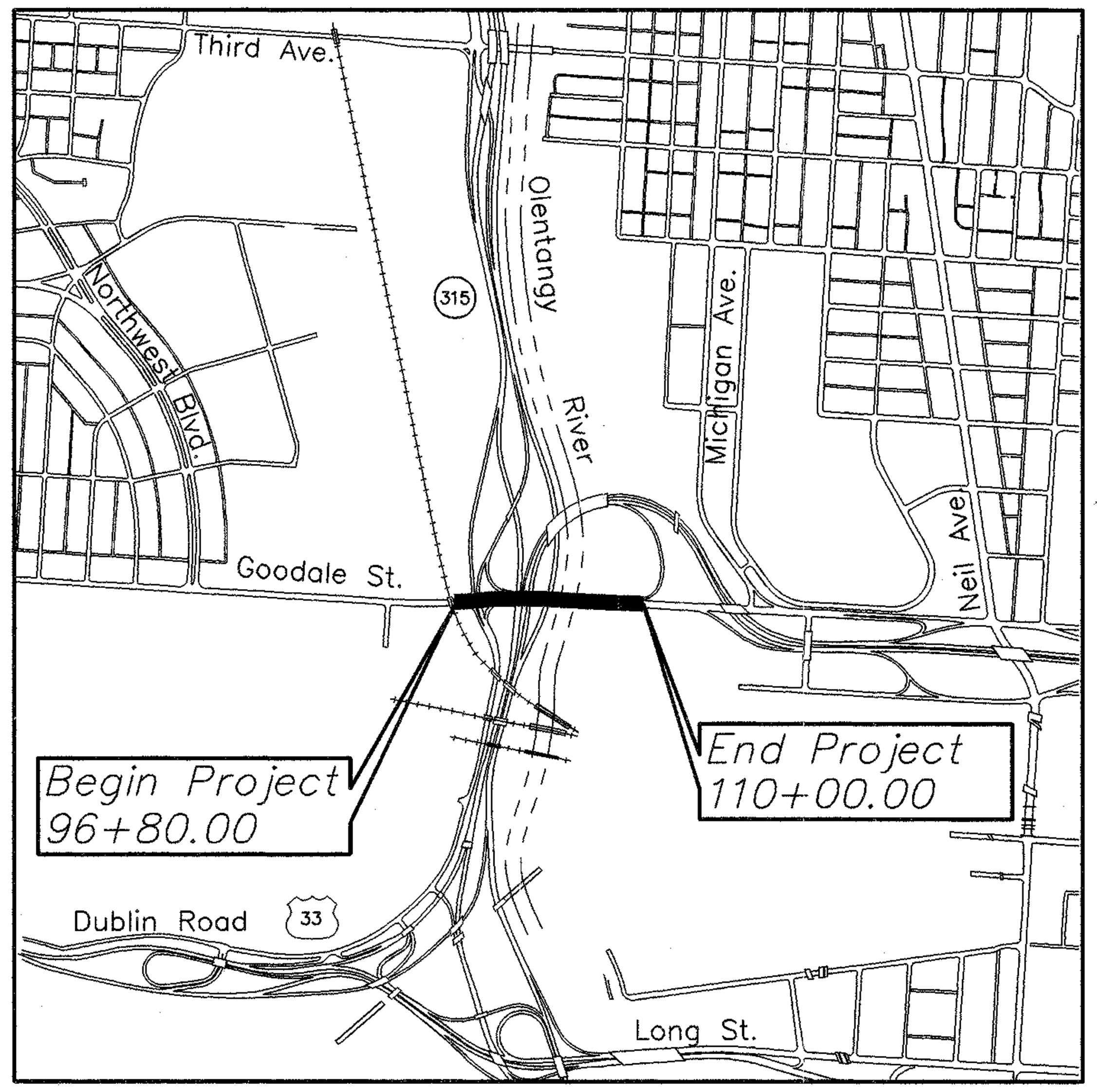


LOCATION MAP

1000 0 1000 2000

Scale: 1"=1000'

PORTION TO BE IMPROVED

U.S. HIGHWAYS (670)

U.S. HIGHWAYS (33)

STATE HIGHWAY (315)

CITY STREETS

RIVER

RAILROAD

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
FRA-GOODALE STREET
CITY OF COLUMBUS
FRANKLIN COUNTY
C.I.P. 316

MICROFILMED
JUN 27 1997

FRA-GOODALE STREET
960179 03-26-96
73PGS DIST. 06

DESIGN DESIGNATION

Current ADT (1994)	22,790
Design ADT (2014)	28,020
DHV	2,802
D (Directional Distribution)	58%
T (Percent B & C Trucks)	6%
Design Speed	35 mph
Legal Speed	35 mph
Functional Classification	Principal Arterial (Urban)

DESIGN EXCEPTIONS

No Design Exceptions Required

INDEX OF SHEETS

PROJECT DESCRIPTION

For improving 0.276 miles of Goodale Street by resurfacing the approach roadways, replacing the sidewalks, and by reconstructing Bridge No. FRA-315-0194 over S.R. 315 and the Olentangy River.

1995 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 not require the closing to traffic of the highway and that provisions for the maintenance and safety of traffic will be as set forth on the plans and estimates.

FOR CITY OF COLUMBUS

Approved [signature]
Date 9/28/94 Administrator, Division of Construction Inspection

Approved [signature], P.E.
Date 9-26-94 Director of Public Utilities

Approved [signature]
Date 9-26-94 Hydrant Supervisor, Division of Fire - Hydrant Structures Only

Approved [signature]
Date 8-23-94 Administrator, Division of Traffic

Approved [signature]
Date ______ Administrator, Division of Electricity - Electrical Structures Only

Approved [signature]
Date 8/31/94 Administrator, Division of Water - Water Structures Only

Approved [signature]
Date 8-24-94 Bridge & Planning Engineer, Division of Engineering

Approved [signature]
Date 9/14/94 Administrator, Division of Sewage and Drainage

Approved [signature], P.E.
Date 8/29/94 City Engineer

Approved [signature]
Date 9/29/94 Director of Public Service

FOR STATE OF OHIO

Approved [signature]
Date 4/13/95 District Deputy Director of Transportation

Approved [signature]
Date 7/25/95 Engineer, Bureau of Bridges and Structural Design

Approved [signature]
Date 12-15-95 Deputy Director, ~~Design~~ Project Mgmt.

Approved [signature]
Date 12/15/95 Director, Department of Transportation

UNDERGROUND UTILITIES

Two Working Days
BEFORE YOU DIG
Call 800-362-2764 (Toll free)
OHIO UTILITIES PROTECTION SERVICE

NON-MEMBERS
MUST BE CALLED DIRECTLY

PLANS PREPARED BY

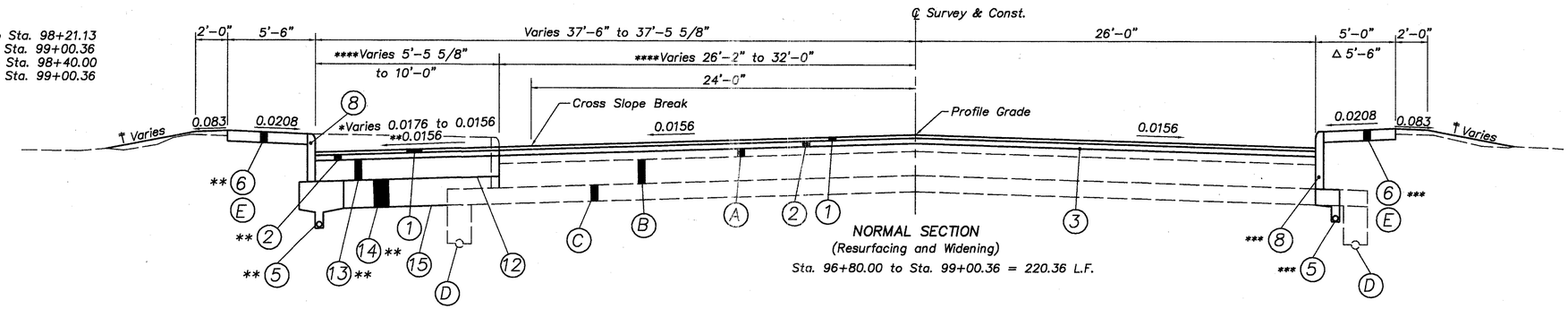
KORDA/NEMETH ENGINEERING, INC.
CONSULTING ENGINEERS
1650 WATERMARK DRIVE, SUITE 200 COLUMBUS, OHIO 43215-1094
TEL (614) 487-1650 FAX (614) 487-8981

STANDARD DRAWINGS										SUPPLEMENTAL SPECIFICATIONS			
NUMBER	DATE	NUMBER	DATE	NUMBER	DATE	NUMBER	DATE	NUMBER	DATE	NUMBER	DATE	NUMBER	DATE
BP-3.1	2-21-92	MC-4	7-26-76	TC-35.10	8-29-84	HL-10.11	5-1-87						
BP-4.1	2-21-92	MC-6	1-30-84	TC-41.10	8-29-84	HL-10.12	5-1-87	AS-1-81	11-27-81	820	6-14-95		
BP-5.1	10-28-94	MC-9.2	5-6-91	TC-41.20	6-21-94	HL-10.13	5-1-87	EXJ-4-87	1-20-94	910	7-17-95		
BP-7.1	10-30-92	MC-11	8-1-78	TC-41.40	6-18-79	HL-20.11	5-1-87						
GR-1.1	5-6-91			TC-42.20	3-26-79	HL-20.14	5-1-87	BR-2-82	11-1-82	944	3-23-95		
GR-1.2	10-30-92	MT-95.31	10-10-88	TC-52.10	4-3-79	HL-30.11	5-1-87	PCB-91	4-24-92	945	6-14-95		
GR-1.3	2-21-92	MT-95.32	8-25-89	TC-52.20	4-3-79	HL-30.21	5-1-87	VPF-1-90	3-24-93				
GR-2.1	5-6-91	MT-99.10	11-14-86	TC-71.10	9-10-91	HL-30.22	5-1-87	SD-1-69	6-12-69				
GR-3.1	5-6-91	MT-101.60	7-01-92	TC-82.10	8-29-84	HL-30.31	5-1-87						
GR-4.1	5-6-91	MT-105.10	7-01-92			HL-40.10	5-1-87						
		MT-105.11	7-01-92			HL-50.11	5-1-87						
BP-1.1	2-21-92					HL-50.21	5-1-87						
						HL-60.11	5-1-87						
CB-3	5-1-79	LA-1	6-1-79			HL-60.12	5-1-87						
HW-4B	4-1-80					HL-60.31	5-1-87						
I-2A	12-18-84												

FEDERAL PROJECT NO.	BHF-94A(8)
PID NO.	12760
CONSTRUCTION PROJECT NO.	
RAILROAD INVOLVEMENT	NONE
	FRA-GOODALE STREET

TYPICAL SECTIONS
TYPE 404

*Sta. 97+86.00 to Sta. 98+21.13
**Sta. 98+21.13 to Sta. 99+00.36
***Sta. 97+80.00 to Sta. 98+40.00
****Sta. 97+47.29 to Sta. 99+00.36



NORMAL SECTION
(Resurfacing and Widening)
Sta. 96+80.00 to Sta. 99+00.36 = 220.36 L.F.

Note: Saw Cut at Face of Existing Curb

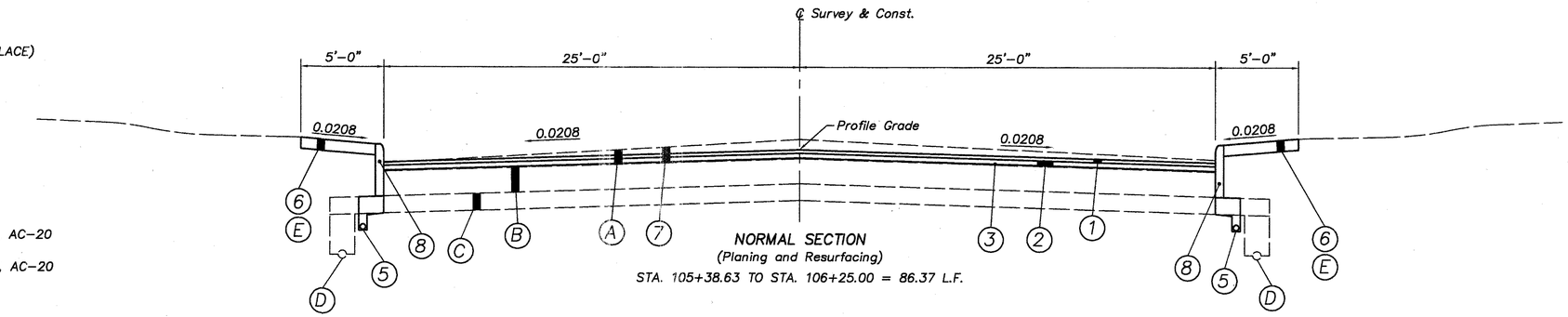
† See Cross Sections
△ Sta. 97+75.50 to Sta. 98+56.00

EXISTING LEGEND

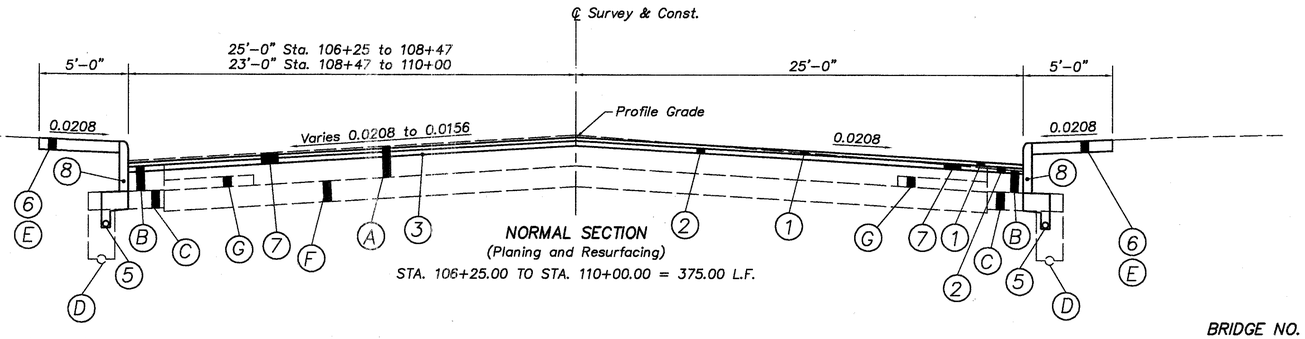
- (A) 3" TO 7" ASPHALT CONCRETE
- (B) 9" PORTLAND CEMENT CONCRETE BASE
- (C) 6" SUBBASE
- (D) 6" PIPE UNDERDRAIN (TO REMAIN IN PLACE)
- (E) 4" CONCRETE SIDEWALK
- (F) 7" CONCRETE BASE
- (G) 3" BRICK OVER 1/2" SAND

PROPOSED LEGEND

- (1) ITEM 404 1 1/4" ASPHALT CONCRETE, AC-20
- (2) ITEM 402 1 3/4" ASPHALT CONCRETE, AC-20
- (3) ITEM 407 TACK COAT
- (4) ITEM 452 9" PLAIN CONCRETE PAVEMENT
- (5) ITEM 605 4" UNCLASSIFIED PIPE UNDERDRAIN
- (6) ITEM 608 4" CONCRETE WALK
- (7) ITEM 254 PAVEMENT PLANING, BITUMINOUS (SEE DETAIL ON SHEET 30)
- (8) ITEM 609 CURB, TYPE 6
- (9) ITEM 611 REINFORCED CONCRETE APPROACH SLAB (T=12"), AS PER PLAN (SEE SHEETS 4, 31, 32)
- (10) ITEM 606 GUARDRAIL, TYPE 5
- (11) ITEM 609 COMBINATION CURB AND GUTTER, TYPE 2, AS PER PLAN (SEE DETAIL ON SHEET 28)
- (12) ITEM 408 BITUMINOUS PRIME COAT
- (13) ITEM 301 10" BITUMINOUS AGGREGATE BASE, AC-20
- (14) ITEM 304 6" AGGREGATE BASE (SEE PROPOSAL NOTE)
- (15) ITEM 203 SUBGRADE COMPACTION



NORMAL SECTION
(Planing and Resurfacing)
STA. 105+38.63 TO STA. 106+25.00 = 86.37 L.F.



NORMAL SECTION
(Planing and Resurfacing)
STA. 106+25.00 TO STA. 110+00.00 = 375.00 L.F.

BRIDGE NO. FRA-315-0194
Sta. 99+15.36 to Sta. 105+23.63 = 608.27 L.F.

TYPICAL SECTIONS

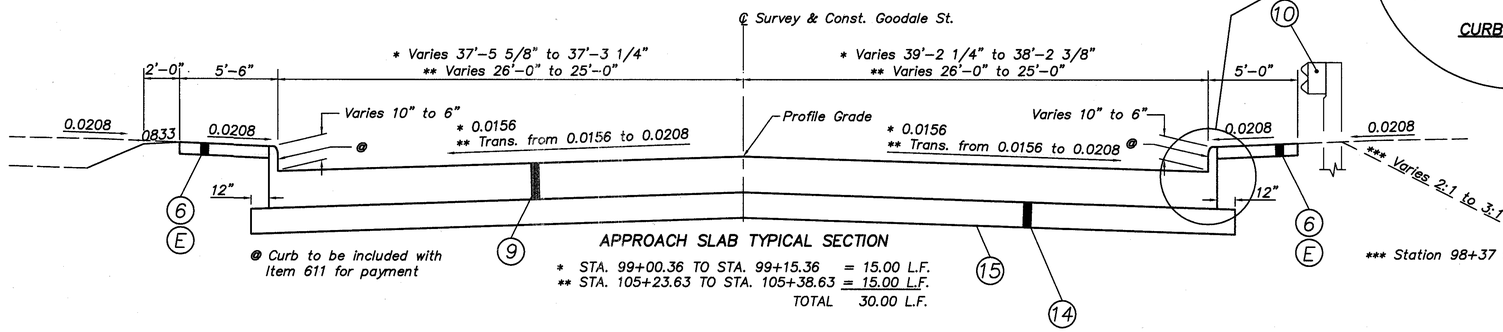
FRA-GOODALE STREET

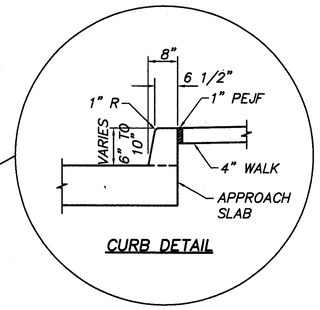
2/73

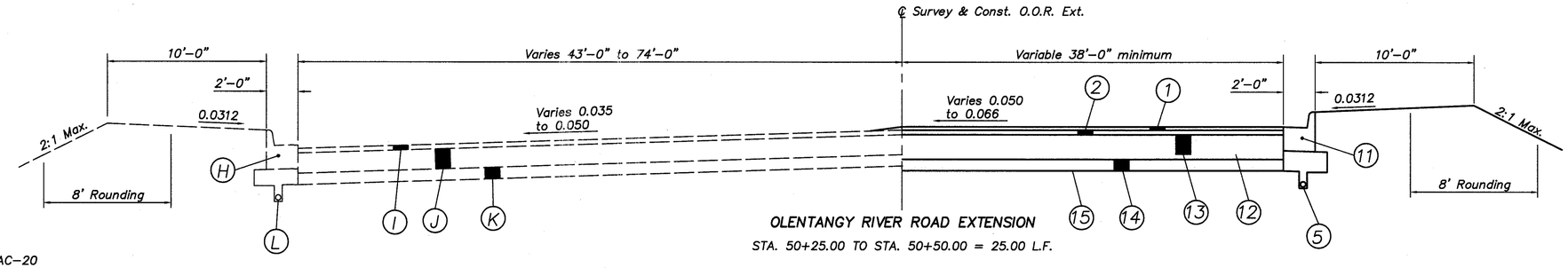
TYPICAL SECTIONS
TYPE 404

EXISTING LEGEND

- (A) 3" TO 7" ASPHALT CONCRETE
- (B) 9" PORTLAND CEMENT CONCRETE BASE
- (C) 6" SUBBASE
- (D) 6" PIPE UNDERDRAIN (TO REMAIN IN PLACE)
- (E) 4" CONCRETE SIDEWALK
- (F) 7" CONCRETE BASE
- (G) 3" BRICK OVER 1/2" SAND
- (H) COMBINATION CURB AND GUTTER
- (I) 1 3/4" ASPHALT CONCRETE
- (J) 8" BITUMINOUS AGGREGATE BASE
- (K) 6" AGGREGATE BASE
- (L) 4" PIPE UNDERDRAIN
- (M) CONCRETE MEDIAN (TO BE REMOVED)







PROPOSED LEGEND

1. ITEM 404 1 1/4" ASPHALT CONCRETE, AC-20
2. ITEM 402 1 3/4" ASPHALT CONCRETE, AC-20
3. ITEM 407 TACK COAT
4. ITEM 452 9" PLAIN CONCRETE PAVEMENT
5. ITEM 605 4" UNCLASSIFIED PIPE UNDERDRAIN
6. ITEM 608 4" CONCRETE WALK
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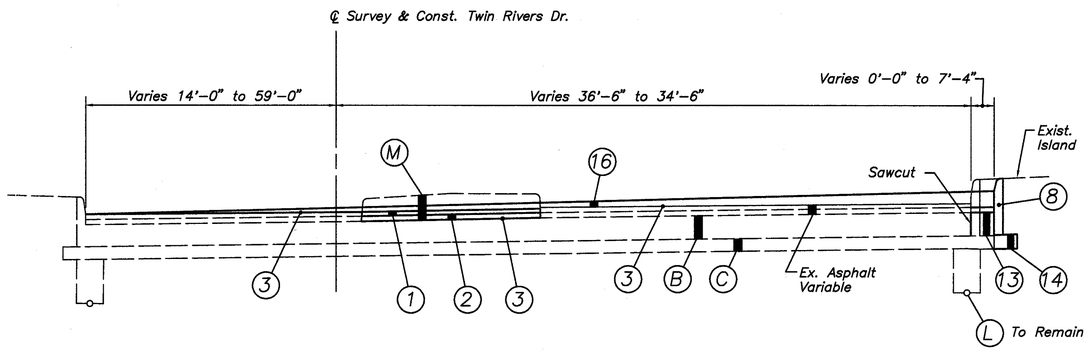
10. ITEM 606 GUARDRAIL TYPE 5
11. ITEM 609 COMBINATION CURB AND GUTTER, TYPE 2, AS PER PLAN (SEE DETAIL ON SHEET 28)
12. ITEM 408 BITUMINOUS PRIME COAT
13. ITEM 301 10" BITUMINOUS AGGREGATE BASE, AC-20
14. ITEM 304 6" AGGREGATE BASE (SEE PROPOSAL NOTE)
15. ITEM 203 SUBGRADE COMPACTION
16. ITEM 404 VARIABLE THICKNESS (0" TO 7") ASPHALT CONCRETE, AC-20



TWIN RIVERS DRIVE
STA. 58+94 TO STA. 59+50 = 56.00 L.F.

BRIDGE NO. FRA-315-0194
Sta. 99+15.36 to Sta. 105+23.63 = 608.27 L.F.

TYPICAL SECTIONS

FRA-GOODALE STREET

3/73

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

UTILITIES
LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

ELECTRIC	COLUMBUS SOUTHERN POWER 215 N. FRONT STREET COLUMBUS, OHIO 43215 (614) 464-7911
TELEPHONE	AMERITECH INC. 150 E. GAY STREET COLUMBUS, OHIO 43215 (614) 223-8535
WATER	CITY OF COLUMBUS, DIVISION OF WATER 910 DUBLIN ROAD COLUMBUS, OHIO 43215 (614) 645-7788
GAS	COLUMBIA GAS CO. 939 W. GOODALE STREET COLUMBUS, OHIO 43212 (614) 460-2079
ELECTRIC	CITY OF COLUMBUS, DIVISION OF ELECTRICITY 910 DUBLIN ROAD COLUMBUS, OHIO 43215 (614) 645-7098
SANITARY SEWERS	CITY OF COLUMBUS DIVISION OF SEWERAGE AND DRAINAGE 910 DUBLIN ROAD COLUMBUS, OHIO 43215 (614) 645-7175
TRAFFIC	CITY OF COLUMBUS DIVISION OF TRAFFIC ENGINEERING 109 N. FRONT STREET COLUMBUS, OHIO 43215 (614) 645-7393

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

CONSTRUCTION INITIATION
THE CONTRACTOR WILL ADVISE THE DISTRICT COMMUNICATIONS OFFICER AT 614-363-1251 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.

CONTINGENCY QUANTITIES
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 COMPLETION OF THIS PROJECT.

ELEVATION DATUM
ALL ELEVATIONS ARE BASED ON U.S.G.S. DATUM OBTAINED FROM FRA-315-2.39 (PROJECT BENCHMARK 1A) OF THE OHIO DEPARTMENT OF TRANSPORTATION.

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.

REMOVAL OF TREES OR STUMPS
ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS SHALL BE REMOVED UNDER THE LUMP SUM BID FOR ITEM 201, CLEARING AND GRUBBING. THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED:

SIZES	NO. TREES	NO. STUMPS	TOTAL
18"	2		2

THE ABOVE ESTIMATE IS APPROXIMATE AND THE ENGINEER RESERVES THE RIGHT TO ORDER THE REMOVAL OF ADDITIONAL TREES OR STUMPS OUTSIDE THE LIMITS OF CONSTRUCTION BUT WITHIN THE RIGHT-OF WAY AND/OR EASEMENT LINES. PAYMENT FOR THE REMOVAL OF THESE ADDITIONAL TREES OR STUMPS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201 CLEARING AND GRUBBING.

ITEM 659, SEEDING AND MULCHING
SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR ITEM 659, SEEDING AND MULCHING, ARE BASED ON THESE LIMITS.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:
659, SEEDING AND MULCHING 1,816 SQ. YD.

SEEDING AND MULCHING OF LAWNS
IN ADDITION TO "AREAS IN FRONT OF RESIDENCES" REFERRED TO IN 659.09, THE SPECIAL PREPARATION SHALL BE EXTENDED TO ENCOMPASS ALL LAWNS AND/OR LAWN-LIKE AREAS AS DETERMINED BY THE ENGINEER.

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

659, WATER	1,816 x 9/1000 x 240/1000 = 4 M.GAL
659, COMMERCIAL FERTILIZER	1,816 x 9 x 20/1000 x 1/2000 = 0.16 TON
659, AGRICULTURAL LIMING	1,816 x 9 x 100/1000 x 1/2000 = 0.82 TON

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, STRAW OR HAY BALES	50 EACH
207, FILTER FABRIC FENCE	200 LIN. FT.

EROSION CONTROL
ITEMS 601 IS PROVIDED IN THE PLANS FOR EROSION CONTROL. ROCK OF A STABLE NATURE SHALL NOT BE REMOVED IN ORDER TO PLACE THIS ITEM. THE ENGINEER SHALL CHECK AND NON- PERFORM QUANTITIES OR ADJUST LOCATIONS AND QUANTITIES OF THIS ITEM WHERE INDICATED BY FIELD CONDITIONS DURING CONSTRUCTION. IN ADDITION, THIS ITEM SHALL MEET THE REQUIREMENT OF 108.04.

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 ALL EXISTING SEWERS 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 INSPECTION 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 CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEMS.

PART-WIDTH CONSTRUCTION
BECAUSE OF THE NECESSITY TO BUILD THIS PROJECT UNDER TRAFFIC AND CONSTRUCTING THE FULL PAVEMENT WIDTH IN STAGES, EXTREME CARE SHALL BE TAKEN TO PREVENT THE CONSTRUCTION OF A BUTT JOINT IN THE BASE COURSES. LONGITUDINAL JOINTS SHALL BE LAPPED AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.1.

CURBING ON APPROACH SLABS
THE SHAPE OF THE CURBING ON APPROACH SLABS SHALL BE TRANSITIONED, FROM THE STANDARD SECTION ON THE APPROACHES TO THE SECTION USED ON THE BRIDGE, WITHIN THE LIMITS OF THE APPROACH SLAB.

CURB REMOVED, AS PER PLAN
THE EXISTING CURB TO BE REMOVED WITH THIS PROJECT IS INTEGRAL WITH EXISTING CONCRETE BASE PAVEMENT. THE SAWCUTTING OF THE EXISTING CURB AND ANY ADDITIONAL CONCRETE AND AGGREGATE REQUIRED DUE TO ANY EXCESSIVE REMOVAL SHALL BE INCLUDED IN ITEM 202 CURB REMOVED , AS PER PLAN FOR PAYMENT.

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

ITEM 202, PULL BOX REMOVED
THIS ITEM SHALL INCLUDE REMOVING THE PULL BOX TO ONE FOOT (1') BELOW THE GROUND LEVEL [THREE FEET (3') BELOW THE GROUND LEVEL WHERE PULL BOX IS TO BE REPLACED WITH A NEW CONCRETE PULL BOX] AND RESTORING THE DISTURBED AREA. WHERE A PULLBOX IS TO BE REPLACED WITH A NEW CONCRETE PULL BOX, IT IS THE INTENT OF THIS NOTE TO CUT ALL CONDUITS IN A NEAT FASHION IN ORDER TO REUSE THE EXISTING CONDUITS IN PLACE. CARE SHALL BE TAKEN NOT TO DAMAGE EXISTING CIRCUIT CONDUCTORS IF THEY ARE TO BE REUSED. PAYMENT SHALL BE PER EACH ITEM 202, PULL BOX REMOVED.

ITEM 611, REINFORCED CONCRETE APPROACH SLAB (T=12"), AS PER PLAN
THE REINFORCING STEEL FOR THE APPROACH SLABS OF THIS STRUCTURE SHALL BE EPOXY COATED IN CONFORMANCE WITH 509. SEE DETAIL ON SHEETS 31 AND 32.

MATERIALS, LABOR AND INSTALLATION SHALL BE INCLUDED FOR PAYMENT IN THIS ITEM 611 REINFORCED CONCRETE APPROACH SLAB (T=12"), AS PER PLAN.

ITEM 253, PAVEMENT REPAIR, AS PER PLAN
THIS ITEM SHALL INCLUDE THE WORK NECESSARY TO REPLACE PAVEMENT REMOVED IN TRENCHING FOR THE STORM SEWERS, TRAFFIC CONDUITS AND ELECTRIC CONDUITS. THE WORK SHALL INCLUDE CONSTRUCTION OF ITEMS 404, 407 AND 305 PER DETAIL SHOWN ON SHEET 28. THE ABOVE WORK SHALL BE INCLUDED WITH ITEM 253 PAVEMENT REPAIR, AS PER PLAN FOR PAYMENT.

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 THIS NOTIFICATION SHALL BE AT THE PRECONSTRUCTION MEETING OR 30 DAYS IN ADVANCE ONCE CONSTRUCTION HAS BEGUN. LANE AND RAMP CLOSURES FOR TWO OR MORE WEEKS SHALL BE REPORTED TWO WEEKS IN ADVANCE OF CLOSURE. LANE AND RAMP CLOSURES OF LESS THEN TWO WEEKS DURATION AND MORE THAN TWO DAYS SHALL BE REPORTED AT LEAST 3 WORKING DAYS IN ADVANCE. FOR SHORT-TERM LANE AND RAMP CLOSURES (TWO DAYS OR LESS) NOTIFICATION SHALL BE MADE AT LEAST ONE 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 THE PTWP. THE CONTRACTOR SHALL DESIGNATE AN INDIVIDUAL WHO WILL BE RESPONSIBLE TO PREPARE THIS REPORT AT THE PRECONSTRUCTION MEETING.

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

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

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.

EXISTING UNDERDRAIN CONNECTIONS
IN GENERAL, THE EXISTING PIPE UNDERDRAINS ARE TO REMAIN IN PLACE AND EITHER CONNECTED TO THE NEW PIPE UNDERDRAINS WITH THE NECESSARY ELBOWS AND/OR WYE CONNECTIONS OR OUTLETTED INTO NEW OR EXISTING DRAINAGE STRUCTURES WITH TYPE F CONDIUT.

ALL WORK AND MATERIAL REQUIRED TO CONNECT EXISTING UNDERDRAINS TO NEW UNDERDRAINS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 605, 4" UNCLASSIFIED PIPE UNDERDRAIN. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER FOR CONNECTING EXISTING PIPE UNDERDRAINS TO DRAINAGE STRUCTURES:

ITEM 603 6" CONDUIT, TYPE F 100 LIN. FT.

CALCULATED DLS CHECKED MDW

GENERAL NOTES

FRA-GOODALE-STREET

ITEM 614, MAINTAINING TRAFFIC
A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES EXCEPT AS NOTED, BY USE OF THE EXISTING PAVEMENT, THE COMPLETED PAVEMENT AND 615 TEMPORARY PAVEMENT.

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.

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

404, BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC 20 CU.YD.

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.

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.

DURING A TRAFFIC SIGNAL INSTALLATION.

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:

CITY OF COLUMBUS POLICE DIVISION
120 MARCONI BLVD.
COLUMBUS, OHIO 43215
(614) 645–4795

LAW ENFORCEMENT OFFICERS WITH PATROL CAR REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON AN HOURLY BASIS UNDER ITEM SPECIAL–LAW ENFORCEMENT OFFICER WITH PATROL CAR. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 614 – LAW ENFORCEMENT OFFICER WITH PATROL CAR 24 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.

DUST CONTROL
THE CONTRACTOR SHALL FURNISH AND APPLY WATER AND CALCIUM CHLORIDE FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING CONTINGENCY QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:
616, WATER 50 M.GAL.
616, CALCIUM CHLORIDE 5 TONS

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. FLAGGERS SHALL BE UTILIZED FOR PROTECTION OF VEHICULAR TRAFFIC UNTIL MOVEMENT OF THE BARRIER IS COMPLETE.

ALL COSTS INVOLVED IN REMOVING AND REINSTALLING THE CONCRETE BARRIER WILL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 622, PORTABLE CONCRETE BARRIER.

WHERE INDICATED IN THE PLANS , BRIDGE MOUNTED PORTABLE CONCRETE BARRIER SHALL BE ANCHORED TO THE DECK.

DELINEATION OF PORTABLE CONCRETE BARRIER
SEE THE PROPOSAL NOTE (142–92) FOR PLACEMENT AND SPACING OF REFLECTOR AND OBJECT MARKERS FOR THE 32" PORTABLE CONCRETE BARRIER. QUANTITIES ARE SHOWN ON SHEET 6.

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 COVER SHALL BE TOTALLY OPAQUE. THE USE OF ADHESIVE TAPE APPLIED DIRECTLY TO A SIGN FACE IS STRICTLY PROHIBITED.

ADDITIONAL TEMPORARY TRAFFIC CONTROL DEVICES
THE FOLLOWING ITEMS ARE TO BE USED WHEN IT HAS BEEN DETERMINED BY THE ENGINEER THAT ADDITIONAL TEMPORARY TRAFFIC CONTROL DEVICES NOT SHOWN IN THE MAINTENANCE OF TRAFFIC PLANS ARE REQUIRED. THIS INCLUDES DEVICES DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR.

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

SIGNS FURNISHED UNDER THIS ITEM SHALL INCLUDE SUPPORT AND MOUNTING HARDWARE.

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

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER:

614	650 L.F.	TEMPORARY PAVEMENT MARKING, MISC.: CLASS I, 740.02
614	650 L.F.	TEMPORARY PAVEMENT MARKING, MISC.: CLASS I, 740.05, TYPE C
622	80 L.F.	PORTABLE CONCRETE BARRIER

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

THE FOLLOWING QUANTITIES SHALL ALSO BE INCLUDED WITH THE LUMP SUM BID FOR ITEM 614 MAINTAINING TRAFFIC FOR USE AS DIRECTED BY THE ENGINEER:

1 EACH	FLASHING ARROW PANEL, TYPE C
30 EACH	TEMPORARY DRUMS OR BARRICADES
1 EACH	A–FRAMED HINGED TYPE III BARRICADE (12 FEET LONG)
50 S.F.	SIGNS, FLAT SHEET, TYPE G

WHEN THE ITEM IS A REPLACEMENT FOR ONE DAMAGED BY TRAFFIC AS STATED ABOVE, THE COST (EITHER UNIT OR AS PART OF THE LUMP SUM) WILL ALSO INCLUDE COSTS NECESSARY TO REMOVE AND DISPOSE OF THE DAMAGED ITEM.

GENERAL

S.R. 315 AND I–670 EASTBOUND

1. PRIOR TO COMMENCEMENT OF ANY WORK ON GOODALE STREET, THE CONTRACTOR SHALL ERECT SIGNS AND PORTABLE CONCRETE BARRIERS ALONG S.R. 315 NORTHBOUND, S.R. 315 SOUTHBOUND, AND I–670 EASTBOUND AT THE LOCATIONS SHOWN ON SHEET 14. THESE WILL BE MAINTAINED IN PLACE THROUGHOUT THE DURATION OF THIS PROJECT.

2. TOTAL CLOSURES OF S.R. 315 NORTHBOUND AND/OR SOUTHBOUND, FOR DEMOLITION AND/OR RECONSTRUCTION OF THE GOODALE STREET BRIDGE, ARE RESTRICTED TO WEEKENDS. SUCH CLOSURES SHALL NOT OCCUR BEFORE 8 P.M. ON FRIDAYS; ALL LANES EXCEPT THOSE SUBJECT TO PRIOR CLOSURE, SHALL BE REOPENED BY 5 A.M. ON MONDAYS. SEE SHEETS 7 THROUGH 10 FOR CLOSURE AND DETOUR PLAN.

3. S.R. 315 CLOSURES SHALL NOT OCCUR ON A WEEKEND WHICH INCLUDES A LEGAL HOLIDAY, OSU HOME FOOTBALL GAME, OR OTHER SPECIAL EVENT WHICH IS EXPECTED TO GENERATE LARGE TRAFFIC VOLUMES. THE CONTRACTOR SHALL OBTAIN PERMISSION FOR ANY S.R. 315 CLOSURE FROM THE ENGINEER AT LEAST 48 HOURS PRIOR TO THE CLOSURE.

4. NORTHBOUND S.R. 315 AND EASTBOUND I–670 CAN BE CLOSED AT THE SAME TIME.

5. <u>LIQUIDATED DAMAGES:</u> IN THE EVENT THAT ANY PORTION OF S.R. 315 IS CLOSED EARLY OR OPENED LATE THE CONTRACTOR SHALL BE REQUIRED TO PAY LIQUIDATED DAMAGES IN THE FOLLOWING AMOUNTS:

   FOR THE FIRST HOUR OR FRACTION THEREOF, THE SUM ON ONE HUNDRED DOLLARS ($100.00), PLUS THREE DOLLARS ($3.00) FOR EACH AND EVERY MINUTE UNTIL THE ROADWAY IS FULLY OPENED TO TRAFFIC.

GOODALE STREET

1. 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 INTERSECTIONS OF GOODALE STREET @ WHITE CASTLE, GOODALE STREET @ TWIN RIVERS DRIVE OR WITHIN ANY POSTED AREA WHERE THE DIVISION HAS UNDERGROUND CABLE.

2. 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.

3. ANY WORK DONE BY THE TRAFFIC ENGINEERING AND PARKING DIVISION, INCLUDING INSTALLATION, RELOCATION, REMOVAL AND/OR REPLACEMENT OF PERMENENT 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.

POST OFFICE DETOUR

THE CONTRACTOR SHALL ERECT THE DETOUR SIGNS AS SHOWN ON SHEET 14 BEFORE ANY OF THE LANE RESTRICTIONS ON GOODALE STREET ARE IMPLEMENTED.

COOPERATION BETWEEN CONTRACTORS
THE CONTRACTOR IS ADVISED THAT AN ADJACENT CONTRACT, FRA–670–1.25–C2, MAY BE UNDER CONSTRUCTION AT THE SAME TIME AS THIS CONTRACT. THE CONTRACTOR SHALL COOPERATE WITH THE OTHER CONTRACTOR IN COORDINATION OF WORK EFFORTS. THE ENGINEER WILL CHECK AND COORDINATE THE PLACEMENT AND APPROPRIATENESS OF DEVICES TO ENSURE MAXIMUM PROTECTION FOR TRAFFIC. THE CONTRACTOR SHALL COMPLY WITH ANY SUCH REVISIONS AS DIRECTED BY THE ENGINEER.

SEQUENCE OF OPERATIONS

PHASE I

CLOSE THE WESTBOUND LANES OF GOODALE STREET IN ACCORDANCE WITH THE MAINTENANCE OF TRAFFIC PLANS AND RECONSTRUCT THE NORTH PORTION OF THE BRIDGE EXCEPT FOR THE SIDEWALK. CONSTRUCT STORM SEWERS, WATER LINE WORK, TEMPORARY PAVEMENT, PAVEMENT WIDENING AND RESURFACING (EXCEPT FOR ITEM 404) AT ROADWAY APPROACHES.

MAINTAIN TWO–WAY, TWO LANE TRAFFIC ON THE EASTBOUND LANES OF GOODALE STREET USING EXISTING PAVEMENT AND BRIDGE. MAINTAIN A MINIMUM WIDTH OF 11.5 FEET IN EACH OF THE LANES OPEN TO TRAFFIC.

PHASE II

CLOSE THE EASTBOUND LANES OF GOODALE STREET IN ACCORDANCE WITH THE MAINTENANCE OF TRAFFIC PLANS AND RECONSTRUCT THE SOUTH PORTION OF THE BRIDGE. CONSTRUCT REMAINDER OF STORM SEWER AND WATER LINE, CURB, WALK AND RESURFACING (EXCEPT FOR ITEM 404) AT ROADWAY APPROACHES.

MAINTAIN TWO–WAY, TWO LANE TRAFFIC ON THE WESTBOUND LANES OF GOODALE STREET USING NEW PAVEMENT, TEMPORARY PAVEMENT AND PORTION OF RECONSTRUCTED BRIDGE. MAINTAIN A MINIMUM WIDTH OF 11.5 FEET IN EACH OF THE LANES OPEN TO TRAFFIC.

PHASE III

CLOSE THE WESTBOUND RIGHT LANE OF GOODALE STREET IN ACCORDANCE WITH THE MAINTENANCE OF TRAFFIC PLANS AND CONSTRUCT THE CURB AND WALK ON THE BRIDGE AND ROADWAY APPROACHES.

MAINTAIN ONE LANE WESTBOUND TRAFFIC AND TWO LANE EASTBOUND TRAFFIC WITH A MINIMUM WIDTH OF 12 FEET IN EACH OF THE THREE LANES OPEN TO TRAFFIC. IN ADDITION, MAINTAIN LEFT TURN LANE AT WEST END OF BRIDGE.

UPON COMPLETION OF PHASE III, ITEM 404 SHALL BE CONSTRUCTED USING MAINTENANCE OF TRAFFIC MEASURES PER STD. DWGS. MT–95.31 AND MT–95.32.

CALCULATED MDW CHECKED JSS

MAINTENANCE OF TRAFFIC NOTES

FRA–GOODALE–STREET

614 TEMPORARY RAISED PAVEMENT MARKERS

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING, INSTALLING, MAINTAINING, AND SUBSEQUENTLY REMOVING TEMPORARY RAISED PAVEMENT MARKERS (TRPM'S). THE TRPM'S SHALL BE YELLOW OR WHITE, AS DESCRIBED IN THE PLAN.

MATERIAL
ALL UNITS SHALL BE OF SUFFICIENT STRENGTH AND PROPERLY SHAPED SO AS NOT TO BE DISLODGED OR BROKEN OR THE REFLECTOR DISLODGED OR DAMAGED BY IMPACTS FROM VEHICLES TIRES. INCLUDING THOSE OF HIGH PRESSURE TRUCK TIRES LOADED TO 4500 POUNDS.

RETROREFLECTORS SHALL BE PROVIDED IN ONE OR TWO DIRECTIONS ON EACH UNIT AS REQUIRED BY THE USAGE AND SHALL RETURN WHITE OR YELLOW LIGHT AS IS APPROPRIATED FOR THE APPLICATION.

THE REFLECTOR SHALL HAVE AN EFFECTIVE AREA OF 0.35 SQUARE INCH FOR TYPE A OR 3.0 SQUARE INCH FOR TYPE B. ITS BRIGHTNESS OR SPECIFIC INTENSITY (WHEN TESTED AT 0.2 DEGREE ANGLE OF OBSERVATION AND THE FOLLOWING ANGLES OF INCIDENCE) SHALL MEET OR EXCEED THE FOLLOWING:

SPECIFIC INTENSITY

INCIDENCE ANGLE (DEGREES)	TYPE A WHITE	TYPE A YELLOW
0	1.0	0.6
20	0.4	0.24
45	–	–
	TYPE B	
	WHITE	YELLOW
0	3.0	1.8
20	1.2	0.72
45	0.3	0.2

ANGLE OF INCIDENCE FORMED BY A RAY FROM LIGHT SOURCE TO THE MARKER AND THE NORMAL TO THE LEADING EDGE OF THE MARKER FACE (ALSO HORIZONTAL ENTRANCE ANGLE).

ANGLE OF OBSERVATION FORMED BY A RAY FROM LIGHT SOURCE TO THE MARKER AND THE RETURNED RAY FROM THE MARKER TO THE MEASURING RECEPTOR.

SPECIFIC INTENSITY IS THE MEAN CANDLEPOWER OF THE REFLECTED LIGHT (AT GIVEN INCIDENCE AND DIVERGENCE ANGLES) FOR EACH FOOT–CANDLE AT THE REFLECTOR (ON A PLANE PERPENDICULAR TO THE INCIDENT LIGHT).

TYPE A UNITS ARE INTENDED TO PROVIDE HIGH VISIBILITY BOTH AT NIGHT AND DURING DAYLIGHT. THEIR DAY TIME VISIBILITY SHALL BE ASSURED BY SIZE, SHAPE AND COLOR AS FOLLOWS:

1) THE UNITS SHALL BE A HIGH VISIBILITY YELLOW OR WHITE COLOR WHICH WILL NOT DEGRADE SUBSTANTIALLY DUE TO TRAFFIC WEAR AND WHICH WILL MATCH THE COLOR OF THE REFLECTOR.

2) WHEN VIEWED FROM ABOVE, THE UNITS SHALL HAVE A VISIBLE AREA OF NOT LESS THAN 14 SQUARE INCHES.

3) WHEN VIEWED FROM THE FRONT, PARALLEL TO THE PAVEMENT, AS FROM APPROACHING TRAFFIC, THE UNIT SHALL HAVE A WIDTH OF APPROXIMATELY 4 INCHES AND A VISIBLE AREA OF NOT LESS THAN 1.5 SQUARE INCHES.

TYPE B UNITS ARE INTENDED TO PROVIDE HIGH VISIBILITY AT NIGHT BY RETROREFLECTING AUTOMOTIVE HEADLIGHT BACK TO THE DRIVER.

INSTALLATION: THEY SHALL BE ATTACHED TO CLEAN, DRY PAVEMENT BY A BUTYL ADHESIVE PAD, A BITUMINOUS ADHESIVE OR OTHER CONSTRUCTION GRADE ADHESIVES (SUCH AS FRANKLIN PANEL AND METAL ADHESIVE) SUITABLE TO ANCHOR THE UNIT UNDER THE ABOVE CONDITIONS. WHEN IT IS NECESSARY TO ATTACH UNITS TO NEW CONCRETE WITH CURING COMPOUND REMAINING, THE CURING COMPOUND MEMBRANE SHALL BE REMOVED BY SANDBLASTING OR OTHER MECHANICAL CLEANING METHOD. THEY SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

THE CONTRACTOR SHALL IMMEDIATELY REPLACE, AT HIS COST, ANY UNITS WHICH FAIL (BROKEN HOUSING, HOUSING WORN TO THE EXTENT THAT DAYTIME VISIBILITY IS SIGNIFICANTLY DIMINISHED OR OF AN UNACCEPTABLE COLOR, DETACHED OR BROKEN REFLECTOR, HOUSING DETACHED FROM ADHESIVE).

TRPM'S ARE LIKELY TO BE REMOVED BY SNOW PLOWING OPERATIONS, THUS THEY ARE NOT CONSIDERED SUITABLE FOR USE DURING THE PERIOD FROM OCTOBER 15 UNTIL APRIL 30. THE CONTRACTOR IS ADVISED TO SCHEDULE HIS WORK AND/OR THE USE OF THESE DEVICES TO AVOID THIS PERIOD. SHOULD THE CONTRACTOR CHOOSE TO USE TRPM'S DURING THIS PERIOD AND THEY ARE SUBSEQUENTLY REMOVED OR DESTROYED BY SNOW AND ICE CONTROL ACTIVITIES, THE CONTRACTOR SHALL IMMEDIATELY, AT HIS COST, PROVIDE A SUBSTITUTE TRAFFIC GUIDANCE SYSTEM EFFECTIVE DURING LIGHT AND DARK AND WHICH IS ACCEPTABLE TO THE ENGINEER.

THE UNITS SHALL BE PLACED ACCURATELY TO DEPICT STRAIGHT OR UNIFORMLY CURVING LINES. WHEN USED TO SUPPLEMENT TEMPORARY PAVEMENT MARKINGS, THEY MAY BE PLACED ON OR IMMEDIATELY ADJACENT TO THE PAVEMENT MARKING. LOCATIONS SHALL BE ADJUSTED UP TO ONE FOOT LONGITUDINALLY OR SIX INCHES LATERALLY TO AVOID PLACEMENT ON JOINTS, CRACKED OR DETERIORATED PAVEMENT. THEY SHALL NOT BE PLACED DIRECTLY ON PAVEMENT MARKINGS IF THIS WILL DETRACT FROM THEIR ABILITY TO REMAIN ATTACHED TO THE PAVEMENT.

APPLICATION
1) WHEN REQUIRED TO SUPPLEMENT PAVEMENT MARKING; THEY SHALL BE PLACED AS FOLLOWS:

LINE	TYPE	SPACING
EDGE LINE	A or B	20' C/C
LANE LINE	A or B	40' C/C *
CENTER LINE (SINGLE/BROKEN)	A or B	40' C/C *
CENTER LINE (DOUBLE/SOLID)	A or B	2 UNITS SIDE BY SIDE 4 INCHES APART 20' C/C
CHANNELIZING LINE (INCLUDES EXIT GORE NOSE)	A or B	10' C/C

* CENTERED IN GAP

2) WHEN USED TO SIMULATE (REPLACE) PAVEMENT MARKING THEY SHALL BE PLACED AS FOLLOWS:

LINE	TYPE	SPACING
EDGE LINE	A	5' C/C
LANE LINE	A	4@3.33' C/C 30' GAP (40' CYCLE)
CENTER LINE (DOUBLE SOLID)	A	2 UNITS SIDE BY SIDE 5' C/C
CENTER LINE (SINGLE/BROKEN)	A	4@3.33' C/C 30' GAP (40' CYCLE)
CHANNELIZING LINE (INCLUDES EXIT GORE NOSE)	A	5' C/C
EDGE LINE (TWO COLOR) (WHITE/YELLOW)	A	BACK TO BACK 5' C/C

YELLOW TRPM'S USED TO SEPARATE OPPOSITE FLOWS OF TRAFFIC (CENTER LINES) SHALL INCLUDE REFLECTIONS FOR BOTH DIRECTIONS. ALL OTHER YELLOW TRPM'S AND WHITE TRPM'S SHALL PROVIDE RETROREFLECTIVELY FOR ONE DIRECTION.

REMOVAL
REMOVAL SHALL BE ACCOMPLISHED IN A MANNER THAT LITTLE OR NONE OF THE ADHESIVE REMAINS ON THE PAVEMENT AND PERMANENT PAVEMENT SURFACES SHALL NOT BE SCARRED, BROKEN OR ROUGHENED SIGNIFICANTLY.

PAYMENT
BASIS OF PAYMENT SHALL BE AT THE CONTRACT UNIT PRICE PER EACH TRPM AND SHALL INCLUDE ALL LABOR, EQUIPMENT, HARDWARE AND INCIDENTIALS REQUIRED TO PERFORM THE WORK. IT SHALL ALSO INCLUDE REPLACEMENT AT NO ADDITIONAL COST OF ALL TRPM'S WHICH, IN THE JUDGEMENT OF THE ENGINEER, FAIL FOR ANY REASON, EXCEPT DUE TO FAILURE OF THE PAVEMENT TO WHICH THEY ARE *ATTACHED.*

ITEM	UNIT	DESCRIPTION
614	EACH	TEMPORARY RAISED PAVEMENT MARKERS

STATIONING (FROM–TO) (SIDE)	SPACING	TYPE A W	TYPE A Y	TYPE A Y/Y	TYPE A W/Y	TYPE B or A W	TYPE B or A Y	TYPE B or A Y/Y	TYPE B or A W/Y	REMARKS (LINE TYPE)
NORTHBOUND S.R. 315										
97+80 TO 101+70, LT. & RT.	10' C/C	80								EDGE LINE
SOUTHBOUND S.R. 315										
98+70 TO 102+70, LT. & RT.	10' C/C	82								EDGE LINE
EASTBOUND I–670										
96+30 TO 101+30, LT.	10' C/C	51								EDGE LINE
107+00 TO 110+95, RT.	10' C/C	40								EDGE LINE
TOTAL CARRIED TO GENERAL SUMMARY		253								
		253								

CALCULATED MDW CHECKED JSS

614 – TEMPORARY RAISED PAVEMENT MARKERS

FRA–GOODALE–STREET

5A / 73

MAINTENANCE OF TRAFFIC ESTIMATED QUANTITIES

STATION LIMITS	Temporary Center Line, Class I, 642 Paint	Temporary Edge Line, Class I, 642 Paint	Temporary Channelizing Line, Class I, 642 Paint	Temporary Stop Line, Class I, 642 Paint	Temporary Lane Arrow, Class I, 642 Paint	Temporary Word on Pavement, 72", Class I, 642 Paint		Temporary Transverse Line Class 1, 642 Paint		Temporary Pavement Class B		Portable Concrete Barrier, 32"	Portable Concrete Barrier, 32", Bridge Mounted	Barrier Reflector Type B	Object Marker	Covering of Vehicular Signal Head	Loop Detector Pavement Cutting	Loop Detector Wire, Type E	Loop Detector Tie In
	614	614	614	614	614	614		614		615		622	622	614	614	632	632	632	632
	L.F.	L.F.	L.F.	L.F.	Each	Each		L.F.		S.Y.		L.F.	L.F.	Each	Each	Each	L.F.	L.F.	Each
GOODALE STREET																			
Phase 1																			
88+40 to 97+50			36	46	2	2										1			
97+50 to 105+50	755	108	65	43								100	640	37	35				
105+50 to 115+20	1110	970	105		2	1													
106+20 to 110+15								450											
Phase 2																			
88+40 to 97+50			200		2	2										1	75	129	2
97+50 to 105+80	760	66	42	48	1	1						240	1280	73	71	1			
105+25 to 105+80										30									
105+50 to 115+20	1305	190	86					320											
Phase 3																			
97+50 to 105+50		100										700		35	33				
105+50 to 111+70		620																	
S.R. 315 NB																			
99+80 to 100+90												220		12	12				
S.R. 315 SB																			
99+50 to 101+70												340		19	17				
I-670																			
98+30 to 100+50												220		12	11				
109+10 to 110+40												130		7	7				
Totals to General Summary	3930	2054	534	137	7	6		770		30		1950	1920	195	186	3	75	129	2
Miles	0.74	0.39																	

MAINTENANCE OF TRAFFIC SIGN SUMMARY **

STATION LIMITS	Sign, Flat Sheet	Ground Mounted Support		Covering of Signs	Installed in Phase:			Removed at end of Phase:			Removal of Overhead mounted Sign and Storage
	630	630		630							630
		#3 Post	#4 Post		1	2	3	1	2	3	
	S.F.	L.F.	L.F.	S.F.							Each
I-670											
97+05± L/R	32.00		64.0		X					X	
108+55±	16.00				X					X	
103+40&110+65±				32.00	X					X	
98+30 to 99+50 Lt.	48.00		96.0		X					X	
S.R. 315 SB											
SLM 2.76± L/R	32.00		64.0		X					X	
SLM 2.76± L/R	10.00				X					X	
SLM 2.53± L/R	32.00		64.0		X					X	
SLM 2.53± L/R	10.00				X					X	
110+50± L/R	32.00		64.0		X					X	
110+50± L/R	10.00				X					X	
104+50± L/R	32.00		64.0		X					X	
104+50± L/R	10.00				X					X	
Subtotals	264.00		416.00	32.00							

MAINTENANCE OF TRAFFIC SIGN SUMMARY **

STATION LIMITS	Sign, Flat Sheet	Ground Mounted Support		Covering of Signs	Installed in Phase:			Removed at end of Phase:			Removal of Overhead mounted Sign and Storage
	630	630		630							630
		#3 Post	#4 Post		1	2	3	1	2	3	
	S.F.	L.F.	L.F.	S.F.							Each
GOODALE STREET											
88+40 Rt.	16.00		32.0		X					X	
88+40 Rt.	5.00				X					X	
92+10 Rt.	16.00		32.0		X					X	
92+10 Rt.	5.00				X					X	
93+45 Rt.	7.50	12.0			X			X			
93+45 Rt.	6.25					X			X		
95+05 Rt.	7.50	12.0			X			X			
95+05 Rt.	6.25					X			X		
96+83 Rt.	7.50	12.0			X						
97+82 Rt.	4.00				X						
97+00 Lt.	8.00	29.0			X					X	
96+73 Lt.	4.00										2
98+50 Lt.	6.25				X					X	
98+95 Lt.	9.00				X			X			
105+50 Lt.	9.00				X			X			
110+75 Lt.	6.25				X			X			
97+06 Rt.	4.00					X			X		
97+80 Rt.	4.00					X			X		
98+05 Rt.	9.00					X			X		
105+50 Rt.	9.00					X			X		
110+75 Lt.	6.25					X			X		
98+75 Lt.	6.25	12.0				X			X		
98+65 Rt.	6.25	12.0			X						
98+70 Lt.	7.50					X				X	
112+40 Lt.	7.50	12.0			X				X		
115+15 Lt.	16.00		32.0*		X		X	X		X	
116+80 Lt.	16.00		32.0		X					X	
119+20 Lt.	16.00		32.0		X					X	
119+20 Lt.	5.00				X					X	
115+15 Lt.	16.00					X			X		
97+06 Rt.	4.00					X			X		
96+90 Rt.	8.00	29.0				X			X		
98+50 Rt.	9.00					X			X		
108+25 Lt.	8.00				X					X	
110+05 Rt.	8.00	29.0				X			X		
105+50 Rt.	4.00					X			X		
105+50 Rt.	4.00					X			X		
98+95 Lt.	4.00				X			X			
98+95 Lt.	4.00				X			X			
105+50 Lt.	4.00				X			X			
105+50 Lt.	4.00				X			X			
106+80 Lt.	9.00				X			X			
107+95 Lt.	9.00				X		X	X		X	
108+00 Lt.	16.00				X			X			
108+05 Lt.	8.00				X			X			
109+00 Lt.	16.00				X			X			
110+80 Lt.	16.00				X			X			
110+80 Lt.	5.00				X			X			
98+05 Rt.	4.00					X			X		
98+05 Rt.	4.00					X			X		
S.R. 315 NB											
SLM 2.21± L/R	32.00		64.0		X					X	
SLM 2.21± L/R	10.00				X					X	
87+00 L/R	32.00		64.0		X					X	
87+00 L/R	10.00				X					X	
95+50 L/R	32.00		64.0		X					X	
95+50 L/R	10.00										
Add Post Office Detour (Sht. 15)	625.00	377.0	160.0								
Add. I-670, S.R. 315	264.00		416.0	32.00							
Totals	1415.25	536.0	928.0	32.00							2

* Post Remains through end of Phase 3

** For information Only. Payment for the erection, maintenance and removal of these items is included in the lump sum price bid for Item 614, Maintaining Traffic.

CALCULATED JSS
CHECKED MDW

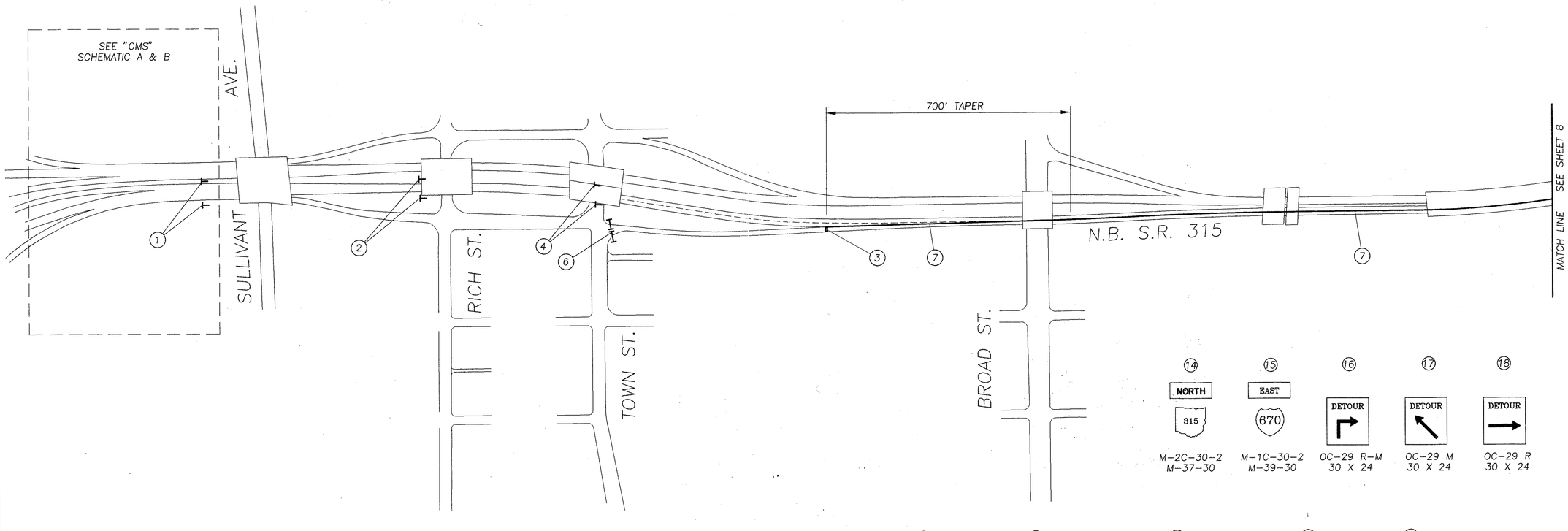
MAINTENANCE OF TRAFFIC SUB-SUMMARIES

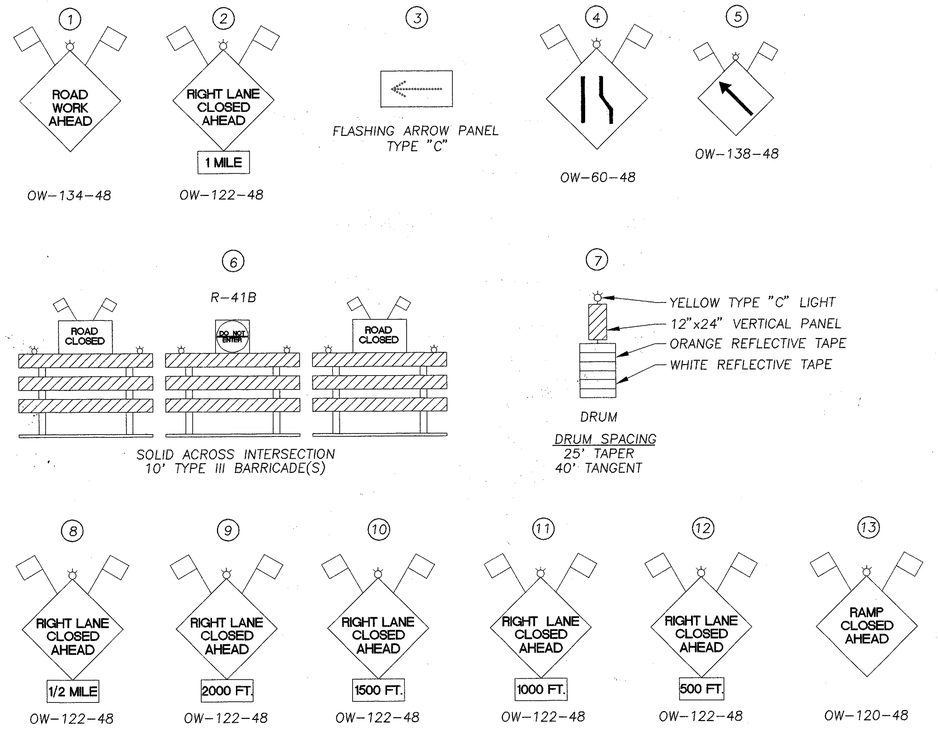
FRA-GOODALE STREET

KORDA / NEMETH ENGINEERING, INC.

0300-ST

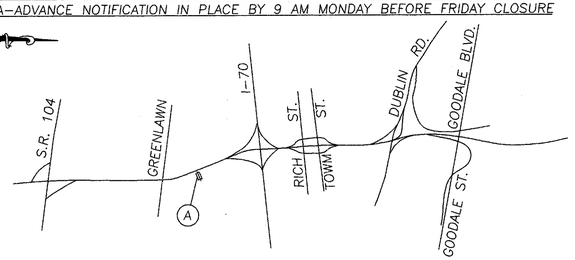
M. STINEMAN G:\CIVILDWG\92024\92024MTRLDWG DATE: OCT 31, 1994 TIME: 10:53 AM



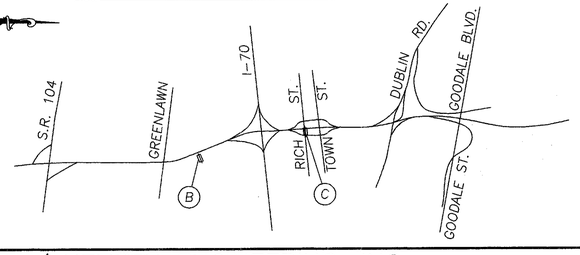


"CMS" SCHEMATIC

A–ADVANCE NOTIFICATION IN PLACE BY 9 AM MONDAY BEFORE FRIDAY CLOSURE



B – LANE CLOSURE NOTIFICATION DURING CONSTRUCTION



MESSAGE SEQUENCING

A	B	C
315 NORTH 670 EAST CLOSED	315 NORTH 670 EAST CLOSED	315 NORTH 670 EAST CLOSED
AT DUBLIN RD. EXIT	AT DUBLIN RD. EXIT	AT DUBLIN RD. EXIT
USE I-71 NORTH	USE I-71 NORTH	FOLLOW DETOUR
FRIDAY 8PM THRU MONDAY 5AM	FAST BLANK	FAST BLANK
FAST BLANK		

NOT TO SCALE

NORTHBOUND S.R. 315

FRA-GOODALE STREET

7/73

NOTE: SEE SHEET 7 FOR SIGN DETAILS

✳ L.E.O. REQUIRED 9:00 AM TO 6:00 PM, INCLUDED WITH LUMP SUM BID FOR ITEM 614 MAINTAINING TRAFFIC

N

NOT TO SCALE

NORTHBOUND S.R. 315 LANE CLOSURE DETAIL
NORTHBOUND S.R. 315 CLOSURE DETOUR

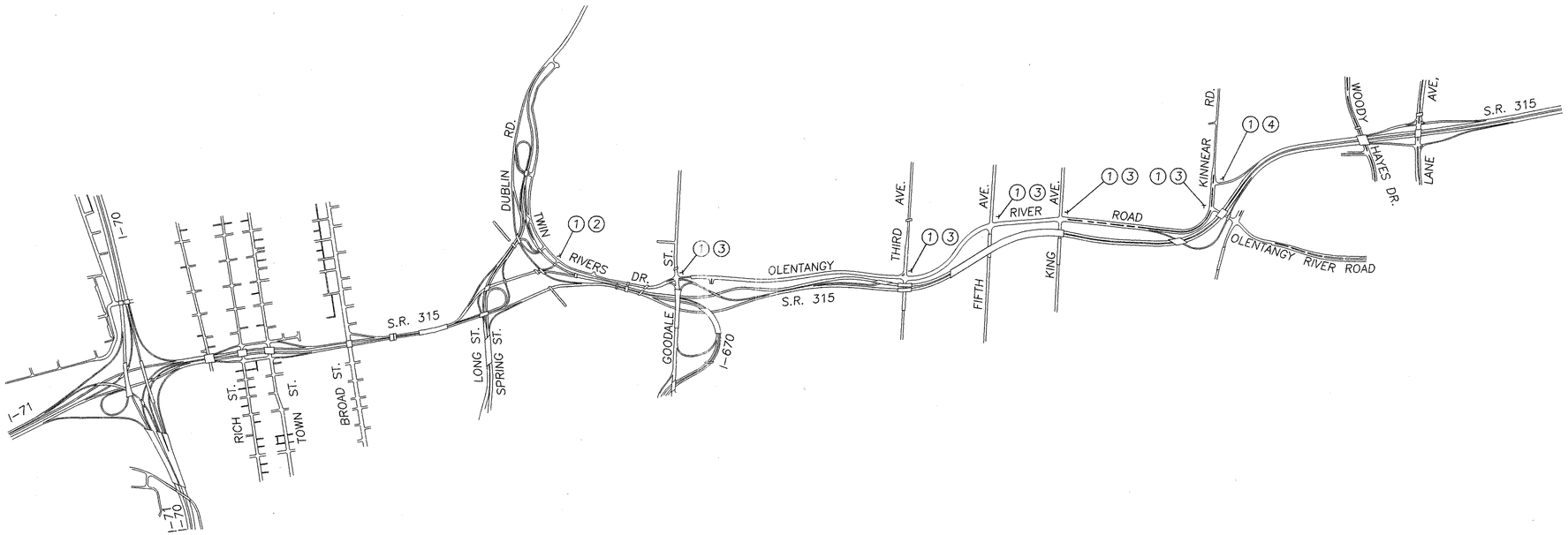
FRA-GOODALE STREET

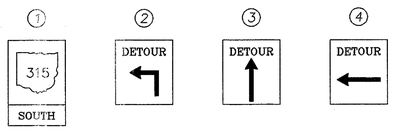
8
73

KORDA / NEMETH ENGINEERING, INC.

0300-ST

M. STINEMAN, KORDA/NEMETH ENG. G:\CHILDWG\92024\92024MU13.DWG DATE: JUN 21, 1994 TIME: 11:13 AM





SIGN CODE	M-2C-30-2 M-38-30	OC-29 L-M 30 X 24	OC-29 30 X 24	OC-29 L 30 X 24
QUANTITY	7	1	5	1

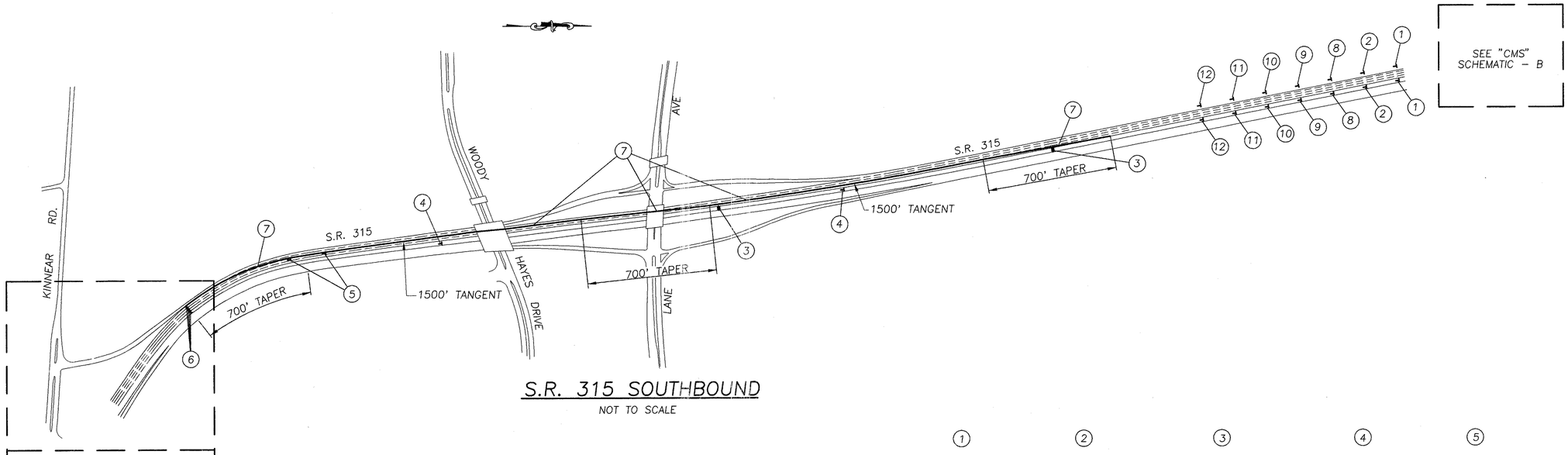
N

NOT TO SCALE

SOUTHBOUND S.R. 315 CLOSURE DETOUR

FRA-GOODALE STREET

9/73

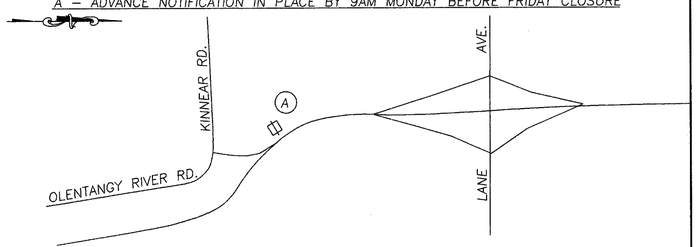


S.R. 315 SOUTHBOUND

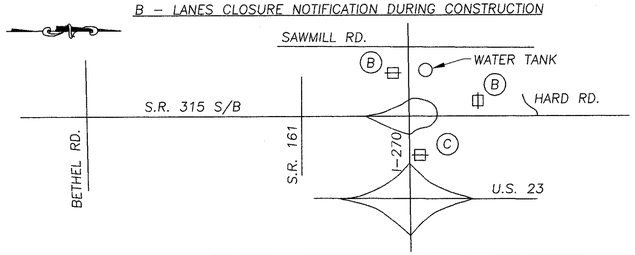
NOT TO SCALE

"CMS" SCHEMATIC

A – ADVANCE NOTIFICATION IN PLACE BY 9AM MONDAY BEFORE FRIDAY CLOSURE

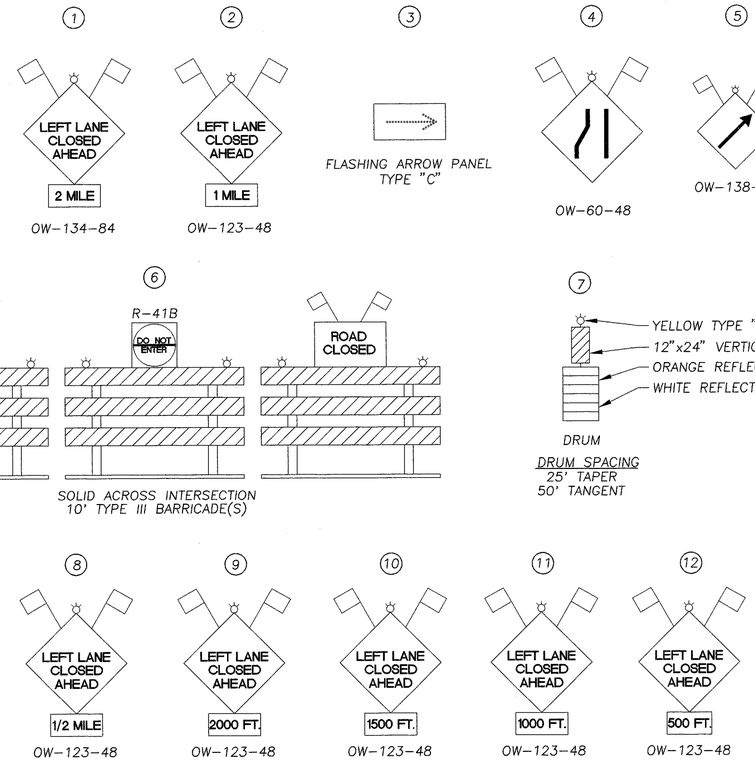


B – LANES CLOSURE NOTIFICATION DURING CONSTRUCTION



MESSAGE SEQUENCING

A	B	C
SOUTH 315 CLOSED	SOUTH 315 CLOSED	SOUTH 315 CLOSED
KINNEAR TO U.S. 33	KINNEAR TO U.S. 33	KINNEAR TO U.S. 33
FRIDAY 8PM THRU MONDAY 5AM	USE I-270 E. I-71 S.	USE I-270 S. I-70 E.
FAST BLANK	FAST BLANK	FAST BLANK

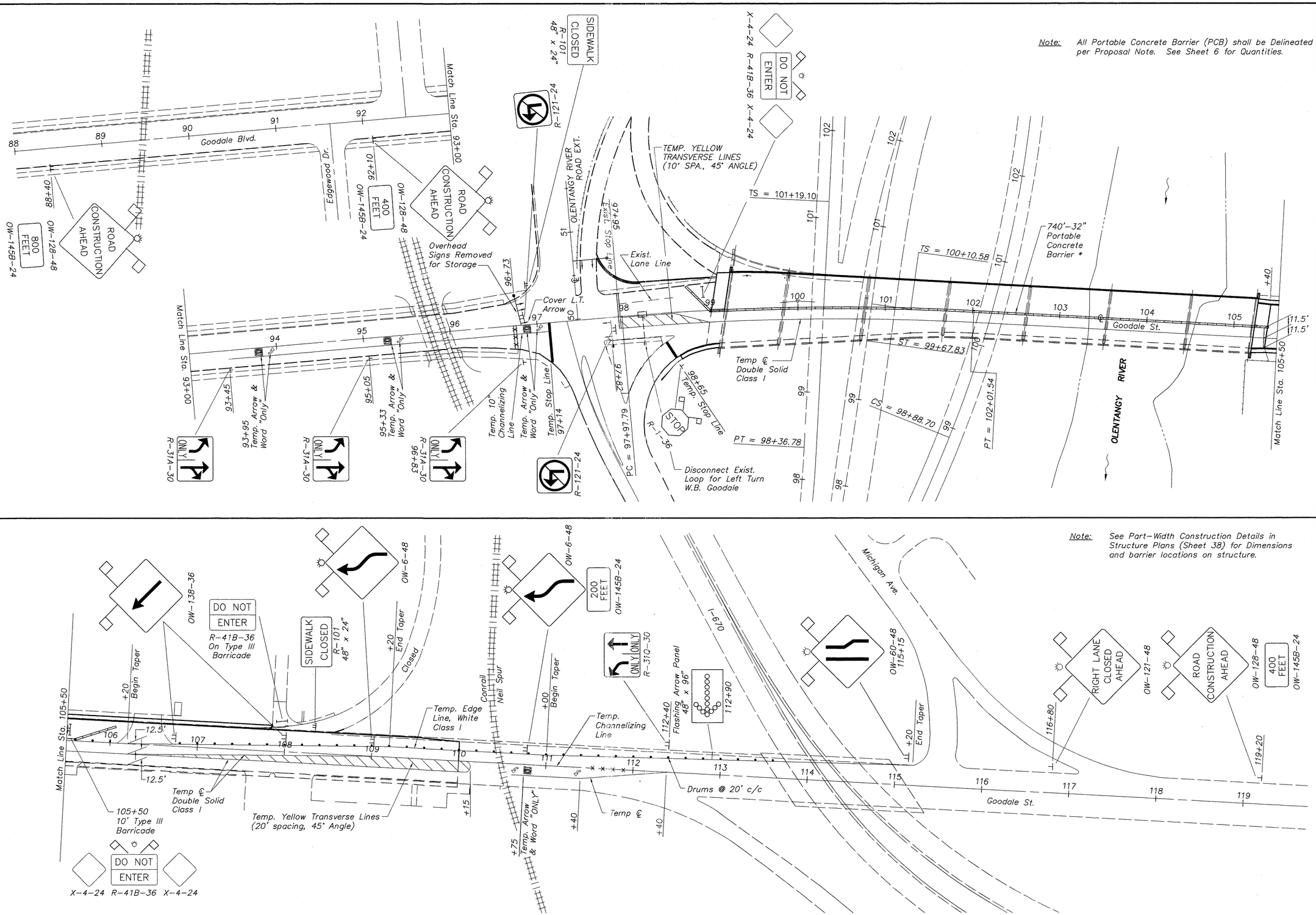


NOT TO SCALE

SOUTHBOUND S.R. 315 LANE CLOSURE DETAIL

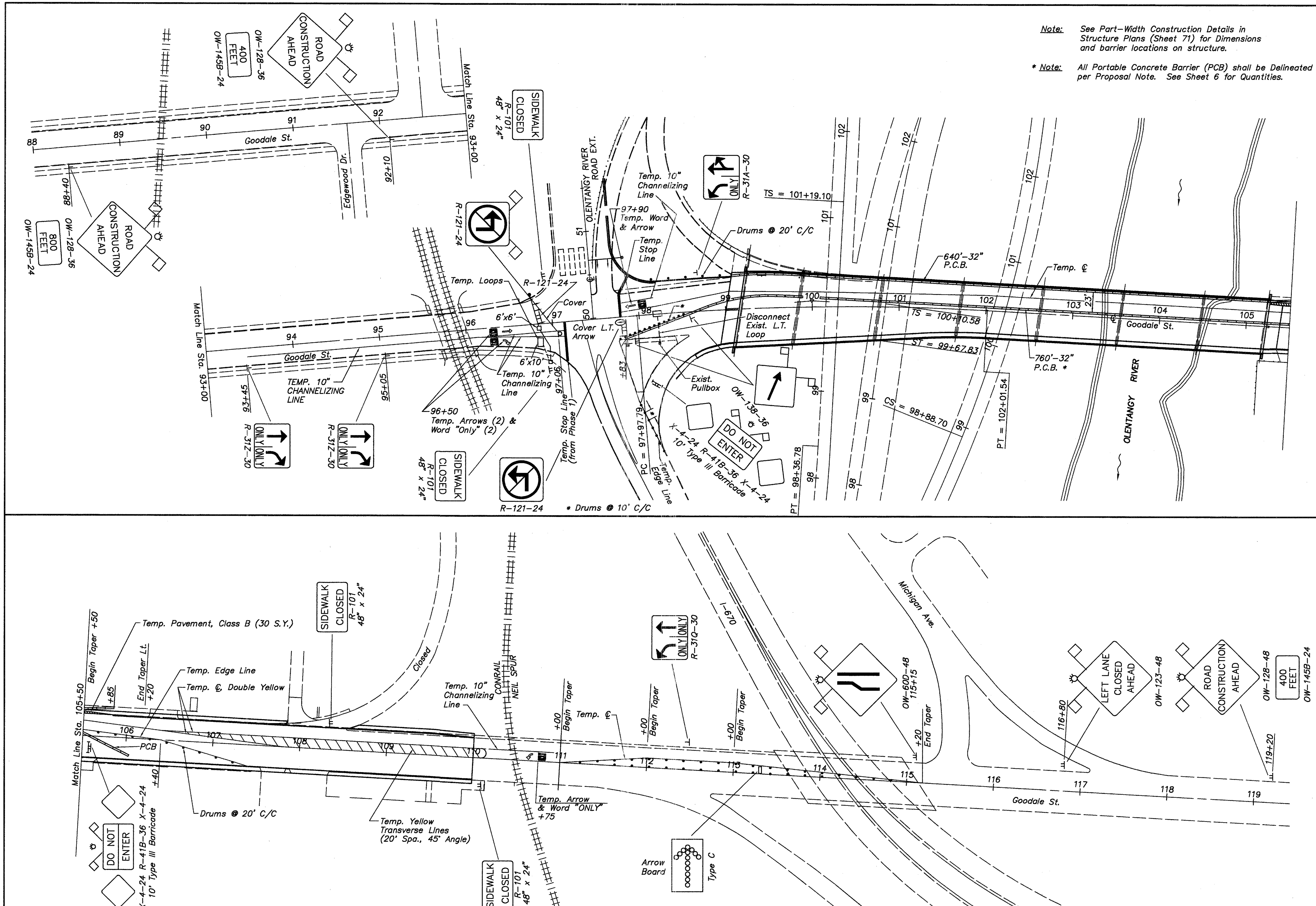
FRA-GOODALE STREET

10/73



Note: See Part-Width Construction Details in Structure Plans (Sheet 71) for Dimensions and barrier locations on structure.

