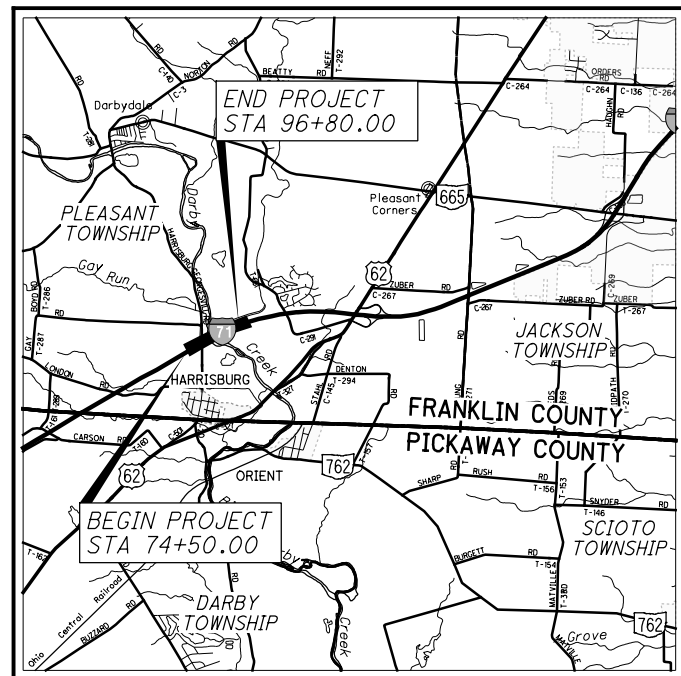


STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

**FRA-71-1.53**

**PLEASANT TOWNSHIP  
FRANKLIN COUNTY**



LOCATION MAP

LATITUDE: 39°49'16" LONGITUDE: 83°10'11"



PORTION TO BE IMPROVED	-----
INTERSTATE HIGHWAY	=====
FEDERAL ROUTES	===== =====
STATE ROUTES	----- -----
COUNTY & TOWNSHIP ROADS	----- -----
OTHER ROADS	-----

**DESIGN DESIGNATION AND  
DESIGN EXCEPTIONS**

SEE SHEET 2

INDEX OF SHEETS:

TITLE SHEET	1
SCHEMATIC PLAN	2-3
TYPICAL SECTIONS	4-5
GENERAL NOTES	6-11
MAINTENANCE OF TRAFFIC	12-22,22A,23-30,30A-30N,31-65,65A-65M,66-107
GENERAL SUMMARY	108-112
SUBSUMMARIES	113-116
STORM WATER SITE PLAN	117-118, 119A-119C, 120-124, 125A-125D
PLAN AND PROFILE	126-146
CROSS SECTIONS	147-171
SUPERELEVATION TABLES	172-173
DRAINAGE DETAILS	174,175,176A,176B,177,178,179A-179D,180-185,186A-186C
MISCELLANEOUS DETAILS	187-188
TRAFFIC CONTROL	189-201
LANDSCAPING	202
STRUCTURE (OVER 20 FOOT SPAN)	203-280
RIGHT OF WAY PLAN	281-285
SOIL PROFILES	

PROJECT DESCRIPTION

THIS PROJECT WILL CONSIST OF ADDING A THIRD LANE TO THE MEDIAN SIDE IN BOTH DIRECTIONS OF I-71 FOR APPROXIMATELY 0.48 MILE, REPLACING TWIN SUPER-STRUCTURES OVER THE BIG DARBY CREEK AND ASSOCIATED ROADWAY, SIGNING AND DRAINAGE IMPROVEMENTS.

PROJECT EARTH DISTURBED AREA: 11.8 ACRES  
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 3.5 ACRES  
NOTICE OF INTENT EARTH DISTURBED AREA: 15.3 ACRES

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.

2016 SPECIFICATIONS

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

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

**UNDERGROUND UTILITIES**  
CONTACT BOTH SERVICES TWO WORKING DAYS BEFORE YOU DIG.

Call Before You Dig  
**1-800-362-2764**

(Non-members must be called directly)

OIL & GAS PRODUCERS  
UNDERGROUND PROTECTION SERVICE  
**1-800-925-0988**

PLAN PREPARED BY:

**Mead & Hunt**  
4700 LAKEHURST CT, STE 110  
COLUMBUS, OH 43016  
(614) 792-5900 PHONE

ENGINEERS SEAL:

STRUCTURES



SIGNED: *Balasubramanyam KV*  
DATE: August 22, 2018

ENGINEERS SEAL:

ROADWAY



SIGNED: *Daniel C. Barnhart*  
DATE: August 22, 2018

STANDARD CONSTRUCTION DRAWINGS								SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS	
BP-1.1	7/28/00	DM-1.2	1/18/13	MGS-6.1	1/19/18	MT-101.70	7/20/18	800-2016	10/19/18	WATERWAY PERMIT	
BP-2.1	7/17/15	DM-4.1	7/20/18	MGS-6.2	1/19/18	MT-101.75	7/15/16	806	3/2/15	CONDITIONS	
BP-2.2	7/18/08	DM-4.2	7/20/12			MT-101.90	7/21/17	808	7/20/18		
BP-2.3	7/18/14	DM-4.3	1/15/16	RM-1.1	7/18/14	MT-102.10	1/20/17	821	4/20/12		
BP-3.1	7/18/14	DM-4.4	1/15/16	RM-4.2	7/20/18	MT-102.20	7/18/14	832	1/17/14		
BP-5.1	7/20/18					MT-104.10	10/16/15	861	1/16/15		
BP-9.1	7/21/17	F-2.1	7/20/18	AS-1-15	7/17/15	MT-105.10	7/19/13	875	1/17/14		
		F-3.1	7/19/13	AS-2-15	1/19/18			878	4/21/17		
CB-2.1	7/20/18	F-3.3	7/19/13	GSD-1-96	7/19/02	TC-41.20	10/18/13	908	10/20/17		
CB-2.2	7/20/18	F-3.4	7/19/13	PCB-91	1/18/13	TC-41.30	10/18/13	921	4/20/12		
CB-3.3	1/15/16			SBR-1-13	7/20/18	TC-42.20	10/18/13				
		MGS-1.1	1/19/18	SICD-1-96	7/18/14	TC-52.10	10/18/13				
HW-2.1	7/20/18	MGS-2.1	1/19/18			TC-52.20	7/20/18				
HW-2.2	7/20/18	MGS-3.1	1/19/18	MT-95.30	7/21/17	TC-61.10	1/17/14				
		MGS-3.2	1/18/13	MT-95.40	1/20/17	TC-64.10	1/20/17				
MH-1.2	1/15/16	MGS-4.2	7/19/13	MT-95.50	7/21/17	TC-65.10	1/17/14				
		MGS-4.3	1/18/13	MT-99.20	7/20/18	TC-65.11	7/21/17				
DM-1.1	7/21/17	MGS-5.2	7/15/16	MT-99.30	1/19/18						

APPROVED \_\_\_\_\_  
DATE \_\_\_\_\_ DISTRICT DEPUTY DIRECTOR

APPROVED \_\_\_\_\_  
DATE \_\_\_\_\_ DIRECTOR, DEPARTMENT OF TRANSPORTATION

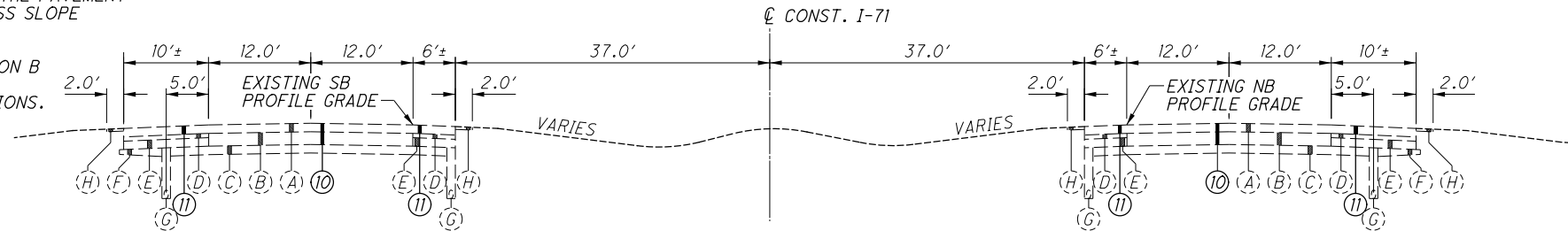
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FEDERAL PROJECT NO. **E120 (525)**  
PID NO. **93496**  
CONSTRUCTION PROJECT NO. \_\_\_\_\_  
RAILROAD INVOLVEMENT **NONE**  
**FRA-71-1.53**  
1/285

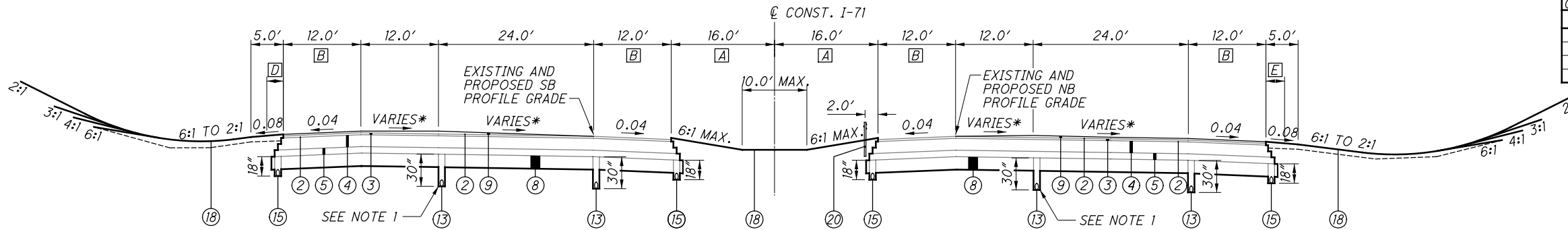
NOTES:  
 1. THE SUPERELEVATED SECTION EDGE OF PAVEMENT UNDERDRAINS SHIFT LATERAL LOCATIONS WHEN THE TRANSITIONING LANE EXCEEDS 0.000, NOT AT WHERE THE PAVEMENT FIRST BEGINS THE CROSS SLOPE TRANSITION.

2. SEE SHEET 5 FOR OPTION B CONCRETE PAVEMENT BUILDUP TYPICAL SECTIONS.

3. APPLY ITEM 875 - LONGITUDINAL JOINT ADHESIVE (1 LB/4 FT) WHERE ITEM 442 SURFACE COURSE IS UTILIZED.



EXISTING NORMAL SECTION - I-71

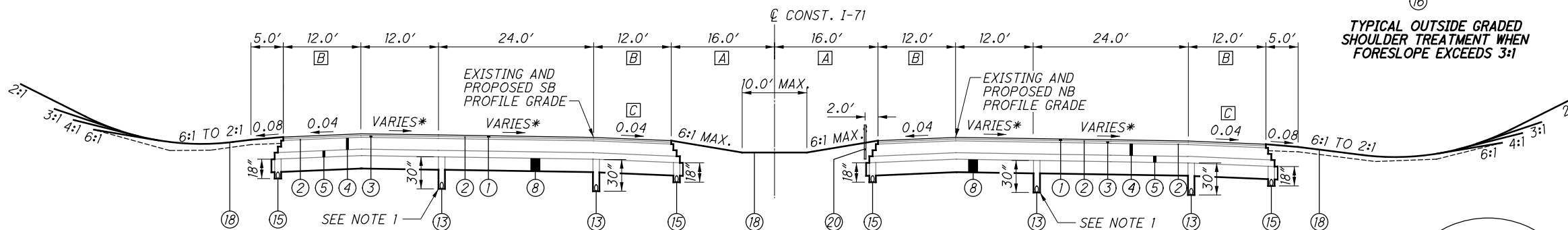


LANE TRANSITION OVERLAY SECTION - I-71 - OPTION A - ASPHALT

SOUTHBOUND  
 STA 74+50.00 TO STA 77+50.00

NORTHBOUND  
 STA 74+50.00 TO STA 77+50.00

\* SEE SHEET 172 FOR SUPERELEVATION DETAILS. ONLY APPLY UP TO INTERMEDIATE COURSE PER SUPERELEVATION DETAILS. SEE VARIABLE COURSE DETAILS ON SHEET

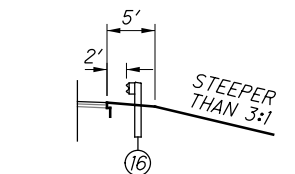


SUPERELEVATED SECTION - I-71 - OPTION A - ASPHALT

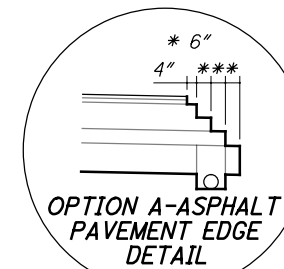
SOUTHBOUND  
 STA 77+50.00 TO STA 81+35.05 (\*0.017 - 0.020)  
 STA 85+06.43 TO STA 94+00.00 (\*0.020 - 0.020)

NORTHBOUND  
 STA 77+50.00 TO STA 81+34.43 (\*0.017 - 0.020)  
 STA 85+07.06 TO STA 94+00.00 (\*0.020 - 0.020)

\* SEE SHEETS 172-173 FOR SUPERELEVATION DETAILS



TYPICAL OUTSIDE GRADED SHOULDER TREATMENT WHEN FORESLOPE EXCEEDS 3:1



OPTION A-ASPHALT PAVEMENT EDGE DETAIL

SB OUTSIDE SHOULDER	NB OUTSIDE SHOULDER
12' AT STA 80+50.00 TO	12' AT STA 80+79.00 TO
14' AT STA 81+35.00	14' AT STA 80+89.00
14' AT STA 85+40.00 TO	14' AT STA 85+10.00 TO
12' AT STA 85+50.00	12' AT STA 86+00.00
SB MEDIAN SHOULDER	NB MEDIAN SHOULDER
12' AT STA 77+15.03 TO **	12' AT STA 80+79.00 TO
13' AT STA 79+00.00	14' AT STA 80+89.00
13' AT STA 80+91.89 TO **	14' AT STA 85+10.00 TO
14' AT STA 81+34.00	12' AT STA 86+00.00
14' AT STA 85+60.00 TO	
12' AT STA 85+70.00	
12' AT STA 87+00.00 TO **	
13.5' AT STA 88+58.52	

\*\* REQUIRED FOR MAINTENANCE OF TRAFFIC

SB MEDIAN SHOULDER	SB OUTSIDE SHOULDER
0.040 AT STA 80+55.00 TO	
0.020 AT STA 81+30.00	
0.020 AT STA 85+10.00 TO	
0.040 AT STA 85+85.00	
NB MEDIAN SHOULDER	NB OUTSIDE SHOULDER
	0.040 AT STA 80+55.00 TO
	0.020 AT STA 81+30.00
	0.020 AT STA 85+10.00 TO
	0.040 AT STA 85+85.00

**A** SOUTHBOUND  
 VARIES FROM 13.41' AT STA 74+50.00 TO 7.75' AT STA 79+00.00.  
 VARIES FROM 7.75' AT STA 80+91.89 TO 6.75' AT STA 81+34.00.  
 VARIES FROM 6.75' AT STA 85+60.00 TO 8.75' AT STA 85+70.00.  
 VARIES FROM 8.75' FROM STA 87+00.00 TO 8.90' AT STA 88+58.00.  
 VARIES FROM 10.82' FROM STA 88+99.62 TO 16' AT STA 94+00.00.

NORTHBOUND  
 VARIES FROM 13.41' AT STA 74+50.00 TO 8.75' AT STA 79+00.00.  
 VARIES FROM 8.75' AT STA 80+79.00 TO 6.75' AT STA 80+89.00.  
 VARIES FROM 6.75' AT STA 85+10.00 TO 8.75' AT STA 86+00.00.  
 VARIES FROM 8.75' FROM STA 87+00.00 TO 16' AT STA 94+00.00.

**B** PLEASE SEE TABLE 1 ABOVE.

**C** TRANSITION BETWEEN 0.04 ON SUPERELEVATED SECTION TO 0.020 AT APPROACH SLABS. SEE TABLE 2 ABOVE.

**D** VARIES FROM 2.56' AT STA 74+50.00 TO 7.75' AT STA 77+50.00.

**E** VARIES FROM 2.91' AT STA 74+50.00 TO 8.75' AT STA 77+50.00.

LEGEND

- (A) EXISTING ASPHALT OVERLAY (6" AVERAGE DEPTH)
- (B) EXISTING REINFORCED PCC (9" AVERAGE DEPTH)
- (C) EXISTING AGGREGATE BASE (6" AVERAGE DEPTH)
- (D) EXISTING BITUMINOUS AGGREGATE (13" AVERAGE DEPTH)
- (E) EXISTING STABILIZED AGGREGATE SHOULDER (VARIABLE DEPTH)
- (F) EXISTING AGGREGATE BASE (VARIABLE DEPTH)
- (G) EXISTING 6" PIPE UNDERDRAIN
- (H) EXISTING COMPACTED AGGREGATE (2" AVERAGE DEPTH)
- (I) EXISTING CONCRETE BARRIER, TYPE A
- (J) EXISTING REINFORCED PORTLAND CONCRETE CEMENT (9" AVERAGE DEPTH)

- (1) ITEM 806 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A, AS PER PLAN
- (2) ITEM 407 - NON-TRACKING TACK COAT
- (3) ITEM 442 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A, (446)
- (4) ITEM 302 - ASPHALT CONCRETE BASE, 11" (2 LIFTS)
- (5) ITEM 304 - 6" AGGREGATE BASE
- (6) ITEM 526 - APPROACH SLAB (T=17")
- (7) ITEM 452 - 1 3/2" NON-REINFORCED CONCRETE PAVEMENT CLASS QC 1 WITH QC/QA
- (8) ITEM 206 - CEMENT STABILIZED SUBGRADE, 12" DEEP
- (9) ITEM 806 - VARIABLE DEPTH ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A, AS PER PLAN, SEE DETAILS SHEET 188

- (10) ITEM 202 - PAVEMENT REMOVED, AS PER PLAN
- (11) ITEM 202 - PAVEMENT REMOVED
- (12) ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE
- (13) ITEM 605 - 6" SHALLOW PIPE UNDERDRAINS
- (14) ITEM 605 - 6" UNCLASSIFIED PIPE UNDERDRAINS
- (15) ITEM 605 - 6" BASE PIPE UNDERDRAINS
- (16) ITEM 606 - GUARDRAIL, TYPE MGS
- (17) ITEM 622 - SINGLE SLOPE CONCRETE BRIDGE RAILING
- (18) ITEM 659 - SEEDING AND MULCHING
- (19) LONGITUDINAL JOINT
- (20) ITEM 606 - CABLE BARRIER (ONLY ON NORTHBOUND SIDE)

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TYPICAL SECTIONS

FRA-71-1.53

**ROUNDING**

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

**UTILITIES**

THERE ARE NO KNOWN UNDERGROUND UTILITIES ON THIS PROJECT.

**ABBREVIATIONS**

THE FOLLOWING IS A LIST OF ABBREVIATIONS USED THROUGHOUT THE PLAN SET:

AA	ANCHOR ASSEMBLY
ABD	ABANDON
ADJ	ADJUST
ADT	AVERAGE DAILY TRAFFIC
AGG	AGGREGATE
AH	AHEAD
ATT	ATTENUATOR
AVE	AVENUE
BK	BACK
B	BASE LINE
BLDG	BUILDING
BLVD	BOULEVARD
BM	BENCHMARK
BOT	BOTTOM
BR	BRIDGE
BTA	BRIDGE TERMINAL ASSEMBLY
C	LONG CHORD
CATV	CABLE TELEVISION
CB	CATCH BASIN
C.B.	CHORD BEARING
CIP	CAST IN PLACE
CL	CENTER LINE
CMP	CORRUGATED METAL PIPE
CONC	CONCRETE
CONST.	CONSTRUCTION
CR	COUNTY ROAD
CS	CURVE TO SPIRAL
CU	CUBIC
Dc	DEGREE OF CURVE
DND	DO NOT DISTURB
DR	DRIVE
E	ELECTRIC OR EXTERNAL DISTANCE
e	SUPERELEVATION RATE
e <sub>max</sub>	MAXIMUM SUPERELEVATION RATE
EB	EASTBOUND
ELEV	ELEVATION
ELEC	ELECTRIC
EMB	EMBANKMENT
EP	EDGE OF PAVEMENT
ES	EDGE OF SHOULDER
ESMT	EASEMENT
EST	ESTABLISH OR ESTABLISHED
EX	EXISTING
EXC	EXCAVATION
EXP	EXPANSION
F	FLOW LINE
FDN	FOUNDATION
FH	FIRE HYDRANT
FO	FIBER OPTIC
f <sub>s</sub>	DEGREE OF SPIRAL
G	GAS
GR	GUARDRAIL
HC	HORIZONTAL CLEARANCE
HW	HEADWALL
HWY	HIGHWAY
I	INTERSTATE
INC	INCORPORATED OR INCLUDING
INV	INVERT
JT	JOINT
K	DISTANCE FROM THE TS TO THE PERPENDICULAR PROJECTION OF THE CENTER OF CURVE
K	DESIGN HOUR FACTOR
L	LENGTH OR LENGTH OF CURVE
LA	LIMITED ACCESS
LEO	LAW ENFORCEMENT OFFICER
LN	LANE
Ls	LENGTH OF SPIRAL
LT	LEFT OR LONG TANGENT
MAX	MAXIMUM
MB	MAIL BOX
MED	MEDIAN
MGS	MIDWEST GUARDRAIL SYSTEM
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MOT	MAINTENANCE OF TRAFFIC
MPH	MILES PER HOUR
MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES

**ABBREVIATIONS (continued)**

N	NORTH
NA OR N/A	NOT AVAILABLE OR NOT APPLICABLE
NAVD	NORTH AMERICAN VERTICAL DATUM
NB	NORTHBOUND
NC	NORMAL CROWN
NDC	NORMAL DESIGN CRITERIA
NE	NORTHEAST
NGS	NATIONAL GEODETIC SURVEY
NGVD	NATIONAL GEODETIC VERTICAL DATUM OF 1929
NHS	NATIONAL HIGHWAY SYSTEM
NHW	NORMAL HIGH WATER
NO.	NUMBER
NTS	NOT TO SCALE
NW	NORTHWEST
OC	ON CENTER
OD	OUTSIDE DIAMETER
OE	OVERHEAD ELECTRIC
OHWM	ORDINARY HIGH WATER MARK
P	PROPERTY LINE
P	OFFSET OF CURVE TO TANGENT
PC	POINT OF CURVATURE
PCB	PORTABLE CONCRETE BARRIER
PCC	POINT OF COMPOUND CURVE
PCMS	PORTABLE CONCRETE MESSAGE SIGN
PED	PEDESTAL OR PEDESTRIAN
PGL	PROFILE GRADE LINE
PH	PHASE
PI	POINT OF INTERSECTION
PKWY	PARKWAY
POT	POINT ON TANGENT
PP	POWER POLE
PRC	POINT OF REVERSE CURVATURE
PROP	PROPOSED
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
Q	PEAK DISCHARGE OR FLOW VOLUME
R	RADIUS
RC	REVERSE CROWN
RCP	REINFORCED CONCRETE PIPE OR ROCK CHANNEL PROTECTION
RD	ROAD
REL	RELOCATE
REM	REMOVE
REP	REPLACE
RPM	RAISED PAVEMENT MARKER
RR	RAILROAD
RT	RIGHT
R/W	RIGHT OF WAY
S	SOUTH
SAN	SANITARY
SB	SOUTHBOUND
SC	SPIRAL TO CURVE
SE	SOUTHEAST
SECT	SECTION
SHLD	SHOULDER
SQ	SQUARE
SR	STATE ROUTE
ST	STREET OR SPIRAL TO TANGENT
STA	STATION
SW	SOUTHWEST OR SIDEWALK
T	TANGENT LENGTH OR TELEPHONE
TC	TANGENT TO CURVE OR TRAFFIC CONTROL
T <sub>p</sub>	PERCENT TRUCKS
TELE	TELECOMMUNICATIONS
TEMP	TEMPORARY
TR	TOWNSHIP ROAD OR TRAIL
TS	TANGENT TO SPIRAL
TWP	TOWNSHIP
TYP	TYPICAL
UD	UNDERDRAIN
UG	UNDERGROUND
VAR	VARIES
VC	VERTICAL CURVE
W	WEST
WB	WESTBOUND
XS	CROSS SECTION
YD	YARD

**EXISTING PLANS**

EXISTING PLANS ENTITLED PIC-1-3.06/FRA-1-0.00, FRA-61-2.12, FRA-71-4.31 AND FRA-71-5.29 MAY BE INSPECTED IN THE ODOT DISTRICT 6 OFFICE IN DELAWARE, OHIO.

**SURVEYING PARAMETERS**

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET 3 OF THE PLANS FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

USE THE FOLLOWING PROJECT CONTROL, VERTICAL POSITIONING, AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

PROJECT CONTROL

POSITIONING METHOD: ODOT VRS  
MONUMENT TYPE: TYPE A

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD88  
GEOID: GEOID09

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD83(CORS96)  
ELLIPSOID: GRS80  
MAP PROJECTION: LAMBERT CONFORMAL CONIC  
COORDINATE SYSTEM: OHIO STATE PLANE - SOUTH ZONE  
COMBINED SCALE FACTOR: 1.00000000 (GRID)  
ORIGIN OF COORDINATE SYSTEM: 0,0

USE THE POSITIONING METHODS AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH CMS 623.

UNITS ARE IN U.S. SURVEY FEET. USE THE FOLLOWING CONVERSION FACTOR: 1 METER = 3.280833333 U.S. SURVEY FEET.

**INTERIM COMPLETION DATES**

THE DEPARTMENT HAS ESTABLISHED TWO INTERIM COMPLETION DATES FOR THIS PROJECT.

1. THE CONTRACTOR SHALL COMPLETE PHASE 1 WORK AND BE IN THE WINTERIZATION PHASE BY NOVEMBER 1, 2019.
2. THE CONTRACTOR SHALL COMPLETE ALL PHASE 4 WORK BY NOVEMBER 1, 2020.

FAILURE TO MEET THESE INTERIM COMPLETION DATES WILL RESULT IN THE ASSESSMENT OF A DISINCENTIVE OF \$2,500.00 PER DAY UNTIL THE REQUIRED WORK IS COMPLETED.

CALCULATED  
DCB  
CHECKED  
JMB

GENERAL NOTES

FRA - 71 - 1.53

**WORK LIMITS**

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

**PROTECTION OF RIGHT-OF-WAY LANDSCAPING**

PRIOR TO BEGINNING WORK, THE CONTRACTOR, THE PROJECT ENGINEER, AND A REPRESENTATIVE OF THE MAINTAINING AGENCY WILL 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.

CONSTRUCT ALL ACTIVITIES, EQUIPMENT STORAGE, AND STAGING TO WITHIN THE CONSTRUCTION LIMITS. UNLESS OTHERWISE IDENTIFIED IN THE PLANS OR PROPOSAL, THE CONSTRUCTION LIMITS ARE IDENTIFIED AS 30 FEET FROM THE EDGE OF PAVEMENT.

SUBMIT A WRITTEN REQUEST TO THE PROJECT ENGINEER TO USE ANY AREA OUTSIDE THESE LIMITS. THE DOCUMENT SUBMITTED MUST CLEARLY IDENTIFY THE AREA AND EXPLAIN THE PROPOSED USE AND RESTORATION OF THE AREA. THE REQUEST MUST BE APPROVED, IN WRITING, BEFORE THE CONTRACTOR HAS PERMISSION TO USE THE AREA.

ANY ITEMS DAMAGED BEYOND THE CONSTRUCTION LIMITS AS DEFINED ABOVE WILL BE REPLACED IN KIND OR AS APPROVED BY THE PROJECT ENGINEER.

**CLEARING AND GRUBBING**

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

**ADDITIONAL SOIL INFORMATION**

THE SOIL PROFILE AND/OR STRUCTURE FOUNDATION INVESTIGATIONS SHEETS CONTAIN ALL AVAILABLE SOIL AND BEDROCK INFORMATION WHICH CAN BE CONVENIENTLY SHOWN. ADDITIONAL SUBSURFACE INVESTIGATION INFORMATION IS AVAILABLE FROM THE DISTRICT 6 OFFICE IN DELAWARE, OHIO.

**MONUMENT ASSEMBLIES**

CONSTRUCT MONUMENT ASSEMBLIES IN ACCORDANCE WITH THE DETAILS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS AND AT THE LOCATIONS SHOWN ON SHEET NO. 286.

**FENCE LENGTHS**

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

**ITEM 204 - SUBGRADE COMPACTION AND PROOF ROLLING**

ALL PROVISION OF ITEM 204 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING THE NOTES. IF THE ENGINEER DETERMINES A LOCALIZED AREA IS UNTREATABLE FOR CHEMICAL STABILIZATION AND CHEMICAL STABILIZATION IS NON-PERFORMED WITHIN THIS AREA, THEN THE AREA SHALL BE PROOF ROLLED ACCORDING TO ITEM 204 PROOF ROLLING AND UNSTABLE SUBGRADE SHALL BE REMOVED TO A MINIMUM DEPTH DETERMINED BY THE ENGINEER AND REPLACED WITH MATERIAL CONFORMING TO ITEM 204 GRANULAR EMBANKMENT OR REPLACED WITH ITEM 304 AT THE ENGINEER'S DISCRETION. THE ENGINEER SHALL EVALUATE THE SUBGRADE CONDITIONS AND CONSULT WITH THE DISTRICT GEOTECHNICAL ENGINEER AS NEEDED ON THE USE OF GEOGRID WITHIN UNDERCUT AREAS. IF GEOGRID IS RECOMMENDED FOR SUBGRADE STABILIZATION WITHIN UNDERCUT AND REPLACE SITUATIONS, THEN ALL SPECIFICATIONS OF SUPPLEMENTAL SPECIFICATION 861 SHALL APPLY. EXCAVATE UNSTABLE SUBGRADES TO 18 INCHES BEYOND THE EDGE OF THE SURFACE OF THE PAVEMENT, PAVED SHOULDERS, OR PAVED MEDIANS, INCLUDING UNDER NEW CURBS AND GUTTERS. COMPACT SUBGRADE MATERIALS ACCORDING TO ITEM 204 SUBGRADE COMPACTION. AFTER COMPACTION THE AREA SHALL BE PROOF ROLLED ONCE MORE TO DEMONSTRATE STABILITY OF THE NEWLY CONSTRUCTED SUBGRADE. PAYMENT FOR EXCAVATION SHALL FALL UNDER ITEM 204 EXCAVATION OF SUBGRADE.

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

ITEM 204 - SUBGRADE COMPACTION	1245 SY
ITEM 204 - PROOF ROLLING	1 HR
ITEM 204 - EXCAVATION OF SUBGRADE	415 CY
ITEM 204 - GRANULAR MATERIAL, TYPE B	415 CY
ITEM 204 - GEOTEXTILE FABRIC	1245 SY

THE QUANTITIES FOR EXCAVATING THE UNSUITABLE SUBGRADE AND UNSTABLE SUBGRADE ARE BOTH PAID UNDER ITEM 204 EXCAVATION OF SUBGRADE.

**SEEDING AND MULCHING**

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

659, SOIL ANALYSIS TEST	2 EACH
659, TOPSOIL	2111 CY
659, REPAIR SEEDING AND MULCHING	951 SY
659, INTER-SEEDING	951 SY
659, COMMERCIAL FERTILIZER	2.65 TON
659, LIME	3.93 ACRES
659, WATER	106 M. GAL.
659, MOWING	43 M. SQ. FT.

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 SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

**CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL**

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A W-BEAM, BEAM SPLICE AS SHOWN IN AASHTO M 180-12, EXCEPT THE BEAM WASHERS ARE NOT TO BE USED. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

**ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE B**

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS FOR TYPE MGS GUARDRAIL AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

REFER TO THE MANUFACTURER'S INSTRUCTIONS REGARDING THE INSTALLATION OF, AND THE GRADING AROUND, THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 31 INCHES FROM THE EDGE OF THE SHOULDER.

ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4 INCHES ABOVE THE GROUND LINE.

THE FACE OF THE TYPE B IMPACT HEAD SHALL BE COVERED WITH TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, MGS TYPE B, 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.

**ITEM 606 - IMPACT ATTENUATOR, TYPE 1 (BIDIRECTIONAL, 75 MPH, 36", CONCRETE FOUNDATION)**

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY ONE OF THE TYPE 1 IMPACT ATTENUATORS AS LISTED ON THE OFFICE OF ROADWAY ENGINEERING'S WEB PAGE. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE FACE OF THE TYPE 1 IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19. PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, IMPACT ATTENUATOR, TYPE 1 (75 MPH, 36", BIDIRECTIONAL), EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED TRANSITIONS, HARDWARE, REFLECTIVE SHEETING AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

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GENERAL NOTES

FRA - 71 - 1.53

**GENERAL, MAINTENANCE OF TRAFFIC DURING CONSTRUCTION**

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE DISTRICT 6 PUBLIC INFORMATION OFFICER VIA EMAIL (D06.PIO@DOT.OHIO.GOV) 21 DAYS IN ADVANCE OF THE START OF CONSTRUCTION ACTIVITIES TO PROPERLY COORDINATE EFFORTS TO NOTIFY THE TRAVELING PUBLIC, INCLUDING RESIDENTS, BUSINESSES, LOCAL EMERGENCY SERVICES, LAW ENFORCEMENT, AND SCHOOLS. THE DISTRICT 6 PIO SHALL PROVIDE NOTIFICATION NO LATER THAN 15 DAYS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. IF, SUBSEQUENT TO THE ADVANCE NOTIFICATION, THE START DATE IS CHANGED, THEN A NEW SEVEN (7) DAY NOTIFICATION SHALL BE REQUIRED. THE ROAD CANNOT BE CLOSED UNLESS PRIOR NOTIFICATION HAS BEEN ACCOMPLISHED. THE SAME PARTIES SHALL BE NOTIFIED WHEN THE CLOSURE HAS CONCLUDED AND THE ROAD IS BACK OPEN TO TRAFFIC. ALL NOTIFICATIONS SHALL BE MADE UTILIZING THE TEMPLATE PROVIDED BY THE DISTRICT 6 PUBLIC INFORMATION OFFICE.

**ECOLOGICAL, AGENCY COORDINATION**

1. THIS PROJECT IS LOCATED WITHIN THE KNOWN HABITAT RANGES OF THE FEDERALLY LISTED AND PROTECTED INDIANA BAT AND NORTHERN LONG-EARED BAT. NO TREES SHALL BE REMOVED UNDER THIS PROJECT FROM APRIL 1 THROUGH SEPTEMBER 30. ALL NECESSARY TREE REMOVAL SHALL OCCUR FROM OCTOBER 1 THROUGH MARCH 31. THIS REQUIREMENT IS NECESSARY TO AVOID AND MINIMIZE IMPACTS TO THESE SPECIES AS REQUIRED BY THE ENDANGERED SPECIES ACT. FOR THE PURPOSE OF THIS NOTE, A TREE IS DEFINED AS A LIVE, DYING, OR DEAD WOODY PLANT WITH A TRUNK THREE INCHES OR GREATER IN DIAMETER AT A HEIGHT OF 4.5 FEET ABOVE THE GROUND SURFACE, AND WITH A MINIMUM HEIGHT OF 13 FEET.

2. THE CONTRACTOR SHALL IMMEDIATELY REMOVE ALL COMPONENTS OF THE EXISTING BRIDGE (PIERS, ABUTMENTS, ETC.) FROM THE STREAM AND PLACE THEM IN AN UPLAND LOCATION. THE CONTRACTOR SHALL REMOVE THE ASPHALT DECK MATERIAL PRIOR TO ANY DEMOLITION ACTIVITIES. PIERS SHALL BE REMOVED DOWN TO AN ELEVATION OF 1 FOOT BELOW THE STREAM BOTTOM. THE CONTRACTOR SHALL AVOID RELEASING DECK MATERIAL INTO THE STREAM. IF ANY MATERIAL FALLS INTO THE RIVER, THE CONTRACTOR SHALL REMOVE IT IMMEDIATELY. IF ANY MATERIAL FALLS INTO THE RIVER OUTSIDE OF THE IN-STREAM WORK DATES, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ODOT CONSTRUCTION PROJECT MANAGER AND THE DISTRICT 6 DISTRICT ENVIRONMENTAL COORDINATOR (MARCI LININGER) AND AWAIT FURTHER INSTRUCTIONS FOR REMOVAL.

3. THE CONTRACTOR MUST ABIDE BY ALL STATE AND FEDERAL REQUIREMENTS FOR THE STORAGE OF FUELS, PETROCHEMICALS, EQUIPMENT AS WELL AS THESE ADDITIONAL REQUIREMENTS: IDLE EQUIPMENT (INACTIVE FOR MORE THAN 6 HOURS), PETROCHEMICALS, TOXIC/HAZARDOUS MATERIALS SHALL NOT BE STORED OR DISCHARGED IN THE 100-YEAR FLOODPLAIN, OR NEAR ANY DRAINAGE WAYS, DITCHES, OR STREAMS THAT COULD CONVEY SUCH MATERIALS INTO THE BIG DARBY CREEK (NATIONAL/STATE SCENIC RIVER) OR ANY OF ITS TRIBUTARIES. REFUELING OF EQUIPMENT SHOULD NOT OCCUR IN THE FLOODPLAIN OR NEAR ANY DRAINAGE WAYS, DITCHES, OR STREAMS.

4. MATERIAL DISPOSITION RELATED TO BIG DARBY CREEK (NATIONAL/STATE SCENIC RIVER): APRONS, SHROUDS, AND/OR OTHER CONTAINMENT DEVICES MUST BE IN PLACE DURING BRIDGE DEMOLITION, BRIDGE CONSTRUCTION, AND SURFACING ACTIVITIES TO CAPTURE FALLING DEBRIS, PAINTS, WELDING, SLAG, SEALANT OVERSPRAY, OR OTHER DEBRIS. ANY AND ALL CONSTRUCTION AND DEMOLITION DEBRIS, EARTHEN DEBRIS, CONCRETE CHUNKS, ASPHALT, GRINDINGS, CONCRETE

**ECOLOGICAL, AGENCY COORDINATION (continued)**

MATERIALS, WOOD, REBAR, EXCESS ASPHALT OR CONCRETE, WOOD DEBRIS FROM CLEARING, EXCESS FILL MATERIAL, MATERIAL EXCAVATED FROM THE RIVER BOTTOM, MIXES, CEMENTS, FLUIDS, OTHER CONSTRUCTION WASTE, AND TRASH SHALL BE DISPOSED OF AT AN APPROVED UPLAND SITE OR LANDFILL ABOVE 100-YEAR FLOOD ELEVATIONS. ANY DEBRIS THAT ENTERS THE RIVER MUST BE IMMEDIATELY REMOVED. DISPOSAL OF ANY SUCH MATERIALS IN WETLANDS, FLOODPLAINS, OR WITHIN 1000 FEET OF STATE SCENIC RIVERS IS PROHIBITED. IF ANY MATERIAL FALLS INTO THE RIVER OUTSIDE OF THE IN-STREAM WORK DATES, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ODOT CONSTRUCTION PROJECT MANAGER AND THE DISTRICT 6 DISTRICT ENVIRONMENTAL COORDINATOR (MARCI LININGER) AND AWAIT FURTHER INSTRUCTIONS FOR REMOVAL.

5. THE CONTRACTOR SHALL ONLY PERFORM ALL IN-STREAM WORK DURING DRY PERIOD OF EXTREMELY LOW FLOW OF THE BIG DARBY CREEK BETWEEN JULY 1 AND NOVEMBER 30. THE WORK PAD AND ALL MATERIALS MUST BE REMOVED FROM THE BIG DARBY CREEK BY NOVEMBER 30 TO ALLOW FOR FREE FLOW DURING HIGH WATER SEASONS.

6. ANY DISTURBED AREAS IN THE STREAM BOTTOM SHALL BE RETURNED TO PRE-CONSTRUCTION CONTOURS NO LATER THAN NOVEMBER 30, 2020 OR CONSTRUCTION COMPLETION DATE, WHICHEVER IS EARLIER. STREAM BOTTOM ELEVATIONS SHALL BE DETERMINED BEFORE IN-STREAM WORK COMMENCES TO ENSURE THAT ALL FILL MATERIAL AND DEBRIS IS COMPLETELY REMOVED BEFORE CONSTRUCTION IS COMPLETE. THE CONTRACTOR WILL PROVIDE PRE AND POST-CONSTRUCTION SURVEY ELEVATIONS OF THE STREAM BOTTOM TO THE DEC TO VERIFY THIS COMMITMENT IS MET.

7. PIER CONSTRUCTION WILL UTILIZE DRILLED SHAFT CONSTRUCTION METHODS WITH HOLDING PITS. SEDIMENT LADEN WATER AND EXCESS CONCRETE WILL BE CONTAINED, STORED AND DISPOSED OF APPROPRIATELY, OFF SITE.

8. RECYCLED PORTLAND CEMENT CONCRETE (RPCC) IS NOT PERMITTED TO BE USED AS THE MATERIAL FOR ROCK CHANNEL PROTECTION (RCP) INSTALLATION FOR THE BIG DARBY CREEK BRIDGES.

9. DE-WATERING: NO WASTEWATER OF ANY KIND SHOULD BE DIRECTLY DISCHARGED INTO BIG DARBY CREEK (NATIONAL/STATE SCENIC RIVER) OR ANY OF ITS TRIBUTARY STREAMS, DRAINAGE WAYS OR DITCHES. IF DEWATERING IS NECESSARY TO FACILITATE IN-STREAM WORK OR PIER CONSTRUCTION, ALL WASTEWATER SHOULD BE PUMPED ONTO A VEGETATED AREA AT LEAST 100 FEET FROM THE RIVERBANK TO ALLOW FOR COMPLETE INFILTRATION. IF DISCHARGE TO A VEGETATED AREA IS NOT FEASIBLE, THEN WASTEWATER SHALL BE DISCHARGED INTO A SEDIMENT FILTER BAG OR INTO A TEMPORARY DETENTION/RETENTION POND WITH SUFFICIENT RETENTION TIME TO PERMIT FOR THE SETTLING OF ALL SUSPENDED SOLIDS PER THE BMP REQUIREMENTS.

10. CLEARING AND GRUBBING: ALL STREAMBANK VEGETATION SHALL BE LEFT UNDISTURBED TO THE MAXIMUM EXTENT POSSIBLE. CUTTING OR CLEARING OF ANY RIPARIAN VEGETATION WITHIN 1000 FEET OF THE BIG DARBY CREEK BEYOND THE EXISTING CONSTRUCTION LIMITS SHALL BE PROHIBITED, HOWEVER VERTICAL TRIMMING IS PERMITTED WHERE NECESSARY. NO GRUBBING SHALL OCCUR WITHIN THE 1,000 FT. SCENIC RIVER BUFFER IN ORDER TO MAINTAIN GROUND STABILIZATION AND LIMIT SEDIMENT EROSION.

11. PAINTING AND SAND/WATER BLASTING: WHEN PAINTING, SAND OR WATER BLASTING ANY PORTION OF THE BRIDGE IS NECESSARY THEN APPROPRIATE APRONS SHALL BE UTILIZED TO

**ECOLOGICAL, AGENCY COORDINATION (continued)**

PROVIDE FOR COMPLETE CONTAINMENT OF ALL PAINT DEBRIS PARTICLES AND OTHER DEBRIS. APPROPRIATE APRONS SHALL BE UTILIZED TO PROVIDE FOR COMPLETE CONTAINMENT OF ALL PAINT AND/OR SEALANT OVER-SPRAY. ANY SUCH DEBRIS SHALL BE REMOVED IMMEDIATELY FROM WITHIN 1000 FEET OF THE BIG DARBY CREEK AND DISPOSED OF AT AN APPROVED UPLAND SITE ABOVE THE 100-YEAR FLOOD ELEVATIONS. DISPOSAL IN WETLANDS, FLOODPLAINS, OR WITHIN 1000- FEET OF STATE SCENIC RIVERS IS PROHIBITED.

12. ODOT D-6 ENVIRONMENTAL COORDINATOR SHALL INVITE ODNR SCENIC RIVERS PROGRAM REGIONAL MANAGER TO THE PRE-BID AND PRE-CONSTRUCTION MEETINGS WITH THE CONTRACTOR PRESENT.

13. ODOT D-6 WITH OES WILL HIRE AN ENVIRONMENTAL COMMITMENT MONITOR TO CONDUCT PERIODIC INSPECTIONS OF THE PROJECT TO ENSURE ALL COMMITMENTS, INCLUDING THE SPECIAL SCENIC RIVER PROTECTION MEASURES ARE BEING MET.

14. SCENIC RIVER PROGRAM PROJECT CONDITIONS HAVE BEEN INCORPORATED INTO THE PROJECT PLANS AND WILL BE INCLUDED IN THE FINAL PROJECT PLAN SET AND WILL BE MADE AVAILABLE TO ALL CONSTRUCTION PERSONNEL THROUGHOUT THE DURATION OF THE PROJECT. THIS WILL ENSURE THAT THE CONTRACTORS UNDERSTAND SCENIC RIVER REQUIREMENTS. SPECIAL CONDITIONS WILL ALSO BE DISCUSSED AT PRE-CONSTRUCTION MEETING. THE SCENIC RIVER REQUIREMENTS WILL BE AN AGENDA ITEM AT THE D-6 PRE-CONSTRUCTION MEETING.

15. SCENIC RIVER SIGNAGE: SIGNS IDENTIFYING THE "BIG DARBY CREEK STATE AND NATIONAL SCENIC RIVER" SHALL BE INSTALLED AT ALL APPROACHES OF THE NEW BRIDGE STRUCTURES. AN ADDITIONAL SIGN STATING (BRIDGE NAME, ROAD NAME/NUMBER, AND RIVER MILE) WILL BE INSTALLED ON THE UPSTREAM SIDE OF THE NEW BRIDGE, IDENTIFYING THE STRUCTURE AND LOCATION TO BE VISIBLE TO RECREATIONAL RIVER USERS. SEE TRAFFIC CONTROL SHEET 196.

16. VISUAL COMPATIBILITY: TO MINIMIZE CONTRAST WITH THE SURROUNDING LANDSCAPE TO PROTECT AND ENHANCE THE SCENERY OF BIG DARBY CREEK, CONCRETE FORM LINERS WITH ROUGH CUT STONE FINISH SHALL BE USED ON THE BRIDGE PARAPETS. WEATHERING STEEL WILL BE UTILIZED FOR THE STEEL GIRDERS OF THE BRIDGE.

17. DISTURBANCES TO THE RIPARIAN ZONE MUST BE LIMITED TO THE ACCESS POINTS AND CONSTRUCTION LIMITS. PROVISIONS SHALL BE IN PLACE TO PROTECT REMAINING VEGETATION/TREES FROM DAMAGE BY CONSTRUCTION EQUIPMENT. THESE PROVISIONS MUST LIMIT THE REMOVAL OF RIPARIAN VEGETATION AND INCLUDE MEASURES TO AVOID DAMAGE TO REMAINING TREES (TRUNKS, BRANCHES, AND/OR ROOTS) LOCATED IN OR ADJACENT TO THE WORK AREA. THE OPERATION OF MACHINERY WITHIN THE DRIP LINE OF TREES SCHEDULED TO REMAIN MUST BE AVOIDED TO THE GREATEST EXTENT POSSIBLE. SEVERELY DAMAGED TREES (WHERE DAMAGE WOULD LEAD TO MORTALITY) MAY REMAIN ONSITE WHERE UNLIKELY TO POSE A SAFETY HAZARD TO SERVE AS NESTING CAVITIES, HOLD SOIL, AND PREVENT EROSION.

18. THE CONTRACTOR SHALL ABIDE BY THE NATIVE PLANTING PLAN INCLUDED IN THESE PLANS FOR THE RIPARIAN CORRIDOR OF BIG DARBY CREEK.

19. THE USE OF HERBICIDES IN THE RIPARIAN CORRIDOR OF BIG DARBY CREEK IS PROHIBITED. ALL FERTILIZERS SHALL BE APPLIED BY QUALIFIED PERSONNEL AND IN ACCORDANCE WITH APPLICATION GUIDELINES AND USED ONLY FOR PLANTINGS.

**ECOLOGICAL, AGENCY COORDINATION (continued)**

20. THIS PROJECT INCLUDES WORK IN AND NEAR A NATIONAL AND STATE SCENIC RIVER. THIS RESOURCE IS OF EXCEPTIONAL VALUE AND SENSITIVITY. THEREFORE ODOT DISTRICT 6 DEC AND ENVIRONMENTAL COMMITMENT MONITOR WILL ATTEND THE PRE-BID, PRE-CONSTRUCTION, AND POST-CONSTRUCTION MEETINGS WITH CONTRACTOR TO EMPHASIZE THE SENSITIVE NATURE OF BIG DARBY CREEK PROJECT AREA AND REINFORCE THE NECESSITY TO ADHERE TO ALL CMS STANDARDS AND THE ENVIRONMENTAL COMMITMENTS FOR THE PROJECT.

21. THE ODOT DISTRICT 6 ENVIRONMENTAL COORDINATOR WILL ENSURE THAT WEEKLY ENVIRONMENTAL COMPLIANCE INSPECTIONS ARE CONDUCTED BY THE ODOT ENVIRONMENTAL COMMITMENT MONITOR AND ODNR SCENIC RIVERS PROGRAM REGIONAL MANAGER. FURTHER THE DEC WILL INVITE THE ODNR CENTRAL ASSISTANT REGIONAL SCENIC RIVER MANAGER TO THE WEEKLY ON-SITE INSPECTIONS.

22. THE PROJECT DESIGNER SHALL ENSURE A PASSAGEWAY WILL BE INCLUDED IN THE PROJECT PLANS FOR DEER AND OTHER TERRESTRIAL WILDLIFE UNDER THE NEW BIG DARBY CREEK BRIDGE.

23. ODOT-OES ECOLOGICAL UNIT WILL PLACE CAMERAS WITHIN VIEWING RANGE OF THE WILDLIFE PASSAGEWAY FOLLOWING COMPLETION OF CONSTRUCTION TO MONITOR UNDER CROSSING FOR USAGE AND TO GAIN STRATEGIES FOR FUTURE APPLICATION WITHIN THE STATE.

24. ODOT DISTRICT 6 DEC AND ODOT-OES WILL HOLD A PRE-BID MEETING FOR CONTRACTORS TO BECOME ACUTELY AWARE OF THE EXTENSIVE ENVIRONMENTAL COMMITMENTS ON THIS PROJECT AND THEIR ABSOLUTE AND MANDATORY ADHERENCE TO THOSE COMMITMENTS DURING CONSTRUCTION.

25. DISTURBED/EXPOSED AREAS IN THE RIPARIAN CORRIDOR (SLOPE AND BANKS) OF BIG DARBY CREEK MUST BE PROPERLY STABILIZED (SEEDED, MULCHED, OR OTHERWISE) IMMEDIATELY AFTER GRADING TO PREVENT EROSION AND ESTABLISHMENT OF INVASIVE PLANT SPECIES.

26. THE CONTRACTOR SHALL NOT USE CONSTRUCTION DEBRIS AS ROCK CHANNEL PROTECTION OR ALLOW CONSTRUCTION DEBRIS TO REMAIN IN THE VICINITY OF THE RIVER. SPOIL PILES SHALL BE COVERED OR OTHERWISE MANAGED TO REDUCE SEDIMENTATION. ALL TEMPORARY STRUCTURES MUST BE COMPLETELY REMOVED FROM THE RIVERBED/BANKS FOLLOWING PROJECT COMPLETION. TEMPORARY ROCK USED FOR ACCESS ROADS AND DOCKS OR OTHER TEMPORARY RIVER ACCESS SHALL BE REMOVED IMMEDIATELY UPON COMPLETION OF THE PROJECT AND STORED/DISPOSED OF AT AN APPROPRIATE UPLAND SITE OUTSIDE OF THE 100-YEAR FLOODPLAIN AREA.

27. THE CONTRACTOR SHALL NOTIFY THE DISTRICT 6 ENVIRONMENTAL COORDINATOR [(740)-833-8065] AND ODNR SCENIC RIVERS PROGRAM REGIONAL MANAGER [(740) 258-0567] ONE (1) WEEK PRIOR TO THE COMMENCEMENT OF WORK TO NOTIFY THEM OF THE PROJECT START DATE. THE SCENIC RIVERS PROGRAM REGIONAL MANAGER WILL ALSO BE CONTACTED 1 WEEK PRIOR TO COMPLETION OF THE PROJECT TO CONDUCT A FINAL SITE INSPECTION WITH THE CONTRACTOR PRESENT.

28. NOT USED

29. IN-STREAM WORK SHALL NOT COMMENCE UNTIL THE MUSSEL SURVEY AND RELOCATION HAS BEEN COMPLETED AND USFWS AND ODNR HAVE APPROVED THE RESULTS. THE CONTRACTOR SHALL CONFIRM WITH DISTRICT 6 DEC THAT THE SURVEY WORK HAS BEEN COMPLETED AND APPROVED.

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**WATERSHED PROTECTION**

THE PROJECT IS LOCATED WITHIN THE OHIO DEPARTMENT OF REHABILITATION AND CORRECTIONS PICKAWAY CORRECTIONS FACILITY WATER SYSTEM AND TIMBERLAKE WATER SYSTEM SOURCE WATER PROTECTION AREAS. IT IS ESSENTIAL THAT ALL ACTIVITIES ASSOCIATED WITH THIS WORK BE PERFORMED IN A MANNER CONSISTENT WITH BEST WATERSHED MANAGEMENT PRACTICES INCLUDING, BUT NOT LIMITED TO: AREAS OF DISTURBED GROUND SHALL HAVE APPROPRIATE EROSION AND SEDIMENT CONTROLS. IF HAZARDOUS/TOXIC MATERIALS INCLUDING BUT NOT LIMITED TO FUELS, OILS, BITUMEN'S PAINTS, SEALANTS, OR OTHER CHEMICALS, ARE STORED ON SITE, THEY SHALL BE STORED IN A DOUBLE-CONTAINMENT MANNER. ALL EQUIPMENT REPAIRS, MAINTENANCE, AND MECHANICAL WORK THAT COULD RESULT IN THE RELEASE OF HAZARDOUS/TOXIC MATERIALS SHALL BE PERFORMED IN AN APPROPRIATELY CONTAINED AREA, PREFERABLY OFF SITE OR AN APPROPRIATE OFF-SITE FACILITY. IN THE EVENT THAT ANY HAZARDOUS/TOXIC MATERIALS INCLUDING, BUT NOT LIMITED TO FUELS, OILS, BITUMEN'S PAINTS, SEALANTS, OR OTHER CHEMICALS ARE SPILLED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY EMERGENCY SERVICES BY CALLING 911 AND THE OHIO EPA 24 HOUR SPILL REPORTING LINE AT 1 (800) 282-9378. THE CONTRACTOR SHOULD BE PREPARED TO PROVIDE DETAILED INFORMATION RELATIVE TO THE TYPE AND QUANTITY OF MATERIAL THAT HAS BEEN SPILLED AS WELL AS THE EXACT LOCATION AND THE EXACT TIME AT WHICH THE SPILL OCCURRED. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR INFORMING ALL SUBCONTRACTORS AND OTHER AGENTS OF THESE RESPONSIBILITIES, PRECAUTIONS, AND PROHIBITIONS.

**SECTION 4F, IDENTIFIED SECTION 4(F) PROPERTIES**

1. THE CONTRACTOR SHALL NOT STAGE AND/OR STORE CONSTRUCTION EQUIPMENT OUTSIDE PROPOSED CONSTRUCTION LIMITS OR WITHIN BATTELLE DARBY CREEK METRO PARK PROPERTY BOUNDARIES
2. THE CONTRACTOR SHALL CLOSELY COORDINATE THE CONSTRUCTION SCHEDULE WITH ODOT, THE ODNR SCENIC RIVERS PROGRAM REGIONAL MANAGER, AND ODNR DIVISION OF STATE PARKS AND WATERCRAFT.
3. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE APPROPRIATE WARNING SIGNS AND BUOYS IN BIG DARBY CREEK WITH THE ODNR DIVISION OF STATE PARKS AND WATERCRAFT FOR WATERCRAFT SAFETY.

**SECTION 4F, IDENTIFIED SECTION 4(F) PROPERTIES (continued)**

4. PROTECTION OF CANOE AND KAYAK TRAFFIC BY USE OF APRONS WILL BE MAINTAINED THROUGHOUT CONSTRUCTION ASSOCIATED WITH THE BRIDGES OVER BIG DARBY CREEK.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PLACEMENT OF APPROPRIATE SIGNAGE OF TAKE-OUT/PORTAGE LOCATIONS FOR RIVER USERS OF BIG DARBY CREEK UPSTREAM AND/OR DOWNSTREAM OF THE CONSTRUCTION LIMITS AT THE IR 71 BRIDGES OVER BIG DARBY CREEK 10 DAYS PRIOR TO THE CLOSURE OF THE STREAM CHANNEL. THE CLOSURE SHALL LAST NO MORE THAN A TOTAL OF THREE (3) DAYS AND WILL OCCUR DURING OFF-PEAK TIMES TO BEST ACCOMMODATE CANOE AND KAYAK TRAFFIC.
6. THE ODNR DIVISION OF STATE PARKS AND WATERCRAFT, ODNR SCENIC RIVERS PROGRAM REGIONAL MANAGER, AND DISTRICT 6 ENVIRONMENTAL COORDINATOR SHALL BE NOTIFIED AT A MINIMUM OF 15 DAYS IN ADVANCE OF THE START OF CONSTRUCTION ACTIVITIES RELATED TO THE BRIDGE REPLACEMENT OVER BIG DARBY CREEK.
7. THE CONTRACTOR SHALL PROVIDE NOTICE OF THE PROJECT'S CONSTRUCTION SCHEDULE AND POTENTIAL FOR USERS TO ENCOUNTER PARTIAL CLOSURES AT THE BIG DARBY CREEK BRIDGES NO LESS THAN 48 HOURS PRIOR TO CONSTRUCTION ACTIVITIES. NOTICES SHALL BE POSTED IN AN AREA THAT CAN BE SEEN BY USERS OF THE BIG DARBY CREEK, BOTH UPSTREAM AND DOWNSTREAM.
8. THE CONTRACTOR WILL NOTIFY DISTRICT 6 PUBLIC INFORMATION OFFICER VIA EMAIL (D06.PIO@DOT.OHIO.GOV); TRAPPER JOHNS CANOE LIVERY OPERATOR AT (614) 877-4321 OR TJ@TRAPPERJOHNSCANOEING.COM; THE ODNR SCENIC RIVERS PROGRAM REGIONAL MANAGER (HEATHER DOHERTY AT 740-258-0567 OR HEATHER.DOHERTY@DNR.STATE.OH.US; METRO PARKS MANAGER, PARK OPERATIONS (DOUG YABLONSKI) AT 614-895-6205 OR YABLONSKI@METROPARKS.NET, PARK MANAGER- BATTELLE DARBY CREEK METRO PARK (KEVIN KASNYIK) AT 614-878-1076 OR KASNYIK@METROPARKS.NET, NO LATER THAN TEN (10) DAYS PRIOR TO THE CLOSURE OF THE STREAM CHANNEL OF BIG DARBY CREEK.
9. THE CONTRACTOR SHALL NOTIFY THE ODNR SCENIC RIVERS PROGRAM REGIONAL MANAGER AT A MINIMUM OF SEVEN (7) DAYS PRIOR TO PROJECT COMPLETION TO CONDUCT A FINAL SITE INSPECTION WITH THE CONTRACTOR PRESENT.
10. ALL COSTS, UNLESS OTHERWISE SPECIFIED, RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE FOR ITEM 690 - SPECIAL - ENVIRONMENTAL, SECTION 4F, IDENTIFIED SECTION 4(F) PROPERTIES.

**PERMITS, WATERWAY PERMITS**

1. ODOT SHALL OBTAIN ALL APPROPRIATE WATERWAY PERMITS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES AND ALL SPECIAL PROVISIONS FOR WATERWAY PERMITS WILL BE INCLUDED IN THE PROJECT PLANS. THE CONTRACTOR IS NOT PERMITTED TO WORK BELOW THE ORDINARY HIGH WATER MARK UNTIL THE PERMITS ARE RECEIVED.

**PERMITS, FLOODPLAINS**

1. THE PROJECT DESIGNER SHALL DELINEATE THE 100-YEAR FLOODPLAIN AND DELINEATE THE LIMITS OF 1,000 FEET FROM THE BANK OF THE BIG DARBY CREEK IN THE PROJECT PLANS.

**ITEM 832 - STORM WATER POLLUTION PREVENTION PLAN, AS PER PLAN**

PRIOR TO COMMENCEMENT OF EARTHWORK OPERATIONS, THE CONTRACTOR SHALL DEVELOP AND IMPLEMENT A SWPPP, AS PER PLAN (SEE SHEET 118). SEDIMENT AND EROSION CONTROLS SHALL BE PROPERLY INSTALLED AND MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. STRAW BALES SHALL NOT BE PERMITTED AS A FORM OF SEDIMENT CONTROL. ENSURE TIMELY ADHERENCE TO THE GENERAL CONSTRUCTION PERMIT FOR ALL SEDIMENT AND EROSION CONTROLS, INCLUDING SEEDING AND MULCHING. PARTICULAR ATTENTION SHALL BE GIVEN TO ANY DRAINAGE WAYS, UNPROTECTED SLOPES, DITCHES, AND STREAMS THAT COULD CONVEY SEDIMENT LADEN WATERS DIRECTLY TO THE BIG DARBY.

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ENVIRONMENTAL GENERAL NOTES

FRA - 71 - 1.53

**ITEM 614 - WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN (CONT.)**

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS, AND CARRIED TO THE GENERAL SUMMARY:

CONCRETE OPTION  
ITEM 614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN  
1301 EACH

ASPHALT OPTION  
ITEM 614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN  
1382 EACH

PAYMENT FOR RESURFACING WITHIN THE TRANSITION AREA SHALL BE PAID FOR UNDER THE APPROPRIATE BID ITEMS FOR THE WORK REQUIRED, AS PROVIDED FOR IN THE PLANS.

**ITEM 614 - WORK ZONE RAISED PAVEMENT MARKERS ON CONCRETE SURFACES**

RAISED PAVEMENT MARKERS IN WORK ZONES, INSTALLED ON CONCRETE SURFACES, SHALL BE ITEM 614 WORK ZONE RAISED PAVEMENT MARKERS. WZRPMS ARE INTENDED FOR USE ONLY DURING THE NON-SNOW-PLOWING SEASON. WZRPMS SHALL NOT BE PROVIDED DURING THE SNOW-PLOWING SEASON.

THE SNOW-PLOWING SEASON SHALL RUN FROM OCTOBER 15 THROUGH APRIL 1.

WHERE A TEMPORARY ALIGNMENT WILL REMAIN IN USE THROUGH THE WINTER, THE WZRPMS SHALL BE REMOVED PRIOR TO THE BEGINNING OF THE SNOW-PLOWING SEASON AND REPLACED APPROXIMATELY APRIL 1, OR AS OTHERWISE DETERMINED BY THE ENGINEER.

THIS ITEM SHALL INCLUDE PURCHASE, INSTALLATION AND REMOVAL OF ITEM 614 WORK ZONE RAISED PAVEMENT MARKERS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS, AND CARRIED TO THE GENERAL SUMMARY:

CONCRETE OPTION  
ITEM 614 WORK ZONE RAISED PAVEMENT MARKER 68 EACH

ASPHALT OPTION  
ITEM 614 WORK ZONE RAISED PAVEMENT MARKER 8 EACH

**DELINEATION OF TEMPORARY AND PERMANENT GUARDRAIL**

BARRIER REFLECTORS SHALL BE INSTALLED ON ALL TEMPORARY GUARDRAIL USED FOR TRAFFIC CONTROL AND ON ALL PERMANENT GUARDRAIL LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE. BARRIER REFLECTORS SHALL CONFORM TO C&MS 626.

OBJECT MARKERS SHALL BE INSTALLED ON ALL TEMPORARY AND PERMANENT GUARDRAIL LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE. GUARDRAIL-MOUNTING OF OBJECT MARKERS SHALL BE MADE BY INSTALLING THE OBJECT MARKERS ON THE EXTENSION BLOCKS RATHER THAN DIRECTLY ONTO THE GUARDRAIL ITSELF. OBJECT MARKERS SHALL CONFORM TO C&MS 614.03 AND THE SPACING SHALL BE APPROXIMATELY 50 FEET WITH A 25 FOOT OFFSET FROM THE BARRIER REFLECTORS.

**DELINEATION OF TEMPORARY AND PERMANENT GUARDRAIL (CONT.)**  
THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

CONCRETE OPTION  
ITEM 614, BARRIER REFLECTOR, TYPE 1 (ONE-WAY) 306 EACH  
ITEM 614, OBJECT MARKER, ONE-WAY 306 EACH

ASPHALT OPTION  
ITEM 614, BARRIER REFLECTOR, TYPE 1 (ONE-WAY) 379 EACH  
ITEM 614, OBJECT MARKER, ONE-WAY 379 EACH

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING THE ABOVE ITEM(S).

**DELINEATION OF PORTABLE AND PERMANENT BARRIER**

BARRIER REFLECTORS AND OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE BARRIER (PB) USED FOR TRAFFIC CONTROL; AND, ON PERMANENT CONCRETE BARRIER (INCLUDING BRIDGE PARAPETS) LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE.

BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THE SPACING SHALL BE AS PER TRAFFIC SCD MT-101.70. OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614.03 AND SCD MT-101.70. WHEN THE PB CONTAINS GLARE SCREEN, ONE SET OF THREE VERTICAL STRIPES OF SHEETING SHALL BE CONSIDERED EQUIVALENT TO AN OBJECT MARKER, ONE-WAY.

INCREASED BARRIER DELINEATION, AS SPECIFIED HEREIN, SHALL BE INSTALLED ON ALL PB AND PERMANENT CONCRETE BARRIER LOCATED WITHIN 5 FEET OF THE EDGE OF THE TRAVELED LANE UNDER EITHER OF THE FOLLOWING CONDITIONS: ALONG TAPERS AND TRANSITION AREAS; OR ALONG CURVES (OUTSIDE ONLY) WITH DEGREE OF CURVATURE GREATER THAN OR EQUAL TO 3 DEGREES.

TRIPLE-STACKED BARRIER REFLECTORS SHALL CONSIST OF ALIGNING THREE BARRIER REFLECTORS VERTICALLY, AT LOCATIONS WHERE A SINGLE BARRIER REFLECTOR WOULD BE OTHERWISE ATTACHED. THERE SHALL BE NO OPEN SPACE BETWEEN THE ADJACENT BARRIER REFLECTORS. THE TRIPLESTACKED BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THEY SHALL BE SPACED AND ALIGNED PER TRAFFIC SCD MT-101.70.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 614, BARRIER REFLECTOR, TYPE 1 (ONE-WAY) 945 EACH

ITEM 614, BARRIER REFLECTOR, TYPE 2 (ONE-WAY) 58 EACH

ITEM 614, OBJECT MARKER, ONE-WAY 373 EACH

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING EACH OF THE ABOVE ITEMS.

**ITEM 614 - LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS**

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF C&MS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

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

IN ADDITION TO THE REQUIREMENT OF C&MS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHOULD BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS AS APPROVED BY THE ENGINEER:

FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN A NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP).

IN GENERAL, LEOS SHOULD BE POSITIONED IN ADVANCE OF AND ON THE SAME SIDE AS THE LANE RESTRICTION OR AT THE POINT OF ROAD CLOSURE, AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH SIGNALIZED INTERSECTIONS IN WORK ZONES.

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE LEOS WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS' DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

ENSURE PROVIDED LEOS HAVE BEEN TRAINED APPROPRIATE TO THE JOB DECISIONS THEY ARE REQUIRED TO MAKE WHILE ON THE PROJECT, IN ACCORDANCE WITH C&MS 614.03.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING THE SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE WHICH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

**ITEM 614 - LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS (CONT.)**

LEOS (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) FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 320 HOURS

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

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF A LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

**ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, APP, TYPE 1**  
**ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, APP, TYPE 2**  
**ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, APP, TYPE 3**  
**ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, APP, TYPE 4**

THIS ITEM SHALL BE UTILIZED FOR THE PAVEMENT REPAIRS NEEDED DURING THIS CONSTRUCTION PROCESS. ALL AREAS TO BE REPAIRED SHALL BE LOCATED BY THE ENGINEER. IT IS LIKELY THAT REPAIRS WILL BE NEEDED PRIOR TO EACH PHASE SWITCH. GREAT CARE SHALL BE TAKEN TO MAINTAIN THE EXISTING PAVEMENT CROSS SLOPE AS WELL AS ALL LONGITUDINAL SLOPES. THE TYPE OF REPAIR SHALL BE DETERMINED BY THE PROJECT ENGINEER. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS REQUIRED FOR MAINTENANCE OF TRAFFIC FOR PAVEMENT REPAIRS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC.

TYPE 1 - IS TO BE USED WHEN YOU NEED TO MILL & FILL AN AREA OF VARYING LENGTH AND HAVE AN AVERAGE WIDTH OF NOT LESS THAN 2 FEET.

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MAINTENANCE OF TRAFFIC GENERAL NOTES

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**ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, APP, TYPE 1 (CONT.)**

**ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, APP, TYPE 2 (CONT.)**

**ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, APP, TYPE 3 (CONT.)**

**ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, APP, TYPE 4 (CONT.)**

TYPE 2 - IS TO BE USED FOR FIXING THE LONGITUDINAL JOINT ISSUES OF VARYING LENGTH AND HAVE A CONSISTENT WIDTH OF 2 FEET. THE JOINT UNDER THE EXISTING NORTHBOUND LANE LINE IS EXPECTED TO BE WITHIN THE PHASE 1 WHEEL PATH AND SHALL BE REPAIRED PRIOR TO SHIFTING TRAFFIC.

TYPE 3 - IS TO BE USED FOR DEEPER REPAIRS (POTHOLES) OF VARYING LENGTH AND WILL HAVE AN AVERAGE WIDTH OF NOT LESS THAN 4 FEET.

TYPE 4 - IS TO BE USED FOR COMPOSITE PAVEMENT REPAIRS OF VARYING LENGTH AND WILL HAVE AN AVERAGE WIDTH OF NOT LESS THAN 3 FEET.

ALL COSTS ASSOCIATED WITH REMOVING AND REPLACING PAVEMENT AND TACK COAT FOR THE REPAIRS SHALL BE INCIDENTAL TO ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN.

ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, APP, TYPE 1 = 75 S.Y.

ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, APP, TYPE 2 = 1550 S.Y.

ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, APP, TYPE 3 = 125 S.Y.

ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, APP, TYPE 4 = 125 S.Y.

**MAINTENANCE OF TRAFFIC FOR MARKING PAVEMENT REPAIRS**  
PROVIDE LANE CLOSURES AS PER THE MAINTENANCE OF TRAFFIC NOTES IN THESE PLANS A MINIMUM OF 24 HOURS PRIOR TO PERFORMING PAVEMENT REPAIRS TO ALLOW THE ENGINEER TO IDENTIFY AND MARK THE AREAS OF THE PAVEMENT IN NEED OF REPAIRS.

PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS, LEO HOURS, AND INCIDENTALS NEEDED TO PERFORM THE ABOVE LISTED WORK IS CONSIDERED INCIDENTAL TO MAINTAINING TRAFFIC ON THE PROJECT AND WILL BE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 614, MAINTAINING TRAFFIC.

**ITEM 614, MAINTAINING TRAFFIC MISC.: BRIDGE DECK AND PAVEMENT PATCHING**

THIS WORK WILL BE AS DIRECTED BY THE ENGINEER AND WILL INCLUDE ALL ASSOCIATED MOT COSTS WITH THE ACTIVITY. THE COST FOR EACH ITEM SHALL BE \$1.00. THE FIXED AMOUNT SHOWN IN THE PROPOSAL IS INCLUDED (AS ANY OTHER BID ITEMS) IN THE TOTAL BID AMOUNT. THIS FIXED AMOUNT IS THE DEPARTMENT'S ESTIMATE OF THE TOTAL COST OF BRIDGE DECK AND PAVEMENT PATCHING WORK REQUIRED TO BE PERFORMED WITHIN THE WORK LIMITS AS DIRECTED BY THE ENGINEER. C&MS TABLE 104.02-2 DOES NOT APPLY TO REDUCTIONS IN THIS CONTRACT ITEM. FORCE ACCOUNT RECORDS SHALL BE KEPT TO TRACK AND ULTIMATELY DETERMINE THE AMOUNT OF THE PAY ITEM USED. THE WORK ITEM SHALL INCLUDE ALL WORK, AS DIRECTED BY THE ENGINEER, NEEDED TO RE-ESTABLISH A REASONABLY SAFE AND PASSABLE CONDITION OF THE DECK AND/OR PAVEMENT FOR THE DURATION OF THE REQUIRED UPCOMING MOT PHASES. THE CONTRACTOR SHALL MEET WITH THE ENGINEER TO ESTABLISH THE WORK AFTER EXECUTION OF THE CONTRACT. THE CONTRACTOR'S PROPOSED PHASING AND PHASING DURATIONS WILL ASSIST THE ENGINEER IN DETERMINING

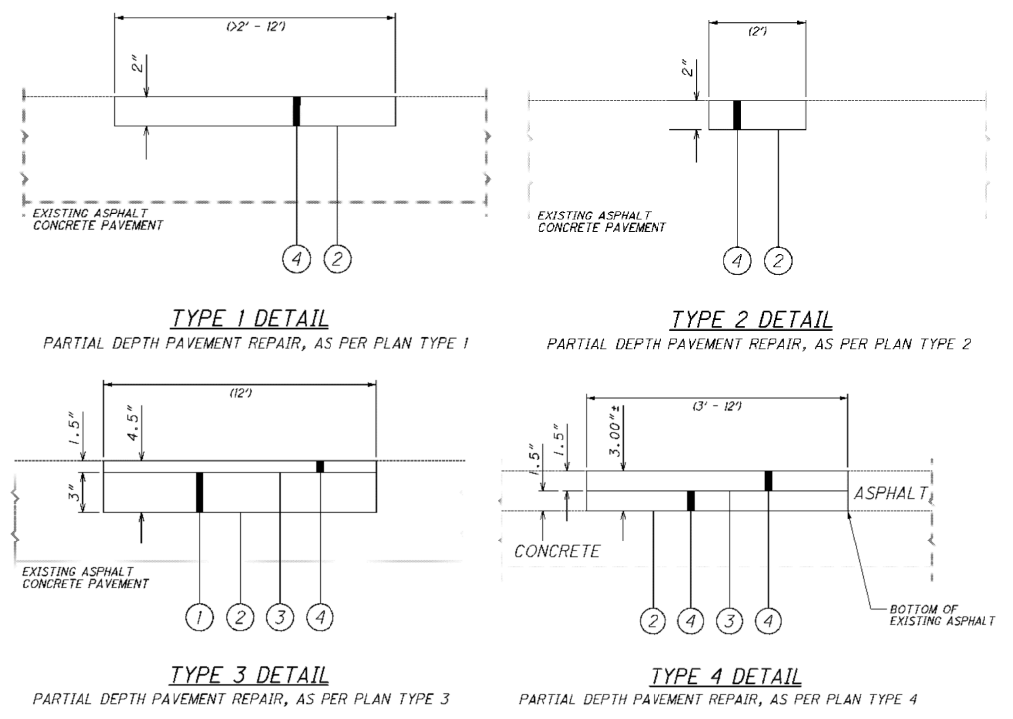
**ITEM 614, MAINTAINING TRAFFIC MISC.: BRIDGE DECK AND PAVEMENT PATCHING (CONT.)**

THE EXTENT OF THE WORK. THIS WORK IS ONLY INTENDED TO ESTABLISH A SAFE AND DRIVEABLE CONDITION FOR THE DURATION OF THE PROJECT. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE REPOSIBILITIES OF 614.02B.

