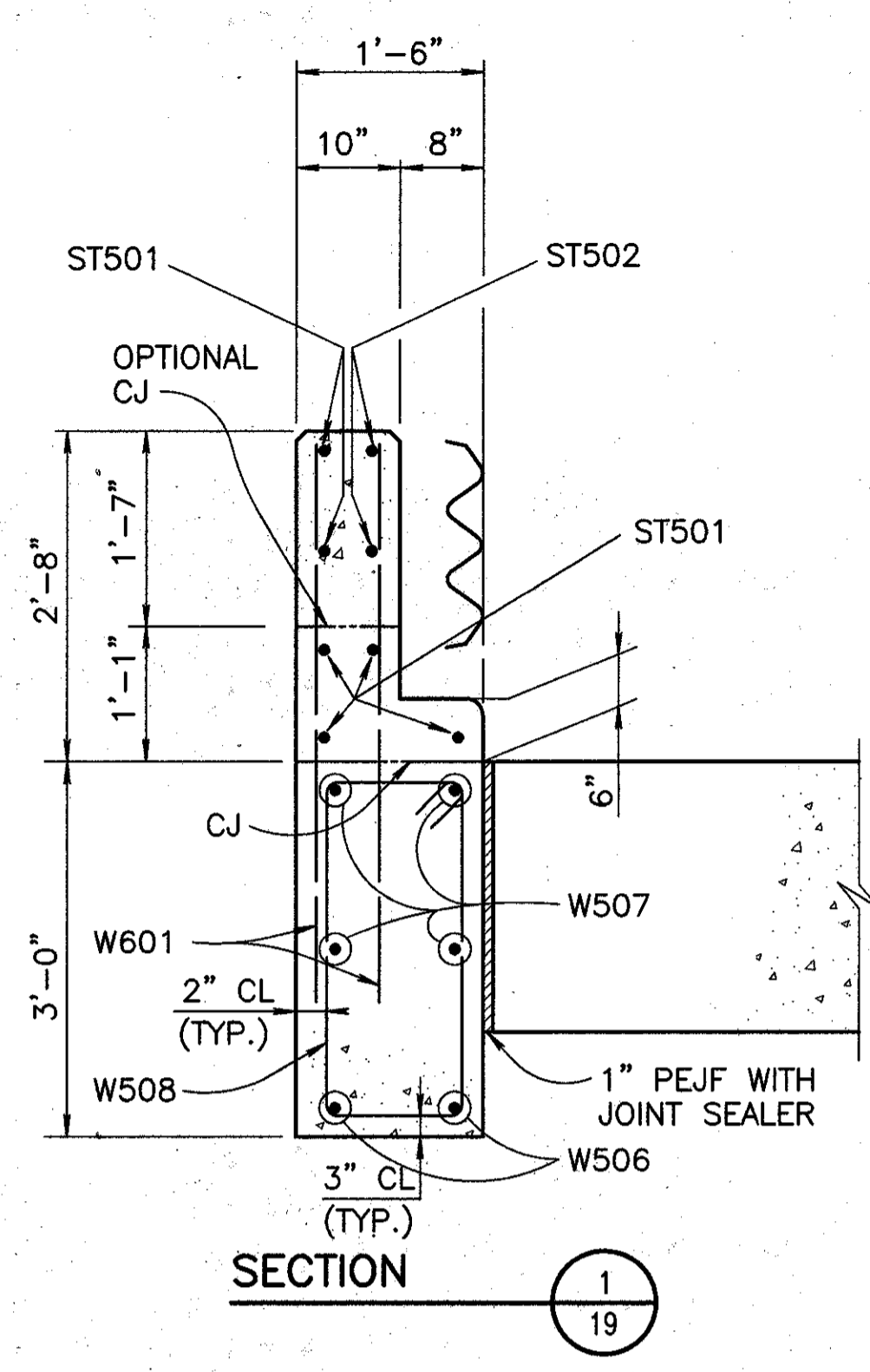
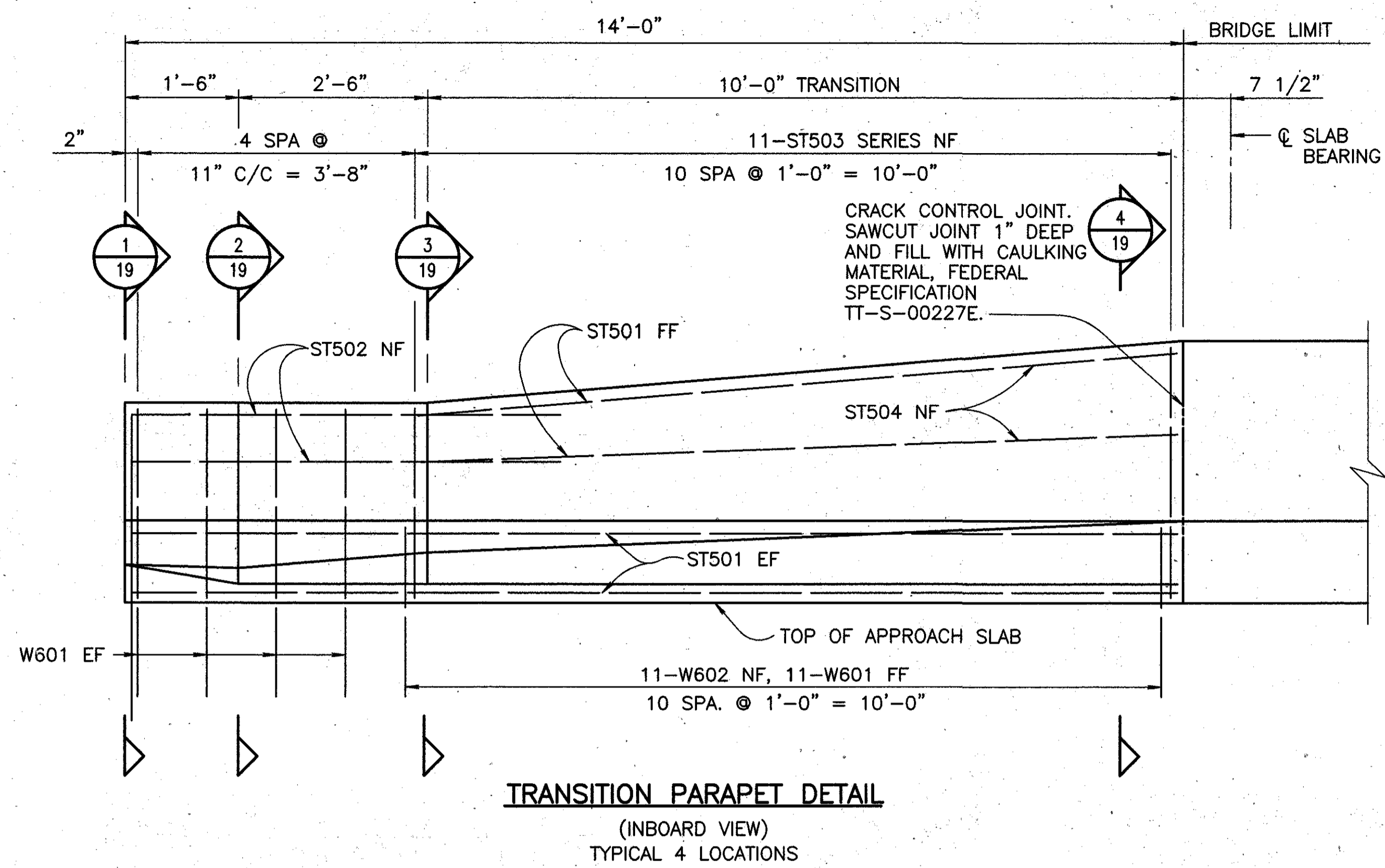
- NOTES:**
- THE SCREED ELEVATIONS SHOWN ARE TO THE TOP OF SUPERSTRUCTURE CONCRETE PLACEMENT AND ARE THE ELEVATIONS REQUIRED PRIOR TO RELEASE OF THE SUPPORTING FALSEWORK. PROPER ALLOWANCE HAS BEEN MADE FOR THE DEAD LOAD DEFLECTION CAUSED BY THE WEIGHT OF THE CONCRETE. ADDITIONAL ALLOWANCE SHALL BE MADE TO COMPENSATE FOR THE DEFLECTION OF ANY FALSEWORK MEMBERS SUPPORTING THE ACTUAL CONCRETE PLACEMENT.
 - FOR SUPERSTRUCTURE NOTES, SEE SHEET 14/20

SULLIVANT AVE. BRIDGE CURVE DATA

RAMP J DATA:	EAST (J) FACE OF PARAPET DATA:	RAMP K DATA:	WEST (K) FACE OF PARAPET DATA:
P.I. = 1+74.00	Δ = 14° 47' 50"	P.I. = 2+36.00	Δ = 16° 12' 40"
D = 6' 00'	R = 954.93'	D = 6' 00'	R = 954.93'
T = 124.00'	Lc = 246.62'	T = 52.15'	Lc = 104.09'
E = 8.02'		E = 9.64'	

LEGEND		STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 8121 HUNTLEY ROAD, COLUMBUS, OHIO 43229			
EOP - EDGE OF PAVEMENT	TYP - TYPICAL	SUPERSTRUCTURE DETAILS BRIDGE NO. FRA-315-0049 OVER SULLIVANT AVENUE FRANKLIN COUNTY STA. 72+45.22 TO STA. 73+89.63			
EF - EACH FACE	NF - NEAR FACE				
FF - FAR FACE	C/C - CENTER TO CENTER				
CJ - CONSTRUCTION JOINT	PEJF - PREFORMED EXPANSION JOINT FILLER				
SPA - SPACING	EXISTING STRUCTURE				
NEW STRUCTURE					
DESIGNED	DRAWN			TRACED	CHECKED
REVIEWED	DATE			REVISOR	DATE
TEU	GV			BRH	RKM 11/07/97
					TDW 10/29/97

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- TRANSITION PARAPET NOTES:**
- PAYMENT: QUANTITIES OF REINFORCING STEEL, CONCRETE FOR PARAPETS AND MEDIAN BARRIERS, AND CONTROL JOINT CAULKING MATERIAL ARE INCLUDED WITH ITEM SPECIAL, HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE (PARAPET) UNLESS OTHERWISE NOTED.
 - FOR SUBSTRUCTURE NOTES, SEE SHEET 3/20.
 - FOR SUPERSTRUCTURE NOTES, SEE SHEET 14/20.
 - FOR ADDITIONAL TRANSITION PARAPET DETAILS NOT SHOWN, SEE STANDARD DRAWING BR-1.
 - FOR CRACK CONTROL JOINT LOCATIONS, SEE THE GENERAL PLAN, SHEET 1/20. VERTICAL BARS IN THE PARAPETS ARE SPACED AT 12" C/C AS PER DETAILS 5 & 6 THIS SHEET.

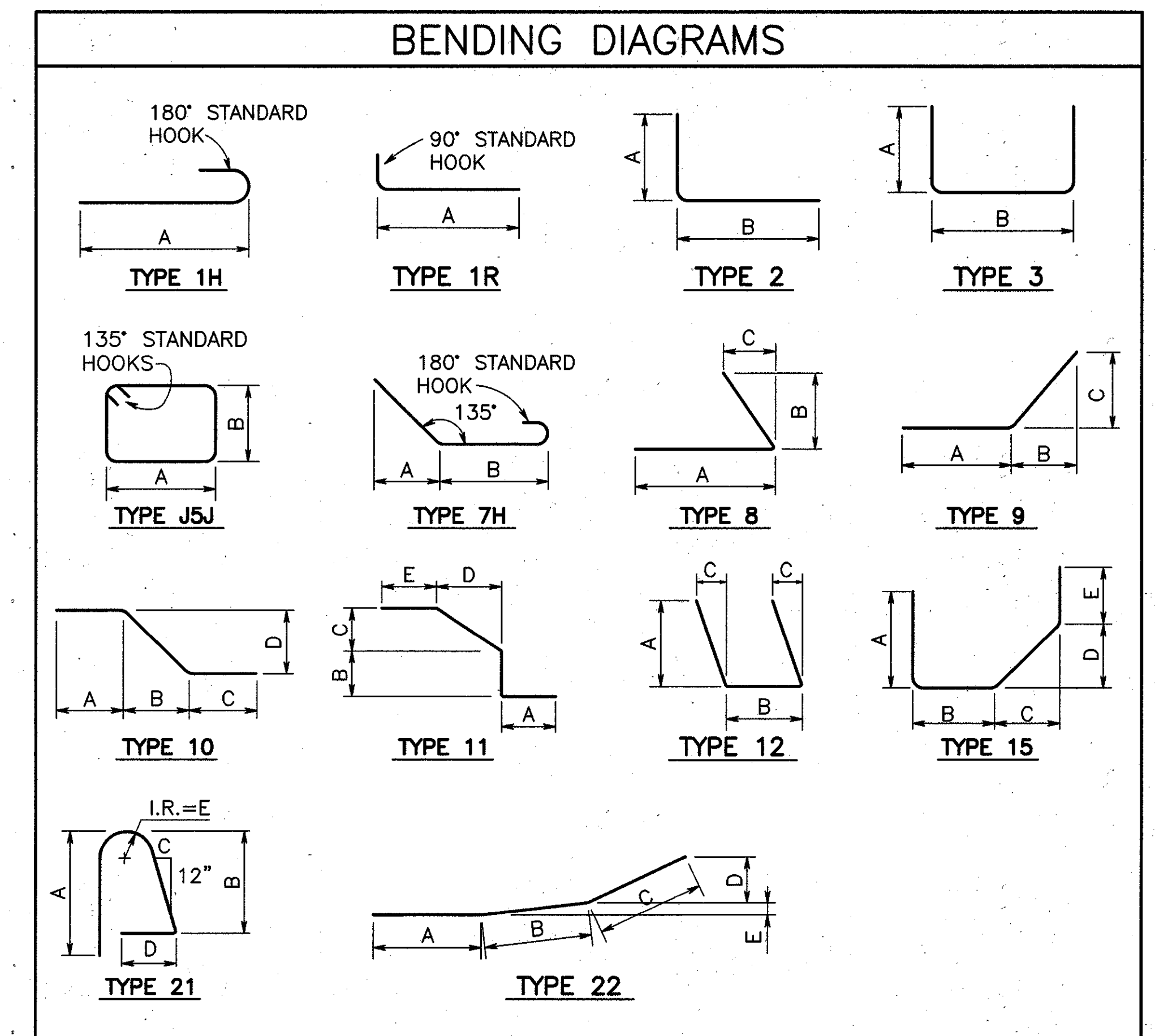
LEGEND		STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 8121 HUNTLEY ROAD, COLUMBUS, OHIO 43229						
TYP - TYPICAL		SUPERSTRUCTURE DETAILS						
EF - EACH FACE								
NF - NEAR FACE		BRIDGE NO. FRA-315-0049 OVER SULLIVANT AVENUE						
FF - FAR FACE								
C/C - CENTER TO CENTER		FRANKLIN COUNTY STA. 72+45.22 TO STA. 73+89.63						
CJ - CONSTRUCTION JOINT								
PEJF - PREFORMED EXPANSION JOINT FILLER		DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
SPA - SPACING		TEU	RTP		BRH	RKM	11/07/97	
CL - CLEAR						TDW	10/29/97	
EXISTING STRUCTURE								
NEW STRUCTURE								

NOTE: EACH RUN OF LONGITUDINAL PARAPET AND MEDIAN BARRIER REINFORCING SHALL BE COMPRISED OF THE FOLLOWING:
4-S501, MINIMUM LAP = 2'-9"

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STEEL LIST										
MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	NOTE
REAR ABUTMENT										
AR501	36	40'-0"	1502	STR.						
AR502	16	30'-3"	505	STR.						
AR503	89	7'-2"	665	3	1'-7"	4'-11"				
AR504	89	7'-10"	727	3	1'-0"	4'-11"				
AR505	91	13'-6"	1281	3	6'-0"	1'-11"				
AR506	91	8'-6"	807	3	3'-6"	1'-11"				
AR507	16	27'-9"	463	STR.						
AR508	12	6'-0"	75	STR.						
AR509	6	40'-0"	250	8	3'-0"	0'-3"	3'-0"			
AR510	6	16'-6"	103	9	3'-0"	0'-3"	3'-0"			
AR1001	8	45'-0"	1549	STR.						
AR1002	8	29'-8"	1021	STR.						
D801	86	6'-3"	1435	7H	1'-0"	4'-0"				
TOTAL=			10383							
FORWARD ABUTMENT										
AF501	36	40'-0"	1502	STR.						
AF502	16	35'-0"	584	STR.						
AF503	94	7'-2"	703	3	1'-7"	4'-11"				
AF504	94	7'-10"	768	3	1'-0"	4'-11"				
AF505	96	13'-6"	1352	3	6'-0"	1'-11"				
AF506	96	8'-6"	851	3	3'-6"	1'-11"				
AF507	8	28'-9"	240	STR.						
AF508	8	35'-10"	299	STR.						
AF509	12	6'-0"	75	STR.						
AF510	6	5'-10"	37	2	3'-0"	3'-0"				
AF511	6	6'-0"	38	9	3'-0"	0'-9"	3'-0"			
AF1001	8	45'-0"	1549	STR.						
AF1002	4	30'-6"	525	STR.						
AF1003	4	37'-8"	648	STR.						
D801	91	6'-3"	1519	7H	1'-0"	4'-0"				
TOTAL=			10690							
REAR ABUTMENT WINGWALLS										
W501	16	11'-5"	191	STR.						
W502	10	10'-0"	104	J5J	3'-2"	1'-7"				
W503	18	10'-11"	205	3	5'-0"	1'-2"				
W504	16	13'-11"	232	3	6'-6"	1'-2"				
W505	12	8'-11"	112	STR.						
W506	4	14'-11"	62	STR.						
W507	8	13'-8"	114	STR.						
W508	8	8'-0"	67	J5J	2'-7"	1'-2"				
W509	2	4'-4"	9	STR.						
W601	38	4'-6"	257	STR.						
W602	22	3'-7"	118	11	0'-0"	2'-3"	0'-9"	0'-6"	0'-8"	
TOTAL=			1471							
FORWARD ABUTMENT WINGWALLS										
W501	16	11'-5"	191	STR.						
W502	10	10'-0"	104	J5J	3'-2"	1'-7"				
W503	18	10'-11"	205	3	5'-0"	1'-2"				
W504	16	13'-11"	232	3	6'-6"	1'-2"				
W505	12	8'-11"	112	STR.						
W506	4	14'-11"	62	STR.						
W507	8	13'-8"	114	STR.						
W508	8	8'-0"	67	J5J	2'-7"	1'-2"				
W509	2	4'-5"	9	STR.						
W601	38	4'-6"	257	STR.						
W602	22	3'-7"	118	11	0'-0"	2'-3"	0'-9"	0'-6"	0'-8"	
TOTAL=			1471							

STEEL LIST										
MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	NOTE
SUPERSTRUCTURE										
S401	616	40'-0"	16460	STR.						
S402	310	27'-8"	5729	STR.						
S403	326	4'-0"	871	3	1'-3"	1'-8"				
S404	326	4'-3"	926	12	1'-3"	1'-9"	0'-4"			
S405	168	34'-3"	3844	STR.						
S406	168	46'-9"	5246	STR.						
S407	162	22'-0"	2381	STR.						
S408	12	49'-2"	394	STR.						
S409	1	16'-0"	11	STR.						
S410	58	28'-4"	1098	STR.						
S411	58	30'-0"	1162	STR.						
S412	48	32'-5"	1039	STR.						
S413	47	35'-6"	1115	STR.						
S414	95	28'-10"	1830	STR.						
S501	128	38'-6"	5140	STR.						
S502	292	7'-0"	2132	21	3'-0"	3'-3"	0'-1"	0'-8"	0'-2"	
S503	290	4'-6"	1361	1H	3'-11"					
S504	290	3'-11"	1185	STR.						
S601	292	4'-6"	1974	15	0'-11"	2'-3"	0'-9"	0'-6"	0'-9"	
S602	292	3'-7"	1572	2	0'-11"	2'-10"				
S603	290	3'-10"	1670	15	0'-6"	2'-3"	0'-9"	0'-6"	0'-5"	
S604	290	3'-6"	1525	11	0'-0"	0'-11"	0'-4"	1'-5"	1'-5"	
S801	189	33'-2"	16737	STR.						
S802	165	35'-0"	15419	STR.						
S803	165	31'-2"	13730	1H	30'-3"					
S804	167	28'-6"	12708	STR.						
S805	92	32'-4"	7942	STR.						
S806	80	31'-6"	6728	STR.						
S807	80	31'-6"	6728	STR.						
S808	1	16'-0"	43	STR.						
S1001	42	37'-4"	6747	STR.						
S1002	6	39'-9"	1026	STR.						
S1101	173	40'-9"	37455	STR.						
S1102	172	24'-0"	21932	STR.						
S1103	168	27'-0"	24100	STR.						
S1104	168	27'-0"	24100	STR.						
S1105	84	47'-10"	21348	STR.						
D501	42	3'-6"	153	1R	2'-9"					
D502	124	4'-1"	528	1R	3'-4"					
TOTAL=			267089							
TRANSITION PARAPETS										
ST501	16	13'-10"	231	STR.						
ST502	8	5'-8"	47	22	1'-10"	2'-5"	1'-5"	0'-2"	0'-5"	
	4	3'-0"			2'-5"					
ST503	SER. OF TO		157	1H	DIMENSION A VARIES BY 3'-3"		0'-1"			
ST504	8	10'-0"	83	STR.						
TOTAL=			518							



NOTES:

1. SERIES BARS - EACH BAR VARIES BY TABULATED AMOUNTS.
2. ALL DIMENSIONS ARE OUT TO OUT UNLESS NOTED OTHERWISE.
3. THE BAR SIZE NUMBER IS SPECIFIED IN THE 'MARK' COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, OR THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER.
4. ALL REINFORCING STEEL SHALL BE EPOXY COATED.
5. TYPE 'STR.' MEANS STRAIGHT BAR.
6. PAYMENT FOR THE REINFORCING STEEL IN EACH STRUCTURAL UNIT OF THE BRIDGE SHALL BE INCLUDED WITH THE UNITS CORRESPONDING ITEM 511, CONCRETE. THIS INCLUDES THE COST OF ANY NECESSARY FIELD BENDING OF THE REINFORCING STEEL.
7. WEIGHTS SHOWN IN THIS REINFORCING STEEL LIST ARE FOR INFORMATION ONLY.

STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 6121 HUNTLEY ROAD, COLUMBUS, OHIO 43228					
REINFORCING STEEL LIST					
BRIDGE NO. FRA-315-0049 OVER SULLIVANT AVENUE					
FRANKLIN COUNTY			STA. 72+45.22 TO STA. 73+89.63		
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
TEU	RTP		BRH	RKM	11/07/97
				TDW	10/29/97

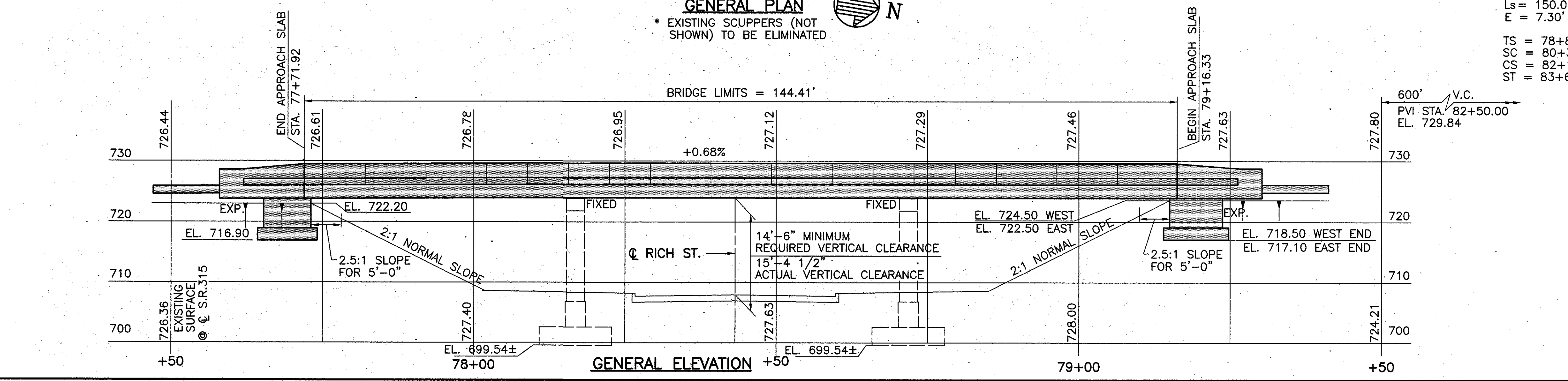
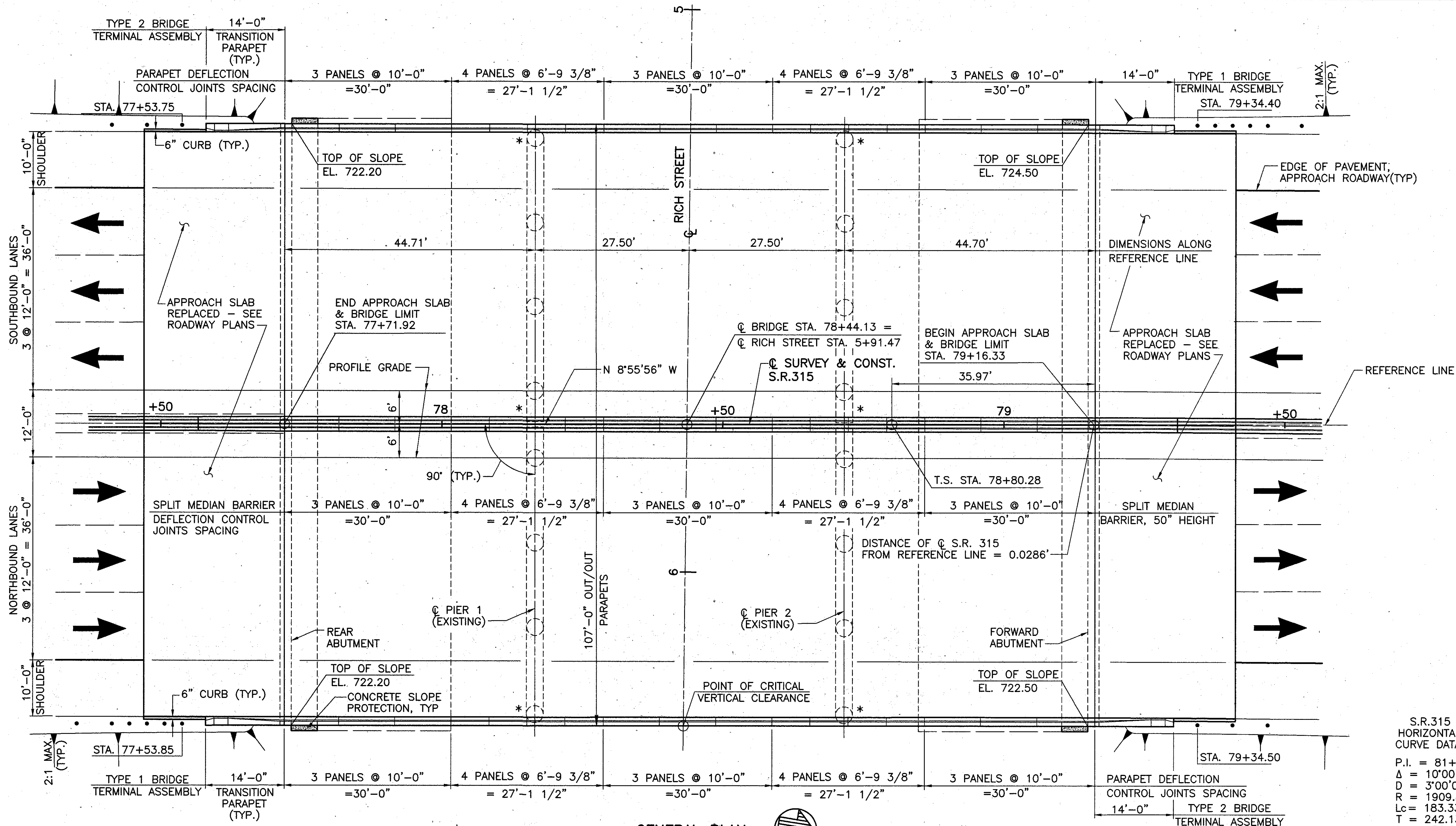
REFERENCE LINE IS THE FORWARD EXTENSION OF S.R.315 CENTERLINE FROM THE T.S. AT STA. 78+80.28.

BENCHMARK: B.M. 31 CHISLED X IN CONCRETE SLAB ON WEST SIDE OF HOUSE AT SOUTHEAST CORNER OF ALLEY AND RICH STREET.
STA. 77+39, 286' RIGHT OF Q. S.R. 315. EL. 709.95

TRAFFIC DATA
CURRENT ADT (1997): 99,554
DESIGN YEAR ADT (2017): 127,027
D.H.V.: 8257
D: 65%
PERCENTAGE TRUCKS: 5%
DESIGN SPEED: 55 M.P.H.
LEGAL SPEED: 55 M.P.H.
CLASSIFICATION: URBAN-OTHER FREEWAYS AND EXPRESSWAYS

EXISTING STRUCTURE
TYPE : 3 SPAN CONTINUOUS CONCRETE SLAB WITH REINFORCED CONCRETE SUBSTRUCTURE
SPANS : 44'-55'-44' C/C BEARINGS ALONG THE Q. S.R. 315
LOAD FREQUENCY RATING : CF 2000 (51) - (ADEQUATE FOR AASHTO ALTERNATE LOADING)
ROADWAY : 104' F/F OF PARAPETS
SKEW : 0'-14'± LEFT FORWARD WITH RESPECT TO THE INTERSECTION OF THE CENTERLINES OF RICH STREET AND S.R.315
SURFACE COURSE : BITUMINOUS CONCRETE, 2 1/2"± THICK
APPROACH SLABS : AS-1-54, 25' LONG
ALIGNMENT : TANGENT AND SPIRAL
SUPERELEVATION : VARIES

PROPOSED STRUCTURE
TYPE : NEW 3 SPAN CONTINUOUS REINFORCED CONCRETE SLAB SUPERSTRUCTURE SUPPORTED BY NEW REINFORCED CONCRETE ABUTMENTS AND EXISTING REINFORCED CONCRETE PIERS
SPANS : 44'-0" : 55'-0" : 44'-0" C/C BEARINGS ALONG THE Q. S.R.315
DESIGN LOADING : HS 20-44 AND THE ALTERNATE MILITARY LOADING
ROADWAY : 104' TOE/TOE OF PARAPETS
SKEW : 0'-00'-00" WITH RESPECT TO THE Q. S.R.315 AND THE REFERENCE LINE (SAME AS EXISTING)
WEARING SURFACE : MONOLITHIC CONCRETE-ONE INCH THICK, ASSUMED
APPROACH SLABS : AS-1-81, 25' LONG
ALIGNMENT : TANGENT AND SPIRAL
SUPERELEVATION : VARIES (SEE SUPERELEVATION TRANSITION DIAGRAM, SHEET [15/17])
STRUCTURE FILE NO. : 2514982
LATITUDE : N 39° 57' 19"
LONGITUDE : W 83° 01' 06"



S.R.315 HORIZONTAL CURVE DATA
P.I. = 81+22.41
Δ = 10°00'00"
D = 3'00'00"
R = 1909.86'
Lc = 183.33'
T = 242.13'
Ls = 150.00'
E = 7.30'
TS = 78+80.28
SC = 80+30.28
CS = 82+13.61
ST = 83+63.61

GENERAL PLAN
* EXISTING SCUPPERS (NOT SHOWN) TO BE ELIMINATED

STILSON & ASSOCIATES, INC.
CONSULTING ENGINEERING AND ARCHITECTURE
8121 HUNTLEY ROAD, COLUMBUS, OHIO 43229

GENERAL PLAN AND ELEVATION
BRIDGE NO. FRA-315-0059
OVER RICH STREET

FRANKLIN COUNTY STA. 77+71.92 TO STA. 79+16.33

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
TEU	GV		BRH	RKM	11/07/97	
				PHB	10/29/97	

[06/01] STRUCTURE 9213143, CONTROLLED VES-PLAN.DWG - NOV. 14, 1997 - 1059553 - PLOT: 1=1/20

ESTIMATED QUANTITIES

Table with columns: ITEM, ITEM EXT., TOTAL, UNIT, DESCRIPTION, R. ABUT. & WINGWALLS, F. ABUT. & WINGWALLS, PIERS, SUPER., GENERAL. Rows include items for structure removal, wearing course, concrete median, barrier, slope protection, conduit, luminaires, downspouts, cofferdams, excavation, concrete class C, high performance concrete, sealing, expansion joint filler, bearing pad, porous backfill, perforated pipe, patching, epoxy injection, and conduit.

* THIS ITEM INCLUDES THE CRUSHED AGGREGATE SLOPE PROTECTION AS SHOWN IN THE SIDE SLOPE OUTLET DETAIL.

SUGGESTED CONSTRUCTION SEQUENCE

- 1. REMOVE THE EXISTING SURFACE WEARING COURSE, CONCRETE MEDIAN CURB AND SAFETY CURB AND RAILING ABOVE THE CONCRETE DECK SLAB.
2. REMOVE THE LUMINAIRES AND SCUPPER DOWNSPOUTS AND CONNECTOR PIPING FROM THE PIER CAP AND COLUMNS.
3. RELOCATE THE GUY WIRES AND/OR ELECTRIC FROM BELOW THE DECK AT PIER NO.1.
4. PROVIDE SHORING FOR THE PIER CAP BEAMS THROUGHOUT THE DEMOLITION AND NEW CONSTRUCTION PHASES OF THIS PROJECT.
5. REFER TO THE PIER NOTES ON SHEET 11/17 FOR SAWCUTTING THE PIER CAP BEAM AND SALVAGING THE STIRRUP REINFORCING.
6. REMOVE THE EXISTING CONCRETE DECK SLAB. CARE SHALL BE TAKEN SO AS TO MINIMIZE THE TORSIONAL EFFECTS AND/OR DISTRESS TO THE PIER CAP BEAMS WHICH ARE TO BE INCORPORATED INTO THE NEW DECK.
7. SAWCUT AND REMOVE THE UPPER 5'-0" PORTION OF THE EXISTING CONCRETE SLOPE PROTECTION AT EACH ABUTMENT.
8. INSTALL TEMPORARY SHEETING TO PROTECT THE REMAINING EMBANKMENT IN FRONT OF THE ABUTMENTS.
9. REMOVE THE EXISTING APPROACH SLABS.
10. COMPLETELY REMOVE THE EXISTING ABUTMENT WALLS AND FOOTINGS. THEN COMPLETE THE REQUIRED EXCAVATION FOR THE ABUTMENTS.
11. CONSTRUCT THE NEW ABUTMENTS, EMBANKMENT, BRIDGE DECK SLAB, PARAPETS, MEDIANS AND APPROACH SLABS.

GENERAL BRIDGE NOTES

STANDARD DRAWING REFERENCES

Table with columns: DESCRIPTION, DWG. NO., SHT., DATE. Includes references for reinforced concrete, approach slab, bridge railing deflector, parapet type, and continuous slab bridge.

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1996, AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING

HS20-44 AND THE ALTERNATE MILITARY LOADING.

DESIGN DATA

HIGH PERFORMANCE CONCRETE-- COMPRESSIVE STRENGTH 4500 P.S.I. (SUPERSTRUCTURE)

CONCRETE CLASS C - COMPRESSIVE STRENGTH 4000 P.S.I. (SUBSTRUCTURE)

REINFORCING STEEL - ASTM A615, A616 OR A617 GRADE 60 MINIMUM YIELD STRENGTH 60,000 P.S.I.

DECK PROTECTION METHOD

EPOXY COATED REINFORCING STEEL. 2-1/2" CONCRETE COVER. SEALING OF CONCRETE SURFACES.

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1" THICK.

SEALING OF CONCRETE SURFACES (EPOXY)

THE SEALING PRODUCT SELECTED SHALL BE COMPATIBLE WITH THE MORTAR PRODUCTS USED FOR THE SURFACE REPAIRS. CONTRACTOR SHALL SUBMIT SEALING PRODUCT MANUFACTURER'S CERTIFICATION OF COMPATIBILITY.

REMOVAL OF EXISTING STRUCTURE

WHEN NO LONGER NEEDED TO MAINTAIN TRAFFIC THE EXISTING SUPERSTRUCTURE SHALL BE REMOVED. ABUTMENTS AND WINGWALLS SHALL BE COMPLETELY REMOVED. PIER CAP SHALL BE REMOVED TO THE LIMITS SHOWN ON THE PIER PLANS.

PORTIONS OF STRUCTURE REMOVED, AS PER PLAN SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE, CONCRETE MEDIAN AND CONCRETE BARRIER REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. ALL WORK SHALL BE DONE IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

ITEM 503. UNCLASSIFIED EXCAVATION, AS PER PLAN

UNCLASSIFIED EXCAVATION SHALL BE IN ACCORDANCE WITH 503 EXCEPT THAT THE BACKFILL MATERIAL BEHIND THE ABUTMENTS SHALL BE 203 MATERIAL PLACED IN LIFTS NOT TO EXCEED A THICKNESS OF SIX (6) INCHES.

FOUNDATION BEARING PRESSURE

ABUTMENT FOOTINGS, AS DESIGNED, PRODUCE A MAXIMUM BEARING PRESSURE OF 1.6 TONS PER SQUARE FEET. THE ALLOWABLE BEARING PRESSURE IS 1.6 TONS PER SQUARE FOOT, WHICH CORRESPONDS TO THE ALLOWABLE BEARING PRESSURE FOR THE EXISTING ABUTMENTS AS PER THE ORIGINAL BRIDGE PLANS.

UTILITY LINES

ALL EXPENSE INVOLVED IN RELOCATION (INSTALLING) THE AFFECTED UTILITY LINES SHALL BE BORNE BY THE UTILITY(IES). PARTICULAR ATTENTION SHALL BE PAID TO THE TWO GUY WIRES UNDER THE DECK AT THE NORTH SIDE PIER NO. 1. THE CONTRACTOR AND UTILITY(IES) ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, AND 105.02.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD.

EXISTING BRIDGE PLANS ARE ON FILE FOR INSPECTION, IF NECESSARY, AT THE O.D.O.T. OFFICE OF STRUCTURAL ENGINEERING IN COLUMBUS, OHIO.

REPLACEMENT OF EXISTING REINFORCING STEEL

ANY EXISTING REINFORCING BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND WHICH ARE MADE UNSERVICEABLE BY THE CONTRACTOR'S CONCRETE REMOVAL OPERATIONS SHALL BE REPLACED WITH NEW STEEL AT THE CONTRACTOR'S COST. ANY EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNSERVICEABLE BECAUSE OF CORROSION SHALL BE REPLACED WITH NEW STEEL. COST OF ALL REINFORCING STEEL SHALL BE INCLUDED IN ITEM SPECIAL, HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE (DECK).

CONCRETE PARAPETS

AS SOON AS A CONCRETE SAW CAN BE OPERATED WITHOUT DAMAGING THE FRESHLY PLACED CONCRETE, 1 INCH DEEP CONTROL JOINTS SHALL BE SAWED INTO THE PERIMETER OF THE CONCRETE PARAPET. THE SAW CUT SHALL BE MADE IN THE COMPLETE CIRCUMFERENCE OF THE PARAPET, STARTING AND ENDING AT THE ELEVATION OF THE CONCRETE DECK. THE SAW CUTS SHALL BE PLACED AS SHOWN ON SHEET 1. THE USE OF AN EDGE GUIDE, FENCE, OR JIG IS REQUIRED TO INSURE THAT THE CUT JOINT IS STRAIGHT, TRUE, AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAW BLADE, A NOMINAL WIDTH OF 1/4 INCH. THE PERIMETER OF THE DEFLECTION CONTROL JOINT SHALL BE SEALED TO A MINIMUM DEPTH OF 1 INCH WITH A CAULKING MATERIAL CONFORMING TO FEDERAL SPECIFICATION, TT-S-00227E. REFER TO CMS PARAGRAPH 511.081 FOR ADDITIONAL PROVISIONS. THE BOTTOM ONE HALF INCH OF BOTH THE INSIDE AND OUTSIDE FACES OF THE PARAPET SHOULD BE LEFT UNSEALED TO ALLOW ANY WATER WHICH MAY ENTER THE JOINT TO ESCAPE.

CONCRETE MEDIAN BARRIER

SAWCUTS FOR THE CRACK CONTROL JOINTS SHALL BE MADE ON THE TRAFFIC AND TOP FACES ONLY.

CUT LINE CONSTRUCTION JOINT PREPARATION

SAWCUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1" DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. WHERE PRACTICABLE, THE EXISTING REINFORCING STEEL WHERE REQUIRED IN THE PLANS SHALL BE LEFT IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACE AND EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THE JOINT SURFACE AND EXPOSED REINFORCEMENT SHALL BE THOROUGHLY CLEANED OF ALL DIRT, DUST, OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. CONCRETE BONDING SURFACES SHALL BE WET WITHOUT FREE WATER AS CONCRETE IS PLACED.

UNDERPASS LIGHTING

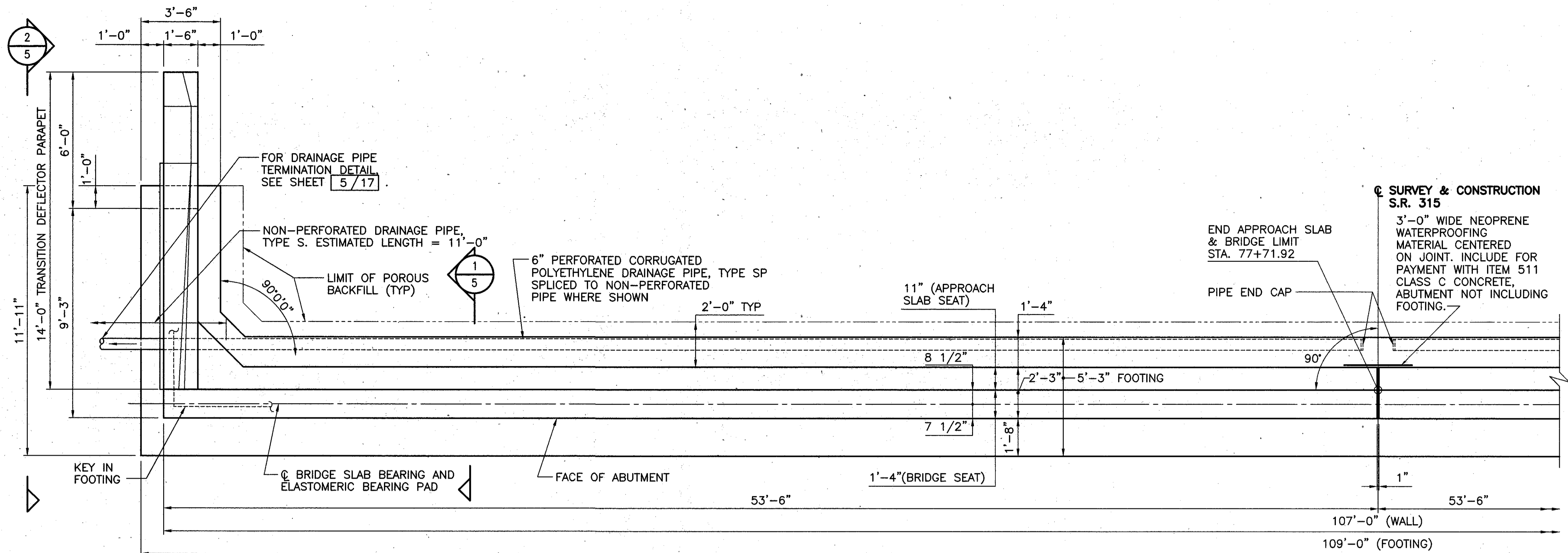
FOR UNDERPASS LIGHTING NOTES AND DETAILS SEE HIGHWAY SHEET 62/163

Project information block including: CALC. BY: TEU, DATE: 8-97, FRANKLIN COUNTY, FRA-315-0.48, OHIO, FHWA REGION 5, and sheet number 106/163.

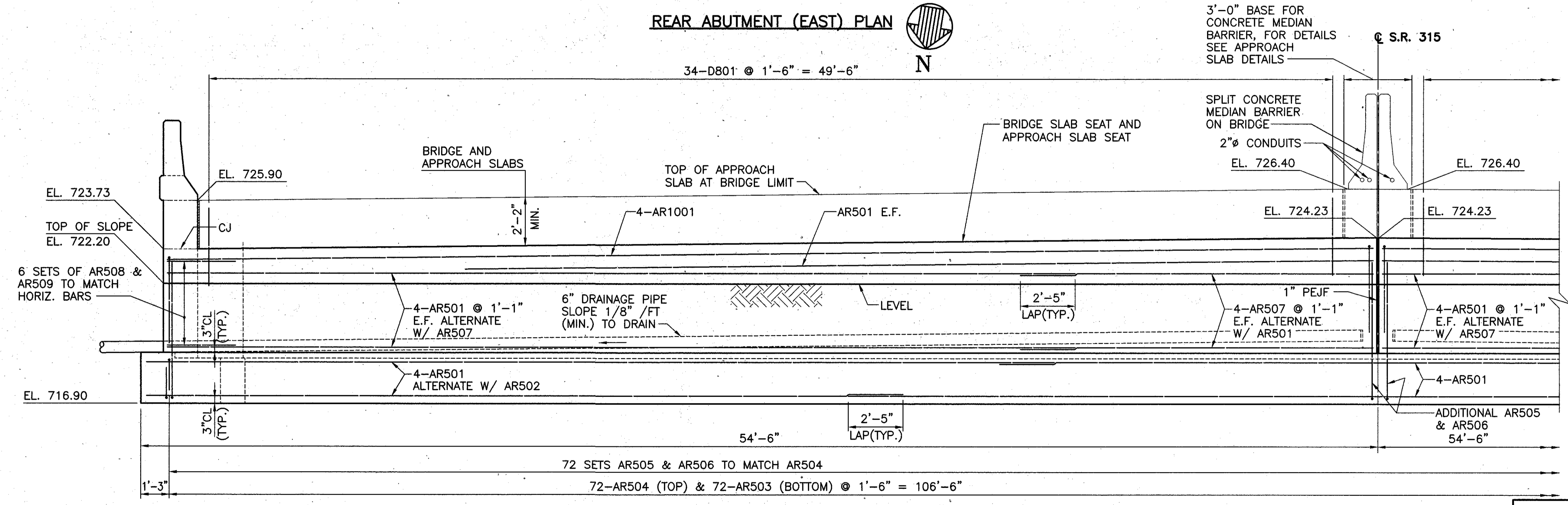
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Project title block: STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE. ESTIMATED QUANTITIES AND GENERAL NOTES. BRIDGE NO. FRA-315-0059. OVER RICH STREET. FRANKLIN COUNTY. STA. 77+71.92 TO STA. 79+16.33. Includes a small table with columns: DESIGNED, DRAWN, TRACED, CHECKED, REVIEWED, DATE, REVISED. Values: TEU, GV, BRH, RKM 11/07/97, PHB 10/29/97.

- SUBSTRUCTURE-NOTES:**
- POROUS BACKFILL WITH FILTER FABRIC, 2 FEET THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, TO ONE FOOT BELOW THE EMBANKMENT SURFACE, AND Laterally TO THE ENDS OF THE WINGWALLS.
 - THE 3'-0" WIDE NEOPRENE WATERPROOFING MATERIAL SHALL BE CENTERED ON THE ABUTMENT EXPANSION JOINT AND SHALL EXTEND FROM TOP OF THE FOOTING UP TO THE BRIDGE SLAB SEAT.
 - SAW CUT THE EXISTING CONCRETE SLOPE PROTECTION SHALL BE INCLUDED WITH ITEM 202 - CONCRETE SLOPE PROTECTION REMOVED, FOR PAYMENT.
 - THE CRUSHED AGGREGATE FOR THE DRAINAGE PIPE TERMINATION SHALL BE INCLUDED WITH ITEM 601 CONCRETE SLOPE PROTECTION, FOR PAYMENT.
 - THE CONCRETE BASE FOR THE MEDIAN CONCRETE BARRIER SHALL NOT BE ANCHORED INTO THE ABUTMENT. DOWEL BARS MARK D801 SHALL NOT BE INSTALLED WITHIN THE CONCRETE BASE LIMIT.



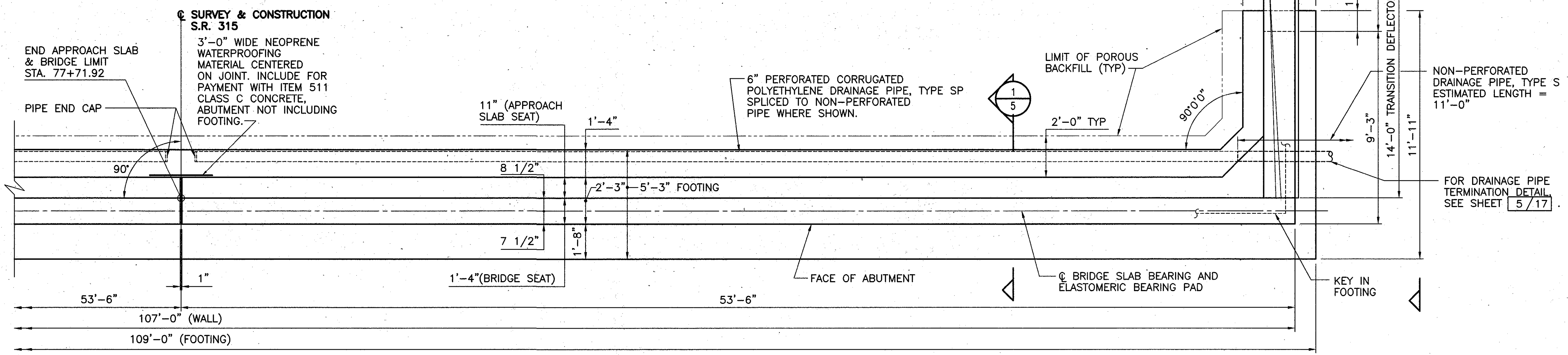
REAR ABUTMENT (EAST) PLAN



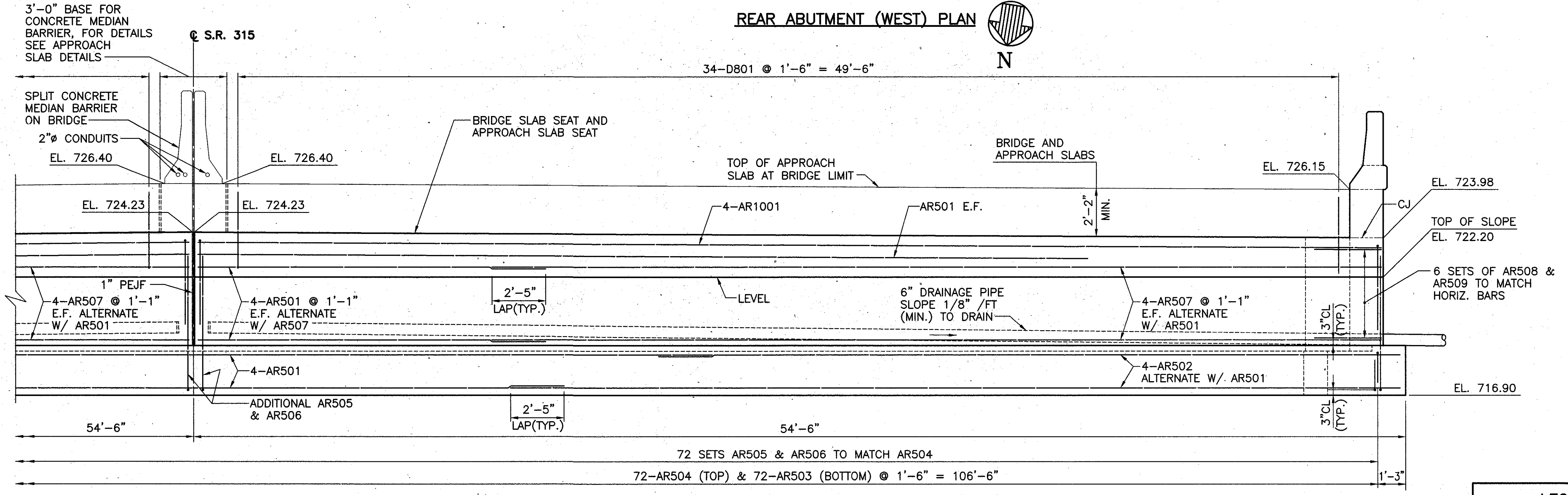
REAR ABUTMENT (EAST) ELEVATION

LEGEND		STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 8121 HUNTLEY ROAD, COLUMBUS, OHIO 43229										
CL - CLEAR	TYP - TYPICAL	REAR ABUTMENT - EAST HALF DETAILS BRIDGE NO. FRA-315-0069 OVER RICH STREET FRANKLIN COUNTY STA. 77+71.92 TO STA. 79+16.33										
EF - EACH FACE	NF - NEAR FACE											
FF - FAR FACE	C/C - CENTER TO CENTER											
CJ - CONSTRUCTION JOINT	PEJF - PREFORMED EXPANSION JOINT FILLER											
SPA - SPACING												
EXISTING STRUCTURE												
NEW STRUCTURE												
DESIGNED	DRAWN							TRACED	CHECKED	REVIEWED	DATE	REVISED
TEU	GV								BRH	RKM	11/07/97	
										PHB	10/29/97	

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REAR ABUTMENT (WEST) PLAN

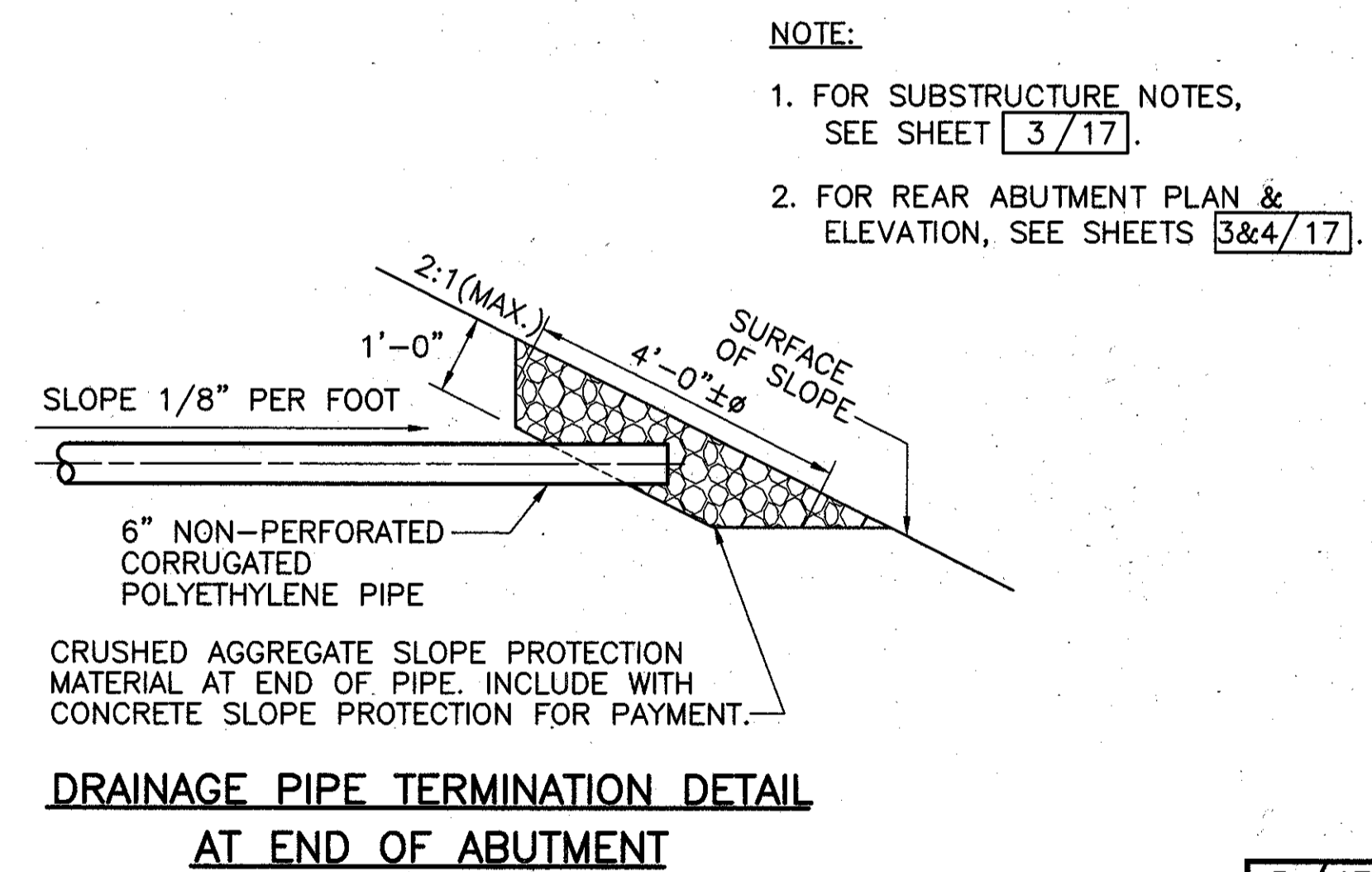
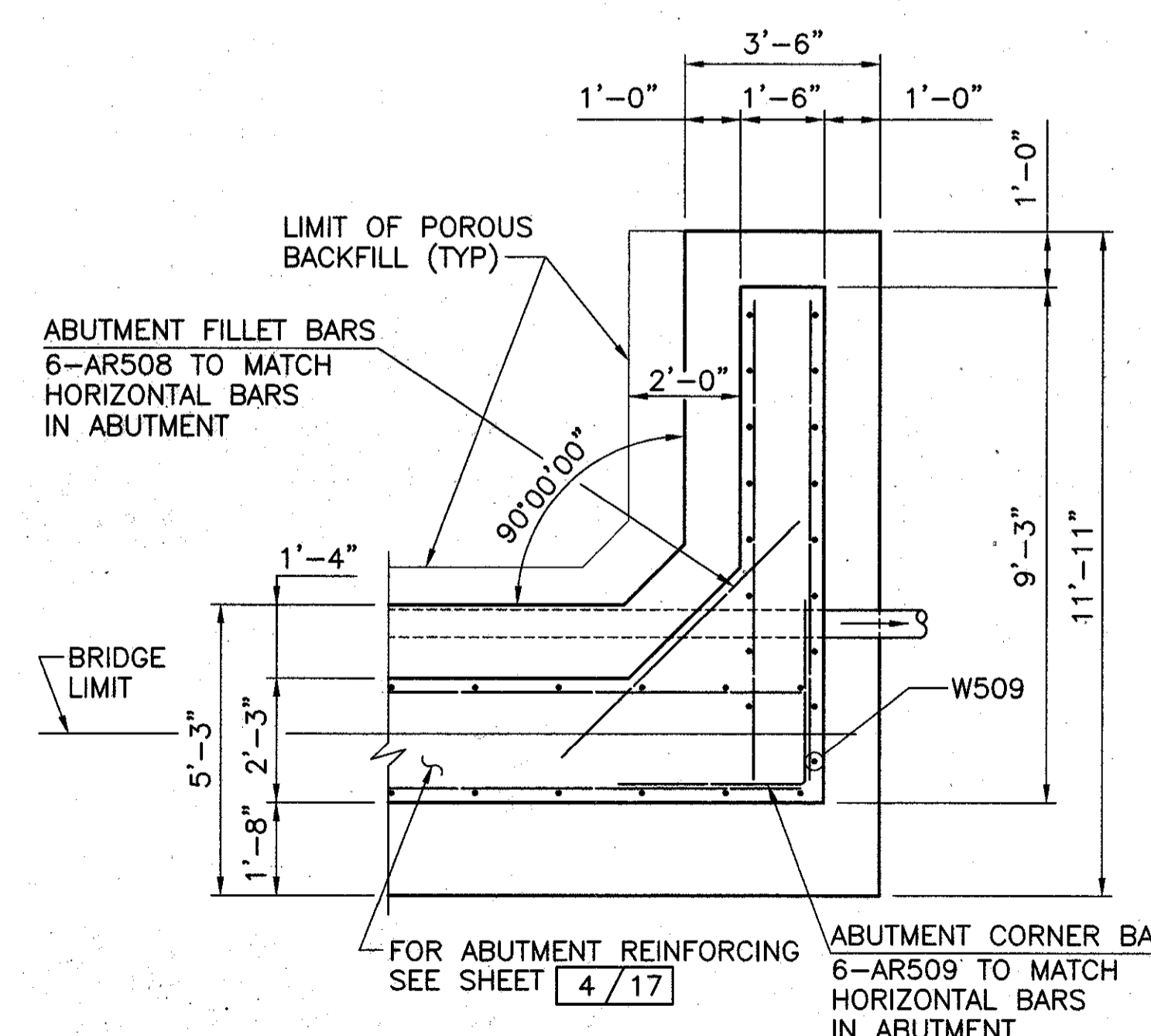
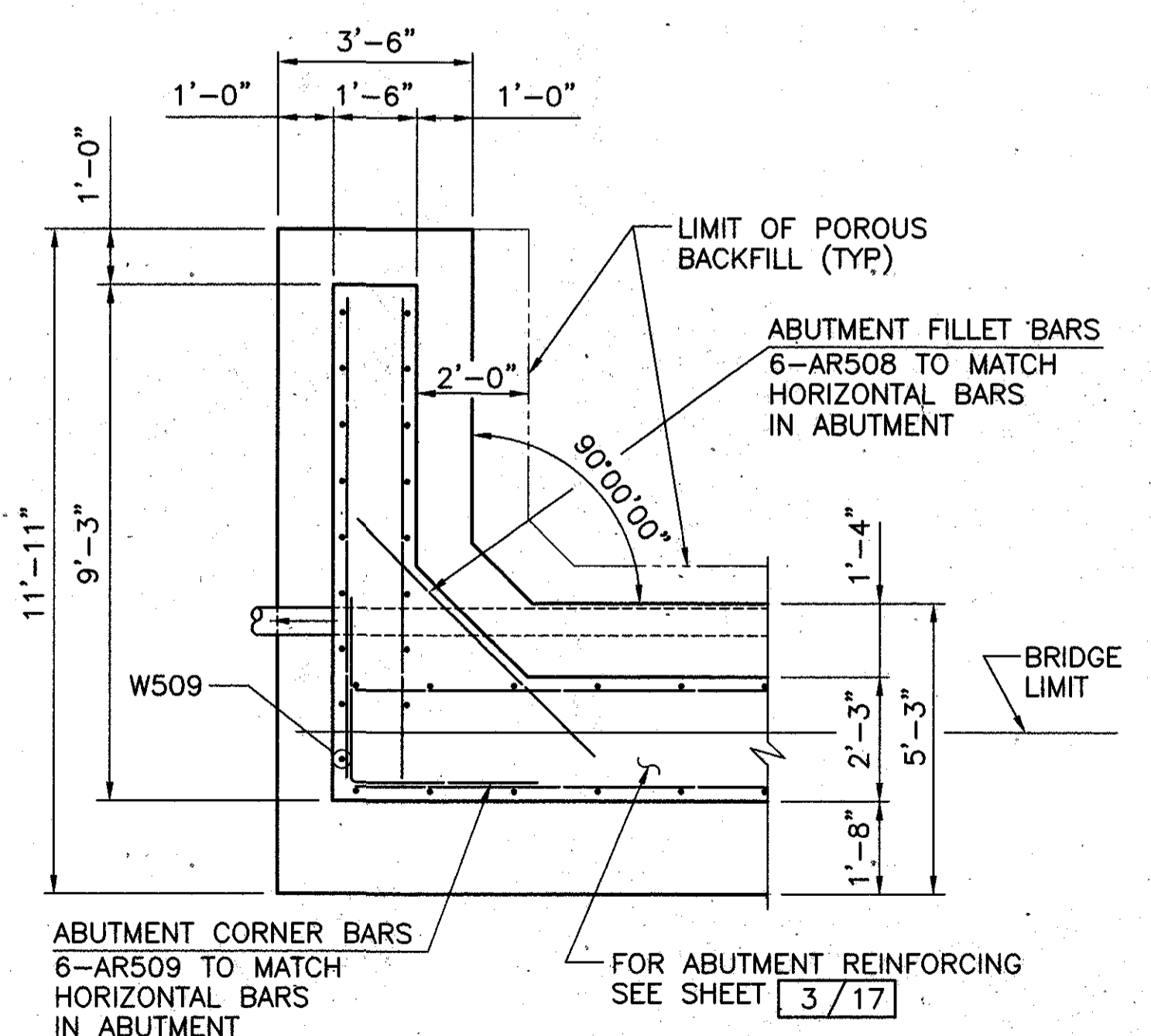
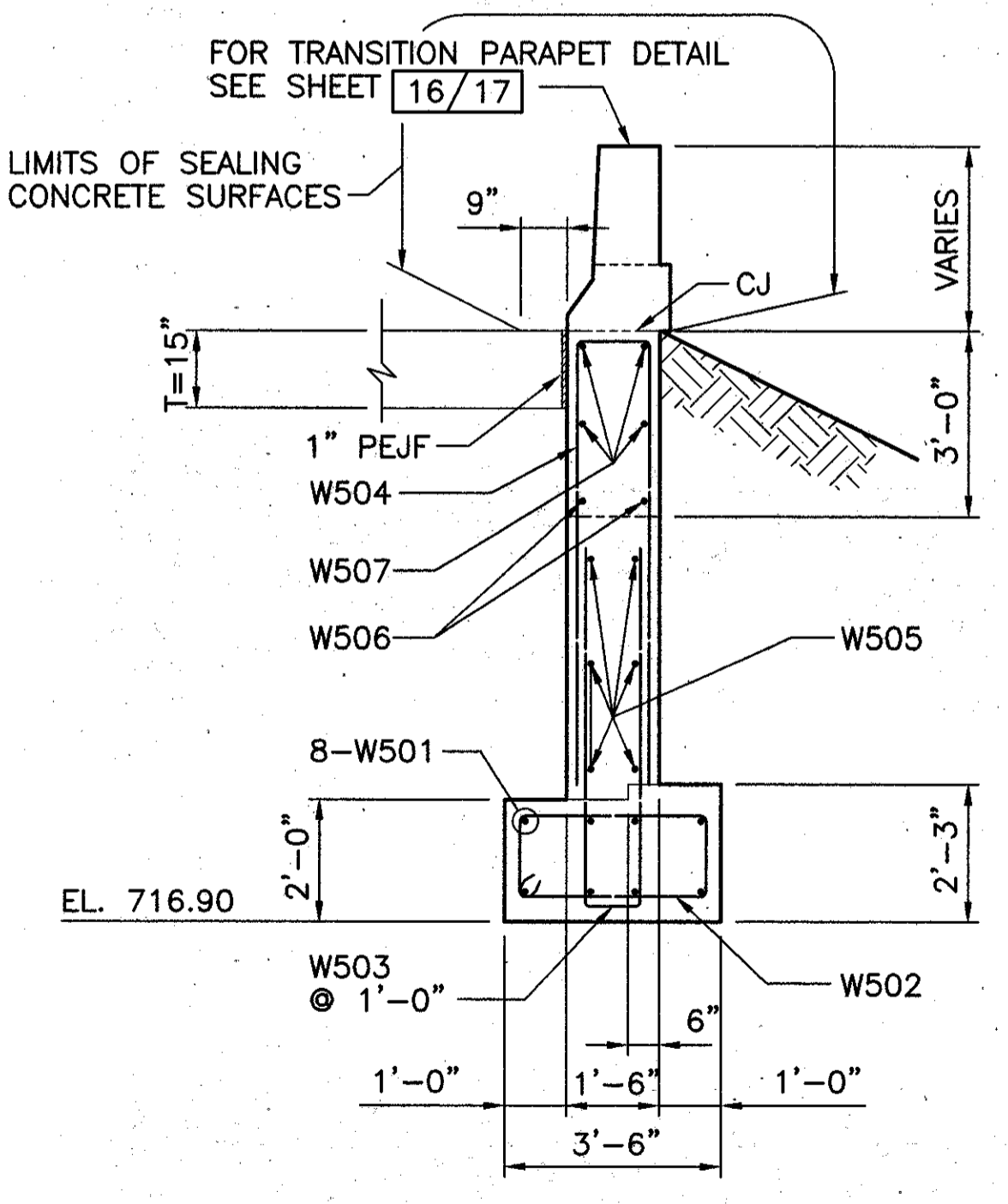
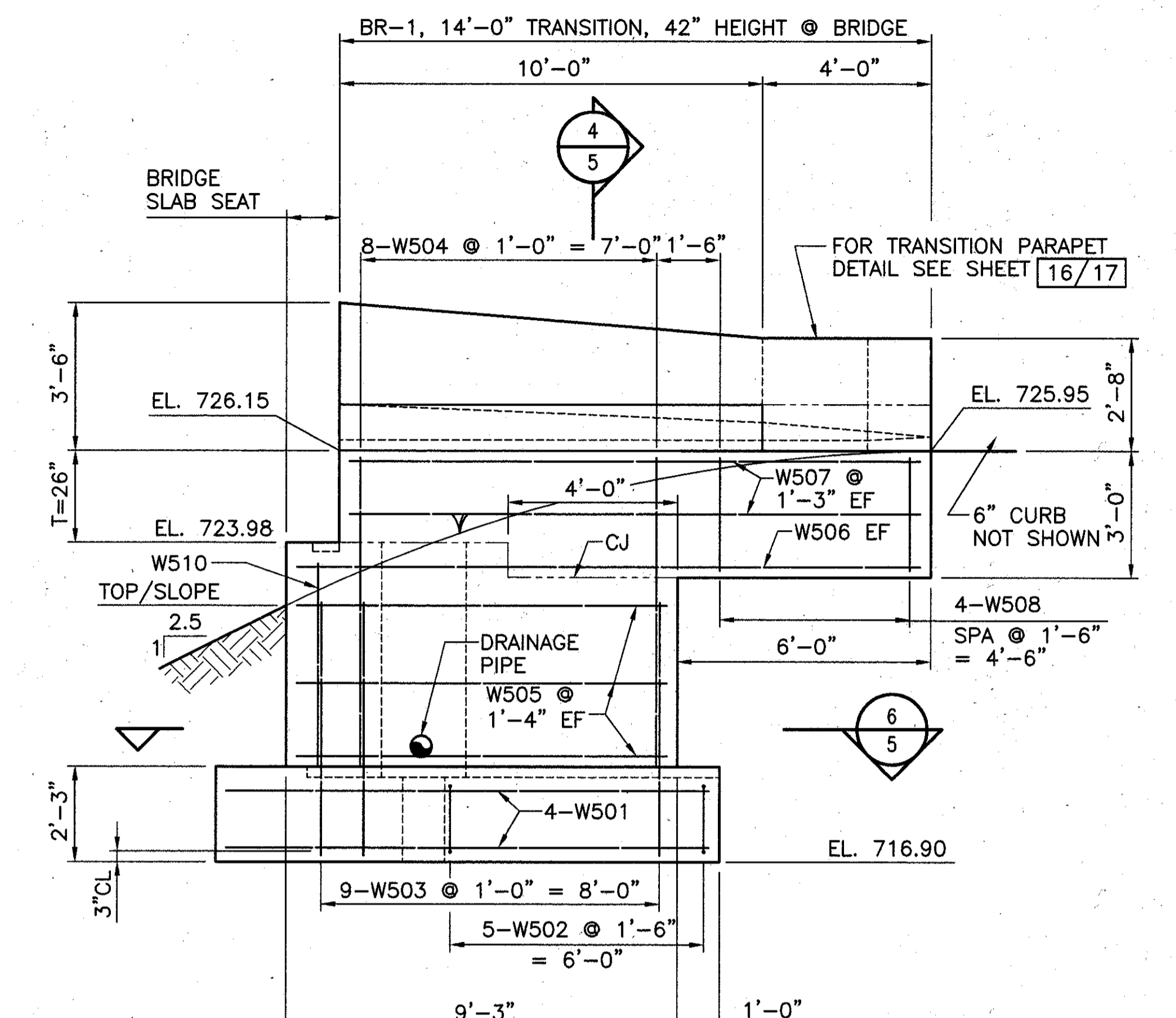
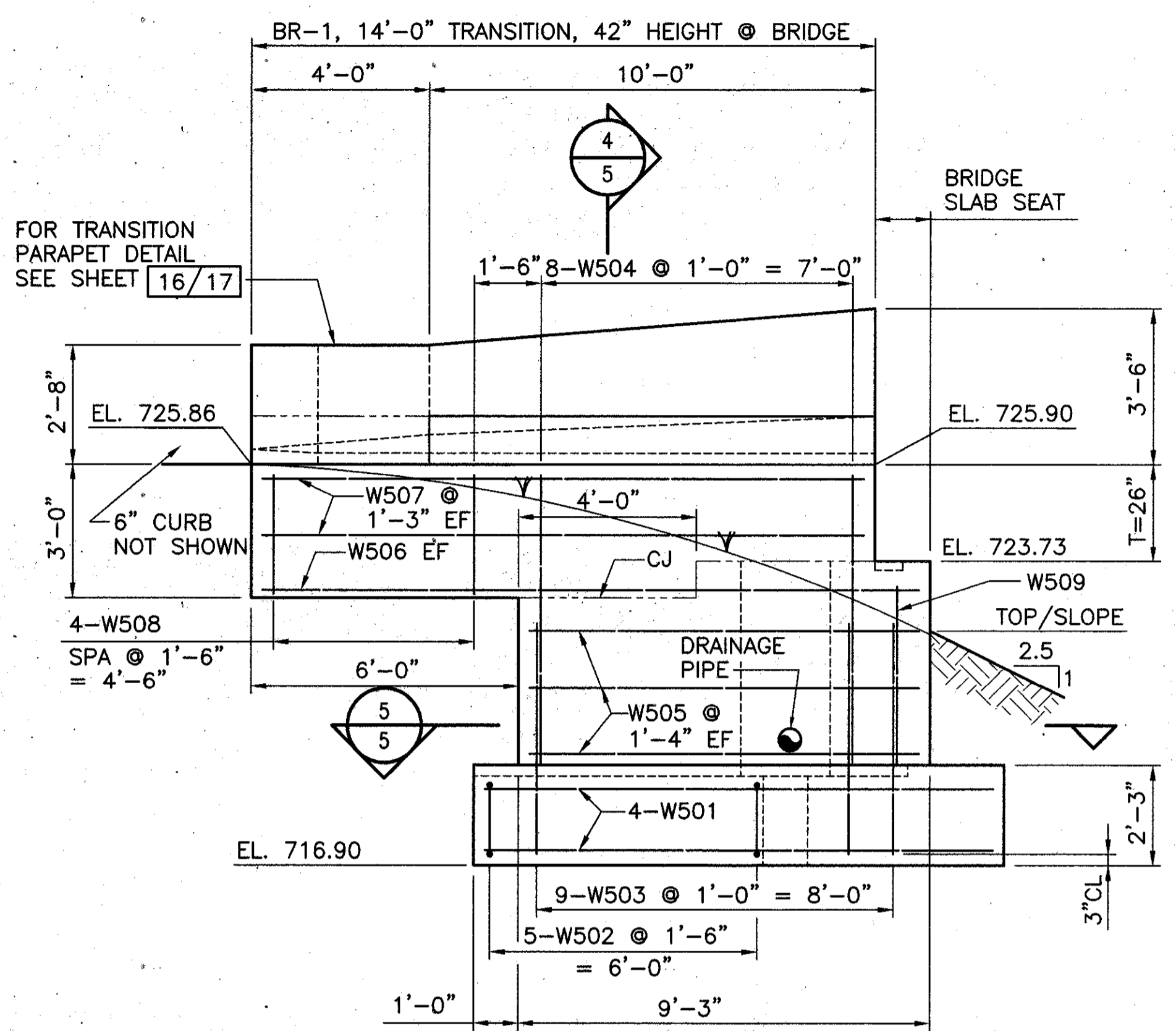
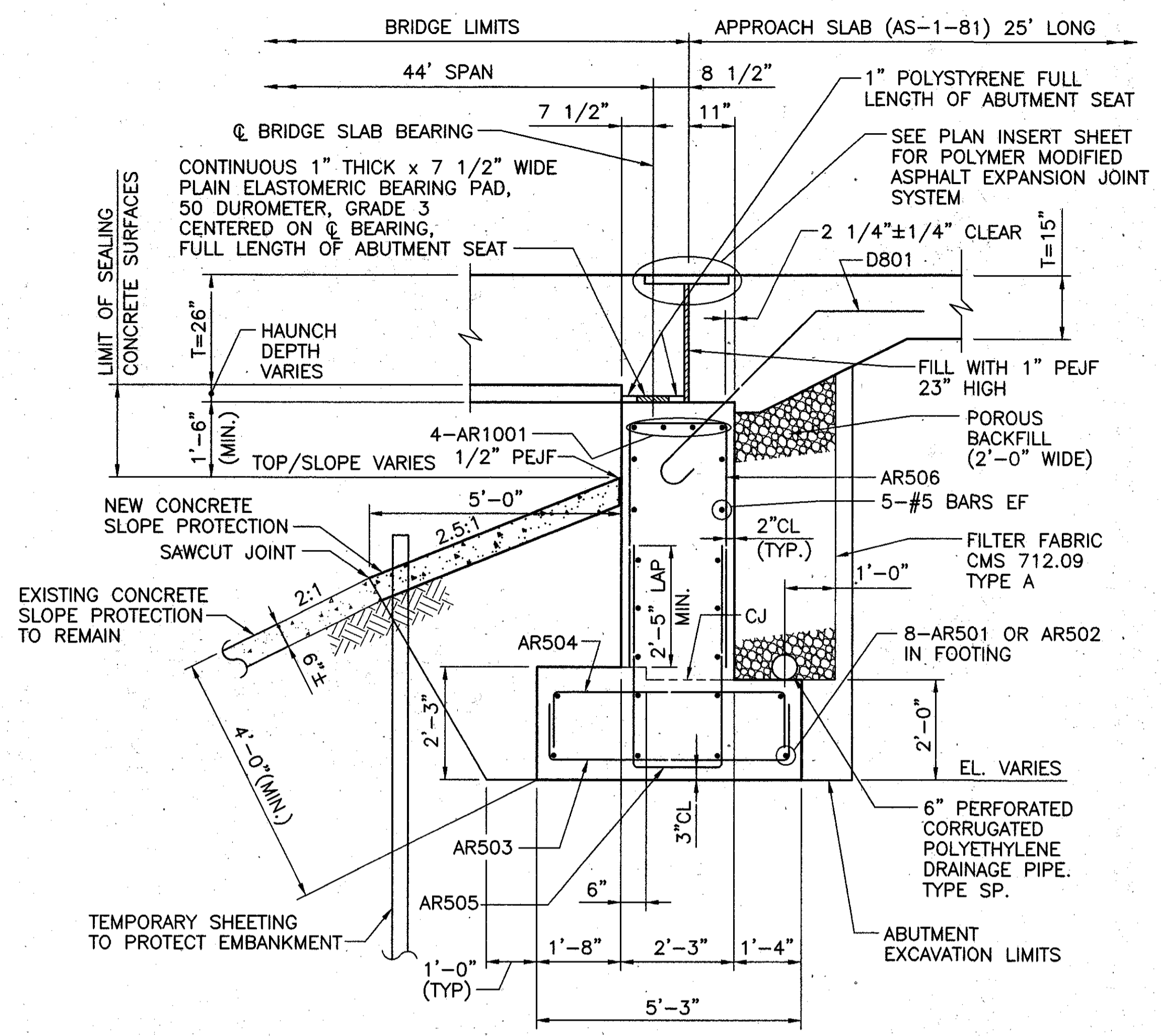


REAR ABUTMENT (WEST) ELEVATION

NOTE:
1. FOR SUBSTRUCTURE NOTES, SEE SHEET 3/17.

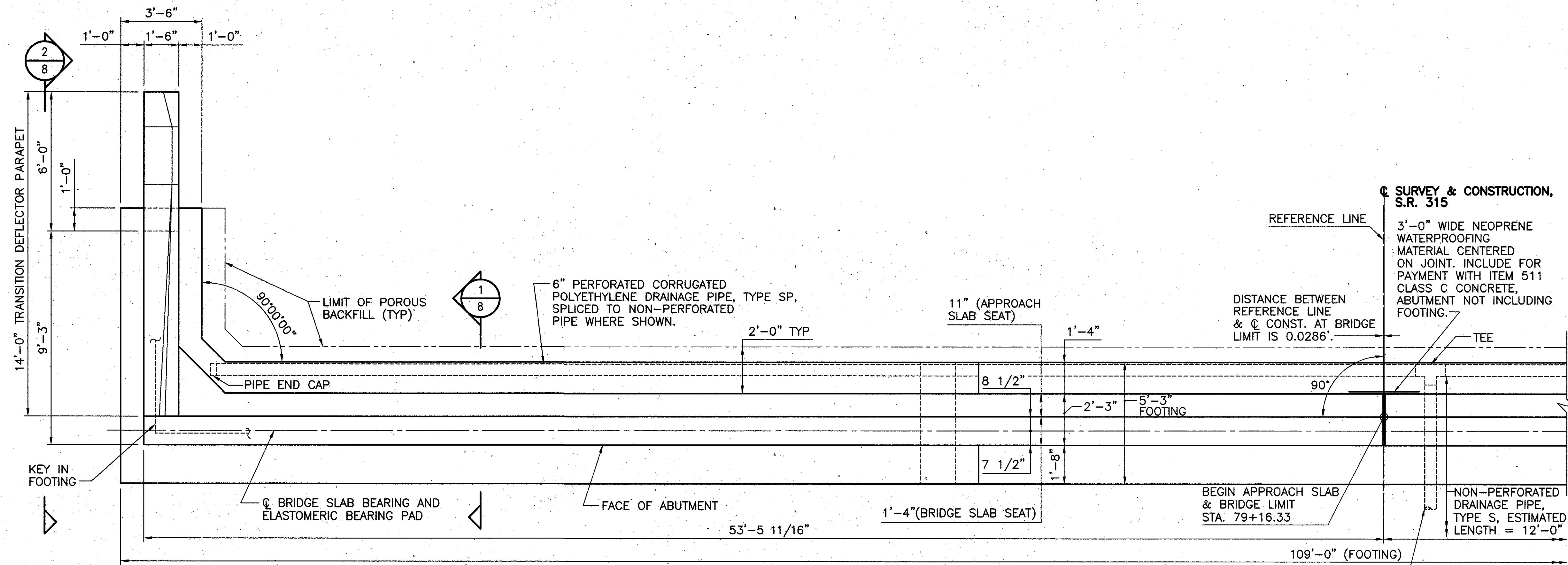
LEGEND		STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 8121 HUNTLEY ROAD, COLUMBUS, OHIO 43229										
CL - CLEAR	TYP - TYPICAL	REAR ABUTMENT - WEST HALF DETAILS BRIDGE NO. FRA-315-0059 OVER RICH STREET FRANKLIN COUNTY STA. 77+71.92 TO STA. 79+16.33										
EF - EACH FACE	NF - NEAR FACE											
FF - FAR FACE	C/C - CENTER TO CENTER											
CJ - CONSTRUCTION JOINT	PEJF - PREFORMED EXPANSION JOINT FILLER											
SPA - SPACING	EXISTING STRUCTURE											
NEW STRUCTURE												
DESIGNED	DRAWN							TRACED	CHECKED	REVIEWED	DATE	REVISED
TEU	GV								BRH	RKM	11/07/97	
										PHB	10/29/97	

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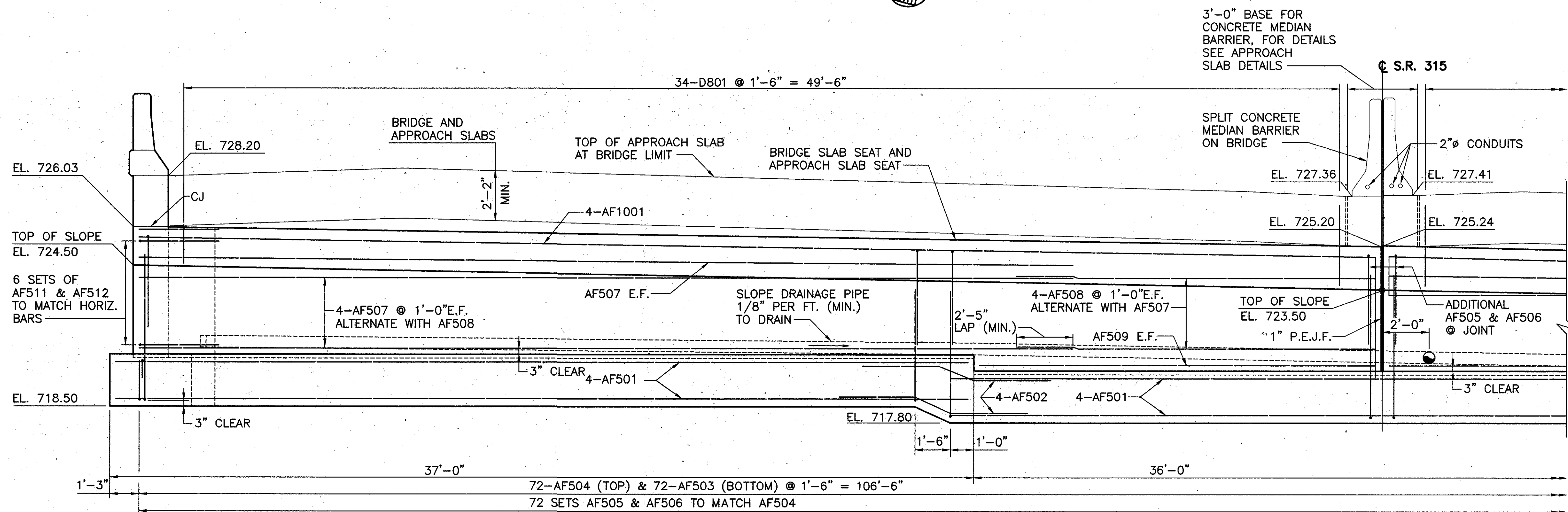


LEGEND		STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 8121 HUNTLEY ROAD, COLUMBUS, OHIO 43229						
CL - CLEAR	TYP - TYPICAL	REAR ABUTMENT DETAILS						
EF - EACH FACE	NF - NEAR FACE							
FF - FAR FACE	C/C - CENTER TO CENTER	BRIDGE NO. FRA-315-0059						
CJ - CONSTRUCTION JOINT	PEJF - PREFORMED EXPANSION JOINT FILLER	OVER RICH STREET						
SPA - SPACING		FRANKLIN COUNTY		STA. 77+71.92 TO STA. 79+16.33				
EXISTING STRUCTURE		DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NEW STRUCTURE		TEU	GV	BRH	RKM	PHB	11/07/97 10/29/97	

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FORWARD ABUTMENT (WEST) PLAN



FORWARD ABUTMENT (WEST) ELEVATION

NOTE:
1. FOR SUBSTRUCTURE NOTES, SEE SHEET 8/17.

