

concept plans



VERMONT AGENCY OF TRANSPORTATION
PROJECT NO. ROCKINGHAM
IM 091-1(66) DESIGN BUILD

REED & REED



March 2016



design concept plans



REVIEWER NOTES

1.
- TWO STAGE CONSTRUCTION WITH INTERSTATE CROSS OVERS TO THE ALTERNATE DIRECTION BRIDGE AS THE DETOUR FOR EACH STAGE.

2.
- PLANS SHOW STAGE 1 AS NORTH BOUND BRIDGE CLOSURE WITH DETOUR ON SOUTH BOUND BRIDGE AND STAGE 2 AS THE SOUTH BOUND CLOSURE WITH DETOUR ON NORTH BOUND BRIDGE.

STATE OF VERMONT

AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT

BRIDGE PROJECT

TOWN OF ROCKINGHAM

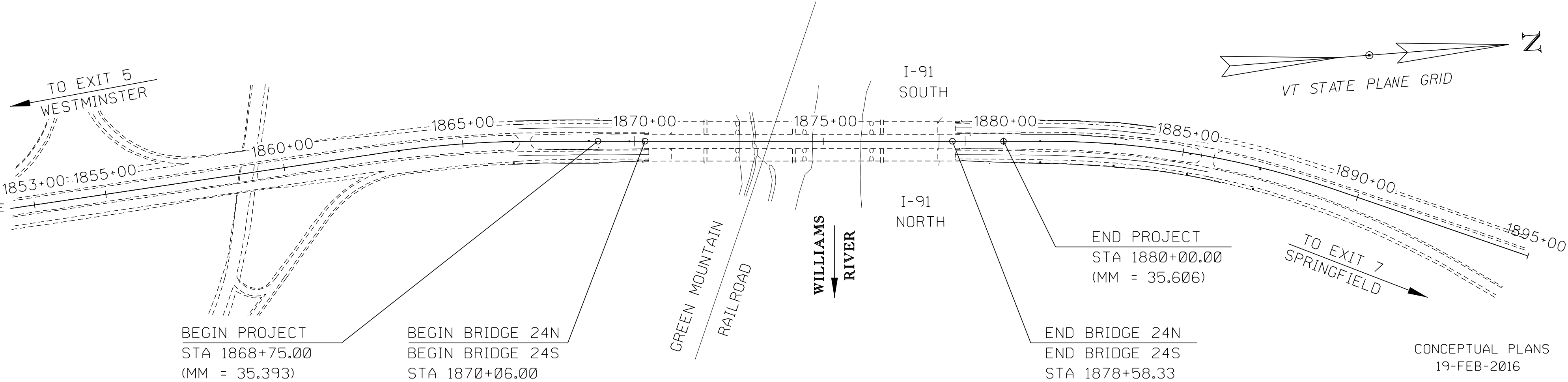
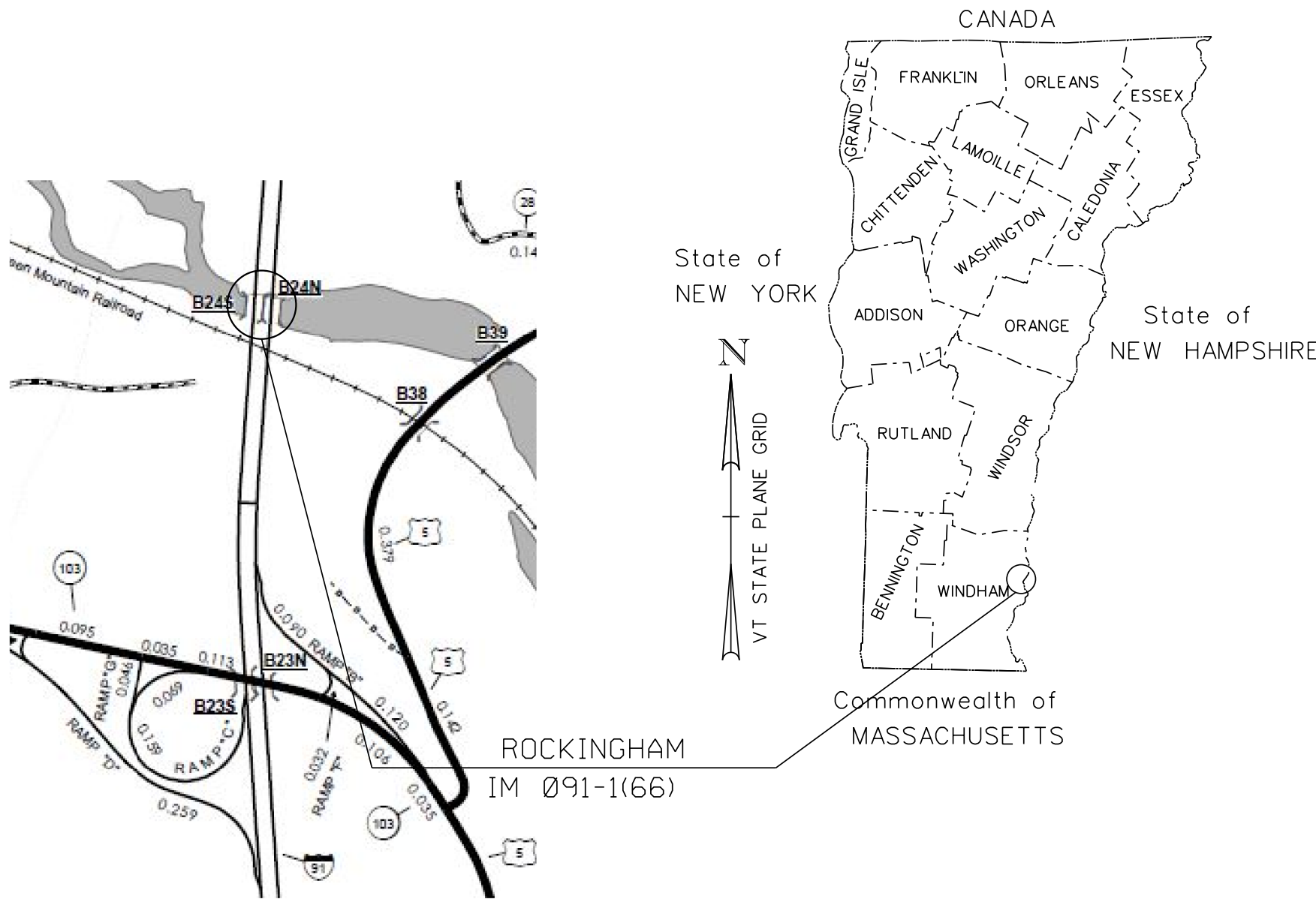
COUNTY OF WINDHAM

ROUTE NO : INTERSTATE 91, BRIDGE 24N AND 24S

PROJECT LOCATION: APPROXIMATELY 0.313 MILES NORTH OF INTERSTATE 91 EXIT 6 ROCKINGHAM

PROJECT DESCRIPTION: REPLACEMENT OF BRIDGE NUMBER(S) 24 N&S ON I-91 IN ROCKINGHAM, OVER THE GREEN MOUNTAIN RAILROAD AND THE WILLIAMS RIVER.

	I-91 NORTHBOUND	I-91 SOUTHBOUND	TOTAL
LENGTH OF STRUCTURE:	852.33 FEET	852.33 FEET	1704.66 FEET
LENGTH OF ROADWAY:	272.67 FEET	272.67 FEET	545.34 FEET
LENGTH OF PROJECT:	1125.00 FEET	1125.00 FEET	2250.00 FEET

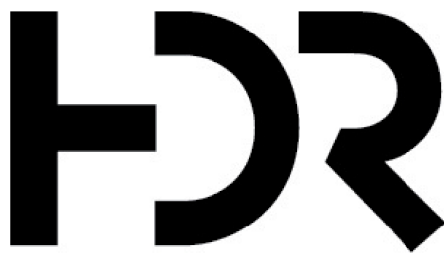


CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2011, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JULY 20, 2011 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

QUALITY ASSURANCE PROGRAM : LEVEL1	
SURVEYED BY :	R.GILMAN
SURVEYED DATE :	04-22-2013
DATUM	
VERTICAL	NAVD88
HORIZONTAL	NAD83 (2011)

SCALE 1" = 200'-0"

CONCEPTUAL PLANS
19-FEB-2016



DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATOR	
APPROVED _____	DATE _____
DIRECTOR OF PROJECT DELIVERY	
APPROVED _____	DATE _____
PROJECT MANAGER : CHARLES SWANSON, P.E.	
PROJECT NAME : ROCKINGHAM	
PROJECT NUMBER : IM 091-1(66)	
SHEET 1 OF 36 SHEETS	

PRELIMINARY INFORMATION SHEET (BRIDGE)

LRFD

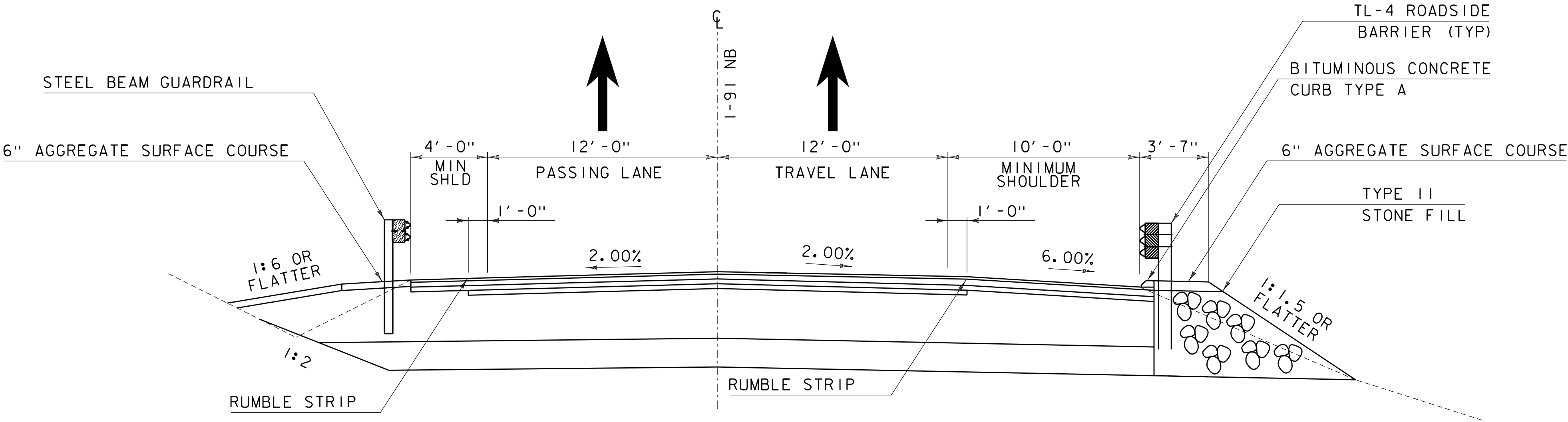
[illegible]

TYPICAL HIGHWAY SECTIONS
INTERSTATE 91 - NORTHBOUND

- 1.75" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT (TYPE IIS WEARING COURSE)
- 3.5" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT (TYPE IIS INTERMEDIATE LAYER)
- 3.5" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT (TYPE IIS BASE COURSE)
- 3.5" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT (TYPE IIS BASE COURSE)
- 24" SUBBASE OF DENSE GRADED CRUSHED STONE
- 18" SAND BORROW OR SUBBASE OF DENSE GRADED CRUSHED STONE

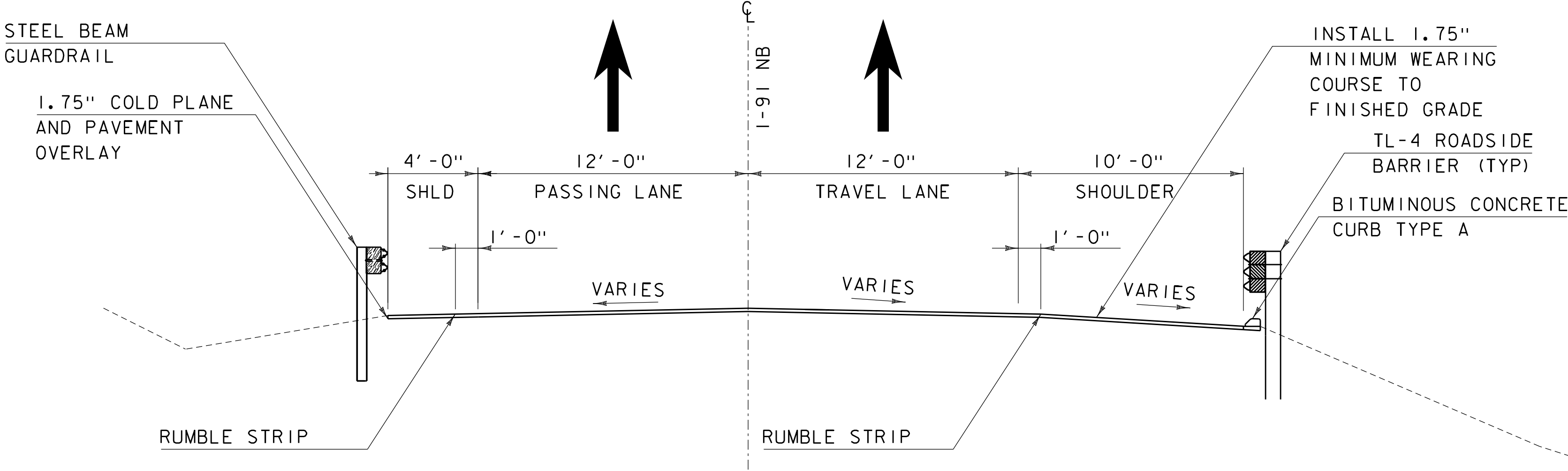
TACK COAT: EMULSIFIED ASPHALT IS TO BE APPLIED AT THE RATE OF 0.025 GAL/SY BETWEEN SUCCESSIVE COURSES OF PAVEMENT AS DIRECTED BY THE ENGINEER.

FOR PG GRADE SEE SECTION 490 OF THE GENERAL SPECIAL PROVISIONS.



PROPOSED I-91 NB FULL DEPTH RECONSTRUCTION

SCALE: 1/4" = 1'-0"



PROPOSED I-91 NB MILL AND OVERLAY

SCALE: 1/4" = 1'-0"

MATERIAL TOLERANCES

(IF USED ON PROJECT)

SURFACE	
- PAVEMENT (TOTAL THICKNESS)	+/- 1/4"
- AGGREGATE SURFACE COURSE	+/- 1/2"
SUBBASE	+/- 1"
SAND BORROWS	+/- 1"

PROJECT NAME: ROCKINGHAM

PROJECT NUMBER: IM 091-1(66)

FILE NAME: sl2al30+typ.dgn

PROJECT LEADER: C. SWANSON

DESIGNED BY: C. GREGORY

NB TYPICAL SECTIONS

PLOT DATE: 18-FEB-2016

DRAWN BY: O. SMITH

CHECKED BY: C. GREGORY

SHEET 3 OF 36

1.75" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT (TYPE IIS WEARING COURSE)
3.5" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT (TYPE IIS INTERMEDIATE LAYER)
3.5" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT (TYPE IIS BASE COURSE)
3.5" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT (TYPE IIS BASE COURSE)
24" SUBBASE OF DENSE GRADED CRUSHED STONE
18" SAND BORROW OR SUBBASE OF DENSE GRADED CRUSHED STONE

FOR PG GRADE SEE SECTION 490 OF THE GENERAL SPECIAL PROVISIONS.



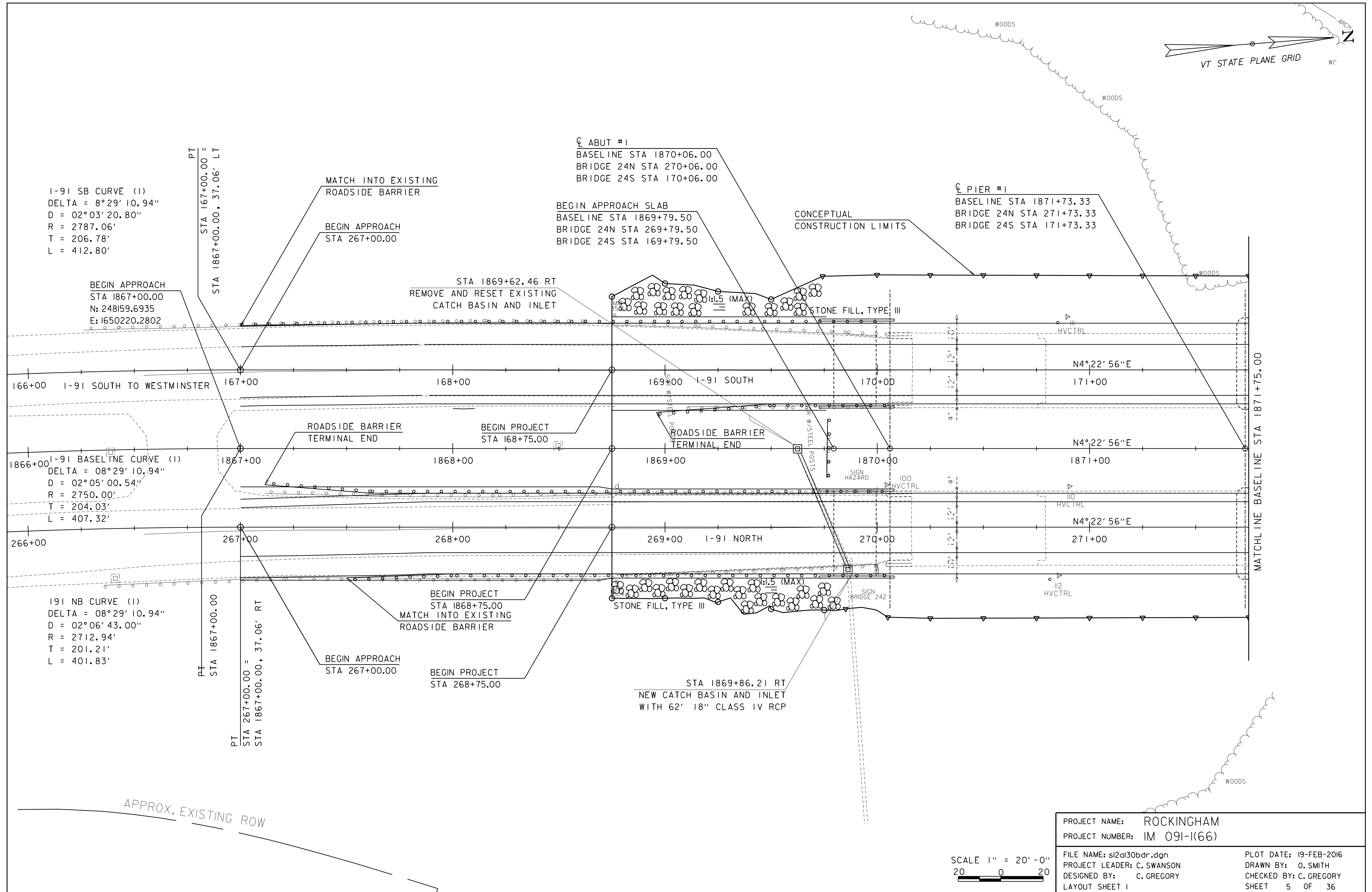
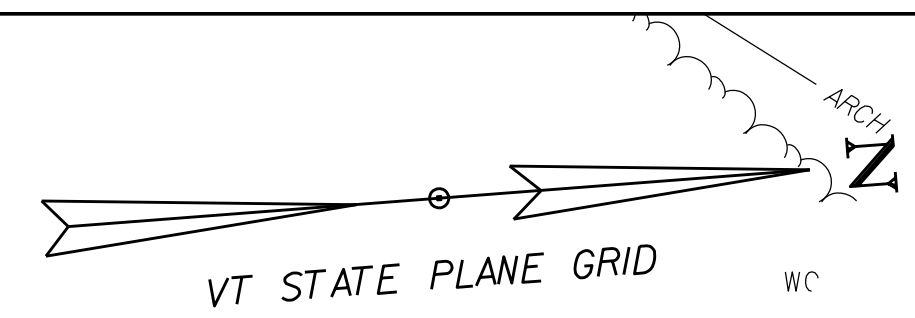
SCALE: $\frac{1}{4}$ " = 1' - 0"



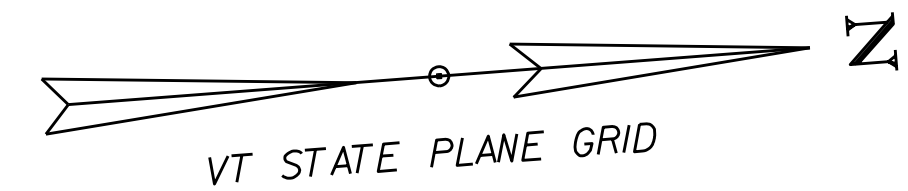
SCALE: $\frac{1}{4}" = 1' - 0"$

MATERIAL TOLERANCES (IF USED ON PROJECT)	
SURFACE	
- PAVEMENT (TOTAL THICKNESS)	+/- 1/4"
- AGGREGATE SURFACE COURSE	+/- 1/2"
SUBBASE	+/- 1"
SAND BORROWS	+/- 1"

PROJECT NAME: ROCKINGHAM	
PROJECT NUMBER: IM 09I-I(66)	
FILE NAME: sl2a130+yp.dgn	PLOT DATE: 18-FEB-2016
PROJECT LEADER: C. SWANSON	DRAWN BY: O. SMITH
DESIGNED BY: C. GREGORY	CHECKED BY: C. GREGORY
SB TYPICAL SECTIONS	SHEET 4 OF 36



PROJECT NAME: ROCKINGHAM	
PROJECT NUMBER: IM 091-1(66)	
FILE NAME: sl2al30bdr.dgn	PLOT DATE: 19-FEB-2016
PROJECT LEADER: C. SWANSON	DRAWN BY: O. SMITH
DESIGNED BY: C. GREGORY	CHECKED BY: C. GREGORY
LAYOUT SHEET 1	SHEET 5 OF 36



MATCHLINE BASELINE STA 1871+75.00

ABUT #2
BASELINE STA 1878+58.33
BRIDGE 24N STA 278+58.33
BRIDGE 24S STA 178+58.33

CONCEPTUAL
CONSTRUCTION LIMITS

END APPROACH SLAB
BASELINE STA 1878+84.83
BRIDGE 24N STA 278+84.83
BRIDGE 24S STA 178+84.83

END PROJECT
STA 180+00.00

STA 1879+99.22 LT
MATCH EXISTING CATCH
BASIN AND INLET

MATCH INTO EXISTING
ROADSIDE BARRIER

END APPROACH
STA 181+00.00 =
STA 1881+00.00, 37.06 LT
PC
STA 181+12.05

191 SB CURVE (2)
DELTA = 15°32'12.38"
D = 02°15'30.26"
R = 2537.00'
T = 131.92'
L = 346.10'

END APPROACH
STA 1881+00.00
N: 249555.6007
E: 1650327.2537

N4°22'56"E
1-91 SOUTH
178+00

N4°22'56"E
1878+00

N4°22'56"E
1-91 NORTH
278+00

STONE FILL, TYPE III
1:1.5 (MAX)
35.6

HAZARD
SIGN
200
HVT RL

ROADSIDE BARRIER
TERMINAL END

MATCH INTO EXISTING
ROADSIDE BARRIER

1881+00

1-91 BASELINE CURVE (1)
DELTA = 18°58'37.20"
D = 02°17'30.59"
R = 2500.00'
T = 417.84'
L = 828.03'

PC
STA 1881+12.05

191 NB CURVE (2)
DELTA = 16°50'05.83"
D = 02°19'34.54"
R = 2463.00'
T = 364.47'
L = 723.69'

CONCEPTUAL
CONSTRUCTION LIMITS

END PROJECT
STA 280+00.00

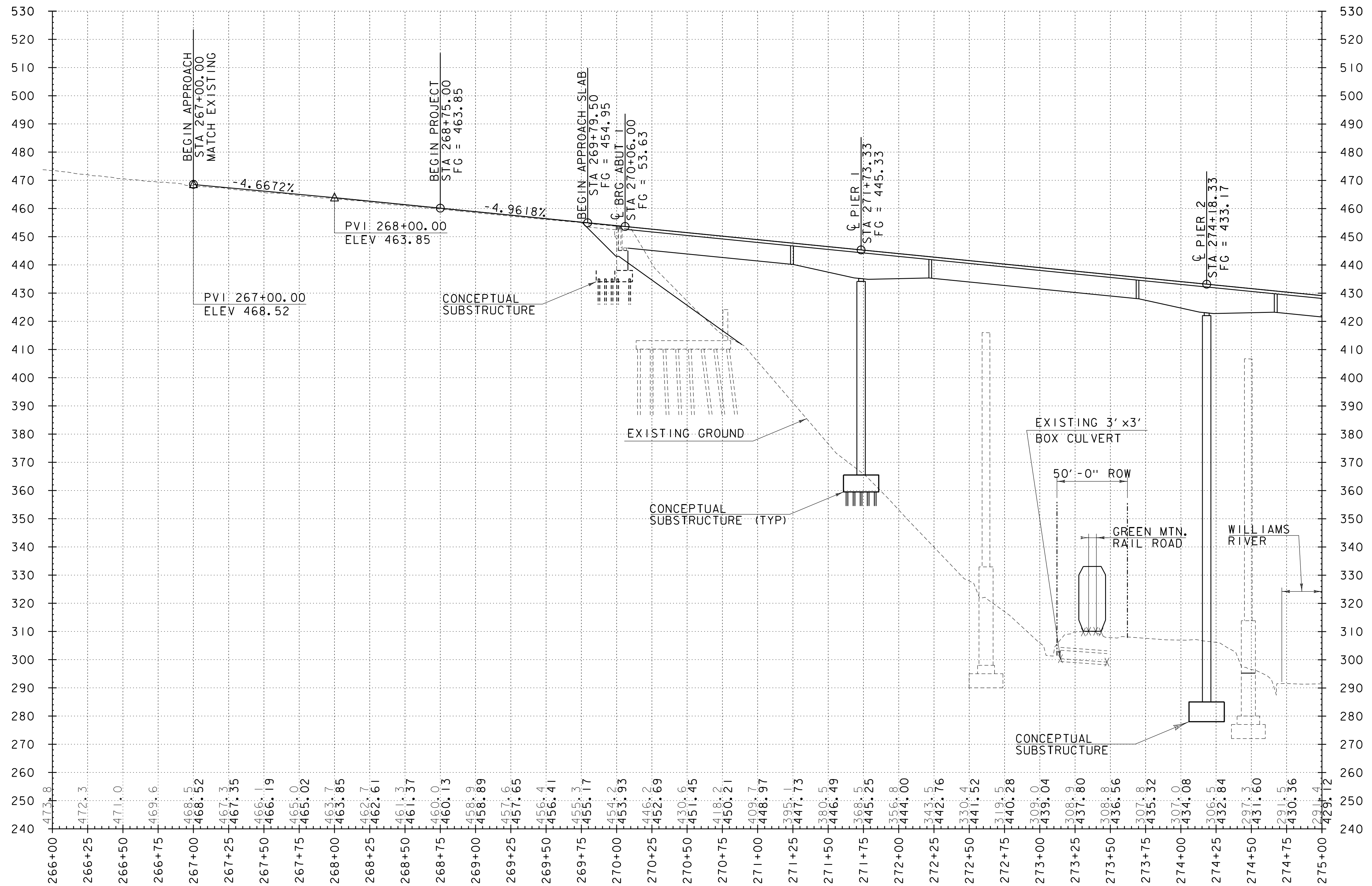
END APPROACH
STA 281+00.00 =
STA 1881+00.00, 37.17' RT

SCALE 1" = 20'-0"
20 0 20

PROJECT NAME: ROCKINGHAM
PROJECT NUMBER: IM 091-1(66)

FILE NAME: sl3al30bdr.dgn
PROJECT LEADER: C. SWANSON
DESIGNED BY: C. GREGORY
LAYOUT SHEET 3

PLOT DATE: 19-FEB-2016
DRAWN BY: O. SMITH
CHECKED BY: C. GREGORY
SHEET 7 OF 36



NB I-91 PROPOSED PROFILE

HORIZONTAL SCALE 1" = 40' VERTICAL SCALE 1" = 20'

THE GRADES SHOWN TO THE TENTH HUNDREDTH ARE THE EXISTING GROUND ELEVATIONS ALONG THE NEW ALIGNMENT. THE GRADES SHOWN TO THE NEAREST HUNDREDTH ARE THE PROPOSED GRADES FOR THE NEW ALIGNMENT.

PROJECT NAME: ROCKINGHAM

PROJECT NUMBER: IM 091-I(66)

FILE NAME: sl2al30pro.dgn

PROJECT LEADER: C. SWANSON

DESIGNED BY: C. GREGORY

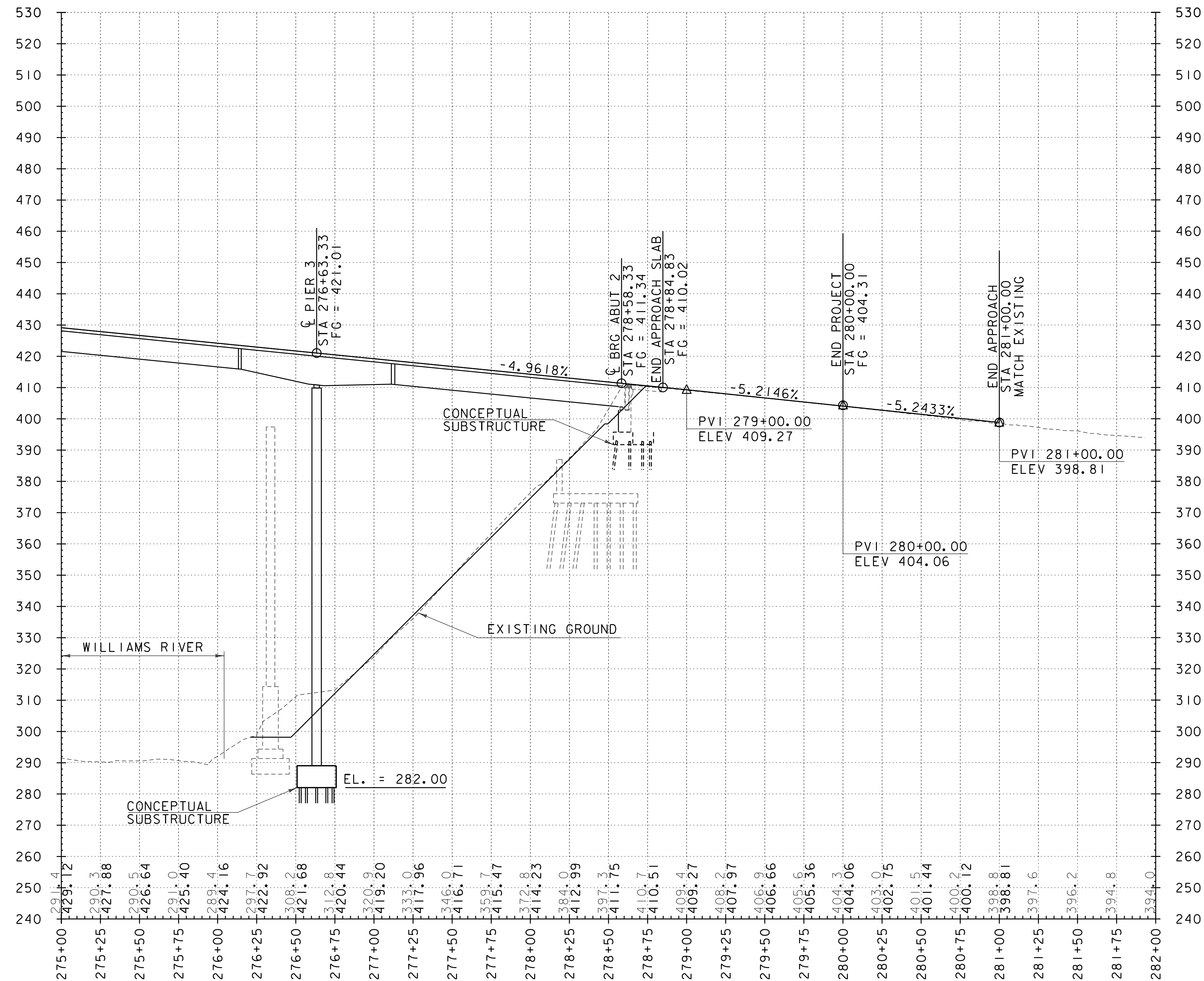
NB PROPOSED PROFILE SHEET 1

PLOT DATE: 19-FEB-2016

DRAWN BY: O. SMITH

CHECKED BY: C. GREGORY

SHEET 8 OF 36



NB I-91 PROPOSED PROFILE

HORIZONTAL SCALE 1" = 40' VERTICAL SCALE 1" = 20'

THE GRADES SHOWN TO THE TENTH HUNDREDTH ARE THE EXISTING GROUND ELEVATIONS ALONG THE NEW ALIGNMENT. THE GRADES SHOWN TO THE NEAREST HUNDREDTH ARE THE PROPOSED GRADES FOR THE NEW ALIGNMENT.