ITEM 614, MAINTAINING TRAFFIC MISC.: BRIDGE DECK AND PAVEMENT PATCHING = \$18,800.00 EACH

**TRAFFIC INCIDENT MANAGEMENT (TIM) DURING MOT**  
OHIO TIM IS OHIO'S TRAFFIC INCIDENT MANAGEMENT PROGRAM WHICH IS COMMITTED TO MAINTAINING THE SAFE AND EFFECTIVE FLOW OF TRAFFIC DURING EMERGENCIES AS TO PREVENT FURTHER DAMAGE, INJURY OR UNDUE DELAY OF THE MOTORING PUBLIC. IN ADDITION TO COMPLYING WITH THE PROVISION OF OMUTCD CHAPTER 6I, CONTROL OF TRAFFIC THROUGH TRAFFIC INCIDENT MANAGEMENT AREAS, THE CONTRACTOR SHALL ACTIVELY PARTICIPATE IN TIM PLANNING AND IMPLEMENTATION AS OUTLINED BELOW.

1. SUPERINTENDENT SHALL IDENTIFY THE INDIVIDUAL PERSONS ON THE PROJECT WHO WILL, OR MAY NEED TO, PERFORM THE DUTIES HEREIN. AT A MINIMUM, INCLUDE THE SUPERINTENDENT, FOREMEN AND SUPERVISORS (OR EQUIVALENT) AS WELL AS THE WORKSITE TRAFFIC SUPERVISOR (WTS; IF APPLICABLE TO THE PROJECT). THESE INDIVIDUALLY IDENTIFIED PERSONS SHALL COLLECTIVELY BE KNOWN AS CONTRACTOR TRAFFIC INCIDENT MANAGEMENT (TIM) CONTACTS. NOTIFY THE PROJECT ENGINEER OF THE CONTRACTOR TIM CONTACTS (ALONG WITH CONTACT INFORMATION FOR EACH) AT OR BEFORE THE PRECONSTRUCTION MEETING.
2. SUPERINTENDENT SHALL NOTIFY THE ENGINEER IMMEDIATELY IF ANY CONTRACTOR TIM CONTACT IS ADDED, REMOVED OR THE CONTACT INFORMATION CHANGES OVER THE COURSE OF THE PROJECT.
3. PRIOR THE FIRST DAY OF WORK IN THE FIELD, EACH CONTRACTOR TIM CONTACT ON THE PROJECT SHALL HAVE ATTENDED AND SUCCESSFULLY COMPLETED OHIO TIM TRAINING PROVIDED BY THE DEPARTMENT OR DESIGNEE. TRAINING INFORMATION CAN BE FOUND AT WWW.OHIOTIM.COM.
4. SUPERINTENDENT, AT A MINIMUM, SHALL ATTEND AND ACTIVELY PARTICIPATE IN A DEPARTMENT SCHEDULED TIM MEETING BEFORE CONSTRUCTION WORK BEGINS AND BEFORE EACH PHASE CHANGE. THESE MEETINGS WILL RESULT IN A DEPARTMENT ISSUED PROJECT SPECIFIC TRAFFIC INCIDENT MANAGEMENT PLAN (TIMP). AT THE TIM MEETINGS THE ATTENDING CONTRACTOR TIM CONTACTS SHALL:
  - A. COLLABORATE WITH ODOT AND SAFETY FORCES;
  - B. SHARE PROJECT SPECIFIC DETAILS THAT IMPACT TIM RESPONDERS; AND
  - C. RECOMMEND WAYS TO INCORPORATE NECESSARY EMERGENCY ACCESS AND OTHER TIM ELEMENTS FOR TIM RESPONDERS GIVEN PROJECT SPECIFIC WORK BEING COMPLETED AND PROJECT SPECIFIC PHASING.
5. CONTRACTOR TIM CONTACTS SHALL IMPLEMENT COMPONENTS OF THE RESULTING TIMP (SUCH AS APPROVED EMERGENCY INGRESS/EGRESS POINTS, ETC), AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.
6. CONTRACTOR TIM CONTACTS SHALL PERFORM, AT A MINIMUM, THE FOLLOWING FUNCTIONS WHEN AN INCIDENT/ CRASH OCCURS:
  - A. IF OBSERVED OR PRESENT WHEN OCCURS, CALL 911 AND THEN NOTIFY THE TRAFFIC MANAGEMENT CENTER (TMC) TO PROVIDE THE FOLLOWING:
    - I. LOCATION, INCLUDING MILEPOST NUMBER AND DIRECTION OF TRAVEL



- LEGEND:**
- ① ITEM 301 - ASPHALT CONCRETE BASE, PG64-22
  - ② ITEM 407 - TACK COAT #0.075 PER SY. YD.
  - ③ ITEM 407 - TACK COAT FOR INTERMEDIATE @ 0.05 PER SY. YD.
  - ④ ITEM 441 -TYPE 1 (AS DESCRIBED IN C&MS 615.05)

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**TRAFFIC INCIDENT MANAGEMENT (TIM) DURING MOT (CONT.)**

II. NUMBER AND TYPE OF VEHICLES INVOLVED, IF KNOWN

III. ESTIMATED EXTENT OF DAMAGE OR INJURY, IF KNOWN

IV. ESTIMATED NUMBER OF PATIENTS INVOLVED, IF KNOWN

V. ANY POTENTIAL HAZARDOUS CONDITIONS, IF KNOWN

VI. THE PLACARD NUMBER ON ANY HAZARDOUS MATERIALS PLACARD FROM A SAFE DISTANCE, IF APPLICABLE AND VISIBLE

**B. FOLLOWING AN INCIDENT/CRASH:**

I. INITIATE TRAFFIC MANAGEMENT/PROVIDE TEMPORARY TRAFFIC CONTROL AS INDICATED IN THE TIMP, AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.

II. RECOMMEND ROADWAY REPAIR NEEDS.

III. PROVIDE REPAIR RESOURCES AND INITIATE REPAIRS, AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.

IV. ATTEND AND PARTICIPATE IN AN AFTER ACTION REVIEW (AAR).

ALL COSTS, UNLESS OTHERWISE SPECIFIED, RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE FOR ITEM 614, MAINTAINING TRAFFIC. FAILURE TO PERFORM THE REQUIREMENTS OF THIS PLAN NOTE WILL RESULT IN A DAILY FINE OF 2% OF ITEM 614, MAINTAINING TRAFFIC AND MAY RESULT IN ONE OR MORE CONTRACTOR TIM CONTACTS BEING REMOVED FROM THE LIST OF OHIO TIM TRAINED INDIVIDUALS (AT THE SOLE DISCRETION OF THE OHIO TIM EXECUTIVE COMMITTEE). IN THE EVENT AN INDIVIDUAL IS REMOVED FROM THE OHIO TIM TRAINED LIST, THE INDIVIDUAL WILL BE REMOVED FROM CONTRACTOR TIM CONTACT RESPONSIBILITIES ON ALL PROJECTS.

**ITEM 615, ROADS FOR MAINTAINING TRAFFIC**

A LUMP SUM QUANTITY HAS BEEN PROVIDED PER SECTION 615 OF ODOT'S CONSTRUCTION AND MATERIALS SPECIFICATIONS (CMS).

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE PLAN FOR INFORMATION ONLY. PAYMENT FOR ALL COSTS ASSOCIATED WITH TEMPORARY EARTHWORK SHALL BE INCLUDED IN THE CONTRACTOR PRICE PER LUMP SUM FOR ITEM 615, ROADS FOR MAINTAINING TRAFFIC.

**ASPHALT OPTION**

EXCAVATION FOR MAINTAINING TRAFFIC 8330 CU. YD.  
EMBANKMENT FOR MAINTAINING TRAFFIC 680 CU. YD.

**CONCRETE OPTION**

EXCAVATION FOR MAINTAINING TRAFFIC 8750 CU. YD.  
EMBANKMENT FOR MAINTAINING TRAFFIC 645 CU. YD.

WHEN UNDERCUTS ARE NECESSARY FOR MAINLINE PAVEMENT OR EMBANKMENT CONSTRUCTION, EVALUATE THE NEED FOR TEMPORARY ROAD UNDERCUTS IF WITHIN A CLOSE PROXIMITY TO THE MAINLINE UNDERCUTS. A GEOTECHNICAL EVALUATION SHOULD BE CONSIDERED TO DETERMINE IF THE EXISTING SOIL CONDITIONS ARE ADEQUATE TO SUPPORT THE TEMPORARY ROAD. ADDITIONAL SOIL BORINGS ALONG THE TEMPORARY ROAD ARE NOT NORMALLY REQUIRED.

THE FOLLOWING CONTINGENCY QUANTITIES HAVE BEEN INCLUDED IN THE PLAN TO BE USED IF DETERMINED BY THE GEOTECHNICAL EVALUATION THAT THE SOIL CONDITIONS ARE NOT ADEQUATE TO

**ITEM 615, ROADS FOR MAINTAINING TRAFFIC (CONT.)**

SUPPORT THE TEMPORARY ROAD AND SHALL BE USED AS DIRECTED BY THE ENGINEER. PAYMENT FOR ALL COSTS ASSOCIATED WITH THE ABOVE DESCRIBED WORK SHALL BE INCLUDED IN THE CONTRACTOR PRICE PER LUMP SUM FOR ITEM 615, ROADS FOR MAINTAINING TRAFFIC.

ITEM 204, SUBGRADE COMPACTION 3830 SQ. YD.  
ITEM 204, PROOF ROLLING 9 HOUR  
ITEM 204, EXCAVATION OF SUBGRADE 950 CU. YD.  
ITEM 204, GRANULAR MATERIAL TYPE B 950 CU. YD.

**SEQUENCE OF CONSTRUCTION**

**PRE-PHASE 1A:**

THE EXISTING OUTSIDE NORTHBOUND AND SOUTHBOUND SHOULDERS SHALL BE PLANED TO A DEPTH OF 9 INCHES AND RECONSTRUCTED PER ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN A. THE EXISTING PAVEMENT JOINTS UNDER THE NORTHBOUND AND SOUTHBOUND LANES SHALL BE REPAIRED PER ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, APP, TYPE 2 AS THEY ARE NEAR THE WHEEL PATH OF PHASE 1 TRAFFIC. PRE-PHASE 1A WORK SHALL BE COMPLETED BY UTILIZING OFF PEAK DAYTIME AND NIGHTTIME LANE CLOSURES PER ODOT SCD MT-95.30 AND MT-101.90 AND ONLY DURING THE ALLOWABLE HOURS AS SHOWN IN THE MAINTENANCE OF TRAFFIC (MOT) GENERAL NOTES.

**PRE-PHASE 1B:**

AT THE COMPLETION OF ALL PRE-PHASE 1A WORK, PLACE ALL SIGNS, PAVEMENT MARKINGS AND PORTABLE BARRIER AS SHOWN ON THE PRE-PHASE 1B PLANS. SHIFT TRAFFIC TO THE EXISTING OUTSIDE LANES AND THE NEWLY RECONSTRUCTED OUTSIDE SHOULDER. RECONSTRUCT THE MEDIAN SHOULDER PER ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN B AS SHOWN ON THE PRE-PHASE 1B PLANS.

**PHASE 1:**

AT THE COMPLETION OF ALL PRE-PHASE 1B WORK, PLACE ALL SIGNS, PAVEMENT MARKINGS AND PORTABLE BARRIER AS SHOWN ON THE PHASE 1 MOT PLANS. SHIFT TRAFFIC TO THE EXISTING OUTSIDE LANES, THE OUTSIDE PORTION OF THE FRA-71-0153 BRIDGES AND THE NEWLY RECONSTRUCTED OUTSIDE SHOULDER. CONSTRUCT THE INSIDE PORTION OF THE NORTHBOUND AND SOUTHBOUND ROADWAY ALONG WITH THE INSIDE PORTION OF THE FRA-71-0153 BRIDGES AS SHOWN ON THE PHASE 1 MOT PLANS. CONSTRUCT THE WORK ZONE PAVEMENT PER ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN B ALONG THE INSIDE NORTHBOUND AND SOUTHBOUND LANES FOR USE DURING PHASE 2 CONSTRUCTION. DO NOT PLACE THE 1/2 INCH ITEM 806 ASPHALT CONCRETE SURFACE COURSE AT THIS TIME.

**WINTERIZATION:**

AT THE COMPLETION OF ALL PHASE 1 WORK, THE PROJECT SHALL ENTER A WINTERIZATION PHASE. ALL WORK ZONE SIGNS, PAVEMENT MARKINGS AND PORTABLE BARRIER AS SHOWN ON THE PHASE 1 MOT PLANS SHALL REMAIN IN PLACE AND TRAFFIC SHALL REMAIN AS IT WAS DURING PHASE 1 CONSTRUCTION.

**PHASE 2:**

AT THE COMPLETION OF THE WINTERIZATION PHASE, PLACE ALL SIGNS, PAVEMENT MARKINGS AND PORTABLE BARRIER AS SHOWN ON THE PHASE 2 MOT PLANS. SHIFT TRAFFIC TO THE INSIDE ONTO THE NEWLY CONSTRUCTED ROADWAY, SHOULDERS, THE FRA-71-0153 BRIDGES AND THE WORK ZONE PAVEMENT CONSTRUCTED DURING PRE-PHASE 1B AND PHASE 1. CONSTRUCT THE OUTSIDE PORTION OF THE NORTHBOUND AND SOUTHBOUND ROADWAY ALONG WITH THE OUTSIDE PORTION OF THE FRA-71-0153 BRIDGES AS SHOWN ON THE PHASE 2 MOT PLANS. DO NOT PLACE THE 1/2 INCH ITEM 806 ASPHALT CONCRETE SURFACE COURSE AT THIS TIME.

**PHASE 3 (ASPHALT OPTION ONLY):**

AT THE COMPLETION OF ALL PHASE 2 WORK, THE CONTRACTOR SHALL REMOVE THE WORK ZONE PAVEMENT WITHIN THE PROJECT LIMITS AND PERFORM THE REQUIRED GRADING. THE CONTRACTOR SHALL PLACE THE 1/2 INCH ITEM 806 ASPHALT CONCRETE SURFACE COURSE ON THE I-71 ROADWAY. THIS WORK SHALL BE COMPLETED BY UTILIZING OFF PEAK DAYTIME AND NIGHTTIME LANE CLOSURES PER ODOT SCD MT-95.30 AND ONLY DURING THE ALLOWABLE HOURS AS SHOWN IN THE MOT GENERAL NOTES.

**SEQUENCE OF CONSTRUCTION (CONT.)**

**PHASE 3 (CONCRETE OPTION ONLY):**

AT THE COMPLETION OF ALL PHASE 2 WORK, THE CONTRACTOR SHALL REMOVE THE WORK ZONE PAVEMENT WITHIN THE PROJECT LIMITS AND PERFORM THE REQUIRED GRADING. THIS WORK SHALL BE COMPLETED BY UTILIZING OFF PEAK DAYTIME AND NIGHTTIME LANE CLOSURES PER ODOT SCD MT-95.30 AND ONLY DURING THE ALLOWABLE HOURS AS SHOWN IN THE MOT GENERAL NOTES. THE CONTRACTOR SHALL PLACE ALL SIGNS, PAVEMENT MARKINGS, PORTABLE BARRIER AND DRUMS AS SHOWN ON THE PHASE 3 MOT PLANS. CONSTRUCT THE REQUIRED GUARDRAIL IN THE MEDIAN AS SHOWN ON THE CONSTRUCTION DRAWINGS.

**PHASE 4:**

AT THE COMPLETION OF ALL PHASE 3 WORK, THE CONTRACTOR SHALL PLACE ALL FINAL PAVEMENT MARKINGS AND SIGNS AS SHOWN ON THE CONSTRUCTION DRAWINGS. COMPLETE ANY FINAL GRADING AND SEEDING AND MULCHING REQUIRED.

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EGD  
CHECKED  
DLW

MAINTENANCE OF TRAFFIC GENERAL NOTES

FRA - 71 - 1.53

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Table with columns: REF. NO., SHEET NO., STATION (FROM, TO), SIDE, and various material descriptions and quantities. Includes sub-phases like PRE-PHASE 1A, PRE-PHASE 1B, PHASE 1, and a final TOTALS CARRIED TO NEXT SHEET row.

MAINTENANCE OF TRAFFIC SUBSUMMARY (ASPHALT)

FRA-71-1.53

CALCULATED ANM CHECKED EGD

X:\4037000\121957.15\93496\MOT\sheet\93496MS002.dgn Sheet 11/20/2018 12:41:59 PM 1636dcb

REF. NO.	SHEET NO.	STATION		SIDE	254	411	614	614	614	614	614	614	614	614	615	615	622	622				
		FROM	TO		PAVEMENT PLANING, ASPHALT CONCRETE (9" THICK)	STABILIZED CRUSHED AGGREGATE	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)	WORK ZONE IMPACT ATTENUATOR (BIDIRECTIONAL)	WORK ZONE RAISED PAVEMENT MARKER	BARRIER REFLECTOR, TYPE 1 (ONE-WAY)	BARRIER REFLECTOR, TYPE 2 (ONE-WAY)	OBJECT MARKER, ONE-WAY	WORK ZONE LANE LINE, CLASS 1, 642 PAINT	WORK ZONE EDGE LINE, CLASS 1, 642 PAINT	WORK ZONE CHANNELIZING LINE, CLASS 1, 642 PAINT	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN A	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN B	PORTABLE BARRIER, 32"	PORTABLE BARRIER, 32", BRIDGE MOUNTED			
					SY	CY	EACH	EACH	EACH	EACH	EACH	MILE	MILE	FT	SY	SY	FT	FT				
PHASE 1 (continued)																						
CH-2	33-35	64+55	74+05	LT					49					950								
LL-2	31-33	54+40	64+55	RT					10			0.19										
PB-1	34-41	69+50	101+50	LT			1			195		65					3200					
PB-2	34-41	69+90	102+00	RT			1			198		66					3210					
		69+30	76+35	RT								16	16									
LL-3	35-40	74+05	97+30	RT					21			0.44										
		76+35	77+16	RT						9		3										
		77+16	81+38	RT								10	10									
		81+38	84+98	RT						27		9										
		84+98	90+92	RT								13	13									
LL-4	35-40	74+05	97+30	LT					21			0.44										
		73+90	77+26	LT								8	8									
		77+26	78+10	LT						9		3										
		78+10	81+45	LT								8	8									
		81+45	85+01	LT					27			9										
		85+01	88+25	LT								8	8									
	38-40	88+91	101+00	RT												2130						
	38-40	88+97	101+00	LT												2643						
		88+91	101+00	RT		45																
		99+95	101+00	LT		4																
CH-3	40-43	97+30	106+85	LT					49					955								
CH-4	40-43	97+30	106+70	RT					48					940								
LL-5	42-44	106+85	117+05	LT					10			0.19										
LL-6	42-44	106+70	119+40	RT					12			0.24										
PHASE 2																						
CH-1	47-50	63+70	76+45	RT					65					1275								
CH-2	47-50	64+45	76+45	LT					61					1200								
EW-1	48-55	66+74	104+00	RT					188				0.71									
EY-1	48-55	66+74	104+00	RT					188				0.71									
EW-2	48-55	67+47	105+07	LT					189				0.71									
EY-2	48-55	67+47	105+07	LT					189				0.71									
PB-1	48-54	70+60	97+80	RT			1			168		56					2340	380				
PB-2	49-50	71+50	76+10	RT			1			33		11					460					
PB-3	49-54	73+50	100+80	LT			1			168		56					2350	380				
PB-4	52-50	88+40	99+60	RT			1	1		72		24					1120					
LL-1	50-53	76+45	94+80	LT					17			0.35										
LL-2	50-53	76+45	94+80	LT					17			0.35										
CH-3	53-56	94+80	107+00	RT					62					1220								
CH-4	47-50	94+80	108+10	LT					68					1330								
		76+10	77+56	RT								4	4									
		77+56	81+35	LT/RT								9	9									
		81+35	85+07	RT						27		9	9									
		76+85	81+10	LT/RT								10	10									
		81+35	85+07	LT						27		9	9									
		85+05	88+50	LT								8	8									
TOTALS FROM PREVIOUS SHEET					12,759	281	4	0	2,518	360	0	120	0.24	9.47	10,680	12,759	8,188	5,690	0			
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>					<b>12,759</b>	<b>330</b>	<b>10</b>	<b>1</b>	<b>3,782</b>	<b>1,320</b>	<b>94</b>	<b>534</b>	<b>2.44</b>	<b>12.31</b>	<b>18,550</b>	<b>12,759</b>	<b>12,961</b>	<b>18,370</b>	<b>760</b>			

MAINTENANCE OF TRAFFIC SUBSUMMARY (ASPHALT)

FRA-71-1.53

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REF. NO.	SHEET NO.	STATION		SIDE	254	411	614	614	614	614	614	614	614	614	615	615	622	622				
		FROM	TO		PAVEMENT PLANING, ASPHALT CONCRETE (9" THICK)	STABILIZED CRUSHED AGGREGATE	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)	WORK ZONE IMPACT ATTENUATOR (BIDIRECTIONAL)	WORK ZONE RAISED PAVEMENT MARKER	BARRIER REFLECTOR, TYPE 1 (ONE-WAY)	BARRIER REFLECTOR, TYPE 2 (ONE-WAY)	OBJECT MARKER, ONE-WAY	WORK ZONE LANE LINE, CLASS 1, 642 PAINT	WORK ZONE EDGE LINE, CLASS 1, 642 PAINT	WORK ZONE CHANNELIZING LINE, CLASS 1, 642 PAINT	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN A	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN B	PORTABLE BARRIER, 32"	PORTABLE BARRIER, 32", BRIDGE MOUNTED			
					SY	CY	EACH	EACH	EACH	EACH	EACH	MILE	MILE	FT	SY	SY	FT	FT				
PHASE 1 (continued)																						
CH-2	69-71	67+25	76+40	LT					47					915								
LL-2	66-69	55+30	67+25	RT					11			0.23										
PB-1	69-75	70+20	97+80	LT			1			171		57					2760					
PB-2	69-75	70+60	97+80	RT			1			168		56					2720					
		68+30	76+35	RT								18	18									
LL-3	71-74	76+40	94+80	LT					17			0.35										
		73+90	77+26	LT								8	8									
		77+26	78+10	LT						9		3										
		78+10	81+45	LT								8	8									
		81+45	85+01	LT						27		9										
		85+01	88+25	LT								8	8									
LL-4	71-74	76+40	94+80	RT					17			0.35										
		76+35	77+16	RT						9		3										
		77+16	81+38	RT								10	10									
		81+38	84+98	RT						27		9										
		84+98	90+92	RT								13	13									
		72-75	85+07	RT													1312					
		72-75	85+69	LT													1225					
			85+07	RT		13																
			85+69	LT		11																
			88+91	RT		30																
			88+97	LT		30																
CH-3	74-76	94+80	103+80	RT					46					900								
CH-4	74-76	94+80	103+60	LT					45					880								
LL-5	76-78	103+60	113+00	LT					9			0.18										
LL-6	76-78	103+80	114+65	RT					11			0.21										
PHASE 2																						
CH-1	82-85	63+95	76+50	RT					63					1255								
CH-2	82-84	64+54	76+50	LT					60					1196								
EY-1	82-90	66+95	103+50	RT					122				0.69									
EW-1	82-90	66+95	103+50	RT					122				0.69									
EY-2	82-90	67+54	104+68	LT					125				0.70									
EW-2	82-90	67+54	104+68	LT					125				0.70									
PB-1	83-89	70+40	97+80	RT			1			165		55					2360	380				
PB-2	84-85	71+90	77+70	RT			1			36		12					580					
PB-3	84-89	73+50	100+90	LT			1			165		55					2360	380				
PB-4	85-86	76+80	81+35	LT						30		10					455					
PB-5	86-89	85+07	99+20	RT						87		29					1413					
LL-1	85-88	76+50	94+80	RT					16			0.35										
LL-2	85-88	76+50	94+80	LT					16			0.35										
CH-3	88-91	94+80	106+50	RT					59					1170								
CH-4	88-91	94+80	107+70	LT					65					1290								
		81+35	85+07	LT																		
		81+35	85+07	RT																		
<b>TOTALS CARRIED TO NEXT SHEET</b>					0	84	5	0	976	894	65	363	2.02	2.78	7,606	0	2537	12,648	760			

MAINTENANCE OF TRAFFIC SUBSUMMARY (CONCRETE)

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FRA-71-1.53

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REF. NO.	SHEET NO.	STATION		SIDE	254	411	614	614	614	614	614	614	614	614	615	615	622	622			
		FROM	TO		PAVEMENT PLANING, ASPHALT CONCRETE (9" THICK)	STABILIZED CRUSHED AGGREGATE	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)	WORK ZONE IMPACT ATTENUATOR (BIDIRECTIONAL)	WORK ZONE RAISED PAVEMENT MARKER	BARRIER REFLECTOR, TYPE 1 (ONE-WAY)	BARRIER REFLECTOR, TYPE 2 (ONE-WAY)	OBJECT MARKER, ONE-WAY	WORK ZONE LANE LINE, CLASS 1, 642 PAINT	WORK ZONE EDGE LINE, CLASS 1, 642 PAINT	WORK ZONE CHANNELIZING LINE, CLASS 1, 642 PAINT	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN A	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN B	PORTABLE BARRIER, 32"	PORTABLE BARRIER, 32", BRIDGE MOUNTED		
					SY	CY	EACH	EACH	EACH	EACH	EACH	EACH	MILE	MILE	FT	SY	SY	FT	FT		
		PHASE 3																			
EW-1	96-105	63+95	106+50	RT										0.81							
EY-1	96-105	63+95	106+50	RT										0.81							
EW-2	96-105	64+54	107+70	LT										0.82							
EY-2	96-105	64+54	107+70	LT										0.82							
LL-1	96-105	63+95	106+50	RT					36				0.81								
LL-2	96-105	64+54	107+70	LT					36				0.82								
PB-1	98-100	73+70	81+50	RT			1			48		16					780				
PB-2	99	76+60	79+60	LT			1			21		7					300				
PB-3	100-101	84+90	90+60	LT			1			36		12					570				
PB-4	101-102	86+90	89+10	RT			1			15		5					220				
TOTALS FROM SHEET 21					8,899	593	4	0	2,352	351	0	117	0.26	8.78	10,350	8,899	9,895	5,570	0		
TOTALS FROM PREVIOUS SHEET					0	84	5	0	976	894	65	363	2.02	2.78	7,606	0	2,537	12,648	760		
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>					<b>8,899</b>	<b>677</b>	<b>13</b>	<b>0</b>	<b>3,400</b>	<b>1,365</b>	<b>65</b>	<b>520</b>	<b>3.91</b>	<b>14.82</b>	<b>17,956</b>	<b>8,899</b>	<b>12,432</b>	<b>20,088</b>	<b>760</b>		

MAINTENANCE OF TRAFFIC SUBSUMMARY (CONCRETE)

FRA-71-1.53

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NOTES: DRUMS ALONG THE MAINLINE SHALL BE SPACED AT 50' C-C AND SHALL BE OFFSET 3' FROM THE EDGE LINE UNLESS OTHERWISE NOTED.

ALL DIMENSIONS ARE TO THE TOE OF THE PORTABLE BARRIER (PB) AND THE FACE OF DRUMS.

IMPACT ATTENUATORS ARE UNIDIRECTIONAL UNLESS OTHERWISE NOTED.

THE CONTRACTOR SHALL PLACE SIGNS PER SCD MT-105.10.

ANY TEMPORARY DRAINAGE ITEMS AND UNDERDRAINS REQUIRED FOR MOT PURPOSES ARE SHOWN ON THE DRAINAGE PLANS. QUANTITIES FOR THESE ITEMS ARE INCLUDED IN THE DRAINAGE SUBSUMMARY.

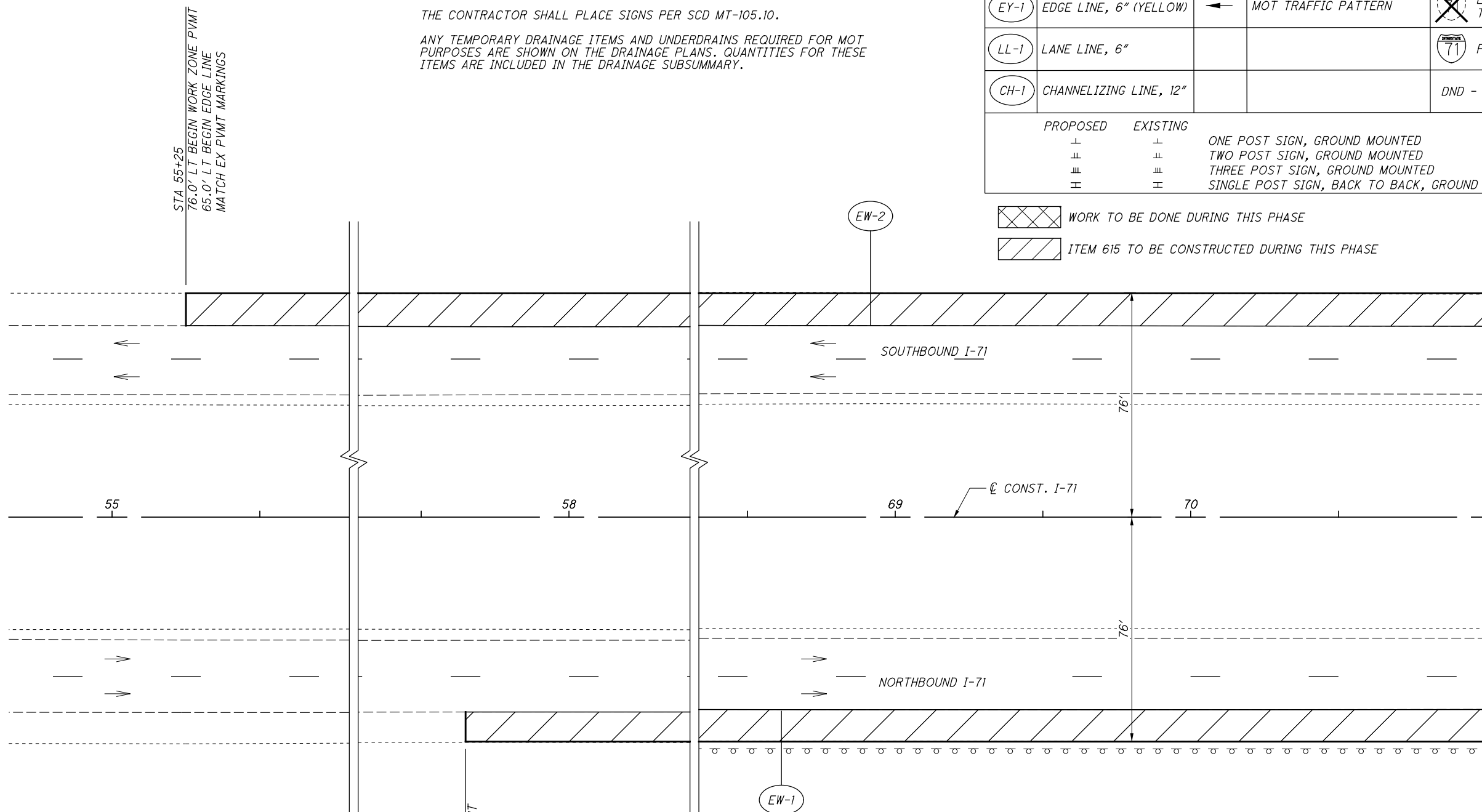
LEGEND

EW-1	EDGE LINE, 6" (WHITE)	←	EXISTING TRAFFIC PATTERN		EXISTING SIGN
EY-1	EDGE LINE, 6" (YELLOW)	←	MOT TRAFFIC PATTERN		EXISTING SIGN TO BE REMOVED
LL-1	LANE LINE, 6"				PROPOSED SIGN
CH-1	CHANNELIZING LINE, 12"				DND - DO NOT DISTURB

PROPOSED	EXISTING	
±	±	ONE POST SIGN, GROUND MOUNTED
±±	±±	TWO POST SIGN, GROUND MOUNTED
±±±	±±±	THREE POST SIGN, GROUND MOUNTED
±±±±	±±±±	SINGLE POST SIGN, BACK TO BACK, GROUND MOUNTED

- WORK TO BE DONE DURING THIS PHASE
- ITEM 615 TO BE CONSTRUCTED DURING THIS PHASE



NOTES:

**\*ITEM 411, STABILIZED CRUSHED AGGREGATE**

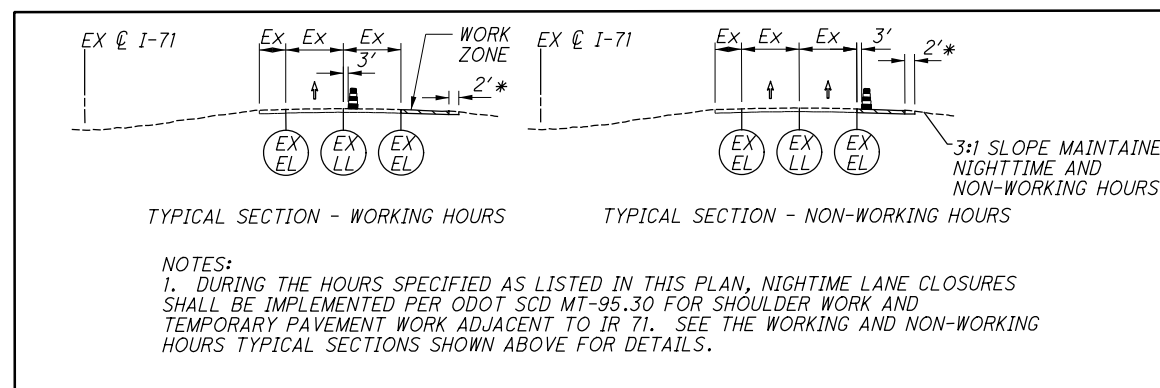
THIS AGGREGATE SHOULDER SHALL BE CONSTRUCTED ALONG THE EDGE OF THE WORK ZONE PAVEMENT AND SHALL BE 2 FEET WIDE BY 6 INCHES DEEP AND PLACED AT THE FOLLOWING LOCATIONS:  
 STA 71+05 TO STA 73+89, LT  
 STA 88+50 TO STA 100+30, LT  
 STA 90+93 TO STA 100+30, RT

**ITEM 254, PAVEMENT PLANING, ASPHALT CONCRETE**

THE CONTRACTOR SHALL PLANE 9 INCHES OF EXISTING OUTSIDE ASPHALT CONCRETE SHOULDER DOWN TO THE EXISTING ITEM 304, AGGREGATE BASE WHICH WILL REMAIN IN PLACE.

**ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN A**

ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN A, SHALL BE USED TO RECONSTRUCT THE OUTSIDE SHOULDERS SHOWN IN PRE-PHASE 1A. THE CONTRACTOR SHALL CONSTRUCT 7 1/2 INCHES OF ITEM 302, ASPHALT CONCRETE BASE IN ONE LIFT AND 1 1/2 INCHES OF ITEM 441, TYPE 1. THE WORK ZONE PAVEMENT OUTSIDE THE PROJECT LIMITS SHALL BE LEFT IN PLACE AT THE END OF THIS PROJECT.



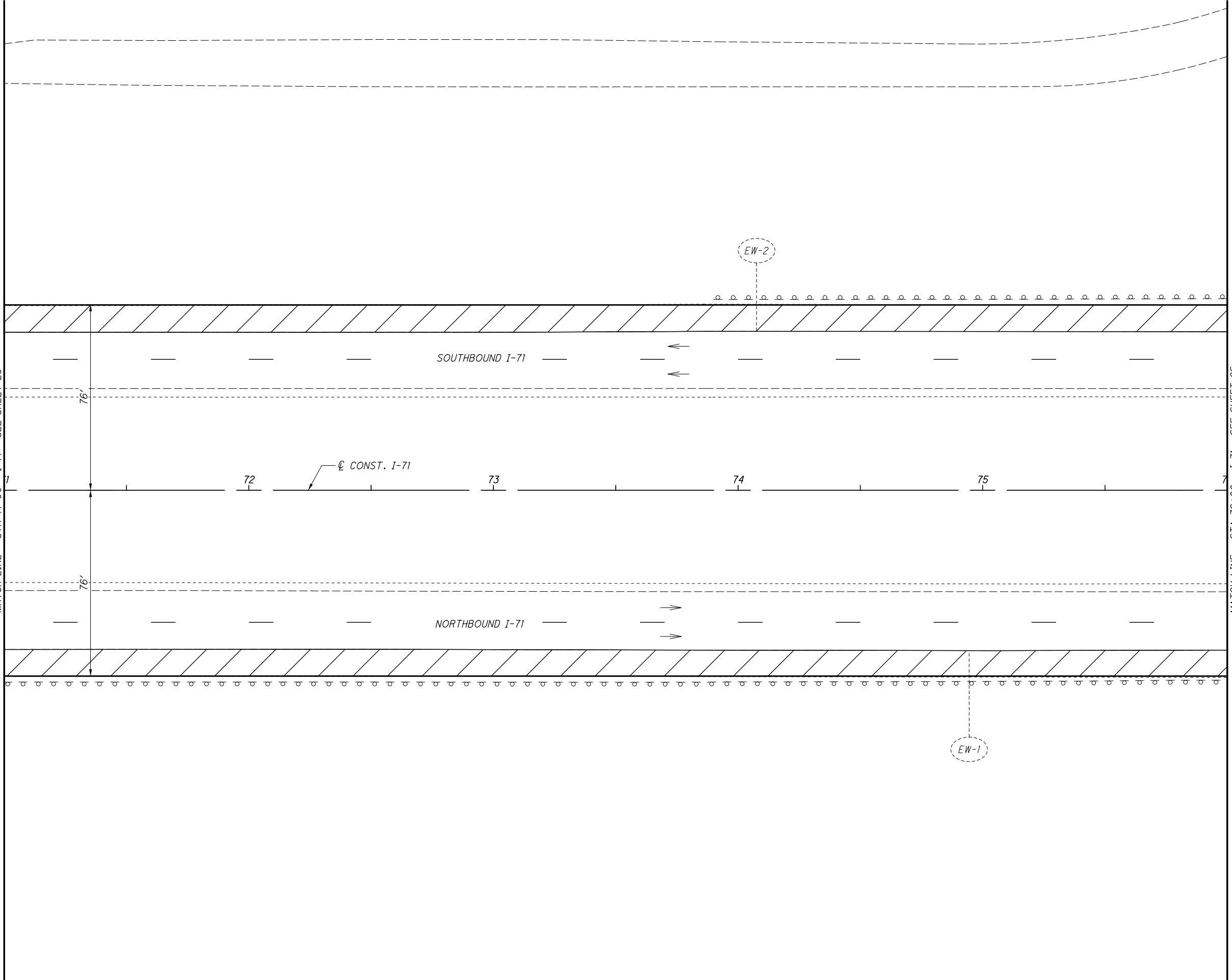
NOTES:  
 1. DURING THE HOURS SPECIFIED AS LISTED IN THIS PLAN, NIGHTTIME LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMPORARY PAVEMENT WORK ADJACENT TO I-71. SEE THE WORKING AND NON-WORKING HOURS TYPICAL SECTIONS SHOWN ABOVE FOR DETAILS.



MAINTENANCE OF TRAFFIC - PRE-PHASE 1A  
(ASPHALT) I-71 STA 54+25 TO STA 71+00

FRA-71-1.53

MATCH LINE - STA 71+00 - I-71 - SEE SHEET 23



MATCH LINE - STA 76+00 - I-71 - SEE SHEET 25

FOR LEGEND, SEE SHEET 23

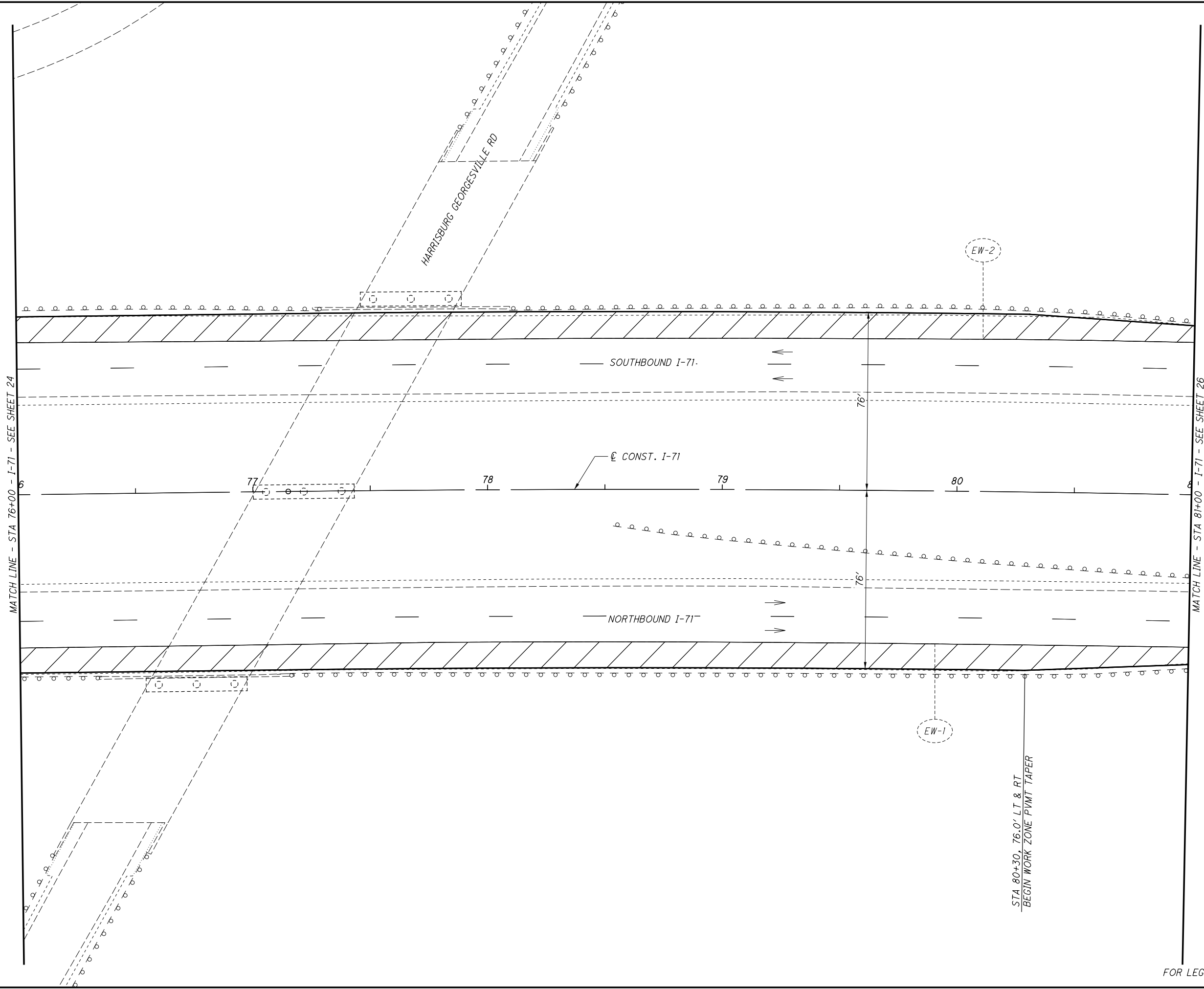
CALCULATED	EGD	CHECKED	DLW

0 20 40  
HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PRE-PHASE 1A  
(ASPHALT) I-71 STA 71+00 TO STA 76+00**

**FRA-71-1.53**





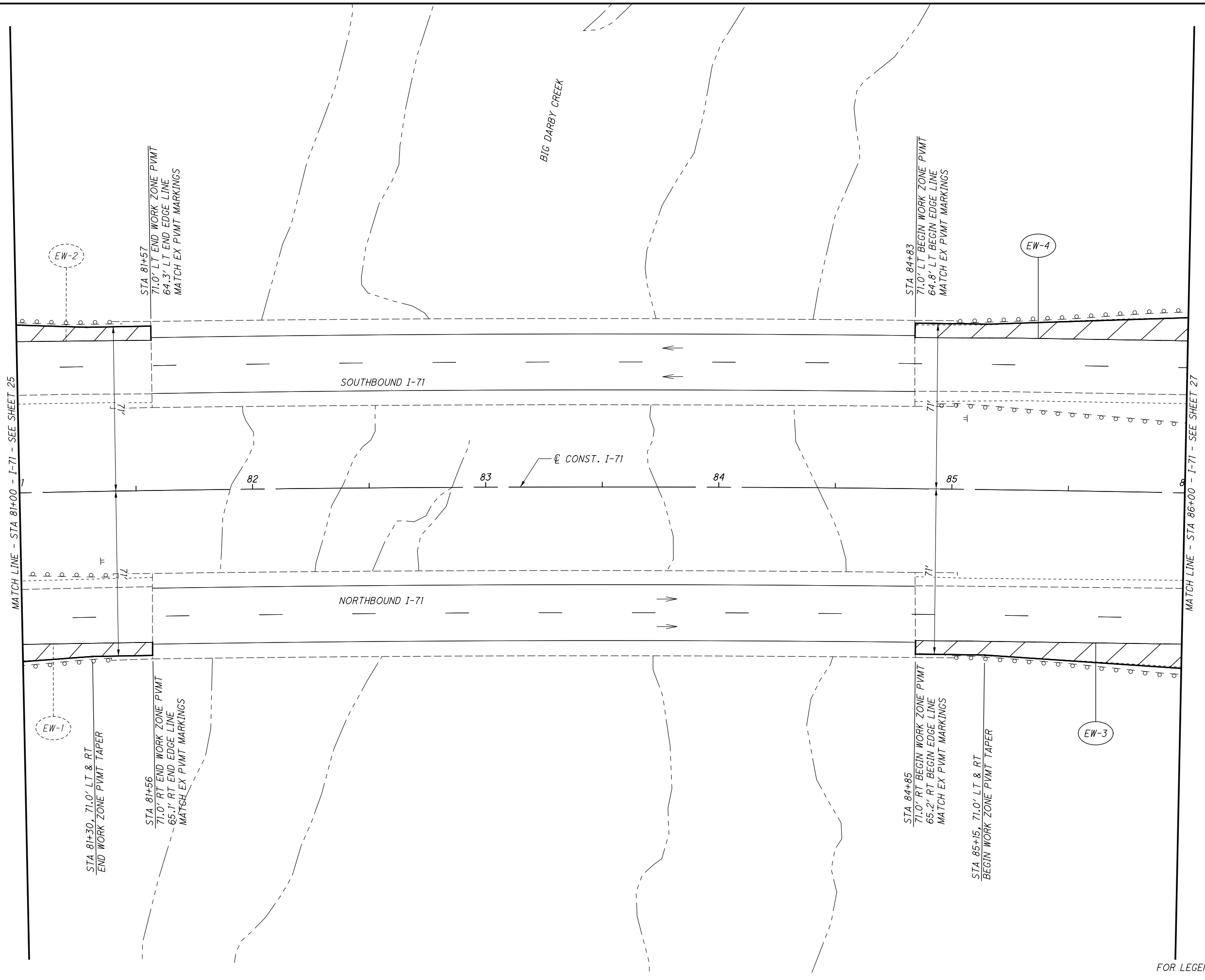
CALCULATED	EGD	CHECKED	DLW

0 20 40  
HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PRE-PHASE 1A  
(ASPHALT) I-71 STA 76+00 TO STA 81+00**

**FRA-71-1.53**

FOR LEGEND, SEE SHEET 23



CALCULATED  
EGD  
CHECKED  
DLW

0 10 20 40  
HORIZONTAL  
SCALE IN FEET

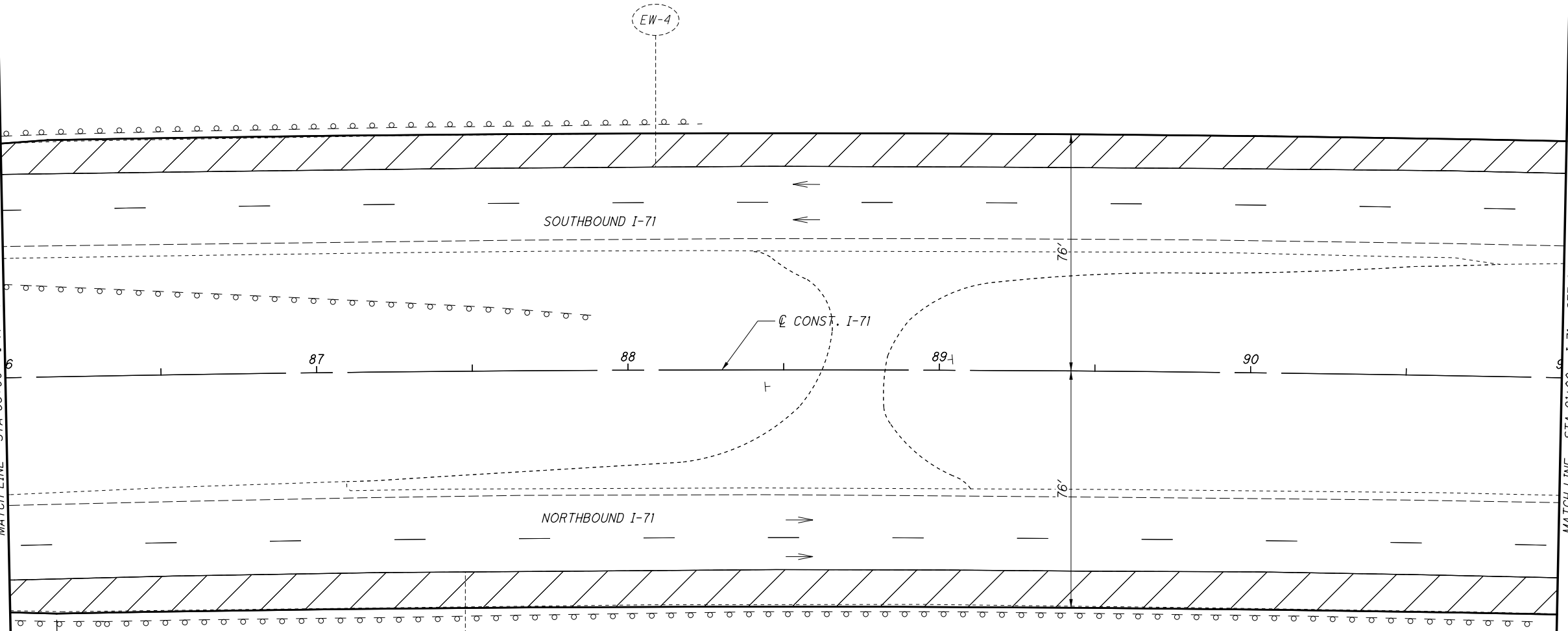
**MAINTENANCE OF TRAFFIC - PRE-PHASE 1A  
(ASPHALT) I-71 STA 81+00 TO STA 86+00**

**FRA -71-1.53**

FOR LEGEND, SEE SHEET 23

MATCH LINE - STA 86+00 - I-71 - SEE SHEET 26

STA 86+15, 76.0' LT & RT  
END WORK ZONE PAVT TAPER



FOR LEGEND, SEE SHEET 23

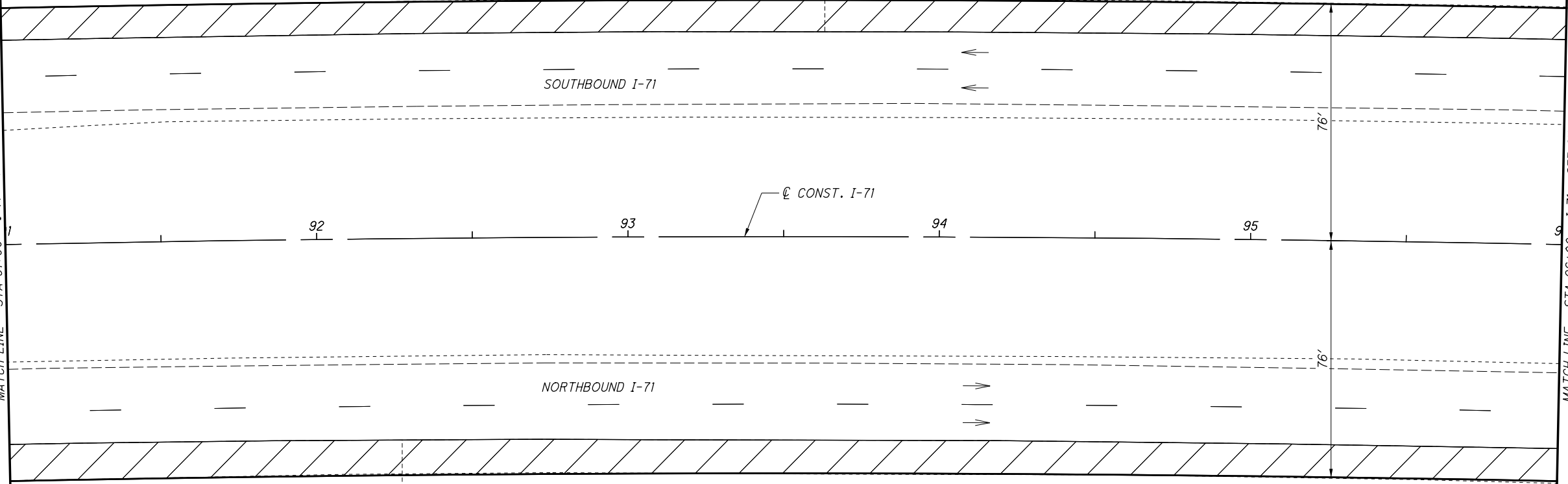
CALCULATED	EGD	CHECKED	DLW

0 20 40  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PRE-PHASE 1A  
(ASPHALT) I-71 STA 86+00 TO STA 91+00**

**FRA-71-1.53**

MATCH LINE - STA 91+00 - I-71 - SEE SHEET 27



MATCH LINE - STA 96+00 - I-71 - SEE SHEET 29

FOR LEGEND, SEE SHEET 23

CALCULATED	EGD	CHECKED	DLW

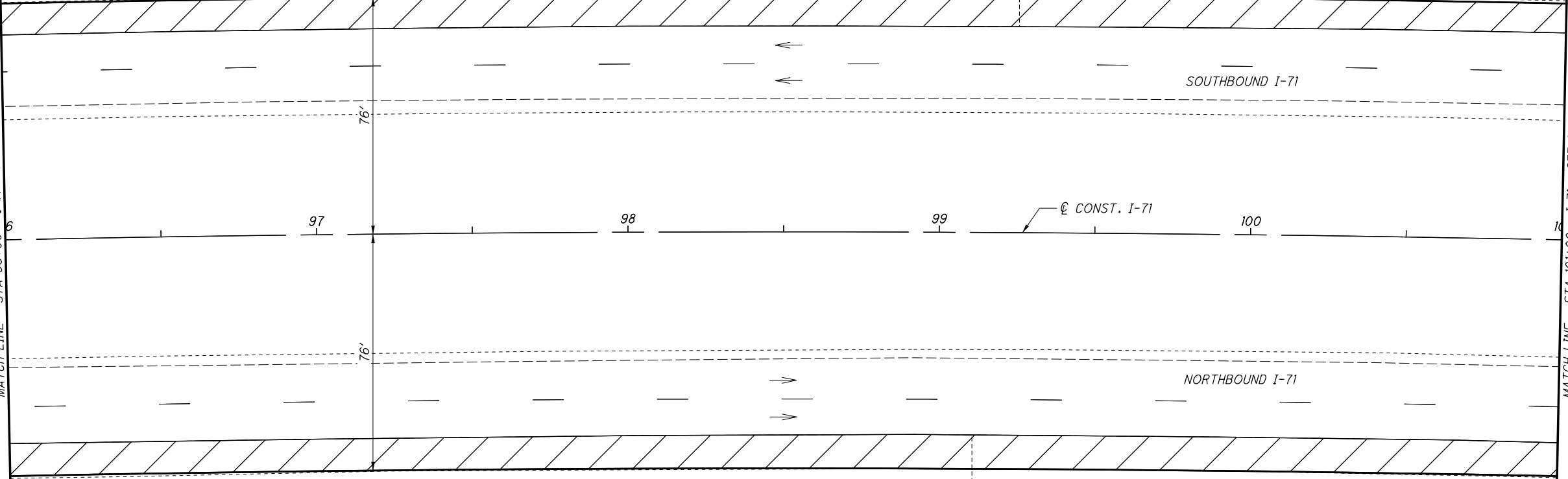
0 20 40  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PRE-PHASE 1A  
(ASPHALT) I-71 STA 91+00 TO STA 96+00**

**FRA-71-1.53**

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MATCH LINE - STA 96+00 - I-71 - SEE SHEET 28



MATCH LINE - STA 101+00 - I-71 - SEE SHEET 30

FOR LEGEND, SEE SHEET 23

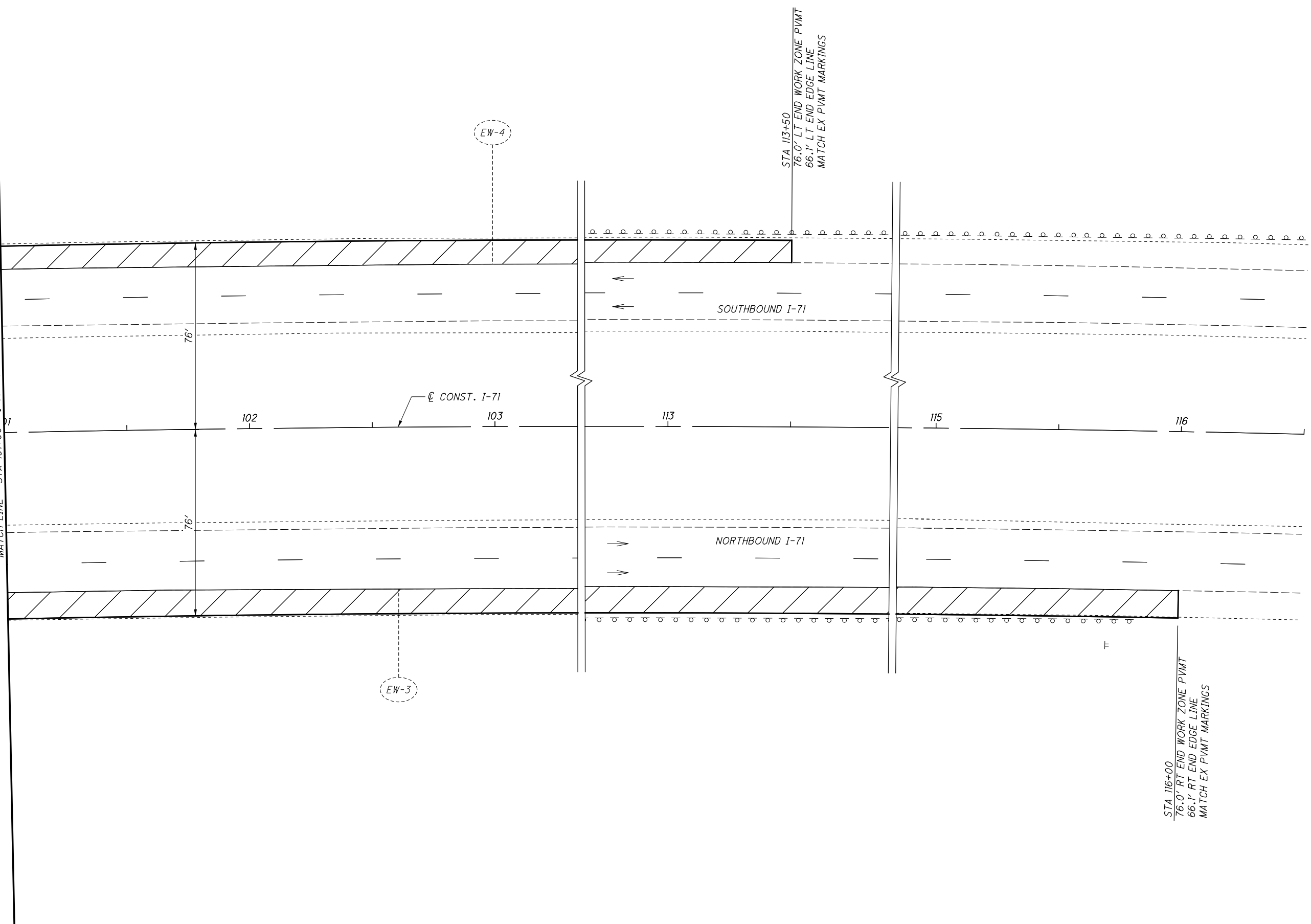
CALCULATED	EGD	CHECKED	DLW

0 20 40  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PRE-PHASE 1A**  
**(ASPHALT) I-71 STA 96+00 TO STA 101+00**

**FRA-71-1.53**

MATCH LINE - STA 101+00 - I-71 - SEE SHEET 30



EW-3

EW-4

STA 113+50  
76.0' LT END WORK ZONE PVMT  
66.1' LT END EDGE LINE  
MATCH EX PVMT MARKINGS

STA 116+00  
76.0' RT END WORK ZONE PVMT  
66.1' RT END EDGE LINE  
MATCH EX PVMT MARKINGS

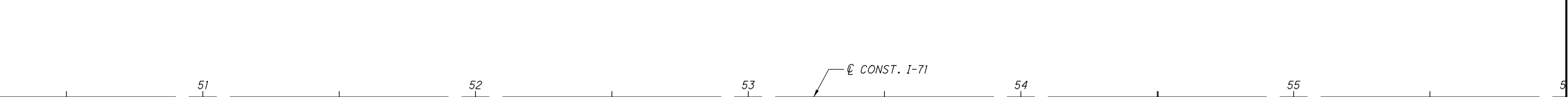
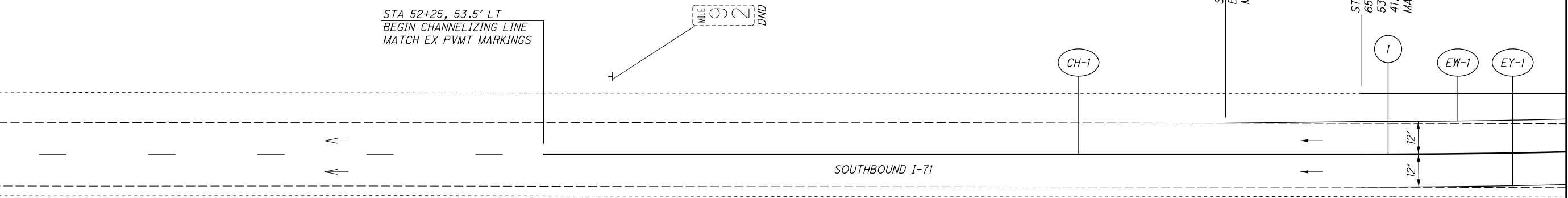
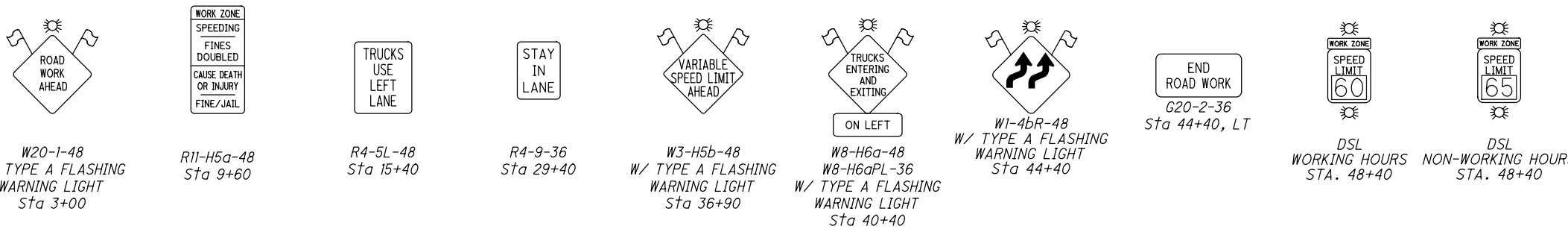
CALCULATED	EGD
CHECKED	DLW

0 20 40  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PRE-PHASE 1A  
(ASPHALT) I-71 STA 101+00 TO STA 116+50**

**FRA-71-1.53**

THE CONTRACTOR SHALL INSTALL THE FOLLOWING ADVANCE WARNING SIGNS ON BOTH SIDES OF THE NORTHBOUND I-71 ROADWAY AT THE LOCATIONS SHOWN PRIOR TO THE START OF PHASE 1B CONSTRUCTION.



**NOTES:**

**ITEM 411, STABILIZED CRUSHED AGGREGATE**  
 THIS AGGREGATE SHOULDER SHALL BE CONSTRUCTED ALONG THE EDGE OF THE WORK ZONE PAVEMENT AND SHALL BE 2 FEET WIDE BY 6 INCHES DEEP AND PLACED AT THE FOLLOWING LOCATIONS:  
 STA 59+00 TO STA 70+50, LT  
 STA 61 90 TO STA 70+50, RT  
 STA 101+00 TO STA 109+50, LT  
 STA 101+00 TO STA 112+50, RT

**ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN B**  
 ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN B, SHALL BE USED FOR ALL WORK ZONE PAVEMENT CONSTRUCTED IN THE MEDIAN. THE CONTRACTOR WILL BE REQUIRED TO USE ITEM 304, AGGREGATE BASE, IN THE COURSE MAKE UP. THE CONTRACTOR WILL NOT BE PERMITTED TO USE ITEMS 301, 302 OR 441 IN LIEU OF 6 INCHES OF 304 AGGREGATE BASE. THE WORK ZONE PAVEMENT OUTSIDE THE PROJECT LIMITS SHALL BE LEFT IN PLACE AT THE END OF THIS PROJECT.