LEGEND	
CL	- CLEAR
TYP	- TYPICAL
EF	- EACH FACE
NF	- NEAR FACE
FF	- FAR FACE
C/C	- CENTER TO CENTER
CJ	- CONSTRUCTION JOINT
PEJF	- PREFORMED EXPANSION JOINT FILLER
SPA	- SPACING
EXISTING STRUCTURE	
NEW STRUCTURE	

STILSON & ASSOCIATES, INC.
CONSULTING ENGINEERING AND ARCHITECTURE
8121 HUNTLEY ROAD, COLUMBUS, OHIO 43229

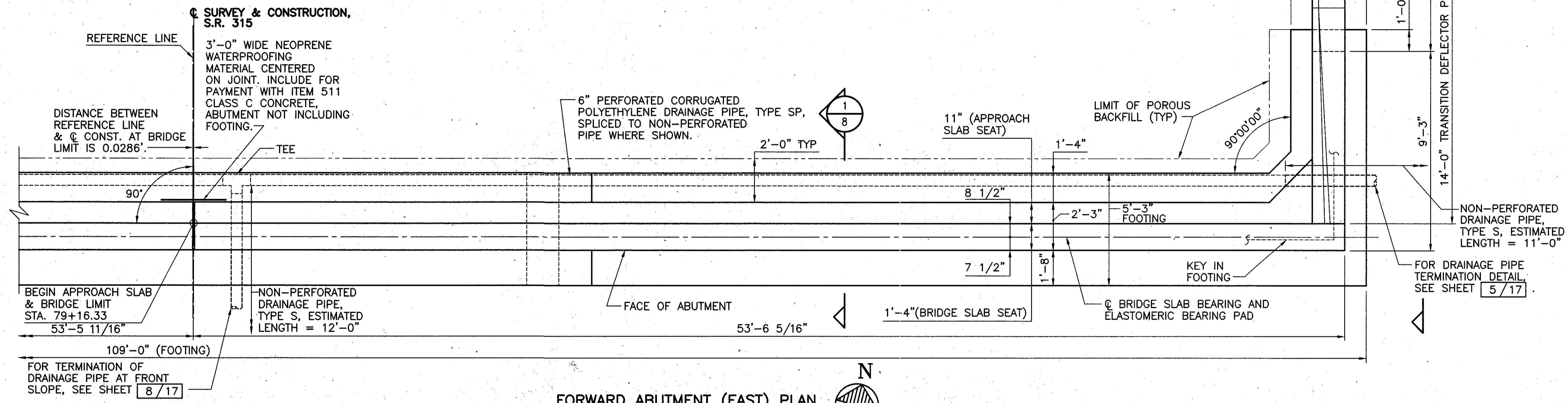
FORWARD ABUTMENT - WEST HALF DETAILS

BRIDGE NO. FRA-315-0059
OVER RICH STREET

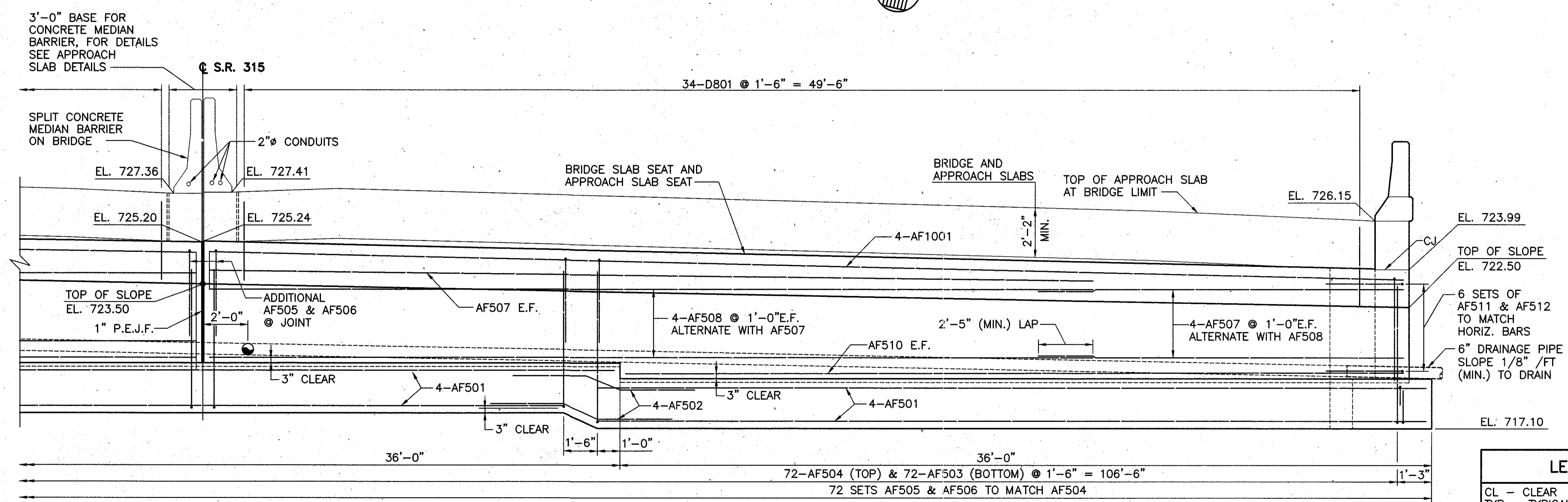
FRANKLIN COUNTY STA. 77+71.92 TO STA. 79+16.33

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
TEU	GV		BRH	RKM	11/07/97 PHB 10/29/97	

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FORWARD ABUTMENT (EAST) PLAN

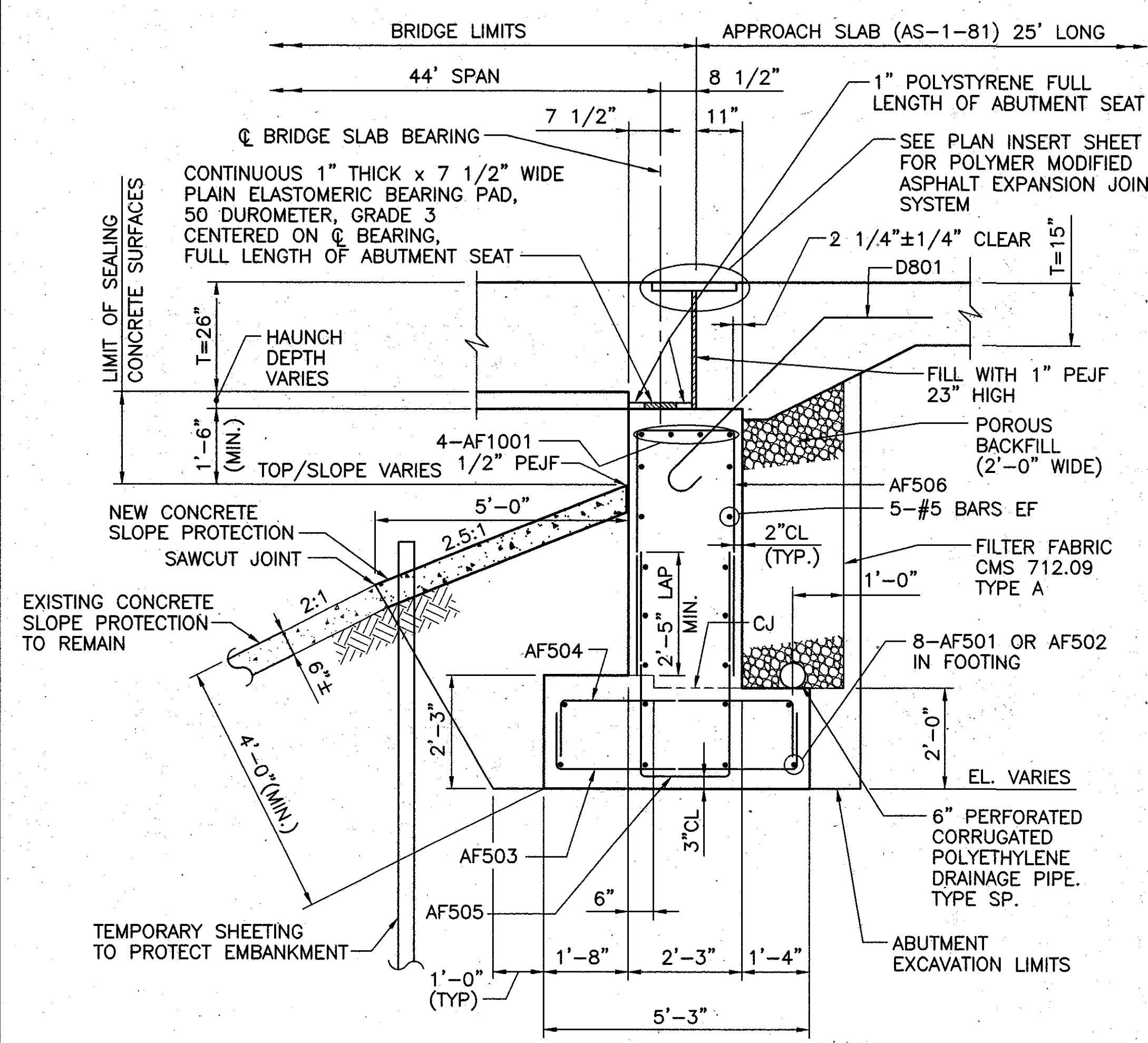


FORWARD ABUTMENT (EAST) ELEVATION

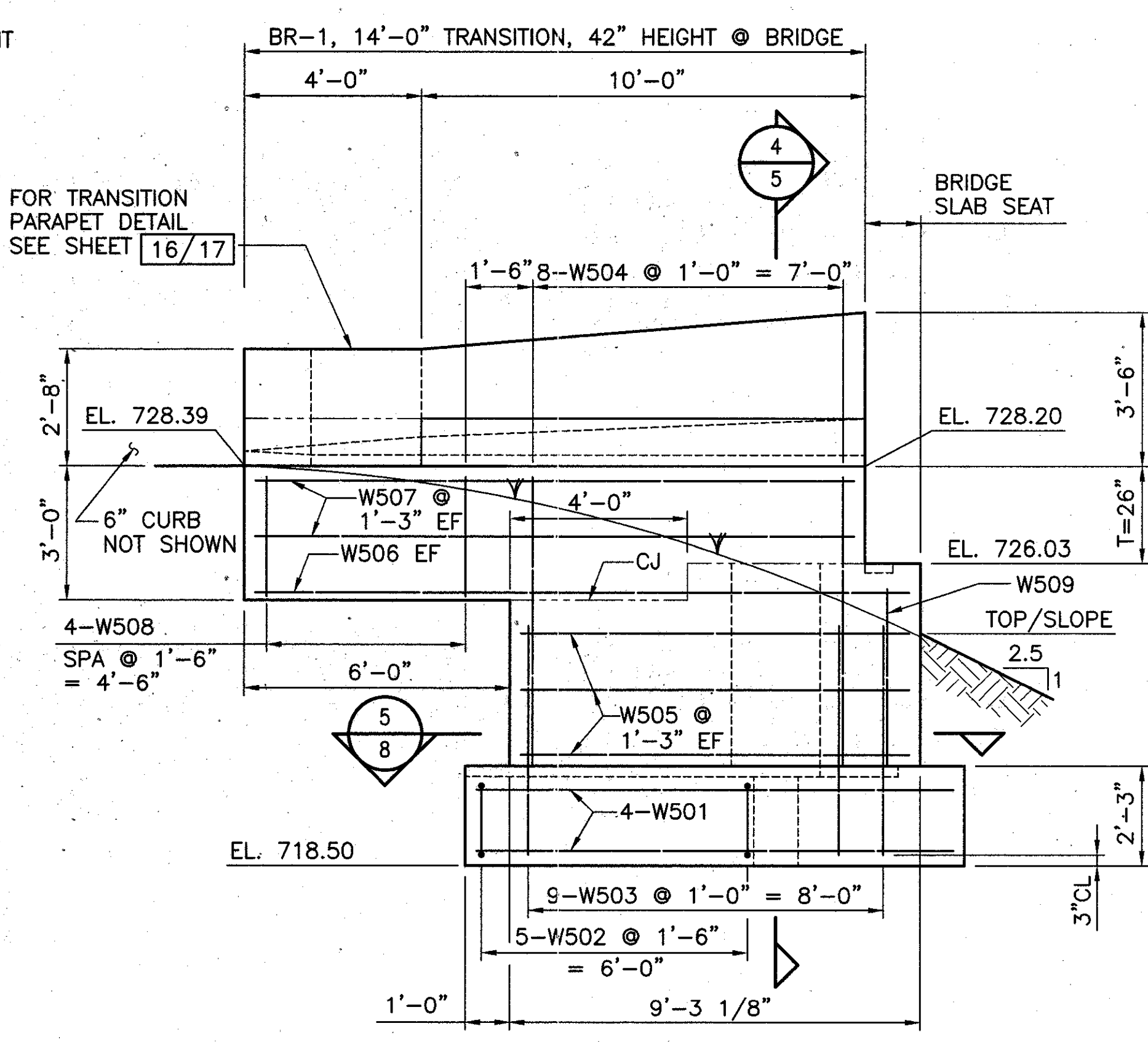
NOTE:
1. FOR SUPERSTRUCTURE NOTES, SEE SHEET 3/17.

LEGEND		STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 6121 HUNTLEY ROAD, COLUMBUS, OHIO 43229											
CL	- CLEAR	FORWARD ABUTMENT - EAST HALF DETAILS BRIDGE NO. FRA-315-0059 OVER RICH STREET FRANKLIN COUNTY STA. 77+71.92 TO STA. 79+16.33											
TYP	- TYPICAL												
EF	- EACH FACE												
NF	- NEAR FACE												
FF	- FAR FACE												
C/C	- CENTER TO CENTER												
CJ	- CONSTRUCTION JOINT												
PEJF	- PREFORMED EXPANSION JOINT FILLER												
SPA	- SPACING												
EXISTING STRUCTURE													
NEW STRUCTURE													
DESIGNED	DRAWN								TRACED	CHECKED	REVIEWED	DATE	REVISED
TEU	GV									BRH	RKM	11/07/97	
											PHB	10/29/97	

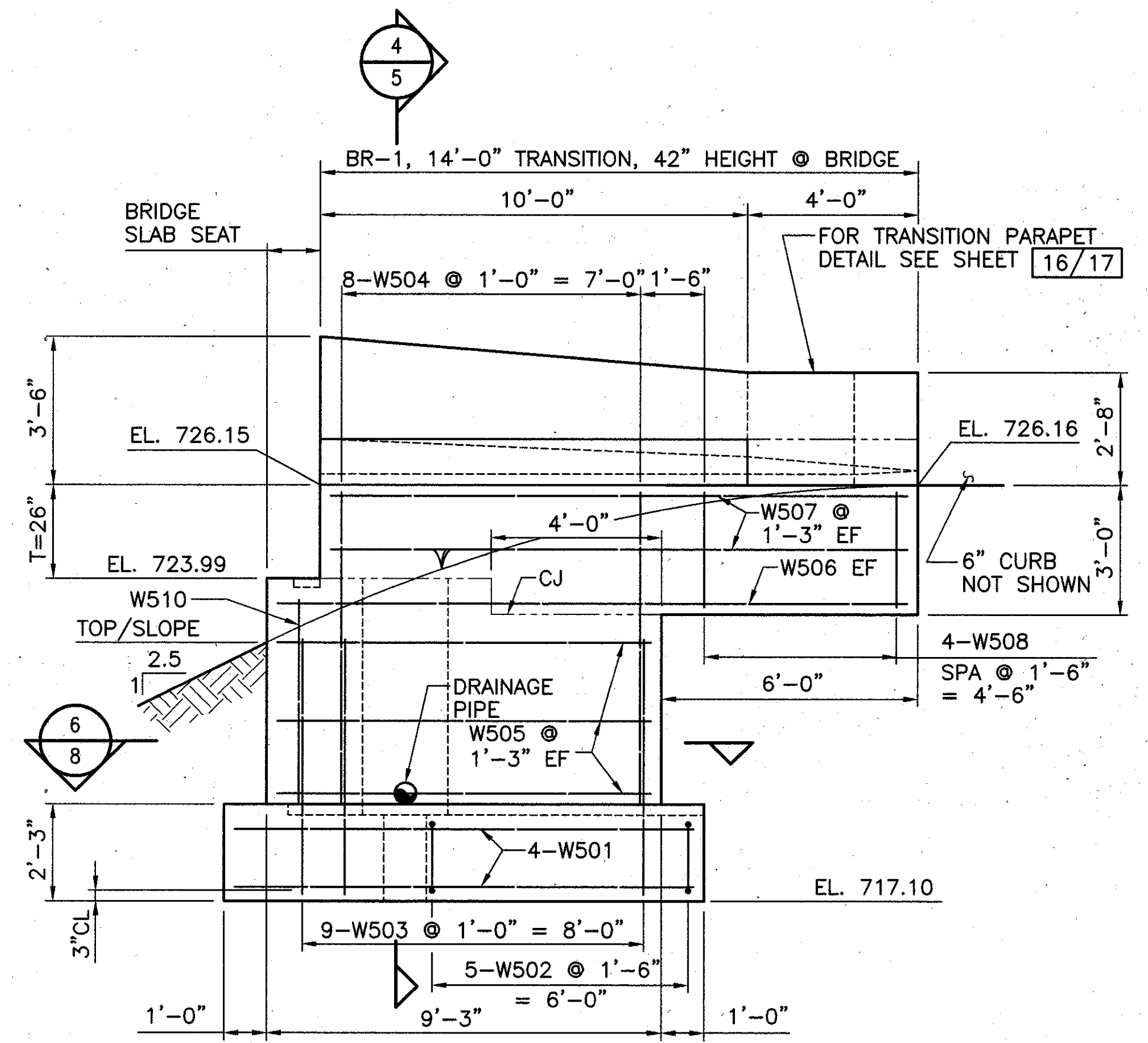
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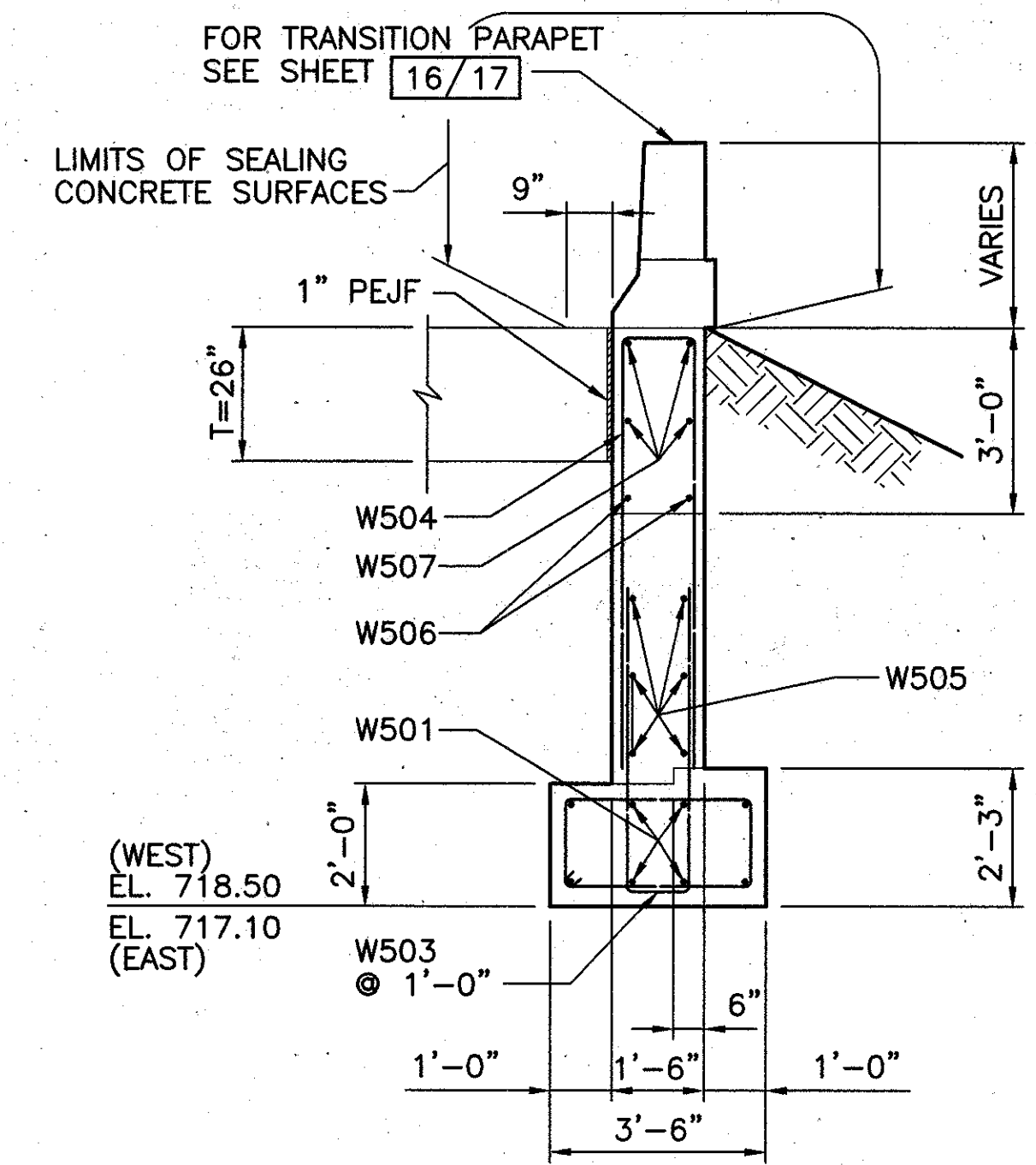
SECTION 1-1



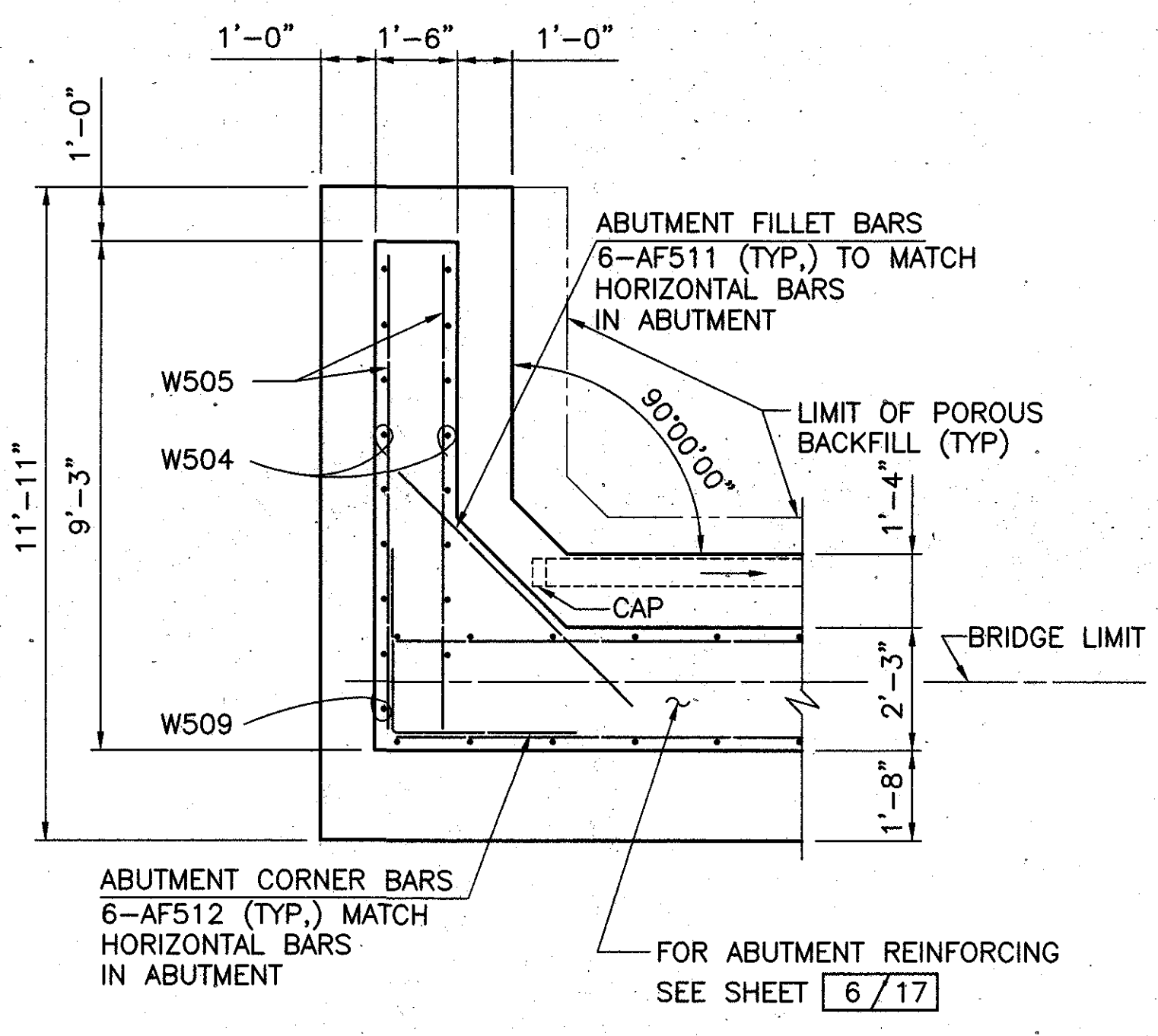
ELEVATION 2-6



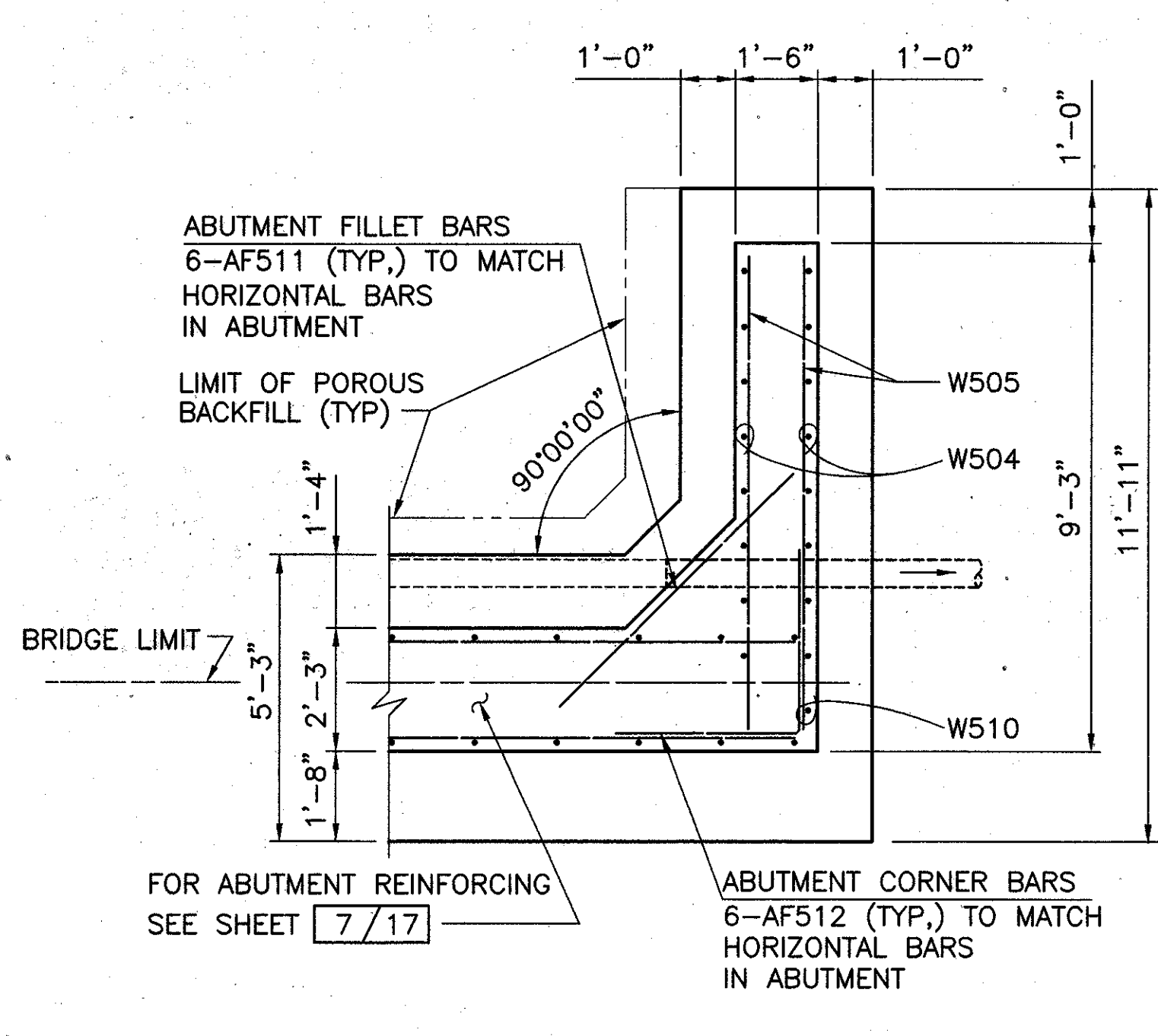
ELEVATION 3-7



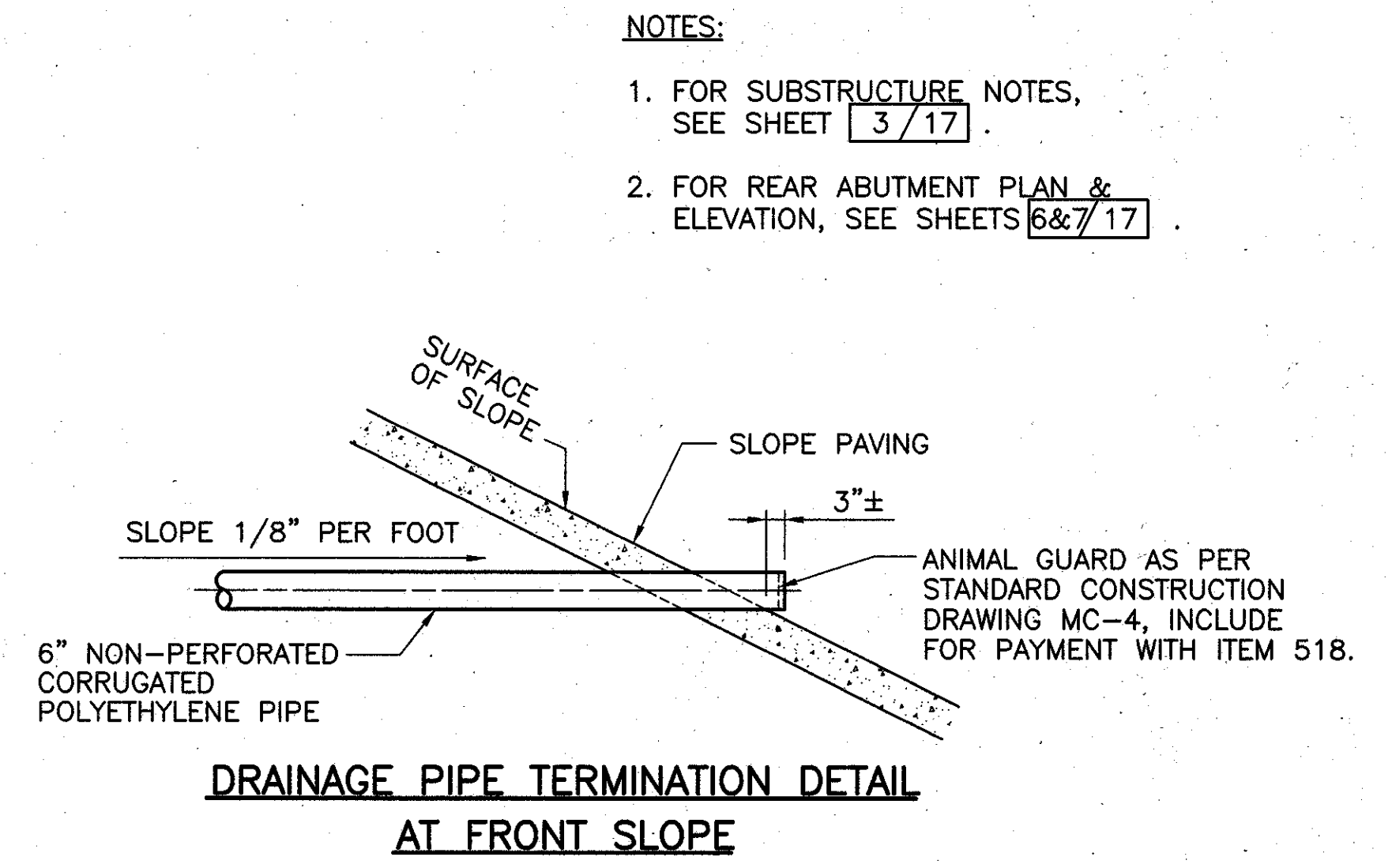
SECTION 4-8



SECTION 5-8



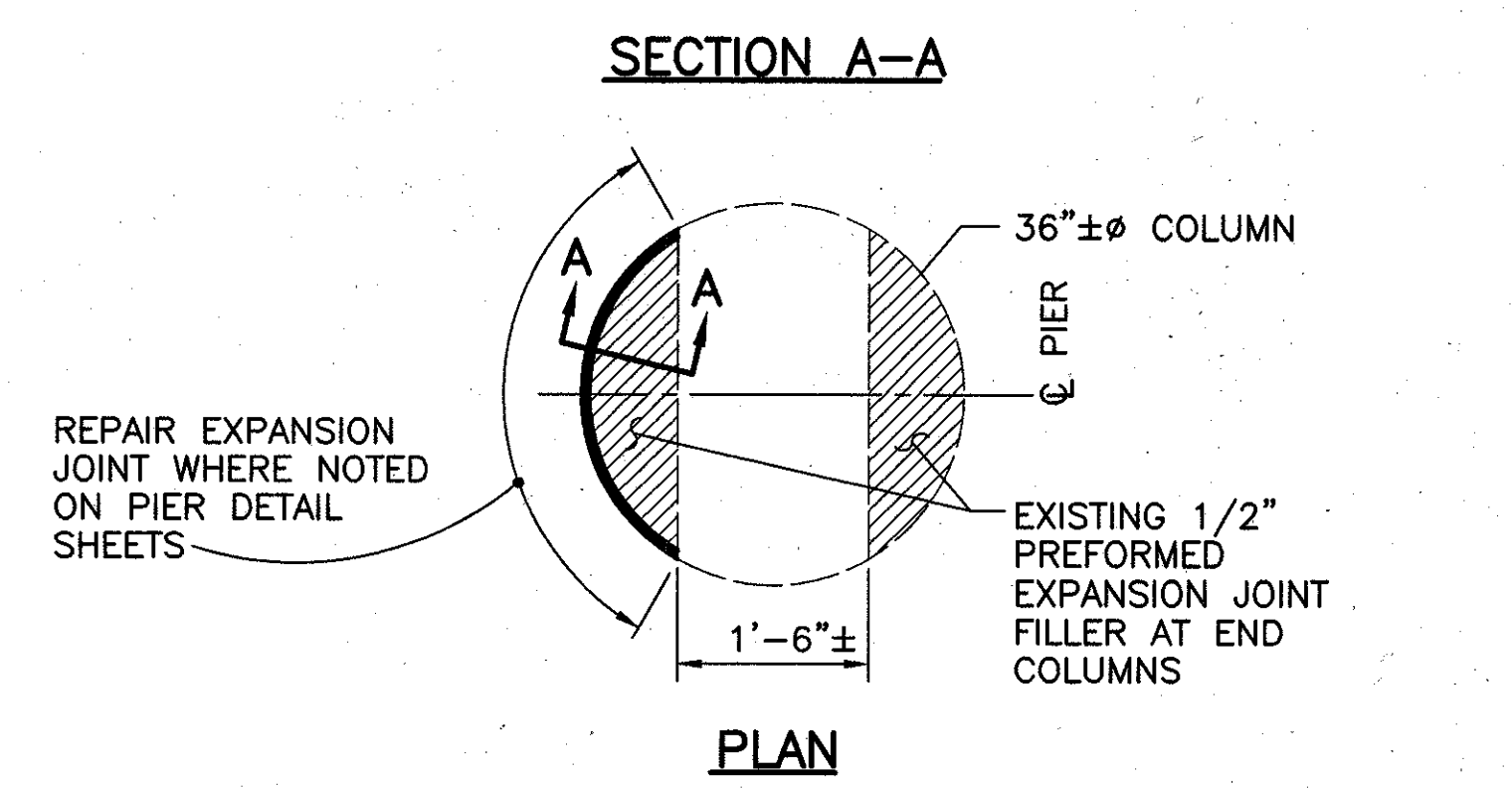
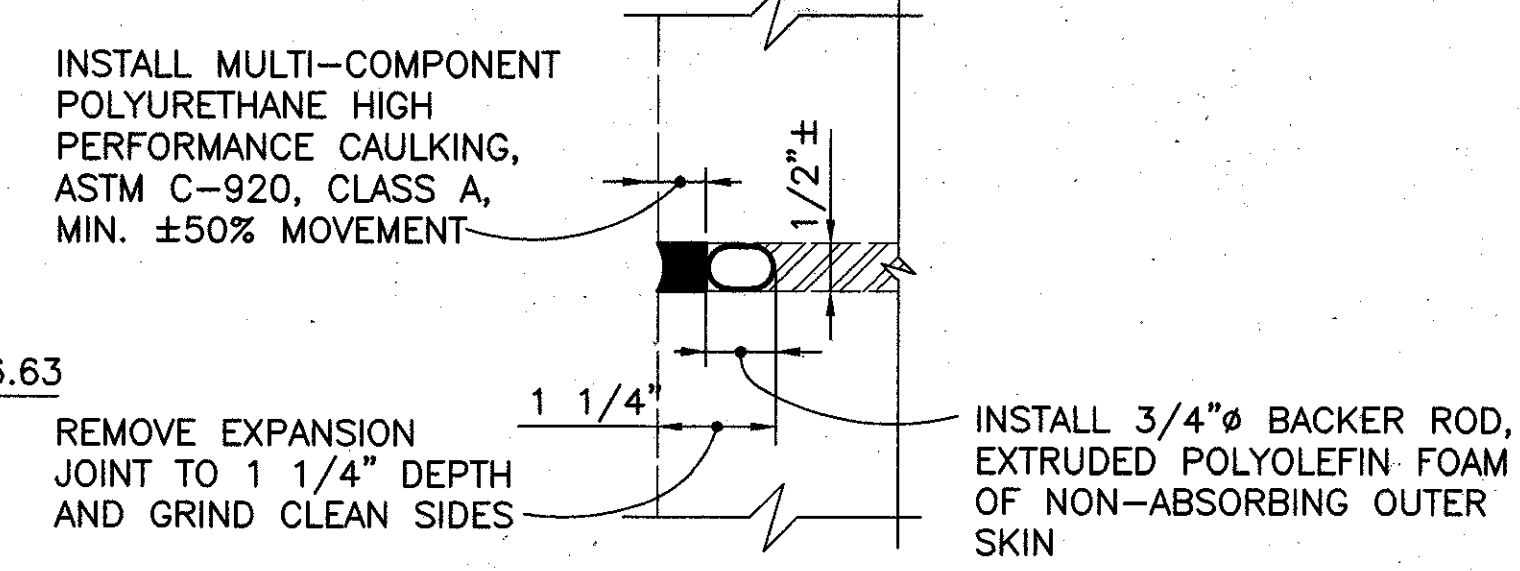
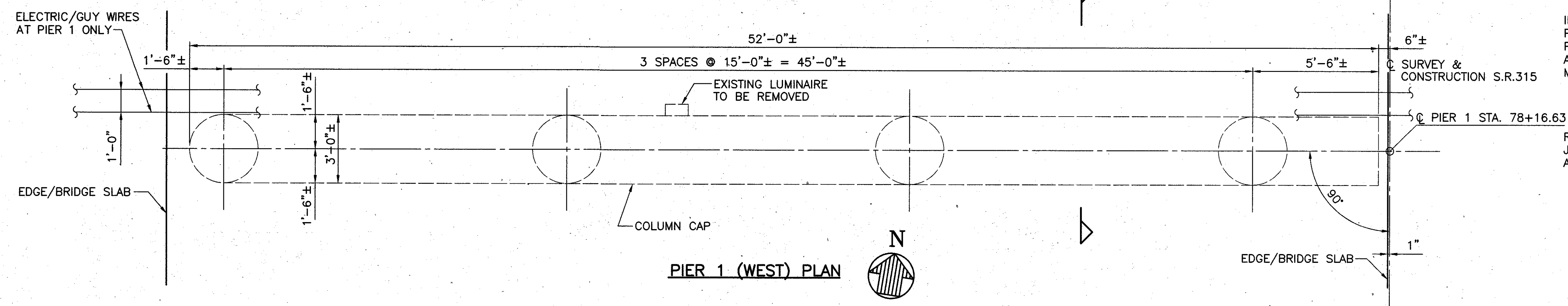
SECTION 6-8



- NOTES:
- FOR SUBSTRUCTURE NOTES, SEE SHEET 3/17.
 - FOR REAR ABUTMENT PLAN & ELEVATION, SEE SHEETS 6&7/17.

LEGEND		STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 6121 HUNTLEY ROAD, COLUMBUS, OHIO 43229										
CL - CLEAR	TYP - TYPICAL	FORWARD ABUTMENT DETAILS BRIDGE NO. FRA-315-0059 OVER RICH STREET FRANKLIN COUNTY STA. 77+71.92 TO STA. 79+16.33										
EF - EACH FACE	NF - NEAR FACE											
FF - FAR FACE	C/C - CENTER TO CENTER											
CJ - CONSTRUCTION JOINT	PEJF - PREFORMED EXPANSION JOINT FILLER											
SPA - SPACING	EXISTING STRUCTURE											
	NEW STRUCTURE											
DESIGNED	DRAWN							TRACED	CHECKED	REVIEWED	DATE	REVISED
TEU	GV								BRH	RKM	11/07/97	
										PHB	10/29/97	

[00]A STRUCTURE 92313143 CONTRACTOR: H-ABUTM.DWG - NOV 14, 1997 - 111459 - PLOT: 1-32



TYPICAL CAP/COLUMN EXPANSION JOINT REPAIR DETAIL

NOTE: INCLUDE THE COST OF ALL LABOR, MATERIALS AND EQUIPMENT WITH ITEM SPECIAL, PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR.

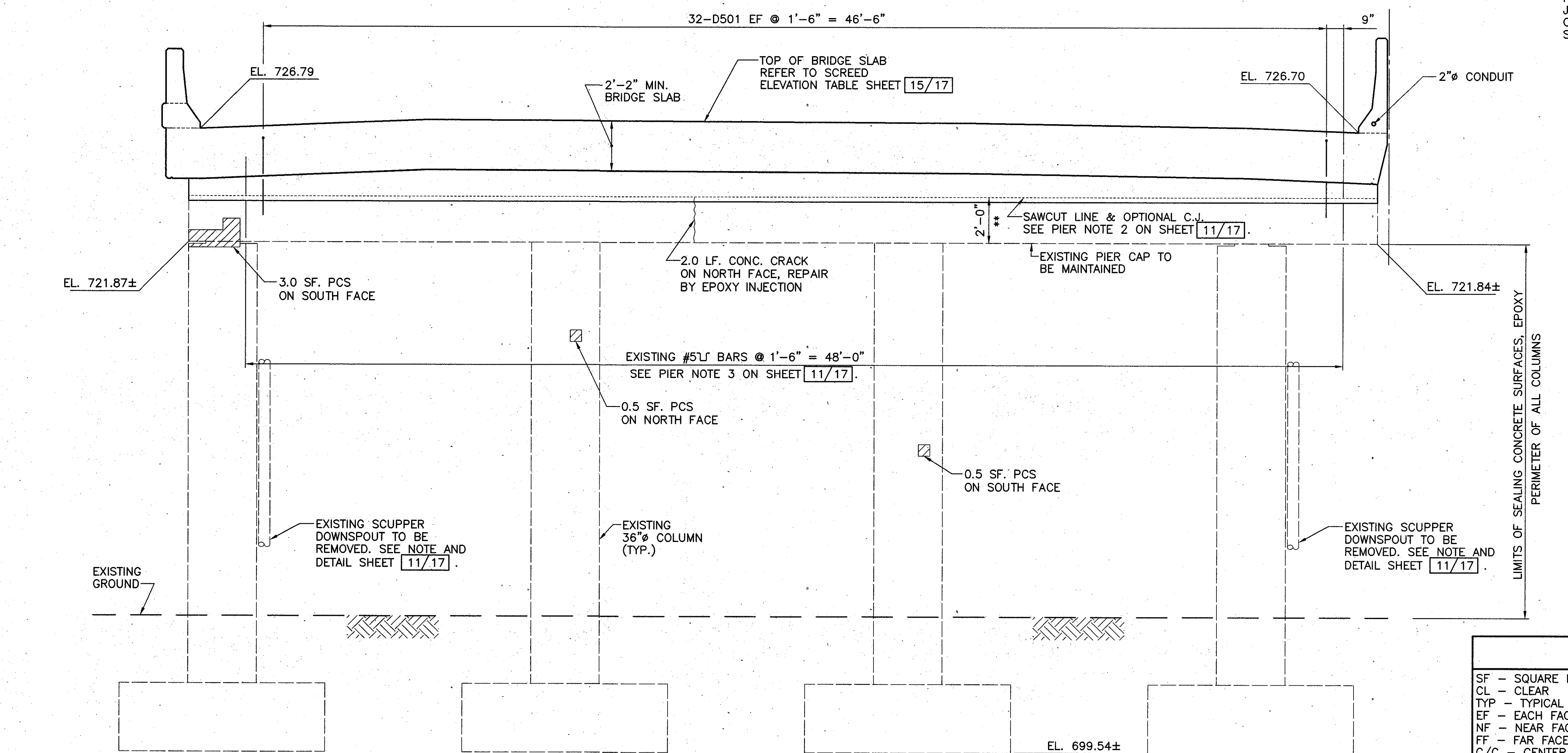
PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETEIORATION WAS PERFORMED IN JULY 1997.

SUMMARY OF PCS QUANTITIES *	
	ESTIMATED QUANTITY
PIER 1	10 S.F.
PIER 2	6 S.F.
TOTAL	16 S.F.

* ESTIMATED QUANTITY HAS BEEN INCREASED 15% OVER FIELD MARKED QUANTITY TO ALLOW FOR ADDITIONAL DETEIORATION AND EXTENSION OF POTENTIAL CONCRETE DETEIORATION.

INDICATES AREAS TO BE REPAIRED AS PER ITEM SPECIAL-PATCHING CONCRETE STRUCTURE WITH TROWELABLE MORTAR.

FOR PIER NOTES SEE SHEET 11/17.



LEGEND

- SF - SQUARE FEET
- CL - CLEAR
- TYP - TYPICAL
- EF - EACH FACE
- NF - NEAR FACE
- FF - FAR FACE
- C/C - CENTER TO CENTER
- CJ - CONSTRUCTION JOINT
- PEJF - PREFORMED EXPANSION JOINT FILLER
- PCS - PATCHING CONCRETE STRUCTURE WITH TROWELABLE MORTAR
- SPA - SPACING
- ** - DIMENSION TO SAWCUT LINE

EXISTING STRUCTURE	NEW STRUCTURE
--------------------	---------------

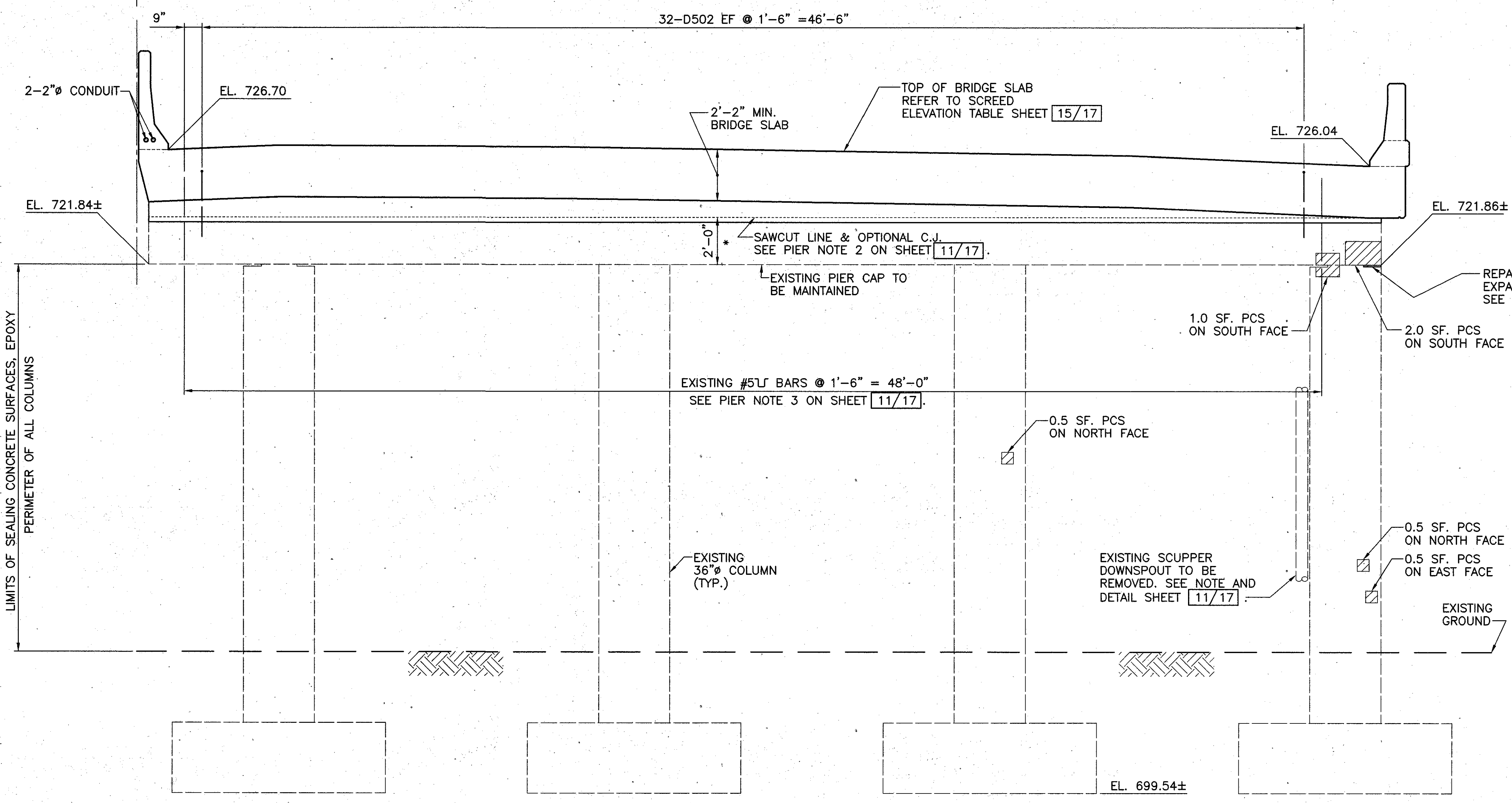
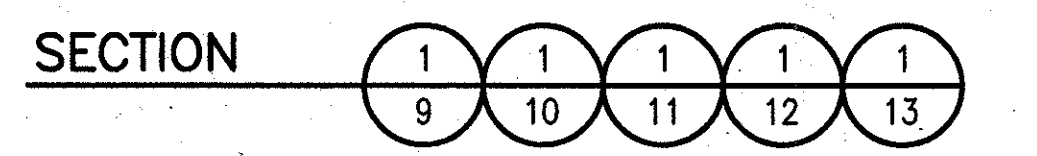
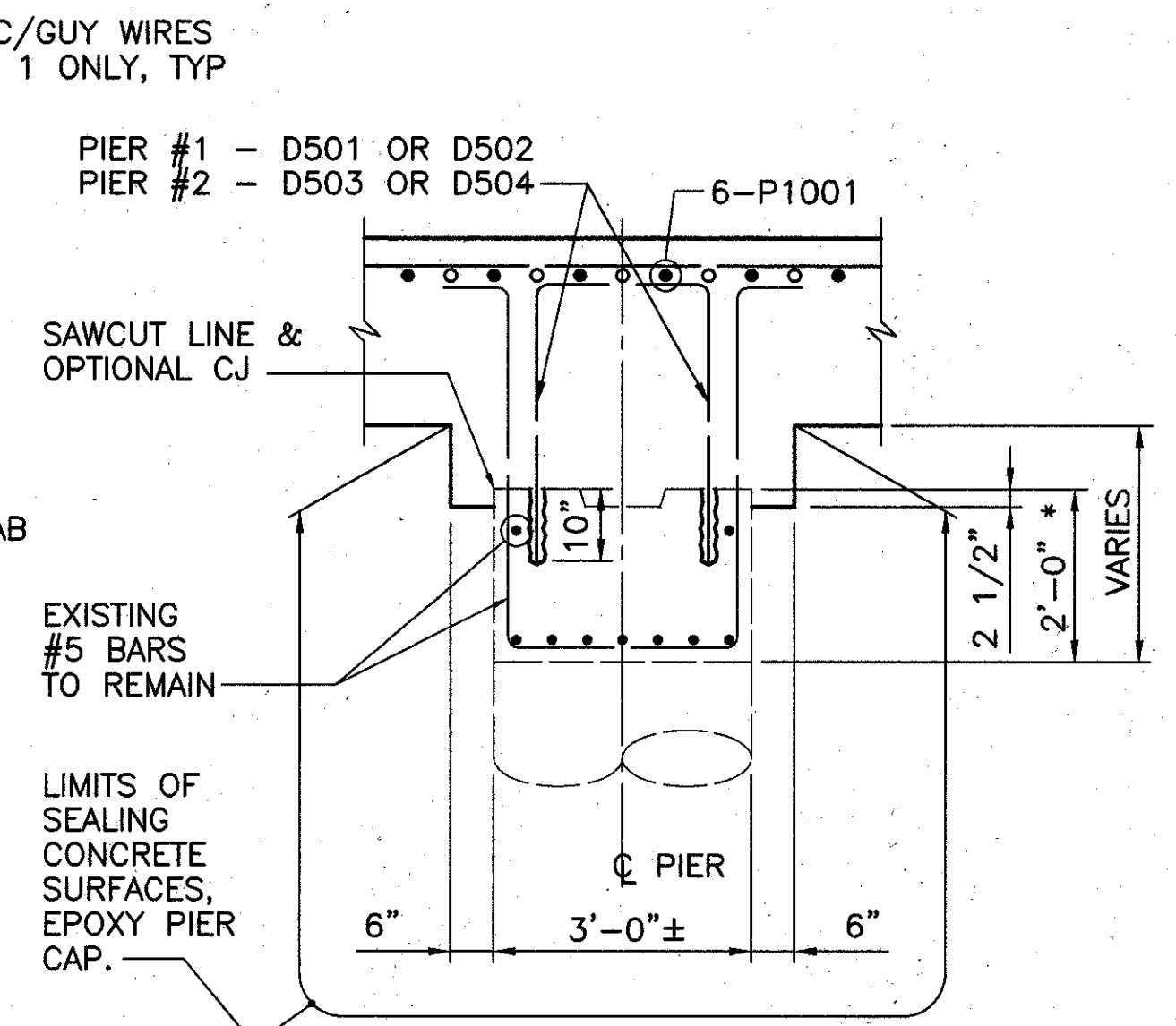
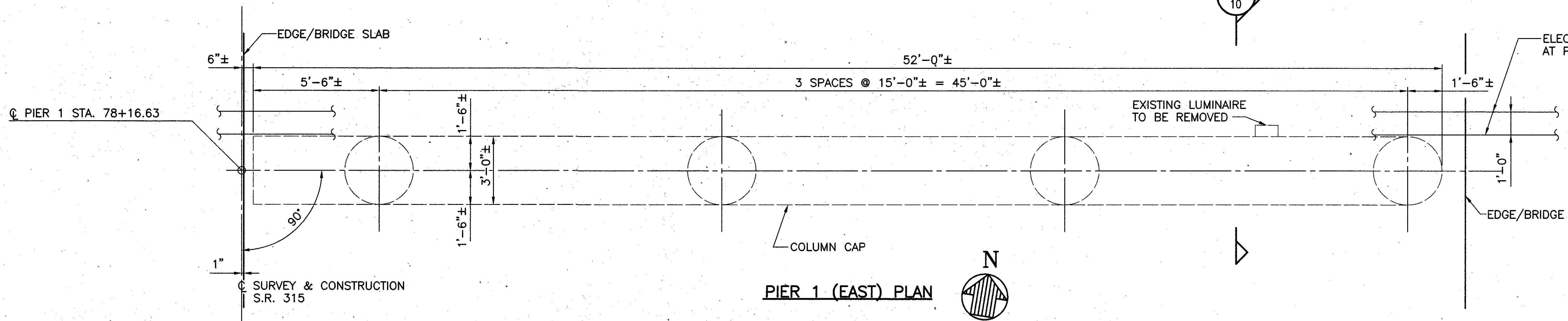
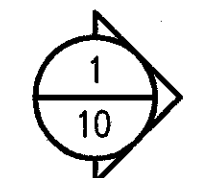
9 / 17

STILSON & ASSOCIATES, INC.
 CONSULTING ENGINEERING AND ARCHITECTURE
 5121 HUNTLEY ROAD, COLUMBUS, OHIO 43229

PIER 1 - WEST BENT DETAILS
 BRIDGE NO. FRA-315-0059
 OVER RICH STREET
 FRANKLIN COUNTY STA. 77+71.92 TO STA. 79+16.33

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
TEU	DST		BRH	RKM	11/07/97	PHB 10/29/97

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LEGEND	
SF	- SQUARE FEET
CL	- CLEAR
TYP	- TYPICAL
EF	- EACH FACE
NF	- NEAR FACE
FF	- FAR FACE
C/C	- CENTER TO CENTER
CJ	- CONSTRUCTION JOINT
PEJF	- PREFORMED EXPANSION JOINT FILLER
PCS	- PATCHING CONCRETE STRUCTURE WITH TROWELABLE MORTAR
SPA	- SPACING
*	- DIMENSION TO SAWCUT LINE
EXISTING STRUCTURE	
NEW STRUCTURE	

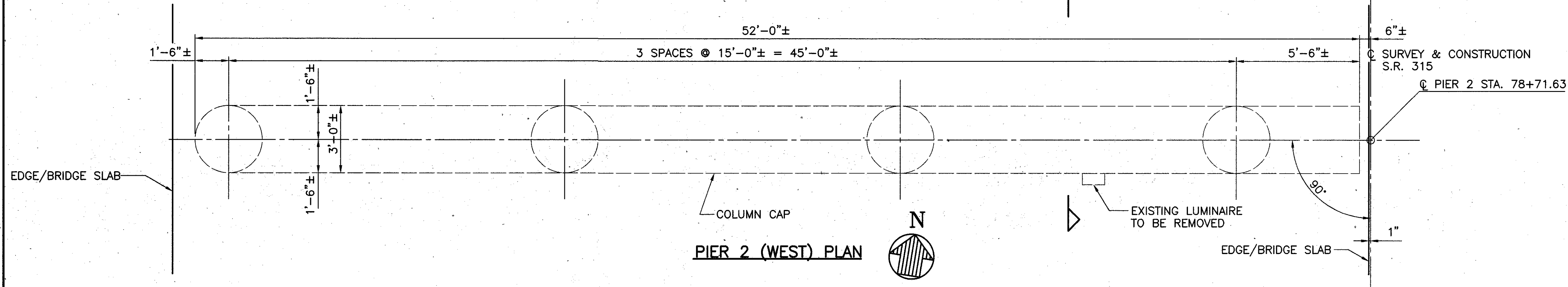
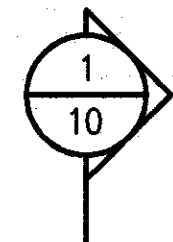
INDICATES AREAS TO BE REPAIRED AS PER ITEM SPECIAL-PATCHING CONCRETE STRUCTURE WITH TROWELABLE MORTAR.

FOR SUMMARY OF PCS QUANTITIES SEE SHEET 9/17.

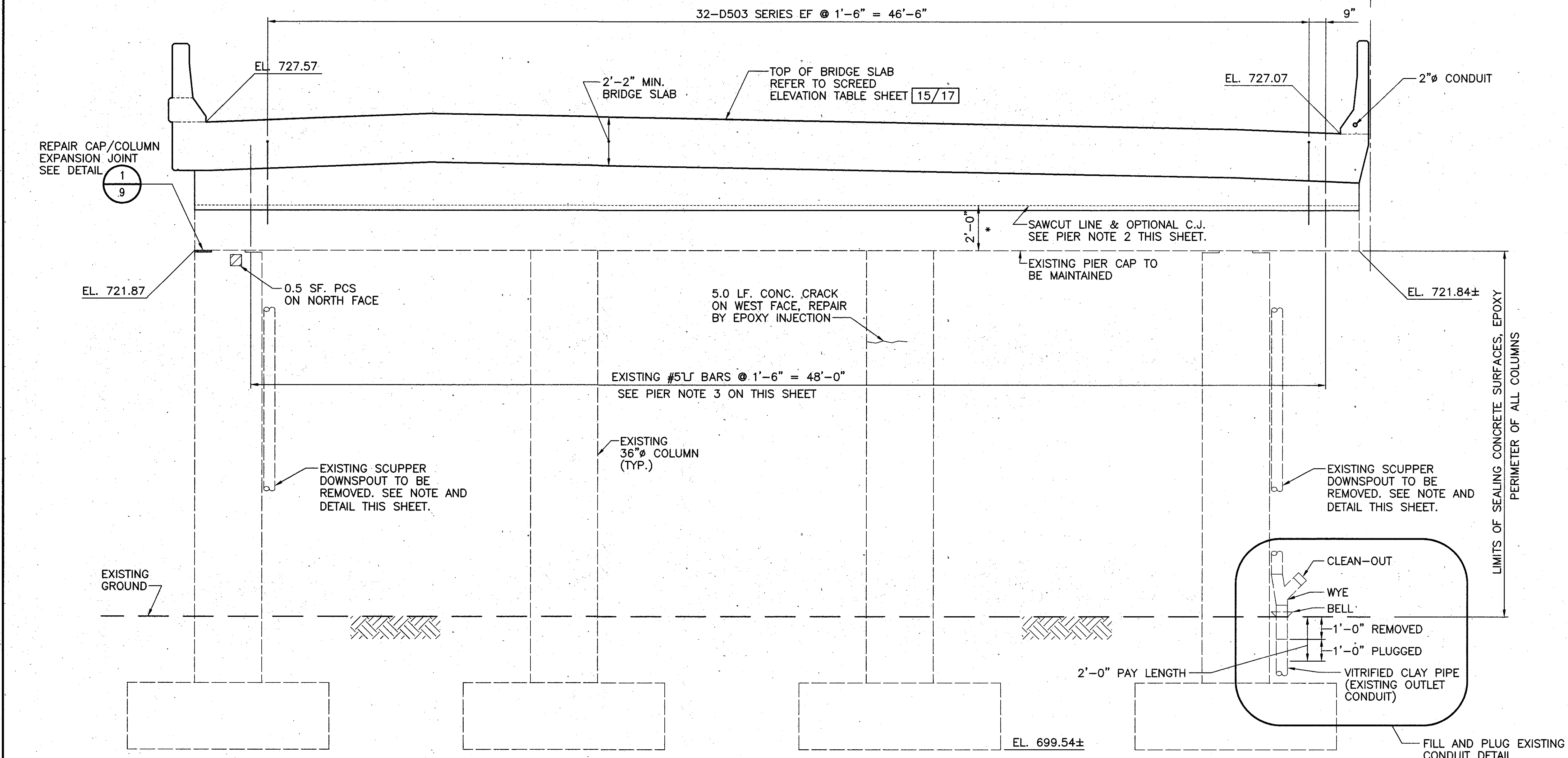
FOR PIER NOTES SEE SHEET 11/17.

STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 6121 HUNTLEY ROAD, COLUMBUS, OHIO 43229						
PIER 1 - EAST BENT DETAILS BRIDGE NO. FRA-315-0059 OVER RICH STREET FRANKLIN COUNTY STA. 77+71.92 TO STA. 79+16.33						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
TEU	DST		BRH	RKM	11/07/97 PHB 10/29/97	

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- PIER NOTES:**
1. THE PIER CAP BEAMS SHALL BE ADEQUATELY SHORED AND SUPPORTED THROUGHOUT THE DEMOLITION AND NEW CONSTRUCTION PHASES OF THIS PROJECT.
 2. THE DEPTH OF THE SAWCUT SHALL BE LESS THAN THE HORIZONTAL CLEARANCE TO THE VERTICAL #5 HAIRPIN BARS. THE SAWCUT WORK SHALL BE PAID FOR AS PART OF THE STRUCTURE REMOVAL ITEM.
 3. THESE HAIRPIN BARS ARE TO BE SALVAGED FOR INCORPORATION INTO THE NEW BRIDGE SLAB.
 4. THE EXISTING SEWERS INTO WHICH THE DOWNSPOUTS EMPTY SHALL BE PLUGGED OR FILLED BELOW GRADE. SEE DETAIL BELOW. REMOVE EXISTING SCUPPER DOWNSPOUT PIPING OUTLET CONDUITS DOWN TO 1'-0" BELOW GRADE. PLUG ADDITIONAL LENGTH OF OUTLET CONDUIT WITH NON-SHRINK GROUT FOR A 1'-0" MINIMUM LENGTH OR PLUG WITH PRECAST VITRIFIED OR CONCRETE STOPPER AS PER CMS 202.09. INCLUDE WITH ITEM SPECIAL 'FILL AND PLUG EXISTING CONDUIT' FOR PAYMENT.
 5. THE D501, D502, D503 AND D504 BARS ARE INCLUDED IN THE SUPERSTRUCTURE REINFORCING STEEL LIST.



LEGEND

- SF - SQUARE FEET
- CL - CLEAR
- TYP - TYPICAL
- EF - EACH FACE
- NF - NEAR FACE
- FF - FAR FACE
- C/C - CENTER TO CENTER
- CJ - CONSTRUCTION JOINT
- PEJF - PREFORMED EXPANSION JOINT FILLER
- PCS - PATCHING CONCRETE STRUCTURE WITH TROWELABLE MORTAR
- SPA - SPACING
- * - DIMENSION TO SAWCUT LINE

EXISTING STRUCTURE
NEW STRUCTURE

INDICATES AREAS TO BE REPAIRED AS PER ITEM SPECIAL-PATCHING CONCRETE STRUCTURE WITH TROWELABLE MORTAR.

FOR SUMMARY OF PCS QUANTITIES SEE SHEET 9/17.

11/17

STILSON & ASSOCIATES, INC.
CONSULTING ENGINEERING AND ARCHITECTURE
6121 HUNTLEY ROAD, COLUMBUS, OHIO 43229

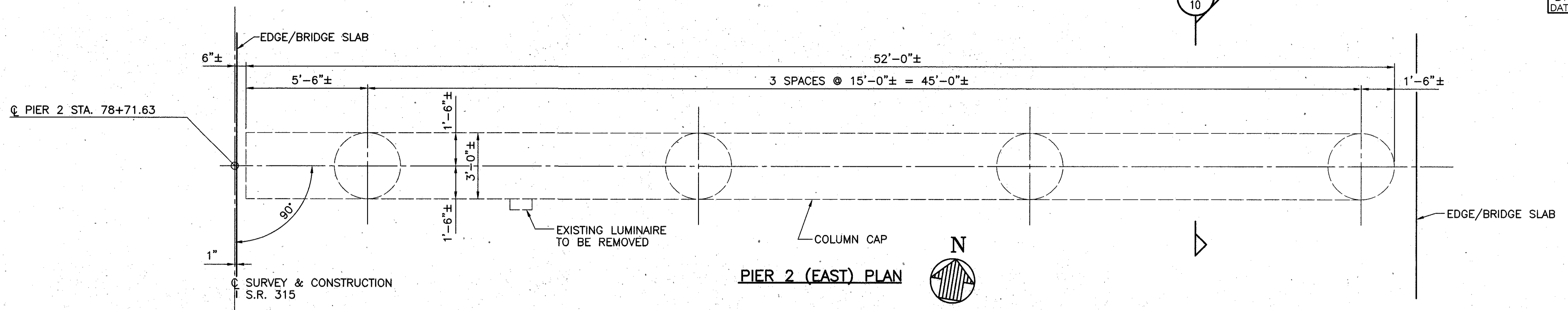
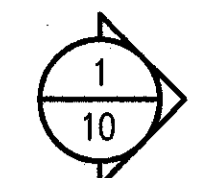
PIER 2 - WEST BENT DETAILS

BRIDGE NO. FRA-315-0059
OVER RICH STREET

FRANKLIN COUNTY STA. 77+71.92 TO STA. 79+16.33

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
TEU	DST		BRH	RKM	11/07/97	
				PHB	10/29/97	

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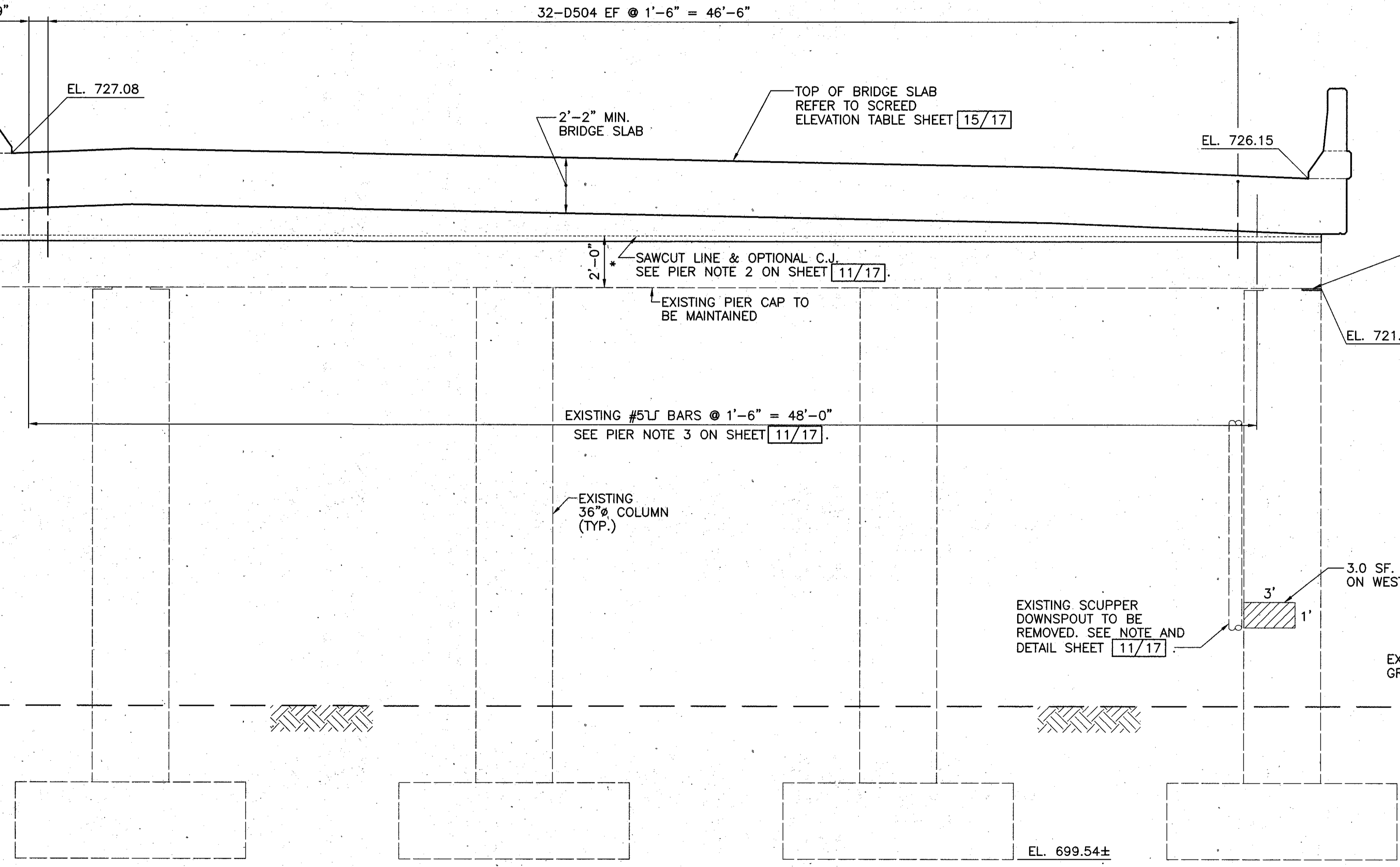
LIMITS OF SEALING CONCRETE SURFACES, EPOXY PERIMETER OF ALL COLUMNS

LEGEND	
SF	- SQUARE FEET
CL	- CLEAR
TYP	- TYPICAL
EF	- EACH FACE
NF	- NEAR FACE
FF	- FAR FACE
C/C	- CENTER TO CENTER
CJ	- CONSTRUCTION JOINT
PEJF	- PREFORMED EXPANSION JOINT FILLER
PCS	- PATCHING CONCRETE STRUCTURE WITH TROWELABLE MORTAR
SPA	- SPACING
*	- DIMENSION TO SAWCUT LINE
EXISTING STRUCTURE	
NEW STRUCTURE	

INDICATES AREAS TO BE REPAIRED AS PER ITEM SPECIAL-PATCHING CONCRETE STRUCTURE WITH TROWELABLE MORTAR.

FOR SUMMARY OF PCS QUANTITIES SEE SHEET 9/17.

FOR PIER NOTES SEE SHEET 11/17.



12/17

STILSON & ASSOCIATES, INC.
CONSULTING ENGINEERING AND ARCHITECTURE
6121 HUNTLEY ROAD, COLUMBUS, OHIO 43229

PIER 2 - EAST BENT DETAILS

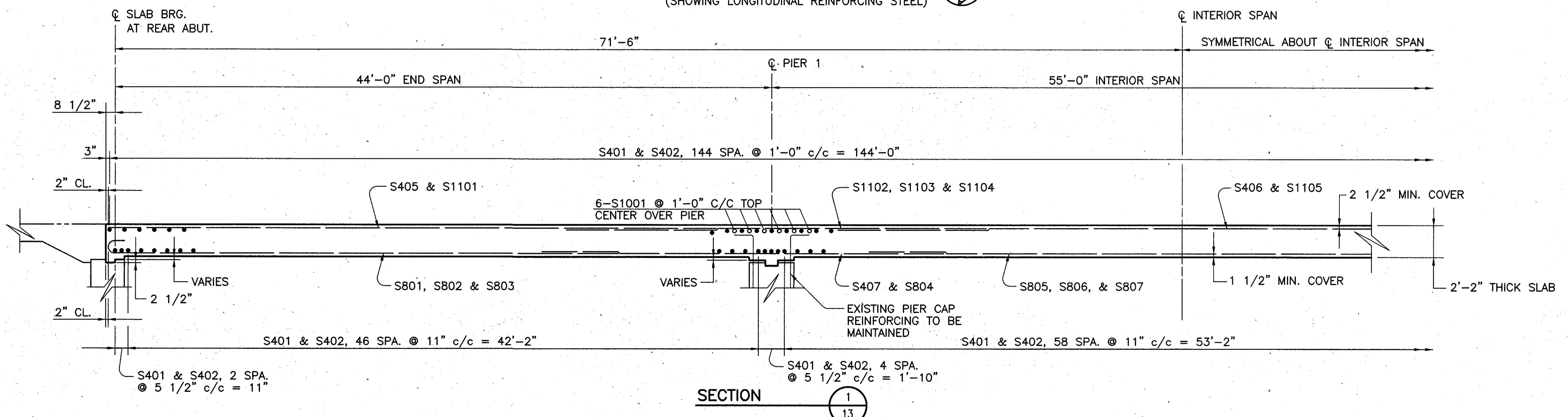
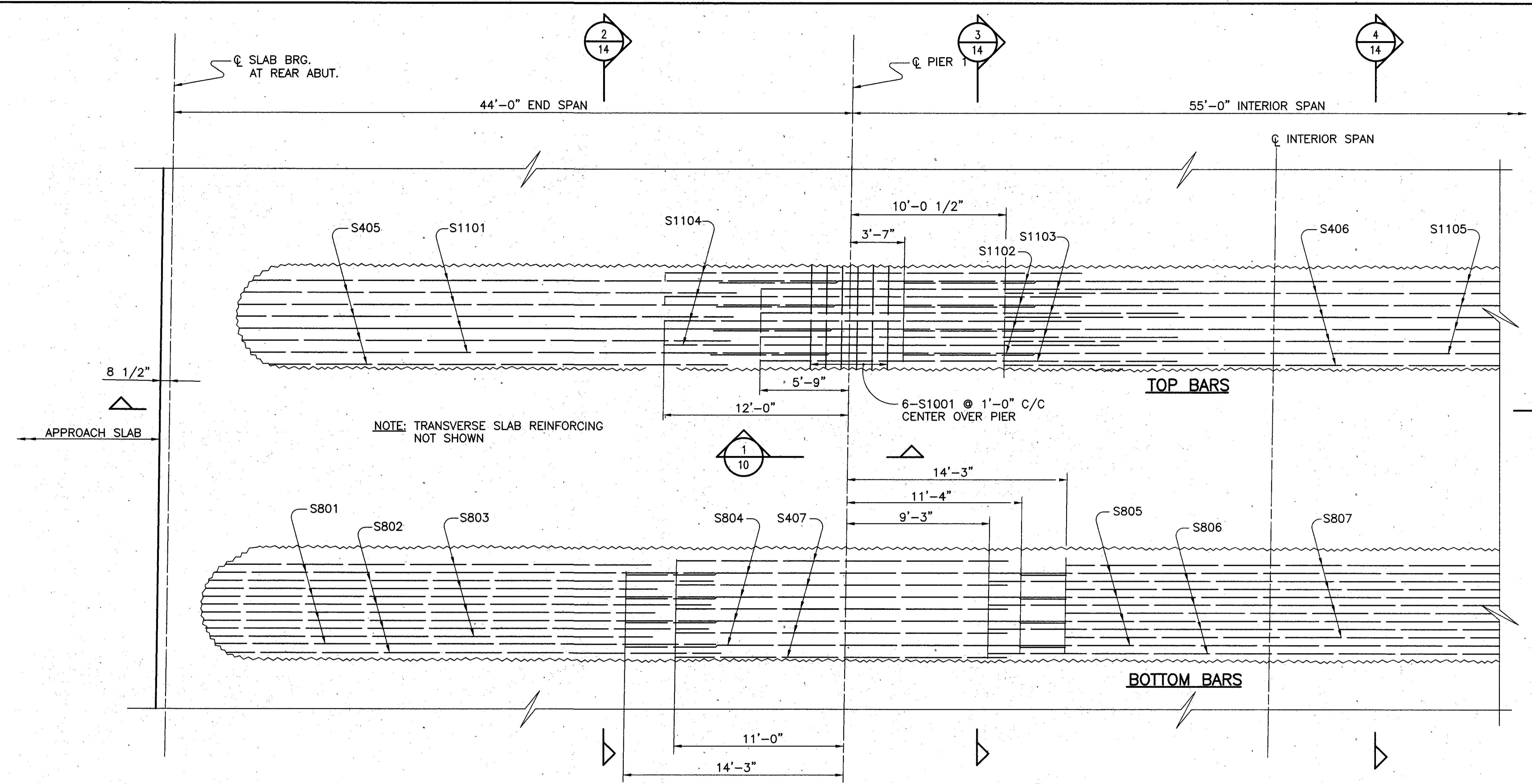
BRIDGE NO. FRA-315-0059
OVER RICH STREET

FRANKLIN COUNTY STA. 77+71.92 TO STA. 79+16.33

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
TEU	DST		BRH	RKM	11/07/97	
				PHB	10/29/97	

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- SUPERSTRUCTURE NOTES:**
1. TRANSVERSE BARS SHALL BE PLACED PARALLEL TO ϕ SLAB BEARING AT ABUTMENTS AND ϕ PIERS.
 2. FOR REQUIRED SLAB ELEVATIONS, SEE SCREED ELEVATION LOCATION PLAN AND TABLE, SHEET 15 / 17.
 3. FOR DEFLECTION CONTROL JOINTS SPACING IN PARAPETS AND SPLIT MEDIAN BARRIER, SEE GENERAL PLAN SHEET 1 / 17.
 4. FOR PARAPET AND SPLIT MEDIAN BARRIER REINFORCING DETAILS, SEE SHEET 16 DETAILS 5 & 6. LAP SPLICE S501 LONGITUDINAL BARS 2'-9" MINIMUM.

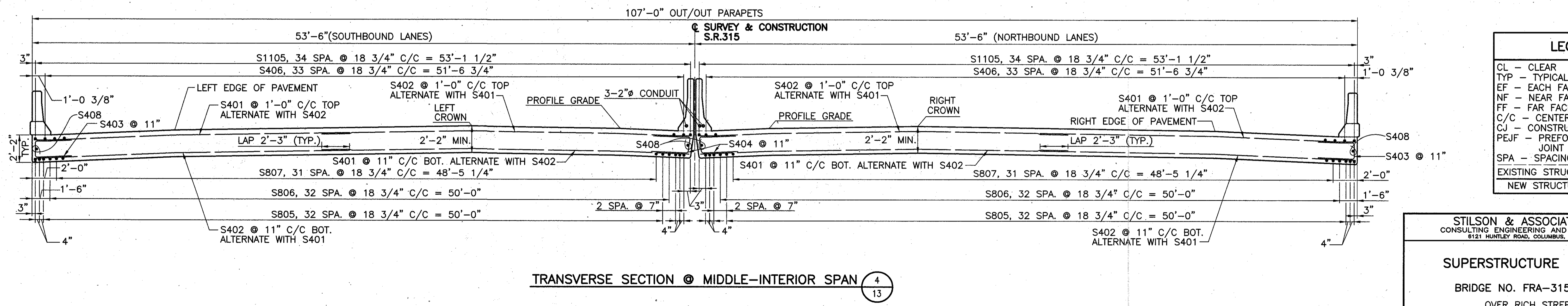
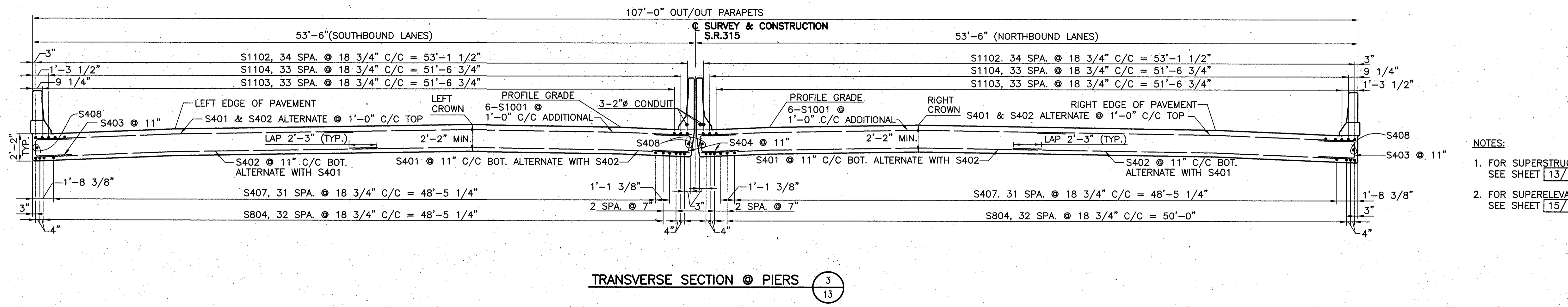
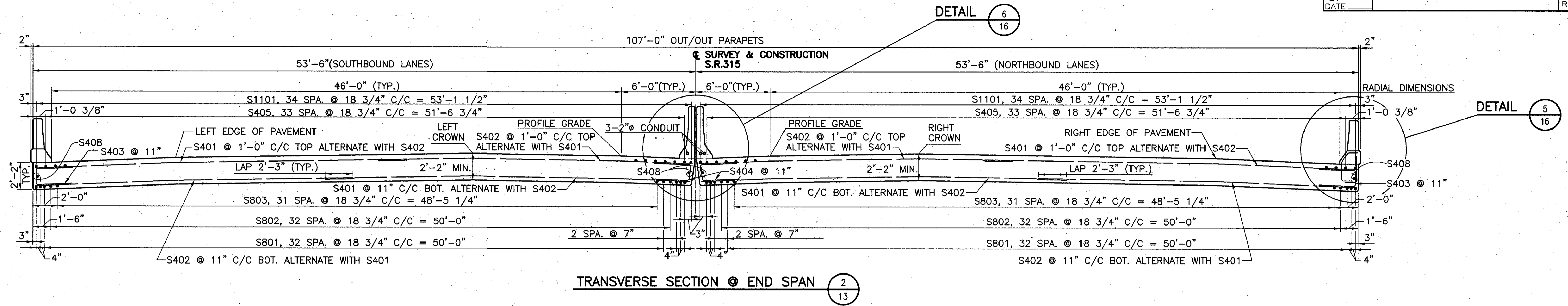


NOTE: DECK SLOPE NOT SHOWN, (DECK SLOPES +0.68%)

LEGEND	
CL	- CLEAR
TYP	- TYPICAL
EF	- EACH FACE
NF	- NEAR FACE
FF	- FAR FACE
C/C	- CENTER TO CENTER
CJ	- CONSTRUCTION JOINT
PEJF	- PREFORMED EXPANSION JOINT FILLER
SPA	- SPACING
EXISTING STRUCTURE	
NEW STRUCTURE	

STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 8121 HUNTLEY ROAD, COLUMBUS, OHIO 43229					
SUPERSTRUCTURE DETAILS BRIDGE NO. FRA-315-0059 OVER RICH STREET FRANKLIN COUNTY STA. 77+71.92 TO STA. 79+16.33					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
TEU	GV		BRH	RKM	11/07/97
				PHB	10/29/97

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- NOTES:**
- FOR SUPERSTRUCTURE NOTES, SEE SHEET 13/17.
 - FOR SUPERELEVATION DIAGRAM, SEE SHEET 15/17.