PROJECT NAME: ROCKINGHAM

PROJECT NUMBER: IM 091-1(66)

FILE NAME: sl2a130pro.dgn

PROJECT LEADER: C. SWANSON

DESIGNED BY: C. GREGORY

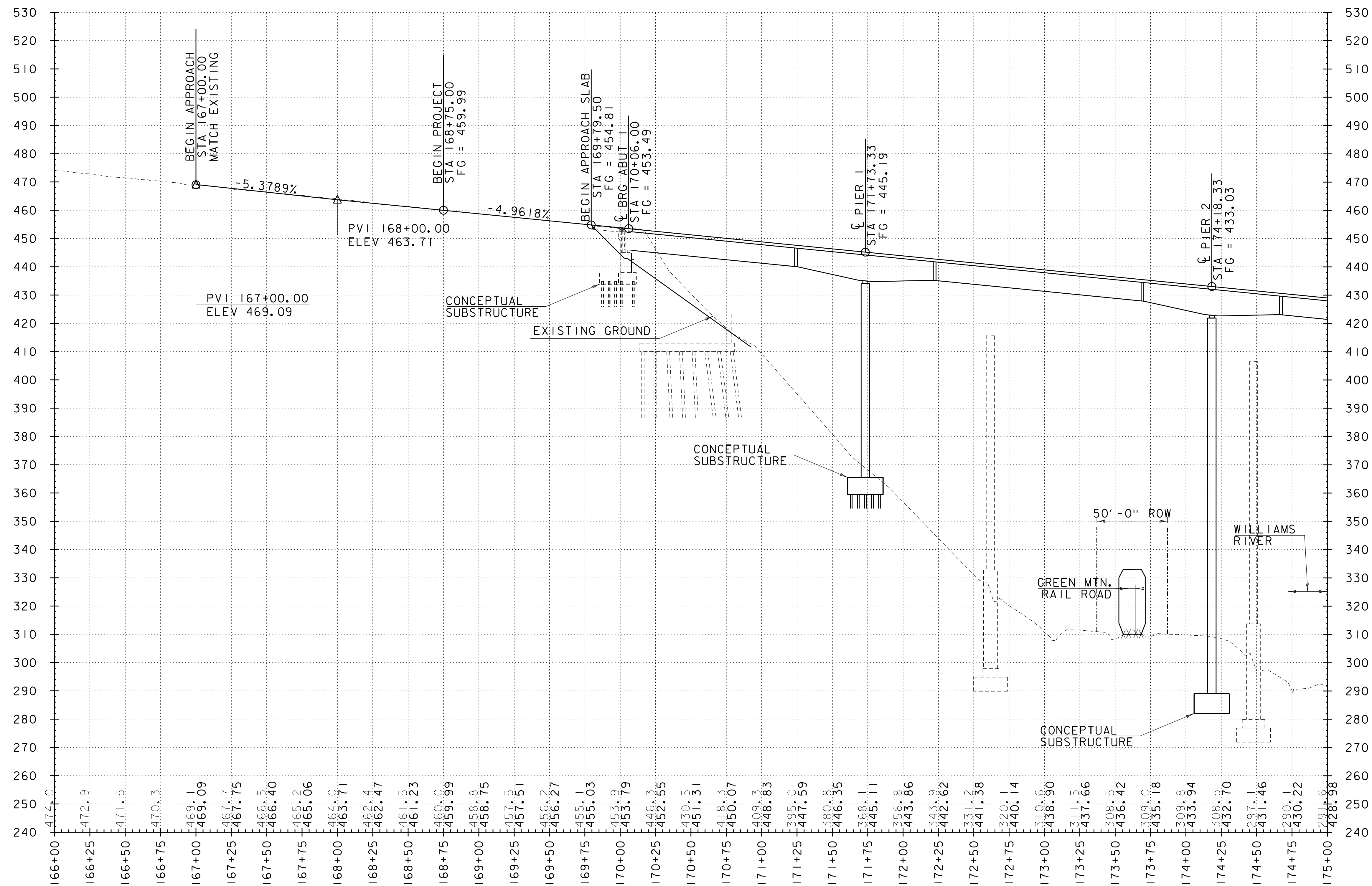
NB PROPOSED PROFILE SHEET 2

PLOT DATE: 19-FEB-2016

DRAWN BY: O. SMITH

CHECKED BY: C. GREGORY

SHEET 9 OF 36

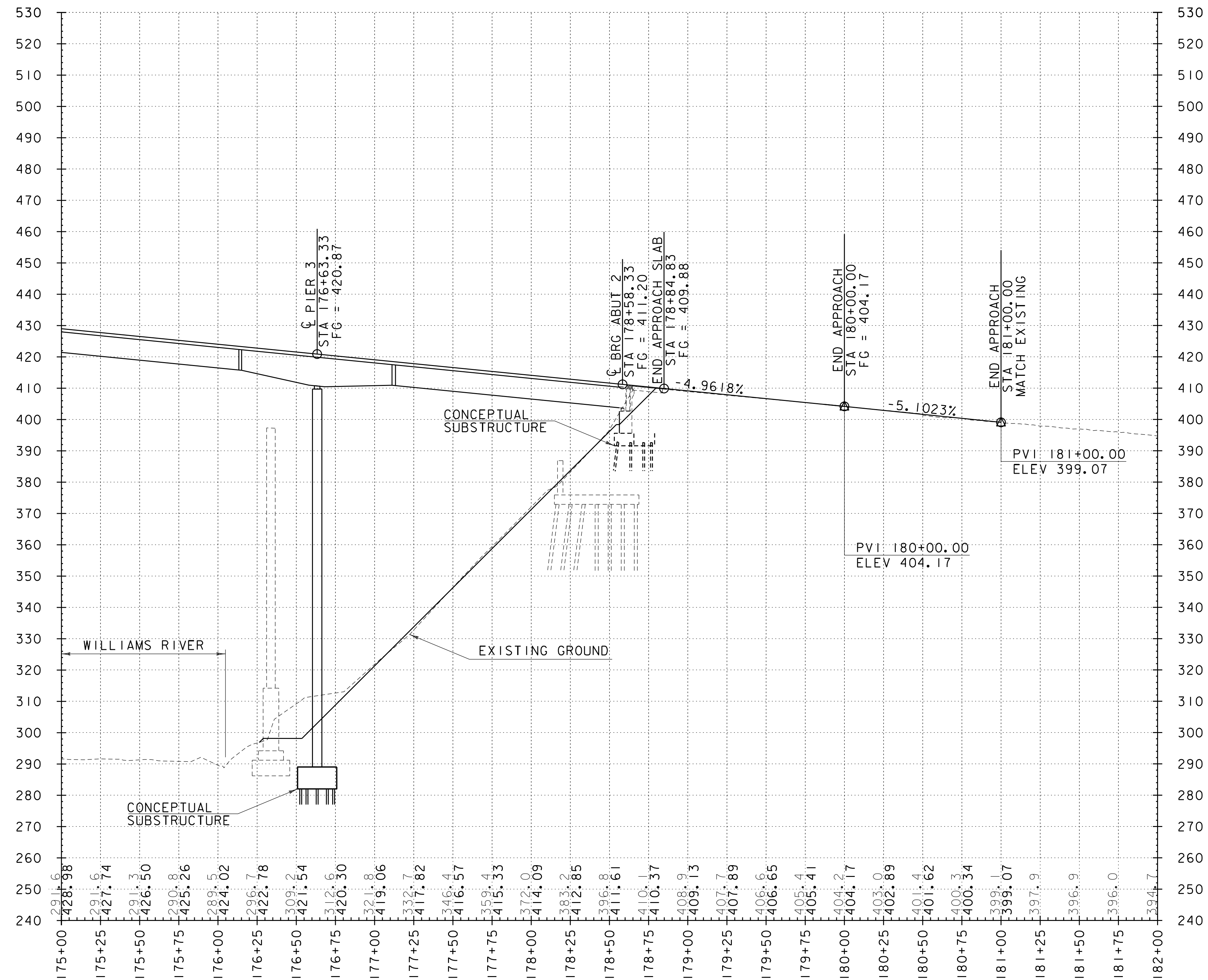


SB I-91 PROPOSED PROFILE

HORIZONTAL SCALE 1" = 40' VERTICAL SCALE 1" = 20'

THE GRADES SHOWN TO THE TENTH HUNDREDTH ARE THE EXISTING GROUND ELEVATIONS ALONG THE NEW ALIGNMENT. THE GRADES SHOWN TO THE NEAREST HUNDREDTH ARE THE PROPOSED GRADES FOR THE NEW ALIGNMENT.

PROJECT NAME:	ROCKINGHAM
PROJECT NUMBER:	IM 091-I(66)
FILE NAME:	sl2al30pro.dgn
PROJECT LEADER:	C. SWANSON
DESIGNED BY:	C. GREGORY
SB PROPOSED PROFILE SHEET I	
PLOT DATE:	19-FEB-2016
DRAWN BY:	O. SMITH
CHECKED BY:	C. GREGORY
SHEET	10 OF 36

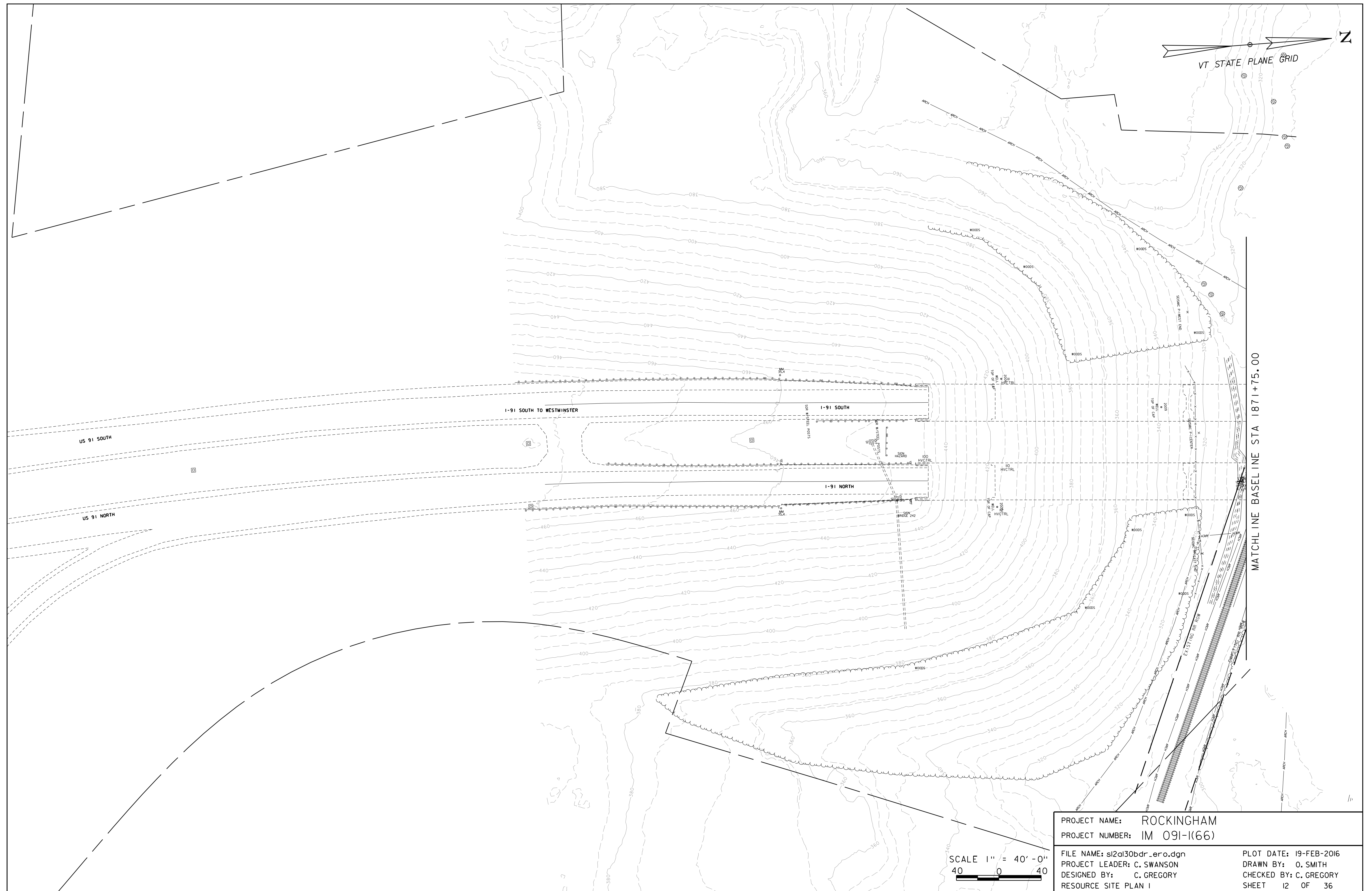


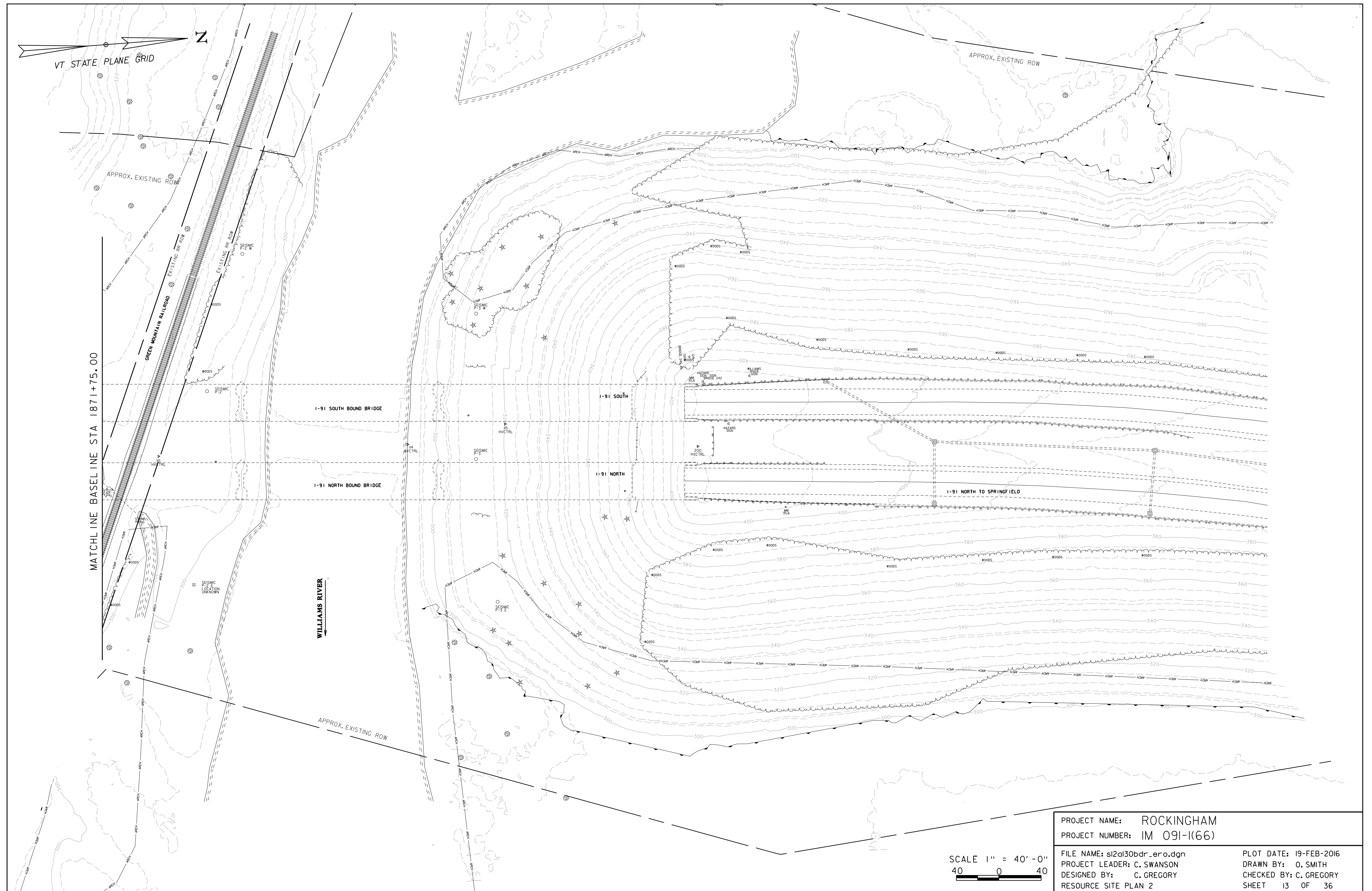
SB I-91 PROPOSED PROFILE

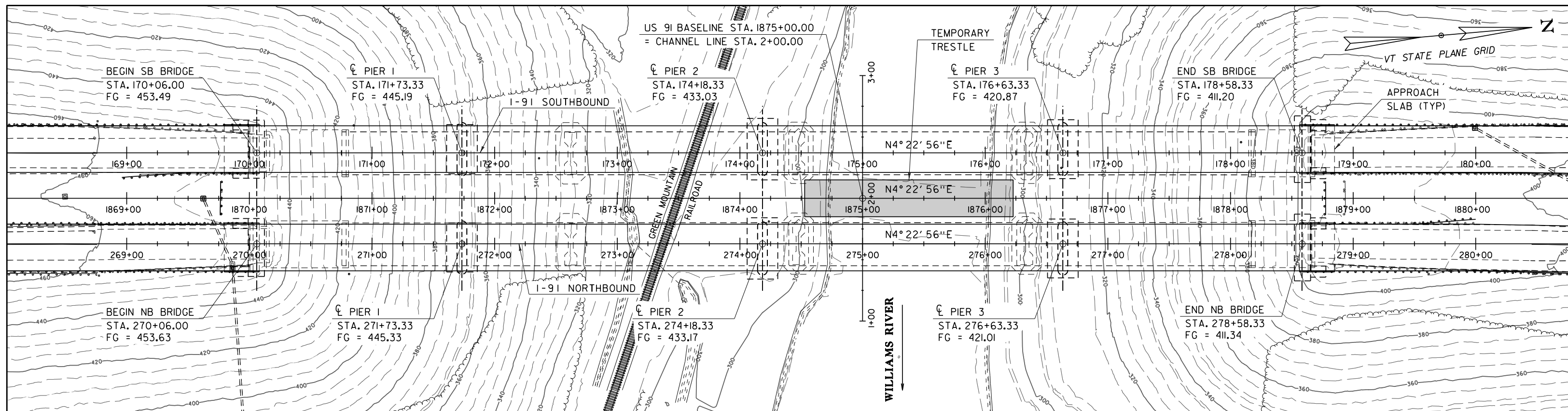
HORIZONTAL SCALE 1" = 40' VERTICAL SCALE 1" = 20'

THE GRADES SHOWN TO THE TENTH HUNDREDTH ARE THE EXISTING GROUND ELEVATIONS ALONG THE NEW ALIGNMENT. THE GRADES SHOWN TO THE NEAREST HUNDREDTH ARE THE PROPOSED GRADES FOR THE NEW ALIGNMENT.

PROJECT NAME:	ROCKINGHAM
PROJECT NUMBER:	IM 091-I(66)
FILE NAME:	sl2a130pro.dgn
PROJECT LEADER:	C. SWANSON
DESIGNED BY:	C. GREGORY
SB PROPOSED PROFILE SHEET 2	
PLOT DATE:	19-FEB-2016
DRAWN BY:	O. SMITH
CHECKED BY:	C. GREGORY
SHEET	II OF 36

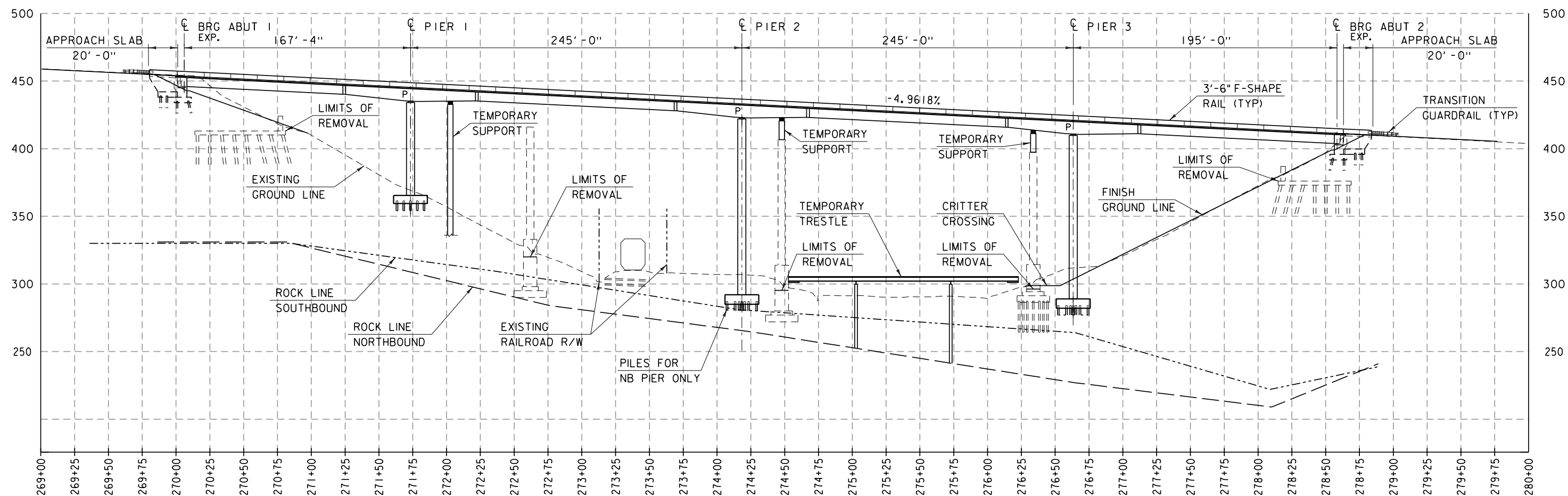






PLAN

SCALE 1" = 40'



ELEVATION

SCALE 1" = 40'

SCALE 1" = 40'-0"

DESIGN CONCEPT

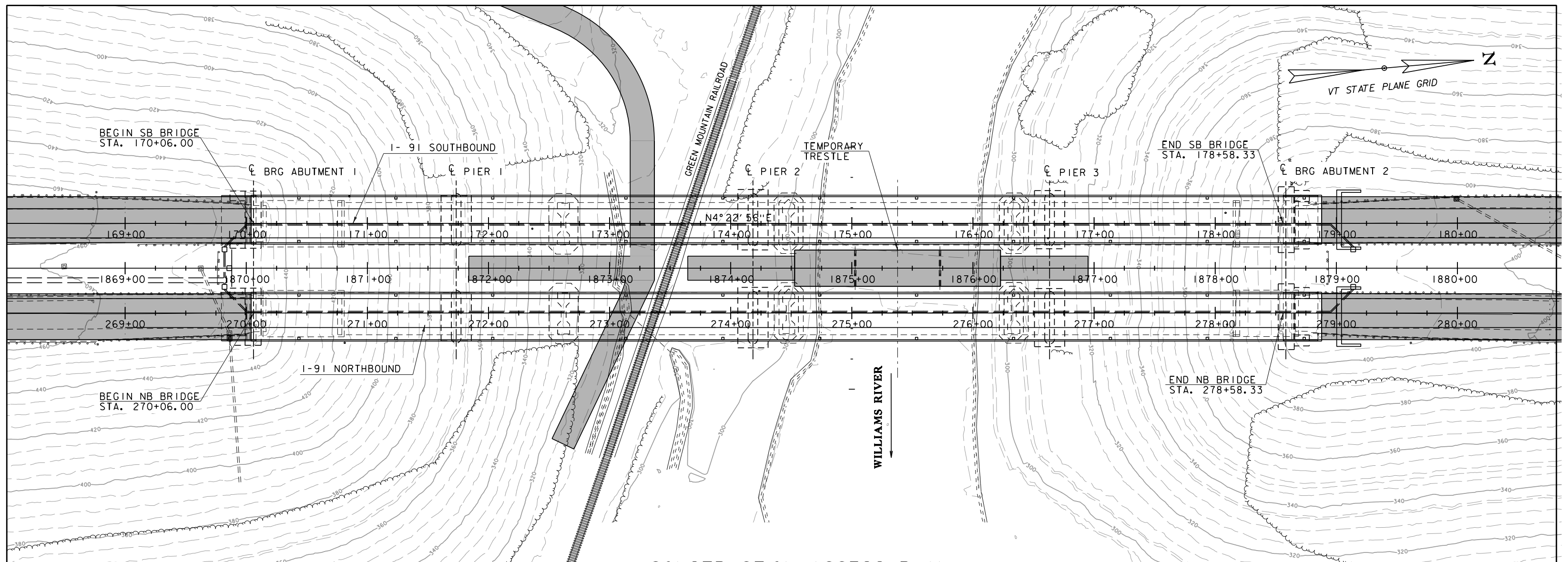
NOTES:

1. LIMITS OF CONCRETE REMOVAL FOR EXISTING PIER WALLS AND ABUTMENT WALLS TO BE 2'-0" BELOW FINISHED GRADE.
2. BEARING OF ALL PIERS AND ABUTMENTS IS NORMAL TO ALIGNMENT.

PROJECT NAME: ROCKINGHAM
PROJECT NUMBER: IM 091-I(66)

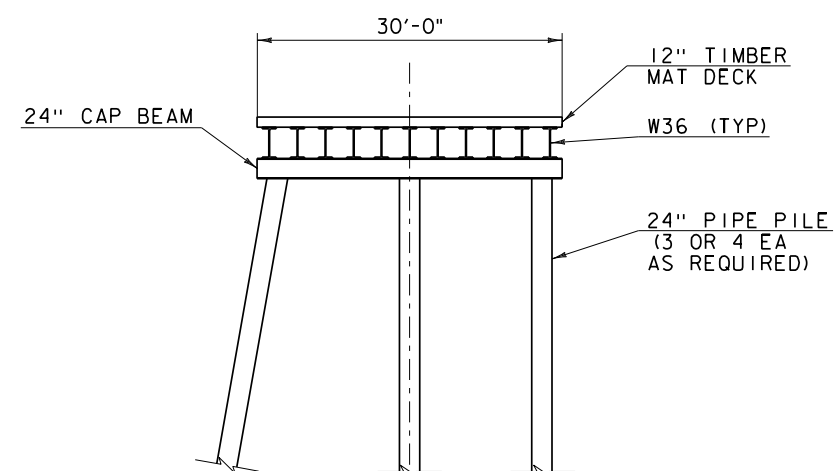
FILE NAME: si2ai30pe.dgn
PROJECT LEADER: C. SWANSON
DESIGNED BY: C. WERTS
PLAN & ELEVATION

PLOT DATE: 3/11/2016
DRAWN BY: S. COUTURE
CHECKED BY: J. WU
SHEET 14 OF 36



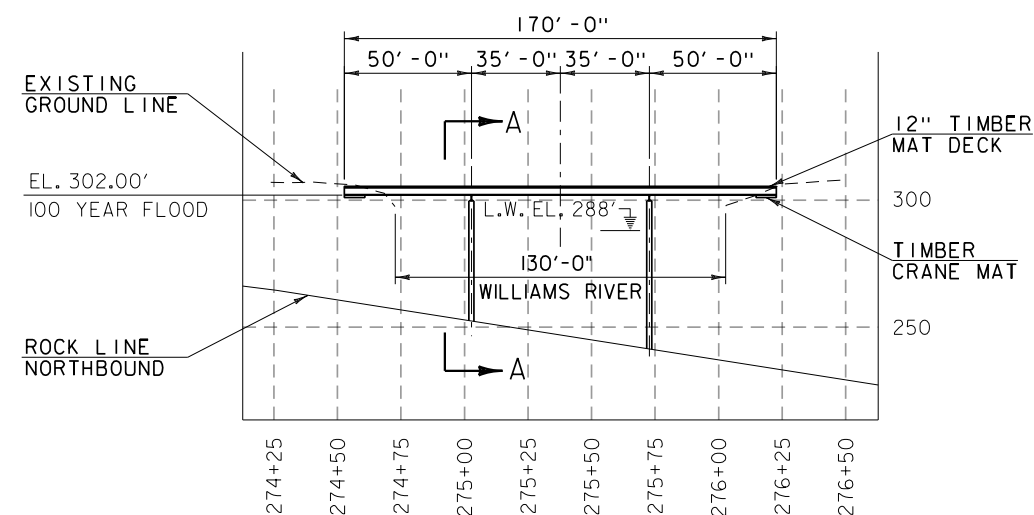
CONSTRUCTION ACCESS PLAN

SCALE 1" = 40'



SECTION A-A

SCALE 1" = 10'



TEMPORARY TRESTLE ELEVATION

SCALE 1" = 40'

NOTES:

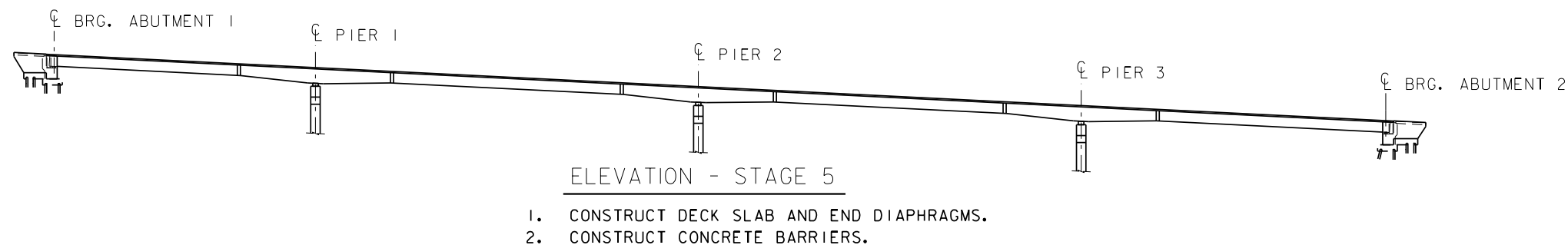
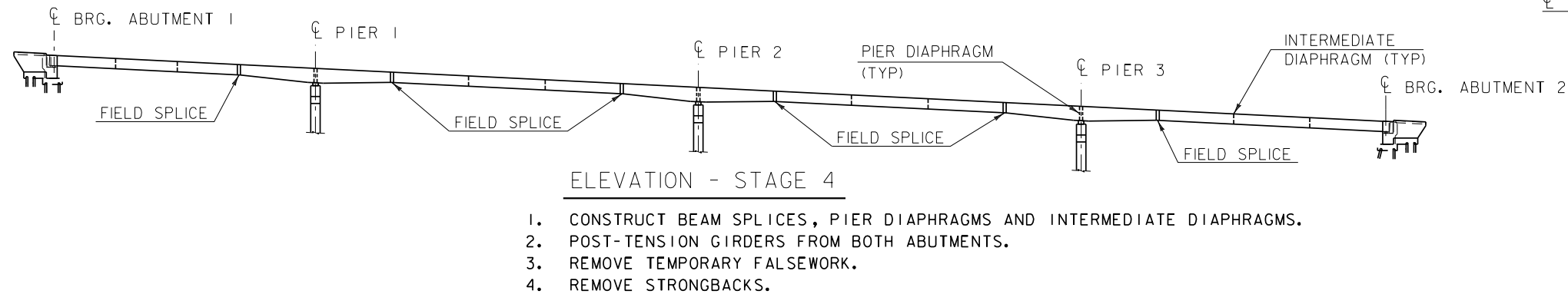
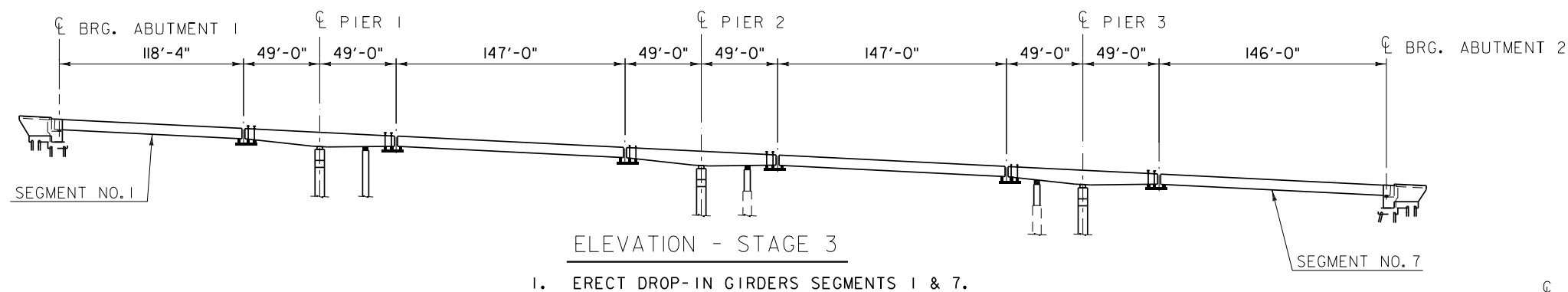
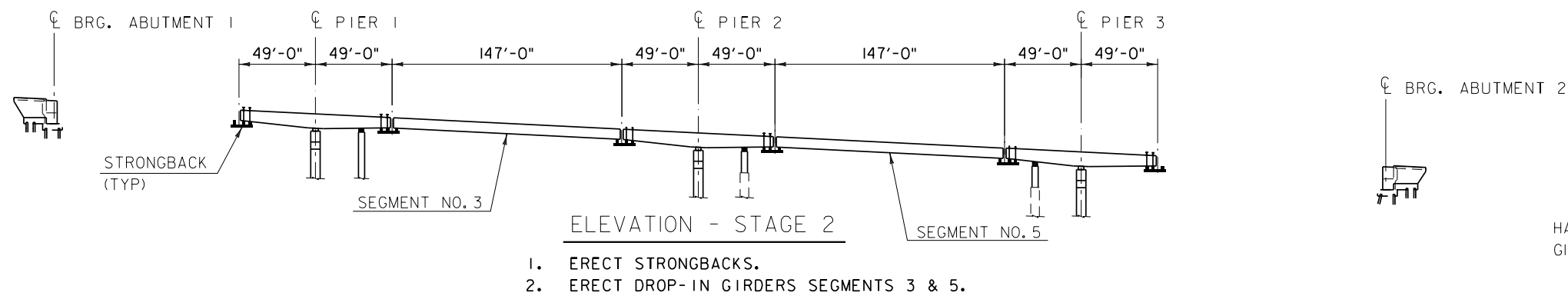
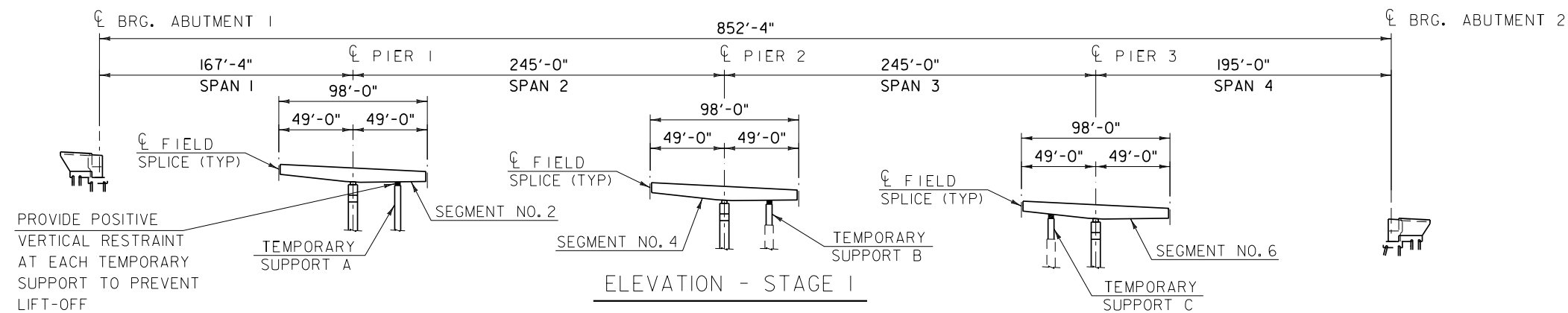
1. IN PLACE MAY. 2017 - DEC. 2019 (2 SPRING RUNOFF).
2. CRANE MAT COULD BE REMOVED WITH ONE DAY NOTICE.
3. W36 BEAMS COULD BE REMOVED WITH FIVE DAYS NOTICE.
4. MAX. PILE BENT SPAN 70'-0".
5. TRESTLE CAN BE BUILT WITH BOTTOM FLANGE AT ELEVATION 302'.