NEW SHEET

FOR LEGEND, SEE SHEET 23

**MAINTENANCE OF TRAFFIC - PRE-PHASE 1B  
(ASPHALT) I-71 STA 50+75 TO STA 56+00**

**FRA-71-1.53**

30A  
285

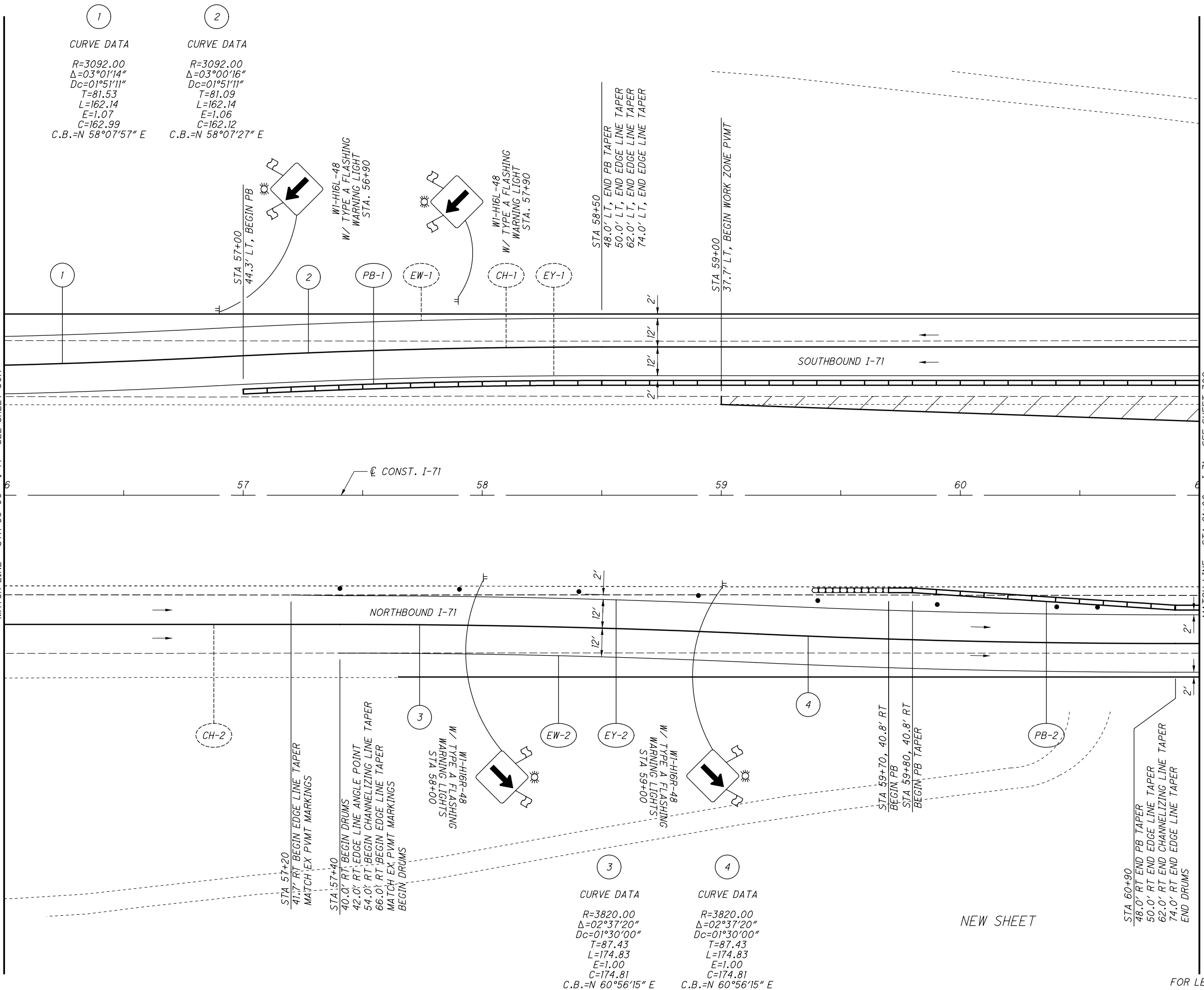
CALCULATED EGD CHECKED DLW

MATCH LINE - STA 56+00 - I-71 - SEE SHEET 30B

X:\4037000\121957.15\93496\MOT\sheets\93496MP051.dgn Sheet 11/19/2018 3:00:02 PM 1636dcb

X:\4037000\121957.15\93496\MOT\sheets\93496MPO52.dgn Sheet 11/19/2018 3:00:02 PM 1636dcb

MATCH LINE - STA 56+00 - I-71 - SEE SHEET 30A



1	2
<b>CURVE DATA</b>	<b>CURVE DATA</b>
R=3092.00	R=3092.00
Δ=03°01'14"	Δ=03°00'16"
Dc=01°51'11"	Dc=01°51'11"
T=81.53	T=81.09
L=162.14	L=162.14
E=1.07	E=1.06
C=162.99	C=162.12
C.B.=N 58°07'57" E	C.B.=N 58°07'27" E

3	4
<b>CURVE DATA</b>	<b>CURVE DATA</b>
R=3820.00	R=3820.00
Δ=02°37'20"	Δ=02°37'20"
Dc=01°30'00"	Dc=01°30'00"
T=87.43	T=87.43
L=174.83	L=174.83
E=1.00	E=1.00
C=174.81	C=174.81
C.B.=N 60°56'15" E	C.B.=N 60°56'15" E

NEW SHEET

FOR LEGEND, SEE SHEET 23

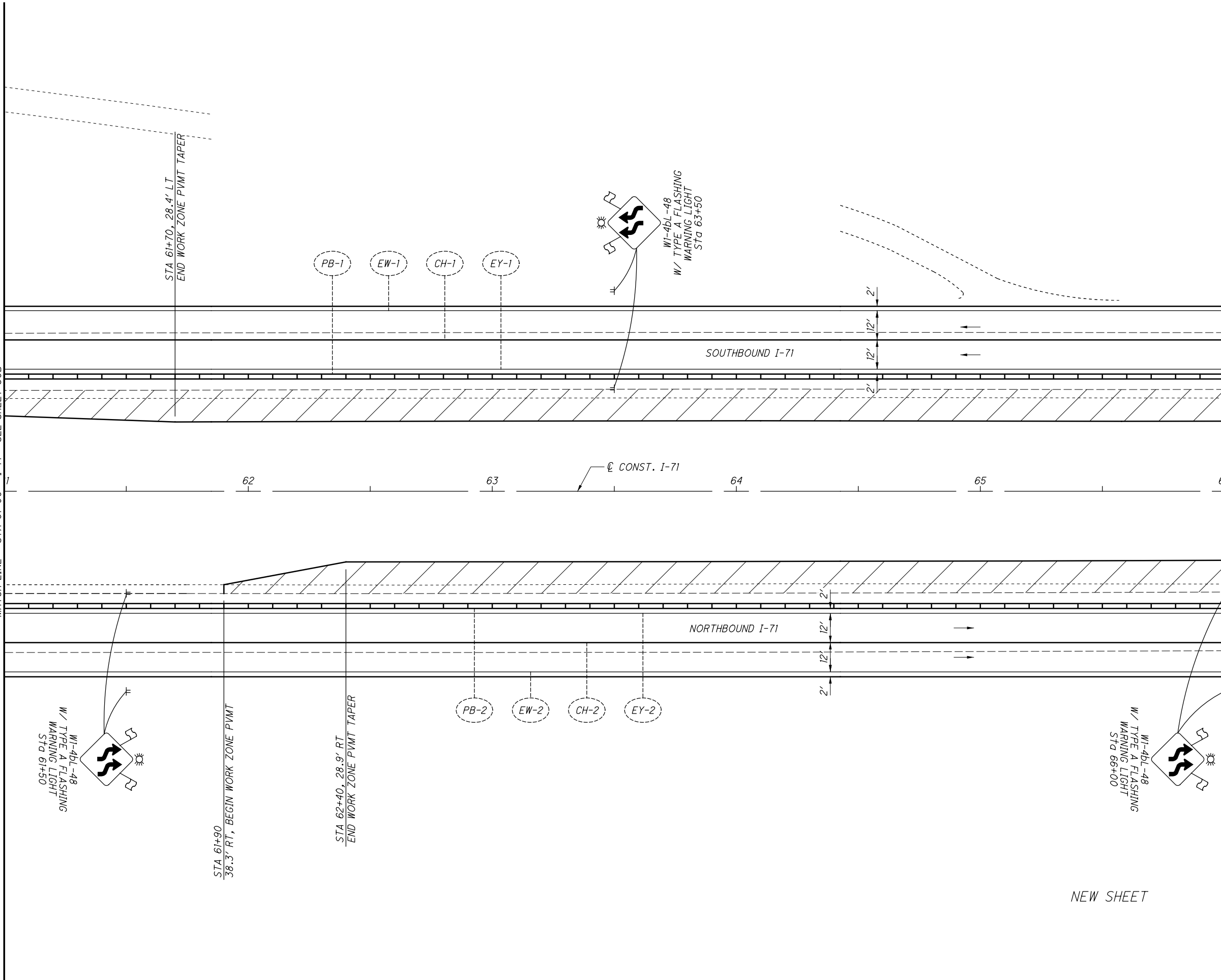


**MAINTENANCE OF TRAFFIC - PRE-PHASE 1B  
(ASPHALT) I-71 STA 56+00 TO STA 61+00**

**FRA-71-1.53**



MATCH LINE - STA 61+00 - I-71 - SEE SHEET 30B



NEW SHEET

FOR LEGEND, SEE SHEET 23

CALCULATED	EGD
CHECKED	DLW

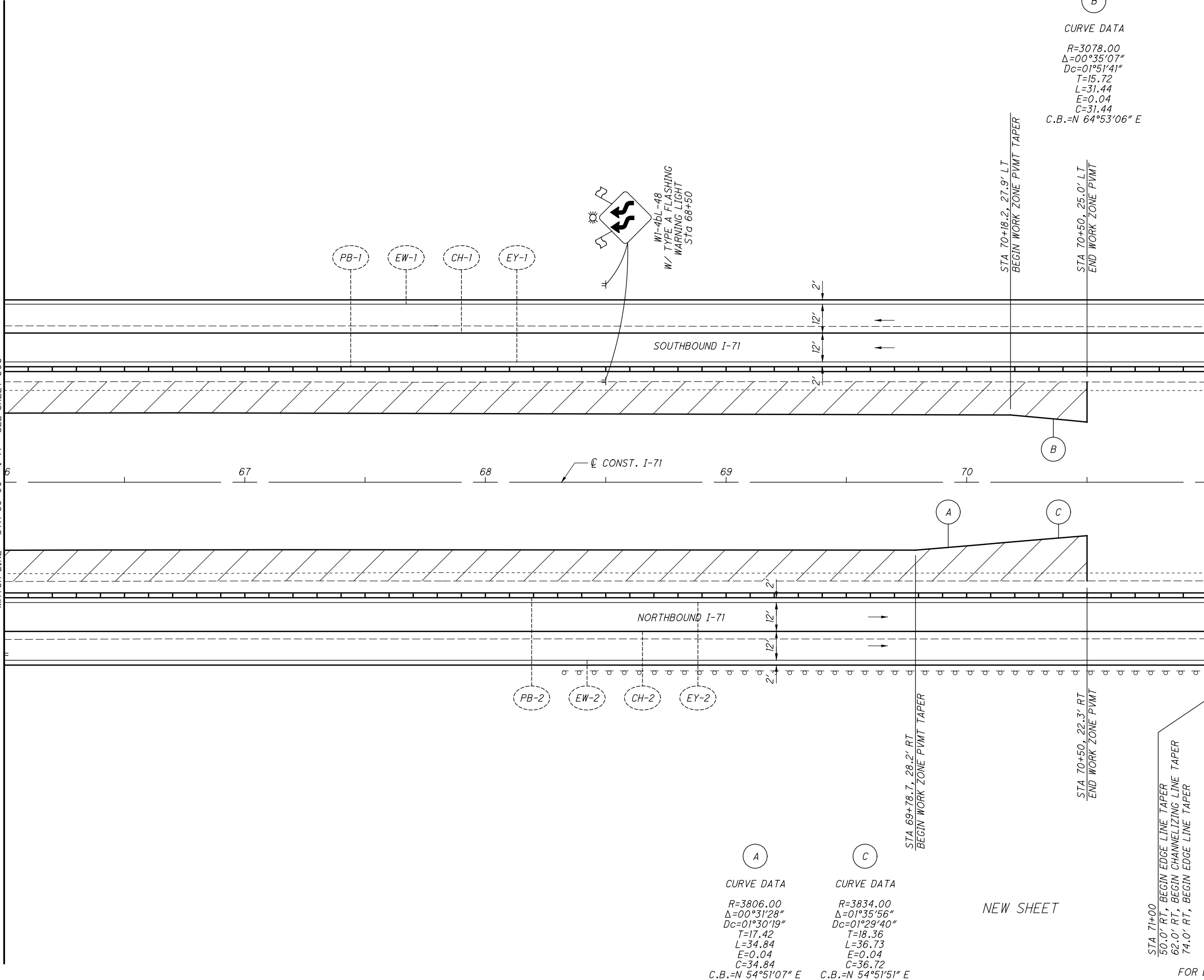
0 20 40  
HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PRE-PHASE 1B  
(ASPHALT) I-71 STA 61+00 TO STA 66+00**

**FRA-71-1.53**

30C  
285

MATCH LINE - STA 66+00 - I-71 - SEE SHEET 30C



(B)  
 CURVE DATA  
 R=3078.00  
 $\Delta=00^{\circ}35'07''$   
 $Dc=01^{\circ}51'41''$   
 T=15.72  
 L=31.44  
 E=0.04  
 C=31.44  
 C.B.=N 64°53'06" E

(A)  
 CURVE DATA  
 R=3806.00  
 $\Delta=00^{\circ}31'28''$   
 $Dc=01^{\circ}30'19''$   
 T=17.42  
 L=34.84  
 E=0.04  
 C=34.84  
 C.B.=N 54°51'07" E

(C)  
 CURVE DATA  
 R=3834.00  
 $\Delta=01^{\circ}35'56''$   
 $Dc=01^{\circ}29'40''$   
 T=18.36  
 L=36.73  
 E=0.04  
 C=36.72  
 C.B.=N 54°51'51" E

NEW SHEET

STA 71+00  
 50.0' RT, BEGIN EDGE LINE TAPER  
 62.0' RT, BEGIN CHANNELIZING LINE TAPER  
 74.0' RT, BEGIN EDGE LINE TAPER

FOR LEGEND, SEE SHEET 23

CALCULATED  
 EGD  
 CHECKED  
 DLW

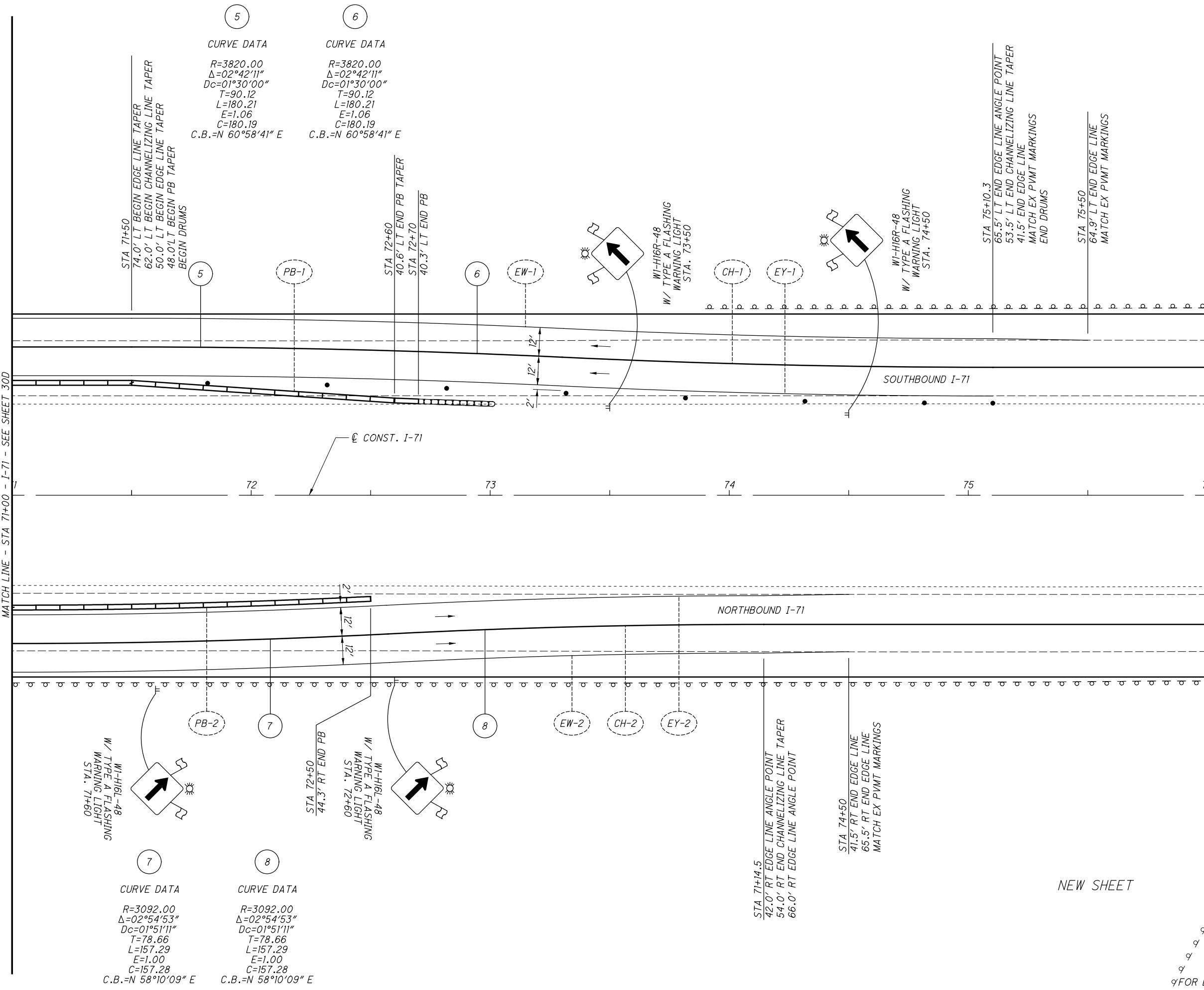
0 20 40  
 HORIZONTAL  
 SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PRE-PHASE 1B  
 (ASPHALT) I-71 STA 66+00 TO STA 71+00**

**FRA-71-1.53**

MATCH LINE - STA 71+00 - I-71 - SEE SHEET 30D

MATCH LINE - STA 76+00 - I-71 - SEE SHEET 30F



NEW SHEET

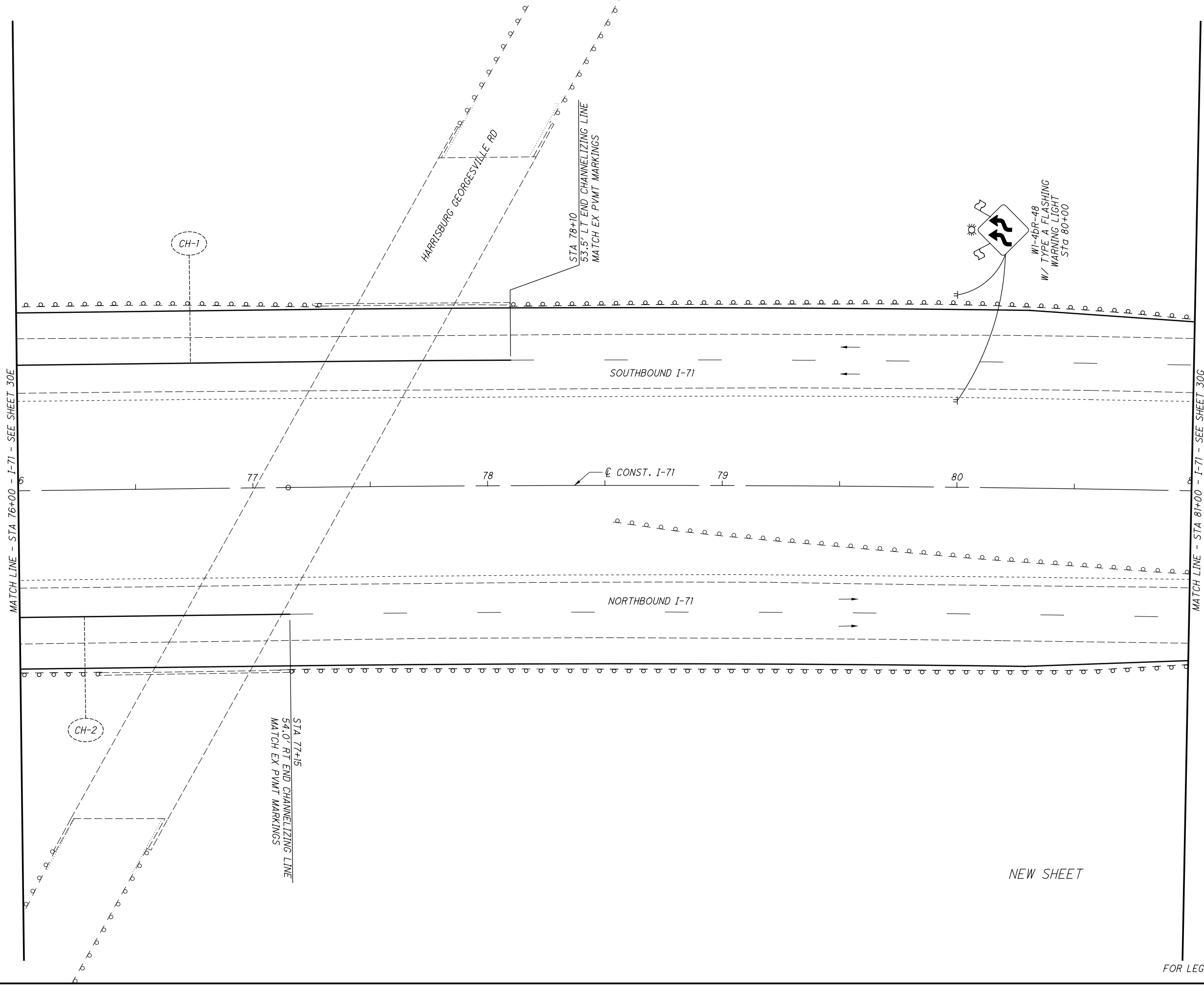
FOR LEGEND, SEE SHEET 23

CALCULATED  
EGD  
CHECKED  
DLW

0 20 40  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PRE-PHASE 1B  
(ASPHALT) I-71 STA 71+00 TO STA 76+00**

**FRA-71-1.53**



FOR LEGEND, SEE SHEET 23

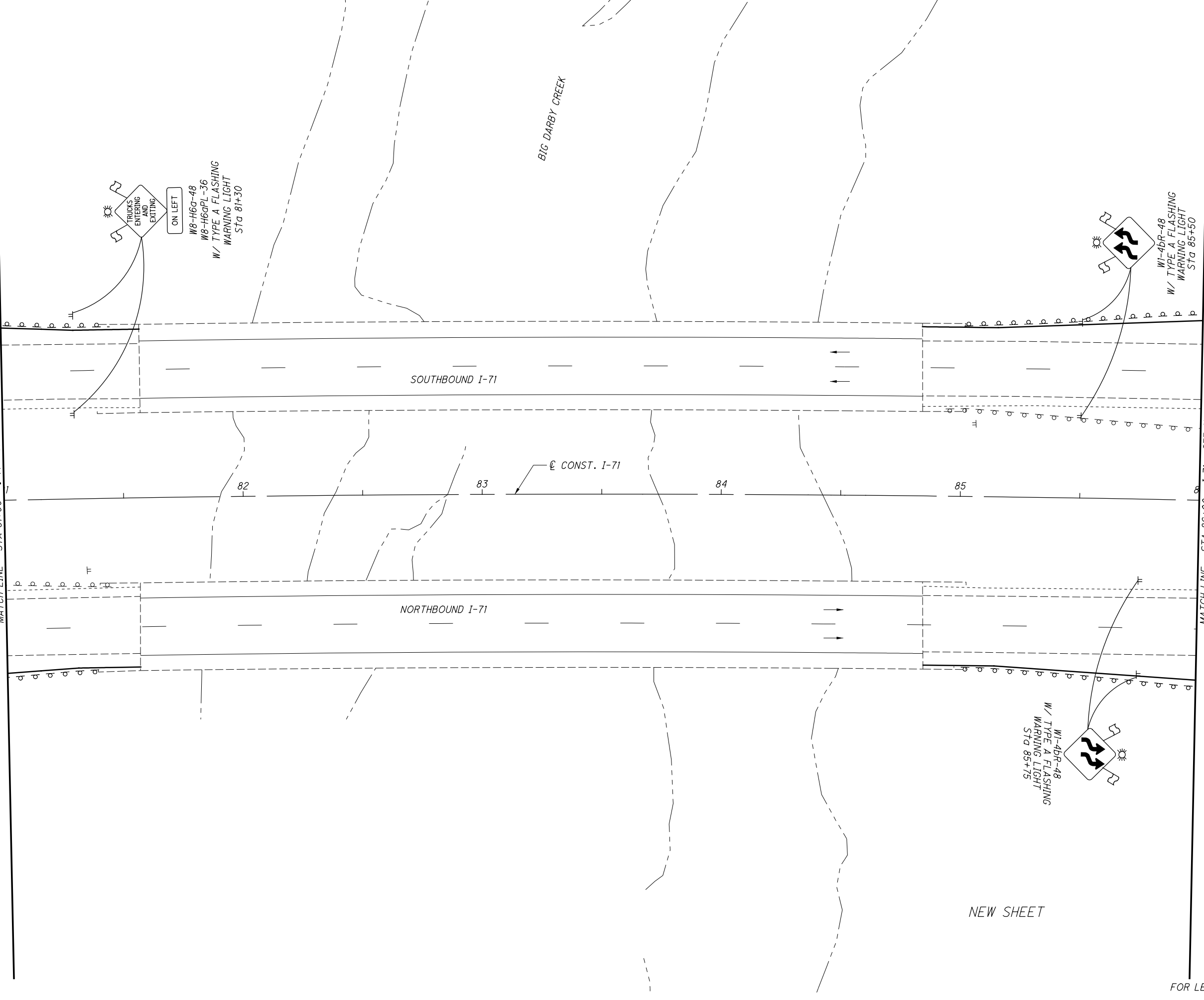
CALCULATED	EGD
CHECKED	DLW

0 20 40  
HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PRE-PHASE 1B  
(ASPHALT) I-71 STA 76+00 TO STA 81+00**

**FRA-71-1.53**

MATCH LINE - STA 81+00 - I-71 - SEE SHEET 30F



FOR LEGEND, SEE SHEET 23

CALCULATED	EGD
CHECKED	DLW

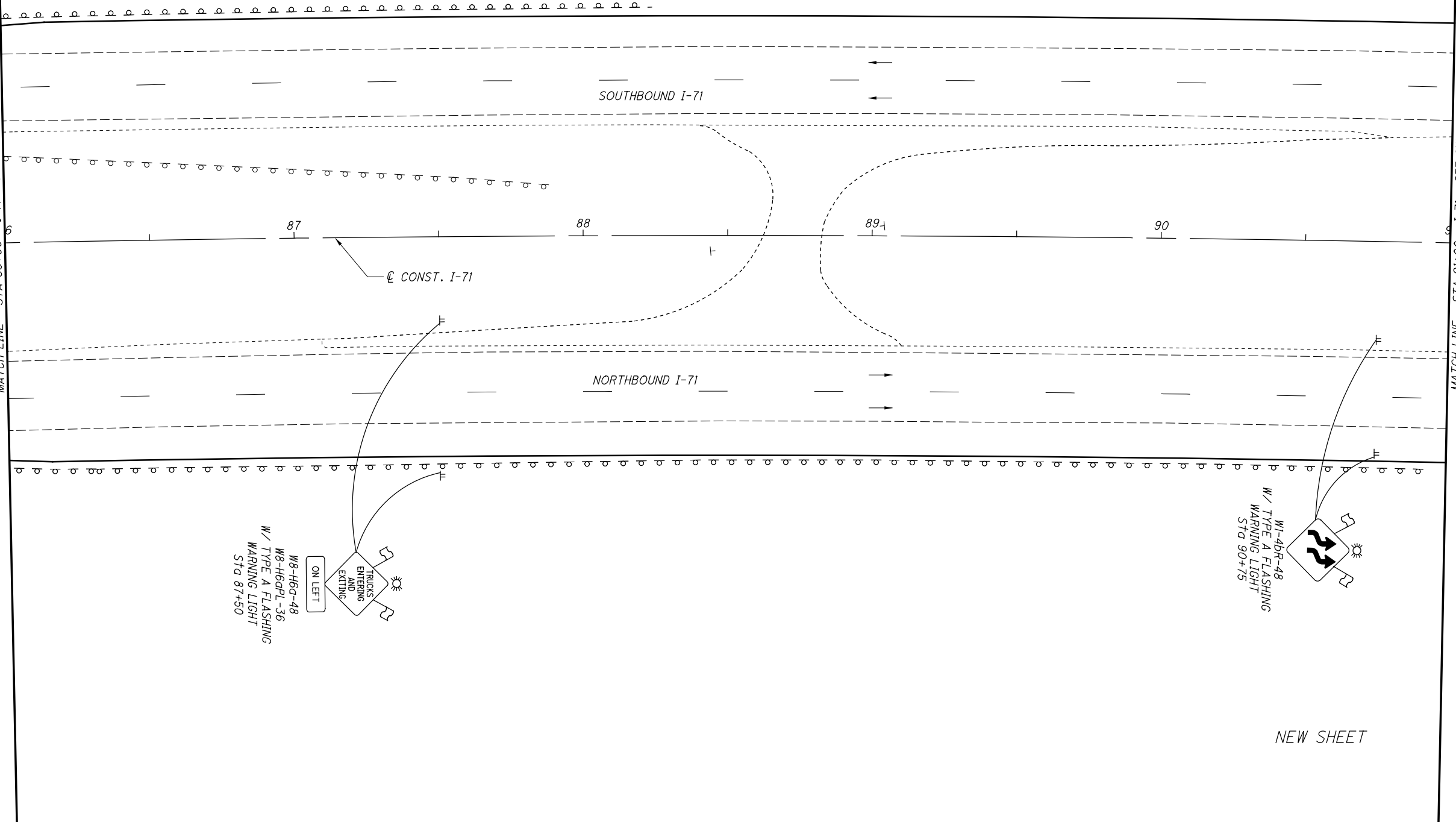
0 20 40  
HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PRE-PHASE 1B  
(ASPHALT) I-71 STA 81+00 TO STA 86+00**

**FRA-71-1.53**

MATCH LINE - STA 86+00 - I-71 - SEE SHEET 300

MATCH LINE - STA 91+00 - I-71 - SEE SHEET 301



FOR LEGEND, SEE SHEET 23

CALCULATED	EGD	CHECKED	DLW

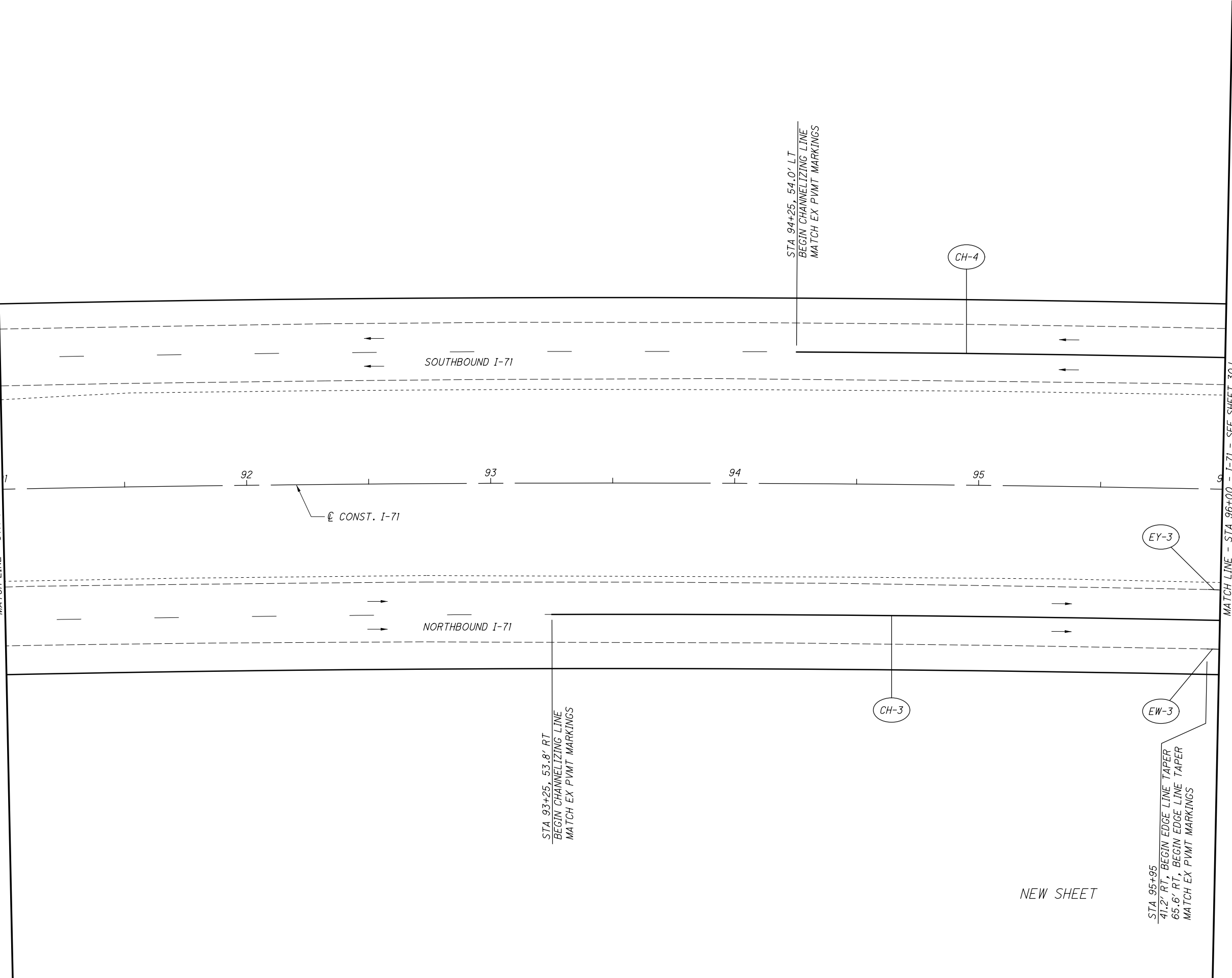
0 20 40  
HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PRE-PHASE 1B  
(ASPHALT) I-71 STA 86+00 TO STA 91+00**

**FRA-71-1.53**

30H  
285

MATCH LINE - STA 91+00 - I-71 - SEE SHEET 30H



NEW SHEET

STA 95+95  
41.2' RT, BEGIN EDGE LINE TAPER  
65.6' RT, BEGIN EDGE LINE TAPER  
MATCH EX PVTM MARKINGS

STA 93+25, 53.8' RT  
BEGIN CHANNELIZING LINE  
MATCH EX PVTM MARKINGS

STA 94+25, 54.0' LT  
BEGIN CHANNELIZING LINE  
MATCH EX PVTM MARKINGS

CONST. I-71

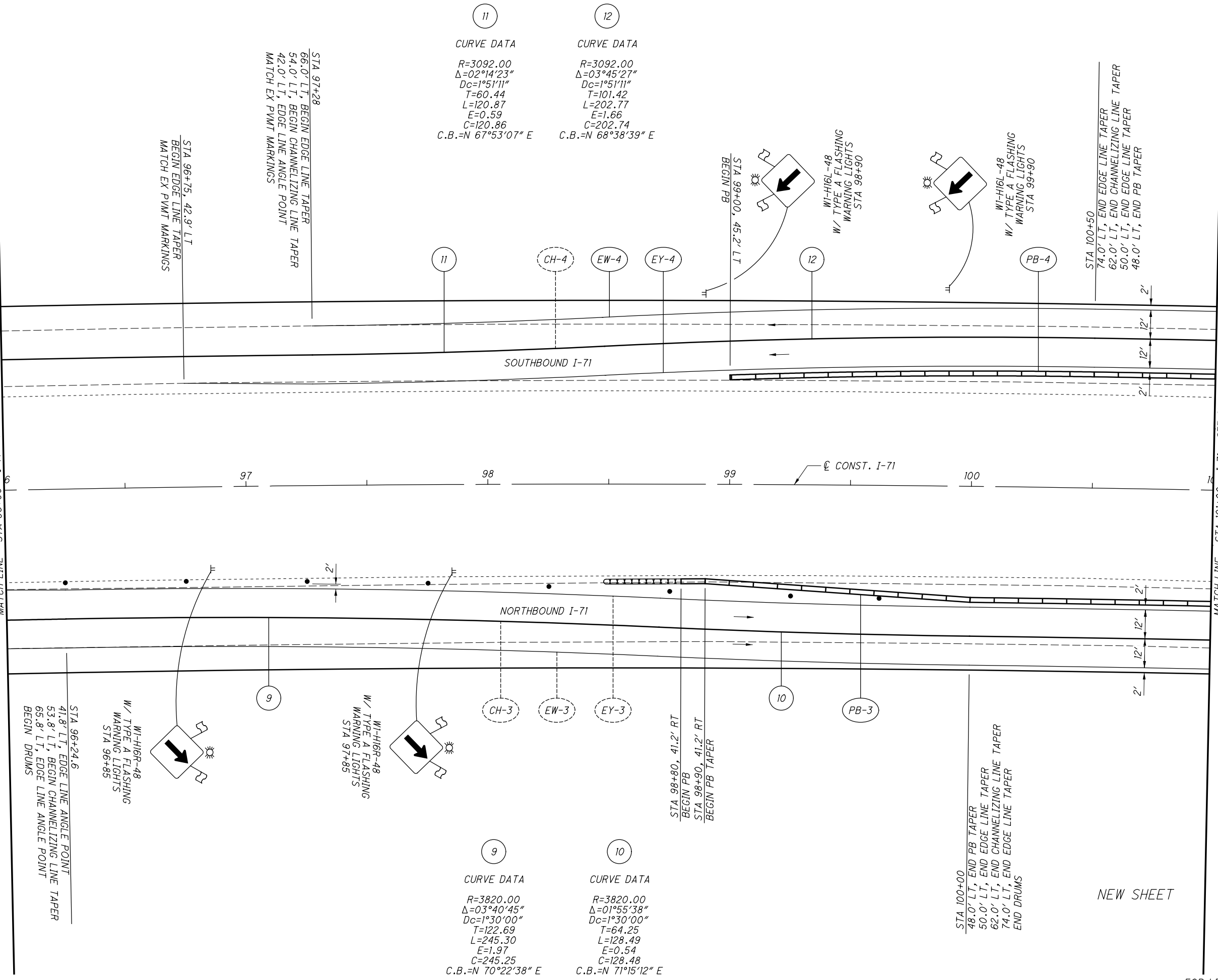
CALCULATED	
DLW	CHECKED
DLW	DLW

0 20 40  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PRE-PHASE 1B  
(ASPHALT) I-71 STA 91+00 TO STA 96+00**

**FRA-71-1.53**

MATCH LINE - STA 96+00 - I-71 - SEE SHEET 301



MATCH LINE - STA 101+00 - I-71 - SEE SHEET 30K

Station	Curve Data
11	CURVE DATA R=3092.00 $\Delta=02^{\circ}14'23''$ Dc=1^{\circ}51'11" T=60.44 L=120.87 E=0.59 C=120.86 C.B.=N 67^{\circ}53'07" E
12	CURVE DATA R=3092.00 $\Delta=03^{\circ}45'27''$ Dc=1^{\circ}51'11" T=101.42 L=202.77 E=1.66 C=202.74 C.B.=N 68^{\circ}38'39" E

Station	Curve Data
9	CURVE DATA R=3820.00 $\Delta=03^{\circ}40'45''$ Dc=1^{\circ}30'00" T=122.69 L=245.30 E=1.97 C=245.25 C.B.=N 70^{\circ}22'38" E
10	CURVE DATA R=3820.00 $\Delta=01^{\circ}55'38''$ Dc=1^{\circ}30'00" T=64.25 L=128.49 E=0.54 C=128.48 C.B.=N 71^{\circ}15'12" E

STA 100+00  
 48.0' LT, END PB TAPER  
 50.0' LT, END EDGE LINE TAPER  
 62.0' LT, END CHANNELIZING LINE TAPER  
 74.0' LT, END EDGE LINE TAPER  
 END DRUMS

NEW SHEET



MAINTENANCE OF TRAFFIC - PRE-PHASE 1B  
 (ASPHALT) I-71 STA 96+00 TO STA 101+00

FRA-71-1.53

30J  
285



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MATCH LINE - STA 101+00 - I-71 - SEE SHEET 30J

STA 101+00.0, 25.4' LT  
BEGIN WORK ZONE PVMIT TAPER

(D) NOT USED      (F) NOT USED      (H) CURVE DATA  
 R=3806.00  
 $\Delta=01^{\circ}01'51''$   
 $Dc=1^{\circ}30'19''$   
 T=32.24  
 L=68.48  
 E=0.15  
 C=68.48  
 C.B.=N 67°01'34" E

(H) (G)

(EW-4) (CH-4) (EY-4) (PB-4)

2' 12' 12' 2'

SOUTHBOUND I-71

CONST. I-71

102 103 104 105

STA 101+00.0, 22.8' RT  
BEGIN WORK ZONE PVMIT TAPER

STA 101+62.9, 28.1' RT  
END WORK ZONE PVMIT TAPER

(G) CURVE DATA  
 R=3106.00  
 $\Delta=1^{\circ}09'43''$   
 $Dc=1^{\circ}50'41''$   
 T=31.50  
 L=62.99  
 E=0.16  
 C=62.99  
 C.B.=N 75°44'45" E

(EW-3) (CH-3) (EY-3) (PB-3)

W/ TYPE A FLASHING WARNING LIGHT STA 103+50

2' 12' 12' 2'

NORTHBOUND I-71

MILE 103 DND

MILE 103 DND

W/ TYPE A FLASHING WARNING LIGHT STA 105+50

NEW SHEET

MATCH LINE - STA 106+00 - I-71 - SEE SHEET 30L

CALCULATED EGD CHECKED DLW

0 20 40 HORIZONTAL SCALE IN FEET

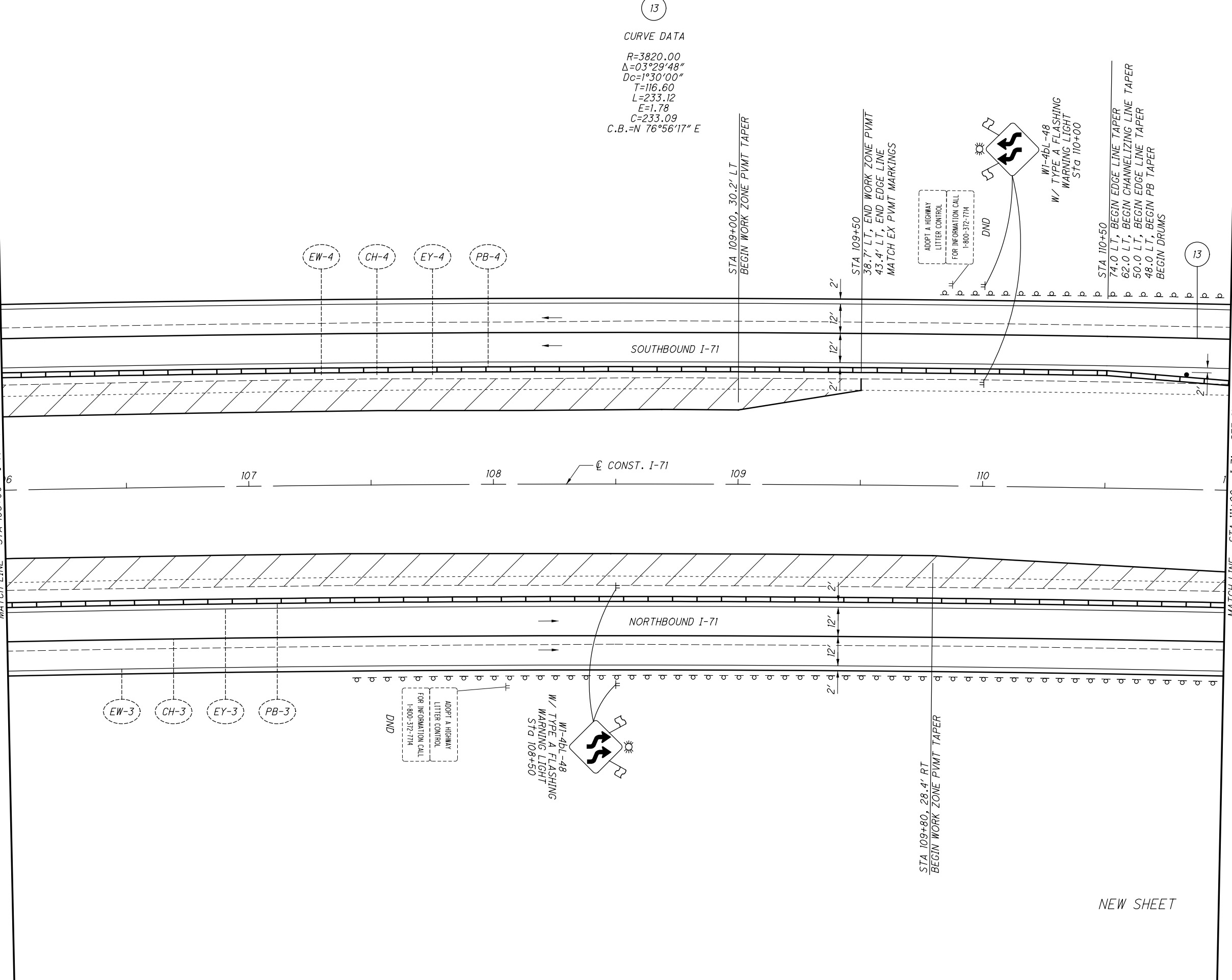
**MAINTENANCE OF TRAFFIC - PRE-PHASE 1B  
(ASPHALT) I-71 STA 101+00 TO STA 106+00**

**FRA-71-1.53**

30K  
285

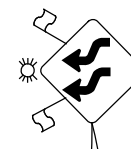
FOR LEGEND, SEE SHEET 23

MATCH LINE - STA 106+00 - I-71 - SEE SHEET 30K



13  
 CURVE DATA  
 R=3820.00  
 $\Delta=03^{\circ}29'48''$   
 $D_c=1^{\circ}30'00''$   
 T=116.60  
 L=233.12  
 E=1.78  
 C=233.09  
 C.B.=N 76°56'17" E

ADOPT A HIGHWAY  
 LITTER CONTROL  
 FOR INFORMATION CALL  
 1-800-372-7714



W1-4BL-48  
 W/ TYPE A FLASHING  
 WARNING LIGHT  
 STA 110+00

DND  
 ADOPT A HIGHWAY  
 LITTER CONTROL  
 FOR INFORMATION CALL  
 1-800-372-7714

W1-4BL-48  
 W/ TYPE A FLASHING  
 WARNING LIGHT  
 STA 108+50

NEW SHEET

MATCH LINE - STA 111+00 - I-71 - SEE SHEET 30M

CALCULATED	EGD	CHECKED	DLW

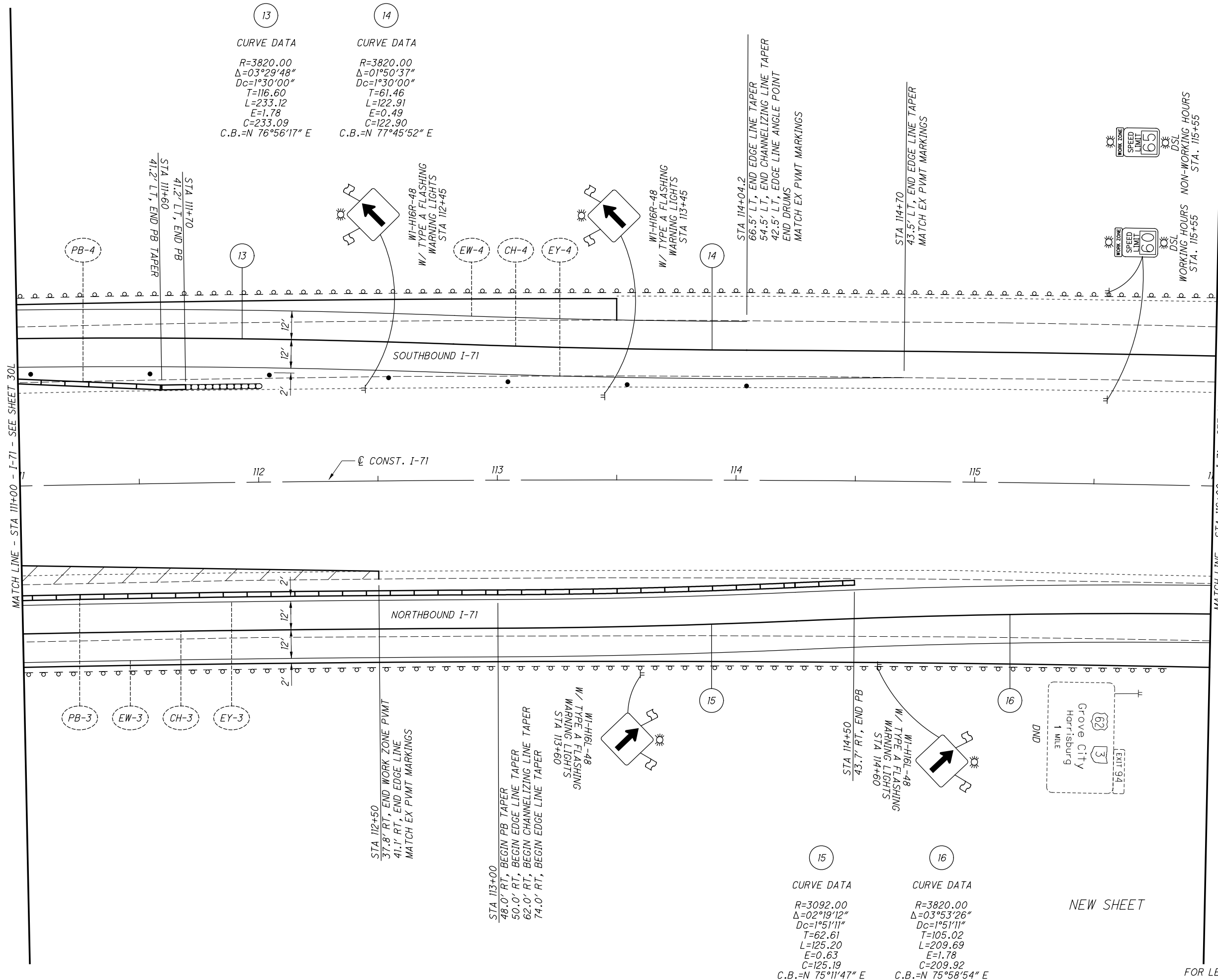
0 20 40  
 HORIZONTAL  
 SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PRE-PHASE 1B  
 (ASPHALT) I-71 STA 106+00 TO STA 111+00**

**FRA-71-1.53**

MATCH LINE - STA 111+00 - I-71 - SEE SHEET 30L

MATCH LINE - STA 116+00 - I-71 - SEE SHEET 30N



Station	Curve Data
13	R=3820.00 $\Delta=03^{\circ}29'48''$ Dc=1°30'00" T=116.60 L=233.12 E=1.78 C=233.09 C.B.=N 76°56'17" E
14	R=3820.00 $\Delta=01^{\circ}50'37''$ Dc=1°30'00" T=61.46 L=122.91 E=0.49 C=122.90 C.B.=N 77°45'52" E

Station	Curve Data
15	R=3092.00 $\Delta=02^{\circ}19'12''$ Dc=1°51'11" T=62.61 L=125.20 E=0.63 C=125.19 C.B.=N 75°11'47" E
16	R=3820.00 $\Delta=03^{\circ}53'26''$ Dc=1°51'11" T=105.02 L=209.69 E=1.78 C=209.92 C.B.=N 75°58'54" E

NEW SHEET

FOR LEGEND, SEE SHEET 23

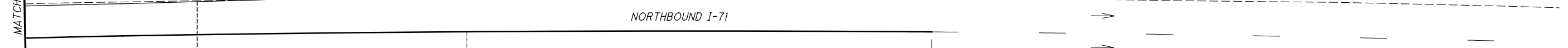
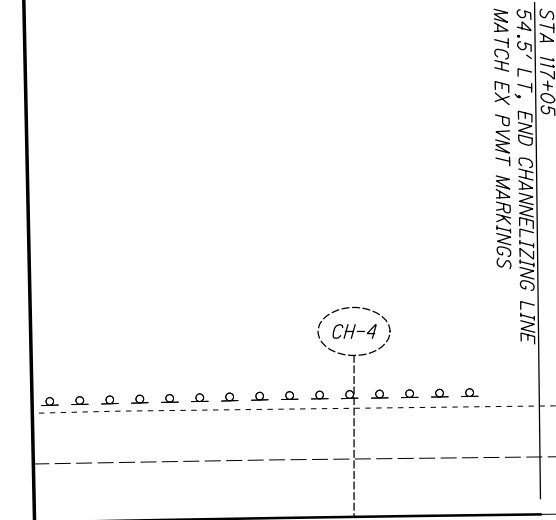
CALCULATED EGD CHECKED DLW

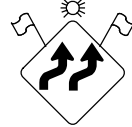
0 10 20 30 40 HORIZONTAL SCALE IN FEET

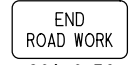
**MAINTENANCE OF TRAFFIC -PRE-PHASE 1B (ASPHALT) I-71 STA 111+00 TO STA 116+00**


**FRA-71-1.53**


MATCH LINE - STA 116+00 - I-71 - SEE SHEET 30M





- 


W1-4bR-48  
W/ TYPE A FLASHING  
WARNING LIGHT  
Sta 127+05
- 


END  
ROAD WORK  
G20-2-36  
Sta 127+05, LT
- 


W8-H6a-48  
W8-H6aPL-36  
W/ TYPE A FLASHING  
WARNING LIGHT  
Sta 131+05
- 

ON LEFT
- 

W3-H5b-48  
W/ TYPE A FLASHING  
WARNING LIGHT  
Sta 134+55
- 

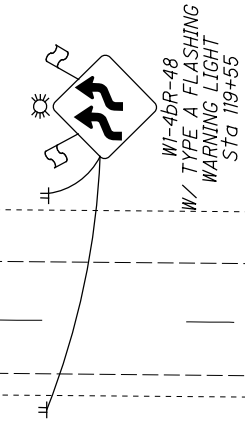
R4-9-36  
Sta 142+05
- 

R4-5L-48  
Sta 156+05
- 

R11-H5a-48  
Sta 161+85
- 

W20-1-48  
W/ TYPE A FLASHING  
WARNING LIGHT  
Sta 168+45

THE CONTRACTOR SHALL INSTALL THE FOLLOWING ADVANCE WARNING SIGNS ON BOTH SIDES OF THE SOUTHBOUND I-71 ROADWAY AT THE LOCATIONS SHOWN PRIOR TO THE START OF PHASE 1B CONSTRUCTION. COVER R2-1 SOUTHBOUND SIGN AT STA. 145+00.



CALCULATED EGD CHECKED DLW

0 20 40  
10 HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PRE-PHASE 1B  
(ASPHALT) I-71 STA 116+00 TO STA 121+75**

**FRA-71-1.53**

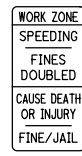
NEW SHEET

FOR LEGEND, SEE SHEET 23

THE CONTRACTOR SHALL INSTALL THE FOLLOWING ADVANCE WARNING SIGNS ON BOTH SIDES OF THE NORTHBOUND I-71 ROADWAY AT THE LOCATIONS SHOWN PRIOR TO THE START OF PHASE 1 CONSTRUCTION.



W20-1-48  
W/ TYPE A FLASHING  
WARNING LIGHT  
Sta 12+25



R11-H5a-48  
Sta 18+85



R4-5L-48  
Sta 24+65



R4-9-36  
Sta 38+65



W3-H5b-48  
W/ TYPE A FLASHING  
WARNING LIGHT  
Sta 46+15



ON LEFT  
W8-H6a-48  
W8-H6aPL-36  
W/ TYPE A FLASHING  
WARNING LIGHT  
Sta 49+20

STA 52+25  
53.5' LT, BEGIN LANE LINE  
MATCH EX PVMT MARKINGS

WILE 02  
DND

LL-1

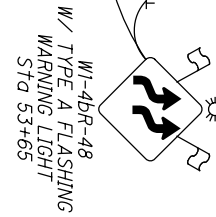
END  
ROAD WORK  
G20-2-36  
Sta 53+65

SOUTHBOUND I-71

CONST. I-71

NORTHBOUND I-71

WILE 02  
DND



W1-4BR-48  
W/ TYPE A FLASHING  
WARNING LIGHT  
Sta 53+65

STA 54+40  
54.0' RT, BEGIN LANE LINE  
MATCH EX PVMT MARKINGS

STA 54+75  
64.9' LT, BEGIN EDGE LINE TAPER  
MATCH EX PVMT MARKINGS

STA 55+25  
65.5' LT, END EDGE LINE TAPER  
41.4' LT, BEGIN EDGE LINE  
MATCH EX PVMT MARKINGS

EW-1

EY-1

LL-2

MATCH LINE - STA 56+00 - I-71 - SEE SHEET 32

CALCULATED EGD CHECKED DLW

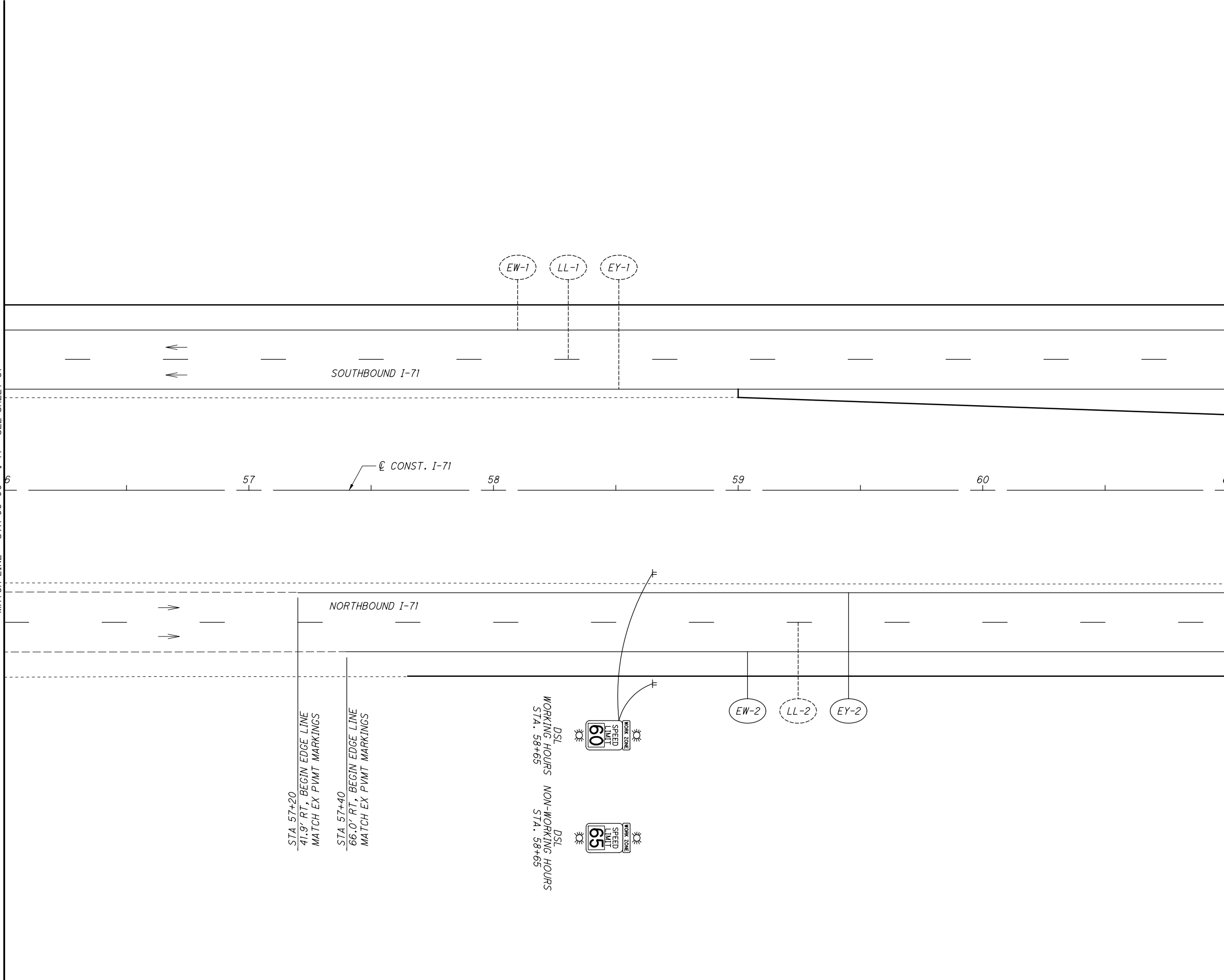
**MAINTENANCE OF TRAFFIC - PHASE 1  
(ASPHALT) I-71 STA 50+75 TO STA 56+00**

**FRA-71-1.53**

FOR LEGEND, SEE SHEET 23

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MATCH LINE - STA 56+00 - I-71 - SEE SHEET 31



STA 57+20  
41.9' RT, BEGIN EDGE LINE  
MATCH EX PVTM MARKINGS

STA 57+40  
66.0' RT, BEGIN EDGE LINE  
MATCH EX PVTM MARKINGS

DSL  
WORKING HOURS  
STA. 58+65



DSL  
NON-WORKING HOURS  
STA. 58+65



CALCULATED	EGD
CHECKED	DLW

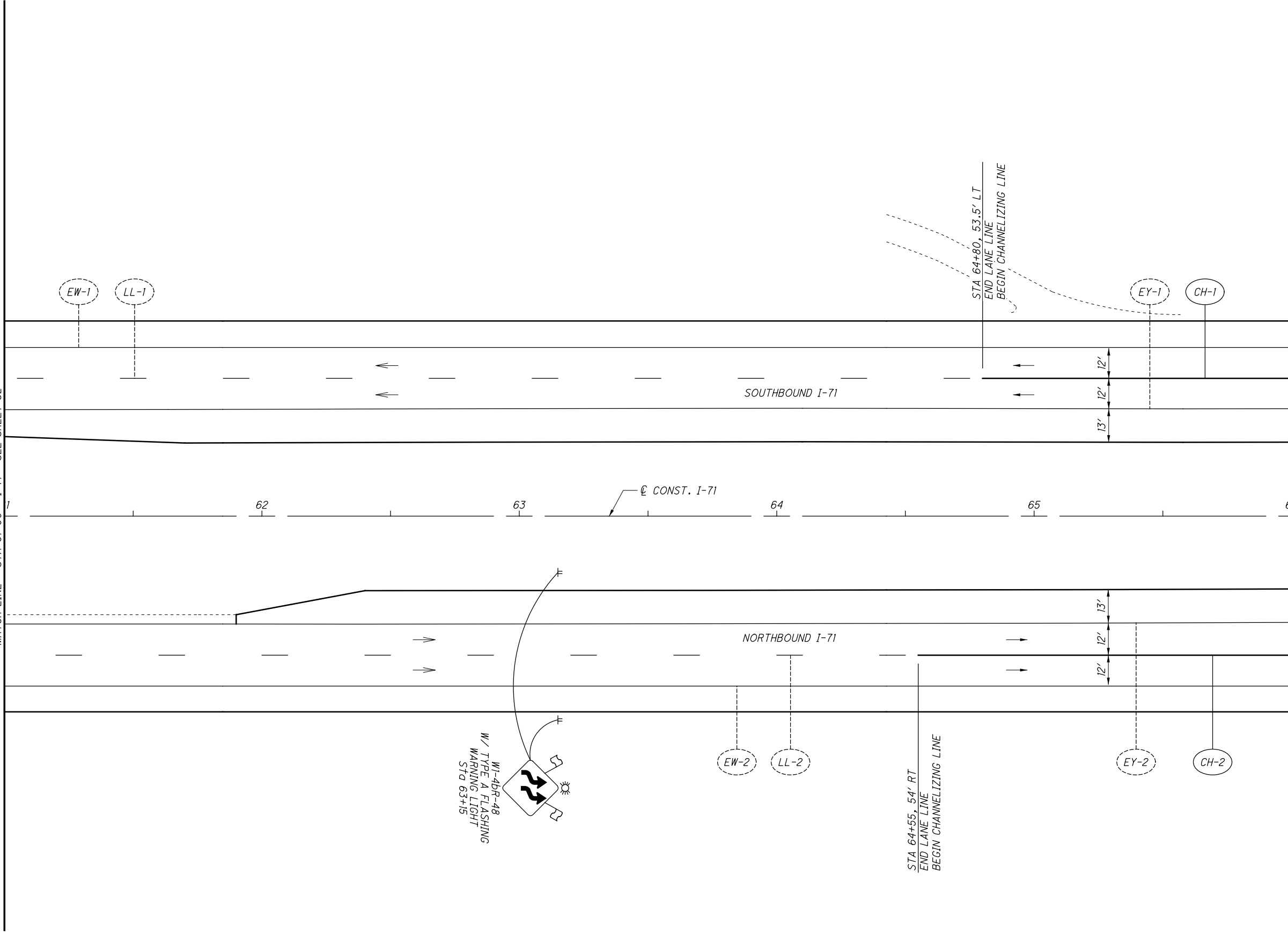
0 20 40  
HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 1  
(ASPHALT) I-71 STA 56+00 TO STA 61+00**

**FRA-71-1.53**

FOR LEGEND, SEE SHEET 23

MATCH LINE - STA 61+00 - I-71 - SEE SHEET 32



MATCH LINE - STA 66+00 - I-71 - SEE SHEET 34

FOR LEGEND, SEE SHEET 23

CALCULATED	EGD
CHECKED	DLW

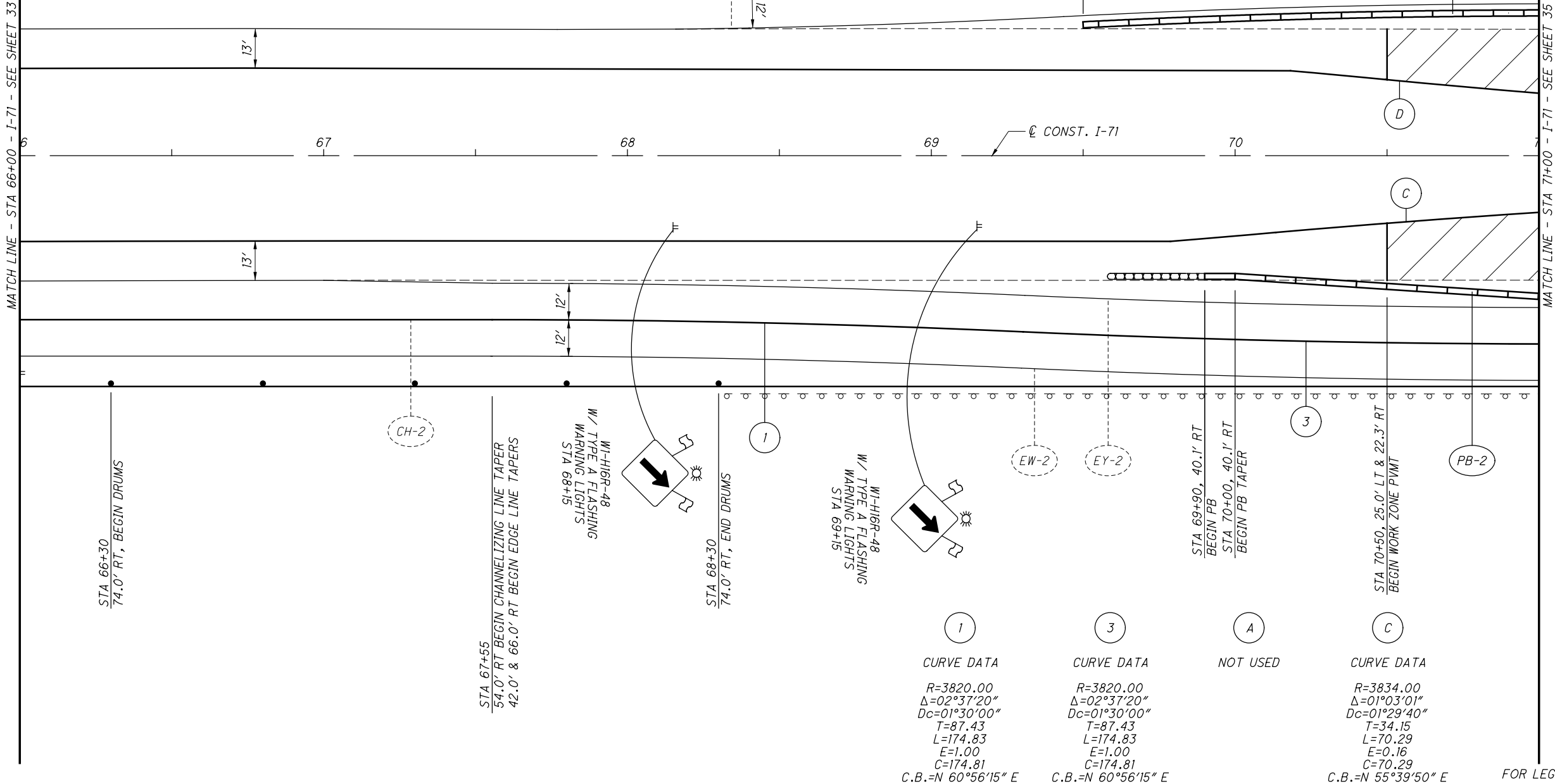
0 20 40  
HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 1  
(ASPHALT) I-71 STA 61+00 TO STA 66+00**

**FRA-71-1.53**

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MATCH LINE - STA 66+00 - I-71 - SEE SHEET 33



NOTES:

**ITEM 411, STABILIZED CRUSHED AGGREGATE**  
 THIS AGGREGATE SHOULDER SHALL BE CONSTRUCTED ALONG THE EDGE OF THE WORK ZONE PAVEMENT AND SHALL BE 2 FEET WIDE BY 6 INCHES DEEP AND PLACED AT THE FOLLOWING LOCATIONS:  
 STA 70+50 TO STA 71+15 RT      STA 70+50 TO STA 76+84, LT  
 STA 77+40 TO STA 80+95, LT      STA 77+56 TO STA 78+58, RT  
 STA 88+91 TO STA 101+00, RT      STA 99+95 TO STA 101+00, LT

**ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN B**  
 ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN B, SHALL BE USED FOR ALL WORK ZONE PAVEMENT CONSTRUCTED IN THE MEDIAN. THE CONTRACTOR WILL BE REQUIRED TO USE ITEM 304, AGGREGATE BASE, IN THE COURSE MAKE UP. THE CONTRACTOR WILL NOT BE PERMITTED TO USE ITEMS 301, 302 OR 441 IN LIEU OF 6 INCHES OF 304 AGGREGATE BASE. THE WORK ZONE PAVEMENT OUTSIDE THE PROJECT LIMITS SHALL BE LEFT IN PLACE AT THE END OF THIS PROJECT.

2	4	B	D
CURVE DATA	CURVE DATA	NOT USED	CURVE DATA
R=3092.00	R=3092.00		R=3106.00
Δ=03°00'16"	Δ=03°00'16"		Δ=05°33'04"
Dc=01°51'11"	Dc=01°51'11"		Dc=01°50'41"
T=81.09	T=81.09		T=150.58
L=162.14	L=162.14		L=300.92
E=1.06	E=1.06		E=3.65
C=162.12	C=162.12		C=300.80
C.B.=N 58°07'27" E	C.B.=N 58°07'27" E		C.B.=N 62°24'07" E

1	3	A	C
CURVE DATA	CURVE DATA	NOT USED	CURVE DATA
R=3820.00	R=3820.00		R=3834.00
Δ=02°37'20"	Δ=02°37'20"		Δ=01°03'01"
Dc=01°30'00"	Dc=01°30'00"		Dc=01°29'40"
T=87.43	T=87.43		T=34.15
L=174.83	L=174.83		L=70.29
E=1.00	E=1.00		E=0.16
C=174.81	C=174.81		C=70.29
C.B.=N 60°56'15" E	C.B.=N 60°56'15" E		C.B.=N 55°39'50" E

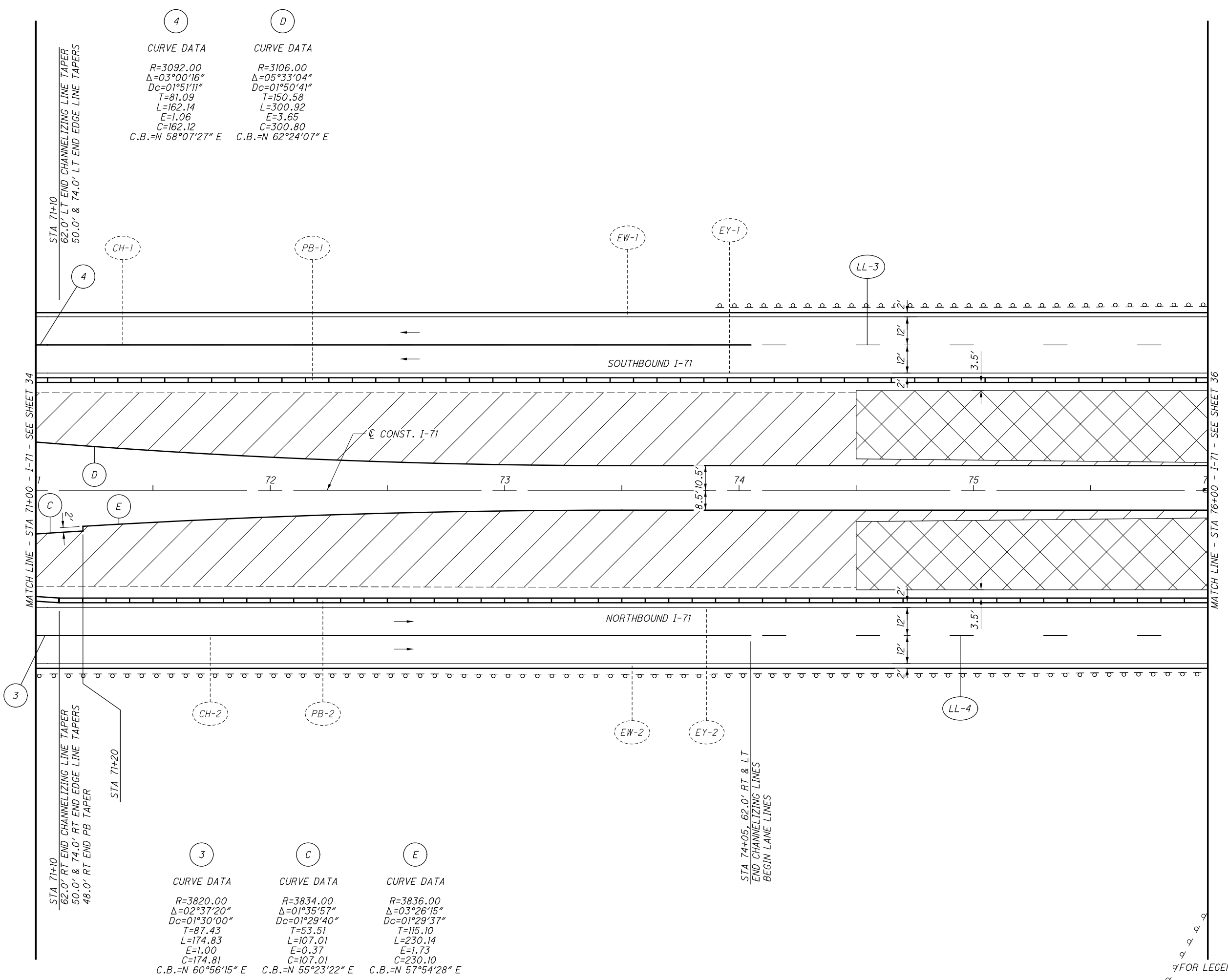
**FRA - 71-1.53**

**MAINTENANCE OF TRAFFIC - PHASE 1**  
**(ASPHALT) I-71 STA 66+00 TO STA 71+00**

34  
285

FOR LEGEND, SEE SHEET 23





4	D
<b>CURVE DATA</b>	<b>CURVE DATA</b>
R=3092.00	R=3106.00
Δ=03°00'16"	Δ=05°33'04"
Dc=01°51'11"	Dc=01°50'41"
T=81.09	T=150.58
L=162.14	L=300.92
E=1.06	E=3.65
C=162.12	C=300.80
C.B.=N 58°07'27" E	C.B.=N 62°24'07" E

3	C	E
<b>CURVE DATA</b>	<b>CURVE DATA</b>	<b>CURVE DATA</b>
R=3820.00	R=3834.00	R=3836.00
Δ=02°37'20"	Δ=01°35'57"	Δ=03°26'15"
Dc=01°30'00"	Dc=01°29'40"	Dc=01°29'37"
T=87.43	T=53.51	T=115.10
L=174.83	L=107.01	L=230.14
E=1.00	E=0.37	E=1.73
C=174.81	C=107.01	C=230.10
C.B.=N 60°56'15" E	C.B.=N 55°23'22" E	C.B.=N 57°54'28" E

STA 71+10  
62.0' LT END CHANNELIZING LINE TAPER  
50.0' & 74.0' LT END EDGE LINE TAPERS

STA 71+10  
62.0' RT END CHANNELIZING LINE TAPER  
50.0' & 74.0' RT END EDGE LINE TAPERS  
48.0' RT END PB TAPER

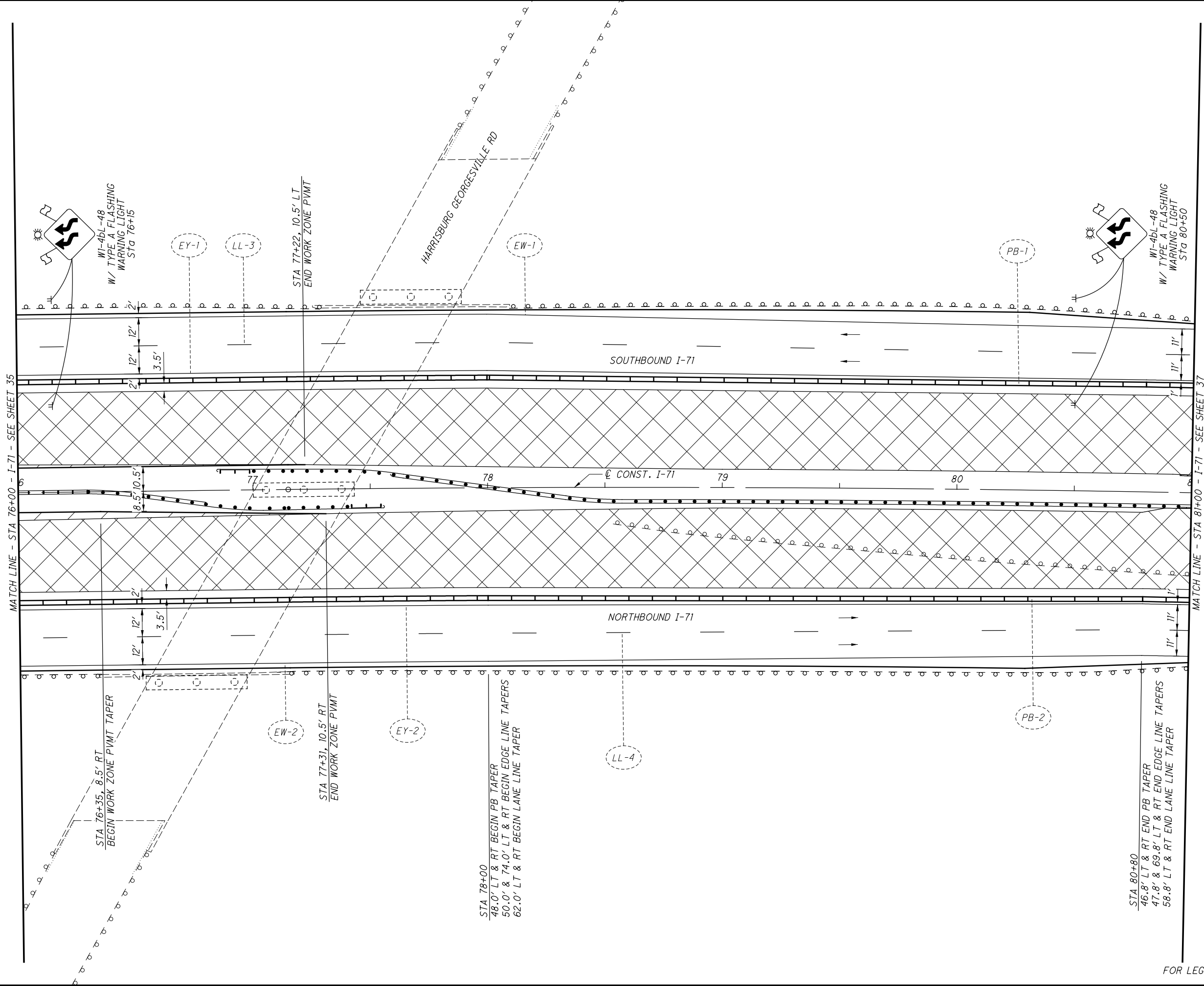
STA 74+05.62 0' RT & LT  
END CHANNELIZING LINES  
BEGIN LANE LINES

CALCULATED  
EGD  
CHECKED  
DLW

**MAINTENANCE OF TRAFFIC - PHASE 1  
(ASPHALT) I-71 STA 71+00 TO STA 76+00**

**FRA-71-1.53**

FOR LEGEND, SEE SHEET 23



CALCULATED  
EGD  
CHECKED  
DLW

0 10 20 40  
HORIZONTAL  
SCALE IN FEET

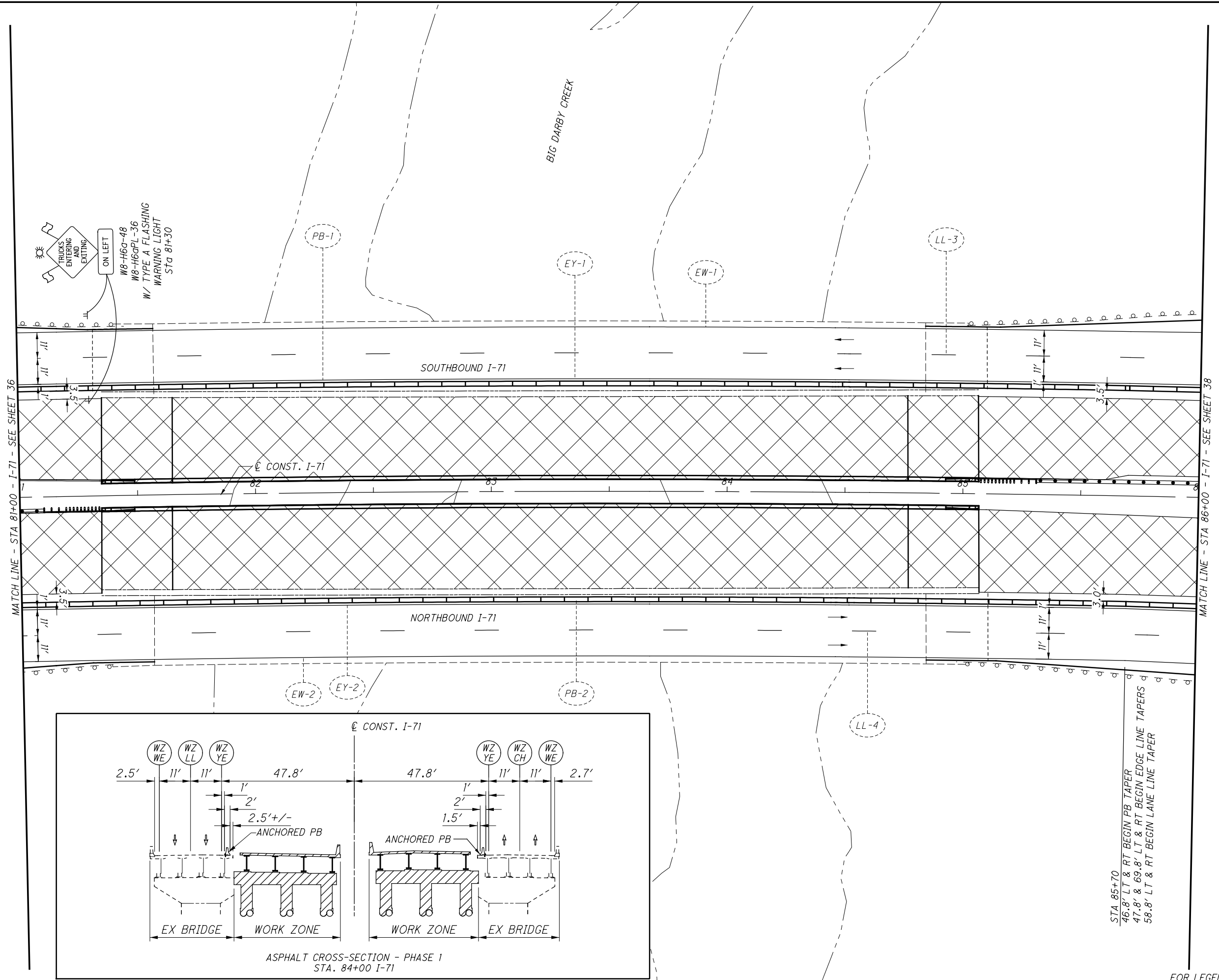
**MAINTENANCE OF TRAFFIC - PHASE 1  
(ASPHALT) I-71 STA 76+00 TO STA 81+00**

**FRA-71-1.53**

36  
285

FOR LEGEND, SEE SHEET 23

X:\4037000\121957.15\93496\MOT\sheets\93496MP107.dgn Sheet 11/19/2018 3:00:09 PM 1636acb