* *Note:* All Portable Concrete Barrier (PCB) shall be Delineated per Proposal Note. See Sheet 6 for Quantities.



ROAD CONSTRUCTION AHEAD
400 FEET
OW-128-36
OW-145B-24
800 FEET
Goodale St.
Edgewood Dr.
Match Line Sta. 93+00
SIDEWALK CLOSED
R-101
48" x 24"
R-121-24
OLENTANGY RIVER ROAD EXT.
Temp. 10" Channelizing Line
97+90 Temp. Word & Arrow
Temp. Stop Line
Drums @ 20' C/C
R-31A-30
TS = 101+19.10
640'-32" P.C.B.
Temp. ℄
Temp. Loops
Cover
Cover L.T. Arrow
Disconnect Exist. L.T. Loop
TS = 100+10.58
ST = 99+67.83
760'-32" P.C.B. *
OLENTANGY RIVER
TEMP. 10" CHANNELIZING LINE
R-31Z-30
96+50 Temp. Arrows (2) & Word "Only" (2)
Temp. Stop Line (from Phase 1)
Exist. Pullbox
OW-138-36
DO NOT ENTER
X-4-24 R-41B-36 X-4-24
10' Type III Barricade
Temp. Edge Line
PC = 97+97.79
PT = 98+36.78
CS = 98+88.70
PT = 102+01.54
* Drums @ 10' C/C
Temp. Pavement, Class B (30 S.Y.)
Begin Taper +50
End Taper Lt. +20
Temp. Edge Line
Temp. ℄, Double Yellow
Match Line Sta. 105+50
PCB
Drums @ 20' C/C
Temp. Yellow Transverse Lines (20' Spa., 45° Angle)
Closed
CONRAIL NEIL SPUR
Temp. Arrow & Word "ONLY" +75
Begin Taper
R-31Q-30
I-670
Arrow Board
Type C
OW-60D-48 115+15
End Taper
Michigan Ave.
LEFT LANE CLOSED AHEAD
OW-123-48
116+80
119+20

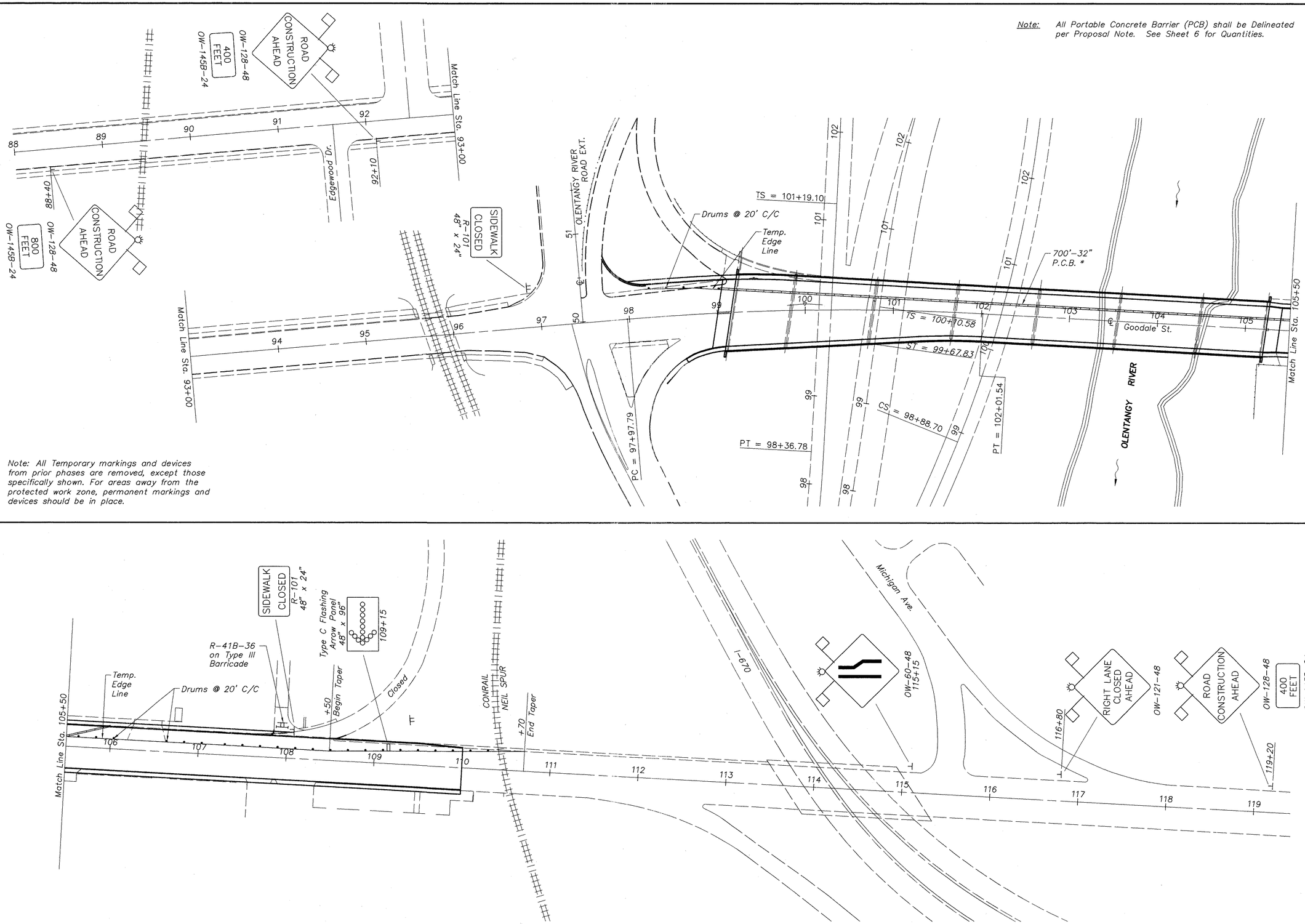
MAINTENANCE OF TRAFFIC
PHASE II

SCALE IN FEET: 0, 25, 50, 100

CALCULATED JSS
CHECKED MDW

FRA-GOODALE STREET

12/73



Note: All Temporary markings and devices from prior phases are removed, except those specifically shown. For areas away from the protected work zone, permanent markings and devices should be in place.

N

SCALE IN FEET
0 25 50 100

CALCULATED JSS
CHECKED MDW

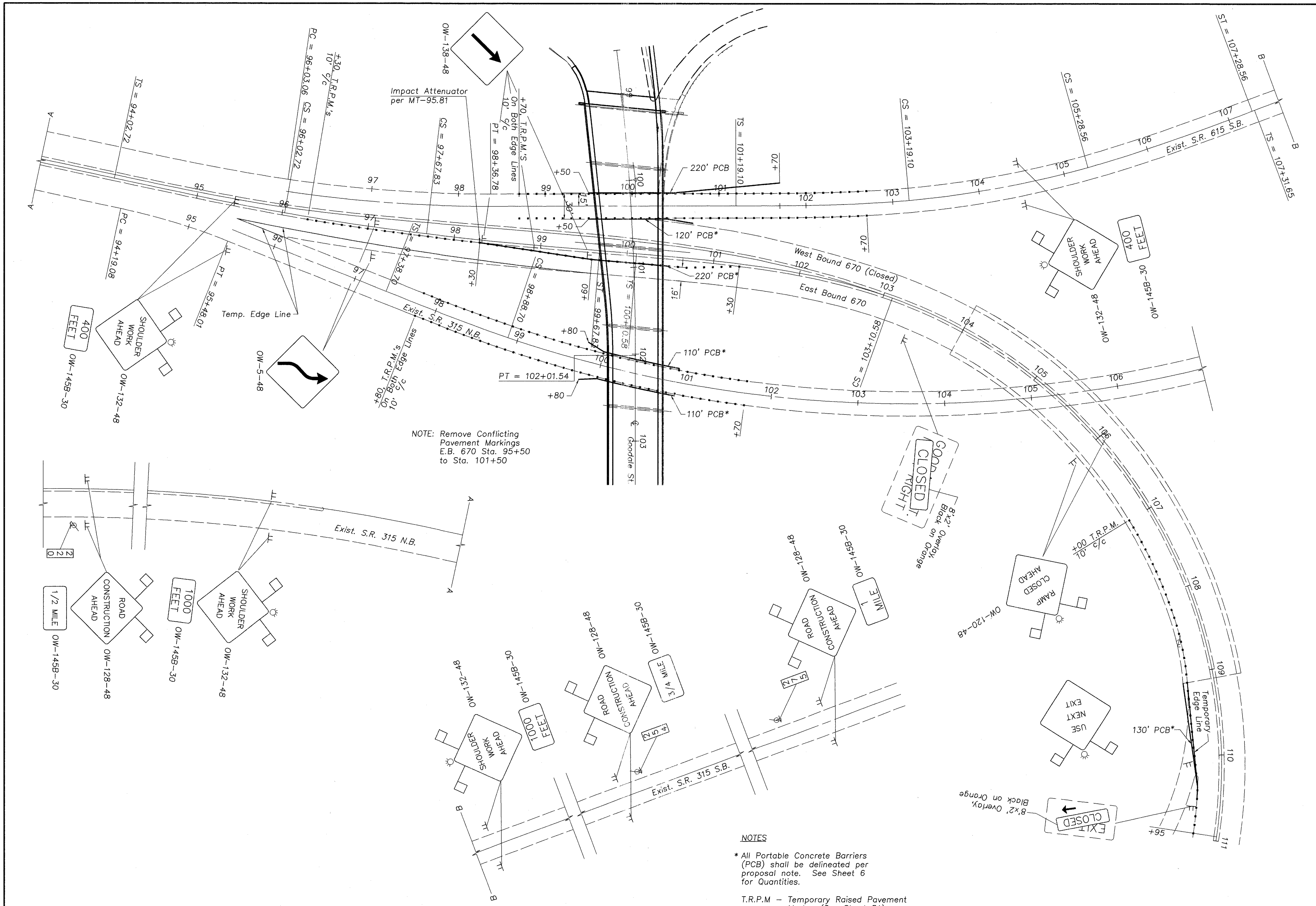
MAINTENANCE OF TRAFFIC PHASE III

FRA-GOODALE STREET

13
73

KORDA / NEMETH ENGINEERING, INC.

0300-ST



Impact Attenuator per MT-95.81
OW-138-48
OW-5-48
Temp. Edge Line
SHOULDER WORK AHEAD
400 FEET
OW-132-48
OW-145B-30
PC = 96+03.06
CS = 96+02.72
TS = 94+02.72
PC = 94+19.08
PT = 95+48.01
CS = 97+67.83
PT = 98+36.78
CS = 98+88.70
TS = 97+28.70
ST = 99+67.87
TS = 100+10.58
PT = 102+01.54
TS = 101+19.10
CS = 103+19.10
CS = 103+10.58
CS = 105+28.56
ST = 107+28.56
TS = 107+31.65
+30 T.R.P.M.'s 10' c/c
+70 T.R.P.M.'S. On Both Edge Lines 10' c/c
+80 T.R.P.M.'s On Both Edge Lines 10' c/c
220' PCB
120' PCB*
220' PCB*
110' PCB*
110' PCB*
130' PCB*
West Bound 670 (Closed)
East Bound 670
Exist. S.R. 315 N.B.
Exist. S.R. 315 S.B.
Exist. S.R. 615 S.B.
Goodale St.
NOTE: Remove Conflicting Pavement Markings E.B. 670 Sta. 95+50 to Sta. 101+50
GOODALE CLOSED RIGHT
8'x2' Overlay, Black on Orange
ROAD CONSTRUCTION AHEAD
OW-128-48
1 MILE
3/4 MILE
1/2 MILE
1000 FEET
RAMP CLOSED AHEAD
OW-120-48
USE NEXT EXIT
EXIT CLOSED
+00 T.R.P.M. 10' c/c
Temporary Edge Line
NOTES
* All Portable Concrete Barriers (PCB) shall be delineated per proposal note. See Sheet 6 for Quantities.
T.R.P.M – Temporary Raised Pavement Marker (See Sheet 5A)

N

SCALE IN FEET 0 25 50 100

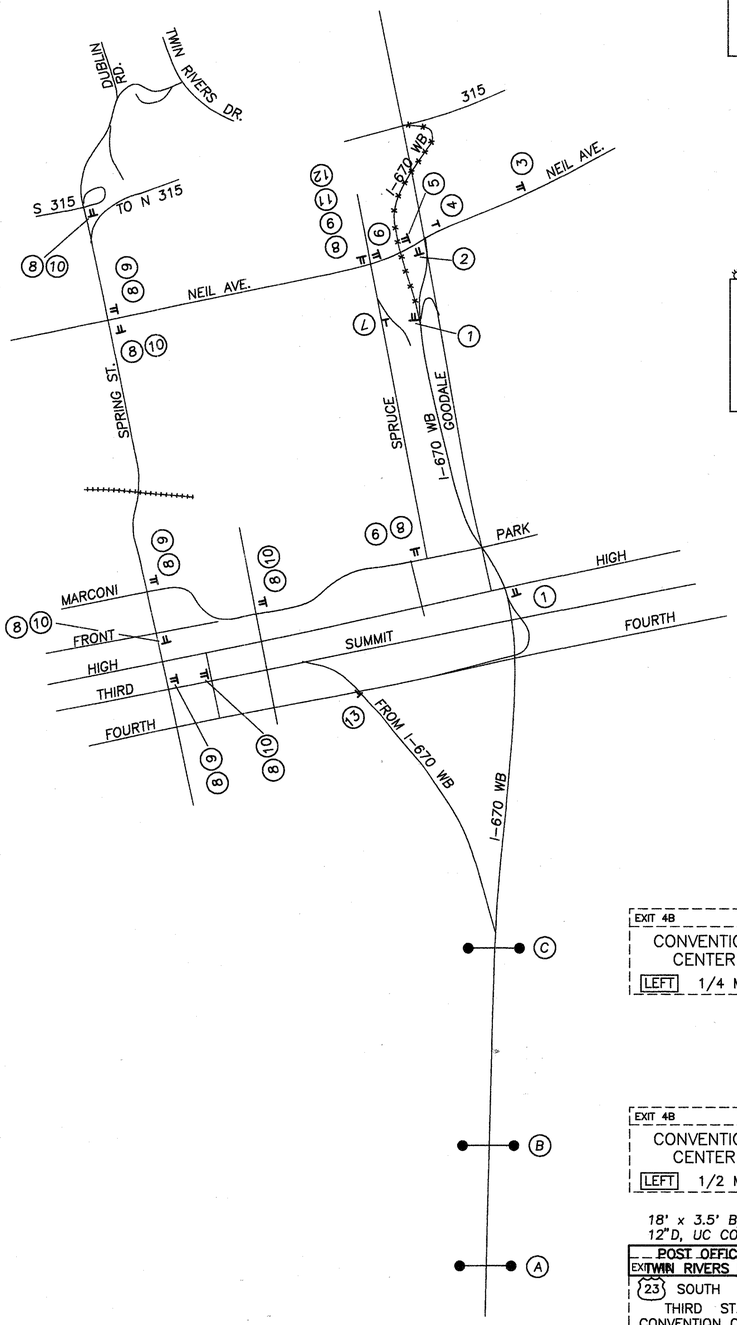
CALCULATED JSS
CHECKED MDW

MAINTENANCE OF TRAFFIC S.R. 315

FRA-GOODALE STREET

0300-ST

M. STINEMAN, KORDA/NEMETH ENG. DATE: JUN 21, 1994 TIME: 3:03 PM



① POST OFFICE TWIN RIVERS DR. KEEP LEFT — 96" x 48" BLK/ORG

② POST OFFICE TWIN RIVERS DR. / DETOUR ← — 60" x 24" BLK/ORG — OC-29

③ POST OFFICE TWIN RIVERS DR. / DETOUR ↑ — 60" x 24" BLK/ORG — OC-29

④ POST OFFICE TWIN RIVERS DR. / DETOUR ↑ — 48" x 24" BLK/ORG — OC-29

⑤ POST OFFICE TWIN RIVERS DR. / DETOUR / TRUCKS ↰ / AUTO ↑ — 60" x 60" BLK\ORG

⑥ POST OFFICE TWIN RIVERS DR. / DETOUR / TRUCKS ← / AUTO ↑ — 60" x 60" BLK\ORG

⑦ POST OFFICE TWIN RIVERS DR. / DETOUR ↗ — 48" X 24" BL/ORG — 30 " x 36" BLK/ORG

⑧ POST OFFICE TWIN RIVERS DR. — 48" X 24" BL/ORG

⑨ DETOUR → — OC-29 R

⑩ DETOUR ↑ — OC-29

⑪ GOODALE BLVD. W — 48" x 12" BLK/ORG

⑫ DETOUR ← — OC-29 L

⑬ POST OFFICE TWIN RIVERS DR. / DETOUR / KEEP RIGHT — 14' x 6.5' B/O 12"D UC BAND TO BRIDGE PIER

Ⓒ 17' x 3.5' B/O 12"D, UC COPY
EXIT 4B CONVENTION CENTER LEFT 1/4 MILE
POST OFFICE / EXIT TWIN RIVERS DR. / 23 SOUTH THIRD ST. / EXIT ONLY
670 WEST
EXIT 4A 23 NORTH FOURTH ST. EXIT ONLY

Ⓑ 18' x 3.5' B/O 12"D, UC COPY
EXIT 4B CONVENTION CENTER LEFT 1/2 MILE
POST OFFICE / EXIT TWIN RIVERS DR. / 23 SOUTH THIRD ST. / EXIT ONLY
670 WEST
EXIT 4A 23 NORTH FOURTH ST. EXIT ONLY

Ⓐ 18' x 3.5' B/O 12"D, UC COPY
POST OFFICE / EXIT TWIN RIVERS DR. / 23 SOUTH THIRD ST. CONVENTION CNTR / LEFT 3/4 MILE
670 WEST / 23 NORTH FOURTH STREET 3/4 MILE

SIGN SUMMARY (CARRIED TO SHEET 6)

	SIGN S.F.	POSTS #3	POSTS #4
A	63.00		
B	63.00		
C	59.50		
1	32.00		32.00
1	32.00		32.00
2	17.50	29.0	
3	17.50	29.0	
4	15.50	29.0	
5	25.00		32.00
6	25.00		32.00
8 9 11 12	27.00		32.00
7	17.50	29.0	
8 9	15.50	29.0	
8 10	15.50	29.0	
13	91.00		
8 10	15.50	29.0	
8 9	15.50	29.0	
8 10	15.50	29.0	
8 9	15.50	29.0	
8 10	15.50	29.0	
8 9	15.50	29.0	
8 10	15.50	29.0	
TOTAL	625.00	377.0	160.0

N

NOT TO SCALE

CALCULATED MDW | CHECKED JSS

POST OFFICE DETOUR

FRA-GOODALE STREET

15/73

M. STINEMAN G:\CIVILDWG\92024\92024MH4.DWG DATE: OCT 18, 1994 TIME: 2:47 PM

KORDA / NEMETH ENGINEERING, INC.

0300-ST

GENERAL SUMMARY

	SHEET NO. 4	5	5A	10		18	19	20	21	22	29			36			ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION
																					ROADWAY
																	201	11000	LUMP		CLEARING AND GRUBBING
								165	85								202	22900	250	SQ YD	APPROACH SLAB REMOVED
							55	33									202	23000	88	SQ YD	PAVEMENT REMOVED
						531											202	23500	531	SQ YD	WEARING COURSE REMOVED
							1143	190	2422	984							202	30000	4739	SQ FT	WALK REMOVED
											93						202	30600	93	SQ YD	CONCRETE MEDIAN REMOVED
							17										202	30800	17	SQ YD	TRAFFIC ISLAND REMOVED
							431	67	543	200							202	32001	1241	LIN FT	CURB REMOVED, AS PER PLAN (SEE SHEET 4)
								175									202	38000	175	LIN FT	GUARDRAIL REMOVED
							1		2		1						202	58200	4	EACH	INLET REMOVED
							2										202	58400	2	EACH	INLET ABANDONED
								1		5							202	75300	6	EACH	PULL BOX REMOVED
						209											203	12000	209	CU YD	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION
						71											203	20000	71	CU YD	EMBANKMENT
						570											203	50000	570	SQ YD	SUBGRADE COMPACTION
								50									606	13000	50	LIN FT	GUARDRAIL, TYPE 5
								1									606	25000	1	EACH	ANCHOR ASSEMBLY, TYPE A
								1									606	35000	1	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 1
						4822											608	10000	4822	SQ FT	4" CONCRETE WALK
						4											608	50000	4	EACH	CURB RAMP, TYPE 1
						2											608	51000	2	EACH	CURB RAMP, TYPE 2
						220											608	53000	220	SQ FT	CURB RAMP, TYPE 1
						1											608	50001	1	EACH	CURB RAMP, TYPE I, AS PER PLAN (SEE SHEET 18)
																					EROSION CONTROL
	200																207	30000	200	LIN FT	FILTER FABRIC FENCE (SEE PROPOSAL NOTE)
	50																207	70000	50	EACH	STRAW OR HAY BALES
							2										601	32200	2	CU YD	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER
	1816																659	10000	1816	SQ YD	SEEDING AND MULCHING
	0.16																659	20000	0.16	TON	COMMERCIAL FERTILIZER
	0.82																659	30000	0.82	TON	AGRICULTURAL LIMING
	4																659	35000	4	MGAL	WATER
																					DRAINAGE
							0.25										602	20000	0.25	CU YD	CONCRETE MASONRY
							40		30	20							603	00406	90	LIN FT	4" CONDUIT, TYPE F
	100																603	01500	100	LIN FT	6" CONDUIT, TYPE F
							115		8								603	04400	123	LIN FT	12" CONDUIT, TYPE B, 706.02
							169										603	05900	169	LIN FT	15" CONDUIT, TYPE B, 706.02
							23										603	06100	23	LIN FT	15" CONDUIT, TYPE C, 706.02
									2								604	00400	2	EACH	CATCH BASIN, NO. 3
							1										604	17500	1	EACH	INLET, NO. 2-A-6
							3										604	18300	3	EACH	INLET, NO. 2-A-10
							1			1							604	20600	2	EACH	INLET ADJUSTED TO GRADE
							144		296	367							605	05200	807	LIN FT	4" UNCLASSIFIED PIPE UNDERDRAIN
							1		3								604	34500	4	EACH	MANHOLE ADJUSTED TO GRADE
																					PAVEMENT
						26								78			253	01001	104	SQ YD	PAVEMENT REPAIR, AS PER PLAN (SEE SHEETS 4 & 28)
						2796											254	01000	2796	SQ YD	PAVEMENT PLANING, BITUMINOUS
						99											301	10002	99	CU YD	BITUMINOUS AGGREGATE BASE, AC-20
						59											304	20000	59	CU YD	AGGREGATE BASE (SEE PROPOSAL NOTE)
						209											402	20000	209	CU YD	ASPHALT CONCRETE, AC-20
						207											404	20000	207	CU YD	ASPHALT CONCRETE, AC-20
						381											407	10000	381	GAL	TACK COAT
						135											408	10000	135	GAL	BITUMINOUS PRIME COAT
						54											452	12000	54	SQ YD	8" PLAIN CONCRETE PAVEMENT (SEE SHT. 23)
						43											609	12001	43	LIN FT	COMBINATION CURB AND GUTTER, TYPE 2, AS PER PLAN
						977											609	26000	977	LIN FT	CURB, TYPE 6
						216											611	10001	216	SQ YD	REINFORCED CONCRETE APPROACH SLAB (T=12"), A.P.P.(SEE SHT. 4)
						16											612	18000	16	SQ YD	9" CONCRETE TRAFFIC ISLAND
																					WATER WORK
									5	3							SPECIAL	63865402	8	EACH	HEAVY DUTY VALVE BOX ADJUSTED TO GRADE (COL. 807)
									1								SPECIAL	63865500	1	EACH	SERVICE BOX ADJUSTED TO GRADE (COL. 807)
									1								SPECIAL	63867000	1	EACH	6" HYDRANT EXTENSION (COL. 810)

CALCULATED DLS
CHECKED MDW

GENERAL SUMMARY

FRA-GOODALE STREET

KORDA/NEMETH ENGINEERING

0300-ST

GENERAL SUMMARY

SHEET NO.																ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION
	4	5	5A	6		18	19	20	21	22			36							
																				LIGHTING
																				SEE SHEET 38 FOR QUANTITIES
																				TRAFFIC SURVEILLANCE
													608			625	25502	608	LIN FT	CONDUIT, 3", 713.07
													813			625	25503	813	LIN FT	CONDUIT, 3", 713.07, AS PER PLAN (SEE SHEET 36A)
													813			625	29001	813	LIN FT	TRENCH, AS PER PLAN (SEE SHEET 36A)
													7			625	31600	7	EACH	*PULL BOX, 713.08, 48", AS PER PLAN (SEE SHEET 36A) *PULL BOX MISC?
													6			632	27200	6	EACH	LOOP DETECTOR TIE IN
													451			632	27500	451	LIN FT	LOOP DETECTOR PAVEMENT CUTTING
													910			632	64900	910	LIN FT	LOOP DETECTOR WIRE, TYPE E
																				TRAFFIC CONTROL
													223			630	03100	223	LIN FT	GROUND MOUNTED SUPPORT NO. 3 POST
													1			630	79500	1	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED
													1			630	79600	1	EACH	SIGN SUPPORT ASSEMBLY, BRIDGE MOUNTED
													65			630	80100	65	SQ FT	SIGN, FLAT SHEET
													2			630	84900	2	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL
													4			630	85100	4	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION
													8			630	86002	8	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL
													8			630	87520	8	EACH	REMOVAL OF POLE MOUNTED SIGN AND REERECTION
													0.47			642	00202	0.47	MILE	LANE LINE, TYPE 2
													0.30			642	00302	0.30	MILE	CENTER LINE, TYPE 2
													390			642	00402	390	LIN FT	CHANNELIZING LINE, TYPE 2
													169			642	00502	169	LIN FT	STOP LINE, TYPE 2
													100			642	00602	100	LIN FT	CROSSWALK LINE, TYPE 2
													420			642	00702	420	LIN FT	TRANSVERSE LINE, TYPE 2
													24			642	00902	24	SQ FT	ISLAND MARKING, TYPE 2
													2			642	01002	2	EACH	RAILROAD SYMBOL MARKING, TYPE 2
													4			642	01302	4	EACH	LANE ARROW, TYPE 2
													4			642	01402	4	EACH	WORD ON PAVEMENT, 72", TYPE 2
																				UTILITIES (MELP)
																				SEE SHEET 47 FOR QUANTITIES
																				CAST-IN-PLACE STRUCTURE
																				SEE SHEET 51 FOR QUANTITIES FOR BRIDGE NO. FRA-315-0194
		20																		MAINTENANCE OF TRAFFIC
		24														404	35000	20	CY YD	BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC
			253													614	11100	24	HR	LAW ENFORCEMENT OFFICER WITH PATROL CAR
				195												614	12800	253	EACH	TEMPORARY RAISED PAVEMENT MARKER
				186												614	13300	195	EACH	BARRIER REFLECTOR, TYPE B
				0.74												614	13350	186	EACH	OBJECT MARKER (SEE PROPOSAL NOTE)
																614	21100	0.74	MILE	TEMPORARY CENTER LINE, CLASS I, 642 PAINT
				0.39												614	22100	0.39	MILE	TEMPORARY EDGE LINE, CLASS I, 642 PAINT
				534												614	23200	534	LIN FT	TEMPORARY CHANNELIZING LINE, CLASS I, 642 PAINT
				770												614	25200	770	LIN FT	TEMPORARY TRANSVERSE LINE, CLASS I, 642 PAINT
				137												614	26200	137	LIN FT	TEMPORARY STOP LINE, CLASS I, 642 PAINT
				7												614	30200	7	EACH	TEMPORARY LANE ARROW, CLASS I, 642 PAINT
				6												614	31200	6	EACH	TEMPORARY WORD ON PAVEMENT, 72", CLASS I, 642 PAINT
		650														614	98100	650	LIN FT	TEMPORARY PAVEMENT MARKING, MISC: CLASS I, 740.02
		650														614	98100	650	LIN FT	TEMPORARY PAVEMENT MARKING, MISC: CLASS I, 740.05, TYPE C
				30												615	25000	30	SQ YD	TEMPORARY PAVEMENT, CLASS B
		50														616	10000	50	M GAL	WATER
		5														616	20000	5	TON	CALCIUM CHLORIDE
		80		1950												622	40020	2030	LIN FT	PORTABLE CONCRETE BARRIER, 32"
				1920												622	40040	1920	LIN FT	PORTABLE CONCRETE BARRIER, 32", BRIDGE MOUNTED
				2												632	27200	2	EACH	LOOP DETECTOR TIE IN
				75												632	27500	75	LIN FT	LOOP DETECTOR PAVEMENT CUTTING
				129												632	64900	129	LIN FT	LOOP DETECTOR WIRE, TYPE E
																SPECIAL	619 25010	LUMP		COMPUTER EQUIPMENT FOR TYPE B OR C OFFICE
		LUMP														614	11000	LUMP		MAINTAINING TRAFFIC
																619	15010	LUMP		FIELD OFFICE, TYPE B
																623	10000	LUMP		CONSTRUCTION LAYOUT STAKES
																624	10000	LUMP		MOBILIZATION

CALCULATED DLS CHECKED MDW

GENERAL SUMMARY

FRA-GOODALE STREET

17/73

M. STINEMAN G:\CIVIL\DWG\2023\2023ACAD.DWG DATE: NOV 01, 1994 TIME: 7:42 AM

PAVEMENT QUANTITIES

STATION		PAV'T LENGTH	PAVMENT WIDTH		SIDE	AREA	PLANI-METERED AREAS	202 Wearing Course Removed S.F. / 9	203 Subgrade Compaction S.F. / 9	253 Pavement Repair, As Per Plan	254 Pavement Planing, Bituminous S.F. / 9	301 Bituminous Aggregate Base (S.F.x(10/12)/27)	304 Aggregate Base (S.F.x(6/12)/27)	402 Asphalt Concrete (S.F.x(1.75/12)/27)	404 Asphalt Concrete (S.F.x(1.25/12)/27)
Begin	End	Ft.	Begin Ft.	End Ft.		S.F.	S.F.	S.Y.	S.Y.	S.Y.	S.Y.	C.Y.	C.Y.	C.Y.	C.Y.
96+00	96+80				Lt.&Rt.		3700	411							
96+80	97+25				Lt.&Rt.		2400				267				
96+80.00	97+82.00	102.00	52.0	52.0	Lt.&Rt.	5304								29	20
97+82.00	99+00.36	118.36	52.0	57.0	Lt.&Rt.	6451								35	25
99+00.36	99+15.36	15.0	78.0	76.8		1161			129						
105+23.63	105+38.63	15.0	53.3	51.3		785			87						
105+38.63	108+47.00	308.37	50.0	50.0	Lt.&Rt.	15419					1713			83	60
108+47.00	110+00.00	153.00	48.0	48.0	Lt.&Rt.	7344					816			40	28
96+67	97+96				Lt.										
97+80	98+32				Rt.										
97+83	99+20				Lt.										
98+48	99+08				Rt.										
105+26	107+85				Lt.										
105+21	110+00				Rt.										
109+45	109+51				Rt.										
97+83	98+21.13				Lt.										
98+21.13	99+08				Lt.										
105+41	107+85				Lt.										
105+36	110+00				Rt.										
98+32	98+56				Rt.										
96+73	97+47.29				Lt.		1340								
50+50 ORR	51+00 ORR				Rt.		900	20							
58+94 TR	59+51 TR						3160								
98+22	98+95				Rt.		1340	100							
97+47.29	99+09				Lt.		3045		338			94	56	16	12
58+00 TR	59+34 TR				Rt.		840							5	3
58+74.5 TR	59+42 TR				Rt.		142		16			5	3	1	1
97+00					Lt.										
97+05					Rt.										
97+90					Lt.										
97+85					Rt.										
98+42					Rt.										
98+54					Rt.										
97+48	97+57				Lt.					7					
97+69	97+73				Lt.					1					
98+14	98+24				Lt.&Rt.					18					
Totals to General Summary								531	570	26	2796	99	59	209	149

404 Asphalt Concrete (Feathering)		407 Tack Coat (S.F./9)x0.075	408 Bituminous Prime Coat @ 0.4 Gal./S.Y. (S.F./9)x0.40	608 4" Concrete Walk L.F. x 4.5'	608 4" Concrete Walk L.F. x 5.0'	608 Curb Ramp Type 1	608 Curb Ramp Type 1	608 Curb Ramp Type 2	609 6" Concrete Combination Curb and Gutter, As per Plan	609 Curb, Type 6	611 Reinforced Conc. Approach Slabs (T = 12") As per Plan	612 9" Concrete Traffic Island	608 Curb Ramp, Type 1 As per Plan
Calc.	C.Y.	Gals.	Gals.	S.F.	S.F.	Each	S.F.	Each	L.F.	L.F.	S.Y.	S.Y.	Each
3700(1.25"/12/27)	14.3	31											
		44											
		54											
											129		
											87		
		128											
		61											
					160								
					280					49			
					650								
				326						65			
				1166		1		1					
				2156		1							
					84								
									43				
										87			
										249			
										464			
												16	
1340(1.2"ave./12)/27	5.0	11											
900(1.8"ave./12)/27	5.0	8											
3160(2.4"ave./12)/27	23.4	26											
1340(2.4"ave./12)/27	9.9	11											
			135										
		7											
							110			63			
							110						
						1							
						1							1
								1					
57.6	381	135	3648	1174	4	220	2	43	977	216	16	1	

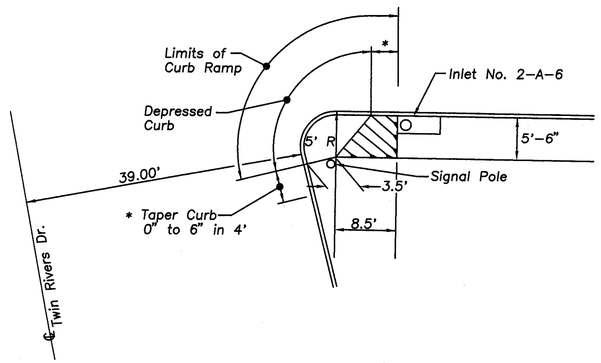
ORR = Olentangy River Road
TR = Twin Rivers Drive

DRIVEWAY QUANTITIES

LOCATION	Length	Average Width	Areas	452 8" Plain Concrete Pavement (S.F. / 9)
Station	Ft.	Ft.	S.F.	S.Y.
105+53, Rt.	4.5	26.5	119	13
106+42, Lt.	4.5	36.5	164	18
108+13, Rt.	4.5	46.5	209	23
Totals to General Summary				54

EARTHWORK QUANTITY SUB-SUMMARY

STATION TO STATION	203 Excavation C.Y.	203 Embankment C.Y.
96+00 to 98+00	106	7
98+50 to 105+23.63	99	36
105+53 to 107+50	4	7
107+71 to 109+00	0	14
109+50 to 110+50	0	7
Total to General Summary	209	71



DETAIL - CURB RAMP, TYPE 1, AS PER PLAN (SEE ALSO SHEET 29)

CALCULATED DLS | CHECKED MDW

SUB-SUMMARY TABLES

FRA-GOODALE STREET

18/73

Cross References	
Sht. No.	Description
18	Walk, Curb, & Curb Ramp Quantities
18	Pavement Quantities
28	Trench, Curb, and Underdrain Details
29	Pavement Details
33	Storm Sewer Profiles
49	Bridge Geometry

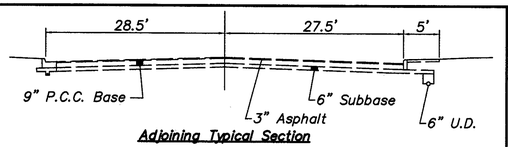
Signal Pole S.E. Bolt — 74.31' — 97.27' — Signal Pole S.W. Bolt
27.44' — PK Nail
Point on Rim of C.B. East
P.O.T. Sta. 96+13.63

Signal Pole S.W. Bolt — 38.90' — 37.97' — Signal Pole Center of Pole
89.50' — PK Nail
Base of Light Pole, South Side
P.C. Sta. 97+97.79

HORIZONTAL CURVE
PI STA. 100+00.00
D_c = 2°00'00"
R = 2864.79'
Δ = 8°04'30"
T = 202.21'
L = 403.75'
E = 7.13'

BEGIN WORK STA. 96+00.00
BEGIN PROJECT STA. 96+80.00 BHF-94A(8)

Guardrail to be Removed with Contract C-2
Existing Curb to Remain (Removed with C-2)
End Curb Removal
Ramp with Contract C-2
115'R
Catch Basin in Contract FRA-670-1.25-C-2 Sta. 50+96 O.R.R., 45' Rt.
Provide Bulkhead @ end of 12"
Ex. SR 315 N.B. To Be Removed C-2
Guardrail to be Removed, See Sheet 20.
Constr. Limits
Traffic Pull Box 36'
Electric Pull Box
Ex. R/W
Ex. 39" San
Ex. 15" S
Ex. 12" S
Ex. 24" S
Ex. 18" S
Ex. 15" San
Ex. 12" San
CSX TRANSPORTATION
Olentangy River Road Ext. N 05°00'27" W
Goodale St. ℄ O.R.R. Ext.
P.O.T. Sta. 97+47.29 ℄ Goodale St. = P.O.T. Sta. 49+98.86 ℄ O.R.R. Ext.
Plug
4" Bend
4' Type F
145.5' R
12" x 45°
Connect 4" to Ex. C.B. See Profile below
Const. Limits
Lighting Pull Box
Ex. Pavement and Curb to be removed, See Sheet 20.
Traffic Pull Box
Control Box
Traffic Pull Box
Traffic Pull box
Electric Pull Box
Const. Limits
2~10" Siphon
Survey & Const. Goodale St.
N84°59'33"E
PC = 97+97.79
P.T. 59+23.35
Goodale St. ℄ Twin Rivers Dr. N 15°12'34" W
Survey Twin Rivers Drive
Sta. 58+94 Twin Rivers Dr. End Feathering
P.O.T. 9+34.40 ℄ Twin Rivers Dr. = P.O.T. 59+76.22 ℄ Twin Rivers Dr.
Concrete Median to be removed. See Sheet 29
MATCH LINE STA 99+00 SEE SHEET 20
*** Quantities carried on Sheet 20 (Plan & Profile)

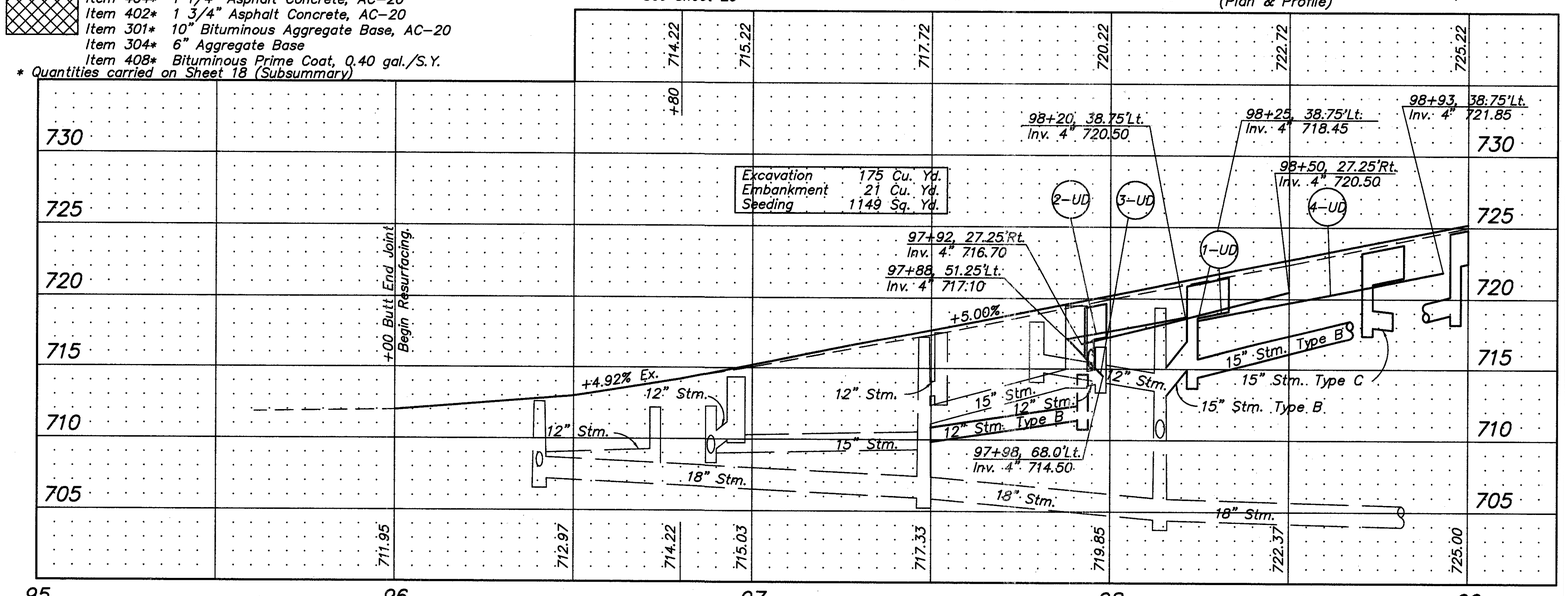


Adjoining Typical Section
Sta. 96+80

Calculations:
Item 601 RCP Type C, w/Filter Fabric
1E: 7.0' x 5.0' x 1.5' x 1/27 = 1.94 C.Y.

Legend:
- Item 202* Wearing Course Removed, 1 1/4"
- Item 404* 1 1/4" Asphalt Concrete, AC-20
- Item 407* Tack Coat, 0.075 gal./S.Y.
- Item 202* Wearing Course Removed, Varies 0" to 1 1/4"
- Item 404* Varies 0" to 5", Asphalt Concrete, AC-20
- Item 407* Tack Coat, 0.075 gal./S.Y.
- Item 404* Varies 7" to 0", Asphalt Concrete, AC-20
- Item 407* Tack Coat, 0.075 gal./S.Y.
- Item 404* 1 1/4" Asphalt Concrete, AC-20
- Item 402* 1 3/4" Asphalt Concrete, AC-20
- Item 301* 10" Bituminous Aggregate Base, AC-20
- Item 304* 6" Aggregate Base
- Item 408* Bituminous Prime Coat, 0.40 gal./S.Y.

* Quantities carried on Sheet 18 (Subsummary)



ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	604 Inlet Adjusted to Grade Each	605 4" Underdrain L.F.	604 Manhole Adjusted to Grade Each	604 Inlet Type 2-A-10 Each	603 15" Conduit, Type C 706.02 L.F.	603 15" Conduit, Type B 706.02 L.F.	603 12" Conduit, Type B 706.02 L.F.	603 4" Conduit, Type F L.F.	602 Concrete Masonry C.Y.	601 RCP Type C W/Filter Fabric C.Y.	202 Inlet Type 2-A-6 Each	202 Pavement Removed S.Y.	202 Walk Removed S.F.	202 Curb Removed, As Per Plan L.F.	202 Inlet Abandoned Each	202 Traffic Island Removed S.Y.	202 Inlet Removed Each
1-D	97+48 to 97+93	Lt.						96	100										
2-D	98+14 to 98+24	Lt.&Rt.				1		73											
3-D	98+27	Lt.				1	23		15	10	0.25								
4-D	98+23.33 to 98+96.33	Lt.			1					20		1.94							
5-D	99+00	Lt.								10									
6-D	98+80	Rt.											1	55	554	196		17	1**
7-D	98+74 to 98+81	Rt.													85	17			
8-D	98+77	Rt.													265	120	1	17	
9-D	97+48	Lt.												55		28			
1-E	98+78 to 98+86	Rt.										1.94				53	2		1
1-R	97+53	Lt.	1												239	17			
2-R	97+90	Lt.																	
3-R	97+72 to 99+00	Lt.														431			
4-R	96+98 to 97+12	Rt.													1143				
10-D	97+75 to 98+56	Rt.											1	55					
6-R	97+47 to 97+82	Lt.																	
7-R	97+47 to 97+56	Lt.																	
8-R	98+52 to 99+00	Rt.																	
9-R	96+96 to 97+05	Rt.																	
1-UD	97+92 to 98+50	Rt.																	
2-UD	97+88 to 98+20	Lt.																	
3-UD	97+98 to 97+98	Lt.																	
4-UD	98+25 to 98+93	Lt.																	
Totals to General Summary			1	144	1	3	23	169	115	40	0.25	1.94	1	55	1143	431	2	17	1

** Includes Connection of Existing Pipes

CALCULATED DLS
CHECKED MDW

SCALE IN FEET 0 10 20 40

PLAN AND PROFILE
STA. 95+00 TO 99+00

FRA-GOODALE STREET

19/73

KORDA / NEMETH ENGINEERING, INC.

0300-ST

M. STINEMAN G:\CIVILDWG\2022\1\2022APP1.DWG DATE: OCT 31, 1994 TIME: 10:10 AM

P.T. Sta. 99+86.77 (Face of Curb)
= Sta. 99+85.60, 34.23' Lt.

39" San.
18" Siphon San
5-R
4-R
6-R
BM #1
Constr. Limits
Portion of existing Structure to be Removed
Ex. S.R.315 (NB)
7-R
Sign Foundation to be Removed Under Item 201 Clearing and Grubbing.
2-R
3-R
1-R
1-G
P.T.
9'-6" Actual
100
101
102
103
S 86° 55' 57" E
Survey & Const. Goodale St.
PC = 149+82.67
PT = 149+34.93
Ex. S.R.315 (SB)
Ex. I.R.670 (WB)
Ex. I.R. 670 (EB)
TS = 150+21.54
Prop. Bike Path
Ex S.R.315 (NB)
Face of Curb
28.00'
5.95'
Face of Curb
81.98'
Expansion Joint (Fixed Edge)
P.I. Sta. 100+00.00
20" Ash
San 18" Siphon
RIVER
OLENTANGY
P.C.C. Sta. 99+00.00 (Face of Curb)
= Sta. 99+00.00, 37.50' Lt.
MATCH LINE STA. 99+00 SEE SHEET 19
MATCH LINE 103+50 SEE SHEET 21
2-10" Siphon San
Prop. S.R.315 SB
Prop. S.R.315 NB
Survey Prop. S.R. 315
Survey Prop. Ramp
TS = 148+63.57
Point of Critical Clearance
PT = 102+01.54
BM #1 Elev. 725.75
Chiseled "⊠" in top of Concrete of N.W. Wingwall Sta. 99+30 67' Lt.

HORIZONTAL CURVE
PI STA. 100+00.00
D_C = 2°00'00"
R = 2864.79'
Δ = 8°04'30"
T = 202.21'
L = 403.75'
E = 7.13'

Bridge Limits = 608.27'
Begin Appr. Slab +00.36
End Appr. Slab +15.36
+5.00%
PVI 102+00 ELEV 740.22
+5.00% −3.00%
VC = 400' SSD Exceeds Design Speed Requirements
Prop. S.R.315 S.B. 15'-7" Actual 15'-6" Required
Prop. S.R.315 N.B. 17'-3" Actual 15'-6" Required
PROP. BIKE PATH 14'-8" ACTUAL 10'-0" REQUIRED
Prop. Bikeway
Prop. S.R.315 (SB)
Prop. S.R.315 (NB)
Ex. S.R.315

Excavation	14 Cu. Yd.
Embankment	20 Cu. Yd.
Seeding	133 Sq. Yd.

725.22 727.72 730.22 731.41 732.47 733.41 734.22 734.91 735.47 735.91 736.22 736.41 736.47 736.41 736.22 735.91 735.47
725.00 727.57 729.95 732.20 734.03 735.24 736.03 736.21 736.13 735.34
735 730 725 720 715 710 705 700
99 100 101 102 103

EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAMS WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURES
SPANS: 65'-0", 2 @ 92'-6", 92'-11", 2 @ 92'-6", 74'-0" c/c BEARINGS ALONG REFERENCE TANGENT
ROADWAY: VARIABLE WIDTH WITH 5'-0" SIDEWALKS AND 2'-0" MEDIAN
LOADING: CF-400
ALIGNMENT: 2°00' RIGHT CURVE AND TANGENT
SKEW: 5°25' LEFT FORWARD FROM REFERENCE TANGENT
WEARING SURFACE: ASPHALT CONCRETE
APPROACH SLABS: 15'-0"
CONDITION: FAIR (TO BE REHABILITATED)
DATE OF CONSTRUCTION: 1959

PROPOSED STRUCTURE

TYPE: NEW CONTINUOUS STEEL BEAMS (PAINTED A572) COMPOSITE WITH NEW REINFORCED CONCRETE DECK ON REHABILITATED SUBSTRUCTURES
SPANS: 65'-0", 2 @ 92'-6", 92'-11", 2 @ 92'-6", 74'-0" c/c BEARINGS ALONG REFERENCE TANGENT
ROADWAY: VARIABLE WIDTH (52'-0" f/f CURBS MIN.) WITH 5'-0" SIDEWALKS
LOADING: HS20-44 CASE II AND ALT. MILITARY LOADING
ALIGNMENT: 2°00' RIGHT CURVE AND TANGENT
SKEW: 5°25' LEFT FORWARD FROM REFERENCE TANGENT (4°38' @ PIER 5 ONLY)
WEARING SURFACE: MONOLITHIC CONCRETE
APPROACH SLABS: AS-1-81 (15'-0" LONG)(MODIFIED)
CROWN: 0.0156 FT./FT.

ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE			606 Bridge Term. Assembly Type 1 Each	606 Anchor Assembly Type A Each	606 Guardrail Type 5 L.F.	202 Pavement Removed S.Y.	202 Guardrail Removed L.F.	202 Pull Box Removed Each	202 Approach Slab Removed S.Y.	202 Walk Removed S.F.	202 Curb Removed, As Per Plan L.F.
1-R	99+00 to 99+08	Rt.	8										
2-R	99+00 to 99+13	Lt.	37										
3-R	99+00.36 to 99+15.36	Lt.&Rt.	54										
4-R	99+12	Lt.		165						1			
5-R	98+60 to 99+29	Lt.							100				
6-R	99+07 to 99+29	Lt.							75				
7-R	98+95 to 97+12	Lt.						33					
1-G	98+37 to 99+07	Rt.					50*						
Totals to General Summary			67	190	165	1	50	33	175	1	165	190	67
					1	1	1						

* Includes 50' @ Radius

N
SCALE IN FEET 0 10 20 40
CALCULATED/D DLS
CHECKED MDW

PLAN AND PROFILE
STA. 99+00 TO 103+50

FRA-GOODALE STREET

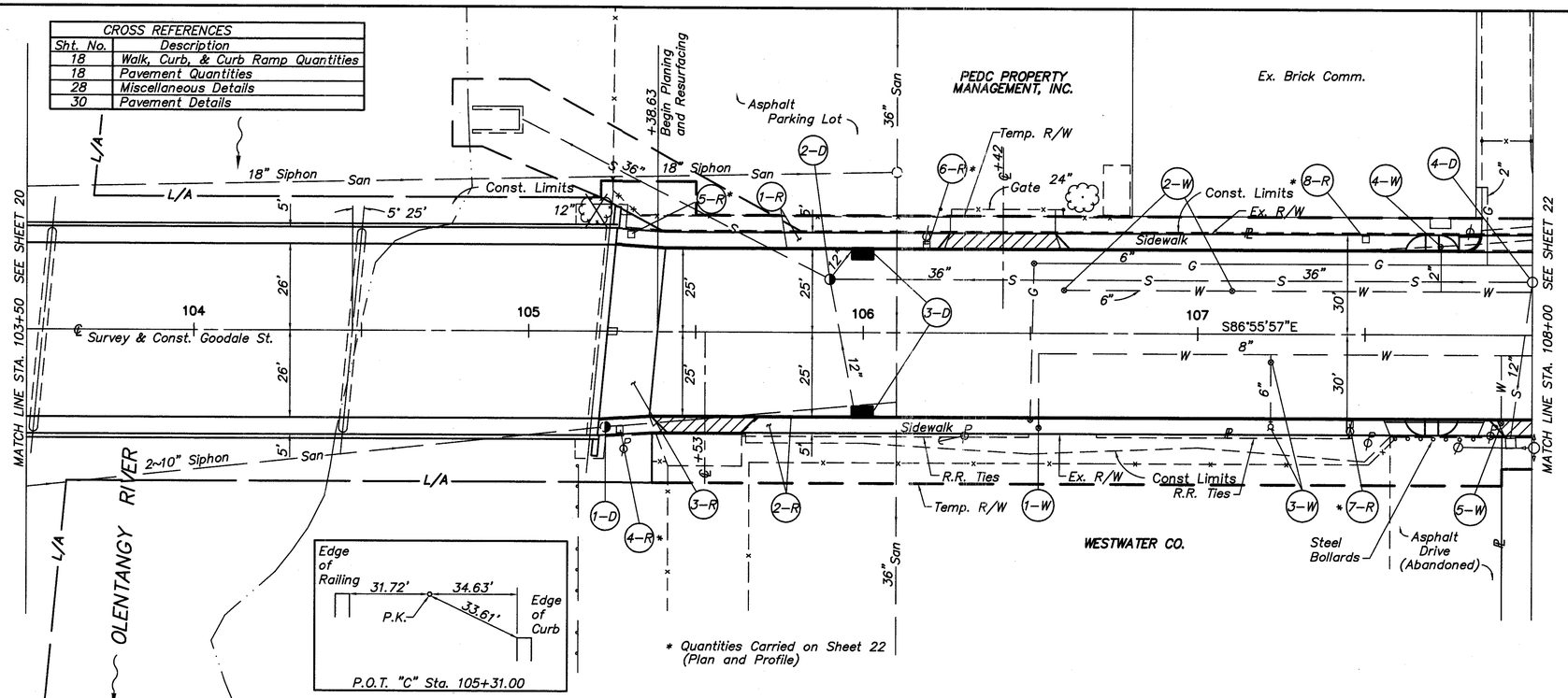
20/73

KORDA / NEMETH ENGINEERING, INC.

0300-ST

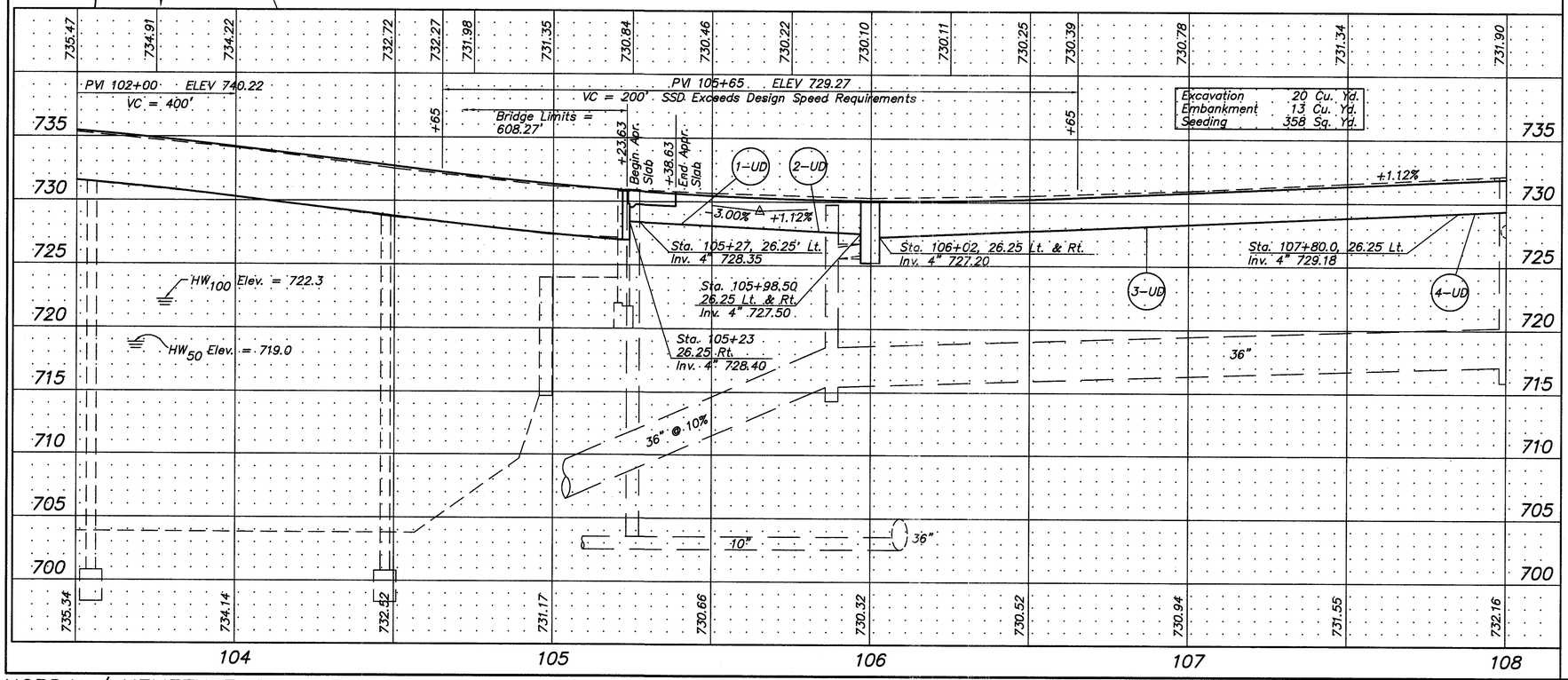
M. STINEMAN G:\CIVILDWG\92024\92024PP2.DWG DATE: OCT 31, 1994 TIME: 10:15 AM

CROSS REFERENCES	
Sht. No.	Description
18	Walk, Curb, & Curb Ramp Quantities
18	Pavement Quantities
28	Miscellaneous Details
30	Pavement Details



LEGEND

Driveway Apron
Item 452 8" Plain Concrete
See Sheet 28 for Details
(Quantities Carried to Sheet 18)



ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	202 Inlet Removed Each	202 Walk Removed S.F.	202 Curb Removed, As Per Plan L.F.	202 Approach Slab Removed S.Y.	604 Catch Basin No. 3 Each	604 Manhole Adjusted to Grade Each	605 4" Underdrain L.F.	603 4" Conduit Type F L.F.	603 12" Conduit Type B 706.02 L.F.	Special: Service Box Adjusted to Grade (Col. 807) Each	Special: Heavy Duty Valve Box Adj. to Grade (Col. 807) Each	Special: 6" Hydrant Extension (Col. 810) Each
1-D	105+23	Rt.						1			8			
2-D	105+90	Lt.						1						
3-D	106+00	Lt.					2							
4-D	108+00	Lt.	2					1						1
1-R	105+26 to 107+85	Lt.		1166	264								1	
2-R	105+21 to 108+00	Rt.		1256	279								1	
3-R	105+23.63 to 105+38.63	Lt. & Rt.				85								
1-W	106+53	Rt.											2	
2-W	106+60 and 107+10	Lt.											1	
3-W	107+22	Rt.											1	
4-W	107+72	Lt.										1		
5-W	107+91	Rt.												1
1-UD	105+23 to 105+99	Rt.							66	10				
2-UD	105+27 to 105+99	Lt.							62	10				
3-UD	106+02 to 107+80	Lt.							168	10				
Totals to General Summary			2	2422	543	85	2	3	296	30	8	1	5	1

CALCULATED DLS
CHECKED MDW

SCALE IN FEET 0 10 20 40

PLAN AND PROFILE
STA. 103+50 TO 108+00

FRA-GOODALE STREET

21/73

KORDA / NEMETH ENGINEERING, INC.

0300-ST

M. STINEMAN G:\CHILDWG\2022A\2022APPLS.DWG DATE: OCT 31, 1994 TIME: 10:22 AM

* R.R.S. Fnd. at P.C. for Goodale/Nationwide Blvd. Connector

BM #2 Elev. 735.33
W. Cap Bolt on Fire Hydrant
Sta. 109+26 30.5' Rt.

Adjoining Typical Section
Sta. 110+00

LEGEND

▨ Driveway Apron
Item 452 8" Plain Concrete
See Sheet 28 for Details
(Quantities Carried to Sheet 18)

* See Sheet 21 for Reference Balloons

ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	202 Pull Box Removed	202 Walk Removed	202 Curb Removed As Per Plan	603 4" Conduit Type F	605 4" Underdrain		604 Inlet Adjusted to Grade	Special Heavy Duty Valve Box Adjusted to Grade (Col 807)		
			Each	S.F.	L.F.	L.F.	L.F.		Each	Each		
1-R	108+87	Rt.							1			
1-W	109+26	Rt.								1		
2-W	109+76	Rt.								1		
3-W	109+82	Rt.								1		
*4-R	105+27	Rt.	1									
*5-R	105+31	Lt.	1									
*6-R	106+19	Lt.	1									
*7-R	107+46	Rt.	1									
*8-R	107+50	Lt.	1									
9-R	108+00 to 110+00	Rt.		900	200							
10-R	109+45 to 109+51	Rt.		84								
1-UD	108+91 to 110+00	Rt.				10	99					
*4-UD	106+10 to 108+80	Rt.				10	268					
Totals to General Summary			5	984	200	20	367		1	3		

0 10 20 40
SCALE IN FEET

CALCULATED DLS
CHECKED MDW

PLAN AND PROFILE
STA. 108+00 TO 112+00

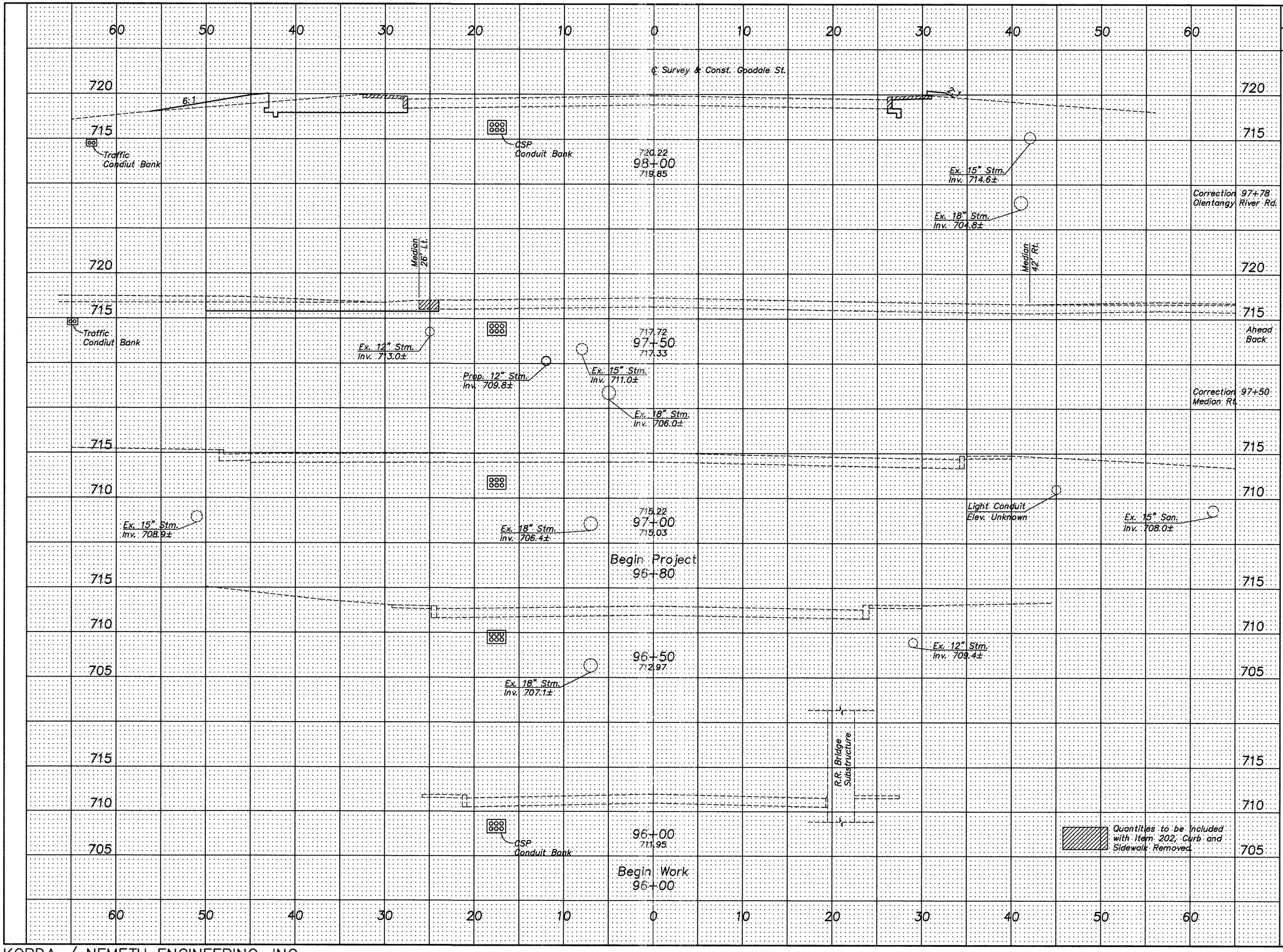
FRA-GOODALE STREET

22/73

KORDA / NEMETH ENGINEERING, INC.

0300-ST

M. STINEMAN, KORDA/NEMETH ENG. G:\CIVILDWG\92024\92024PP4.DWG DATE: JUN 28, 1994 TIME: 1:29 PM



End Area		Volumes		
Cut	Fill	Cut	Fill	
27	8			
		57	7	
		14	0	
34	0			Ahead
0	0			Back
		0	0	
		35	0	
0	0			
		0	0	
0	0			
		0	0	
0	0			

CALCULATED JJL
CHECKED MDW

STA. 96+00 to STA. 98+00
CROSS SECTIONS

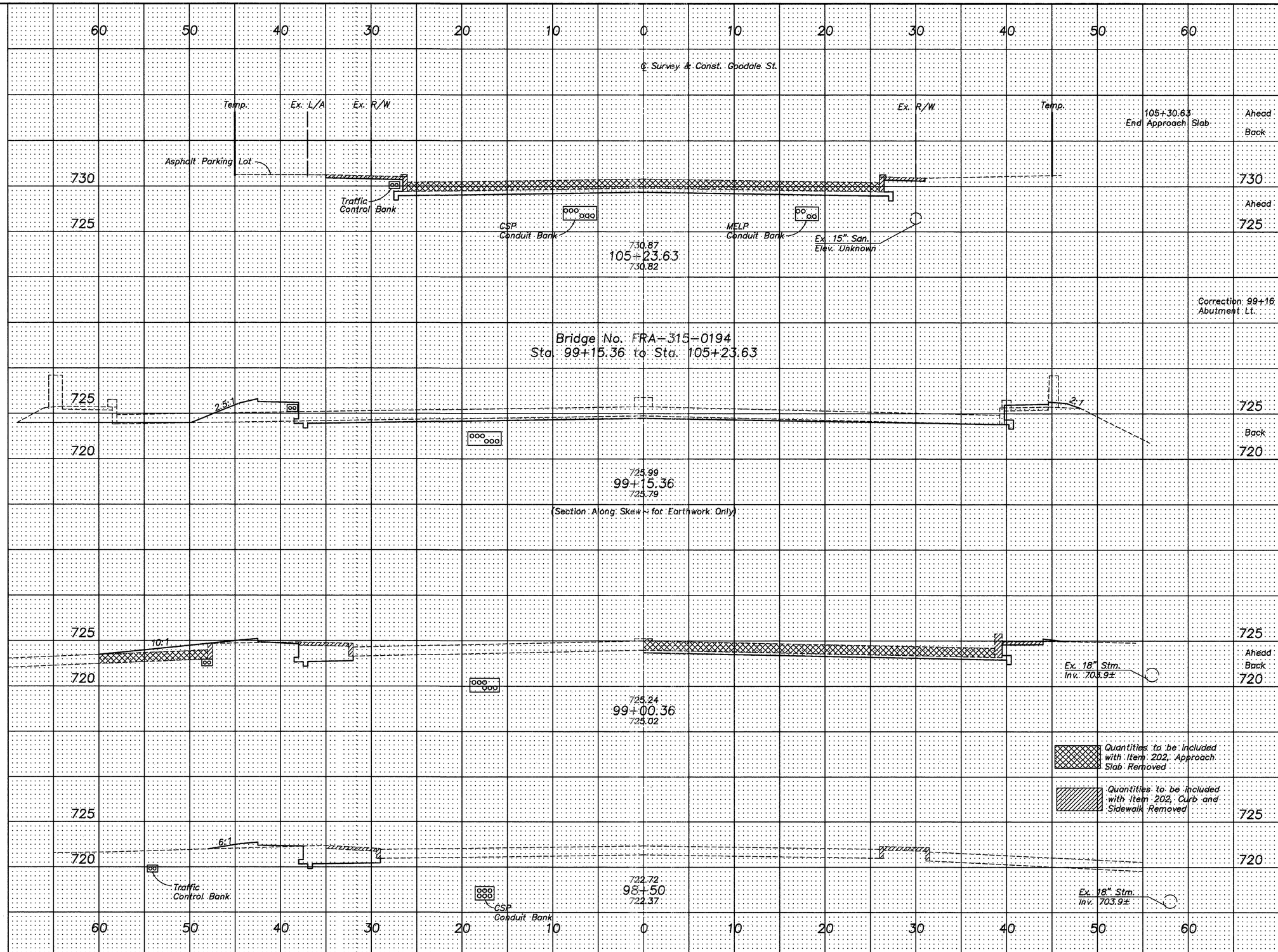
FRA-GOODALE STREET

23/73

KORDA / NEMETH ENGINEERING, INC.

0300-ST

M. STINEMAN, KORDA/NEMETH ENG. G:\DWLDWG\92024\92024XS1.DWG DATE: JAN 23, 1994 TIME: 11:00 AM



		End Area		Volumes	
		Cut	Fill	Cut	Fill
				0	2
105+30.63 End Approach Slab	Ahead	0	1		
	Back	29	0		
				16	0
	Ahead	29	1		
Correction 99+16 Abutment Lt.				0	16
	Back	41	9		
				14	4
	Ahead	11	5		
	Back	9	5		
				26	4
		19	3		
				43	10

CALCULATED JJL
CHECKED MDW

STA. 98+50 to STA. 105+23.63
CROSS SECTIONS

FRA-GOODALE STREET

24/73

KORDA / NEMETH ENGINEERING, INC.

0300-ST

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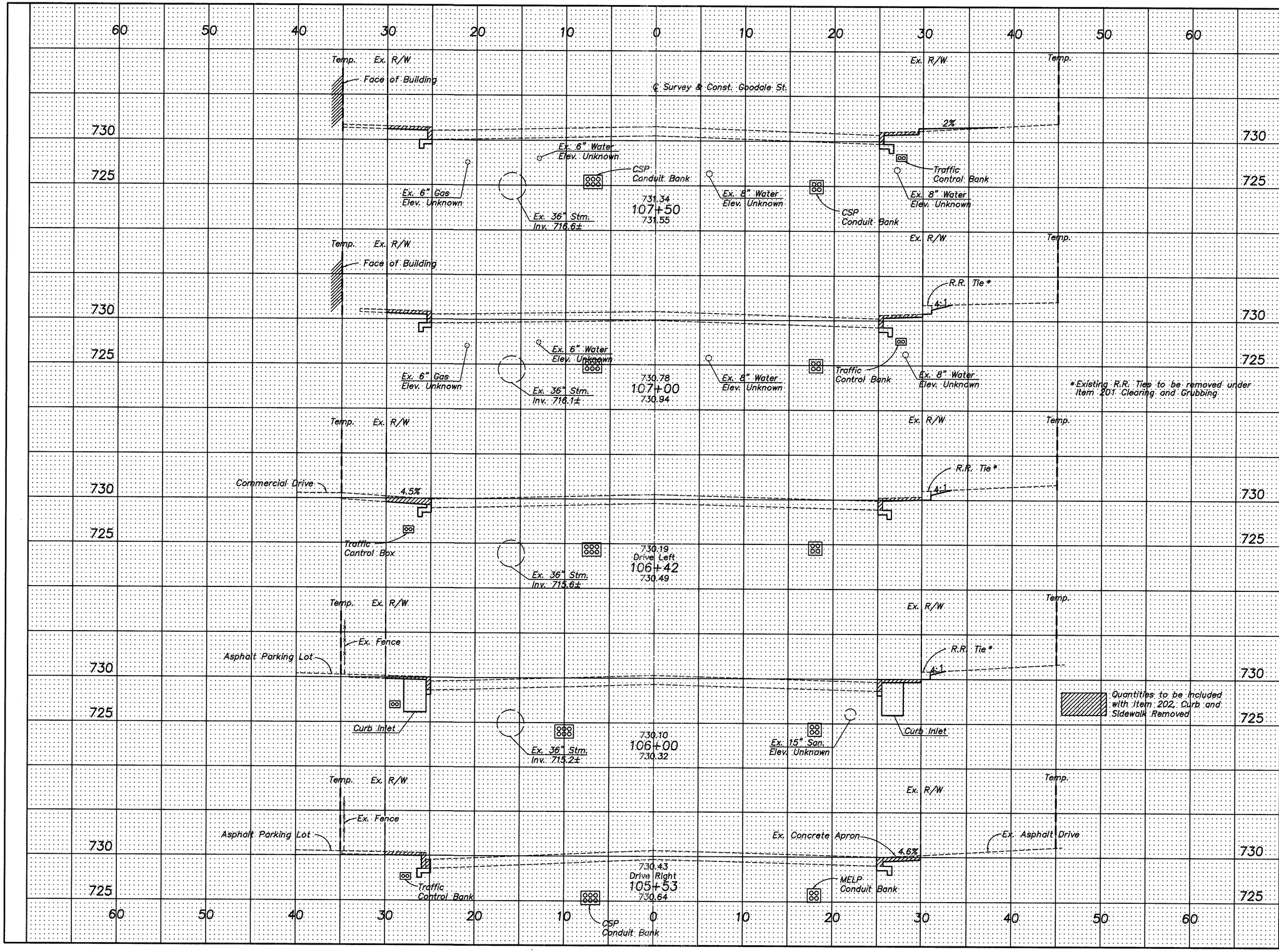


End Area		Volumes		CALCULATED JJL / CHECKED MDW
Cut	Fill	Cut	Fill	
0	2			STA. 105+53 to STA. 107+50 CROSS SECTIONS
		1	2	
1	0			
		2	1	
1	1			
		1	2	
0	1			
		0	2	
0	1			

FRA-GOODALE STREET

25/73

0300-ST

M. STINEMAN G:\CIVILDWG\2022\2022ASSL.DWG DATE: OCT 27, 1994 TIME: 2:38 PM

60 50 40 30 20 10 0 10 20 30 40 50 60

735 730 725

℄ Survey & Const. Goodale St.

Ex. R/W — Temp.