DESIGN CONCEPT

PROJECT NAME: ROCKINGHAM
PROJECT NUMBER: IM 091-I(66)

FILE NAME: si2ai30ConstAccess.dgn
PROJECT LEADER: C. SWANSON
DESIGNED BY: C. WERTS
CONSTRUCTION ACCESS

PLOT DATE: 3/11/2016
DRAWN BY: S. COUTURE
CHECKED BY: N. RODDA
SHEET 15 OF 36



SUPERSTRUCTURE CONSTRUCTION SEQUENCE

SCALE 1" = 50'

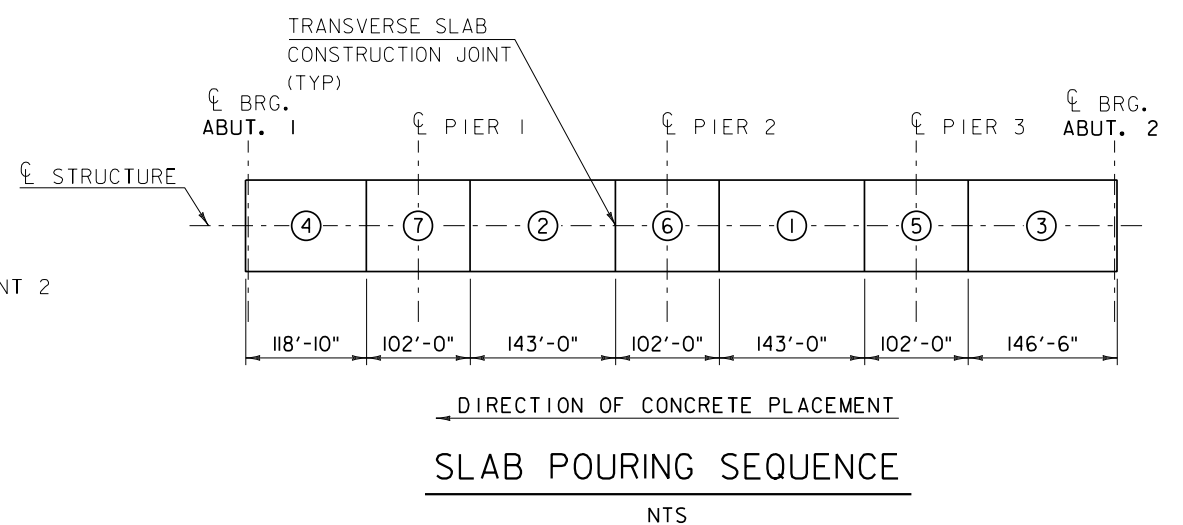
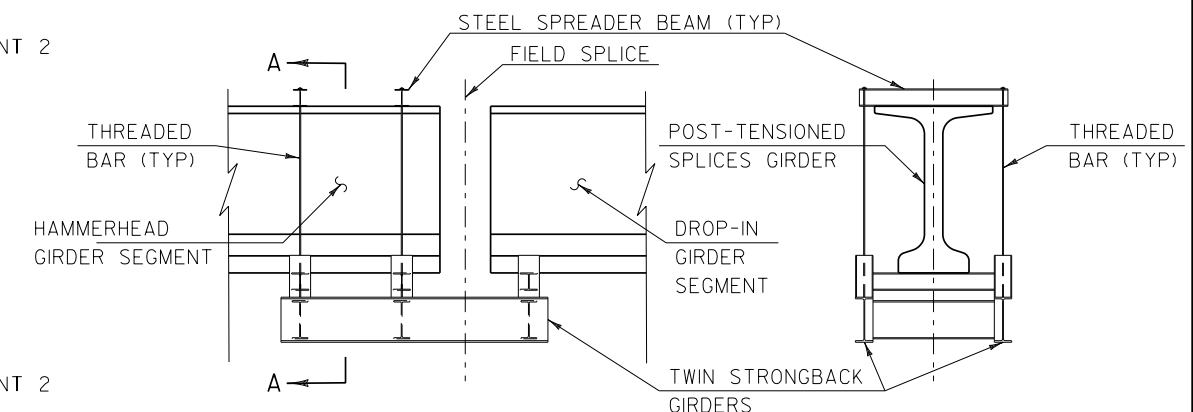
NOTES:

THE GIRDER DESIGN AND DETAILS PRESENTED ARE BASED ON THE CONSTRUCTION SEQUENCE AND LOCATIONS FOR TEMPORARY SUPPORTS SHOWN ON THIS SHEET. ALTERNATE LOCATIONS FOR FALSEWORK AND SEQUENCING MAY BE SUBMITTED FOR APPROVAL PROVIDED THE GIRDERS ARE REDESIGNED FOR THE CHANGES. SEE SPECIAL PROVISIONS.

STRONGBACK DETAILS, FALSEWORK DETAILS, AND SEQUENCE OF OPERATIONS SHOWN ARE CONCEPTUAL AND FOR INFORMATION ONLY. SUBMIT DETAILED CALCULATIONS AND DRAWINGS, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF VERMONT THAT DEMONSTRATES THE PROPOSED MEANS AND METHODS FOR ERECTING THE GIRDERS FOR APPROVAL, SEE SPECIAL PROVISIONS.

USE 8,000 psi STRENGTH CONCRETE FOR GIRDER SPLICE CLOSURE POURS, SEE SPECIAL PROVISIONS. WET CURE THE CLOSURE SPLICE FOR A MINIMUM OF 10 DAYS PRIOR TO POST-TENSIONING REGARDLESS OF THE COMPRESSION STRENGTH.

JACK THE SUPERSTRUCTURE AT EACH ABUTMENT AND PIER TO ALLOW THE BEARINGS TO RETURN TO THEIR UNDEFORMED SHAPE IF THE BEARING DEFLECTION IS GREATER THAN 1.0 INCH AFTER POST-TENSIONING IS COMPLETE. INCLUDE ALL COSTS ASSOCIATED WITH RESETTING THE BEARINGS IN THE UNIT PRICE BID FOR POST-TENSIONING CONTINUITY.



NOTES:

THE NUMBER INSCRIBED IN THE CIRCLES REPRESENT THE SEQUENCE OF PLACING SECTIONS IN THE SLAB. FOLLOW THE SEQUENCE REPRESENTED BY THE NUMBERS INSCRIBED IN THE CIRCLE WHEN PLACING SECTIONS OF THE SLAB.

THE DIMENSIONS SHOWN ARE HORIZONTAL DIMENSIONS MEASURED ALONG CL STRUCTURE.

SET EXPANSION JOINTS AND CAST CONCRETE IN BLOCKOUTS AFTER ALL SLAB POURS ARE COMPLETE. MAKE FINAL ADJUSTMENTS TO EXPANSION JOINTS BEFORE PLACING CONCRETE IN BLOCKOUTS.

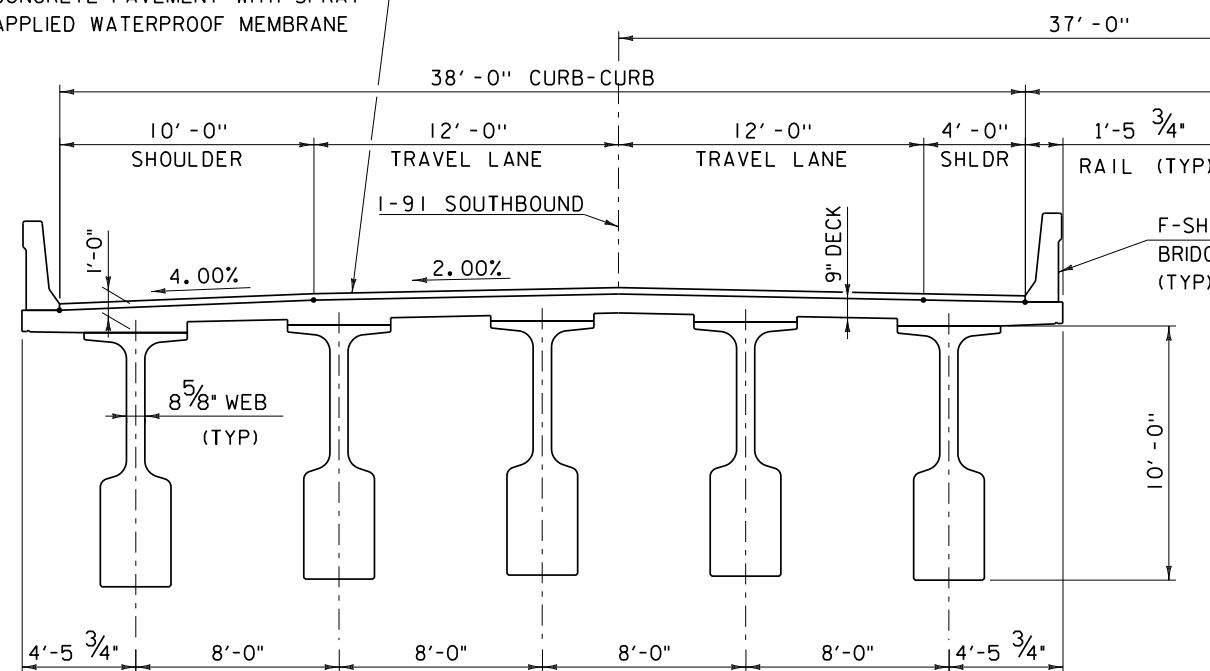
DESIGN CONCEPT

PROJECT NAME: ROCKINGHAM
PROJECT NUMBER: IM 091-I(66)

FILE NAME: sl2al30cs.dgn
PROJECT LEADER: C. SWANSON
DESIGNED BY: C. WERTS
CONSTRUCTION SEQUENCE

PLOT DATE: 3/11/2016
DRAWN BY: S. COUTURE
CHECKED BY: N. RODDA
SHEET 16 OF 36

3" SUPERPAVE BITUMINOUS
CONCRETE PAVEMENT WITH SPRAY
APPLIED WATERPROOF MEMBRANE



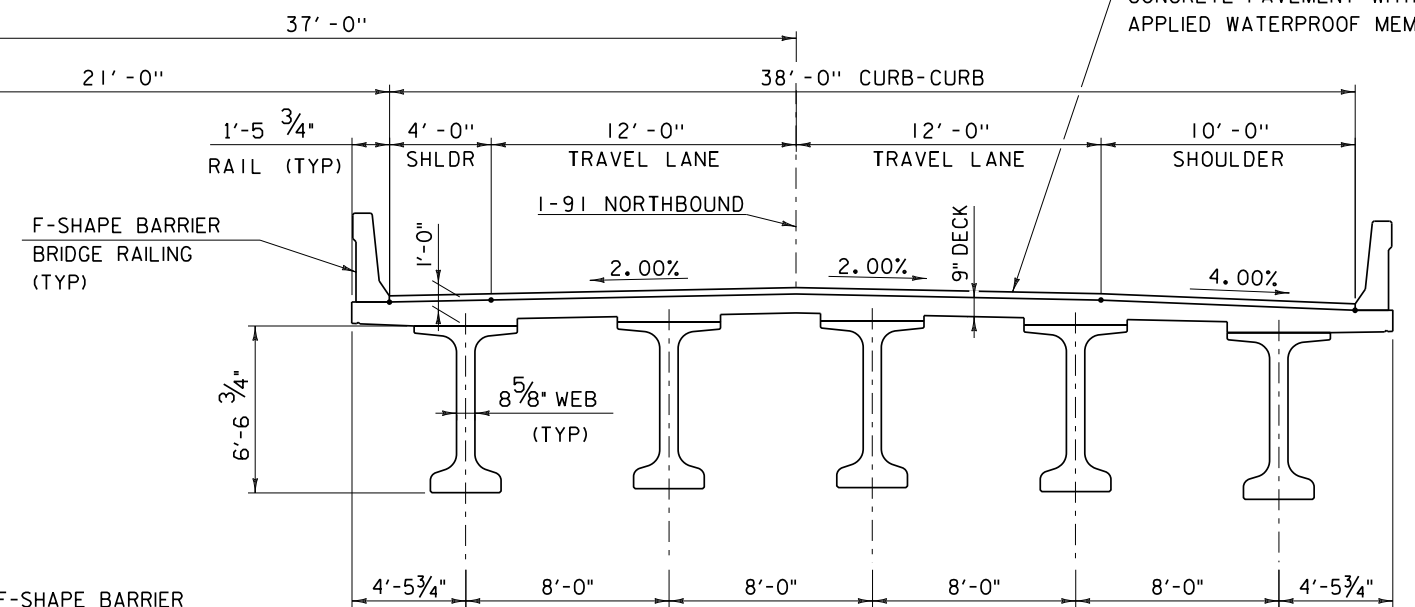
SECTION AT C PIER

NOTES:

1. CONCRETE FOR BRIDGE DECK & F-SHAPE BARRIER SHALL BE HP CONCRETE CLASS A.
2. REINFORCING STEEL IN THE BRIDGE DECK AND F-SHAPE BARRIER SHALL BE ASTM A955, GRADE 60.

APPROXIMATE HISTORIC
BASELINE GEOMETRY

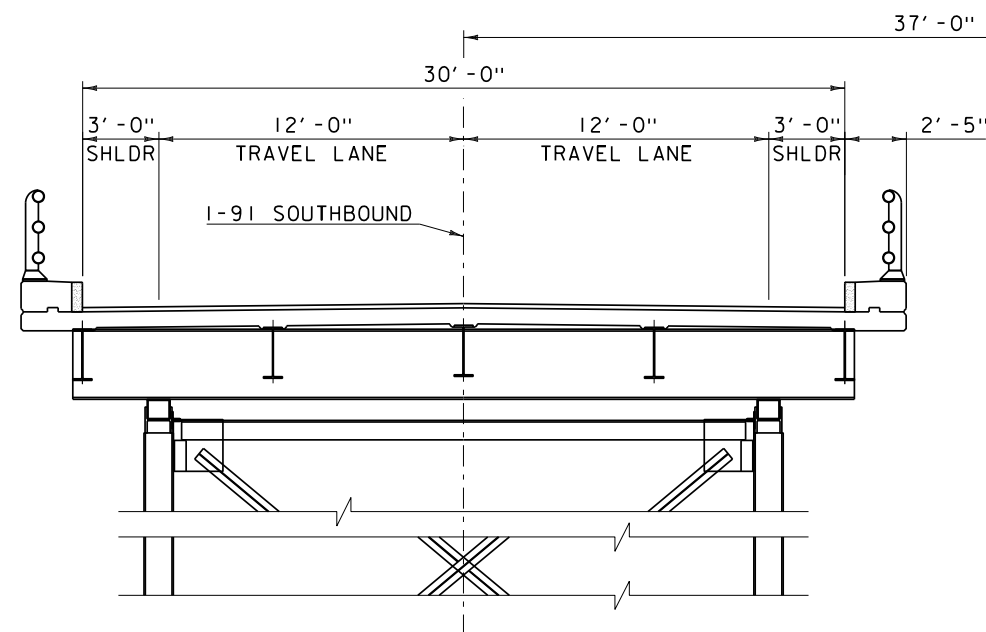
3" SUPERPAVE BITUMINOUS
CONCRETE PAVEMENT WITH SPRAY
APPLIED WATERPROOF MEMBRANE



TYPICAL SECTION

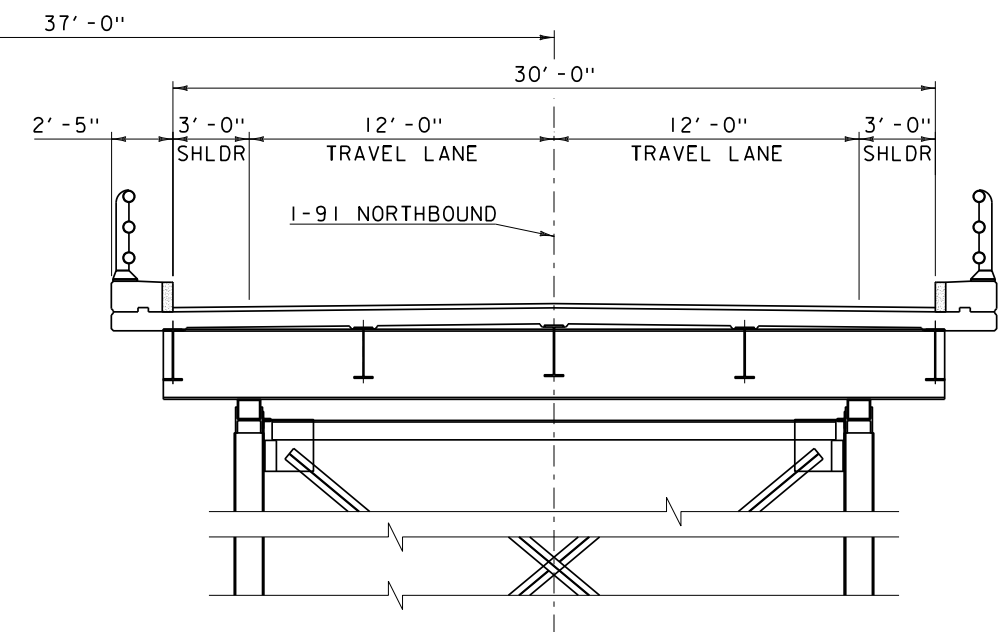
PROPOSED BULB-TEE TYPICAL SECTIONS

SCALE 1/4" = 1'-0"



EXISTING BRIDGE - SB

APPROXIMATE HISTORIC
BASELINE GEOMETRY



EXISTING BRIDGE - NB

EXISTING TYPICAL SECTIONS

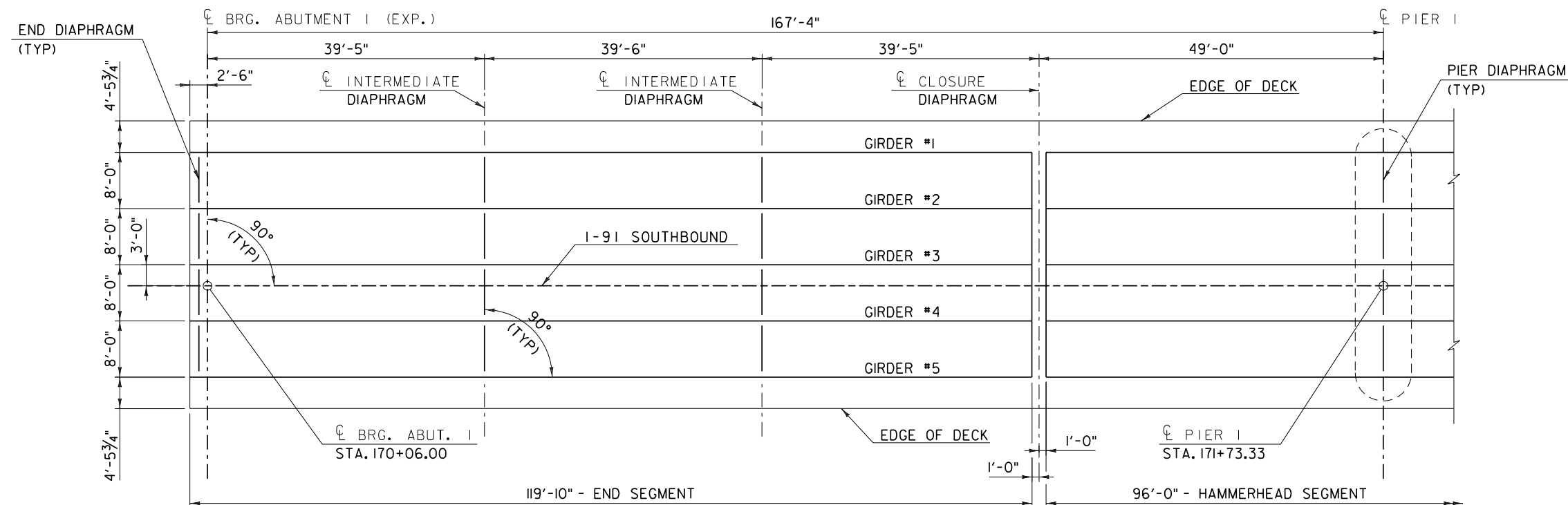
SCALE 1/4" = 1'-0"

DESIGN CONCEPT

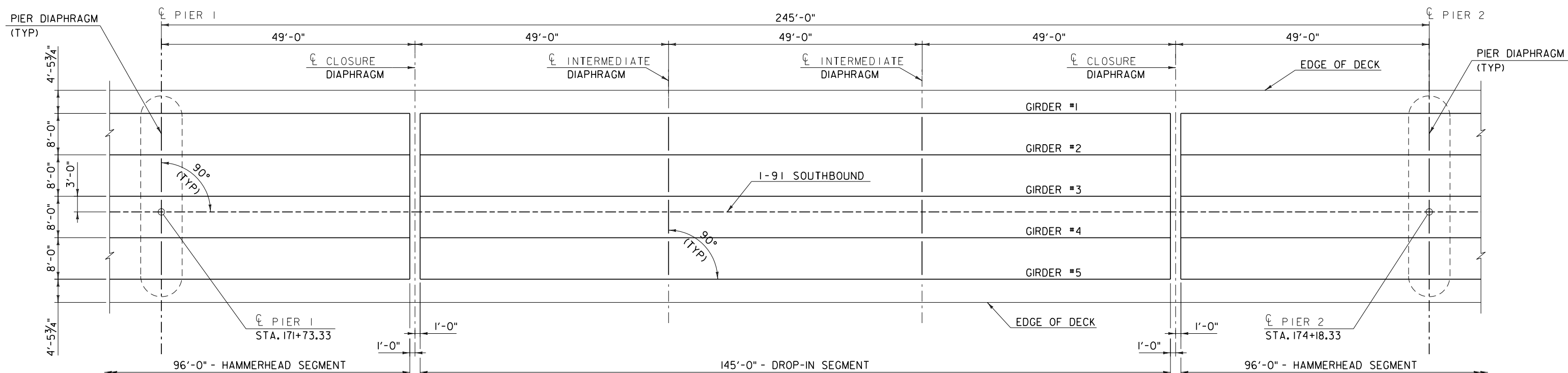
PROJECT NAME: ROCKINGHAM
PROJECT NUMBER: IM 091-I(66)

FILE NAME: si2ai30TypSec.dgn
PROJECT LEADER: C. SWANSON
DESIGNED BY: C. WERTS
TYPICAL SECTIONS

PLOT DATE: 3/11/2016
DRAWN BY: S. COUTURE
CHECKED BY: N. RODDA
SHEET 17 OF 36



FRAMING PLAN - SPAN 1
(SOUTHBOUND SHOWN, NORTHBOUND SIMILAR)
SCALE 1" = 10'



FRAMING PLAN - SPAN 2
(SOUTHBOUND SHOWN, NORTHBOUND SIMILAR)
SCALE 1" = 10'

NOTES:

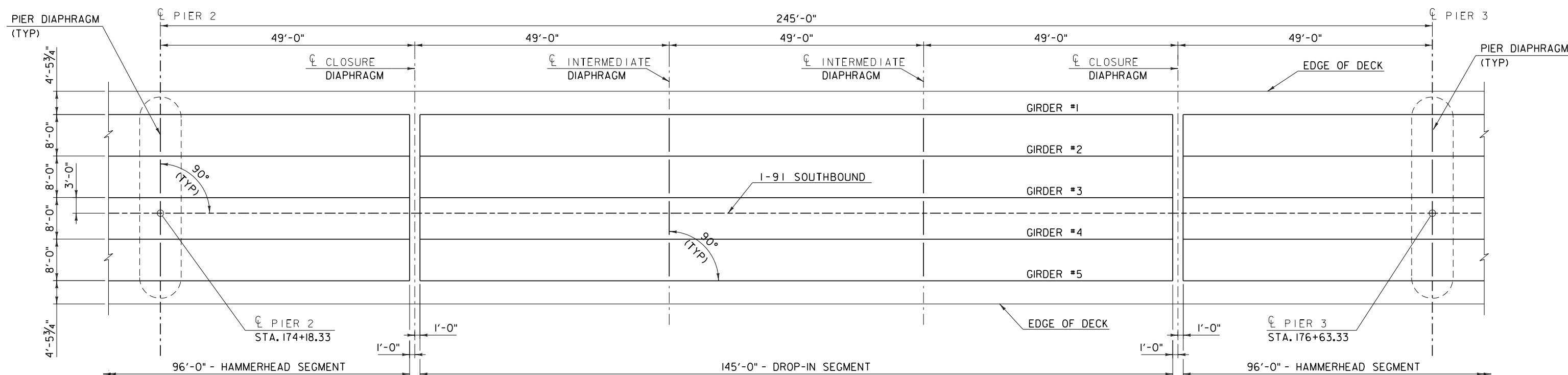
- CAUTION SHALL BE EXERCISED IN HANDLING AND PLACING GIRDER SEGMENTS. ALL GIRDERS SHALL BE CHECKED BY THE CONTRACTOR TO ENSURE THAT THEY ARE BRACED ADEQUATELY TO PREVENT TIPPING AND TO CONTROL LATERAL BENDING DURING SHIPPING. ONCE ERECTED, ALL GIRDERS SHALL BE BRACED Laterally TO PREVENT TIPPING UNTIL THE DIAPHRAGMS ARE CAST AND CURED.
- TEMPORARY PLATFORMS MAY BE REQUIRED FOR CONSTRUCTING CLOSURE FORMWORK.

DESIGN CONCEPT

PROJECT NAME: ROCKINGHAM
PROJECT NUMBER: IM 091-I(66)

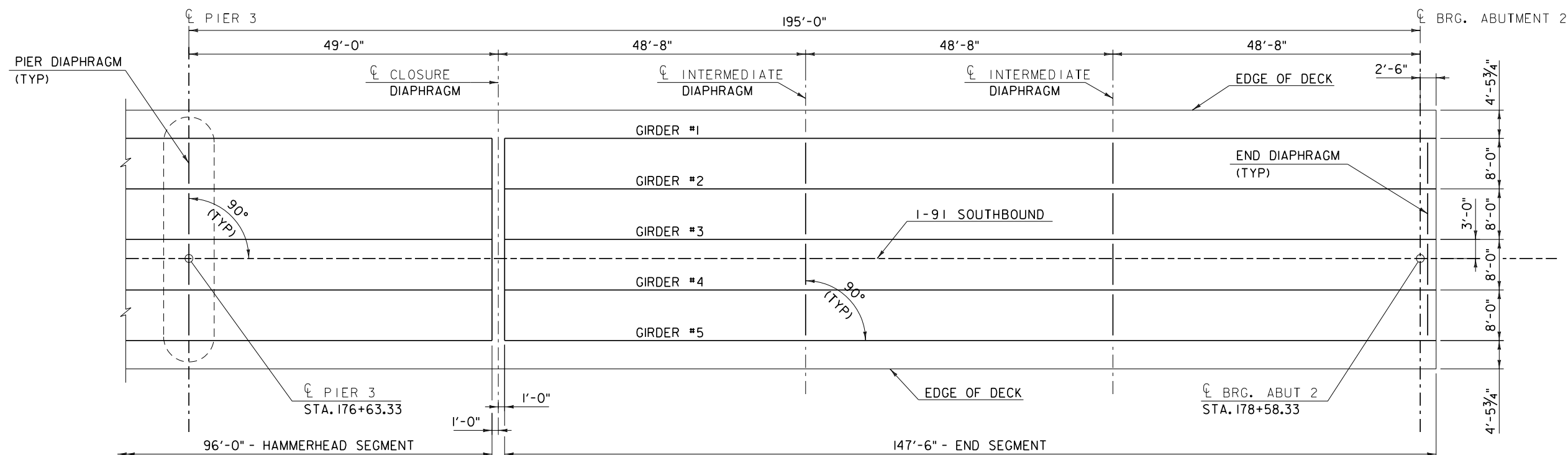
FILE NAME: si2a130Framing.dgn
PROJECT LEADER: C. SWANSON
DESIGNED BY: N. RODDA
FRAMING PLAN - SPAN 1 & 2

PLOT DATE: 3/11/2016
DRAWN BY: S. COUTURE
CHECKED BY: C. WERTS
SHEET 18 OF 36



FRAMING PLAN - SPAN 3

(SOUTHBOUND SHOWN, NORTHBOUND SIMILAR)
SCALE 1" = 10'



FRAMING PLAN - SPAN 4

(SOUTHBOUND SHOWN, NORTHBOUND SIMILAR)
SCALE 1" = 10'

NOTE:

FOR ADDITIONAL NOTES, SEE FRAMING PLAN
SPAN 1 & 2 SHEET.

