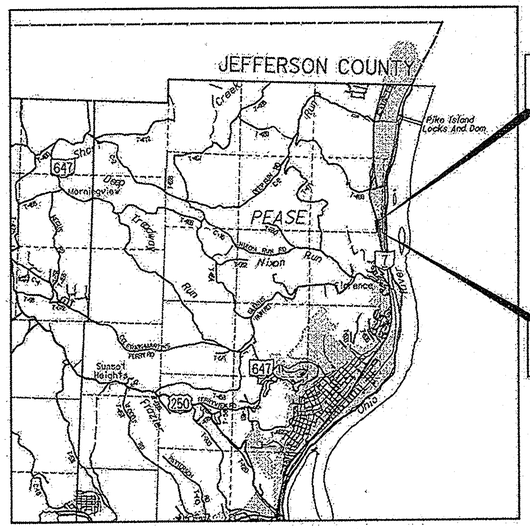


LOCATION MAP

LATITUDE: N 40°07'00" LONGITUDE: W 80°42'35"

SCALE IN MILES

0 1 2 3 4

N

PORTION TO BE IMPROVED

INTERSTATE HIGHWAY

FEDERAL ROUTES

STATE ROUTES

COUNTY & TOWNSHIP ROADS

OTHER ROADS

DESIGN DESIGNATION

CURRENT ADT (2017)	19,000
DESIGN YEAR ADT (2037)	21,000
DESIGN HOURLY VOLUME (2037)	1,890
DIRECTIONAL DISTRIBUTION	53%
TRUCKS (24 HOUR B&C)	8%
T	6%
DESIGN SPEED	55 MPH
LEGAL SPEED	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION: URBAN PRINCIPAL ARTERIAL	
NHS PROJECT	YES

DESIGN EXCEPTIONS	APPROVAL DATE	SHEET NO.
BRIDGE WIDTH AND SHOULDER WIDTH	3/10/15	2

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES
CALL TWO WORKING DAYS
BEFORE YOU DIG

CALL
1-800-362-2764
(TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

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

PLAN PREPARED BY:

W. E. QUICKSALL AND ASSOCIATES, INC.
CIVIL ENGINEERS
554 WEST HIGH AVE.
NEW PHILADELPHIA, OHIO

ENGINEER'S SEAL:

ENTIRE PLAN EXCEPT STRUCTURE SHEETS

STATE OF OHIO
NATHAN W. QUICKSALL
E-75213
REGISTERED PROFESSIONAL ENGINEER

SIGNED: N. W. Quicksall
DATE: 12/23/15

ENGINEER'S SEAL:

STRUCTURE SHEETS

STATE OF OHIO
JACOB T WROTEN
E-75691
REGISTERED PROFESSIONAL ENGINEER

SIGNED:
DATE: 12/23/15

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

BEL-7-23.60

PEASE TOWNSHIP

BELMONT COUNTY

INDEX OF SHEETS:

TITLE SHEET	1
TYPICAL SECTIONS	2-3
GENERAL NOTES	4-5
MAINTENANCE OF TRAFFIC	6-38
GENERAL SUMMARY	39-40
PLAN & PROFILE - S.R. 7	41-46
CROSS SECTIONS - S.R. 7	47-50
STORM SEWER PROFILE	51
DRAINAGE PROFILE	52
MISCELLANEOUS DETAILS	53
PRELIMINARY TRAFFIC CONTROL	54-59
STRUCTURES (20' AND OVER): BEL-7-2361	60-82

PROJECT DESCRIPTION

REPLACEMENT OF THE CONCRETE DECK, SIDEWALK, BRIDGE PARAPETS, MEDIAN ISLAND, AND APPROACH SLABS ON STRUCTURE NO. BEL-7-2361 OVER GLENNS RUN. PROPOSED WORK INCLUDES A COMPOSITE REINFORCED CONCRETE DECK, 42" HIGH CONCRETE PARAPETS, FULL-WIDTH APPROACH SLABS, SIDEWALK, MEDIAN ISLAND, AND BACKWALL REPAIRS. NO WORK WILL BE PERFORMED ON THE EXISTING STEEL BEAMS. TOTAL PROJECT LENGTH IS 0.04 MILES.

PROJECT EARTH DISTURBED AREA:	N/A (MAINTENANCE PROJECT)
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	N/A (MAINTENANCE PROJECT)
NOTICE OF INTENT EARTH DISTURBED AREA:	N/A (MAINTENANCE PROJECT)

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.

2013 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 EXCEPT FOR THE COUNTY HIGHWAY ROUTE 4 AND HILL STREET AS DESCRIBED ON SHEET 9 AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED Lloyd V. MacWilliam, P.E., P.S.
DATE 2/22/16 DISTRICT DEPUTY DIRECTOR

APPROVED Terry Wray
DATE 11-23-15 DIRECTOR, DEPARTMENT OF TRANSPORTATION

STANDARD CONSTRUCTION DRAWINGS										SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS
BP-2.1	7/17/15	RM-1.1	7/18/14	DM-1.2	1/18/13	MT-95.30	7/18/14	AS-1-15	7/17/15	800	10/21/16	
BP-2.2	7/18/08	RM-3.1	7/19/13	DM-4.2	7/20/12	MT-95.70	7/19/13			621	4/20/12	
BP-3.1	7/18/14	RM-4.2	4/18/14	DM-4.3	1/15/16	MT-99.30	1/16/15	AS-2-15	7/17/15	832	1/17/14	
BP-5.1	7/19/13	RM-4.3	7/18/14	DM-4.4	1/15/16	MT-100.00	1/15/16	BR-2-98	7/20/12			
		RM-4.4	7/18/14			MT-101.60	7/19/13	EXJ-4-87	7/19/02			
MGS-1.1	7/19/13	RM-4.6	7/19/13	TC-42.20	10/18/13	MT-101.70	1/17/14	GSD-1-96	7/19/02			
MGS-2.1	7/19/13			TC-52.10	10/18/13	MT-101.80	1/16/15	PCB-91	1/18/13			
MGS-3.1	7/18/14	CB-2.1	1/15/16	TC-52.20	7/18/14	MT-101.90	7/17/15	RB-1-55	7/19/13			
MGS-3.2	1/18/13	CB-2.2	1/15/16	TC-65.10	1/17/14	MT-102.20	7/18/14	SBR-1-13	1/17/14			
MGS-4.2	7/19/13			TC-71.10	1/17/14	MT-105.10	7/19/13					
MGS-4.3	1/18/13	I-1.1	1/15/16			MT-110.10	7/19/13					
MGS-5.2	7/19/13											
MGS-6.1	7/19/13	MH-1.1	1/15/16									

FEDERAL PROJECT NO. E131(026)

PID NO. 91546

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT NONE

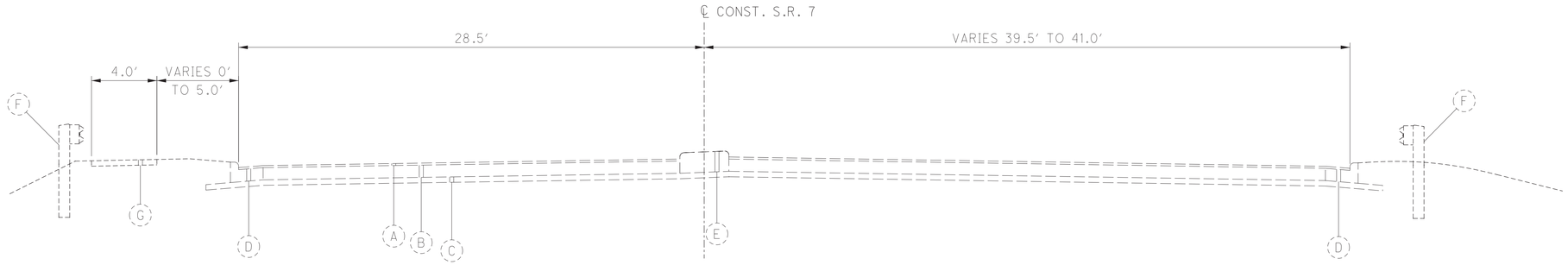
BEL-7-23.60

1 / 82

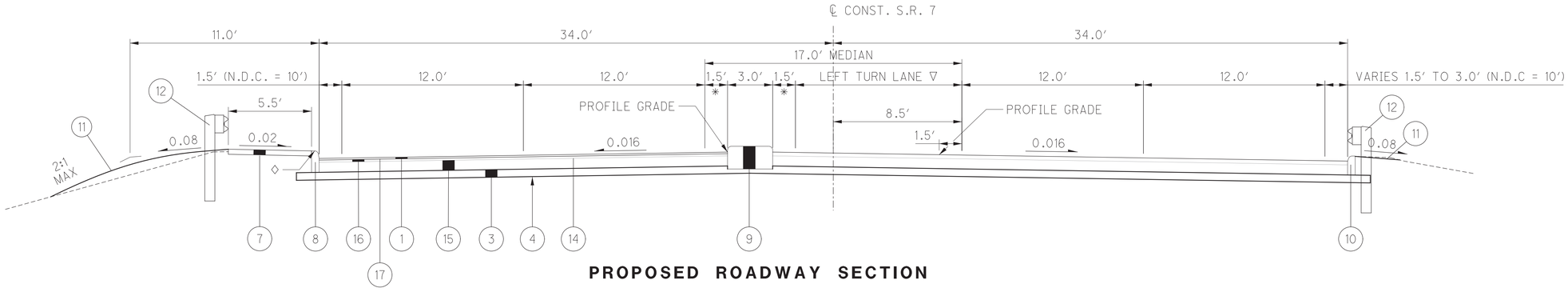
BEL - SR 7-23.61
170009 PID - 91546
Dist 11 1/19/2017

Contract Proposal Available @ www.contracts.dot.state.oh.us/home

O:\2014\1405\BEL\91546\roadway\sheets\91546GT001.dgn 12/23/2015 3:04:19 PM wcs



EXISTING SECTION



PROPOSED ROADWAY SECTION

STA. 1265+71.82 TO STA. 1265+96.82
STA. 1267+13.54 TO STA. 1267+38.54

NOTES

◇ - TRANSITION CURB HEIGHT FROM 6″ AT ROADWAY TO 8″ ON APPROACH SLAB IN 10′. TRANSITION WILL OCCUR ON ROADWAY, NOT APPROACH SLAB

▽ - VARIES 0′ TO 11′:
STA. 1262+89.30 TO STA. 1265+45.47
11′:
STA. 1265+45.47 TO STA. 1268+18.00

✱ - N.D.C. = 4′

PROPOSED LEGEND

1. ITEM 441 - 1 1/4″ ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), AS PER PLAN, PG70-22M
2. ITEM 452 - 9″ NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1, AS PER PLAN
3. ITEM 304 - 6″ AGGREGATE BASE, AS PER PLAN
4. ITEM 204 - SUBGRADE COMPACTION
5. ITEM 526 - REINFORCED CONCRETE APPROACH SLAB (T=17″)
6. ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE B, AS PER PLAN
7. ITEM 608 - 4″ CONCRETE WALK
8. ITEM 609 - CURB, TYPE 6
9. ITEM 609 - CONCRETE MEDIAN, AS PER PLAN
10. ITEM 609 - CURB, TYPE 4-C
11. ITEM 659 - SEEDING AND MULCHING
12. ITEM 606 - GUARDRAIL, TYPE MGS
13. ITEM 252 - FULL DEPTH PAVEMENT SAWING
14. ITEM 407 - TACK COAT (APPLIED AT 0.04 GAL./SY)
15. ITEM 302 - 9″ ASPHALT CONCRETE BASE, PG64-22
16. ITEM 441 - 1 3/4″ ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2 (446)
17. ITEM 407 - TACK COAT FOR INTEREMEDIATE COURSE

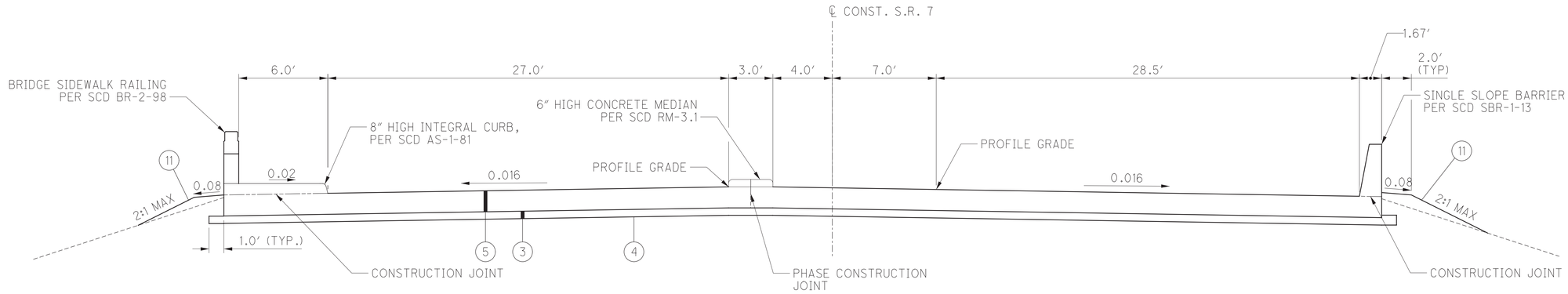
EXISTING LEGEND

- A. 4″± ASPHALT CONCRETE OVERLAY
- B. 9″± REINFORCED CONCRETE
- C. 4″± BITUMINOUS AGGREGATE BASE
- D. CURB AND GUTTER
- E. CONCRETE MEDIAN ISLAND
- F. EX. GUARDRAIL
- G. 4″± CONCRETE WALK
- H. Ex. CONCRETE BARRIER

CALCULATED BEO
CHECKED NWQ

TYPICAL SECTIONS

BEL-7-23.60



PROPOSED APPROACH SLAB

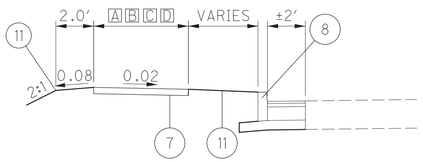
STA. 1265+96.82 TO STA. 1266+26.82 - REAR
STA. 1266+83.54 TO STA. 1267+13.54 - FWD.

NOTES

FOR PROPOSED LEGEND, SEE SHEET NO. 2

FOR EXISTING LEGEND, SEE SHEET NO. 2

□ - TRANSITION CURB HEIGHT FROM 0″ TO 6″ IN THE FIRST 10′.



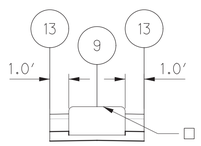
CURB AND SIDEWALK DETAIL

A VARIES 4.0′ TO 5.0′
STA. 1259+50, LT TO STA. 1260+00, LT

B 5.0′
STA. 1260+00, LT TO STA. 1265+16.40, LT

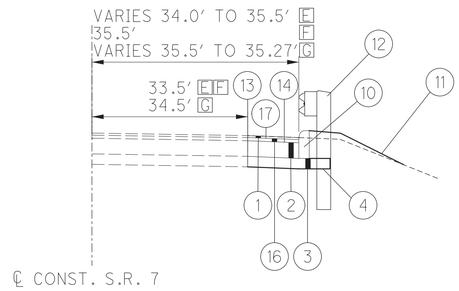
C VARIES 5.0′ TO 5.5′
STA. 1265+16.40, LT TO STA. 1265+66.13, LT

D 5.5′
STA. 1265+66.13, LT TO STA. 1266+23.94, LT
STA. 1267+40.66, LT TO STA. 1268+10.30, LT



MEDIAN ISLAND REPLACEMENT DETAIL

STA. 1263+01.28 TO STA. 1268+14.19

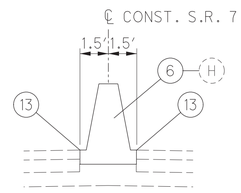


PROPOSED SHOULDER DETAIL

E STA. 1264+69.51, RT TO STA. 1265+19.49, RT

F STA. 1265+19.49, RT TO STA. 1265+45.40, RT

G STA. 1267+11.33, RT TO STA. 1267+21.11, RT



CONCRETE BARRIER SECTION DETAIL

STA. 1258+00 TO STA. 1262+75.28
STA. 1270+02.75 TO STA. 1276+03.54

CALCULATED BEO
CHECKED NWQ

TYPICAL SECTIONS

BEL-7-23.60

UTILITIES

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

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

POWER:

JEFF TURNER
AEP OHIO POWER COMPANY
47687 NATIONAL ROAD
P.O. BOX 99
ST. CLAIRSVILLE, OHIO 43950
740-699-7845

GAS:

ANTHONY WINTERS
COLUMBIA GAS TRANSMISSION CORP.
4115 CORK BOCKTON ROAD
CLINTON, PA 15026
724-223-3944

ROUNDING

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

EXISTING PLANS

EXISTING PLANS ENTITLED BEL-007-23.74 MAY BE INSPECTED IN THE ODOT DISTRICT 11 OFFICE AT 2201 REISER AVENUE, NEW PHILADELPHIA, OHIO 44663

THESE EXISTING PLANS CAN ALSO BE DOWNLOADED FROM THE FOLLOWING FTP SITE:
ftp://ftp.dot.state.oh.us/pub/Contracts/Attach

ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), AS PER PLAN, PG70-22M

FOLLOW SPECIFICATION 703.05 EXCEPT DO NOT USE COARSE AGGREGATE FROM A SOURCE DESIGNATED 'SR' OR 'SRH' ACCORDING TO THE OFFICE OF MATERIALS MANAGEMENT (OMM) IN ANY JOB MIX FORMULA (JMF) FOR THIS ITEM.

ITEM 609 - CONCRETE MEDIAN, AS PER PLAN

CONSTRUCT CONCRETE MEDIAN PER SCD RM-3.1 EXCEPT MINIMUM WIDTH SHALL BE 3.0'.

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.

MEDIAN AND/OR CURBING ON APPROACH SLABS

WITHIN THE LIMITS OF THE APPROACH SLAB, TRANSITION THE SHAPE OF THE MEDIAN AND/OR CURBING ON APPROACH SLABS FROM THE STANDARD SECTION ON THE APPROACHES TO THE SECTION USED ON THE BRIDGE.

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.

SEEDING AND MULCHING

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

659, TOPSOIL: 61 CU. YD.

659, SEEDING AND MULCHING: 547 SQ. YD.

659, REPAIR SEEDING AND MULCHING: 27 SQ. YD

659, COMMERCIAL FERTILIZER: 2 TON

659, LIME: 0.11 ACRES

659, WATER: 3.10 M. GAL.

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.

ITEM 606 - IMPACT ATTENUATOR, TYPE 2, (BIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE TYPE 2 IMPACT ATTENUATORS AS LISTED ON THE OFFICE OF ROADWAY ENGINEERING'S WEB PAGE. WHEN BI-DIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS. PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, IMPACT ATTENUATOR, TYPE 2, 55 MPH, 30 INCH, BIDIRECTIONAL EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS/BACKSTOPS, TRANSITIONS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

CLEARING AND GRUBBING

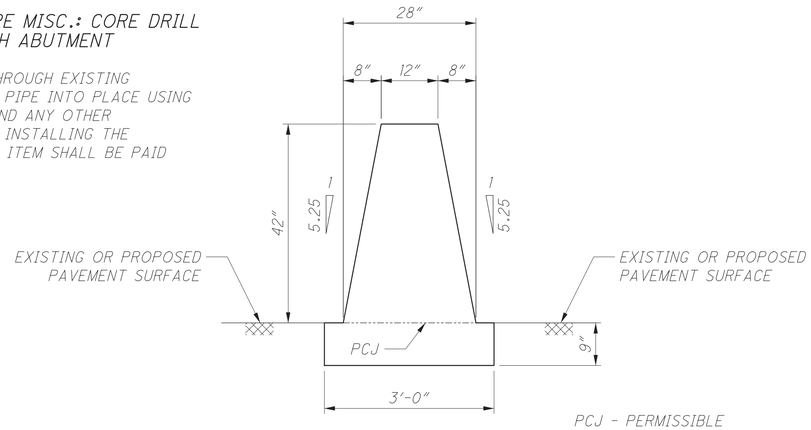
ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID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

STREAM AVOIDANCE

GLENNS RUN FLOWS UNDER THE BRIDGE TO BE REHABILITATED. THE CONTRACTOR SHALL EXERCISE CAUTION TO ASSURE THAT NO IMPACTS OCCUR TO THIS JURISDICTIONAL WATERWAY. NO TEMPORARY OR PERMANENT FILL OF ANY TYPE MAY BE PLACED BELOW THE ORDINARY HIGH WATER MARK OF GLENNS RUN. ANY ACTIVITIES OCCURRING IN THIS STREAM WOULD REQUIRE PERMITS FROM THE US ARMY CORP OF ENGINEERS AND/OR THE OHIO EPA.

ITEM 611 - DRAINAGE STRUCTURE MISC.: CORE DRILL AND INSTALL CONDUIT THROUGH ABUTMENT

ITEM CONSISTS OF CORE DRILLING THROUGH EXISTING ABUTMENT WALL, SETTING PROPOSED PIPE INTO PLACE USING NON-SHRINK GROUT, PER ITEM 613, AND ANY OTHER INCIDENTAL COSTS ASSOCIATED WITH INSTALLING THE CONDUIT INTO THE ABUTMENT WALL. ITEM SHALL BE PAID FOR BY EACH.



TYPE B BARRIER

ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE B, AS PER PLAN

THIS ITEM CONSISTS OF PLACING CONCRETE BARRIER, SINGLE SLOPE, AS PER THE PROVISIONS OF THE CMS AND THE STANDARD CONSTRUCTION DRAWINGS, EXCEPT THAT THE BARRIER WILL BE PLACED ON A 36" WIDE BY 9" THICK CONCRETE BASE. IF THE BASE IS BUILT SEPARATELY FROM THE SINGLE SLOPE BARRIER, THE CONSTRUCTION JOINTS MUST BE DOWELED AS PER THE STANDARD CONSTRUCTION DRAWING DETAILS AND NOTES. THE TOP OF THE BASE MUST BE LEVEL WITH THE TOP OF THE EXISTING SURFACE COURSE OR PROPOSED 441 SURFACE COURSE. PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 622, CONCRETE BARRIER, SINGLE SLOPE, TYPE B, AS PER PLAN, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT THE CONCRETE BARRIER.

SURVEYING PARAMETERS

USE THE FOLLOWING VERTICAL POSITIONING AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:
VERTICAL POSITIONING
ORTHOMETRIC HEIGHT DATUM: NAVD 88
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: 0.9999734
UNITS ARE IN U.S. SURVEY FEET. USE THE FOLLOWING
CONVERSION FACTOR: 1 METER = 3.280833333 U.S. SURVEY FEET.

PROJECT CONTROL TABLE

POINT No.	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	776532.75	2469059.41	667.71	MAG NAIL SET
2	775990.39	2469114.03	--	MAG NAIL SET
3	775953.99	2469197.42	--	HUB & TACK SET
4	776268.11	2469171.44	--	HUB & TACK SET
100	776426.37	2469065.30	666.92	ODOT CL REF MONUMENT PIN FOUND IN CONC
101	775937.83	2469199.44	665.15	ODOT CL REF MONUMENT PIN FOUND IN CONC
BM1	776507.94	2469152.35	670.52	X CHISELED ON SOUTHERLY END OF CONCRETE WALL
BM2	775561.12	2469311.23	663.33	X CHISELED ON NORTHWEST BILLBOARD COLUMN FOUNDATION

ASBESTOS NOTIFICATION

AN ASBESTOS SURVEY OF THE BRIDGE STRUCTURE SCHEDULED FOR REHABILITATION WAS CONDUCTED BY A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST. THE SURVEY DETERMINED THAT NO ASBESTOS IS PRESENT ON THE BRIDGE STRUCTURE.

A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORMS, PARTIALLY COMPLETED AND SIGNED BY THE BRIDGE OWNER, WILL BE PROVIDED TO THE SUCCESSFUL BIDDER. THE CONTRACTOR SHALL COMPLETE THE FORM AND SUBMIT IT TO THE ADDRESS BELOW AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR RENOVATION.

MR. LESLEY JENKINS
OHIO EPA, SEDO
2195 FRONT STREET
LOGAN, OHIO 43138

THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER. INFORMATION REQUIRED ON THE FORM WILL INCLUDE: 1) THE CONTRACTORS NAME AND ADDRESS, 2) THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE BRIDGE REMOVAL AND 3) A DESCRIPTION OF THE PLANNED DEMOLITION WORK AND THE METHOD(S) TO BE USED. COPIES OF THE OEPA FORM AND BRIDGE INSPECTION REPORT ARE AVAILABLE FOR REVIEW AT THE ODOT DISTRICT 11 OFFICE, 2201 REISER AVENUE, NEW PHILADELPHIA, OHIO 44663.

BASIS FOR PAYMENT THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN ITEM 202 PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

CALCULATED BEO CHECKED NWQ

GENERAL NOTES

BEL-7-23.60

REVIEW OF DRAINAGE FACILITIES

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

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

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

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEMS.

ITEM 611 - DRAINAGE STRUCTURE MISC.: REMOVE, STORE, AND REINSTALL CATCH BASIN FRAME AND GRATE

ANY CATCH BASINS WITHIN THE LIMITS OF THE PAVEMENT FOR MAINTAINING TRAFFIC, TYPE A, AS PER PLAN SHALL HAVE ITS EXISTING FRAME AND GRATE TEMPORARILY REMOVED AND REMAINING STRUCTURE COVERED BY A STEEL PLATE RATED FOR TRAFFIC. THE STEEL PLATE MUST BE SECURED IN-PLACE TO THE SATISFACTION AND APPROVAL OF THE ENGINEER PRIOR TO ALLOWING TRAFFIC FOR PHASE CONSTRUCTION.

THE COST OF THIS ITEM SHALL INCLUDE REMOVAL, STORAGE, AND REINSTALLATION OF THE FRAME AND GRATE. WORK SHALL BE DONE IN ACCORDANCE WITH ODOT CMS ITEM 611 FOR DRAINAGE STRUCTURES.

CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF THE STRUCTURE THROUGHOUT CONSTRUCTION. MAINTENANCE NECESSARY FOR THE STRUCTURE OR SURFACE AS A RESULT OF THE TRAFFIC LOADS DURING CONSTRUCTION SHALL BE PAID FOR UNDER PAVEMENT FOR UNDER ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, TYPE A, AS PER PLAN.

ITEM 611 - DRAINAGE STRUCTURE MISC.: REMOVE, STORE, AND REINSTALL INLET FRAME AND LID

ANY MEDIAN INLETS WITHIN THE LIMITS OF THE PAVEMENT FOR MAINTAINING TRAFFIC, TYPE A, AS PER PLAN SHALL HAVE ITS EXISTING FRAME AND LID TEMPORARILY REMOVED AND REMAINING STRUCTURE COVERED BY A STEEL PLATE RATED FOR TRAFFIC. THE STEEL PLATE MUST BE SECURED IN-PLACE TO THE SATISFACTION AND APPROVAL OF THE ENGINEER PRIOR TO ALLOWING TRAFFIC FOR PHASE CONSTRUCTION.

THE COST OF THIS ITEM SHALL INCLUDE REMOVAL, STORAGE, AND REINSTALLATION OF THE FRAME AND COVER. WORK SHALL BE DONE IN ACCORDANCE WITH ODOT CMS ITEM 611 FOR DRAINAGE STRUCTURES.

CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF THE STRUCTURE THROUGHOUT CONSTRUCTION. MAINTENANCE NECESSARY FOR THE STRUCTURE OR SURFACE AS A RESULT OF THE TRAFFIC LOADS DURING CONSTRUCTION SHALL BE PAID FOR UNDER PAVEMENT FOR UNDER ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, TYPE A, AS PER PLAN.

EARTHWORK QUANTITIES

PLAN SHEET	203 EXCAVATION	203 EMBANKMENT	659 SEEDING AND MULCHING
	CU. YD.	CU. YD.	SQ. YD.
47	2	97	514
48	0	1	8
49	3	4	23
50	1	1	2
TOTALS	*6	*103	⊗547

* TOTALS CARRIED TO GENERAL SUMMARY
⊗ TOTALS CARRIED TO SEEDING AND MULCHING NOTE, SEE SHEET NO. 4

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GENERAL NOTES

BEL-7-23.60

ITEM 614 - MAINTAINING TRAFFIC

A MINIMUM OF ONE (1) LANE(S) OF TRAFFIC IN EACH DIRECTION ON S.R. 7 SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT AND TEMPORARY CROSSOVERS.

TRAFFIC ON C.R. 4 AND HILL STREET SHALL OPERATE UNDER A RIGHT IN, RIGHT OUT, PARTIAL DETOUR SEQUENCE THROUGHOUT THE DURATION OF CONSTRUCTION AS DETAILED UNDER THE SEQUENCE OF CONSTRUCTION.

NO EXTENSIONS OF TIME SHALL BE GRANTED FOR DELAYS IN MATERIAL DELIVERIES, UNLESS SUCH DELAYS ARE INDUSTRY WIDE, OR FOR LABOR STRIKES, UNLESS SUCH STRIKES ARE AREA-WIDE.

THE CONTRACTOR SHALL CONSTRUCT THIS PROJECT IN ACCORDANCE WITH THE "SEQUENCE OF CONSTRUCTION" SHOWN ON THIS SHEET FOR S.R. 7.

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

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

SEQUENCE OF CONSTRUCTION

S.R. 7

PHASE 1

THE CONTRACTOR SHALL PLACE ALL TEMPORARY TRAFFIC CONTROL DEVICES PER MT-95.30 FOR THE SOUTHBOUND TRAFFIC, MERGING IT TO THE INSIDE LANE THROUGH THE CONSTRUCTION LIMITS. THE CONTRACTOR SHALL THEN PLACE ALL DETOUR SIGNS PERTAINING TO HILL STREET AND C.R. 4 AS SHOWN ON SHEET 9. THE FOLLOWING ACTIVITIES SHALL THEN BE COMPLETED:

- REMOVE SIDEWALK AND PARAPET ACROSS SOUTHBOUND STRUCTURE.
- SAWCUT ALONG EDGE OF PAVEMENT AND REMOVE PAVEMENT, CURB, AND SIDEWALK AS SHOWN IN PLANS.
- COVER EXISTING CURB INLETS AND CATCH BASIN BASES.
- CONSTRUCT PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN, ALONG WEST SIDE OF S.R. 7.

PHASE 2A

THE CONTRACTOR SHALL PLACE ALL TEMPORARY TRAFFIC CONTROL DEVICES AS DETAILED ON SHEET NO. 15-25 FOR SOUTHBOUND TRAFFIC. THE CONTRACTOR SHALL ALSO PLACE ALL TEMPORARY TRAFFIC CONTROL DEVICES PER MT-95.30 FOR THE NORTHBOUND TRAFFIC, MERGING IT TO THE OUTSIDE LANE THROUGH THE CONSTRUCTION LIMITS. THE FOLLOWING ACTIVITIES SHALL THEN BE COMPLETED:

- REMOVE EXISTING MEDIAN BARRIER AND MEDIAN ISLAND.
- COVER EXISTING MEDIAN BARRIER INLETS.
- CONSTRUCT PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN, ALONG REMOVED MEDIAN BARRIER.

PHASE 2B

THE CONTRACTOR SHALL MAINTAIN PHASE 2A SOUTHBOUND TEMPORARY TRAFFIC CONTROL DEVICES AND PLACE ALL TEMPORARY TRAFFIC CONTROL DEVICES AS DETAILED ON SHEET NO. 15-25 FOR NORTHBOUND TRAFFIC, CROSSING OVER THE NORTHBOUND TRAFFIC. THE FOLLOWING ACTIVITIES SHALL THEN BE COMPLETED:

- RECONSTRUCT THE NORTHBOUND STRUCTURE.
- RECONSTRUCT APPROACH SLABS AND COMPLETE FULL-DEPTH PAVEMENT REPLACEMENT ON BOTH SIDES OF THE NORTHBOUND STRUCTURE.
- PLACE NEW GUARDRAIL FOR NORTHBOUND TRAFFIC.

PHASE 3A

THE CONTRACTOR SHALL PLACE ALL TEMPORARY TRAFFIC CONTROL DEVICES AS DETAILED ON SHEET NO. 27-37, CROSSING OVER THE SOUTHBOUND TRAFFIC. THE FOLLOWING ACTIVITIES SHALL THEN BE COMPLETED:

- RECONSTRUCT THE SOUTHBOUND STRUCTURE.
- RECONSTRUCT APPROACH SLABS AND COMPLETE FULL-DEPTH PAVEMENT REPLACEMENT ON BOTH SIDES OF THE SOUTHBOUND STRUCTURE.
- PLACE NEW GUARDRAIL FOR SOUTHBOUND TRAFFIC.
- REMOVE TEMPORARY PAVEMENT PLACED IN PHASE 1.
- RECONSTRUCT ITEMS REMOVED IN PHASE 1 (CURB, SIDEWALK, CATCH BASIN AND CURB INLET FRAMES, COVERS, AND GRATES, LIGHT POLES (BY OTHERS)).

PHASE 3B

THE CONTRACTOR SHALL MAINTAIN PHASE 3A NORTHBOUND TEMPORARY TRAFFIC CONTROL DEVICES AND PLACE ALL TEMPORARY TRAFFIC CONTROL DEVICES PER MT-95.30 FOR THE SOUTHBOUND TRAFFIC, MERGING IT TO THE OUTSIDE LANE THROUGH THE CONSTRUCTION LIMITS. THE FOLLOWING ACTIVITIES SHALL THEN BE COMPLETED:

- REMOVE TEMPORARY PAVEMENT PLACED IN PHASE 2A.
- RECONSTRUCT ITEMS REMOVED IN PHASE 2A (MEDIAN BARRIERS, MEDIAN ISLAND, MEDIAN BARRIER INLETS, PERMANENT IMPACT ATTENUATORS).

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL:

ITEM 616 - WATER 5 M. GAL

ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL OR BIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NON-GATING IMPACT ATTENUATOR. FURNISH AN IMPACT ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING'S APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS, FROM THE ROADWAY STANDARDS WEB PAGE FOR ROADWAY STANDARDS APPROVED PRODUCTS.

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE CONTRACTOR SHALL REPAIR OR REPLACE A DAMAGED UNIT WITHIN 24 HOURS OF A DAMAGING IMPACT.

WHEN BIDIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS.

WHEN GATING IMPACT ATTENUATORS ARE DESIRED, THE CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE ENGINEER FOR ACCEPTANCE.

THE COST FOR THE ADDITIONAL BARRIER REQUIRED FOR A GATING IMPACT ATTENUATOR SHALL BE INCLUDED IN THE COST OF THE GATING IMPACT ATTENUATOR.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT AND MAINTAIN A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 614, MAINTAINING TRAFFIC (NOTICE OF CLOSURE SIGN)

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

ITEM 614, MAINTAINING TRAFFIC (SIGNS AND BARRICADES)

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN SIGNS AND SIGN SUPPORTS, AS DETAILED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND TYPE III BARRICADES.

TRENCH FOR WIDENING

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

OVERNIGHT TRENCH CLOSING

THE TRENCH SHALL BE COMPLETED TO A DEPTH OF NO MORE THAN 1¼ INCHES BELOW THE EXISTING PAVEMENT BY THE END OF EACH WORK DAY. NO TRENCH SHALL BE LEFT OPEN OVERNIGHT EXCEPT FOR A SHORT LENGTH (25 FEET OR LESS) OF A WORK SECTION AT THE END OF THE TRENCH. IN CASE WORK MUST BE SUSPENDED BECAUSE OF INCLEMENT WEATHER OR OTHER REASONS, THE TRENCH FOR THE UNCOMPLETED PAVEMENT SHALL BE BACKFILLED AT THE DIRECTION OF THE ENGINEER.

ITEM 614, WORK ZONE CROSSOVER LIGHTING SYSTEM

THIS WORK SHALL CONSIST OF FURNISHING, ERECTING, OPERATING, MAINTAINING AND REMOVING A WORK ZONE LIGHTING SYSTEM FOR THE NORTHERN-MOST PAIR OF CROSSOVERS. THE SYSTEM SHALL BE AS SHOWN ON TRAFFIC SCD MT-100.00. THE CONTRACTOR SHALL ARRANGE FOR AND PAY FOR POWER. ALL MATERIALS AND CONSTRUCTION SHALL COMPLY WITH APPLICABLE PORTIONS OF 625 AND 725 EXCEPT: THE PERFORMANCE TEST OF 625.19F, AND CERTIFIED DRAWING REQUIREMENT OF 625.04, ARE WAIVED AND USED MATERIALS IN GOOD CONDITION ARE ACCEPTABLE.

POLES WHICH ARE NOT PROTECTED BY GUARDRAIL OR PORTABLE BARRIER SHALL BE LOCATED OUTSIDE THE CLEAR ZONE, AND SHOULD BE LOCATED AT LEAST 30 FT (PREFERABLY 40 FEET) FROM THE EDGE OF PAVEMENT WHEN POSSIBLE. ADDITIONAL POLE LINES, CABLES AND APPURTENANCES NECESSARY TO FURNISH POWER TO THE LIGHTING SYSTEM SHALL BE INCLUDED IN THIS ITEM. SERVICE POLES SHALL BE POSITIONED WITH THE SAME CONSTRAINTS AS THE LIGHTING POLES AS A MINIMUM.

PAYMENT WILL BE MADE AT THE UNIT PRICE PER EACH FOR ITEM 614, WORK ZONE CROSSOVER LIGHTING SYSTEM THROUGH-OUT ALL PHASES OF WORK WHEN THE CROSSOVER ROADWAYS

ITEM 614 - WORK ZONE CROSSOVER LIGHTING SYSTEM 2 EACH ARE USED.

WORK ZONE MARKINGS AND SIGNS

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AT LOCATIONS IDENTIFIED BY THE ENGINEER FOR WORK ZONE PAVEMENT MARKINGS AND SIGNS PER THE REQUIREMENTS OF CMS 614.04 AND 614.11.

EARTHWORK FOR MAINTAINING TRAFFIC

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE PLAN FOR INFORMATION ONLY:

EXCAVATION FOR MAINTAINING TRAFFIC 246 CU. YD.

WHEN UNDERCUTS ARE NECESSARY FOR MAINLINE PAVEMENT OR EMBANKMENT CONSTRUCTION, EVALUATE THE NEED FOR TEMP-ORARY 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.

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MAINTENANCE OF TRAFFIC GENERAL NOTES

BEL-7-23.60

WORKSITE TRAFFIC SUPERVISOR

SUBJECT TO APPROVAL OF THE ENGINEER, THE CONTRACTOR SHALL EMPLOY AND IDENTIFY (SOMEONE OTHER THAN THE SUPERINTENDENT) A CERTIFIED WORKSITE TRAFFIC SUPERVISOR (WTS) BEFORE STARTING WORK IN THE FIELD. THE WTS SHALL BE CERTIFIED FROM ONE OF THE FOLLOWING ORGANIZATIONS:

1. AMERICAN TRAFFIC SAFETY SERVICE ASSOCIATION (ATSSA), PHONE NUMBER 1-800-272-8772, CERTIFIED TRAFFIC CONTROL SUPERVISOR (TCS).

2. NATIONAL HIGHWAY INSTITUTE, DESIGN AND OPERATION OF WORK ZONE TRAFFIC CONTROL, PHONE NUMBER 1-703-235-0528.

3. THE OHIO CONTRACTORS ASSOCIATION, TRAFFIC CONTROL SUPERVISOR (OCA/TCS) WORK ZONE CLASS, ONLY IF TAKEN AFTER MAY 5, 2004, PHONE NUMBER 1-800-229-1388.

4. OHIO LABORERS TRAINING, TRAFFIC CONTROL SUPERVISORS CLASS, PHONE NUMBER 1-740-599-7915.

A COPY OF EACH WTSS CERTIFICATION AND 24-HOUR CONTACT INFORMATION SHALL BE PROVIDED TO THE ENGINEER AT THE PRECONSTRUCTION CONFERENCE. IF THE DESIGNATED WTS WILL NOT BE AVAILABLE FULL TIME (24/7) THE CONTRACTOR MAY DESIGNATE AN ALTERNATE WTS TO BE AVAILABLE WHEN THE PRIMARY IS OFF DUTY. EACH WTS SHALL HAVE A CURRENT WTS CERTIFICATION (WITH AN EXPIRATION DATE NO MORE THAN 5 YEARS FROM THE DATE OF ISSUE) FROM ANY OF THE APPROVED ORGANIZATIONS.

THE WTS POSITION HAS THE RESPONSIBILITY OF MONITORING TRAFFIC CONTROL DEFICIENCIES FOR THE ENTIRE WORK ZONE. THE DUTIES OF THE WTS ARE AS FOLLOWS:

1. BE AVAILABLE ON A 24-HOUR PER DAY BASIS, AND BE ABLE TO BE ON SITE FOR ALL EMERGENCY TRAFFIC CONTROL NEEDS WITHIN ONE HOUR OF NOTIFICATION BY POLICE OR PROJECT STAFF AND BE PREPARED TO EFFECT CORRECTIVE MEASURES IMMEDIATELY ON EXISTING WORK ZONE TRAFFIC CONTROL DEVICES.

2. ATTEND PRECONSTRUCTION MEETING AND ALL PROJECT MEETINGS WHERE TRAFFIC CONTROL MANAGEMENT IS DISCUSSED.

3. BE AVAILABLE FOR MEETINGS OR DISCUSSIONS WITH THE ENGINEER UPON REQUEST OR WITHIN 36 HOURS.

4. COORDINATE A TRAFFIC INCIDENT MANAGEMENT MEETING EACH YEAR BEFORE CONSTRUCTION WORK BEGINS WITH ODOT AND THE SAFETY FORCES THAT WILL RESPOND TO INCIDENTS ON THE PROJECT.
   ITEMS TO BE DISCUSSED WILL BE THE:

   A. TRAFFIC INCIDENT MANAGEMENT PLAN (TIMP);

   B. EMERGENCY REPONCE AND NOTIFICATION;

   C. PROJECT WORK/PHASING CONCERNS (E.G., RAMP CLOSURES)

   D. RESPONDERS CONCERNS

5. BE AWARE OF, AND COORDINATE IF NECESSARY, ALL TRAFFIC CONTROL OPERATIONS, INCLUDING THOSE OF SUBCONTRACTORS AND SUPPLIERS.

6. COORDINATE PROJECT ACTIVITIES WITH ALL LAW ENFORCEMENT OFFICERS (LEOS). A WTS SHALL ALSO BE THE MAIN CONTACT PERSON WITH THE LEOS WHILE THEY ARE ON THE PROJECT.

7. COORDINATE MEETINGS WITH ODOT PERSONNEL, LEOS AND OTHER APPLICABLE ENTITIES BEFORE EACH PLAN PHASE SWITCH TO DISCUSS WORK ZONE TRAFFIC CONTROL.

8. ENSURE COMPLIANCE WITH THE CONTRACT DOCUMENTS FOR SIGNS, BARRICADES, TEMPORARY CONCRETE BARRIER, PAVEMENT MARKINGS, PORTABLE MESSAGE SIGNS, AND OTHER TRAFFIC CONTROL DEVICES ON A DAILY BASIS; AND FACILITATE ANY CORRECTIVE ACTION NECESSARY.

9. NOTIFY THE CONTRACTOR OF THE NEED FOR CLEANING AND MAINTENANCE OF ALL TRAFFIC CONTROL DEVICES, INCLUDING THE COVERING AND REMOVAL OF INAPPLICABLE SIGNS.

10. INSPECT, EVALUATE, PROPOSE NECESSARY MODIFICATIONS TO, AND DOCUMENT THE EFFECTIVENESS OF, THE TRAFFIC CONTROL DEVICES AND/OR TRAFFIC OPERATIONS ON A DAILY BASIS (7 DAYS A WEEK). IN ADDITION, A WEEKLY NIGHT INSPECTION OF THE WORK ZONE SETUP FOR DAYTIME WORK OPERATIONS; AND ONE DAYTIME INSPECTION PER WEEK FOR NIGHTTIME PROJECTS. THIS SHALL INCLUDE (BUT NOT BE LIMITED TO) DOCUMENTATION ON THE FOLLOWING PROJECT EVENTS:

    A. INITIAL TRAFFIC CONTROL SETUP (DAY AND NIGHT REVIEW).

    B. DAILY TRAFFIC CONTROL SETUP AND REMOVAL.

    C. WHEN CONSTRUCTION STAGING CAUSES A CHANGE IN THE TRAFFIC CONTROL SETUP.

    D. CRASH OCCURRENCES WITHIN THE CONSTRUCTION AREA.

    E. REMOVAL OF TRAFFIC CONTROL DEVICES AT THE END OF A PHASE OR PROJECT.

    F. ALL OTHER EMERGENCY TRAFFIC CONTROL NEEDS.

11. COMPLETE THE DEPARTMENT APPROVED LONG TERM INSPECTION FORM (CA-D-8) AFTER EACH INSPECTION AS REQUIRED IN # 10 AND SUBMIT IT TO THE ENGINEER THE FOLLOWING WORK DAY. THESE REPORTS SHALL INCLUDE A CHECKLIST OF ALL TRAFFIC CONTROL MAINTENANCE ITEMS TO BE REVIEWED. A COPY OF THE FORM WILL BE PROVIDED AT THE PRE-CONSTRUCTION MEETING. ANY DEFICIENCIES OBSERVED SHALL BE NOTED, ALONG WITH RECOMMENDED CORRECTIVE ACTIONS AND THE DATES BY WHICH SUCH CORRECTIONS WERE, OR WILL BE, COMPLETED. A COPY OF THIS DOCUMENT CAN BE FOUND IN THE CURRENT REVISION OF THE DEPARTMENT OF TRANSPORTATION CONSTRUCTION INSPECTION FORMS MANUAL.

12. VERIFY THAT ALL FLAGGING OPERATIONS ARE BEING CONDUCTED PER THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

13. HAVE COPIES OF THE ODOT TEMPORARY TRAFFIC CONTROL MANUAL AND APPLICABLE STANDARDS AND SPECIFICATIONS INCLUDED IN THE CONTRACT DOCUMENTS AVAILABLE AT ALL TIMES ON THE PROJECT.

14. IDENTIFY AND CONTACT ALL POSSIBLE RESPONSE PERSONNEL; PREPLAN AND KEEP AN UPDATED ROSTER WITH PHONE NUMBERS:

    A. FEDERAL, STATE, AND LOCAL TRANSPORTATION AGENCIES (TRAFFIC MANAGEMENT CENTER);

    B. REGIONAL, COUNTY OR LOCAL 911 DISPATCH; AND

    C. TOWING AND RECOVERY PROVIDERS.

15. COMPLY WITH THE PROVISIONS OF OMUTCD CHAPTER 6I, CONTROL OF TRAFFIC THROUGH TRAFFIC INCIDENT MANAGEMENT AREAS.

16. PROPOSE A RESPONSE/ACTION PLAN TO:

    A. ESTABLISH ALTERNATE ROUTE PLANS PER THE PROVIDED ODOT PLAYBOOK;

    B. REMOVE TRAFFIC DEMAND FROM IMPACTED ROADWAY(S);

    C. DIVERT TRAFFIC TO ROUTES THAT CAN ACCOMMODATE DEMANDS;

    D. DETOUR TRAFFIC AWAY FROM SENSITIVE AREAS (SUCH AS SCHOOLS, HOSPITALS, ETC.);

    E. DISCUSS METHODS OF DETERMINING A STAGING AREA FOR RESPONDERS WITHIN OR NEAR THE CONSTRUCTION ZONE;

    F. DISCUSS METHODS OF DEVELOPING INGRESS AND EGRESS SITES WITHIN THE CONSTRUCTION ZONE.

    THE RESPONSE/ACTION PLAN SHALL BE SUBMITTED TO ODOT FOR ACCEPTANCE BEFORE THE CONTRACTOR'S FIRST DAY OF WORK.

17. PERFORM, AT A MINIMUM, THE FOLLOWING FUNCTIONS IN INCIDENT DETECTION AND VERIFICATION:

    A. CALL 911/ NOTIFY TRAFFIC MANAAGEMENT CENTER AND PROVIDE THE FOLLOWING:

       I. LOCATION, INCLUDING MILEPOST NUMBER AND DIRECTION OF TRAVEL.
       II. NUMBER AND TYPE OF VEHICLES INVOLVED.
       III. ESTIMATED EXTENT OF DAMAGE OR INJURY.
       IV. ESTIMATED NUMBER OF PATIENTS INVOLVED.
       V. ANY POTENTIAL HAZARDOUS CONDITIONS.
       VI. THE PLACARD NUMBER ON ANY HAZARDOUS MATERIALS PLACARD FROM A SAFE DISTANCE.

    B. INITIATE TRAFFIC MANAGEMENT / PROVIDE TRAFFIC CONTROL.

    C. ASSIST MOTORIST WITH DISABLED VEHICLES.

    D. RECOMMEND ROADWAY REPAIR NEEDS.

    E. PROVIDE REPAIR RESOURCES.

18. ATTEND POST-INCIDENT DEBRIEFINGS IF REQUIRED.

THE DEPARTMENT WILL DEDUCT THE PRORATED DAILY AMOUNT OF THE UNIT PRICE BID FOR THE WTS FOR ANY DAY ON WHICH THE CONTRACTOR FAILS TO PERFORM THE DUTIES SET FORTH ABOVE. SHOULD THE CONTRACTOR'S FAILURE TO PERFORM ANY OF THE DUTIES DESCRIBED ABOVE RESULT IN A MAINTENANCE OF TRAFFIC SAFETY ISSUE, THE DEPARTMENT WILL DEDUCT THE PRORATED DAILY AMOUNT FOR ITEM 614 MAINTENANCE OF TRAFFIC FROM THE CONTRACTOR'S NEXT SCHEDULED ESTIMATE.

