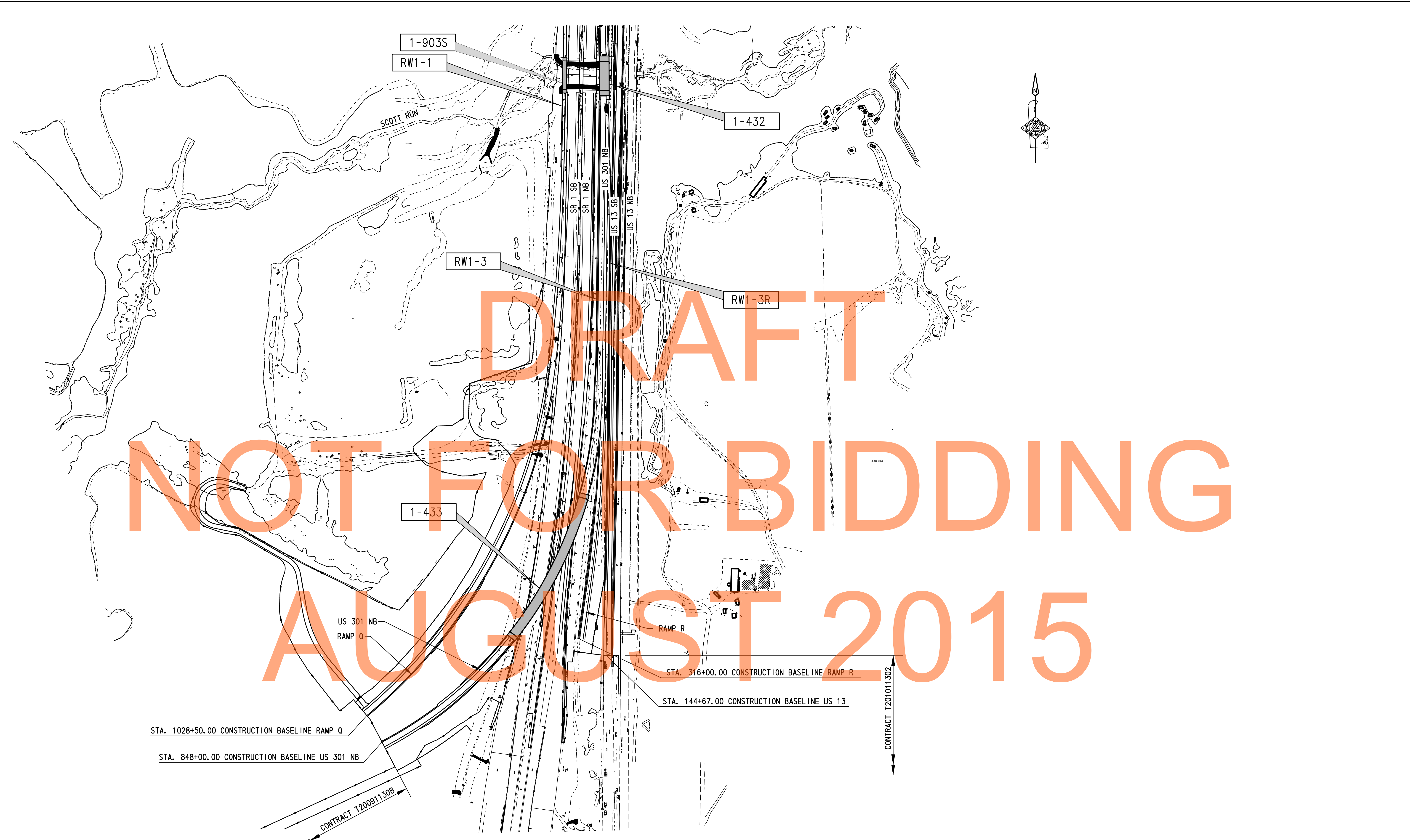
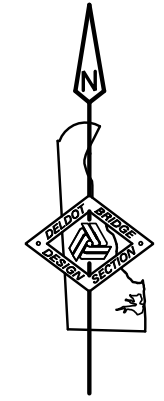


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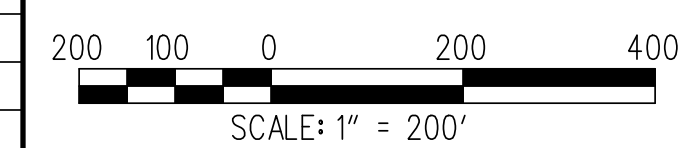


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STRUCTURE LOCATION PLAN - CONTRACT T200911302

SCALE: 1" = 200'-0"



ADDENDUMS / REVISIONS	

**US 301 &
SR 1 INTERCHANGE**

CONTRACT T200911302	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: W.R.A. CHECKED BY: P.S.D.

**STRUCTURE LOCATION
PLAN**

IS-04
SHEET NO. 117
TOTAL SHTS. 491

PROJECT NOTES:

- LOCATION**
PROPOSED WIDENING OF EXISTING BRIDGE NO. 1-903S CARRYING SOUTHBOUND SR1 OVER SCOTT RUN IN NEW CASTLE COUNTY, DELAWARE.
- ELEVATIONS**
VERTICAL DATUM IS REFERENCED TO NAVD 88.
- DESIGN CRITERIA**
4TH ED. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS INCLUDING 2008 AND 2009 INTERIM PROVISIONS. DELDOT BRIDGE DESIGN MANUAL, MAY 2005, LATEST REVISIONS JANUARY 2008.
- LOADING**
HL-93 AND DELAWARE LEGAL LOAD FOR LIVE LOAD.
15 PSF FOR STAY-IN-PLACE DECK FORMS (EXCEPT DECK OVERHANG).
25 PSF FOR FUTURE WEARING SURFACE.
40 PCF EQUIVALENT FLUID EARTH PRESSURE.
SEISMIC DESIGN AND REQUIREMENTS SHALL BE IN ACCORDANCE WITH 4TH ED. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS WITH 2008 AND 2009 INTERIM PROVISIONS.
- CONCRETE**
ALL CONCRETE PROPERTIES SHALL BE IN ACCORDANCE WITH SECTION 812 OF THE DELAWARE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.

CLASS A - EXPOSED FOOTINGS, ABUTMENTS, STEMS, BACKWALLS, WINGWALLS, PIER BENT CAP, FILL FOR STEEL PIPE PILES, SUPERSTRUCTURE DIAPHRAGMS AND PARAPETS (f'c = 4,500 PSI).

CLASS D - CONCRETE DECK SLAB, APPROACH SLABS (f'c = 4,500 PSI).

ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4" UNLESS NOTED OTHERWISE.
- REINFORCING STEEL**
ALL REINFORCING STEEL SHALL BE AASHTO M31 (ASTM A615), GRADE 60 AND UNLESS SPECIFIED OTHERWISE ON THE PLANS SHALL BE PROTECTED WITH FUSION BONDED EPOXY, CONFORMING TO AASHTO M284 (ASTM A775) AND DENOTED WITH A SUFFIX 'E' IN THE BAR MARKS.

MINIMUM CONCRETE COVER FOR REINFORCING STEEL SHALL BE:

FOUNDATION ELEMENTS: 3"
DECK SLABS: 2 1/2" TOP OF SLAB (INCLUDES 1/2" INTEGRAL WEARING SURFACE)
1" BOTTOM OF SLAB WHEN STAY-IN-PLACE FORMS ARE USED
PIER CAPS: 2" CLEAR TO STIRRUPS
2" CLEAR TO MAIN STEEL AT ENDS
- PRESTRESSED REINFORCED CONCRETE MEMBERS**
PRESTRESSED CONCRETE DESIGN: DESIGN CONSISTENT WITH 4TH ED. AASHTO LRFD, WITH 2008 AND 2009 INTERIM PROVISIONS. THE PRECAST CONCRETE BEAMS ARE DESIGNED AS NONCOMPOSITE SIMPLE SPANS FOR ALL DEAD LOADS EXCEPT THE PARAPET AND FUTURE WEARING SURFACE. THE PRECAST BEAMS ARE DESIGNED AS COMPOSITE SIMPLE SPANS FOR LIVE LOADS AS WELL AS THE PARAPET AND FUTURE WEARING SURFACE DEAD LOADS. REINFORCING STEEL DESIGN: fs = 24,000 PSI (NONPRETENSIONING STEEL). THE MINIMUM AGE OF PRECAST GIRDERS FOR PLACEMENT OF THE PIER DIAPHRAGM AND DECK SLAB CLOSURE POUR AT THE PIER SHALL BE 90 DAYS.