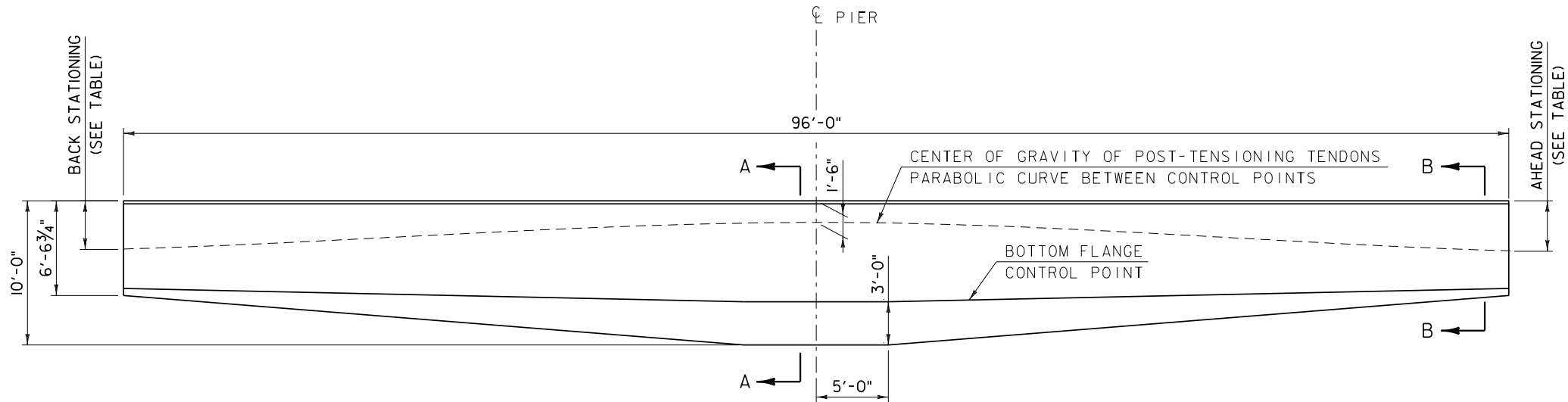
DESIGN CONCEPT

PROJECT NAME: ROCKINGHAM
PROJECT NUMBER: IM 091-I(66)

FILE NAME: s12a130Framing.dgn
PROJECT LEADER: C. SWANSON
DESIGNED BY: N. RODDA
FRAMING PLAN - SPAN 3 & 4

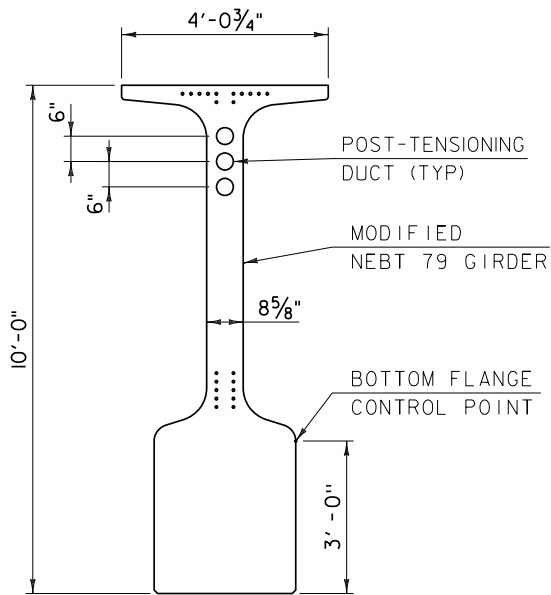
PLOT DATE: 3/11/2016
DRAWN BY: S. COUTURE
CHECKED BY: C. WERTS
SHEET 19 OF 36

CENTER OF GRAVITY POINTS		
PIER	AHEAD STA.	BACK STA.
1	3'-4½"	3'-9¾"
2	3'-4½"	3'-4½"
3	3'-6"	3'-4½"



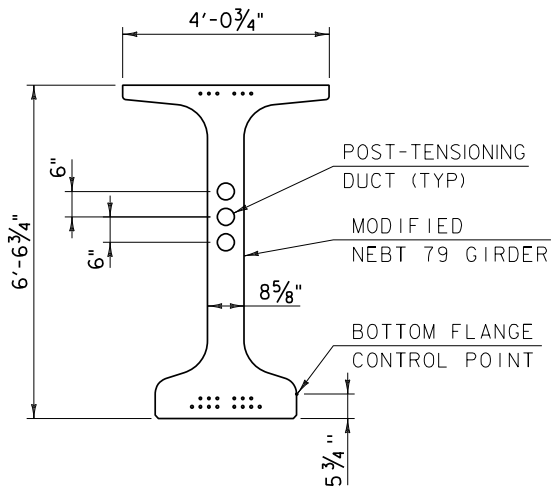
SEGMENT 2, 4 & 6 GIRDERS - AT PIERS

SCALE 3/16" = 1'-0"



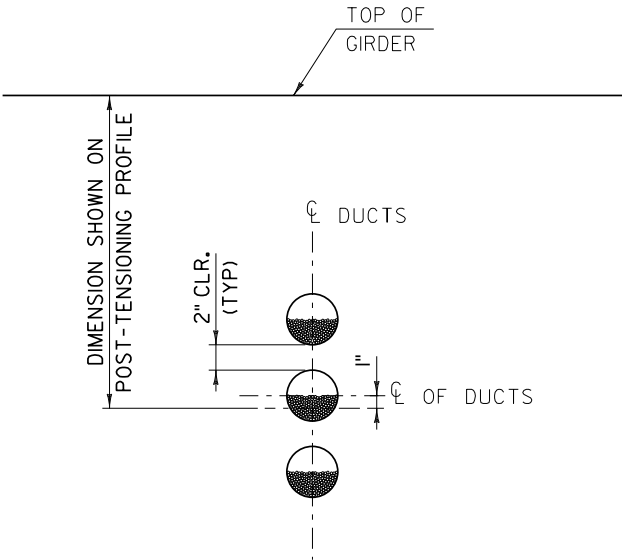
SECTION A-A

SCALE 1/4" = 1'-0"



SECTION B-B

SCALE 1/4" = 1'-0"

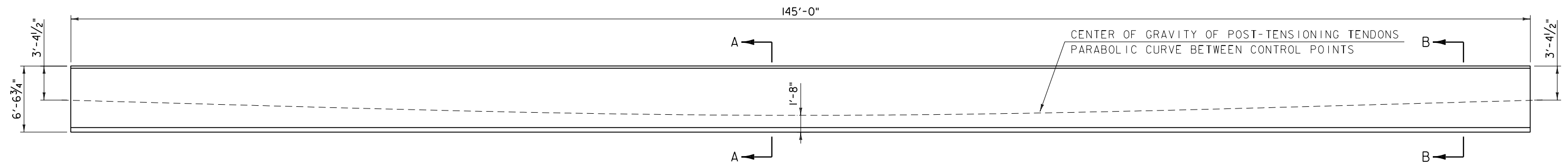


TENDON IN SUMMIT CURVE

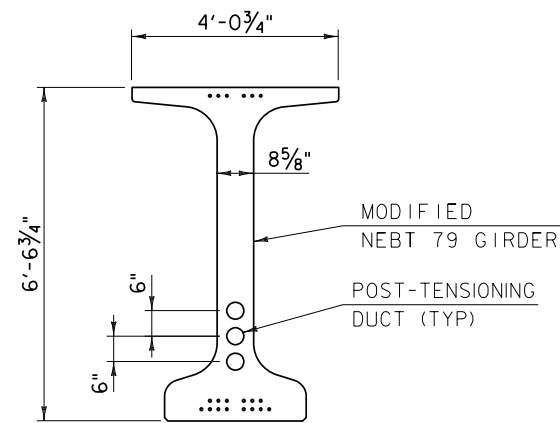
NTS

DESIGN CONCEPT

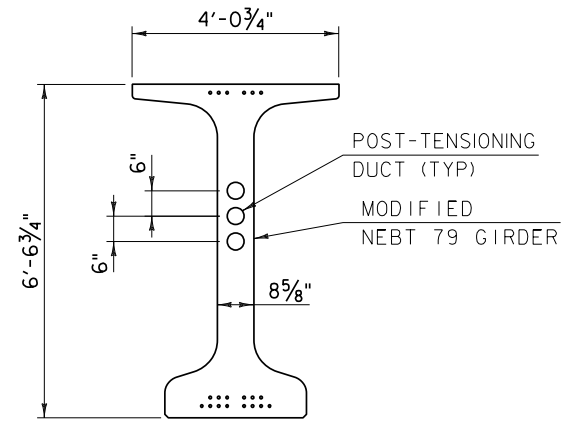
PROJECT NAME: ROCKINGHAM	
PROJECT NUMBER: IM 091-I(66)	
FILE NAME: si2ai30hhGirDet.dgn	PLOT DATE: 3/11/2016
PROJECT LEADER: C. SWANSON	DRAWN BY: S. COUTURE
DESIGNED BY: N. RODDA	CHECKED BY: C. WERTS
HAMMERHEAD GIRDER DETAILS	SHEET 20 OF 36



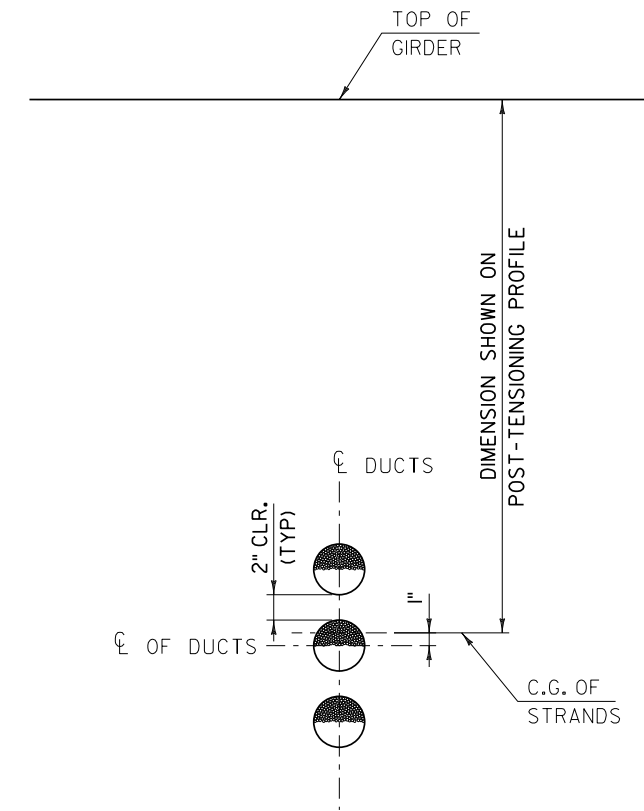
SEGMENT 3 & 5 GIRDERS - SPAN 2 & 3
SCALE $\frac{3}{16}" = 1'-0"$



SECTION A-A
SCALE $\frac{1}{2}" = 1'-0"$



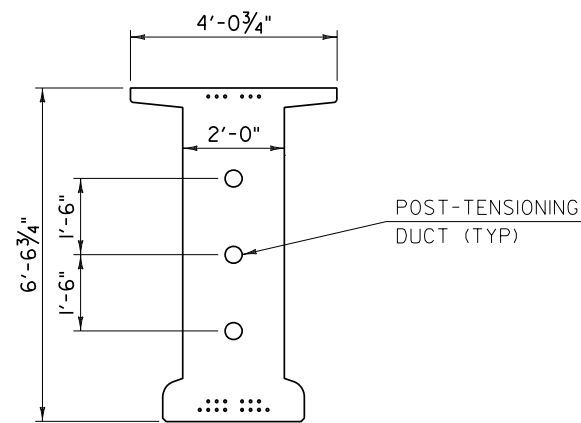
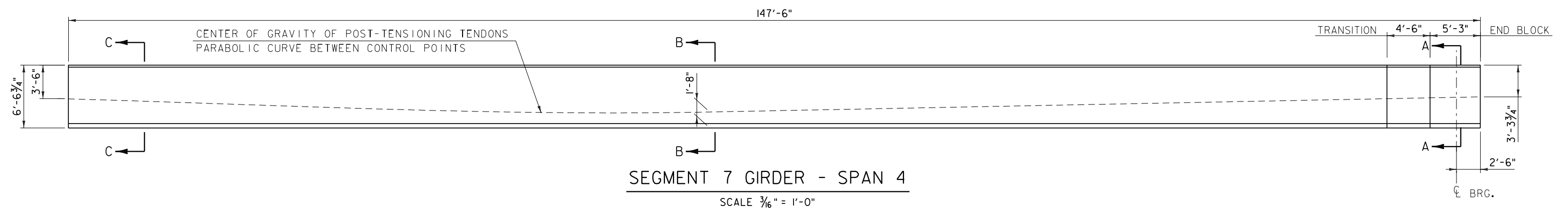
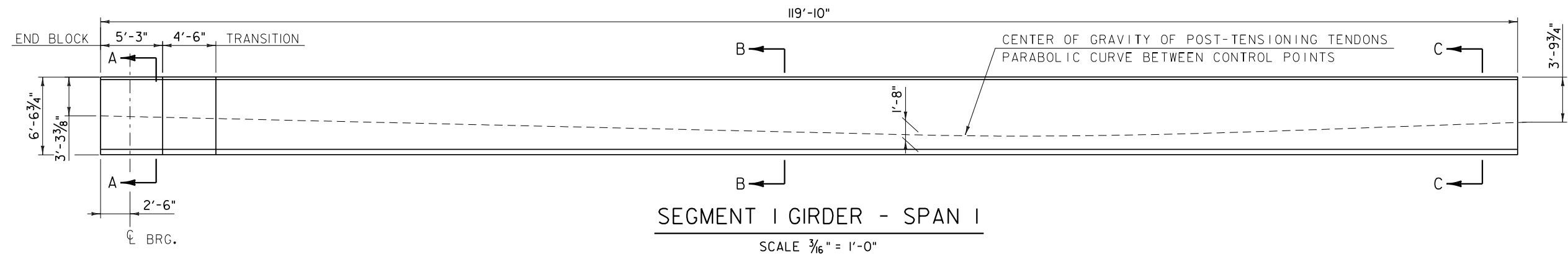
SECTION B-B
SCALE $\frac{1}{2}" = 1'-0"$



TENDON IN SAG CURVE
NTS

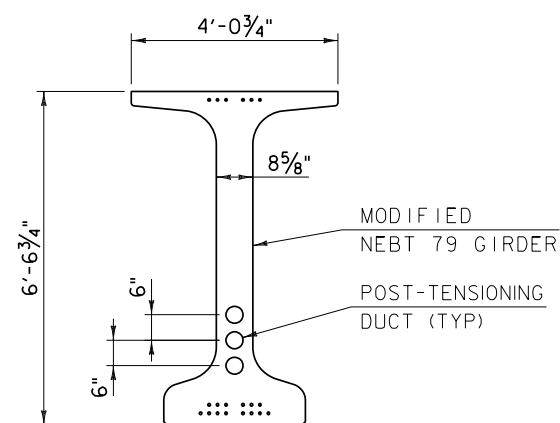
DESIGN CONCEPT

PROJECT NAME: ROCKINGHAM	
PROJECT NUMBER: IM 091-I(66)	
FILE NAME: s12a130hhGirDet.dgn	PLOT DATE: 3/11/2016
PROJECT LEADER: C. SWANSON	DRAWN BY: S. COUTURE
DESIGNED BY: N. RODDA	CHECKED BY: C. WERTS
DROP-IN GIRDER DETAILS	SHEET 21 OF 36



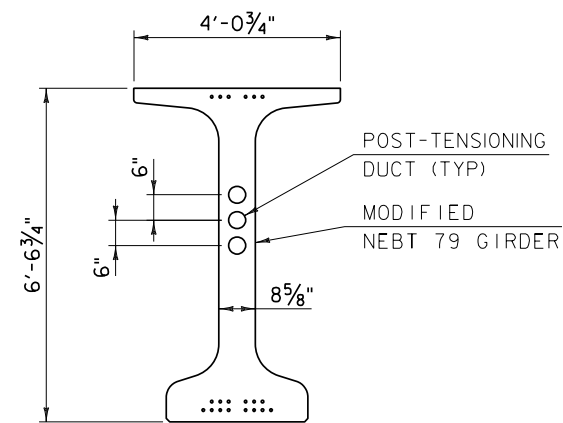
SECTION A-A

SCALE ¹/₂" = 1'-0"



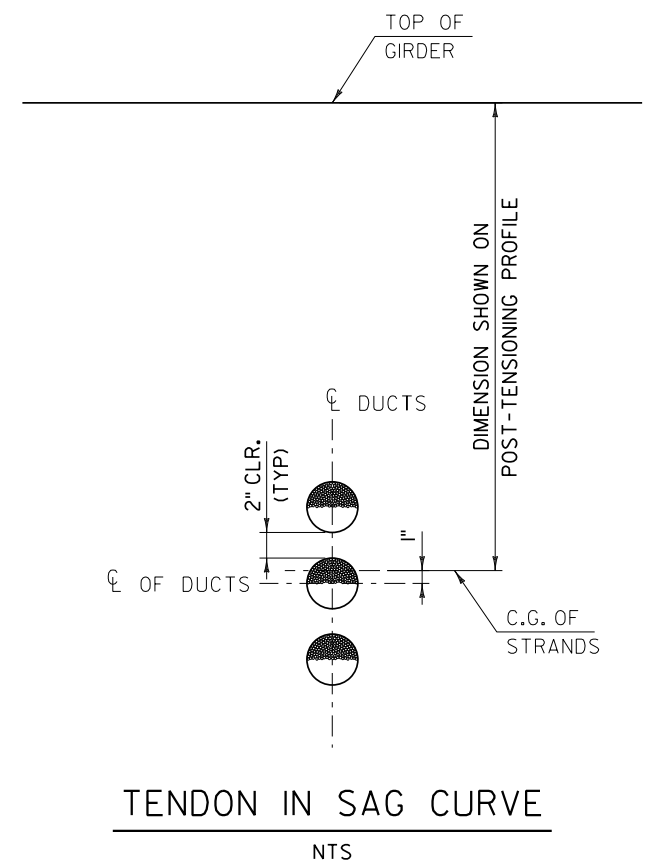
SECTION B-B

SCALE ¹/₂" = 1'-0"



SECTION C-C

SCALE ¹/₂" = 1'-0"

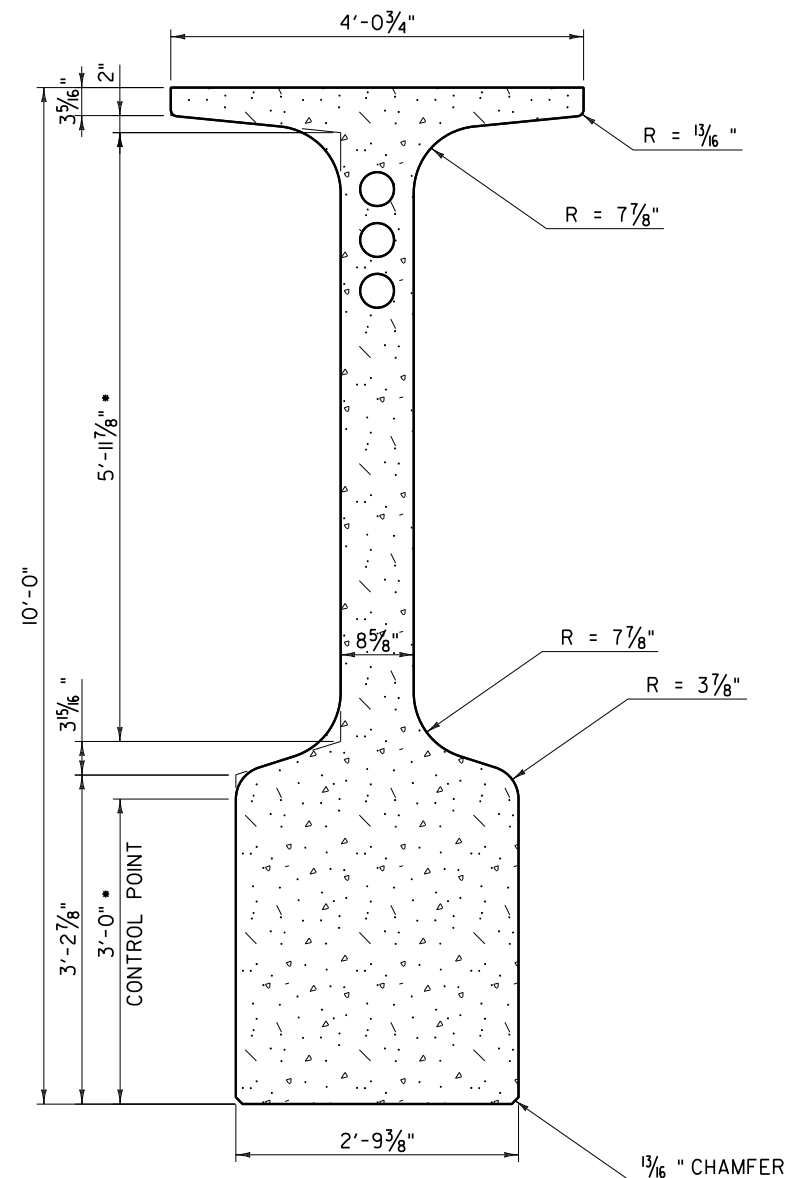


DESIGN CONCEPT

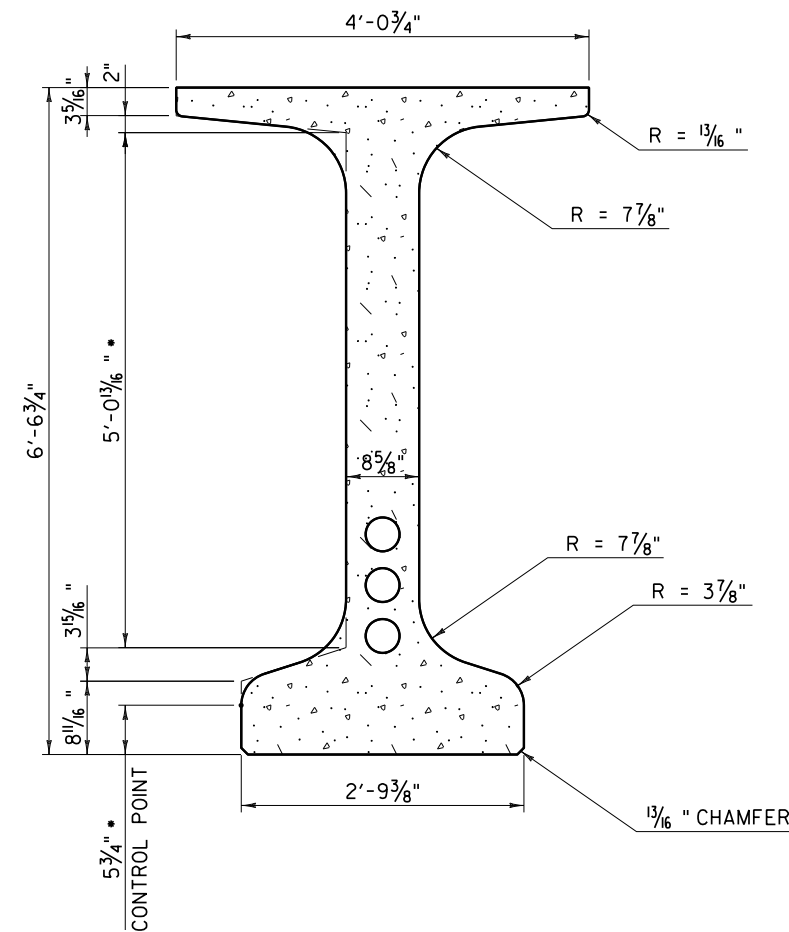
PROJECT NAME: ROCKINGHAM
PROJECT NUMBER: IM 091-I(66)

FILE NAME: sl2al30hhGlrDet.dgn
PROJECT LEADER: C. SWANSON
DESIGNED BY: N. RODDA
END GIRDER DETAILS

PLOT DATE: 3/11/2016
DRAWN BY: S. COUTURE
CHECKED BY: C. WERTS
SHEET 22 OF 36



BULB-TEE CROSS SECTION
(TYPICAL AT PIERS)
SCALE 1/2" = 1'-0"



BULB-TEE CROSS SECTION
(TYPICAL AT DROP-IN GIRDER)
SCALE 1/2" = 1'-0"

NOTES:

1. CONCRETE STRENGTH OF THE PRECAST GIRDER SEGMENTS SHALL BE 10.0 KSI. THE MINIMUM STRENGTH OF THE GIRDER SEGMENT CONCRETE SHALL BE 7.5 KSI PRIOR TO RELEASE.
2. REINFORCEMENT FOR PRECAST GIRDER SEGMENTS SHALL BE ASTM A 615, GRADE 60 EXCEPT THAT GIRDER STIRRUPS SHALL BE ASTM A 955, GRADE 60.
3. ALL PRETENSIONED STRANDS SHALL BE 0.6" DIAMETER LOW RELAXATION STRANDS (AASHTO M203 GRADE 270).
4. THE MAXIMUM INSIDE DIAMETER OF THE DUCT SHALL BE 4 INCHES. THE AREA OF THE DUCT SHALL BE AT LEAST 2.5 TIMES THE NET AREA OF THE PRESTRESSING STEEL IN THE DUCTS. EACH DUCT SHALL HAVE A MINIMUM OF 19 STRANDS.

• DIMENSIONS VARY IN HAMMERHEAD GIRDER.

DESIGN CONCEPT

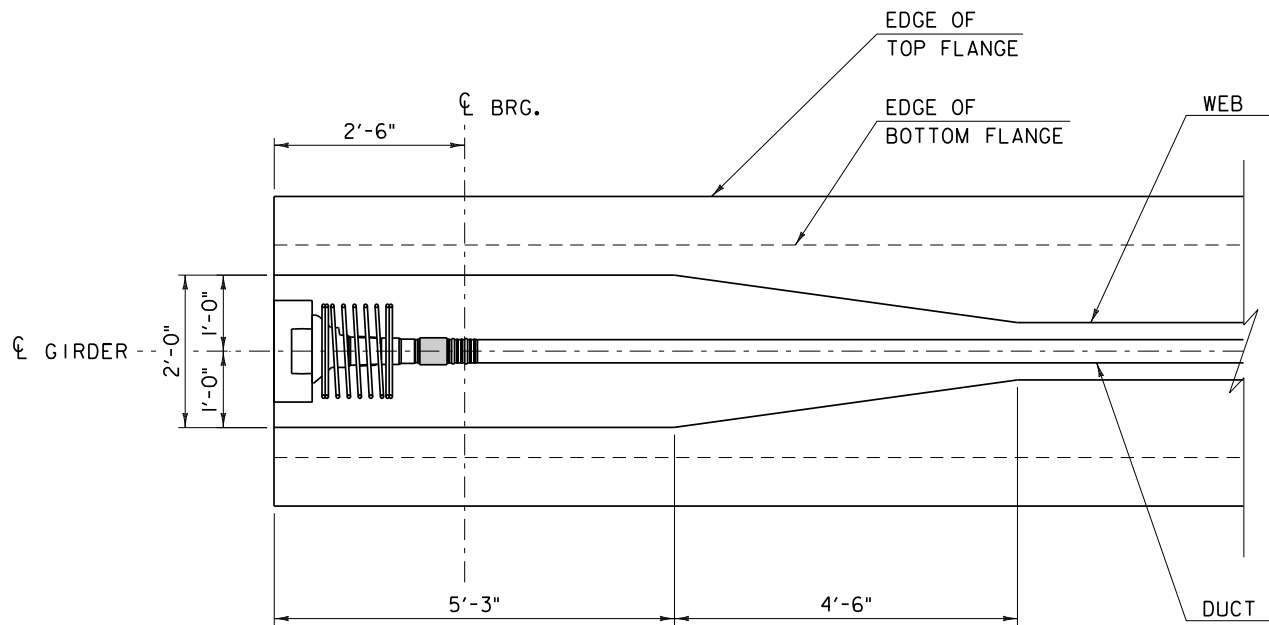
PROJECT NAME: ROCKINGHAM
PROJECT NUMBER: IM 091-I(66)

FILE NAME: si2ai30PreGirDet.dgn
PROJECT LEADER: C. SWANSON
DESIGNED BY: N. RODDA
PRESTRESSED GIRDER DETAILS

PLOT DATE: 3/11/2016
DRAWN BY: S. COUTURE
CHECKED BY: C. WERTS
SHEET 23 OF 36

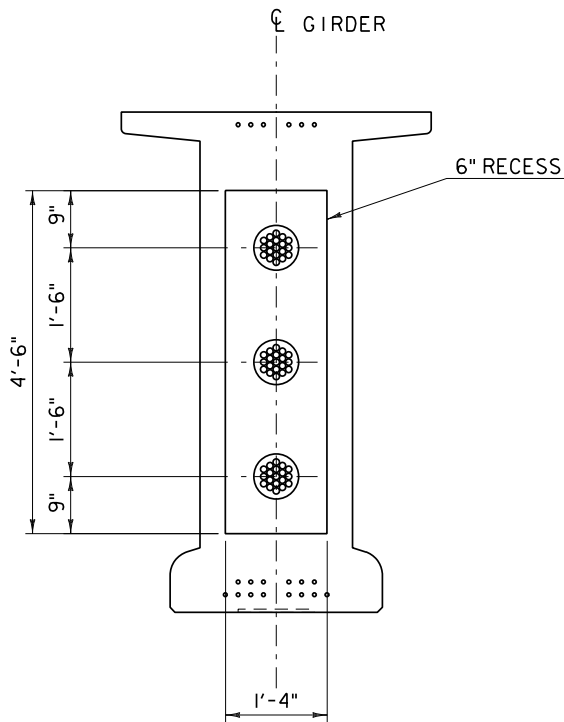
POST-TENSIONING NOTES:

1. THE DESIGN IS BASED ON 0.6" DIAMETER LOW RELAXATION STRANDS, A JACKING LOAD OF 730 KIPS PER TENDON, AN ANCHOR SET OF 3/8 INCH, A CURVATURE FRICTION COEFFICIENT OF 0.23, AND A WOBBLE FRICTION COEFFICIENT OF 0.0002 '/FT. THE ACTUAL ANCHOR SET AND JACKING FORCE USED BY THE CONTRACTOR SHALL BE SPECIFIED IN THE SHOP PLANS AND INCLUDED IN THE TRANSFER FORCE CALCULATIONS.
2. ALL TENDONS SHALL BE STRESSED FROM BOTH ENDS.



