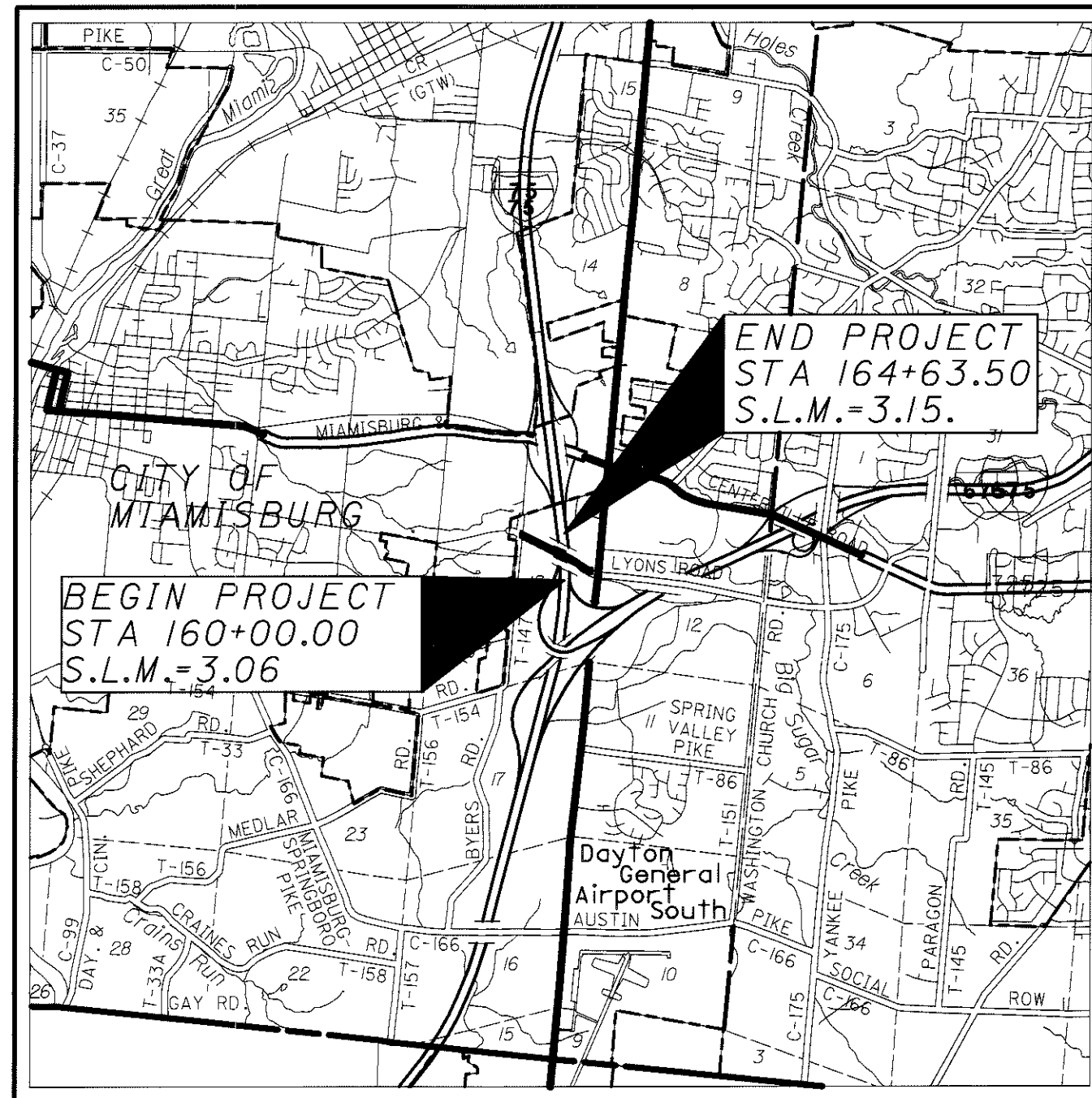


MOT - LR 75-3.06  
010541 PID - 13434  
Dist 7 12/12/2001



LOCATION MAP

LATITUDE: 39°37'35" N LONGITUDE: 84°13'10" W

SCALE IN MILES

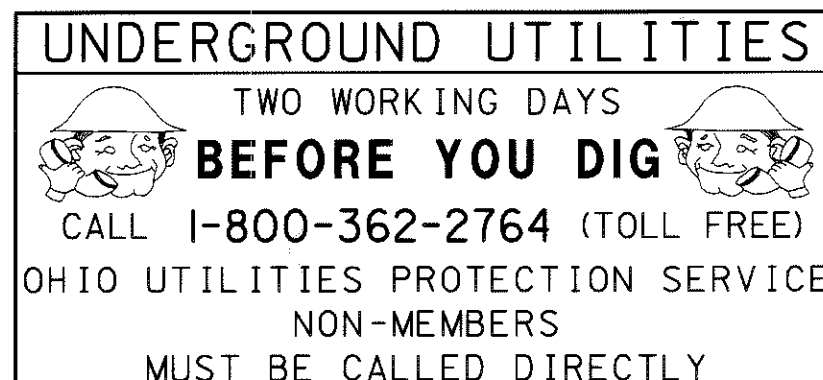


PORTION TO BE IMPROVED.....  
INTERSTATE & DIVIDED HIGHWAY.....  
UNDIVIDED STATE & FEDERAL ROUTES.....  
OTHER ROADS.....

### DESIGN DESIGNATION

CURRENT ADT (2001).....19,950  
DESIGN YEAR ADT (2021).....28,200  
DESIGN HOURLY VOLUME (2021).....2,820  
DIRECTIONAL DISTRIBUTION.....60 %  
TRUCKS (24 HOUR B&C).....2 %  
DESIGN SPEED.....45 MPH  
LEGAL SPEED.....45 MPH

DESIGN FUNCTIONAL CLASSIFICATION - URBAN ARTERIAL



PLAN PREPARED BY:  
**CH2MHILL**  
ONE DAYTON CENTRE, SUITE 1400  
ONE SOUTH MAIN STREET  
DAYTON, OHIO 45402-1828  
TEL: 937.228.4285  
FAX: 937.228.7572

ENGINEERS SEAL:



SIGNED: *[Signature]*  
DATE: 9-29-00

# STATE OF OHIO DEPARTMENT OF TRANSPORTATION

## MOT-75-3.06

### MIAMI TOWNSHIP MONTGOMERY COUNTY

#### INDEX OF SHEETS:

TITLE SHEET . . . . .	1	MISC. DRIVE PROFILES . . . . .	37
SCHEMATIC PLAN . . . . .	2	INTERSECTION DETAIL . . . . .	38
TYPICAL SECTIONS . . . . .	3-7	SUPERELEVATION TABLE . . . . .	39
GENERAL NOTES . . . . .	8-9	CULVERT DETAILS . . . . .	40-41
MAINTENANCE OF TRAFFIC . . . . .	10-12	STORM SEWER PROFILES. . . . .	42
GENERAL SUMMARY . . . . .	13-15	GRADING DETAIL . . . . .	43
SUBSUMMARIES . . . . .	16-18	TRAFFIC CONTROL PLANS . . . . .	44-47
CALCULATIONS . . . . .	19	SIGNAL PLAN . . . . .	48-50, 50A
STORM WATER POLLUTION PREVENTION PLAN . . . . .	20	STRUCTURES . . . . .	51-83
PLAN AND PROFILE . . . . .	21-25	RIGHT-OF-WAY PLANS . . . . .	84-90
CROSS SECTIONS . . . . .	26-36	SUBSURFACE INVESTIGATION	

#### DESIGN EXCEPTIONS

DESIGN FEATURE	APPROVAL DATES	SHEET
CURVE 3 - LYONS ROAD SUPER ELEVATION RATE		23
CURVE 4 - LYONS ROAD SUPERELEVATION RATE		23, 24
VERTICAL STOPPING SIGHT DISTANCE		23
GRADE BREAK		24
GRADED SHOULDER WIDTH		21-24

STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS	
BP-3.1	7-28-00		AS-1-81	9-15-94	TC-22.10M	3-13-97	
BP-4.1	7-28-00		BR-1	12-15-94	TC-22.20M	2-01-94	
BP-5.1	7-28-00	GR-1.1M	10-21-97	BS-1-93	12-19-94	TC-41.10M	3-31-94
BP-7.1	7-28-00	GR-1.2M	1-3-96	EXJ-4-87	2-14-97	TC-41.20M	7-1-94
		GR-1.3M	11-30-94	GSD-1-96	2-12-97	TC-41.41M	3-31-94
DM-1.1M	10-21-97	GR-2.1M	4-14-98	SICD-1-96	2-12-97	TC-42.10M	3-31-94
DM-1.2M	10-21-97	GR-3.1M	10-21-97	VPF-1-90	3-20-95	TC-42.20M	3-31-94
DM-2.1M	6-30-95	GR-4.2M	10-21-97			TC-52.10M	7-29-94
DM-4.3	4-29-99	GR-4.3M	10-21-97			TC-52.20M	7-29-94
DM-4.4	4-29-99	GR-5.1M	4-21-95	MT-35.10	1-30-95	TC-65.10M	11-1-95
		GR-5.2M	11-30-94	MT-35.11M	1-30-95	TC-65.11M	11-1-95
F-1.1	7-28-00	GR-5.3M	11-30-94	MT-95.30M	4-25-94	TC-65.12M	11-1-95
F-3.1	7-28-00	GR-6.1M	1-3-96	MT-99.10M	1-30-95	TC-71.10M	9-1-93
F-3.4	7-28-00	HL-30.11M	3-31-95	MT-99.20M	1-30-95	TC-81.10	5-01-00
		HL-30.21M	5-1-95	MT-101.60M	4-25-94	TC-82.10	1-19-99
HW-2.2M	7-12-95	HL-30.22M	3-31-95	MT-105.10M	4-25-94	TC-82.11	1-19-99
RM-4.3M	10-21-97	MH-1.2M	9-6-95	MT-105.11M	4-25-94	TC-84.20	5-01-00
CB-1.3M	7-12-95	RM-1.1	4-29-99			TC-85.10	5-01-00
		RM-4.2M	10-21-97	TC-21.20M	12-10-96	TC-85.20	5-01-00

SPECIAL PROVISIONS

#### PROJECT DESCRIPTION

REHABILITATION AND WIDENING OF LYONS ROAD AND STRUCTURE MOT-75-0306. IMPROVEMENTS INCLUDE: REHABILITATION OF MOT-75-0306 MODIFYING PROFILE AND ALIGNMENT, AND ADDING LANES ON APPROACH ROADWAY, UPGRADING TRAFFIC SIGNAL AT LYONS ROAD AND STATE ROUTE 741 TO ACCOMMODATE DUAL LEFT TURNS FROM STATE ROUTE 741 TO WESTBOUND LYONS ROAD. PROJECT LENGTH IS 0.5 mi INCLUDING BRIDGE.

#### LIMITED ACCESS

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

#### 1997 SPECIFICATIONS

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

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE CLOSING LYONS ROAD TO THROUGH TRAFFIC AND THAT DETOURS WILL BE AS INDICATED ON SHEET 10.

APPROVED *William F. Harrison* / *PSM*  
DATE 8-28-01 DISTRICT DEPUTY DIRECTOR

APPROVED *London Proctor* / *HL*  
DATE 10-12-01 DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO.  
TE21-G000 (575)

PID NO.  
13434

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT

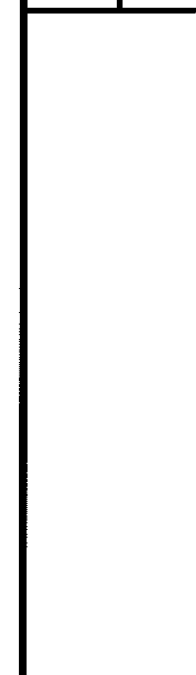
NONE

MOT-75-3.06

1  
90

HORIZONTAL  
SCALE IN FEET

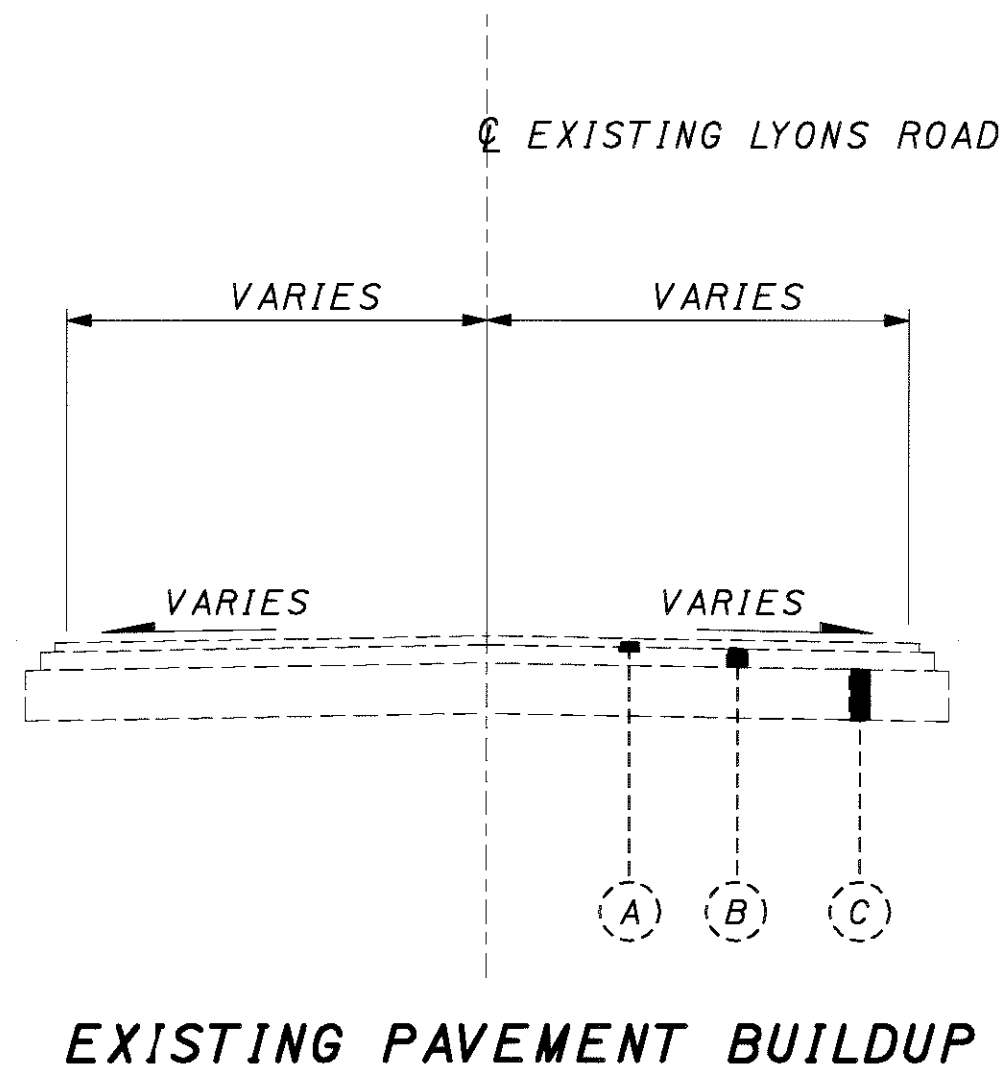
CALCULATED	CHECKED
YNY	MJH



## SCHEMATIC PLAN

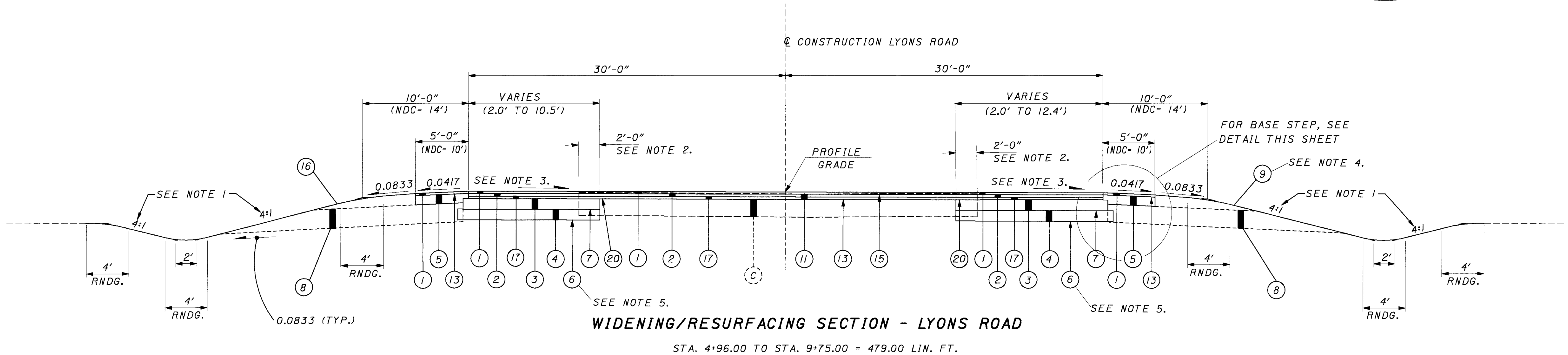
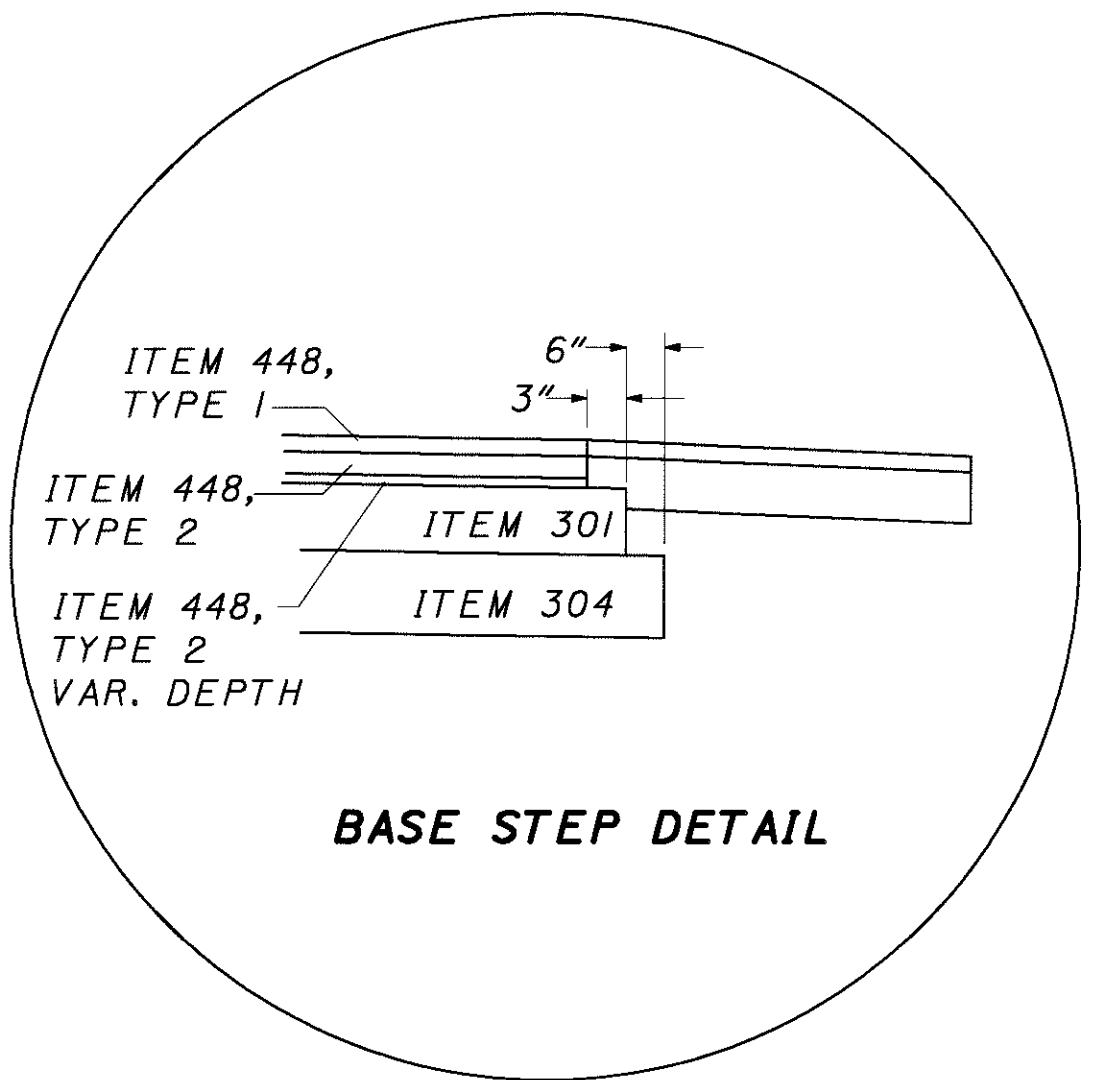
**MOT-75-3.06**

- NOTES:
1. UNLESS OTHERWISE SHOWN ON THE CROSS SECTIONS.
2. TRIM AND CUT EXISTING PAVEMENT EDGES, AS PER 203.04 (f). FOR ESTIMATING PURPOSES, AN AVERAGE WIDTH OF 2 FEET OF EXISTING PAVEMENT IS ASSUMED TO BE REPLACED.
3. SLOPE VARIES, SEE SUPERELEVATION TABLE, SHEET 39.
4. SEE CROSS SECTIONS FOR SODDING LIMITS.
5. PAYMENT FOR AREA LESS THAN 6 FEET SHALL BE AS PER 203.13(a).



EXISTING LEGEND

- (A) 1-1/4" ASPHALT CONCRETE AC-20
- (B) 1-3/4" ASPHALT CONCRETE AC-20
- (C) 10-1/2" BITUMINOUS AGGREGATE BASE

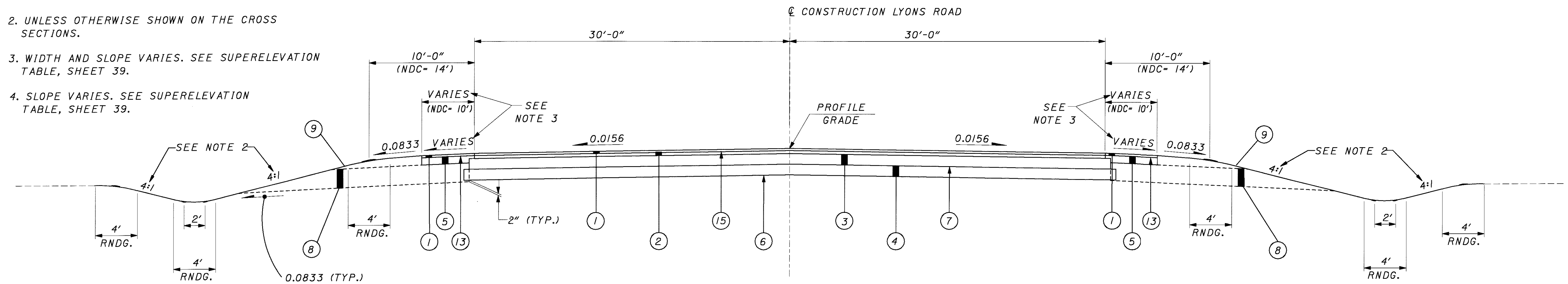


LEGEND

- |  |   |   |
|--|---|---|
| (1) ITEM 448 - 1-1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22       | (10) ITEM 830 - CURB, TYPE 6  | (19) ITEM 605 - PIPE UNDERDRAIN (SET DEPTH TO MATCH EXISTING)                       |
| (2) ITEM 448 - 1-3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22  | (11) ITEM 254 - PAVEMENT PLANING, BITUMINOUS (3" MAX.)                                | (20) ITEM 512 - TYPE 2 MEMBRANE WATERPROOFING, AS PER PLAN                          |
| (3) ITEM 301 - 6" BITUMINOUS AGGREGATE BASE, PG64-22                         | (12) ITEM 606 - GUARDRAIL, TYPE 5   | (21) ITEM 301 - VARIABLE DEPTH BITUMINOUS AGGREGATE BASE, PG64-22                   |
| (4) ITEM 304 - 6" AGGREGATE BASE   | (13) ITEM 407 - TACK COAT (SEE GENERAL NOTES)   | (22) ITEM 448 - 2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22 (DRIVEWAYS)     |
| (5) ITEM 301 - 4" BITUMINOUS AGGREGATE BASE, PG64-22                         | (14) ITEM 611 - REINFORCED CONCRETE APPROACH SLAB, T=15" AS PER PLAN                  | (23) ITEM 448 - 1-1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22 (DRIVEWAYS) |
| (6) ITEM 203 - SUBGRADE COMPACTION   | (15) ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE, (SEE GENERAL NOTES)                | (24) ITEM 448 - 1-3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22        |
| (7) ITEM 408 - BITUMINOUS PRIME COAT (APPLIED AT THE RATE OF 0.40 GAL./S.Y.) | (16) ITEM 870 - SEEDING AND MULCHING  | (25) ITEM 304 - 8" AGGREGATE BASE   |
| (8) ITEM 605 - AGGREGATE DRAINS  | (17) ITEM 448 - VARIABLE DEPTH, ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22 | (26) ITEM 601 - 18" ROCK CHANNEL PROTECTION, TYPE C WITH FABRIC FILTER              |
| (9) ITEM 660 - SODDING, UNSTAKED   | (18) ITEM 830 - COMBINATION CURB AND GUTTER, TYPE 2                                   | (27) ITEM 830 - CURB, TYPE 4-C  |

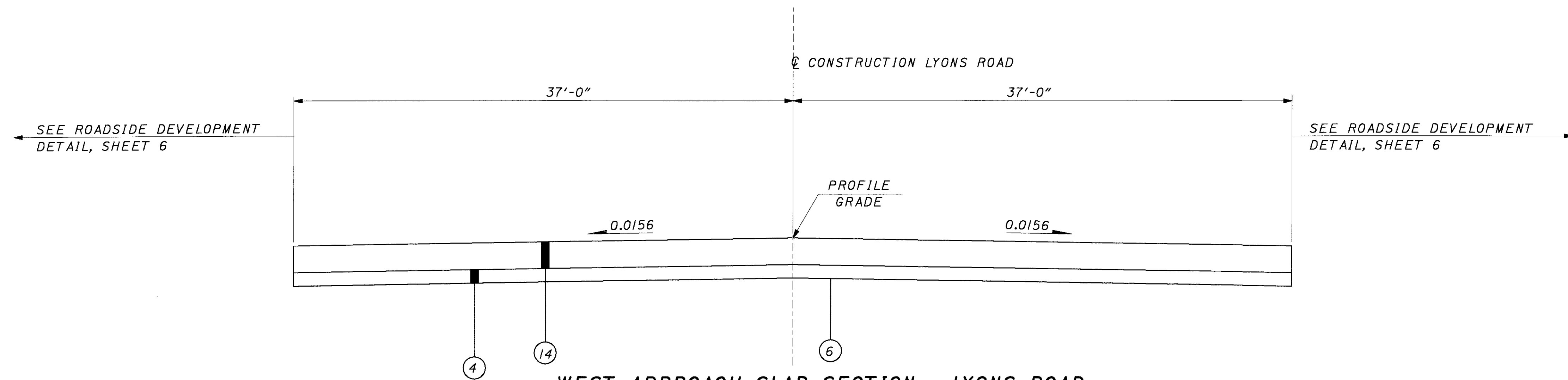


4. SLOPE VARIES. SEE SUPERELEVATION TABLE, SHEET 39.



*NORMAL SECTION - LYONS ROAD*

STA. 14+38.00 TO STA. 14+58.86 = 20.86 LIN. FT.

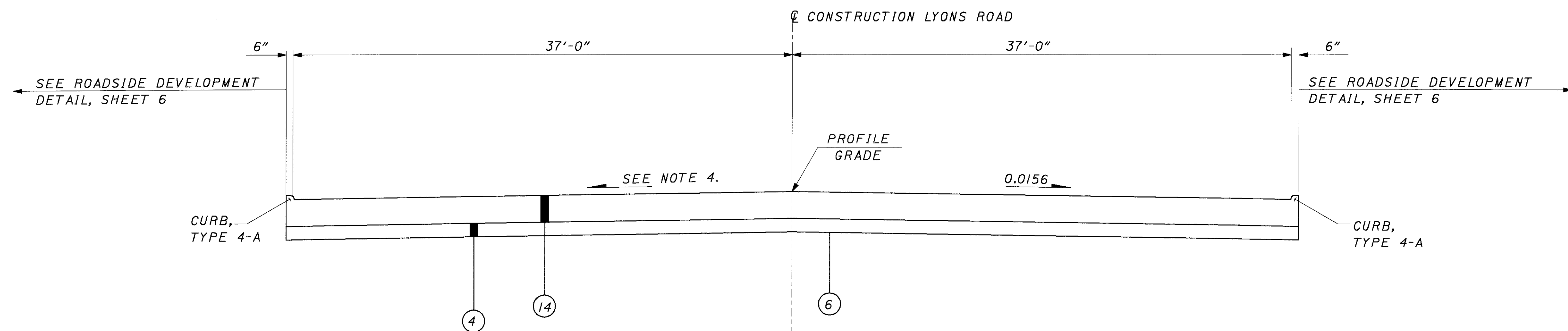


WEST APPROACH SLAB SECTION - LYONS ROAD

STA. 14+58.86 TO STA. 14+83.86 = 25.00 LIN. FT.

MOT-75-0306 BRIDGE LIMITS

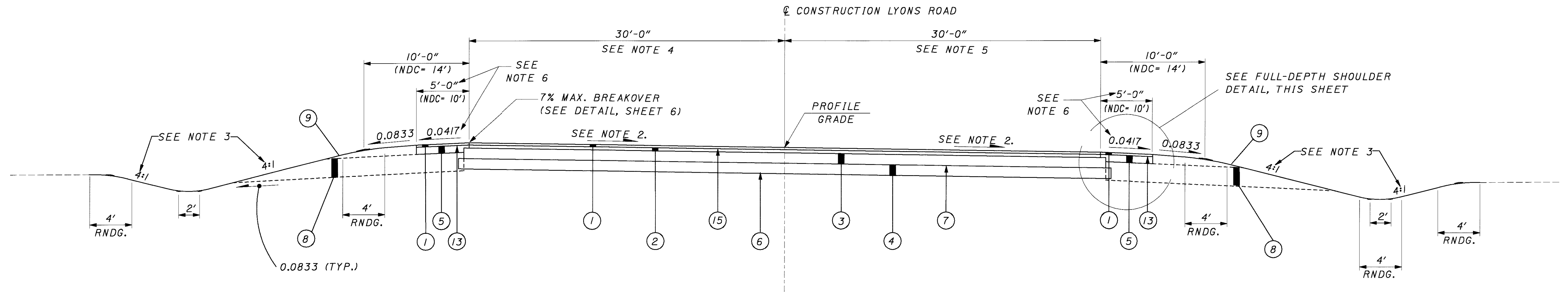
STA. 14+83.86 TO STA. 19+33.19 = 449.33 LIN. FT.



EAST APPROACH SLAB SECTION - LYONS ROAD

STA. 19+33.19 TO STA. 19+58.19 = 25.00 LIN. FT.



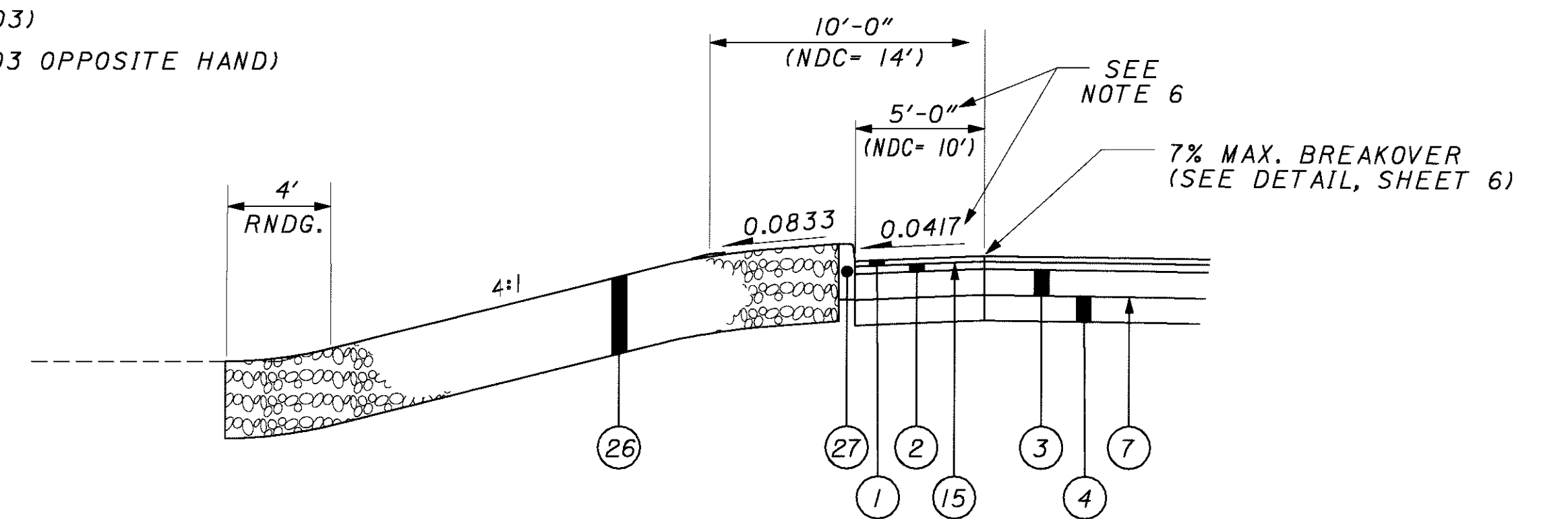


### SUPERELEVATED SECTION - LYONS ROAD

STA. 9+75.00 TO STA. 14+38.00 = 463.00 LIN. FT. ( $e_{max}=0.04$  OPPOSITE HAND)  
 STA. 19+58.19 TO STA. 24+31.00 = 472.81 LIN. FT. ( $e_{max}=0.03$ )  
 STA. 24+31.00 TO STA. 29+32.76 = 501.76 LIN. FT. ( $e_{max}=0.03$  OPPOSITE HAND)  
 TOTAL LENGTH = 1,437.57 LIN. FT.

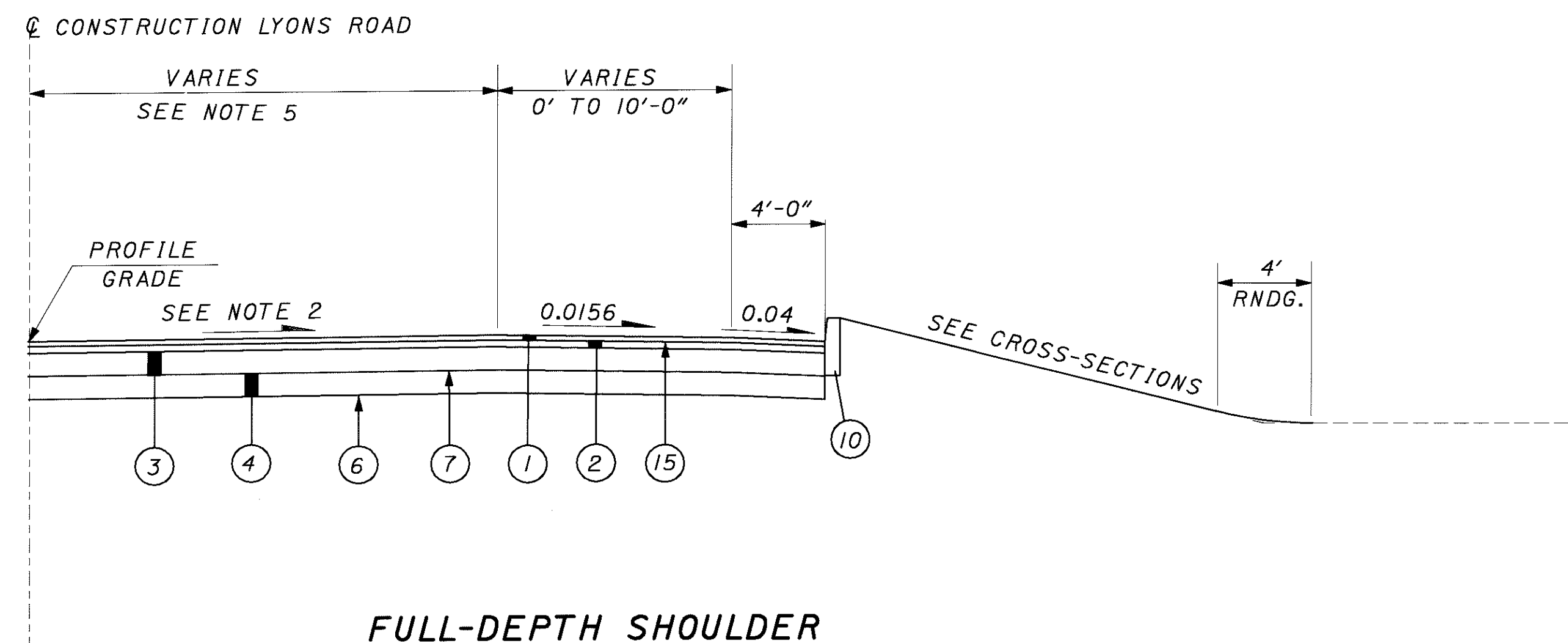
#### NOTES:

1. FOR LEGEND, SEE SHEET 3.
2. SLOPE VARIES, SEE SUPERELEVATION TABLES, SHEET 39, AND INTERSECTION DETAILS, SHEET 38.
3. UNLESS OTHERWISE SHOWN ON THE CROSS SECTIONS.
4. VARIES FROM 30' AT STA. 25+43.03 LT. TO 28.58' AT STA. 28+66.46 LT. SEE SUPERELEVATION TABLE, SHEET 39, AND INTERSECTION DETAILS, SHEET 38.
5. VARIES FROM 30' AT STA. 25+37.29 RT. TO 39.61' AT STA. 28+93.88 RT. SEE SUPERELEVATION TABLE SHEET 39, AND INTERSECTION DETAILS, SHEET 38.
6. WIDTH AND SLOPE VARIES. SEE SUPERELEVATION TABLE, SHEET 39.



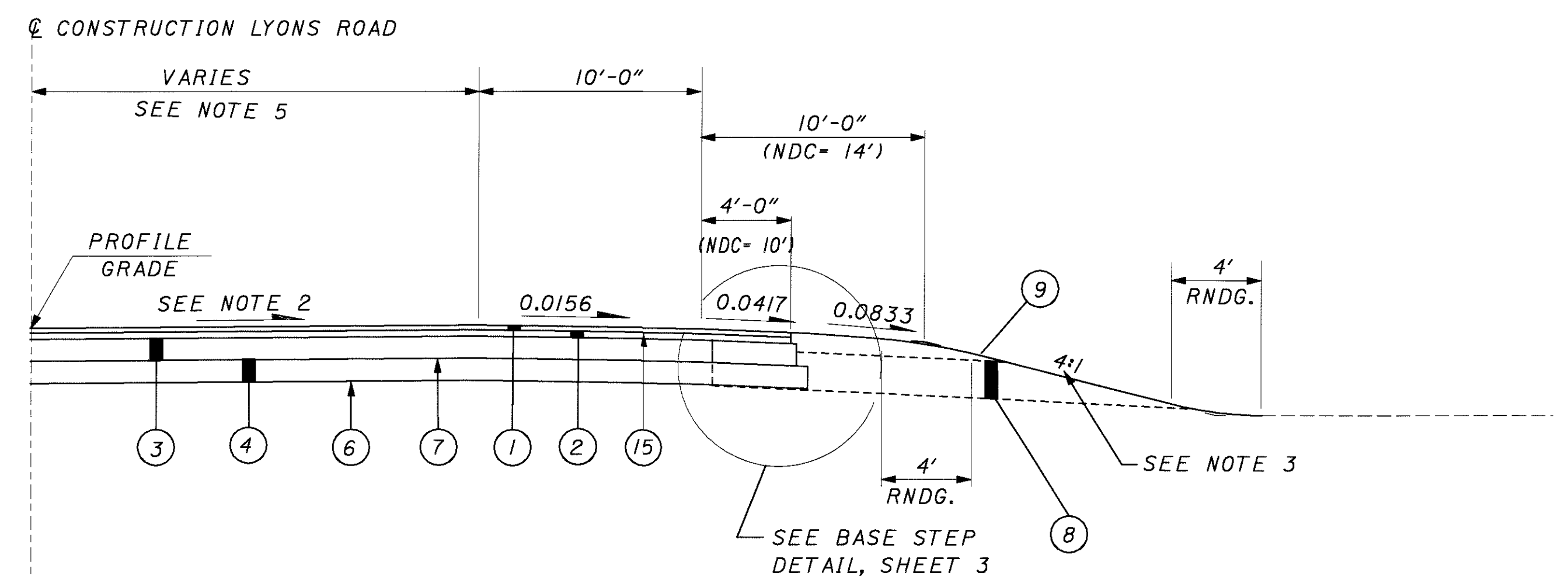
### FULL-DEPTH SHOULDER SECTION - WITH TYPE 4-C CURB LYONS ROAD

STA. 19+36.18 LT. TO STA. 19+53.18 LT. = 17 LIN. FT. ( $e_{max}=0.03$ )  
 STA. 19+79.01 RT. TO STA. 19+96.01 RT. = 17 LIN. FT. ( $e_{max}=0.03$ )  
 TOTAL LENGTH = 34.00 LIN. FT.



### FULL-DEPTH SHOULDER SECTION - WITH TYPE 6 CURB LYONS ROAD

STA. 26+13.68 RT. TO STA. 27+99.82 RT. = 185.94 LIN. FT. ( $e_{max}=0.03$ )



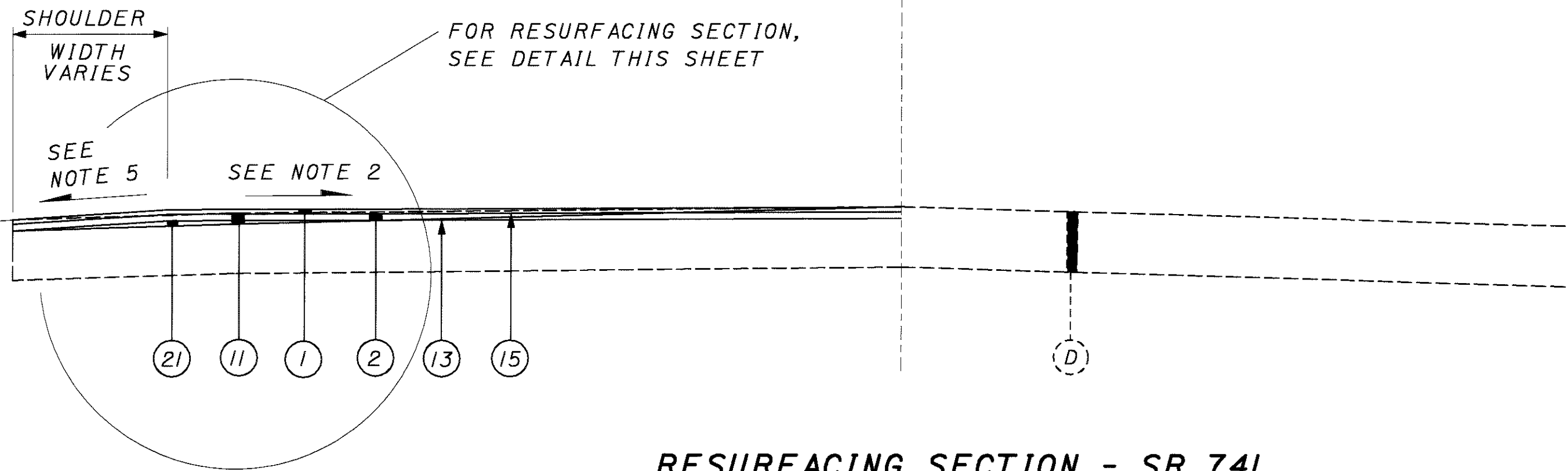
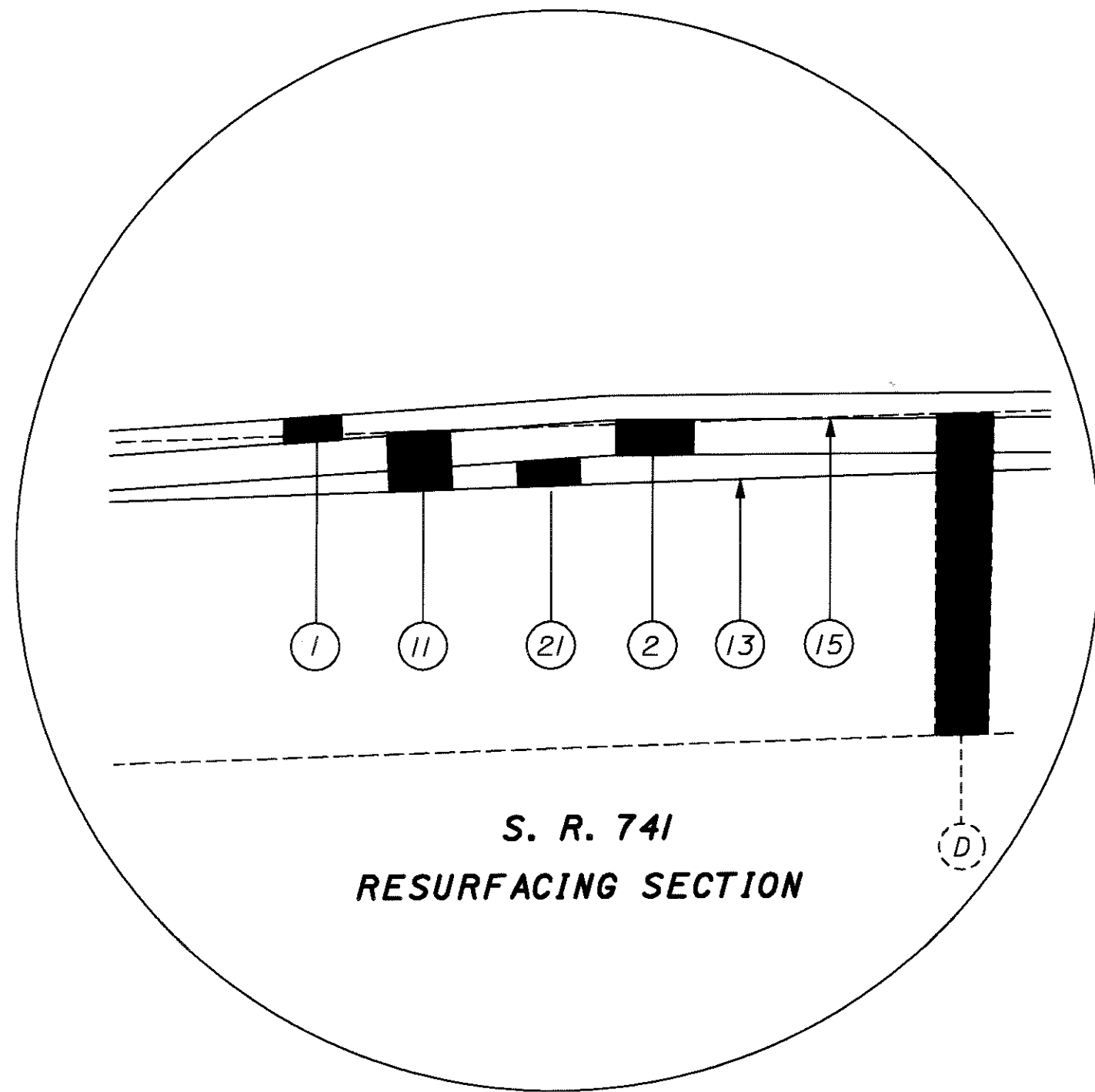
### FULL-DEPTH SHOULDER SECTION - LYONS ROAD

STA. 27+99.62 RT. TO STA. 29+32.76 RT. = 133.14 LIN. FT. ( $e_{max}=0.03$ )

OPPOSITE HAND ALSO, SEE CROSS-SECTIONS

NOTES:

1. FOR LEGEND, SEE SHEET 3.
2. SLOPE VARIES, SEE INTERSECTION DETAILS, SHEET 38.
3. REGRADE TO EXISTING TOE OF SLOPE.
4. 0.02 OR SLOPE TO DRAIN.
5. SLOPE TO MEET AT EXISTING EDGE OF SHOULDER.

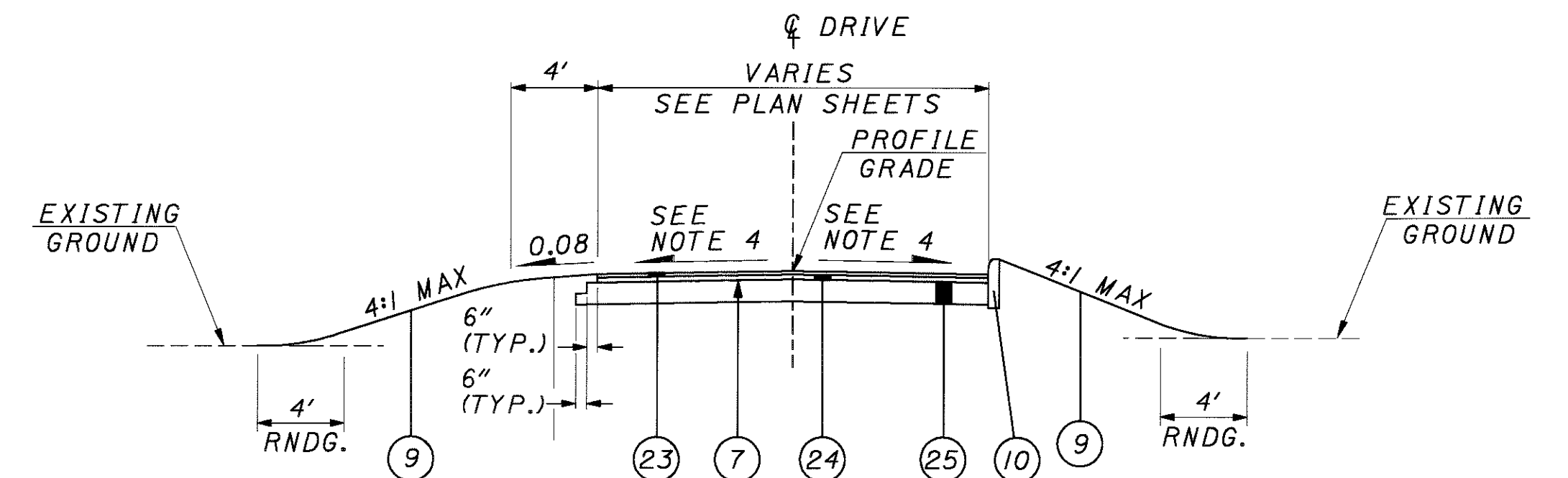


RESURFACING SECTION - SR 741

STA. 153+25.00 TO STA. 157+00.00 = 375.00 LIN. FT.

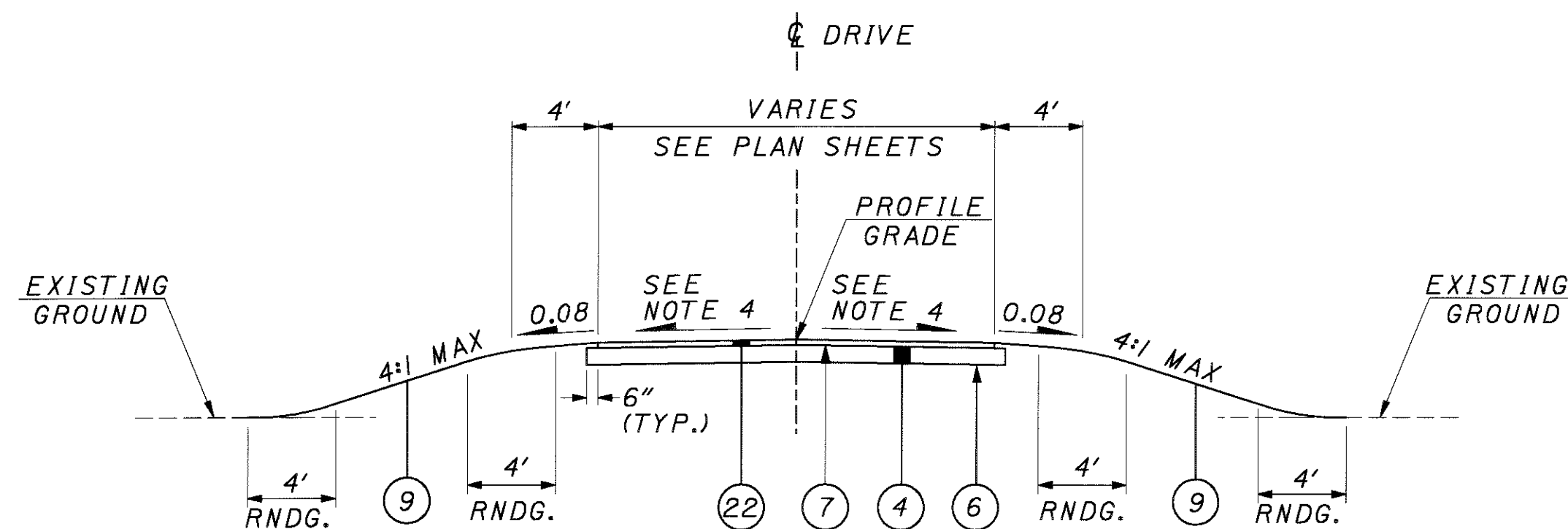
EXISTING LEGEND

- (D) 2-1/2" ASPHALT CONCRETE AC-20 ON 8" BITUMINOUS AGGREGATE BASE ON 6" BASE



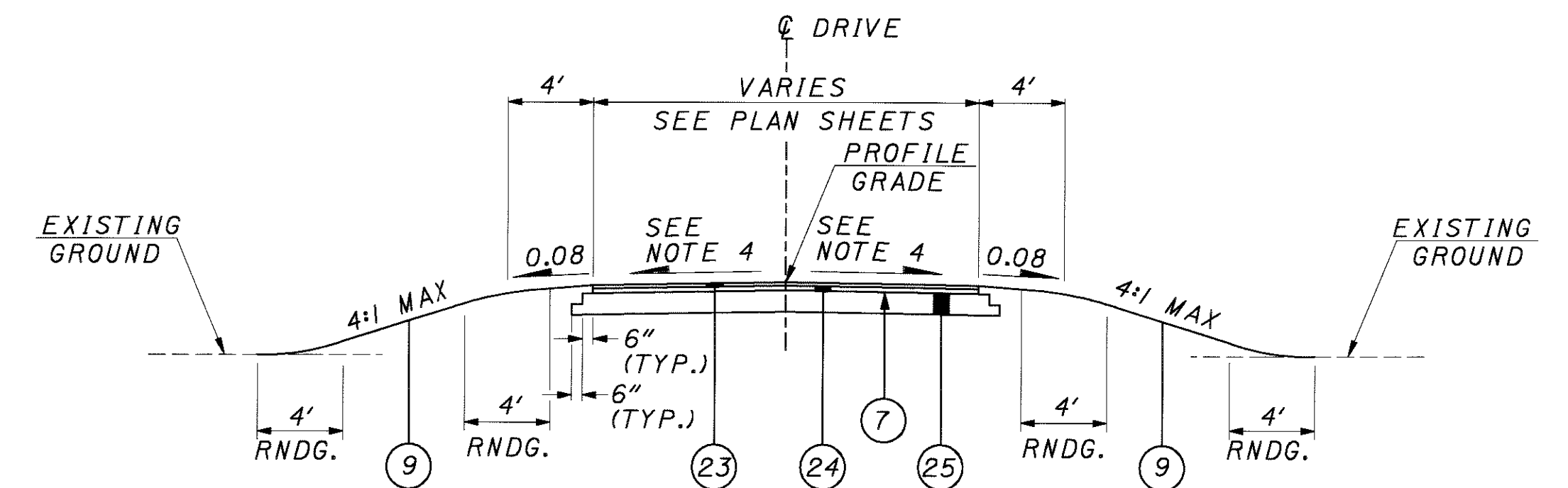
ASPHALT COMMERCIAL DRIVEWAY CURBED SECTION

LYONS ROAD - STA. 25+95.32 RT.



ASPHALT RESIDENTIAL DRIVEWAY SECTION

LYONS ROAD - STA. 9+40.73 RT.



ASPHALT COMMERCIAL DRIVEWAY UNCURBED SECTION

LYONS ROAD - STA. 23+92.84 RT.



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

TELEPHONE:	NATURAL GAS:
AMERITECH 3233 WOODMAN DR. RM 225 DAYTON, OH 45420 937-296-3644	DAYTON POWER & LIGHT 1900 DRYDEN RD. DAYTON, OH 45439 937-331-4129
ELECTRIC:	COMMUNICATION:
DAYTON POWER & LIGHT 1 SOUTH GEBHART RD. MIAMISBURG, OH 45439 937-331-3536	ICG NETCOM 130 WEST SECOND SUITE 1120 DAYTON, OH 45402 937-461-5012
CABLE:	WATER AND SANITARY SEWER:
MEDIA ONE 4333 DISPLAY LANE KETTERING, OH 45429 937-496-7000 EXT. 5153	MONTGONERY COUNTY SANITARY 4333 LAMME RD. DAYTON, OH 45429 937-496-7000
PIPELINE:	
BP OIL PIPELINE COMPANY 12716 TANK FARM RD. CYGNET, OH 43413 419-234-4105	

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 1563.64 O.R.C.

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.

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.

PART-WIDTH CONSTRUCTION

BECAUSE OF THE NECESSITY TO CONSTRUCT SR 741 UNDER TRAFFIC AND TO CONSTRUCT 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.I.

PROTECTION OF RIGHT-OF-WAY LANDSCAPING

THE CONTRACTOR SHALL CONSTRICT ALL OF HIS/HER ACTIVITIES, EQUIPMENT STORAGE, AND STAGING TO WITHIN THE CONSTRUCTION LIMITS. UNLESS OTHERWISE IDENTIFIED IN THE PLANS OR PROPOSAL, THE CONSTRUCTION LIMITS ARE IDENTIFIED AS SHOWN ON THE PLANS. SHOULD THE CONTRACTOR WISH TO USE ANY AREA OUTSIDE THESE LIMITS, A REQUEST IN WRITING MUST BE SUBMITTED TO THE PROJECT ENGINEER. THE DOCUMENT SUBMITTED MUST CLEARLY IDENTIFY THE AREA THAT THE CONTRACTOR PLANS TO USE AND EXPLAIN THE PROPOSED USE AND RESTORATION OF THE AREA. THE ENGINEER SHALL APPROVE THE REQUEST IN WRITING BEFORE THE CONTRACTOR HAS PERMISSION TO USE THE AREA. PRIOR TO BEGINNING WORK, THE CONTRACTOR, SUPERINTENDENT OR HIS REPRESENTATIVE, THE PROJECT ENGINEER, AND A REPRESENTATIVE OF THE MAINTAINING AGENCY SHALL REVIEW AND RECORD ALL LANDSCAPING ITEMS WITHIN THE RIGHT OF WAY (BOTH WITHIN AND OUTSIDE THE CONSTRUCTION LIMITS). A RECORD OF THIS REVIEW WILL BE KEPT IN THE PROJECT ENGINEER'S FILES. PRIOR TO FINAL ACCEPTANCE, A FINAL REVIEW OF LANDSCAPING ITEMS WILL BE MADE. ANY ITEMS DAMAGED BEYOND THE CONSTRUCTION LIMITS AS DEFINED ABOVE WILL BE REPLACED IN KIND OR AS DIRECTED BY THE PROJECT ENGINEER.

TEMPORARY SOIL EROSION AND SEDIMENT CONTROL

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE PLACED BY THE CONTRACTOR WITH THE ENGINEER'S CONCURRENCE FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES:

870, REPAIR SEEDING AND MULCHING	164 SQ. YDS.
870, INTERSEEDING	3271 SQ. YDS.
870, COMMERCIAL FERTILIZER	0.14 TONS
870, WATER	1.4 M. GALS.
877, TEMPORARY SEEDING AND MULCHING	654 SQ. YDS.
877, TEMPORARY PERIMETER FILTER FABRIC FENCE	1404 LIN. FT.
877, TEMPORARY DITCH CHECK FILTER FABRIC FENCE	60 LIN. FT.
877, TEMPORARY INLET PROTECTION FILTER FABRIC FENCE	15 LIN. FT.
877, SEDIMENT REMOVAL	100 CU. YDS.

ENDANGERED SPECIES HABITAT

TREES REMOVED FOR THIS PROJECT WHICH ARE LARGE ENOUGH TO QUALIFY FOR INDIANA BAT HABITAT MUST BE REMOVED BEFORE APRIL 15 OR AFTER SEPTEMBER 15 -- TO COMPLY WITH STANDARDS SET FOR ENDANGERED OR THREATENED SPECIES.

ANY TREES REMOVED FOR THIS PROJECT WHICH ARE 9" DBA OR GREATER MUST BE REMOVED WITHIN THE ABOVE SPECIFIED TIME FRAME.

NO CLEARING OR GRUBBING WILL BE PERMITTED OUTSIDE THE WORK LIMITS.

ITEM 407 - TACK COAT AND ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE

THE RATE OF APPLICATION OF THE 407 TACK COAT SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. FOR ESTIMATING PURPOSES ONLY, THE PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF:

407, TACK COAT 0.075 GAL PER SQ. YARD
407, TACK COAT FOR INTERMEDIATE COURSE 0.04 GALLONS PER SQ. YARD

MANHOLES, CATCH BASINS AND INLETS REMOVED OR ABANDONED

ALL CASTINGS SHALL BE CAREFULLY REMOVED AND STORED WITHIN THE RIGHT OF WAY FOR SALVAGE BY THE OHIO DEPARTMENT OF TRANSPORTATION AND MONTGOMERY COUNTY ENGINEERING.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 202 ITEM.

ITEM 605 - AGGREGATE DRAINS

AGGREGATE DRAINS SHALL BE PLACED AT 50'-0" INTERVALS ON EACH SIDE OF NORMAL CROWNED SECTIONS, STAGGERED SO THAT EACH DRAIN IS 25'-0" FROM THE ADJACENT DRAIN ON THE OPPOSITE SIDE, AND AT 25'-0" INTERVALS ON THE LOW SIDE ONLY OF SUPERELEVATED SECTIONS. AN AGGREGATE DRAIN SHALL BE PLACED AT THE LOW POINT OF EACH SAG VERTICAL CURVE.

ITEM 605 - AGGREGATE DRAIN 1300 LIN. FT.

CLEARING AND GRUBBING

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
15"	1	0	1
18"	1	0	1
60"	1	0	1

ITEM 203 EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION, AS PER PLAN

ANY EXISTING ROCK CHANNEL PROTECTION BETWEEN STA. 8+00 TO STA. 10+50 LT. SHALL BE STOCK PILED IN THE TEMPORARY EASEMENT AS DIRECTED BY THE ENGINEER. ALL COST SHALL BE INCLUDED IN ITEM 203 EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION, AS PER PLAN.

ITEM 607 - FENCE, TYPE CLT, AS PER PLAN AND ITEM 607 - FENCE, MISC.: TYPE CLT, TEMPORARY

ALL FENCE CONSTRUCTED ALONG THE HIERONYMUS AND 741 LAND COMPANY PROPERTY (PARCEL 5), BOTH PERMANENT AND TEMPORARY, SHALL BE AS PER EXISTING FENCE; 8'-0" HIGH, TOP RAIL, BOTTOM STRINGER, AND GREEN VINYL COATING ON THE FENCE FABRIC. ALL OTHER SPECIFICATIONS AND STANDARD DRAWING PROVISIONS SHALL APPLY. REQUIREMENTS FOR TEMPORARY FENCE SHALL BE THE SAME AS FOR PERMANENT FENCE EXCEPT THAT TESTING REQUIREMENTS SHALL BE WAIVED AND USED MATERIALS MAY BE UTILIZED. UPON COMPLETION OF ALL WORK CONTAINED WITHIN TEMPORARY FENCE, INCLUDING INSTALLATION OF PERMANENT FENCE, THE TEMPORARY FENCE SHALL BE REMOVED AND SHALL BECOME THE PROPERTY OF THE CONTRACTOR. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN THE TOTAL INTEGRITY OF THE FENCE AROUND THE HIERONYMUS AND 741 LAND COMPANY PROPERTY ADJACENT TO THE PROJECT CONTINUOUSLY THROUGHOUT ALL CONSTRUCTION OPERATIONS. PAYMENT SHALL BE MADE UNDER THE FOLLOWING ITEMS:

ITEM 607 - FENCE, TYPE CLT, AS PER PLAN	922 LIN. FT.
ITEM 607 - FENCE, TYPE CLT, TEMPORARY, AS PER PLAN	922 LIN. FT.
ITEM 607 - FENCE, TYPE CL	708 LIN. FT.

MEDIAN AND/OR CURBING ON APPROACH SLABS

THE SHAPE OF THE MEDIAN AND/OR 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.

FENCE LENGTHS

THE LENGTHS OF FENCE SHOWN IN THE PLANS ARE HORIZONTAL DIMENSIONS. MEASUREMENTS OF THE FINAL QUANTITIES SHALL BE MADE IN ACCORDANCE WITH ITEM 607.

METRIC STANDARD DRAWINGS

THE METRIC STANDARD DRAWINGS REFERENCED IN THIS PLAN SHALL BE CONVERTED TO ENGLISH UNITS USING THE SI (METRIC) TO ENGLISH CONVERSION FACTORS PROVIDED IN SECTION 109.011 OF THE 1997 CONSTRUCTION AND MATERIALS SPECIFICATIONS. THE APPENDIX OF ASTM E 380 SHALL BE UTILIZED FOR ANY ADDITIONAL CONVERSION FACTORS REQUIRED. CONVERSIONS SHALL BE APPROPRIATELY PRECISE AND SHALL REFLECT STANDARD INDUSTRY ENGLISH VALUES WHERE SUITABLE.

ITEM 203 EMBANKMENT, AS PER PLAN

ALL FILL MATERIAL FOR THE CONSTRUCTION OF THE APPROACH EMBANKMENT PLACED BETWEEN STATIONS 13+83.00 TO 20+34.00 AND FOR FILLING THE EXCAVATION VOID CREATED BY REMOVAL OF THE EXISTING ABUTMENTS, SHALL BE PLACED IN 6 INCH LIFTS.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR THIS PURPOSE:

ITEM 203 EMBANKMENT, AS PER PLAN	3277 CU. YDS.
----------------------------------	---------------

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 APPURTENANCE 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.

ITEM 202 REMOVAL MISC.; PARKING LOT LIGHTS

THE CONTRACTOR SHALL PROPERLY DISCONNECT THE EXISTING PARKING LOT LIGHTS. AFTER THE EXISTING PARKING LOT LIGHTS HAVE BEEN DISCONNECTED FROM THEIR POWER SOURCE THE CONTRACTOR SHALL CAREFULLY REMOVE THEM IN SUCH A MANNER AS TO NOT DAMAGE THE LIGHT POLES OR LUMINAIRES. THE CONTRACTOR SHALL STORE THE POLES AND LUMINAIRES IN AN AREA DESIGNATED BY THE ENGINEER.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID FOR EACH ITEM 202 REMOVAL MISC.; PARKING LOT LIGHT AND SHALL BE FULL COMPENSATION INCLUDING LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS REQUIRED TO COMPLETE THE WORK DESCRIBED ABOVE.

ITEM 870 - 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 870, SEEDING AND MULCHING, ARE BASED ON THESE LIMITS.

870, SEEDING AND MULCHING	3271	SQ. YDS.
870, SOIL ANALYSIS TEST	1	EACH
870, PLACING TOPSOIL	182	CU. YD.
870, COMMERCIAL FERTILIZER	0.29	TON
870, AGRICULTURAL LIME	1.35	TON
870, WATER	60	M GAL.

SEEDING AND MULCHING OF LAWNS

IN ADDITION TO "SEED BED AREAS IN FRONT OF RESIDENCES" REFERRED TO IN 870.J3, THE SPECIAL PREPARATION SHALL BE EXTENDED TO ENCOMPASS ALL LAWNS AND/OR LAWN-LIKE AREAS AS DETERMINED BY THE ENGINEER.

EROSION CONTROL

ITEMS 601 AND 660 ARE PROVIDED IN THE PLANS FOR EROSION CONTROL. ROCK OF A STABLE NATURE SHALL NOT BE REMOVED IN ORDER TO PLACE ANY OF THESE ITEMS AND TURF OF A STABLE NATURE SHALL NOT BE REMOVED IN ORDER TO PLACE 660. THE ENGINEER SHALL CHECK AND NON-PERFORM QUANTITIES OR ADJUST LOCATIONS AND QUANTITIES OF THESE ITEMS WHERE INDICATED BY FIELD CONDITIONS DURING CONSTRUCTION. IN ADDITION, THESE ITEMS SHALL MEET THE REQUIREMENT OF 108.04.

BENCHING OF FOUNDATION SLOPES

ALTHOUGH CROSS-SECTIONS INDICATE SPECIFIC DIMENSIONS FOR PROPOSED BENCHING OF THE EMBANKMENT FOUNDATIONS IN CERTAIN AREAS, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. ALL OTHER SLOPED EMBANKMENT AREAS SHALL BE BENCHED AS SET FORTH IN 203.09. NO ADDITIONAL PAYMENT WILL BE MADE FOR BENCHING REQUIRED UNDER THE PROVISIONS OF 203.09.

MONUMENTS

MONUMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAILS AS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS AND AT THE LOCATIONS SHOWN ON SHEET NO. 84. THE FOLLOWING QUANTITY FOR THIS ITEM HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 604, MONUMENT ASSEMBLY	8	EACH
-----------------------------	---	------

ITEM 203 - PROOF ROLLING

AN ESTIMATED QUANTITY FOR THIS ITEM HAS BEEN PROVIDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

ITEM 203 - PROOF ROLLING	5	HOURS
--------------------------	---	-------

ITEM 512 SPECIAL - WATERPROOFING, MISC.:  
TYPE 2 MEMBRANE WATERPROOFING

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NON-WOVEN, NEEDLE-PUNCHED POLYPROPYLENE FABRIC EMBEDDED IN A SELF-ADHESIVE, RUBBERIZED ASPHALT. THE NON-WOVEN FABRIC SHALL BE PRECOATED WITH ASPHALT CEMENT, AND SHALL COMPLY WITH THE FOLLOWING SPECIFICATIONS:

<u>PROPERTY</u>	<u>TEST METHODS</u>	<u>UNITS</u>	<u>PETROTAC 4591</u>		
PHYSICAL					
Grab Tensil	ASTM D4632	lbs.			200
Elongation	ASTM D4632	%			40
Strip Tensile	ASTM D882(modified)	lbs./in.			50
Puncture Resistance	ASTM E154	lbs.			200
Permeance-Perms	ASTM E96 method B	max.			0.10
Reliability-1/4 "Mandrel	ASTM D146(modified)	-			
80° blend at 25°F			No cracks in fabric or rubberized asphalt		
PACKAGING					
Roll Width		in.	18	24	36
Roll Length		ft.	108	108	45
Gross Weight		lbs.	65	88	57
Area		sq. yds.	18	24	15

ITEM 606 - ANCHOR ASSEMBLY, TYPE B-98

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING EITHER OF THE FOLLOWING GUARDRAIL END TERMINALS.

1) THE SRT-350, GUARDRAIL END TERMINAL AS MANUFACTURED BY SYRO INC., 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

THE LENGTH OF THE SRT-350 SYSTEM IS CONSIDERED TO BE 37'-6", INCLUSIVE OF THREE 12'-6" LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
SS444	SLOTTED RAIL TERMINAL POST LAYOUT AND ERECTION DETAILS SRT-350 (12.5, 8 POST)	7/12/99 Rev. 1	8/27/99
SS425M	SLOTTED RAIL TERMINAL SRT-350 POST LAYOUT AND ERECTION DETAILS (12.5, 9 POST)	6/21/97 Rev. 1	3/6/98

2) THE FLEAT-350 MANUFACTURED BY ROAD SYSTEMS, INC., 7631 NEW CASTLE DRIVE, FRANKFORT, IL 60423 (TELEPHONE: 815-464-5917).

THE LENGTH OF THE FLEAT-350 IS CONSIDERED TO BE 37'-6", INCLUSIVE OF THREE 12'-6" LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
FLT-M	FLARED ENERGY ABSORBING TERMINAL (FLEAT-350) ASSEMBLY	4/16/98	7/31/98

GRADING SHALL BE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING GR-4.3M.

THE FACE OF THE TYPE B-98 IMPACT HEAD SHALL BE COVERED WITH TYPE G REFLECTIVE SHEETING, PER CMS 730.19; APPROXIMATELY 36" W X 12" H FOR THE SRT-350 AND 14" W X 20" H FOR THE FLEAT.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, TYPE B-98, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING REFLECTIVE SHEETING AND ALL RELATED HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

STORM WATER POLLUTION PREVENTION PLAN

THE CONDITIONS OF THE NPDES CONSTRUCTION STORM WATER GENERAL PERMIT (SEE PROPOSAL) SHALL BE MET DURING ALL STAGES OF CONSTRUCTION. THE LOCATION AND TIMING OF ALL EROSION AND SEDIMENT CONTROL ITEMS SHALL BE FIELD ADJUSTED TO PREVENT SIGNIFICANT IMPACTS ON RECEIVING WATERS. IMPLEMENTATION OF THIS STORM WATER POLLUTION PREVENTION PLAN SHALL CONTINUE THROUGHOUT THE DURATION OF THE PROJECT OR UNTIL SUCH TIME THAT THE UPSLOPE DISTURBED AREAS ARE STABILIZED.

INSTALLATION OF SEDIMENT BASINS/DAMS, PERIMETER FILTER FABRIC FENCE, AND DITCH CHECKS SHALL BE CONCURRENT WITH CLEARING AND GRUBBING AND/OR GRADING OPERATIONS.

ALL REASONABLE ATTEMPTS SHOULD BE MADE TO MINIMIZE THE TOTAL AREA OF DISTURBED LAND.

AREAS TO REMAIN DORMANT FOR MORE THAN 45 DAYS SHOULD BE IMMEDIATELY STABILIZED WITH TEMPORARY SEEDING AND MULCHING, EROSION CONTROL MATTING OR OTHER APPROPRIATE EROSION CONTROL MEASURES.

ADDITIONAL QUANTITIES OF TEMPORARY SOIL EROSION AND SEDIMENT CONTROL ITEMS ARE GIVEN IN THE GENERAL NOTES.

WASTE AREAS

THE CONTRACTOR SHALL NOT BE PERMITTED TO USE THE EXISTING OR PROPOSED RIGHT-OF-WAY FOR WASTE DISPOSAL.

VALUE ENGINEERING CHANGE PROPOSAL NOTE

THE PROVISIONS OF THIS NOTE ARE MODIFIED AS FOLLOWS: FOR STRUCTURE MOT-75-0306, THE BRIDGE TYPES SHALL NOT BE CHANGED.

ITEM 606 - ANCHOR ASSEMBLY, TYPE E-98

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING EITHER OF THE FOLLOWING GUARDRAIL END TERMINALS.

1) THE ET-2000 (1997) MANUFACTURED BY SYRO, INC., 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

THE LENGTH OF THE ET-2000 (1997) SYSTEM IS CONSIDERED TO BE 50'-0", INCLUSIVE OF TWO 25'-0" LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
SS265	ET-2000 (1997) PLAN, ELEVATION AND SECTIONS	6/20/97	3/6/98

2) THE SKT-350 MANUFACTURED BY ROAD SYSTEMS, INC., 7631 NEW CASTLE DRIVE, FRANKFORT, IL 60423 (TELEPHONE: 815-464-5917).

THE LENGTH OF THE SKT-350 SYSTEM IS CONSIDERED TO BE 50'-0", INCLUSIVE OF FOUR 12'-6" LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
SKT-4M	SEQUENTIAL KINKING TERMINAL (SKT-350) ASSEMBLY WITH 4 FOUNDATION TUBES	12/11/97	3/6/98

THE FACE OF THE TYPE E-98 IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19, APPROXIMATELY 18" X 18".

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, TYPE E-98, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

CONTROL OF SPILLS

SPILLS OF FUELS, OILS, CHEMICALS OR OTHER MATERIALS WHICH COULD POSE A THREAT TO GROUNDWATER SHALL BE CLEANED UP IMMEDIATELY BY THE CONTRACTOR. IF THE SPILL IS A REPORTABLE AMOUNT AND IS LOCATED ON THE NORTH SIDE OF LYONS ROAD BETWEEN THE BRIDGE OVER IR 75 AND BYERS ROAD, THE CONTRACTOR SHOULD CONTACT THE CHIEF OF THE MIAMISBURG FIRE DEPARTMENT AT (937) 847-6652 FOR CLEAN UP OF THE SPILL. IF THE SPILL IS IN ANY OTHER AREA OF THE PROJECT, THE CONTRACTOR SHOULD CONTACT THE FIRE CHIEF OF MIAMI TOWNSHIP AT (937) 433-4242 FOR CLEAN UP OF THE SPILL. USE OF CHEMICALS AND REFUELING ACTIVITIES SHALL BE CAREFULLY CONTROLLED TO MINIMIZE THE POTENTIAL FOR SPILLS. THIS PROJECT IS LOCATED OVER A PORTION OF THE GREAT MIAMI RIVER/LITTLE MIAMI RIVER SOLE SOURCE AQUIFER AND THESE ACTIONS ARE NECESSARY TO PROTECT THE AQUIFER.



GENERAL REQUIREMENTS

IF THE CONTRACTOR SO ELECTS, HE MAY SUBMIT ALTERNATE METHODS FOR THE MAINTENANCE OF TRAFFIC, PROVIDED THE INTENT AND PROVISIONS HEREIN ARE FOLLOWED, AND NO ADDITIONAL INCONVENIENCE TO THE TRAVELING PUBLIC RESULTS THEREFROM. NO ALTERNATE PLAN SHALL BE PLACED INTO EFFECT UNTIL APPROVAL HAS BEEN GRANTED IN WRITING BY THE DIRECTOR.

THE PROJECT SHALL BE CONSTRUCTED USING STANDARD LANE CLOSURES, AND DETOURING THROUGH TRAFFIC ON LYONS ROAD AS SHOWN ON SHEET 12.

ACCESS TO ABUTTING PROPERTY OWNERS MUST BE MAINTAINED AT ALL TIMES IN ACCORDANCE WITH THESE NOTES AND PLAN SPECIFICATIONS. THE CONTRACTOR SHALL WORK WITH THE PROPERTY OWNERS TO MAINTAIN SPECIAL ACCESS PROVISIONS, AS OUTLINED BELOW:

- \* THE JACK WALKER DRIVEWAY NEAR STATION 26+00 MAY BE CLOSED TO CUSTOMER TRAFFIC DURING CONSTRUCTION. THE CONTRACTOR SHALL ARRANGE ACCESS TO THE DRIVEWAY FOR DELIVERY TRUCKS, AS REQUIRED BY THE OWNER.
- \* THE DRIVEWAY TO THE ODOT MAINTENANCE GARAGE NEAR STATION 24+00 MUST REMAIN OPEN FOR STATE VEHICLES. THE CONTRACTOR SHALL MAKE ARRANGEMENTS WITH THE OHIO DEPARTMENT OF TRANSPORTATION TO PROVIDE ACCESS TO THIS DRIVEWAY AT ALL TIMES DURING CONSTRUCTION.

TRAFFIC PATTERN CHANGES, TEMPORARY LANE CLOSURES (FOR CONSTRUCTION OPERATIONS NOT SPECIFICALLY COVERED IN THE PLAN), AND CONSTRUCTION OPERATIONS WHICH REQUIRE ONE-LANE, TWO-WAY OPERATIONS WILL NOT BE PERMITTED DURING RESTRICTED HOURS -- DEFINED AS 6:30 AM TO 9:30 AM AND 3:00 PM TO 6:00 PM MONDAY THROUGH FRIDAY.

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 FOR MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

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.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING, MAINTAINING, AND SUBSEQUENT REMOVAL OF ALL TEMPORARY ROADS AND PAVEMENT, SIGNS, BARRICADES, BARRIERS, AND LIGHTS USED FOR THE PURPOSES OF MAINTAINING TRAFFIC. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614 MAINTAINING TRAFFIC, AS PER PLAN, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

TRENCH FOR WIDENING

TRENCH EXCAVATION FOR BASE WIDENING SHALL BE ONLY ON ONE SIDE OF THE PAVEMENT AT A TIME. THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH DRUMS OR BARRICADES AT ALL TIMES. PLACEMENT OF PROPOSED SUBBASE AND BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND EXCAVATION OPERATIONS. THE LENGTH OF WIDENING TRENCH WHICH IS OPEN AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

FLOODLIGHTING

FLOODLIGHTING OF THE WORK SITE FOR OPERATIONS CONDUCTED DURING NIGHT TIME PERIODS SHALL BE ACCOMPLISHED SO THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE ROADWAY. TO ENSURE THE ADEQUACY OF THE FLOODLIGHT PLACEMENT, THE CONTRACTOR AND THE ENGINEER SHALL DRIVE THROUGH THE WORK SITE EACH NIGHT WHEN THE LIGHTING IS IN PLACE AND OPERATIVE PRIOR TO COMMENCING ANY WORK. IF GLARE IS DETECTED, THE LIGHT PLACEMENT AND SHIELDING SHALL BE ADJUSTED TO THE SATISFACTION OF THE ENGINEER BEFORE WORK PROCEEDS.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR MAINTAINING TRAFFIC.

CONTINGENCY QUANTITIES

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR THE MAINTENANCE OF TRAFFIC, DRIVEWAY ACCESS, AND DUST CONTROL.

ITEM 410 TRAFFIC COMPACTED SURFACE, TYPE A OR B	50 CU. YDS
ITEM 614 BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC	20 CU. YDS
ITEM 616 WATER	10 M. GALS
ITEM 616 CALCIUM CHLORIDE	1 TON

GUARDRAIL REPLACEMENT

NO HAZARD SHALL BE LEFT UNPROTECTED EXCEPT FOR THE ACTUAL TIME NECESSARY TO REMOVE THE EXISTING GUARDRAIL, PREPARE THE SITE, AND INSTALL NEW GUARDRAIL IN A CONTINUOUS OPERATION. THE REMOVAL OF ALL GUARDRAIL SHALL AT ALL TIMES BE AS DIRECTED BY THE ENGINEER. NO GUARDRAIL SHALL BE REMOVED UNTIL THE REPLACEMENT MATERIAL IS ON THE SITE, READY FOR INSTALLATION. FAILURE TO COMPLY WITH THIS REQUIREMENT SHALL BE DEEMED SUFFICIENT CAUSE TO ORDER WORK SUSPENDED UNTIL SUCH TIME AS THE ENGINEER IS ASSURED OF COMPLIANCE.

LAW ENFORCEMENT OFFICER

IN ADDITION TO THE REQUIREMENTS OF 614 AND 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 AND TEAR DOWN PERIODS;
- \* SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED; AND,
- \* DURING TRAFFIC SIGNAL INSTALLATION WORK WHICH REQUIRES A LANE CLOSURE.

LAW ENFORCEMENT OFFICERS (L.E.O.'S) ARE NOT REQUIRED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED. THE L.E.O.'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 THE STATE HIGHWAY PATROL OR MONTGOMERY COUNTY SHERIFF'S OFFICE.

LAW ENFORCEMENT OFFICERS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614 - 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	40 HOURS
---	----------

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

IF CONTRACTORS WISH TO UTILIZE L.E.O.S FOR FLAGGING AND TRAFFIC CONTROL OTHER THAN FOR THAT REQUIRED IN THESE PLANS, THEY MAY DO SO AT THEIR OWN EXPENSE. PAYMENT FOR THE EXCESS ABOVE THE CONTRACT REQUIREMENTS WILL BE INCLUDED UNDER ITEM 614 MAINTAINING TRAFFIC, AS PER PLAN.

INSTALLATION OF STRAIN POLE

INSTALLATION OF STRAIN POLE "B" SHALL BE CONDUCTED OUTSIDE RESTRICRED HOURS. THE SIGNAL MAY BE SHUT DOWN DURING THIS WORK, HOWEVER, A LAW ENFORCEMENT OFFICER MUST BE USED TO DIRECT TRAFFIC DURING THE OPERATION. TRAFFIC THROUGH THE INTERSECTION MUST BE STOPPED WHILE MESSENGER WIRE IS BEING REMOVED AND ATTACHED.