0.07% — Asphalt Parking Lot

CSP Conduit Bank
733.02
109+00
733.20

Ex. 6" Gas
Elev. Unknown

Ex. 36" Strm.
Inv. 717.9±

Ex. 6" Water
Elev. Unknown

Ex. 8" Water
Elev. Unknown

MELP Conduit Bank

Traffic Control Bank

Ramp "L"

Ex. Conc. Apron

0.03% — Asphalt Parking Lot

732.46
108+50
732.62

Ex. 6" Gas
Elev. Unknown

Ex. 36" Strm.
Inv. 717.5±

Ex. 6" Water
Elev. Unknown

Ex. 8" Water
Elev. Unknown

Ex. R/W — Temp.

Ex. Conc. Apron

3.8% — Commercial Drive

Drive Right
108+13

Ex. R/W — Temp.

Ex. R/W

Ex. Strm. M.H.

Commercial Drive

Ex. Conc. Apron

Ex. Conc. Apron

-4.6% — Commercial Drive

731.90
108+00
732.16

Ex. 6" Gas
Elev. Unknown

Ex. 6" Water
Elev. Unknown

CSP Conduit Bank

Ex. 8" Water
Elev. Unknown

MELP Conduit Bank

Traffic Control Bank

Ex. 36" Strm.
Inv. 717.0±

Quantities to be included with Item 202, Curb and Sidewalk Removed

End Area		Volumes		
Cut	Fill	Cut	Fill	
0	3			
		0	7	
0	4			
0	1			Ahead
				Back
0	1			
		0	2	
0	1			
		0	1	
0	1			
		0	2	
0	2			

CALCULATED J.JL
CHECKED MWD

STA. 107+71 to STA. 109+00
CROSS SECTIONS

FRA-GOODALE STREET

26/73

M. STINEMAN G:\CIVIL\DWG\2022#\2022#XSSKJ.DWG DATE: OCT 27, 1994 TIME: 4:30 PM

KORDA / NEMETH ENGINEERING, INC.

0300-ST

60 50 40 30 20 10 0 10 20 30 40 50 60

735
730
725

Ex. R/W
℄ Survey & Constr. Goodale St
Ex. Concrete Apron
Commercial Drive
Ex. 6" Gas
Elev. Unknown
Ex. 6" Water
Elev. Unknown
110+50
734.22
Ex. 8" Water
Elev. Unknown
End Work
110+22
Ex. R/W
Temp.
℄ Survey & Constr. Goodale St
Asphalt Parking Lot
End Project
110+00
734.24
Ex. 6" Gas
Elev. Unknown
Ex. 6" Water
Elev. Unknown
Ex. 8" Water
Elev. Unknown
Ex. R/W
Temp.
℄ Survey & Constr. Goodale St
Ex. Conc. Walk
Match Ex. Joint
CSP
Conduit Bank
733.58
109+50
733.78
Ex. 6" Gas
Elev. Unknown
Ex. 6" Water
Elev. Unknown
Ex. 8" Water
Elev. Unknown
MELP
Conduit Bank
Traffic
Conduit Bank
Quantities to be included with Item 202, Curb and Sidewalk Removed.

60 50 40 30 20 10 0 10 20 30 40 50 60

End Area		Volumes		CALCULATED JJL / CHECKED MWD
Cut	Fill	Cut	Fill	
0	0			
		0	2	
		0	2	
		0	5	

STA. 109+50 to STA. 110+00
CROSS SECTIONS

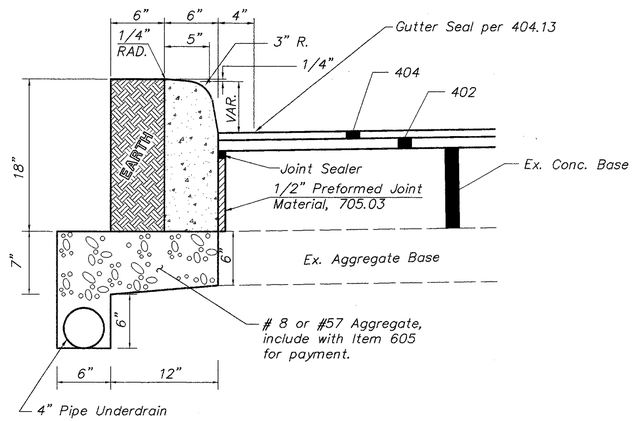
FRA-GOODALE STREET

27/73

M. STINEMAN G:\CIVILDWG\2022A\2022AXSS.DWG DATE: OCT 27, 1994 TIME: 4:55 PM

KORDA / NEMETH ENGINEERING, INC.

0300-ST

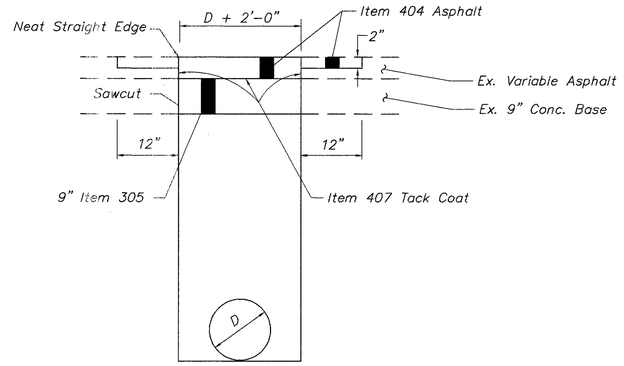


Type 6 Curb per Std. Dwg. BP-5.1

All exposed surfaces of concrete curb shall have a brush finish.

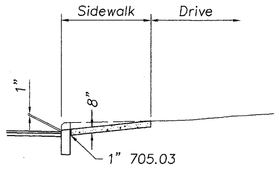
Gutter Seal Payment shall be included in price bid for Item 404, Asphalt Concrete.

DETAIL-STRAIGHT CURB AND UNDERDRAIN

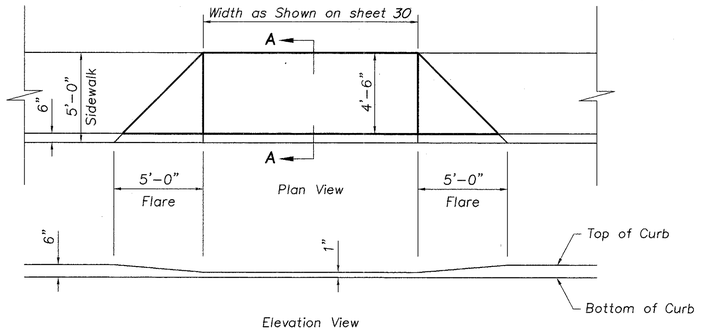


Notes:
1. Bedding to conform to requirements of 603.04 Bedding Class B.
2. Backfilling to conform to 603.08 for Type B Conduits.

TYPICAL TRENCH & PAVEMENT REPAIR DETAIL

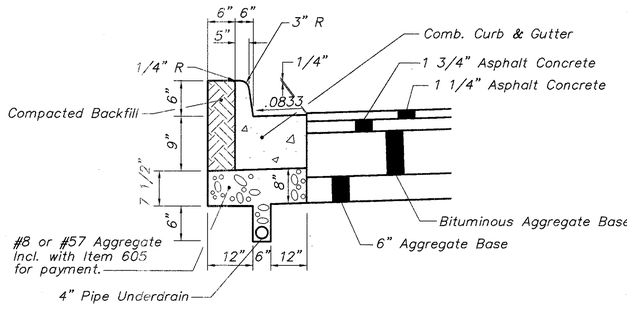


Section A-A

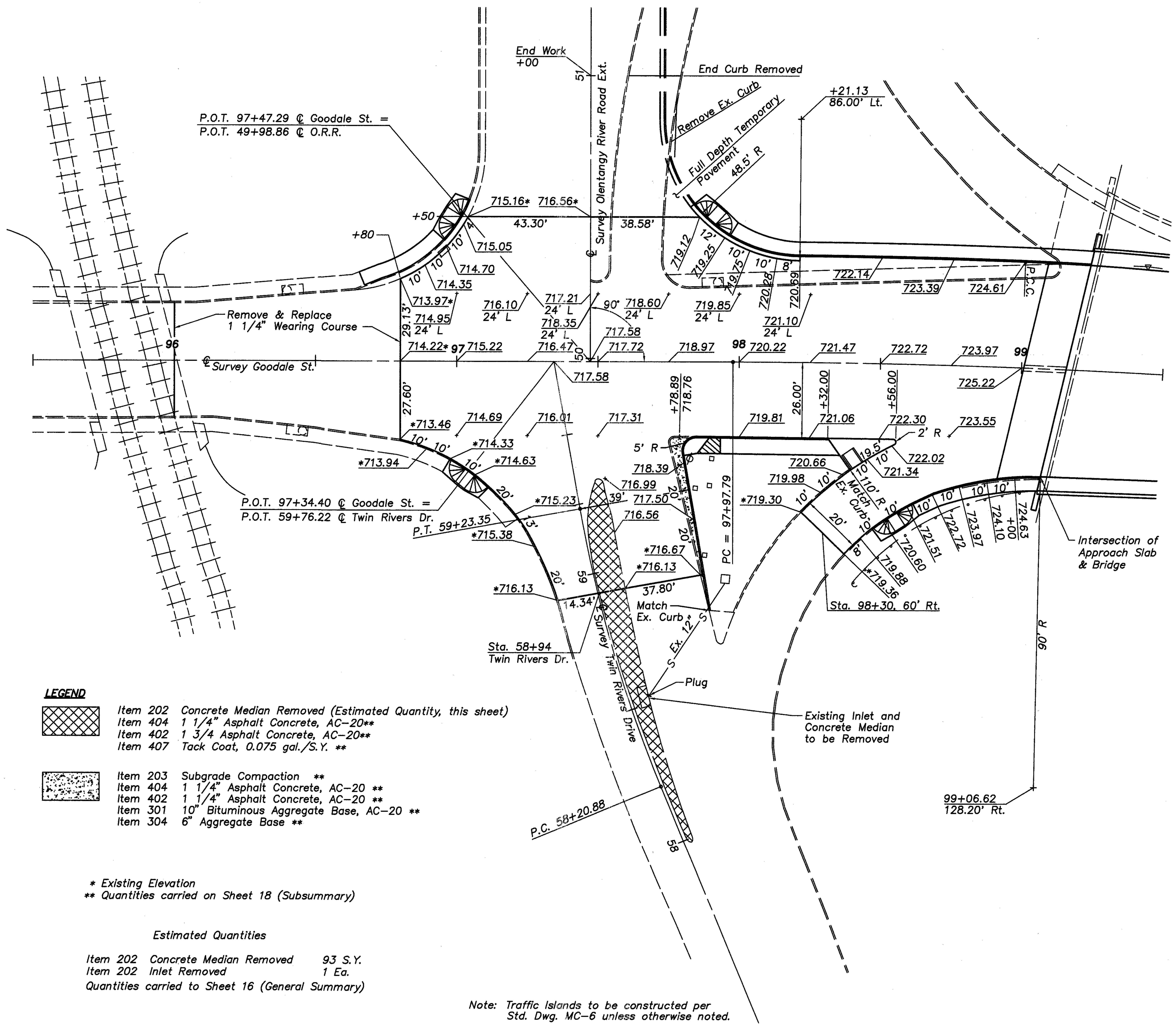


Elevation View

TYPICAL DRIVEWAY DETAILS



DETAIL ~ COMBINATION CURB AND GUTTER, AS PER PLAN AND UNDERDRAINS



LEGEND

(crosshatch)	Item 202 Concrete Median Removed (Estimated Quantity, this sheet) Item 404 1 1/4" Asphalt Concrete, AC-20** Item 402 1 3/4 Asphalt Concrete, AC-20** Item 407 Tack Coat, 0.075 gal./S.Y. **
(stipple)	Item 203 Subgrade Compaction ** Item 404 1 1/4" Asphalt Concrete, AC-20 ** Item 402 1 1/4" Asphalt Concrete, AC-20 ** Item 301 10" Bituminous Aggregate Base, AC-20 ** Item 304 6" Aggregate Base **

* Existing Elevation
** Quantities carried on Sheet 18 (Subsummary)

Estimated Quantities

Item 202	Concrete Median Removed	93 S.Y.
Item 202	Inlet Removed	1 Ea.

Quantities carried to Sheet 16 (General Summary)

Note: Traffic Islands to be constructed per Std. Dwg. MC-6 unless otherwise noted.

N
0 10 20 40
SCALE IN FEET

CALCULATED DLS
CHECKED MDW

PAVEMENT DETAILS

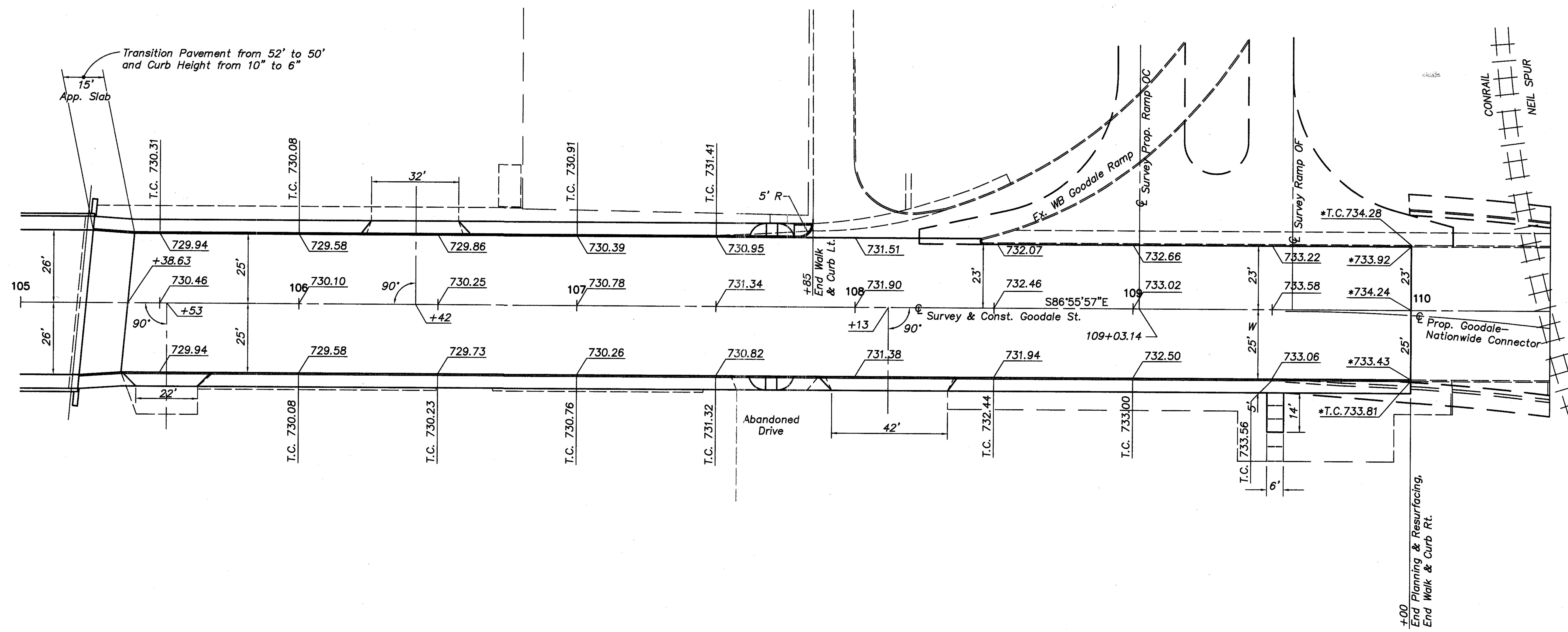
FRA-GOODALE STREET

29
73

KORDA / NEMETH ENGINEERING, INC.

0300-ST

M. STINEMAN G:\CIVILDWG\92024\92024DET.DWG DATE: OCT 31, 1994 TIME: 10:37 AM



LEGEND

729.73	Proposed Pavement Elevation
T.C.729.73	Proposed Top of Curb Elevation
*729.73	Existing Elevation

* Match Existing Elevation

PAVEMENT ELEVATIONS

STATION	PROPOSED ELEVATIONS ~ LEFT			PROPOSED	PROPOSED ELEVATIONS ~ RIGHT			EXISTING ELEVATIONS			PLANING (FEET)		
	Top Curb	Curb Ht.	Edge Pav't.	℄ ELEV.	Edge Pav't.	Curb Ht.	Top Curb	Lt. E/P	℄	Rt. E/P	Left	℄	Right
96+20	–	–	–	–	–	–	–	711.96	712.36	711.95	–	–	–
96+80	–	–	713.97	714.22	713.46	–	–	713.97	714.22	713.46	0.25	0.25	0.25
97+00	–	–	714.92	715.22	714.69	–	–	714.86	715.03	714.59	0.19	0.06	0.15
97+50	–	–	717.30	717.72	717.31	–	–	717.01	717.33	716.86	–	–	–
97+97.79	–	–	719.81	720.11	719.71	0.50	720.20	719.41	719.85	719.46	–	–	–
105+50	730.31	0.37	729.94	730.46	729.94	0.08	Drop Curb	729.97	730.66	730.00	0.28	0.45	0.31
106+00	730.08	0.50	729.58	730.10	729.58	0.50	730.08	729.56	730.32	729.64	0.23	0.47	0.31
106+50	Drop Curb	0.08	729.86	730.25	729.73	0.50	730.23	729.90	730.52	729.86	0.29	0.52	0.38
107+00	731.00	0.52	730.39	730.78	730.26	0.50	730.76	730.55	730.94	730.21	0.41	0.41	0.20
107+50	731.41	0.46	730.95	731.34	730.82	0.50	731.32	731.02	731.55	730.68	0.32	0.46	0.11
108+00	Drop Curb	0.08	731.51	731.90	731.38	0.08	Drop Curb	731.51	732.16	731.23	0.25	0.51	0.10
108+50	–	–	732.07	732.46	731.94	0.50	732.44	731.99	732.62	731.85	0.17	0.41	0.16
109+00	–	–	732.63	733.02	732.50	0.50	733.00	732.71	733.20	732.44	0.33	0.43	0.19
109+50	–	–	733.19	733.58	733.06	0.50	733.56	733.33	733.78	732.89	0.39	0.45	0.08
110+00	–	–	*	*	*	*	*	733.92	734.24	733.43	0.25	0.25	0.25

SCALE IN FEET 0 10 20 40

CALCULATED DLS
CHECKED MDW

PAVEMENT DETAILS

FRA–GOODALE STREET

KORDA / NEMETH ENGINEERING, INC.

REINFORCING STEEL LIST (EPOXY COATED)

MARK	NO.	LENGTH	TYPE	DIMENSIONS A	B	C
EA1001	94	15'-11"	7	14'-6"		
EB501	22	31'-4"	ST			
EB502	11	21'-5"	ST			
EB503	22	31'-4"	ST			
EB504	11	21'-5"	ST			
EC501	53	14'-6"	ST			
** ED501	15	0'-8"	ST			

NOTES:

REINFORCING STEEL SHOWN IS FOR ONE APPROACH SLAB & SHALL BE INCLUDED WITH ITEM 611 FOR PAYMENT.

CURBS AND DRILLED ANCHORS PER SUPP. SPEC. 852 SHALL BE INCLUDED WITH ITEM 611 FOR PAYMENT.

SEE SHEET 72/73 FOR REINFORCING STEEL BENDING DIAGRAMS AND NOTES.

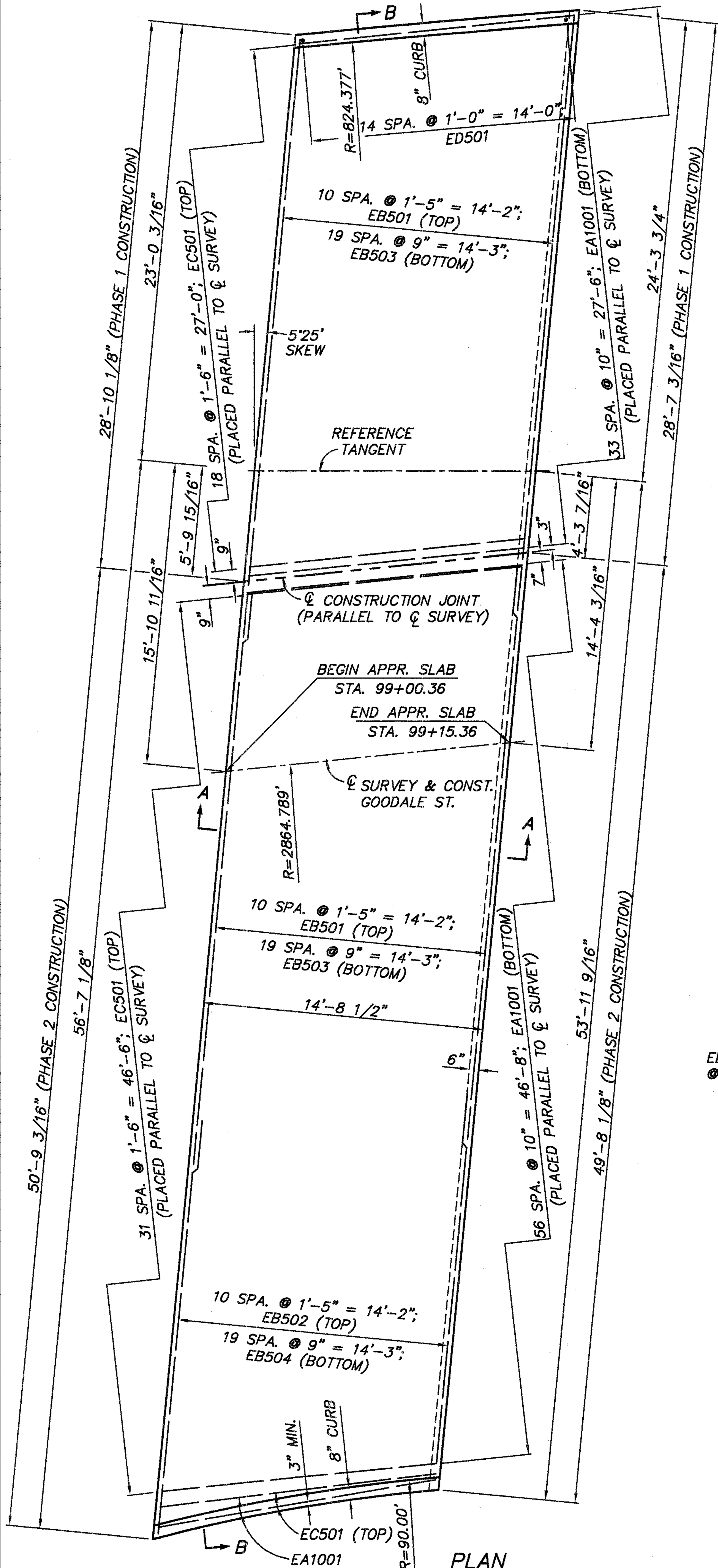
* ED801 BARS ARE INCLUDED WITH ITEM 509 FOR PAYMENT, SEE SHEETS 54/73 AND 55/73 FOR LOCATIONS.

FOR ADDITIONAL APPROACH SLAB DETAILS, SEE STD. DWG. AS-1-81.

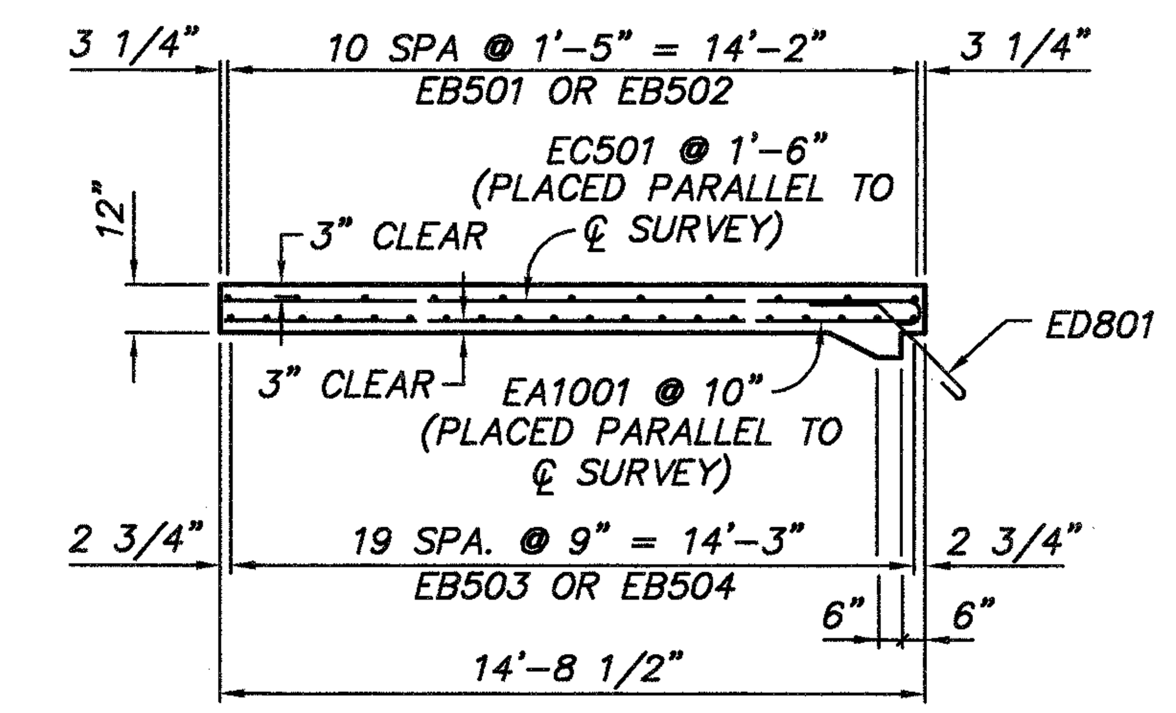
FOR DETAILS AT ABUTMENTS, SEE SHEETS 54/73 AND 55/73.

MIN. LAPS ~ #5 BARS = 2'-6"

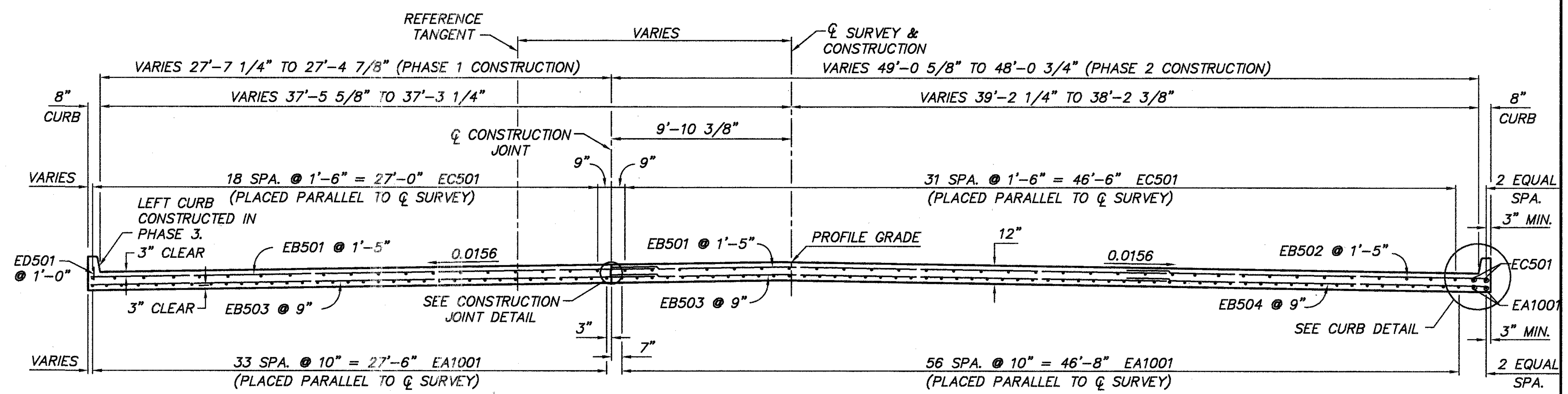
** LENGTH OF ED501 BARS SHOWN IS BASED UPON A DRILLED ANCHORING DEPTH OF 5"; IT SHALL BE MODIFIED ACCORDINGLY FOR THE SELECTED ANCHORING SYSTEM.



PLAN



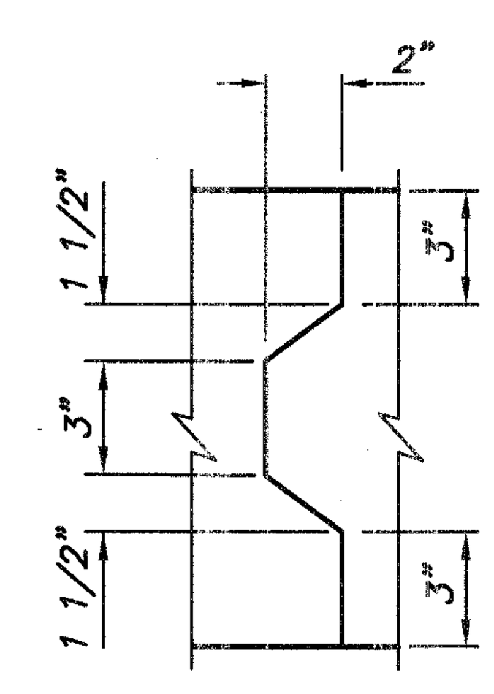
SECTION A-A



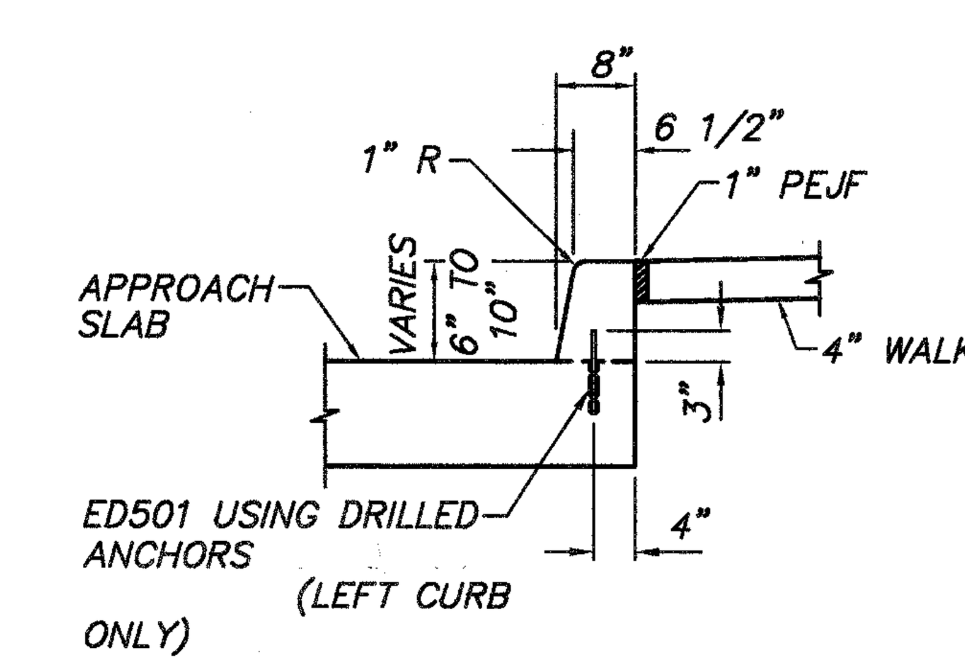
FIELD BEND EB501 & EB503 BARS AT ℄ SURVEY & CONSTRUCTION. INCLUDE WITH ITEM 611 FOR PAYMENT.

SECTION B-B

(NORMAL TO ℄ SURVEY & CONSTRUCTION)



CONSTRUCTION JOINT DETAIL



CURB DETAIL

KORDA/NEMETH ENGINEERING, INC. CONSULTING ENGINEERS

DESIGNED DAT	DRAWN DEB	REVIEWED RWE	DATE 5/10/94
CHECKED MTO	REVISED	STRUCTURE FILE NO. 2516144	

REAR APPROACH SLAB DETAILS

BRIDGE NO. FRA-315-0194 OVER S.R. 315 AND OLENTANGY RIVER

FRA-GOODALE STREET

31/73

REINFORCING STEEL LIST (EPOXY COATED)						
MARK	NO.	LENGTH	TYPE	DIMENSIONS A	B	C
EA1001	64	15'-11"	7	14'-6"		
EB505	11	27'-0"	ST			
EB506	11	28'-6"	ST			
EB507	20	27'-0"	ST			
EB508	20	28'-6"	ST			
EC501	37	14'-6"	ST			
** ED501	15	0'-8"	ST			

NOTES:

REINFORCING STEEL SHOWN IS FOR ONE APPROACH SLAB & SHALL BE INCLUDED WITH ITEM 611 FOR PAYMENT.

CURBS AND DRILLED ANCHORS SHALL BE INCLUDED WITH ITEM 611 FOR PAYMENT.

SEE SHEET 72/73 FOR REINFORCING STEEL BENDING DIAGRAMS AND NOTES.

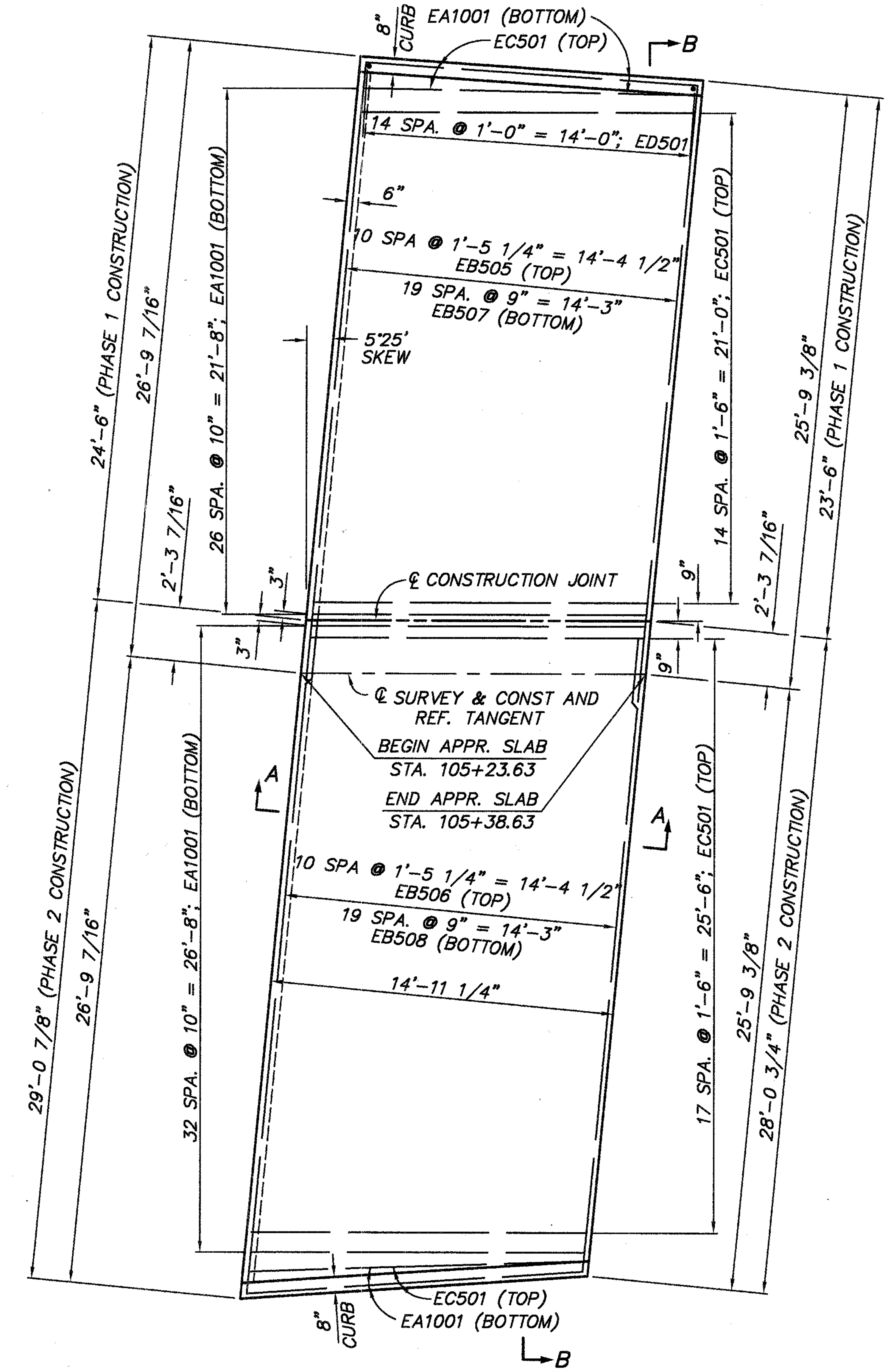
* ED801 BARS ARE INCLUDED WITH ITEM 509 FOR PAYMENT, SEE SHEETS 54/73 AND 55/73 FOR LOCATIONS.

FOR ADDITIONAL APPROACH SLAB DETAILS, SEE STD. DWG. AS-1-81.

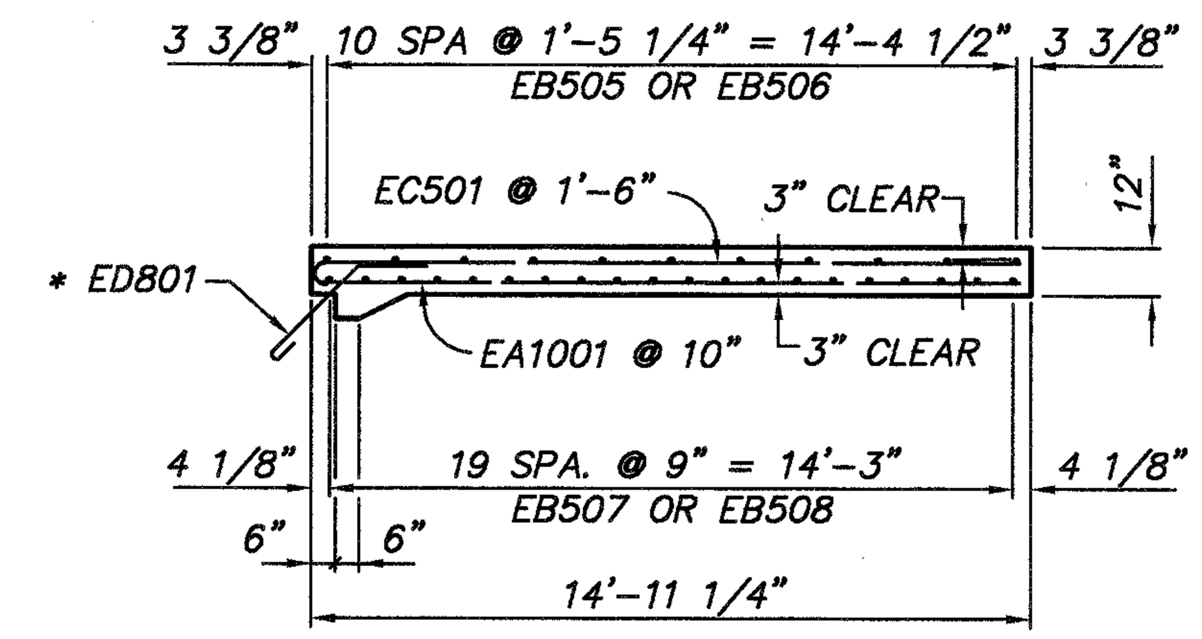
FOR DETAILS AT ABUTMENTS, SEE SHEETS 54/73 AND 55/73.

MIN. LAPS ~ #5 BARS = 2'-6"

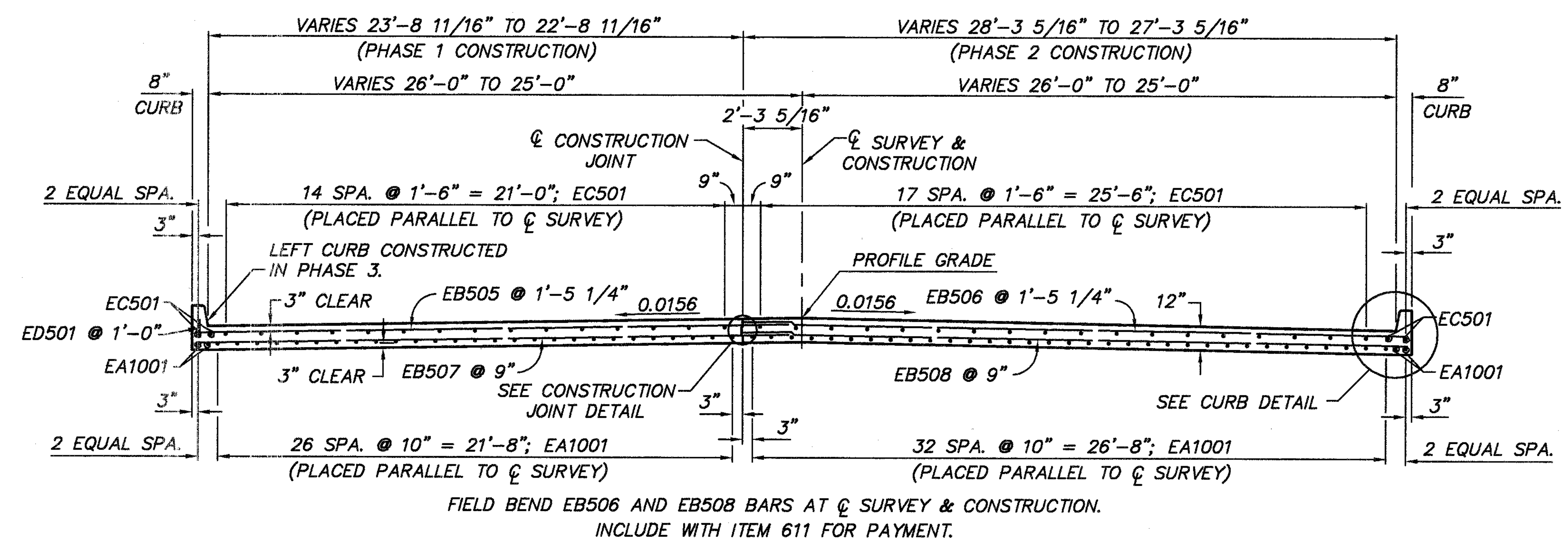
** LENGTH OF ED501 BARS SHOWN IS BASED UPON A DRILLED ANCHORING DEPTH OF 5"; IT SHALL BE MODIFIED ACCORDINGLY FOR THE SELECTED ANCHORING SYSTEM.



PLAN



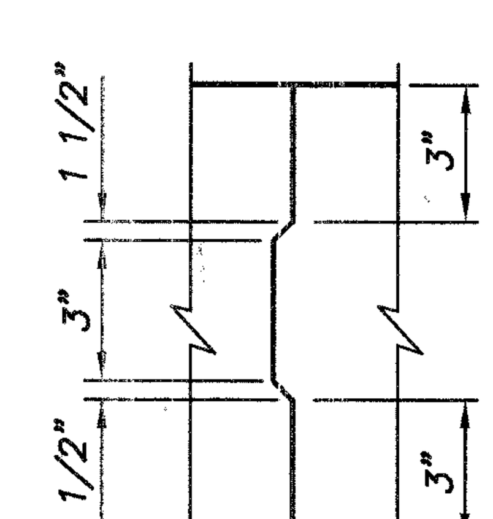
SECTION A–A



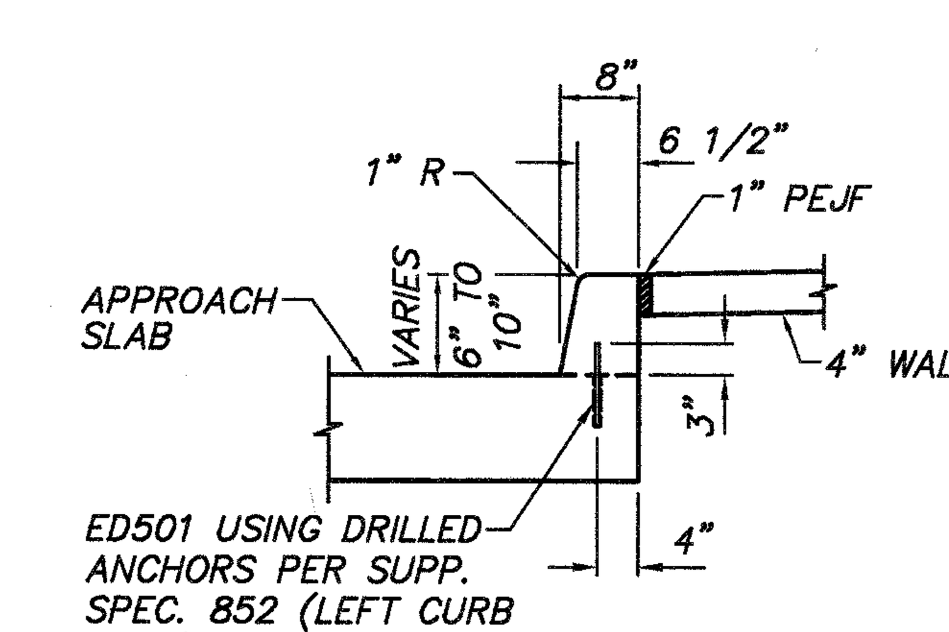
FIELD BEND EB506 AND EB508 BARS AT ℄ SURVEY & CONSTRUCTION. INCLUDE WITH ITEM 611 FOR PAYMENT.

SECTION B–B

(NORMAL TO ℄ SURVEY & CONST.)



CONSTRUCTION JOINT DETAIL



CURB DETAIL

KORDA/NEMETH ENGINEERING, INC. CONSULTING ENGINEERS

DESIGNED	DRAWN	REVIEWED	DATE
DAT	DB	RWE	5/10/94
CHECKED	REVISED	STRUCTURE FILE NO.	
MTO		2516144	

FORWARD APPROACH SLAB DETAILS

BRIDGE NO. FRA-315-0194 OVER S.R. 315 AND OLENTANGY RIVER

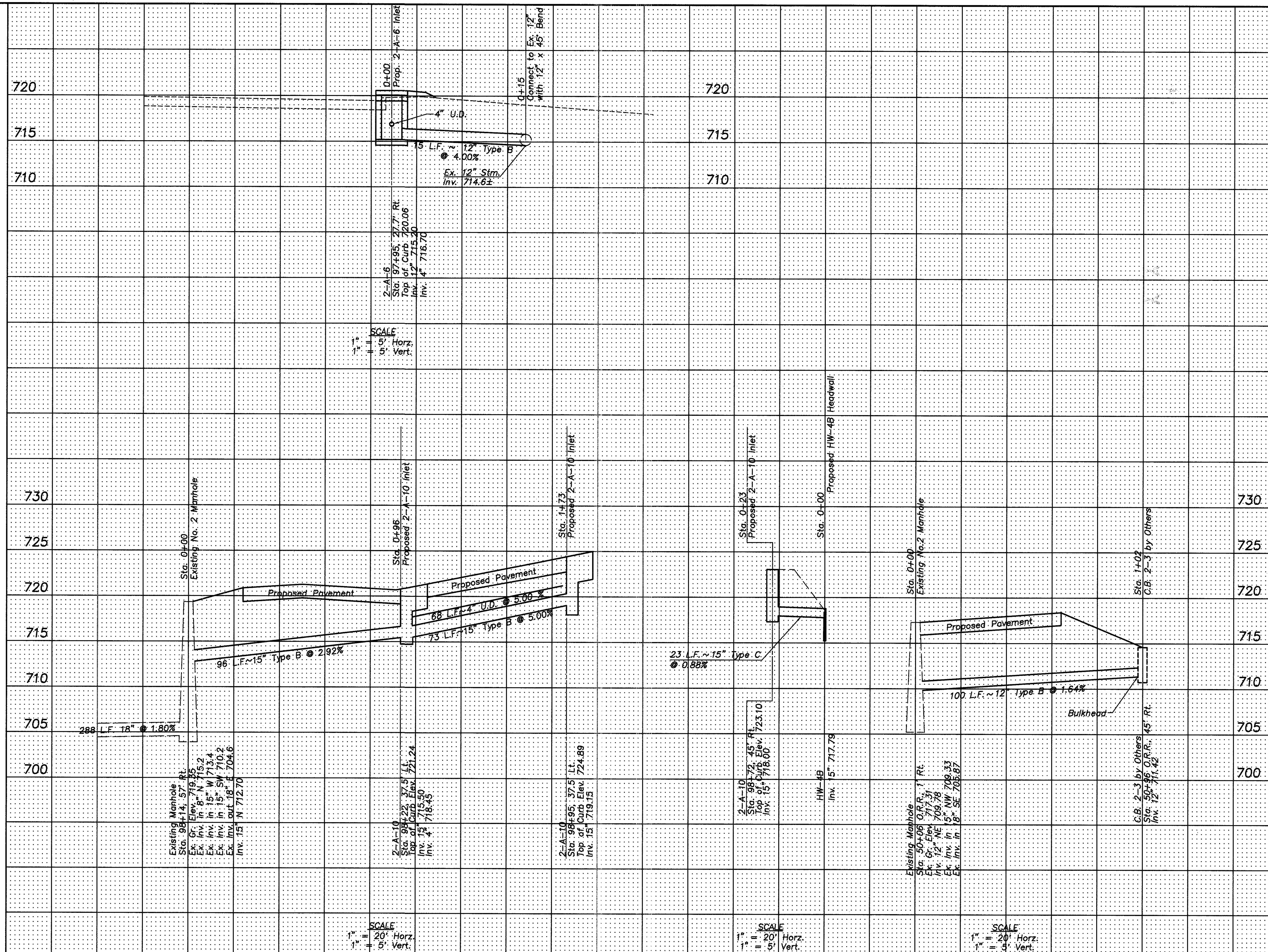
FRA-GOODALE STREET

KORDA / NEMETH ENGINEERING, INC.

0300–ST

DAVE BURNHEIMER G:\CIVILDWG\92024\92024S2.DWG DATE: OCT 27, 1994 TIME: 1:30 PM

/92024/92024S2



CALCULATED DLS
CHECKED MDW

STORM SEWER PROFILES

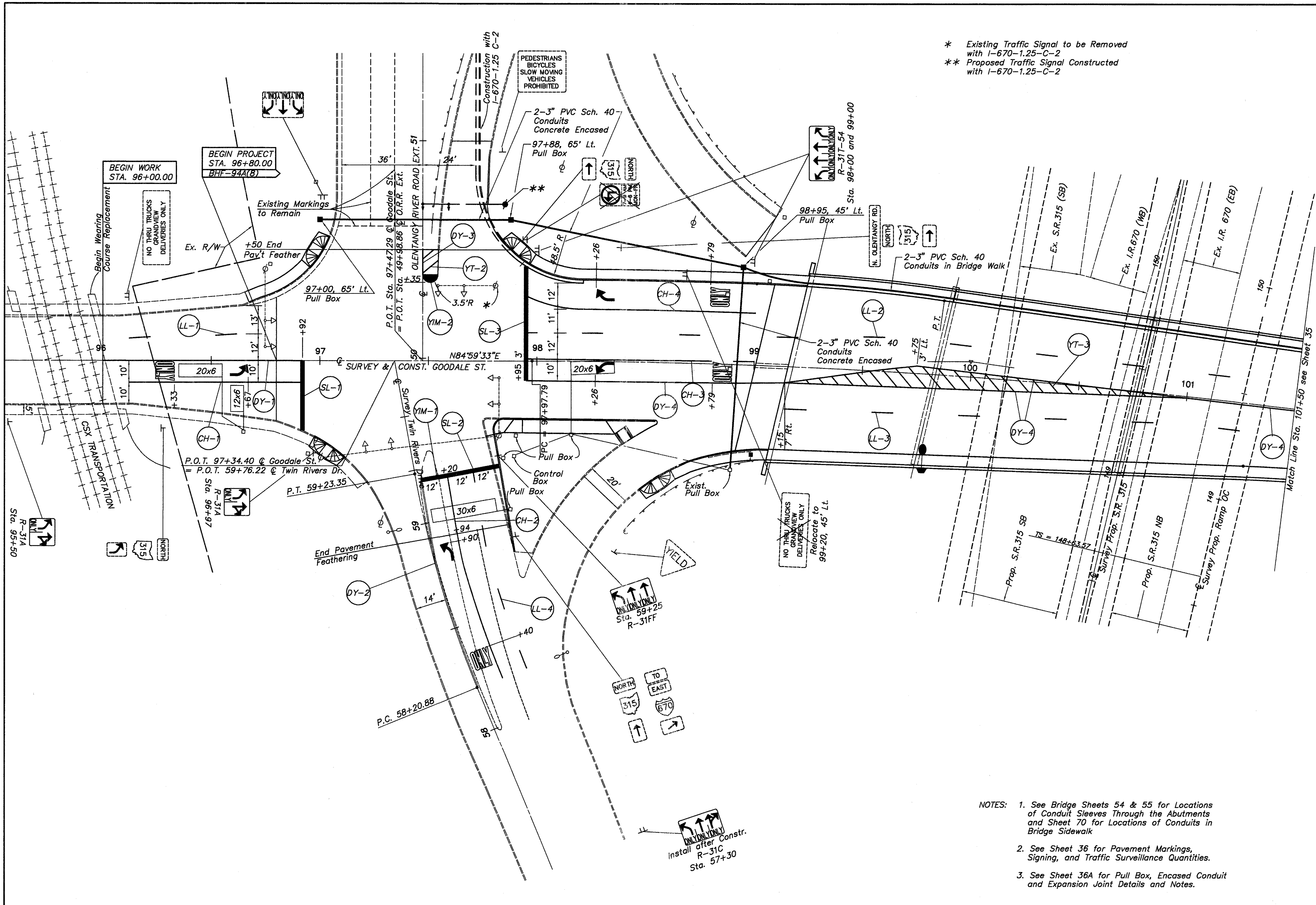
FRA-GOODALE STREET

33/73

M. STINEMAN G:\CIVILDWG\92024\92024S01.DWG DATE: OCT 31, 1994 TIME: 8:01 AM

KORDA / NEMETH ENGINEERING, INC.

0300-ST


BEGIN WORK STA. 96+00.00
BEGIN PROJECT STA. 96+80.00
BHF-94A(8)
Begin Wearing Course Replacement
NO THRU TRUCKS GRANDVIEW DELIVERIES ONLY
Ex. R/W
Existing Markings to Remain
+50 End Pav't Feather
97+00, 65' Lt. Pull Box
P.O.T. Sta. 97+47.29 ℄ Goodale St. = P.O.T. Sta. 49+98.86 ℄ O.R.R. Ext.
OLENTANGY RIVER ROAD EXT.
Construction with I-670-1.25 C-2
PEDESTRIANS BICYCLES SLOW MOVING VEHICLES PROHIBITED
2-3" PVC Sch. 40 Conduits Concrete Encased
97+88, 65' Lt. Pull Box
R-31T-54 Sta. 98+00 and 99+00
98+95, 45' Lt. Pull Box
N. OLENTANGY RD.
NORTH
315
2-3" PVC Sch. 40 Conduits in Bridge Walk
Ex. S.R.315 (SB)
Ex. I.R.670 (WB)
Ex. I.R. 670 (EB)
℄ SURVEY & CONST. GOODALE ST.
N84°59'33"E
2-3" PVC Sch. 40 Conduits Concrete Encased
Match Line Sta. 101+50 see Sheet 35
20x6
12x6
30x6
ONLY
CSX TRANSPORTATION
P.O.T. 97+34.40 ℄ Goodale St. = P.O.T. 59+76.22 ℄ Twin Rivers Dr.
P.T. 59+23.35
R-31A Sta. 96+97
R-31A Sta. 95+50
℄ Survey Twin Rivers Drive
PC = 97+97.79
Pull Box
Control Box
Pull Box
Exist. Pull Box
20'
End Pavement Feathering
P.C. 58+20.88
YIELD
Sta. 59+25 R-31FF
NO THRU TRUCKS GRANDVIEW DELIVERIES ONLY
Relocate to 99+20, 45' Lt.
TO EAST
670
Install after Constr. R-31C Sta. 57+30
Prop. S.R.315 SB
TS = 148+63.57
℄ Survey Prop. S.R. 315
Prop. S.R.315 NB
℄ Survey Prop. Ramp OC
LL-1
LL-2
LL-3
LL-4
DY-1
DY-2
DY-3
DY-4
YT-2
YT-3
YIM-1
YIM-2
SL-1
SL-2
SL-3
CH-1
CH-2
CH-3
CH-4
0 10 20 40
SCALE IN FEET

* Existing Traffic Signal to be Removed with I-670-1.25-C-2

** Proposed Traffic Signal Constructed with I-670-1.25-C-2

NOTES:

1. See Bridge Sheets 54 & 55 for Locations of Conduit Sleeves Through the Abutments and Sheet 70 for Locations of Conduits in Bridge Sidewalk
2. See Sheet 36 for Pavement Markings, Signing, and Traffic Surveillance Quantities.
3. See Sheet 36A for Pull Box, Encased Conduit and Expansion Joint Details and Notes.

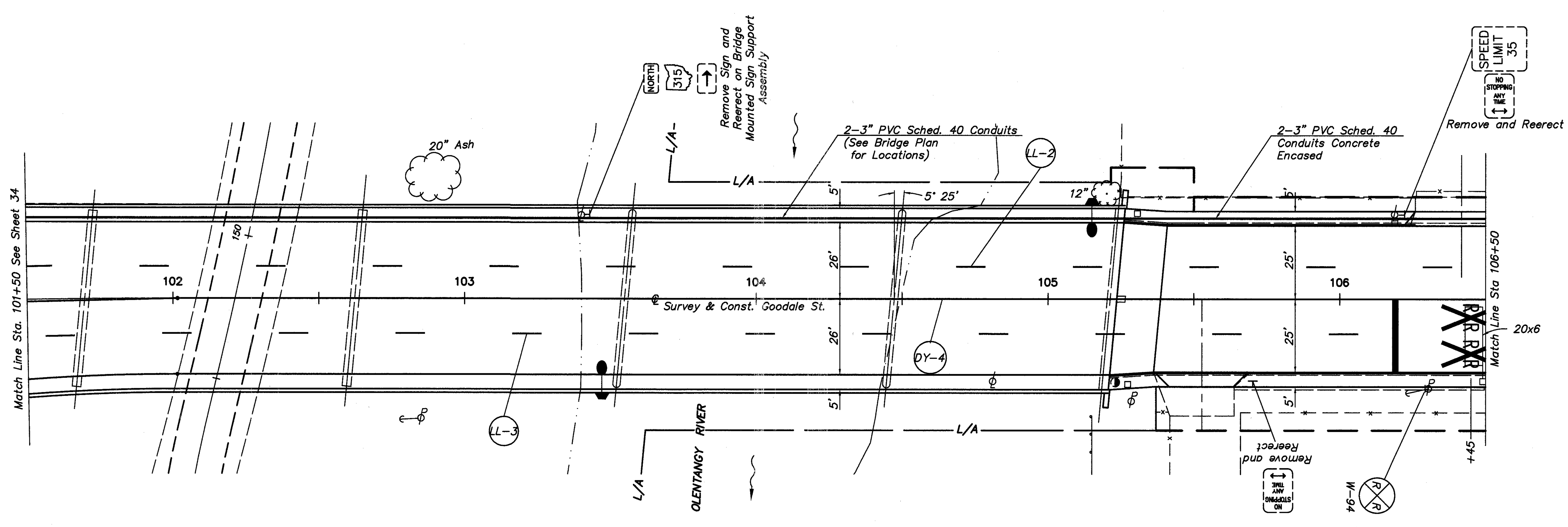
CALCULATED

CHECKED

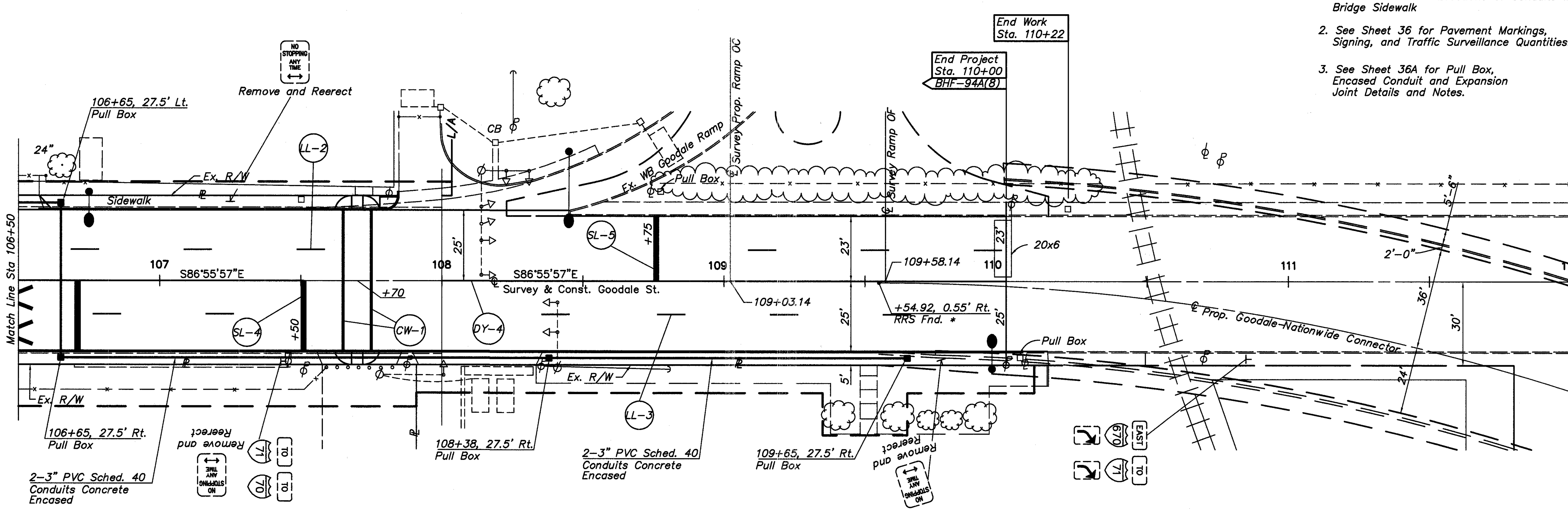
TRAFFIC CONTROL

FRA-GOODALE STREET

M. STINEMAN G:\CIVILDWG\92024\92024TC1.DWG DATE: OCT 27, 1994 TIME: 11:39 AM



NOTES:
1. See Bridge Sheets 54 & 55 for Locations of Conduit Sleeves Through the Abutments and Sheet 70 for Locations of Conduits in Bridge Sidewalk
2. See Sheet 36 for Pavement Markings, Signing, and Traffic Surveillance Quantities.
3. See Sheet 36A for Pull Box, Encased Conduit and Expansion Joint Details and Notes.



TRAFFIC CONTROL

FRA-GOODALE STREET

CALCULATED
CHECKED

SCALE IN FEET 0 25 50 100

35
73

KORDA / NEMETH ENGINEERING, INC.

0300-ST

M. STINEMAN G:\CIVILDWG\92024\92024TC2.DWG DATE: OCT 28, 1994 TIME: 11:19 AM

PAVEMENT MARKING SUB-SUMMARY

SHEET NO.	REFERENCE NO.	LOCATION	STATION FROM	STATION TO	SIDE	642 LANE LINE, TYPE 2 L.F.	RAILROAD SYMBOL MARKING, TYPE 2 EACH	CENTER LINE DOUBLE SOLID YELLOW, TYPE 2 L.F.	CHANNELIZING LINE TYPE 2 L.F.	ISLAND MARKING YELLOW, TYPE 2 S.F.	STOP LINE, TYPE 2 L.F.	LANE ARROW, TYPE 2 EACH	WORD "ONLY" ON PAVEMENT, TYPE 2 EACH	TRANSVERSE LINE YELLOW, TYPE 2 L.F.	CROSSWALK LINE, TYPE 2 L.F.
34	DY-1	GOODALE ST.	96+00	96+92	LT.			92							
34	DY-2	TWIN RIVERS DRIVE	57+95	59+20	RT.			103							
34	DY-3	O.R.R. EXT.	50+35	50+50	RT.			23							
34,35	DY-4	GOODALE ST.	97+95	110+00	℄			1390							
34	SL-1	GOODALE ST.	96+92		RT.						32				
34	SL-2	TWIN RIVERS DRIVE	59+20		RT.						37				
34	SL-3	GOODALE ST.	97+95		L. & R.						52				
35	SL-4	GOODALE ST.	107+50		RT.						25				
35	SL-5	GOODALE ST.	108+75		LT.						23				
34	LL-1	GOODALE ST.	96+12	96+92	LT.	80									
34,35	LL-2	GOODALE ST.	97+95	110+00	LT.	1205									
34,35	LL-3	GOODALE ST.	99+15	110+00	RT.	1085									
34	LL-4	TWIN RIVERS DR.				100									
34	CH-1	GOODALE ST.	96+12	96+92	RT.				80						
34	CH-2	TWIN RIVERS DR.	58+94	59+30	RT.				100						
34	CH-3	GOODALE ST.	97+95	99+00	LT.				105						
34	CH-4	GOODALE ST.	97+95	99+00	LT.				105						
35	CW-1	GOODALE ST.	107+70		RT.										100
34		GOODALE ST.	96+33		RT.								1		
34		GOODALE ST.	96+67		RT.							1			
34		TWIN RIVERS DR.	58+90		RT.							1			
34		TWIN RIVERS DR.	58+40		RT.								1		
34		GOODALE ST.	98+26		L. & R.							2			
34		GOODALE ST.	98+79		L. & R.								2		
35		GOODALE ST.	106+45		RT.		2								
34	YIM-1	TWIN RIVERS	59+20		RT.					4					
34	YIM-2	O.O.R. EXT.	50+35		RT.					20					
34	YT-1	TWIN RIVERS	57+95	59+20	RT.									220	
34	YT-2	O.O.R. EXT.	50+35	50+50	RT.									20	
34	YT-3	GOODALE ST.	99+15	101+00	L. & R.									180	
					SUBTOTAL	2470	2	1609	390	24	169	4	4	420	100
					MILES	0.47	–	0.30	–	–	–	–	–	–	–
TOTALS TO GENERAL SUMMARY						0.47	2	0.30	390	24	169	4	4	420	100

SIGNING SUB-SUMMARY

SHEET NO.	STATION	SIDE	630 SIGN CODE (NEW SIGNS)	SIGNS FLAT SHEET S.F	GROUND MOUNTED SUPPORT NO. 3 POST L.F.	REMOVAL OF GROUND MOUNTED SIGN & RE-ERECTION EACH	REMOVAL OF GROUND MOUNTED SIGN & DISPOSAL EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT & DISPOSAL EACH	SIGN SUPPORT ASSEMBLY, BRIDGE MOUNTED, TYPE I EACH	REMOVAL OF POLE MOUNTED SIGN & REERECTION EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED EACH
	GOODALE ST.										
34	95+50	RT.	R-31A	7.5	13						
34	96+97	RT.	R-31A	7.5	13						
34	97+95	LT.					1	1			
34	98+00	LT.	R-31T-54	11.25	13-13						
34	99+00	LT.	R-31T-54	11.25	13-13						
34	99+20	LT.			14-14	1		2			
35	103+40	LT.							1	1	
35	105+70	RT.			12.5	1		1			
35	106+20	LT.			12.5					2	
35	106+30	RT.	W-94	7.07							1
35	107+25	LT.			12.5	1		1			
35	107+45	RT.			14-14					5	
35	109+78	RT.			12.5	1		1			
	TWIN RIVERS DR.										
34	57+30	RT.	R-31C	10.00	13-13		1	2			
34	59+25	RT.	R-31FF	10.00	13						
TOTALS TO GENERAL SUMMARY				64.57	223	4	2	8	1	8	1

TRAFFIC SURVEILLANCE SUB-SUMMARY

LOCATION	SIDE	625 PULL BOX, 713.08, 48", AS PER PLAN EACH	625 * CONDUIT, 3", 713.07 L.F.	625 CONDUIT, 3" 713.07, AS PER PLAN, L.F.	632 LOOP DETECTOR TIE IN EACH	632 LOOP DETECTOR PAVEMENT CUTTING L.F.	632 LOOP DETECTOR WIRE TYPE E L.F.	253 PAVEMENT REPAIR, AS PER PLAN S.Y.	625 TRENCH, AS PER PLAN L.F.
GOODALE ST.									
96+55	RT.				1	70	140		
96+65	RT.				1	40	85		
98+15	RT.				1	75	130		
98+75	LT.				1	75	155		
97+00 TO 99+23	LT.	3		227				56	227
106+50	RT.				1	55	110		
110+02	LT.				1	55	110		
98+95	CROSSING			93					93
99+23 TO 105+27	LT.		608						
105+27 to 106+65	LT./RT.	2		193				22	193
106+65 TO 109+65	RT.	2		300					300
TWIN RIVERS DR.									
59+00	RT.					81	180		
TOTALS TO GENERAL SUMMARY		7	608	813	6	451	910	78	813

* TO BE PLACED IN BRIDGE WALK, INCLUDES EXPANSION FITTING (SEE DETAIL ON SHEET 36A)

CALCULATED MDW CHECKED JSS

TRAFFIC CONTROL AND SURVEILLANCE

FRA-GOODALE STREET

36 / 73

ITEM 625: CONDUIT,3",713.07, AS PER PLAN

MATERIAL CONDUIT – THE NON–METALLIC CONDUIT SHALL BE SCHEDULE 40 POLYVINYL CHLORIDE. IT SHALL BE DESIGNED TO FORM A SOUND, STRONG DUCT, FREE FROM DEFECTS. IT SHALL BE NON–MAGNETIC, RESISTANT TO CORROSIVE ACTION, UNAF–FECTED BY ELECTROLYSIS AND SHALL NOT SOFTEN, DEFORM OR DETERIORATE WHEN EXPOSED TO THE MAXIMUM SAFE OPERATING TEMPERATURE OF CABLES. THE INSIDE SURFACE OF THE CONDUIT SHALL BE SMOOTH ROUND, AND SHALL HAVE A 3" NOMINAL INSIDE DIAMETER.

COUPLINGS – THE COUPLINGS SHALL BE OF THE SAME MATERIAL AS THE CONDUIT, AND SHALL BE SUFFICIENTLY TIGHT TO PREVENT SILT OR CONCRETE FROM ENTERING THE CONDUIT. ALL COUPLINGS SHALL BE STRAIGHT – THRU (180°): NO ELBOWS.

SPACERS – PLASTIC BASE AND INTERMEDIATE TYPE FOR 3" CONDUIT.

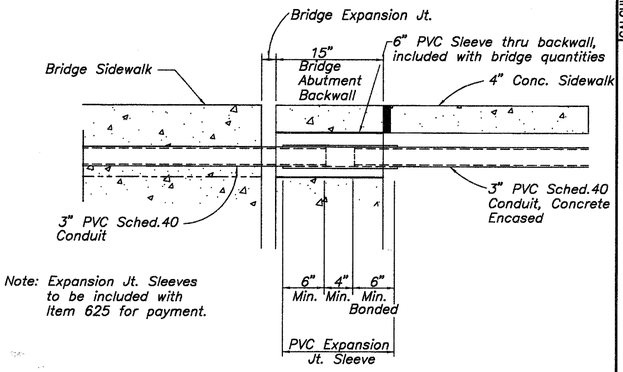
INSTALLATION

1. THE CONDUIT SHALL BE INSTALLED AS SHOWN ON DRAWINGS 34,35 AND 36A.
2. THE TRENCH SHALL BE DUG WIDE AND DEEP ENOUGH TO ACCOMMODATE THE CONDUIT AND CONCRETE ENVELOPE AS INDICATED ON THIS SHEET.

   EXCESS MATERIAL SHALL BE REMOVED FROM THE JOB SITE.
3. AFTER THE DUCT LINES ARE INSTALLED, A FLEXIBLE MANDREL NOT LESS THAN 12" LONG, HAVING A CROSS SECTION APPROXIMATELY 1/4" LESS THAN THE CONDUIT SHALL BE PULLED THROUGH EACH CONDUIT AFTER WHICH A STIFF OVERSIZE WIRE BRUSH SHALL BE PULLED THROUGH TO MAKE CERTAIN THERE ARE NO PARTICLES LEFT IN THE CONDUIT.
4. DUCTS SHALL BE INSTALLED AT A MINIMUM OF 24 INCHES BELOW GRADE.
5. THE TRENCH SHALL BE COMPACTED GRANULAR BACKFILL AS PER ITEM 304.
6. DURING CONSTRUCTION, THE COMPLETED AND UNCOMPLETED ENDS OF ALL DUCT SECTION SHALL BE CLOSED WITH TIGHT FITTING PLUGS TO PREVENT THE EN–TRANCE OF MUD OR FOREIGN MATERIAL INTO THE DUCT BORE.
7. CONDUITS SHALL BE INSTALLED BY A BUILT–UP METHOD BY LAYING THE DUCTS ON BASE SPACES AND USING PRECAST PLASTIC SPACERS. THE INDIVIDUAL DUCTS AND DUCT LAYERS SHALL BE TIED TOGETHER TO ONE ANOTHER WITH PIECES OF HEAVY TWINE (NOT WIRE). PRECAST PLASTIC SPACERS AT 5 FOOT INTERVALS SHALL BE USED TO SEPARATE THE CONDUITS AT A MINIMUM OF 2 INCHES APART. BOTTOM AND SIDE SPACE SHALL INSURE A FULL CONCRETE FLOW OF 3 INCH MINIMUM ENCASEMENT.
8. ENCASEMENT SHALL BE CLASS C CONCRETE.
9. WHERE CONDUITS CROSS OR PARALLEL NEW OR EXISTING CONDUITS, THEY SHALL BE SEPARATED BY A 2" LAYER OF LOOSE SAND.
10. THE CONTRACTOR SHALL EXPOSE AND VERIFY THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES IN THE PATH OF THE PROPOSED DUCT BANK. ADJUST–MENTS TO PLAN LOCATION AND/OR DEPTH OF THE DUCT BANK MUST BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT.

METHOD OF MEASUREMENT

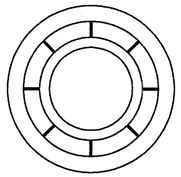
CONDUIT QUANTITY IS DETERMINED AS THE DISTANCE BETWEEN STATIONS SHOWN ON THE PLAN AND PROFILE SHEETS AND SHALL INCLUDE ALL EXCAVATION, GRANULAR BACK–FILL MATERIAL, COMPACTION, DISPOSAL OF SURPLUS MATERIAL, CONDUITS, ALL FITTINGS AND APPURTENANCES AND CONCRETE ENCASE–MENT.



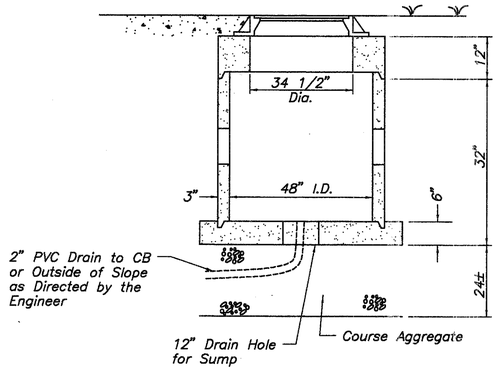
Note: Expansion Jt. Sleeves to be included with Item 625 for payment.

CONDUIT EXPANSION JOINT

"TRAFFIC" to be Cast in Lid



NEENAH R–1793–HL Wt. = 280

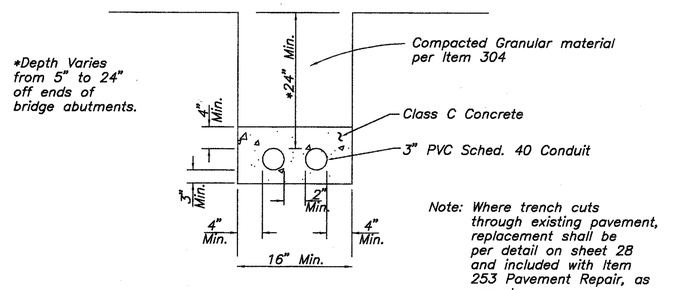


NOTES: Pull Boxes shall be drained with a 2" Conduit, 713.07, to the nearest curb and gutter inlet as shown on Plan Sheets 19–21. The cost of such drains shall be included in the Item 625 – Pull Box, 713.08, as per plan.

All traffic lids shall conform to the NEENAH Foundry Company catalog listing R–1793 Manhole Frame, Solid Lid or equal. The word "TRAFFIC" shall appear on lid.

All traffic boxes shall conform to Hartford Concrete Products, Inc., Type S or approved equal.

48" CONCRETE PULL BOX–DETAIL (ROUND)



Note: Where trench cuts through existing pavement, replacement shall be per detail on sheet 28 and included with Item 253 Pavement Repair, as per plan.

TRAFFIC CONDUIT ENCASEMENT AND TRENCH DETAIL

CALCULATED MDW CHECKED JSS

TRAFFIC SURVEILLANCE NOTES & DETAILS

FRA–GOODALE STREET

36A / 73

GENERAL NOTES

POWER SERVICE

THE POWER SUPPLYING AGENCY FOR THIS PROJECT IS:
CITY OF COLUMBUS, DIVISION OF ELECTRICITY

ELECTRICAL ENERGY FROM EXISTNG POWER SERVICES SHALL CONTINUE TO BE CHARGED TO THE MAINTAINING AGENCY. THE CONTRACTOR SHALL PAY ELECTRICAL ENERGY CHARGES FOR NEW POWER SERVICES ESTABLISHED BY THIS PROJECT. AFTER ACCEPTANCE OF THE LIGHTING, POWER SERVICE ELECTRICAL ENERGY ACCOUNTS SHALL BE TRANSFERRED TO THE MAINTAINING AGENCIES NOTED IN THE PLANS.

THIS SHALL INCLUDE NEW POWER SERVICE ESTABLISHED BY THIS PROJECT AS WELL AS REASSIGNMENT OF EXISTING SERVICE DUE TO WORK PERFORMED BY THIS PROJECT.

THE MAINTAINING AGENCY FOR NEW POWER SERVICE ACCOUNTS ESTABLISHED BY THIS PROJECT IS THE CITY OF COLUMBUS, DIVISION OF ELECTRICITY

UTILITY COMPANIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

ELECTRIC	COLUMBUS SOUTHERN POWER 215 N. FRONT STREET COLUMBUS, OHIO 43215 (614) 464-7941
TELEPHONE	AMERITECH INC. 150 E. GAY STREET COLUMBUS, OHIO 43215 (614) 223-5123
WATER	CITY OF COLUMBUS, DIVISION OF WATER 910 DUBLIN ROAD COLUMBUS, OHIO 43215 (614) 645-7788
GAS	COLUMBIA GAS CO. 920 W. GOODALE STREET COLUMBUS, OHIO 43212 (614) 460-2082
ELECTRIC	CITY OF COLUMBUS, DIVISION OF ELECTRICITY 910 DUBLIN ROAD COLUMBUS, OHIO 43215 (614) 645-8371
SANITARY SEWERS	CITY OF COLUMBUS DIVISION OF SEWERAGE AND DRAINAGE 910 DUBLIN ROAD COLUMBUS, OHIO 43215 (614) 645-7175
TRAFFIC	CITY OF COLUMBUS DIVISION OF TRAFFIC ENGINEERING 109 N. FRONT STREET COLUMBUS, OHIO 43215 (614) 645-7393

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

UNDERGROUND UTILITIES

THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS HAVE BEEN OBTAINED BY DILIGENT FIELD CHECKS AND SEARCHES OF AVAILABLE RECORDS. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT, BUT THE STATE OF OHIO AND CONSULTING ENGINEER MAKE NO GUARANTEES AS TO THEIR ACCURACY OR COMPLETENESS. REFER TO THE RIGHT OF WAY PLANS FOR ALL OTHER UTILITIES IN THE VINCINITY OF THIS PROJECT.