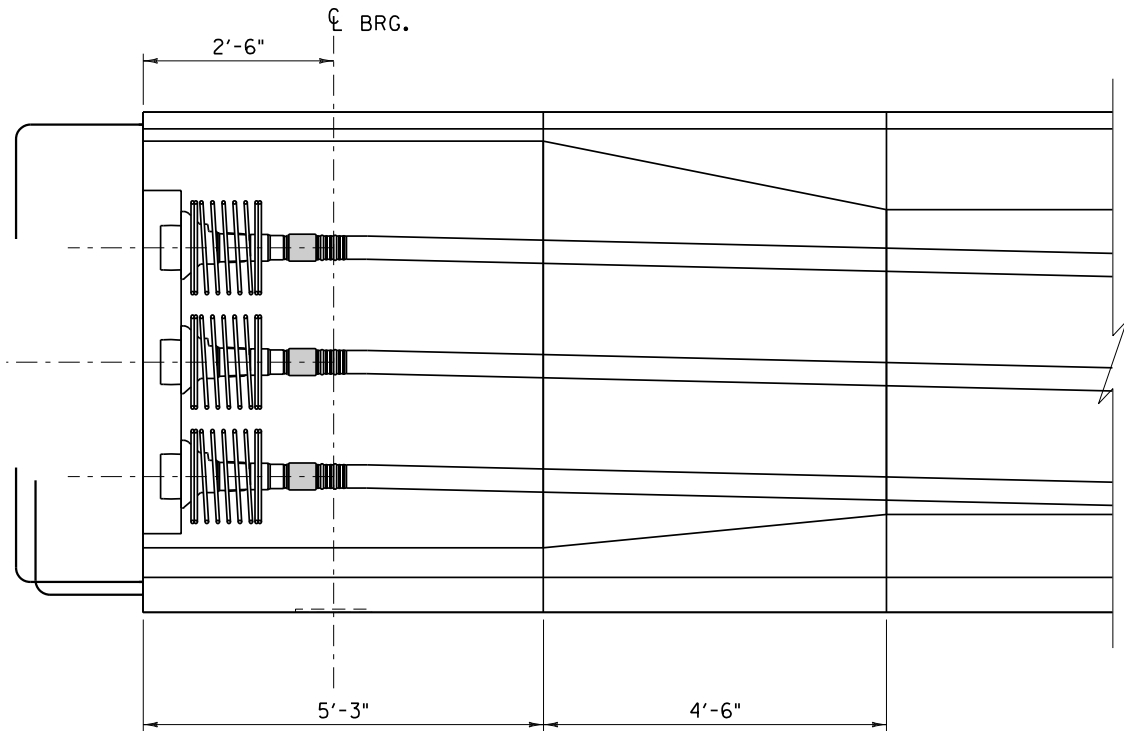
TYPICAL END SEGMENT - PLAN

SCALE 3/4" = 1'-0"



TYPICAL END VIEW

SCALE 3/4" = 1'-0"



TYPICAL END SEGMENT - ELEVATION

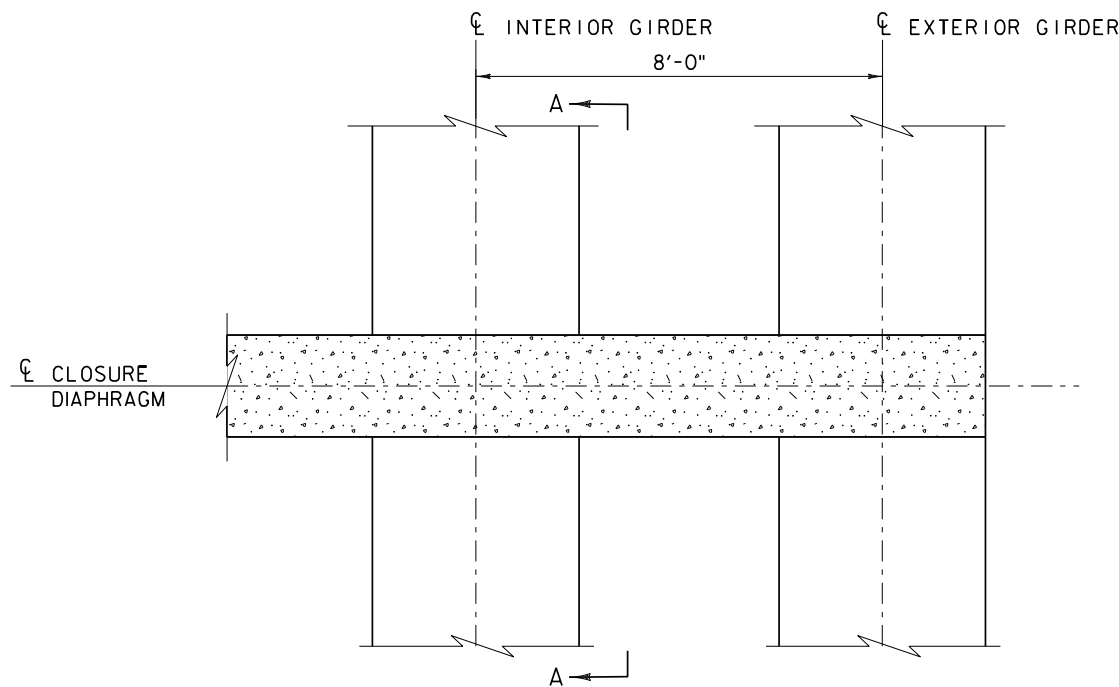
SCALE 3/4" = 1'-0"

DESIGN CONCEPT

PROJECT NAME: ROCKINGHAM
PROJECT NUMBER: IM 091-I(66)

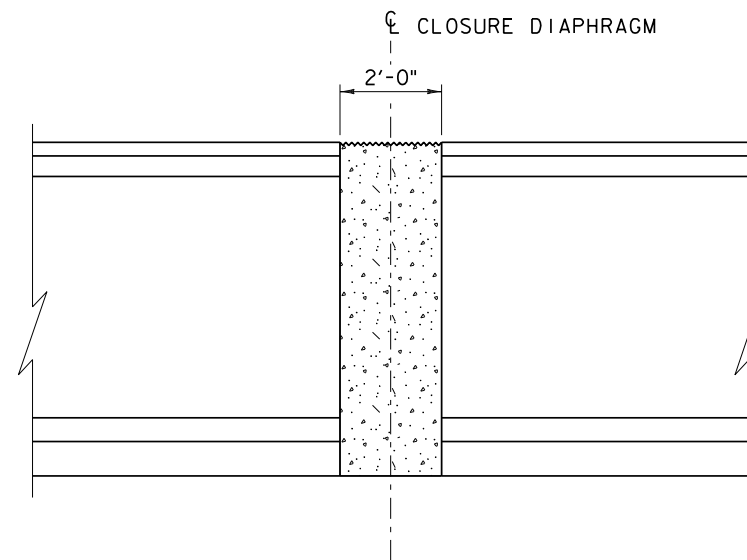
FILE NAME: s12a130GirPTDet.dgn
PROJECT LEADER: C. SWANSON
DESIGNED BY: N. RODDA
GIRDER POST-TENSIONING DETAILS

PLOT DATE: 3/11/2016
DRAWN BY: S. COUTURE
CHECKED BY: C. WERTS
SHEET 24 OF 36



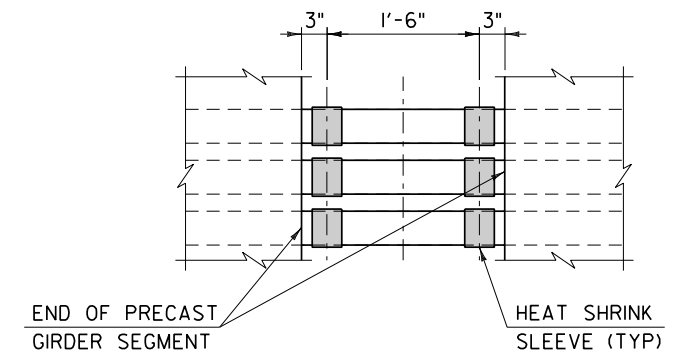
GIRDER SPLICE - PARTIAL PLAN

SCALE $\frac{1}{2}'' = 1'-0''$



SECTION A-A

SCALE $\frac{1}{2}'' = 1'-0''$

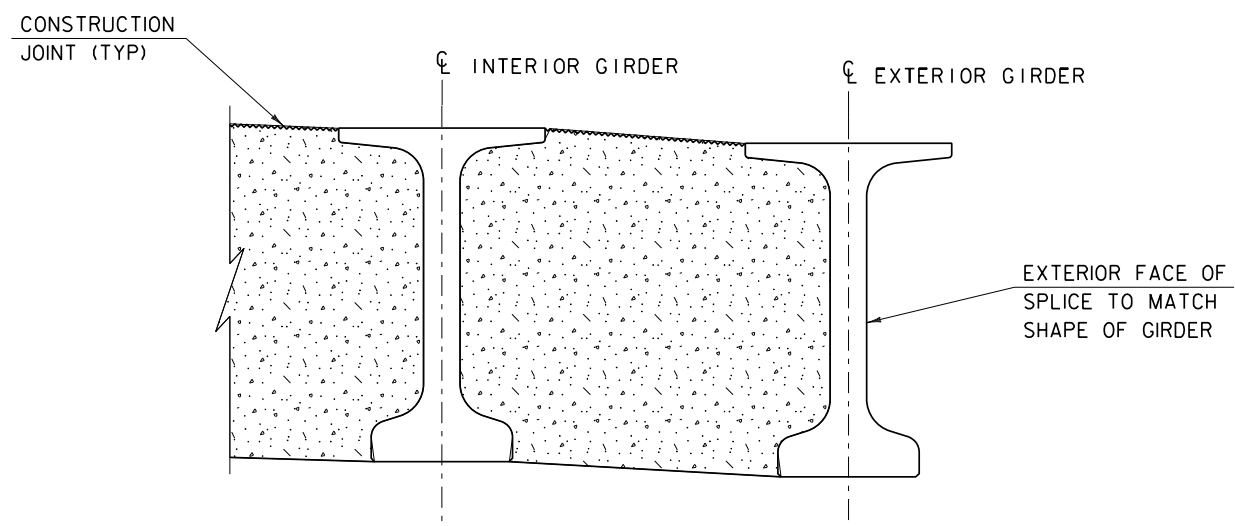


DUCT SPLICE DETAIL

NTS

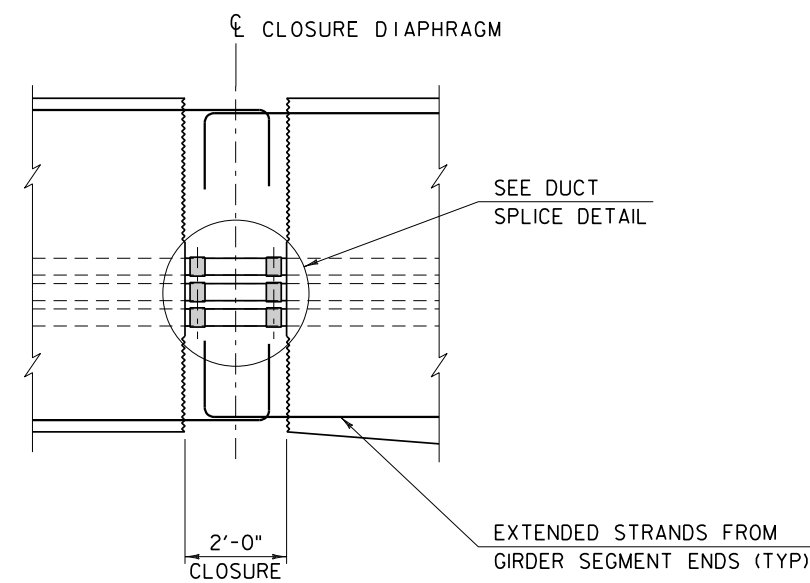
NOTES:

1. CONCRETE STRENGTH FOR THE CAST-IN-PLACE CLOSURES SHALL BE 10.0 KSI, THE MINIMUM STRENGTH OF THE CAST-IN-PLACE CLOSURE AT THE TIME OF POST-TENSIONING SHALL BE 8.0 KSI.
2. REINFORCEMENT FOR CAST-IN-PLACE CLOSURES SHALL BE ASTM A 615, GRADE 60 EXCEPT THAT STIRRUPS EXTENDING INTO THE BRIDGE DECK SHALL BE ASTM A 955, GRADE 60.



GIRDER SPLICE - PARTIAL ELEVATION

SCALE $\frac{1}{2}'' = 1'-0''$

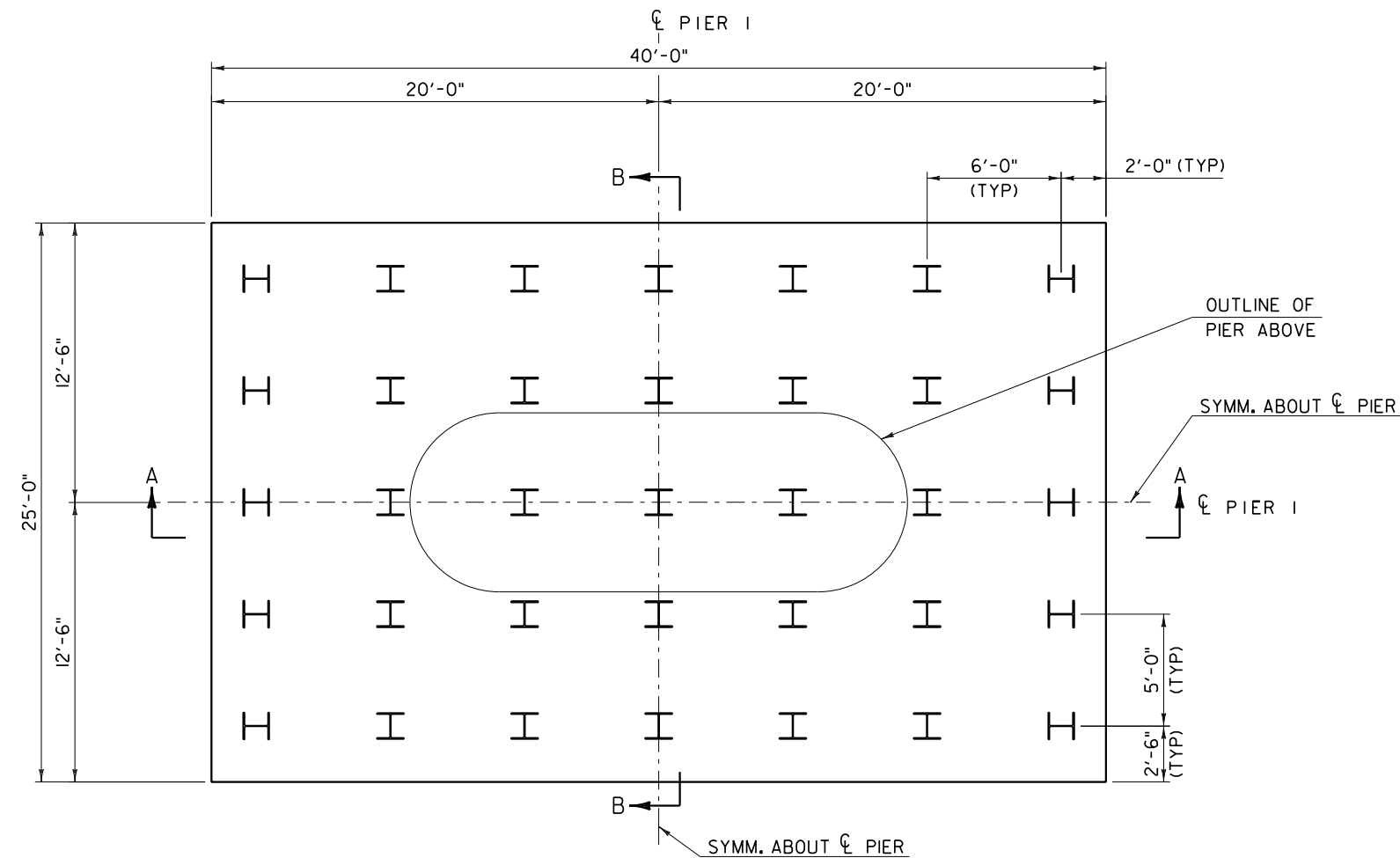


CLOSURE DETAIL

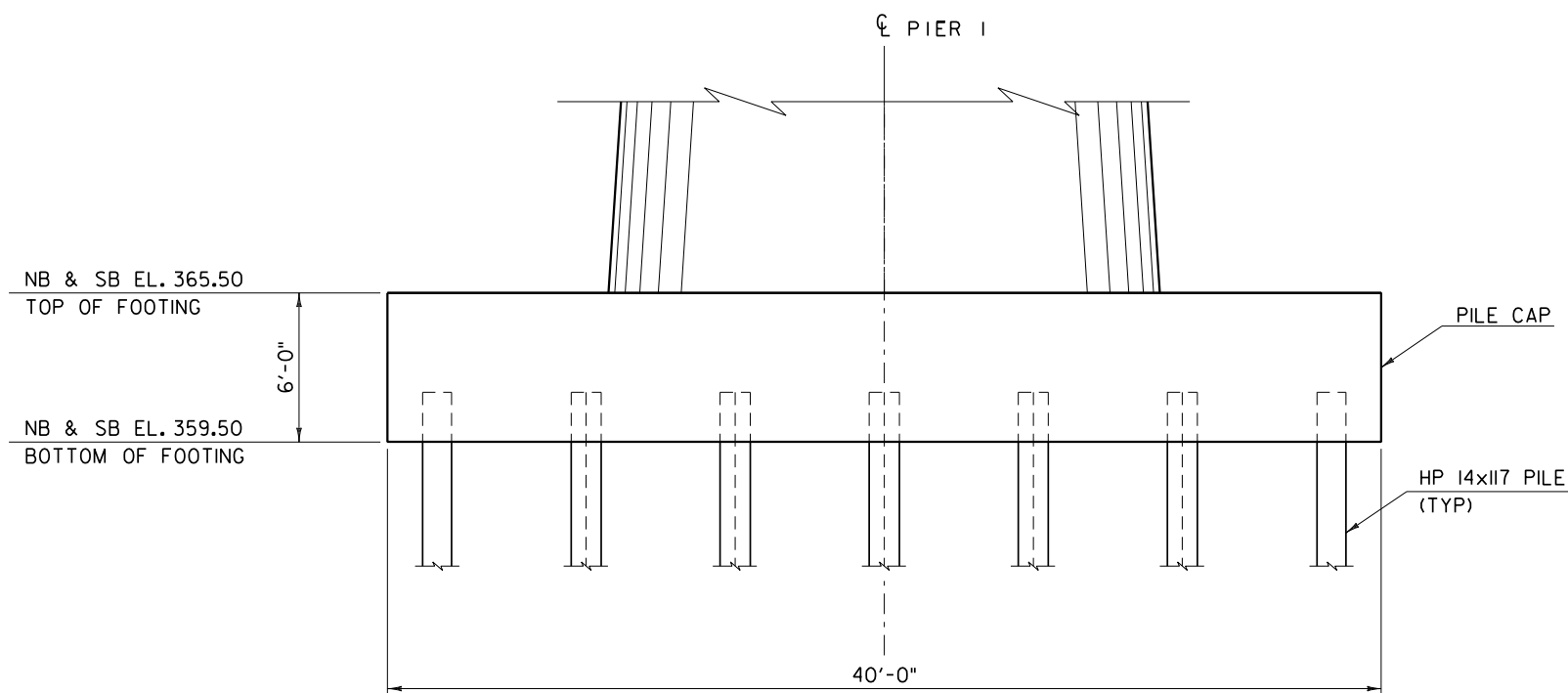
SCALE $\frac{1}{2}'' = 1'-0''$

DESIGN CONCEPT

PROJECT NAME: ROCKINGHAM	PLOT DATE: 3/11/2016
PROJECT NUMBER: IM 091-I(66)	DRAWN BY: S. COUTURE
FILE NAME: s12a130GirSpliceDet.dgn	CHECKED BY: C. WERTS
PROJECT LEADER: C. SWANSON	SHEET 25 OF 36
DESIGNED BY: N. RODDA	
GIRDER SPLICE DETAILS	



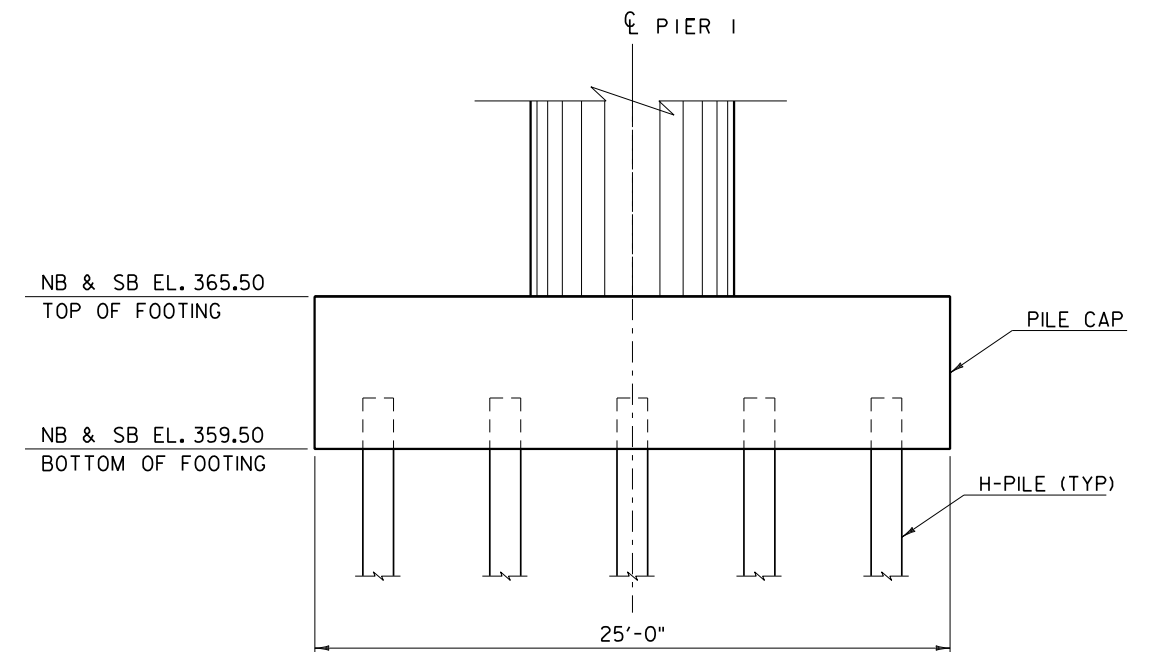
FOOTING PLAN - PIER I
SCALE 1/4" = 1'-0"



SECTION A-A
SCALE 1/4" = 1'-0"

NOTES:

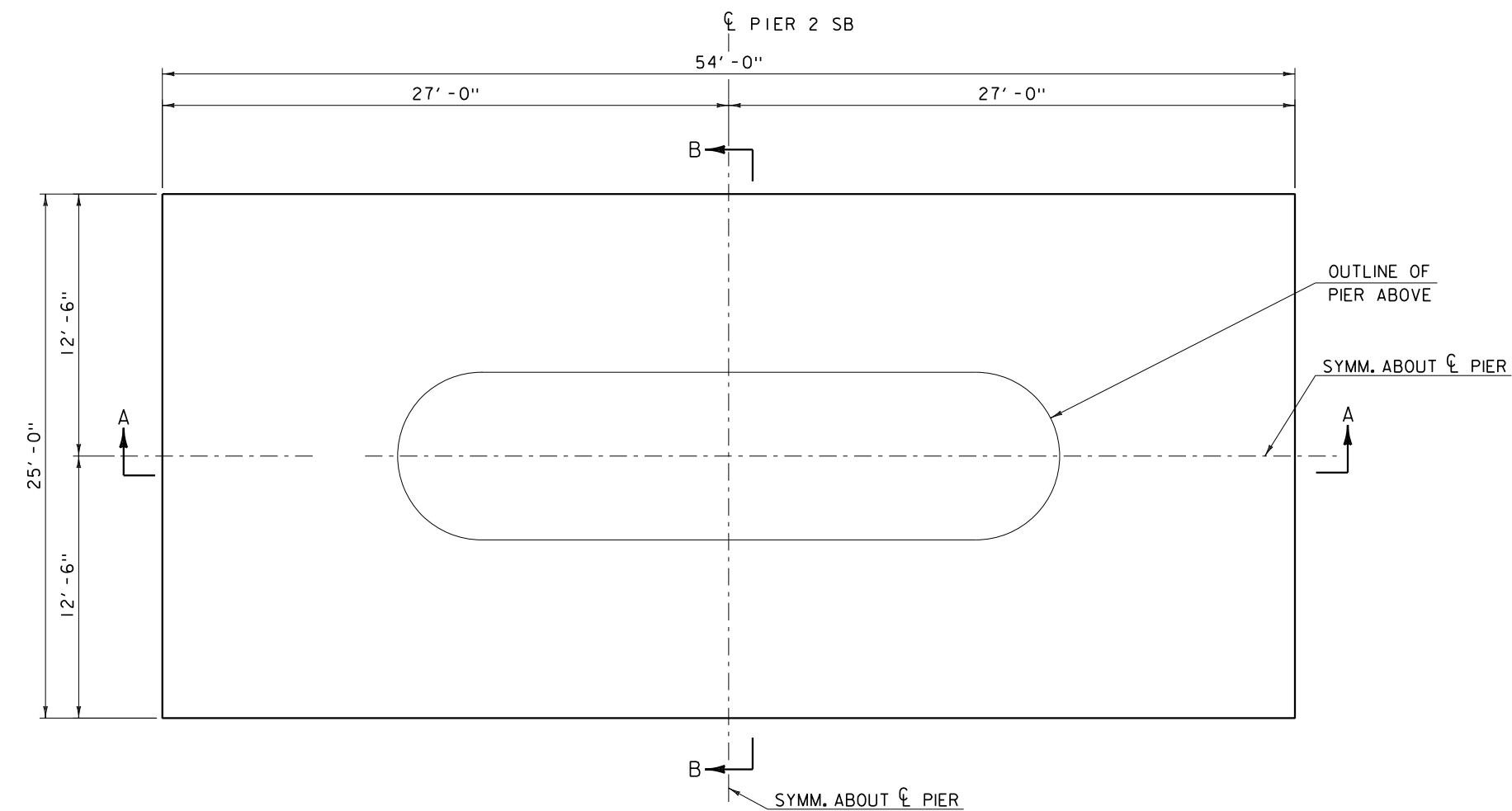
1. CONCRETE FOR PILE CAP SHALL BE HP CONCRETE CLASS B.
2. STEEL REINFORCING FOR PILE CAP SHALL BE AASHTO M31, GRADE 60, EPOXY COATED.
3. STEEL HP PILES SHALL BE ASTM A572, GRADE 50.



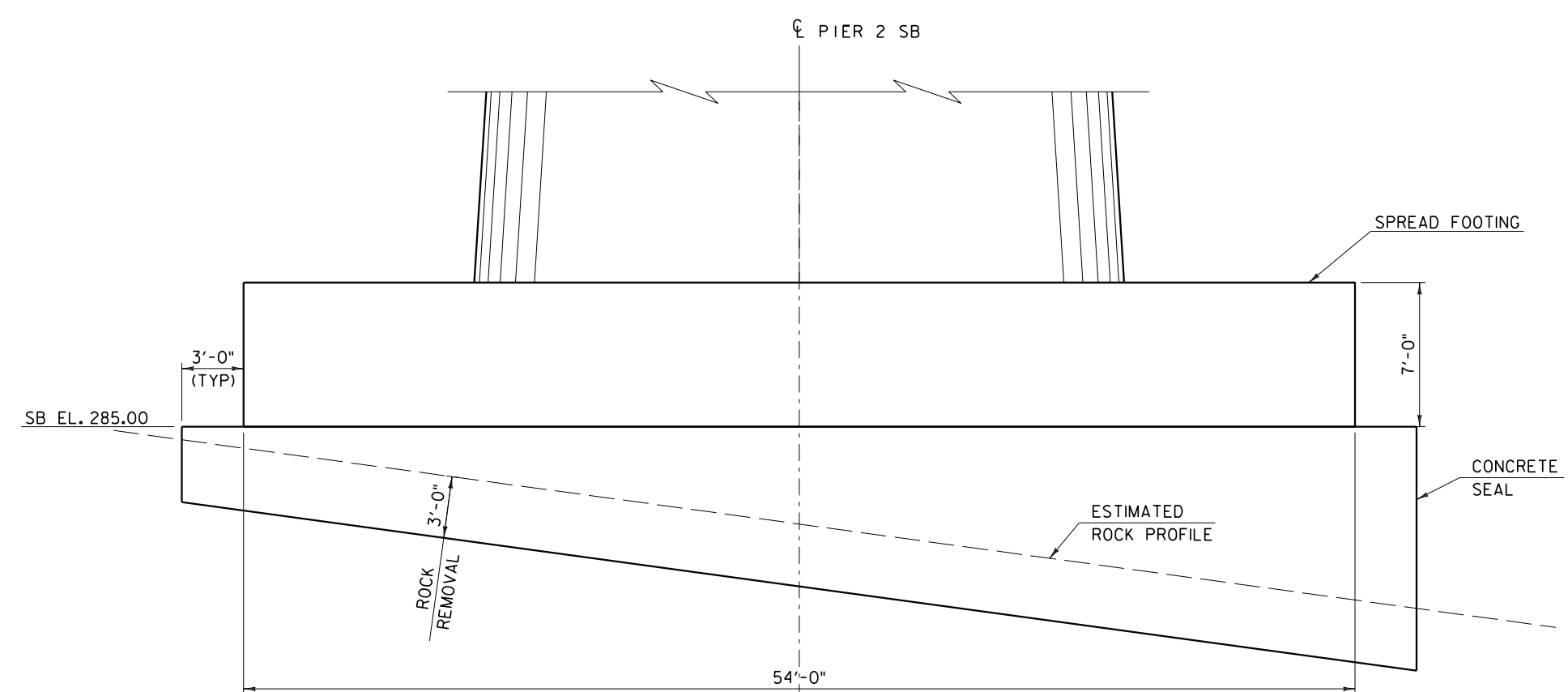
SECTION B-B
SCALE 1/4" = 1'-0"

DESIGN CONCEPT

PROJECT NAME: ROCKINGHAM	PLOT DATE: 3/11/2016
PROJECT NUMBER: IM 091-I(66)	DRAWN BY: S. COUTURE
FILE NAME: s12a130PierIFooting.dgn	CHECKED BY: J. WU
PROJECT LEADER: C. SWANSON	SHEET 26 OF 36
DESIGNED BY: P. McALPINE	
PIER I FOOTING DETAILS	



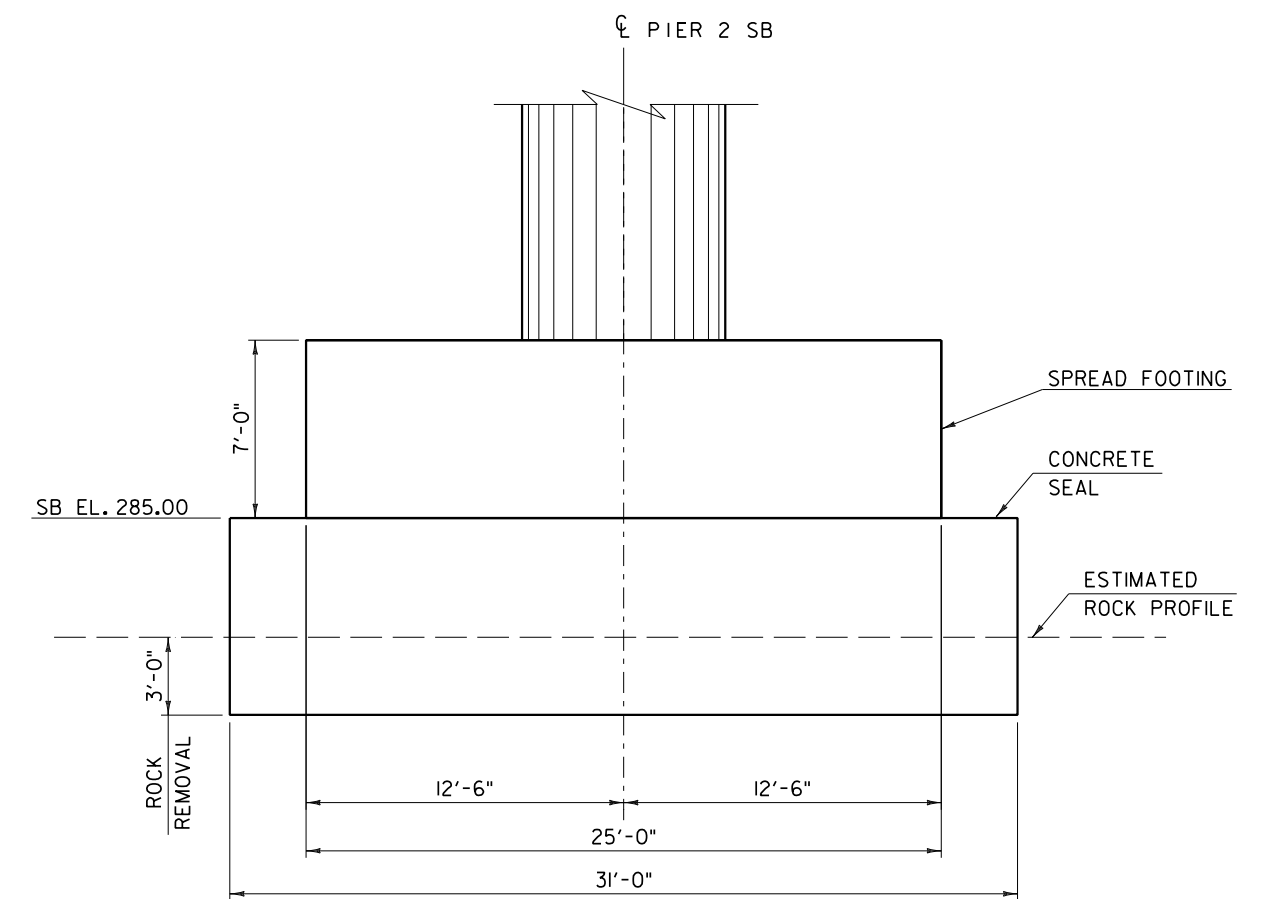
FOOTING PLAN - PIER 2 SB
SCALE 1/4" = 1'-0"



SECTION A-A
SCALE 1/4" = 1'-0"

NOTES:

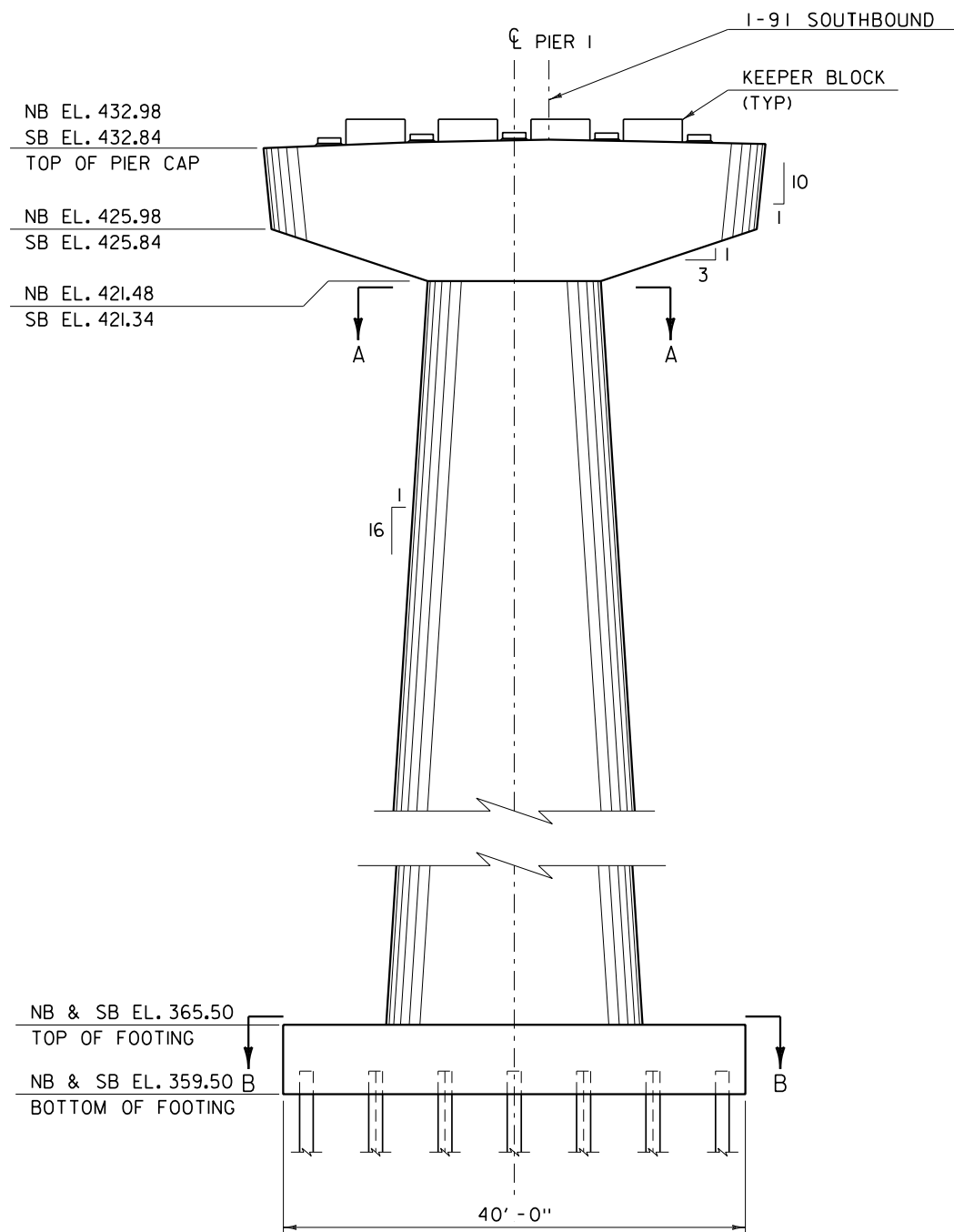
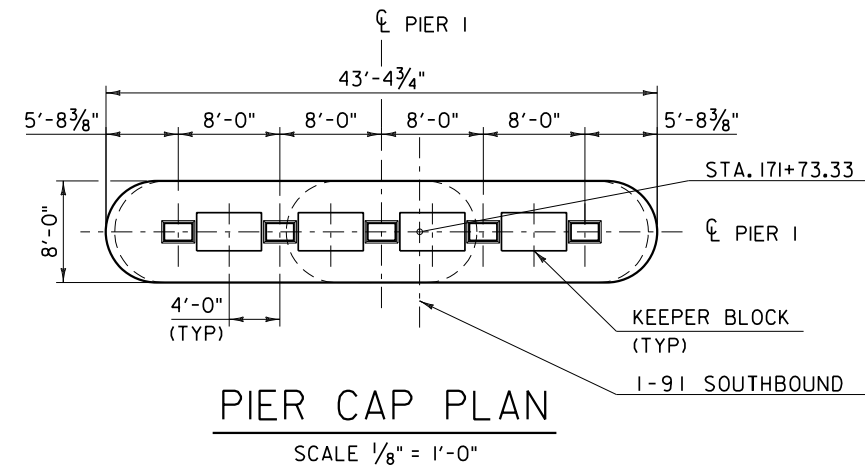
1. CONCRETE FOR SPREAD FOOTING SHALL BE HP CONCRETE CLASS B.
2. STEEL REINFORCING SHALL BE AASHTO M31, GRADE 60, EPOXY COATED.