MAINTENANCE OF TRAFFIC  
GENERAL NOTES AND CONTINGENCY QUANTITIES

MOT-75-3.06



SHORT TERM CLOSURE NOTES:

THE CONTRACTOR IS RESTRICTED FROM PERFORMING ANY WORK OVER A LANE THAT IS OPEN TO TRAFFIC. THE ERECTION/REMOVAL OF BRIDGE STRUCTURAL STEEL SHALL BE PERFORMED AS FOLLOWS:

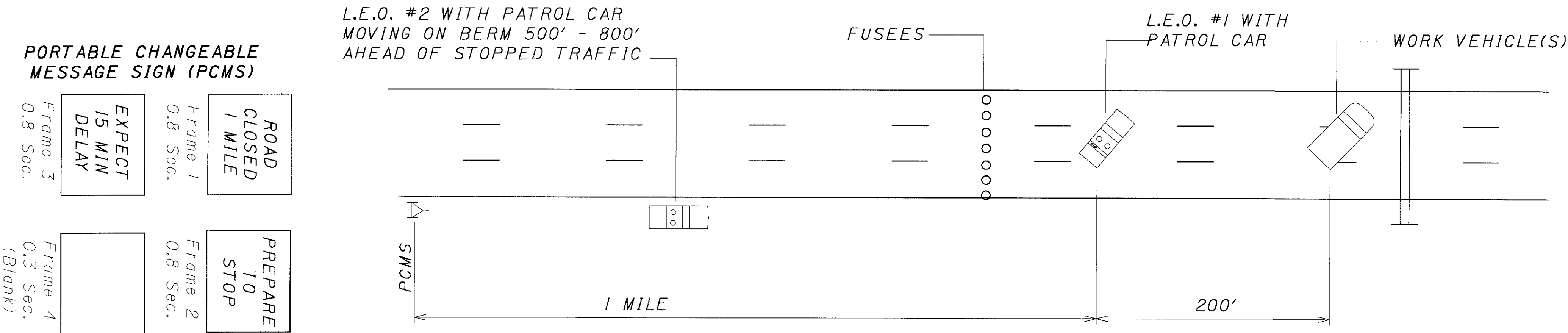
- A) ALL LANES OF TRAFFIC MAY BE CLOSED FOR A PERIOD NOT TO EXCEED 15 MINUTES. THE CLOSURE SHALL BE IN ACCORDANCE WITH THE DIAGRAM SHOWN ON THIS SHEET. SUCCESSIVE CLOSURES SHALL NOT OCCUR UNTIL THE PREVIOUS BACKUP HAS CLEARED THE SITE, AND NORMAL (FREE FLOW) TRAFFIC OPERATIONS HAVE BEEN RESTORED.
- B) SHORT TERM CLOSURES MAY TAKE PLACE ONLY BETWEEN THE HOURS OF 11:00 PM AND 5:00 AM SUNDAY THROUGH THURSDAY (THE DAY OF THE WEEK AT 11:00 PM).
- C) SHORT TERM CLOSURES SHALL NOT TAKE PLACE DURING EXTENDED WEEKENDS OF FEDERAL HOLIDAYS. THE DAYS OF THE EXTENDED WEEKENDS SHALL BE DETERMINED BY THE ENGINEER.
- D) BOTH L.E.O.'S SHALL STOP TRAFFIC BY TRAVELING SIDE BY SIDE AND COMING TO A STOP AT THE POINT OF CLOSURE. THE CONTRACTOR MAY PROVIDE SUPPLEMENTAL VEHICLE(S) EQUIPPED WITH A FLASHING YELLOW BEACON TO ASSIST THE L.E.O.'S ON WIDE SECTIONS OF ROADWAY. L.E.O. #1 SHALL BE RESPONSIBLE FOR PHYSICALLY CLOSING THE ROADWAY WITH THE PATROL CAR AND FUSEES.

- E) L.E.O. #2 SHALL BACK UP ALONG THE RIGHT BERM, STAYING APPROXIMATELY 500 TO 800 FEET AHEAD OF ANY STOPPED TRAFFIC. L.E.O. #2 SHALL BE VISIBLE TO APPROACHING TRAFFIC AT ALL TIMES.
- F) THE PORTABLE MESSAGE SIGN SHALL BE TURNED ON AT THE BEGINNING OF THE CLOSURE AND TURNED OFF AS SOON AS TRAFFIC IS MOVING NORMALLY.
- G) FOR A PERIOD OF SEVEN (7) CALENDAR DAYS BEFORE THE START OF ANY SHORT TERM CLOSURE, THE CONTRACTOR SHALL PLACE A PORTABLE CHANGEABLE MESSAGE SIGN NEAR THE POINT OF CLOSURE, FACING THE APPROPRIATE DIRECTION OF TRAVEL. THE PCMS SHALL BE PROGRAMMED AS SHOWN IN THE FOLLOWING DIAGRAM:

PORTABLE CHANGEABLE MESSAGE SIGN  
ADVANCED NOTICE OF CLOSURE

15 MIN FREEWAY CLOSURE	JUL 15 TO JUL 19
Frame 1 0.8 Sec.	Frame 2 0.8 Sec.
11:00 PM TO 5:00 AM	
Frame 3 0.8 Sec.	Frame 4 0.3 Sec. (Blank)

SHORT TERM TOTAL CLOSURE



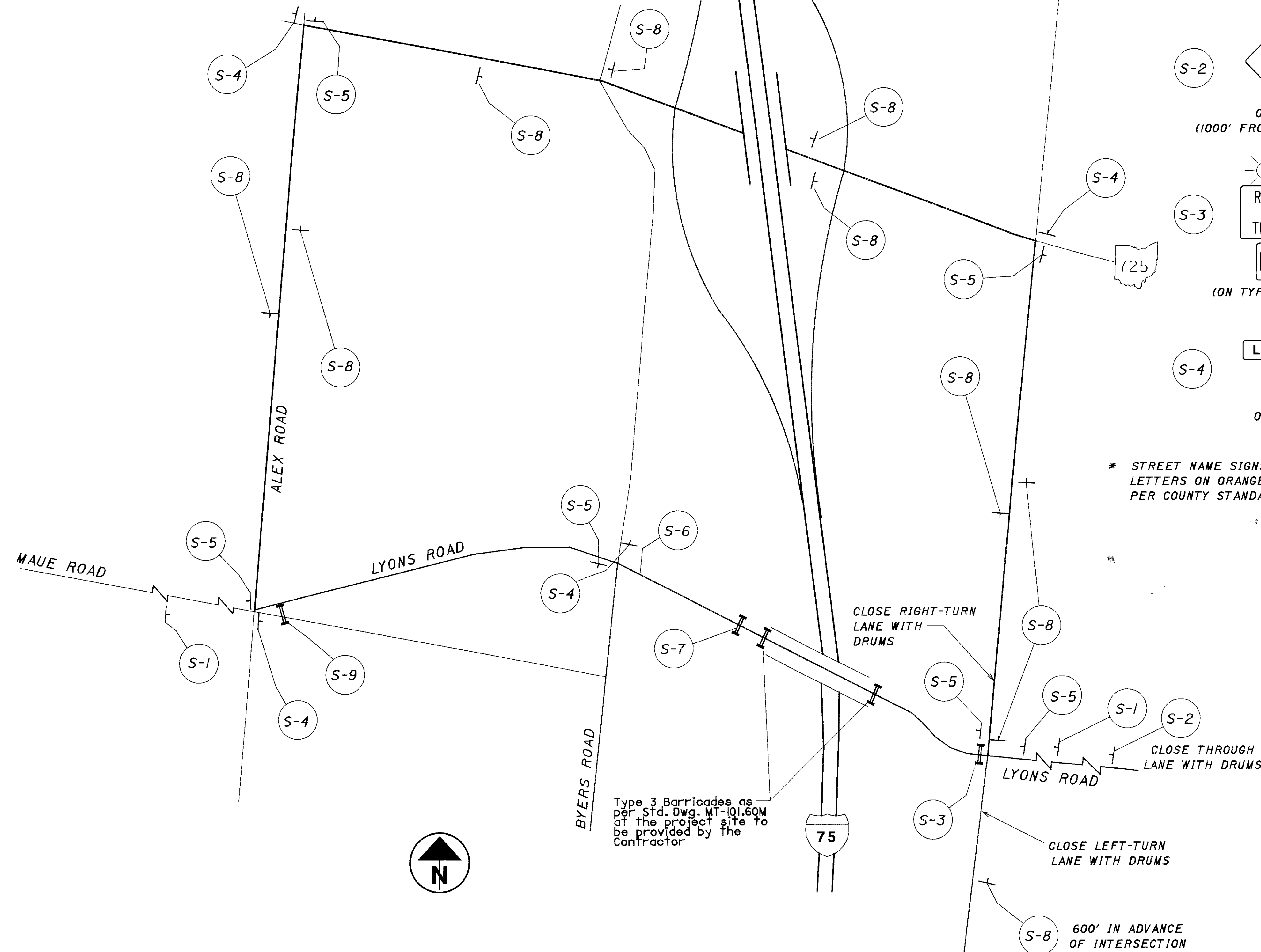
NOTES:

1) THE CONTRACTOR SHALL ERECT, MAINTAIN, AND REMOVE THE DETOUR. PAYMENT FOR ALL MATERIAL, LABOR AND EQUIPMENT TO PERFORM THIS WORK SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 MAINTAINING TRAFFIC, AS PER PLAN.

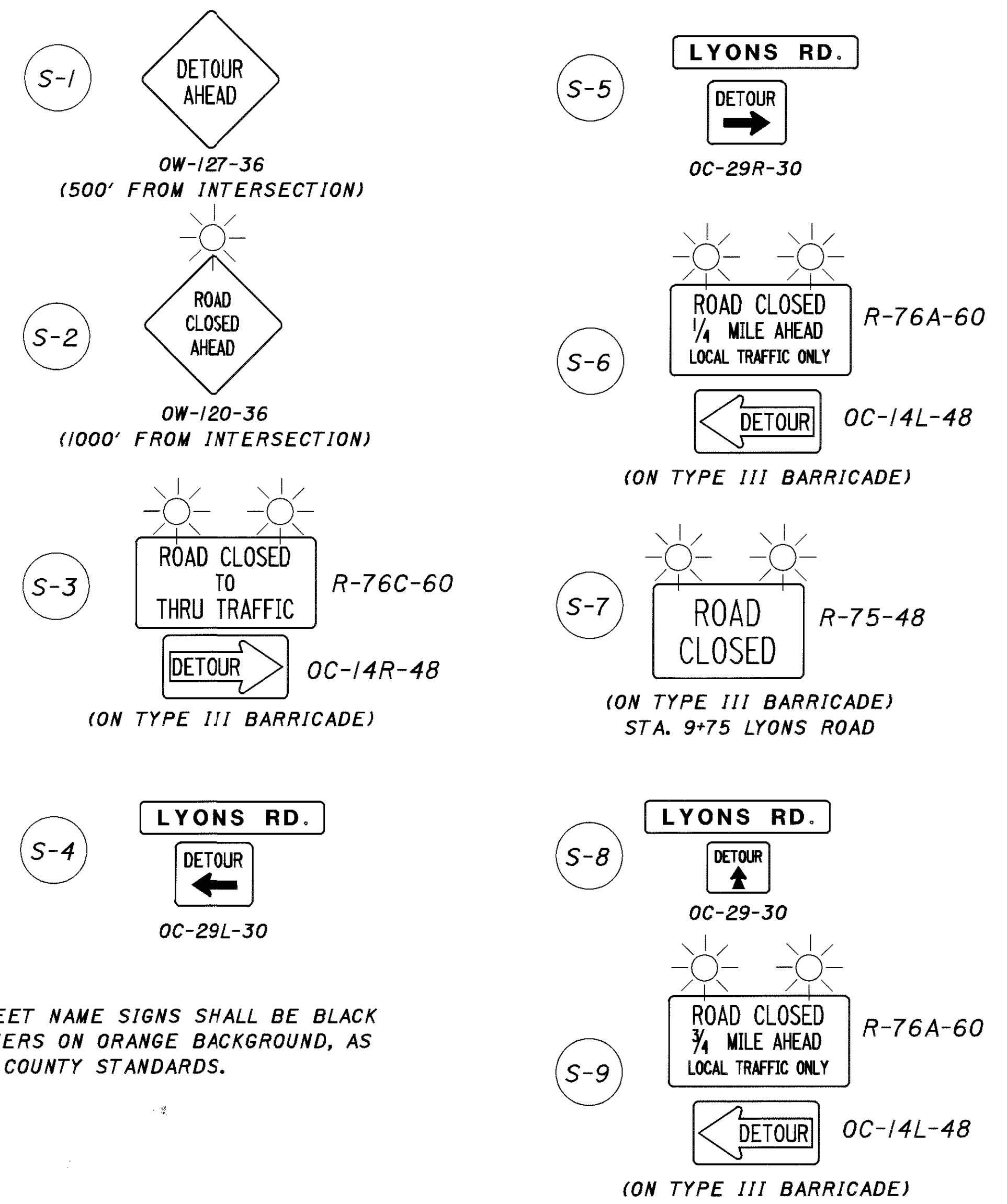
2) THE CONSTRUCTION OF LYONS ROAD SHALL BEGIN BETWEEN THE DATES OF MAY 1 TO MAY 15 AND MUST BE COMPLETED WITHIN 120 CALENDER DAYS FOLLOWING CLOSURE OF THE ROAD. SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED LIQUIDATED DAMAGES IN THE AMOUNT OF \$6000 PER DAY.

3) THE CONTRACTOR SHALL NOTIFY THE COUNTY ENGINEER'S ROADWAY SERVICE MANAGER TWO WEEKS PRIOR TO CLOSURE OF THE ROAD.

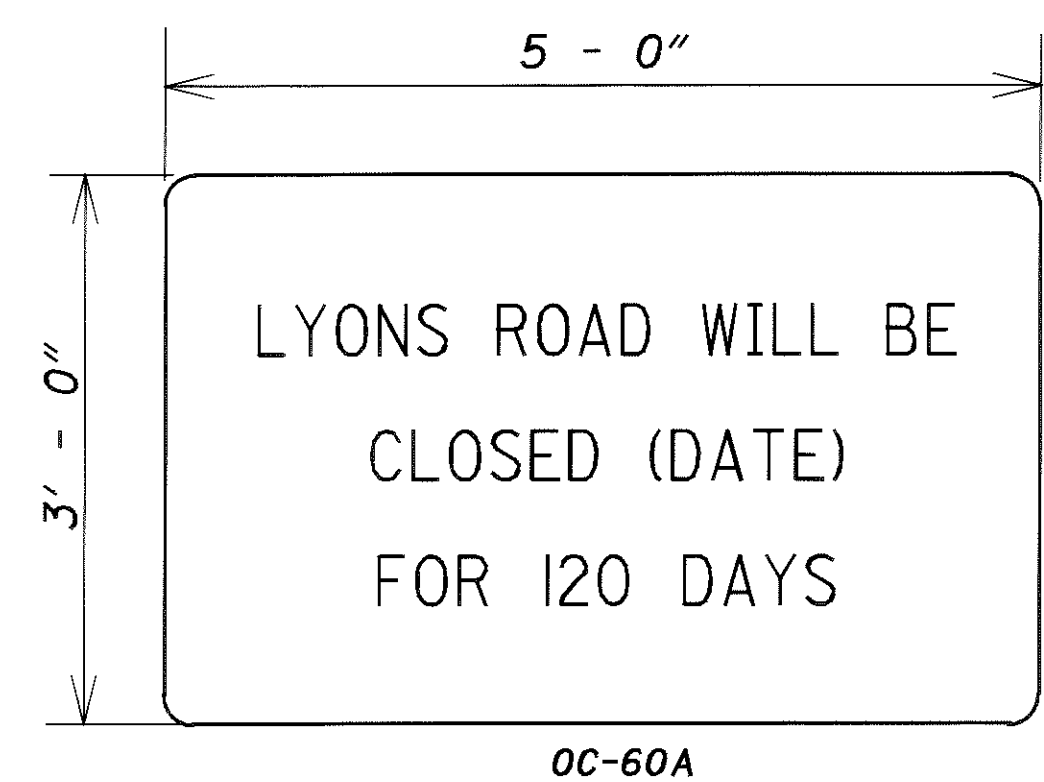
4) ALL OVERHEAD LANE USE SIGNS AND THE PORTION OF THE GROUND MOUNTED LANE USE SIGN THAT NO LONGER APPLY DUE TO LANE CLOSURES MUST BE COVERED. ALL MATERIAL, LABOR, AND EQUIPMENT TO PERFORM THIS WORK SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 - MAINTAINING TRAFFIC, AS PER PLAN.



Two red warning lights shall be mounted on top of Type III Barricades. One amber warning Light shall be mounted on top of each OW-120 Sign.



\* STREET NAME SIGNS SHALL BE BLACK LETTERS ON ORANGE BACKGROUND, AS PER COUNTY STANDARDS.



NOTICE OF CLOSURE SIGNS, AS DETAILED IN THESE PLANS, SHALL BE ERECTED BY THE CONTRACTOR AT LEAST ONE WEEK IN ADVANCE OF THE SCHEDULED ROAD CLOSURE. THE SIGNS SHALL BE ERECTED ON THE RIGHT HAND SIDE OF THE ROAD FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT THE POINT OF CLOSURE.

SHEET NUMBER																MPO/ LOCAL	100% ODOT	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.		
8	9		16	17	18	19	20		21	22	23	24		45											
												</													



SHEET NUMBER															MPO/ LOCAL	100% ODOT	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
8	9		17	18	19	20	25	44	45													
																					EROSION CONTROL (CONT.)	
654															654		877	10000	654	SQ. YARD	TEMPORARY SEEDING AND MULCHING	
1404						2807									3948	263	877	30100	4211	LIN. FEET	TEMPORARY PERIMETER FILTER FABRIC FENCE	
60						120									150	30	877	30200	180	LIN. FEET	TEMPORARY DITCH CHECK FILTER FABRIC FENCE	
15						30									45		877	30300	45	LIN. FEET	TEMPORARY INLET PROTECTION FILTER FABRIC FENCE	
						200									56	144	877	50000	200	CU.YARD	TEMPORARY SEDIMENT BASINS AND DAMS	
100															28	72	877	60000	100	CU. YARD	SEDIMENT REMOVAL	
																					DRAINAGE	
				119											8	111	601	11000	119	SQ. YARD	RIPRAP USING 6" REINFORCED CONCRETE SLAB	
				7.1											2.74	4.36	602	20000	7.1	CU. YARD	CONCRETE MASONRY	
				64											64		603	06100	64	LIN. FEET	15" CONDUIT, TYPE C, 706.02	
				213											139	74	603	20700	213	LIN. FEET	48" CONDUIT, TYPE A, 706.02	
				1											1		604	05700	1	EACH	CATCH BASIN, NO. 2-5	
				1												1	604	31500	1	EACH	MANHOLE, NO. 3	
				2											2		604	34500	2	EACH	MANHOLE, ADJUSTED TO GRADE	
			140												140		605	30000	140	LIN. FEET	SHALLOW UNDERDRAIN	
	1300														1300		605	31100	1300	LIN. FEET	AGGREGATE DRAIN	
																					PAVEMENT	
			4107												4107		254	01000	4107	SQ. YARD	PAVEMENT PLANNING, BITUMINOUS	
			2177				10								2086	101	301	46000	2187	CU. YARD	BITUMINOUS AGGREGATE BASE, P664-22	
			2012	123			10								1907	238	304	20000	2145	CU. YARD	AGGREGATE BASE	
			520												503	17	407	10000	520	GALLON	TACK COAT	
			618				2								599	21	407	14000	620	GALLON	TACK COAT FOR INTERMEDIATE COURSE	
			4539	252											4601	190	408	10000	4791	GALLON	BITUMINOUS PRIME COAT	
			753	15			3								745	26	448	46050	771	CU. YARD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, P664-22	
			607	29			2								616	22	448	47020	638	CU. YARD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, P664-22	
			958												958		512	67300	958	LIN. FEET	SPECIAL - WATERPROOFING MISC.: TYPE 2 MEMBRANE	9
																					WATERPROOFING	
			411													411	611	25001	411	SQ. YARD	REINFORCED CONCRETE APPROACH SLAB (T-15"), AS PER PLAN	
			140												140		830	12000	140	LIN. FEET	COMBINATION CURB AND GUTTER, TYPE 2	
			34													34	830	24510	34	LIN. FEET	CURB, TYPE 4C	
															235	50	830	26000	285	LIN. FEET	CURB, TYPE 6	
									55						55		621	00100	55	EACH	RAISED PAVEMENT MARKER	
					36										10	26	626	00100	36	EACH	BARRIER REFLECTOR, TYPE A	
					12											12	626	00200	12	EACH	BARRIER REFLECTOR, TYPE B	
								250.5							250.0		630	03100	250.5	LIN. FEET	GROUND MOUNTED SUPPORT, NO. 3 POST	
								38.0								38.0	630	07600	38.0	LIN. FEET	GROUND MOUNTED SUPPORT, W10 x 12 BEAM	
								2							2		630	09000	2	EACH	BREAKAWAY BEAM CONNECTION	
								92.5							92.5		630	80102	92.5	SQ. FEET	SIGN, FLAT SHEET, TYPE G	
								2							2		630	84500	2	EACH	GROUND MOUNTED BEAM SUPPORT FOUNDATION	
								17							15	2	630	85000	17	EACH	REMOVAL OF GROUND MOUNTED SIGN AND STORAGE	

GENERAL SUMMARY

MOT-75-3.06

SHEET NUMBER															MPO/ LOCAL	100% ODOT	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	GENERAL SUMMARY																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
10		44	45			50																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													

GENERAL SUMMARY

MOT-75-3.06

CALCULATED  
M.J.H.  
CHECKED  
Y.N.Y.

REF NO.	SHEET NO.	STATION		SIDE	202													606						608	622	638				
					PAVEMENT REMOVED	WALK REMOVED	TRAFFIC ISLAND REMOVED	CURB AND GUTTER REMOVED	GUTTER REMOVED		GUARDRAIL REMOVED			MONUMENT ASSEMBLY REMOVED	FENCE REMOVED	REMOVAL, MISC.: PARKING LOT LIGHT			GUARDRAIL, TYPE 5	ANCHOR ASSEMBLY, TYPE B-98	ANCHOR ASSEMBLY, TYPE E-98		ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY, TYPE I		CURB RAMP, DESIGN D	CONCRETE BARRIER, TYPE D	FIRE HYDRANT ADJUSTED TO GRADE		
		FROM	TO		SQ. YD.	SQ. FT.	SQ. YD.	LIN. FT.	SQ. YD.		LIN. FT.			EACH	LIN. FT.	EACH			LIN. FT.	EACH	EACH		EACH	EACH		SQ. FT.	LIN. FT.	EACH		
		LYONS ROAD																												
R-1	21	4+97	6+18	RT.				54.4																						
R-2	↓	5+36.53		LT.								/																		
R-3		9+37.27		℄								/																		
R-4	↓	7+95	9+76	LT.					321																					
R-5	21, 22	5+50	14+70	LT.									1088.0																	
R-6	22	12+90	14+90	RT.							162.6																			
R-7	↓	12+96	14+40	LT.							289.5																			
R-8	↓	14+33	14+59	LT.					51																					
R-9		19+39.18	19+58.64	LT.& RT.								2																		
R-10	↓	19+21	19+27	LT.									87.0																	
R-11		22, 23	19+45	23+75	RT.								503.0																	
R-12	↓	19+58	23+43	RT.					259																					
R-13	↓	19+40	23+69	RT.							427.6																			
R-14		19+27	25+68	LT.							640.3																			
R-15	23	24+17	25+58	RT.	263.0																									
R-16	↓	25+33		RT.									/																	
R-17	↓	26+32		RT.									/																	
R-18		27+34		RT.									/																	
R-19	24	27+99		RT.									/																	
R-20	↓	28+66		RT.									/																	
R-21		30+17	31+37.48	LT.				139.6																						
R-22	↓	30+29	33+76	℄			297.2																							
R-24	23	24+65		RT.									/																	
GR-1	22	11+52.04	15+08.29	RT.													318.75	/				/								
GR-2	22	12+94.62	14+63.37	LT.													118.75		/			/								
GR-3	22, 23	19+08.76	23+58.03	LT.													418.75	/				/								
GR-4	22, 23	19+53.68	23+64.49	RT.													406.25			/	/									
W-1	22	13+40.90		LT.																										
SW-1	24	30+30.16	30+47.32	LT.		25.2																			35.7			/		
		SR 741																												
R-23	23	155+57.8	155+67.8	LT.				20.17																						
		I-75																												
R-1	25	160+36.61	161+41.55	RT.							106.6																			
R-2	↓	160+56.48	162+68.18	RT.							213.8																			
R-3		162+21.01	164+35.42	LT.							213.7																			
R-4		163+57.45	164+72.46	LT.							114.1																			
GR-1	↓	160+65.65	161+08.86	RT.													43.75	/				/								
GR-2		160+71.51	162+45.28	RT.													175	2												
GR-3		162+44.59	164+20.44	LT.													175	2												
GR-4		163+85.59	164+29.82	LT.													43.75	/				/								
B-1	↓	161+06.78	162+04.91	RT.																						99.25				
B-2		162+87.33	163+87.11	LT.																						99.25				
TOTALS (THIS SHEET)					263.0	25.2	297.2	214.17	631		2168.2			4	1678.0	6		1700	8	/		/	6		35.7	198.5	/			
TOTALS CARRIED TO GENERAL SUMMARY					263	25	297	214	631		2168			4	1678	6		1700	8	/		/	6		36	199	/			



STATION		SIDE	DISTANCE (D)	SHOULDER AREA	SURFACE AREA (A) (PLANIMETERED)	203	254	301				304		407	408	448				512	605	611	830				CALCULATED M/JH CHECKED YNY									
						⑥	⑪	BITUM. AGG. BASE				6" AGG. BASE		⑬	⑮	⑦	INT. COURSE		SURF. COURSE		⑳	㉑	㉒	⑱	㉔	⑩										
						203 SUBGRADE COMPACT. (SC)	PAVEMENT PLANING, BITUMINOUS (3" NOMINAL THICKNESS)	⑤	③	③	②	④	④				TACK COAT	TACK COAT FOR INT. COURSE  0.04(A) 9 OR 0.04(A+S) 9	BIT. PRIME COAT	1.75" INT. COURSE (TYPE 2)								VAR. DEPTH INT. COURSE (TYPE 2)	1.25" MAINLINE (TYPE 1)	1.25" SHOULDER (TYPE 1)	MEM. WATER- PROOFING	UNDER- DRAIN	APP. SLAB T=15"	TYPE 2 COMB. CURB AND GUTTER D	TYPE 4-C CURB D	TYPE 6 CURB D
						(A+S) 9																														
						SQ. YD.	SQ. YD.	CU. YD.	CU. YD.	CU. YD.	CU. YD.	CU. YD.	CU. YD.	GAL.	GAL.	GAL.	CU. YD.	CU. YD.	CU. YD.	CU. YD.	LIN. FT.	LIN. FT.	SQ. YD.	LIN. FT.	LIN. FT.	LIN. FT.										
FROM		TO																																		
LYONS ROAD																																				
MAINLINE																																				
PAVEMENT PLANING AND RESURF.																																				
STA. 4+96.0 STA. 9+75.0		℄	479.00	-	21491.15		2387.91						179.09	95.52		116.08	1.04	82.91																		
WIDENING & SHOULDERS																																				
STA. 4+96.0 STA. 9+75.0		LT	479.00	2395.00	3209.67	622.74		29.57	61.66			66.09	46.71	14.27	142.65	17.34	0.15	12.38	9.24	479.00																
STA. 4+96.0 STA. 9+75.0		RT	479.00	2395.00	4039.53	714.95		29.57	77.02			81.46	53.62	17.95	179.53	21.82	0.15	15.58	9.24	479.00																
NORMAL SECTION																																				
STA. 9+75.0 STA. 14+58.86		LT	483.86	2361.09	14179.97	1837.90		29.15	264.83			269.31	19.68	63.02	630.22	76.59		54.71	9.11																	
STA. 9+75.0 STA. 14+58.86		RT	483.86	2645.01	14848.88	1943.77		32.65	277.22			281.70	22.04	66.00	659.95	80.20		57.29	10.20																	
WEST APPROACH SLAB																																				
STA. 14+58.86 STA. 14+83.86		LT & RT	25.00	-	1850.00	205.56						34.26										205.56														
EAST APPROACH SLAB																																				
STA. 19+33.19 STA. 19+58.19		LT & RT	25.00	-	1849.99	205.55						34.26										205.55			25.0											
FULL DEPTH SHLDR. W/TYPE 4C CURB																																				
STA. 19+36.18 STA. 19+53.18		LT	17.00																					17.00												
STA. 19+79.01 STA. 19+96.01		RT	17.00																				17.00													
NORMAL SECTION																																				
STA. 19+58.19 STA. 29+32.76		LT	999.36	5146.11	29846.71	3888.09		63.53	557.34			566.60	42.88	132.65	1326.52	161.21		115.15	19.85																	
STA. 19+58.19 STA. 26+13.68		RT	634.16	3190.70	19360.12	2505.65		39.39	361.46			367.33	26.59	86.04	860.45	104.57		74.69	12.31						25.0											
FULL DEPTH SHLDR. W/TYPE 6 CURB																																				
STA. 26+13.68 STA. 28+00.0		RT	-	-	6700.21	744.47				124.08		124.08		29.78	297.79	36.19		25.85							215.01											
FULL DEPTH SHOULDER W/O CURB																																				
STA. 28+00.0 STA. 29+32.76		RT	-	-	6981.90	775.77			130.14			131.84		31.03	310.31	37.71		26.94																		
CURB REPLACEMENT																																				
STA. 30+12.63 STA. 31+37.48		LT	139.61	-	292.67					5.42		5.42		1.30	13.01	1.58		1.13			139.61		139.61													
MEDIAN REMOVAL																																				
STA. 30+26.97 STA. 33+78.51		℄	351.78	-	2674.91					49.54		49.54		11.89	118.88	14.45		10.32																		
SR 741																																				
PAVEMENT PLANING AND RESURF.																																				
STA. 153+25.00 STA. 155+78.60		LT	253.60	-	6321.65		702.41				19.95		52.68	28.10		34.14		24.39																		
PLANING AND RESURF. W/EX. CURB																																				
STA. 155+78.60 STA. 157+00.00		LT	121.40	-	9146.70		1016.30			24.21			76.22	40.65		49.40		35.29							20.17											
* QUANTITY CARRIED TO ROADWAY GENERAL SUMMARY, SHEET 13																																				
† QUANTITY CARRIED TO DRAINAGE GENERAL SUMMARY, SHEET 14																																				
TOTALS (THIS SHEET)						13444.43	4106.61	223.86	1729.68	179.03	44.16	1764.33	247.55	519.51	618.20	4539.31	751.28	1.34	536.63	69.96	958.00	139.61	411.11	139.61	34.00	285.18										
TOTALS CARRIED TO PAVEMENT GENERAL SUMMARY						13444*	4107	2177				2012		520	618	4539	753		607		958	140†	411	140	34	285										

PAVEMENT SUB-SUMMARY

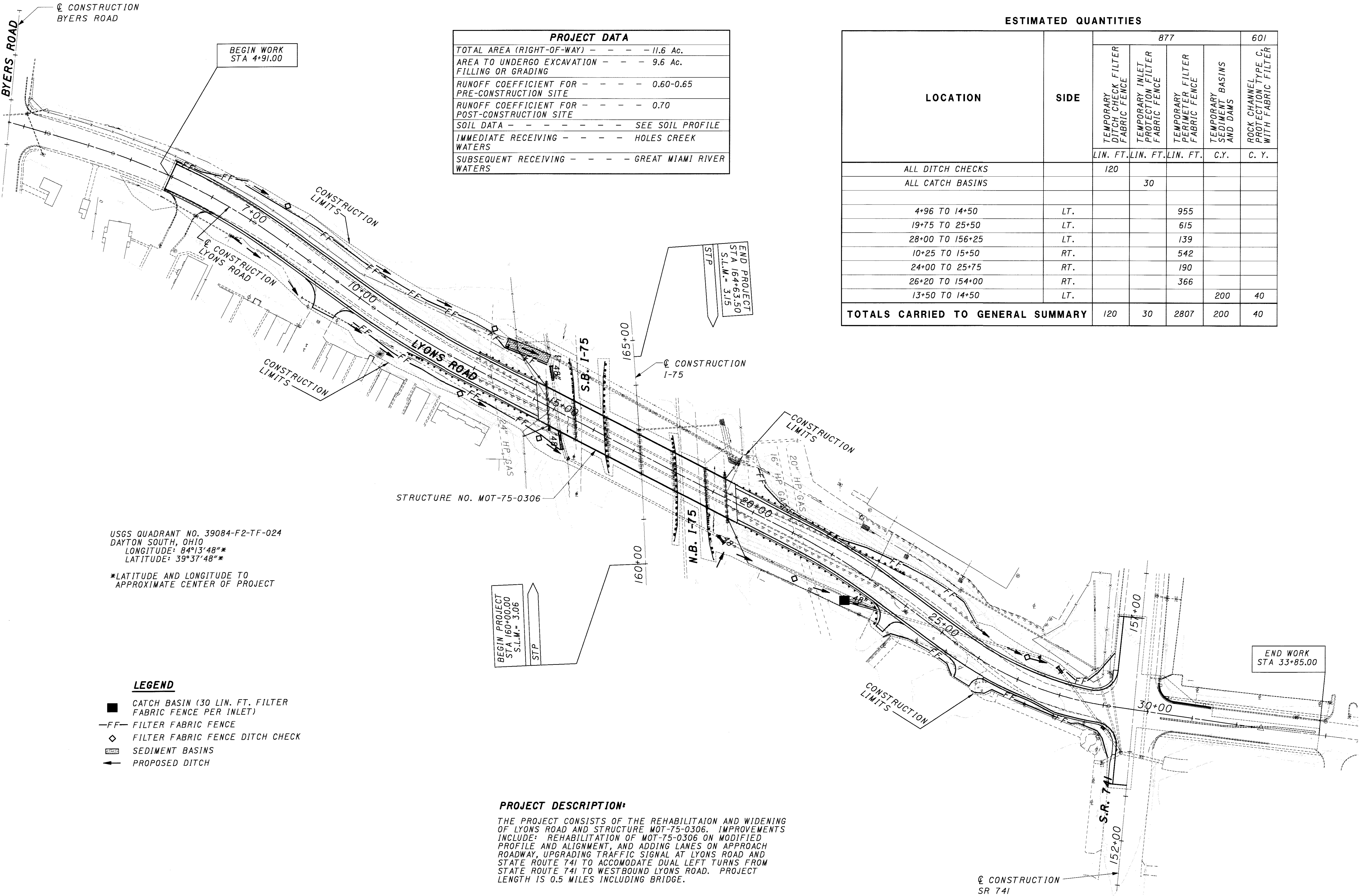
MOT-75-3.06

1790

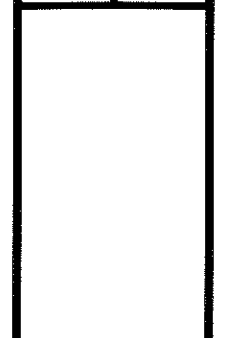
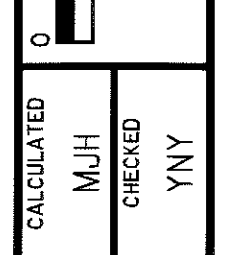


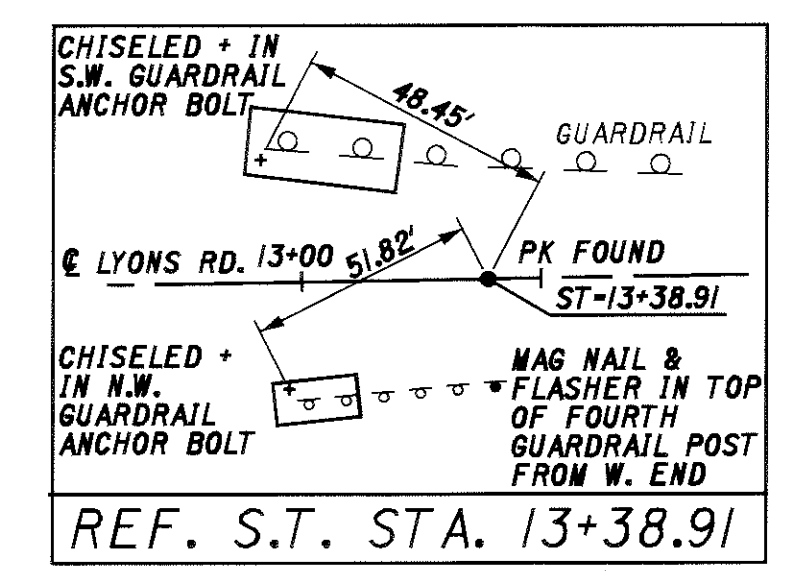
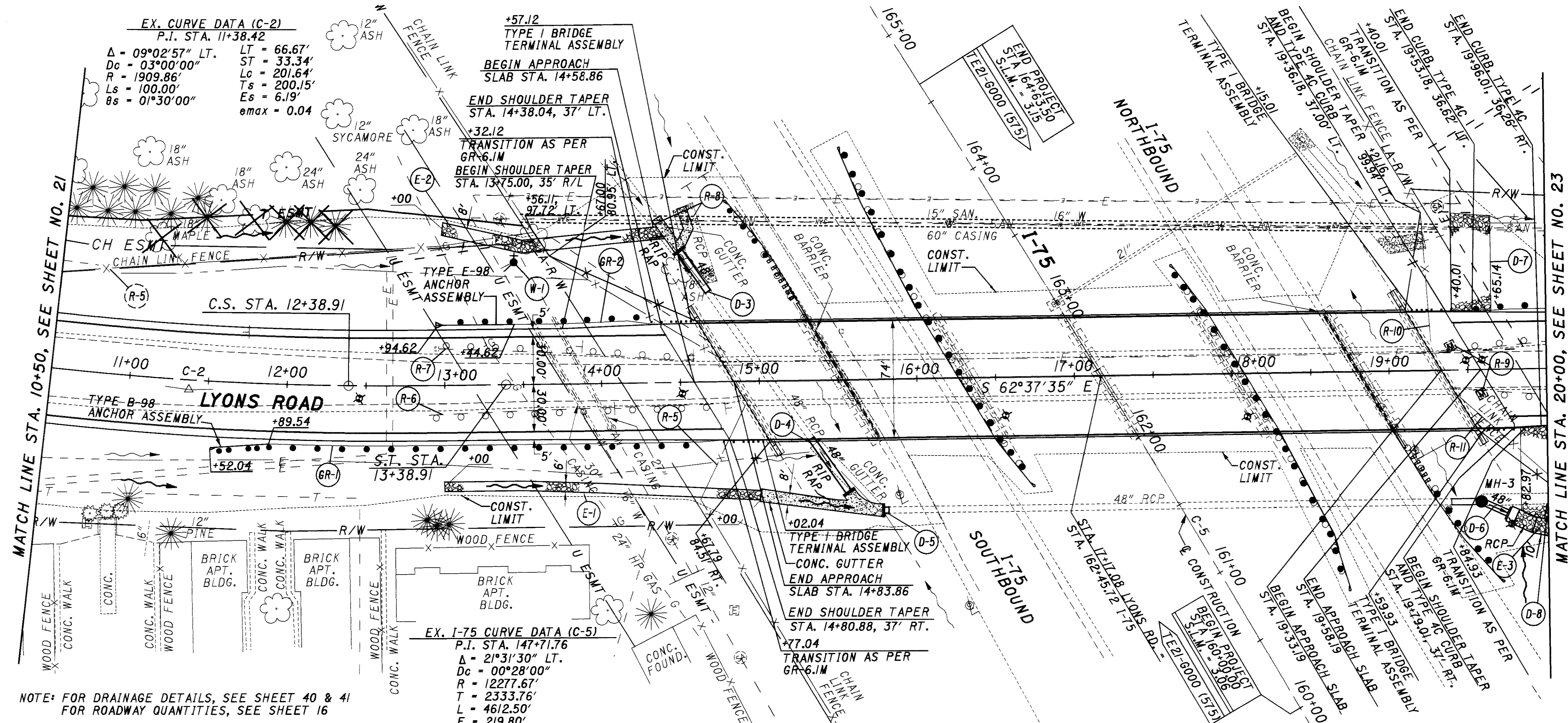




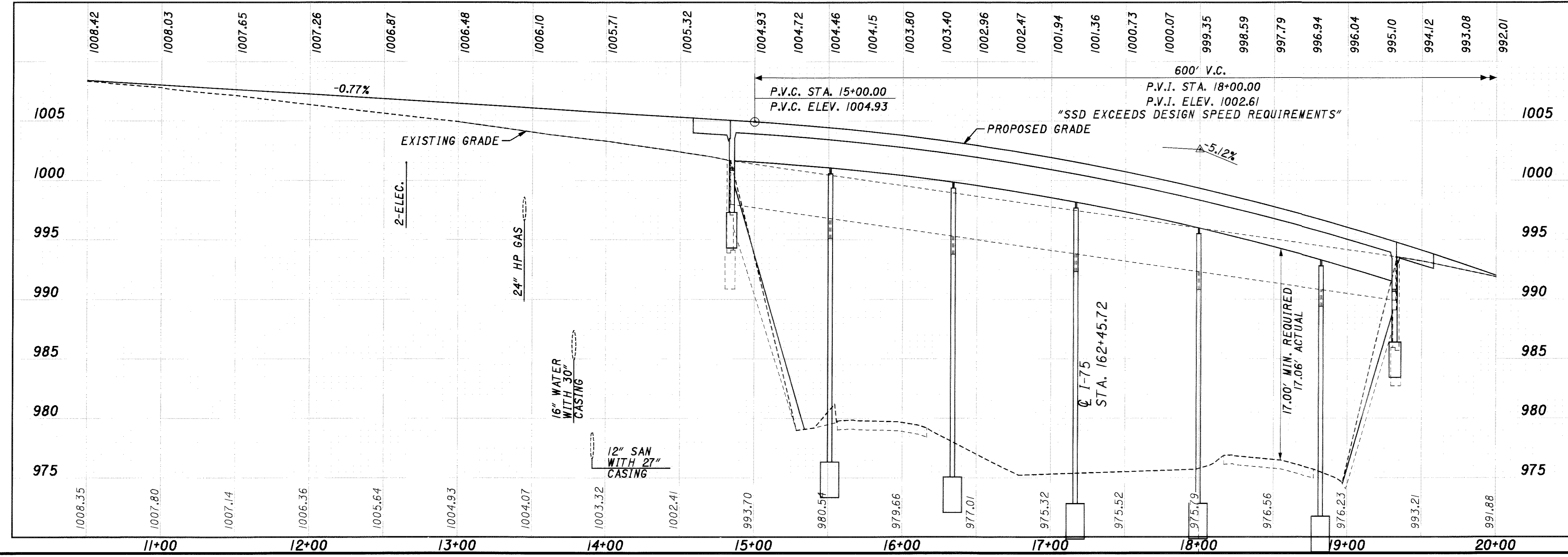








STA. 10+50 TO STA. 20+00	
203 EXCAVATION NOT INC. EMBANKMENT	411 CU. YD.
203 EMBANKMENT	10049 CU. YD.
660 SODDING UNSTAKED	7694 SQ. YD.
660 SODDING STAKED	3172 SQ. YD.
870 SEEDING AND MULCHING	251 SQ. YD.
QUANTITIES CARRIED TO GENERAL SUMMARY	





[illegible]

CHISEL X IN S. END OF STEEL GUARDRAIL POST

49.16'

1/2" REBAR WITH CAP

18.56'

20.00'

PK IN TOP OF WOODEN GUARDRAIL BLOCKS

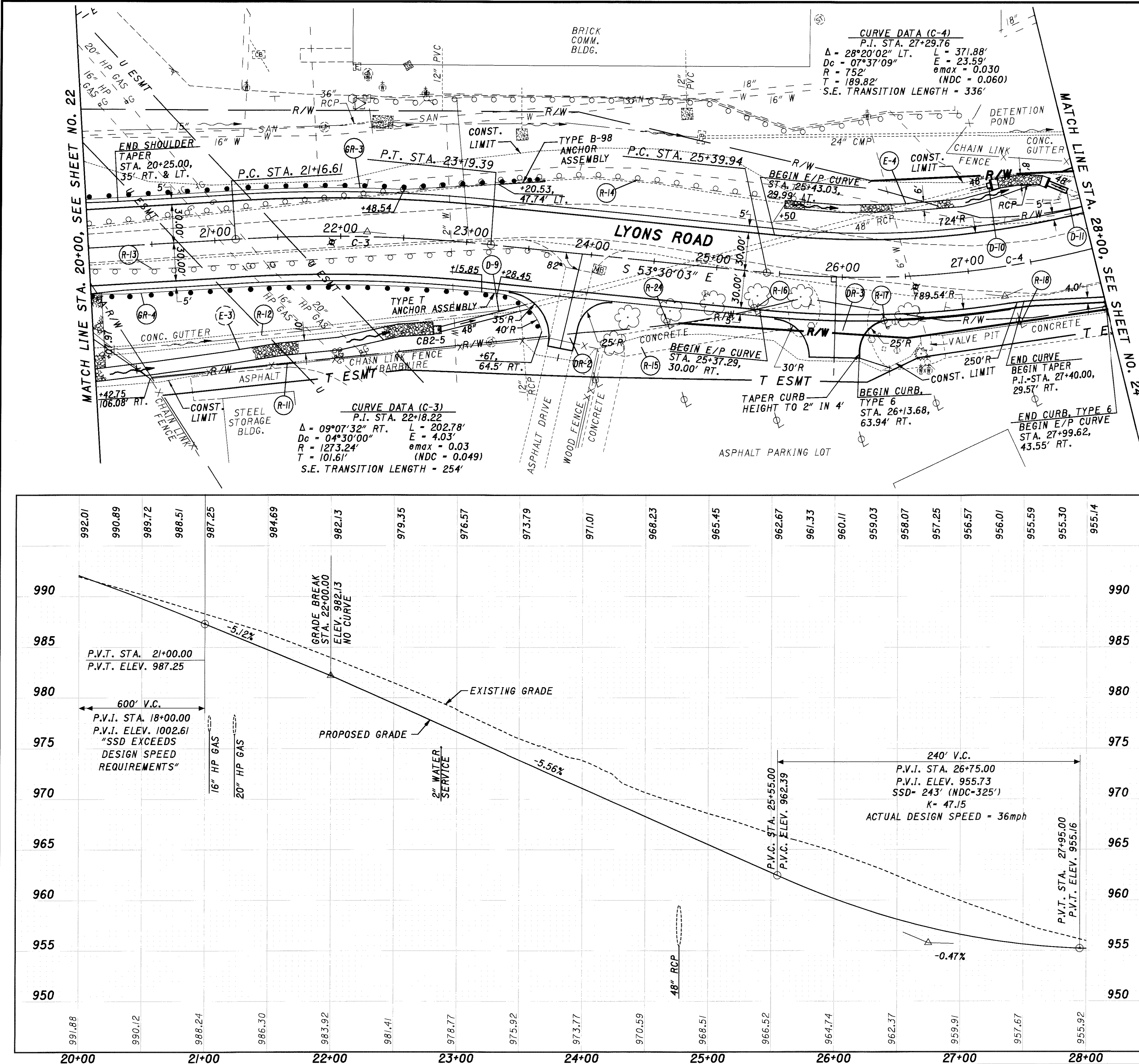
€ LYONS RD. 23+00

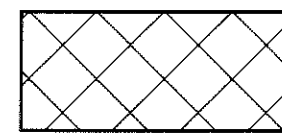
PT-23+19.39

REF. P.T. STA. 23+19.3

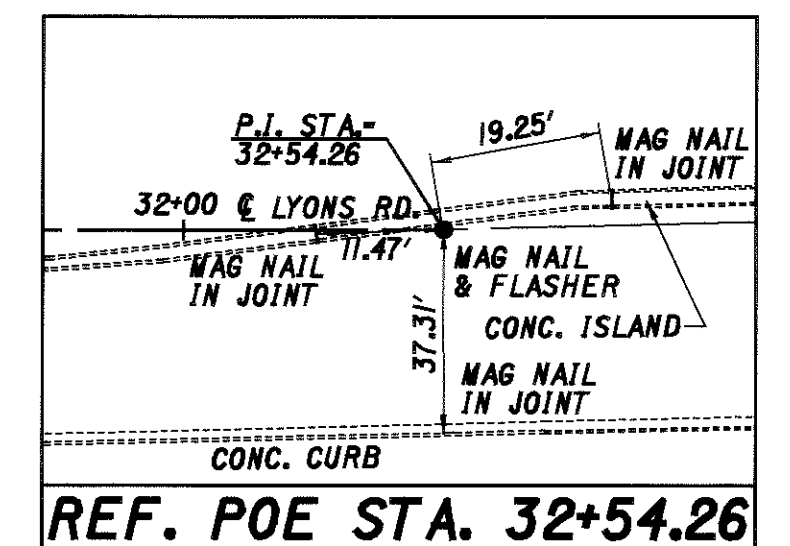
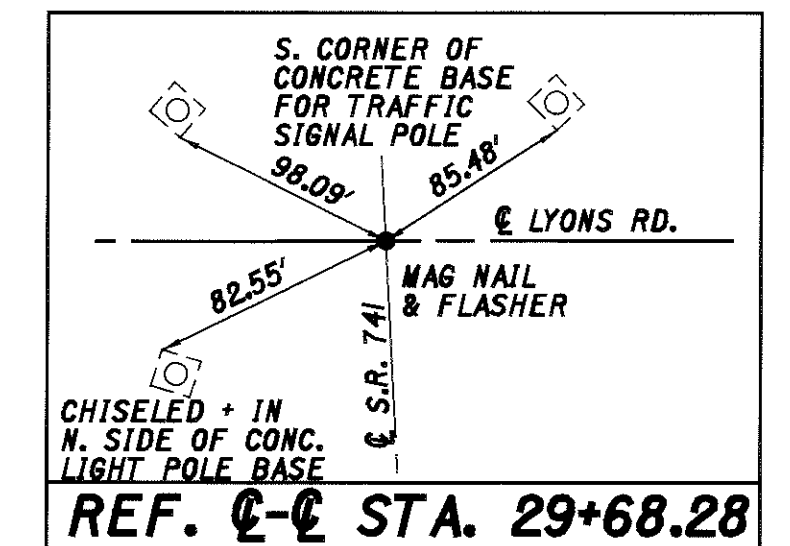
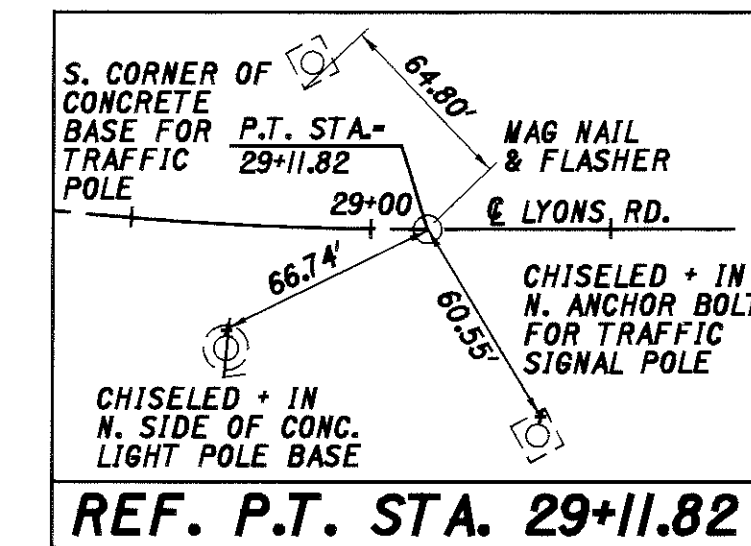
[illegible]

STA. 20+00 TO STA. 28+00	
203 EXCAVATION NOT INC. EMBANKMENT	9214 CU. YD.
203 EMBANKMENT	4946 CU. YD.
660 SODDING UNSTAKED	833 SQ. YD.
660 SODDING STAKED	2035 SQ. YD.
870 SEEDING AND MULCHING	2602 SQ. YD.
QUANTITIES CARRIED TO GENERAL SUMMARY	





RESURFACING AREA



STA. 28+00 TO STA. 29+00	
203 EXCAVATION NOT INC. EMBANKMENT	297 CU. YD.
203 EMBANKMENT	40 CU. YD.
660 SODDING UNSTAKED	532 SQ. YD.
660 SODDING STAKED	0 SQ. YD.
870 SEEDING AND MULCHING	418 SQ. YD.
QUANTITIES CARRIED TO GENERAL SUMMARY	

NOTES: FOR DRAINAGE PROFILES, SEE SHEET 42  
FOR ROADWAY QUANTITIES, SEE SHEET 16

ITEM D-13, ADJUST MANHOLES TO GRADE:

SANITARY MANHOLE  
STA. 153+74.31, 40.95' LT.  
EX. LID ELEV. = 952.86  
PROP. LID ELEV. = 953.33

STORM MANHOLE  
STA. 153+96.08, 19.29' LT.  
EX. LID ELEV. - 953.42  
PROP. LID ELEV. - 953.75



20  
HORIZONTAL  
SCALE IN FEET  
80

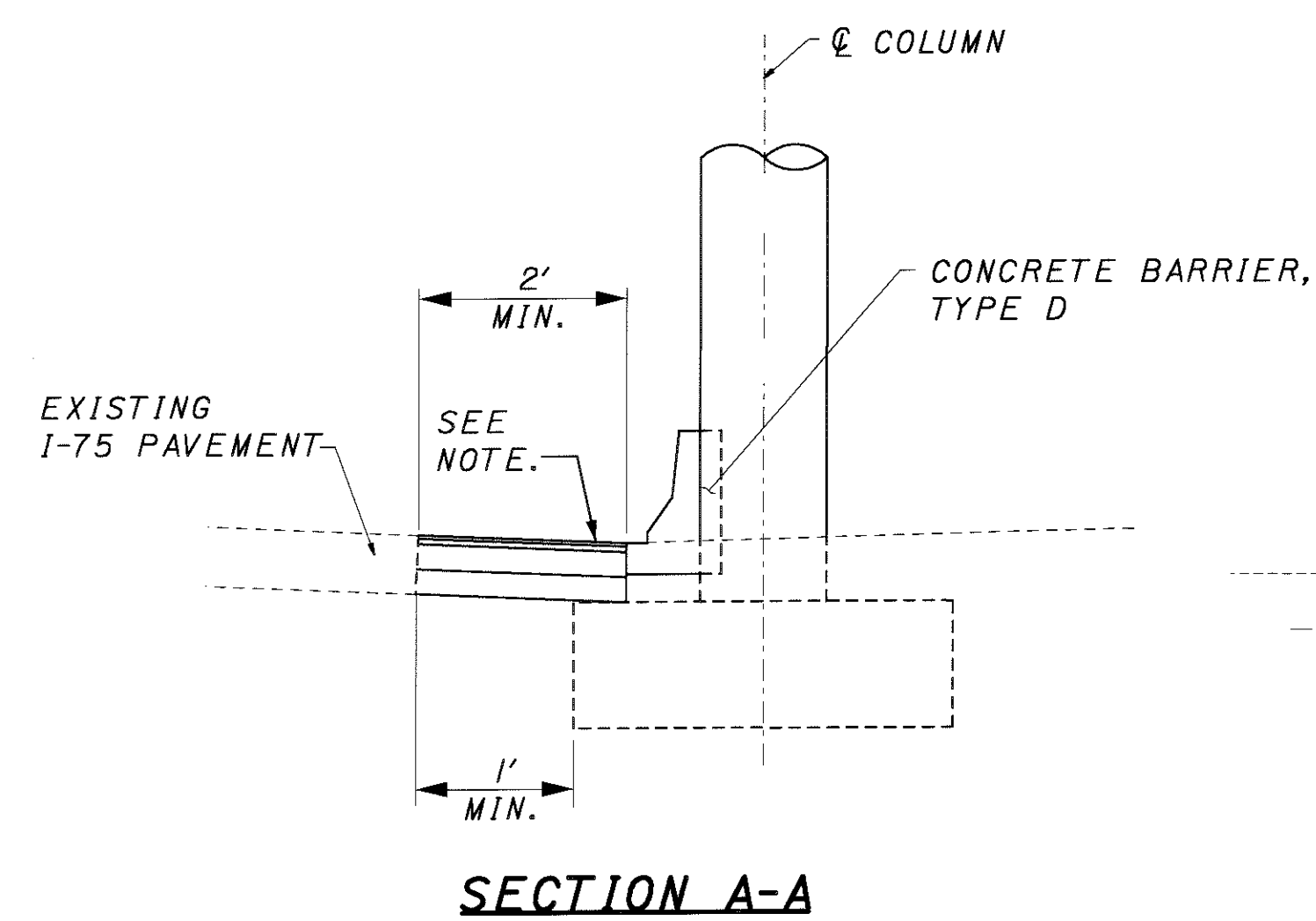
MJH  
CHECKED  
YNY

**STATIONING ROAD PLAN AND PROFILE**

MOI - 75 - 3.06

24  
90





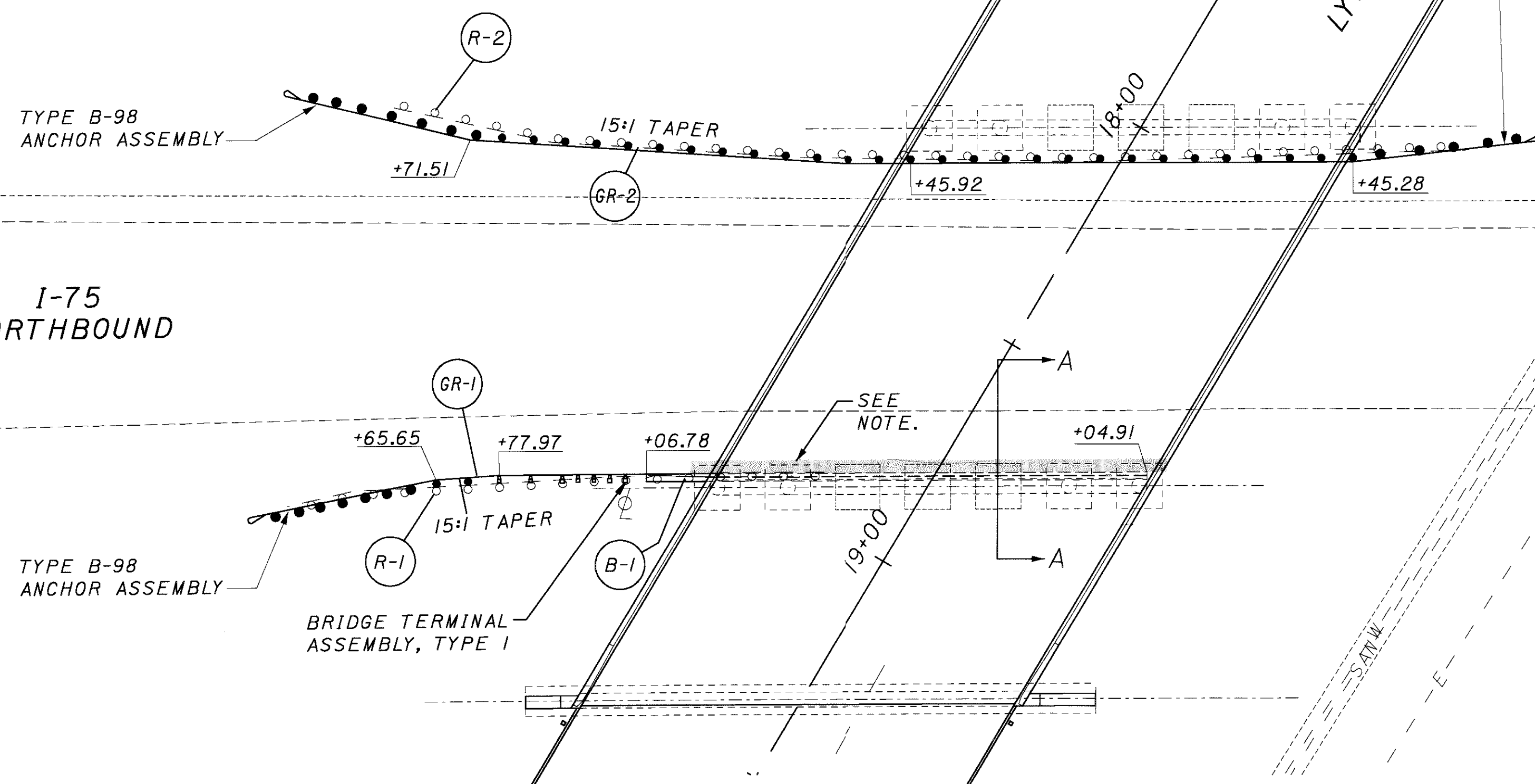
## NOTE

THE CONTRACTOR SHALL REPAIR THE DISTURBED SHOULDER AREAS USING THE EXISTING BUILD-UP OF MATERIALS. THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR THIS PURPOSE.

ITEM 448	1-1/4" ASHHALT SURFACE COURSE, TYPE 1, PG 64-22	2.0 CU. YDS.
ITEM 448	1-3/4" ASPHALT INTER. COURSE, TYPE 2, PG 64-22	2.8 CU. YDS.
ITEM 301	6" BITUMINOUS AGGREGATE BASE	9.7 CU. YDS.
ITEM 304	6" AGGREGATE BASE	9.7 CU. YDS.
ITEM 407	TACK COAT FOR INTERMEDIATE COAT	2 GAL.

STA. 17+17.08 LYONS RD. =  
STA. 162+45.72 I-75

I-75  
NORTHBOUND



I-75  
SOUTHBOUND

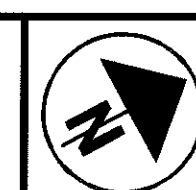
TYPE B-98  
ANCHOR ASSEMBLY

TYPE B-98  
ANCHOR ASSEMBLY

BRIDGE TERMINAL  
ASSEMBLY, TYPE 1

TYPE B-98  
ANCHOR ASSEMBLY

TYPE B-98  
ANCHOR ASSEMBLY

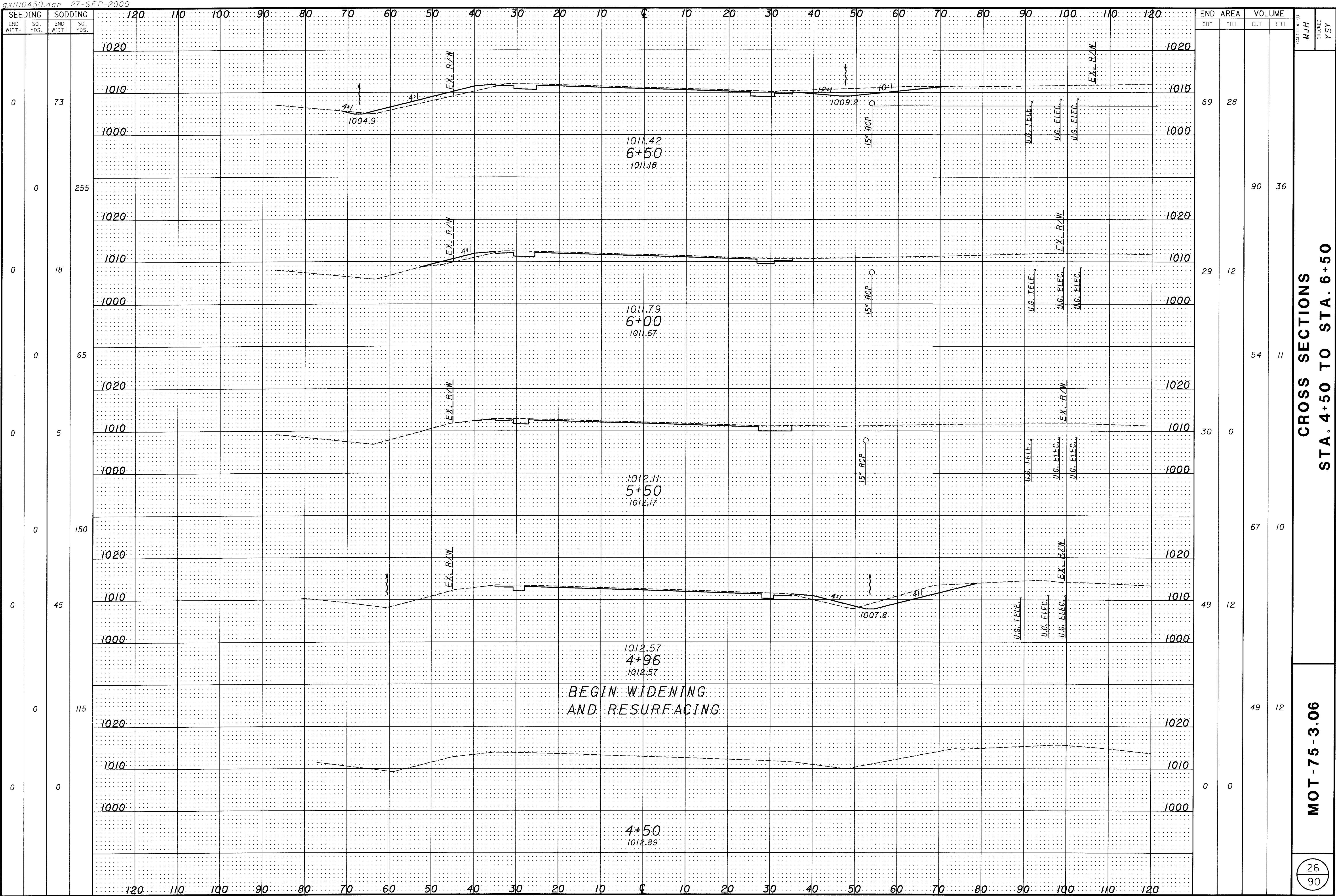


CALCULATED  
M.J.H.  
CHECKED  
Y.N.Y.

I-75 PLAN  
STA. 159+50 TO STA. 165+50

MOT-75-3.06

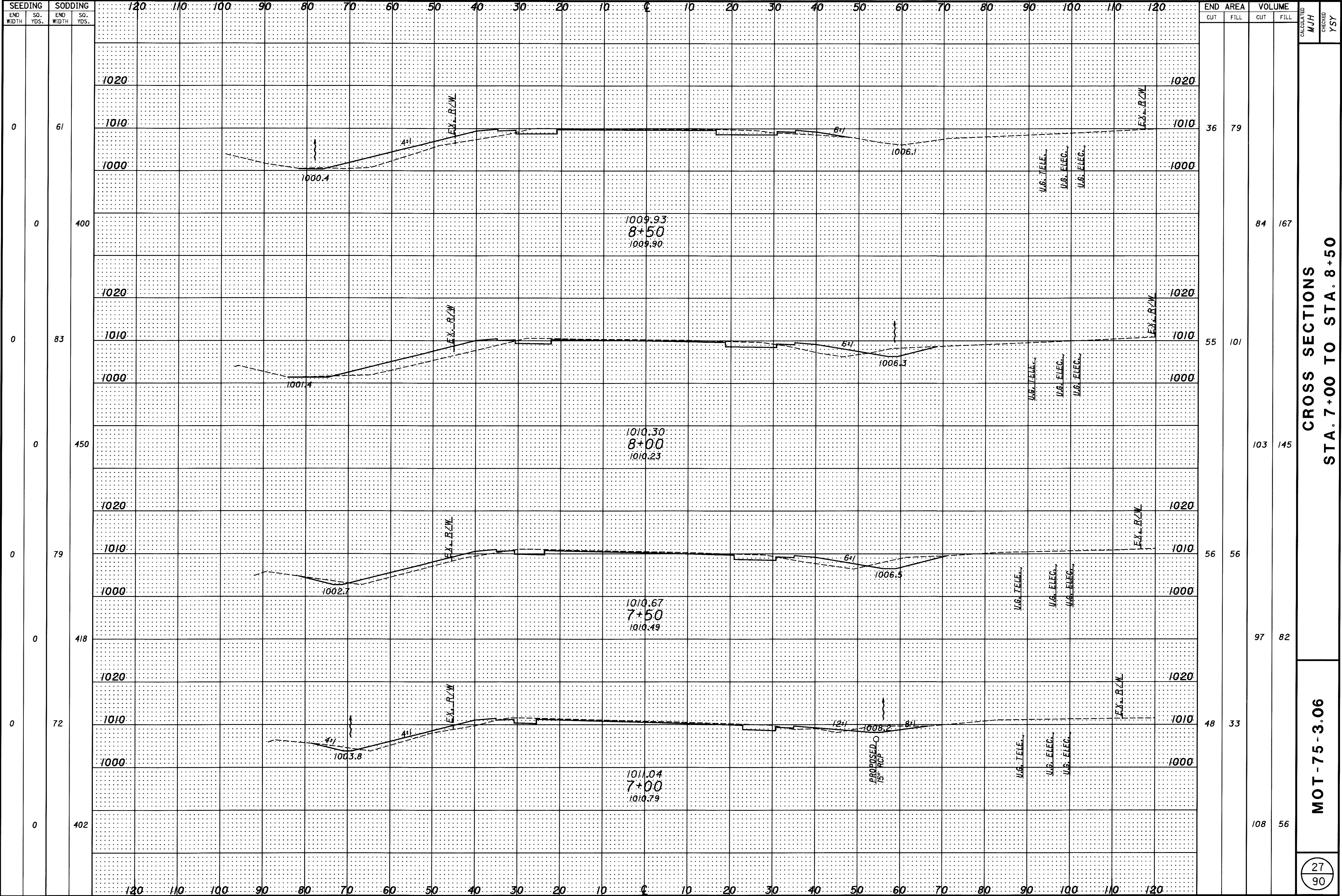
25  
90



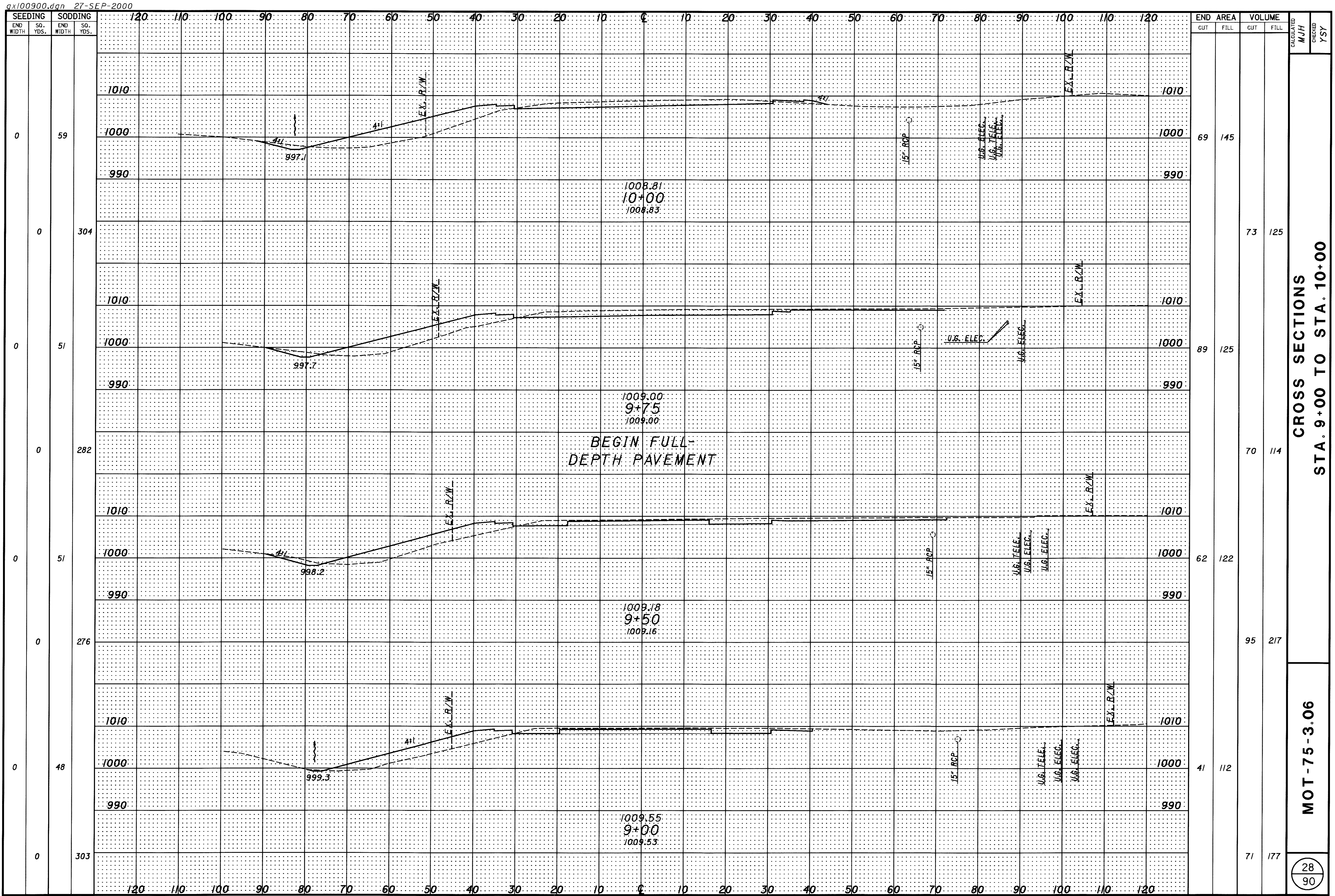
CROSS SECTIONS  
STA. 4+50 TO STA. 6+50

MOT-75-3.06

26  
90

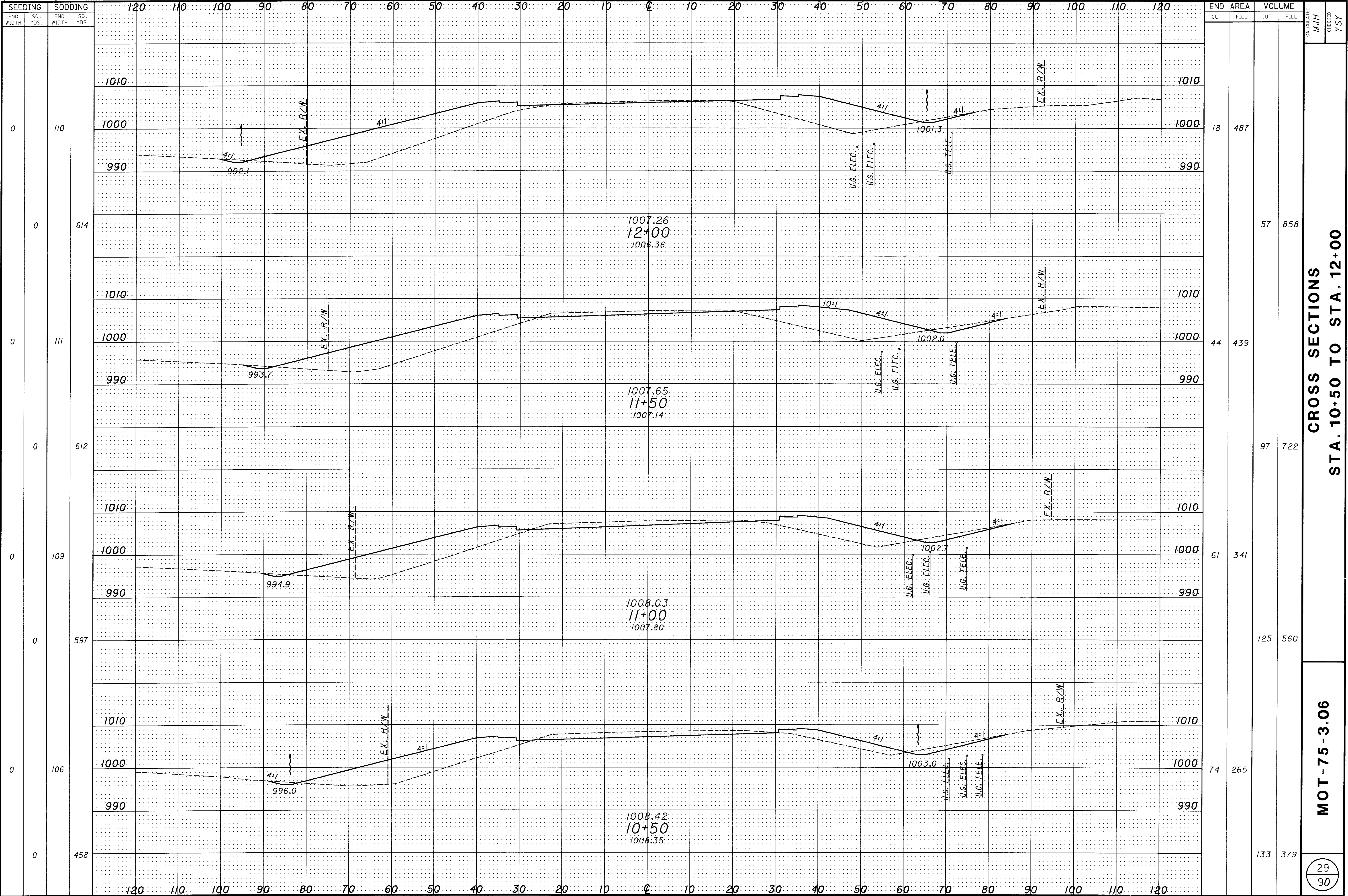






CROSS SECTIONS  
STA. 9+00 TO STA. 10+00

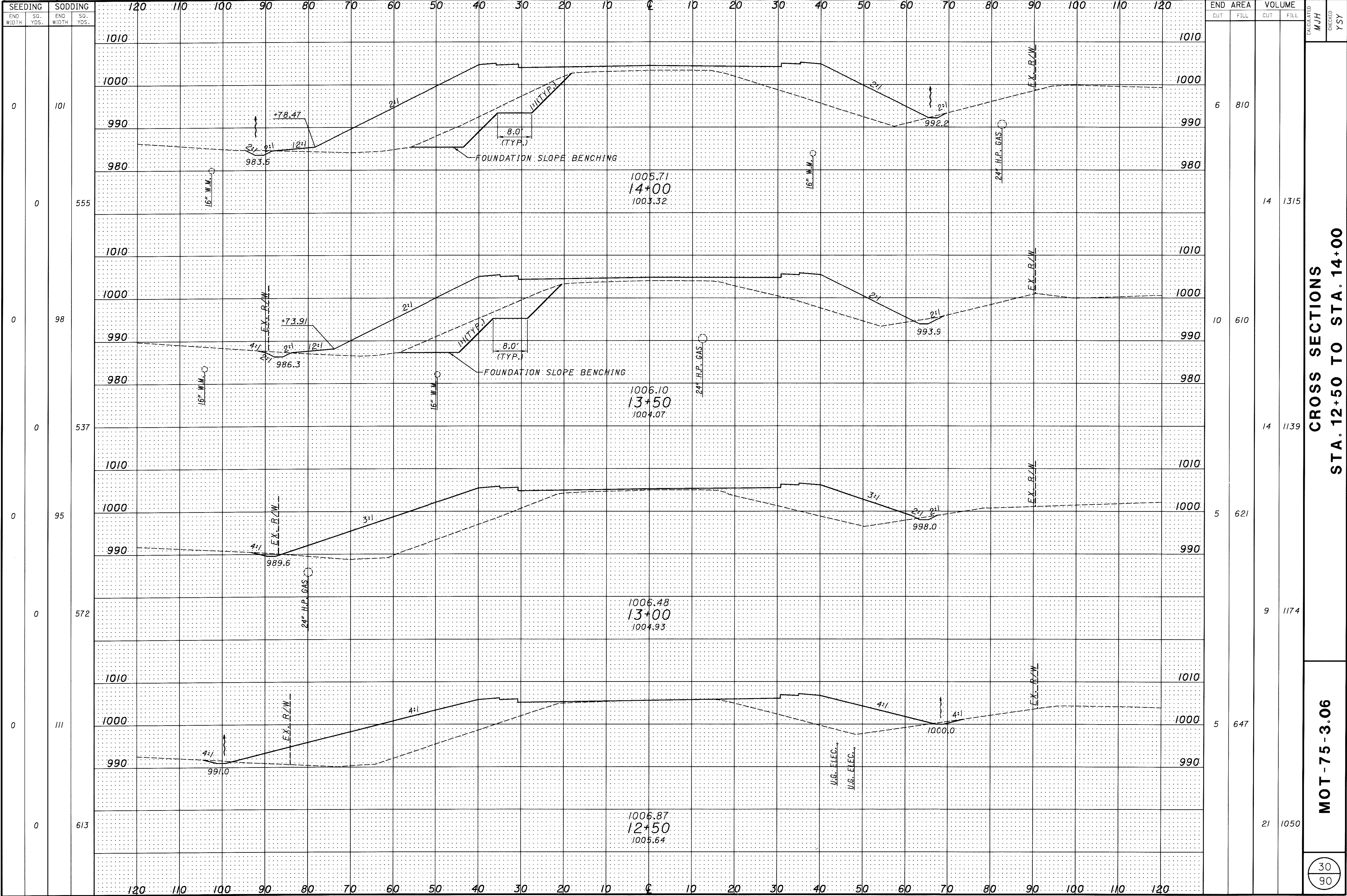
MOT-75-3.06



CROSS SECTIONS  
STA. 10+50 TO STA. 12+00

MOT-75-3.06



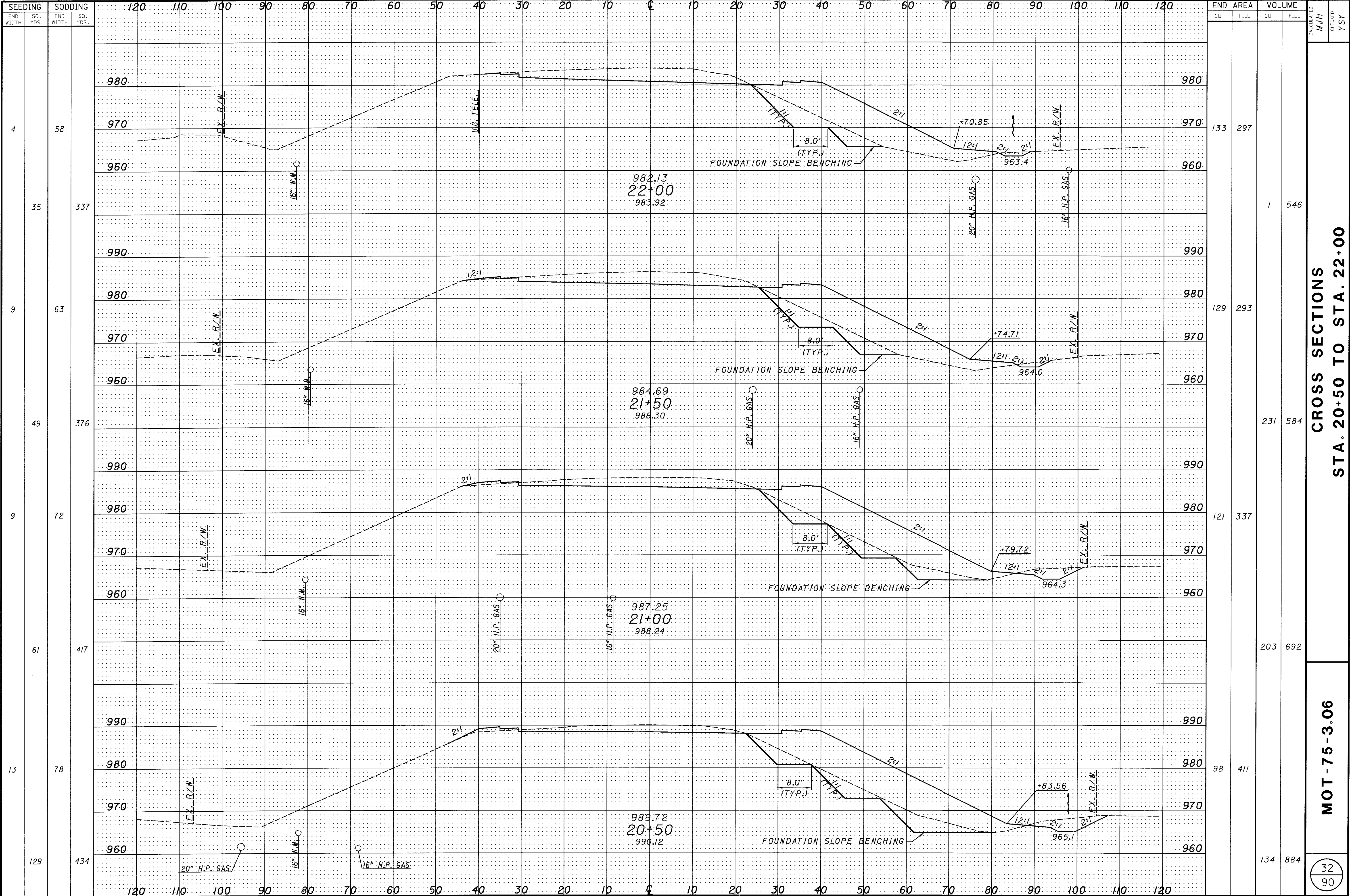


CROSS SECTIONS  
STA. 12+50 TO STA. 14+00

MOT-75-3.06



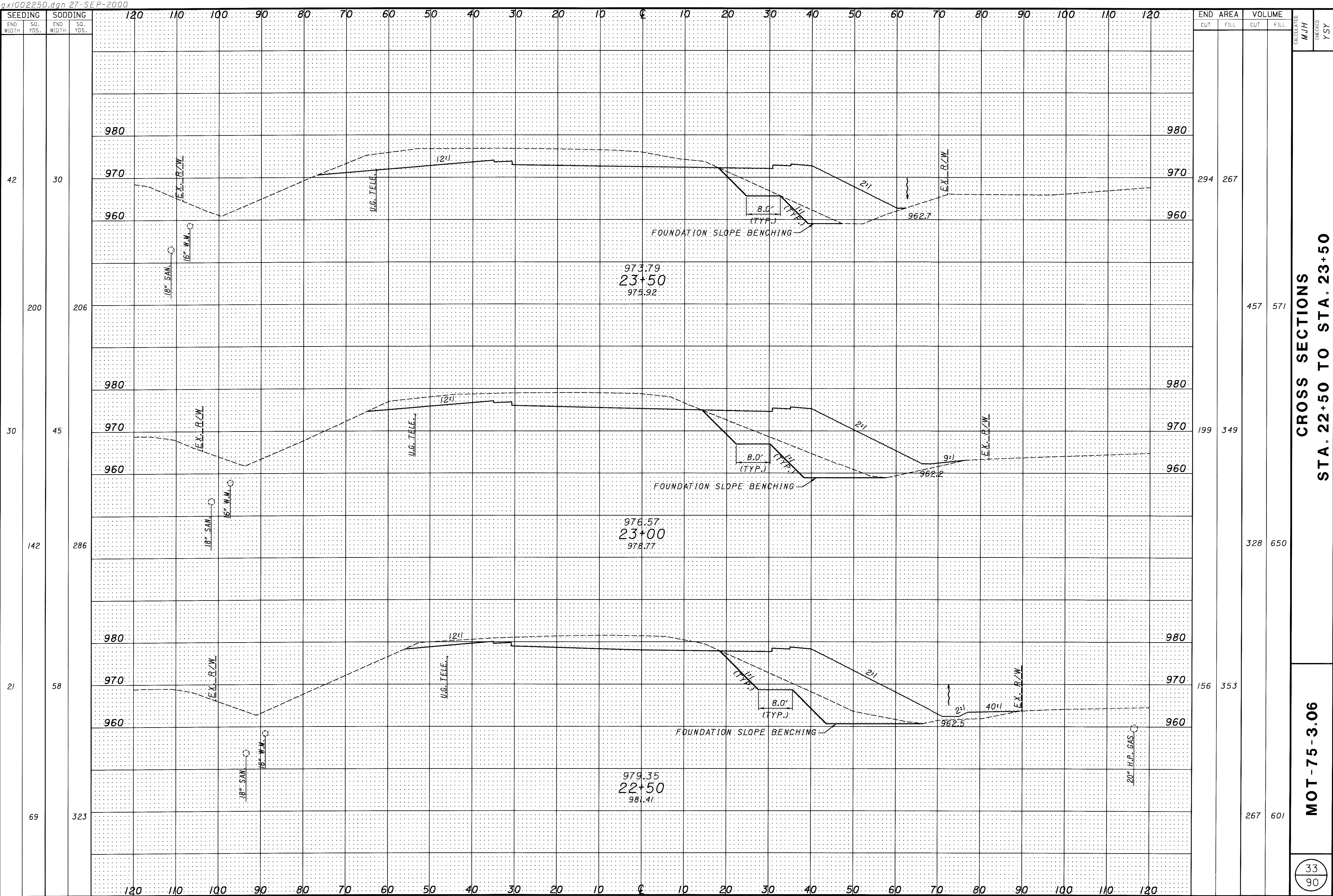




CROSS SECTIONS  
STA. 20+50 TO STA. 22+00

MOT-75-3.06



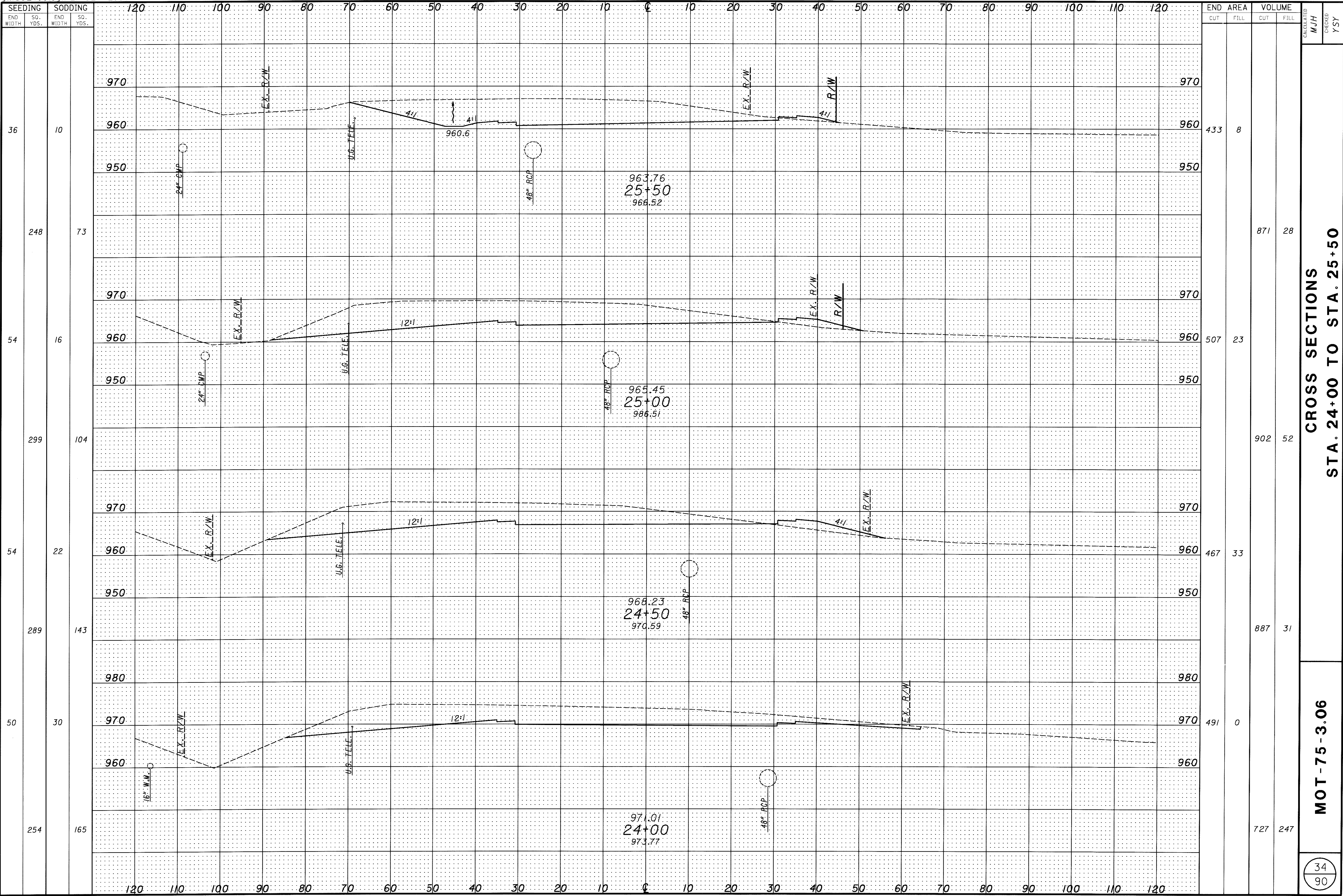


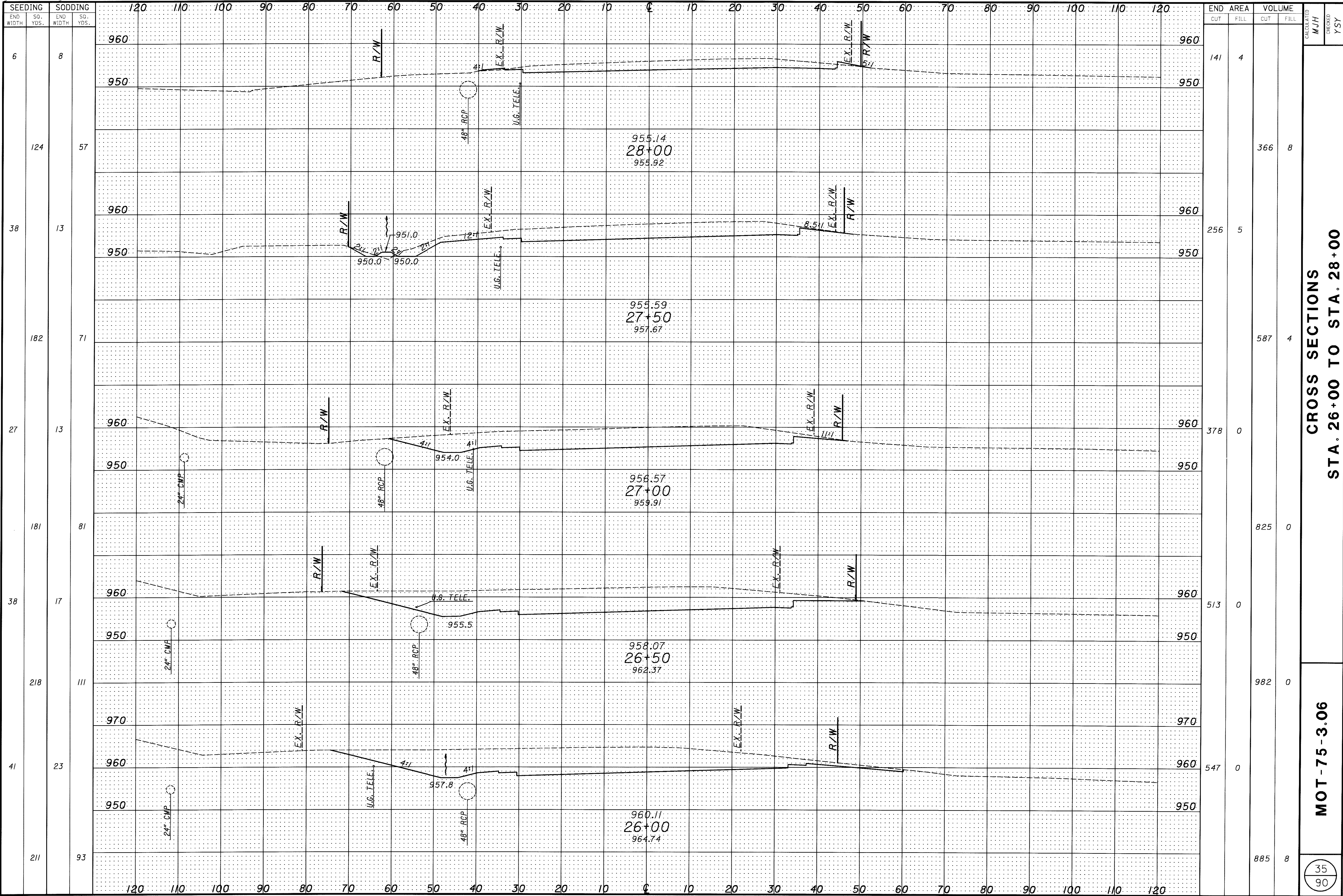
CROSS SECTIONS  
STA. 22+50 TO STA. 23+50