LEGEND	
CL	- CLEAR
TYP	- TYPICAL
EF	- EACH FACE
NF	- NEAR FACE
FF	- FAR FACE
C/C	- CENTER TO CENTER
CJ	- CONSTRUCTION JOINT
PEJF	- PREFORMED EXPANSION JOINT FILLER
SPA	- SPACING
EXISTING STRUCTURE	
NEW STRUCTURE	

14/17

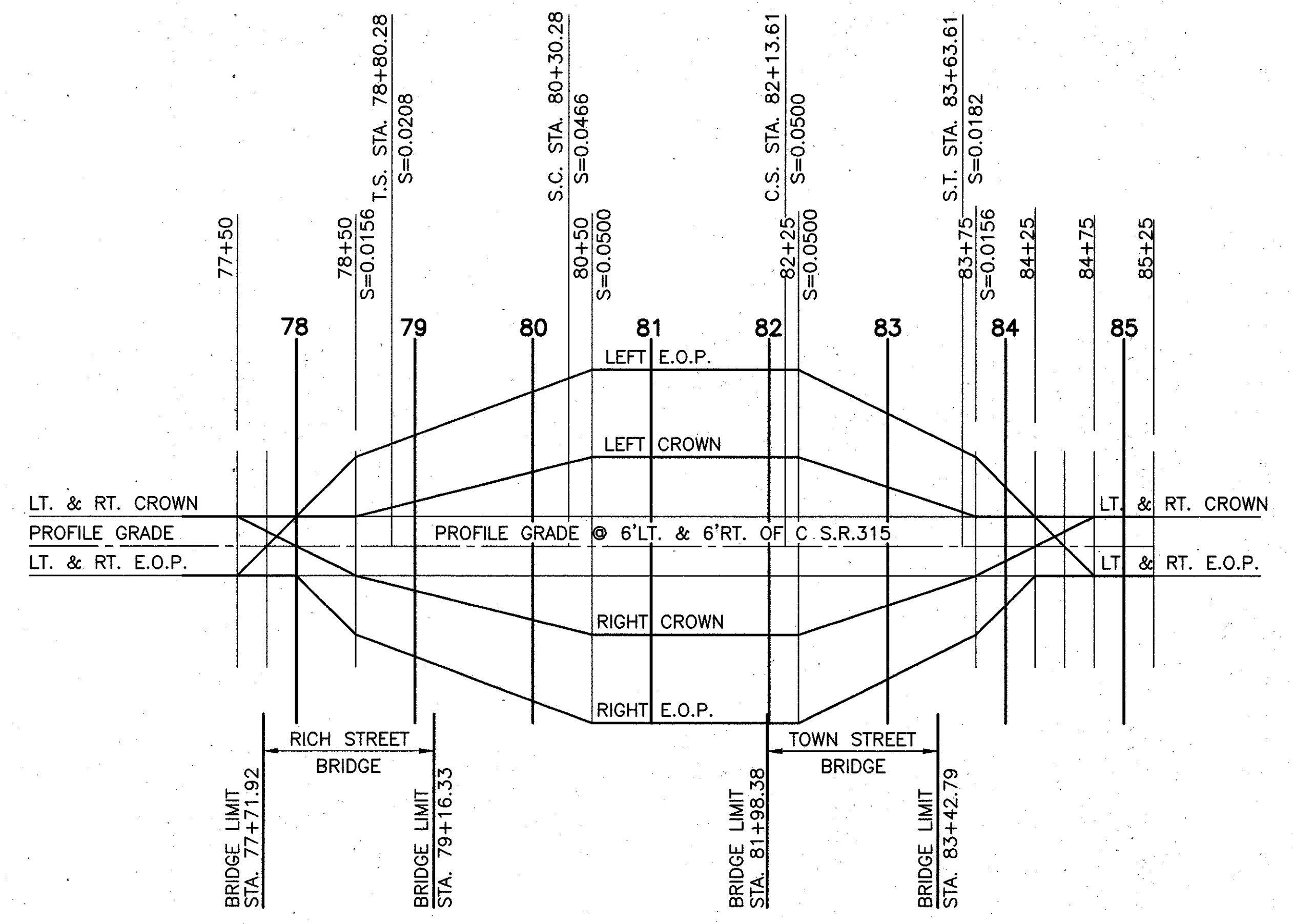
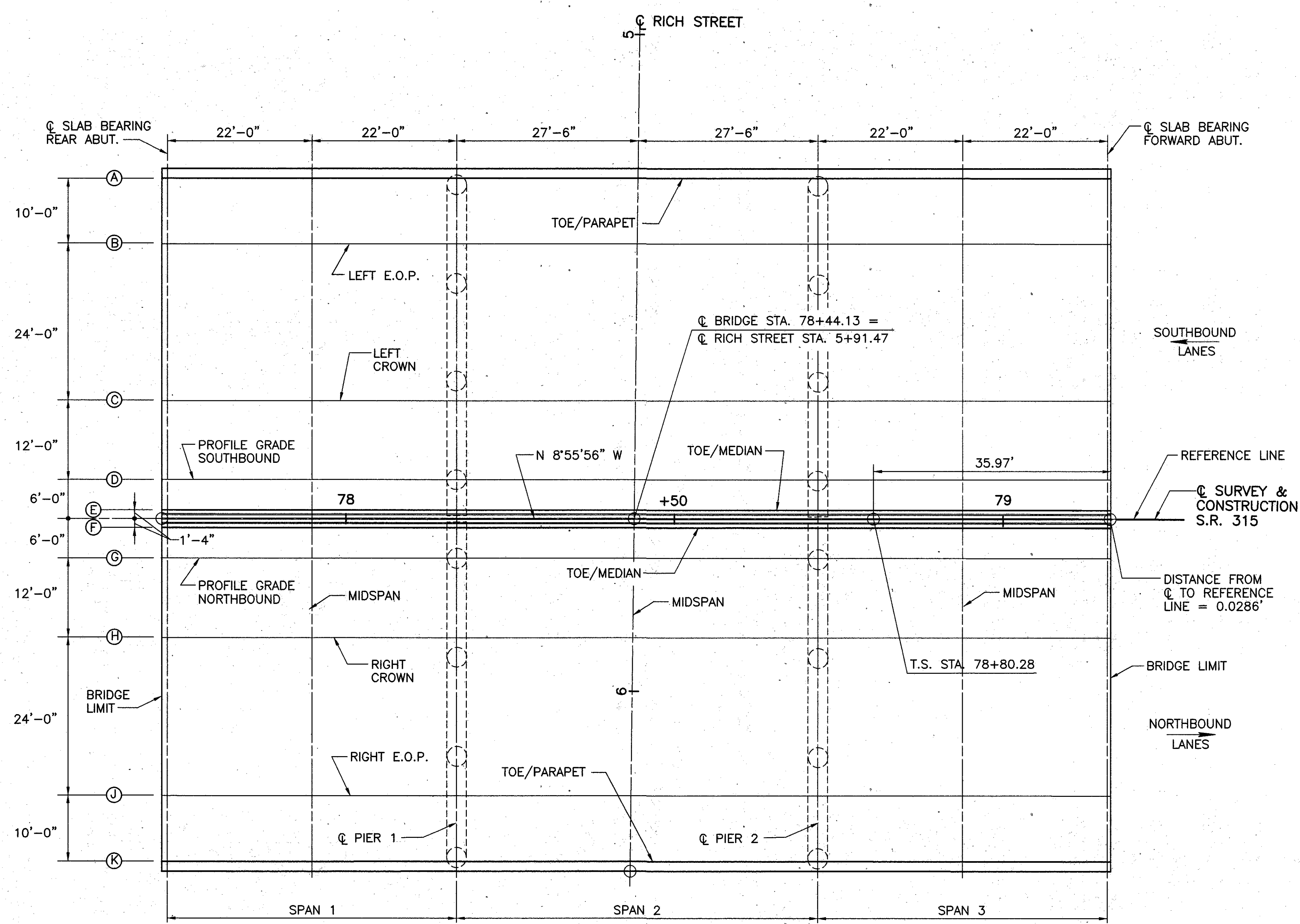
STILSON & ASSOCIATES, INC.
CONSULTING ENGINEERING AND ARCHITECTURE
6121 HUNTLEY ROAD, COLUMBUS, OHIO 43229

SUPERSTRUCTURE DETAILS

BRIDGE NO. FRA-315-0059
OVER RICH STREET
FRANKLIN COUNTY STA. 77+71.92 TO STA. 79+16.33

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVIS
TEU	GV		BRH	RKM	11/07/97	
				PHB	10/29/97	

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SCREED ELEVATION LOCATION PLAN N

TABLE OF SCREED ELEVATIONS

SCREED LINE	SPAN 1		SPAN 2		SPAN 3		
	BRIDGE LIMIT REAR ABUTMENT	MIDSPAN	Q PIER 1	MIDSPAN	Q PIER 2	MIDSPAN	BRIDGE LIMIT FWD. ABUTMENT
A	726.15	726.54	726.79	727.28	727.57	727.94	728.20
B	726.57	726.95	727.20	727.70	727.96	728.31	728.54
C	726.78	726.99	727.08	727.37	727.50	727.76	727.89
D	726.59	726.81	726.89	727.18	727.27	727.48	727.57
E	726.40	726.61	726.70	726.99	727.07	727.28	727.36
F	726.40	726.61	726.70	726.99	727.08	727.31	727.41
G	726.59	726.81	726.89	727.18	727.27	727.48	727.57
H	726.69	726.83	726.83	727.02	727.04	727.20	727.25
J	726.32	726.45	726.46	726.64	726.57	726.65	726.60
K	725.90	726.03	726.04	726.23	726.15	726.21	726.15

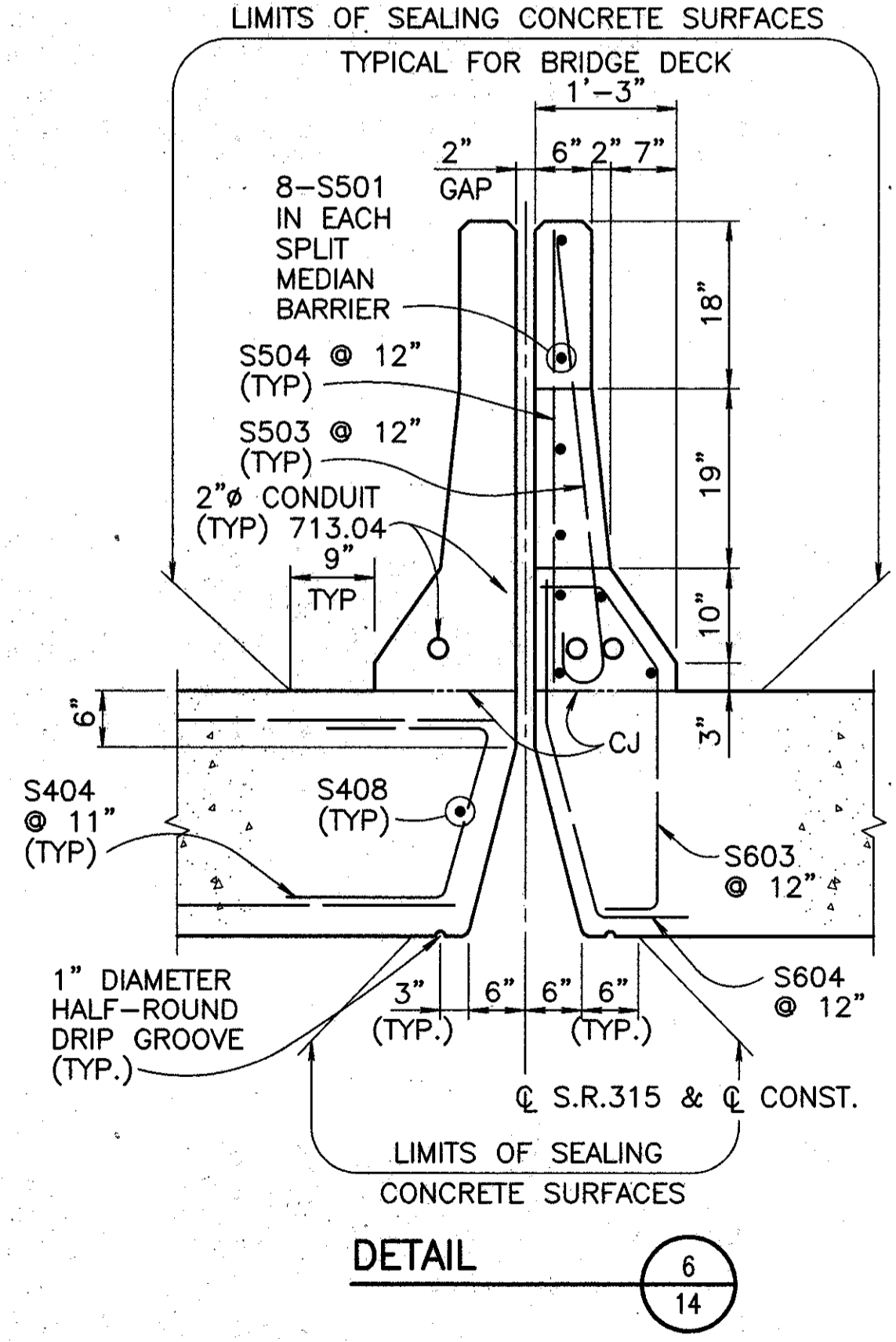
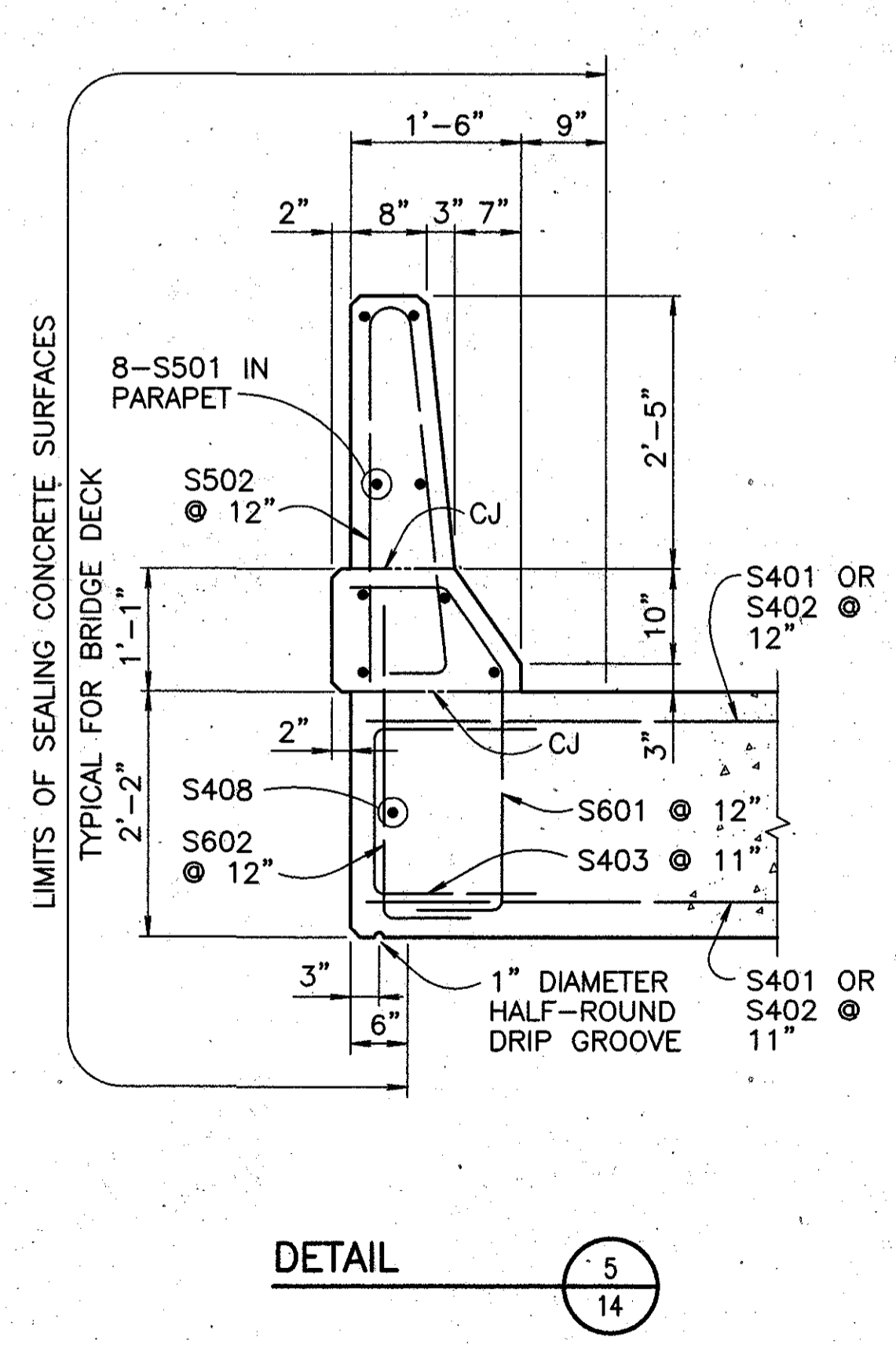
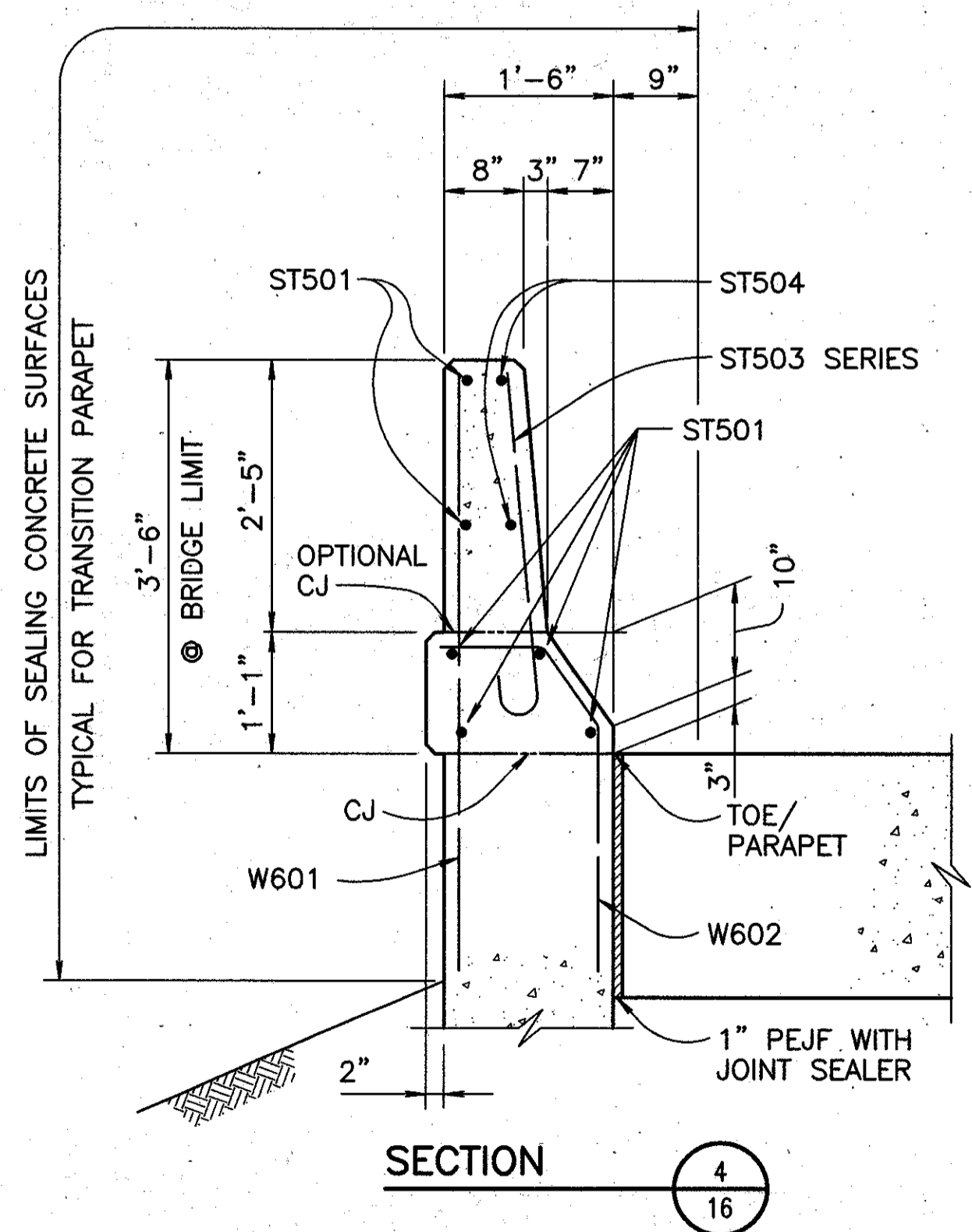
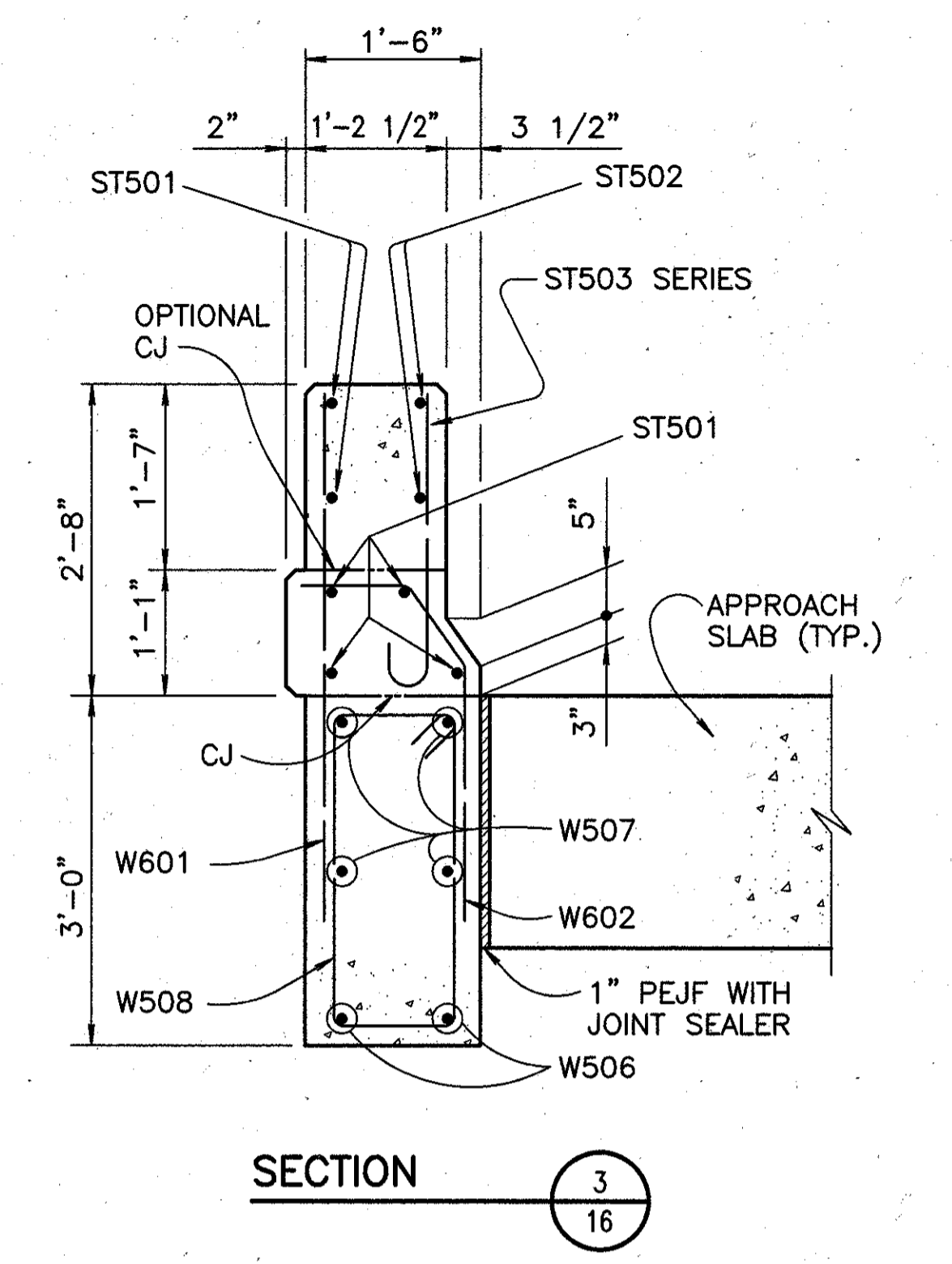
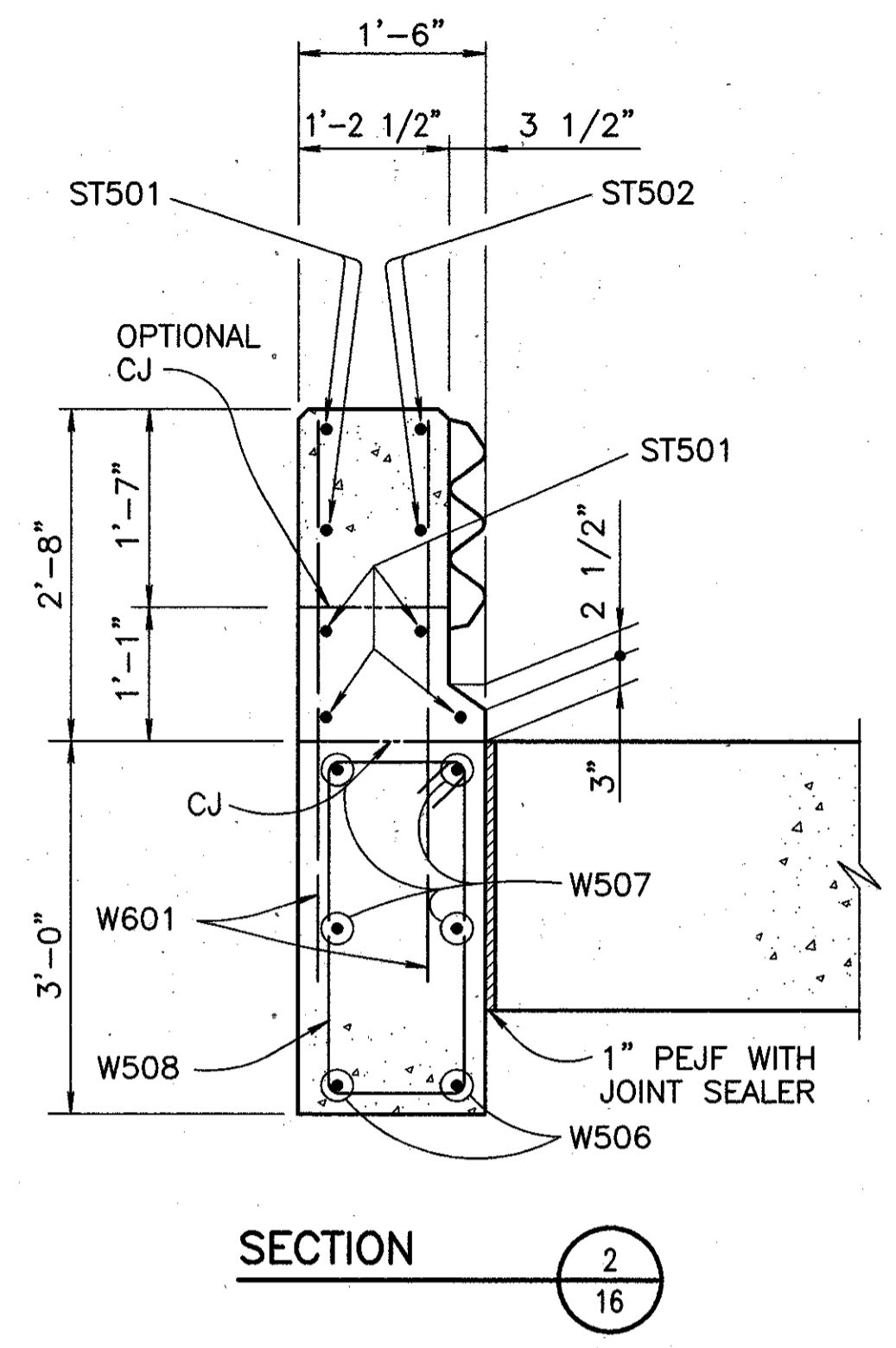
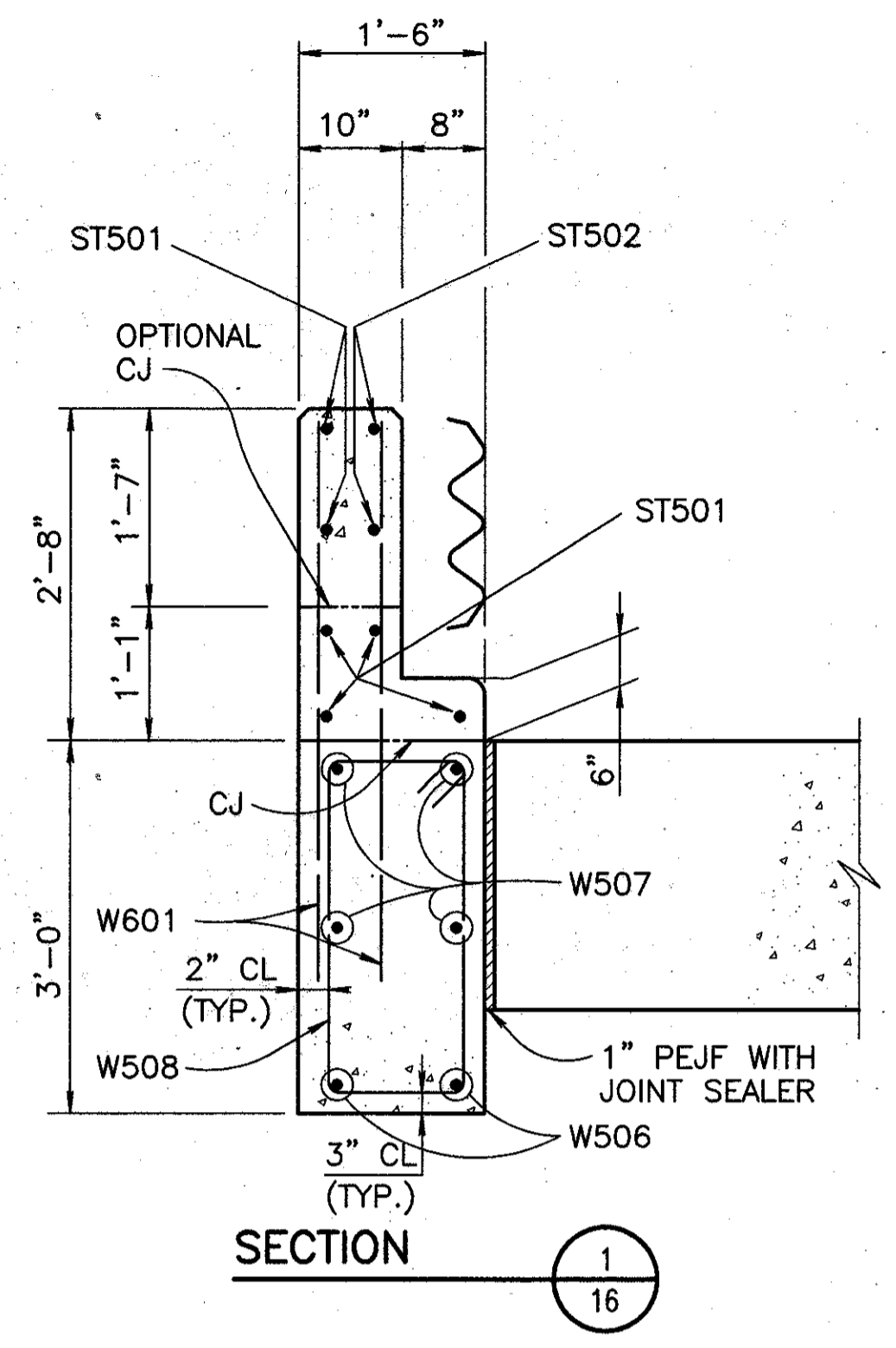
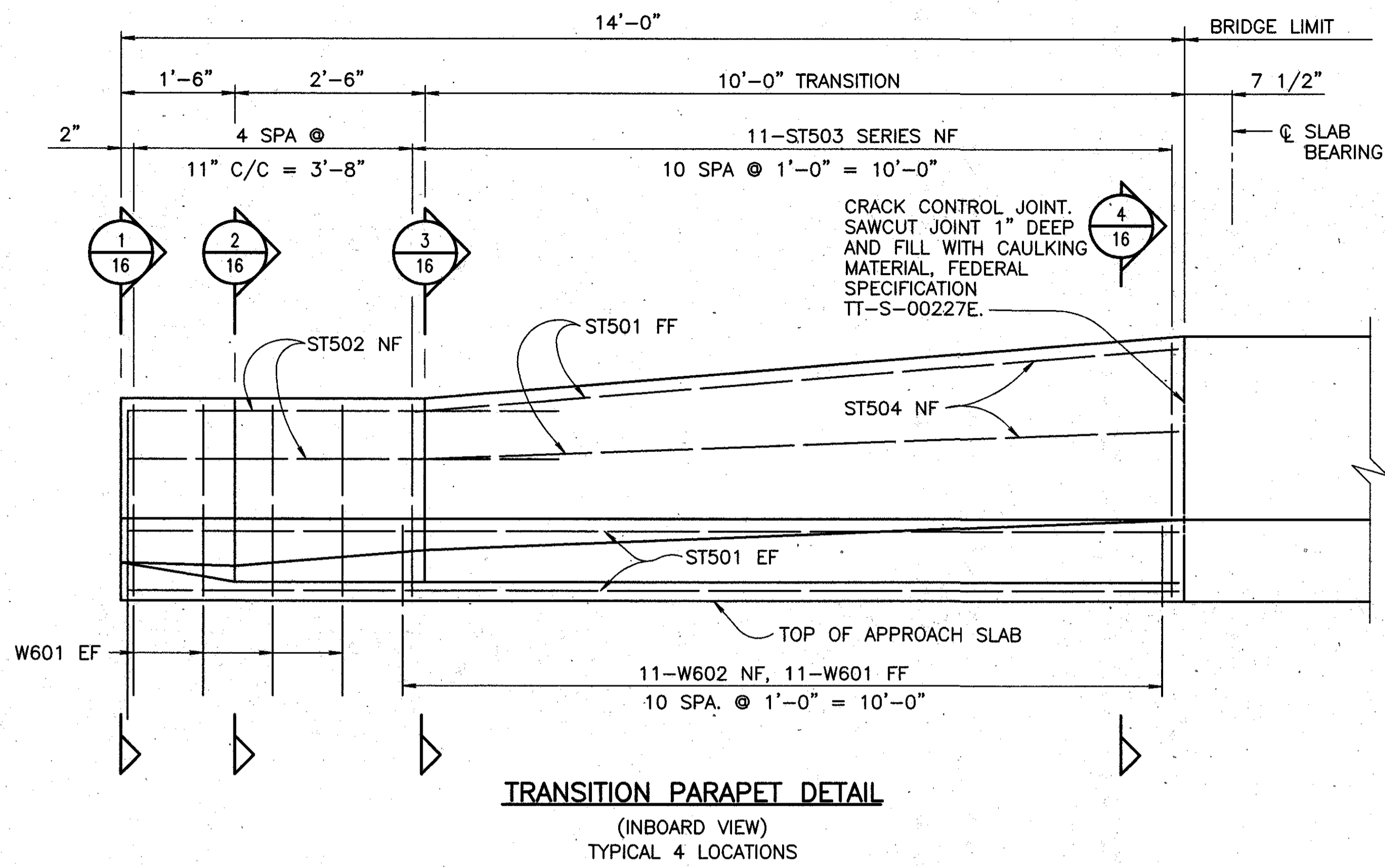
S.R.315
HORIZONTAL
CURVE DATA
P.I. = 81+22.41
Δ = 10°00'00"
D = 3'00'00"
R = 1909.86'
Lc = 183.33'
T = 242.13'
Ls = 150.00'
E = 7.30'
TS = 78+80.28
SC = 80+30.28
CS = 82+13.61
ST = 83+63.61

NOTES:

- THE SCREED ELEVATIONS SHOWN ARE TO THE TOP OF SUPERSTRUCTURE CONCRETE PLACEMENT AND ARE THE ELEVATIONS REQUIRED PRIOR TO RELEASE OF THE SUPPORTING FALSEWORK. PROPER ALLOWANCE HAS BEEN MADE FOR THE DEAD LOAD DEFLECTION CAUSED BY THE WEIGHT OF THE CONCRETE. ADDITIONAL ALLOWANCE SHALL BE MADE TO COMPENSATE FOR THE DEFLECTION OF ANY FALSEWORK MEMBERS SUPPORTING THE ACTUAL CONCRETE PLACEMENT.
- FOR SUPERSTRUCTURE NOTES, SEE SHEET 13/17.

LEGEND CL - CLEAR TYP - TYPICAL EF - EACH FACE NF - NEAR FACE FF - FAR FACE C/C - CENTER TO CENTER CJ - CONSTRUCTION JOINT PEJF - PREFORMED EXPANSION JOINT FILLER SPA - SPACING EXISTING STRUCTURE NEW STRUCTURE		STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 6121 HUNTLEY ROAD, COLUMBUS, OHIO 43229					
		SUPERSTRUCTURE DETAILS BRIDGE NO. FRA-315-0059 OVER RICH STREET FRANKLIN COUNTY STA. 77+71.92 TO STA. 79+16.33					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED	
TEU	GV		BRH	RKM	11/07/97 PHB 10/29/97		

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- TRANSITION PARAPET NOTES:**
- PAYMENT: QUANTITIES OF REINFORCING STEEL, CONCRETE FOR PARAPETS AND MEDIAN BARRIERS, AND CONTROL JOINT CAULKING MATERIAL ARE INCLUDED WITH ITEM SPECIAL, HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE (PARAPET) UNLESS OTHERWISE NOTED.
 - FOR SUBSTRUCTURE NOTES, SEE SHEET 3/17.
 - FOR SUPERSTRUCTURE NOTES, SEE SHEET 13/17.
 - FOR ADDITIONAL TRANSITION PARAPET DETAILS NOT SHOWN, SEE STANDARD DRAWING BR-1.
 - FOR CRACK CONTROL JOINT LOCATIONS, SEE THE GENERAL PLAN, SHEET 1/17. VERTICAL BARS IN THE PARAPETS ARE SPACED AT 12" C/C AS PER DETAILS 5 & 6 THIS SHEET.

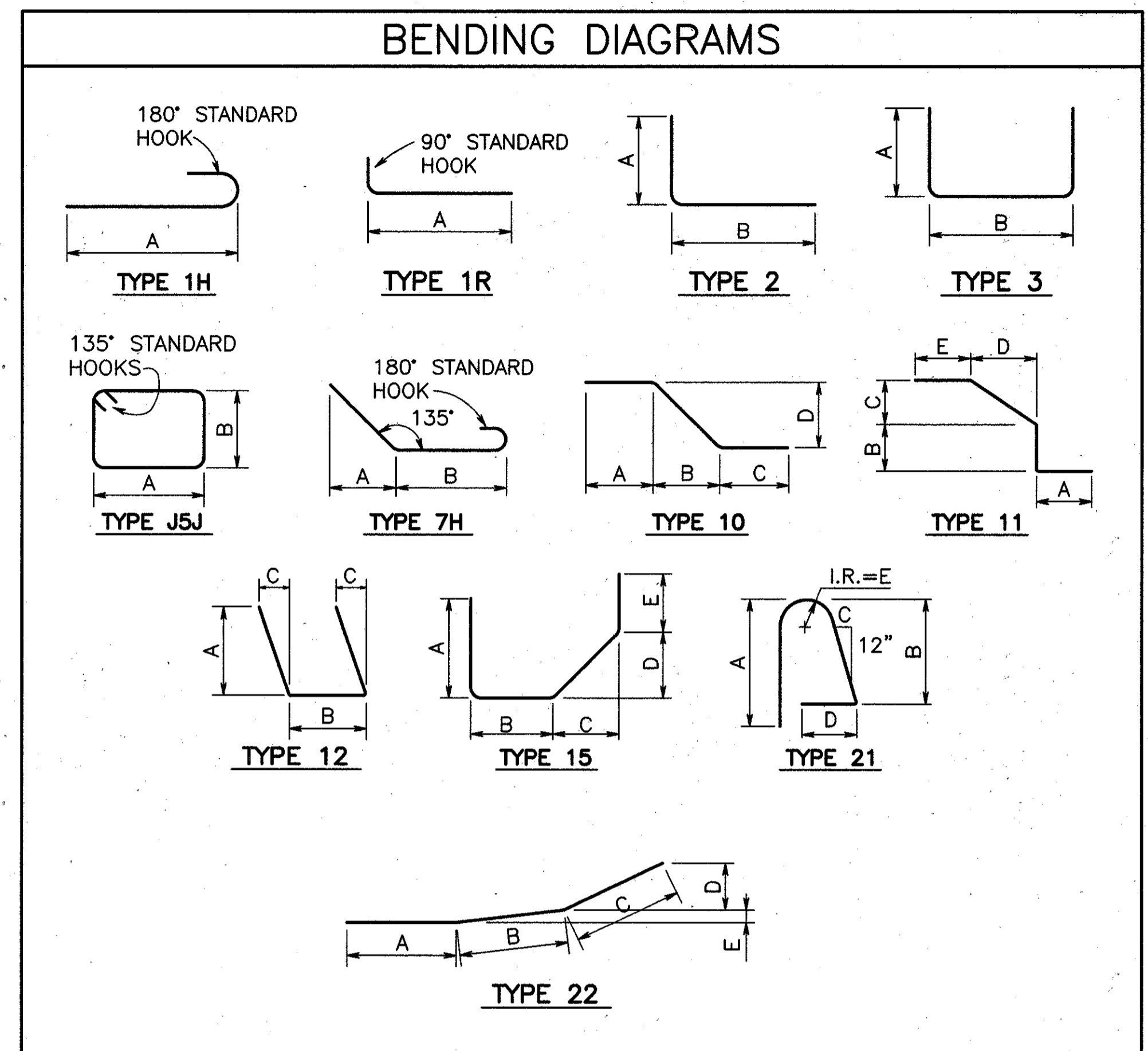
LEGEND		STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 8121 HUNTLEY ROAD, COLUMBUS, OHIO 43229						
TYP - TYPICAL	EF - EACH FACE	SUPERSTRUCTURE DETAILS						
NF - NEAR FACE	FF - FAR FACE							
C/C - CENTER TO CENTER	CJ - CONSTRUCTION JOINT	BRIDGE NO. FRA-315-0059 OVER RICH STREET						
PEJF - PREFORMED EXPANSION JOINT FILLER	SPA - SPACING							
CL - CLEAR		FRANKLIN COUNTY STA. 77+71.92 TO STA. 79+16.33						
EXISTING STRUCTURE		DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NEW STRUCTURE		TEU	RTP		BRH	RKM	11/07/97	
						PHB	10/29/97	

NOTE: EACH RUN OF LONGITUDINAL PARAPET AND MEDIAN BARRIER REINFORCING SHALL BE COMPRISED OF THE FOLLOWING:
4-S501, MINIMUM LAP = 2'-9"

I:\DATA\PROJECT\9231345\CONCRETE\PARAPET\PARAPET.DWG - NOV 14, 1997 - 11:33:05 - PLOT: 1x16

STEEL LIST										
MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	NOTE
REAR ABUTMENT										
AR501	36	40'-0"	1502	STR.						
AR502	8	33'-6"	280	STR.						
AR503	72	7'-10"	588	3	1'-7"	4'-11"				
AR504	72	6'-8"	501	3	1'-0"	4'-11"				
AR505	74	13'-8"	1055	3	6'-0"	1'-11"				
AR506	74	8'-4"	643	3	3'-4"	1'-11"				
AR507	16	15'-8"	261	STR.						
AR508	12	6'-0"	75	STR.						
AR509	12	5'-10"	73	2	3'-0"	3'-0"				
AR1001	8	53'-0"	1824	STR.						8
D801	68	6'-3"	1135	7H	1'-0"	4'-0"				
TOTAL=			7937							
FORWARD ABUTMENT										
AF501	24	36'-8"	918	STR.						
AF502	16	7'-2"	120	10	2'-9"	1'-6"	2'-9"	0'-10"		
AF503	72	7'-10"	588	3	1'-7"	4'-11"				
AF504	72	6'-8"	501	3	1'-0"	4'-11"				
AF505	74	13'-8"	1055	3	6'-0"	1'-11"				
AF506	74	9'-0"	695	3	3'-8"	1'-11"				
AF507	20	40'-0"	834	STR.						
AF508	16	15'-8"	261	STR.						
AF509	2	17'-6"	37	STR.						
AF510	2	34'-6"	72	STR.						
AF511	12	6'-0"	75	STR.						
AF512	12	5'-10"	73	2	3'-0"	3'-0"				
AF1001	8	53'-0"	1824	STR.						8
D801	68	6'-3"	1135	7H	1'-0"	4'-0"				
TOTAL=			8188							
REAR ABUTMENT WINGWALLS										
W501	16	11'-5"	191	STR.						
W502	10	10'-0"	105	J5J	3'-2"	1'-7"				
W503	18	11'-3"	211	3	5'-2"	1'-2"				
W504	16	14'-1"	235	3	6'-7"	1'-2"				
W505	12	8'-11"	112	STR.						
W506	4	14'-11"	62	STR.						
W507	8	13'-8"	114	STR.						
W508	8	8'-0"	67	J5J	2'-7"	1'-2"				
W509	2	4'-8"	10	STR.						
W601	38	4'-6"	257	STR.						
W602	22	3'-7"	117	11	0'-0"	2'-3"	0'-9"	0'-6"	0'-8"	
TOTAL=			1481							

STEEL LIST											
MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	NOTE	
FORWARD ABUTMENT WINGWALLS											
W501	16	11'-5"	191	STR.							
W502	10	10'-0"	105	J5J	3'-2"	1'-7"					
W503	18	11'-3"	211	3	5'-2"	1'-2"					
W504	16	14'-3"	238	3	6'-8"	1'-2"					
W505	12	8'-11"	112	STR.							
W506	4	14'-11"	62	STR.							
W507	8	13'-8"	114	STR.							
W508	8	8'-0"	67	J5J	2'-7"	1'-2"					
W509	1	4'-10"	5	STR.							
W510	1	4'-8"	5	STR.							
W601	38	4'-6"	257	STR.							
W602	22	3'-7"	117	11	0'-0"	2'-3"	0'-9"	0'-6"	0'-8"		
TOTAL=			1484								
SUPERSTRUCTURE											
S401	616	30'-0"	12345	STR.							
S402	616	25'-8"	10562	STR.							
S403	326	4'-0"	862	3	1'-3"	1'-8"					
S404	326	4'-3"	928	12	1'-3"	1'-9"	0'-4"				
S405	136	34'-3"	3112	STR.							
S406	136	46'-9"	4247	STR.							
S407	132	22'-0"	1940	STR.							
S408	12	49'-2"	394	STR.							
S501	128	38'-1"	5084	STR.							
S502	290	7'-0"	2105	21	3'-0"	3'-3"	0'-1"	0'-8"	0'-2"		
S503	290	4'-6"	1361	1H	3'-11"						
S504	290	4'-5"	1345	2	3'-11"	0'-8"					
S601	290	4'-6"	1965	15	0'-11"	2'-3"	0'-9"	0'-6"	0'-9"		
S602	290	3'-7"	1565	2	0'-11"	2'-10"					
S603	290	3'-10"	1656	15	0'-6"	2'-3"	0'-9"	0'-6"	0'-5"		
S604	290	3'-6"	1534	11	0'-0"	0'-11"	0'-4"	1'-5"	1'-5"		
S801	152	33'-2"	13460	STR.							
S802	132	35'-0"	12335	STR.							
S803	128	31'-2"	10652	1H	30'-3"						
S804	152	28'-6"	11566	STR.							
S805	76	32'-4"	6561	STR.							
S806	66	31'-6"	5551	STR.							
S807	64	31'-6"	5383	STR.							
S1001	24	53'-0"	5473	STR.							
S1101	140	40'-9"	30311	STR.							
S1102	140	24'-0"	17852	STR.							
S1103	136	27'-0"	19509	STR.							
S1104	136	27'-0"	19509	STR.							
S1105	70	47'-10"	17790	STR.							
D501	64	4'-1"	175	1R	3'-4"						
D502	216	3'-6"	150	1R	2'-9"						
	2	4'-3"			3'-8"						
D503	SER. OF	TO	200	1R						1	
	32	5'-1"			4'-4"						
D504	64	3'-9"	160	1R	3'-0"						
TOTAL=			227642								
TRANSITION PARAPETS											
ST501	16	13'-10"	231	STR.							
ST502	8	5'-8"	47	22	1'-10"	2'-5"	1'-5"	0'-2"	0'-5"		
	4	3'-0"			2'-5"						
ST503	SER. OF	TO	157	1H	DIMENSION A VARIES BY					0'-1"	1
	11	3'-10"			3'-3"						
ST504	8	10'-0"	83	STR.							
TOTAL=			518								



- NOTES:**
- SERIES BARS - EACH BAR VARIES BY TABULATED AMOUNTS.
 - ALL DIMENSIONS ARE OUT TO OUT UNLESS NOTED OTHERWISE.
 - THE BAR SIZE NUMBER IS SPECIFIED IN THE 'MARK' COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, OR THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER.
 - ALL REINFORCING STEEL SHALL BE EPOXY COATED.
 - TYPE 'STR.' MEANS STRAIGHT BAR.
 - PAYMENT FOR THE REINFORCING STEEL IN EACH STRUCTURAL UNIT OF THE BRIDGE SHALL BE INCLUDED WITH THE UNITS CORRESPONDING ITEM 511, CONCRETE. THIS INCLUDES THE COST OF ANY NECESSARY FIELD BENDING OF THE REINFORCING STEEL.
 - WEIGHTS SHOWN IN THIS REINFORCING STEEL LIST ARE FOR INFORMATION ONLY.
 - THE LONGITUDINAL NO. 10 BARS IN THE BRIDGE SEAT, AT THE OPTION OF THE CONTRACTOR, MAY BE FURNISHED EITHER IN ONE LENGTH AS SHOWN ON PLANS, OR SPLICED. IF THE SPLICE OPTION IS CHOSEN, THE NO. 10 BARS SHALL BE LAPPED 9'-3".

17 / 17

STILSON & ASSOCIATES, INC.
CONSULTING ENGINEERING AND ARCHITECTURE
8121 HUNTLEY ROAD, COLUMBUS, OHIO 43229

REINFORCING STEEL LIST

BRIDGE NO. FRA-315-0059
OVER RICH STREET

FRANKLIN COUNTY STA. 77+71.92 TO 79+16.33

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
TEU	RTP		BRH	RKM	11/07/97	
				PHB	10/29/97	

C:\DATA\STRUCT\02213143\CONTRACT\NS-REST.DWG - NOV 14, 1997 - 11:25:44 - PLOT: 1=1

REFERENCE LINE: IS THE BACKWARD EXTENSION OF THE TANGENT FROM THE S.T. AT STA. 83+63.61

BENCHMARK: B.M. 30 NORTH SIDE OF STEPS (2nd STEP) OF HOUSE AT 184 SANDUSKY STREET.
STA. 81+80, 150' RIGHT OF C. S.R. 315. EL. 708.89

TRAFFIC DATA

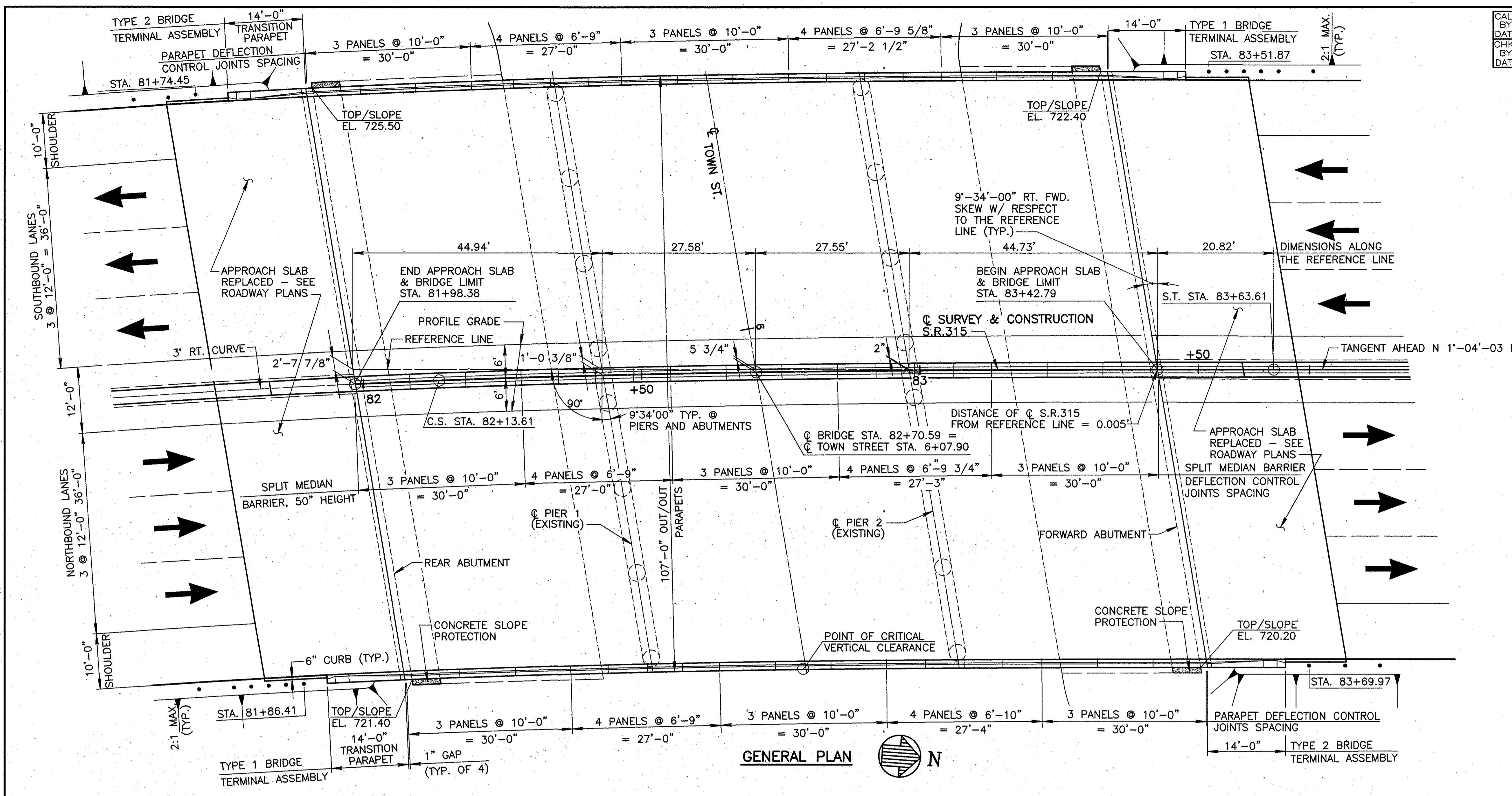
CURRENT ADT (1997): 99,554
DESIGN YEAR ADT (2017): 127,027
D.H.V.: 8257
D: 65%
PERCENTAGE TRUCKS: 5%
DESIGN SPEED: 55 M.P.H.
LEGAL SPEED: 55 M.P.H.
CLASSIFICATION: URBAN-OTHER FREEWAYS AND EXPRESSWAYS

EXISTING STRUCTURE

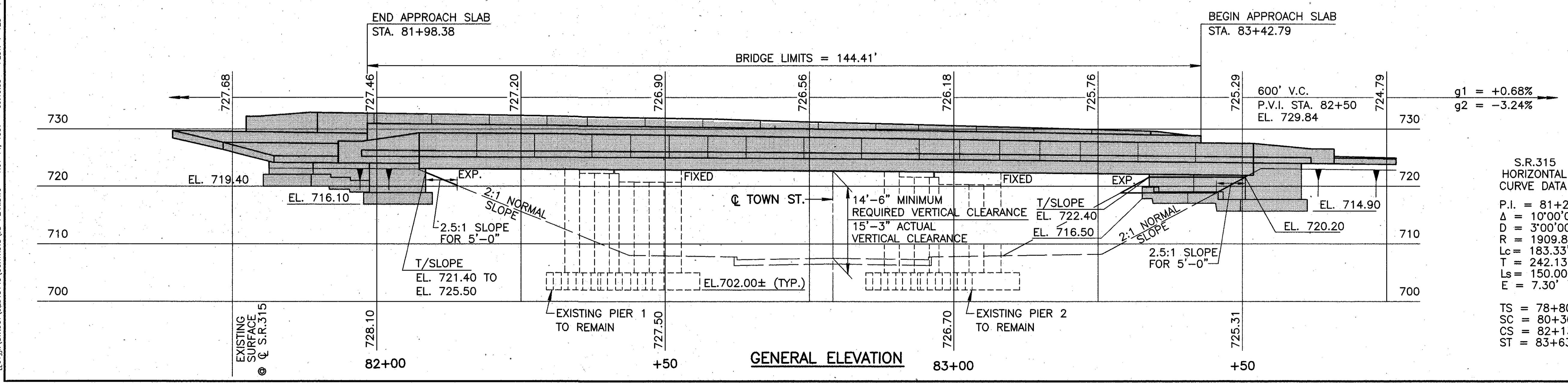
TYPE: 3 SPAN CONTINUOUS CONCRETE SLAB WITH REINFORCED CONCRETE SUBSTRUCTURE
SPANS: 44'-55'-44" C/C BEARINGS ALONG THE C. S.R. 315
LOAD FREQUENCY RATING: CF 2000 (51) - (ADEQUATE FOR AASHTO ALTERNATE LOADING)
ROADWAY: 104' F/F OF PARAPETS
SKEW: 8'-41'-01" RIGHT FORWARD
SURFACE COURSE: BITUMINOUS CONCRETE, 2 1/2"± THICK
APPROACH SLABS: AS-1-54, 25' LONG
ALIGNMENT: 3' RIGHT CURVE & 150' SPIRAL
SUPERELEVATION: VARIES

PROPOSED STRUCTURE

TYPE: NEW 3 SPAN CONTINUOUS REINFORCED CONCRETE SLAB SUPERSTRUCTURE SUPPORTED BY NEW REINFORCED CONCRETE ABUTMENTS AND EXISTING REINFORCED CONCRETE PIERS
SPANS: 44'-0"; 55'-0"; 44'-0" C/C BEARINGS ALONG THE C. S.R. 315
DESIGN LOADING: HS20-44 AND THE ALTERNATE MILITARY LOADING
ROADWAY: 104'-0" TOE/TOE OF PARAPETS
SKEW: 9' 34' 00" RIGHT FORWARD WITH RESPECT TO THE REFERENCE LINE
WEARING SURFACE: MONOLITHIC CONCRETE-ONE INCH ASSUMED
APPROACH SLABS: AS-1-81, 25' LONG
ALIGNMENT: 3' RIGHT CURVE, & 150' SPIRAL
SUPERELEVATION: VARIES (SEE SUPERELEVATION TRANSITION DIAGRAM, SHEET 15/17)
STRUCTURE FILE NO.: 2515016
LATITUDE: N 39° 57' 24"
LONGITUDE: W 83° 01' 07"



GENERAL PLAN



GENERAL ELEVATION

S.R. 315
HORIZONTAL
CURVE DATA

P.I. = 81+22.41
Δ = 10°00'00"
D = 3'00'00"
R = 1909.86'
Lc = 183.33'
T = 242.13'
Ls = 150.00'
E = 7.30'

TS = 78+80.28
SC = 80+30.28
CS = 82+13.61
ST = 83+63.61

STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 9121 HUNTLEY ROAD, COLUMBUS, OHIO 43229					
GENERAL PLAN AND ELEVATION					
BRIDGE NO. FRA-315-0067 OVER TOWN STREET					
FRANKLIN COUNTY			STA. 81+98.38 TO STA. 83+42.79		
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
TEU	GV		BRH	RKM	11/07/97 WEB 10/29/97

[C:\PJ\STRUCT\92313143\CONTRACT\YS-PLAN.DWG - NOV 14, 1997 - 09:19:03 - PLOT: 1=120]

ESTIMATED QUANTITIES

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	R. ABUT. & WINGWALLS	F. ABUT. & WINGWALLS	PIERS	SUPER.	GENERAL
202	11203	LUMP	LUMP	PORTIONS OF STRUCTURE REMOVED, OVER 20' SPAN, AS PER PLAN					LUMP
202	23500	1536	SQ.YD.	WEARING COURSE REMOVED				1536	
202	30500	144.50	LIN.FT.	CONCRETE MEDIAN REMOVED				144.50	
202	30700	289	LIN.FT.	CONCRETE BARRIER REMOVED				289	
202	32800	134	SQ.YD.	CONCRETE SLOPE PROTECTION REMOVED	67	67			
SPECIAL	20270000	12	LIN.FT.	FILL AND PLUG EXISTING CONDUIT					12
202	75506	4	EACH	LUMINAIRE REMOVED			4		
202	98000	LUMP	LUMP	REMOVAL MISC.: DOWNSPOUTS AND CONNECTOR PIPING			LUMP		
503	11100	LUMP	LUMP	COFFERDAMS, CRIBS AND SHEETING	LUMP	LUMP			
503	21301	LUMP	LUMP	UNCLASSIFIED EXCAVATION, AS PER PLAN	LUMP	LUMP			
511	44100	121	CU.YD.	CLASS C CONCRETE, ABUTMENT NOT INCLUDING FOOTING	60	61			
511	46500	98	CU.YD.	CLASS C CONCRETE, FOOTING	49	49			
SPECIAL	51148000	1238	CU.YD.	HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE (DECK) (SEE PROPOSAL NOTE)				1238	
SPECIAL	51148020	74	CU.YD.	HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE (PARAPET) (SEE PROPOSAL NOTE)				74	
SPECIAL	51149000	LUMP	LUMP	HIGH PERFORMANCE CONCRETE, TRIAL MIX (SEE PROPOSAL NOTE)				LUMP	
SPECIAL	51149010	LUMP	LUMP	HIGH PERFORMANCE CONCRETE, TESTING (SEE PROPOSAL NOTE)				LUMP	
SPECIAL	51267500	908	SQ.YD.	SEALING OF CONCRETE SURFACES (SEE PROPOSAL NOTE)	26	26		856	
SPECIAL	51267502	407	SQ.YD.	SEALING OF CONCRETE SURFACES, EPOXY (SEE PROPOSAL NOTE)			407		
516	13600	428	SQ.FT.	1 INCH PREFORMED EXPANSION JOINT FILLER	214	214			
516	42600	212	LIN.FT.	ELASTOMERIC BEARING PAD, MISC.: 1" THICK x 7.75" WIDE	106	106			
518	21230	LUMP	LUMP	POROUS BACKFILL, WITH FILTER FABRIC	LUMP	LUMP			
518	40000	208	LIN.FT.	6" PERFORATED CORRUGATED PLASTIC PIPE	104	104			
518	40010	40	LIN.FT.	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	20	20			
SPECIAL	51911502	12	SQ.FT.	PATCHING CONCRETE STRUCTURE WITH TROWELABLE MORTAR (SEE PROPOSAL NOTE)			12		
601	21000	134	SQ.YD.	CONCRETE SLOPE PROTECTION *	67	67			
625	25400	433.23	LIN.FT.	CONDUIT, 2", 713.04				433.23	

* THIS ITEM INCLUDES THE CRUSHED AGGREGATE SLOPE PROTECTION AS SHOWN IN THE SIDE SLOPE OUTLET DETAIL.

SUGGESTED DEMOLITION PROCEDURE

- REMOVE THE EXISTING SURFACE WEARING COURSE, CONCRETE MEDIAN CURB AND SAFETY CURB AND RAILING ABOVE THE CONCRETE DECK SLAB.
- REMOVE THE LUMINAIRES AND SCUPPER DOWNSPOUTS AND CONNECTOR PIPING FROM THE PIER CAP AND COLUMNS.
- PROVIDE SHORING FOR THE PIER CAP BEAMS THROUGHOUT THE DEMOLITION AND NEW CONSTRUCTION PHASES OF THIS PROJECT.
- REFER TO THE PIER NOTES ON SHEET 11/17 FOR SAWCUTTING THE PIER CAP BEAM AND SALVAGING THE STIRRUP REINFORCING.
- REMOVE THE EXISTING CONCRETE DECK SLAB. CARE SHALL BE TAKEN SO AS TO MINIMIZE THE TORSIONAL EFFECTS AND/OR DISTRESS TO THE PIER CAP BEAMS WHICH ARE TO BE INCORPORATED INTO THE NEW DECK.
- SAWCUT AND REMOVE THE UPPER 5'-0" PORTION OF THE EXISTING CONCRETE SLOPE PROTECTION AT EACH ABUTMENT.
- INSTALL TEMPORARY SHEETING TO PROTECT THE REMAINING EMBANKMENT IN FRONT OF THE ABUTMENTS.
- REMOVE THE EXISTING APPROACH SLABS.
- COMPLETELY REMOVE THE EXISTING ABUTMENT WALLS AND FOOTINGS. THEN COMPLETE THE REQUIRED EXCAVATION FOR THE ABUTMENTS.
- CONSTRUCT THE NEW ABUTMENTS, EMBANKMENT, BRIDGE DECK SLAB, PARAPETS, MEDIANS AND APPROACH SLABS.

GENERAL BRIDGE NOTES

STANDARD DRAWING REFERENCES

DESCRIPTION	DWG. NO.	SHT.	DATE
REINFORCED CONCRETE	AS-1-81	1-3	9-15-94R
APPROACH SLAB			
BRIDGE RAILING DEFLECTOR	BR-1	2 OF 2	12-15-94R
PARAPET TYPE			
CONTINUOUS SLAB BRIDGE	CS-1-93	1-3	6-30-95R

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1996, AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING

HS20-44 AND THE ALTERNATE MILITARY LOADING.

DESIGN DATA

HIGH PERFORMANCE CONCRETE- COMPRESSIVE STRENGTH 4500 P.S.I. (SUPERSTRUCTURE)

CONCRETE CLASS C - COMPRESSIVE STRENGTH 4000 P.S.I. (SUBSTRUCTURE)

REINFORCING STEEL - ASTM A615, A616 OR A617 GRADE 60 MINIMUM YIELD STRENGTH 60,000 P.S.I.

DECK PROTECTION METHOD

EPOXY COATED REINFORCING STEEL.
2-1/2" CONCRETE COVER.
SEALING OF CONCRETE SURFACES.

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1" THICK.

SEALING OF CONCRETE SURFACES (EPOXY)

THE SEALING PRODUCT SELECTED SHALL BE COMPATIBLE WITH THE MORTAR PRODUCTS USED FOR THE SURFACE REPAIRS. CONTRACTOR SHALL SUBMIT SEALING PRODUCT MANUFACTURER'S CERTIFICATION OF COMPATIBILITY.

REMOVAL OF EXISTING STRUCTURE

WHEN NO LONGER NEEDED TO MAINTAIN TRAFFIC THE EXISTING SUPERSTRUCTURE SHALL BE REMOVED. ABUTMENTS AND WINGWALLS SHALL BE COMPLETELY REMOVED. PIER CAP SHALL BE REMOVED TO THE LIMITS SHOWN ON THE PIER PLANS.

PORTIONS OF STRUCTURE REMOVED, AS PER PLAN SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE, CONCRETE MEDIAN AND CONCRETE BARRIER REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. ALL WORK SHALL BE DONE IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

ITEM 503, UNCLASSIFIED EXCAVATION, AS PER PLAN

UNCLASSIFIED EXCAVATION SHALL BE IN ACCORDANCE WITH 503 EXCEPT THAT THE BACKFILL MATERIAL BEHIND THE ABUTMENTS SHALL BE 203 MATERIAL PLACED IN LIFTS NOT TO EXCEED A THICKNESS OF SIX (6) INCHES.

FOUNDATION BEARING PRESSURE

ABUTMENT FOOTINGS, AS DESIGNED, PRODUCE A MAXIMUM BEARING PRESSURE OF 1.6 TONS PER SQUARE FEET. THE ALLOWABLE BEARING PRESSURE IS 1.6 TONS PER SQUARE FOOT, WHICH CORRESPONDS TO THE ALLOWABLE BEARING PRESSURE FOR THE EXISTING ABUTMENTS AS PER THE ORIGINAL BRIDGE PLANS.

UTILITY LINES

ALL EXPENSE INVOLVED IN RELOCATION (INSTALLING) THE AFFECTED UTILITY LINES SHALL BE BORNE BY THE UTILITY(IES). PARTICULAR ATTENTION SHALL BE PAID TO THE TWO GUY WIRES UNDER THE DECK AT THE NORTH SIDE PIER NO. 1. THE CONTRACTOR AND UTILITY(IES) ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, AND 105.02.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD.

EXISTING BRIDGE PLANS ARE ON FILE FOR INSPECTION, IF NECESSARY, AT THE O.D.O.T. OFFICE OF STRUCTURAL ENGINEERING IN COLUMBUS, OHIO.

REPLACEMENT OF EXISTING REINFORCING STEEL

ANY EXISTING REINFORCING BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND WHICH ARE MADE UNUSABLE BY THE CONTRACTOR'S CONCRETE REMOVAL OPERATIONS SHALL BE REPLACED WITH NEW STEEL AT THE CONTRACTOR'S COST. ANY EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION SHALL BE REPLACED WITH NEW STEEL. COST OF ALL REINFORCING STEEL SHALL BE INCLUDED IN ITEM SPECIAL, HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE (DECK).

CONCRETE PARAPETS

AS SOON AS A CONCRETE SAW CAN BE OPERATED WITHOUT DAMAGING THE FRESHLY PLACED CONCRETE, 1 INCH DEEP CONTROL JOINTS SHALL BE SAWED INTO THE PERIMETER OF THE CONCRETE PARAPET. THE SAW CUT SHALL BE MADE IN THE COMPLETE CIRCUMFERENCE OF THE PARAPET, STARTING AND ENDING AT THE ELEVATION OF THE CONCRETE DECK. THE SAW CUTS SHALL BE PLACED AS SHOWN ON SHEET 1. THE USE OF AN EDGE GUIDE, FENCE, OR JIG IS REQUIRED TO INSURE THAT THE CUT JOINT IS STRAIGHT, TRUE, AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAW BLADE, A NOMINAL WIDTH OF 1/4 INCH. THE PERIMETER OF THE DEFLECTION CONTROL JOINT SHALL BE SEALED TO A MINIMUM DEPTH OF 1 INCH WITH A CAULKING MATERIAL CONFORMING TO FEDERAL SPECIFICATION, TT-S-00227E. REFER TO CMS PARAGRAPH 511.081 FOR ADDITIONAL PROVISIONS. THE BOTTOM ONE HALF INCH OF BOTH THE INSIDE AND OUTSIDE FACES OF THE PARAPET SHOULD BE LEFT UNSEALED TO ALLOW ANY WATER WHICH MAY ENTER THE JOINT TO ESCAPE.

CONCRETE MEDIAN BARRIER

SAWCUTS FOR THE CRACK CONTROL JOINTS SHALL BE MADE ON THE TRAFFIC AND TOP FACES ONLY.

CUT LINE CONSTRUCTION JOINT PREPARATION

SAWCUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1" DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. WHERE PRACTICABLE, THE EXISTING REINFORCING STEEL WHERE REQUIRED IN THE PLANS SHALL BE LEFT IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACE AND EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THE JOINT SURFACE AND EXPOSED REINFORCEMENT SHALL BE THOROUGHLY CLEANED OF ALL DIRT, DUST, OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. CONCRETE BONDING SURFACES SHALL BE WET WITHOUT FREE WATER AS CONCRETE IS PLACED.

UNDERPASS LIGHTING

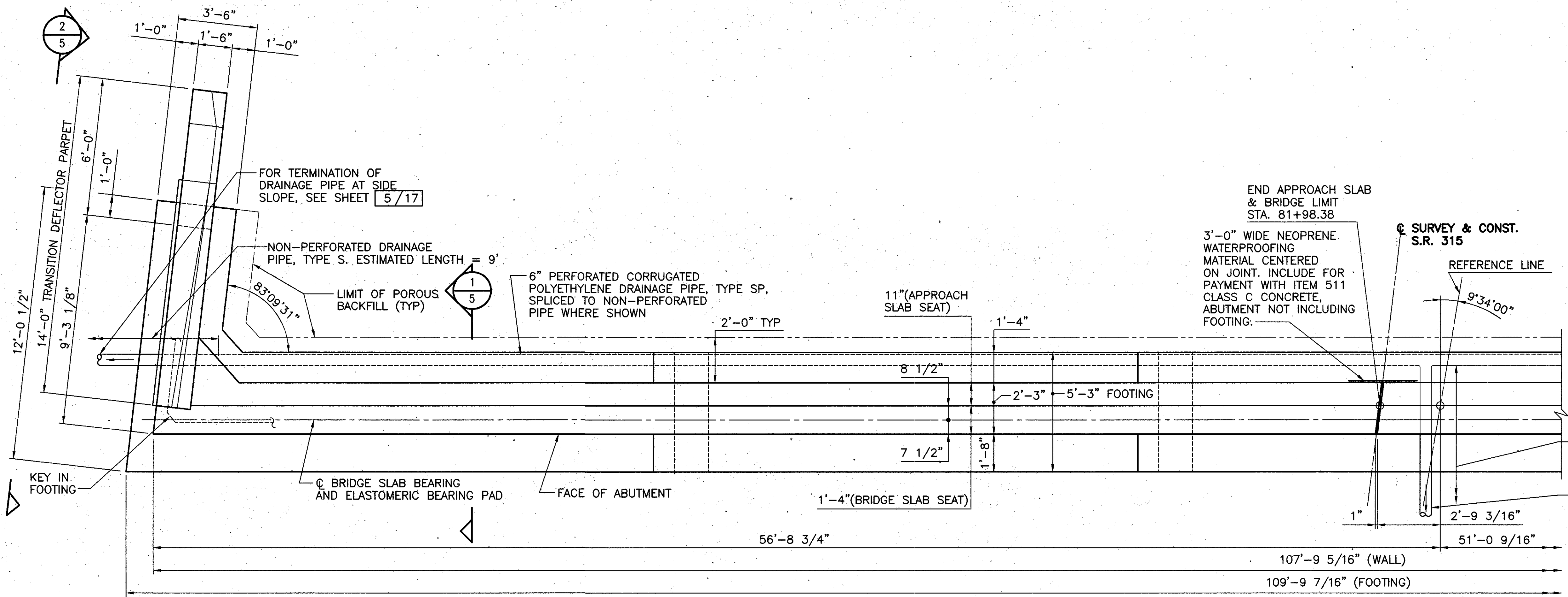
FOR UNDERPASS LIGHTING NOTES AND DETAILS SEE HIGHWAY SHEET

CALC. BY: TEU	FRANKLIN COUNTY	OHIO	123
DATE: 8-97		FHWA REGION 5	
CHKD BY: BRH	FRA-315-0.48		
DATE: 8-97			

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163

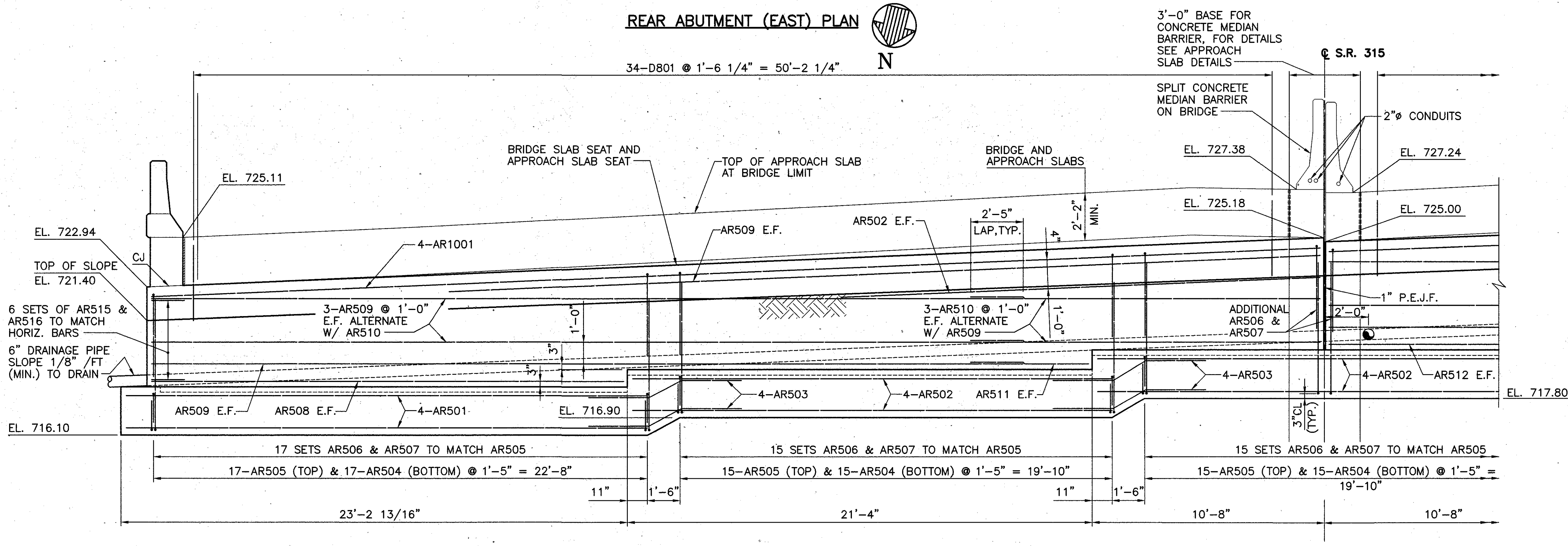
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STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 6121 HUNTLEY ROAD, COLUMBUS, OHIO 43229						
ESTIMATED QUANTITIES AND GENERAL NOTES						
BRIDGE NO. FRA-315-0067						
OVER TOWN STREET						
					STA. 81+98.38 TO	
					STA. 83+42.79	
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
TEU	GV		BRH	RKM	11/07/97	
				WEB	10/29/97	



- SUBSTRUCTURE--NOTES:**
- POROUS BACKFILL WITH FILTER FABRIC, 2 FEET THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, TO ONE FOOT BELOW THE EMBANKMENT SURFACE, AND LATERALLY TO THE ENDS OF THE WINGWALLS.
 - THE 3'-0" WIDE NEOPRENE WATERPROOFING MATERIAL SHALL BE CENTERED ON THE ABUTMENT EXPANSION JOINT AND SHALL EXTEND FROM TOP OF THE FOOTING UP TO THE BRIDGE SLAB SEAT.
 - SAW CUT THE EXISTING CONCRETE SLOPE PROTECTION SHALL BE INCLUDED WITH ITEM 202 - CONCRETE SLOPE PROTECTION REMOVED, FOR PAYMENT.
 - THE CRUSHED AGGREGATE FOR THE DRAINAGE PIPE TERMINATION SHALL BE INCLUDED WITH ITEM 601 CONCRETE SLOPE PROTECTION, FOR PAYMENT.
 - THE CONCRETE BASE FOR THE MEDIAN CONCRETE BARRIER SHALL NOT BE ANCHORED INTO THE ABUTMENT. DOWEL BARS MARK D801 SHALL NOT BE INSTALLED WITHIN THE CONCRETE BASE LIMIT.

REAR ABUTMENT (EAST) PLAN



REAR ABUTMENT (EAST) ELEVATION

LEGEND	
CL	- CLEAR
TYP	- TYPICAL
EF	- EACH FACE
NF	- NEAR FACE
FF	- FAR FACE
C/C	- CENTER TO CENTER
CJ	- CONSTRUCTION JOINT
PEJF	- PREFORMED EXPANSION JOINT FILLER
SPA	- SPACING
EXISTING STRUCTURE	
NEW STRUCTURE	

STILSON & ASSOCIATES, INC.
CONSULTING ENGINEERING AND ARCHITECTURE
8121 HUNTLEY ROAD, COLUMBUS, OHIO 43229

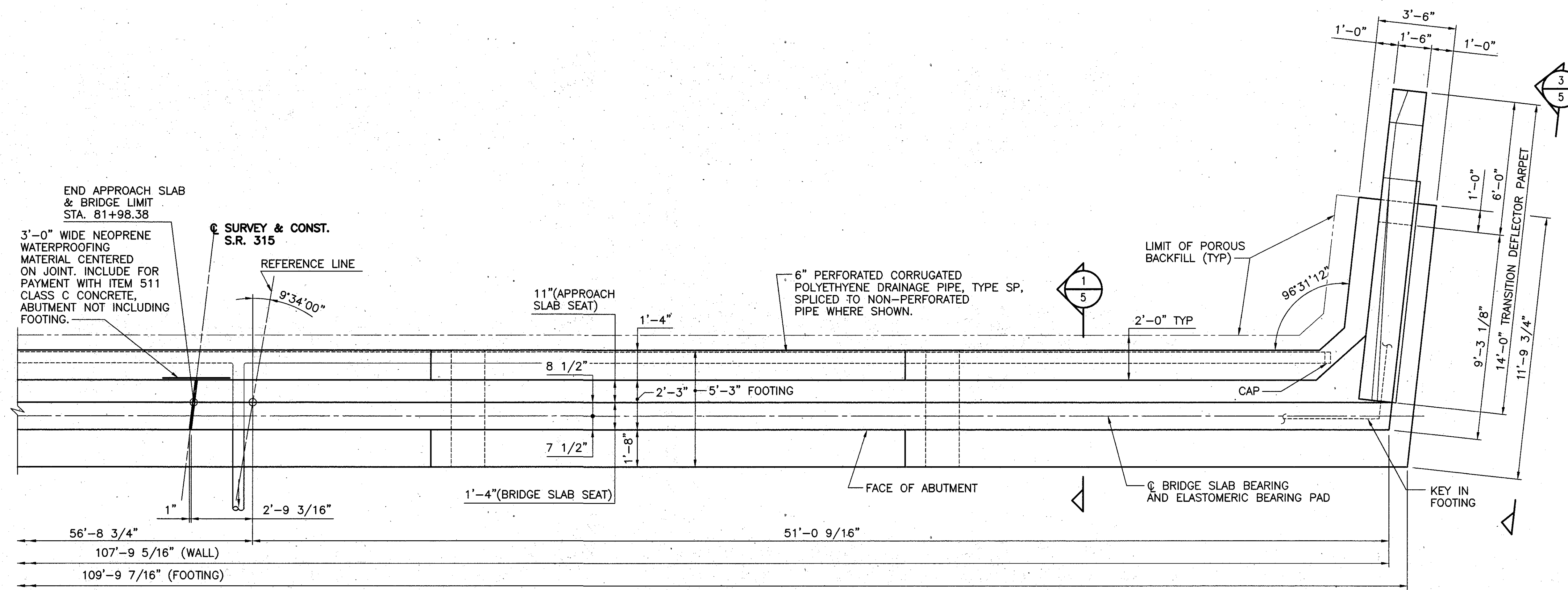
REAR ABUTMENT - EAST HALF DETAILS

BRIDGE NO. FRA-315-0067
OVER TOWN STREET

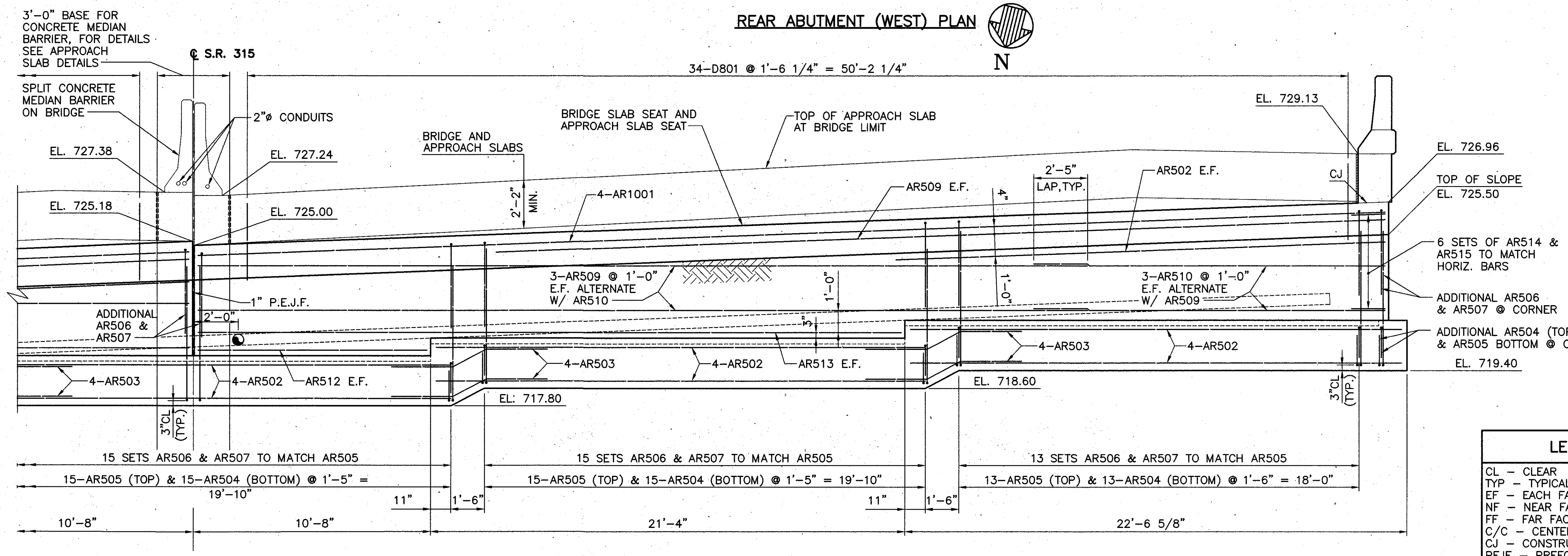
FRANKLIN COUNTY STA. 81+98.38 TO STA. 83+42.79

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
TEU	GV		BRH	RKM	11/07/97 WEB 10/29/97	

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REAR ABUTMENT (WEST) PLAN

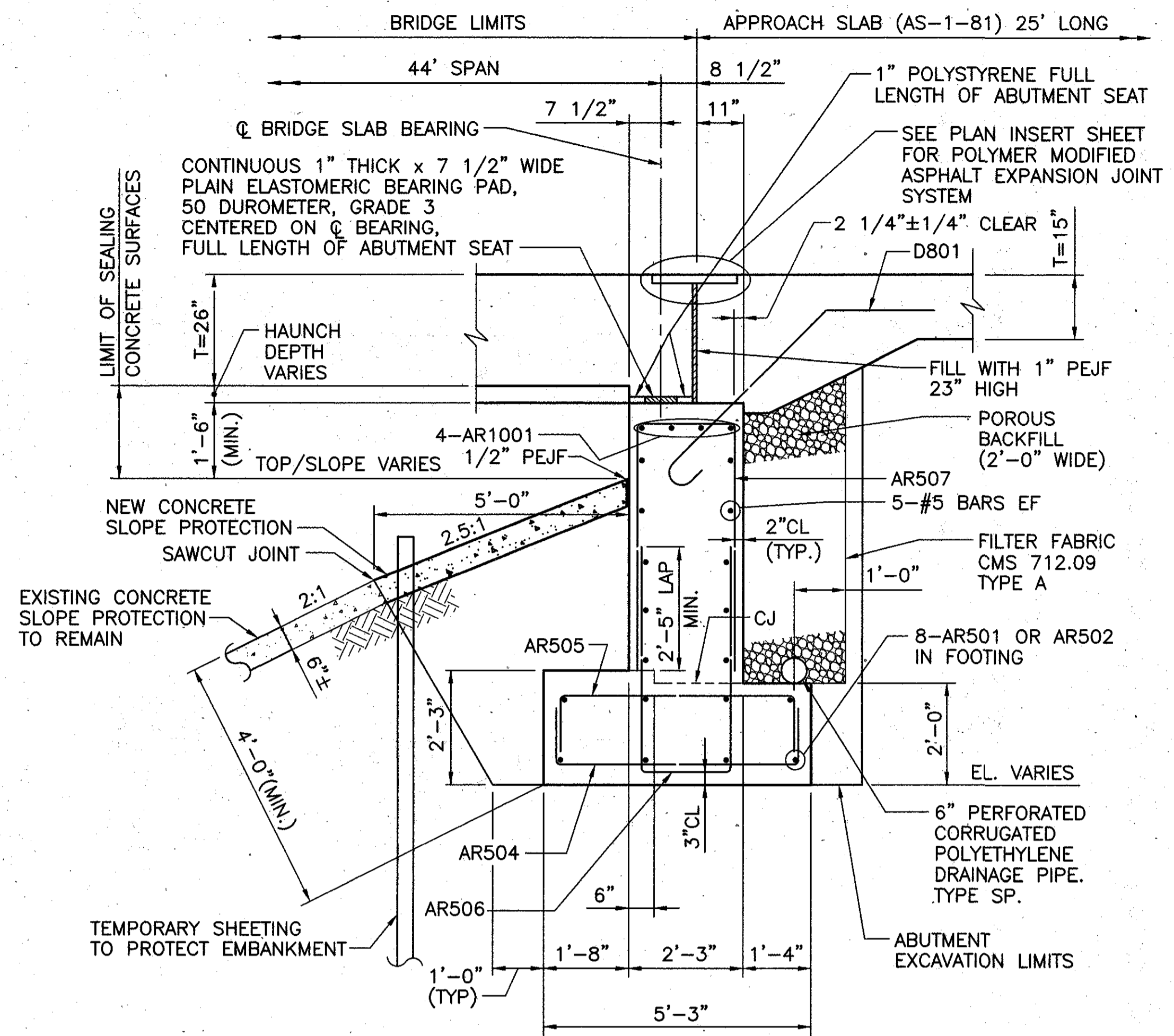


REAR ABUTMENT (WEST) ELEVATION

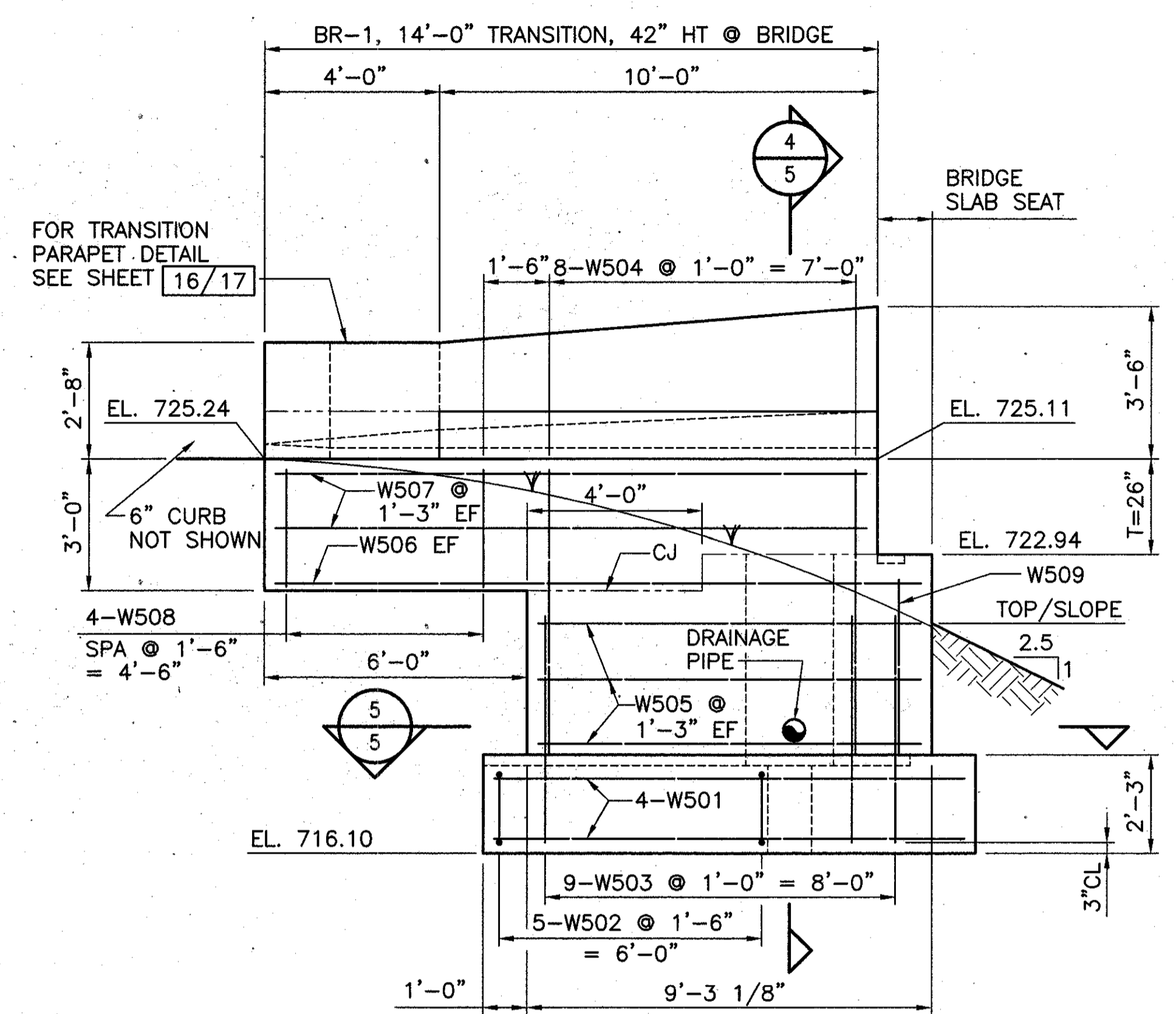
NOTE:
1. FOR SUBSTRUCTURE NOTES, SEE SHEET 3/17.