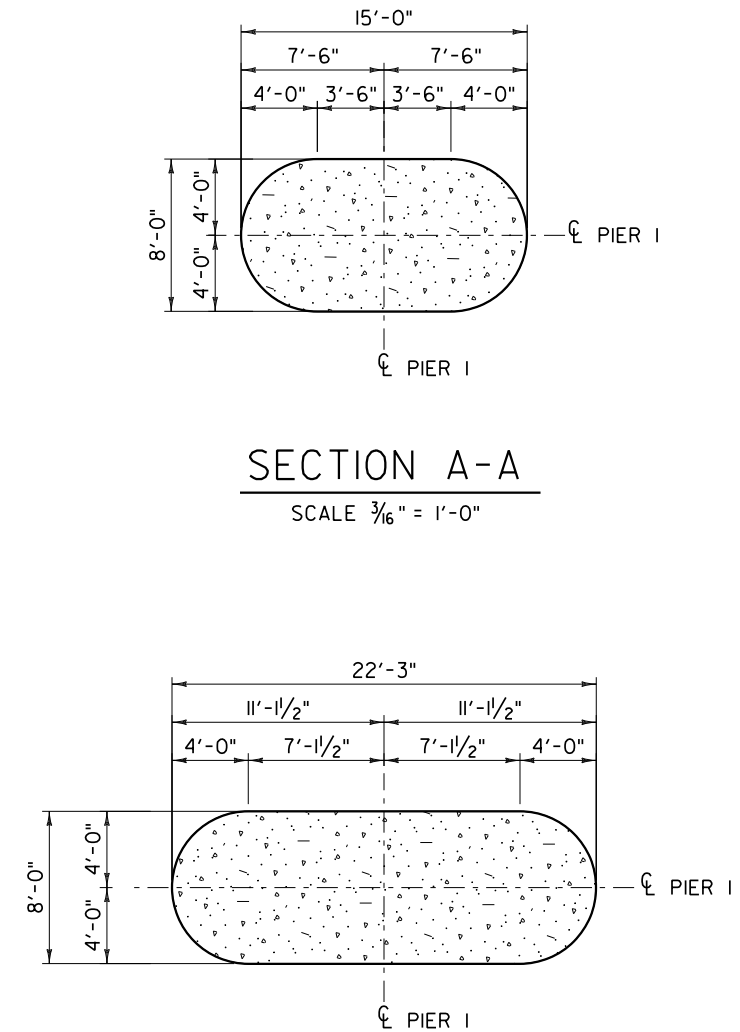
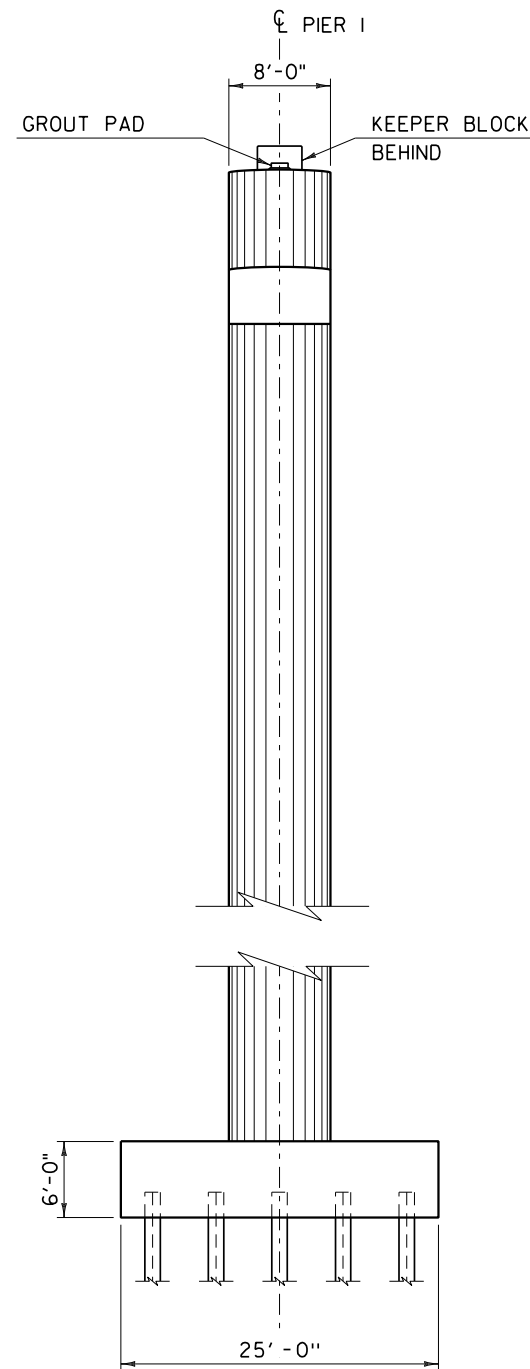
SECTION B-B
SCALE 1/4" = 1'-0"

DESIGN CONCEPT

PROJECT NAME: ROCKINGHAM	
PROJECT NUMBER: IM 091-I(66)	
FILE NAME: sl2al30Pier2Footing.dgn	PLOT DATE: 3/11/2016
PROJECT LEADER: C. SWANSON	DRAWN BY: S. COUTURE
DESIGNED BY: P. McALPINE	CHECKED BY: J. WU
PIER 2 SB FOOTING DETAILS	SHEET 27 OF 36



(SOUTHBOUND SHOWN, NORTHBOUND SIMILAR, EXCEPT OPP. HAND)



NOTES:

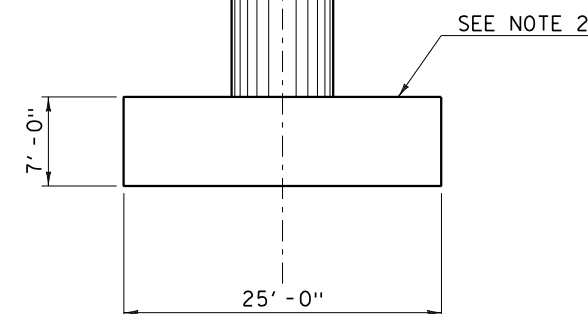
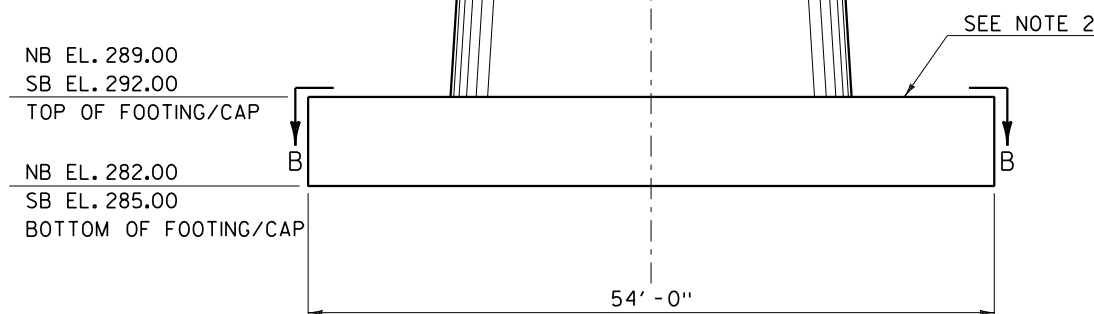
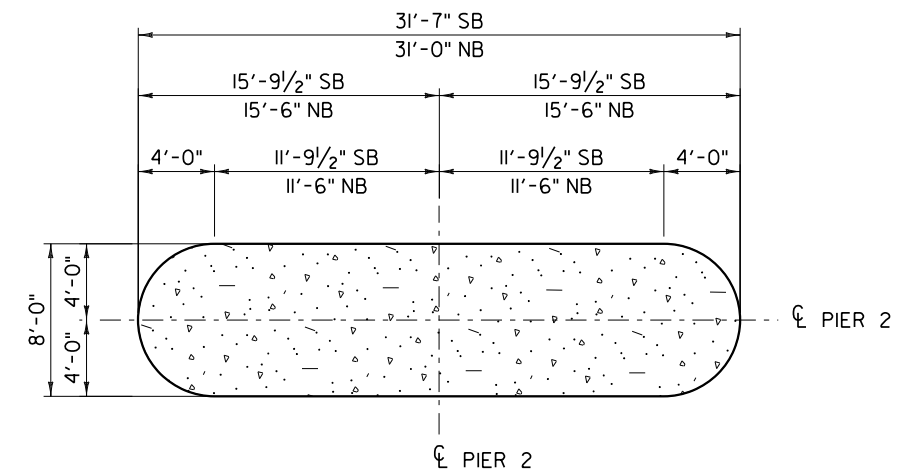
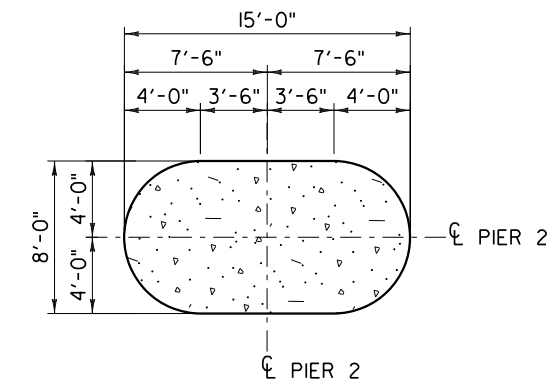
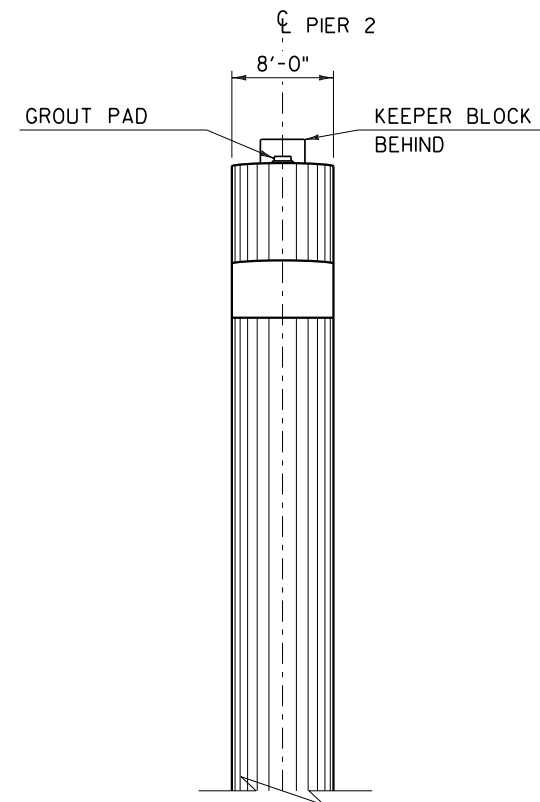
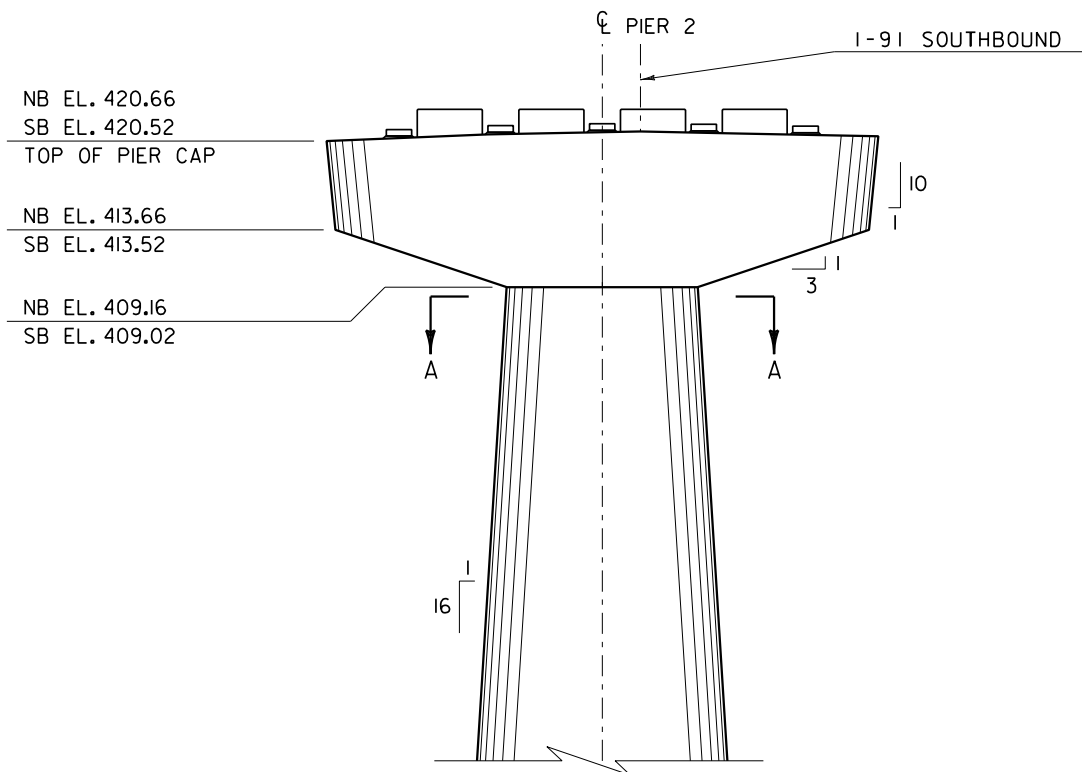
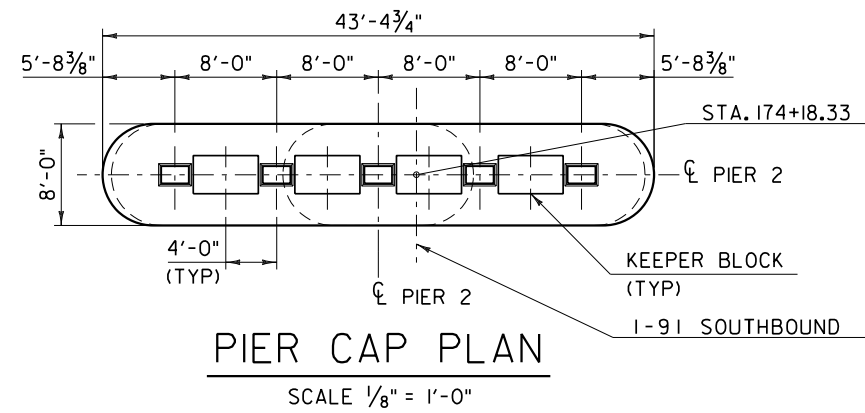
1. FOR GROUT PAD AND KEEPER BLOCK DETAILS, SEE BEARING DETAILS SHEET.
2. CONCRETE FOR PIER STEM AND CAP SHALL BE HP CONCRETE CLASS B.
3. STEEL REINFORCING FOR PIER STEM SHALL BE AASHTO M31, GRADE 60, EPOXY COATED.
4. STEEL REINFORCING FOR PIER CAP SHALL BE SOLID STAINLESS STEEL REINFORCING BAR COMFORMING TO ASTM A 955, GRADE 60.

DESIGN CONCEPT

PROJECT NAME: ROCKINGHAM
PROJECT NUMBER: IM 091-I(66)

FILE NAME: s12a130Pier1Det.dgn
PROJECT LEADER: C. SWANSON
DESIGNED BY: P. McALPINE
PIER 1 DETAILS

PLOT DATE: 3/11/2016
DRAWN BY: S. COUTURE
CHECKED BY: J. WU
SHEET 29 OF 36



NOTES:

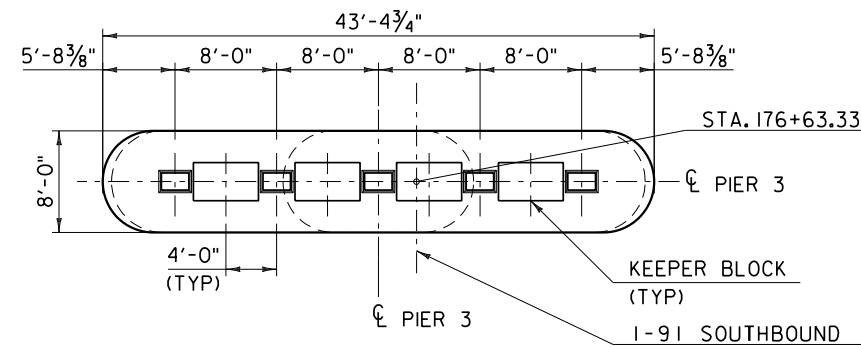
- FOR ADDITIONAL NOTES, SEE PIER 1 DETAILS SHEET.
- FOOTING CONFIGURATIONS VARY BETWEEN NB & SB BRIDGES, SEE FOOTING DETAILS FOR ADDITIONAL INFORMATION.

DESIGN CONCEPT

PROJECT NAME: ROCKINGHAM
PROJECT NUMBER: IM 091-I(66)

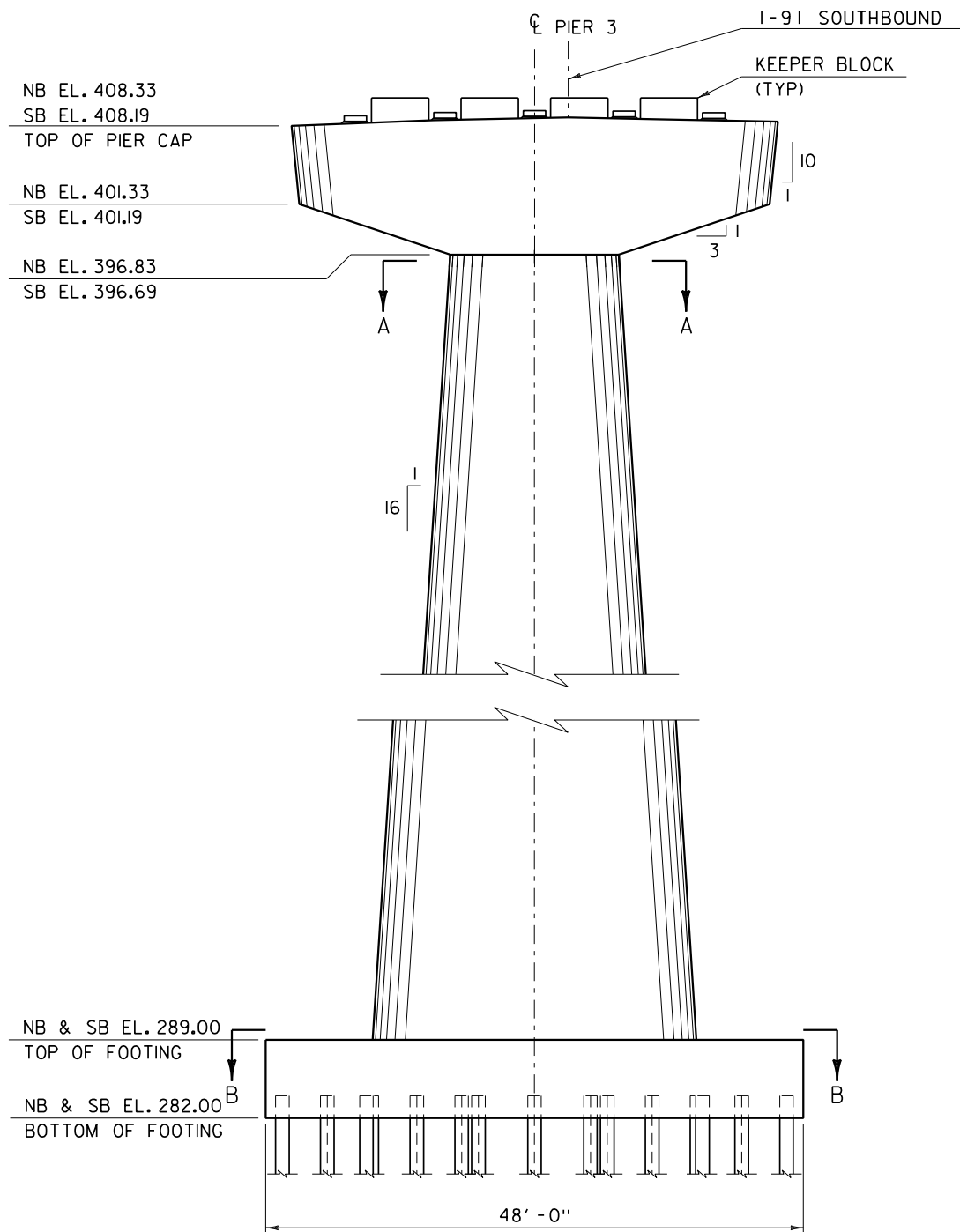
FILE NAME: si2a130Pier2Det.dgn
PROJECT LEADER: C. SWANSON
DESIGNED BY: P. McALPINE
PIER 2 DETAILS

PLOT DATE: 3/11/2016
DRAWN BY: S. COUTURE
CHECKED BY: J. WU
SHEET 30 OF 36



PIER CAP PLAN

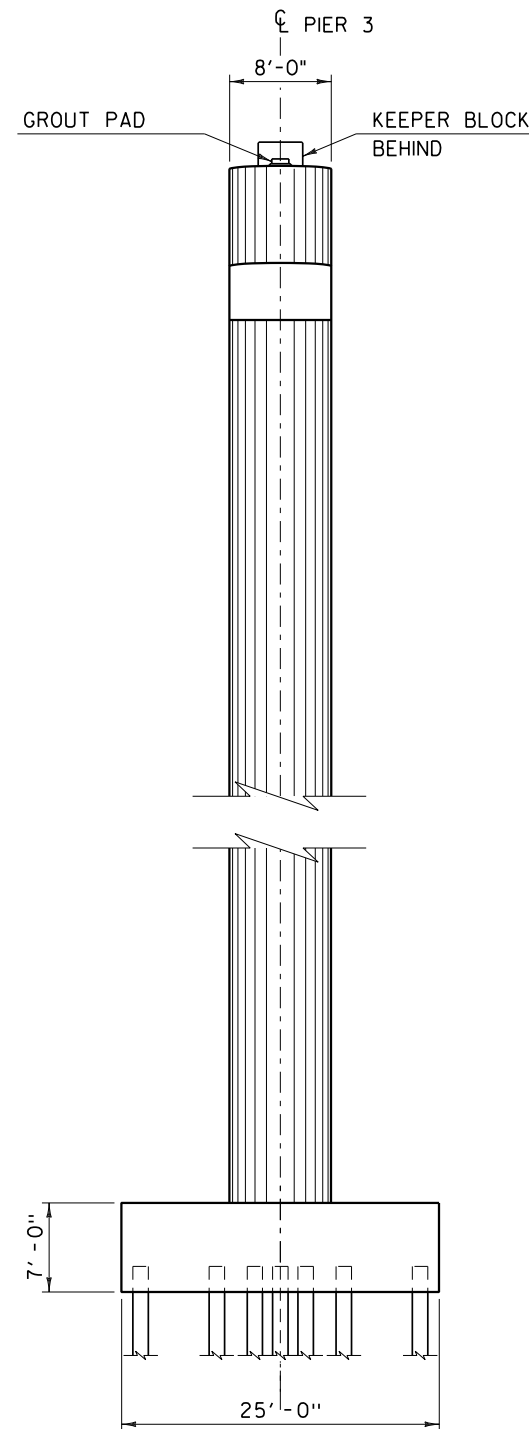
SCALE 1/8" = 1'-0"



TRANSVERSE ELEVATION

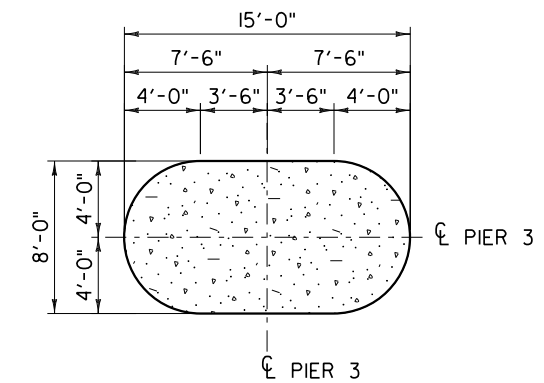
(SOUTHBOUND SHOWN, NORTHBOUND SIMILAR, EXCEPT OPP. HAND)

SCALE 1/8" = 1'-0"



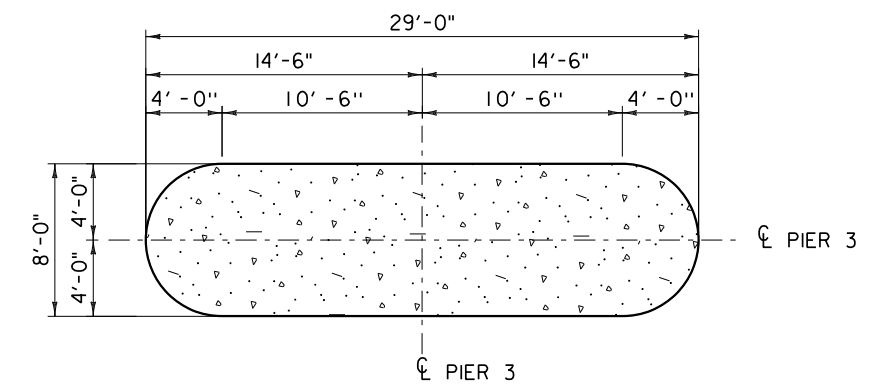
ELEVATION

SCALE 1/8" = 1'-0"



SECTION A-A

SCALE 3/16" = 1'-0"



SECTION B-B

SCALE 3/16" = 1'-0"

NOTE:

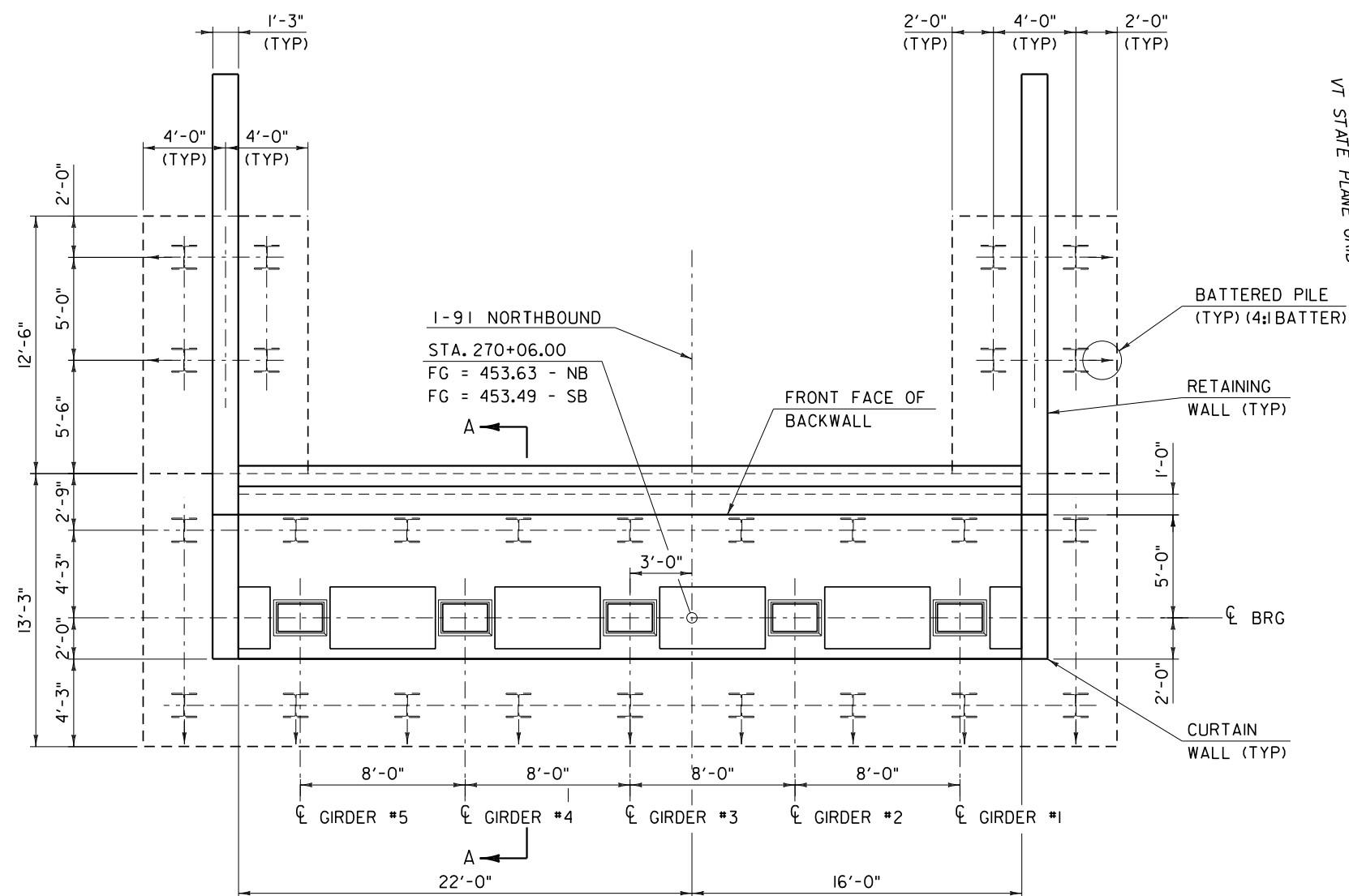
FOR ADDITIONAL NOTES, SEE PIER 1 DETAILS SHEET.