MATCH LINE - STA 81+00 - I-71 - SEE SHEET 36

MATCH LINE - STA 86+00 - I-71 - SEE SHEET 38

TRUCKS ENTERING AND EXITING ON LEFT  
 W8-H6a-48  
 W8-H6qPL-36  
 W/ TYPE A FLASHING WARNING LIGHT  
 STA 81+30

STA 85+70  
 46.8' LT & RT BEGIN PB TAPER  
 47.8' LT & 69.8' LT & RT BEGIN EDGE LINE TAPERS  
 58.8' LT & RT BEGIN LANE LINE TAPER

ASPHALT CROSS-SECTION - PHASE 1  
STA. 84+00 I-71

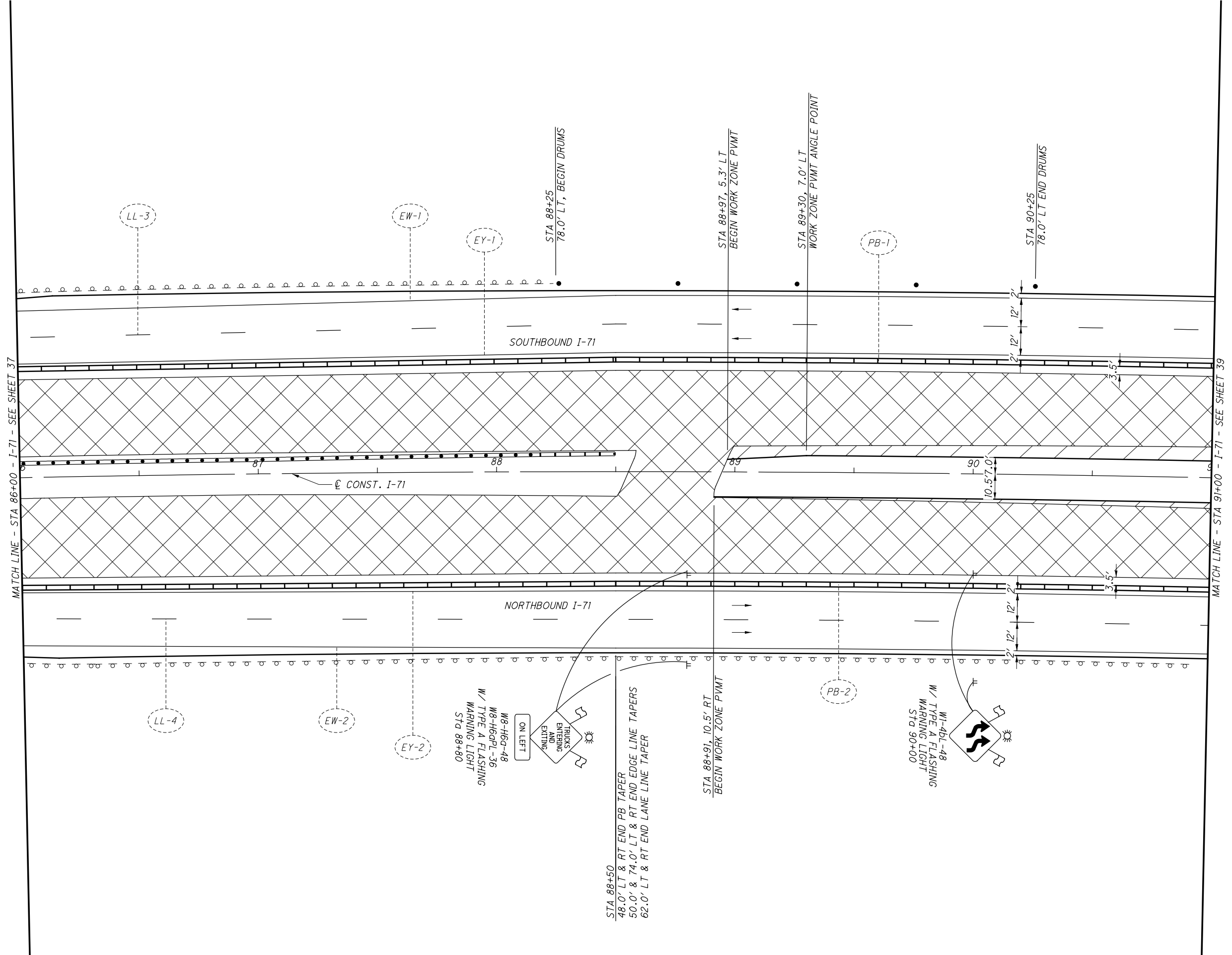
CALCULATED EGD CHECKED DLW

0 20 40  
 HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 1  
 (ASPHALT) I-71 STA 81+00 TO STA 86+00**

**FRA-71-1.53**

FOR LEGEND, SEE SHEET 23



08-88  
 W8-HGD-48  
 W8-HGFL-36  
 W/ TYPE A FLASHING  
 WARNING LIGHT  
 STA 88+80

W1-4BL-48  
 W/ TYPE A FLASHING  
 WARNING LIGHT  
 STA 90+00

STA 88+50  
 48.0' LT & RT END PB TAPER  
 50.0' & 74.0' LT & RT END EDGE LINE TAPERS  
 62.0' LT & RT END LANE LINE TAPER

STA 88+91, 10.5' RT  
 BEGIN WORK ZONE PVMT

STA 88+97, 5.3' LT  
 BEGIN WORK ZONE PVMT

STA 89+30, 7.0' LT  
 WORK ZONE PVMT ANGLE POINT

STA 90+25  
 78.0' LT END DRUMS

SOUTHBOUND I-71

NORTHBOUND I-71

CONST. I-71

MATCH LINE - STA 86+00 - I-71 - SEE SHEET 37

MATCH LINE - STA 91+00 - I-71 - SEE SHEET 39

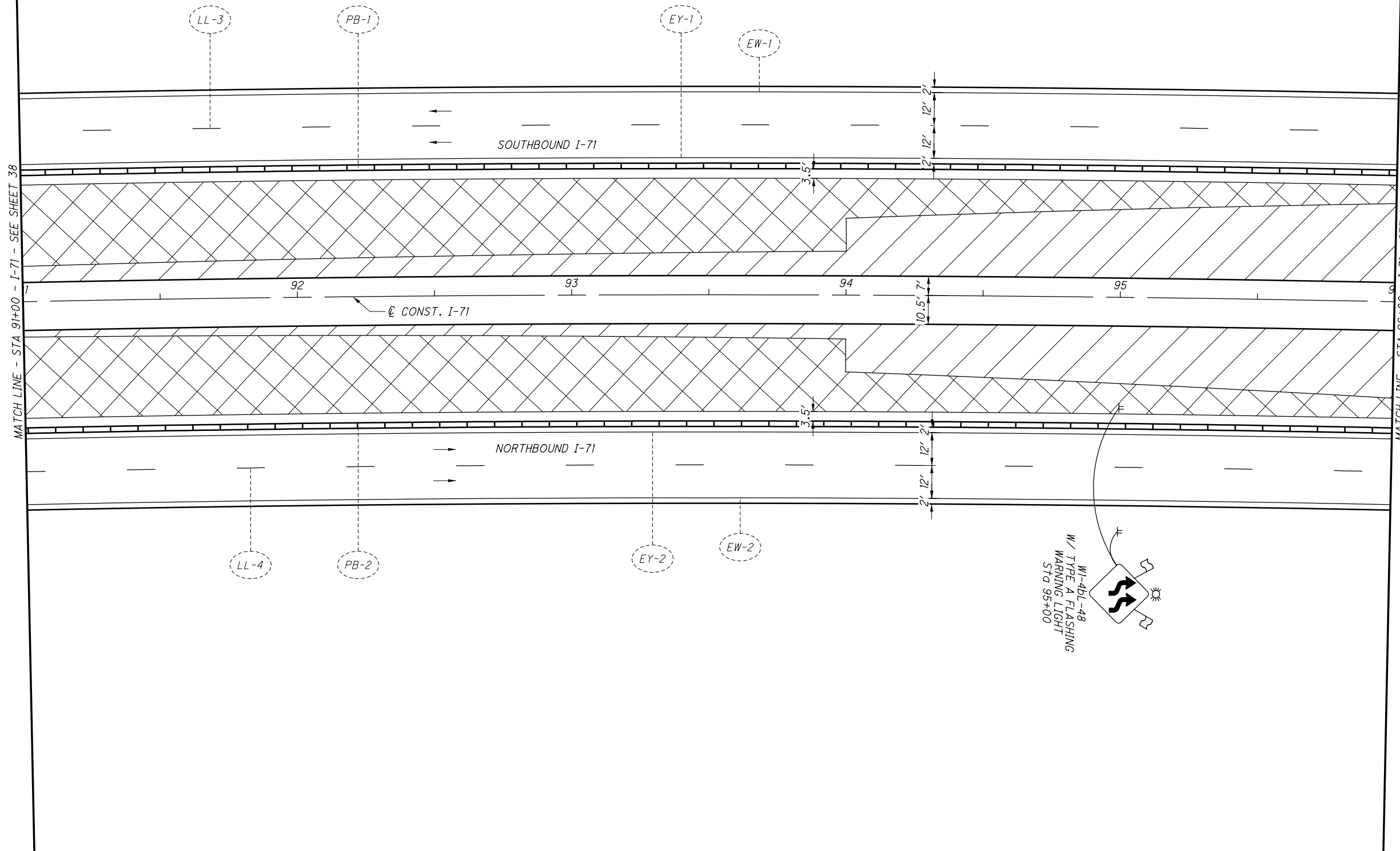
CALCULATED	EGD
CHECKED	DLW

0 20 40  
 HORIZONTAL  
 SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 1  
 (ASPHALT) I-71 STA 86+00 TO STA 91+00**

**FRA-71-1.53**

FOR LEGEND, SEE SHEET 23



MATCH LINE - STA 91+00 - I-71 - SEE SHEET 38

MATCH LINE - STA 96+00 - I-71 - SEE SHEET 40

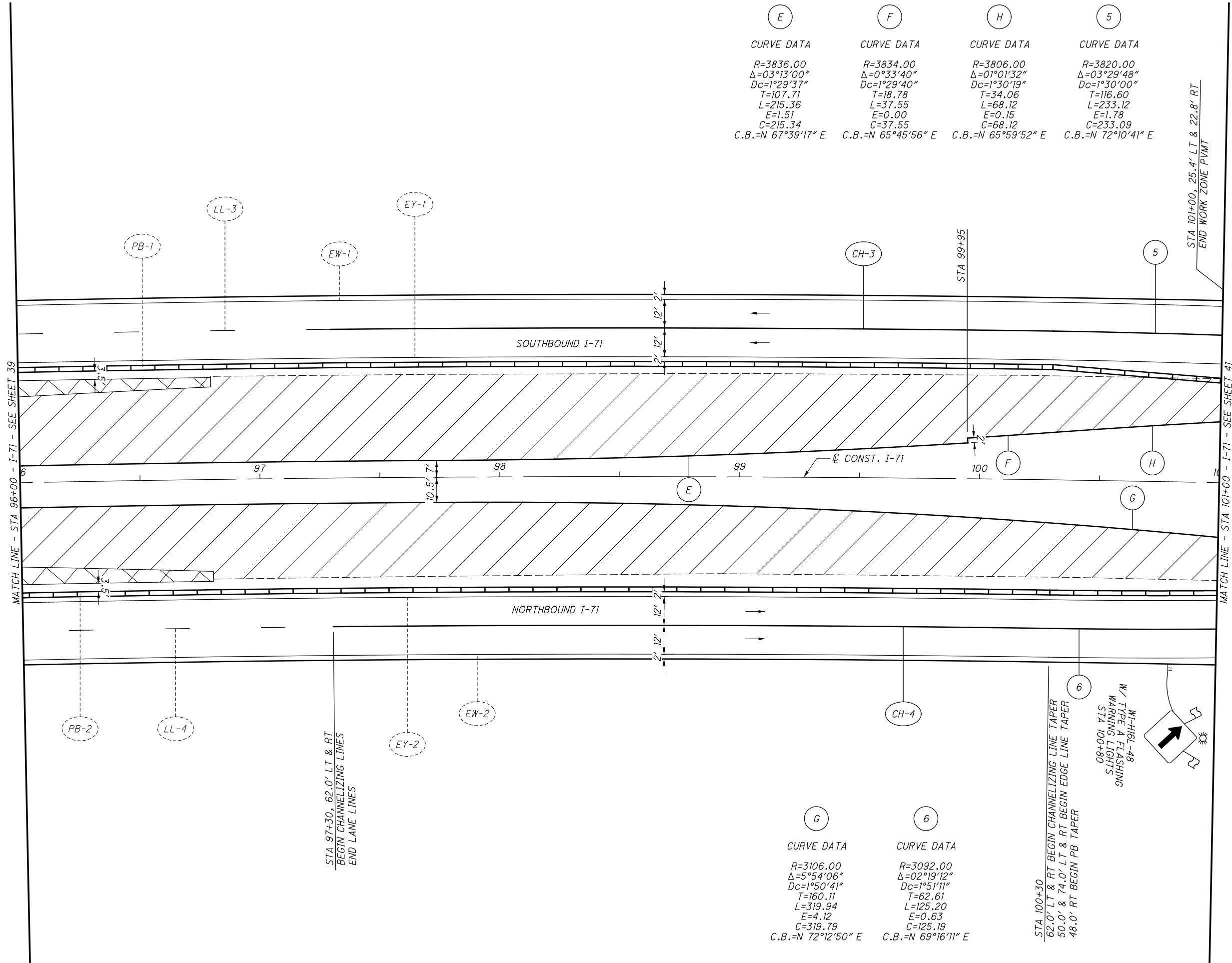
CALCULATED	DLW
CHECKED	DLW

0 20 40  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 1  
(ASPHALT) I-71 STA 91+00 TO STA 96+00**

**FRA-71-1.53**

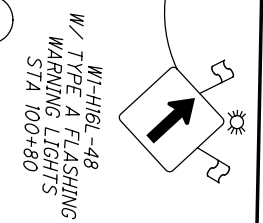
FOR LEGEND, SEE SHEET 23



(E)	(F)	(H)	(5)
<b>CURVE DATA</b>	<b>CURVE DATA</b>	<b>CURVE DATA</b>	<b>CURVE DATA</b>
R=3836.00	R=3834.00	R=3806.00	R=3820.00
Δ=0°3'13"00"	Δ=0°33'40"	Δ=0°1'01"32"	Δ=0°3'29"48"
Dc=1°29'37"	Dc=1°29'40"	Dc=1°30'19"	Dc=1°30'00"
T=107.71	T=18.78	T=34.06	T=116.60
L=215.36	L=37.55	L=68.12	L=233.12
E=1.51	E=0.00	E=0.15	E=1.78
C=215.34	C=37.55	C=68.12	C=233.09
C.B.=N 67°39'17" E	C.B.=N 65°45'56" E	C.B.=N 65°59'52" E	C.B.=N 72°10'41" E

(G)	(6)
<b>CURVE DATA</b>	<b>CURVE DATA</b>
R=3106.00	R=3092.00
Δ=5°54'06"	Δ=02°19'12"
Dc=1°50'41"	Dc=1°51'11"
T=160.11	T=62.61
L=319.94	L=125.20
E=4.12	E=0.63
C=319.79	C=125.19
C.B.=N 72°12'50" E	C.B.=N 69°16'11" E

STA 100+30  
 62.0' LT & RT BEGIN CHANNELIZING LINE TAPER  
 50.0' & 74.0' LT & RT BEGIN EDGE LINE TAPER  
 48.0' RT BEGIN PB TAPER



CALCULATED  
EGD  
CHECKED  
DLW

0 20 40  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 1  
 (ASPHALT) I-71 STA 96+00 TO STA 101+00**

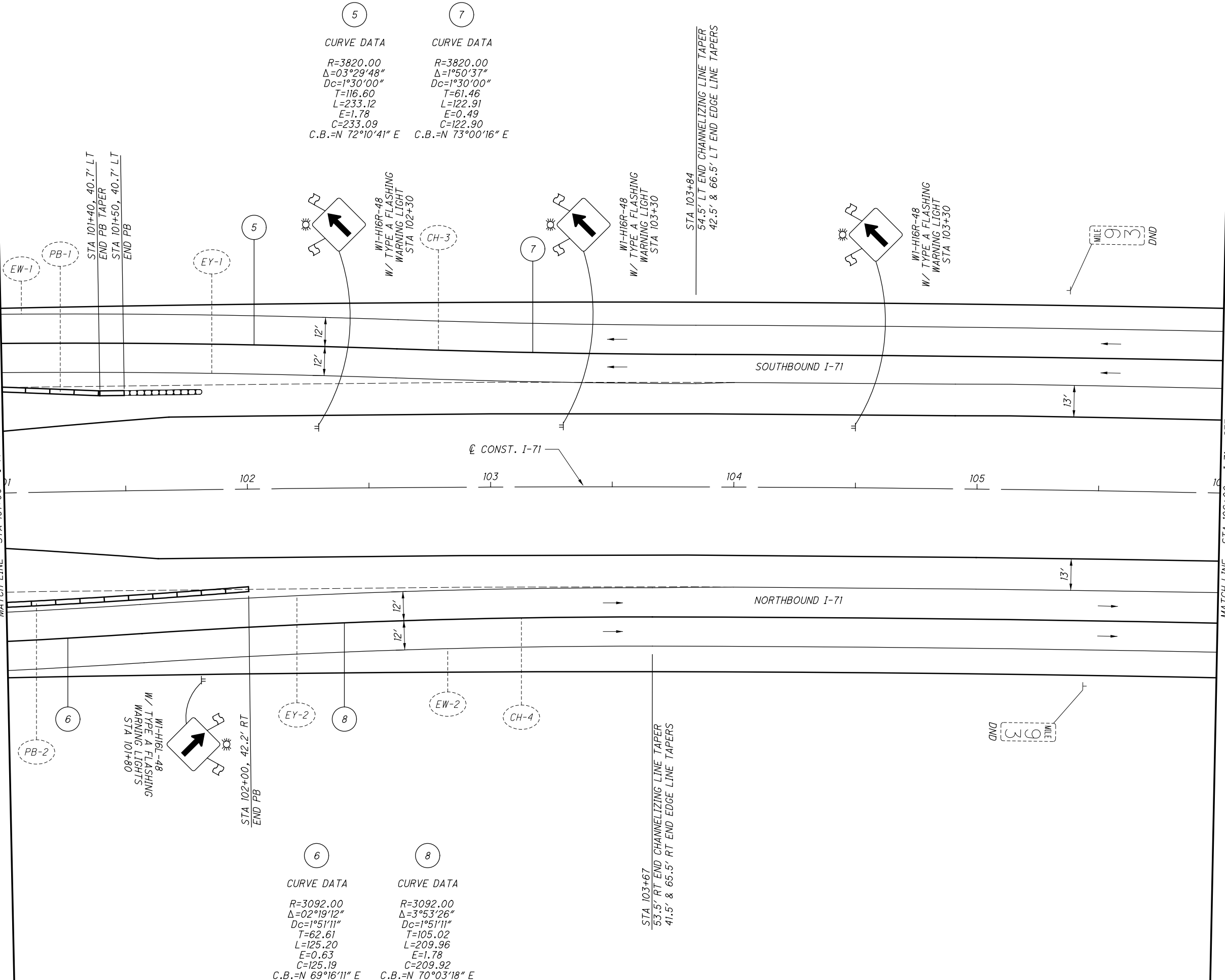
**FRA-71-1.53**

FOR LEGEND, SEE SHEET 23

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MATCH LINE - STA 101+00 - I-71 - SEE SHEET 40

MATCH LINE - STA 106+00 - I-71 - SEE SHEET 42



Station	Curve Data
5	R=3820.00 $\Delta=03^{\circ}29'48''$ $Dc=1^{\circ}30'00''$ T=116.60 L=233.12 E=1.78 C=233.09 C.B.=N 72°10'41" E
7	R=3820.00 $\Delta=1^{\circ}50'37''$ $Dc=1^{\circ}30'00''$ T=61.46 L=122.91 E=0.49 C=122.90 C.B.=N 73°00'16" E

Station	Curve Data
6	R=3092.00 $\Delta=02^{\circ}19'12''$ $Dc=1^{\circ}51'11''$ T=62.61 L=125.20 E=0.63 C=125.19 C.B.=N 69°16'11" E
8	R=3092.00 $\Delta=3^{\circ}53'26''$ $Dc=1^{\circ}51'11''$ T=105.02 L=209.96 E=1.78 C=209.92 C.B.=N 70°03'18" E

STA 103+67  
53.5' RT END CHANNELIZING LINE TAPER  
41.5' & 65.5' RT END EDGE LINE TAPERS

STA 103+84  
54.5' LT END CHANNELIZING LINE TAPER  
42.5' & 66.5' LT END EDGE LINE TAPERS

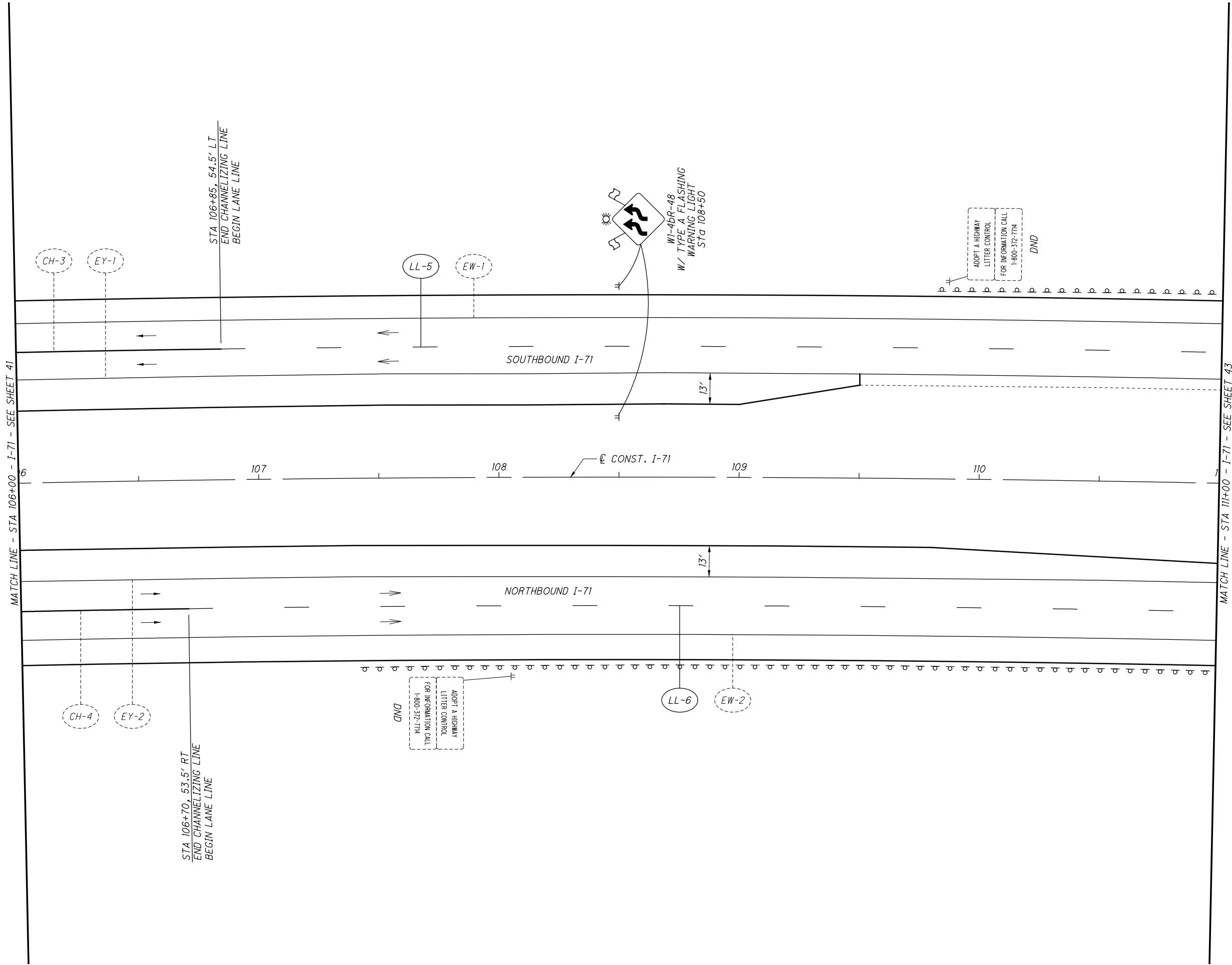
CALCULATED  
EGD  
CHECKED  
DLW

0 20 40  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 1  
(ASPHALT) I-71 STA 101+00 TO STA 106+00**

**FRA-71-1.53**

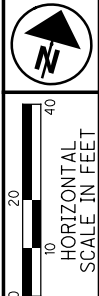
FOR LEGEND, SEE SHEET 23



CALCULATED  
EGD  
CHECKED  
DLW

**MAINTENANCE OF TRAFFIC - PHASE 1  
(ASPHALT) I-71 STA 106+00 TO STA 111+00**

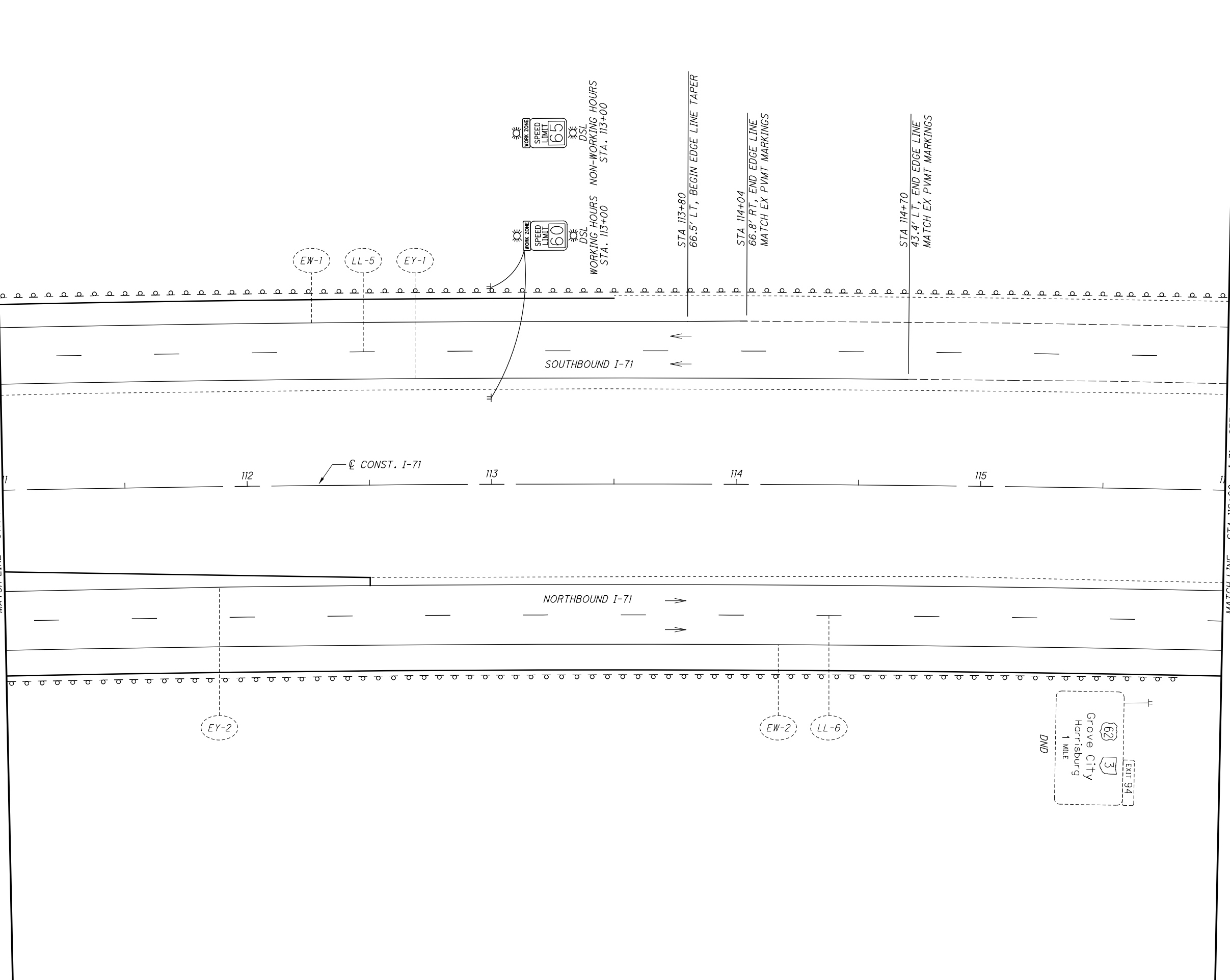
**FRA-71-1.53**



FOR LEGEND, SEE SHEET 23



MATCH LINE - STA 111+00 - I-71 - SEE SHEET 42



MATCH LINE - STA 116+00 - I-71 - SEE SHEET 44

FOR LEGEND, SEE SHEET 23

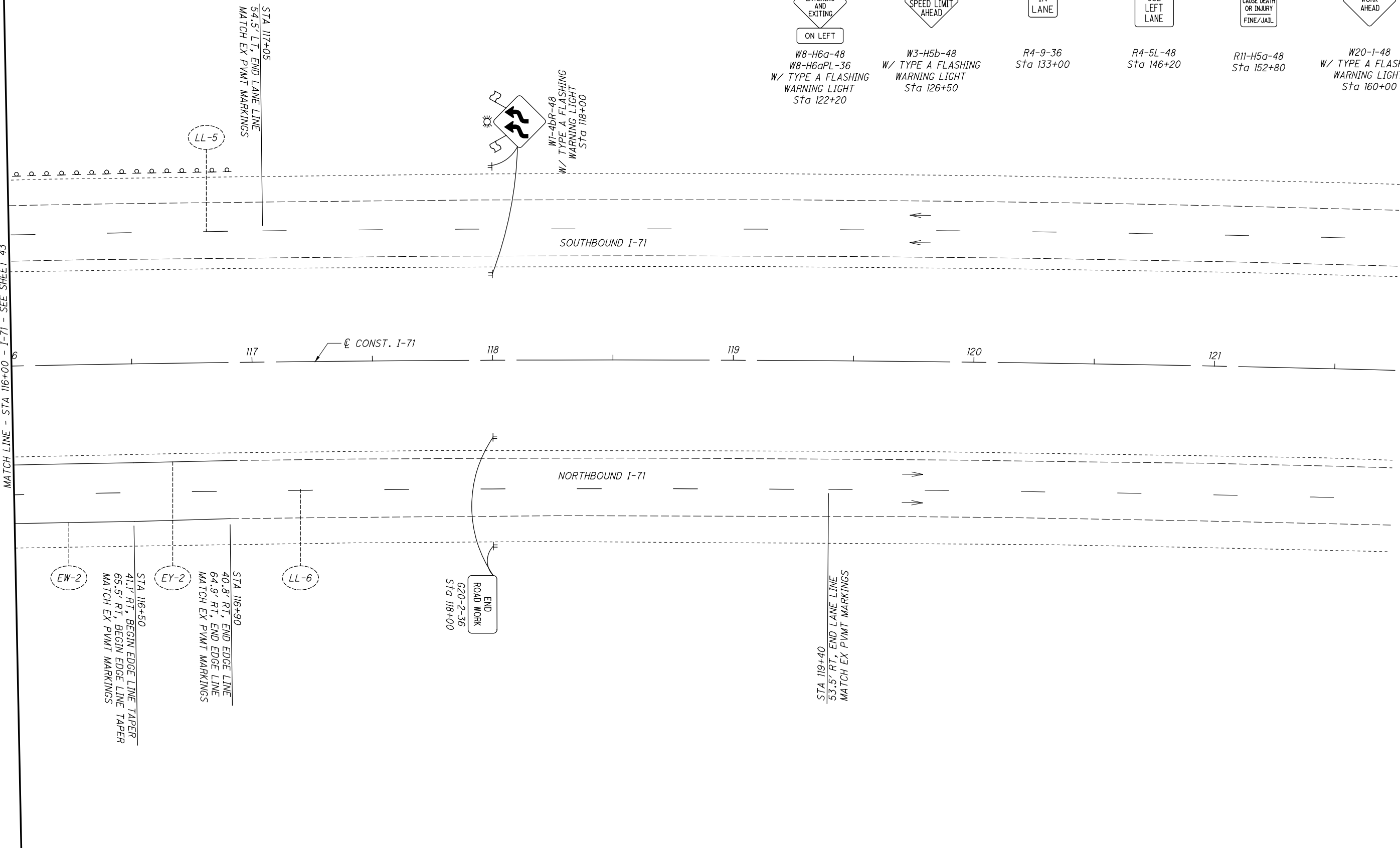
CALCULATED	EGD
CHECKED	DLW

0 20 40  
HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 1  
(ASPHALT) I-71 STA 111+00 TO STA 116+00**

**FRA-71-1.53**

MATCH LINE - STA 116+00 - I-71 - SEE SHEET 43



STA 117+05  
54.5' LT, END LANE LINE  
MATCH EX PVMT MARKINGS

LL-5

W1-4bR-48  
W/ TYPE A FLASHING  
WARNING LIGHT  
Sta 118+00

SOUTHBOUND I-71

CONST. I-71

NORTHBOUND I-71

EW-2

STA 116+50  
41.1' RT, BEGIN EDGE LINE TAPER  
65.5' RT, BEGIN EDGE LINE TAPER  
MATCH EX PVMT MARKINGS

EY-2





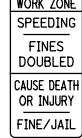

STA 116+90  
40.8' RT, END EDGE LINE  
64.9' RT, END EDGE LINE  
MATCH EX PVMT MARKINGS

LL-6

END  
ROAD WORK  
G20-2-36  
Sta 118+00

STA 119+40  
53.5' RT, END LANE LINE  
MATCH EX PVMT MARKINGS

THE CONTRACTOR SHALL INSTALL THE FOLLOWING ADVANCE WARNING SIGNS ON BOTH SIDES OF THE SOUTHBOUND I-71 ROADWAY AT THE LOCATIONS SHOWN PRIOR TO THE START OF PHASE 1 CONSTRUCTION. COVER R2-1 SOUTHBOUND SIGN AT STA. 145+00.

-   
**ON LEFT**  
 W8-H6a-48  
 W8-H6aPL-36  
 W/ TYPE A FLASHING  
 WARNING LIGHT  
 Sta 122+20
-   
 W3-H5b-48  
 W/ TYPE A FLASHING  
 WARNING LIGHT  
 Sta 126+50
-   
 R4-9-36  
 Sta 133+00
-   
 R4-5L-48  
 Sta 146+20
-   
 R11-H5a-48  
 Sta 152+80
-   
 W20-1-48  
 W/ TYPE A FLASHING  
 WARNING LIGHT  
 Sta 160+00

CALCULATED EGD CHECKED DLW

0 20 40  
10 HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 1  
(ASPHALT) I-71 STA 116+00 TO STA 121+75**

**FRA-71-1.53**

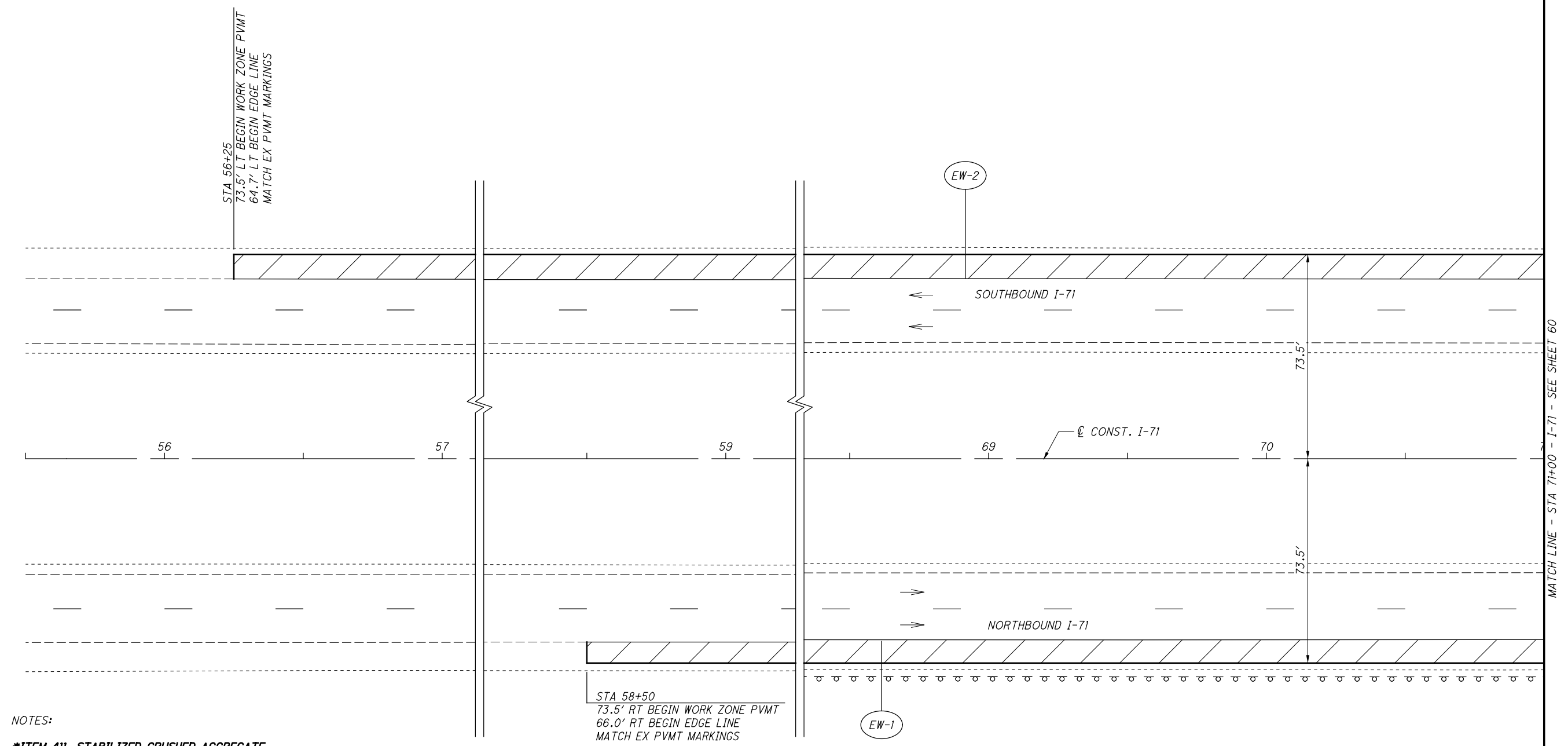
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CALCULATED  
EGD  
CHECKED  
DLW

0 20 40  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PRE-PHASE 1A  
(CONCRETE) I-71 STA 55+50 TO STA 71+00**

**FRA-71-1.53**

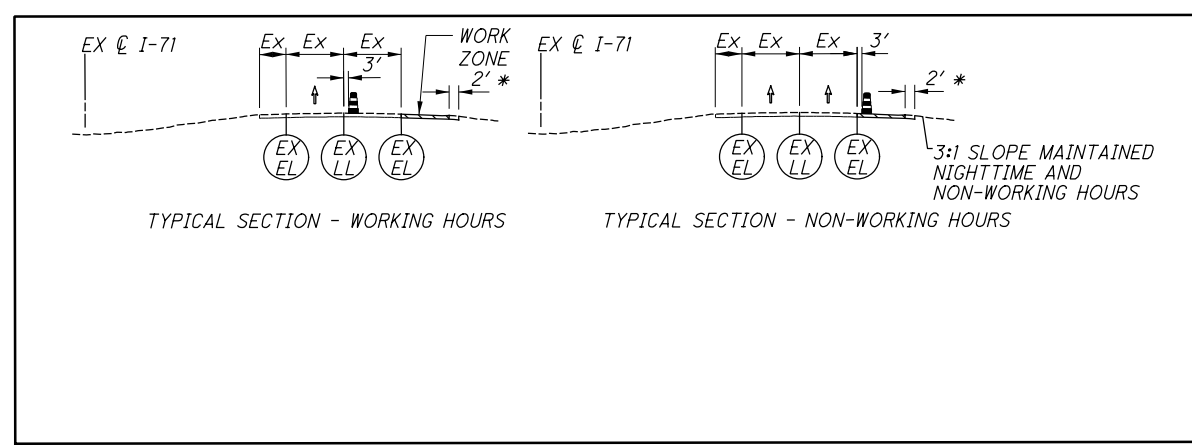


**NOTES:**

**\*ITEM 411, STABILIZED CRUSHED AGGREGATE**  
THIS AGGREGATE SHOULDER SHALL BE CONSTRUCTED ALONG THE EDGE OF THE WORK ZONE PAVEMENT AND SHALL BE 2 FEET WIDE BY 6 INCHES DEEP AND PLACED AT THE FOLLOWING LOCATIONS:  
STA 56+25 TO STA 81+57, LT  
STA 58+50 TO STA 81+56, RT  
STA 84+83 TO STA 109+10, LT  
STA 84+85 TO STA 111+50, RT

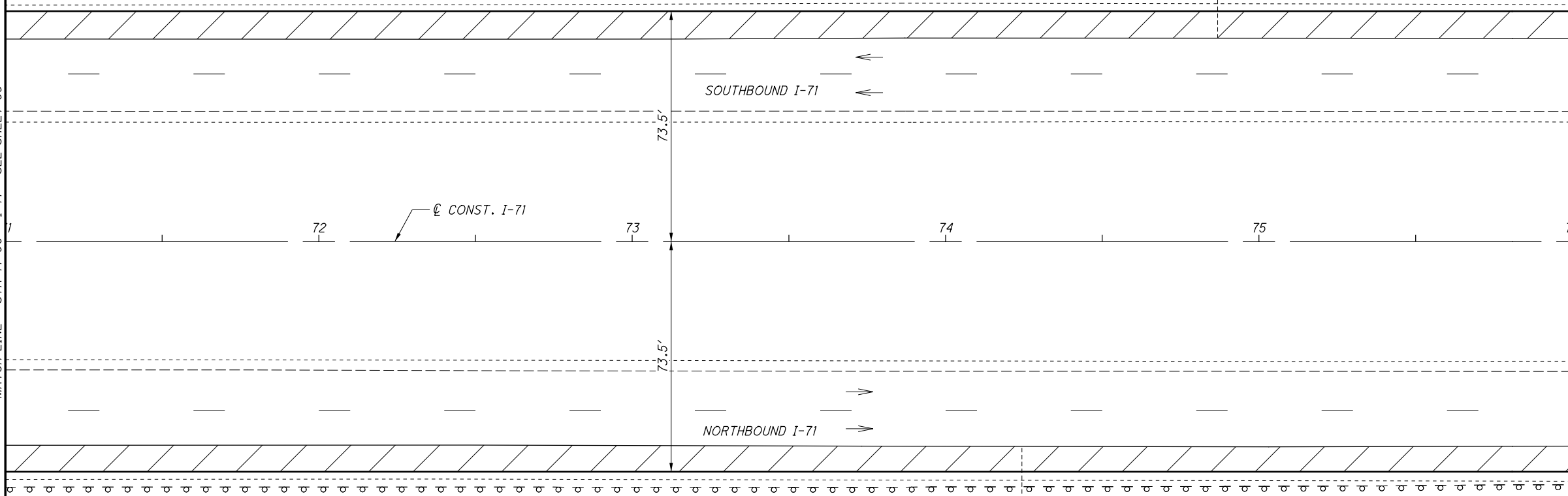
**ITEM 254, PAVEMENT PLANING, ASPHALT CONCRETE**  
THE CONTRACTOR SHALL PLANE 9 INCHES OF EXISTING OUTSIDE ASPHALT CONCRETE SHOULDER DOWN TO THE EXISTING ITEM 304, AGGREGATE BASE WHICH WILL REMAIN IN PLACE.

**ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN A**  
ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN A, SHALL BE USED TO RECONSTRUCT THE OUTSIDE SHOULDERS SHOWN IN PRE-PHASE 1A. THE CONTRACTOR SHALL CONSTRUCT 7 1/2 INCHES OF ITEM 302, ASPHALT CONCRETE BASE IN ONE LIFT AND 1 1/2 INCHES OF ITEM 441, TYPE 1. THE WORK ZONE PAVEMENT OUTSIDE THE PROJECT LIMITS SHALL BE LEFT IN PLACE AT THE END OF THIS PROJECT.



FOR LEGEND, SEE SHEET 23

MATCH LINE - STA 71+00 - I-71 - SEE SHEET 59

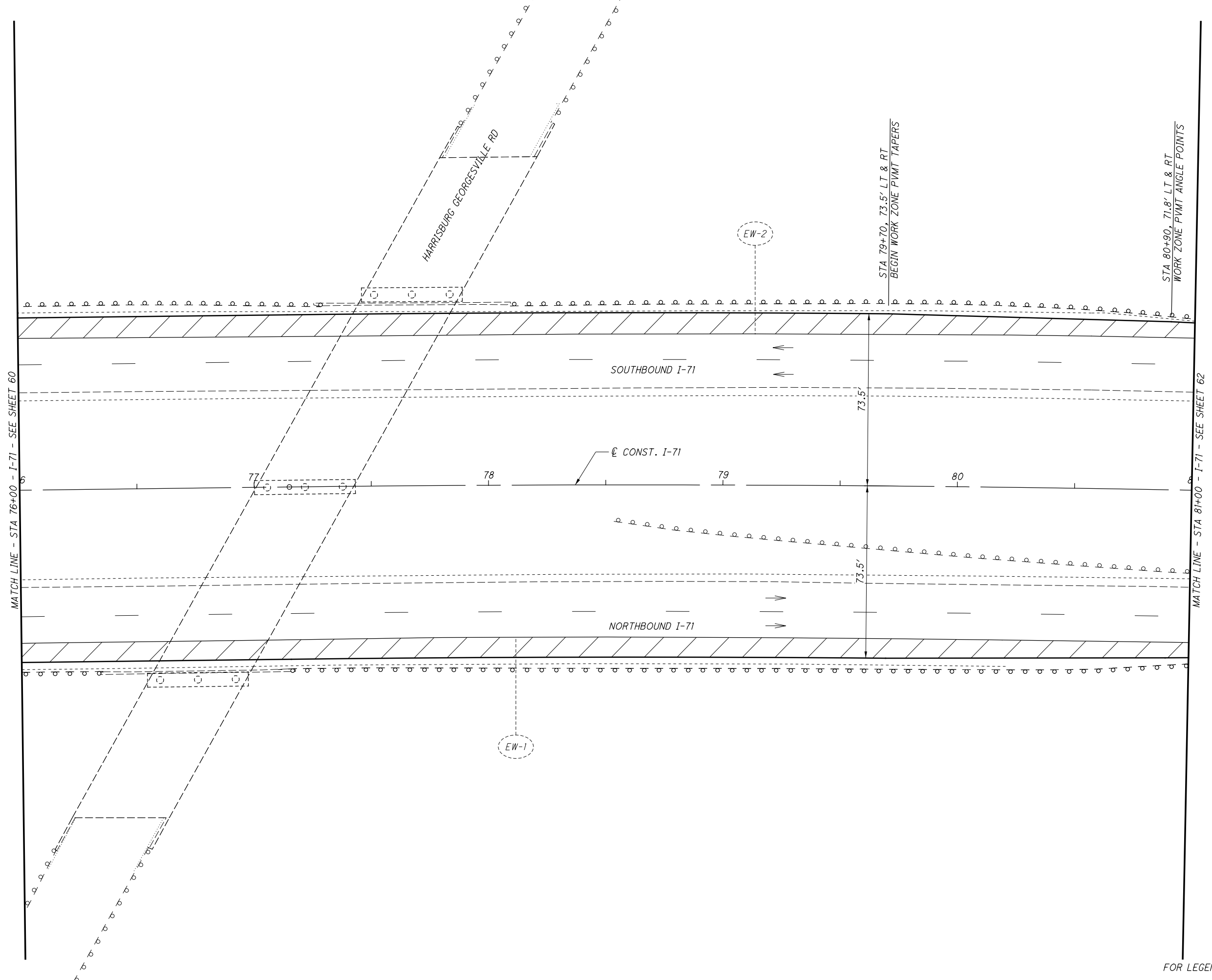


CALCULATED	EGD	CHECKED	DLW

0 20 40  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PRE-PHASE 1A  
(CONCRETE) I-71 STA 71+00 TO STA 76+00**

**FRA-71-1.53**



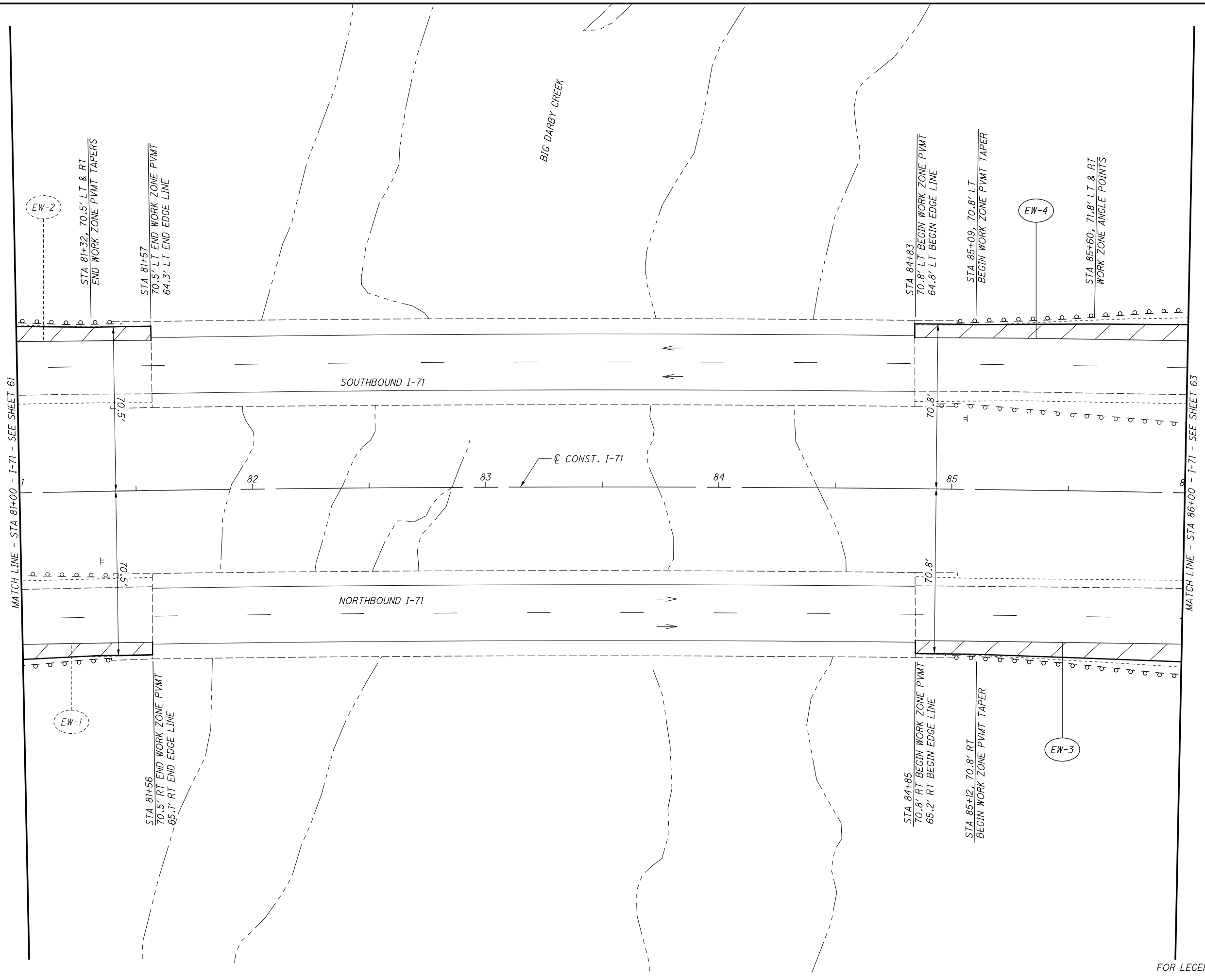
FOR LEGEND, SEE SHEET 23

CALCULATED	EGD
CHECKED	DLW

0 20 40  
HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PRE-PHASE 1A  
(CONCRETE) I-71 STA 76+00 TO STA 81+00**

**FRA-71-1.53**



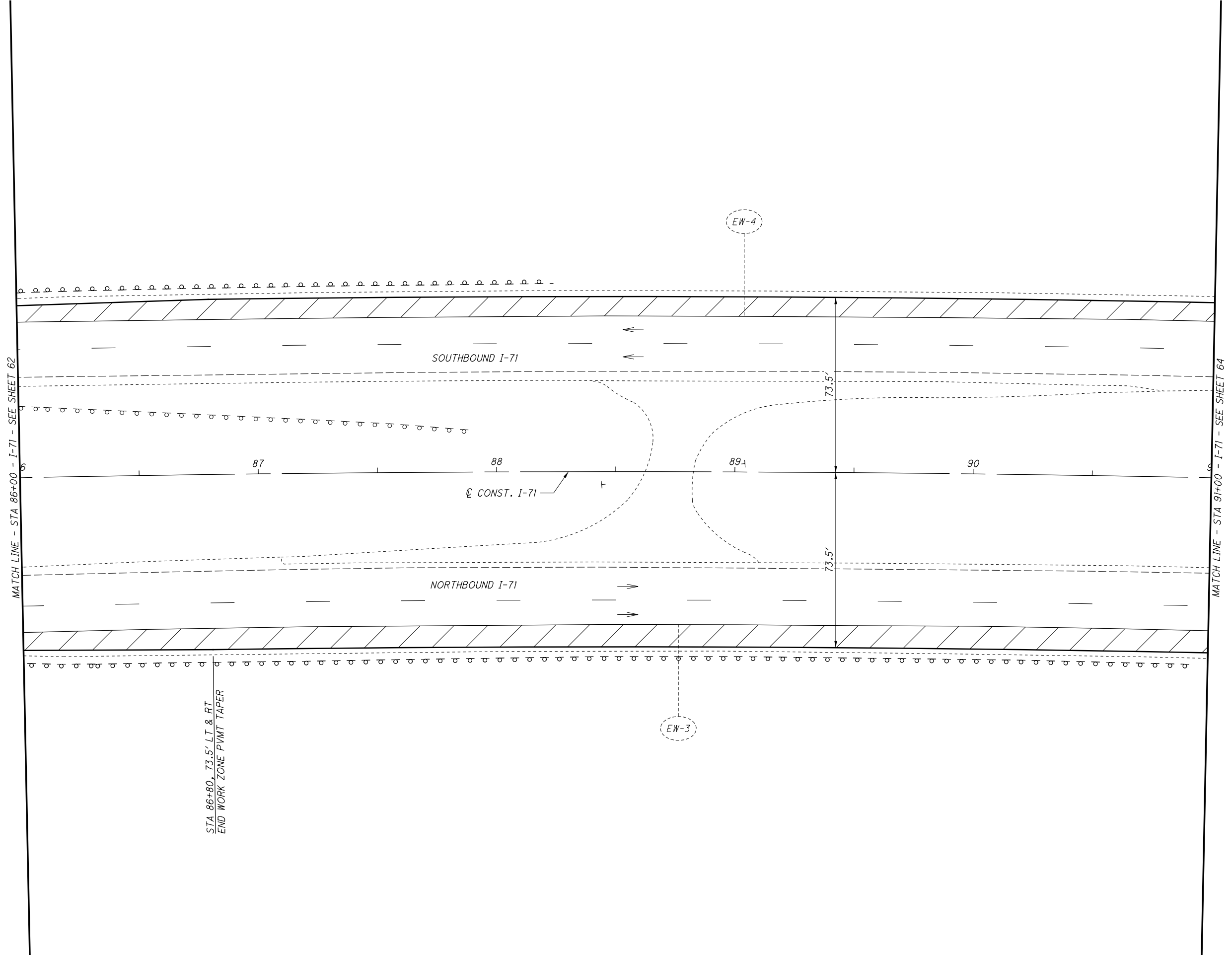
FOR LEGEND, SEE SHEET 23

CALCULATED	EGD
CHECKED	DLW

0 20 40  
HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PRE-PHASE 1A  
(CONCRETE) I-71 STA 81+00 TO STA 86+00**

**FRA-71-1.53**



CALCULATED	EGD	CHECKED	DLW

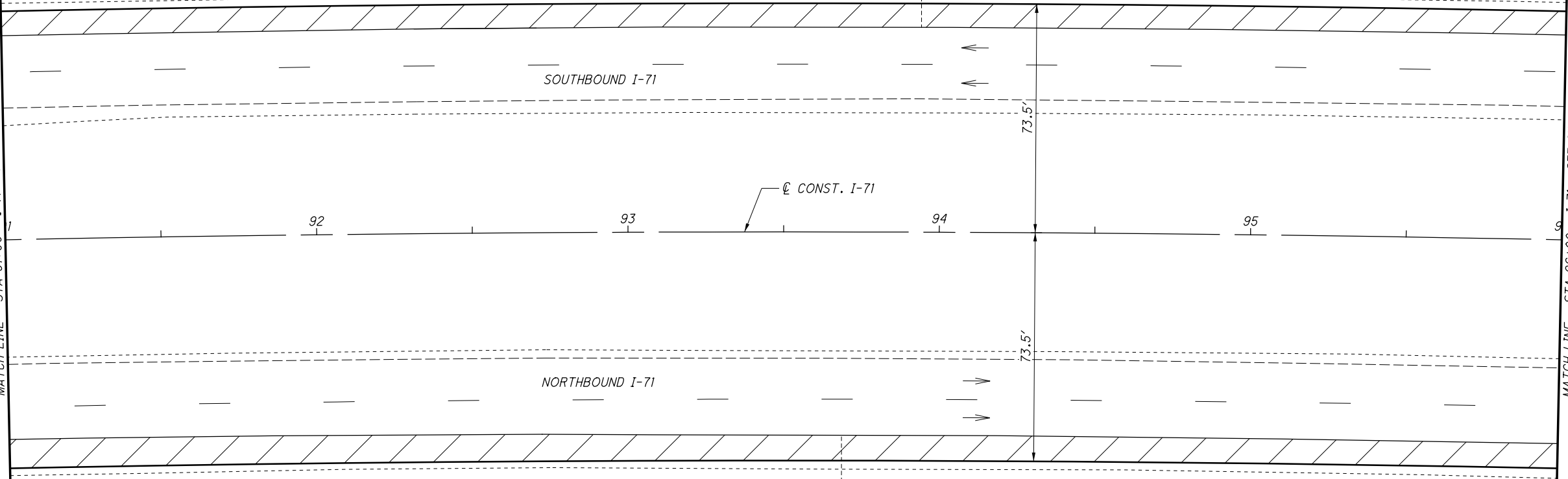
0 20 40  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PRE-PHASE 1A  
(CONCRETE) I-71 STA 86+00 TO STA 91+00**

**FRA-71-1.53**

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MATCH LINE - STA 91+00 - I-71 - SEE SHEET 63



MATCH LINE - STA 96+00 - I-71 - SEE SHEET 65

FOR LEGEND, SEE SHEET 23

CALCULATED	EGD	CHECKED	DLW

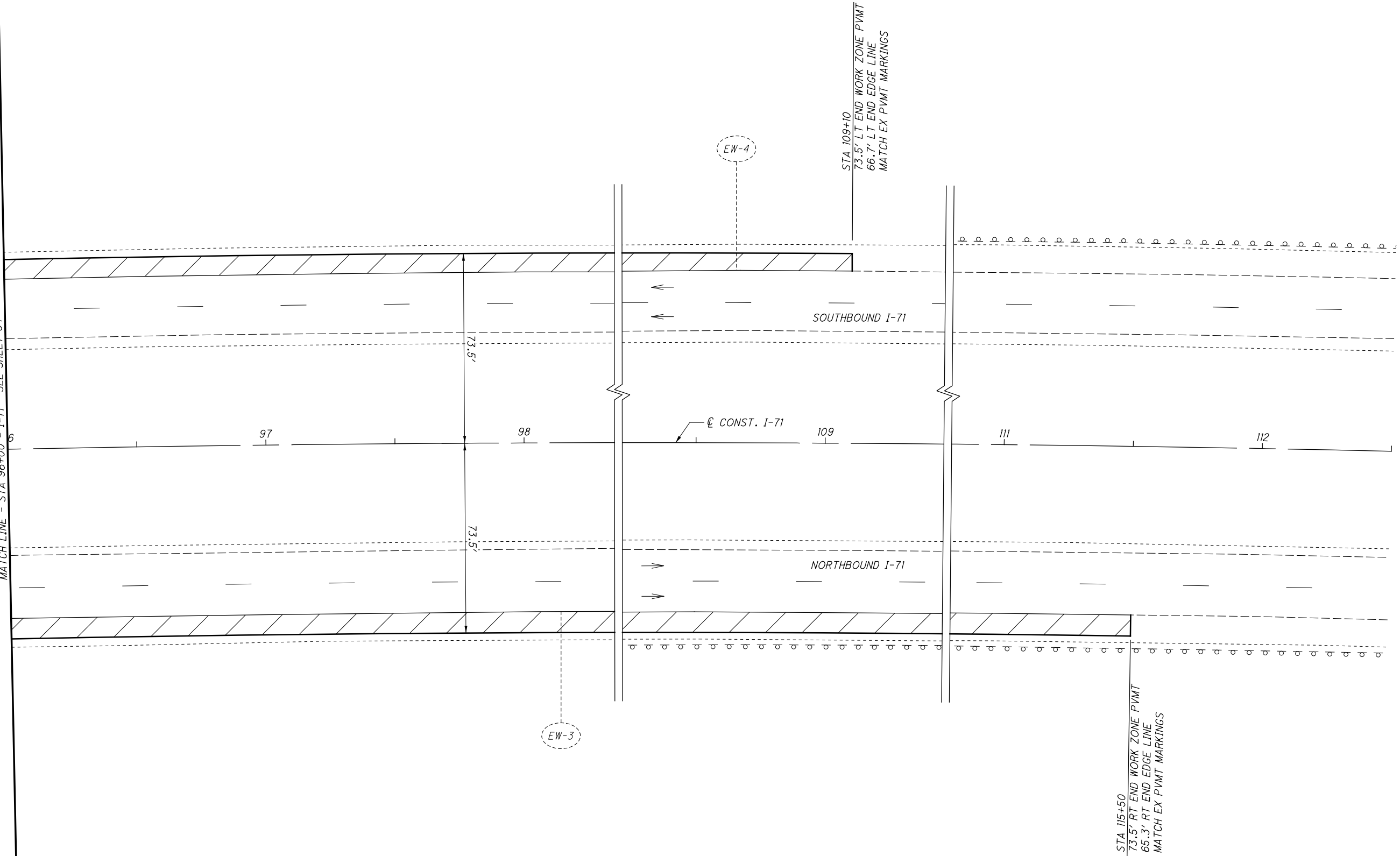
0 20 40  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PRE-PHASE 1A  
(CONCRETE) I-71 STA 91+00 TO STA 96+00**

**FRA-71-1.53**



MATCH LINE - STA 96+00 - I-71 - SEE SHEET 64



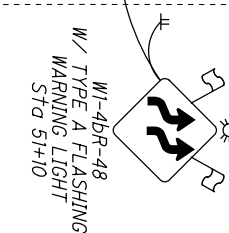
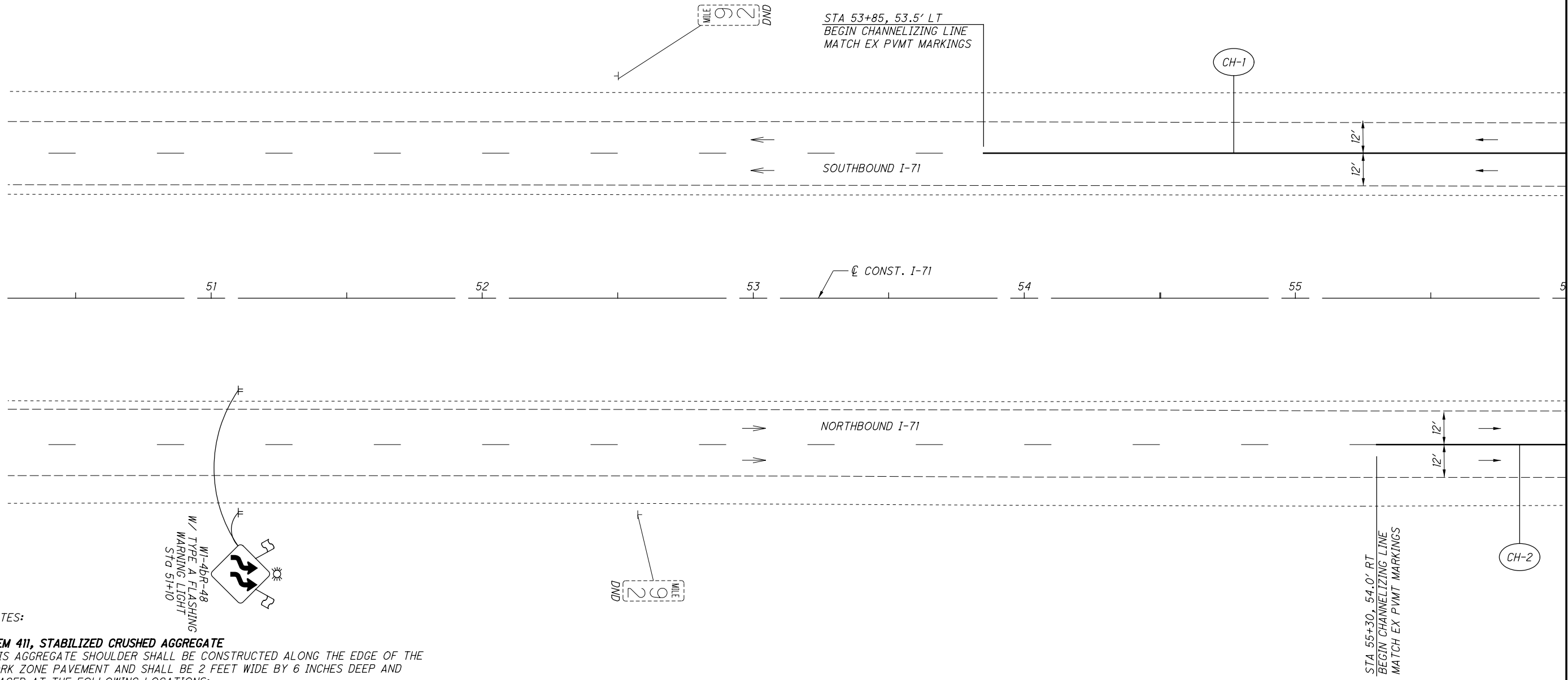
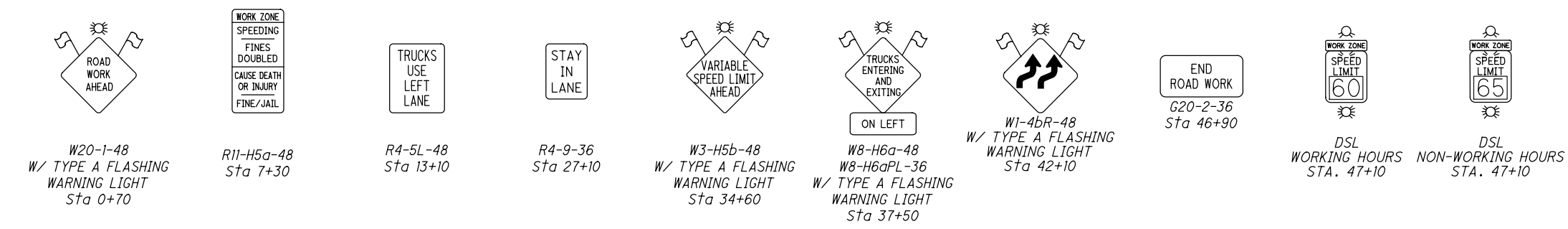
CALCULATED  
EGD  
CHECKED  
DLW

0 20 40  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PRE-PHASE 1A  
(CONCRETE) I-71 STA 96+00 TO STA 112+50**

**FRA-71-1.53**

THE CONTRACTOR SHALL INSTALL THE FOLLOWING ADVANCE WARNING SIGNS ON BOTH SIDES OF THE NORTHBOUND I-71 ROADWAY AT THE LOCATIONS SHOWN PRIOR TO THE START OF PHASE 1B CONSTRUCTION.



**NOTES:**

**ITEM 411, STABILIZED CRUSHED AGGREGATE**  
 THIS AGGREGATE SHOULDER SHALL BE CONSTRUCTED ALONG THE EDGE OF THE WORK ZONE PAVEMENT AND SHALL BE 2 FEET WIDE BY 6 INCHES DEEP AND PLACED AT THE FOLLOWING LOCATIONS:  
 STA 60+10 TO STA 72+50, LT  
 STA 62+20 TO STA 72+50, RT  
 STA 97+00 TO STA 105+80, LT  
 STA 97+00 TO STA 108+30, RT

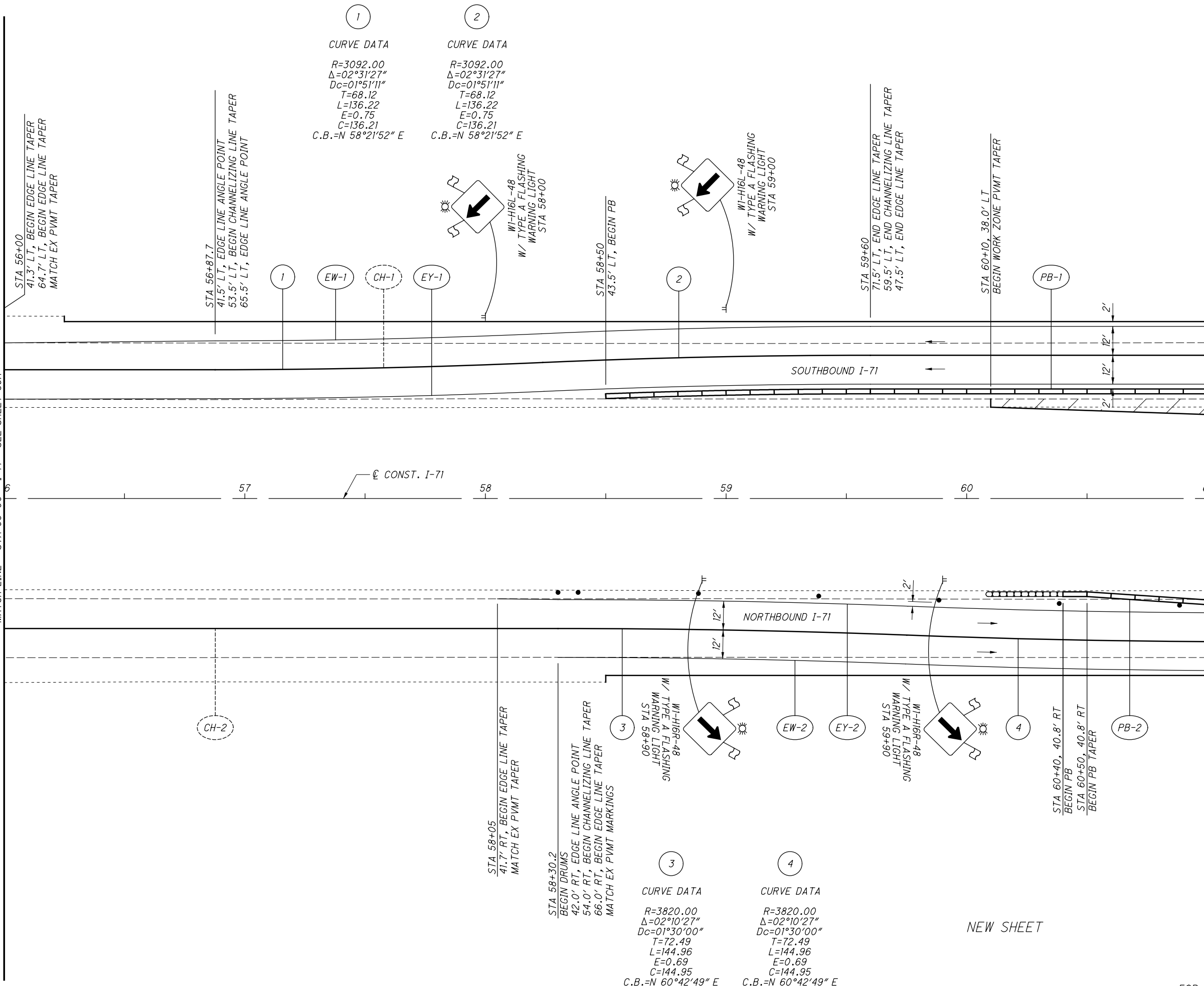
**ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN B**  
 ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN B SHALL BE USED FOR ALL WORK ZONE PAVEMENT CONSTRUCTED IN THE MEDIAN. THE CONTRACTOR WILL BE REQUIRED TO USE ITEM 304, AGGREGATE BASE, IN THE COURSE MAKE UP. THE CONTRACTOR WILL NOT BE PERMITTED TO USE ITEMS 301, 302 OR 441 IN LIEU OF 6 INCHES OF 304 AGGREGATE BASE. THE WORK ZONE PAVEMENT OUTSIDE THE PROJECT LIMITS SHALL BE LEFT IN PLACE AT THE END OF THIS PROJECT.