ALL UNDERGROUND UTILITIES, WATER, SEWER, TELEPHONE, GAS, TRAFFIC CONTROL, ETC. NEAR PROPOSED LIGHT POLES, PULL BOXES, ETC. SHALL BE STAKED BY THAT UTILITY COMPANY BEFORE CONSTRUCTION BEGINS.

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 80 LINEAR FEET OF ITEM 603 "4 INCH CONDUIT TYPE E" IS INCLUDED IN THE LIGHTING GENERAL SUMMARY FOR THIS PURPOSE.

ITEM 713.14 – LAMPS

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

ITEM 625 – 713.11 LUMINAIRES

STYLE B LUMINAIRES SHALL HAVE SINGLE RATED, 480 VOLT, 310 WATT, INTEGRAL REGULATOR BALLASTS FOR USE WITH HIGH PRESSURE SODIUM LAMPS AND SHALL BE GENERAL ELECTRIC M400, CROUSE HINDS OVM, AMERICAN 25/26, OR EQUAL APPROVED BY THE ENGINEER.

PADLOCKS AND KEYS

PADLOCKS FURNISHED SHALL BE EITHER BRASS OR BRONZE, EQUAL TO NO. 4BKA OR WILSON BOHANNAN 660A, AND SHALL BE KEYED IN ACCORDANCE WITH SPECIFICATION 631.08. PAYMENT SHALL BE INCLUDED IN THE BID FOR THE ITEM(S) BEING LOCKED.

ITEM 202 – LIGHT POLE REMOVED

THIS ITEM SHALL INCLUDE REMOVING AND DISPOSING OF THE LIGHT POLE, BRACKET ARM, BASE AND POLE AND BRACKET WIRING.

PAYMENT SHALL BE PER EACH ITEM 202 – "LIGHT POLE REMOVED".

ITEM 202 – LIGHT POLE FOUNDATION REMOVED, AS PER PLAN

THIS ITEM SHALL INCLUDE REMOVING THE LIGHT POLE CONCRETE FOUNDATION AND INTEGRAL CONCRETE PULL BOX TO A DEPTH OF ONE FOOT (1') BELOW GROUND LEVEL, TWO FEET (2') BELOW GROUND LEVEL WHERE IT WOULD INTERFERE WITH PROPOSED TRENCHING AND THREE FEET (3') BELOW GROUND LEVEL WHERE THE FOUNDATION IS TO BE REPLACED BY A PULL BOX, AND RESTORING THE DISTURBED AREA.

PAYMENT SHALL BE PER EACH ITEM 202 – "LIGHT POLE FOUNDATION REMOVED, AS PER PLAN".

ITEM 202 – PULL BOX REMOVED

THIS ITEM SHALL INCLUDE REMOVING THE PULLBOX TO ONE FOOT (1') BELOW THE GROUND LEVEL [THREE FEET (3') BELOW THE GROUND LEVEL WHERE PULL BOX IS TO BE REPLACED WITH A NEW CONCRETE PULL BOX] AND RESTORING THE DISTURED AREA. WHERE A PULLBOX IS TO BE REPLACED WITH A NEW CONCRETE PULL BOX, IT IS THE INTENT OF THIS NOTE TO CUT ALL CONDUITS IN A NEAT FASHION IN ORDER TO REUSE THE EXISTING CONDUITS IN PLACE. CARE SHALL BE TAKEN NOT TO DAMAGE EXISITNG CIRCUIT CONDUCTORS IF THEY ARE TO BE REUSED.

PAYMENT SHALL BE PER EACH ITEM 202 – "PULL BOX REMOVED".

ITEM SPECIAL – DISCONNECT EXISTING CIRCUIT

THIS ITEM OF WORK SHALL CONSIST OF THE DISCONNECTION OF AN EXISTING LIGHT CIRCUIT AT A PULL BOX.

DISCONNECTION AT A PULL BOX SHALL INVOLVE CUTTING THE EXISTING CIRCUIT AND AS SHOWN ON PLANS. ANY CABLE THAT IS TO BE ABANDONED SHALL BE TERMINATED IN A MANNER SUCH THAT NO CABLE IS LEFT REMAINING IN THE PULL BOX. ANY CABLE THAT IS TO BE REUSED SHALL BE CUT IN A MANNER SO THAT THERE IS SUFFICIENT LENGTH OF CABLE LEFT FOR RECONNECTION.

CONNECTOR KITS SHALL BE PAID FOR SEPARATELY UNDER EACH ITEM 625 "CABLE SPLICE KIT".

PAYMENT WILL BE MADE AT THE UNIT BID PROVIDED FOR EACH ITEM SPECIAL "DISCONNECT EXISTING CIRCUIT" AND SHALL BE FULL COMPENSATION INCLUDING ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THE WORK IN A SATISFACTORY WORKMANLIKE MANNER.

ITEM 202 – LUMINAIRE REMOVED

THIS ITEM OF WORK SHALL CONSIST OF THE REMOVAL OF THE EXISTING LUMINAIRE FOR DISPOSAL BY CONTRACTOR OFF OF PROJECT SITE.

PAYMENT SHALL BE PER EACH ITEM 202 – "LUMINAIRE REMOVED".

ITEM 625 – POWER SERVICE

POWER SERVICE EQUIPMENT SHALL BE INSTALLED AS SPECIFIED IN THE ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS AND AS DETAILED IN THESE PLANS. ENCLOSURE TYPES SHALL BE AS PER STANDARD CONSTRUCTION DRAWING HL-40.10. THE CONTRACTOR SHALL PAY ANY UTILITY COMPANY FEES ASSOCIATED WITH THE INSTALLATION AND REARANGEMENT OF POWER COMPANY EQUIPMENT NEEDED TO ESTABLISH A 480 OR 120/240 VOLT ELECTRICAL SERVICE AS SPECIFIED HEREIN.

CONDUIT ON STRUCTURES

EXPANSION FITTINGS FOR CONDUIT ON STRUCTURES SHALL BE OZ TYPE AX, SPRING CITY TYPE AF, APPLETON TYPE XJ-4, OR EQUAL APPROVED BY THE ENGINEER FOR BRIDGE NO.

ITEM 625 – LIGHT POLE ANCHOR L-BOLTS, AS PER PLAN

THIS ITEM SHALL CONSIST OF PROVIDING LIGHT POLE ANCHOR L-BOLTS FOR LIGHT POLES MOUNTED ON STRUCTURES AS PER TABLE NO. 4 ON STANDARD CONSTRUCTION DRAWING HL-10.13. ANCHOR BOLTS THAT ARE 40 INCHES LONG SHALL INCLUDE A 4 INCH BEND AND 48 INCH LONG ANCHOR BOLTS SHALL INCLUDE A 6 INCH BEND. ANCHOR BOLTS SHALL BE PROVIDED WITH NUTS.

PAYMENT FOR THIS ITEM SHALL BE PER EACH "ITEM 625 – LIGHT POLE ANCHOR L-BOLTS, AS PER PLAN" AND SHALL INCLUDE ALL EQUIPMENT, LABOR AND MATERIALS NECESSARY TO PROVIDE LIGHT POLE ANCHOR BOLTS AS SPECIFIED HEREIN.

ITEM SPECIAL – MAINTAIN EXISTING LIGHTING

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 HEREIN.

BEFORE ANY WORK IS STARTED IN THE IMMEDIATE VICINITY OF ANY EXISTING LIGHTING CIRCUITS, REPRESENTATIVES 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 HEREIN.

WHEN THE EXISTING SYSTEM IS IN 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.

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 PERTINENT INFORMATION. THE TEMPORARY LIGHTING SHALL PROVIDE AN AVERAGE INITIAL INTENSITY OF 1.2 FOOTCANDLES 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 CONDUCTOR CLEARANCE SHALL BE 20 FEET. TEMPORARY OVERHEAD CONSTRUCTION SHALL NOT BE LESS THAN GRADE "A" FOR STRENGTH REQUIREMENT 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 BREAKAWAY 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 "MAINTAIN EXISTING LIGHTING" SHALL INCLUDE PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIALS, AND INCIDENTALS NECESSARY TO MAINTAIN THE EXISTING LIGHTING AS SPECIFIED HEREIN.

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 AFORMENTIONED INSPECTION AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO PROVIDE A REPLACEMENT FOR SUCH UNIT. AN ESTIMATED QUANTITY OF ONE IS INCLUDED IN THE LIGHTING GENERAL SUMMARY FOR THIS PURPOSE.

ITEM SPECIAL – RECONNECT EXISTING LIGHT POLE

THIS ITEM OF WORK CHANGES THE WIRING OF EACH LIGHT POLE FROM A 480 VOLT TWO WIRE UNGROUNDED POLE TO A 480 VOLT TWO WIRE GROUNDED POLE.

FIRST, DISCONNECT AND REPLACE ONE TYPE II FUSED CONNECTOR KIT WITH A TYPE III UNFUSED CONNECTOR KIT TO BE CONNECTED TO THE GROUNDED NEUTRAL LINES COMING INTO THE LIGHT POLE, AS SHOWN ON STANDARD CONSTRUCTION DRAWINGS.

SECOND, CONNECT THE GROUNDED POLE AND BRACKET CABLE TO THE CABLE THAT CONNECTS THE POLE TO THE GROUND ROD, WITH A COMPRESSION CONNECTOR AS SHOWN ON STANDARD CONSTRUCTION DRAWINGS.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID FOR EACH "ITEM SPECIAL-RECONNECT EXISTING LIGHT POLE" WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO PERFORM THIS WORK IN A SATISFACTORY WORKMANLIKE MANNER.

CALCULATED RFG
CHECKED GAP

LIGHTING GENERAL NOTES

FRA-GOODALE STREET

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GENERAL SUMMARY

LIGHTING QUANTITIES

1 of 1

SHEET NUMBER		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
37	39					
	5	202	75300	5	EACH	PULL BOX REMOVED
	8	202	75400	8	EACH	LIGHT POLE REMOVED
	4	202	75501	4	EACH	LIGHT POLE FOUNDATION REMOVED, AS PER PLAN
	8	202	75506	8	EACH	LUMINAIRE REMOVED
80		603	00400	80	LIN. FT.	4 INCH CONDUIT, TYPE E
	7	625	00500	7	EACH	CONNECTOR KIT, TYPE II
	7	625	00600	7	EACH	CONNECTOR KIT, TYPE III
	10	625	01500	10	EACH	CABLE SPLICING KIT
	2	625	06000	2	EACH	LIGHT POLE, DESIGN AT6B41.7
	1	625	06300	1	EACH	LIGHT POLE, DESIGN AT12B41.7
	4	625	05000	4	EACH	LIGHT POLE, DESIGN A6B40
	3	625	14100	3	EACH	LIGHT POLE FOUNDATION, 24" X 8' DEEP
	16	625	10601	16	EACH	LIGHT POLE ANCHOR L-BOLTS, AS PER PLAN
	3092	625	23200	3092	LIN. FT.	NO. 4 AWG, 5000 VOLT DISTRIBUTION CABLE
	668	625	23400	668	LIN. FT.	NO. 10 AWG POLE AND BRACKET CABLE
	676	625	25400	676	LIN. FT.	CONDUIT, 2", 713.04
	615	625	25500	615	LIN. FT.	CONDUIT, 3", 713.04
	120	625	25900	120	LIN. FT.	CONDUIT, JACKED OR DRILLED UNDER PAVEMENT, 3",
	7	625	26250	7	EACH	LUMINAIRE, CONVENTIONAL, STYLE B, TYPE III, 310 WATT, HPS, 480 VOLT, AS PER PLAN
	305	625	29002	305	LIN. FT.	TRENCH, 24" DEEP
	300	625	29600	300	LIN. FT.	TRENCH IN PAVED AREA, TYPE B
	4	625	30700	4	EACH	PULL BOX, 713.08, 18"
	4	625	29920	4	EACH	STRUCTURE JUNCTION BOX
	3	625	32000	3	EACH	GROUND ROD
	1	625	33000	1	EACH	STRUCTURE GROUNDING SYSTEM
	1	625	34000	1	EACH	POWER SERVICE
LUMP		625	38000	LUMP		HIGH VOLTAGE TEST
LUMP		SPECIAL	62540000	LUMP		MAINTAIN EXISTING LIGHTING
1		SPECIAL	62540010	1	EACH	REPLACEMENT OF EXISTING LIGHTING UNIT
	2	SPECIAL	62540020	2	EACH	DISCONNECT EXISTING CIRCUIT
	5	SPECIAL	62598000	5	EACH	*RECONNECT EXISTING LIGHT POLE * LIGHTING, MISC.:

CALCULATED RFG
CHECKED GAP

LIGHTING GENERAL SUMMARY

FRA-GOODALE STREET

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LIGHTING QUANTITIES SUB-SUMMARY

FRA-GOODALE STREET

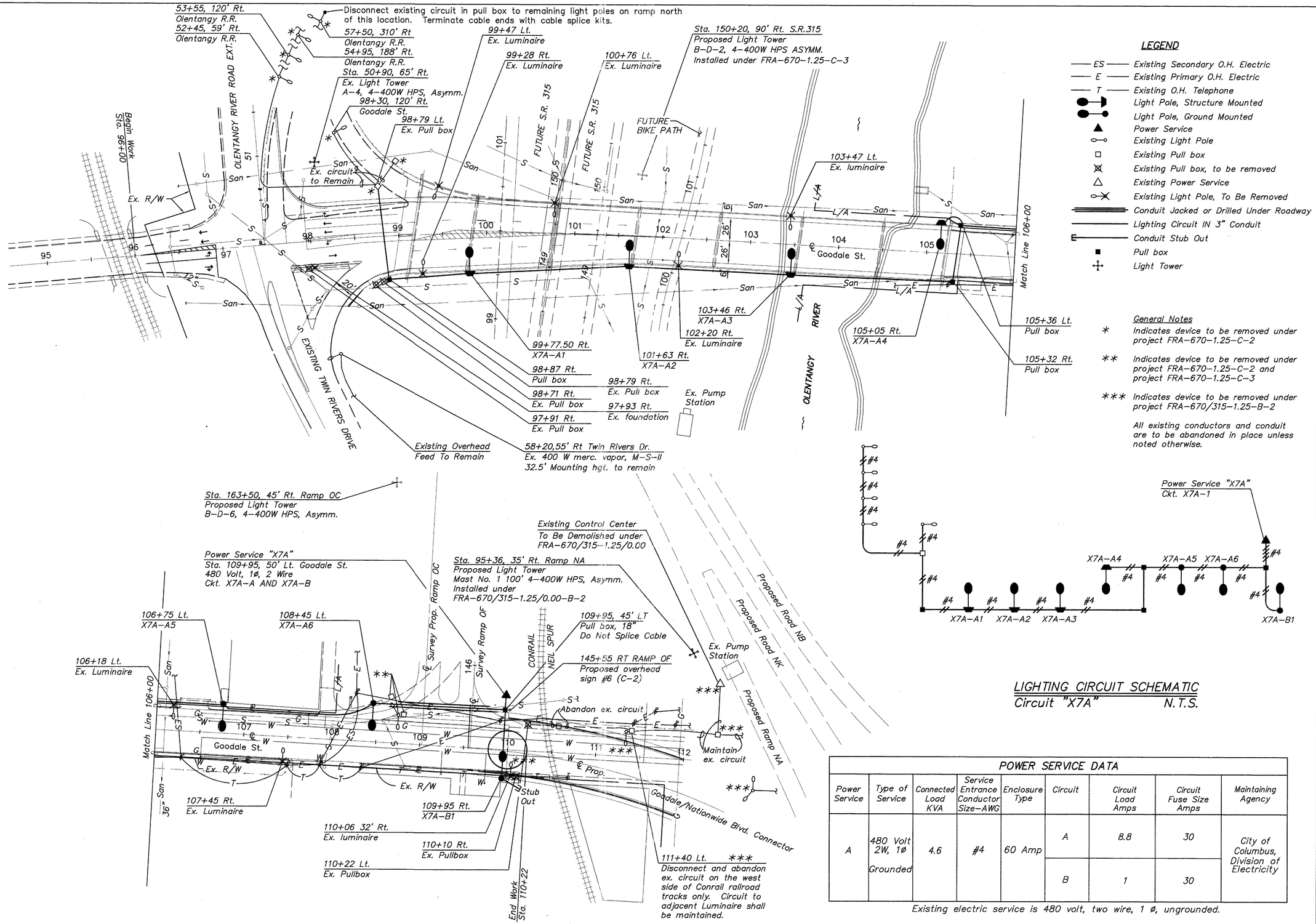
STATION				ITEM 625																								ITEM SPECIAL			ITEM 625							
FROM -OR- AT	TO	LOCATION	SIDE	LIGHT POLE REMOVED	LIGHT POLE FOUNDATION REMOVED, AS PER PLAN	LUMINAIRE REMOVED	PULL BOX REMOVED	LIGHT POLE DESIGN A6B40	LIGHT POLE DESIGN AT6B41.7	LIGHT POLE DESIGN AT12B41.7		LUMINAIRE, CONVENTIONAL, STYLE B, TYPE III, 310 WATT, HPS, 480 VOLT, AS PER PLAN	LIGHT POLE FOUNDATION, 24" X 8' DEEP	PULL BOX, 713.08, 18"		LIGHT POLE ANCHOR L-BOLTS, AS PER PLAN	STRUCTURE JUNCTION BOX	CONDUIT, 2", 713.04	CONDUIT, 3", 713.04	GROUND ROD	STRUCTURE GROUNDING SYSTEM	TRENCH, 24" DEEP	TRENCH IN PAVED AREA, TYPE B		NO. 10 AWG POLE AND BRACKET CABLE	NO. 4 AWG, 5000 VOLT DISTRIBUTION CABLE		RECONNECT EXISTING LIGHT POLE	DISCONNECT EXISTING CIRCUIT		CONNECTOR KIT TYPE II	CONNECTOR KIT TYPE III	CABLE SPLICING KIT		CONDUIT, JACKED OR DRILLED UNDER PAVEMENT, 3"	POWER SERVICE		
				EA.	EA.	EA.	EA.	EA.	EA.	EA.		EA.	EA.	EA.		EA.	EA.	L.F.	L.F.	EA.	EA.	L.F.	L.F.		L.F.	L.F.		EA.	EA.		EA.		EA.		L.F.	EA.		
97+91		GOODALE ST	RT				1																															
97+93		GOODALE ST	RT		1																																	
98+71		GOODALE ST	RT				1																															
98+79		GOODALE ST	RT				1																															
99+28		GOODALE ST	RT	1		1																																
102+20		GOODALE ST	RT	1		1																																
107+45		GOODALE ST	RT	1	1	1																																
110+06		GOODALE ST	RT	1	1	1																																
110+10		GOODALE ST	RT				1																															
99+47		GOODALE ST	LT	1		1																																
100+76		GOODALE ST	LT	1		1																																
103+47		GOODALE ST	LT	1		1																																
106+18		GOODALE ST	LT	1	1	1																																
110+22		GOODALE ST	LT				1																															
98+79		GOODALE ST	LT																														2					
98+79 LT	98+87	GOODALE ST	LT/RT																120			45	75			260												
98+87		GOODALE ST	RT											1																			2					
98+87	99+77.50	GOODALE ST	RT															91				20				202												
99+77.50		GOODALE ST	RT					1				1				4	1				1				92						1	1						
99+77.50	101+63	GOODALE ST	RT															185								390												
101+63		GOODALE ST	RT					1				1				4	1								92						1	1						
101+63	103+46	GOODALE ST	RT															183								386												
103+46		GOODALE ST	RT					1				1				4	1								92						1	1						
103+46	105+32	GOODALE ST	RT															186								392												
105+32		GOODALE ST	RT											1																			2					
105+32 RT	105+36 LT	GOODALE ST	RT/LT																63				63			146												
105+05 LT		GOODALE ST	LT					1				1				4	1								92						1	1						
105+05	105+36	GOODALE ST	LT															31								82												
105+36		GOODALE ST	LT											1																			2					
105+36	106+75	GOODALE ST	LT																139			107	32			298												
106+75		GOODALE ST	LT						1			1	1							1					96						1	1						
106+75	108+45	GOODALE ST	LT																170			105	65			360												
108+45		GOODALE ST	LT							1		1	1							1					108						1	1						
108+45	109+95 45' LT	GOODALE ST	LT																30							320									120			
109+95 45' LT		GOODALE ST	LT											1																								
109+95 45' LT	109+95 50' LT	GOODALE ST	LT																5			5				60												
109+95 50' LT		GOODALE ST	LT																																	1		
109+95 45' LT	109+95 RT	GOODALE ST	LT/RT																88			23	65			196												
109+95 RT		GOODALE ST	RT						1			1	1							1					96						1	1						
111+40 LT		GOODALE ST	LT																										1									
52+45 59' RT		OLENTANGY R.R.	RT																									1										
53+55 120' RT		OLENTANGY R.R.	RT																									1										
54+95 188' RT		OLENTANGY R.R.	RT																									1										
57+50 310' RT		OLENTANGY R.R.	RT																									1	1				2					
98+30 120' LT		GOODALE ST	LT																									1										
SHEET TOTAL				8	4	8	5	4	2	1		7	3	4		16	4	676	615	3	1	305	300		668	3092		5	2		7	7	10		120	1		

CALCULATED RFG
CHECKED GAP

LIGHTING SUB-SUMMARY

FRA-GOODALE STREET

KORDA/NEMETH ENGINEERING, INC.



LEGEND

- ES — Existing Secondary O.H. Electric
- E — Existing Primary O.H. Electric
- T — Existing O.H. Telephone
- Light Pole, Structure Mounted
- Light Pole, Ground Mounted
- Power Service
- Existing Light Pole
- Existing Pull box
- Existing Pull box, to be removed
- Existing Power Service
- Existing Light Pole, To Be Removed
- Conduit Jacked or Drilled Under Roadway
- Lighting Circuit IN 3" Conduit
- Conduit Stub Out
- Pull box
- Light Tower

SCALE IN FEET: 0, 25, 50, 100

CALCULATED/RFG

CHECKED/GAP

General Notes

* Indicates device to be removed under project FRA-670-1.25-C-2

** Indicates device to be removed under project FRA-670-1.25-C-2 and project FRA-670-1.25-C-3

*** Indicates device to be removed under project FRA-670/315-1.25-B-2

All existing conductors and conduit are to be abandoned in place unless noted otherwise.

LIGHTING CIRCUIT SCHEMATIC

Circuit "X7A" N.T.S.

POWER SERVICE DATA

Power Service	Type of Service	Connected Load KVA	Service Entrance Conductor Size-AWG	Enclosure Type	Circuit	Circuit Load Amps	Circuit Fuse Size Amps	Maintaining Agency
A	480 Volt 2W, 1ø Grounded	4.6	#4	60 Amp	A	8.8	30	City of Columbus, Division of Electricity
					B	1	30	

Existing electric service is 480 volt, two wire, 1 ø, ungrounded.

LIGHTING PLAN

FRA-GOODALE STREET

40/73

PRECAST CONCRETE ELECTRIC MANHOLES AND VAULTS

A. MATERIAL

THE PRECAST CONCRETE ELECTRIC MANHOLE SHALL MEET THE FOLLOWING SPECIFICATIONS:

1. THE MANHOLE AND VAULT SHALL BE AS THAT MANUFACTURED BY UNIVERSAL CONCRETE PRODUCTS INC. OR AN APPROVED EQUAL.

2. THE MANHOLE SHALL BE MANUFACTURED IN ACCORDANCE WITH THE DIVISION OF ELECTRICITY DRAWING NO. 02E0025, TITLED "ELECTRIC MANHOLE – PRECAST CONCRETE." THE VAULT SHALL BE MANUFACTURED IN ACCORDANCE WITH THE DIVISION OF ELECTRICITY DRAWING NO. 02E0020, TITLED, "PRECAST TRANSFORMER VAULT."

3. THE MANHOLE SHALL HAVE OVERALL DIMENSIONS OF 13' X 8' X 9'–2". THE VAULT SHALL HAVE OVERALL DIMENSIONS OF 18'–2" X 10' X 11'–6".

4. THE MANHOLES AND VAULTS SHALL BE DESIGNED IN ACCORDANCE WITH AASHTO STANDARD HS20–44 FOR TRUCK LOADING.

5. THE MANHOLES AND VAULTS TOP SLAB ACCESS OPENINGS SHALL BE 36" DIAMETER.

6. PULLING EYES SHALL BE PROVIDED ON THE OPPOSITE SIDE OF EACH DUCT OPENING. PULLING EYES SHALL BE AS THAT MANUFACTURED BY LINE MATERIAL CO. STYLE NO. DU27.3 OR APPROVED EQUAL.

7. ALL THE CONCRETE USED IN THE CONSTRUCTION OF MANHOLES OR VAULTS SHALL BE CLASS C.

8. MANHOLE FRAME WITH SOLID LID, SIMILAR TO NEENAH FOUNDRY CO. NO. R–1752, SHALL BE PROVIDED AND INSTALLED AT EACH MANHOLE OR VAULT. COVERS SHALL BE LETTERED "MEL&P".

B. INSTALLATION

1. CONTRACTOR SHALL PROVIDE ALL EXCAVATION AND BACKFILL NECESSARY FOR MANHOLES, VAULTS AND UNDERGROUND CONDUIT DUCTS INSTALLATION.

2. EXCAVATION FOR MANHOLE AND VAULTS SHALL EXTEND TO 6" BELOW BOTTOM OF MANHOLE OR VAULT BASE OR AS NECESSARY FOR PROPER INSTALLATION AND COMPLETION OF WORK.

3. EXCAVATION OF UNDERGROUND CONDUIT DUCTS SHALL EXTEND TO PROFILE OF LOWER SIDE OF THE CONDUIT ENCASEMENT. CONDUITS SHALL HAVE A MINIMUM OF 30" COVER. PROFILE BETWEEN MANHOLES AND/OR VAULTS SHALL BE SET SO THAT CONDUITS ARE LEVEL OR SLOPED TO ONE OF THE MANHOLES. WHERE CONDUITS ENTER MANHOLES AT A LOWER LEVEL THAN THE APPROACHING PROFILE OF THE CONDUIT, THE CONDUIT SHALL BE SLOPED DOWN TO THE MANHOLE OR VAULT WINDOW AT A RATE NOT EXCEEDING 30" FROM THE HORIZONTAL.

4. AFTER MANHOLES AND VAULTS ARE SET AND CONDUITS ARE INSTALLED, BACKFILL SHALL BE BROUGHT TO PROPER LEVEL AND SHALL BE COMPACTED IN ACCORDANCE WITH ITEM 604 SECTION 604.04 OF ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS. BACKFILL SHALL BE BROUGHT TO BOTTOM OF EXISTING PAVING BASE IN PAVED AREAS. FINISHED GRADE SHALL BE REPLACED IN KIND, I.E, SOD, GRAVEL, BLACKTOP, CONCRETE, ETC.

5. WORK SHALL BE SO PLANNED THAT EXCAVATIONS ARE OPEN FOR A MINIMUM OF TIME. NO LOAD, OR BACKFILL SHALL BE APPLIED OR OTHER WORK CONDUCTED THAT WOULD DAMAGE NEW CONCRETE OR INTERFERE WITH ITS CURING.

6. OPEN TRENCHES IN OPEN AREAS SHALL BE BARRICADED AND PROPERLY PROTECTED.

7. AFTER MANHOLE IS PLACED, MANHOLE COVER FRAME SHALL BE PLACED AND TOP ADJUSTED TO GROUND OR PAVING LEVEL, A 6" THICK CONCRETE OR BRICK ADJUSTING RING SHALL BE PROVIDED TO PROVIDE CONTINUOUS CLOSURE BETWEEN TOP SLAB OF MANHOLE AND MANHOLE COVER FRAME.

C. BASIS OF PAYMENT

THE WORK INCLUDED IN THIS ITEM, INCLUDING EXCAVATION AND BACKFILL, SHALL BE PAID FOR AT THE CONTRACT PRICE, COMPLETE IN PLACE.

ITEM	UNIT	DESCRIPTION
SPECIAL	EACH	PRECAST ELECTRIC MANHOLE

CONCRETE ENCASED 5" CONDUIT DUCT BANKS

A. MATERIAL

CONDUIT – THE NON–METALLIC CONDUIT SHALL BE SCHEDULE 40 POLYVINYL CHLORIDE. IT SHALL BE DESIGNED TO FORM A SOUND, STRONG DUCT, FREE FROM DEFECTS. IT SHALL BE NON–MAGNETIC, RESISTANT TO CORROSIVE ACTION, UNAFFECTED BY ELECTROLYSIS AND SHALL NOT SOFTEN, DEFORM OR DETERIORATE WHEN EXPOSED TO THE MAXIMUM SAFE OPERATING TEMPERATURE OF CABLES. THE INSIDE SURFACE OF THE CONDUIT SHALL BE SMOOTH, AND ROUND AND SHALL HAVE A 5" NOMINAL INSIDE DIAMETER. THE CONDUIT SHALL BE CARLON HEAVY WALL "PV–DUIT PLUS" CONDUIT OR AN APPROVED EQUAL.

COUPLINGS – THE COUPLINGS SHALL BE OF THE SAME MATERIAL AS THE CONDUIT, AND SHALL BE SUFFICIENTLY TIGHT TO PREVENT SILT OR CONCRETE FROM ENTERING THE CONDUIT.

SPACERS – PLASTIC BASE AND INTERMEDIATE TYPE FOR 5" CONDUIT.

B. INSTALLATION

THE CONDUIT SHALL BE INSTALLED AS DETAILED IN THE PLAN.

IF THE CONDUIT IS INSTALLED IN AN AREA TO BE PAVED UNDER THIS OR ANOTHER CONTRACT, BACKFILL SHALL BE APPROPRIATE FOR THE PAVING INDICATED. NO OTHER SURFACE RESTORATION WILL BE REQUIRED.

THE TRENCH SHALL BE DUG SO THAT ANY CURVE RADIUS WILL BE AS LARGE AS POSSIBLE. THE TRENCH SHALL BE DUG NO WIDER THAN NECESSARY TO ACCOMMODATE THE CONDUIT AND CONCRETE ENVELOPE AS INDICATED ON THE DETAILED DRAWINGS. THE BOTTOM OF THE TRENCH SHALL BE UNDISTURBED, TAMPED AND RELATIVELY SMOOTH EARTH. TRENCHES WHICH HAVE BEEN DUG TOO DEEP AT ANY POINT ARE TO BE PARTIALLY REFILLED AND TAMPED SOLID. THE SIDE OF THE TRENCH WILL BE TRIMMED SMOOTH TO PROVIDE FOR A UNIFORM SHEATH OF CONCRETE AROUND THE CONDUITS. THE SIDES OF THE EXCAVATION ARE TO BE SHORED WHERE NECESSARY TO MAINTAIN A UNIFORM TRENCH. EXCESS MATERIAL SHALL BE REMOVED FROM THE JOB SITE.

WHERE A CONDUIT CROSSES A SEWER OR WATER LINE, OR ANY OTHER UNDERGROUND STRUCTURE, THE CLEARANCE BETWEEN THEM WILL NEED TO BE LARGE ENOUGH TO PERMIT MAINTENANCE OF THE SYSTEM WITHOUT DAMAGE TO THE STRUCTURE. THE CLEARANCES WILL NEED TO BE DETERMINED BY THE UTILITIES INVOLVED. A SUITABLE SUPPORT ON EACH SIDE OF THE UNDERGROUND STRUCTURE WILL BE BUILT TO AVOID TRANSFERRING ANY DIRECT LOAD ONTO THAT STRUCTURE.

THE CONDUIT RUN SHALL BE AS STRAIGHT AS POSSIBLE. THE RADIUS OF ANY CURVE SHALL BE AS LARGE AS POSSIBLE TO FACILITATE THE PULLING IN OF CABLE. SCH 40, 5 DEGREE ANGLE COUPLINGS OR COMBINATION OF 5 DEGREE ANGLE COUPLINGS AND STRAIGHT SECTIONS OF DUCT ARE RECOMMENDED TO NEGOTIATE CURVES. ANY FIELD BENDING OF CONDUIT SHALL BE DONE WITH MANUFACTURER RECOMMENDED CONDUIT BENDING EQUIPMENT AND PROCEDURES.

PRECAST PLASTIC BASE AND INTERMEDIATE SPACERS WILL BE PLACED AT 5 FOOT INTERVALS THAT SHALL SEPARATE THE CONDUITS A MINIMUM OF 2 INCHES APART AND PROVIDE A 3 INCH MINIMUM OUTSIDE ENCASEMENT. BURRS ON THE END OF THE CONDUIT, AS THE RESULT OF SAWING, MUST BE REMOVED PRIOR TO COMPLETING A JOINT. JOINT SHALL FORM A CONTINUOUS SMOOTH INTERIOR SURFACE BETWEEN DUCT SECTIONS SO THAT CABLE WILL NOT BE DAMAGED WHEN PULLED PAST THE JOINT. SURFACES TO BE JOINED WILL BE CLEAN AND FREE FROM DIRT, FOREIGN MATERIALS AND MOISTURE. THE JOINTS WILL BE SEALED WITH THE PROPER CEMENT SPECIFIED BY THE DUCT MANUFACTURER.
DUCTS ARE TO BE TIED TOGETHER WITH HEAVY CORDS AS TO SECURELY HOLD THE DUCTS IN PLACE. THE OPEN ENDS OF THE DUCT ARE TO BE CLOSED WITH TIGHT FITTING PLUGS TO PREVENT THE ENTRANCE OF MUD OR FOREIGN MATERIAL INTO THE DUCT. AFTER CONDUIT IS INSTALLED IT SHALL BE INSPECTED.

THE CONCRETE IS TO BE POURED AS SOON AS POSSIBLE AFTER CONDUITS HAVE BEEN PLACED. DUCTS ARE TO BE TIED DOWN TO HOLD THEM IN POSITION WHILE THE CONCRETE IS POURED. THE CONCRETE SHALL BE CLASS C. THE CONCRETE DELIVERY CHUTE SHALL BE ADJUSTED SO THAT THE FALL OF CONCRETE INTO THE TRENCH IS MINIMAL. A SPLASH BOARD WILL BE USED TO DIVERT THE FLOW OF CONCRETE AWAY FROM THE TRENCH SIDES TO AVOID DISLODGING SOIL AND STONES. CONCRETE SHALL BE PLACED ALWAYS FROM ONE END OF THE DUCT SECTION TO THE OTHER END OF THE SECTION. CONTINUOUS SPADING IS TO BE DONE TO ENSURE A FLOW OF CONCRETE BETWEEN AND UNDER THE INDIVIDUAL DUCTS. A LONG FLAT TOOL OR SPATULA WILL BE WORKED CAREFULLY UP AND DOWN BETWEEN EACH VERTICAL LINE OF DUCTS TO ELIMINATE VOIDS. THE TOP OF THE CONCRETE IS THEN TO BE SMOOTHED.

AFTER THE CONCRETE HAS TAKEN ITS INITIAL SET THE TRENCH CAN BE BACKFILLED. A PIECE OF CAUTION BURIED ELECTRIC TAPE IS TO BE PLACED ABOVE THE DUCT DURING BACKFILLING.

AFTER THE DUCTS ARE INSTALLED A FLEXIBLE STEEL MANDREL NOT LESS THAN 12 INCHES LONG WITH A CROSS SECTION OF 4–3/4 INCHES (FITTED WITH A PULLING EYE AT EACH END) SHALL BE PULLED THROUGH EACH CONDUIT. BY WORKING THE MANDREL BACK AND FORTH, OBSTRUCTIONS SUCH AS CONCRETE WILL BE REMOVED. AFTER THE MANDREL HAS BEEN PULLED THRU, A STIFF 5 INCH CIRCULAR WIRE BRUSH AND A SWAB SHALL THEN BE PULLED THRU THE DUCT TO REMOVE ANY BITS OF CONCRETE, ETC.

A NO. 10 AWG COPPER–CLAD, ALUMINUM–CLAD OR GALVANIZED PULLING WIRE SHALL BE INSTALLED IN ALL SPARE DUCT. ENDS OF THE CONDUIT SHALL BE SEALED IN AN APPROVED MANNER TO KEEP ALL MOISTURE AND FOREIGN MATTER OUT OF THE CONDUIT.

C. BASIS OF PAVEMENT

THE ACCEPTED QUANTITIES OF SPECIFIC ITEM OF ELECTRIC WORK AND EQUIPMENT MEASURED AS PROVIDED ABOVE WILL BE PAID FOR UNDER:

ITEM	UNIT	DESCRIPTION
SPECIAL	LIN. FT.	4–5" CONDUITS, ENCASED IN CONCRETE, SCH 40 PVC, AS PER PLAN
SPECIAL	LIN. FT.	4–5" GALVANIZED STEEL CONDUITS ENCASED IN CONCRETE, 713.04 TYPE I, AS PER PLAN

UNDERBRIDGE CONDUIT

A. MATERIAL

1. THE NON–METALLIC CONDUIT SHALL BE 5" IPS FIBERGLASS. IT SHALL BE DESIGNED FROM A SOUND, STRONG DUCT, FREE FROM DEFECTS. IT SHALL BE NON–MAGNETIC, RESISTANT TO CORROSIVE ACTION, UNAFFECTED BY ELECTROLYSIS AND SHALL NOT SOFTEN, DEFORM OR DETERIORATE WHEN EXPOSED TO THE MAXIMUM SAFE OPERATING TEMPERATURE OF CABLES. THE INSIDE OF CONDUITS SHALL BE SMOOTH, AND ROUND AND HAVE A 5" NOMINAL INSIDE DIAMETER. THE CONDUIT SHALL BE OSBURN ASSOCIATES, INC. IPS FIBERGLASS CONDUIT OR AN APPROVED EQUAL. CONDUIT SHALL BE 5" I.D. BASED FIBERGLASS CONDUIT WHICH MEETS NATIONAL ELECTRIC MANUFACTURERS ASSOCIATION (NEMA) TC2–1978, UNDERWRITERS' LABORATORIES, INC. 651 AND FEDERAL SPECIFICATION WC–1094A.

2. THE RIGID CONDUIT SHALL BE 5" DIAMETER GALVANIZED STEEL CONDUIT, 713.04, TYPE I.

3. COUPLINGS – THE COUPLINGS SHALL BE OF THE SAME MATERIAL AS THE CONDUIT AND SHALL BE SUFFICIENTLY TIGHT TO PREVENT MOISTURE FROM ENTERING THE CONDUIT.

4. ALL STRAPS, BOLTS, NUTS AND OTHER MISCELLANEOUS HARDWARE SHALL BE HOT DIPPED GALVANIZED.

B. INSTALLATION

1. THE CONDUIT SHALL BE INSTALLED AS DETAILED IN THE PLAN

2. THE VOID BETWEEN THE 5" FIBERGLASS CONDUIT AND THE 8" PVC CONDUIT SLEEVE CAST IN THE ABUTMENT SHALL BE FILLED WITH A NON–SHRINK GROUT, 705.20.

3. THE 5" IPS FIBERGLASS BACK TO BACK EXPANSION JOINT SHALL BE INSTALLED TO MANUFACTURER'S RECOMMENDATIONS.

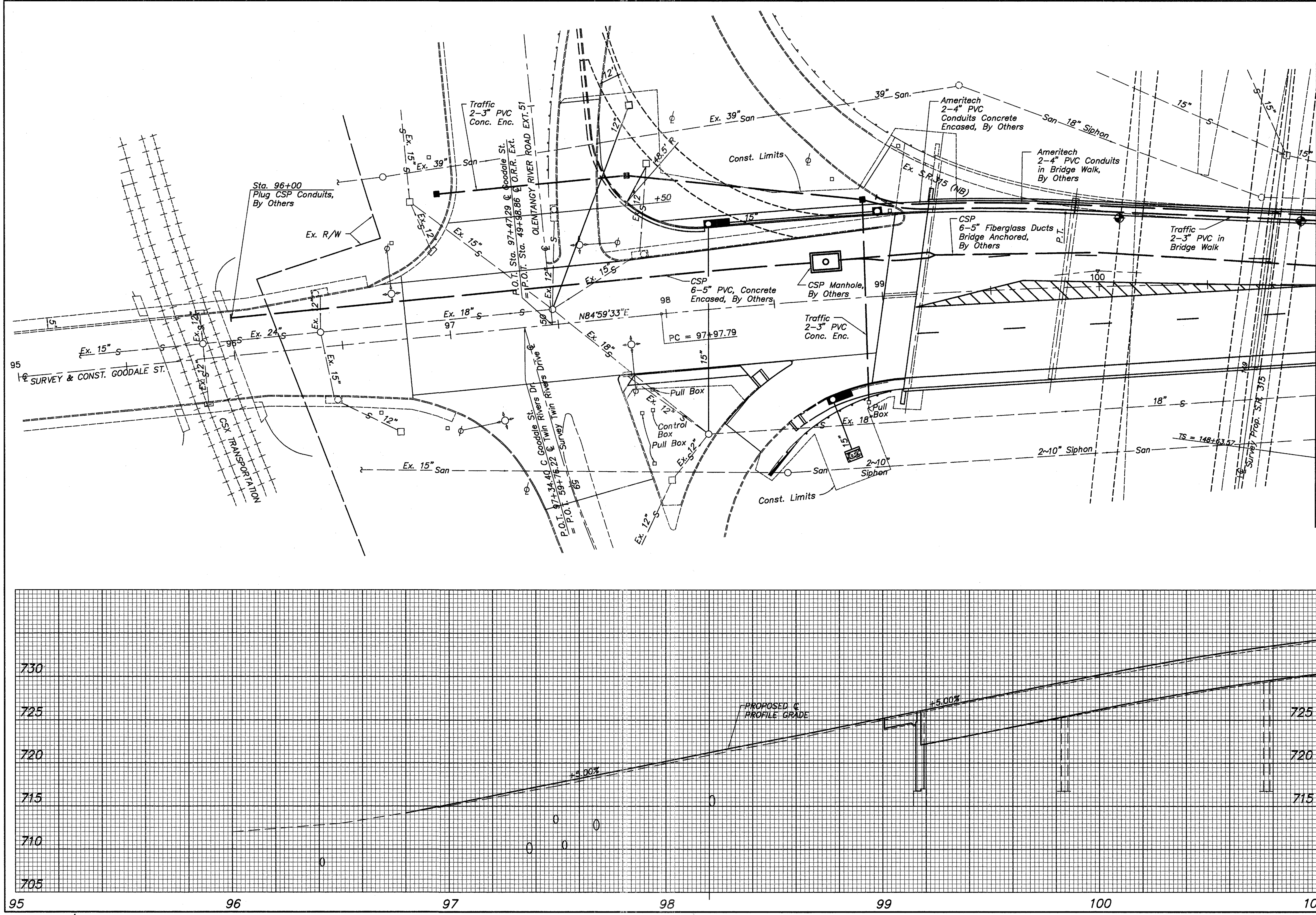
C. BASIS OF PAYMENT

THE COSTS OF ALL LABOR AND MATERIALS REQUIRED TO PROVIDE THE UNDERBRIDGE CONDUIT SYSTEM PER THESE PLANS AND SPECIFICATIONS, COMPLETE AND ACCEPTED IN PLACE, SHALL BE PAID FOR UNDER THE FOLLOWING ITEMS:

ITEM	UNIT	DESCRIPTION
SPECIAL	LIN. FT.	4–5" FIBERGLASS CONDUIT ON STRUCTURE, AS PER PLAN
SPECIAL	LIN. FT.	4–5" GALVANIZED STEEL CONDUITS ON STRUCTURE, AS PER PLAN

THESE ITEMS SHALL INCLUDE, BUT NOT BE LIMITED TO, THE COST OF ALL CONDUITS, FITTINGS, COUPLINGS, BENDS, EXPANSION DEVICES, STRAPS, HARDWARE, AND FIELD CUTTING OF ANCHOR HOLES IN THE STRUCTURAL STEEL CROSSFRAMES.

THE COSTS OF INSTALLING THE 8" PVC CONDUIT SLEEVES AT THE ABUTMENTS SHALL BE INCLUDED WITH THE STRUCTURE QUANTITIES FOR PAYMENT.



CALCULATED
CHECKED
0 10 20 40
SCALE IN FEET

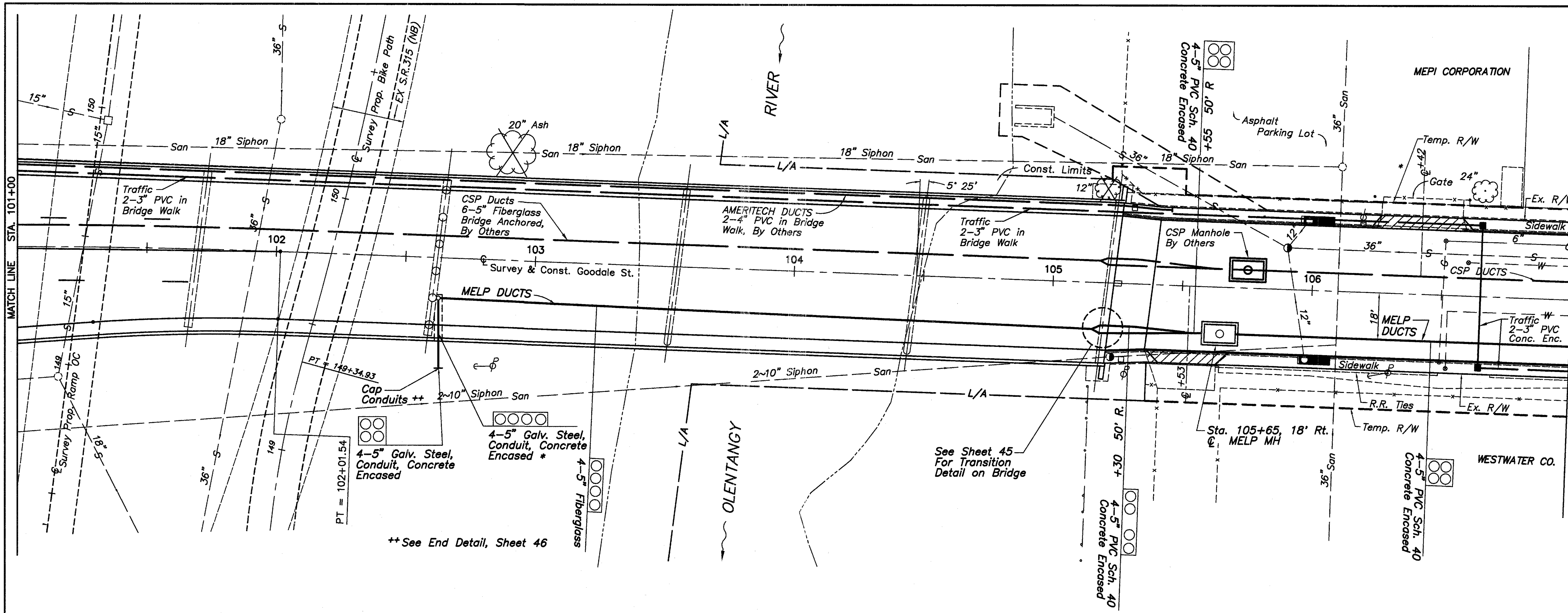
MELP PLAN AND PROFILE
STA. 95+00 TO 101+00

FRA-GOODALE STREET

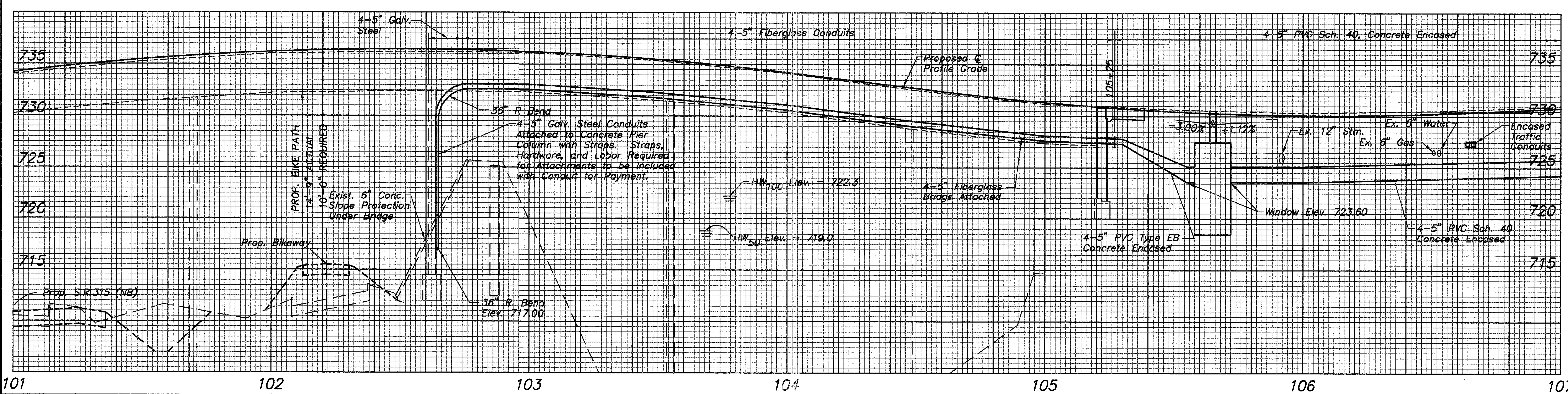
KORDA / NEMETH ENGINEERING, INC.

0300-ST

M. STINEMAN G:\CIVILDWG\92024\MELP3.DWG DATE: NOV 01, 1994 TIME: 9:59 AM


MATCH LINE STA. 101+00
MATCH LINE STA. 107+00
MEPI CORPORATION
WESTWATER CO.
OLENTANGY
RIVER
18" Siphon
San
20" Ash
Traffic 2-3" PVC in Bridge Walk
CSP Ducts 6-5" Fiberglass Bridge Anchored, By Others
AMERITECH DUCTS 2-4" PVC in Bridge Walk, By Others
℄ Survey & Const. Goodale St.
MELP DUCTS
Const. Limits
Asphalt Parking Lot
Temp. R/W
Ex. R/W
Gate
Sidewalk
CSP Manhole By Others
CSP DUCTS
Traffic 2-3" PVC Conc. Enc.
R.R. Ties
Sta. 105+65, 18' Rt. ℄ MELP MH
See Sheet 45 For Transition Detail on Bridge
2~10" Siphon
L/A
PT = 149+34.93
Cap Conduits ++
4-5" Galv. Steel, Conduit, Concrete Encased
4-5" Galv. Steel, Conduit, Concrete Encased *
PT = 102+01.54
4-5" Fiberglass
4-5" PVC Sch. 40 Concrete Encased
50' R
++See End Detail, Sheet 46
℄ Survey Prop. Ramp OC

* Concrete Slope Protection, 6" thick, shall be removed 1' wider per side than the trench necessary to place the 4-5" steel conduit duct bank. After placement of the duct bank, the slope protection shall be replaced per ODOT Item 601. Payment for the above shall be included in the unit price bid for Item Special, 4-5" Galvanized Steel Conduits Encased in Concrete, 713.04, As Per Plan.


4-5" Galv. Steel
4-5" Fiberglass Conduits
4-5" PVC Sch. 40, Concrete Encased
Proposed ℄ Profile Grade
36" R Bend
4-5" Galv. Steel Conduits Attached to Concrete Pier Column with Straps. Straps, Hardware, and Labor Required for Attachments to be Included with Conduit for Payment.
PROP. BIKE PATH 14'-9" ACTUAL 10'-6" REQUIRED
Exist. 6" Conc. Slope Protection Under Bridge
Prop. Bikeway
Prop. S.R.315 (NB)
36" R. Bend Elev. 717.00
HW_{100} Elev. = 722.3
HW_{50} Elev. = 719.0
4-5" Fiberglass Bridge Attached
4-5" PVC Type EB Concrete Encased
-3.00%
+1.12%
Ex. 12" Stm.
Ex. 6" Gas
Ex. 8" Water
Encased Traffic Conduits
Window Elev. 723.60
4-5" PVC Sch. 40 Concrete Encased
735
730
725
720
715
101
102
103
104
105
106
107

MELP PLAN AND PROFILE
STA. 101+00 TO 107+00

FRA-GOODALE STREET

CALCULATED
CHECKED

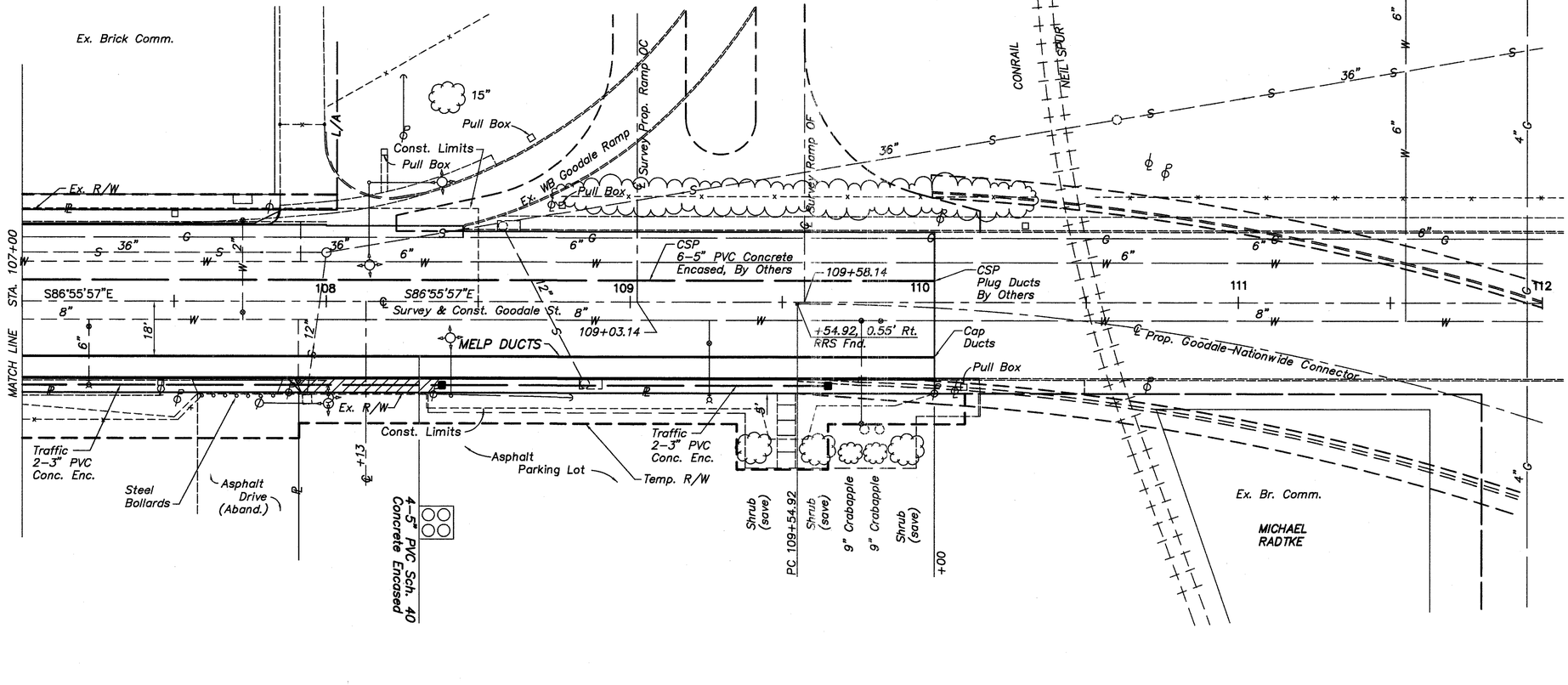
SCALE IN FEET 0 10 20 40

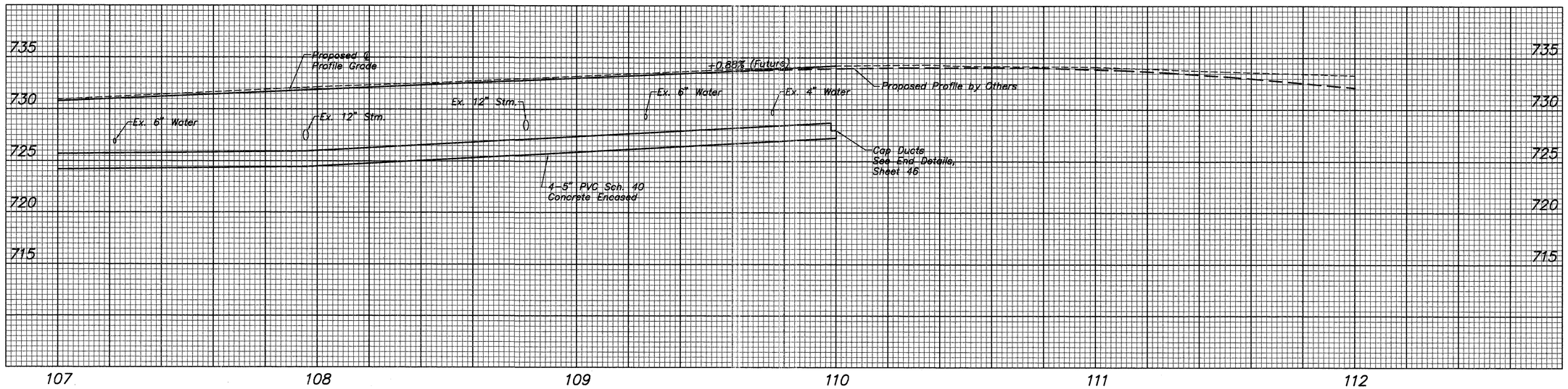
43/73

KORDA / NEMETH ENGINEERING, INC.

0300-ST

M. STINEMAN G:\CIVIL\DWG\92024\MELP1.DWG DATE: NOV 01, 1994 TIME: 9:54 AM





MELP PLAN AND PROFILE
STA. 107+00 TO 112+00

FRA-GOODALE STREET

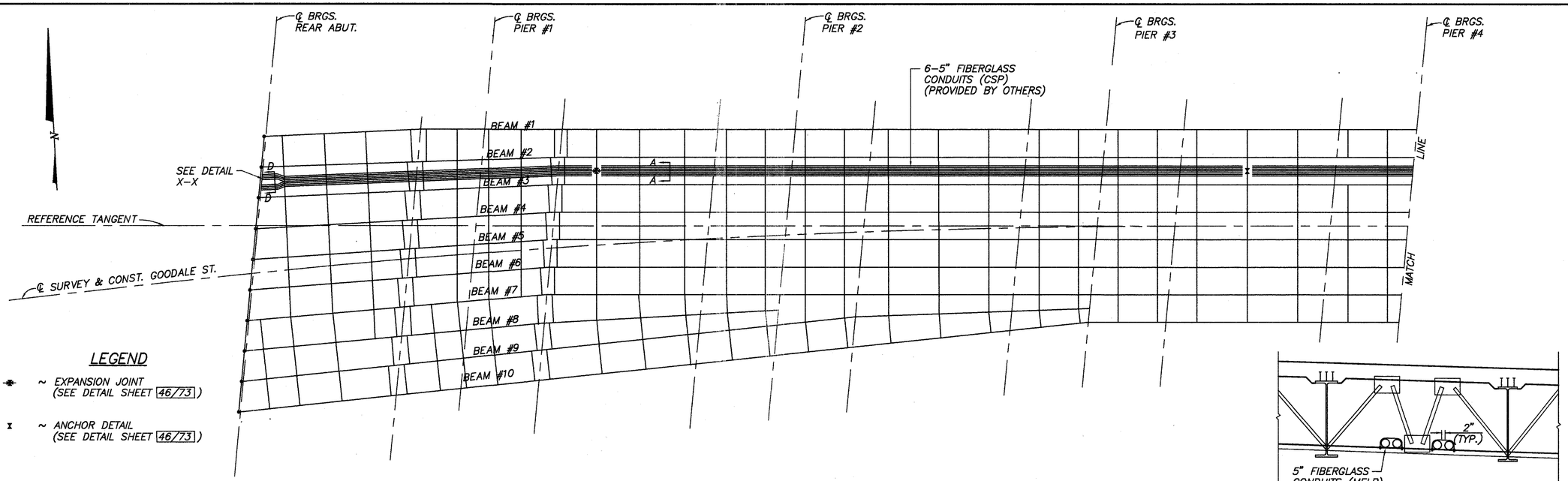
SCALE IN FEET 0 10 20 40

CALCULATED/D

CHECKED

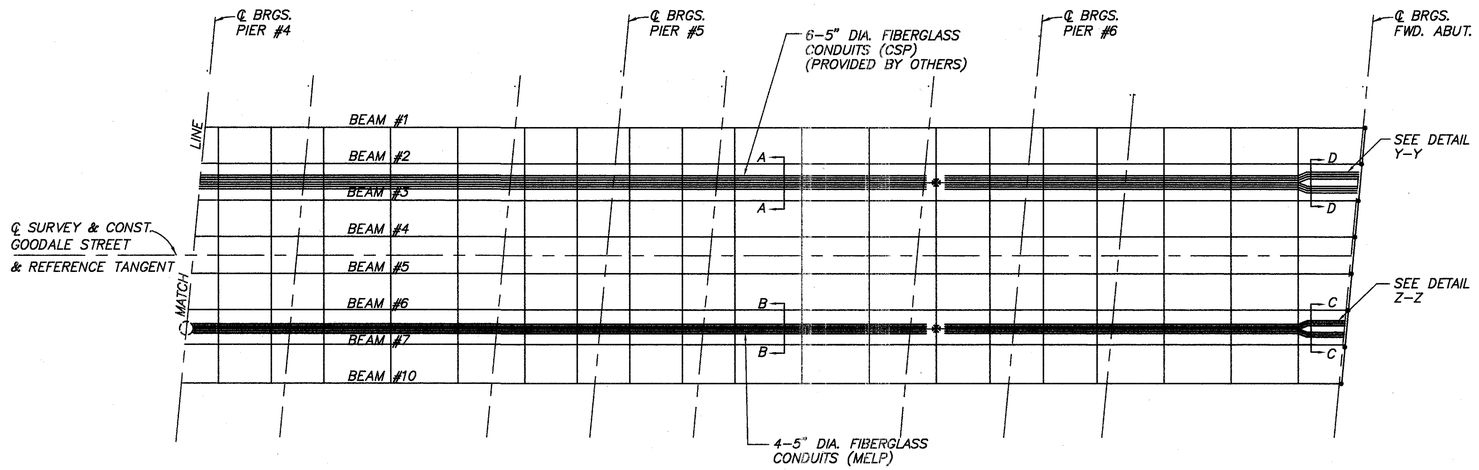
44
73

M. STINEMAN G:\CIVILDWG\2020\MELP2.DWG DATE: NOV 01, 1994 TIME: 9:42 AM



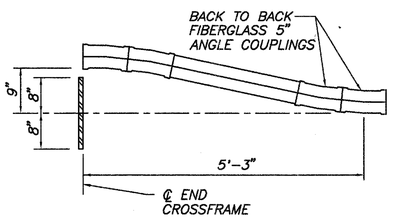
LEGEND

- ~ EXPANSION JOINT (SEE DETAIL SHEET 46/73)
- ~ ANCHOR DETAIL (SEE DETAIL SHEET 46/73)

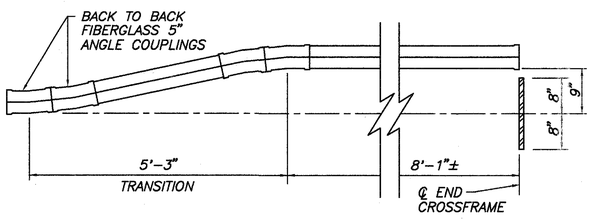


FRAMING PLAN

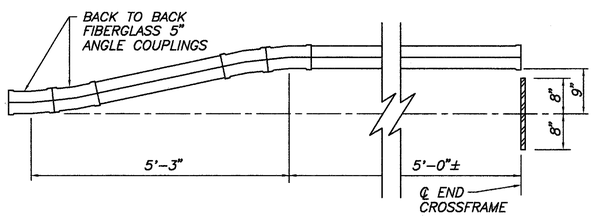
N.T.S.



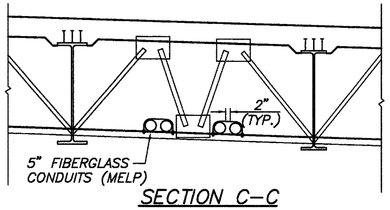
CONDUIT TRANSITION X–X



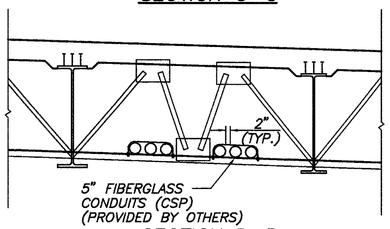
CONDUIT TRANSITION Y–Y



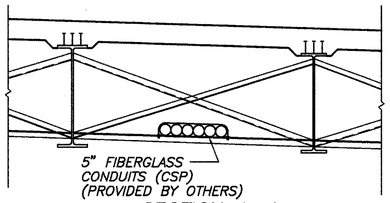
CONDUIT TRANSITION Z–Z



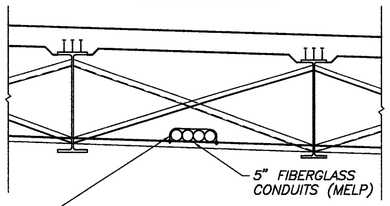
SECTION C–C



SECTION D–D



SECTION A–A



SECTION B–B

NOTE: THE COST FOR ALL PIPE STRAPS, HARDWARE, AND THE FIELD DRILLING OF HOLES IN ANGLES FOR MELP CONDUITS SHALL BE INCLUDED WITH ITEM SPECIAL, "5" FIBERGLASS CONDUIT" FOR PAYMENT.

NOT TO SCALE

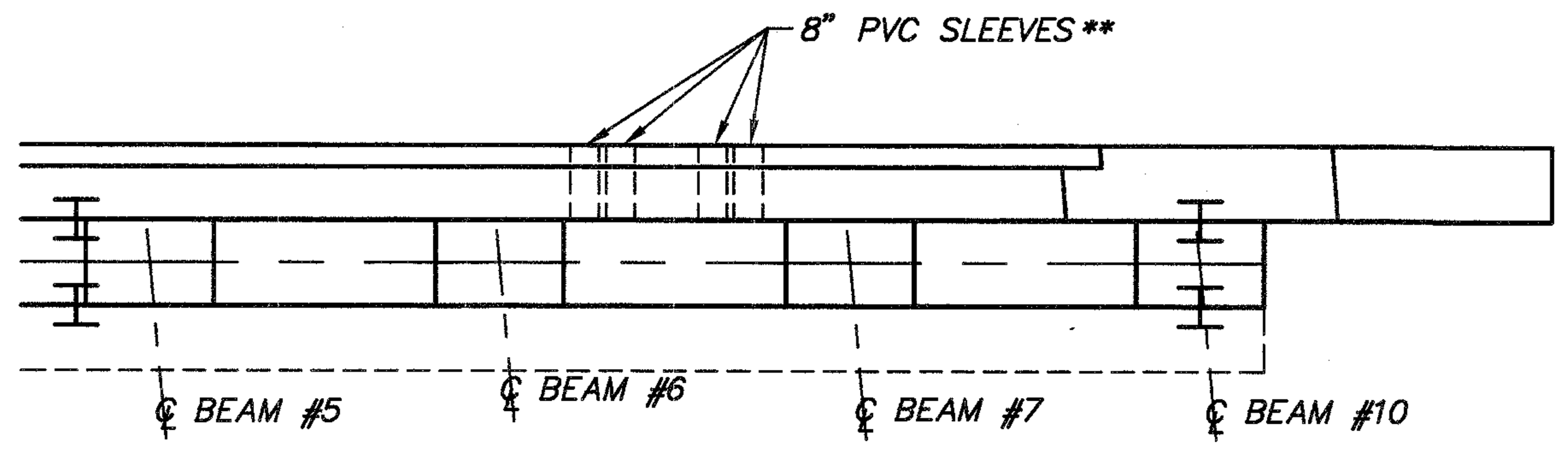
CALCULATED | CHECKED

MELP DETAILS

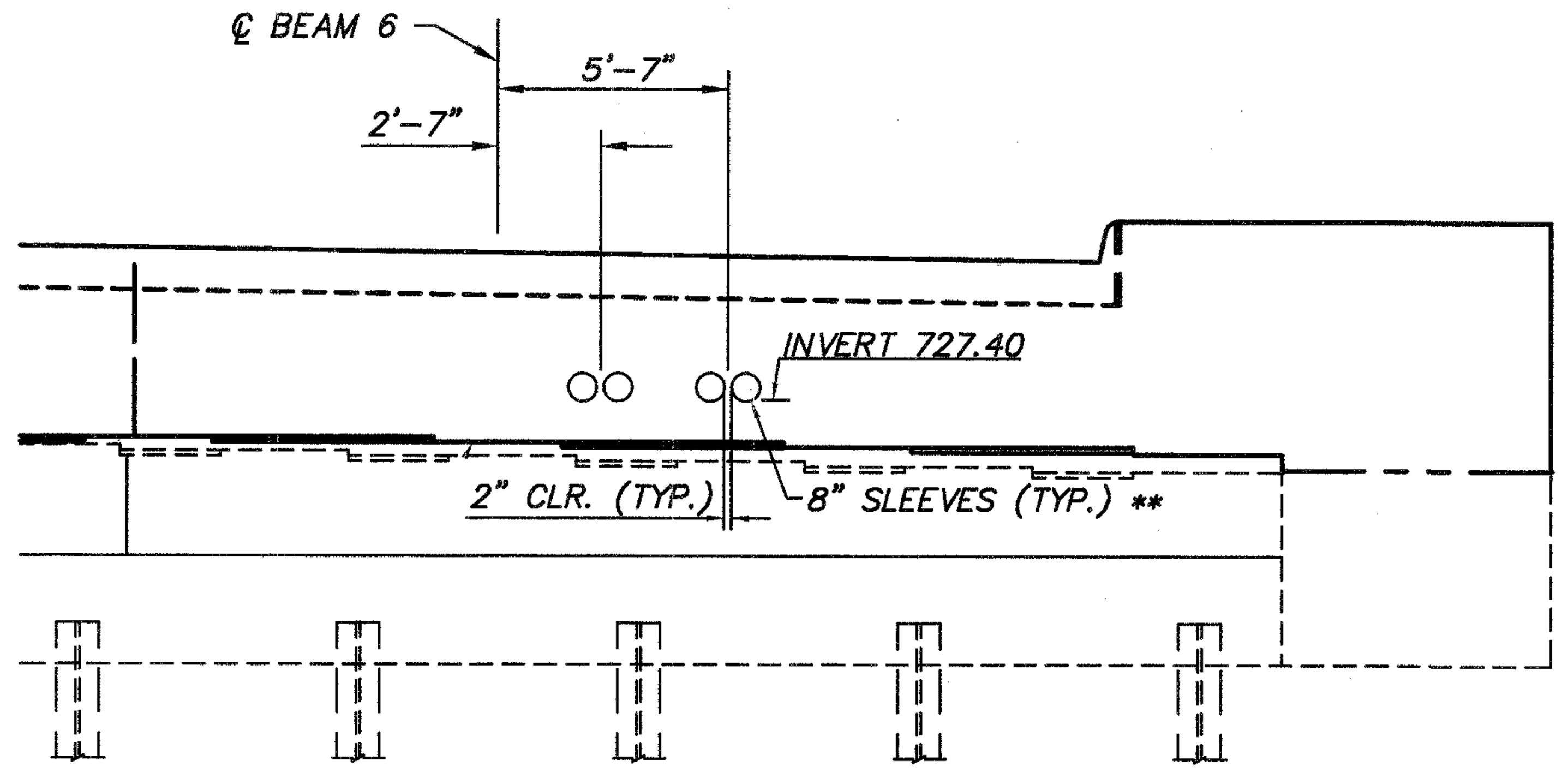
MELP

FRA–GOODALE STREET

45/73

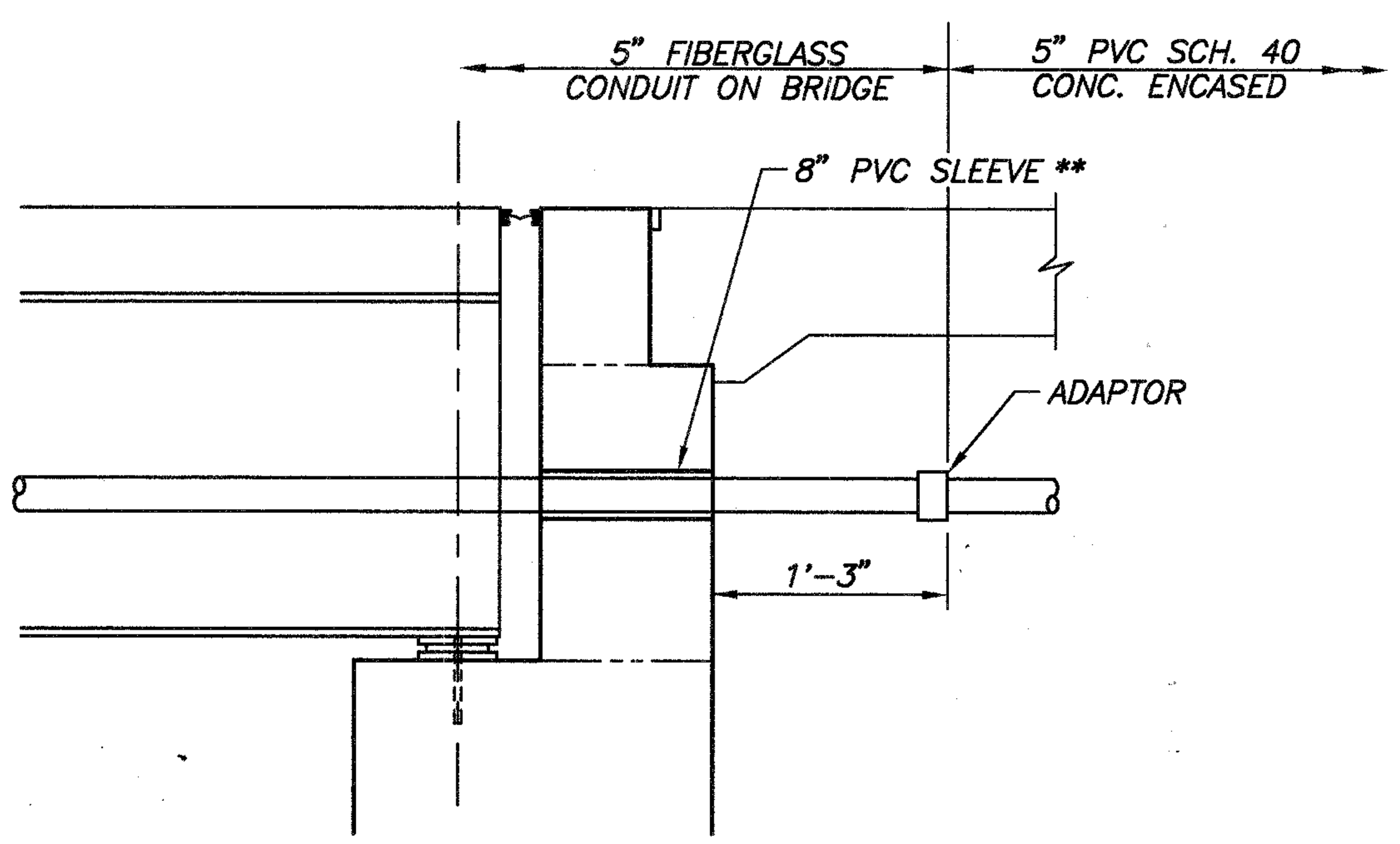


PLAN

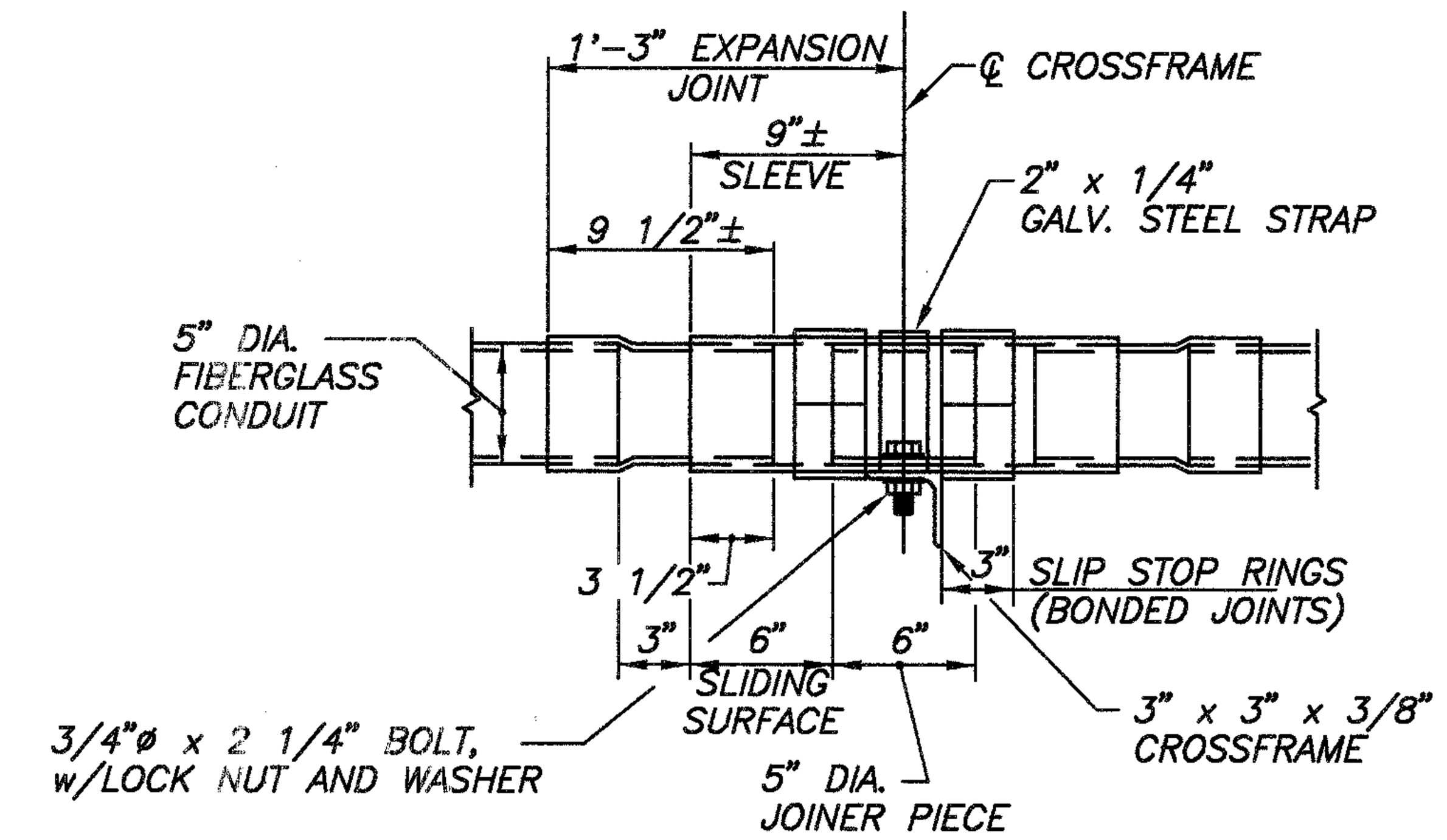


PART ELEVATION AT FORWARD ABUTMENT

** SEE BRIDGE SHEETS 54 & 55 FOR LOCATIONS OF SLEEVES THRU ABUTMENT, SLEEVES INCLUDED WITH ABUTMENT CONCRETE FOR PAYMENT.