PRESTRESSED CONCRETE: THE MINIMUM COMPRESSIVE STRENGTH FOR PRECAST CONCRETE AT THE AGE OF 28 DAYS SHALL BE f'c = 5,000 PSI. THE MINIMUM COMPRESSIVE STRENGTH AT THE TRANSFER OF PRESTRESS SHALL BE f'ci = 4,500 PSI.

PRETENSIONING STEEL: PRETENSIONING STEEL SHALL CONSIST OF 0.5 INCH DIAMETER 7-WIRE LOW-RELAXATION STRANDS CONFORMING TO THE REQUIREMENTS OF M203 GRADE 270. EACH 0.5 INCH STRAND SHALL BE PRETENSIONED TO 30,980 LBS (0.75 f's). AFTER ESTIMATED LOSSES OF 29,640 PSI, THE FINAL EFFECTIVE PRESTRESS FORCE PER STRAND IS 26,450 LBS. CAMBER GROWTH IN PRETENSIONED BEAMS BETWEEN THE TIME OF STRESSING AND THE TIME OF SLAB PLACEMENT IS ASSUMED TO BE 80% FOR CAMBER CALCULATIONS.
- FOUNDATIONS**
ALL PROPOSED SUBSTRUCTURE UNITS WILL BE SUPPORTED ON OPEN END STEEL PIPE PILES AS INDICATED ON THE PILE PLAN SHEETS.

PILES SHALL BE ASTM A252, GRADE 3 WITH A MINIMUM YIELD STRENGTH OF 45,000 PSI

16" DIAMETER PIPE PILES SHALL HAVE A WALL THICKNESS OF 0.500 IN. COAT PIER BENT PILES WITH COAL TAR EPOXY AS INDICATED ON DWG. NO. PL-03.

ONCE INSTALLED, ALL PILES SHALL BE FILLED WITH CLASS A CONCRETE TO THE MINIMUM ELEVATIONS SHOWN.
- CONSTRUCTION JOINTS**
KEYED CONSTRUCTION JOINTS SHALL BE 2" X 4" OR AS NOTED. ALL EXPOSED CONSTRUCTION JOINT EDGES SHALL HAVE A 3/4" V-NOTCH UNLESS NOTED OTHERWISE.
- EXISTING STRUCTURE**
ALL DIMENSIONS AND STATIONS SHOWN ARE APPROXIMATE. ALL DIMENSIONS AFFECTED BY THE GEOMETRICS, AND/OR LOCATION OF EXISTING STRUCTURES SHALL BE CHECKED IN THE FIELD BY THE CONTRACTOR BEFORE ANY CONSTRUCTION IS DONE AND BEFORE ANY MATERIAL IS ORDERED OR FABRICATED. IF THE GEOMETRICS DIFFER SIGNIFICANTLY FROM THAT SHOWN ON THE PLANS, THE ENGINEER SHALL BE CONTACTED FOR EVALUATION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SUPPLY THE ENGINEER WITH ALL FIELD DIMENSIONS REQUIRED TO CHECK DETAIL DRAWINGS.

ANY DAMAGE INCURRED TO EXISTING STRUCTURES TO REMAIN RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED ALL AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE ENGINEER.

- MISCELLANEOUS**
ALL AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE GRADED BACK TO THE ORIGINAL EXISTING GRADE, TOP SOILED, SEEDED AND MULCHED. PAYMENT SHALL BE INCIDENTAL TO THE CONTRACT. AS DIRECTED BY THE ENGINEER, ALL AREAS DISTURBED BY THE CONTRACTOR'S OPERATION RESULTING FROM UNAUTHORIZED ACTIVITIES OUTSIDE THE LIMIT OF CONSTRUCTION SHALL BE TOP SOILED, SEEDED, AND MULCHED AT THE CONTRACTOR'S EXPENSE.
- SLOPE PROTECTION**
EXISTING RIPRAP SHALL BE REMOVED AND REPLACED AT THE ABUTMENT EXTENSIONS TO THE LIMITS SHOWN ON THE PLANS. REMOVAL AND REPLACEMENT SHALL BE INCIDENTAL TO ITEM 207000 - STRUCTURE EXCAVATION AND BACKFILL FOR STRUCTURES.
- STABILIZING STRUCTURAL EXCAVATIONS**
IN LIEU OF A 2:1 SLOPE, THE CONTRACTOR MAY USE SHORING FOR EXCAVATIONS EXCEEDING 5 FEET IN HEIGHT. THE COST OF THE SHORING SHALL BE INCIDENTAL TO ITEM 207000 - EXCAVATION AND BACKFILL FOR STRUCTURES.

FOR ALL EXCAVATIONS REQUIRING TEMPORARY EXCAVATION SUPPORT, THE CONTRACTOR SHALL SUBMIT WORKING DRAWINGS AND CALCULATIONS FOR DESIGN OF THE TEMPORARY EXCAVATION SUPPORT SYSTEMS, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN DELAWARE. THE CONTRACTOR SHALL BE ENTIRELY RESPONSIBLE FOR THE DESIGN AND ADEQUACY OF THE TEMPORARY EXCAVATION SUPPORT SYSTEMS. METHODS OF DEWATERING EXCAVATIONS SHALL CONFORM TO THOSE SHOWN ON THE MAINTENANCE OF STREAMFLOW PLANS ON DWG. NOS. MS 1/2-1 AND MS 1/2-2.

THE FOLLOWING EARTH PRESSURE PARAMETERS ARE RECOMMENDED FOR USE IN DESIGNING TEMPORARY EXCAVATION SUPPORT SYSTEMS:

SOIL UNIT WT = 120 PCF
SOIL BUOYANT UNIT WT = 58 PCF
PHI = 30 DEG
c = 0 PSF
Ka = 0.333
- HYDRAULIC DATA**
DRAINAGE AREA = 3.72 SQ. MI.
25-YR FLOOD ELEVATION = 12.68
DESIGN FREQUENCY = 50 YEARS
DESIGN DISCHARGE = 1586 CFS
DESIGN HEADWATER ELEVATION = 13.24
DESIGN VELOCITY = 1.15 FPS
FLOW AREA OF PROPOSED OPENING = 1358 SF

NOTE: HYDRAULIC ANALYSIS CONDUCTED WITH EXISTING US 13 BOX CULVERT IN-PLACE, AS WORSE CASE SCENARIO.

NOTE: PEAK FLOWRATES WERE COMPUTED IN THE TR-20 HYDROLOGIC ANALYSES FOR SCOTT RUN (2011). SEE REPORT TITLED, "HYDROLOGIC AND HYDRAULIC ANALYSES OF SCOTT RUN WATERSHED AND PROPOSED BRIDGES 1-1, 1-2, 1-4 NB & SB, 1-6, AND 1-7 NB & SB FOR US 301 EXTENSION," DATED MAY 2011.
- SCOUR DATA**
BRIDGE BR1-903S HAS BEEN ANALYZED FOR THE EFFECTS OF SCOUR IN ACCORDANCE WITH FHWA HEC-18, 'EVALUATING SCOUR AT BRIDGES', AND HEC-23, 'BRIDGE SCOUR AND STREAM INSTABILITY COUNTERMEASURES.'
SCOUR COUNTERMEASURES HAVE BEEN DESIGNED FOR THE WORSE CASE OF THE OVERTOPPING FLOOD OR THE 500-YR FLOOD EVENT.

NOTE: SCOUR ANALYSES CONDUCTED WITH REMOVAL OF EXISTING US 13 BOX CULVERT, AS WORSE CASE SCENARIO.

DESIGN STORM EVENT = 100 YEAR FLOOD
DESIGN STORM DISCHARGE = 1887 CFS
DESIGN STORM HEADWATER ELEVATION = 11.08 FT
DESIGN STORM VELOCITY, CHANNEL = 1.90 FPS
DESIGN STORM DEPTH OF FLOW = 5.71 FT

CHECK STORM EVENT = 500 YEAR FLOOD
CHECK STORM DISCHARGE = 2568 CFS
CHECK STORM HEADWATER ELEVATION = 12.09 FT
CHECK STORM VELOCITY, CHANNEL = 2.18 FPS
CHECK STORM DEPTH OF FLOW = 6.73 FT
- LOAD RATINGS**
LOAD RATINGS FOR WIDENED BRIDGE NO. 1-903S WILL NOT BE GOVERNED BY THE PROPOSED CONSTRUCTION. EXISTING GIRDERS WILL CONTINUE TO GOVERN THE RATINGS.
- UTILITIES**
BEFORE BEGINNING WORK, THE CONTRACTOR SHALL GIVE NOTIFICATION BY TELEPHONE BY CALLING "MISS UTILITY" AT 1-800-282-8555 A MINIMUM OF 2 WORKING DAYS PRIOR TO START OF WORK. VERIFY AND LOCATE ALL UTILITIES PRIOR TO STARTING WORK.