MOT-75-3.06

33  
90







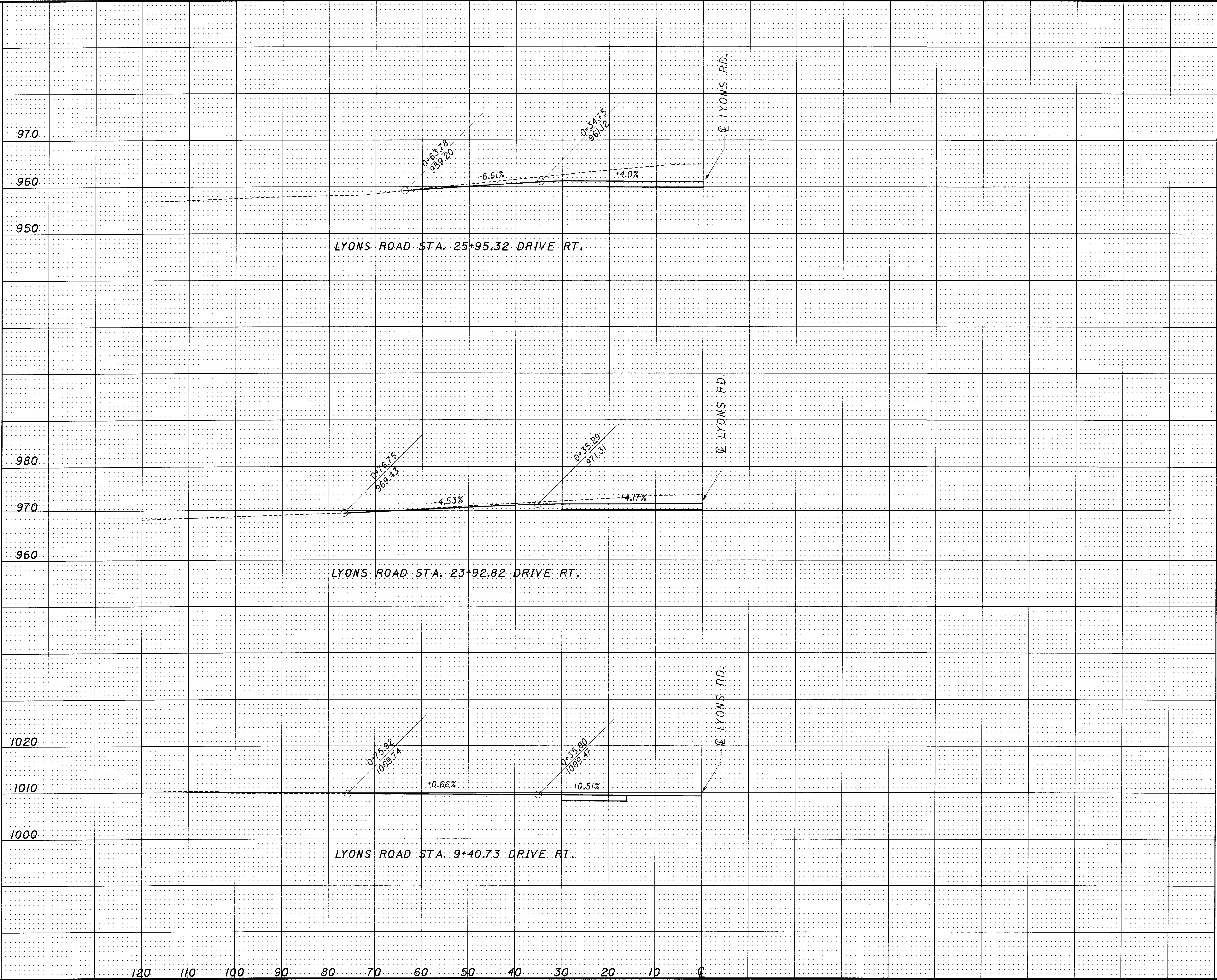
CROSS SECTIONS  
STA. 26+00 TO STA. 28+00

MOT-75-3.06



SEEDING		SODDING		END AREA		VOLUME		CROSS SECTIONS	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	STA. 28+50 TO STA. 30+00	
0	0	0	0	0	0	0	0	CROSS SECTIONS	
29	36	39	19					STA. 28+50 TO STA. 30+00	
11	13	42	21						
47	78	103	28						
6	15	69	10						
35	64	194	12						



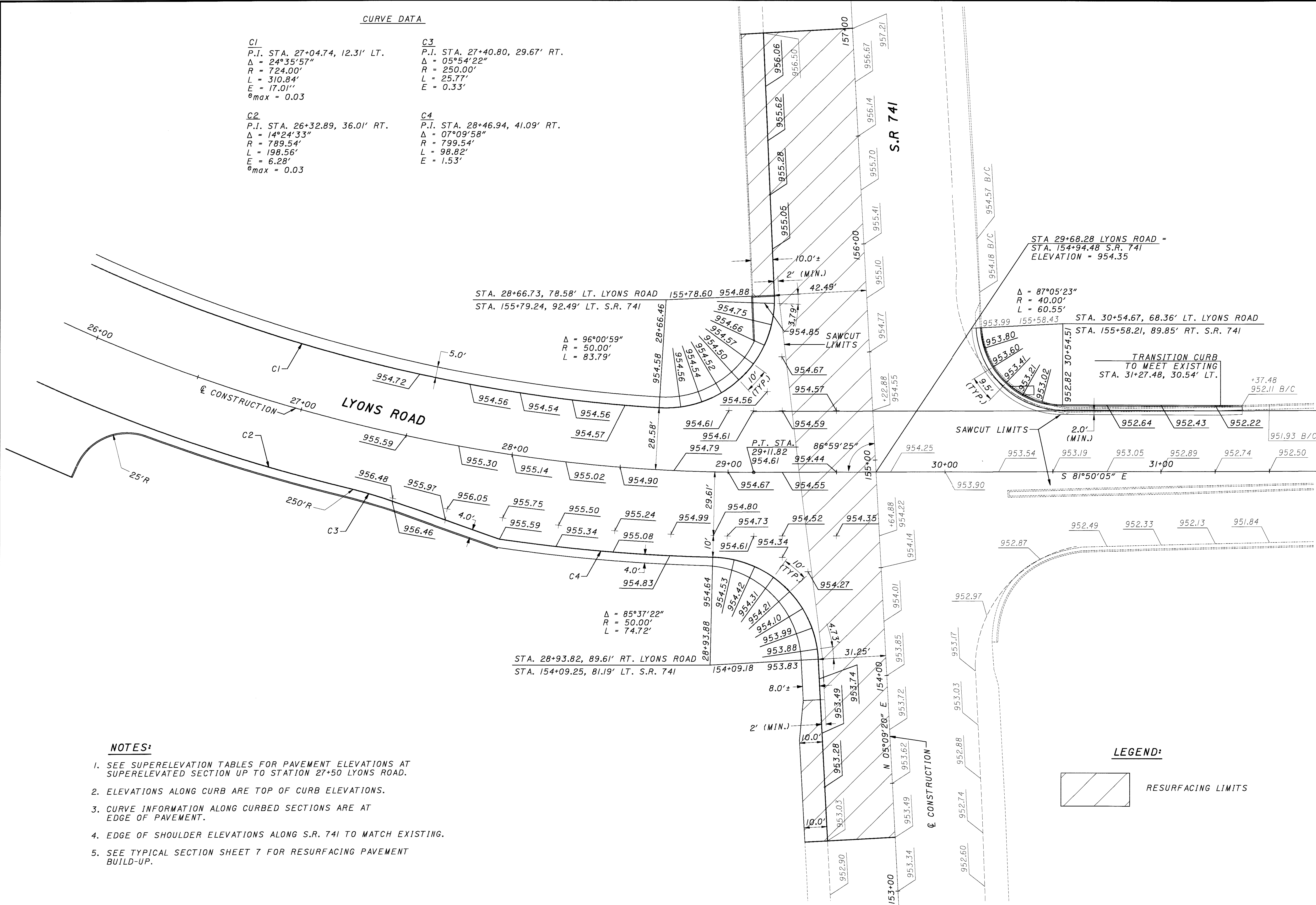


DRIVEWAY PROFILES  
LYONS ROAD

MOT-75-3.06

CURVE DATA

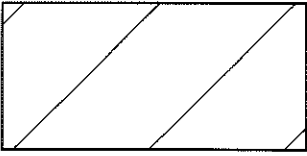
<u>C1</u> P.I. STA. 27+04.74, 12.31' LT. $\Delta = 24^{\circ}35'57''$ $R = 724.00'$ $L = 310.84'$ $E = 17.01'$ $e_{max} = 0.03$	<u>C3</u> P.I. STA. 27+40.80, 29.67' RT. $\Delta = 05^{\circ}54'22''$ $R = 250.00'$ $L = 25.77'$ $E = 0.33'$
<u>C2</u> P.I. STA. 26+32.89, 36.01' RT. $\Delta = 14^{\circ}24'33''$ $R = 789.54'$ $L = 198.56'$ $E = 6.28'$ $e_{max} = 0.03$	<u>C4</u> P.I. STA. 28+46.94, 41.09' RT. $\Delta = 07^{\circ}09'58''$ $R = 799.54'$ $L = 98.82'$ $E = 1.53'$



NOTES:

1. SEE SUPERELEVATION TABLES FOR PAVEMENT ELEVATIONS AT SUPERELEVATED SECTION UP TO STATION 27+50 LYONS ROAD.
2. ELEVATIONS ALONG CURB ARE TOP OF CURB ELEVATIONS.
3. CURVE INFORMATION ALONG CURBED SECTIONS ARE AT EDGE OF PAVEMENT.
4. EDGE OF SHOULDER ELEVATIONS ALONG S.R. 741 TO MATCH EXISTING.
5. SEE TYPICAL SECTION SHEET 7 FOR RESURFACING PAVEMENT BUILD-UP.

LEGEND:



RESURFACING LIMITS



0 20 40  
HORIZONTAL  
SCALE IN FEET

CALCULATED  
CWB  
CHECKED  
DB

INTERSECTION DETAIL  
LYONS ROAD AND S.R. 741

MOT-75-3.06

SUPERELEVATION TABLE - CURVE 2									SUPERELEVATION TABLE - CURVE 3 AND 4											
LEFT SIDE			CENTERLINE CONTROL		RIGHT SIDE				LEFT SIDE				CENTERLINE CONTROL		RIGHT SIDE					
EDGE ELEVATION	ELEVATION CORRECTION	CROSS SLOPE	STATION	PROFILE GRADE	CROSS SLOPE	ELEVATION CORRECTION	EDGE ELEVATION	REMARKS	EDGE ELEVATION	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	EDGE ELEVATION	REMARKS	
CURVE 2									CURVES 3 AND 4											
1008.46	-0.54	-0.0180	9+75	1009.00	0.0180	0.54	1009.54	MEET EXISTING	993.65	-0.47	-0.0156	30	19+50	994.12	30	-0.0156	-0.47	993.65		
1008.14	-0.67	-0.0222	10+00	1008.81	0.0222	0.67	1009.48		992.75	-0.33	-0.0111	30	19+75	993.08	30	-0.0156	-0.47	992.61		
1007.83	-0.79	-0.0264	10+25	1008.62	0.0264	0.79	1009.41		991.81	-0.20	-0.0066	30	20+00	992.01	30	-0.0156	-0.47	991.54		
1007.50	-0.92	-0.0306	10+50	1008.42	0.0306	0.92	1009.34		990.83	-0.06	-0.0021	30	20+25	990.89	30	-0.0156	-0.47	990.42		
1007.18	-1.04	-0.0348	10+75	1008.22	0.0348	1.04	1009.26		989.79	0.07	0.0024	30	20+50	989.72	30	-0.0156	-0.47	989.25		
1006.91	-1.17	-0.0390	11+00	1008.03	0.0390	1.17	1009.20		989.12	0.16	0.0052	30	20+66	988.96	30	-0.0156	-0.47	988.49	END CROWN REMOVAL	
1006.86	-1.20	-0.0400	11+06	1007.98	0.0400	1.20	1009.18	FULL SUPER	988.72	0.21	0.0069	30	20+75	988.51	30	-0.0172	-0.52	987.99		
1006.75	-1.10	-0.0367	11+25	1007.85	0.0432	1.30	1009.15		987.59	0.34	0.0113	30	21+00	987.25	30	-0.0216	-0.65	986.60		
1006.68	-0.97	-0.0324	11+50	1007.65	0.0474	1.42	1009.07		986.45	0.48	0.0158	30	21+25	985.97	30	-0.0260	-0.78	985.19		
1006.61	-0.84	-0.0281	11+75	1007.45	0.0516	1.55	1009.00		985.39	0.60	0.0200	30	21+48	984.79	30	-0.0300	-0.90	983.89	FULL SUPER (RIGHT)	
1006.54	-0.72	-0.0238	12+00	1007.26	0.0558	1.67	1008.93		985.30	0.61	0.0203	30	21+50	984.69	30	-0.030	-0.90	983.79		
1006.47	-0.59	-0.0196	12+25	1007.06	0.0600	1.80	1008.86		984.15	0.74	0.0248	30	21+75	983.41	30	-0.030	-0.90	982.51		
1006.42	-0.51	-0.0172	12+38.91	1006.96	0.0623	1.87	1008.83	C.S	983.01	0.88	0.0293	30	22+00	982.13	30	-0.030	-0.90	981.23		
1006.38	-0.47	-0.0156	12+48	1006.89	0.0638	1.92	1008.81	BEGIN CROWN REMOVAL	982.81	0.90	0.0300	30	22+04	981.91	30	-0.030	-0.90	981.01	FULL SUPER (LEFT)	
1006.37	-0.47	-0.0156	12+50	1006.87	0.0642	1.93	1008.80		981.64	0.90	0.0300	30	22+25	980.74	30	-0.030	-0.90	979.84		
1006.20	-0.47	-0.0156	12+75	1006.67	0.0684	2.05	1008.72		980.25	0.90	0.0300	30	22+50	979.35	30	-0.030	-0.90	978.45		
1006.01	-0.47	-0.0156	13+00	1006.48	0.0726	2.18	1008.66		979.53	0.90	0.0300	30	22+63	978.63	30	-0.030	-0.90	977.73		
1005.82	-0.47	-0.0156	13+25	1006.29	0.0768	2.30	1008.59		978.80	0.84	0.0279	30	22+75	977.96	30	-0.0279	-0.84	977.12		
1005.63	-0.47	-0.0156	13+50	1006.10	0.0810	2.43	1008.53		977.27	0.70	0.0234	30	23+00	976.57	30	-0.0234	-0.70	975.87		
1005.43	-0.47	-0.0156	13+75	1005.90	0.0852	2.56	1008.46		976.09	0.60	0.0199	30	23+19.39	975.49	30	-0.0199	-0.60	974.89	P.T.	
1005.24	-0.47	-0.0156	14+00	1005.71	0.0894	2.68	1008.39		975.75	0.57	0.0189	30	23+25	975.18	30	-0.0189	-0.57	974.61		
1005.04	-0.47	-0.0156	14+25	1005.51	0.0936	2.81	1008.32		974.22	0.43	0.0145	30	23+50	973.79	30	-0.0145	-0.43	973.36		
1004.85	-0.47	-0.0156	14+38	1005.32	0.0958	2.87	1008.19	BEGIN NORMAL SECTION	972.70	0.30	0.0100	30	23+75	972.40	30	-0.0100	-0.30	972.10		
									971.18	0.17	0.0055	30	24+00	971.01	30	-0.0055	-0.17	970.84		
									969.65	0.03	0.0011	30	24+25	969.62	30	-0.0011	-0.03	969.59		
* - ALL WIDTHS 30'									968.13	-0.10	-0.0034	30	24+50	968.23	30	0.0034	0.10	968.33		
									966.60	-0.24	-0.0079	30	24+75	966.84	30	0.0079	0.24	967.08		
									965.08	-0.37	-0.0123	30	25+00	965.45	30	0.0123	0.37	965.82		
									963.56	-0.50	-0.0168	30	25+25	964.06	30	0.0168	0.50	964.56		
									962.65	-0.58	-0.0194	30	25+39.94	963.23	30	0.0194	0.58	963.81	P.C.	
									962.03	-0.64	-0.0212	29.97	25+50	962.67	29.96	0.0212	0.64	963.31		
									960.51	-0.77	-0.0257	29.86	25+75	961.28	29.89	0.0257	0.77	962.05		
									959.22	-0.89	-0.0300	29.76	26+00	960.11	29.81	0.0300	0.89	961.00	FULL SUPER	
									958.14	-0.89	-0.0300	29.66	26+25	959.03	29.75	0.0300	0.89	959.92		
									957.18	-0.89	-0.0300	29.55	26+50	958.07	29.69	0.0300	0.89	958.96		
									956.37	-0.88	-0.0300	29.45	26+75	957.25	29.65	0.0300	0.89	958.14		
									955.69	-0.88	-0.0300	29.34	27+00	956.57	29.61	0.0300	0.89	957.46		
									955.13	-0.88	-0.0300	29.23	27+25	956.01	29.59	0.0300	0.89	956.90		
									954.72	-0.87	-0.0300	29.12	27+50	955.59	29.56	0.0300	0.89	956.48		
									* - 28+00 FORWARD - SEE INTERSECTION DETAILS, SHEET 38											





20  
10  
0  
HORIZONTAL  
SCALE IN FEET

CALCULATED  
YNY  
CHECKED  
M/JH

CULVERT DETAIL LYONS ROAD STA. 15+08.00

MOT-75-3.06

40  
90

CONST.  
LIMITS

ROCK CHANNEL PROTECTION  
(TO BE REMOVED)

ELEV. = 982.0

32' ~ 48"

CONC. GUTTER  
(TO BE REMOVED)

49.96, 83.34' LT.

CHAINLINK FENCE

LYONS ROAD

55°29'9"

48" RCP

CONC. GUTTER  
(TO BE REMOVED)

56.39, 71.43' RT.

77.34, 82.93' RT.

4' ~ 48"

CONST.  
LIMITS

# NOTES

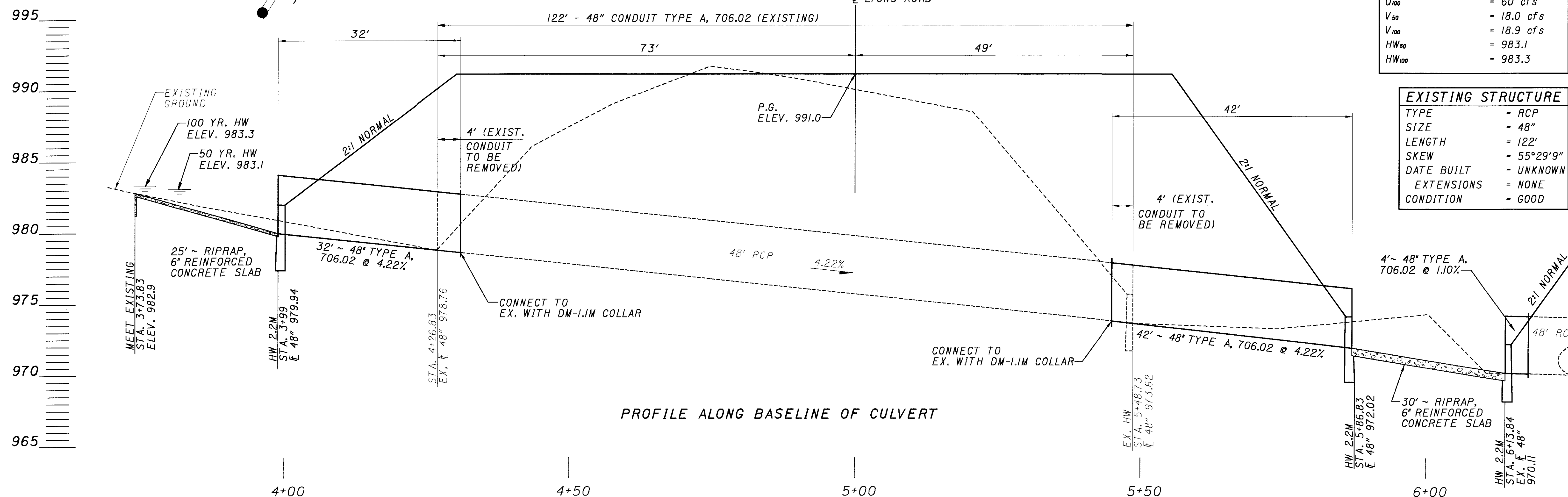
1. FOR QUANTITIES SEE SHEET 18
2. PROPOSED PROFILE OVER CULVERT  
ALONG ABUTMENT EMBANKMENT

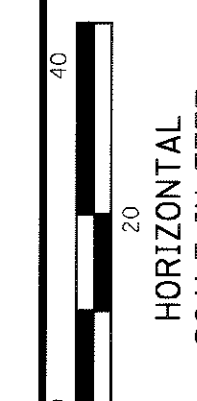
## HYDRAULIC DESIGN DATA

DRAINAGE AREA	= 22 Ac
Q <sub>50</sub>	= 52 cfs
Q <sub>100</sub>	= 60 cfs
V <sub>50</sub>	= 18.0 cfs
V <sub>100</sub>	= 18.9 cfs
HW <sub>50</sub>	= 983.1
HW <sub>100</sub>	= 983.3

## EXISTING STRUCTURE

TYPE	= RCP
SIZE	= 48"
LENGTH	= 122'
SKEW	= 55°29'9"
DATE BUILT	= UNKNOWN
EXTENSIONS	= NONE
CONDITION	= GOOD





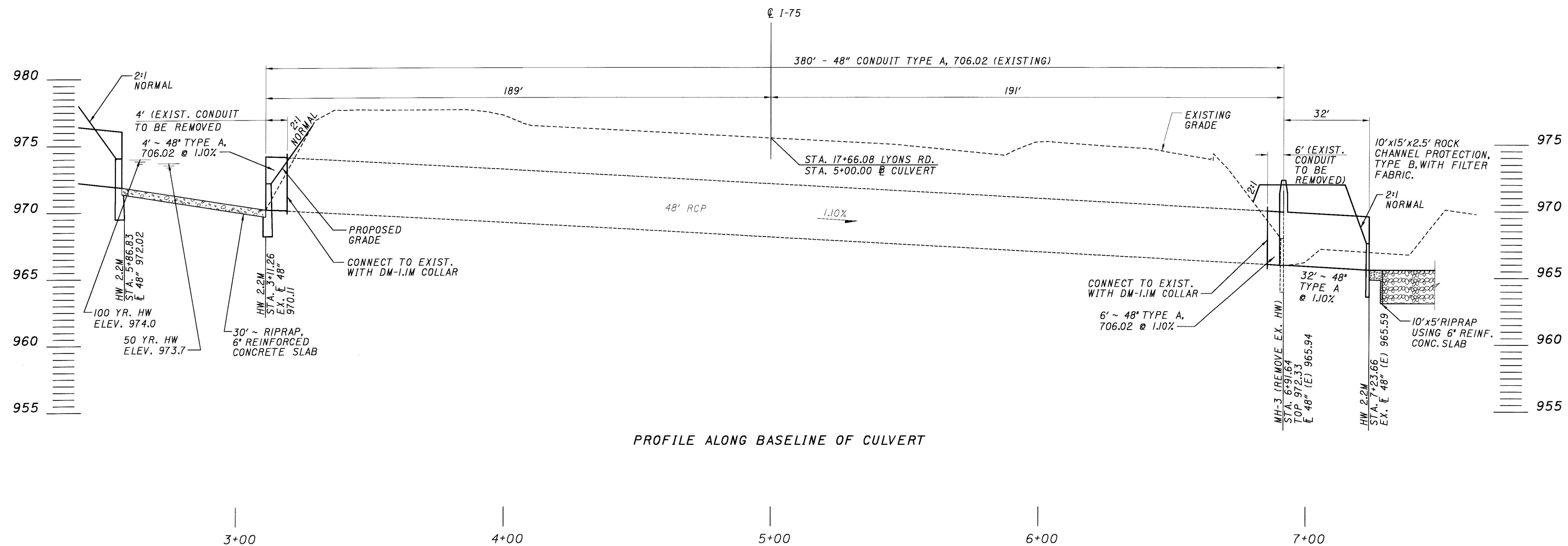
CALCULATED	CHECKED
YNY	MAI

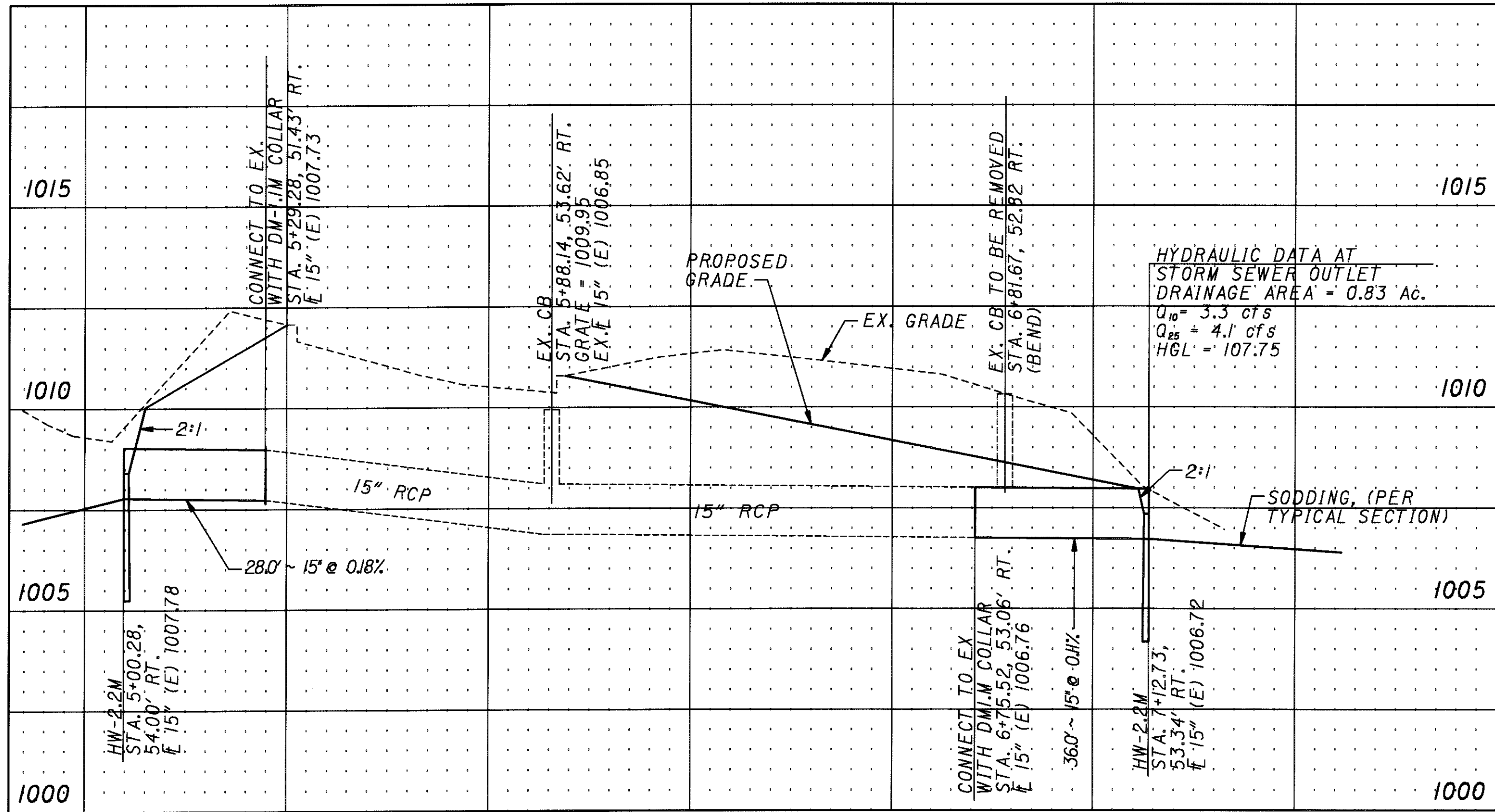
**CULVERT DETAIL I-75 STA. 162+50.00**

**MOT-75-3.06**

$\frac{41}{90}$

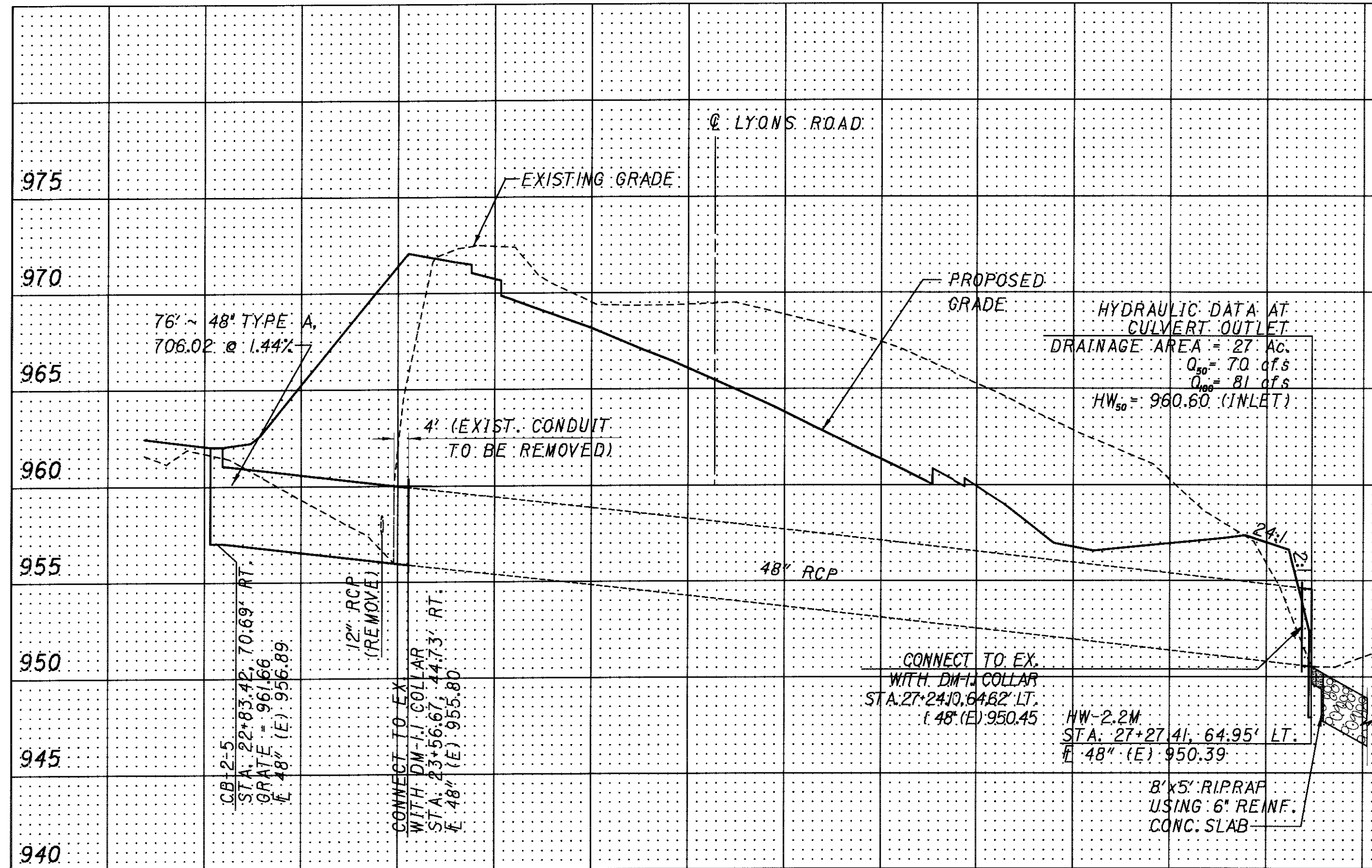
1. FOR QUANTITIES SEE SHEET 18



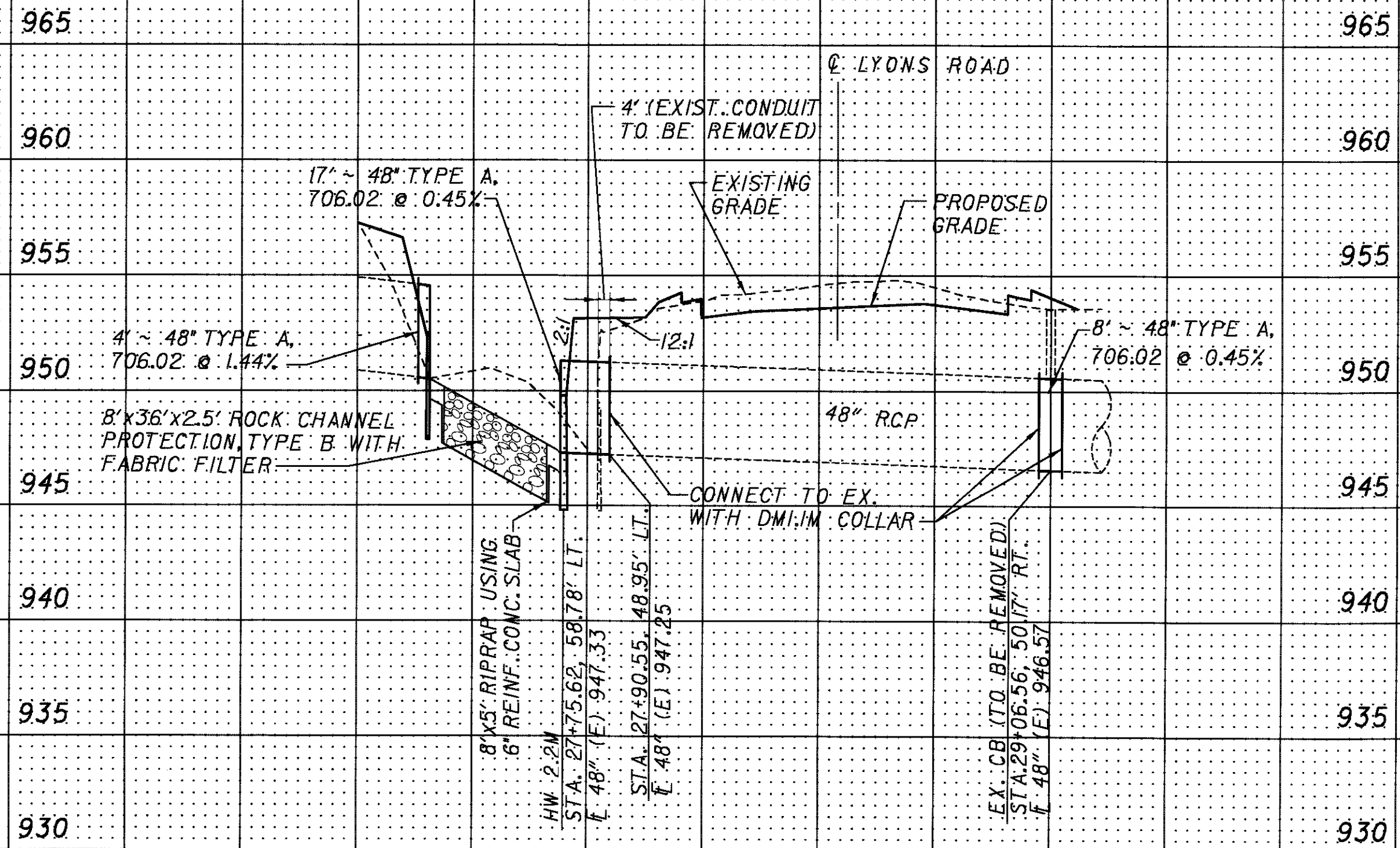


LYONS ROAD STA. 6+88, RT. TO STA. 7+12.73 (D-1 & D-2)  
SCALE: 1"=80' HORZ.  
1"=10' VERT.

NOTE:  
1. FOR QUANTITIES, SEE SHEET 18



LYONS ROAD STA. 22+83.42, RT. TO STA. 27+27.41, LT. (D-9 & D-10)

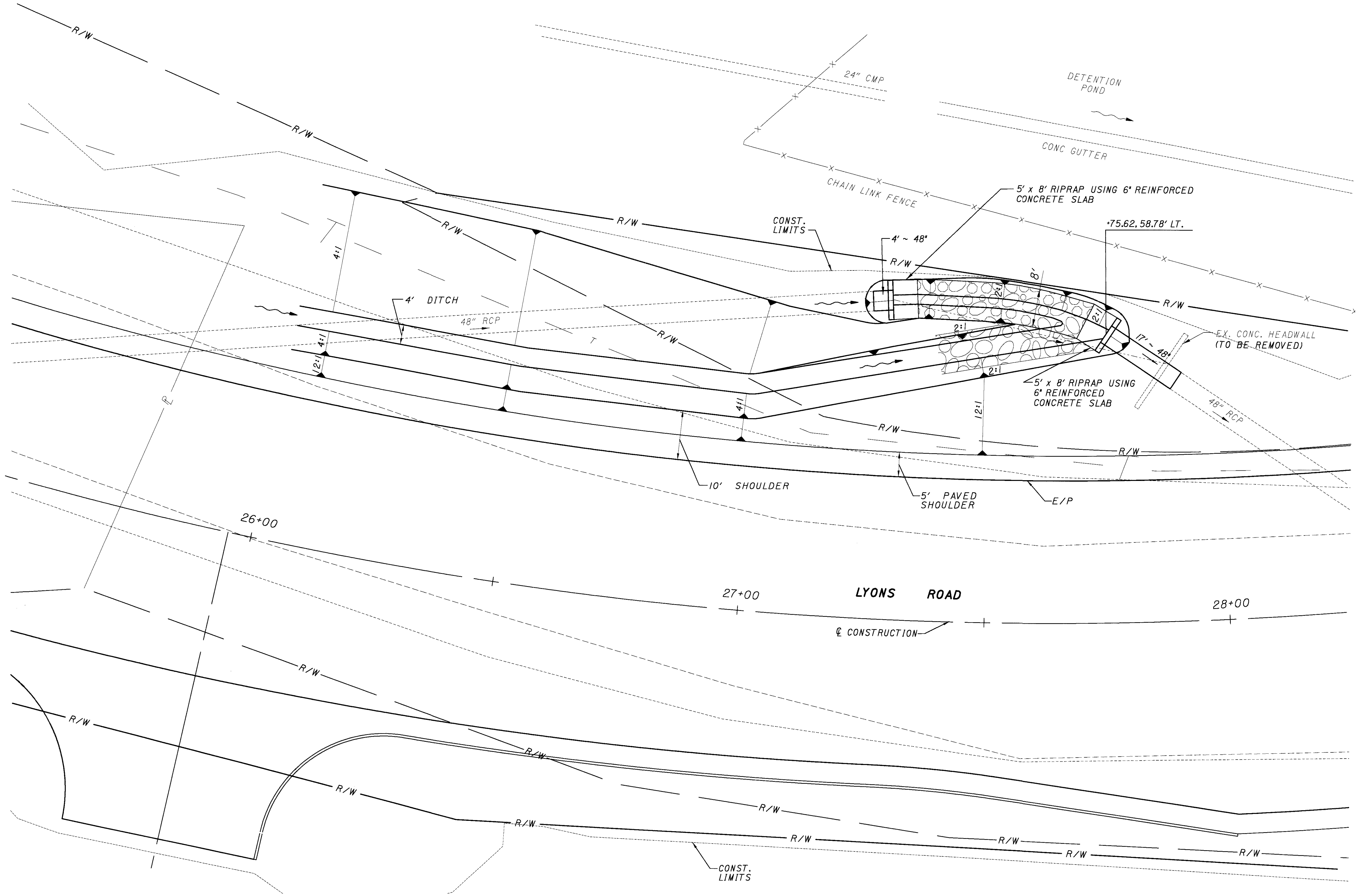


LYONS ROAD STA. 27+75.62, LT. TO STA. 29+08.34, RT. (D-11 & D-12)

SCALE: 1"=40' HORZ. (OR AS NOTED)  
1"=5' VERT.



- NOTES:
- 1. FOR CULVERT PROFILES SEE SHEET 42.
  - 2. FOR QUANTITIES SEE SHEET 18.



CALCULATED  
YNY  
CHECKED  
MJH

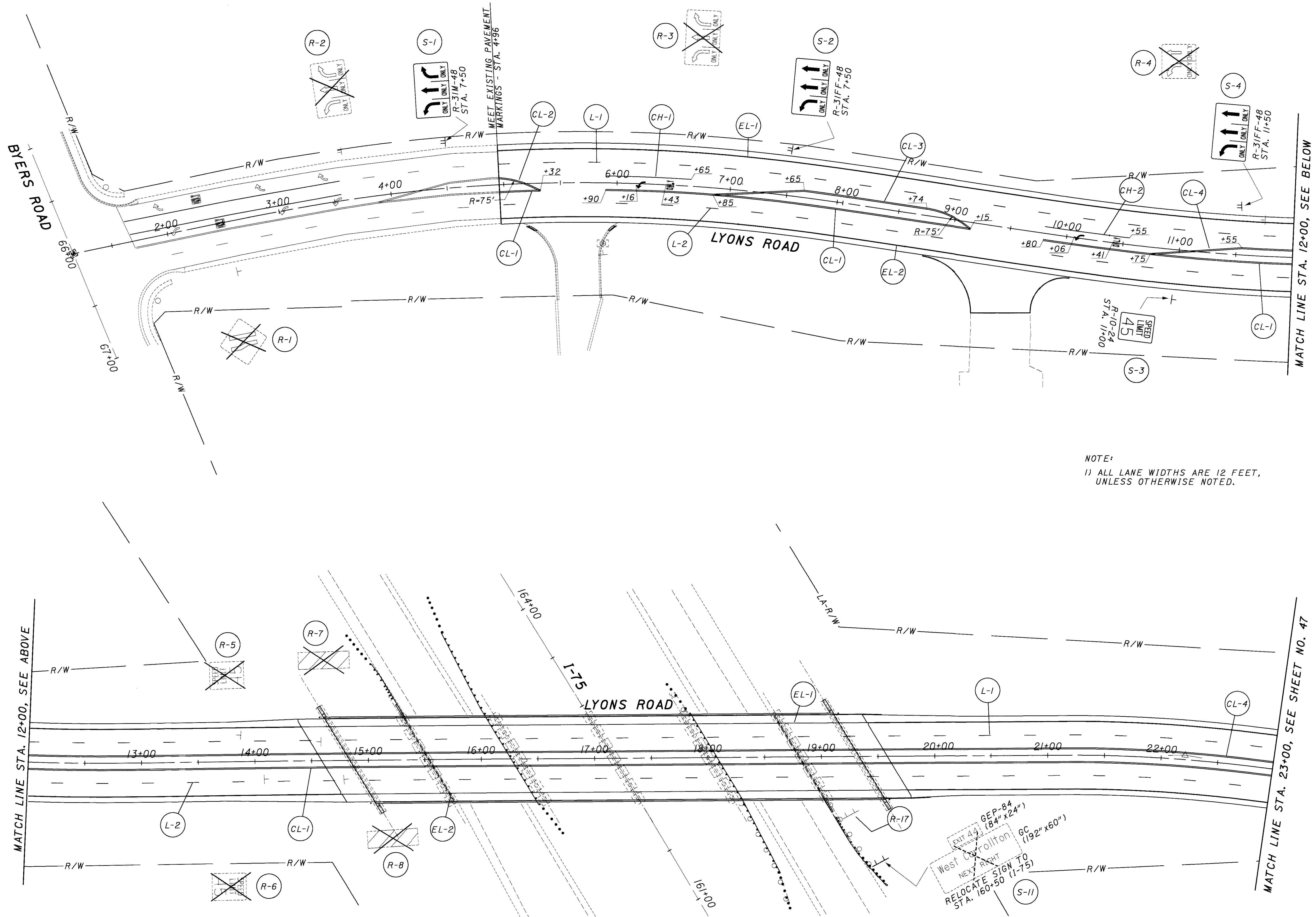
GRADING DETAIL

MOT-75-3.06

[illegible][illegible]

[illegible]





NOTE:  
1) ALL LANE WIDTHS ARE 12 FEET,  
UNLESS OTHERWISE NOTED.

**SIGNING AND PAVEMENT MARKING PLAN**  
**STA. 1+00 TO STA. 23+00 - LYONS ROAD**

**MOT-75-3.06**

NOTE:

- 1) ALL LANE WIDTHS ARE 12 FEET, UNLESS OTHERWISE NOTED.
- 2) STOP LINES ARE STATIONED FROM THE FRONT OF THE STOP LINE.
- 3) SEE SHEET 44 FOR ADDITIONAL PAVEMENT MARKING LAYOUT INFORMATION.

MATCH LINE STA. 23+00, SEE SHEET NO. 46

P.C. STA. 25+39.94 - BEGIN  
NON-CONCENTRIC PAVEMENT  
MARKING CURVES TO INTERSECTION  
(SEE TABLE, SHEET 44)

MEET EXISTING PAVEMENT  
MARKINGS - STA. 157+00

END LANE LINE (MEET EXISTING)  
STA. 32+84, 20.32' LT.  
(R-4) REMOVE CHAN. LINE  
AND YEL. EDGE LINE

(R-2) REMOVE ARROWS,  
WORDS, AND STOP LINE

LYONS ROAD  
(R-3) REMOVE LANE  
LINE & DOTTED LINE

END DOUBLE YELLOW LINE  
BEGIN SINGLE YELLOW CENTER LINES  
STA. 32+91, 2.8' LT.  
END LANE LINE (MEET EXISTING)  
STA. 33+25.51, 20.22' RT.

EXIST. CHAN. LINES  
& R.P.M.'S TO REMAIN

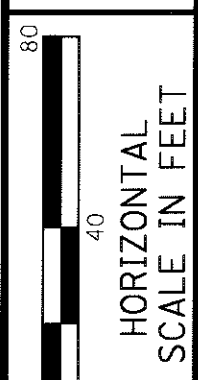
MATCH EXISTING PAVEMENT  
MARKINGS - STA. 153+25

MATCH LINE STA. 149+50, SEE THIS SHEET

(R-1) REMOVE CHAN.  
LINES & R.P.M.'S

(R-1) REMOVE CHAN.  
LINE & R.P.M.'S

MATCH LINE STA. 149+50,  
SEE THIS SHEET



CALCULATED  
MUH  
CHECKED  
JPH

SIGNING AND PAVEMENT MARKING PLAN  
STA. 23+00 TO STA. 35+00 - LYONS ROAD

MOT-75-3.06



MAINTENANCE OF TRAFFIC SIGNAL/FLASHER INSTALLATIONS

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC SIGNAL/FLASHER INSTALLATIONS WITHIN THE PROJECT UNDER THE FOLLOWING CONDITIONS:

- EXISTING SIGNAL /FLASHER INSTALLATIONS THAT THE PLANS REQUIRE THE CONTRACTOR TO ADJUST, MODIFY, ADD ONTO OR REMOVE, OR WHICH THE CONTRACTOR ACTUALLY ADJUSTS, MODIFIES OR OTHERWISE DISTURBS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ENTIRE INSTALLATION (AT AN INTERSECTION) FROM THE TIME HIS OPERATIONS FIRST DISTURB THE INSTALLATION UNTIL THE INSTALLATION HAS BEEN SUBSEQUENTLY REMOVED OR MODIFIED AND THE WORK IS ACCEPTED.
- NEW OR REUSED SIGNAL/FLASHER INSTALLATIONS OR DEVICES INSTALLED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THESE FROM THE TIME OF INSTALLATION UNTIL WORK IS ACCEPTED.

THE CONTRACTOR SHALL CORRECT AS QUICKLY AS POSSIBLE ALL OUTAGES OR MALFUNCTIONS. HE SHALL PROVIDE THE MAINTAINING AGENCY AND THE ENGINEER SUCH ADDRESSES AND PHONE NUMBERS WHERE HIS MAINTENANCE FORCES CAN BE CONTACTED. THE CONTRACTOR SHALL PROVIDE ONE OR MORE PERSONS TO RECEIVE ALL CALLS AND DISPATCH THE NECESSARY MAINTENANCE FORCES TO CORRECT OUTAGES. SUCH A PERSON OR PERSONS MAY BE USED TO PERFORM OTHER DUTIES AS LONG AS PROMPT ATTENTION IS GIVEN TO THESE CALLS AND A PERSON IS READILY AVAILABLE CONTINUOUSLY 24 HOURS A DAY, 7 DAYS A WEEK. ALL LAMP OUTAGES, CABLE OUTAGES, ELECTRICAL FAILURE, EQUIPMENT MALFUNCTIONS AND MISALIGNED SIGNAL HEADS SHALL BE CORRECTED TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK IN SERVICE WITHIN FOUR HOURS AFTER THE CONTRACTOR HAS BEEN NOTIFIED OF THE OUTAGE.

IN THE EVENT NEW SIGNALS ARE DAMAGED PRIOR TO ACCEPTANCE ALL DAMAGED EQUIPMENT EXCEPT POLES AND CONTROL EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK IN SERVICE WITHIN 8 HOURS AFTER THE CONTRACTOR'S NOTIFICATION OF THE OUTAGE. THE CONTRACTOR SHALL ARRANGE FOR FULL TRAFFIC CONTROL UNTIL THE SIGNAL IS BACK IN OPERATION.

IF THE POLES AND/OR CONTROL EQUIPMENT ARE DAMAGED AND MUST BE REPLACED, THE CONTRACTOR SHALL MAKE TEMPORARY REPAIRS AS NECESSARY TO BRING THE SIGNAL BACK INTO FULL OPERATION WITHIN THE ALLOWED 8-HOUR PERIOD, AND SHALL MAKE PERMANENT REPAIRS OR REPLACEMENTS AS SOON THEREAFTER AS POSSIBLE.

NONE OF THE ABOVE SHALL BE CONSTRUED AS COLLECTIVE OR CONSECUTIVE OUTAGE TIME PERIODS AT ANY ONE LOCATION. THAT IS WHERE MORE THAN ONE OUTAGE OCCURS AT ANY ONE LOCATION, THEN THE ALLOTED TIME LIMIT SHALL BE FOR THE WORST SINGLE OUTAGE.

WHERE OUTAGES ARE THE DIRECT RESULT OF A VEHICLE ACCIDENT THE RESPONSE OF THE CONTRACTOR SHALL BE AS OUTLINED ABOVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COLLECTION OF ANY COMPENSATION FOR THIS WORK FROM THOSE PARTIES RESPONSIBLE FOR THE DAMAGE.

WHERE THE CONTRACTOR HAS FAILED TO OR CANNOT RESPOND TO AN OUTAGE OR SIGNAL EQUIPMENT MALFUNCTION, AT THE LOCATIONS WITHIN HIS RESPONSIBILITY, WITHIN IN THE PERIODS AS SPECIFIED ABOVE, THE ENGINEER MAY IMMEDIATELY PROCEED TO MAINTAIN THE PROJECT AND ANY SUBSEQUENT BILLINGS TO THE RESPECTIVE AGENCY FOR POLICE SERVICES AND MAINTENANCE SERVICES BY COUNTY OR ODOT FORCES SHALL BE DEDUCTED FROM MONIES DUE OR TO BECOME DUE TO THE CONTRACTOR.

THE CONTRACTOR SHALL PROVIDE THE MAINTENANCE SERVICE ENTIRELY WITH HIS FORCES. WHEN THE CONTRACTOR DUE TO CONSTRUCTION PROCEDURES MUST TAKE A TRAFFIC SIGNAL OUT OF SERVICE, THIS OUTAGE SHALL NOT EXCEED 4 HOURS AND SHALL NOT INCLUDE THE HOURS OF 7 AM TO 9:30 AM AND 4 PM TO 6 PM. THE CONTRACTOR AS DESCRIBED ABOVE SHALL PROTECT ANY SIGNALIZED INTERSECTION, WHERE THE SIGNAL IS OUT OF SERVICE DUE TO CONSTRUCTION PROCEDURES, OR DUE TO AN OUTAGE OR MALFUNCTION OF EQUIPMENT, BY THE INSALLATION OF TEMPORARY "STOP" SIGNS. ANY OTHER WORK THAT DOES NOT REQUIRE THE INTERSECTION TO BE TAKEN OUT OF SERVICE MAY BE PERFORMED DURING NORMAL WORK HOURS.

ANY VEHICULAR OR PEDESTRIAN SIGNAL HEAD, EITHER NEW OR EXISTING WHICH WILL BE OUT OF OPERATION SHALL BE COVERED IN THE MANNER DESCRIBED IN 632.24.

ALL COSTS RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC, AS PER PLAN.

ITEM 632 - VEHICULAR SIGNAL HEAD, 3-SECTION, 12" LENS, I-WAY, AS PER PLAN

SECTION 732.01 OF THE SPECIFICATIONS IS MODIFIED FOR THIS PROJECT AS FOLLOWS:

- SIGNAL HEADS AND VISORS SHALL BE CONSTRUCTED OF ALUMINUM.
- SIGNAL HEADS SHALL BE FURNISHED WITH TUNNEL TYPE VISORS WHEN INDICATED IN THE PLANS.
- GLASS LENSES SHALL BE USED.
- BALANCE ADJUSTORS (TWO BOLT CLAMP TYPE, BY PELCO OR EQUAL) SHALL BE USED FOR SIGNAL HEAD ATTACHMENT TO SPAN WIRE.
- THE ENTRANCE FITTING SHALL BE OF THE TRI-STUD DESIGN WITH SERRATED RINGS IN ORDER TO ACHIEVE POSITIVE LOCKING.

THE ENGINEER SHALL CHECK THE FIELD INSTALLATION FOR ALL SIGNAL HEADS BEFORE ANY WIRING CONNECTIONS ARE MADE BY THE CONTRACTOR.

ITEM 632 - LOOP DETECTOR UNIT, 4 CHANNEL, DELAY AND EXTENSION TYPE, AS PER PLAN

MODIFICATION TO THE REQUIREMENTS OF 632 AND 732.071, LOOP DETECTOR UNITS, SHALL HAVE THE FOLLOWING REQUIREMENTS OR FEATURES:

- THE UNITS SHALL BE RACK MOUNTED, SHALL MEET NEMA TS-2 SPECIFICATIONS, SHALL HAVE A VEHICULAR COUNT OUTPUT ACCORDING TO C) OR D) BELOW, SHALL REMEMBER AND LOCK-IN AN INDICATION FOR INTERMITTENT AND/OR FAILED LOOP ON A PER CHANNEL BASIS, SHALL GENERATE AND SEND A "FAILED" LOOP OUTPUT SIGNAL TO THE CONTROLLER, AND SHALL HAVE DELAY/EXTENSION TIMING. FAILED AND COUNT SIGNALS SHALL BE ROUTED THROUGH THE UNIT'S EDGE CONNECTOR ONLY.
- THE UNIT SHALL BE SELF TUNING.
- WHERE SPECIFIED BY INTERSECTION, VEHICLE COUNTS SHALL BE TAKEN ON LONG (> 6.5 FT.) PRESENCE LOOPS. THIS OPERATION SHALL BE PERFORMED USING SCANNING DETECTORS. TWO LOOP CHANNNELS SHALL BE CONNECTED TO EACH PRESENCE LOOP. THE OUTPUT OF THE FIRST DETECTOR SHALL BE CONNECTED TO THE TIME TO SUPPLY PHASE DETECTOR INFORMATION. THE OUTPUT OF THE SECOND DETECTOR SHALL BE IN THE PULSE MODE AND BE CONNECTED TO A COUNT CHANNEL. THE CONTRACTOR SHALL DEMONSTRATE TO THE MAINTAINING AGENCY AND ODOT, THAT THE SCANNING DETECTOR CAN PERFORM THIS FUNCTION ACCURATELY IN THE FIELD TEST.
- ALL LOOP DETECTORS SHALL BE SOLID STATE. THE RACK POWER SUPPLY MODULE SHALL BE MADE BY THE SAME MANUFACTURER AS THE DETECTOR UNITS. THE PLUG-IN DETECTOR CARD SHALL HAVE ALL DETECTOR OUTPUT COMMONS JUMPERED TO GROUND FOR ALL CHANNELS. NO DETECTOR DELAY INPUT CHANNELS SHALL BE JUMPERED TO GROUND. THEY SHALL BE JUMPERED AS SPECIFIED. EACH DETECTOR RACK OUTPUT SHALL BE WIRED ACCORDING TO C) ABOVE. THE RACK SHALL BE WIRED SO ALL DETECTOR INPUTS AND OUTPUTS ARE ACCESSIBLE VIA TERMINAL TEST POINTS. IF MULTIPLE RACKS ARE USED, EACH RACK SHALL BE PROVIDED WITH ITS OWN POWER SUPPLY MODULE AND A SEPARATE INCOMING AC POWER CIRCUIT. AC POWER TO EITHER RACK SHALL BE INDEPENDENTLY DISCONNECTED WITHOUT DISRUPTING POWER TO ANY OTHER DEVICE IN THE CABINET. DISRUPTION OF AC POWER TO EACH RACK CAN BE ACCOMPLISHED BY USING A SEPARATE BREAKER OR BY PROVIDING AC POWER VIA A PLUG AND RECEPTACLE. ALL AC POWER SHALL BE TERMINATED AT THE RACK POWER SUPPLY MODULE. RACKS SHALL BE SECURED TO THE BOTTOM SHELF VIA REMOVABLE FASTENERS AND BE POSITIONED TOWARD THE LEFT SIDE OF THE CABINET. EITHER RACK SHALL BE REMOVABLE WITHOUT NEEDING TO REMOVE BOTH RACKS. RACKS SHALL HAVE ADEQUATE AIR FLOW BETWEEN THEM AND HAVE A MINIMUM OF ¾" CLEARANCE BETWEEN THE RACK STRUCTURE AND SURROUNDING CABINET ITEMS.

PAYMENT FOR THIS ITEM SHALL BE PER CHANNEL REGARDLESS OF THE NUMBER OF UNITS. PAYMENT FOR THE RACK AND THE POWER SUPPLY MODULE SHALL BE CONSIDERED INCIDENTAL TO THIS PAY ITEM.

ITEM 633 - CONTROLLER, MISC.: CONTROLLER, ACTUATED, 12-PHASE, SOLID STATE DIGITAL MICROPROCESSOR, WITH INTERNAL TIME BASE COORDINATION, AS PER PLAN

THE EXISTING CONTROL CABINET SHALL BE REMOVED AND REPLACED WITH A NEW CABINET, PRE-WIRED FOR TWELVE PHASE OPERATION. THE CABINET SHALL BE MOUNTED ON THE EXISTING CABINET FOUNDATION. ALL EXISTING FEATURES SHALL BE PROVIDED WITH THE NEW CONTROLER, INCLUDING:

- EAGLE EPAC CONTROLLER, WITH ALL NECESSARY FEATURES REQUIRED FOR COMPATIBILITY WITH THE MONARCH SYSTEM;
- MULTI-MODE FIBER OPTIC INTERCONNECT READY;
- TS2 TYPE I CABINET
- SYSTEM COMMUNICATION CAPABILITY/TELEMETRY MODE;
- CABINET DOOR LOCK CORBIN TYPE KEYED TO STANDARD #2 COMBINATION.

THE CONTRACTOR SHALL NOT ORDER CONTROL EQUIPMENT UNTIL APPROVAL HAS BEEN GRANTED IN WRITING FROM THE ENGINEER. THE CONTRACTOR SHALL ENSURE THAT THE EQUIPMENT ORDERED IS ENTIRELY COMPATIBLE WITH THE EXISTING SYSTEM, AND ALL EXISTING FEATURES WILL BE PROVIDED WITH THE PROPOSED CONTROLLER AND CABINET.

THE EXISTING FIBER OPTIC CONNECTION SHALL BE REUSED IN THE PROPOSED CABINET. THE CONTRACTOR SHALL TAKE GREAT CARE TO SALVAGE AND REUSE THE EXISTING WALL ENCLOSURE HOUSING, AND RECONNECT THE INTERCONNECT WITHOUT DAMAGING THE FIBER. ANY DAMAGED FIBER OR COMPONENTS SHALL BE REPLACED BY THE CONTRACTOR, AT HIS EXPENSE.

PAYMENT FOR THIS ITEM SHALL BE MADE AT THE CONTRACT UNIT PRICE, AND INCLUDE ALL CONNECTIONS, TESTED AND ACCEPTED.

ITEM 632 - REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN

THIS ITEM WILL INCLUDE REMOVAL OF THE FOLLOWING ITEMS, IN CONFORMANCE WITH ITEM 632.25:  
1) ONE (1) STRAIN POLE (REMOVED FOR STORAGE) AND FOUNDATION;  
2) ONE (1) CONTROL CABINET AND CONTROLLER (REMOVED FOR STORAGE);  
3) ONE (1) SIGNAL HEAD (REMOVED FOR STORAGE); AND,  
4) REMOVAL AND DISPOSAL OF WIRE AND CABLE (NOT DESIGNATED FOR REUSE).

ALL ITEMS DESIGNATED FOR STORAGE SHALL BE STORED ON THE PROJECT SITE FOR PICKUP BY THE DISTRICT. PAYMENT FOR THIS ITEM SHALL BE MADE AT THE CONTRACT UNIT PRICE.

CALCULATED  
CHECKED

TRAFFIC CONTROL GENERAL NOTES

MOT -75 - 3.06



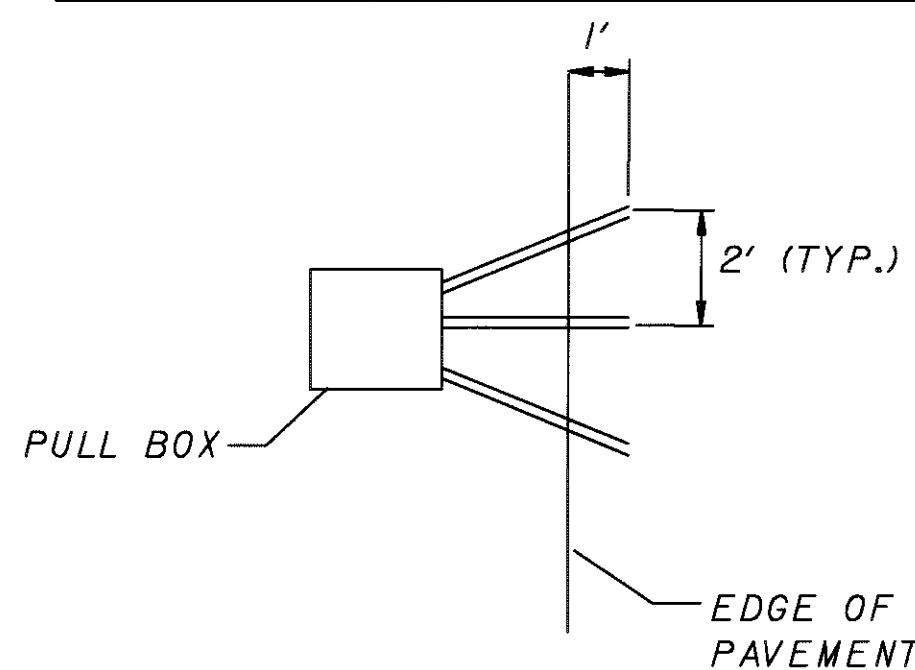
I SEE NO

SIGN ASSEMBLIES SHA

---

LOOP DETECTORS								
PLAN LOOP	LOCATION	SIZE	No. OF TURNS	ASSOC. PHASE	AMP. MODE	DELAY	EXT.	DELAY OVERRIDE
L-1	EXISTING	6' x 6'	-	φ2	PULSE	-	2.0 SEC	-
L-2	EXISTING	6' x 6'	-	φ2	PULSE	-	2.0 SEC	-
L-3	EXISTING	6' x 6'	-	φ2	PULSE	-	2.0/SYSTEM	-
L-4	EXISTING	6' x 6'	-	φ2	PULSE	-	2.0/SYSTEM	-
L-5	STA. 154+37	6' x 24'	3	φ5	PRESENCE	5 SEC		-
L-6	STA. 28+39	6' x 15'	3	φ7	PRESENCE	5 SEC		φ7
L-7	STA. 29+18	6' x 30'	3	φ4	PRESENCE	5 SEC		-
L-8	STA. 29+18	6' x 28'	3	φ4	PRESENCE	5 SEC		-
L-9	EXISTING	6' x 6'	-	φ6	PULSE	-	2.0 SEC	-
L-10	EXISTING	6' x 6'	-	φ6	PULSE	-	2.0 SEC	-
L-11	EXISTING	6' x 6'	-	φ6	PULSE	-	2.0/SYSTEM	-
L-12	EXISTING	6' x 6'	-	φ6	PULSE	-	2.0/SYSTEM	-
L-13	EXISTING	6' x 24'	-	φ1	PRESENCE	5 SEC		-
L-14	STA. 155+37	6' x 24'	3	φ1	PRESENCE	5 SEC		-
L-15	STA. 30+96	6' x 15'	3	φ3	PRESENCE	5 SEC		φ3
L-16	STA. 30+29	6' x 25'	3	φ8	PRESENCE	10 SEC		-
L-17	STA. 30+28	6' x 24'	3	φ8	PRESENCE	5 SEC		φ8
L-18	EXISTING	6' x 6'	-	SYSTEM	PULSE	-		-
L-19	EXISTING	6' x 6'	-	SYSTEM	PULSE	-		-
L-20	STA. 28+18	6' x 6'	4	φ4	PULSE	-	1.5 SEC	-
L-21	STA. 28+18	6' x 6'	4	φ4	PULSE	-	1.5 SEC	-
L-22	STA. 31+30	6' x 6'	4	φ8	PULSE		1.5 SEC	-
L-23	STA. 31+32	6' x 6'	4	φ8	PULSE		1.5 SEC	-
L-24	STA. 153+79	18' x 6'	3	φ5	PULSE	5 SEC	1.5 SEC	φ5
L-25	STA. 154+37	6' x 25'	3	φ5	PRESENCE	5 SEC		-
L-26	STA. 28+98	6' x 26'	3	φ4	PRESENCE	5 SEC		φ4
L-27	STA. 29+18	6' x 26'	3	φ4	PRESENCE	10 SEC		-
L-28	STA. 155+95	18' x 6'	3	φ1	PULSE	5 SEC		φ1
L-29	STA. 30+31	6' x 25'	3	φ8	PRESENCE	5 SEC		-

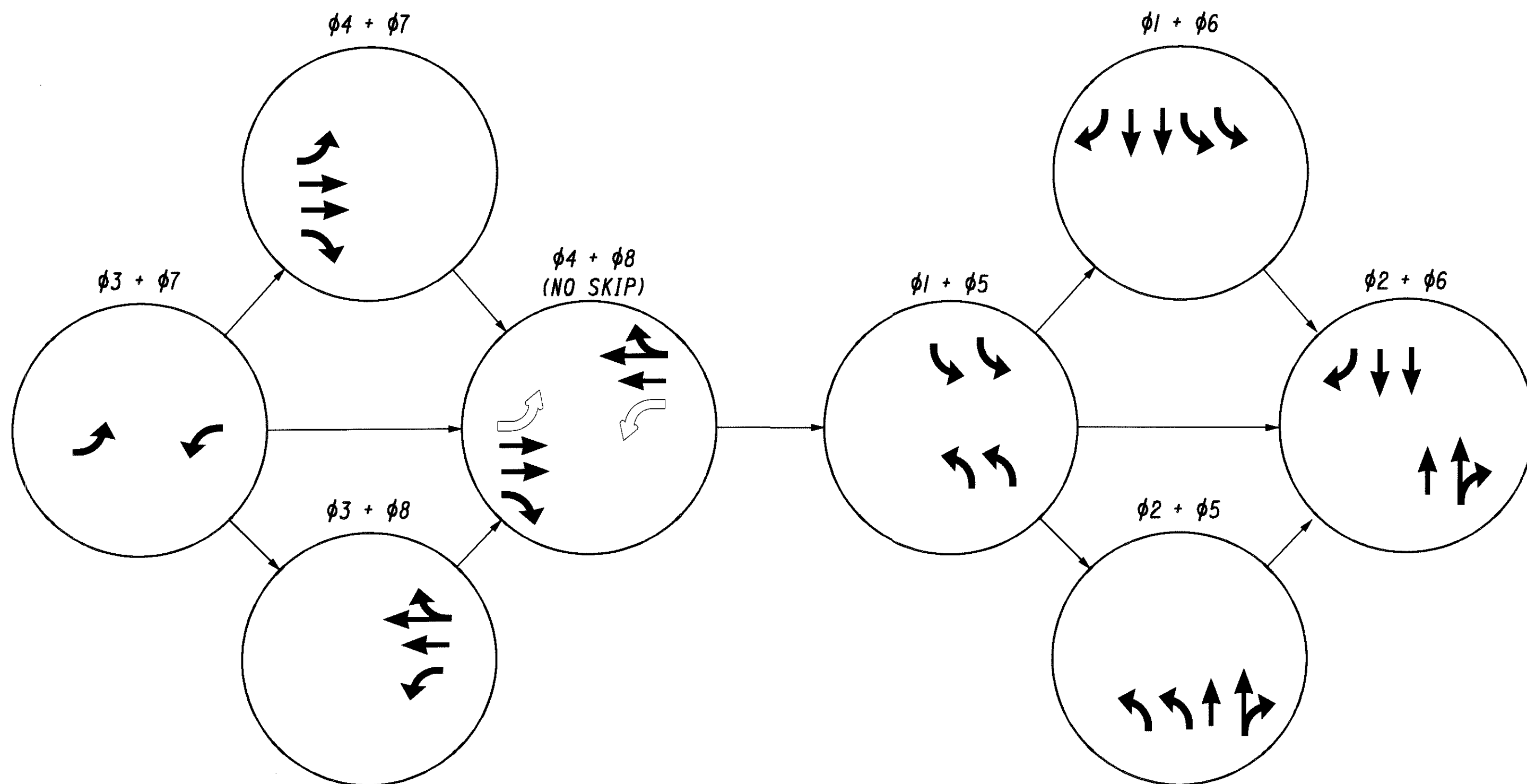
## NOTES:

1) ALL DETECTOR STATIONED FROM POINT  
CLOSEST TO CENTER OF THE INTERSECTION2) LOOP DETECTOR AMPS AND CHANNELS  
SHALL BE ASSIGNED BY EAGLE CONTROLLER  
REPRESENTITIVES.DETAIL 1 - TYPICAL PULL BOX  
TO LOOP DETAIL

TRAFFIC SIGNAL SUBSUMMARY

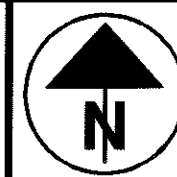
ITEM	QUAN.	UNITS	DESCRIPTION
625	100	LIN. FT.	CONDUIT, 2", 713.04
625	100	LIN. FT.	TRENCH
625	1	EACH	PULL BOX, 713.08, 18"
625	1	EACH	PULL BOX REMOVED AND REPLACED
625	2	EACH	GROUND ROD
630	10.0	SQ. FT.	SIGN, FLAT SHEET, TYPE G
630	1	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND STORAGE
630	2	EACH	SIGNING, MISC.: FIELD MOUNT SPAN WIRE SIGN
632	3	EACH	VEHICULAR SIGNAL HEAD, 3-SECTION, 12" LENS, 1-WAY, AS PER PLAN
632	3	EACH	COVERING OF VEHICULAR SIGNAL HEAD
632	4	EACH	PEDESTRIAN PUSHBUTTON
632	18	EACH	DETECTOR LOOP, AS PER PLAN
632	11	EACH	LOOP DETECTOR UNIT, 4 CHANNEL, DELAY AND EXTENSION TYPE, AS PER PLAN
632	4	EACH	LOOP DETECTOR TIE IN
632	51	LIN. FT.	MESSENGER WIRE, 7 STRAND, 3/8" DIAMETER, WITH ACCESSORIES
632	809	LIN. FT.	SIGNAL CABLE, 3 CONDUCTOR, NO. 14 AWG.
632	222	LIN. FT.	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG.
632	24	LIN. FT.	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG.
632	1	EACH	STRAIN POLE FOUNDATION
632	3700	LIN. FT.	LOOP DETECTOR LEAD-IN CABLE
632	1	EACH	STRAIN POLE, TYPE TC-81.10, DESIGN 7
632	1	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN
633	1	EACH	CONTROLLER, MISC.: CONTROLLER, ACTUATED, 12 PHASE, SOLID STATE DIGITAL MICROPROCESSOR, WITH INTERNAL TIME BASED COORDINATION, AS PER PLAN

SIGNAL PHASING



PLAN LEGEND

	3-SECTION SIGNAL HEAD		EXISTING SIGNAL HEAD (TO REMAIN)
	5-SECTION SIGNAL HEAD		EXISTING SIGNAL HEAD (TO BE REMOVED)
	3-SECTION SIGNAL HEAD (WITH TURN ARROW)		EXISTING DETECTOR LOOP (TO BE ABANDONED)
	L# VEHICLE LOOP DETECTOR		EXISTING PULL BOX (TO REMAIN)
	PULL BOX		
	LEFT-TURN SIGNAL/ LEFT-TURN LANE SIGN		
	SIGNAL HEAD I.D. NUMBER		



NO SCALE

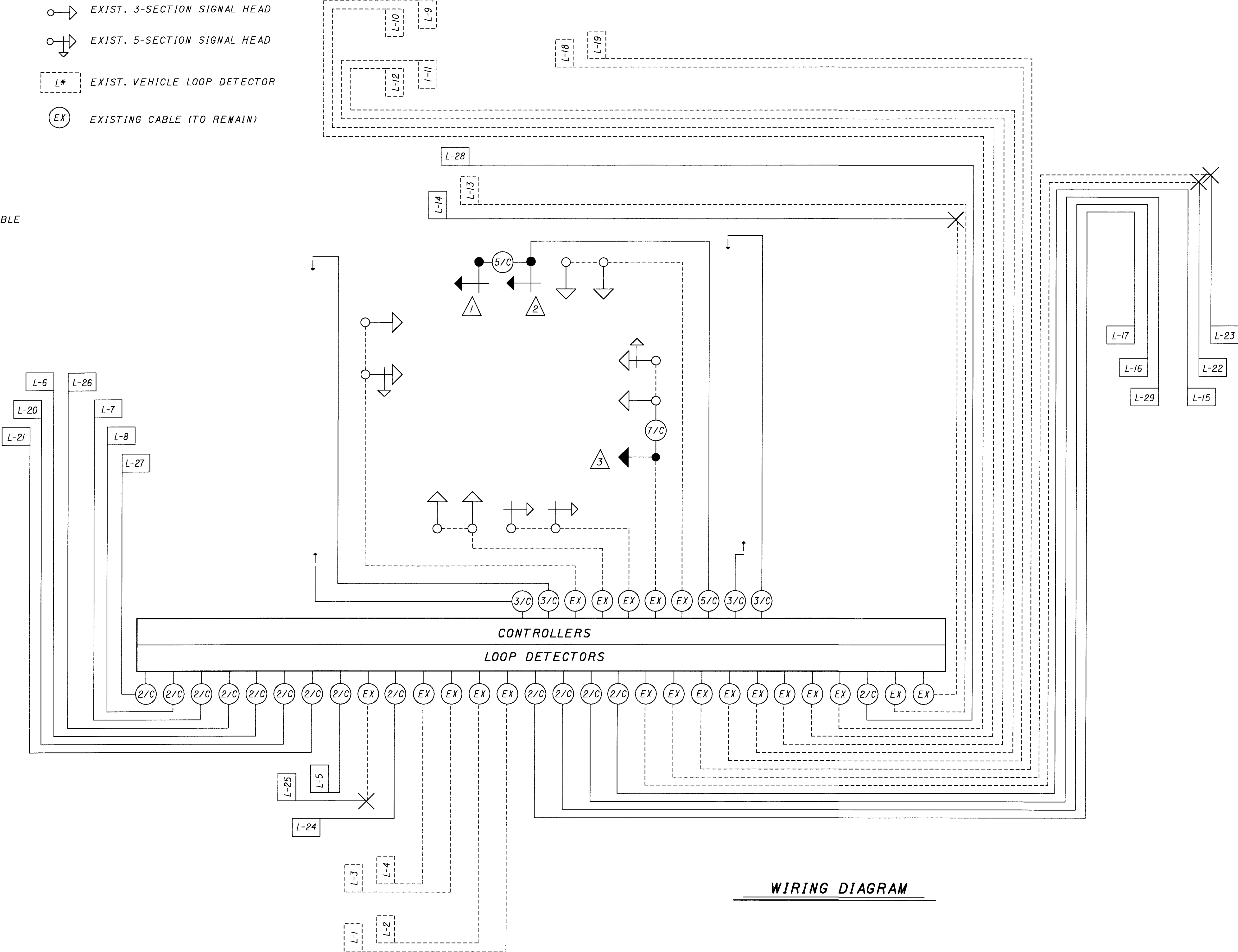
CALCULATED  
MUJH  
CHECKED  
JPHSUPPLEMENTAL SIGNAL PLAN INFORMATION  
LYONS ROAD AT S.R. 741