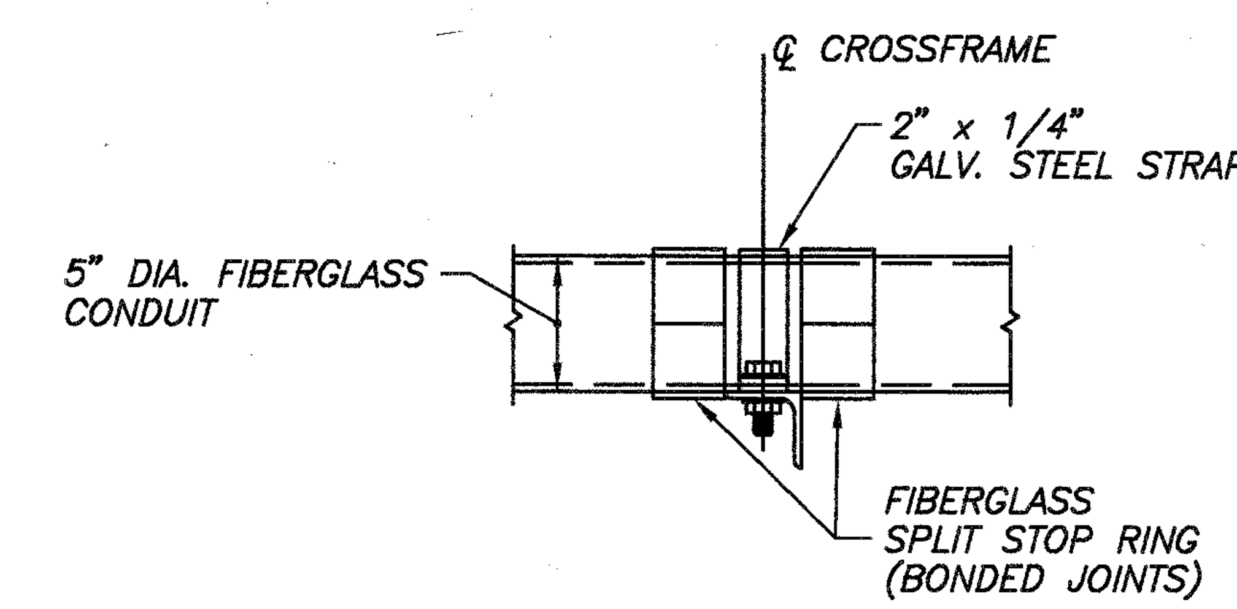


ABUTMENT SECTION



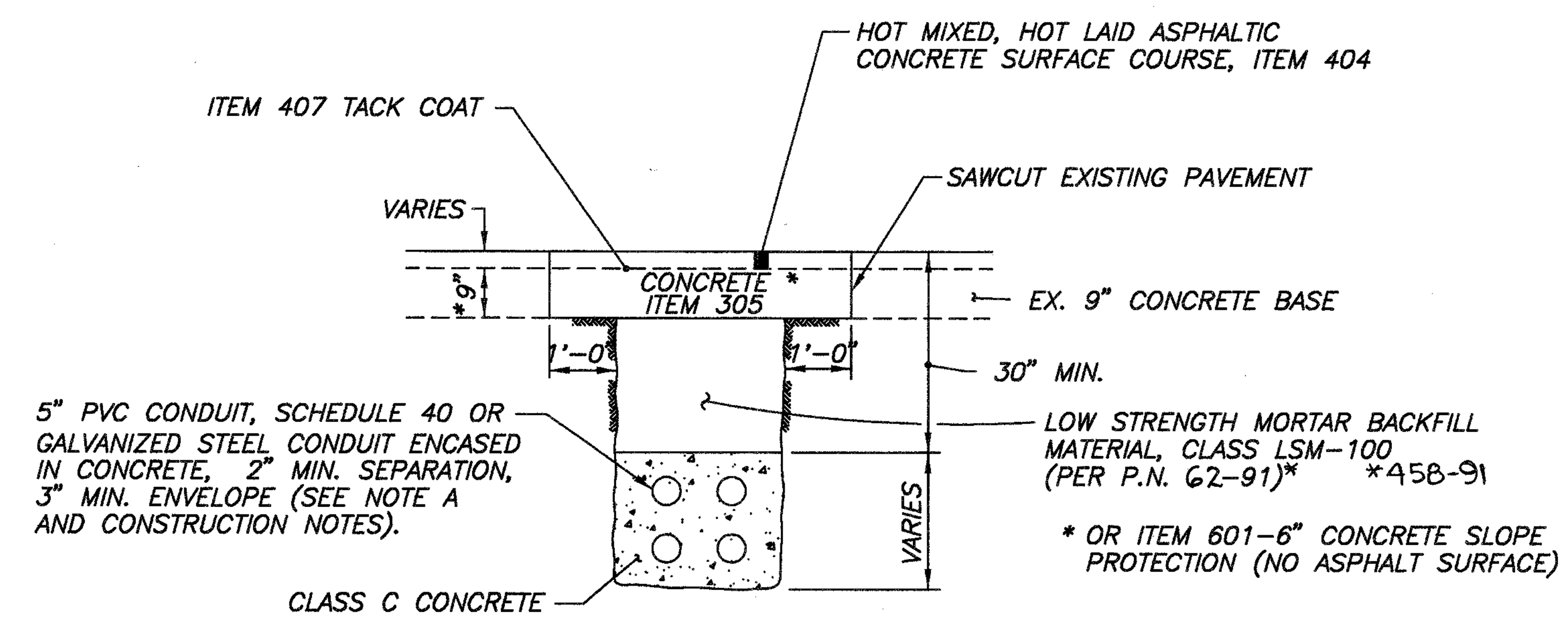
DOUBLE INTERMEDIATE EXPANSION JOINT

N.T.S.



FIXED INTERMEDIATE RESTRAINT SUPPORT

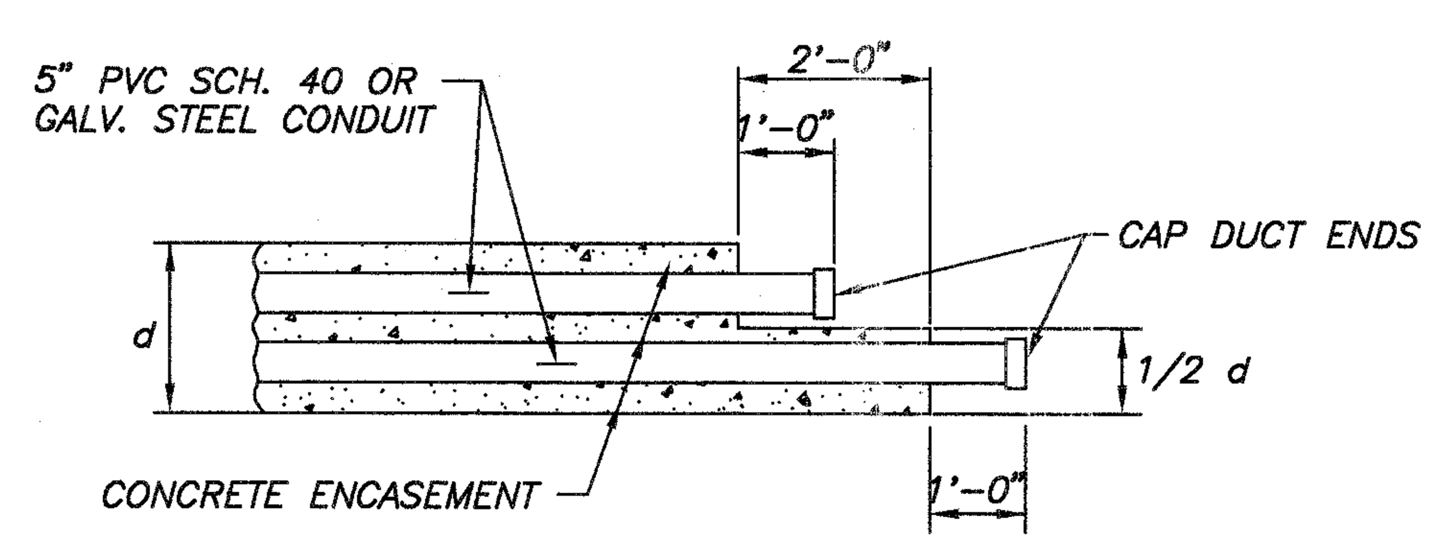
N.T.S.



TYPICAL TRENCH AND DUCT BANK DETAIL

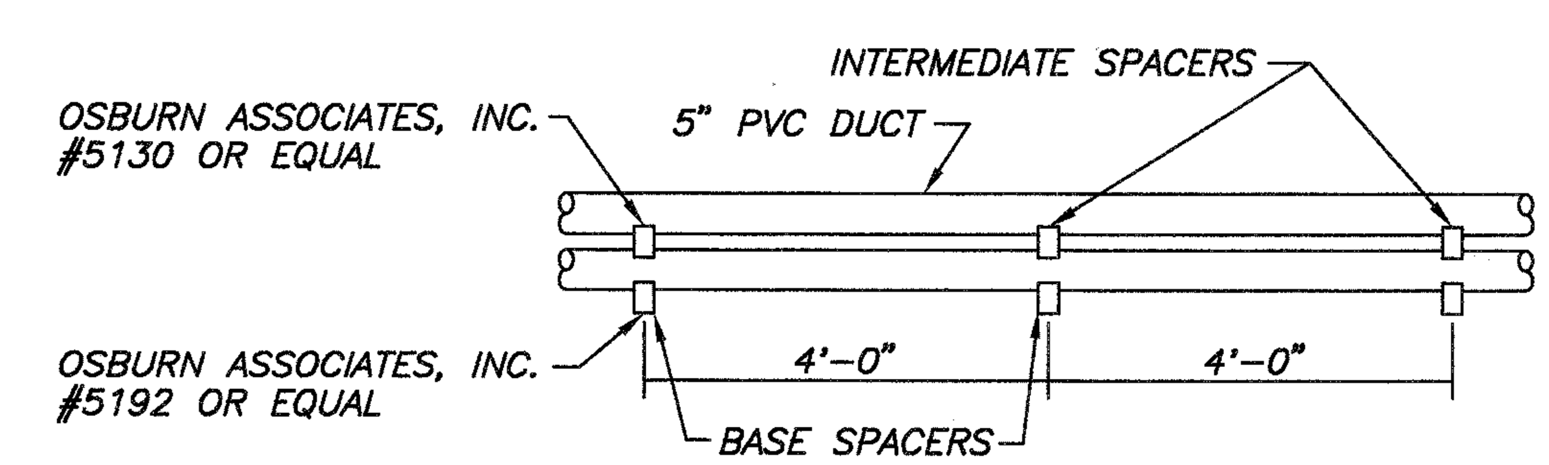
N.T.S.

PAYMENT FOR THE CONDUIT, FITTINGS, TRENCH EXCAVATION AND BACKFILL, AND CONCRETE ENCASEMENT IN PLACE, SHALL BE INCLUDED IN THE UNIT PRICE BID PER LINEAR FOOT FOR 4-5" CONDUITS ENCASED IN CONCRETE, SCHEDULE 40 PVC, AS PER PLAN, OR 4-5" GALVANIZED STEEL CONDUITS, ENCASED IN CONCRETE, 713.40 TYPE I, AS PER PLAN.



DUCT BANK END DETAIL

N.T.S.



TYPICAL DUCT STACKING DETAIL

N.T.S.

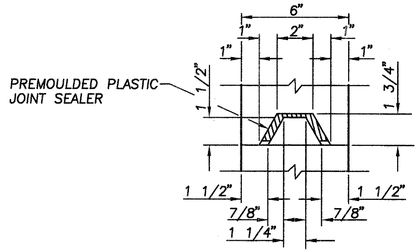
MELP DETAILS

FRA-GOODALE STREET

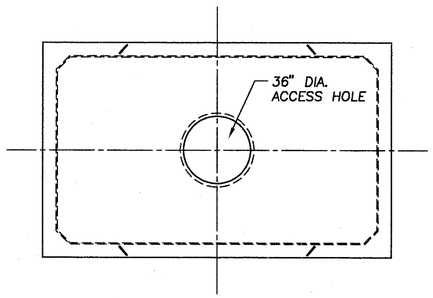
KORDA / NEMETH ENGINEERING, INC.

0300-ST

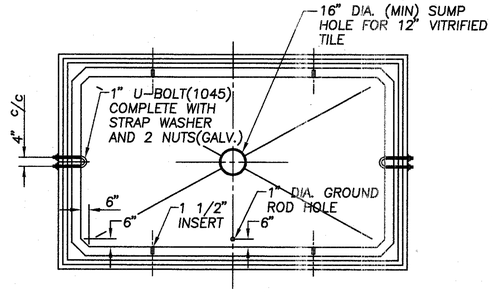
M. STINEMAN G:\CIVILDWG\92024\MELPDET2.DWG DATE: NOV 01, 1994 TIME: 9:37 AM



JOINT DETAIL



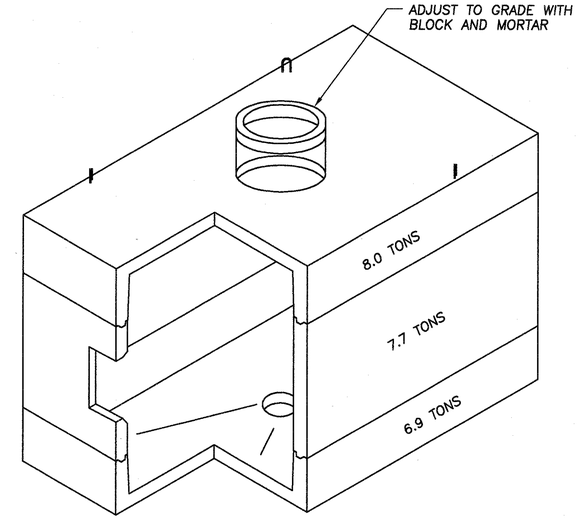
PLAN TOP



PLAN BOTTOM

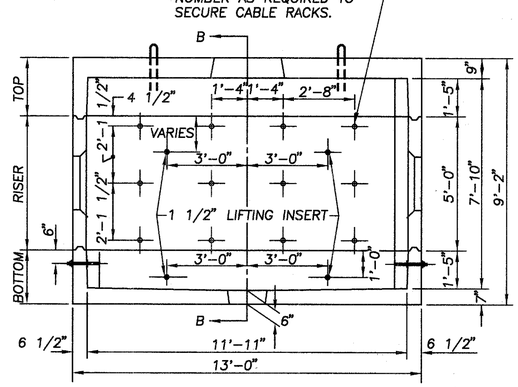
NOTES:

1. FOR ELEVATION OF DUCT WINDOWS SEE SHEET 43.
2. PULL IN IRONS TO BE OPPOSITE AND ONE FOOT BELOW EACH WINDOW. IN NO CASE SHOULD THE PULL IN IRON BE CLOSER THAN SIX INCHES TO A JOINT. PULL IN IRONS SHALL BE IN LINE MATERIAL CO. STYLE NO. DU 213, JOSLYN MFG. CAT# J-8119 OR APPROVED EQUAL.
3. LIVE LOAD DESIGN – AASHTO HS-20-44
4. CONCRETE STRENGTH – 5000 P.S.I.

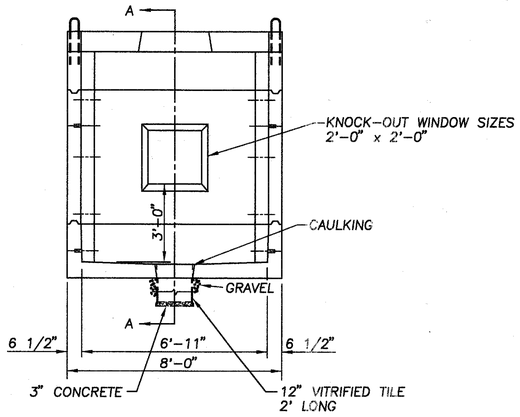


MELP GENERAL SUMMARY – 100% CITY FUNDS

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION
				* ROADWAY, MISC.:
SPECIAL	69098100	475	LIN. FT.	*4-5" CONDUITS ENCASED IN CONCRETE, SCH. 40 PVC
SPECIAL	69098100	30	LIN. FT.	*4-5" GALVANIZED STEEL CONDUITS ENCASED IN CONCRETE, 713.04 TYPE I
SPECIAL	69098100	60	LIN. FT.	*4-5" GALVANIZED STEEL CONDUITS ON STRUCTURE
SPECIAL	69096000	1	EACH	*PRECAST ELECTRIC MANHOLE
SPECIAL	69098100	255	LIN. FT.	*4-5" FIBERGLASS CONDUITS ON STRUCTURE
253	01001	185	S.Y.	PAVEMENT REPAIR, AS PER PLAN (SEE SHEETS 4 AND 28)



SECTION A-A

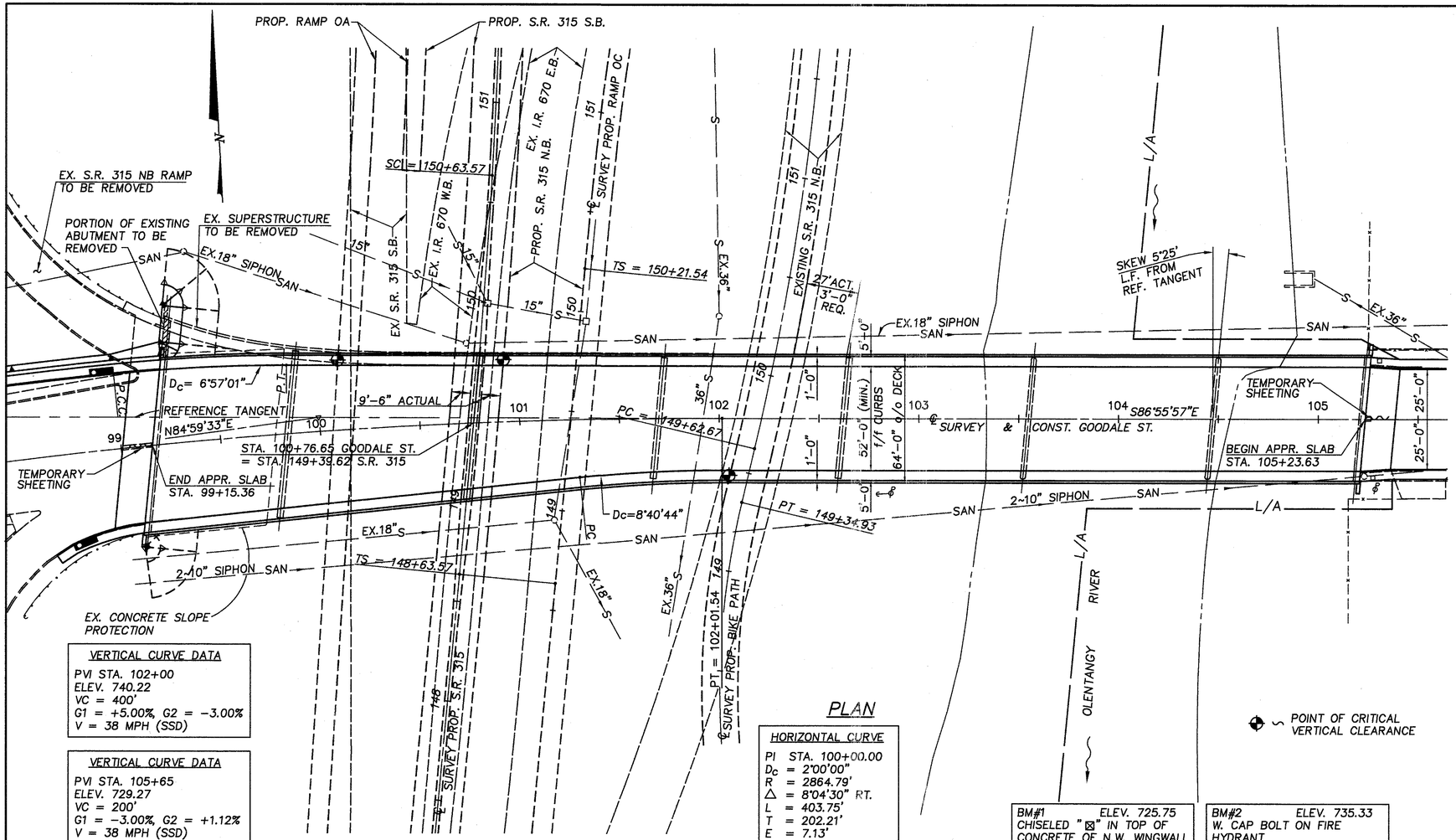


SECTION B-B

MELP MANHOLE DETAIL
MELP GENERAL SUMMARY

FRA-GOODALE STREET

47
73



VERTICAL CURVE DATA

PVI STA. 102+00
ELEV. 740.22
VC = 400'
G1 = +5.00%, G2 = −3.00%
V = 38 MPH (SSD)

VERTICAL CURVE DATA

PVI STA. 105+65
ELEV. 729.27
VC = 200'
G1 = −3.00%, G2 = +1.12%
V = 38 MPH (SSD)

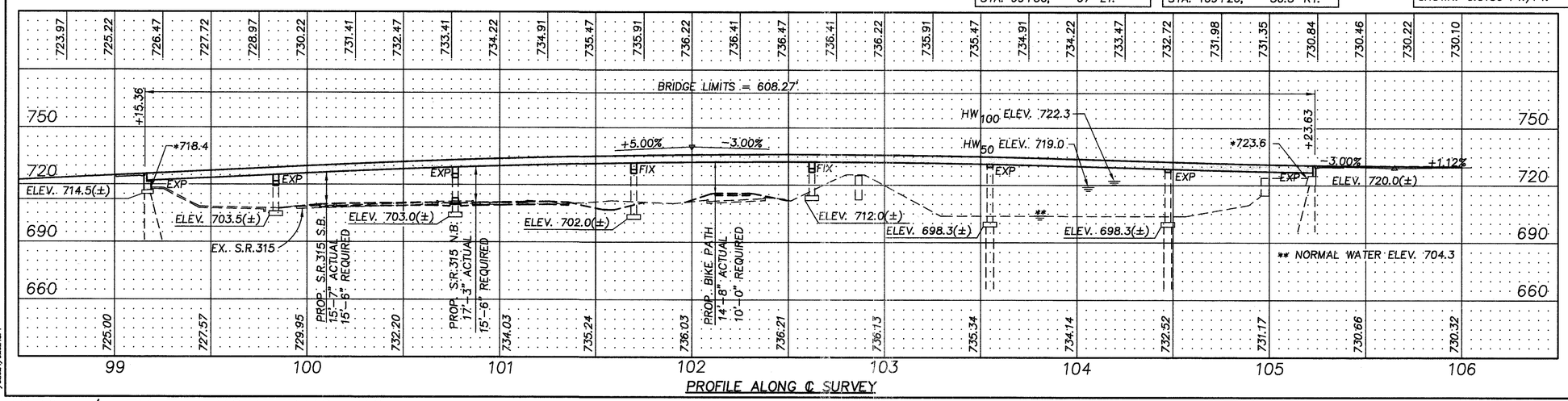
PLAN

HORIZONTAL CURVE

PI STA. 100+00.00
D_C = 2°00'00"
R = 2864.79'
Δ = 8°04'30" RT.
L = 403.75'
T = 202.21'
E = 7.13'

BM#1 ELEV. 725.75
CHISELED "X" IN TOP OF CONCRETE OF N.W. WINGWALL
STA. 99+30, 67' LT.

BM#2 ELEV. 735.33
W. CAP BOLT ON FIRE HYDRANT
STA. 109+26, 30.5' RT.



PROFILE ALONG ℄ SURVEY

NOTES:

EARTHWORK LIMITS:
EARTHWORK LIMITS SHOWN ARE APPROXIMATE; ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

ELEVATIONS:
ELEVATIONS SHOWN WITH AN ASTERISK ARE TOP OF SLOPE ELEVATIONS AT FACE OF ABUTMENTS.

UTILITIES:
ALL EXISTING UTILITIES SHOWN ARE TO REMAIN IN PLACE FOR THIS PROJECT.

TRAFFIC DATA (YEAR 2014):
ADT = 28,020
ADTT = 1,680

HYDROLOGICAL DATA:
DRAINAGE AREA = 543 SQ.MI.
50 YEAR DISCHARGE = 14,000 CFS
100 YEAR DISCHARGE = 17,400 CFS

VELOCITY THROUGH STRUCTURE:
V_{50} = 5.6 FPS
V_{100} = 5.6 FPS

WATER SURFACE ELEVATIONS:
HW_{50} ELEV. 719.0
HW_{100} ELEV. 722.3
STRUCTURE CLEARS 50 YEAR DESIGN HIGH WATER BY 7.5 FEET.

EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAMS WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURES
SPANS: 65'−0", 2 @ 92'−6", 92'−11", 2 @ 92'−6", 74'−0" c/c BEARINGS ALONG REFERENCE TANGENT
ROADWAY: VARIABLE WIDTH WITH 5'−0" SIDEWALKS AND 2'−0" MEDIAN
LOADING: CF−400
ALIGNMENT: 2°00' RIGHT CURVE AND TANGENT
SKEW: 5°25' LEFT FORWARD FROM REFERENCE TANGENT
WEARING SURFACE: ASPHALT CONCRETE
APPROACH SLABS: 15'−0"
CONDITION: FAIR (TO BE REHABILITATED)
DATE OF CONSTRUCTION: 1959

PROPOSED STRUCTURE

TYPE: NEW CONTINUOUS STEEL BEAMS (PAINTED A572) COMPOSITE WITH NEW REINFORCED CONCRETE DECK ON REHABILITATED SUBSTRUCTURES
SPANS: 65'−0", 2 @ 92'−6", 92'−11", 2 @ 92'−6", 74'−0" c/c BEARINGS ALONG REFERENCE TANGENT
ROADWAY: VARIABLE WIDTH (52'−0" f/f CURBS MIN.) WITH 5'−0" SIDEWALKS
LOADING: HS20−44 CASE II AND ALT. MILITARY LOADING
ALIGNMENT: 2°00' RIGHT CURVE AND TANGENT
SKEW: 5°25' LEFT FORWARD FROM REFERENCE TANGENT (4°38' @ PIER 5 ONLY)
WEARING SURFACE: MONOLITHIC CONCRETE
APPROACH SLABS: AS−1−81 (15'−0" LONG)(MODIFIED)
CROWN: 0.0156 FT./FT.

KORDA/NEMETH ENGINEERING, INC.
CONSULTING ENGINEERS
1650 WATERMARK DRIVE, SUITE 200
COLUMBUS, OHIO 43215-1044
TEL (614) 487-1650
FAX (614) 487-8881

DESIGNED	DRAWN	REVIEWED	DATE
DAT	TWK	RWE	1/18/94
CHECKED	REVISED	STRUCTURE FILE NO	
MTO		2516144	

FRANKLIN COUNTY
STA. 99+15.36 TO STA. 105+23.63

SITE PLAN
BRIDGE NO. FRA−315−0194
OVER S.R. 315 AND OLENTANGY RIVER

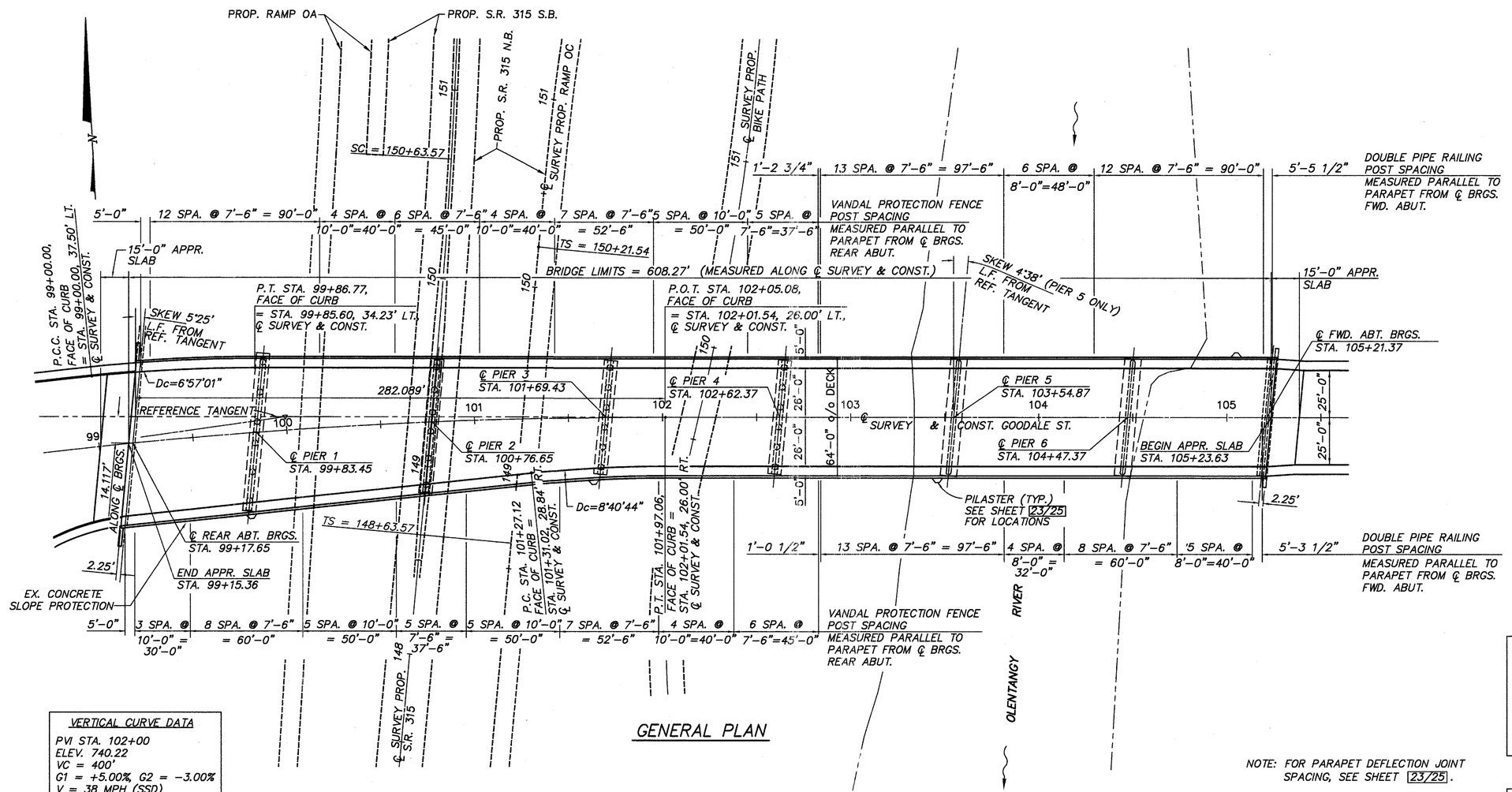
FRA−GOODALE STREET

1/25

48/73

0300−ST

KORDA / NEMETH ENGINEERING, INC.



GENERAL PLAN

NOTE: FOR PARAPET DEFLECTION JOINT SPACING, SEE SHEET 23/25.

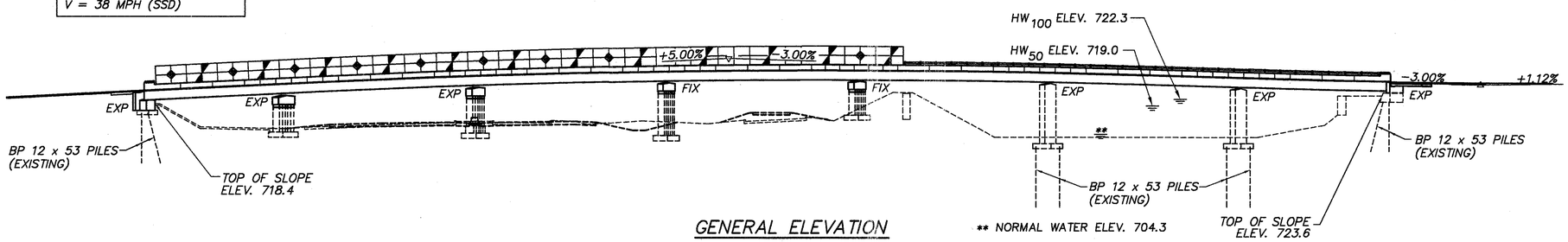
VERTICAL CURVE DATA
PVI STA. 102+00
ELEV. 740.22
VC = 400'
G1 = +5.00%, G2 = −3.00%
V = 38 MPH (SSD)

VERTICAL CURVE DATA
PVI STA. 105+65
ELEV. 729.27
VC = 200'
G1 = −3.00%, G2 = +1.12%
V = 38 MPH (SSD)

HORIZONTAL CURVE (℄ SURVEY)
PI STA. 100+00.00
D_C = 2°00'00"
R = 2864.79'
△ = 8°04'30" RT.
T = 202.21'
L = 403.75'
E = 7.13'

HORIZONTAL CURVE (FACE OF CURB, LT. SIDE)
PI STA. 99+43.43
D_C = 6°57'01"
R = 824.38'
△ = 6°01'51"
T = 43.43'
L = 86.77'
E = 1.14'

HORIZONTAL CURVE (FACE OF CURB, RT. SIDE)
PI STA. 101+62.12
D_C = 8°40'44"
R = 660.18'
△ = 6°04'10"
T = 35.00'
L = 69.93'
E = 0.93'



GENERAL ELEVATION

** NORMAL WATER ELEV. 704.3

KORDA/NEMETH ENGINEERING, INC.
CONSULTING ENGINEERS
1650 WATERMARK DRIVE, SUITE 200
COLUMBUS, OHIO 43215-1994
TEL (614) 487-1650
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DESIGNED	DRAWN	REVIEWED	DATE
DAT	TWK	RWE	5/18/94
CHECKED	REVISED	STRUCTURE FILE NO.	
MTO		2516144	

GENERAL PLAN & ELEVATION
BRIDGE NO. FRA-315-0194
OVER S.R. 315 AND OLENTANGY RIVER

FRA-GOODALE STREET

2/25

49/73

DAVE BURNHEMER G:\CIVILDWG\920241\920240PE.DWG DATE: OCT 26, 1994 TIME: 3:33 PM

/920241/920240PE

GENERAL NOTES

REFERENCE SHALL BE MADE TO ODOT STANDARD DRAWINGS:

AS-1-81, SHEETS 1, 2 AND 3	DATED 11-27-81
EXJ-4-87, SHEETS 1 THRU 5	DATED 1-20-94
PCB-91	DATED 4-24-92
SD-1-69, SHEETS 1 AND 4	DATED 6-12-69
VPF-1-90, SHEETS 1 THRU 6	REVISED 3-24-93
HL-10.13	DATED 5-01-87
HL-20.14	DATED 5-01-87

AND TO ODOT SUPPLEMENTAL SPECIFICATIONS:

[redacted]

944	DATED 3-23-95
945	DATED 6-14-95

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1992, INCLUDING THE 1993 INTERIM SPECIFICATIONS AND THE OHIO DEPARTMENT OF TRANSPORTATION BRIDGE DESIGN MANUAL.

DESIGN LOADING: HS20-44 CASE II AND THE ALTERNATE MILITARY LOADING. SIDEWALK LIVE LOAD 85 PSF.

DESIGN STRESSES:

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 ASTM A572 - YIELD STRENGTH 50,000 P.S.I.

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE ONE INCH THICK.

DECK PROTECTION METHODS: 2-1/2" CONCRETE COVER, EPOXY COATED REINFORCING STEEL, AND SEALING OF CONCRETE SURFACES.

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/OR 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 REFERED 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.

EXISTING BRIDGE PLANS MAY BE INSPECTED IN THE CITY OF COLUMBUS ENGINEER'S OFFICE, 109 NORTH FRONT STREET, THIRD FLOOR.

PROTECTION OF TRAFFIC: PRIOR TO DEMOLITION OF ANY PORTIONS OF THE EXISTING SUPERSTRUCTURE, THE CONTRACTOR SHALL SUBMIT PLANS FOR THE PROTECTION OF TRAFFIC (VEHICULAR & PEDESTRIAN) 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.

MAINTENANCE OF TRAFFIC: 2-WAY, 2 LANE TRAFFIC WITH A MINIMUM LANE WIDTH OF 11'-6" SHALL BE MAINTAINED ON GOODALE ST. OVER SR. 315 AND OLENTANGY RIVER AT ALL TIMES. SEE SHEETS 5/73 THRU 15/73 FOR MAINTNENANCE OF TRAFFIC NOTES AND DETAILS.

CONCRETE PARAPETS: WITHIN 48 HOURS AFTER PLACEMENT OF PARAPET CONCRETE, SAWCUT 1-INCH DEEP JOINTS INTO THE CONCRETE PARAPETS AT LOCATIONS SHOWN ON SHEET 23/25. THE SAWCUT SHALL BE MADE IN THE COMPLETE CIRCUMFERENCE OF THE PARAPET, STARTING AND ENDING AT THE ELEVATION OF THE CONCRETE SIDEWALK, AND THE COMPLETED SAWCUT SHALL BE FILLED WITH A CAULKING MATERIAL CONFORMING TO FEDERAL SPECIFICATION TT-S-00227E. THE BOTTOM HALF INCH OF THE ONE INCH DEEP SAWED JOINT IN BOTH THE INSIDE AND OUTSIDE FACES OF THE PARAPET SHOULD BE LEFT UNSEALED TO ALLOW ANY WATER WHICH MAY ENTER THE JOINT TO ESCAPE. PAYMENT SHALL BE INCLUDED WITH ITEM 511, CLASS S CONCRETE, SUPERSTRUCTURE, AS PER PLAN.

ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN: WHEN NO LONGER NEEDED TO MAINTAIN TRAFFIC, PORTIONS OF THE SUPERSTRUCTURE AND ABUTMENTS SHALL BE REMOVED AS SHOWN ON SHEETS 24/25, 5/25, AND 6/25; PORTIONS OF PIERS SHALL BE REMOVED AS SHOWN ON SHEET 10/25.

THIS ITEM SHALL INCLUDE THE REMOVAL OF ALL ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, INCLUDING WEARING COURSE 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 STRUCTURE REMOVAL AND THE WEIGHT OF HAMMERS SHALL BE APPROVED BY THE ENGINEER. (SUBSTRUCTURE CONCRETE REMOVAL SHALL ALSO BE SUBJECT TO RESTRICTIONS NOTED ON SHEETS 5/25, 6/25, AND 10/25.) 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.

CONSTRUCTION JOINT PREPARATION AS SHOWN ON THE FOLLOWING SHEETS:

1. REAR ABUTMENT 5/25
2. FORWARD ABUTMENT 6/25
3. PIER DEMOLITION PLAN 10/25
4. PIER 5 AND 6 DETAILS 14/25

SHALL BE INCLUDED WITH ITEM 202 FOR PAYMENT.

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 LIFTS NOT TO EXCEED A THICKNESS OF SIX (6) INCHES. THE COST FOR REMOVAL OF EXISTING 6-INCH CONCRETE SLOPE PROTECTION AS SHOWN ON SECTION A-A, SHEET 5/25, SHALL ALSO BE INCLUDED WITH ITEM 503 FOR PAYMENT.

ITEM 503, COFFERDAMS, CRIBS, AND SHEETING, AS PER PLAN: TEMPORARY SHORING SHALL BE USED TO ACCOMPLISH THE PROPOSED CONSTRUCTION IN STAGES. THE DESIGN OF THE TEMPORARY SHORING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER, AND CONFORM WITH 501.05. FOR APPROVAL, FIVE COPIES OF THE DRAWINGS SHALL BE SUBMITTED TO THE DIRECTOR AND CONCURRENTLY, ONE COPY TO THE BUREAU OF BRIDGES AND STRUCTURAL DESIGN. CONSTRUCTION OF THE SHORING SHALL NOT BEGIN UNTIL AFTER WRITTEN APPROVAL HAS BEEN RECEIVED FROM THE DIRECTOR. PORTIONS OF THE TEMPORARY SHORING COMPOSED OF STEEL OR CONCRETE MAY BE LEFT IN PLACE AT THE DISCRETION OF THE ENGINEER. PORTIONS COMPOSED OF OTHER MATERIALS SHALL BE REMOVED PRIOR TO COMPLETION OF THE WORK.

REPLACEMENT OF EXISTING REINFORCING STEEL: ANY EXISITNG 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 THEIR COST. ANY EXISITNG REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION SHALL BE REPLACED WITH NEW STEEL. AN ALLOWANCE OF 500 POUNDS IS INCLUDED IN ITEM 509 FOR THIS PURPOSE, LISTED IN THE "GENERAL" COLUMN OF THE ESTIMATED QUANTITIES.

ITEM SPECIAL, SEALING OF CONCRETE SURFACES: A CONCRETE SEALER SHALL BE APPLIED TO THE CONCRETE SURFACES SHOWN ON SHEETS 18/25, 20/25. AN EPOXY CONCRETE SEALER SHALL BE APPLIED TO THE CONCRETE SURFACES SHOWN ON SHEETS 7/25, 8/25, 11/25, 12/25, AND 13/25. SEE THE PROPOSAL FOR SURFACE PREPARATION REQUIRMENT, APPLICATION RATES, MATERIALS REQUIREMENTS, AND APPLICATION PROCEDURES.

ITEM SPECIAL, TREATING CONCRETE BRIDGE DECKS WITH HMWM RESIN: THE PART-WIDTH CONSTRUCTION JOINTS SHALL BE TREATED WITH A HMWM RESIN ALONG THE LENGTH OF THE BRIDGE AS SHOWN ON SHEETS 18/25 AND 20/25 FOR A WIDTH OF 1'-0" ON EITHER SIDE OF THE JOINTS. SEE THE PROPOSAL FOR SURFACE PREPARATION REQUIREMENTS, APPLICATION RATES, MATERIAL REQUIREMENTS, AND APPLICATION PROCEDURES.

ITEM 510, DOWEL HOLES, AS PER PLAN: THIS ITEM SHALL INCLUDE THE DRILLING OF HOLES INTO CONCRETE OR MASONRY AND THE FURNISHING AND PLACING OF GROUT INTO HOLES AS SHOWN ON PIER 5 AND PIER 6 DETAILS, SHEET 14/25 AND FORWARD ABUTMENT DETAILS, SHEET 8/25. ALL EXISTING REINFORCING STEEL BARS IN THE AREA OF THE DOWEL HOLES SHALL BE LOCATED WITH THE AID OF A REINFORCING STEEL BAR LOCATOR (PACHOMETER) PRIOR TO DRILLING THE HOLES. IF AN EXISTING BAR IS ENCOUNTERED AT THE SAME LOCATION AS A PROPOSED DOWEL HOLE, THE DOWEL HOLE SHALL BE MOVED TO EITHER SIDE OF THE EXISTING BAR. ALL DOWEL HOLES AND GROUTING UNLESS NOTED OTHERWISE SHALL BE INCLUDED WITH ITEM 510 FOR PAYMENT.

ITEM 511, CLASS S CONCRETE, SUPERSTRUCTURE, AS PER PLAN: MEMBRANE CURING AS PER METHOD (B) WILL NOT BE PERMITTED. CONCRETE SHALL BE CURED BY METHOD (A), WATER CURING.

ITEM 518, 6" PERFORATED CORRUGATED PLASTIC PIPE, AS PER PLAN: CORRUGATED PIPE USED IN ABUTMENT DRAINAGE SHALL BE 6 INCH DIAMETER, PLASTIC CORRUGATED AS PER SUPPLEMENTAL SPECIFICATION 944, AASHTO M294, TYPE SP.

ITEM 518, 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN: CORRUGATED PIPE USED IN ABUTMENT DRAINAGE SHALL BE 6 INCH DIAMETER, PLASTIC CORRUGATED AS PER SUPPLEMENTAL SPECIFICATION 944, AASHTO M294, TYPE S. THIS ITEM SHALL INCLUDE ALL ELBOWS, TEES AND END CAPS REQUIRED TO COMPLETE THE ABUTMENT DRAINAGE SYSTEM.

UTILITY CONDUITS: ALL COSTS FOR INSTALLING THE 8" PVC CONDUIT SLEEVES AT THE ABUTMENTS SHALL BE INCLUDED WITH ITEM 511, CLASS C CONCRETE, ABUTMENT, FOR PAYMENT. ALL OTHER EXPENSES INVOLVED IN INSTALLING THE AMERITECH AND COLUMBUS SOUTHERN POWER UTILITY CONDUITS, INCLUDING THE FIELD DRILLING OF ANCHOR HOLES THROUGH THE CROSSFRAME ANGLES, SHALL BE BORNE BY THE UTILITY COMPANIES. ALL OTHER COSTS FOR INSTALLING THE LIGHTING, TRAFFIC CONTROL, AND MUNICIPAL ELECTRIC POWER CONDUITS SHALL BE INCLUDED WITH THE PERTINENT ITEMS IN THE ROADWAY PLANS FOR PAYMENT. (THE COSTS OF FIELD DRILLING ANCHOR HOLES IN THE CROSSFRAME ANGLES FOR THE MELP CONDUITS SHALL BE INCLUDED WITH THE CONDUIT FOR PAYMENT.)

THE CONTRACTOR AND UTILITY COMPANIES ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT THE INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

FOR PLAN LOCATIONS AND DETAILS OF AMERITECH, COLUMBUS SOUTHERN POWER, AND MUNICIPAL ELECTRIC POWER CONDUITS NOT SHOWN IN THE STRUCTURE PLANS, SEE SHEETS 41/73 THROUGH 47/73.

FOR PLAN LOCATIONS AND DETAILS OF LIGHTING CONDUITS NOT SHOWN IN THE STRUCTURE PLANS, SEE SHEETS 37/73 THROUGH 40/73.

FOR PLAN LOCATIONS AND DETAILS OF TRAFFIC CONTROL CONDUITS NOT SHOWN IN THE STRUCTURE PLANS, SEE SHEETS 34/73 THROUGH 36A/73.

DESIGNED	DRAWN	REVIEWED	DATE
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MTO		2516144	

GENERAL NOTES
BRIDGE NO. FRA-315-0194
OVER S.R. 315 AND OLENTANGY RIVER

FRA-GOODALE STREET

ESTIMATED QUANTITIES

CALC BY: DAT DATE: 5/10/94
CHKD BY: JEM DATE: 5/17/94

	ITEM	EXT.	TOTAL	UNIT	DESCRIPTIONS	ABUTS.	PIERS	SUPER	GEN'L
	202	11203	LUMP	LUMP	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LUMP
					(SEE SHEET 3/25)				
	503	11101	LUMP	LUMP	COFFERDAMS, CRIBS, AND SHEETING, AS PER PLAN (SEE SHEET 3/25)				LUMP
	503	21101	53	CU. YD.	UNCLASSIFIED EXCAVATION, AS PER PLAN (SEE SHEETS 3/25 & 5/25)	51	2		
	509	15840	417,093	POUND	EPOXY COATED REINFORCING STEEL, GRADE 60	8,735	29,108	378,750	500
	510	11101	220	EACH	DOWEL HOLE, AS PER PLAN (SEE SHEET 3/25)	60	160		
	511	31505	1,566	CU. YD.	CLASS S CONCRETE, SUPERSTRUCTURE, AS PER PLAN (SEE SHEET 3/25)			1,566	
**	511	33404	1,566	CU. YD.	CLASS S CONCRETE, SUPERSTRUCTURE (USING SHRINKAGE COMPENSATING CEMENT) *			1,566	
**	511	33410	LUMP	LUMP	CLASS S CONCRETE, (USING SHRINKAGE COMPENSATING CEMENT, FOR				LUMP
					PRE-PLACEMENT TESTING) *				
	511	43200	136	CU. YD.	CLASS C CONCRETE, PIER		136		
	511	45700	113	CU. YD.	CLASS C CONCRETE, ABUTMENT	113			
	512	44400	3	SQ. YD.	TYPE B WATERPROOFING	3			
	SPECIAL	51267500	2,450	SQ. YD.	SEALING OF CONCRETE SURFACES *			2,450	
	SPECIAL	51267502	506	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY) *	186	320		
	SPECIAL	51273000	270	SQ. YD.	TREATING CONCRETE BRIDGE DECKS WITH HMWM RESIN *			270	
	513	11400	1,108,500	POUND	STRUCTURAL STEEL, A572-50 AISC CATEGORY I *			1,108,500	
	513	20000	10,128	EACH	WELDED STUD SHEAR CONNECTOR, 5" x 7/8"			10,128	
	514	00620	65,354	SQ. FT.	FIELD PAINTING OF NEW STEEL, SYSTEM IZEU *			65,354	
	516	11210	149	LIN. FT.	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL *			149	
	516	44100	17	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE)			17	
					(16" X 20" X 2" BEARING WITH 18" X 26" X 2" LOAD PLATE) *				
	516	44200	18	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE)			18	
					(16" X 20" X 3" BEARING WITH 18" X 22" X 2" LOAD PLATE) *				
	516	44300	18	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE)			18	
					(16" X 20" X 4 1/4" BEARING WITH 18" X 22" X 2" LOAD PLATE) *				
	516	44301	18	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE),			18	
					AS PER PLAN (14 1/2" X 14 1/2" X 4 3/4" BEARING WITH 16 1/2" X 16 1/2" X 1 1/2"				
					LOAD PLATE AND 16 1/2" X 20 1/2" X 1 1/2" ANCHOR PLATE) *				
	517	76300	465	LIN. FT.	RAILING*(DOUBLE PIPE RAIL), AS PER PLAN * (SEE SHEET 3/25) * MISC.:			465	
	518	21200	99	CU. YD.	POROUS BACKFILL WITH FILTER FABRIC	99			
	518	40001	102	LIN. FT.	6" PERFORATED CORRUGATED PLASTIC PIPE, AS PER PLAN	102			
	518	40011	48	LIN. FT.	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN	48			
	519	11100	1,165	SQ. FT.	PATCHING CONCRETE STRUCTURE	27	1138		
	601	21001	10	SQ. YD.	CONCRETE SLOPE PROTECTION, AS PER PLAN (SEE SHEET 7/25)	10			
	SPECIAL	60436600	2	EACH	PRECAST REINFORCED CONCRETE OUTLET	2			
	SPECIAL	60739900	720	LIN. FT.	VANDAL PROTECTION FENCE, 6 FOOT STRAIGHT, COATED FABRIC			720	
	510	10000	402	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT			402	

* SEE PROPOSAL NOTE

** ALTERNATE BID ITEMS: THESE TWO ITEMS SHALL CONSTITUTE ONE ALTERNATE BID TO CLASS S CONCRETE, SUPERSTRUCTURE, AS PER PLAN (SEE PROPOSAL NOTE)

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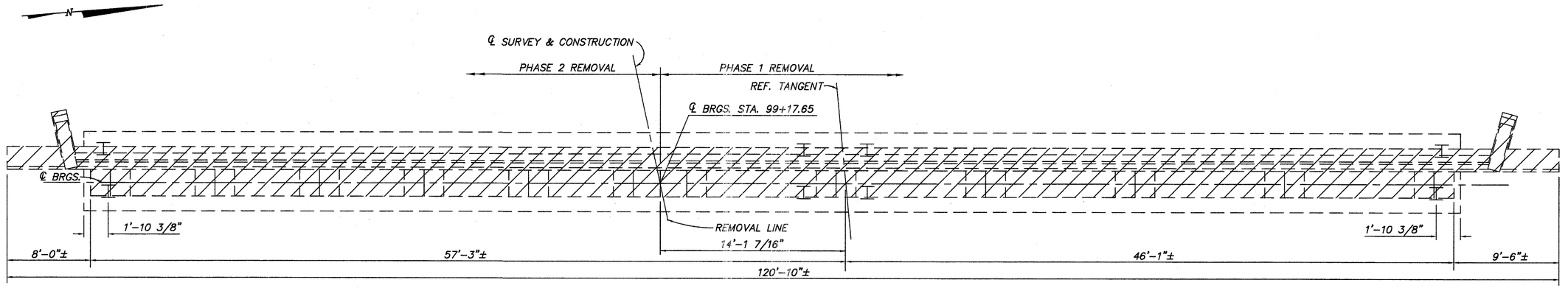
DESIGNED DAT
DRAWN DB
CHECKED JEM
REVIEWED RWE
DATE 5/18/94
REVISED
STRUCTURE FILE NO. 2516144

ESTIMATED QUANTITIES
BRIDGE NO. FRA-315-0194
OVER S.R. 315 AND OLENTANGY RIVER

FRA-GOODALE STREET

4/25

51/73



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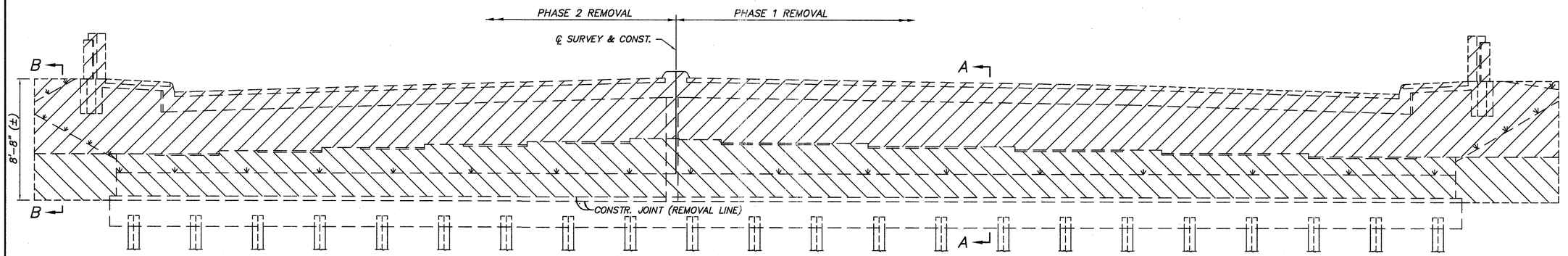

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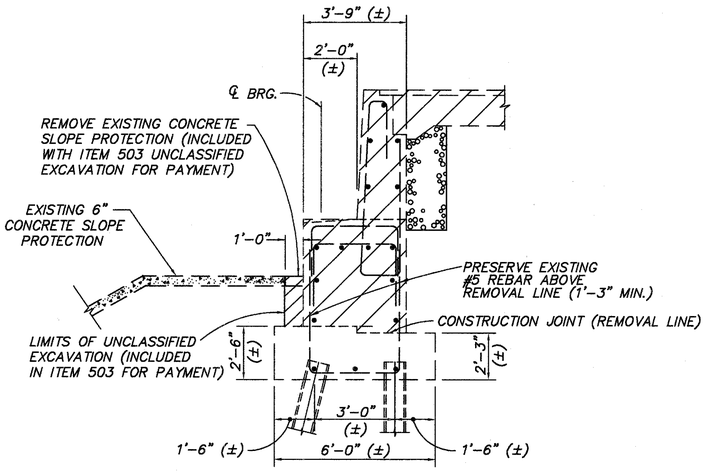
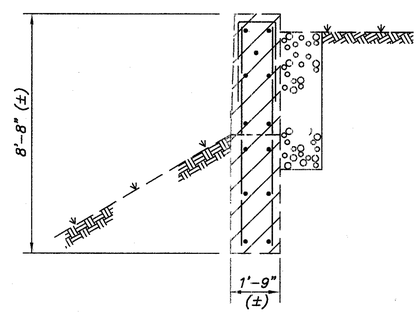


SECTION A–A



SECTION B–B

LEGEND

PORTION OF STRUCTURE TO BE REMOVED

NOTES:

CONSTRUCTION JOINT PREPARATION SAW CUT THE BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP AND REMOVE THE CONCRETE TO A ROUGH SURFACE. A MINIMUM LENGTH OF PROTRUDING REINFORCING STEEL SHALL BE LEFT IN PLACE AS SHOWN ON THE PLANS.
PRIOR TO CONCRETE PLACEMENT, ABRASIVELY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THE JOINT SURFACE AND EXPOSED REINFORCEMENT SHALL THEN BE THOROUGHLY CLEANED OF ALL DIRT, RUST, OR OTHER FOREIGN MATERIALS BY THE USE OF WATER, AIR UNDER PRESSURE, OR ANOTHER METHOD THAT PRODUCES RESULTS SATISFACTORY TO THE ENGINEER. THE CONCRETE BONDING SURFACE 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. THE USE OF EXPLOSIVES AND/OR 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 REINFORCING STEEL PARTIALLY EXPOSED BY CONCRETE REMOVAL, AND TO BE LEFT IN PLACE, SHALL BE BENT AS NECESSARY TO CLEAR PROPOSED CONCRETE SURFACES BY AT LEAST 2 INCHES. ALL WORK SHALL BE DONE IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED.

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DESIGNED	DRAWN	REVIEWED	DATE
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REAR ABUTMENT DEMOLITION PLAN

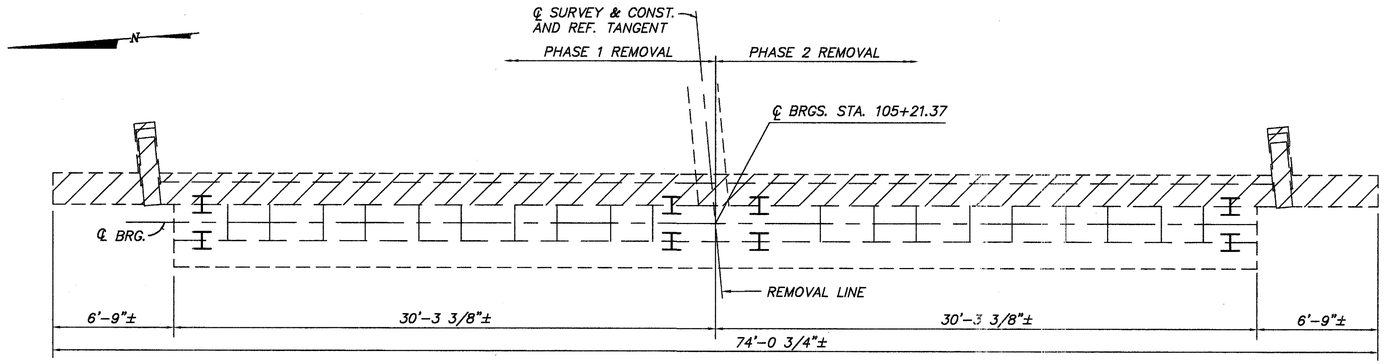
BRIDGE NO. FRA-315-0194
OVER S.R. 315 AND OLENTANGY RIVER

FRA–GOODALE STREET

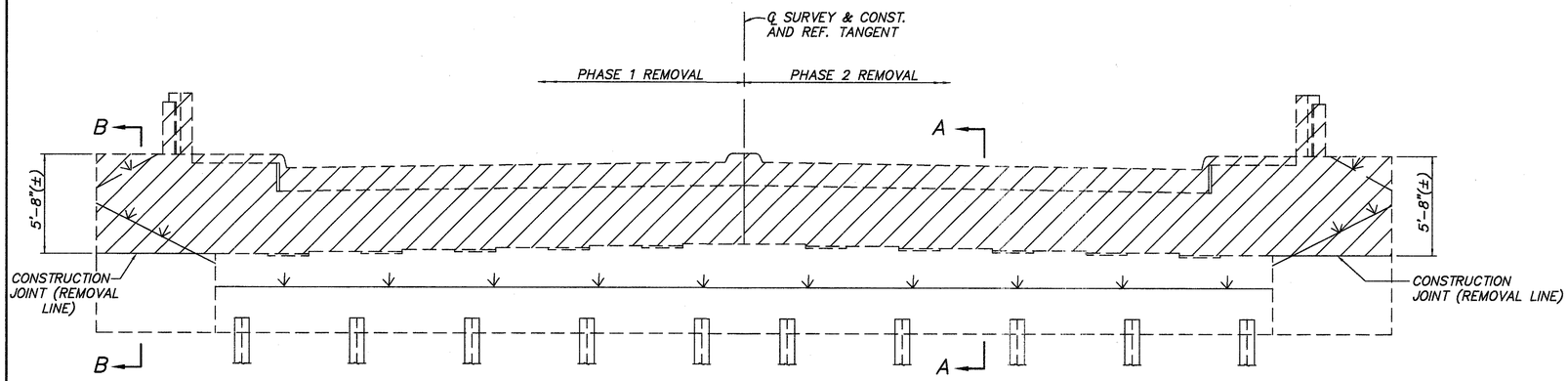
5/25

52/73

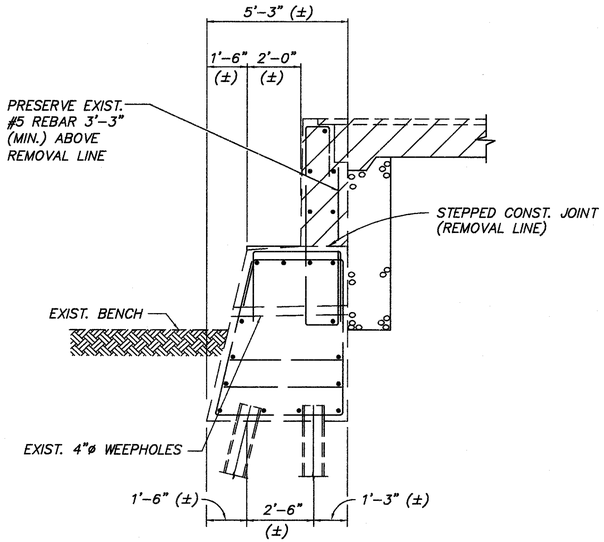
0300–ST



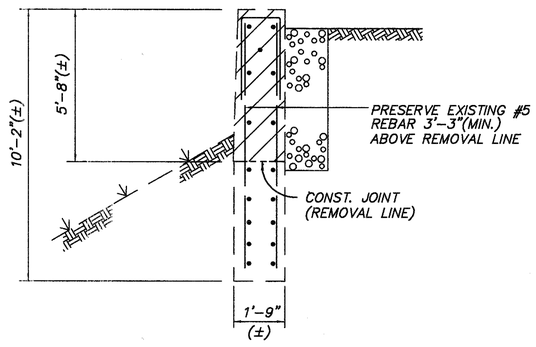
PLAN



ELEVATION



SECTION A–A



SECTION B–B

LEGEND

PORTION OF STRUCTURE TO BE REMOVED

FOR CONCRETE REMOVAL NOTES, SEE SHEET 5/25

KORDA/NEMETH ENGINEERING, INC.
CONSULTING ENGINEERS
6640 BUSCH BLVD. SUITE 330
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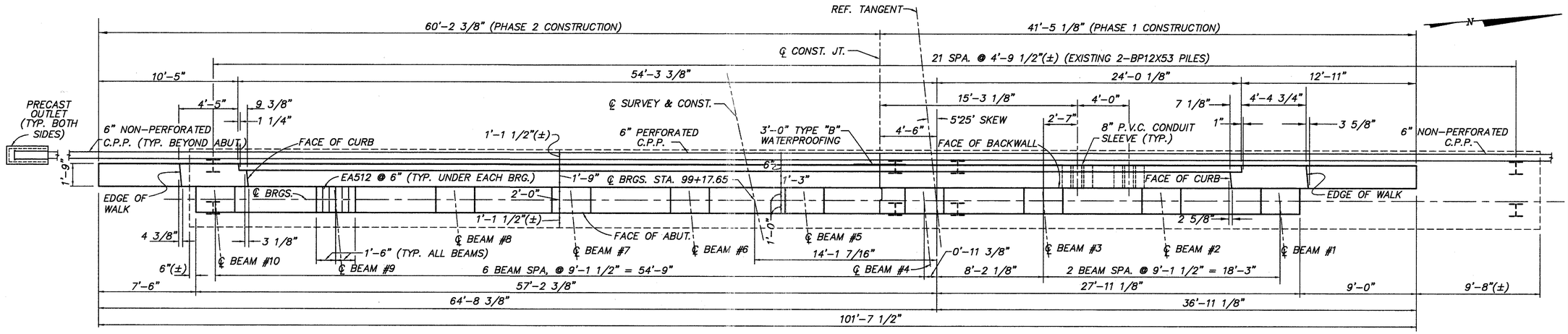
FORWARD ABUTMENT DEMOLITION PLAN
BRIDGE NO. FRA-315-0194
OVER S.R. 315 AND OLENTANGY RIVER

FRA-GOODALE STREET

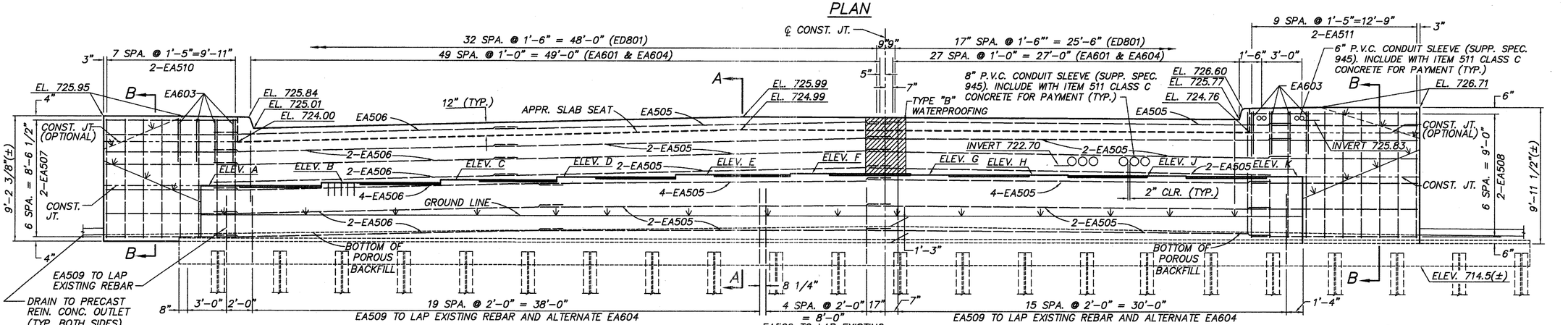
6/25

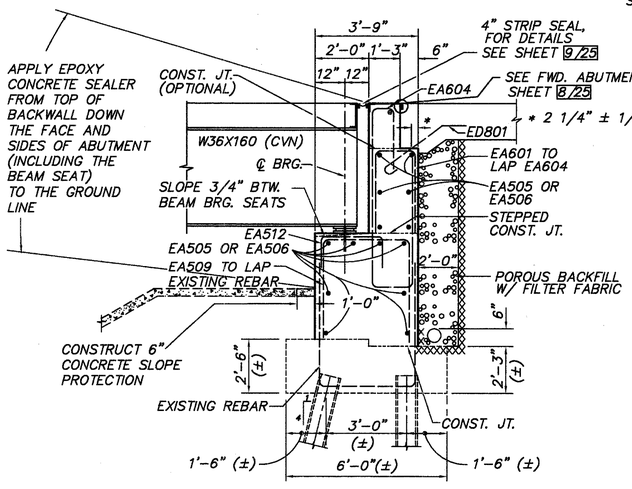
53/73

0300-ST

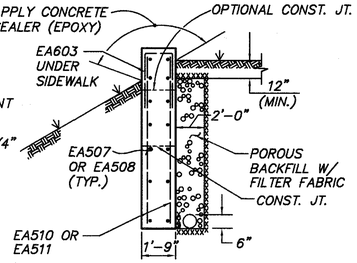


PLAN

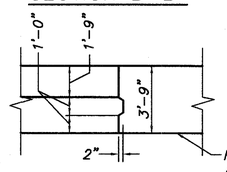




SECTION A-A



SECTION B-B



BREASTWALL CONSTRUCTION JOINT DETAIL

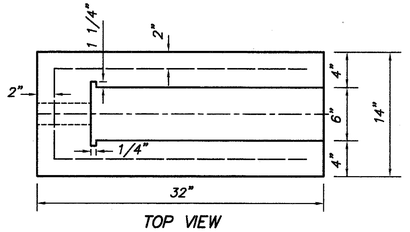
(FOR BACKWALL CONST. JT. SEE SHEET 8/25)

ELEVATION

POINT	BEAM SEAT ELEV. ALONG ℄ BRGS.
A	720.55
B	720.78
C	721.01
D	721.23
E	721.46
F	721.57
G	721.51
H	721.46
J	721.41
K	721.35

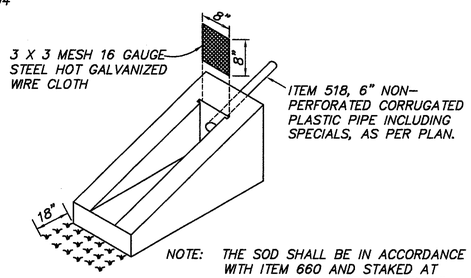
LEGEND

XXXXX ~ LIMITS OF FILTER FABRIC
MIN. LAPS: ~ #5 BARS = 2'-6"
#6 BARS = 3'-3"



TOP VIEW

THE CONCRETE OUTLET SHALL MEET THE REQUIREMENT OF ITEM 604 IN THE CONSTRUCTION & MATERIALS SPECIFICATIONS. PAYMENT SHALL BE MADE ON AN EACH BASIS. PAYMENT SHALL INCLUDE THE COST OF THE SOD & WIRE CLOTH.



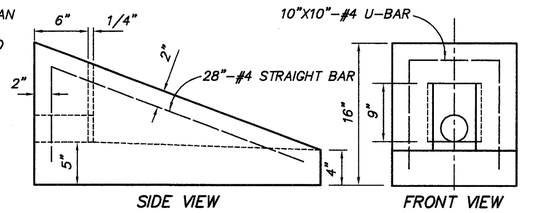
NOTE: THE SOD SHALL BE IN ACCORDANCE WITH ITEM 660 AND STAKED AT EACH CORNER APPROXIMATELY 3 INCHES IN FROM THE EDGE.

POROUS BACKFILL WITH FILTER FABRIC: FOR NOTES SEE SHEET 8/25
TWO CUBIC FEET OF BAGGED NO. 3 AGGREGATE NOT REQUIRED FOR REAR ABUT.

BRIDGE SEAT REINFORCING: REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT SHALL BE ACCURATELY PLACED TO AVOID INTERFERENCE WITH THE DRILLING OF BEARING ANCHOR HOLES.

BRIDGE SEAT ELEVATIONS HAVE BEEN ADJUSTED UPWARD 1/8-INCH TO COMPENSATE FOR THE VERTICAL DEFORMATION OF THE BEARINGS.

BACKWALL CONCRETE: FOR NOTES SEE SHEET 8/25



SIDE VIEW FRONT VIEW

PRECAST REINFORCED CONCRETE OUTLET DETAILS

KORDA/NEMETH ENGINEERING, INC.
CONSULTING ENGINEERS
6640 BUSCH BLVD. SUITE 250
COLUMBUS, OHIO 43229-1064
TEL. (614) 487-1660
FAX. (614) 487-1666

DESIGNED	DRAWN	REVIEWED	DATE
DAT	E.JM	RWE	5/18/94
CHECKED	REVISED	STRUCTURE FILE NO.	
MTO		2516144	

REAR ABUTMENT DETAILS
BRIDGE NO. FRA-315-0194
OVER S.R. 315 AND OLENTANGY RIVER

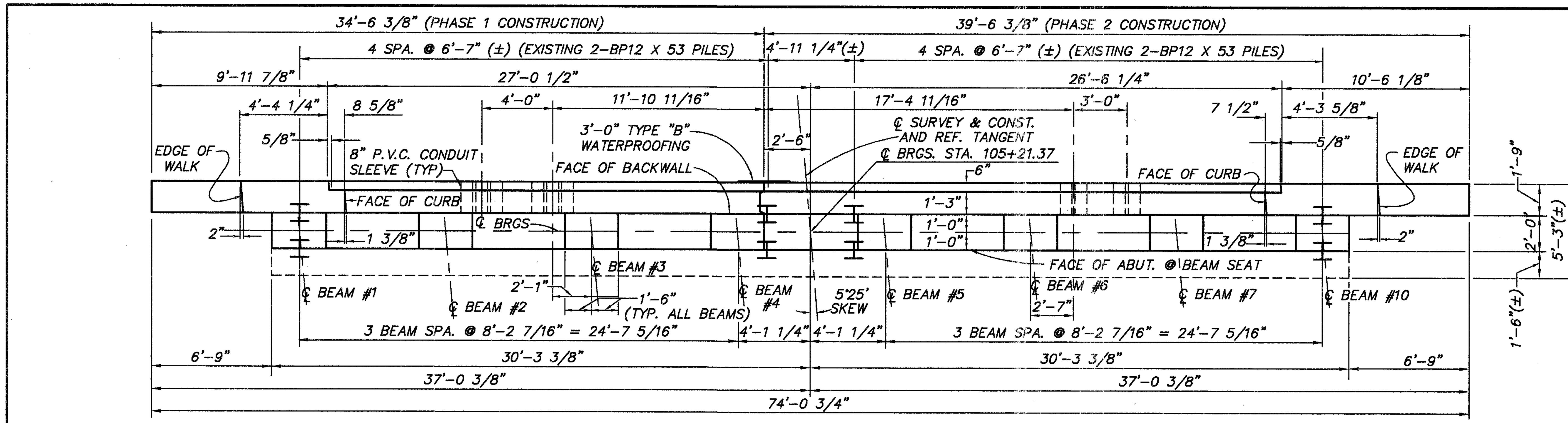
FRA-GOODALE STREET

7/25

54/73

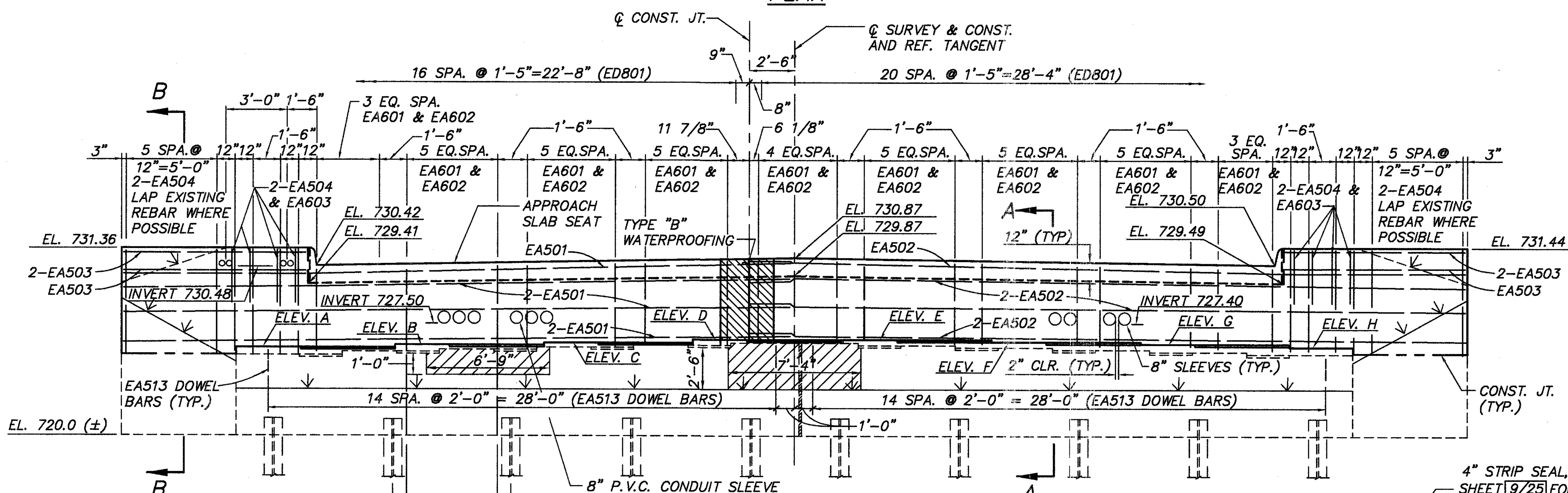
DATE: BURNHEMER G:\CIVIL\DWG\92024\92024ABT.DWG DATE: OCT 24, 1994 TIME: 3:42 PM

/92024/92024ABT



PLAN

1/4 INCH SCARIFICATION: THE EXISTING BRIDGE SEAT SURFACE SHALL BE SCARFICED 1/4 INCH INTO SOUND CONCRETE PRIOR TO CONSTRUCTION OF THE CONCRETE PEDESTAL SHOWN ON THE PLANS. AFTER THE DOWEL BARS HAVE BEEN INSTALLED, BUT PRIOR TO CONCRETE PLACEMENT, THE SURFACE SHALL BE THOROUGHLY CLEANED AND PREPARED THE SAME WAY AS STATED IN THE CONSTRUCTION JOINT PREPARATION NOTE ON SHEET 5/25



ELEVATION

POINT	BEAM SEAT ELEV. ALONG ℄ BRGS.
A	725.90
B	726.04
C	726.18
D	726.32
E	726.34
F	726.22
G	726.11
H	726.00

LEGEND

XXXXX ~ LIMITS OF FILTER FABRIC

MIN. LAPS: ~ #5 BARS = 2'-6"
#6 BARS = 3'-3"

▨ ~ PATCHING OF CONCRETE STRUCTURE

DOWEL BARS, ED801, SHALL BE PLACED PARALLEL TO THE CENTERLINE OF SURVEY & CONSTRUCTION.

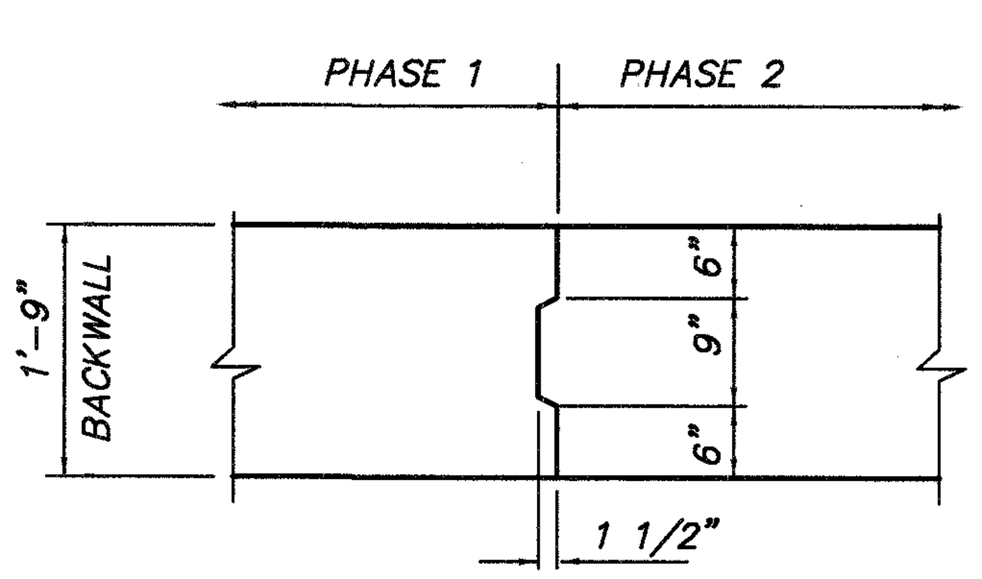
EXISTING WEEPHOLES SHALL BE CLEAR OF DEBRIS PRIOR TO PLACING POROUS BACKFILL. THE COST FOR CLEARING EXISTING WEEPHOLES SHALL BE INCLUDED WITH ITEM 518 FOR PAYMENT.

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. GEOTEXTILE FABRIC SHALL CONFORM WITH 712.09, TYPE A, TWO CUBIC FEET OF BAGGED NO. 3 AGGREGATE SHALL BE PLACED AT EACH WEEPHOLE. BAGGED AGGREGATE AND GEOTEXTILE FABRIC ARE INCLUDED WITH POROUS BACKFILL FOR PAYMENT.