IF THREE OR MORE FAILURES TO PERFORM THE DUTIES SET FORTH ABOVE OCCUR, THE WTS SHALL BE IMMEDIATELY REMOVED FROM THE WORK IN ACCORDANCE WITH C&MS 108.05.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED FOR THE WORKSITE TRAFFIC SUPERVISOR:

ITEM 614 WORKSITE TRAFFIC SUPERVISOR	6 MONTHS

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.

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

ITEM 614 - BARRIER REFLECTOR, TYPE A	23 EACH
ITEM 614 - OBJECT MARKER, ONE WAY	46 EACH

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

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:

FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP). IN GENERAL, LEOS SHOULD BE POSITIONED AT THE POINT OF LANE RESTRICTION OR ROAD CLOSURE AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH INTERSECTIONS IN WORK ZONES.

WHEN CONSTRUCTION VEHICLES ARE ENTERING/EXITING THE ZONE DIRECTLY FROM/INTO AN OPEN LANE OF TRAFFIC. IF A LANE HAS BEEN CLOSED TO PROVIDE AN ACCELERATION/DECELERATION LANE FOR THE VEHICLE, THE LEO WILL NOT BE REQUIRED.

(CONTINUED...)

CALCULATED BEO CHECKED NWQ

GENERAL NOTES OF TRAFFIC MAINTENANCE

BEL-7-23.60

(CONTINUED...)

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.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING 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. ONCE THE LEO HAS COMPLETED THE DUTIES DESCRIBED ABOVE AND STILL HAS TIME REMAINING ON HIS/HER SHIFT, THE LEO MAY BE ASKED TO PATROL THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) OR BE PLACED AT A LOCATION TO DETER MOTORISTS FROM SPEEDING. 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.

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 80 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 AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

DETOUR NOTIFICATION

THE CONTRACTOR SHALL ADVISE THE ODOT DISTRICT OFFICE EIGHTEEN (18) DAYS IN ADVANCE OF WHEN THE DETOUR ROUTE SHOULD BE IN EFFECT. ALL WORK ZONE DEVICES REQUIRED SHALL BE FURNISHED, ERECTED, MAINTAINED, AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR. PAYMENT FOR ALL WORK ASSOCIATED WITH THE DETOUR SHALL BE INCLUDED UNDER THE LUMP SUM BID FOR ITEM 614, DETOUR SIGNING.

LINEAR DELINEATION, AS PER PLAN

INCREASED DELINEATION, AS SPECIFIED HEREIN, SHALL BE INSTALLED ON ALL PORTABLE BARRIER AND BRIDGE PARAPET LOCATED WITHIN 5-FEET OF THE EDGE OF THE TRAVELED LANE UNDER EITHER OF THE FOLLOWING CONDITIONS:

ALONG TAPERS AND TRANSITION AREAS

ALONG CURVES (OUTSIDE ONLY) WITH DEGREE OF CURVATURE GREATER THAN OR EQUAL TO 3 DEGREES

THE INCREASED DELINEATION SHALL CONSIST OF EITHER LINEAR DELINEATION PANELS OR THE TRIPLE STACKING OF WORK ZONE BARRIER REFLECTORS.

THE LINEAR DELINEATION PANELS SHALL CONSIST OF PANELS OF DELINEATION, APPROXIMATELY 34 INCHES LONG AND 6-INCHES WIDE AND SHALL BE "CRIMPED". PANELS SHALL BE PROVIDED AT THE RATE OF ONE PANEL EVERY 10 FEET ON PORTABLE BARRIER AND BRIDGE PARAPET, SPACED EVENLY ALONG THE LENGTH OF THE RUN. THE PANELS SHALL BE MOUNTED SUCH THAT THE TOPS OF THE PANELS ARE 26 INCHES ABOVE THE PAVEMENT.

TRIPLE STACKED BARRIER REFLECTORS SHALL CONSIST OF THREE BARRIER REFLECTORS STACKED VERTICALLY IN THEIR ATTACHMENT TO PORTABLE BARRIER. THERE SHALL BE NO OPEN SPACE BETWEEN THE ADJACENT BARRIER REFLECTORS. THE TOP OF THE MIDDLE BARRIER REFLECTOR SHALL BE LOCATED 26 IN ABOVE THE PAVEMENT.

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING LINEAR DELINEATION.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE PLANS:

614 - LINEAR DELINEATION, AS PER PLAN 360 FEET

ALONG RUNS OF PORTABLE CONCRETE BARRIER WHERE THIS ITEM IS PROVIDED, THE QUANTITY SHALL BE MEASURED AS THE ENTIRE LENGTH OF THE RUN BEING DELINEATED, INCLUDING THE SPACES BETWEEN THE INDIVIDUAL PANELS OR STACKS OF BARRIER REFLECTORS.

THE CONTRACTOR SHALL ALSO INCLUDE AN "ALTERNATIVE DELINEATION METHOD" FROM SCD MT-101.70 FOR THE GORE AREA BARRIER SHOWN IN THE PLANS. ANY ADDITIONAL COSTS SHALL BE INCLUDED IN THIS ITEM.

ITEM 614 - ASPHALT CONCRETE FOR MAINTAINING TRAFFIC, AS PER PLAN

THIS ITEM OF WORK SHALL BE USED TO REPAIR EXISTING S.R. 7 MAINLINE ASPHALT PAVEMENT AND SHOULDERS. FOLLOW SPECIFICATION 703.05 EXCEPT DO NOT USE COARSE AGGREGATE FROM A SOURCE DESIGNATED "SR" OR "SRH" ACCORDING TO THE OFFICE OF MATERIALS MANAGEMENT (OMM) IN ANY JOB MIX FORMULA (JMF) FOR THIS ITEM. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED FOR USE WHEN AND AS DETERMINED BY THE ENGINEER:

ITEM 614 - ASPHALT CONCRETE FOR MAINTAINING TRAFFIC, AS PER PLAN 10 CU.YD.

THE COST OF MAINTAINING TRAFFIC DURING REPAIRS SHALL BE INCLUDED IN ITEM 614 - MAINTAINING TRAFFIC.

FLOODLIGHTING

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

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC.

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

IN ADDITION TO THE REQUIREMENTS OF 615, THIS ITEM REPLACES THE 7 INCHES OF ITEM 302 BITUMINOUS AGGREGATE BASE AND THE 4 INCHES OF ITEM 304 AGGREGATE BASE WITH 9 INCHES OF ITEM 302 BITUMINOUS AGGREGATE BASE.

EXISTING ROADWAY ITEMS REMOVED INCLUDING BUT NOT LIMITED TO CURB AND GUTTER, SIDEWALK, PAVEMENT, CONCRETE MEDIAN, ETC. REQUIRED TO INSTALL PAVEMENT FOR MAINTAINING TRAFFIC SHALL BE PAID FOR UNDER THE REMOVAL ITEM MOST APPROPRIATE USING ALL PROVISIONS DESCRIBED UNDER SECTION 202 OF THE CMS.

THE EXISTING PAVEMENT/SHOULDER SHALL BE SAWCUT AS PER 203.04(E).

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED IN CONSTRUCTING THE PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN.

ITEM 615 - ROADS FOR MAINTAINING TRAFFIC 1 LUMP SUM

UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL REMOVE THE PAVEMENT FOR MAINTAINING TRAFFIC INCLUDING ANY TEMPORARY DRAINAGE FACILITIES. THE AFFECTED EXISTING EARTH MEDIAN AND PAVED SHOULDERS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AS DIRECTED BY THE ENGINEER AND AS PER 615.08.

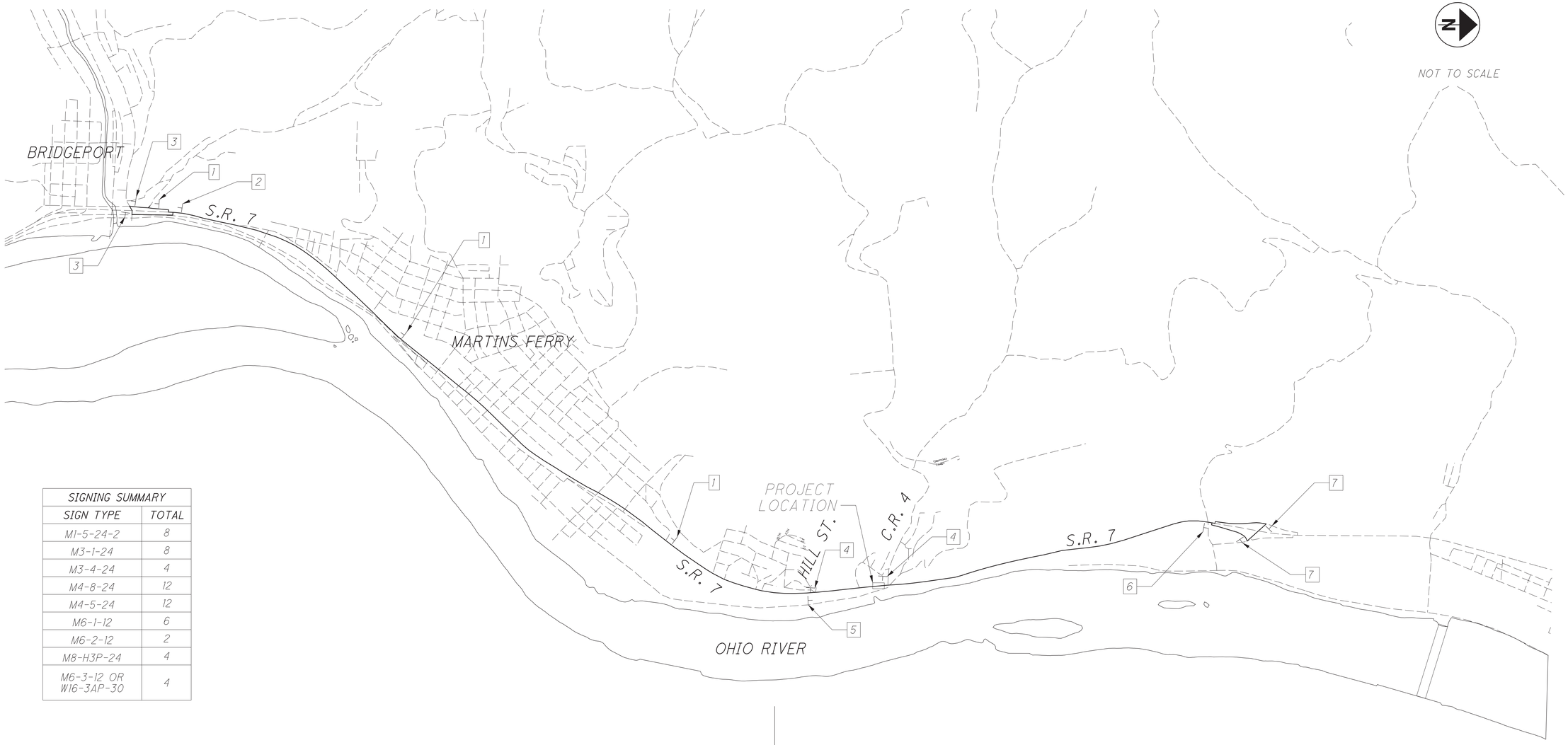
PAVEMENT FOR MAINTAINING TRAFFIC SHALL NOT BE OPENED TO TRAFFIC UNTIL ALL WORK ZONE TRAFFIC CONTROL DEVICES, SIGNS, PAVEMENT MARKINGS AND PORTABLE CONCRETE BARRIERS HAVE BEEN ERECTED AND APPROVED BY THE ENGINEER.

ALTHOUGH ESTIMATES FOR TEMPORARY EXCAVATION, EMBANKMENT AND TEMPORARY DRAINAGE FACILITIES MAY BE SHOWN ON THE PLAN DETAILS, THESE ITEMS SHALL BE CONSIDERED INCIDENTAL TO, AND INCLUDED WITH PAYMENT FOR ITEM 615 ROADS FOR MAINTAINING TRAFFIC.

CALCULATED BEO CHECKED NWQ

MAINTENANCE OF TRAFFIC GENERAL NOTES

BEL-7-23.60



SIGNING SUMMARY	
SIGN TYPE	TOTAL
M1-5-24-2	8
M3-1-24	8
M3-4-24	4
M4-8-24	12
M4-5-24	12
M6-1-12	6
M6-2-12	2
M8-H3P-24	4
M6-3-12 OR W16-3AP-30	4

1
DETOUR M4-8-24
TO M4-5-24
NORTH M3-1-24
7 M1-5-24-2
M6-3-12 OR 2.5 MILES W16-3AP-30

2
DETOUR M4-8-24
TO M4-5-24
NORTH M3-1-24
7 M1-5-24-2
M6-2-12

3
DETOUR M4-8-24
TO M4-5-24
NORTH M3-1-24
7 M1-5-24-2
M6-1-12

4
DETOUR M4-8-24
TO M4-5-24
NORTH M3-1-24
7 M1-5-24-2
M6-1-12

EASTBOUND C.R. 4, EASTBOUND HILL ST. TO NORTHBOUND S.R. 7 - DETOUR ROUTE
RIGHT TURN ONLY TO SOUTHBOUND S.R. 7 FOR 3+ MILES. EXIT S.R. 7 AT CADIZ PIKE. LEFT ONTO CADIZ PIKE, LEFT ONTO NORTHBOUND S.R. 7 ON-RAMP.

5
DETOUR M4-8-24
TO M4-5-24
WEST M3-4-24
C.R. 4 HILL ST. M8-H3P-24
M6-3-12

6
DETOUR M4-8-24
TO M4-5-24
WEST M3-4-24
C.R. 4 HILL ST. M8-H3P-24
M6-2-12

7
DETOUR M4-8-24
TO M4-5-24
WEST M3-4-24
C.R. 4 HILL ST. M8-H3P-24
M6-1-12

NORTHBOUND S.R. 7 TO C.R. 4, HILL ST. - DETOUR ROUTE
NORTH ON S.R. 7 TO PATTONS RUN/PICOMA RD EXIT. TURN LEFT AT STOP SIGN, CONTINUE OVER THE S.R. 7 OVERPASS, TURN LEFT ONTO SOUTHBOUND S.R. 7 ON-RAMP. TRAVEL ON SOUTHBOUND S.R. 7 AND TURN RIGHT ONTO WESTBOUND C.R. 4, HILL ST.

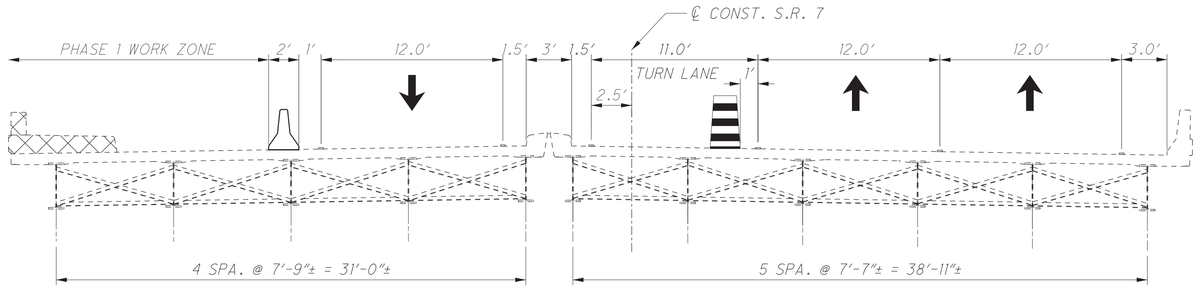
LEGEND
——— - DETOUR ROUTE

CALCULATED BEO CHECKED NWQ

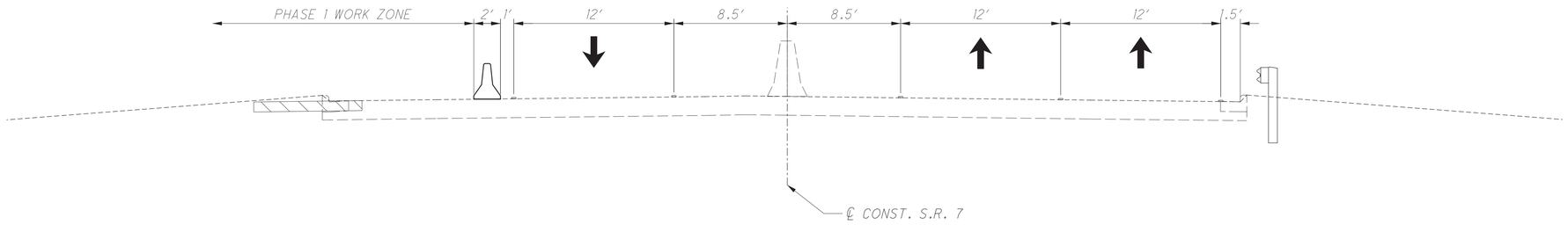
DETOUR PLAN
C.R. 4 PARTIAL DETOUR - PHASES 1-3

C.R. 4 PHASE 1-3

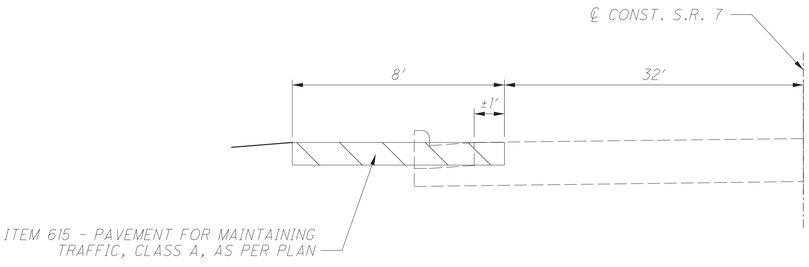
BEL-7-23.60



PHASE 1 - STRUCTURE TYPICAL



PHASE 1 - ROADWAY TYPICAL NEAR STRUCTURE



PHASE 1, PAVEMENT FOR MAINTAINING TRAFFIC DETAIL

STA. 1259+50.00, LT TO STA. 1268+38.00, LT

DRAWING NOT TO SCALE

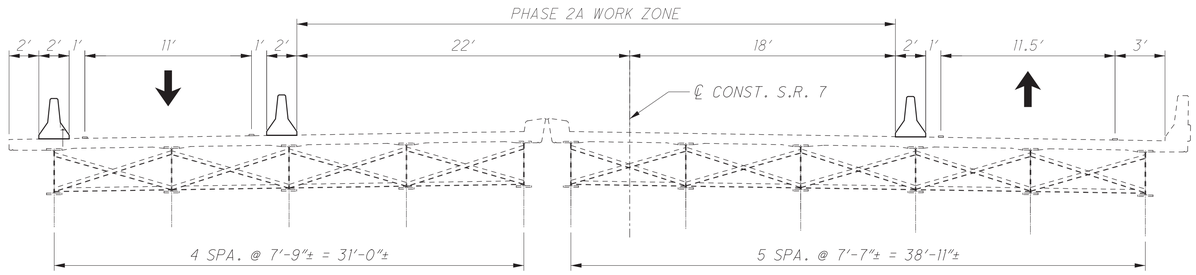
LEGEND:

- TEMPORARY PAVEMENT CONSTRUCTION THIS PHASE
- REMOVE EXISTING PARAPET AND SIDEWALK THIS PHASE

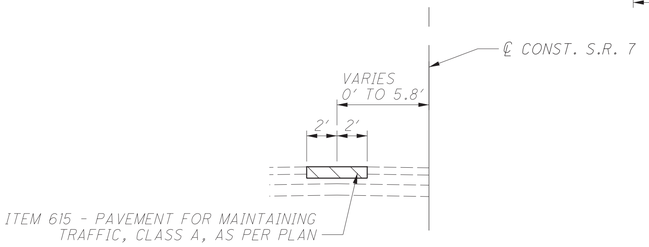
CALCULATED BEO CHECKED NWQ

PHASE 1 - MAINTENANCE OF TRAFFIC TYPICAL SECTIONS

BEL-7-23.60

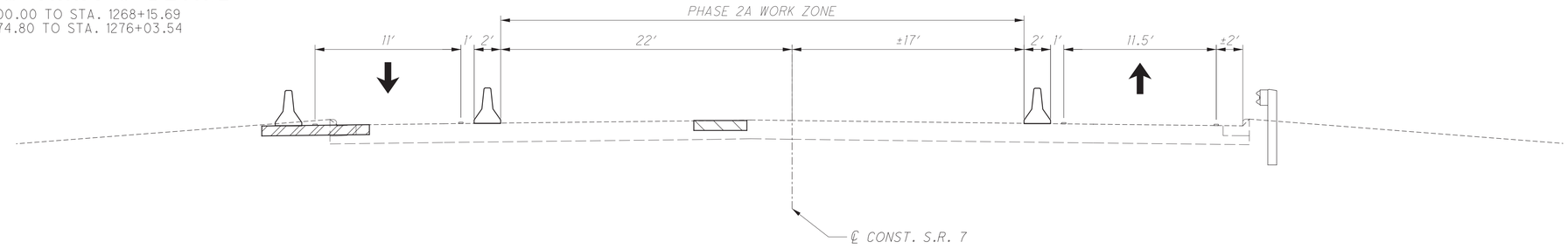


PHASE 2A - STRUCTURE TYPICAL



PHASE 2A, PAVEMENT FOR MAINTAINING TRAFFIC DETAIL

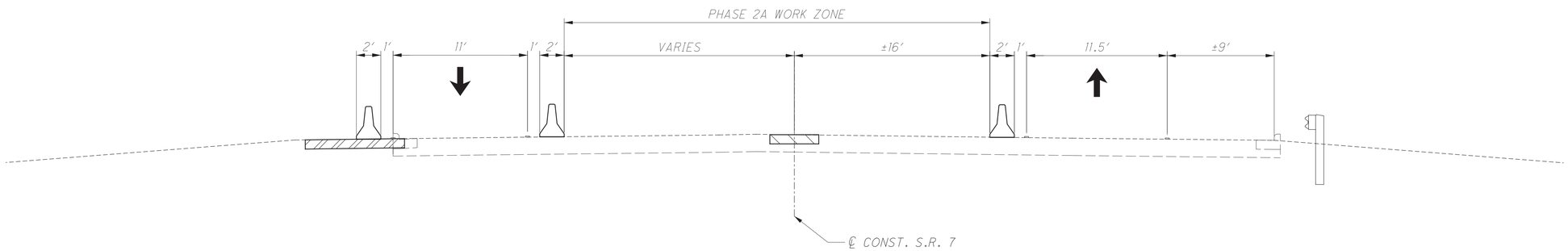
STA. 1258+00.00 TO STA. 1268+15.69
STA. 1269+74.80 TO STA. 1276+03.54



PHASE 2A - ROADWAY TYPICAL NEAR STRUCTURE

LEGEND:

- TEMPORARY PAVEMENT CONSTRUCTION THIS PHASE
- TEMPORARY PAVEMENT CONSTRUCTION PREVIOUS PHASE



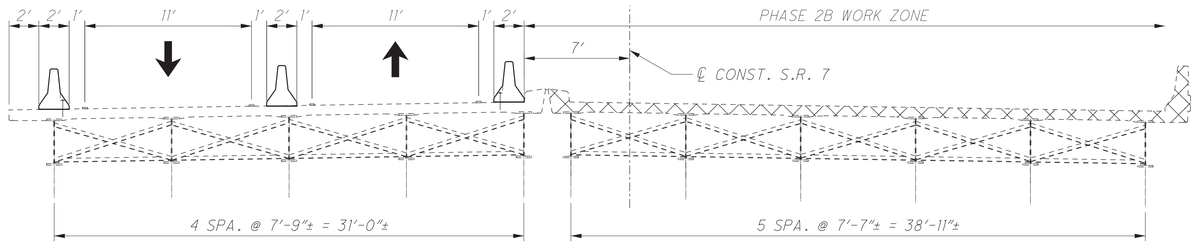
PHASE 2A - ROADWAY TYPICAL OUTSIDE PROJECT LIMITS

NOTE: NORTHBOUND TRAVEL LANE WIDTH MEASURED FROM EXISTING EDGE LINE

CALCULATED BEO CHECKED NWQ

PHASE 2A - MAINTENANCE OF TRAFFIC TYPICAL SECTIONS

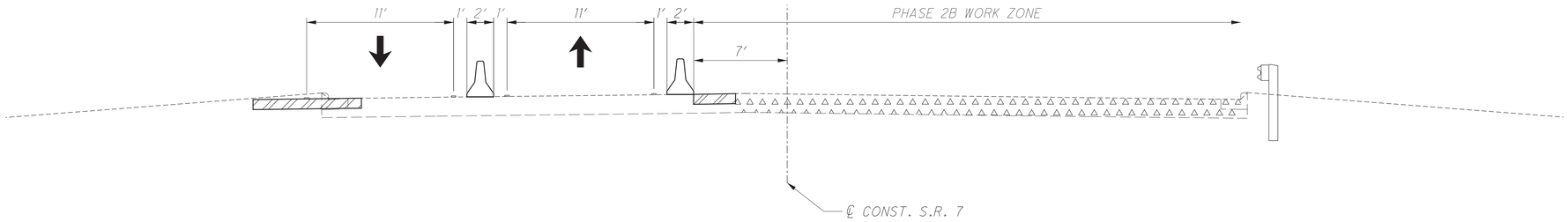
BEL-7-23.60



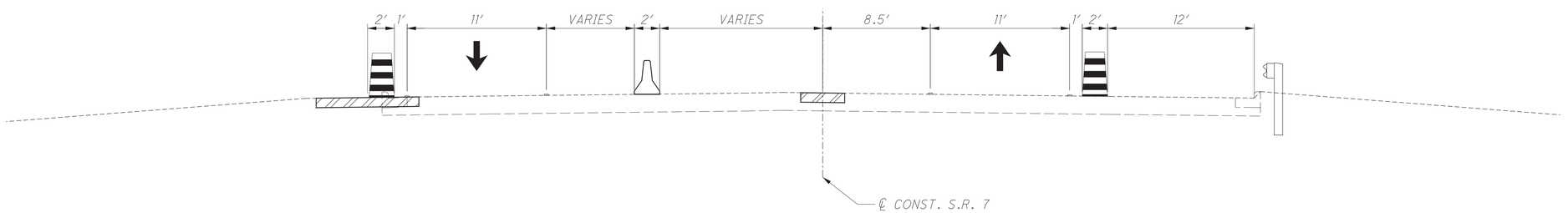
PHASE 2B - STRUCTURE TYPICAL

LEGEND:

- BRIDGE CONSTRUCTION THIS PHASE
- TEMPORARY PAVEMENT CONSTRUCTION PREVIOUS PHASE(S)
- FULL-DEPTH PAVEMENT REPLACEMENT THIS PHASE



PHASE 2B - ROADWAY TYPICAL
NEAR STRUCTURE



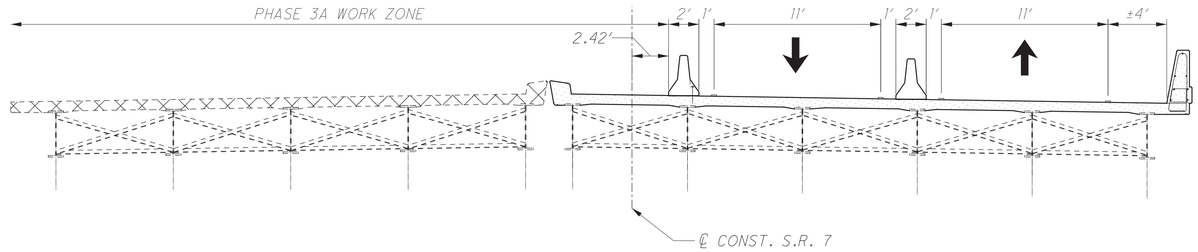
PHASE 2B - ROADWAY TYPICAL
OUTSIDE NORTHBOUND CROSSOVER

CALCULATED BEO CHECKED NWQ

MAINTENANCE OF TRAFFIC TYPICAL SECTIONS

PHASE 2B

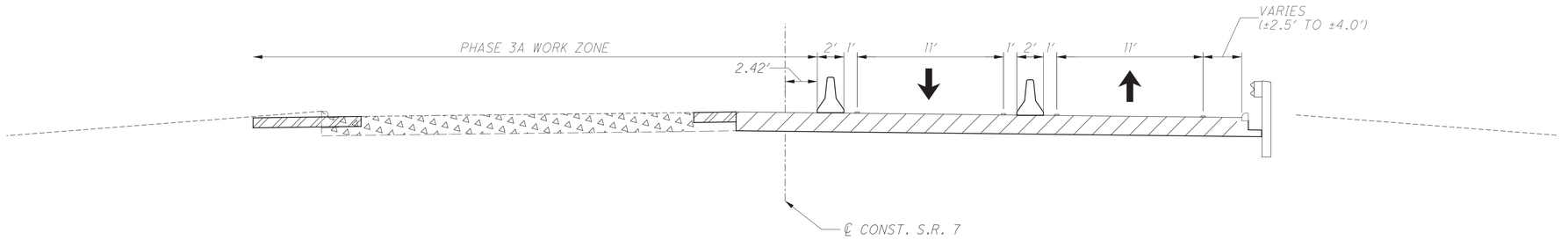
BEL-7-23.60



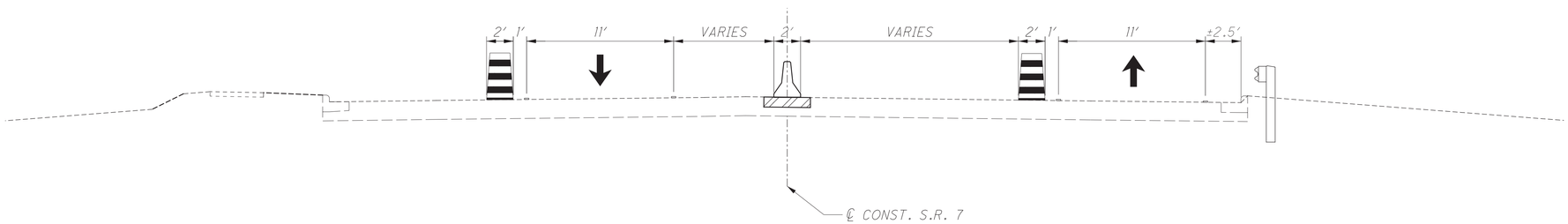
PHASE 3A - STRUCTURE TYPICAL

LEGEND:

- BRIDGE CONSTRUCTION THIS PHASE
- TEMPORARY PAVEMENT CONSTRUCTION PREVIOUS PHASE(S)
- FULL-DEPTH PAVEMENT REPLACEMENT THIS PHASE
- BRIDGE CONSTRUCTION PREVIOUS PHASE
- FULL-DEPTH PAVEMENT REPLACEMENT PREVIOUS PHASE



PHASE 3A - ROADWAY TYPICAL
NEAR STRUCTURE

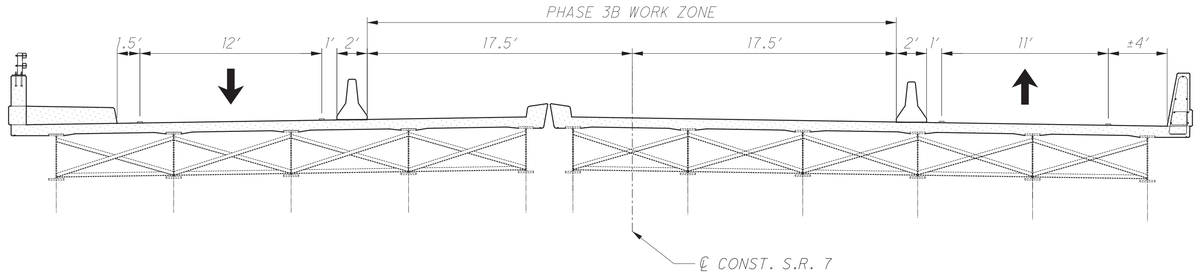


PHASE 3A - ROADWAY TYPICAL
OUTSIDE SOUTHBOUND CROSSOVER

CALCULATED BEO CHECKED NWQ

PHASE 3A - MAINTENANCE OF TRAFFIC TYPICAL SECTIONS

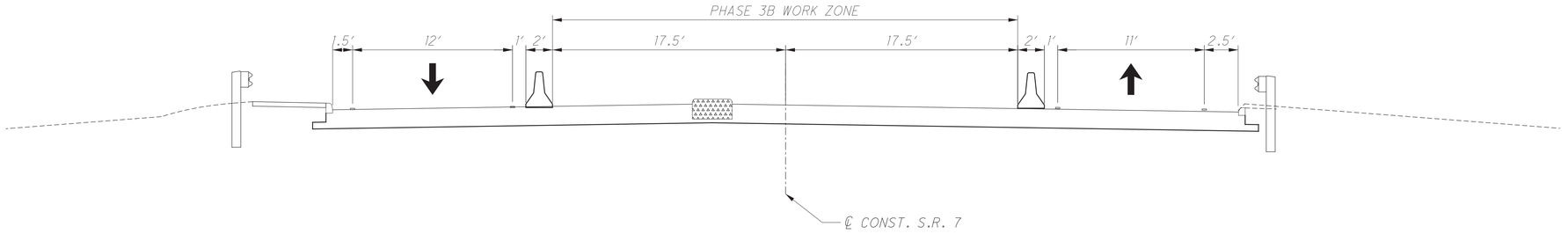
BEL-7-23.60



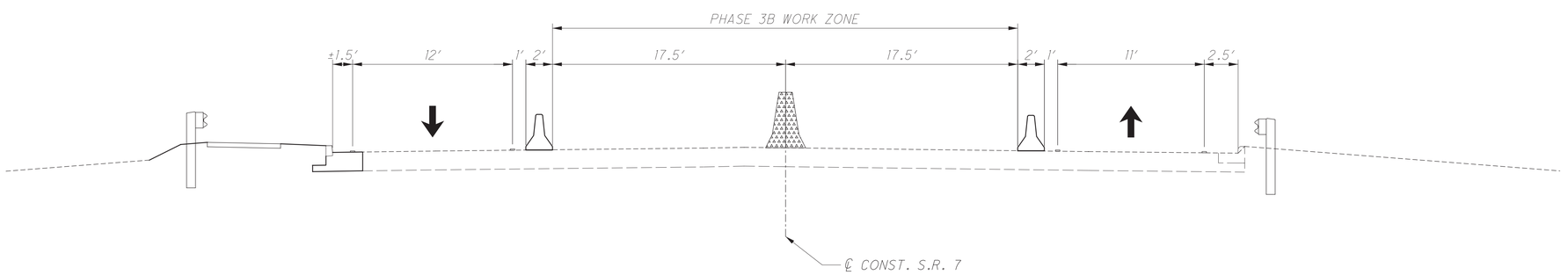
PHASE 3B - STRUCTURE TYPICAL

LEGEND:

- BRIDGE CONSTRUCTION PREVIOUS PHASE
- FULL-DEPTH PAVEMENT REPLACEMENT PREVIOUS PHASE
- MEDIAN ISLAND AND MEDIAN BARRIER REPLACEMENT THIS PHASE



PHASE 3B - ROADWAY TYPICAL
NEAR STRUCTURE



PHASE 3B - ROADWAY TYPICAL
OUTSIDE OF PROJECT LIMITS

CALCULATED BEO
CHECKED NWQ

PHASE 3B - MAINTENANCE OF TRAFFIC TYPICAL SECTIONS

BEL-7-23.60

NOTES:

- ADVANCED SIGNING SHALL BE PLACED PER ST'D MT-95.30

- FOR PHASE 2 ESTIMATED QUANTITIES, SEE SHEET NO. 26

N

0 10 20 40
HORIZONTAL SCALE IN FEET

CALCULATED WCS
CHECKED NWQ

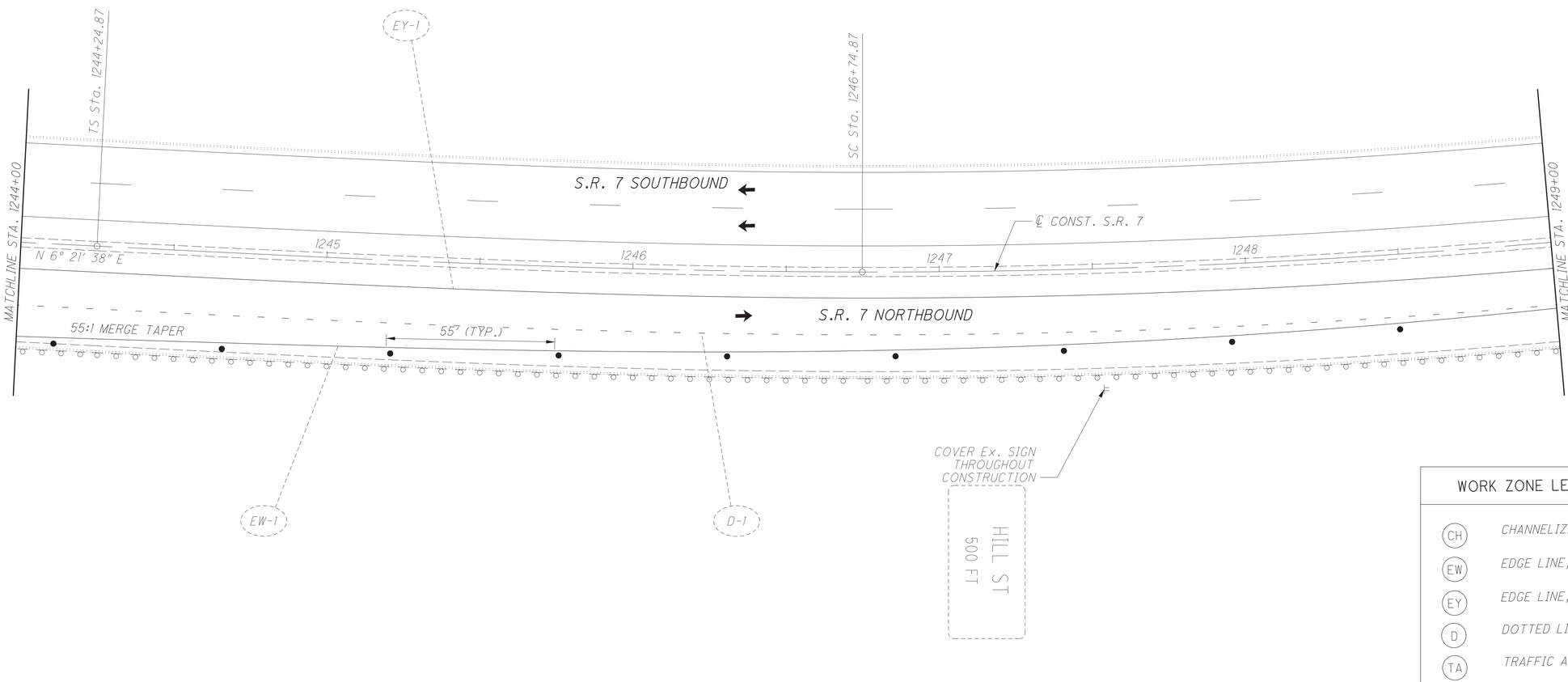
MAINTENANCE OF TRAFFIC

S.R. 7 - STA. 1239+00 TO STA. 1244+00

PHASE 2 - STA. 1239+00 TO STA. 1244+00

BEL-7-23.60

S.R. 7 - SPIRAL CURVE DATA
P.I. Sta. 1248+21.85
Δ = 12° 11′ 19″ (LT)
Dc = 2° 15′ 00″
R = 2,546.48′
Ls = 250.00′
θs = 2° 48′ 45″
LT = 166.69′
ST = 83.35′
x = 249.94′
y = 4.09′
k = 124.99′
p = 1.02′
Δc = 6° 33′ 49″ (LT)
Lc = 291.72′
Ts = 396.98′
E = 15.50′
C = 291.56′
C1 = C2 = 249.97′



WORK ZONE LEGEND

CH	CHANNELIZING LINE
EW	EDGE LINE, WHITE
EY	EDGE LINE, YELLOW
D	DOTTED LINE, WHITE
TA	TRAFFIC ARROW
→	DIRECTION OF TRAVEL
• • •	DRUMS
▭	PORTABLE BARRIER
▨	CONSTRUCTION AREA
	WORK ZONE IMPACT ATTENUATOR

NOTES:

- ADVANCED SIGNING SHALL BE PLACED PER ST'D MT-95.30

- FOR PHASE 2 ESTIMATED QUANTITIES, SEE SHEET NO. 26

N

0 10 20 40
HORIZONTAL SCALE IN FEET

CALCULATED WCS
CHECKED NWQ

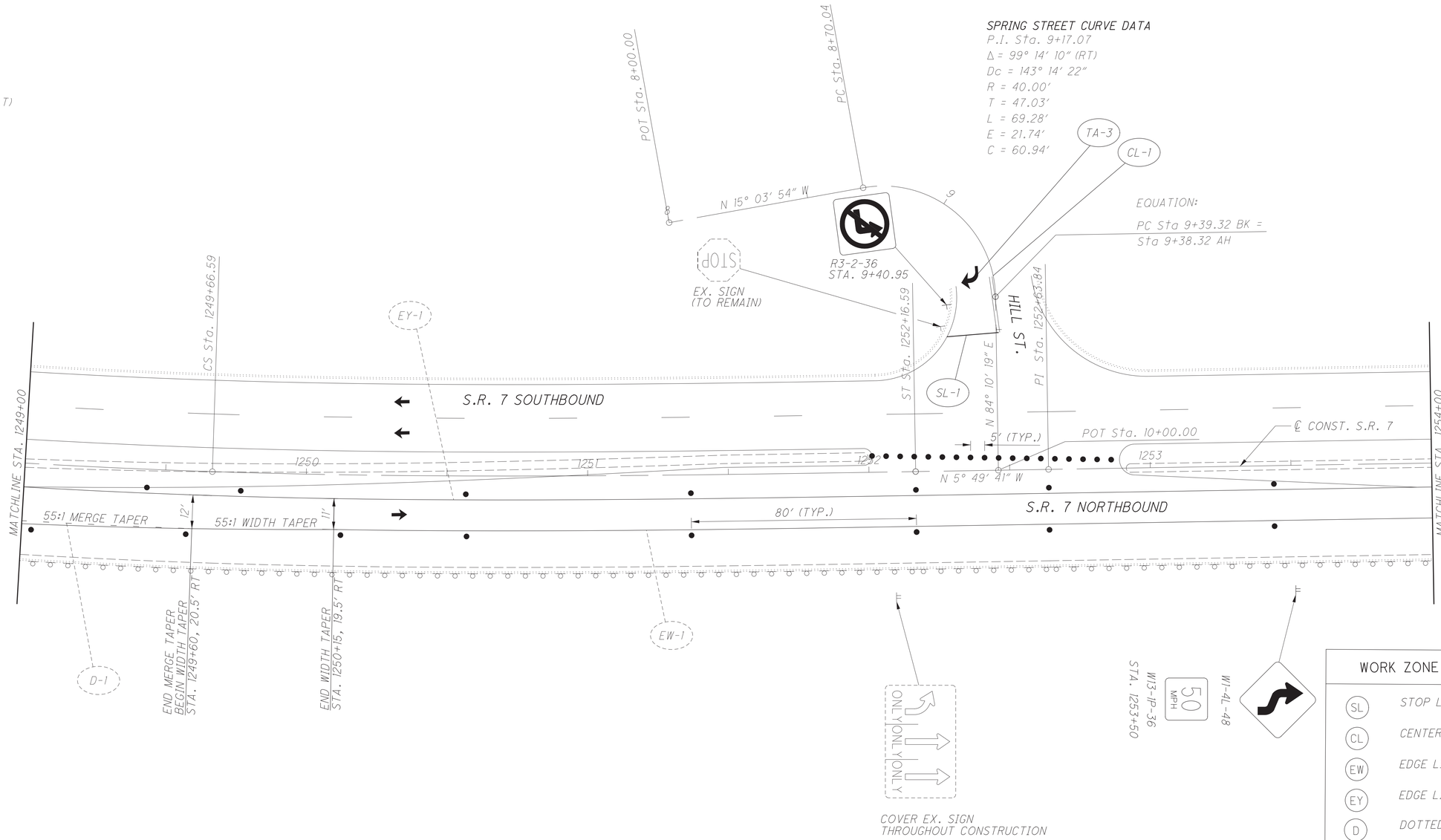
S.R. 7 - MAINTENANCE OF TRAFFIC
PHASE 2 - STA. 1244+00 TO STA. 1249+00

BEL-7-23.60

16
82

S.R. 7 - SPIRAL CURVE DATA
P.I. Sta. 1248+21.85
Δ = 12° 11′ 19″ (LT)
Dc = 2° 15′ 00″
R = 2,546.48′
Ls = 250.00′
θs = 2° 48′ 45″
LT = 166.69′
ST = 83.35′
x = 249.94′
y = 4.09′
k = 124.99′
p = 1.02′
Δc = 6° 33′ 49″ (LT)
Lc = 291.72′
Ts = 396.98′
E = 15.50′
C = 291.56′
C1 = C2 = 249.97′

SPRING STREET CURVE DATA
P.I. Sta. 9+17.07
Δ = 99° 14′ 10″ (RT)
Dc = 143° 14′ 22″
R = 40.00′
T = 47.03′
L = 69.28′
E = 21.74′
C = 60.94′



WORK ZONE LEGEND

- SL — STOP LINE
- CL — CENTER LINE
- EW — EDGE LINE, WHITE
- EY — EDGE LINE, YELLOW
- D — DOTTED LINE, WHITE
- TA — TRAFFIC ARROW
- DIRECTION OF TRAVEL
- DRUMS
- PORTABLE BARRIER
- CONSTRUCTION AREA
- WORK ZONE IMPACT ATTENUATOR

NOTES:

- ADVANCED SIGNING SHALL BE PLACED PER ST'D MT-95.30

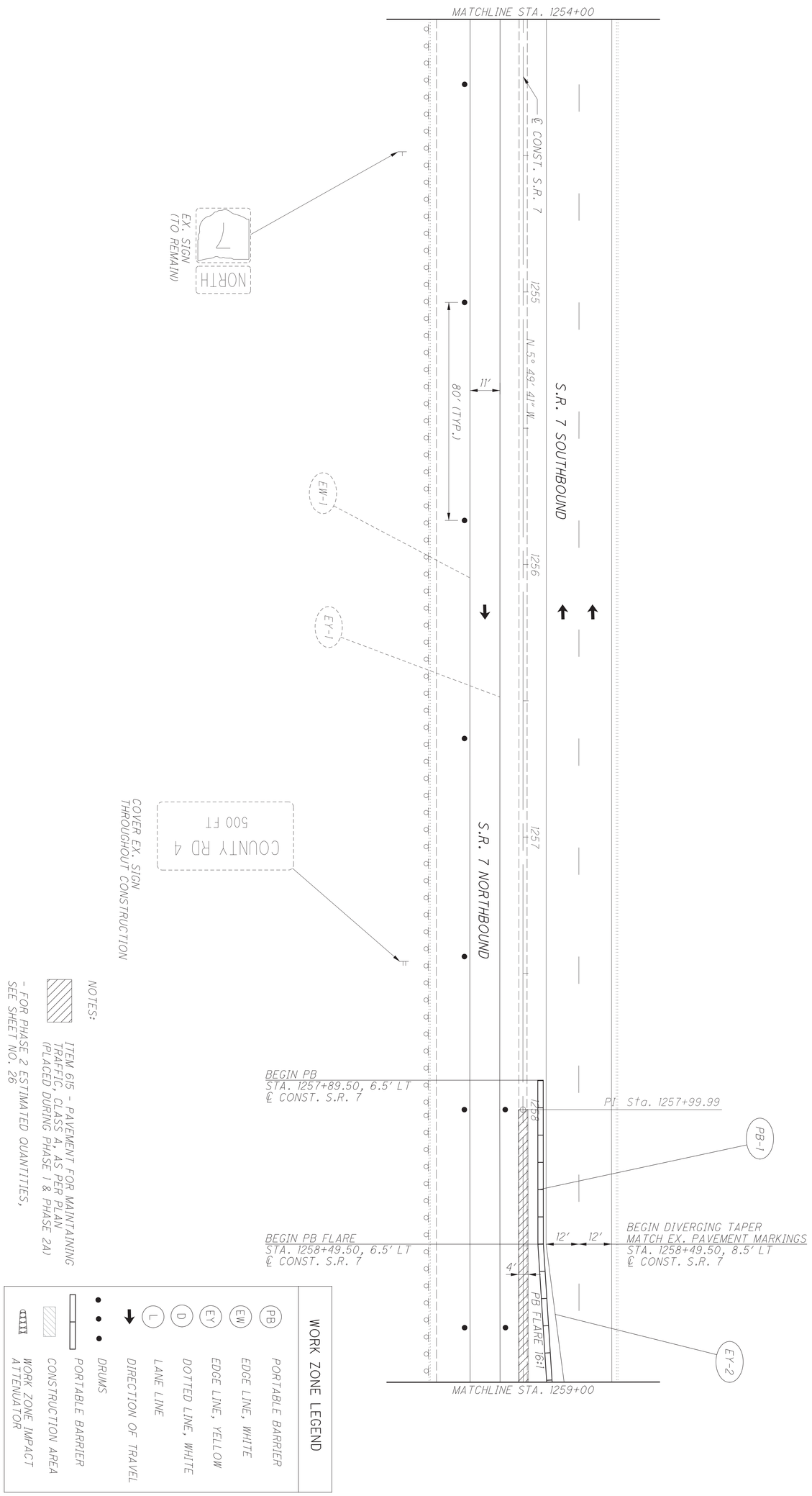
- FOR PHASE 2 ESTIMATED QUANTITIES, SEE SHEET NO. 26

HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED WCS
CHECKED NWQ

S.R. 7 - MAINTENANCE OF TRAFFIC
PHASE 2 - STA. 1249+00 TO STA. 1254+00

BEL-7-23.60

17
82



NOTES:

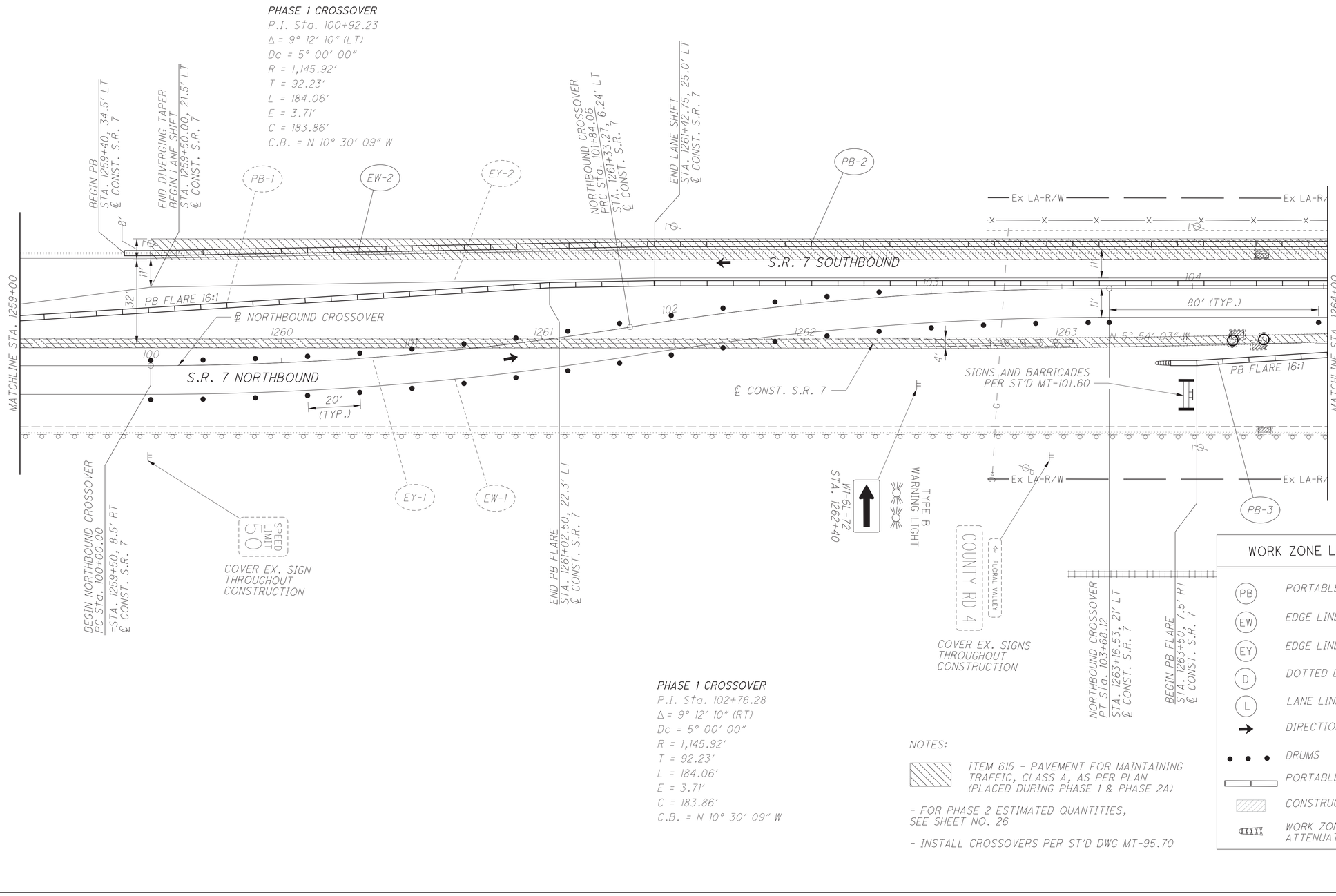
ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN (PLACED DURING PHASE 1 & PHASE 2A)

- FOR PHASE 2 ESTIMATED QUANTITIES, SEE SHEET NO. 26

WORK ZONE LEGEND

- (PB) PORTABLE BARRIER
- (EW) EDGE LINE, WHITE
- (EY) EDGE LINE, YELLOW
- (D) DOTTED LINE, WHITE
- (L) LANE LINE
- DIRECTION OF TRAVEL
- DRUMS
- PORTABLE BARRIER
- CONSTRUCTION AREA
- WORK ZONE IMPACT ATTENUATOR

18 / 82	BEL-7-23.60	S.R. 7 - MAINTENANCE OF TRAFFIC PHASE 2 - STA. 1254 TO STA. 1259+00	CALCULATED WCS CHECKED NWQ	0 20 10 40 HORIZONTAL SCALE IN FEET



HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED WCS
CHECKED NWQ

S.R. 7 - MAINTENANCE OF TRAFFIC
PHASE 2 - STA. 1259+00 TO STA. 1264+00

BEL-7-23.60

19
82

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NOTES:

ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN (PLACED DURING PHASE 1 & PHASE 2A)

- FOR PHASE 2 ESTIMATED QUANTITIES, SEE SHEET NO. 26

- INSTALL CROSSOVERS PER ST'D DWG MT-95.70

WORK ZONE LEGEND

PB	PORTABLE BARRIER
EW	EDGE LINE, WHITE
EY	EDGE LINE, YELLOW
D	DOTTED LINE, WHITE
TA	TRAFFIC ARROW
SL	STOP LINE
CL	CENTER LINE
→	DIRECTION OF TRAVEL
• • •	DRUMS
	PORTABLE BARRIER
	CONSTRUCTION AREA
	WORK ZONE IMPACT ATTENUATOR

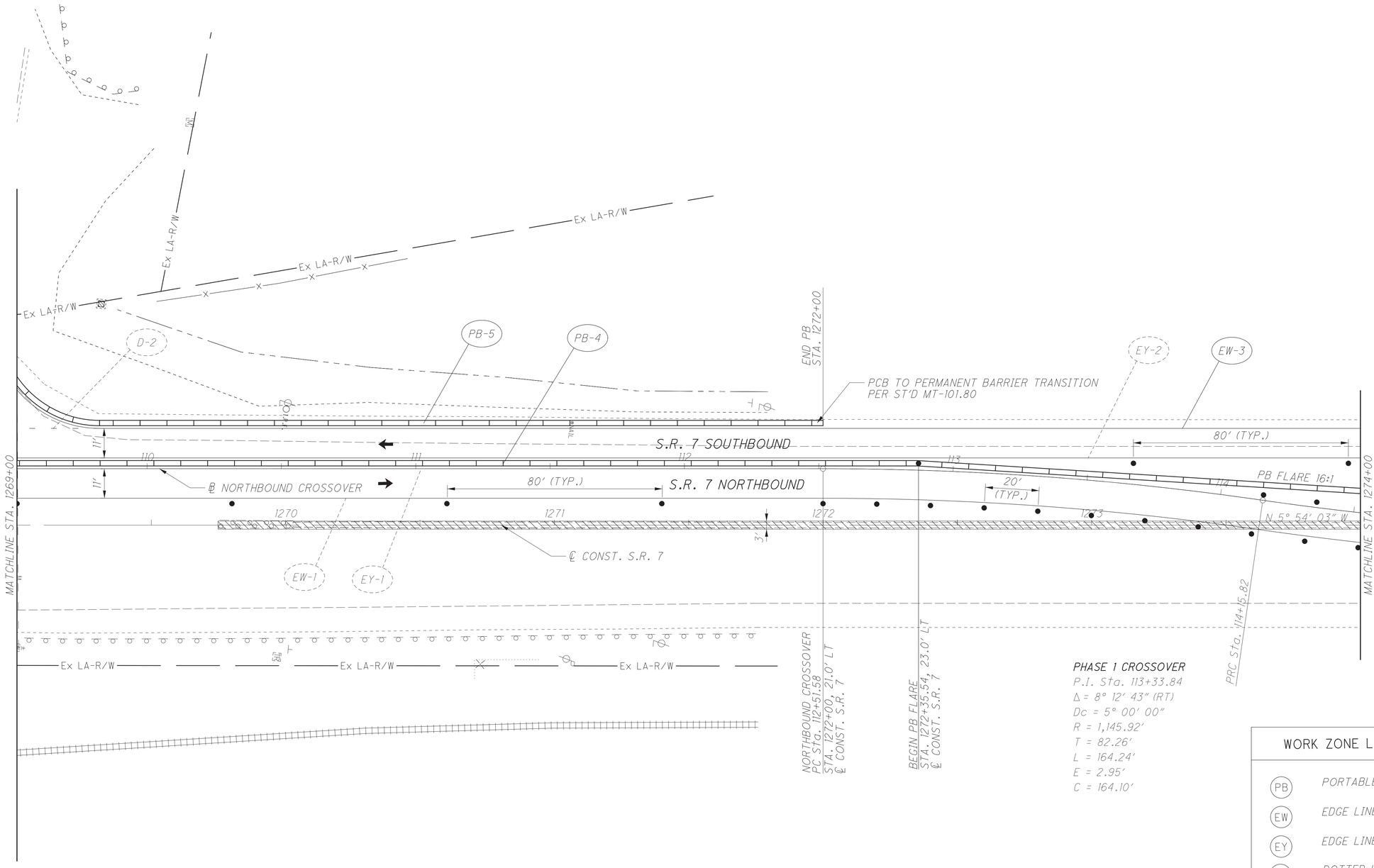
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED WCS
CHECKED NWQ

S.R. 7 - MAINTENANCE OF TRAFFIC
PHASE 2 - STA. 1264+00 TO STA. 1269+00

BEL-7-23.60

20
82



PHASE 1 CROSSOVER
P.I. Sta. 113+33.84
Δ = 8° 12' 43" (RT)
Dc = 5° 00' 00"
R = 1,145.92'
T = 82.26'
L = 164.24'
E = 2.95'
C = 164.10'

NOTES:

ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN (PLACED DURING PHASE 1 & PHASE 2A)

- FOR PHASE 2 ESTIMATED QUANTITIES, SEE SHEET NO. 26

- INSTALL CROSSOVERS PER ST'D DWG MT-95.70

WORK ZONE LEGEND

- (PB) PORTABLE BARRIER
- (EW) EDGE LINE, WHITE
- (EY) EDGE LINE, YELLOW
- (D) DOTTED LINE, WHITE
- (L) LANE LINE
- DIRECTION OF TRAVEL
- DRUMS
- PORTABLE BARRIER
- CONSTRUCTION AREA
- WORK ZONE IMPACT ATTENUATOR

N

0 10 20 40
HORIZONTAL SCALE IN FEET

CALCULATED WCS
CHECKED NWQ

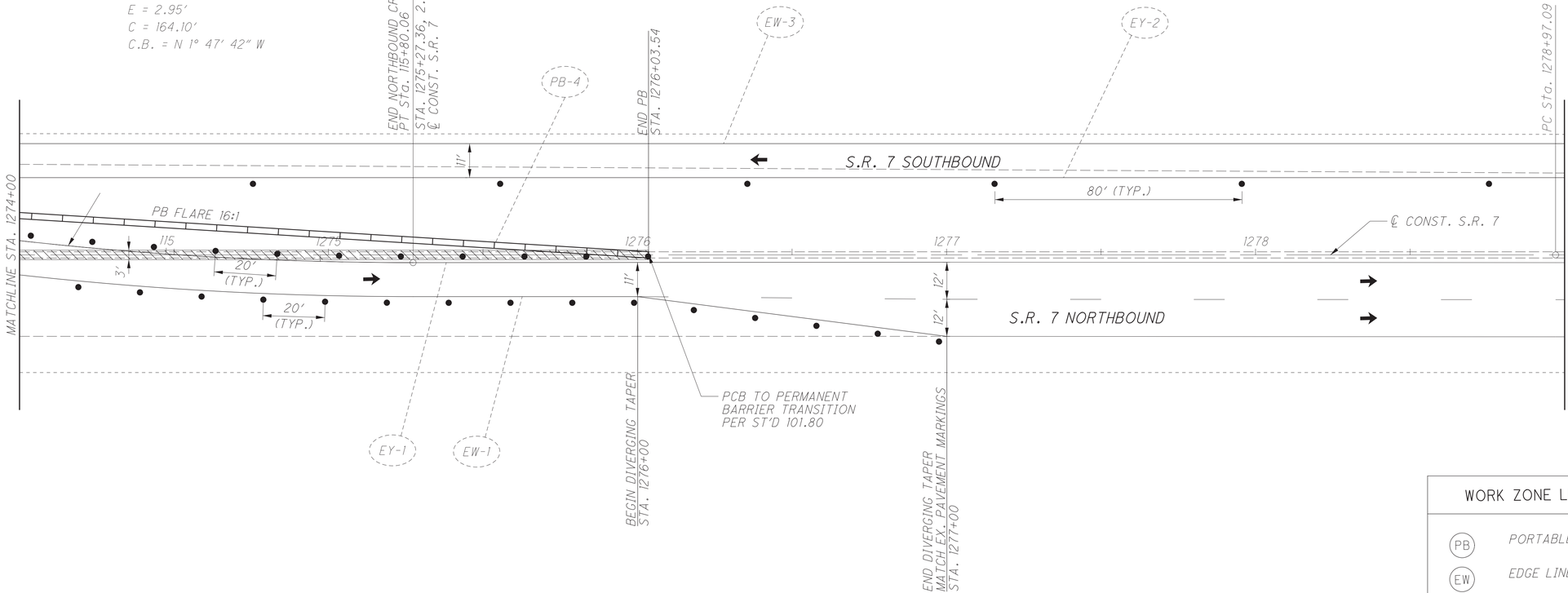
S.R. 7 - MAINTENANCE OF TRAFFIC
PHASE 2 - STA. 1269+00 TO STA. 1274+00

BEL-7-23.60

21
82

PHASE 1 CROSSOVER

P.I. Sta. 114+98.08
Δ = 8° 12' 43" (LT)
Dc = 5° 00' 00"
R = 1,145.92'
T = 82.26'
L = 164.24'
E = 2.95'
C = 164.10'
C.B. = N 1° 47' 42" W



WORK ZONE LEGEND

PB	PORTABLE BARRIER
EW	EDGE LINE, WHITE
EY	EDGE LINE, YELLOW
D	DOTTED LINE, WHITE
L	LANE LINE
→	DIRECTION OF TRAVEL
• • •	DRUMS
	PORTABLE BARRIER
	CONSTRUCTION AREA
	WORK ZONE IMPACT ATTENUATOR

NOTES:

ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN (PLACED DURING PHASE 1 & PHASE 2A)

- ADVANCED SIGNING SHALL BE PLACED PER ST'D MT-95.30

- FOR PHASE 2 ESTIMATED QUANTITIES, SEE SHEET NO. 26

N

0 10 20 40
HORIZONTAL SCALE IN FEET

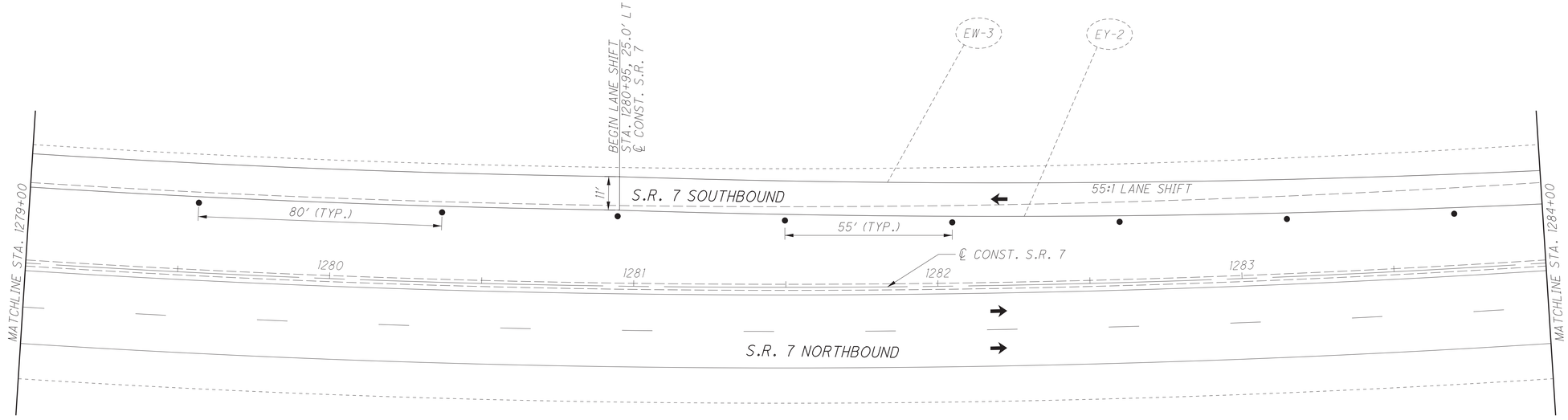
CALCULATED WCS
CHECKED NWQ

S.R. 7 - MAINTENANCE OF TRAFFIC
PHASE 2 - STA. 1274+00 TO STA. 1279+00

BEL-7-23.60

22
82

S.R. 7 CURVE DATA
P.I. Sta. 1283+25.55
Δ = 12° 31′ 05″ (LT)
Dc = 1° 28′ 00″
R = 3,906.53′
T = 428.46′
L = 853.50′
E = 23.43′
C = 851.80′



WORK ZONE LEGEND

CH	CHANNELIZING LINE
EW	EDGE LINE, WHITE
EY	EDGE LINE, YELLOW
D	DOTTED LINE, WHITE
L	LANE LINE
→	DIRECTION OF TRAVEL
• • •	DRUMS
	PORTABLE BARRIER
	CONSTRUCTION AREA
	WORK ZONE IMPACT ATTENUATOR

NOTES:

- ADVANCED SIGNING SHALL BE PLACED PER ST'D MT-95.30

- FOR PHASE 2 ESTIMATED QUANTITIES, SEE SHEET NO. 26

N

0 10 20 40
HORIZONTAL SCALE IN FEET

CALCULATED WCS
CHECKED NWQ

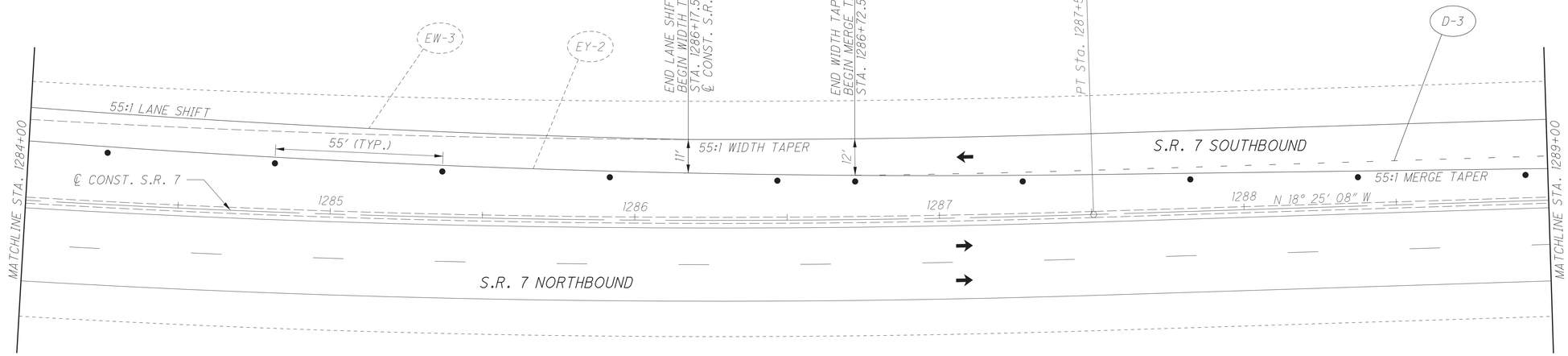
S.R. 7 - MAINTENANCE OF TRAFFIC
PHASE 2 - STA. 1279+00 TO STA. 1284+00

BEL-7-23.60

23
82

S.R. 7 CURVE DATA

P.I. Sta. 1283+25.55
Δ = 12° 31′ 05″ (LT)
Dc = 1° 28′ 00″
R = 3,906.53′
T = 428.46′
L = 853.50′
E = 23.43′
C = 851.80′



WORK ZONE LEGEND

- (CH) CHANNELIZING LINE
- (EW) EDGE LINE, WHITE
- (EY) EDGE LINE, YELLOW
- (D) DOTTED LINE, WHITE
- (L) LANE LINE
- DIRECTION OF TRAVEL
- DRUMS
- PORTABLE BARRIER
- CONSTRUCTION AREA
- WORK ZONE IMPACT ATTENUATOR

NOTES:

- ADVANCED SIGNING SHALL BE PLACED PER ST'D MT-95.30

- FOR PHASE 2 ESTIMATED QUANTITIES, SEE SHEET NO. 26

N

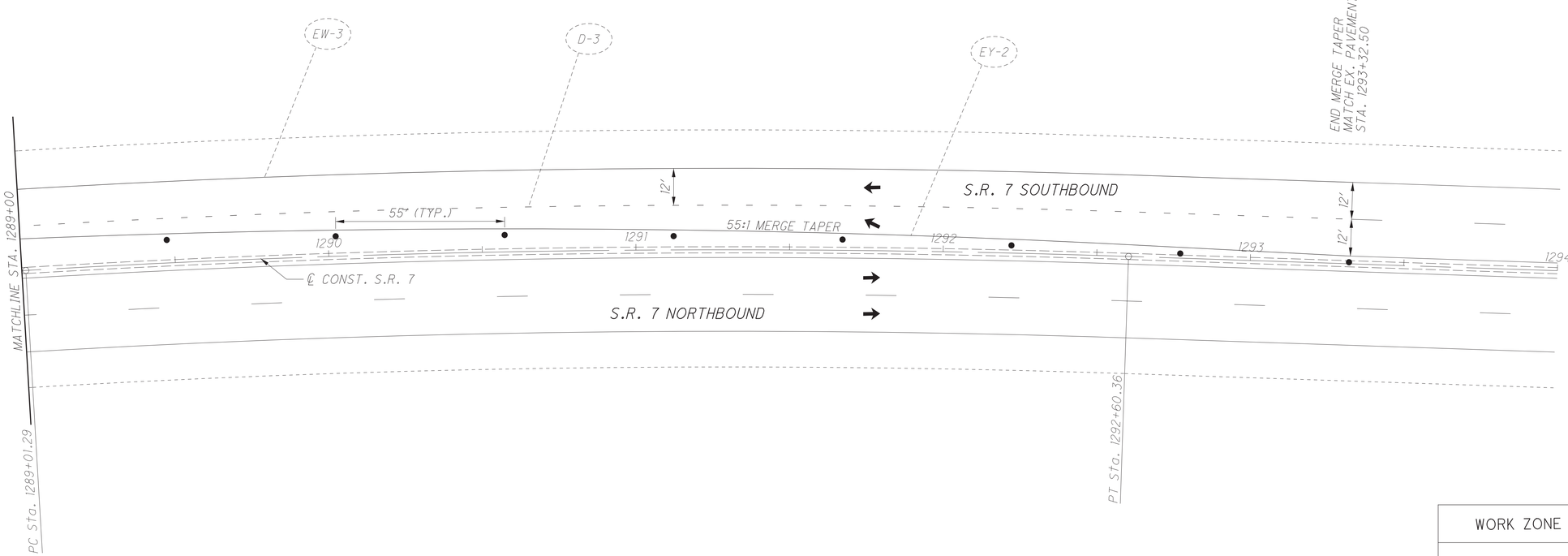
0 10 20 40
HORIZONTAL SCALE IN FEET

CALCULATED WCS
CHECKED NWQ

S.R. 7 - MAINTENANCE OF TRAFFIC
PHASE 2 - STA. 1284+00 TO STA. 1289+00

BEL-7-23.60

S.R. 7 CURVE DATA
P.I. Sta. 1290+80.95
Δ = 5° 15′ 59″ (RT)
Dc = 1° 28′ 00″
R = 3,906.53′
T = 179.66′
L = 359.07′
E = 4.13′
C = 358.94′
C.B. = N 15° 47′ 09″ W



WORK ZONE LEGEND	
CH	CHANNELIZING LINE
EW	EDGE LINE, WHITE
EY	EDGE LINE, YELLOW
D	DOTTED LINE, WHITE
L	LANE LINE
→	DIRECTION OF TRAVEL
• • •	DRUMS
	PORTABLE BARRIER
	CONSTRUCTION AREA
	WORK ZONE IMPACT ATTENUATOR

NOTES:

- ADVANCED SIGNING SHALL BE PLACED PER ST'D MT-95.30

- FOR PHASE 2 ESTIMATED QUANTITIES, SEE SHEET NO. 26

N

0 10 20 40
HORIZONTAL SCALE IN FEET

CALCULATED WCS
CHECKED NWQ

S.R. 7 - MAINTENANCE OF TRAFFIC
PHASE 2 - STA. 1289+00 TO STA. 1294+00

BEL-7-23.60

25
82

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REF NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	614 WORK ZONE EDGE LINE, CLASS I, 642 PAINT (YELLOW) MI	614 WORK ZONE EDGE LINE, CLASS I, 642 PAINT (WHITE) MI	614 WORK ZONE DOTTED LINE, CLASS I, 642 PAINT FT	614 OBJECT MARKER, ONE-WAY EA	614 WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL) EA	614 BARRIER REFLECTOR (TYPE B1) EA		614 WORK ZONE ARROW, CLASS I, 642 PAINT (RIGHT TURN) EA	614 WORK ZONE STOP LINE CLASS I, 642 PAINT FT	614 WORK ZONE CENTER LINE CLASS I, 642 PAINT MI		622 GLARE SCREEN FT	622 PORTABLE BARRIER, 32" FT	622 PORTABLE BARRIER, 32", BRIDGE MOUNTED FT	622 BARRIER MISC: PORTABLE BARRIER TO PERMANENT BARRIER TRANSITION EA
		ALL STATIONS REFERENCE ℄ CONST. S.R. 7 UNLESS OTHERWISE NOTED.																	
EW-1	15-22	1243+00	1277+00	RT		0.65													
EW-2	19-20	1259+50	℄C.R.4 9+23.66	LT		0.18													
EW-3	20-25	℄C.R.4 9+16.23	1293+32.50	LT		0.47													
EY-1	15-22	1243+00	1277+00	RT	0.64														
EY-2	18-25	1258+49.50	1293+32.50	LT	0.66														
D-1	15-17	1243+00	1249+60	RT			661												
D-2	20-21	1268+13.44	1269+30.71	LT			117												
D-3	24-25	1286+72.50	1293+32.50	LT			661												
TA-3	17	℄HILL ST. 9+32		RT								1							
TA-6	20	℄CONST. C.R.4 8+75		RT								1							
TA-7	20	℄CONST. C.R.4 9+35		RT								1							
SL-1	17	℄HILL ST. 9+51		RT									18						
SL-2	20	℄C.R.4 9+55		RT									31						
CL-1	17	℄HILL ST. 9+51	℄HILL ST. 9+32	℄										0.005					
CL-2	20	℄C.R.4 8+67.59	℄C.R.4 9+55	℄										0.015					
PB-1	18-20	1257+89.50	1258+34.09	LT					1	42						1045	915	130	
PB-2	19-20	1259+40	℄C.R.4 9+35	LT				19	1	17							797	130	
PB-3	19-20	1263+40	1269+00	RT&LT					1	12						560	430	130	
PB-4	20-22	1268+90.94	1276+03.54	LT					1	30						713	713		1
PB-5	20-21	℄C.R.4 9+16.23	1272+00	LT				7		7							333		1
			SUBTOTAL		1.30	1.30						3							
TOTALS CARRIED TO GENERAL SUMMARY					2.60		1439	26	4	108		3	49	0.02		2318	3188	390	2

CALCULATED WCS
CHECKED NWQ

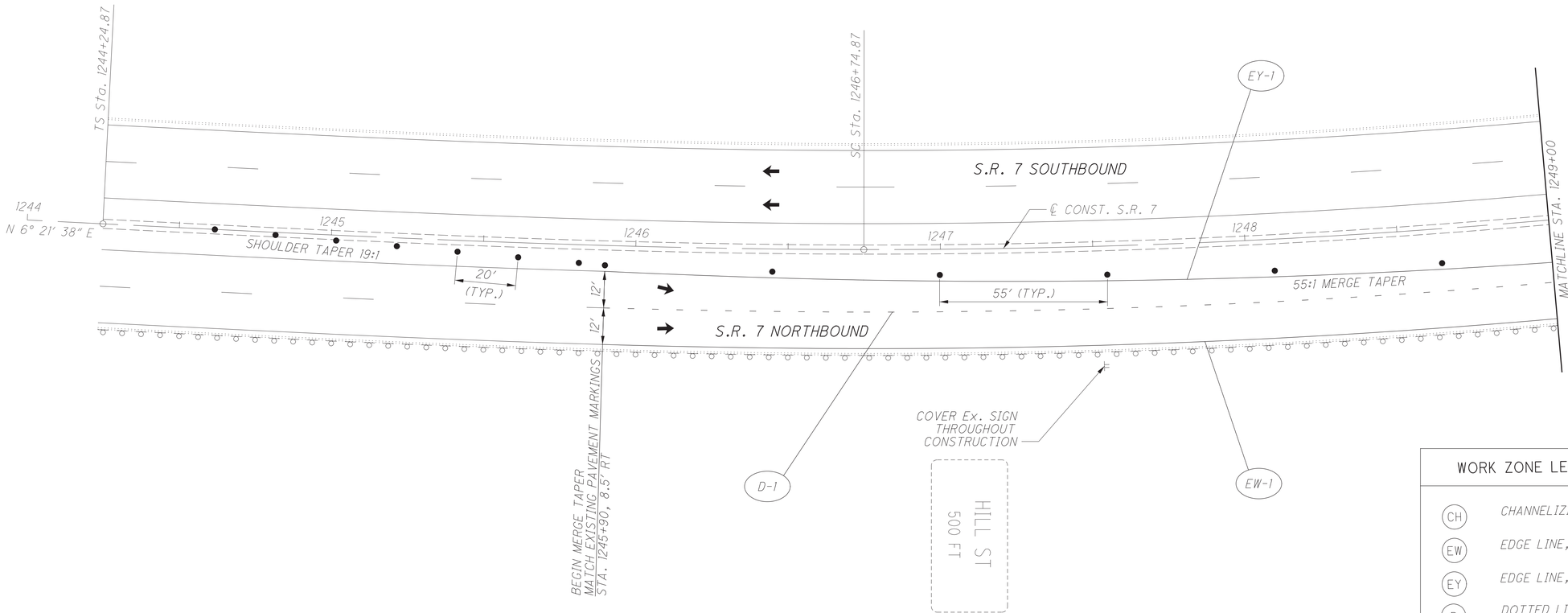
MAINTENANCE OF TRAFFIC
PHASE 2 - ESTIMATED QUANTITIES

BEL-7-23.60

26
82

S.R. 7 - SPIRAL CURVE DATA

P.I. Sta. 1248+21.85
Δ = 12° 11′ 19″ (LT)
Dc = 2° 15′ 00″
R = 2,546.48′
Ls = 250.00′
θs = 2° 48′ 45″
LT = 166.69′
ST = 83.35′
x = 249.94′
y = 4.09′
k = 124.99′
p = 1.02′
Δc = 6° 33′ 49″ (LT)
Lc = 291.72′
Ts = 396.98′
E = 15.50′
C = 291.56′
C1 = C2 = 249.97′



WORK ZONE LEGEND

CH	CHANNELIZING LINE
EW	EDGE LINE, WHITE
EY	EDGE LINE, YELLOW
D	DOTTED LINE, WHITE
TA	TRAFFIC ARROW
	DIRECTION OF TRAVEL
	DRUMS
	PORTABLE BARRIER
	CONSTRUCTION AREA
	WORK ZONE IMPACT ATTENUATOR

NOTES:

- ADVANCED SIGNING SHALL BE PLACED PER ST'D MT-95.30

- FOR ESTIMATED QUANTITIES SEE SHEET NO. 38

N

0 10 20 40
HORIZONTAL SCALE IN FEET

CALCULATED WCS
CHECKED NWQ

S.R. 7 - MAINTENANCE OF TRAFFIC
PHASE 3 - STA. 1244+00 TO STA. 1249+00

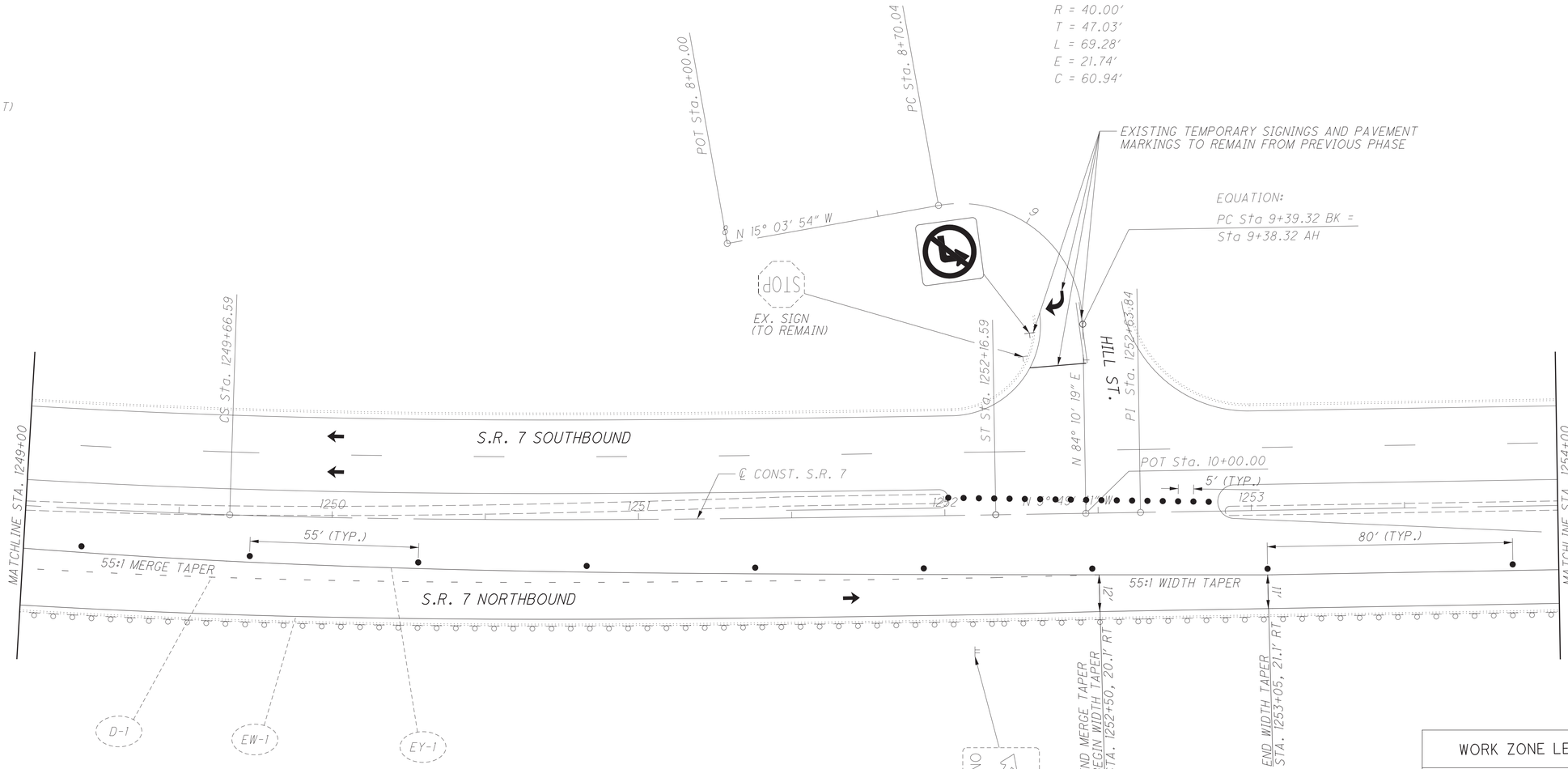
BEL-7-23.60

S.R. 7 - SPIRAL CURVE DATA

P.I. Sta. 1248+21.85
Δ = 12° 11′ 19″ (LT)
Dc = 2° 15′ 00″
R = 2,546.48′
Ls = 250.00′
θs = 2° 48′ 45″
LT = 166.69′
ST = 83.35′
x = 249.94′
y = 4.09′
k = 124.99′
p = 1.02′
Δc = 6° 33′ 49″ (LT)
Lc = 291.72′
Ts = 396.98′
E = 15.50′
C = 291.56′
C1 = C2 = 249.97′

SPRING STREET CURVE DATA

P.I. Sta. 9+17.07
Δ = 99° 14′ 10″ (RT)
Dc = 143° 14′ 22″
R = 40.00′
T = 47.03′
L = 69.28′
E = 21.74′
C = 60.94′



COVER EX. SIGN
THROUGHOUT CONSTRUCTION

NOTES:

- FOR ESTIMATED QUANTITIES SEE SHEET NO. 38

WORK ZONE LEGEND

CL	CENTER LINE
EW	EDGE LINE, WHITE
EY	EDGE LINE, YELLOW
D	DOTTED LINE, WHITE
SL	STOP LINE
TA	TRAFFIC ARROW
→	DIRECTION OF TRAVEL
• • •	DRUMS
	PORTABLE BARRIER
	CONSTRUCTION AREA
	WORK ZONE IMPACT ATTENUATOR

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED WCS
CHECKED NWQ

S.R. 7 - MAINTENANCE OF TRAFFIC
PHASE 3 - STA. 1249+00 TO STA. 1254+00

BEL-7-23.60

28
82

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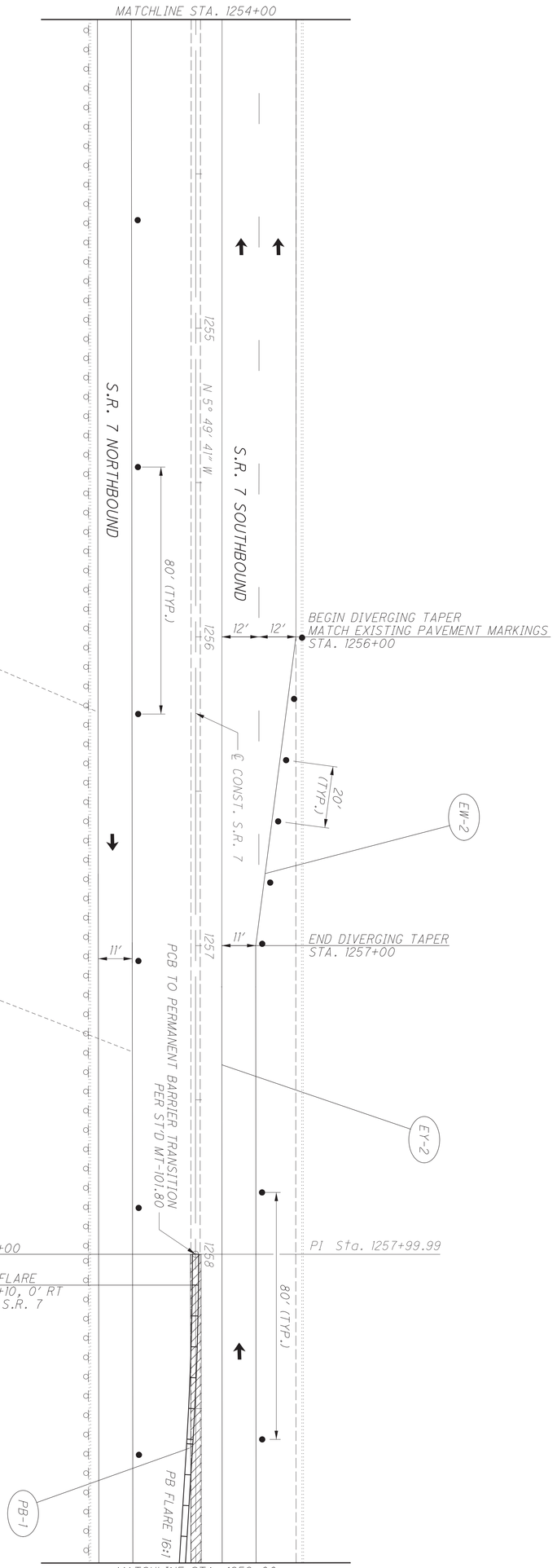


NOTES:

ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN (PLACED DURING PHASE 1 & PHASE 2A)

- FOR ESTIMATED QUANTITIES SEE SHEET NO. 38

WORK ZONE LEGEND

- (PB) PORTABLE BARRIER
- (EW) EDGE LINE, WHITE
- (EY) EDGE LINE, YELLOW
- (D) DOTTED LINE, WHITE
- (L) LANE LINE
- DIRECTION OF TRAVEL
- DRUMS
- PORTABLE BARRIER
- CONSTRUCTION AREA
- WORK ZONE IMPACT ATTENUATOR

29
82

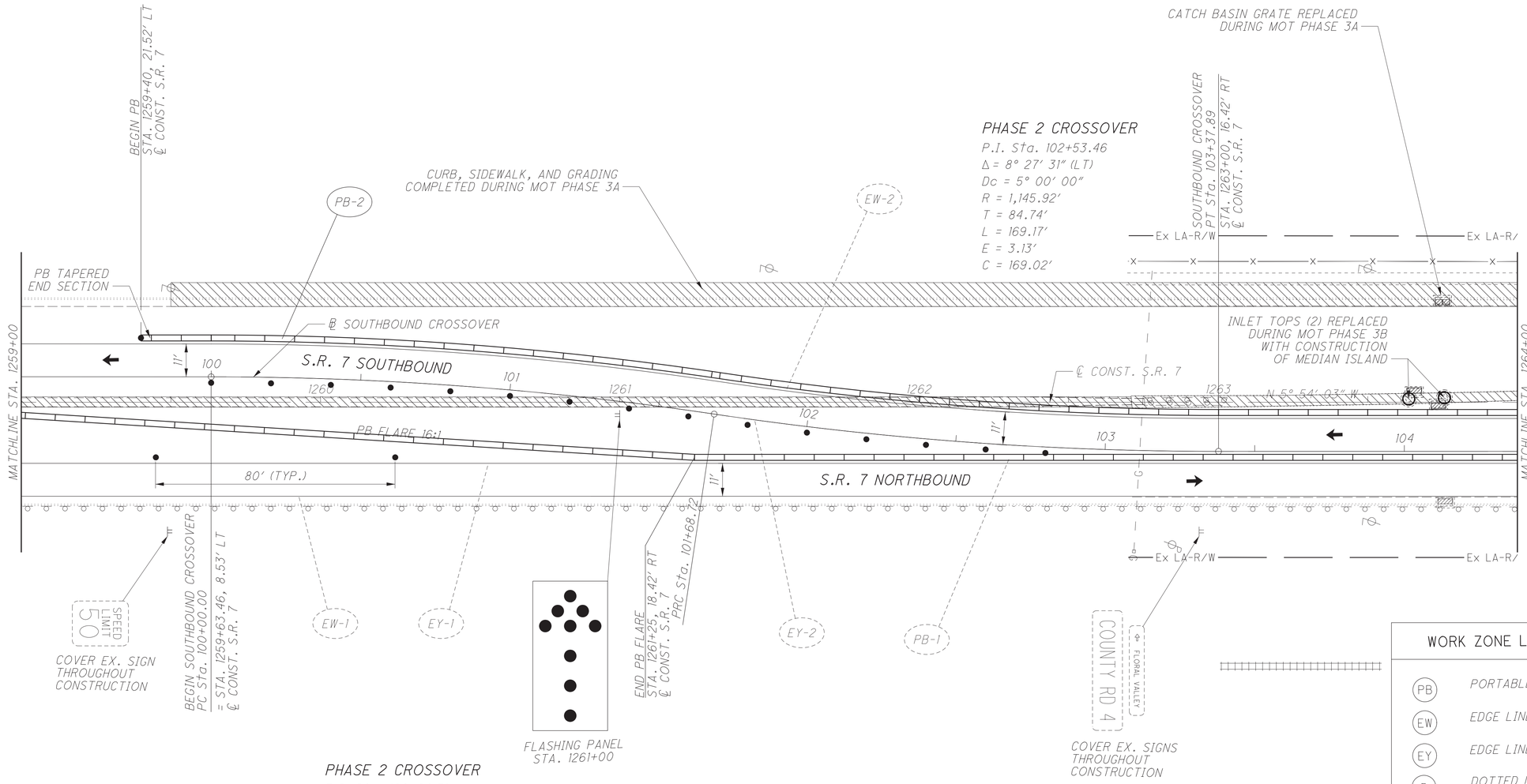
BEL-7-23.60

S.R. 7 - MAINTENANCE OF TRAFFIC
PHASE 3 - STA. 1254+00 TO STA. 1259+00

CALCULATED WCS
CHECKED NWQ

0 20
10 40
HORIZONTAL SCALE IN FEET

N



PHASE 2 CROSSOVER
P.I. Sta. 100+84.51
Δ = 8° 26' 09" (RT)
Dc = 5° 00' 00"
R = 1,145.92'
T = 84.51'
L = 168.72'
E = 3.11'
C = 168.57'

NOTES:

ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN (PLACED DURING PHASE 1 & PHASE 2A)

- FOR ESTIMATED QUANTITIES SEE SHEET NO. 38

- INSTALL CROSSOVERS PER ST'D DWG MT-95.70

WORK ZONE LEGEND

- (PB) PORTABLE BARRIER
- (EW) EDGE LINE, WHITE
- (EY) EDGE LINE, YELLOW
- (D) DOTTED LINE, WHITE
- (L) LANE LINE
- DIRECTION OF TRAVEL
- DRUMS
- PORTABLE BARRIER
- CONSTRUCTION AREA
- WORK ZONE IMPACT ATTENUATOR