COORDINATE THE REQUIREMENTS FOR PROTECTION OF ANY UTILITY WITH THE UTILITY OWNER PRIOR TO STARTING WORK.

CONDUCT OPERATIONS IN A MANNER WHICH ENSURES THAT THE UTILITIES WILL NOT BE DISTURBED OR ENDANGERED. ANY DAMAGE INCURRED TO THESE UTILITIES OR ANY OTHER UTILITIES, SHOWN OR NOT SHOWN ON THE PLANS, DUE TO THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE APPROPRIATE UTILITY COMPANY. THE DEPARTMENT DOES NOT ASSUME RESPONSIBILITY FOR REIMBURSEMENT, PARTICIPATION IN DESIGN AND/OR REVISIONS, OR LIABILITY FOR ACCURACY OF TYPE, SIZE AND LOCATION OF ANY UTILITY.

THE CONTRACTOR IS RESPONSIBLE FOR TEMPORARILY SUPPORTING, PROTECTING, OR RELOCATING ANY UTILITIES DURING CONSTRUCTION. WHERE NECESSARY, THE COST FOR THIS WORK WILL BE INCIDENTAL TO THE CONTRACT.

- STAGING AREAS**
PROPER EROSION AND SEDIMENT CONTROL MEASURES AS DETERMINED BY THE ENGINEER SHALL BE INSTALLED IN ALL STAGING AREAS.

ALL AREAS USED BY THE CONTRACTOR FOR STAGING OPERATIONS SHALL BE FULLY RESTORED BY THE CONTRACTOR UPON COMPLETION OF THE PROJECT. IF THE STAGING AREA IS PAVED, IT SHALL BE RESTORED TO ITS ORIGINAL CONDITION. IF THE STAGING AREA IS UNPAVED, IT SHALL BE RE-GRADED, TOP SOILED, SEEDED AND MULCHED IN ACCORDANCE WITH DELAWARE STANDARD SPECIFICATION SECTIONS 732, 734 AND 735, FOR TOP SOIL, SEED, AND MULCH, RESPECTIVELY, TO THE SATISFACTION OF THE ENGINEER. THE SEED SHALL ADHERE TO THE SPECIFICATIONS OF SECTION 734 FOR PERMANENT GRASS SEEDING-DRY GROUND. ALL COSTS ASSOCIATED WITH RESTORATION OF THE STAGING AREA SHALL BE AT THE CONTRACTOR'S EXPENSE. IF THE ENGINEER DETERMINES THAT A SATISFACTORY STAND OF GRASS DOES NOT EXIST AT THE TIME OF FINAL INSPECTION, ALL COSTS ASSOCIATED WITH REESTABLISHING A SATISFACTORY STAND OF GRASS SHALL ALSO BE AT THE CONTRACTOR'S EXPENSE.
- TEMPORARY PROTECTIVE SHIELD**
THE CONTRACTOR SHALL INSTALL A TEMPORARY PROTECTIVE SHIELD DURING BRIDGE DEMOLITION AND CONSTRUCTION. THE TEMPORARY PROTECTIVE SHIELD SHALL COVER 5 FEET MINIMUM BEYOND ALL SIDES OF FULL DEPTH CONCRETE REMOVAL AND THE FULL WIDTH AND SPAN, BETWEEN ABUTMENT BEARING CENTERLINES, OF THE PROPOSED BRIDGE WIDENING.

BRIDGE NO. 1-903S INDEX OF SHEETS		
SHEET NO.	DWG. NO.	TABLE OF CONTENTS
118	PN-01	PROJECT NOTES
119	QS-01	QUANTITY SUMMARY
120	PE-01	GENERAL PLAN AND ELEVATION
121	CS-01	SEQUENCE OF CONSTRUCTION - 1
122	CS-02	SEQUENCE OF CONSTRUCTION - 2
123	CS-03	SEQUENCE OF CONSTRUCTION - 3
124	CS-04	SEQUENCE OF CONSTRUCTION - 4
125	CS-05	SEQUENCE OF CONSTRUCTION - 5
126	FT-01	GEOMETRIC FOOTING LAYOUT PLAN
127	PL-01	SOUTH ABUTMENT PILE PLAN LAYOUT
128	PL-02	NORTH ABUTMENT PILE PLAN LAYOUT
129	PL-03	PIER BENT PILE PLAN LAYOUT AND STEEL PIPE PILE DETAILS
130	AB-01	SOUTH ABUTMENT PLAN AND ELEVATION
131	AB-02	NORTH ABUTMENT PLAN AND ELEVATION
132	AB-03	ABUTMENT TYPICAL SECTION & REINFORCEMENT DETAILS
133	WW-01	WING WALL ELEVATIONS & SECTIONS
134	PR-01	PIER BENT PLAN & ELEVATION
135	PR-02	PIER BENT REINFORCEMENT DETAILS
136	BR-01	ABUTMENT REINFORCEMENT BAR LIST
137	BR-02	PIER BENT REINFORCEMENT BAR LIST
138	TS-01	SUPERSTRUCTURE TYPICAL SECTION
139	FR-01	FRAMING PLAN
140	BM-01	PRESTRESSED GIRDER DETAILS
141	DK-01	DECK SLAB PLAN & CROSS SECTION
142	DK-02	DIAPHRAGM DETAILS - 1
143	DK-03	DIAPHRAGM DETAILS - 2
144	DK-04	DECK SLAB EXPANSION JOINT DETAILS - 1
145	DK-05	DECK SLAB EXPANSION JOINT DETAILS - 2
146	FD-01	FINISHED BRIDGE DECK ELEVATIONS
147	AS-01	APPROACH SLAB AND PARAPET CONDUIT DETAILS
148	BR-03	SUPERSTRUCTURE REINFORCEMENT BAR LIST
149	BO-01	BORING PROFILE

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ADDENDUMS / REVISIONS	

SCALE: AS NOTED

US 301 & SR 1 INTERCHANGE

CONTRACT	BRIDGE NO.	1-903S
T200911302	DESIGNED BY:	MEG
COUNTY	CHECKED BY:	KEE
NEW CASTLE		

PROJECT NOTES

BR1-1 PN-01
SHEET NO.
118
TOTAL SHTS.
491

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ITEM NO.	ITEM DESCRIPTION	UNITS	QUANTITY
202000	EXCAVATION AND EMBANKMENT	CY	50
202508	WETLAND ACCESS ROAD, TYPE II	LS	1
207000	EXCAVATION AND BACKFILL FOR STRUCTURES	CY	100
302012	DELAWARE NO. 57 STONE	TON	25
601502	TEMPORARY PROTECTIVE SHIELD	LS	1
602003	PORTLAND CEMENT CONCRETE MASONRY, ABUTMENT FOOTING, CLASS A	CY	37
602007	PORTLAND CEMENT CONCRETE MASONRY, PIER ABOVE FOOTING, CLASS A	CY	16
602013	PORTLAND CEMENT CONCRETE MASONRY, SUPERSTRUCTURE, CLASS D	CY	62
602014	PORTLAND CEMENT CONCRETE MASONRY, APPROACH SLAB, CLASS D	CY	28
602015	PORTLAND CEMENT CONCRETE MASONRY, ABUTMENT ABOVE FOOTING, CLASS A	CY	19
602017	PORTLAND CEMENT CONCRETE MASONRY, PARAPET, CLASS A	CY	22
602019	PORTLAND CEMENT CONCRETE MASONRY, SUPERSTRUCTURE, CLASS A	CY	10
602579	DRILLING HOLES AND INSTALLING DOWELS	EACH	182
602580	PARTIAL REMOVAL OF P. C. C. MASONRY	CY	35
603000	BAR REINFORCEMENT	LB	2,460
604000	BAR REINFORCEMENT, EPOXY COATED	LB	35,960
605511	PREFABRICATED EXPANSION JOINT SYSTEM, 3"	LF	35
605659	STRIP SEAL EXPANSION JOINT, 3"	LF	135
618558	STEEL PIPE PILES, 16" DIAMETER	LF	678
618559	STEEL PIPE TEST PILES, 16" DIAMETER	LF	215
618560	INSTALL STEEL PIPE PILES, 16" DIAMETER	LF	678
618561	INSTALL STEEL PIPE TEST PILES, 16" DIAMETER	LF	215
619501	PRODUCTION PILE RESTRIKE	EACH	3
619502	TEST PILE RESTRIKE	EACH	1
619519	DYNAMIC PILE TESTING BY CONTRACTOR	EACH	8
619539	SIGNAL MATCHING ANALYSIS BY CONTRACTOR	EACH	8
623001	PRESTRESSED REINFORCED CONCRETE MEMBERS, I-BEAMS	LS	1
712006	RIPRAP, R-5	SY	5
713003	GEOTEXTILES, RIPRAP	SY	10

- NOTES:**
- ITEM 202000 IS REPRESENTED UNDER TYPE C MATERIAL REQUIRED, "TYPE C BACKFILL FOR STRUCTURES"; SEE DRAWING EW-02.
 - ITEM 207000 IS REPRESENTED ON DRAWING EW-02 UNDER EXCAVATION AVAILABLE FOR EMBANKMENT, "PLUS EXCAVATION AND BACKFILLING FOR STRUCTURES."