NEW SHEET

CALCULATED EGD CHECKED DLW  
 MAINTENANCE OF TRAFFIC - PRE-PHASE 1B (CONCRETE) I-71 STA 50+75 TO STA 56+00  
 FRA-71-1.53  
 65A  
 285  
 FOR LEGEND, SEE SHEET 23

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MATCH LINE - STA 56+00 - I-71 - SEE SHEET 65A



MATCH LINE - STA 61+00 - I-71 - SEE SHEET 65C



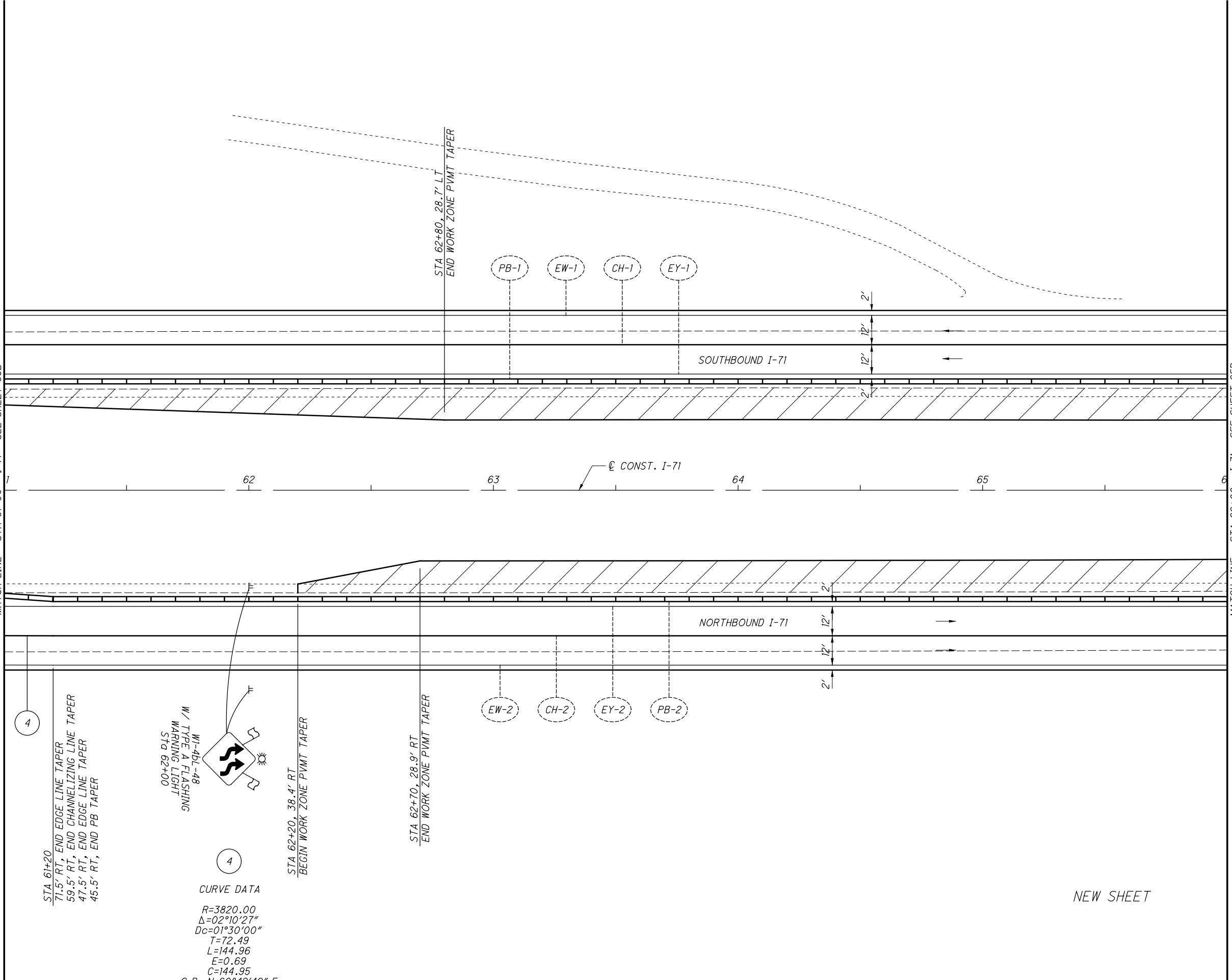
MAINTENANCE OF TRAFFIC - PRE-PHASE 1B  
(CONCRETE) I-71 STA 56+00 TO STA 61+00

FRA-71-1.53

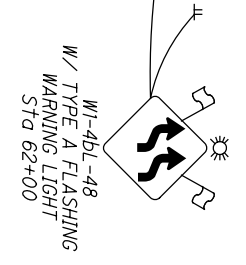
65B  
285

FOR LEGEND, SEE SHEET 23

MATCH LINE - STA 61+00 - I-71 - SEE SHEET 65B



4  
 STA 61+20  
 71.5' RT, END EDGE LINE TAPER  
 59.5' RT, END CHANNELIZING LINE TAPER  
 47.5' RT, END EDGE LINE TAPER  
 45.5' RT, END PB TAPER



4  
 CURVE DATA  
 R=3820.00  
 $\Delta=02^{\circ}10'27''$   
 $Dc=01^{\circ}30'00''$   
 T=72.49  
 L=144.96  
 E=0.69  
 C=144.95  
 C.B.=N 60°42'49" E

STA 62+20, 38.4' RT  
 BEGIN WORK ZONE PIVMT TAPER

STA 62+70, 28.9' RT  
 END WORK ZONE PIVMT TAPER

STA 62+80, 28.7' LT  
 END WORK ZONE PIVMT TAPER

MATCH LINE - STA 66+00 - I-71 - SEE SHEET 65D

NEW SHEET

CALCULATED  
 EGD  
 CHECKED  
 DLW

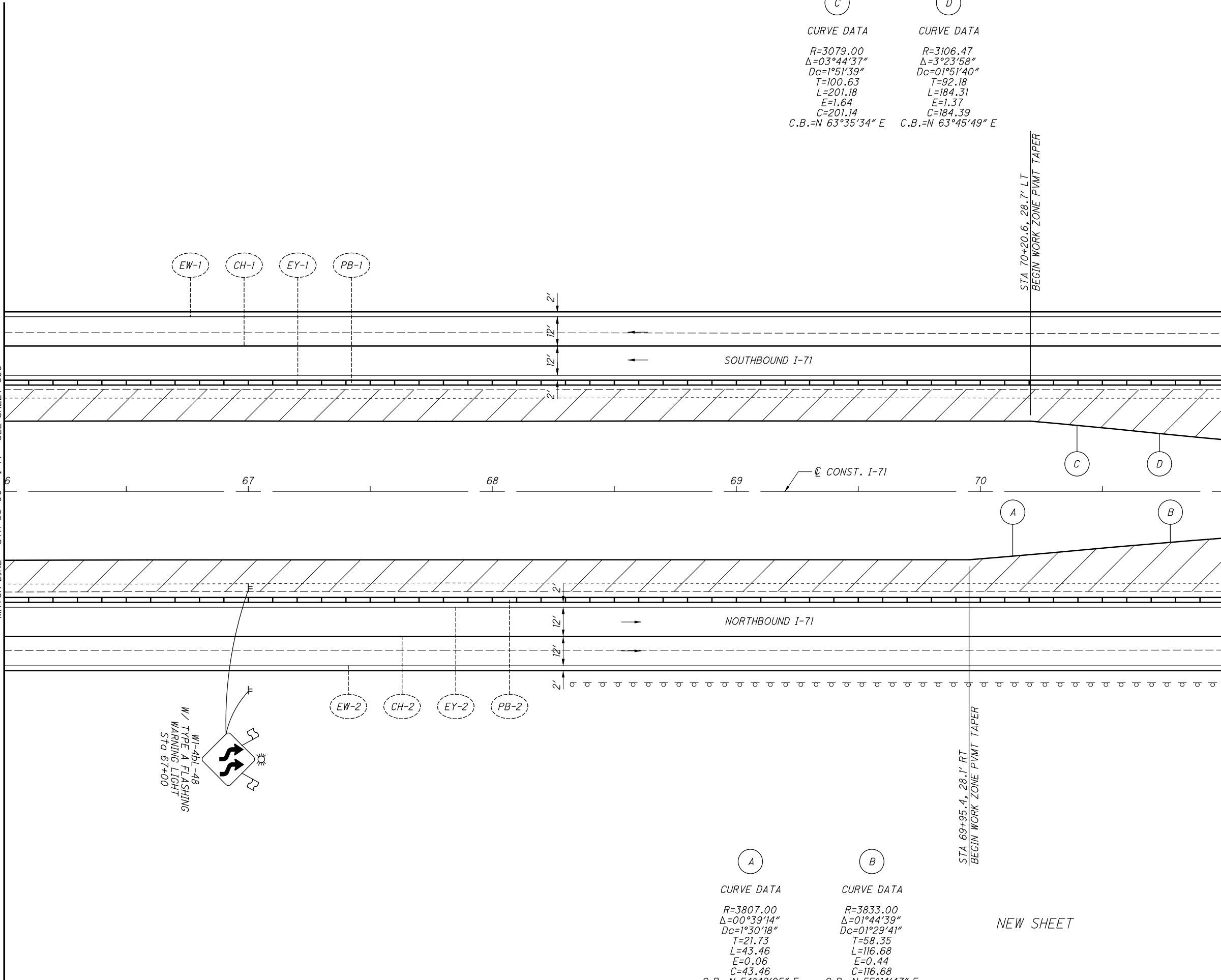
0 20 40  
 HORIZONTAL  
 SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PRE-PHASE 1B  
 (CONCRETE) I-71 STA 61+00 TO STA 66+00**

**FRA-71-1.53**

X:\4037000\121957.15\93496\MOT\sheets\93496MP354.dgn Sheet 11/19/2018 3:00:20 PM 1636dcb

MATCH LINE - STA 66+00 - I-71 - SEE SHEET 65C



W1-4BL-48  
W/ TYPE A FLASHING  
WARNING LIGHT  
STA 67+00

(C)	(D)
<b>CURVE DATA</b>	<b>CURVE DATA</b>
R=3079.00	R=3106.47
$\Delta=03^{\circ}44'37''$	$\Delta=3^{\circ}23'58''$
Dc=1^{\circ}51'39''	Dc=01^{\circ}51'40''
T=100.63	T=92.18
L=201.18	L=184.31
E=1.64	E=1.37
C=201.14	C=184.39
C.B.=N 63^{\circ}35'34" E	C.B.=N 63^{\circ}45'49" E

(A)	(B)
<b>CURVE DATA</b>	<b>CURVE DATA</b>
R=3807.00	R=3833.00
$\Delta=00^{\circ}39'14''$	$\Delta=01^{\circ}44'39''$
Dc=1^{\circ}30'18''	Dc=01^{\circ}29'41''
T=21.73	T=58.35
L=43.46	L=116.68
E=0.06	E=0.44
C=43.46	C=116.68
C.B.=N 54^{\circ}42'05" E	C.B.=N 55^{\circ}14'47" E

STA 70+20.6, 28.7' LT  
BEGIN WORK ZONE PVMT TAPER

STA 69+95.4, 28.1' RT  
BEGIN WORK ZONE PVMT TAPER

NEW SHEET

MATCH LINE - STA 71+00 - I-71 - SEE SHEET 65E



**MAINTENANCE OF TRAFFIC - PRE-PHASE 1B  
(CONCRETE) I-71 STA 66+00 TO STA 71+00**

**FRA-71-1.53**

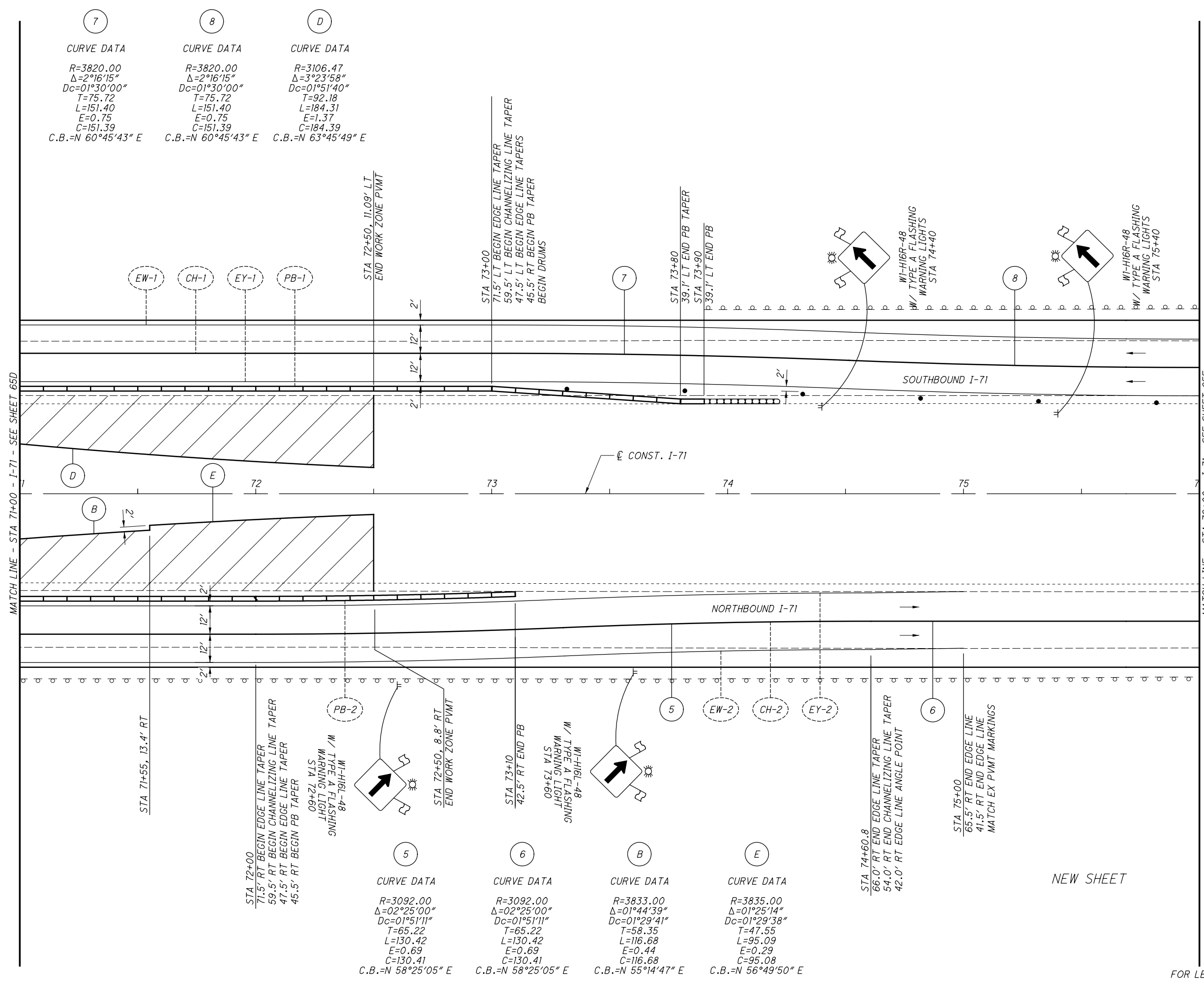
65D  
285

FOR LEGEND, SEE SHEET 23

X:\4037000\121957.15\93496\MOT\sheets\93496MP355.dgn Sheet 11/19/2018 3:00:20 PM 1636dcb

MATCH LINE - STA 71+00 - I-71 - SEE SHEET 65D

MATCH LINE - STA 76+00 - I-71 - SEE SHEET 65F



7	8	D
<b>CURVE DATA</b>	<b>CURVE DATA</b>	<b>CURVE DATA</b>
R=3820.00	R=3820.00	R=3106.47
Δ=2°16'15"	Δ=2°16'15"	Δ=3°23'58"
Dc=01°30'00"	Dc=01°30'00"	Dc=01°51'40"
T=75.72	T=75.72	T=92.18
L=151.40	L=151.40	L=184.31
E=0.75	E=0.75	E=1.37
C=151.39	C=151.39	C=184.39
C.B.=N 60°45'43" E	C.B.=N 60°45'43" E	C.B.=N 63°45'49" E

<b>5</b>	<b>6</b>	<b>B</b>	<b>E</b>
<b>CURVE DATA</b>	<b>CURVE DATA</b>	<b>CURVE DATA</b>	<b>CURVE DATA</b>
R=3092.00	R=3092.00	R=3833.00	R=3835.00
Δ=02°25'00"	Δ=02°25'00"	Δ=01°44'39"	Δ=01°25'14"
Dc=01°51'11"	Dc=01°51'11"	Dc=01°29'41"	Dc=01°29'38"
T=65.22	T=65.22	T=58.35	T=47.55
L=130.42	L=130.42	L=116.68	L=95.09
E=0.69	E=0.69	E=0.44	E=0.29
C=130.41	C=130.41	C=116.68	C=95.08
C.B.=N 58°25'05" E	C.B.=N 58°25'05" E	C.B.=N 55°14'47" E	C.B.=N 56°49'50" E



MAINTENANCE OF TRAFFIC - PRE-PHASE 1B  
(CONCRETE) I-71 STA 71+00 TO STA 76+00

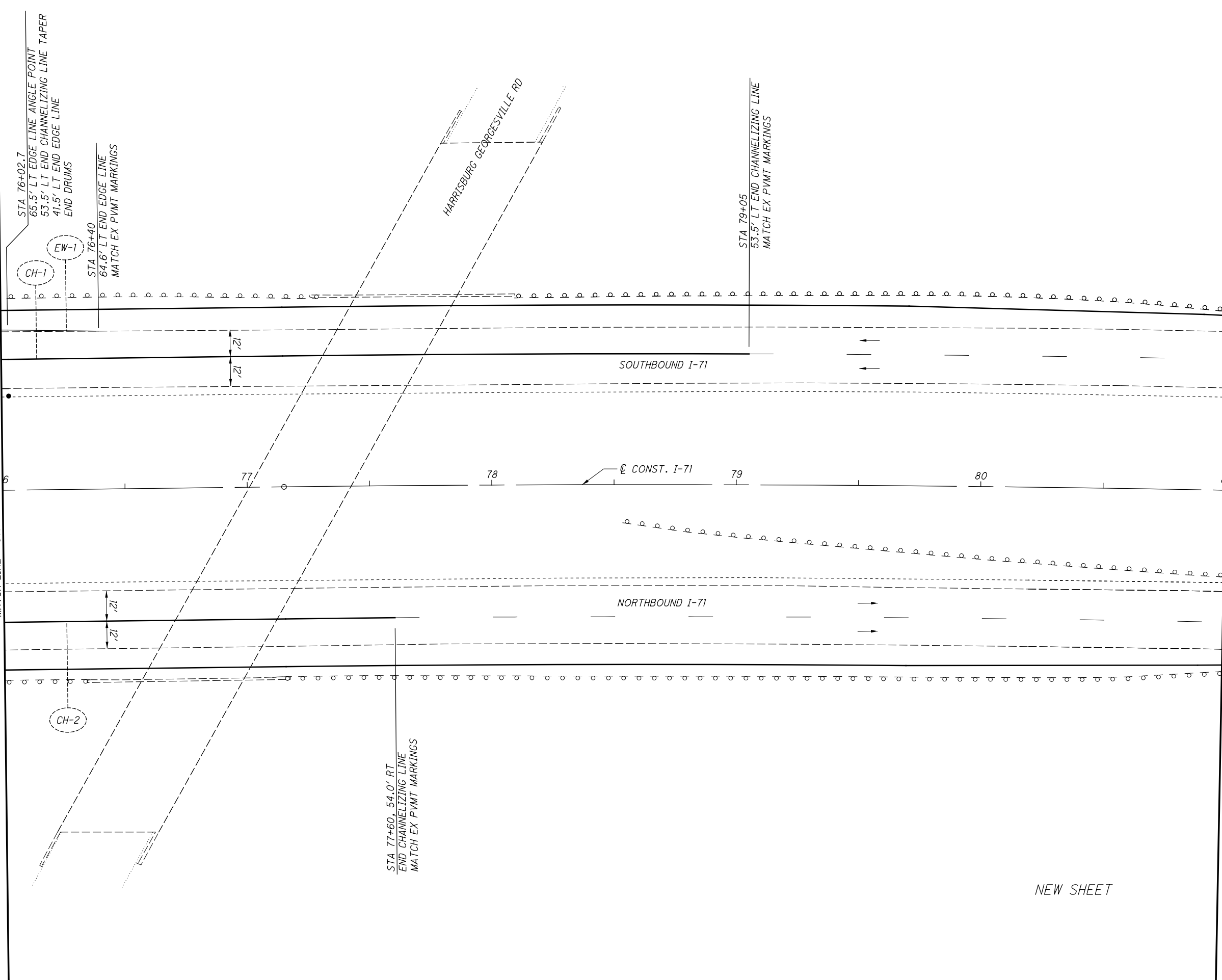
FRA-71-1.53

65E  
285

NEW SHEET

FOR LEGEND, SEE SHEET 23

MATCH LINE - STA 76+00 - I-71 - SEE SHEET 65E



NEW SHEET

FOR LEGEND, SEE SHEET 23

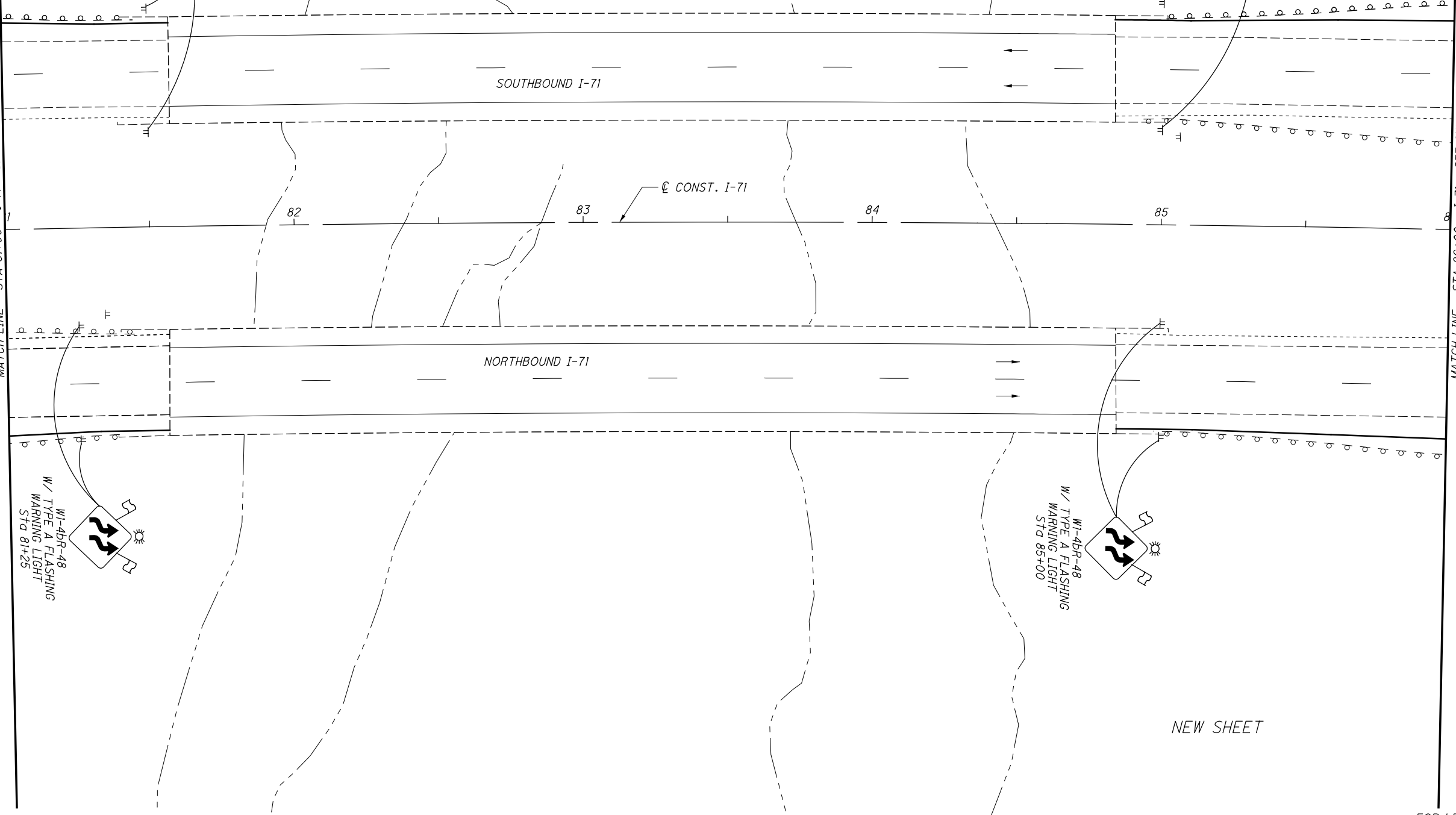
CALCULATED	EGD
CHECKED	DLW

0 20 40  
HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PRE-PHASE 1B  
(CONCRETE) I-71 STA 76+00 TO STA 81+00**

**FRA-71-1.53**

MATCH LINE - STA 81+00 - I-71 - SEE SHEET 65F



NEW SHEET

FOR LEGEND, SEE SHEET 23

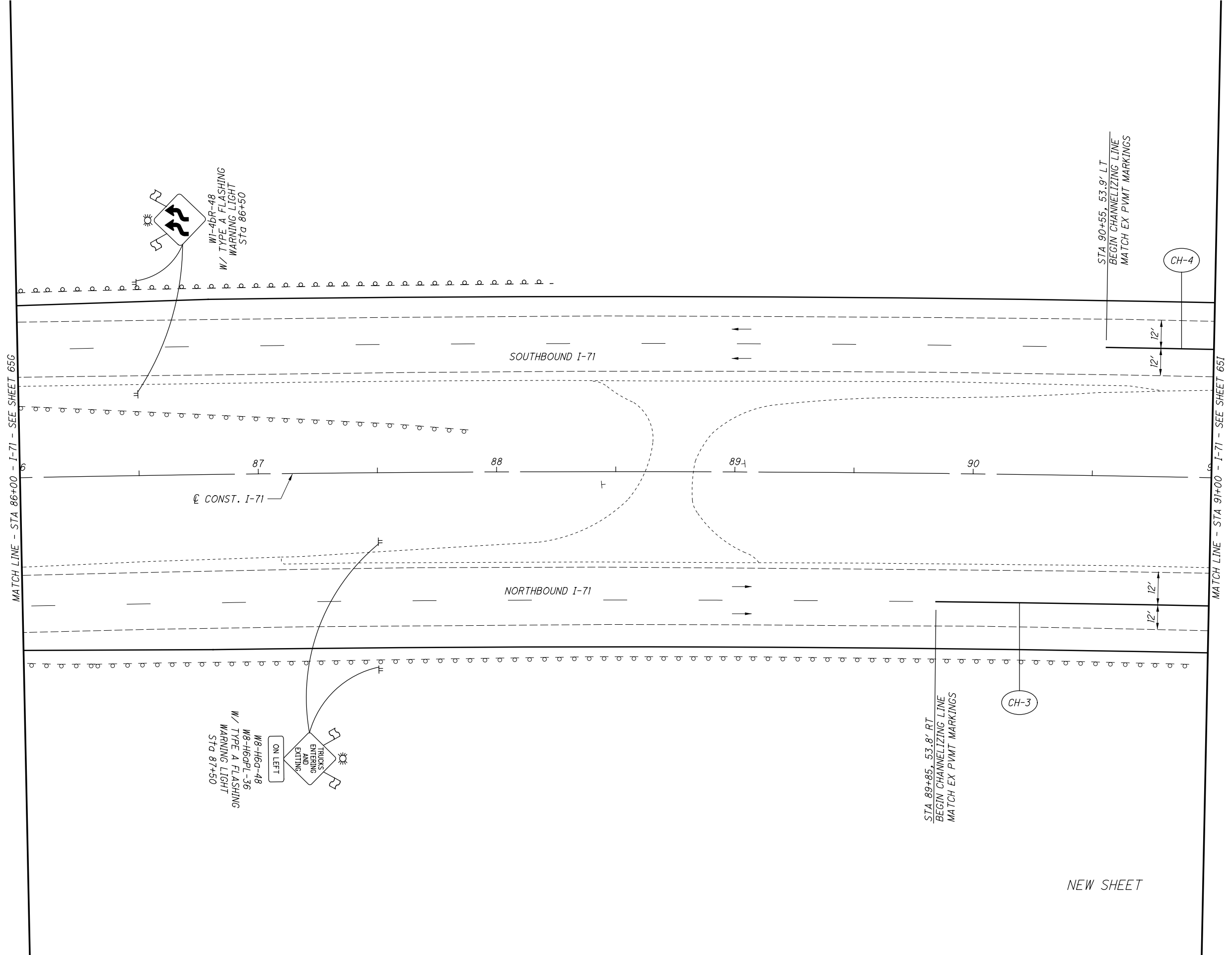
CALCULATED	EGD
CHECKED	DLW

0 20 40  
HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PRE-PHASE 1B  
(CONCRETE) I-71 STA 81+00 TO STA 86+00**

**FRA-71-1.53**





W8-H6G-48  
W8-H6GPL-36  
W/ TYPE A FLASHING  
WARNING LIGHT  
STA 87+50

ON LEFT

TRUCKS  
ENTERING  
AND  
EXITING

W1-4BR-48  
W/ TYPE A FLASHING  
WARNING LIGHT  
STA 86+50

STA 89+85, 53.8' RT  
BEGIN CHANNELIZING LINE  
MATCH EX PVT MARKINGS

STA 90+55, 53.9' LT  
BEGIN CHANNELIZING LINE  
MATCH EX PVT MARKINGS

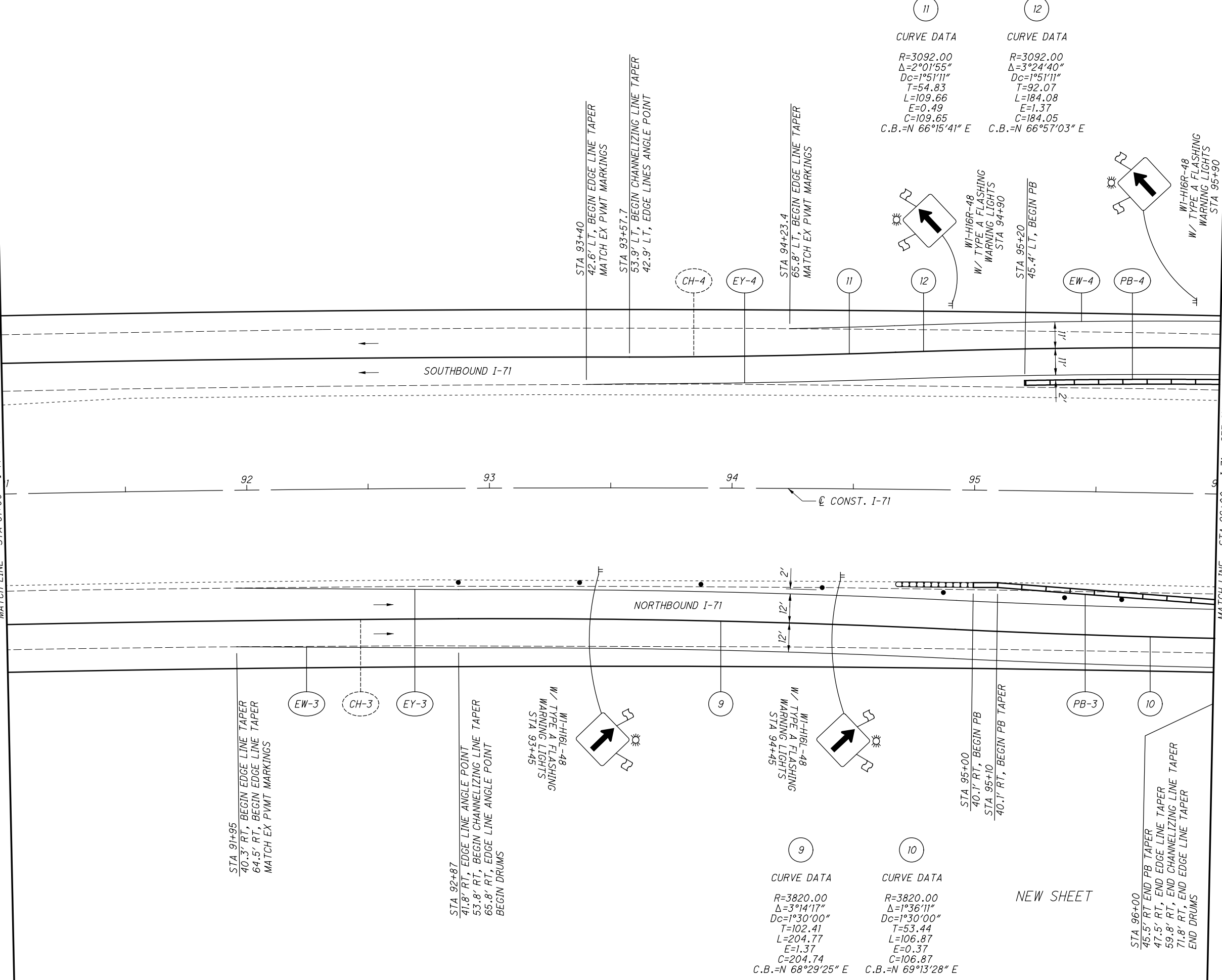
CALCULATED	EGD
CHECKED	DLW

0 20 40  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PRE-PHASE 1B  
(CONCRETE) I-71 STA 86+00 TO STA 91+00**

**FRA-71-1.53**

MATCH LINE - STA 91+00 - I-71 - SEE SHEET 65H



11	12
<b>CURVE DATA</b>	<b>CURVE DATA</b>
R=3092.00	R=3092.00
$\Delta=2^{\circ}01'55''$	$\Delta=3^{\circ}24'40''$
Dc=1^{\circ}51'11''	Dc=1^{\circ}51'11''
T=54.83	T=92.07
L=109.66	L=184.08
E=0.49	E=1.37
C=109.65	C=184.05
C.B.=N 66^{\circ}15'41'' E	C.B.=N 66^{\circ}57'03'' E

9	10
<b>CURVE DATA</b>	<b>CURVE DATA</b>
R=3820.00	R=3820.00
$\Delta=3^{\circ}14'17''$	$\Delta=1^{\circ}36'11''$
Dc=1^{\circ}30'00''	Dc=1^{\circ}30'00''
T=102.41	T=53.44
L=204.77	L=106.87
E=1.37	E=0.37
C=204.74	C=106.87
C.B.=N 68^{\circ}29'25'' E	C.B.=N 69^{\circ}13'28'' E

NEW SHEET



MAINTENANCE OF TRAFFIC - PRE-PHASE 1B  
(CONCRETE) I-71 STA 91+00 TO STA 96+00

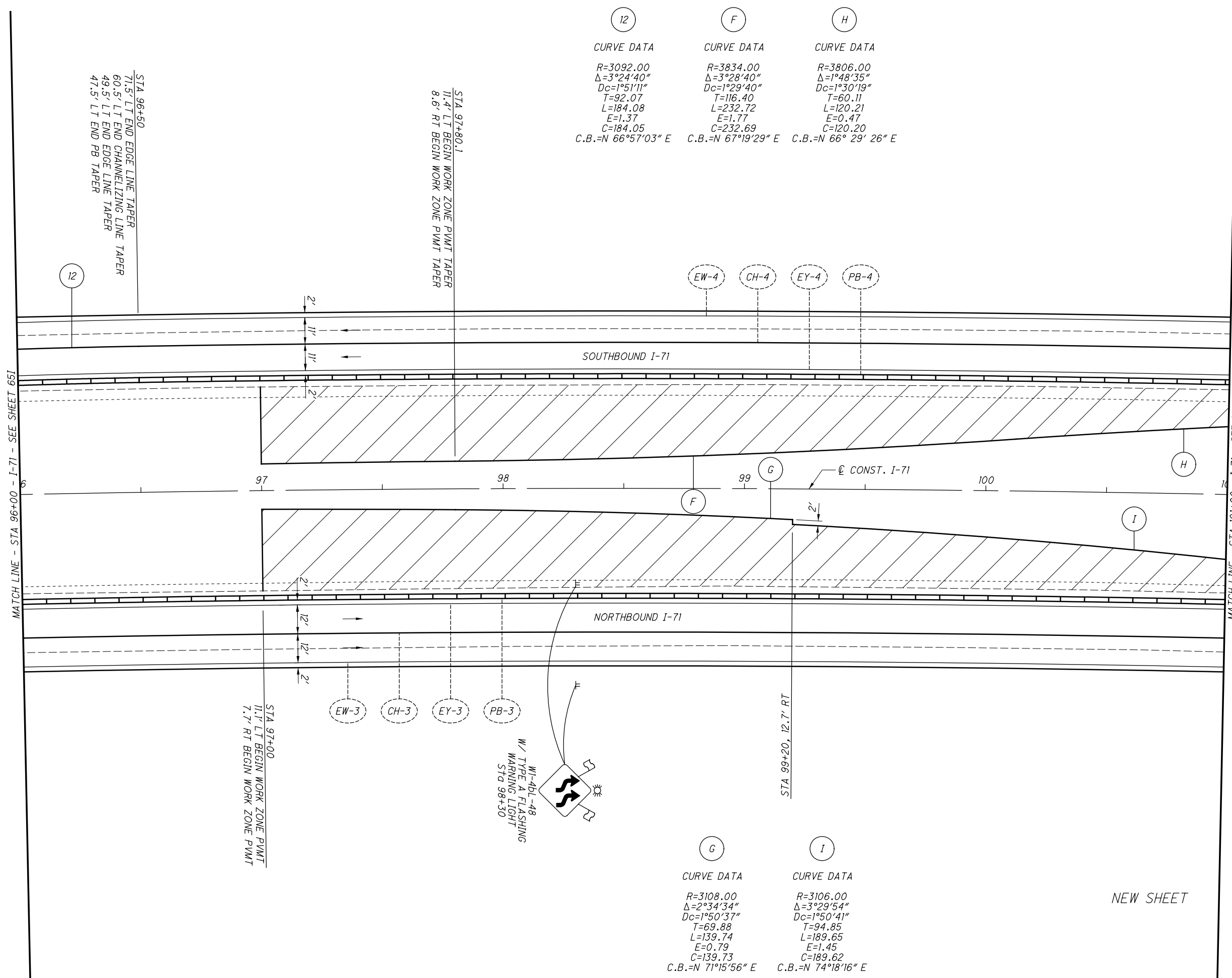
FRA-71-1.53

651  
285

FOR LEGEND, SEE SHEET 23

MATCH LINE - STA 96+00 - I-71 - SEE SHEET 65I

MATCH LINE - STA 101+00 - I-71 - SEE SHEET 65K



STA 96+50  
71.5' LT END EDGE LINE TAPER  
60.5' LT END CHANNELIZING LINE TAPER  
49.5' LT END EDGE LINE TAPER  
47.5' LT END PB TAPER

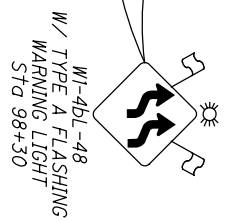
STA 97+80.1  
11.4' LT BEGIN WORK ZONE PVMIT TAPER  
8.6' RT BEGIN WORK ZONE PVMIT TAPER

STA 97+00  
11.1' LT BEGIN WORK ZONE PVMIT  
7.7' RT BEGIN WORK ZONE PVMIT

STA 99+20, 12.7' RT

12	F	H
CURVE DATA	CURVE DATA	CURVE DATA
R=3092.00	R=3834.00	R=3806.00
$\Delta=3^{\circ}24'40''$	$\Delta=3^{\circ}28'40''$	$\Delta=1^{\circ}48'35''$
Dc=1^{\circ}51'11''	Dc=1^{\circ}29'40''	Dc=1^{\circ}30'19''
T=92.07	T=116.40	T=60.11
L=184.08	L=232.72	L=120.21
E=1.37	E=1.77	E=0.47
C=184.05	C=232.69	C=120.20
C.B.=N 66^{\circ}57'03'' E	C.B.=N 67^{\circ}19'29'' E	C.B.=N 66^{\circ} 29' 26'' E

G	I
CURVE DATA	CURVE DATA
R=3108.00	R=3106.00
$\Delta=2^{\circ}34'34''$	$\Delta=3^{\circ}29'54''$
Dc=1^{\circ}50'37''	Dc=1^{\circ}50'41''
T=69.88	T=94.85
L=139.74	L=189.65
E=0.79	E=1.45
C=139.73	C=189.62
C.B.=N 71^{\circ}15'56'' E	C.B.=N 74^{\circ}18'16'' E



NEW SHEET

CALCULATED  
EGD  
CHECKED  
DLW

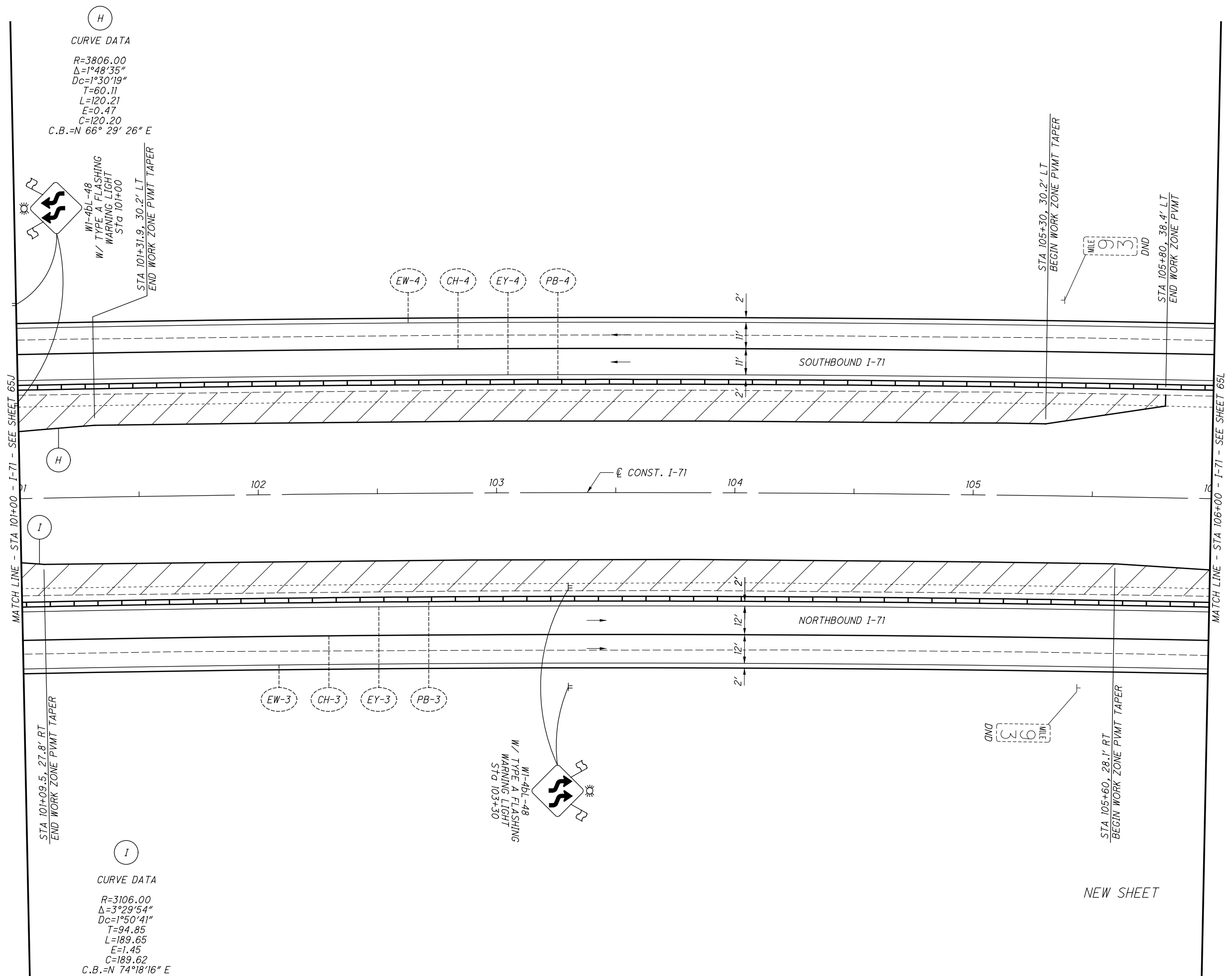
0 20 40  
HORIZONTAL SCALE IN FEET

N

**MAINTENANCE OF TRAFFIC - PRE-PHASE 1B  
(CONCRETE) I-71 STA 96+00 TO STA 101+00**

**FRA-71-1.53**

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**H**  
 CURVE DATA  
 R=3806.00  
 $\Delta=1^{\circ}48'35''$   
 $Dc=1^{\circ}30'19''$   
 T=60.11  
 L=120.21  
 E=0.47  
 C=120.20  
 C.B.=N 66° 29' 26" E

W1-4BL-48  
 W/ TYPE A FLASHING  
 WARNING LIGHT  
 STA 101+00  
 STA 101+31.9, 30.2' LT  
 END WORK ZONE PVMT TAPER

**H**

**I**

STA 101+09.5, 27.8' RT  
 END WORK ZONE PVMT TAPER

**I**  
 CURVE DATA  
 R=3106.00  
 $\Delta=3^{\circ}29'54''$   
 $Dc=1^{\circ}50'41''$   
 T=94.85  
 L=189.65  
 E=1.45  
 C=189.62  
 C.B.=N 74°18'16" E

W1-4BL-48  
 W/ TYPE A FLASHING  
 WARNING LIGHT  
 STA 103+30

DND  
 MILE  
 9.3

STA 105+60, 28.1' RT  
 BEGIN WORK ZONE PVMT TAPER

STA 105+30, 30.2' LT  
 BEGIN WORK ZONE PVMT TAPER

STA 105+80, 38.4' LT  
 END WORK ZONE PVMT

NEW SHEET

MATCH LINE - STA 101+00 - I-71 - SEE SHEET 65J

MATCH LINE - STA 106+00 - I-71 - SEE SHEET 65L

CALCULATED  
EGD  
CHECKED  
DLW

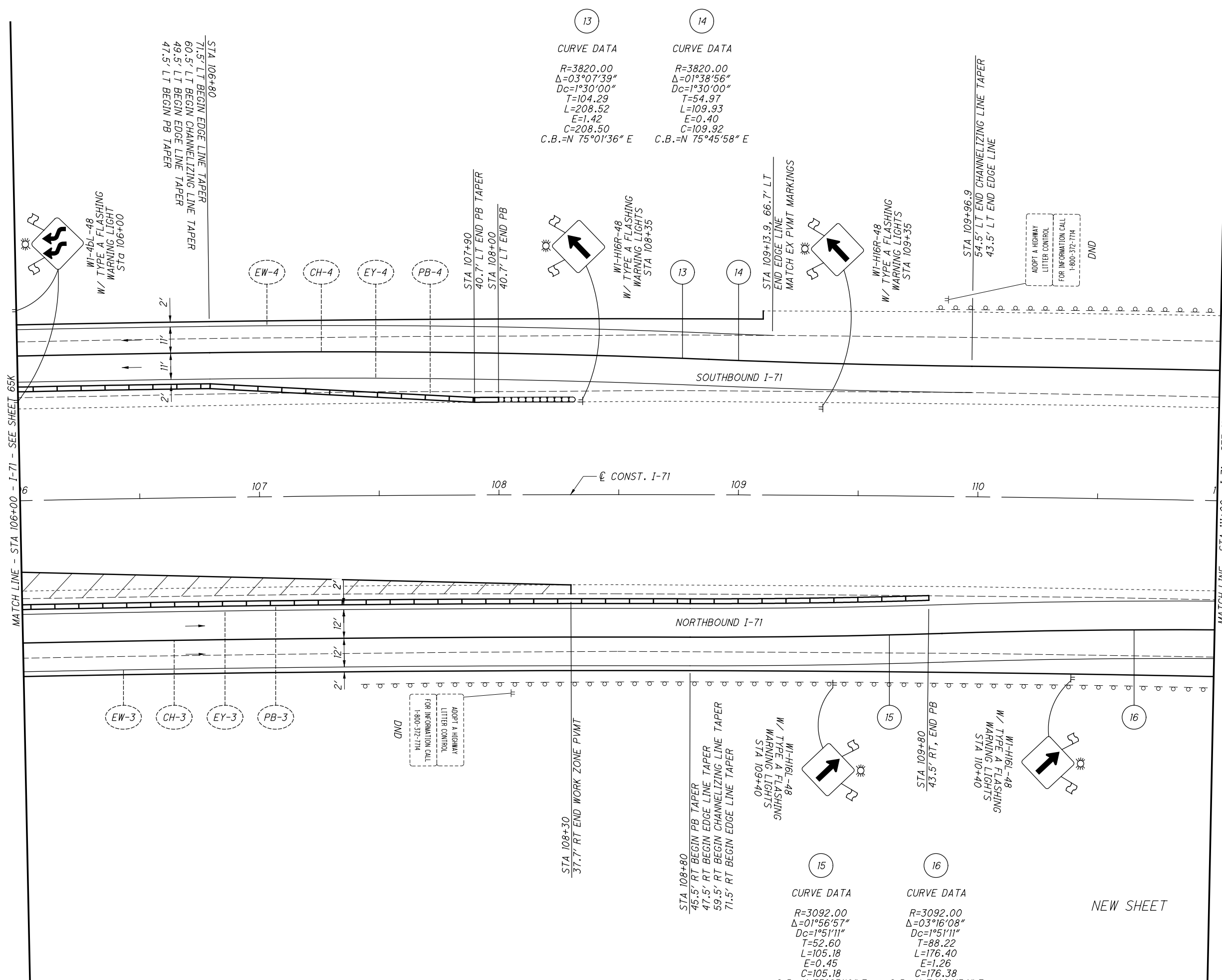
0 20 40  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PRE-PHASE 1B  
 (CONCRETE) I-71 STA 101+00 TO STA 106+00**

**FRA-71-1.53**

65K  
285

FOR LEGEND, SEE SHEET 23



13	14
<b>CURVE DATA</b>	<b>CURVE DATA</b>
R=3820.00	R=3820.00
$\Delta=03^{\circ}07'39''$	$\Delta=01^{\circ}38'56''$
Dc=1^{\circ}30'00''	Dc=1^{\circ}30'00''
T=104.29	T=54.97
L=208.52	L=109.93
E=1.42	E=0.40
C=208.50	C=109.92
C.B.=N 75^{\circ}01'36" E	C.B.=N 75^{\circ}45'58" E

15	16
<b>CURVE DATA</b>	<b>CURVE DATA</b>
R=3092.00	R=3092.00
$\Delta=01^{\circ}56'57''$	$\Delta=03^{\circ}16'08''$
Dc=1^{\circ}51'11''	Dc=1^{\circ}51'11''
T=52.60	T=88.22
L=105.18	L=176.40
E=0.45	E=1.26
C=105.18	C=176.38
C.B.=N 73^{\circ}25'18" E	C.B.=N 74^{\circ}04'54" E

CALCULATED  
EGD  
CHECKED  
DLW

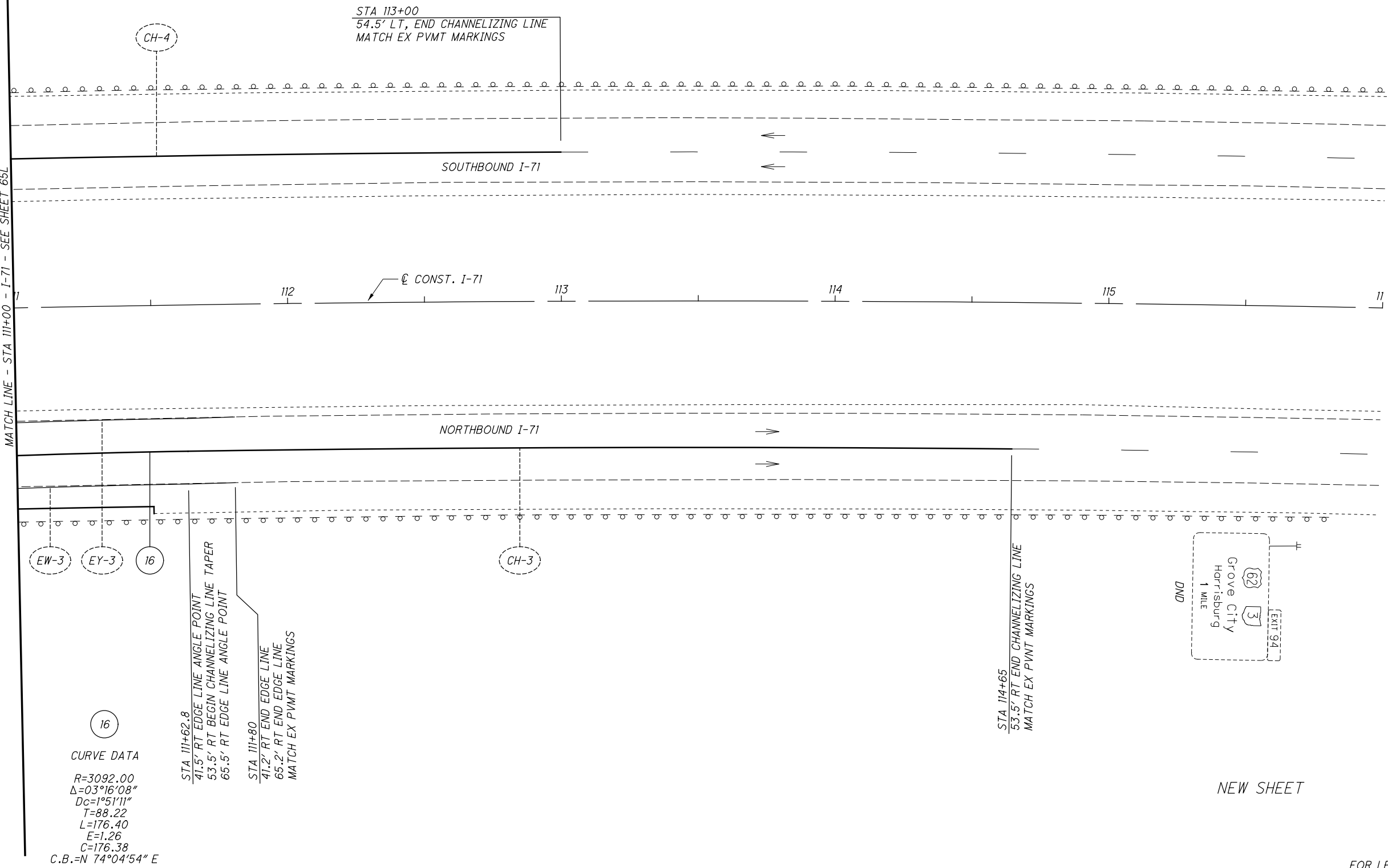
0 20 40  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PRE-PHASE 1B  
(CONCRETE) I-71 STA 106+00 TO STA 111+00**

**FRA-71-1.53**

X:\4037000\121957.15\93496\MOT\sheets\93496MP363.dgn Sheet 11/19/2018 3:00:23 PM 1636dcb

MATCH LINE - STA 111+00 - I-71 - SEE SHEET 65L



16

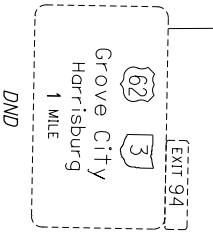
**CURVE DATA**  
 $R=3092.00$   
 $\Delta=03^{\circ}16'08''$   
 $Dc=1^{\circ}51'11''$   
 $T=88.22$   
 $L=176.40$   
 $E=1.26$   
 $C=176.38$   
 $C.B.=N 74^{\circ}04'54'' E$

STA 111+62.8  
 41.5' RT EDGE LINE ANGLE POINT  
 53.5' RT BEGIN CHANNELIZING LINE TAPER  
 65.5' RT EDGE LINE ANGLE POINT

STA 111+80  
 41.2' RT END EDGE LINE  
 65.2' RT END EDGE LINE  
 MATCH EX PVMT MARKINGS

STA 113+00  
 54.5' LT, END CHANNELIZING LINE  
 MATCH EX PVMT MARKINGS

STA 114+65  
 53.5' RT END CHANNELIZING LINE  
 MATCH EX PVMT MARKINGS



NEW SHEET

THE CONTRACTOR SHALL INSTALL THE FOLLOWING ADVANCE WARNING SIGNS ON BOTH SIDES OF THE SOUTHBOUND I-71 ROADWAY AT THE LOCATIONS SHOWN PRIOR TO THE START OF PHASE 1B CONSTRUCTION. COVER R2-1 SOUTHBOUND SIGN AT STA. 145+00.

- W1-4bR-48  
 W/ TYPE A FLASHING  
 WARNING LIGHT  
 Sta 118+00
- DSL  
 WORKING HOURS  
 STA. 123+00
- DSL  
 NON-WORKING HOURS  
 STA. 123+00
- G20-2-36  
 Sta 124+50, LT
- W1-4bR-48  
 W/ TYPE A FLASHING  
 WARNING LIGHT  
 Sta 128+00
- W8-H6a-48  
 W8-H6aPL-36  
 W/ TYPE A FLASHING  
 WARNING LIGHT  
 Sta 131+50
- W3-H5b-48  
 W/ TYPE A FLASHING  
 WARNING LIGHT  
 Sta 135+50
- R4-9-36  
 Sta 143+00
- R4-5L-48  
 Sta 157+00
- R11-H5a-48  
 Sta 162+80
- W20-1-48  
 W/ TYPE A FLASHING  
 WARNING LIGHT  
 Sta 169+40

CALCULATED EGD CHECKED DLW

0 20 40  
 HORIZONTAL SCALE IN FEET

MAINTENANCE OF TRAFFIC - PRE-PHASE 1B (CONCRETE) I-71 STA 111+00 TO STA 116+00

FRA-71-1.53

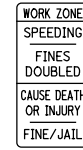
65M 285

FOR LEGEND, SEE SHEET 23

THE CONTRACTOR SHALL INSTALL THE FOLLOWING ADVANCE WARNING SIGNS ON BOTH SIDES OF THE NORTHBOUND I-71 ROADWAY AT THE LOCATIONS SHOWN PRIOR TO THE START OF PHASE I CONSTRUCTION.



W20-1-48  
W/ TYPE A FLASHING  
WARNING LIGHT  
Sta 12+70



R11-H5a-48  
Sta 19+30



R4-5L-48  
Sta 25+10



R4-9-36  
Sta 39+10

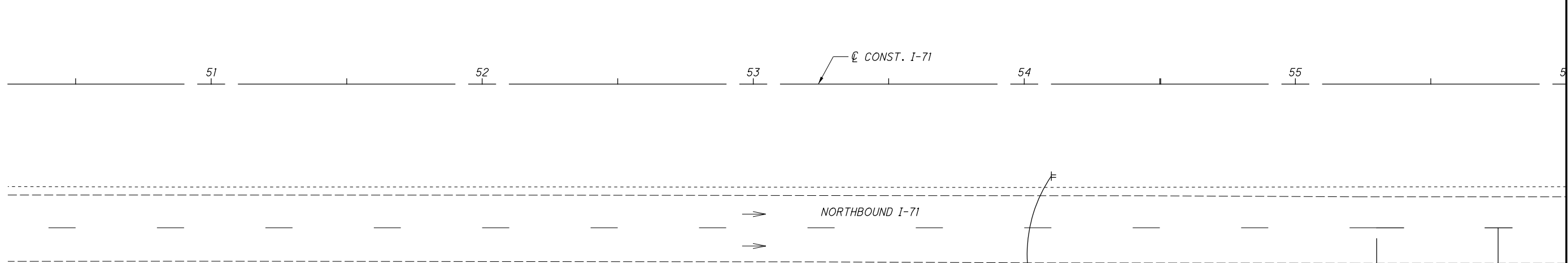
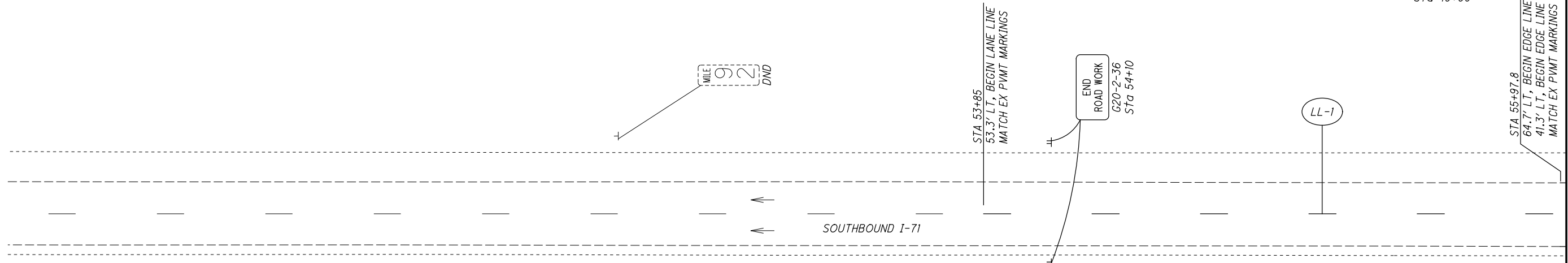


W3-H5b-48  
W/ TYPE A FLASHING  
WARNING LIGHT  
Sta 46+60



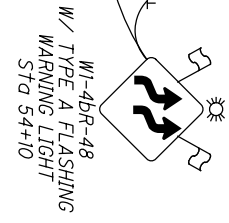
W8-H6a-48  
W8-H6aPL-36  
W/ TYPE A FLASHING  
WARNING LIGHT  
Sta 49+50

ON LEFT



WILE 92 DND

WILE 92 DND



W1-4BR-48  
W/ TYPE A FLASHING  
WARNING LIGHT  
Sta 54+10

STA 55+30  
53.1' LT, BEGIN LANE LINE  
MATCH EX PIVMT MARKINGS

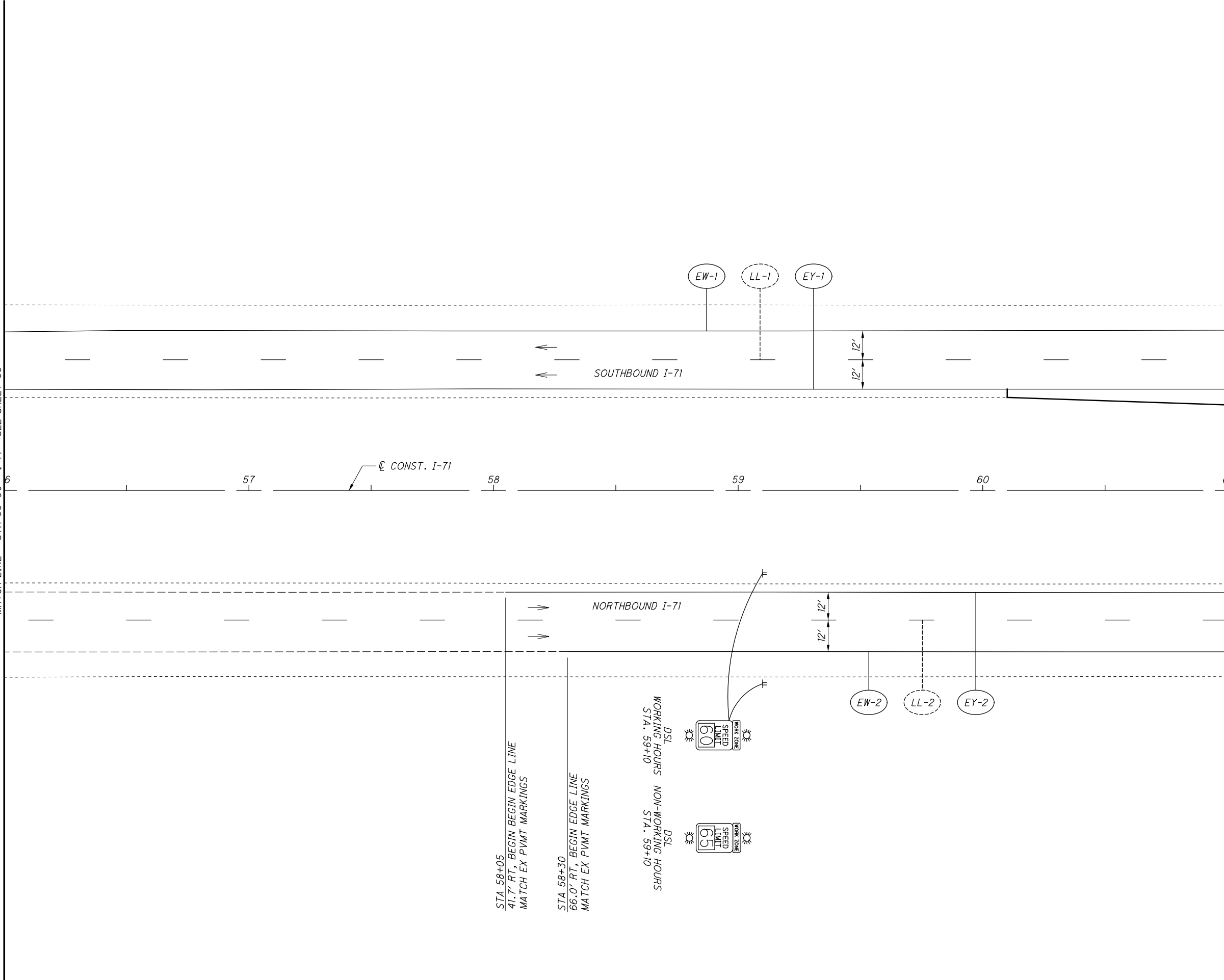
STA 55+97.8  
64.7' LT, BEGIN EDGE LINE  
41.3' LT, BEGIN EDGE LINE  
MATCH EX PIVMT MARKINGS

MATCH LINE - STA 56+00 - I-71 - SEE SHEET 67

CALCULATED EGD CHECKED DLW

**MAINTENANCE OF TRAFFIC - PHASE 1  
(CONCRETE) I-71 STA 50+75 TO STA 56+00**

MATCH LINE - STA 56+00 - I-71 - SEE SHEET 66



FOR LEGEND, SEE SHEET 23

CALCULATED	EGD
CHECKED	DLW

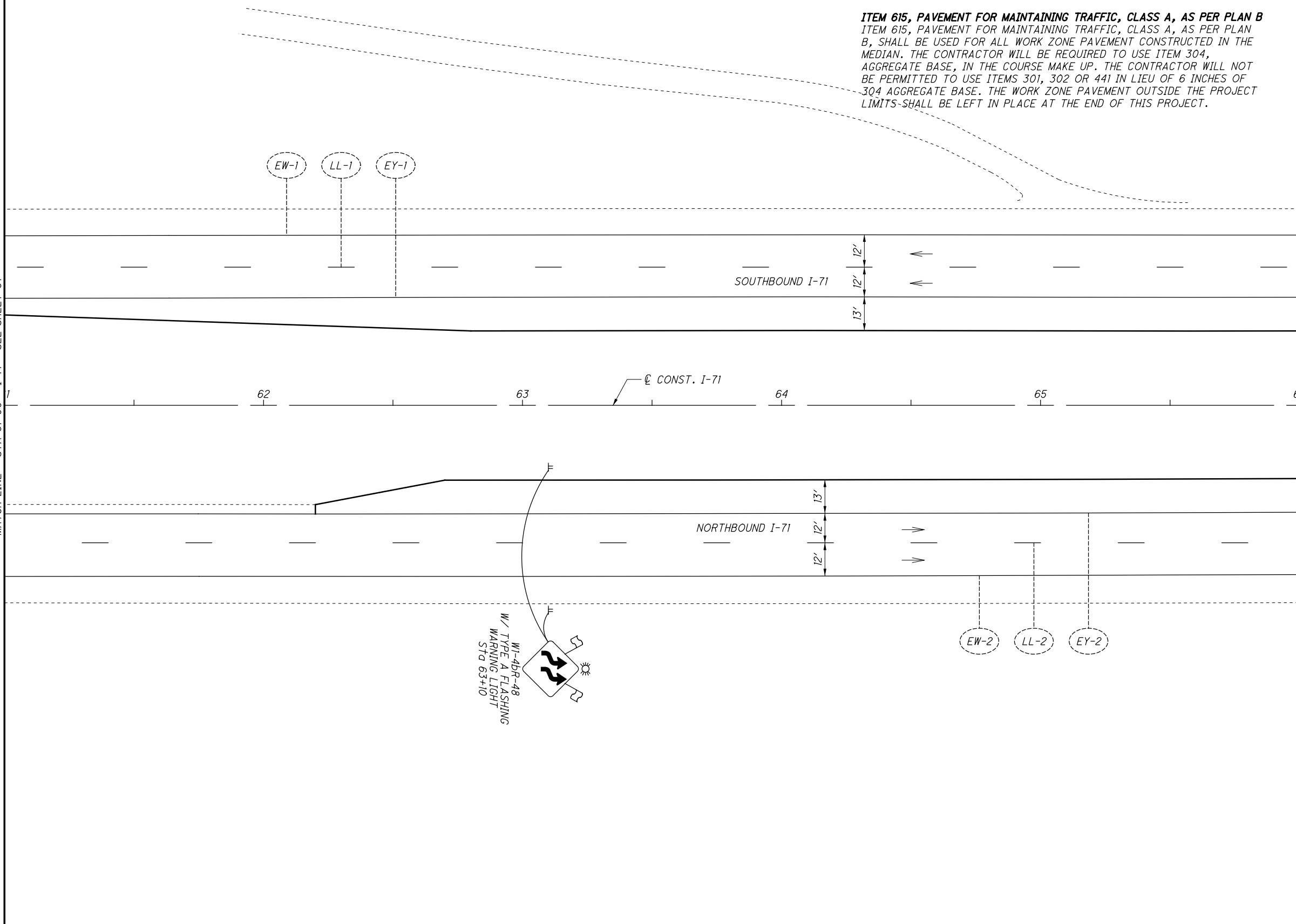
0 20 40  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 1  
(CONCRETE) I-71 STA 56+00 TO STA 61+00**

**FRA-71-1.53**



MATCH LINE - STA 61+00 - I-71 - SEE SHEET 67



NOTES:

**ITEM 411, STABILIZED CRUSHED AGGREGATE**  
 THIS AGGREGATE SHOULDER SHALL BE CONSTRUCTED ALONG THE EDGE OF THE WORK ZONE PAVEMENT AND SHALL BE 2 FEET WIDE BY 6 INCHES DEEP AND PLACED AT THE FOLLOWING LOCATIONS:  
 STA 72+50 TO STA 81+35 LT      STA 72+50 TO STA 81+35, RT  
 STA 85+07 TO STA 88+54, RT      STA 85+69 TO STA 88+57, LT  
 STA 88+91 TO STA 97+00, RT      STA 88+97 TO STA 97+00, LT

**ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN B**  
 ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN B, SHALL BE USED FOR ALL WORK ZONE PAVEMENT CONSTRUCTED IN THE MEDIAN. THE CONTRACTOR WILL BE REQUIRED TO USE ITEM 304, AGGREGATE BASE, IN THE COURSE MAKE UP. THE CONTRACTOR WILL NOT BE PERMITTED TO USE ITEMS 301, 302 OR 441 IN LIEU OF 6 INCHES OF 304 AGGREGATE BASE. THE WORK ZONE PAVEMENT OUTSIDE THE PROJECT LIMITS SHALL BE LEFT IN PLACE AT THE END OF THIS PROJECT.