DESIGN CONCEPT

PROJECT NAME: ROCKINGHAM
PROJECT NUMBER: IM 091-I(66)

FILE NAME: si2a130Pier3Det.dgn
PROJECT LEADER: C. SWANSON
DESIGNED BY: P. McALPINE
PIER 3 DETAILS

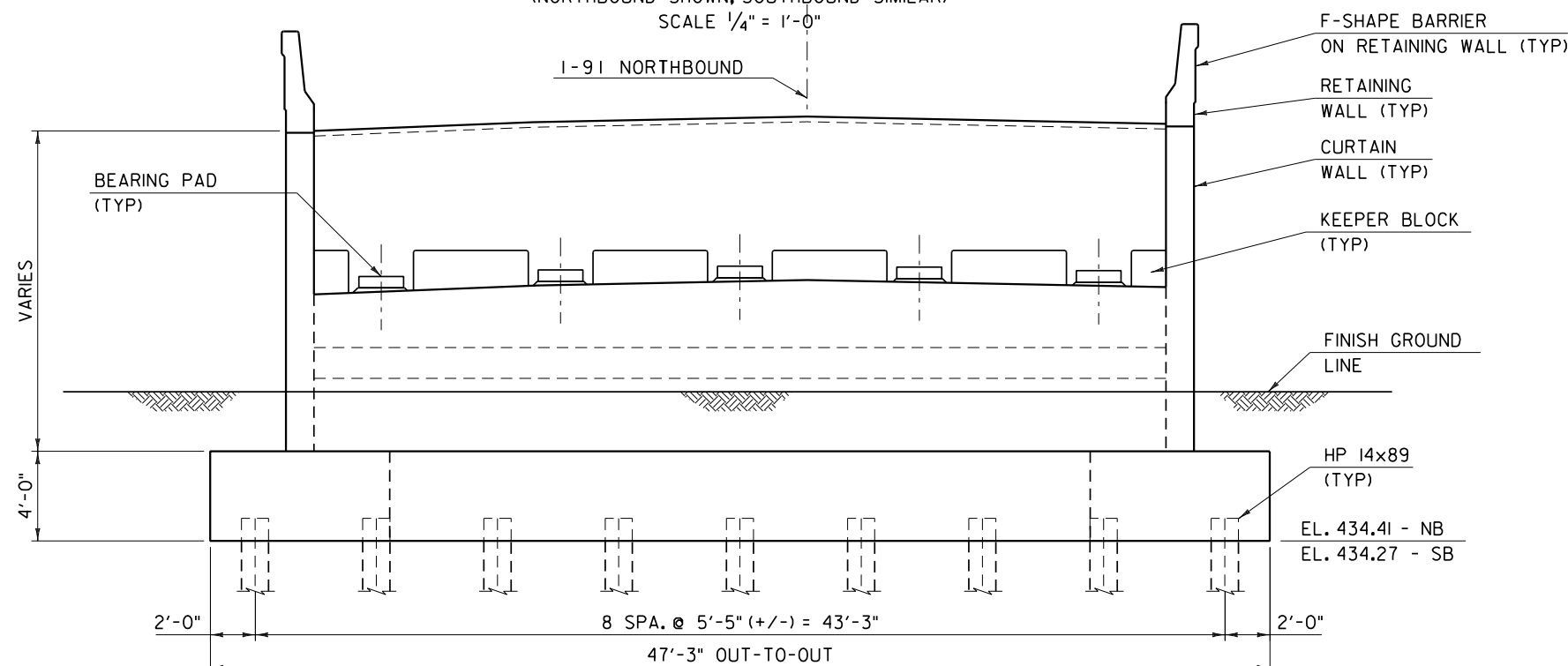
PLOT DATE: 3/11/2016
DRAWN BY: S. COUTURE
CHECKED BY: J. WU
SHEET 31 OF 36



PLAN - ABUTMENT I

(NORTHBOUND SHOWN, SOUTHBOUND SIMILAR)

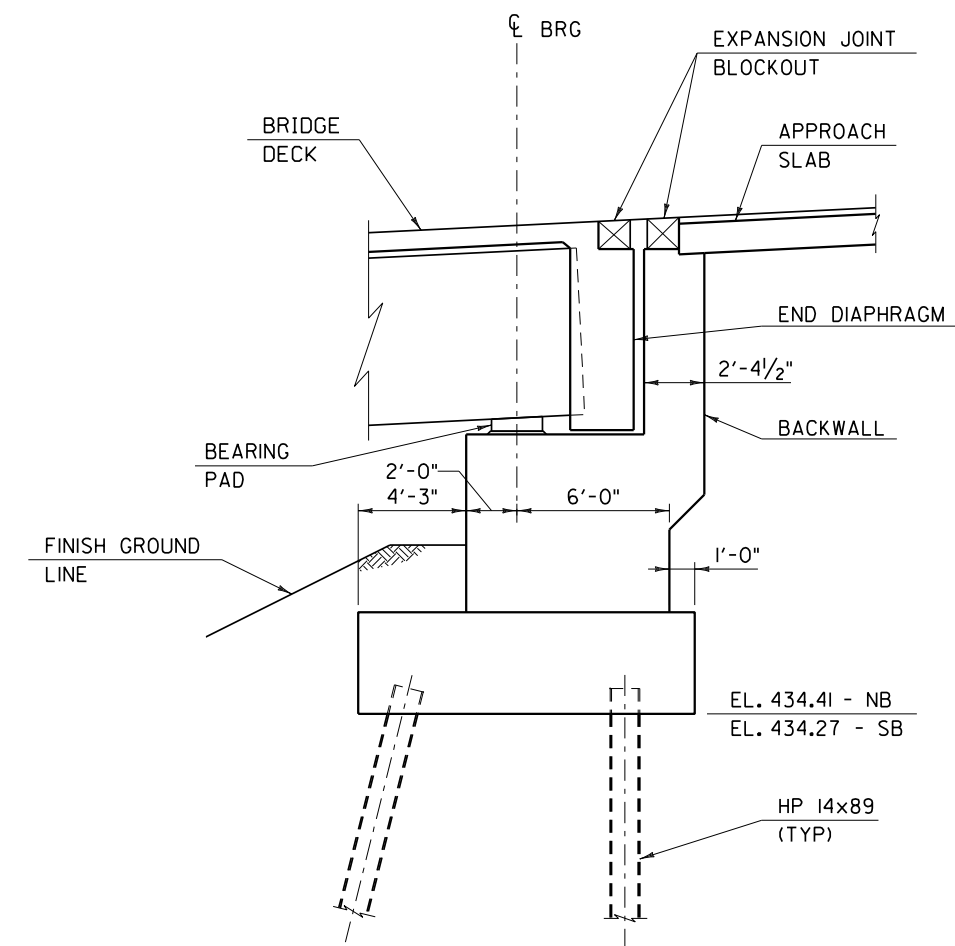
SCALE 1/4" = 1'-0"



ELEVATION - ABUTMENT I

(LOOKING BACK ON STATIONING)

SCALE 1/4" = 1'-0"



SECTION A-A

SCALE 1/4" = 1'-0"

NOTES:

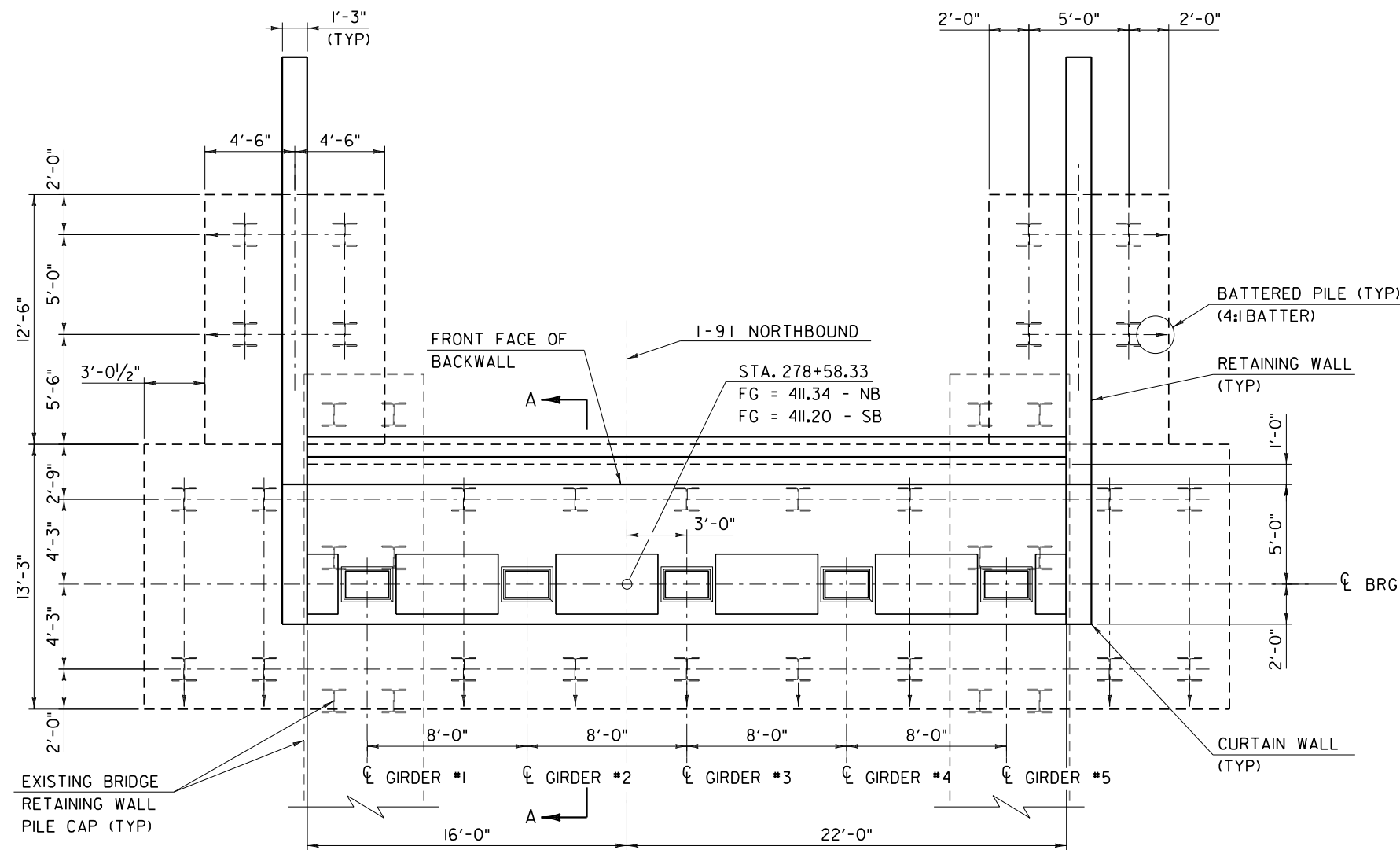
1. CONCRETE SHALL BE HP CONCRETE CLASS B, EXCEPT HP CONCRETE CLASS A SHALL BE USED FOR CONCRETE BARRIERS AND CURTAIN WALLS.
2. STEEL REINFORCING SHALL BE AASHTO M31 GRADE 60, EPOXY COATED, EXCEPT SOLID STAINLESS STEEL REINFORCING BAR CONFORMING TO ASTM A955 GRADE 60 SHALL BE USED FOR BACKWALLS, CURTAIN WALLS, AND KEEPER BLOCKS.
3. STEEL HP PILES SHALL BE ASTM A572 GRADE 50.

DESIGN CONCEPT

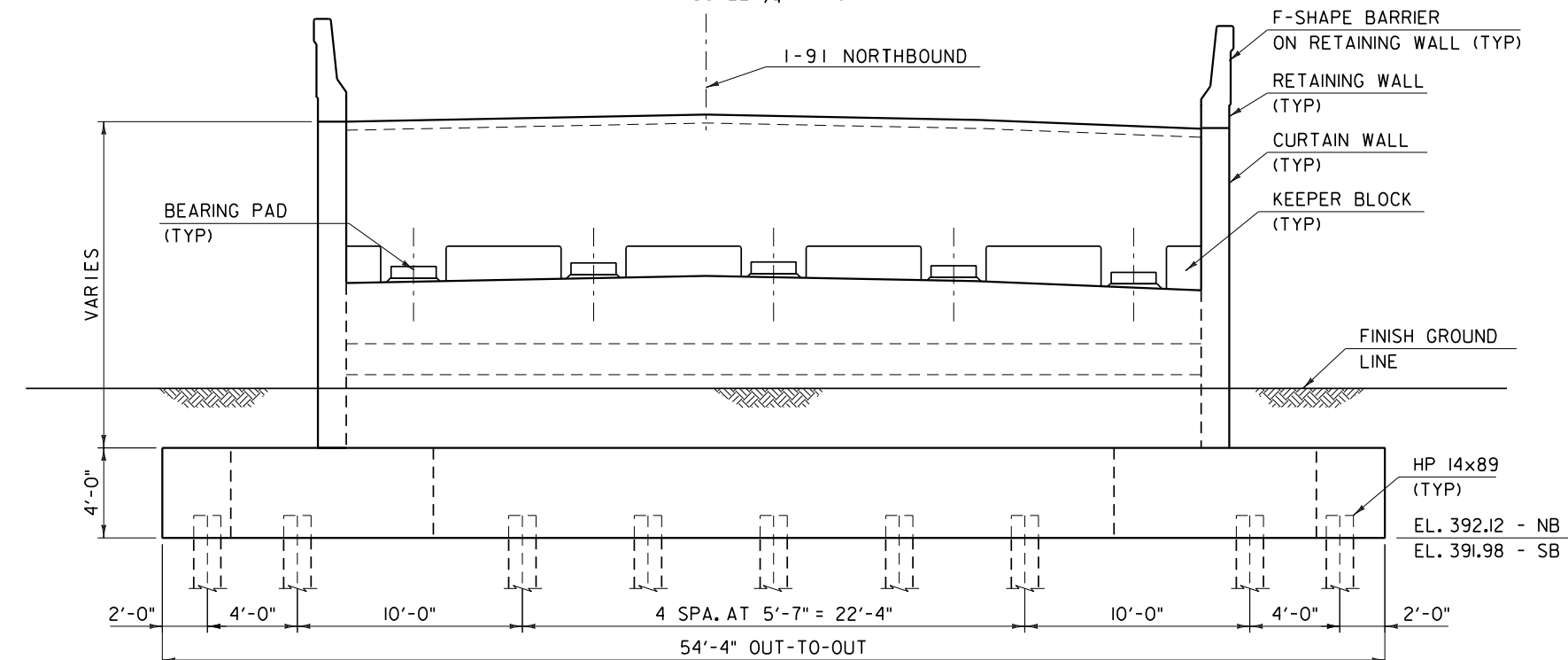
PROJECT NAME: ROCKINGHAM
PROJECT NUMBER: IM 091-I(66)

FILE NAME: si2ai30AbutIDet.dgn
PROJECT LEADER: C. SWANSON
DESIGNED BY: P. McALPINE
ABUTMENT I DETAILS

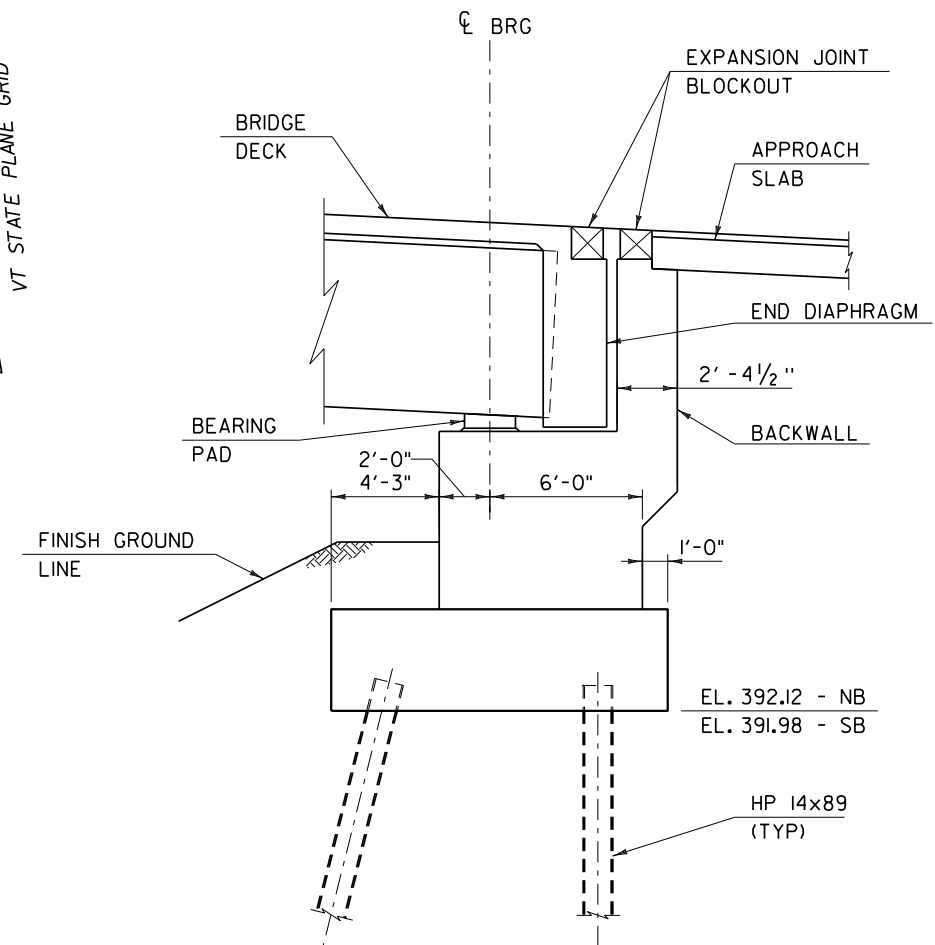
PLOT DATE: 3/11/2016
DRAWN BY: S. COUTURE
CHECKED BY: J. WU
SHEET 32 OF 36



PLAN - ABUTMENT 2
(NORTHBOUND SHOWN, SOUTHBOUND SIMILAR)
SCALE 1/4" = 1'-0"



ELEVATION - ABUTMENT 2
SCALE 1/4" = 1'-0"



SECTION A-A
SCALE 1/4" = 1'-0"

NOTE:

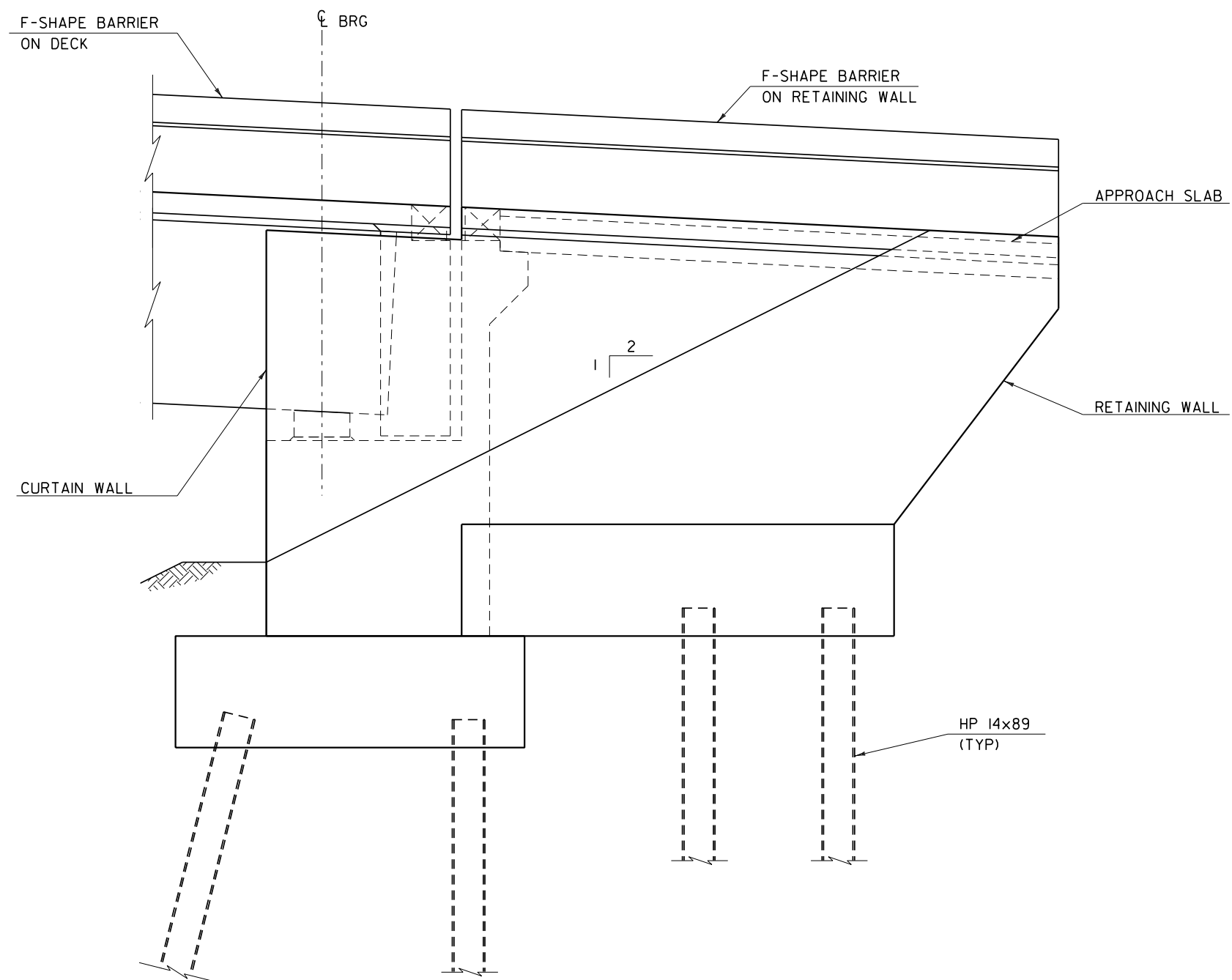
FOR ADDITIONAL NOTES, SEE ABUTMENT 1 DETAILS SHEET.

DESIGN CONCEPT

PROJECT NAME: ROCKINGHAM
PROJECT NUMBER: IM 091-1(66)

FILE NAME: si2ai30Abut2Det.dgn
PROJECT LEADER: C. SWANSON
DESIGNED BY: P. McALPINE
ABUTMENT 2 DETAILS

PLOT DATE: 3/11/2016
DRAWN BY: S. COUTURE
CHECKED BY: J. WU
SHEET 33 OF 36



NOTE:

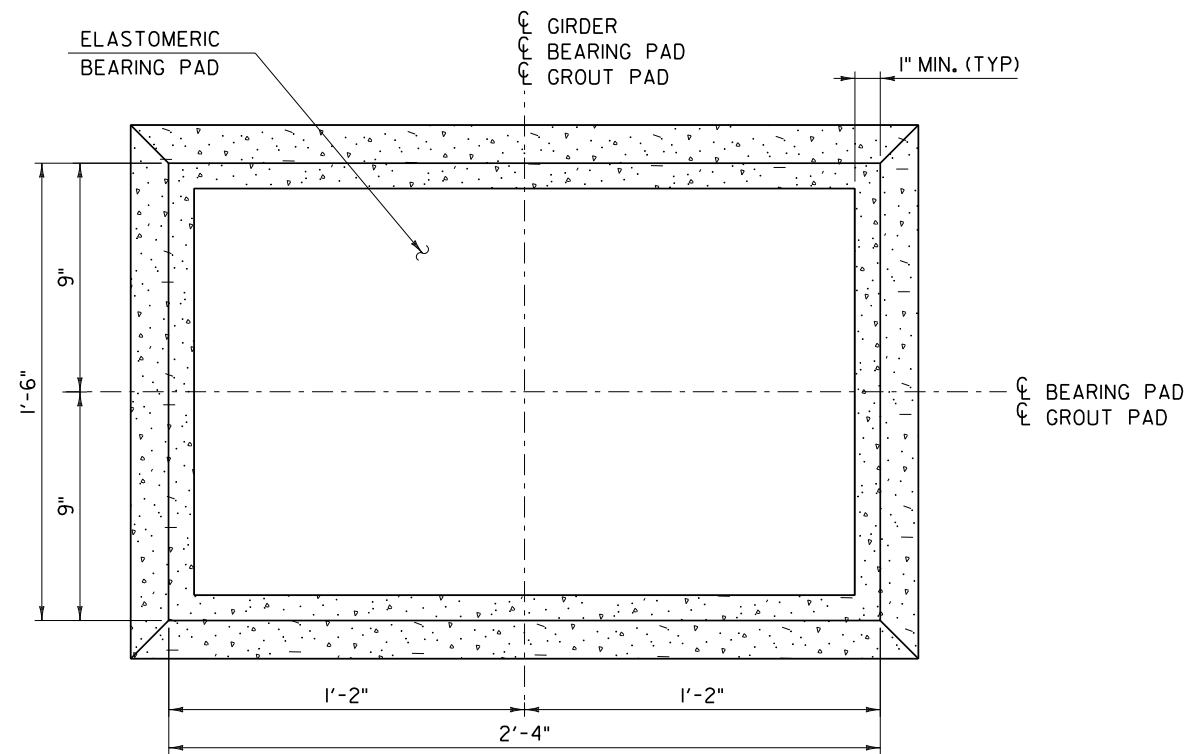
FOR ADDITIONAL NOTES, SEE ABUTMENT 1 DETAILS SHEET.

TYPICAL ABUTMENT RETAINING WALL

SCALE 1/2" = 1'-0"

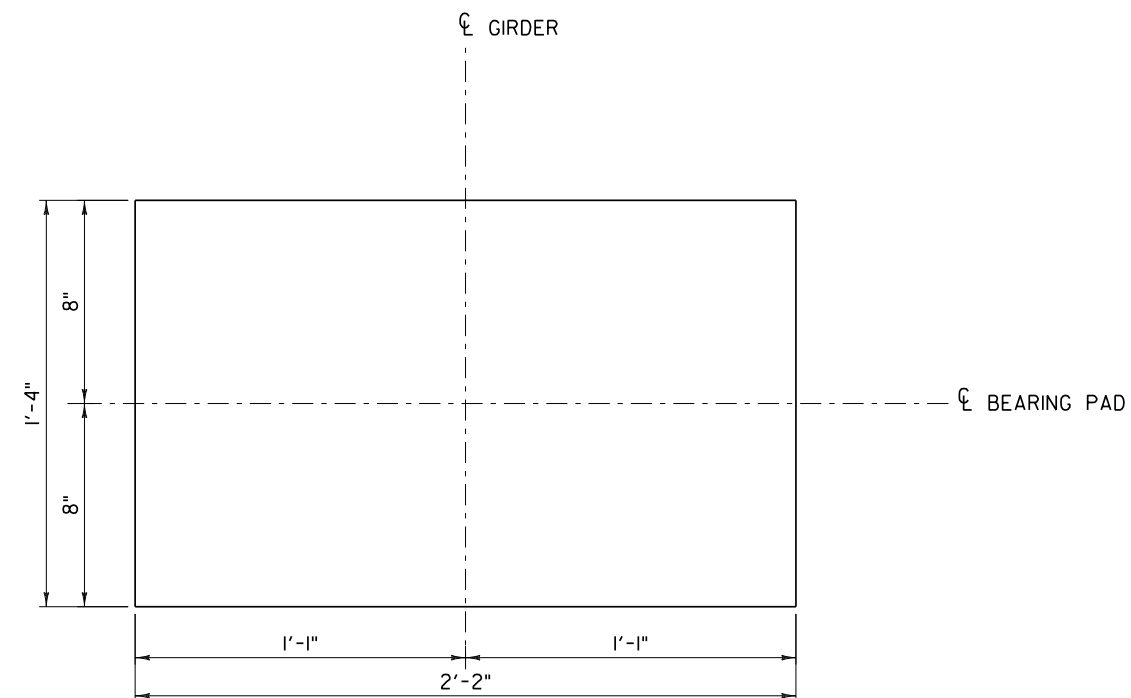
DESIGN CONCEPT

PROJECT NAME: ROCKINGHAM	
PROJECT NUMBER: IM 091-1(66)	
FILE NAME: si2ai30Abut1Det.dgn	PLOT DATE: 3/11/2016
PROJECT LEADER: C. SWANSON	DRAWN BY: S. COUTURE
DESIGNED BY: P. McALPINE	CHECKED BY: J. WU
ABUTMENT RETAINING WALL	SHEET 34 OF 36



GROUT PAD DETAIL

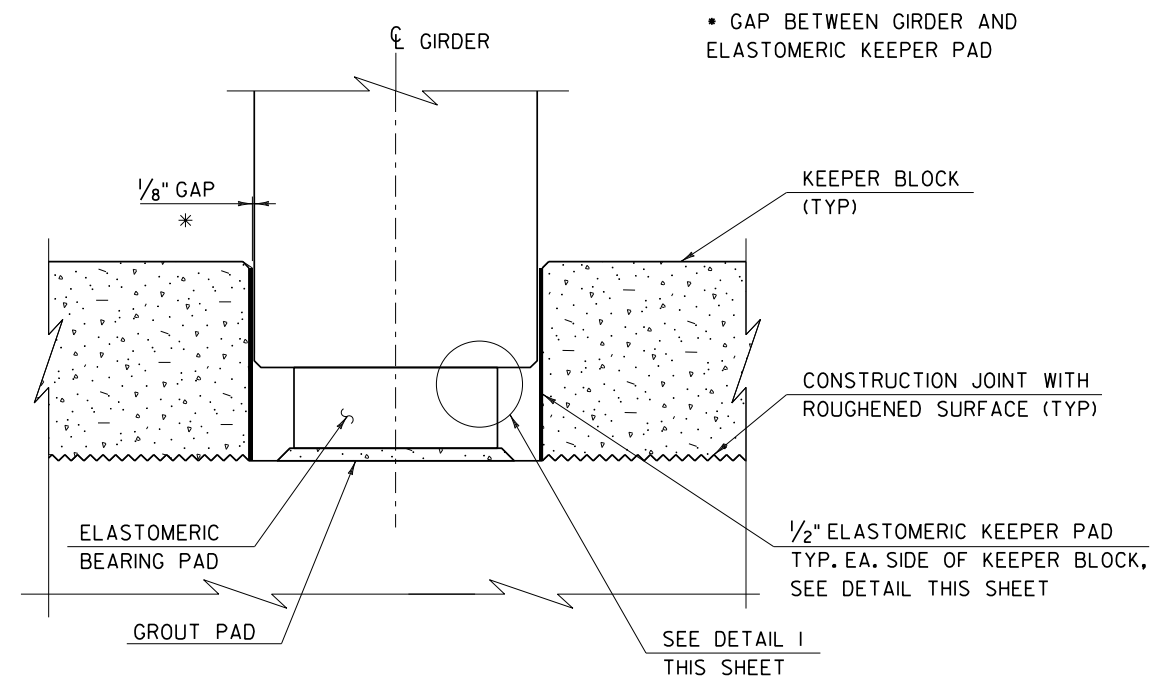
SCALE 3" = 1'-0"



ELASTOMERIC BEARING PAD DETAIL

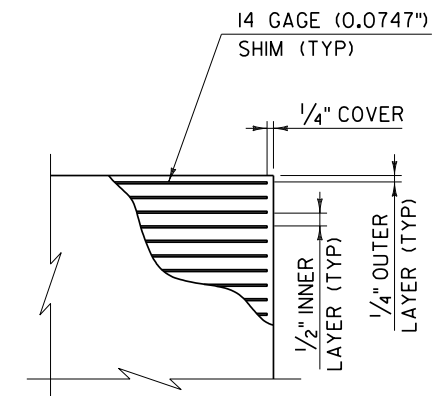
SCALE 3" = 1'-0"

(NUMBER REQUIRED FOR PIERS = 15)
(NUMBER REQUIRED FOR ABUTMENTS = 10, SEE NOTE 4)



KEEPER BLOCK DETAIL

SCALE 1" = 1'-0"

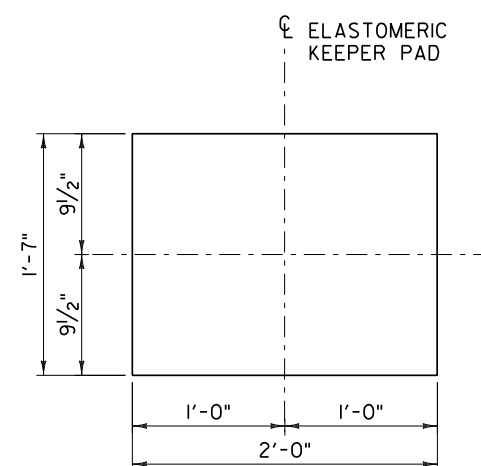


DETAIL 1

SCALE 3" = 1'-0"

NOTES:

- KEEPER BLOCKS SHALL BE CONSTRUCTED AFTER GIRDER PLACEMENT.
- THE ELASTOMERIC KEEPER PADS SHALL BE CEMENTED TO KEEPER BLOCKS WITH APPROVED ADHESIVE.
- ELASTOMER GRADE SHALL BE 4, WITH A SHEAR MODULUS OF 140 psi.
- BEARINGS SHOWN ARE AT PIERS. ELASTOMERIC BEARINGS WITH PTFE SLIDING SURFACE SHALL BE USED AT ABUTMENTS.



KEEPER PAD DETAIL

SCALE 1 1/2" = 1'-0"

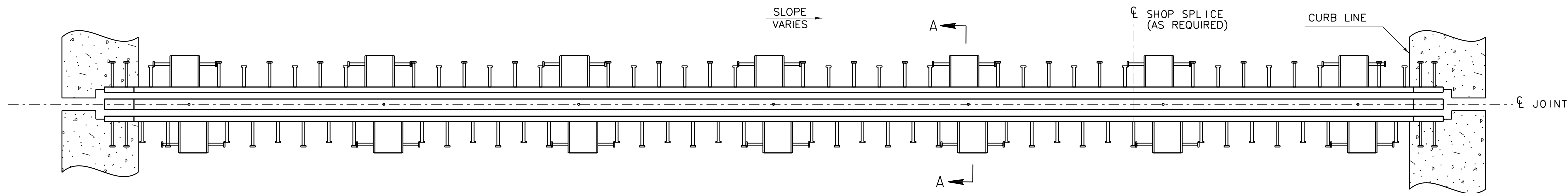
(NUMBER REQUIRED - 44)

DESIGN CONCEPT

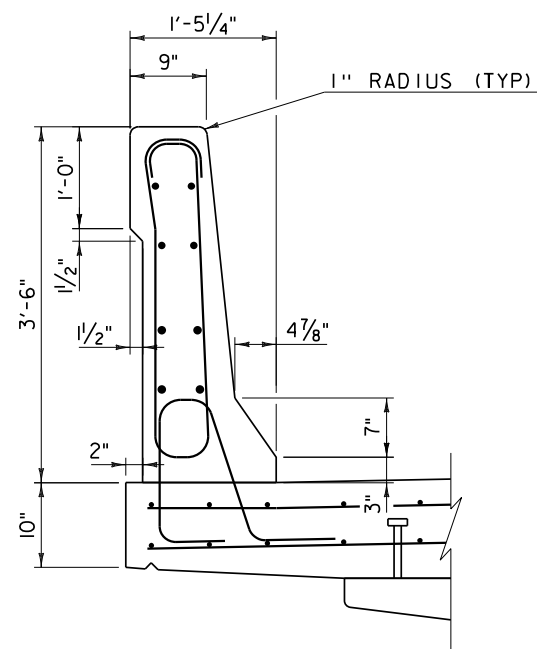
PROJECT NAME: ROCKINGHAM
PROJECT NUMBER: IM 091-I(66)

FILE NAME: sl2al30BrqDet.dgn
PROJECT LEADER: C. SWANSON
DESIGNED BY: N. RODDA
BEARING DETAILS

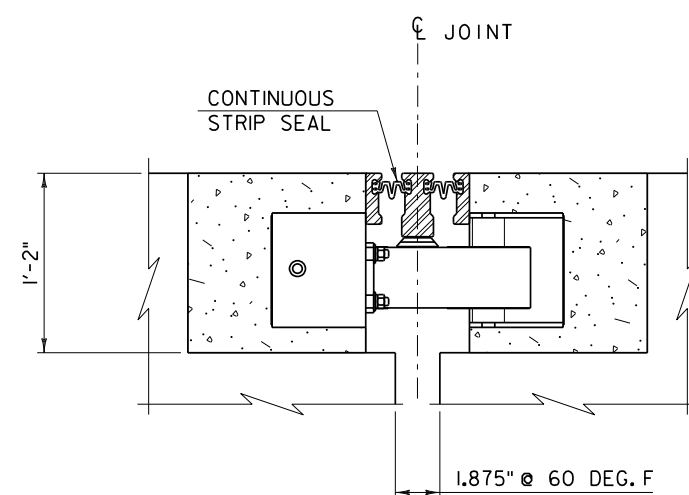
PLOT DATE: 3/11/2016
DRAWN BY: S. COUTURE
CHECKED BY: C. WERTS
SHEET 35 OF 36



MODULAR DECK JOINT DETAIL
NTS



F-SHAPE RAIL DETAIL ON BRIDGE
NTS



SECTION A-A
NTS

NOTES:

1. ALL FABRICATED COMPONENTS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123, UNLESS NOTED OTHERWISE.
2. REINFORCEMENT FOR F-SHAPE RAIL SHALL BE ASTM A 955, GRADE 60.
3. EACH MODULAR EXPANSION JOINT SYSTEM SHALL BE DESIGNED TO ACCOMMODATE 5 INCHES OF MOVEMENT. JOINTS SHALL BE PROVIDED AT EACH ABUTMENT.