MOT-75-3.06

50  
90

WIRING DIAGRAM LEGEND

- 3-SECTION SIGNAL HEAD
- 3-SECTION SIGNAL HEAD  
W/TURN ARROW
- L# VEHICLE LOOP DETECTOR
- I SIGNAL HEAD I.D. NUMBER
- 5/C 5-CONDUCTOR SIGNAL CABLE
- 7/C 7-CONDUCTOR SIGNAL CABLE
- 2/C LOOP DETECTOR LEAD-IN CABLE
- PEDESTRIAN PUSH BUTTON
- LOOP DETECTOR TIE-IN
- EXIST. 3-SECTION SIGNAL HEAD
- EXIST. 5-SECTION SIGNAL HEAD
- L# EXIST. VEHICLE LOOP DETECTOR
- EX EXISTING CABLE (TO REMAIN)



NO SCALE

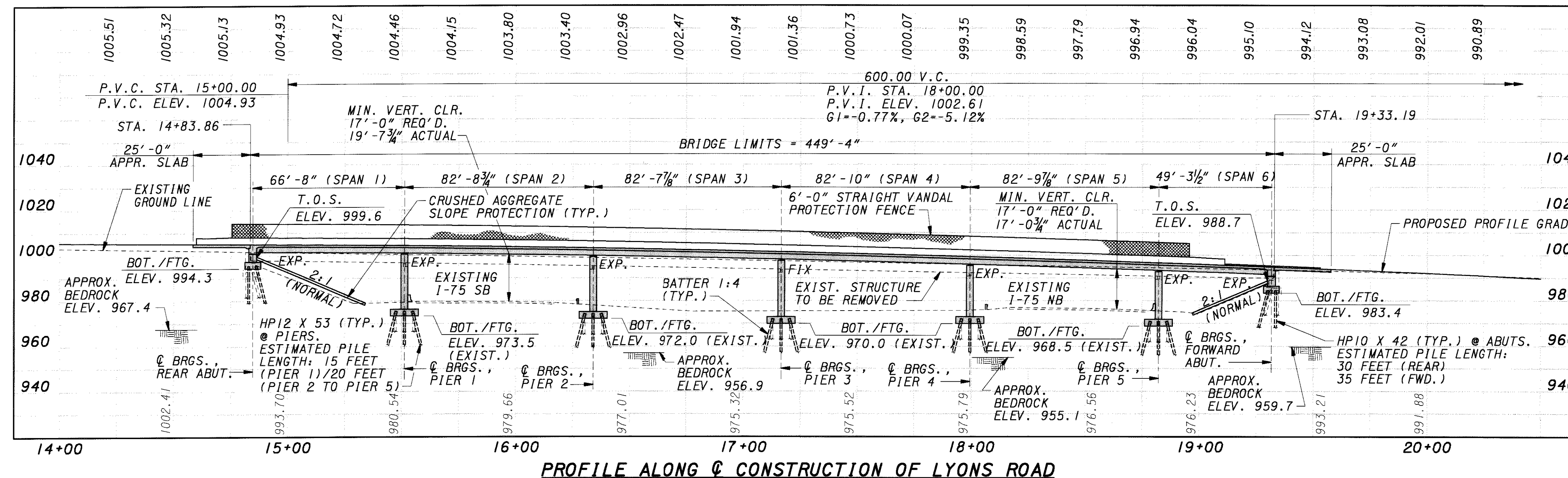
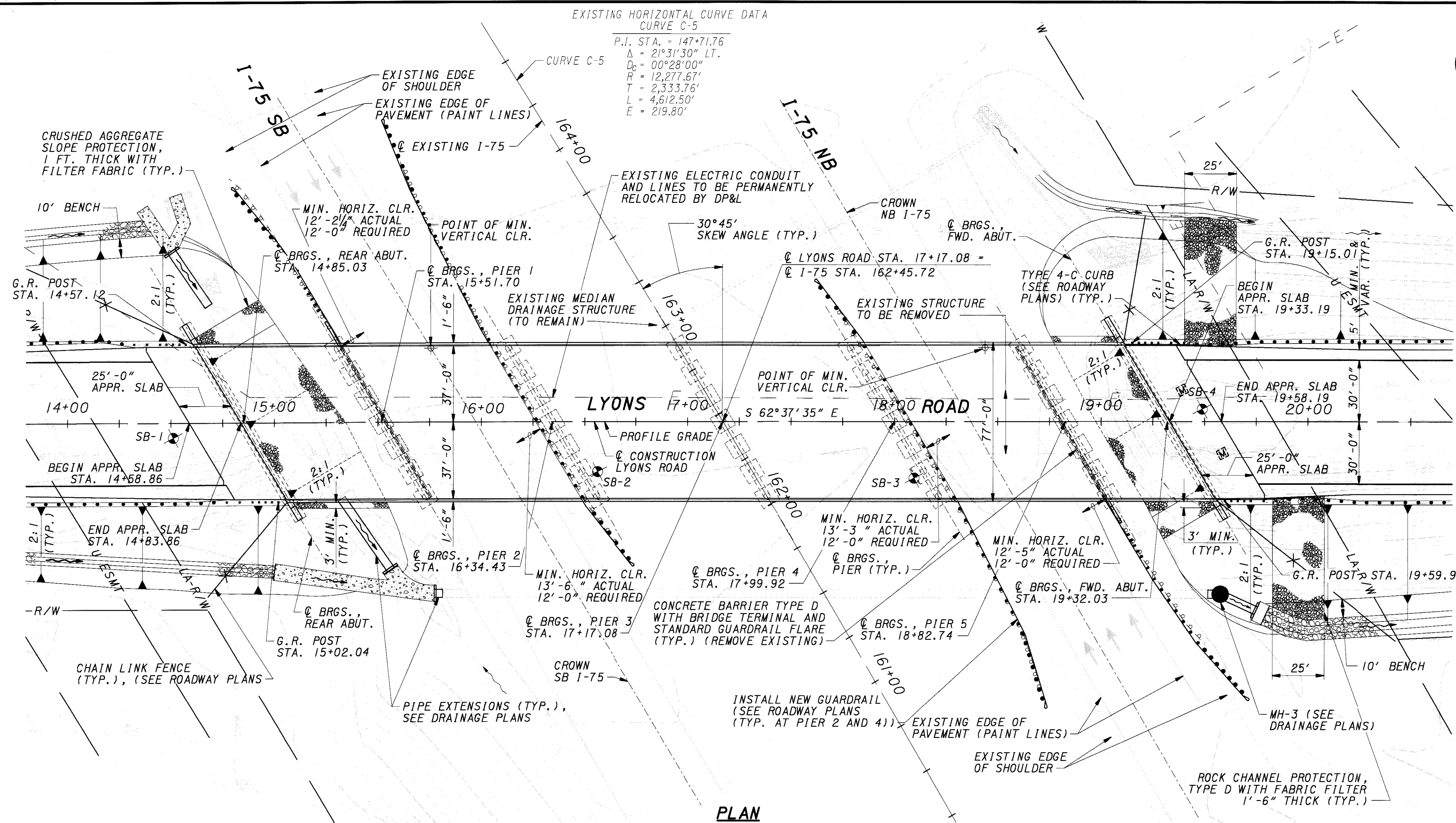
CALCULATED  
MAJH  
CHECKED  
JPH

WIRING DIAGRAM  
LYONS ROAD AT S.R. 741

MOT-75-3.06

50A  
90





**BENCHMARKS**

**BM-100:** CHISELED SQUARE CUT IN THE NORTHEAST CORNER OF CONCRETE BASE OF TRAFFIC SIGNAL POLE LOCATED IN SOUTHEAST CORNER OF LYONS AND BYERS ROAD INTERSECTION STA. 1+80.0, 54.6' RIGHT. ELEV. 1011.21

**BM-101:** CHISELED SQUARE CUT IN THE NORTHWEST CORNER OF A CONCRETE HEADWALL STA. 8+94.3, 72.9' RIGHT. ELEV. 1008.93

**BM-103:** CHISELED SQUARE CUT IN THE SOUTHWEST CORNER OF A CONCRETE BASE FOR TELEPHONE SWITCHING EQUIPMENT STA. 22+08.2, 105' LEFT. ELEV. 969.23

**BM-104:** CHISELED SQUARE CUT IN THE SOUTHWEST CORNER OF A CONCRETE HEADWALL STA. 27+83.9, 45.9' LEFT. ELEV. 952.66

**TRAFFIC DATA**  
 CURRENT ADT (2000): 19,150  
 DESIGN ADT (2021): 28,200  
 CURRENT ADTT: 2%

**LEGEND:**  
 ♦ INDICATES BORING LOCATION

**NOTE**  
 EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

**EXISTING STRUCTURE**

**TYPE:** 6-SPAN CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE

**LENGTH OF SPAN:** 66'-7", 82'-8 3/4", 82'-7 7/8", 82'-10", 82'-9 7/8", AND 49'-3 1/2" C/C BEARINGS (AS SURVEYED)

**ROADWAY:** 24'-0" F/F OF CURBS WITH 2'-2" SAFETY CURBS

**DESIGN LOADING:** CF = 130(57)

**SKEW ANGLE:** 30°43'41" RIGHT FORWARD (AS SURVEYED)

**WEARING SURFACE:** 3/4" (±) MONOLITHIC CONCRETE

**APPROACH SLABS:** AS-1-54 (25' LONG)

**ALIGNMENT:** TANGENT

**STRUCTURE FILE NUMBER:** 5706459

**DATE BUILT:** 1958

**PROPOSED STRUCTURE**

**TYPE:** 6-SPAN CONTINUOUS, COMPOSITE WELDED PLATE GIRDERS (A-572, PAINTED) WITH REINFORCED CONC. DECK, CAP AND COLUMN PIERS, AND SEMI-INTEGRAL STUB ABUTMENTS

**LENGTH OF SPAN:** 66'-8", 82'-8 3/4", 82'-7 7/8", 82'-10", 82'-9 7/8", AND 49'-3 1/2" C/C BEARINGS

**ROADWAY:** 74'-0" (TOE TO TOE OF PARAPETS)

**SIDEWALK:** NONE

**DESIGN LOADING:** HS 20-44 CASE 11 AND THE ALTERNATE MILITARY LOADING AND A FUTURE WEARING SURFACE OF 60 PSF.

**SKEW ANGLE:** 30°45'00" RIGHT FORWARD

**WEARING SURFACE:** MONOLITHIC CONCRETE

**APPROACH SLABS:** 25'-0" LONG (AS-1-81)

**ALIGNMENT:** TANGENT

**CROWN:** NORMAL CROWN (0.0156 FT./FT.)

**SLOPE PROTECTION:** CRUSHED AGGREGATE

**LATITUDE:** N 39°37'48"

**LONGITUDE:** W 84°13'48"

**STRUCTURE FILE NUMBER:** 5706467

DESIGN AGENCY: **CH2MHILL**  
 ONE SOUTH MAIN STREET, SUITE 1400  
 DAYTON, OH 45402-1828

DATE: 01/14/00  
 REVIEWED: SPW  
 DRAWN: RDC  
 DESIGNED: TAB  
 CHECKED: SKT

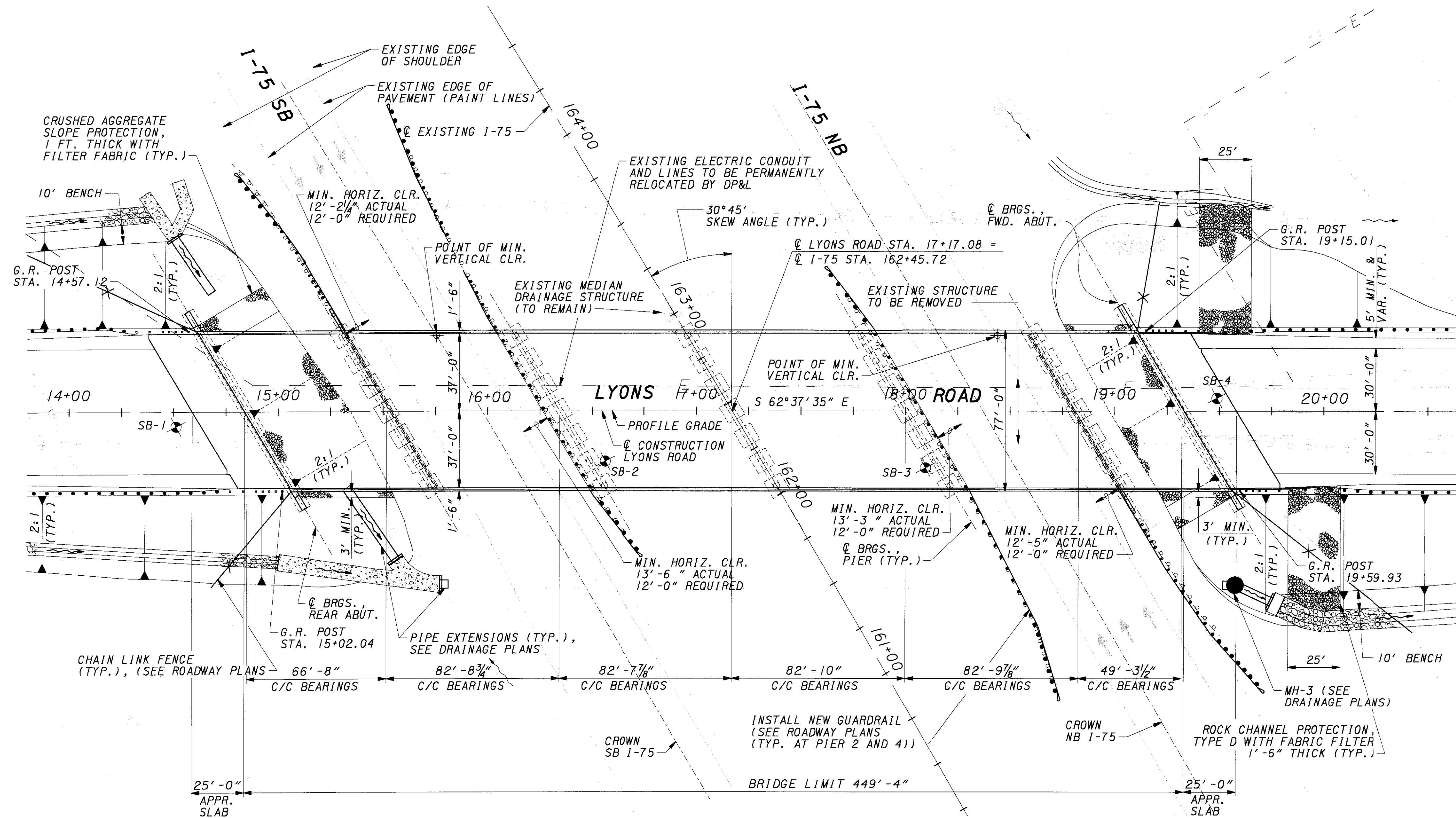
MONTGOMERY COUNTY  
 STA. 14+83.86 TO STA. 19+33.19

**S I T E P L A N**  
 BRIDGE NO. MOT-75-3.06  
 LYONS ROAD OVER I-75 MAINLINE

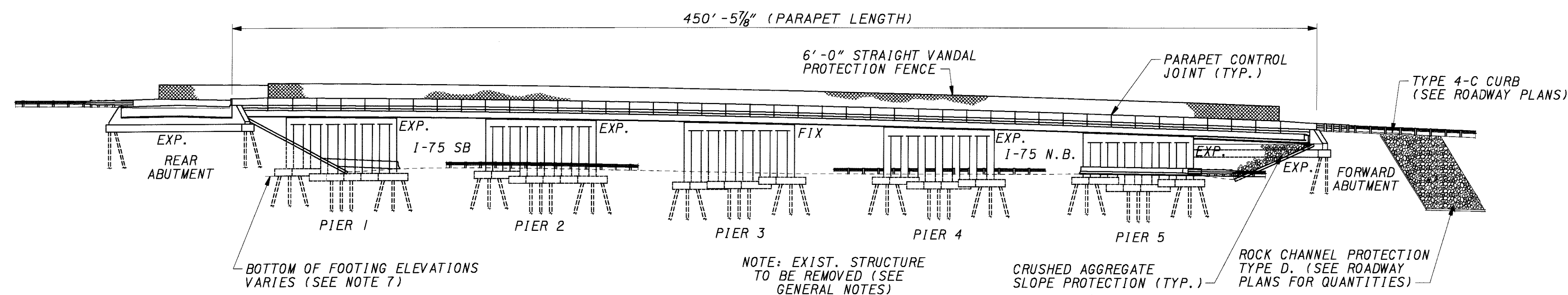
**MOT-75-3.06**

1/33

51/90



GENERAL PLAN



SOUTH ELEVATION

## NOTES:

1. FOR ABUTMENT PLANS, SEE SHEETS 7 THRU 12; SEE SHEETS 27 AND 28 FOR ABUTMENT DIAPHRAGM DETAILS.
2. FOR FRAMING PLAN AND GIRDER DETAILS, SEE SHEETS 18 THRU 21.
3. FOR BEARING DETAILS, SEE SHEETS 23 AND 24.
4. FOR TYPICAL TRANSVERSE SECTION AND SLAB PLAN, SEE SHEETS 25 AND 26.
5. FOR PARAPET AND FENCE DETAILS, SEE SHEETS 30 AND 31.
6. FOR HORIZONTAL AND VERTICAL CURVE INFORMATION, SEE SHEET 1.
7. FOR PIER PLANS AND DETAILS INCLUDING BOTTOM OF FOOTING ELEVATION AT EACH PIER, SEE SHEETS 13 THRU 17.



REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:

AS-1-81	DATED	9-15-94
BR-1	DATED	12-15-94 (REVISED 1-06-99)
BS-1-93	DATED	12-19-94
EXJ-4-87	DATED	2-14-97
GSD-1-96	DATED	2-12-97
SICD-1-96M	DATED	2-12-97 (SEE SHEET 4 FOR NOTES)
VPF-1-90M	DATED	3-20-95 (SEE SHEET 4 FOR NOTES)

AND TO SUPPLEMENTAL SPECIFICATION(S):

816	DATED	4-21-97
842	DATED	1-6-99
863	DATED	10-12-99
910	DATED	7-28-98

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO), 1996, INCLUDING THE 1997, 1998 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING: HS20-44 CASE II, THE ALTERNATE MILITARY LOADING, AND A FUTURE WEARING SURFACE OF 60 LB/SQ FT.

DESIGN DATA:  
HIGH PERFORMANCE CONCRETE HPC SS 844 FOR SUPERSTRUCTURE- COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)  
HIGH PERFORMANCE CONCRETE HPC SS 844 FOR SUBSTRUCTURE - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)  
REINFORCING STEEL - ASTM A615, A616 OR A617 GRADE 60, MINIMUM YIELD STRENGTH 60,000 PSI.  
SPIRAL REINFORCEMENT MAY BE PLAIN BARS, ASTM A82 OR A615.  
STRUCTURAL STEEL - ASTM A572 - YIELD STRESS 50,000 PSI

DECK PROTECTION METHOD: EPOXY COATED REINFORCING STEEL AND 2½" CONCRETE COVER.

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

ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN: SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND ARE NOT SEPARATELY LISTED FOR PAYMENT. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS, AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF THE HAMMER SHALL BE APPROVED BY THE ENGINEER. ALL WORK SHALL BE DONE IN A MANNER THAT WILL NOT CUT, ELONGATE, OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH THE REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

WHEN NO LONGER NEEDED TO MAINTAIN TRAFFIC, THE EXISTING STRUCTURE SHALL BE REMOVED. ABUTMENTS SHALL BE REMOVED. EXISTING PILES SHALL BE CUT OFF ONE FOOT BELOW THE BOTTOM OF PROPOSED FOOTING. PIER COLUMNS SHALL BE REMOVED TO THE TOP OF FOOTING ELEVATIONS (EXTRA CARE SHALL BE TAKEN IN NOT DAMAGING THE #11 DOWELS FROM EACH PIER FOOTING). DURING THE REMOVAL OF COLUMNS, DOWELS SHALL NOT BE CUT OR REMOVED FROM THE FOOTING AT EACH PIER.

PIER SUBSTRUCTURE CONCRETE REMOVAL SHALL BE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, A HAMMER HEAVIER THAN 35 POUNDS, BUT NOT TO EXCEED 90 POUNDS, MAY BE USED UPON 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.

PILE DRIVING CONSTRAINTS: PRIOR TO DRIVING PILES, THE SPILL THROUGH SLOPES AND THE BRIDGE APPROACH EMBANKMENT BEHIND THE ABUTMENTS IN THE WIDENED BRIDGE AREA SHALL BE CONSTRUCTED UP TO THE LEVEL OF THE SUBGRADE ELEVATION FOR A MINIMUM DISTANCE OF 200 FT. BEHIND EACH ABUTMENT. THE EXCAVATION FOR THE ABUTMENT FOOTINGS AND THE INSTALLATION OF THE ABUTMENT PILES SHALL NOT BEGIN UNTIL AFTER THE ABOVE REQUIRED EMBANKMENT HAS BEEN CONSTRUCTED.

CONSTRUCTION CONSTRAINTS: ALL EMBANKMENT MATERIAL FOR FILLING THE VOID CREATED BY EXCAVATING FOR THE ABUTMENT FOOTINGS SHALL BE 203 EMBANKMENT MATERIAL. AFTER THE FOOTING AND THE BREASTWALL HAVE BEEN CONSTRUCTED, THE VOID BEHIND EACH ABUTMENT SHALL BE FILLED UP TO THE GIRDER SEAT ELEVATION AND FROM THE GIRDER SEAT UP ON A 1:1 SLOPE TO THE SUBGRADE ELEVATION PRIOR TO CONSTRUCTING THE BACKWALL OR DIAPHRAGM AND SETTING THE GIRDERS ON THE ABUTMENT.

GENERAL NOTES

ITEM 503, UNCLASSIFIED EXCAVATION, AS PER PLAN: UNCLASSIFIED EXCAVATION SHALL BE IN ACCORDANCE WITH 503 EXCEPT THAT THE BACKFILL MATERIAL BEHIND THE ABUTMENTS SHALL BE 203 MATERIAL PLACED IN 6 INCH LIFTS.

PILE DESIGN LOADS (ULTIMATE BEARING CAPACITY): PILES SHALL BE DRIVEN TO REFUSAL ON BEDROCK. REFUSAL SHALL BE CONSIDERED AS OBTAINED BY PENETRATING SOFT BEDROCK FOR SEVERAL INCHES WITH A MINIMUM RESISTANCE OF 20 BLOWS PER INCH, OR REFUSAL SHALL BE CONSIDERED AS OBTAINED AFTER THE PILE HAS CONTACTED HARD BEDROCK AND THE PILE HAS THEN RECEIVED AT LEAST 20 BLOWS.

THE ULTIMATE BEARING VALUE IS 104 TONS PER PILE FOR THE REAR ABUTMENT PILES AND 86 TONS FOR THE FORWARD ABUTMENT PILES.  
THE ULTIMATE BEARING VALUE IS 89 TONS PER PILE FOR THE PIER PILES.

REAR ABUTMENT PILES:  
HP 10x42, 23 PILES 30 FEET LONG, ESTIMATED LENGTH  
HP 10x42, 23 PILES OF ORDER LENGTH 35 FEET LONG  
12 SPLICES  
FORWARD ABUTMENT PILES:  
HP 10x42, 23 PILES 35 FEET LONG, ESTIMATED LENGTH  
HP 10x42, 23 PILES OF ORDER LENGTH 40 FEET LONG  
12 SPLICES  
PIER 1 PILES:  
HP 12x53, 20 PILES 15 FEET LONG, ESTIMATED LENGTH  
HP 12x53, 20 PILES OF ORDER LENGTH 20 FEET LONG  
10 SPLICES  
PIER 2 THRU PIER 5 PILES:  
HP 12x53, 20 PILES 20 FEET LONG, ESTIMATED LENGTH  
HP 12x53, 20 PILES OF ORDER LENGTH 25 FEET LONG  
10 SPLICES

ITEM 507, STEEL POINTS, AS PER PLAN: STEEL PILE POINTS SHALL BE USED TO PROTECT THE TIPS OF THE PROPOSED STEEL "H" PILING. THE STEEL POINTS SHALL BE FURNISHED BY ASSOCIATED PILE AND FITTING CORPORATION, 262 RUTHERFORD BLVD., CLIFTON, NEW JERSEY 07014; INTERNATIONAL CONSTRUCTION EQUIPMENT, INC., 301 WAREHOUSE DRIVE, MATTHEWS, NORTH CAROLINA 28015; DOUGHERTY FOUNDATION PRODUCTS, INC., P.O. BOX 688, FRANKLIN LAKES, NEW JERSEY 07417; VERSA STEEL INC., 3601 N.W. YEON AVE., P.O. BOX 10559, PORTLAND, OREGON 97210; PILING ACCESSORIES, INC., 3467 GRIBBLE ROAD, MATTHEWS, NORTH CAROLINA 28105; OR BY A MANUFACTURER THAT CAN FURNISH A STEEL POINT THAT IS ACCEPTABLE TO DIRECTOR. THE MATERIAL USED FOR THE MANUFACTURING OF PILE POINTS SHALL CONFORM TO ASTM A27 450/240 - CLASS 2 - HEAT TREATED OR AASHTO M103 450/240 - HEAT TREATED. A NOTARIZED COPY OF THE MILL TEST REPORT SHALL BE SUBMITTED TO THE ENGINEER.

ITEM 516, SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN:  
REAR AND FORWARD ABUTMENT: INSTALL A 3 FOOT WIDE STRIP, 3/32 INCH THICK, GENERAL PURPOSE, HEAVY DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT AT LOCATIONS SHOWN IN THE PLANS. SECURE THE 3 FOOT WIDE NEOPRENE SHEETING TO THE CONCRETE WITH 1¼" x 3/32" (LENGTH x SHANK DIAMETER) #10 GALVANIZED BUTTON HEAD SPIKE THROUGH A 1 INCH OUTSIDE DIAMETER, #10 GAGE GALVANIZED WASHER. MAXIMUM FASTENER SPACING IS 9 INCHES. OTHER SIMILAR GALVANIZED DEVICES WHICH WILL NOT DAMAGE EITHER THE NEOPRENE OR THE CONCRETE MAY BE USED SUBJECT TO THE APPROVAL OF THE ENGINEER.

CENTER THE NEOPRENE STRIPS ON ALL JOINTS. FOR HORIZONTAL JOINTS, SECURE THE HORIZONTAL NEOPRENE STRIP BY USING A SINGLE LINE OF FASTENERS, STARTING AT 6 INCHES (±) FROM THE TOP OF THE NEOPRENE STRIP. FOR THE VERTICAL JOINTS, SECURE THE VERTICAL NEOPRENE STRIP BY USING A SINGLE VERTICAL LINE OF FASTENERS, STARTING AT 6 INCHES (±) FROM THE VERTICAL EDGE OF THE NEOPRENE STRIP NEAREST TO THE CENTERLINE OF ROADWAY. FOR VERTICAL JOINTS, INSTALL 2 ADDITIONAL FASTENERS, AT 6 INCHES CENTER TO CENTER, ACROSS THE TOP OF THE NEOPRENE STRIP ON THE SAME SIDE OF THE VERTICAL JOINT AS WHERE THE SINGLE VERTICAL ROW OF FASTENERS IS LOCATED.

THE VERTICAL NEOPRENE STRIPS SHOULD COMPLETELY OVERLAP THE HORIZONTAL STRIPS. LAPS IN THE LENGTH OF THE HORIZONTAL STRIPS DUE TO MATERIAL MANUFACTURING SHALL BE AT LEAST 1 FOOT IN LENGTH, IF NOT VULCANIZED OR ADHESIVE BONDED, OR 6 INCHES IN LENGTH IF THE LAP IS VULCANIZED OR ADHESIVE BONDED. NO LAPS ARE ACCEPTABLE IN VERTICALLY INSTALLED NEOPRENE STRIPS.

THE NEOPRENE SHEETING SHALL BE 3/32 INCH THICK GENERAL PURPOSE, HEAVY DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT. THE SHEETING SHALL BE "FAIRPRENE NUMBER NN-0003", BY E.I. DUPONT DE NEMOURS AND COMPANY, INC., "WINGPRENE" BY THE GOODYEAR TIRE AND RUBBER COMPANY, OR AN APPROVED ALTERNATE. THE NEOPRENE SHEETING SHALL CONFORM TO THE FOLLOWING:

DESCRIPTION OF TEST	ASTM METHOD	REQUIREMENT
THICKNESS, INCHES	D 751	0.094 ± 0.01
BREAKING STRENGTH, GRAB WXF, LBS, MINIMUM	D 751	700 x 700
ADHESIVE 1" STRIP, 2" MINIMUM, LBS, MINIMUM	D 751	9
BURST STRENGTH (MULLEN) PSI, MINIMUM	D 751	1400
HEAT AGING 70 HOURS T 212 °F, 180 BEND WITHOUT CRACKING	D 2136	NO CRACKING OF COATING
LOW TEMPERATURE BRITTLINESS 1 HOUR AT -40 °F, BEND AROUND ¼ INCH MANDREL	D 2136	NO CRACKING OF COATING

PAYMENT FOR LABOR, MATERIALS, AND INSTALLATION OF THE ABOVE ITEMS SHALL BE INCLUDED IN ITEM 516, SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN.

ITEM 516, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN: FOR BEARING PLAN NOTES, SEE SHEET 23.

ITEM 816, FIELD PAINTING OF NEW STRUCTURAL STEEL, INTERMEDIATE AND FINISH COAT, SYSTEM IZEU: THE FINISH COAT COLOR SHALL BE BLUE, MEETING NO. FS-595B-15526.

UTILITY LINES: ALL EXPENSE INVOLVED IN RELOCATING (INSTALLING) THE AFFECTED UTILITY LINES SHALL BE BORNE BY THE UTILITY(IES). THE CONTRACTOR AND UTILITY(IES) ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

CONCRETE PARAPETS: AS SOON AS A CONCRETE SAW CAN BE OPERATED WITHOUT DAMAGING THE FRESHLY PLACED CONCRETE, 1¼" DEEP CONTROL JOINTS SHALL BE SAWS INTO THE PERIMETER OF THE CONCRETE PARAPET. THE SAW CUT SHALL BE MADE IN THE COMPLETE CIRCUMFERENCE OF THE PARAPET, STARTING AND ENDING AT THE ELEVATION OF THE CONCRETE DECK. THE SAWCUTS SHALL BE PLACED AT A MINIMUM OF 6 FEET AND A MAXIMUM OF 10 FEET CENTERS. THE USE OF AN EDGE GUIDE, FENCE, OR JIG IS REQUIRED TO INSURE THAT THE CUT JOINT IS STRAIGHT, TRUE, AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAW BLADE, A NOMINAL WIDTH OF ¼ INCH. THE PERIMETER OF THE DEFLECTION CONTROL JOINT SHALL BE SEALED WITH A CAULKING MATERIAL CONFORMING TO FEDERAL SPECIFICATION, TT-S-00227E TO A MINIMUM DEPTH OF 1 INCH. THE BOTTOM ½ INCH OF THE INSIDE AND OUTSIDE FACE SHOULD BE LEFT UNSEALED TO ALLOW WATER TO ESCAPE.

ITEM 611, REINFORCED CONCRETE APPROACH SLAB (T=15 IN.), AS PER PLAN: CONCRETE FOR APPROACH SLABS SHALL CONFORM TO HPC SS 844. APPROACH SLAB REINFORCING AND DIMENSIONS SHALL CONFORM TO STD. DWG. AS-1-81. FOR APPROACH SLAB QUANTITIES, SEE ROADWAY PLANS. THE SHAPE OF THE CURBING ON THE FORWARD ABUTMENT APPROACH SLAB SHALL BE TRANSITIONED FROM THE STANDARD SECTION ON THE ROADWAY APPROACH TO THE SECTION USED ON THE BRIDGE, WITHIN THE LIMITS OF THE APPROACH SLAB. PAYMENT OF THE CURB, TYPE 4-A, SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 611.

DESIGN AGENCY  
**CH2M HILL**  
ONE DAYTON CENTRE, SUITE 1400  
DAYTON, OH 45402-1628

DATE  
06/02/00  
REVIEWED  
RGS  
DRAWN  
JTC  
DESIGNED  
SKT  
CHECKED  
TAB

STRUCTURE FILE NUMBER  
5706467

GENERAL NOTES  
BRIDGE NO. MOT-75-0306  
LYONS ROAD OVER I-75 MAINLINE

MOT-75-3.06

3 / 33

53  
90



ABBREVIATIONS

THE FOLLOWING ABBREVIATIONS HAVE BEEN USED THROUGHOUT THESE PLANS TO INDICATE THE DESIGNATIONS CONTAINED IN THE LEGEND BELOW:

ABUT. = ABUTMENT  
APPR. = APPROACH  
APPROX. = APPROXIMATE  
A.P.P. = AS PER PLAN  
ASTM = AMERICAN STANDARD  
OF TESTING AND MATERIALS

B = BASELINE  
BOT. = BOTTOM  
BOT./FTG. = BOTTOM OF FOOTING  
BR = BORING  
BRGS. = BEARINGS  
B/W = BETWEEN

C/C = CENTERLINE TO CENTERLINE  
C = CENTERLINE  
C.I.P. = CAST-IN-PLACE  
CJ = CONSTRUCTION JOINT  
CLR. = CLEAR  
CMS = CONSTRUCTION AND MATERIAL  
SPECIFICATIONS  
CONC. = CONCRETE  
CONN. = CONNECTS  
CONST. = CONSTRUCTION  
CPP = CORRUGATED  
PLASTIC PIPE  
CU FT = CUBIC FOOT  
CU YD = CUBIC YARD  
CVN = CHARPY-V-NOTCH

DIA. = DIAMETER  
DIM. = DIMENSION  
DL = DEAD LOAD  
DWG. = DRAWING

EF = EACH FACE  
EL. / ELEV. = ELEVATION  
E/P = EDGE OF PAVEMENT  
EQ. = EQUAL  
EXIST. = EXISTING  
EXP. = EXPANSION

F/F = FACE TO FACE  
FF = FAR FACE  
F = FLOWLINE  
FNDN. = FOUNDATION  
FT. / ' = FOOT  
FTG. = FOOTING  
FWD. = FORWARD

GEN. = GENERAL  
G.R. = GUARDRAIL

HORIZ. = HORIZONTAL  
HPC = HIGH PERFORMANCE  
CONCRETE  
H.S. = HIGH STRENGTH

IN. / " = INCH  
INCL. = INCLUDED  
INT. = INTERMEDIATE

KIPS = KILOPOUNDS  
KSI = KILOPOUNDS PER  
SQUARE INCH

LBS = POUNDS  
LIN FT = LINEAR FOOT  
LL = LIVE LOAD  
LS = LUMP SUM  
LT. = LEFT

MAX. = MAXIMUM  
MIN. = MINIMUM  
MISC. = MISCELLANEOUS

NB = NORTHBOUND  
NF = NEAR FACE  
# / NO. = NUMBER  
NW = NORTHWEST

PEJF = PREFORMED  
EXPANSION  
JOINT FILLER

P = PLATE  
PROJ. = PROJECT  
PROP. = PROPOSED  
PSI = POUNDS PER SQUARE  
INCH

P.V.C. = POINT OF VERTICAL  
CURVATURE  
P.V.I. = POINT OF VERTICAL  
INTERSECTION

R = RADIUS  
RD. = ROAD  
RDWY. = ROADWAY  
RT. = RIGHT

SB = SOUTHBOUND  
SPA. = SPACING  
SQ FT = SQUARE FOOT  
STA. = STATION  
STD. = STANDARD  
SUPER. = SUPERSTRUCTURE  
SW = SOUTHWEST

TBM = TEMPORARY BENCH  
MARK  
T.O.S. = TOP OF SLOPE  
TYP. = TYPICAL

W.P. = WORKING POINT

VAR. = VARIES  
V.C. = VERTICAL CURVE  
VERT. = VERTICAL

YD = YARD

ESTIMATED QUANTITIES

BRIDGE MOT-75-0306

CALCULATED BY: JTC/DGS  
CHECKED BY: SKT

DATED: 5/00  
DATED: 5/00

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	SUPER.	ABUT.	PIER	GEN.
202	11203	LUMP	LUMP	PORTION OF STRUCTURE REMOVED, OVER 20 FT. SPAN, A.P.P.				LUMP
503	21101	1117	CU YD	UNCLASSIFIED EXCAVATION, AS PER PLAN		406	711	
505	11100	LUMP	LUMP	PILE DRIVING EQUIPMENT MOBILIZATION				LUMP
507	00101	1725	LIN FT	STEEL PILES HP 10x42, FURNISHED, AS PER PLAN		1725		
507	00151	1495	LIN FT	STEEL PILES HP 10x42, DRIVEN, AS PER PLAN		1495		
507	00201	2400	LIN FT	STEEL PILES HP 12x53, FURNISHED, AS PER PLAN			2400	
507	00251	1900	LIN FT	STEEL PILES HP 12x53, DRIVEN, AS PER PLAN			1900	
507	50500	74	EACH	STEEL PILE SPLICES		24	50	
507	93301	146	EACH	STEEL POINTS (OR SHOE), AS PER PLAN		46	100	
SPECIAL	51267510	2139	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) *	931	117	1091	
516	13900	48	SQ FT	2" PREFORMED EXPANSION JOINT FILLER		48		
516	14021	198	LIN FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN		198		
516	44301	10	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD		10		
516	44101	10	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD			10	
516	44101	10	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD			10	
516	44101	10	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD			10	
516	44101	10	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD			10	
516	44101	10	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD			10	
516	44201	10	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD			10	
516	44201	10	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD			10	
518	21230	LUMP	LUMP	POROUS BACKFILL WITH FILTER FABRIC				LUMP
518	40000	224	LIN FT	6" PERFORATED CORRUGATED PLASTIC PIPE		224		
518	40010	38	LIN FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCL. SPECIALS		38		
601	20000	893	SQ YD	CRUSHED AGGREGATE SLOPE PROTECTION		893		
604	36600	4	EACH	PRECAST REINFORCED CONCRETE OUTLET		4		
SPECIAL	60739900	842	LIN FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC	842			
816	00600	LUMP	LUMP	FIELD PAINTING OF NEW STEEL, INTERMEDIATE AND FINISH	LUMP			
844	48000	976	CU YD	HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE (DECK)	908	68		
844	48020	105	CU YD	HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE (PARAPET)	105			
844	48040	794	CU YD	HIGH PERFORMANCE CONCRETE, SUBSTRUCTURE		245	549	
844	49000	LUMP	LUMP	HIGH PERFORMANCE CONCRETE TRIAL MIX				LUMP
844	49010	LUMP	LUMP	HIGH PERFORMANCE CONCRETE TESTING				LUMP
863	10080	LUMP	LUMP	STRUCTURAL STEEL MEMBERS, LEVEL (4) FABRICATION	LUMP			
863	20000	10890	EACH	WELDED STUD SHEAR CONNECTOR	10890			

\* SEE PROPOSAL NOTE  
FOR ROCK CHANNEL PROTECTION PAY ITEM AND QUANTITIES, SEE ROADWAY PLANS.  
FOR REINFORCED CONCRETE APPROACH SLAB NOTES, SEE SHEET 3; FOR SECTIONS AND QUANTITIES, SEE ROADWAY PLANS.

FOR AS PER PLAN NOTES, SEE GENERAL NOTES ON SHEET 3.

DESIGN AGENCY  
**CH2MHILL**  
ONE DAYTON CENTRE SUITE 1400  
DAYTON, OH 45402-1828

DATE  
REVIEWED  
**RGS** 06/02/00  
STRUCTURE FILE NUMBER  
5706467

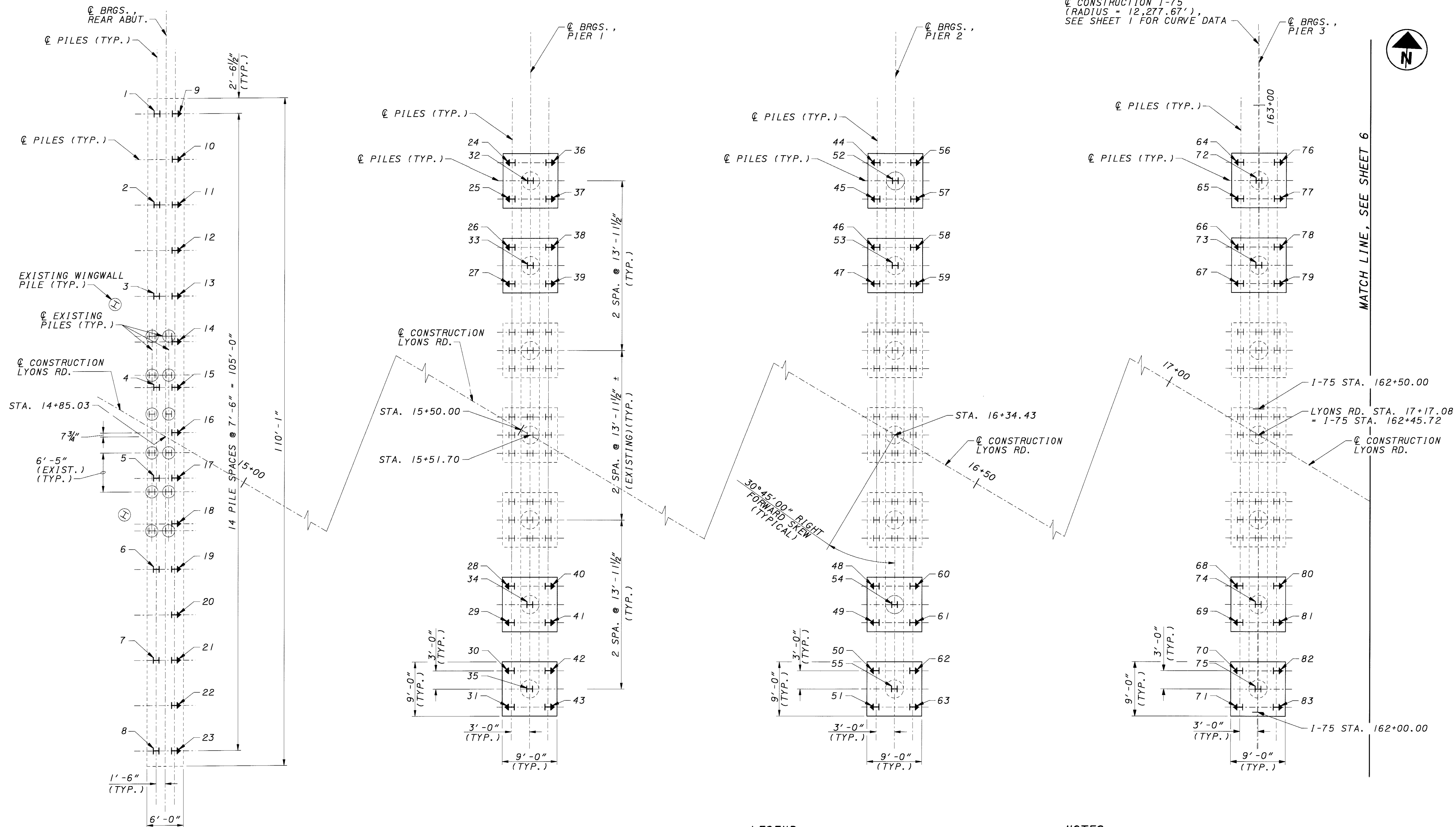
DRAWN  
**JTC**  
DESIGNED  
**JTC/DGS**  
CHECKED  
**SKT**

GENERAL NOTES AND ESTIMATED QUANTITIES  
BRIDGE NO. MOT-75-0306  
LYONS ROAD OVER I-75 MAINLINE

MOT-75-3.06

4 / 33

54  
90

**LEGEND:**

- H EXISTING STEEL PILE AT PIERS
- ⊕ EXISTING STEEL PILE AT ABUTMENTS
- H NEW VERTICAL STEEL PILE  
(HP 10x42 AT ABUTMENTS)  
(HP 12x53 AT PIERS)
- NEW STEEL PILE-BATTERED 1H:4V  
(HP 10x42 AT ABUTMENTS)  
(HP 12x53 AT PIERS)

**NOTES:**

1. FOR ABUTMENT PLANS AND DETAILS, SEE SHEETS 7 THRU 12.
2. FOR PIER PLANS AND DETAILS, SEE SHEETS 13 THRU 17.
3. FOR FOUNDATION AND PILE LAYOUT AT REMAINING SUBSTRUCTURE UNITS, SEE SHEET 6.



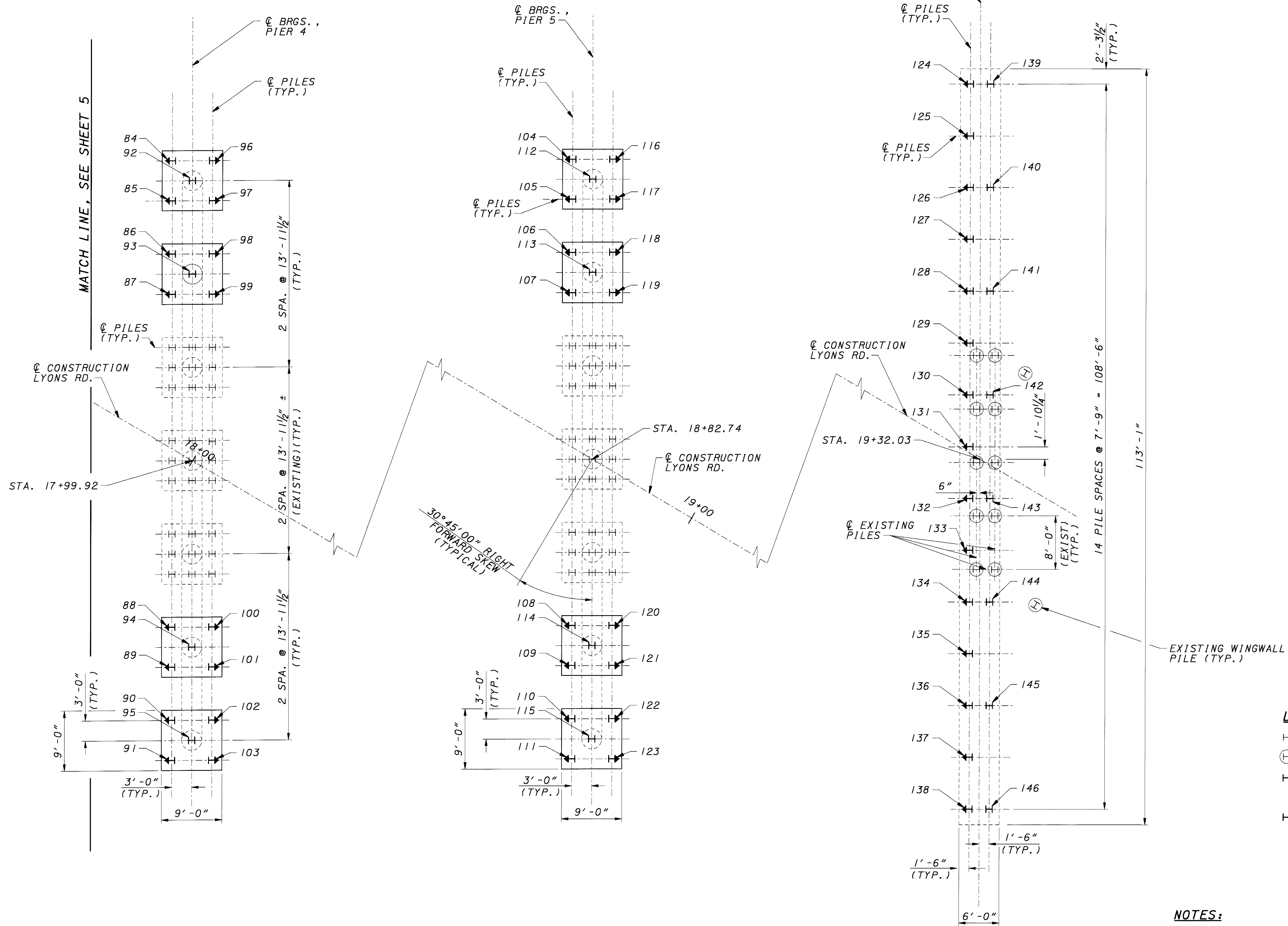
MATCH LINE, SEE SHEET 6

**FOUNDATION AND PILE LAYOUT PLAN 1**  
 BRIDGE NO. MOT-75-0306  
 LYONS ROAD OVER I-75 MAINLINE

MOT-75-3.06

5/33

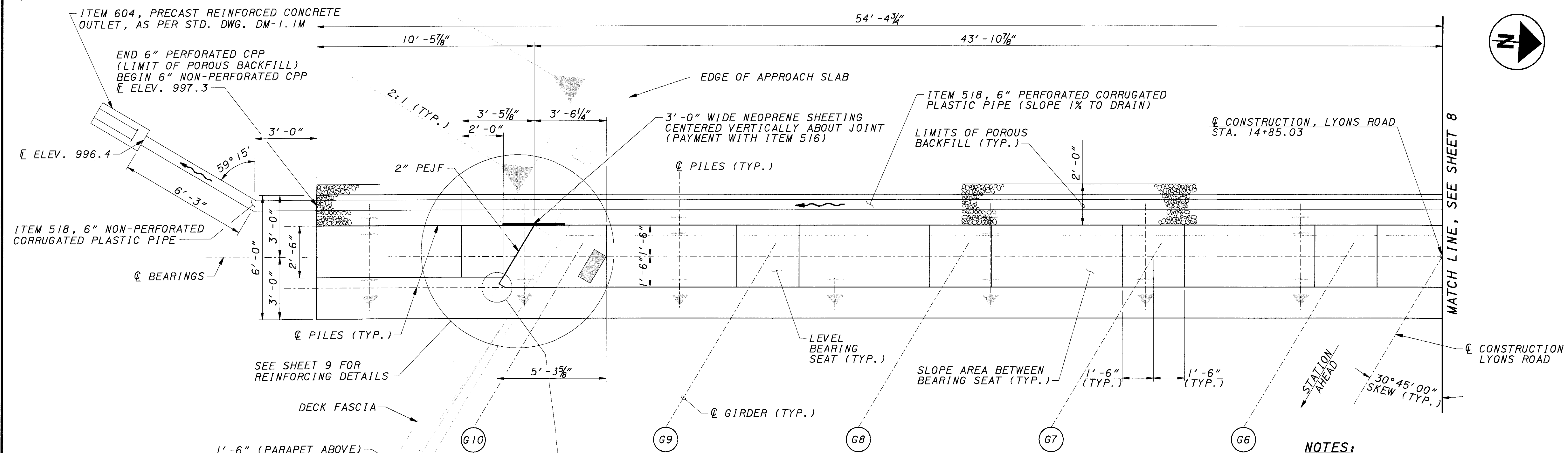
55  
90



- LEGEND:**
- H EXISTING STEEL PILE AT PIERS
  - ⊕ EXISTING STEEL PILE AT ABUTMENTS
  - H NEW VERTICAL STEEL PILE  
(HP 10x42 AT ABUTMENTS)  
(HP 12x53 AT PIERS)
  - NEW STEEL PILE-BATTERED 1H:4V  
(HP 10x42 AT ABUTMENTS)  
(HP 12x53 AT PIERS)

- NOTES:**
1. FOR ABUTMENT PLANS AND DETAILS, SEE SHEETS 7 THRU 12.
  2. FOR PIER PLANS AND DETAILS, SEE SHEETS 13 THRU 17.
  3. FOR FOUNDATION AND PILE LAYOUT AT REMAINING SUBSTRUCTURE UNITS, SEE SHEET 5.





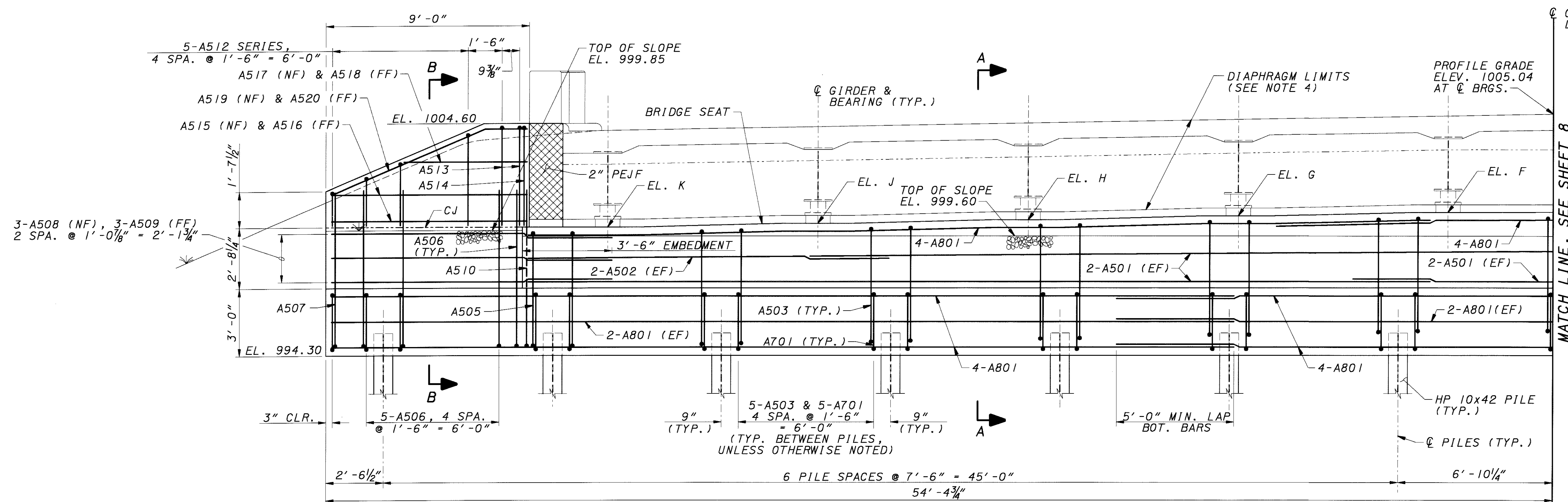
**LEGEND:**

- DENOTES VERTICAL HP 10x42 STEEL PILE
- DENOTES HP 10x42 STEEL PILE BATTERED 1H:4V IN THE DIRECTION OF THE ARROW
- DENOTES GIRDER DESIGNATION
- BEARING RETAINER ASSEMBLY (SEE SHEET 23)

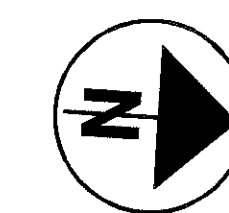
**PARTIAL PLAN**

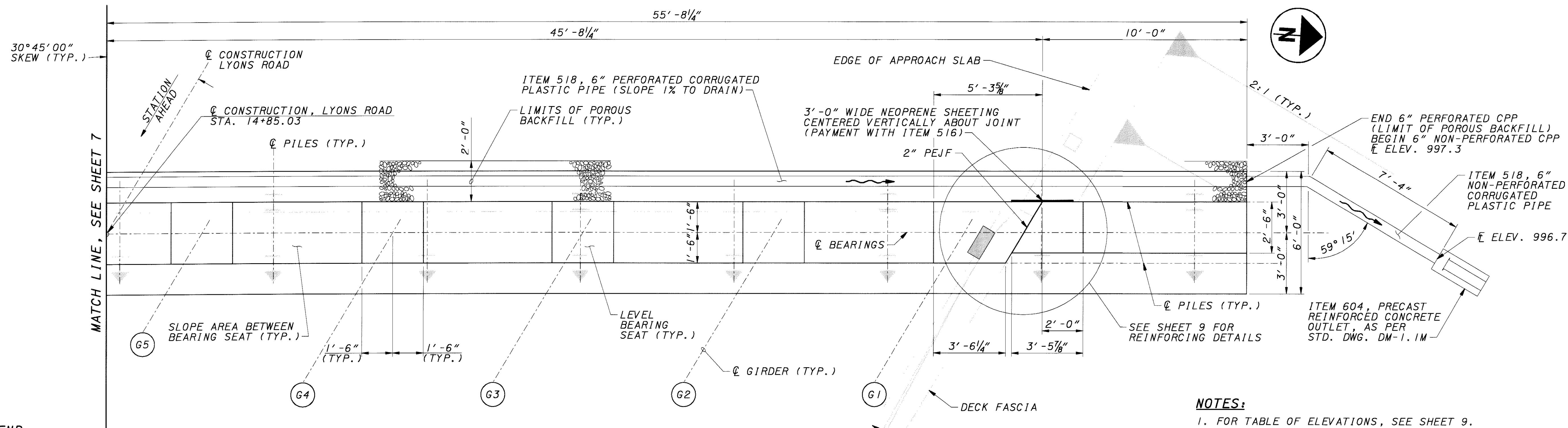
**NOTES:**

1. FOR TABLE OF ELEVATIONS, SEE SHEET 9.
2. REINFORCING STEEL LAP LENGTHS:  
UNLESS OTHERWISE NOTED, LAPS SHALL BE AS FOLLOWS:  
NO. 5 BARS 3'-6"  
NO. 7 BARS 5'-2"  
NO. 8 BARS 6'-10"  
FOR REINFORCING STEEL LIST, SEE SHEET 33.
3. FOR ABUTMENT DETAILS INCLUDING SECTIONS A-A AND B-B, SEE SHEET 9.
4. FOR ABUTMENT DIAPHRAGM DETAILS, SEE SHEET 27.
5. FOR PILES AND FOUNDATION LAYOUT, SEE SHEET 5.



**PARTIAL ELEVATION**





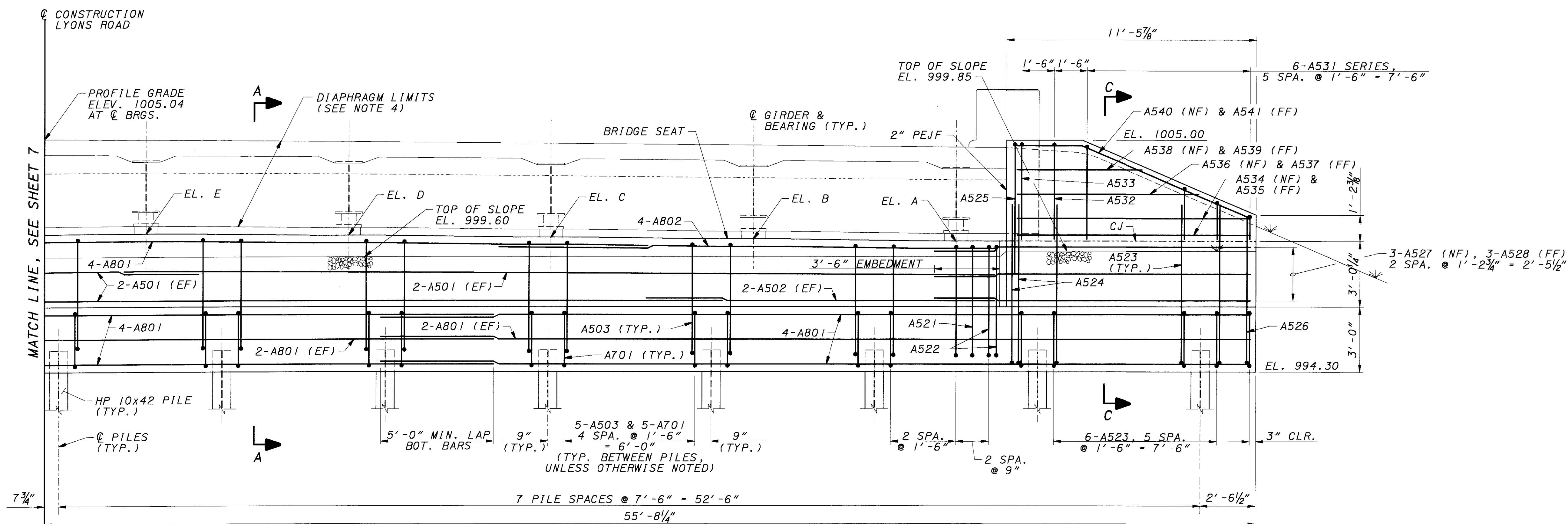
**LEGEND:**

- DENOTES VERTICAL HP 10x42 STEEL PILE
- DENOTES HP 10x42 STEEL PILE BATTERED 1H:4V IN THE DIRECTION OF THE ARROW
- DENOTES GIRDER DESIGNATION
- BEARING RETAINER ASSEMBLY (SEE SHEET 23)

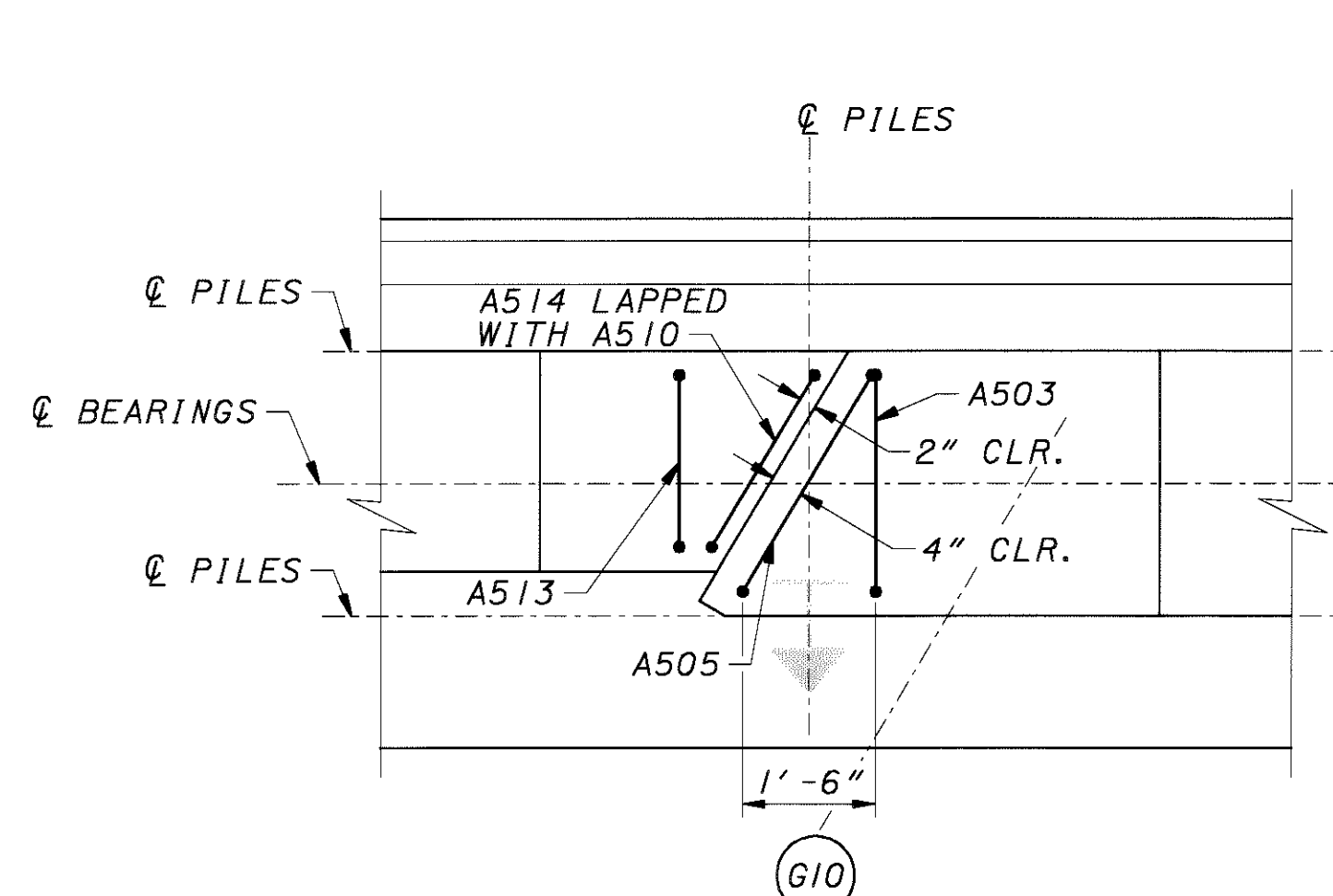
**PARTIAL PLAN**

**NOTES:**

1. FOR TABLE OF ELEVATIONS, SEE SHEET 9.
2. REINFORCING STEEL LAP LENGTHS: UNLESS OTHERWISE NOTED, LAPS SHALL BE AS FOLLOWS:  
 NO. 5 BARS 3'-6"  
 NO. 7 BARS 5'-2"  
 NO. 8 BARS 6'-10"  
 FOR REINFORCING STEEL LIST, SEE SHEET 33.
3. FOR ABUTMENT DETAILS INCLUDING SECTIONS A-A AND C-C, SEE SHEET 9.
4. FOR ABUTMENT DIAPHRAGM DETAILS, SEE SHEET 27.
5. FOR PILES AND FOUNDATION LAYOUT, SEE SHEET 5.



**PARTIAL ELEVATION**



Technical drawing of a pile cap cross-section showing reinforcement details. The drawing includes labels for reinforcement bars: A503, A521, A522, A532, A533, and A525. It also shows dimensions: 2 SPA. @ 9", 1'-6", 2" CLR., and 3" CLR. The drawing is oriented with a north arrow pointing right and a "G1" label at the bottom left.

(GX) DENOTES GIRDER DESIGNATION

SEALING OF CONCRETE SURFACES  
(EPOXY-URETHANE)

2'-0" WIDE POROUS  
BACKFILL WITH  
FILTER FABRIC  
(SEE NOTE 1)

1'-0" THICK  
IMPERVIOUS  
MATERIAL

6" MIN.

2' -6"

2" CLR.

Ø BEARINGS

A531 (SERIES),  
A532, A533, OR A525

A540 (NF), A541 (FF)

A538 (NF),  
A539 (FF)

A536 (NF),  
A537 (FF)

A534 (NF),  
A535 (FF)

VARIABLES

2 EQ. SPA.  
@ 1'-1 1/2"

1'-0"

3-A527 (NF),  
3-A528 (FF)

1'-6"

CJ

2'-0"

TOP OF  
SLOPE  
EL. 999.85

3'-0 1/4"

1'-0" THICK CRUSHED  
AGGREGATE SLOPE  
PROTECTION WITH  
FILTER FABRIC (INCLUDED  
WITH ROADWAY QUANTITIES)

2:1

ITEM 518, 6" PERFORATED  
CORRUGATED PLASTIC PIPE

A801 (TYP.)

A701

A523,  
A524,  
OR A526

3'-0"

EL. 994.30  
BOT. OF FTG.

HP 10x42  
(TYP.)

3" CLR.  
(TYP.)

4

1'-6"

3'-0"

1'-6"

6'-0"

J @ GIRDER G9  
 K @ GIRDER G10

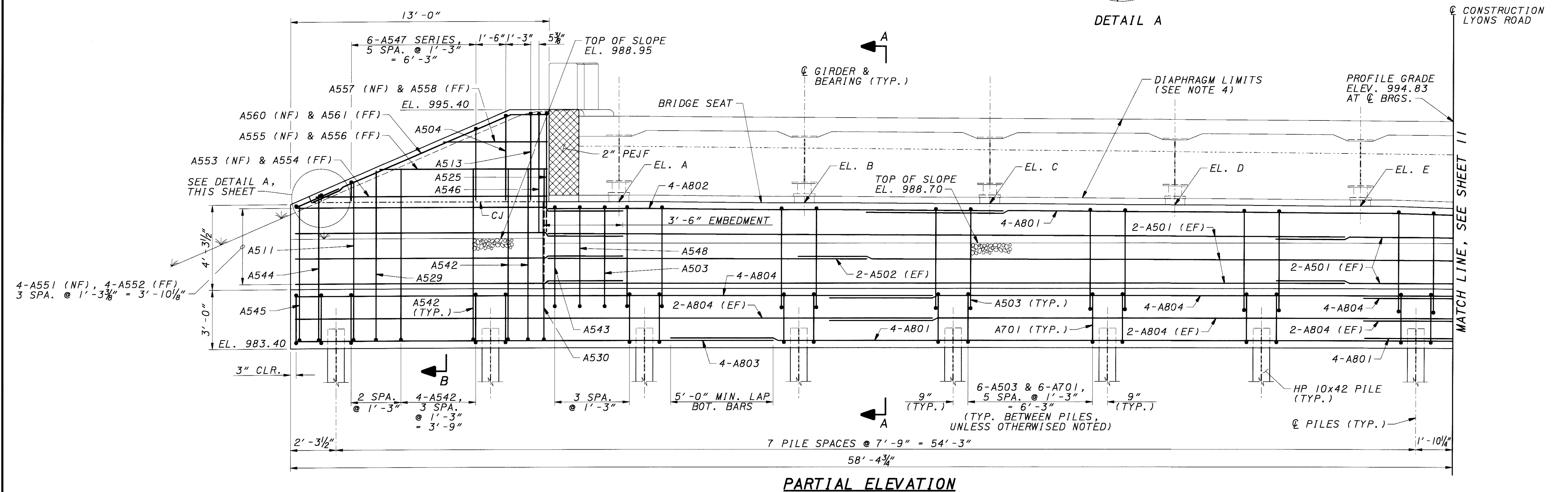
2'-0" WIDE POROUS BACKFILL WITH FILTER FABRIC (SEE NOTE 1)  
 3'-0" WIDE NEOPRENE SHEETING CENTERED ON JOINT  
 VARIES  
 A801 OR A802 (TYP.)  
 A503, A505, A521, OR A522  
 A501 OR A502  
 ITEM 518, 6" PERFORATED CORRUGATED PLASTIC PIPE  
 A801 (TYP.)  
 HP 10x42 (TYP.)  
 3" CLR. (TYP.)  
 4  
 1'-6" 3'-0" 1'-6" 6'-0"

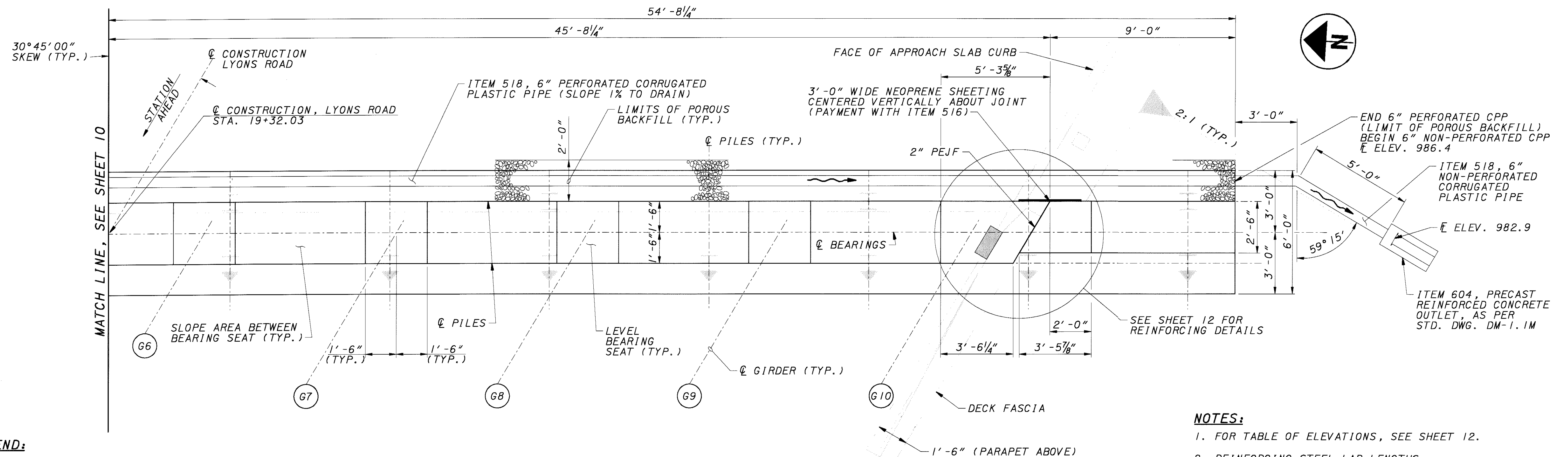
BEARINGS  
 3'-0"  
 1'-6" (TYP.)  
 BRIDGE SEAT (SEE TABLE OF ELEVATIONS)  
 SEALING OF CONCRETE SURFACE (EPOXY-URETHANE)  
 4 1/4" THICK EXPANDED POLYSTYRENE FILLER, COST TO BE INCLUDED WITH ITEM 844, HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE (DECK)  
 TOP OF SLOPE EL. 999.60  
 1'-6" (TYP.)  
 2:1  
 1'-0" THICK CRUSHED AGGREGATE SLOPE PROTECTION WITH FILTER FABRIC (INCLUDED WITH ROADWAY QUANTITIES)  
 A701  
 EL. 994.30 BOT. OF FTG.  
 3'-0"

**NOTES:**  
 1. POROUS BACKFILL SHALL EXTEND TO ONE FOOT LATERALLY BE INCLUDED WITH FILTER FABRIC

2. FOR ABUTMENT PLAN, ELEVATION, AND LOCATION OF SECTIONS A-A, B-B, & C-C, SEE SHEETS 7 AND 8.







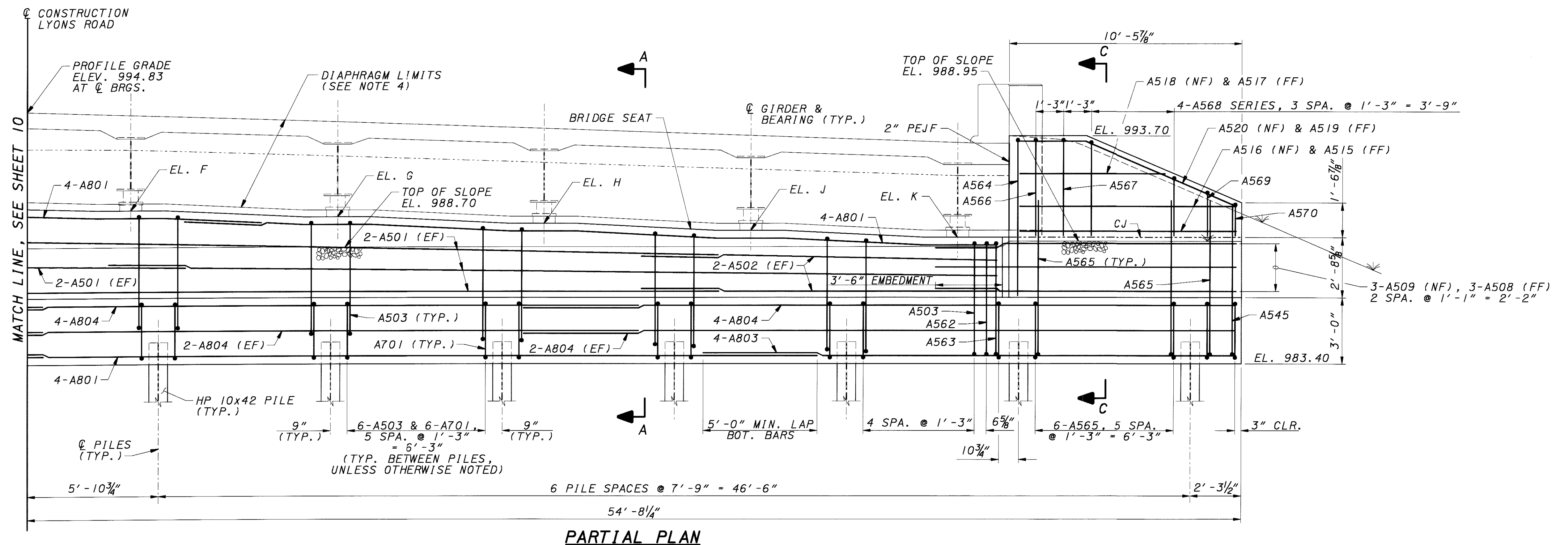
**LEGEND:**

- DENOTES VERTICAL HP 10x42 STEEL PILE
- DENOTES HP 10x42 STEEL PILE BATTERED 1H:4V IN THE DIRECTION OF THE ARROW
- (GX) DENOTES GIRDER DESIGNATION
- BEARING RETAINER ASSEMBLY (SEE SHEET 23)

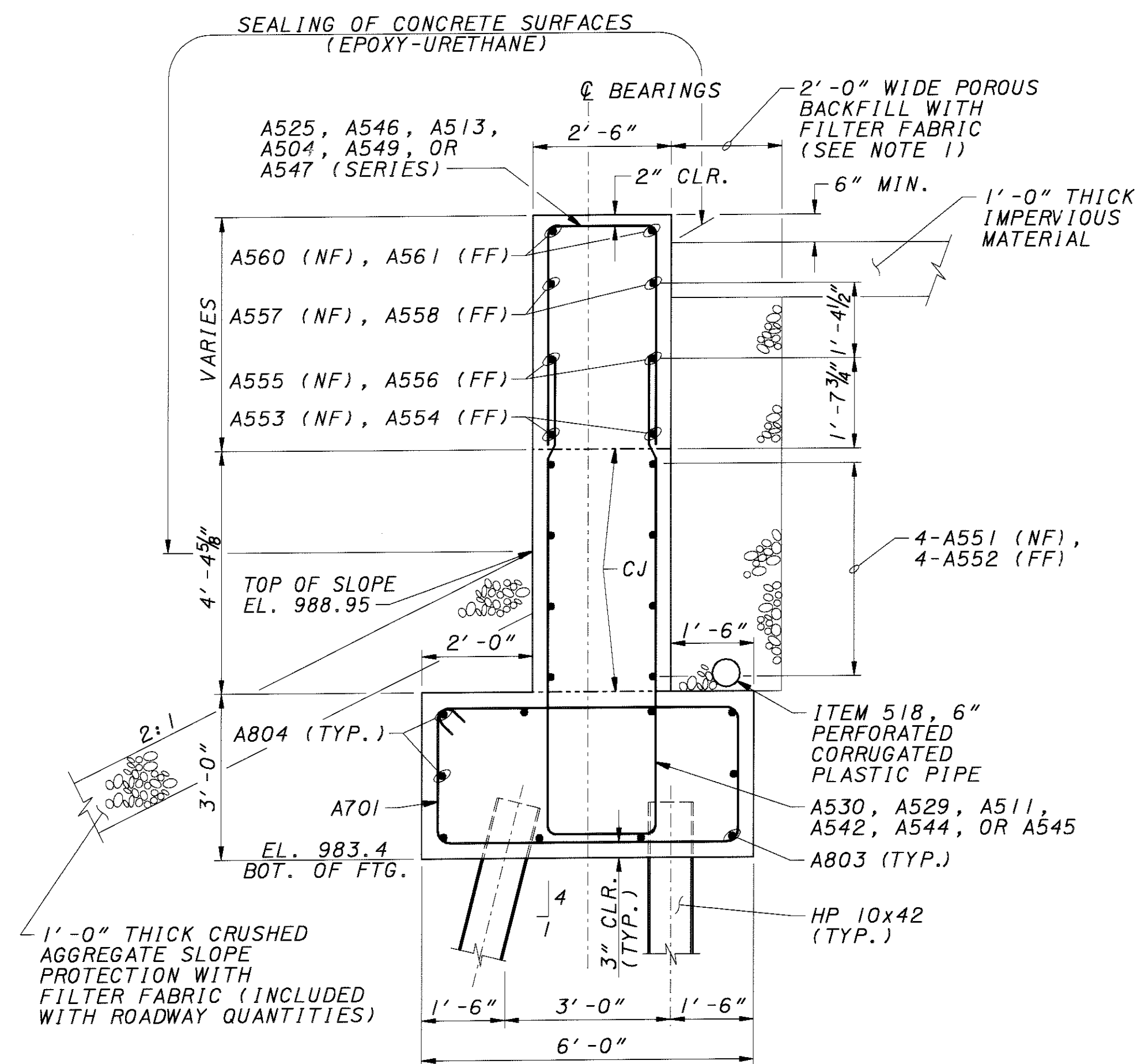
**PARTIAL PLAN**

**NOTES:**

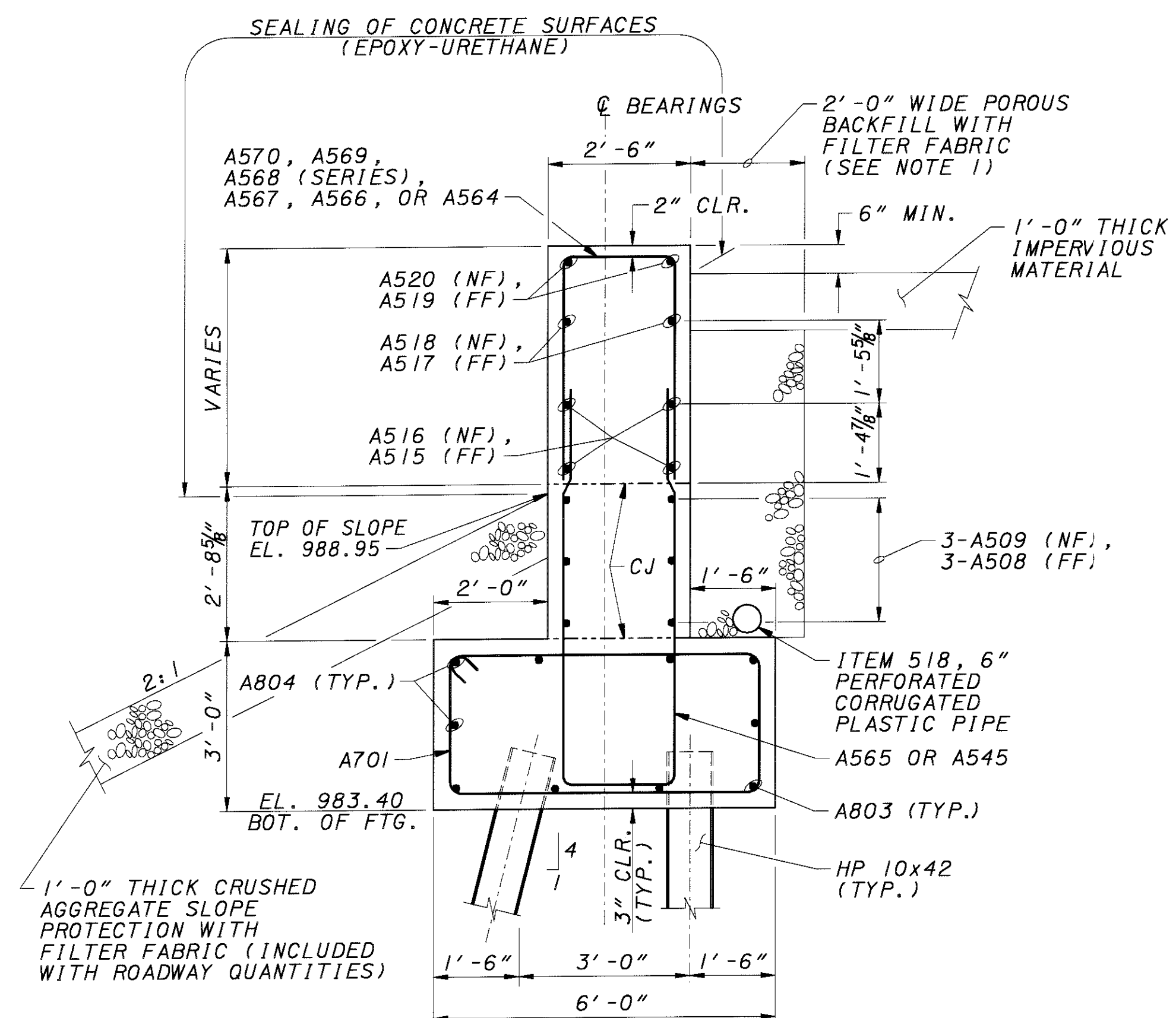
1. FOR TABLE OF ELEVATIONS, SEE SHEET 12.
2. REINFORCING STEEL LAP LENGTHS: UNLESS OTHERWISE NOTED, LAPS SHALL BE AS FOLLOWS:  
 NO. 5 BARS 3'-6"  
 NO. 7 BARS 5'-2"  
 NO. 8 BARS 6'-10"  
 FOR REINFORCING STEEL LIST, SEE SHEET 33.
3. FOR ABUTMENT DETAILS INCLUDING SECTIONS A-A AND C-C, SEE SHEET 12.
4. FOR ABUTMENT DIAPHRAGM DETAILS, SEE SHEET 28.
5. FOR PILES AND FOUNDATION LAYOUT, SEE SHEET 6.