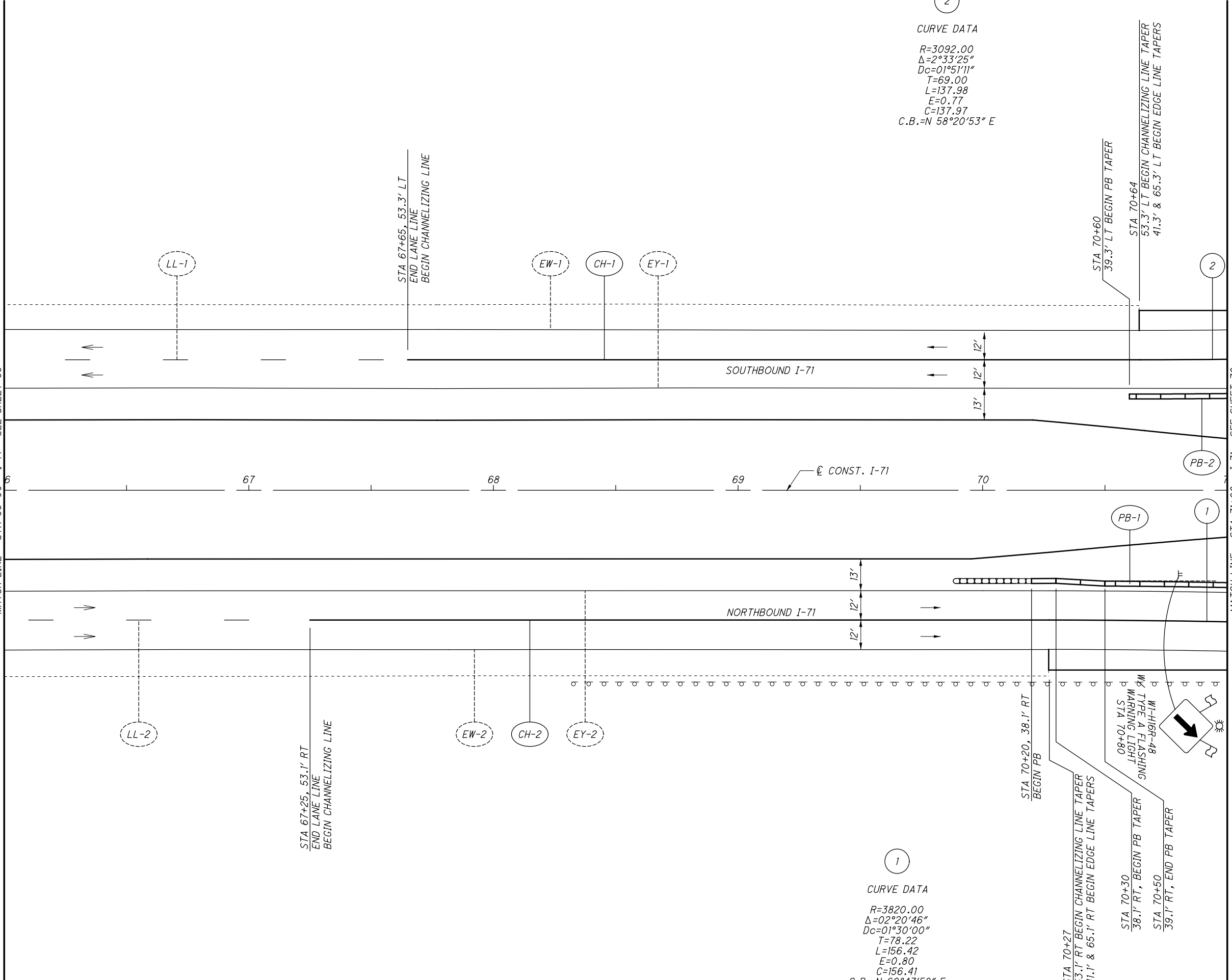
CALCULATED	EGD	CHECKED	DLW

0 10 20 40  
 HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 1  
 (CONCRETE) I-71 STA 61+00 TO STA 66+00**

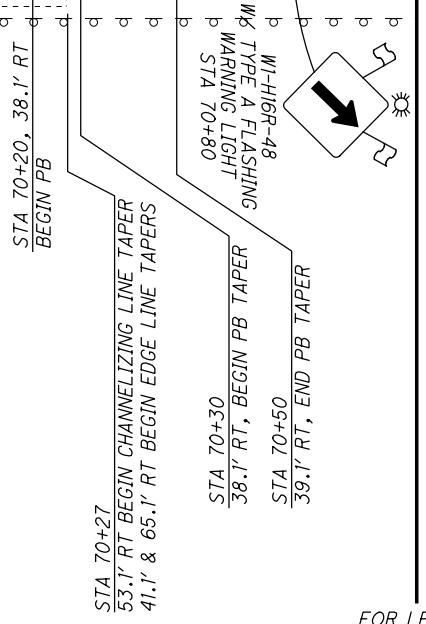
**FRA-71-1.53**

MATCH LINE - STA 66+00 - I-71 - SEE SHEET 68



2  
 CURVE DATA  
 R=3092.00  
 $\Delta=2^{\circ}33'25''$   
 $Dc=01^{\circ}51'11''$   
 T=69.00  
 L=137.98  
 E=0.77  
 C=137.97  
 C.B.=N 58°20'53" E

1  
 CURVE DATA  
 R=3820.00  
 $\Delta=02^{\circ}20'46''$   
 $Dc=01^{\circ}30'00''$   
 T=78.22  
 L=156.42  
 E=0.80  
 C=156.41  
 C.B.=N 60°47'58" E



CALCULATED  
 EGD  
 CHECKED  
 DLW

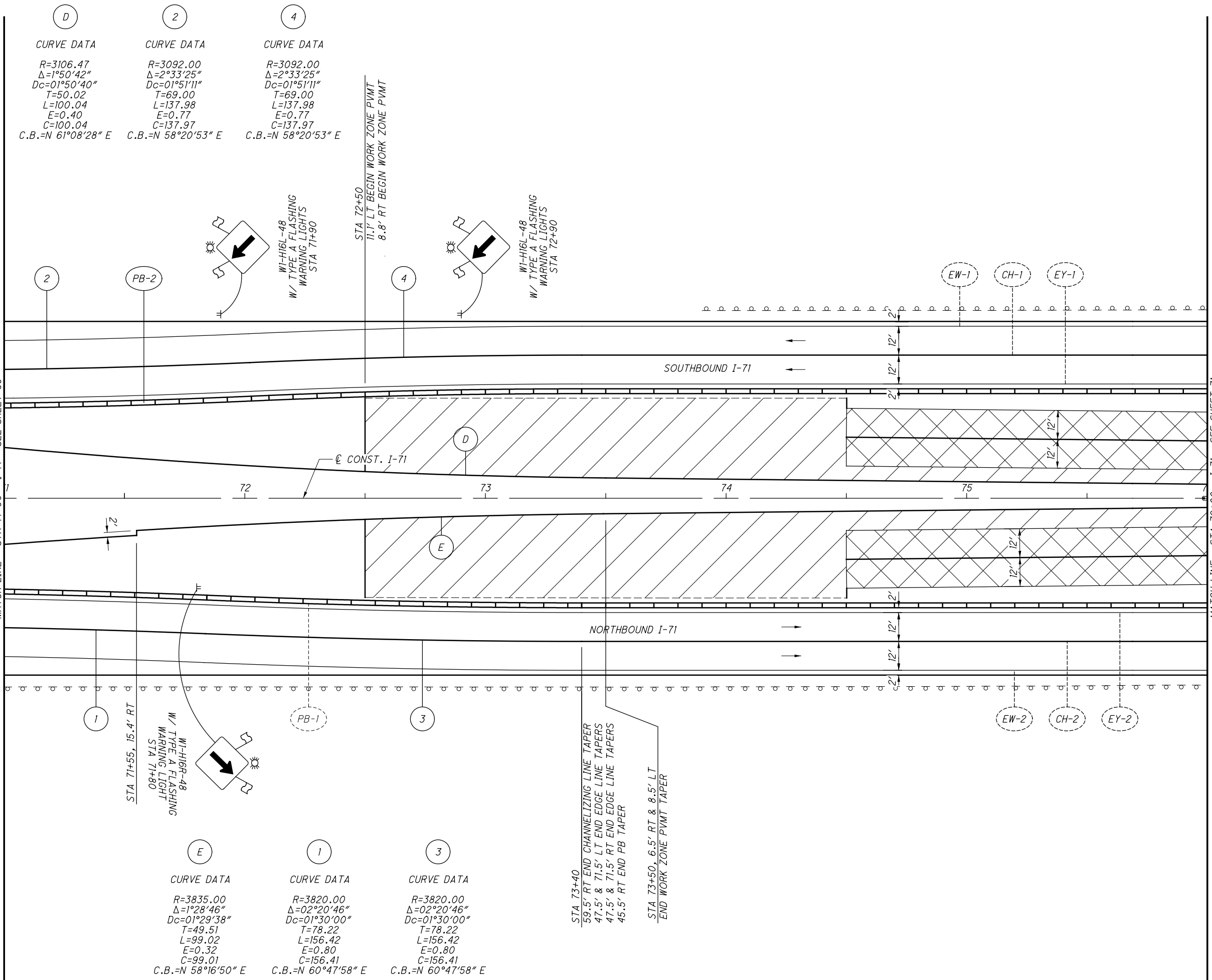
0 20 40  
 HORIZONTAL  
 SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 1  
 (CONCRETE) I-71 STA 66+00 TO STA 71+00**

**FRA-71-1.53**

FOR LEGEND, SEE SHEET 23

MATCH LINE - STA 71+00 - I-71 - SEE SHEET 69



(D)	(2)	(4)
<b>CURVE DATA</b>	<b>CURVE DATA</b>	<b>CURVE DATA</b>
R=3106.47	R=3092.00	R=3092.00
Δ=1°50'42"	Δ=2°33'25"	Δ=2°33'25"
Dc=01°50'40"	Dc=01°51'11"	Dc=01°51'11"
T=50.02	T=69.00	T=69.00
L=100.04	L=137.98	L=137.98
E=0.40	E=0.77	E=0.77
C=100.04	C=137.97	C=137.97
C.B.=N 61°08'28" E	C.B.=N 58°20'53" E	C.B.=N 58°20'53" E

(E)	(1)	(3)
<b>CURVE DATA</b>	<b>CURVE DATA</b>	<b>CURVE DATA</b>
R=3835.00	R=3820.00	R=3820.00
Δ=1°28'46"	Δ=02°20'46"	Δ=02°20'46"
Dc=01°29'38"	Dc=01°30'00"	Dc=01°30'00"
T=49.51	T=78.22	T=78.22
L=99.02	L=156.42	L=156.42
E=0.32	E=0.80	E=0.80
C=99.01	C=156.41	C=156.41
C.B.=N 58°16'50" E	C.B.=N 60°47'58" E	C.B.=N 60°47'58" E

STA 73+40  
 59.5' RT END CHANNELIZING LINE TAPER  
 47.5' & 71.5' LT END EDGE LINE TAPERS  
 47.5' & 71.5' RT END EDGE LINE TAPERS  
 45.5' RT END PB TAPER

STA 73+50, 6.5' RT & 8.5' LT  
 END WORK ZONE PVMT TAPER

MATCH LINE - STA 76+00 - I-71 - SEE SHEET 71

CALCULATED  
EGD  
CHECKED  
DLW

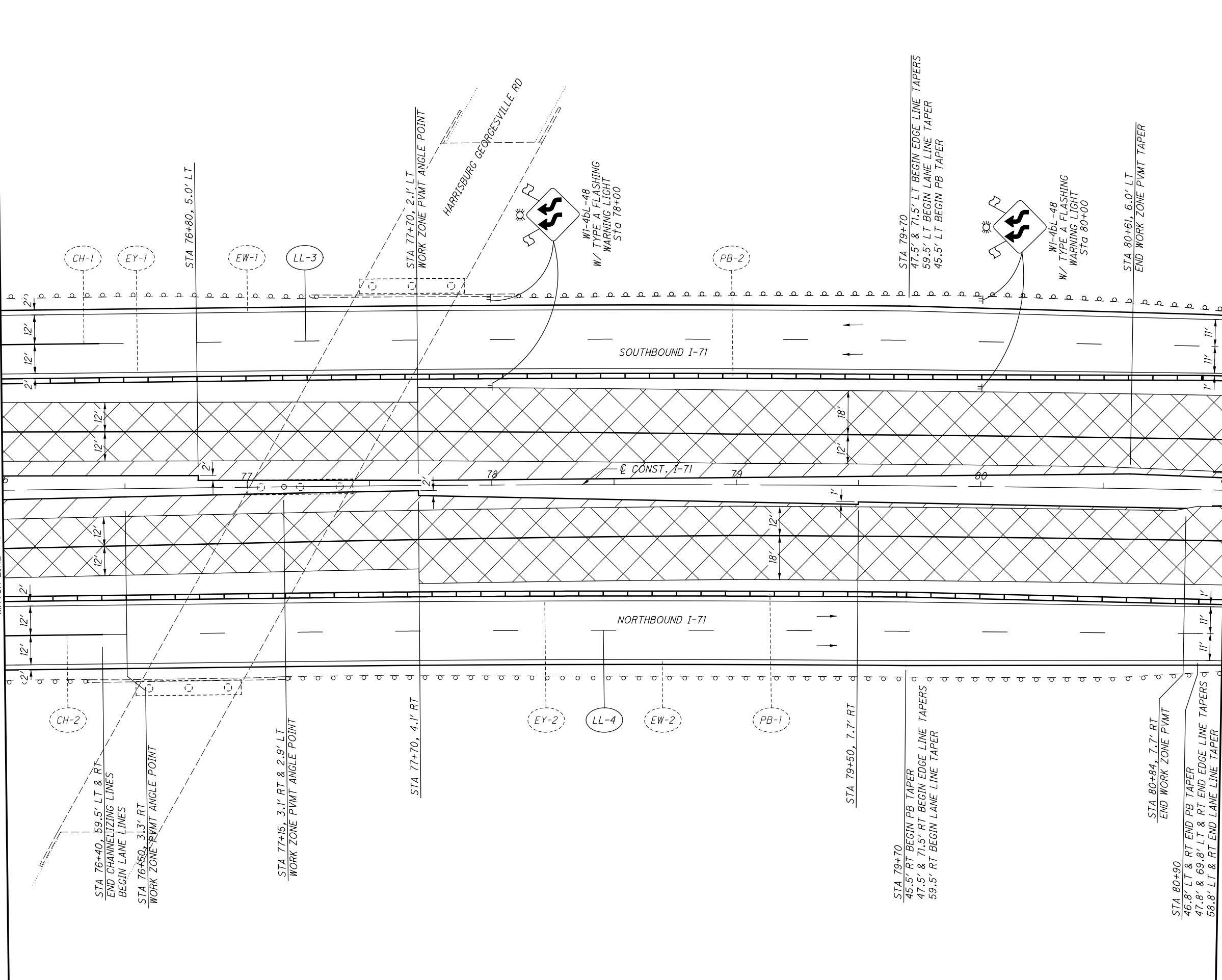
0 20 40  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 1  
 (CONCRETE) I-71 STA 71+00 TO STA 76+00**

**FRA-71-1.53**

FOR LEGEND, SEE SHEET 23

MATCH LINE - STA 76+00 - I-71 - SEE SHEET 70



MATCH LINE - STA 81+00 - I-71 - SEE SHEET 72

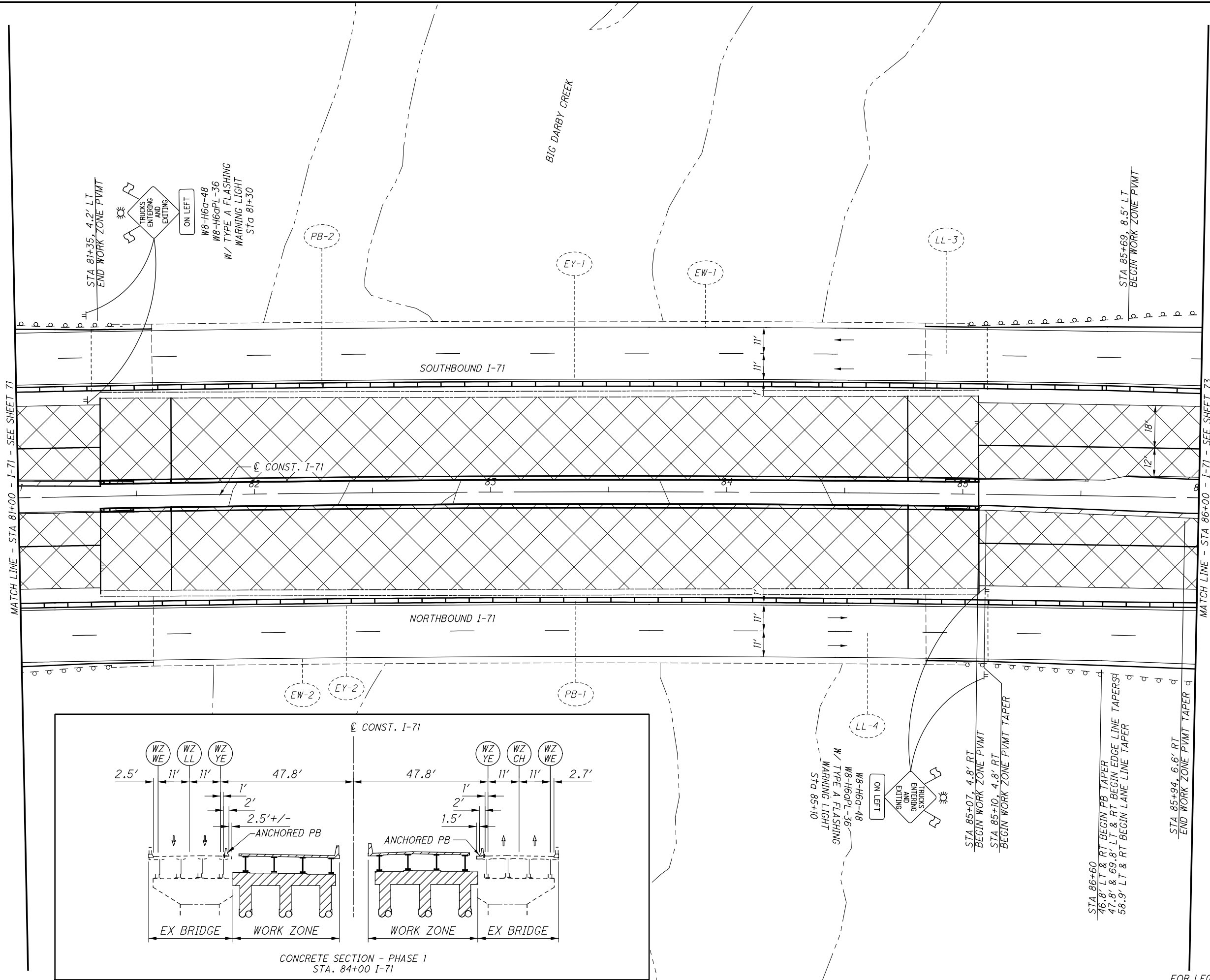
FOR LEGEND, SEE SHEET 23

CALCULATED  
EGD  
CHECKED  
DLW

0 20 40  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 1  
(CONCRETE) I-71 STA 76+00 TO STA 81+00**

**FRA-71-1.53**



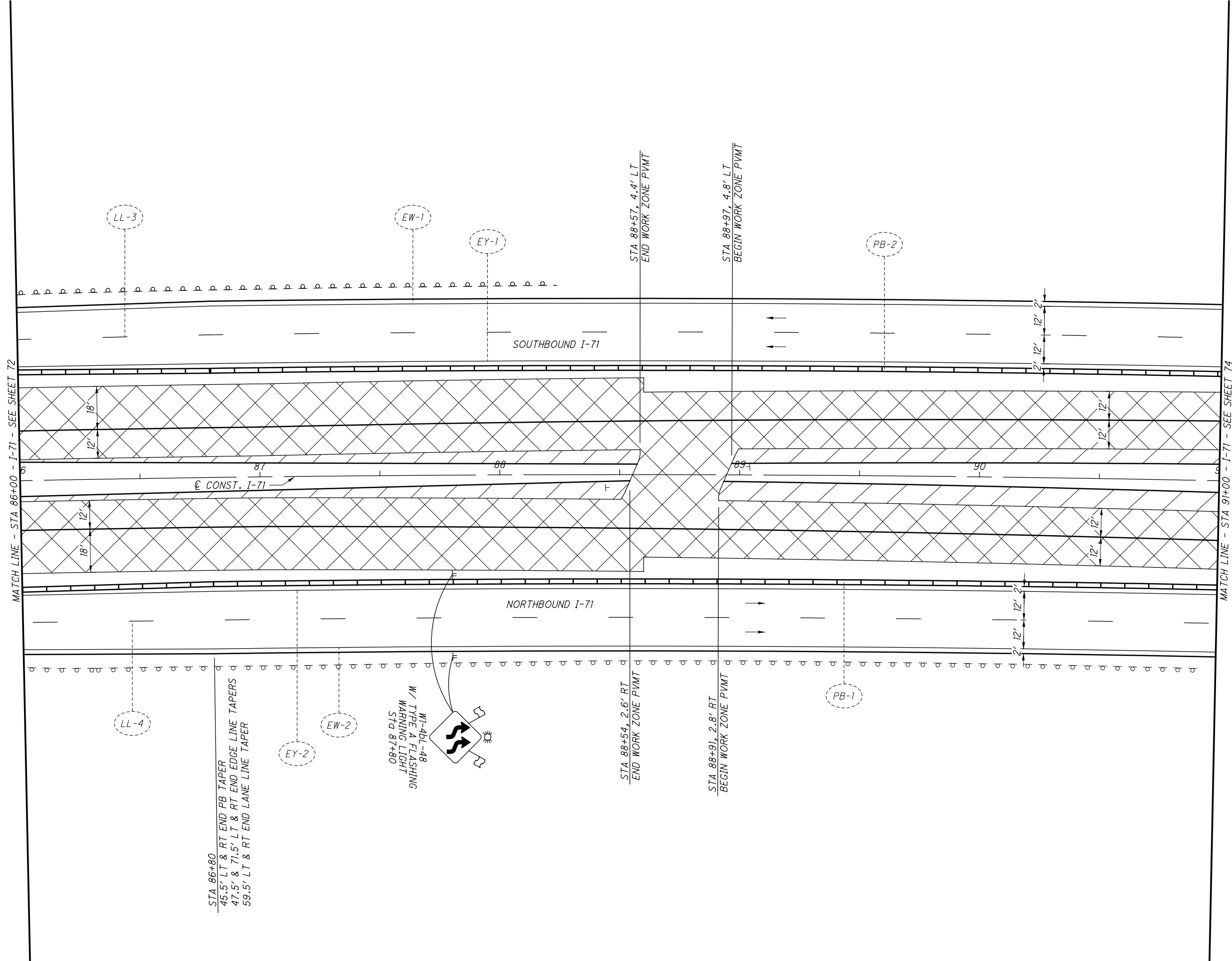
CALCULATED EGD CHECKED DLW

0 20 40  
10  
HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 1  
(CONCRETE) I-71 STA 81+00 TO STA 86+00**

**FRA-71-1.53**

FOR LEGEND, SEE SHEET 23



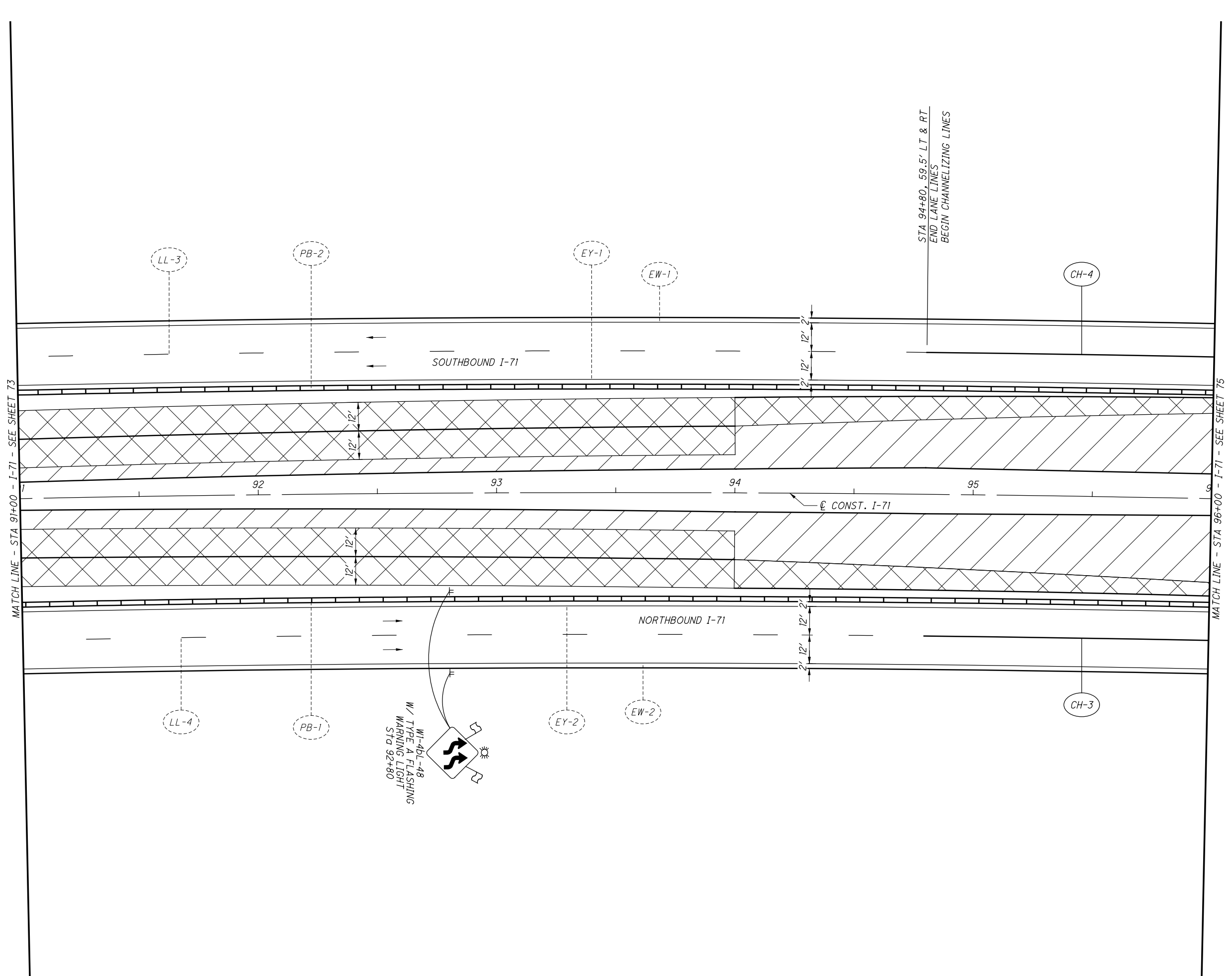
CALCULATED  
EGD  
CHECKED  
DLW

0 20 40  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 1  
(CONCRETE) I-71 STA 86+00 TO STA 91+00**

**FRA-71-1.53**

FOR LEGEND, SEE SHEET 23



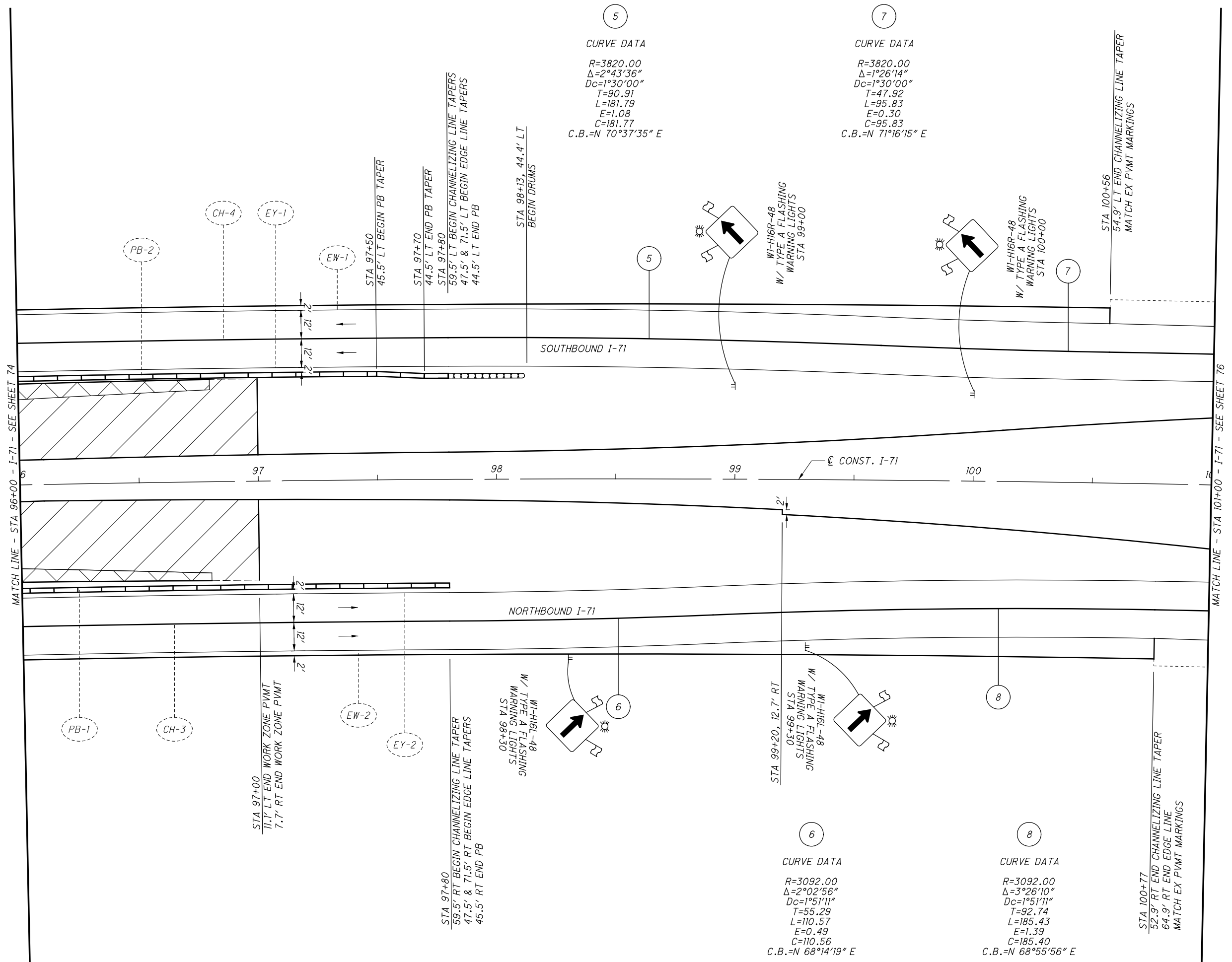
CALCULATED DLW  
CHECKED DLW

0 20 40  
HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 1  
(CONCRETE) I-71 STA 91+00 TO STA 96+00**

**FRA-71-1.53**

FOR LEGEND, SEE SHEET 23



CALCULATED  
EGD  
CHECKED  
DLW

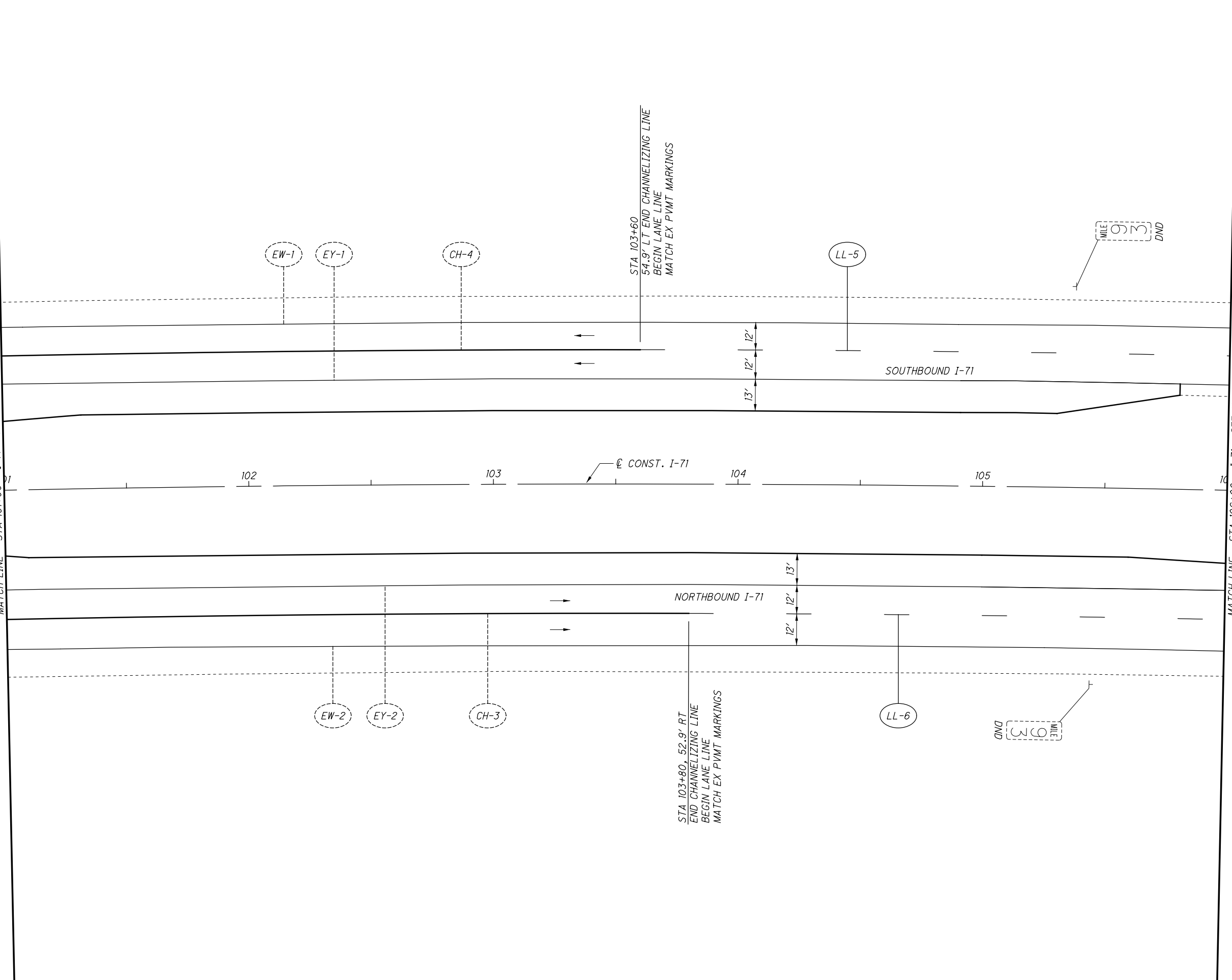
0 20 40  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 1  
(CONCRETE) I-71 STA 96+00 TO STA 101+00**

FOR LEGEND, SEE SHEET 23



MATCH LINE - STA 101+00 - I-71 - SEE SHEET 75



MATCH LINE - STA 106+00 - I-71 - SEE SHEET 77

FOR LEGEND, SEE SHEET 23

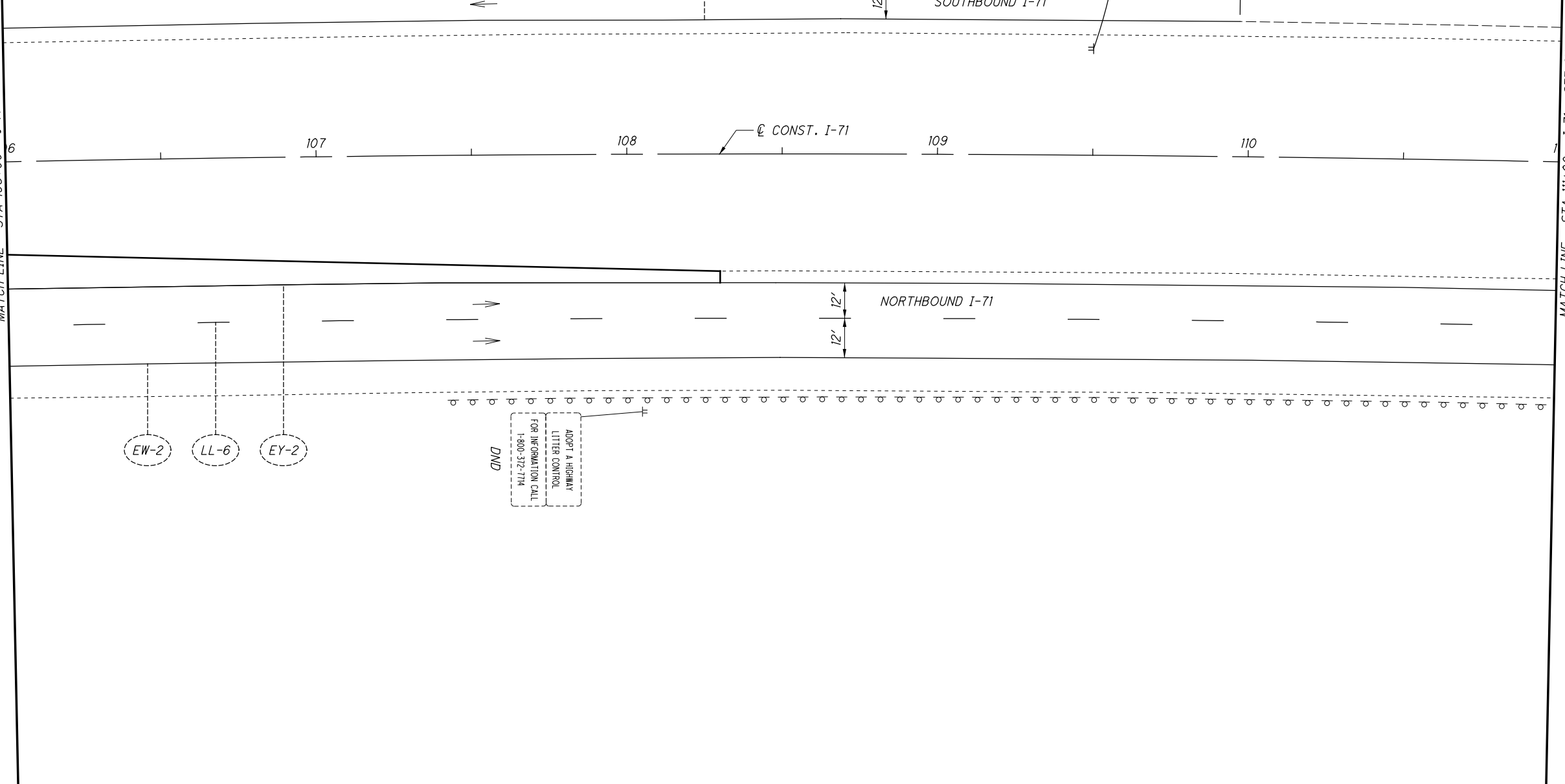
CALCULATED	EGD
CHECKED	DLW

0 20 40  
HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 1  
(CONCRETE) I-71 STA 101+00 TO STA 106+00**

**FRA-71-1.53**

MATCH LINE - STA 106+00 - I-71 - SEE SHEET 76



STA 109+13.9  
66.7' LT END EDGE LINE  
MATCH EX PVTM MARKINGS

STA 109+96.9  
43.5' LT END EDGE LINE  
MATCH EX PVTM MARKINGS

MATCH LINE - STA 111+00 - I-71 - SEE SHEET 78

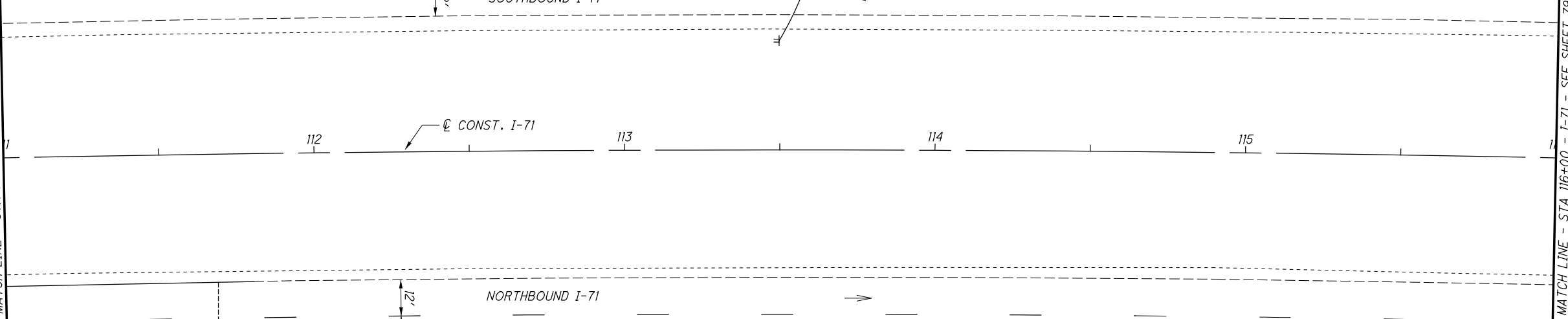
CALCULATED	EGD
CHECKED	DLW

0 20 40  
HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 1  
(CONCRETE) I-71 STA 106+00 TO STA 111+00**

**FRA-71-1.53**

MATCH LINE - STA 111+00 - I-71 - SEE SHEET 77



EW-2  
LL-6  
EY-2

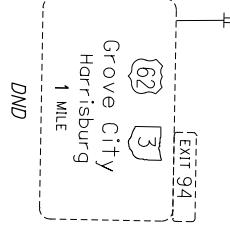
STA 111+80  
41.2' RT END EDGE LINE  
65.2' RT END EDGE LINE  
MATCH EX PVTM MARKINGS

STA 113+00  
54.9' LT END LANE LINE  
MATCH EX PVTM MARKINGS

WORK ZONE  
SPEED LIMIT 60  
DSI  
WORKING HOURS  
STA. 113+50

WORK ZONE  
SPEED LIMIT 65  
DSI  
NON-WORKING HOURS  
STA. 113+50

STA 114+65  
52.9' RT END LANE LINE  
MATCH EX PVTM MARKINGS



MATCH LINE - STA 116+00 - I-71 - SEE SHEET 79

FOR LEGEND, SEE SHEET 23

CALCULATED	EGD
CHECKED	DLW

0 20 40  
HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC - PHASE 1  
(CONCRETE) I-71 STA 111+00 TO STA 116+00**

**FRA-71-1.53**

MATCH LINE - STA 116+00 - I-71 - SEE SHEET 78

b b b b b b b b b b b b b b b b b b b b

SOUTHBOUND I-71

117

CONST. I-71

118

119

120

121

NORTHBOUND I-71

END ROAD WORK  
G20-2-36  
Sta 118+50

W1-4DR-48  
W/ TYPE A FLASHING  
WARNING LIGHT  
Sta 118+50

THE CONTRACTOR SHALL INSTALL THE FOLLOWING ADVANCE WARNING SIGNS ON BOTH SIDES OF THE SOUTHBOUND I-71 ROADWAY AT THE LOCATIONS SHOWN PRIOR TO THE START OF PHASE 1 CONSTRUCTION. COVER R2-1 SOUTHBOUND SIGN AT STA. 145+00.



W20-1-48  
W/ TYPE A FLASHING  
WARNING LIGHT  
Sta 159+90



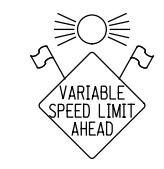
R11-H5a-48  
Sta 153+30



R4-5L-48  
Sta 147+50



R4-9-36  
Sta 133+50



W3-H5b-48  
W/ TYPE A FLASHING  
WARNING LIGHT  
Sta 126+00



ON LEFT

W8-H6a-48  
W8-H6aPL-36  
W/ TYPE A FLASHING  
WARNING LIGHT  
Sta 122+00



CALCULATED EGD  
CHECKED DLW

MAINTENANCE OF TRAFFIC - PHASE 1  
(CONCRETE) I-71 STA 116+00 TO STA 121+00

FRA-71-1.53





X:\4037000\121957.15\93496\roadway\_sheets\93496GG003.dgn Sheet 11/20/2018 8:47:41 AM 1636dcd

SHEET NUM.				PART.				ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	CALCULATED DCB CHECKED DLW
116	189			01/MS/P/V	02/NHS/PV	03/IMS/BR	04/NHS/BR							
											TRAFFIC CONTROL OPTION A - ASPHALT			
	4.24			4.24				644	00104	4.24	MILE	EDGE LINE, 6"		
	2.32			2.32				644	00204	2.32	MILE	LANE LINE, 6"		
	0.28			0.28				646	10010	0.28	MILE	EDGE LINE, 6" (ALTERNATE 1)		
	0.14			0.14				646	10110	0.14	MILE	LANE LINE, 6" (ALTERNATE 1)		
	0.28			0.28				646	10010	0.28	MILE	EDGE LINE, 6" (POLYCARB MARK 55.4) (ALTERNATE 2)		
	0.14			0.14				646	10110	0.14	MILE	LANE LINE, 6" (POLYCARB MARK 55.4) (ALTERNATE 2)		
											TRAFFIC CONTROL OPTION B - CONCRETE			
	4.52			4.52				646	10010	4.52	MILE	EDGE LINE, 6" (ALTERNATE 1)		
	2.46			2.46				646	10110	2.46	MILE	LANE LINE, 6" (ALTERNATE 1)		
	4.52			4.52				646	10010	4.52	MILE	EDGE LINE, 6" (POLYCARB MARK 55.4) (ALTERNATE 2)		
	2.46			2.46				646	10110	2.46	MILE	LANE LINE, 6" (POLYCARB MARK 55.4) (ALTERNATE 2)		
											<b>STRUCTURE OVER 20 FOOT SPAN (FRA-71-0153L)</b>			
LS						LS		202	11003	LS	STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	206, 217		
187						102	85	202	22900	187	SY	APPROACH SLAB REMOVED		
1,227						674	553	202	23500	1,227	SY	WEARING COURSE REMOVED		
LS						LS		503	11101	LS	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	206, 218-220		
LS						LS		503	21300	LS	UNCLASSIFIED EXCAVATION			
LS						LS		505	11100	LS	PILE DRIVING EQUIPMENT MOBILIZATION			
1,920						1,056	864	507	00200	1,920	FT	STEEL PILES HP12X53, FURNISHED		
1,600						880	720	507	00250	1,600	FT	STEEL PILES HP12X53, DRIVEN		
64						35	29	507	93300	64	EACH	STEEL POINTS OR SHOES		
288,328						158,580	129,748	509	10001	288,328	LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN	206	
849						466	383	511	21522	849	CY	CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE		
2						1	1	511	33500	2	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE		
64						35	29	511	41010	64	CY	CLASS QC1 CONCRETE, PIER ABOVE FOOTINGS		
212						116	96	511	44112	212	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING		
276						151	125	511	46512	276	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING		
1,228						675	553	512	10100	1,228	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)		
11						6	5	512	33000	11	SY	TYPE 2 WATERPROOFING		
794,144						436,779	357,365	513	10401	794,144	LB	STRUCTURAL STEEL MEMBERS, HYBRID GIRDER, LEVEL SIX (6) FABRICATION, AS PER PLAN	206-207	
7,665						4,215	3,450	513	20000	7,665	EACH	WELDED STUD SHEAR CONNECTORS		
18						9	9	516	13600	18	SF	1" PREFORMED EXPANSION JOINT FILLER		
366						201	165	516	13900	366	SF	2" PREFORMED EXPANSION JOINT FILLER		
162						89	73	516	14020	162	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL		
7						4	3	516	44300	7	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (22" X 27" X 4.9" WITH 23" X 28" X 2.5" LOAD PLATE)		
14						8	6	516	44301	14	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (14" X 20" X 4.35" WITH 15" X 21" X 2.0" LOAD PLATE)	247	
193						106	87	518	21200	193	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC		
181						99	82	518	40000	181	FT	6" PERFORATED CORRUGATED PLASTIC PIPE		
20						11	9	518	40011	20	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN	243	
50						27	23	524	94904	50	FT	DRILLED SHAFTS, 48" DIAMETER, INTO BEDROCK		
70						38	32	524	94906	70	FT	DRILLED SHAFTS, 54" DIAMETER, ABOVE BEDROCK		
449						246	203	526	30011	449	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17"), AS PER PLAN	272-276	
135						74	61	526	90030	135	FT	TYPE C INSTALLATION		
5						3	2	SPECIAL	53000400	5	EACH	STRUCTURES PILOT EXPLORATION HOLES	207	
2,172						1,194	978	SPECIAL	53013000	2,172	SF	FORM LINER	207	
											<b>STRUCTURE OVER 20 FOOT SPAN (FRA-71-0153R)</b>			
LS						LS		202	11003	LS	STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	206, 217		
187						102	85	202	22900	187	SY	APPROACH SLAB REMOVED		
1,227						674	553	202	23500	1,227	SY	WEARING COURSE REMOVED		
LS						LS		503	11101	LS	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	206		
LS						LS		503	21300	LS	UNCLASSIFIED EXCAVATION			

GENERAL SUMMARY

FRA - 71 - 1.53

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SHEET NUM.				PART.				ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
15	16	20	22A	01/MS/P/V	02/NHS/PV	03/IMS/BR	04/NHS/BR						
		12,759						254	01000	12,759	SY	PAVEMENT PLANING, ASPHALT CONCRETE (9" THICK)	
		330						411	10000	330	CY	STABILIZED CRUSHED AGGREGATE	
		10						614	12336	10	EACH	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)	
		1						614	12338	1	EACH	WORK ZONE IMPACT ATTENUATOR (BIDIRECTIONAL)	
8		3,782						614	12800	3,790	EACH	WORK ZONE RAISED PAVEMENT MARKER	
1,382								614	12801	1,382	EACH	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	15
379		1,320						614	13310	1,699	EACH	BARRIER REFLECTOR, TYPE 1 (ONE-WAY)	
		94						614	13312	94	EACH	BARRIER REFLECTOR, TYPE 2 (ONE-WAY)	
379		534						614	13350	913	EACH	OBJECT MARKER, ONE WAY	
		2.44						614	20100	2.44	MILE	WORK ZONE LANE LINE, CLASS I, 4", 642 PAINT	
		12.31						614	22100	12.31	MILE	WORK ZONE EDGE LINE, CLASS I, 4", 642 PAINT	
		18,550						614	23200	18,550	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 8", 642 PAINT	
		17,532						615	20001	17,532	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	16
		8,188						615	25001	8,188	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN	
		18,370						622	41000	18,370	FT	PORTABLE BARRIER, 32"	
		760						622	41020	760	FT	PORTABLE BARRIER, 32", BRIDGE MOUNTED	
												MAINTENANCE OF TRAFFIC OPTION B - CONCRETE	
		3,576						204	10000	3,576	SY	SUBGRADE COMPACTION	
		1,192						204	13000	1,192	CY	EXCAVATION OF SUBGRADE	
		1,192						204	30010	1,192	CY	GRANULAR MATERIAL, TYPE B	
		6						204	45000	6	HOUR	PROOF ROLLING	
		3,576						204	50000	3,576	SY	GEOTEXTILE FABRIC	
		385						206	10500	385	TON	CEMENT	
		12,391						206	11000	12,391	SY	CURING COAT	
		12,391						206	15010	12,391	SY	CEMENT STABILIZED SUBGRADE, 12 INCHES DEEP	
		LS						206	30000	LS		MIXTURE DESIGN FOR CHEMICALLY STABILIZED SOILS	
		8,899						254	01000	8,899	SY	PAVEMENT PLANING, ASPHALT CONCRETE (9" THICK)	
		677						411	10000	677	CY	STABILIZED CRUSHED AGGREGATE	
		13						614	12336	13	EACH	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)	
68		3,400						614	12800	3,468	EACH	WORK ZONE RAISED PAVEMENT MARKER	
1,301								614	12801	1,301	EACH	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	15
306		1,365						614	13310	1,671	EACH	BARRIER REFLECTOR, TYPE 1 (ONE-WAY)	
		65						614	13312	65	EACH	BARRIER REFLECTOR, TYPE 2 (ONE-WAY)	
306		520						614	13350	826	EACH	OBJECT MARKER, ONE WAY	
		3.91						614	20100	3.91	MILE	WORK ZONE LANE LINE, CLASS I, 4", 642 PAINT	
		14.82						614	22100	14.82	MILE	WORK ZONE EDGE LINE, CLASS I, 4", 642 PAINT	
		17,956						614	23200	17,956	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 8", 642 PAINT	
		8,899						615	20001	8,899	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	16
		12,432						615	25001	12,432	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN	16
		20,088						622	41000	20,088	FT	PORTABLE BARRIER, 32"	
		760						622	41020	760	FT	PORTABLE BARRIER, 32", BRIDGE MOUNTED	
												INCIDENTALS	
								108	10000	LS		CPM PROGRESS SCHEDULE	
								614	11001	LS		MAINTAINING TRAFFIC, AS PER PLAN	16
								619	16021	20	MNTH	FIELD OFFICE, TYPE C, AS PER PLAN	9
								623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
								624	10000	LS		MOBILIZATION	

**GENERAL SUMMARY**

**FRA - 71 - 1.53**



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SHEET NO.	202	202	202	202	202	451	601	601	601	601	602	605		605	605	605	605	606	606	606	606	606	606	606	606		
	CONCRETE BARRIER REMOVED FT	PIPE REMOVED, 24" AND UNDER FT	GUARDRAIL REMOVED FT	CATCH BASIN REMOVED EACH	FENCE REMOVED FT	SPECIAL - PRESSURE RELIEF JOINT, TYPE A FT	TIED CONCRETE BLOCK MAT, TYPE 1 SY	TIED CONCRETE BLOCK MAT, TYPE 2 SY	ROCK CHANNEL PROTECTION, TYPE A WITH FILTER CY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER CY	CONCRETE MASONRY CY	6" CONSTRUCTION UNDERDRAINS FT		6" SHALLOW PIPE UNDERDRAINS FT	6" SHALLOW PIPE UNDERDRAINS, AS PER PLAN FT	6" UNCLASSIFIED PIPE UNDERDRAINS FT	6" BASE PIPE UNDERDRAINS FT	GUARDRAIL, TYPE MGS FT	GUARDRAIL - BARRIER DESIGN, TYPE MGS FT	ANCHOR ASSEMBLY, MGS TYPE B EACH	ANCHOR ASSEMBLY, MGS TYPE T EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1 EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2 EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1 EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2 EACH	IMPACT ATTENUATOR, TYPE 1 (BIDIRECTIONAL) EACH	
128		85		2																							
131			454															1337.5									
134	167	84	1058	1			3.6	150.8		0.54								125	400		2		1	1	1	1	
137		84	1216	1	498	256	1.8	122.0	1151	1.3	0.54							900	287.5	1	1	1	1	1	1	1	
140		150		2																							
143										1.3	0.27																
146																											
176A							12.6					6844															
176B							7.2					1732		2561	733	240	2693										
177							7.2					3412		2660	887	240	4277										
178							10.8					5865				454											
TOTALS CARRIED TO GENERAL SUMMARY	167	403	2728	6	498	256	43.2	272.8	1151.0	2.6	1.35	17853		5221	1620	934	6970	2362.5	687.5	1	3	2	2	2	2	2	

<b>ROADWAY SUBSUMMARY</b>	<b>FRA - 71 - 1.53</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">CALCULATED</td> </tr> <tr> <td style="text-align: center;">DCB</td> </tr> <tr> <td style="text-align: center;">CHECKED</td> </tr> <tr> <td style="text-align: center;">JMB</td> </tr> </table>	CALCULATED	DCB	CHECKED	JMB
CALCULATED						
DCB						
CHECKED						
JMB						

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SHEET NO.	607	609	611	611	611	611	611	611	611	611	611	611	611	611	611	611	618	618	670					
	FENCE, TYPE 47RA	CURB, TYPE 4-C	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLET	12" CONDUIT, TYPE C, 706.02	15" CONDUIT, TYPE B	15" CONDUIT, TYPE C	15" CONDUIT, TYPE C, 706.02	15" CONDUIT, TYPE F	CONDUIT BORED OR JACKED, 15", TYPE B	CATCH BASIN, NO. 3	CATCH BASIN, NO. 3A	CATCH BASIN, NO. 8	CATCH BASIN RECONSTRUCTED TO GRADE	MANHOLE, NO. 3	PRECAST REINFORCED CONCRETE OUTLET	RUMBLE STRIPS, (ASPHALT CONCRETE)	RUMBLE STRIPS, (CONCRETE)	DITCH EROSION PROTECTION						
	FT	FT	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	FT	FT	SY						
128				45		479	29					3	6	1				0						
131																2740.0		279						
134		120			14	95	138	1	2	1								125						
137	282	132			111	347	44		3	2			1		3573.0	240.4		30						
140																		125						
143					100			111		4			1					553						
146												4												
176A															7									
176B					444										4									
177					542										4									
178					100										6									
TOTALS CARRIED TO GENERAL SUMMARY	282	252	1086	45	211	840	29	139	249	1	5	10	10	3	21	6313.0	240.4	1112						

ROADWAY SUBSUMMARY	CALCULATED
	DCB
FRA - 71 - 1.53	CHECKED
	JMB

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SHEET NO.	203	203		659																	
	EXCAVATION CY	EMBANKMENT CY		SEEDING AND MULCHING SY																	
147	0	0		0																	
148	0	0		0																	
149	217	0		330																	
150	528	0		642																	
151	436	0		656																	
152	983	0		794																	
153	1258	0		1049																	
154	1331	31		1089																	
155	627	109		755																	
156	178	1389		1042																	
157	100	438		496																	
158	296	219		579																	
159	312	205		700																	
160	470	168		795																	
161	559	95		728																	
162	612	142		1085																	
163	618	203		1275																	
164	529	230		1480																	
165	343	135		1295																	
166	334	114		1275																	
167	370	111		1266																	
168	504	13		1275																	
169	91	8		414																	
170	0	0		0																	
171	0	0		0																	
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>																					
	10,696	3,610		19,020																	

<table border="1"> <tr><td>CALCULATED</td></tr> <tr><td>DCB</td></tr> <tr><td>CHECKED</td></tr> <tr><td>JMB</td></tr> </table>	CALCULATED	DCB	CHECKED	JMB	<b>EARTHWORK SUBSUMMARY</b>	<b>FRA - 71 - 1.53</b>	<table border="1"> <tr><td>115</td></tr> <tr><td>285</td></tr> </table>	115	285
CALCULATED									
DCB									
CHECKED									
JMB									
115									
285									

BRIDGE ESTIMATED QUANTITIES

FRA-71-0153L (SOUTHBOUND)	FRA-71-0153R (NORTHBOUND)				ITEM	EXTENSION	UNIT	DESCRIPTION
LUMP	LUMP				202	11003	LS	STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN
187	187				202	22900	SY	APPROACH SLAB REMOVED
1227	1227				202	23500	SY	WEARING COURSE REMOVED
LUMP	LUMP				503	11101	LS	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN
LUMP	LUMP				503	21300	LS	UNCLASSIFIED EXCAVATION
LUMP	LUMP				505	11100	LS	PILE DRIVING EQUIPMENT MOBILIZATION
1,920	1,760				507	00200	FT	STEEL PILES HP12X53, FURNISHED
1,600	1,440				507	00250	FT	STEEL PILES HP12X53, DRIVEN
64	64				507	93300	EACH	STEEL POINTS OR SHOES
288,328	289,137				509	10001	LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN
849	849				511	21522	CY	CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE
2	2				511	33500	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE
64	64				511	41010	CY	CLASS QC1 CONCRETE, PIER ABOVE FOOTINGS
212	214				511	44112	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING
276	273				511	46512	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING
1,228	1,269				512	10100	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
11	11				512	33000	SY	TYPE 2 WATERPROOFING
794,144	794,144				513	10401	LB	STRUCTURAL STEEL MEMBERS, HYBRID GIRDER, LEVEL SIX (6) FABRICATION, AS PER PLAN
7,665	7,665				513	20000	EACH	WELDED STUD SHEAR CONNECTORS
18	18				516	13600	SF	1" PREFORMED EXPANSION JOINT FILLER
366	366				516	13900	SF	2" PREFORMED EXPANSION JOINT FILLER
162	162				516	14020	FT	SEMI-INTEGRAL ABUTMENT EXPANSTON JOINT SEAL
7	7				516	44300	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (22" x 27" x 4.91" WITH 23" x 28" x 2.5" LOAD PLATE)
14	14				516	44301	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (14" x 20" x 4.35" WITH 15" x 21" x 2.0" LOAD PLATE), AS PER PLAN
193	193				518	21200	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC
181	181				518	40000	FT	6" PERFORATED CORRUGATED PLASTIC PIPE
20	20				518	40011	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN
50	50				524	94904	FT	DRILLED SHAFTS, 48" DIAMETER, INTO BEDROCK
70	70				524	94906	FT	DRILLED SHAFTS, 54" DIAMETER, ABOVE BEDROCK
449	449				526	30011	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17"), AS PER PLAN
135	135				526	90030	FT	TYPE C INSTALLATION
5	5				SPECIAL	530E00400	EACH	SPECIAL - STRUCTURES: PILOT EXPLORATION HOLES
2172	2172				SPECIAL	530E13000	SF	SPECIAL - FORMLINER
587	564				601	32000	CY	ROCK CHANNEL PROTECTION, TYPE A WITH FILTER

CALCULATED  
CMH/DJC  
CHECKED  
ALM/LYH

STRUCTURE SUBSUMMARY

FRA - 71 - 1.53

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ITEM 670 - DITCH EROSION PROTECTION,  
WIDTH = 11' UNLESS NOTED

ROCK CHANNEL PROTECTION,  
TYPE C w/FILTER

CALCULATED  
DCB  
CHECKED  
JMB

PLAN - I-71  
STA 66+00 TO STA 71+00

FRA-71-1.53  
126  
285

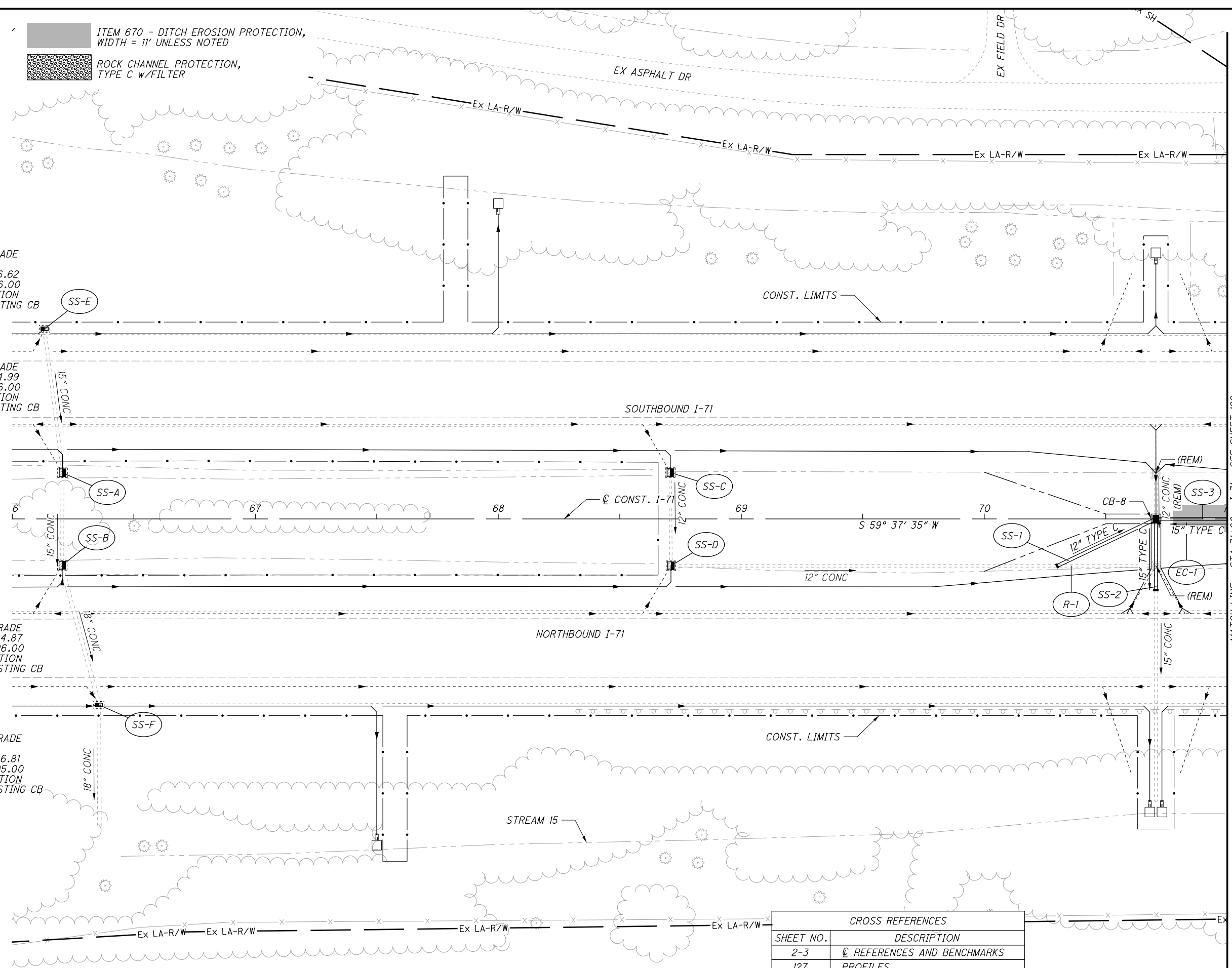
X:\4037000\121957.15\93496\roadway\_sheets\93496P015.dgn Sheet 11/20/2018 11:16:51 AM 1636dcb

SS-E  
RECONSTRUCT TO GRADE  
WITH SOLID TOP  
EX. GRATE ELEV. 796.62  
PR. GRATE ELEV. 796.00  
CONNECT CONSTRUCTION  
UNDERDRAIN TO EXISTING CB  
6" (S) = 794.00

SS-A  
RECONSTRUCT TO GRADE  
EX. GRATE ELEV. 794.99  
PR. GRATE ELEV. 796.00  
CONNECT CONSTRUCTION  
UNDERDRAIN TO EXISTING CB  
6" (N) = 792.60

SS-B  
RECONSTRUCT TO GRADE  
EX. GRATE ELEV. 794.87  
PR. GRATE ELEV. 796.00  
CONNECT CONSTRUCTION  
UNDERDRAIN TO EXISTING CB  
6" (N) = 792.20

SS-F  
RECONSTRUCT TO GRADE  
WITH SOLID TOP  
EX. GRATE ELEV. 796.81  
PR. GRATE ELEV. 795.00  
CONNECT CONSTRUCTION  
UNDERDRAIN TO EXISTING CB  
6" (N) = 792.00



CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-3	☉ REFERENCES AND BENCHMARKS
127	PROFILES
128	ESTIMATED QUANTITIES
179	UNDERDRAIN DETAILS

MATCH LINE - STA 71+00 - I-71 - SEE SHEET 129

X:\4037000\121957.15\93496\roadway\_sheets\93496G015.dgn Sheet 11/20/2018 11:24:57 AM 1636dcb

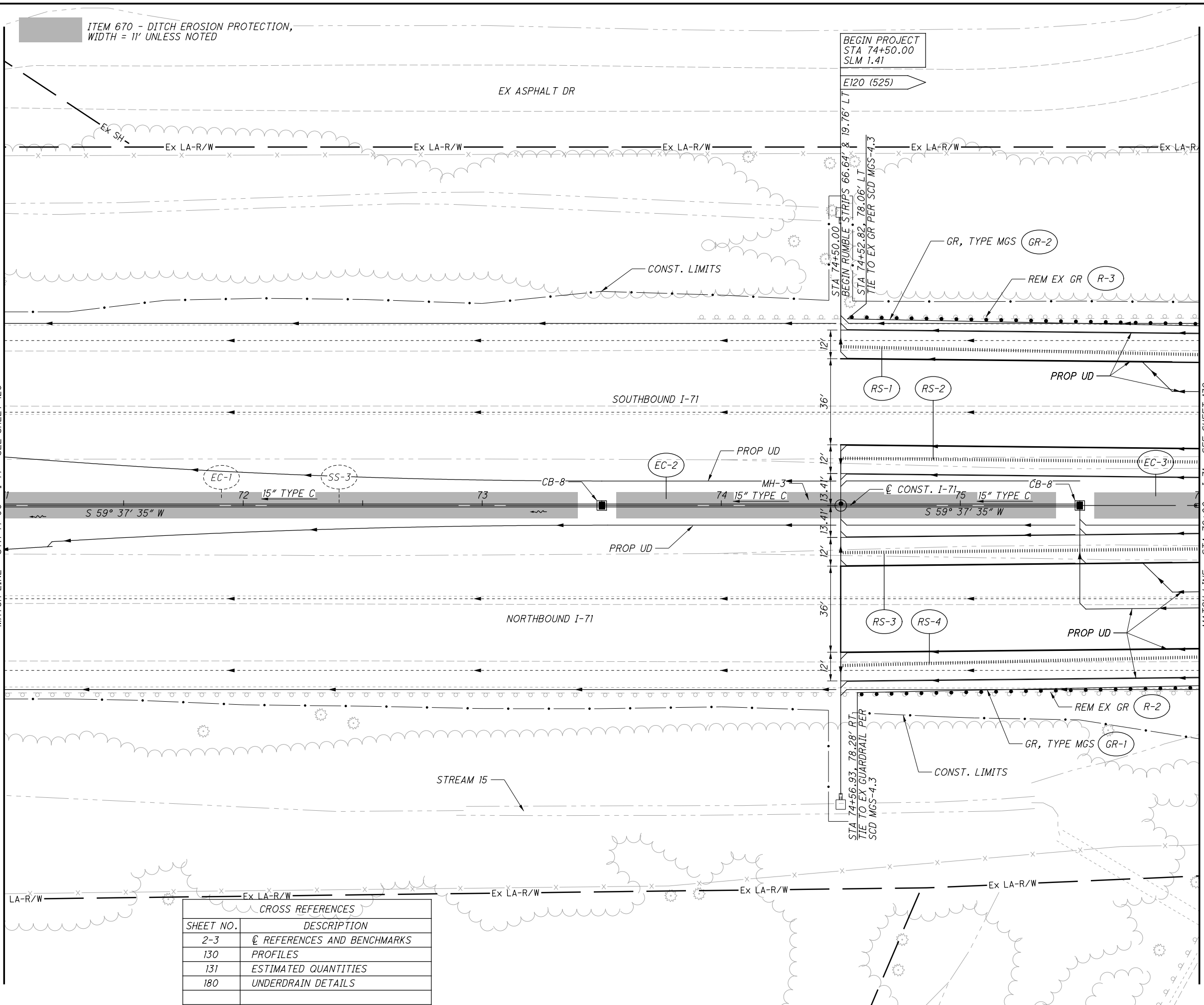
REF. NO.	SHEET NO.	STATION		SIDE	202	202	611	611	611	611	611	611	611	611	670				
		FROM	TO		PIPE REMOVED, 24" AND UNDER FT	CATCH BASIN REMOVED EACH	12" CONDUIT, TYPE C, 706.02 FT	15" CONDUIT, TYPE C FT	15" CONDUIT, TYPE C, 706.02 FT	CATCH BASIN, NO. 8 EACH	CATCH BASIN RECONSTRUCTED TO GRADE EACH	MANHOLE, No. 3 EACH				DITCH EROSION PROTECTION SY			
R-1	126	70+30	70+71	LT/RT	85	2													
EC-1	126, 129	70+78	73+40	CL											322				
SS-A	126	68+21	68+21	LT								1							
SS-B	126	68+21	68+21	RT								1							
SS-C	126	68+71	68+71	LT								1							
SS-D	126	68+71	68+71	RT								1							
SS-E	126	66+13	66+13	LT								1							
SS-F	126	66+36	66+36	RT								1							
SS-1	126	70+30	70+71	RT			45												
SS-2	126	70+71	70+71	RT				29											
SS-3	126, 129	70+71	75+50	CL/RT				479	3			1							
TOTALS CARRIED TO SHEETS 113-114					85	2	45	479	29	3		6	1		322				

<b>ESTIMATED QUANTITIES</b>	<b>FRA - 71 - 1.53</b>
CALCULATED DCB CHECKED JMB	128 285

X:\4037000\121957.15\93496\roadway\_sheets\93496P016.dgn Sheet 11/2/2018 2:26:20 PM 1636dcb

MATCH LINE - STA 71+00 - I-71 - SEE SHEET 126

MATCH LINE - STA 76+00 - I-71 - SEE SHEET 132



ITEM 670 - DITCH EROSION PROTECTION, WIDTH = 11' UNLESS NOTED

BEGIN PROJECT STA 74+50.00 SLM 1.41

E120 (525)

19.76' LT

66.64' LT

78.06' LT

TIE TO EX GR PER SCD MGS-4.3

STA 74+50.00

BEGIN RUMBLE STRIPS

STA 74+52.82

TIE TO EX GR PER SCD MGS-4.3

STA 74+56.93

TIE TO EX GUARDRAIL PER SCD MGS-4.3

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-3	☉ REFERENCES AND BENCHMARKS
130	PROFILES
131	ESTIMATED QUANTITIES
180	UNDERDRAIN DETAILS

CALCULATED DCB CHECKED JMB

HORIZONTAL SCALE IN FEET

PLAN - I-71  
STA 71+00 TO STA 76+00

FRA-71-1.53




129  
285

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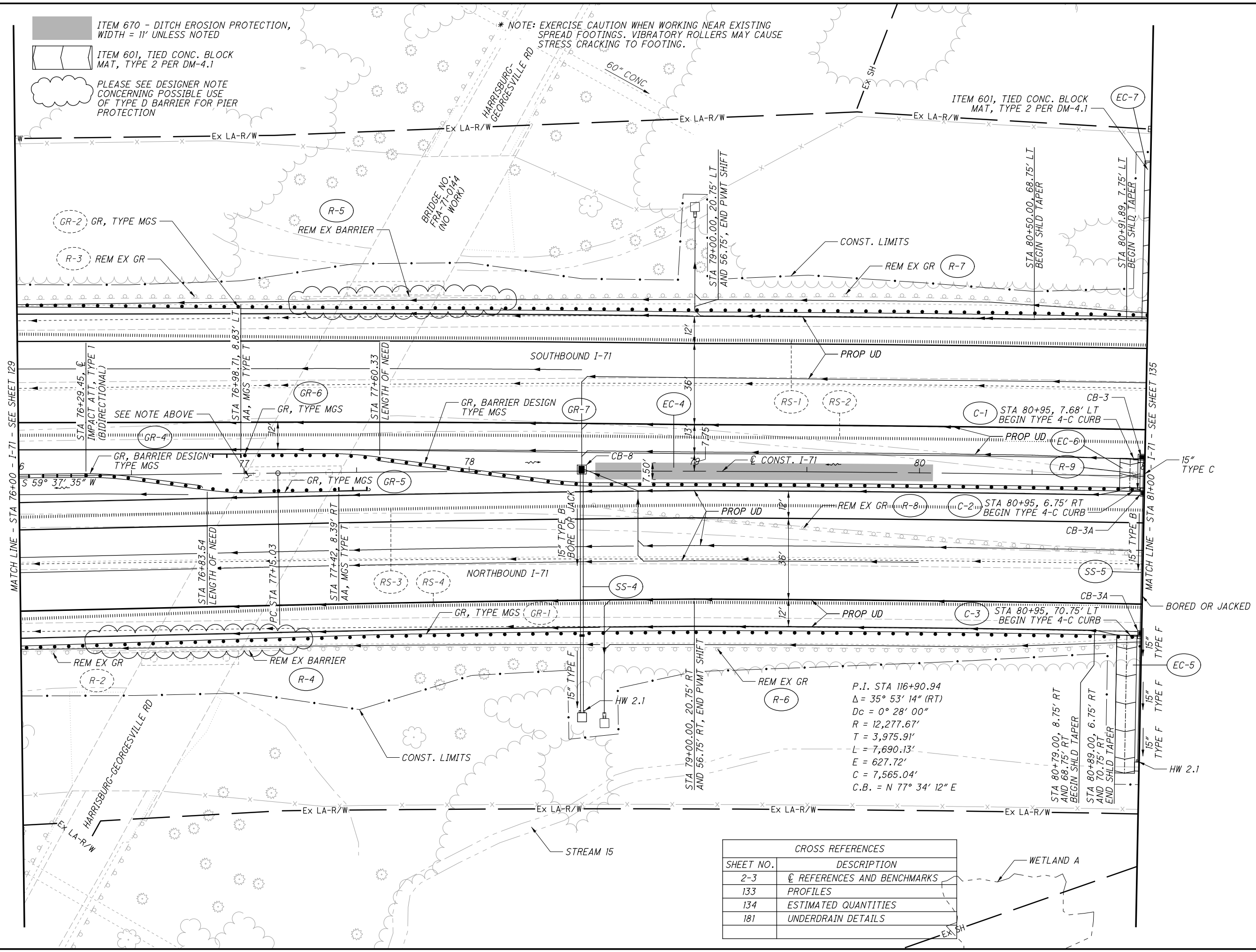
REF. NO.	SHEET NO.	STATION		SIDE	202	606	606	606			618	670						
		FROM	TO		GUARDRAIL REMOVED FT	GUARDRAIL, TYPE MGS FT	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1 EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2 EACH	RUMBLE STRIPS, (ASPHALT CONCRETE) FT	DITCH EROSION PROTECTION SY								
R-2	129, 132	74+57	76+35	RT	177													
GR-1	129, 132, 135	74+57	81+35	RT		650	1											
R-3	129, 132	74+53	77+29	LT	277													
GR-2	129, 132, 135	74+53	81+35	LT		687.5	1											
EC-2	129	73+56	75+40	CL								225						
EC-3	129	75+56	76+00	CL								54						
GR-3	NOT USED																	
RS-1	129, 132, 135	74+50.00	81+35.00	LT							685.0							
RS-2	129, 132, 135	74+50.00	81+35.00	LT							685.0							
RS-3	129, 132, 135	74+50.00	81+35.00	RT							685.0							
RS-4	129, 132, 135	74+50.00	81+35.00	RT							685.0							
TOTALS CARRIED TO SHEETS 113-114					454	1337.5	1	1			2740.0	279						

<b>ESTIMATED QUANTITIES</b>	CALCULATED DCB CHECKED JMB
<b>FRA - 71 - 1.53</b>	131 285



-  ITEM 670 - DITCH EROSION PROTECTION, WIDTH = 11' UNLESS NOTED
-  ITEM 601, TIED CONC. BLOCK MAT, TYPE 2 PER DM-4.1
-  PLEASE SEE DESIGNER NOTE CONCERNING POSSIBLE USE OF TYPE D BARRIER FOR PIER PROTECTION

\* NOTE: EXERCISE CAUTION WHEN WORKING NEAR EXISTING SPREAD FOOTINGS. VIBRATORY ROLLERS MAY CAUSE STRESS CRACKING TO FOOTING.