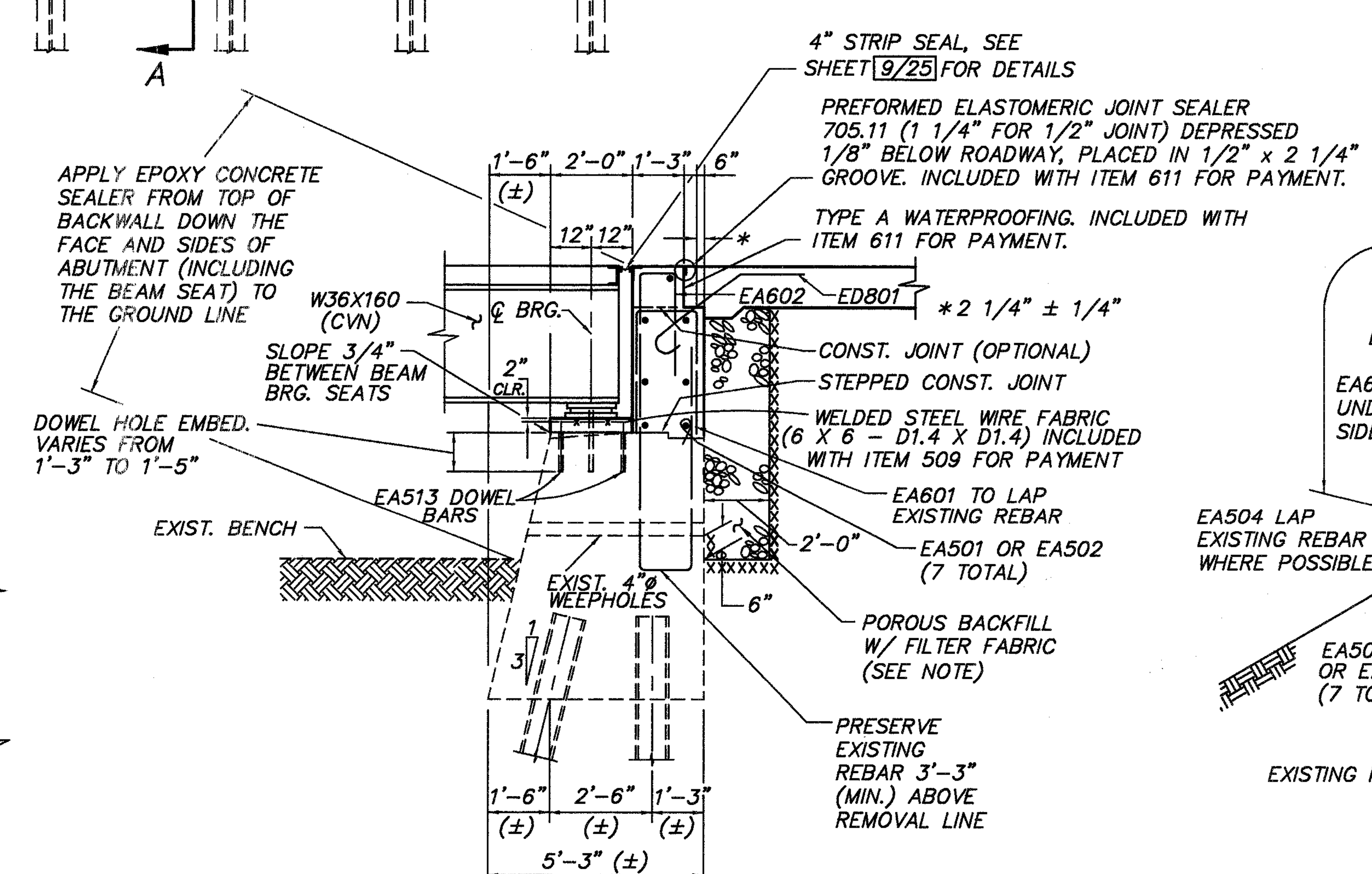
DOWEL HOLES
REFER TO GENERAL NOTES, 3/25

BRIDGE SEAT ELEVATIONS AND REINFORCING
FOR NOTES SEE SHEET 7/25

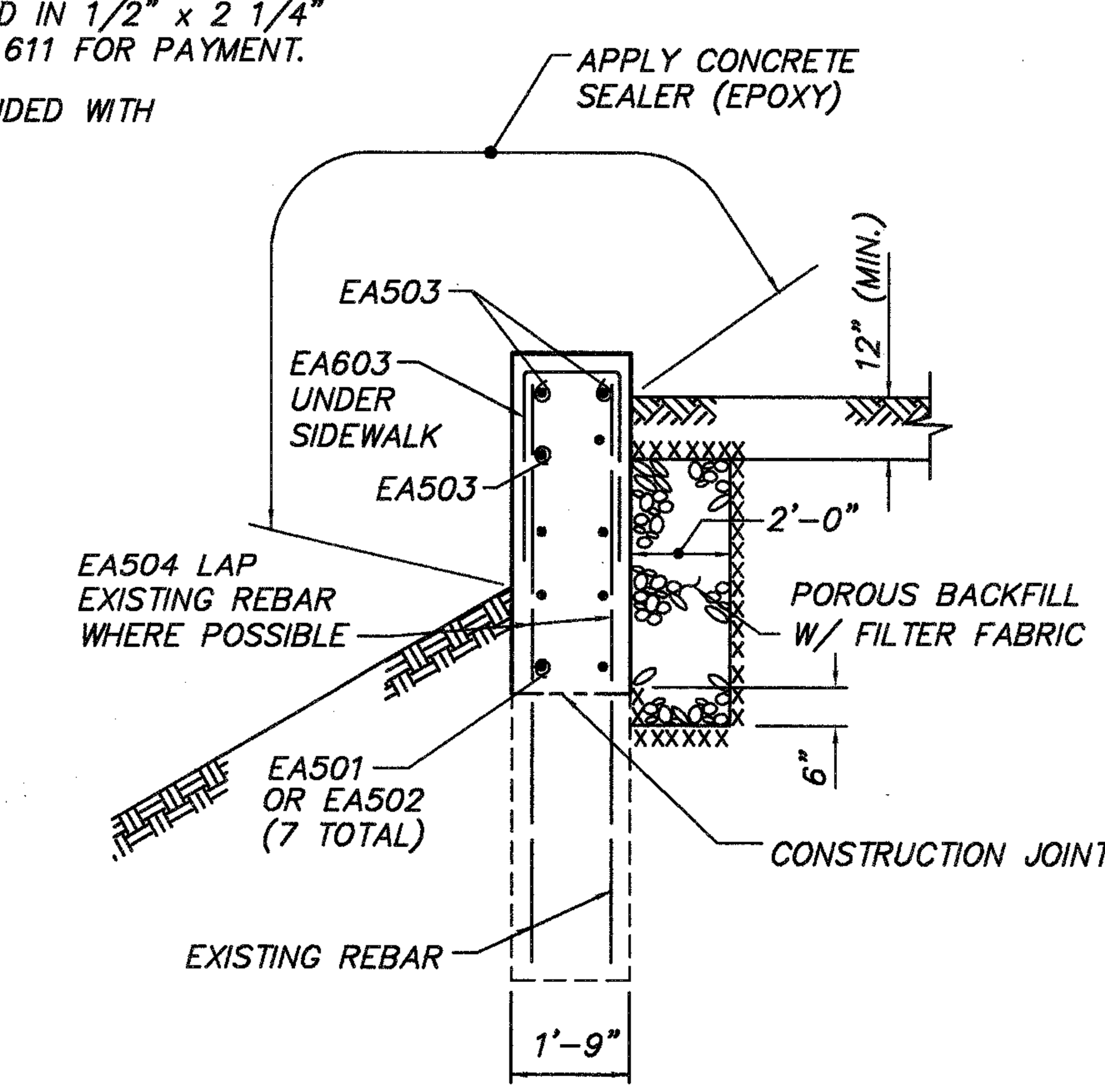
BACKWALL CONCRETE: IN ADDITION TO THE PROVISIONS OF 511.08, BACKWALL CONCRETE ABOVE THE OPTIONAL CONSTRUCTION JOINT AT THE APPROACH SLAB SEAT SHALL NOT BE PLACED UNTIL AFTER THE DECK CONCRETE IN THE SPAN ADJACENT TO THE ABUTMENT HAS BEEN PLACED.



BACKWALL CONSTRUCTION JOINT DETAIL
FOR BREASTWALL CONSTRUCTION JOINT DETAIL, SEE SHEET 7/25



SECTION A–A



SECTION B–B

KORDA/NEMETH ENGINEERING, INC.
CONSULTING ENGINEERS

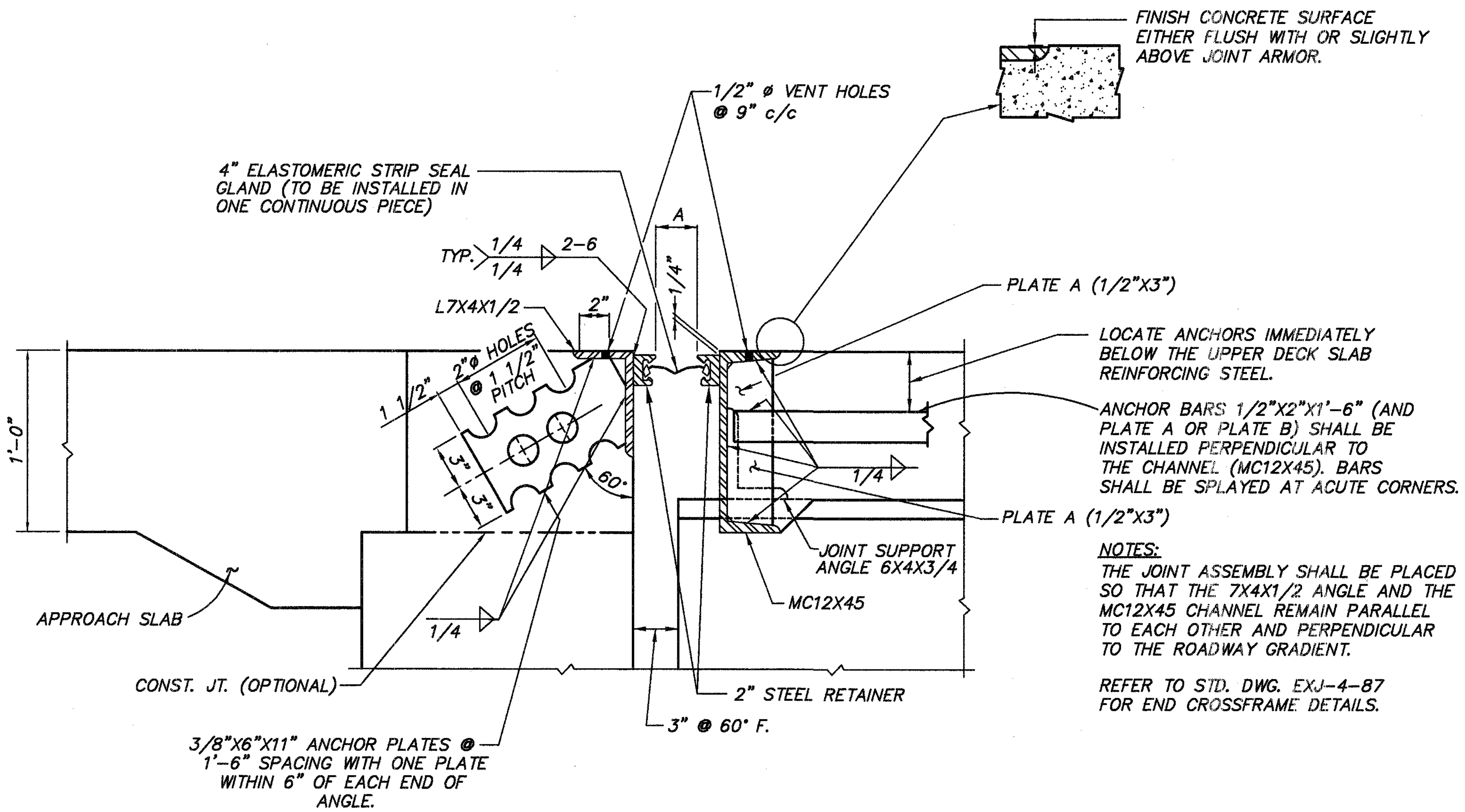
DESIGNED	DRAWN	REVIEWED	DATE
DAT	KAH	RWE	5/18/94
CHECKED	REVISED	STRUCTURE FILE NO.	
MTO		2516144	

FORWARD ABUTMENT DETAILS
BRIDGE NO. FRA-315-0194
OVER S.R. 315 AND OLENTANGY RIVER

FRA-GOODALE STREET

8/25

55/73

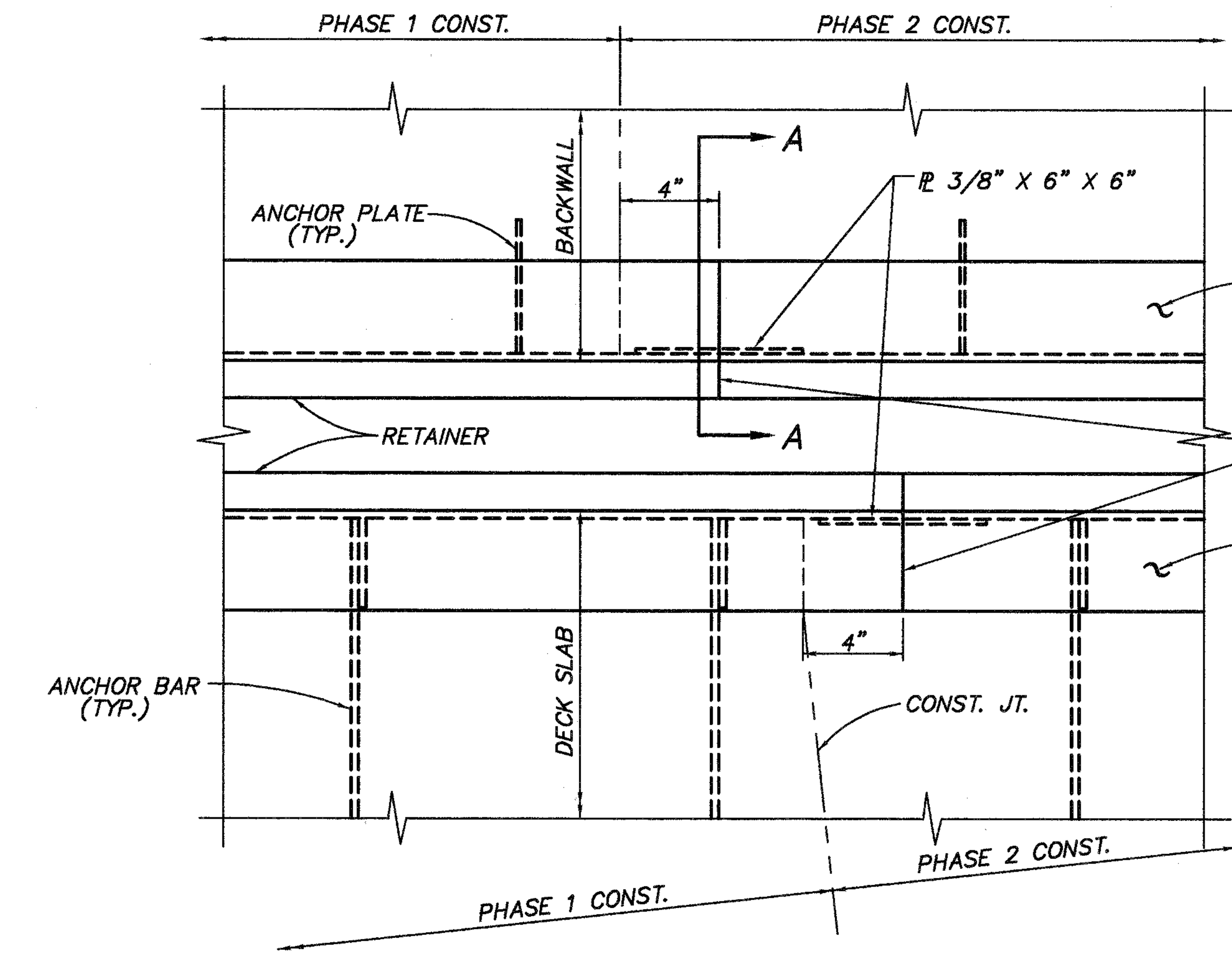


NOTES:
THE JOINT ASSEMBLY SHALL BE PLACED SO THAT THE 7X4X1/2 ANGLE AND THE MC12X45 CHANNEL REMAIN PARALLEL TO EACH OTHER AND PERPENDICULAR TO THE ROADWAY GRADIENT.

REFER TO STD. DWG. EXJ-4-87 FOR END CROSSFRAME DETAILS.

JOINT DIMENSION "A"							
TEMPERATURE F°	90°	80°	70°	60°	50°	40°	30°
REAR ABUTMENT	1 1/8"	1 3/8"	1 5/8"	1 7/8"	2 1/8	2 3/8"	2 5/8
FORWARD ABUTMENT	1 1/8"	1 3/8"	1 5/8"	1 7/8"	2 1/8	2 3/8"	2 5/8

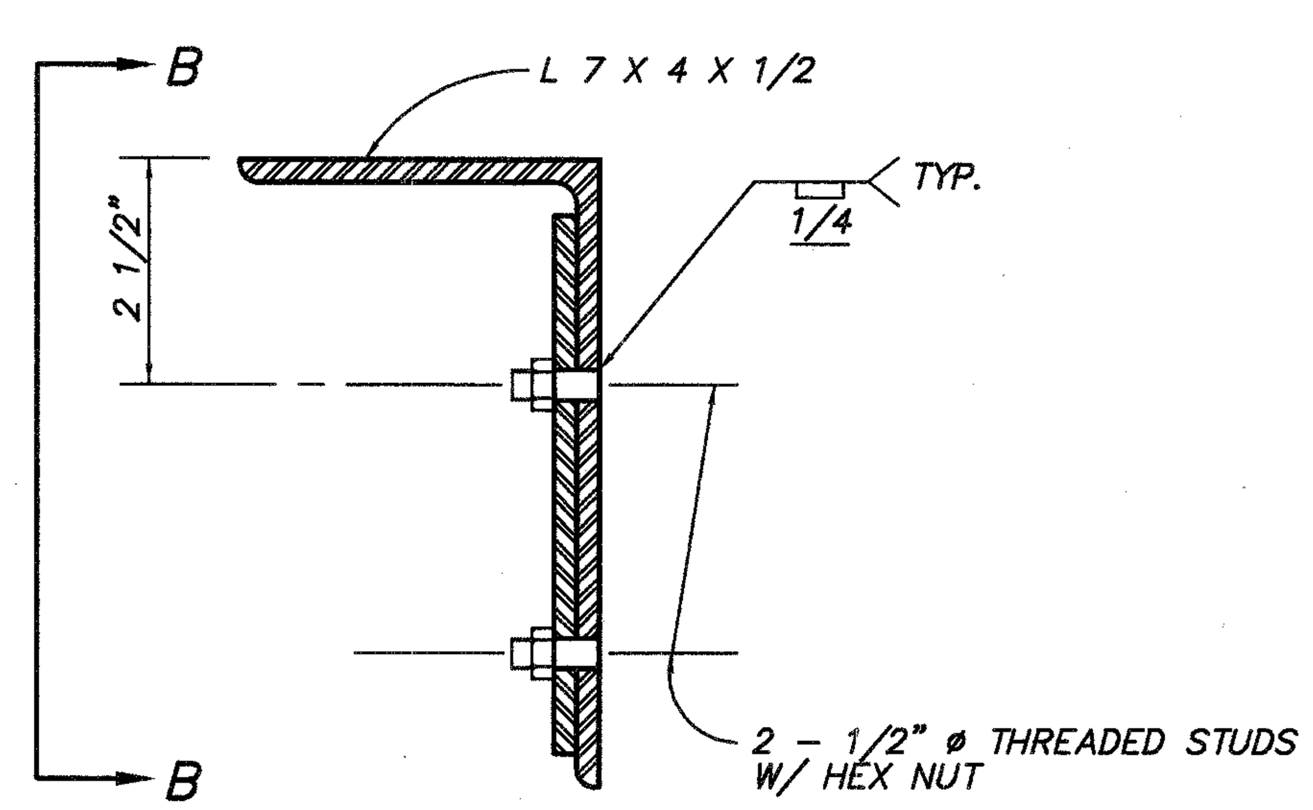
STRIP SEAL JOINT DETAIL



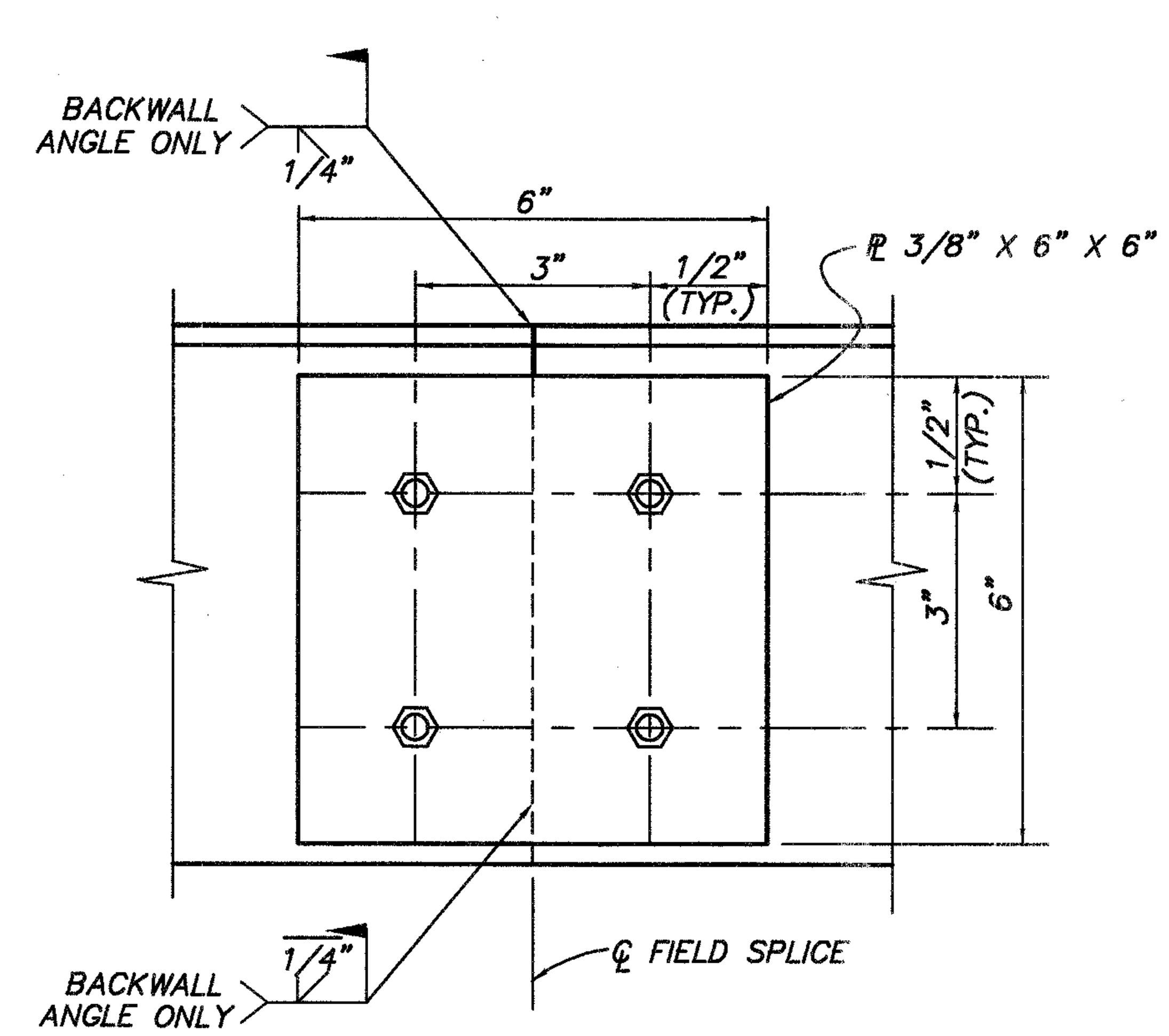
SPLICE DETAIL FOR JOINT ARMOR
(COST OF SPLICES TO BE INCLUDED WITH ITEM 516 FOR PAYMENT)

FABRICATION NOTES:
PROVIDE 7" DIAMETER HOLES IN 1/2" PLATES OF SIDEWALK JOINT ARMOR FOR 6" DIAMETER PVC CONDUIT SLEEVES (LEFT SIDEWALK ONLY); SEE ABUTMENT DETAIL SHEETS 7/25 AND 8/25 FOR LOCATIONS. COST TO BE INCLUDED WITH ITEM 516 FOR PAYMENT.

REFER TO STD. DWG. EXJ-4-87 FOR OTHER DETAILS AND NOTES NOT SHOWN, INCLUDING DETAILS OF JOINT ASSEMBLY AT SIDEWALKS.



SECTION A-A



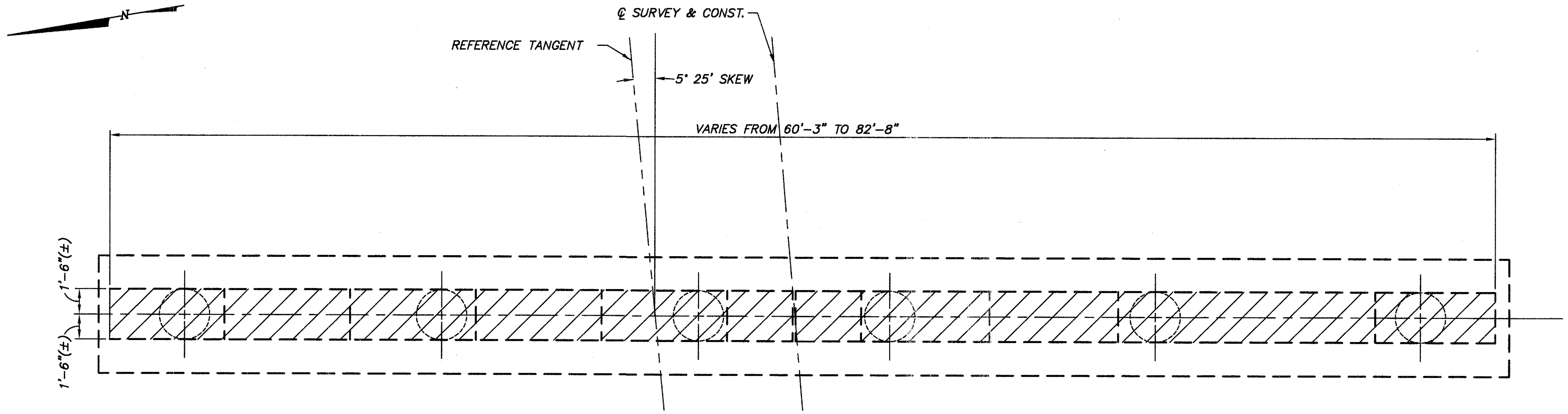
VIEW B-B
NOTE: SPLICE DETAIL FOR MC 12 X 45 IS SIMILAR

KORDA/NEMETH ENGINEERING, INC. CONSULTING ENGINEERS

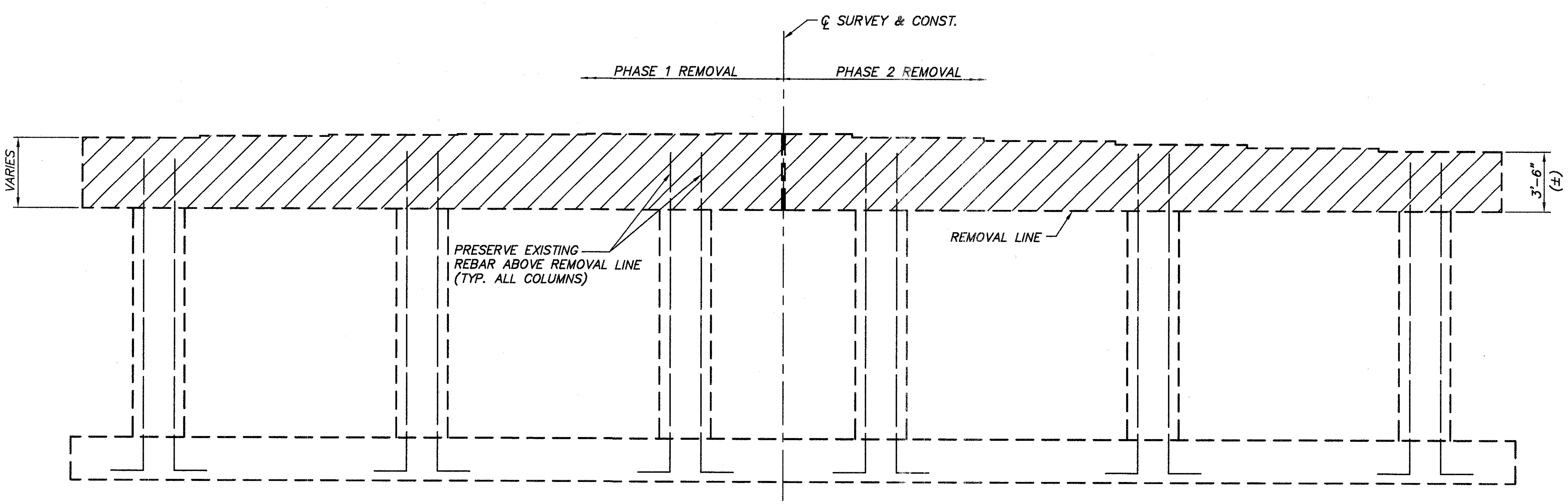
DESIGNED DAT	DRAWN KAH	REVIEWED RWE	DATE 5/18/94
CHECKED MTO	REVISED	STRUCTURE FILE NO. 2516144	

STRIP SEAL EXPANSION JOINT DETAILS
BRIDGE NO. FRA-315-0194
OVER S.R. 315 AND OLENTANGY RIVER

FRA-GOODALE STREET



PLAN



ELEVATION

NOTES:

CONSTRUCTION JOINT PREPARATION: SAW CUT THE BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP AND REMOVE THE CONCRETE TO A ROUGH SURFACE. PROTRUDING REINFORCING STEEL SHALL BE LEFT IN PLACE AS SHOWN ON THE PLANS.

PRIOR TO CONCRETE PLACEMENT, ABRASIVELY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THE JOINT SURFACE AND EXPOSED REINFORCEMENT SHALL THEN BE THOROUGHLY CLEANED OF ALL DIRT, RUST, OR OTHER FOREIGN MATERIALS BY THE USE OF WATER, AIR UNDER PRESSURE, OR ANOTHER METHOD THAT PRODUCES RESULTS SATISFACTORY TO THE ENGINEER. THE CONCRETE BONDING SURFACE 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. THE USE OF EXPLOSIVES AND/OR 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 REINFORCING STEEL PARTIALLY EXPOSED BY CONCRETE REMOVAL, AND TO BE LEFT IN PLACE, SHALL BE BENT AS NECESSARY TO CLEAR PROPOSED CONCRETE SURFACES BY AT LEAST 2 INCHES. ALL WORK SHALL BE DONE IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED.

LEGEND

▨ PORTION OF STRUCTURE TO BE REMOVED

DESIGNED	DRAWN	REVIEWED	DATE
DAT	VSS	RWE	5/18/94
CHECKED	REVISED	STRUCTURE FILE NO.	
MTO		2516144	

KORDA/NEMETH ENGINEERING, INC.

PIER DEMOLITION PLAN (PIERS 1, 2, 3, & 4)
BRIDGE NO. FRA-315-0194
OVER S.R. 315 AND OLENTANGY RIVER

FRA-GOODALE STREET

10/25

57/73

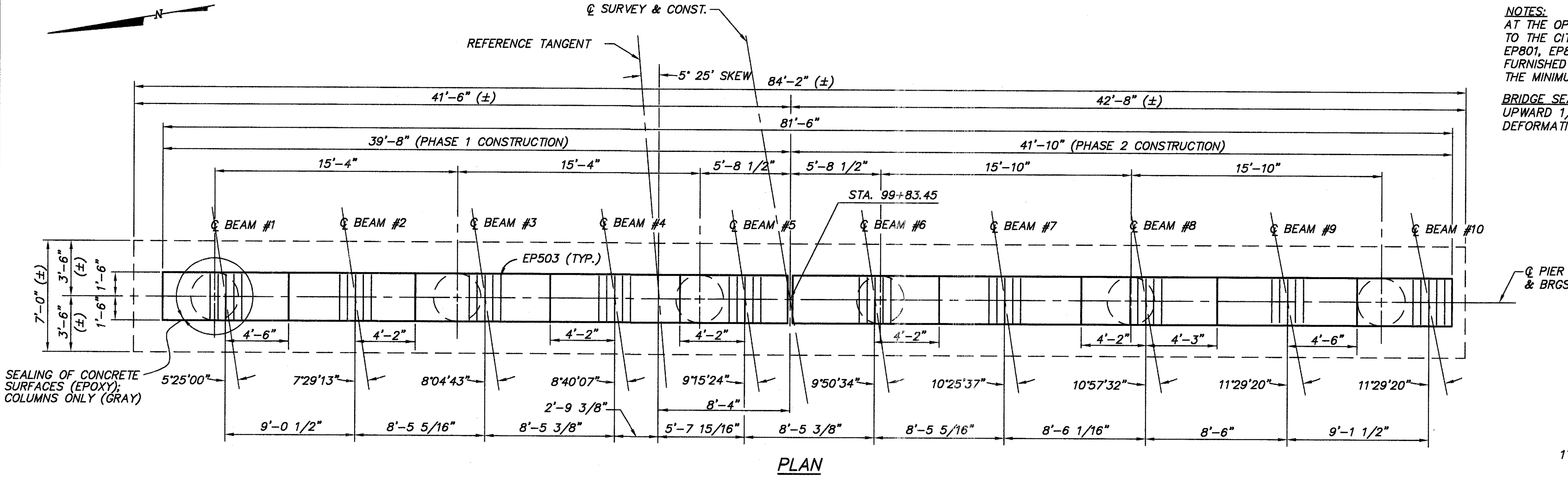
DAVE BURNHEIMER G:\CIVILDWG\92024\92024DM3.DWG DATE: OCT 19, 1994 TIME: 2:22 PM

/92024/92024DM3

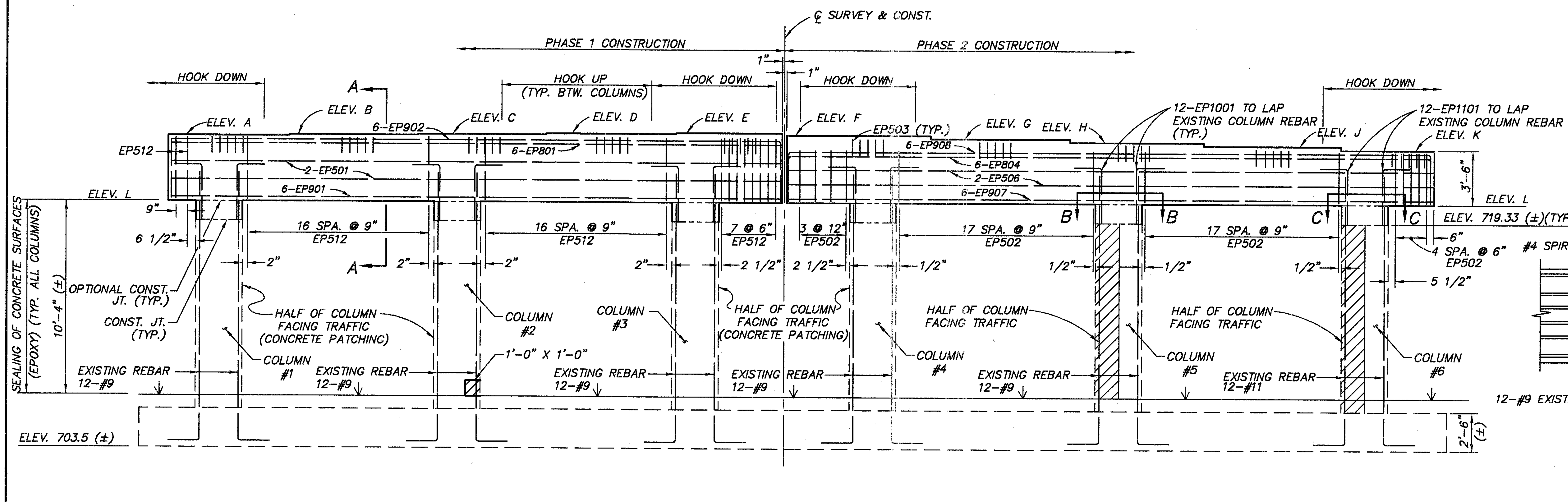
NOTES:

AT THE OPTION OF THE CONTRACTOR, AND AT NO EXTRA COST TO THE CITY OF COLUMBUS, BARS DESIGNATED EP501, EP506, EP801, EP804, EP901, EP902, EP907, AND EP908 MAY EACH BE FURNISHED AS TWO SEPARATE BARS WITH LAPS CONFORMING TO THE MINIMUM LENGTHS SHOWN.

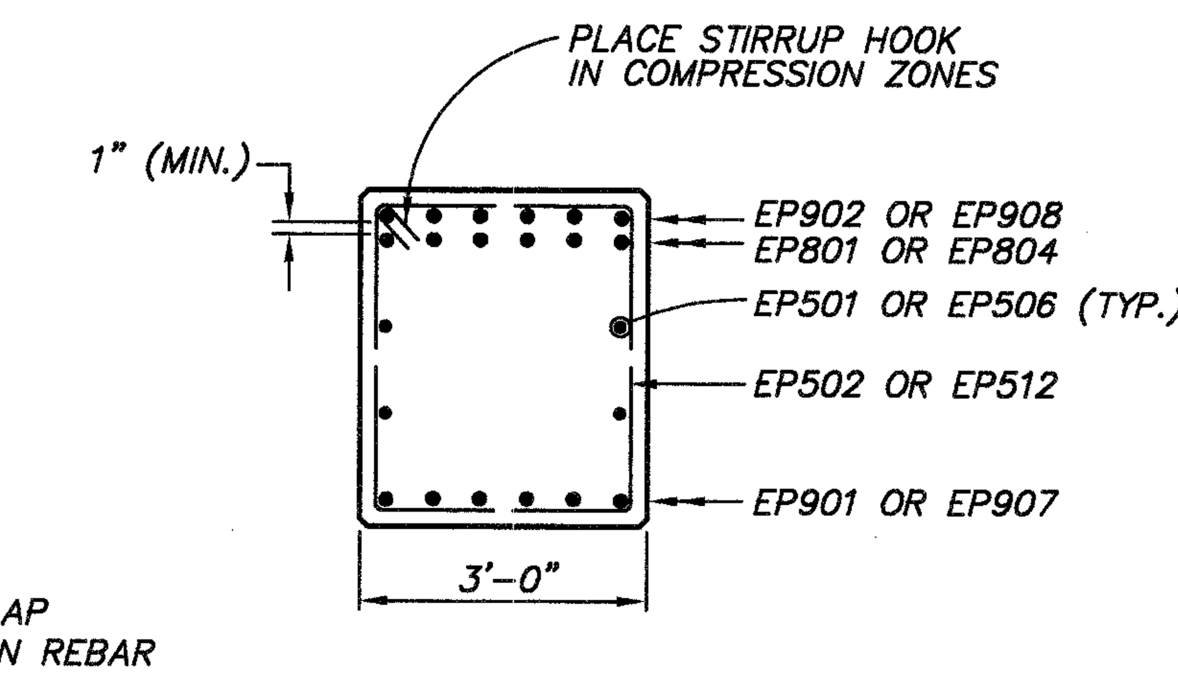
BRIDGE SEAT ELEVATIONS HAVE BEEN ADJUSTED UPWARD 1/8-INCH TO COMPENSATE FOR THE VERTICAL DEFORMATION OF THE BEARINGS.



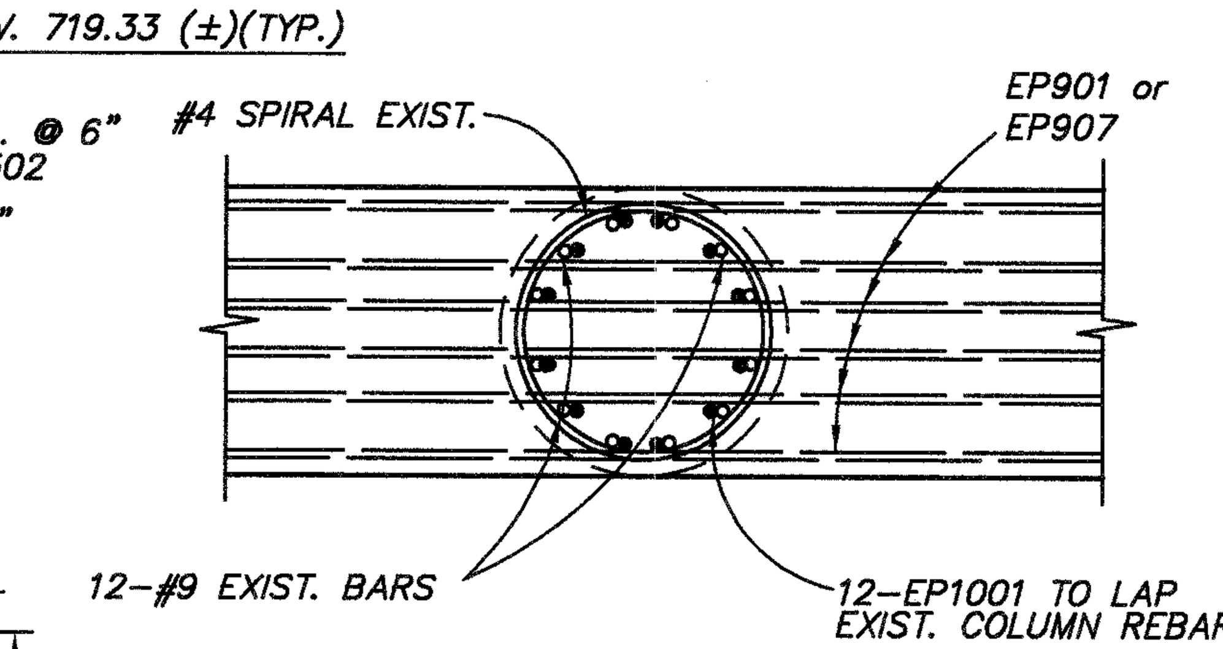
PLAN



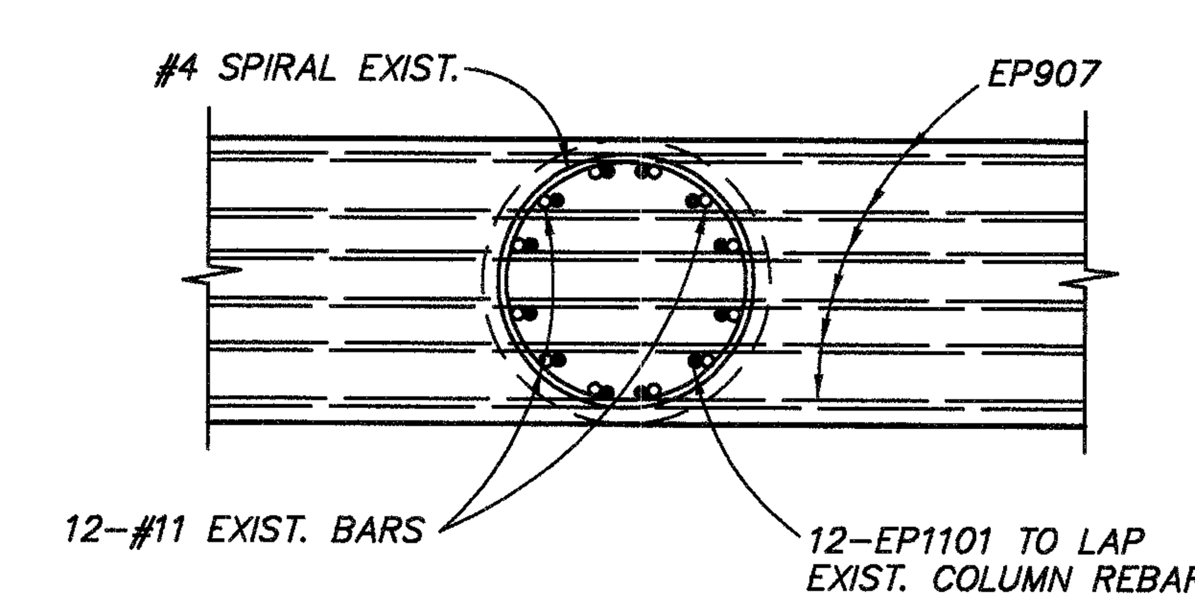
ELEVATION



SECTION A-A



SECTION B-B



SECTION C-C

LEGEND

MIN. LAPS: #5 BARS = 2'-9"
#8 BARS = 7'-3"
#9 BARS = 9'-2"

~ PATCHING OF CONCRETE STRUCTURE

ELEVATIONS											
LOCATION	A	B	C	D	E	F	G	H	J	K	L
PIER #1	724.69	724.76	724.82	724.87	724.93	724.81	724.61	724.41	724.20	723.98	720.48

COLUMN #	* AREA TO BE PATCHED (SQ. FT.)
1	43.3
2	44.3
3	43.3
4	43.3
5	43.3
6	62.8
TOTAL	280.3

* FIELD MEASUREMENTS DECEMBER 8, 1993

KORDA/NEMETH ENGINEERING, INC. CONSULTING ENGINEERS

DESIGNED	DRAWN	REVIEWED	DATE
DAT	VSS	RWE	5/18/94
CHECKED	REVISED	STRUCTURE FILE NO.	
MTO		2516144	

PIER 1 DETAILS
BRIDGE NO. FRA-315-0194
OVER S.R. 315 AND OLENTANGY RIVER

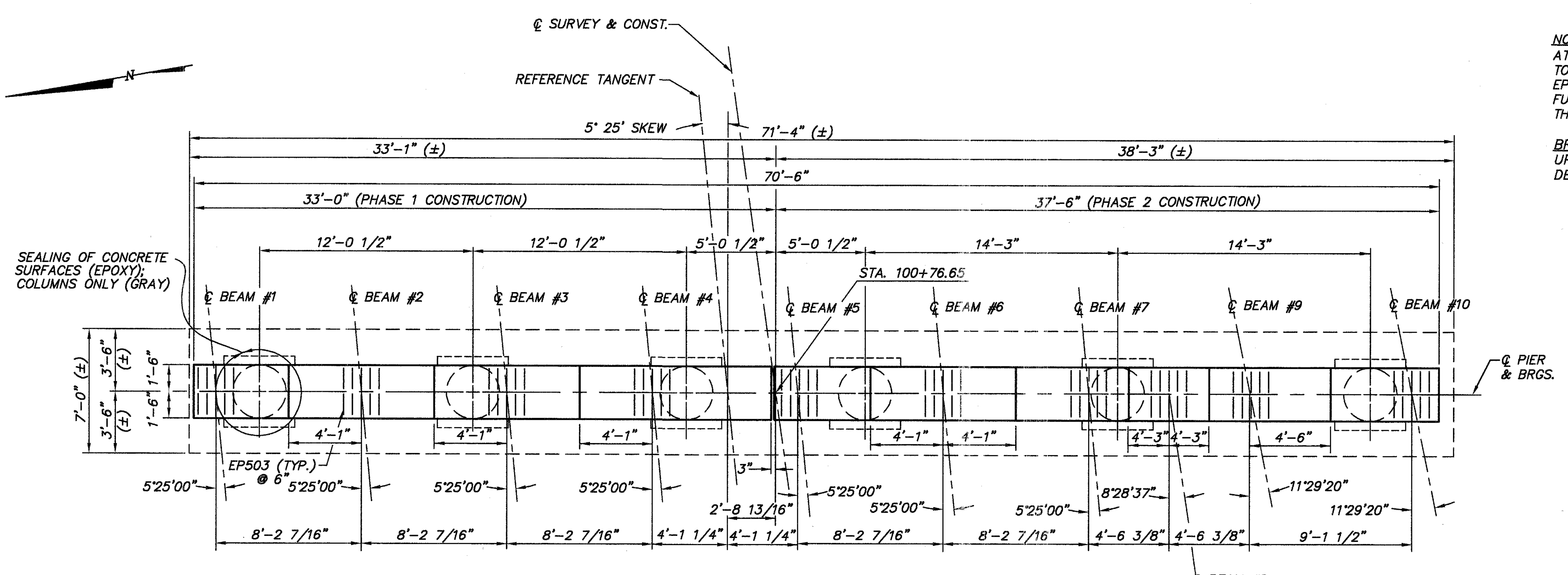
FRA-GOODALE STREET

11/25

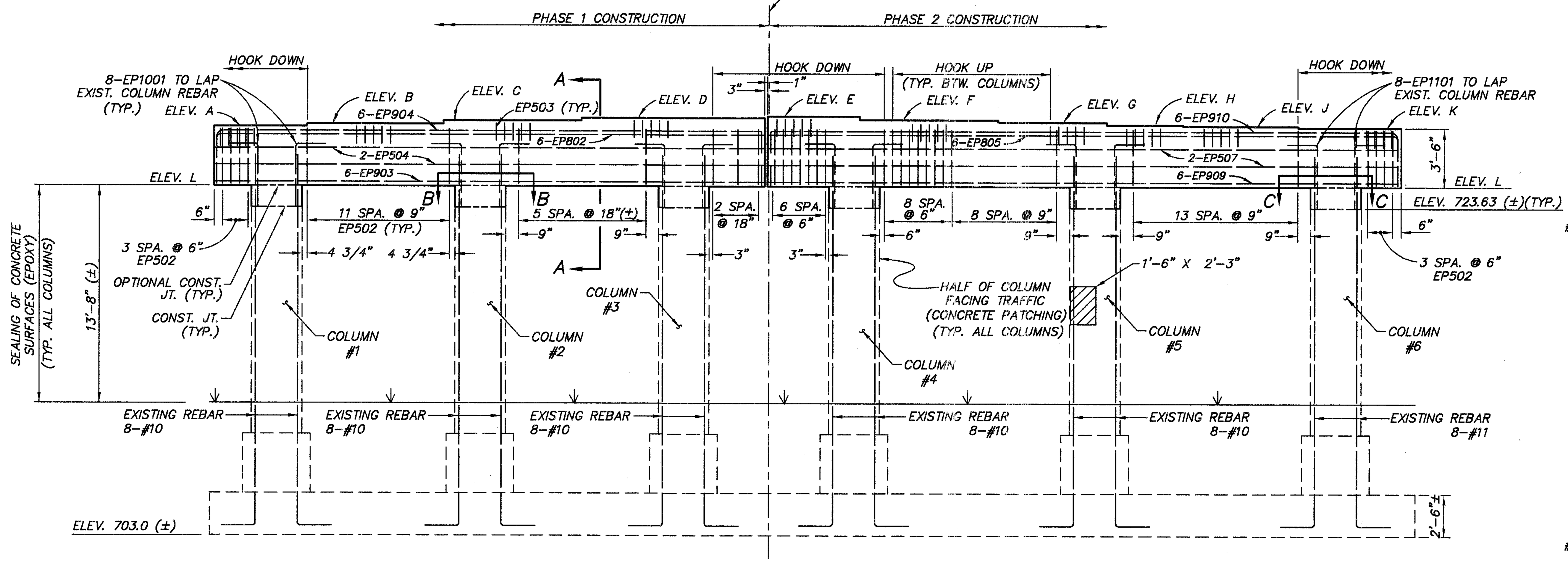
58/73

DAVE BURNHEIMER G:\CIVILDWG\92024\92024P01.DWG DATE: OCT 26, 1994 TIME: 2:58 PM

/92024/92024P01



PLAN

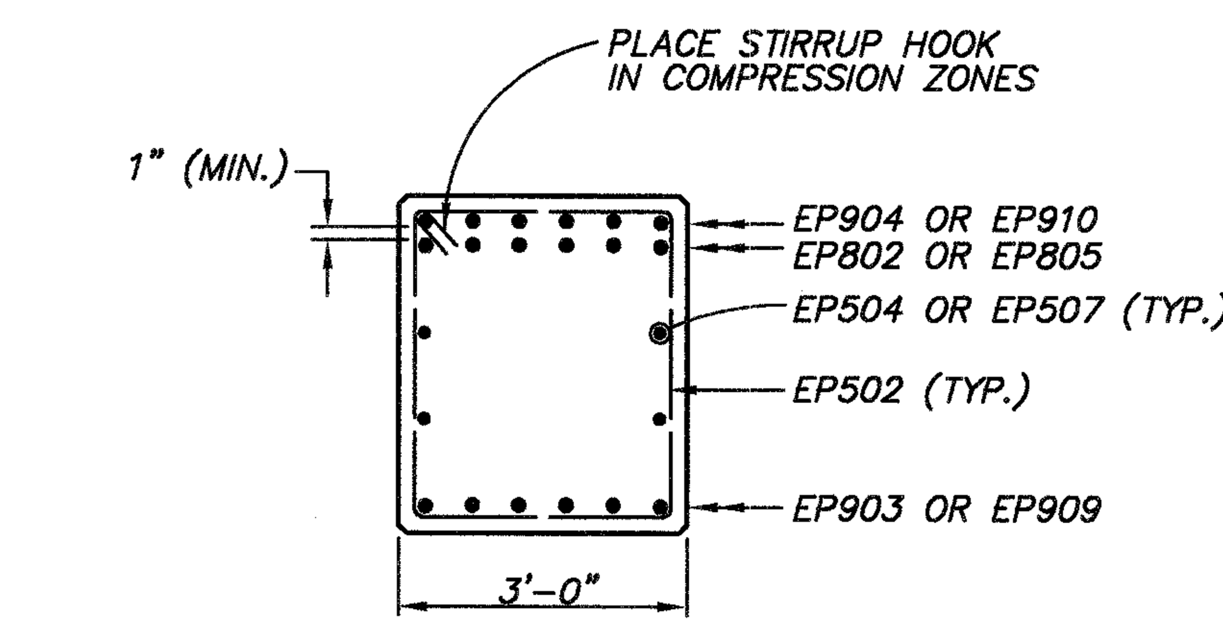


ELEVATION

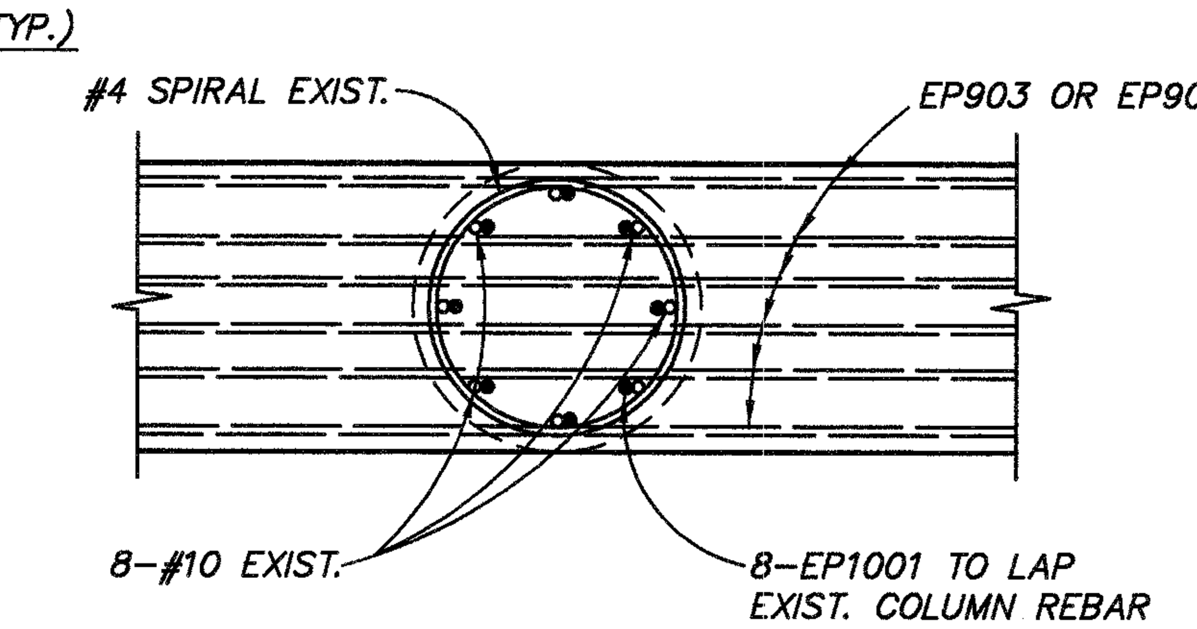
NOTES:

AT THE OPTION OF THE CONTRACTOR, AND AT NO EXTRA COST TO THE CITY OF COLUMBUS, BARS DESIGNATED EP504, EP507, EP802, EP805, EP903, EP904, EP909, AND EP910 MAY EACH BE FURNISHED AS TWO SEPARATE BARS WITH LAPS CONFORMING TO THE MINIMUM LENGTHS AS SHOWN.

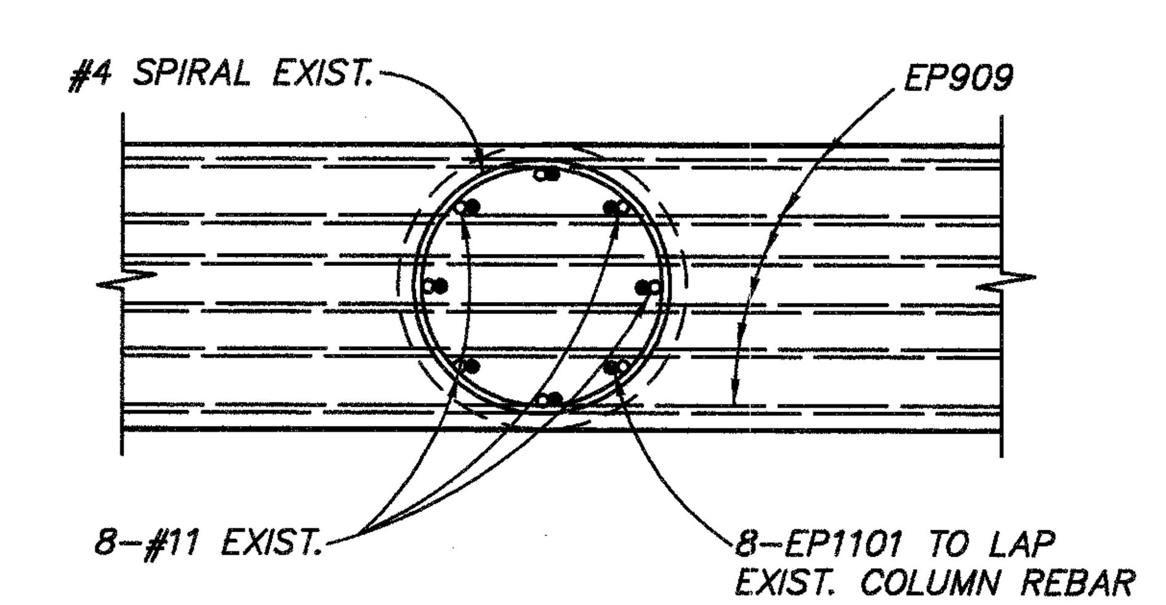
BRIDGE SEAT ELEVATIONS EXCLUDING ELEV. H HAVE BEEN ADJUSTED UPWARD 1/8-INCH TO COMPENSATE FOR THE VERTICAL DEFORMATION OF THE BEARINGS.



SECTION A-A



SECTION B-B



SECTION C-C

LEGEND

MIN. LAPS: #5 BARS = 2'-9"
#8 BARS = 7'-3"
#9 BARS = 9'-2"

(hatched box) ~ PATCHING OF CONCRETE STRUCTURE

ELEVATIONS

LOCATION	A	B	C	D	E	F	G	H	J	K	L
PIER #2	728.78	728.87	728.96	729.05	729.10	728.93	728.76	728.73	728.58	728.39	724.89

COLUMN #	* AREA TO BE PATCHED (SQ. FT.)
1	58.5
2	58.5
3	58.5
4	58.5
5	61.9
6	58.5
TOTAL	354.4

* FIELD MEASUREMENTS DECEMBER 8, 1993

KORDA/NEMETH ENGINEERING, INC. CONSULTING ENGINEERS

DESIGNED	DRAWN	REVIEWED	DATE
DAT	VSS	RWE	5/18/94
CHECKED	REVISED	STRUCTURE FILE NO.	
MTO		2516144	

PIER 2 DETAILS
BRIDGE NO. FRA-315-0194
OVER S.R. 315 AND OLENTANGY RIVER

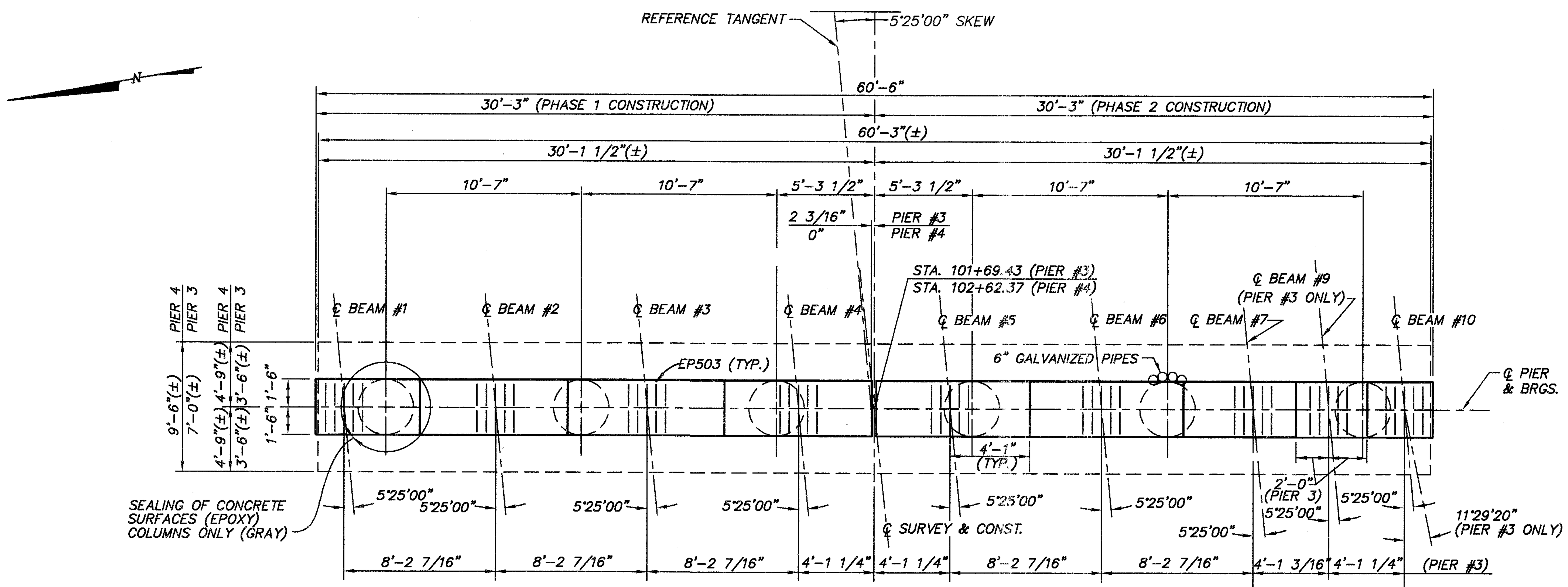
FRA-GOODALE STREET

12/25

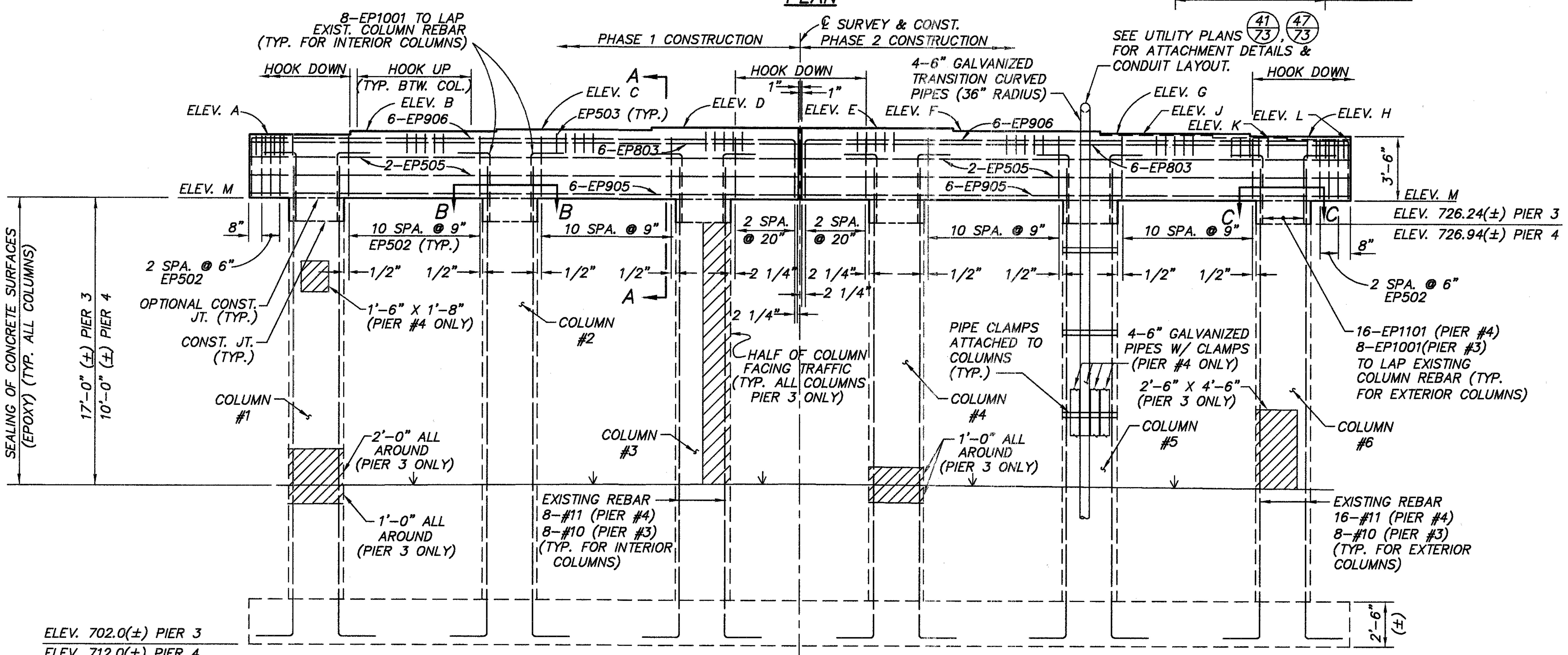
59/73

/92024/92024P02

DAVE BURNHEIMER G:\CIVILDWG\92024\92024P02.DWG DATE: OCT 19, 1994 TIME: 2:26 PM



PLAN



ELEVATION

ELEVATIONS												
LOCATION	A	B	C	D	E	F	G	H	J	K	L	M
PIER #3	731.16	731.27	731.39	731.50	731.49	731.35	N/A	N/A	731.26	731.14	731.07	727.57
PIER #4	731.74	731.87	732.00	732.13	732.13	732.00	731.88	731.75	N/A	N/A	N/A	728.24

COLUMN #	* AREA TO BE PATCHED (SQ. FT.)	
	PIER #3	PIER #4
1	102.1	2.5
2	73.8	–
3	73.8	–
4	92.7	–
5	73.8	–
6	85.0	–
TOTAL	501.2	2.5

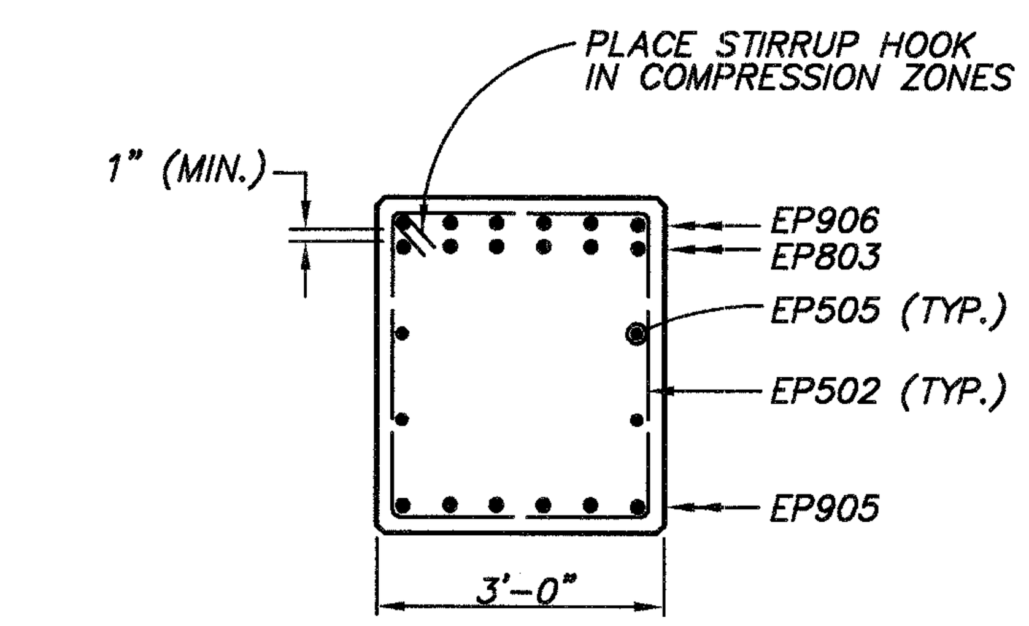
* FIELD MEASUREMENTS DECEMBER 8, 1993

LEGEND

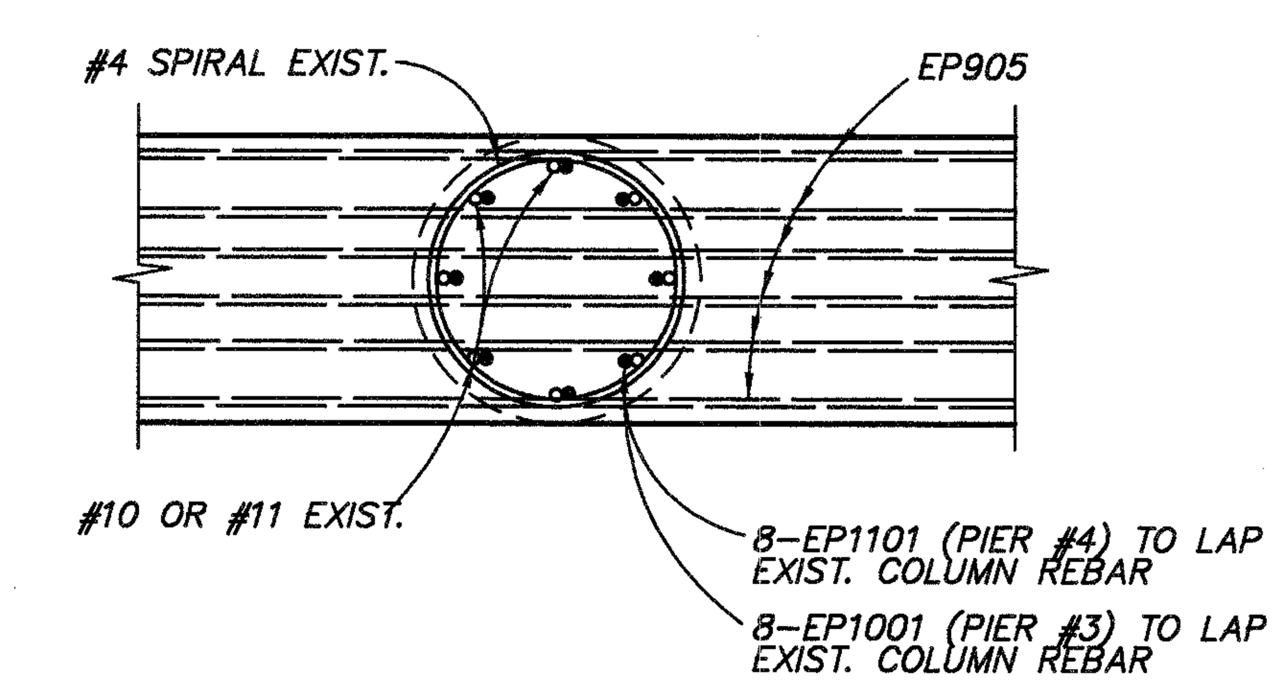
▨ ~ PATCHING OF CONCRETE STRUCTURE

NOTE:

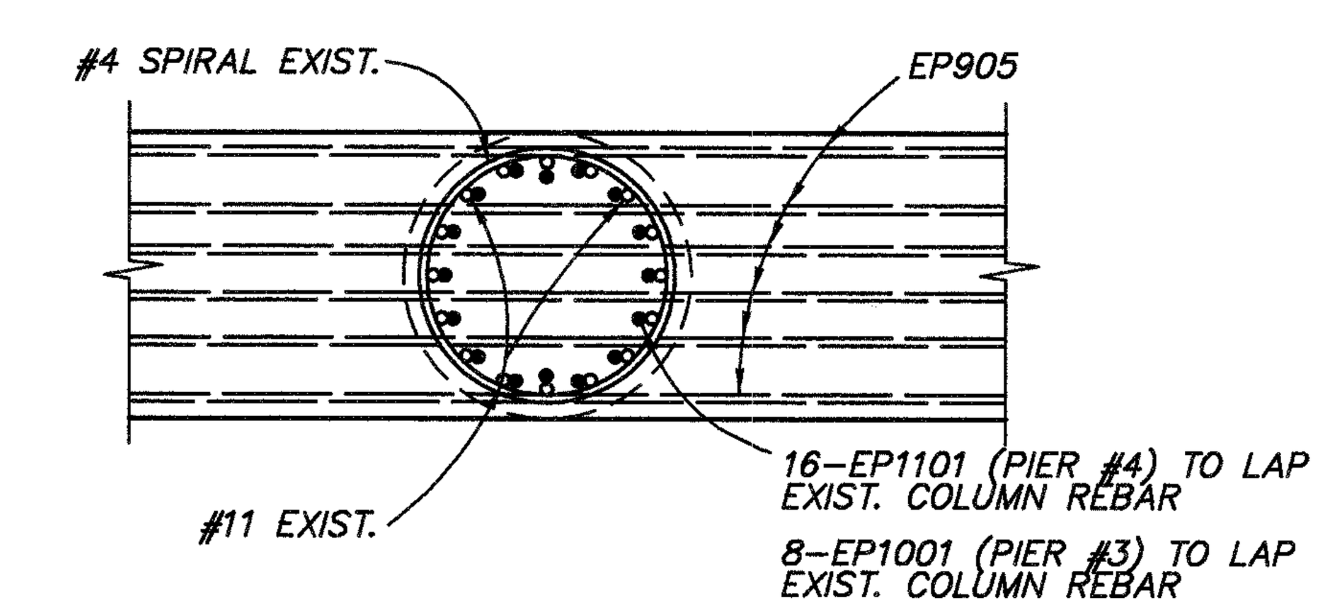
BRIDGE SEAT REINFORCING: REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT SHALL BE ACCURATELY PLACED TO AVOID INTERFERENCE WITH THE DRILLING OF ANCHOR BAR HOLES.