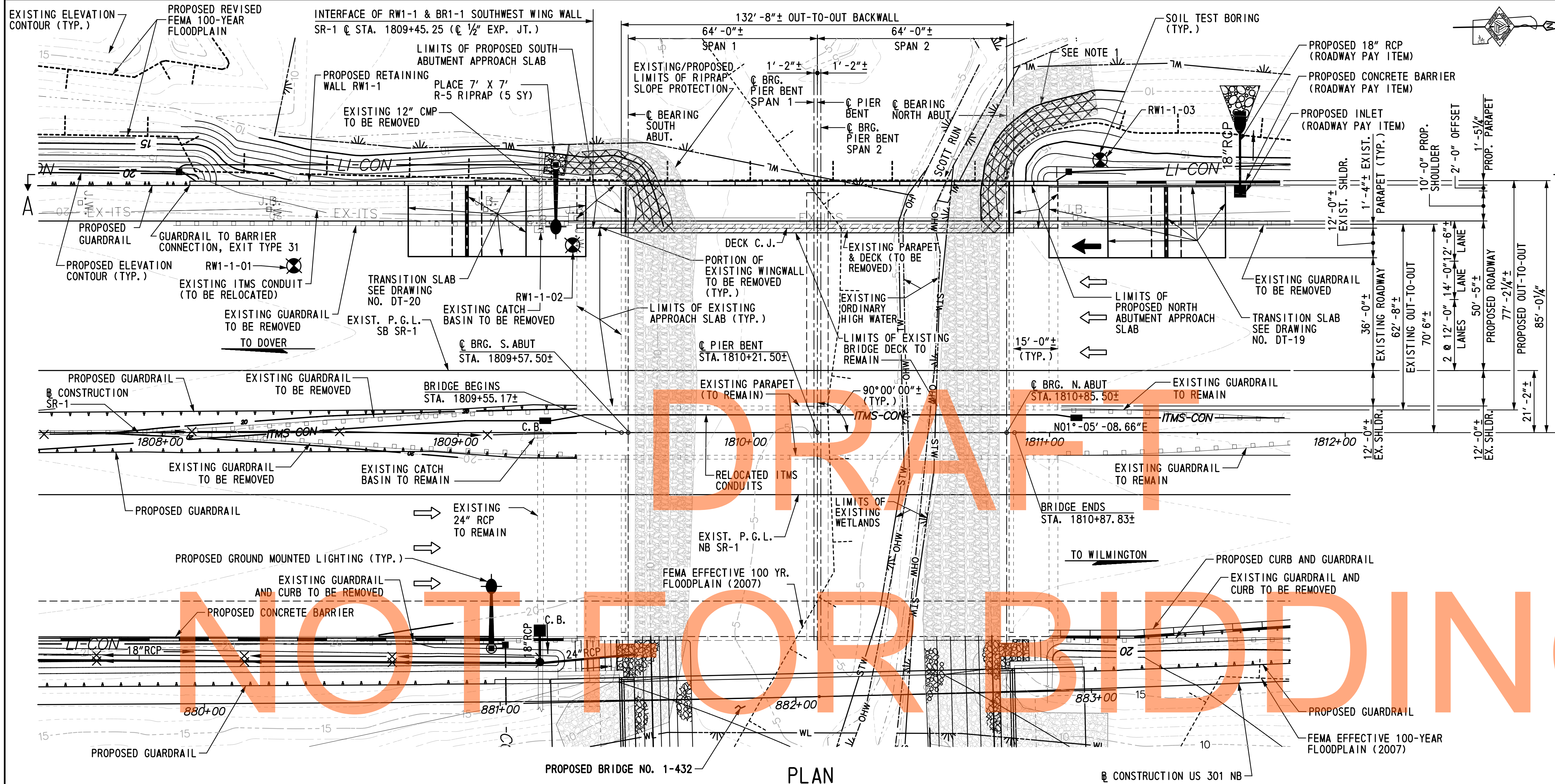
ADDENDUMS / REVISIONS

**US 301 &
SR 1 INTERCHANGE**

CONTRACT	BRIDGE NO.	1-903S
T200911302	DESIGNED BY:	MED
COUNTY	CHECKED BY:	KEE
NEW CASTLE		

QUANTITY SUMMARY

BR1-1 QS-01
SHEET NO.
119
TOTAL SHTS.
491



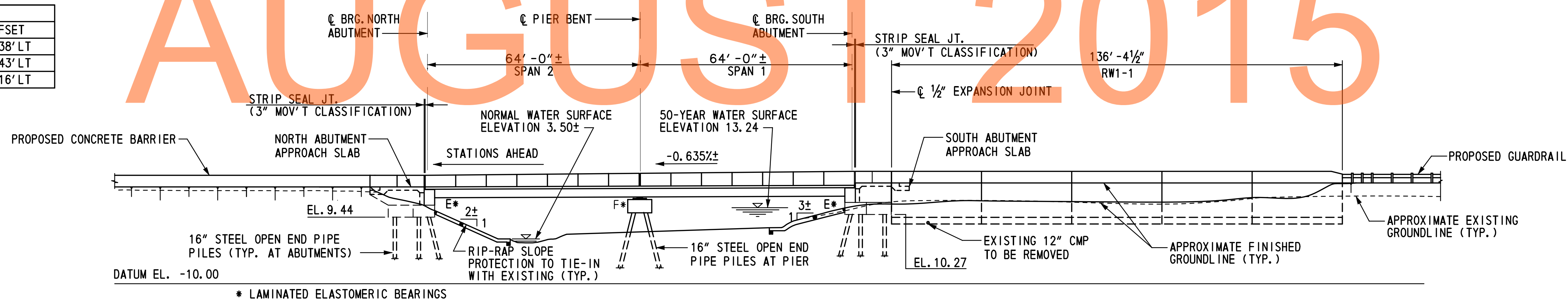
LEGEND

(SA)	SOUTH ABUTMENT
(NA)	NORTH ABUTMENT
(NF)	NEAR FACE
(FF)	FAR FACE
(EF)	EACH FACE
(T)	TOP
(B)	BOTTOM
(SAS)	SOUTH APPROACH SLAB
(NAS)	NORTH APPROACH SLAB
(NAS)	CONSTRUCTION JOINT
C. J.	CONSTRUCTION JOINT
U. N. O.	UNLESS NOTED OTHERWISE
---	EXISTING STRUCTURE
---	PROPOSED STRUCTURE
(G1)	EXISTING GIRDER DESIGNATION
(G18)	PROPOSED GIRDER DESIGNATION
---	PORTIONS OF EXISTING STRUCTURE TO BE REMOVED
---	EXISTING RIP RAP REMOVAL AND REPLACEMENT AREAS