LEGEND		STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 6121 HUNTLEY ROAD, COLUMBUS, OHIO 43229			
CL - CLEAR		REAR ABUTMENT - WEST HALF DETAILS BRIDGE NO. FRA-315-0067 OVER TOWN STREET FRANKLIN COUNTY STA. 81+98.38 TO STA. 83+42.79			
TYP - TYPICAL					
EF - EACH FACE					
NF - NEAR FACE					
FF - FAR FACE					
C/C - CENTER TO CENTER					
CJ - CONSTRUCTION JOINT					
PEJF - PREFORMED EXPANSION JOINT FILLER					
SPA - SPACING					
EXISTING STRUCTURE					
NEW STRUCTURE					
DESIGNED	TEU			DRAWN	GV
TRACED				CHECKED	BRH
REVIEWED	RKM			DATE	11/07/97
REVISED				DATE	WEB 10/29/97

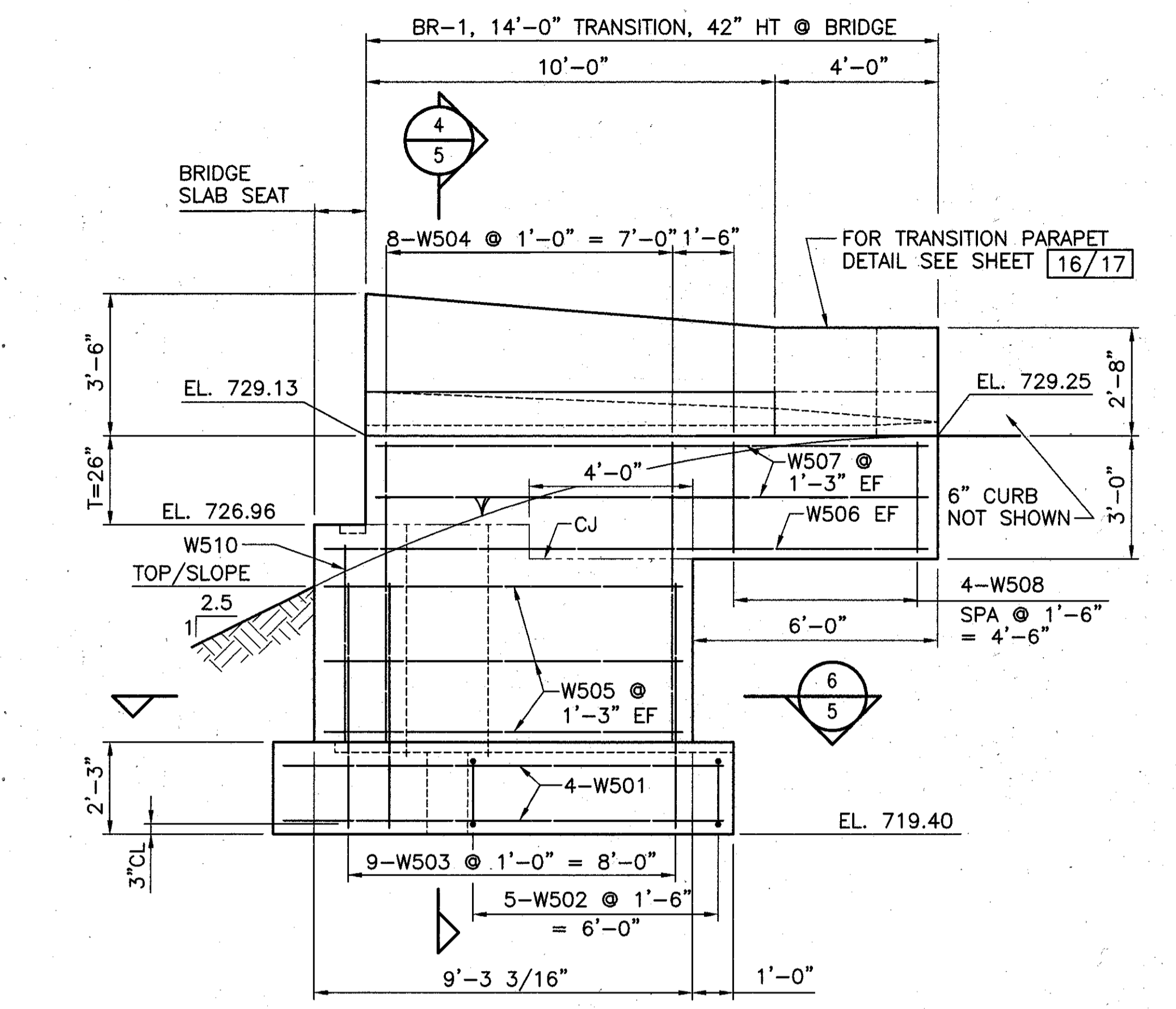
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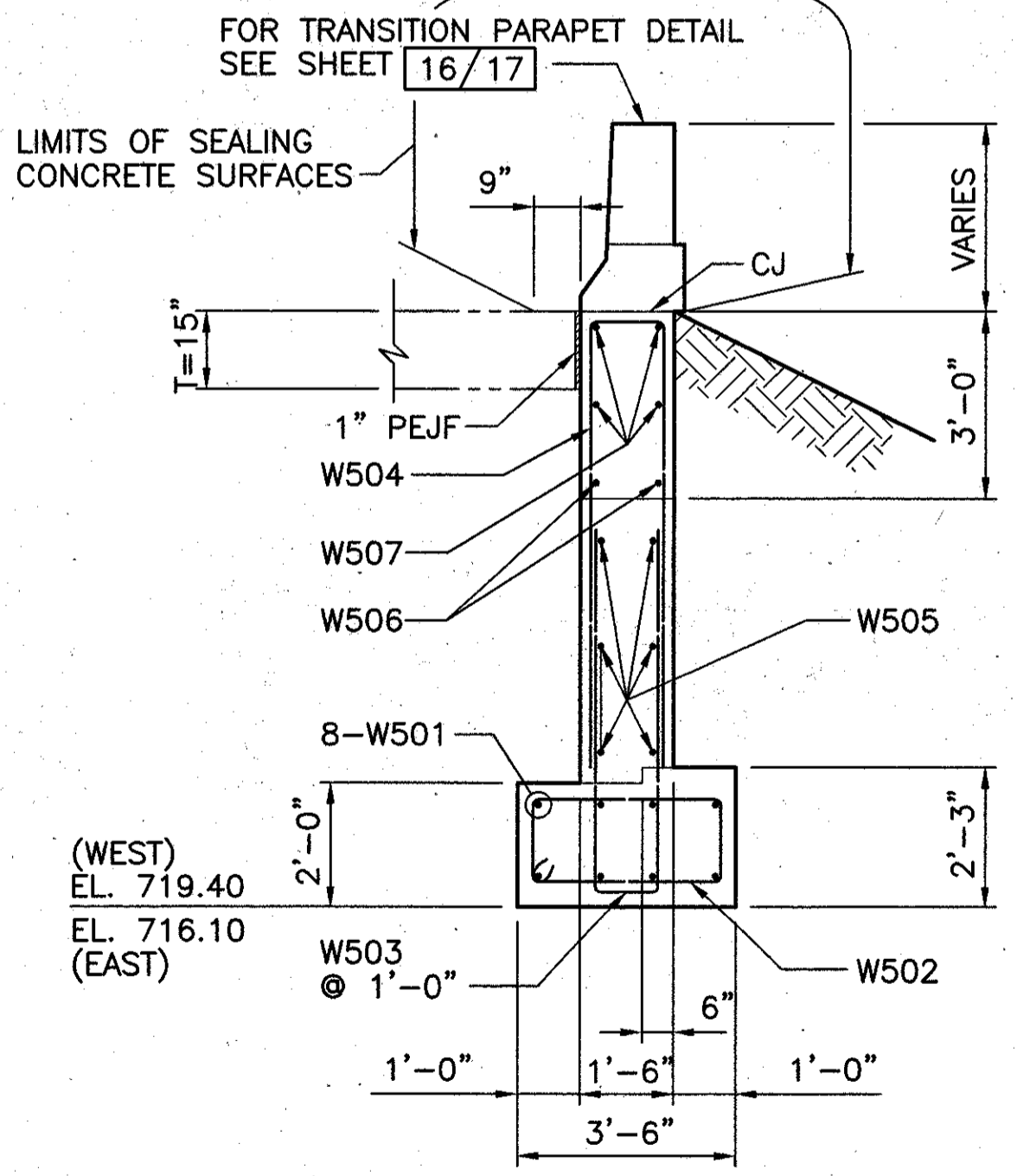
SECTION 1-1



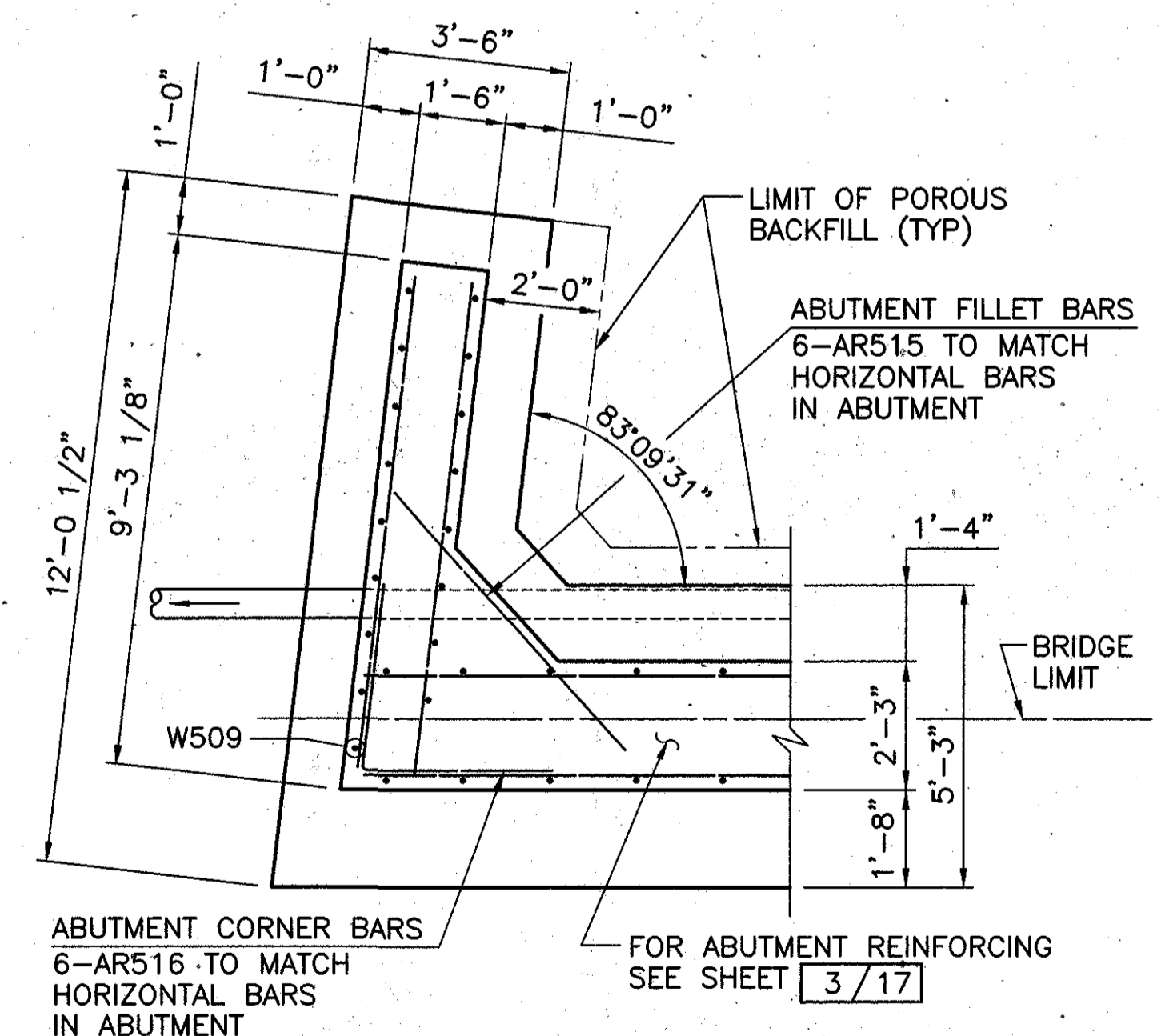
ELEVATION 2-2



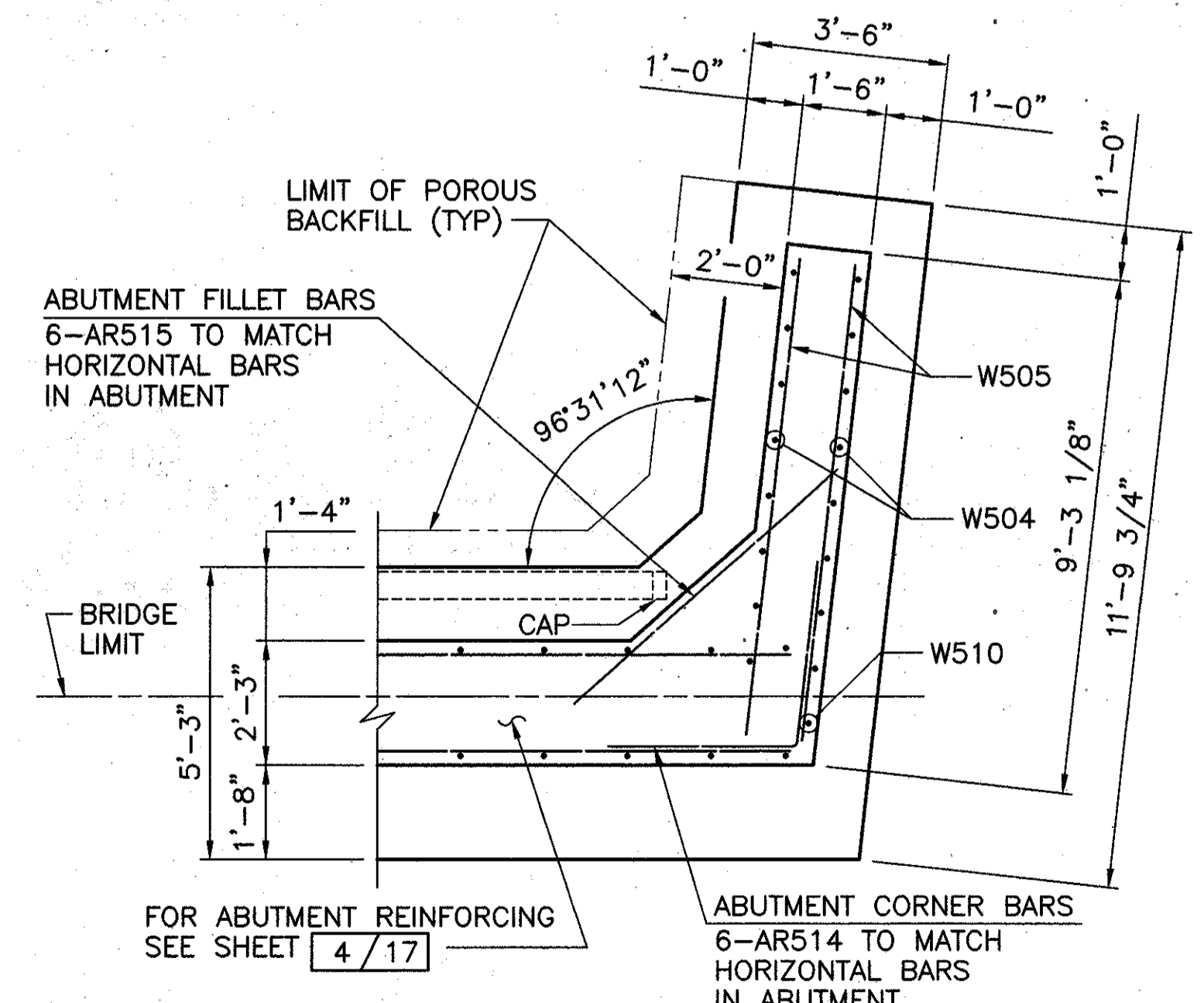
ELEVATION 3-3



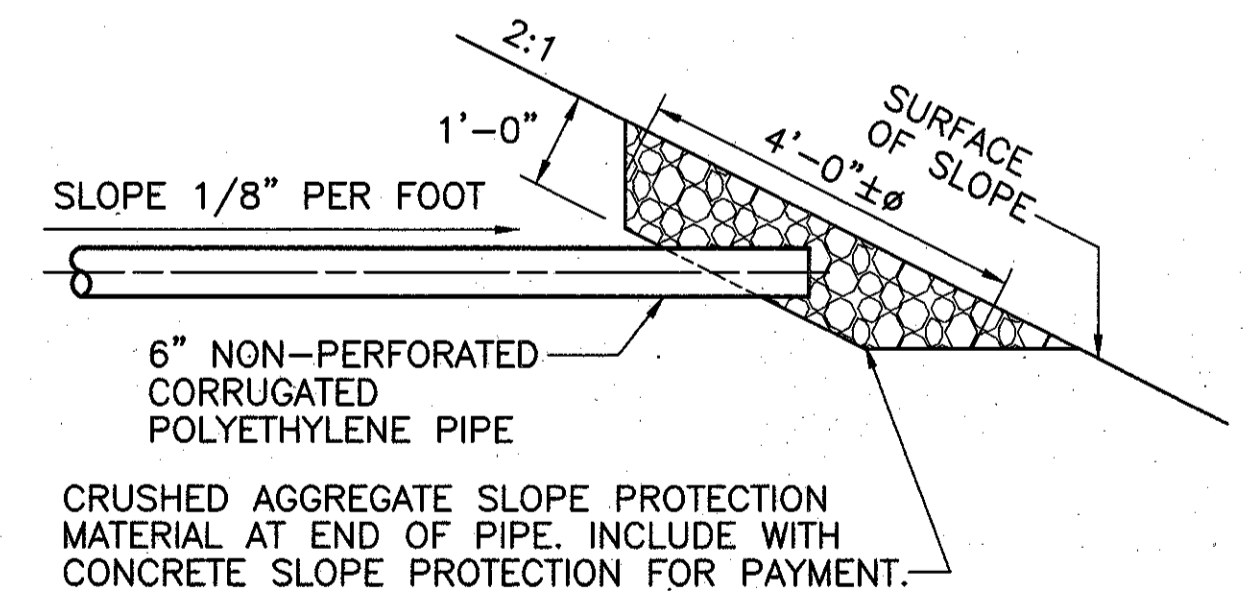
SECTION 4-4



SECTION 5-5



SECTION 6-6

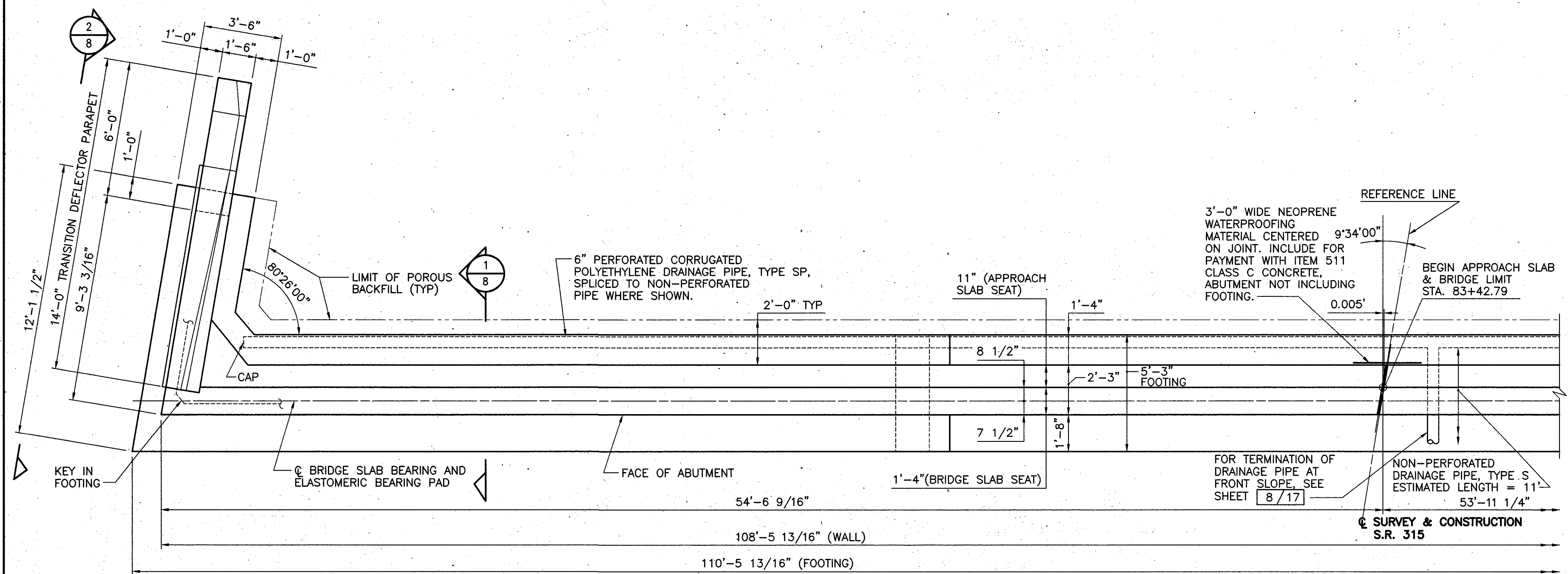


DRAINAGE PIPE TERMINATION DETAIL AT END OF ABUTMENT

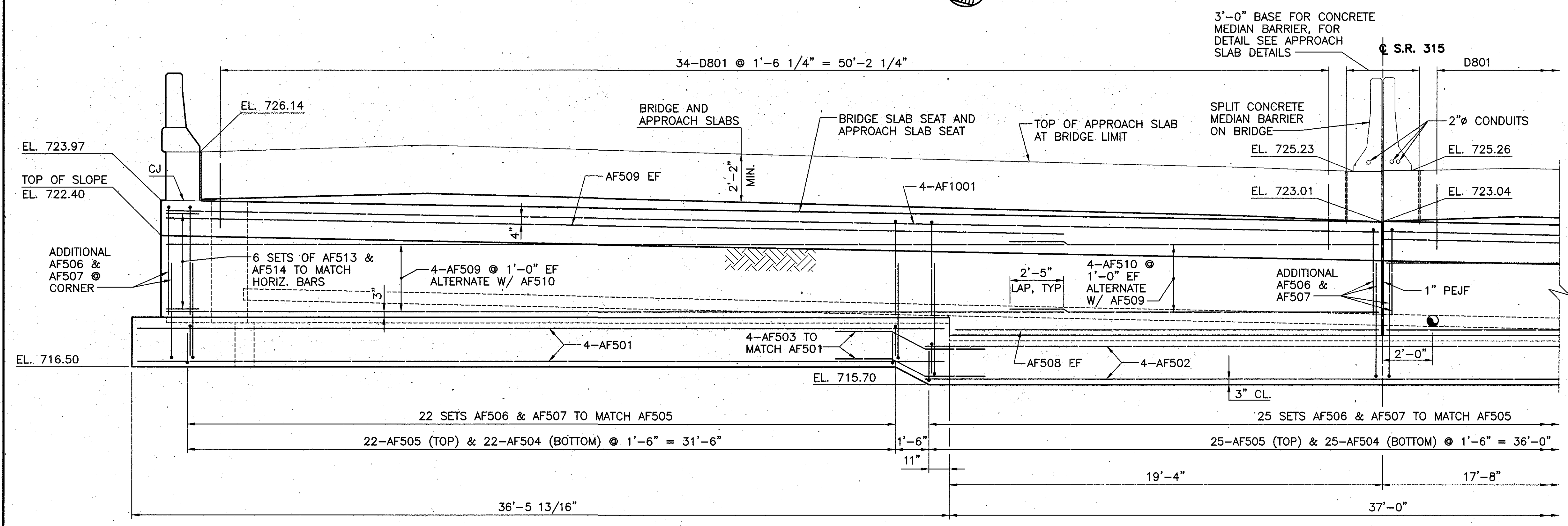
- NOTE:
- FOR SUBSTRUCTURE NOTES, SEE SHEET 3/17.
 - FOR REAR ABUTMENT PLAN & ELEVATION, SEE SHEETS 3&4/17.

LEGEND		STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 8121 HUNTLEY ROAD, COLUMBUS, OHIO 43229	
CL - CLEAR	TYP - TYPICAL	REAR ABUTMENT DETAILS	
EF - EACH FACE	NF - NEAR FACE		
FF - FAR FACE	C/C - CENTER TO CENTER	BRIDGE NO. FRA-315-0067	
CJ - CONSTRUCTION JOINT	PEJF - PREFORMED EXPANSION JOINT FILLER	OVER TOWN STREET	
SPA - SPACING		FRANKLIN COUNTY STA. 81+98.38 TO STA. 83+42.79	
EXISTING STRUCTURE		DESIGNED	TEU
NEW STRUCTURE		DRAWN	GV
		TRACED	BRH
		CHECKED	BRH
		REVIEWED	RKM 11/07/97
		DATE	WEB 10/29/97
		REVISED	

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FORWARD ABUTMENT (WEST) PLAN



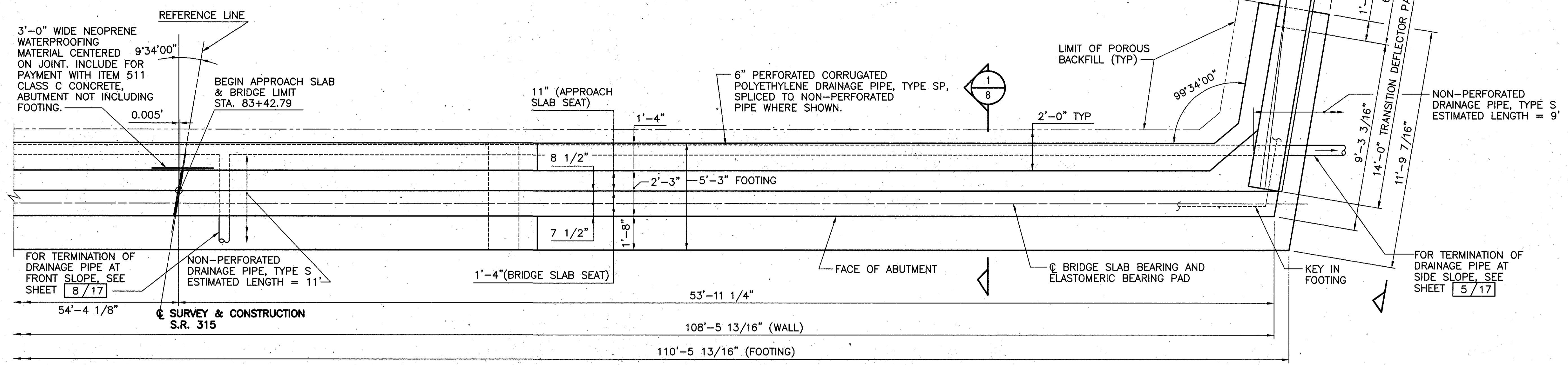
FORWARD ABUTMENT (WEST) ELEVATION

NOTE:
FOR SUBSTRUCTURE NOTES
SEE SHEET 3/17.

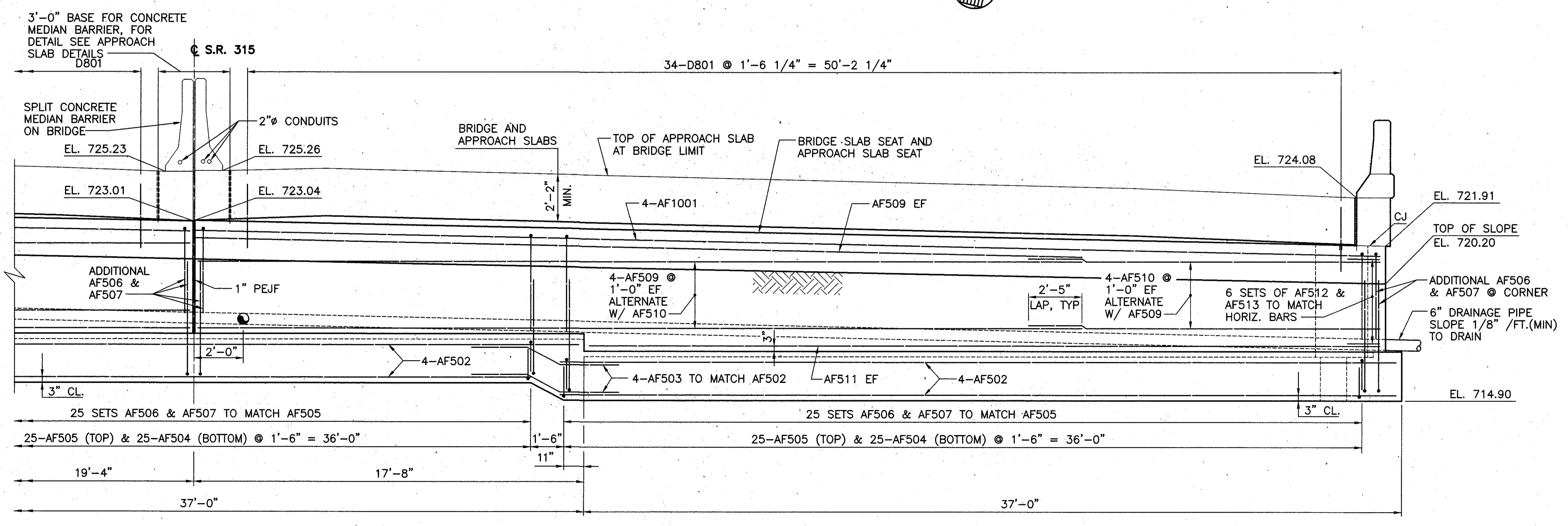
LEGEND	
CL	- CLEAR
TYP	- TYPICAL
EF	- EACH FACE
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CJ	- CONSTRUCTION JOINT
PEJF	- PREFORMED EXPANSION JOINT FILLER
SPA	- SPACING
EXISTING STRUCTURE	
NEW STRUCTURE	

STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 8121 HUNTLEY ROAD, COLUMBUS, OHIO 43229						
FORWARD ABUTMENT - WEST HALF DETAILS						
BRIDGE NO. FRA-315-0067 OVER TOWN STREET						
FRANKLIN COUNTY					STA. 81+98.38 TO STA. 83+42.79	
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
TEU	DST		BRH	RKM	11/07/97 WEB 10/29/97	

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FORWARD ABUTMENT (EAST) PLAN



FORWARD ABUTMENT (EAST) ELEVATION

NOTE:
FOR SUBSTRUCTURE NOTES,
SEE SHEET 3/17.

LEGEND	
CL	- CLEAR
TYP	- TYPICAL
EF	- EACH FACE
NF	- NEAR FACE
FF	- FAR FACE
C/C	- CENTER TO CENTER
CJ	- CONSTRUCTION JOINT
PEJF	- PREFORMED EXPANSION JOINT FILLER
SPA	- SPACING
EXISTING STRUCTURE	
NEW STRUCTURE	

STILSON & ASSOCIATES, INC.
CONSULTING ENGINEERING AND ARCHITECTURE
8121 HUNTLEY ROAD, COLUMBUS, OHIO 43229

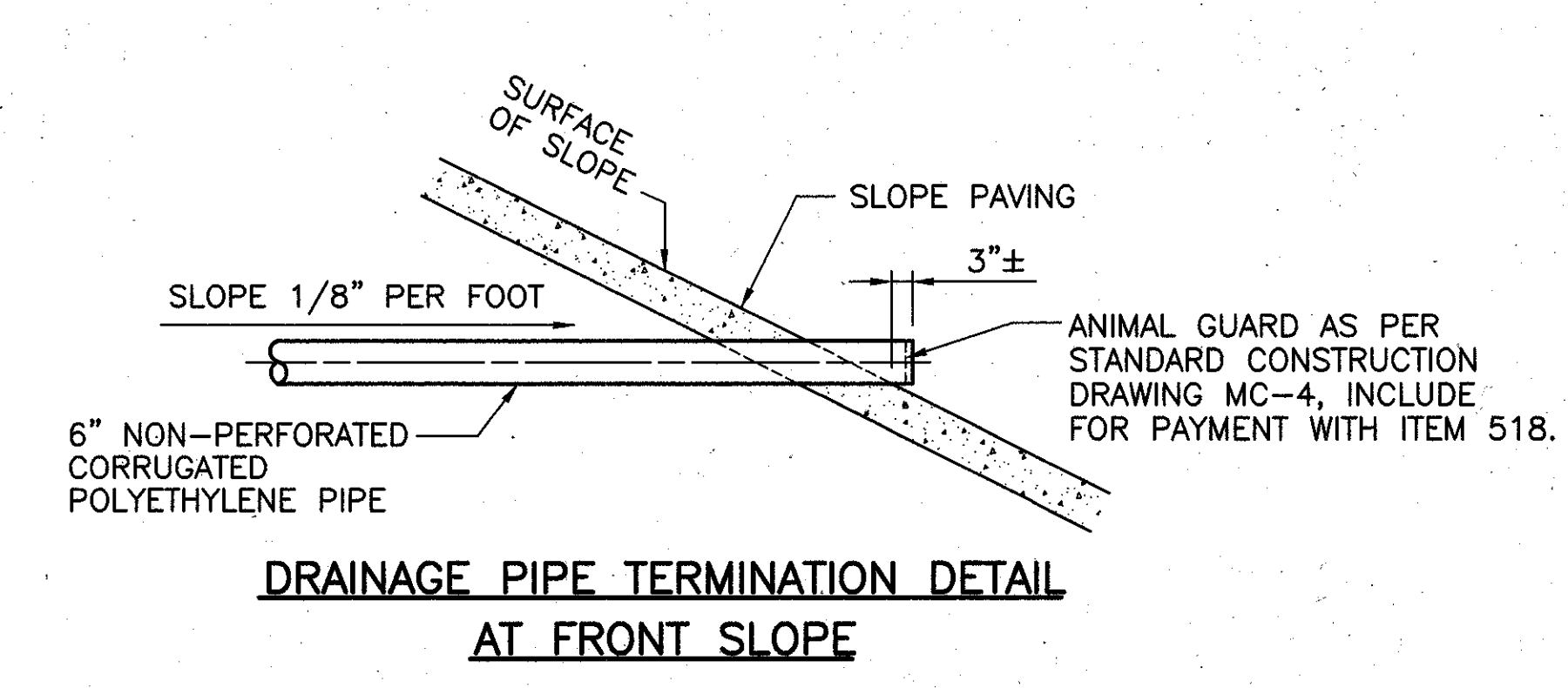
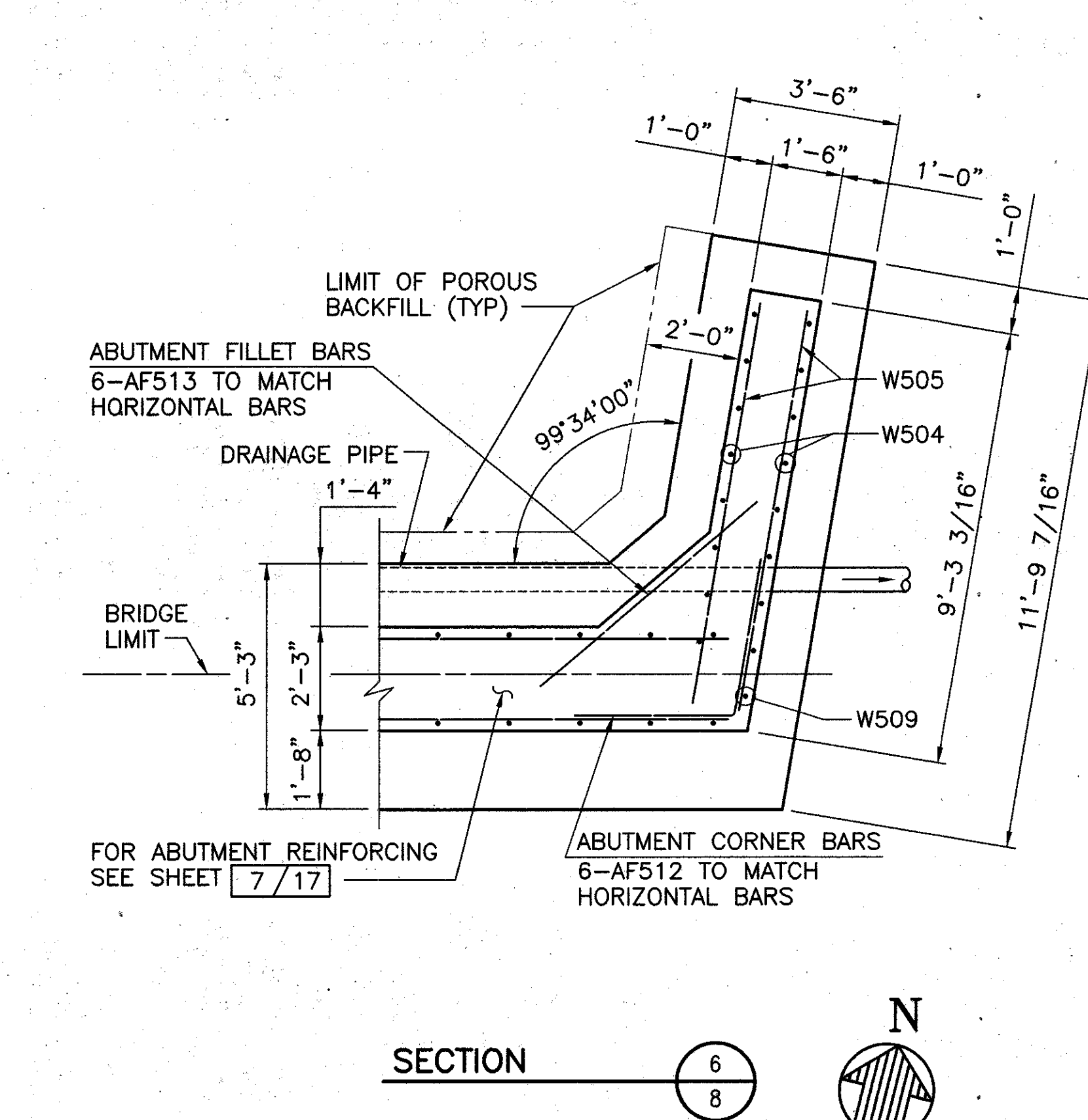
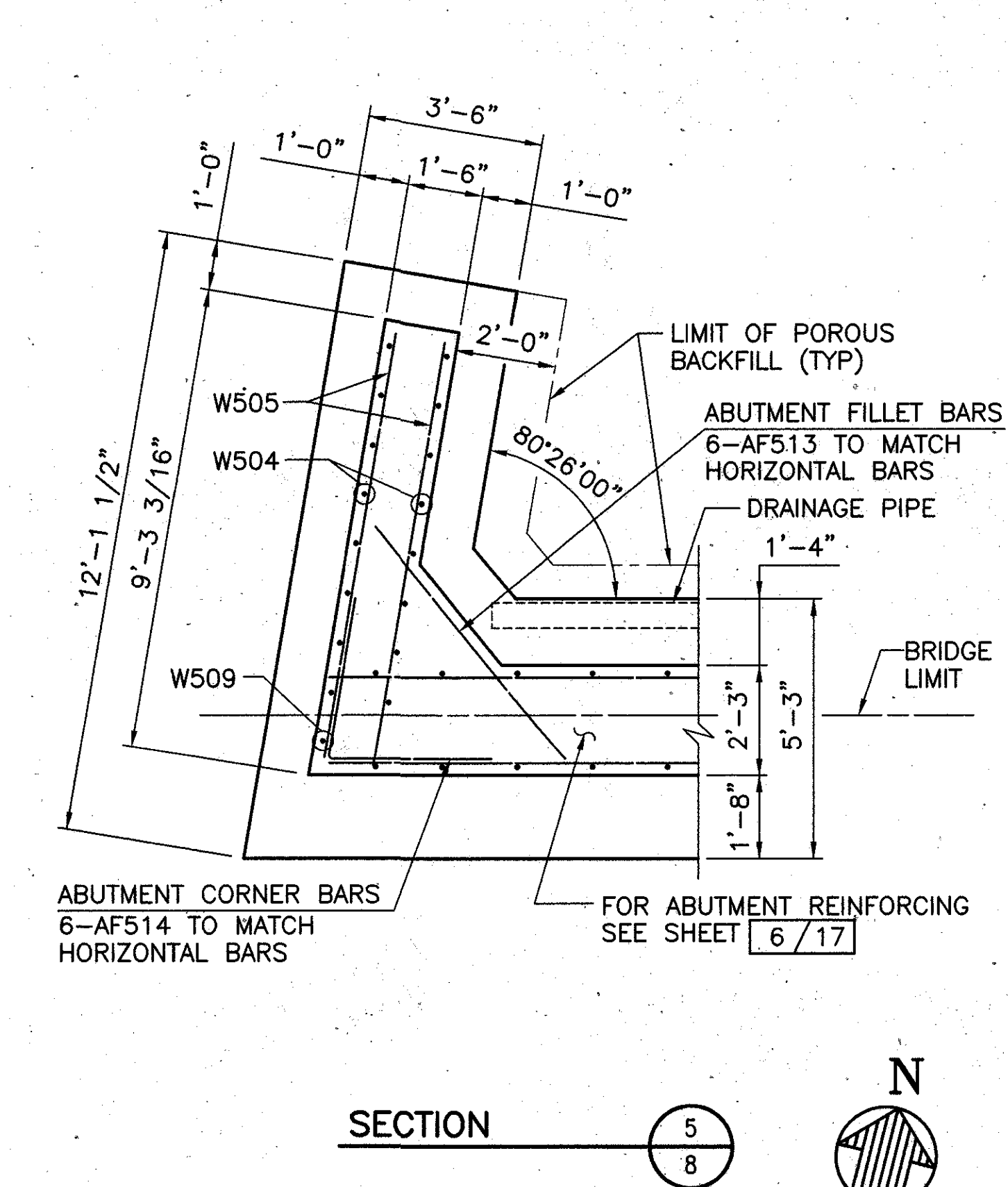
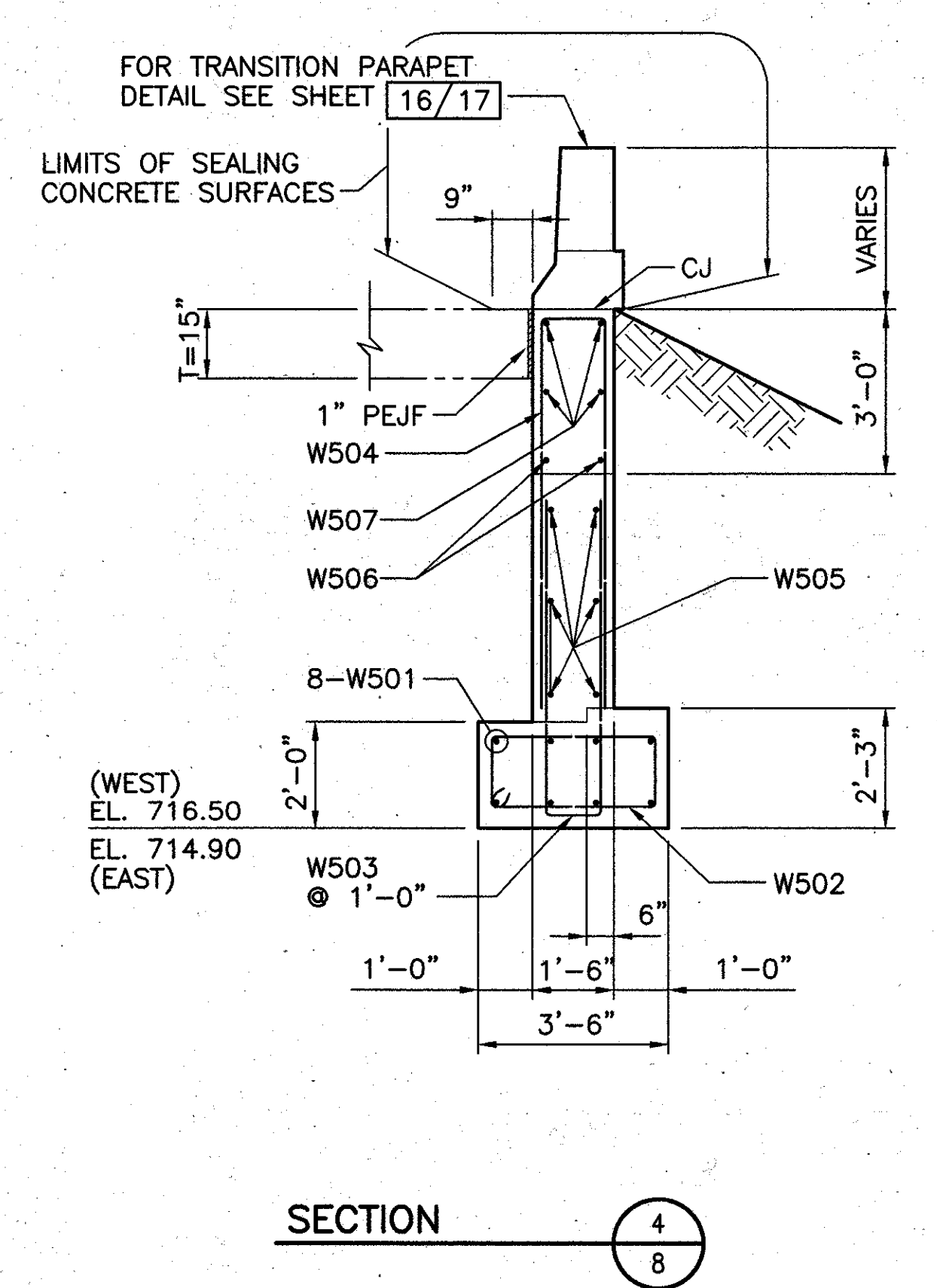
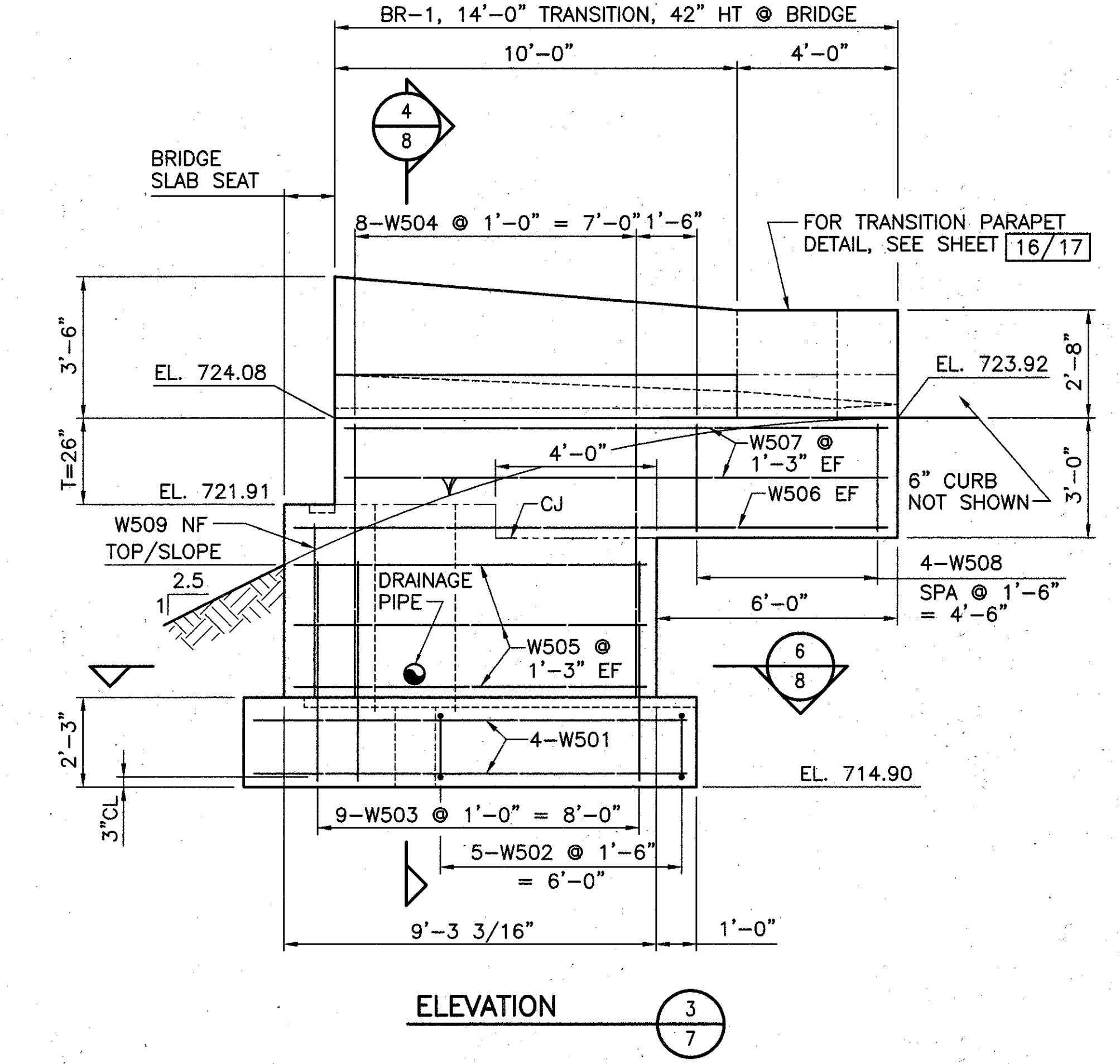
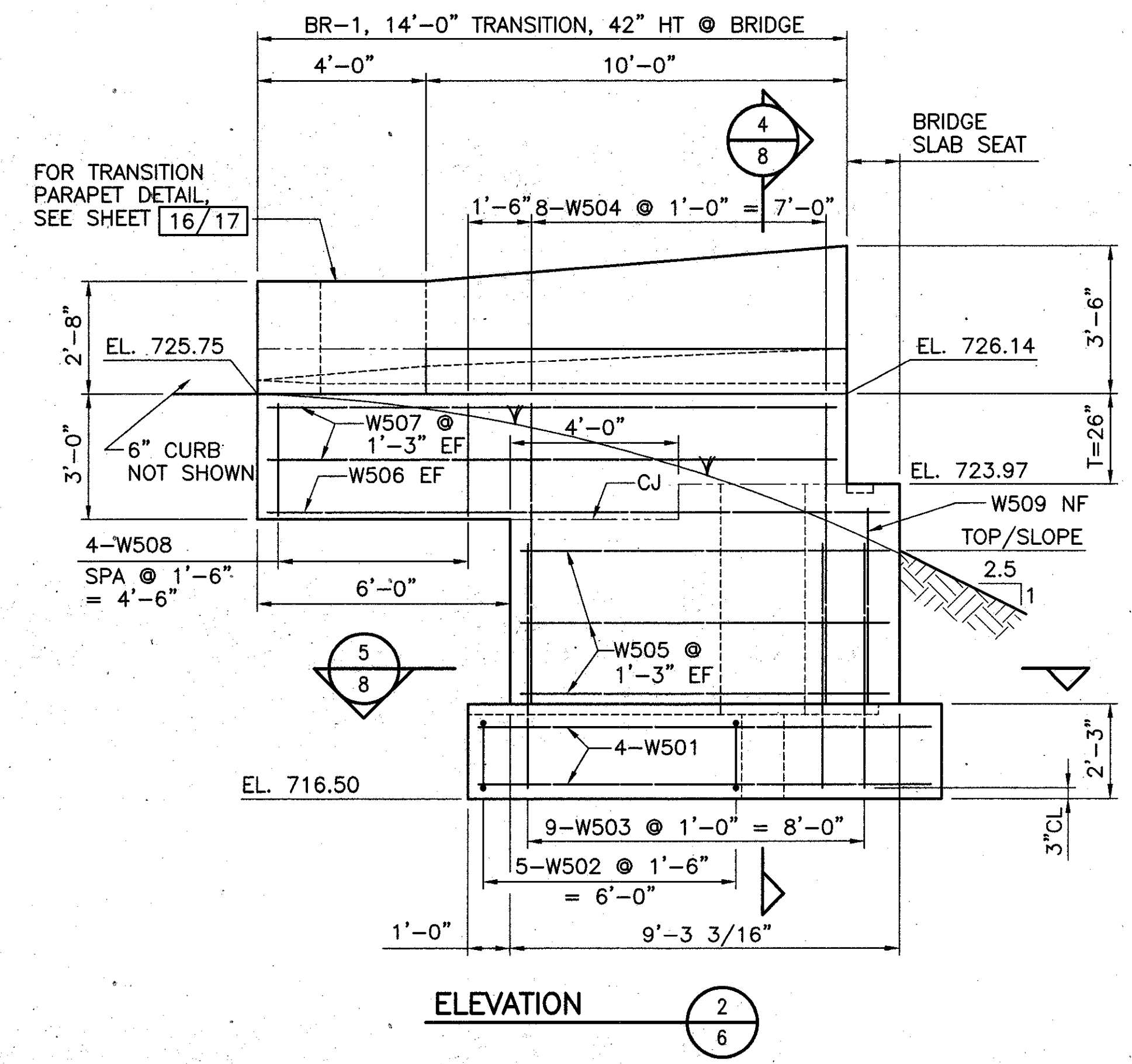
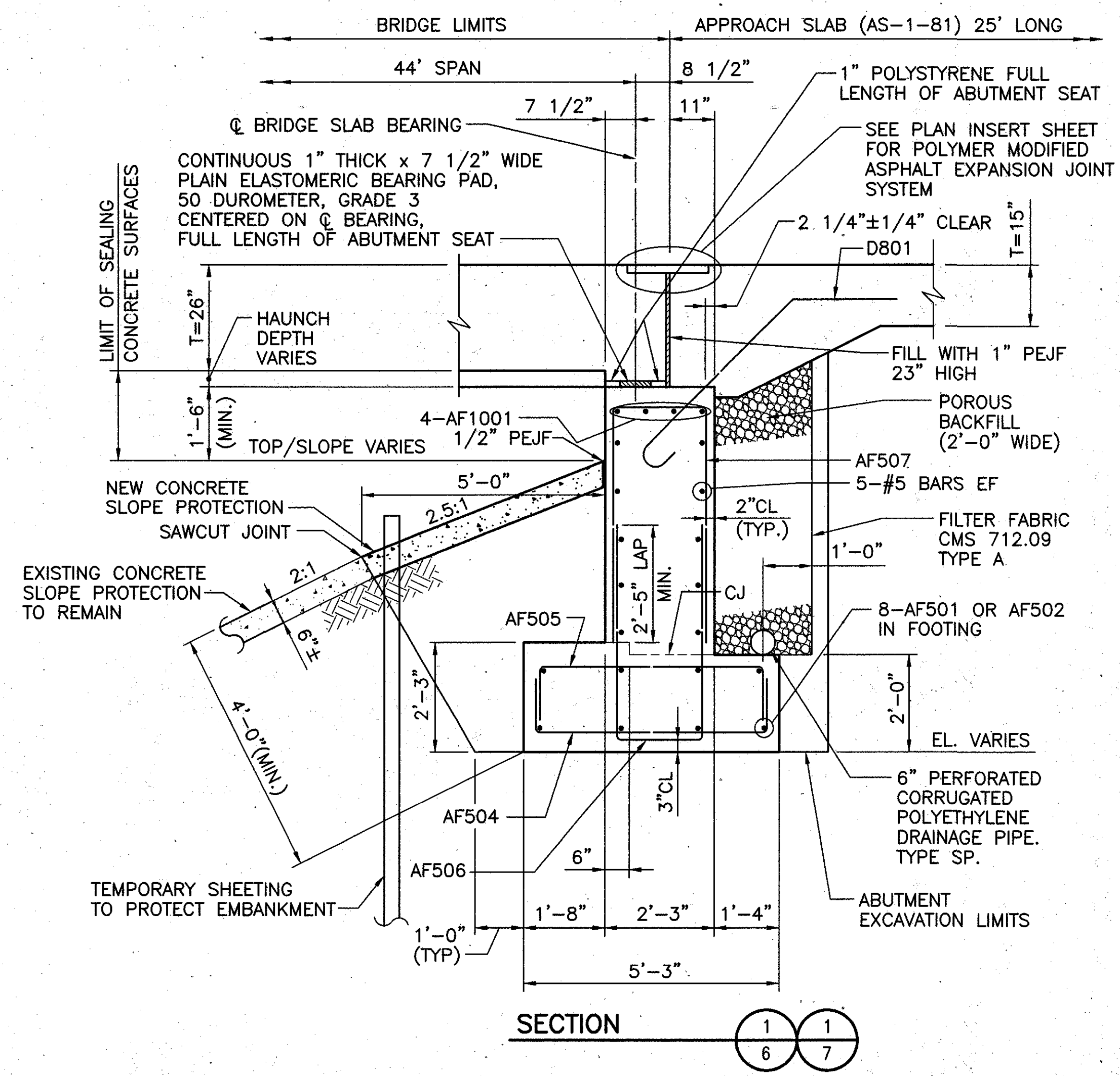
FORWARD ABUTMENT - EAST HALF DETAILS

BRIDGE NO. FRA-315-0067
OVER TOWN STREET

FRANKLIN COUNTY STA. 81+98.38 TO STA. 83+42.79

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
TEU	DST		BRH	RKM	11/07/97	WEB 10/29/97

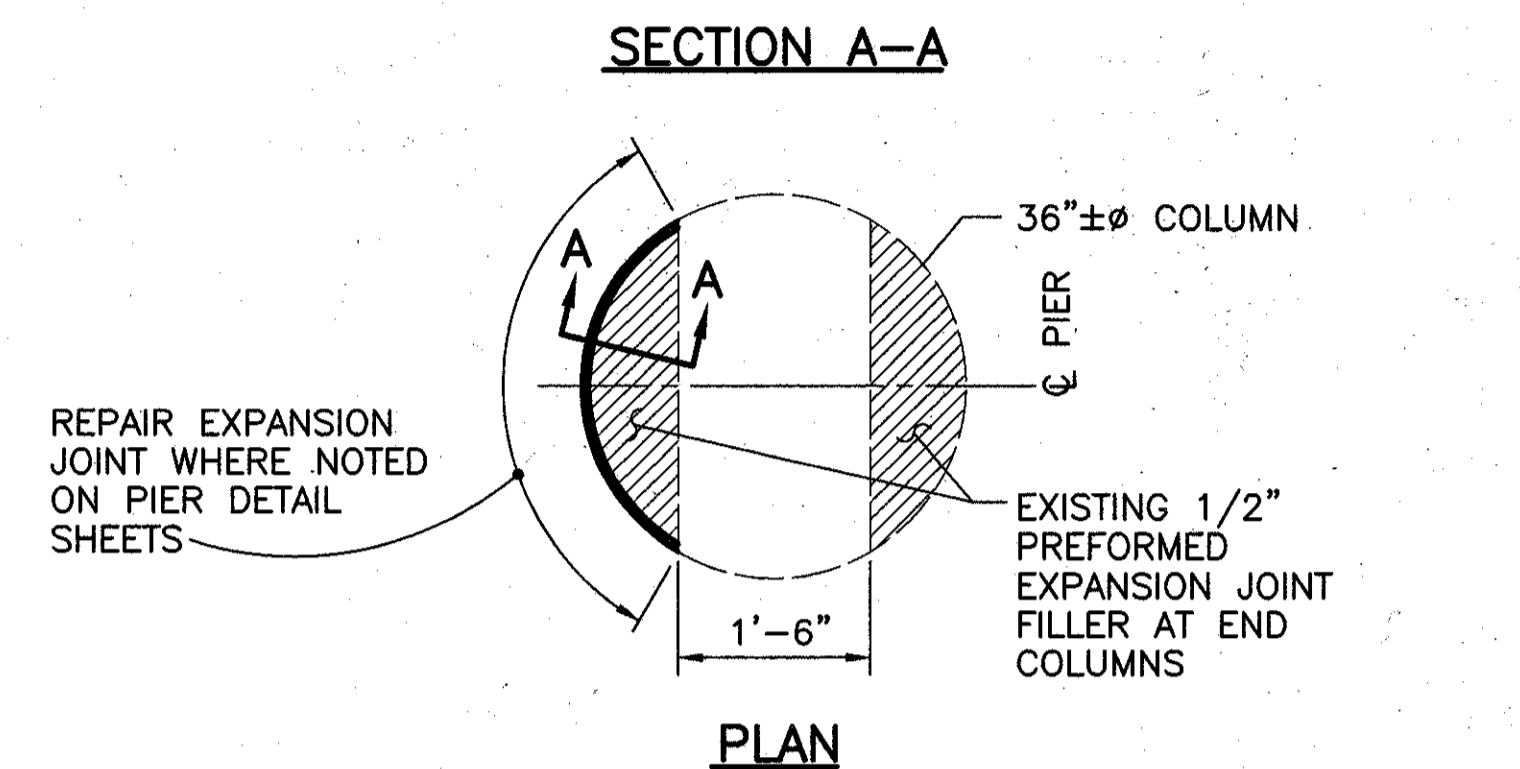
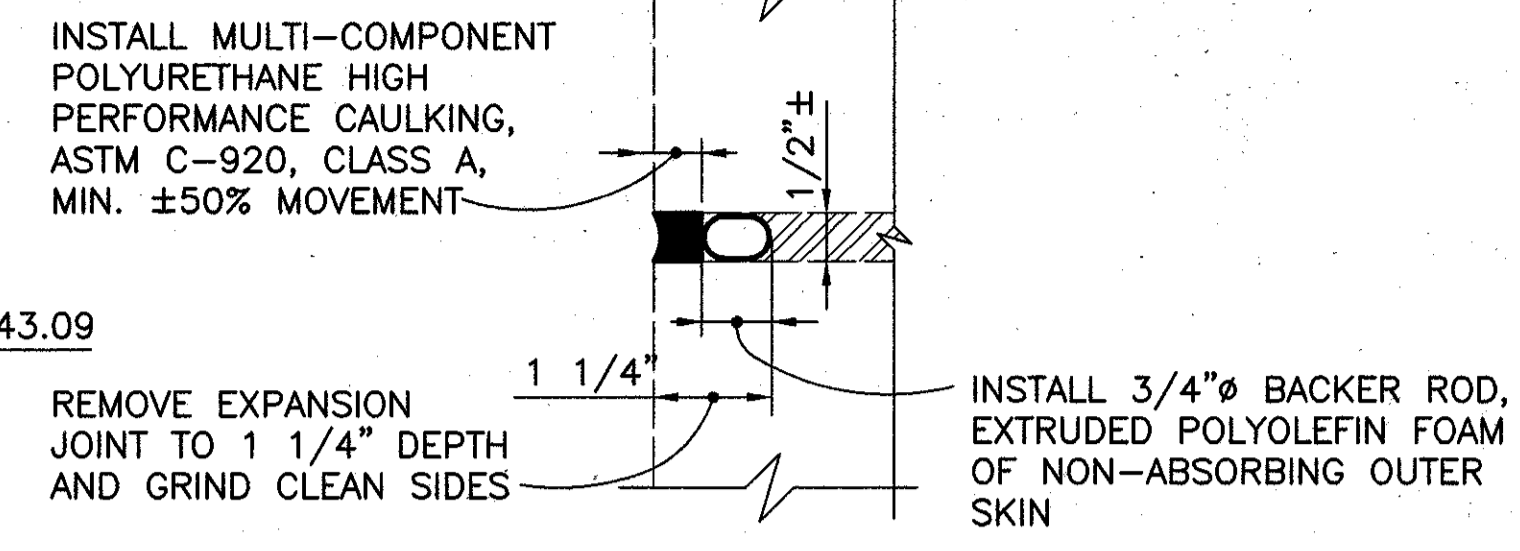
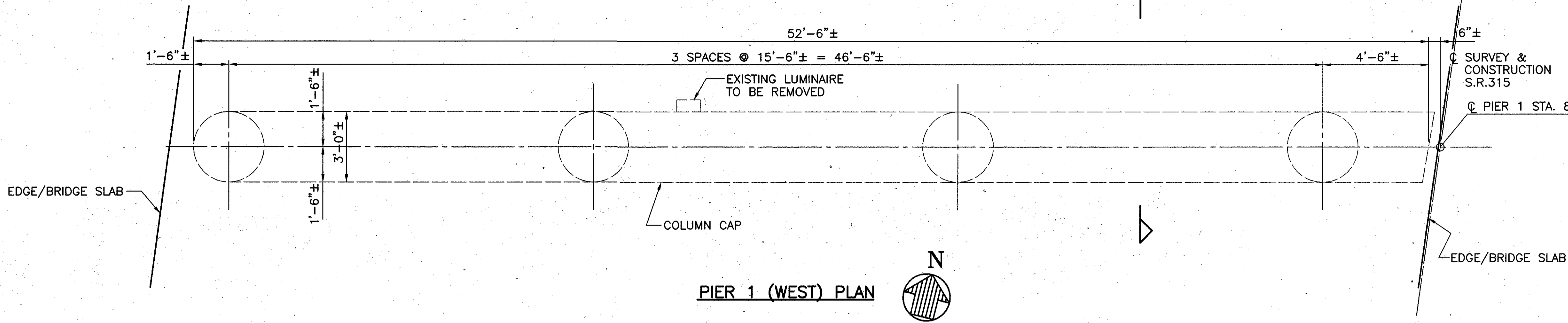
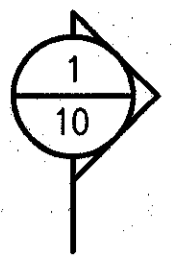
[G:\PROJECTS\STRUCT\92313143\CONTRCTD\YS-NE-ABUT.DWG - NOV 13, 1997 - 16:08:48 - PLOT: 1-32



- NOTE:
- FOR FORWARD ABUTMENT PLANS, SEE SHEET 6&7/17.
 - FOR SUBSTRUCTURE NOTES, SEE SHEET 3/17.

LEGEND		STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 8121 HUNTLEY ROAD, COLUMBUS, OHIO 43229	
CL - CLEAR	TYP - TYPICAL	FORWARD ABUTMENT DETAILS	
EF - EACH FACE	NF - NEAR FACE		
FF - FAR FACE	C/C - CENTER TO CENTER	BRIDGE NO. FRA-315-0067	
CJ - CONSTRUCTION JOINT	PEJF - PREFORMED EXPANSION JOINT FILLER	OVER TOWN STREET	
SPA - SPACING		FRANKLIN COUNTY STA. 81+98.38 TO STA. 83+42.79	
EXISTING STRUCTURE		DESIGNED	TEU
NEW STRUCTURE		DRAWN	GV
		TRACED	
		CHECKED	BRH
		REVIEWED	RKM 11/07/97
		DATE	WEB 10/29/97
		REVISED	

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TYPICAL CAP/COLUMN EXPANSION JOINT REPAIR DETAIL

NOTE:
INCLUDE THE COST OF ALL LABOR, MATERIALS AND EQUIPMENT WITH ITEM SPECIAL, PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR.

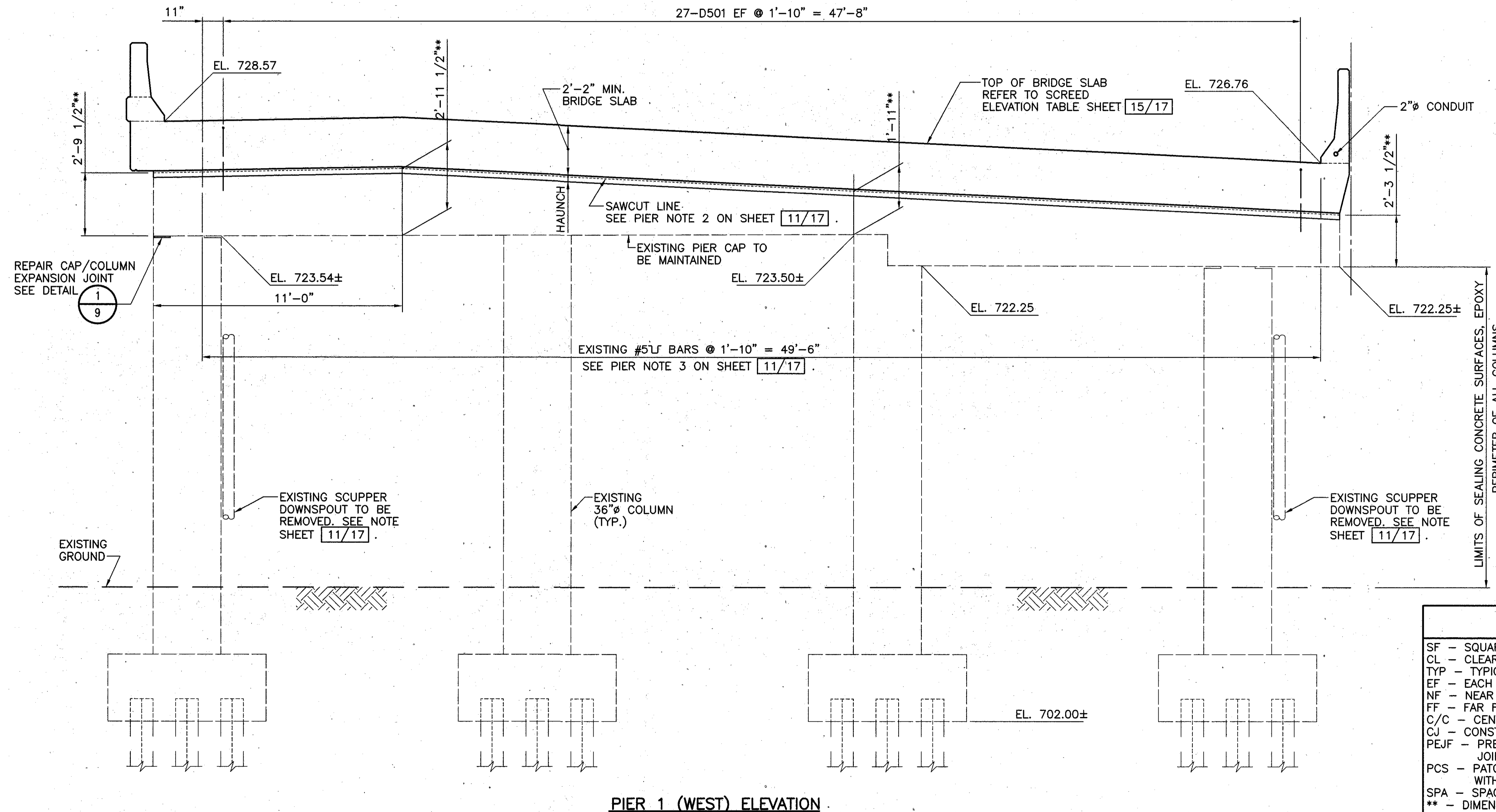
PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JULY 1997.

SUMMARY OF PCS QUANTITIES *	
	ESTIMATED QUANTITY
PIER 1	6 S. F.
PIER 2	6 S. F.
TOTAL	12 S. F.

* ESTIMATED QUANTITY HAS BEEN INCREASED 15% OVER FIELD MARKED QUANTITY TO ALLOW FOR ADDITIONAL DETERIORATION AND EXTENSION OF POTENTIAL CONCRETE DETERIORATION.

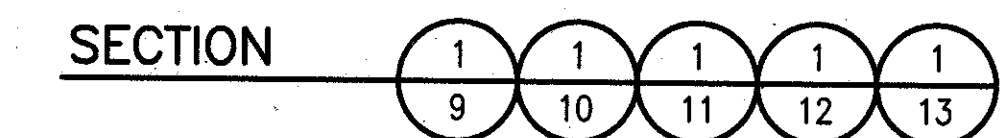
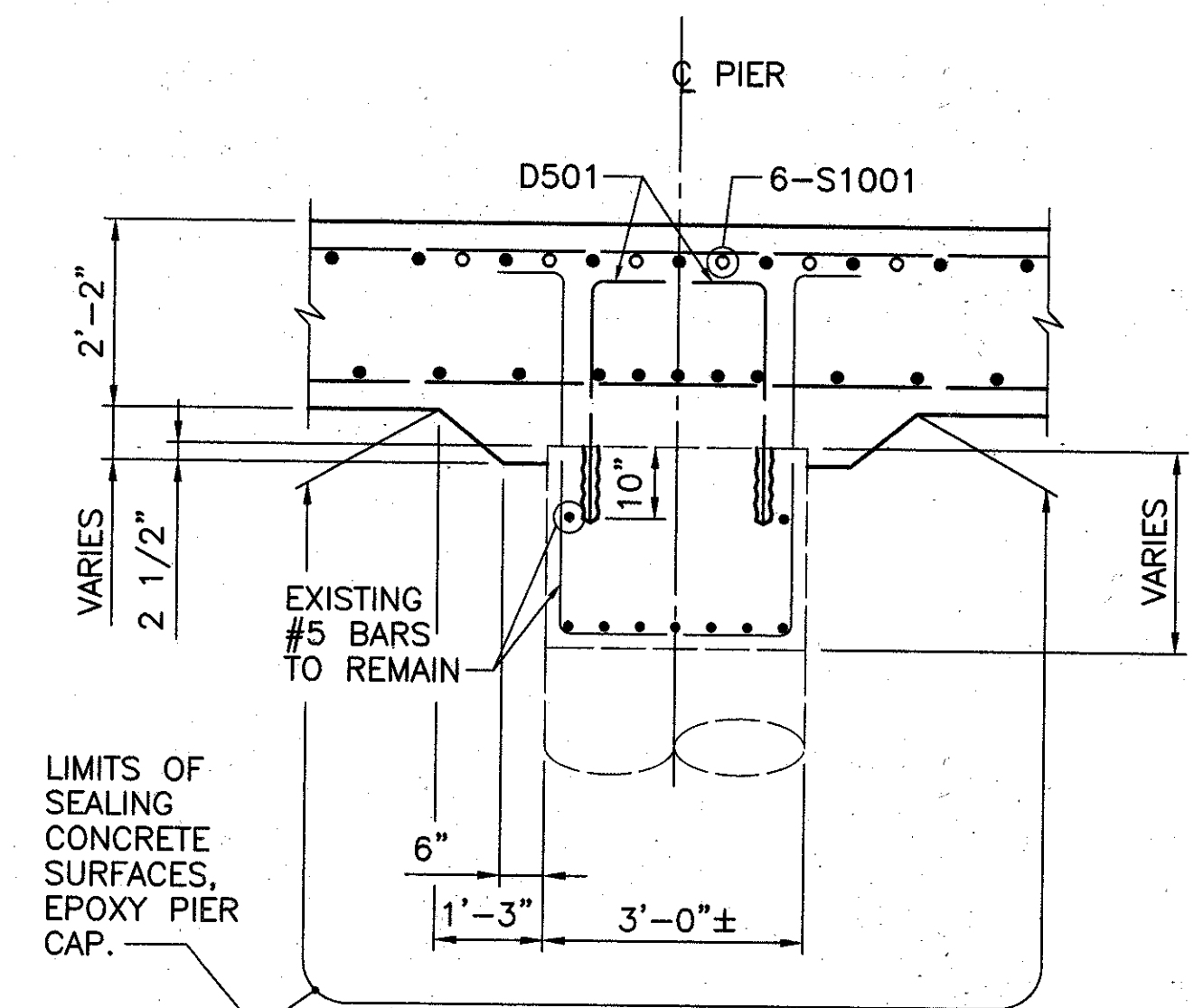
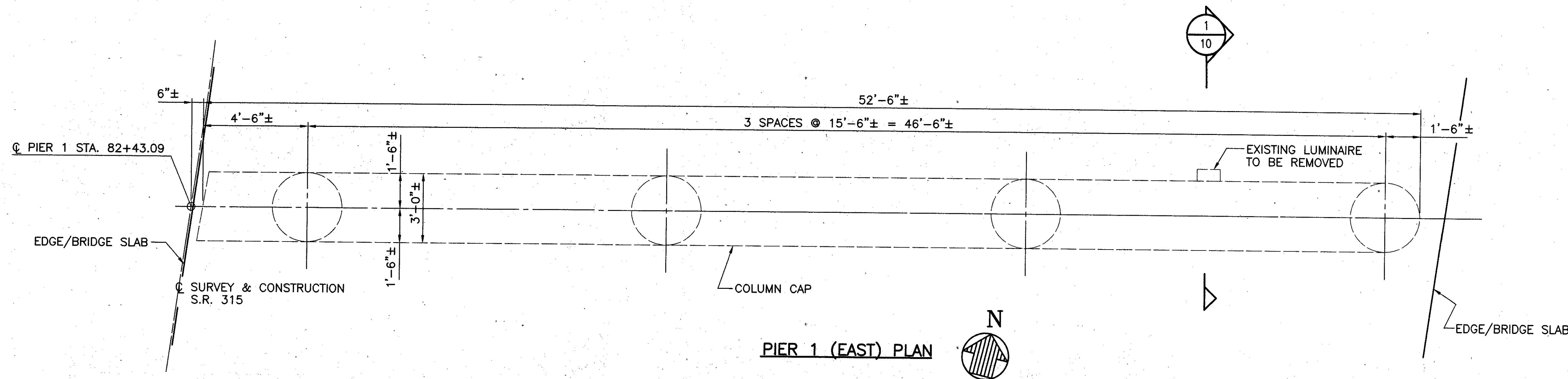
INDICATES AREAS TO BE REPAIRED AS PER ITEM SPECIAL-PATCHING CONCRETE STRUCTURE WITH TROWELABLE MORTAR.

FOR PIER NOTES SEE SHEET 11/17



LEGEND	
SF	- SQUARE FEET
CL	- CLEAR
TYP	- TYPICAL
EF	- EACH FACE
NF	- NEAR FACE
FF	- FAR FACE
C/C	- CENTER TO CENTER
CJ	- CONSTRUCTION JOINT
PEJF	- PREFORMED EXPANSION JOINT FILLER
PCS	- PATCHING CONCRETE STRUCTURE WITH TROWELABLE MORTAR
SPA	- SPACING
**	- DIMENSION TO SAWCUT LINE
EXISTING STRUCTURE	
NEW STRUCTURE	

9 / 17					
STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 8121 HUNTLEY ROAD, COLUMBUS, OHIO 43229					
PIER 1 - WEST BENT DETAILS					
BRIDGE NO. FRA-315-0067 OVER TOWN STREET					
FRANKLIN COUNTY			STA. 81+98.38 TO STA. 83+42.79		
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
TEU	GV		BRH	RKM	11/07/97
				WEB	10/29/97

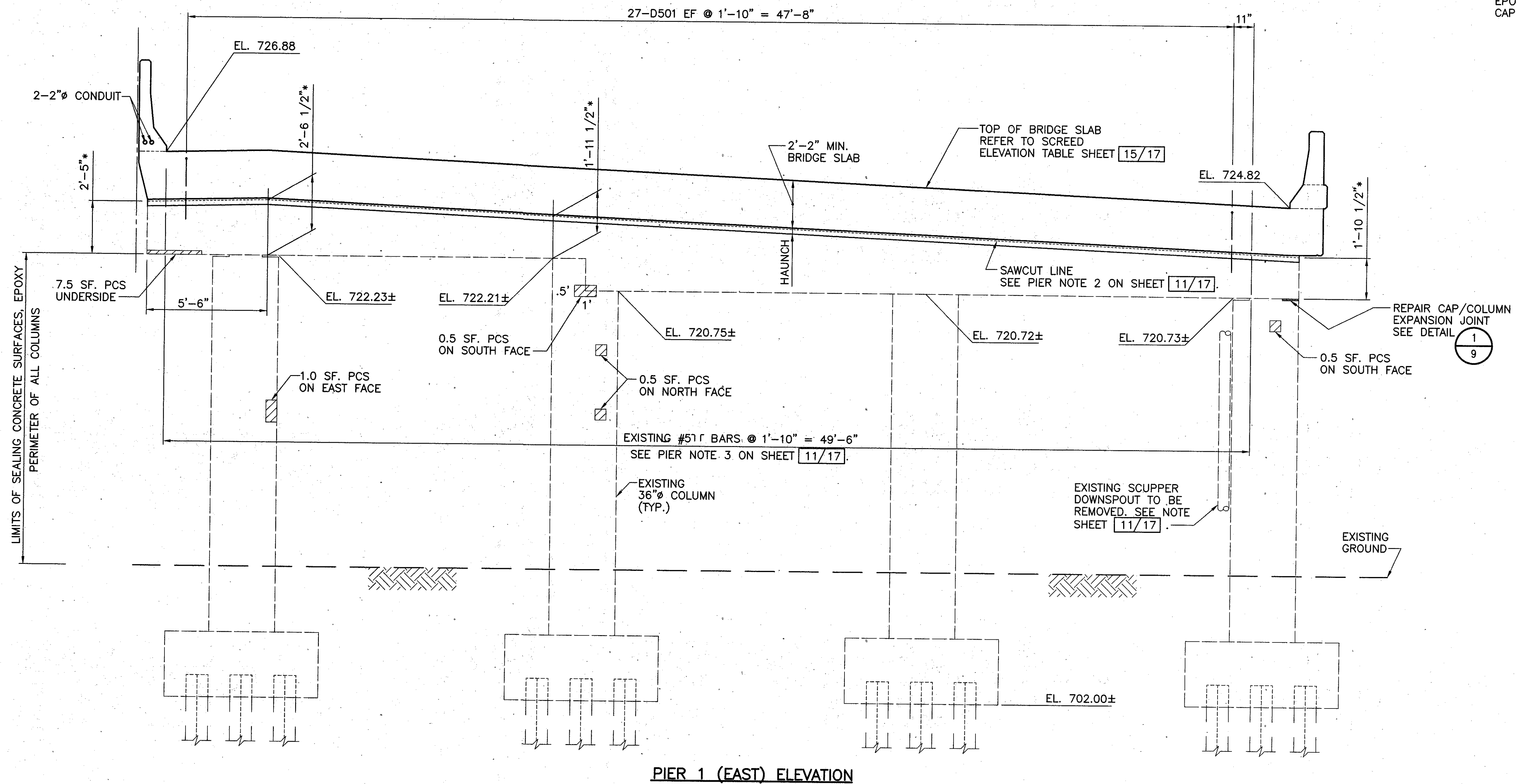


LEGEND	
SF	- SQUARE FEET
CL	- CLEAR
TYP	- TYPICAL
EF	- EACH FACE
NF	- NEAR FACE
FF	- FAR FACE
C/C	- CENTER TO CENTER
CJ	- CONSTRUCTION JOINT
PEJF	- PREFORMED EXPANSION JOINT FILLER
PCS	- PATCHING CONCRETE STRUCTURE WITH TROWELABLE MORTAR
SPA	- SPACING
*	- DIMENSION TO SAWCUT LINE
EXISTING STRUCTURE	
NEW STRUCTURE	

INDICATES AREAS TO BE REPAIRED AS PER ITEM SPECIAL-PATCHING CONCRETE STRUCTURE WITH TROWELABLE MORTAR.

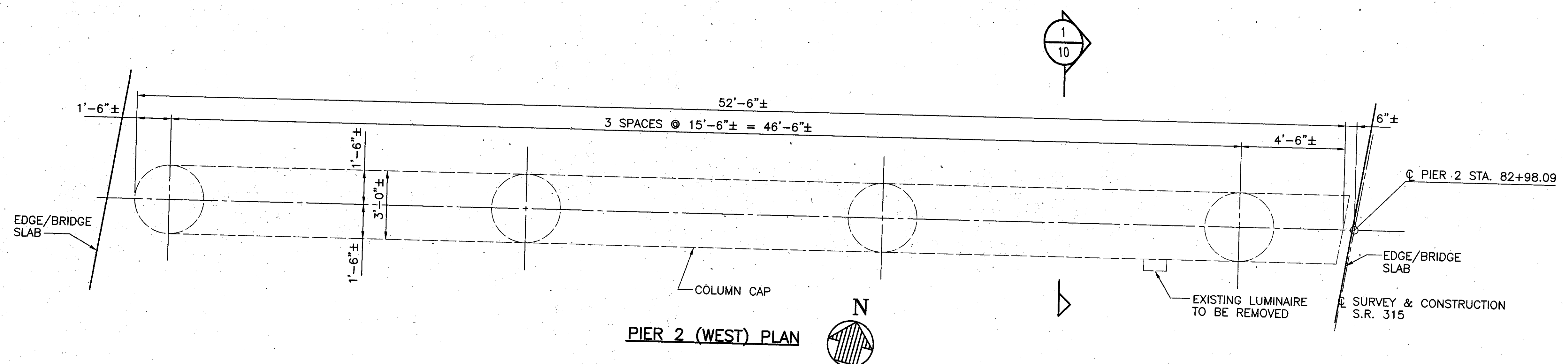
FOR SUMMARY OF PCS QUANTITIES SEE SHEET 9/17.

FOR PIER NOTES SEE SHEET 11/17.

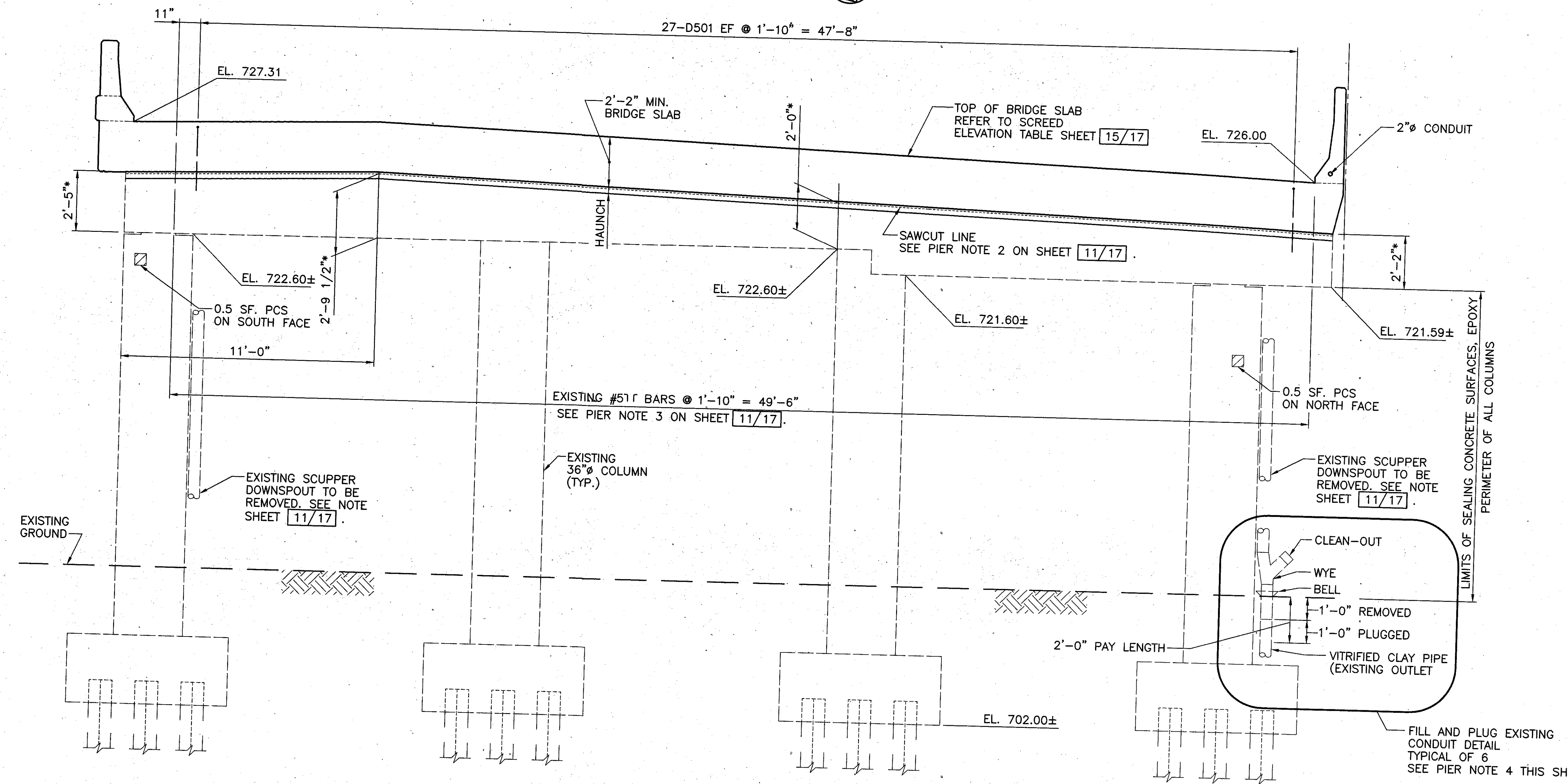


STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE <small>8121 HUNTLEY ROAD, COLUMBUS, OHIO 43228</small>					
PIER 1 - EAST BENT DETAILS BRIDGE NO. FRA-315-0067 OVER TOWN STREET FRANKLIN COUNTY					
			STA. 81+98.38 TO		
			STA. 83+42.79		
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
TEU	GV		BRH	RKM	11/07/97
				WEB	10/29/97

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- PIER NOTES:**
1. THE PIER CAP BEAMS SHALL BE ADEQUATELY SHORED AND SUPPORTED THROUGHOUT THE DEMOLITION AND NEW CONSTRUCTION PHASES OF THIS PROJECT.
 2. THE DEPTH OF THE SAWCUT SHALL BE LESS THAN THE HORIZONTAL CLEARANCE TO THE VERTICAL #5 HAIRPIN BARS.
 3. THESE HAIRPIN BARS ARE TO BE SALVAGED FOR INCORPORATION INTO THE NEW BRIDGE SLAB.
 4. THE EXISTING SEWERS INTO WHICH THE DOWNSPOUTS EMPTY SHALL BE PLUGGED OR FILLED BELOW GRADE. SEE DETAIL BELOW. REMOVE EXISTING SCUPPER DOWNSPOUT PIPING OUTLET CONDUITS DOWN TO 1'-0" BELOW GRADE. PLUG ADDITIONAL LENGTH OF OUTLET CONDUIT WITH NON-SHRINK GROUT FOR A 1'-0" MINIMUM LENGTH OR PLUG WITH PRECAST VITRIFIED OR CONCRETE STOPPER AS PER CMS 202.09. INCLUDE WITH ITEM SPECIAL 'FILL AND PLUG EXISTING CONDUIT' FOR PAYMENT.
 5. THE D501 BARS ARE INCLUDED IN THE SUPERSTRUCTURE REINFORCING STEEL LIST.



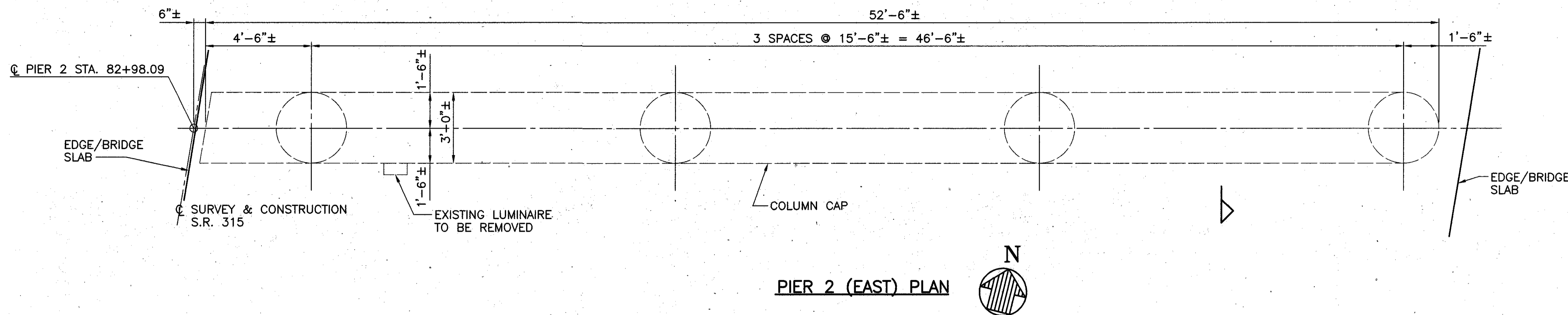
LEGEND	
SF	- SQUARE FEET
CL	- CLEAR
TYP	- TYPICAL
EF	- EACH FACE
NF	- NEAR FACE
FF	- FAR FACE
C/C	- CENTER TO CENTER
CJ	- CONSTRUCTION JOINT
PEJF	- PREFORMED EXPANSION JOINT FILLER
PCS	- PATCHING CONCRETE STRUCTURE WITH TROWELABLE MORTAR
SPA	- SPACING
*	- DIMENSION TO SAWCUT LINE
EXISTING STRUCTURE	
NEW STRUCTURE	

INDICATES AREAS TO BE REPAIRED AS PER ITEM SPECIAL-PATCHING CONCRETE STRUCTURE WITH TROWELABLE MORTAR.

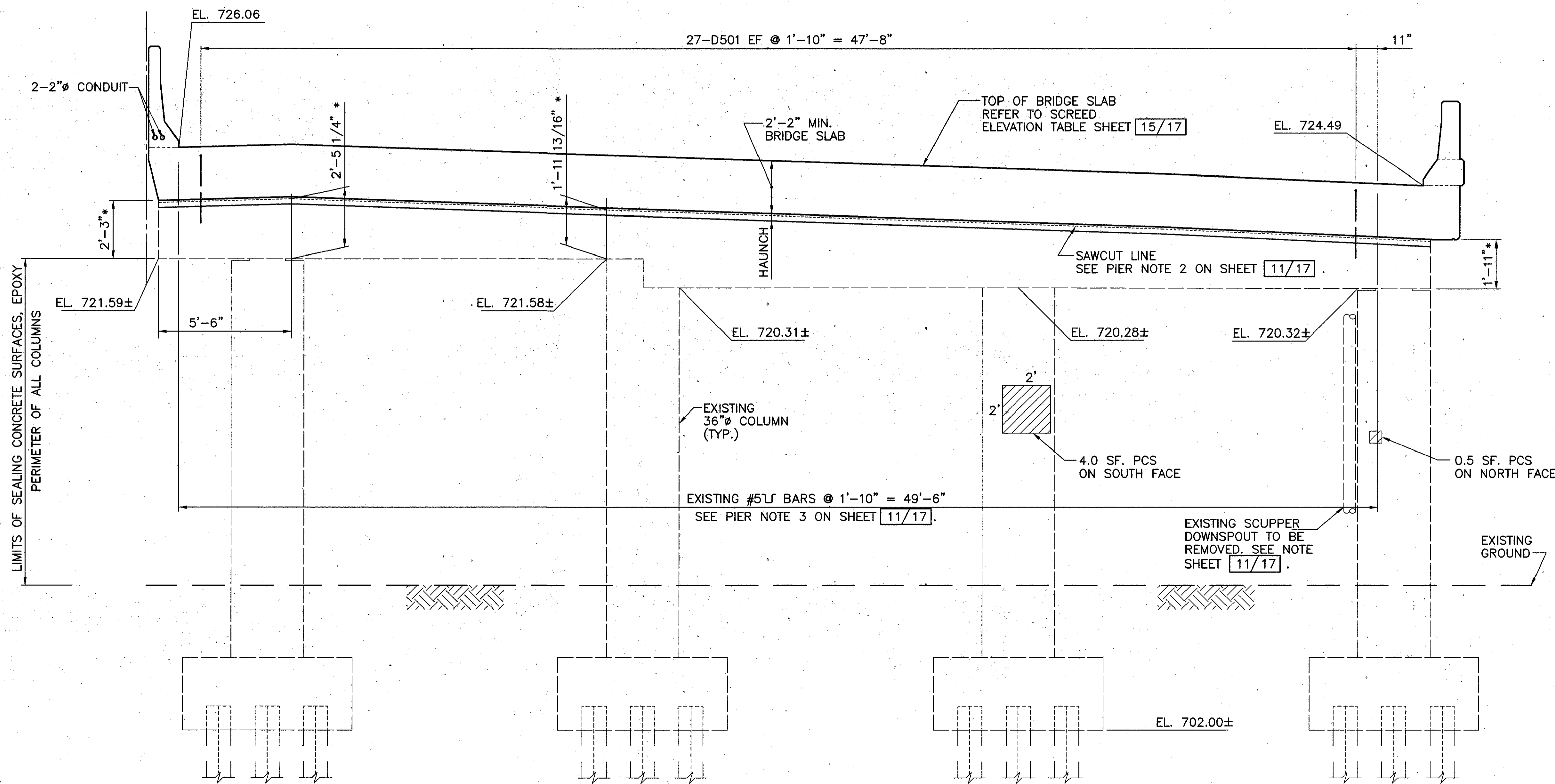
FOR SUMMARY OF PCS QUANTITIES SEE SHEET 9/17.