SECTION A-A



SECTION B-B (PIER #3 & #4)
SECTION C-C (PIER #3 ONLY)



SECTION C-C (PIER #4)

KORDA/NEMETH ENGINEERING, INC. CONSULTING ENGINEERS

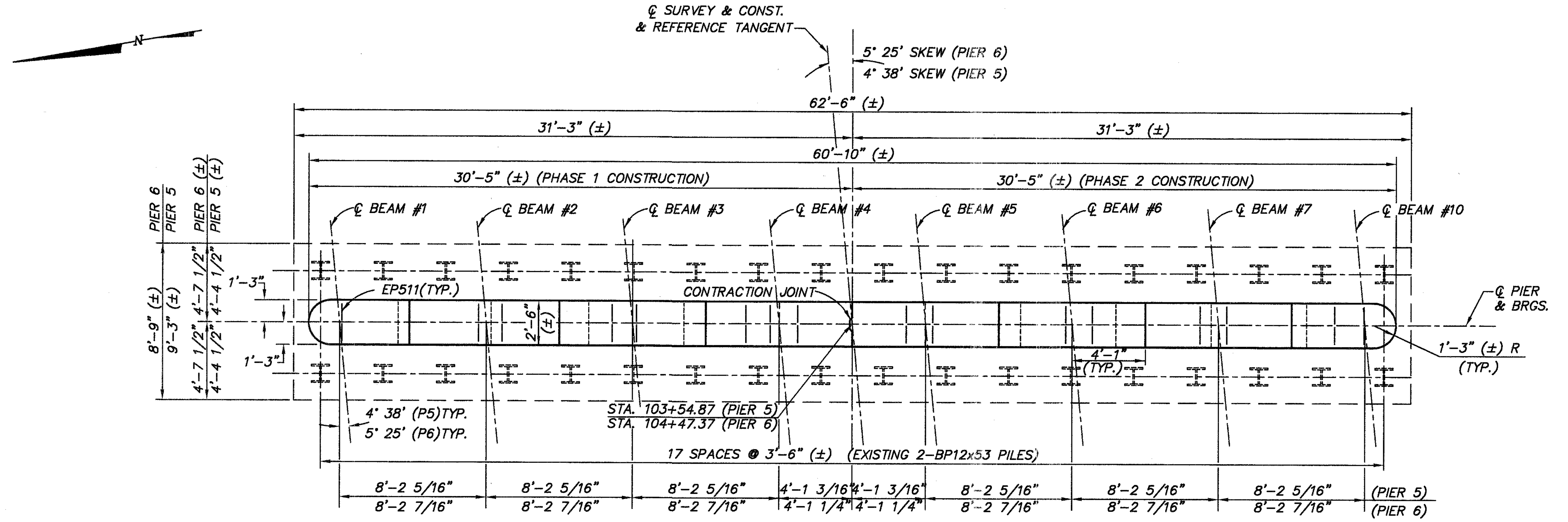
DESIGNED DAT	DRAWN VSS	REVIEWED RWE	DATE 5/18/94
CHECKED MTO	REVISED	STRUCTURE FILE NO. 2516144	

PIER 3 AND 4 DETAILS
BRIDGE NO. FRA-315-0194
OVER S.R. 315 AND OLENTANGY RIVER

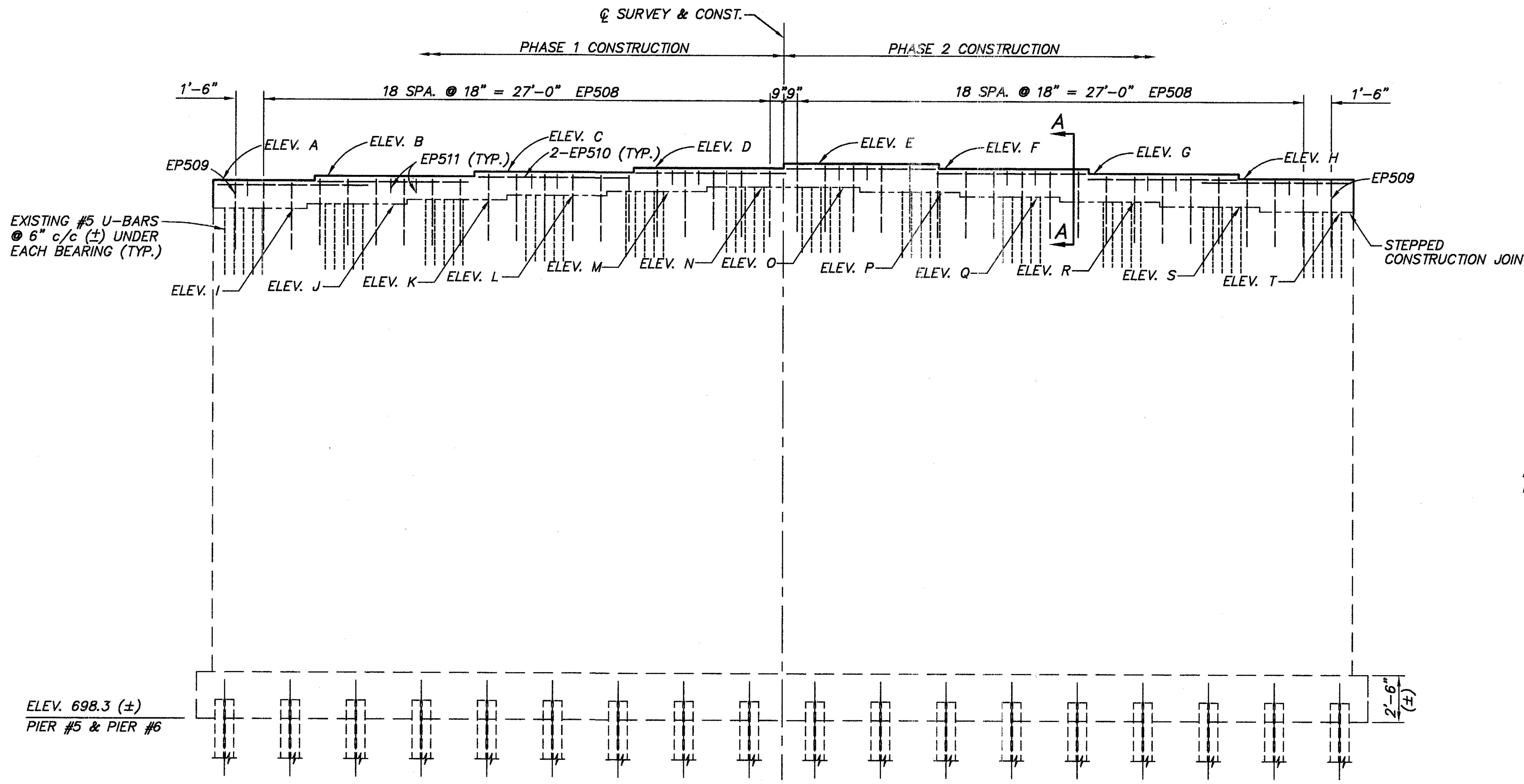
FRA-GOODALE STREET

/92024/92024P03

DAVE BURKHEIMER G:\CIVILDWG\92024\92024P03.DWG DATE: OCT 24, 1994 TIME: 5:22 PM



PLAN



ELEVATION

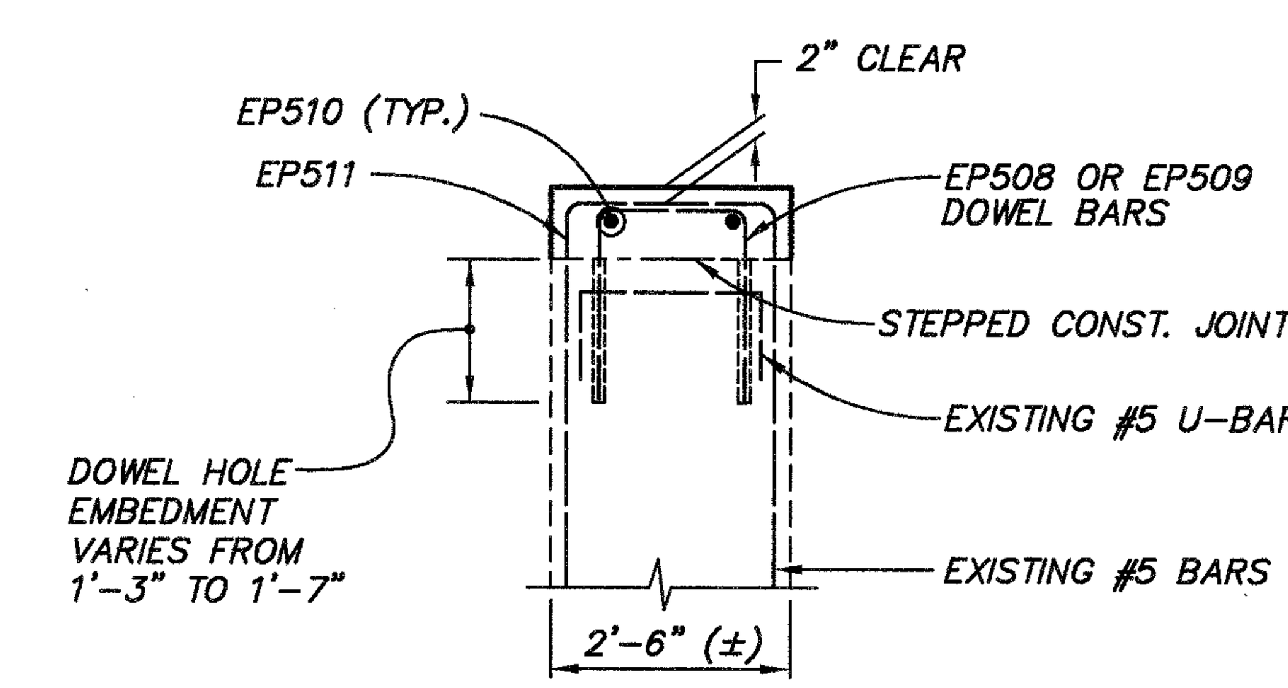
ELEVATIONS																				
LOCATION	A	B	C	D	E	F	G	H	I (±)	J (±)	K (±)	L (±)	M (±)	N (±)	O (±)	P (±)	Q (±)	R (±)	S (±)	T (±)
PIER #5	730.53	730.67	730.82	730.96	730.97	730.86	730.74	730.63	729.27	729.62	729.71	729.80	729.90	729.99	730.00	729.94	729.85	729.78	729.71	729.39
PIER #6	727.83	727.98	728.13	728.28	728.31	728.20	728.10	727.99	726.68	727.03	727.13	727.23	727.33	727.42	727.44	727.37	727.30	727.23	727.16	726.85

NOTES:

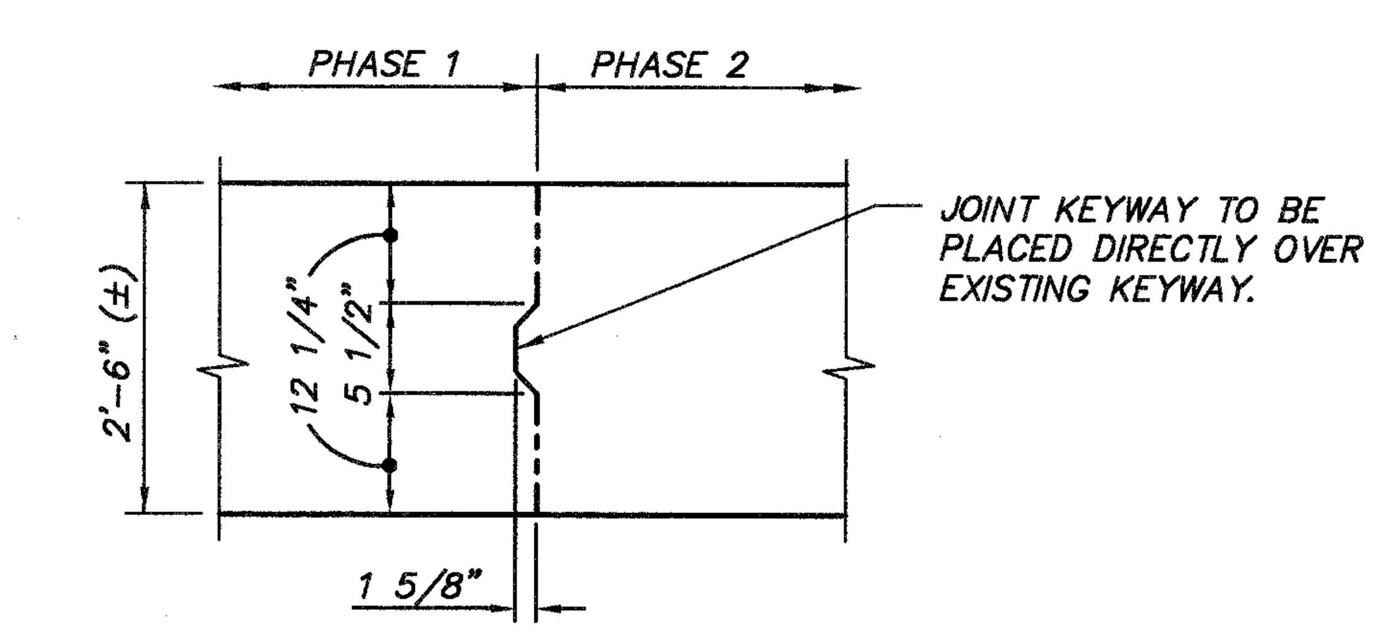
CONSTRUCTION JOINT PREPARATION: THE EXISTING BRIDGE SEAT SURFACE SHALL BE SCARIFIED 1/4" INTO SOUND CONCRETE PRIOR TO CONSTRUCTION OF THE CONCRETE PEDESTAL SHOWN IN THE PLANS.

AFTER THE DOWEL BARS HAVE BEEN INSTALLED, BUT PRIOR TO CONCRETE PLACEMENT, ABRASIVELY CLEAN THE JOINT SURFACE TO REMOVE LOOSE AND DISINTEGRATED CONCRETE. THE JOINT SURFACE AND DOWEL BARS SHALL THEN BE THOROUGHLY CLEANED OF ALL DIRT, OR OTHER FOREIGN MATERIALS BY THE USE OF WATER, AIR UNDER PRESSURE OR ANOTHER METHOD THAT PRODUCES RESULTS SATISFACTORY TO THE ENGINEER. THE CONCRETE BONDING SURFACE SHALL BE WET WITHOUT FREE-STANDING WATER AS CONCRETE IS PLACED.

BRIDGE SEAT ELEVATIONS HAVE BEEN ADJUSTED UPWARD 1/8-INCH TO COMPENSATE FOR THE VERTICAL DEFORMATION OF THE BEARINGS.



SECTION A-A



CONTRACTION JOINT DETAIL

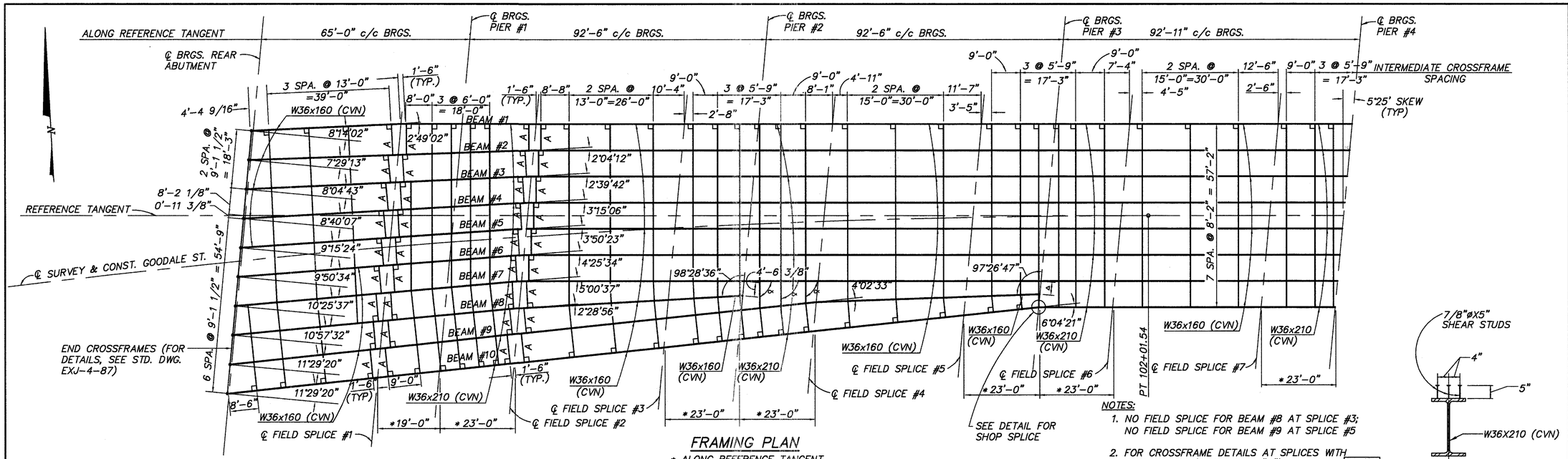
KORDA/NEMETH ENGINEERING, INC.
CONSULTING ENGINEERS

DESIGNED	DRAWN	REVIEWED	DATE
DAT	VSS	RWE	5/18/94
CHECKED	REVISED	STRUCTURE FILE NO.	
MTO		2516144	

PIER 5 AND 6 DETAILS
BRIDGE NO. FRA-315-0194
OVER S.R. 315 AND OLENTANGY RIVER

FRA-GOODALE STREET

KORDA / NEMETH ENGINEERING, INC.



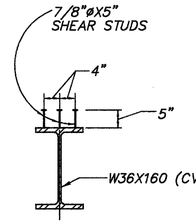
FRAMING PLAN

* ALONG REFERENCE TANGENT
∝ = 86°57'50"
△ = 4'-1 3/16" MEASURED ALONG ℄ PIER #3

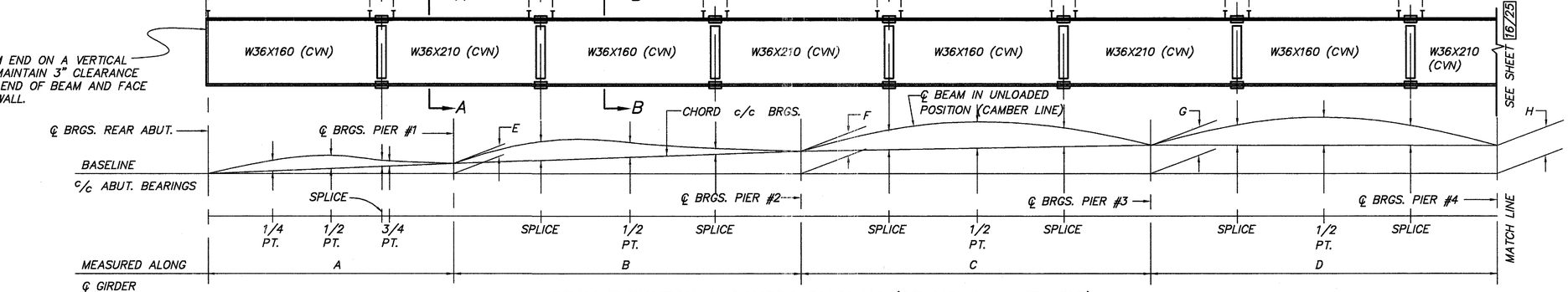
NOTES:

1. NO FIELD SPLICE FOR BEAM #8 AT SPLICE #3; NO FIELD SPLICE FOR BEAM #9 AT SPLICE #5
2. FOR CROSSFRAME DETAILS AT SPLICES WITH DEFLECTIONS (DESIGNATED "A") SEE SHEET 16/25

SECTION A-A



SECTION B-B

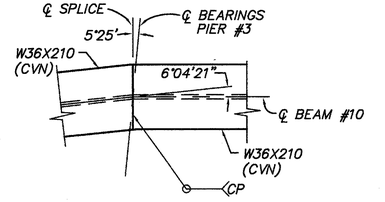


BEAM ELEVATION & CAMBER DIAGRAM (BEAMS #1 - #7, #10)

DIMENSIONS (FT.-IN.)								
BEAM	A	B	C	D	E	F	G	H
#1	65'-3 5/16"	92'-6"	92'-6"	92'-11"	2'-9 5/16"	6'-0 13/16"	7'-8"	7'-6 9/16"
#2	65'-3 1/4"	92'-7 1/8"	92'-6"	92'-11"	2'-9 5/16"	6'-1"	7'-8 1/4"	7'-6 7/8"
#3	65'-4 3/8"	92'-7 9/16"	92'-6"	92'-11"	2'-9 1/4"	6'-1 1/8"	7'-8 9/16"	7'-7 3/16"
#4	65'-5 9/16"	92'-7 15/16"	92'-6"	92'-11"	2'-9 3/16"	6'-1 1/4"	7'-8 13/16"	7'-7 1/2"
#5	65'-6 13/16"	92'-8 3/8"	92'-6"	92'-11"	2'-9 5/16"	6'-1 1/4"	7'-8 5/16"	7'-7 1/8"
#6	65'-8 3/16"	92'-8 7/8"	92'-6"	92'-11"	2'-9 1/8"	6'-0 9/16"	7'-7 7/8"	7'-6 15/16"
#7	65'-9 5/8"	92'-9 3/8"	92'-6"	92'-11"	2'-9 5/16"	6'-0 15/16"	7'-8 5/16"	7'-7 3/8"
#10	66'-0 7/16"	93'-11 5/8"	93'-11 5/8"	92'-11"	2'-9 1/4"	6'-2 13/16"	7'-11 5/8"	7'-10"

NOTES:

3. FOR ELEVATION VIEWS AND DIMENSIONS OF BEAMS 8 & 9, SEE SHEET 16/25
4. FOR BEAM DEFLECTIONS AND CAMBERS, SEE SHEET 17/25
5. FOR FIELD SPLICE DETAILS, SEE SHEET 22/25



PLAN ELEVATION

SHOP SPLICE DETAIL AT PIER #3 (BEAM #10)

WELDED ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE MAY BE MADE TO AREAS OF THE FASCIA BEAM FLANGES DESIGNATED "COMPRESSION". ATTACHMENTS SHALL NOT BE MADE TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL NOT BE CLOSER THAN 1" FROM EDGE OF FLANGE, BE NOT MORE THAN 2" LONG, AND BE NOT SMALLER THAN THE MINIMUM SIZE REQUIRED BY AASHTO.

WHERE A SHAPE OR PLATE IS DESIGNATED "(CVN)" THE MATERIAL SHALL MEET SPECIFIED MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01 OF THE CMS.

KORDA/NEMETH ENGINEERING, INC.
CONSULTING ENGINEERS
COLUMBUS, OHIO 43215-1064
TEL (614) 487-1660
FAX (614) 487-1666

DESIGNED	DRAWN	REVIEWED	DATE
DAT	KAH	MTO	5/18/94
CHECKED	REVISED	STRUCTURE FILE NO.	
RWE		2516144	

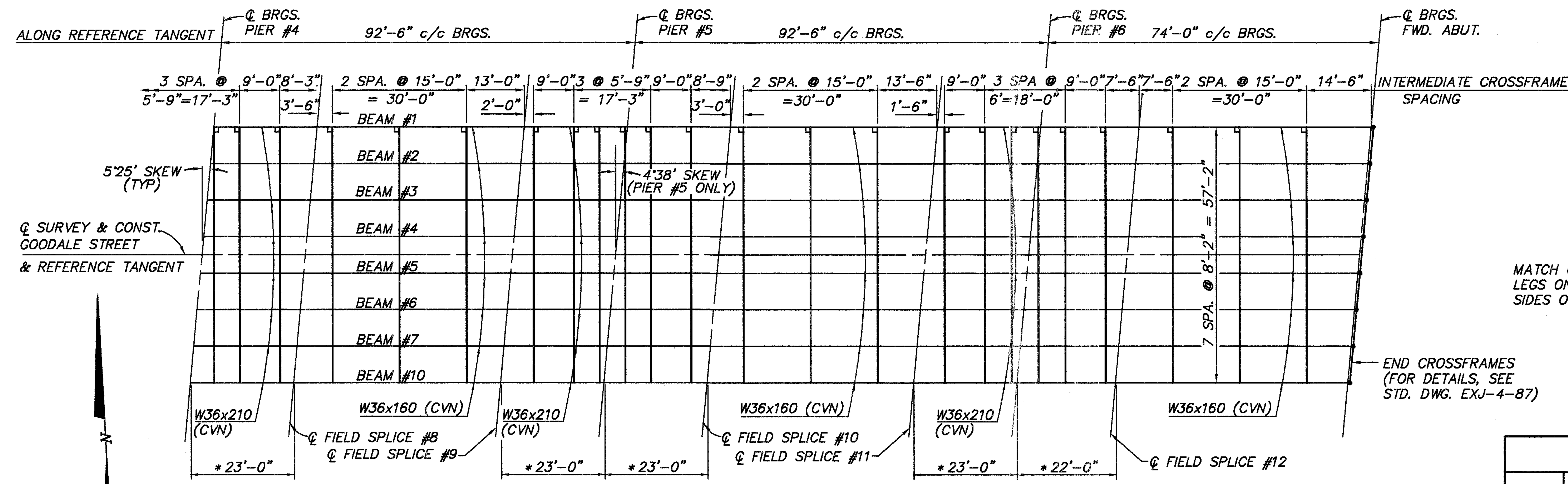
FRAMING PLAN (SPANS 1, 2, 3, & 4)
BRIDGE NO. FRA-315-0194
OVER S.R. 315 AND OLENTANGY RIVER

FRA-GOODALE STREET

15/25

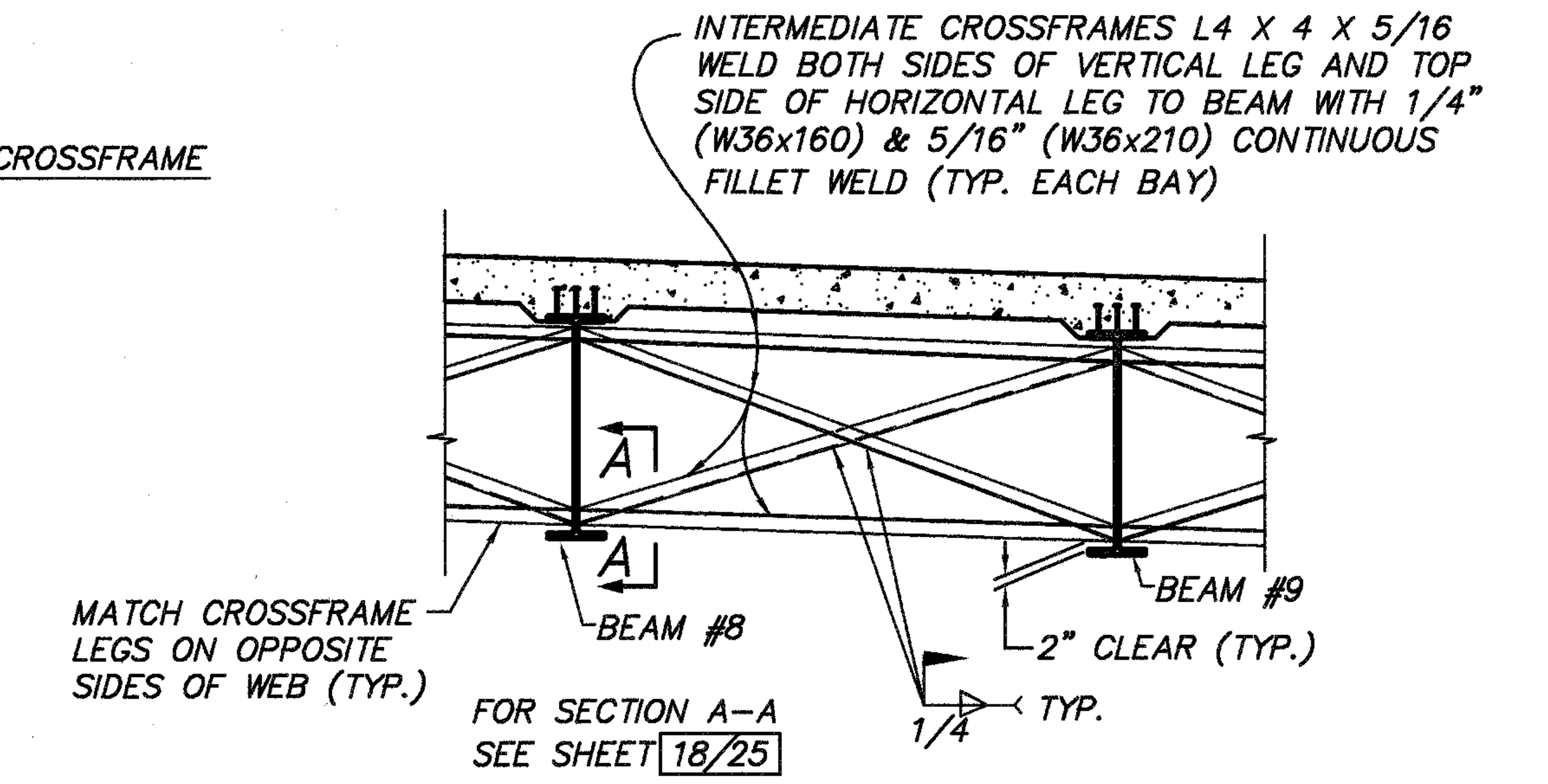
62/73

0300-ST



FRAMING PLAN

* ALONG REFERENCE TANGENT



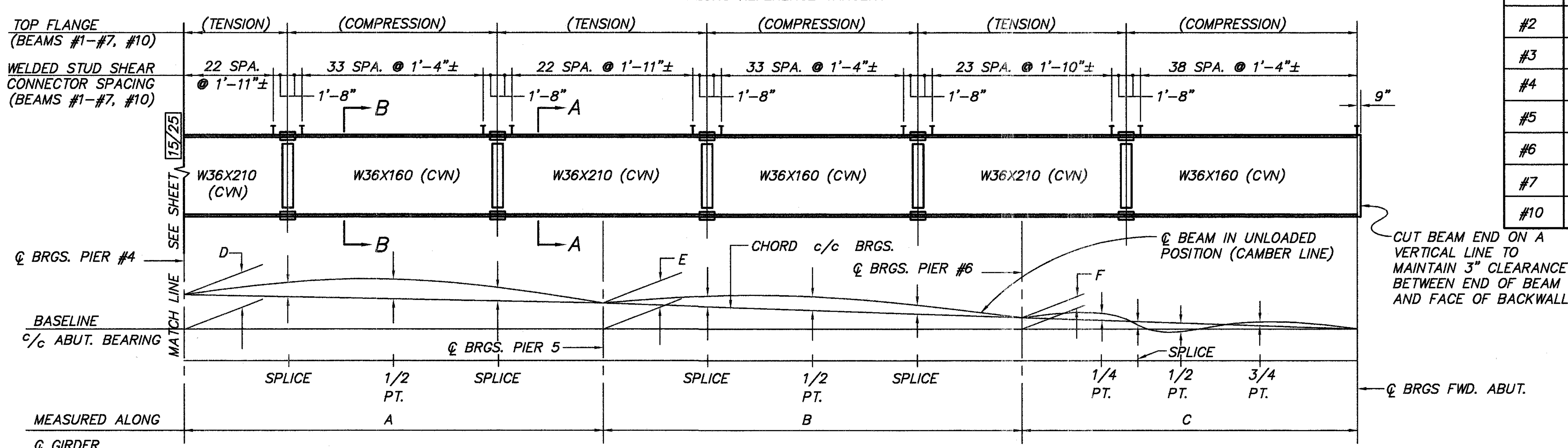
CROSSFRAME DETAIL AT SPLICES WITH DEFLECTIONS

(SEE SHEET 15/25) (DESIGNATED "A")

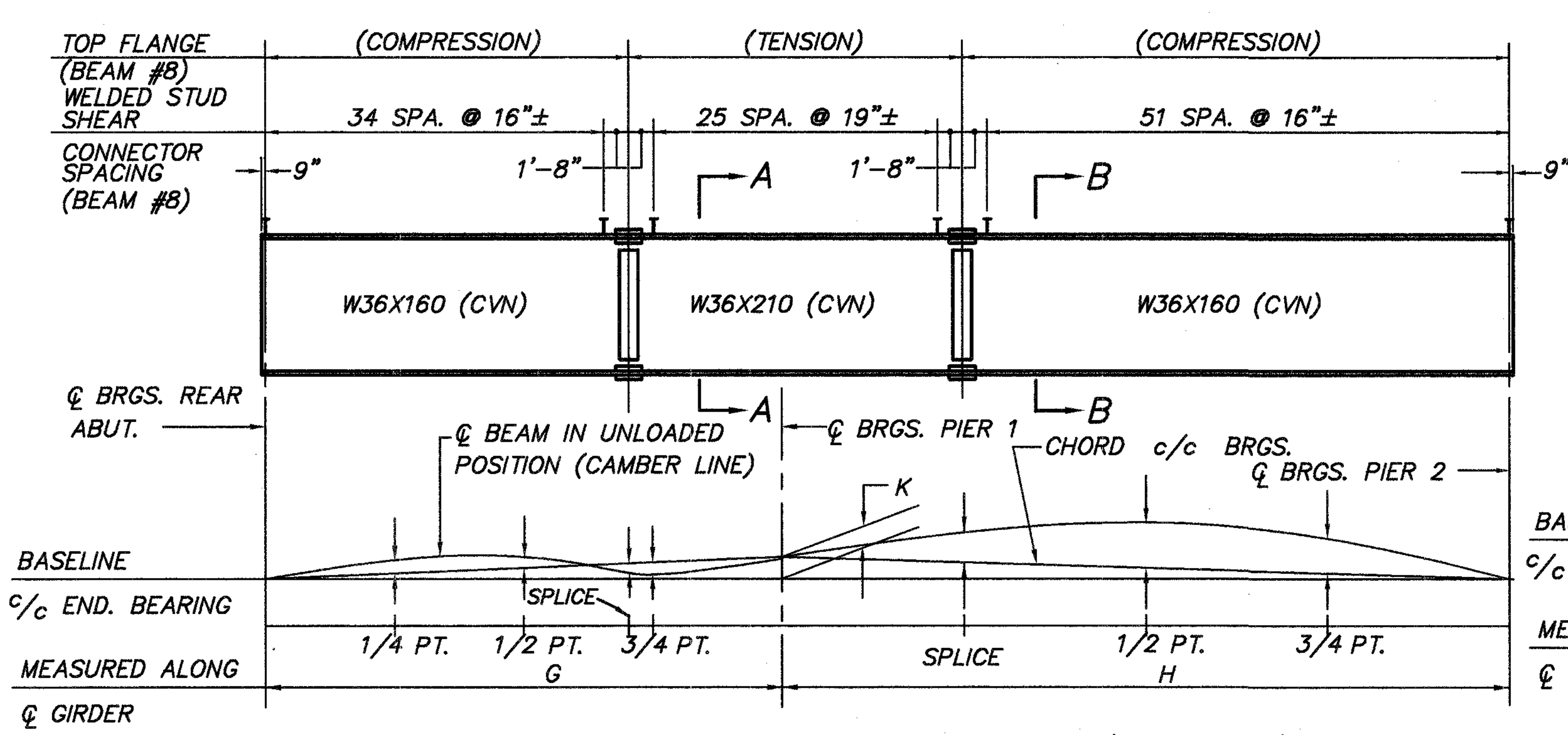
DIMENSIONS (FT.-IN.)						
BEAM	A	B	C	D	E	F
#1	92'-1 5/16"	92'-10 3/4"	74'-0"	7'-6 9/16"	5'-8 11/16"	2'-5 1/16"
#2	92'-2 5/8"	92'-9 3/8"	74'-0"	7'-6 7/8"	5'-9"	2'-5 5/16"
#3	92'-4"	92'-8 1/16"	74'-0"	7'-7 3/16"	5'-9 1/4"	2'-5 1/2"
#4	92'-5 5/16"	92'-6 11/16"	74'-0"	7'-7 1/2"	5'-9 9/16"	2'-5 3/4"
#5	92'-6 11/16"	92'-5 5/16"	74'-0"	7'-7 1/8"	5'-9 3/8"	2'-5 13/16"
#6	92'-8 1/16"	92'-4"	74'-0"	7'-6 15/16"	5'-9 5/16"	2'-5 7/8"
#7	92'-9 3/8"	92'-2 5/8"	74'-0"	7'-7 3/8"	5'-9 11/16"	2'-6 3/16"
#10	92'-10 3/4"	92'-1 5/16"	74'-0"	7'-10"	5'-11 1/2"	2'-7 1/16"

NOTES:
1. FOR BEAM DEFLECTIONS AND CAMBERS, SEE SHEET 17/25
2. FOR FIELD SPLICE DETAILS, SEE SHEET 22/25
3. FOR ADDITIONAL NOTES, SEE SHEET 15/25

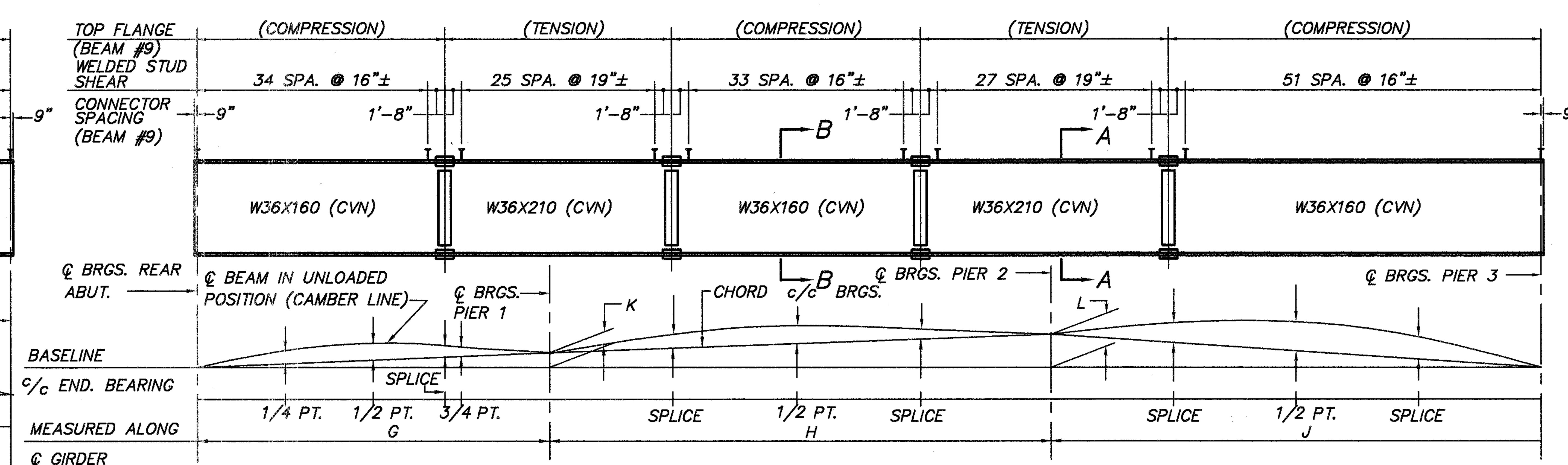
DIMENSIONS (FT.-IN.)					
BEAM	G	H	J	K	L
#8	65'-11"	93'-3 3/8"	–	0'-2 11/16"	–
#9	66'-0 7/16"	93'-11 5/8"	93'-1 11/16"	0'-8 5/8"	1'-2 7/8"



BEAM ELEVATION & CAMBER DIAGRAM (BEAM #1 - #7, #10)



BEAM ELEVATION & CAMBER DIAGRAM (BEAM #8)



BEAM ELEVATION & CAMBER DIAGRAM (BEAM #9)

KORDA/NEMETH ENGINEERING, INC. CONSULTING ENGINEERS

DESIGNED DAT	DRAWN KAH	REVIEWED MTO	DATE 5/18/94
CHECKED RWE	REVISED	STRUCTURE FILE NO. 2516144	

FRAMING PLAN (SPANS 5, 6, & 7)
BRIDGE NO. FRA-315-0194
OVER S.R. 315 AND OLENTANGY RIVER

FRA-GOODALE STREET

16/25

63/73

/92024/92024FP2

DAVE BURNHEIMER G:\CIVILDWG\92024\92024FP2.DWG DATE: OCT 20, 1994 TIME: 2:51 PM

DEFLECTION & CAMBER (INCHES) (SPAN #1)

POINTS	BEAM #1				BEAM #2				BEAM #3				BEAM #4				BEAM #5				BEAM #6				BEAM #7				BEAM #8				BEAM #9				BEAM #10			
	1/4	1/2	SPLICE	3/4	1/4	1/2	SPLICE	3/4	1/4	1/2	SPLICE	3/4	1/4	1/2	SPLICE	3/4	1/4	1/2	SPLICE	3/4	1/4	1/2	SPLICE	3/4	1/4	1/2	SPLICE	3/4	1/4	1/2	SPLICE	3/4	1/4	1/2	SPLICE	3/4	1/4	1/2	SPLICE	3/4
DEFLECTION DUE TO WEIGHT OF STEEL	1/16	1/8	1/16	0	1/16	1/8	1/16	0	1/16	1/8	1/16	0	1/16	1/8	1/16	0	1/16	1/8	1/16	0	1/16	1/8	1/16	0	1/16	1/8	1/16	0	1/16	0	0	0	1/16	1/8	1/16	1/16	1/16	1/8	1/16	0
DEFLECTION DUE TO REMAINING DEAD LOAD	7/16	1/2	3/16	1/8	7/16	1/2	3/16	1/8	7/16	1/2	3/16	1/8	7/16	1/2	3/16	1/8	7/16	1/2	3/16	1/8	7/16	1/2	3/16	1/8	7/16	1/2	3/16	1/8	1/4	3/16	−1/16	−1/8	9/16	5/8	5/16	1/4	7/16	1/2	3/16	1/8
ADJUSTMENT FOR VERTICAL CURVE	0	−1/16	−1/16	−1/16	0	1/16	0	0	0	1/16	0	0	0	1/16	0	0	0	1/16	0	0	0	−1/16	0	0	0	−1/16	0	0	0	−1/16	0	0	0	−1/16	0	0	0	−1/16	0	0
REQUIRED SHOP CAMBER	1/2	9/16	3/16	1/16	1/2	11/16	1/4	1/8	1/2	11/16	1/4	1/8	1/2	11/16	1/4	1/8	1/2	11/16	1/4	1/8	1/2	9/16	1/4	1/8	1/2	9/16	1/4	1/8	5/16	1/8	−1/16	−1/8	5/8	11/16	3/8	5/16	1/2	9/16	1/4	1/8

DEFLECTION & CAMBER (INCHES) (SPAN #2)

POINTS	BEAM #1			BEAM #2			BEAM #3			BEAM #4			BEAM #5			BEAM #6			BEAM #7			BEAM #8			BEAM #9			BEAM #10		
	SPLICE	1/2	SPLICE	SPLICE	1/2	SPLICE	SPLICE	1/2	SPLICE	SPLICE	1/2	SPLICE	SPLICE	1/2	SPLICE	SPLICE	1/2	SPLICE	SPLICE	1/2	SPLICE	SPLICE	1/2	3/4	SPLICE	1/2	SPLICE	SPLICE	1/2	SPLICE
DEFLECTION DUE TO WEIGHT OF STEEL	1/8	1/4	1/8	1/8	1/4	1/8	1/8	1/4	1/8	1/8	1/4	1/8	1/8	1/4	1/8	1/8	1/4	1/8	1/8	1/4	1/8	5/16	9/16	7/16	1/8	3/16	1/16	1/8	1/4	1/8
DEFLECTION DUE TO REMAINING DEAD LOAD	13/16	1 5/16	11/16	13/16	1 5/16	11/16	13/16	1 5/16	11/16	13/16	1 5/16	11/16	13/16	1 5/16	11/16	13/16	1 5/16	11/16	13/16	1 5/16	11/16	1 7/16	2 3/4	2 3/16	9/16	15/16	3/8	13/16	1 5/16	11/16
ADJUSTMENT FOR VERTICAL CURVE	1 13/16	2 1/2	1 7/8	1 11/16	2 7/16	1 7/8	1 11/16	2 7/16	1 7/8	1 5/8	2 3/8	1 13/16	1 11/16	2 5/8	2 1/8	1 7/8	2 1/2	1 7/8	1 7/8	2 1/2	1 7/8	1 11/16	2 7/16	1 7/8	1 9/16	2 3/8	1 7/8	1 1/2	2 5/16	1 13/16
REQUIRED SHOP CAMBER	2 3/4	4 1/16	2 11/16	2 5/8	4	2 11/16	2 5/8	4	2 11/16	2 9/16	3 15/16	2 5/8	2 5/8	4 3/16	2 15/16	2 13/16	4 1/16	2 11/16	2 13/16	4 1/16	2 11/16	3 7/16	5 3/4	4 1/2	2 1/4	3 1/2	2 5/16	2 7/16	3 7/8	2 5/8

DEFLECTION & CAMBER (INCHES) (SPAN #3)

POINTS	BEAM #1			BEAM #2			BEAM #3			BEAM #4			BEAM #5			BEAM #6			BEAM #7			BEAM #8			BEAM #9			BEAM #10		
	SPLICE	1/2	SPLICE	SPLICE	1/2	SPLICE	SPLICE	1/2	SPLICE	SPLICE	1/2	SPLICE	SPLICE	1/2	SPLICE	SPLICE	1/2	SPLICE	SPLICE	1/2	SPLICE	SPLICE	1/2	SPLICE	SPLICE	1/2	3/4	SPLICE	1/2	SPLICE
DEFLECTION DUE TO WEIGHT OF STEEL	1/8	1/4	1/8	1/8	1/4	1/8	1/8	1/4	1/8	1/8	1/4	1/8	1/8	1/4	1/8	1/8	1/4	1/8	1/8	1/4	1/8	–	–	–	1/4	1/2	7/16	1/8	1/4	1/8
DEFLECTION DUE TO REMAINING DEAD LOAD	11/16	1 5/16	3/4	11/16	1 5/16	3/4	11/16	1 5/16	3/4	11/16	1 5/16	3/4	11/16	1 5/16	3/4	11/16	1 5/16	3/4	11/16	1 5/16	3/4	–	–	–	1 3/16	2 3/8	1 15/16	11/16	1 5/16	3/4
ADJUSTMENT FOR VERTICAL CURVE	1 15/16	2 9/16	1 15/16	1 15/16	2 5/8	1 15/16	1 15/16	2 5/8	1 15/16	2	2 5/8	2	1 7/8	2 1/2	1 7/8	1 7/8	2 1/2	1 7/8	1 7/8	2 9/16	1 7/8	–	–	–	2 1/16	2 11/16	2	2	2 5/8	1 15/16
REQUIRED SHOP CAMBER	2 3/4	4 1/8	2 13/16	2 3/4	4 3/16	2 13/16	2 3/4	4 3/16	2 13/16	2 13/16	4 3/16	2 7/8	2 11/16	4 1/16	2 3/4	2 11/16	4 1/16	2 3/4	2 11/16	4 1/8	2 3/4	–	–	–	3 1/2	5 9/16	4 3/8	2 13/16	4 3/16	2 13/16

DEFLECTION & CAMBER (INCHES) (SPAN #4)

POINTS	BEAM #1			BEAM #2			BEAM #3			BEAM #4			BEAM #5			BEAM #6			BEAM #7			BEAM #8			BEAM #9			BEAM #10		
	SPLICE	1/2	SPLICE	SPLICE	1/2	SPLICE	SPLICE	1/2	SPLICE	SPLICE	1/2	SPLICE	SPLICE	1/2	SPLICE	SPLICE	1/2	SPLICE	SPLICE	1/2	SPLICE	SPLICE	1/2	SPLICE	SPLICE	1/2	SPLICE	SPLICE	1/2	SPLICE
DEFLECTION DUE TO WEIGHT OF STEEL	3/16	5/16	3/16	3/16	5/16	3/16	3/16	5/16	3/16	3/16	5/16	3/16	3/16	5/16	3/16	3/16	5/16	3/16	3/16	5/16	3/16	–	–	–	–	–	–	3/16	5/16	3/16
DEFLECTION DUE TO REMAINING DEAD LOAD	15/16	1 5/8	15/16	15/16	1 5/8	15/16	15/16	1 5/8	15/16	15/16	1 5/8	15/16	15/16	1 5/8	15/16	15/16	1 5/8	15/16	15/16	1 5/8	15/16	–	–	–	–	–	–	15/16	1 5/8	15/16
ADJUSTMENT FOR VERTICAL CURVE	1 15/16	2 9/16	1 15/16	1 15/16	2 5/8	1 15/16	1 15/16	2 5/8	1 15/16	1 15/16	2 5/8	1 15/16	1 15/16	2 9/16	1 15/16	1 15/16	2 5/8	1 15/16	1 15/16	2 5/8	1 15/16	–	–	–	–	–	–	1 15/16	2 5/8	1 15/16
REQUIRED SHOP CAMBER	3 1/16	4 1/2	3 1/16	3 1/16	4 9/16	3 1/16	3 1/16	4 9/16	3 1/16	3 1/16	4 9/16	3 1/16	3 1/16	4 1/2	3 1/16	3 1/16	4 9/16	3 1/16	3 1/16	4 9/16	3 1/16	–	–	–	–	–	–	3 1/16	4 9/16	3 1/16

DEFLECTION & CAMBER (INCHES) (SPAN #5)

POINTS	BEAM #1			BEAM #2			BEAM #3			BEAM #4			BEAM #5			BEAM #6			BEAM #7			BEAM #8			BEAM #9			BEAM #10		
	SPLICE	1/2	SPLICE	SPLICE	1/2	SPLICE	SPLICE	1/2	SPLICE	SPLICE	1/2	SPLICE	SPLICE	1/2	SPLICE	SPLICE	1/2	SPLICE	SPLICE	1/2	SPLICE	SPLICE	1/2	SPLICE	SPLICE	1/2	SPLICE	SPLICE	1/2	SPLICE
DEFLECTION DUE TO WEIGHT OF STEEL	3/16	1/4	1/8	3/16	1/4	1/8	3/16	1/4	1/8	3/16	1/4	1/8	3/16	1/4	1/8	3/16	1/4	1/8	3/16	1/4	1/8	–	–	–	–	–	–	3/16	1/4	1/8
DEFLECTION DUE TO REMAINING DEAD LOAD	13/16	1 3/8	3/4	13/16	1 3/8	3/4	13/16	1 3/8	3/4	13/16	1 3/8	3/4	13/16	1 3/8	3/4	13/16	1 3/8	3/4	13/16	1 3/8	3/4	–	–	–	–	–	–	13/16	1 3/8	3/4
ADJUSTMENT FOR VERTICAL CURVE	1 15/16	2 9/16	1 7/8	1 15/16	2 9/16	1 15/16	1 15/16	2 9/16	1 15/16	1 15/16	2 9/16	1 15/16	1 15/16	2 9/16	1 15/16	1 15/16	2 9/16	1 15/16	1 15/16	2 5/8	1 15/16	–	–	–	–	–	–	1 15/16	2 5/8	1 15/16
REQUIRED SHOP CAMBER	2 15/16	4 3/16	2 3/4	2 15/16	4 3/16	2 13/16	2 15/16	4 3/16	2 13/16	2 15/16	4 3/16	2 13/16	2 15/16	4 3/16	2 13/16	2 15/16	4 3/16	2 13/16	2 15/16	4 1/4	2 13/16	–	–	–	–	–	–	2 15/16	4 1/4	2 13/16

DEFLECTION & CAMBER (INCHES) (SPAN #6)

POINTS	BEAM #1			BEAM #2			BEAM #3			BEAM #4			BEAM #5			BEAM #6			BEAM #7			BEAM #8			BEAM #9			BEAM #10		
	SPLICE	1/2	SPLICE	SPLICE	1/2	SPLICE	SPLICE	1/2	SPLICE	SPLICE	1/2	SPLICE	SPLICE	1/2	SPLICE	SPLICE	1/2	SPLICE	SPLICE	1/2	SPLICE	SPLICE	1/2	SPLICE	SPLICE	1/2	SPLICE	SPLICE	1/2	SPLICE
DEFLECTION DUE TO WEIGHT OF STEEL	1/8	3/16	1/8	1/8	3/16	1/8	1/8	3/16	1/8	1/8	3/16	1/8	1/8	3/16	1/8	1/8	3/16	1/8	1/8	3/16	1/8	–	–	–	–	–	–	1/8	3/16	1/8
DEFLECTION DUE TO REMAINING DEAD LOAD	9/16	1 1/8	9/16	9/16	1 1/8	9/16	9/16	1 1/8	9/16	9/16	1 1/8	9/16	9/16	1 1/8	9/16	9/16	1 1/8	9/16	9/16	1 1/8	9/16	–	–	–	–	–	–	9/16	1 1/8	9/16
ADJUSTMENT FOR VERTICAL CURVE	1 3/16	1 1/8	9/16	1 1/4	1 1/8	9/16	1 1/4	1 3/16	5/8	1 1/4	1 1/4	5/8	1 1/4	1 1/4	5/8	1 5/16	1 5/16	5/8	1 5/16	1 5/16	11/16	–	–	–	–	–	–	1 5/16	1 3/8	11/16
REQUIRED SHOP CAMBER	1 7/8	2 7/16	1 1/4	1 15/16	2 7/16	1 1/4	1 15/16	2 1/2	1 5/16	1 15/16	2 9/16	1 5/16	1 15/16	2 9/16	1 5/16	2	2 5/8	1 5/16	2	2 5/8	1 3/8	–	–	–	–	–	–	2	2 11/16	1 3/8

DEFLECTION & CAMBER (INCHES) (SPAN #7)

POINTS	BEAM #1				BEAM #2				BEAM #3				BEAM #4				BEAM #5				BEAM #6				BEAM #7				BEAM #8				BEAM #9				BEAM #10			
	1/4	SPLICE	1/2	3/4	1/4	SPLICE	1/2	3/4	1/4	SPLICE	1/2	3/4	1/4	SPLICE	1/2	3/4	1/4	SPLICE	1/2	3/4	1/4	SPLICE	1/2	3/4	1/4	SPLICE	1/2	3/4	1/4	SPLICE	1/2	3/4	1/4	SPLICE	1/2	3/4	1/4	SPLICE	1/2	3/4
DEFLECTION DUE TO WEIGHT OF STEEL	1/8	1/8	1/4	3/16	1/8	1/8	1/4	3/16	1/8	1/8	1/4	3/16	1/8	1/8	1/4	3/16	1/8	1/8	1/4	3/16	1/8	1/8	1/4	3/16	1/8	1/8	1/4	3/16	–	–	–	–	–	–	–	–	1/8	1/8	1/4	3/16
DEFLECTION DUE TO REMAINING DEAD LOAD	1/2	5/8	1 1/8	15/16	1/2	5/8	1 1/8	15/16	1/2	5/8	1 1/8	15/16	1/2	5/8	1 1/8	15/16	1/2	5/8	1 1/8	15/16	1/2	5/8	1 1/8	15/16	1/2	5/8	1 1/8	15/16	–	–	–	–	–	–	–	–	1/2	5/8	1 1/8	15/16
ADJUSTMENT FOR VERTICAL CURVE	−1 1/16	−1 3/16	−1 9/16	−1 3/16	−1 1/16	−1 3/16	−1 9/16	−1 3/16	−1 1/16	−1 3/16	−1 9/16	−1 3/16	−1	−1 3/16	−1 1/2	−1 3/16	−1	−1 1/8	−1 1/2	−1 3/16	−15/16	−1 1/8	−1 1/2	−1 3/16	−15/16	−1 1/8	−1 1/2	−1 3/16	–	–	–	–	–	–	–	–	−7/8	−1 1/16	−1 7/16	−1 3/16
REQUIRED SHOP CAMBER	−7/16	−7/16	−3/16	−1/16	−7/16	−7/16	−3/16	−1/16	−7/16	−7/16	−3/16	−1/16	−3/8	−7/16	−1/8	−1/16	−3/8	−3/8	−1/8	−1/16	−5/16	−3/8	−1/8	−1/16	−5/16	−3/8	−1/8	−1/16	–	–	–	–	–	–	–	–	−1/4	−5/16	−1/16	−1/16

KORDA/NEMETH ENGINEERING, INC.
ENGINEERS
CONSULTING

DESIGNED DAT	DRAWN KAH	REVIEWED RWE	DATE 5/18/94
CHECKED MTO	REVISED	STRUCTURE FILE NO. 2516144	

DEFLECTION & CAMBER TABLES
BRIDGE NO. FRA-315-0194
OVER S.R. 315 AND OLENTANGY RIVER

FRA-GOODALE STREET

17/25

64/73

DAVE BURNHEIMER G:\CIVILDWG\92024\92024FP3.DWG DATE: OCT 20, 1994 TIME: 2:52 PM

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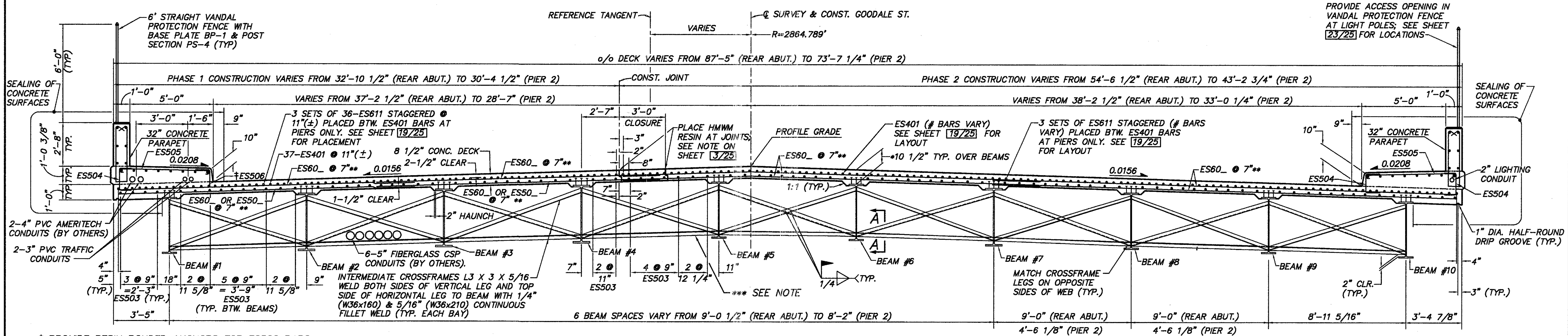
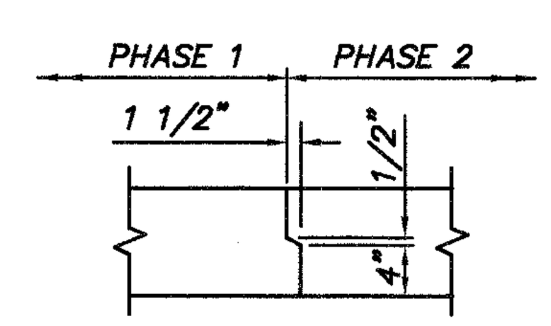
KORDA / NEMETH ENGINEERING, INC.

0300-ST



† PROVIDE RESIN BONDED ANCHORS FOR ES506 BARS

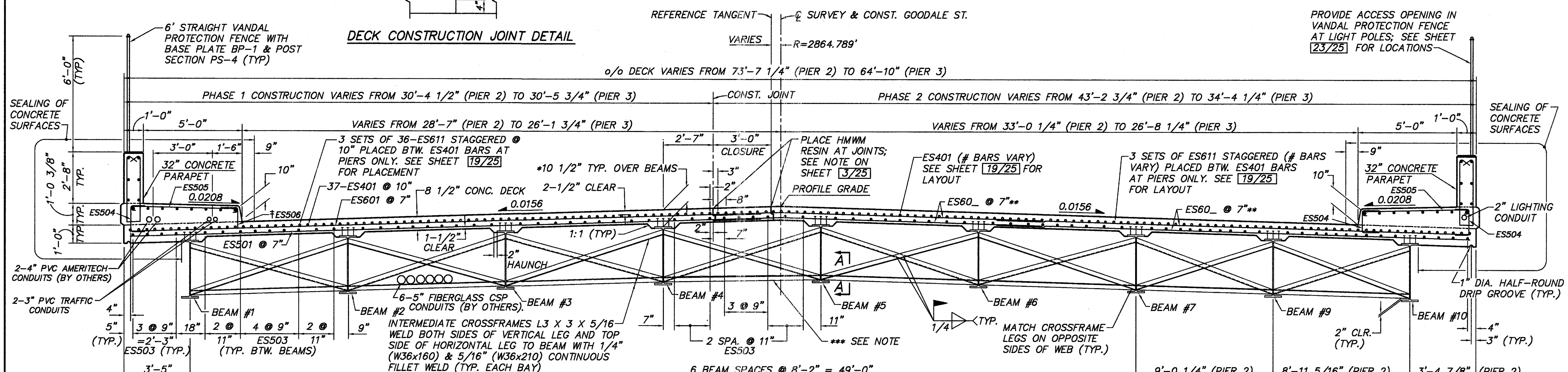
FIELD BEND ES60_ BARS AT THE DECK APEX. INCLUDE WITH ITEM 509 FOR PAYMENT



DECK CONSTRUCTION JOINT DETAIL

TRANSVERSE SECTION

(SPANS 1,2)



† PROVIDE RESIN BONDED ANCHORS FOR ES506 BARS

FIELD BEND ES60_ BARS AT THE DECK APEX. INCLUDE WITH ITEM 509 FOR PAYMENT

TRANSVERSE SECTION

(SPAN 3)

NOTES:

THE LEFT SIDE SIDEWALK AND PARAPET ARE TO BE CONSTRUCTED DURING PHASE 3 CONSTRUCTION, SEE SHEET 24/25 FOR PART-WIDTH CONSTRUCTION NOTES AND DETAILS.

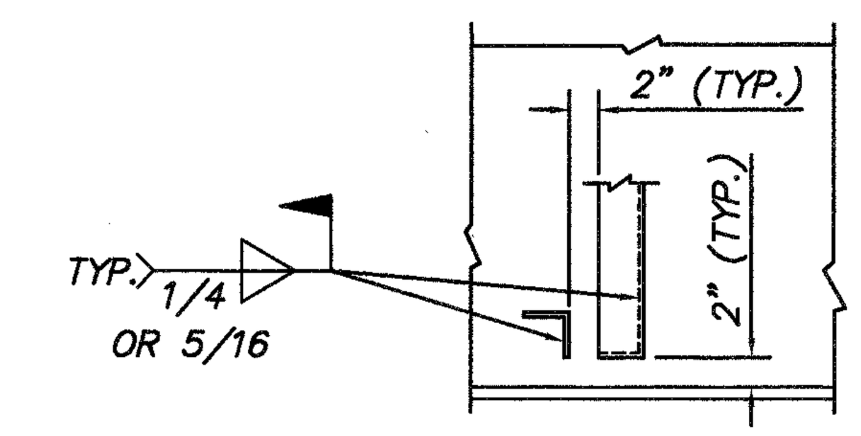
* DECK SLAB DEPTH: THE DISTANCE SHOWN FROM TOP OF DECK SLAB TO TOP OF STEEL BEAM IS THE THEORETICAL DESIGN DIMENSION. THE QUANTITY OF DECK CONCRETE TO BE PAID FOR SHALL BE BASED ON THIS DIMENSION, EVEN THOUGH DEVIATION FROM IT MAY BE NECESSARY BECAUSE THE TOP FLANGE OF THE BEAM MAY NOT HAVE THE EXACT CAMBER OR CONFORMATION REQUIRED TO PLACE IT PARALLEL TO THE FINISHED GRADE.

A HAUNCH WIDTH BASED ON A SLOPE OF 1:1 SHALL BE USED FOR COMPUTING QUANTITY OF CONCRETE. THE SLOPE OF THE HAUNCH MAY BE LESS AT THE CONTRACTOR'S OPTION.

** REFER TO SLAB PLAN, SHEET 19/25, FOR BAR DESIGNATIONS AND LAYOUT.

UTILITY PLANS: FOR CONDUIT LAYOUT, DETAILS, AND NOTES, SEE SHEETS 34/73 TO 47/73.

*** DO NOT ATTACH CROSSFRAMES BETWEEN BEAMS #4 AND #5 UNTIL AFTER THE DECK SLAB (NOT INCLUDING CLOSURE POUR), SIDEWALK, PARAPET, AND VANDAL PROTECTION FENCE OR RAILING HAVE BEEN CONSTRUCTED FOR PHASE 2. THE CLOSURE POUR SHALL BE COMPLETED AFTER THE CROSSFRAMES HAVE BEEN ATTACHED.



SECTION A-A

MIN. LAPS: #4 BARS = 2'-3"
#5 BARS = 2'-10"
#6 BARS = 3'-0"

KORDA/NEMETH ENGINEERING, INC. CONSULTING ENGINEERS

DESIGNED	DRAWN	REVIEWED	DATE
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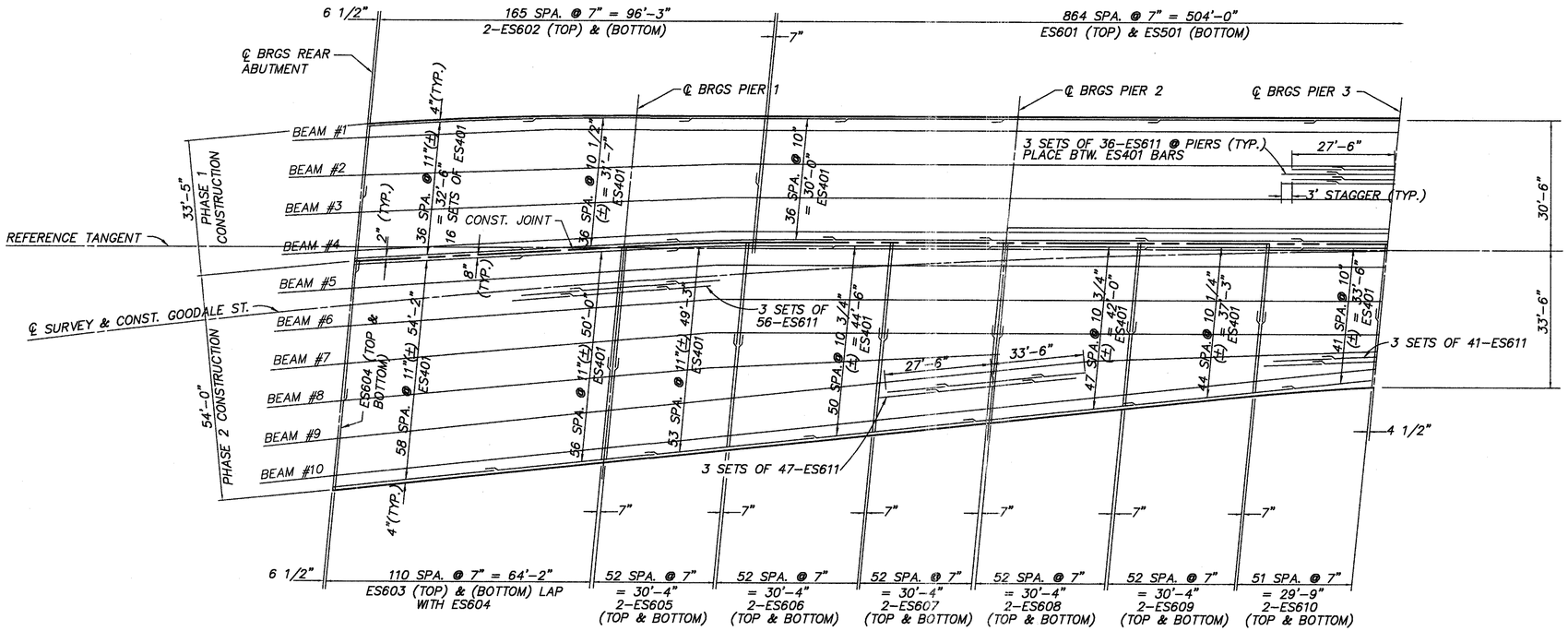
TRANSVERSE SECTION (SPANS 1, 2, & 3)
BRIDGE NO. FRA-315-0194
OVER S.R. 315 AND OLENTANGY RIVER

FRA-GOODALE STREET

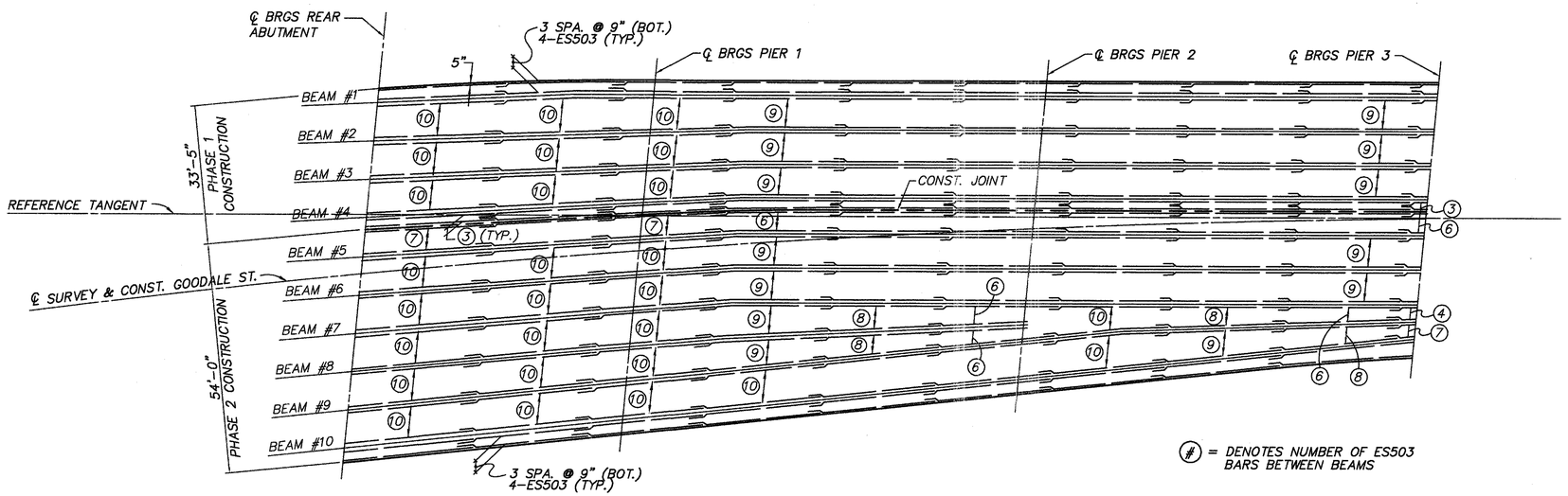
18/25

65/73



SLAB PLAN (SPANS 1, 2, & 3)

(TOP & TRANSVERSE BARS)



SLAB PLAN (SPANS 1, 2, & 3)

(BOTTOM BARS)

NOTE:
SEE TRANSVERSE SECTION, SHEET 18/25 FOR ES503 BAR SPACING.

MIN. LAPS #4 BARS = 2'-3"
#5 BARS = 2'-10"
#6 BARS = 3'-0"

KORDA/NEMETH ENGINEERING, INC.
CONSULTING ENGINEERS
1960 WATERMARK DRIVE, SUITE 300
COLUMBUS, OHIO 43215-1094
TEL (614) 487-1650
FAX (614) 487-1660

DESIGNED	DRAWN	REVIEWED	DATE
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SLAB PLAN (SPANS 1, 2, & 3)
BRIDGE NO. FRA-315-0194
OVER S.R. 315 AND OLENTANGY RIVER

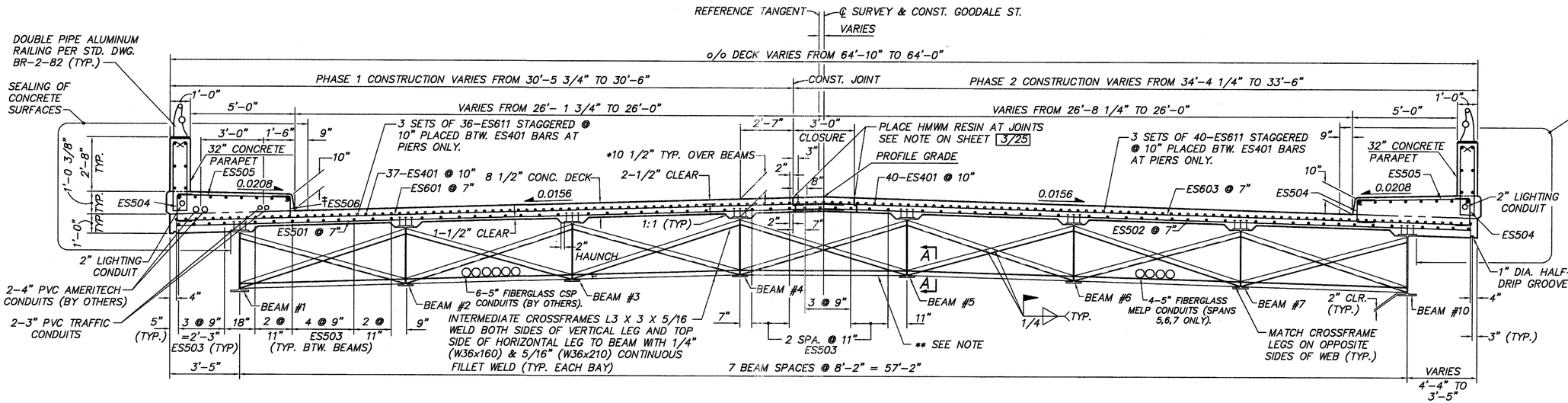
FRA-GOODALE STREET

19/25

66/73

0300-ST

KORDA / NEMETH ENGINEERING, INC.



NOTES:
THE LEFT SIDE SIDEWALK AND PARAPET ARE TO BE CONSTRUCTED DURING PHASE 3 CONSTRUCTION, SEE SHEET 24/25 FOR PART-WIDTH CONSTRUCTION NOTES AND DETAILS.

UTILITY PLANS: FOR CONDUIT LAYOUT, DETAILS, AND NOTES, SEE SHEETS (34/73) TO (47/73).

FIELD BEND ES501, ES502, ES601 & ES603 BARS AT THE DECK APEX. INCLUDE WITH ITEM 509 FOR PAYMENT

‡ PROVIDE RESIN BONDED ANCHORS FOR ES506 BARS.

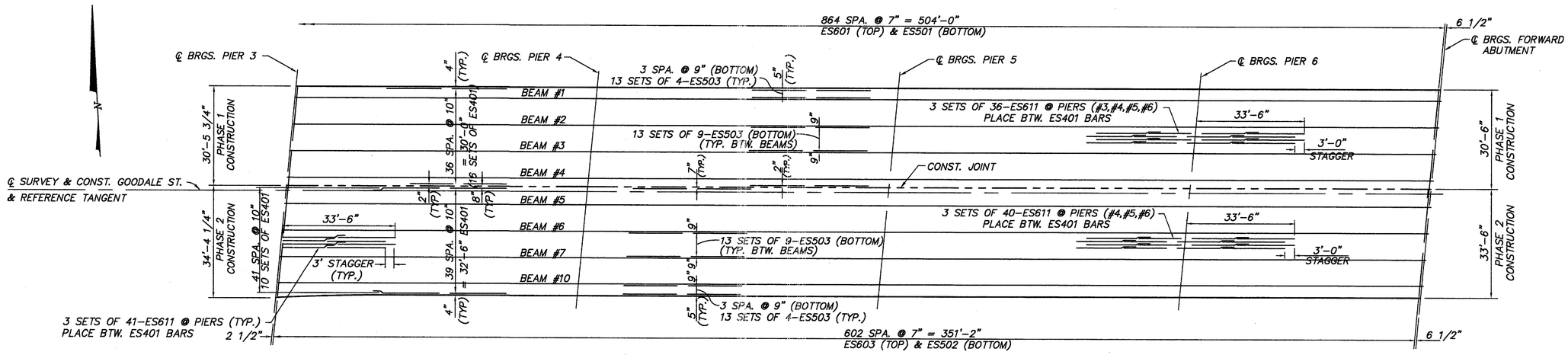
FOR SECTION A-A SEE SHEET 18/25.

TRANSVERSE SECTION
(SPANS 4,5,6,7)

** DO NOT ATTACH CROSSFRAMES BETWEEN BEAMS #4 AND #5 UNTIL AFTER THE DECK SLAB (NOT INCLUDING CLOSURE POUR), SIDEWALK, PARAPET, AND VANDAL PROTECTION FENCE OR RAILING HAVE BEEN CONSTRUCTED FOR PHASE 2. THE CLOSURE POUR SHALL BE COMPLETED AFTER THE CROSSFRAMES HAVE BEEN ATTACHED.

* 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 BASED ON A SLOPE OF 1:1 SHALL BE USED FOR COMPUTING QUANTITY OF CONCRETE. THE SLOPE OF THE HAUNCH MAY BE LESS AT THE CONTRACTOR'S OPTION.



SLAB PLAN
(SPANS 4,5,6,7)

MIN. LAPS: #4 BARS = 2'-3"
#5 BARS = 2'-10"
#6 BARS = 3'-0"

KORDA/NEMETH ENGINEERING, INC.
CONSULTING ENGINEERS
1960 WATERMARK DRIVE, SUITE 200
COLUMBUS, OHIO 43215-1094
TEL (614) 487-1650
FAX (614) 487-1651

DESIGNED	DRAWN	REVIEWED	DATE
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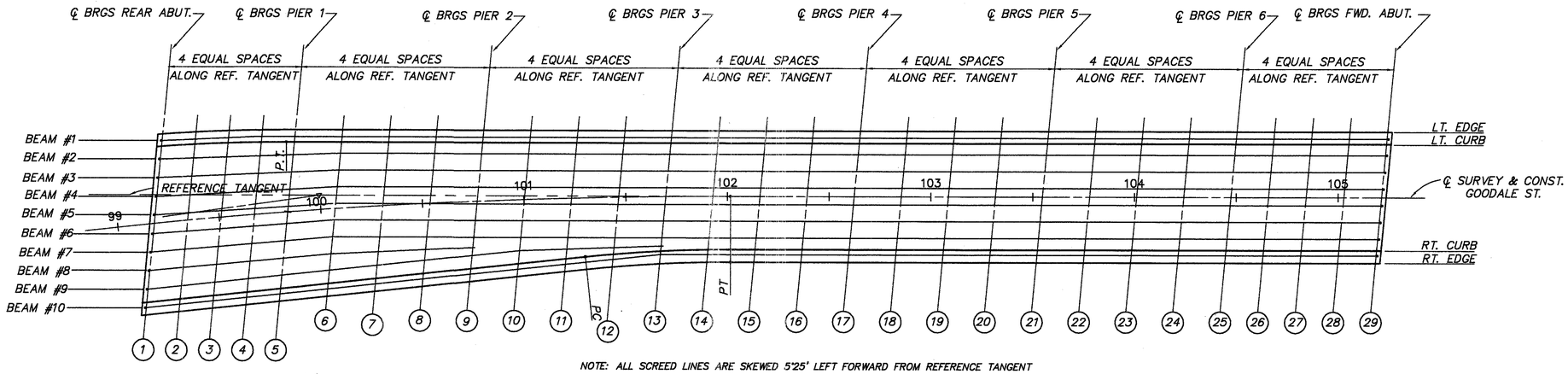
TRANSVERSE SECTION AND SLAB PLAN (SPANS 4,5,6 & 7)
BRIDGE NO. FRA-315-0194
OVER S.R. 315 AND OLENTANGY RIVER

FRA-GOODALE STREET

20/25
67/73



NOTE: ALL SCREED LINES ARE SKEWED 5°25' LEFT FORWARD FROM REFERENCE TANGENT

SCREED ELEVATIONS SHOWN ARE FOR THE DECK SLAB SURFACE PRIOR TO CONCRETE PLACEMENT. ALLOWANCE HAS BEEN MADE FOR ANTICIPATED CALCULATED DEAD LOAD DEFLECTIONS.