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AUGUST 2015

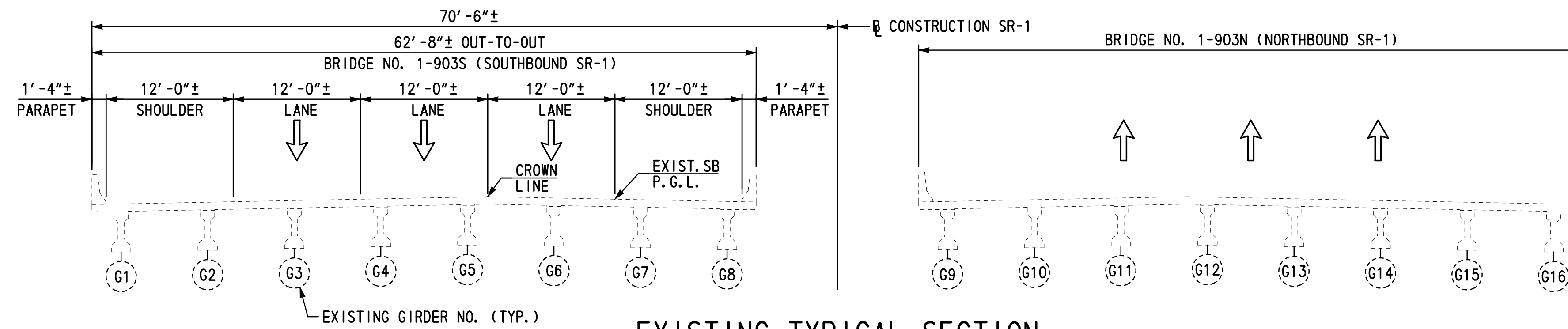
TEST BORINGS		
BORING	SR 1 @ STA.	OFFSET
RW1-1-01	1808+44.38	56.38' LT
RW1-1-02	1809+38.72	63.43' LT
RW1-1-03	1811+17.07	92.16' LT



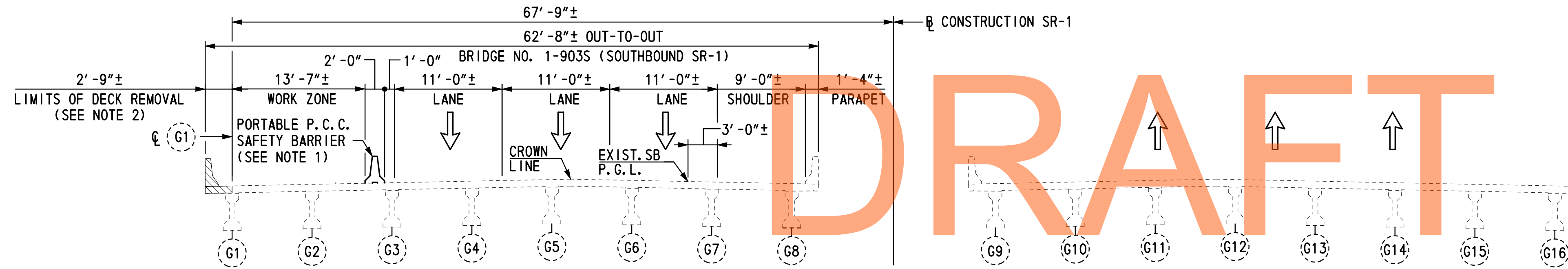
- NOTES:**
- EXISTING RIP RAP TO BE REMOVED AND REPLACED AT BOTH ABUTMENT EXTENSIONS, REFER TO PROJECT NOTE 12 ON DWG. NO. BR1-1 PN-01.
 - WETLAND ACCESS ROAD AND FOR MAINTENANCE OF STREAM FLOW PLANS, SEE DWG. NOS. MS-01 AND MS-02.
 - REMOVAL OF PORTIONS OF EXISTING CONCRETE PARAPET AND DECK SLAB WILL BE PAID UNDER ITEM 602580 - PARTIAL REMOVAL OF P. C. C MASONRY.

VIEW A-A: WEST ELEVATION
SCALE: 1"=20'-0"

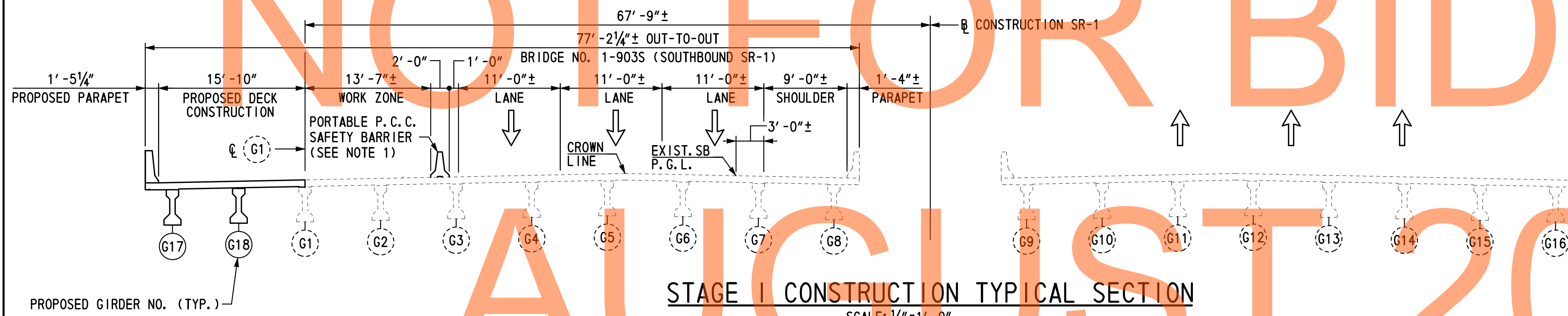
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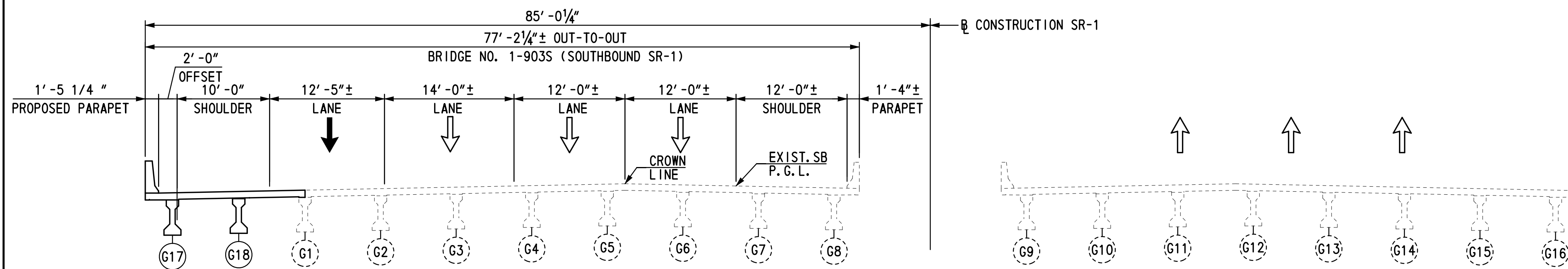
EXISTING TYPICAL SECTION
SCALE: 1/8"=1'-0"



STAGE I REMOVAL TYPICAL SECTION
SCALE: 1/8"=1'-0"



STAGE I CONSTRUCTION TYPICAL SECTION
SCALE: 1/8"=1'-0"



FINAL CONDITION TYPICAL SECTION
SCALE: 1/8"=1'-0"

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AUGUST 2015

NOTES:

1. PORTABLE P. C. C. SAFETY BARRIER TO BE ATTACHED TO EXISTING BRIDGE DECK.
2. PORTIONS OF EXISTING DECK TRANSVERSE REINFORCING TO REMAIN AND SHALL BE SPLICED TO PROPOSED DECK RECONSTRUCTION REINFORCING STEEL. SEE DWG. NO. DK-01 FOR DETAILS.
3. FOR TRAFFIC CONTROL REQUIREMENTS, SEE CONSTRUCTION PHASING, M. O. T., AND EROSION CONTROL PLANS.
4. INSTALL TEMPORARY PROTECTIVE SHIELD DURING BRIDGE DEMOLITION AND CONSTRUCTION. SEE PROJECT NOTE 19 FOR ADDITIONAL INFORMATION.