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11/17					
STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE <small>9121 HUNTLEY ROAD, COLUMBUS, OHIO 43229</small>					
PIER 2 - WEST BENT DETAILS BRIDGE NO. FRA-315-0067 OVER TOWN STREET FRANKLIN COUNTY STA. 81+98.38 TO STA. 83+42.79					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
TEU	GV		PHB	RKM	11/07/97
				WEB	10/29/97

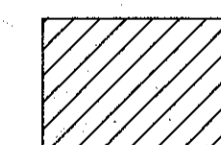


PIER 2 (EAST) PLAN



PIER 2 (EAST) ELEVATION

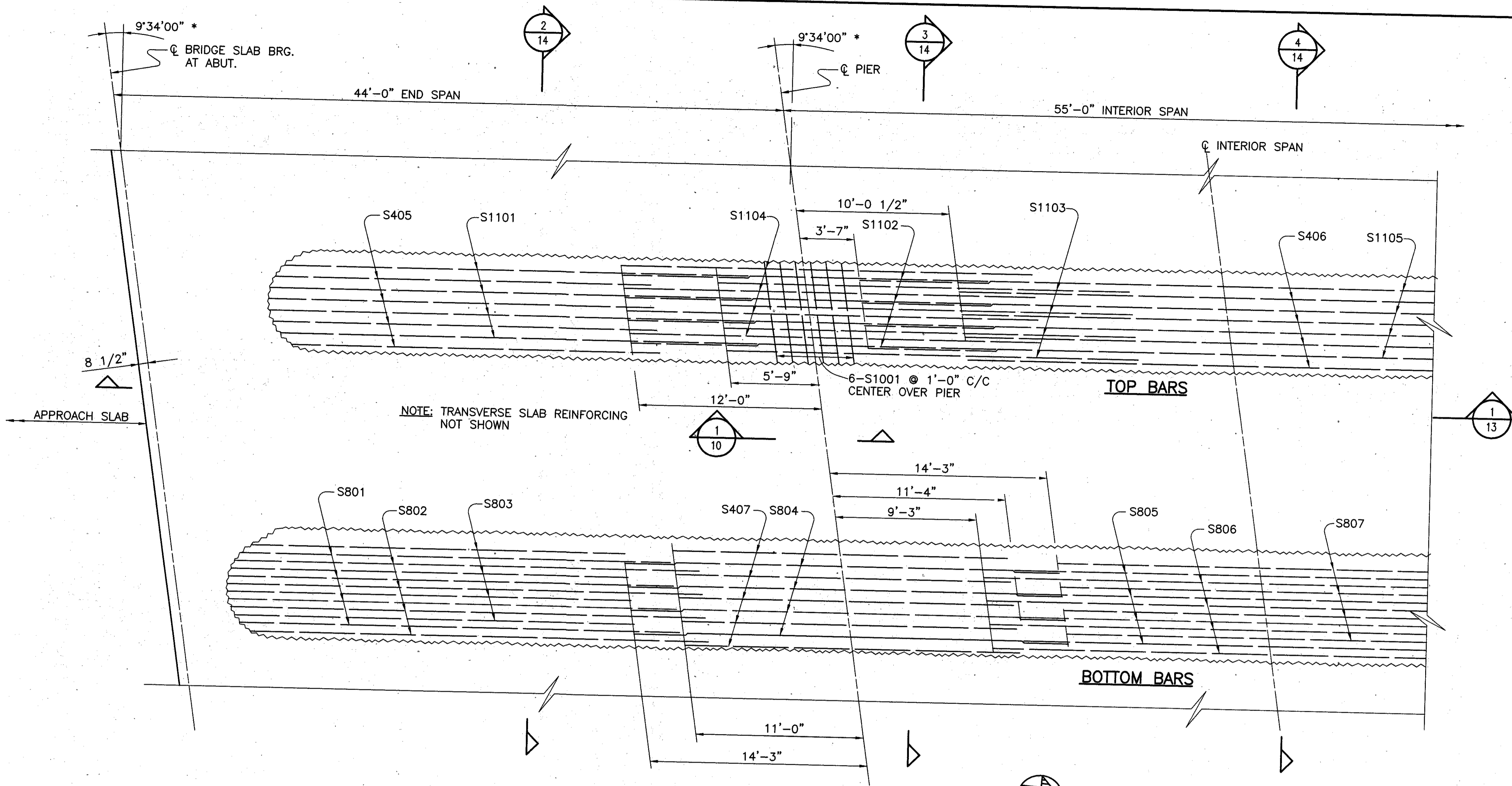
LEGEND	
SF	- SQUARE FEET
CL	- CLEAR
TYP	- TYPICAL
EF	- EACH FACE
NF	- NEAR FACE
FF	- FAR FACE
C/C	- CENTER TO CENTER
CJ	- CONSTRUCTION JOINT
PEJF	- PREFORMED EXPANSION JOINT FILLER
PCS	- PATCHING CONCRETE STRUCTURE WITH TROWELABLE MORTAR
SPA	- SPACING
*	- DIMENSION TO SAWCUT LINE
EXISTING STRUCTURE	
NEW STRUCTURE	

 INDICATES AREAS TO BE REPAIRED AS PER ITEM SPECIAL-PATCHING CONCRETE STRUCTURE WITH TROWELABLE MORTAR.

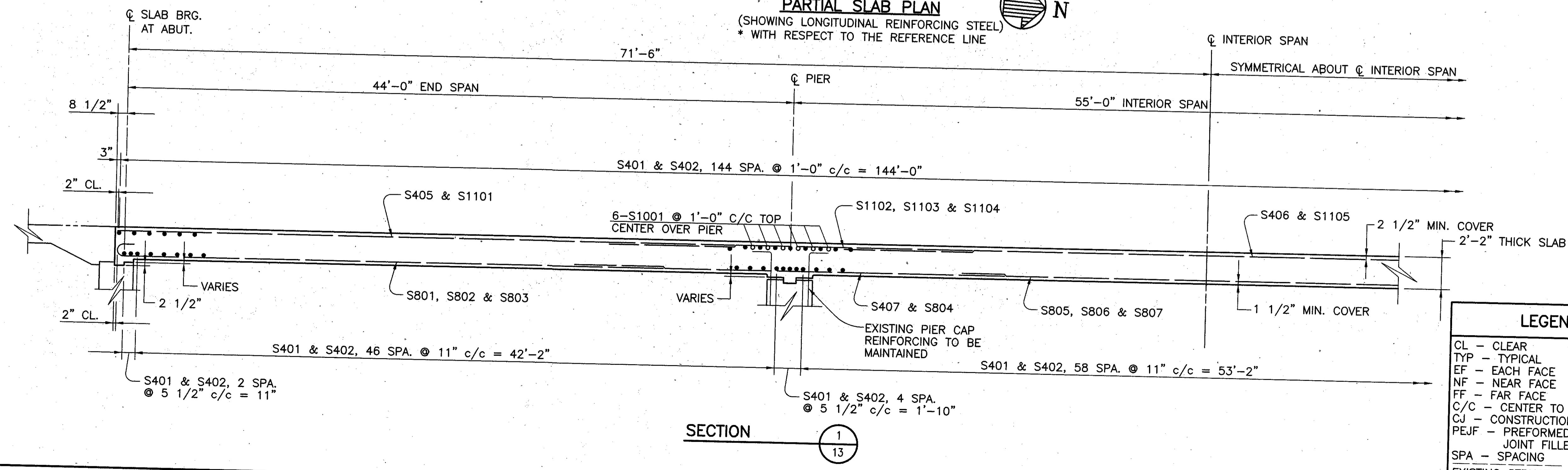
FOR SUMMARY OF PCS QUANTITIES SEE SHEET 9/17.

FOR PIER NOTES SEE SHEET 11/17.

STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 8121 HUNTLEY ROAD, COLUMBUS, OHIO 43229						
PIER 2 - EAST BENT DETAILS BRIDGE NO. FRA-315-0067 OVER TOWN STREET FRANKLIN COUNTY STA. 81+98.38 TO STA. 83+42.79						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
TEU	GV		BRH	RKM	11/07/97 WEB 10/29/97	



- SUPERSTRUCTURE NOTES:**
1. TRANSVERSE BARS SHALL BE PLACED PARALLEL TO ϕ SLAB BEARING AT ABUTMENTS AND ϕ PIERS.
 2. FOR REQUIRED SLAB ELEVATIONS, SEE SCREED ELEVATION LOCATION PLAN AND TABLE, SHEET 15/17.
 3. FOR DEFLECTION CONTROL JOINTS SPACING IN PARAPETS AND SPLIT MEDIAN BARRIER, SEE GENERAL PLAN SHEET 1/17.
 4. FOR PARAPET AND SPLIT MEDIAN BARRIER REINFORCING DETAILS, SEE SHEET 16 DETAILS 5 & 6. LAP SPLICE S501 LONGITUDINAL BARS 2'-9" MINIMUM.

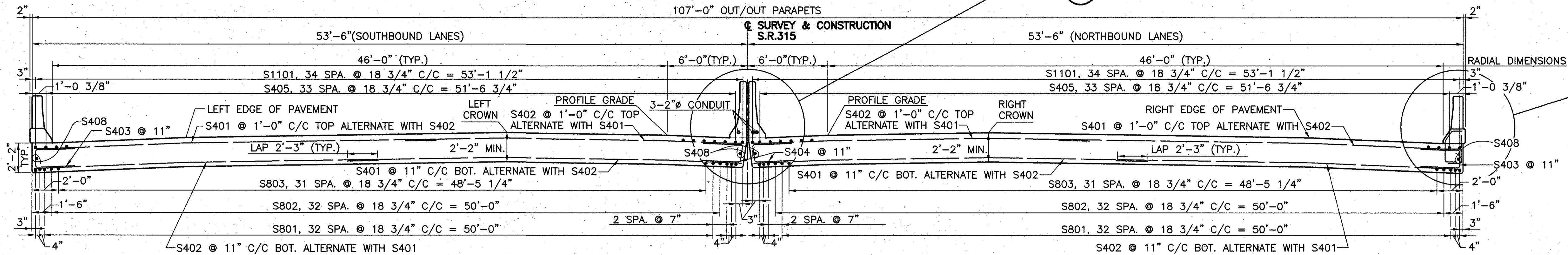


LEGEND		STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 8121 HUNTLEY ROAD, COLUMBUS, OHIO 43229	
CL - CLEAR TYP - TYPICAL EF - EACH FACE NF - NEAR FACE FF - FAR FACE C/C - CENTER TO CENTER CJ - CONSTRUCTION JOINT PEJF - PREFORMED EXPANSION JOINT FILLER SPA - SPACING		SUPERSTRUCTURE DETAILS BRIDGE NO. FRA-315-0067 OVER TOWN STREET FRANKLIN COUNTY STA. 81+98.38 TO STA. 83+42.79	
EXISTING STRUCTURE	DESIGNED	DRAWN	TRACED
NEW STRUCTURE	TEU	GV	BRH
			CHECKED
			REVIEWED
			DATE
			REVISION
			RKM 11/07/97
			WEB 10/29/97

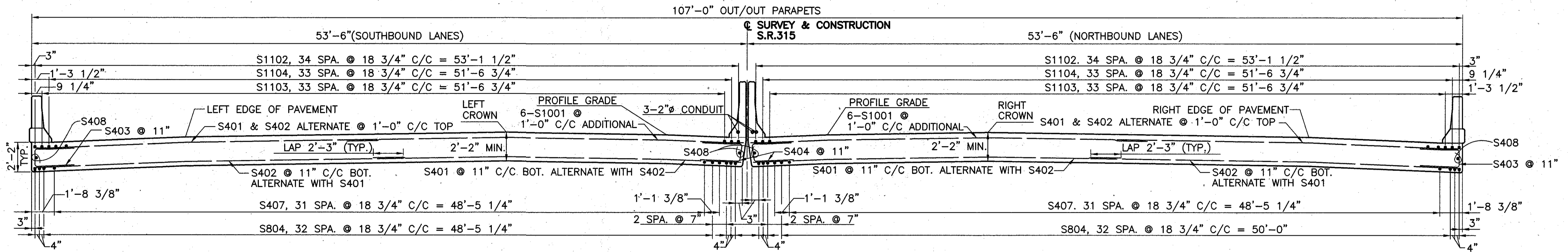
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DETAIL 6
16

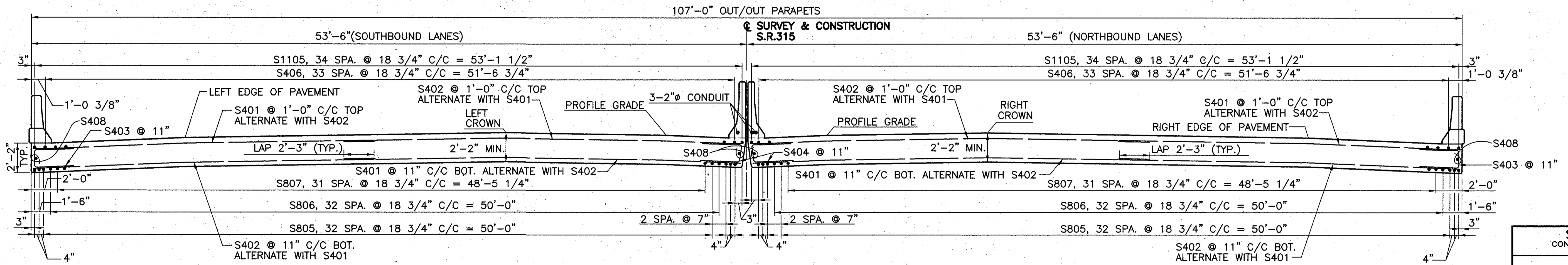
DETAIL 5
16



TRANSVERSE SECTION @ END SPAN 2
13



TRANSVERSE SECTION @ PIERS 3
13



TRANSVERSE SECTION @ MIDDLE-INTERIOR SPAN 4
13

- NOTES:
1. FOR SUPERSTRUCTURE NOTES, SEE SHEET 13/17.
 2. FOR SUPERELEVATION DIAGRAM, SEE SHEET 15/17.

LEGEND	
CL	- CLEAR
TYP	- TYPICAL
EF	- EACH FACE
NF	- NEAR FACE
FF	- FAR FACE
C/C	- CENTER TO CENTER
CJ	- CONSTRUCTION JOINT
PEJF	- PREFORMED EXPANSION JOINT FILLER
SPA	- SPACING
(Solid line)	EXISTING STRUCTURE
(Dashed line)	NEW STRUCTURE

14/17

STILSON & ASSOCIATES, INC.
CONSULTING ENGINEERING AND ARCHITECTURE
8121 HUNTLEY ROAD, COLUMBUS, OHIO 43229

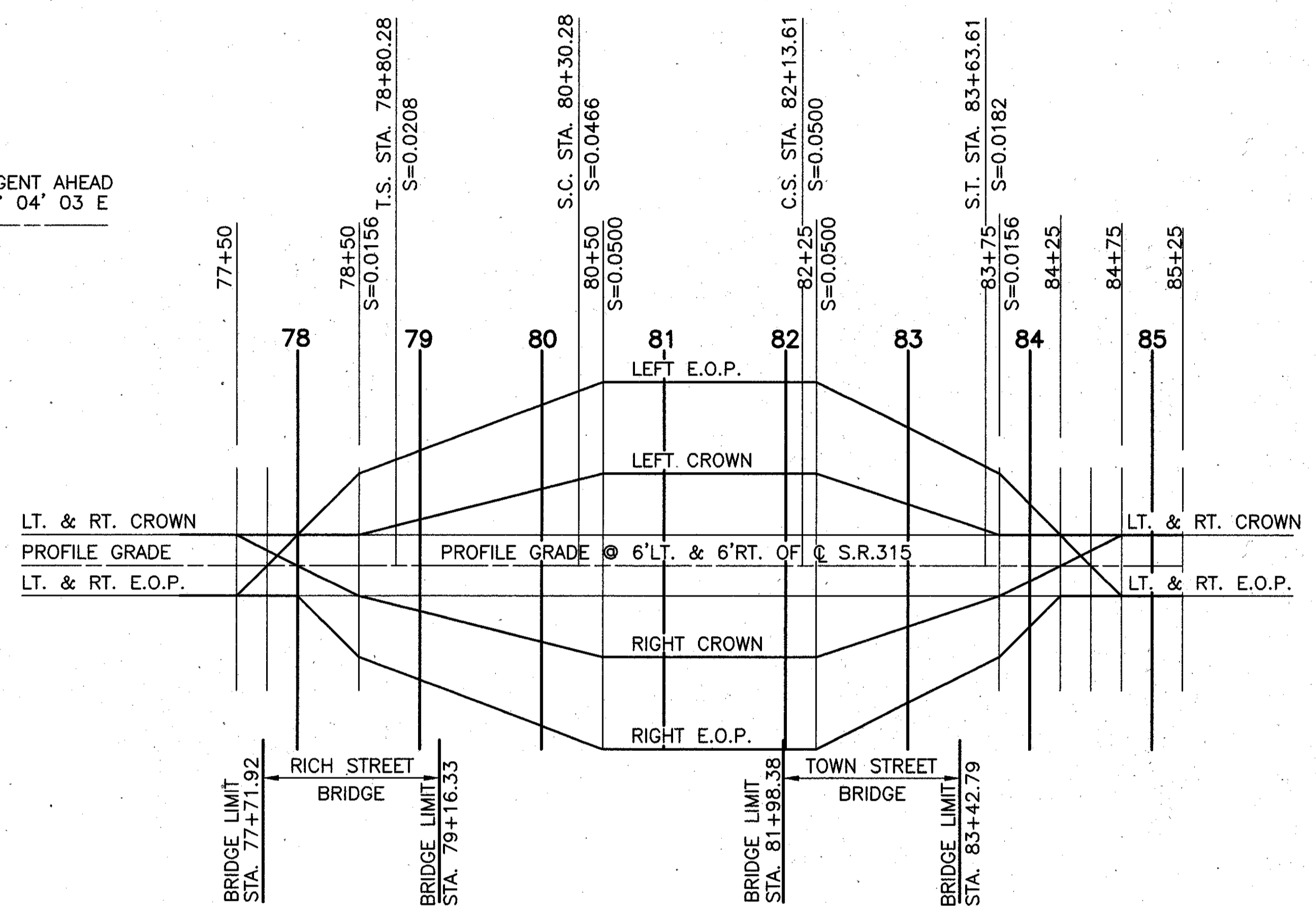
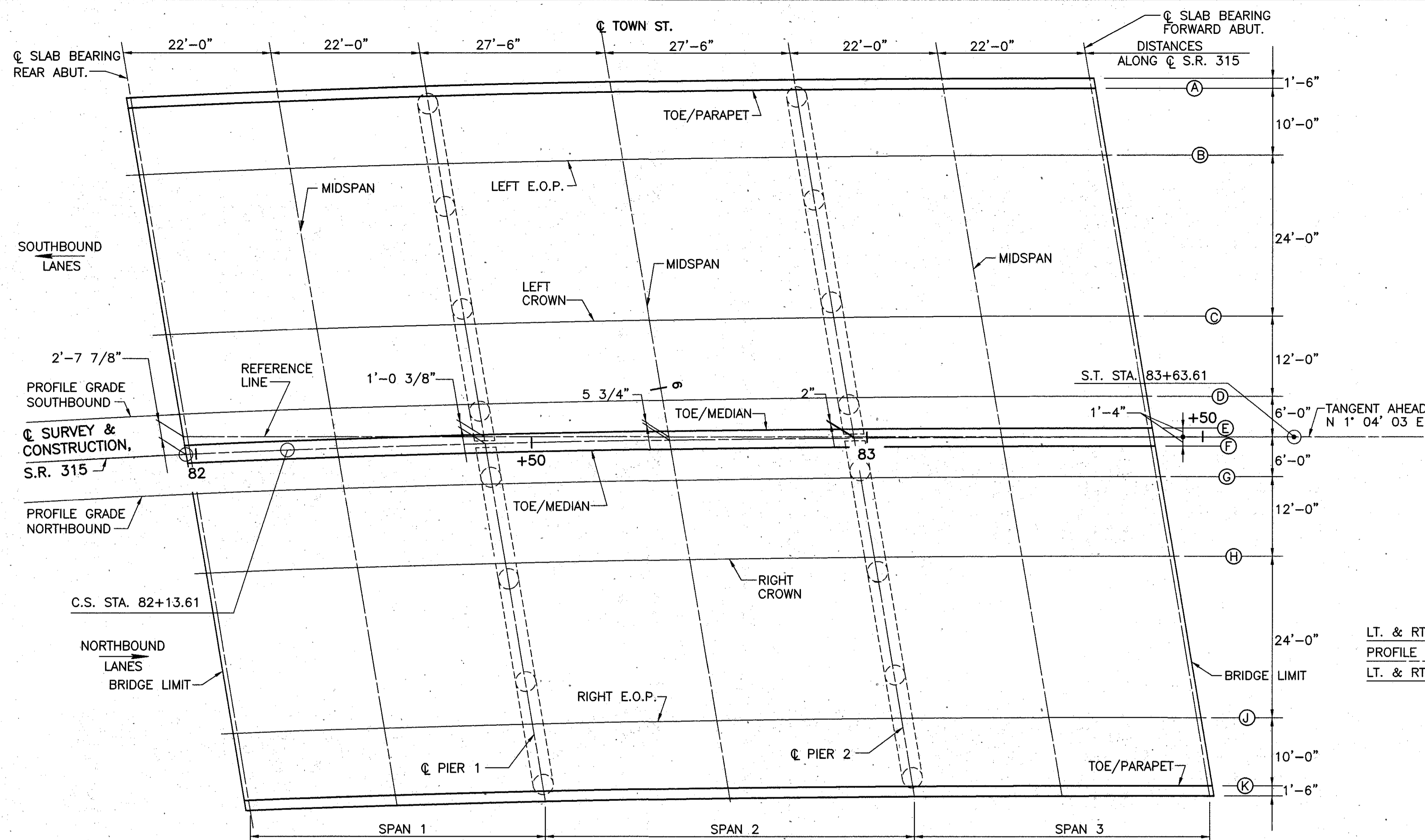
SUPERSTRUCTURE DETAILS

BRIDGE NO. FRA-315-0067
OVER TOWN STREET

FRANKLIN COUNTY STA. 81+98.38 TO 83+42.79

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
TEU	GV		BRH	RKM	11/07/97	WEB 10/29/97

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SCREED ELEVATION LOCATION PLAN N

SUPERELEVATION TRANSITION DIAGRAM
E.O.P. - EDGE OF PAVEMENT (OF OUTER TRAVELED LANE OF APPROACH ROADWAY PROJECTED ACROSS BRIDGE DECK)

TABLE OF SCREED ELEVATIONS

SCREED LINE	SPAN 1 (SOUTH END)		SPAN 2 (INTERIOR)			SPAN 3 (NORTH END)	
	BRIDGE LIMIT REAR ABUTMENT	MIDSPAN	☉ PIER 1	MIDSPAN	☉ PIER 2	MIDSPAN	BRIDGE LIMIT FWD. ABUTMENT
A	729.13	728.97	728.57	728.08	727.31	726.81	726.14
B	729.32	729.16	728.76	728.30	727.57	727.09	726.45
C	728.09	727.93	727.58	727.25	726.66	726.30	725.77
D	727.48	727.31	727.00	726.75	726.22	725.92	725.45
E	727.24	727.07	726.76	726.51	726.00	725.70	725.23
F	727.38	727.21	726.88	726.61	726.06	725.74	725.26
G	727.47	727.29	726.98	726.72	726.19	725.89	725.41
H	726.85	726.68	726.41	726.23	725.77	725.52	725.11
J	725.62	725.45	725.31	725.27	724.96	724.82	724.53
K	725.11	724.95	724.82	724.79	724.49	724.36	724.08

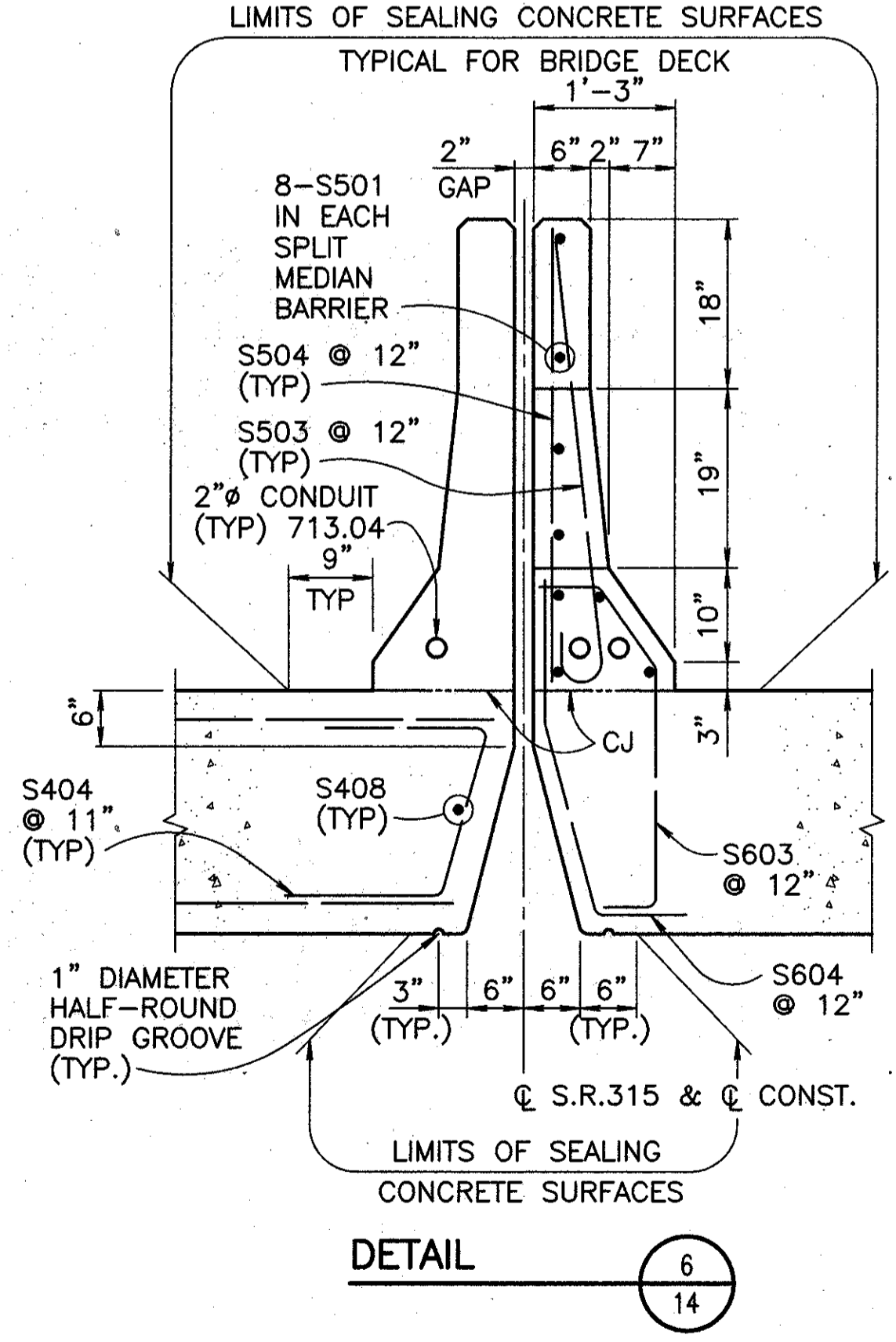
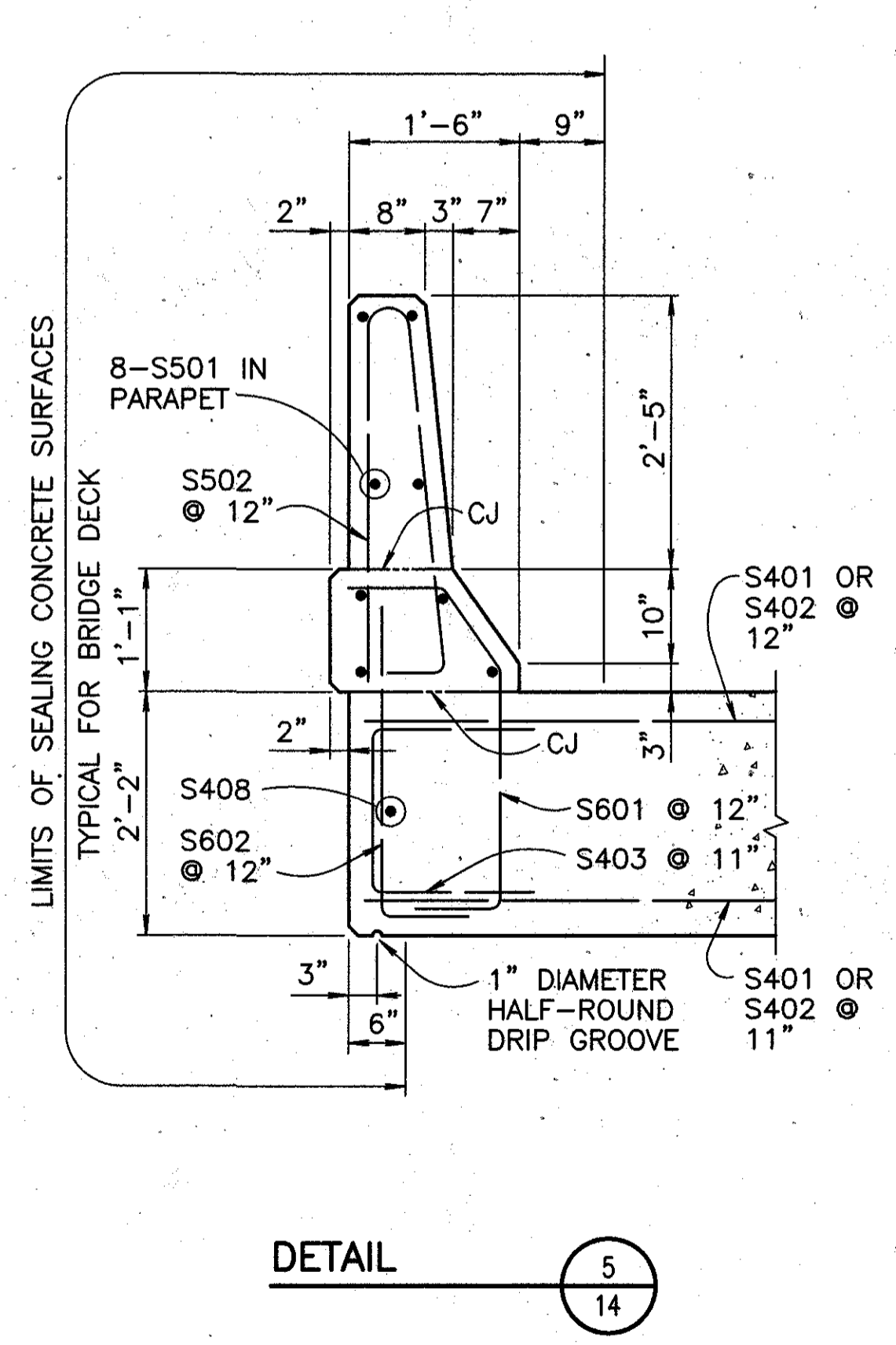
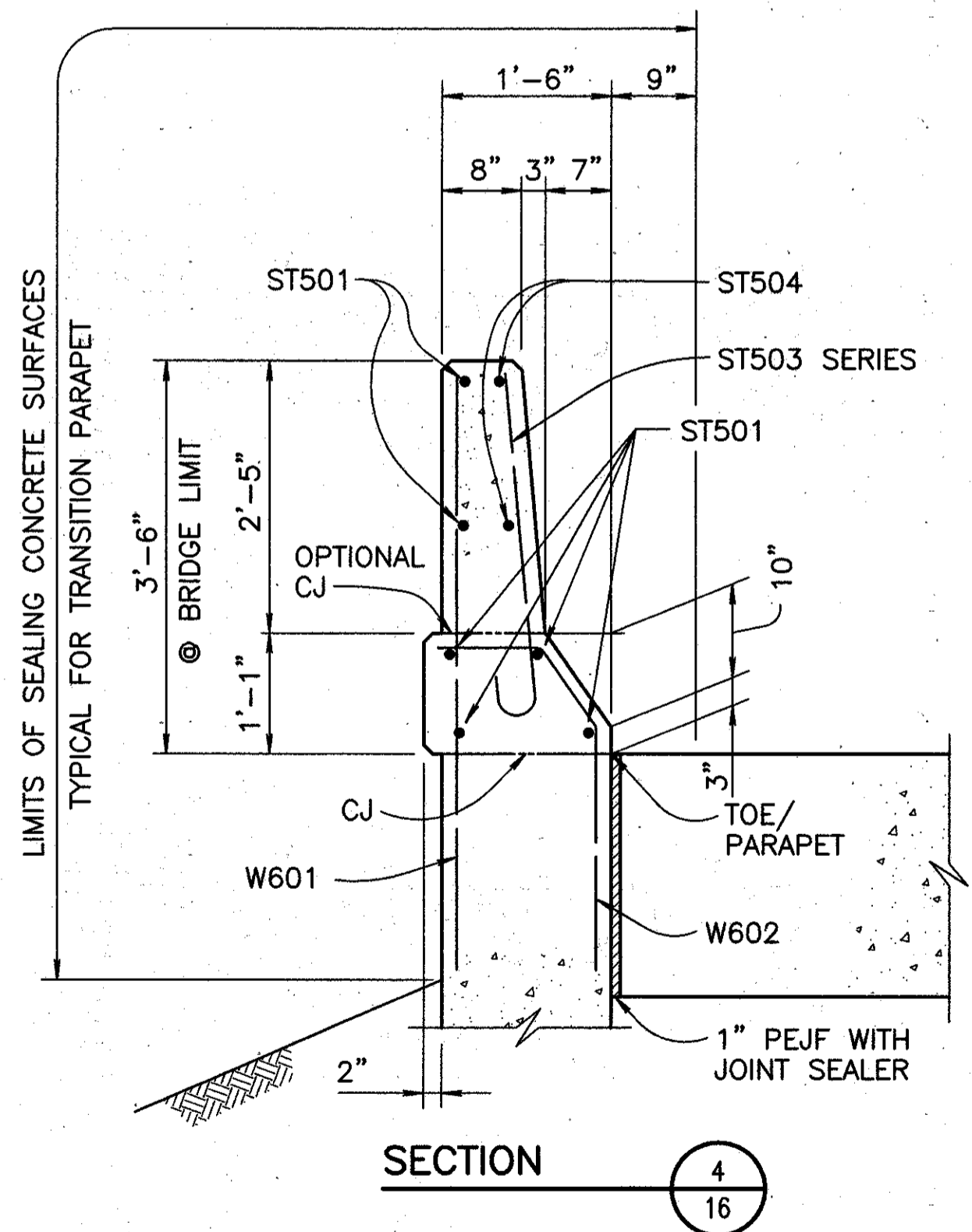
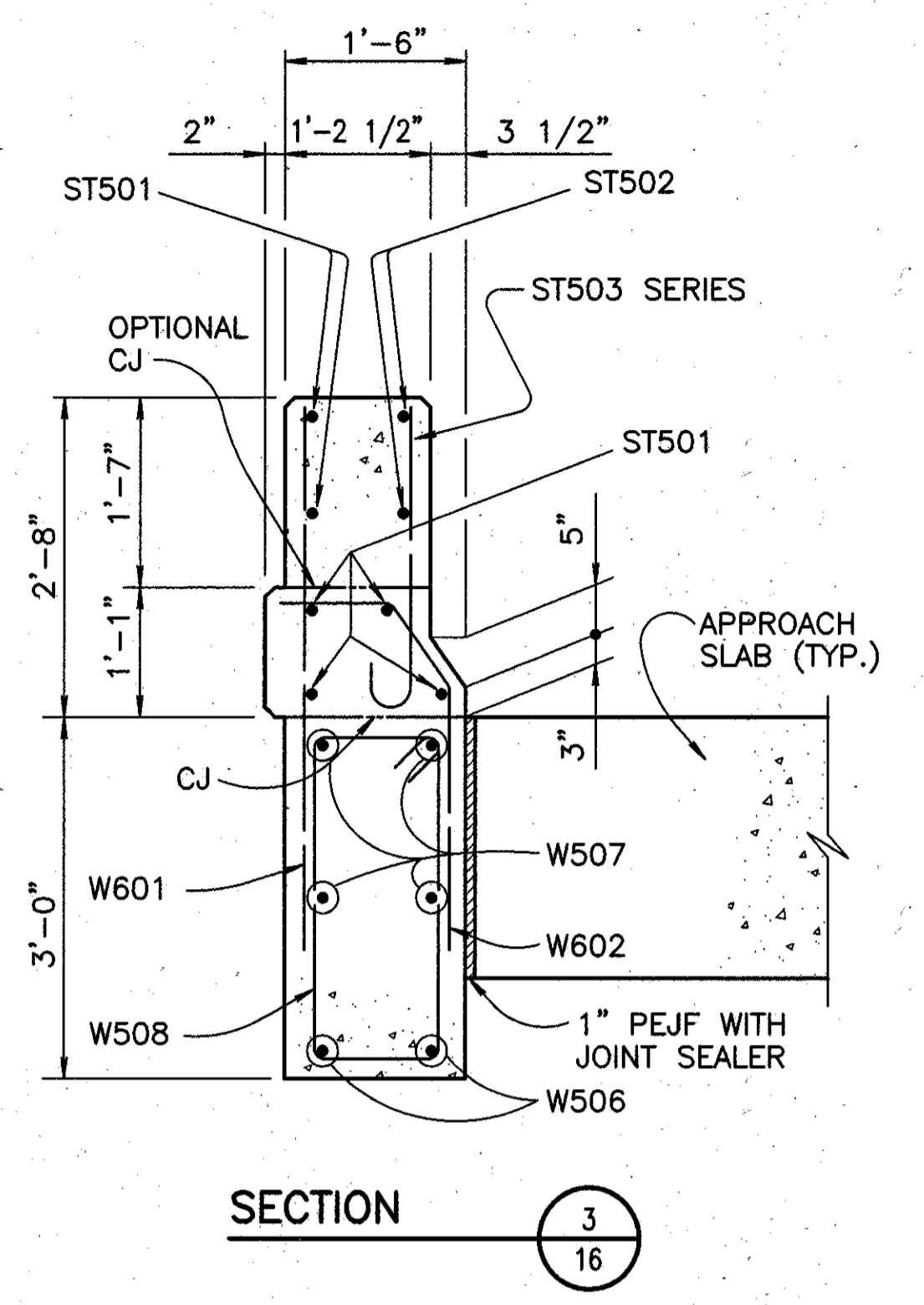
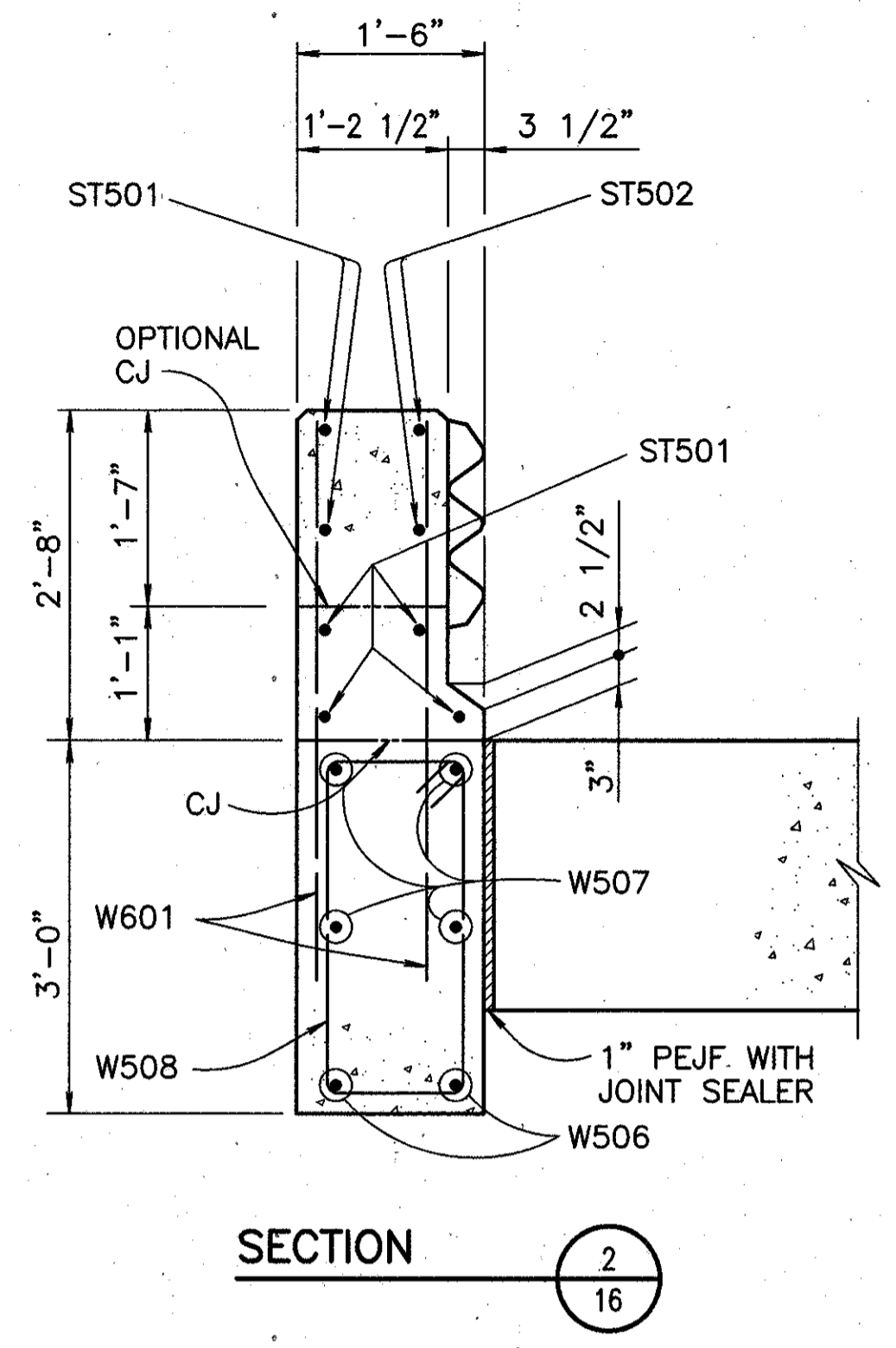
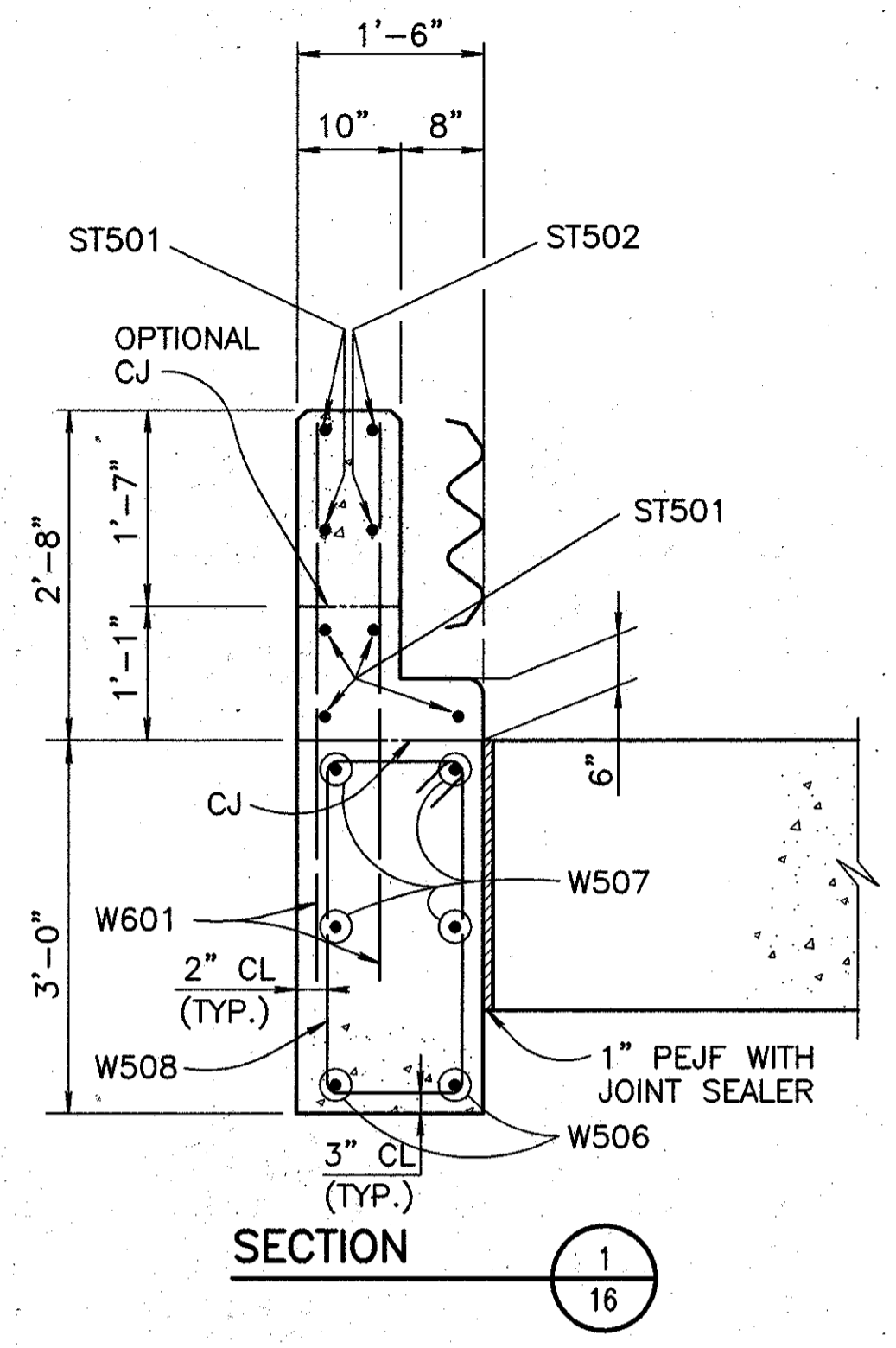
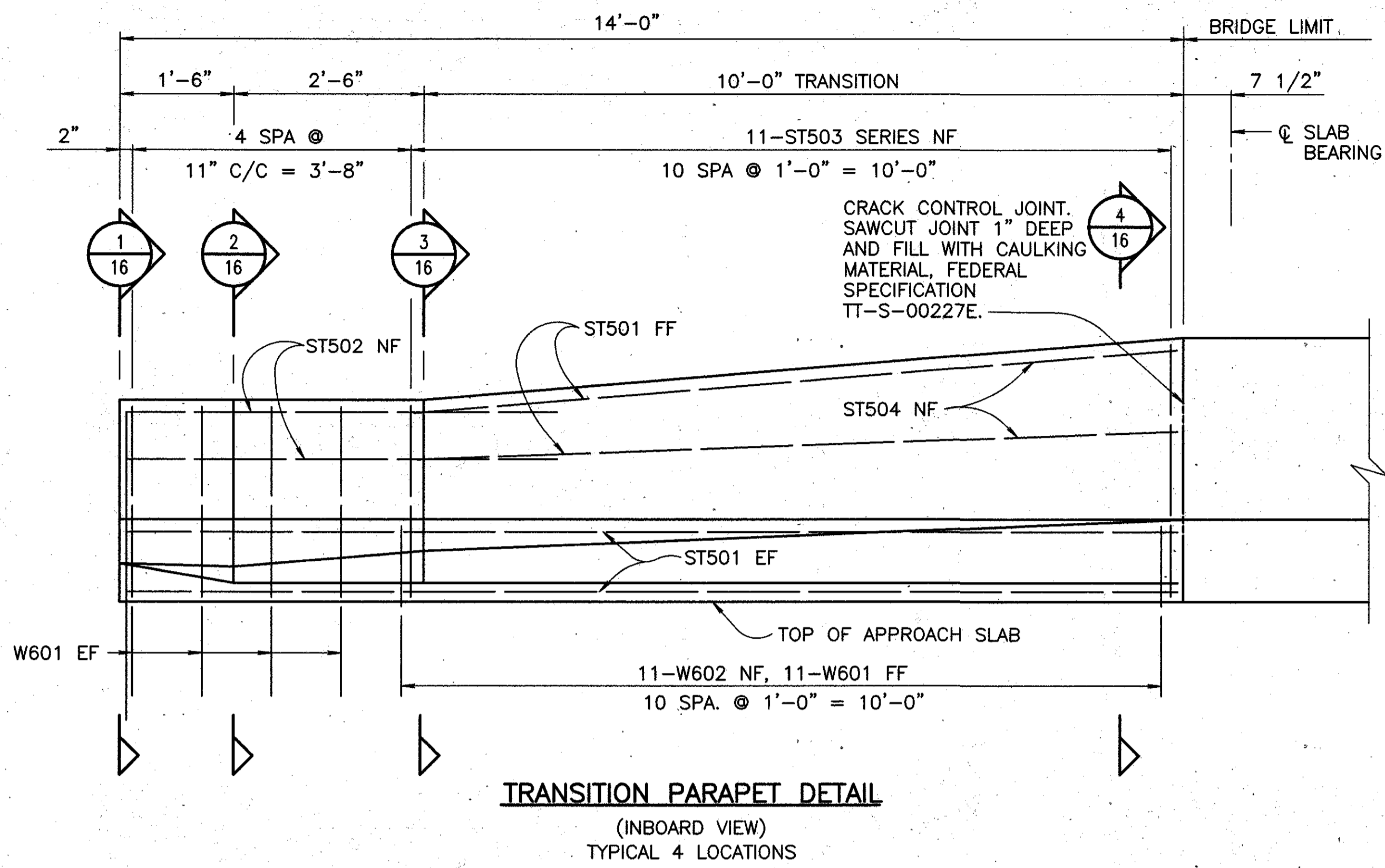
S.R.315
HORIZONTAL
CURVE DATA
P.I. = 81+22.41
Δ = 10°00'00"
D = 3'00'00"
R = 1909.86'
Lc = 183.33'
T = 242.13'
Ls = 150.00'
E = 7.30'
TS = 78+80.28
SC = 80+30.28
CS = 82+13.61
ST = 83+63.61

NOTES:

- THE SCREED ELEVATIONS SHOWN ARE TO THE TOP OF SUPERSTRUCTURE CONCRETE PLACEMENT AND ARE THE ELEVATIONS REQUIRED PRIOR TO RELEASE OF THE SUPPORTING FALSEWORK. PROPER ALLOWANCE HAS BEEN MADE FOR THE DEAD LOAD DEFLECTION CAUSED BY THE WEIGHT OF THE CONCRETE. ADDITIONAL ALLOWANCE SHALL BE MADE TO COMPENSATE FOR THE DEFLECTION OF ANY FALSEWORK MEMBERS SUPPORTING THE ACTUAL CONCRETE PLACEMENT.
- FOR SUPERSTRUCTURE NOTES, SEE SHEET 13/17.

<p>LEGEND</p> <p>CL - CLEAR TYP - TYPICAL EF - EACH FACE NF - NEAR FACE FF - FAR FACE C/C - CENTER TO CENTER CJ - CONSTRUCTION JOINT PEJF - PREFORMED EXPANSION JOINT FILLER SPA - SPACING EXISTING STRUCTURE NEW STRUCTURE</p>	<p align="center">STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 8121 HUNTLEY ROAD, COLUMBUS, OHIO 43229</p> <p align="center">SUPERSTRUCTURE DETAILS</p> <p align="center">BRIDGE NO. FRA-315-0067 OVER TOWN STREET</p> <p align="center">FRANKLIN COUNTY STA. 81+98.38 TO STA. 83+42.79</p>																			
	<table border="1"> <tr> <th>DESIGNED</th> <th>DRAWN</th> <th>TRACED</th> <th>CHECKED</th> <th>REVIEWED</th> <th>DATE</th> <th>REVISED</th> </tr> <tr> <td>TEU</td> <td>GV</td> <td></td> <td>BRH</td> <td>RKM</td> <td>11/07/97</td> <td>WEB 10/29/97</td> </tr> </table>	DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED	TEU	GV		BRH	RKM	11/07/97	WEB 10/29/97					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED														
TEU	GV		BRH	RKM	11/07/97	WEB 10/29/97														

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- TRANSITION PARAPET NOTES:**
- PAYMENT: QUANTITIES OF REINFORCING STEEL, CONCRETE FOR PARAPETS AND MEDIAN BARRIERS, AND CONTROL JOINT CAULKING MATERIAL ARE INCLUDED WITH ITEM SPECIAL, HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE (PARAPET) UNLESS OTHERWISE NOTED.
 - FOR SUBSTRUCTURE NOTES, SEE SHEET 3/17.
 - FOR SUPERSTRUCTURE NOTES, SEE SHEET 13/17.
 - FOR ADDITIONAL TRANSITION PARAPET DETAILS NOT SHOWN, SEE STANDARD DRAWING BR-1.
 - FOR CRACK CONTROL JOINT LOCATIONS, SEE THE GENERAL PLAN, SHEET 1/17. VERTICAL BARS IN THE PARAPETS ARE SPACED AT 12" C/C AS PER DETAILS 5 & 6 THIS SHEET.

LEGEND		STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 8121 HUNTLEY ROAD, COLUMBUS, OHIO 43228						
TYP - TYPICAL		SUPERSTRUCTURE DETAILS						
EF - EACH FACE								
NF - NEAR FACE		BRIDGE NO. FRA-315-0067 OVER TOWN STREET						
FF - FAR FACE								
C/C - CENTER TO CENTER		FRANKLIN COUNTY STA. 81+98.38 TO STA. 83+42.79						
CJ - CONSTRUCTION JOINT								
PEJF - PREFORMED EXPANSION JOINT FILLER		DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
SPA - SPACING		TEU	RTP		BRH	RKM	11/07/97	
CL - CLEAR						WEB	10/29/97	
EXISTING STRUCTURE								
NEW STRUCTURE								

NOTE: EACH RUN OF LONGITUDINAL PARAPET AND MEDIAN BARRIER REINFORCING SHALL BE COMPRISED OF THE FOLLOWING:
4-S501, MINIMUM LAP = 2'-9"

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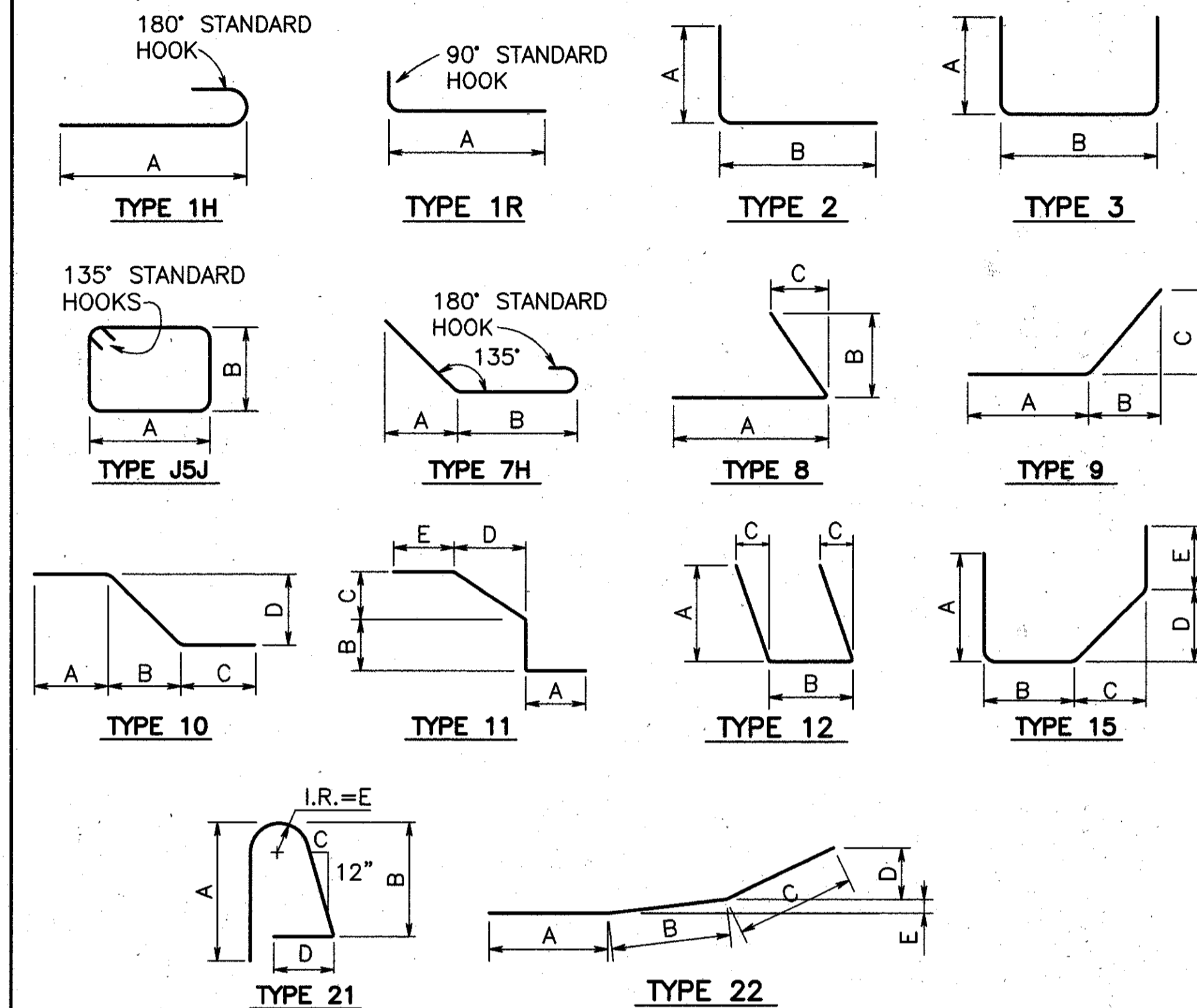
STEEL LIST

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	NOTE
REAR ABUTMENT										
AR501	8	23'-0"	192	STR.						
AR502	36	22'-0"	826	STR.						
AR503	32	7'-2"	238	10	2'-9"	1'-6"	2'-9"	0'-10"		
AR504	76	7'-10"	620	3	1'-7"	4'-11"				
AR505	76	6'-8"	528	3	1'-0"	4'-11"				
AR506	78	13'-10"	1125	3	6'-0"	1'-11"				
AR507	78	9'-4"	759	3	3'-9"	1'-11"				
AR508	2	21'-8"	45	STR.						
AR509	18	40'-0"	751	STR.						
AR510	12	16'-6"	207	STR.						
AR511	2	5'-6"	11	STR.						
AR512	2	10'-4"	22	STR.						
AR513	2	31'-6"	66	STR.						
AR514	6	5'-11"	37	9	3'-0"	0'-6"	3'-0"			
AR515	12	6'-0"	75	STR.						
AR516	6	5'-11"	37	8	3'-0"	0'-6"	3'-0"			
AR1001	8	53'-5"	1839	STR.						8
D801	68	6'-3"	1133	7H	1'-0"	4'-0"				
		TOTAL=	8511							
FORWARD ABUTMENT										
AF501	8	35'-2"	293	STR.						
AF502	16	37'-6"	626	STR.						
AF503	16	7'-2"	119	10	2'-9"	1'-6"	2'-9"	0'-10"		
AF504	72	7'-10"	587	3	1'-7"	4'-11"				
AF505	72	6'-8"	500	3	1'-0"	4'-11"				
AF506	76	13'-10"	1097	3	6'-0"	1'-11"				
AF507	76	9'-4"	740	3	3'-9"	1'-11"				
AF508	2	18'-8"	39	STR.						
AF509	20	40'-0"	834	STR.						
AF510	16	16'-6"	275	STR.						
AF511	2	35'-9"	75	STR.						
AF512	6	5'-11"	37	9	3'-0"	0'-6"	3'-0"			
AF513	12	6'-0"	75	STR.						
AF514	6	5'-11"	37	8	3'-0"	0'-6"	3'-0"			
AF1001	8	53'-8"	1847	STR.						8
D801	68	6'-3"	1133	7H	1'-0"	4'-0"				
		TOTAL=	8314							
REAR ABUTMENT WINGWALLS										
W501	16	11'-5"	191	STR.						
W502	10	10'-0"	105	J5J	3'-2"	1'-7"				
W503	18	13'-1"	246	3	6'-1"	1'-2"				
W504	16	13'-3"	220	3	6'-2"	1'-2"				
W505	12	8'-11"	112	STR.						
W506	4	14'-11"	62	STR.						
W507	8	13'-8"	114	STR.						
W508	8	8'-0"	67	J5J	2'-7"	1'-2"				
W509	2	4'-6"	9	STR.						
W601	38	4'-6"	257	STR.						
W602	22	3'-7"	117	11	0'-0"	2'-3"	0'-9"	0'-6"	0'-8"	
		TOTAL=	1500							

STEEL LIST

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	NOTE
FORWARD ABUTMENT WINGWALLS										
W501	16	11'-5"	191	STR.						
W502	10	10'-0"	105	J5J	3'-2"	1'-7"				
W503	18	13'-1"	246	3	6'-1"	1'-2"				
W504	16	13'-3"	220	3	6'-2"	1'-2"				
W505	12	8'-11"	112	STR.						
W506	4	14'-11"	62	STR.						
W507	8	13'-8"	114	STR.						
W508	8	8'-0"	67	J5J	2'-7"	1'-2"				
W509	2	4'-6"	9	STR.						
W601	38	4'-6"	257	STR.						
W602	22	3'-7"	117	11	0'-0"	2'-3"	0'-9"	0'-6"	0'-8"	
		TOTAL=	1500							
SUPERSTRUCTURE										
S401	616	30'-0"	12345	STR.						
S402	616	26'-1"	10733	STR.						
S403	326	4'-0"	862	3	1'-3"	1'-8"				
S404	326	4'-3"	928	12	1'-3"	1'-9"	0'-4"			
S405	136	34'-3"	3112	STR.						
S406	136	46'-9"	4247	STR.						
S407	132	22'-0"	1940	STR.						
S408	12	49'-2"	394	STR.						
S501	128	38'-1"	5084	STR.						
S502	290	7'-0"	2105	21	3'-0"	3'-3"	0'-1"	0'-8"	0'-2"	
S503	290	4'-6"	1361	1H	3'-11"					
S504	290	3'-11"	1185	STR.	3'-11"					
S601	290	4'-6"	1965	15	0'-11"	2'-3"	0'-9"	0'-6"	0'-9"	
S602	290	3'-7"	1565	2	0'-11"	2'-10"				
S603	290	3'-10"	1656	15	0'-6"	2'-3"	0'-9"	0'-6"	0'-5"	
S604	290	3'-6"	1534	11	0'-0"	0'-11"	0'-4"	1'-5"	1'-5"	
S801	152	33'-2"	13460	STR.						
S802	132	35'-0"	12335	STR.						
S803	128	31'-2"	10652	1H	30'-3"					
S804	152	28'-6"	11566	STR.						
S805	76	32'-4"	6561	STR.						
S806	66	31'-6"	5551	STR.						
S807	64	31'-6"	5383	STR.						
S1001	24	53'-0"	5473	STR.						
S1101	140	40'-9"	30311	STR.						
S1102	140	24'-0"	17852	STR.						
S1103	136	27'-0"	19509	STR.						
S1104	136	27'-0"	19509	STR.						
S1105	70	47'-10"	17790	STR.						
D501	216	3'-6"	779	1R	2'-9"					
		TOTAL=	227747							
TRANSITION PARAPETS										
ST501	16	13'-10"	231	STR.						
ST502	8	5'-8"	47	22	1'-10"	2'-5"	1'-5"	0'-2"	0'-5"	
	4	3'-0"			2'-5"					
ST503	SER. OF	TO	157	1H	DIMENSION A VARIES BY 0'-1"					1
	11	3'-10"			3'-3"					
ST504	8	10'-0"	83	STR.						
		TOTAL=	518							

BENDING DIAGRAMS



NOTES:

- SERIES BARS - EACH BAR VARIES BY TABULATED AMOUNTS.
- ALL DIMENSIONS ARE OUT TO OUT UNLESS NOTED OTHERWISE.
- THE BAR SIZE NUMBER IS SPECIFIED IN THE 'MARK' COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, OR THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER.
- ALL REINFORCING STEEL SHALL BE EPOXY COATED.
- TYPE 'STR.' MEANS STRAIGHT BAR.
- PAYMENT FOR THE REINFORCING STEEL IN EACH STRUCTURAL UNIT OF THE BRIDGE SHALL BE INCLUDED WITH THE UNITS CORRESPONDING ITEM 511, CONCRETE.
- WEIGHTS SHOWN IN THIS REINFORCING STEEL LIST ARE FOR INFORMATION ONLY.
- THE LONGITUDINAL NO. 10 BARS IN THE BRIDGE SEAT, AT THE OPTION OF THE CONTRACTOR, MAY BE FURNISHED EITHER IN ONE LENGTH AS SHOWN ON PLANS, OR SPLICED. IF THE SPLICE OPTION IS CHOSEN, THE NO. 10 BARS SHALL BE LAPPED 9'-3".

STILSON & ASSOCIATES, INC.
 CONSULTING ENGINEERING AND ARCHITECTURE
 8121 HUNTLEY ROAD, COLUMBUS, OHIO 43229

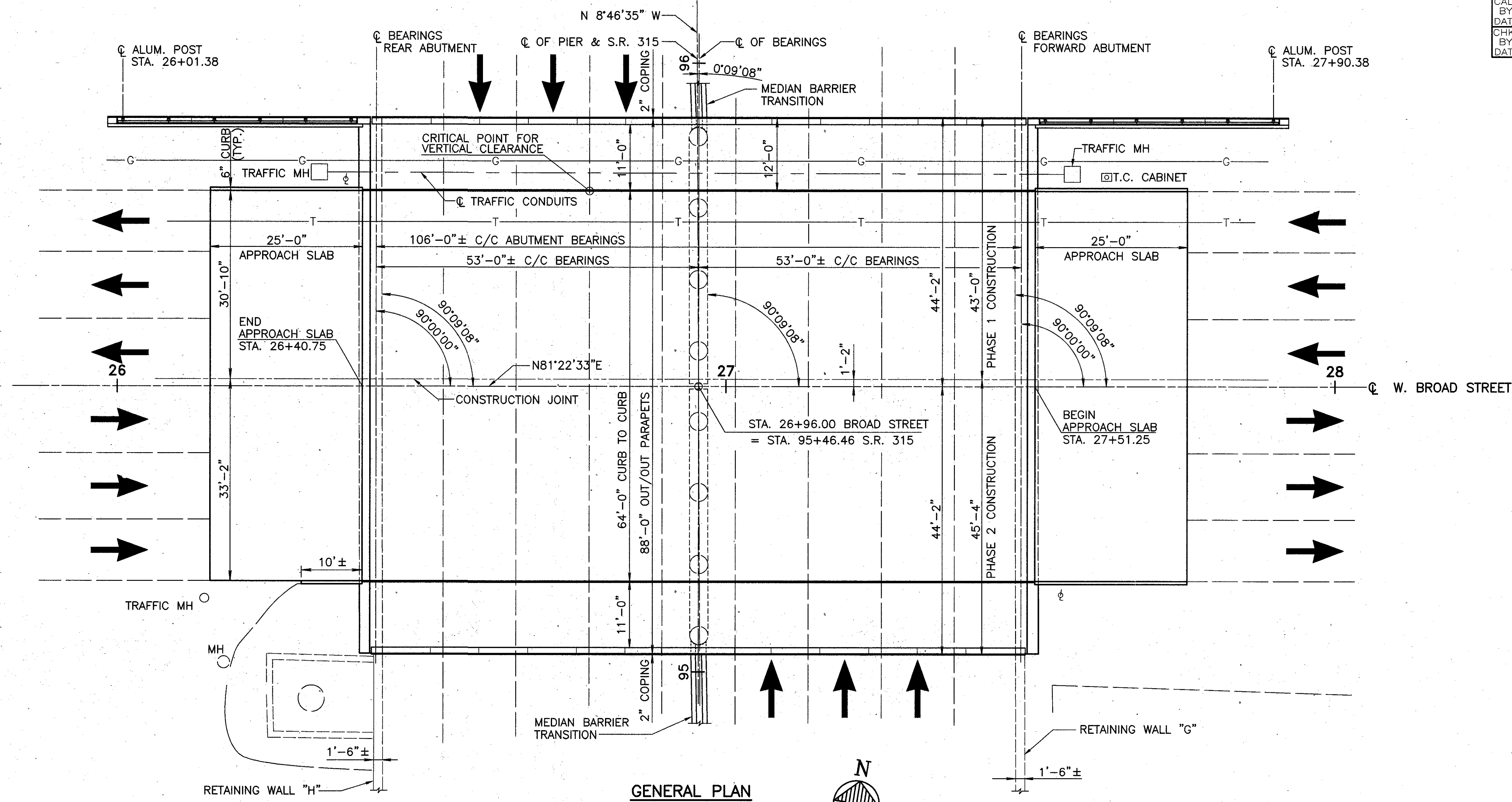
REINFORCING STEEL LIST

BRIDGE NO. FRA-315-0067

OVER TOWN STREET

FRANKLIN COUNTY STA. 81+98.38 TO
 STA. 83+42.79

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
TEU	RTP		BRH	RKM	11/07/97	WEB 10/29/97



NOTE:
 VANDAL PROTECTION FENCE NOT SHOWN FOR CLARITY.
 --- EXISTING STRUCTURES
 --- NEW STRUCTURES

TRAFFIC DATA		
CURRENT (1998):	ADT=24810	ADTT=992
DESIGN YEAR (2018):	ADT=27300	ADTT=1092

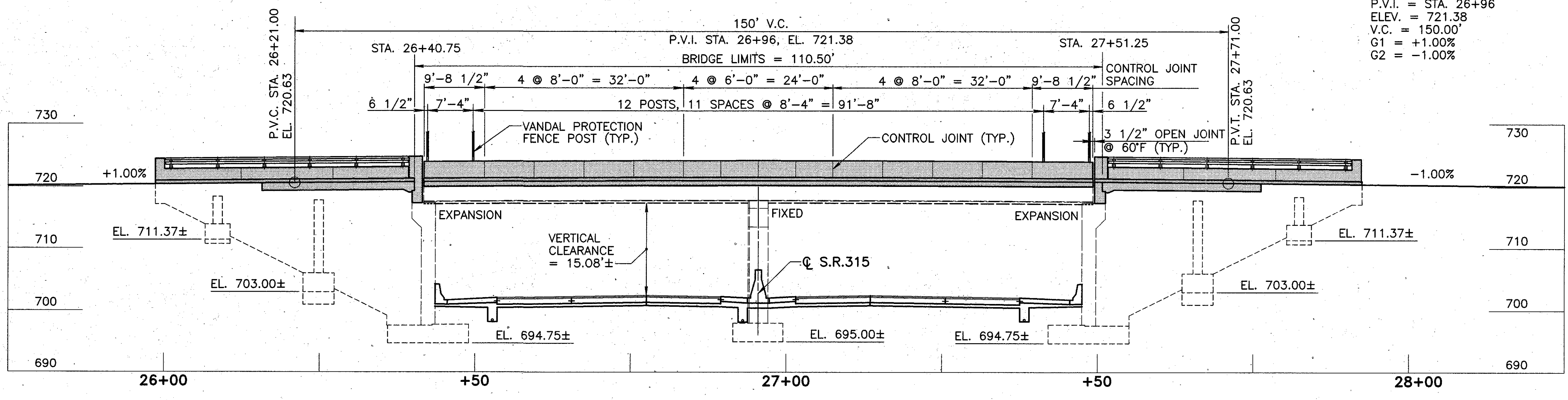
EXISTING STRUCTURE

TYPE : 2 SPAN CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE
 SPANS : 53'-53' C/C BEARINGS
 LOAD FREQUENCY RATING : CF 2000 (51) - (ADEQUATE FOR AASHO ALTERNATE LOADING)
 ROADWAY : 64' F/F OF 11'-0" SIDEWALKS.
 SKEW : SUPERSTRUCTURE NONE, SUBSTRUCTURE 0° 09' 08" R.F.
 SURFACE COURSE : BITUMINOUS CONCRETE
 APPROACH SLABS : AS-1-54 (25' LONG)
 ALIGNMENT : TANGENT
 SUPERELEVATION : NONE

PROPOSED STRUCTURE

PROPOSED WORK : NEW COMPOSITE REINFORCED CONCRETE DECK AND END DAM ON EXISTING REINFORCED CONCRETE SUBSTRUCTURE
 TYPE : 2 SPAN CONTINUOUS STEEL BEAM WITH COMPOSITE REINFORCED CONCRETE DECK AND REINFORCED CONCRETE SUBSTRUCTURE
 SPANS : 53'-53' C/C BEARINGS
 DESIGN LOADING : HS20-44 (CASE II) AND THE ALTERNATE MILITARY LOADING
 ROADWAY : 64'-0" F/F OF 11'-0" SIDEWALKS
 SKEW : SUPERSTRUCTURE NONE, SUBSTRUCTURE 0° 09' 08" R.F.
 WEARING SURFACE : MONOLITHIC CONCRETE-ONE INCH ASSUMED
 APPROACH SLABS : AS-1-81, 25' LONG
 ALIGNMENT : TANGENT
 SUPERELEVATION : NONE
 STRUCTURE FILE NO. : 2502496
 LATITUDE : N 39° 57' 36"
 LONGITUDE : W 83° 01' 08"

VERTICAL CURVE DATA
 P.V.I. = STA. 26+96
 ELEV. = 721.38
 V.C. = 150.00'
 G1 = +1.00%
 G2 = -1.00%



STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 6121 HUNTLEY ROAD, COLUMBUS, OHIO 43229					
GENERAL PLAN AND ELEVATION BRIDGE NO. FRA-40-1158 WEST BROAD STREET OVER S.R. 315 FRANKLIN COUNTY STA. 26+40.75 TO STA. 27+51.25					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
JN	GV		TDW	RKM	11/07/97
				TEU	10/29/97

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BRIDGE GENERAL NOTES

STANDARD DRAWING REFERENCES

DESCRIPTION	DWG. NO.	SHT.	DATE
REINFORCED CONCRETE APPROACH SLABS	AS-1-81	1-3	11-27-81/9-15-94 (REV.)
BRIDGE SIDEWALK RAILING WITH CONCRETE PARAPETS	BR-2-82	1	11- 1-82
STRIP SEAL EXPANSION JOINTS	EXJ-4-87	1-5	1-20-94/2-14-97 (REV.)
STEEL STRINGER STRUCTURES			
GENERAL STEEL DETAILS	GSD-1-96	1-3	2-12-97
VANDAL PROTECTION FENCE	VPF-1-90	1-6	9-26-90/3-24-93 (REV.)
PORTABLE CONCRETE BARRIER	PCB-91	1	4-24-92

SUPPLEMENTAL SPECIFICATION REFERENCES

DESCRIPTION	NO.	DATE
FIELD PAINTING OF EXISTING STEEL, SYSTEM OZEU	875	7/17/95
FIELD PAINTING OF NEW STEEL, SYSTEM IZEU	816	4/21/97
OZEU STRUCTURAL STEEL PAINT	910	7/17/95
PREFORMED POLYCHLOROPRENE ELASTOMERIC SEALS FOR STRUCTURAL STEEL JOINTS	949	9/26/86

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1996 AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING

HS20-44 (CASE II) AND THE ALTERNATE MILITARY LOADING. 85 POUNDS PER SQUARE FOOT OF SIDEWALK.

DESIGN DATA

CONCRETE CLASS S - COMPRESSIVE STRENGTH 4500 P.S.I. (SUPERSTRUCTURE)
 CONCRETE CLASS C - COMPRESSIVE STRENGTH 4000 P.S.I. (SUBSTRUCTURE)
 REINFORCING STEEL - ASTM A615, A616 OR A617
 GRADE 60 MINIMUM YIELD STRENGTH 60,000 P.S.I.
 STRUCTURAL STEEL - A36 - YIELD STRENGTH 36,000 P.S.I.

DECK PROTECTION METHOD

EPOXY COATED REINFORCING STEEL.
 2-1/2" CONCRETE COVER.
 SEALING OF CONCRETE SURFACES.

MONOLITHIC WEARING SURFACE IS ASSUMED TO BE 1" THICK FOR DESIGN PURPOSE.

PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

DESCRIPTION: THIS WORK SHALL CONSIST OF THE REMOVAL OF CONCRETE DECKS INCLUDING SIDEWALKS, PARAPETS, RAILINGS, DECK JOINTS AND OTHER APPURTENANCES FROM STEEL SUPPORTING SYSTEMS (BEAMS, GIRDERS, CROSS FRAMES, ETC.). CARE SHALL BE TAKEN DURING DECK REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. IN THIS RESPECT, THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT IS PROHIBITED.

PROTECTION OF TRAFFIC: PRIOR TO DEMOLITION OF ANY PORTIONS OF THE EXISTING SUPERSTRUCTURE, THE CONTRACTOR SHALL SUBMIT HIS PLANS FOR THE PROTECTION OF TRAFFIC (VEHICULAR, PEDESTRIAN, ETC.) ADJACENT TO AND/OR UNDER THE STRUCTURE TO THE DIRECTOR FOR APPROVAL. THESE PLANS SHALL INCLUDE PROVISIONS FOR ANY DEVICES AND STRUCTURES THAT MAY BE NECESSARY TO ENSURE SUCH PROTECTION. TEMPORARY VERTICAL CLEARANCES SPECIFIED ON THE PLANS OR IN THE PROPOSAL SHALL BE MAINTAINED AT ALL TIMES EXCEPT AS OTHERWISE APPROVED BY THE DIRECTOR.

PROTECTION OF STEEL SUPPORTS SYSTEMS: BEFORE DECK SLAB CUTTING IS PERMITTED, THE OUTLINE OF PRIMARY STEEL MEMBERS IN CONTACT WITH THE BOTTOM OF THE DECK SHALL BE DRAWN ON THE SURFACE OF DECK. SMALL DIAMETER PILOT HOLES SHALL BE DRILLED 2 INCHES OUTSIDE THESE LINES TO CONFIRM THE LOCATION OF FLANGE EDGES. DECK CUTS OVER OR WITHIN 2 INCHES OF FLANGE EDGES SHALL NOT EXTEND LOWER THAN THE BOTTOM LAYER OF DECK SLAB REINFORCING STEEL. CUTS MADE OUTSIDE 2 INCHES OF FLANGE EDGES MAY EXTEND THE FULL DEPTH OF THE DECK. DURING CUTTING OF THE DECK SLAB, CARE SHALL BE TAKEN NOT TO DAMAGE STEEL MEMBERS THAT ARE TO BE INCORPORATED INTO THE PROPOSED STRUCTURE.

PROTECTION OF UTILITIES: ALL UTILITY LINES SHALL BE CAREFULLY PROTECTED AND SUPPORTED DURING THE REMOVAL OF CONCRETE DECK AND CONCRETE BACK WALLS.

REMOVAL METHODS: CONCRETE MAY BE REMOVED BY CUTTING AND BY MEANS OF HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED OR BLUNTED CHISEL TYPE TOOLS. FOR REMOVALS ABOVE STEEL MEMBERS, A HAMMER HEAVIER THAN 35 POUNDS BUT NOT TO EXCEED 90 POUNDS MAY BE USED AT THE APPROVAL OF THE ENGINEER, TO ENSURE ADEQUATE DEPTH CONTROL AND TO PREVENT NICKING OR GOUGING THE PRIMARY STEEL MEMBERS.

DECK REMOVALS: DUE TO THE POSSIBLE PRESENCE OF WELDED ATTACHMENTS TO EXISTING STRUCTURAL STEEL (FINISHING MACHINE, SCUPPER AND FORM SUPPORTS, ETC.), CARE SHALL BE TAKEN DURING DECK REMOVAL TO AVOID DAMAGING STRINGERS WHICH ARE TO REMAIN. STRINGERS DAMAGED BY THE CONTRACTOR'S REMOVAL OPERATIONS SHALL, AT NO COST TO THE PROJECT, BE REPLACED OR REPAIRED. PROPOSED REPAIRS, DEVELOPED BY A REGISTERED PROFESSIONAL ENGINEER, SHALL BE SUBMITTED IN WRITING FOR REVIEW AND APPROVAL BY THE DIRECTOR.

EXTRANEEOUS MEMBERS: EXISTING EXTRANEEOUS MEMBERS (I.E., FINISHING MACHINE AND FORM SUPPORTS, ETC., AND THE SUPPORT FOR SCUPPERS AND BULB ANGLES WHICH ARE TO BE REMOVED) ATTACHED BY WELDED CONNECTIONS TO PORTIONS OF THE TOP FLANGES DESIGNATED "TENSION" SHALL BE REMOVED AND THE FLANGE SURFACES GROUND SMOOTH. GRINDING SHALL BE CAREFULLY DONE AND PARALLEL TO THE FLANGES.

LOADING LIMITATIONS: NO PART OF THE STRUCTURE SHALL BE SUBJECTED TO UNIT STRESSES THAT EXCEED 136.5% OF THE ALLOWABLE UNIT STRESSES GIVEN IN THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES DUE EITHER TO DEMOLITION, ERECTION OR CONSTRUCTION METHODS, OR TO THE USE OR MOVEMENT OF DEMOLITION OR ERECTION EQUIPMENT ON OR ACROSS THE STRUCTURE. STRUCTURAL ANALYSIS COMPUTATIONS, BY A REGISTERED PROFESSIONAL ENGINEER, SHOWING THE ALLOWABLE STRESSES AND THE MAXIMUM STRESSES PRODUCED BY THE CONTRACTOR'S METHODS OR EQUIPMENT SHALL BE SUBMITTED TO THE DIRECTOR FOR REVIEW AND APPROVAL AT LEAST TWO WEEKS PRIOR TO THE START OF THE WORK.

PAYMENT: THIS WORK WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE BID, WHICH PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN CONFORMANCE WITH THESE REQUIREMENTS, WITH PERTINENT PROVISIONS OF 202, AND TO THE SATISFACTION OF THE ENGINEER.

CUT LINE CONSTRUCTION JOINT PREPARATION

SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1" DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. WHERE PRACTICABLE, THE EXISTING REINFORCING STEEL WHERE REQUIRED IN THE PLANS SHALL BE LEFT IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACE AND EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THEN, THE JOINT SURFACE AND EXPOSED REINFORCEMENT SHALL BE THOROUGHLY CLEANED OF ALL DIRT, DUST, OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. CONCRETE BONDING SURFACES SHALL BE WET WITHOUT FREE WATER AS CONCRETE IS PLACED.

SUBSTRUCTURE CONCRETE REMOVAL SHALL BE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18-INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18-INCH LIMIT, A HAMMER HEAVIER THAN 35 POUNDS, BUT NOT TO EXCEED 90 POUNDS, MAY BE USED AT THE APPROVAL OF THE ENGINEER. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.02.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD.

REPLACEMENT OF EXISTING REINFORCING STEEL

ANY EXISTING REINFORCING BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND WHICH ARE MADE UNUSABLE BY CONCRETE REMOVAL OPERATIONS SHALL BE REPLACED WITH NEW STEEL. ANY EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION SHALL BE REPLACED WITH NEW STEEL. THE CONTRACTOR SHALL PROVIDE REPLACEMENT DETAIL FOR APPROVAL BY THE ENGINEER. COST OF ALL REINFORCING STEEL SHALL BE INCLUDED WITH APPROPRIATE ITEM 511 CONCRETE ITEMS.

ITEM 503. UNCLASSIFIED EXCAVATION, AS PER PLAN

UNCLASSIFIED EXCAVATION SHALL BE IN ACCORDANCE WITH 503 EXCEPT THAT THE BACKFILL MATERIAL BEHIND THE ABUTMENTS SHALL BE 203 GRANULAR MATERIAL PLACED IN 6 INCH LIFTS AND COMPACTED IN ACCORDANCE WITH 304.04.

ITEM 520. PNEUMATICALLY PLACED MORTAR, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ITEM 520, THE REQUIRED 28 DAY STRENGTH IN SECTION 520.09, RECONSTRUCTION TESTING, PARAGRAPH 3, SHALL BE INCREASED TO 5000 PSI WITH A MINIMUM COMPRESSIVE STRENGTH AFTER 7 DAYS OF 3800 PSI.

THE AVERAGE COMPRESSIVE STRENGTH REQUIRED IN 520.11, INSPECTION AND TESTING, PARAGRAPH 2, SHALL BE A MINIMUM OF 3600 PSI AT 7 DAYS WITH NO SINGLE CORE TEST LESS THAN 3100 PSI.

ITEM 513. STRUCTURAL STEEL FOR REHABILITATION, AS PER PLAN

STEEL MEMBERS TO BE FABRICATED UNDER THIS ITEM WILL NOT REQUIRE SHOP DRAWINGS PRIOR TO FABRICATION. THE CONTRACTOR SHALL MAKE NECESSARY MEASUREMENTS AND PREPARE SKETCHES, DRAWINGS, TABLES, ETC. THE ENGINEER SHALL HAVE AUTHORITY AND RESPONSIBILITY FOR ENSURING THAT THE FABRICATED STEEL IS ACCEPTABLE. TECHNICAL ASSISTANCE WILL BE PROVIDED ON REQUEST BY THE BUREAU OF BRIDGES. MILL TEST REPORTS AND SHIPPING DOCUMENTS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO INCORPORATING STEEL ITEMS INTO THE WORK, AS REQUIRED BY 501.07. AFTER FABRICATION, THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR REVIEW AND APPROVAL TO ENSURE THAT THE DRAWINGS DEPICT THE STEEL AS ACTUALLY INCORPORATED INTO THE WORK. THE ENGINEER WILL THEN SEND ONE APPROVED SET TO THE BUREAU OF BRIDGES FOR INFORMATION. PAY WEIGHTS SHALL BE COMPUTED IN COMPLIANCE WITH 513 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS AND SUBMITTED TO THE ENGINEER FOR HIS REVIEW AND APPROVAL. THE FABRICATOR SHALL FURNISH A 35 MILLIMETER MICROFILM COPY OF EACH SHOP DRAWING, WHICH SHALL BE MOUNTED ON AN APERTURE CARD AS SPECIFIED IN 501.05. STEEL MEMBERS INCLUDED IN THIS ITEM INCLUDE INTERMEDIATE AND END CROSSFRAMES.

ITEM 516. JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN
 THIS ITEM SHALL CONSIST OF FURNISHING ALL NECESSARY LABOR, MATERIALS, AND EQUIPMENT TO RAISE OR REPOSITION ANY EXISTING STRUCTURES TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, INSTALLATION AND OPERATION OF AN ADEQUATE JACKING SYSTEM, INCLUDING ANY TEMPORARY OR PERMANENT SUPPORTS NECESSARY TO PERFORM THE WORK DESCRIBED IN THE PROJECT PLANS. THREE (3) SETS OF JACKING PLANS, WHICH INCLUDE THE INFORMATION DESCRIBED IN THIS NOTE, SHALL BE SUBMITTED TO THE DIRECTOR FOR APPROVAL AT LEAST THIRTY (30) DAYS BEFORE ACTUAL WORK IS TO BEGIN. THE PLANS SHALL BE PREPARED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER.

JACKING SUBMITTALS SHALL INCLUDE AT LEAST THE FOLLOWING:

1. THE SIGNATURE AND NUMBER, OR PROFESSIONAL SEAL, OF THE REGISTERED PROFESSIONAL ENGINEER WHO PREPARED THE SUBMITTAL.
2. CALCULATIONS AND ANALYSIS OF THE STRUCTURE TO DETERMINE AND DEFINE THE ACTUAL LOADING APPLIED AT THE CONTRACTOR'S SELECTION JACKING POINTS.
3. A DRAWING SHOWING THE PHYSICAL AND DIMENSIONAL POSITION OF THE JACKS WITH RESPECT TO THE STRUCTURE INCLUDING CLEARANCES AND CENTER OF LIFT.
4. A SCHEMATIC LAYOUT OF JACKS, CHECK VALVES, PUMPS WITH 3 WAY RETRACTOR VALVE, PRESSURE GAGES, FLOW CONTROL VALVES, ETC. IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. ALL JACKS FOR EACH ABUTMENT OR PIER SHALL BE CONNECTED TOGETHER. ALL JACKS AT EACH ABUTMENT OR PIER SHALL BE THE SAME SIZE.
5. ANALYSIS AND CALCULATIONS OF THE STRESSES INDUCED OR CREATED IN THE STRUCTURE AND ANY TEMPORARY OR PERMANENT SUPPORTS. DESIGN CALCULATIONS FOR ANY TEMPORARY OR PERMANENT SUPPORTS.
6. PHYSICAL DIMENSIONS, MATERIALS, AND FABRICATION DETAILS OF ANY TEMPORARY OR PERMANENT SUPPORTS. HORIZONTAL AND VERTICAL MOVEMENT RESTRAINT SHALL BE PROVIDED.
7. A STEP BY STEP PROCEDURES DETAILING ALL STEPS IN THE JACKING OPERATION.
8. METHOD OF ATTACHMENT TO STRUCTURAL MEMBERS. WELDING TO TENSION AREAS WILL NOT BE PERMITTED.