DESIGN CONCEPT

PROJECT NAME: ROCKINGHAM
PROJECT NUMBER: IM 091-I(66)

FILE NAME: s12a130JOINTdET.dgn
PROJECT LEADER: C. SWANSON
DESIGNED BY: N. RODDA
DECK JOINT DETAILS

PLOT DATE: 3/11/2016
DRAWN BY: S. COUTURE
CHECKED BY: C. WERTS
SHEET 36 OF 36

maintenance of traffic concept plans



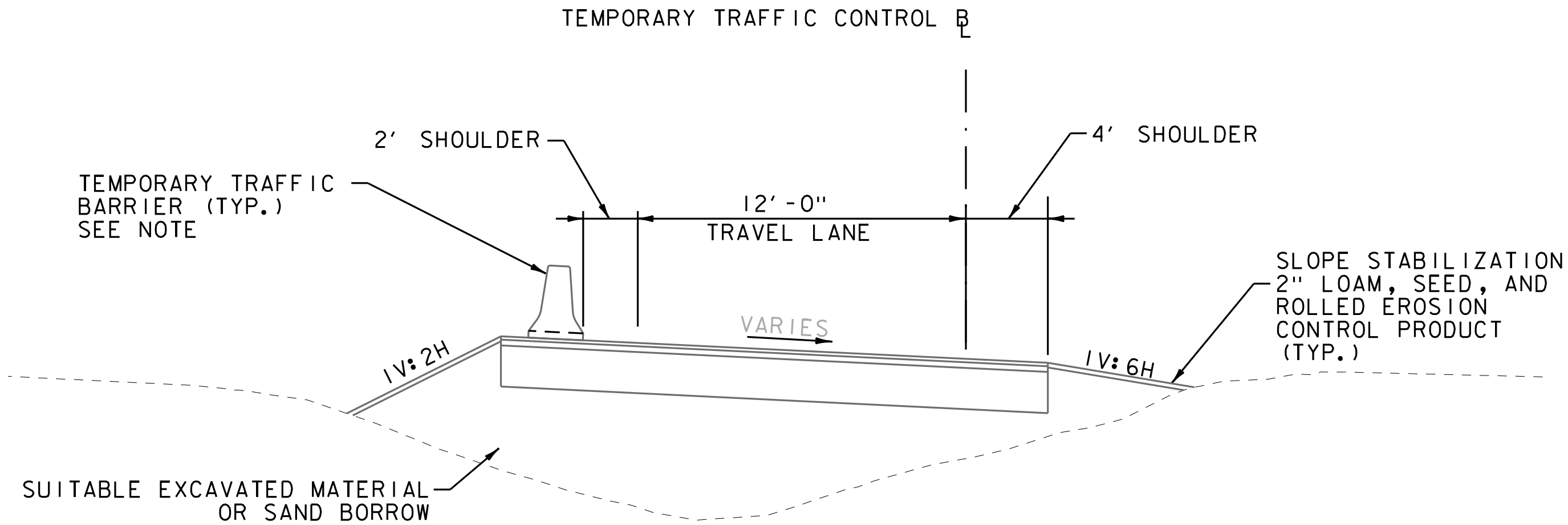
MATERIAL ITEM	THICKNESS TOLERANCE
PAVEMENT (TOTAL DEPTH ALL LAYERS)	+/-1/4"
SUBBASE	+/-1"

TYPICAL CROSSOVER SECTIONS

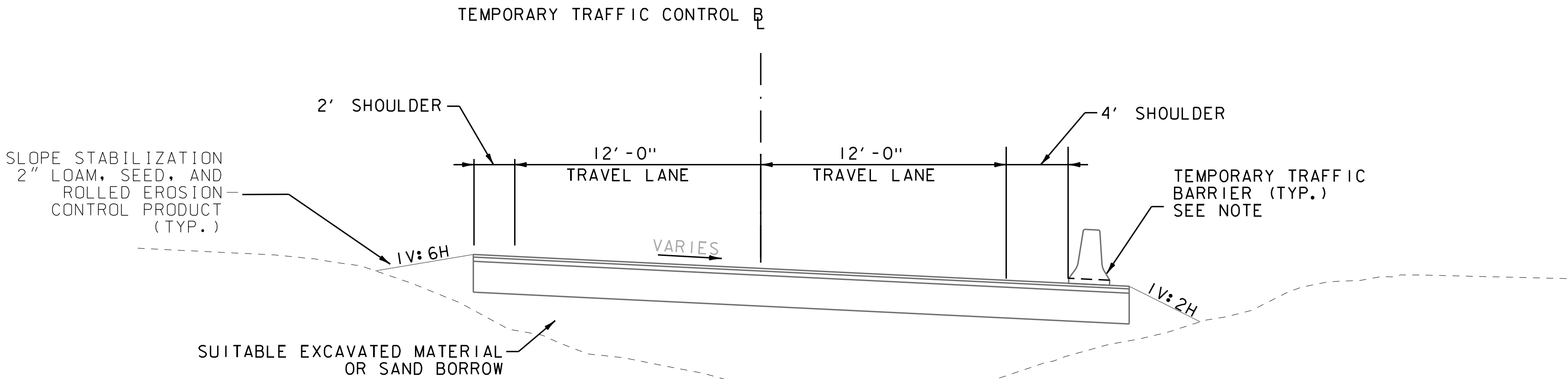
- 1.5" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT (TYPE IVS) (SEE NOTES)
- 2.5" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT (TYPE IIS) (SEE NOTES)
- 18" SUBBASE OF DENSE GRADED CRUSHED STONE

- TACK COAT: EMULSIFIED ASPHALT IS TO BE APPLIED AT THE RATE OF 0.025 GAL/SY BETWEEN SUCCESSIVE COURSES OF PAVEMENT AS DIRECTED BY THE ENGINEER.
- ** FOR PG GRADE SEE SECTION 490 OF THE GENERAL SPECIAL PROVISIONS.

INDEX OF SHEETS		
1	TYPICAL SECTIONS	
2	MOT PHASES 1&2	
3	MOT PHASE	3
4	MOT PHASE	4
5	MOT PHASE	5



TYPICAL ONE LANE SECTION WITH BARRIER
NTS



TYPICAL TWO LANE SECTION WITH BARRIER
NTS

NOTES:

1. THE TOTAL MINIMUM THICKNESS OF BITUMINOUS CONCRETE PAVEMENT FOR THE CROSSOVERS SHALL BE FOUR (4) INCHES.
2. TEMPORARY TRAFFIC BARRIER SHOWN SHALL MEET THE REQUIREMENTS OF NCHRP REPORT 350 CRASH TEST LEVEL 3 (TL-3) RATING.

DESIGN CONCEPT PLANS
MARCH, 2016



PROJECT NAME: ROCKINGHAM
PROJECT NUMBER: IM 091-I(66)

FILE NAME: MOTcutsheet-typicals.dgn
PROJECT LEADER: S.SAWYER
DESIGNED BY: S.SAWYER
TYPICAL SECTIONS

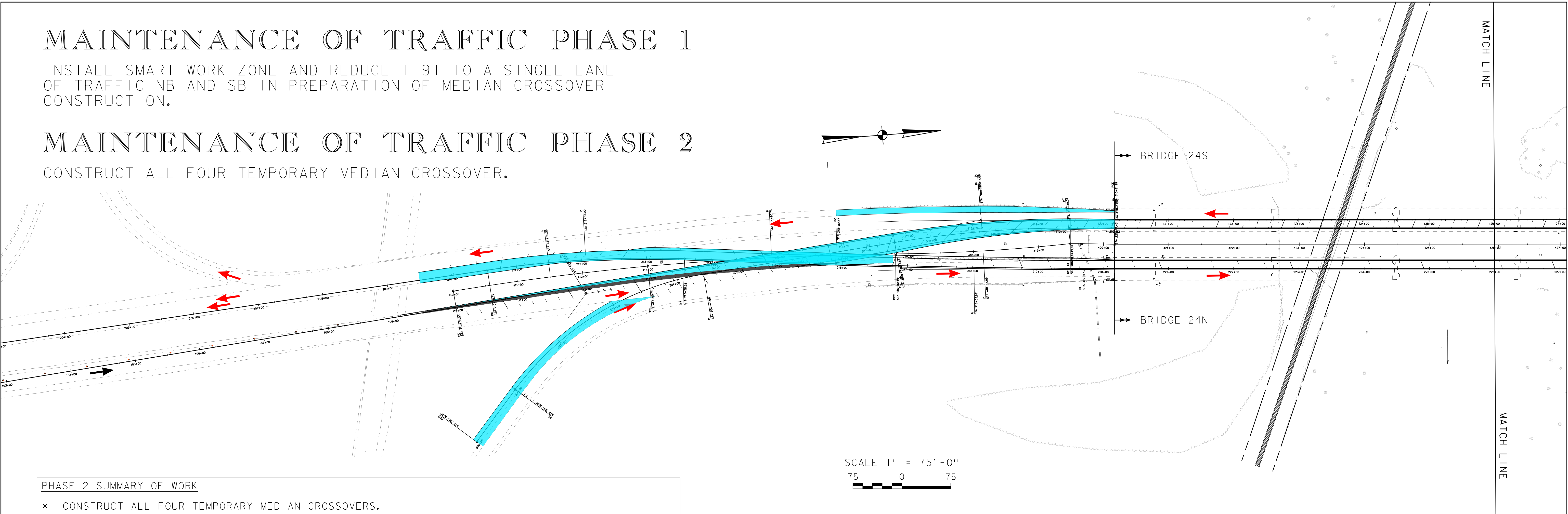
PLOT DATE: 03/04/2016
DRAWN BY: C.THOMPSON
CHECKED BY: S.SAWYER
SHEET 1 OF 5

MAINTENANCE OF TRAFFIC PHASE 1

INSTALL SMART WORK ZONE AND REDUCE I-91 TO A SINGLE LANE OF TRAFFIC NB AND SB IN PREPARATION OF MEDIAN CROSSOVER CONSTRUCTION.

MAINTENANCE OF TRAFFIC PHASE 2

CONSTRUCT ALL FOUR TEMPORARY MEDIAN CROSSOVER.

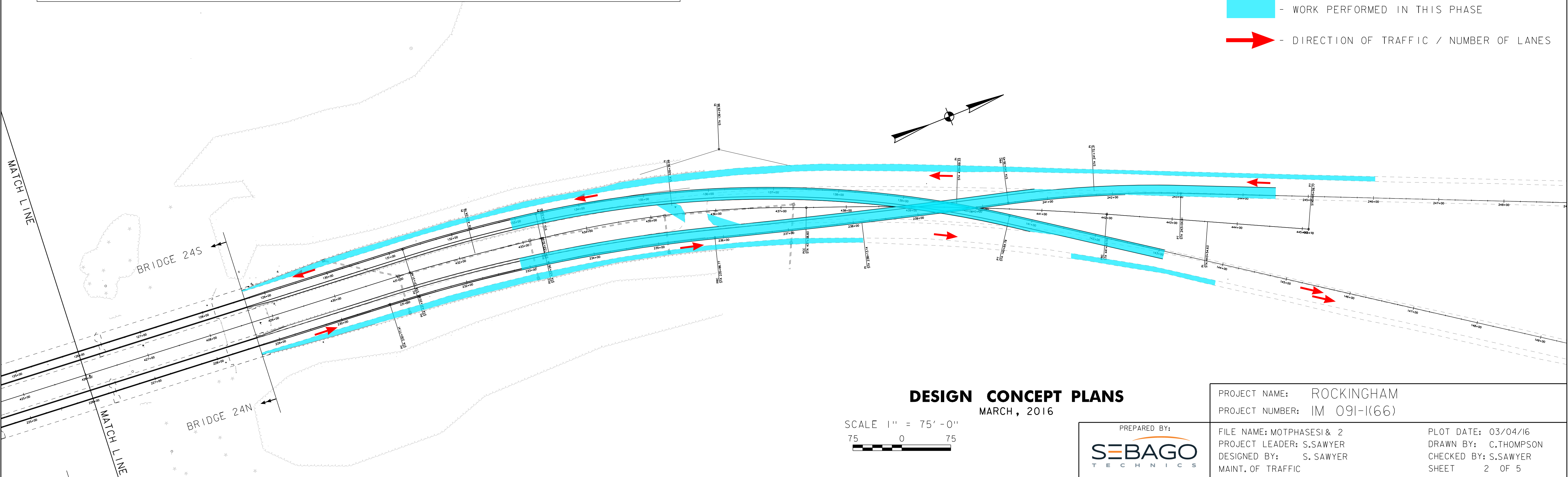


PHASE 2 SUMMARY OF WORK

- * CONSTRUCT ALL FOUR TEMPORARY MEDIAN CROSSOVERS.
- * SHIM OUTSIDE SHOULDERS.
- * WIDEN NB ON-RAMP.

LEGEND

- WORK PERFORMED IN THIS PHASE
- DIRECTION OF TRAFFIC / NUMBER OF LANES



DESIGN CONCEPT PLANS

MARCH, 2016

SCALE 1" = 75' - 0"
75 0 75

PREPARED BY:
SEBAGO
TECHNICS

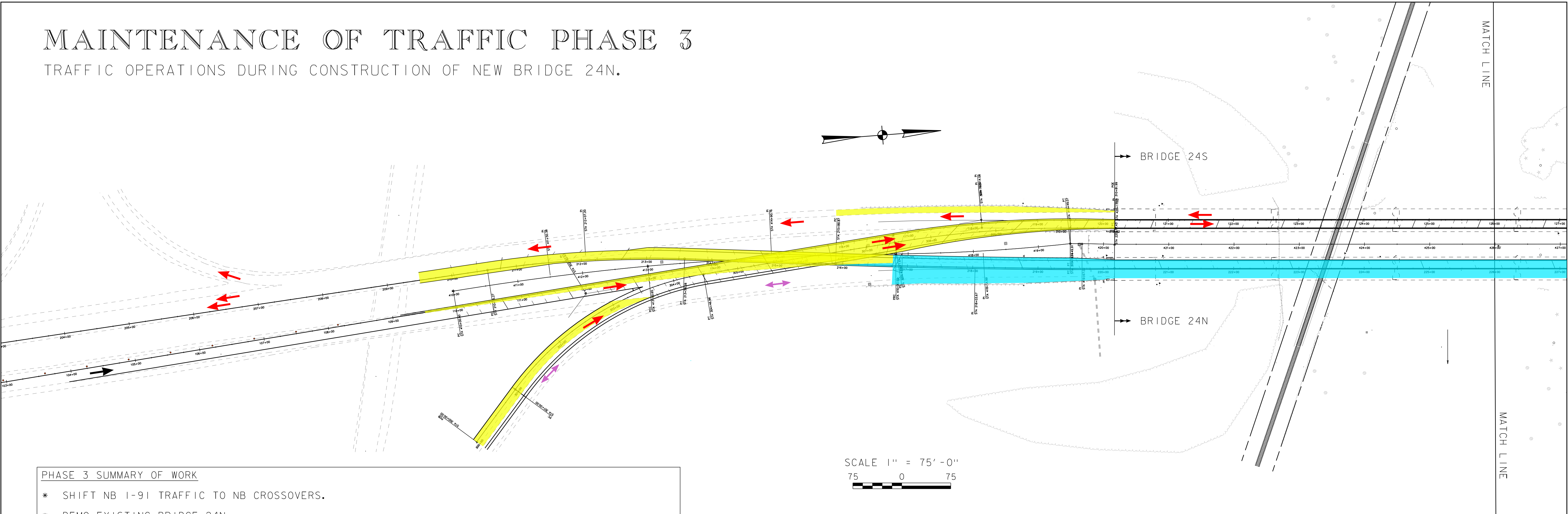
PROJECT NAME: ROCKINGHAM
PROJECT NUMBER: IM 091-I(66)

FILE NAME: MOTPHASES1 & 2
PROJECT LEADER: S.SAWYER
DESIGNED BY: S. SAWYER
MAINT. OF TRAFFIC

PLOT DATE: 03/04/16
DRAWN BY: C.THOMPSON
CHECKED BY: S.SAWYER
SHEET 2 OF 5

MAINTENANCE OF TRAFFIC PHASE 3

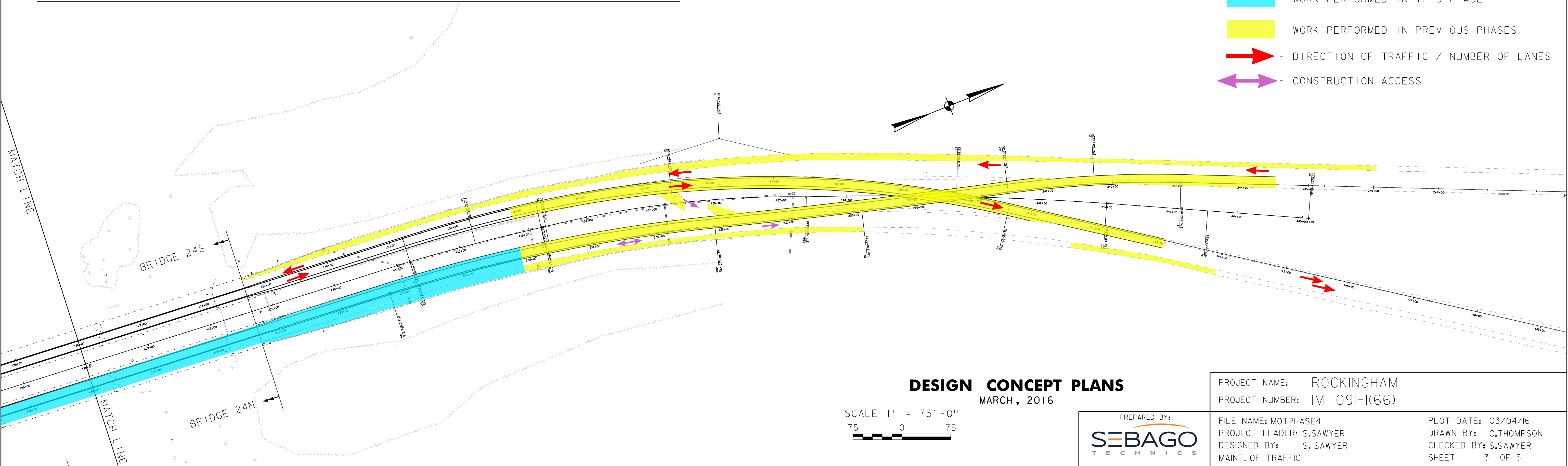
TRAFFIC OPERATIONS DURING CONSTRUCTION OF NEW BRIDGE 24N.



- PHASE 3 SUMMARY OF WORK
- * SHIFT NB I-91 TRAFFIC TO NB CROSSOVERS.
 - * DEMO EXISTING BRIDGE 24N.
 - * CONSTRUCT NEW BRIDGE 24N.
 - * I-95 ON-RAMP REMAINS OPEN THIS PHASE

LEGEND

- WORK PERFORMED IN THIS PHASE
- WORK PERFORMED IN PREVIOUS PHASES
- DIRECTION OF TRAFFIC / NUMBER OF LANES
- CONSTRUCTION ACCESS



DESIGN CONCEPT PLANS

MARCH, 2016

SCALE 1" = 75'-0"

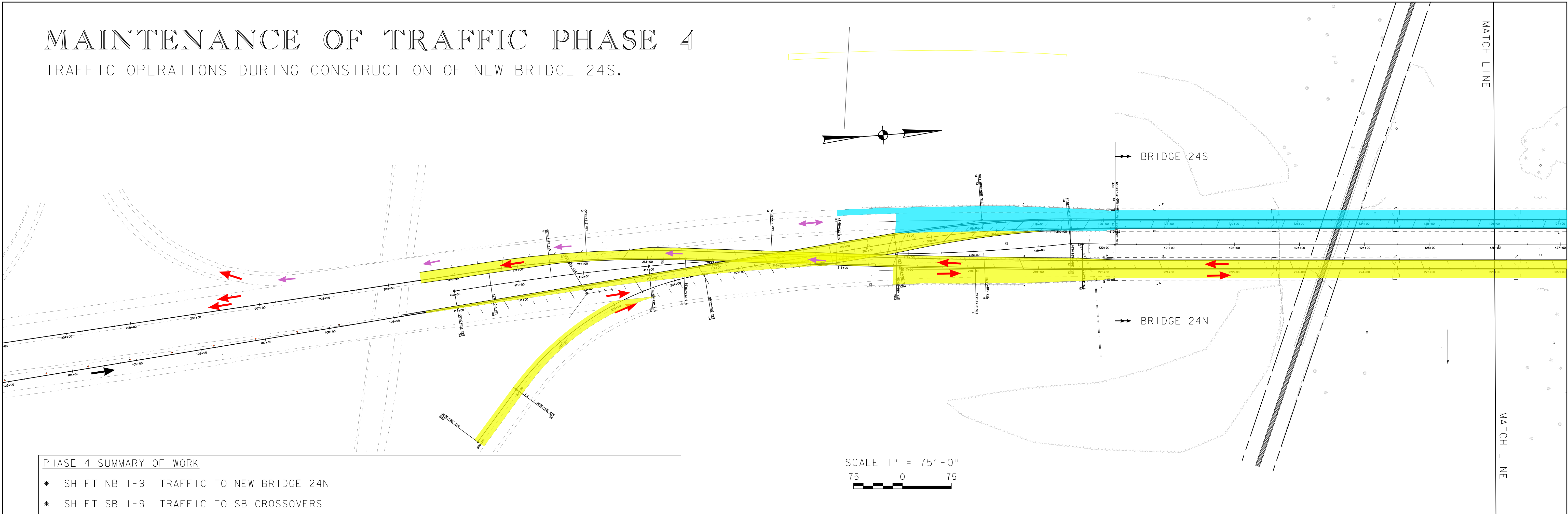
PREPARED BY:
SEBAGO
TECHNICS

PROJECT NAME: ROCKINGHAM
PROJECT NUMBER: IM 091-I(66)
FILE NAME: MOTPHASE4
PROJECT LEADER: S.SAWYER
DESIGNED BY: S. SAWYER
MAINT. OF TRAFFIC

PLOT DATE: 03/04/16
DRAWN BY: C.THOMPSON
CHECKED BY: S.SAWYER
SHEET 3 OF 5

MAINTENANCE OF TRAFFIC PHASE 4

TRAFFIC OPERATIONS DURING CONSTRUCTION OF NEW BRIDGE 24S.

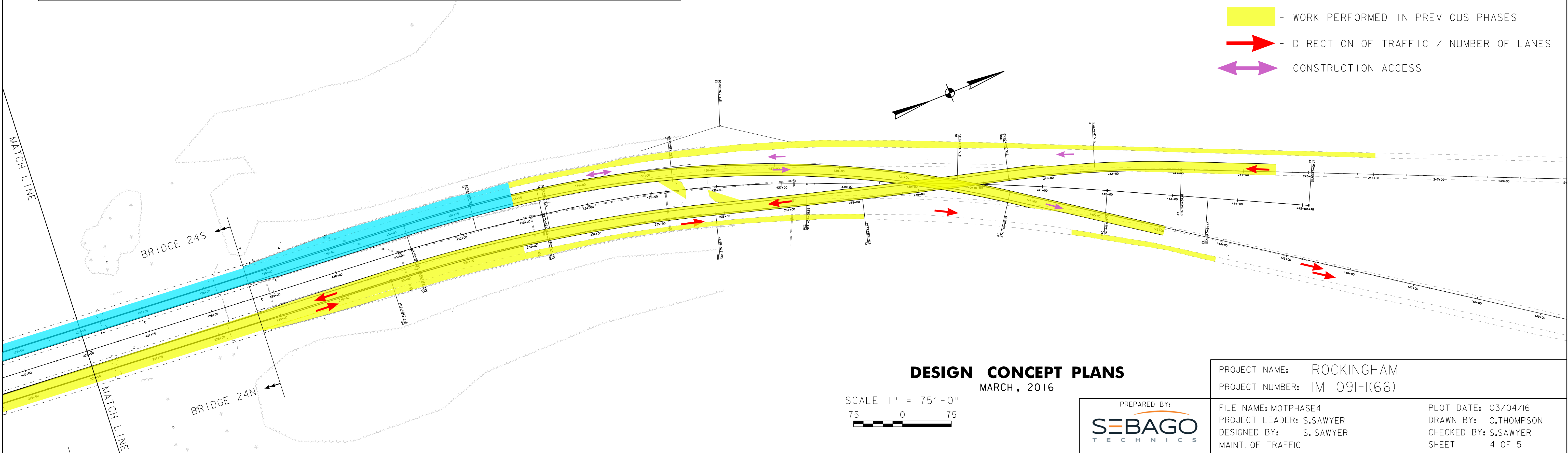


- PHASE 4 SUMMARY OF WORK
- * SHIFT NB I-91 TRAFFIC TO NEW BRIDGE 24N
 - * SHIFT SB I-91 TRAFFIC TO SB CROSSOVERS
 - * DEMO EXISTING BRIDGE 24S.
 - * CONSTRUCT NEW BRIDGE 24S.
 - * I-95 ON-RAMP REMAINS OPEN THIS PHASE

SCALE 1" = 75' - 0"

75 0 75

- LEGEND
- WORK PERFORMED IN THIS PHASE
 - WORK PERFORMED IN PREVIOUS PHASES
 - DIRECTION OF TRAFFIC / NUMBER OF LANES
 - CONSTRUCTION ACCESS



DESIGN CONCEPT PLANS

MARCH, 2016

SCALE 1" = 75' - 0"

75 0 75

PREPARED BY:

SEBAGO
TECHNICS

PROJECT NAME: ROCKINGHAM

PROJECT NUMBER: IM 091-I(66)

FILE NAME: MOTPHASE4

PROJECT LEADER: S.SAWYER

DESIGNED BY: S. SAWYER

MAINT. OF TRAFFIC

PLOT DATE: 03/04/16

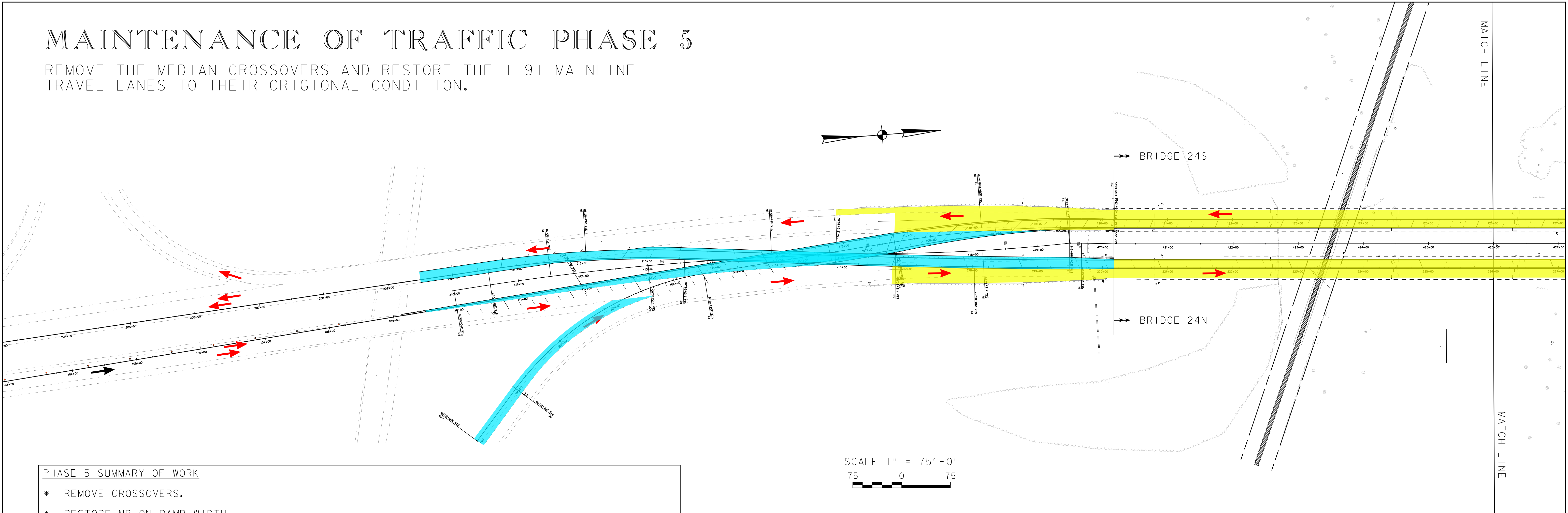
DRAWN BY: C.THOMPSON

CHECKED BY: S.SAWYER

SHEET 4 OF 5

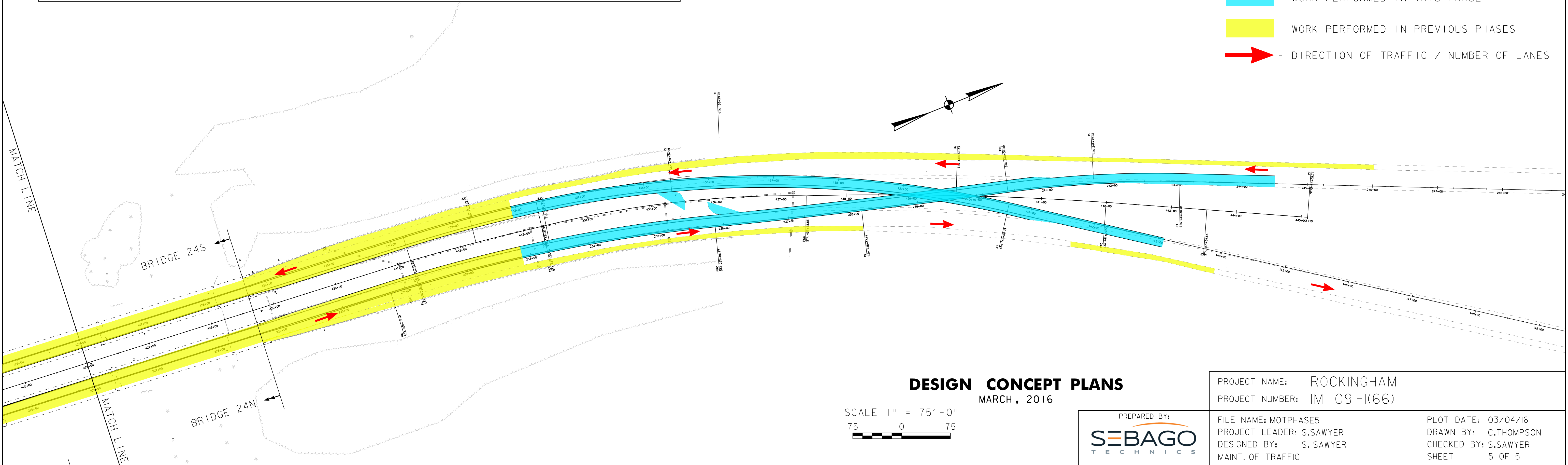
MAINTENANCE OF TRAFFIC PHASE 5

REMOVE THE MEDIAN CROSSOVERS AND RESTORE THE I-91 MAINLINE TRAVEL LANES TO THEIR ORIGINAL CONDITION.



LEGEND

- WORK PERFORMED IN THIS PHASE
- WORK PERFORMED IN PREVIOUS PHASES
- DIRECTION OF TRAFFIC / NUMBER OF LANES



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Woolwich, ME 04579
(207) 443-9747