P.I. STA 116+90.94  
 $\Delta = 35^\circ 53' 14''$  (RT)  
 $D_c = 0^\circ 28' 00''$   
 $R = 12,277.67'$   
 $T = 3,975.91'$   
 $L = 7,690.13'$   
 $E = 627.72'$   
 $C = 7,565.04'$   
 $C.B. = N 77^\circ 34' 12'' E$

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-3	☉ REFERENCES AND BENCHMARKS
133	PROFILES
134	ESTIMATED QUANTITIES
181	UNDERDRAIN DETAILS

CALCULATED DCB CHECKED JMB



0 20 40  
 HORIZONTAL SCALE IN FEET

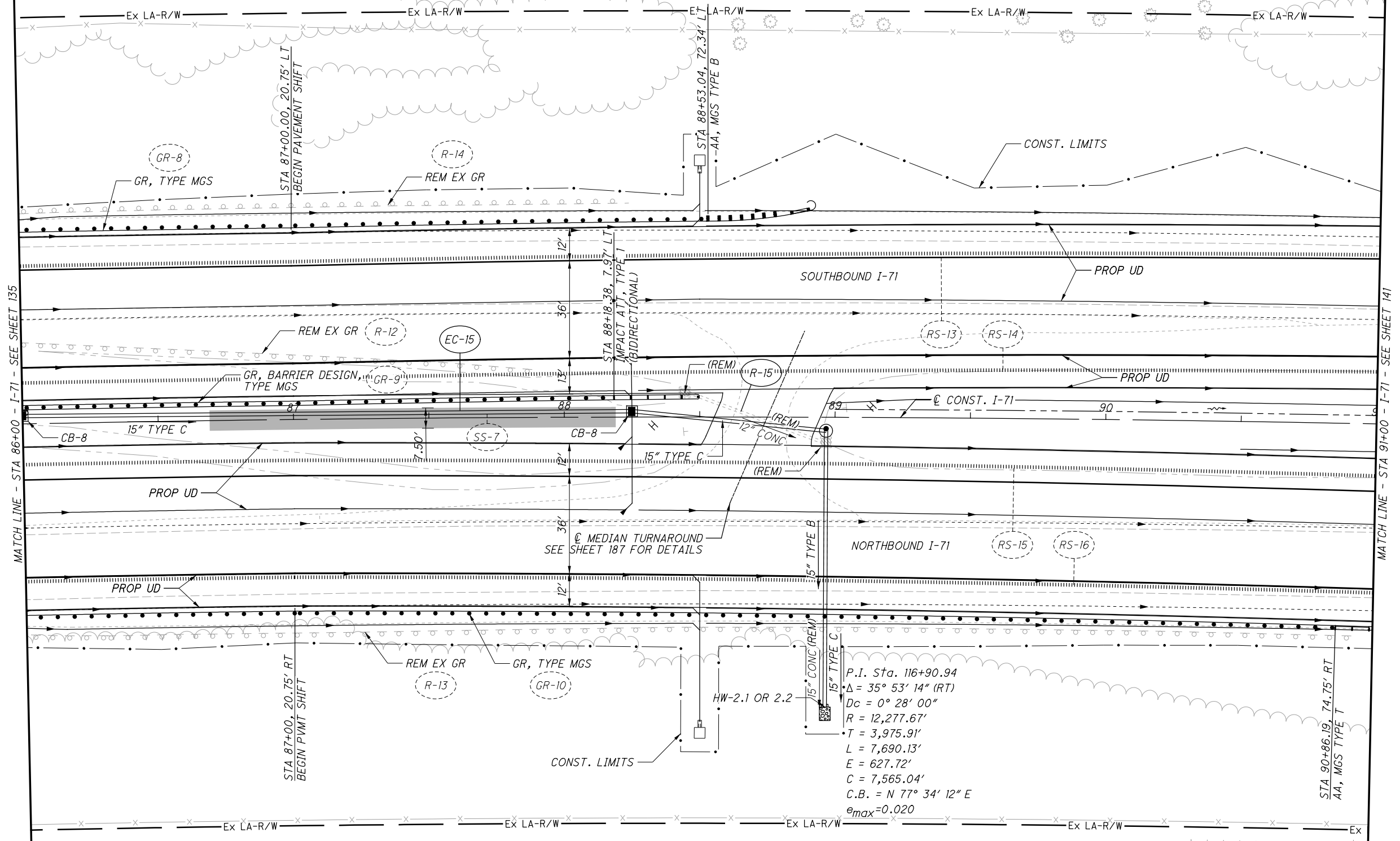
PLAN - I-71  
 STA 76+00 TO STA 81+00

FRA-71-1.53

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X:\4037000\121957.15\93496\roadway\sheets\93496GP019.dgn Sheet 11/2/2018 2:43:04 PM 1636dcb

ITEM 670 - DITCH EROSION PROTECTION, WIDTH = 14.5' UNLESS NOTED  
 ROCK CHANNEL PROTECTION, TYPE C w/FILTER



P.I. Sta. 116+90.94  
 $\Delta = 35^\circ 53' 14''$  (RT)  
 $D_c = 0^\circ 28' 00''$   
 $R = 12,277.67'$   
 $T = 3,975.91'$   
 $L = 7,690.13'$   
 $E = 627.72'$   
 $C = 7,565.04'$   
 $C.B. = N 77^\circ 34' 12'' E$   
 $e_{max} = 0.020$

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-3	☉ REFERENCES AND BENCHMARKS
139	PROFILES
140	ESTIMATED QUANTITIES
183	UNDERDRAIN DETAILS

CALCULATED DCB CHECKED JMB  
 0 20 40  
 HORIZONTAL SCALE IN FEET

PLAN - I-71  
 STA 86+00 TO STA 91+00

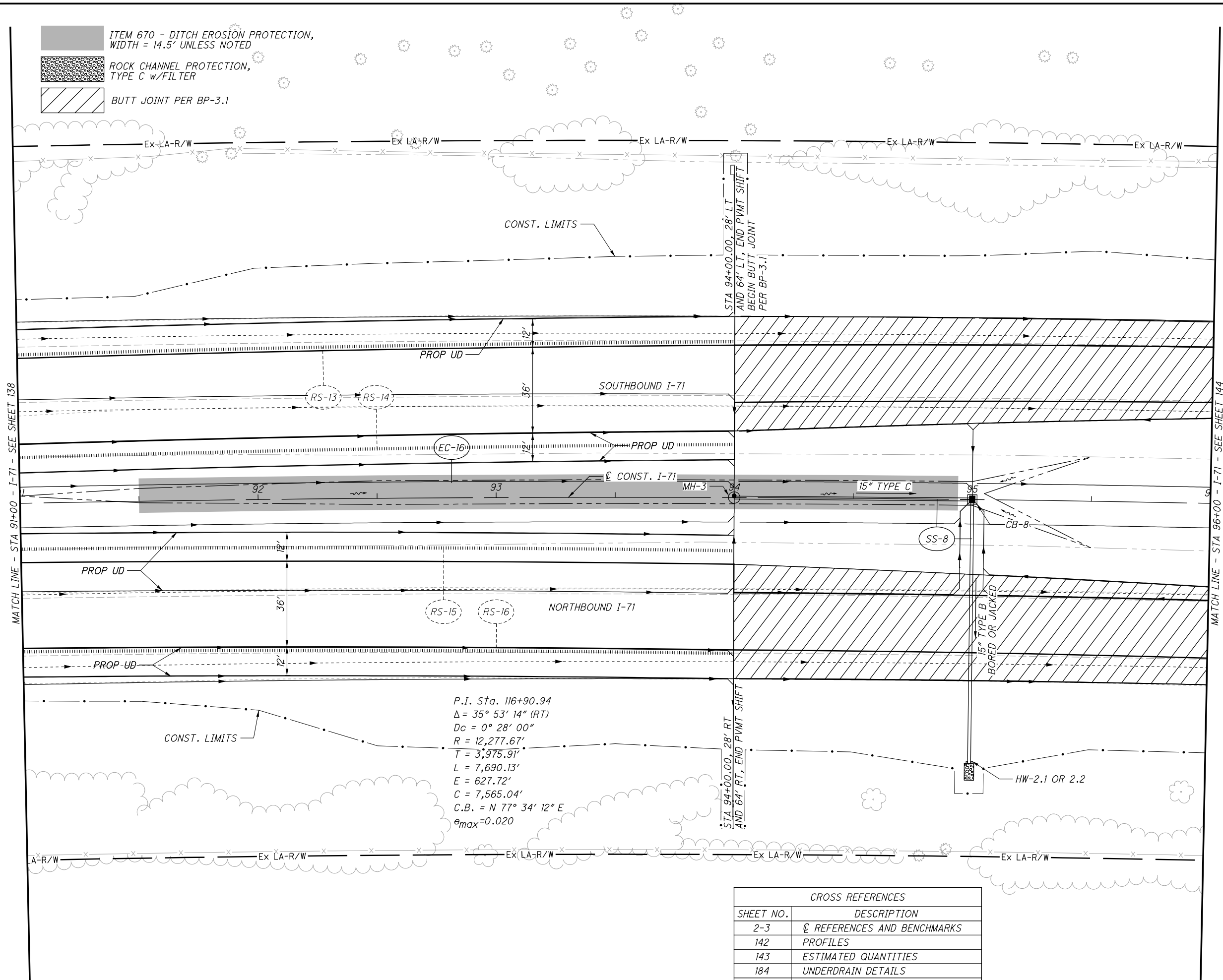
FRA-71-1.53

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REF. NO.	SHEET NO.	STATION		SIDE	202	202					670							
		FROM	TO		PIPE REMOVED, 24" AND UNDER FT	CATCH BASIN REMOVED EACH	DITCH EROSION PROTECTION MAT SY											
R-15	138	88+45	88+97	LT/RT	150	2												
EC-15	138	86+68	88+18	CL							125							
GR-11	NOT USED																	
TOTALS CARRIED TO SHEETS 113-114					150	2					125							

<b>FRA - 71 - 1.53</b>	<b>ESTIMATED QUANTITIES</b>						
<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px;">CALCULATED</td> </tr> <tr> <td style="padding: 2px;">DCB</td> </tr> <tr> <td style="padding: 2px;">CHECKED</td> </tr> <tr> <td style="padding: 2px;">JMB</td> </tr> </table>	CALCULATED	DCB	CHECKED	JMB	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px;">140</td> </tr> <tr> <td style="padding: 2px;">285</td> </tr> </table>	140	285
CALCULATED							
DCB							
CHECKED							
JMB							
140							
285							

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- ITEM 670 - DITCH EROSION PROTECTION, WIDTH = 14.5' UNLESS NOTED
- ROCK CHANNEL PROTECTION, TYPE C w/FILTER
- BUTT JOINT PER BP-3.1

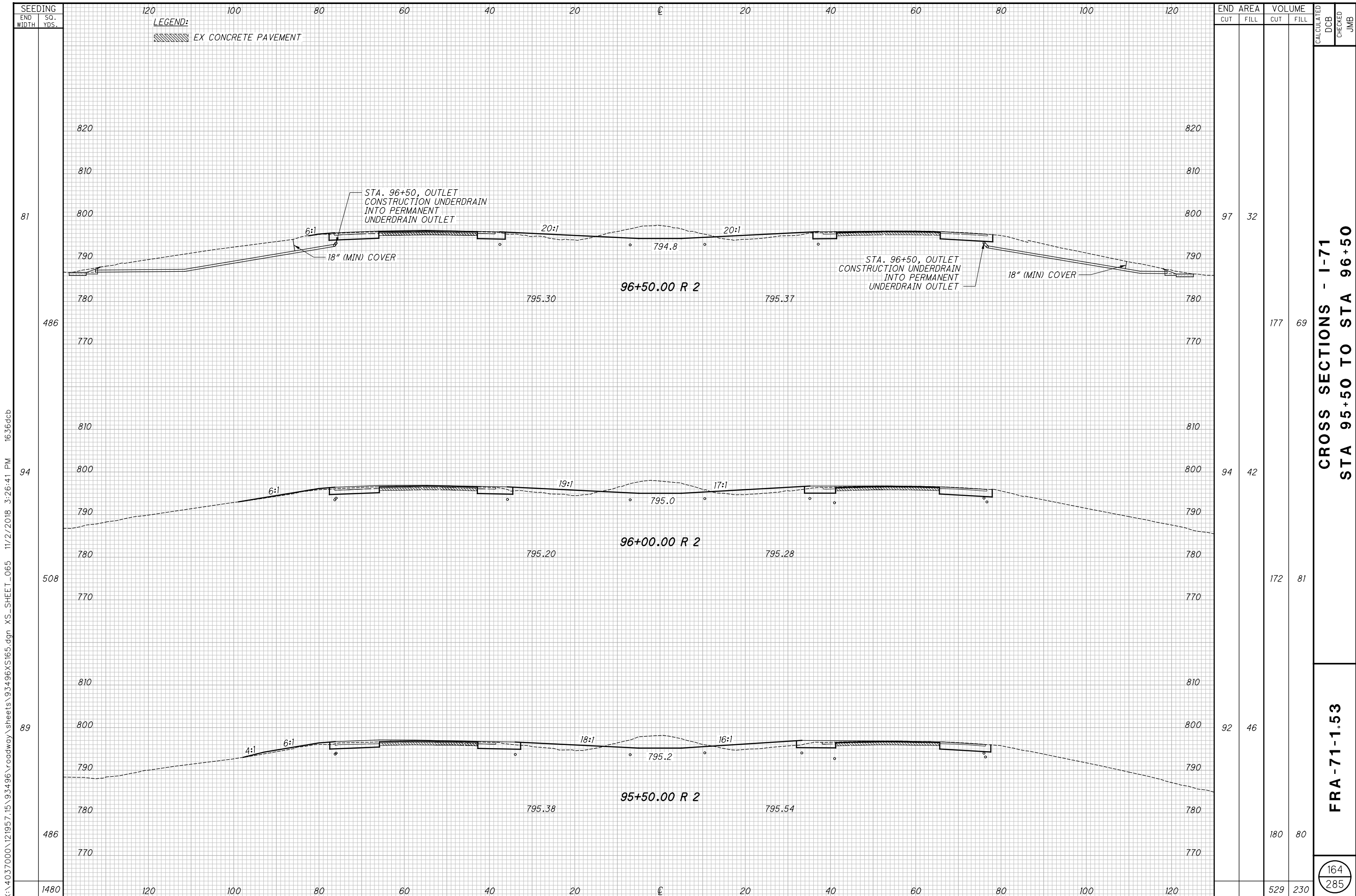
CALCULATED  
DCB  
CHECKED  
JMB

0 20 40  
HORIZONTAL  
SCALE IN FEET

PLAN - I-71  
STA 91+00 TO STA 96+00

FRA-71-1.53

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-3	☉ REFERENCES AND BENCHMARKS
142	PROFILES
143	ESTIMATED QUANTITIES
184	UNDERDRAIN DETAILS



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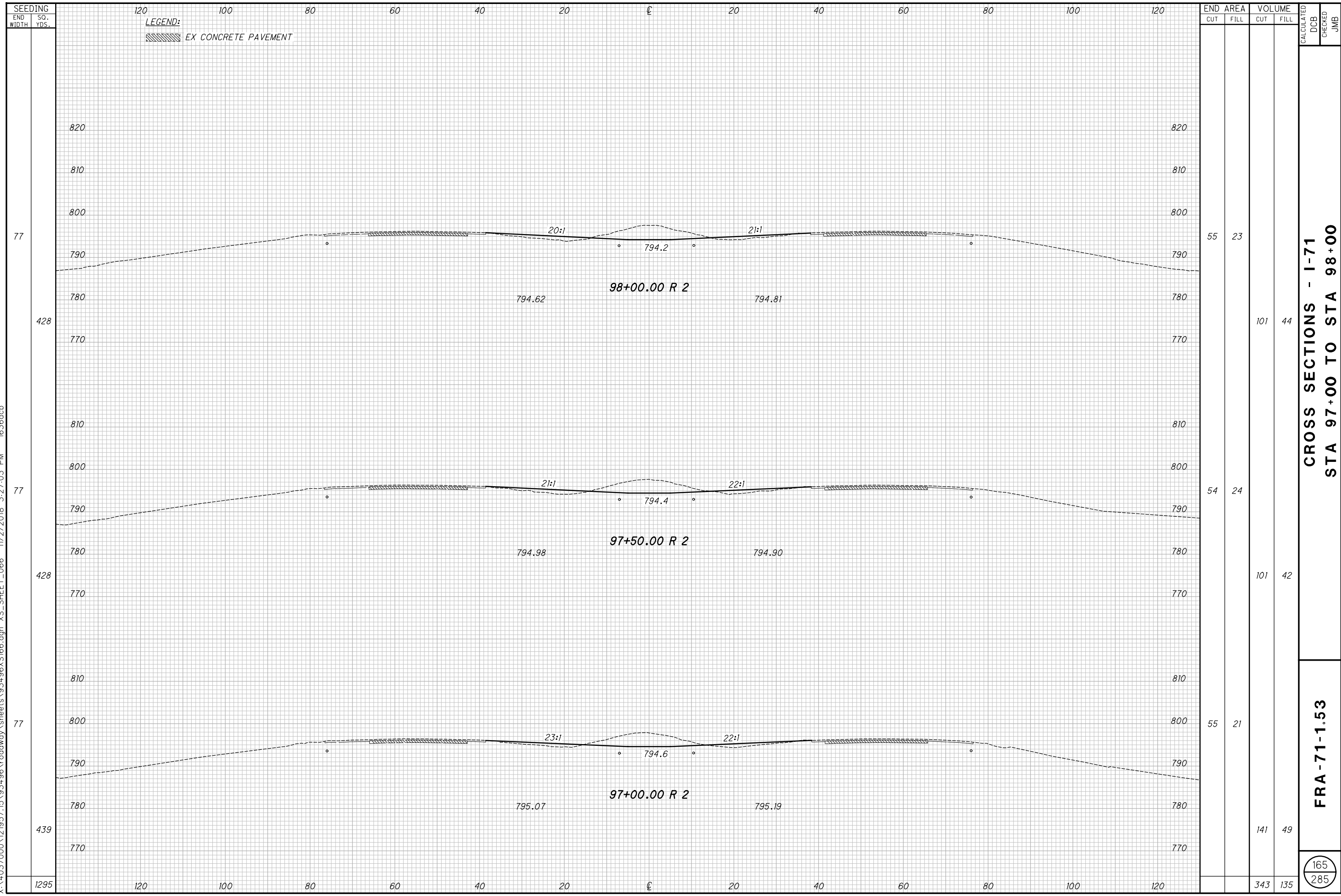
END STA.	AREA		VOLUME		CALCULATED DCB	CHECKED JMB
	CUT	FILL	CUT	FILL		
97	97	32	177	69		
94	94	42	172	81		
92	92	46	180	80		
1480			529	230	164	285

**CROSS SECTIONS - I-71  
 STA 95+50 TO STA 96+50**

**FRA-71-1.53**

**LEGEND:**  
 EX CONCRETE PAVEMENT

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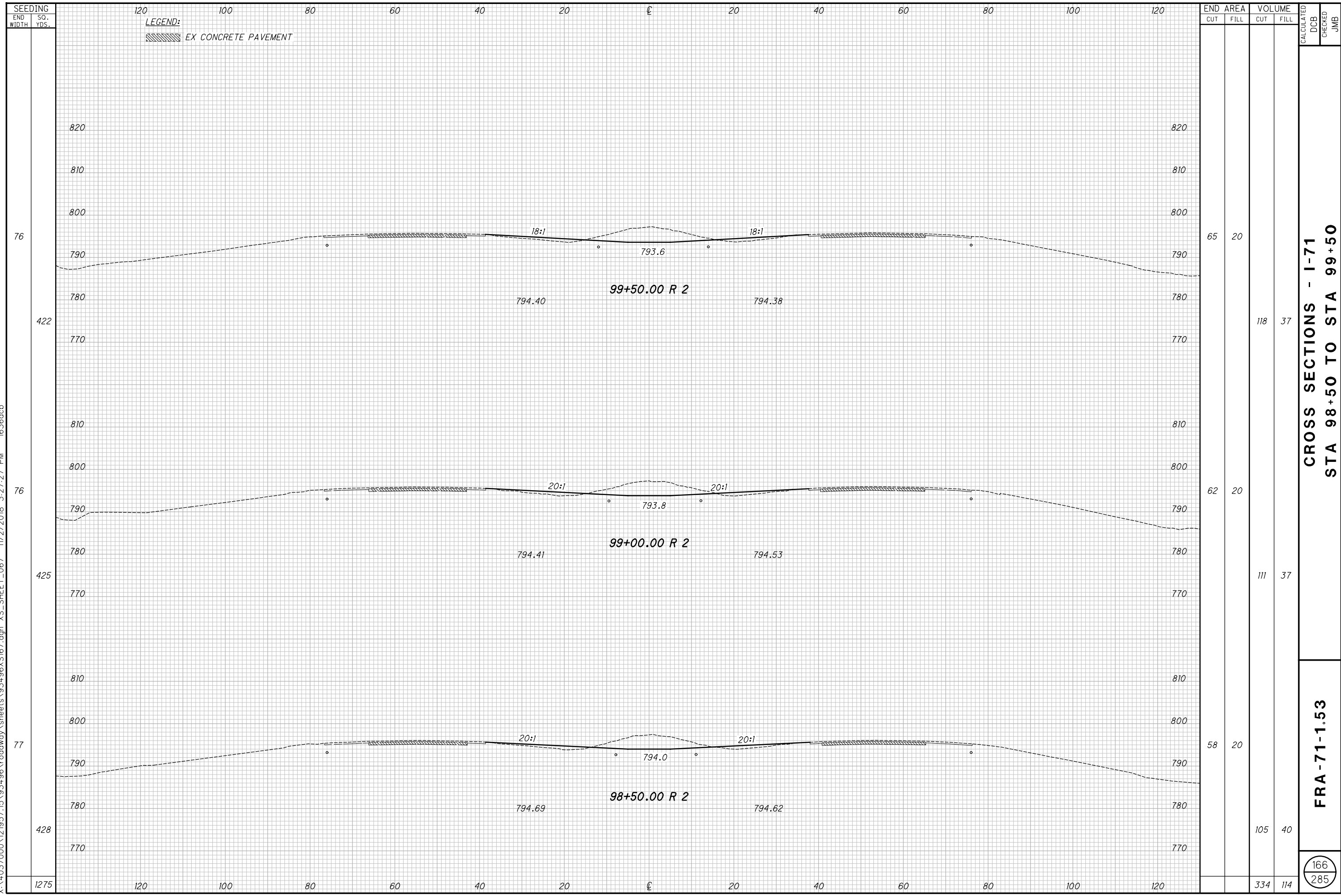


**CROSS SECTIONS - I-71  
 STA 97+00 TO STA 98+00**

**FRA-71-1.53**

165  
 285

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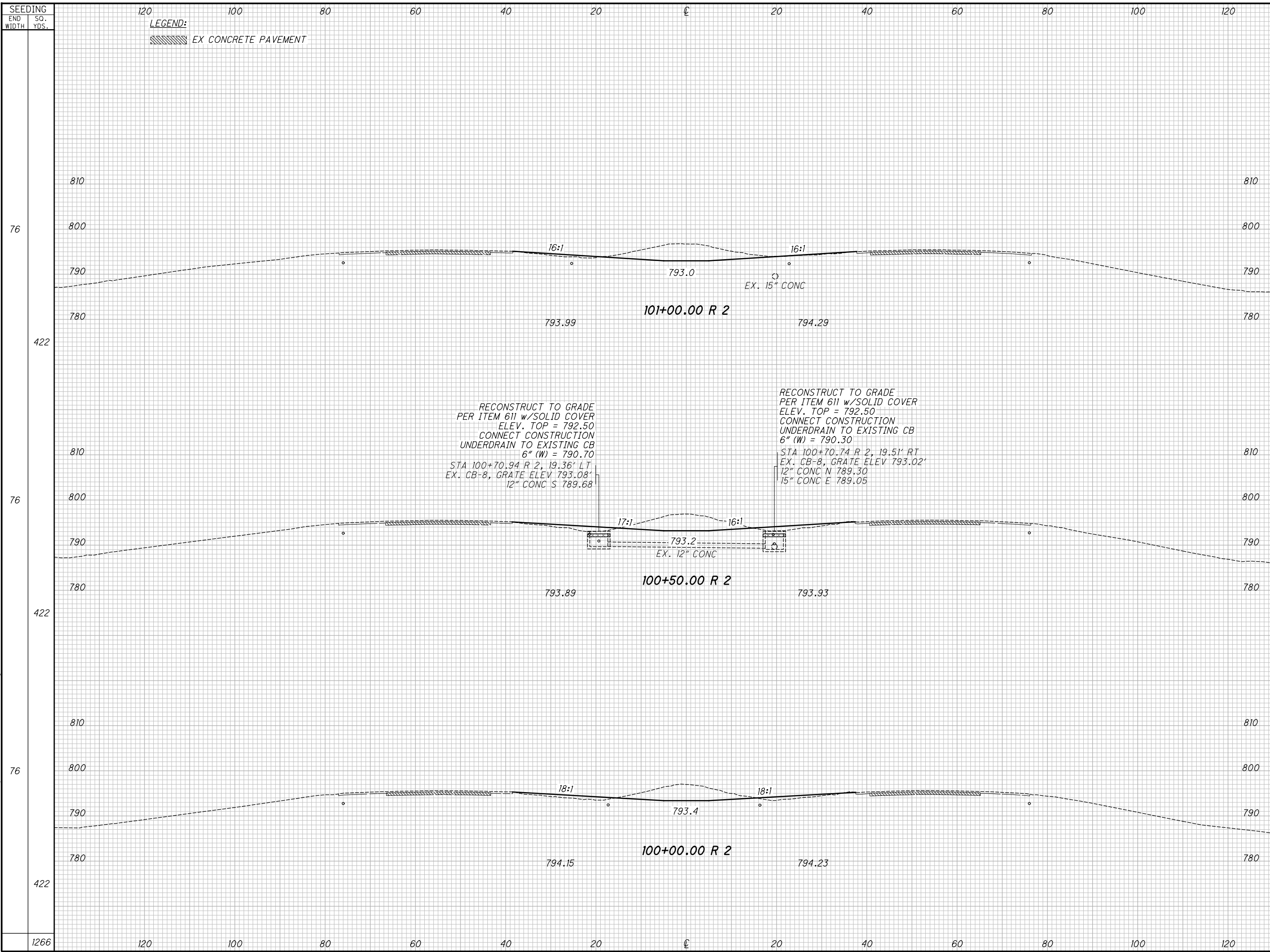


**CROSS SECTIONS - I-71  
 STA 98+50 TO STA 99+50**

**FRA-71-1.53**

166  
285

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END AREA	VOLUME	CALCULATED		DCB	CHECKED	JMB
		CUT	FILL			
78	8					
65	26	132	31			
63	20	119	43			
		119	37			
		370	111			

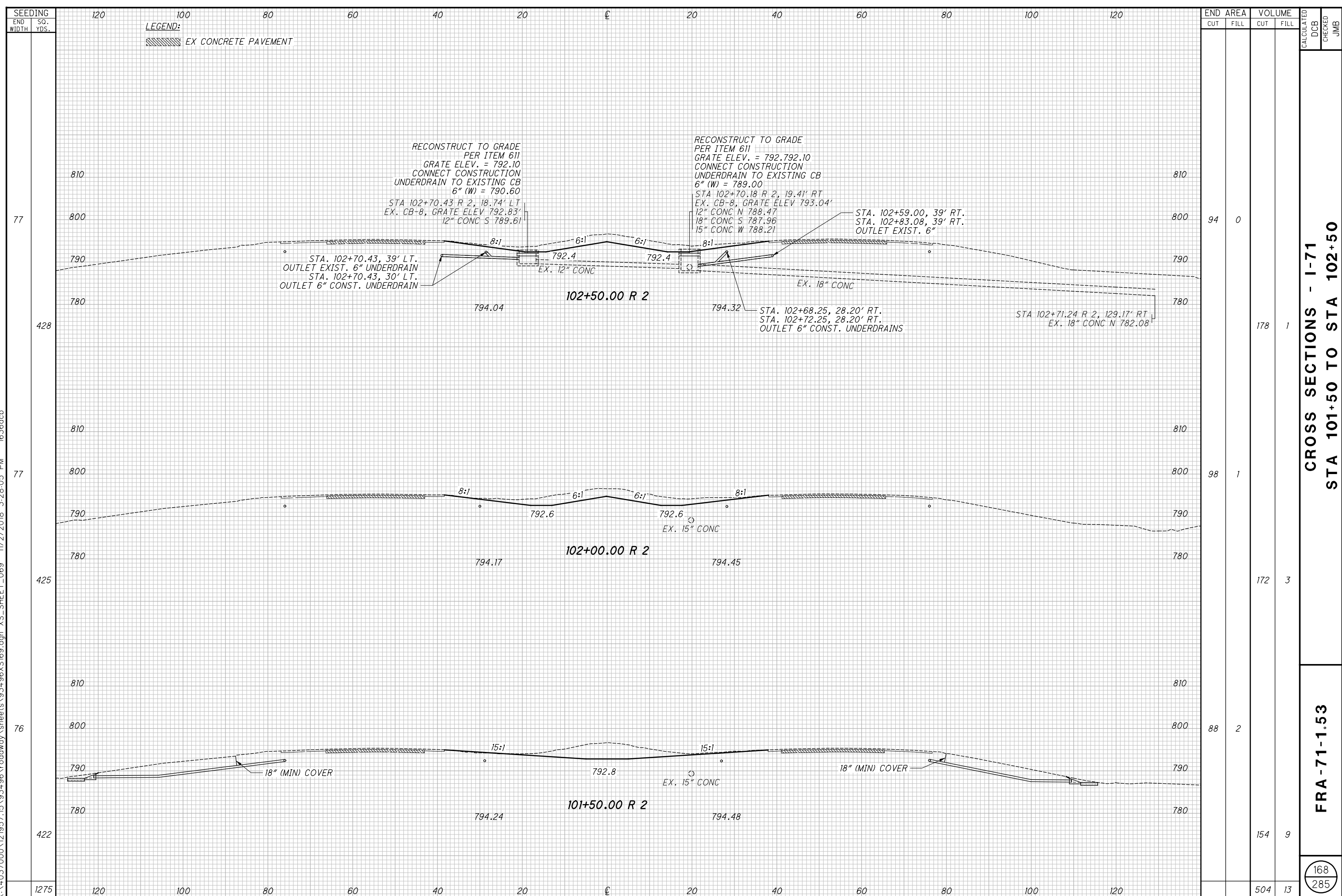
**CROSS SECTIONS - I-71  
 STA 100+00 TO STA 101+00**

**FRA-71-1.53**

167  
 285



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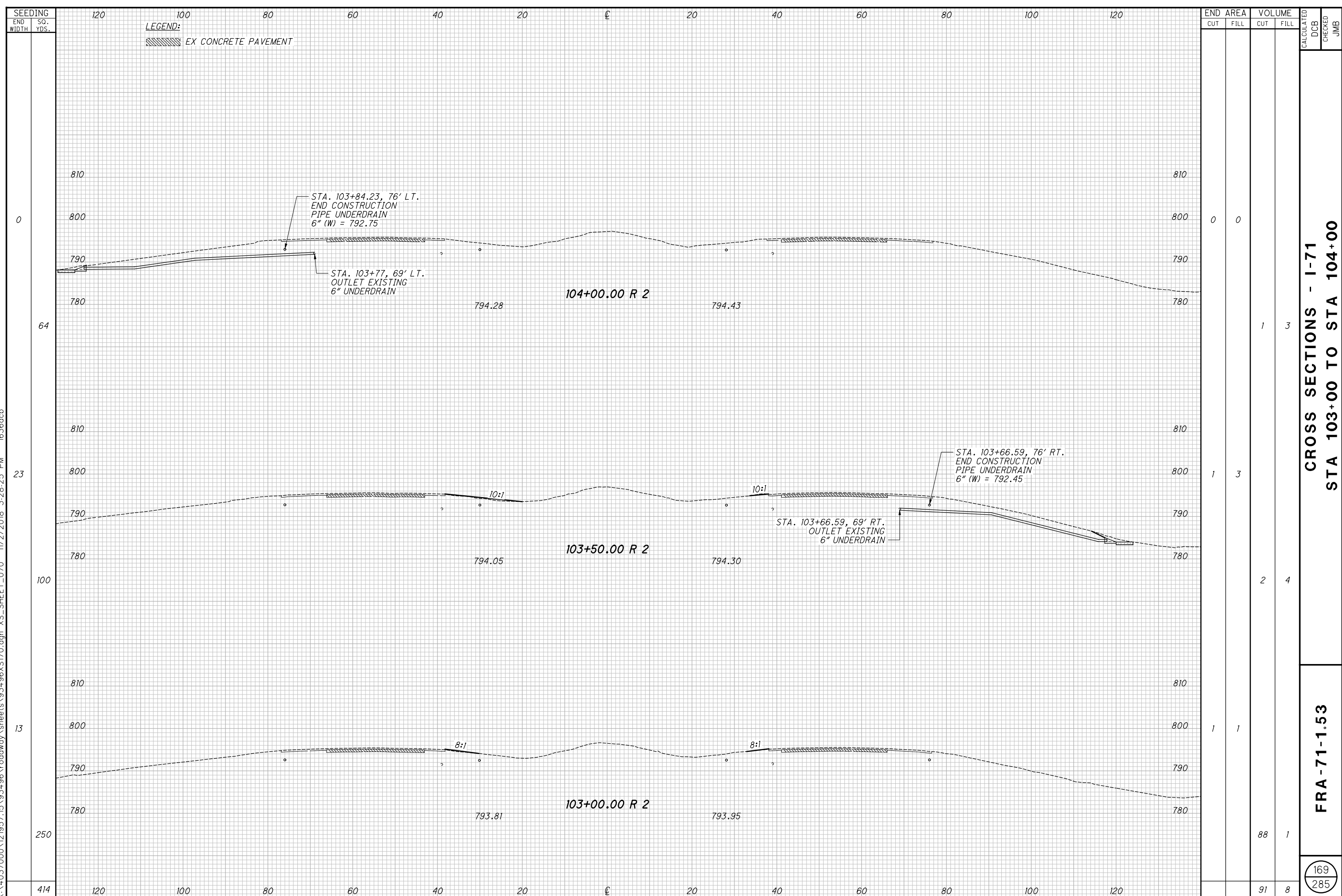


CROSS SECTIONS - I-71  
 STA 101+50 TO STA 102+50

FRA-71-1.53

168  
 285

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**CROSS SECTIONS - I-71  
STA 103+00 TO STA 104+00**

**FRA-71-1.53**

169  
285



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REF. NO.	SHEET NO.	STATION FROM	SIDE	OFFSET	INVERT	STATION TO	SIDE	OFFSET	INVERT	601		605		605		605		605		611		611		BENDS AND BRANCHES FOR INFORMATION ONLY						CALCULATED DCB CHECKED JMB													
										TIED CONCRETE BLOCK MAT, TYPE I		6" CONSTRUCTION UNDERDRAINS		6" SHALLOW PIPE UNDERDRAINS		6" SHALLOW PIPE UNDERDRAINS, AS PER PLAN		6" UNCLASSIFIED PIPE UNDERDRAINS		6" BASE PIPE UNDERDRAINS		6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS		PRECAST REINFORCED CONCRETE OUTLET		PLUG NO.	6" X 6" TEE NO.	6" X 6" WYE NO.	6" X 6" CROSS NO.		6" X 90° ELL NO.	6" X 45° ELL NO.											
										SQ YD	FT	FT	FT	FT	FT	FT	FT	EACH	NO.	NO.	NO.	NO.	NO.	NO.																			
U-34	180	74+50	LT	61.66	792.55	74+50	LT	117.38	782.73	1.8										58	1										2			1	2								
U-35	180	74+50	LT	25.16	792.35	74+50	℄	0.00	791.70												25												1										
U-36	180	74+50	RT	25.16	792.36	74+50	℄	0.00	791.70												25												1										
U-37	180	74+50	RT	61.66	792.52	74+50	RT	120.82	783.88	1.8											61	1											1	2									
U-38	180-181	74+50	LT	76.20	793.35	78+98	LT	76.20	795.15				448																														
U-39	180-181	74+50	LT	73.66	793.02	78+98	LT	69.02	795.49										448																								
U-40	180	74+50	LT	61.66	792.55	75+89	LT	60.23	793.09				139																														
U-41	180-181	74+50	LT	25.16	792.36	78+48	LT	21.04	793.90				398																														
U-42	180-181	74+50	LT	13.16	792.82	78+48	LT	9.04	794.37										398																								
U-43	180	74+50	LT	10.30	792.60	75+50	LT	10.30	792.95				100																														
U-44	180	74+50	RT	8.50	792.55	75+48	RT	8.25	792.95				98																														
U-45	180	74+50	RT	13.16	792.83	75+48	RT	12.15	793.19										98																								
U-46	180	74+50	RT	25.16	792.36	75+48	RT	24.15	792.61				98																														
U-47	180-181	74+50	RT	61.66	792.52	78+58	RT	57.44	793.46				408																														
U-48	180-181	74+50	RT	73.66	792.99	78+58	RT	69.44	793.99										408																								
U-49	180-181	74+50	RT	77.00	793.35	78+58	RT	77.00	794.95				408																														
U-50	180-181	75+76	LT	60.36	793.05	78+50	LT	45.00	794.30																																		
U-51	180	75+50	RT	43.37	792.80	75+50	℄	0.00	792.25												45																						
U-52	180	75+50	RT	24.13	792.60	75+89	RT	23.73	792.85				39																														
U-53	180-181	75+76	RT	23.85	792.81	78+73	RT	33.28	794.09				297																														
U-54	180-181	75+50	RT	43.37	792.80	78+73	RT	40.03	793.95																																		
U-55	180-181	75+50	RT	8.25	792.95	76+75	RT	9.09	793.40				125																														
U-56	180-181	75+50	RT	12.12	793.24	78+73	RT	8.78	794.85											323																							
U-57	181	78+50	LT	42.06	794.31	78+50	LT	0.67	793.35												46																						
U-58	181	78+75	RT	40.00	793.97	78+50	LT	0.67	793.35												58																						
U-59	181	78+60	RT	57.42	793.48	78+60	RT	107.60	785.50	1.8																																	
U-60	181-182	78+50	LT	21.02	794.37	81+65	LT	20.50	796.04																																		
U-61	181	78+50	LT	9.02	794.42	80+97	LT	7.34	796.00																																		
U-62	181	78+75	RT	8.76	794.87	80+98	RT	8.50	796.00																																		
U-63	181-182	78+75	RT	33.26	794.09	81+64	RT	33.00	796.71																																		
U-64	181	78+75	RT	40.00	793.97	80+00	RT	39.75	795.32																																		
U-65	181-182	78+60	RT	57.42	793.48	81+64	RT	57.00	796.23																																		
U-66	181	78+60	RT	69.42	794.01	80+98	RT	69.00	796.50																																		
U-67	181-182	78+60	RT	77.00	794.95	81+56	RT	72.00	795.95																																		
U-68	181	79+00	LT	69.00	795.50	79+00	LT	113.00	786.95	1.8			296																														
U-69	181-182	79+00	LT	76.20	795.15	81+57	LT	71.20	796.10																																		
U-70	181-182	79+00	LT	69.00	795.50	81+65	LT	71.00	797.29																																		
U-71	181-182	78+50	LT	42.06	794.31	81+65	LT	41.40	796.53																																		
U-72	182	81+00	LT	8.47	796.35	81+65	LT	6.50	796.00																																		
U-73	182	81+00	RT	8.25	797.00	81+65	RT	6.50	797.30																																		
U-74	182	81+00	RT	70.38	796.50	81+65	RT	71.00	796.89																																		
BIG DARBY CREEK BRIDGE																																											
TOTALS CARRIED TO SHEETS 113-114											7.2	1732											2561	733	240	2693	444	4	32	6	14									9	7		

**ESTIMATED QUANTITIES - UNDERDRAINS**

**FRA - 71 - 1.53**

176B  
285

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REF. NO.	SHEET NO.	STATION	SIDE	OFFSET	INVERT	STATION	SIDE	OFFSET	INVERT	601	605	605	605	605	605	611	611	BENDS AND BRANCHES FOR INFORMATION ONLY						CALCULATED DCB CHECKED JMB															
										TIED CONCRETE BLOCK MAT, TYPE 1	6" CONSTRUCTION UNDERDRAINS	6" SHALLOW PIPE UNDERDRAINS	6" SHALLOW PIPE UNDERDRAINS, AS PER PLAN	6" UNCLASSIFIED PIPE UNDERDRAINS	6" BASE PIPE UNDERDRAINS	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	PRECAST REINFORCED CONCRETE OUTLET	PLUG	6" X 6" TEE	6" X 6" WYE	6" X 6" CROSS	6" X 90° ELL	6" X 45° ELL		SQ YD	FT	FT	FT	FT	FT	EACH	NO.	NO.	NO.	NO.	NO.	NO.		
BIG DARBY CREEK BRIDGE																																							
U-100	182-183	84+83	LT	71.20	795.50	88+48	LT	76.2	794.70		365										1																		
U-101	182-183	84+76	LT	71.00	797.17	88+48	LT	70.56	795.77													1																	
U-102	182-183	84+76	LT	42.25	796.41	88+22	LT	43.08	795.00													1																	
U-103	182-183	84+76	LT	20.50	795.92	88+22	LT	21.79	794.59													1																	
U-104	182	84+77	LT	6.50	796.69	85+41	LT	7.12	796.00													1																	
U-105	182-183	84+77	RT	6.50	797.59	88+22	RT	9.76	795.86													1																	
U-106	182-183	84+77	RT	33.00	796.82	88+22	RT	34.26	795.10													1																	
U-107	182-183	84+77	RT	57.00	796.34	88+48	RT	58.50	794.50													1																	
U-108	182	84+78	RT	71.00	797.10	85+16	RT	70.30	796.75													1																	
U-109	182-183	84+85	RT	71.20	795.30	88+48	RT	76.20	795.05		363											1																	
U-110	182-183	85+43	LT	6.75	796.00	88+22	LT	9.76	795.07													1																	
U-111	182-183	85+18	RT	70.90	796.63	88+48	RT	70.53	795.00													1																	
U-112	183	88+22	LT	43.08	794.95	88+25	LT	2.17	794.40																														
U-113	183	88+22	RT	34.27	795.00	88+25	LT	2.17	794.40																														
U-114	183-184	88+27	LT	21.81	794.59	93+98	LT	27.75	792.88													1																	
U-115	183-184	88+27	LT	9.81	795.07	93+98	LT	15.75	793.35													1																	
U-116	183-184	88+27	RT	9.81	795.83	93+98	RT	15.72	794.18													1																	
U-117	183-184	88+27	RT	34.32	795.07	93+98	RT	40.22	793.46													1																	
U-118	183	88+48	LT	70.56	795.77	88+50	LT	90.44	794.55	1.8																													
U-119	183	88+48	RT	58.50	794.50	88+50	RT	112.28	784.80	1.8																													
U-120	183-184	88+52	LT	76.20	795.05	93+98	LT	76.22	793.60		546											1																	
U-121	183-184	88+52	LT	70.58	795.76	93+98	LT	76.22	793.55																														
U-122	183-184	88+27	LT	43.16	795.00	93+98	LT	43.50	793.17													1																	
U-123	183-184	88+52	RT	58.32	794.50	93+98	RT	64.25	792.99													1																	
U-124	183-184	88+52	RT	70.32	795.00	93+98	RT	76.25	793.46													1																	
U-125	183-184	88+52	RT	76.00	795.05	93+98	RT	76.22	793.60		546											1																	
U-126	183-184	88+97	LT	5.08	794.55	94+00	LT	6.80	792.90													1																	
U-127	183-184	90+50	RT	10.30	795.00	93+98	RT	10.30	793.95		503											1																	
U-128	184	93+98	LT	76.22	794.18	94+00	LT	133.35	787.39	1.8																													
U-129	184	93+98	LT	43.50	793.17	94+00	⊥	0.00	792.00													1																	
U-130	184	93+98	RT	40.22	793.46	94+00	⊥	0.00	792.00																														
U-131	184	93+98	RT	64.22	792.99	94+00	RT	127.68	784.73	1.8												1																	
STATION 94+00 END 6 - LANE FULL DEPTH PAVEMENT, BEGIN FULL DEPTH PAVEMENT TAPERS																																							
U-132	184-185	94+02	LT	76.25	793.60	96+78	LT	76.25	792.70		276										1																		
U-133	184-185	94+02	LT	76.25	794.07	96+78	LT	76.25	792.80																														
U-134	184	94+02	LT	27.83	792.88	94+98	LT	31.74	793.59													1																	
U-135	184	94+02	LT	6.80	792.90	95+00	LT	6.80	792.95													1																	
U-136	184	94+02	RT	10.30	793.95	94+93	RT	10.30	793.55													1																	
U-137	184	94+00	RT	39.75	793.46	94+95	RT	40.02	792.98													1																	
U-138	184-185	94+02	RT	76.25	793.46	96+78	RT	76.20	792.59																														
U-139	184-185	94+02	RT	76.25	793.60	96+78	RT	76.20	792.80		276											1																	
U-140	184	94+95	RT	40.02	792.98	95+00	⊥	0.00	791.64																														
U-141	184	94+98	LT	31.74	793.57	95+00	⊥	0.00	791.64																														
U-142	184	95+05	RT	40.06	792.04	95+00	⊥	0.00	791.64																														
TOTALS CARRIED TO SHEETS 113-114										7.2	3412			2660	887	240	4277	542	4	32	6	12	0	10	13														
<b>ESTIMATED QUANTITIES - UNDERDRAINS</b>																																							
<b>FRA - 71-1.53</b>																																							
177																																							
285																																							

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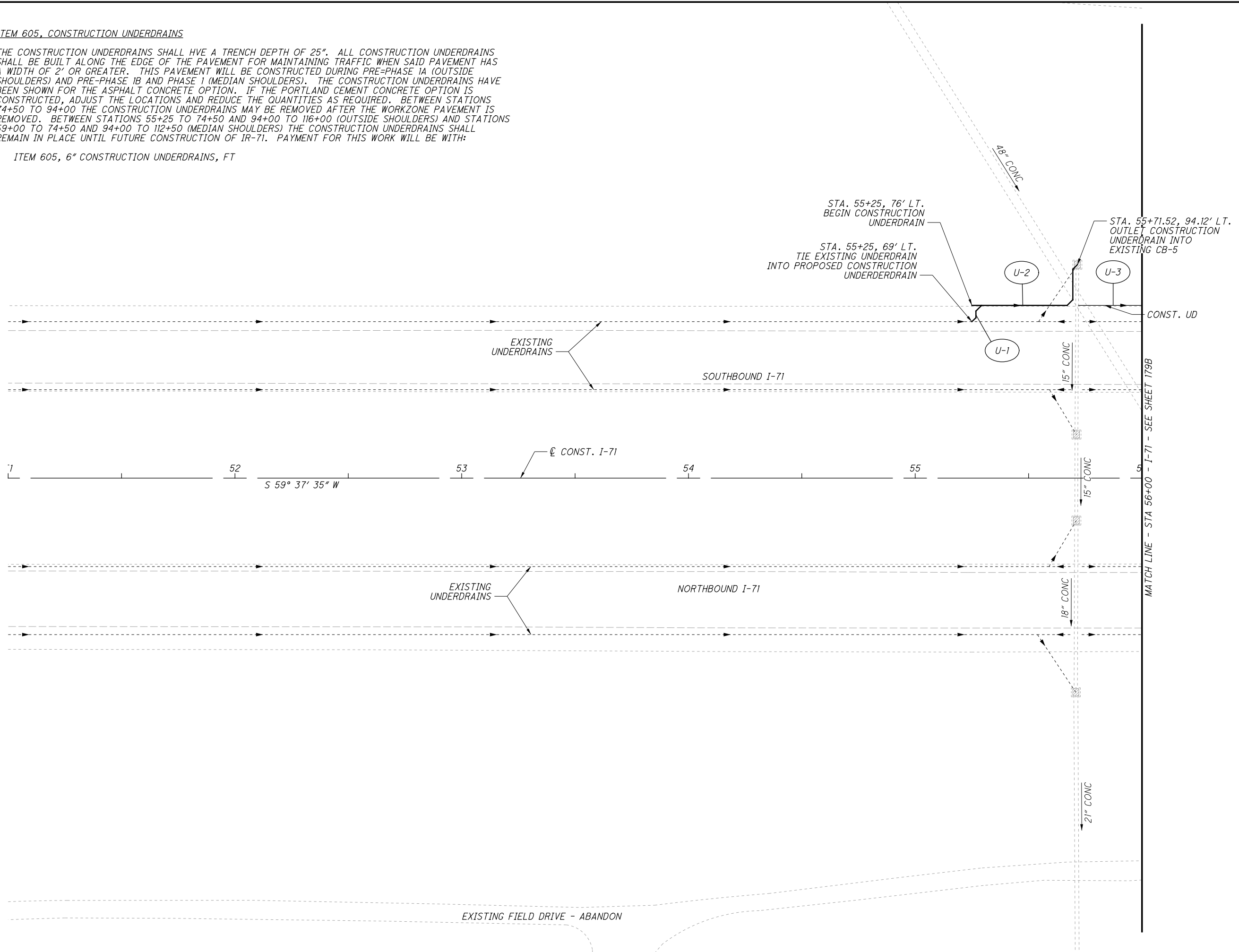
REF. NO.	SHEET NO.	STATION	SIDE	OFFSET	INVERT	STATION	SIDE	OFFSET	INVERT	601	605	605	605	605	605	611	611	BENDS AND BRANCHES FOR INFORMATION ONLY						
										TIED CONCRETE BLOCK MAT, TYPE 1	6" CONSTRUCTION UNDERDRAINS	6" SHALLOW PIPE UNDERDRAINS	6" SHALLOW PIPE UNDERDRAINS, AS PER PLAN	6" UNCLASSIFIED PIPE UNDERDRAINS	6" BASE PIPE UNDERDRAINS	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	PRECAST REINFORCED CONCRETE OUTLET	PLUG	6" X 6" TEE	6" X 6" WYE	6" X 6" CROSS	6" X 90° ELL	6" X 45° ELL	
		FROM			TO						SQ YD	FT	FT	FT	FT	FT	EACH	NO.	NO.	NO.	NO.	NO.	NO.	
U-143	184-185	95+02	LT	31.95	791.94	96+80	LT	38.38	793.20					178				1						
U-144	184-185	95+02	RT	6.80	792.95	100+71	RT	19.40	790.70		569							1					3	
U-145	184-185	94+97	RT	10.30	793.55	100+71	RT	19.50	790.30		574							1					1	
U-146	184	95+02	RT	31.10	792.00	96+80	RT	38.25	793.20					178				1						
146A	186	95+02	RT	40.30	792.05	96+00	RT	41.00	792.50					98				1						
U-147	185	96+78	LT	76.25	793.49	96+80	LT	118.96	787.20	1.8	2					57	1		1				1	
U-148	185	96+78	RT	76.25	792.59	96+80	RT	119.00	787.50	1.8	2					43	1		1			1	1	
STATION 96+80 END FULL DEPTH PAVEMENT TAPER CONSTRUCTION																								
U-149	185-186A	96+82	LT	76.25	793.49	101+72	LT	76.25	791.60									1						
U-150	185-186A	9682	RT	76.25	792.59	101+72	RT	76.25	791.60									1						
U-151	NOT USED																							
U-152	NOT USED																							
U-153	185-186A	100+73	LT	21.44	791.60	102+59	LT	28.58	791.50									1					1	
U-154	185-186A	100+73	RT	20.60	791.50	102+68	RT	27.95	791.40									1					1	
U-155	186A	101+69	LT	76.25	791.60	101+73	LT	121.00	788.35	1.8	45						1		1				1	
U-156	186A	101+72	RT	76.20	791.60	101+72	RT	109.50	787.35	1.8	34						1		1				1	
U-157	186A	101+72	LT	76.25	791.60	105+48	LT	76.25	793.00									1						
U-158	186A	101+72	RT	76.25	791.60	105+48	RT	76.25	793.00									1						
U-159	186A	102+59	RT	39.00	791.25	102+70	RT	19.40	789.00										1	1				2
U-160	186A	102+70	LT	39.00	791.25	102+70	LT	18.70	790.60										2	1				
U-161	186A	102+83	RT	39.00	791.25	102+70	RT	19.40	789.00										1	1				2
U-162	186A & B	102+70	LT	30.00	791.50	109+50	LT	38.74	791.60									1						1
U-163	186A - C	102+72	RT	28.00	791.25	111+69	RT	35.4	802.10									1						
U-164	186A & B	105+50	RT	119.00	786.85	108+48	RT	76.25	796.50	1.8	332						1	1				1	1	
U-165	186A & B	105+50	LT	125	788.25	110+48	LT	76.25	799.30	1.8	548						1	1				1	1	
U-166	186C	111+71	RT	19.5	800.75	112+50	RT	37.56	804.00									1					1	1
U-167	185B & C	108+50	RT	114.1	788.15	111+48	RT	76.25	801.90	1.8	332						1	1				1	1	
U-168	185B & C	110+50	LT	111.6	787	113+50	LT	76.25	805.80	1.8	336						1	1				1	1	
U-169	186C	111+50	RT	113.5	787.9	114+50	RT	76.25	808.00	1.8	332						1	1				1	1	
U-170	186C	113+50	LT	69	805.5	113+50	LT	125	786.40	1.8	60						1					1	2	
U-171	186C	114+50	RT	76.25	806.7	116+00	RT	69	810.60	1.8	173						1	1				2	2	
TOTALS CARRIED TO SHEETS 113-114										10.8	5865				454	100	6	15	8	3		3	17	

<b>ESTIMATED QUANTITIES - UNDERDRAINS</b>	<b>FRA - 71 - 1.53</b>
CALCULATED DCB CHECKED JMB	178 285

ITEM 605, CONSTRUCTION UNDERDRAINS

THE CONSTRUCTION UNDERDRAINS SHALL HVE A TRENCH DEPTH OF 25". ALL CONSTRUCTION UNDERDRAINS SHALL BE BUILT ALONG THE EDGE OF THE PAVEMENT FOR MAINTAINING TRAFFIC WHEN SAID PAVEMENT HAS A WIDTH OF 2' OR GREATER. THIS PAVEMENT WILL BE CONSTRUCTED DURING PRE-PHASE 1A (OUTSIDE SHOULDERS) AND PRE-PHASE 1B AND PHASE 1 (MEDIAN SHOULDERS). THE CONSTRUCTION UNDERDRAINS HAVE BEEN SHOWN FOR THE ASPHALT CONCRETE OPTION. IF THE PORTLAND CEMENT CONCRETE OPTION IS CONSTRUCTED, ADJUST THE LOCATIONS AND REDUCE THE QUANTITIES AS REQUIRED. BETWEEN STATIONS 74+50 TO 94+00 THE CONSTRUCTION UNDERDRAINS MAY BE REMOVED AFTER THE WORKZONE PAVEMENT IS REMOVED. BETWEEN STATIONS 55+25 TO 74+50 AND 94+00 TO 116+00 (OUTSIDE SHOULDERS) AND STATIONS 59+00 TO 74+50 AND 94+00 TO 112+50 (MEDIAN SHOULDERS) THE CONSTRUCTION UNDERDRAINS SHALL REMAIN IN PLACE UNTIL FUTURE CONSTRUCTION OF IR-71. PAYMENT FOR THIS WORK WILL BE WITH:

ITEM 605, 6" CONSTRUCTION UNDERDRAINS, FT



CALCULATED  
MAH  
CHECKED  
CTW

0 20 40  
HORIZONTAL  
SCALE IN FEET

UNDERDRAIN PLAN - I-71  
STA 51+00 TO STA 56+00

FRA -71-1.53

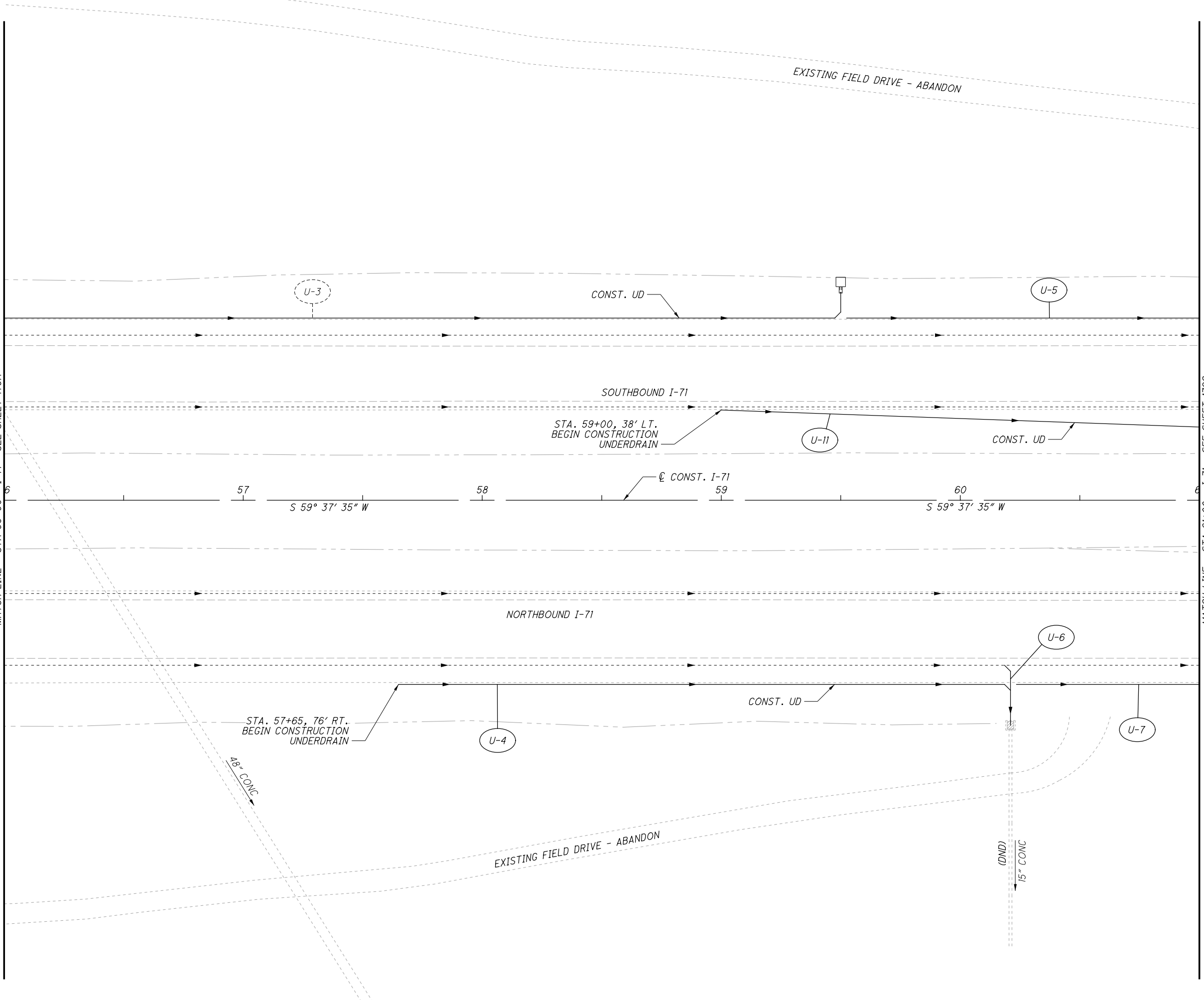
179A  
285

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MATCH LINE - STA 56+00 - I-71 - SEE SHEET 179A

MATCH LINE - STA 61+00 - I-71 - SEE SHEET 179C



CALCULATED MAH  
CHECKED CTW

0 20 40  
HORIZONTAL SCALE IN FEET

**UNDERDRAIN PLAN - I-71**  
**STA 56+00 TO STA 61+00**

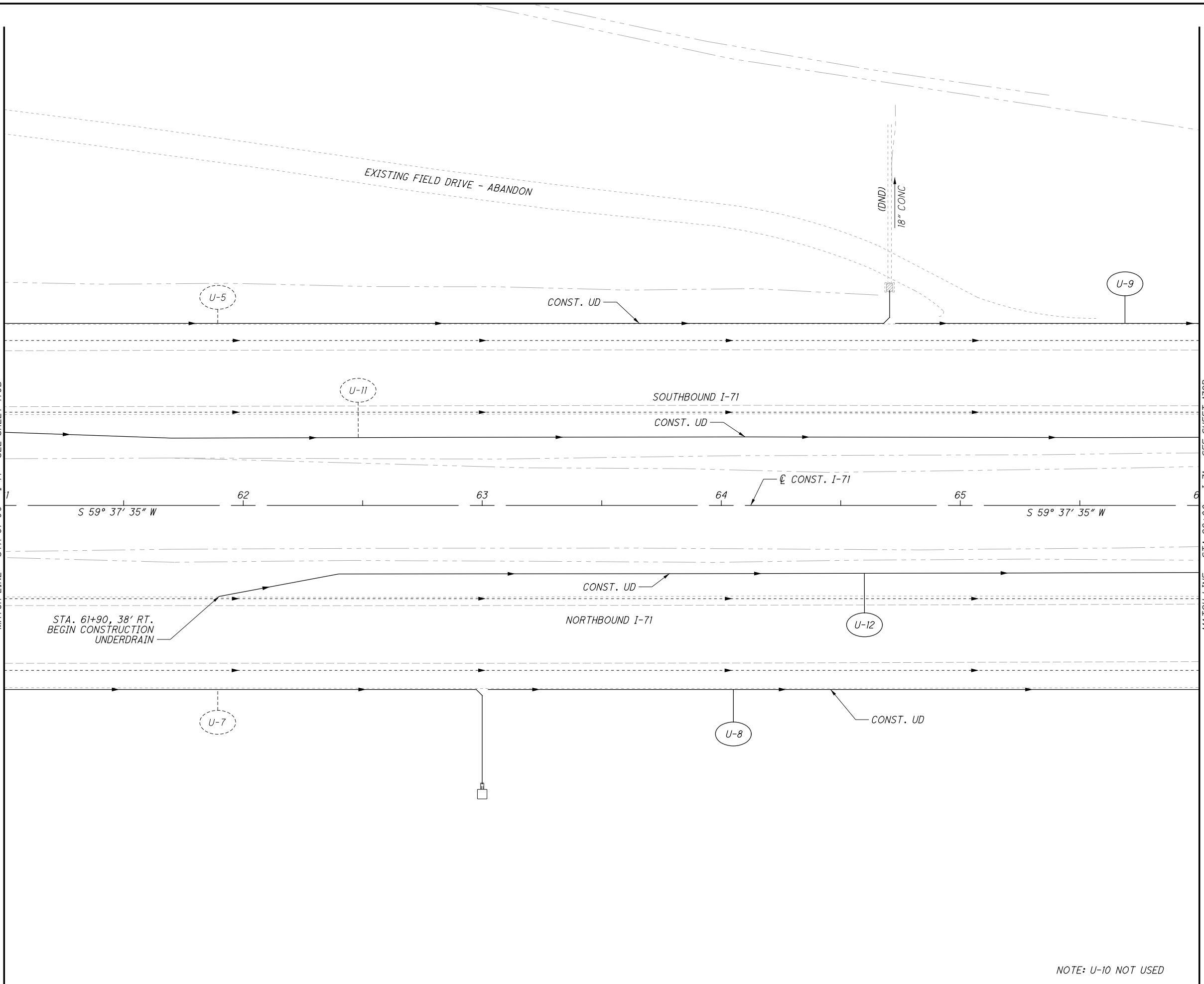
**FRA - 71 - 1.53**

179B  
285



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MATCH LINE - STA 61+00 - I-71 - SEE SHEET 179B



STA. 61+90, 38' RT.  
BEGIN CONSTRUCTION  
UNDERDRAIN

S 59° 37' 35" W

S 59° 37' 35" W

MATCH LINE - STA 66+00 - I-71 - SEE SHEET 179D

NOTE: U-10 NOT USED

CALCULATED	MAH
CHECKED	CTW

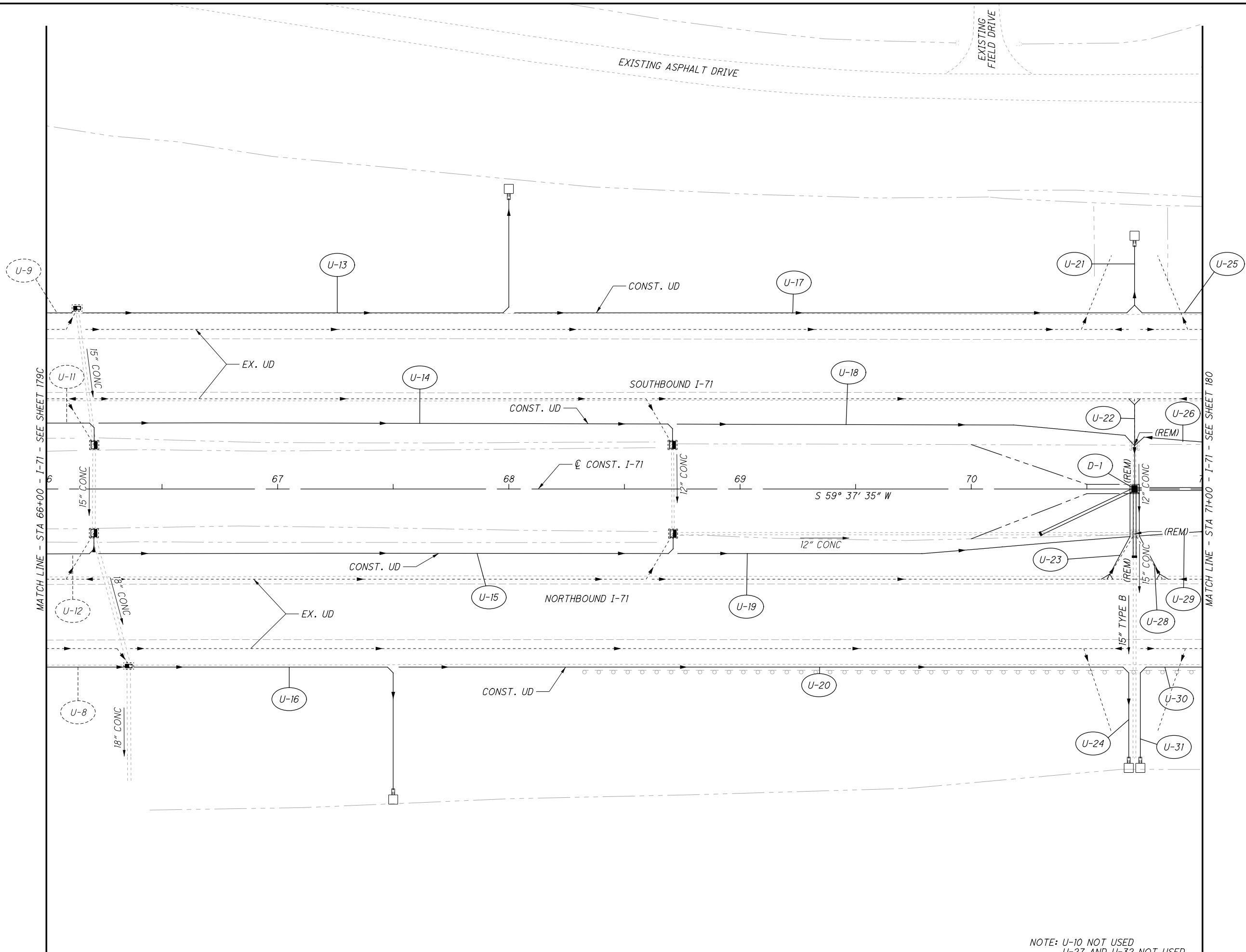
0 20 40  
HORIZONTAL  
SCALE IN FEET

**UNDERDRAIN PLAN - I-71**  
**STA 61+00 TO STA 66+00**

**FRA-71-1.53**

179C  
285

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MATCH LINE - STA 66+00 - I-71 - SEE SHEET 179C

MATCH LINE - STA 71+00 - I-71 - SEE SHEET 180

EXISTING ASPHALT DRIVE

EXISTING FIELD DRIVE

SOUTHBOUND I-71

NORTHBOUND I-71

CONST. I-71

S 59° 37' 35" W

NOTE: U-10 NOT USED  
U-27 AND U-32 NOT USED

CALCULATED MAH  
CHECKED CTW

HORIZONTAL SCALE IN FEET

**UNDERDRAIN PLAN - I-71**  
**STA 66+00 TO STA 71+00**

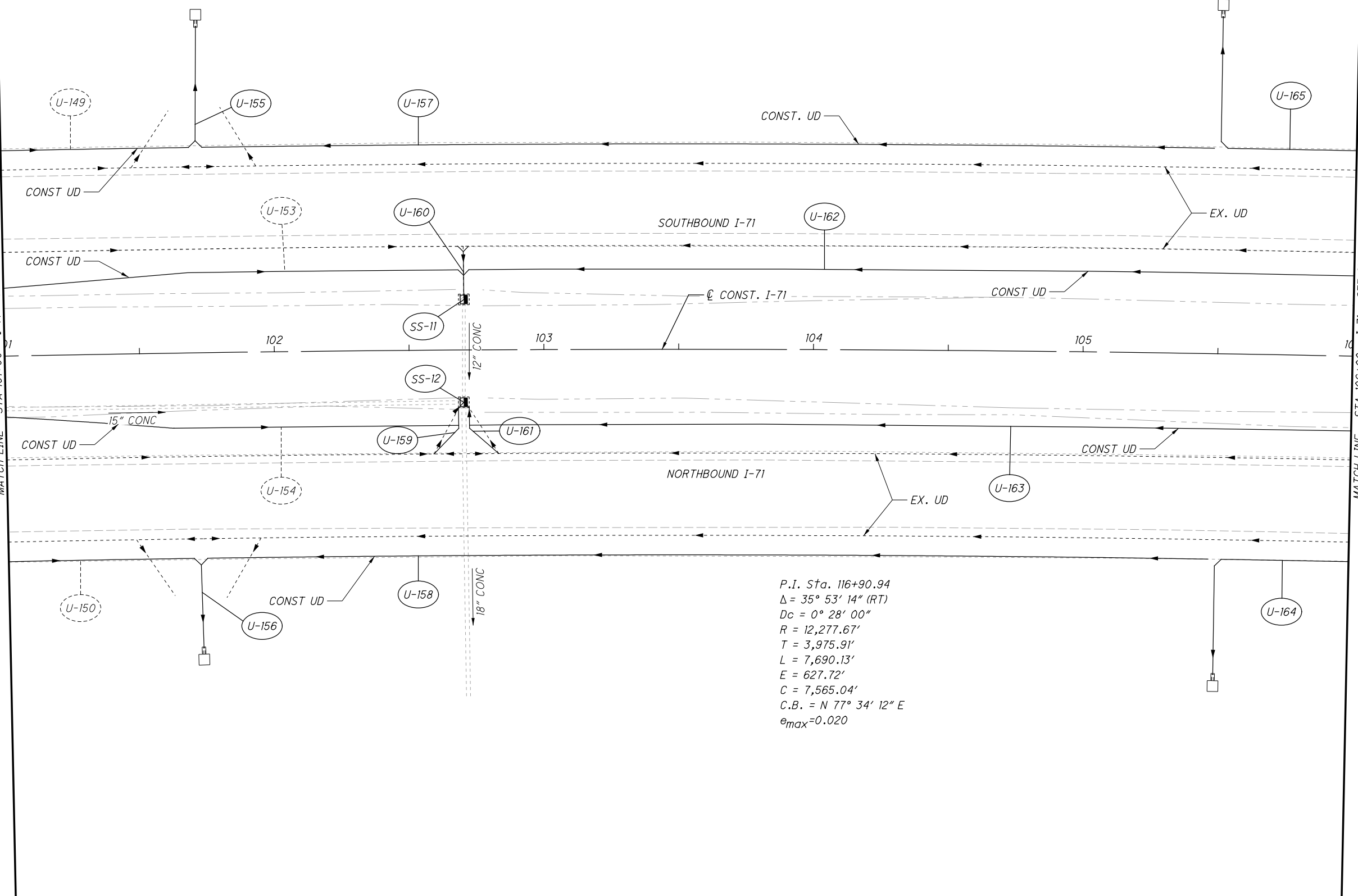
**FRA - 71 - 1.53**

179D  
285

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MATCH LINE - STA 101+00 - I-71 - SEE SHEET 185

MATCH LINE - STA 106+00 - I-71 - SEE SHEET 186B



P.I. Sta. 116+90.94  
 $\Delta = 35^\circ 53' 14''$  (RT)  
 $Dc = 0^\circ 28' 00''$   
 $R = 12,277.67'$   
 $T = 3,975.91'$   
 $L = 7,690.13'$   
 $E = 627.72'$   
 $C = 7,565.04'$   
 $C.B. = N 77^\circ 34' 12'' E$   
 $e_{max} = 0.020$

CALCULATED MAH  
 CHECKED CTW  
 0 20 40  
 HORIZONTAL SCALE IN FEET

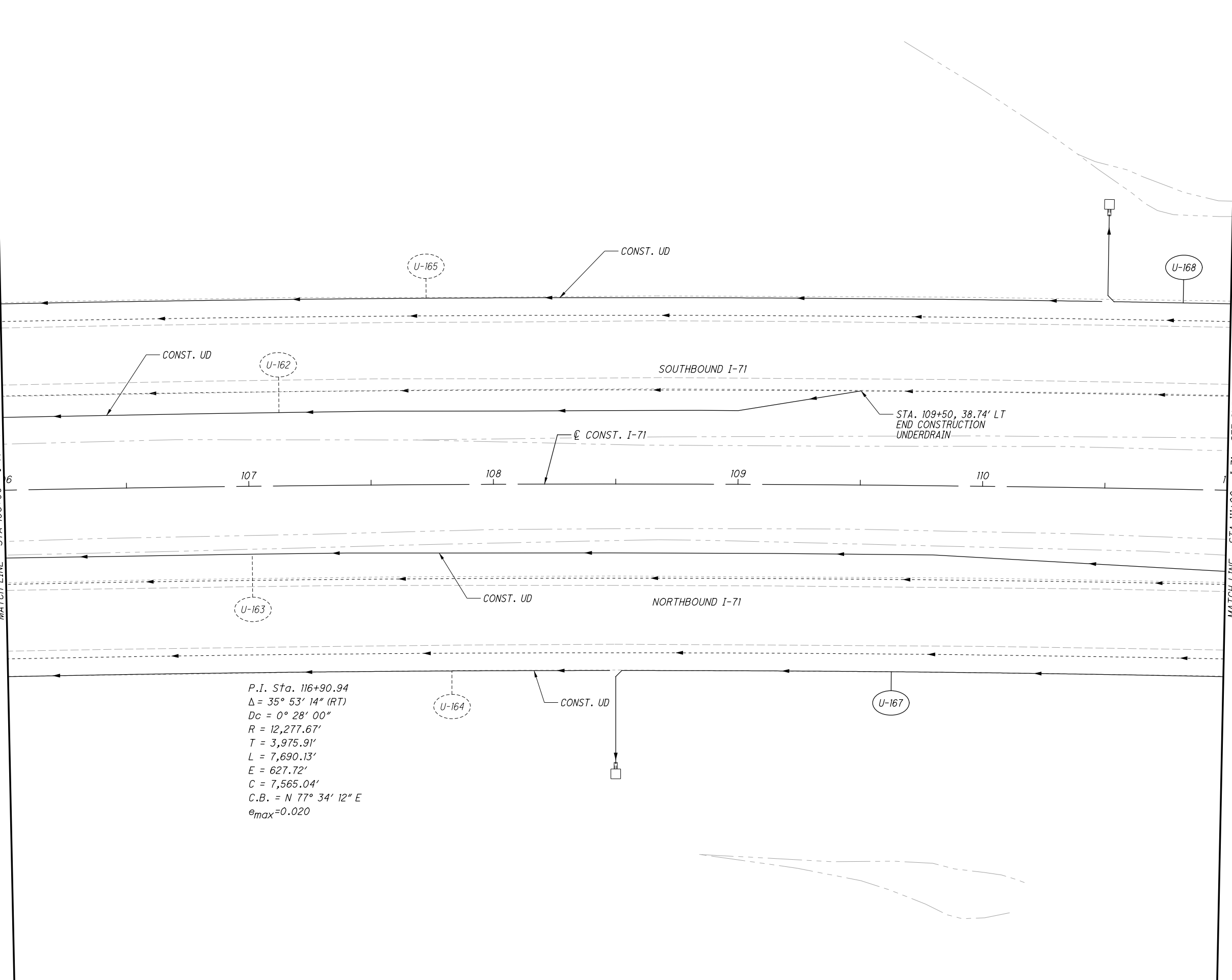
**UNDERDRAIN PLAN - I-71**  
**STA 101+00 TO STA 106+00**