THE ENTIRE SYSTEM INCLUDING JACKS SHALL HAVE 20% MORE CAPACITY THAN REQUIRED BASED ON CALCULATED LOADS.

FOR LIFTS GREATER THAN 1", JACKS SHALL HAVE LOCKING NUTS TO POSITIVELY LOCK AND SUPPORT THE STRUCTURE DURING THE LIFT.

JACKS SHALL HAVE A SWIVEL LOAD CAP, A DOMED PISTON HEAD OR SOME OTHER DEVICE TO PROTECT AGAINST THE EFFECTS OF SIDE LOAD ON THE JACK.

JACKS ALONE SHALL NOT BE USED TO SUPPORT LOADS EXCEPT DURING THE ACTUAL JACKING OPERATION. TEMPORARY SUPPORTS, BLOCKING OR OTHER METHODS APPROVED BY THE DIRECTOR SHALL BE USED.

SINGLE ACTING RAMS WITH NO OVER-TRAVEL PROTECTION SYSTEM SHALL NOT BE USED.

SPARE EQUIPMENT SHALL BE AVAILABLE ON SITE FOR THE REQUIRED STRUCTURE RAISING TO PROCEED IN THE EVENT OF BREAKDOWN. A LIST OF SPARE EQUIPMENT SHALL BE PROVIDED TO THE ENGINEER.

AT A MINIMUM, A JACKING OPERATION SHALL LIFT ALL BEAMS AT ANY ONE ABUTMENT OR PIER SIMULTANEOUSLY. THE ONLY EXCEPTION IS THE SITUATION WHERE THE WORK INVOLVES REPLACING OR REHABILITATING INDIVIDUAL BEARINGS; NO PERMANENT SHIMMING IS REQUIRED AND THE HEIGHT OF THE LIFT SHALL NOT EXCEED 1/4 INCH.

MAXIMUM DIFFERENTIAL JACKING HEIGHT BETWEEN ANY ADJACENT ABUTMENTS OR PIERS SHALL BE 1" OR LESS.

THE CONTRACTOR SHALL DEMONSTRATE TO THE ENGINEER THAT THE BRIDGE BEARINGS ARE FULLY SEATED BETWEEN ALL CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUITABLE MEANS OF REPAIR, SUBJECT TO THE APPROVAL OF THE ENGINEER, WILL BE REQUIRED AT THE CONTRACTOR'S EXPENSE.

THE JACKING OPERATION SHALL BE DIRECTED BY A PROFESSIONAL ENGINEER EMPLOYED BY THE CONTRACTOR. FAILURE TO HAVE A PROFESSIONAL ENGINEER PRESENT SHALL BE CAUSE FOR CEASING JACKING OPERATION.

PAYMENT SHALL BE MADE AT THE LUMP SUM PRICE BID FOR ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN AND SHALL INCLUDE NECESSARY TOOLS, LABOR, EQUIPMENT AND MATERIALS NECESSARY TO COMPLETE THIS ITEM OF WORK.

INSPECTION OF STRUCTURAL STEEL

THE ENGINEER SHALL VISUALLY INSPECT ALL EXISTING BUTT-WELDED SPLICES AND/OR TOP FLANGE COVER PLATE FILLET WELDS TO ENSURE THAT THEY ARE FREE OF DEFECTS. THE DECK SLAB HAUNCH FORMS IMMEDIATELY ADJACENT TO SUCH WELDS SHALL NOT BE ERECTED UNTIL AFTER THE ENGINEER HAS COMPLETED THIS INSPECTION. THIS INSPECTION SHALL NOT TAKE PLACE UNTIL AFTER THE TOP FLANGES ARE CLEANED AS SPECIFIED IN 511.08. BUT IT SHALL BE DONE BEFORE THE DECK SLAB REINFORCEMENT IS INSTALLED. THE COST ASSOCIATED WITH THIS INSPECTION SHALL BE INCLUDED WITH ITEM 511, SUPERSTRUCTURE CONCRETE FOR PAYMENT.

CALC. BY _____	FRANKLIN COUNTY FRA-315-0.48	OHIO	140 163
DATE _____		FHWA REGION 5	
CHKD. BY _____			
DATE _____			

UTILITY LINES

ALL EXPENSE INVOLVED IN RELOCATION (INSTALLING) THE AFFECTED UTILITY LINES SHALL BE BORNE BY THE UTILITIES. THE CONTRACTOR AND UTILITIES ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

SEALING OF CONCRETE SURFACES (EPOXY)

THE SEALING PRODUCT SELECTED SHALL BE COMPATIBLE WITH THE MORTAR PRODUCTS USED FOR THE SURFACE REPAIRS. CONTRACTOR SHALL SUBMIT SEALING PRODUCT MANUFACTURER'S CERTIFICATION OF COMPATIBILITY.

PROPOSED WORK:

1. REPLACE EXISTING DECK WITH COMPOSITE REINFORCED CONCRETE DECK.
2. REPLACE EXISTING RAILINGS, PARAPETS AND PROTECTION FENCES.
3. REPLACE EXISTING ABUTMENT BACKWALL.
4. REPLACE EXISTING ABUTMENT BEARINGS WITH ELASTOMERIC BEARINGS.
5. REPLACE END CROSSFRAMES AND DECK JOINTS.
6. ADD INTERMEDIATE CROSSFRAMES BETWEEN BEAM LINE #6 AND #7.
7. REPLACE DAMAGED CROSSFRAME MEMBERS.
8. ADD STUDS TO THE EXISTING STEEL BEAMS.
9. CLEAN AND PAINT EXISTING AND NEW STEEL MEMBERS.
10. REPAIR CONCRETE SURFACES OF ABUTMENT WALLS, WINGWALLS, AND PIER.
11. SEAL CONCRETE SURFACES.
12. PHASE CONSTRUCTION: REFER TO SHEET 4/17.
13. REPLACE EXISTING APPROACH SLABS.

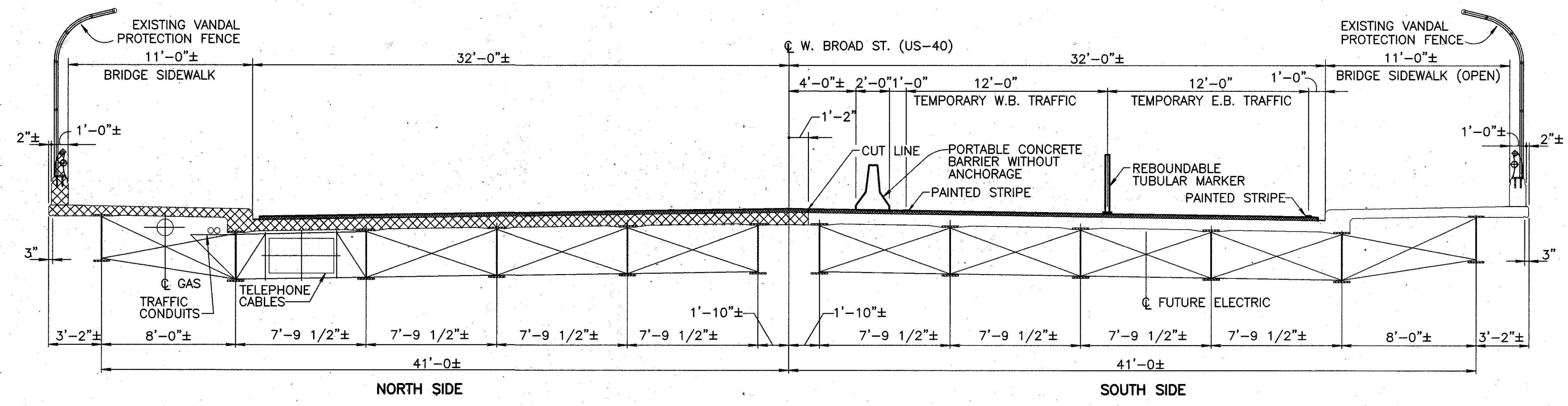
STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 8121 HUNTLEY ROAD, COLUMBUS, OHIO 43229					
GENERAL NOTES					
BRIDGE NO. FRA-40-1158					
WEST BROAD STREET OVER S.R. 315					
FRANKLIN COUNTY				STA. 26+40.75 TO STA. 27+51.25	
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
JN	GV		TDW	RKM	11/07/97
				TEU	10/29/97

ESTIMATED QUANTITIES

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	WEST ABUT. & WINGWALL	EAST ABUT. & WINGWALL	PIER	SUPER.	ROADWAY	GENERAL
202	11201	LUMP	LUMP	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN						LUMP
202	38500	301	LIN FT	BRIDGE RAILING REMOVED						301
202	75000	214	LIN FT	FENCE REMOVED						214
503	21301	LUMP	LUMP	UNCLASSIFIED EXCAVATION, AS PER PLAN	LUMP	LUMP				
511	31510	362	CU YD	CLASS S CONCRETE, SUPERSTRUCTURE				362		
511	45700	46	CU YD	CLASS C CONCRETE, ABUTMENT	23	23				
SPECIAL	51267500	246	SQ YD	SEALING OF CONCRETE SURFACES (SEE PROPOSAL NOTE)				246		
SPECIAL	51267510	720	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) (SEE PROPOSAL NOTE)	290	290	140			
SPECIAL	51273000	24	SQ YD	TREATING CONCRETE BRIDGE DECKS WITH HMW RESIN (SEE PROPOSAL NOTE)				24		
513	15901	2796	POUND	STRUCTURAL STEEL, REPLACEMENT OF DETERIORATED END CROSSFRAMES, AS PER PLAN				2796		
513	16001	637	POUND	STRUCTURAL STEEL FOR REHABILITATION, AS PER PLAN				637		
513	20000	2628	EACH	WELDED STUD SHEAR CONNECTOR				2628		
516	11210	172	LIN FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL				172		
516	44001	24	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), 12" x 8 1/2" x 1 3/8", AS PER PLAN (SEE PROPOSAL NOTE)	12	12				
516	47001	LUMP	LUMP	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN						LUMP
517	71500	86	LIN FT	RAILING (CONCRETE PARAPET WITH DOUBLE PIPE RAIL) (SEE PROPOSAL NOTE)	43	43				
518	21230	LUMP	LUMP	POROUS BACKFILL WITH FILTER FABRIC	LUMP	LUMP				
SPECIAL	51912600	11	LIN FT	CONCRETE REPAIR BY EPOXY INJECTION			11			
520	11101	677	SQ FT	PNEUMATICALLY PLACED MORTAR, AS PER PLAN	322	323	32			
815	00100	LUMP	LUMP	SURFACE PREPARATION OF EXISTING STEEL, SYSTEM OZEU				LUMP		
815	00200	LUMP	LUMP	FIELD PAINTING OF EXISTING STEEL, PRIME COAT, SYSTEM OZEU				LUMP		
815	00300	LUMP	LUMP	FIELD PAINTING OF EXISTING STEEL, INTERMEDIATE COAT, SYSTEM OZEU				LUMP		
815	00400	LUMP	LUMP	FIELD PAINTING OF EXISTING STEEL, FINISH COAT, SYSTEM OZEU				LUMP		
816	00600	LUMP	LUMP	FIELD PAINTING OF NEW STEEL, SYSTEM IZEU				LUMP		
SPECIAL	60739930	107	LIN FT	VANDAL PROTECTION FENCE, 12' CURVED, COATED FABRIC				107		

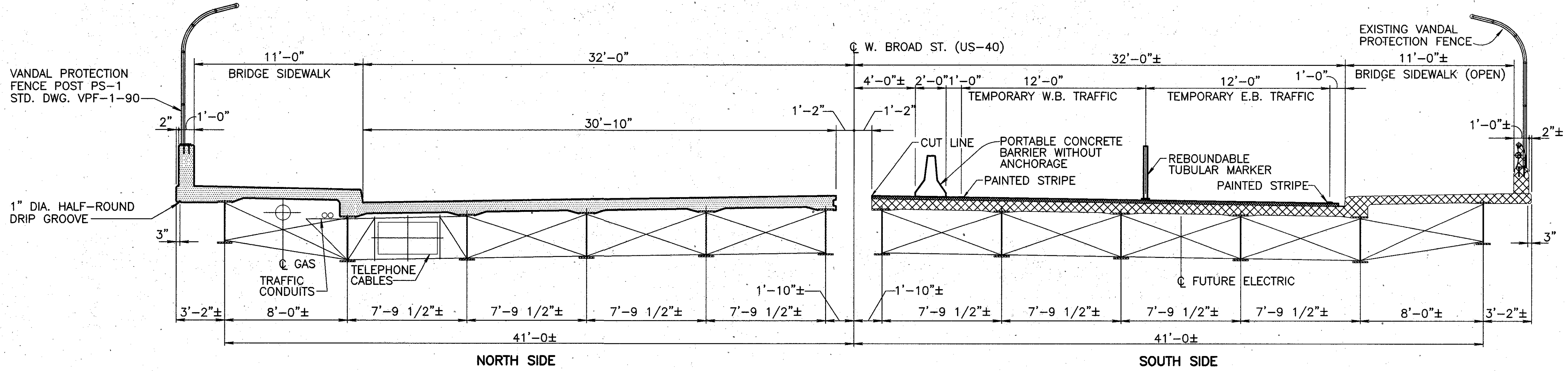
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STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 8121 HUNTLEY ROAD, COLUMBUS, OHIO 43229						
ESTIMATED QUANTITIES BRIDGE NO. FRA-40-1158 WEST BROAD STREET OVER S.R.315 FRANKLIN COUNTY STA. 26+40.75 TO STA. 27+51.25						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JN/PHE	GV		TDW	RKM	11/07/97	
				TEU	10/29/97	

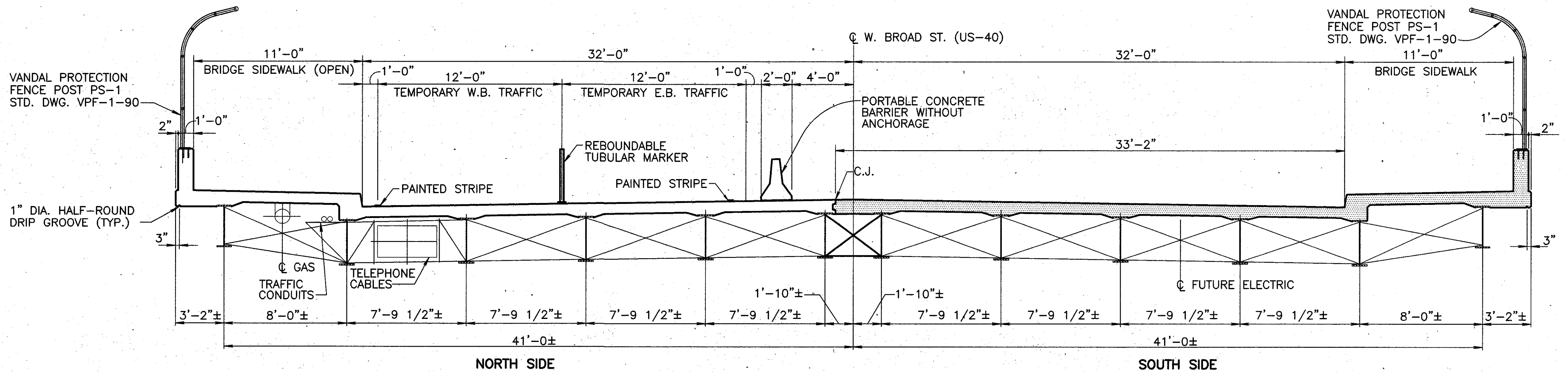


PHASE 1 DEMOLITION

- SEQUENCE OF CONSTRUCTION (EACH PHASE):**
- 1) REDUCE BROAD STREET TRAFFIC TO ONE LANE IN EACH DIRECTION, AS SHOWN IN THE MAINTENANCE OF TRAFFIC PLANS.
 - 2) REMOVE SR-315 TRAFFIC SIGNS MOUNTED ON FASCIA OF BRIDGE.
 - 3) REMOVE THE EXISTING APPROACH SLAB AND DECK INCLUDING SIDEWALK PARAPET, RAILING AND VANDAL PROTECTION FENCE, CARE SHALL BE TAKEN TO AVOID DAMAGING EXISTING UTILITIES AND STRINGERS WHICH ARE TO REMAIN.
 - 4) REMOVE EXISTING BACKWALL AND WINGWALL PARAPETS. PROTECT AND SUPPORT EXISTING UTILITIES.
 - 5) REMOVE PAINT, THEN CLEAN AND VISUALLY INSPECT THE EXISTING STEEL FRAMING.
 - 6) REPLACE DAMAGED CROSSFRAMES AS INDICATED ON STEEL FRAMING PLANS.
 - 7) INSTALL SHEAR STUDS TO THE EXISTING BEAMS.
 - 8) PAINT EXISTING AND NEW STRUCTURAL STEEL WITH THE OZEU AND IZEU SYSTEM RESPECTIVELY.
 - 9) CONSTRUCT NEW ABUTMENT BACKWALL AND REPAIR DAMAGED SURFACE AREA OF EXISTING ABUTMENT WALL FACE, WINGWALL FACE AND PIER COLUMNS.
 - 10) INSTALL NEW ELASTOMERIC EXPANSION BEARINGS AT ABUTMENTS.
 - 11) INSTALL NEW END DAM AND EXPANSION JOINT ARMOR.
 - 12) CONSTRUCT ABUTMENT BACKWALL AND CONCRETE DECK INCLUDING SIDEWALK, (ELIMINATE SCUPPERS—CALCULATED 5 YEAR DESIGN FREQUENCY PAVEMENT DRAINAGE SPREAD AT EACH SCUPPER IS 5 FEET ADJACENT TO CURB. DESIGN CRITERIA PERMITS 6 FEET SPREAD ONTO ADJACENT TRAVELED LANE. THEREFORE, THESE SCUPPERS CAN BE ELIMINATED.)
 - 13) CONSTRUCT NEW APPROACH SLAB, PARAPETS, RAILING AND VANDAL PROTECTION FENCE.
 - 14) SEAL CONCRETE SURFACE.



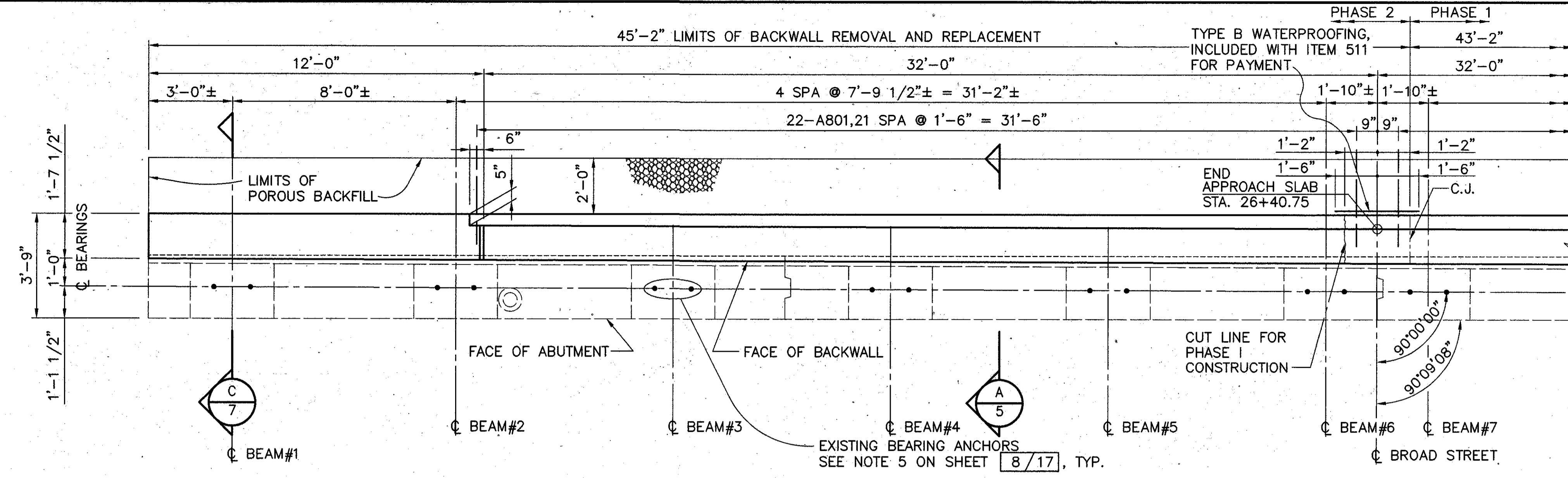
PHASE 1 CONSTRUCTION, PHASE 2 DEMOLITION



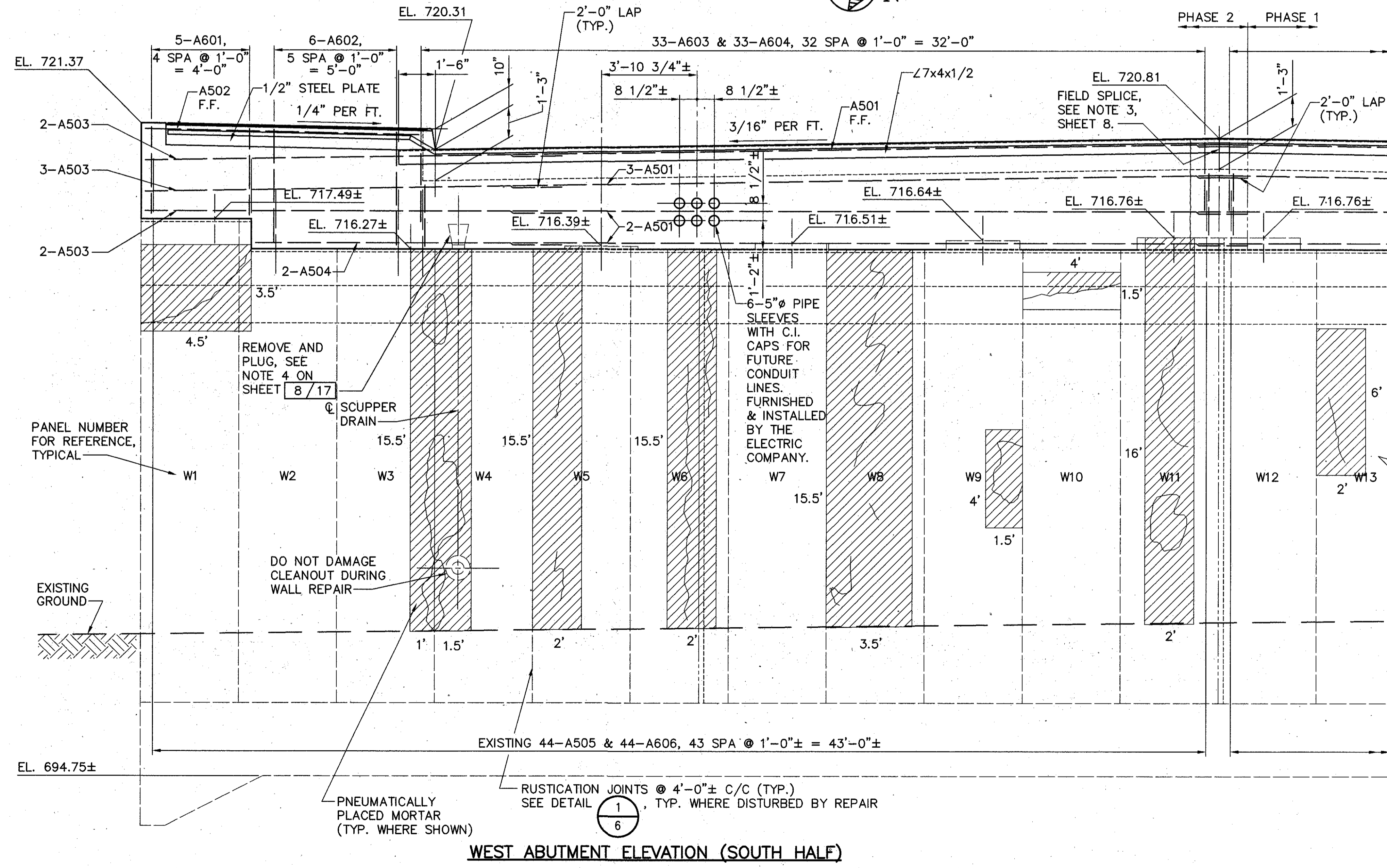
PHASE 2 CONSTRUCTION

= PHASE DEMOLITION
 = PHASE CONSTRUCTION

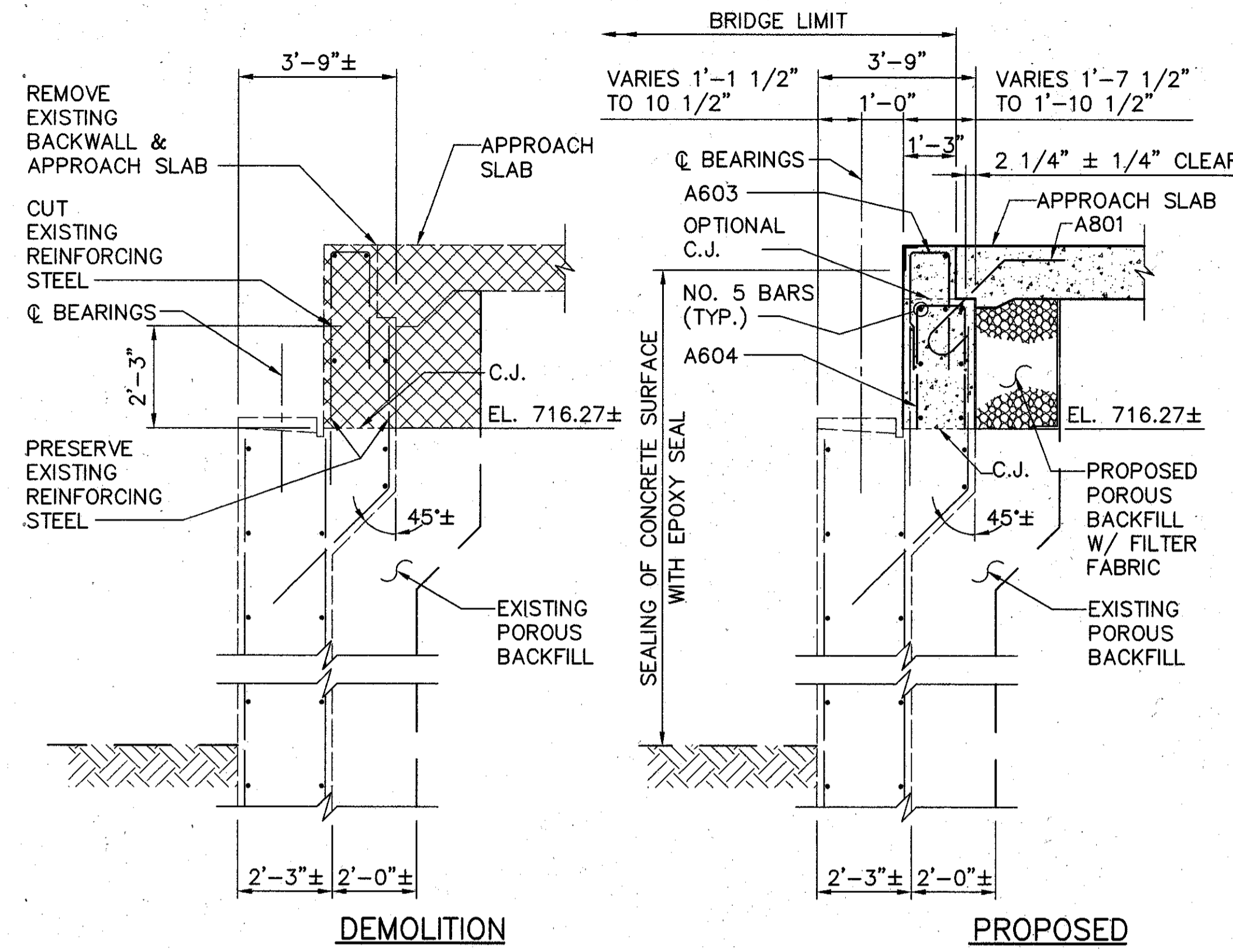
LEGEND C/C - CENTER TO CENTER C.J. - CONSTRUCTION JOINT DIA. - DIAMETER DWG. - DRAWING E.B. - EASTBOUND STD. - STANDARD TYP. - TYPICAL W.B. - WESTBOUND EXISTING STRUCTURE NEW STRUCTURE	STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 6121 HUNTLEY ROAD, COLUMBUS, OHIO 43229					
	PHASE CONSTRUCTION DETAILS BRIDGE NO. FRA-40-1158 WEST BROAD STREET OVER S.R. 315 FRANKLIN COUNTY STA. 26+40.75 TO STA. 27+51.25					
	DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
	PHB	GV		TDW	RKM	11/07/97
				TEU	10/29/97	



WEST ABUTMENT PLAN (SOUTH HALF)



WEST ABUTMENT ELEVATION (SOUTH HALF)



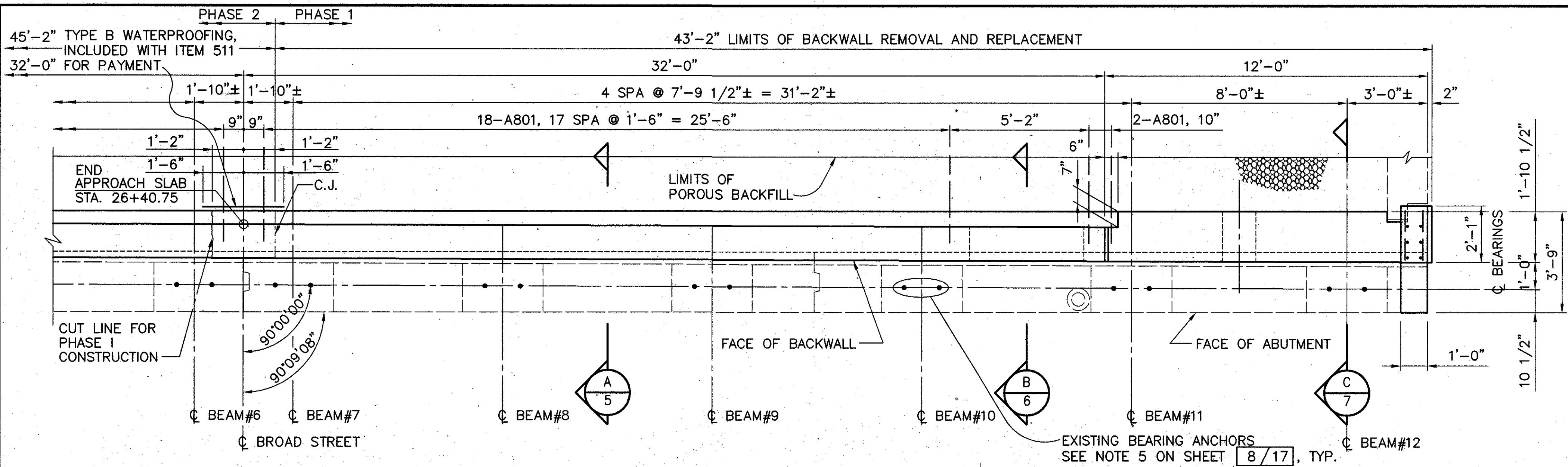
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NOTE:
FOR ADDITIONAL NOTES SEE SHEET 8/17.

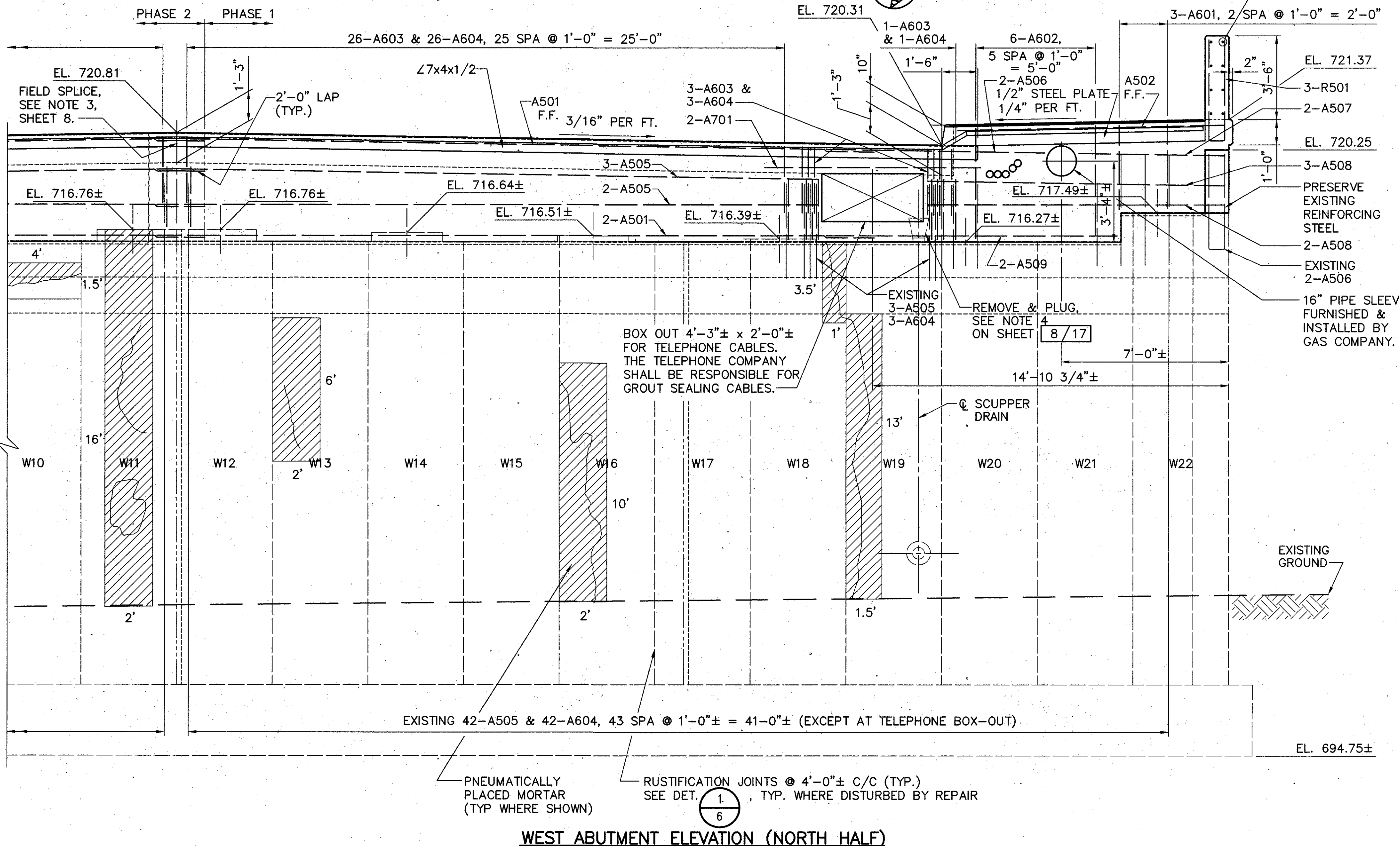
- INDICATES AREAS TO BE REMOVED AS PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OR APPROACH SLAB REMOVED.
- INDICATES AREAS TO BE PATCHED AS PER ITEM 520-PNEUMATICALLY PLACED MORTAR, AS PER PLAN.

LEGEND		STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 9121 HUNTLEY ROAD, COLUMBUS, OHIO 43229			
TYP. - TYPICAL	C.J. - CONSTRUCTION JOINT	WEST ABUTMENT SOUTH HALF DETAILS BRIDGE NO. FRA-40-1158 WEST BROAD STREET OVER S.R. 315 FRANKLIN COUNTY STA. 26+40.75 TO STA. 27+51.25			
C/C - CENTER TO CENTER	F.F. - FAR FACE				
EXISTING STRUCTURE	NEW STRUCTURE				
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
PHB	DST		TDW	RKM	11/07/97
				TEU	10/29/97

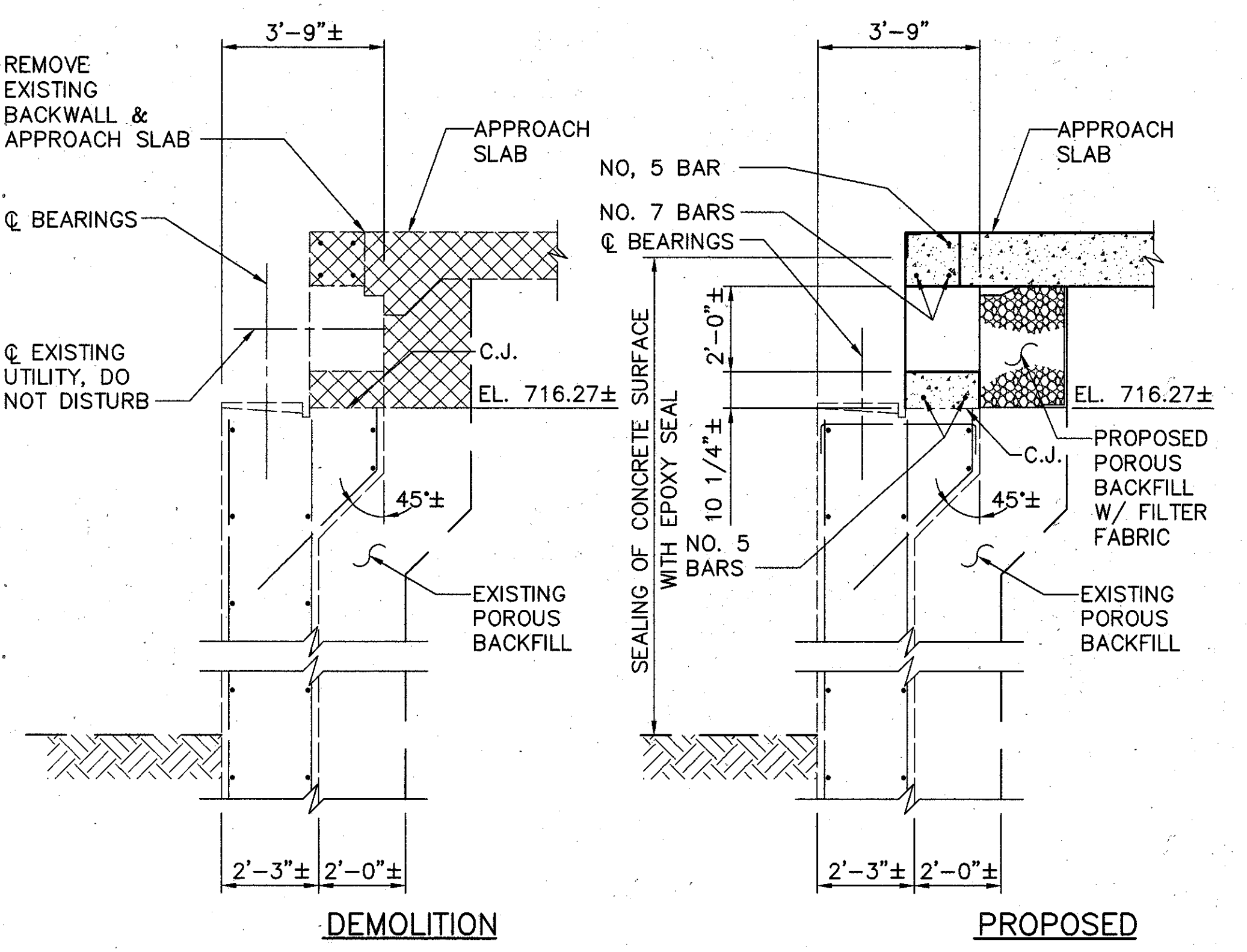
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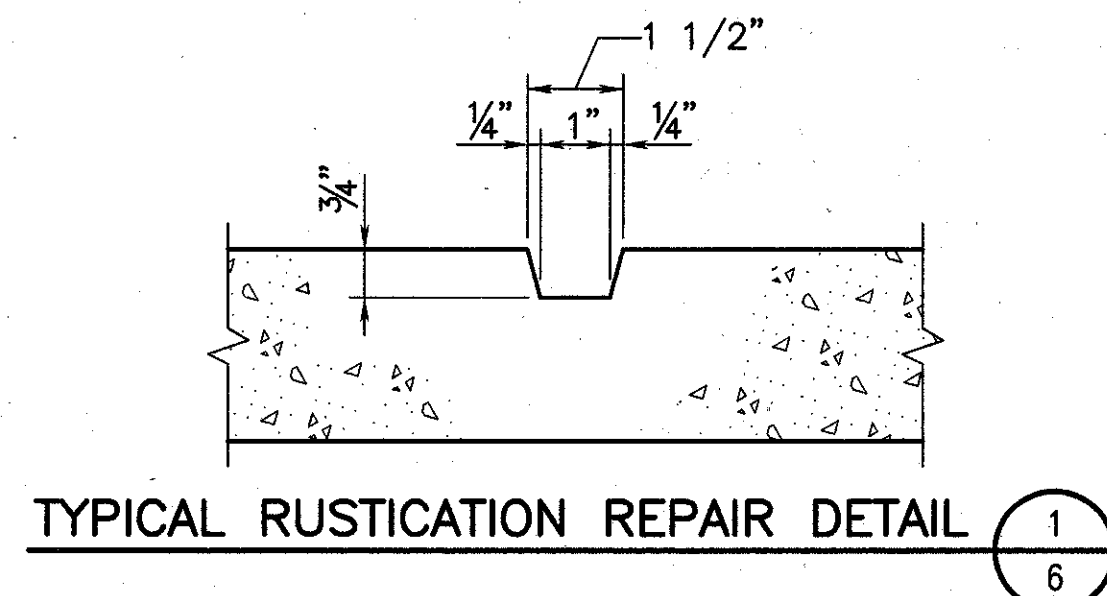
WEST ABUTMENT PLAN (NORTH HALF)



WEST ABUTMENT ELEVATION (NORTH HALF)



SECTION



TYPICAL RUSTICATION REPAIR DETAIL

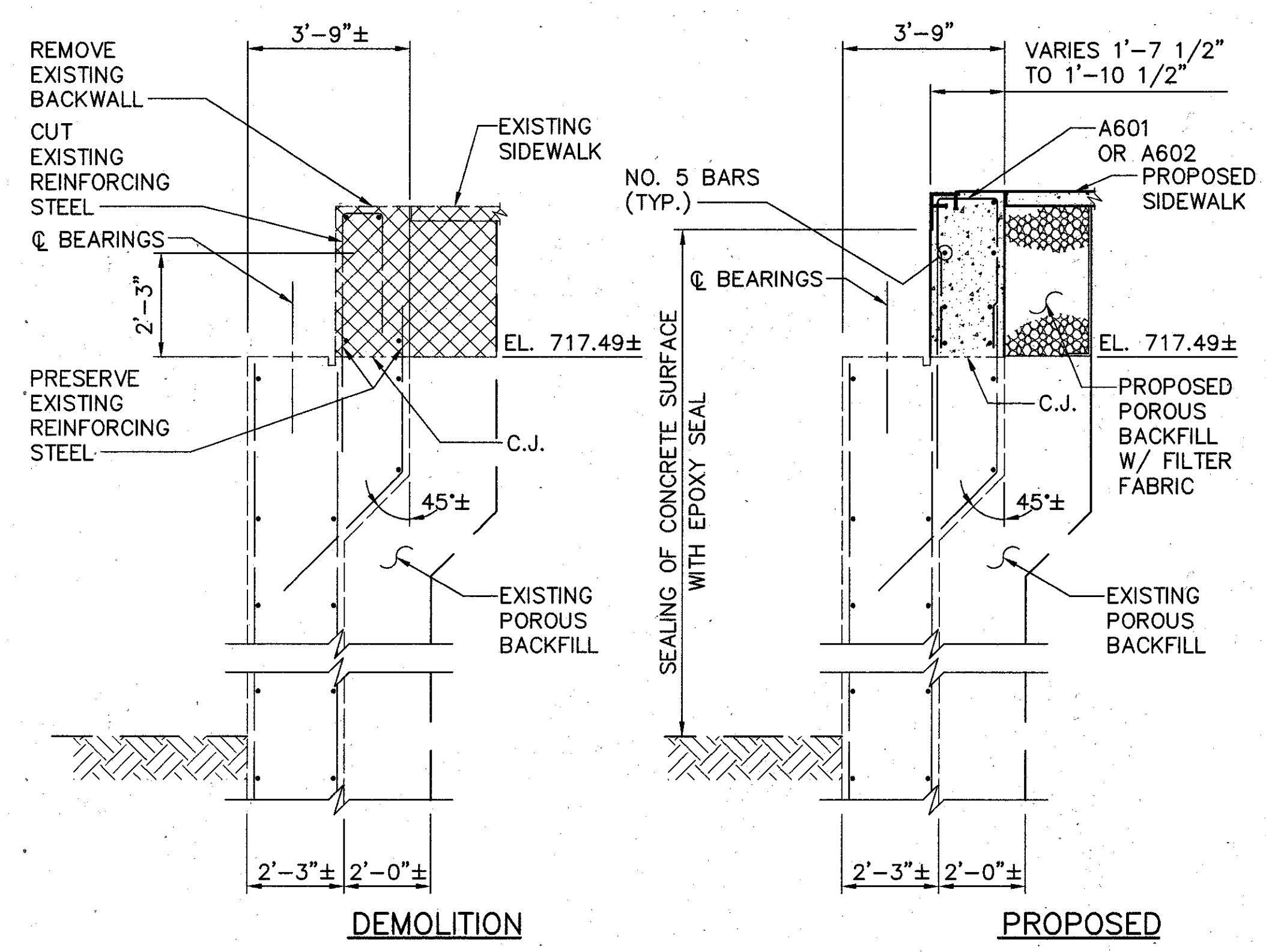
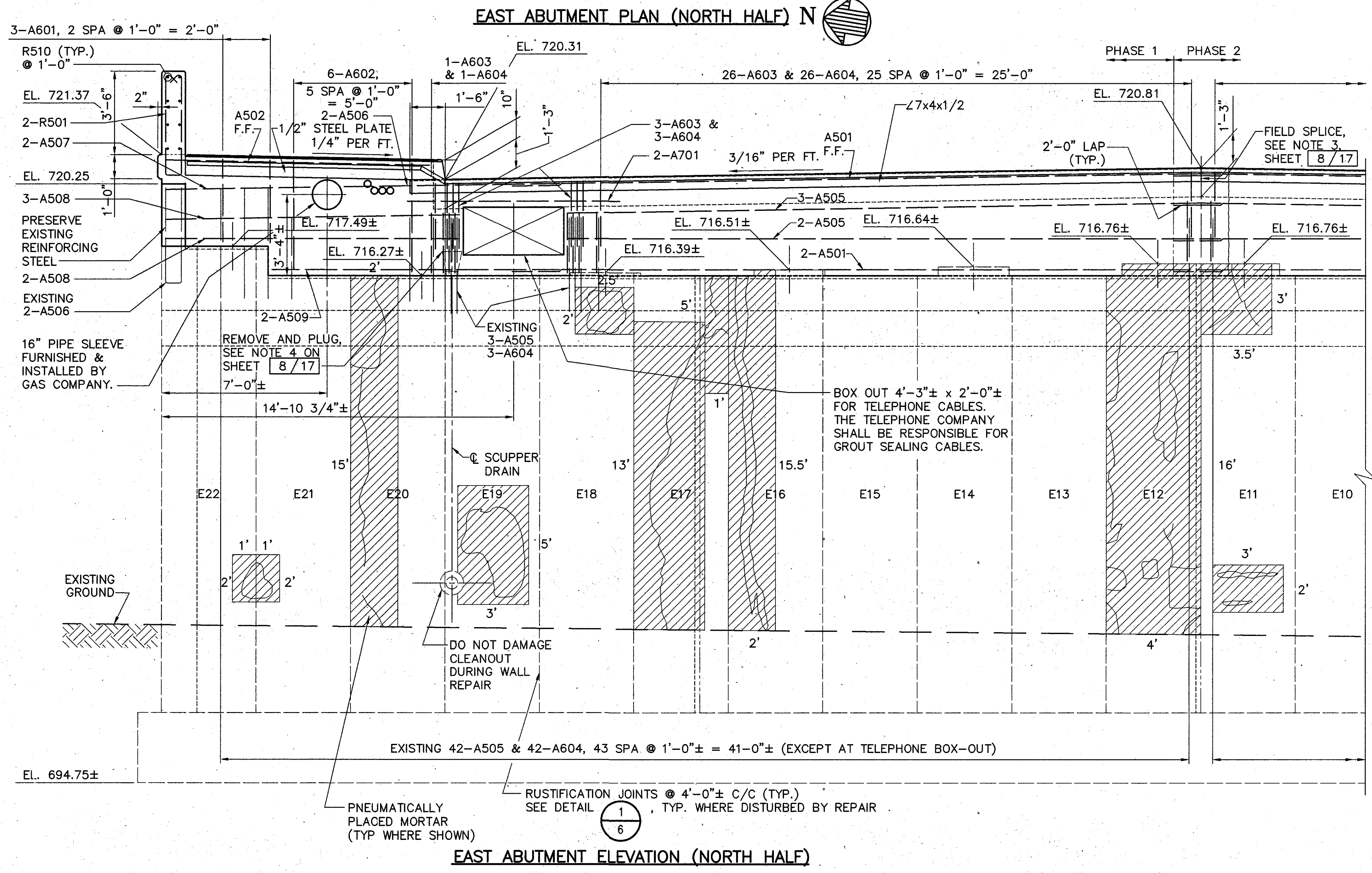
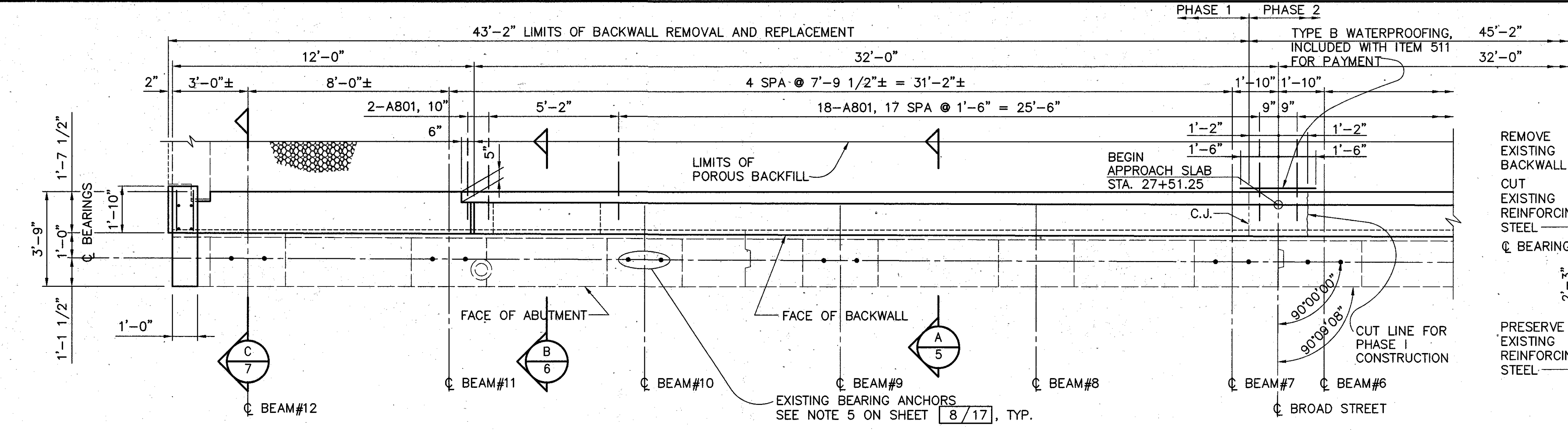
NOTE:
FOR ADDITIONAL NOTES SEE SHEET 8/17.

[Cross-hatched box] INDICATES AREAS TO BE REMOVED AS PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OR APPROACH SLAB REMOVED.

[Diagonal hatched box] INDICATES AREAS TO BE PATCHED AS PER ITEM 520-PNEUMATICALLY PLACED MORTAR, AS PER PLAN.

LEGEND		STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 8121 HUNTLEY ROAD, COLUMBUS, OHIO 43229						
TYP. - TYPICAL	C.J. - CONSTRUCTION JOINT	WEST ABUTMENT NORTH HALF DETAILS BRIDGE NO. FRA-40-1158 WEST BROAD STREET OVER S.R. 315 FRANKLIN COUNTY STA. 26+40.75 TO STA. 27+51.25						
C/C - CENTER TO CENTER	F.F. - FAR FACE							
EXISTING STRUCTURE	NEW STRUCTURE							
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED		
PHB	DST		TDW	RKM	11/07/97			
				TEU	10/29/97			

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NOTE:
FOR ADDITIONAL NOTES SEE SHEET 8/17.

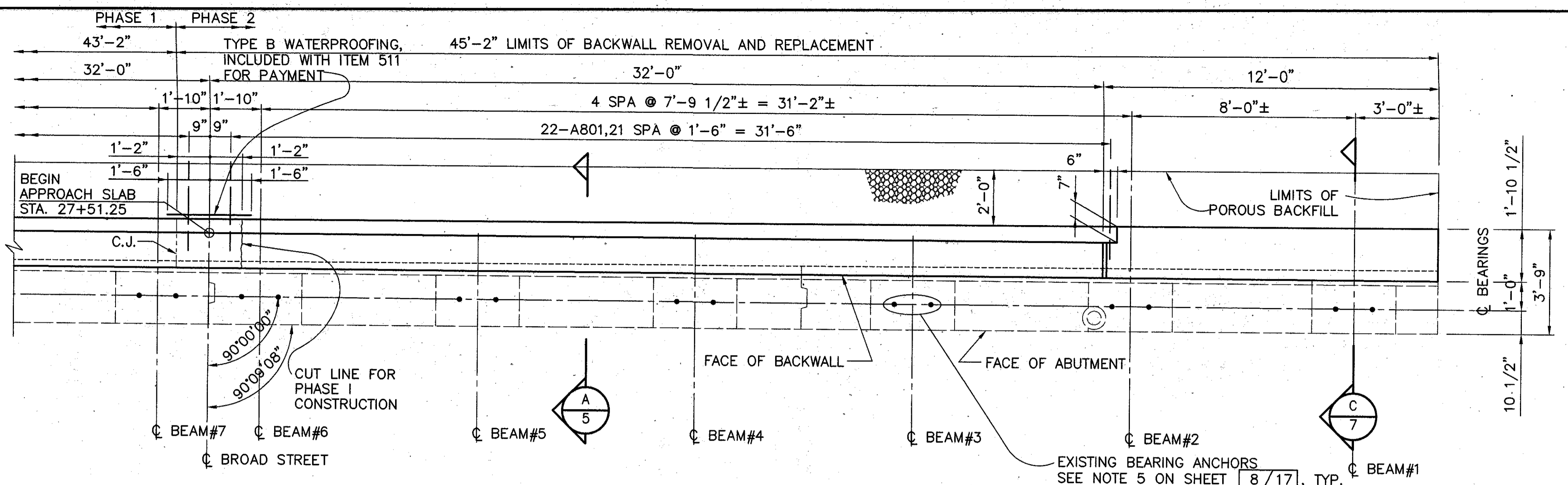
INDICATES AREAS TO BE REMOVED AS PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OR WALK REMOVED.

INDICATES AREAS TO BE PATCHED AS PER ITEM 520-PNEUMATICALLY PLACED MORTAR, AS PER PLAN.

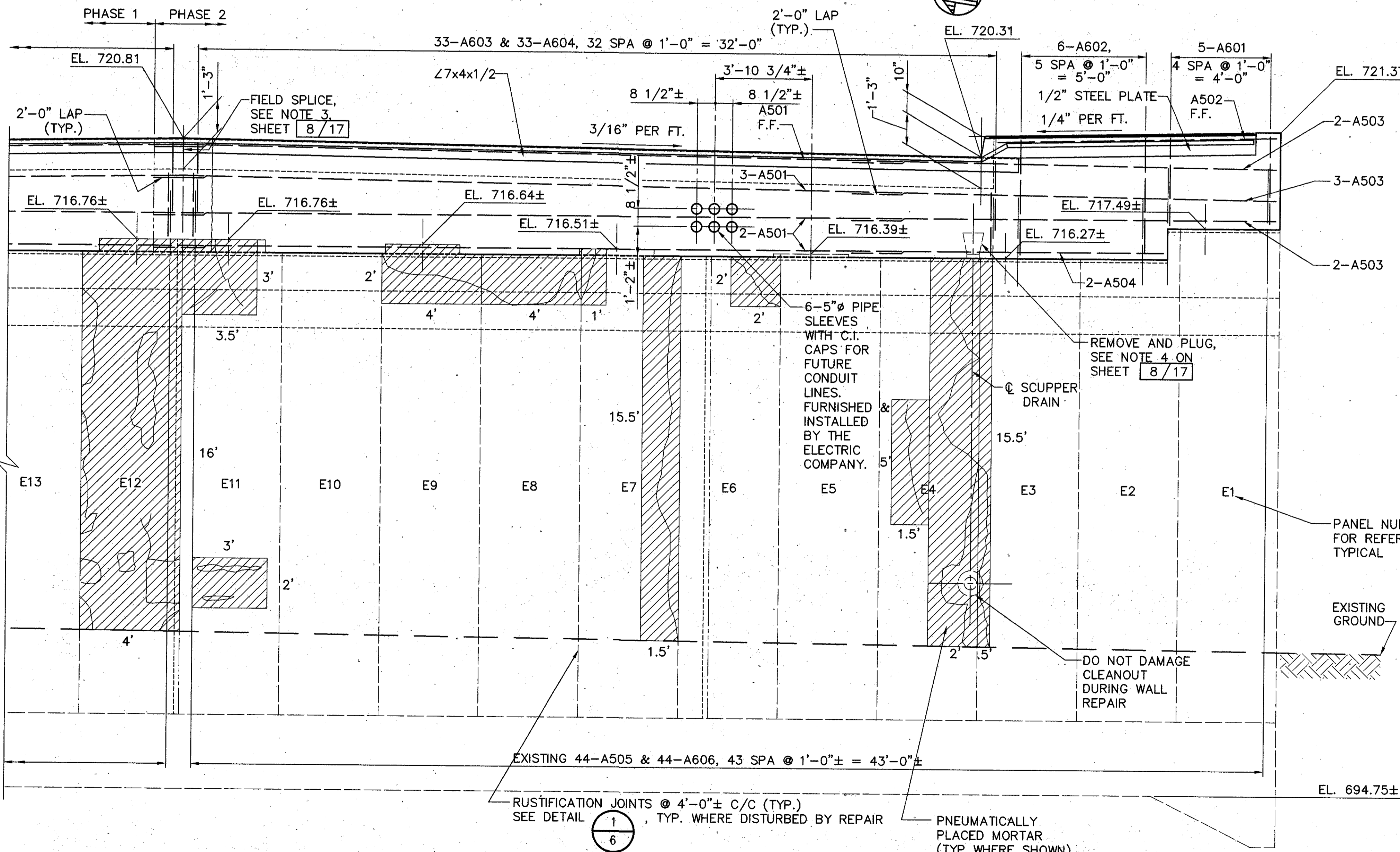
LEGEND		STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 8121 HUNTLEY ROAD, COLUMBUS, OHIO 43229										
TYP. - TYPICAL	C.J. - CONSTRUCTION JOINT	EAST ABUTMENT NORTH HALF DETAILS BRIDGE NO. FRA-40-1158 WEST BROAD STREET OVER S.R. 315 FRANKLIN COUNTY STA. 26+40.75 TO STA. 27+51.25 EXISTING STRUCTURE										
C/C - CENTER TO CENTER	F.F. - FAR FACE											
DESIGNED	DRAWN							TRACED	CHECKED	REVIEWED	DATE	REVISED
PHB	DST							TDW	RKM	11/07/97	TEU	10/29/97

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- NOTES:**
- POROUS BACKFILL WITH FILTER FABRIC, 2 FEET THICK** SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, TO ONE FOOT BELOW THE EMBANKMENT SURFACE, FROM TOP OF EXISTING POROUS BACKFILL.
 - BACKWALL CONCRETE:** IN ADDITION TO THE PROVISIONS OF 511.08, BACKWALL CONCRETE ABOVE THE OPTIONAL CONSTRUCTION JOINT AT THE APPROACH SLAB SEAT SHALL NOT BE PLACED UNTIL AFTER THE DECK CONCRETE IN SPAN ADJACENT TO THE ABUTMENT HAS BEEN PLACED.
 - EXPANSION JOINT ARMOR AND FIELD SPICE** NOT SHOWN ON PLAN VIEW FOR CLARITY, SEE SHEET 15 OF 18 FOR NOTES AND DETAILS.
 - REMOVE AND PLUG DRAIN:** INSTALL PERMANENT PLUG APPROXIMATELY 12 INCHES BELOW BRIDGE SEAT. FILL PIPE AND HOLE SOLID FROM PLUG TO BRIDGE SEAT WITH NON-SHRINK NON-METALLIC GROUT, 705.20. INCLUDE ALL ASSOCIATED LABOR, EQUIPMENT AND MATERIALS WITH PORTIONS OF STRUCTURE REMOVED, AS PER PLAN, ITEM 202 FOR PAYMENT. TYPICAL AT FOUR (4) LOCATIONS.
 - REMOVE EXISTING BEARING ANCHORS:** UNDERCUT ANCHORS 2 INCHES BELOW BEARING SEAT AND PATCH WITH NON-SHRINK NON-METALLIC GROUT, 705.20. INCLUDE ALL ASSOCIATED LABOR, EQUIPMENT AND MATERIALS WITH ITEM 202. PORTIONS OF STRUCTURE REMOVED, AS PER PLAN FOR PAYMENT.



EAST ABUTMENT PLAN (SOUTH HALF) N



EAST ABUTMENT ELEVATION (SOUTH HALF)

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN DECEMBER 1996.

SUMMARY OF PPM QUANTITIES *	
	ESTIMATED QUANTITY
W. ABUT. & WINGWALL	322 S. F.
E. ABUT. & WINGWALL	323 S. F.
TOTAL	645 S. F.

PPM = PNEUMATICALLY PLACED MORTAR, ITEM SPECIAL

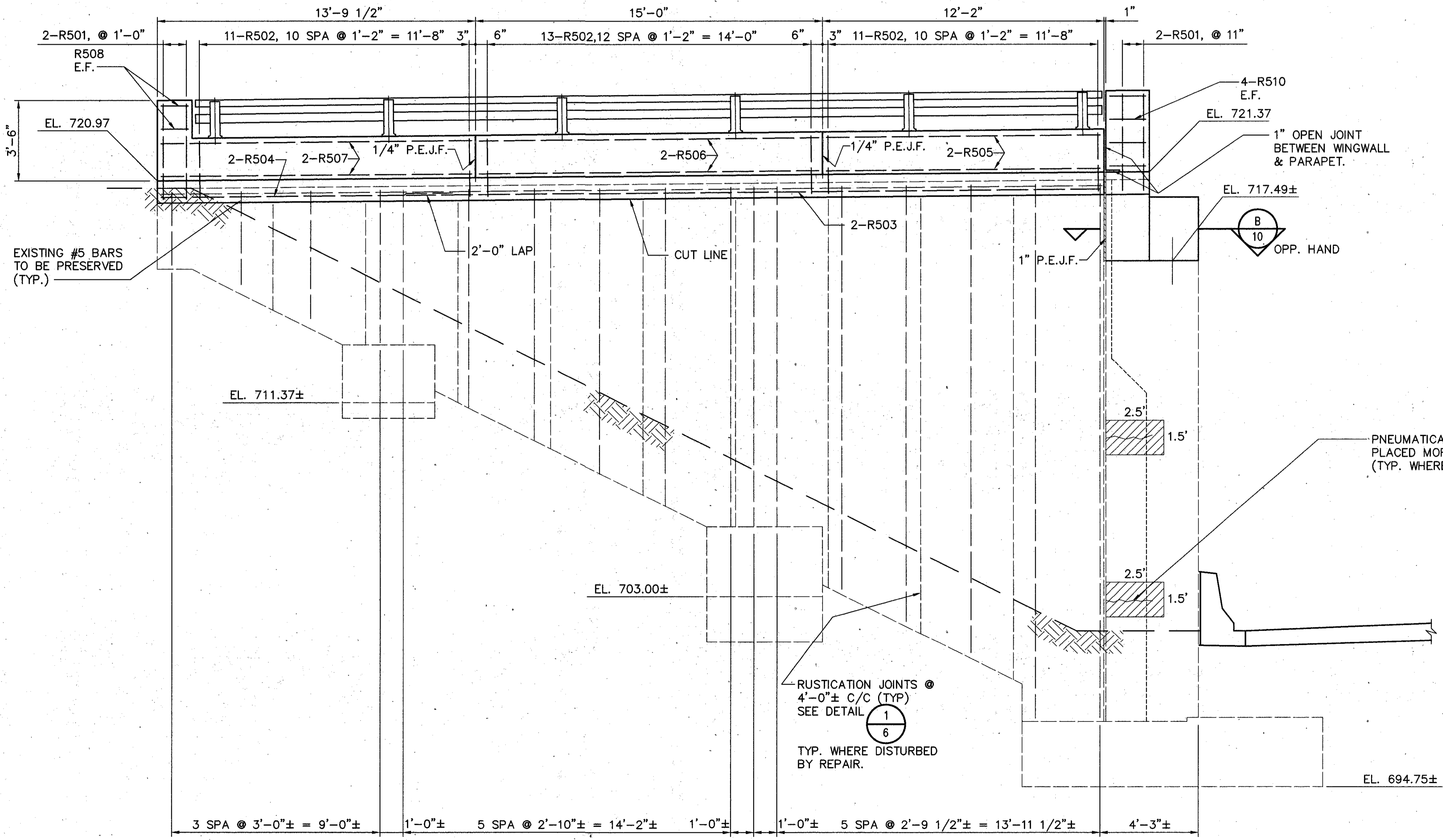
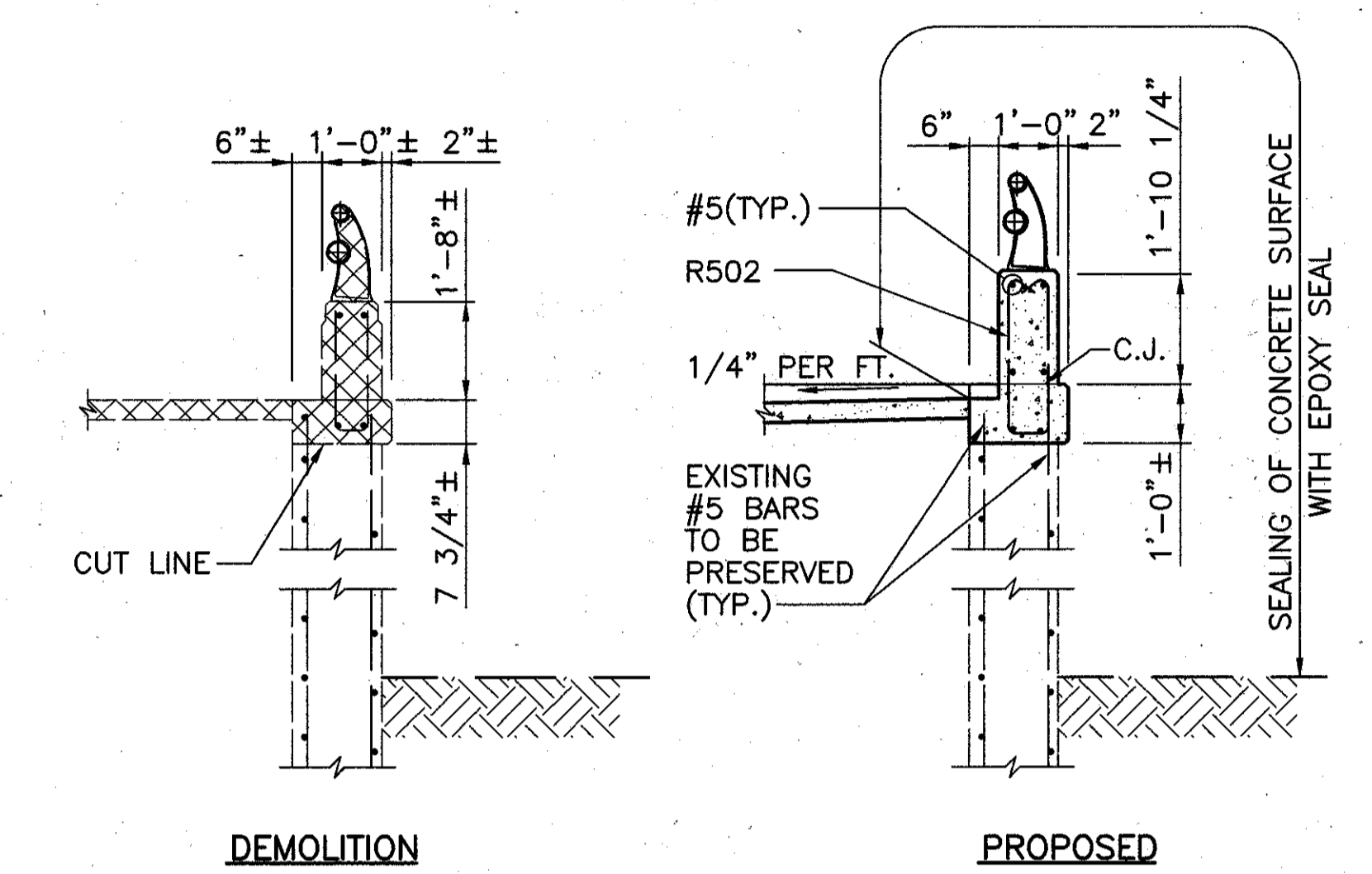
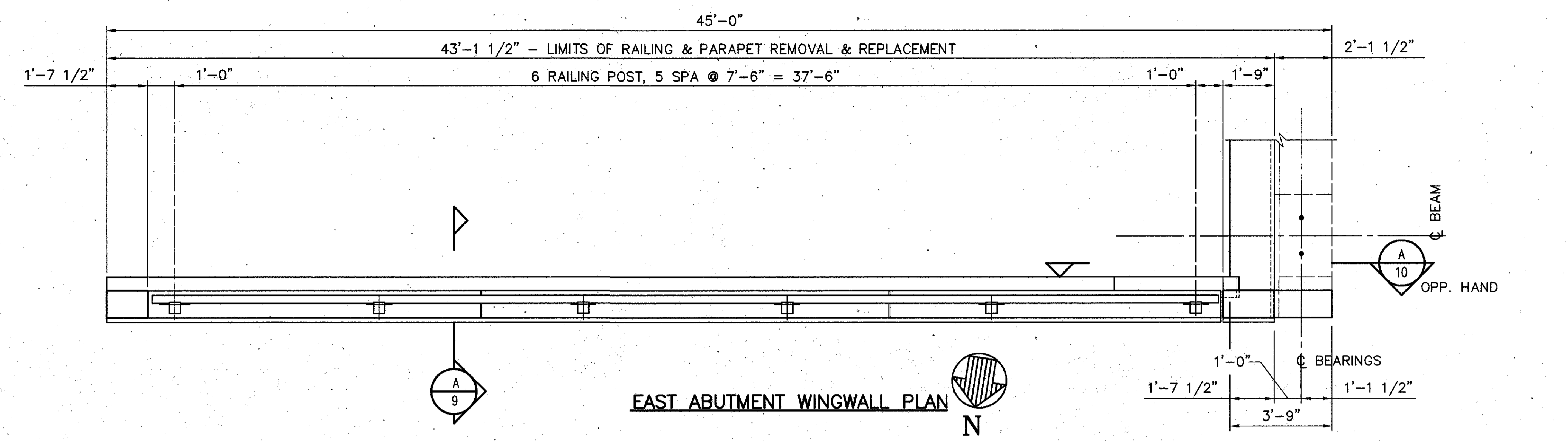
* ESTIMATED QUANTITY HAS BEEN INCREASED 15% OVER FIELD MARKED QUANTITY TO ALLOW FOR ADDITIONAL DETERIORATION AND EXTENSION OF POTENTIAL CONCRETE DETERIORATION.

INDICATES AREAS TO BE REMOVED AS PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED.

INDICATES AREAS TO BE PATCHED AS PER ITEM 520-PNEUMATICALLY PLACED MORTAR, AS PER PLAN.

LEGEND	STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 6121 HUNTLEY ROAD, COLUMBUS, OHIO 43229					
	EAST ABUTMENT SOUTH HALF DETAILS BRIDGE NO. FRA-40-1158 WEST BROAD STREET OVER S.R. 315 FRANKLIN COUNTY STA. 26+40.75 TO STA. 27+51.25					
TYP. - TYPICAL	C.J. - CONSTRUCTION JOINT	C/C - CENTER TO CENTER	F.F. - FAR FACE	EXISTING STRUCTURE	DESIGNED	DRAWN
				NEW STRUCTURE	PHB	DST
					TRACED	CHECKED
						TDW
					REVIEWED	DATE
					RKM 11/07/97	TEU 10/29/97
					REVISED	

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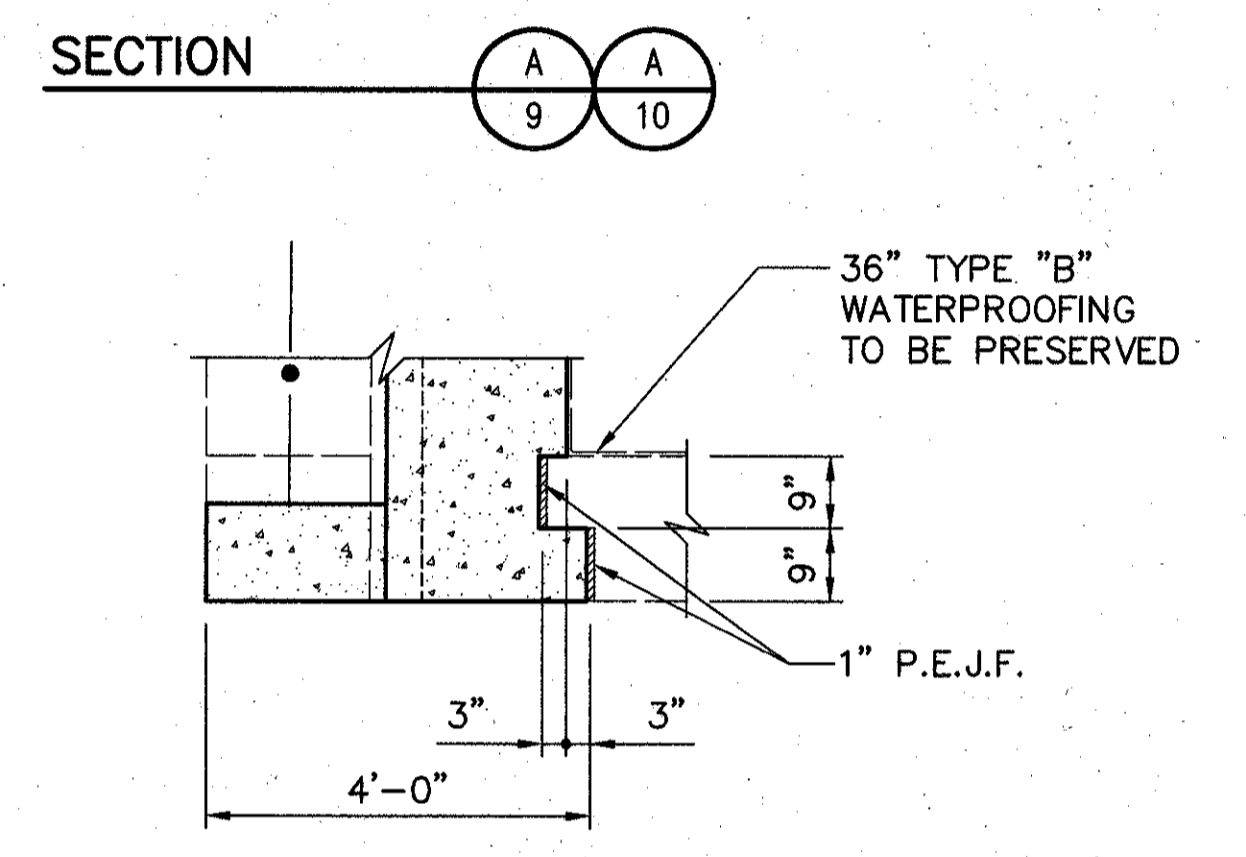
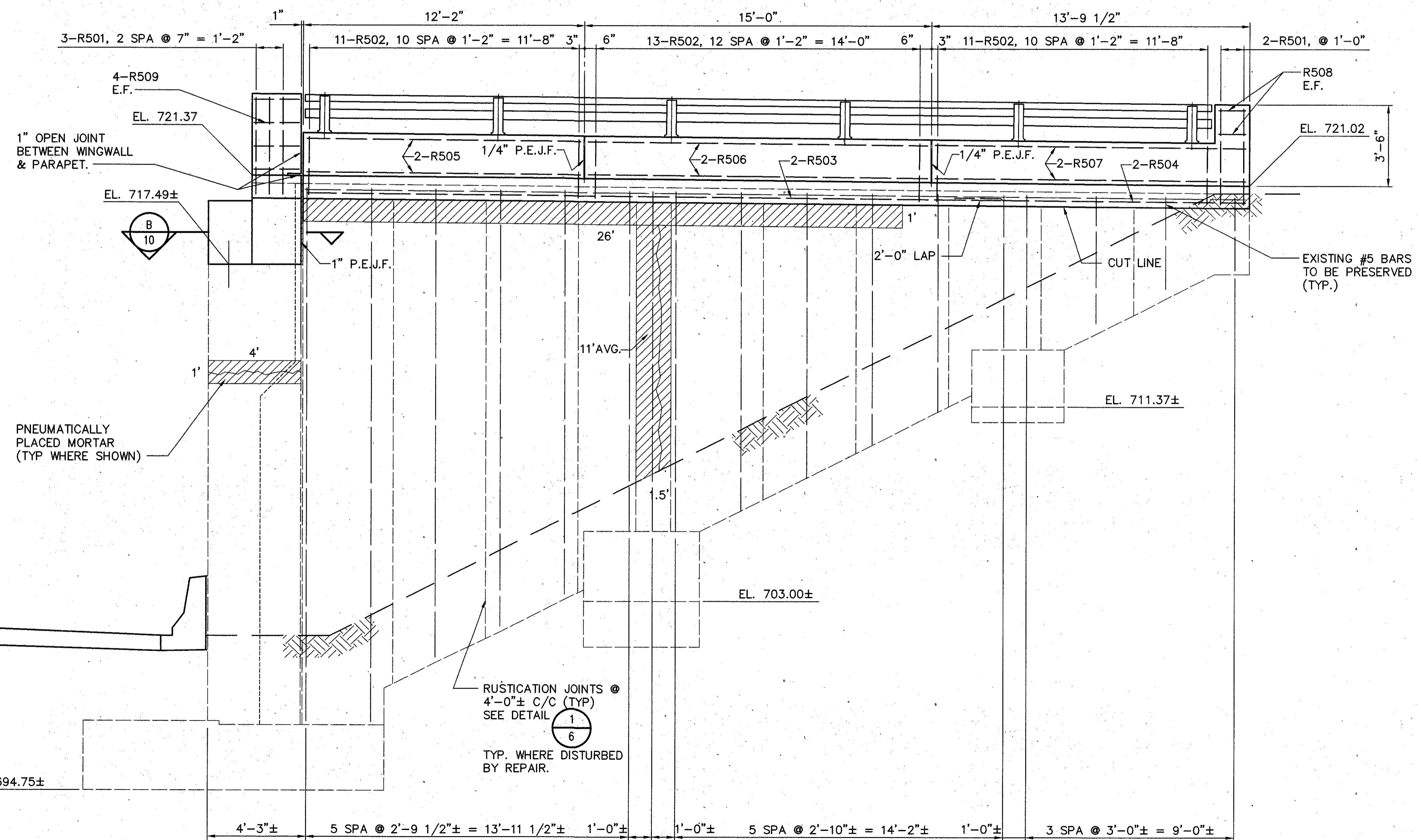
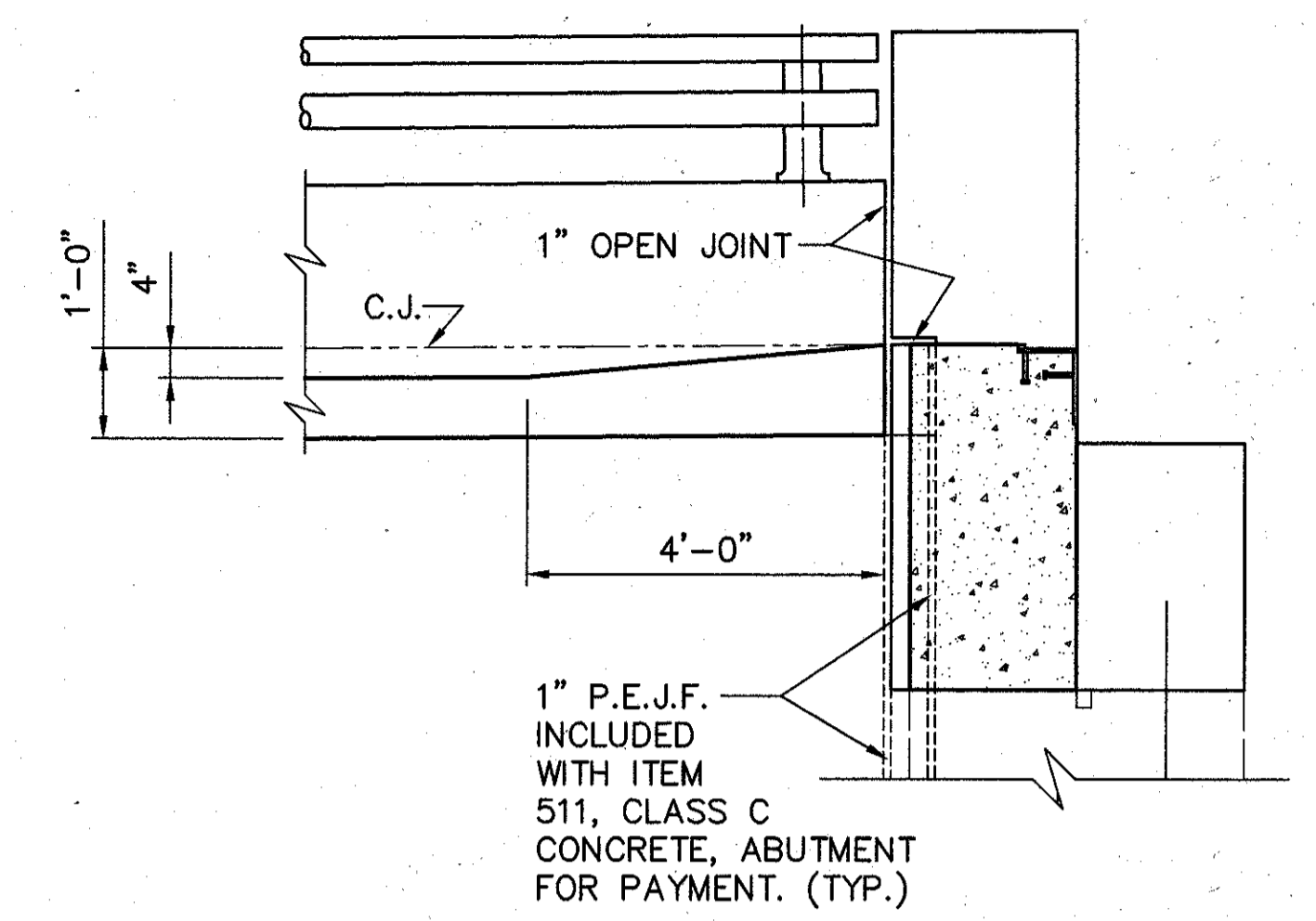
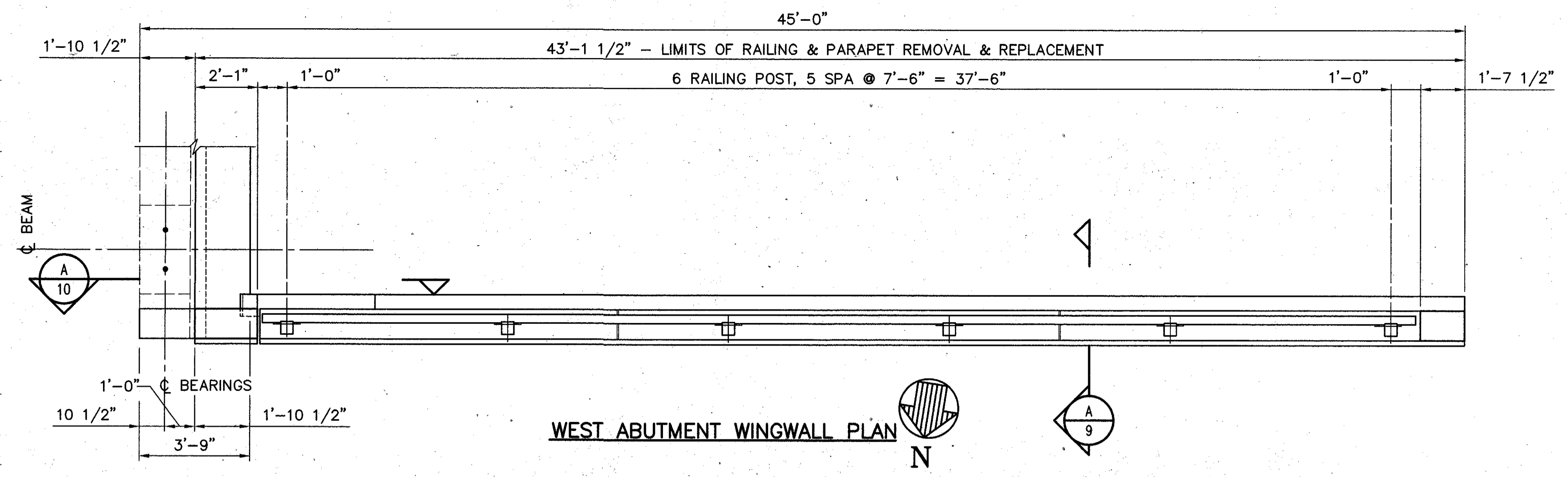
NOTE:
RAILING & PARAPET: SEE BRIDGE STANDARD DRAWING BR-2-82 FOR OTHER DETAILS.

INDICATES AREAS TO BE REMOVED AS PER ITEM 202 - BRIDGE RAILING OR WALK REMOVED.

INDICATES AREAS TO BE PATCHED AS PER ITEM 520 - PNEUMATICALLY PLACED MORTAR, AS PER PLAN.

LEGEND		STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 9121 HUNTLEY ROAD, COLUMBUS, OHIO 43229						
TYP. - TYPICAL	C.J. - CONSTRUCTION JOINT	EAST ABUTMENT WINGWALL DETAILS BRIDGE NO. FRA-40-1158 WEST BROAD STREET OVER S.R. 315 FRANKLIN COUNTY STA. 26+40.75 TO STA. 27+51.25						
C/C - CENTER TO CENTER	F.F. - FAR FACE							
P.E.J.F. - PREMOLDED EXPANSION JOINT FILLER								
EXISTING STRUCTURE	NEW STRUCTURE							
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED		
PHB	DST		TDW	RKM	11/07/97			
				TEU	10/29/97			

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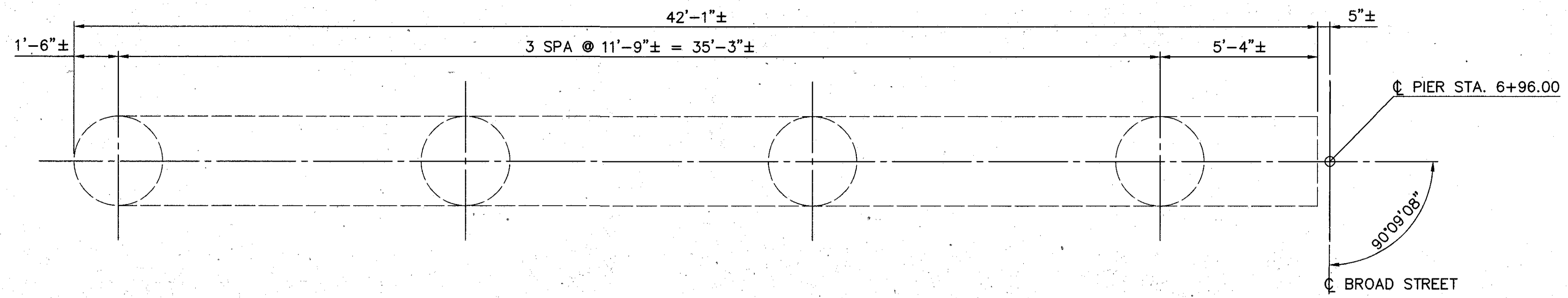


NOTE:
RAILING & PARAPET: SEE BRIDGE STANDARD DRAWING BR-2-82 FOR OTHER DETAILS.