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED WCS
CHECKED NWQ

S.R. 7 - MAINTENANCE OF TRAFFIC
PHASE 3 - STA. 1259+00 TO STA. 1264+00

BEL-7-23.60

30
82

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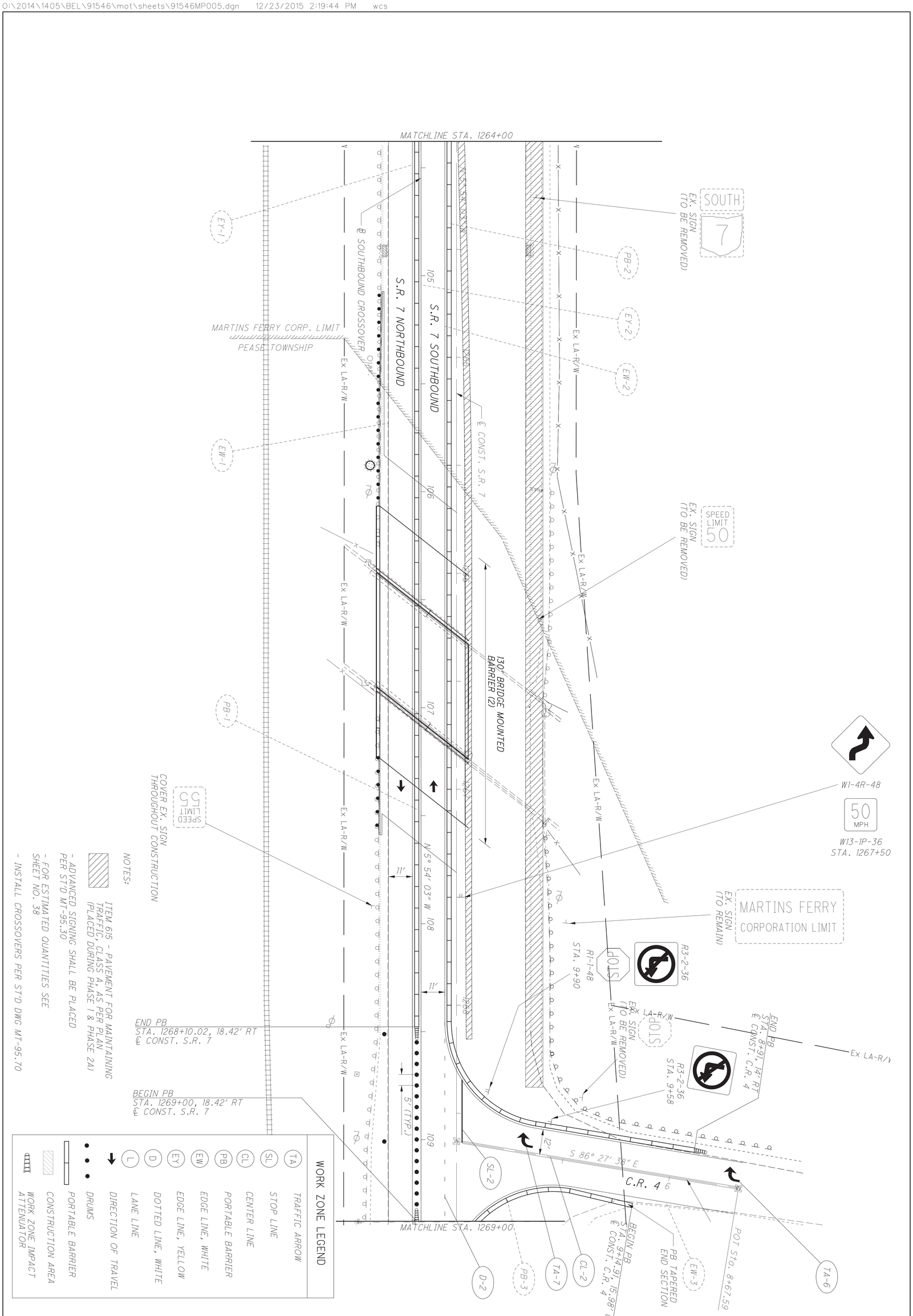
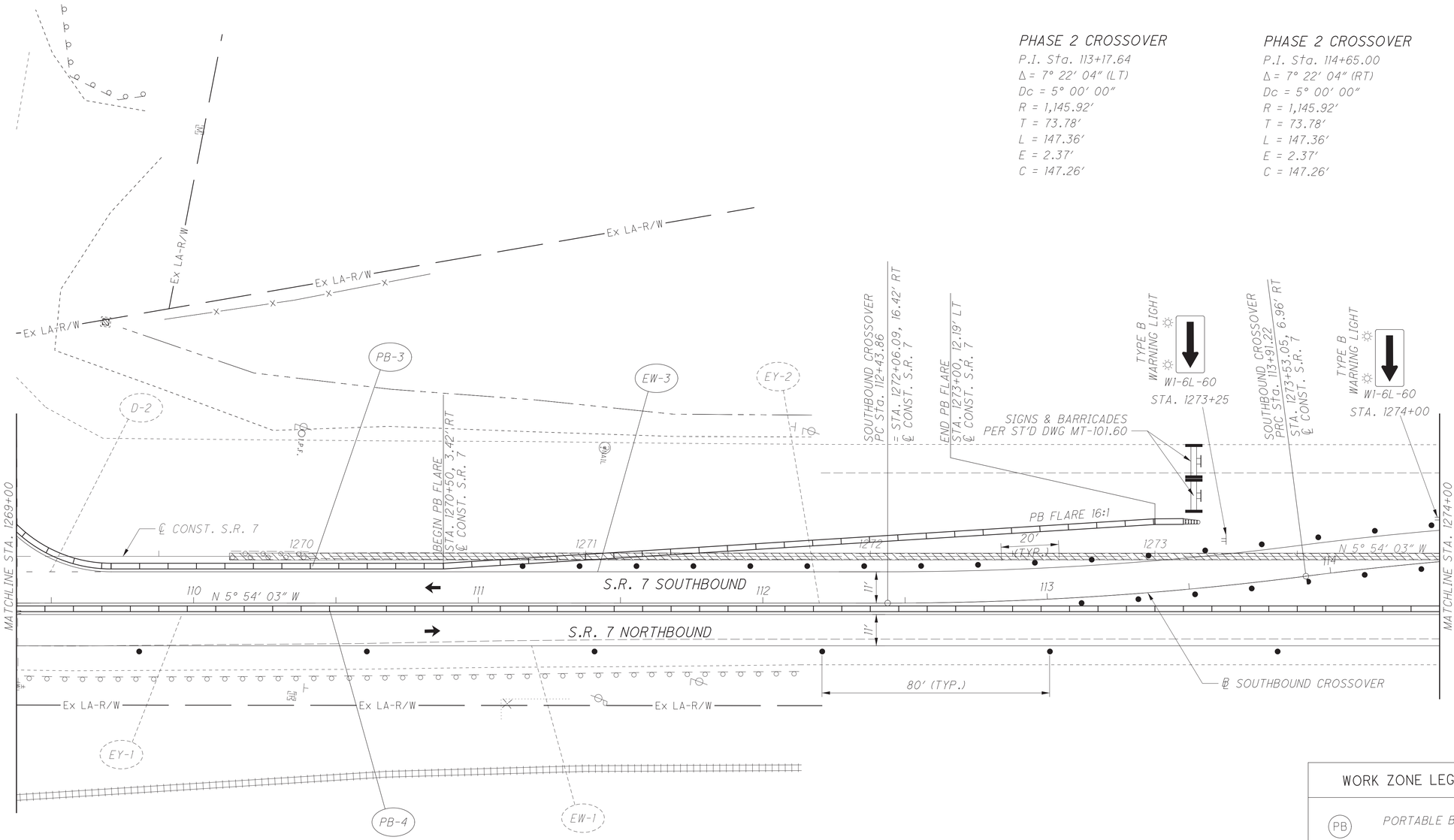


31 / 82	BEL-7-23.60	S.R. 7 - MAINTENANCE OF TRAFFIC PHASE 3 - STA. 1264+00 TO STA. 1269+00	CALCULATED WCS CHECKED NWQ	0 20 10 40 HORIZONTAL SCALE IN FEET



NOTES:

ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN (PLACED DURING PHASE 1 & PHASE 2A)

- FOR ESTIMATED QUANTITIES SEE SHEET NO. 38

- INSTALL CROSSOVERS PER ST'D DWG MT-95.70

WORK ZONE LEGEND

- (PB) PORTABLE BARRIER
- (EW) EDGE LINE, WHITE
- (EY) EDGE LINE, YELLOW
- (D) DOTTED LINE, WHITE
- (L) LANE LINE
- DIRECTION OF TRAVEL
- DRUMS
- PORTABLE BARRIER
- CONSTRUCTION AREA
- WORK ZONE IMPACT ATTENUATOR

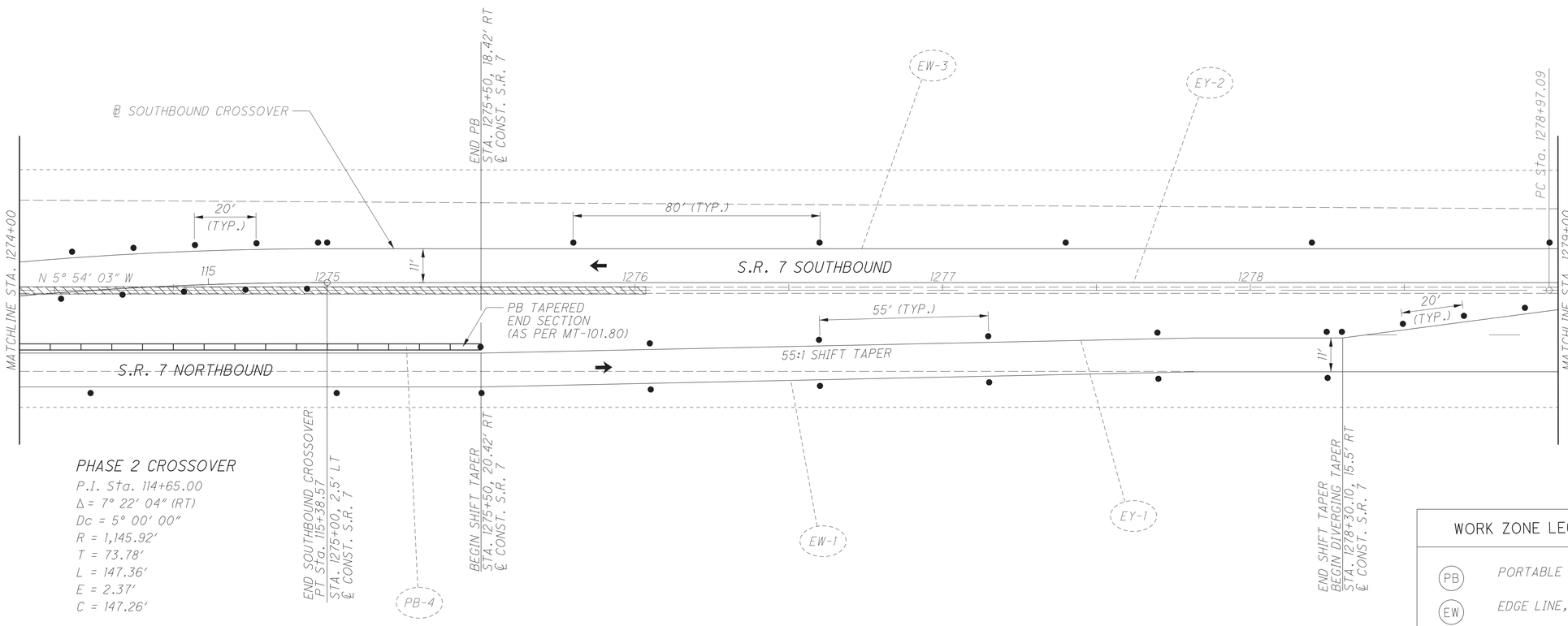
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED WCS
CHECKED NWQ

S.R. 7 - MAINTENANCE OF TRAFFIC
PHASE 3 - STA. 1269+00 TO STA. 1274+00

BEL-7-23.60

32
82



PHASE 2 CROSSOVER

P.I. Sta. 114+65.00
Δ = 7° 22' 04" (RT)
Dc = 5° 00' 00"
R = 1,145.92'
T = 73.78'
L = 147.36'
E = 2.37'
C = 147.26'

NOTES:

ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN (PLACED DURING PHASE 1 & PHASE 2A)

- FOR ESTIMATED QUANTITIES SEE SHEET NO. 38

- INSTALL CROSSOVERS PER ST'D DWG MT-95.70

WORK ZONE LEGEND

- (PB) PORTABLE BARRIER
- (EW) EDGE LINE, WHITE
- (EY) EDGE LINE, YELLOW
- (D) DOTTED LINE, WHITE
- (L) LANE LINE
- DIRECTION OF TRAVEL
- DRUMS
- PORTABLE BARRIER
- CONSTRUCTION AREA
- WORK ZONE IMPACT ATTENUATOR

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED WCS
CHECKED NWQ

S.R. 7 - MANTENANCE OF TRAFFIC
PHASE 3 - STA. 1274+00 TO STA. 1279+00

BEL-7-23.60

33
82

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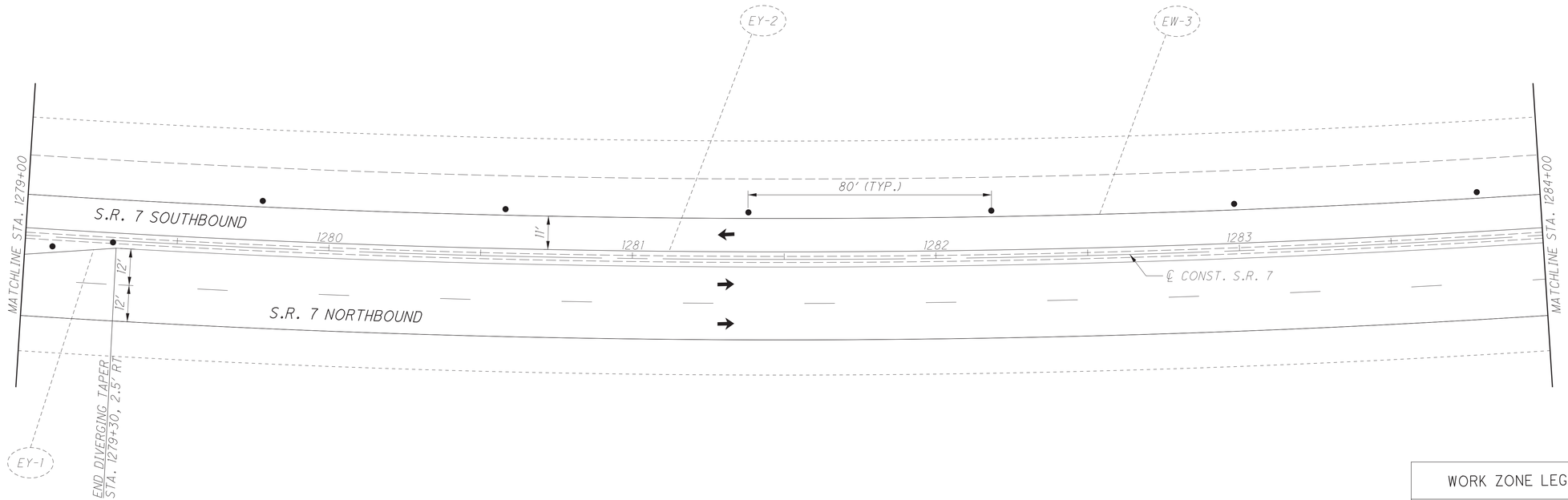
S.R. 7 - CURVE DATA
P.I. Sta. 1283+25.55
Δ = 12° 31′ 05″ (LT)
Dc = 1° 28′ 00″
R = 3,906.53′
T = 428.46′
L = 853.50′
E = 23.43′
C = 851.80′



WORK ZONE LEGEND

CH	CHANNELIZING LINE
EW	EDGE LINE, WHITE
EY	EDGE LINE, YELLOW
D	DOTTED LINE, WHITE
L	LANE LINE
→	DIRECTION OF TRAVEL
• • •	DRUMS
	PORTABLE BARRIER
	CONSTRUCTION AREA
	WORK ZONE IMPACT ATTENUATOR

NOTES:

- FOR ESTIMATED QUANTITIES SEE SHEET NO. 38

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED WCS
CHECKED NWQ

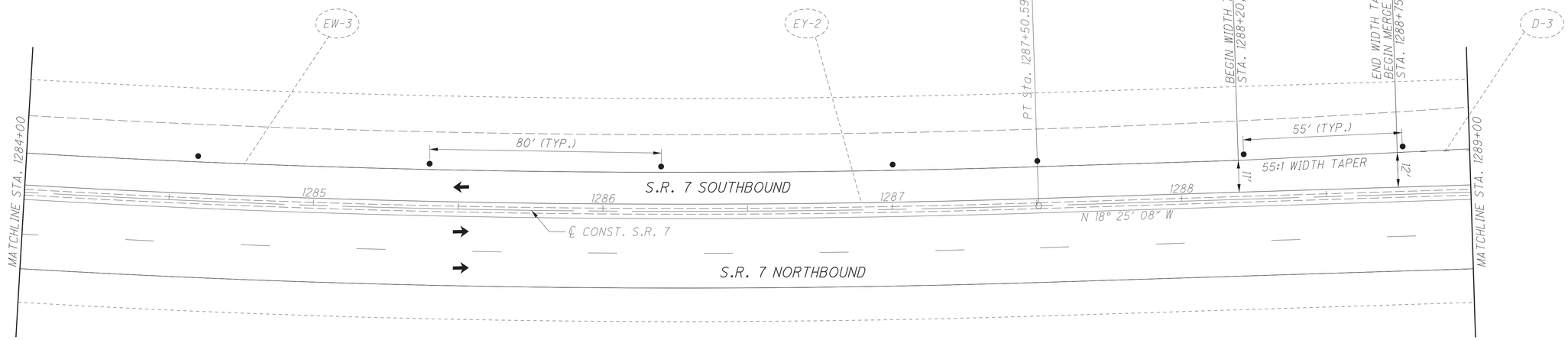
S.R. 7 - MAINTENANCE OF TRAFFIC
PHASE 3 - STA. 1279+00 TO STA. 1284+00

BEL-7-23.60

34
82

S.R. 7 - CURVE DATA

P.I. Sta. 1283+25.55
Δ = 12° 31′ 05″ (LT)
Dc = 1° 28′ 00″
R = 3,906.53′
T = 428.46′
L = 853.50′
E = 23.43′
C = 851.80′



WORK ZONE LEGEND

- (CH) CHANNELIZING LINE
- (EW) EDGE LINE, WHITE
- (EY) EDGE LINE, YELLOW
- (D) DOTTED LINE, WHITE
- (L) LANE LINE
- DIRECTION OF TRAVEL
- DRUMS
- PORTABLE BARRIER
- CONSTRUCTION AREA
- WORK ZONE IMPACT ATTENUATOR

NOTES:

- FOR ESTIMATED QUANTITIES SEE SHEET NO. 38

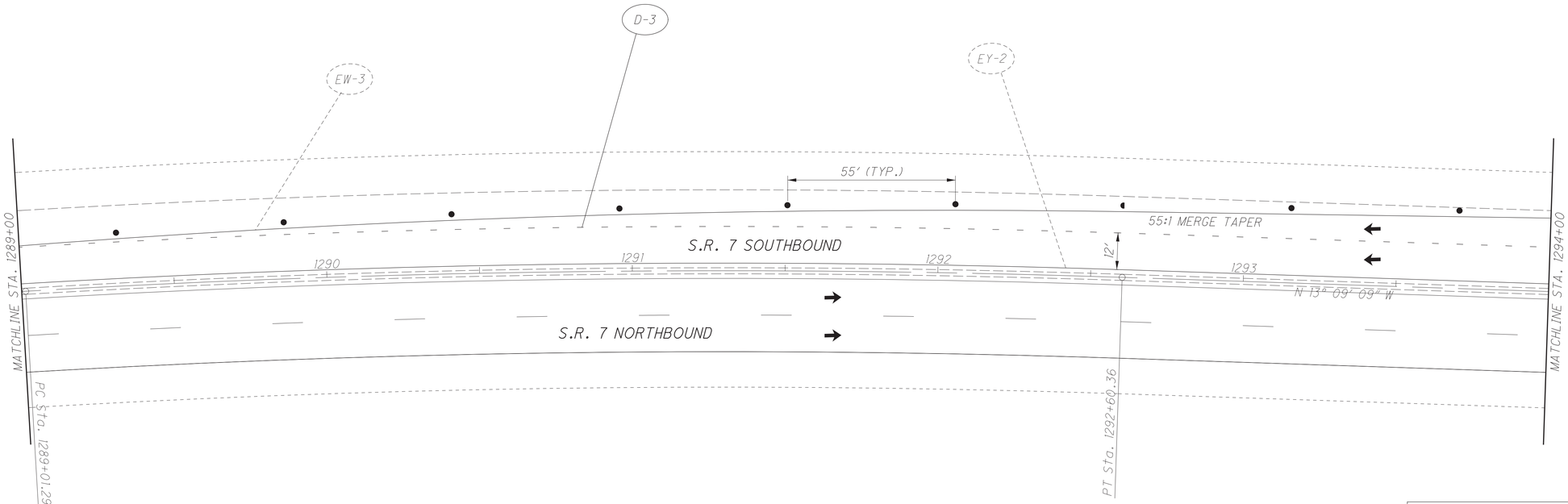
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED WCS
CHECKED NWQ

S.R. 7 - MAINTENANCE OF TRAFFIC
PHASE 3 - STA. 1284+00 TO STA. 1289+00

BEL-7-23.60

S.R. 7 - CURVE DATA
P.I. Sta. 1290+80.95
Δ = 5° 15′ 59″ (RT)
Dc = 1° 28′ 00″
R = 3,906.53′
T = 179.66′
L = 359.07′
E = 4.13′
C = 358.94′



NOTES:

- FOR ESTIMATED QUANTITIES SEE SHEET NO. 38

WORK ZONE LEGEND

CH	CHANNELIZING LINE
EW	EDGE LINE, WHITE
EY	EDGE LINE, YELLOW
D	DOTTED LINE, WHITE
L	LANE LINE
→	DIRECTION OF TRAVEL
• • •	DRUMS
	PORTABLE BARRIER
	CONSTRUCTION AREA
	WORK ZONE IMPACT ATTENUATOR

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED WCS
CHECKED NWQ

S.R. 7 - MAINTENANCE OF TRAFFIC
PHASE 3 - STA. 1289+00 TO STA. 1294+00

BEL-7-23.60

WORK ZONE LEGEND

CH	CHANNELIZING LINE
EW	EDGE LINE, WHITE
EY	EDGE LINE, YELLOW
D	DOTTED LINE, WHITE
L	LANE LINE
→	DIRECTION OF TRAVEL
• • •	DRUMS
	PORTABLE BARRIER
	CONSTRUCTION AREA
	WORK ZONE IMPACT ATTENUATOR

NOTES:

- ADVANCED SIGNING SHALL BE PLACED PER ST'D MT-95.30

- FOR ESTIMATED QUANTITIES SEE SHEET NO. 38

N

0 10 20 40
HORIZONTAL SCALE IN FEET

CALCULATED WCS
CHECKED NWQ

S.R. 7 - MAINTENANCE OF TRAFFIC
PHASE 3 - STA. 1294+00 TO STA. 1299+00

BEL-7-23.60

37
82

REF NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	614 WORK ZONE EDGE LINE, CLASS I, 642 PAINT (YELLOW) MI	614 WORK ZONE EDGE LINE, CLASS I, 642 PAINT (WHITE) MI	614 DOTTED WORK ZONE LINE, CLASS I, 642 PAINT FT	614 OBJECT MARKER, ONE-WAY EA	614 WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL) EA	614 BARRIER REFLECTOR (TYPE B1) EA		614 WORK ZONE ARROW, CLASS I, 642 PAINT (RIGHT TURN) EA	614 WORK ZONE STOP LINE CLASS I, 642 PAINT FT		622 GLARE SCREEN FT	622 PORTABLE BARRIER, 32" FT	622 PORTABLE BARRIER, 32", BRIDGE MOUNTED FT	622 BARRIER MISC: PORTABLE BARRIER TO PERMANENT BARRIER TRANSITION EA
		ALL STATIONS REFERENCE ℄ CONST. S.R. 7 UNLESS OTHERWISE NOTED.																
EW-1	27-33	1245+90	1278+30.10	RT		0.61												
EW-2	29-31	1256+00	℄ C.R.4 8+67.59	LT		0.26												
EW-3	31-37	℄ C.R.4 8+67.59	1295+35	LT		0.70												
EY-1	27-33	1245+90	1279+30	RT	0.63													
EY-2	29-37	1257+00	1295+35	LT	0.73													
D-1	27-28	1245+90	1252+50	RT			664											
D-2	31-32	1268+07.53	1269+33.24	LT			126											
D-3	35-37	1288+75	1295+35	LT			662											
TA-6	31	℄ CONST. C.R.4 8+73		RT								1						
TA-7	31	℄ CONST. C.R.4 9+73		RT								1						
SL-2	31	℄ C.R.4 9+97		RT									29					
CL-2	31	℄ C.R.4 8+67	℄ C.R.4 9+97	℄														
PB-1	29-31	1258+00	1268+10	RT					1	42					1011	881	130	1
PB-2	30-31	1259+40	℄ C.R.4 8+91	RT&LT				21	1	21						881	130	
PB-3	31-32	℄ C.R.4 9+15	1273+10	LT				10	1	10						490		
PB-4	31-33	1269+00	1275+50	RT					1	26					650	650		
			SUBTOTAL		1.36	1.57												
TOTALS CARRIED TO GENERAL SUMMARY					2.93		1452	31	4	99		2	29		1661	2902	260	1

CALCULATED WCS
CHECKED NWQ

MAINTENANCE OF TRAFFIC
PHASE 3 - ESTIMATED QUANTITIES

BEL-7-23.60

SHEET NUMBER												PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
4	5	42	44	46	52						OFFICE CALCS	01/NHS/BR							
																		ROADWAY	
LS												LS		201	11000	LS		CLEARING AND GRUBBING	
											804	804		202	23000	804	SY	PAVEMENT REMOVED	
		2812	450									3262		202	30000	3,262	SF	WALK REMOVED	
		129	34									163		202	30600	163	SY	CONCRETE MEDIAN REMOVED	
		476		601								1077		202	30700	1,077	FT	CONCRETE BARRIER REMOVED	
		704	100									804		202	32000	804	FT	CURB REMOVED	
			468									468		202	38000	468	FT	GUARDRAIL REMOVED	
		1		1								2		202	47800	2	EACH	IMPACT ATTENUATOR REMOVED	
	6											6		203	10000	6	CY	EXCAVATION	
	103											103		203	20000	103	CY	EMBANKMENT	
											1314	1314		204	10000	1,314	SY	SUBGRADE COMPACTION	
			300									300		606	15050	300	FT	GUARDRAIL, TYPE MGS	
			1									1		606	26550	1	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
			2									2		606	35002	2	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
			2									2		606	35102	2	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	
		1		1								2		606	60028	2	EACH	IMPACT ATTENUATOR, TYPE 2 (BIDIRECTIONAL), 55 MPH, 30 INCH	4
		3418	371									3789		608	10000	3,789	SF	4" CONCRETE WALK	
		476		567								1043		622	10061	1,043	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE B, AS PER PLAN	4
				1								1		622	10200	1	EACH	BARRIER TRANSITION	
				1								1		622	25000	1	EACH	CONCRETE BARRIER END SECTION , TYPE D	
																		EROSION CONTROL	
61												61		659	00300	61	CY	TOPSOIL	
547												547		659	10000	547	SY	SEEDING AND MULCHING	
27												27		659	14000	27	SY	REPAIR SEEDING AND MULCHING	
2												2		659	20000	2	TON	COMMERCIAL FERTILIZER	
0.11												0.11		659	31000	0.11	ACRE	LIME	
3												3		659	35000	3	MGAL	WATER	
												1000		832	30000	1000	EACH	EROSION CONTROL	
																		DRAINAGE	
					90							90		605	11110	90	FT	6" SHALLOW PIPE UNDERDRAINS WITH FABRIC WRAP	
					10							10		611	00510	10	FT	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	
			88									88		611	04400	88	FT	12" CONDUIT, TYPE B	
			58									58		611	04600	58	FT	12" CONDUIT, TYPE C	
			2									2		611	98180	2	EACH	CATCH BASIN, NO. 3A	
			1									1		611	99550	1	EACH	MANHOLE, NO. 1	
		2										2		611	99900	2	EACH	DRAINAGE STRUCTURE, MISC.:REMOVE, STORE, REINSTALL INLET FRAME AND LID	5
		2										2		611	99900	2	EACH	DRAINAGE STRUCTURE, MISC.:REMOVE, STORE, REINSTALL CATCH BASIN FRAME AND GRATE	5
			1									1		611	99900	1	EACH	DRAINAGE STRUCTURE, MISC.:CORE DRILL AND INSTALL CONDUIT THROUGH ABUTMENT	4
																		PAVEMENT	
											4563	4563		255	20000	4,563	FT	FULL DEPTH PAVEMENT SAWING	
											198	198		302	46000	198	CY	ASPHALT CONCRETE BASE, PG64-22	
											219	219		304	20000	219	CY	AGGREGATE BASE	
											35	35		407	10000	35	GAL	TACK COAT	
											35	35		407	14000	35	GAL	TACK COAT FOR INTERMEDIATE COURSE	
											31	31		441	10101	31	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), AS PER PLAN, PG70-22M	4
											43	43		441	10200	43	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446)	
			100									100		609	24510	100	FT	CURB, TYPE 4-C	
		704										704		609	26000	704	FT	CURB, TYPE 6	
		110	34									144		609	72001	144	SY	CONCRETE MEDIAN, AS PER PLAN	4

CALCULATED WCS
CHECKED NWQ

GENERAL SUMMARY

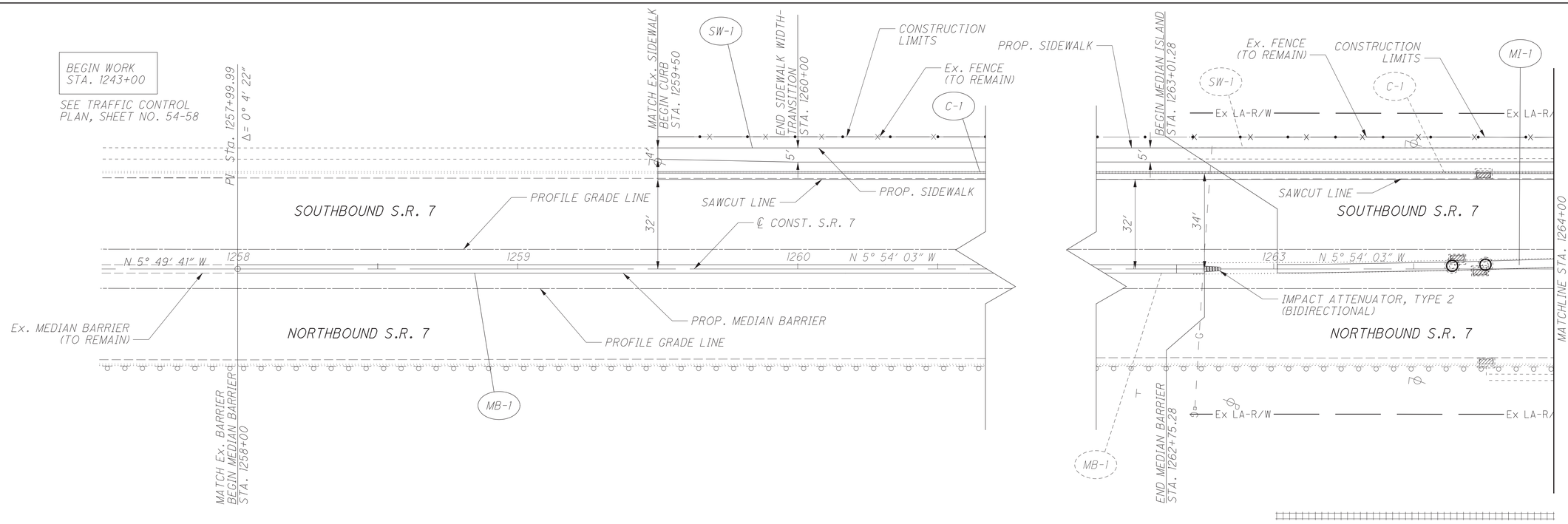
BEL-7-23.60

SHEET NUMBER												PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
	6	7	8	26	38	42	44	46	59		OFFICE CALCS	01/NHS/ BR							
																		TRAFFIC CONTROL	
									108			108		621	00100	108	EACH	RPM	
									102			102		621	54000	102	EACH	RAISED PAVEMENT MARKER REMOVED	
						10	12	12				34		626	00100	34	EACH	BARRIER REFLECTOR	
									2.73			2.73		646	10010	2.73	MILE	EDGE LINE, 6"	
									1.39			1.39		646	10110	1.39	MILE	LANE LINE, 6"	
									0.03			0.03		646	10200	0.03	MILE	CENTER LINE	
									305			305		646	10310	305	FT	CHANNELIZING LINE, 12"	
									22			22		646	10400	22	FT	STOP LINE	
									6			6		646	20300	6	EACH	LANE ARROW	
																		FOR STRUCTURE BEL-7-23.61 GENERAL SUMMARY SEE SHEET NO. 65	
																		MAINTENANCE OF TRAFFIC	
			80									80		614	11110	80	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
		6										6		614	11500	6	MNTH	WORKSITE TRAFFIC SUPERVISOR	
			360									360		614	11621	360	FT	LINEAR DELINEATION, AS PER PLAN	8
				4	4							8		614	12336	8	EACH	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)	
			LS									LS		614	12420	LS		DETOUR SIGNING	
	2											2		614	12756	2	EACH	WORK ZONE CROSSOVER LIGHTING SYSTEM	
			10									10		614	13001	10	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC, AS PER PLAN	8
		23										23		614	13200	23	EACH	BARRIER REFLECTOR, TYPE A	
				108	99							207		614	13300	207	EACH	BARRIER REFLECTOR, TYPE B	
		46		26	31							103		614	13350	103	EACH	OBJECT MARKER, ONE WAY	
				0.02								0.02		614	21100	0.02	MILE	WORK ZONE CENTER LINE, CLASS I, 642 PAINT	
				2.60	2.93							5.53		614	22100	5.53	MILE	WORK ZONE EDGE LINE, CLASS I, 642 PAINT	
				1439	1452							2891		614	24200	2,891	FT	WORK ZONE DOTTED LINE, CLASS I, 642 PAINT	
				49	29							78		614	26200	78	FT	WORK ZONE STOP LINE, CLASS I, 642 PAINT	
				3	2							5		614	30200	5	EACH	WORK ZONE ARROW, CLASS I, 642 PAINT	
			LS									LS		615	10000	LS		ROADS FOR MAINTAINING TRAFFIC	
											1450	1450		615	20001	1450	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	8
	5											5		616	10000	5	MGAL	WATER	
				3188	2902							6090		622	41000	6,090	FT	PORTABLE BARRIER, 32"	
				390	260							650		622	41020	650	FT	PORTABLE BARRIER, 32", BRIDGE MOUNTED	
				2318	1661							3979		622	80000	3,979	FT	GLARE SCREEN	
				2	1							3		622	90200	3	EACH	BARRIER, MISC.:PORTABLE BARRIER TRANSITION TO PERMANENT BARRIER	
	LS											LS		614	11000	LS		MAINTAINING TRAFFIC	
												6		619	16010	6	MNTH	FIELD OFFICE, TYPE B	
												LS		623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
												LS		624	10000	LS		MOBILIZATION	

CALCULATED WCS
CHECKED NWQ

GENERAL SUMMARY

BEL-7-23.60



S.R. 7 - PLAN & PROFILE
STA. 1257+50 TO STA. 1264+00

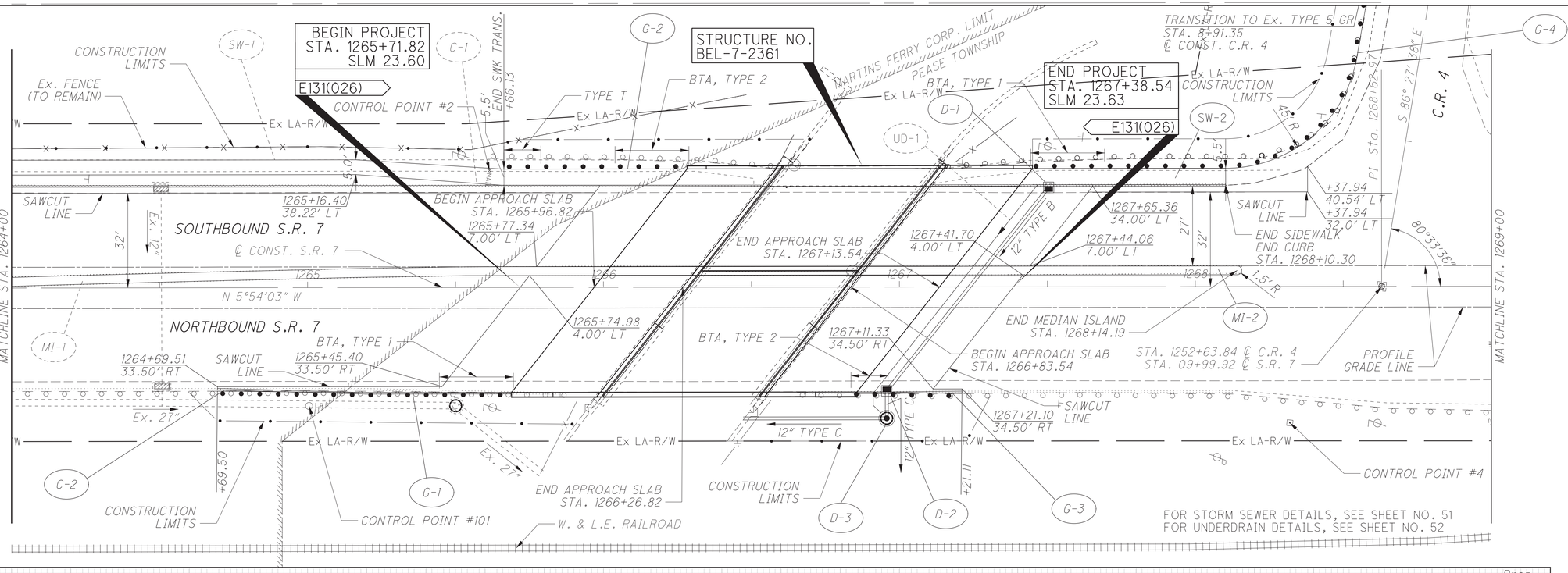
BEL-7-23.60

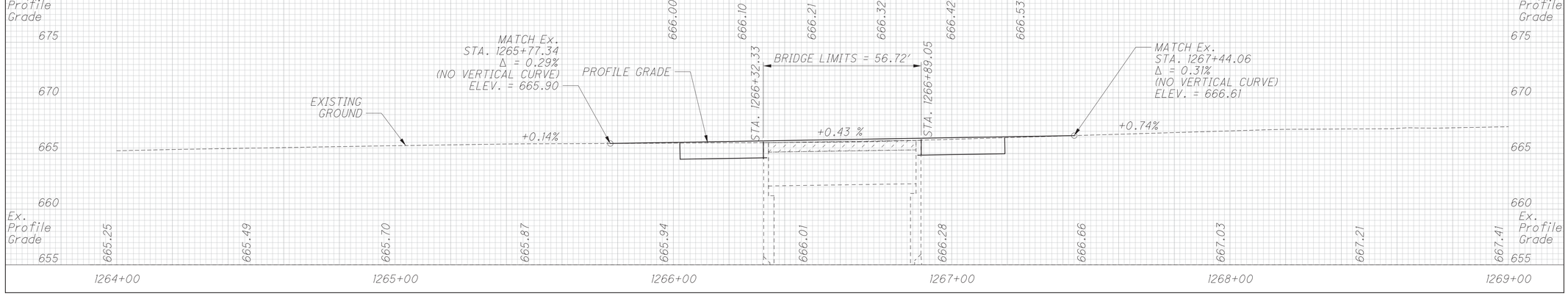
ROADWAY ESTIMATED QUANTITIES

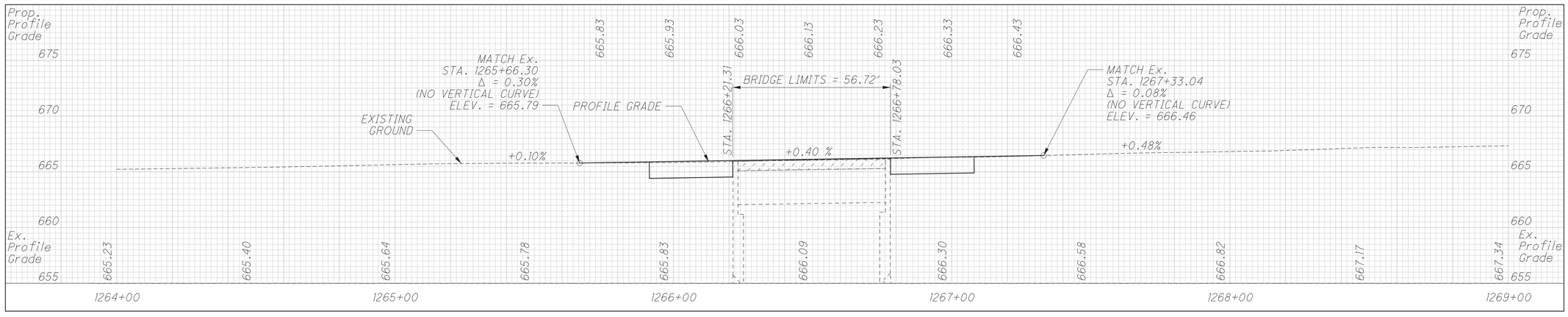
CALCULATED WCS | CHECKED NWQ

REF NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	202 CURB REMOVED (FT)	202 WALK REMOVED (SF)	202 CONCRETE BARRIER REMOVED (FT)	202 IMPACT ATTENUATOR REMOVED (EA)	202 CONCRETE MEDIAN REMOVED (SY)		606 IMPACT ATTENUATOR TYPE II (BI-DIRECTIONAL) (EA)	608 4" CONCRETE WALK (SF)	609 CURB, TYPE 6 (FT)	609 CONCRETE MEDIAN, AS PER PLAN (SY)	611 DRAINAGE STRUCTURE MISC: REMOVE, STORE, AND REINSTALL INLET FRAME AND LID (EA)	611 DRAINAGE STRUCTURE MISC: REMOVE, STORE, AND REINSTALL CATCH BASIN FRAME AND GRATE (EA)	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE B, AS PER PLAN (FT)		626 BARRIER REFLECTOR (TYPE B) (EA)			
		* - COMPUTER GENERATED AREA																				
SW-1	41,43	1259+50	1266+28.30	LT		*2812						*3418										
C-1	41	1259+50	1268+10.30	LT	704								704			2						
MB-1	41,43	1258+00	1262+75.28	℄			476	1			1						476		10			
MI-1	41,43	1263+01.28	1265+96.82	℄					*129					110	2							
TOTALS CARRIED TO GENERAL SUMMARY					704	2812	476	1	129		1	3418	704	110	2	2	476		10			

BEL-7-23.60







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N

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED BEO
CHECKED NWO

S.R. 7 - PLAN & PROFILE
STA. 1264+00 TO STA. 1269+00

BEL-7-23.60

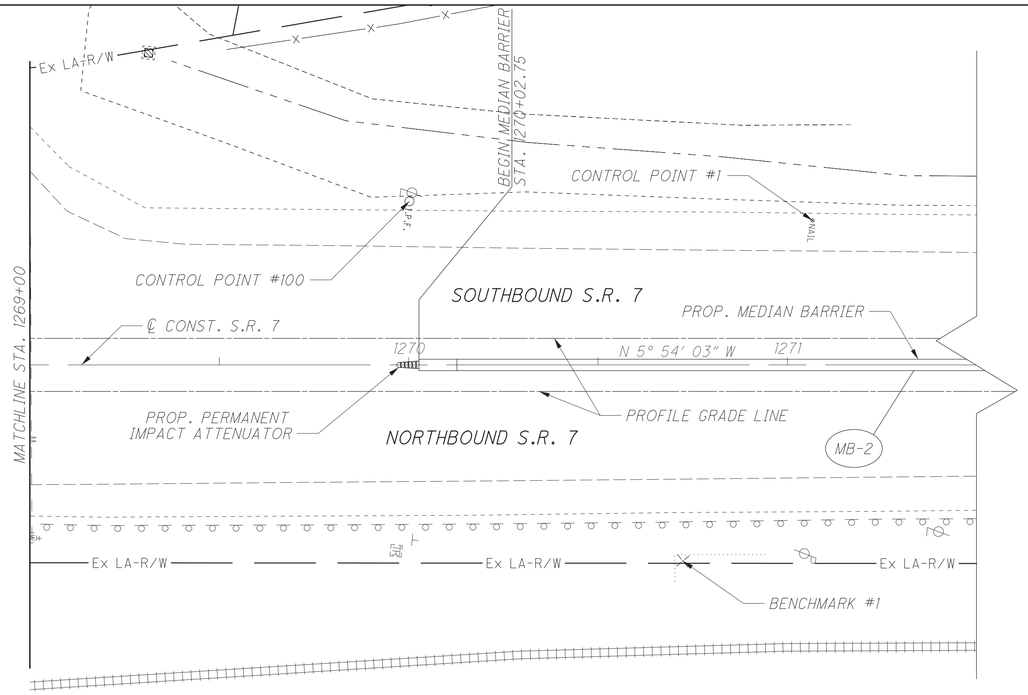
43
82

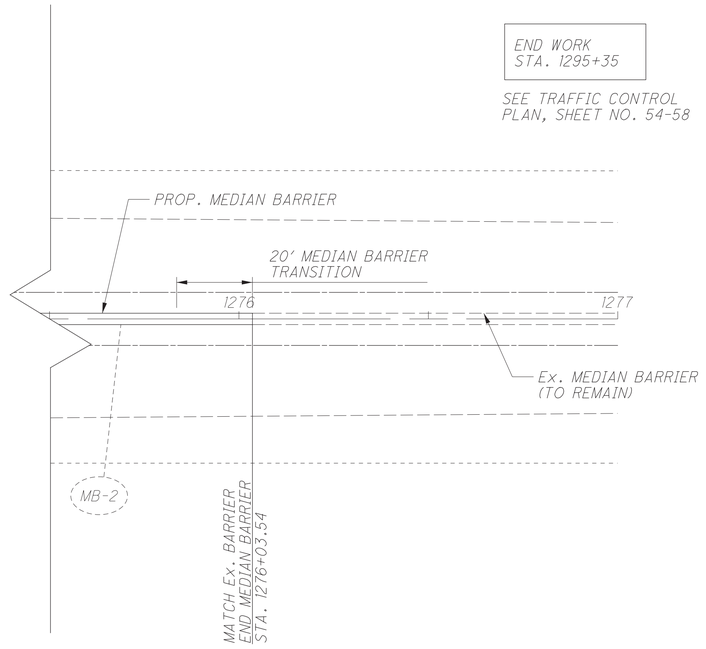
REF NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	202 CURB REMOVED FT	202 GUARDRAIL REMOVED FT	202 CONCRETE MEDIAN REMOVED SY	202 WALK REMOVED SF	606 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1 EA	606 ANCHOR ASSEMBLY, MGS TYPE T EA	606 GUARDRAIL, TYPE MGS FT	606 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2 EA	608 4" CONCRETE WALK SF	609 CURB, TYPE 4-C FT	609 CONCRETE MEDIAN, AS PER PLAN SY	611 CATCH BASIN, NO. 3A EA	611 12" CONDUIT, TYPE B FT	611 12" CONDUIT, TYPE C FT	611 MANHOLE, NO. 1 EA	611 DRAINAGE STRUCTURE MISC.: CORE DRILL AND INSTALL CONDUIT THROUGH ABUTMENT EA		626 BARRIER REFLECTOR (TYPE A) EA
		* - COMPUTER GENERATED AREA																				
C-2	43	1264+69.50	1265+68.89	RT	100									100								
G-1	43	1264+69.50	1265+87	RT		119			1		75.0											3
G-2	43	1265+66.13	1266+47	LT		101				1	50.0	1										3
G-3	43	1266+66	1267+21.10	RT		56					37.5	1										3
G-4	43	1267+26	℄ C.R.4 8+90	LT		192			1		137.5											3
D-1	43,51	1267+50.47	1266+95.67	LT/RT												1	88					
D-2	43,51	1266+95.67	1266+95.67	RT												1		9				
D-3	43,51	1266+95.67	1266+47.22	RT														49	1	1		
MI-2	43	1267+13.54	1268+14.19	℄			34								34							
SW-2	43	1267+40.69	1268+10.30	LT				450					*371									
TOTALS CARRIED TO GENERAL SUMMARY					100	468	34	450	2	1	300	2	371	100	34	2	88	58	1	1		12

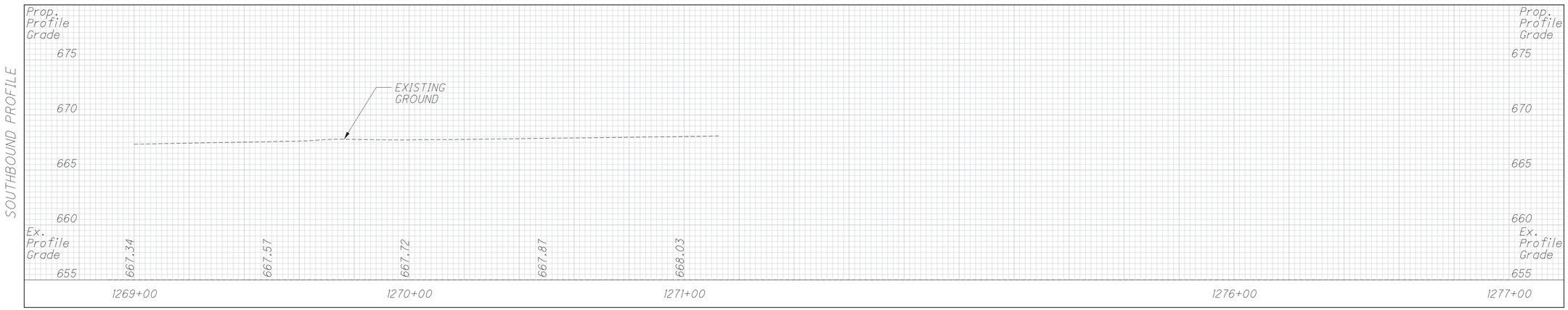
CALCULATED WCS
CHECKED NWQ

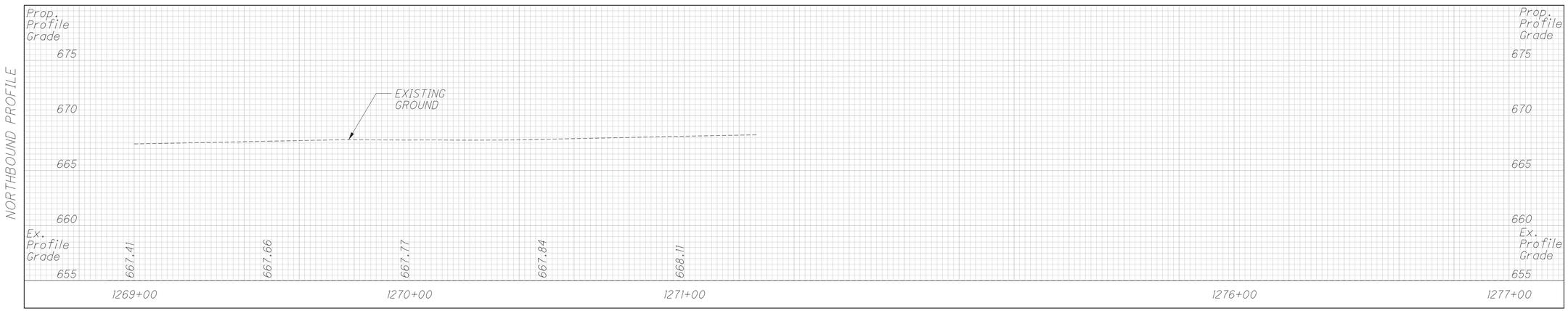
ROADWAY ESTIMATED QUANTITIES

BEL-7-23.60









HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED BEO
CHECKED NWQ

S.R. 7 - PLAN & PROFILE
STA. 1269+00 TO STA. 1277+00

BEL-7-23.60

REF NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	202 CONCRETE BARRIER REMOVED (FT)	202 IMPACT ATTENUATOR REMOVED (EA)		606 IMPACT ATTENUATOR TYPE II (BI-DIRECTIONAL) (EA)		622 CONCRETE BARRIER, SINGLE SLOPE, TYPE B, AS PER PLAN (FT)	622 BARRIER TRANSITION (EA)	622 CONCRETE BARRIER END SECTION, TYPE D (EA)	626 BARRIER REFLECTOR (TYPE B) (EA)								
MB-2	45	1270+02.75	1276+03.54	℄	601	1		1		567	1	1	12								
TOTALS CARRIED TO GENERAL SUMMARY					601	1		1		567	1	1	12								