**FRA-71-1.53**

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MATCH LINE - STA 106+00 - I-71 - SEE SHEET 185A

MATCH LINE - STA 111+00 - I-71 - SEE SHEET 185C



P.I. Sta. 116+90.94  
 $\Delta = 35^\circ 53' 14''$  (RT)  
 $Dc = 0^\circ 28' 00''$   
 $R = 12,277.67'$   
 $T = 3,975.91'$   
 $L = 7,690.13'$   
 $E = 627.72'$   
 $C = 7,565.04'$   
 $C.B. = N 77^\circ 34' 12'' E$   
 $e_{max} = 0.020$

CALCULATED MAH  
 CHECKED CTW

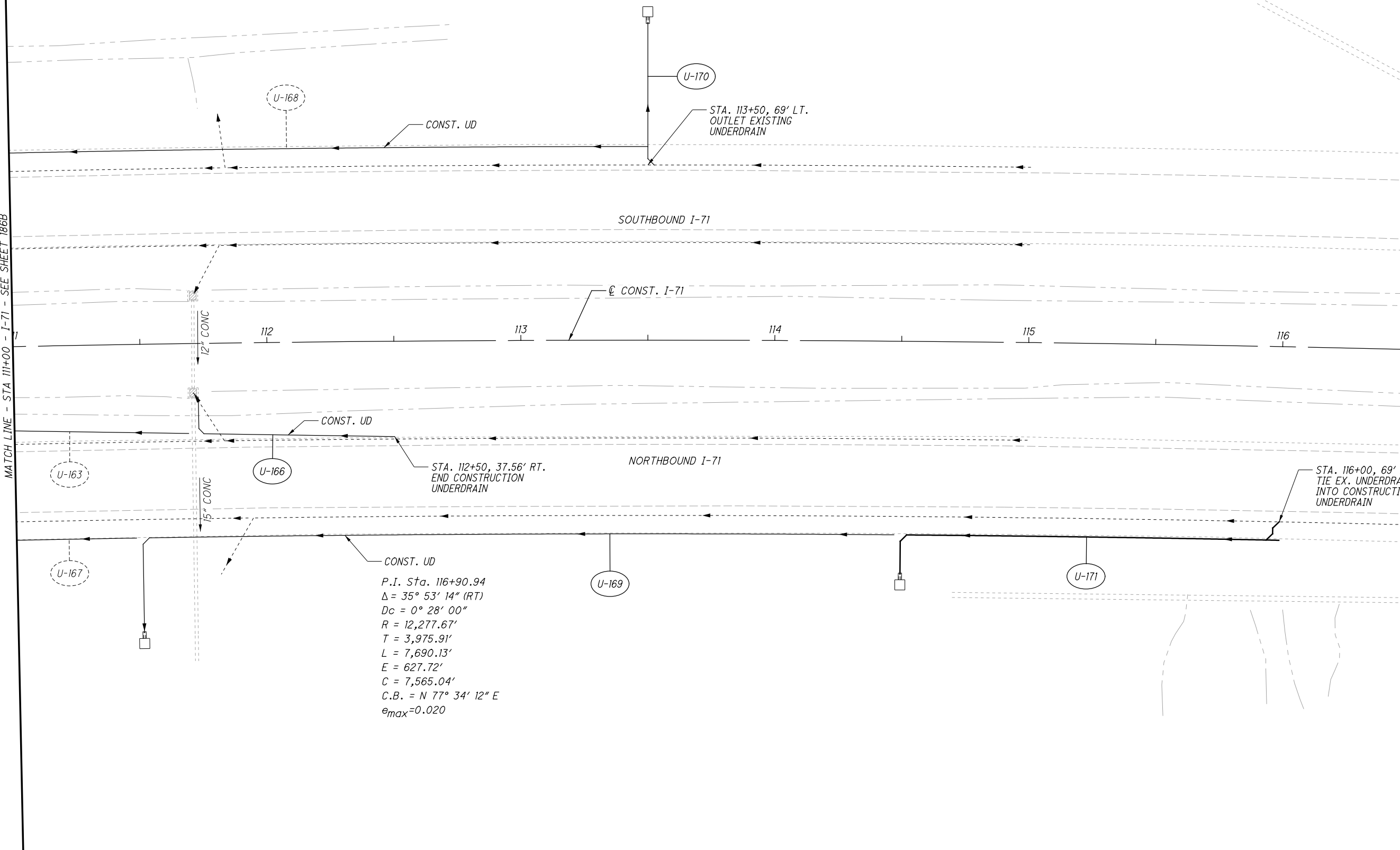
0 20 40  
 HORIZONTAL SCALE IN FEET

**UNDERDRAIN PLAN - I-71**  
**STA 106+00 TO STA 111+00**

FRA-71-1.53

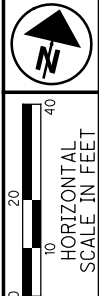
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MATCH LINE - STA 111+00 - I-71 - SEE SHEET 186B



P.I. Sta. 116+90.94  
 $\Delta = 35^\circ 53' 14''$  (RT)  
 $Dc = 0^\circ 28' 00''$   
 $R = 12,277.67'$   
 $T = 3,975.91'$   
 $L = 7,690.13'$   
 $E = 627.72'$   
 $C = 7,565.04'$   
 $C.B. = N 77^\circ 34' 12'' E$   
 $e_{max} = 0.020$

CALCULATED MAH  
 CHECKED CTW



**UNDERDRAIN PLAN - I-71**  
**STA 116+00 TO STA 121+00**

**FRA -71-1.53**

186C  
285

X:\4037000\121957.15\93496\traffic\sheets\93496\TS001.dgn Sheet 11/19/2018 3:01:43 PM 1636dcb

SHEET NO.	REFERENCE NO.	LOCATION	STATION		SIDE	LENGTH	620	621	626	644*	644*	644*	644*	646	646	646										
			DELINEATOR, POST GROUND MOUNTED	RPM			BARRIER REFLECTOR	EDGE LINE, 6" (WHITE)	EDGE LINE, 6" (YELLOW)	LANE LINE, 6"	REMOVAL OF PAVEMENT MARKING		EDGE LINE, 6" (WHITE)	EDGE LINE, 6" (YELLOW)	LANE LINE, 6"											
			FROM	TO			EACH	EACH	EACH	MILE	MILE	MILE	FEET		MILE	MILE	MILE									
191	- 196	EW-1	I-71	57+20.00	81+35.00	RT				0.46																
191	- 196	EY-1	I-71	57+20.00	81+35.00	RT					0.46															
191	- 196	LL-1	I-71	54+40.00	81+35.00	RT		22				0.51														
192	- 196	EW-2	I-71	54+75.00	81+35.00	LT				0.50																
192	- 196	EY-2	I-71	54+75.00	81+35.00	LT					0.50															
192	- 196	LL-2	I-71	52+25.00	81+35.00	LT		24				0.55														
196		EW-3	I-71	81+35.00	85+08.00	RT								0.07												
196		EY-3	I-71	81+35.00	85+08.00	RT									0.07											
196		LL-3	I-71	81+35.00	85+08.00	RT		4								0.07										
196		EW-4	I-71	81+35.00	85+08.00	LT								0.07												
196		EY-4	I-71	81+35.00	85+08.00	LT									0.07											
196		LL-4	I-71	81+35.00	85+08.00	LT		4								0.07										
196	201	EW-5	I-71	85+08.00	116+90.00	RT				0.60																
196	201	EY-5	I-71	85+08.00	116+90.00	RT					0.60															
196	201	LL-5	I-71	85+08.00	119+40.00	RT		30				0.65														
196	201	EW-6	I-71	85+08.00	114+70.00	LT				0.56																
196	201	EY-6	I-71	85+08.00	114+70.00	LT					0.56															
196	201	LL-6	I-71	85+08.00	117+05.00	LT		27				0.61														
197	- 201	BR-1	I-71	68+32.00	91+00.00	RT			24																	
198	- 201	BR-2	I-71	74+16.00	88+91.00	LT			16																	
199		BR-3	I-71	76+75.00	77+55.00	RT			2																	
199		BR-4	I-71	76+86.00	77+70.00	LT			2																	
199	- 200	BR-5	I-71	78+33.00	85+07.00	RT			8																	
200	- 201	BR-6	I-71	81+35.00	88+50.00	LT			8																	
191	- 194		MARKINGS REMOVED NB	54+40.00	74+50.00	RT	2010						6,030													
192	- 194		MARKINGS REMOVED SB	52+25.00	74+50.00	LT	2225						6,675													
199	- 201		MARKINGS REMOVED NB	96+80.00	119+40.00	RT	2260						6,780													
199	- 201		MARKINGS REMOVED SB	96+80.00	117+05.00	LT	2025						6,075													
191	- 196		I-71	54+75.00	81+35.00	LT/RT		15																		
197	- 201		I-71	85+08.00	116+90.00	LT/RT		18																		
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>								33	111	60	4.24	2.32	25,560		0.28	0.14										

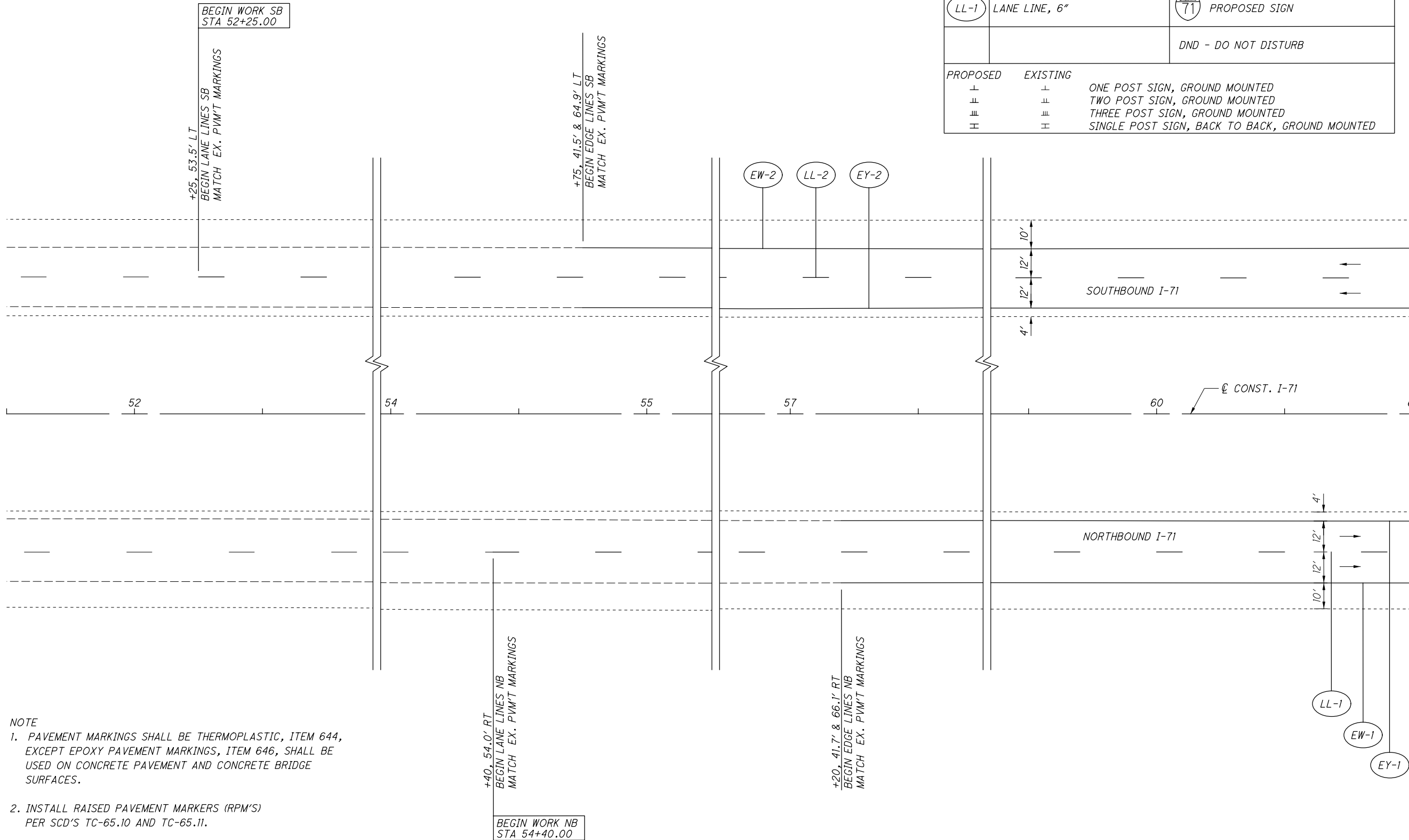
\*USE ITEM 644 FOR OPTION A (ASPHALT)  
USE ITEM 646 FOR OPTION B (CONCRETE)

SUBSUMMARY - TRAFFIC CONTROL

FRA - 71 - 1.53

CALCULATED  
EGD  
CHECKED  
DLW

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- NOTE**
- PAVEMENT MARKINGS SHALL BE THERMOPLASTIC, ITEM 644, EXCEPT EPOXY PAVEMENT MARKINGS, ITEM 646, SHALL BE USED ON CONCRETE PAVEMENT AND CONCRETE BRIDGE SURFACES.
  - INSTALL RAISED PAVEMENT MARKERS (RPM'S) PER SCD'S TC-65.10 AND TC-65.11.
  - MATCH EXISTING PAVEMENT MARKINGS AT STATIONS 61+35.00 AND 108+10.00 SB AND STATIONS 60+60.00 AND 107+00.00 NB.
  - INSTALL ITEM 620, DELINEATORS, POST GROUND MOUNTED ALONG THE OUTSIDE SHOULDER PER STANDARD CONSTRUCTION DRAWING TC-61.10.

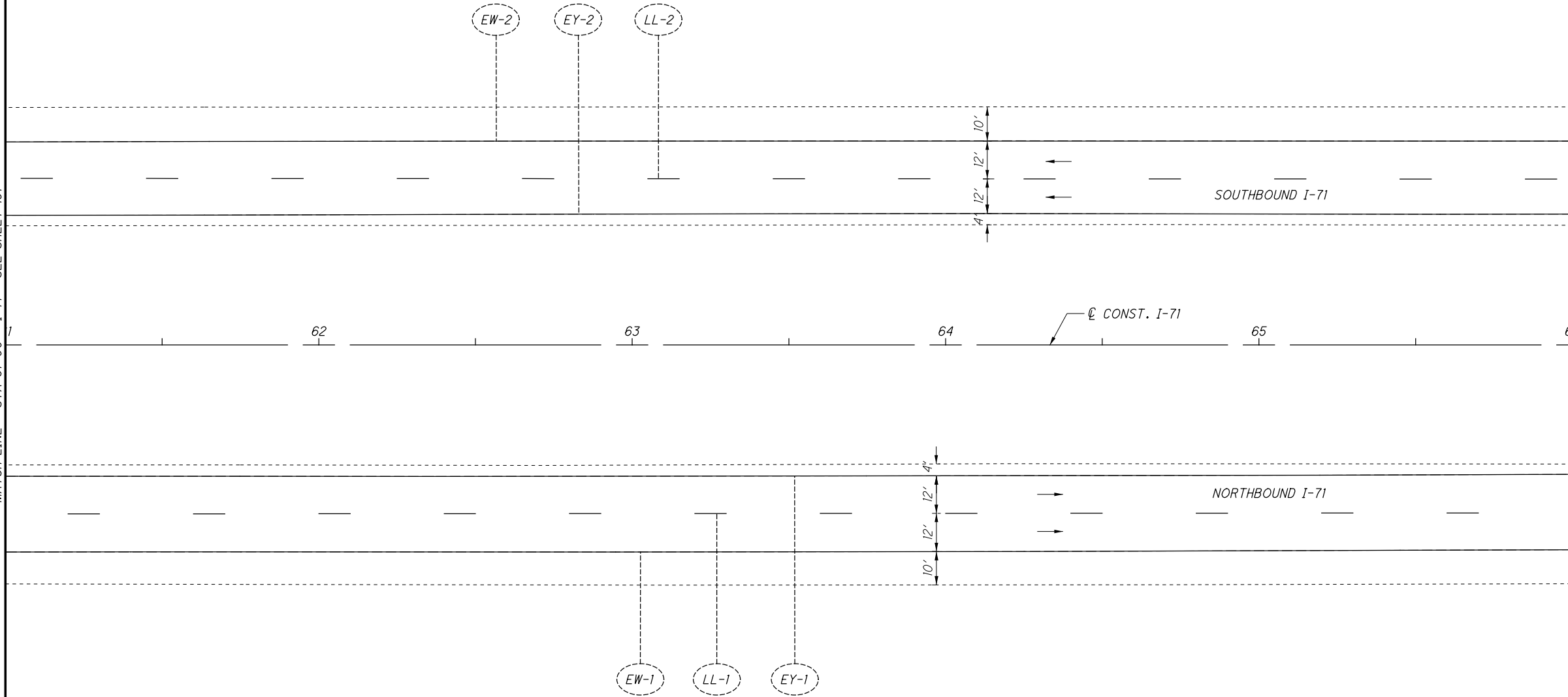
LEGEND		
EW-1	EDGE LINE, 6" (WHITE)	EXISTING SIGN
EY-1	EDGE LINE, 6" (YELLOW)	EXISTING SIGN TO BE REMOVED
LL-1	LANE LINE, 6"	PROPOSED SIGN
		DND - DO NOT DISTURB
<b>PROPOSED</b>	<b>EXISTING</b>	
+	+	ONE POST SIGN, GROUND MOUNTED
±	±	TWO POST SIGN, GROUND MOUNTED
≡	≡	THREE POST SIGN, GROUND MOUNTED
⊥	⊥	SINGLE POST SIGN, BACK TO BACK, GROUND MOUNTED

CALCULATED  
DLW  
CHECKED  
EGD

0 20 40  
HORIZONTAL  
SCALE IN FEET

**TRAFFIC CONTROL PLAN - I-71**  
**STA 51+50 TO STA 61+00**

MATCH LINE - STA 61+00 - I-71 - SEE SHEET 191



MATCH LINE - STA 66+00 - I-71 - SEE SHEET 193

FOR LEGEND, SEE SHEET 191

CALCULATED	DLW	CHECKED	EGD

0 20 40  
HORIZONTAL SCALE IN FEET

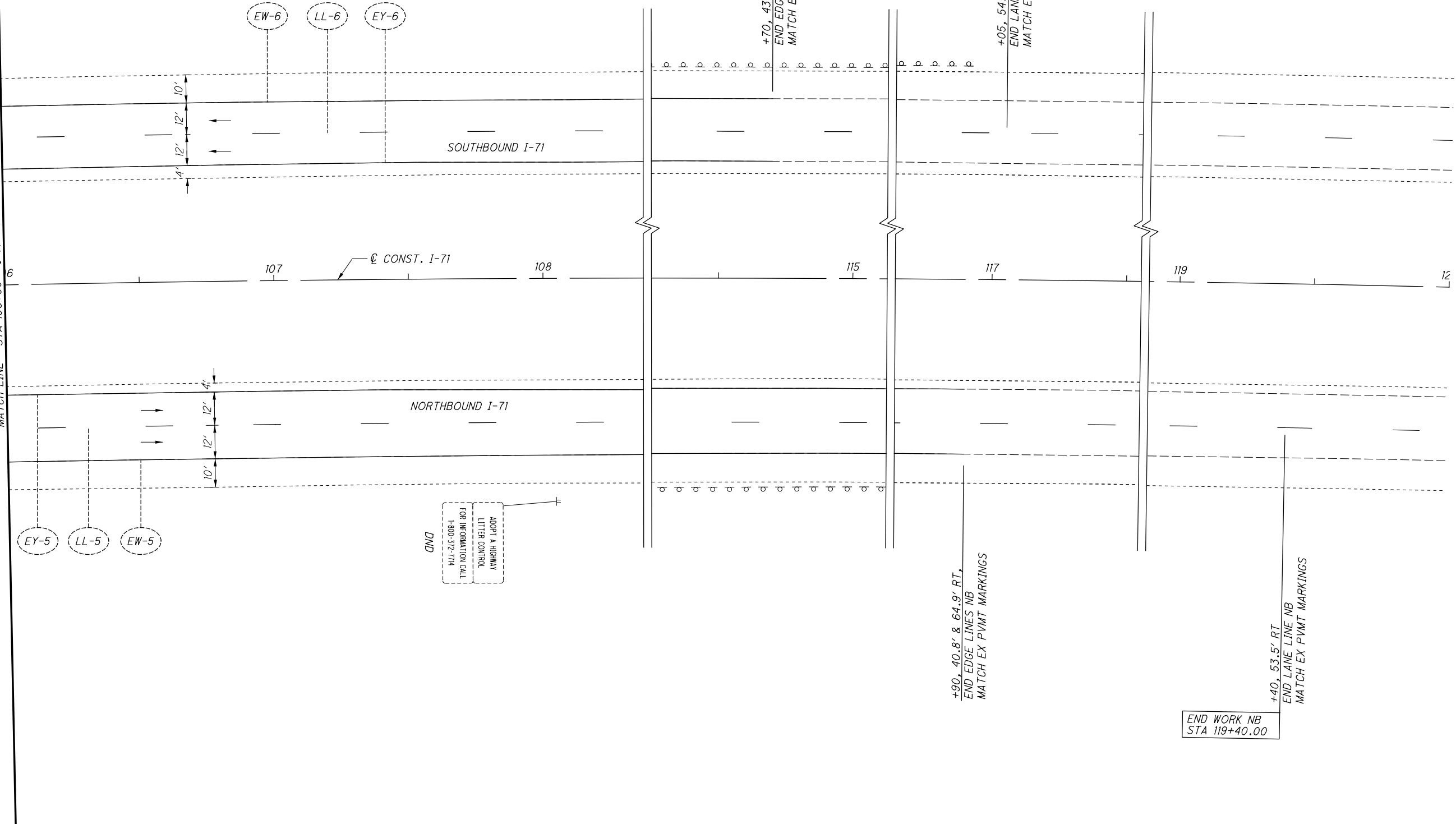
**TRAFFIC CONTROL PLAN - I-71**  
**STA 61+00 TO STA 66+00**

**FRA-71-1.53**



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MATCH LINE - STA 106+00 - I-71 - SEE SHEET 200



CALCULATED  
DLW  
CHECKED  
EGD

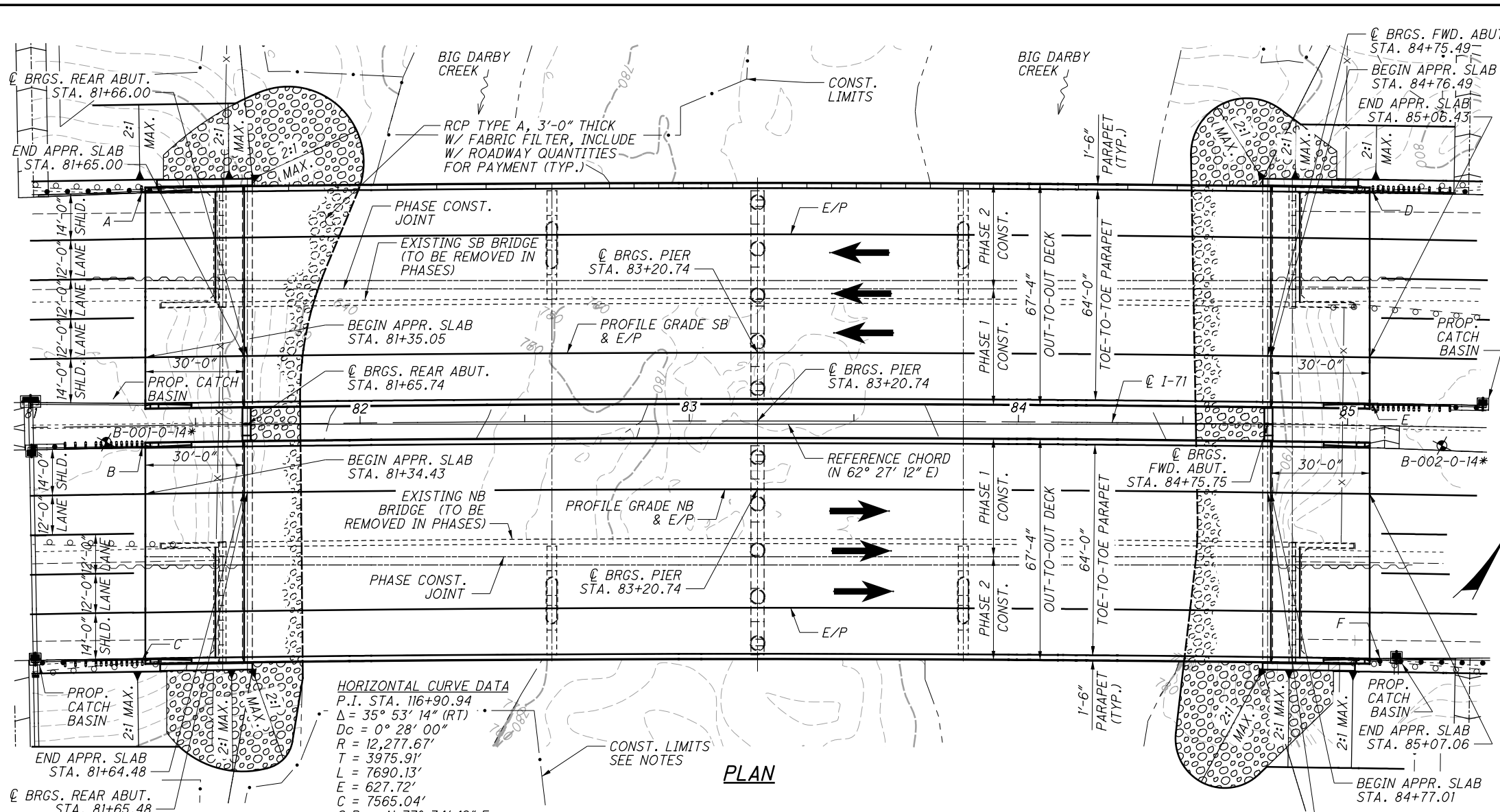
0 20 40  
HORIZONTAL  
SCALE IN FEET

**TRAFFIC CONTROL PLAN - I-71**  
**STA 106+00 TO STA 120+00**

**FRA-71-1.53**

FOR LEGEND, SEE SHEET 191

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**HORIZONTAL CURVE DATA**  
 P.I. STA. 116+90.94  
 $\Delta = 35^\circ 53' 14''$  (RT)  
 $D_c = 0^\circ 28' 00''$   
 $R = 12,277.67'$   
 $T = 3975.91'$   
 $L = 7690.13'$   
 $E = 627.72'$   
 $C = 7565.04'$   
 $C.B. = N 77^\circ 34' 12'' E$   
 $e = -0.020$

BENCHMARK DATA	
BM #1	STA. 67+71.02, EL. 797.22, 0.02' LT., CONC. MONUMENT
BM #2	STA. 76+70.85, EL. 799.25, 0.05' RT., CONC. MONUMENT
BM #3	STA. 93+71.58, EL. 798.81, 0.04' RT., CONC. MONUMENT
BM #4	STA. 101+71.41, EL. 796.63, 0.03' RT., CONC. MONUMENT

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET 5 OF 1369.

**NOTES**  
 EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.  
 FOR REFERENCE CHORD DIAGRAM, SEE SHEET 2/78.  
 FOR CONSTRUCTION AND ISLAND EXCAVATION LIMITS, SEE SHEET 3/78.

DESIGN TRAFFIC:  
 2017 ADT = 44,670    2017 ADTT = 13,401  
 2037 ADT = 64,070    2037 ADTT = 19,221  
 DIRECTIONAL DISTRIBUTION = 55%

- LEGEND**
- ⊕ BORING LOCATION
  - ▭ - LIMITS OF ROCK CHANNEL PROTECTION
  - ▨ - ISLAND EXCAVATION (TO EL. 781.0)
  - \* - SEE LEGEND ON SHEET 2/78
- HYDRAULIC DATA**
- DRAINAGE AREA = 495 SQ. MILES  
 $Q(50) = 30800$  CFS     $V(50) = 10.40$  FT/S  
 $Q(100) = 38000$  CFS     $V(100) = 11.97$  FT/S  
 STRUCTURE CLEARS THE 50 YEAR DESIGN HW BY 5.34 FEET.
1. - NORMAL WATER EL. 776.0
  2. - MAX. RECORD H.W. EL. 792.4 (1959 FLOOD EL.)
  3. - FLOW LINE EL. 774.0±
  4. - 50 YR. H.W. EL. 789.09 LEFT BRIDGE, 788.33 RIGHT BRIDGE
  5. - 100 YR. H.W. EL. 790.13 LEFT BRIDGE, 789.04 RIGHT BRIDGE
  6. - O.H.W.M. EL. 780.7

**EXISTING STRUCTURE**

TYPE: CONTINUOUS WELDED STEEL GIRDER WITH CONCRETE DECK AND SUBSTRUCTURE

SPANS: 100'-0"± - 125'-0"± - 100'-0"± C/C BRGS.

ROADWAY: 33'-6"± T/T BARRIER

LOADING: CF-2000 (57) ADEQUATE FOR AASHO ALTERNATE LOADING

SKREW: 0°-00"±

APPROACH SLABS: AS-1-54 (25'-0"±) SPECIAL

ALIGNMENT: 0° - 28"± CURVE RIGHT

CROWN: 0.016 FT/FT NORMAL CROWN

STRUCTURAL FILE NUMBER: 2506785L/2506815R

DATE BUILT: 1964

DISPOSITION: TO BE REPLACED

**PROPOSED STRUCTURE**

TYPE: TWO-SPAN CONTINUOUS A709-50W/HPS 70W STEEL PLATE GIRDER WITH COMPOSITE REINFORCED CONCRETE DECK ON SEMI-INTEGRAL ABUTMENTS AND REINFORCED CONCRETE CAP AND COLUMN PIER.

SPANS: 155'-0" - 155'-0" C/C BRGS. ALONG REF. CHORD

ROADWAY: 64'-0" TOE/TOE PARAPET

LOADING: HL-93, 60 PSF FWS

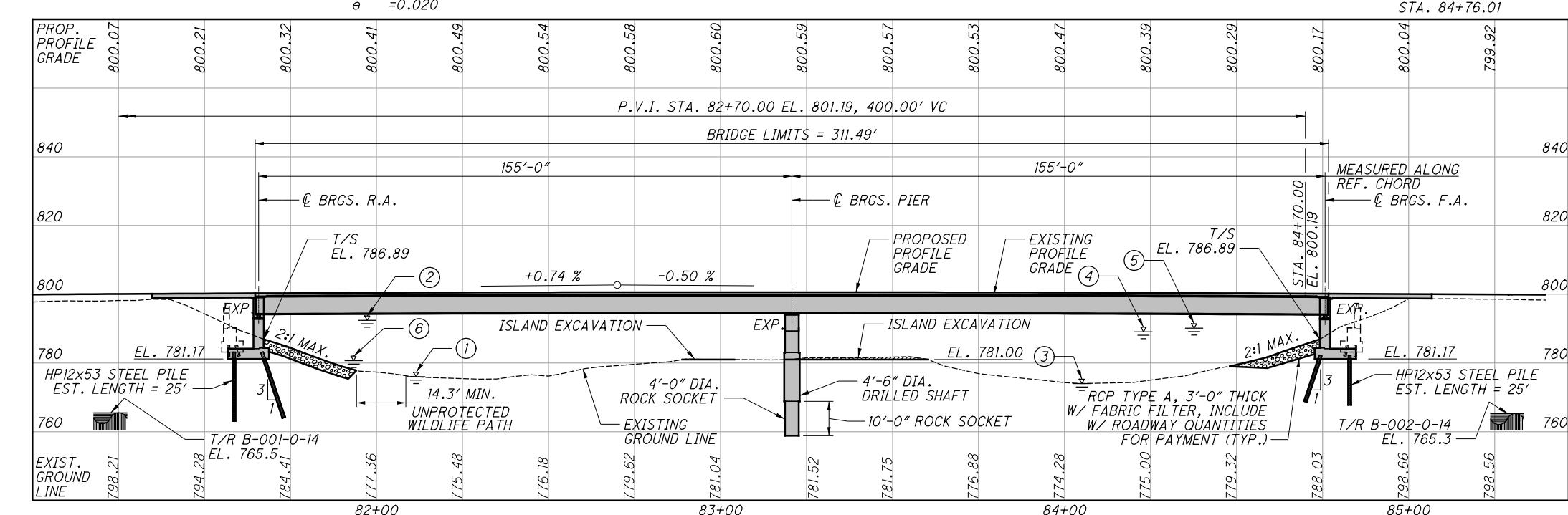
SKREW: 0°-00'

APPROACH SLABS: 30'-0" LONG (AS-1-81)

ALIGNMENT: 0° - 28' CURVE RIGHT

SUPERELEVATION: 0.02 FT/FT

COORDINATES: LATITUDE 39°49'16" N  
 LONGITUDE 83°10'11" W



PROFILE ALONG PROFILE GRADE LINE SB

DESIGN AGENCY: Mead & Hunt  
 4700 LAKEHURST CT., STE 110 DUBLIN, OH 43016  
 (614) 792-5900 PHONE (614) 792-5901 FAX

DATE: 8/1/2016  
 REVIEWED: KVB  
 STRUCTURE FILE NUMBER: 2506786

DRAWN: DJC  
 CHECKED: CMH

DESIGNED: LYH

FRANKLIN COUNTY  
 STA. 81+65.00  
 STA. 84+76.49

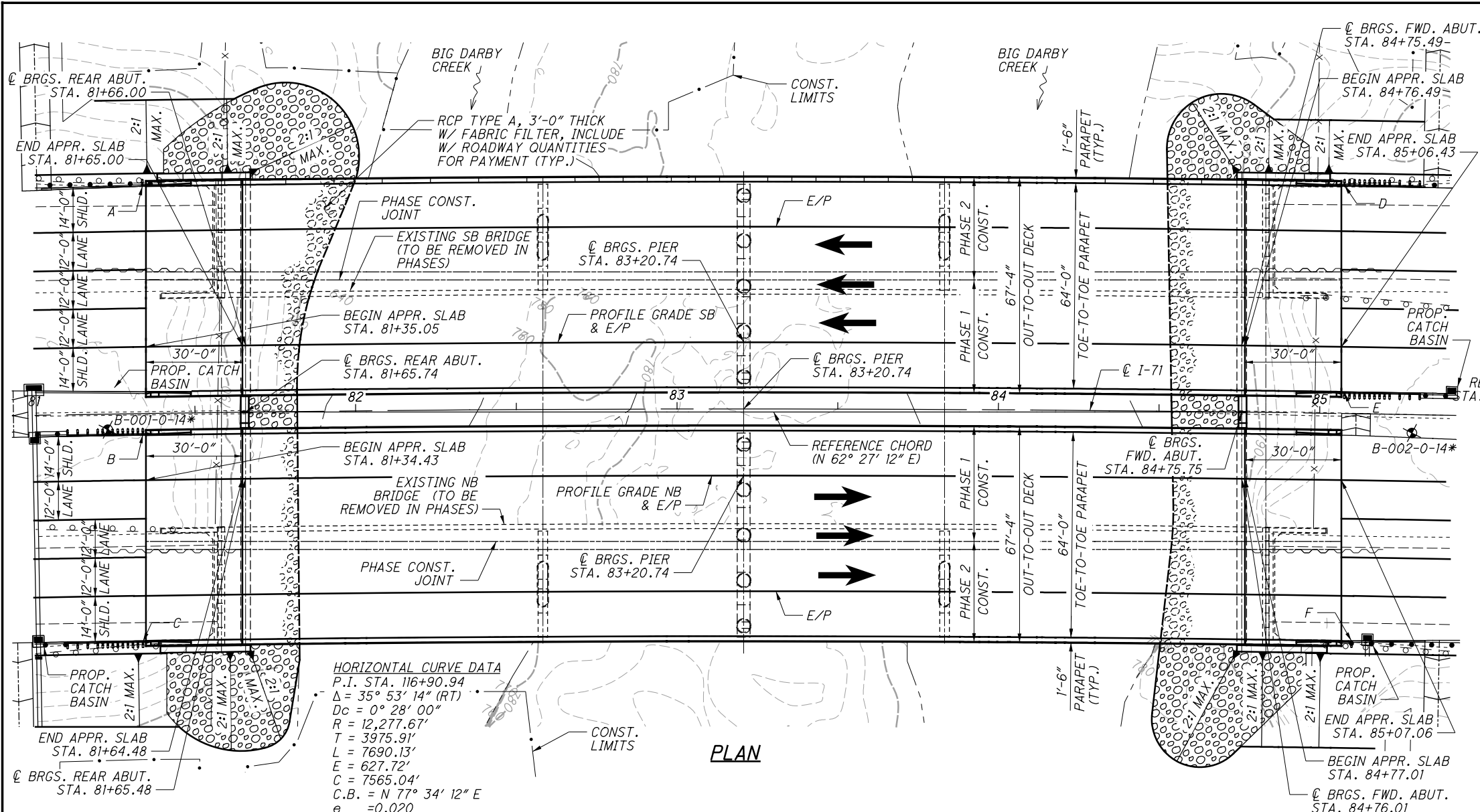
SITE PLAN  
 BRIDGE NO. FRA-71-0153 L/R  
 OVER BIG DARBY CREEK

FRA-71-1.53  
 PID No. 93496

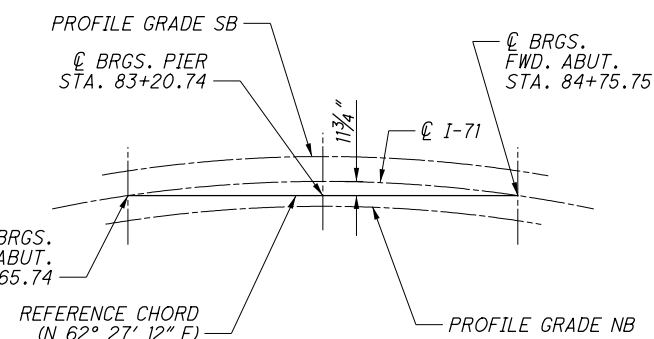
1/78

203  
 285

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**HORIZONTAL CURVE DATA**  
 P.I. STA. 116+90.94  
 $\Delta = 35^\circ 53' 14''$  (RT)  
 $D_c = 0^\circ 28' 00''$   
 $R = 12,277.67'$   
 $T = 3975.91'$   
 $L = 7690.13'$   
 $E = 627.72'$   
 $C = 7565.04'$   
 $C.B. = N 77^\circ 34' 12'' E$   
 $e = -0.020$



**REFERENCE CHORD DIAGRAM**

**BRGS. GUARDRAIL POST STATIONING**

- A: 81+34.68      D: 85+06.64
- B: 81+33.68      E: 85+07.60
- C: 81+32.70      F: 85+10.97

**NOTE:**

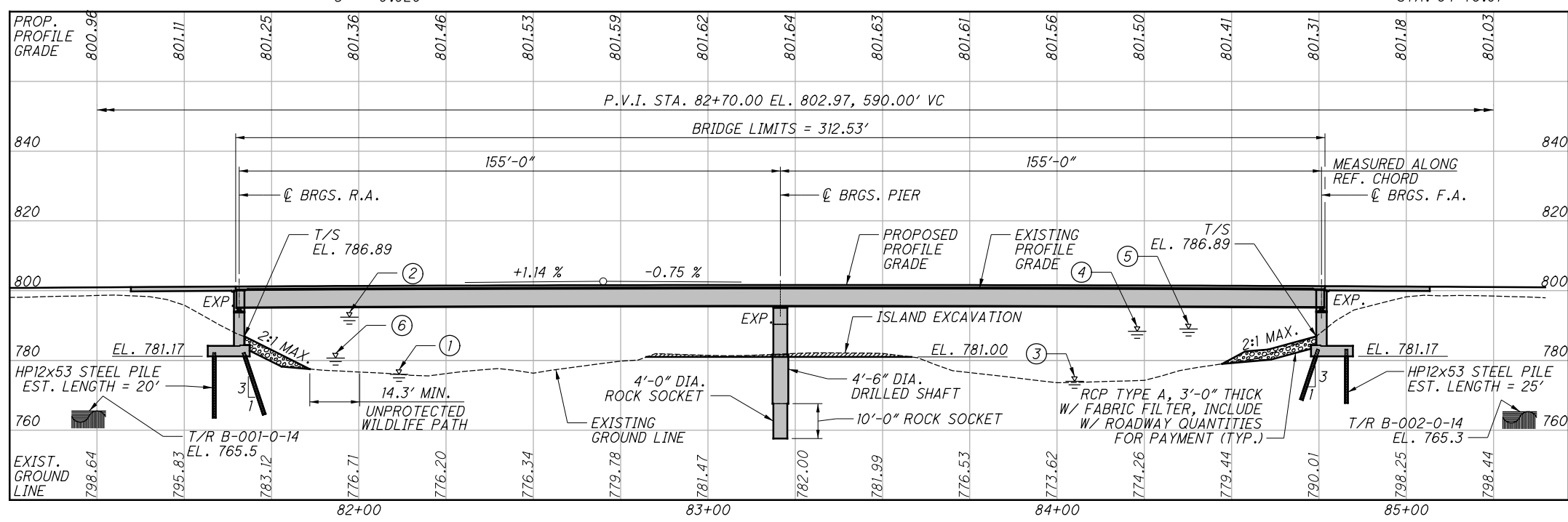
FOR EXISTING, PROPOSED STRUCTURE BLOCK, & HYDRAULIC DATA SEE SHEET 1/78.

FOR THIS PROJECT, PERMITS FOR SECTIONS 401 AND 404 OF THE CLEAN WATER ACT, ARE BASED ON THE LIMITS OF TEMPORARY CONSTRUCTION FILL PLACED IN "WATERS OF THE UNITED STATES" AS SHOWN BELOW. IF EITHER OF THE LIMITS PROVIDED ARE EXCEEDED, THEN A 404/401 PERMIT MODIFICATION WILL BE REQUIRED. IF A PERMIT MODIFICATION IS REQUIRED, REFER TO SUPPLEMENTAL SPECIFICATION 832.09 FOR THE APPLICATION REQUIREMENTS.

PLAN AREA OF TEMPORARY FILL MATERIAL = 0.65 ACRES  
 TOTAL VOLUME OF TEMPORARY FILL MATERIAL = 5726.4 CY

**LEGEND**

\* - BORINGS B-001-0-14 & B-002-0-14 CORRESPOND TO BORINGS B-021-1-14 & B-021-2-14, RESPECTIVELY IN THE SOIL PROFILE AND BORING LOG SHEETS



**PROFILE ALONG PROFILE GRADE LINE NB**

DESIGN AGENCY	Mead & Hunt		
DATE	8/1/2016	DESIGNED	LYH
REVIEWED	KVB	CHECKED	CMH
DRAWN	DJC	STRUCTURE FILE NUMBER	2506816
FRANKLIN COUNTY	STA. 81+64.48 STA. 84+77.01		
SITE PLAN	BRIDGE NO. FRA-71-0153 L/R OVER BIG DARBY CREEK		
FRA-71-1.53	PID No. 93496		
2 / 78	(204 / 285)		

**STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS**

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

AS-1-15	DATED	07-17-15
AS-2-15	DATED	07-17-15
GSD-1-96	REVISED	07-19-02
PCB-91	REVISED	01-18-13
SBR-1-13	REVISED	01-17-14
SICD-1-96	REVISED	07-18-14
SICD-2-14	DATED	07-18-14

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):

800	REVISED	7-15-16
-----	---------	---------

**DESIGN SPECIFICATIONS:**

THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 7TH EDITION, 2014, INCLUDING THE 2015 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

**DESIGN LOADING**

DESIGN LOADING: HL-93  
FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/SQ. FT.

**DESIGN DATA**

CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)  
CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)  
CONCRETE CLASS QC5 - COMPRESSIVE STRENGTH 4.5 KSI (DRILLED SHAFTS)  
REINFORCING STEEL - ASTM A615 OR A996 GRADE 60, MIN. YIELD STRENGTH 60 KSI  
STRUCTURAL STEEL - ASTM A709 GRADE 50W - YIELD STRENGTH 50 KSI  
ASTM A709 GRADE HPS70W - YIELD STRENGTH 70 KSI  
STEEL H-PILES - ASTM A572 GRADE 50 - YIELD STRENGTH 50 KSI

**OPERATIONAL IMPORTANCE**

A LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

**DECK PROTECTION METHOD**

EPOXY COATED REINFORCING STEEL  
2 1/2" CONCRETE COVER

**MONOLITHIC WEARING SURFACE**

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

**ITEM 203 EMBANKMENT, AS PER PLAN**

PLACE AND COMPACT EMBANKMENT MATERIAL IN 6 INCH LIFTS FOR THE CONSTRUCTION OF THE APPROACH EMBANKMENT.

**MAINTENANCE OF TRAFFIC**

I-71 TRAFFIC WILL BE MAINTAINED AT ALL TIMES. SEE PHASE CONSTRUCTION DETAILS AND ROADWAY PLANS FOR ADDITIONAL MAINTENANCE OF TRAFFIC NOTES AND DETAILS.

**PILES TO BEDROCK**

DRIVE PILES TO REFUSAL ON BEDROCK. THE DEPARTMENT WILL CONSIDER REFUSAL TO BE OBTAINED WHEN THE PILE PENETRATION IS AN INCH OR LESS AFTER RECEIVING AT LEAST 20 BLOWS FROM THE PILE HAMMER. SELECT THE HAMMER SIZE TO ACHIEVE THE REQUIRED DEPTH TO BEDROCK AND REFUSAL.

THE TOTAL FACTORED LOAD IS 354 KIPS PER PILE FOR THE ABUTMENT PILES.

SOUTHBOUND ABUTMENT PILES:

HP12x53 PILES 30 FEET LONG, ORDER LENGTH (MIN. TIP ELEVATION IS 768.17)

NORTHBOUND REAR ABUTMENT PILES:

HP12x53 PILES 25 FEET LONG, ORDER LENGTH (MIN. TIP ELEVATION IS 768.17)

NORTHBOUND FORWARD ABUTMENT PILES:

HP12x53 PILES 30 FEET LONG, ORDER LENGTH (MIN. TIP ELEVATION IS 768.17)

**PILE SPLICES**

IN LIEU OF USING THE FULL PENETRATION BUTT WELDS SPECIFIED IN CMS 507.09 TO SPLICE STEEL H-PILES, THE CONTRACTOR MAY USE A MANUFACTURED H-PILE SPLICER. FURNISH SPLICERS FROM THE FOLLOWING MANUFACTURER:

ASSOCIATED PILE AND FITTING CORPORATION  
8 WOOD HOLLOW RD. PLAZA 1  
PARSIPPANY, NEW JERSEY 07054

INSTALL AND WELD THE SPLICER TO THE PILE SECTIONS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN ASSEMBLY PROCEDURE SUPPLIED TO THE ENGINEER BEFORE THE WELDING IS PERFORMED.

**DRILLED SHAFTS**

THE MAXIMUM FACTORED LOAD TO BE SUPPORTED BY EACH DRILLED SHAFT IS 1,418 KIPS AT THE PIERS. THIS LOAD IS RESISTED BY SIDE RESISTANCE WITHIN A PORTION OF THE BEDROCK SOCKET AND ALSO BY TIP RESISTANCE. THE FACTORED RESISTANCE DEVELOPED BY SIDE RESISTANCE IS 334 KIPS, ASSUMED TO ACT ALONG THE BOTTOM 8 FEET OF THE BEDROCK SOCKET FOR THE PIERS. THE FACTORED RESISTANCE PROVIDED BY THE DRILLED SHAFT TIP IS 13,001 KIPS.

**UTILITY LINES**

THERE ARE NO KNOWN UNDERGROUND OR OVERHEAD UTILITIES WITHIN THE BRIDGE CONSTRUCTION LIMITS.

**ITEM 503. COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN:**

THE DESIGN SHOWN ON THE PLANS FOR THE TEMPORARY SUPPORT OF EXCAVATION IS ONE REPRESENTATIVE DESIGN THAT MAY BE USED TO CONSTRUCT THE PROJECT. THE CONTRACTOR MAY CONSTRUCT THE DESIGN SHOWN ON THE PLANS OR PREPARE AN ALTERNATE DESIGN TO SUPPORT THE SIDES OF EXCAVATION. IF CONSTRUCTING AN ALTERNATE PLAN DESIGN FOR TEMPORARY SUPPORT OF EXCAVATION, PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH C&MS 501.05. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT OF EXCAVATION AT THE CONTRACT LUMP SUM PRICE FOR COFFERDAMS AND EXCAVATION BRACING. NO ADDITIONAL PAYMENT WILL BE MADE FOR PROVIDING AN ALTERNATE DESIGN.

**EXISTING STRUCTURE VERIFICATION**

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

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

**PROTECTION OF TRAFFIC**

PRIOR TO DEMOLITION OF ANY PORTIONS OF THE EXISTING SUPERSTRUCTURE, SUBMIT PLANS FOR THE PROTECTION OF TRAFFIC (VEHICULAR, PEDESTRIAN, BOAT, ETC.) ADJACENT TO AND/OR UNDER THE STRUCTURE TO THE DIRECTOR IN ACCORDANCE WITH CMS SECTION 500. THESE PLANS SHALL INCLUDE PROVISIONS FOR ANY DEVICES AND STRUCTURES THAT MAY BE NECESSARY TO ENSURE SUCH PROTECTION. MAINTAIN THE TEMPORARY VERTICAL CLEARANCES SPECIFIED ON THE PLANS OR IN THE PROPOSAL AT ALL TIME EXCEPT AS OTHERWISE APPROVED BY THE DIRECTOR.

**DECK PLACEMENT ASSUMPTIONS**

THE FOLLOWING ASSUMPTIONS OF CONSTRUCTION MEANS AND METHODS WERE MADE FOR THE ANALYSIS AND DESIGN OF THE SUPERSTRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FALSEWORK SUPPORT SYSTEM WITHIN THESE PARAMETERS AND WILL ASSUME RESPONSIBILITY FOR SUPERSTRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.6 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65".

**ITEM 202. STRUCTURE REMOVED, OVER 20' SPAN, AS PER PLAN**

WHEN NO LONGER NEEDED TO MAINTAIN TRAFFIC, THE EXISTING STRUCTURE SHALL BE REMOVED IN PHASES UPON APPROVAL FROM THE ENGINEER. SEE PHASE CONSTRUCTION DETAILS ON SHEETS 7/78 THRU 15/78.

**ITEM 509. EPOXY COATED REINFORCING STEEL, AS PER PLAN**

IN ADDITION TO THE PROVISIONS OF ITEM 509, FIELD BEND AND/OR FIELD CUT THE REINFORCING STEEL DESIGNATED IN THE PLANS, AS NECESSARY, IN ORDER TO MAINTAIN THE REQUIRED CLEARANCES AND BAR SPACING'S. REPAIR ALL DAMAGE TO THE EPOXY COATING, AS A RESULT OF THIS WORK, ACCORDING TO 709.00.

**MECHANICAL CONNECTORS:**

AN APPROVED TYPE OF MECHANICAL CONNECTOR FOR REINFORCING BARS SHALL BE PROVIDED. INSTALLATION OF CONNECTORS SHALL CONFORM WITH THE MANUFACTURER'S RECOMMENDED PROCEDURES. MECHANICAL CONNECTORS SHALL BE CAPABLE OF DEVELOPING 125 PERCENT OF THE YIELD STRENGTH OF THE BARS CONNECTED AND SHALL BE EPOXY COATED. COATING FOR BOTH CONNECTORS AND REINFORCING BARS SHALL CONFORM TO THE SAME SPECIFICATIONS. COATINGS WHICH HAVE BEEN DAMAGED OR WHICH OTHERWISE DO NOT MEET SPECIFICATION WITH RESPECT TO COLOR, CONTINUITY AND UNIFORMITY MAY BE REPAIRED AS DIRECTED BY THE ENGINEER OR THEY SHALL BE REPLACED WITH MATERIAL WHICH MEETS THE SPECIFICATIONS. ALL EXPENSES INVOLVED IN REPAIR OR REPLACEMENT SHALL BE BORNE BY THE CONTRACTOR. THE CONNECTORS SHALL CONFORM AND BE INCLUDED WITH ITEM 509 FOR PAYMENT.

**ITEM 513. STRUCTURAL STEEL MEMBERS, HYBRID GIRDER, LEVEL SIX FABRICATION, AS PER PLAN**

**1. DESCRIPTION:**

1.01 THIS WORK CONSIST OF FURNISHING ALL NECESSARY LABOR, MATERIALS AND EQUIPMENT TO FURNISH AND ERECT STRUCTURAL STEEL MEMBERS, DESIGNED AS A HYBRID/MIX OF STEEL MATERIALS CONSISTING OF: ASTM A709, HIGH PERFORMANCE GRADE HPS70W IN COMBINATION WITH GRADE 50W STEEL.

1.02 THIS WORK SHALL BE PERFORMED PER ITEM 513 STRUCTURAL STEEL MEMBER, LEVEL SIX(6) EXCEPT AS MODIFIED BY THE JUNE, 2003 2ND EDITION OF THE "GUIDE FOR HIGHWAY BRIDGE FABRICATION WITH HPS70W STEEL (HPS485W), A SUPPLEMENT TO ANSI/AASHTO AWS D1.5" AND AS MODIFIED BY THESE PLAN NOTES.

**2. MATERIALS:**

2.01 STEEL FOR GIRDER WEBS AND FLANGES SHALL BE A COMBINATION OF ASTM A709 GRADE HPS70W MANUFACTURED BY THE THERMO- ECHANICAL CONTROLLED PROCESSING (TMCP) OR QUENCHED AND TEMPERED HEAT TREATMENT PROCESSING ALONG WITH ASTM A588/709 GRADE 50W. ALL OTHER STEEL SHALL BE ASTM A709 GRADE 50W.

2.02 STEEL DESIGNATED CVN SHALL BE IMPACT TESTED TO EXCEED THE TEST VALUES OF ASTM A709 TABLE S1.2 "NON-FRACTURE CRITICAL IMPACT TEST REQUIREMENTS" FOR ZONE 2, TEMPERATURE RANGE.

**3. ADDITIONAL FABRICATION RESTRICTIONS / WARNINGS:**

3.01 APPLICATION OF HEAT FOR CURVING AND STRAIGHTENING APPLICATIONS, CAMBER AND SWEEP ADJUSTMENT, OR OTHER REASON HEATING IS LIMITED TO 1100°F MAXIMUM, AND MUST BE DONE BY PROCEDURES APPROVED BY THE DIRECTOR OR HIS AUTHORIZED REPRESENTATIVE.

3.02 THE MATCHING SUBMERGED ARC WELDING CONSUMABLES ESAB ENI4 ELECTRODE IN COMBINATION WITH LINCOLN MIL800H, RECOMMENDED IN APPENDIX A OF THE AASHTO GUIDE FOR HIGHWAY BRIDGE FABRICATION WITH HPS70W STEEL, HAS PRODUCED WELDMENT CONTAINING UNACCEPTABLE DISCONTINUITIES IN A SUBSTANTIAL NUMBER OF COMPLETE PENETRATION GROOVE WELDS IN ONE STRUCTURE, BASED ON THE PARAMETERS USED AND EXPERIENCE OF ONE FABRICATOR. EXTREME CAUTION SHOULD BE EXERCISED WHEN USING THIS ELECTRODE/FLUX COMBINATION.

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DESIGN AGENCY	4700 LAKEHURST CT, STE 110 DUBLIN, OH 43016 (614) 792-5900 PHONE (614) 792-5901 FAX	
	<b>Mead &amp; Hunt</b>	
DATE	8/1/2016	
REVIEWED	KVB	STRUCTURE FILE NUMBER 2506786L/2506816R
DRAWN	CMH	REVISED
DESIGNED	CMH	CHECKED
		ALM
GENERAL NOTES		
BRIDGE NO. FRA-71-0153 L/R OVER BIG DARBY CREEK		
FRA-71-0.00 PID No. 93496		
4/78		
206 285		

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**ESTIMATED QUANTITIES**

ITEM	EXTENSION	SOUTHBOUND	NORTHBOUND	UNIT	DESCRIPTION	SOUTHBOUND				NORTHBOUND				SHEET #
						ABUT.	PIER	SUPER.	GEN.	ABUT.	PIER	SUPER.	GEN.	
202	11003	LUMP	LUMP	LS	STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LUMP				LUMP	4, 15
202	22900	187	187	SY	APPROACH SLAB REMOVED				187				187	
202	23500	1,227	1,227	SY	WEARING COURSE REMOVED			1,227			1,227			
503	11101	LUMP	LUMP	LS	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	LUMP	LUMP			LUMP	LUMP			4, 16-18
503	21300	LUMP	LUMP	LS	UNCLASSIFIED EXCAVATION	LUMP	LUMP		LUMP	LUMP			LUMP	
505	11100	LUMP	LUMP	LS	PILE DRIVING EQUIPMENT MOBILIZATION	LUMP	LUMP			LUMP	LUMP			
507	00200	1,920	1,760	FT	STEEL PILES HP12X53, FURNISHED	1,920				1,760				
507	00250	1,600	1,440	FT	STEEL PILES HP12X53, DRIVEN	1,600				1,440				
507	93300	64	64	EACH	STEEL POINTS OR SHOES	64				64				
509	10001	288,328	289,137	LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN	49,437	26,274	212,617		50,301	26,407	212,429		4
511	21522	849	849	CY	CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE			849				849		
511	33500	2	2	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE	2				2				
511	41010	64	64	CY	CLASS QC1 CONCRETE, PIER ABOVE FOOTINGS		64				64			
511	44112	212	214	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING	212				214				
511	46512	276	273	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	276				273				
512	10100	1,228	1,269	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	307	155	766		345	158	766		
512	33000	11	11	SY	TYPE 2 WATERPROOFING	11				11				
513	10401	794,144	794,144	LB	STRUCTURAL STEEL MEMBERS, HYBRID GIRDER, LEVEL SIX (6) FABRICATION, AS PER PLAN			794,144				794,144		4, 5
513	20000	7,665	7,665	EACH	WELDED STUD SHEAR CONNECTORS			7,665				7,665		
516	13600	18	18	SF	1" PREFORMED EXPANSION JOINT FILLER	18				18				
516	13900	366	366	SF	2" PREFORMED EXPANSION JOINT FILLER	366				366				
516	14020	162	162	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL					162				
516	44300	7	7	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (22" x 27" x 4.91" WITH 23" x 28" x 2.5" LOAD PLATE)		7				7			
516	44301	14	14	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (14" x 20" x 4.35" WITH 15" x 21" x 2.0" LOAD PLATE), AS PER PLAN	14				14				45
518	21200	193	193	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	193				193				
518	40000	181	181	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	181				181				
518	40011	20	20	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN	20				20				41
524	94904	50	50	FT	DRILLED SHAFTS, 48" DIAMETER, INTO BEDROCK		50				50			
524	94906	70	70	FT	DRILLED SHAFTS, 54" DIAMETER, ABOVE BEDROCK		70				70			
526	30011	449	449	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17"), AS PER PLAN				449			449		70-74
526	90030	135	135	FT	TYPE C INSTALLATION				135			135		
SPECIAL	530E00400	5	5	EACH	SPECIAL - STRUCTURES: PILOT EXPLORATION HOLES		5				5			5
SPECIAL	530E13000	2,172	2,172	SF	SPECIAL - FORMLINER			2,172				2,172		5
* 601	32000	587	564	CY	ROCK CHANNEL PROTECTION, TYPE A WITH FILTER	585				566				

\* - FOR INFORMATION ONLY. PAID FOR UNDER ROADWAY QUANTITIES.

**ABBREVIATIONS:**

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

- |  |  |                         |   |  |                             |
|--|--|-------------------------|---|--|-----------------------------|
| ABUT. - ABUTMENT                                 | CIP - CAST-IN-PLACE                            | EL. - ELEVATION         | JT. - JOINT                                       | P.C.P.P - PERFORATED CORRUGATED PLASTIC PIPE | TAF - TEMPORARY ACCESS FILL |
| ADT - AVERAGE DAILY TRAFFIC                      | C.J. - CONSTRUCTION JOINT                      | EQ. - EQUAL             | LT. - LEFT  | P.E.J.F. - PREFORMED EXPANSION JOINT FILLER  | TEMP. - TEMPORARY           |
| ADTT - AVERAGE DAILY TRUCK TRAFFIC               | CLR. - CLEARANCE                               | EX. - EXISTING          | MAX. - MAXIMUM                                    | R.A. - REAR ABUTMENT                         | T/R - TOP OF ROCK           |
| APPROX. - APPROXIMATE                            | CMS - CONSTRUCTION AND MATERIAL SPECIFICATIONS | F.A. - FORWARD ABUTMENT | MIN. - MINIMUM                                    | RT. - RIGHT                                  | T/S - TOP OF SLOPE          |
| ASTM - AMERICAN SOCIETY OF TESTING AND MATERIALS | CONST. - CONSTRUCTION                          | F.F. - FRONT FACE       | MOT - MAINTENANCE OF TRAFFIC                      | U.N.O. - UNLESS NOTED OTHERWISE              | T/T - TOE TO TOE            |
| B.F. - BACK FACE                                 | DIA./φ - DIAMETER                              | F/F - FACE TO FACE      | NB - NORTHBOUND                                   | SB - SOUTHBOUND                              | TYP. - TYPICAL              |
| BOT. - BOTTOM                                    | DWG. - DRAWING                                 | FTG. - FOOTING          | N.C.P.P. - NON-PERFORATED CORRUGATED PLASTIC PIPE | SPA. - SPACES OR SPACING                     |                             |
| BRGS. - BEARINGS                                 | E.F. - EACH FACE                               | FT/FT - FOOT PER FOOT   | O/O - OUT TO OUT                                  | STD. - STANDARD                              |                             |
| ☒ - CENTERLINE                                   | E/P - EDGE OF PAVEMENT                         | FWD. - FORWARD          |   | STR. - STRAIGHT                              |                             |
| C/C - CENTER TO CENTER                           | E/S - EDGE OF SHOULDER                         | I - INTERSTATE ROUTE    |   |  |                             |

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DATE: 8/1/2016  
 REVIEWED: KVB  
 DRAWN: CMH  
 DESIGNED: CMH  
 CHECKED: ALM

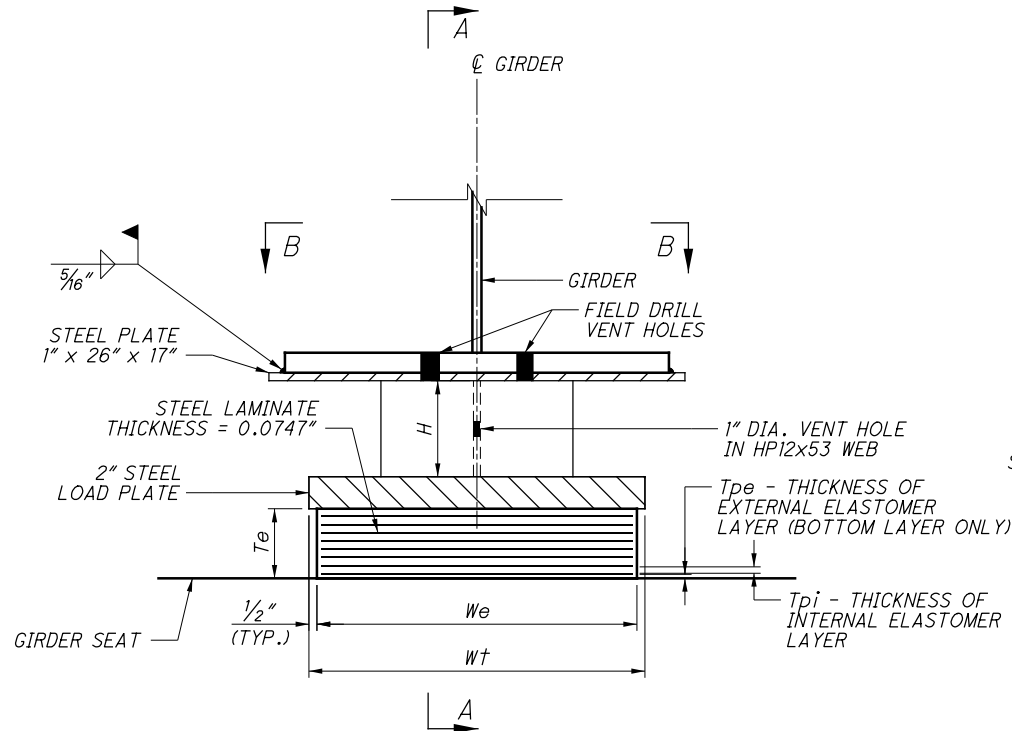
STRUCTURE FILE NUMBER: 2506786L/2506816R

**ESTIMATED QUANTITIES**  
 BRIDGE NO. FRA-71-0153 L/R  
 OVER BIG DARBY CREEK

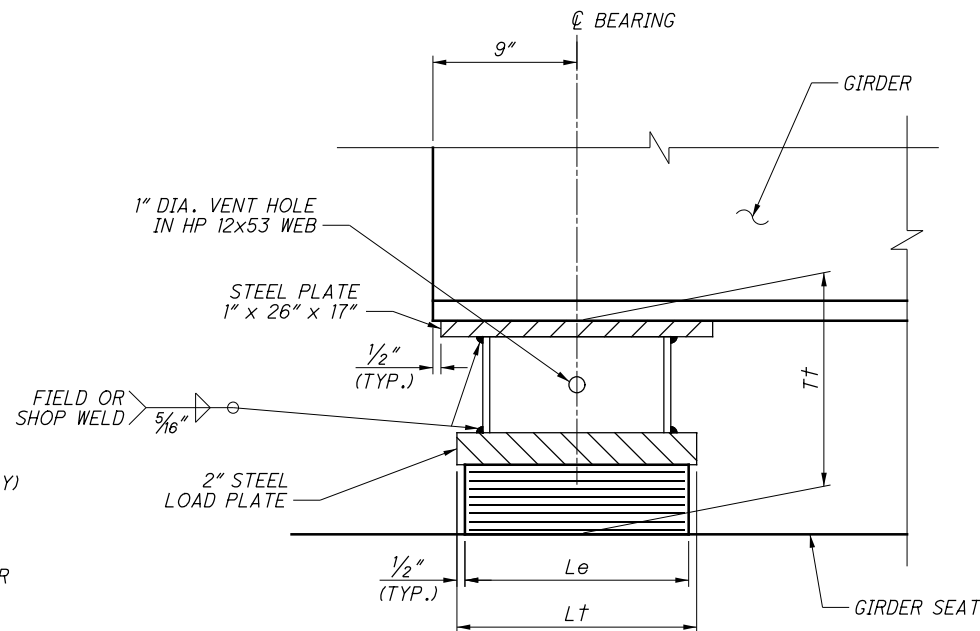
**FRA-71-1.53**  
 PID No. 93496

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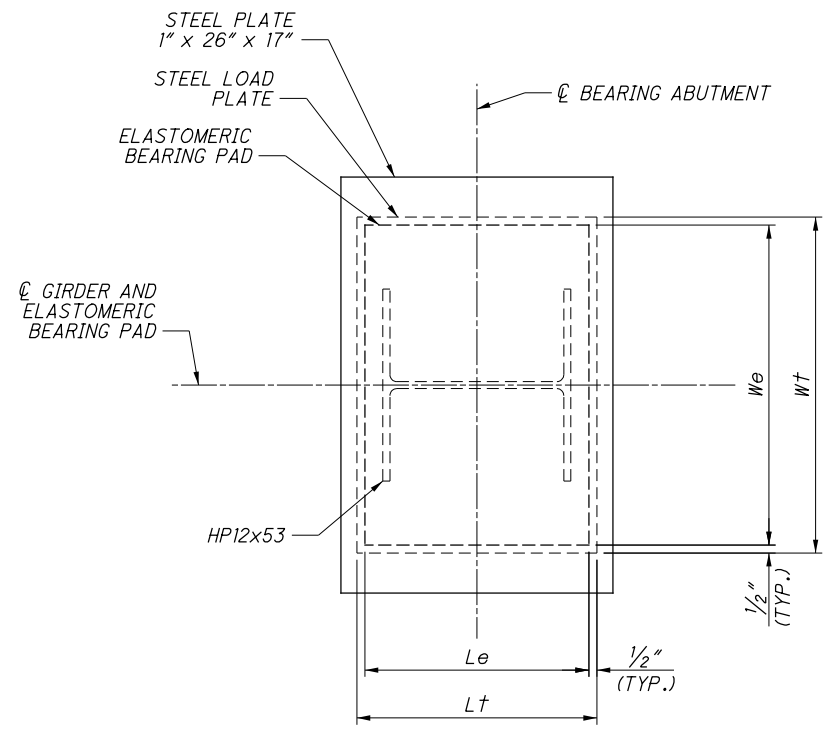
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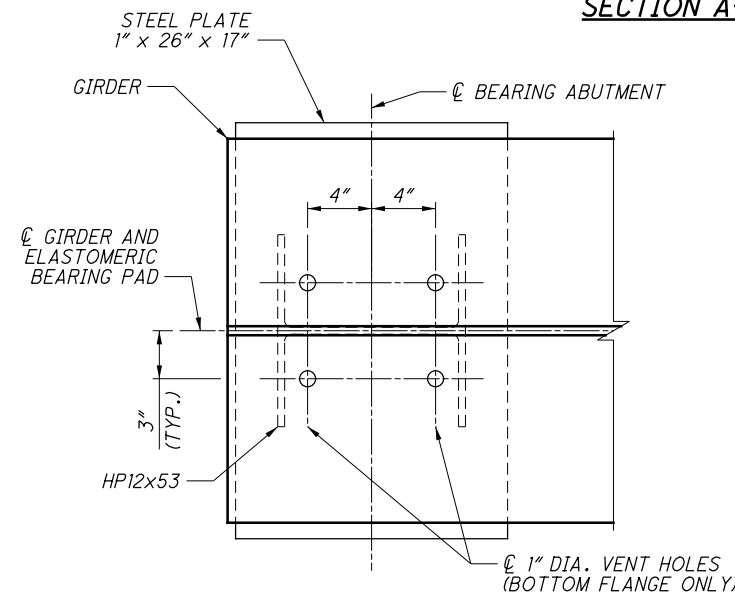
**Elastomeric Bearing**



**SECTION A-A**



**PLAN**



**SECTION B-B**

	GIRDER NO.	H	Tt
SOUTHBOUND REAR ABUTMENT	1	4"	11 3/8"
	2	8 7/8"	16 1/4"
	3	8 5/16"	15 11/16"
	4	5 7/8"	13 1/4"
	5	8 7/8"	16 3/16"
	6	6 7/16"	13 13/16"
	7	4"	11 3/8"
SOUTHBOUND FORWARD ABUTMENT	1	4"	11 3/8"
	2	8 13/16"	16 1/8"
	3	8 1/4"	15 9/16"
	4	5 13/16"	13 1/8"
	5	8 7/8"	16 1/4"
	6	6 7/16"	13 13/16"
	7	4"	11 3/8"

	GIRDER NO.	H	Tt
NORTHBOUND REAR ABUTMENT	8	4"	11 3/8"
	9	8 7/8"	16 3/16"
	10	8 5/16"	15 11/16"
	11	5 13/16"	13 3/16"
	12	8 7/8"	16 3/16"
	13	6 3/8"	13 3/4"
	14	4"	11 3/8"
NORTHBOUND FORWARD ABUTMENT	8	4"	11 3/8"
	9	8 13/16"	16 3/16"
	10	8 5/16"	15 11/16"
	11	5 7/8"	13 3/16"
	12	8 13/16"	16 3/16"
	13	6 3/8"	13 3/4"
	14	4"	11 3/8"

ELASTOMERIC BEARINGS															
BEARING LOCATION	TYPE	NO. REQ'D	DEAD LOAD KIPS	LIVE LOAD KIPS	TOTAL LOAD (DL+LL) KIPS	$L_e$	$W_e$	$T_{pi}$	NO. OF $T_{pi}$ 'S	$T_{pe}$ (1'EA)	N	$T_e$	STEEL LOAD PLATE		REMARK
													$L_t$	$W_t$	
REAR ABUTMENTS (SB & NB)	EXP	14	169	105	274	14"	20"	0.4375"	8	0.25"	8	4.348"	15"	21"	H & Tt VARIES
FORWARD ABUTMENTS (SB & NB)	EXP	14	169	105	274	14"	20"	0.4375"	8	0.25"	8	4.348"	15"	21"	H & Tt VARIES

$T_{pi}$  = THICKNESS OF INTERNAL ELASTOMER LAYER  
 $T_{pe}$  = THICKNESS OF EXTERNAL ELASTOMER LAYER  
 $T_e$  = TOTAL THICKNESS OF ELASTOMERIC BEARING  
 $T_t$  = TOTAL THICKNESS OF BEARING ASSEMBLY  
 N = NO. OF STEEL LAMINATES  
 STEEL LAMINATE THICKNESS = 0.0747"  
 DUROMETER OF ELASTOMER = 50 DUROMETER

**NOTES:**

- ELASTOMERIC BEARINGS: THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED IN ACCORDANCE WITH SECTION 14.7.6 (METHOD A) OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. THE LONG TERM COMPRESSION PROOF LOAD TEST (AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DIVISION II, SECTION 18.7.2.6) IS NOT REQUIRED.
- LOAD PLATES & HP12X53 BEARINGS PEDESTALS: THE STEEL LOAD PLATE SHALL MEET THE GRADE 50 REQUIREMENTS OF STRUCTURAL STEEL ASTM A709 AND SHALL BE GALVANIZED PER CMS 711.02.
- THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.
- ALL BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE THE BEARING LOCATION ON THE BRIDGE, AND A DIRECTION ARROW THAT POINTS UP-STATION. ALL MARKS SHALL BE PERMANENT AND BE VISIBLE AFTER THE BEARING IS INSTALLED.
- TOTAL DESIGN LOAD FOR BEARINGS EQUALS THE SUM OF THE DEAD LOADS AND LIVE LOADS TABULATED IN THE BEARING TABLE. IMPACT IS NOT INCLUDED. LOADS ARE UNFACTORED.
- BASIS OF PAYMENT: THE UNIT BID PRICE SHALL INCLUDE THE LOAD PLATE, HP12X53 PEDESTAL, STEEL PLATE, AND ALL MATERIALS, LABOR, TESTING AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS. FOR THE ABUTMENTS, PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, EACH, ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN.
- FOR ADDITIONAL INFORMATION, SEE ODOT STANDARD DRAWING, SICD-1-96.
- ALL BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE THE BEARING LOCATION ON THE BRIDGE, AND A DIRECTION ARROW THAT POINTS UP-STATION. ALL MARKS SHALL BE PERMANENT AND BE VISIBLE AFTER THE BEARING IS INSTALLED.

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DRAWN: DUC  
 CHECKED: KVB  
 DESIGNED: RLC  
 REVISIONS:

**ABUTMENT BEARING DETAILS**  
 BRIDGE NO. FRA-71-0153 L/R  
 OVER BIG DARBY CREEK

**FRA-71-1.53**  
 PID No. 93496

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 285