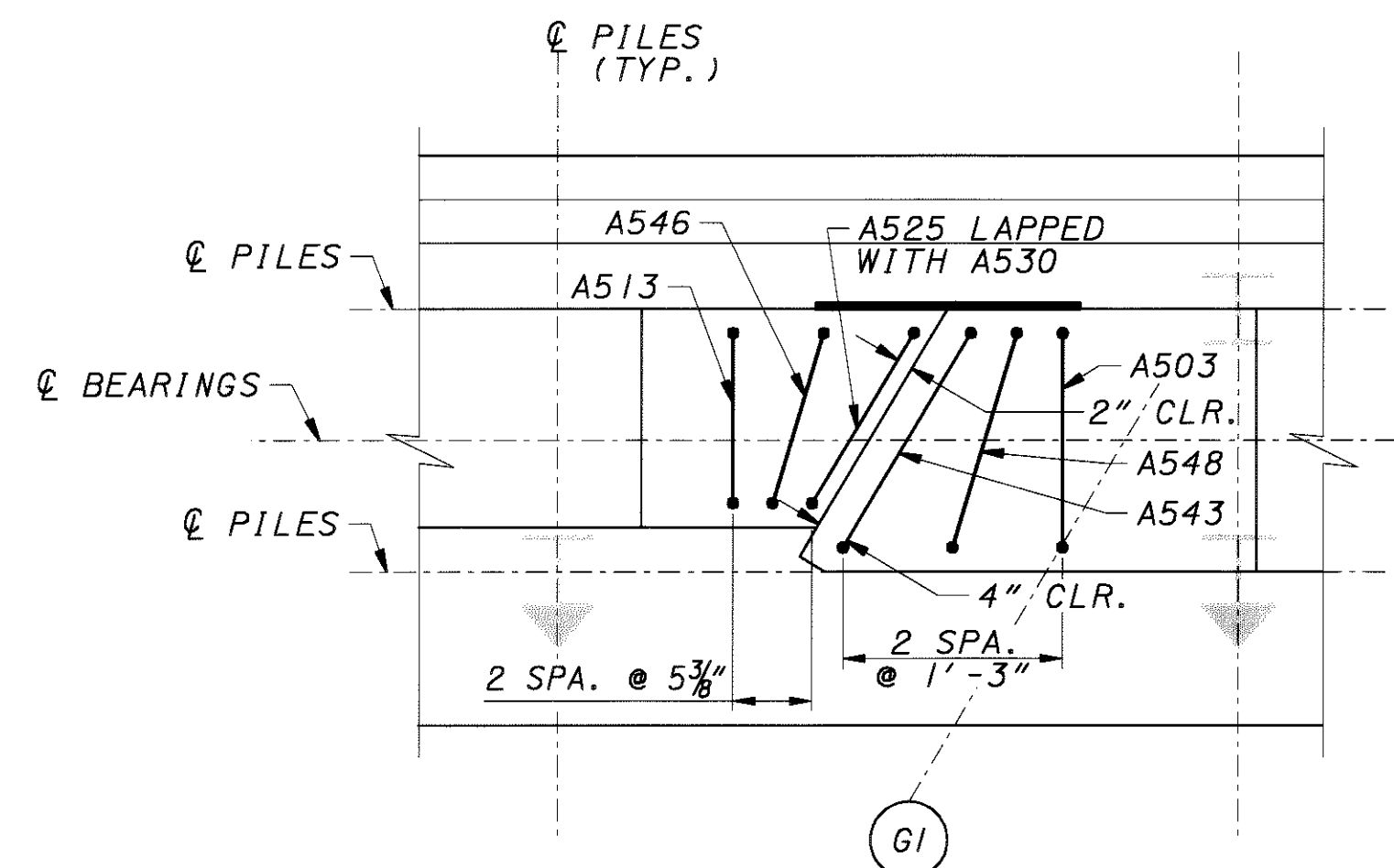
**PARTIAL PLAN**



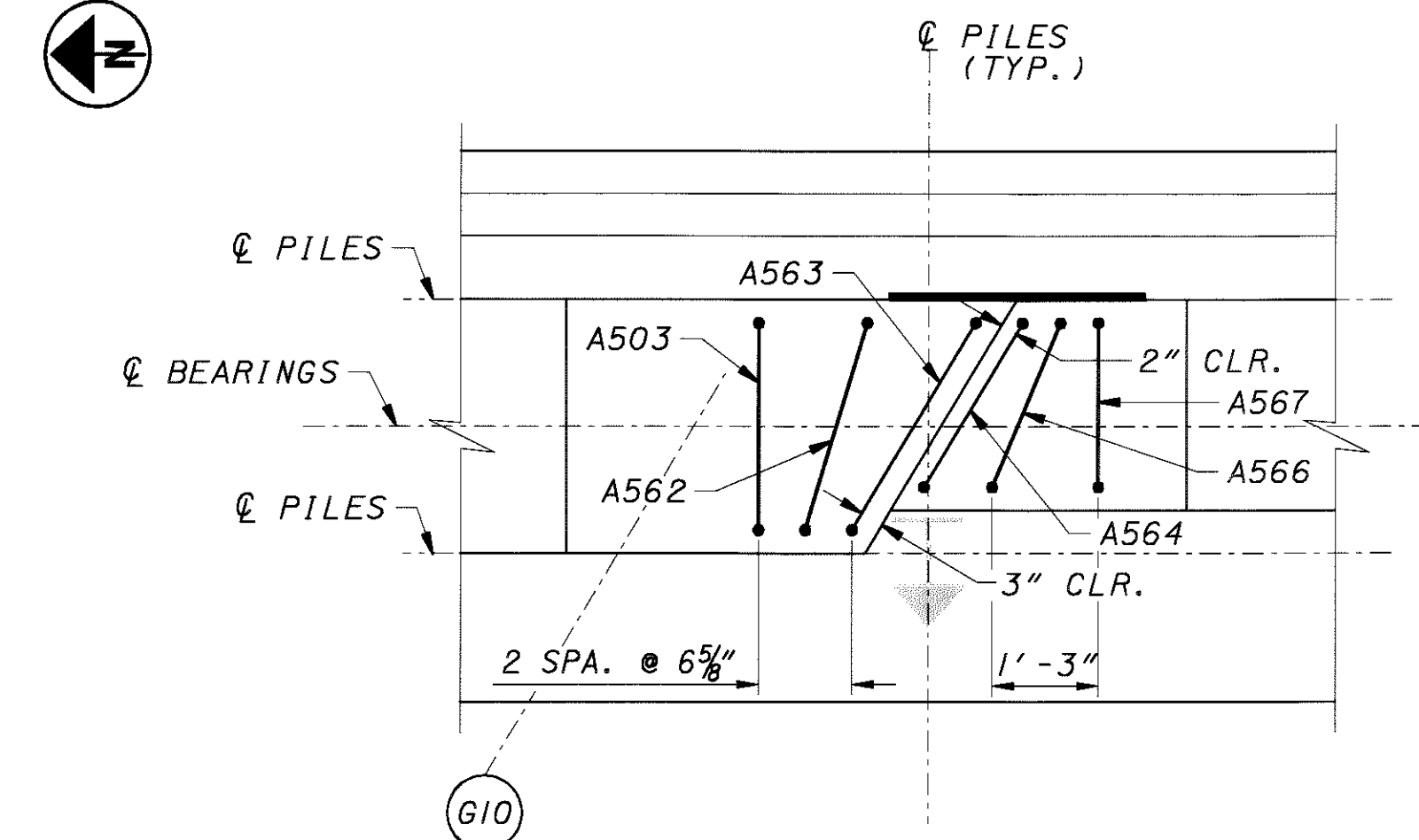
SECTION B-B



SECTION C-C



PARTIAL STEM PLAN  
(NORTH SIDE)



PARTIAL STEM PLAN  
(SOUTH SIDE)

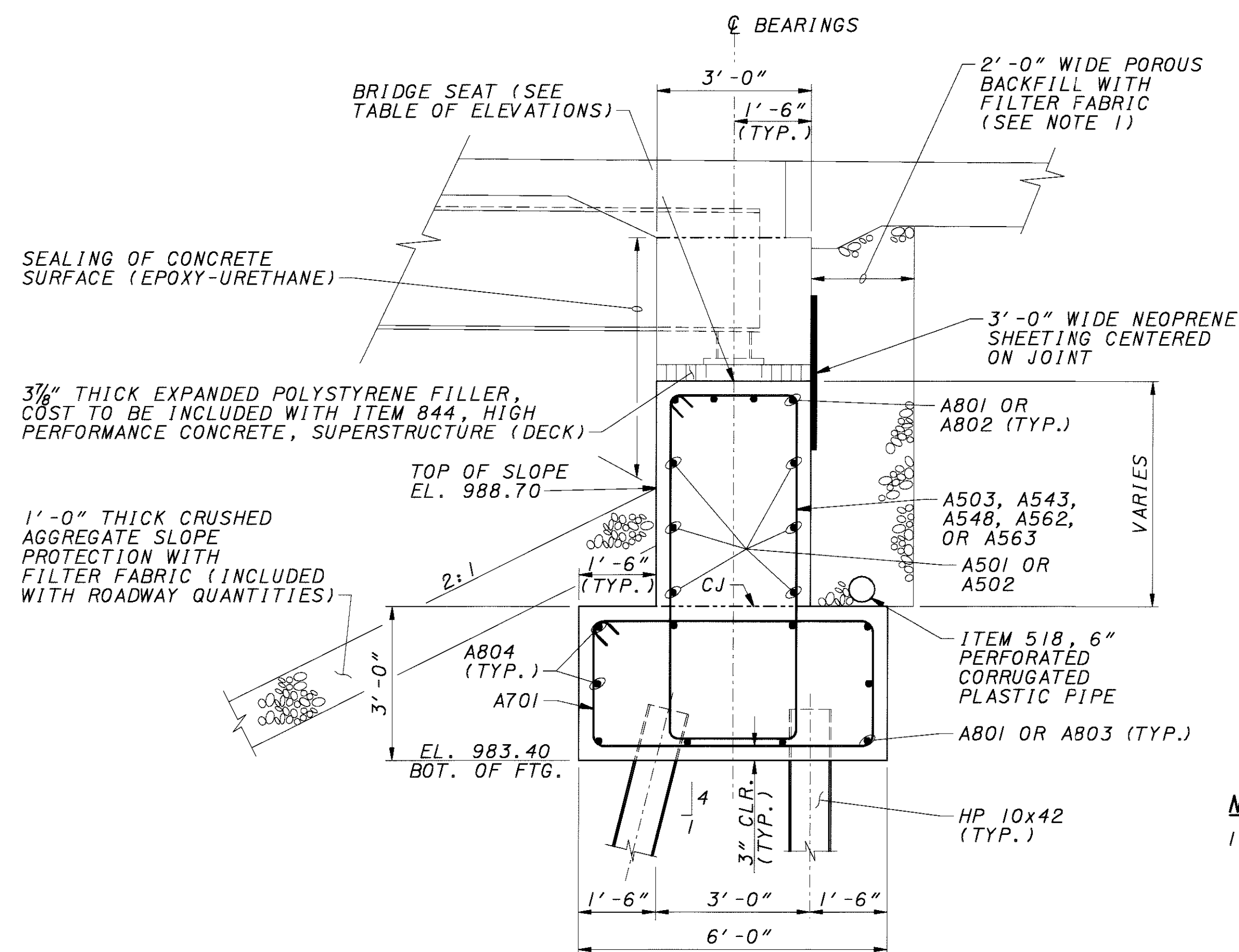
LEGEND:

 DENOTES VERTICAL HP 10x42 STEEL PILE

↓ DENOTES HP 10x42 STEEL PILE BATTERED 1H:4V IN THE DIRECTION OF THE ARROW

(GX) DENOTES GIRDER DESIGNATION

TABLE OF ELEVATIONS	
(SEE SHEETS 10 & 11 FOR POINT LOCATION)	
POINT	ELEVATION
A @ GIRDER G1	990.79
B @ GIRDER G2	990.73
C @ GIRDER G3	990.68
D @ GIRDER G4	990.62
E @ GIRDER G5	990.56
F @ GIRDER G6	990.37
G @ GIRDER G7	990.06
H @ GIRDER G8	989.75
J @ GIRDER G9	989.43
K @ GIRDER G10	989.12

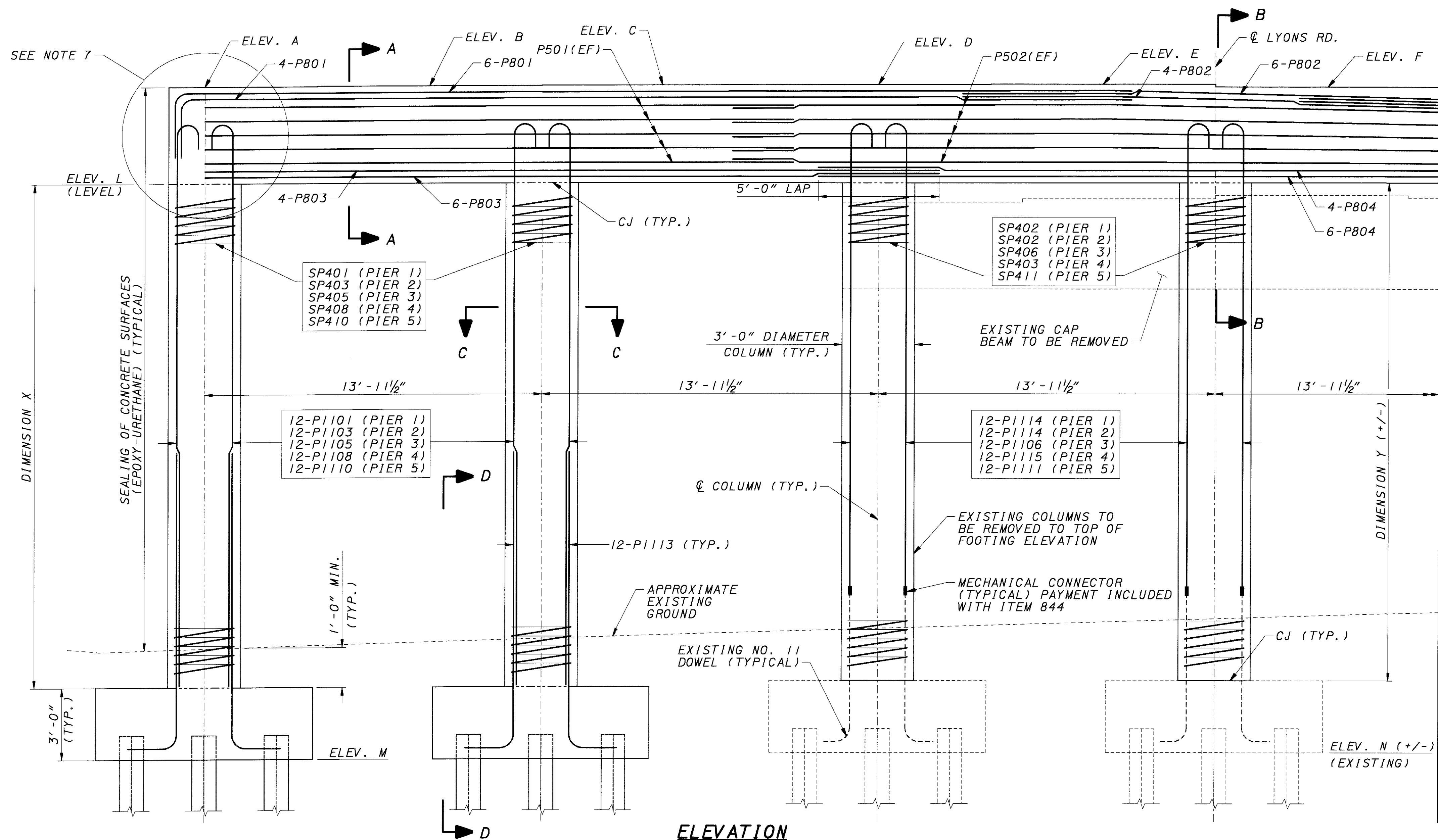
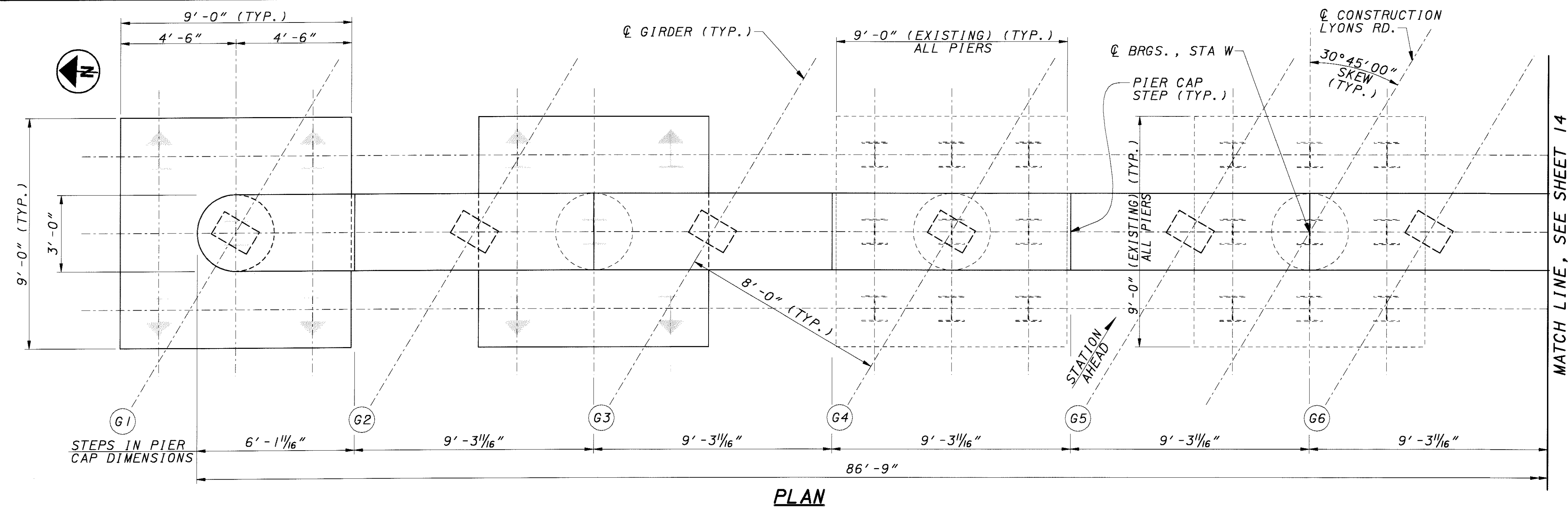


SECTION A-A

NOTES:

1. 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 WINGWALL. COST TO BE INCLUDED WITH ITEM 518, POROUS BACKFILL WITH FILTER FABRIC.
2. FOR ABUTMENT PLAN, ELEVATION, AND LOCATION OF SECTIONS A-A, B-B, & C-C, SEE SHEETS 10 AND 11.

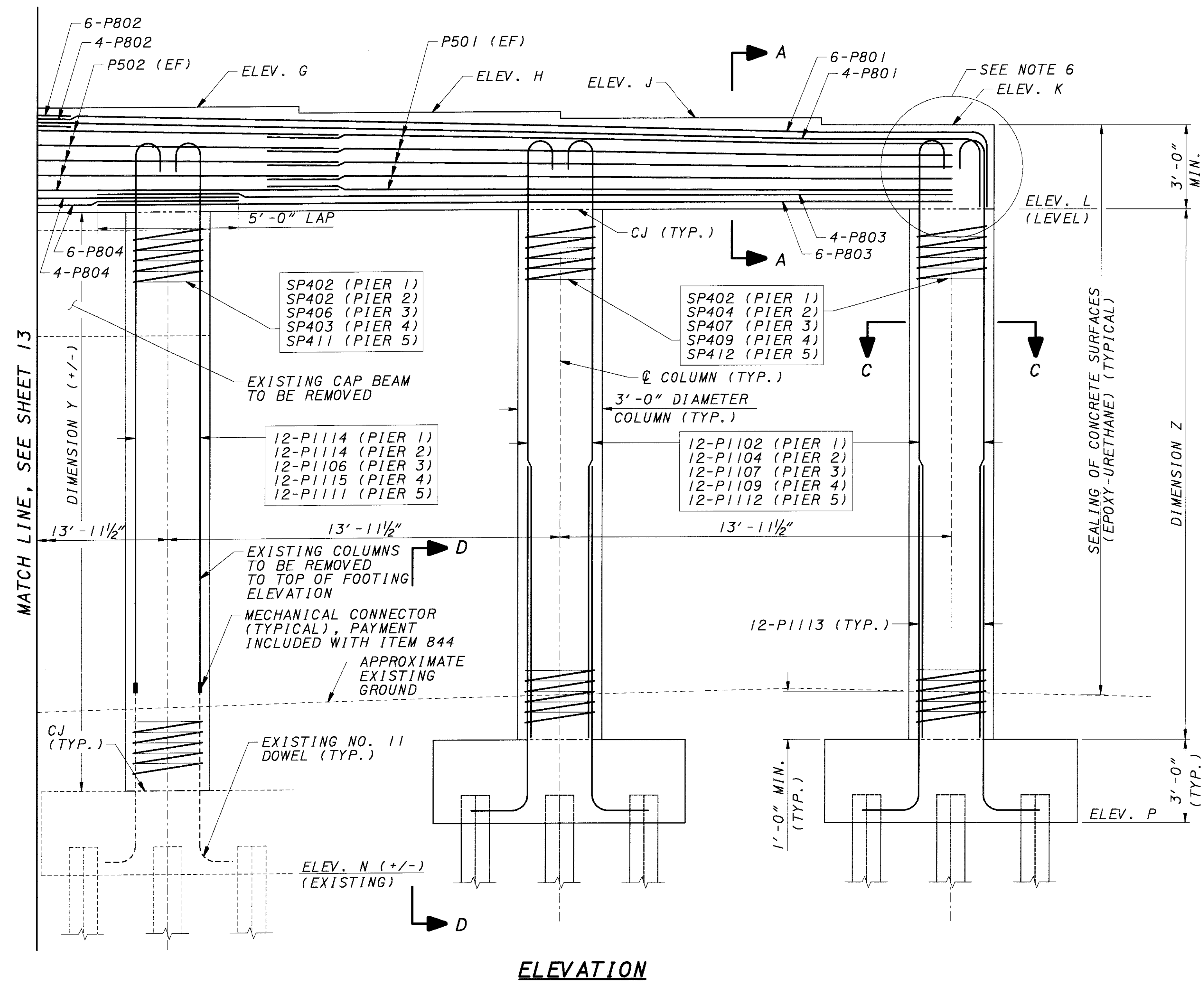
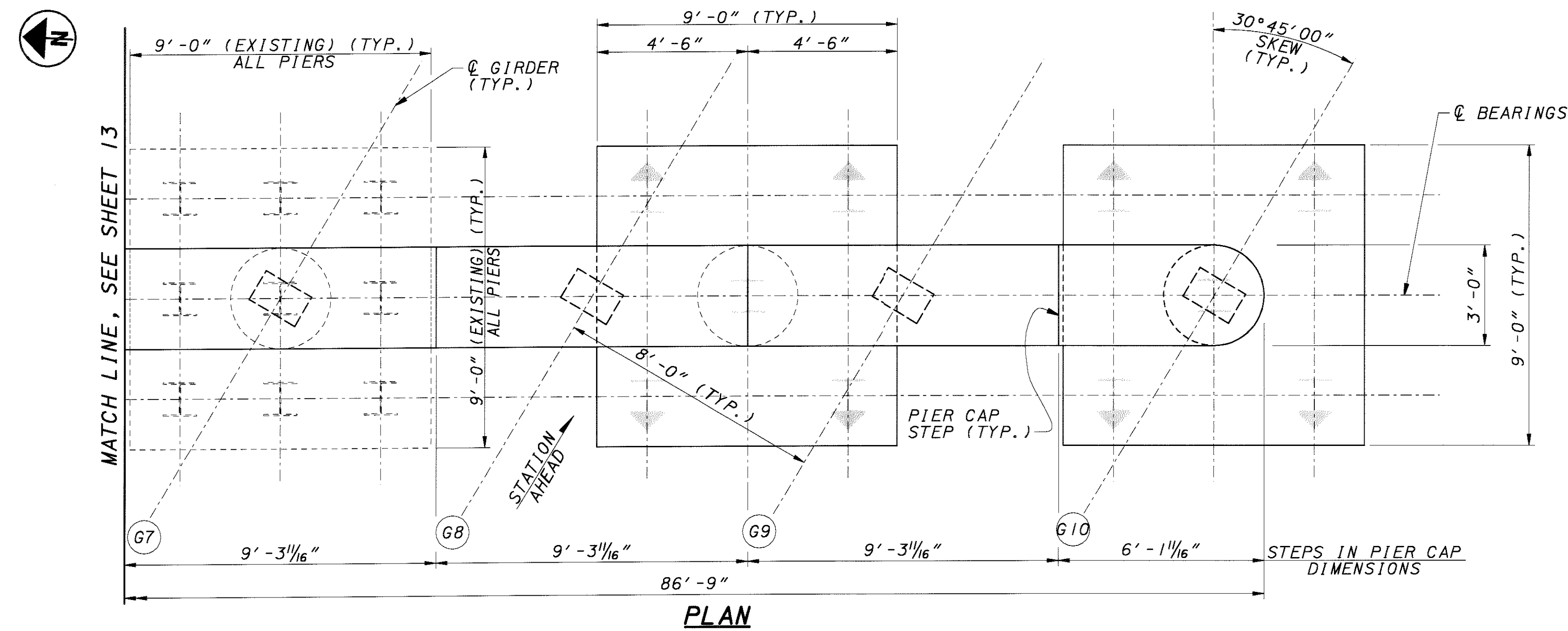


**LEGEND:**

- ⊙GX - DENOTES GIRDER NUMBER
- - DENOTES BEARING PAD
- - DENOTES EXISTING HP 12x53 STEEL PILE
- - DENOTES NEW HP 12x53 STEEL PILE-VERTICAL
- - DENOTES NEW HP 12x53 STEEL PILE-BATTERED (1H:4V)

**NOTES:**

1. FOR TABLE OF ELEVATIONS, STATIONS, AND DIMENSIONS, SEE SHEET 14.
2. FOR PIER DETAILS INCLUDING SECTIONS A-A, B-B, C-C, AND VIEW D-D, SEE SHEET 15.
3. REINFORCING STEEL LAP LENGTHS: UNLESS OTHERWISE NOTED LAPS SHALL BE AS FOLLOWS:  
 NO. 5 BARS, 2'-6"  
 NO. 8 BARS, 7'-0"  
 NO. 11 BARS, 9'-8"  
 FOR REINFORCING STEEL LIST, SEE SHEET 32.
4. SEAT ELEVATIONS A THRU F ARE LOCATED AT CENTERLINE OF BEARING AT Ⓞ PIER.
5. FOR FOUNDATION AND PILE LAYOUT PLAN, SEE SHEETS 5 AND 6.
6. FOR BEARING DETAILS, SEE SHEET 24.
7. FOR PIER CAP SHEAR REINFORCEMENT AND END OF CAP REINFORCEMENT, SEE SHEET 16.
8. FOR FOOTING REINFORCING DETAILS, SEE SHEET 15.








### TABLE OF ELEVATIONS, STATIONS, & DIMENSIONS

LOCATION	DESCRIPTION	PIER 1	PIER 2	PIER 3	PIER 4	PIER 5
ELEV. A	BRIDGE SEAT	1000.32	999.30	997.69	995.67	993.05
ELEV. B	BRIDGE SEAT	1000.40	999.34	997.71	995.66	993.01
ELEV. C	BRIDGE SEAT	1000.47	999.39	997.73	995.65	992.98
ELEV. D	BRIDGE SEAT	1000.55	999.44	997.74	995.64	992.94
ELEV. E	BRIDGE SEAT	1000.62	999.48	997.76	995.62	992.89
ELEV. F	BRIDGE SEAT	1000.56	999.40	997.65	995.48	992.72
ELEV. G	BRIDGE SEAT	1000.38	999.19	997.41	995.22	992.43
ELEV. H	BRIDGE SEAT	1000.20	998.98	997.17	994.95	992.13
ELEV. J	BRIDGE SEAT	1000.02	998.76	996.93	994.68	991.83
ELEV. K	BRIDGE SEAT	999.83	998.55	996.68	994.41	991.53
ELEV. L	BRIDGE SEAT	996.83	995.55	993.68	991.41	988.53
ELEV. M	BOT. OF FTG.	975.60	974.00	969.70	971.90	971.50
ELEV. N	BOT. OF FTG.	973.50	972.00	970.00	970.00	968.50
ELEV. P	BOT. OF FTG.	973.50	972.50	971.80	970.90	970.60
DIMENSION X	COLUMN HEIGHT	18.23	18.55	20.98	16.51	14.03
DIMENSION Y	COLUMN HEIGHT	20.33	20.55	20.68	18.41	17.03
DIMENSION Z	COLUMN HEIGHT	20.33	20.05	18.88	17.51	14.93
STATION W	WORKING POINT	15+51.70	16+34.43	17+17.08	17+99.92	18+82.74

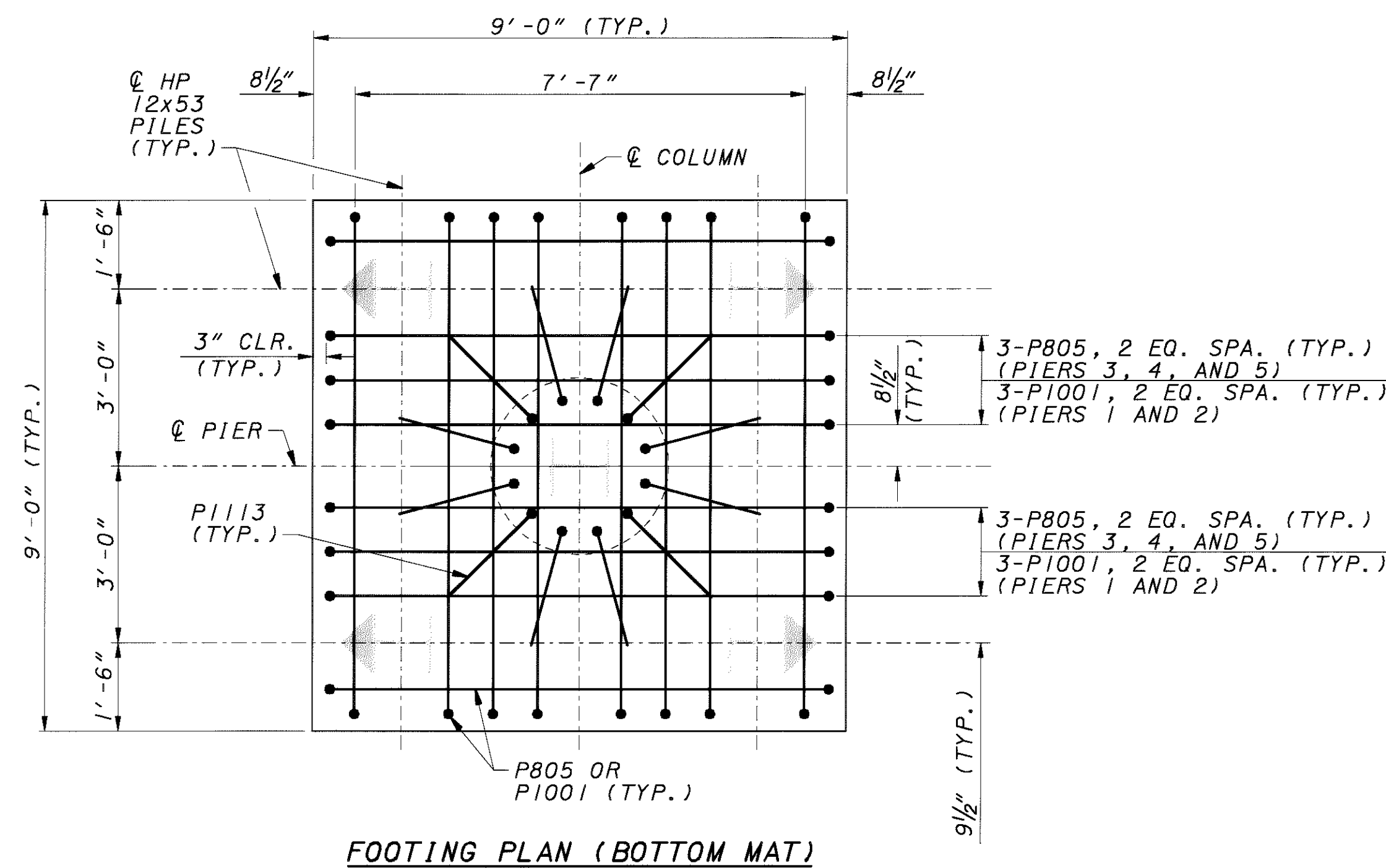
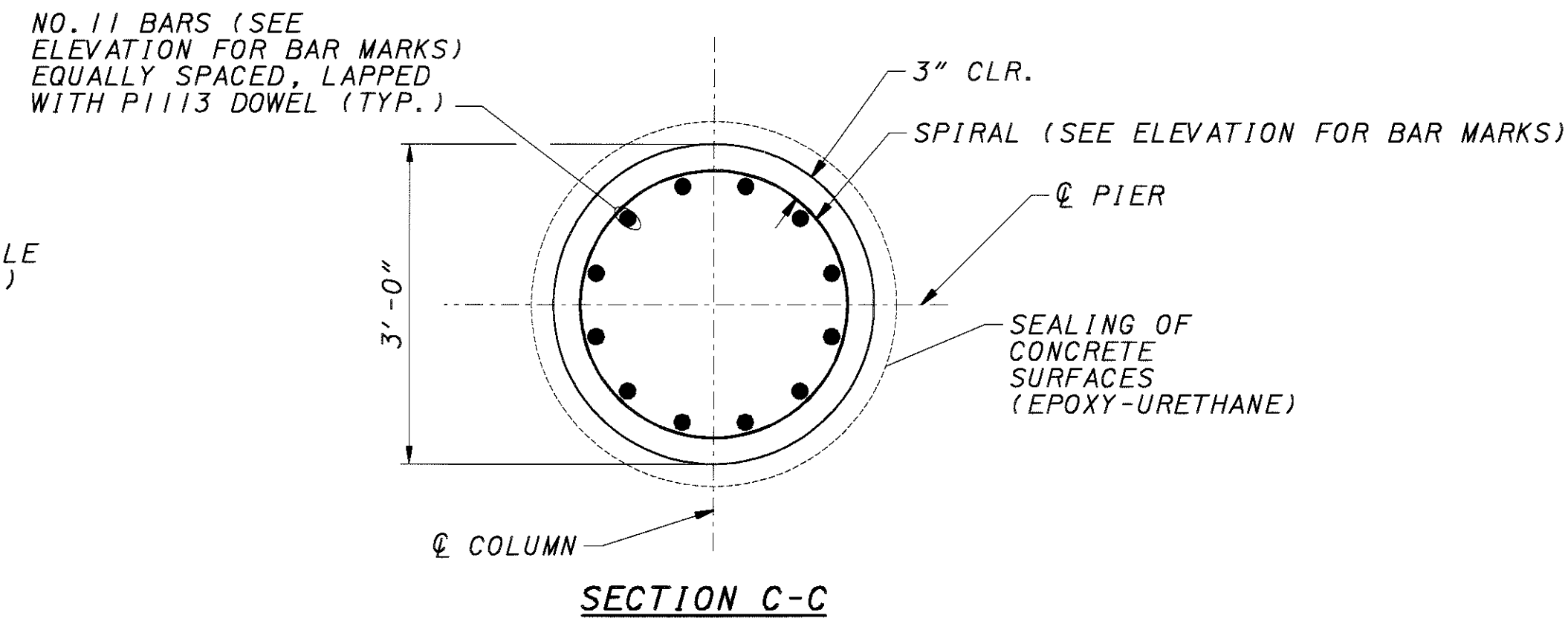
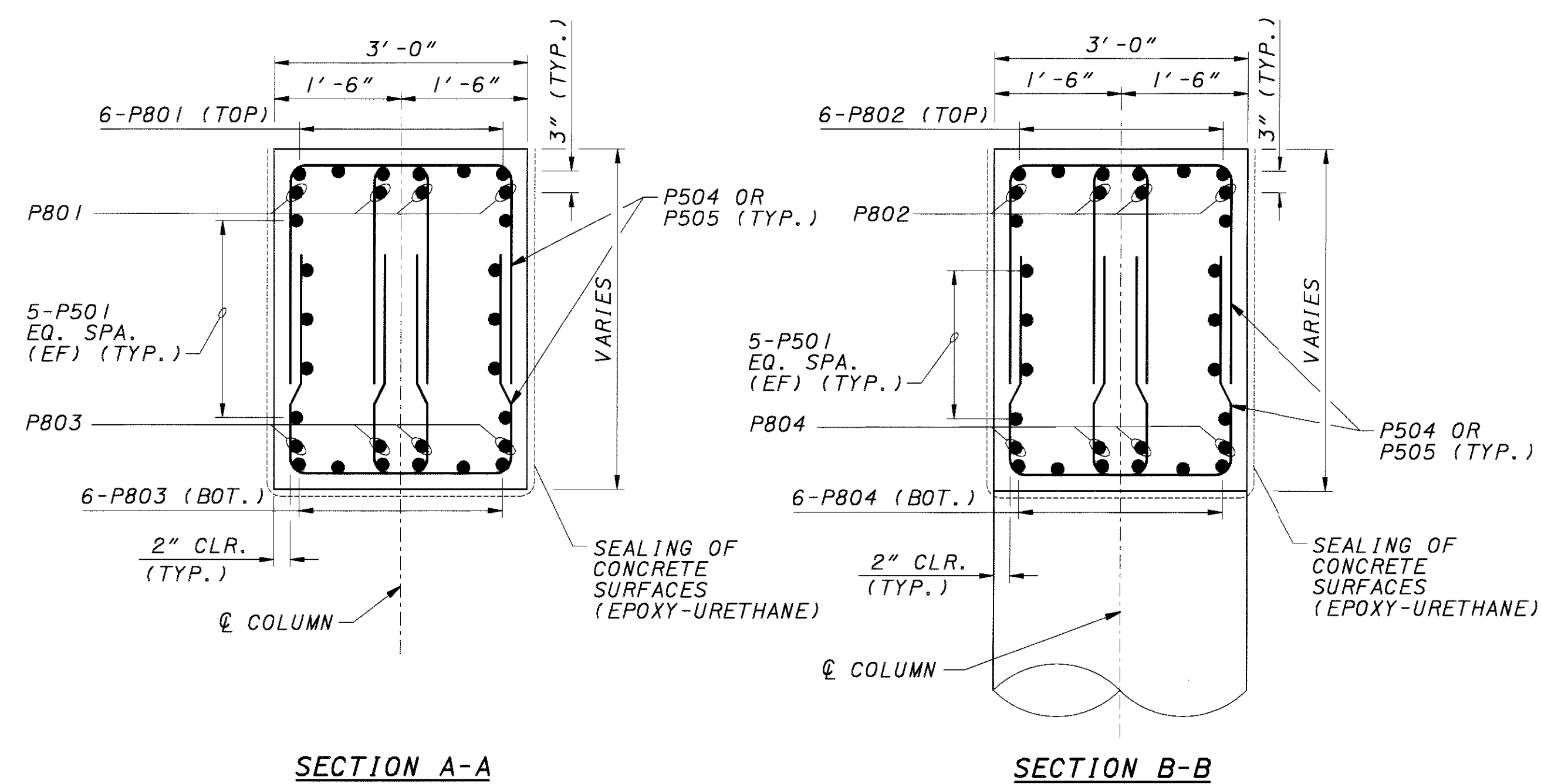
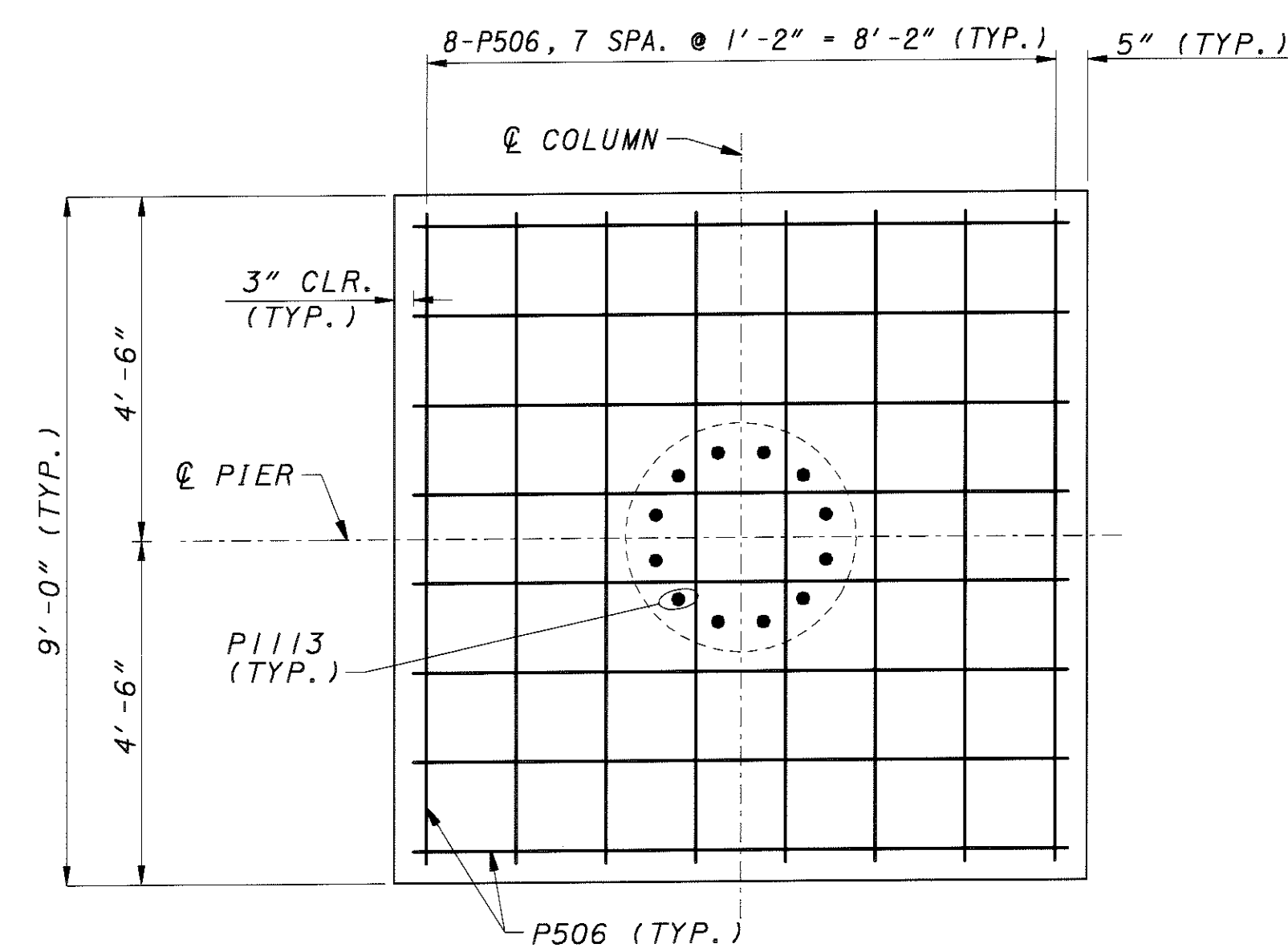
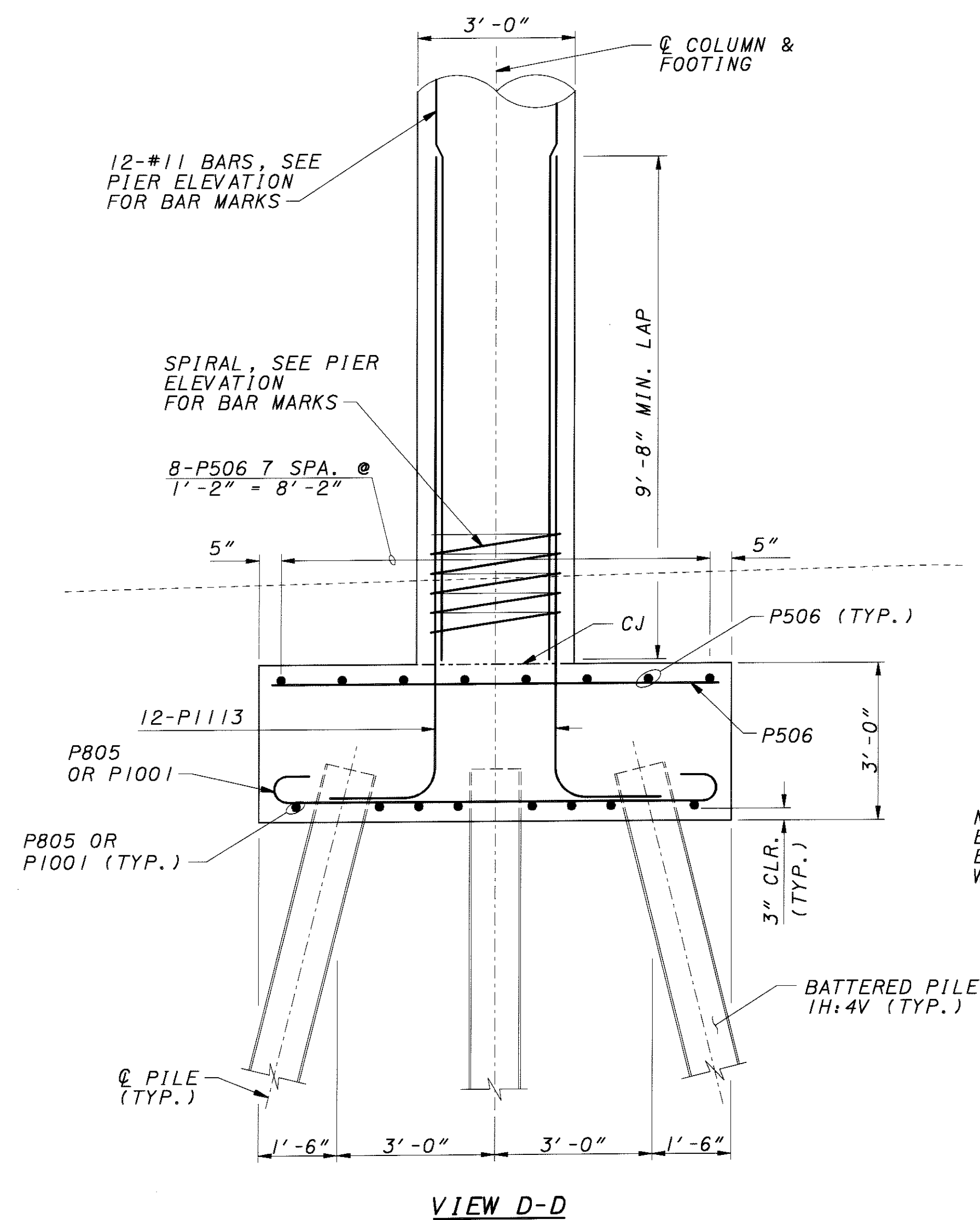
USE THIS TABLE WITH THIS SHEET AND SHEET 13.

LEGEND:

-  - DENOTES GIRDER NUMBER  
 - DENOTES BEARING PAD  
 - DENOTES EXISTING HP 12x53 STEEL PILE  
 - DENOTES NEW HP 12x53 STEEL PILE  
 - DENOTES NEW HP 12x53 STEEL PILE-BATTERED (1H:4V)

NOTES:

1. FOR PIER DETAILS INCLUDING SECTIONS A-A, C-C, AND VIEW D-D, SEE SHEET 15.
2. REINFORCING STEEL LAP LENGTHS: UNLESS OTHERWISE NOTED LAPS SHALL BE AS FOLLOWS:  
NO. 5 BARS, 2'-6"  
NO. 8 BARS, 7'-0"  
NO. 11 BARS, 9'-8"  
FOR REINFORCING STEEL LIST, SEE SHEET 32.
3. SEAT ELEVATIONS G THRU K ARE LOCATED AT CENTERLINE OF BEARING AT  $\frac{1}{2}$  PIER.
4. FOR FOUNDATION AND PILE LAYOUT PLAN, SEE SHEETS 5 AND 6.
5. FOR BEARING DETAILS, SEE SHEET 24.
6. FOR PIER CAP SHEAR REINFORCEMENT AND END OF CAP REINFORCEMENT, SEE SHEET 16.
7. FOR FOOTING REINFORCING DETAILS, SEE SHEET 15.



LEGEND:

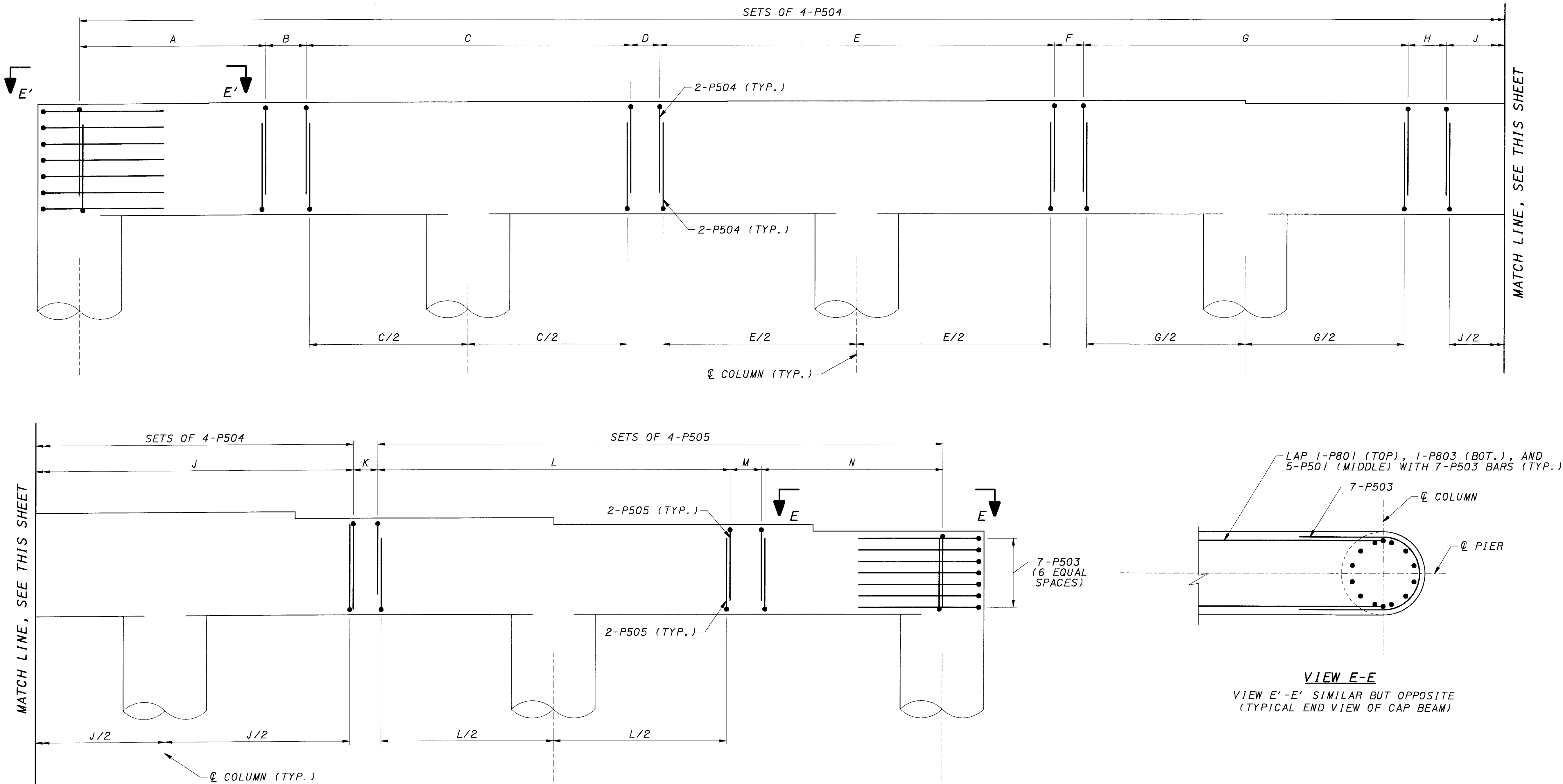
- DENOTES NEW HP 12x53 STEEL PILE

- DENOTES NEW HP 12x53 STEEL PILE-BATTERED (1H:4V)

NOTES:

1. FOR PIER PLAN AND ELEVATION INCLUDING LOCATION OF SECTIONS A-A, B-B, C-C, AND VIEW D-D, SEE SHEETS 13 AND 14.
2. FOR FOUNDATION AND PILE LAYOUT PLAN, SEE SHEETS 5 AND 6.





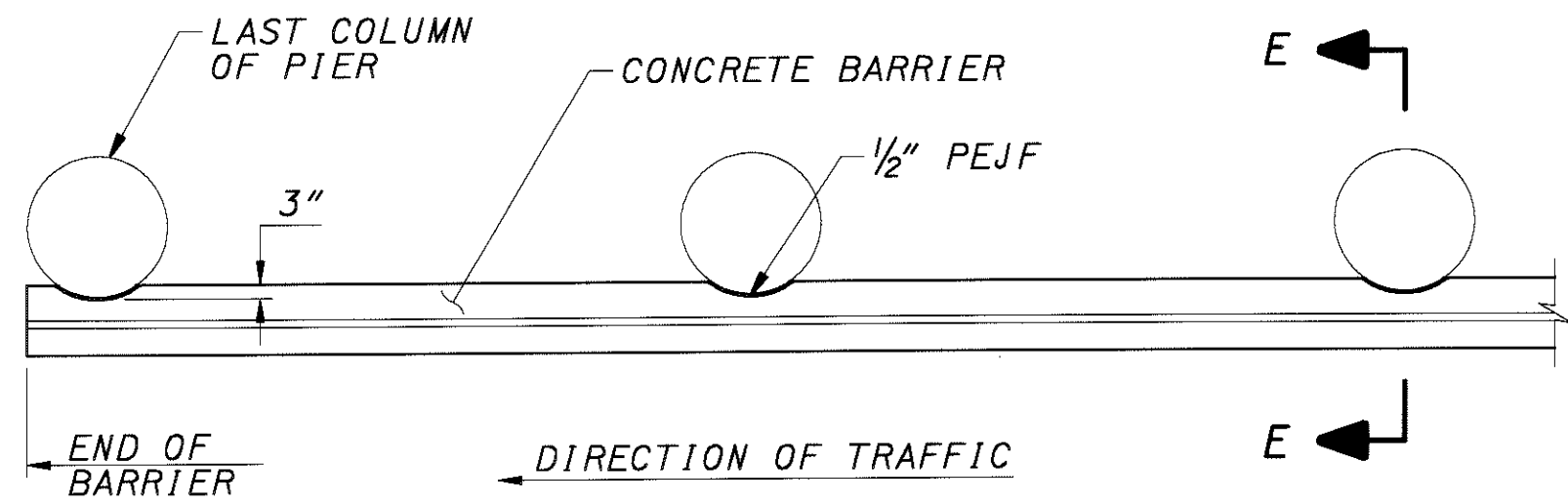
TYPICAL SHEAR REINFORCING DETAIL

STIRRUP SPACING DIMENSIONS													
	A	B	C	D	E	F	G	H	J	K	L	M	N
ALL PIERS	5-P504 SETS, 4 SPACES @ 1'-6" = 6'-0"	1'-2½"	10-P504 SETS, 9 SPACES @ 1'-6" = 13'-6"	1'-4½"	8-P504 SETS, 7 SPACES @ 1'-8" = 11'-8"	1'-4½"	9-P504 SETS, 8 SPACES @ 1'-6" = 12'-0"	1'-0½"	23-P504 SETS, 22 SPACES @ 8" = 14'-8"	0'-7½"	21-P505 SETS, 20 SPACES @ 8" = 13'-4"	1'-1½"	6-P505 SETS, 5 SPACES @ 1'-2" = 5'-10"

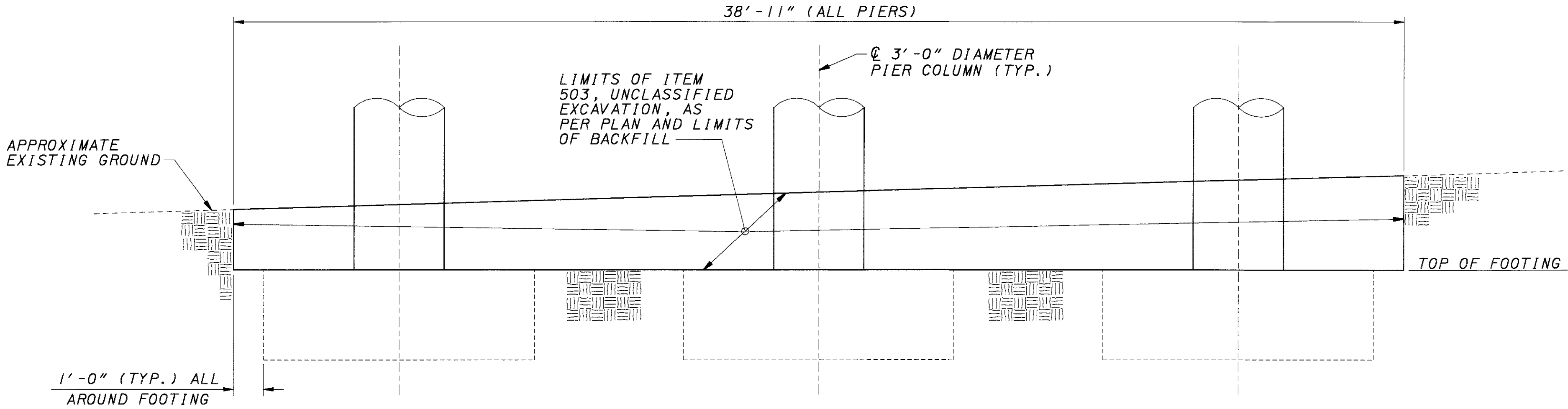
NOTES:

1. FOR PIER PLAN AND ELEVATION, SEE SHEETS 13 AND 14.

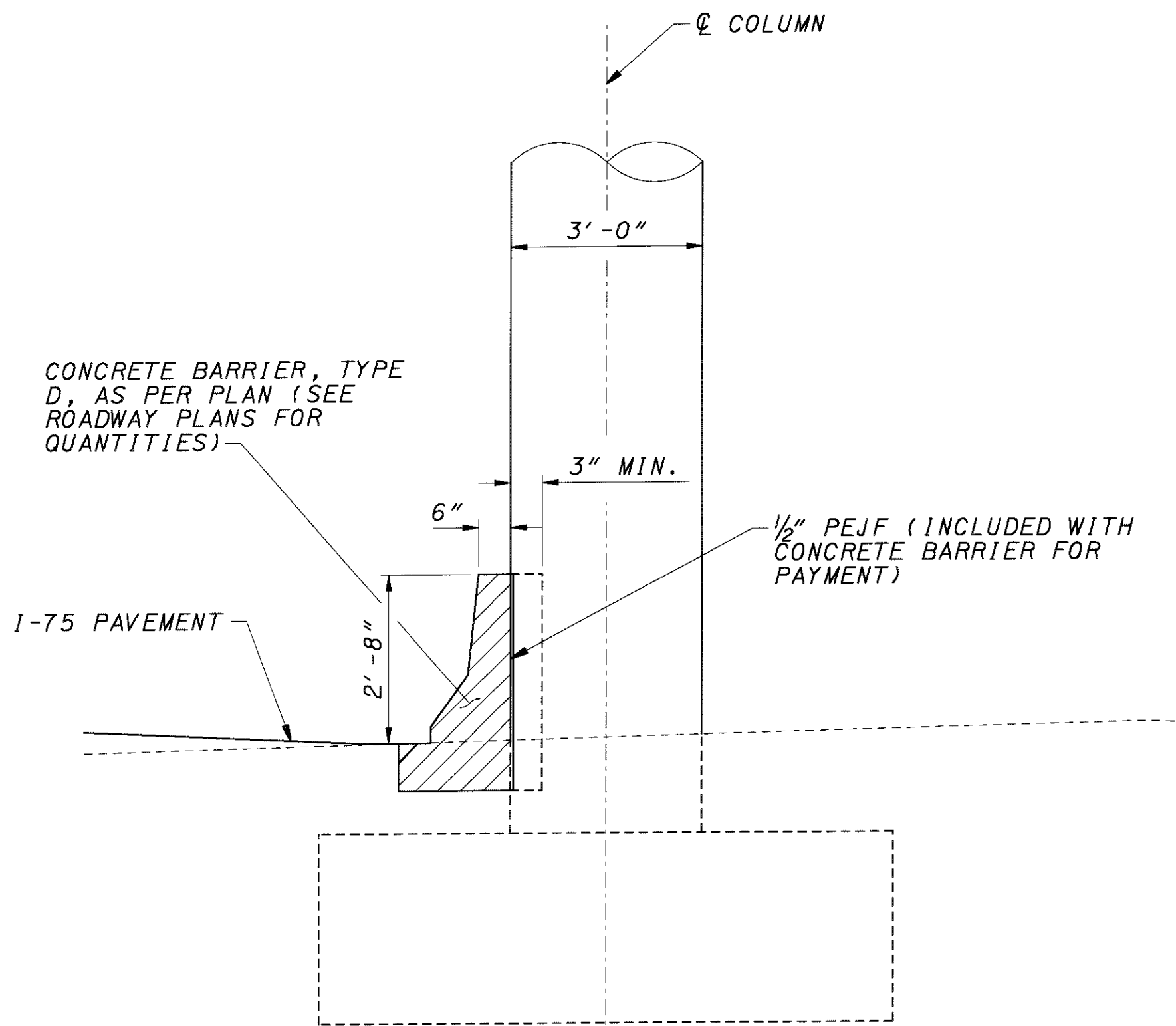
2. FOR PIER DETAILS, SEE SHEETS 15 AND 17.



PLAN

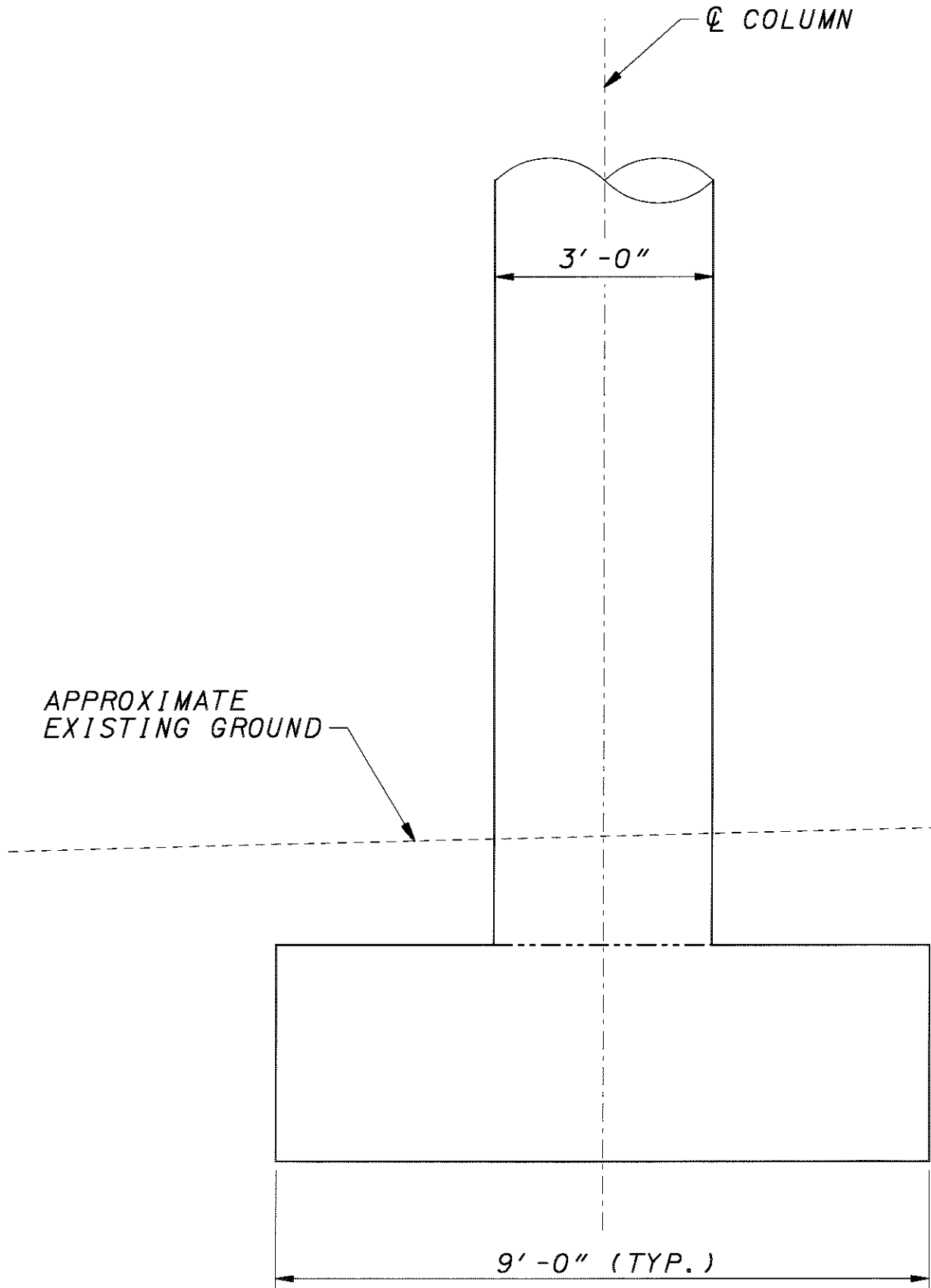


FOUNDATION PAYMENT LIMITS AT EXISTING FOOTINGS  
(PILES NOT SHOWN FOR CLARITY)

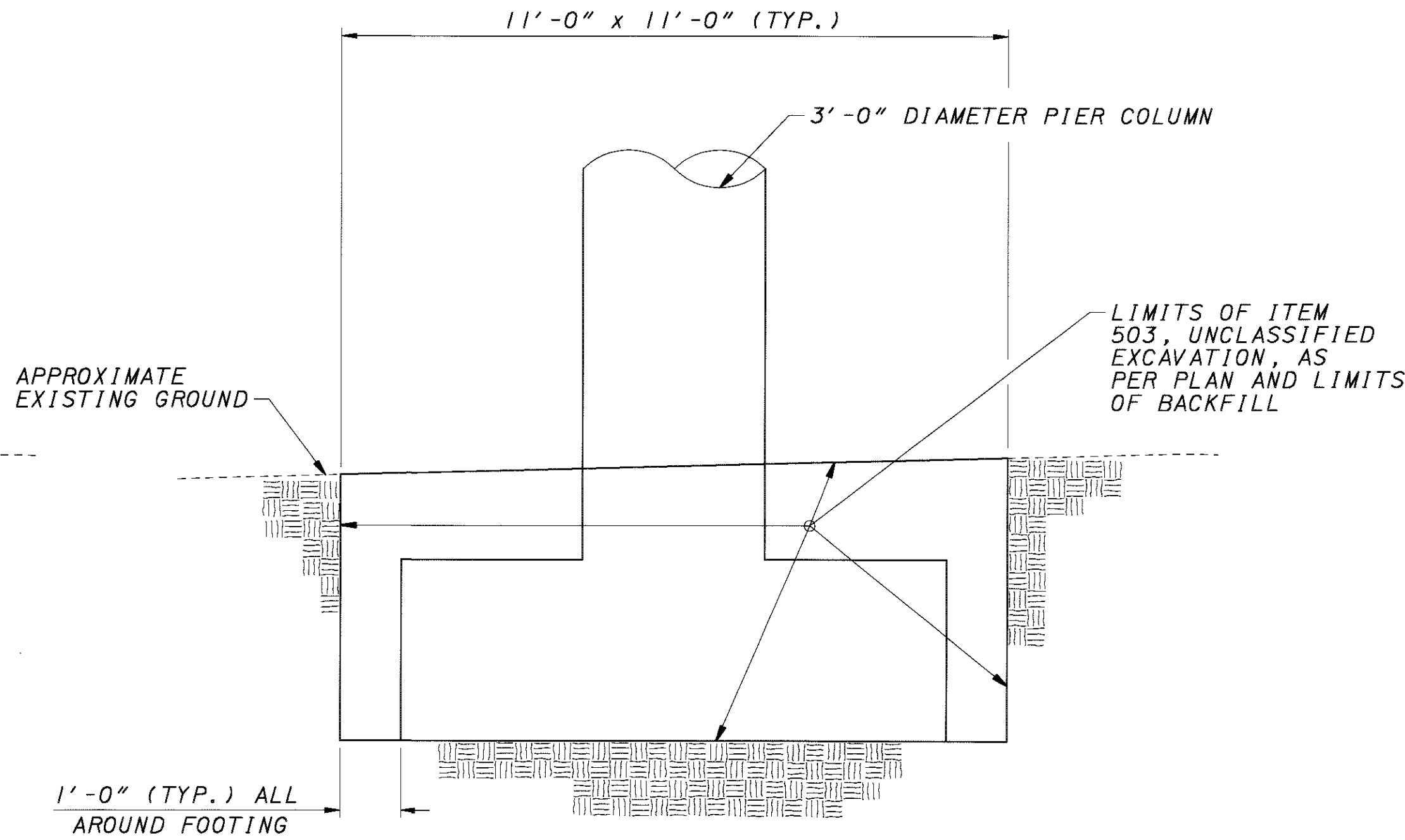


SECTION E-E

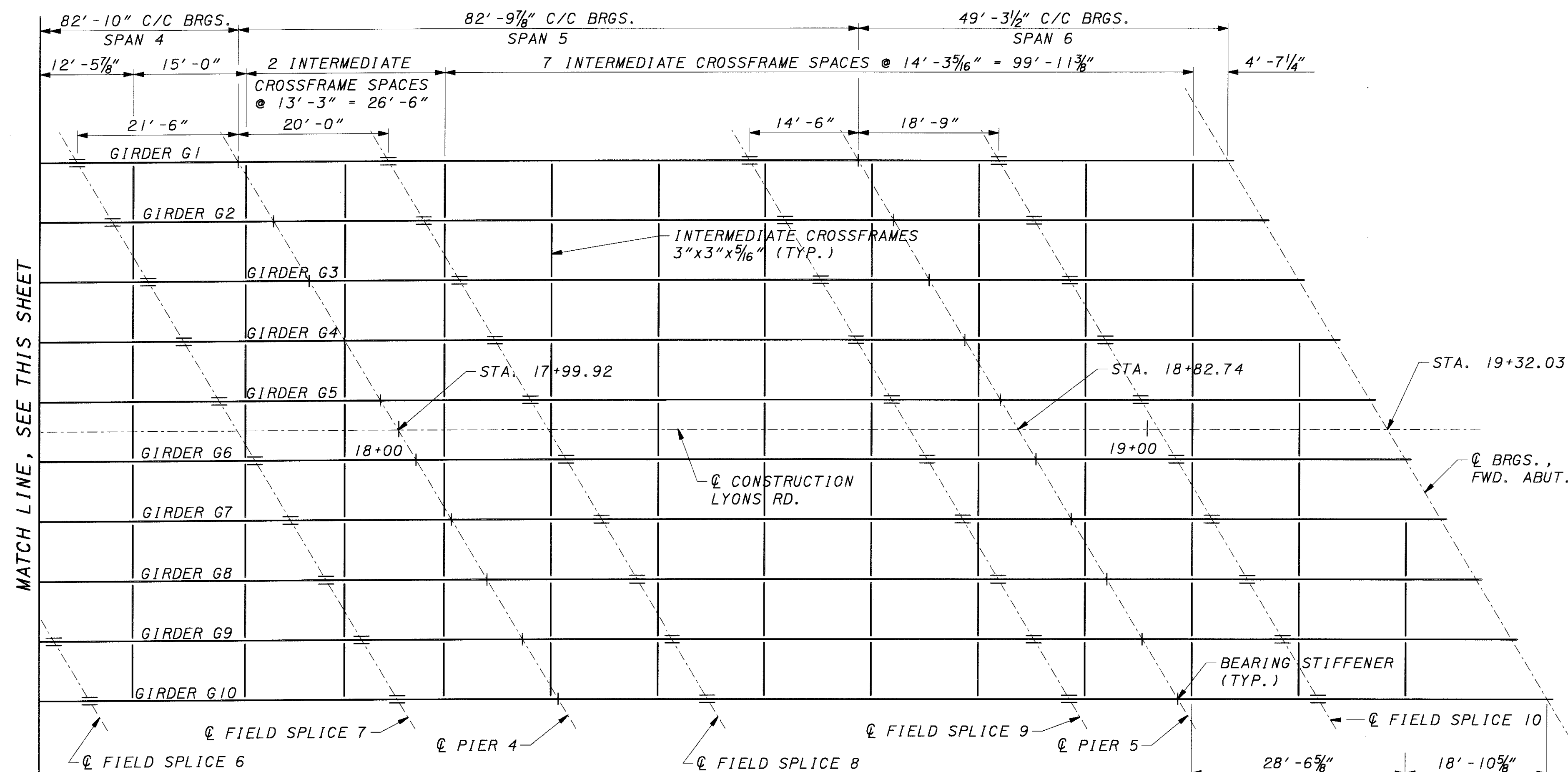
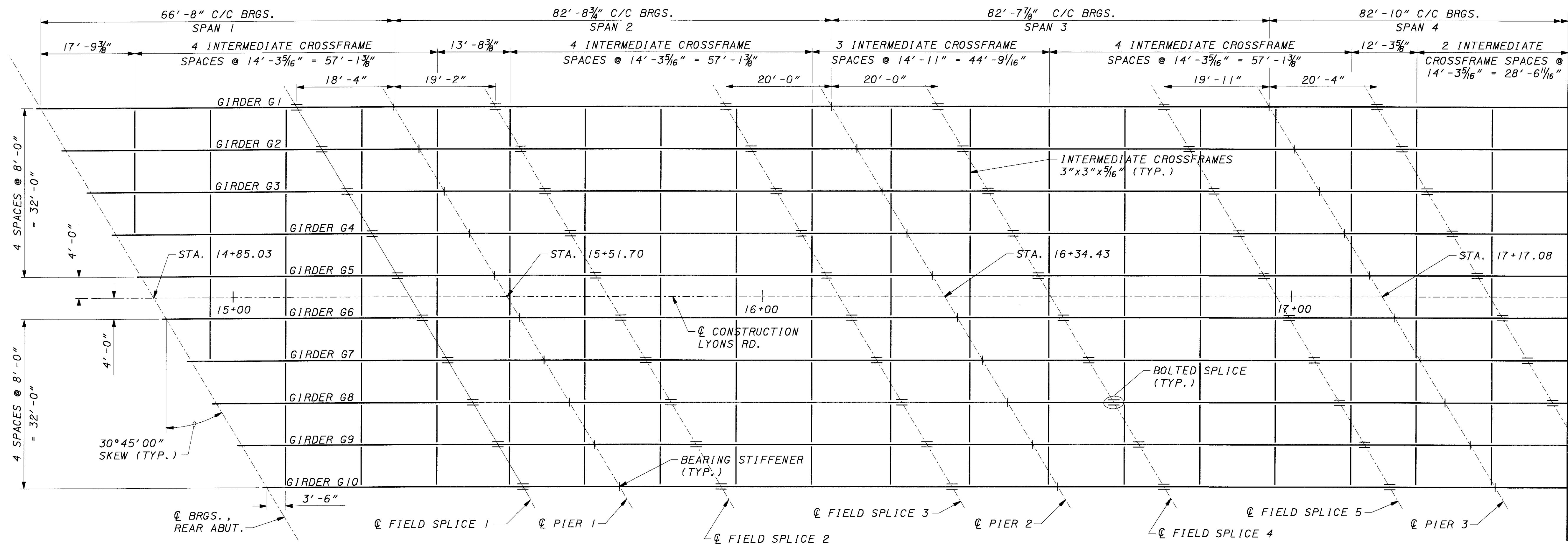
PIER 2 AND 4 BARRIER TREATMENT  
(PILES NOT SHOWN FOR CLARITY)



TYPICAL REFERENCE MONUMENT DETAIL  
(PILES NOT SHOWN FOR CLARITY)



FOUNDATION PAYMENT LIMITS AT PROPOSED FOOTINGS  
(PILES NOT SHOWN FOR CLARITY)

**NOTES:**

1. FOR SPLICE CONNECTIONS, HIGH STRENGTH BOLTS SHALL BE  $\frac{1}{8}$ " DIA. ASTM A325 GALVANIZED, UNLESS OTHERWISE NOTED.
2. WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), THE MATERIAL SHALL MEET SPECIFIED MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
3. ON ALL FIELD SPLICES, BOLT HEADS SHALL BE PLACED ON THE OUTSIDE FACE OF THE EXTERIOR GIRDER AND ON THE BOTTOM OF THE BOTTOM FLANGE PLATES AND TOP OF THE TOP FLANGE PLATES. FOR BOLTED SPLICE DETAILS, SEE SHEET 20.
4. ALL STRUCTURAL STEEL SHALL BE ASTM A572 GRADE 50, YIELD STRENGTH 50 KSI UNLESS OTHERWISE NOTED.
5. FOR INTERMEDIATE CROSSFRAME DETAILS, SEE SHEET 21.
6. FOR BEARING DETAILS, SEE SHEETS 23 AND 24.
7. FOR GIRDER DEFLECTION AND CAMBER TABLE, SEE SHEET 22.
8. FOR TYPICAL DECK SECTIONS, SEE SHEET 25.
9. ESTIMATED QUANTITY OF STRUCTURAL STEEL IS 855,000 LBS. QUANTITY FURNISHED FOR INFORMATIONAL PURPOSES ONLY. PAYMENT SHALL BE MADE AT THE CONTRACT BID PRICE FOR ITEM 863, STRUCTURAL STEEL MEMBERS, LEVEL FOUR (4) FABRICATION. PAYMENT FOR SHEAR STUDS SHALL BE INCLUDED WITH ITEM 863, WELDED SHEAR STUD CONNECTOR.
10. FOR ADDITIONAL SUPERSTRUCTURE DETAILS, SEE STD. DWG. GSD-1-96.
11. FOR GIRDER ELEVATIONS, SEE SHEET 19.

**FRAMING PLAN**

DESIGN AGENCY  
**CH2M HILL**  
ONE DAYTON CENTER STREET  
DAYTON, OH 45402-1828

DATE  
06/02/00  
REVIEWED  
RGS  
STRUCTURE FILE NUMBER  
5706467

DRAWN  
JTC  
DESIGNED  
TAB  
CHECKED  
SKT

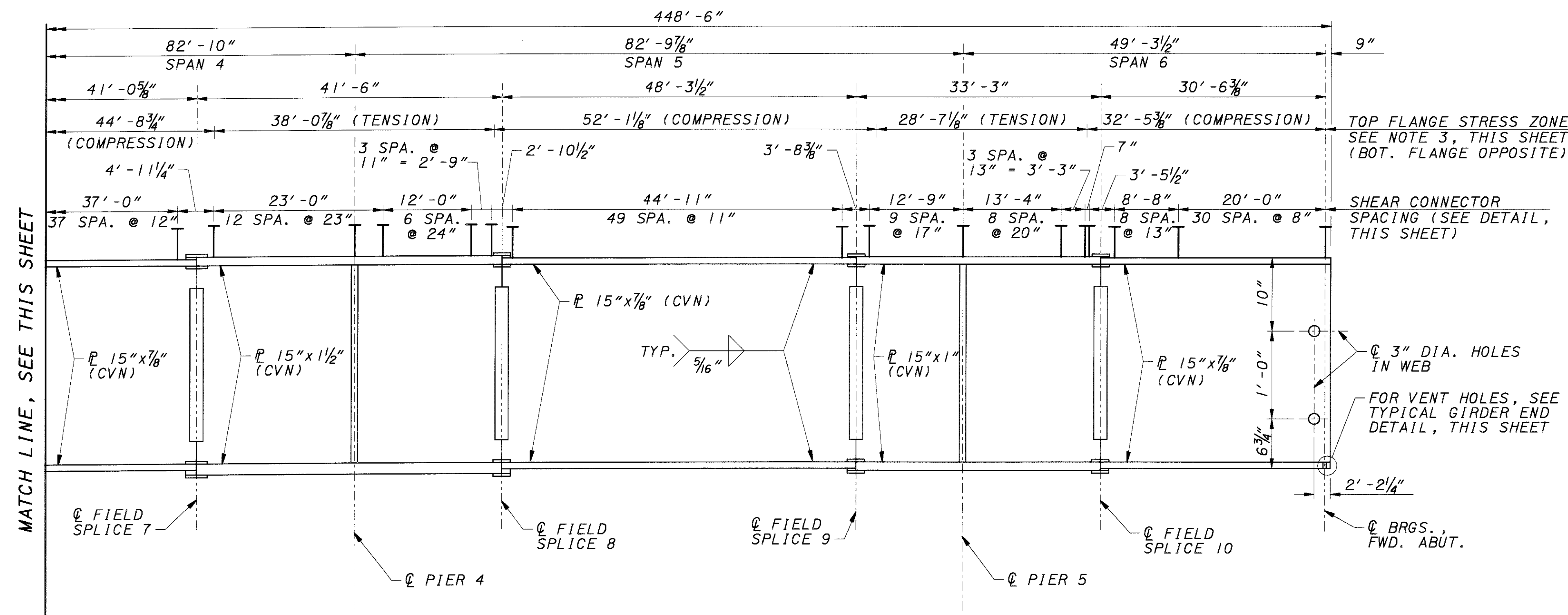
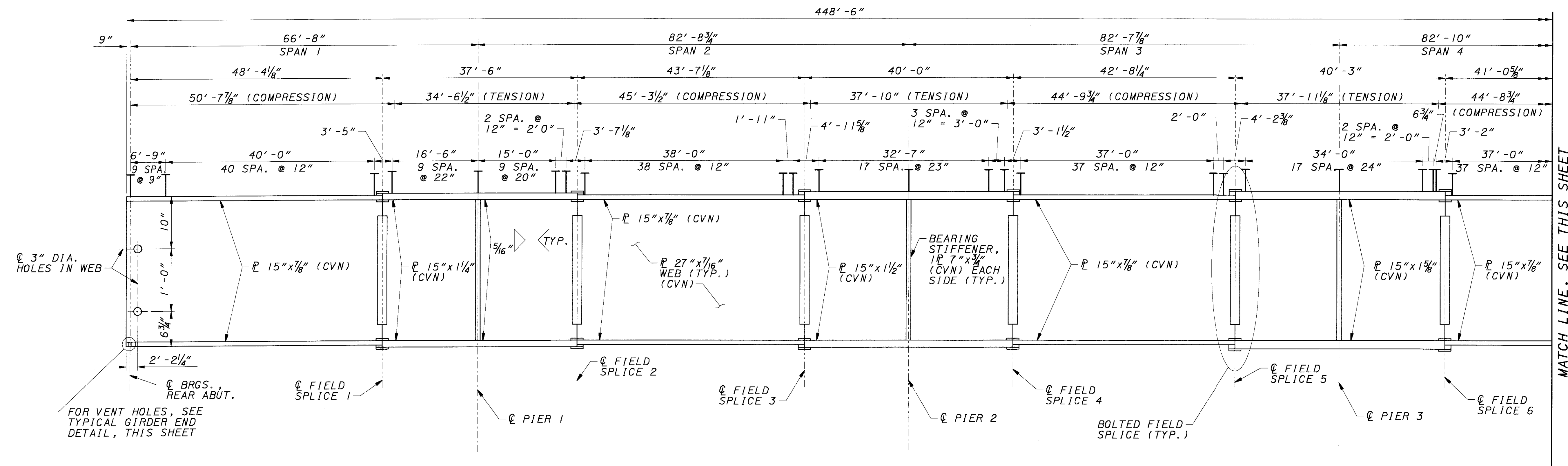
**FRAMING PLAN**  
BRIDGE NO. MOT-75-0306  
LYONS ROAD OVER I-75 MAINLINE

**MOT-75-3.06**

18/33

68  
90

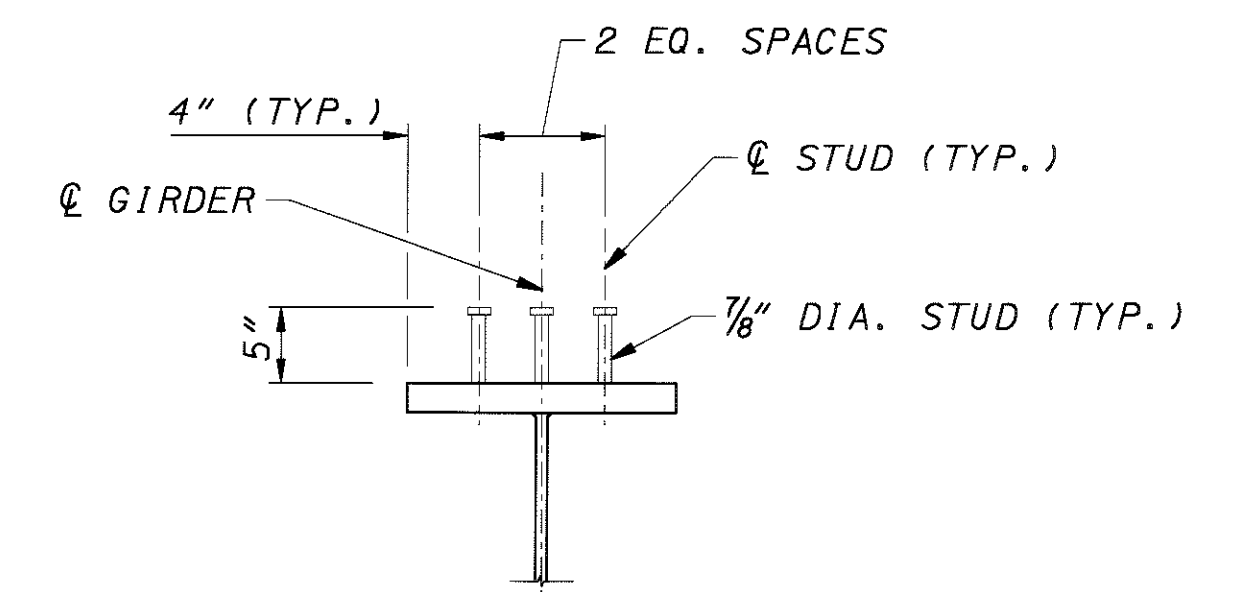




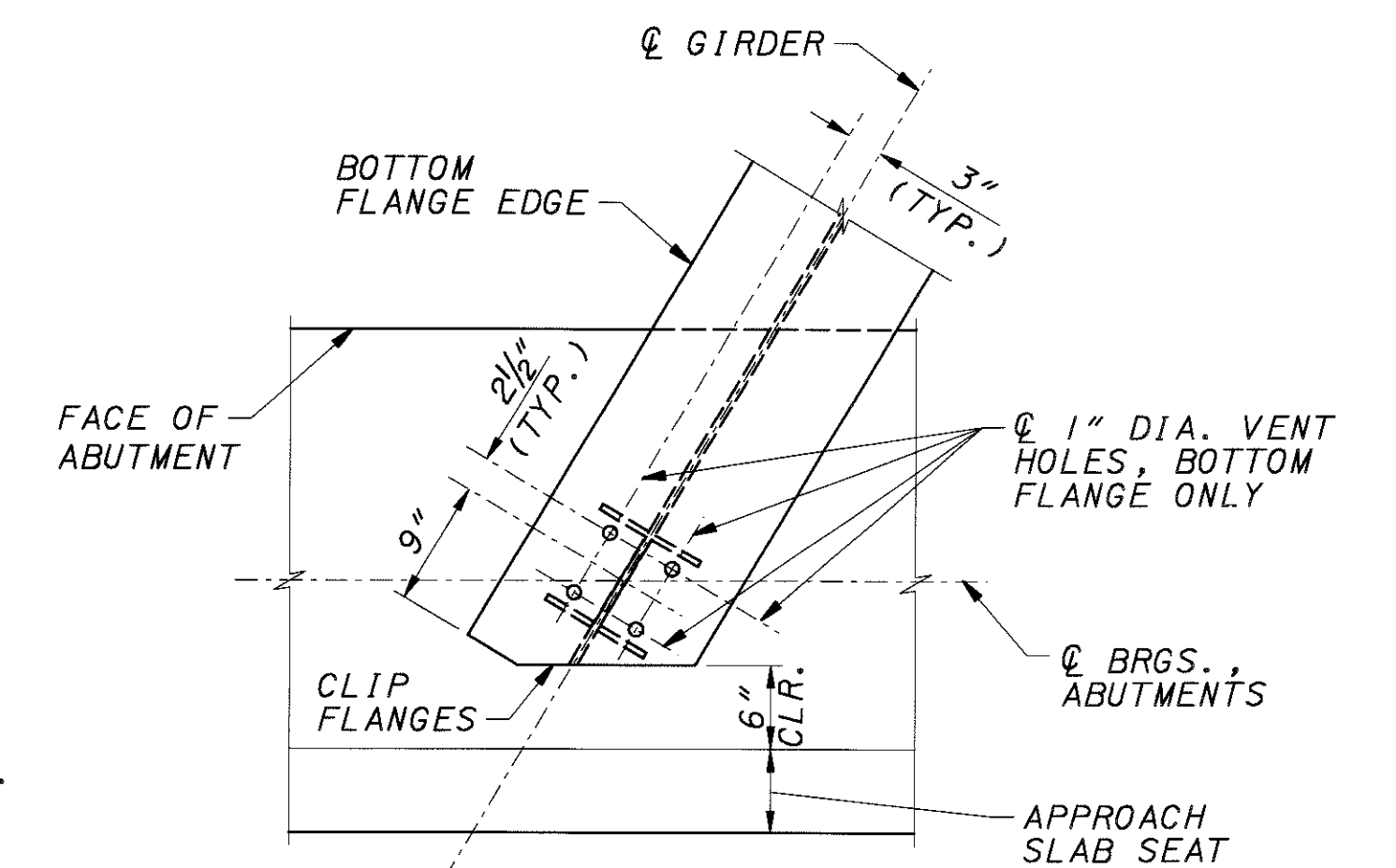
**GIRDER ELEVATION**  
GIRDERS G1 THRU G10

**NOTES:**

1. FOR FRAMING PLAN AND NOTES, SEE SHEET 18.
2. FOR TYPICAL BOLTED SPLICE DETAILS, SEE SHEET 20.
3. WELDED ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE MAY BE MADE TO AREAS OF THE FASCIA STRINGER FLANGES DESIGNATED "COMPRESSION". ATTACHMENTS SHALL NOT BE MADE TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE NOT CLOSER THAN 1 INCH FROM EDGE OF FLANGE, BE NOT MORE THAN 2 INCHES LONG, AND BE NOT SMALLER THAN THE MINIMUM SIZE REQUIRED BY AASHTO.