CALCULATED WCS
CHECKED NWQ

ROADWAY ESTIMATED QUANTITIES

BEL-7-23.60

SEEDING	
END WIDTH	SQ. YDS.
	1
2	
	2
4	
	31
7	
	480
	514

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

670
665
660

12.5:1

(ADJUSTED FOR SKEW)

665.90
1265+71.82
665.90

BEGIN FULL DEPTH REPLACEMENT (SKEWED)

Ex. 27" STORM SEWER

(ADJUSTED FOR SKEW)

Ex. MANHOLE
STA. 1265+50, 40' RT
RIM ELEV. 665.63
℄ 27" 653.03

2:1

665.88
1265+50.00
665.87

2:1

Ex. 27" STORM SEWER

665.74
1265+00.00
665.73

BEGIN SEEDING AND MULCHING
STA. 1258+82.36, LT

℄ CONST. S.R. 7

END AREA	
CUT	FILL
2	0
0	1
0	4

VOLUME	
CUT	FILL
1	0
1	0
0	5
0	92
2	97

CALCULATED WCS
CHECKED NWQ

S.R. 7 - CROSS SECTIONS
STA. 1265+00.00 TO STA. 1265+71.82

BEL-7-23.60

47
82

SEEDING	
END WIDTH	SQ. YDS.
5	
0	
AHEAD	
3	
BACK	
0	
2	
8	

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

670
665
660

(ADJUSTED FOR SKEW)

PROP. 12" STORM SEWER

666.31
1266+83.54
666.30
BEGIN FORWARD APPROACH SLAB (SKEWED)

STRUCTURE NO.
BEL-7-2361

666.08
1266+26.82
666.07
END REAR APPROACH SLAB (SKEWED)

665.93
1265+96.82
665.93
BEGIN REAR APPROACH SLAB (SKEWED)

Ex. 27" STORM SEWER

℄ CONST. S.R. 7

END AREA	
CUT	FILL
0	0
0	0
0	0
0	1

VOLUME	
CUT	FILL
0	1
0	0
0	0
0	1

CALCULATED WCS
CHECKED NWQ

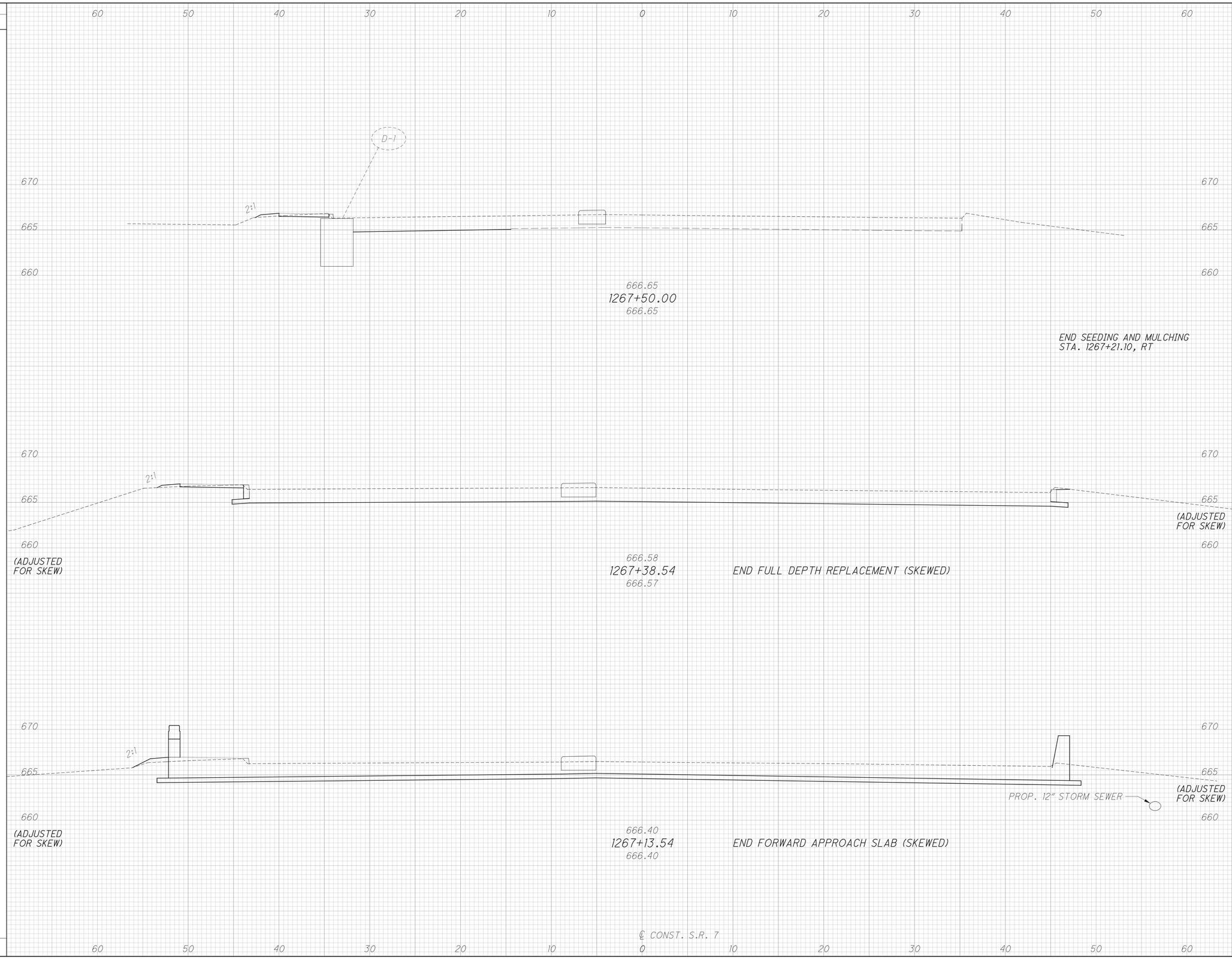
S.R. 7 - CROSS SECTIONS
STA. 1265+96.82 TO STA. 1266+83.54

BEL-7-23.60

48
82

O:\2014\1405\BEL\91546\roadway\sheets\91546XS001.dgn 12/23/2015 2:19:57 PM wcs

SEEDING END WIDTH	SEEDING SQ. YDS.
	17
3	
	3
3	
4	
	3
	23



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		2	2
1	1		
		1	1
1	1		
		0	1
0	1		
		3	4

CALCULATED WCS
CHECKED NWQ

S.R. 7 - CROSS SECTIONS
STA. 1267+13.54 TO STA. 1267+50.00

BEL-7-23.60

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

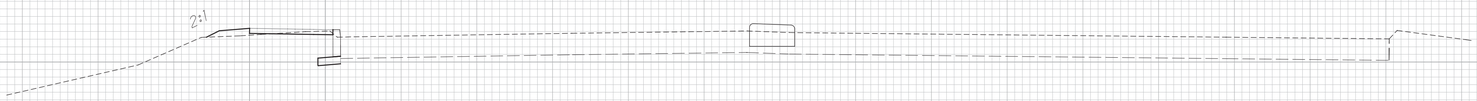
CALCULATED	CHECKED
WCS	NWQ

S.R. 7 - CROSS SECTIONS

STA. 1268+00.00

BEL-7-23.60

END SEEDING AND MULCHING
STA. 1268+36.97, LT



670
665
660

666.89
1268+00.00
666.89

℄ CONST. S.R. 7

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

CALCULATED BEO | CHECKED NWQ

STORM SEWER PROFILE
S.R. 7

D-3
STA 1266+95.67, 44.40' RT
MH-1, RIM ELEV 665.27
12" (W) 660.50
12" (S) 660.50
6" (SW) 663.03

D-2
STA 1266+95.67, 35.50' RT
CB-3A, GRATE ELEV 665.98
12" (NW) 660.56
12" (E) 660.56

D-1
STA 1267+50.47, 34.00' LT
CB-3A, GRATE ELEV 666.26
12" (SE) 661.00

Ex. GROUND

88' - 12" TYPE B @ 0.5%

9' - 12" TYPE C @ 0.67%

49' - 12" TYPE C @ 0.5%

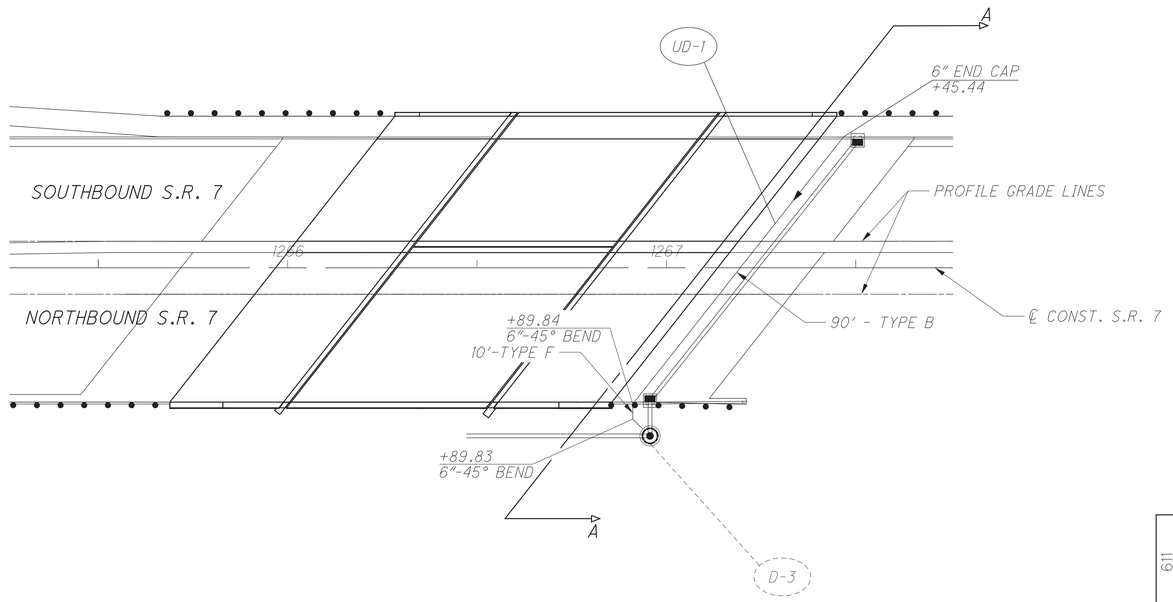
CORE DRILL OUTFALL
THROUGH Ex. ABUTMENT
STA 1266+47.22, 44.40' RT
12" (N) 660.26

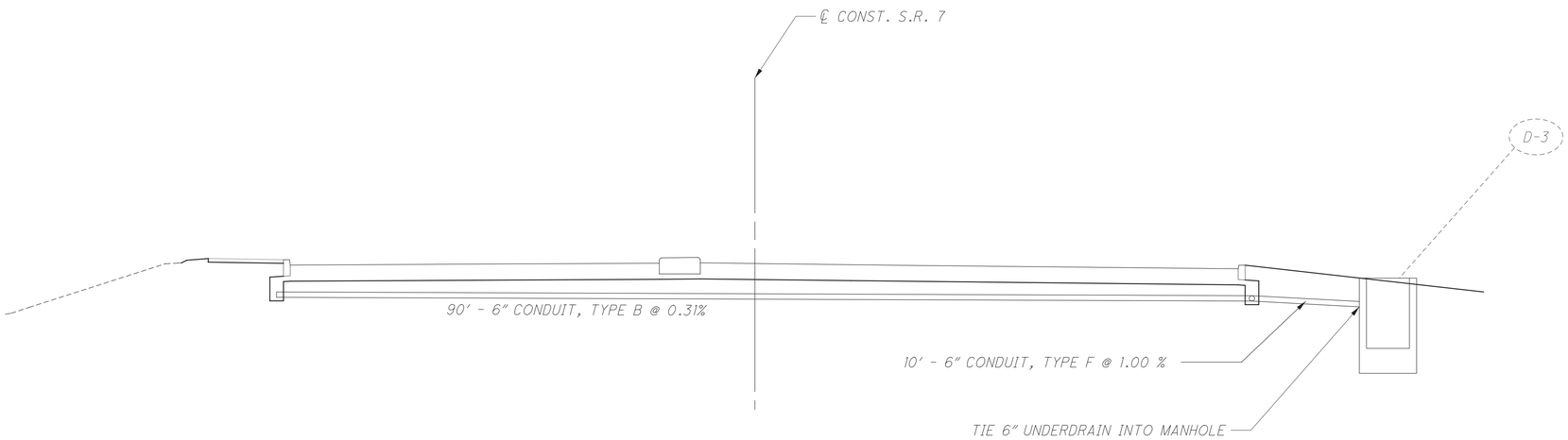
700 695 690 685 680 675 670 665 660 655 650 645 640 635 630 625 620

665.48 665.74 665.88 665.94 666.20 666.37 666.65 666.89 667.25 666.94 667.29

FOR STORM SEWER ESTIMATED QUANTITIES, SEE SHEET NO. 44

BEL-7-23.60





SECTION A-A (SKEWED)
(LOOKING UPSTATION)
N.T.S.

FOR STORM SEWER DETAILS, SEE SHEET NO. 51

REF NO.	STATION FROM	STATION TO	SIDE	BENDS & BRANCHES: 6" – 45° BEND (EA)	BENDS & BRANCHES: 6" – END CAP (EA)	605: 6" SHALLOW PIPE UNDERDRAINS, 707.31, WITH FABRIC WRAP (FT)	611: 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLET (FT)
UD-1	1267+45.44	1266+95.67	LT/RT	2	1	90	10
TOTALS CARRIED TO GENERAL SUMMARY				FOR INFORMATION ONLY		90	10

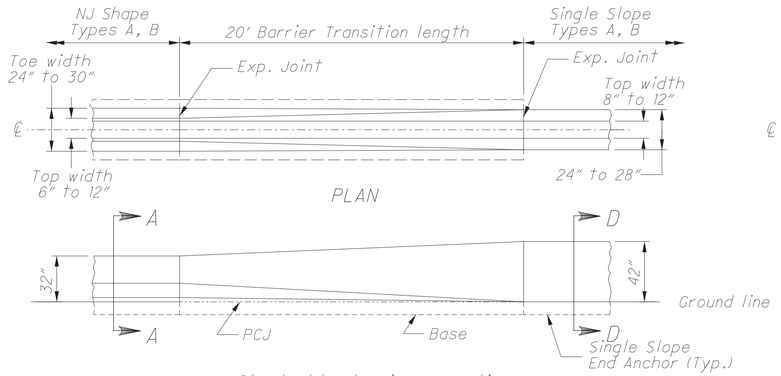
N

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED BEO
CHECKED NWQ

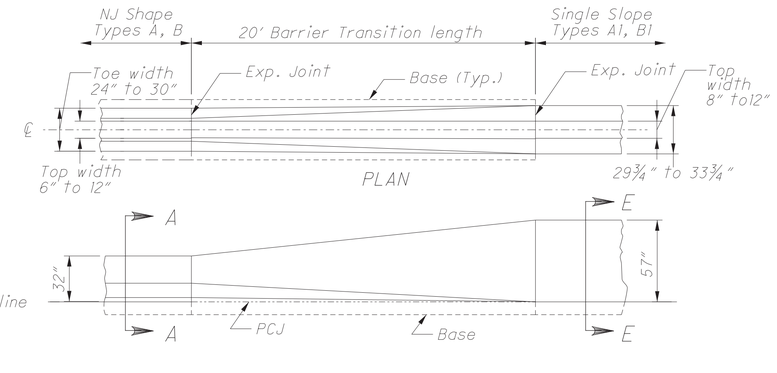
UNDERDRAIN DETAILS

BEL-7-23.60



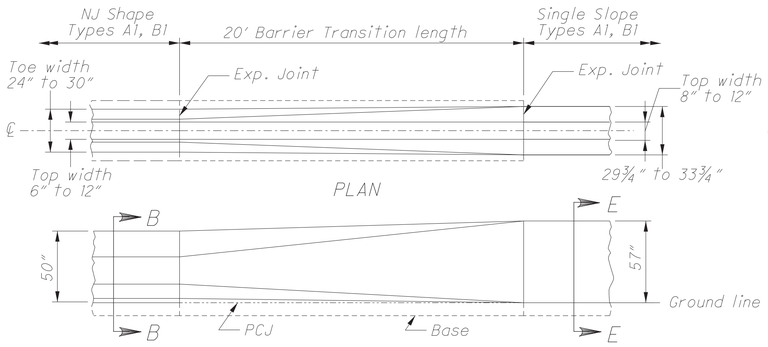
Standard low barrier connection

ELEVATION



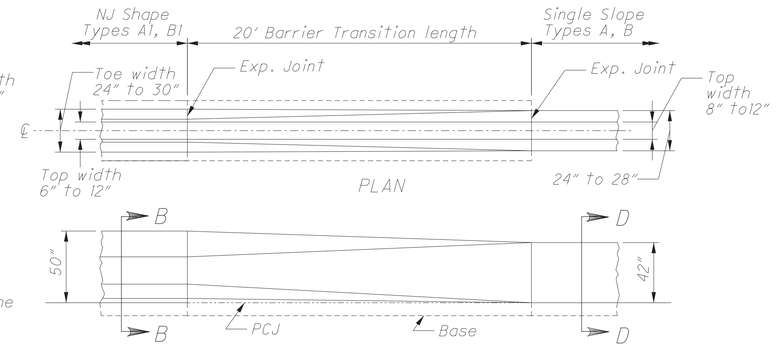
Atypical use

ELEVATION



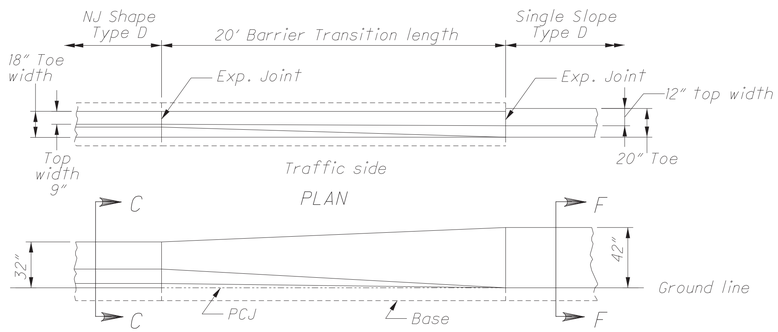
Standard tall barrier connection

ELEVATION



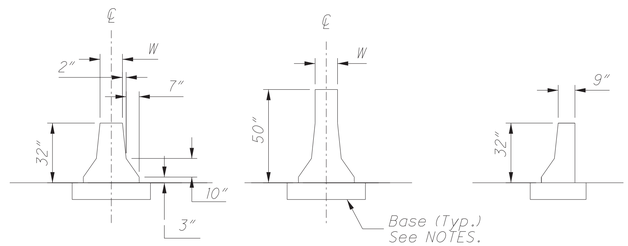
Atypical use

ELEVATION



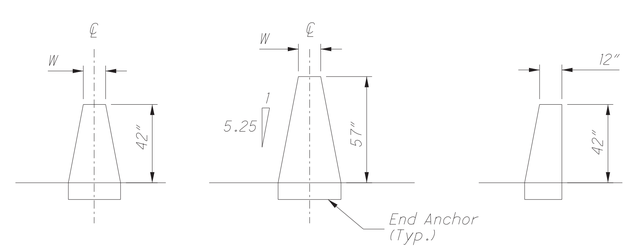
Standard Roadside barrier connection

ELEVATION



NJ SHAPE SECTIONS

See Plan Insert sheets for specific NJ Shape Concrete barrier details.



SINGLE SLOPE SECTIONS

See SCD RM-4.3 and RM-4.5 for specific Single Slope concrete barrier details.

NOTES

GENERAL: This insert details the Barrier Transition, to connect existing NJ Concrete Barrier (safety shape) to a new run of Single Slope Concrete Barrier at locations shown on the plans. For NJ barrier shape and other details see the respective plan insert sheets. For Single Slope barrier details, see SCD RM-4.3 (RM-4.5 for Type D).

ADJACENT CONCRETE BARRIER RUNS: Remove any tapered end sections, Impact attenuators, or other guardrail hardware from existing barrier end. The barrier to barrier transition is not intended to be used at transition sections (those shown on SCD RM-4.4), Inlets, or on Type C or C1 Barrier. If proposed adjacent single slope barrier is Type A or A1, the Barrier Transiton should contain horizontal reinforcing steel similiar to that required in the respective single slope barrier. Reinforcement is not shown and should be detailed separately. The adjacent single slope end should be terminated with a reinforced End Anchor as detailed on the SCDs.

BARRIER FACE TRANSITION: To prevent vehicle snagging, a smooth transition from the safety shape face to the single slope face is made over a 20' length. The actual shape of the Transition is dependent on both the adjacent NJ barrier and the single slope barrier Types, as detailed on the plans. The contractor and Engineer will agree on a construction method to ensure a smooth barrier face.

MATERIALS: Materials are same for those shown on RM-4.3 and RM-4.5, except that cast-in-place is the only acceptable method. Edges may be chamfered or radiused as shown on those drawings.

CONCRETE BASE: Construct base as shown on the NJ shape insert sheets, including the methods detailing the footing joint, Permissible Construction Joint (PCJ), and Dowelling requirements. The width of the base matches the existing NJ barrier.

JOINTS: Construct joints as shown on respective barrier drawings.

RACEWAYS: When specified, place raceway(s) to match raceway elevation in adjoining segments. Place to obtain maximum concrete cover.

METRIC UNITS: Refer to respective barrier drawings or inserts for metric dimensions.

PAYMENT: This Barrier Transiton shall include all material and labor needed to construct this 20' section, including any raceways, reinforcing steel, dowels and other necessary incidentals. Payment shall be made at the unit price for Item 622 - Barrier Transition, Each.

OFFICE OF ROADWAY ENGINEERING

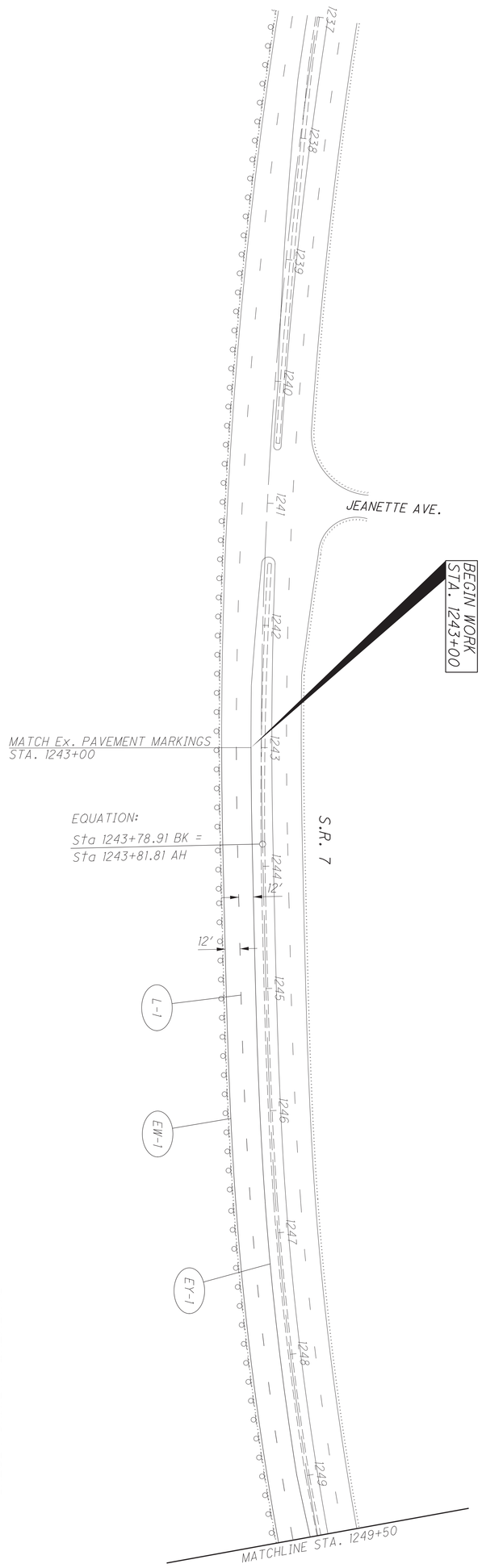
DESIGNED — REVIEWED —

REVISION DATE 10-20-06 CHECKED NWQ

PLAN INSERT SHEET

NJ SHAPE TO SINGLE SLOPE BARRIER TRANSITION

BEL-7-23.60

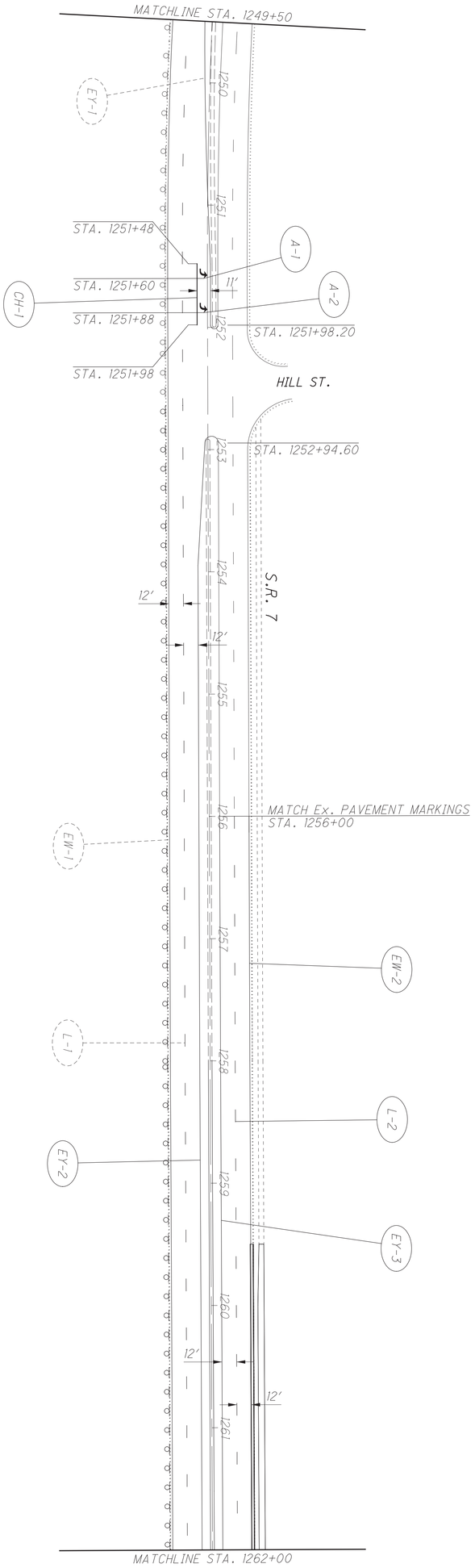


PAVEMENT MARKING LEGEND

- L — LANE LINE
- EW — EDGE LINE (WHITE)
- EY — EDGE LINE (YELLOW)

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET NO. 59

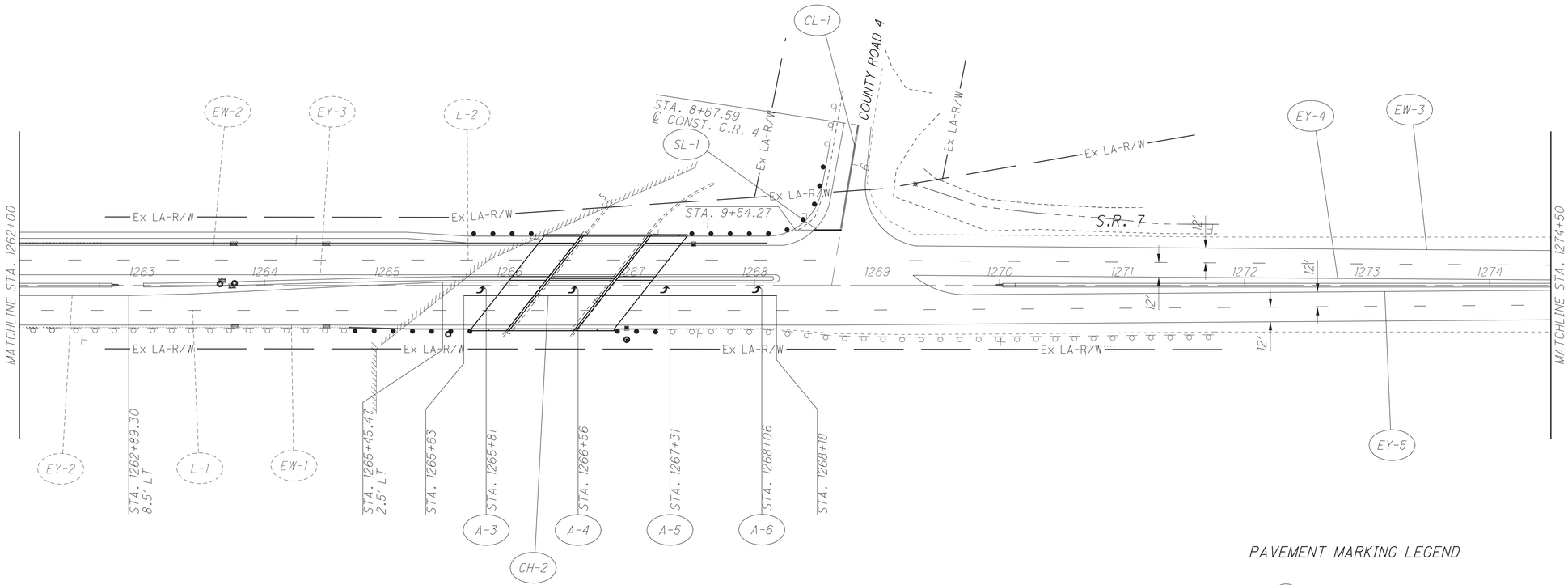
54 / 82	BEL-7-23.60	S.R. 7 - TRAFFIC CONTROL PLAN STA. 1237+00 TO STA. 1249+50	CALCULATED WCS CHECKED NWQ	0 50 25 100 HORIZONTAL SCALE IN FEET



PAVEMENT MARKING LEGEND

- (L) LANE LINE
- (EW) EDGE LINE (WHITE)
- (EY) EDGE LINE (YELLOW)
- (CH) CHANNELIZING LINE
- (A) LANE ARROW

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET NO. 59



PAVEMENT MARKING LEGEND

- (L) LANE LINE
- (EW) EDGE LINE (WHITE)
- (EY) EDGE LINE (YELLOW)
- (CH) CHANNELIZING LINE
- (CL) CENTERLINE, DOUBLE SOLID
- (SL) STOP LINE
- (A) LANE ARROW

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET NO. 59

N

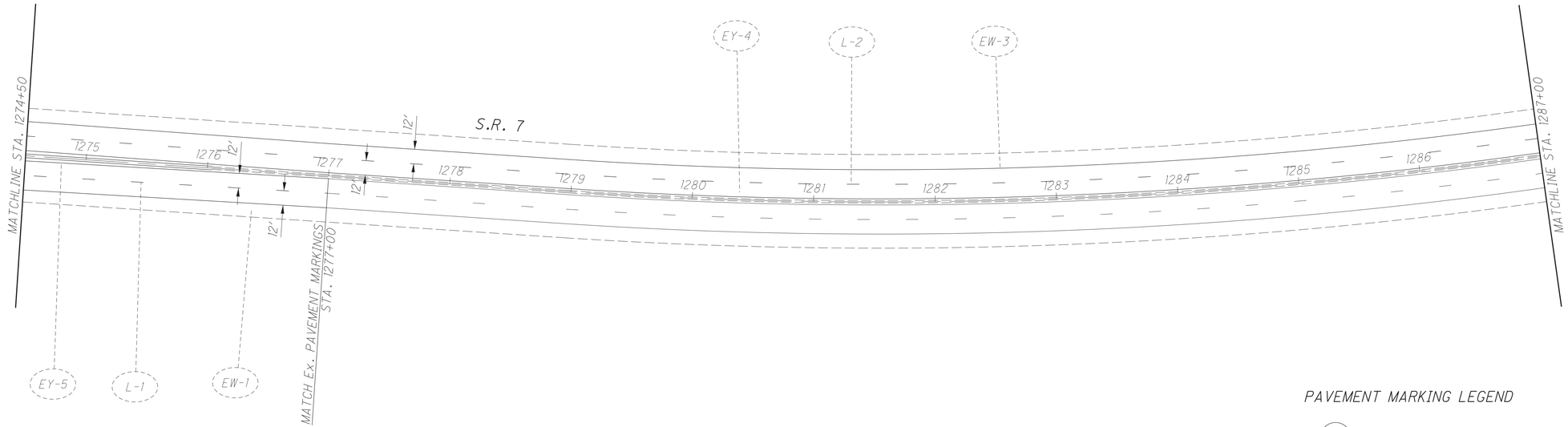
0 25 50 100 HORIZONTAL SCALE IN FEET

CALCULATED WCS | CHECKED NWQ

S.R. 7 - TRAFFIC CONTROL PLAN
STA. 1262+00 TO STA. 1274+50

BEL-7-23.60

O:\2014\1405\BEL\91546\roadway\sheets\91546TP003.dgn 12/23/2015 2:20:03 PM wcs



PAVEMENT MARKING LEGEND

- (L) LANE LINE
- (EW) EDGE LINE (WHITE)
- (EY) EDGE LINE (YELLOW)

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET NO. 59

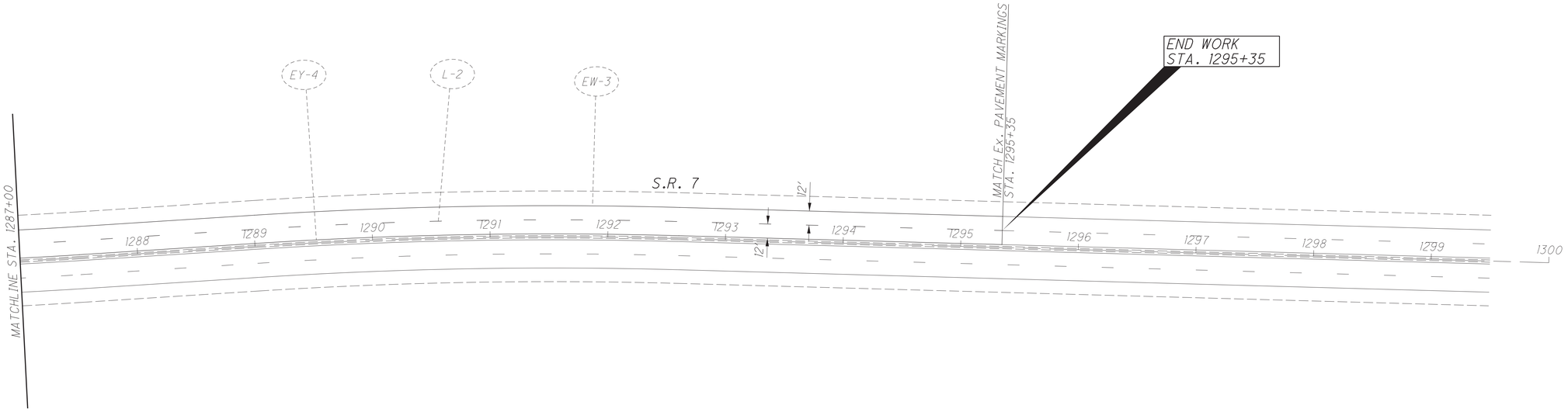
N

0 25 50 100
HORIZONTAL SCALE IN FEET

CALCULATED WCS
CHECKED NWQ

S.R. 7 - TRAFFIC CONTROL PLAN
STA. 1274+50 TO STA. 1287+00

BEL-7-23.60



PAVEMENT MARKING LEGEND

- (L) LANE LINE
- (EW) EDGE LINE (WHITE)
- (EY) EDGE LINE (YELLOW)

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET NO. 59

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED WCS
CHECKED NWQ

S.R. 7 - TRAFFIC CONTROL PLAN
STA. 1287+00 TO STA. 1300+00

BEL-7-23.60

PAVEMENT MARKING QUANTITIES

REF NO.	SHEET NO.	STATION (ALL STATIONS REFERENCE ℄ CONST. S.R. 7 UNLESS OTHERWISE NOTED) FROM	TO	SIDE	646 EDGE LINE, 6" (WHITE) MILE	646 EDGE LINE, 6" (YELLOW) MILE	646 CENTER LINE (DOUBLE YELLOW) MILE	646 LANE LINE, 6" (DASHED WHITE) MILE	646 STOP LINE (WHITE) FT	646 CHANNELIZING LINE, 12" (WHITE) FT	646 LANE ARROW (WHITE) EA	621 RAISED PAVEMENT MARKING REMOVED EA	621 RPM 2-WAY, WHITE/RED EA	621 RPM 1-WAY, WHITE EA	621 RPM 2-WAY, YELLOW/YELLOW EA
L-1	54-57	1243+00	1277+00	RT				0.64				44	44		
L-2	55-58	1256+00	1295+35	LT				0.75				51	51		
EW-1	54-57	1243+00	1277+00	RT	0.64										
EW-2	55-56	1256+00	℄ C.R.4 8+67.59	LT	0.25									3	
EW-3	56-58	℄ C.R.4 8+67.59	1295+35	LT	0.51										
EY-1	54-55	1243+00	1251+98.20	RT		0.17									
EY-2	55-56	1252+94.60	1268+17.32	RT		0.29									
EY-3	55-56	1256+00	1268+17.32	LT		0.23									
EY-4	56-58	1269+29.48	1295+35	LT		0.49									
EY-5	56-57	1269+29.48	1277+00	RT		0.15									
CH-1	55	1251+48	1251+98	RT						50		3	3		
CH-2	56	1265+63	1268+18	RT						255		4	4		
A-1	55	1251+60		RT							1				
A-2	55	1251+88		RT							1				
A-3	56	1265+81		RT							1				
A-4	56	1266+56		RT							1				
A-5	56	1267+31		RT							1				
A-6	56	1268+06		RT							1				
SL-1	56	℄ C.R.4 9+54.27		RT					22						
CL-1	56	℄ C.R.4 8+67.59	℄ C.R.4 9+54.27	℄			0.03								3
			SUB-TOTAL		1.40	1.33							102	3	3
TOTALS CARRIED TO GENERAL SUMMARY					2.73		0.03	1.39	22	305	6	102	108		

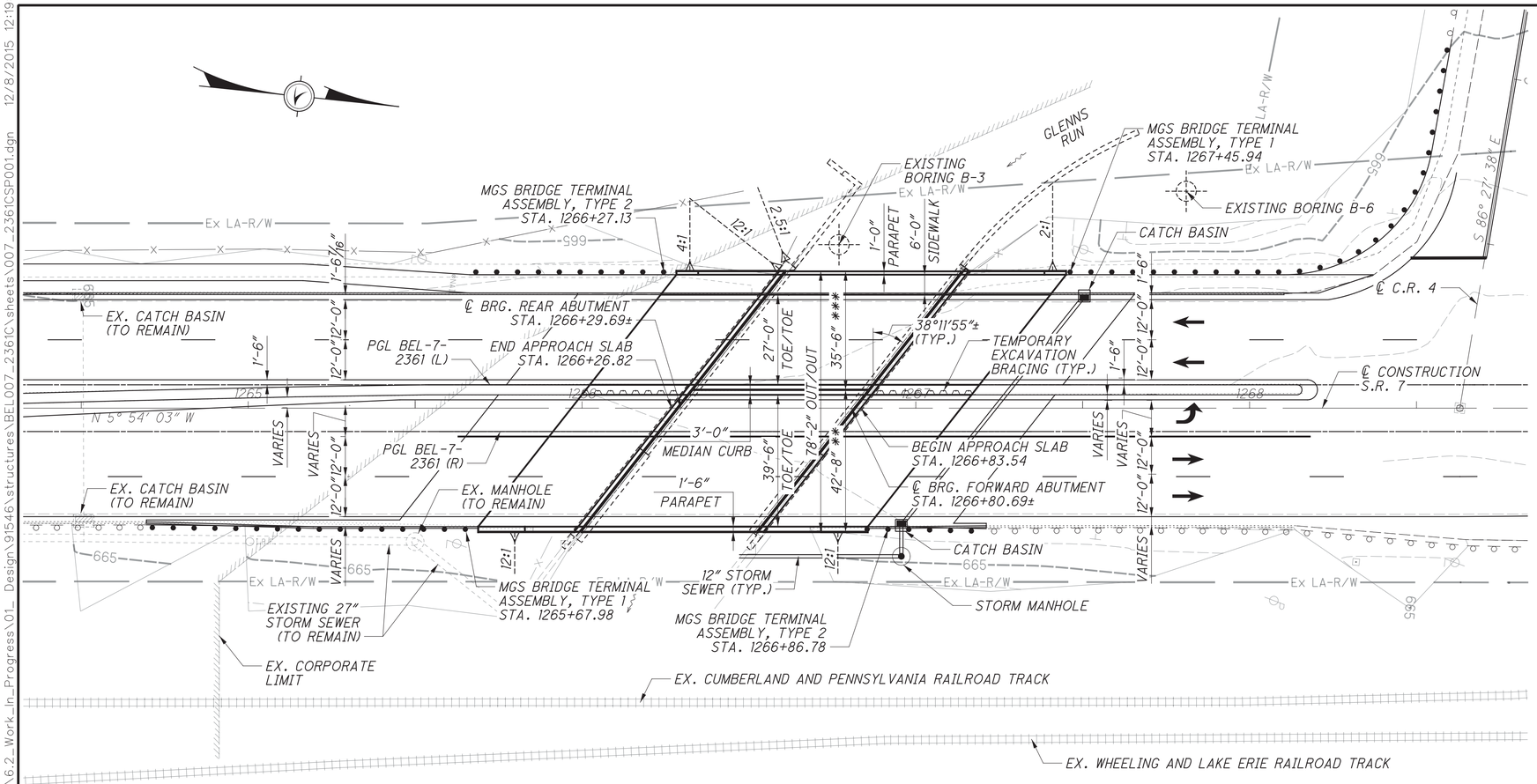
CALCULATED WCS CHECKED NWQ

TRAFFIC CONTROL ESTIMATED QUANTITIES

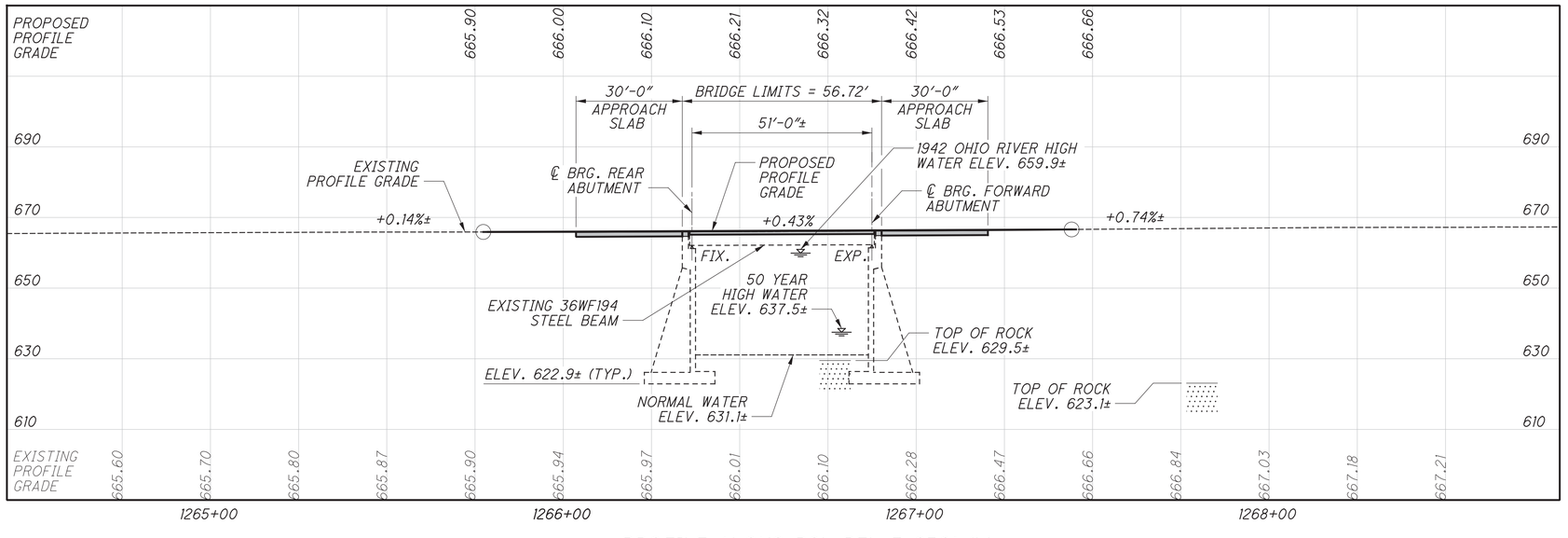
BEL-7-23.60

59
82

0:\2014\1405\BEL\91546\roadway\sheets\91546TQ001.dgn 12/23/2015 2:20:04 PM wcs



PLAN



PROFILE ALONG PGL BEL-7-2361 (L)

*NOTE: ELEVATIONS FROM ORIGINAL 1974 PLANS HAVE BEEN INCREASED BY 3.10' TO MATCH SURVEY DATA.

BENCHMARK DATA

BM #1 STA. 1270+72.47 ELEV. 670.52 OFFSET 51.53' RT.
"X" CHISELED ON SOUTHERLY END OF CONCRETE WALL
BM #2 STA. 1261+14.41 ELEV. 663.33 OFFSET 113.35' RT.
"X" CHISELED ON NORTHWEST BILLBOARD COLUMN FOUNDATION

SEE ROADWAY PLANS FOR ADDITIONAL BENCHMARK INFORMATION.

NOTES

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. CURRENT PROJECT DID NOT REQUIRE A HYDRAULIC STUDY. HYDRAULIC DATA WAS OBTAINED FROM EXISTING PLANS (1967).

DESIGN TRAFFIC:
2017 ADT = 19,000 2017 ADTT = 1,520
2037 ADT = 21,000 2037 ADTT = 1,680
DIRECTIONAL DISTRIBUTION = 53%

LEGEND

** - PHASE 2B CONSTRUCTION
*** - PHASE 3A CONSTRUCTION

HYDRAULIC DATA (OBTAINED FROM ORIG. PLANS)

DRAINAGE AREA = 10.5 SQ. MILES
Q (50) = 4200 V (50) = 14.6 FT/S
Q (100) = 4730 V (100) = 14.9 FT/S
STRUCTURE CLEARS THE 50 YEAR DESIGN HW BY 24.4± FEET.

EXISTING STRUCTURE

TYPE: SINGLE SPAN STEEL BEAM WITH REINFORCED CONCRETE SLAB AND SUBSTRUCTURE.
SPANS: 51'-0"± C/C BEARING
ROADWAY: 69'-6"± TOE OF PARAPET TO FACE OF CURB, WITH 3'-0"± RAISED MEDIAN AND 6'-0"± SIDEWALK.
LOADING: HS20-44
SKEW: 38°11'55"± LEFT FORWARD
APPROACH SLABS: AS-1-72 MODIFIED (30'-0"± LONG)
ALIGNMENT: TANGENT
CROWN: 0.0156± FT/FT
WEARING SURFACE: 2¾"± CONCRETE OVERLAY
STRUCTURAL FILE NUMBER: 0700770
DATE BUILT: 1976±
DISPOSITION: REPLACE REINFORCED CONCRETE DECK SLAB AND APPROACH SLABS.