REFERENCES:

1. PROJECT NOTES, SEE DWG. NO. PN-01.
2. FOR LEGEND, SEE DWG. NO. PE-01.

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ADDENDUMS / REVISIONS

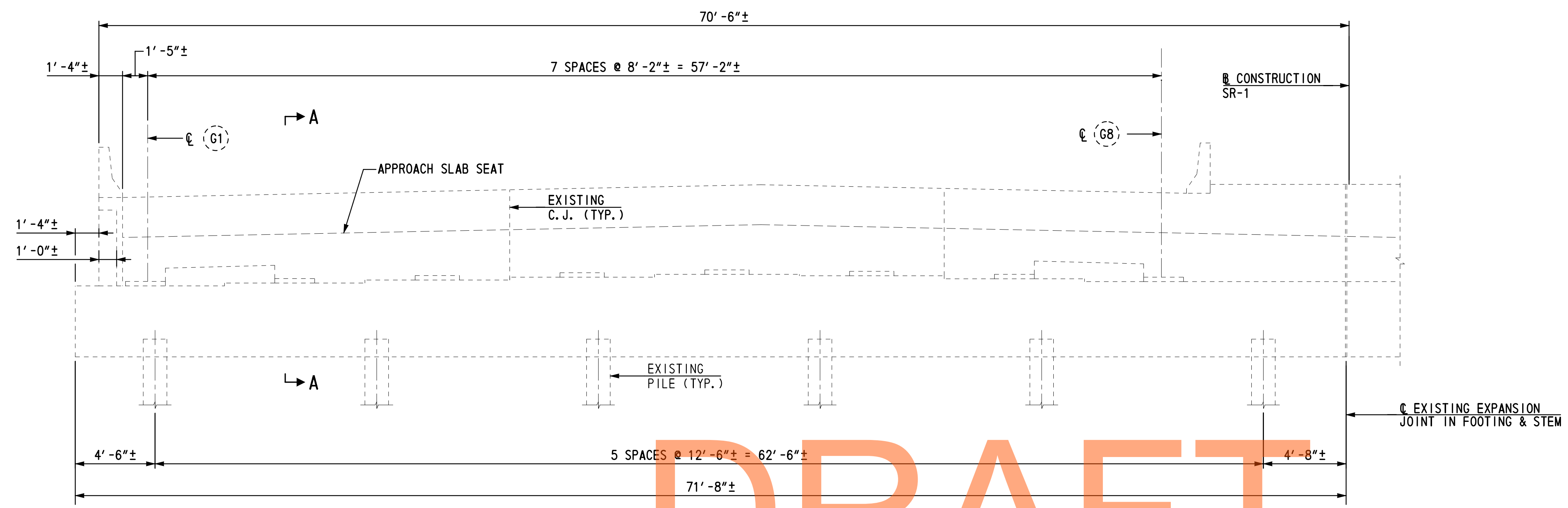
SCALE: AS NOTED

US 301 &
SR 1 INTERCHANGE

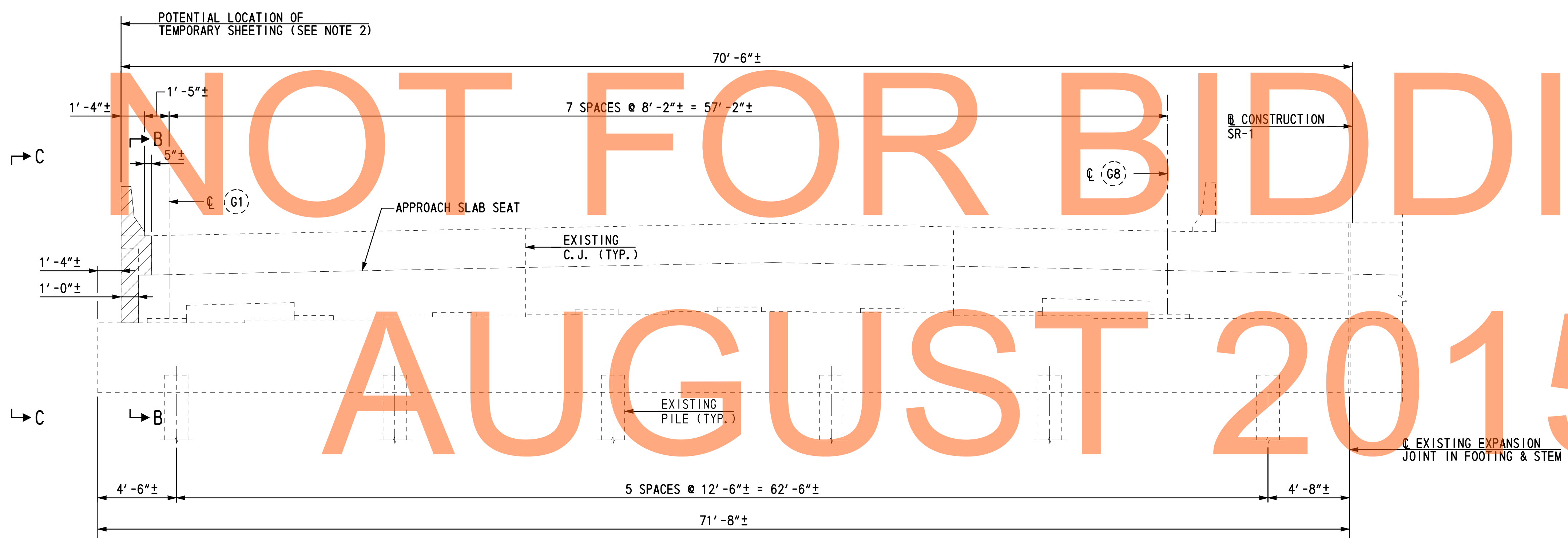
CONTRACT	BRIDGE NO.	1-903S
T200911302	DESIGNED BY:	MED
COUNTY	CHECKED BY:	SSD
NEW CASTLE		

SEQUENCE OF
CONSTRUCTION - 1

BR1-1 CS-01
SHEET NO.
121
TOTAL SHTS.
491



EXISTING ABUTMENT ELEVATION
SCALE: 1/4"=1'-0"



STAGE I ABUTMENT REMOVAL ELEVATION
SCALE: 1/4"=1'-0"

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AUGUST 2015

- NOTES:**
1. SOUTHBOUND ROADWAY, NORTH ABUTMENT SHOWN; SOUTHBOUND ROADWAY, SOUTH ABUTMENT OPPOSITE HAND AND SIMILAR.
 2. IF SHEETING IS REQUIRED REFER TO PROJECT NOTE 13 ON DWG. NO. PN-01.
 3. FOR SECTIONS A-A, B-B & VIEW C-C, SEE DWG. NO. CS-04.
 4. REMOVAL OF PORTIONS OF EXISTING CONCRETE PARAPET, WINGWALL, BACKWALL AND CHEEKWALL WILL BE PAID UNDER ITEM 602580 - PARTIAL REMOVAL OF P.C.C. MASONRY.
 5. COAT CUT ENDS OF EXISTING REINFORCEMENT BARS WITH AN APPROVED EPOXY PAINT. COST SHALL BE INCIDENTAL TO ITEM 602580 - PARTIAL REMOVAL OF P.C.C. MASONRY.

- REFERENCES:**
1. FOR PROJECT NOTES, SEE DWG. NO. PN-01.
 2. FOR LEGEND, SEE DWG. NO. PE-01.