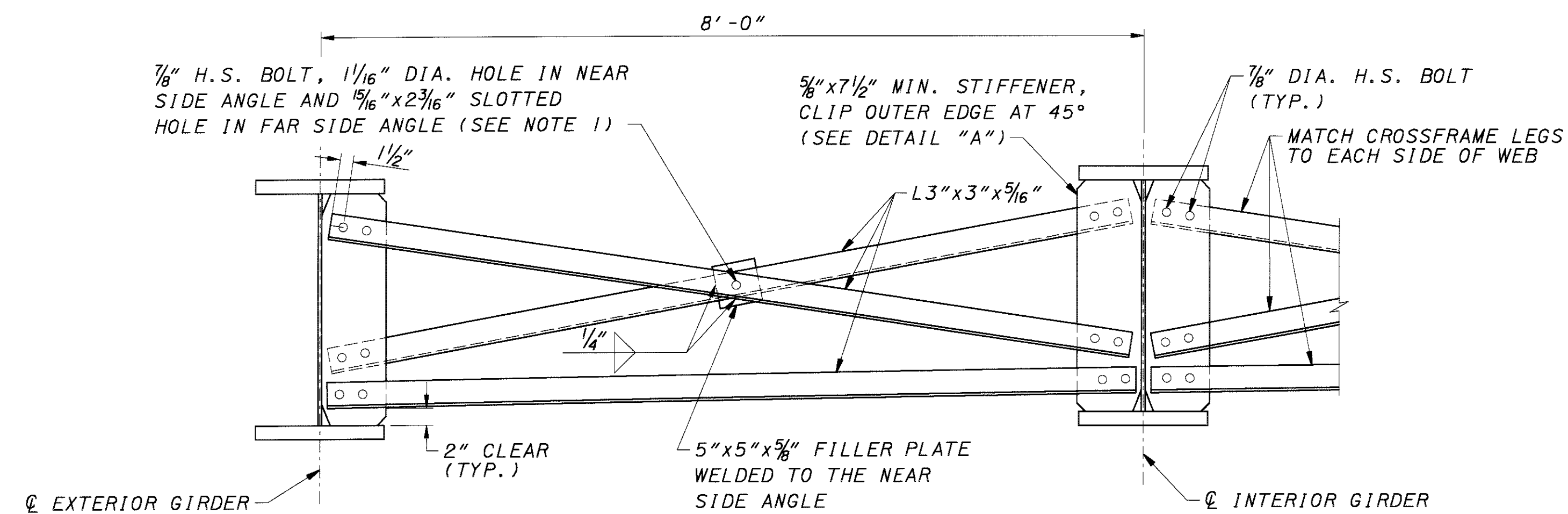


**SHEAR CONNECTOR DETAIL**

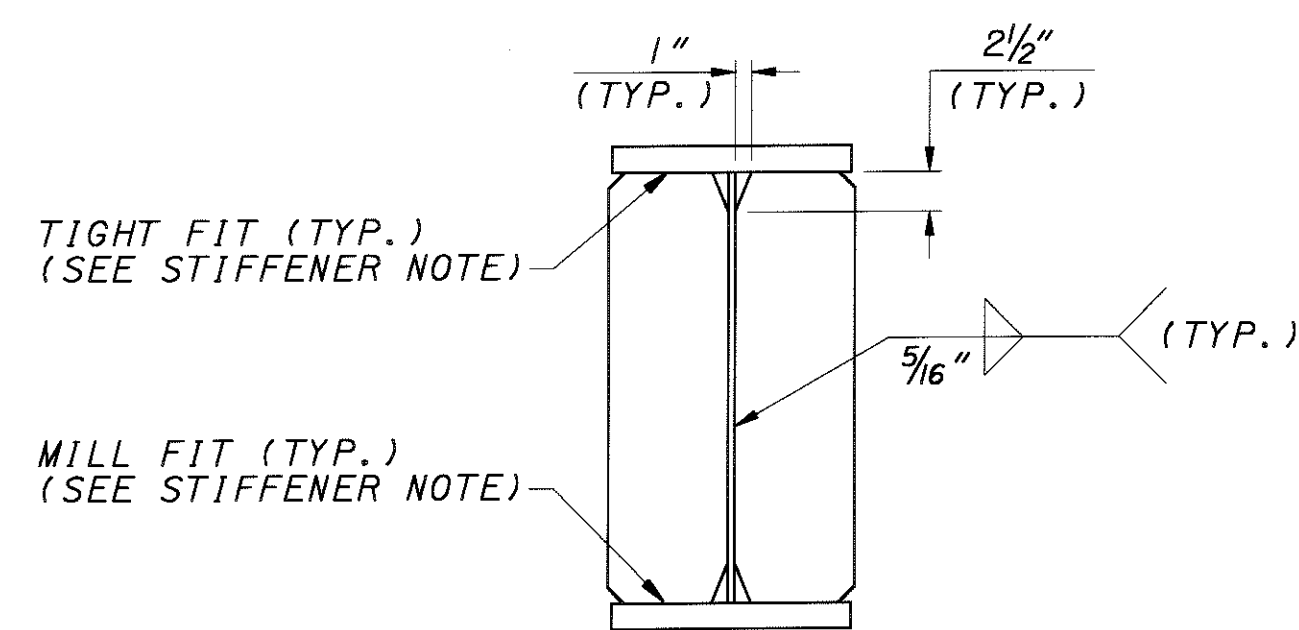


**TYPICAL GIRDER END DETAIL**  
GIRDERS G1 THRU G10

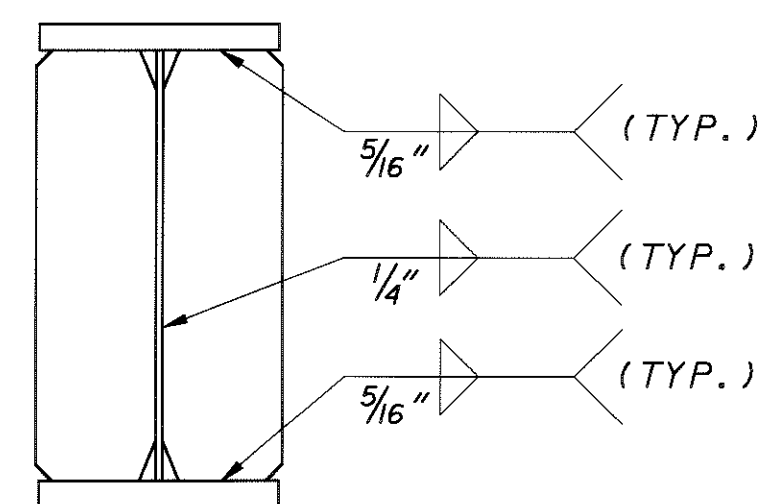




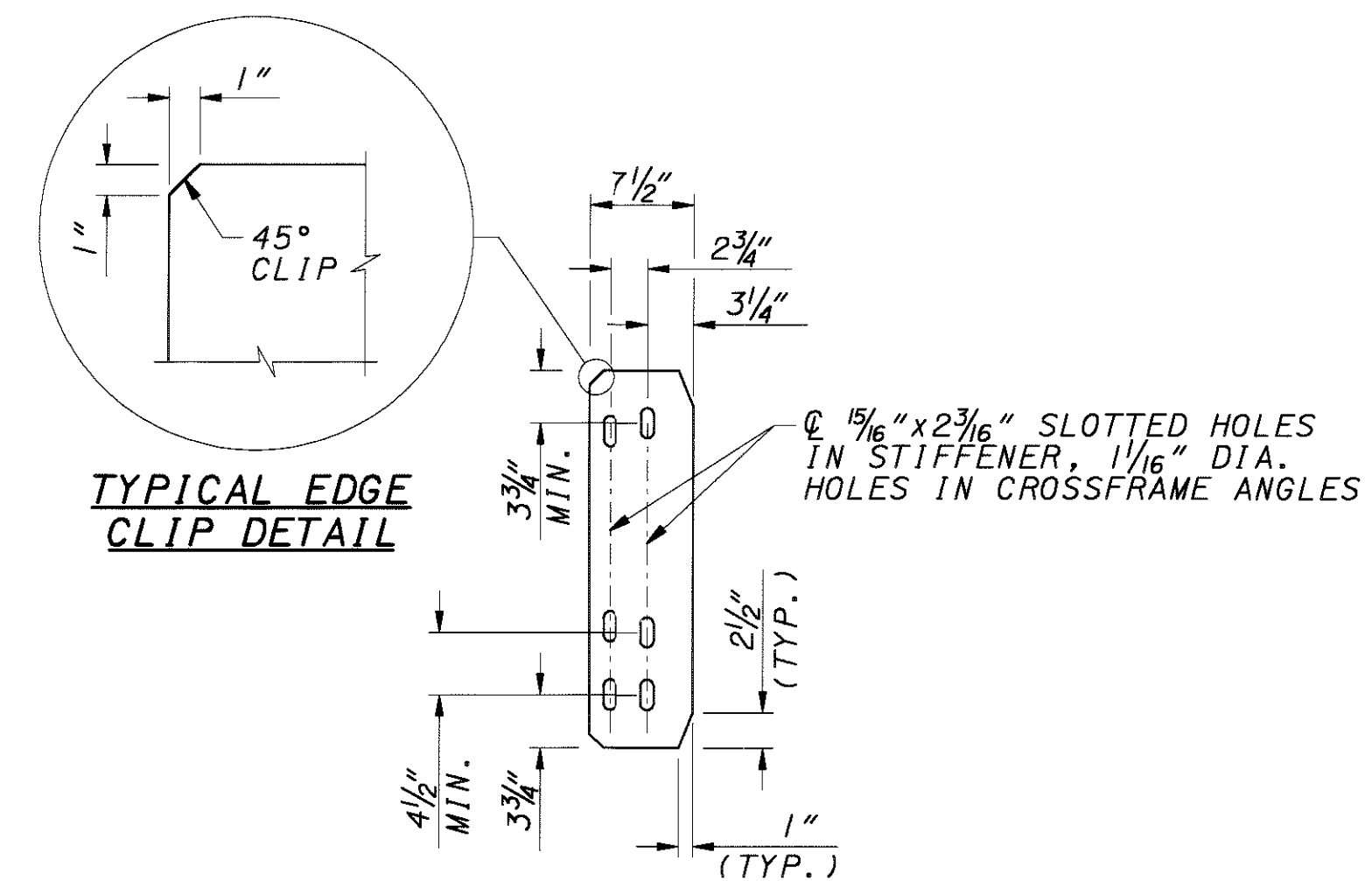
INTERMEDIATE CROSSFRAME DETAIL (TYPE 4)



BEARING STIFFENER



### INTERMEDIATE STIFFENER WITH CROSSFRAMES



DETAIL "A"

NOTES:

1. FOR CROSSFRAME CONNECTIONS, ALL BOLTS SHALL BE  $\frac{7}{8}$ " DIA. HIGH STRENGTH ASTM A325 TYPE 1 GALVANIZED. EACH ANCHOR ASSEMBLY SHALL INCLUDE A BOLT, NUT AND TWO (2) WASHERS, TIGHTENED PER SUPPLEMENTAL SPECIFICATION 863, SECTION 863.21.
2. THE FABRICATOR SHALL CHECK THE LONGITUDINAL CROSSFRAME SPACING SO THAT INTERFERENCE WITH BOLTED SPLICES, ANCHOR BOLTS, COMPLETE PENETRATION WEB OR FLANGE WELDED SPLICES AND BEARING STIFFENERS CAN BE AVOIDED. SPACING SHALL BE ADJUSTED TO PROVIDE AT LEAST SIX INCHES OF LONGITUDINAL CLEARANCE. THE FABRICATOR MAY ADJUST CROSSFRAME SPACES UP TO A MAXIMUM OF 15'-0" CENTER TO CENTER UNLESS THE CONTRACT DRAWINGS PROVIDE A NOTED MAXIMUM. FOR FRAMING PLAN, SEE SHEET 18.
3. FOR ADDITIONAL CROSSFRAME DETAILS, SEE STD. DWG. GSD-1-96.
4. IN LIEU OF THE TYPE 4 CROSSFRAME DETAIL SHOWN, THE CONTRACTOR HAS THE OPTION OF USING THE TYPE 3 DETAIL AS SHOWN IN STD. DWG. GSD-1-96 SUBJECT TO THE APPROVAL OF THE DIRECTOR.

STIFFENER NOTES:

BEARING STIFFENER: BEARING STIFFENER SHALL BE VERTICAL AFTER ERECTION.

WELDS: STIFFENER TO GIRDER WELDS SHALL BE TERMINATED AS GIVEN BELOW:

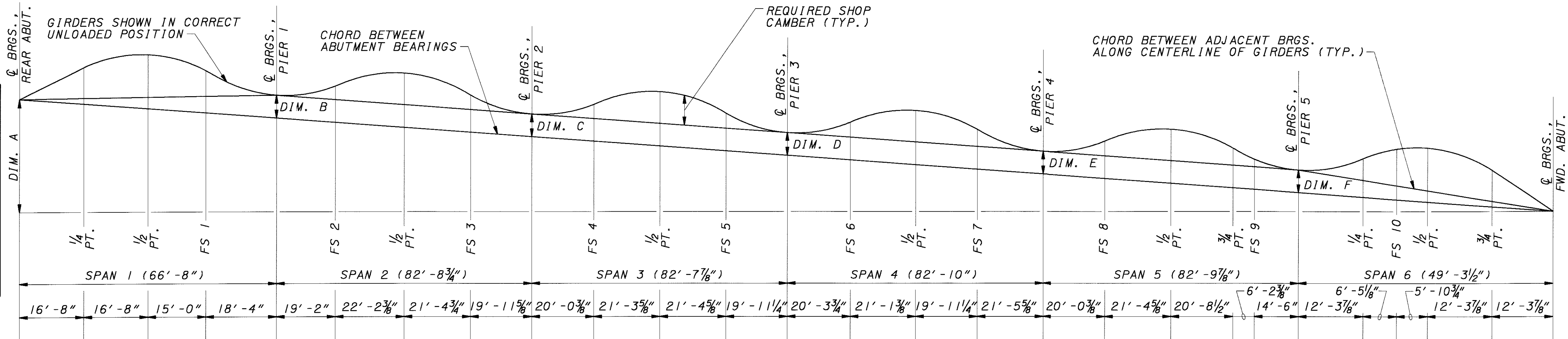
- STIFFENER TO GIRDER FLANGE WELDS  $\frac{1}{4}$ "  $\pm \frac{1}{8}$ " AT BOTH ENDS OF THE STIFFENER.
- B. STIFFENER TO GIRDER WEB WELDS  $\frac{1}{2}$ "  $\pm \frac{1}{4}$ " AT BOTH ENDS OF THE STIFFENER.

*MILL FIT: THE BEARING ENDS OF THE BEARING STIFFENER SHALL BE FLUSH AND SQUARE WITH THE WEB AND SHALL HAVE AT LEAST 75 PERCENT OF THIS AREA IN CONTACT WITH THE INNER SURFACE OF THE FLANGE.*

TIGHT FIT: A TIGHT FIT IS DEFINED AS ONE IN WHICH THE STIFFENER AND FLANGE ARE IN PHYSICAL CONTACT OVER SOME PORTION OF THE END OF THE STIFFENER AND HAVING NO GAP IN EXCESS OF  $1/16$  INCH.



DIMENSION TABLE						
GIRDER	A	B	C	D	E	F
GIRDER G1	9'-6 <sup>3</sup> / <sub>4</sub> "	7 <sup>1</sup> / <sub>8</sub> "	19 <sup>1</sup> / <sub>16</sub> "	1 <sup>13</sup> / <sub>16</sub> "	1 <sup>1</sup> / <sub>2</sub> "	1 <sup>1</sup> / <sub>16</sub> "
GIRDER G2	9'-8 <sup>3</sup> / <sub>4</sub> "	7 <sup>1</sup> / <sub>8</sub> "	19 <sup>1</sup> / <sub>16</sub> "	1 <sup>13</sup> / <sub>16</sub> "	1 <sup>1</sup> / <sub>2</sub> "	1 <sup>1</sup> / <sub>16</sub> "
GIRDER G3	9'-10 <sup>1</sup> / <sub>16</sub> "	7 <sup>1</sup> / <sub>8</sub> "	19 <sup>1</sup> / <sub>16</sub> "	1 <sup>13</sup> / <sub>16</sub> "	1 <sup>1</sup> / <sub>2</sub> "	1 <sup>1</sup> / <sub>16</sub> "
GIRDER G4	9'-11 <sup>3</sup> / <sub>4</sub> "	7 <sup>1</sup> / <sub>8</sub> "	15 <sup>1</sup> / <sub>8</sub> "	1 <sup>13</sup> / <sub>16</sub> "	1 <sup>1</sup> / <sub>2</sub> "	1 <sup>1</sup> / <sub>16</sub> "
GIRDER G5	10'-19 <sup>1</sup> / <sub>16</sub> "	5 <sup>1</sup> / <sub>16</sub> "	15 <sup>1</sup> / <sub>8</sub> "	1 <sup>13</sup> / <sub>16</sub> "	1 <sup>1</sup> / <sub>2</sub> "	1 <sup>1</sup> / <sub>16</sub> "
GIRDER G6	10'-3 <sup>3</sup> / <sub>8</sub> "	5 <sup>1</sup> / <sub>16</sub> "	15 <sup>1</sup> / <sub>8</sub> "	1 <sup>13</sup> / <sub>16</sub> "	1 <sup>1</sup> / <sub>2</sub> "	1 <sup>1</sup> / <sub>16</sub> "
GIRDER G7	10'-5 <sup>3</sup> / <sub>16</sub> "	5 <sup>1</sup> / <sub>16</sub> "	15 <sup>1</sup> / <sub>8</sub> "	1 <sup>13</sup> / <sub>16</sub> "	1 <sup>1</sup> / <sub>2</sub> "	1 <sup>1</sup> / <sub>16</sub> "
GIRDER G8	10'-6 <sup>3</sup> / <sub>16</sub> "	5 <sup>1</sup> / <sub>16</sub> "	15 <sup>1</sup> / <sub>8</sub> "	1 <sup>13</sup> / <sub>16</sub> "	1 <sup>1</sup> / <sub>2</sub> "	1 <sup>1</sup> / <sub>16</sub> "
GIRDER G9	10'-8 <sup>3</sup> / <sub>16</sub> "	5 <sup>1</sup> / <sub>16</sub> "	15 <sup>1</sup> / <sub>8</sub> "	1 <sup>13</sup> / <sub>16</sub> "	1 <sup>1</sup> / <sub>2</sub> "	1 <sup>1</sup> / <sub>16</sub> "
GIRDER G10	10'-10 <sup>3</sup> / <sub>16</sub> "	5 <sup>1</sup> / <sub>16</sub> "	15 <sup>1</sup> / <sub>8</sub> "	1 <sup>13</sup> / <sub>16</sub> "	1 <sup>1</sup> / <sub>2</sub> "	1 <sup>1</sup> / <sub>16</sub> "



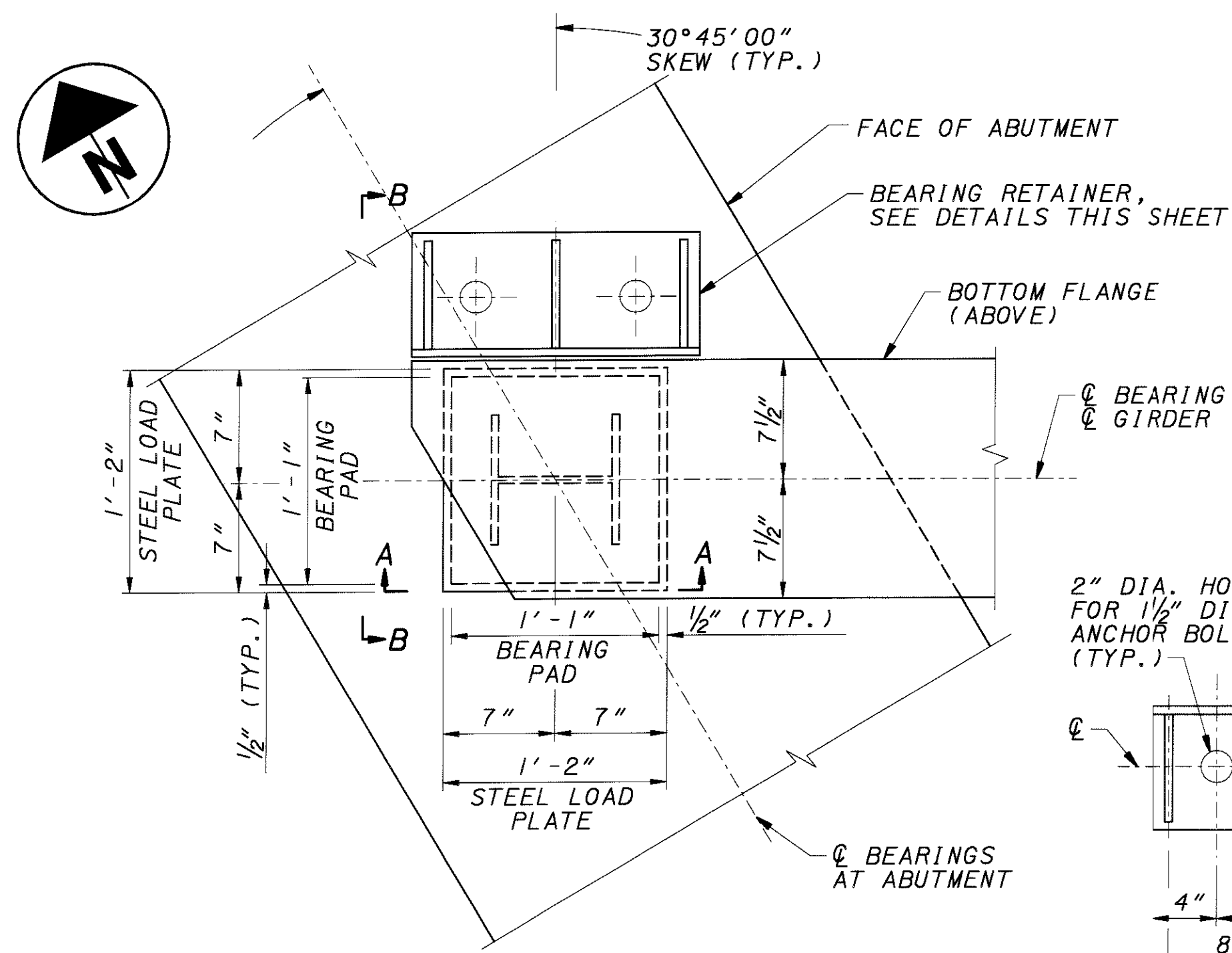
GIRDER G1	DEFLECTION DUE TO WEIGHT OF STEEL		1/8	1/8	1/16		1/16	3/16	1/16		1/16	3/16	1/16		1/16	3/16	1/16		1/8	1/4	1/8	1/8	0	0	0	0
	DEFLECTION DUE TO REMAINING DEAD LOAD		1/8	1 1/16	3/16		1/2	1 1/16	3/16		1/2	1	1/2		7/16	7/8	7/16		3/4	1 1/2	1	1 1/16	-1/16	0	1/16	1/8
	DEFLECTION REQUIRED FOR VERTICAL CURVE		1/8	3/16	1/4		1/2	3/4	9/16		9/16	3/4	9/16		9/16	3/4	9/16		9/16	3/4	9/16	7/16	3/16	1/4	1/4	3/16
	SUM OF DEFLECTION AND CONVEXITY EQUALS REQUIRED SHOP CAMBER		1 1/8	1 3/8	7/8		1 1/16	2	1 3/16		1 1/8	1 15/16	1 1/8		1 1/16	1 13/16	1 1/16		1 1/4	2 1/2	1 11/16	1 1/4	1/8	1/4	5/16	5/16
GIRDER G2	DEFLECTION DUE TO WEIGHT OF STEEL		1/8	1/8	1/16		1/16	3/16	1/16		1/16	3/16	1/16		1/16	3/16	1/16		1/8	1/4	1/8	1/8	0	0	0	0
	DEFLECTION DUE TO REMAINING DEAD LOAD		15/16	1/8	9/16		5/8	1 1/8	9/16		9/16	1 1/16	9/16		7/16	15/16	7/16		13/16	1 5/8	1 1/16	1 1/16	-1/16	0	1/8	1/8
	DEFLECTION REQUIRED FOR VERTICAL CURVE		1/8	1/4	1/4		1/2	3/4	9/16		9/16	3/4	9/16		9/16	3/4	9/16		9/16	3/4	9/16	7/16	3/16	1/4	1/4	3/16
	SUM OF DEFLECTION AND CONVEXITY EQUALS REQUIRED SHOP CAMBER		1 3/16	1 1/2	7/8		1 3/16	2 1/16	1 3/16		1 3/16	2	1 3/16		1 1/16	1 7/8	1 1/16		1 1/2	2 5/8	1 3/4	1 1/4	1/8	1/4	3/8	5/16
GIRDER G3	DEFLECTION DUE TO WEIGHT OF STEEL		1/8	1/8	1/16		1/16	3/16	1/16		1/16	3/16	1/16		1/16	3/16	1/16		1/8	1/4	1/8	1/8	0	0	0	0
	DEFLECTION DUE TO REMAINING DEAD LOAD		15/16	1/8	9/16		5/8	1 1/8	9/16		9/16	1 1/16	9/16		7/16	15/16	7/16		13/16	1 5/8	1 1/16	1 1/16	-1/16	0	1/8	1/8
	DEFLECTION REQUIRED FOR VERTICAL CURVE		3/16	5/16	5/16		1/2	3/4	9/16		9/16	3/4	9/16		9/16	3/4	9/16		9/16	3/4	9/16	7/16	3/16	1/4	1/4	3/16
	SUM OF DEFLECTION AND CONVEXITY EQUALS REQUIRED SHOP CAMBER		1 1/4	1 9/16	15/16		1 3/16	2 1/16	1 3/16		1 3/16	2	1 3/16		1 1/16	1 7/8	1 1/16		1 1/2	2 5/8	1 3/4	1 1/4	1/8	1/4	3/8	5/16
GIRDER G4	DEFLECTION DUE TO WEIGHT OF STEEL		1/8	1/8	1/16		1/16	3/16	1/16		1/16	3/16	1/16		1/16	3/16	1/16		1/8	1/4	1/8	1/8	0	0	0	0
	DEFLECTION DUE TO REMAINING DEAD LOAD		15/16	1/8	9/16		5/8	1 1/8	9/16		9/16	1 1/16	9/16		7/16	15/16	7/16		13/16	1 5/8	1 1/16	1 1/16	-1/16	0	1/8	1/8
	DEFLECTION REQUIRED FOR VERTICAL CURVE		3/16	3/8	5/16		1/2	3/4	9/16		9/16	3/4	9/16		9/16	3/4	9/16		9/16	3/4	9/16	7/16	3/16	1/4	1/4	3/16
	SUM OF DEFLECTION AND CONVEXITY EQUALS REQUIRED SHOP CAMBER		1 1/4	1 5/8	15/16		1 3/16	2 1/16	1 3/16		1 3/16	2	1 3/16		1 1/16	1 7/8	1 1/16		1 1/2	2 5/8	1 3/4	1 1/4	1/8	1/4	3/8	5/16
GIRDER G5	DEFLECTION DUE TO WEIGHT OF STEEL		1/8	1/8	1/16		1/16	3/16	1/16		1/16	3/16	1/16		1/16	3/16	1/16		1/8	1/4	1/8	1/8	0	0	0	0
	DEFLECTION DUE TO REMAINING DEAD LOAD		15/16	1/8	9/16		5/8	1 1/8	9/16		9/16	1 1/16	9/16		7/16	15/16	7/16		13/16	1 5/8	1 1/16	1 1/16	-1/16	0	1/8	1/8
	DEFLECTION REQUIRED FOR VERTICAL CURVE		1/4	7/16	3/8		1/2	3/4	9/16		9/16	3/4	9/16		9/16	3/4	9/16		9/16	3/4	9/16	7/16	3/16	1/4	1/4	3/16
	SUM OF DEFLECTION AND CONVEXITY EQUALS REQUIRED SHOP CAMBER		1 5/16	1 11/16	1		1 3/16	2 1/16	1 3/16		1 3/16	2	1 3/16		1 1/16	1 7/8	1 1/16		1 1/2	2 5/8	1 3/4	1 1/4	1/8	1/4	3/8	5/16
GIRDER G6	DEFLECTION DUE TO WEIGHT OF STEEL		1/8	1/8	1/16		1/16	3/16	1/16		1/16	3/16	1/16		1/16	3/16	1/16		1/8	1/4	1/8	1/8	0	0	0	0
	DEFLECTION DUE TO REMAINING DEAD LOAD		15/16	1/8	9/16		5/8	1 1/8	9/16		9/16	1 1/16	9/16		7/16	15/16	7/16		13/16	1 5/8	1 1/16	1 1/16	-1/16	0	1/8	1/8
	DEFLECTION REQUIRED FOR VERTICAL CURVE		5/16	7/16	3/8		1/2	3/4	9/16		9/16	3/4	9/16		9/16	3/4	9/16		9/16	3/4	9/16	7/16	3/16	1/4	1/4	3/16
	SUM OF DEFLECTION AND CONVEXITY EQUALS REQUIRED SHOP CAMBER		1 3/8	1 11/16	1		1 3/16	2 1/16	1 3/16		1 3/16	2	1 3/16		1 1/16	1 7/8	1 1/16		1 1/2	2 5/8	1 3/4	1 1/4	1/8	1/4	3/8	5/16
GIRDER G7	DEFLECTION DUE TO WEIGHT OF STEEL		1/8	1/8	1/16		1/16	3/16	1/16		1/16	3/16	1/16		1/16	3/16	1/16		1/8	1/4	1/8	1/8	0	0	0	0
	DEFLECTION DUE TO REMAINING DEAD LOAD		15/16	1/8	9/16		5/8	1 1/8	9/16		9/16	1 1/16	9/16		7/16	15/16	7/16		13/16	1 5/8	1 1/16	1 1/16	-1/16	0	1/8	1/8
	DEFLECTION REQUIRED FOR VERTICAL CURVE		5/16	1/2	3/8		1/2	3/4	9/16		9/16	3/4	9/16		9/16	3/4	9/16		9/16	3/4	9/16	7/16	3/16	1/4	1/4	3/16
	SUM OF DEFLECTION AND CONVEXITY EQUALS REQUIRED SHOP CAMBER		1 3/8	1 3/4	1		1 3/16	2 1/16	1 3/16		1 3/16	2	1 3/16		1 1/16	1 7/8	1 1/16		1 1/2	2 5/8	1 3/4	1 1/4	1/8	1/4	3/8	5/16
GIRDER G8	DEFLECTION DUE TO WEIGHT OF STEEL		1/8	1/8	1/16		1/16	3/16	1/16		1/16	3/16	1/16		1/16	3/16	1/16		1/8	1/4	1/8	1/8	0	0	0	0
	DEFLECTION DUE TO REMAINING DEAD LOAD		15/16	1/8	9/16		5/8	1 1/8	9/16		9/16	1 1/16	9/16		7/16	15/16	7/16		13/16	1 5/8	1 1/16	1 1/16	-1/16	0	1/8	1/8
	DEFLECTION REQUIRED FOR VERTICAL CURVE		3/8	1/2	3/8		1/2	3/4	9/16		9/16	3/4	9/16		9/16	3/4	9/16		9/16	3/4	9/16	7/16	3/16	1/4	1/4	3/16
	SUM OF DEFLECTION AND CONVEXITY EQUALS REQUIRED SHOP CAMBER		1 7/16	1 3/4	1		1 3/16	2 1/16	1 3/16		1 3/16	2	1 3/16		1 1/16	1 7/8	1 1/16		1 1/2	2 5/8	1 3/4	1 1/4	1/8	1/4	3/8	5/16
GIRDER G9	DEFLECTION DUE TO WEIGHT OF STEEL		1/8	1/8	1/16		1/16	3/16	1/16		1/16	3/16	1/16		1/16	3/16	1/16		1/8	1/4	1/8	1/8	0	0	0	0
	DEFLECTION DUE TO REMAINING DEAD LOAD		15/16	1/8	9/16		5/8	1 1/8	9/16		9/16	1 1/16	9/16		7/16	15/16	7/16		13/16	1 5/8	1 1/16	1 1/16	-1/16	0	1/8	1/8
	DEFLECTION REQUIRED FOR VERTICAL CURVE		3/8	1/2	3/8		1/2	3/4	9/16		9/16	3/4	9/16		9/16	3/4	9/16		9/16	3/4	9/16	7/16	3/16	1/4	1/4	3/16
	SUM OF DEFLECTION AND CONVEXITY EQUALS REQUIRED SHOP CAMBER		1 7/16	1 3/4	1		1 3/16	2 1/16	1 3/16		1 3/16	2	1 3/16		1 1/16	1 7/8	1 1/16		1 1/2	2 5/8	1 3/4	1 1/4	1/8	1/4	3/8	5/16
GIRDER G10	DEFLECTION DUE TO WEIGHT OF STEEL		1/8	1/8	1/16		1/16	3/16	1/16		1/16	3/16	1/16		1/16	3/16	1/16		1/8	1/4	1/8	1/8	0	0	0	0
	DEFLECTION DUE TO REMAINING DEAD LOAD		1/8	1 1/16	9/16		1/2	1 1/16	9/16		1/2	1	1/2		7/16	7/8	7/16		3/4	1 1/2	1	1 1/16	-1/16	0	1/16	1/8
	DEFLECTION REQUIRED FOR VERTICAL CURVE		3/8	1/2	3/8		1/2	3/4	9/16		9/16	3/4	9/16		9/16	3/4	9/16		9/16	3/4	9/16	7/16	3/16	1/4	1/4	3/16
	SUM OF DEFLECTION AND CONVEXITY EQUALS REQUIRED SHOP CAMBER		1 3/8	1 11/16	1		1 1/16	2	1 3/16		1 1/8	1 15/16	1 1/8		1 1/16	1 13/16	1 1/16		1 7/16	2 1/2	1 11/16	1 1/4	1/8	1/4	5/16	5/16

DEFLECTION AND CAMBER TABLE (INCHES)

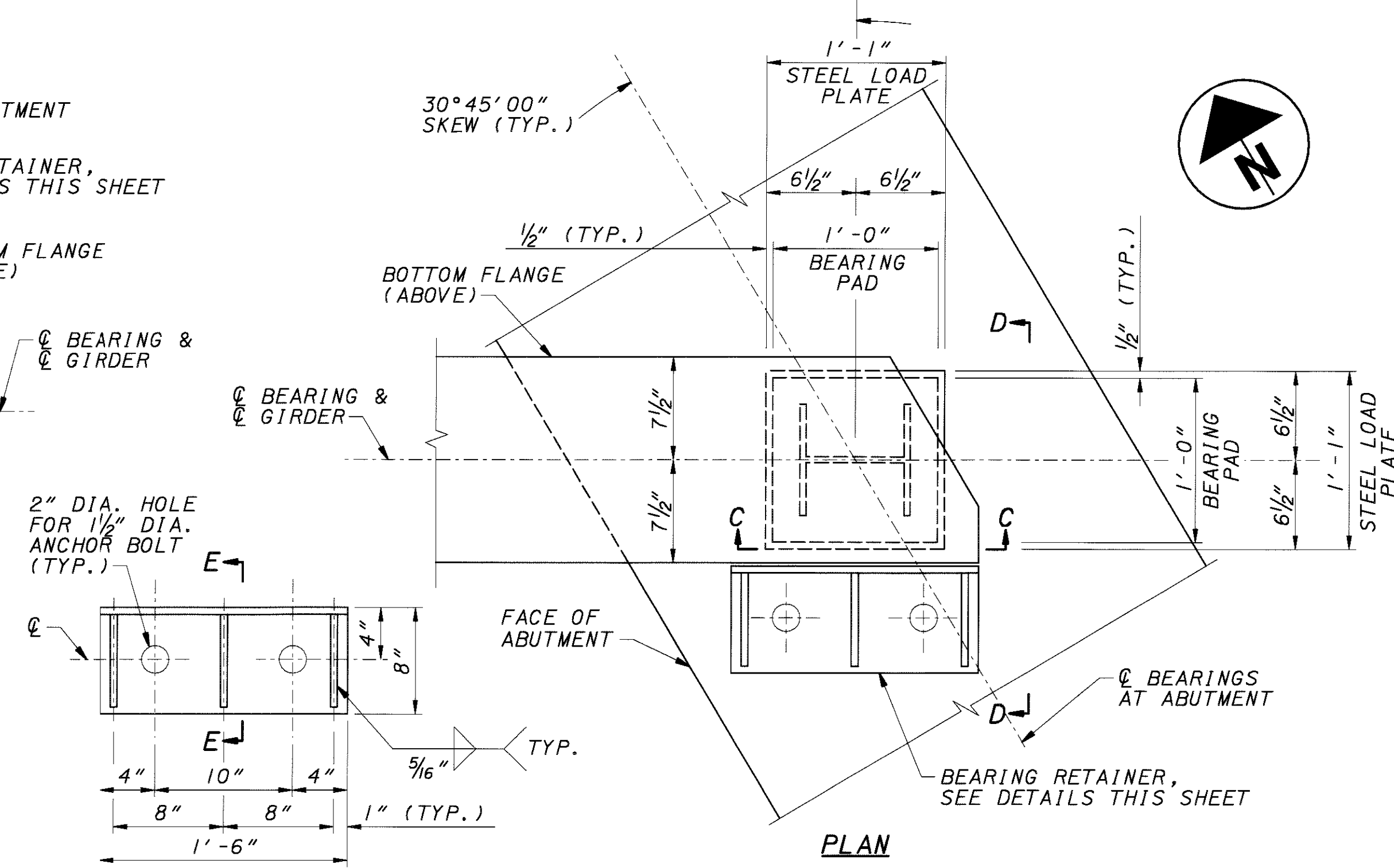
(A POSITIVE CAMBER VALUE INDICATES THE CAMBER IS ABOVE THE CHORD BETWEEN ADJACENT BEARINGS IN THAT SPAN)

NOTES:

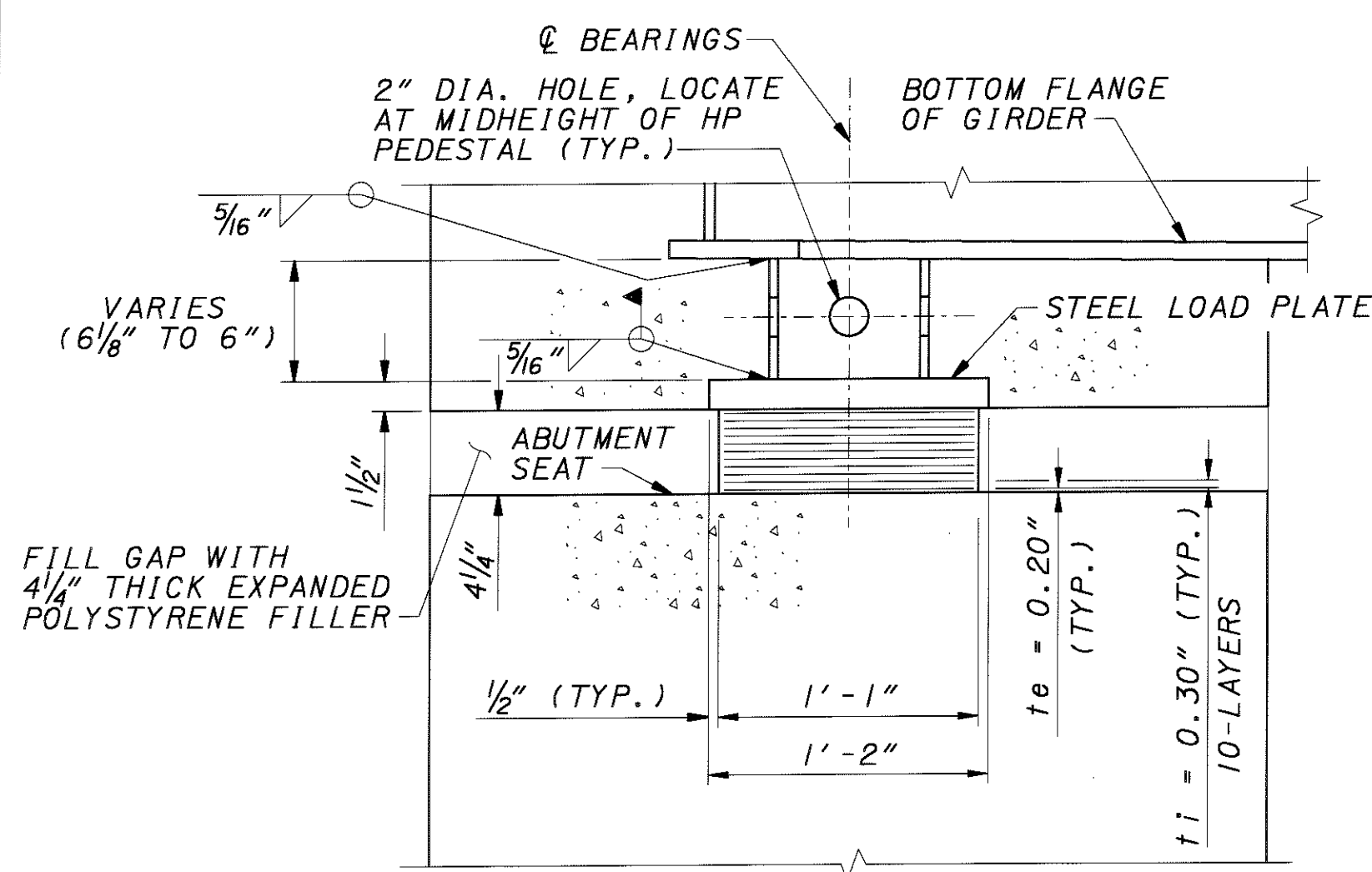
1. FOR FRAMING PLAN, SEE SHEET 18.



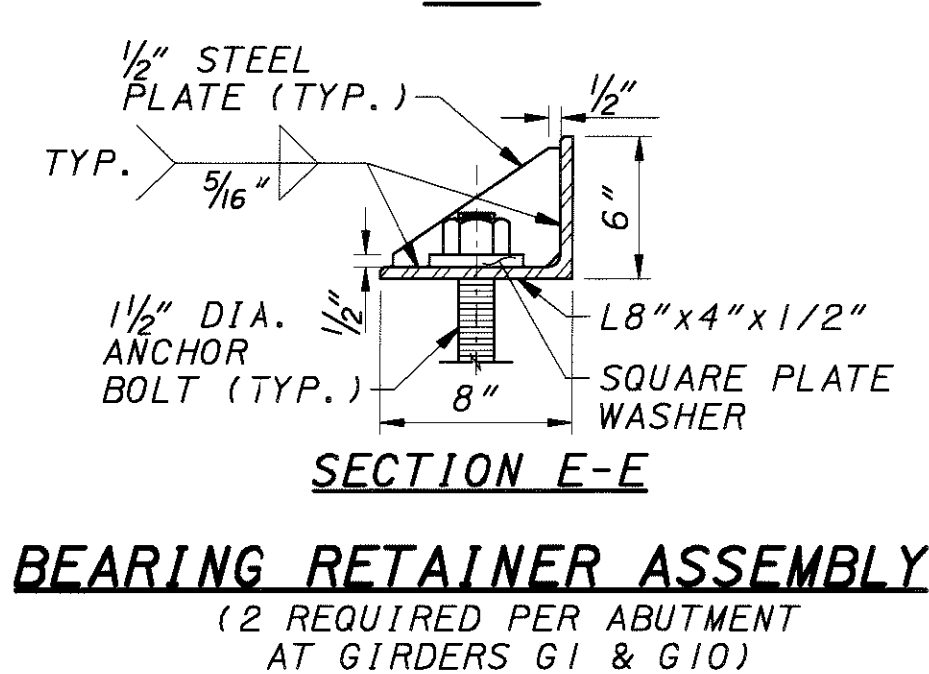
PLAN



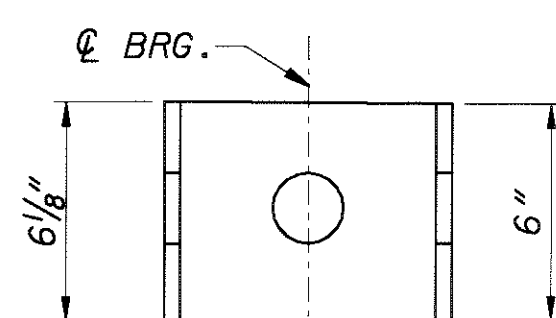
PLAN



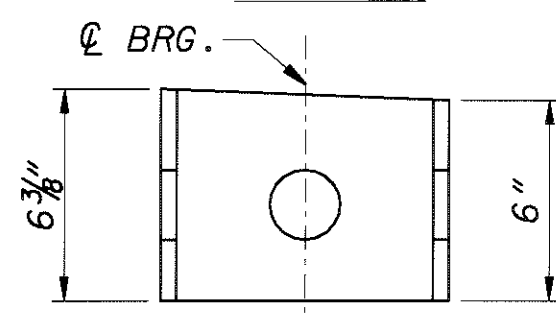
ELEVATION A-A



SECTION E-E  
BEARING RETAINER ASSEMBLY  
(2 REQUIRED PER ABUTMENT  
AT GIRDERS G1 & G10)

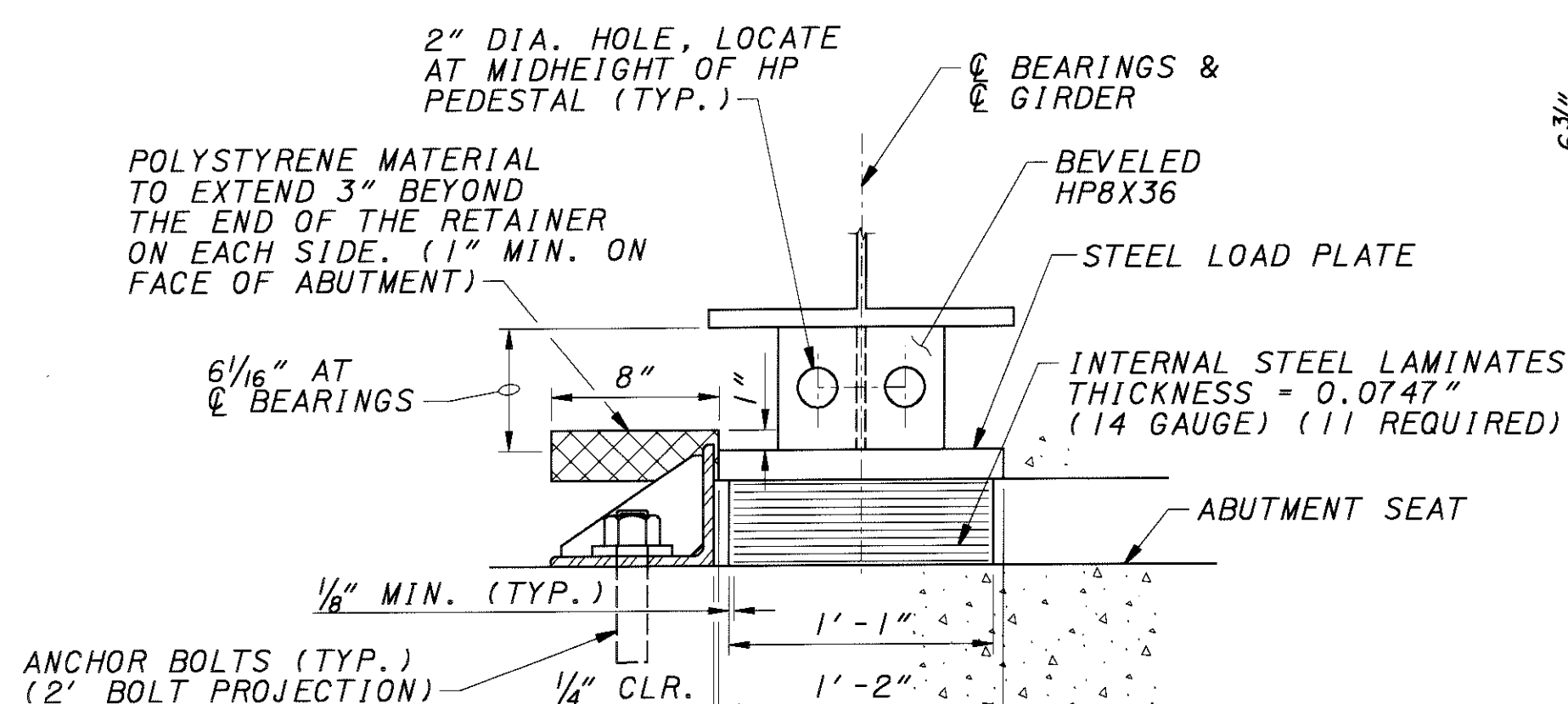


REAR  
AHEAD

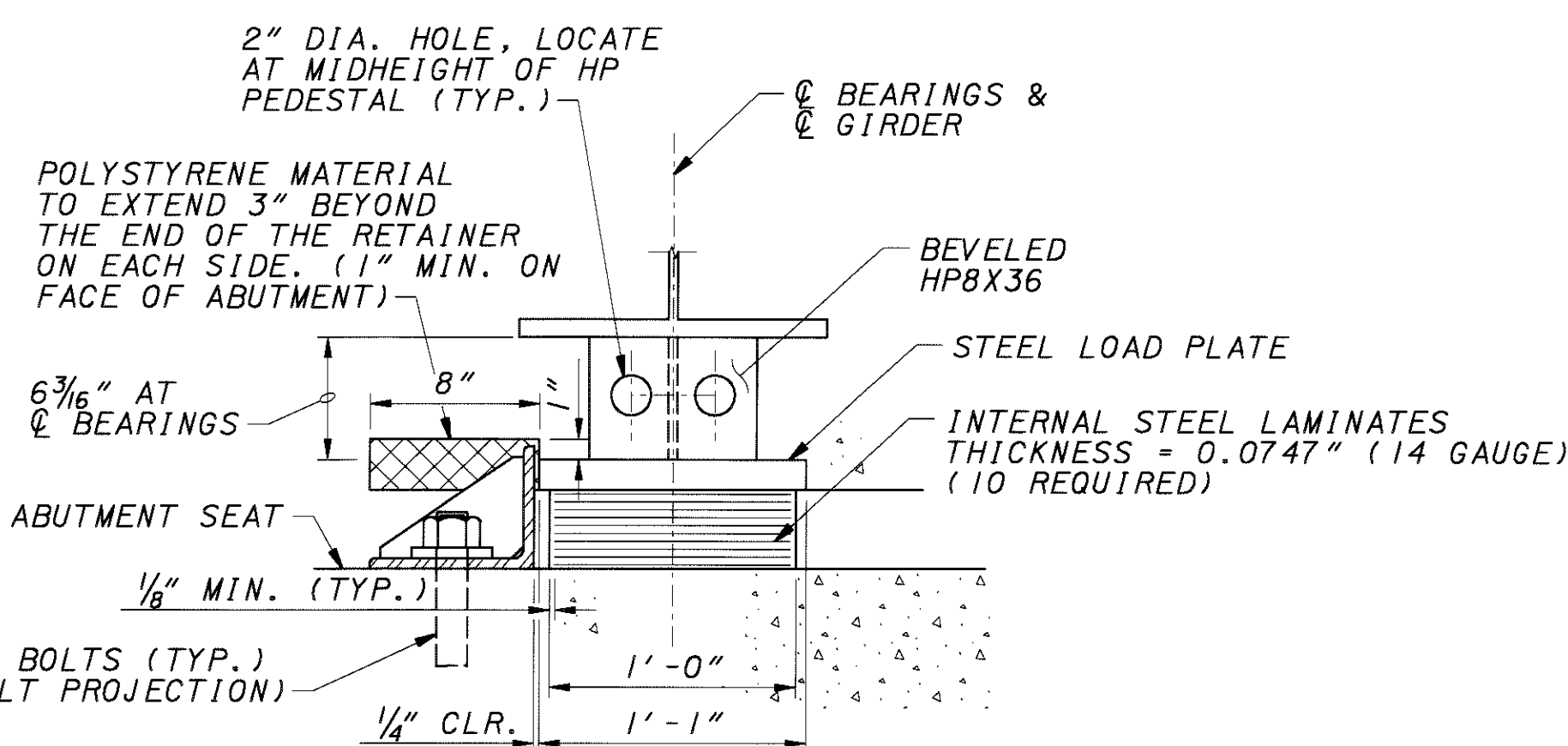


FORWARD  
AHEAD

HP8X36 BEVEL



ELEVATION B-B



ELEVATION D-D

LAMINATED ELASTOMERIC EXPANSION BEARING DETAILS

(REAR ABUTMENT - FOR GIRDERS G1 THRU G10)

LAMINATED ELASTOMERIC EXPANSION BEARING DETAILS

(FORWARD ABUTMENT - FOR GIRDERS G1 THRU G10)

BEARING NOTES:

- ELASTOMERIC BEARINGS SHALL COMPLY WITH ITEM 516 AND AASHTO STANDARD SPECIFICATION FOR HIGHWAY BRIDGES, SECTION 18, BEARING DEVICES, DIVISION 11, CONSTRUCTION, ARTICLES 18.4.5.1 AND 18.5.6.2. BEARINGS SHALL BE GRADE 3, 50-DUROMETER ELASTOMER, AND SHALL BE SUBJECTED TO THE LOAD TESTING REQUIREMENTS DEFINED IN ARTICLE 18.7.4.5 OF THE AASHTO DOCUMENT LISTED ABOVE. BEARINGS WERE DESIGNED UNDER SECTION 14.6.6 OF SECTION 14, BEARINGS, DIVISION 1, DESIGN. TESTING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE BEARINGS, EACH.

- LOAD PLATES: THE STEEL LOAD PLATE SHALL MEET THE REQUIREMENTS OF STRUCTURAL STEEL ASTM A572.

- THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS. WELDING OF THE LOAD PLATE TO THE SUPERSTRUCTURE SHALL BE CONTROLLED SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE SHALL NOT EXCEED 300° F AS DETERMINED BY THE USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.

- BEARING REPOSITIONING: IF THE STEEL IS ERECTED AT AN AMBIENT TEMPERATURE HIGHER THAN 80° F OR LOWER THAN 40° F AND THE BEARING SHEAR DEFLECTION EXCEEDS 1/6 OF THE BEARING HEIGHT AT 60° F (± 10° F), THE GIRDERS SHALL BE RAISED TO ALLOW THE BEARINGS TO RETURN TO THEIR UNDEFORMED SHAPE AT 60° F (± 10° F).

- BASIS OF PAYMENT: THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS AS DETAILED. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATES (NEOPRENE), AS PER PLAN, FOR THE FOLLOWING:

REAR ABUTMENT BEARING PAD (GIRDERS G1-G10):	13"x13"x4 1/4"
LOAD PLATE:	14"x14"x1 1/2"
PIER 1 BEARING PAD (GIRDERS G1-G10):	19"x12"x2 3/4"
LOAD PLATE:	20"x13"x2 1/4" WITH 1/4" BEVEL
PIER 2 BEARING PAD (GIRDERS G1-G10):	19"x12"x2"
LOAD PLATE:	20"x13"x2 1/4" WITH 1/4" BEVEL
PIER 3 BEARING PAD (GIRDERS G1-G10):	19"x12"x2 3/4"
LOAD PLATE:	25"x13"x2 3/4" WITH 3/8" BEVEL
PIER 4 BEARING PAD (GIRDERS G1-G10):	19"x12"x2"
LOAD PLATE:	20"x13"x2 3/4" WITH 3/8" BEVEL
PIER 5 BEARING PAD (GIRDERS G1-G10):	18"x11 1/2"x3 1/8"
LOAD PLATE:	19"x12 1/2"x2 1/2" WITH 1/2" BEVEL
FWD. ABUTMENT BEARING PAD (GIRDERS G1-G10):	12"x12"x3 1/8"
LOAD PLATE:	13"x13"x1 1/2"

- THE HP8X36 BEARING PEDESTALS SHALL MEET THE REQUIREMENTS OF STRUCTURAL STEEL ASTM A572 AND SHALL BE GALVANIZED IN ACCORDANCE WITH 711.02. PAYMENT FOR THE HP8X36 BEARING PEDESTAL SHALL BE INCLUDED IN THE CONTRACT BID PRICE FOR ITEM 863, STRUCTURAL STEEL MEMBERS, LEVEL FOUR (4) FABRICATION.

- FOR ADDITIONAL BEARING NOTES AND DETAILS, SEE STD. DWG. SICD-1-96, SHEET 7 OF 7.

- SHOP PRIME COAT APPLICATION: GIRDER SURFACES WHICH ARE EMBEDDED IN CONCRETE INCLUDING THE HP BEARING PEDESTALS, STEEL LOAD PLATES, AREAS BEHIND STIFFENER CLIPS, CONTACT SURFACES OF CONNECTIONS, AND SURFACES WITHIN 2" OF FIELD WELDS SHALL RECEIVE A MIST OF SHOP PRIME COAT, AS SPECIFIED IN ITEM 863.

- BEARINGS SHALL BE DESIGNED FOR THE FOLLOWING LOADS:

	MAX. DL	MAX. LL	TOTAL DESIGN LOAD
REAR ABUT. =	67 KIPS	61 KIPS	128 KIPS
PIER 1 =	137 KIPS	78 KIPS	215 KIPS
PIER 2 =	137 KIPS	81 KIPS	218 KIPS
PIER 3 =	136 KIPS	81 KIPS	217 KIPS
PIER 4 =	142 KIPS	80 KIPS	222 KIPS
PIER 5 =	119 KIPS	74 KIPS	193 KIPS
FWD. ABUT. =	52 KIPS	59 KIPS	111 KIPS

- THE STEEL RETAINER ASSEMBLY AND THE SQUARE PLATE WASHER SHALL MEET THE REQUIREMENTS OF STRUCTURAL STEEL ASTM A572. ANCHOR BOLTS AND NUTS SHALL BE ASTM A325. ANCHOR BOLTS, NUTS, AND SQUARE PLATE WASHERS SHALL BE GALVANIZED AS PER 711.02. STEEL RETAINER ASSEMBLIES SHALL BE PAINTED AS PER ITEM 816, FIELD PAINTING OF NEW STEEL, INTERMEDIATE AND FINISH COAT, SYSTEM IZEU. PAYMENT FOR LABOR, MATERIALS, FABRICATION, PROTECTIVE COATING, GALVANIZING, POLYSTYRENE, AND INSTALLATION OF THE RETAINER ASSEMBLIES SHALL BE INCLUDED WITH APPROPRIATE ITEM 516, AT ABUTMENTS.

LEGEND:

te = THICKNESS OF EXTERNAL ELASTOMER LAYER

ti = THICKNESS OF INTERNAL ELASTOMER LAYER

NOTES:

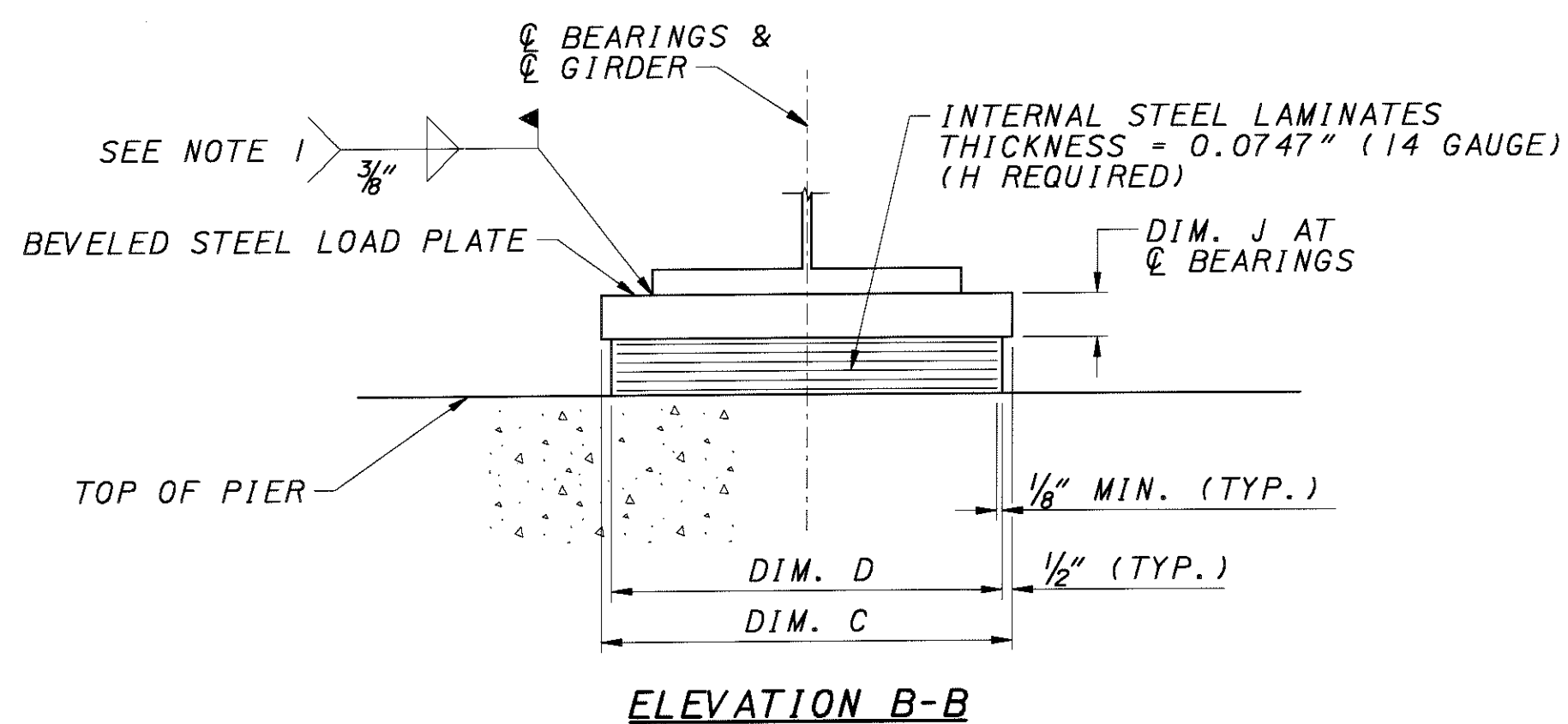
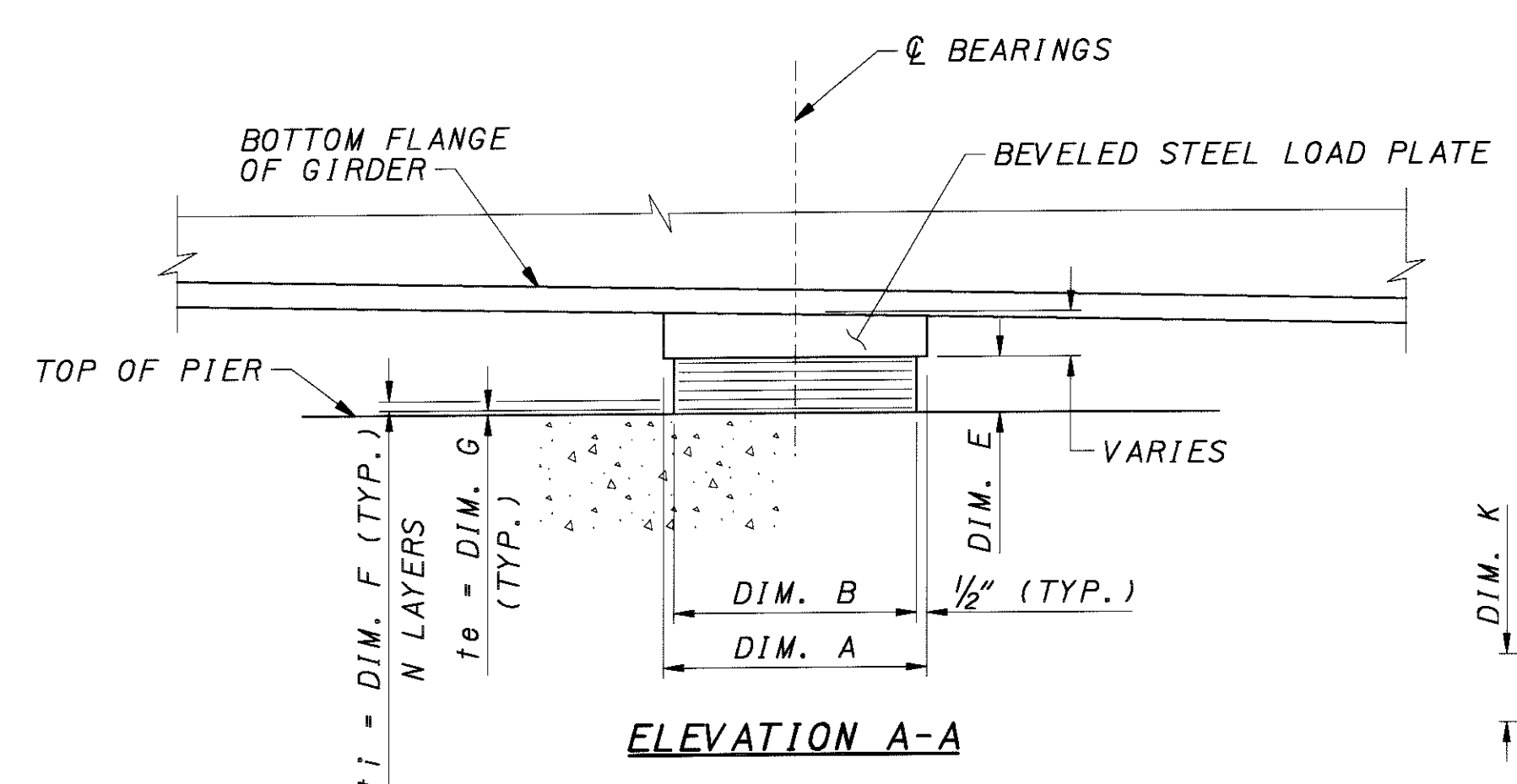
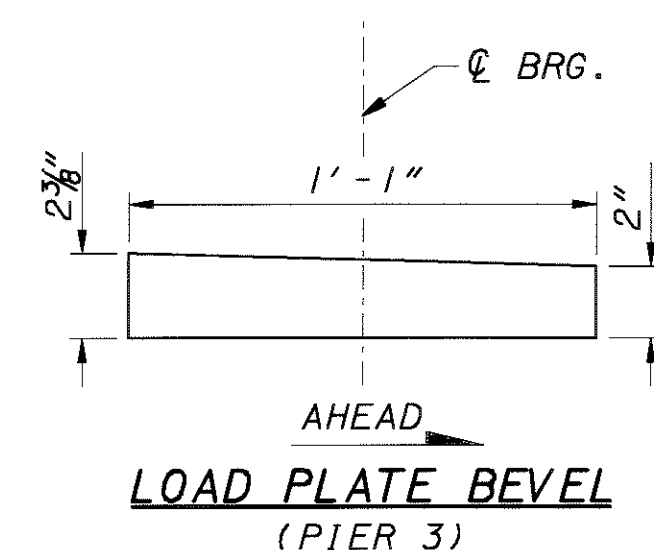
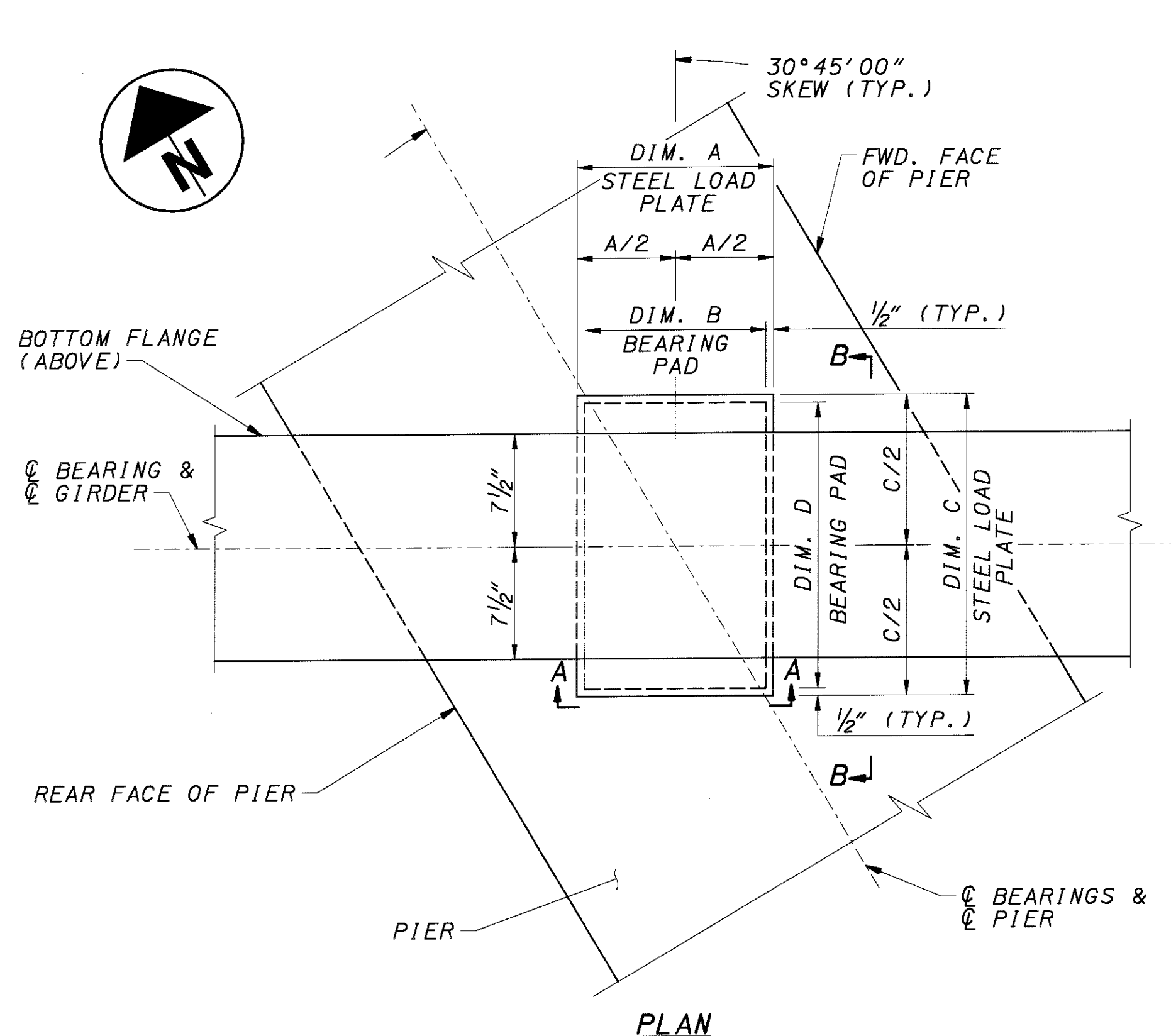
- FOR ABUTMENT ELEVATIONS AT THE CENTERLINE OF BEARINGS, SEE SHEETS 7 & 8 AND 10 & 11.

- FOR ABUTMENT DIAPHRAGM DETAILS, SEE SHEETS 27 & 28.

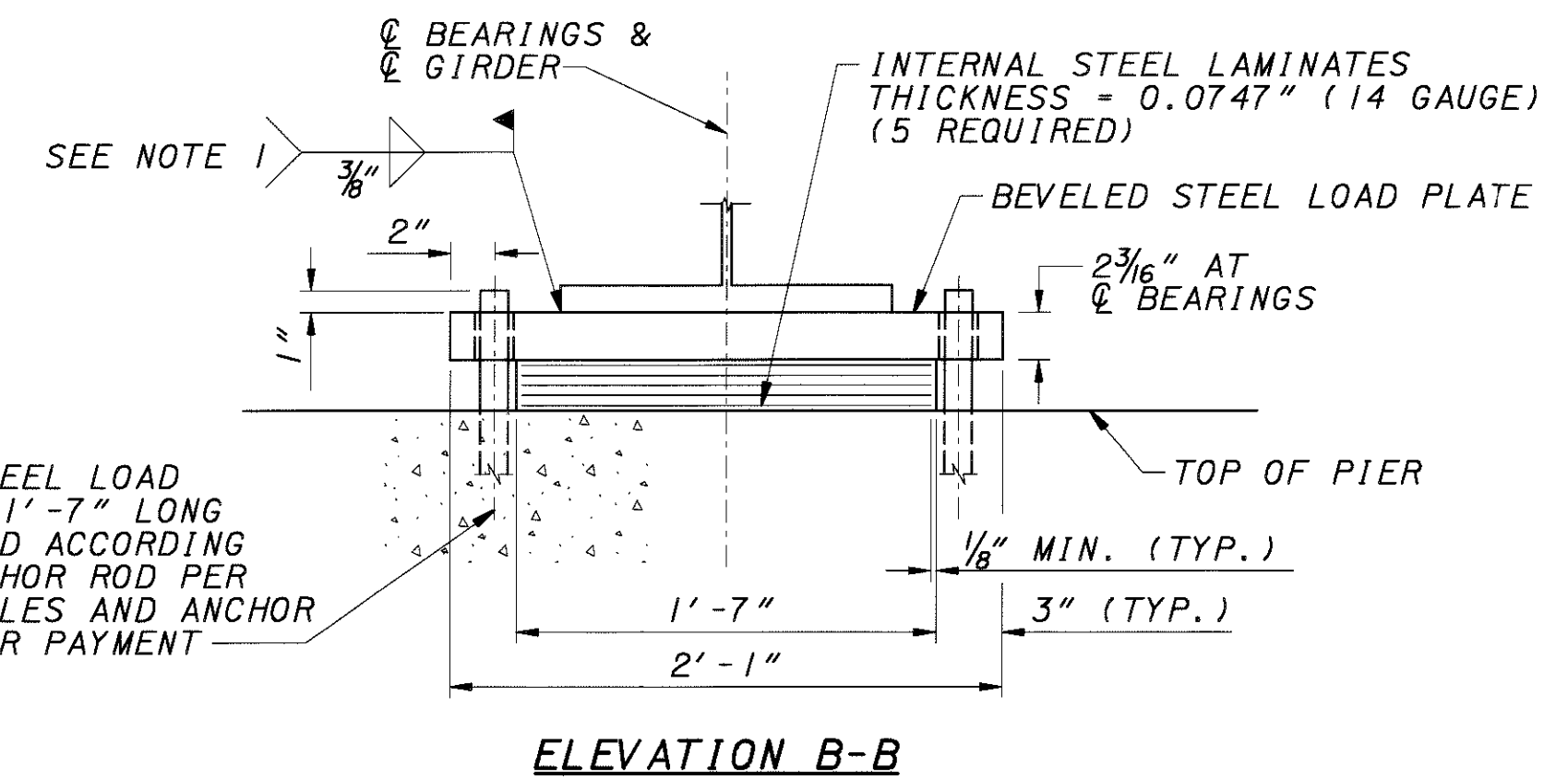
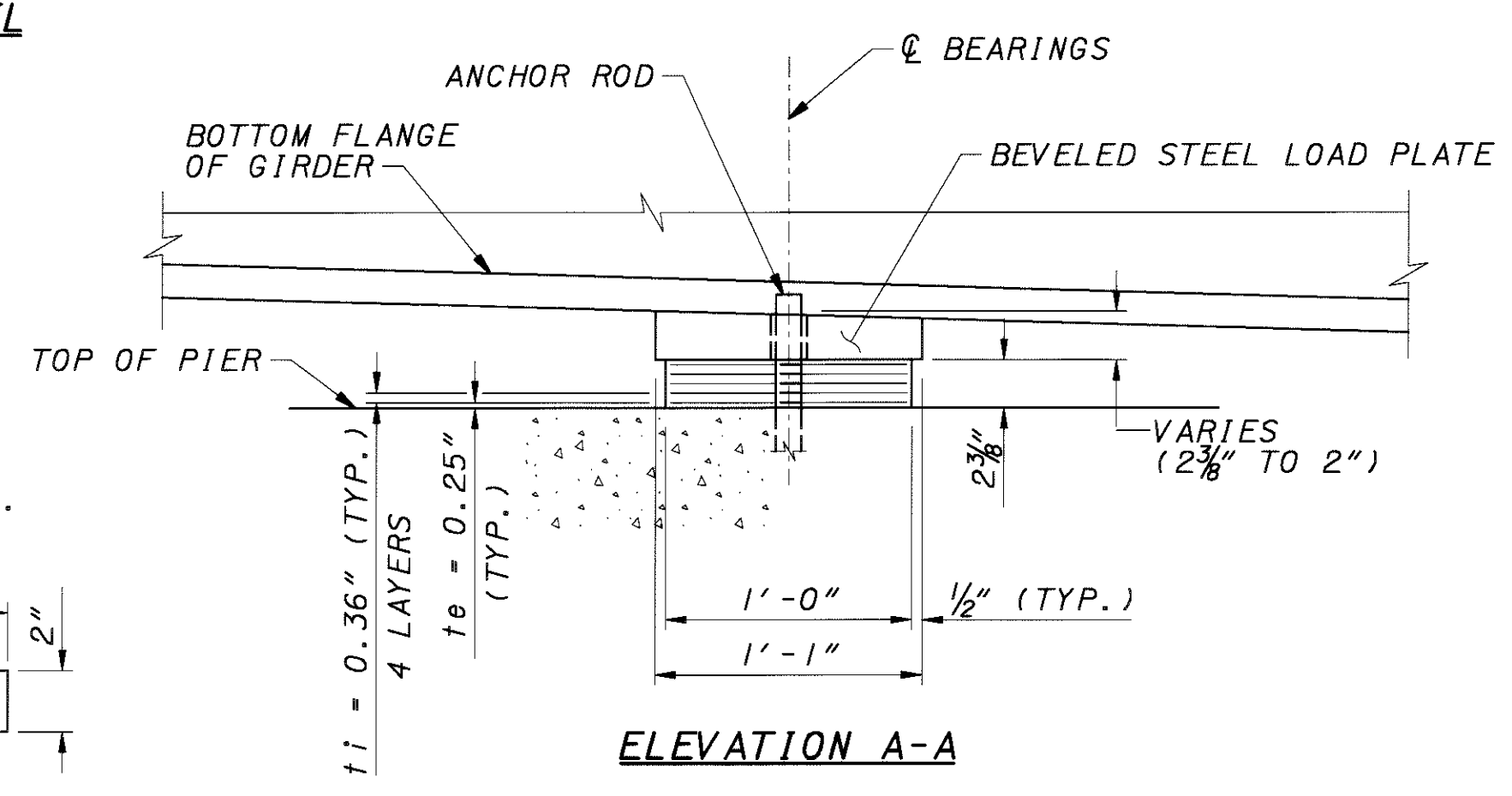
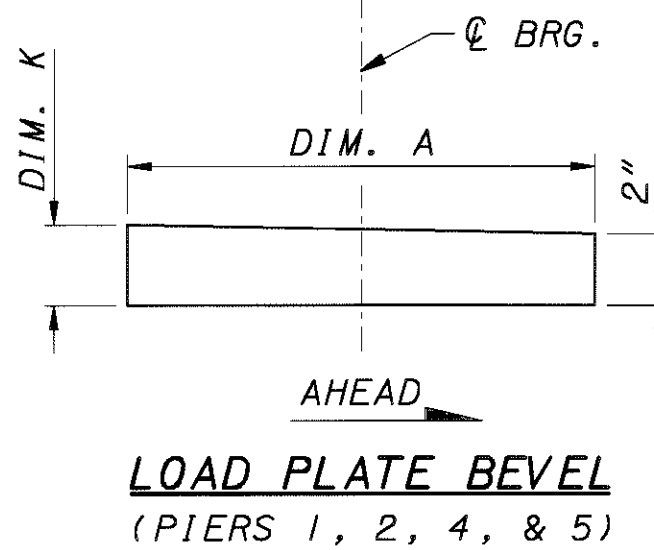
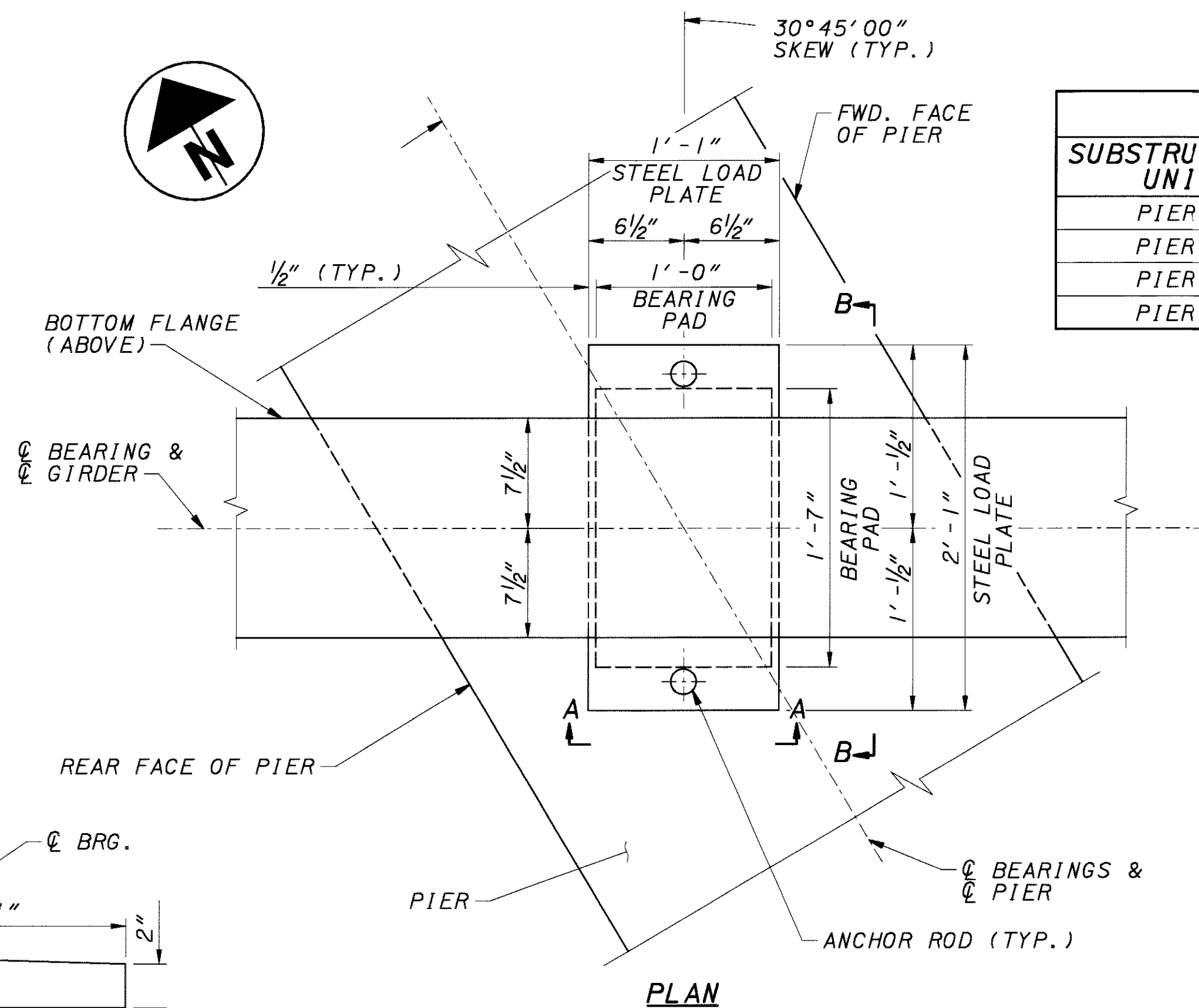
- FOR FRAMING PLAN, SEE SHEET 18.