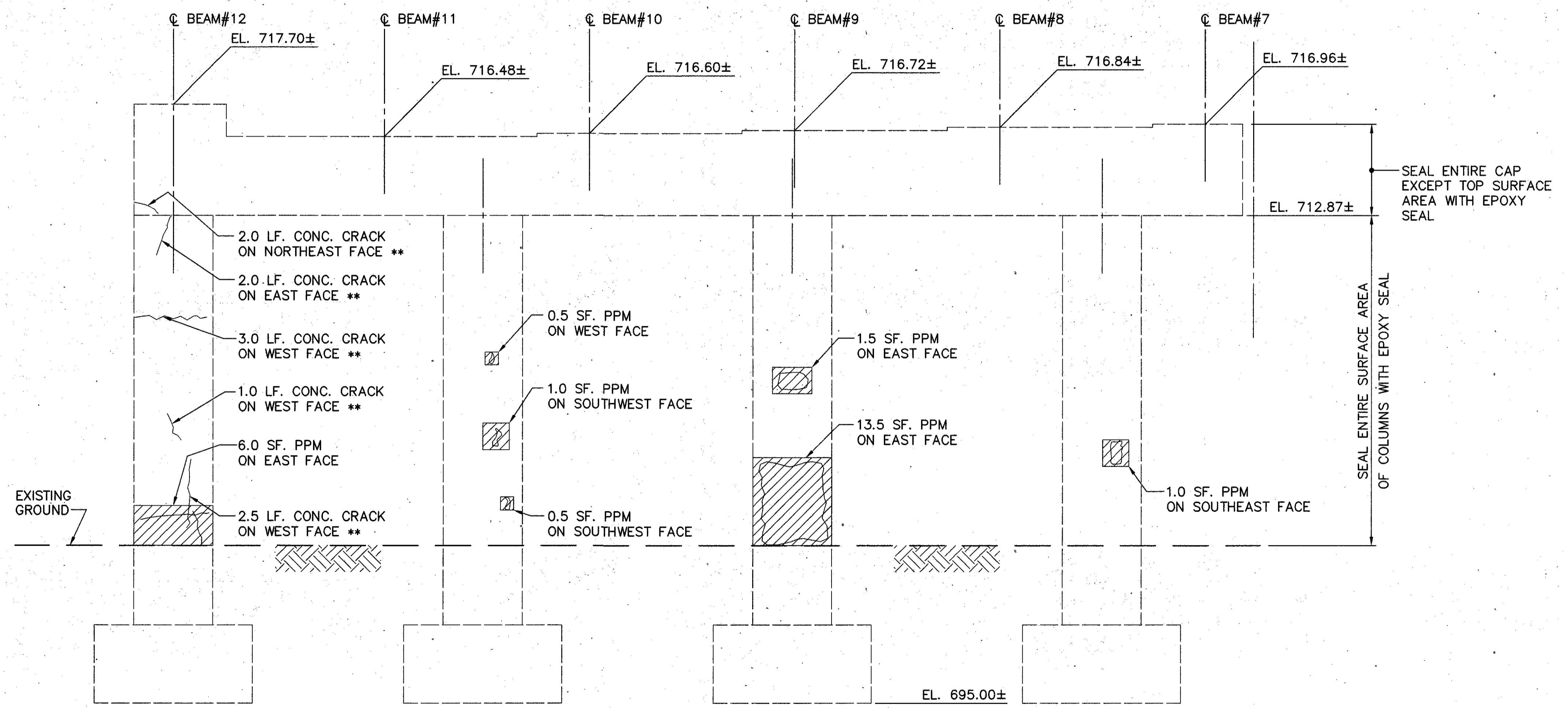
INDICATES AREAS TO BE PATCHED AS PER ITEM 520-PNEUMATICALLY PLACED MORTAR, AS PER PLAN.

LEGEND		STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 6121 HUNTLEY ROAD, COLUMBUS, OHIO 43229						
TYP. - TYPICAL	C.J. - CONSTRUCTION JOINT	WEST ABUTMENT WINGWALL DETAIL						
C/C - CENTER TO CENTER	F.F. - FAR FACE							
P.E.J.F. - PREMOLDED EXPANSION JOINT FILLER								
EXISTING STRUCTURE	NEW STRUCTURE							
		DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
		PHB	DST		TDW	RKM	11/07/97	
						TEU	10/29/97	

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PIER (NORTH) PLAN N



PIER (NORTH) ELEVATION

** CONCRETE REPAIR BY EPOXY INJECTION, TYPICAL AT LOCATIONS WITH AN ASTERISK
PPM PNEUMATICALLY PLACED MORTAR SURFACE REPAIR

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN DECEMBER 1996.

SUMMARY OF PPM QUANTITIES *	
	ESTIMATED QUANTITY
N. PIER	28 S. F.
S. PIER	4 S. F.
TOTAL	32 S. F.

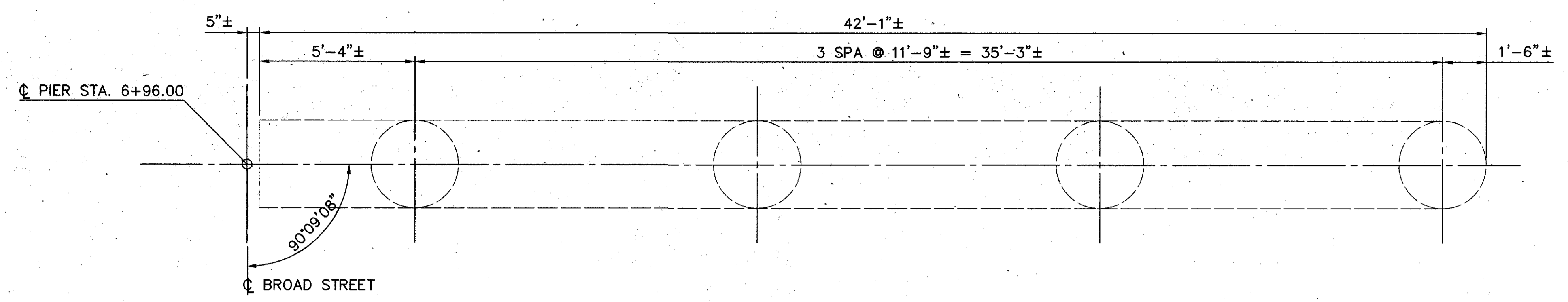
PPM = PNEUMATICALLY PLACED MORTAR, ITEM 520

* ESTIMATED QUANTITY HAS BEEN INCREASED 15% OVER FIELD MARKED QUANTITY TO ALLOW FOR ADDITIONAL DETERIORATION AND EXTENSION OF POTENTIAL CONCRETE DETERIORATION.

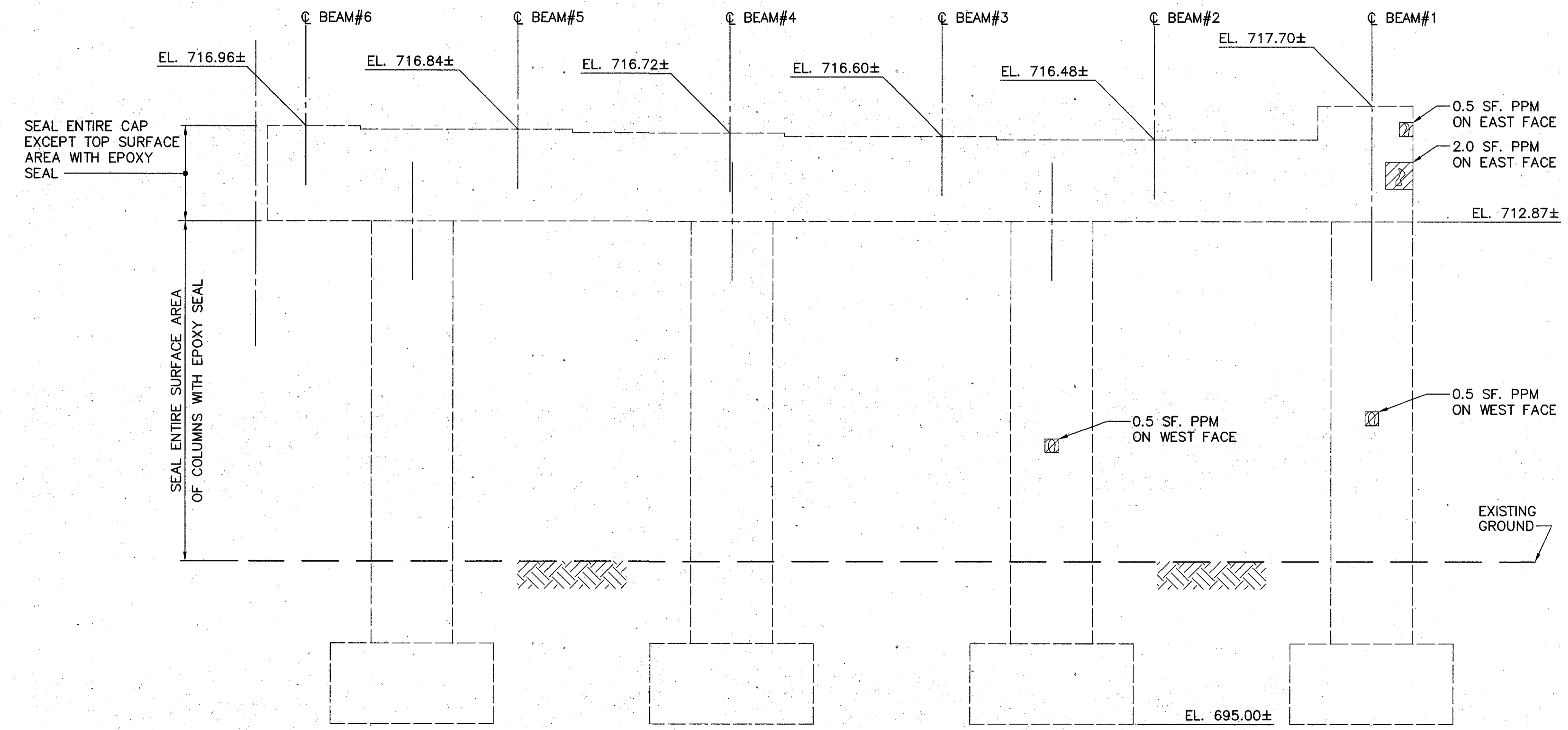
INDICATES AREAS TO BE PATCHED AS PER ITEM 520-PNEUMATICALLY PLACED MORTAR, AS PER PLAN.

LEGEND	STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 6121 HUNTLEY ROAD, COLUMBUS, OHIO 43229					
	PIER NORTH BENT DETAILS BRIDGE NO. FRA-40-1158 WEST BROAD STREET OVER S.R. 315 FRANKLIN COUNTY STA. 26+40.75 TO STA. 27+51.25					
CONC. - CONCRETE LF. - LINEAL FEET SF. - SQUARE FEET EL. - ELEVATION PLM - PNEUMATICALLY PLACED MORTAR	DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
EXISTING STRUCTURE	PHB	DST		TDW	RKM	11/07/97
NEW STRUCTURE					TEU	10/29/97

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PIER (SOUTH) PLAN N



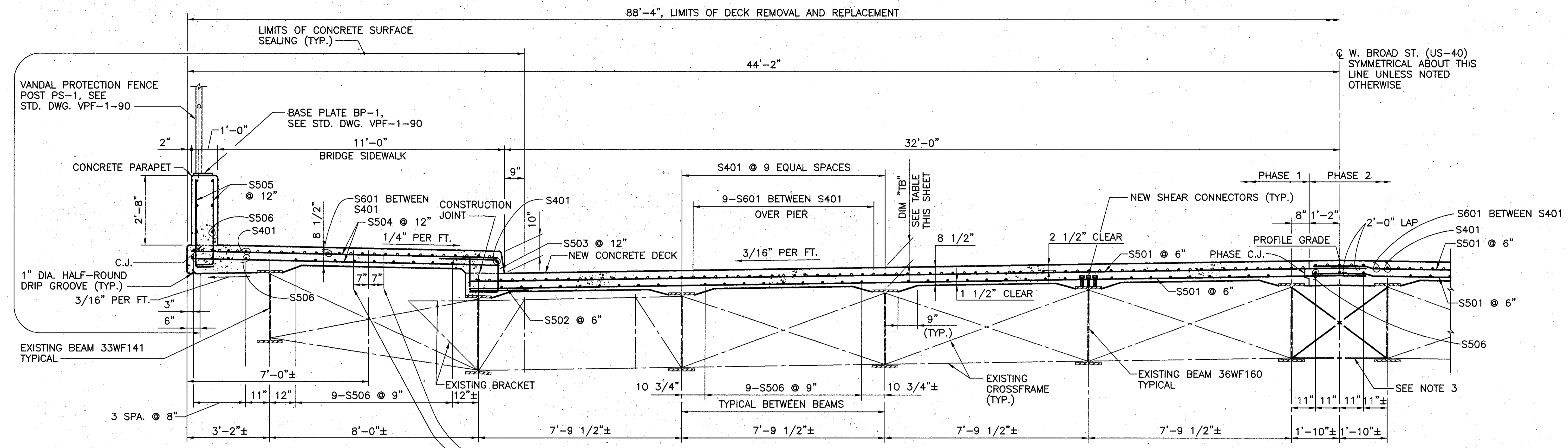
PIER (SOUTH) ELEVATION

** CONCRETE REPAIR BY EPOXY INJECTION, TYPICAL AT LOCATIONS WITH AN ASTERISK
PPM PNEUMATICALLY PLACED MORTAR SURFACE REPAIR

INDICATES AREAS TO BE PATCHED AS PER ITEM 520-PNEUMATICALLY PLACED MORTAR, AS PER PLAN.
FOR SUMMARY OF PPM QUANTITIES SEE SHEET 11/17.

LEGEND		STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 8121 HUNTLEY ROAD, COLUMBUS, OHIO 43229				
CONC. - CONCRETE	LF. - LINEAL FEET	PIER SOUTH BENT DETAILS BRIDGE NO. FRA-40-1158 WEST BROAD STREET OVER S.R. 315 FRANKLIN COUNTY STA. 26+40.75 TO STA. 27+51.25				
SF. - SQUARE FEET	EL. - ELEVATION					
PPM - PNEUMATICALLY PLACED MORTAR						
EXISTING STRUCTURE						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NEW STRUCTURE	PHB	DST	TDW	RKM	11/07/97	TEU 10/29/97

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6" CONCRETE INSERTS, 11"± CENTER TO CENTER, IN NORTH SIDEWALK SLAB ONLY, FURNISHED AND INSTALLED BY THE GAS COMPANY

TRANSVERSE SECTION

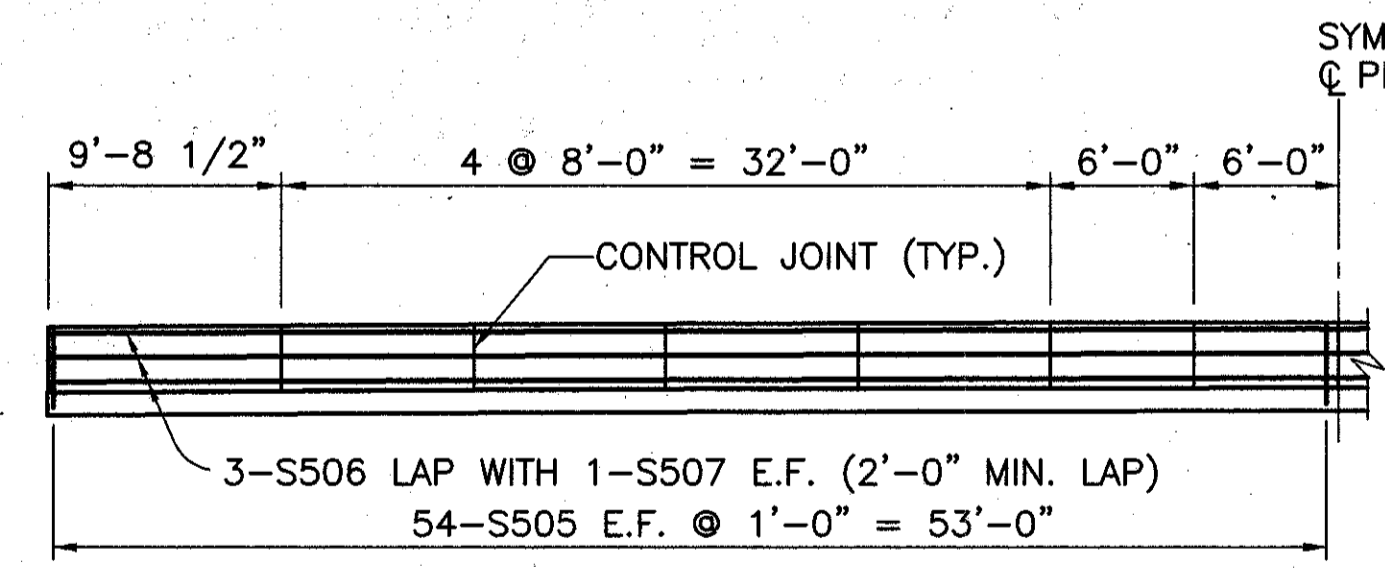
SHOWING NORTH HALF. SOUTH HALF OPPOSITE HAND EXCEPT AS INDICATED ON STEEL FRAMING PLAN, SEE SHEET 14/17

DIMENSION "TB"

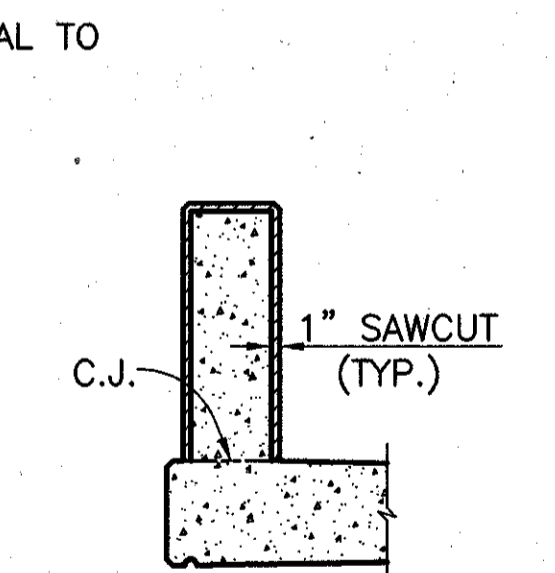
	Q BEARINGS ABUTMENTS	QUARTER POINTS	CENTER OF SPAN	QUARTER POINTS	Q BEARINGS PIER
BEAM LINE #1 & #12	10"±	9 7/8"±	9 7/8"±	10 1/4"±	10 1/4"±
BEAM LINE #2 & #11	1'-8"±	1' 7 3/4"±	1'-7 7/8"±	1'-8 1/8"±	1'-8 1/8"±
BEAM LINE #3 & #10	9 1/2"±	9 3/8"±	9 1/2"±	9 3/4"±	9 3/4"±
BEAM LINE #4 & #9	9 1/2"±	9 3/8"±	9 1/2"±	9 3/4"±	9 3/4"±
BEAM LINE #5 & #8	9 1/2"±	9 3/8"±	9 1/2"±	9 3/4"±	9 3/4"±
BEAM LINE #6 & #7	9 1/2"±	9 3/8"±	9 1/2"±	9 3/4"±	9 7/8"±

NOTES:

- ALL LONGITUDINAL TOP BARS SHALL CONSIST OF THREE S401 AND ONE S402 WITH MINIMUM LAP OF 1'-8".
- ALL LONGITUDINAL BOTTOM BARS SHALL CONSIST OF THREE S506 AND ONE S507 WITH MINIMUM LAP OF 2'-0".
- INSTALL NEW INTERMEDIATE CROSSFRAMES SPACED AS SHOWN ON STEEL FRAMING PLAN, SHEET 14. USE STANDARD DRAWING GSD-1-96, SHEET 1 OF 3, TYPE 1 FOR DETAILS.
- DURING CONSTRUCTION, UTILITIES SHALL BE CAREFULLY PROTECTED AND TEMPORARY SUPPORT SHALL BE PROVIDED BY UTILITY COMPANIES.
- DECK SLAB DEPTH: THE DISTANCE SHOWN FROM TOP OF DECK SLAB TO TOP OF STEEL BEAM IS THE THEORETICAL DESIGN DIMENSION. THE QUANTITY OF DECK CONCRETE TO BE PAID FOR SHALL BE BASED ON THIS DIMENSION, EVEN THOUGH DEVIATION FROM IT MAY BE NECESSARY BECAUSE THE TOP FLANGE OF THE BEAM MAY NOT HAVE THE EXACT CAMBER OR CONFORMATION REQUIRED TO PLACE IT PARALLEL TO THE FINISHED GRADE.
- A HAUNCH WIDTH OF 9 INCHES SHALL BE USED FOR COMPUTING QUANTITY OF CONCRETE. HOWEVER, THE HAUNCH WIDTH MAY VARY BETWEEN 6 AND 12 INCHES.



ELEVATION

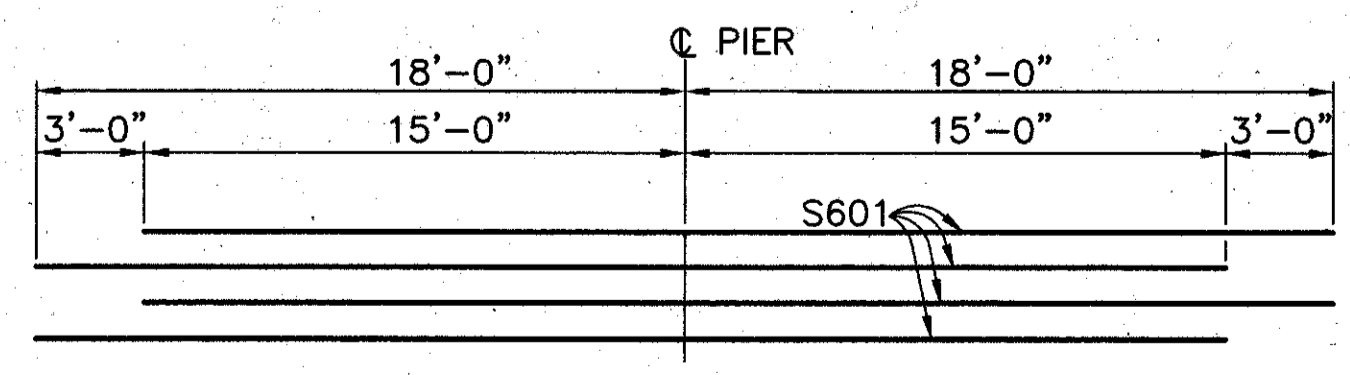


SECTION THROUGH SAWCUT

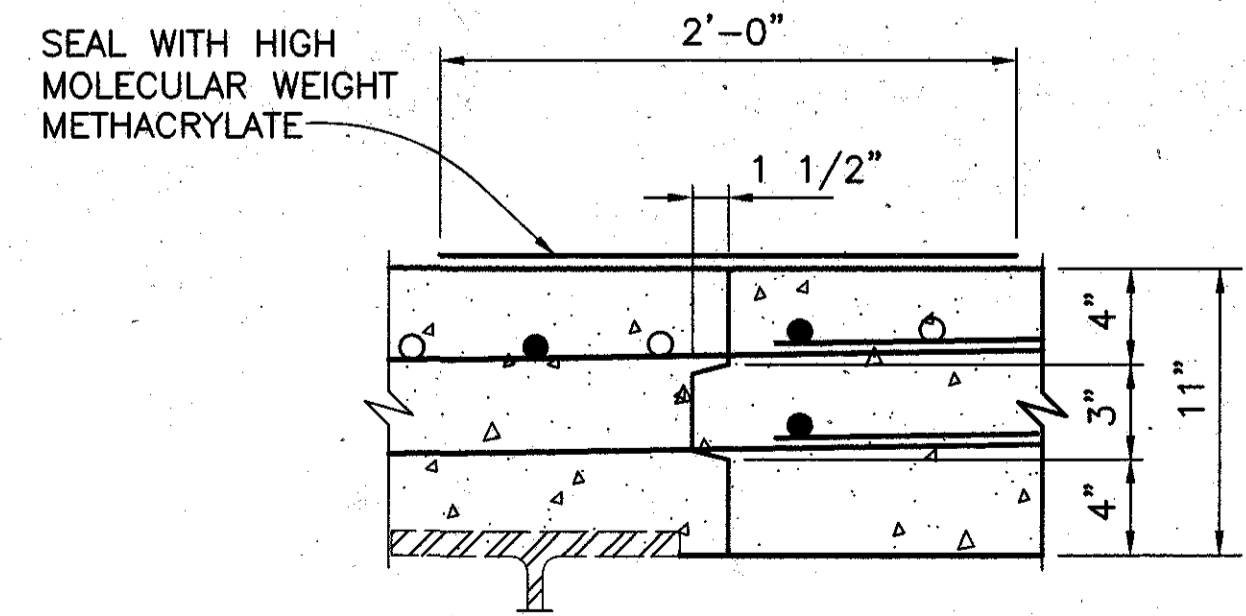
CONTROL JOINTS FOR CONCRETE PARAPETS:
AS SOON AS CONCRETE SAW CAN BE OPERATED WITHOUT DAMAGING THE FRESHLY PLACED CONCRETE, 1 INCH DEEP CONTROL JOINTS SHALL BE SAWED INTO THE PERIMETER OF THE CONCRETE PARAPET. THE SAW CUT SHALL BE MADE IN THE COMPLETE CIRCUMFERENCE OF THE PARAPET, STARTING AND ENDING AT THE ELEVATION OF THE CONCRETE DECK. THE USE OF AN EDGE GUIDE, FENCE, OR JIG IS REQUIRED TO INSURE THAT THE CUT JOINT IS STRAIGHT, TRUE, AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH SHALL BE THE WIDTH OF

THE SAW BLADE, A NOMINAL WIDTH OF 1/4 INCH. THE PERIMETER OF THE DEFLECTION CONTROL JOINT SHALL BE SEALED TO A MINIMUM DEPTH OF 1 INCH WITH A CAULKING MATERIAL CONFORMING TO FEDERAL SPECIFICATION, TT-S-00227E. THE BOTTOM ONE HALF INCH OF BOTH THE INSIDE AND OUTSIDE FACES OF THE PARAPET SHOULD BE LEFT UNSEALED TO ALLOW ANY WATER WHICH MAY ENTER THE JOINT TO ESCAPE. QUANTITIES OF CONCRETE, REINFORCING STEEL, DEFLECTION JOINT SAWCUT AND CAULKING MATERIAL FOR PARAPET ARE INCLUDED WITH SUPERSTRUCTURE FOR PAYMENTS.

PARAPET CONTROL JOINT DETAIL



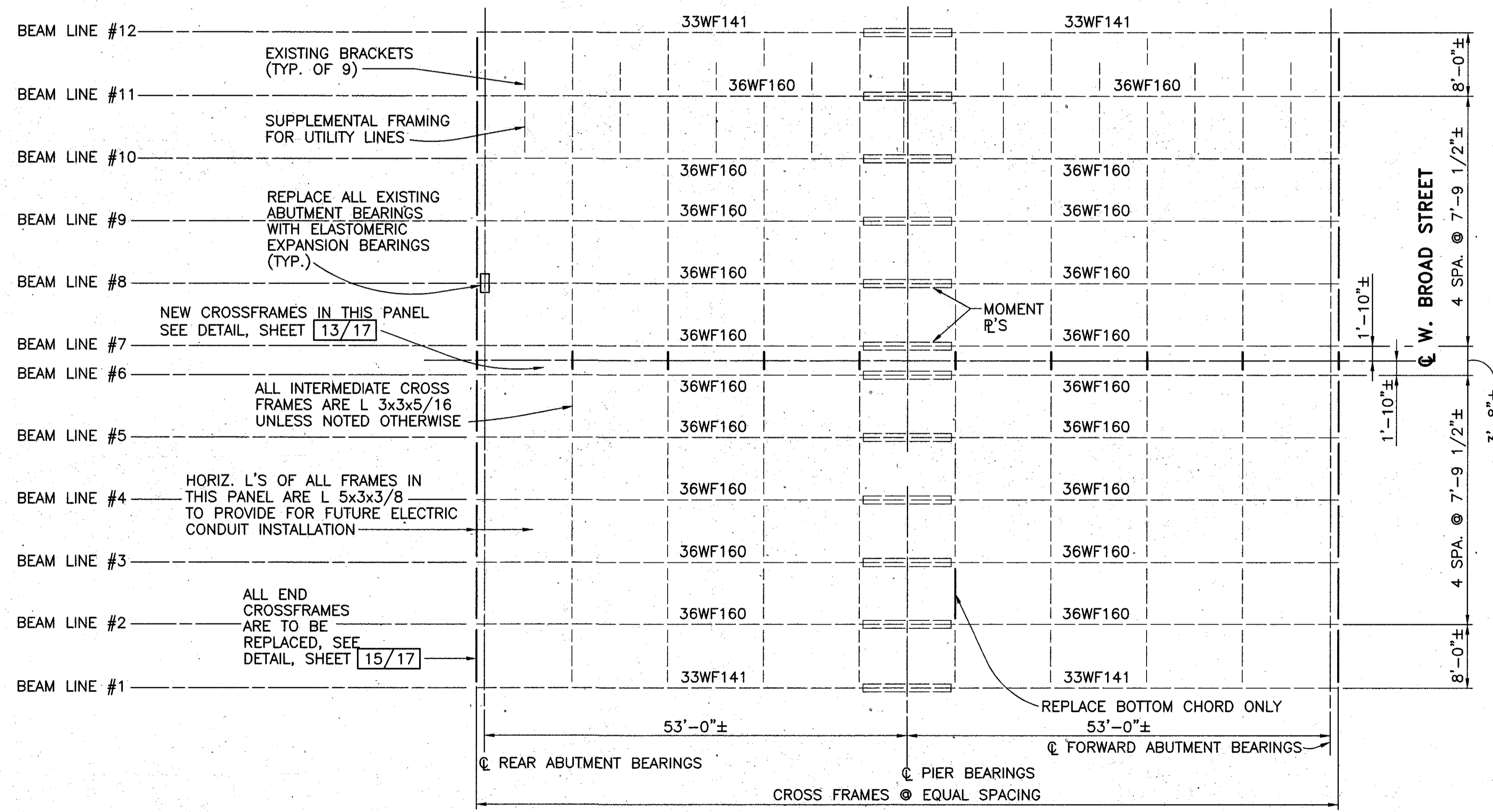
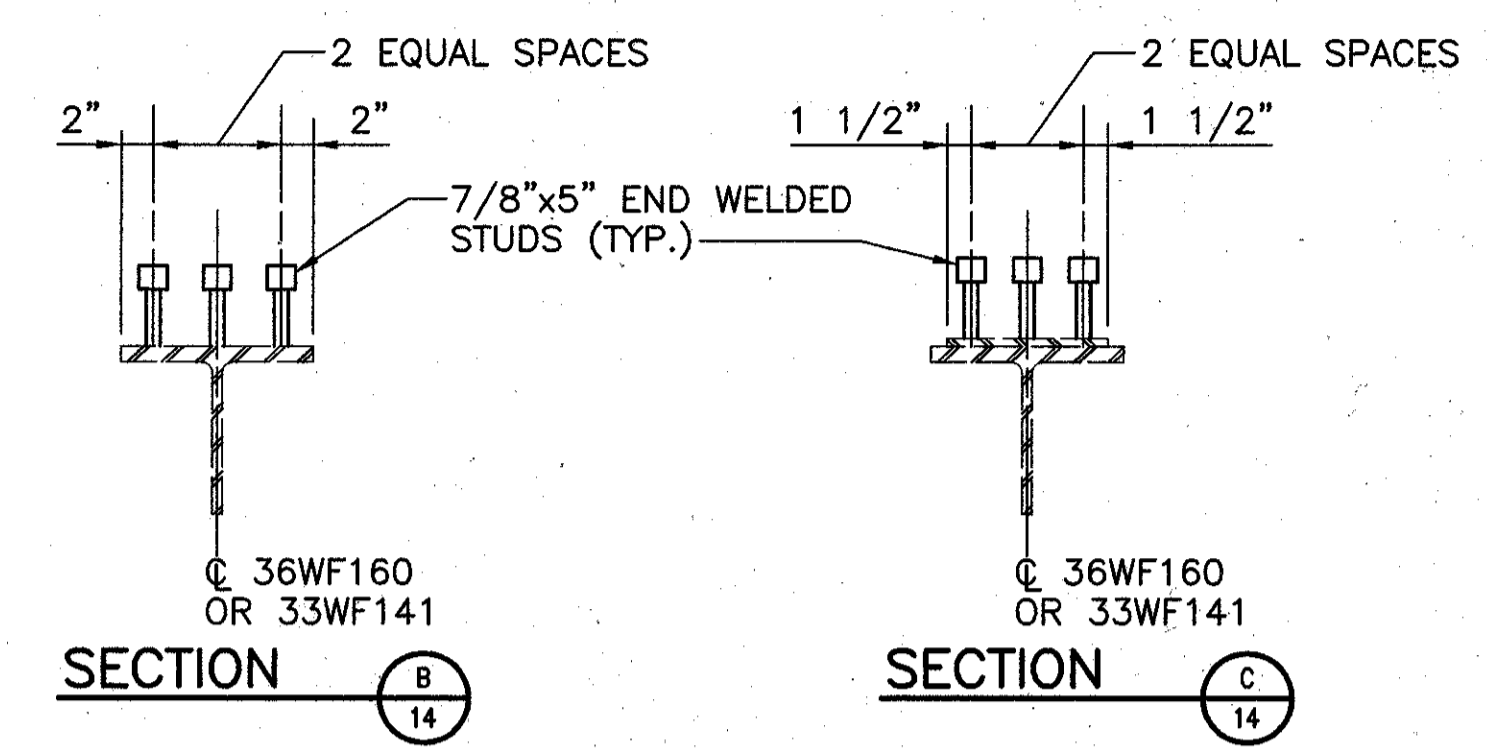
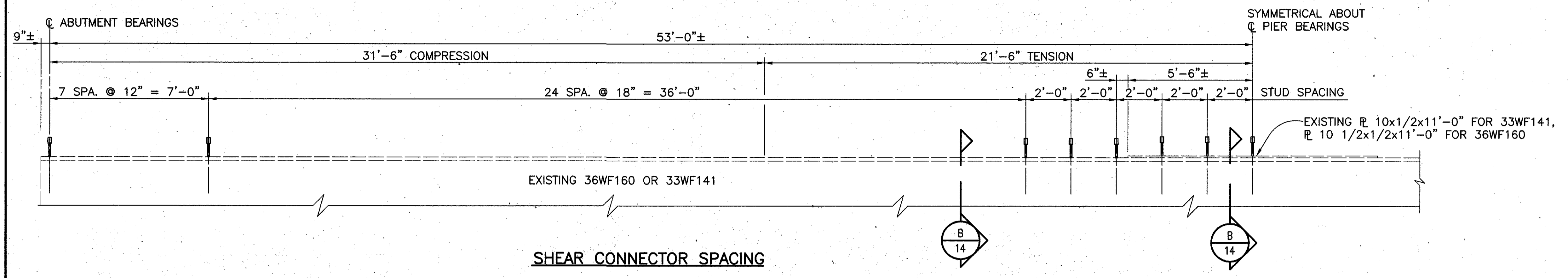
SKETCH SHOWING STAGGER OF S601 BARS OVER PIER



PHASE CONSTRUCTION JOINT DETAIL

LEGEND		STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 8121 HUNTLEY ROAD, COLUMBUS, OHIO 43229					
C.J.	CONSTRUCTION JOINT	SUPERSTRUCTURE DETAILS (1) BRIDGE NO. FRA-40-1158 WEST BROAD STREET OVER S.R. 315 FRANKLIN COUNTY STA. 26+40.75 TO STA. 27+51.25					
DIA.	DIAMETER						
DWG.	DRAWING						
E.F.	EACH FACE						
MIN.	MINIMUM	DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
STA.	STANDARD	JN	GV	TDW	RKM	TEU	11/07/97
TYP.	TYPICAL	EXISTING STRUCTURE		NEW STRUCTURE			
							10/29/97

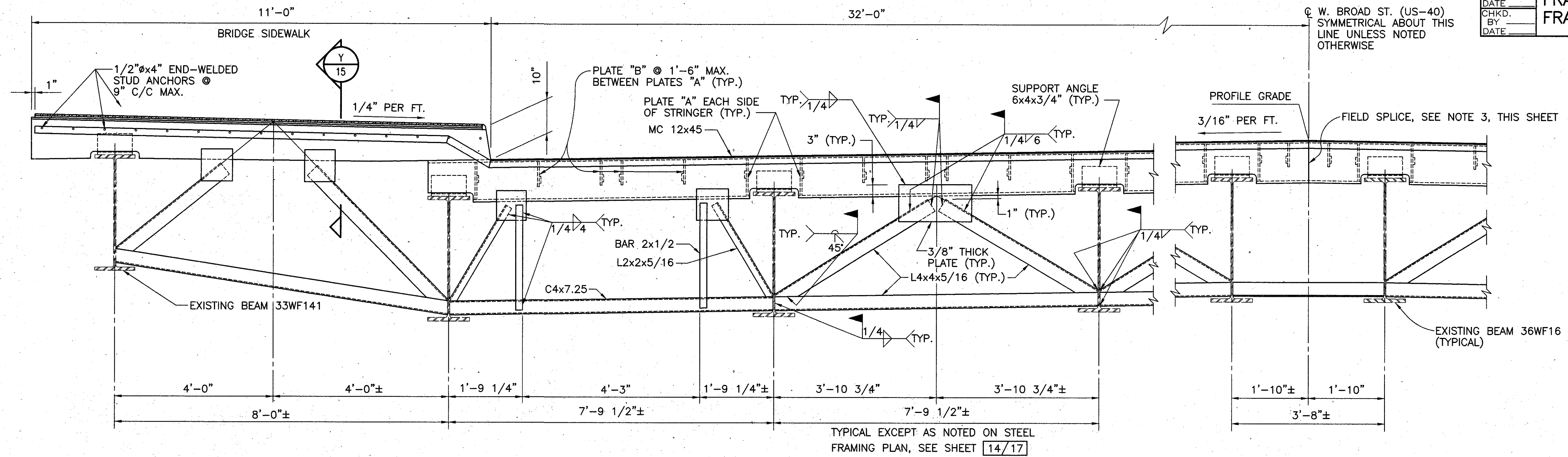
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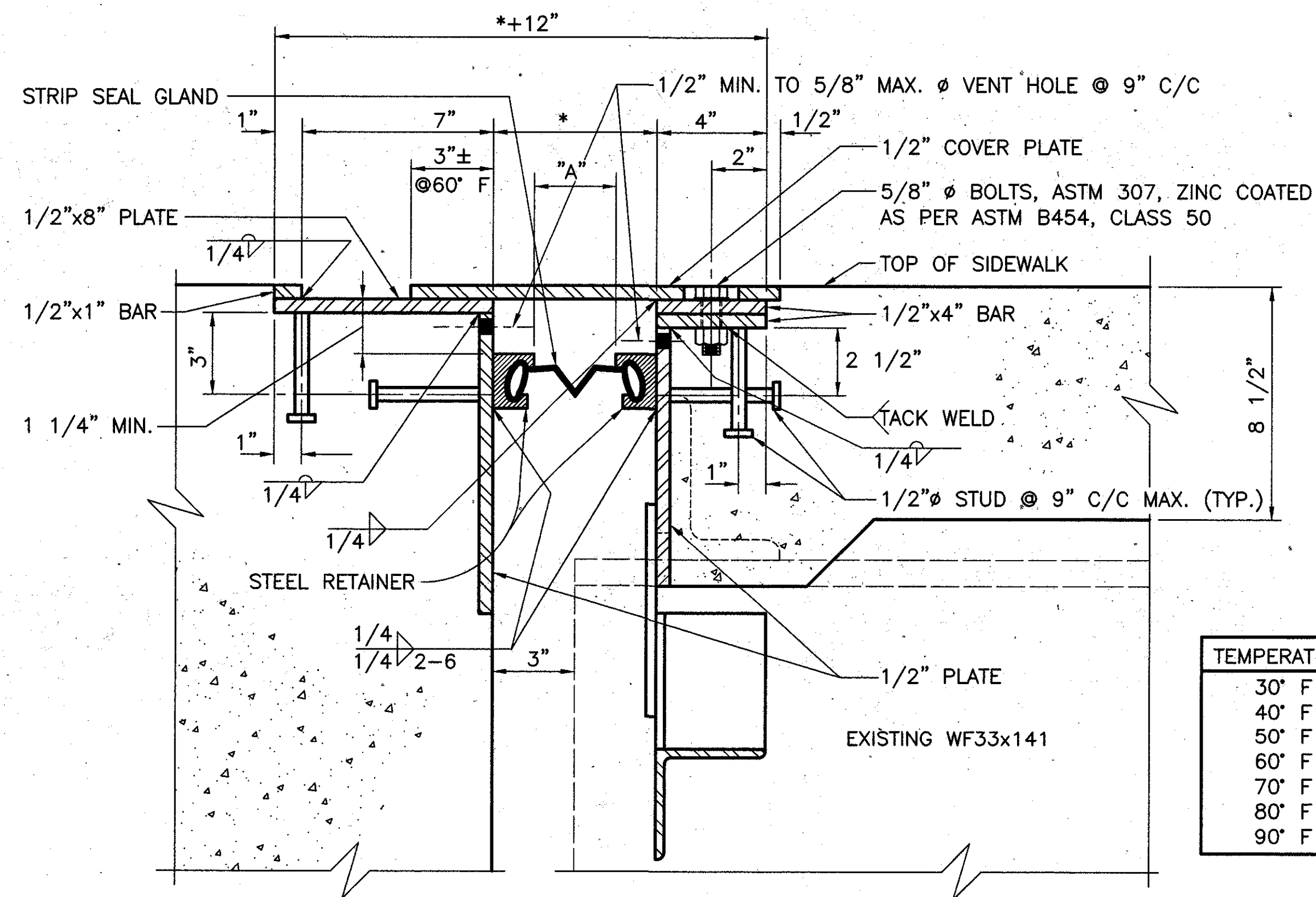
- NOTES:**
1. WELDED ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE MAY BE MADE TO AREAS OF THE FASCIA STRINGER FLANGES DESIGNATED "COMPRESSION". ATTACHMENTS SHALL NOT BE MADE TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE NOT CLOSER THAN 1" FROM EDGE OF FLANGE, BE NOT MORE THAN 2" LONG, AND BE NOT SMALLER THAN THE MINIMUM SIZE REQUIRED BY AASHTO AND AWS.
 2. CROSSFRAMES BETWEEN BEAM LINE #6 AND #7 SHALL NOT BE INSTALLED UNTIL AFTER ALL OF THE DECK CONCRETE HAS BEEN PLACED.
 3. ALL NEW AND EXISTING STEEL MEMBERS SHALL BE PAINTED WITH IZEU AND OZEU SYSTEM RESPECTIVELY.

LEGEND		STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 8121 HUNTLEY ROAD, COLUMBUS, OHIO 43229																											
TYP. - TYPICAL		SUPERSTRUCTURE DETAILS (2) BRIDGE NO. FRA-40-1158 WEST BROAD STREET OVER S.R.315 FRANKLIN COUNTY STA. 26+40.75 TO STA. 27+51.25																											
MAX. - MAXIMUM																													
MIN. - MINIMUM																													
C/C - CENTER TO CENTER																													
DIM. - DIMENSION		<table border="1"> <tr> <td>DESIGNED</td> <td>DRAWN</td> <td>TRACED</td> <td>CHECKED</td> <td>REVIEWED</td> <td>DATE</td> <td>REVISED</td> </tr> <tr> <td>JN</td> <td>GV</td> <td></td> <td>TDW</td> <td>RKM</td> <td>11/07/97</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>TEU</td> <td>10/29/97</td> <td></td> </tr> </table>							DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED	JN	GV		TDW	RKM	11/07/97						TEU	10/29/97	
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED																							
JN	GV		TDW	RKM	11/07/97																								
				TEU	10/29/97																								
EXISTING STRUCTURE																													
NEW STRUCTURE																													

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END CROSSFRAME DETAILS
(NORTH SIDE SHOWN)



TEMPERATURE	DIM. "A"
30° F	1 7/8"
40° F	1 13/16"
50° F	1 3/4"
60° F	1 5/8"
70° F	1 9/16"
80° F	1 1/2"
90° F	1 3/8"

* THIS DIMENSION IS THE SUM OF (2 X STEEL RETAINER WIDTH+DIM. "A").

SECTION Y
15

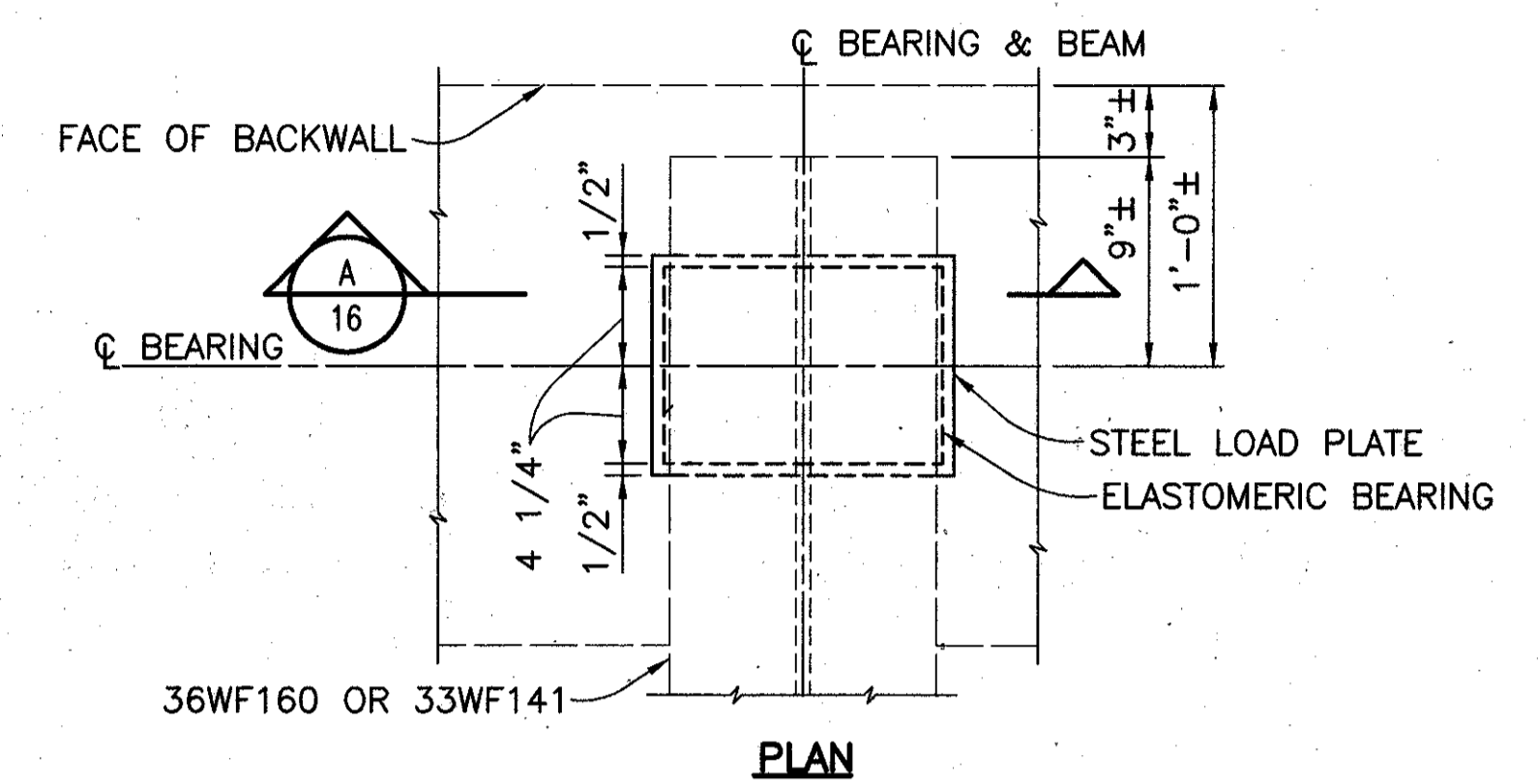
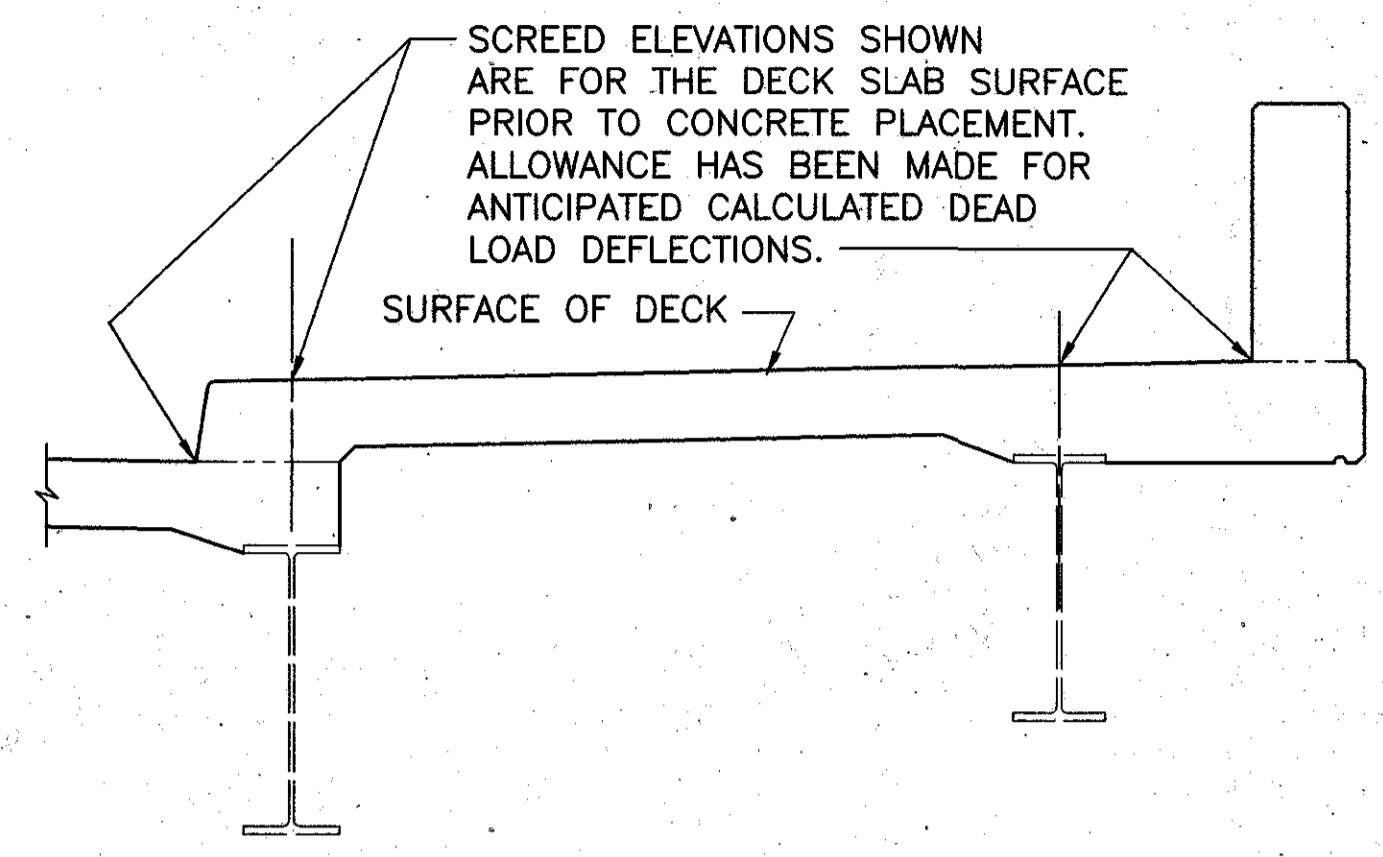
NOTE:

- SEE STANDARD DRAWING EXJ-4-87, SHEET 1-5 FOR OTHER DETAILS AND NOTES NOT SHOWN.
- DURING INSTALLATION OF THE SUPPORT/ARMOR FOR THE SUPERSTRUCTURE SIDE OF THE EXPANSION JOINT SEAL, THE SEATING OF BEAMS ON BEARINGS SHALL BE CAREFULLY OBSERVED TO ASSURE THAT POSITIVE BEARING IS MAINTAINED. PROPER VERTICAL FIT OF THE SUPPORT/ARMOR ON THE BEAMS SHALL BE ACHIEVED BY POSITIONING OF THE BEVEL FILL PLATES RATHER THAN BY CLAMPING FORCE.
- FIELD SPLICE: A COMPLETE PENETRATION BUTT WELD SHOULD BE PROVIDED AT THE ARMOR JOINTS AND A PARTIAL PENETRATION BUTT WELD SHOULD BE PROVIDED AROUND THE OUTER PERIPHERY OF THE ABUTTING SURFACES OF THE RETAINER (NOT IN THE AREA IN CONTACT WITH THE GLAND). THE GLAND SHOULD BE CONTINUOUS AND INSTALLED IN ONE PIECE.

15/17

LEGEND	STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 8121 HUNTLEY ROAD, COLUMBUS, OHIO 43229					
	SUPERSTRUCTURE DETAILS (3)					
TYP. - TYPICAL	BRIDGE NO. FRA-40-1158					
MAX. - MAXIMUM	WEST BROAD STREET OVER S.R. 315					
MIN. - MINIMUM	FRANKLIN COUNTY STA. 26+40.75 TO STA. 27+51.25					
C/C - CENTER TO CENTER	EXISTING STRUCTURE					
DIM. - DIMENSION	DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	JN	GV		TDW	RKM 11/07/97 TEU 10/29/97	

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NOTES:

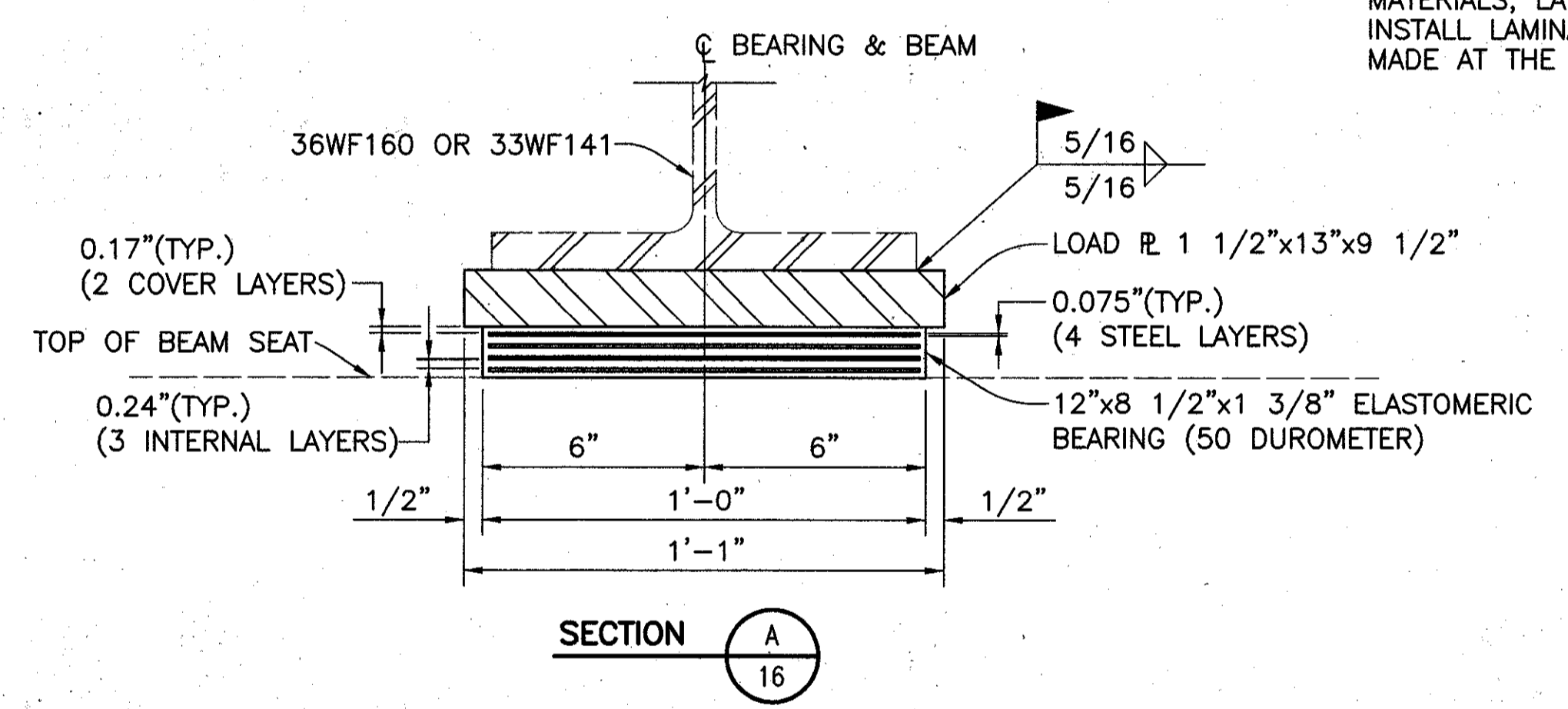
LOAD PLATE: THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS. WELDING OF THE LOAD PLATE TO THE SUPERSTRUCTURE SHALL BE CONTROLLED SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE SHALL NOT EXCEED 300° F AS DETERMINED BY THE USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.

BEARING REPOSITIONING: IF DECK CONCRETE IS PLACED AT AN AMBIENT TEMPERATURE HIGHER THAN 80° F OR LOWER THAN 40° F AND THE BEARING SHEAR DEFLECTION AT 60° F ±10° F EXCEEDS ONE-SIXTH OF THE BEARING HEIGHT, THE BEAMS SHALL BE RAISED TO ALLOW THE BEARING TO RETURN TO THEIR UNDEFORMED SHAPE AT 60° F ±10° F.

ELASTOMERIC BEARINGS SHALL COMPLY WITH ITEM 516 AND ARTICLES 18.2.5 THROUGH 18.2.8 OF SECTION 18, BEARING DEVICES, DIVISION II, CONSTRUCTION OF THE AASHTO STANDARD SPECIFICATION FOR HIGHWAY BRIDGES. BEARINGS SHALL BE GRADE 3, 50 DUROMETER ELASTOMER, AND SHALL BE SUBJECTED TO THE LOAD TESTING REQUIREMENTS CORRESPONDING TO DESIGN METHOD B. TESTING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE BEARINGS, EACH.

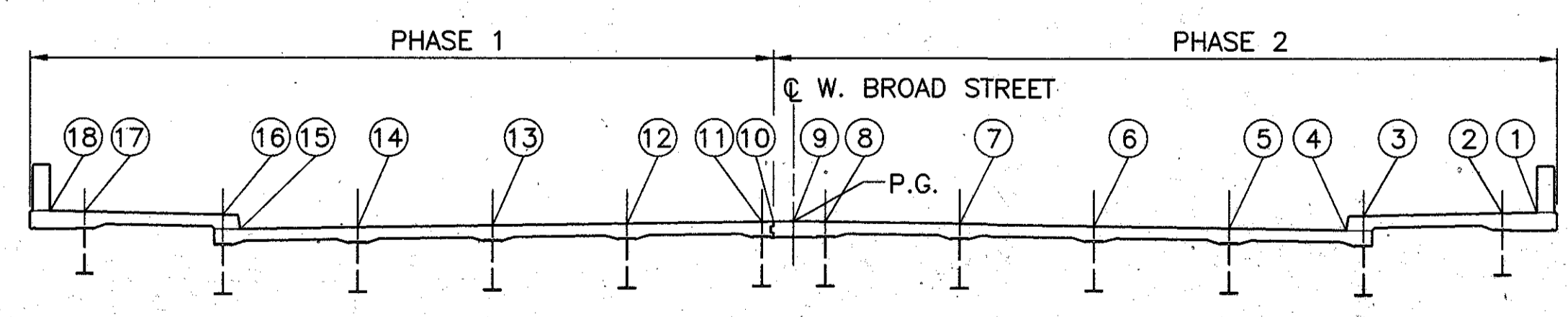
BASIS OF PAYMENT: THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, EACH.

DECK SCREED ELEVATIONS										
POINT	DESCRIPTION	STATION :								
		26+43.0 WEST ABUT.	26+50.0	26+69.5 MID-SPAN	26+75.0	26+96.0 PIER	27+00.0	27+22.5 MID-SPAN	27+25.0	27+49.0 EAST ABUT.
1	SOUTH TOE OF PARAPET	721.38	721.44	721.55	721.56	721.57	721.57	721.55	721.54	721.38
2	BEAM LINE #1	721.34	721.40	721.50	721.52	721.53	721.53	721.50	721.49	721.34
3	BEAM LINE #2	721.17	721.23	721.33	721.35	721.36	721.36	721.33	721.32	721.17
4	SOUTH TOE OF CURB	720.32	720.37	720.48	720.49	720.51	720.51	720.48	720.47	720.32
5	BEAM LINE #3	720.42	720.48	720.58	720.60	720.61	720.61	720.58	720.57	720.42
6	BEAM LINE #4	720.55	720.60	720.70	720.72	720.73	720.73	720.70	720.69	720.55
7	BEAM LINE #5	720.67	720.72	720.83	720.84	720.85	720.85	720.83	720.82	720.67
8	BEAM LINE #6	720.79	720.84	720.94	720.96	720.98	720.98	720.94	720.93	720.79
9	PROFILE GRADE	720.82	720.87	720.97	720.99	721.01	721.00	720.97	720.96	720.82
10	PHASE CONSTRUCTION JOINT	720.80	720.85	720.95	720.97	720.99	720.99	720.95	720.95	720.80
11	BEAM LINE #7	720.79	720.84	720.94	720.96	720.98	720.98	720.94	720.93	720.79
12	BEAM LINE #8	720.67	720.72	720.83	720.84	720.85	720.85	720.83	720.82	720.67
13	BEAM LINE #9	720.55	720.60	720.70	720.72	720.73	720.73	720.70	720.69	720.55
14	BEAM LINE #10	720.42	720.48	720.58	720.60	720.61	720.61	720.58	720.57	720.42
15	NORTH TOE OF CURB	720.32	720.37	720.48	720.49	720.51	720.51	720.48	720.47	720.32
16	BEAM LINE #11	721.17	721.23	721.33	721.35	721.36	721.36	721.33	721.32	721.17
17	BEAM LINE #12	721.34	721.40	721.50	721.52	721.53	721.53	721.50	721.49	721.34
18	NORTH TOE OF PARAPET	721.38	721.44	721.55	721.56	721.57	721.57	721.55	721.54	721.38



LOADING	
DESIGN DATA	ABUTMENT BEARINGS
DL	35.5 KIPS
LL	45.3 KIPS
TOTAL DESIGN LOAD	80.8 KIPS

BEARINGS AT ABUTMENT

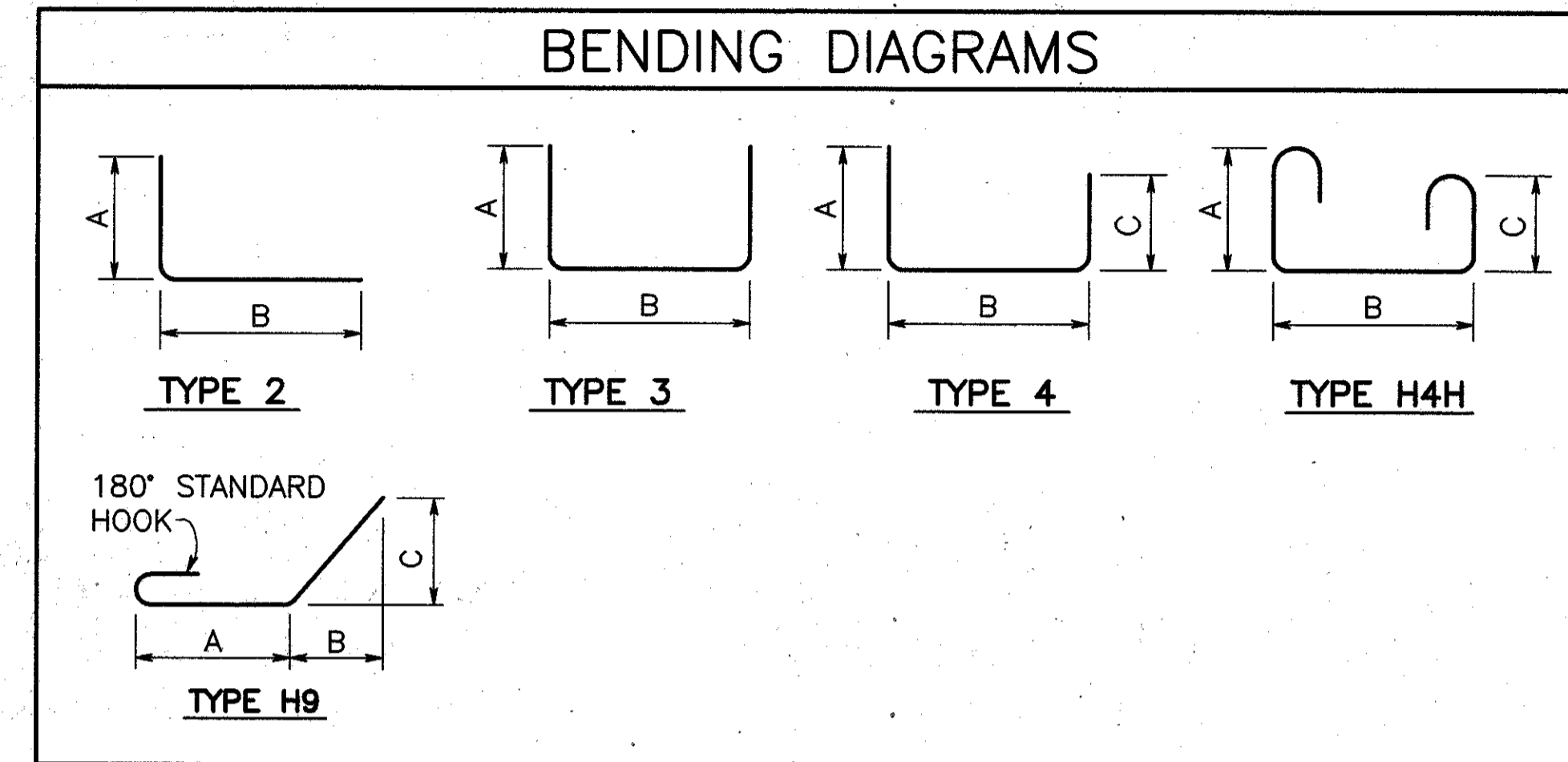


SCREED POINT LOCATIONS

LEGEND	STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 8121 HUNTLEY ROAD, COLUMBUS, OHIO 43229				
	SUPERSTRUCTURE DETAILS (4)				
EXISTING STRUCTURE	BRIDGE NO. FRA-40-1158				
	WEST BROAD STREET OVER S.R.315				
NEW STRUCTURE	FRANKLIN COUNTY STA. 26+40.75 TO STA. 27+51.25				
	DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE
	JN	GV		TDW	RKM 11/07/97 TEU 10/29/97

[C:\D:\STRUCT\923131\CONTRACT\BRIDGE\BRIDGE\BRIDGE.DWG - OCT 15, 1997 - 14:38:58 - PLOT: 1=1

STEEL LIST										
MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	NOTE
ABUTMENTS										
A501	22	30'-0"	688	STR.						
A502	4	11'-2"	47	STR.						
A503	14	17'-0"	248	STR.						
A504	4	12'-6"	52	STR.						
A505	10	27'-8"	289	STR.						
A506	4	9'-0"	38	STR.						
A507	4	6'-0"	25	STR.						
A508	10	12'-5"	130	STR.						
A509	4	12'-2"	51	STR.						
A601	16	7'-11"	190	3	3'-6"	1'-3"				
A602	24	10'-1"	363	3	4'-7"	1'-3"				
A603	132	6'-0"	1190	3	2'-9"	0'-10"				
A604	132	5'-11"	1173	3	2'-6"	1'-3"				
A701	4	9'-0"	74	STR.						
A801	84	4'-10"	1084	H9	2'-7"	1'-0"	1'-0"			
EPOXY COATED TOTAL=			5642							
SUPERSTRUCTURE										
S401	321	30'-0"	6433	STR.						
S402	107	22'-0"	1572	STR.						
S501	860	34'-4"	30796	STR.						
S502	430	3'-3"	1458	2	1'-2"	2'-3"				
S503	216	4'-2"	939	4	2'-3"	1'-2"	1'-0"			
S504	432	11'-8"	5257	STR.						
S505	432	3'-9"	1690	2	3'-1"	0'-10"				
S506	339	30'-0"	10607	STR.						
S507	113	23'-0"	2711	STR.						
S601	104	33'-0"	5155	STR.						
EPOXY COATED TOTAL=			66618							
RAILING										
R501	10	9'-9"	102	H4H	4'-1"	0'-8"	4'-1"			
R502	70	6'-7"	481	H4H	2'-6"	0'-8"	2'-6"			
R503	4	30'-0"	125	STR.						
R504	4	12'-8"	53	STR.						
R505	8	11'-9"	98	STR.						
R506	8	14'-7"	122	STR.						
R507	8	13'-5"	112	STR.						
R508	8	1'-3"	10	STR.						
R509	8	1'-9"	15	STR.						
R510	8	1'-6"	13	STR.						
EPOXY COATED TOTAL=			1131							



NOTES:

1. ALL DIMENSIONS ARE OUT TO OUT UNLESS NOTED OTHERWISE.
2. THE BAR SIZE NUMBER IS SPECIFIED IN THE 'MARK' COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, OR THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER.
3. ALL REINFORCING STEEL SHALL BE EPOXY COATED.
4. THE DESIGNATED BARS MAY NEED TO BE CUT OR BENT IN FIELD TO FIT.
5. TYPE 'STR.' MEANS STRAIGHT BAR.

STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 6121 HUNTLEY ROAD, COLUMBUS, OHIO 43229						
REINFORCING STEEL LIST BRIDGE NO. FRA-40-1158 WEST BROAD STREET OVER S.R.315 FRANKLIN COUNTY STA. 26+40.75 TO STA. 27+51.25						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JN.	RTP		TDW	RKM	11/07/97	
				TEU	10/29/97	

RETAINING WALLS H & G GENERAL NOTES

STANDARD DRAWING REFERENCES

DESCRIPTION	DWG. NO.	SHT.	DATE	REVISED
VANDAL PROTECTION FENCE	VPF-1-90	1-6	9-26-90	3-24-93

DESIGN SPECIFICATIONS

REHABILITATION AND REPAIRS TO THESE STRUCTURES CONFORM TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1996 AND THE ODOT BRIDGE DESIGN MANUAL.

WALL PROTECTION METHOD

SEALING OF CONCRETE SURFACES, EPOXY, AS PER PLAN.

REHABILITATION AND REPAIR

DESCRIPTION: THIS WORK SHALL CONSIST OF REMOVAL OF EXISTING CHAIN LINK FENCE AND LIGHT POLES MOUNTED ON TOP OF THE WALLS, SURFACE REPAIRS TO THE EXPOSED WALL FACES, BOTH FRONT AND BACK, WALL TOPS, EXPANSION JOINT REPAIRS, FENCE REPLACEMENT AND SEALING OF EXPOSED CONCRETE SURFACES.

UTILITY LINES

ALL EXPENSE INVOLVED IN RELOCATION (INSTALLING) THE AFFECTED UTILITY LINES SHALL BE BORNE BY THE UTILITIES. THE CONTRACTOR AND UTILITIES ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.02.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD.

REPLACEMENT OF EXISTING REINFORCING STEEL

ANY EXISTING REINFORCING BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND WHICH ARE MADE UNUSABLE BY CONCRETE REMOVAL OPERATIONS SHALL BE REPLACED WITH NEW STEEL AT THE CONTRACTOR'S COST. ANY EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION SHALL BE REPLACED WITH NEW STEEL.

SEALING OF CONCRETE SURFACES (EPOXY)

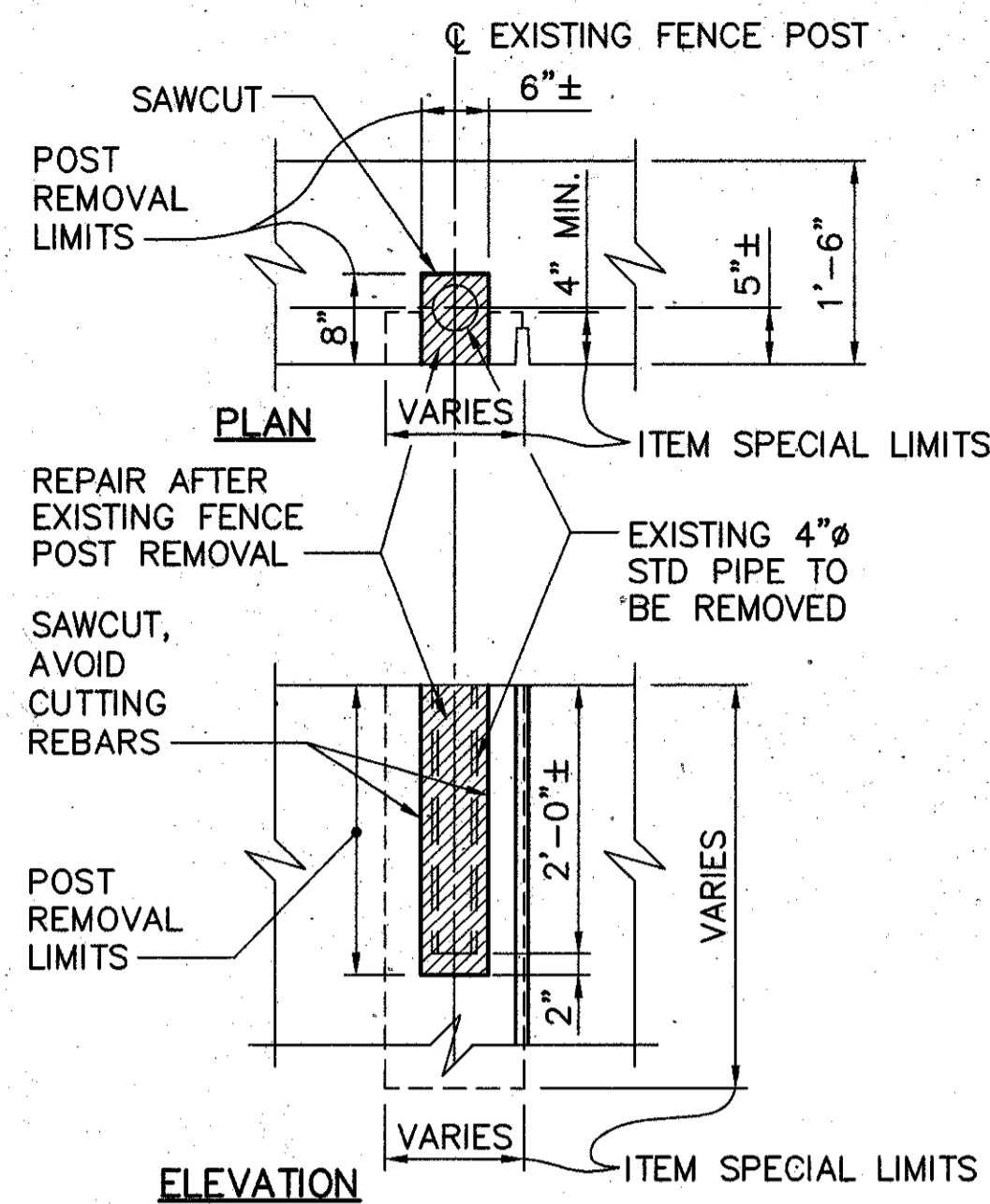
THE SEALING PRODUCT SELECTED SHALL BE COMPATIBLE WITH THE MORTAR PRODUCTS USED FOR THE SURFACE REPAIRS. CONTRACTOR SHALL SUBMIT SEALING PRODUCT MANUFACTURER'S CERTIFICATION OF COMPATIBILITY.

ITEM 520 PNEUMATICALLY PLACED MORTAR, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ITEM 520, THE REQUIRED 28 DAY STRENGTH IN SECTION 520.09, RECONSTRUCTION TESTING, PARAGRAPH 3, SHALL BE INCREASED TO 5000 PSI WITH A MINIMUM COMPRESSIVE STRENGTH AFTER 7 DAYS OF 3800 PSI. THE AVERAGE COMPRESSIVE STRENGTH REQUIRED IN 520.11, INSPECTION AND TESTING, PARAGRAPH 2, SHALL BE A MINIMUM OF 3600 PSI AT 7 DAYS WITH NO SINGLE CORE TEST LESS THAN 3100 PSI.

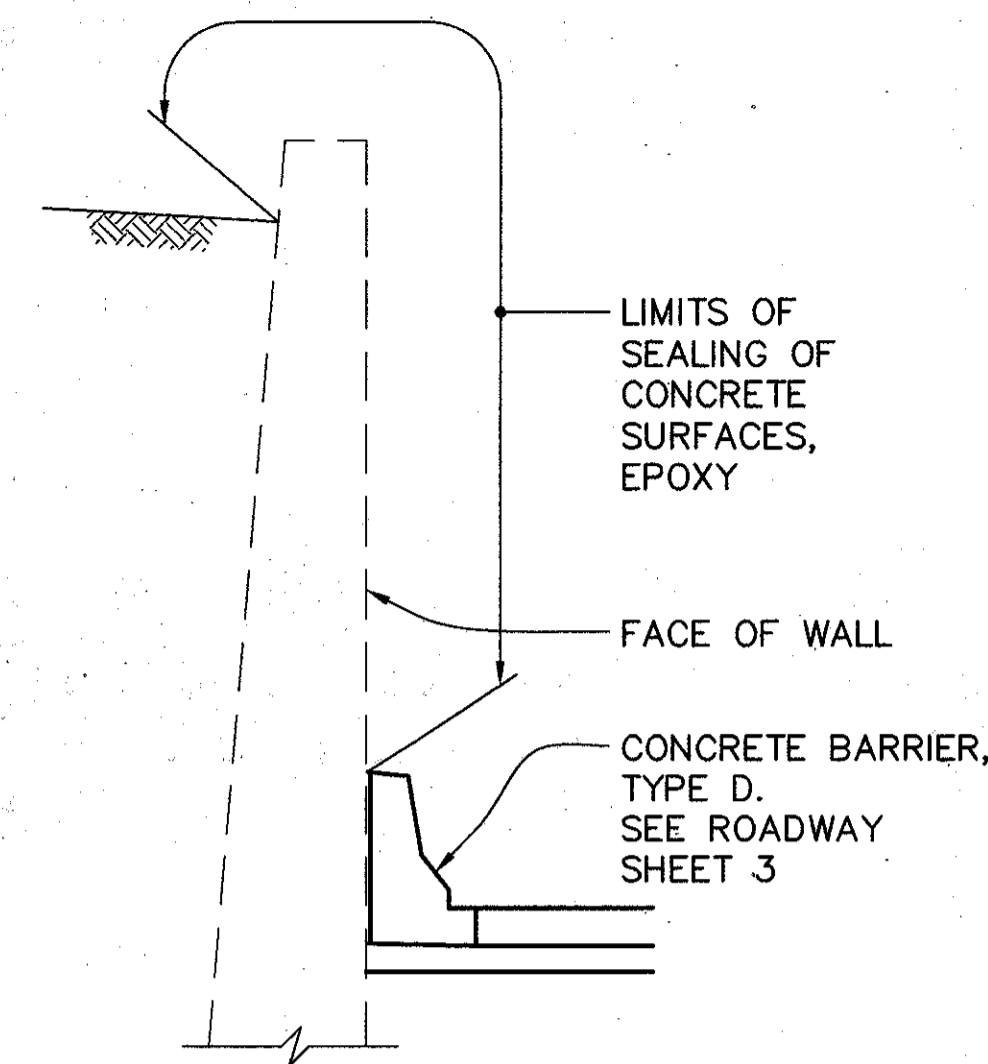
ESTIMATED QUANTITIES

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	RETAINING WALL 'H'	RETAINING WALL 'G'
202	75000	1062	LIN FT	FENCE REMOVED	601	461
SPECIAL	51267502	2148	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY) (SEE PROPOSAL NOTE)	1185	963
SPECIAL	51912600	96	LIN FT	CONCRETE REPAIR BY EPOXY INJECTION	43	53
520	11101	1821	SQ FT	PNEUMATICALLY PLACED MORTAR, AS PER PLAN	991	830
607	20000	1063	LIN FT	FENCE, TYPE CL	601	462

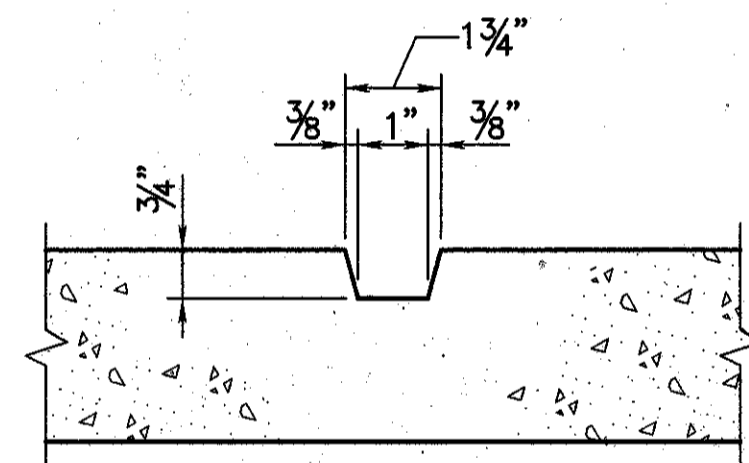


TYPICAL FENCE POST REMOVAL DETAIL 1

NOTE: INCLUDE WITH ITEM 520 PNEUMATICALLY PLACED MORTAR FOR PAYMENT, AS PER PLAN.

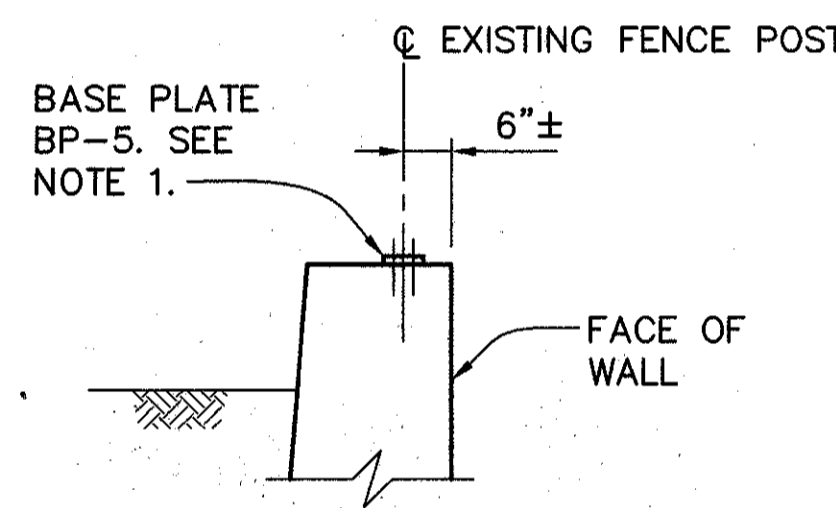


TYPICAL WALL SEALING DETAIL 2



RUSTICATION REPAIR DETAIL 3

REPAIR ALL GROOVES DISTURBED BY SURFACE REPAIRS.



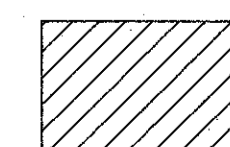
TYPICAL FENCE POST MOUNTING DETAIL 4

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETEIORATION WAS PERFORMED IN DECEMBER 1996.

SUMMARY OF PPM QUANTITIES *	
	ESTIMATED QUANTITY
WALL "H"	991 S.F.
WALL "G"	830 S.F.
TOTAL	1821 S.F.

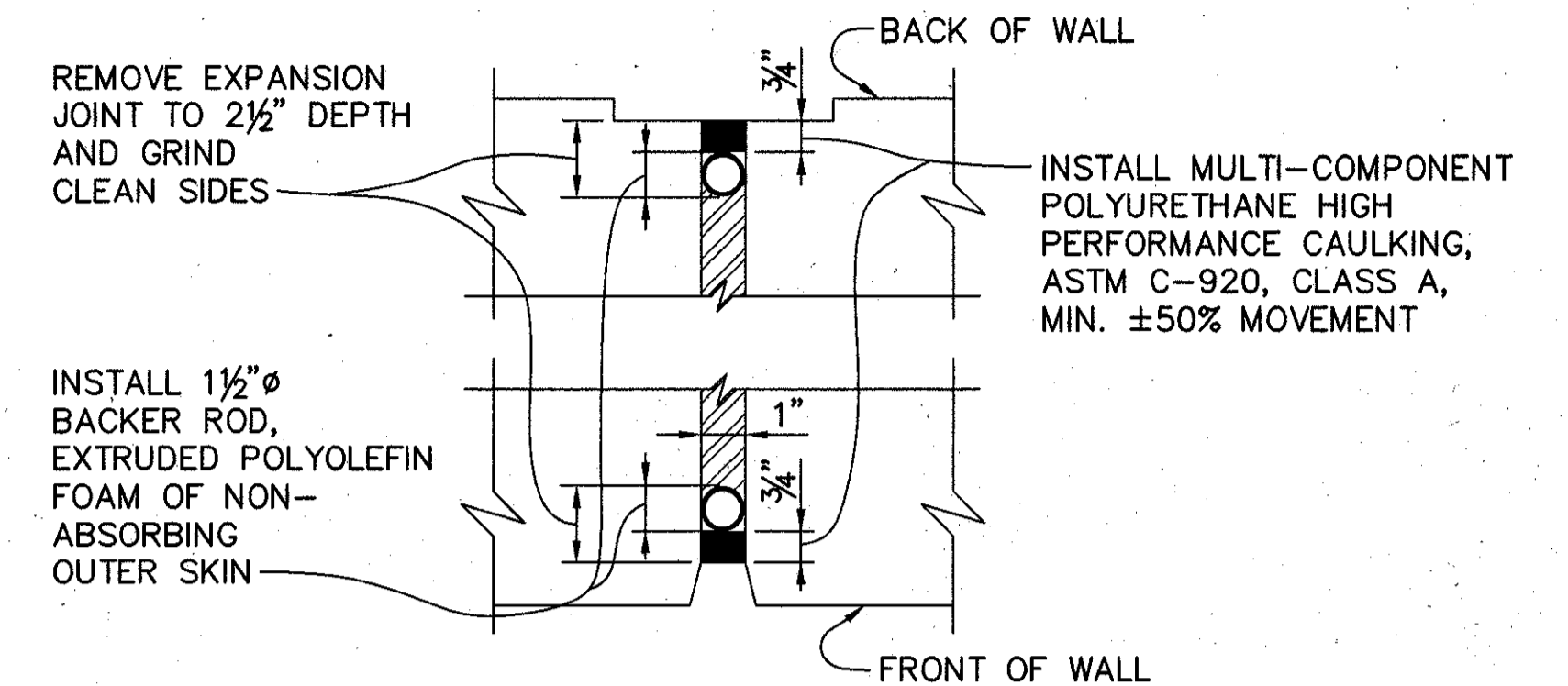
PPM = PNEUMATICALLY PLACED MORTAR, ITEM 520, AS PER PLAN

* ESTIMATED QUANTITY HAS BEEN INCREASED 15% OVER FIELD MARKED QUANTITY TO ALLOW FOR ADDITIONAL DETEIORATION AND EXTENSION OF POTENTIAL CONCRETE DETEIORATION.



INDICATES AREAS TO BE REPAIRED AS PER ITEM 520-PNEUMATICALLY PLACED MORTAR, AS PER PLAN.

CALC. BY: PHB DATE: 7/15/97	FRANKLIN COUNTY FRA-315-0.48	OHIO	156
CHKD. BY: WCB DATE: 7/28/97		FHWA REGION 5	163



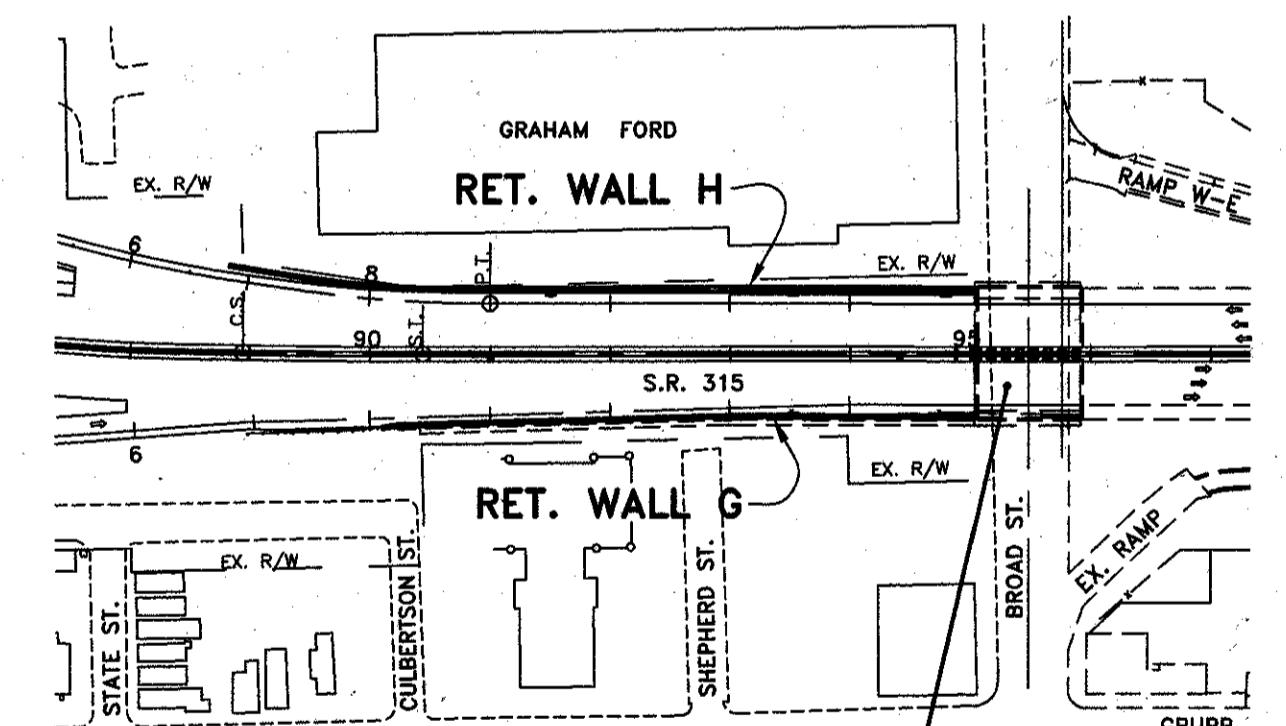
TYPICAL EXPANSION JOINT REPAIR DETAIL 5

NOTE: REPAIR JOINTS FULL HEIGHT OF EXPOSED FACES OF FRONT AND BACK OF WALL AND TOP OF WALL (1'-6" WIDTH).

ALLOW FOR 250 LIN.FT. OF REPAIR AND INCLUDE THE COST OF ALL LABOR, MATERIALS AND EQUIPMENT WITH ITEM 520, PNEUMATICALLY PLACED MORTAR, AS PER PLAN.