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ADDENDUMS / REVISIONS

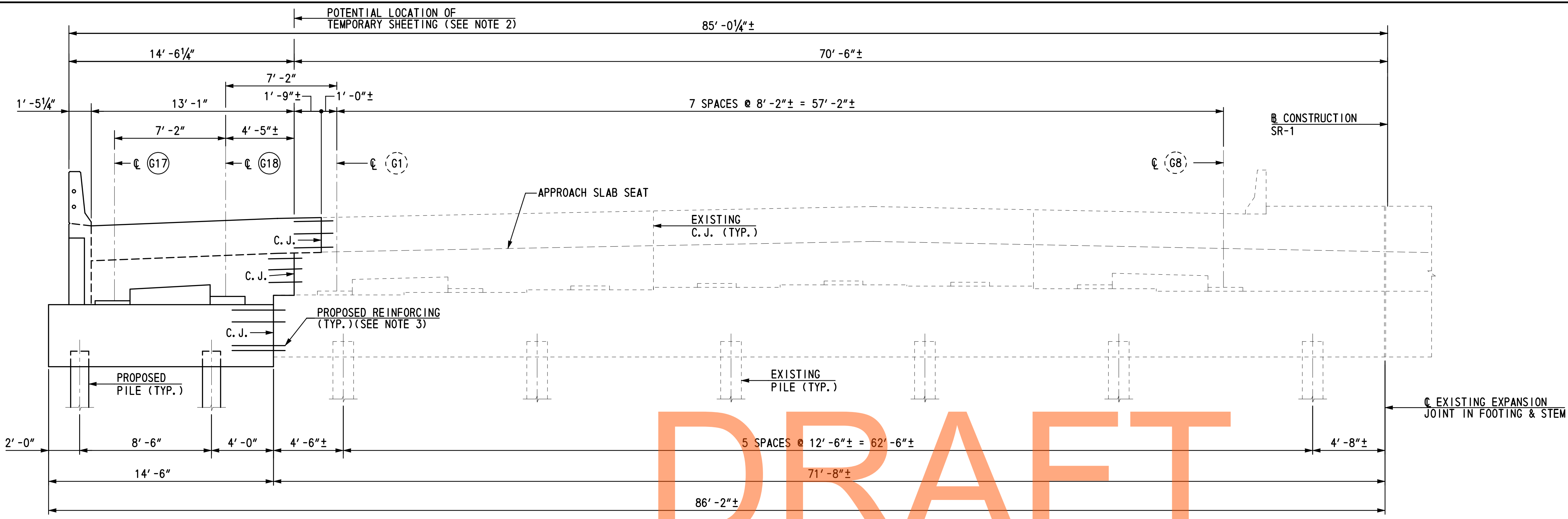
SCALE: AS NOTED

**US 301 &
SR 1 INTERCHANGE**

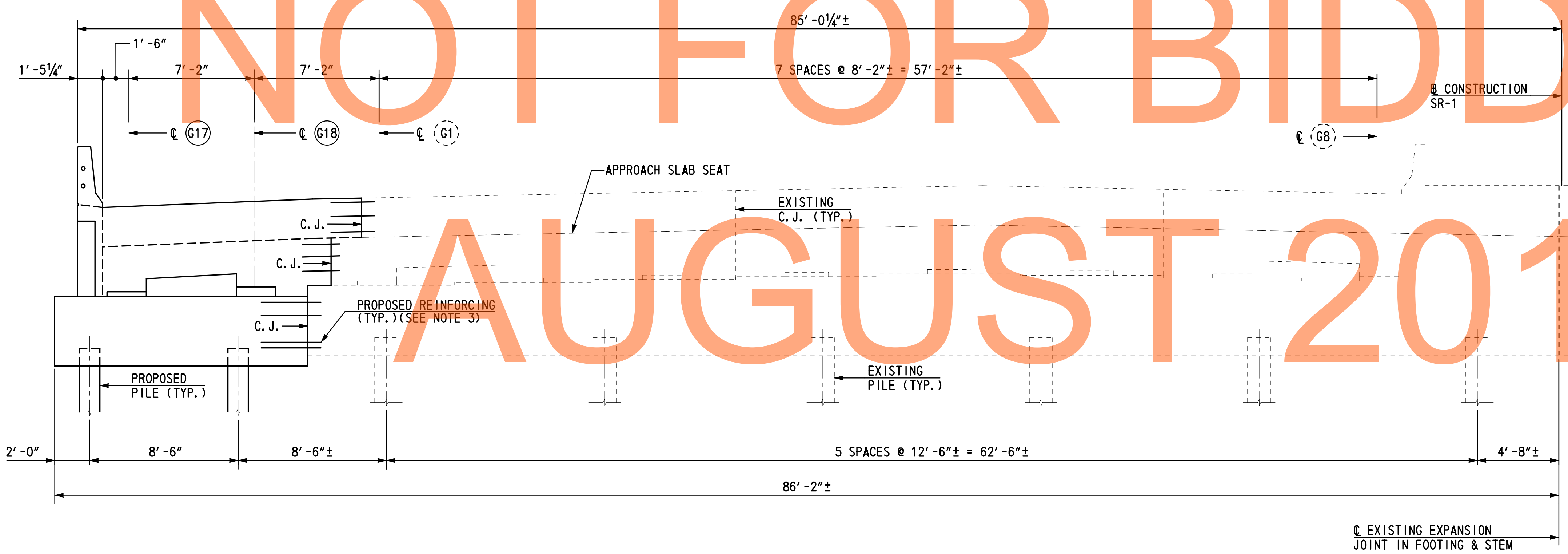
CONTRACT	BRIDGE NO.	1-903S
T200911302	DESIGNED BY:	MED
COUNTY	CHECKED BY:	SSD
NEW CASTLE		

**SEQUENCE OF
CONSTRUCTION - 2**

BR1-1 CS-02
SHEET NO. 122
TOTAL SHTS. 491



STAGE I ABUTMENT CONSTRUCTION ELEVATION
SCALE: 1/4"=1'-0"



FINAL CONDITION ABUTMENT ELEVATION
SCALE: 1/4"=1'-0"

DRAFT
NOT FOR BIDDING
AUGUST 2015

NOTES:

1. SOUTHBOUND ROADWAY, NORTH ABUTMENT SHOWN; SOUTHBOUND ROADWAY, SOUTH ABUTMENT OPPOSITE HAND AND SIMILAR.
2. IF SHEETING IS REQUIRED REFER TO PROJECT NOTE 13 ON DWG. NO. PN-01.
3. PROPOSED REINFORCING FOR ABUTMENTS SHALL BE DRILLED AND GROUTED INTO EXISTING STRUCTURE. SEE DWG. NO. AB-03 FOR ABUTMENT REINFORCEMENT DETAILS.
4. DRILLING HOLES AND INSTALLING REINFORCING BAR DOWELS WILL BE PAID UNDER ITEM 602579 - DRILLING HOLES AND INSTALLING DOWELS. DOWEL BARS WILL BE PAID UNDER ITEM 604000 - BAR REINFORCEMENT, EPOXY COATED.

REFERENCES:

1. FOR PROJECT NOTES, SEE DWG. NO. PN-01.
2. FOR LEGEND, SEE DWG. NO. PE-01.

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ADDENDUMS / REVISIONS	

SCALE: AS NOTED

US 301 &
SR 1 INTERCHANGE

CONTRACT	BRIDGE NO.	1-903S
T200911302	DESIGNED BY:	MED
COUNTY	CHECKED BY:	SSD
NEW CASTLE		

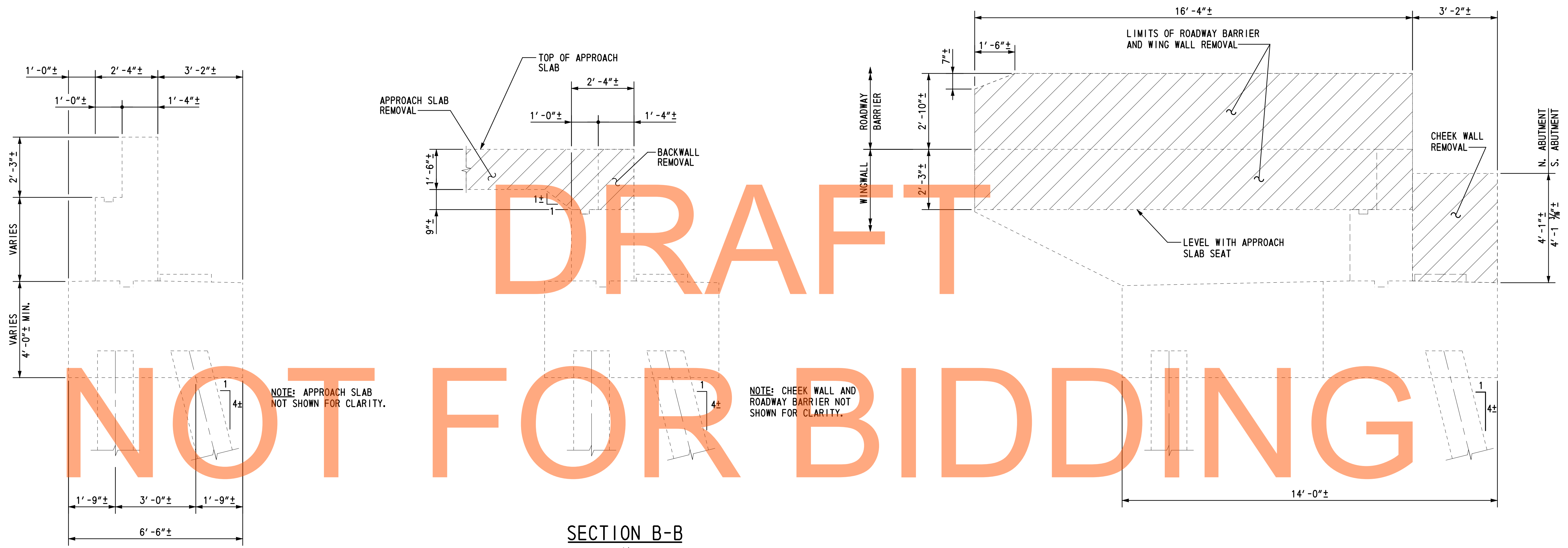
SEQUENCE OF
CONSTRUCTION - 3

BR1-1 CS-03
SHEET NO.
123
TOTAL SHTS.
491

DRAFT

NOT FOR BIDDING

AUGUST 2015



NOTE: APPROACH SLAB NOT SHOWN FOR CLARITY.

NOTE: CHEEK WALL AND ROADWAY BARRIER NOT SHOWN FOR CLARITY.