PROPOSED STRUCTURE

PROPOSED WORK: REPLACE EXISTING NON-COMPOSITE REINFORCED CONCRETE SLAB WITH A REINFORCED CONCRETE SLAB THAT IS COMPOSITE WITH EXISTING STEEL BEAMS. MODIFY EXISTING BACKWALLS AND REPLACE EXISTING APPROACH SLABS.
SPANS: 51'-0"± C/C BEARING
ROADWAY: 69'-6" TOE OF PARAPET TO FACE OF SIDEWALK CURB, 3'-0" RAISED MEDIAN AND 6'-0" SIDEWALK.
LOADING: HS20 CASE II AND THE ALTERNATE MILITARY LOADING, 60 PSF FUTURE WEARING SURFACE
SKEW: 38°11'55"± LEFT FORWARD
APPROACH SLABS: 30'-0" LONG (AS-1-15)
ALIGNMENT: TANGENT
CROWN: 0.016 FT/FT (NORMAL CROWN)
WEARING SURFACE: 1" MONOLITHIC CONCRETE
COORDINATES: LATITUDE N40°07'01"
LONGITUDE W80°42'36"

DESIGN AGENCY
HDR ENGINEERING, INC.
1100 SUPERIOR AVE., SUITE 650
CLEVELAND, OHIO 44114
216-912-4240

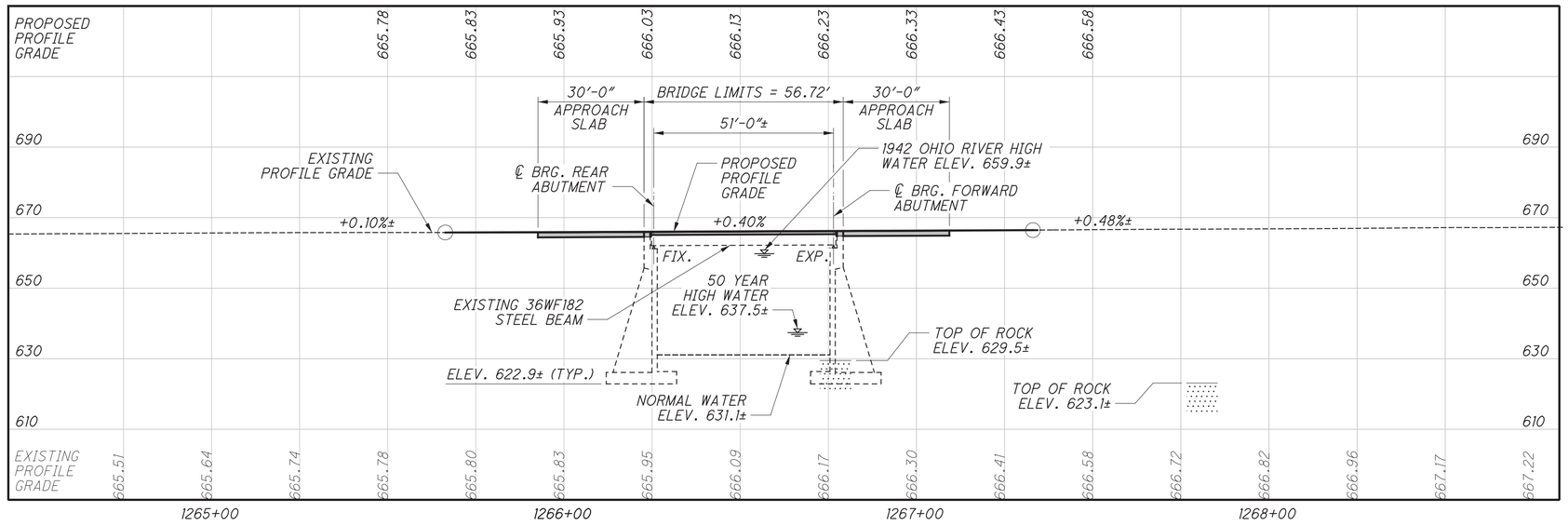
DESIGNED	DRAWN	REVIEWED	DATE
TJM	TJM	JMS	10/16/15
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DWW/JTW		0700770	

BELMONT COUNTY
STA. 1266+26.82
STA. 1266+83.54

SITE PLAN
BRIDGE NO. BEL-7-2361
S.R. 7 OVER GLENNS RUN

BEL-7-23.60
PID No. 91546

1 / 23
60 / 82



PROFILE ALONG PGL BEL-7-2361 (R)

DESIGN AGENCY
HDR ENGINEERING, INC.
1100 SUPERIOR AVE., SUITE 650
CLEVELAND, OHIO 44114
216-912-4240

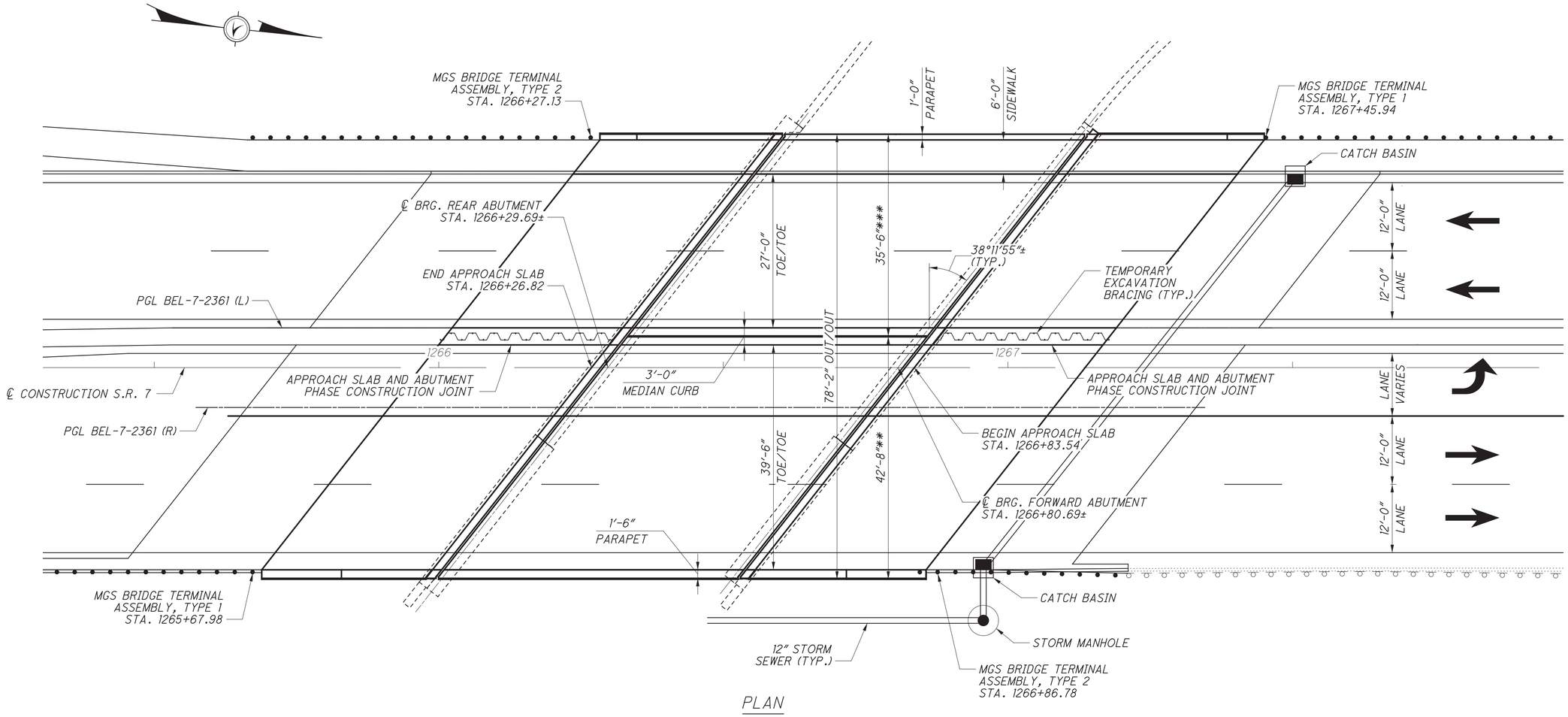
DESIGNED	DRAWN	REVIEWED	DATE
TJM	TJM	JMS	10/16/15
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DWW/JTW		07000770	

BEL-7-2361 (R) PROFILE
BRIDGE NO. BEL-7-2361
S.R. 7 OVER GLENNS RUN

BEL-7-23.60
PID No. 91546

2 / 23

61
82



PLAN

LEGEND

** - PHASE 2B CONSTRUCTION

*** - PHASE 3A CONSTRUCTION

DESIGN AGENCY
HDR ENGINEERING, INC.
1100 SUPERIOR AVE., SUITE 650
CLEVELAND, OHIO 44114
216-912-4240

DESIGNED	DRAWN	REVIEWED	DATE
JML	JML	JMS	10/16/15
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DWW		07000770	

GENERAL PLAN

BRIDGE NO. BEL-7-2361
S.R. 7 OVER GLENNS RUN

BEL-7-23.60

PID No. 91546

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

AS-1-15 REVISED 07-17-15

AS-2-15 REVISED 07-17-15

BR-2-98 REVISED 07-20-12

EXJ-4-87 REVISED 07-19-02

GSD-1-96 REVISED 07-19-02

PCB-91 REVISED 01-18-13

RB-1-55 REVISED 07-19-13

SBR-1-13 REVISED 01-17-14

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

800 DATED 7-15-16

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 17TH EDITION, AND THE 2004 ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING

DESIGN LOADING: HS20 CASE II AND ALTERNATE MILITARY LOADING

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)

REINFORCING STEEL - ASTM A615 OR A996, GRADE 60

STRUCTURAL STEEL - ASTM A709, GRADE 50 - YIELD STRENGTH 50 KSI

DECK PROTECTION METHOD

EPOXY COATED REINFORCING STEEL

2.5" CONCRETE COVER

MONOLITHIC WEARING SURFACE

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

PROPOSED WORK

1. PHASE REMOVAL OF EXISTING NON-COMPOSITE DECK, SIDEWALKS, CURBS AND APPROACH SLABS. PARTIAL REMOVAL OF ABUTMENT BACKWALLS.
2. CLEAN, RESET AND PAINT EXISTING BEARINGS. PERFORM SPOT PAINTING.
3. INSTALLATION OF ABUTMENT BACKWALLS, COMPOSITE CONCRETE DECK, PARAPETS AND APPROACH SLABS.
4. SEALING OF CONCRETE SURFACES.

ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

THIS WORK CONSISTS OF THE REMOVAL OF CONCRETE DECKS INCLUDING SIDEWALKS, PARAPETS, RAILINGS, DECK JOINTS AND OTHER APPURTENANCES FROM STEEL SUPPORTING SYSTEMS (BEAMS, GIRDERS, CROSS FRAMES, ETC.). THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING DECK REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT IS PROHIBITED. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

PROTECTION OF STEEL SUPPORT SYSTEMS: BEFORE DECK SLAB CUTTING IS PERMITTED, DRAW THE OUTLINE OF PRIMARY STEEL MEMBERS IN CONTACT WITH THE BOTTOM OF THE DECK ON THE SURFACE OF DECK. DRILL SMALL DIAMETER PILOT HOLES 2 INCHES OUTSIDE THESE LINES TO CONFIRM THE LOCATION OF FLANGE EDGES. DECK CUTS OVER OR WITHIN 2 INCHES OF FLANGE EDGES SHALL NOT EXTEND LOWER THAN THE BOTTOM LAYER OF DECK SLAB REINFORCING STEEL. CUTS MADE OUTSIDE 2 INCHES OF FLANGE EDGES MAY EXTEND THE FULL DEPTH OF THE DECK. PERFORM WORK CAREFULLY DURING CUTTING OF THE DECK SLAB TO AVOID DAMAGING STEEL MEMBERS THAT ARE TO BE INCORPORATED INTO THE PROPOSED STRUCTURE. REPLACE OR REPAIR STEEL MEMBERS DAMAGED BY THE DECK SLAB CUTTING OPERATIONS AT NO COST TO THE PROJECT. AT LEAST 7 DAYS BEFORE PERFORMING REPAIR WORK, SUBMIT A PROPOSED REPAIR PLAN, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER TO THE DIRECTOR. OBTAIN THE DIRECTOR'S APPROVAL BEFORE PERFORMING REPAIR.

REMOVAL METHODS: THE CONTRACTOR MAY REMOVE CONCRETE BY CUTTING AND BY MEANS OF HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED OR BLUNTED CHISEL TYPE TOOLS. FOR REMOVALS OVER STRUCTURAL MEMBERS (STEEL BEAM), THE CONTRACTOR MAY USE A HAMMER HEAVIER THAN 35 POUNDS BUT NOT TO EXCEED 90 POUNDS UNLESS APPROVED BY THE ENGINEER. REMOVAL METHODS OVER STRUCTURAL MEMBERS SHALL ENSURE ADEQUATE DEPTH CONTROL AND PREVENT NICKING OR GOUGING THE PRIMARY STRUCTURAL MEMBERS.

DUE TO THE POSSIBLE PRESENCE OF ATTACHMENTS (E.G., FINISHING MACHINE, SCUPPER AND FORM SUPPORTS, ETC.) TO EXISTING STRUCTURAL MEMBERS, PERFORM WORK CAREFULLY DURING DECK REMOVAL TO AVOID DAMAGING STRUCTURAL MEMBERS THAT ARE TO REMAIN. REPLACE OR REPAIR STRUCTURAL MEMBERS DAMAGED BY THE REMOVAL OPERATIONS AT NO COST TO THE PROJECT. AT LEAST 7 DAYS BEFORE PERFORMING REPAIR WORK, SUBMIT A PROPOSED REPAIR PLAN, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER TO THE DIRECTOR. OBTAIN THE DIRECTOR'S APPROVAL BEFORE PERFORMING REPAIR.

ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN (CONTINUED...)

EXISTING WELDED ATTACHMENTS: REMOVE EXISTING WELDED ATTACHMENTS (E.G., FINISHING MACHINE AND FORM SUPPORTS; AND SUPPORTS FOR SCUPPERS AND BULB ANGLES WHICH ARE TO BE REMOVED) LOCATED IN THE DESIGNATED TENSION PORTIONS OF THE TOP FLANGES OF EXISTING STEEL MEMBERS AND GRIND THE FLANGE SURFACES SMOOTH. CAREFULLY GRIND PARALLEL TO THE FLANGES.

CUT LINE CONSTRUCTION JOINT PREPARATION: SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL, IF REQUIRED IN THE PLANS, IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACES AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT OF ALL DIRT, DUST, RUST OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH, BUT REMOVE ALL PACK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

SUBSTRUCTURE CONCRETE REMOVAL: REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

MEASUREMENT & PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

ITEM 202, WEARING COURSE REMOVED

THIS WORK CONSISTS OF THE REMOVAL OF THE ASPHALT WEARING COURSE ON THE APPROACH SLABS.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.04.

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.

DECK PLACEMENT DESIGN 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 2.5 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".

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

UTILITY LINES

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

ITEM 514, FIELD PAINTING, MISC.: THREE COAT SYSTEM FOR SPOT REPAIR OF EXISTING STRUCTURAL STEEL

DESCRIPTION: THIS ITEM CONSISTS OF FIELD PAINTING STRUCTURAL STEEL PREVIOUSLY COATED WITH AN OZEU PAINT SYSTEM TO CORRECT DAMAGE BY REMOVAL OF EXISTING STRIP SEAL JOINT ARMOR AND WELDING. ALL END FRAMES ARE TO BE PAINTED AS WELL AS THREE FEET OF EACH GIRDER (SEE FIGURE 1). THIS ITEM ALSO INCLUDES THE FIELD PAINTING OF ALL EXISTING END FRAME CONNECTOR PLATES. THIS WORK CONSISTS OF PERFORMING SURFACE PREPARATION AND APPLYING A THREE-COAT PAINT SYSTEM TO THE PREPARED STEEL AND FEATHERED REMOVAL AREAS OF EXISTING OZEU PAINT SYSTEMS.

GENERAL: CMS 514.05 THROUGH 514.10 AND 514.13.D APPLY UNLESS MODIFIED BY THESE NOTES.

WASHING EXISTING OZEU PAINTED SURFACES: CLEAN SURFACES TO BE COATED WITH LOW PRESSURE WATER CLEANING TO REMOVE ALL DIRT, DEBRIS, ANIMAL EXCREMENT, SALT CONTAMINANTS AND OTHER ACCUMULATED FOREIGN MATERIAL IN ACCORDANCE WITH SSPC-SP12 (LP WC), LOW PRESSURE WATER CLEANING. THE PRESSURE WASHER SHALL BE CAPABLE OF ACHIEVING AT LEAST 2000 POUNDS PER SQUARE INCH AT THE NOZZLE. WHEN USING THE POWER WASHING EQUIPMENT, THE NOZZLE SHALL BE MAINTAINED NO MORE THAN 10 INCHES FROM THE SURFACE. SUPPLY AND USE POTABLE WATER. PROVIDE TO THE ENGINEER A LETTER OF WRITTEN ACCEPTANCE FOR ANY BIODEGRADABLE DETERGENTS OR CLEANERS USED IN CONJUNCTION WITH THIS METHOD.

COLLECT AND CONTAIN WATER AND DEBRIS REMOVED DURING WASHING OPERATIONS ABOVE WATER FEATURES IN CONFORMANCE WITH CMS 514.08 AND CMS 514.13.D FOR ANY DEBRIS. CREATE SETTLEMENT COLLECTION BASINS AND STRAIN ALL WASH WATER ABOVE LAND FEATURES AS NECESSARY TO PRODUCE VISIBLY CLEAR WATER AND COMPLY WITH CMS 514.08 AND CMS 514.13.D FOR ANY DEBRIS.

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DESIGNED	DRAWN	REVIEWED	DATE
JML	JML	JMS	10/16/15
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DWW		0700770	

GENERAL NOTES - 1
BRIDGE NO. BEL-7-2361
S.R. 7 OVER GLENNS RUN

BEL-7-23.60
PID No. 91546

ITEM 514, FIELD PAINTING, MISC.: THREE COAT SYSTEM FOR SPOT REPAIR OF EXISTING STRUCTURAL STEEL (CONTINUED...)

SURFACE PREPARATION: AFTER THE PRESSURE WASHED SURFACE HAS DRIED, REMOVE EXISTING PAINT COATING TO CONTRACT LIMITS OR AS DIRECTED BY THE ENGINEER ACCORDING TO: SSPC-SP11, POWER TOOL CLEANING TO BARE METAL, AS SHOWN ON THE PICTORIAL SURFACE PREPARATION STANDARDS FOR PAINTING STEEL SURFACES SHOWN IN SSPC-VIS3; SSPC SP6, COMMERCIAL BLAST CLEANING, AS SHOWN ON THE PICTORIAL SURFACE PREPARATION STANDARDS FOR PAINTING STEEL SURFACES SHOWN IN SSPC-VIS1; OR SSPC SP12 UHP WJ-4, ULTRAHIGH-PRESSURE WATER JETTING, AS SHOWN ON THE PICTORIAL SURFACE PREPARATION STANDARDS FOR PAINTING STEEL SURFACES SHOWN IN SSPC-VIS4. SUPPLY BLAST WATER CONTAINING A COMMERCIALLY AVAILABLE RUST INHIBITOR AT A DOSAGE THAT PREVENTS FLASH RUSTING FOR 12 HOURS AND DOCUMENTED AS ACCEPTABLE TO THE COATING'S MANUFACTURER. THE ENGINEER WILL USE THE SSPC-VIS1, SSPC-VIS3 OR SSPC-VIS4 TO DETERMINE THE ACCEPTANCE OF THE SURFACE PREPARATION. FEATHER THE EXISTING PAINT TO EXPOSE A MINIMUM OF 1/2 INCH OF EACH COAT. CONTAIN AND DISPOSE OF WASTE GENERATED BY THE CLEANING ACCORDING TO CMS 514.13.D.

ROUND ALL EXPOSED CORNERS OF MAIN MATERIAL TO BE PAINTED AS NECESSARY TO ACHIEVE A 1/16 INCH RADIUS OR EQUIVALENT FLAT SURFACE AT A 45 DEGREE ANGLE.

FIELD PAINTING: APPLY THE PRIME, INTERMEDIATE AND FINISH COATS OF THE THREE-COAT PAINT SYSTEM SPECIFIED IN CMS 708.02, ACCORDING TO CMS 514.15, 514.16, 514.17, 514.19 AND 514.20 TO CONTRACT LIMITS OR AS DIRECTED BY THE ENGINEER. TINT THE FINISH COAT TO APPROXIMATELY THE SAME COLOR AS THE EXISTING FINISH COLOR OR AS DESIGNATED IN THE CONTRACT. MATCH THE COLOR TO THE ENGINEERS SATISFACTION. THE ENGINEER WILL DETERMINE THE PRIME AND INTERMEDIATE COAT THICKNESS USING A TYPE 2 MAGNETIC GAGE AT SPOT LOCATIONS. THE PRIME, INTERMEDIATE AND FINISH COAT OF PAINT SHALL MEET THE MINIMUM DRY FILM THICKNESS REQUIREMENTS OF CMS 514.20. APPLY PAINT AS FOLLOWS:

A. APPLY THE PRIME COAT ONLY TO THE PREPARED SURFACE OF THE BARE STEEL AND THE EXISTING PRIME COAT EXPOSED BY FEATHERING. DO NOT APPLY THE PRIME COAT TO THE ADJACENT INTERMEDIATE COAT.

B. APPLY CAULK AFTER PRIMING, IF NECESSARY.

C. APPLY THE INTERMEDIATE COAT TO THE NEW PRIME COAT AND TO THE EXISTING INTERMEDIATE COATS THAT ARE EXPOSED BY FEATHERING.

D. APPLY THE FINISH COAT TO THE NEW INTERMEDIATE COAT AND TO THE EXISTING FINISH COATS THAT ARE EXPOSED BY FEATHERING.

AT THE PERIMETER OF THE REPAIR AREA, APPLY THE PRIME, INTERMEDIATE AND FINISH COATS WITH A BRUSH. IN LIEU OF BRUSHING THE CONTRACTOR MAY DOUBLE MASK AREAS NOT TO BE COATED AND SPRAY TO FEATHERED REMOVAL LINES.

BLEND REPAIR AREAS WITH THE ADJACENT COATING TO PROVIDE A FINISHED SURFACE IN THE PATCHED AREAS THAT IS SMOOTH AND HAS AN EVEN PROFILE WITH THE ADJACENT SURFACE.

ITEM 514, FIELD PAINTING, MISC.: THREE COAT SYSTEM FOR SPOT REPAIR OF EXISTING STRUCTURAL STEEL (CONTINUED...)

BASIS OF PAYMENT: THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICES AS FOLLOWS: THE DEPARTMENT MAY CONSIDER PAINT AS ELIGIBLE FOR PAYMENT FOR MATERIAL ON-HAND AS SPECIFIED IN 109.10, HOWEVER, ONLY PAINT THAT THE CONTRACTOR CAN PROVE TO THE ENGINEER WILL BE USED DURING THE CONSTRUCTION SEASON IS ELIGIBLE FOR PAYMENT. THE CONTRACTOR SHALL PROVIDE THE ENGINEER CALCULATIONS INDICATING THE TOTAL SQUARE FEET OF STEEL TO BE PAINTED DURING THE CONSTRUCTION SEASON. THE CONTRACTOR SHALL ALSO PROVIDE CALCULATIONS SHOWING THE TOTAL NUMBER OF GALLONS REQUIRED.

IF THE CONTRACTOR CAUSES DAMAGE OR INJURY TO PUBLIC OR PRIVATE PROPERTY, THE DEPARTMENT WILL NOT PAY FOR RESTORING THE PROPERTY TO ITS ORIGINAL CONDITION.

THE DEPARTMENT WILL NOT PAY FOR REPAIRING ADJACENT COATINGS DAMAGED DURING THE WASHING, POWER TOOL CLEANING OR BLAST CLEANING OPERATION.

THE DEPARTMENT WILL NOT PAY FOR REMOVING AND REPLACING AN AREA OF COATING BECAUSE A SPOT OR MAXIMUM AVERAGE THICKNESS EXCEEDS THE MAXIMUM SPOT THICKNESS.

THE DEPARTMENT WILL NOT PAY FOR ADDITIONAL TESTING REQUIRED BY ANY HAULER, TREATMENT FACILITY, DISPOSAL FACILITY OR LANDFILL.

THE DEPARTMENT WILL NOT PAY FOR ACCESSING, INSPECTING, AND REPAIRING AREAS THAT ARE NOT FOUND TO BE IN CONFORMANCE WITH THE SPECIFICATIONS AND PERTINENT CONTRACT DOCUMENTS.

ALL OTHER REQUIREMENTS OF THIS FIELD PAINTING SPECIFICATION ARE CONSIDERED INCIDENTAL TO THE WORK.

ITEM	UNIT	DESCRIPTION
514	SQ FT	FIELD PAINTING, MISC.: THREE COAT SYSTEM FOR SPOT REPAIR OF EXISTING STRUCTURAL STEEL

PAINT COLOR: THE URETHANE FINISH COAT COLOR SHALL MATCH THE EXISTING FINISH COAT COLOR AND BE APPROVED BY THE ENGINEER.

MEASUREMENT: THE DEPARTMENT WILL MEASURE ITEM 514, FIELD PAINTING, MISC.: THREE COAT SYSTEM FOR SPOT REPAIR OF EXISTING STRUCTURAL STEEL ON A SQ FT BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED PAINTING QUANTITY AT THE CONTRACT PRICE FOR ITEM 514, FIELD PAINTING, MISC.: THREE COAT SYSTEM FOR SPOT REPAIR OF EXISTING STRUCTURAL STEEL.

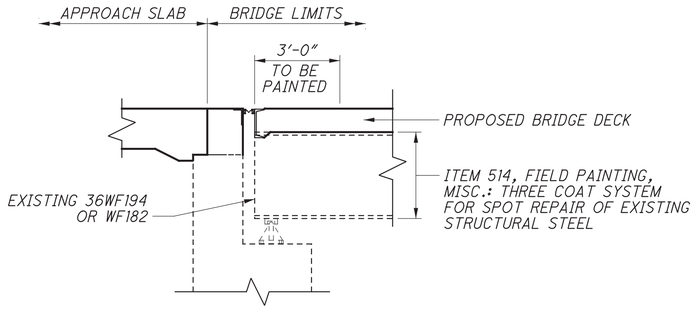


FIGURE 1

ITEM 516, REFURBISH AND RESET BEARING, AS PER PLAN

THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO PROPERLY ALIGN BRIDGE BEARINGS AS WELL AS THEIR CLEANING AND PAINTING. INCLUDED SHALL BE THE DISASSEMBLY OF THE BEARINGS, HAND TOOL CLEANING (GRINDING IF NECESSARY), PAINTING ACCORDING TO ITEM 514, REPLACEMENT OF ANY DAMAGED SHEET LEAD WITH PREFORMED BEARING PADS (711.21), INSTALLATION OF ANY NECESSARY STEEL SHIMS OF THE SAME SIZE AS THE BEARINGS TO PROVIDE A SNUG FIT, REALIGNMENT OF THE UPPER BEARING PLATE BY REMOVING EXISTING WELDS AND REWELDING SO THAT THE BEARINGS ARE VERTICALLY ALIGNED AT 60° F [15° C], LUBRICATING SLIDING SURFACES, AND REASSEMBLY OF THE BEARINGS. ASSURE ALL BEARINGS ARE SHIMMED ADEQUATELY AND THAT NO BEAMS AND/OR BEARING DEVICES ARE "FLOATING". AT NO ADDITIONAL COST TO THE STATE, THE CONTRACTOR MAY INSTALL NEW BEARINGS OF THE SAME TYPE AS THE EXISTING IN PLACE OF REFURBISHING THE BEARINGS. ALL WORK SHALL BE TO THE SATISFACTION OF THE ENGINEER. PAYMENT FOR ALL OF THE ABOVE DESCRIBED LABOR AND MATERIALS WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 516 - REFURBISH AND RESET BEARING, AS PER PLAN.

ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN

THIS WORK CONSISTS OF RAISING OR RE-POSITIONING EXISTING STRUCTURES TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS.

SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH CMS 501.05.

IF JACKING OPERATIONS ARE PERFORMED AFTER THE PLACEMENT OF THE PROPOSED CONCRETE DECK AND CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL STRINGERS, OR OTHER DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED, IMMEDIATELY CEASE THE JACKING OPERATION AND INSTALL SUPPORTS TO THE SATISFACTION OF THE ENGINEER. ANALYZE THE DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL. EPOXY INJECT ALL BEAMS THAT SEPARATE FROM THE DECK FOR THE DISTANCE OF THE SEPARATION IN ACCORDANCE WITH CMS 512.07. THE DEPARTMENT WILL NOT PAY FOR THE COST OF THIS EPOXY INJECTION OR OTHER REQUIRED REPAIRS. THE BRIDGE BEARINGS SHALL BE FULLY SEATED AT ALL CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUBMIT A REPAIR PLAN TO THE ENGINEER. THE DEPARTMENT WILL NOT PAY FOR THE REPAIR COSTS TO ENSURE FULL SEATING ON BEARINGS.

THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS.

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

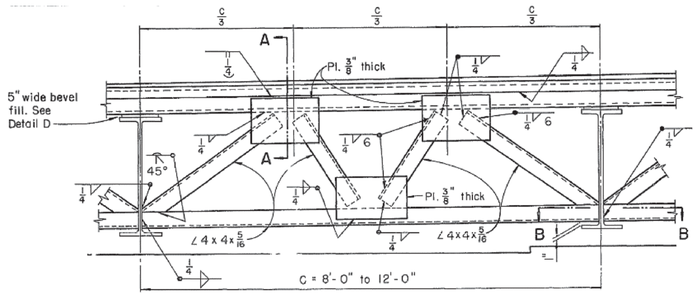
ITEM 513 STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN

DESCRIPTION: THIS WORK SHALL CONSIST OF REMOVING AND REPLACING DETERIORATED END CROSSFRAME MEMBERS AND CONNECTION PLATES AS DIRECTED BY THE ENGINEER. PRIOR TO ORDERING AND PERFORMING END CROSSFRAME REPLACEMENT WORK THE ENGINEER SHALL DETERMINE THE MEMBERS AND PLATES WHICH REQUIRE REPLACEMENT. MEMBERS OR PLATES THAT REQUIRE REPLACEMENT SHALL BE COMPLETELY REPLACED. MEMBER AND PLATE SIZES ARE ASSUMED TO BE BASED ON THE CURRENT STANDARD DRAWING AT THE TIME OF ORIGINAL CONSTRUCTION AND ARE SHOWN BELOW. MEMBERS AND PLATE SIZES SHALL BE FIELD VERIFIED. IF SIZES DEVIATE FROM THE DETAIL BELOW MEMBERS AND PLATES SHALL BE REPLACED IN KIND. FOR ADDITIONAL END CROSSFRAME DETAILS SEE STANDARD DRAWING GSD-1-96.

ALL REQUIREMENTS OF 513 APPLY TO SHOP FABRICATED MEMBERS. PERFORM ALL WORK FOR FIELD-FABRICATED MEMBERS ACCORDING TO ITEM 513, EXCEPT AS MODIFIED HEREIN. THE DEPARTMENT WILL NOT REQUIRE THE CONTRACTOR PERFORMING THE FIELD FABRICATION TO BE PRE-QUALIFIED AS SPECIFIED IN SUPPLEMENT 1078. SUBMIT A WRITTEN LETTER OF MATERIAL ACCEPTANCE IN ACCORDANCE WITH 501.06, TO THE ENGINEER. PROVIDE THE ENGINEER "AS BUILT" DRAWINGS IN ACCORDANCE WITH 513.06, EXCEPT 501.04 DOES NOT APPLY. UPON RECEIPT OF THE ENGINEER'S ACCEPTANCE, SUPPLY A COPY OF THE DRAWINGS, ACCORDING TO SUPPLEMENT 1002, TO THE OFFICE OF MATERIAL MANAGEMENT FOR RECORD PURPOSES.

MEASUREMENT AND PAYMENT: ALL MATERIAL, LABOR AND INCIDENTALS NECESSARY TO REPLACE THE DETERIORATED MEMBERS AND PLATES SHALL BE INCLUDED WITH THIS ITEM. THE DEPARTMENT WILL MEASURE THE QUANTITY OF STEEL REPLACED IN POUNDS AS DIRECTED BY THE ENGINEER. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITY OF STEEL AT THE CONTRACT PRICE FOR ITEM 513, STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN. BASE CONTRACT BID PRICE FOR THIS ITEM UPON RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE STRUCTURE. HOWEVER THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS, DIMENSIONS, AND MEMBER AND PLATE CONDITIONS THAT HAVE BEEN FIELD VERIFIED.

A CONTINGENCY QUANTITY BASED ON 20% OF THE END CROSSFRAME STEEL WEIGHT HAS BEEN ADDED TO THE PROJECT.



END CROSSFRAME
For beam spacing of 8'-0" to 12'-0" measured parallel to end dam.

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DESIGNED	DRAWN	REVIEWED	DATE
JML	JML	JMS	10/16/15
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JTW		0700770	

GENERAL NOTES - 2
BRIDGE NO. BEL-7-2361
S.R. 7 OVER GLENNS RUN

BEL-7-23.60
PID No. 91546

CALCULATED BY: JML DATE: 9/11/15
CHECKED BY: JTW DATE: 9/14/15

ESTIMATED QUANTITIES

ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT.	SUPER.	GEN.	REF.
202	11203	LUMP		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				4 / 23
202	22900	464	SY	APPROACH SLAB REMOVED			464	
202	23500	444	SY	WEARING COURSE REMOVED			444	
503	11100	LUMP		COFFERDAMS AND EXCAVATION BRACING				
509	10000	35906	LB	EPOXY COATED REINFORCING STEEL	3761	32145		
510	10000	543	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	543			
511	34446	123	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK		123		
511	34450	9	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)		9		
511	44110	16	CY	CLASS QC1 CONCRETE, ABUTMENT NOT INCLUDING FOOTING	16			
511	51512	11	CY	CLASS QC2 CONCRETE WITH QC/QA, SIDEWALK		11		
512	10050	87	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)		87		
512	10100	388	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	112	158	118	
513	10201	938	LB	STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN		938		5 / 23
513	20000	1826	EACH	WELDED STUD SHEAR CONNECTORS		1826		
514	27700	1452	SF	FIELD PAINTING, MISC.: THREE COAT SYSTEM FOR SPOT REPAIR OF EXISTING STRUCTURAL STEEL		1452		4 - 5 / 23
516	11211	193	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN			193	18 / 23
516	13600	24	SF	1" PREFORMED EXPANSION JOINT FILLER			24	
516	13900	4	SF	2" PREFORMED EXPANSION JOINT FILLER			4	
516	46801	22	EACH	REFURBISH AND RESET BEARING, AS PER PLAN			22	5 / 23
516	47001	LUMP		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN				5 / 23
517	75120	116	FT	RAILING (CONCRETE PARAPET WITH TWIN STEEL TUBE RAILING)		116		
526	30011	522	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17"), AS PER PLAN			522	20 / 23
526	90010	199	FT	TYPE A INSTALLATION			199	

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DESIGNED JML | CHECKED DWW
DRAWN JML | REVISED
REVIEWED JMS 10/16/15 | DATE | STRUCTURE FILE NUMBER 07000770

ESTIMATED QUANTITIES
BRIDGE NO. BEL-7-2361
S.R. 7 OVER GLENNS RUN

BEL-7-23.60
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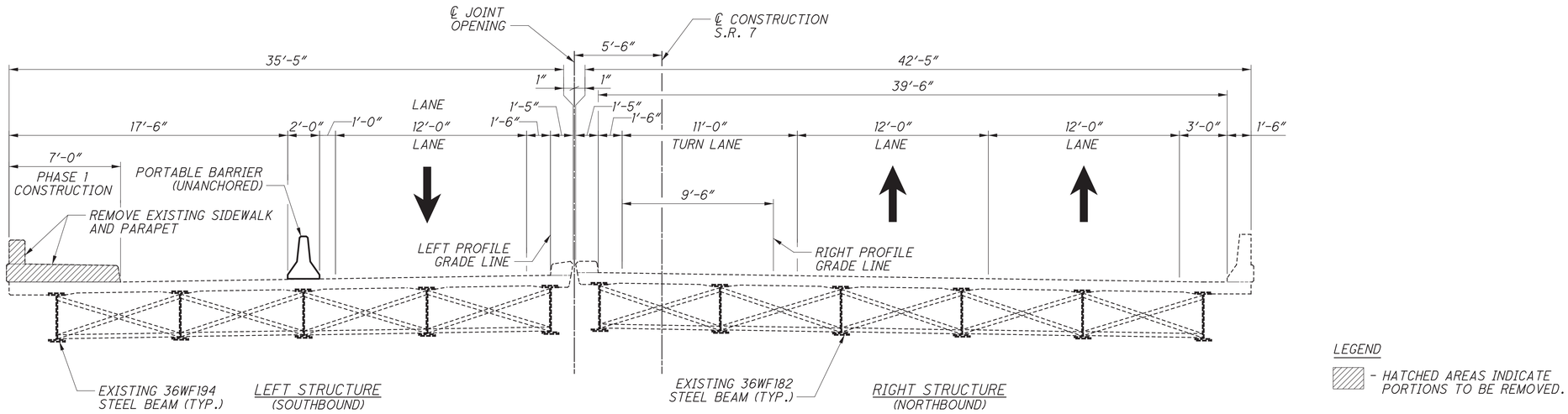
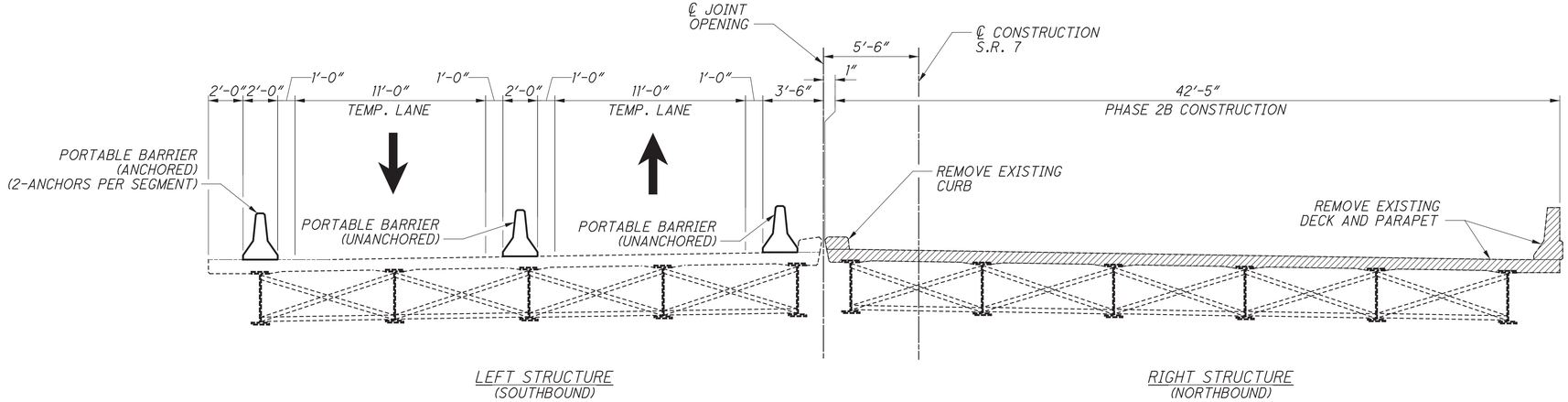
6 / 23

65
82



PHASE 1



PHASE 2B

LEGEND

▨ - HATCHED AREAS INDICATE PORTIONS TO BE REMOVED.

PHASE 1

A) INSTALL PORTABLE BARRIER ON THE SOUTHBOUND STRUCTURE. SHIFT ALL SOUTHBOUND TRAFFIC TO THE INSIDE LANE OF THE EXISTING SOUTHBOUND STRUCTURE. CLOSE THE NORTHBOUND LEFT-TURN LANE. OTHERWISE, NORTHBOUND TRAFFIC WILL NOT BE IMPACTED.

B) REMOVE EXISTING SIDEWALK AND BRIDGE PARAPET FROM THE OUTSIDE OF THE EXISTING SOUTHBOUND STRUCTURE. ALSO REMOVE PORTIONS OF THE APPROACH CURB AND SIDEWALK FROM EACH END OF THE BRIDGE.

PHASE 2A

PHASE 2A DOES NOT INCLUDE BRIDGE WORK.

PHASE 2B

A) MAINTAIN PORTABLE BARRIERS ON THE SOUTHBOUND STRUCTURE INSTALLED DURING PHASE 2A. MAINTAIN SOUTHBOUND TRAFFIC TO THE OUTSIDE OF THE EXISTING SOUTHBOUND STRUCTURE REROUTED IN PHASE 2A. REROUTE NORTHBOUND TRAFFIC INTO ONE LANE ON THE INSIDE OF THE EXISTING SOUTHBOUND STRUCTURE.

B) REMOVE THE EXISTING NORTHBOUND DECK SLAB, PARAPET, CURB, APPROACH SLABS, AND TOPS OF ABUTMENT BACKWALLS.

C) INSTALL SHEAR STUDS ON THE EXISTING STEEL BEAMS, REFURBISH BEARINGS AND PERFORM SPOT PAINTING.

D) CONSTRUCT THE NEW DECK SLAB AND THE TOP PORTION OF THE ABUTMENT BACKWALLS.

E) CONSTRUCT NEW APPROACH SLABS.

F) CONSTRUCT THE BRIDGE PARAPET AND MEDIAN CURB.

G) INSTALL NEW STRIP SEAL EXPANSION JOINTS.

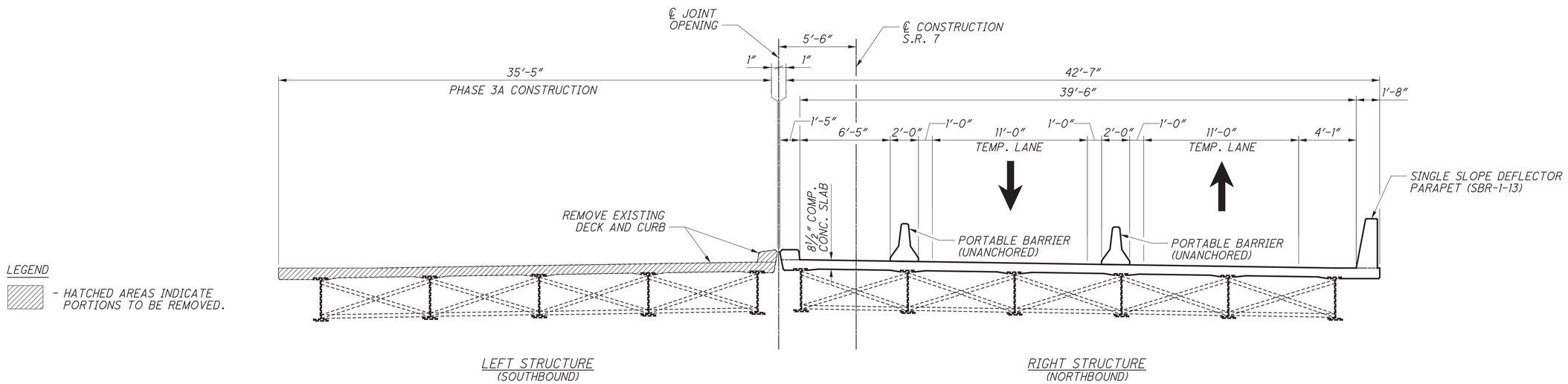
DESIGN AGENCY
HDR ENGINEERING, INC.
1100 SUPERIOR AVE., SUITE 650
CLEVELAND, OHIO 44114
216-912-4240

DESIGNED	DRAWN	REVIEWED	DATE
JMS	NJH	JMS	10/16/15
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DWW/JTW		07000770	

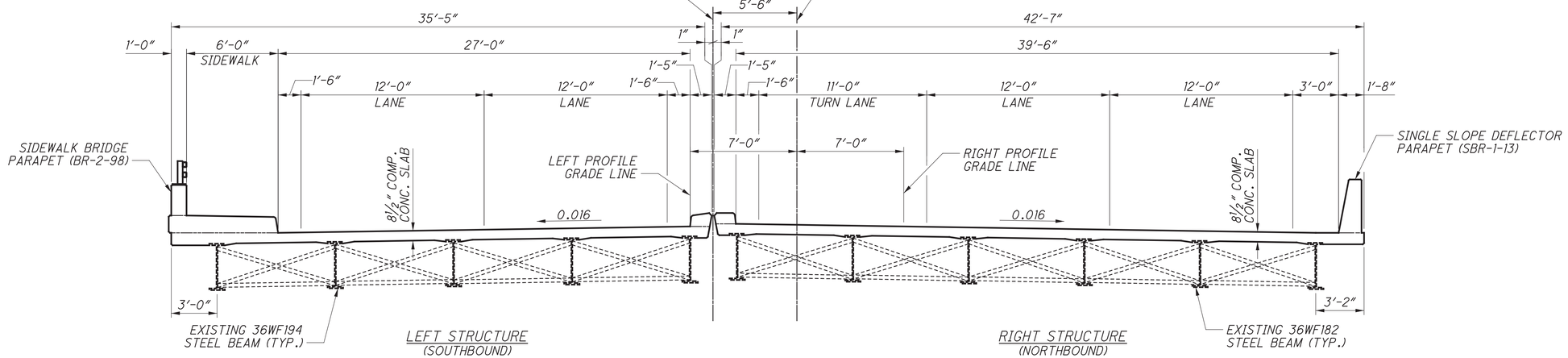
SEQUENCE OF CONSTRUCTION - 1

BRIDGE NO. BEL-7-2361
S.R. 7 OVER GLENNS RUN

BEL-7-23.60
PID No. 91546



PHASE 3A



PROPOSED BRIDGE SECTION

PHASE 3A

A) INSTALL PORTABLE BARRIERS ON THE NORTHBOUND STRUCTURE. REROUTE NORTHBOUND TRAFFIC TO THE OUTSIDE OF THE NEWLY RECONSTRUCTED NORTHBOUND STRUCTURE. REROUTE SOUTHBOUND TRAFFIC TO THE MIDDLE OF THE NEWLY RECONSTRUCTED NORTHBOUND STRUCTURE.

B) REMOVE THE EXISTING SOUTHBOUND DECK SLAB, CURB, APPROACH SLABS, AND TOPS OF ABUTMENT BACKWALLS.

C) INSTALL SHEAR STUDS ON THE EXISTING STEEL BEAMS, REFURBISH BEARINGS AND PERFORM SPOT PAINTING.

D) CONSTRUCT THE NEW DECK SLAB AND THE TOP PORTION OF THE ABUTMENT BACKWALLS.

E) CONSTRUCT NEW APPROACH SLABS.

F) CONSTRUCT THE SIDEWALK, PARAPET, AND MEDIAN CURB.

G) INSTALL NEW STRIP SEAL EXPANSION JOINTS.

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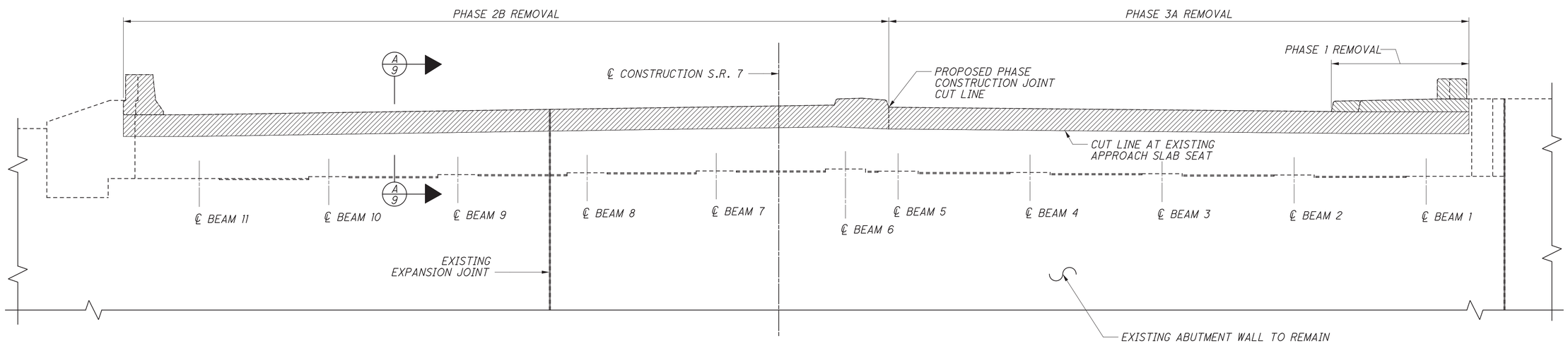
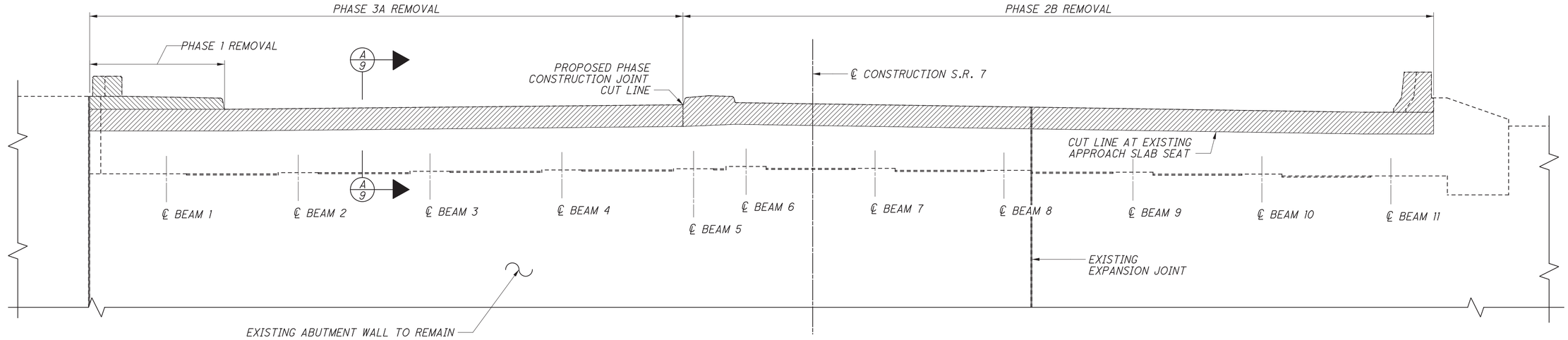
SEQUENCE OF CONSTRUCTION - 2

BRIDGE NO. BEL-7-2361
S.R. 7 OVER GLENNS RUN

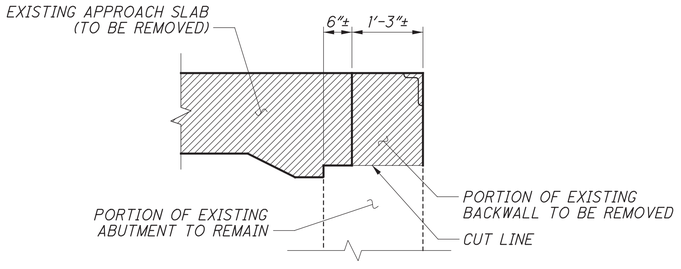
BEL-7-23.60
PID No. 91546



REAR ABUTMENT ELEVATION



FORWARD ABUTMENT ELEVATION



A/9 ABUTMENT SECTION
(REAR ABUTMENT SHOWN, FORWARD SIMILAR)

LEGEND

▨ - HATCHED AREAS INDICATE PORTIONS TO BE REMOVED.