- FOR BEARING DETAILS AT PIERS, SEE SHEET 24.





**LAMINATED ELASTOMERIC EXPANSION BEARING DETAILS**  
(PIERS 1, 2, 4, & 5)



**LAMINATED ELASTOMERIC FIXED BEARING DETAILS**  
(PIER 3)

BEARING TABLE											
SUBSTRUCTURE UNIT	DIM. A	DIM. B	DIM. C	DIM. D	DIM. E	DIM. F	DIM. G	H	DIM. J	DIM. K	N
PIER 1	13"	12"	20"	19"	2 3/4"	.36"	.25"	6	2 1/8"	2 1/4"	5
PIER 2	13"	12"	20"	19"	2"	.36"	.25"	4	2 1/8"	2 1/4"	3
PIER 4	13"	12"	20"	19"	2"	.36"	.25"	4	2 3/16"	2 3/8"	3
PIER 5	12 1/2"	11 1/2"	19"	18"	3 1/8"	.35"	.24"	7	2 1/4"	2 1/2"	6

**LEGEND:**

te = THICKNESS OF EXTERNAL ELASTOMER LAYER  
ti = THICKNESS OF INTERNAL ELASTOMER LAYER

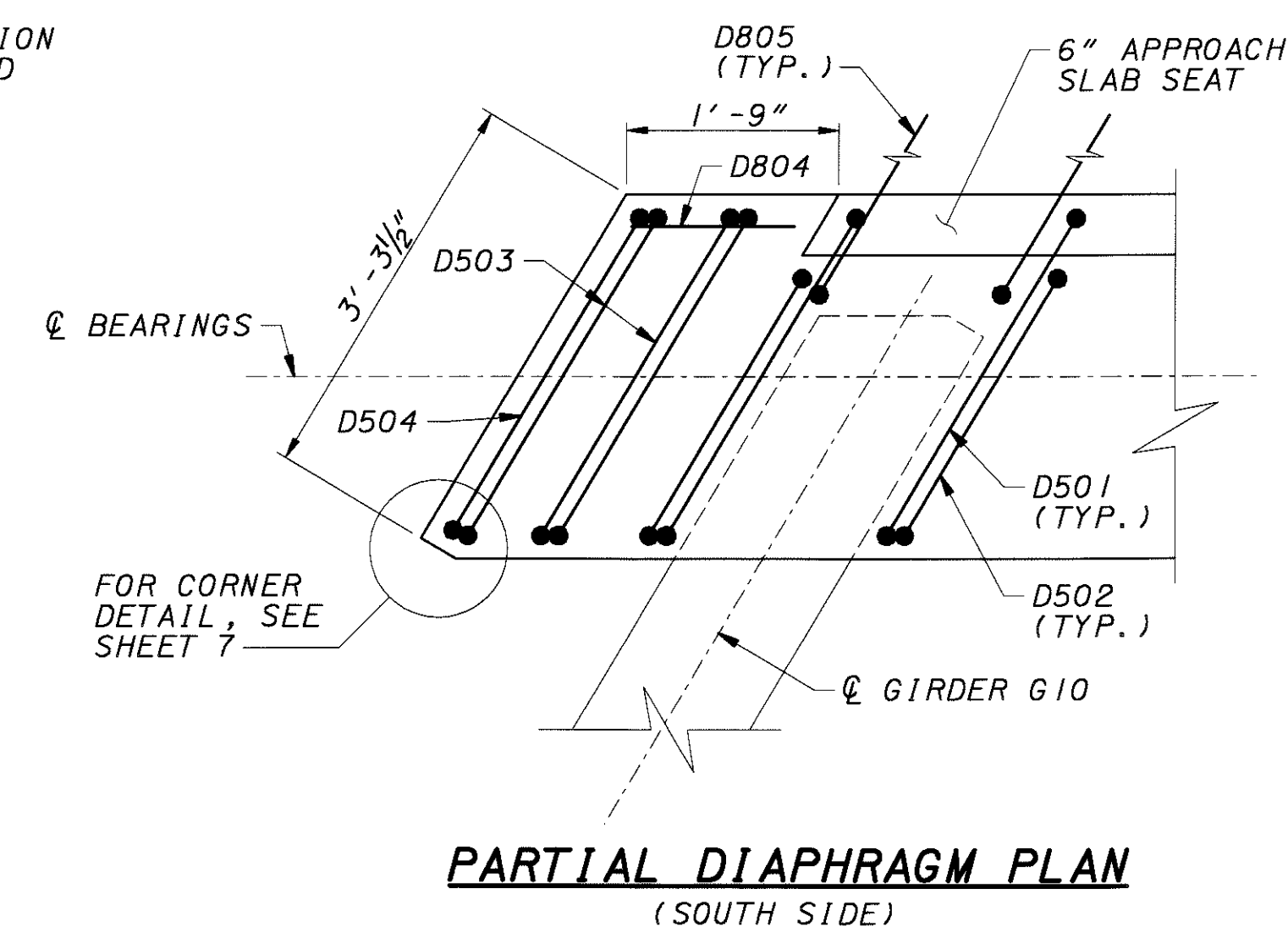
**NOTES:**

- FOR BEARING PAD AND LOAD PLATE NOTES, SEE SHEET 23.
- FOR PIER SEAT ELEVATIONS AT THE CENTERLINE OF BEARINGS, SEE SHEETS 13 AND 14.
- FOR FRAMING PLAN, SEE SHEET 18.
- FOR BEARING DETAILS AT ABUTMENTS, SEE SHEET 23.

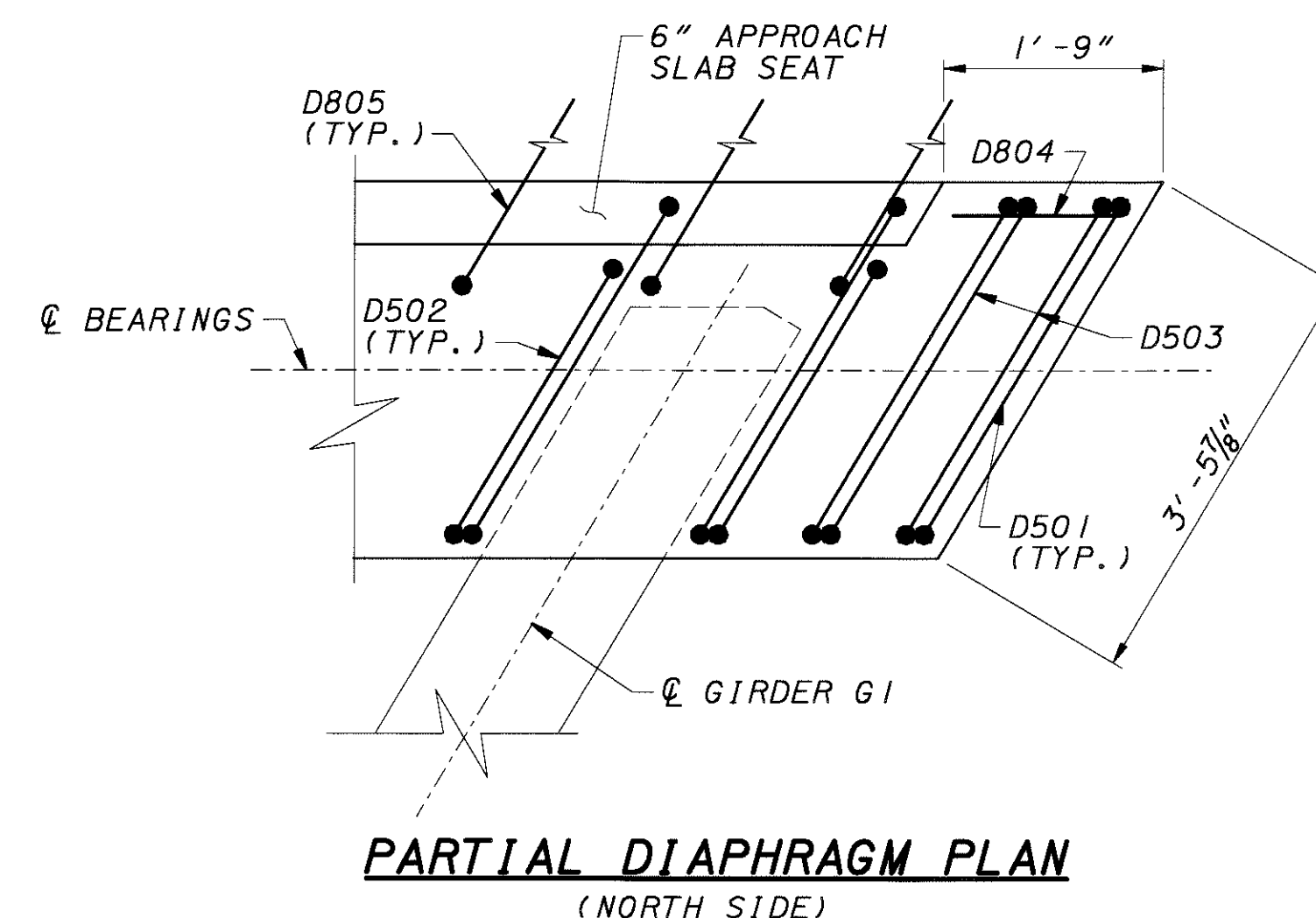








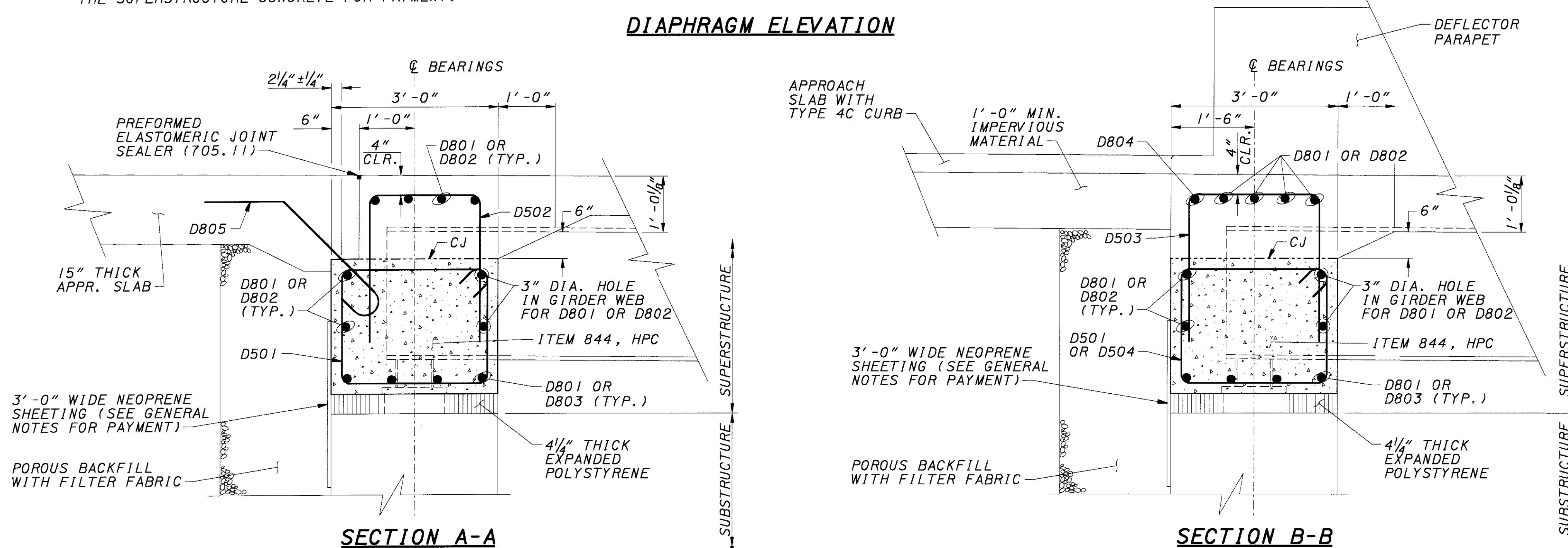
PARTIAL DIAPHRAGM PLAN  
(SOUTH SIDE)



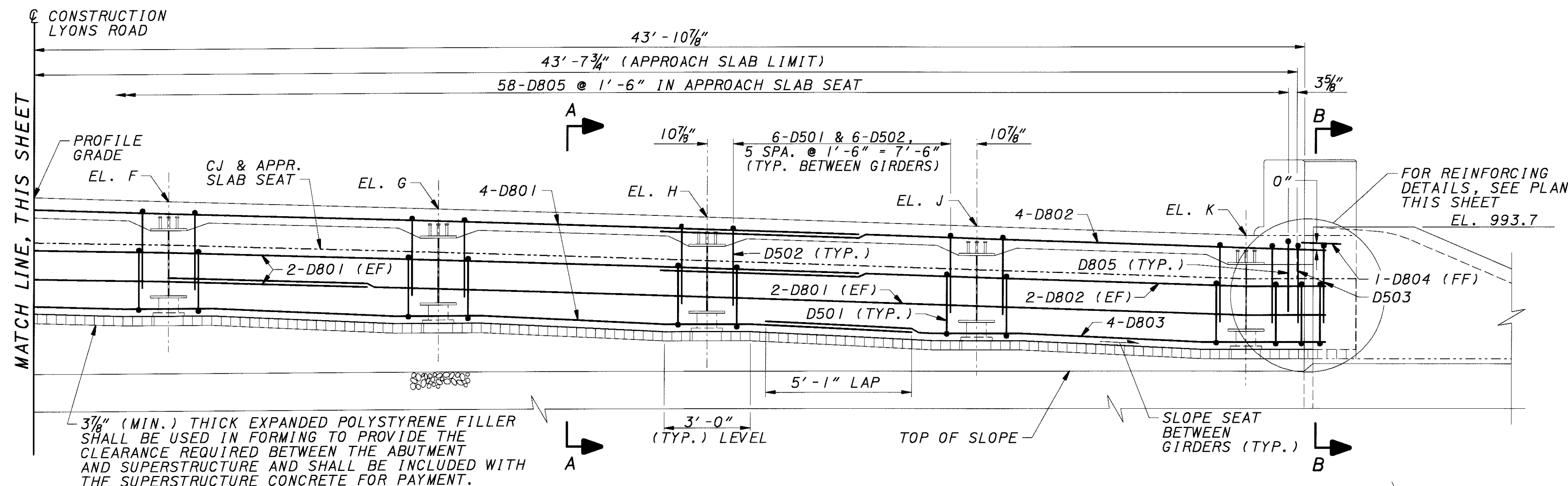
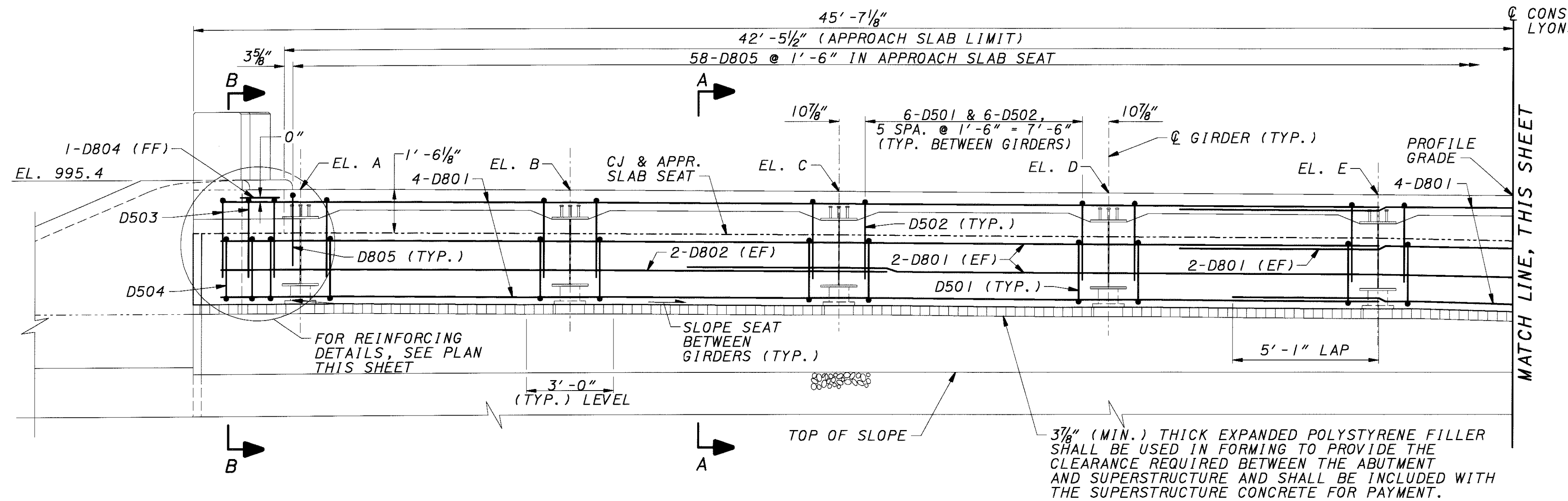
PARTIAL DIAPHRAGM PLAN  
(NORTH SIDE)

TABLE OF ELEVATION	
POINT	ELEVATION
A @ GIRDER G1	1004.64
B @ GIRDER G2	1004.73
C @ GIRDER G3	1004.81
D @ GIRDER G4	1004.90
E @ GIRDER G5	1004.99
PROFILE GRADE	1005.04
F @ GIRDER G6	1004.95
G @ GIRDER G7	1004.79
H @ GIRDER G8	1004.63
J @ GIRDER G9	1004.47
K @ GIRDER G10	1004.31

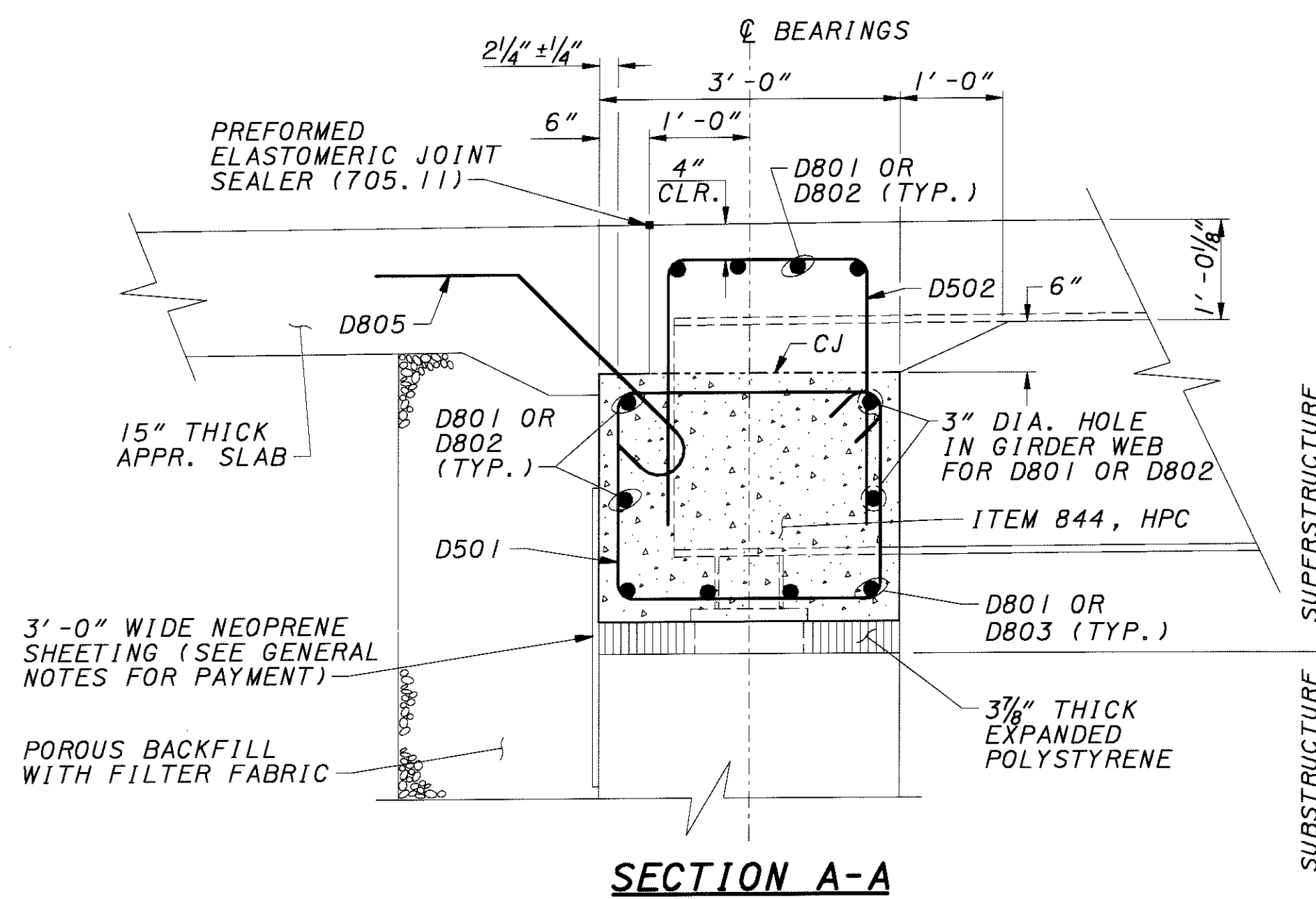
1. FOR REAR ABUTMENT PLAN AND DETAILS, INCLUDING BRIDGE SEAT ELEVATIONS, SEE SHEETS 7, 8, & 9.
2. FOR BEARING DETAILS, SEE SHEETS 23 & 24.
3. DIAPHRAGM CONCRETE: THE CONCRETE ENCASES STRUCTURAL STEEL MEMBERS SUPPORTED IN THE SEMI-INTEGRAL AND INTEGRAL TYPE ABUTMENTS MAY BE PLACED BEFORE THE ACTUAL DECK CONCRETE IS PLACED. IF THE CONTRACTOR CHOOSES THIS OPTION THE CONCRETE SHALL HAVE HAD AT LEAST 48 HOURS OF SET TIME BEFORE DECK CONCRETE IS PLACED.
4. 1" PEJF LOCATED ON VERTICAL END FACE OF APPROACH SLAB SEAT SHALL BE INCLUDED IN THE PRICE BID PER SQUARE FOOT FOR THE APPROACH SLAB. SEE ROADWAY PLANS.
5. REINFORCING STEEL LAP LENGTHS: UNLESS OTHERWISE NOTED LAPS SHALL BE AS FOLLOWS:  
NO. 8 BARS 6'-10"  
FOR REINFORCING STEEL LIST, SEE SHEET 32.



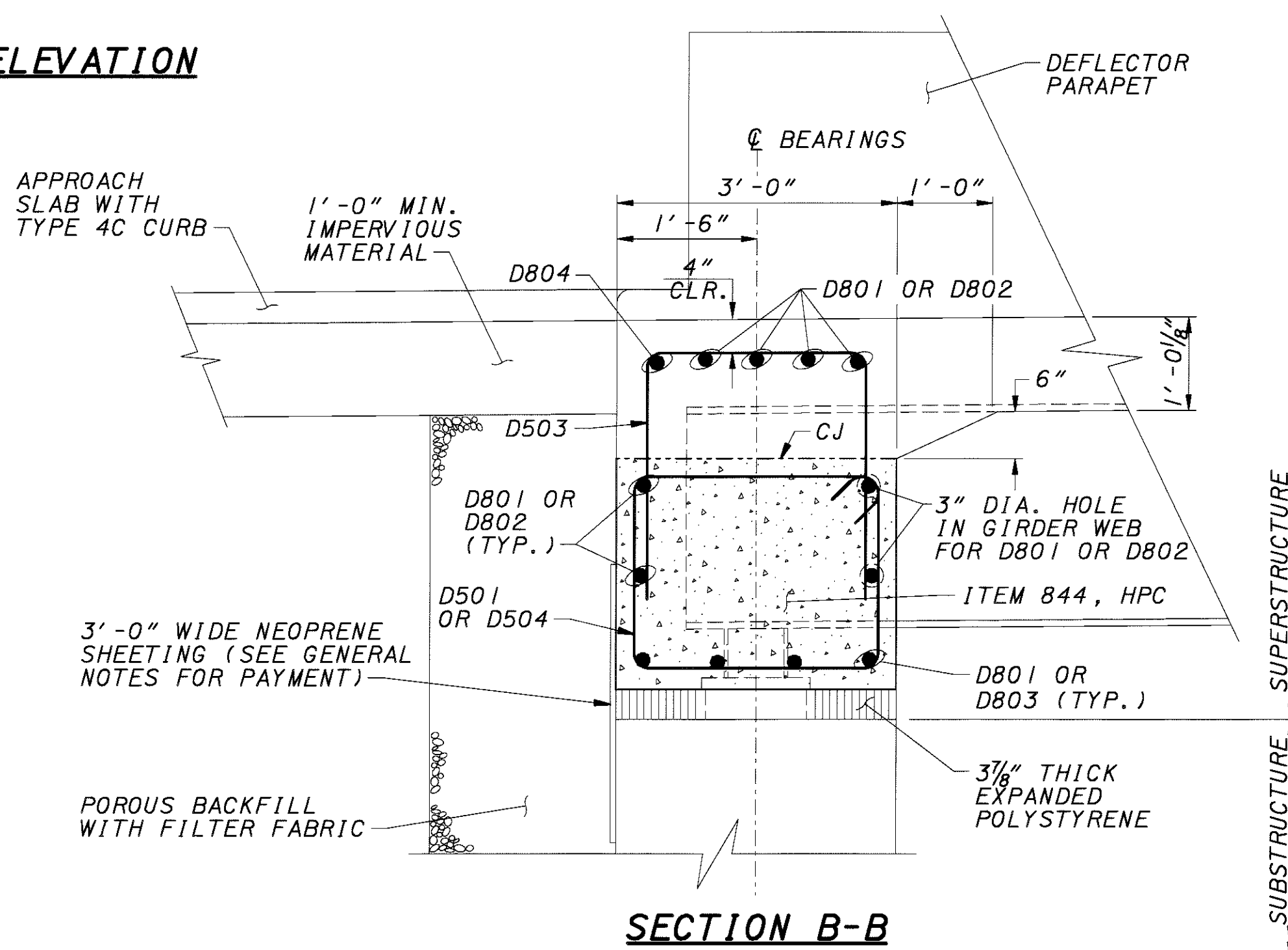




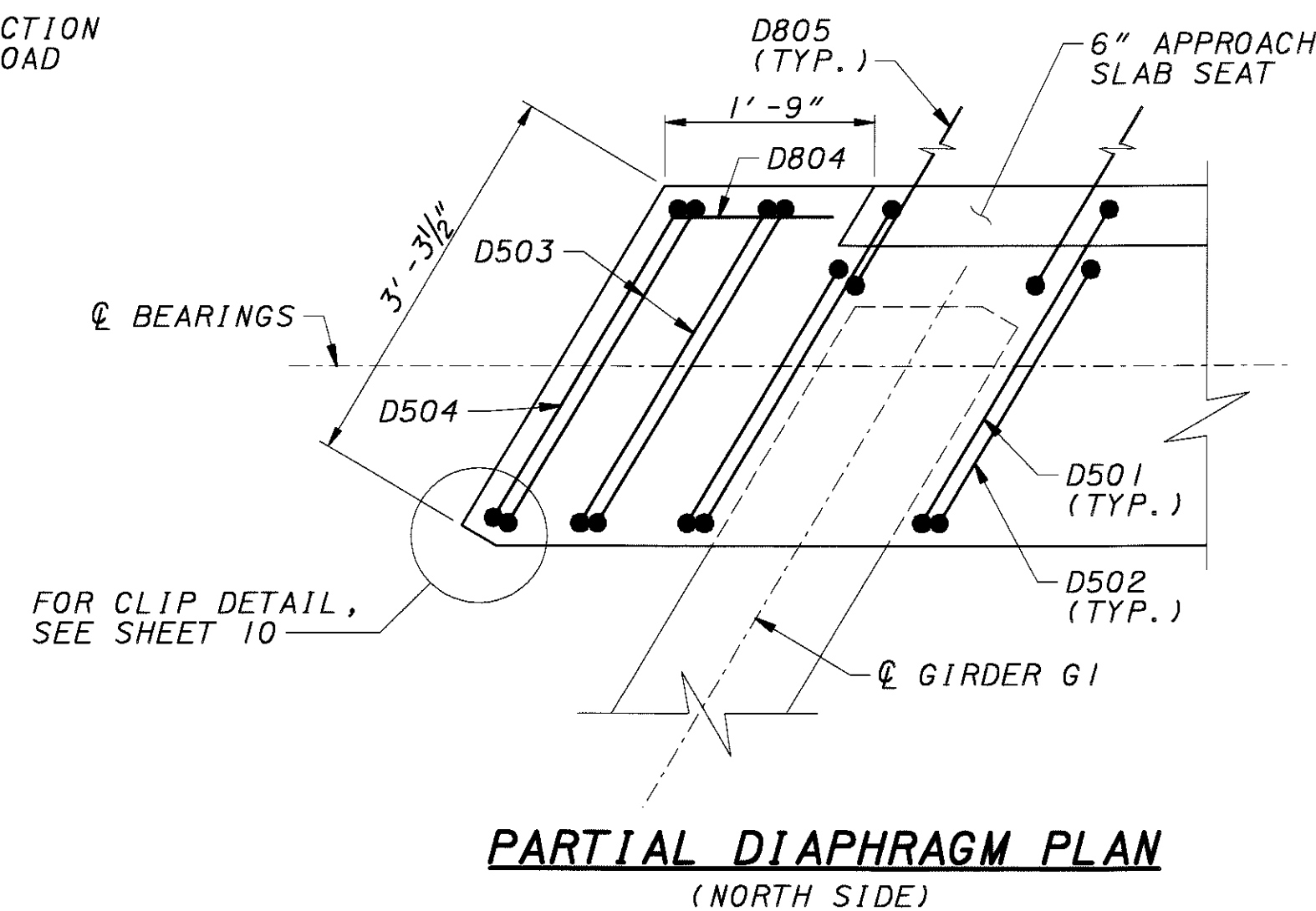
DIAPHRAGM ELEVATION



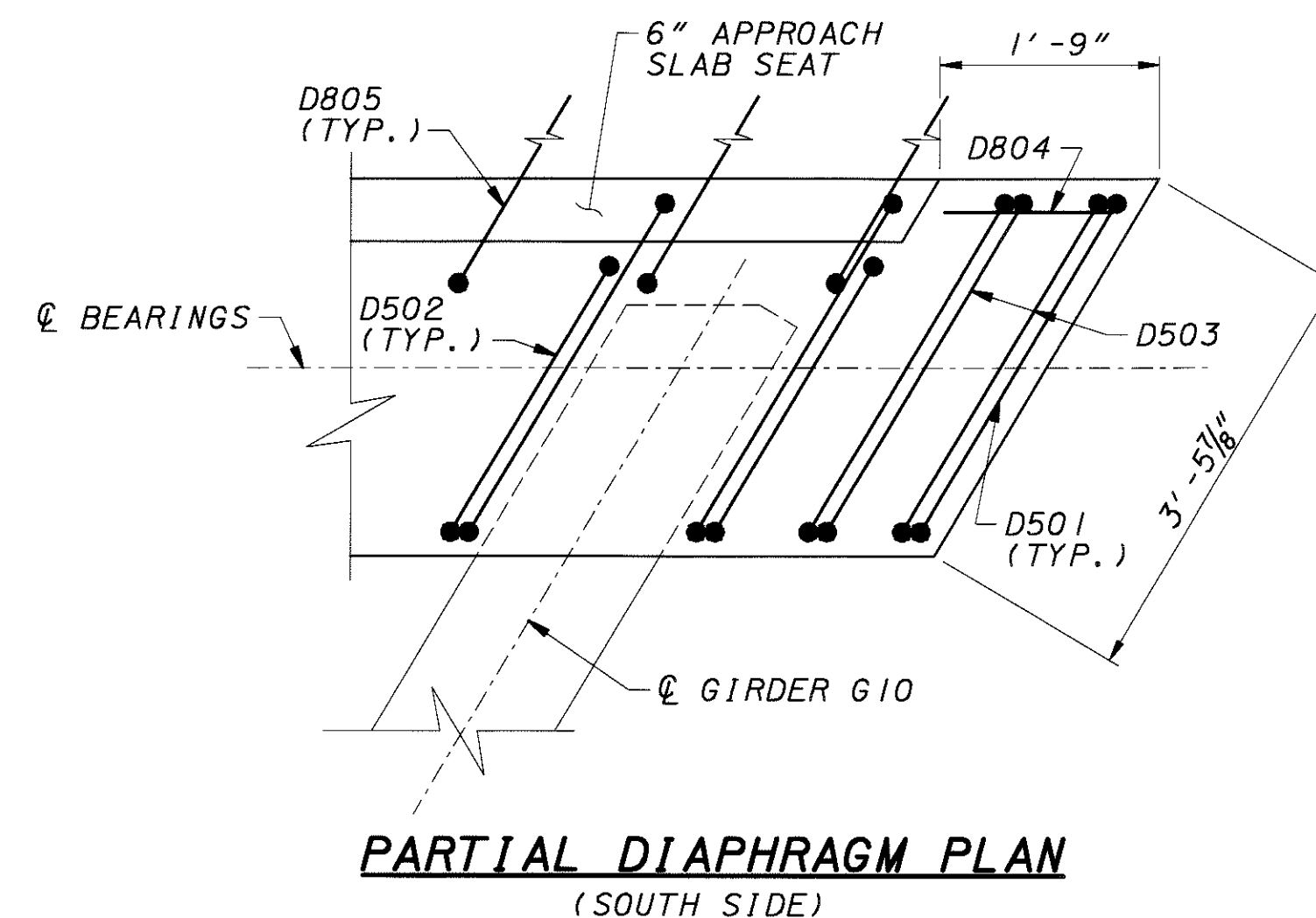
SECTION A-A



SECTION B-B



PARTIAL DIAPHRAGM PLAN  
(NORTH SIDE)

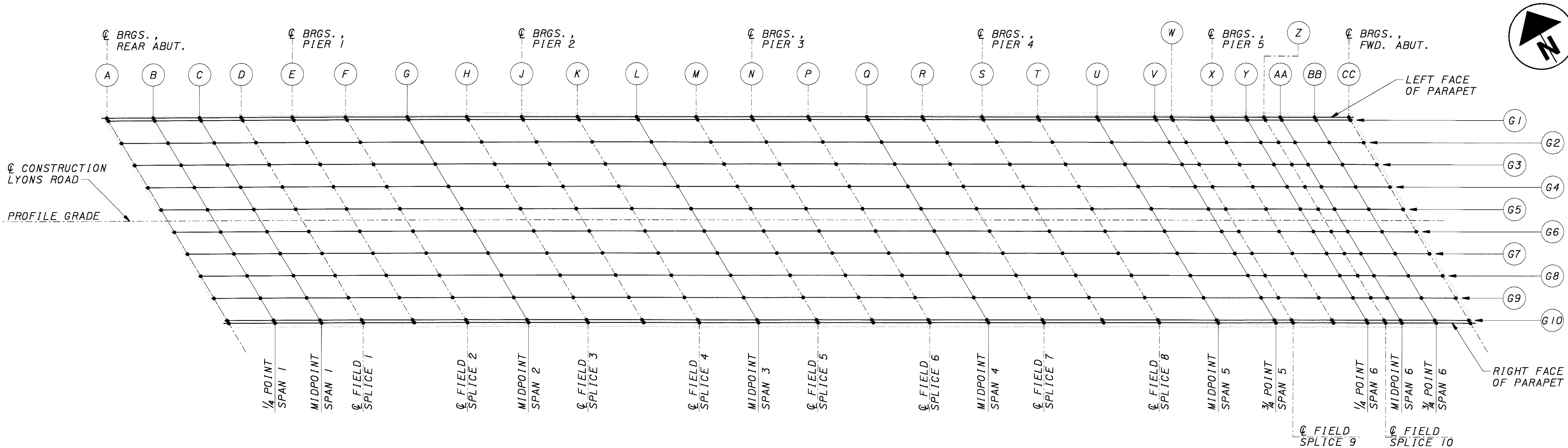


PARTIAL DIAPHRAGM PLAN  
(SOUTH SIDE)

TABLE OF ELEVATION	
POINT	ELEVATION
A @ GIRDER G1	995.08
B @ GIRDER G2	995.03
C @ GIRDER G3	994.97
D @ GIRDER G4	994.92
E @ GIRDER G5	994.86
PROFILE GRADE	994.83
F @ GIRDER G6	994.67
G @ GIRDER G7	994.36
H @ GIRDER G8	994.05
J @ GIRDER G9	993.73
K @ GIRDER G10	993.41

NOTES:

- FOR FORWARD ABUTMENT PLAN AND DETAILS, INCLUDING BRIDGE SEAT ELEVATIONS, SEE SHEETS 10, 11, & 12.
- FOR BEARING DETAILS, SEE SHEETS 23 & 24.
- DIAPHRAGM CONCRETE: THE CONCRETE ENCASING STRUCTURAL STEEL MEMBERS SUPPORTED IN THE SEMI-INTEGRAL AND INTEGRAL TYPE ABUTMENTS MAY BE PLACED BEFORE THE ACTUAL DECK CONCRETE IS PLACED. IF THE CONTRACTOR CHOOSES THIS OPTION THE CONCRETE SHALL HAVE HAD AT LEAST 48 HOURS OF SET TIME BEFORE DECK CONCRETE IS PLACED.
- 1" PEJF LOCATED ON VERTICAL END FACE OF APPROACH SLAB SEAT SHALL BE INCLUDED IN THE PRICE BID PER SQUARE FOOT FOR THE APPROACH SLAB. SEE ROADWAY PLANS.
- REINFORCING STEEL LAP LENGTHS: UNLESS OTHERWISE NOTED LAPS SHALL BE AS FOLLOWS:  
NO. 8 BARS 6'-10"  
FOR REINFORCING STEEL LIST, SEE SHEET 32.



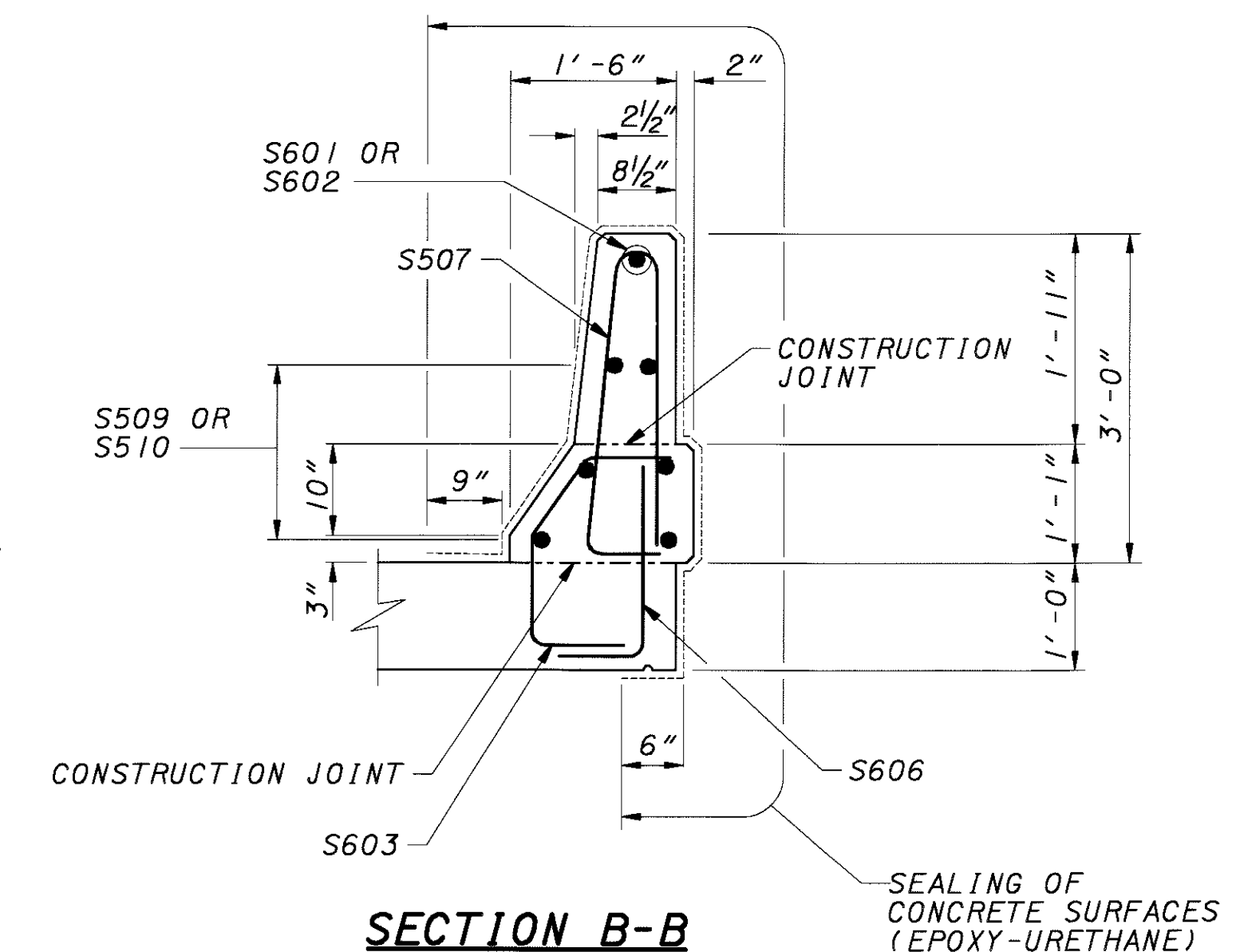
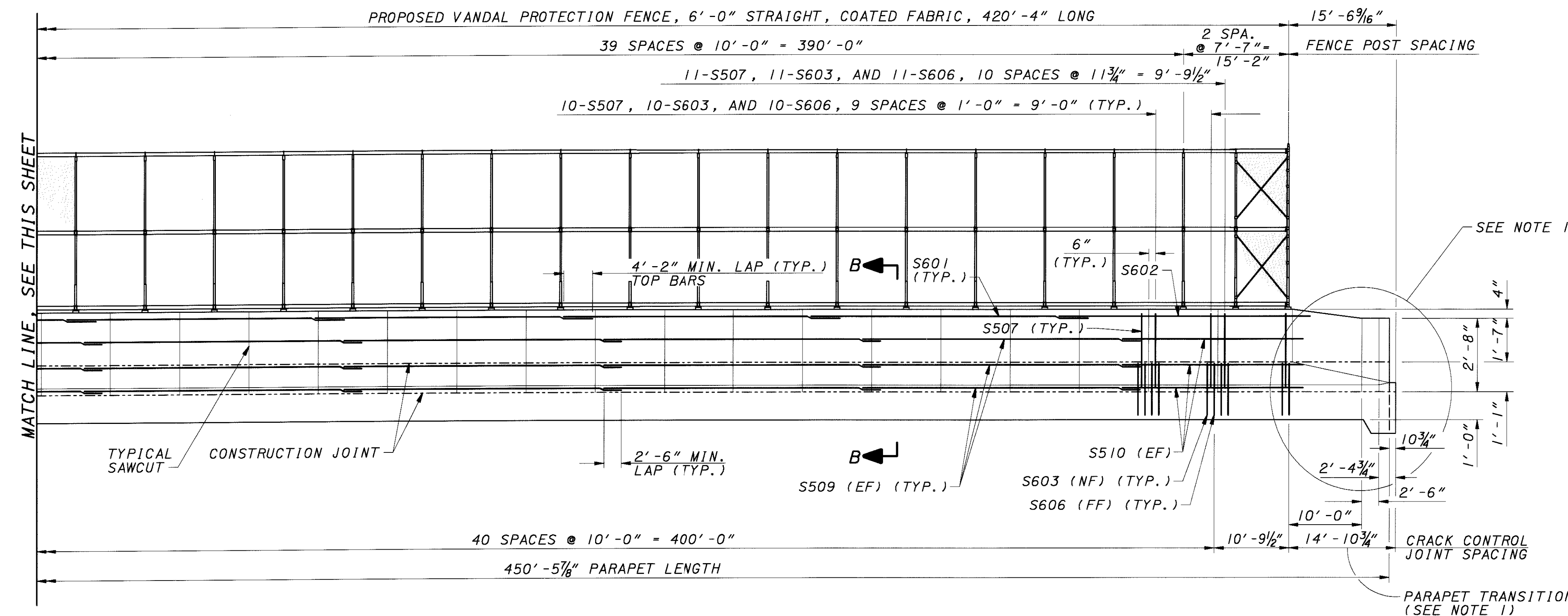
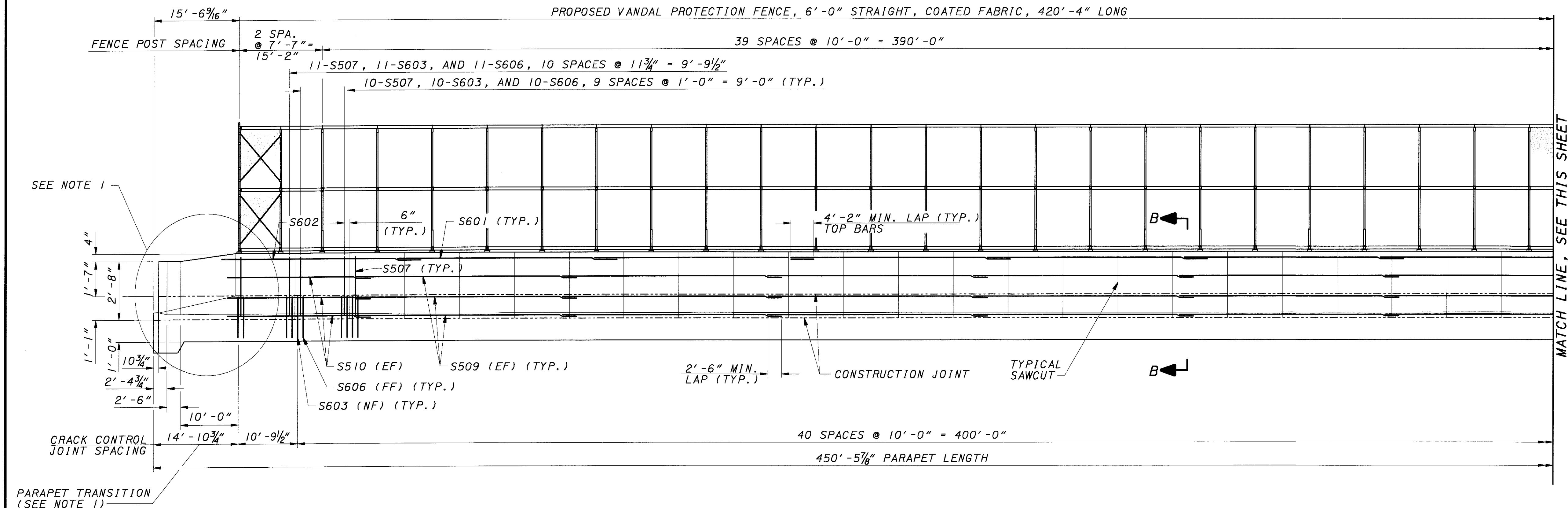
SCREED ELEVATION LAYOUT

SCREED ELEVATIONS																
LOCATION	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R
LEFT TOE OF PARAPET	1004.63	1004.57	1004.46	1004.30	1004.08	1003.92	1003.70	1003.37	1003.02	1002.73	1002.39	1001.93	1001.46	1001.04	1000.57	1000.02
G1	1004.64	1004.58	1004.47	1004.31	1004.09	1003.93	1003.71	1003.37	1003.03	1002.73	1002.39	1001.93	1001.46	1001.04	1000.57	1000.02
G2	1004.73	1004.68	1004.56	1004.39	1004.17	1004.01	1003.78	1003.43	1003.07	1002.78	1002.43	1001.96	1001.48	1001.06	1000.58	1000.02
G3	1004.81	1004.77	1004.65	1004.47	1004.24	1004.08	1003.84	1003.48	1003.12	1002.82	1002.46	1001.98	1001.50	1001.07	1000.58	1000.02
G4	1004.90	1004.85	1004.73	1004.55	1004.32	1004.15	1003.90	1003.53	1003.17	1002.86	1002.49	1002.01	1001.52	1001.08	1000.58	1000.01
G5	1004.99	1004.94	1004.82	1004.63	1004.39	1004.21	1003.95	1003.58	1003.21	1002.89	1002.52	1002.03	1001.53	1001.08	1000.58	1000.01
PROFILE GRADE (C CONSTRUCTION)	1005.04	1004.99	1004.86	1004.67	1004.43	1004.24	1003.98	1003.61	1003.23	1002.91	1002.54	1002.04	1001.54	1001.09	1000.58	1000.00
G6	1004.95	1004.90	1004.78	1004.58	1004.34	1004.15	1003.89	1003.51	1003.13	1002.80	1002.43	1001.92	1001.42	1000.97	1000.46	999.87
G7	1004.79	1004.74	1004.61	1004.41	1004.15	1003.96	1003.69	1003.31	1002.92	1002.59	1002.20	1001.69	1001.18	1000.72	1000.20	999.61
G8	1004.63	1004.58	1004.43	1004.23	1003.97	1003.77	1003.49	1003.10	1002.71	1002.37	1001.98	1001.46	1000.94	1000.47	999.95	999.35
G9	1004.47	1004.41	1004.26	1004.06	1003.79	1003.58	1003.29	1002.90	1002.49	1002.15	1001.75	1001.23	1000.70	1000.23	999.70	999.09
G10	1004.31	1004.23	1004.08	1003.87	1003.60	1003.38	1003.09	1002.69	1002.28	1001.93	1001.52	1000.99	1000.46	999.97	999.43	998.82
RIGHT TOE OF PARAPET	1004.29	1004.21	1004.06	1003.85	1003.58	1003.36	1003.06	1002.66	1002.25	1001.90	1001.49	1000.96	1000.43	999.94	999.40	998.79

SCREED ELEVATIONS											
LOCATION	S	T	U	V	W	X	Y	Z	AA	BB	CC
LEFT TOE OF PARAPET	999.40	998.90	998.31	997.61	997.39	996.85	996.42	996.20	996.00	995.56	995.09
G1	999.40	998.89	998.31	997.61	997.38	996.84	996.42	996.20	995.99	995.55	995.08
G2	999.39	998.88	998.30	997.59	997.35	996.81	996.37	996.15	995.95	995.50	995.03
G3	999.38	998.86	998.27	997.55	997.32	996.77	996.33	996.11	995.90	995.45	994.97
G4	999.37	998.85	998.25	997.52	997.28	996.73	996.29	996.06	995.85	995.40	994.92
G5	999.36	998.83	998.22	997.49	997.25	996.68	996.24	996.01	995.80	995.34	994.86
PROFILE GRADE (C CONSTRUCTION)	999.35	998.81	998.20	997.47	997.23	996.66	996.22	995.99	995.78	995.31	994.83
G6	999.22	998.68	998.06	997.32	997.08	996.52	996.07	995.84	995.62	995.16	994.67
G7	998.95	998.40	997.78	997.04	996.79	996.22	995.77	995.54	995.32	994.85	994.36
G8	998.68	998.13	997.50	996.75	996.50	995.92	995.47	995.23	995.01	994.54	994.05
G9	998.41	997.85	997.22	996.46	996.21	995.63	995.16	994.93	994.71	994.23	993.73
G10	998.14	997.57	996.92	996.16	995.91	995.33	994.86	994.62	994.40	993.92	993.41
RIGHT TOE OF PARAPET	998.11	997.53	996.89	996.12	995.87	995.29	994.82	994.58	994.36	993.88	993.37

- NOTES:
1. THE ELEVATIONS SHOWN ARE THE TOP OF THE CONCRETE SLAB ELEVATIONS WHICH ARE REQUIRED BEFORE THE CONCRETE IS PLACED. SCREED POINT LOCATIONS 'G1' THROUGH 'G10' ARE LOCATED DIRECTLY ABOVE THEIR CORRESPONDING GIRDER CENTERLINES. PROPER ALLOWANCE HAS BEEN MADE FOR THE DEAD LOAD DEFLECTIONS CAUSED BY THE WEIGHT OF THE CONCRETE.
2. FOR THE TYPICAL DECK SECTION, SEE SHEET 25.
3. FOR THE SLAB PLAN AND DETAILS, SEE SHEET 26.

- LEGEND:
- GX - GIRDER DESIGNATION
- X - SCREED ELEVATION LOCATION (ON SKEW)



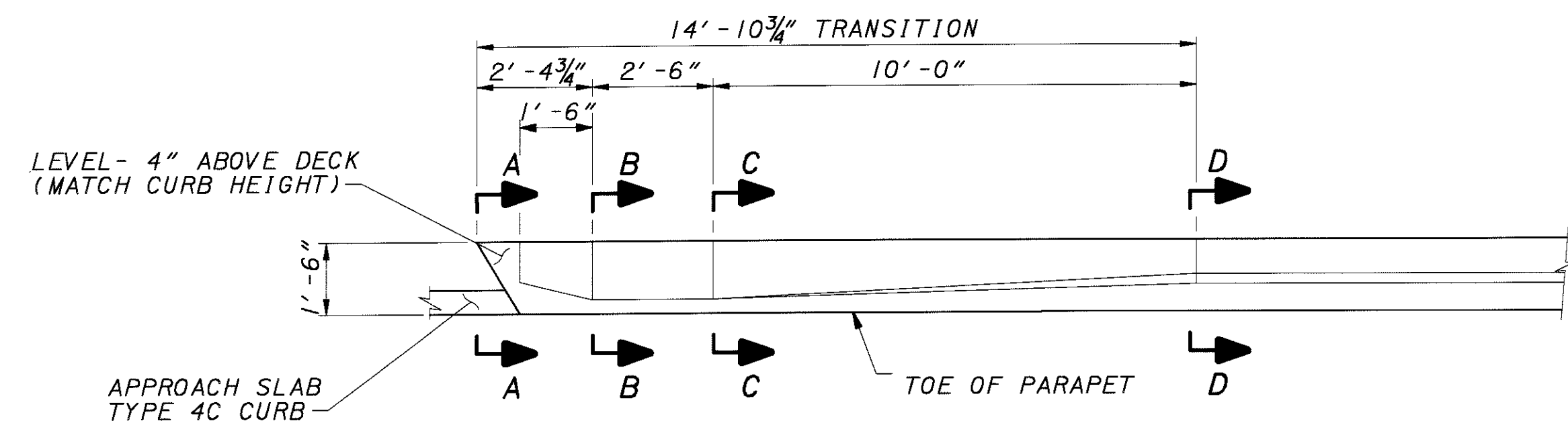
**NOTES:**

- FOR PARAPET TRANSITION DETAILS, SEE SHEET 31.
- REINFORCING STEEL LAP LENGTHS: UNLESS OTHERWISE NOTED, LAPS SHALL BE AS FOLLOWS:  
NO. 5 BARS 2'-6"  
NO. 6 BARS 3'-0"  
FOR REINFORCING STEEL LIST, SEE SHEET 32.
- FOR TYPICAL PARAPET SAWCUT DETAIL, SEE SHEET 31.
- ALL REINFORCING STEEL SHALL BE EPOXY COATED CONFORMING TO ITEM 509. BENT OR CUT STEEL SHALL BE COATED OR PATCHED AND TREATED WITH EPOXY MATERIAL AS SPECIFIED IN CMS SECTION 709.00. PAYMENT SHALL BE INCLUDED IN THE CONTRACT BID PRICE FOR ITEM 844, HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE.

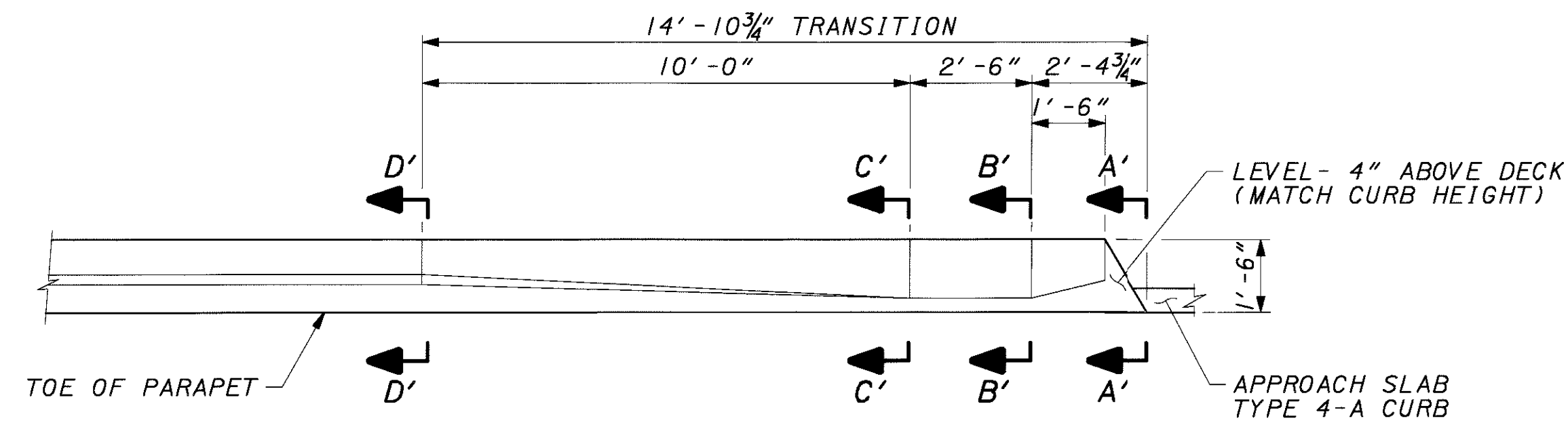
**PARAPET ELEVATION**

(NORTH ELEVATION SHOWN, SOUTH ELEVATION SIMILAR BUT OPPOSITE)

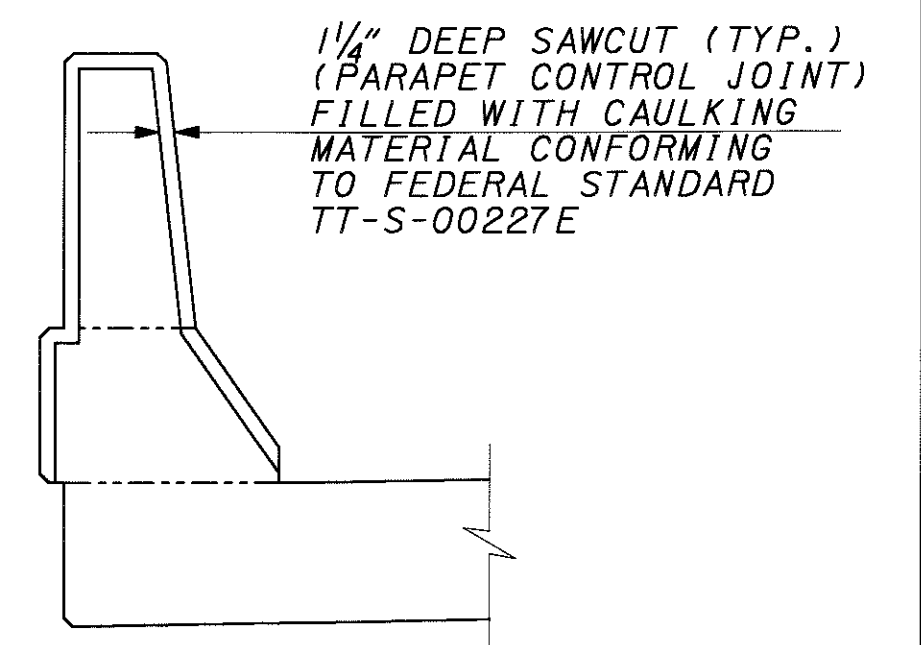




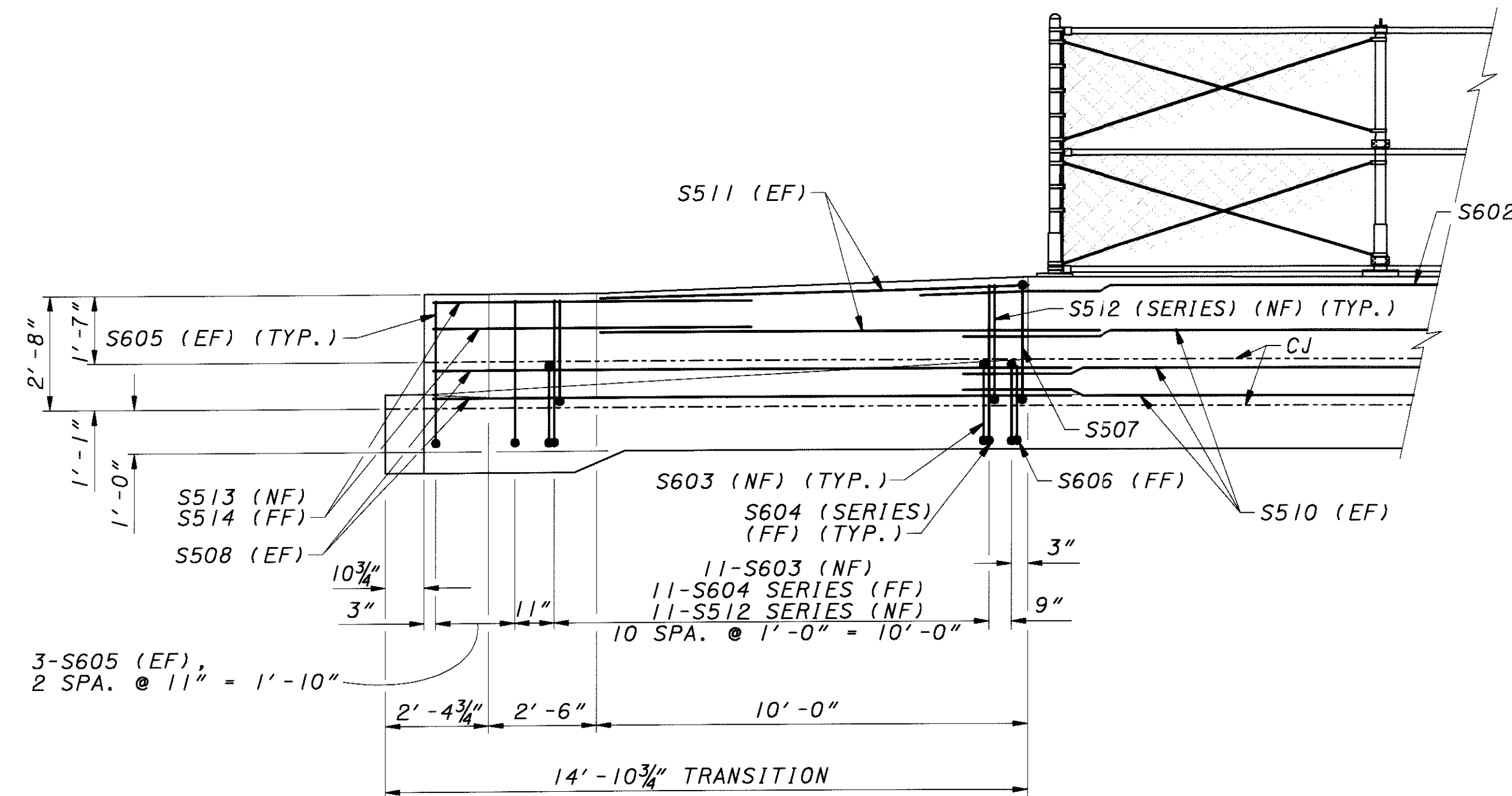
**NORTH PARAPET PLAN (WEST END)**  
(SOUTH PARAPET - EAST END, SIMILAR)



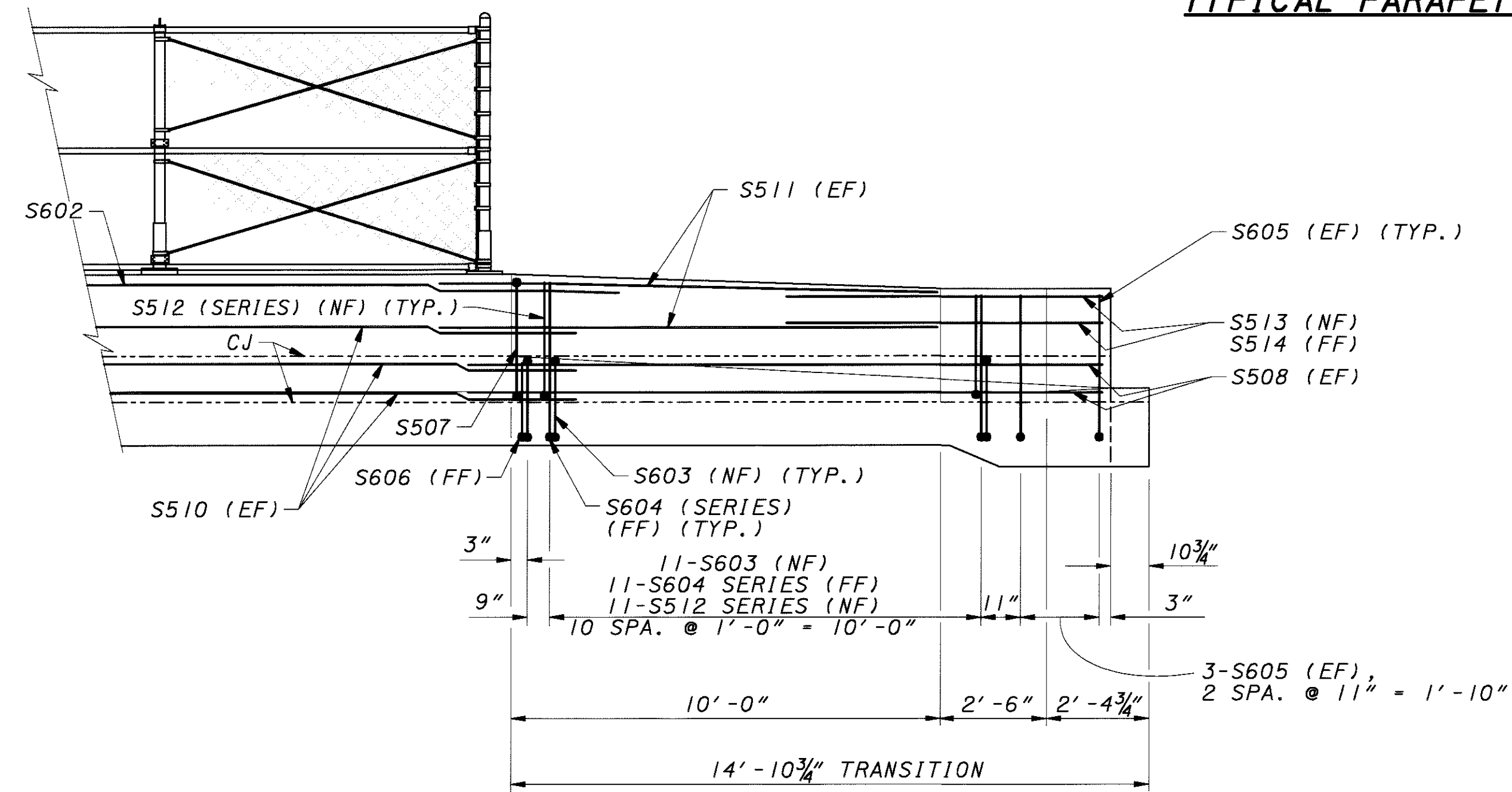
**NORTH PARAPET PLAN (EAST END)**  
(SOUTH PARAPET - WEST END, SIMILAR)



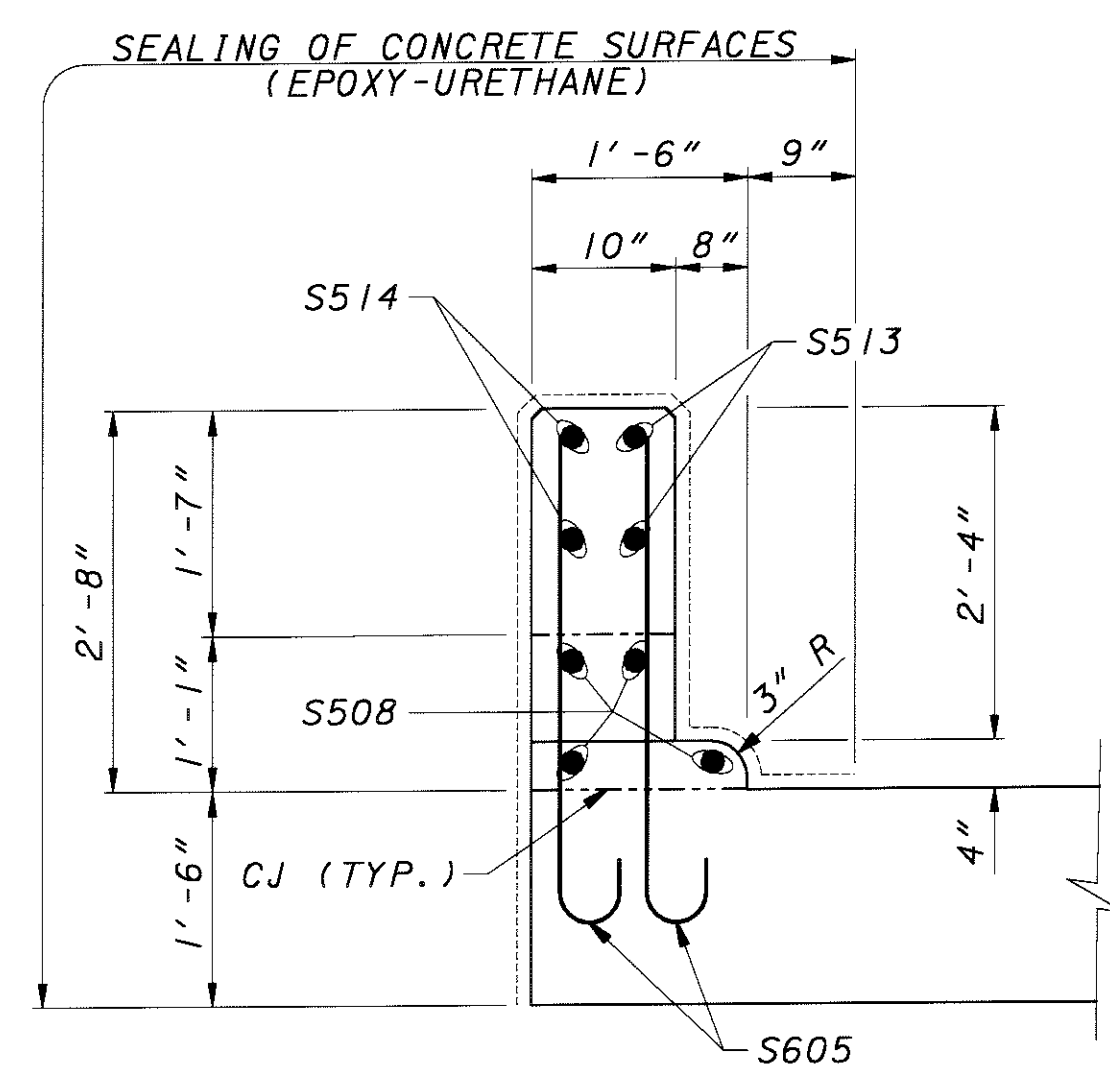
**TYPICAL PARAPET SAWCUT DETAIL**



**NORTH PARAPET ELEVATION (WEST END)**  
(SOUTH PARAPET - EAST END, SIMILAR)

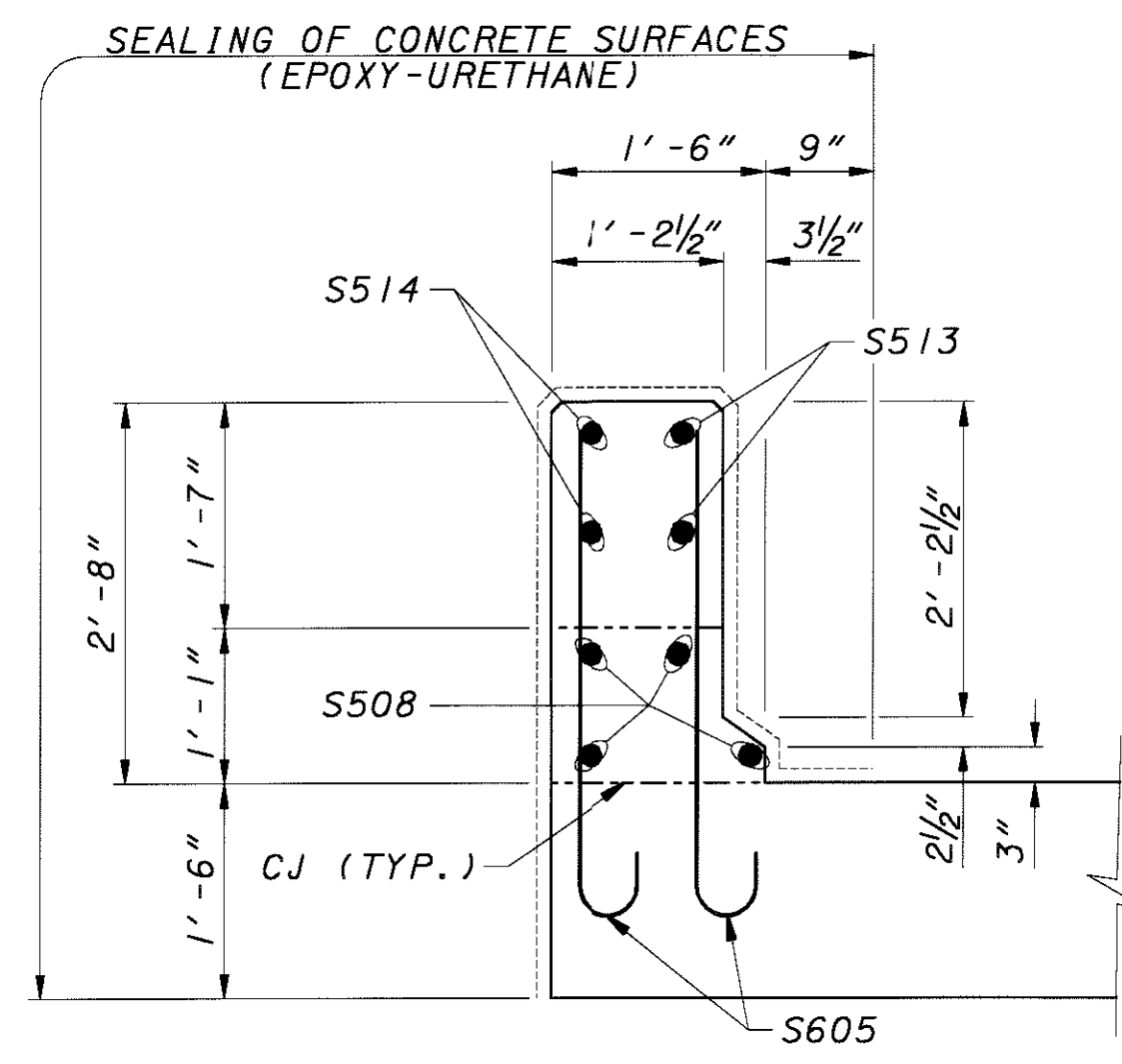


**NORTH PARAPET ELEVATION (EAST END)**  
(SOUTH PARAPET - WEST END, SIMILAR)



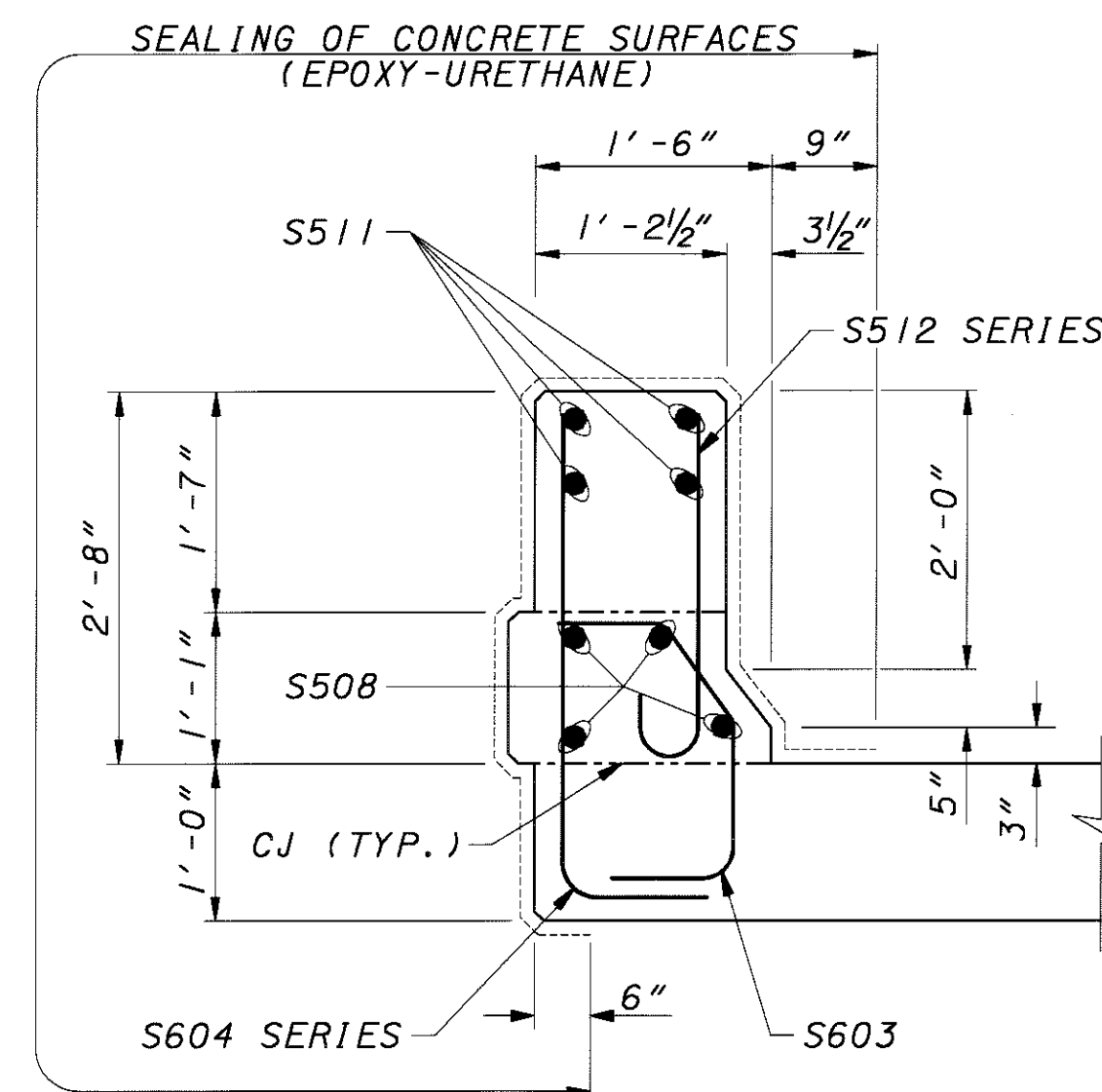
**SECTION A-A**

(SECTION A'-A' SIMILAR BUT OPPOSITE HAND)



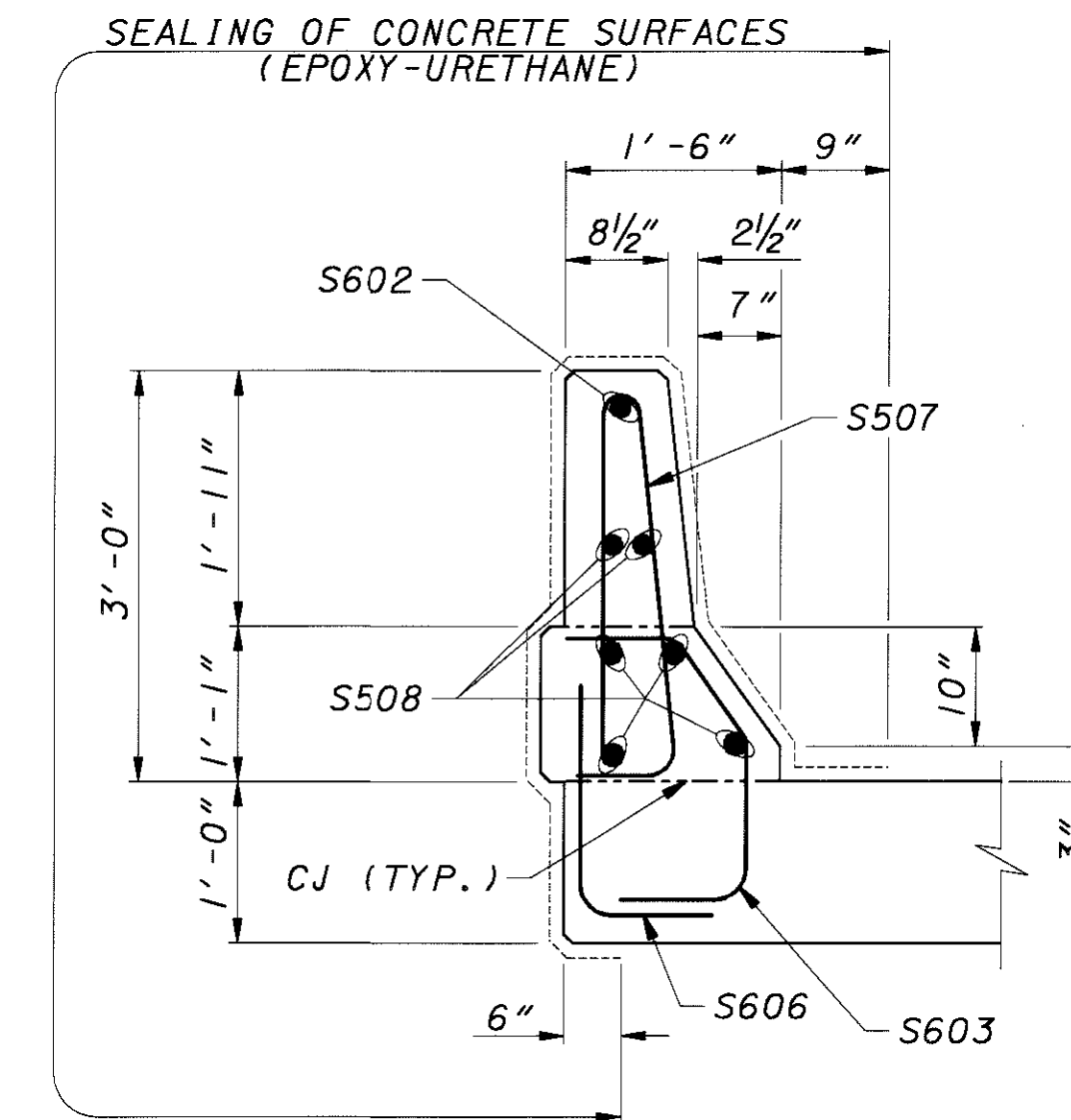
**SECTION B-B**

(SECTION B'-B' SIMILAR BUT OPPOSITE HAND)



**SECTION C-C**

(SECTION C'-C' SIMILAR BUT OPPOSITE HAND)

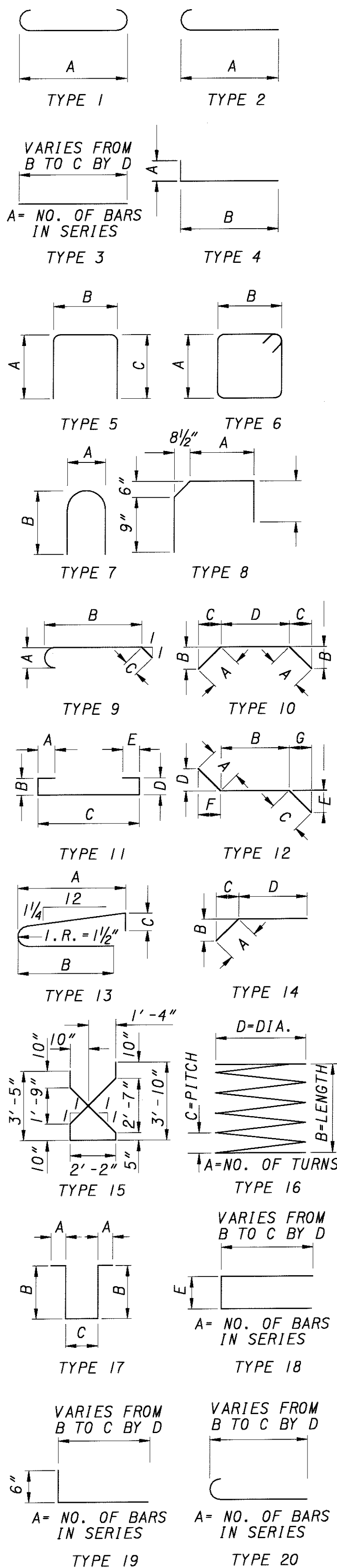


**SECTION D-D**

(SECTION D'-D' SIMILAR BUT OPPOSITE HAND)

**NOTES:**  
1. FOR PARAPET NOTES, SEE SHEET 30.

## BAR TYPE DIAGRAM



## PIERS

MARK	QUANTITY					TOTAL QUANTITY	LENGTH	WEIGHT (LBS.)	TYPE	A	B	C	D	E
	PIER 1	PIER 2	PIER 3	PIER 4	PIER 5									
SP401	2					2	394'-9"	643	16	51	18'-2 3/4"	4 1/2"	2'-6"	
SP402	5	3				8	438'-1"	2857	16	57	20'-4"	4 1/2"	2'-6"	
SP403		2		3		5	398'-6"	1623	16	52	18'-6 5/8"	4 1/2"	2'-6"	
SP404		2				2	432'-4"	705	16	56	20'-0 3/4"	4 1/2"	2'-6"	
SP405			2			2	451'-6"	737	16	58	20'-11 3/4"	4 1/2"	2'-6"	
SP406			3			3	445'-3"	1089	16	58	20'-8 1/8"	4 1/2"	2'-6"	
SP407			2			2	408'-2"	665	16	53	18'-10 3/8"	4 1/2"	2'-6"	
SP408				2		2	359'-4"	585	16	46	16'-6 1/8"	4 1/2"	2'-6"	
SP409				2		2	379'-11"	619	16	49	17'-6 1/8"	4 1/2"	2'-6"	
SP410					2	2	308'-2"	501	16	40	14'-0 3/8"	4 1/2"	2'-6"	
SP411					3	3	370'-0"	904	16	48	17'-0 3/8"	4 1/2"	2'-6"	
SP412					2	2	326'-9"	531	16	42	14'-11 1/8"	4 1/2"	2'-6"	
P501	20	20	20	20	20	100	24'-5"	2547	STR.					
P502	10	10	10	10	10	50	40'-0"	2086	STR.					
P503	14	14	14	14	14	70	10'-2"	743	7	2'-7 3/8"	4'-3 3/8"			
P504	220	200	204	204	148	976	8'-6"	8653	5	3'-1"	2'-7 3/8"	3'-1"		
P505	108	112	108	108	68	504	7'-5"	3899	5	2'-6 1/2"	2'-7 3/8"	2'-6 1/2"		
P506	64	64	64	64	64	320	8'-6"	2837	STR.					
P801	20	20	20	20	20	100	42'-1"	11237	4	2'-7 1/8"	39'-7 3/4"			
P802	10	10	10	10	10	50	21'-0"	2804	STR.					
P803	20	20	20	20	20	100	30'-5"	8122	STR.					
P804	10	10	10	10	10	50	32'-11"	4395	STR.					
P805			64	64	64	192	10'-5"	5340	1	8'-5"				
PI001	64	64				128	11'-4"	6243	1	8'-4 3/4"				
PI101	24					24	22'-3"	2838	2	20'-7 3/4"				
PI102	24					24	24'-4"	3103	2	22'-9"				
PI103		24				24	22'-7"	2880	2	20'-11 5/8"				
PI104		24				24	24'-1"	3071	2	22'-5 3/8"				
PI105			24			24	25'-0"	3188	2	23'-4 3/4"				
PI106			36			36	21'-1"	4033	2	19'-5 3/4"				
PI107			24			24	22'-11"	2923	2	21'-3 3/8"				
PI108				24		24	20'-6"	2614	2	18'-11 1/8"				
PI109				24		24	21'-6"	2742	2	19'-11 1/8"				
PI110					24	24	18'-0"	2296	2	16'-5 3/8"				
PI111					36	36	17'-5"	3332	2	15'-9 7/8"				
PI112					24	24	18'-11"	2413	2	17'-4 1/8"				
PI113	48	48	48	48	48	240	14'-0"	17852	4	2'-0"	12'-3 1/2"			
PI114	36	36				72	20'-9"	7938	2	19'-1 1/2"				
PI115				36		36	18'-10"	3603	2	17'-2 3/8"				
TOTAL WEIGHT								135,191						

## SUPERSTRUCTURE - ABUTMENT DIAPHRAGMS

MARK	QUANTITY @ REAR ABUT.	QUANTITY @ FWD. ABUT.	TOTAL QUANTITY	LENGTH	WEIGHT (LBS.)	TYPE	A	B	C	D	E
D501	59	59	118	10'-8"	1313	6	2'-0 3/4"	3'-0 1/2"			
D502	56	56	112	7'-6"	877	5	2'-8"	2'-5 1/2"	2'-8"		
D503	4	4	8	8'-1"	68	5	2'-8"	3'-0 1/2"	2'-8"		
D504	1	1	2	10'-7"	23	6	2'-0 1/2"	2'-11 1/8"			
D801	24	24	48	40'-0"	5127	STR.					
D802	8	8	16	23'-0"	983	STR.					
D803	4	4	8	19'-4"	413	STR.					
D804	2	2	4	1'-4"	15	STR.					
D805	58	58	116	5'-9"	1781	9	6"	3'-5 3/8"	1'-5"		
TOTAL WEIGHT					10,600						

## SUPERSTRUCTURE - DECK

MARK	QUANTITY	LENGTH	WEIGHT (LBS.)	TYPE	A	B	C	D	E
S401	234	38'-10"	6071	STR.					
S402	1170	40'-0"	31263	STR.					
S501	580	33'-0"	19964	STR.					
S502	2660	40'-0"	110976	STR.					
S503	174	38'-10"	7048	STR.					
S504	2427	27'-3"	68980	STR.					
S505	4 SERIES OF 43	5'-0" TO 38'-0"	3858	3	43	5'-0"	38'-0"	9 7/16"	
S506	4 SERIES OF 44	3'-0" TO 39'-0"	3855	3	44	3'-0"	39'-0"	10 1/16"	
S507	848	6'-0"	5307	13	2'-9"	2'-6"	8"		
S508	16	14'-10"	248	STR.					
S509	120	40'-0"	5007	STR.					
S510	24	26'-1"	653	STR.					
S511	16	11'-7"	194	STR.					
S512	4 SERIES OF 11	3'-0" TO 3'-4"	146	20	11	2'-4 5/8"	2'-8 3/8"	3/8"	
S513	8	7'-5"	62	STR.					
S514	8	7'-5"	62	STR.					
S601	20	40'-0"	1202	STR.					
S602	4	36'-3"	218	STR.					
S603	892	3'-4"	4466	8	1'-2 5/8"				
S604	4 SERIES OF 11	3'-8" TO 3'-11"	251	19	11	3'-3 3/8"	3'-7 1/4"	3/8"	
S605	24	4'-0"	145	2	3'-3 5/8"				
S606	848	2'-6"	3185	4	11"	1'-8 5/8"			
TOTAL WEIGHT			273,161						

## NOTES:

- ALL DIMENSIONS ARE OUT TO OUT OF BAR.
- RADIUS DIMENSION 'R' IS TO OUTSIDE OF BAR. RADIUS DIMENSION 'I.R.' IS TO INSIDE OF BAR.
- THE LENGTH OF BENT BARS IS MEASURED ALONG THE CENTERLINE.
- FOR STANDARD HOOK DIMENSIONS, SEE SECTION 509.05 OF THE SPECIFICATIONS.
- ALL REINFORCING STEEL SHALL BE EPOXY COATED, GRADE 60.
- REINFORCING STEEL LIST AND WEIGHTS ARE FOR INFORMATIONAL PURPOSES ONLY. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICES BID FOR APPROPRIATE 844 ITEMS.
- SPIRALS: THE LENGTH SHOWN IN THE STEEL LIST FOR THE SPIRAL BARS IN THE COLUMNS IS THE DISTANCE FROM THE TOP OF THE FOOTING TO THE BOTTOM OF THE PIER CAP. 1 1/2 CLOSED COILS SHALL BE PROVIDED AT EACH END OF THE SPIRAL UNIT. FOUR STEEL CHANNEL, TEE, OR ANGLE SPACERS, WEIGHING APPROXIMATELY 0.80 LB. PER LIN. FT. OF COLUMN, SHALL BE PROVIDED FOR EACH SPIRAL UNIT. THEY SHALL BE EQUALLY SPACED ALONG THE PERIPHERY OF THE COIL. THE NUMBER OF LBS. OF THESE SPACERS, BASED ON 0.80 LB. PER LIN. FT. SHALL BE INCLUDED IN THE UNIT PRICE OF ITEM 844 CONCRETE ITEMS.