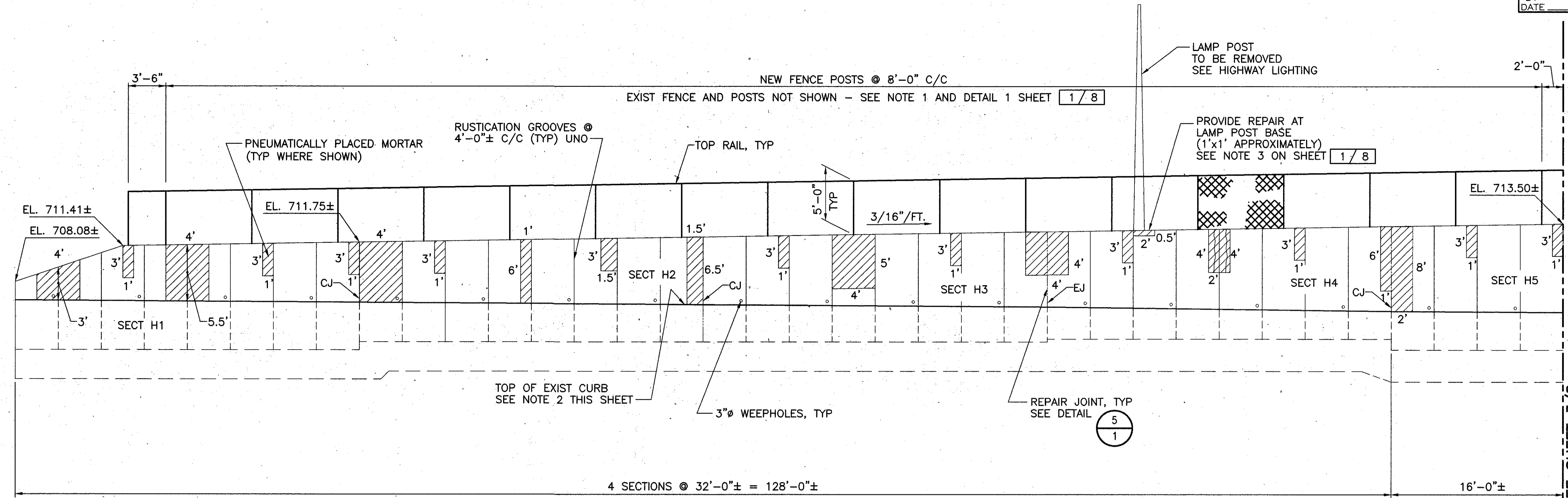
DETAIL NOTES

- REMOVE EXISTING FENCE AND REPLACE WITH NEW FENCE AS SHOWN. PROVIDE 5'-0" STRAIGHT VANDAL PROOF FENCE WITH BASE PLATE BP-5 AS SHOWN ON STANDARD DRAWINGS VPF-1-90. EXISTING FENCE POST SLEEVES ARE TO BE REMOVED AND CONCRETE PATCHED AS INDICATED ON ELEVATIONS. SEE DETAIL 1 THIS SHEET.
- ALL MATERIALS, LABOR, TOOLS AND INCIDENTALS NECESSARY TO REPAIR THE RETAINING WALLS SHALL BE INCLUDED FOR PAYMENT WITH ITEM 520, PNEUMATICALLY PLACED MORTAR, AS PER PLAN.
- LAMP POST BASE REPAIR (TYPICAL OF 7) AFTER LAMP POST IS REMOVED, REMOVE THE EXPOSED LAMP BASE ANCHOR RODS (4) AND ELECTRICAL CONDUIT BY UNDERCUTTING 2 INCHES BELOW SURFACES OF WALL. GROUT CONDUIT SOLID WITH NON-METALLIC NON-SHRINK GROUT. REPAIR TOP AND SIDES OF WALL WITH GROUT. INCLUDE ALL LABOR, MATERIAL AND EQUIPMENT COSTS FOR THE ABOVE WORK WITH ITEM 520 - PNEUMATICALLY PLACED MORTAR, AS PER PLAN.

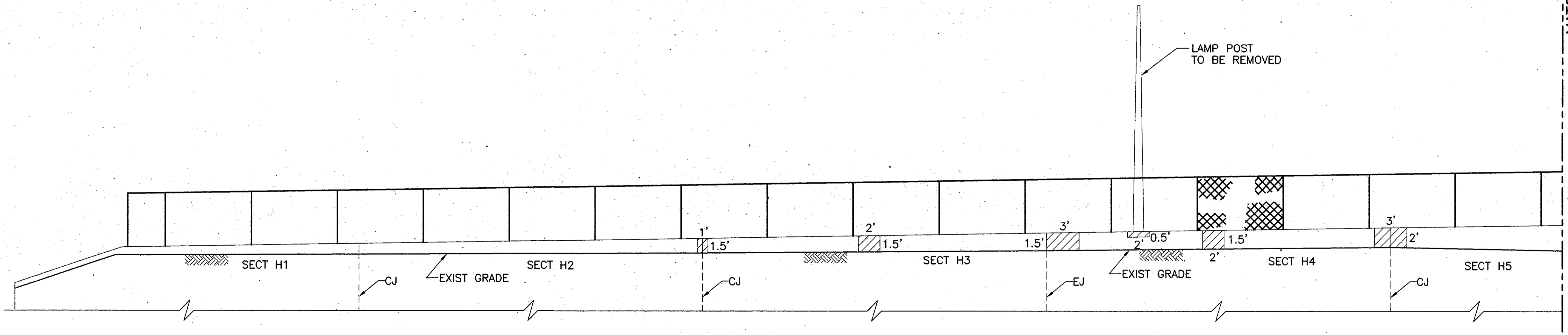


LOCATION PLAN

STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 8121 HUNTLEY ROAD, COLUMBUS, OHIO 43229						
RETAINING WALLS "H" & "G" GENERAL NOTES, ESTIMATED QUANTITIES, TYPICAL DETAILS						
FRANKLIN COUNTY						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
SKBB	RTP		PHB	RKM	11/07/97	
				WCB	10/29/97	



ELEVATION WALL "H" - LOOKING WEST (NEAR FACE)



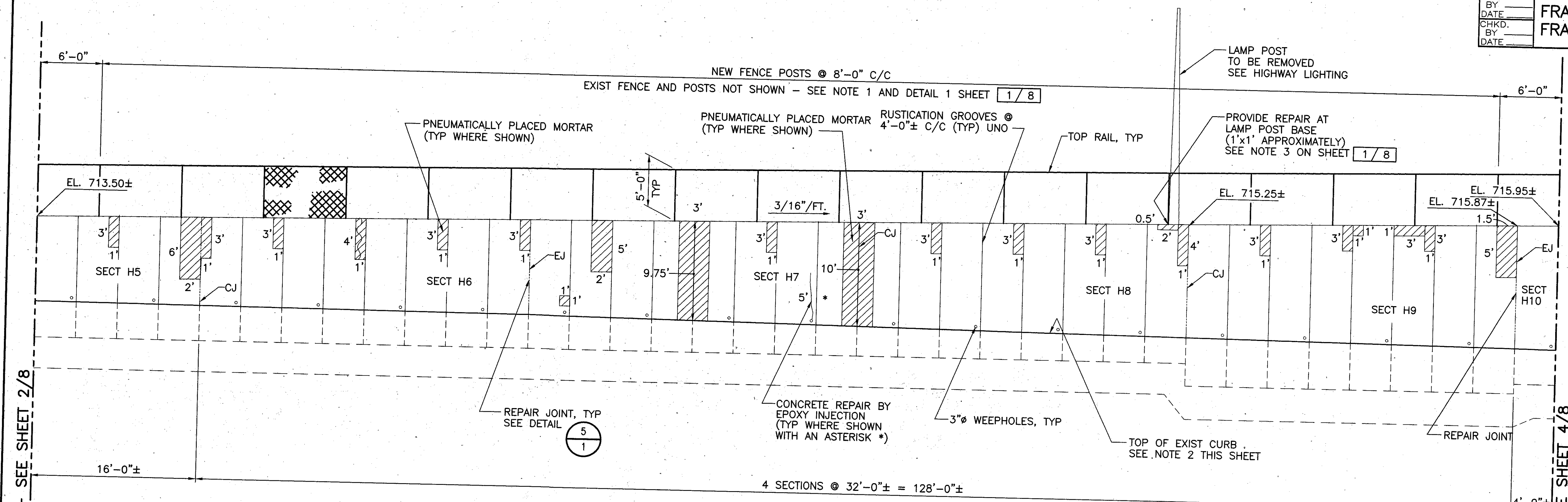
ELEVATION WALL "H" - LOOKING WEST (FAR FACE)

NOTE: SEE ELEVATION ABOVE FOR ALL DIMENSIONS & ELEVATIONS.

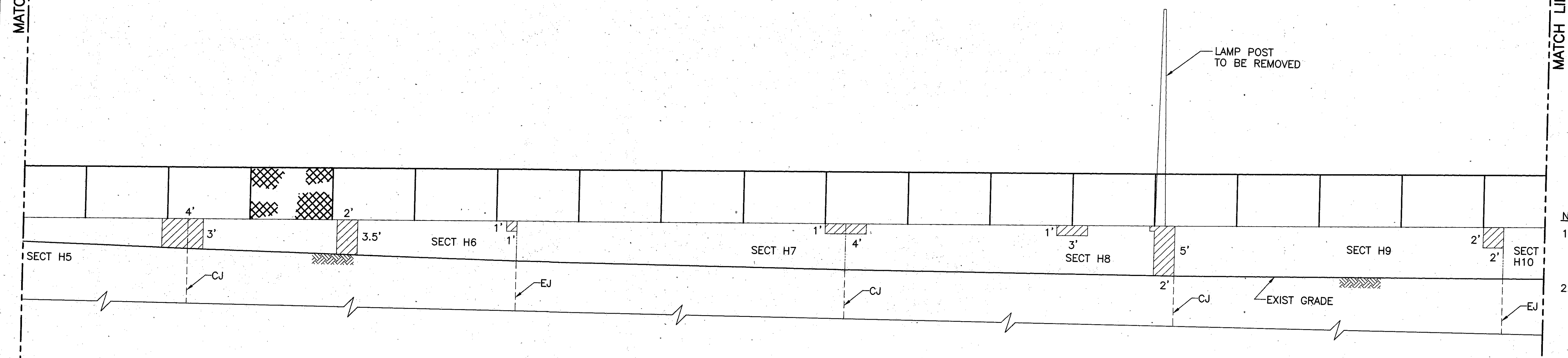
- NOTES:**
- FOR GENERAL NOTES, ESTIMATED QUANTITIES, TYPICAL DETAILS AND LOCATION PLAN SEE SHEET 1/8.
 - TOP OF EXISTING CURB (USED FOR REFERENCE) TO BE REMOVED AND REPLACED BY CONCRETE BARRIER, TYPE D, NOT SHOWN. SEE ROADWAY SHEET 3. MAKE WALL SURFACE REPAIRS PRIOR TO CONSTRUCTING BARRIER.

LEGEND		STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 8121 HUNTLEY ROAD, COLUMBUS, OHIO 43229																				
CJ - CONTROL JOINT	<p>RETAINING WALL "H" SECTIONS H1 THRU H5 ELEVATIONS</p> <p>FRANKLIN COUNTY</p> <table border="1"> <tr> <th>DESIGNED</th> <th>DRAWN</th> <th>TRACED</th> <th>CHECKED</th> <th>REVIEWED</th> <th>DATE</th> <th>REVISED</th> </tr> <tr> <td>SKBB</td> <td>JS</td> <td></td> <td>PHB</td> <td>RKM</td> <td>11/07/97</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>WCB</td> <td>10/29/97</td> <td></td> </tr> </table>	DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED	SKBB	JS		PHB	RKM	11/07/97						WCB	10/29/97	
DESIGNED		DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED															
SKBB		JS		PHB	RKM	11/07/97																
					WCB	10/29/97																
EJ - EXPANSION JOINT																						
EXIST - EXISTING																						
REQ'D - REQUIRED																						
SECT - SECTION																						
TYP - TYPICAL	INDICATES AREAS TO BE REPAIRED AS PER ITEM 520-PNEUMATICALLY PLACED MORTAR, AS PER PLAN.																					
UNO - UNLESS NOTED OTHERWISE																						
EXISTING STRUCTURE																						

[RTP] 9/23/14 CONCRETE RETAINING WALLS WALLING - NOV 17, 1997 - 13:58:17 - PLOT: 1=1



ELEVATION WALL "H" - LOOKING WEST (NEAR FACE)



ELEVATION WALL "H" - LOOKING WEST (FAR FACE)

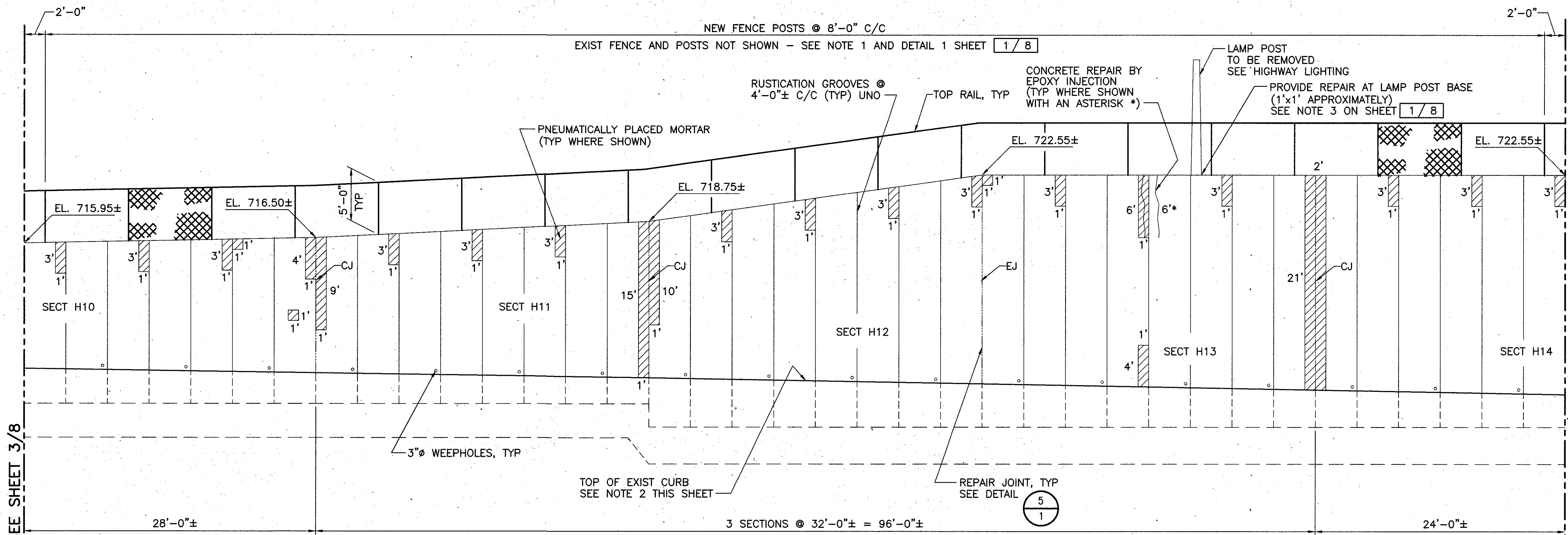
NOTE: SEE ELEVATION ABOVE FOR ALL DIMENSIONS & ELEVATIONS.

INDICATES AREAS TO BE REPAIRED AS PER ITEM 520-PNEUMATICALLY PLACED MORTAR, AS PER PLAN.

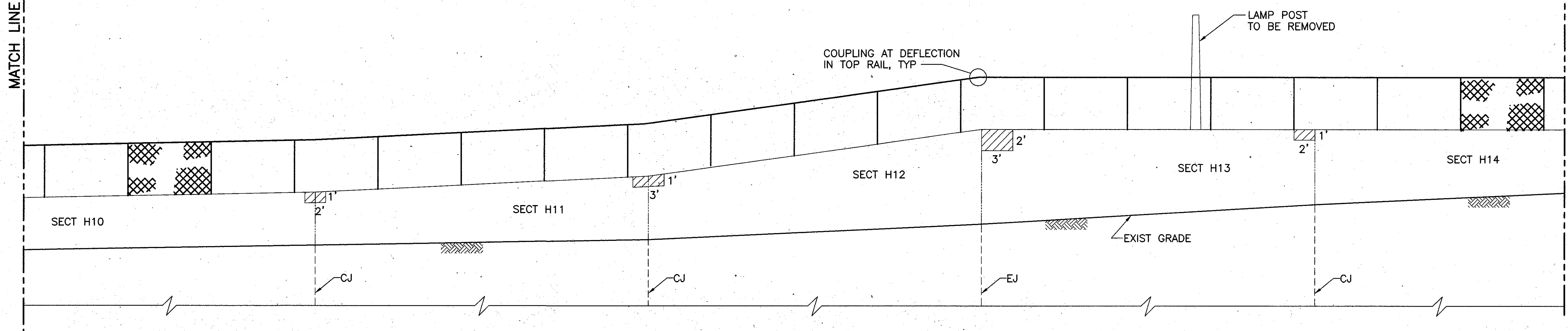
- NOTES:
- FOR GENERAL NOTES, ESTIMATED QUANTITIES, TYPICAL DETAILS AND LOCATION PLAN SEE SHEET 1/8.
 - TOP OF EXISTING CURB (USED FOR REFERENCE) TO BE REMOVED AND REPLACED BY CONCRETE BARRIER, TYPE D, NOT SHOWN. SEE ROADWAY SHEET 3. MAKE WALL SURFACE REPAIRS PRIOR TO CONSTRUCTING BARRIER.

LEGEND	STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 8121 HUNTLEY ROAD, COLUMBUS, OHIO 43229						
	RETAINING WALL "H" SECTIONS H5 THRU H10 ELEVATIONS						
FRANKLIN COUNTY							
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED	
EXISTING STRUCTURE	SKBB	JS	PHB	RKM	11/07/97	WCB	10/29/97

[PROJECT] STILSON 9/23/14 430 CONCRETE RETAINING WALL ELEVATIONS - NOV 17, 1997 - 1322608 - PLOT: 1=1



ELEVATION WALL "H" - LOOKING WEST (NEAR FACE)



ELEVATION WALL "H" - LOOKING WEST (FAR FACE)

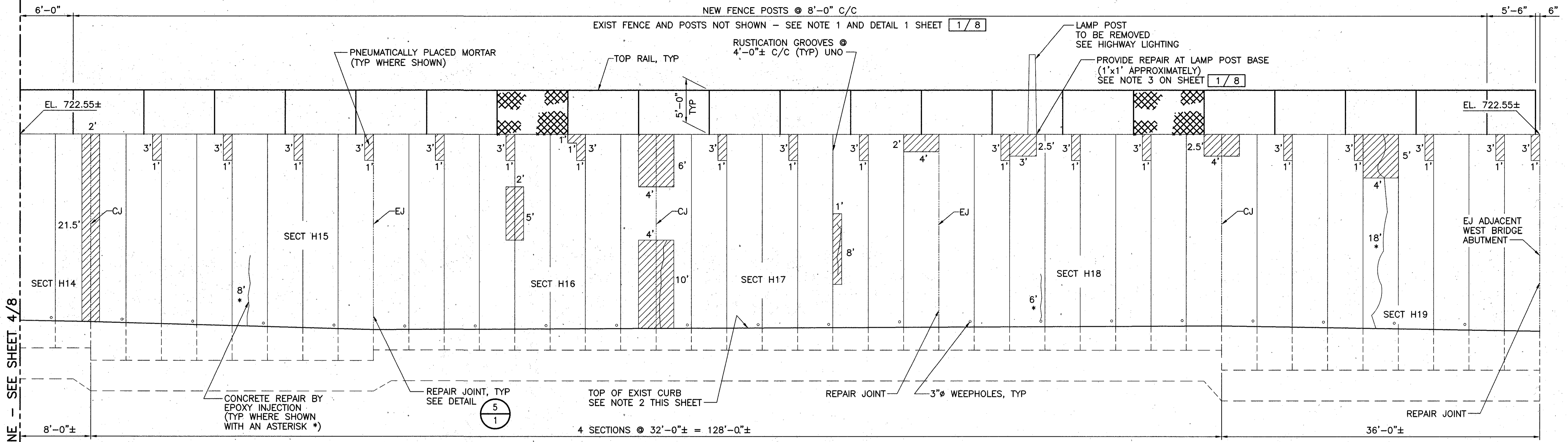
NOTE: SEE ELEVATION ABOVE FOR ALL DIMENSIONS & ELEVATIONS.

INDICATES AREAS TO BE REPAIRED AS PER ITEM 520-PNEUMATICALLY PLACED MORTAR, AS PER PLAN.

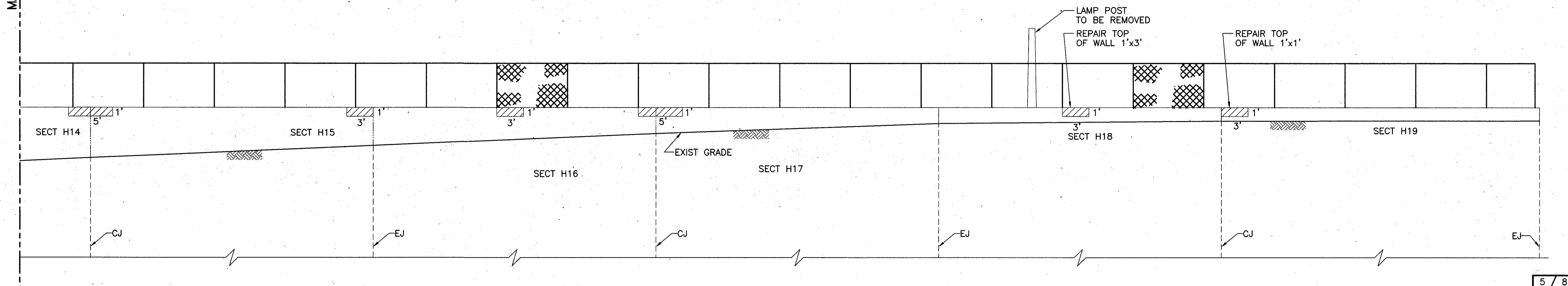
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- FOR GENERAL NOTES, ESTIMATED QUANTITIES, TYPICAL DETAILS AND LOCATION PLAN SEE SHEET 1/8.
 - TOP OF EXISTING CURB (USED FOR REFERENCE) TO BE REMOVED AND REPLACED BY CONCRETE BARRIER, TYPE D, NOT SHOWN. SEE ROADWAY SHEET 3. MAKE WALL SURFACE REPAIRS PRIOR TO CONSTRUCTING BARRIER.

LEGEND CJ - CONTROL JOINT EJ - EXPANSION JOINT EXIST - EXISTING REQ'D - REQUIRED SECT - SECTION TYP - TYPICAL UNO - UNLESS NOTED OTHERWISE EXISTING STRUCTURE	STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 9121 HUNTLEY ROAD, COLUMBUS, OHIO 43229						
	RETAINING WALL "H" SECTIONS H10 THRU H14 ELEVATIONS						
	FRANKLIN COUNTY						
	DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
	SKBB	JS		PHB	RKM	11/07/97 WCB 10/29/97	

[D:\PROJECTS\8231345\CONTR\RD\RET WALLS\WALL.DWG - NOV 14, 1997 - 16:11:08 - PLOT: 1-1



ELEVATION WALL "H" - LOOKING WEST (NEAR FACE)



ELEVATION WALL "H" - LOOKING WEST (FAR FACE)

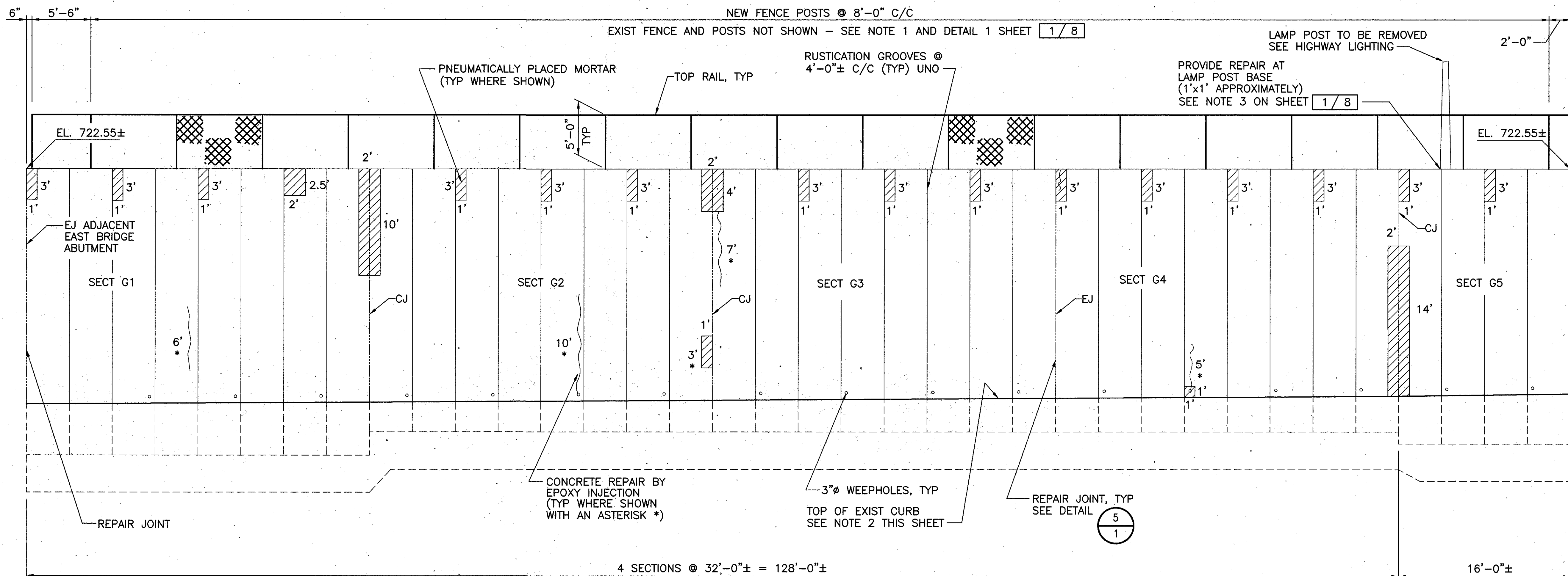
NOTE: SEE ELEVATION ABOVE FOR ALL DIMENSIONS & ELEVATIONS.

INDICATES AREAS TO BE REPAIRED AS PER ITEM 520-PNEUMATICALLY PLACED MORTAR, AS PER PLAN.

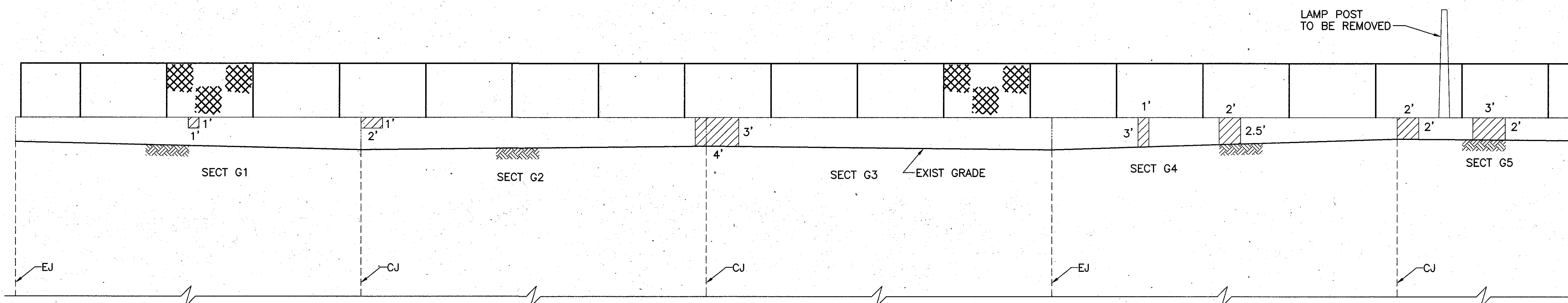
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LEGEND		STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 9121 HUNTLEY ROAD, COLUMBUS, OHIO 43229						
CJ - CONTROL JOINT	EJ - EXPANSION JOINT	RETAINING WALL "H" SECTIONS H14 THRU H19 ELEVATIONS FRANKLIN COUNTY						
EXIST - EXISTING	REQ'D - REQUIRED							
SECT - SECTION	TYP - TYPICAL							
UNO - UNLESS NOTED OTHERWISE								
EXISTING STRUCTURE		DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
		SKBB	JS		PHB	RKM	11/07/97	
						WCB	10/29/97	

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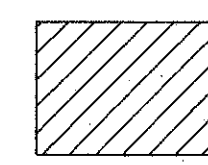


ELEVATION WALL "G" - LOOKING EAST (NEAR FACE)



ELEVATION WALL "G" - LOOKING EAST (FAR FACE)

NOTE: SEE ELEVATION ABOVE FOR ALL DIMENSIONS & ELEVATIONS.

 INDICATES AREAS TO BE REPAIRED AS PER ITEM 520-PNEUMATICALLY PLACED MORTAR, AS PER PLAN.

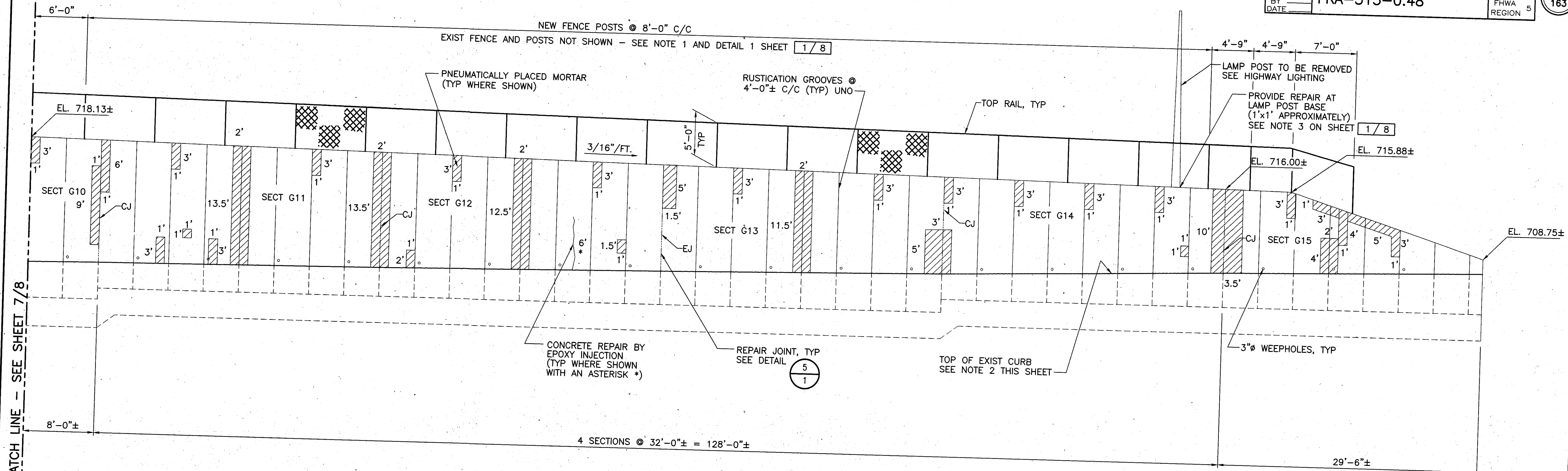
- NOTES:
- FOR GENERAL NOTES, ESTIMATED QUANTITIES, TYPICAL DETAILS AND LOCATION PLAN SEE SHEET 1/8.
 - TOP OF EXISTING CURB (USED FOR REFERENCE) TO BE REMOVED AND REPLACED BY CONCRETE BARRIER, TYPE D, NOT SHOWN. SEE ROADWAY SHEET 3. MAKE WALL SURFACE REPAIRS PRIOR TO CONSTRUCTING BARRIER.

LEGEND		STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 9121 HUNTLEY ROAD, COLUMBUS, OHIO 43229						
CJ - CONTROL JOINT		RETAINING WALL "G" SECTIONS G1 THRU G5 ELEVATIONS FRANKLIN COUNTY						
EJ - EXPANSION JOINT								
EXIST - EXISTING								
REQ'D - REQUIRED		DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
SECT - SECTION		SKBB	JS		PHB	RKM	11/07/97	
TYP - TYPICAL						WCB	10/29/97	
UNO - UNLESS NOTED OTHERWISE								
EXISTING STRUCTURE								

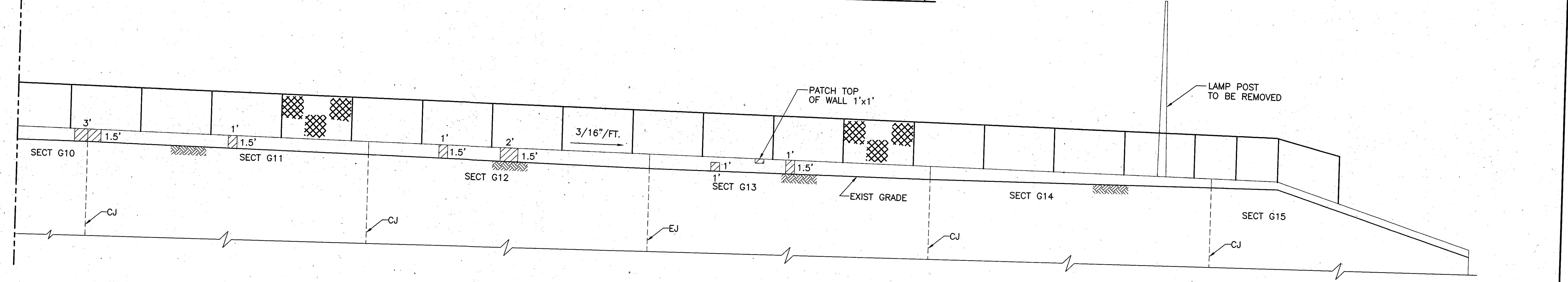
E:\03\STRUCT\9231345\CONCRETE\RETAINING WALLS\WALLS.DWG - NOV 14, 1997 - 18:55:57 - PLOT: 1=1

MATCH LINE - SEE SHEET 7/8

6 / 8

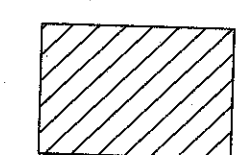


ELEVATION WALL "G" - LOOKING EAST (NEAR FACE)



ELEVATION WALL "G" - LOOKING EAST (FAR FACE)

NOTE: SEE ELEVATION ABOVE FOR ALL DIMENSIONS & ELEVATIONS.

 INDICATES AREAS TO BE REPAIRED AS PER ITEM 520-PNEUMATICALLY PLACED MORTAR, AS PER PLAN.

- NOTE:
- FOR GENERAL NOTES, ESTIMATED QUANTITIES, TYPICAL DETAILS AND LOCATION PLAN SEE SHEET 1/8.
 - TOP OF EXISTING CURB (USED FOR REFERENCE) TO BE REMOVED AND REPLACED BY CONCRETE BARRIER, TYPE D, NOT SHOWN. SEE ROADWAY SHEET 3. MAKE WALL SURFACE REPAIRS PRIOR TO CONSTRUCTING BARRIER.

LEGEND		STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE 6121 HUNTLEY ROAD, COLUMBUS, OHIO 43229				
CJ - CONTROL JOINT		RETAINING WALL "G" SECTIONS G10 THRU G15 ELEVATIONS FRANKLIN COUNTY				
EJ - EXPANSION JOINT						
EXIST - EXISTING						
REQ'D - REQUIRED						
SECT - SECTION		DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED
TYP - TYPICAL		SKBB	JS		PHB	RKM
UNO - UNLESS NOTED OTHERWISE						DATE
						11/07/97
						REVIS
						10/29/97

[D:\PROJECTS\315\315A\CONTRACT\NEW WALLS\WALL ELEVATIONS - NOV 14, 1997 - 1822-13 - PLOT: 1-1

GENERAL INFORMATION

INTRODUCTION

THE PROJECT CONSISTS OF RECONSTRUCTING AND WIDENING 2500 FEET OF ROADWAY (NORTH AND SOUTHBOUND) ALONG STATE ROUTE 315. THE SITE IS LOCATED IN DOWNTOWN COLUMBUS BETWEEN SULLIVANT AVENUE AND W. BROAD STREET, NEAR THE SCIOTO RIVER, AND CAN BE FOUND ON THE USGS SOUTHWEST COLUMBUS QUADRANGLE.

GEOLOGY OF THE SITE

GENERALIZED GEOLOGICAL REFERENCES REPORT THAT THE SITE WAS COVERED BY BOTH THE ILLINOIAN AND WISCONSIN GLACIERS. OVERBURDEN AT THE SITE IS BELIEVED TO BE DEPOSITS OF GLACIAL OUTWASH FROM THE ILLINOIAN AND WISCONSIN GLACIERS, CONSISTING OF SANDS, GRAVELS, AND TILLS, AND ALLUVIAL DEPOSITS FROM THE SCIOTO RIVER. THE UNDERLYING BEDROCK AT THE SITE IS REPORTED TO BE SHALE AND LIMESTONE OF THE DELAWARE AND COLUMBUS FORMATIONS.

EXPLORATION

THE EXPLORATION CONSISTED OF DRILLING SIX (6) BORINGS, B-1 THROUGH B-6, IN THE MEDIAN OF SR 315 BETWEEN STATIONS 72+00 AND 96+00. THE BORINGS WERE DRILLED ON AUGUST 16, 1995 USING A TRUCK-MOUNTED DRILL RIG. BORINGS B-1 AND B-2 EXTENDED TO DEPTHS OF 8.8 AND 9.4 FEET, RESPECTIVELY. THE REMAINING BORINGS EXTENDED TO A DEPTH OF 10.0 FEET BELOW THE GROUND SURFACE. BEDROCK WAS NOT ENCOUNTERED.

FINDINGS

A. SOIL CONDITIONS

TOPSOIL WAS ENCOUNTERED IN ALL BORINGS EXCEPT B-1. THE TOPSOIL RANGED IN THICKNESS FROM THREE (3) TO SEVEN (7) INCHES. BELOW THE TOPSOIL, ALL SIX BORINGS ENCOUNTERED FILL. THIS FILL CONSISTED LARGELY OF GRAVEL WITH VARYING PERCENTAGES OF SAND, SILT, AND CLAY (A-1-a, A-1-b, A-2-4, & A-2-6). IN ADDITION TO THE GRAVELS, BORINGS B-1, B-3, AND B-5 ENCOUNTERED A LAYER OF SILTY CLAY (A-6a, A-6b). IN BORINGS B-5 AND B-6, POSSIBLE FILL WAS ENCOUNTERED AT A DEPTH OF 5.5 FEET, FOLLOWED BY NATURAL SOIL AT 8.0 FEET. THESE SOILS CONSISTED OF GRAVEL WITH SAND, SILT AND CLAY (A-2-6) IN B-5 AND GRAVEL (A-1-a) IN B-6.

B. GROUNDWATER CONDITIONS

WATER SEEPAGE WAS ENCOUNTERED IN THREE (3) OF THE BORINGS, BORING B-3, B-5, AND B-6, AT DEPTHS OF 8.5, 6.5, AND 3.5 FEET, RESPECTIVELY, BELOW THE GROUND SURFACE. WATER LEVELS AT THE COMPLETION OF DRILLING WERE AT DEPTHS OF 8.5, 6.9, AND 3.2 FEET BELOW THE GROUND SURFACE IN BORINGS B-3, B-5, AND B-6, RESPECTIVELY. IT IS ANTICIPATED THAT WATER LEVELS IN BORINGS B-5 AND B-6 ARE RELATED TO RIVER LEVELS IN THE SCIOTO RIVER.

LEGEND FOR PROJECT AVERAGE RESULTS OF TESTS - 12 SAMPLES TESTED

DESCRIPTION	AASHTO CLASS.	ODOT CLASS.	% AGG.	% C. SAND	% F. SAND	% SILT	% CLAY	LIQUID LIMIT	PLASTICITY INDEX	WATER CONTENT	SAMPLES TESTED
GRAVEL	A-1-a (0)	A-1-a	72	13	6	-	9	NP	NP	8	2
GRAVEL WITH SAND	A-1-b (0)	A-1-b	47	17	13	-	23	NP	NP	8	3
GRAVEL WITH SAND AND SILT	A-2-4 (0)	A-2-4	VISUAL CLASSIFICATION								
GRAVEL WITH SAND, SILT, AND CLAY	A-2-6 (1)	A-2-6	40	17	13	16	14	30	13	12	5
SILT AND CLAY	A-6 (3)	A-6a	30	13	11	25	21	32	13	13	1
SILTY CLAY	A-6 (9)	A-6b	17	13	10	29	31	37	19	17	1

⊙ DRIVE SAMPLE AND/OR CORE BORING - PLAN VIEW

⊙ DRIVE SAMPLE AND/OR CORE BORING - PROFILE VIEW

W FREE WATER OR WATER SEEPAGE

▽ WATER LEVEL AT COMPLETION OF BORING

NOTE: FIGURES BESIDE BORINGS INDICATE WATER CONTENT IN PERCENT e.g. 15

• WATER CONTENT NEARLY EQUAL TO OR GREATER THAN LIQUID LIMIT.

X/Y/Z FIGURES BESIDE THE BORING LOG IN PROFILE INDICATE THE NUMBER OF BLOWS FOR "STANDARD PENETRATION" TEST.

X = NUMBER OF BLOWS FOR FIRST 6 INCHES

Y = NUMBER OF BLOWS FOR SECOND 6 INCHES

Z = NUMBER OF BLOWS FOR THIRD 6 INCHES

50 (n) INDICATES NUMBER OF BLOWS (50) TO DRIVE A SPLIT-BARREL SAMPLER A DEPTH OF (n) INCHES OTHER THAN THE "NORMAL 6 INCH INCREMENT."

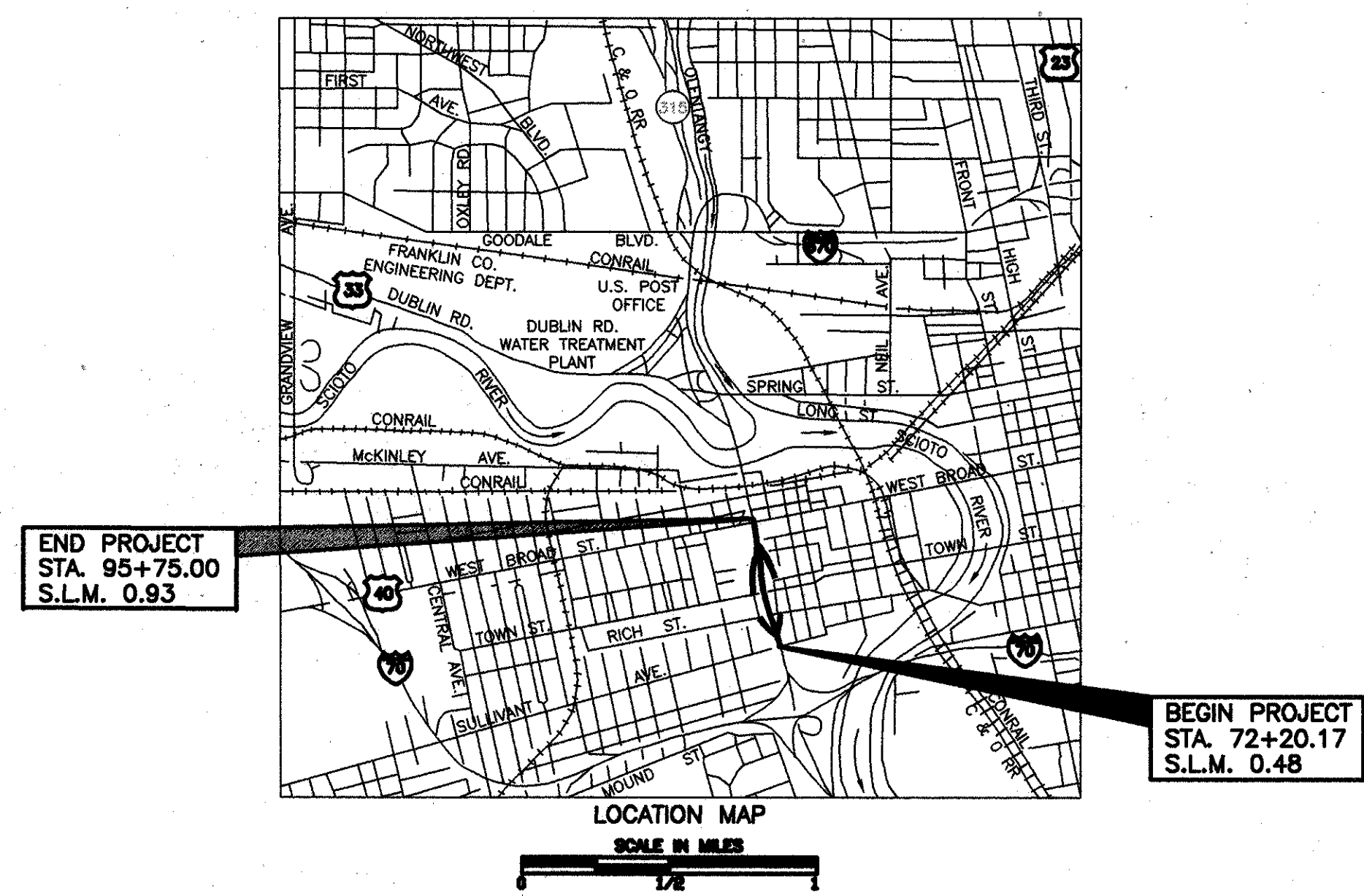


STATION		PLAN VIEW SHEET	PROFILE SHEET	CUT MAX.	FILL EMB. MAX.
FROM	TO				
72+20	80+00	2	2	-	3.5
80+00	91+00	3	3	-	3.5
91+00	95+00	4	4	-	2.5

SUMMARY OF SOIL TEST DATA

NOTE: N.P. SHOWN IN LIQUID LIMIT AND PLASTICITY INDEX COLUMNS INDICATES THAT THE MATERIAL IS NON PLASTIC
* DENOTES SAMPLE TAKEN AT OR NEAR GRADE

STATION	OFFSET	DEPTH FROM	DEPTH TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	LL.	P.I.	W.C.	ODOT CLASS.	
75+39	0.0'	CL	0.0 - 3.0	55	12	8	15	10	NP	NP	7	A-1-b *	
			3.0 - 4.0	BROWN SILT AND CLAY (A-6a)	Visual								
			4.0 - 8.0	62	15	8	15	NP	NP	7	A-1-a	Visual	
			8.0 - 8.8	BROWN GRAVEL WITH SAND AND SILT (A-2-4)	Visual								
80+13	0.0'	CL	0.0 - 0.3	TOPSOIL									Visual
			0.3 - 3.0	34	22	11	19	14	30	14	13	A-2-6 *	
			3.0 - 5.5	51	12	9	17	11	30	12	11	A-2-6	Visual
			5.5 - 9.4	BROWN GRAVEL WITH SAND AND SILT (A-2-4)	Visual								
85+00	11.0'	Rt.	0.0 - 0.5	TOPSOIL									Visual
			0.5 - 5.5	49	12	8	19	12	-	-	10	A-2-6 *	
			5.5 - 8.5	30	13	11	25	21	32	13	13	A-6a	Visual
			8.5 - 9.0	BROWN GRAVEL WITH SAND (A-1-b)	Visual								
87+82	10.0'	Lt.	0.0 - 0.6	TOPSOIL									Visual
			0.6 - 4.0	41	22	10	27	-	-	9	A-2-6 *		
			4.0 - 8.0	29	24	24	23	NP	NP	9	A-1-b	Visual	
			8.0 - 10.0	BROWN GRAVEL WITH SAND, SILT, AND CLAY (A-2-6)	Visual								
91+24	11.0'	Rt.	0.0 - 0.6	TOPSOIL									Visual
			0.6 - 3.0	17	13	10	29	31	37	19	17	A-6b *	
			3.0 - 5.5	24	20	25	12	19	31	14	16	A-2-6	Visual
			5.5 - 8.0	BROWN GRAVEL WITH SAND, SILT, AND CLAY (A-2-6)	Visual								
93+98	8.0'	Lt.	0.0 - 0.6	TOPSOIL									Visual
			0.6 - 3.0	58	15	5	22	NP	NP	7	A-1-b *		
			3.0 - 5.5	83	10	3	4	NP	NP	9	A-1-a	Visual	
			5.5 - 8.0	BROWN GRAVEL (A-1-a)	Visual								
8.0 - 10.0	BROWN GRAVEL (A-1-a)	Visual											



NOTE: INFORMATION SHOWN BY THIS SUBSURFACE INVESTIGATION WAS OBTAINED SOLELY FOR USE IN ESTABLISHING DESIGN CONTROLS FOR THE PROJECT. THE STATE OF OHIO DOES NOT GUARANTEE THE ACCURACY OF THIS DATA AND IT IS NOT TO BE CONSTRUED AS A PART OF THE PLAN GOVERNING CONSTRUCTION OF THIS PROJECT.

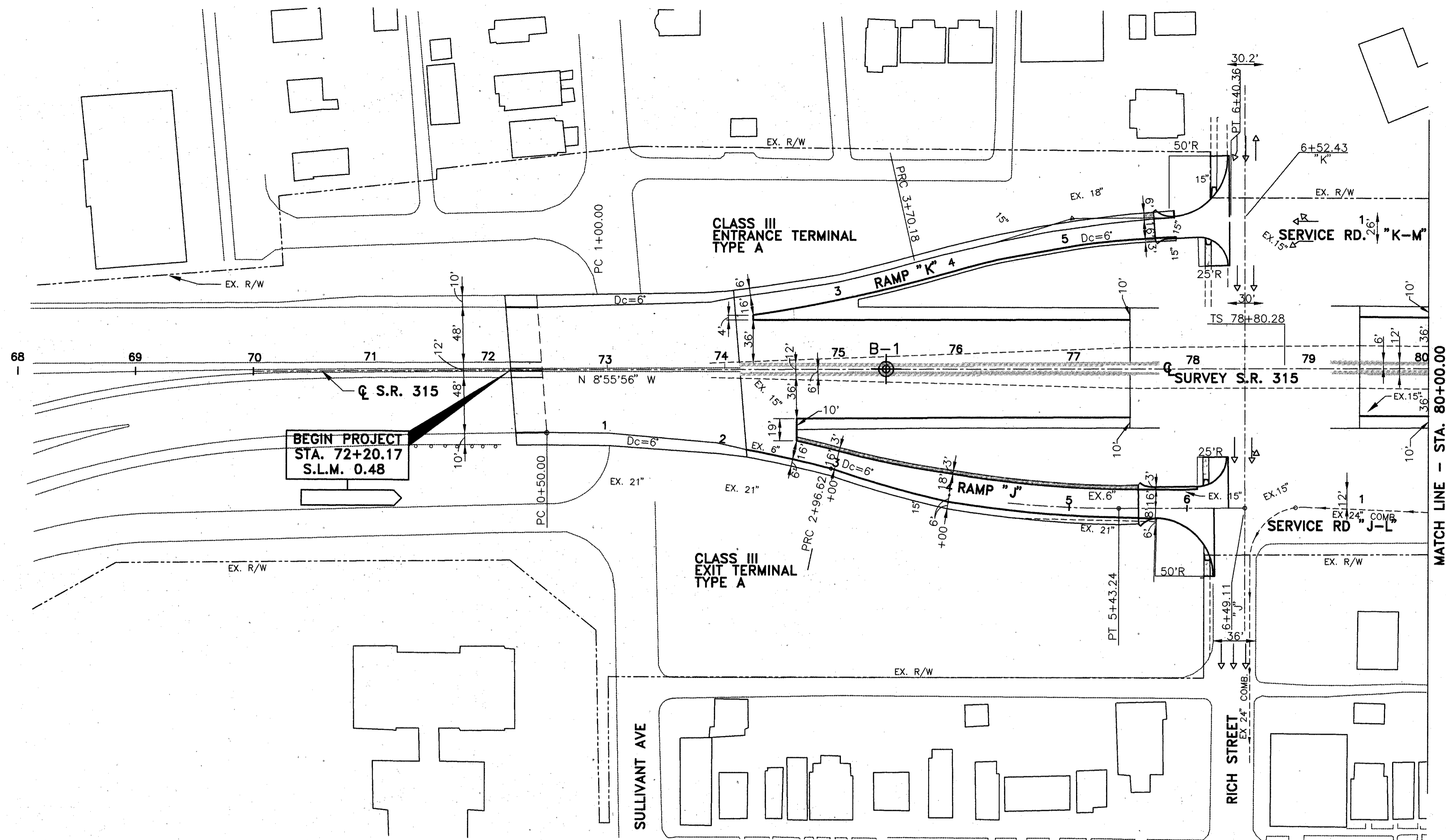
ALL AVAILABLE SOIL AND BEDROCK INFORMATION WHICH CAN BE CONVENIENTLY SHOWN ON THE STRUCTURE FOUNDATION INVESTIGATION SHEETS HAS BEEN SO REPORTED. ADDITIONAL SUBSURFACE INVESTIGATIONS MAY HAVE BEEN MADE TO STUDY SOME SPECIAL ASPECT OF THE PROJECT. COPIES OF THIS DATA, IF ANY, MAY BE INSPECTED IN THE DISTRICT DEPUTY DIRECTOR'S OFFICE, THE BUREAU OF TESTS AT 1600 WEST BROAD STREET, THE PAVEMENT AND SOILS SECTION OF THE BUREAU OF LOCATION AND DESIGN OR IN THE BRIDGE BUREAU AT 25 SOUTH FRONT STREET.

MASON - de VERTEUIL GEOTECHNICAL SERVICES
6121 HUNTLEY ROAD
COLUMBUS, OHIO 43229

ROADWAY SUBSURFACE INVESTIGATION
SOIL PROFILE
STA. 72+20 TO 95+75
FRANKLIN COUNTY
S.R. 315

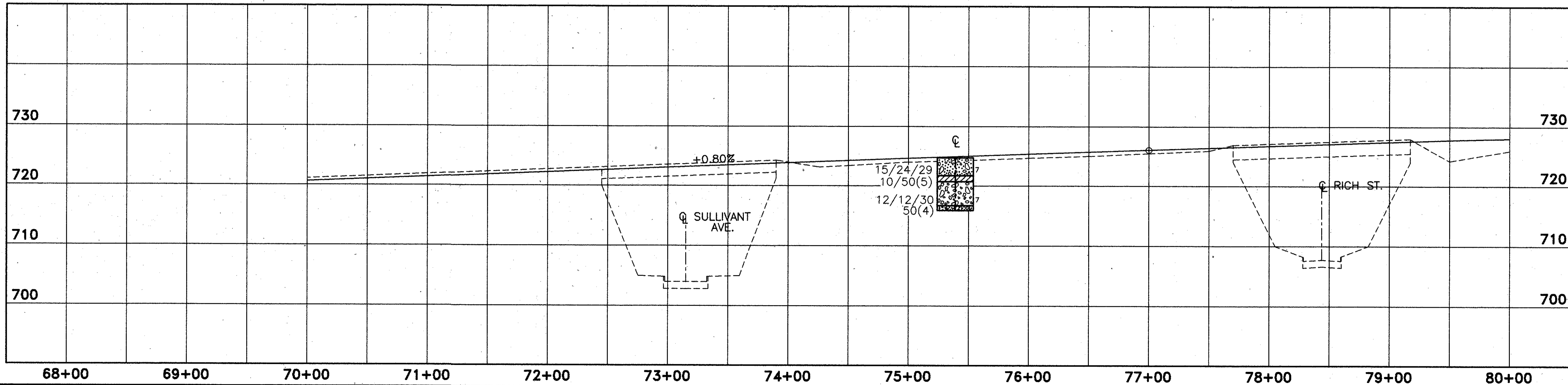
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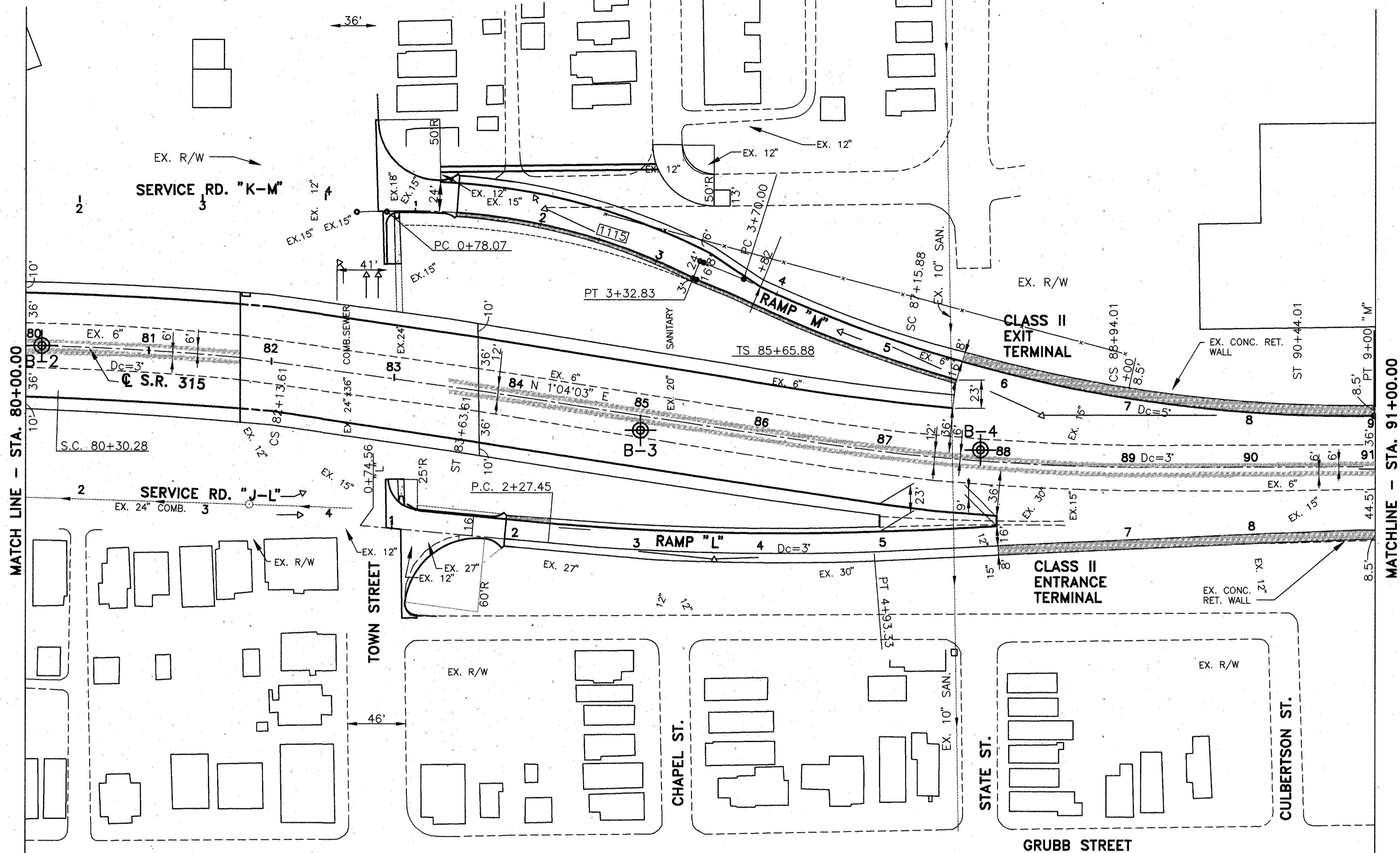
DRAWN BY DMC	CHECKED BY PAN	REVIEWED BY AEN	DATE 10/4/95
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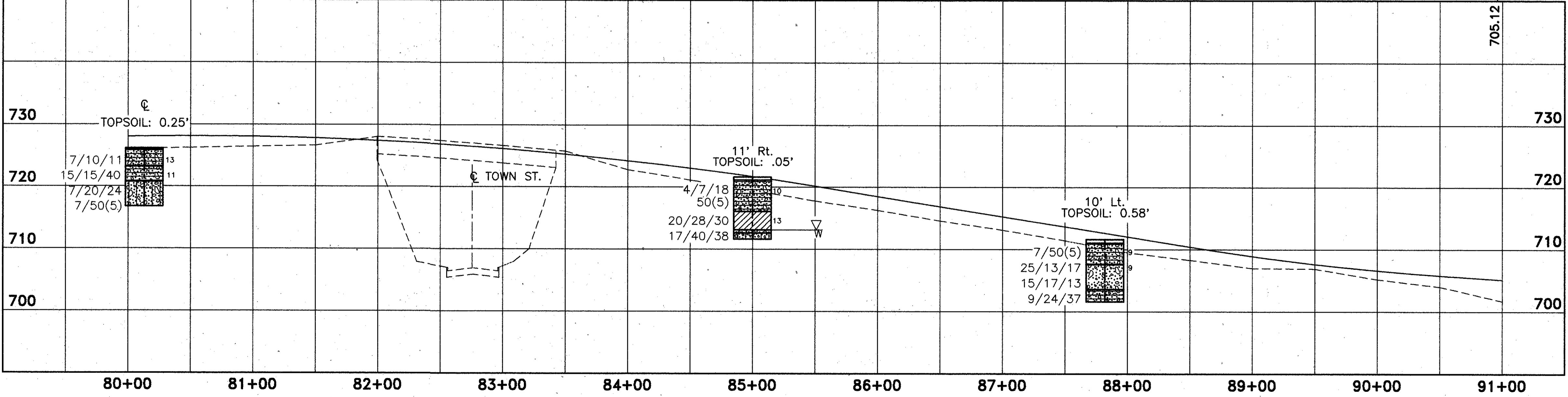
MATCH LINE - STA. 80+00.00

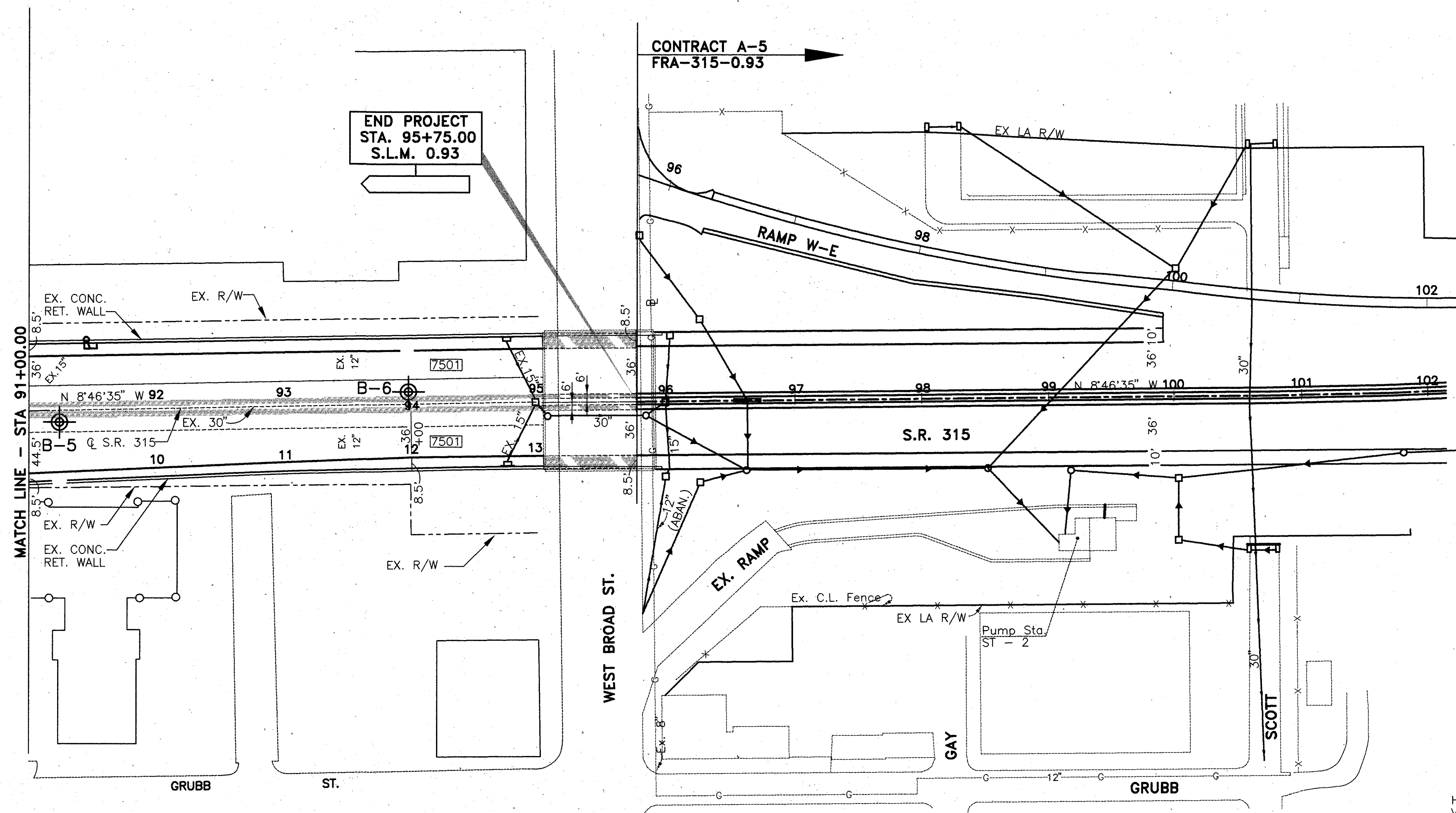
HORIZONTAL SCALE 1" = 50'
VERTICAL SCALE 1" = 10'



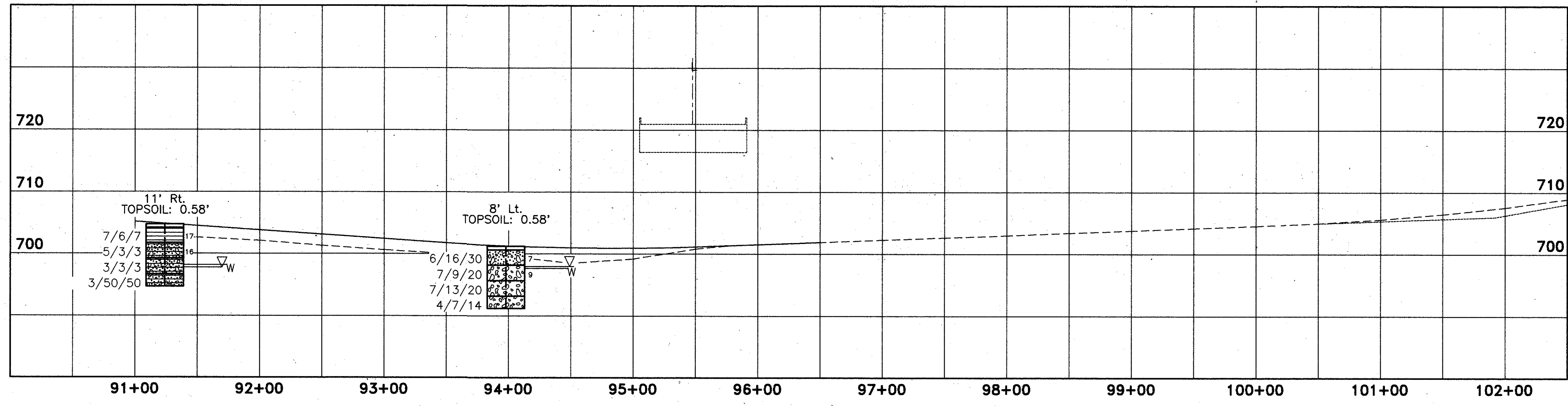


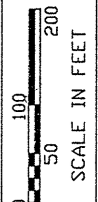
HORIZONTAL SCALE 1" = 50'
VERTICAL SCALE 1" = 10'





HORIZONTAL SCALE 1" = 50'
VERTICAL SCALE 1" = 10'





DRAWN GJH/ELF
CHECKED

FREEWAY SURVEILLANCE SYSTEM
SURVEILLANCE PLAN

FRA-315-0.48 (Contract D)

② FMS DETECTOR STATION 75+25 R

① 2- 4" MEDIAN MULTICELL RACEWAY
SCH 40 713.07

③ 2- 4" MEDIAN MULTICELL RACEWAY
SCH 40 713.07

END PROJECT
STA. 95+75.00
S.L.M. 0.93

NH-20(59)

④ FMS DETECTOR STATION 87+00 R

⑤ 2- 4" MEDIAN MULTICELL RACEWAY
SCH 40 713.07

STRUCTURE NO.
FRA-315-0049

STRUCTURE NO.
FRA-315-0059

STRUCTURE NO.
FRA-315-0067

STRUCTURE NO.
FRA-40-1158

*ELIMINATE
RAMP "K"
CROSSING
LEWIS STREET*

*1 EA 4" MULTICELL
INSTEAD OF 2 EA 15 OK*

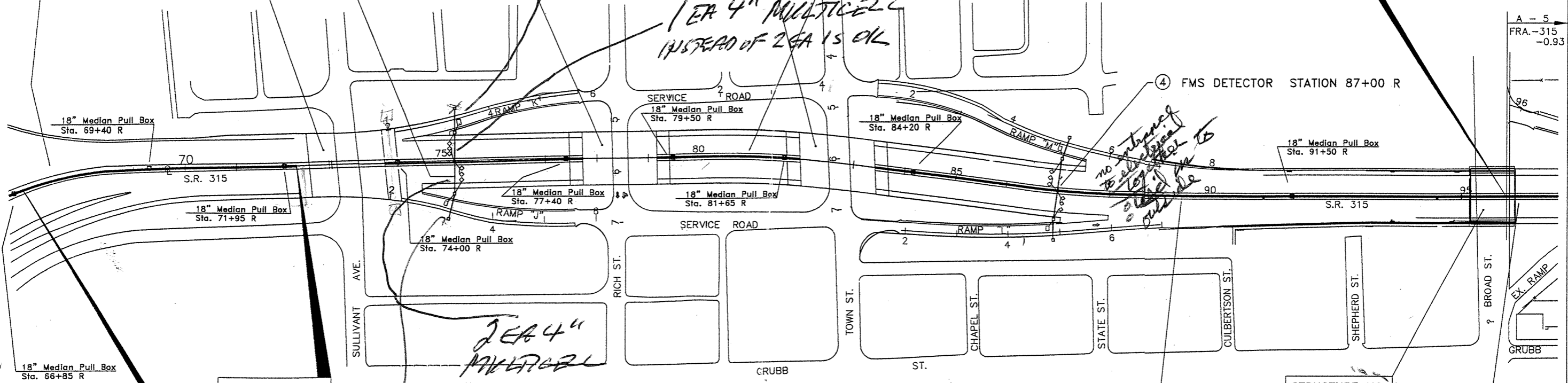
*2 EA 4"
MULTICELL*

*CAN CUT
LOOP LATER IF
ABSOLUTELY
NECESSARY*

*no trenching
to be done
outside*

Conduit ties into pullbox
on A-5 project

416 201



REF	STATION	625		625		625		632	
		EA	LF	EA	LF	EA	LF	EA	LF
1	66+80 - 75+25		4				1690		
2	75+25	4	1	217			430	8	
3	75+25 - 87+00		4				2350		
4	87+00	4	1	205			410	8	
5	87+00 - 95+75		1				1750		

FREEWAY MANAGEMENT LOOP DETECTORS

ALL DETECTORS SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING TC-82.10, EXCEPT THAT THE MAINLINE LOOPS SHALL BE ORIENTED IN A DIAMOND PATTERN IN THE CENTER OF EACH LANE AS SHOWN ON THE TYPICAL.

THE INSTALLED LOOPS SHALL BE TESTED FOR CONTINUITY (PARAGRAPH 3) AND INSULATION (PARAGRAPH 4) AS PER 632.27. THE INSULATION RESISTANCE MEASURED TO GROUND SHALL NOT BE LESS THAN ONE HUNDRED (100) MEGOHMS. AN ADDITIONAL CERTIFIED COPY OF THE TEST RECORDS SHALL BE SENT TO THE CITY OF COLUMBUS, DIVISION OF TRAFFIC ENGINEERING, 109 NORTH FRONT STREET, COLUMBUS, OHIO 43215. ATTENTION FREEWAY ENGINEER.

THE LOOPS SHALL BE INSTALLED IN THE CONCRETE BASE PRIOR TO THE PLACEMENT OF THE SURFACE COURSE OF ASPHALT.




THE 20 FEET BETWEEN SPEED MEASUREMENT LOOPS SHALL BE MAINTAINED AT ALL TIMES.

ALL LOOPS SHALL BE CENTERED IN THE PERMANENT TRAFFIC LANES. IN ORDER TO INSURE THIS, A PERMANENT REFERENCE SHALL BE ESTABLISHED FROM THE CENTER LINE OF CONSTRUCTION OR THE RIGHT EDGE OF PAVEMENT OR THE 32 INCH PULL BOX ADJACENT TO THE STATION. THE LOCATION OF EACH LOOP IN THE STATION SHALL BE RECORDED WITH RESPECT TO THIS REFERENCE. ONE COPY OF THIS LOG SHALL BE KEPT IN THE PROJECT OFFICE, ONE COPY SHALL BE GIVEN TO THE PAVEMENT SUBCONTRACTOR AND ONE COPY SHALL BE SENT TO THE CITY OF COLUMBUS, ATTENTION FREEWAY ENGINEER, AT THE ABOVE ADDRESS. THIS REFERENCE LOG SHALL BE USED TO VERIFY THE LOCATION OF THE PERMANENT LANE LINES AND EDGE LINES.

32 INCH PULL BOXES SHALL BE CONCRETE CONSTRUCTED AND INSTALLED AS PER PLAN. ALL PULL BOX LIDS FOR THE SURVEILLANCE LOOPS AND CONDUIT SHALL BE PERMANENTLY EMBOSSED WITH THE WORD "TRAFFIC". PAYMENT SHALL BE MADE UNDER ITEM 625 PULL BOX, MISC.: 32 INCH, 713.08, AS PER PLAN.

ALL CONDUIT SHALL BE CAPPED. A PULL WIRE SHALL BE INSTALLED IN ALL CONDUITS WITH THE PULL WIRE EXTENDING THROUGH THE CAP AND AS PER 625.13.

GENERAL NOTES TYPICAL TO ALL PLAN SHEETS:

- 1) ALL MULTICELL CONTAIN 4 EA. 1.25 INCH INNERDUCT
- 2) ALL LOOPS 6 FT X 6 FT, CENTERED IN TRAVEL LANE, UNLESS NOTED OTHERWISE
- 3)  AND  = 3 TURNS OF LOOP WIRE
- 4)  = 4 TURNS OF LOOP WIRE
- 5) CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING LOOPS IN THE CENTER OF LANES BASED ON THE PROJECT CENTERLINE OF SURVEY AND CONSTRUCTION

ITEM 625: CONDUIT, MISC. : 4 INCH, MULTICELL RACEWAY - 713.07, SCHEDULE 40, AS PER PLAN

THE TRAFFIC SURVEILLANCE RACEWAY SHALL CONSIST OF A FACTORY ASSEMBLED SYSTEM OF (4) INNERDUCTS ASSEMBLED WITHIN A PROTECTIVE OUTERDUCT.

THE INNERDUCTS SHALL BE NOMINAL 1.25 INCH, TYPE DB PVC PER NEMA TC-8 WITH A BELL INSERTION DEPTH OF 1.75 INCHES MINIMUM.

THE COUPLING SHALL BE DESIGNED IN A MANNER TO PERMIT EASY FIELD ASSEMBLY. THE COUPLING SHALL BE MARKED OR KEYED IN A MANNER TO ENSURE THE INNERDUCTS ARE PROPERLY ALIGNED, ANY COLOR CODES ARE CONTINUED AND THE ADJOINING SECTION IS INSERTED TO THE PROPER DEPTH IN THE BELL. ALL KEYS AND/OR MARKINGS SHALL BE VISIBLE AFTER ASSEMBLY, TO ALLOW THE INSPECTION OF EACH JOINT FOR PROPER ASSEMBLY BEFORE BURIAL. THE SEALING SYSTEM SHALL BE DESIGNED TO ASSURE AIR INTEGRITY OF EACH INDIVIDUAL INNERDUCT AND WATER INTEGRITY OF THE ENTIRE SYSTEM.

WHERE A MULTICELL DUCT IS TO REMAIN EMPTY, A 1/4" NYLON ROPE SHALL BE INSTALLED. THE ROPE WILL REMAIN TO BE USED FOR A FUTURE CABLE INSTALLATION.

ITEM 625: CONDUIT, MISC. : 4 INCH, MULTICELL CROSSOVER - 713.07, SCHEDULE 80, AS PER PLAN

THE TRAFFIC SURVEILLANCE RACEWAY SHALL CONSIST OF A FACTORY ASSEMBLED SYSTEM OF (4) INNERDUCTS ASSEMBLED WITHIN A PROTECTIVE OUTERDUCT.

THE INNERDUCTS SHALL BE NOMINAL 1.25 INCH, TYPE DB PVC PER NEMA TC-8 WITH A BELL INSERTION DEPTH OF 1.75 INCHES MINIMUM.

THE COUPLING SHALL BE DESIGNED IN A MANNER TO PERMIT EASY FIELD ASSEMBLY. THE COUPLING SHALL BE MARKED OR KEYED IN A MANNER TO ENSURE THE INNERDUCTS ARE PROPERLY ALIGNED, ANY COLOR CODES ARE CONTINUED AND THE ADJOINING SECTION IS INSERTED TO THE PROPER DEPTH IN THE BELL. ALL KEYS AND/OR MARKINGS SHALL BE VISIBLE AFTER ASSEMBLY, TO ALLOW THE INSPECTION OF EACH JOINT FOR PROPER ASSEMBLY BEFORE BURIAL. THE SEALING SYSTEM SHALL BE DESIGNED TO ASSURE AIR INTEGRITY OF EACH INDIVIDUAL INNERDUCT AND WATER INTEGRITY OF THE ENTIRE SYSTEM.

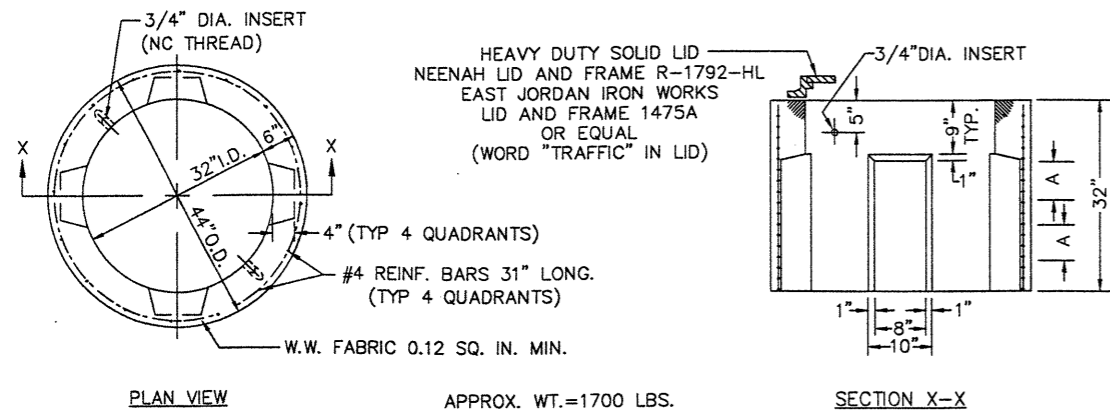
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DRAWN
FCP/JLF
CHECKED
LJK

FREEWAY SURVEILLANCE SYSTEM
GENERAL NOTES

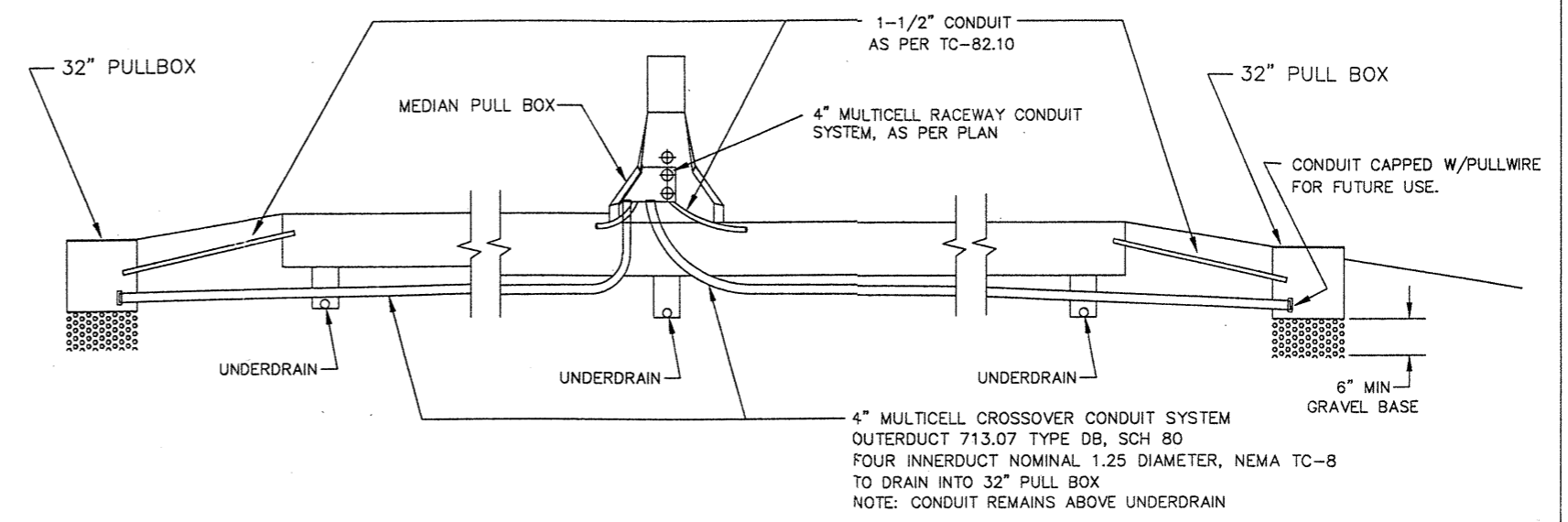
FRA-315-0.48 (Contract D)

2
3

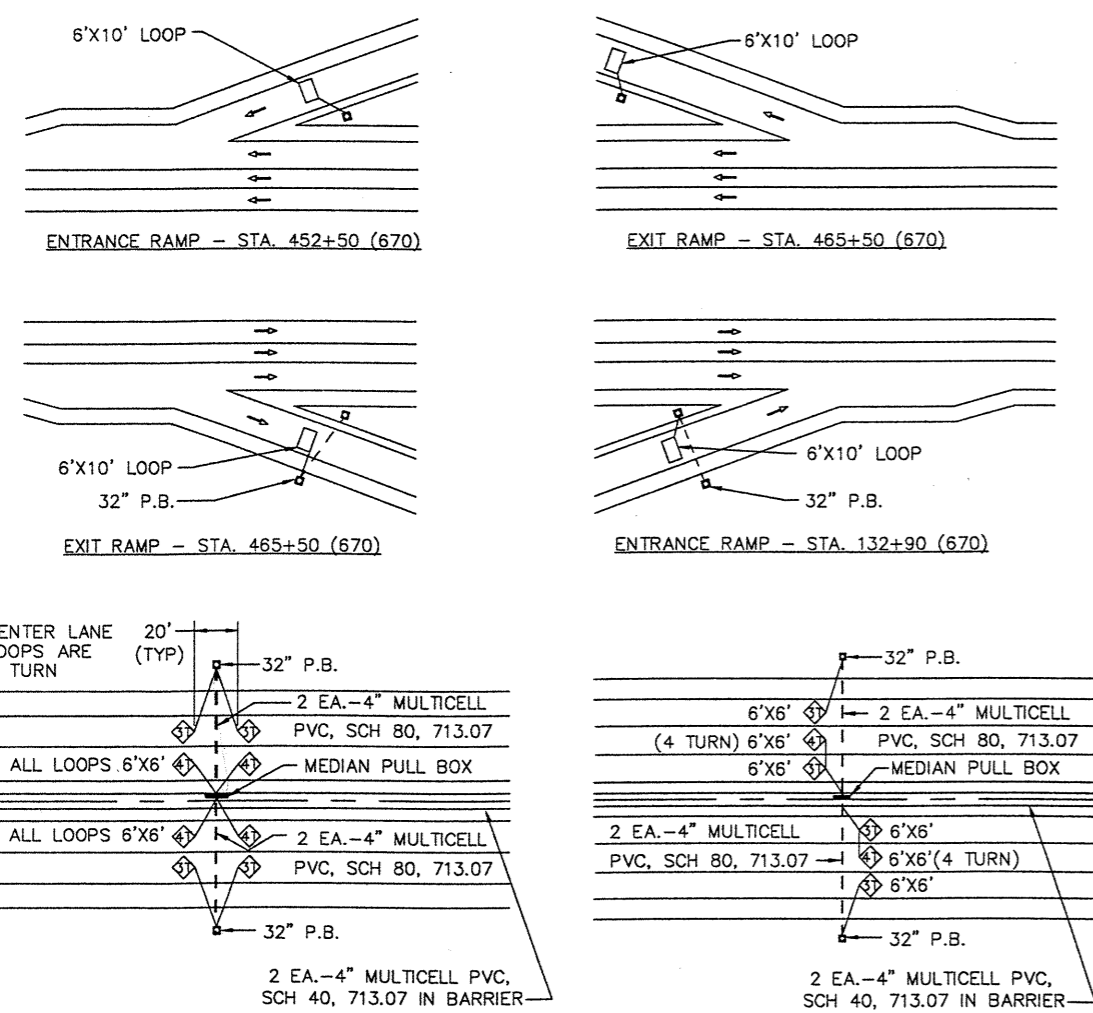


"A" CUT OUT 4 WIRES IN THE AREA OF THE REDUCED WALL SECTION. ALSO INCLUDE THE VERTICAL WIRE FOR REMOVAL.
CONCRETE COMP. STRENGTH 4000 PSI MIN. DESIGN.
CONCRETE AIR ENTRAINMENT TO BE 6% + 1 1/2%.
COATING OF PROTECTIVE ACRYLIC IS TO BE APPLIED TO THE TOP 12" OF THE OUTSIDE FACE AND TOTAL INSIDE FACE.
LID RING LOAD TRANSFER IS TO BE DISTRIBUTED BY THE USE OF A PERFORMED MOSTIC JOINT MATERIAL.

32" PULL BOX DETAIL



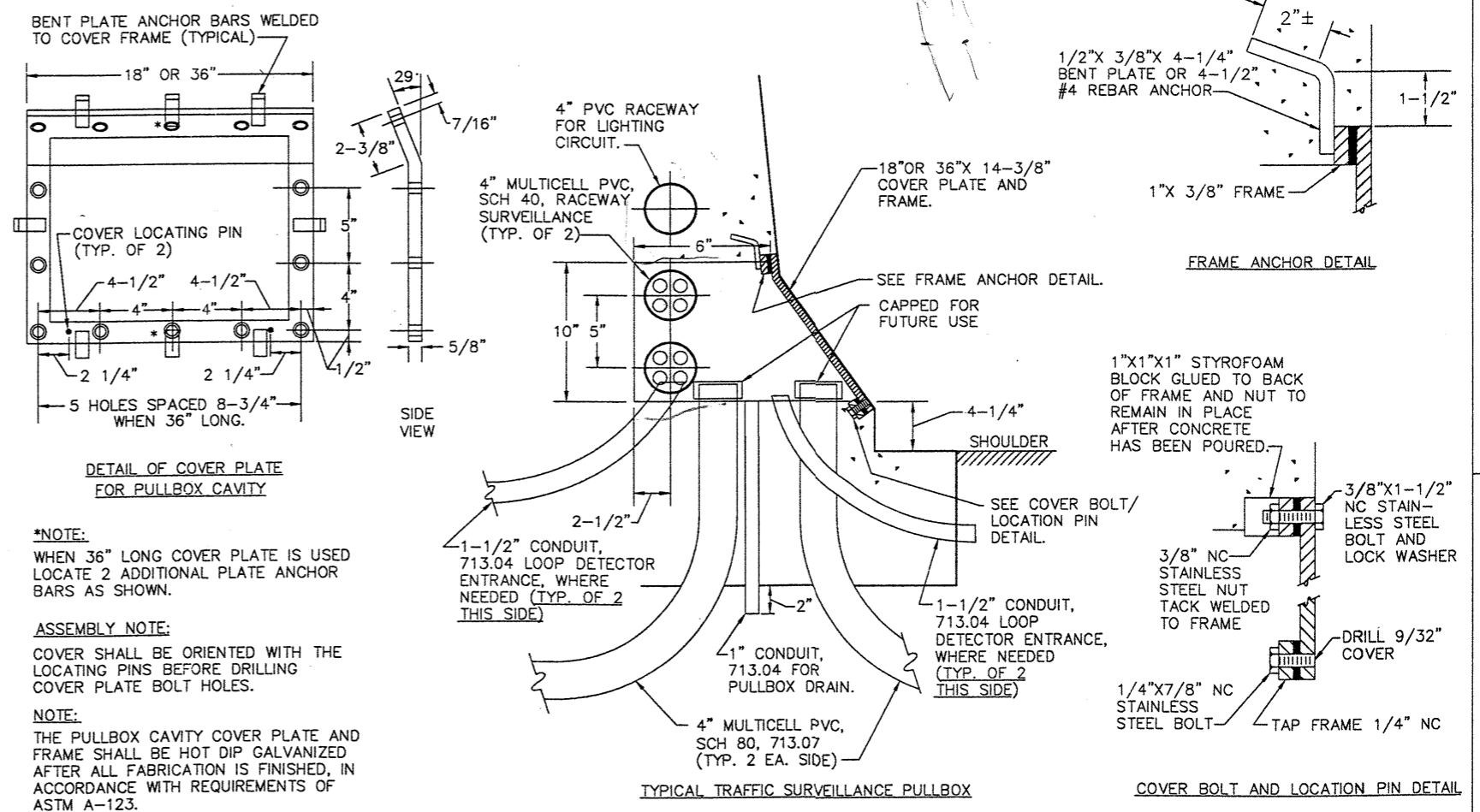
CROSS SECTION
DETECTOR/SPEED MEASUREMENT STATION



SPEED MEASUREMENT STATION #315-0006

DETECTOR STATIONS #670-0008 AND 670-0009

LOOP PLACEMENT



NEW SURVEILLANCE MEDIAN PULL BOX AND CONDUIT

FREEWAY SURVEILLANCE SYSTEM
DETAILS AND TYPICALS

FRA-315-0.48 (Contract D)