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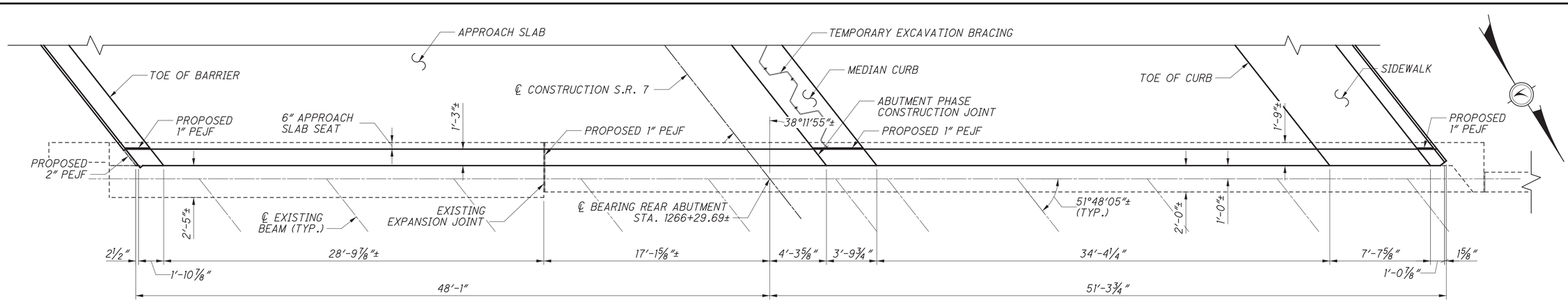
ABUTMENT REMOVAL DETAILS
BRIDGE NO. BEL-7-2361
S.R. 7 OVER GLENNS RUN

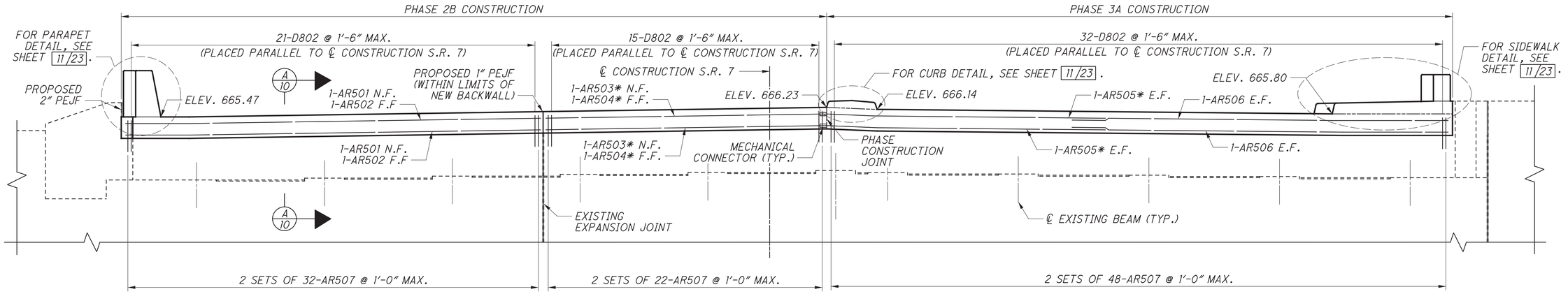
BEL-7-23.60
PID No. 91546

9 / 23

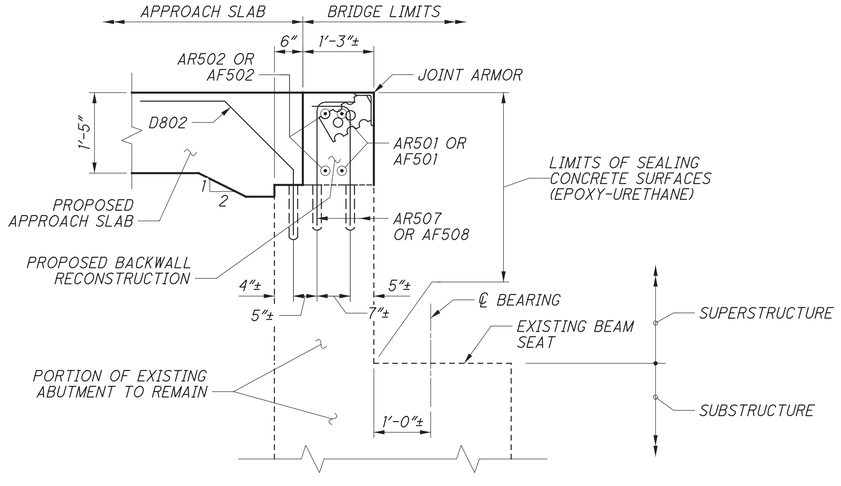
68 / 82



PLAN



ELEVATION



A 10 A 11 ABUTMENT SECTION (REAR AND FORWARD ABUTMENTS SIMILAR)

MINIMUM LAP LENGTHS (UNLESS NOTED OTHERWISE)
TYPICAL #5 BARS - 2'-6"

NOTES:

1. SCARIFY THE TOP OF EXISTING SURFACES TO BE REPLACED WITH PROPOSED CONCRETE TO A DEPTH OF ¼".
2. FOR ADDITIONAL DETAILS, SEE SHEET 11/23.
3. ALL DOWELS SHALL BE PER CMS 510 AND SET WITH NONSHRINK, NONMETALLIC GROUT. REBAR DOWEL LENGTHS ARE BASED ON THE FOLLOWING MINIMUM EMBEDMENT DEPTHS:

   NO. 5 BAR = 9" NO. 8 BAR = 13"
4. BARS MARKED "*" REQUIRE MECHANICAL CONNECTORS.
5. FOR ADDITIONAL JOINT ARMOR AND STRIP SEAL EXPANSION JOINT DETAILS, SEE SHEET 18/23.

LEGEND:

E.F. = EACH FACE
F.F. = FAR FACE
N.F. = NEAR FACE

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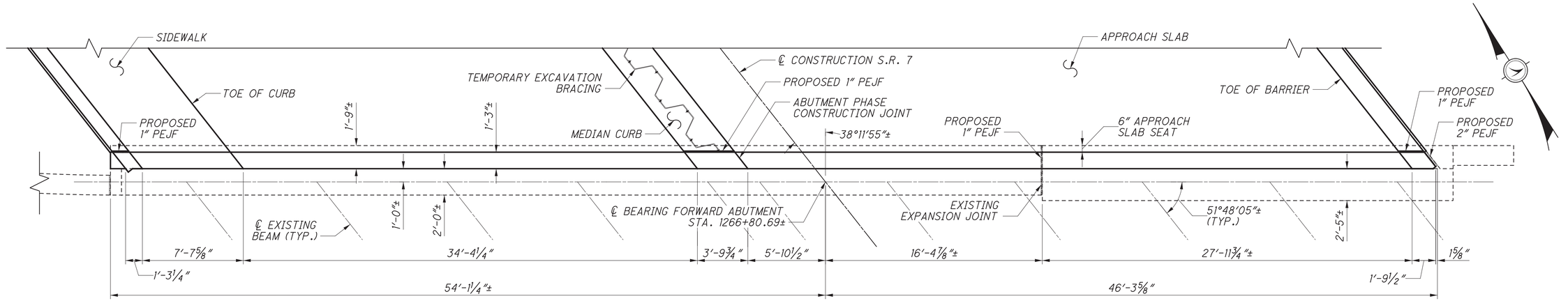
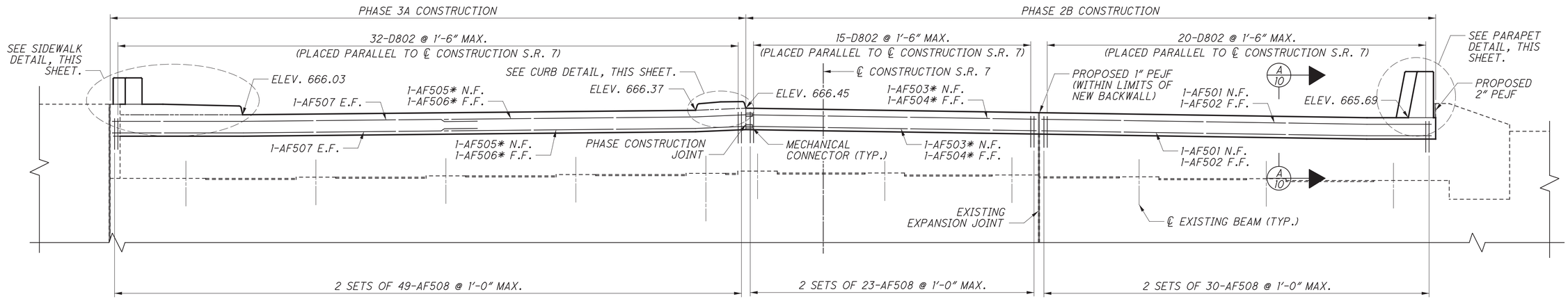
REAR ABUTMENT DETAILS

BRIDGE NO. BEL-7-2361
S.R. 7 OVER GLENNS RUN

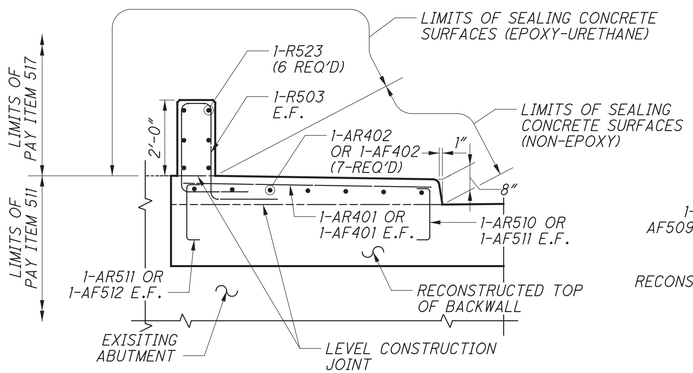
BEL-7-23.60
PID No. 91546



PLAN

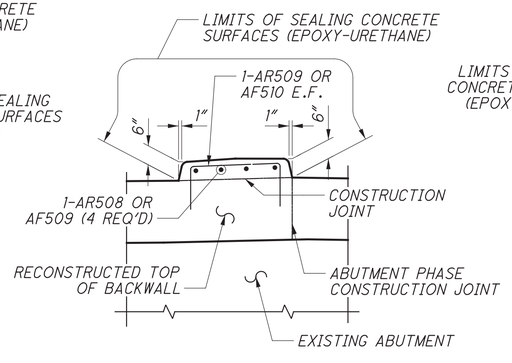


ELEVATION



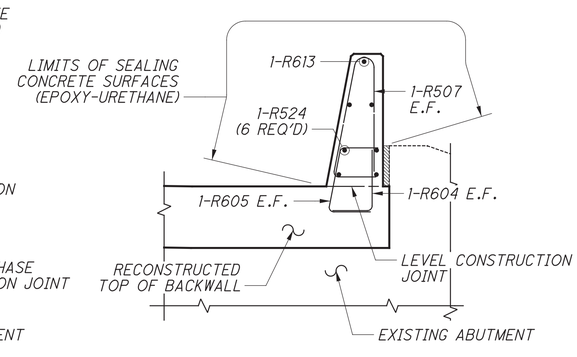
SIDEWALK DETAIL

(ABOVE ABUTMENT BACKWALL)
(LOOKING UPSTATION)
(ABUTMENT REINFORCING NOT SHOWN FOR CLARITY)



MEDIAN CURB DETAIL

(ABOVE ABUTMENT BACKWALL)
(LOOKING UPSTATION)
(ABUTMENT REINFORCING NOT SHOWN FOR CLARITY)



PARAPET DETAIL

(ABOVE ABUTMENT BACKWALL)
(LOOKING UPSTATION)
(ABUTMENT REINFORCING NOT SHOWN FOR CLARITY)

NOTES:

1. FOR LAP SPLICE LENGTHS, SEE SHEET 10/23.
2. FOR TYPICAL ABUTMENT SECTION, SEE SHEET 10/23.
3. FOR ADDITIONAL NOTES, SEE SHEET 10/23.
4. BARS MARKED "*" REQUIRE MECHANICAL CONNECTORS.

LEGEND:

E.F. = EACH FACE
F.F. = FAR FACE
N.F. = NEAR FACE
REQ'D = REQUIRED

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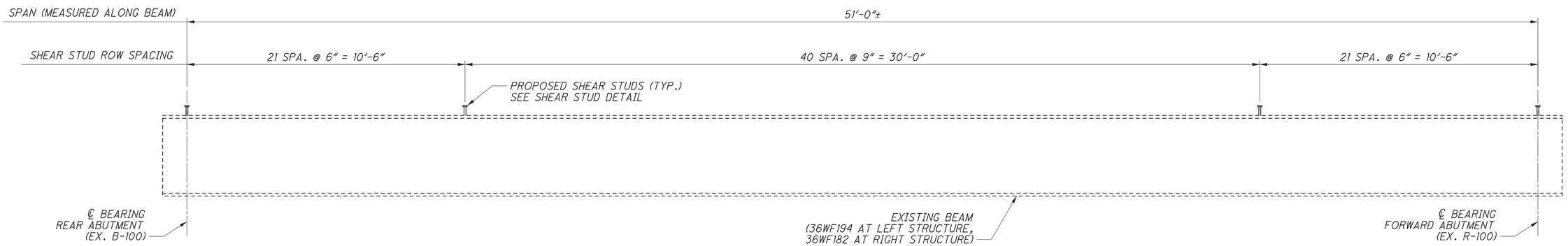
FORWARD ABUTMENT DETAILS

BRIDGE NO. BEL-7-2361
S.R. 7 OVER GLENNS RUN

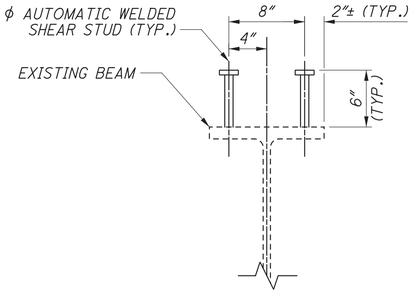
BEL-7-23.60
PID No. 91546

11 / 23

70 / 82



EXISTING BEAM ELEVATION



SHEAR STUD DETAIL

		SPAN 1 DEFLECTIONS (IN.)				
BEAM NUMBERS	BEAM SIZES	CL BRG. REAR ABUT.	0.25	0.50	0.75	CL BRG. FWD. ABUT.
BEAMS 1-5	36WF194	0.000	0.351	0.499	0.351	0.000
BEAMS 6-11	36WF182	0.000	0.326	0.463	0.326	0.000

BEAM DEFLECTIONS

NOTE:

1. BEAM DEFLECTIONS SHOWN ARE CAUSED BY THE DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS (EXCLUDING THE WEIGHT OF THE STEEL BEAMS).
2. TOP FLANGE IS IN COMPRESSION FOR THE ENTIRE SPAN LENGTH. FILLET WELDS TO COMPRESSION FLANGES SHALL BE AT LEAST 1" FROM EDGE OF FLANGE, BE NO MORE THAN 2" LONG AND BE AT LEAST 1/4" FOR THICKNESS UP TO 3/4" OR 5/16" FOR GREATER THAN 3/4" THICK.

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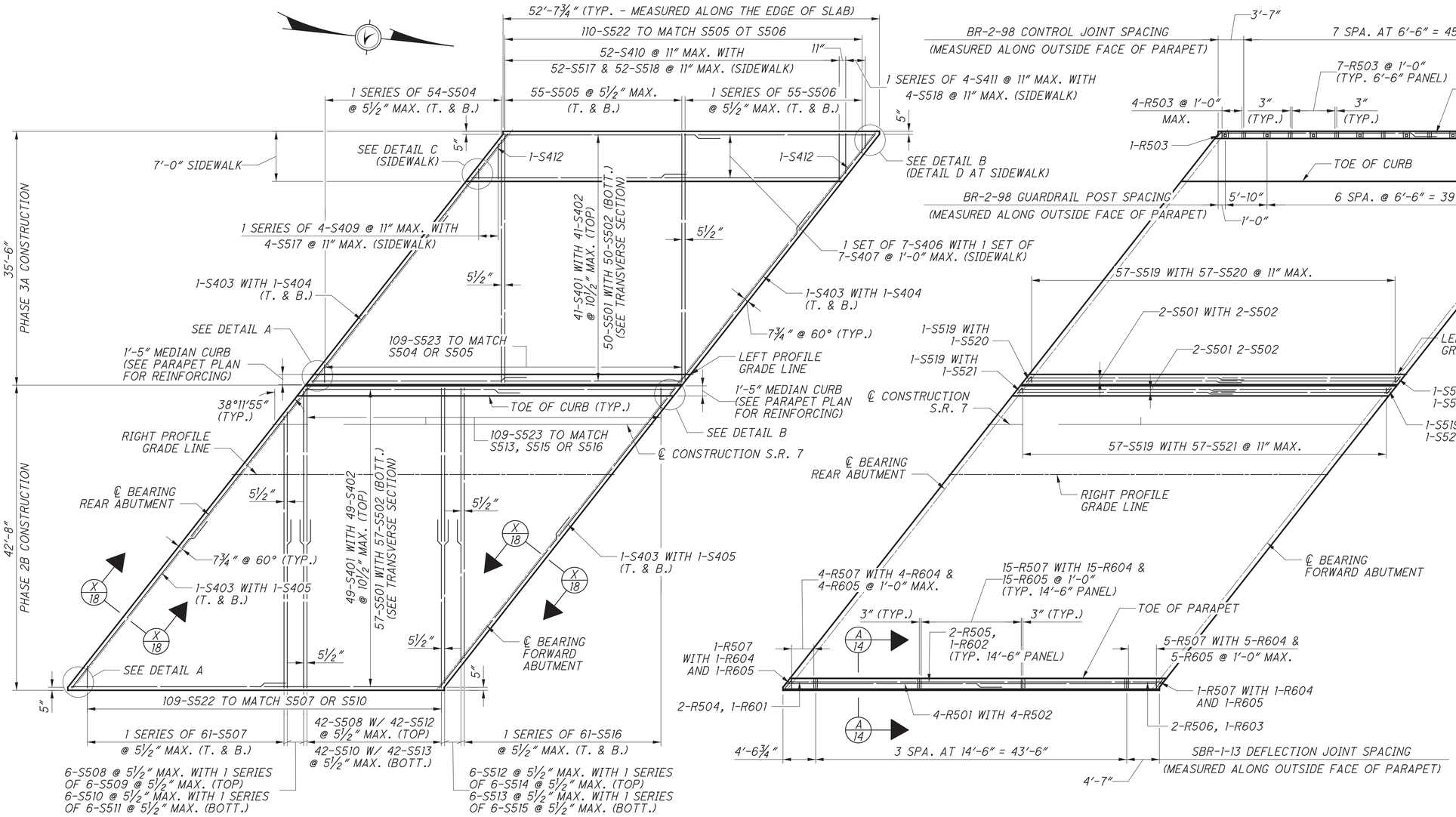
BEAM ELEVATION AND SUPERSTRUCTURE DETAILS

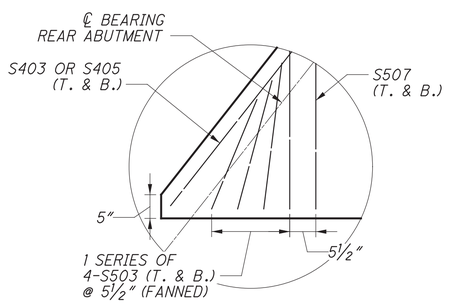
BRIDGE NO. BEL-7-2361
S.R. 7 OVER GLENNS RUN

BEL-7-23.60
PID No. 91546

12 / 23

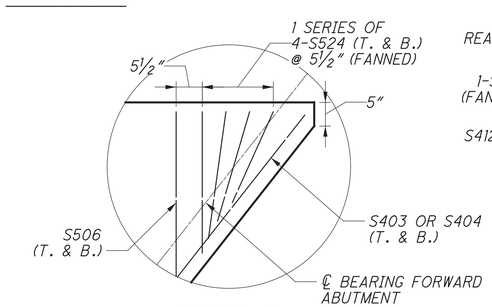
71
82





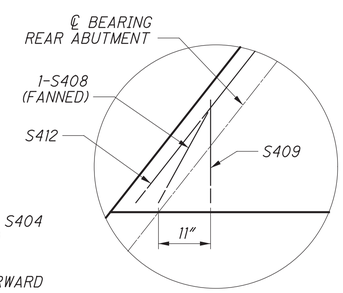
DETAIL A

(SLAB)
(LONGITUDINAL BARS NOT SHOWN FOR CLARITY)
(NORTHBOUND CORNER SHOWN, SOUTHBOUND CORNER SIMILAR)



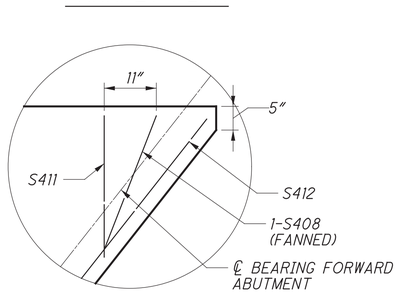
DETAIL B

(SLAB)
(LONGITUDINAL BARS NOT SHOWN FOR CLARITY)
(SOUTHBOUND CORNER SHOWN, NORTHBOUND CORNER SIMILAR)



DETAIL C

(SIDEWALK)
(LONGITUDINAL BARS NOT SHOWN FOR CLARITY)



DETAIL D

(SIDEWALK)
(LONGITUDINAL BARS NOT SHOWN FOR CLARITY)

NOTES:

1. FOR LAP SPLICE LENGTHS, SEE SHEET 14/23.
2. FOR EXPANSION JOINT DETAILS, SEE SHEET 18/23.

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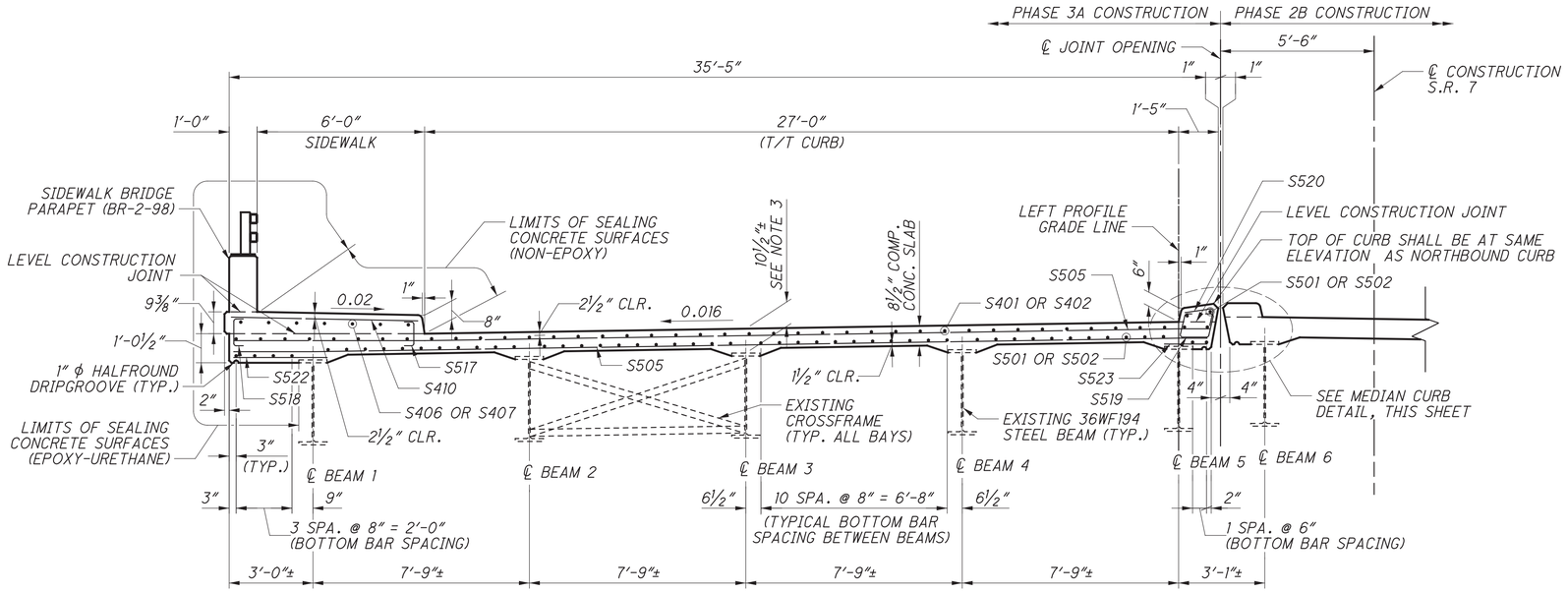
SLAB AND PARAPET PLAN
BRIDGE NO. BEL-7-2361
S.R. 7 OVER GLENNS RUN

BEL-7-23.60
PID No. 91546

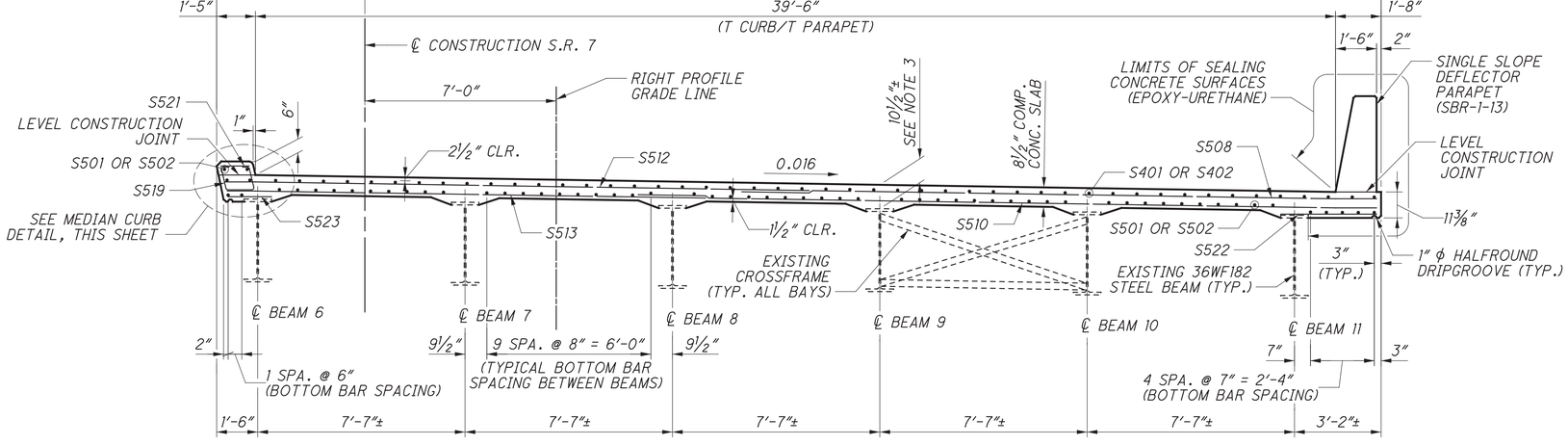
13 / 23

72
82



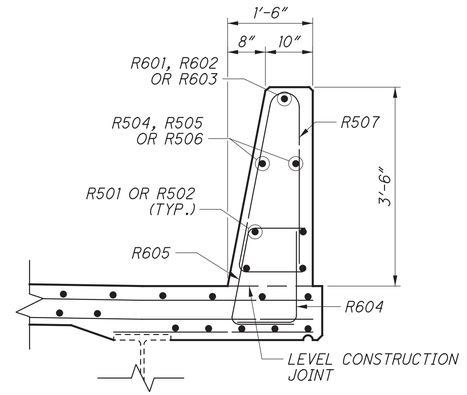
TRANSVERSE SECTION

(SOUTHBOUND)
(LOOKING UPSTATION)

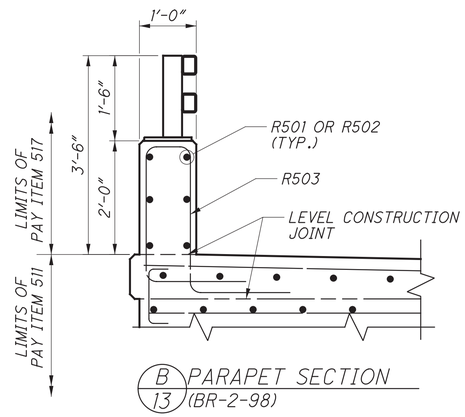


TRANSVERSE SECTION

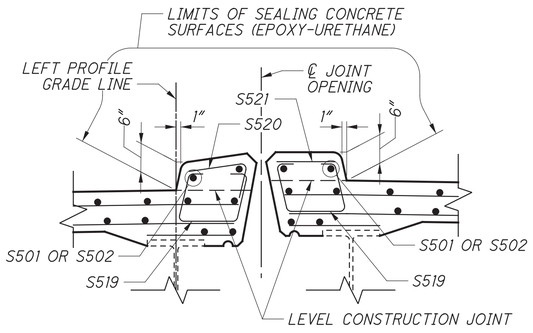
(NORTHBOUND)
(LOOKING UPSTATION)



A 13 PARAPET SECTION (SBR-1-13)



B 13 PARAPET SECTION (BR-2-98)



MEDIAN CURB DETAIL

(LOOKING UPSTATION)

NOTES:

1. DRIPGROOVES SHALL TERMINATE 3'-0" FROM THE EXPANSION JOINTS.
2. FOR ADDITIONAL PARAPET DETAILS AND NOTES, SEE ODOT STD. DWG. SBR-1-13 AND BR-2-98.
3. DECK SLAB CONCRETE QUANTITY: THE ESTIMATED QUANTITY OF DECK SLAB CONCRETE IS BASED ON THE CONSTANT DECK SLAB THICKNESS, AS SHOWN, PLUS THE QUANTITY OF CONCRETE THAT FORMS EACH BEAM HAUNCH. THE ESTIMATE ASSUMES A CONSTANT HAUNCH THICKNESS OF 2 INCHES AND A CONSTANT HAUNCH WIDTH OUTSIDE THE EDGE OF EACH BEAM FLANGE OF 9 INCHES. DEVIATE FROM THIS HAUNCH THICKNESS AS NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE. THE ALLOWABLE TOLERANCE FOR THE HAUNCH WIDTH OUTSIDE THE EDGE OF EACH BEAM FLANGE IS ±3 INCHES.

   THE HAUNCH THICKNESS WAS MEASURED AT THE CENTERLINE OF THE BEAM, FROM THE SURFACE OF THE DECK TO THE BOTTOM OF THE TOP FLANGE MINUS THE DECK SLAB THICKNESS. THE AREA OF ALL EMBEDDED STEEL PLATES HAS BEEN DEDUCTED FROM THE HAUNCH QUANTITY IN ACCORDANCE WITH 511.24.

TYPICAL MINIMUM LAP LENGTHS (UNLESS NOTED OTHERWISE)
#4 BARS - 2'-0"
#5 BARS - 2'-6"
#6 BARS - 3'-0"

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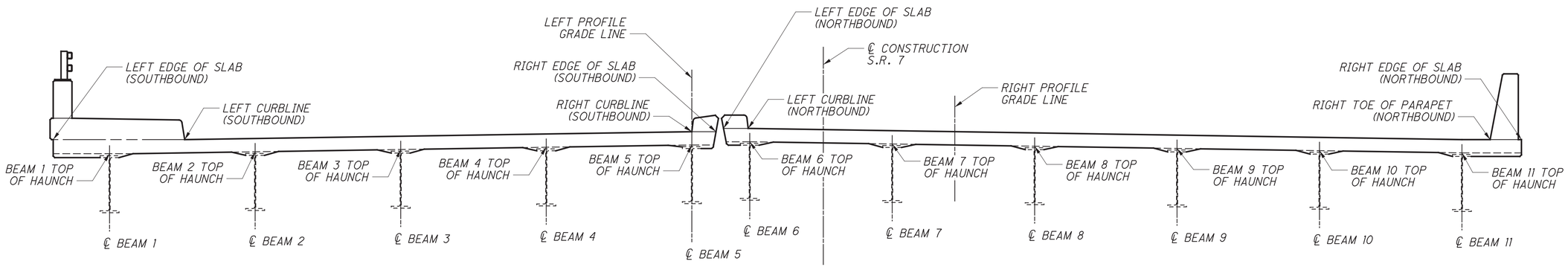
TRANSVERSE SECTION
BRIDGE NO. BEL-7-2361
S.R. 7 OVER GLENNS RUN

BEL-7-23.60
PID No. 91546



TYPICAL CROSS SECTION

SCREED ELEVATIONS (LEFT STRUCTURE)						
		SPAN 1				
	SPAN LOCATION	CL BRG. REAR ABUT.	0.25	0.50	0.75	CL BRG. FWD. ABUT.
LEFT EDGE OF SLAB (SOUTHBOUND)	STATION	1266+61.95	1266+74.70	1266+87.45	1267+00.20	1267+12.95
	OFFSET	41.00′ LT.	41.00′ LT.	41.00′ LT.	41.00′ LT.	41.00′ LT.
	SCREED ELEVATION	665.83	665.91	665.98	666.02	666.05
LEFT CURBLINE (SOUTHBOUND)	STATION	1266+56.44	1266+69.19	1266+81.94	1266+94.69	1267+07.44
	OFFSET	34.00′ LT.	34.00′ LT.	34.00′ LT.	34.00′ LT.	34.00′ LT.
	SCREED ELEVATION	665.80	665.89	665.96	666.00	666.02
LEFT PROFILE GRADE LINE AND RIGHT CURBLINE (SOUTHBOUND)	STATION	1266+35.19	1266+47.94	1266+60.69	1266+73.44	1266+86.19
	OFFSET	7.00′ LT.	7.00′ LT.	7.00′ LT.	7.00′ LT.	7.00′ LT.
	SCREED ELEVATION	666.15	666.23	666.30	666.34	666.36
RIGHT EDGE OF SLAB (SOUTHBOUND)	STATION	1266+34.08	1266+46.83	1266+59.58	1266+72.33	1266+85.08
	OFFSET	5.58′ LT.	5.58′ LT.	5.58′ LT.	5.58′ LT.	5.58′ LT.
	SCREED ELEVATION	666.14	666.23	666.29	666.33	666.36

SCREED ELEVATIONS (RIGHT STRUCTURE)						
		SPAN 1				
	SPAN LOCATION	CL BRG. REAR ABUT.	0.25	0.50	0.75	CL BRG. FWD. ABUT.
LEFT EDGE OF SLAB (NORTHBOUND)	STATION	1266+33.95	1266+46.70	1266+59.45	1266+72.20	1266+84.95
	OFFSET	5.42′ LT.	5.42′ LT.	5.42′ LT.	5.42′ LT.	5.42′ LT.
	SCREED ELEVATION	666.24	666.32	666.38	666.42	666.45
LEFT CURBLINE (NORTHBOUND)	STATION	1266+32.83	1266+45.58	1266+58.33	1266+71.08	1266+83.83
	OFFSET	4.00′ LT.	4.00′ LT.	4.00′ LT.	4.00′ LT.	4.00′ LT.
	SCREED ELEVATION	666.23	666.31	666.38	666.42	666.44
RIGHT PROFILE GRADE LINE	STATION	1266+24.18	1266+36.93	1266+49.68	1266+62.43	1266+75.18
	OFFSET	7.00′ RT.	7.00′ RT.	7.00′ RT.	7.00′ RT.	7.00′ RT.
	SCREED ELEVATION	666.02	666.10	666.17	666.21	666.23
RIGHT TOE OF PARAPET (NORTHBOUND)	STATION	1266+01.75	1266+14.50	1266+27.25	1266+40.00	1266+52.75
	OFFSET	35.50′ RT.	35.50′ RT.	35.50′ RT.	35.50′ RT.	35.50′ RT.
	SCREED ELEVATION	665.48	665.56	665.62	665.66	665.68
RIGHT EDGE OF SLAB (NORTHBOUND)	STATION	1266+00.44	1266+13.19	1266+25.94	1266+38.69	1266+51.44
	OFFSET	37.17′ RT.	37.17′ RT.	37.17′ RT.	37.17′ RT.	37.17′ RT.
	SCREED ELEVATION	665.47	665.55	665.61	665.65	665.68

NOTES:

1. SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
2. FOR A PLAN VIEW IDENTIFYING THE SCREED ELEVATION LOCATIONS, SEE SHEET 17/23.
3. FOR CLARITY, CROSSFRAMES ARE NOT SHOWN ON THE TYPICAL CROSS SECTION.
4. ALL OFFSETS ARE FROM ℄ CONSTRUCTION S.R. 7.

DESIGN AGENCY
HDR ENGINEERING, INC.
1100 SUPERIOR AVE., SUITE 650
CLEVELAND, OHIO 44114
216-912-4240

DESIGNED	DRAWN	REVIEWED	DATE
JML	JML	JMS	10/16/15
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DWW		07000770	

SCREED ELEVATIONS

BRIDGE NO. BEL-7-2361
S.R. 7 OVER GLENNS RUN

BEL-7-23.60
PID No. 91546

TOP OF HAUNCH ELEVATIONS (LEFT STRUCTURE)						
		SPAN 1				
	SPAN LOCATION	CL BRG. REAR ABUT.	0.25	0.50	0.75	CL BRG. FWD. ABUT.
℄ BEAM 1	STATION	1266+59.59	1266+72.34	1266+85.09	1266+97.84	1267+10.59
	OFFSET	38.00′ LT.	38.00′ LT.	38.00′ LT.	38.00′ LT.	38.00′ LT.
	TOP OF HAUNCH ELEVATION	665.11	665.19	665.26	665.30	665.33
℄ BEAM 2	STATION	1266+53.49	1266+66.24	1266+78.99	1266+91.74	1267+04.49
	OFFSET	30.25′ LT.	30.25′ LT.	30.25′ LT.	30.25′ LT.	30.25′ LT.
	TOP OF HAUNCH ELEVATION	665.14	665.23	665.29	665.34	665.36
℄ BEAM 3	STATION	1266+47.39	1266+60.14	1266+72.89	1266+85.64	1266+98.39
	OFFSET	22.50′ LT.	22.50′ LT.	22.50′ LT.	22.50′ LT.	22.50′ LT.
	TOP OF HAUNCH ELEVATION	665.24	665.33	665.39	665.43	665.46
℄ BEAM 4	STATION	1266+41.29	1266+54.04	1266+66.79	1266+79.54	1266+92.29
	OFFSET	14.75′ LT.	14.75′ LT.	14.75′ LT.	14.75′ LT.	14.75′ LT.
	TOP OF HAUNCH ELEVATION	665.34	665.42	665.49	665.53	665.56
℄ BEAM 5	STATION	1266+35.19	1266+47.94	1266+60.69	1266+73.44	1266+86.19
	OFFSET	7.00′ LT.	7.00′ LT.	7.00′ LT.	7.00′ LT.	7.00′ LT.
	TOP OF HAUNCH ELEVATION	665.44	665.52	665.59	665.63	665.66

TOP OF HAUNCH ELEVATIONS (RIGHT STRUCTURE)						
		SPAN 1				
	SPAN LOCATION	CL BRG. REAR ABUT.	0.25	0.50	0.75	CL BRG. FWD. ABUT.
℄ BEAM 6	STATION	1266+32.77	1266+45.52	1266+58.27	1266+71.02	1266+83.77
	OFFSET	3.92′ LT.	3.92′ LT.	3.92′ LT.	3.92′ LT.	3.92′ LT.
	TOP OF HAUNCH ELEVATION	665.52	665.60	665.67	665.71	665.73
℄ BEAM 7	STATION	1266+26.80	1266+39.55	1266+52.30	1266+65.05	1266+77.80
	OFFSET	3.67′ RT.	3.67′ RT.	3.67′ RT.	3.67′ RT.	3.67′ RT.
	TOP OF HAUNCH ELEVATION	665.38	665.46	665.52	665.56	665.59
℄ BEAM 8	STATION	1266+20.83	1266+33.58	1266+46.33	1266+59.08	1266+71.83
	OFFSET	11.25′ RT.	11.25′ RT.	11.25′ RT.	11.25′ RT.	11.25′ RT.
	TOP OF HAUNCH ELEVATION	665.23	665.31	665.38	665.42	665.44
℄ BEAM 9	STATION	1266+14.87	1266+27.62	1266+40.37	1266+53.12	1266+65.87
	OFFSET	18.83′ RT.	18.83′ RT.	18.83′ RT.	18.83′ RT.	18.83′ RT.
	TOP OF HAUNCH ELEVATION	665.09	665.17	665.23	665.27	665.29
℄ BEAM 10	STATION	1266+08.90	1266+21.65	1266+34.40	1266+47.15	1266+59.90
	OFFSET	26.42′ RT.	26.42′ RT.	26.42′ RT.	26.42′ RT.	26.42′ RT.
	TOP OF HAUNCH ELEVATION	664.94	665.02	665.08	665.12	665.15
℄ BEAM 11	STATION	1266+02.93	1266+15.68	1266+28.43	1266+41.18	1266+53.93
	OFFSET	34.00′ RT.	34.00′ RT.	34.00′ RT.	34.00′ RT.	34.00′ RT.
	TOP OF HAUNCH ELEVATION	664.80	664.88	664.94	664.98	665.00

NOTES:

1. TOP OF HAUNCH ELEVATIONS SHOWN REPRESENT THE THEORETICAL LOCATION OF THE BOTTOM OF THE DECK ABOVE THE BEAM HAUNCH PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
2. FOR A CROSS SECTION IDENTIFYING THE TOP OF HAUNCH ELEVATION LOCATIONS, SEE SHEET 15/23.
3. FOR A PLAN VIEW IDENTIFYING THE TOP OF HAUNCH ELEVATION LOCATIONS, SEE SHEET 17/23.
4. ALL OFFSETS ARE FROM ℄ CONSTRUCTION S.R. 7.

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216-912-4240

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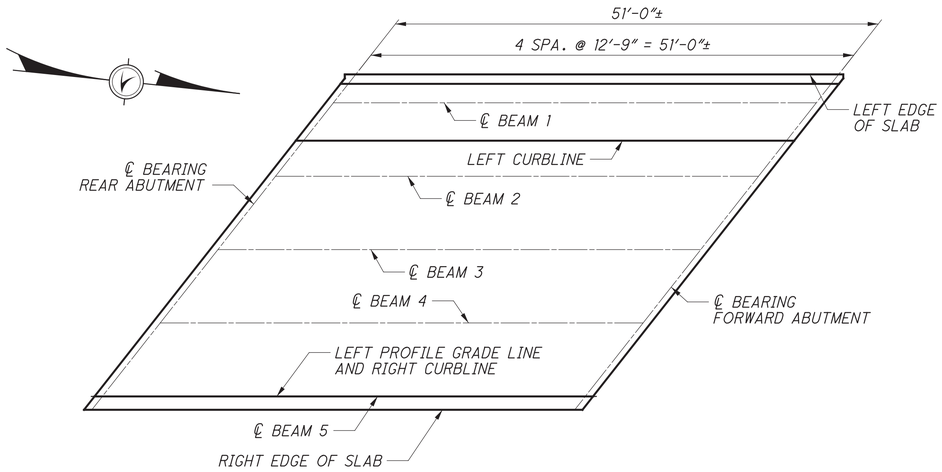
DWW		0700770	

TOP OF HAUNCH ELEVATIONS

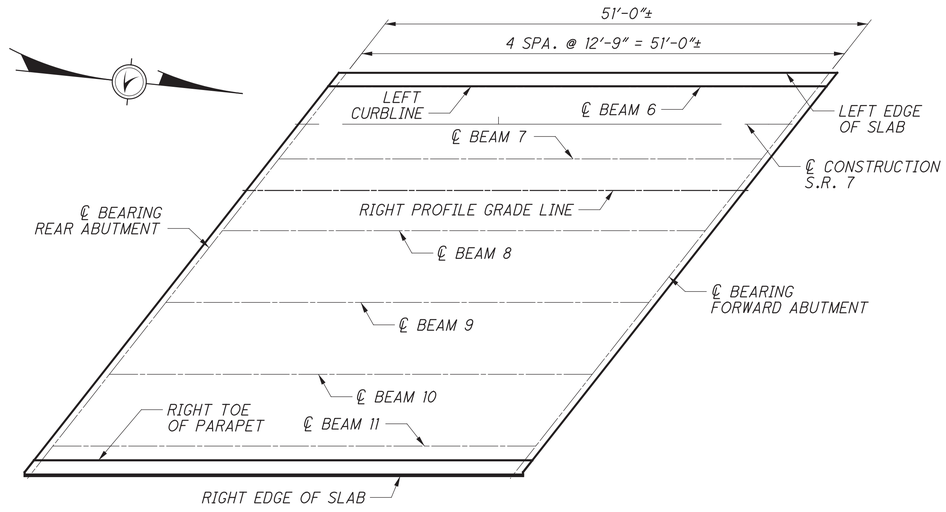
BRIDGE NO. BEL-7-2361
S.R. 7 OVER GLENNS RUN

BEL-7-23.60
PID No. 91546



PLAN VIEW

(LEFT STRUCTURE)
(SOUTHBOUND)



PLAN VIEW

(RIGHT STRUCTURE)
(NORTHBOUND)

FINAL DECK SURFACE ELEVATIONS (LEFT STRUCTURE)

		SPAN 1				
	SPAN LOCATION	CL BRG. REAR ABUT.	0.25	0.50	0.75	CL BRG. FWD. ABUT.
LEFT EDGE OF SLAB (SOUTHBOUND)	STATION	1266+61.95	1266+74.70	1266+87.45	1267+00.20	1267+12.95
	OFFSET	41.00' LT.	41.00' LT.	41.00' LT.	41.00' LT.	41.00' LT.
	FINAL DECK SURFACE ELEVATION	665.83	665.88	665.94	665.99	666.05
℄ BEAM 1	STATION	1266+59.59	1266+72.34	1266+85.09	1266+97.84	1267+10.59
	OFFSET	38.00' LT.	38.00' LT.	38.00' LT.	38.00' LT.	38.00' LT.
	FINAL DECK SURFACE ELEVATION	665.82	665.87	665.93	665.98	666.04
LEFT CURBLINE (SOUTHBOUND)	STATION	1266+56.44	1266+69.19	1266+81.94	1266+94.69	1267+07.44
	OFFSET	34.00' LT.	34.00' LT.	34.00' LT.	34.00' LT.	34.00' LT.
	FINAL DECK SURFACE ELEVATION	665.80	665.86	665.91	665.97	666.02
℄ BEAM 2	STATION	1266+53.49	1266+66.24	1266+78.99	1266+91.74	1267+04.49
	OFFSET	30.25' LT.	30.25' LT.	30.25' LT.	30.25' LT.	30.25' LT.
	FINAL DECK SURFACE ELEVATION	665.85	665.91	665.96	666.02	666.07
℄ BEAM 3	STATION	1266+47.39	1266+60.14	1266+72.89	1266+85.64	1266+98.39
	OFFSET	22.50' LT.	22.50' LT.	22.50' LT.	22.50' LT.	22.50' LT.
	FINAL DECK SURFACE ELEVATION	665.95	666.00	666.06	666.11	666.17
℄ BEAM 4	STATION	1266+41.29	1266+54.04	1266+66.79	1266+79.54	1266+92.29
	OFFSET	14.75' LT.	14.75' LT.	14.75' LT.	14.75' LT.	14.75' LT.
	FINAL DECK SURFACE ELEVATION	666.05	666.10	666.16	666.21	666.27
LEFT PROFILE GRADE LINE AND RIGHT CURBLINE (SOUTHBOUND)	STATION	1266+35.19	1266+47.94	1266+60.69	1266+73.44	1266+86.19
	OFFSET	7.00' LT.	7.00' LT.	7.00' LT.	7.00' LT.	7.00' LT.
	FINAL DECK SURFACE ELEVATION	666.15	666.20	666.26	666.31	666.36
℄ BEAM 5	STATION	1266+35.19	1266+47.94	1266+60.69	1266+73.44	1266+86.19
	OFFSET	7.00' LT.	7.00' LT.	7.00' LT.	7.00' LT.	7.00' LT.
	FINAL DECK SURFACE ELEVATION	666.15	666.20	666.26	666.31	666.36
RIGHT EDGE OF SLAB (SOUTHBOUND)	STATION	1266+34.08	1266+46.83	1266+59.58	1266+72.33	1266+85.08
	OFFSET	5.58' LT.	5.58' LT.	5.58' LT.	5.58' LT.	5.58' LT.
	FINAL DECK SURFACE ELEVATION	666.14	666.20	666.25	666.30	666.36

FINAL DECK SURFACE ELEVATIONS (RIGHT STRUCTURE)