## ABUTMENTS

MARK	QUANTITY @ REAR ABUT.	QUANTITY @ FWD. ABUT.	TOTAL QUANTITY	LENGTH	WEIGHT (LBS.)	TYPE	A	B	C	D	E
A501	8	12	20	40'-0"	835	STR.					
A502	4	6	10	16'-0"	167	STR.					
A503	58	67	125	15'-5"	2010	6	4'-11 $\frac{3}{4}$ "	2'-5 $\frac{3}{8}$ "			
A504		1	1	10'-2"	11	5	4'-3"	1'-11 $\frac{3}{8}$ "	4'-3"		
A505	1		1	16'-2"	17	6	4'-11 $\frac{3}{4}$ "	2'-10 $\frac{1}{8}$ "			
A506	6		6	15'-7"	98	5	6'-11 $\frac{1}{8}$ "	1'-11 $\frac{3}{8}$ "	6'-11 $\frac{1}{8}$ "		
A507	1		1	15'-4"	16	5	6'-9 $\frac{7}{8}$ "	1'-11 $\frac{3}{8}$ "	6'-9 $\frac{7}{8}$ "		
A508	3	3	6	12'-6"	79	STR.					
A509	3	3	6	13'-7"	85	STR.					
A510	1		1	15'-10"	17	5	6'-11 $\frac{1}{8}$ "	2'-3 $\frac{1}{4}$ "	6'-11 $\frac{1}{8}$ "		
A511		1	1	17'-8"	19	5	7'-11 $\frac{1}{8}$ "	1'-11 $\frac{3}{8}$ "	7'-11 $\frac{1}{8}$ "		
A512	1 SERIES OF 5		1 SERIES OF 5	4'-7" TO 9'-9"	38	18	5	1'-5 $\frac{1}{2}$ "	4'-0 $\frac{3}{8}$ "	7 $\frac{3}{4}$ "	1'-11 $\frac{3}{8}$ "
A513	2	1	3	10'-4"	33	5	4'-4 $\frac{1}{4}$ "	1'-11 $\frac{3}{8}$ "	4'-4 $\frac{1}{4}$ "		
A514	1		1	10'-8"	12	5	4'-4 $\frac{1}{4}$ "	2'-3 $\frac{1}{4}$ "	4'-4 $\frac{1}{4}$ "		
A515	2	2	4	8'-7"	36	STR.					
A516	2	2	4	9'-9"	41	STR.					
A517	1	1	2	5'-5"	12	STR.					
A518	1	1	2	6'-6"	14	STR.					
A519	1	1	2	9'-3"	20	14	1'-10 $\frac{1}{4}$ "	8 $\frac{3}{4}$ "	1'-8 $\frac{1}{2}$ "	7'-4 $\frac{7}{8}$ "	
A520	1	1	2	10'-4"	22	14	2'-11 $\frac{3}{8}$ "	1'-2"	2'-8 $\frac{1}{2}$ "	7'-4 $\frac{7}{8}$ "	
A521	1		1	13'-0"	14	6	4'-11 $\frac{3}{4}$ "	2'-6 $\frac{5}{8}$ "			
A522	2		2	13'-4"	28	6	4'-11 $\frac{3}{4}$ "	2'-10 $\frac{1}{8}$ "			
A523	6		6	16'-2"	102	5	7'-3"	1'-11 $\frac{3}{8}$ "	7'-3"		
A524	2		2	16'-6"	35	5	7'-3"	2'-3 $\frac{1}{4}$ "	7'-3"		
A525	1	1	2	13'-11"	29	5	5'-11 $\frac{1}{4}$ "	2'-3 $\frac{1}{4}$ "	5'-11 $\frac{1}{4}$ "		
A526	1		1	15'-2"	16	5	6'-8 $\frac{3}{4}$ "	1'-11 $\frac{3}{8}$ "	6'-8 $\frac{3}{4}$ "		
A527	3		3	14'-7"	46	STR.					
A528	3		3	13'-6"	43	STR.					
A529		1	1	18'-8"	20	5	8'-6 $\frac{1}{4}$ "	1'-11 $\frac{3}{8}$ "	8'-6 $\frac{1}{4}$ "		
A530		1	1	19'-3"	21	5	8'-7 $\frac{1}{2}$ "	2'-3 $\frac{1}{4}$ "	8'-7 $\frac{1}{2}$ "		
A531	1 SERIES OF 6		1 SERIES OF 6	3'-8" TO 10'-2"	44	18	6	1'-0 $\frac{1}{4}$ "	4'-3"	7 $\frac{3}{4}$ "	1'-11 $\frac{3}{8}$ "
A532	1		1	10'-5"	11	5	4'-4 $\frac{1}{4}$ "	1'-11 $\frac{3}{8}$ "	4'-4 $\frac{1}{4}$ "		
A533	1		1	10'-8"	12	5	4'-4 $\frac{1}{4}$ "	2'-3 $\frac{1}{4}$ "	4'-4 $\frac{1}{4}$ "		
A534	2		2	10'-9"	23	STR.					
A535	2		2	9'-8"	21	STR.					
A536	1		1	8'-4"	9	STR.					
A537	1		1	7'-3"	8	STR.					
A538	1		1	5'-9"	6	STR.					
A539	1		1	4'-8"	5	STR.					
A540	1		1	11'-5"	12	14	2'-11 $\frac{3}{8}$ "	1'-2"	2'-8 $\frac{1}{2}$ "	8'-5 $\frac{7}{8}$ "	
A541	1		1	10'-4"	11	14	1'-10 $\frac{1}{4}$ "	8 $\frac{3}{4}$ "	1'-8 $\frac{1}{2}$ "	8'-5 $\frac{7}{8}$ "	
A542		6	6	18'-11"	119	5	8'-7 $\frac{1}{2}$ "	1'-11 $\frac{3}{8}$ "	8'-7 $\frac{1}{2}$ "		
A543	1		1	16'-2"	17	6	4'-11 $\frac{3}{4}$ "	2'-10 $\frac{1}{8}$ "			
A544	1		1	16'-4"	18	5	7'-4 $\frac{1}{8}$ "	1'-11 $\frac{3}{8}$ "	7'-4 $\frac{1}{8}$ "		
A545	2		2	15'-3"	32	5	6'-9 $\frac{5}{8}$ "	1'-11 $\frac{3}{8}$ "	6'-9 $\frac{5}{8}$ "		
A546	1		1	13'-8"	15	5	5'-11 $\frac{1}{4}$ "	2'-0 $\frac{3}{8}$ "	5'-11 $\frac{1}{4}$ "		
A547		1 SERIES OF 6	1 SERIES OF 6	3'-6" TO 8'-11"	39	18	6	11"	3'-7 $\frac{1}{4}$ "	6 $\frac{1}{2}$ "	1'-11 $\frac{3}{8}$ "
A548	1	1	1	15'-7"	17	6	4'-11 $\frac{3}{4}$ "	2'-6 $\frac{5}{8}$ "			
A549	1	1	1	2'-3"	3	5	3 $\frac{1}{4}$ "	1'-11 $\frac{3}{8}$ "	3 $\frac{1}{4}$ "		
A550	1	1	1	2'-10"	3	25	1'-11 $\frac{3}{8}$ "				
A551	4		4	16'-6"	69	STR.					
A552	4		4	17'-7"	74	STR.					
A553	1		1	11'-7"	13	STR.					
A554	1		1	12'-8"	14	STR.					
A555	1		1	8'-5"	9	STR.					
A556	1		1	9'-6"	10	STR.					
A557	1		1	5'-3"	6	STR.					
A558	1		1	6'-4"	7	STR.					
A559	2		2	2'-5"	6	STR.					
A560	1		1	12'-8"	14	14	1'-10 $\frac{1}{4}$ "	8 $\frac{3}{4}$ "	1'-8 $\frac{3}{4}$ "	10'-9 $\frac{7}{8}$ "	
A561	1		1	13'-9"	15	14	2'-11 $\frac{3}{8}$ "	1'-2"	2'-8 $\frac{1}{8}$ "	10'-9 $\frac{7}{8}$ "	

## ABUTMENTS

MARK	QUANTITY @ REAR ABUT.	QUANTITY @ FWD. ABUT.	TOTAL QUANTITY	LENGTH	WEIGHT (LBS.)	TYPE	A	B	C	D	E
A562		1	1	15'-8"	17	6	5'-0 $\frac{1}{8}$ "	2'-6 $\frac{5}{8}$ "			
A563		1	1	16'-3"	17	6	5'-0 $\frac{1}{8}$ "	2'-10 $\frac{1}{8}$ "			
A564		1	1	16'-0"	17	5	7'-0 $\frac{1}{4}$ "	2'-3 $\frac{1}{4}$ "	7'-0 $\frac{1}{4}$ "		
A565		7	7	15'-7"	114	5	6'-11 $\frac{1}{2}$ "	1'-11 $\frac{3}{8}$ "	6'-11 $\frac{1}{2}$ "		
A566		1	1	10'-5"	11	5	4'-3 $\frac{5}{8}$ "	2'-1 $\frac{1}{4}$ "	4'-3 $\frac{5}{8}$ "		
A567		1	1	10'-3"	11	5	4'-3 $\frac{5}{8}$ "	1'-11 $\frac{3}{8}$ "	4'-3 $\frac{5}{8}$ "		
A568		1 SERIES OF 4	1 SERIES OF 4	6'-10" TO 10'-1"	36	18	4	2'-7 $\frac{1}{8}$ "	4'-2 $\frac{3}{8}$ "	6 $\frac{3}{8}$ "	1'-11 $\frac{3}{8}$ "
A569		1	1	5'-7"	6	5	1'-11 $\frac{3}{8}$ "	1'-11 $\frac{3}{8}$ "	1'-11 $\frac{3}{8}$ "		
A570		1	1	4'-6"	5	5	1'-4 $\frac{1}{8}$ "	1'-11 $\frac{3}{8}$ "	1'-4 $\frac{1}{8}$ "		
A701	74	88	162	16'-8"	5519	6	2'-5 $\frac{1}{8}$ "	5'-5 $\frac{1}{8}$ "			
A801	38	16	54	40'-0"	5768	STR.					
A802	4	4	8	22'-10"	488	STR.					
A803		8	8	24'-0"	513	STR.					
A804		24	24	32'-0"	2051	STR.					
				TOTAL WEIGHT	19,171						

## NOTES:

- ALL DIMENSIONS ARE OUT TO OUT OF BAR.
- RADIUS DIMENSION 'R' IS TO OUTSIDE OF BAR. RADIUS DIMENSION 'I.R.' IS TO INSIDE OF BAR.
- THE LENGTH OF BENT BARS IS MEASURED ALONG THE CENTERLINE.
- FOR STANDARD HOOK DIMENSIONS, SEE SECTION 509.05 OF THE SPECIFICATIONS.
- ALL REINFORCING STEEL SHALL BE EPOXY COATED, GRADE 60
- REINFORCING STEEL LIST AND WEIGHTS ARE FOR INFORMATIONAL PURPOSES ONLY, PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICES BID FOR APPROPRIATE 844 ITEMS.
- SPIRALS: THE LENGTH SHOWN IN THE STEEL LIST FOR THE SPIRAL BARS IN THE COLUMNS IS THE DISTANCE FROM THE TOP OF THE FOOTING TO THE BOTTOM OF THE PIER CAP. 1 $\frac{1}{2}$  CLOSED COILS SHALL BE PROVIDED AT EACH END OF THE SPIRAL UNIT. FOUR STEEL CHANNEL, TEE, OR ANGLE SPACERS, WEIGHING APPROXIMATELY 0.80 LB. PER LIN. FT. OF COLUMN, SHALL BE PROVIDED FOR EACH SPIRAL UNIT. THEY SHALL BE EQUALLY SPACED ALONG THE PERIPHERY OF THE COIL. THE NUMBER OF LBS. OF THESE SPACERS, BASED ON 0.80 LB. PER LIN. FT. SHALL BE INCLUDED IN THE UNIT PRICE OF ITEM 844 CONCRETE ITEMS.

REINFORCING STEEL LIST 11  
BRIDGE NO. MOT-75-0306  
LYONS ROAD OVER I-75 MAINLINE

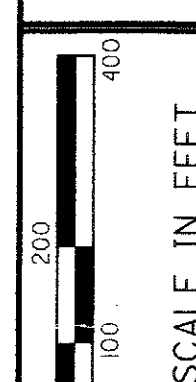
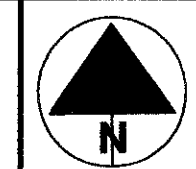
MOT-75-3.06

33/33

83  
90DESIGNED  
SKT  
CHECKED  
TAB  
DRAWN  
SKT  
REVISED  
REVIEWED  
RGS  
DATE  
06/02/00  
STRUCTURE FILE NUMBER  
5706467DESIGN AGENCY  
CH2M HILL  
ONE DAYTON CENTRE, SUITE 1400  
ONE SOUTH MAIN STREET  
DAYTON, OH 45402-1828



MOT-75-3.06  
SECTION 18  
T-2, R-5 M.R.S.  
MIAMI TOWNSHIP  
MONTGOMERY COUNTY, OHIO



PID NO.  
**13434**

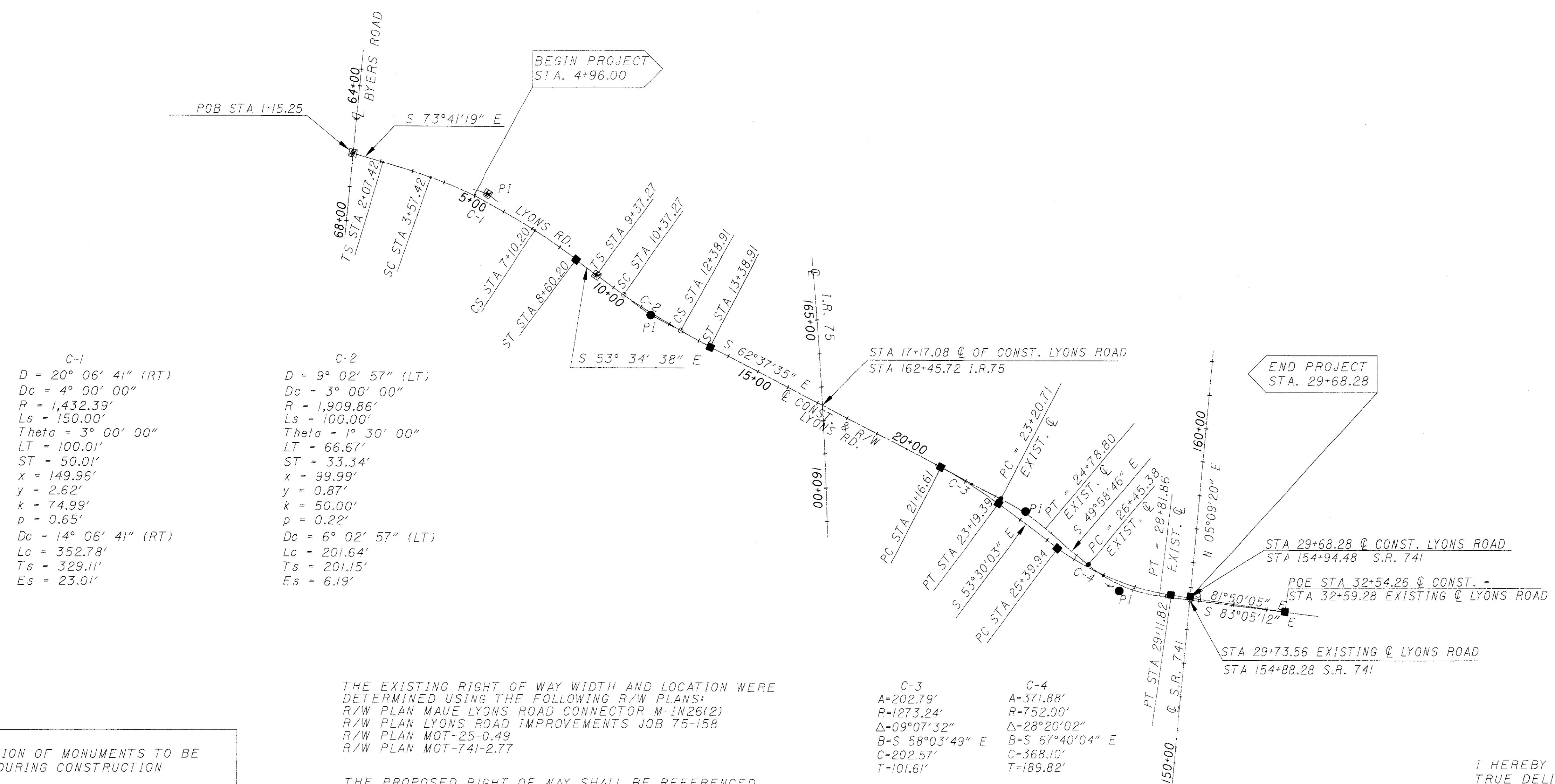
R/W DESIGNER  
CLT  
R/W REVIEWER  
RPC

**CENTERLINE PLAT**

**MOT-75-3.06**

1 / 7

84  
90



**C-1**  
D = 20° 06' 41" (RT)  
Dc = 4° 00' 00"  
R = 1,432.39'  
Ls = 150.00'  
Theta = 3° 00' 00"  
LT = 100.01'  
ST = 50.01'  
x = 149.96'  
y = 2.62'  
k = 74.99'  
p = 0.65'  
Dc = 14° 06' 41" (RT)  
Lc = 352.78'  
Ts = 329.11'  
Es = 23.01'

**C-2**  
D = 9° 02' 57" (LT)  
Dc = 3° 00' 00"  
R = 1,909.86'  
Ls = 100.00'  
Theta = 1° 30' 00"  
LT = 66.67'  
ST = 33.34'  
x = 99.99'  
y = 0.87'  
k = 50.00'  
p = 0.22'  
Dc = 6° 02' 57" (LT)  
Lc = 201.64'  
Ts = 201.15'  
Es = 6.19'

**C-3**  
A=202.79'  
R=1273.24'  
Δ=09°07'32"  
B=S 58°03'49" E  
C=202.57'  
T=101.61'

**C-4**  
A=371.88'  
R=752.00'  
Δ=28°20'02"  
B=S 67°40'04" E  
C=368.10'  
T=189.82'

LOCATION OF MONUMENTS TO BE SET DURING CONSTRUCTION  
@ CONSTRUCTION LYONS ROAD

ST STA 8+60.20  
TS STA 9+37.27  
ST STA 13+38.91  
PC STA 21+16.61  
PT STA 23+19.39  
PC STA 25+39.94  
PT STA 29+11.82  
INT. STA 29+68.28 @ S.R. 741  
POE STA 32+54.26

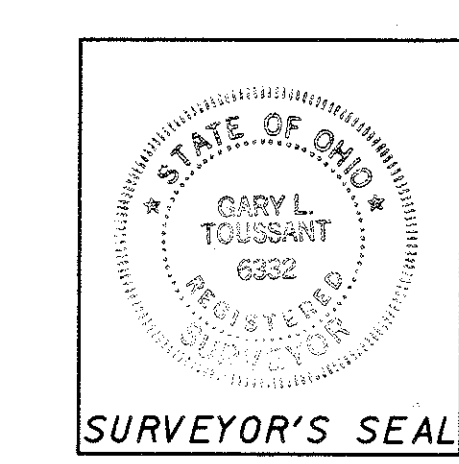
- MONUMENT LEGEND**
- PROPOSED MONUMENT ASSEMBLY
  - ▣ MONUMENT ASSEMBLY FOUND
  - RAILROAD SPIKE FOUND
  - 5/8" REBAR FOUND
  - P.K. NAIL FOUND

THE EXISTING RIGHT OF WAY WIDTH AND LOCATION WERE DETERMINED USING THE FOLLOWING R/W PLANS:  
R/W PLAN MAUE-LYONS ROAD CONNECTOR M-IN26(2)  
R/W PLAN LYONS ROAD IMPROVEMENTS JOB 75-158  
R/W PLAN MOT-25-0.49  
R/W PLAN MOT-741-2.77

THE PROPOSED RIGHT OF WAY SHALL BE REFERENCED FROM THE CENTERLINE OF RIGHT OF WAY.

ADJUSTABLE CENTERLINE MONUMENTS, REFERENCE MONUMENTS AND RIGHT OF WAY MONUMENTS ARE SHOWN ON STANDARD CONSTRUCTION DRAWING RM-11 (REV. 4-29-99) OF THE OHIO DEPARTMENT OF TRANSPORTATION. THE PLACEMENT OF THE MONUMENTS SHALL BE UNDER THE DIRECTION OF A SURVEYOR REGISTERED IN THE STATE OF OHIO AND ARE TO BE SET, AS SHOWN, BY THE HIGHWAY CONTRACTOR AT THE TIME OF CONSTRUCTION. ANY ALTERATIONS, WITH THE APPROVAL OF THE OHIO DEPARTMENT OF TRANSPORTATION, SHALL BE NOTED AND O.D.O.T. SHALL BE NOTIFIED OF THE NEW LOCATIONS.

THE BASIS OF BEARING IS THE OHIO STATE PLANE COORDINATE SYSTEM (OHIO SOUTH ZONE NAD 83)

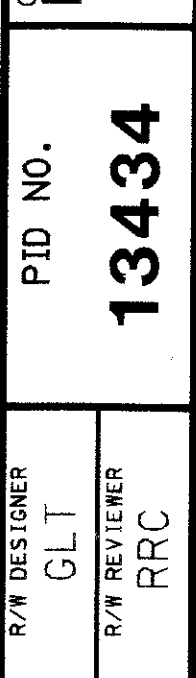


I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY MADE FOR THE COUNTY OF MONTGOMERY IN 1999 BY HAMMONTREE & ASSOCIATES, LIMITED.

THE ESTABLISHMENT OF PROPERTY LINES AND EXISTING RIGHT OF WAY LINES SHOWN ON THIS PLAN AS OF THIS DATE WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION

*Gary L. Toussant* DATE 2/4/00  
GARY L. TOUSSANT P.S. #6332

RECEIVED	20
RECORDED	20
BOOK	PAGE
COUNTY RECORDER	

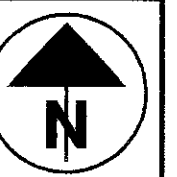


MOT-75-3.06

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

- ① KIMCO DEVELOPMENT OF SPRINGBORO PIKE, INC.
- ② AUTO LAND LIMITED
- ③ STATE OF OHIO
- ④ CMBI LIMITED PARTNERSHIP
- ⑤ HIERONYMUS LIMITED LIABILITY COMPANY  
AND 741 LAND COMPANY
- ⑥ BURT LAKE ASSOCIATES

[illegible]





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

ALL RIGHT OF WAY TO BE ACQUIRED BY MONTGOMERY COUNTY  
IN THE NAME OF MONTGOMERY COUNTY

NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE  
ALL AREAS IN ACRES

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD		AUDITOR'S PARCEL NO.	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUC TURE	NET RESIDUE		TYPE FUND	REMARKS AND PERSONALTY	AS ACQUIRED	
			BOOK	PAGE								LEFT	RIGHT			BOOK	PAGE
1	KIMCO DEVELOPMENT OF SPRINGBORO PIKE, INC	7	MICROFICHE NO. 86-0371 B 01		K-45-258-12-0002 K-45-258-12-0003 K-45-258-12-0004 TOTAL	1.178 10.968 0.757 12.903	0.000				NO			STATE/ LOCAL	NO TAKE		
2 WD	AUTO LAND, LTD. AN OHIO LIMITED PARTNERSHIP	7	MICROFICHE NO. 95-0526 E 08		K-45-26-07-0004	8.923	0.308	0.415	0.308	0.107	NO		8.508	STATE/ LOCAL	* 2 LIGHT POLES TO BE REMOVED * 2 SPRINKLER VALVE BOXES TO BE REMOVED		
2 T								0.347		0.347					TO REPLACE AN EXISTING DRIVE AND GRADE AND SOD		
3 WA	STATE OF OHIO	6-7	2004	306		3.838	0.890	0.159		0.159	NO		2.948	STATE/ LOCAL	TO REPLACE AN EXISTING DRIVE AND GRADE AND SEED		
4	CMBI LIMITED PARTNERSHIP	5-6	MICROFICHE NO. 92-0142 A 01		K-45-26-07-146, 147,148,149	16.208	1.522								NO TAKE		
5	HIERONYMUS LIMITED LIABILITY COMPANY AND 741 LAND COMPANY	5-6	MICROFICHE NO. 99-538 A 01 MICROFICHE NO. 99-538 A 06		K-46-010-04-0007	27.856	0.781	0.598	0.000	0.598	NO	27.075		STATE/ LOCAL	To grade and Sod.		
6	BURT LAKE ASSOCIATES	7	MICROFICHE NO. 78-098-B03-B07		K-45-026-04-0017	6.335	0.670				NO			STATE/ LOCAL	NO TAKE		

NOTE: UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR UNLESS NOTED OTHERWISE.

NOTE: ALL TEMPORARY PARCELS TO BE OF 18 MONTHS DURATION

\* R/W ENCROACHMENT TO BE REMOVED

REV.	DATE	DESCRIPTION
RAM	6/4/01	Parcel 6T NOT NEEDED.
RAM	6/4/01	Parcel 5 Ownership Change.
RAM	6/4/01	Parcel 3T changed to 3 WA.
RAM	6/4/01	Parcels 1WD, 1WD-1 & 1T NOT NEEDED.
PLANS COMPLETED FEBRUARY 2000		

FEDERAL PROJECT NO. TE21-G000(575)

PID NO. 13434

STATE JOB NO.

DESIGNER GLT  
REVIEWER RRC

SUMMARY OF ADDITIONAL RIGHT OF WAY

MOT-75-3.06

4 / 7

87  
90

PID NO.  
**13434**

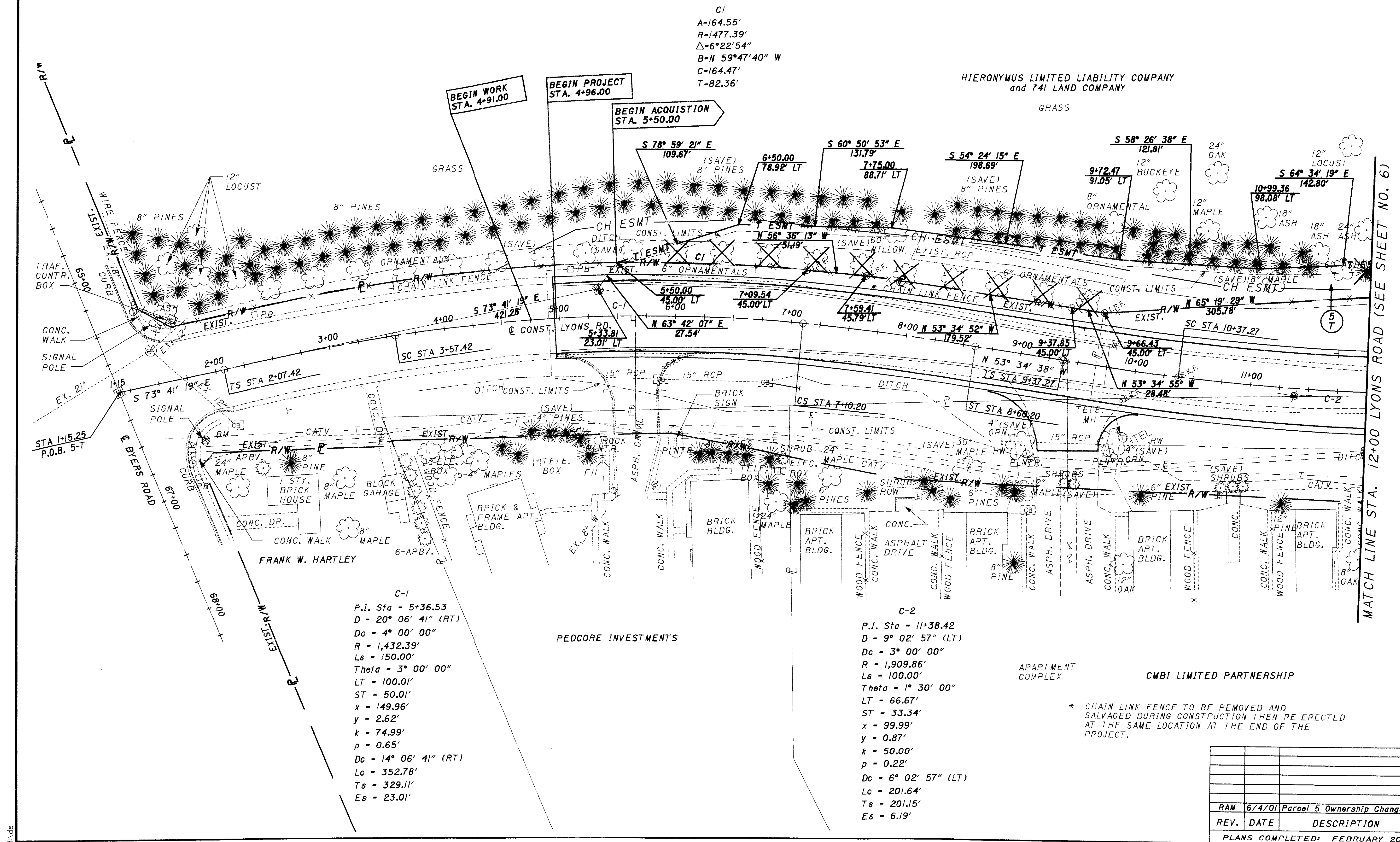
R/W DESIGNER	GLT	R/W REVIEWER	RRC
--------------	-----	--------------	-----

**RIGHT OF WAY PLAN**  
**STA. 1+15 TO STA. 12+00**

**MOT-75-3.06**

5	7
---	---

88  
90





## STRUCTURES KEY

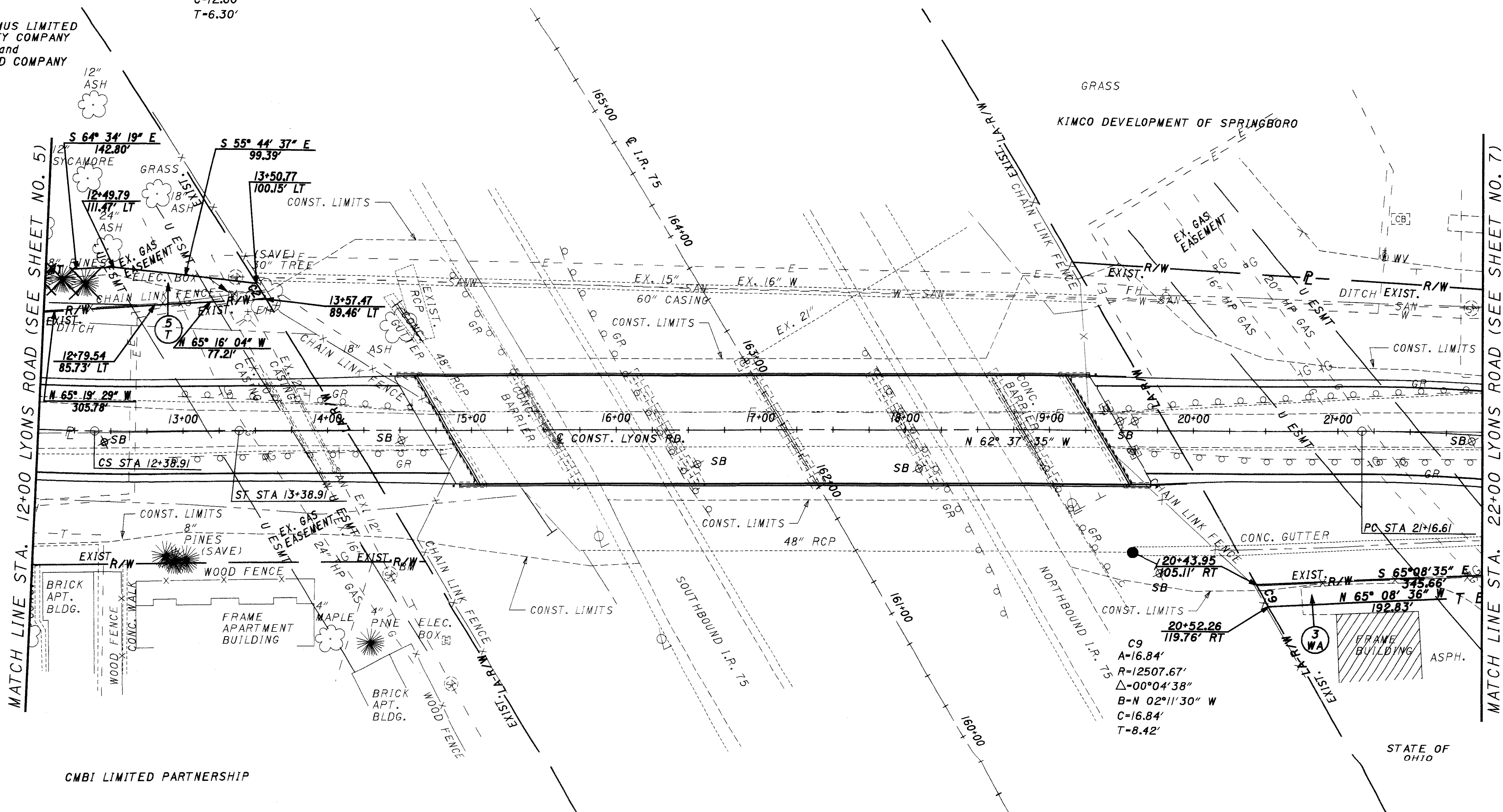
- RESIDENTIAL  
COMMERCIAL

## LEGEND

- EX. R/W MONUMENT  
D.I.R.F. 5/8" REBAR FOUND  
O.R.K.F. PK NAIL FOUND  
C2  
A=12.60'  
R=12017.67'  
Δ=00°03'36"  
B-S 04°37'29" E  
C=12.60'  
T=6.30'

SECTION 18  
T-2, R-5 M.R.S.  
MIAMI TOWNSHIP  
MONTGOMERY COUNTY, OHIO

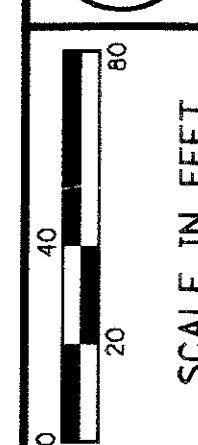
HIERONYMUS LIMITED  
LIABILITY COMPANY  
and  
741 LAND COMPANY



CMBI LIMITED PARTNERSHIP

STATE OF  
OHIO

REV.	DATE	DESCRIPTION
RAM	6/4/01	Ownership Change Parcel 5.
RAM	6/4/01	Parcel 31 changed to 3 WA.
REV.	DATE	DESCRIPTION
PLANS COMPLETED: FEBRUARY 2000		



PID NO.  
13434

R/W DESIGNER  
GLT  
R/W REVIEWER  
RRC

RIGHT OF WAY PLAN  
STA. 12+00 TO STA. 22+00

MOT-75-3.06

6 / 7

89  
90



## STRUCTURES KEY

RESIDENTIAL

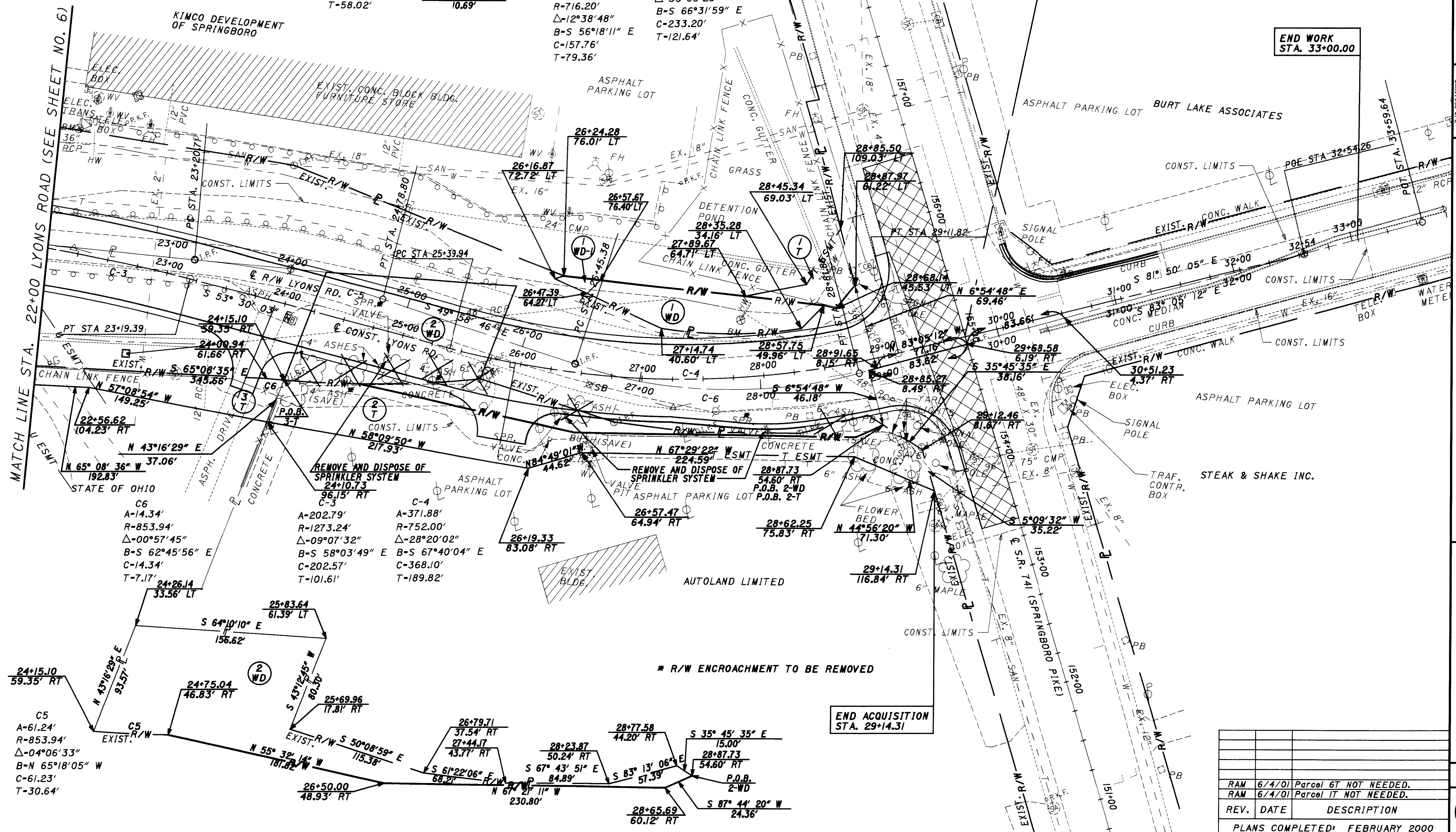
COMMERCIAL

## LEGEND

EX. R/W MONUMENT

I.R.F. 5/8" REBAR FOUND

O.R.K.F. PK NAIL FOUND

CITY OF MIAMISBURG  
SECTION 18  
T-2, R-5 M.R.S.  
MIAMI TOWNSHIP  
MONTGOMERY COUNTY, OHIOEND PROJECT  
STA. 29+68.28END WORK  
STA. 33+00.00PID NO.  
13434RIGHT OF WAY PLAN  
STA. 22+00 TO STA. 33+00

MOT-75-3.06

7/7

90  
90

REV.	DATE	DESCRIPTION
RAM	6/4/01	Parcel 6T NOT NEEDED.
RAM	6/4/01	Parcel 1T NOT NEEDED.
REV.	DATE	DESCRIPTION
PLANS COMPLETED: FEBRUARY 2000		

GEOLOGY OF THE SITE

GEOLOGICALLY, THE SITE LIES WITHIN THE GLACIATED SOUTHERN OHIO LOAMY TILL PLAIN. BOTH THE ILLINOIAN AND WISCONSIN ICE SHEETS PASSED OVER THE AREA. THE PROJECT SITE TRAVERSES SOIL CLASSIFIED PRIMARILY AS CAESAR, SHELBYVILLE, AND CRAWFORDSVILLE GROUND MORaine AND END MORaine TILL DEPOSITED BY THE LATE WISCONSINAN ICE SHEET. BASED ON THE BORINGS DRILLED AND THE BEDROCK TOPOGRAPHY MAP OF MONTGOMERY COUNTY, OBTAINED FROM THE OHIO DEPARTMENT OF NATURAL RESOURCES (ODNR), THE TOP OF BEDROCK UNDER-LYING THE SITE RANGES BETWEEN APPROXIMATELY ELEVATIONS 955 AND 965 FEET. THE UNDER-LYING BEDROCK CONSISTS OF LIMESTONE AND SHALE OF THE RICHMOND FORMATION.

EXPLORATION

FOUR (4) STRUCTURAL TEST BORINGS, DESIGNATED SB-1 THROUGH SB-4, FOUR PAVEMENT BORINGS, DESIGNATED PB-1 THROUGH PB-4, AND ONE (1) EMBANKMENT BORING, DESIGNATED EB-1, WERE DRILLED AT THE LOCATIONS ILLUSTRATED ON THE BORING LOGS ON SHEETS 5 OF 8 THROUGH 8 OF 8. THE BORING LOCATIONS WERE STAKED BY REPRESENTATIVES OF RESOURCE INTERNATIONAL, AND THE STATIONS, OFFSETS, AND GROUND ELEVATIONS WERE SURVEYED BY REPRESENTATIVES OF HAMMONTREE AND ASSOCIATES. BORING SB-1, DRILLED TO A DEPTH OF 45.0 FEET, WAS DRILLED JUST WEST OF THE EXISTING BRIDGE IN REFERENCE TO THE PROPOSED REAR ABUTMENT. BORINGS SB-2 AND SB-3, BOTH DRILLED TO A DEPTH OF 30.0 FEET, WERE DRILLED SOUTH OF THE EXISTING BRIDGE IN THE GRASS MEDIAN OF 1-75 IN REFERENCE TO THE CONSTRUCTION OF THE PIERS. BORIN SB-4, DRILLED TO A DEPTH OF 55.0 FEET, WAS DRILLED JUST EAST OF THE EXISTING BRIDGE IN REFERENCE TO THE PROPOSED FORWARD ABUTMENT. PAVEMENT BORINGS PB-1 AND PB-2 WERE DRILLED WEST OF THE EXISTING BRIDGE, AND PB-3 AND PB-4 WERE DRILLED EAST OF THE BRIDGE. THE PAVEMENT BORINGS WERE EACH DRILLED TO A DEPTH OF 10.0 FEET. EB-1, DRILLED TO A DEPTH OF 25.0 FEET, WAS DRILLED NEAR THE TOE OF THE EXISTING SOUTH (RIGHT) SIDESLOPE JUST EAST OF THE BRIDGE. THE BORINGS WERE DRILLED BETWEEN MAY 17 AND MAY 21, 1999.

INVESTIGATIONAL FINDINGS AND OBSERVATIONS

THE PAVEMENT BORINGS AND STRUCTURAL BORINGS SB-1 AND SB-4 WERE DRILLED THROUGH THE EXISTING ROADWAY. THE BORINGS EXHIBITED 6.0 TO 7.0 INCHES OF ASPHALT OVERLYING BETWEEN 29 AND 36 INCHES OF SAND AND GRAVEL BASE. BORING EB-1 EXHIBITED 4.0 INCHES OF TOPSOIL AT THE GROUND SURFACE, DESCRIBED AS BROWN SILTY CLAY WITH THE PRESENCE OF ORGANICS.

THE PLANS FOR THE EXISTING STRUCTURE (DATED 8/7/58) INDICATE THAT 17± FEET OF EMBANKMENT FILL WAS PLACED AT THE REAR ABUTMENT AND 22± FEET OF EMBANKMENT FILL WAS PLACED AT THE FORWARD ABUTMENT DURING CONSTRUCTION OF THE EXISTING BRIDGE. THE BORINGS INDICATE THAT THE EMBANKMENT FILL, AS WELL AS THE UNDERLYING 'IN-SITU' SOIL, IS PRIMARILY FINE-GRAINED, PREDOMINANTLY DESCRIBED AS BROWN TO GRAY CLAYEY SILT (SILTY CLAY, SILT AND CLAY) WITH 'SOME' COARSE TO FINE SAND AND 'TRACE' TO 'LITTLE' FINE GRAVEL. BORINGS SB-2, SB-3, SB-4, AND EB-1 EXHIBITED LAYERS OF BROWN TO GRAY COARSE TO FINE SANDY SILT (SILTY SAND) WITH 'TRACE' TO 'SOME' CLAY. BORINGS SB-1, SB-2, SB-3, AND EB-1 EACH EXHIBITED A LAYER/LENS OF GRANULAR SOIL AT VARYING ELEVATIONS, DESCRIBED AS BROWN FINE GRAVEL WITH 'SOME' FINE TO COARSE SAND. A MORE COMPREHENSIVE DESCRIPTION OF WHAT WAS ENCOUNTERED DURING THE DRILLING PROCESS MAY BE FOUND ON THE BORING LOGS ON SHEETS 5 OF 8 THROUGH 8 OF 8. LABORATORY TEST RESULTS AND VISUAL INSPECTION OF REPRES-ENTATIVE SAMPLES INDICATE THAT THE SOIL TYPES ENCOUNTERED ARE CLASSIFIED AS ODOT A-1-B, A-4A, A-6A, AND A-6B.

MANY SOIL PROPERTIES, INCLUDING SOIL CONSISTENCY AND SHEAR STRENGTH (OF COHESIVE SAMPLES), ARE PRIMARILY DERIVED FROM STANDARD PENETRATION BLOW COUNTS AND HAND PENETROMETER READINGS (PERFORMED ON COHESIVE SAMPLES IF APPLICABLE). JUDGING FROM THE STANDARD PENETRATION BLOW COUNTS OBTAINED, THE TEST BORINGS EXHIBITED STIFF TO HARD COHESIVE SOIL AND DENSE TO VERY DENSE GRANULAR SOIL. BLOW COUNTS RANGED FROM 10 BLOWS PER FOOT TO REFUSAL. REFUSAL IS DEFINED AS OBTAINING IN EXCESS OF 50 BLOWS WITH LESS THAN 6 INCHES OF PENETRATION.

NATURAL MOISTURE CONTENTS OF THE SOIL SAMPLES TESTED RANGED FROM 4% TO 23%, BUT WERE PRIMARILY LESS THAN 16%. THE NATURAL MOISTURE CONTENTS OF THE COHESIVE SOIL SAMPLES TESTED FOR PLASTICITY INDEX RANGED FROM 9% BELOW TO 2% ABOVE THEIR CORRESPONDING PLASTIC LIMITS, BUT WERE PRIMARILY BELOW THEIR CORRESPONDING PLASTIC LIMITS. IN GENERAL, THE SOIL EXHIBITED NATURAL MOISTURE CONTENTS CONSIDERED TO BE SLIGHTLY BELOW TO ABOVE OPTIMUM MOISTURE LEVELS (BASED ON CORRELATION CHARTS).

GROUNDWATER WAS INITIALLY ENCOUNTERED ON THE DRILL ROD DURING THE DRILLING PROCESS IN SB-1 AT 24.5 FEET (ELEVATION 977.9 FEET), IN SB-2 AT 12.0 FEET (ELEVATION 964.9 FEET), IN SB-3 AT 10.0 FEET (ELEVATION 965.1 FEET), IN SB-4 AT 30.0 FEET (ELEVATION 963.FEET), AND IN EB-1 AT 4.0 FEET (ELEVATION 964.3 FEET). DUE TO THE USE OF WASH WATER DURING THE CORING PROCESS IN THE STRUCTURAL BORINGS, AND BECAUSE EB-1 WAS LOCATED ADJACENT TO A DRAINAGE DITCH, GROUNDWATER LEVELS UPON COMPLETION OF THE DRILLING PROCESS COULD NOT BE DETERMINED. GROUNDWATER WAS NOT ENCOUNTERED DURING THE DRILLING PROCESS IN ANY OF THE PAVEMENT BORINGS, AND THE BOREHOLES WERE DRY UPON COMPLETION. GROUNDWATER LEVELS AND/OR THE PRESENCE OF GROUNDWATER ARE CONSIDERED TO BE DEPENDENT ON SEASONAL FLUCTUATIONS IN PRECIPITATION. AT THE TIME OF THIS INVESTIGATION, RECENT PRECIP-ITATION WAS CONSIDERED TO BE NORMAL.

THE TOP OF BEDROCK WAS ENCOUNTERED IN THE BOREHOLES AT THE ELEVATIONS ILLUSTRATED IN THE FOLLOWING TABLE:

EXISTING PAVEMENT SECTION

BORING NUMBER	STATION & OFFSET	GROUND ELEVATION	TOP OF BEDROCK ELEVATION
SB-1	14+51, 7' RT	1002.4 FT	967.4 FT
SB-2	16+56, 24' RT	976.9 FT	956.9 FT
SB-3	18+10, 27' RT	975.1 FT	955.1 FT
SB-4	19+49, 6' LT	993.2 FT	959.7 FT

THE TOP 11.5 FEET OF BEDROCK IN SB-4 IS DESCRIBED AS GRAY, LEACHED, HIGHLY BROKEN (AUGERABLE) LIMESTONE. THE CORED BEDROCK IN EVERY BORING IS DESCRIBED AS INTERBEDDED LAYERS OF GRAY, HARD, BROKED AND JOINTED TO MASSIVE, LIMESTONE, AND LAYERS OF GRAY, SOFT, SLIGHTLY TO HIGHLY BROKEN AND JOINTED, WEATHERED, SHALE. THE QUALITY OF THE ROCK WAS VERY POOR TO EXCELLENT, WITH RQD VALUES BETWEEN 0% AND 93%.

LEGEND

PRESS AND/OR DRIVE SAMPLE AND/OR CORE BORING LOCATION-PLAN VIEW.

HORIZONTAL BAR ON BORING LOG INDICATES THE DEPTH THE SAMPLE WAS TAKEN.

FIGURES BESIDE THE BORING LOG IN PROFILE INDICATE THE NUMBER OF BLOWS FOR STANDARD PENETRATION TEST.

X = NUMBER OF BLOWS FOR FIRST 6 INCHES  
Y = NUMBER OF BLOWS FOR SECOND 6 INCHES  
Z = NUMBER OF BLOWS FOR THIRD 6 INCHES

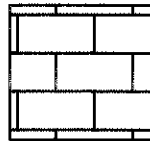
TR ——— TOP OF ROCK

W ——— INDICATES FREE WATER LEVEL

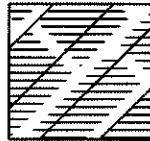
PARTICLE SIZE DEFINITIONS

8"	3"	2.0mm	0.42mm	0.074mm	0.005mm
BOULDERS	COBBLES	GRAVEL NO. 10	C.SAND NO. 40	F.SAND NO. 200	SILT CLAY

SYMBOL OF ROCK TYPE



LIMESTONE



WEATHERED SHALE

GENERAL INFORMATION

DRIVE SAMPLES

DRIVE SAMPLE BORINGS ARE MADE BY MEANS OF A MECHANICALLY-POWERED, ROTARY-TYPE DRILL RIG EMPLOYING A 2.0-INCH O.D., 1.375-INCH I.D., SPLIT-SPOON SAMPLER, AT 1.5-FOOT TO 5.0-FOOT DEPTH INTERVALS, DRIVEN BY MEANS OF A 140 POUND HAMMER WITH A FREE FALL OF 30 INCHES. THE NUMBER OF BLOWS REQUIRED TO DRIVE THE SAMPLER THREE 6.0-INCH INCREMENTS IS CONSIDERED THE STANDARD PENETRATION TEST.

PRESS SAMPLES

PRESS SAMPLES ARE TAKEN BY MEANS OF MECHANICALLY-POWERED, ROTARY-TYPE DRILL RIG, EMPLOYING A 3.0-INCH O.D. THIN-WALL PRESS SAMPLING TUBE. THE PRESS SAMPLING TUBE IS ADVANCED BY CONTINUOUS UNIFORM PRESSURE APPLIED BY THE DRILL RIG.

CORE BORINGS

CORE BORINGS ARE MADE BY MEANS OF MECHANICALLY-POWERED, ROTARY-TYPE DRILL RIG, EMPLOYING AN NW-PAM CORE BARREL WITH AN INDUSTRIAL DIAMOND CUTTING HEAD.

SAMPLING AND TESTING

THE BORING LOG SHEETS SHOW A GRAPHIC PLOT OF THE INFORMATION OBTAINED, INCLUDING DEPTH AND ELEVATION OF THE SAMPLE, TYPE OF SAMPLE, NUMBER OF BLOWS FOR THE STANDARD PENETRATION TEST IN THREE 6.0 INCH INCREMENTS, AND A SAMPLE DESCRIPTION BASED ON LABORATORY TEST RESULTS, UTILIZING THE ODOT CLASSIFICATION SYSTEM. RESULTS OF STRENGTH AND CONSOLIDATION TESTING, IF PERFORMED ON UNDISTURBED SAMPLES, APPEAR GRAPHICALLY ON SEPARATE ENCLOSURES. ROCK SAMPLES ARE DISPLAYED ON THE LOG SHEETS, INCLUDING DEPTH AND ELEVATION OF THE SAMPLE, AMOUNT OF RECOVERY, AND A VISUAL CLASSIFICATION BASED ON TYPE, COLOR, DEGREE OF HARDNESS, GRAIN SIZE, DETERIORATION, BEDDING, ACID REACTION, AND OTHER QUALIFYING FACTORS.

AT DEPTHS WHERE MATERIALS ARE BOULDERY OR GRAVELLY TO THE EXTENT THAT A SAMPLER CANNOT BE UTILIZED, A WASH SAMPLE IS PROCURED AND VISUALLY CLASSIFIED, IN ORDER TO DETERMINE THE GENERAL CHARACTERISTICS OF THE MATERIAL. THESE SAMPLES ARE NOT CONSIDERED SUFFICIENTLY REPRESENTATIVE TO WARRANT LABORATORY TESTING.

NOTES

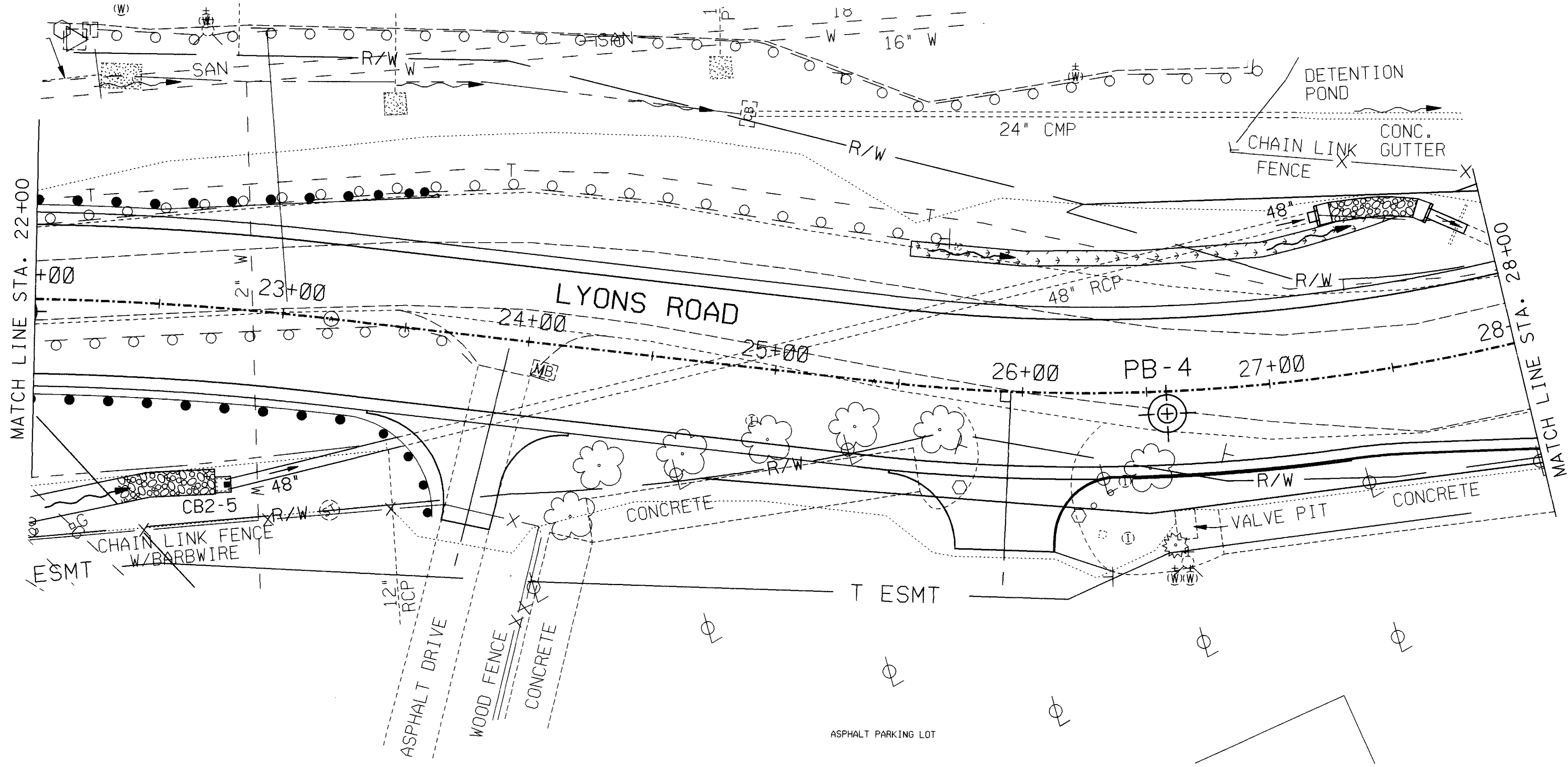
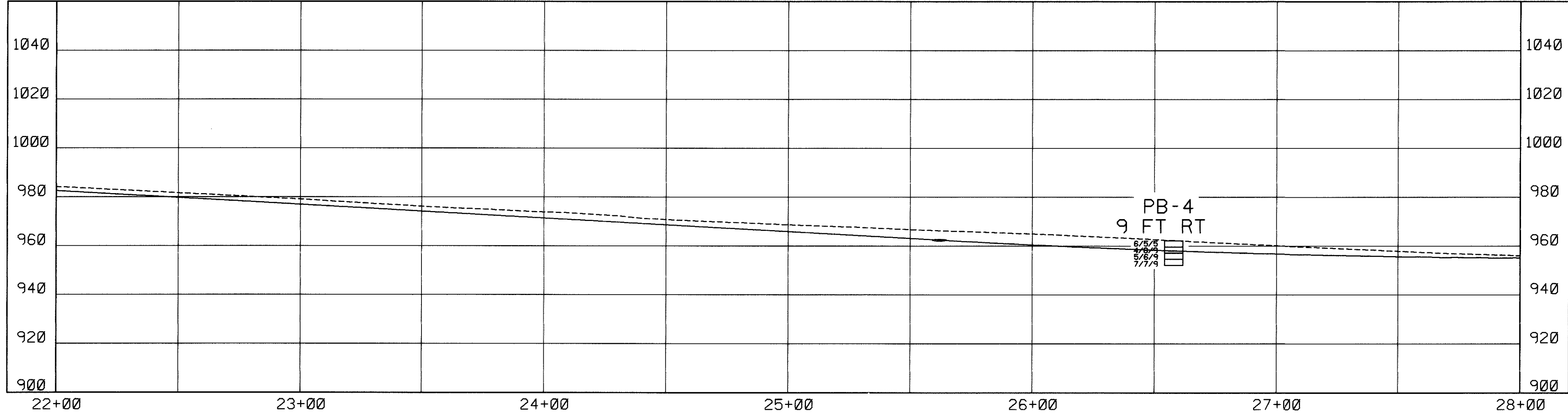
ALL AVAILABLE SOIL AND BEDROCK INFORMATION WHICH CAN BE CONVENIENTLY SHOWN ON THE STRUCTURE FOUNDATION INVESTIGATIONS SHEETS HAS BEEN SO REPORTED. ADDITIONAL SUBSURFACE INVESTIGATIONS MAY HAVE BEEN MADE TO STUDY SOME SPECIAL ASPECT OF THE PROJECT. COPIES OF THIS DATA, IF ANY, MAY BE INSPECTED IN THE DISTRICT DEPUTY DIRECTOR'S OFFICE, (DISTRICT 7), THE SOILS SECTION OF THE OFFICE OF ROADWAY ENGINEERING, OR IN THE OFFICE OF BRIDGES AT 1680 WEST BROAD STREET, COLUMBUS, OHIO 43223.











LOG OF BORING  
DATE STARTED 5/21/99 SAMPLER'S TYPE HSA DIA. 3.75 IN. WATER ELEV. N/A  
DATE COMPLETED 5/21/99  
BORING NO. PB-1 STATION & OFFSET 9+79.19 FT. LT SURFACE ELEV. 1008.0 FT

ELEV. (FT)	DEPTH (FT)	STD. PEN./ RQD	REC. (%)	DESCRIPTION	SAMPLE NO.	PHYSICAL CHARACTERISTICS								ODOT CLASS
						% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	W.C.	
1008.0	0			6" - ASPHALT 0.5										
1005.5		23/19/16	22	36" SAND AND GRAVEL BASE 3.5	SS-1									VISUAL
1003.0	5	6/10/15	100	BROWN SILTY CLAY, SOME SAND, LITTLE GRAVEL	SS-2	13	11	19	25	32	32	18	12	A-6b
1000.5		11/13/18	67		SS-3								9	VISUAL
998.0	10	16/18/18	100		SS-4								10	VISUAL

BOTTOM OF BORING = 10.0'

LOG OF BORING  
DATE STARTED 5/20/99 SAMPLER'S TYPE HSA DIA. 3.75 IN. WATER ELEV. N/A  
DATE COMPLETED 5/20/99  
BORING NO. PB-2 STATION & OFFSET 12+46.8 FT. RT SURFACE ELEV. 1005.8 FT

ELEV. (FT)	DEPTH (FT)	STD. PEN./ RQD	REC. (%)	DESCRIPTION	SAMPLE NO.	PHYSICAL CHARACTERISTICS								ODOT CLASS
						% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	W.C.	
1005.8	0			6" - ASPHALT 0.5										
1003.3		7/11/6	33	36" SAND AND GRAVEL BASE 3.5	SS-1									VISUAL
1000.8	5	6/10/9	100	BROWN TO ORANGISH BROWN SILTY CLAY, SOME SAND, SOME GRAVEL	SS-2	20	11	17	25	27	32	18	10	A-6b
998.3		8/12/12	100		SS-3								10	VISUAL
996.3	10	16/50-1'	57		SS-4								9	VISUAL

BOTTOM OF BORING = 10.0'

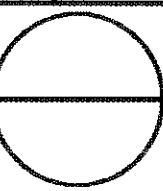
LOG OF BORING  
DATE STARTED 5/20/99 SAMPLER'S TYPE HSA/RC DIA. 3.75 IN. WATER ELEV. N/A \*  
DATE COMPLETED 5/20/99  
BORING NO. SB-1 STATION & OFFSET 14+51.7 FT. RT SURFACE ELEV. 1002.4 FT

ELEV. (FT)	DEPTH (FT)	STD. PEN./ RQD	REC. (%)	DESCRIPTION	SAMPLE NO.	PHYSICAL CHARACTERISTICS								ODOT CLASS
						% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	W.C.	
1002.4	0			7" - ASPHALT 0.6										
1000.9		50-2"	100	35" - SAND AND GRAVEL BASE 3.5	SS-1									
997.4	5	4/9/16	100	BROWN TO GRAY CLAYEY SILT, SOME SAND, LITTLE TO TRACE GRAVEL	SS-2	14	12	19	28	27	27	13	15	A-6a
994.9		7/7/14	100		SS-3								19	
992.4	10	8/10/14	100		SS-4								12	
989.9		6/11/11	100		SS-5								11	
987.4	15	10/14/16	100		SS-6								13	
984.9		8/14/19	78		SS-7	4	7	14	40	35			20	VISUAL
982.4	20	3/7/12	100		SS-8								15	
980.9		50-1'	100	BROWN GRAVEL, SOME SAND, SOME SILTY CLAY 21.0	SS-9									
977.4	25	8/8/26	56	-COBBLE/ BOULDER ENCOUNTERED IN SS-9 -GROUNDWATER INITIALLY ENCOUNTERED @ 24.5'	SS-10	55	14	9	-22-					A-1-b
972.4	30	11/29/50-5'	18	-LIMESTONE FRAGMENTS ENCOUNTERED IN SS-11 & SS-12	SS-11									
968.4	35	50-1'	100	AUGER REFUSAL @ 35.0 FEET	SS-12									

RC-1			70	LIMESTONE; GRAY, HARD, HIGHLY BROKEN, HIGHLY JOINTED, CALCITE AND DOLOMITE CRYSTAL INCLUSIONS, SLIGHTLY WEATHERED -QR (@39.5')=5,435 PSI -CORE LOSS = 30%										
	40	18												
957.4	45													

BOTTOM OF BORING = 45.0'

\* THE GROUNDWATER LEVEL UPON COMPLETION OF THE DRILLING PROCESS COULD NOT BE DETERMINED DUE TO THE USE OF WASH WATER DURING THE CORING PROCESS.





LOG OF BORING  
DATE STARTED 5/17/99 SAMPLER'S TYPE HSA/RC DIA. 3.75 IN. WATER ELEV. N/A \*  
DATE COMPLETED 5/18/99  
BORING NO. SB-2 STATION & OFFSET 16+56, 24 FT. RT SURFACE ELEV. 976.9 FT

ELEV. (FT)	DEPTH (FT)	STD. PEN./ RQD	REC. (%)	DESCRIPTION	SAMPLE NO.	PHYSICAL CHARACTERISTICS									
						% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L	P.I.	W.C.	ODOT CLASS	
976.9	0														
974.4	5    10   15  20	4/6/7	67	MOTTLED BROWN AND GRAY TO BROWN SILTY SAND, SOME GRAVEL, LITTLE CLAY, -TRACE ORGANICS IN SS-1 & SS-2    <div>11.0</div> BROWN GRAVEL, SOME SAND, LITTLE SILTY CLAY <div>13.5</div> -GROUNDWATER INITAILLY ENCOUNTERED @ 12.0' GRAY CLAYEY SILT, SOME SAND   AUGER REFUSAL @ 20.0 FEET	SS-1								6	A-4a	
971.9		4/5/6	11		SS-2										6
969.4		10/19/32	89		SS-3	20	20	22	21	17	18	5	4		
966.9		9/29/50-5"	100		SS-4								10		
965.4		50-3"	100		SS-5								11		
961.9		8/25/31	22		SS-6								10		
960.4		50-5"	100		SS-7								15		
957.9		50-0"	0		SS-8										
RC-1	25	93	85	LIMESTONE; GRAY AND LIGHT GRAY, HARD, SLIGHTLY MASSIVE, SLIGHTLY JOINTED, TURBIDITES, DOLOMITE INCLUSIONS, SLIGHTLY ARENACEOUS -NO CORE LOSS  -QR (@26.0') = 10,562 PSI											
946.9	30		0	SHALE: GRAY, SOFT, HIGHLY BROKEN, HIGHLY JOINTED, SILTY, WEATHERED -CORE LOSS = 50%											
BOTTOM OF BORING = 30.0'															

LOG OF BORING  
DATE STARTED 5/17/99 SAMPLER'S TYPE HSA/RC DIA. 3.75 IN. WATER ELEV. N/A \*  
DATE COMPLETED 5/18/99  
BORING NO. SB-3 STATION & OFFSET 18+10, 27 FT. RT SURFACE ELEV. 975.1 FT

ELEV. (FT)	DEPTH (FT)	STD. PEN./ RQD	REC. (%)	DESCRIPTION	SAMPLE NO.	PHYSICAL CHARACTERISTICS									
						% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	W.C.	ODOT CLASS	
975.1	0														
972.6		4/4/7	100	BROWN SILT AND CLAY, SOME SAND, TRACE GRAVEL	SS-1								8	VISUAL	
970.1	5	11/10/9	67		SS-2	9	10	18	32	31			9	VISUAL	
968.6		50-5'	100		SS-3								9	VISUAL	
965.6	10	27/50-2"	50	-GROUNDWATER INITIALLY ENCOUNTERED @ 10.0'	SS-4								16	VISUAL	
963.6		50-1'	100	BROWN GRAVEL, SOME SAND, LITTLE SILT	SS-5								8	VISUAL	
961.1	15	50-3'	100		SS-6								16	VISUAL	
958.1		37/50-2"	75		SS-7	50	19	15	-16-					A-1-b	
956.1	20	50-5'	100	GRAY SANDY SILT, TRACE CLAY 18.5	SS-8								14	VISUAL	
				AUGER REFUSAL @ 20.0 FEET 20.0											
RC-1			70	LIMESTONE: GRAY, HARD, HIGHLY BROKEN, HIGHLY JOINTED, CALCITIC, WITH DOLOMITE INCLUSIONS										20.5	
	25	38		SHALE: GRAY, SOFT, SLIGHTLY BROKEN, SLIGHTLY JOINTED, WEATHERED										24.5	
				-RC-1: CORE LOSS = 30%										25.5	
				LIMESTONE: GRAY, HARD, HIGHLY BROKEN, HIGHLY JOINTED, CALCITIC, WITH DOLOMITE INCLUSIONS										25.5	
				SHALE: GRAY, SOFT, SLIGHTLY BROKEN, SLIGHTLY JOINTED, WEATHERED											
945.1	30														
BOTTOM OF BORING = 30.0'															

\* THE GROUNDWATER LEVEL UPON COMPLETION OF THE DRILLING PROCESS COULD NOT BE DETERMINED DUE TO THE USE OF WASH WATER DURING THE CORING PROCESS.

LOG OF BORING  
DATE STARTED 5/19/99 SAMPLER'S TYPE HSA/RC DIA. 3.75 IN. WATER ELEV. N/A \*  
DATE COMPLETED 5/19/99  
BORING NO. SB-4 STATION & OFFSET 19+49.6 FT. LT SURFACE ELEV. 993.2 FT

ELEV. (FT)	DEPTH (FT)	STD. PEN./ RQD	REC. (%)	DESCRIPTION	SAMPLE NO.	PHYSICAL CHARACTERISTICS											
						% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L	P.I.	W.C.	ODOT CLASS			
993.2	0																
991.7		50-2'	100	6" - ASPHALT 36" - SAND AND GRAVEL BASE	SS-1												VISUAL
988.2	5	10/9/10	33	BROWN SANDY SILT, SOME CLAY, TRACE GRAVEL	SS-2											19	VISUAL
986.7		50-2'	100	-TRACE ORGANICS IN SS-2 -LIMESTONE FRAGMENTS (COBBLES) ENCOUNTERED IN SS-3	SS-3												VISUAL
983.2	10	15/11/13	100		SS-4	9	12	20	33	26	21	8	10		A-4a		
980.7		19/16/17	100		SS-5										9		VISUAL
978.2	15	12/11/11	33		SS-6										14		VISUAL
975.7		7/15/11	100		SS-7										10		VISUAL
973.2	20	9/12/15	100		SS-8										10		VISUAL
970.7		17/23/19	89		SS-9										11		VISUAL
969.2	25	50/3'	100		SS-10										9		VISUAL
963.2		30	14/9/8	0	-GROUNDWATER INITIALLY ENCOUNTERED @ 30.0'	SS-11											VISUAL
959.2		35	50-1'	100	GRAY LEACHED, HIGHLY BROKEN LIMESTONE	SS-12											VISUAL
954.2		40	50-1'	100		SS-13											VISUAL
949.2		45	50-0'	0	AUGER REFUSAL @ 45.0 FEET	SS-14											VISUAL
RC-1			100	SHALE: GRAY, VERY SOFT TO SOFT, HIGHLY BROKEN, HIGHLY JOINTED, SLIGHTLY FISSILE, WEATHERED													
	50	68	100	-RC-1: NO CORE LOSS													
RC-2		0	100	-RC-2: NO CORE LOSS													
	55																

BOTTOM OF BORING = 55.0'

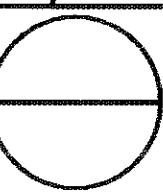
LOG OF BORING  
DATE STARTED 5/21/99 SAMPLER'S TYPE HSA DIA. 3.75 IN. WATER ELEV. N/A \*\*  
DATE COMPLETED 5/21/99  
BORING NO. EB-1 STATION & OFFSET 19+77.98 FT. RT SURFACE ELEV. 968.3 FT

ELEV. (FT)	DEPTH (FT)	STD. PEN./ RQD	REC. (%)	DESCRIPTION	SAMPLE NO.	PHYSICAL CHARACTERISTICS									
						% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	W.C.	ODOT CLASS	
968.3	0														
965.8	5  <														

BOTTOM OF BORING = 25.0'

\* THE GROUNDWATER LEVEL UPON COMPLETION OF THE DRILLING PROCESS COULD NOT BE DETERMINED DUE TO THE USE OF WASH WATER DURING THE CORING PROCESS.

\*\* THE GROUNDWATER LEVEL UPON COMPLETION OF THE DRILLING PROCESS COULD NOT BE DETERMINED DUE TO THE BORING BEING NEXT TO A DRAINAGE DITCH.



LOG OF BORING  
DATE STARTED 5/19/99 SAMPLER'S TYPE HSA DIA. 2.25 IN. WATER ELEV. N/A  
DATE COMPLETED 5/19/99  
BORING NO. PB-3 STATION & OFFSET 21+93, 5 FT. RT SURFACE ELEV. 984.2 FT

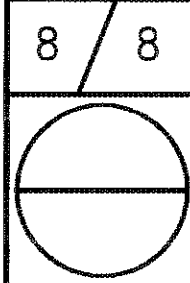
ELEV. (FT)	DEPTH (FT)	STD. PEN./ RQD	REC. (%)	DESCRIPTION	SAMPLE NO.	PHYSICAL CHARACTERISTICS								ODOT CLASS
984.2	0													
981.7		6/7/4	22	7' - ASPHALT 0.6 29' - SAND AND GRAVEL BASE 3.0	SS-1									VISUAL
979.2	5	6/10/8	89	BROWN SILTY CLAY, SOME SAND, TRACE GRAVEL	SS-2	9	9	19	30	33	29	15	13	A-6a
976.7		8/11/13	100		SS-3								10	VISUAL
974.2	10	8/9/9	89		SS-4								9	VISUAL

BOTTOM OF BORING = 10.0'

LOG OF BORING  
DATE STARTED 5/20/99 SAMPLER'S TYPE HSA DIA. 3.75 IN. WATER ELEV. N/A  
DATE COMPLETED 5/20/99  
BORING NO. PB-4 STATION & OFFSET 26+58, 9 FT. RT SURFACE ELEV. 962.2 FT

ELEV. (FT)	DEPTH (FT)	STD. PEN./ RQD	REC. (%)	DESCRIPTION	SAMPLE NO.	PHYSICAL CHARACTERISTICS								ODOT CLASS
962.2	0													
959.7		6/5/5	28	6' - ASPHALT 0.5 36' - SAND AND GRAVEL BASE	SS-1									VISUAL
957.2	5	4/8/8	100	GRAY TO DARK BROWN AND GRAY CLAYEY SILT, LITTLE SAND, TRACE GRAVEL 3.5	SS-2	3	4	13	43	37	36	19	19	A-6b
954.7		5/6/9	100		SS-3								19	VISUAL
952.2	10	7/7/9	100		SS-4								23	VISUAL

BOTTOM OF BORING = 10.0'



MOT-75-0306

STRUCTURE FOUNDATION INVESTIGATION  
MOT-75-0306 LYONS ROAD OVER I-75 MAINLINE

DATE	DRAWN
6/6/00	KAL
DATE	CHECKED
6/6/00	GPH

RESOURCE INTERNATIONAL, INC.  
281 ENTERPRISE DRIVE  
WESTERVILLE, OHIO 43081 (614) 885-1959