TABLE OF SCREED ELEVATIONS

LINE NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
℄ STATION	99+ 17.65	99+ 34.13	99+ 50.59	99+ 67.03	99+ 83.45	100+ 06.80	100+ 30.11	100+ 53.40	100+ 76.65	100+ 99.88	101+ 23.09	101+ 46.27	101+ 69.43	101+ 92.68	102+ 15.91	102+ 39.14	102+ 62.37	102+ 85.49	103+ 08.62	103+ 31.74	103+ 54.87	103+ 77.99	104+ 01.12	104+ 24.24	104+ 47.37	104+ 65.87	104+ 84.37	105+ 02.87	105+ 21.37
LT DECK FASCIA OVERHANG	3'-5"	3'-8"	3'-7 1/8"	3'-3 7/8"	3'-5"	3'-5"	3'-5"	3'-5"	3'-5"	3'-5"	3'-5"	3'-5"	3'-5"	3'-5"	3'-5"	3'-5"	3'-5"	3'-5"	3'-5"	3'-5"	3'-5"	3'-5"	3'-5"	3'-5"	3'-5"	3'-5"	3'-5"	3'-5"	3'-5"
LT. EDGE OF DECK	725.85	726.70	727.51	728.30	729.11	730.32	731.41	732.31	733.09	733.88	734.55	735.02	735.37	735.76	736.01	736.04	735.95	735.89	735.71	735.31	734.82	734.30	733.69	732.95	732.21	731.70	731.24	730.79	730.35
BEAM #1	725.87	726.72	727.54	728.32	729.13	730.35	731.45	732.34	733.13	733.92	734.60	735.07	735.42	735.80	736.06	736.10	736.00	735.95	735.76	735.37	734.87	734.36	733.75	733.01	732.27	731.76	731.30	730.85	730.41
LT. FACE OF CURB	725.88	726.73	727.55	728.34	729.15	730.37	731.47	732.37	733.15	733.95	734.63	735.10	735.46	735.84	736.10	736.14	736.04	735.99	735.81	735.42	734.92	734.41	733.80	733.06	732.32	731.81	731.35	730.90	730.46
BEAM #2	725.92	726.78	727.60	728.39	729.20	730.41	731.52	732.42	733.21	734.01	734.70	735.18	735.53	735.92	736.18	736.22	736.13	736.08	735.90	735.51	735.02	734.51	733.90	733.16	732.42	731.91	731.45	731.00	730.55
BEAM #3	725.97	726.83	727.66	728.45	729.26	730.48	731.59	732.50	733.30	734.11	734.80	735.29	735.65	736.04	736.31	736.35	736.26	736.21	736.04	735.65	735.16	734.66	734.05	733.31	732.57	732.06	731.60	731.14	730.69
BEAM #4	726.03	726.89	727.71	728.50	729.32	730.54	731.66	732.58	733.39	734.20	734.90	735.39	735.76	736.16	736.43	736.47	736.39	736.34	736.17	735.79	735.30	734.81	734.20	733.46	732.72	732.21	731.75	731.29	730.84
℄ SURVEY	726.10	726.96	727.79	728.58	729.39	730.62	731.74	732.67	733.47	734.27	734.97	735.46	735.82	736.22	736.49	736.54	736.46	736.41	736.24	735.86	735.37	734.88	734.28	733.54	732.80	732.29	731.82	731.36	730.91
BEAM #5	726.08	726.94	727.77	728.56	729.37	730.60	731.73	732.66	733.44	734.23	734.91	735.39	735.75	736.15	736.42	736.47	736.39	736.35	736.18	735.81	735.31	734.83	734.23	733.49	732.75	732.23	731.77	731.30	730.85
BEAM #6	725.98	726.83	727.65	728.44	729.26	730.49	731.59	732.48	733.27	734.07	734.76	735.24	735.61	736.01	736.29	736.34	736.27	736.23	736.06	735.69	735.20	734.72	734.12	733.38	732.64	732.13	731.66	731.19	730.74
BEAM #7	725.75	726.61	727.44	728.23	729.05	730.30	731.40	732.31	733.10	733.91	734.61	735.10	735.47	735.88	736.16	736.21	736.14	736.11	735.94	735.58	735.09	734.61	734.02	733.28	732.54	732.03	731.55	731.08	730.62
BEAM #8	725.52	726.37	727.19	728.00	728.85	730.15	731.36	732.31	733.00	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
BEAM #9	725.29	726.17	727.01	727.82	728.64	729.89	731.05	732.03	732.92	733.82	734.59	735.11	735.40	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
RT. FACE OF CURB	725.13	726.00	726.85	727.66	728.49	729.75	730.94	731.93	732.79	733.66	734.41	734.95	735.36	735.78	736.07	736.13	736.06	736.02	735.86	735.50	735.01	734.54	733.95	733.21	732.47	731.95	731.48	731.01	730.55
BEAM #10	725.06	725.93	726.78	727.59	728.42	729.69	730.88	731.86	732.73	733.60	734.36	734.91	735.33	735.74	736.02	736.08	736.01	735.98	735.83	735.46	734.97	734.50	733.92	733.17	732.43	731.92	731.45	730.97	730.51
RT. EDGE OF DECK	724.97	725.85	726.69	727.51	728.34	729.61	730.80	731.79	732.66	733.54	734.29	734.84	735.25	735.68	735.97	736.03	735.96	735.93	735.78	735.41	734.93	734.46	733.87	733.13	732.39	731.88	731.40	730.93	730.46
RT. DECK FASCIA OVERHANG	3'-4 3/4"	3'-4 3/4"	3'-4 3/4"	3'-4 7/8"	3'-4 7/8"	3'-4 7/8"	3'-4 7/8"	3'-4 7/8"	3'-4 7/8"	3'-4 7/8"	3'-4 7/8"	3'-4 7/8"	3'-6 1/8"	4'-4"	3'-6 1/4"	3'-5"	3'-5"	3'-5"	3'-5"	3'-5"	3'-5"	3'-5"	3'-5"	3'-5"	3'-5"	3'-5"	3'-5"	3'-5"	3'-5"

KORDA/NEMETH ENGINEERING, INC.
CONSULTING ENGINEERS
1650 WATKINS MILL PK., SUITE 200
COLUMBUS, OHIO 43240-1084
TEL. (614) 457-1000
FAX (614) 457-1881

DESIGNED	DRAWN	REVIEWED	DATE
DAT	TWK	RWE	5/18/94
CHECKED	REVISED	STRUCTURE FILE NO.	
MTO		2516144	

SCREED ELEVATIONS
BRIDGE NO. FRA-315-0194
OVER S.R. 315 AND OLENTANGY RIVER

FRA-GOODALE STREET

21/25

68/73

0300-ST

BEARING SCHEDULE							1 1/2" STEEL	2" STEEL	1 1/2" STEEL	
LOCATION	ASSEMBLY TYPE	NO. OF BEARINGS	SIZE L x W x T	NO. OF STEEL LAMINATES	t_i	t_o	LOAD PLATE L X W	LOAD PLATE L X W	ANCHOR PLATE L X W	GRADE %
REAR ABT.	EXPANSION & ANCHORED	10	14 1/2 X 14 1/2 X 4 3/4	8	0.4922	0.3537	16 1/2 X 16 1/2	——	16 1/2 X 20 1/2	+5.0
PIER 1	EXPANSION	10	16 X 20 X 4 1/4	7	0.5020	0.3575	——	18 X 22	——	+5.0
PIER 2	EXPANSION	10	16 X 20 X 3	5	0.4840	0.3457	——	18 X 22	——	+3.5
PIER 3	FIXED	9	16 X 20 X 2	4	0.3850	0.2750	——	18 X 26	——	+1.6
PIER 4	FIXED	8	16 X 20 X 2	4	0.3850	0.2750	——	18 X 26	——	−0.3
PIER 5	EXPANSION	8	16 X 20 X 3	5	0.4840	0.3457	——	18 X 22	——	−2.1
PIER 6	EXPANSION	8	16 X 20 X 4 1/4	7	0.5020	0.3575	——	18 X 22	——	−3.0
FWD. ABT.	EXPANSION & ANCHORED	8	14 1/2 X 14 1/2 X 4 3/4	8	0.4922	0.3537	16 1/2 X 16 1/2	——	16 1/2 X 20 1/2	−2.5

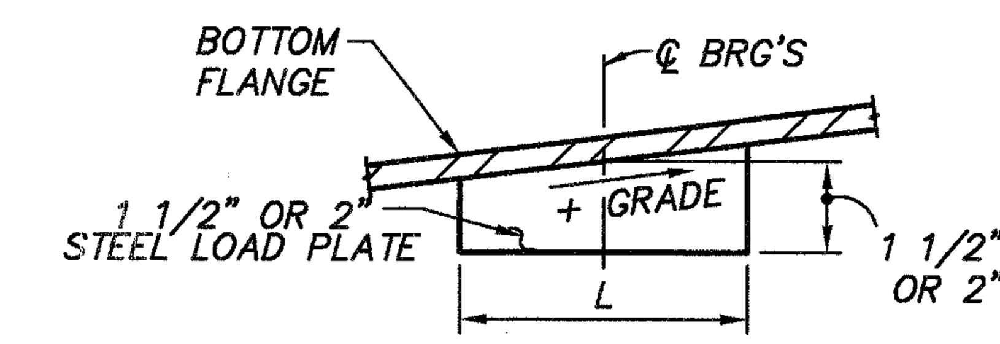
LAMINATED ELASTOMERIC BEARINGS SHALL COMPLY WITH 516 AND ARTICLES 18.2.3 THROUGH 18.2.8 OF SECTION 18, BEARING DEVICES, DIVISION II, CONSTRUCTION, OF THE 1992 AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES. BEARINGS SHALL BE GRADE 3, 50-DUROMETER ELASTOMER, AND SHALL BE SUBJECTED TO THE LOAD TESTING REQUIREMENTS CORRESPONDING TO DESIGN METHOD A. TESTING SHALL BE INCLUDED IN THE PRICE BID FOR THE BEARINGS.

LAMINATED ELASTOMERIC BEARING DESIGN LOADS:
THE MAXIMUM DESIGN LOAD FOR THE 2", 3", & 4 1/4" LAMINATED ELASTOMERIC BEARING PADS IS 257 KIPS. MAXIMUM DEAD LOAD IS 187 KIPS. MAXIMUM LIVE LOAD IS 70 KIPS.

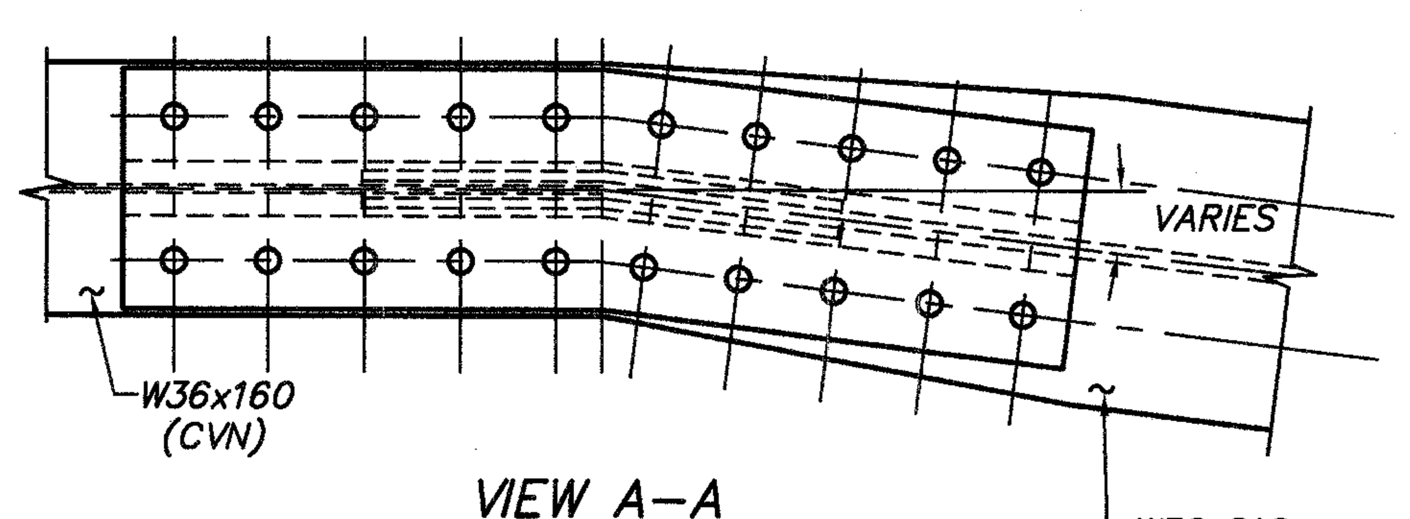
THE MAXIMUM DESIGN LOAD FOR THE 4 3/4" LAMINATED ELASTOMERIC BEARING PADS IS 102 KIPS. MAXIMUM DEAD LOAD IS 57 KIPS. MAXIMUM LIVE LOAD IS 45 KIPS.

STEEL LOAD AND ANCHOR PLATES: THE STEEL LOAD AND ANCHOR PLATES SHALL BE THE SAME MATERIAL AS THE ATTACHED STRUCTURAL STEEL (A572), AND BE SIMILARLY CLEANED AND COATED. SURFACE PREPARATION AND PRIMING SHALL BE DONE IN THE SHOP AND BE INCLUDED IN THE PRICE BID FOR THE BEARINGS. FIELD COATS SHALL BE INCLUDED IN THE PRICE BID FOR PAINTING THE STRUCTURAL STEEL. THE STEEL LOAD AND ANCHOR PLATES SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS. WELDING SHALL BE CONTROLLED SO THAT THE STEEL LOAD AND ANCHOR PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 300°F AS DETERMINED BY THE USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.

ELASTOMERIC BEARING REPOSITIONING: IF DECK CONCRETE IS PLACED AT AN AMBIENT TEMPERATURE HIGHER THAN 80°F OR LOWER THAN 40°F AND THE ELASTOMERIC BEARING SHEAR DEFLECTION EXCEEDS ONE-SIXTH OF THE BEARING HEIGHT AT 60°F (±) 10°F, THE BEAMS SHALL BE RAISED (BY 1/2" MAXIMUM) TO ALLOW THE BEARINGS TO RETURN TO THEIR UNDEFORMED SHAPE AT 60°F (±) 10°F.

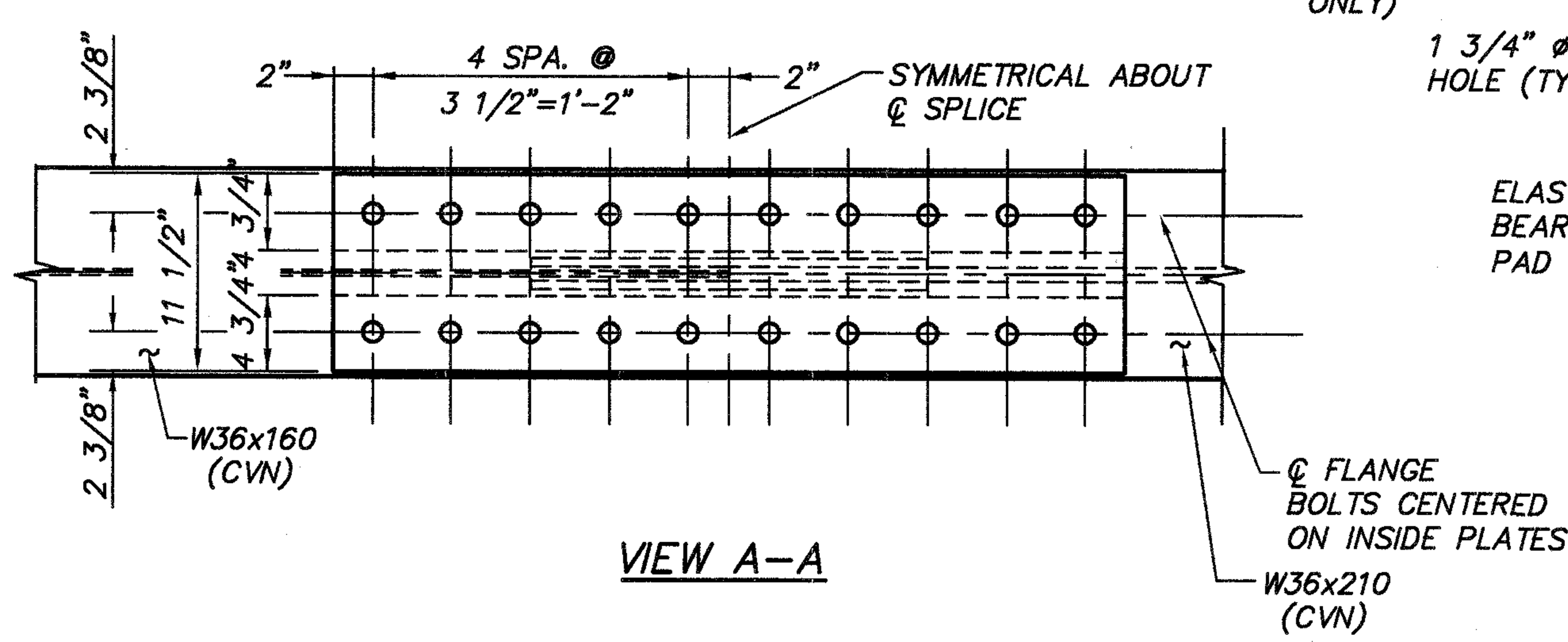


STEEL LOAD PLATE DETAIL

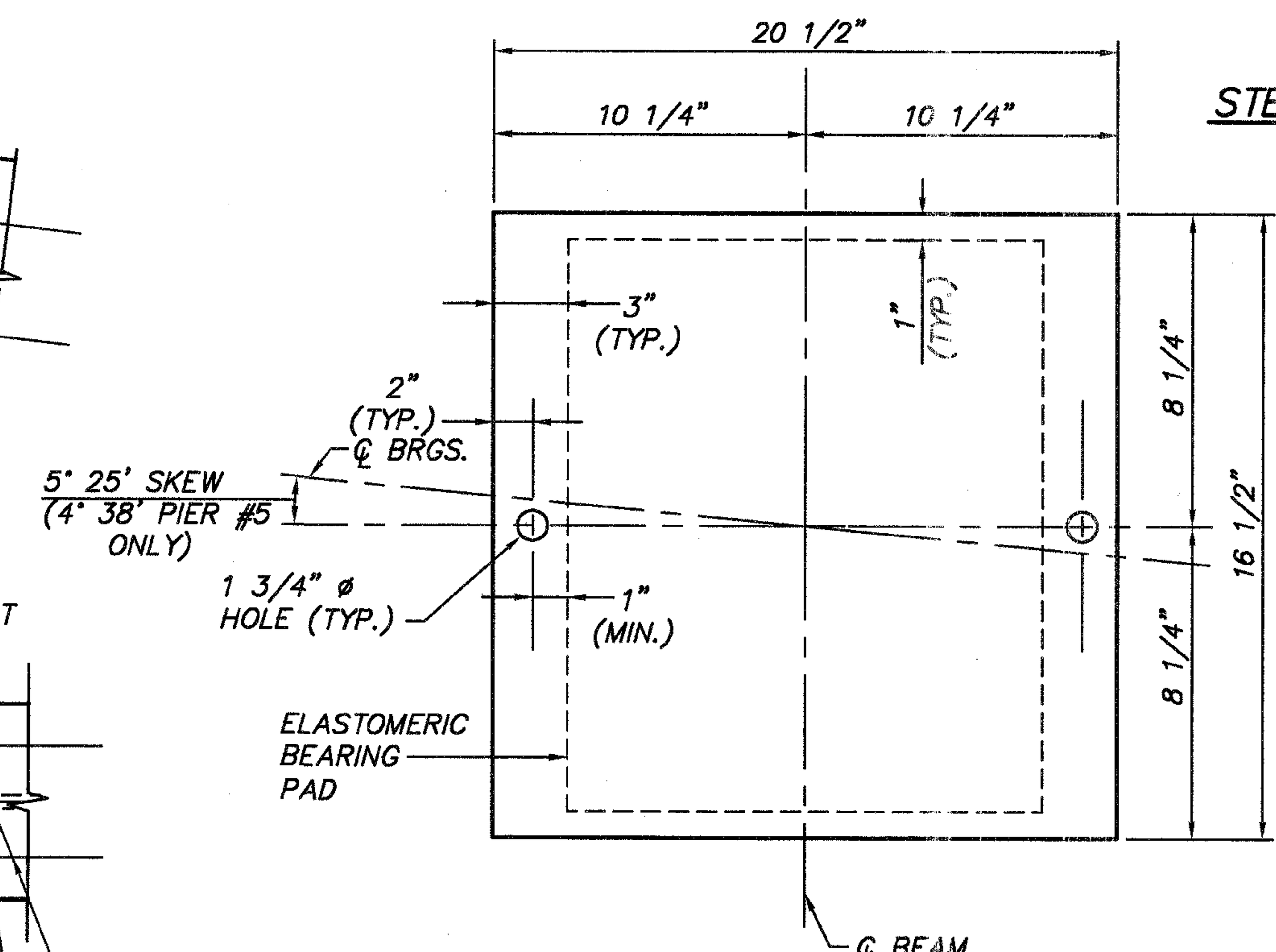


VIEW A-A

SEE SHEET 15/25 FOR DEFLECTIONS

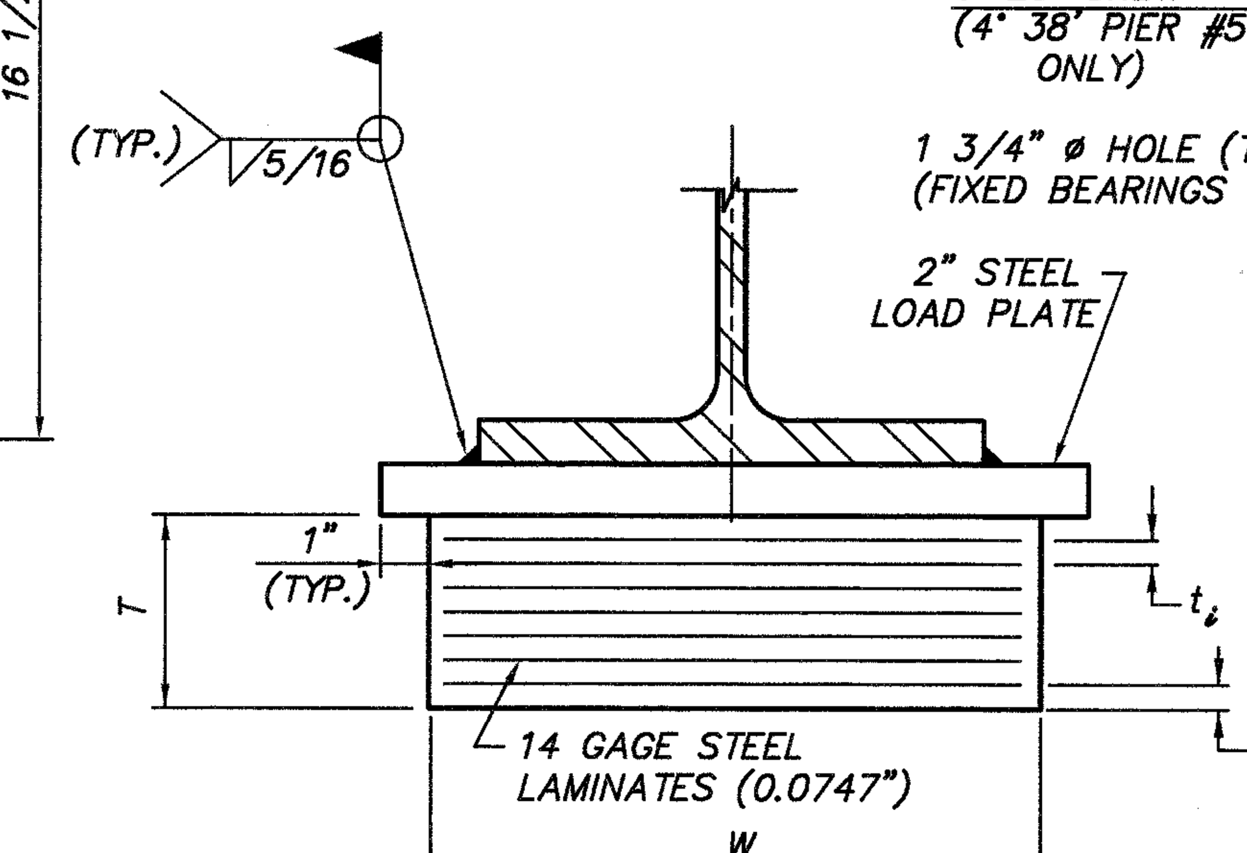


VIEW A-A

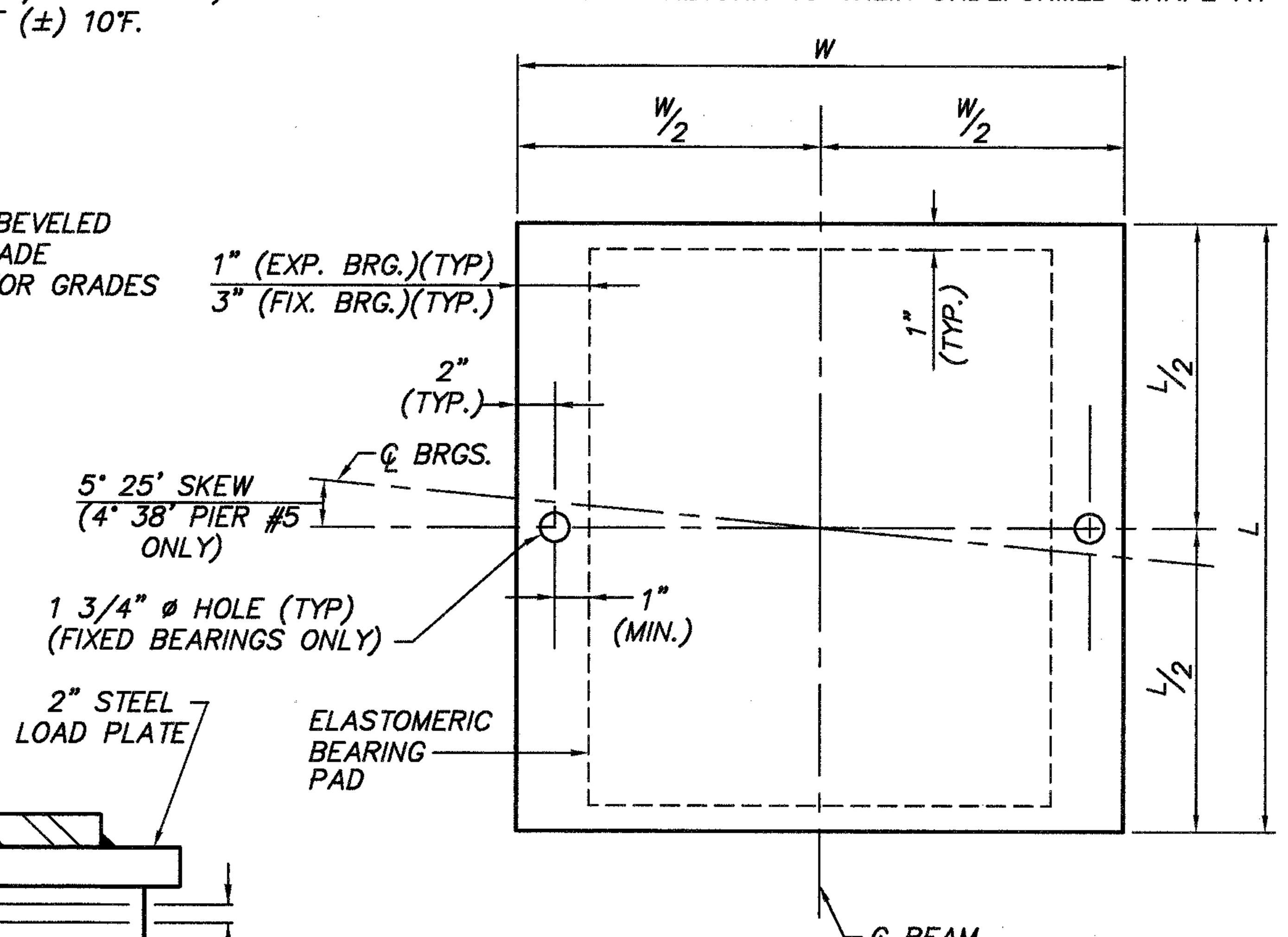


STEEL ANCHOR PLATE DETAIL

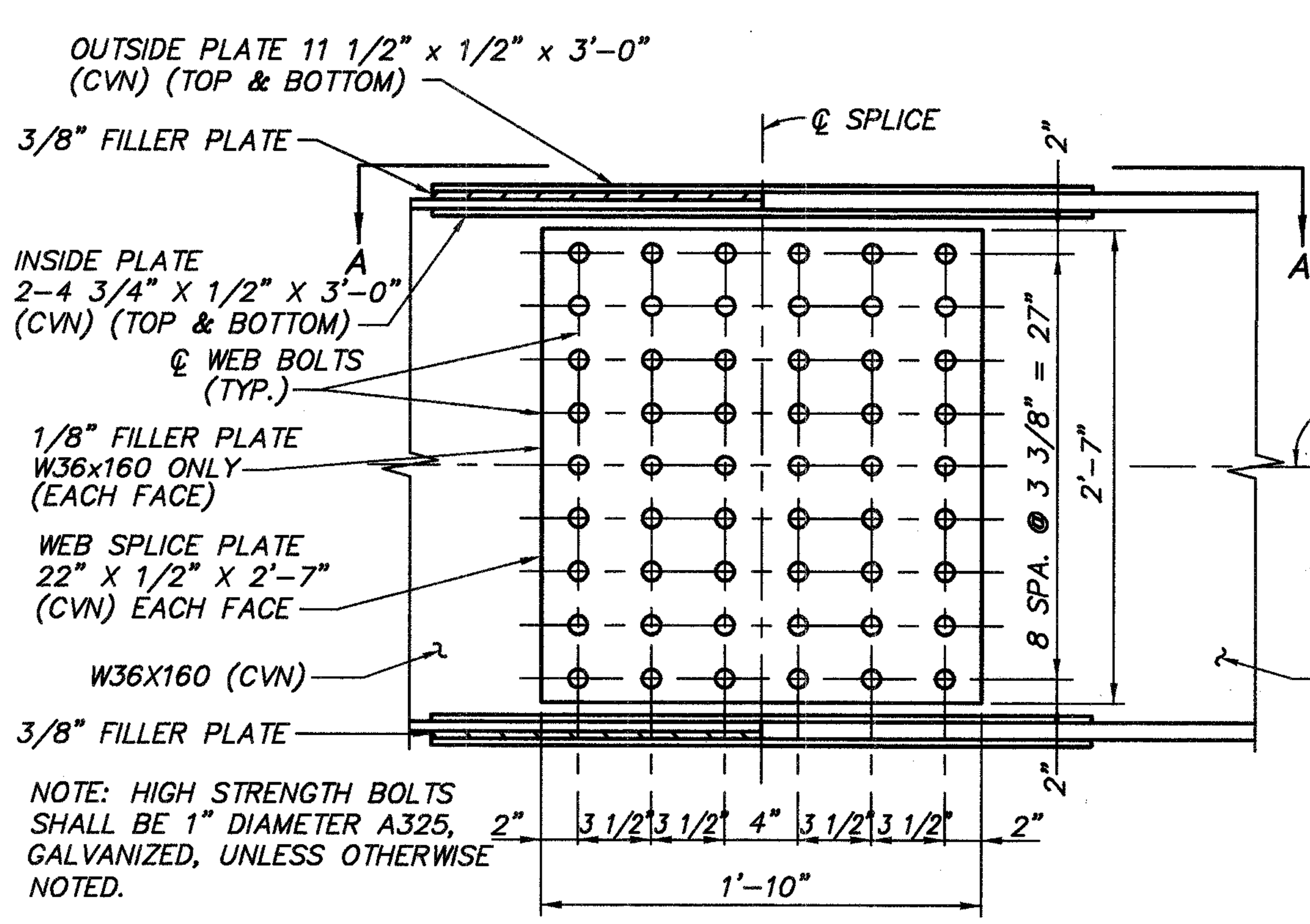
THE STEEL LOAD PLATE SHALL BE BEVELED TO MATCH THE CORRESPONDING GRADE GIVEN IN THE BEARING SCHEDULE FOR GRADES GREATER THAN 0.50%



EXPANSION BEARING DETAIL

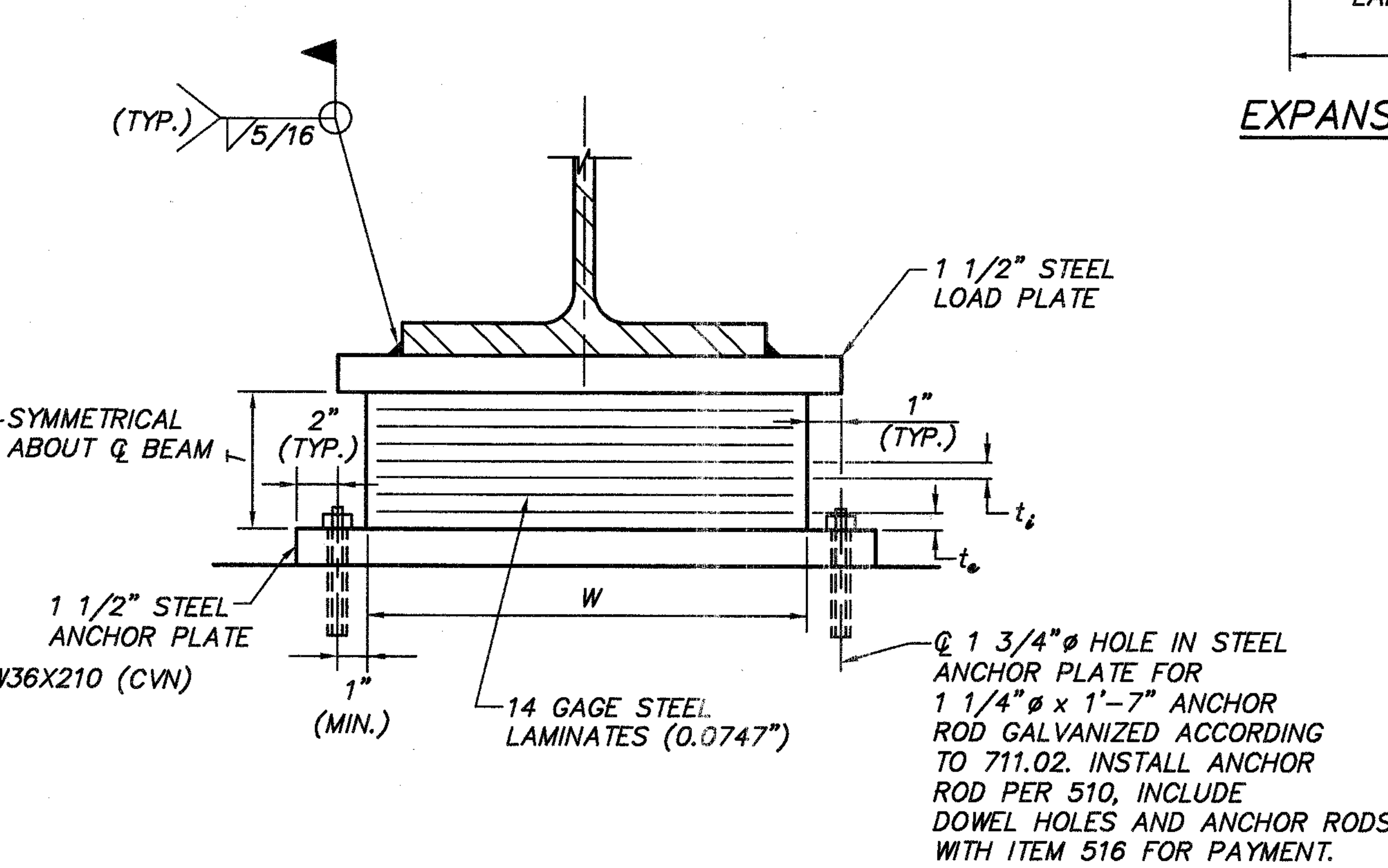


STEEL LOAD PLATE DETAIL

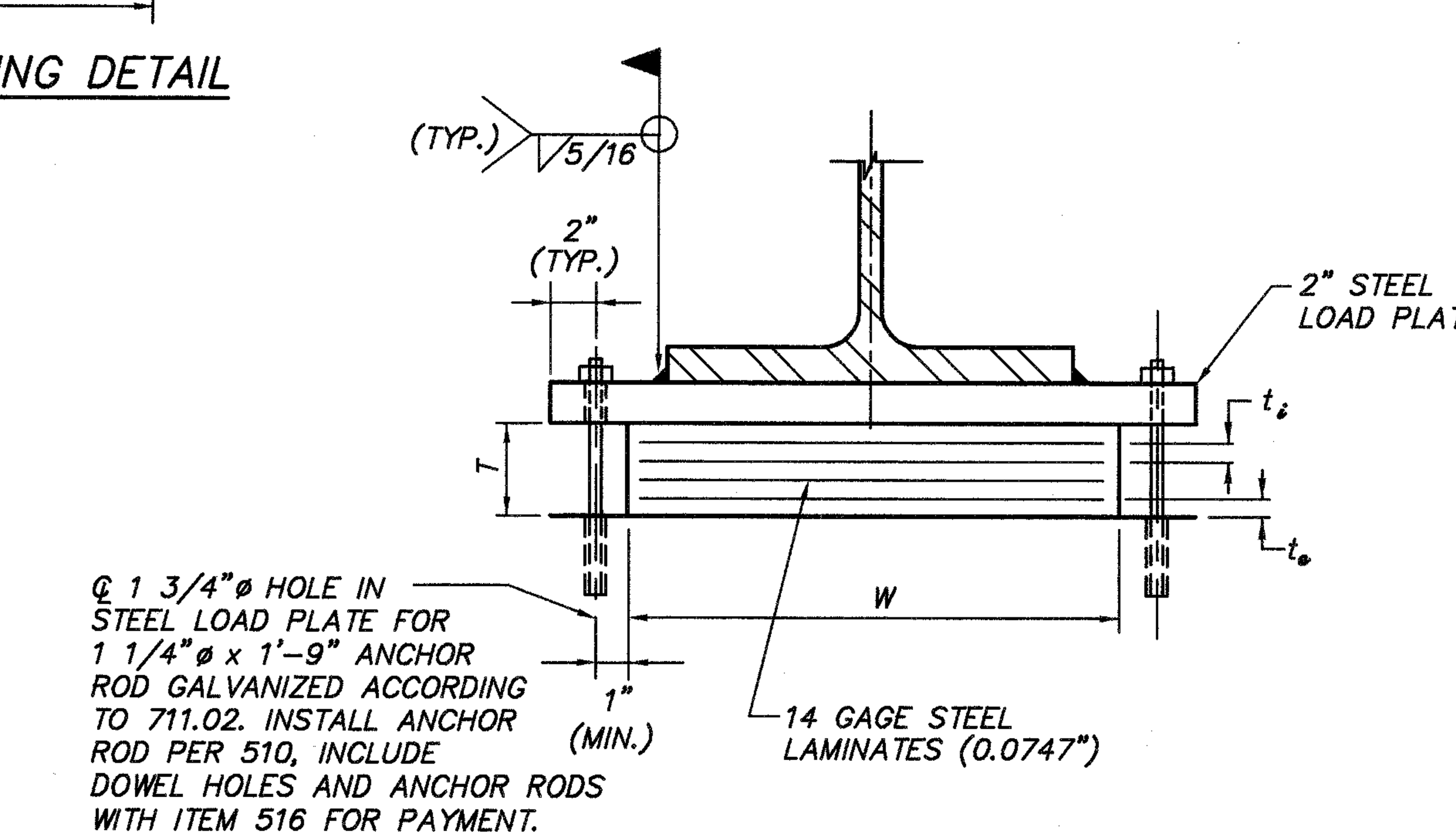


NOTE: HIGH STRENGTH BOLTS SHALL BE 1" DIAMETER A325, GALVANIZED, UNLESS OTHERWISE NOTED.

BOLTED BEAM SPLICE DETAILS



EXPANSION & ANCHORED BEARING DETAIL



FIXED BEARING DETAIL

KORDA/NEMETH ENGINEERING, INC. CONSULTING ENGINEERS

DESIGNED DAT	DRAWN KAH	REVIEWED MTO	DATE 5/18/94
CHECKED RWE	REVISED	STRUCTURE FILE NO. 2516144	

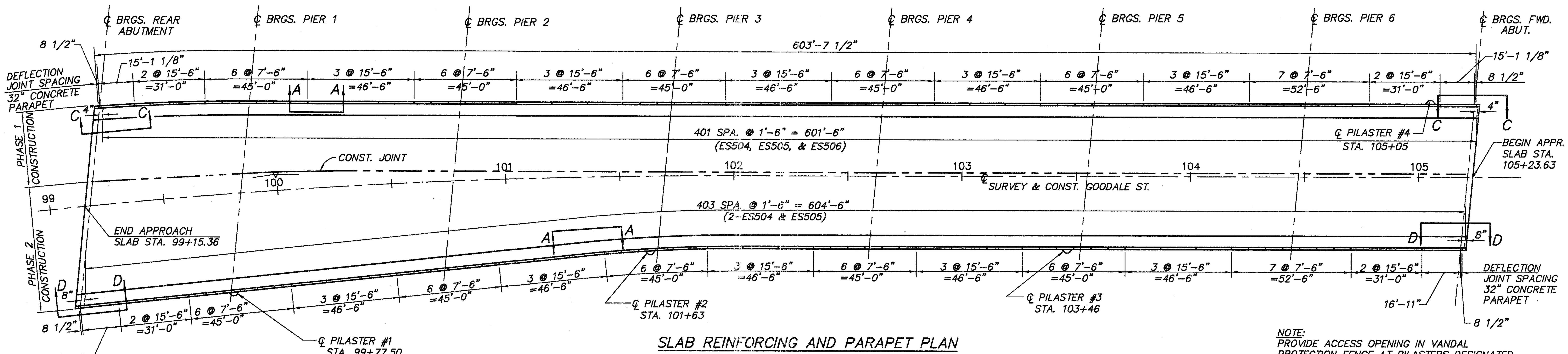
SUPERSTRUCTURE DETAILS
BRIDGE NO. FRA-315-0194
OVER S.R. 315 AND OLENTANGY RIVER

FRA-GOODALE STREET

22/25

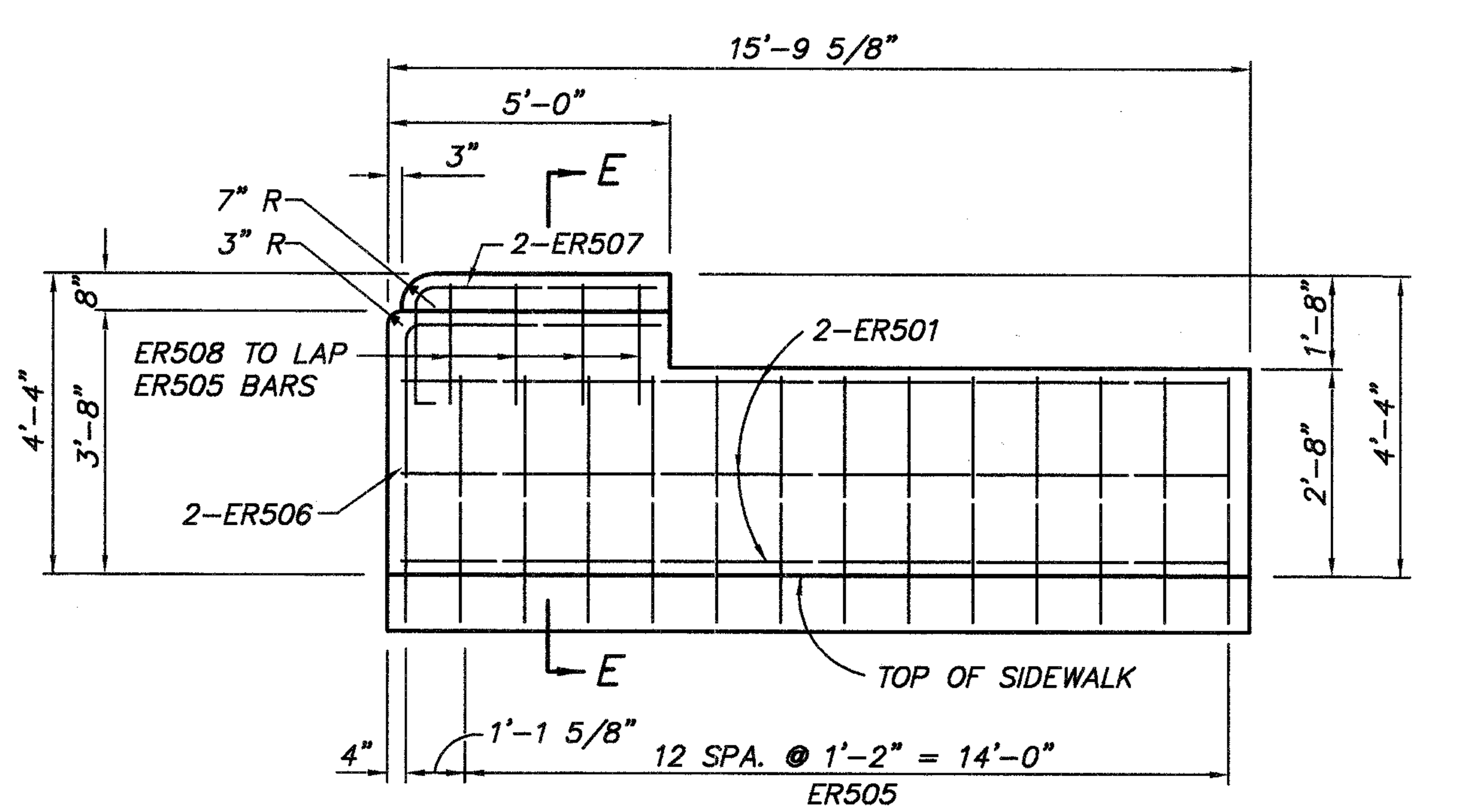
69/73

\92024\92024SS2

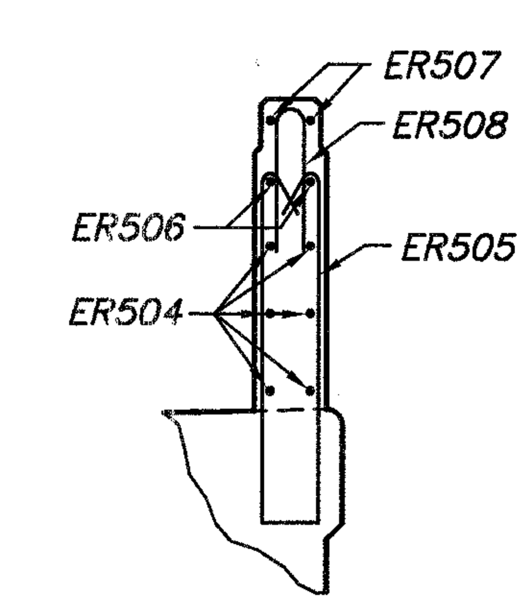


SLAB REINFORCING AND PARAPET PLAN

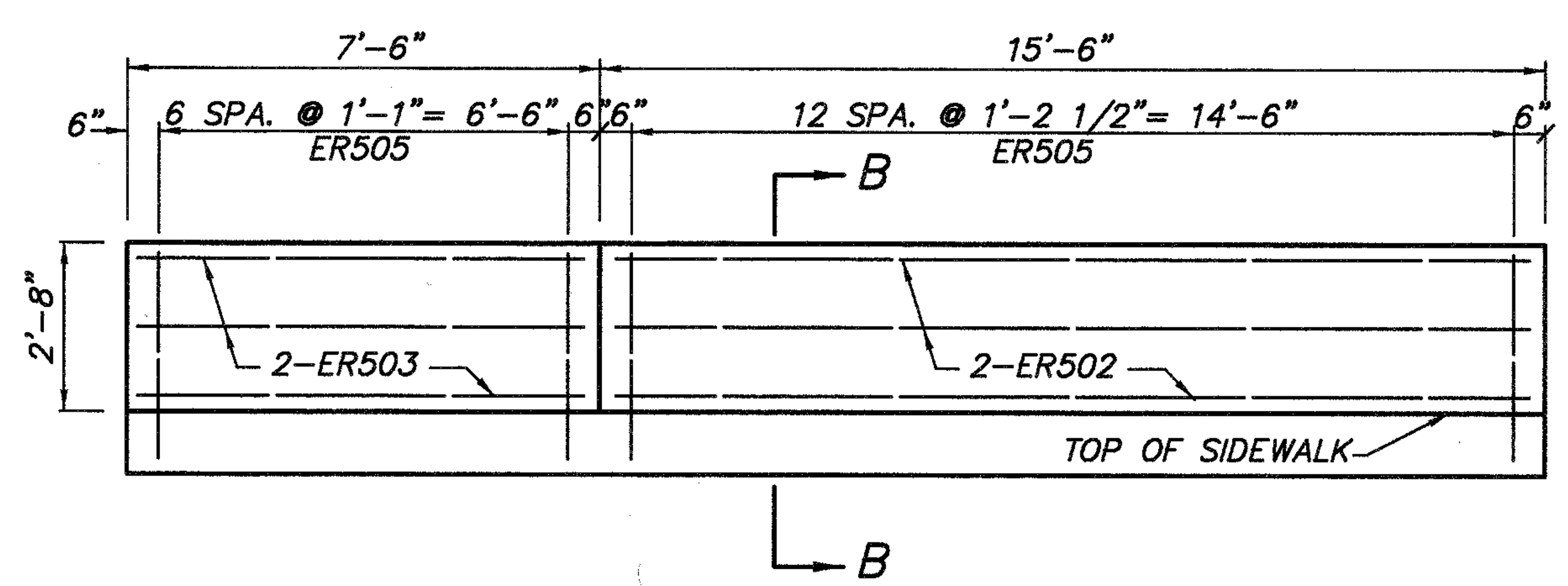
NOTE:
PROVIDE ACCESS OPENING IN VANDAL PROTECTION FENCE AT PILASTERS DESIGNATED #1 AND #2 ON BRIDGE. SEE STANDARD DRAWING VPF-1-90 FOR DETAILS.



ELEVATION C-C

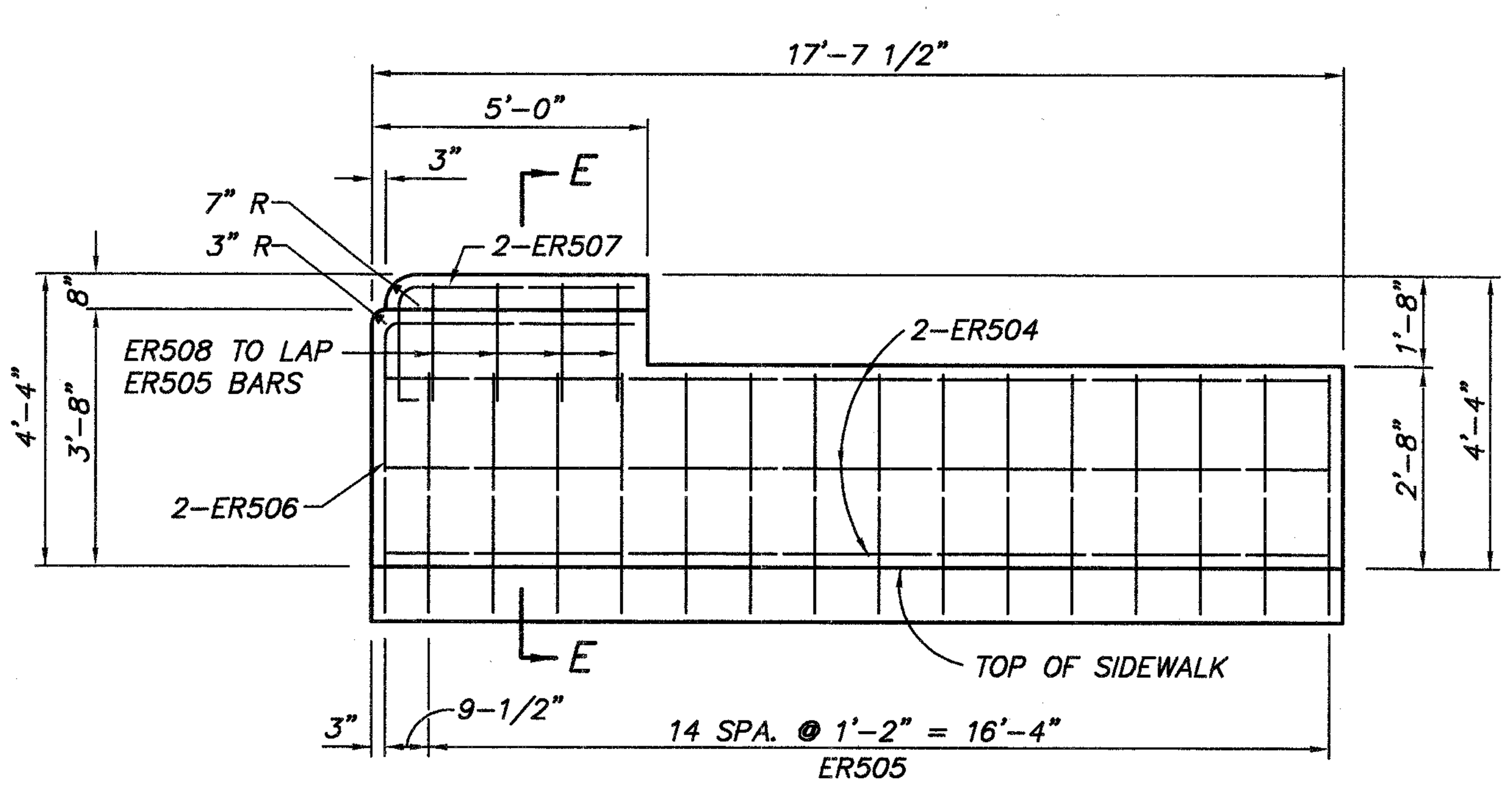


SECTION E-E

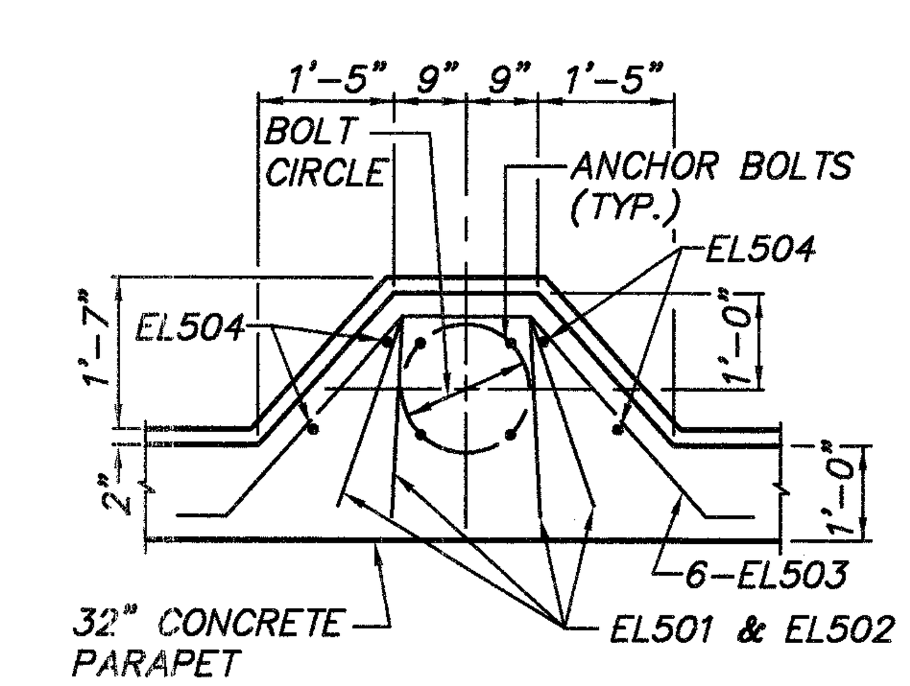


ELEVATION A-A

NOTES:
QUANTITIES OF CONCRETE AND REINFORCING STEEL FOR THE PARAPET ARE INCLUDED FOR PAYMENT WITH ITEM 511 AND ITEM 509 RESPECTIVELY.
FOR VANDAL PROTECTION FENCE POST SPACING AND DOUBLE PIPE RAILING POST SPACING, SEE SHEET 2/25.
MIN. LAP ~ #4 BARS = 2'-3"

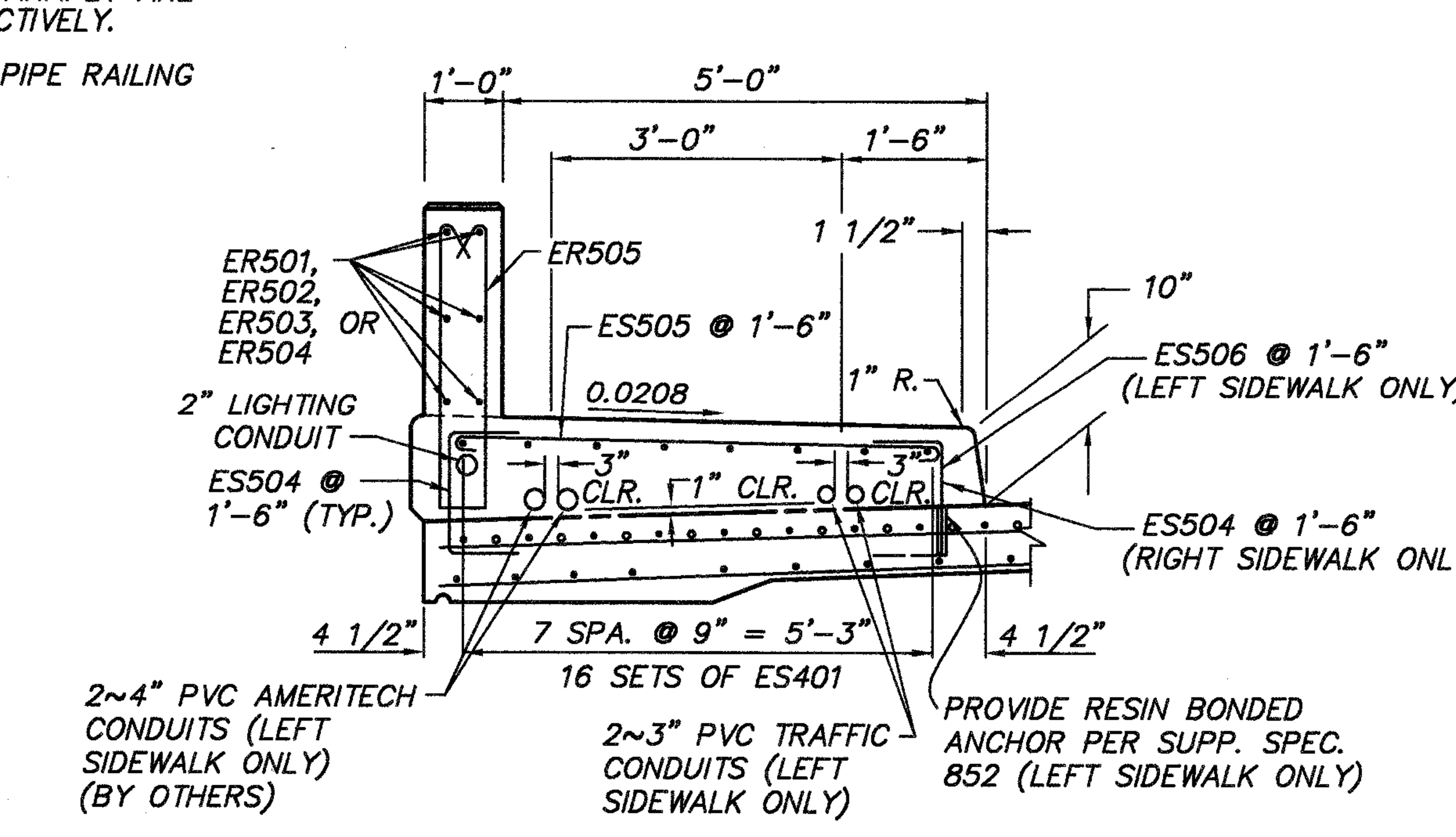


ELEVATION D-D



PILASTER DETAIL

SEE LIGHTING PLANS & STD. DWG. HL-20.14 FOR DETAILS NOT SHOWN



SECTION B-B

KORDA/NEMETH ENGINEERING, INC. CONSULTING ENGINEERS

DESIGNED DAT	DRAWN DB	REVIEWED RWE	DATE 5/18/94
CHECKED MTO	REVISED	STRUCTURE FILE NO. 2516144	

SIDEWALK & PARAPET DETAILS
BRIDGE NO. FRA-315-0194
OVER S.R. 315 AND OLENTANGY RIVER

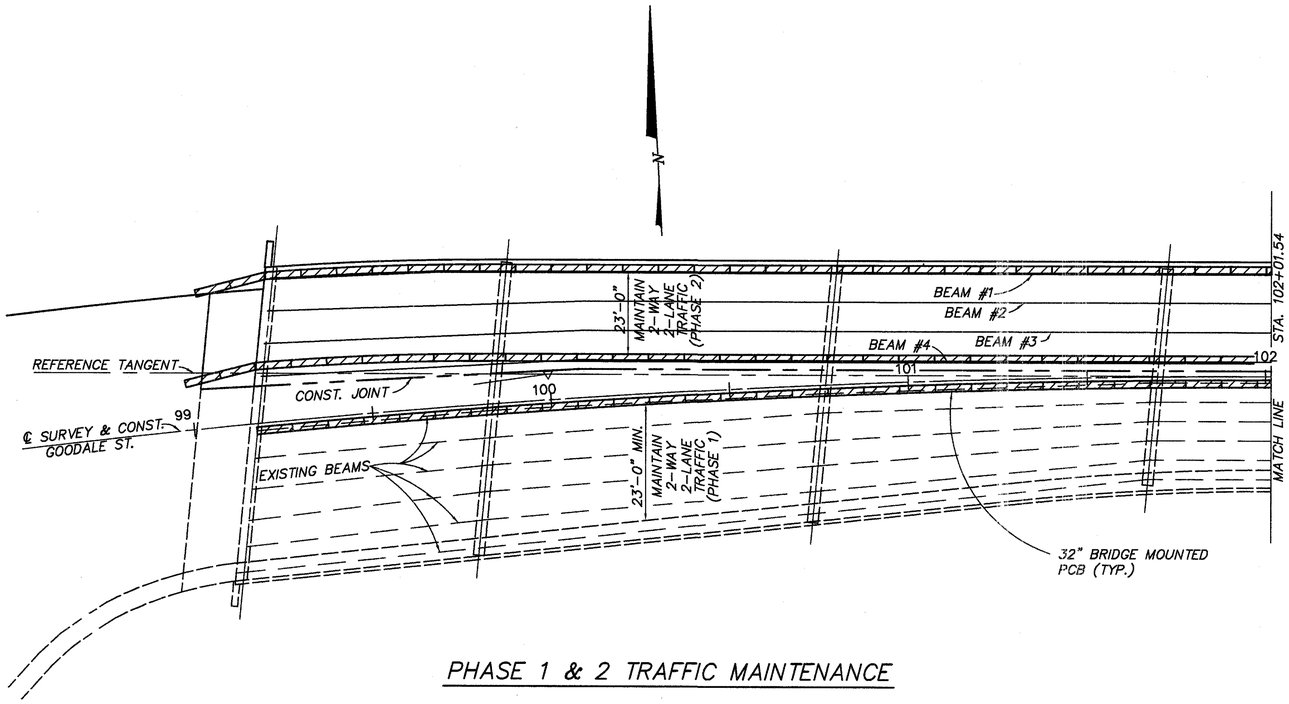
FRA-GOODALE STREET

23/25

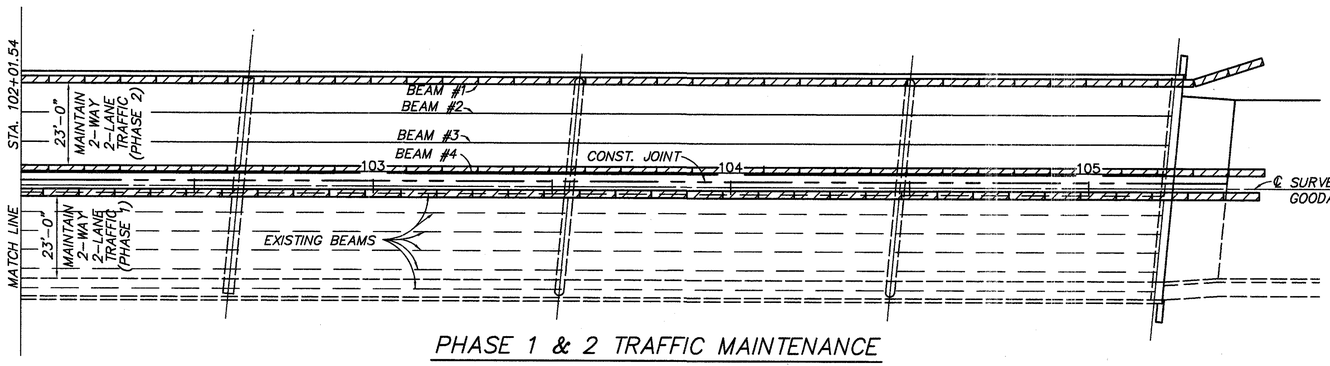
70/73

KORDA / NEMETH ENGINEERING, INC.

0300-ST



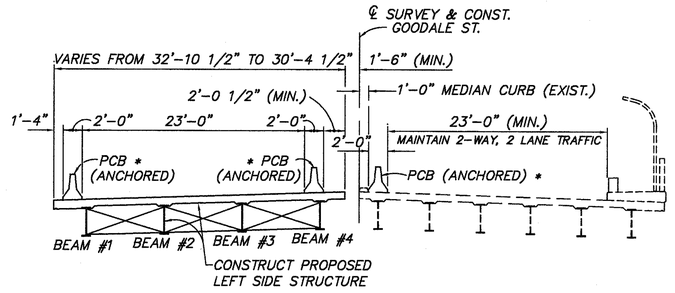
PHASE 1 & 2 TRAFFIC MAINTENANCE



PHASE 1 & 2 TRAFFIC MAINTENANCE

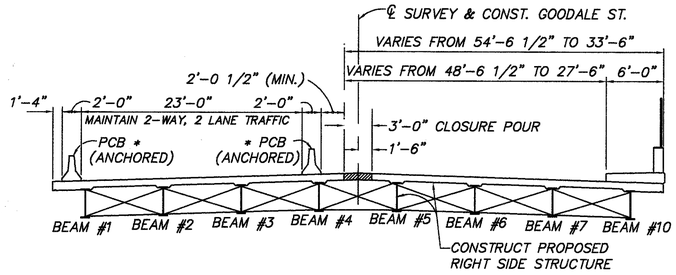
PART-WIDTH CONSTRUCTION OUTLINE

1. 2-WAY, 2 LANE TRAFFIC SHALL BE MAINTAINED AT ALL TIMES.
2. PLACE ANCHORED BRIDGE MOUNTED PORTABLE CONCRETE BARRIER AS SHOWN AND MAINTAIN 2-WAY, 2-LANE TRAFFIC ON THE RIGHT SIDE OF THE EXISTING STRUCTURE DURING PHASE 1.
3. REMOVE THE LEFT SIDE OF THE EXISTING SUPERSTRUCTURE. CONSTRUCT THE PROPOSED LEFT SIDE OF THE SUPERSTRUCTURE (BEAMS #1 THRU #4 NOT INCLUDING THE SIDEWALK). PLACE ANCHORED BRIDGE MOUNTED PORTABLE CONCRETE BARRIER AS SHOWN AND MAINTAIN 2-WAY, 2 LANE TRAFFIC ON THE PORTION OF THE PROPOSED SUPERSTRUCTURE CONSTRUCTED IN PHASE 1.
4. REMOVE THE REMAINDER OF THE EXISTING SUPERSTRUCTURE. CONSTRUCT THE PROPOSED RIGHT SIDE OF SUPERSTRUCTURE (INCLUDING SIDEWALK) AS SHOWN FOR PHASE 2. DO NOT ATTACH CROSSFRAMES BETWEEN BEAMS #4 AND #5 UNTIL AFTER THE DECK SLAB (NOT INCLUDING CLOSURE POUR), SIDEWALK, PARAPET, AND VANDAL PROTECTION FENCE OR RAILING HAVE BEEN CONSTRUCTED FOR PHASE 2. THE CLOSURE POUR SHALL BE COMPLETED AFTER THE CROSSFRAMES HAVE BEEN ATTACHED.
5. PROVIDE UNANCHORED BRIDGE MOUNTED PORTABLE CONCRETE BARRIER AND MAINTAIN 1-WAY, 1-LANE AND 1-WAY, 2-LANE TRAFFIC AS SHOWN FOR PHASE 3.
6. CONSTRUCT THE PROPOSED LEFT SIDE SIDEWALK, PARAPET, AND VANDAL PROTECTION FENCE, OR RAILING.

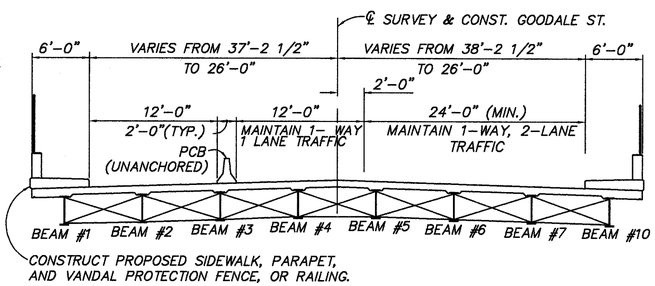


PHASE 1 CONSTRUCTION

* PROVIDE 2 ANCHORS PER BARRIER SEGMENT, SEE STD-DWG PCB-91



PHASE 2 CONSTRUCTION



PHASE 3 CONSTRUCTION

NOTE: PORTABLE CONCRETE BARRIER ANCHORS SHALL BE THRU BOLTS OR APPROVED RESIN ANCHORS. WHEN RESIN ANCHORS ARE USED, THEY MUST BE EMBEDDED A MINIMUM OF 6 1/2 INCHES INTO FIRM CONCRETE. WHEN NO LONGER NEEDED, ANCHORS SHALL BE REMOVED AS DIRECTED BY THE ENGINEER. WHERE DECK IS TO REMAIN, HOLES SHALL BE FILLED WITH AN EPOXY NON-SHRINK GROUT. THE ABOVE SHALL BE INCLUDED WITH ITEM 622 FOR PAYMENT.

A MINIMUM OF 2 ANCHORS SHALL BE USED FOR EACH BARRIER SEGMENT.

KORDA/NEMETH ENGINEERING, INC.
CONSULTING
1650 WATERMARK DRIVE, SUITE 200
COLUMBUS, OHIO 43215-1094
TEL (614) 487-1650
FAX (614) 487-8981

DESIGNED	DRAWN	REVIEWED	DATE
DAT	TWK	RWE	5/18/94
CHECKED	REVISED	STRUCTURE FILE NO.	
MTO		2516144	

PART-WIDTH CONSTRUCTION DETAILS
BRIDGE NO. FRA-315-0194
OVER S.R. 315 AND OLENTANGY RIVER

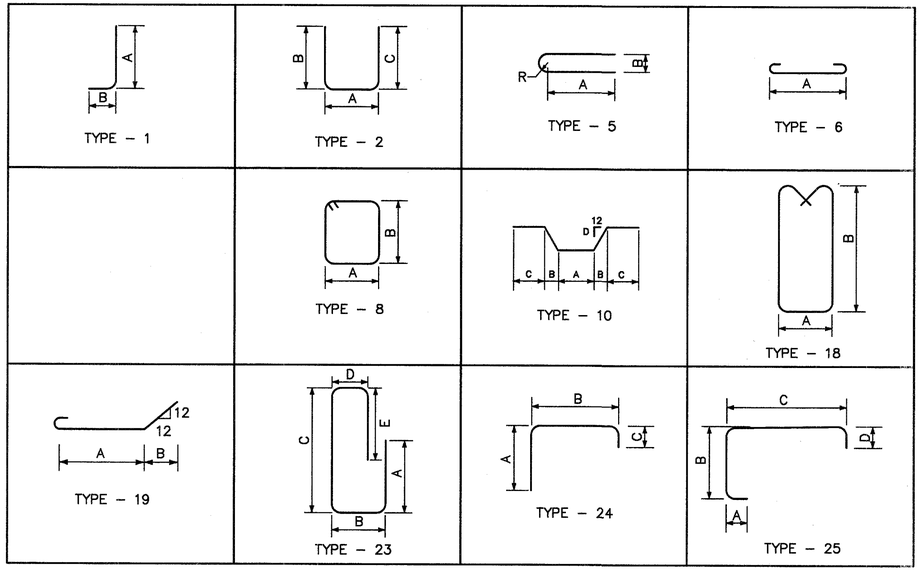
FRA-GOODALE STREET

24/25
71/73

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FWD.	TOTAL				A	B	C	D	E	R	INC
ABUTMENTS													
EA501	–	7	7	36–9	268	ST.							
EA502	–	7	7	39–3	287	ST.							
EA503	–	6	6	9–9	61	ST.							
EA504	–	40	40	5–7	233	ST.							
EA505	30	–	30	34–3	1072	ST.							
EA506	15	–	15	21–4	334	ST.							
EA507	14	–	14	10–3	150	ST.							
EA508	14	–	14	12–9	186	ST.							
EA509	42	–	42	9–8	423	2	3–5	3–3	3–3				
EA510	16	–	16	8–11	149	ST.							
EA511	20	–	20	9–9	203	ST.							
EA512	50	–	50	5–7	291	2	2–4	1–9	1–9				
EA513	–	60	60	1–7	99	ST.							
EA601	78	49	127	7–7	1447	2	1–5	3–3	3–3				
EA602	–	49	49	5–7	411	2	0–11	2–6	2–6				
EA603	8	8	16	6–1	146	2	1–5	2–6	2–6				
EA604	78	–	78	15–7	1826	23	5–3	1–5	6–2	0–11	2–6		
ED801	51	38	89	4–10	1149	19	2–6	1–0					
				TOTAL	8,735	LBS.							

* THE "A" DIMENSION FOR ES506 BARS IS BASED UPON A DRILLED ANCHORING DEPTH OF 5"; IT SHALL BE MODIFIED ACCORDINGLY FOR THE SELECTED ANCHORING SYSTEM.

BENDING DIAGRAMS



NOTES

1. ALL BARS SHALL BE EPOXY COATED.
2. LENGTHS ARE GIVEN IN FEET – INCHES.
3. "ST." IN THE "TYPE" COLUMN INDICATES STRAIGHT BARS.
4. REFER TO C.M.S. SEC. 509.05 FOR STANDARD BEND DIMENSIONS.
5. ALL DIMENSIONS ARE OUT–TO–OUT.

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
			TOTAL				A	B	C	D	E	R	INC
SUPERSTRUCTURE (SLAB & SIDEWALK)													
ES401			1564	40–0	41790	ST.							
ES501			865	33–3	29998	ST.							
ES502			603	33–0	20755	ST.							
ES503			1718	30–3	54204	ST.							
ES504			1210	2–9	3471	2	1–3	0–10	0–10				
ES505			806	6–6	5464	6	5–4						
* ES506			402	1–9	734	1	1–1	0–10					
ES601			865	33–3	43199	ST.							
ES602			664	19–7	19531	ST.							
ES603			825	33–0	40892	ST.							
ES604			222	24–2	8058	ST.							
ES605			212	27–7	8783	ST.							
ES606			212	26–1	8306	ST.							
ES607			212	24–8	7854	ST.							
ES608			212	23–3	7403	ST.							
ES609			212	21–7	6873	ST.							
ES610			208	19–11	6222	ST.							
ES611			1440	22–4	48304	ST.							
				TOTAL	361,841	LBS.							
SUPERSTRUCTURE (PARAPETS)													
ER501			12	15–5	193	ST.							
ER502			228	15–2	3607	ST.							
ER503			444	7–2	3319	ST.							
ER504			12	17–3	216	ST.							
ER505			1068	8–0	8911	18	0–8	3–4					
ER506			8	9–6	79	24	4–4	4–8	0–9				
ER507			8	6–11	58	25	0–6	1–8	4–5	0–9			
ER508			16	4–3	71	5	2–0	0–6 1/2				0–3 1/4	
EL501			16	3–0	50	2	2–1	0–7	0–7				
EL502			16	8–10	147	2	2–1	3–6	3–6				
EL503			24	8–0	200	10	1–4	2–1	0–6	12			
EL504			16	3–6	58	ST.							
				TOTAL	16,909	LBS.							
PIERS													
EP501			4	39–3	164	ST.							
EP502			224	12–2	2843	8	2–8	3–2					
EP503			185	4–5	852	2	2–8	1–0	1–0				
EP504			4	32–5	135	ST.							
EP505			16	29–10	498	ST.							
EP506			4	41–5	173	ST.							
EP507			4	37–3	155	ST.							
EP508			76	5–11	469	2	1–8	2–3	2–3				
EP509			4	5–7	23	2	1–4	2–3	2–3				
EP510			32	8–0	267	ST.							
EP511			32	3–4	111	2	2–2	0–8 1/2	0–8 1/2				
EP512			44	13–6	620	8	2–8	3–10					
EP801			6	45–6	729	2	38–11	3–6	3–6				
EP802			6	37–6	601	2	32–1	2–11	2–11				
EP803			24	34–11	2237	2	29–6	2–11	2–11				
EP804			6	46–6	745	2	41–1	2–11	2–11				
EP805			6	42–4	678	2	36–11	2–11	2–11				
EP901			6	39–3	801	ST.							
EP902			6	46–2	942	2	39–3	3–9	3–9				
EP903			6	32–5	661	ST.							
EP904			6	38–0	775	2	32–5	3–1	3–1				
EP905			24	29–10	2434	ST.							
EP906			24	35–5	2890	2	29–10	3–1	3–1				
EP907			6	41–5	845	ST.							
EP908			6	47–0	959	2	41–5	3–1	3–1				
EP909			6	37–3	760	ST.							
EP910			6	42–10	874	2	37–3	3–1	3–1				
EP1001			148	5–5	3450	1	3–9	2–0					
EP1101			84	5–5	2417	1	3–9	2–0					
				TOTAL	29,108	LBS.							

KORDA/NEMETH ENGINEERING, INC.
CONSULTING ENGINEERS
1650 WATERMARK DRIVE, SUITE 200
COLUMBUS, OHIO 43215-1094
TEL (614) 487-1650
FAX (614) 487-1666

DESIGNED DAT | DRAWN KAH | CHECKED JEM | REVISED

REVIEWED RWE | DATE 5/18/94 | STRUCTURE FILE NO. 2516144

REINFORCING STEEL LIST
BRIDGE NO. FRA-315-0194
OVER S.R. 315 AND OLENTANGY RIVER

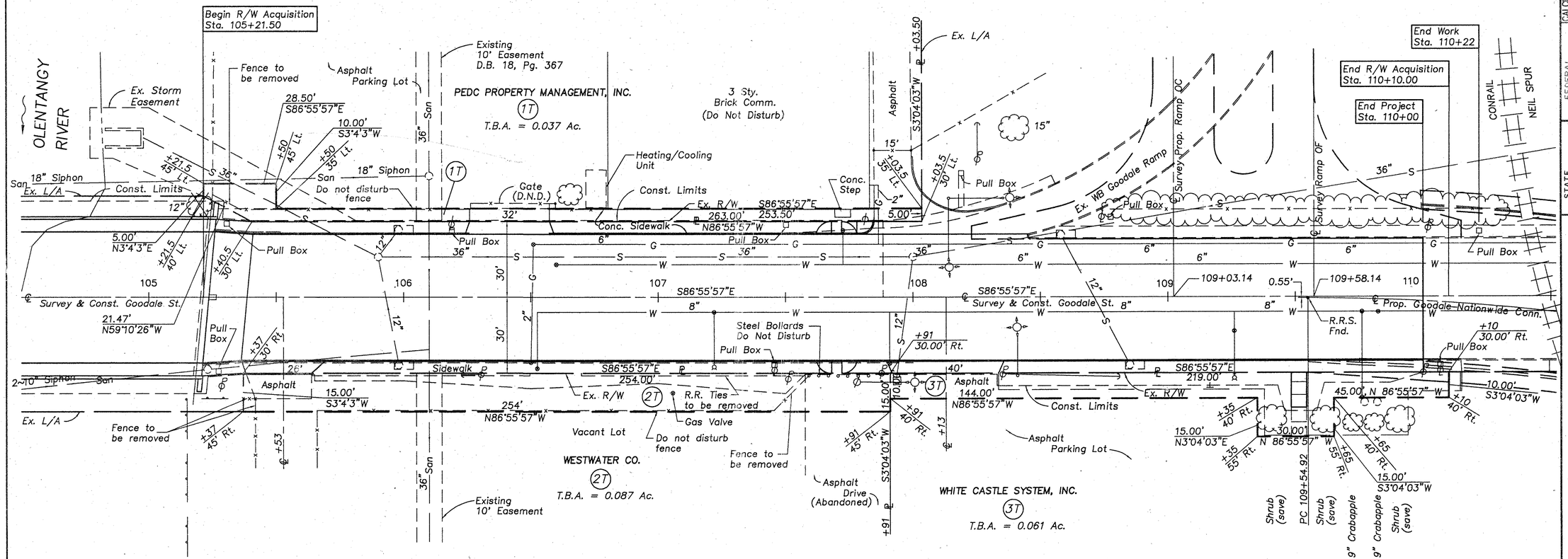
FRA-GOODALE STREET

25/25

72/73

FRA–GOODALE STREET

FRANKLIN COUNTY
CITY OF COLUMBUS



NOTE: Existing Right–of–Way Location and Width Determined from Existing Plans (FRA–3–15.28, 1957, Sheets 17 & 20).

P.I.D.: 12760

TOTAL NUMBER OF
3 OWNERSHIPS
0 TOTAL TAKES
0 OWNERSHIPS WITH STRUCTURES INVOLVED
0 OWNERSHIPS WITH "P" ITEMS

SUMMARY OF ADDITIONAL R/W REQUIRED

ALL AREAS IN ACRES UNLESS OTHERWISE NOTED

PARCEL	OWNER	SHEET NO.	OWNERS RECORD BOOK	OWNERS RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	PRO IN TAKE	NET TAKE	STRUC-TURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS AND PERSONALTY	AS ACQUIRED BOOK	AS ACQUIRED PAGE
1T	PEDC Property Management, Inc.		24044	J13	010–54045	4.244		0.037		0.037				LOCAL	TO CONSTRUCT N.E. WINGWALL AND SIDEWALK		
					010–77797												
					010–52736												
2T	Westwater Company		3355	194	010–24915	3.720		0.087		0.087				LOCAL	TO CONSTRUCT SIDEWALK AND GRADE		
3T	White Castle System, Inc.		8585	431	010–44700	10.664		0.061		0.061				LOCAL	TO CONSTRUCT SIDEWALK AND GRADE		

REV.	DATE	DESCRIPTION	BY
		Completion Date: 11-01-94	MDW
RDM	1-4-95	Added P.I.D., S.J.N. & F.P.N.	

KORDA / NEMETH ENGINEERING, INC.

N

SCALE IN FEET: 0 10 20 40

CALCULATED: JLL
CHECKED: MDW

FEDERAL PROJECT NO: BHF-94A(8)

STATE PROJECT NO: 06058(0)

RIGHT–OF–WAY
STA. 104+50 TO 110+50

FRA–GOODALE STREET