		SPAN 1				
	SPAN LOCATION	CL BRG. REAR ABUT.	0.25	0.50	0.75	CL BRG. FWD. ABUT.
LEFT EDGE OF SLAB (NORTHBOUND)	STATION	1266+33.95	1266+46.70	1266+59.45	1266+72.20	1266+84.95
	OFFSET	5.42' LT.	5.42' LT.	5.42' LT.	5.42' LT.	5.42' LT.
	FINAL DECK SURFACE ELEVATION	666.24	666.29	666.34	666.39	666.45
LEFT CURBLINE (NORTHBOUND)	STATION	1266+32.83	1266+45.58	1266+58.33	1266+71.08	1266+83.83
	OFFSET	4.00' LT.	4.00' LT.	4.00' LT.	4.00' LT.	4.00' LT.
	FINAL DECK SURFACE ELEVATION	666.23	666.29	666.34	666.39	666.44
℄ BEAM 6	STATION	1266+32.77	1266+45.52	1266+58.27	1266+71.02	1266+83.77
	OFFSET	3.92' LT.	3.92' LT.	3.92' LT.	3.92' LT.	3.92' LT.
	FINAL DECK SURFACE ELEVATION	666.23	666.28	666.34	666.39	666.44
℄ BEAM 7	STATION	1266+26.80	1266+39.55	1266+52.30	1266+65.05	1266+77.80
	OFFSET	3.67' RT.	3.67' RT.	3.67' RT.	3.67' RT.	3.67' RT.
	FINAL DECK SURFACE ELEVATION	666.09	666.14	666.19	666.24	666.29
RIGHT PROFILE GRADE LINE	STATION	1266+24.18	1266+36.93	1266+49.68	1266+62.43	1266+75.18
	OFFSET	7.00' RT.	7.00' RT.	7.00' RT.	7.00' RT.	7.00' RT.
	FINAL DECK SURFACE ELEVATION	666.02	666.08	666.13	666.18	666.23
℄ BEAM 8	STATION	1266+20.83	1266+33.58	1266+46.33	1266+59.08	1266+71.83
	OFFSET	11.25' RT.	11.25' RT.	11.25' RT.	11.25' RT.	11.25' RT.
	FINAL DECK SURFACE ELEVATION	665.94	665.99	666.05	666.10	666.15
℄ BEAM 9	STATION	1266+14.87	1266+27.62	1266+40.37	1266+53.12	1266+65.87
	OFFSET	18.83' RT.	18.83' RT.	18.83' RT.	18.83' RT.	18.83' RT.
	FINAL DECK SURFACE ELEVATION	665.80	665.85	665.90	665.95	666.00
℄ BEAM 10	STATION	1266+08.90	1266+21.65	1266+34.40	1266+47.15	1266+59.90
	OFFSET	26.42' RT.	26.42' RT.	26.42' RT.	26.42' RT.	26.42' RT.
	FINAL DECK SURFACE ELEVATION	665.65	665.70	665.75	665.81	665.86
℄ BEAM 11	STATION	1266+02.93	1266+15.68	1266+28.43	1266+41.18	1266+53.93
	OFFSET	34.00' RT.	34.00' RT.	34.00' RT.	34.00' RT.	34.00' RT.
	FINAL DECK SURFACE ELEVATION	665.51	665.56	665.61	665.66	665.71
RIGHT TOE OF PARAPET (NORTHBOUND)	STATION	1266+01.75	1266+14.50	1266+27.25	1266+40.00	1266+52.75
	OFFSET	35.50' RT.	35.50' RT.	35.50' RT.	35.50' RT.	35.50' RT.
	FINAL DECK SURFACE ELEVATION	665.48	665.53	665.58	665.63	665.68
RIGHT EDGE OF SLAB (NORTHBOUND)	STATION	1266+00.44	1266+13.19	1266+25.94	1266+38.69	1266+51.44
	OFFSET	37.17' RT.	37.17' RT.	37.17' RT.	37.17' RT.	37.17' RT.
	FINAL DECK SURFACE ELEVATION	665.47	665.52	665.58	665.63	665.68

NOTES:

1. FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURRED.
2. ALL OFFSETS ARE FROM ℄ CONSTRUCTION S.R. 7.

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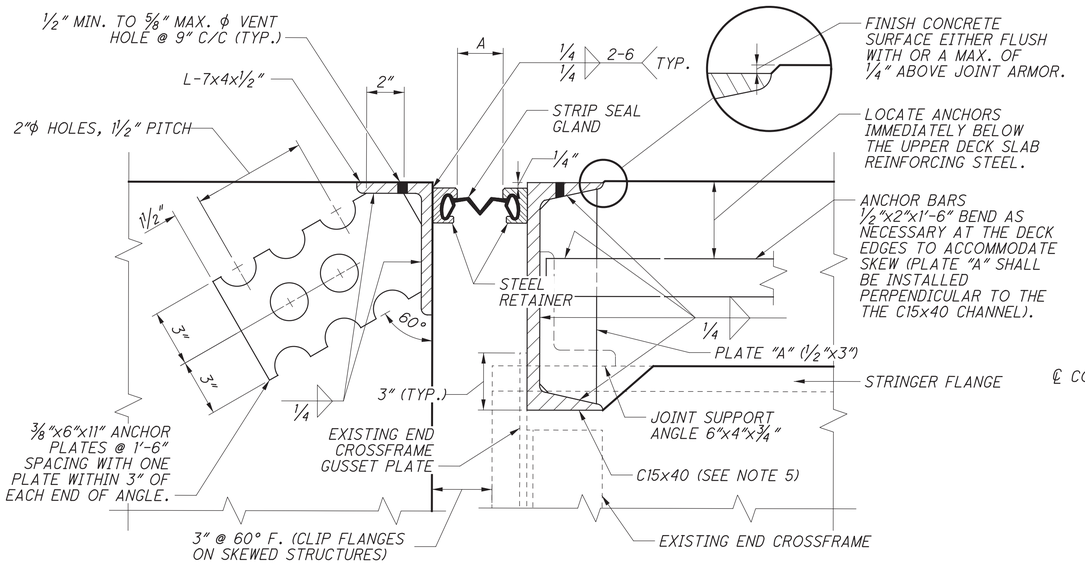
FINAL DECK SURFACE ELEVATIONS

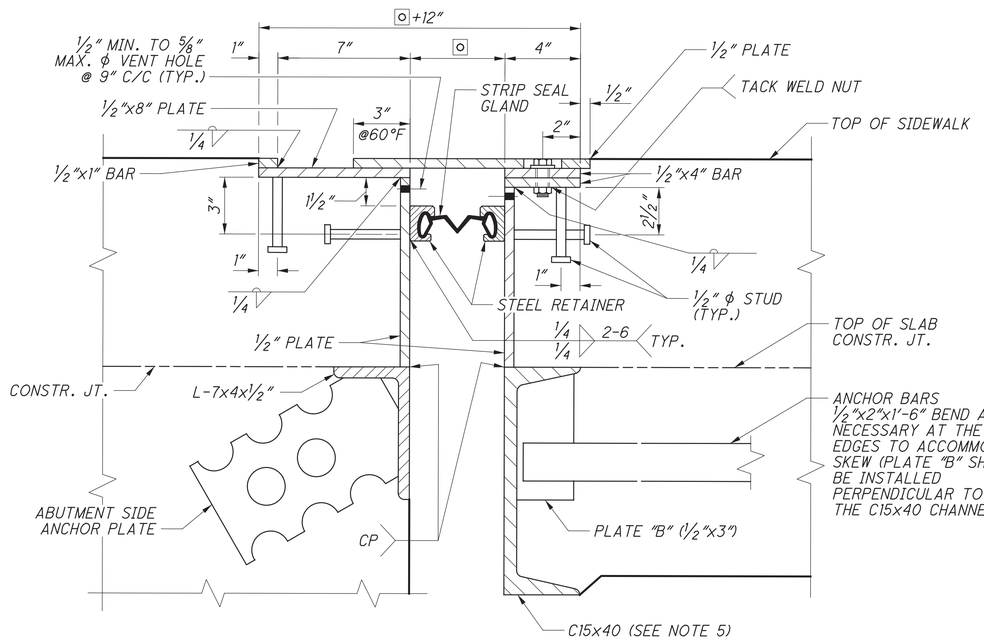
BRIDGE NO. BEL-7-2361
S.R. 7 OVER GLENNS RUN

BEL-7-23.60

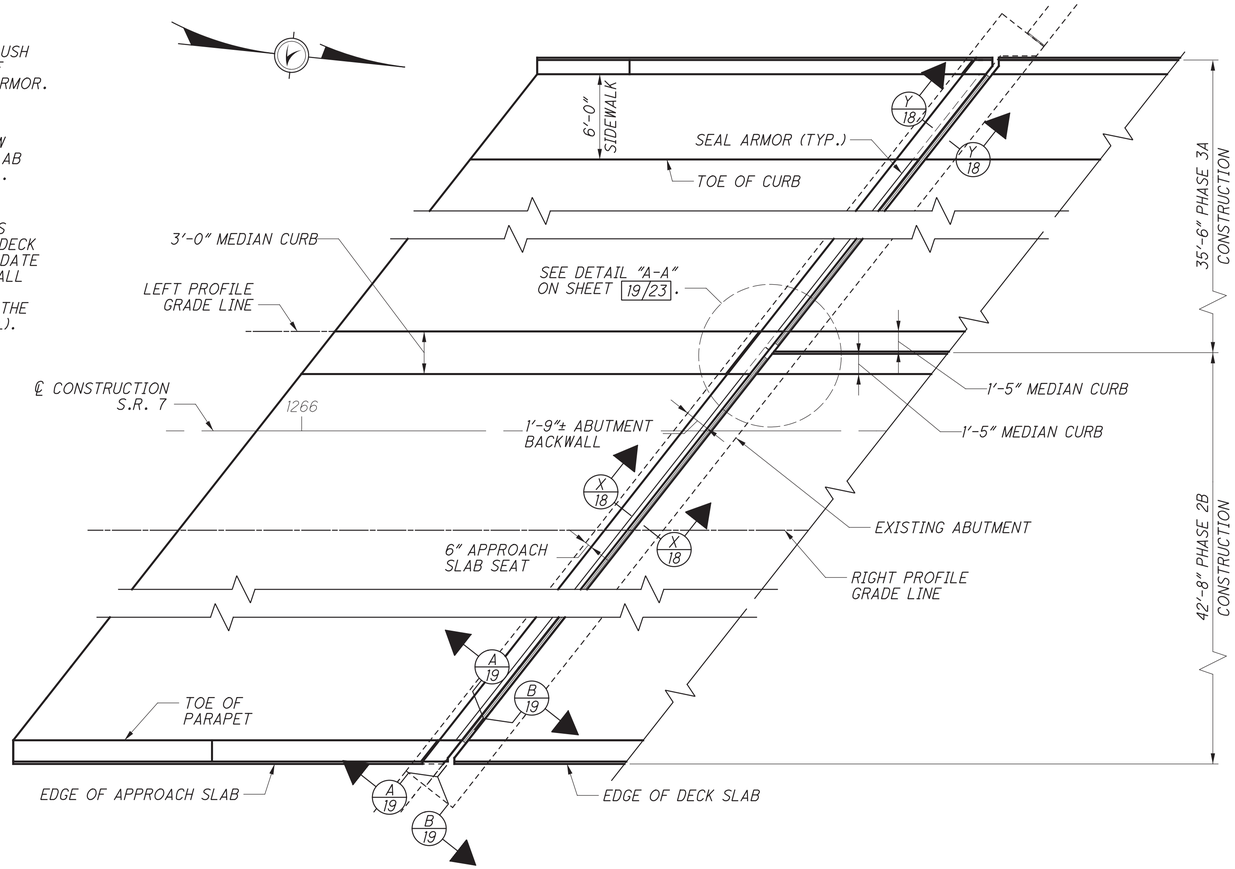
PID No. 91546



X/13 X/18 TYPICAL ABUTMENT SECTION



Y/18 ABUTMENT SECTION AT SIDEWALK



PARTIAL PLAN AT REAR ABUTMENT

(FORWARD ABUTMENT SIMILAR)

STRIP SEAL JOINT WIDTH	
AMBIENT TEMPERATURE	DIMENSION "A"
	3" SEAL
30° F	1.79"
40° F	1.76"
50° F	1.74"
60° F	1.71"
70° F	1.68"
80° F	1.66"
90° F	1.63"

LEGEND:

⊙ - THIS DIMENSION IS THE SUM OF (2 X STEEL RETAINER WIDTH + DIM. "A").

NOTES:

1. FOR ADDITIONAL NOTES AND DETAILS, SEE ODOT STD. DWG. EXJ-4-87.
2. EXPANSION DEVICE REQUIRES COMPLETE PENETRATION WELDED BUTT JOINTS. BUTT WELDS IN CONTACT WITH THE SEALING GLAND SHALL BE GROUND FLUSH AT THE CONTACT AREA.
3. MINIMUM JOINT OPENING (DIMENSION "A") AT TIME OF SEAL GLAND INSTALLATION SHALL NOT BE LESS THAN 1½". IF THE JOINT OPENING IS LESS, INSTALLATION SHALL BE POSTPONED UNTIL THE TEMPERATURE DROPS A SUFFICIENT AMOUNT TO ALLOW THE MINIMUM 1½" OPENING.
4. THE STRIP SEAL GLAND SIZE SHALL BE 3" FOR EACH JOINT. FOR EACH SUPERSTRUCTURE THE STRIP SEAL GLAND SHALL BE INSTALLED IN ONE CONTINUOUS PIECE AT EACH JOINT.
5. THE C15x40 SHALL BE INCLUDED WITH ITEM 516, STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN.

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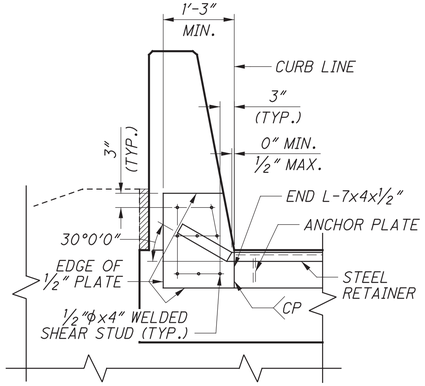
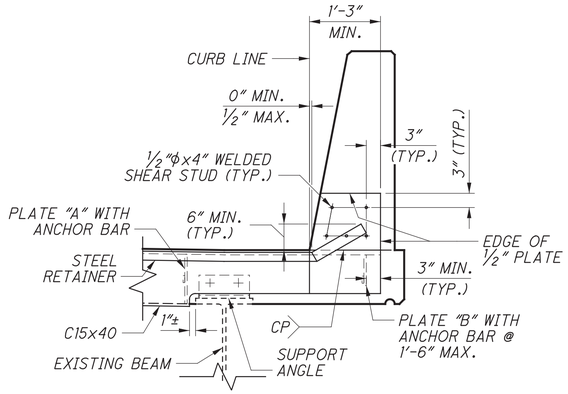
STRIP SEAL EXPANSION JOINT DETAILS - 1

BRIDGE NO. BEL-7-2361
S.R. 7 OVER GLENNS RUN

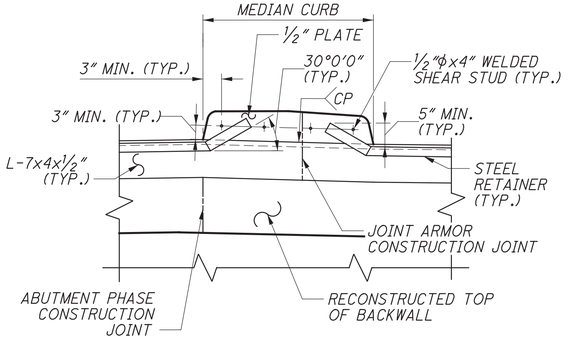
BEL-7-23.60
PID No. 91546



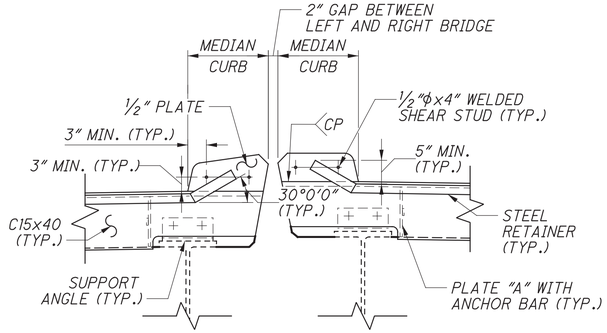
A 18 SECTION



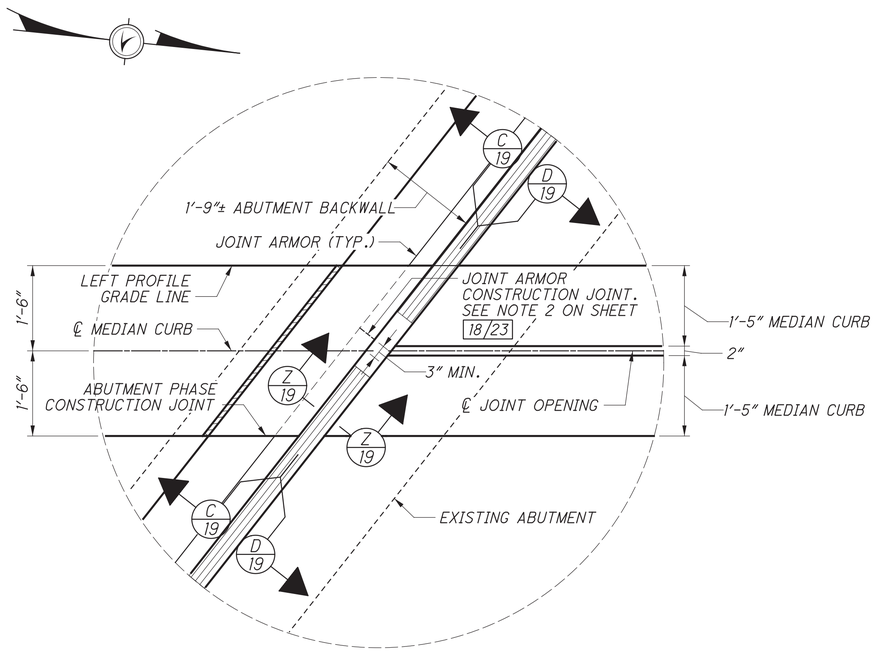
B 18 SECTION



C 19 SECTION

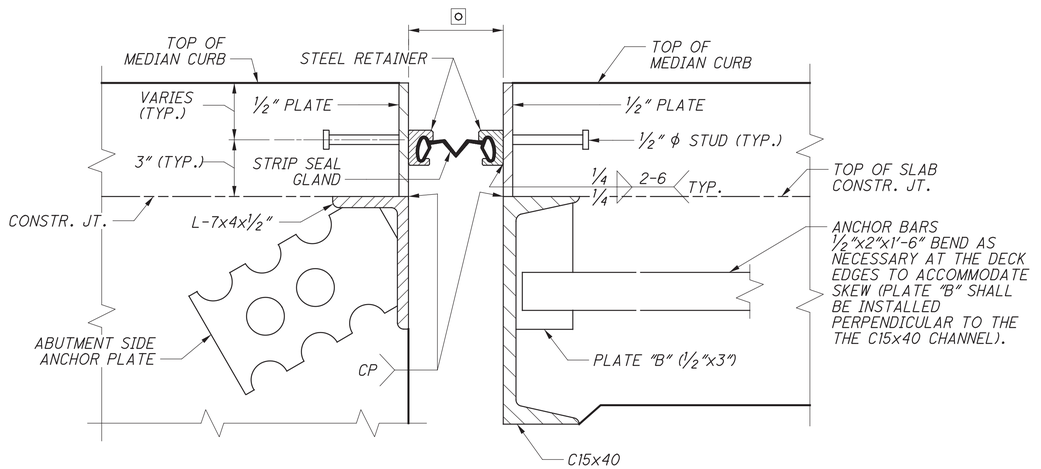


D 19 SECTION



DETAIL "A-A"

(FORWARD ABUTMENT SIMILAR)



Z 19 ABUTMENT SECTION AT MEDIAN CURB

LEGEND:

[o] - THIS DIMENSION IS THE SUM OF (2 X STEEL RETAINER WIDTH + DIM. "A"). (FOR TABLE OF DIM. "A", SEE SHEET 18/23)

NOTE:

1. FOR ADDITIONAL NOTES AND DETAILS, SEE SHEET 18/23.

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JTW		07007770	

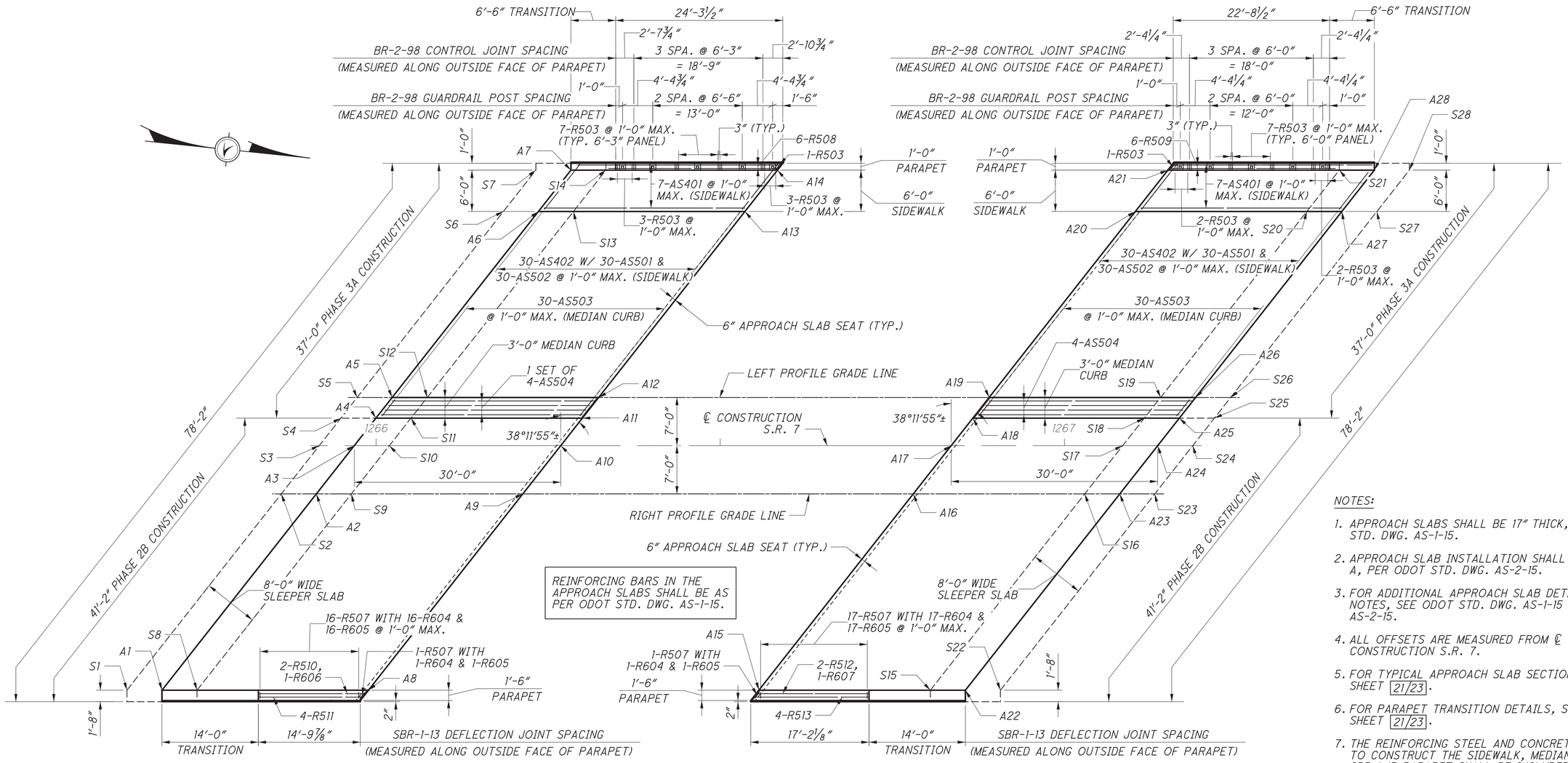
STRIP SEAL EXPANSION JOINT DETAILS - 2

BRIDGE NO. BEL-7-2361
S.R. 7 OVER GLENNS RUN

BEL-7-23.60
PID No. 91546

19 / 23

78 / 82



REAR APPROACH SLAB

FORWARD APPROACH SLAB

NOTES:

1. APPROACH SLABS SHALL BE 17" THICK, PER ODOT STD. DWG. AS-1-15.
2. APPROACH SLAB INSTALLATION SHALL BE TYPE A, PER ODOT STD. DWG. AS-2-15.
3. FOR ADDITIONAL APPROACH SLAB DETAILS AND NOTES, SEE ODOT STD. DWG. AS-1-15 AND AS-2-15.
4. ALL OFFSETS ARE MEASURED FROM ℄ CONSTRUCTION S.R. 7.
5. FOR TYPICAL APPROACH SLAB SECTION, SEE SHEET 21/23.
6. FOR PARAPET TRANSITION DETAILS, SEE SHEET 21/23.
7. THE REINFORCING STEEL AND CONCRETE NEEDED TO CONSTRUCT THE SIDEWALK, MEDIAN CURB AND SBR-1-13 PARAPET SHALL BE INCLUDED WITH ITEM 526, REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17"), AS PER PLAN FOR PAYMENT.

REAR APPROACH SLAB SURFACE ELEVATIONS			
	STATION	OFFSET	ELEVATION
A1	1265+68.89	35.50' RT.	665.34
A2	1265+91.31	7.00' RT.	665.89
A3	1265+96.82	0.00'	666.03
A4	1265+99.97	4.00' LT.	666.10
A5	1266+02.33	7.00' LT.	666.01
A6	1266+23.58	34.00' LT.	665.66
A7	1266+28.30	40.00' LT.	665.69
A8	1265+98.89	35.50' RT.	665.47
A9	1266+21.31	7.00' RT.	666.01
A10	1266+26.82	0.00'	666.15
A11	1266+29.97	4.00' LT.	666.22
A12	1266+32.33	7.00' LT.	666.13
A13	1266+53.58	34.00' LT.	665.79
A14	1266+58.30	40.00' LT.	665.81

REAR SLEEPER SLAB SURFACE ELEVATIONS			
	STATION	OFFSET	ELEVATION
S1	1265+63.80	35.50' RT.	663.91
S2	1265+86.22	7.00' RT.	664.45
S3	1265+91.73	0.00'	664.59
S4	1265+94.88	4.00' LT.	664.66
S5	1265+97.24	7.00' LT.	664.57
S6	1266+18.49	34.00' LT.	664.23
S7	1266+23.21	40.00' LT.	664.25
S8	1265+73.98	35.50' RT.	663.95
S9	1265+96.40	7.00' RT.	664.49
S10	1266+01.91	0.00'	664.63
S11	1266+05.06	4.00' LT.	664.71
S12	1266+07.42	7.00' LT.	664.61
S13	1266+28.67	34.00' LT.	664.27
S14	1266+33.39	40.00' LT.	664.29

FORWARD APPROACH SLAB SURFACE ELEVATIONS			
	STATION	OFFSET	ELEVATION
A15	1266+55.61	35.50' RT.	665.70
A16	1266+78.03	7.00' RT.	666.24
A17	1266+83.54	0.00'	666.38
A18	1266+86.69	4.00' LT.	666.45
A19	1266+89.05	7.00' LT.	666.38
A20	1267+10.30	34.00' LT.	666.03
A21	1267+15.02	40.00' LT.	666.05
A22	1266+85.61	35.50' RT.	665.82
A23	1267+08.03	7.00' RT.	666.36
A24	1267+13.54	0.00'	666.50
A25	1267+16.69	4.00' LT.	666.57
A26	1267+19.05	7.00' LT.	666.50
A27	1267+40.30	34.00' LT.	666.16
A28	1267+45.02	40.00' LT.	666.18

FORWARD SLEEPER SLAB SURFACE ELEVATIONS			
	STATION	OFFSET	ELEVATION
S15	1266+80.52	35.50' RT.	664.38
S16	1267+02.94	7.00' RT.	664.93
S17	1267+08.45	0.00'	665.06
S18	1267+11.60	4.00' LT.	665.14
S19	1267+13.96	7.00' LT.	665.07
S20	1267+35.21	34.00' LT.	664.72
S21	1267+39.93	40.00' LT.	664.74
S22	1266+90.70	35.50' RT.	664.42
S23	1267+13.12	7.00' RT.	664.97
S24	1267+18.63	0.00'	665.10
S25	1267+21.78	4.00' LT.	665.18
S26	1267+24.14	7.00' LT.	665.11
S27	1267+45.39	34.00' LT.	664.77
S28	1267+50.11	40.00' LT.	664.79

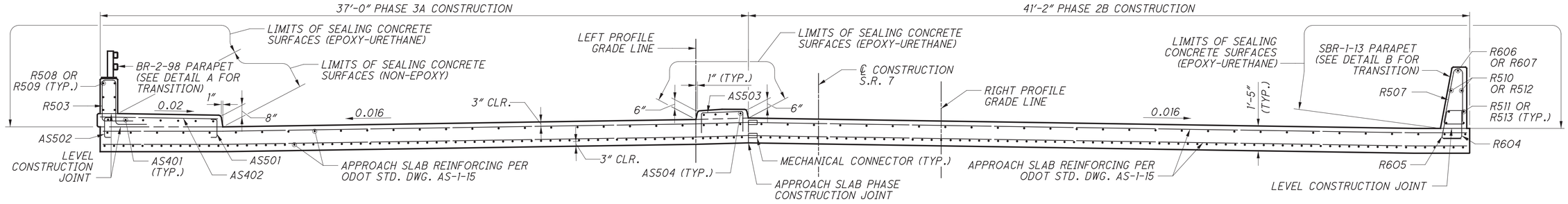
DESIGN AGENCY
HDR ENGINEERING, INC.
1100 SUPERIOR AVE., SUITE 650
CLEVELAND, OHIO 44114
216-912-4240

DESIGNED JML | DRAWN JML | REVIEWED JMS | DATE 10/16/15
CHECKED DWW | REVISED | STRUCTURE FILE NUMBER 0700770

APPROACH SLAB PLAN
BRIDGE NO. BEL-7-2361
S.R. 7 OVER GLENNS RUN

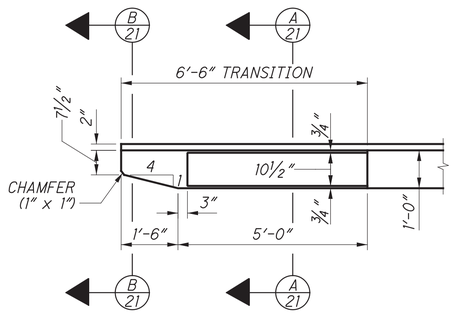
BEL-7-23.60
PID No. 91546

20/23
79/82

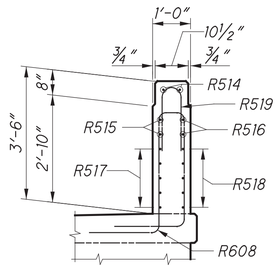


TYPICAL APPROACH SLAB SECTION

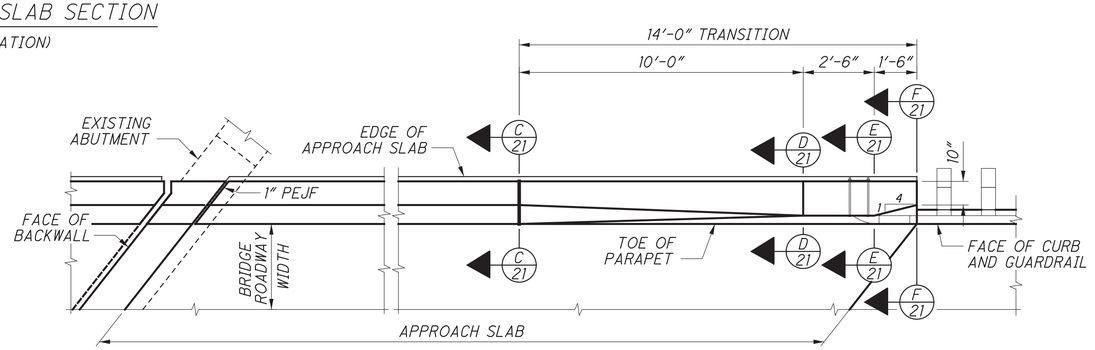
(LOOKING UPSTATION)



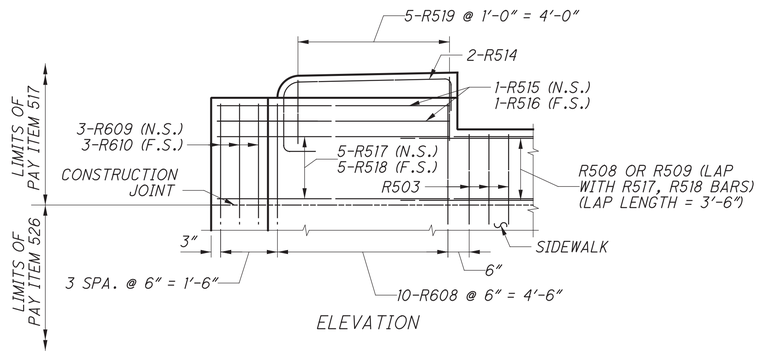
PLAN



A 21 PARAPET SECTION (GUARDRAIL NOT SHOWN)



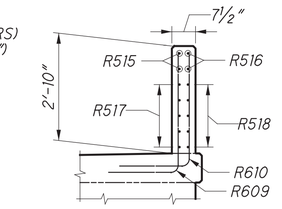
PLAN



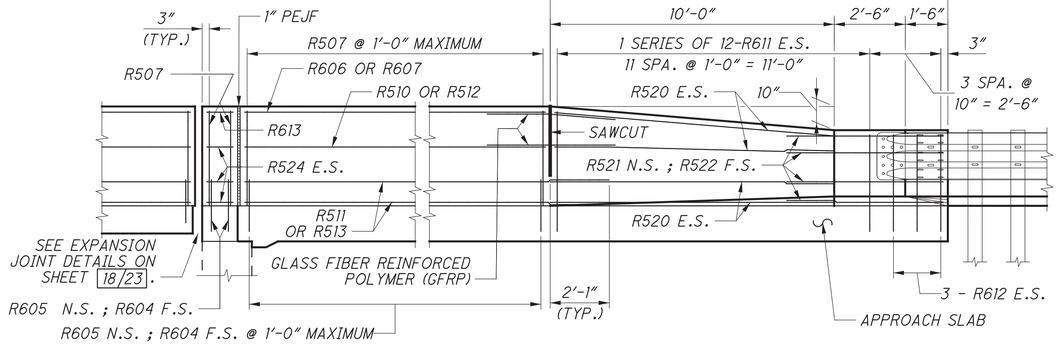
ELEVATION

DETAIL A

(BR-2-98 PARAPET TRANSITION)
(GUARDRAIL NOT SHOWN FOR CLARITY)
(REAR TRANSITION SHOWN, FORWARD SIMILAR)



B 21 PARAPET SECTION (GUARDRAIL NOT SHOWN)



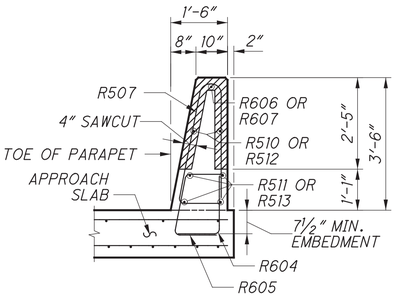
ELEVATION

DETAIL B

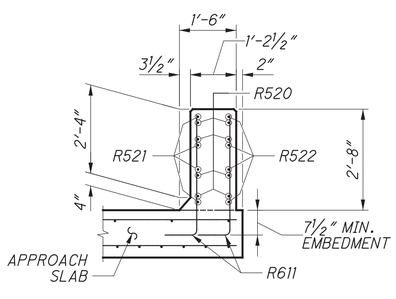
(SBR-1-13 PARAPET TRANSITION)
(REAR TRANSITION SHOWN, FORWARD SIMILAR)

LEGEND:

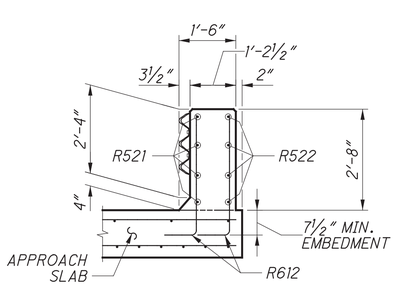
E.S. = EACH SIDE
F.S. = FAR SIDE
N.S. = NEAR SIDE



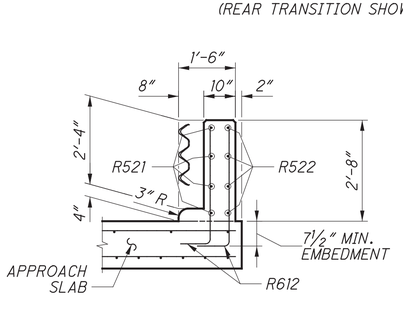
C 21 PARAPET SECTION (GFRP NOT SHOWN)



D 21 PARAPET SECTION



E 21 PARAPET SECTION



F 21 PARAPET SECTION

NOTES:

1. FOR APPROACH SLAB PLAN VIEWS, SEE SHEET 20/23.
2. REINFORCING BARS IN THE APPROACH SLABS SHALL BE AS PER ODOT STD. DWG. AS-1-15.
3. FOR ADDITIONAL APPROACH SLAB DETAILS AND NOTES, SEE ODOT STD. DWG. AS-1-15 AND AS-2-15.
4. FOR ADDITIONAL PARAPET DETAILS AND NOTES, SEE ODOT STD. DWG. SBR-1-13 AND BR-2-98.

DESIGN AGENCY
HDR ENGINEERING, INC.
1100 SUPERIOR AVE., SUITE 650
CLEVELAND, OHIO 44114
216-912-4240

DESIGNED	DRAWN	REVIEWED	DATE
JML	JML	JMS	10/16/15
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DWW		0700770	

APPROACH SLAB DETAILS
BRIDGE NO. BEL-7-2361
S.R. 7 OVER GLENNS RUN

BEL-7-23.60
PID No. 91546

21 / 23

80 / 82

MARK	NUMBER	LENGTH	WEIGHT (LBS.)	TYPE	DIMENSIONS A	B	C	D	E	R	INC.
REAR ABUTMENT											
AR401	2	8′-1″	11	STR							
AR402	7	1′-3″	6	STR							
AR501	2	30′-8″	64	STR							
AR502	2	31′-4″	65	STR							
AR503*	2	20′-11″	44	35	20′-11″						
AR504*	2	20′-4″	42	35	20′-4″						
AR505*	4	19′-6″	81	36	19′-6″						
AR506	4	30′-0″	125	STR							
AR507	204	2′-10″	603	1	0′-8″	2′-3″					
AR508	4	1′-3″	5	STR							
AR509	2	5′-11″	12	2	1′-4″	3′-6″	1′-4″				
AR510	2	2′-4″	5	2	0′-10″	0′-11″	0′-10″				
AR511	2	2′-6″	5	2	0′-10″	1′-1″	0′-10″				
D802	68	4′-6″	817	13	1′-2″	1′-5″	1′-5″	1′-5″			
	SUB-TOTAL		1885								

MARK	NUMBER	LENGTH	WEIGHT (LBS.)	TYPE	DIMENSIONS A	B	C	D	E	R	INC.
FORWARD ABUTMENT											
AF401	2	8′-1″	11	STR							
AF402	7	1′-3″	6	STR							
AF501	2	29′-6″	62	STR							
AF502	2	28′-10″	60	STR							
AF503*	2	22′-2″	46	35	22′-2″						
AF504*	2	22′-10″	48	35	22′-10″						
AF505*	2	20′-4″	42	36	20′-4″						
AF506*	2	19′-8″	41	36	19′-8″						
AF507	4	30′-0″	125	STR							
AF508	204	2′-10″	603	1	0′-8″	2′-3″					
AF509	4	1′-3″	5	STR							
AF510	2	5′-11″	12	2	1′-4″	3′-6″	1′-4″				
AF511	2	2′-4″	5	2	0′-10″	0′-11″	0′-10″				
AF512	2	2′-6″	5	2	0′-10″	1′-1″	0′-10″				
D802	67	4′-6″	805	13	1′-2″	1′-5″	1′-5″	1′-5″			
	SUB-TOTAL		1876								

MARK	NUMBER	LENGTH	WEIGHT (LBS.)	TYPE	DIMENSIONS A	B	C	D	E	R	INC.
DECK SLAB											
S401	90	30′-0″	1804	STR							
S402	90	24′-4″	1463	STR							
S403	8	30′-0″	160	STR							
S404	4	16′-3″	43	STR							
S405	4	25′-4″	68	STR							

NOTE:

1. FOR ADDITIONAL NOTES AND BAR BENDING DIAGRAMS, SEE SHEET 23/23.
2. BAR MARKS DESIGNATED WITH "*" REQUIRE MECHANICAL CONNECTORS. BAR LENGTH ADJUSTMENT AND/OR END PREPARATION MAY BE NECESSARY DEPENDING ON THE TYPE OF CONNECTOR USED.

MARK	NUMBER	LENGTH	WEIGHT (LBS.)	TYPE	DIMENSIONS A	B	C	D	E	R	INC.
DECK SLAB (CONTINUED)											
S406	7	30′-0″	140	STR							
S407	7	24′-4″	114	STR							
S408	2	2′-0″	3	STR							
	1	1′-5″									
S409	SERIES OF	TO	8	STR							1′-2″
	4	4′-11″									
S410	52	6′-9″	234	STR							
	1	2′-1″									
S411	SERIES OF	TO	10	STR							1′-2″
	4	5′-7″									
S412	2	8′-1″	11	STR							
S501	111	30′-0″	3473	STR							
S502	111	24′-10″	2875	STR							
	4	2′-1″									
S503	SERIES OF	TO	41	STR							0′-3″
	4	2′-10″									
	2	3′-5″									
S504	SERIES OF	TO	2126	STR							0′-7″
	54	34′-4″									
S505	110	34′-10″	3996	STR							
	2	3′-1″									
S506	SERIES OF	TO	2156	STR							0′-7″
	55	34′-6″									
	2	3′-5″									
S507	SERIES OF	TO	2662	STR							0′-7″
	61	38′-5″									
S508	48	23′-3″	1164	STR							
	1	18′-2″									
S509	SERIES OF	TO	123	STR							0′-7″
	6	21′-1″									
S510	48	27′-0″	1352	STR							
	1	14′-5″									
S511	SERIES OF	TO	99	STR							0′-7″
	6	17′-4″									
S512	48	21′-5″	1072	STR							
S513	48	17′-9″	889	STR							
	1	19′-9″									
S514	SERIES OF	TO	133	STR							0′-7″
	6	22′-8″									
	1	23′-6″									
S515	SERIES OF	TO	156	STR							0′-7″
	6	26′-5″									
	2	3′-3″									
S516	SERIES OF	TO	2635	STR							0′-7″
	61	38′-2″									
S517	56	2′-4″	136	2	0′-10″	0′-11″	0′-10″				
S518	56	2′-6″	146	2	0′-10″	1′-1″	0′-10″				
S519	118	2′-10″	349	34	1′-0″	0′-11″	0′-3″				
S520	59	1′-5″	87	11	0′-1″	0′-6″	1′-0″				
S521	59	1′-0″	62	STR							
S522	219	3′-4″	761	STR							
S523	218	1′-9″	398	STR							
	4	1′-9″									
S524	SERIES OF	TO	35	STR							0′-3″
	4	2′-6″									
	SUB-TOTAL		30984								

DESIGN AGENCY
HDR ENGINEERING, INC.
1100 SUPERIOR AVE., SUITE 650
CLEVELAND, OHIO 44114
216-912-4240

DESIGNED JML | DRAWN JML | REVIEWED JMS | DATE 10/16/15 | CHECKED JTW | REVISED | STRUCTURE FILE NUMBER 0700770

REINFORCING STEEL LIST - 1

BRIDGE NO. BEL-7-2361
S.R. 7 OVER GLENNS RUN

BEL-7-23.60
PID No. 91546

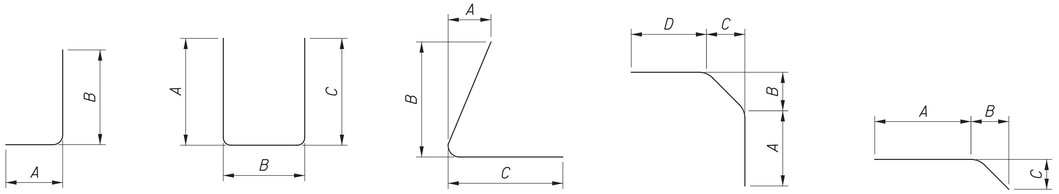
22 / 23

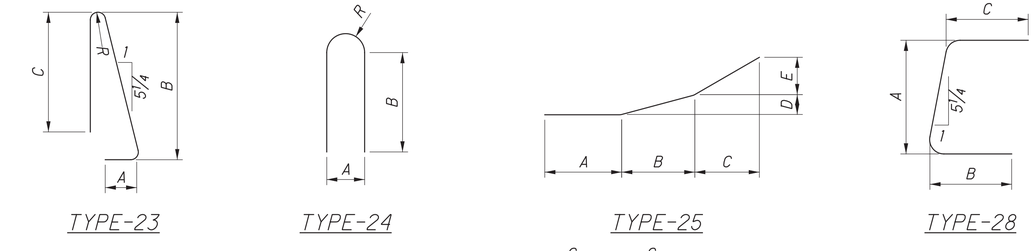
81 / 82

MARK	NUMBER	LENGTH	WEIGHT (LBS.)	TYPE	DIMENSIONS A	B	C	D	E	R	INC.
SBR-1-13 PARAPET											
R504	2	3'-4"	7	STR							
R505	6	14'-2"	89	STR							
R506	2	4'-3"	9	STR							
R507	60	7'-4"	459	23	0'-11"	3'-3"	3'-0"			0'-2 3/4"	
R524	12	1'-1"	14	STR							
R601	1	4'-0"	6	STR							
R602	3	14'-2"	64	STR							
R603	1	4'-5"	7	STR							
R604	60	2'-5"	218	1	1'-0"	1'-7"					
R605	60	3'-2"	285	28	1'-7"	1'-0"	0'-11"				
R613	2	1'-1"	3	STR							
	SUB-TOTAL		1161								

MARK	NUMBER	LENGTH	WEIGHT (LBS.)	TYPE	DIMENSIONS A	B	C	D	E	R	INC.
BR-2-98 PARAPET - FOR INFORMATION ONLY											
R501	10	30'-0"	313	STR							
R502	10	24'-10"	259	STR							
R503	117	7'-8"	936	30	1'-6"	0'-8"	2'-4"	2'-2"			
R508	6	27'-8"	173	STR							
R509	6	26'-9"	167	STR							
R514	4	7'-8"	32	31	1'-11"	0'-1"	4'-5"			0'-4 3/8"	
R515	4	6'-0"	25	19	4'-8"	1'-4"	0'-4"				
R516	4	6'-2"	26	STR							
R517	10	8'-2"	85	19	6'-10"	1'-4"	0'-4"				
R518	10	8'-3"	86	STR							
R519	10	3'-6"	37	24	0'-7"	1'-5"				0'-2 5/8"	
R523	12	1'-1"	14	STR							
R608	20	9'-10"	295	30	1'-10"	0'-8"	3'-2"	3'-0"			
R609	6	4'-10"	44	1	1'-10"	3'-2"					
R610	6	4'-8"	42	1	1'-10"	3'-0"					
	SUB-TOTAL		2534	(INCLUDED WITH ITEM 517 FOR PAYMENT)							

MARK	NUMBER	LENGTH	WEIGHT (LBS.)	TYPE	DIMENSIONS A	B	C	D	E	R	INC.
APPROACH SLABS - FOR INFORMATION ONLY											
AS401	14	28'-9"	269	STR							
AS402	60	8'-8"	347	STR							
R507	35	7'-4"	268	23	0'-11"	3'-3"	3'-0"			0'-2 3/4"	
R510	2	14'-6"	30	STR							
R511	4	17'-10"	74	STR							
R512	2	15'-8"	33	STR							
R513	4	19'-0"	79	STR							
R520	16	10'-0"	167	STR							
R521	8	5'-8"	47	25	1'-10"	2'-5"	1'-4"	0'-1 1/2"	0'-5"		
R522	8	5'-8"	47	STR							
AS501	60	2'-4"	146	2	0'-10"	0'-11"	0'-10"				
AS502	60	2'-6"	156	2	0'-10"	1'-1"	0'-10"				
AS503	60	5'-11"	370	2	1'-4"	3'-6"	1'-4"				
AS504	8	29'-8"	248	STR							
R604	35	2'-5"	127	1	1'-0"	1'-7"					
R605	35	3'-2"	166	28	1'-7"	1'-0"	0'-11"				
R606	1	14'-8"	22	STR							
R607	1	16'-5"	25	STR							
	4	4'-0"				3'-2"					
R611	SERIES OF	TO	318	1	1'-0"	TO					0'-7/8"
	12	4'-10"				4'-0"					
R612	12	4'-0"	72	1	1'-0"	3'-2"					
	SUB-TOTAL		3011	(INCLUDED WITH ITEM 526 FOR PAYMENT)							





NOTES:

1. ALL REINFORCING STEEL SHALL BE EPOXY COATED.
2. BAR SIZE: THE BAR SIZE IS INDICATED IN THE BAR MARK COLUMN. THE MARK BEGINS WITH ONE OR TWO LETTERS THAT IDENTIFY THE BAR LOCATION. THE NEXT DIGIT WHERE THREE DIGITS ARE USED OR THE NEXT TWO DIGITS WHERE FOUR DIGITS ARE USED, INDICATES THE BAR SIZE NUMBER.
   EXAMPLE: S501
   S = SLAB
   5 = #5 BAR
   01 = BAR SEQUENCE NUMBER 1
3. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS NOTED OTHERWISE.
4. "STR" IN THE BAR TYPE COLUMN INDICATES A STRAIGHT BAR.
5. "INC." INDICATES THE LENGTH INCREMENT FOR A SERIES BAR.
6. BAR MARKS DESIGNATED WITH "*" REQUIRE MECHANICAL CONNECTORS. BAR LENGTH ADJUSTMENT AND/OR END PREPARATION MAY BE NECESSARY DEPENDING ON THE TYPE OF CONNECTOR USED.

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DESIGNED JML | DRAWN JML | REVIEWED JMS | DATE 10/16/15 | CHECKED JTW | REVISED | STRUCTURE FILE NUMBER 0700770

REINFORCING STEEL LIST - 2

BRIDGE NO. BEL-7-2361
S.R. 7 OVER GLENNS RUN

BEL-7-23.60
PID No. 91546

23 / 23

82 / 82