NOTES:

- REMOVAL OF PORTIONS OF EXISTING CONCRETE PARAPET, WINGWALL, BACKWALL, CHEEKWALL AND APPROACH SLAB WILL BE PAID UNDER ITEM 602580 - PARTIAL REMOVAL OF P. C. C. MASONRY.

REFERENCES:

- FOR PROJECT NOTES, SEE DWG. NO. PN-01.
- FOR LEGEND, SEE DWG. NO. PE-01.
- FOR LOCATION OF SECTIONS A-A, B-B AND VIEW C-C, SEE DWG. NO. CS-02.

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ADDENDUMS / REVISIONS	

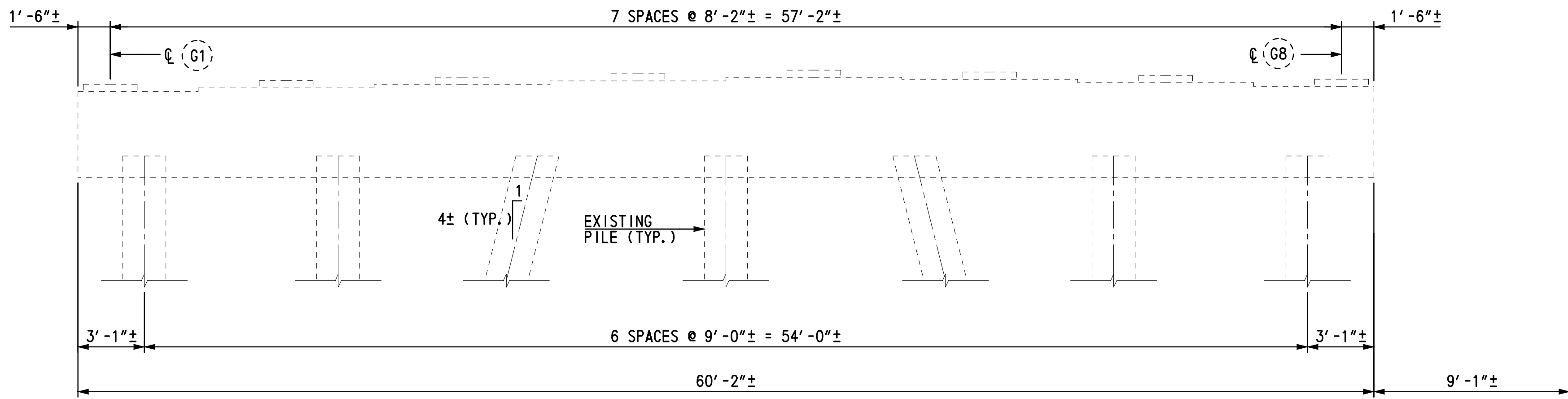
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US 301 & SR 1 INTERCHANGE

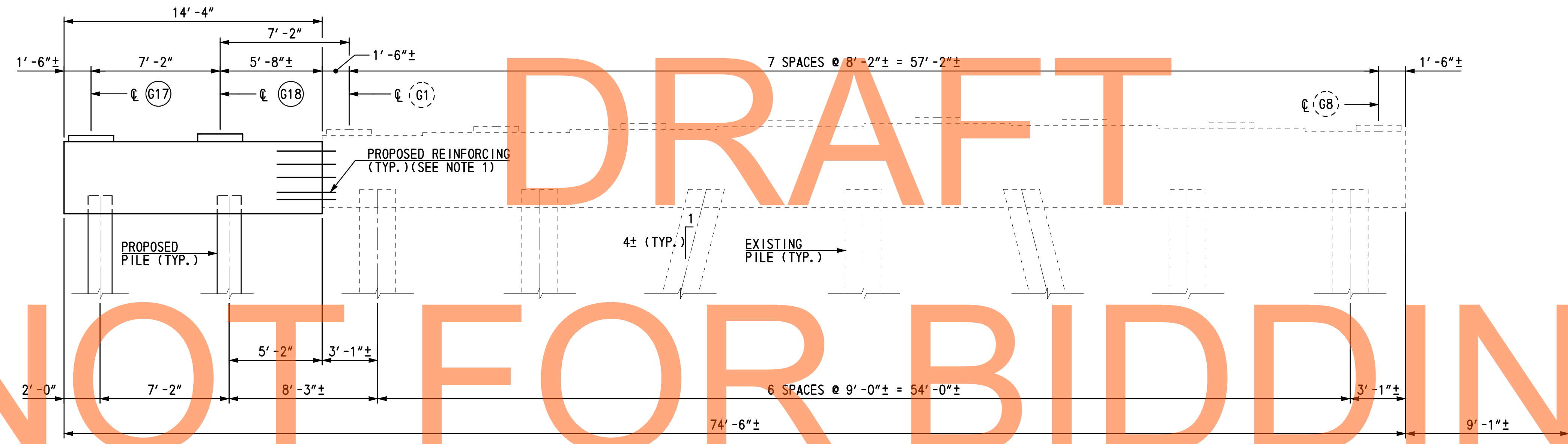
CONTRACT	BRIDGE NO.	1-903S
T200911302	DESIGNED BY:	MED
COUNTY	CHECKED BY:	RHM
NEW CASTLE		

SEQUENCE OF CONSTRUCTION - 4

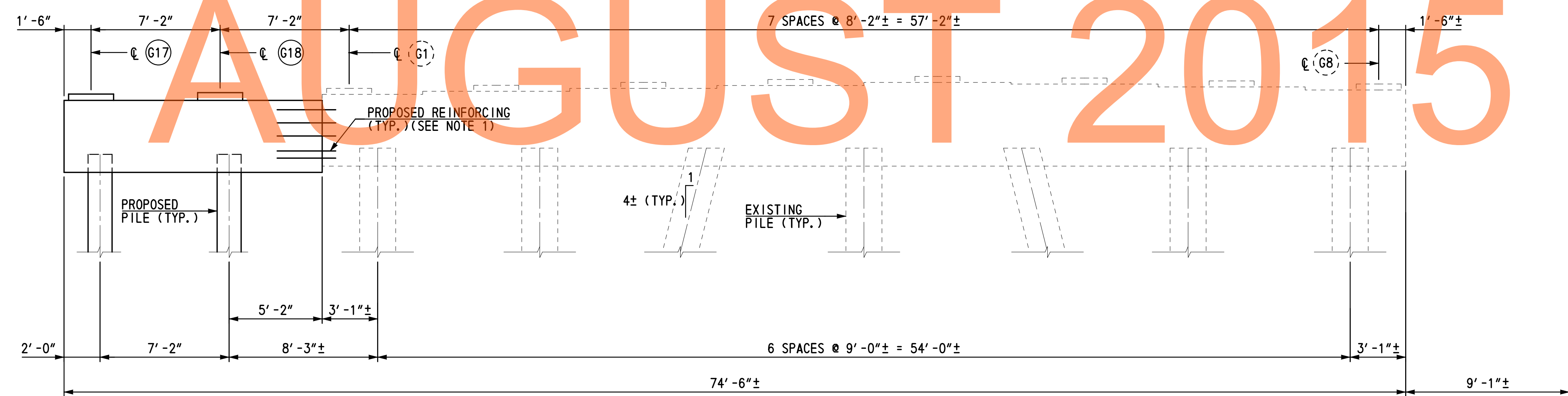
BR1-1 CS-04
SHEET NO.
124
TOTAL SHTS.
491



EXISTING PIER ELEVATION
SCALE: 1/4" = 1'-0"



STAGE I PIER CONSTRUCTION ELEVATION
SCALE: 1/4" = 1'-0"



FINAL CONDITION PIER ELEVATION
SCALE: 1/4" = 1'-0"

DRAFT
NOT FOR BIDDING
AUGUST 2015

CONSTRUCTION SR-1

CONSTRUCTION SR-1

CONSTRUCTION SR-1

NOTES:

1. PROPOSED REINFORCING FOR PIER CAP SHALL BE DRILLED AND GROUTED INTO EXISTING STRUCTURE. SEE DWG. NO. PR-02 FOR PIER BENT REINFORCEMENT DETAILS.
2. DRILLING HOLES AND INSTALLING REINFORCING BAR DOWELS WILL BE PAID UNDER ITEM 602579 - DRILLING HOLES AND INSTALLING DOWELS. DOWEL BARS WILL BE PAID UNDER ITEM 603000 - BAR REINFORCEMENT.

REFERENCES:

1. FOR PROJECT NOTES, SEE DWG. NO. PN-01.
2. FOR LEGEND, SEE DWG. NO. PE-01.

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ADDENDUMS / REVISIONS	

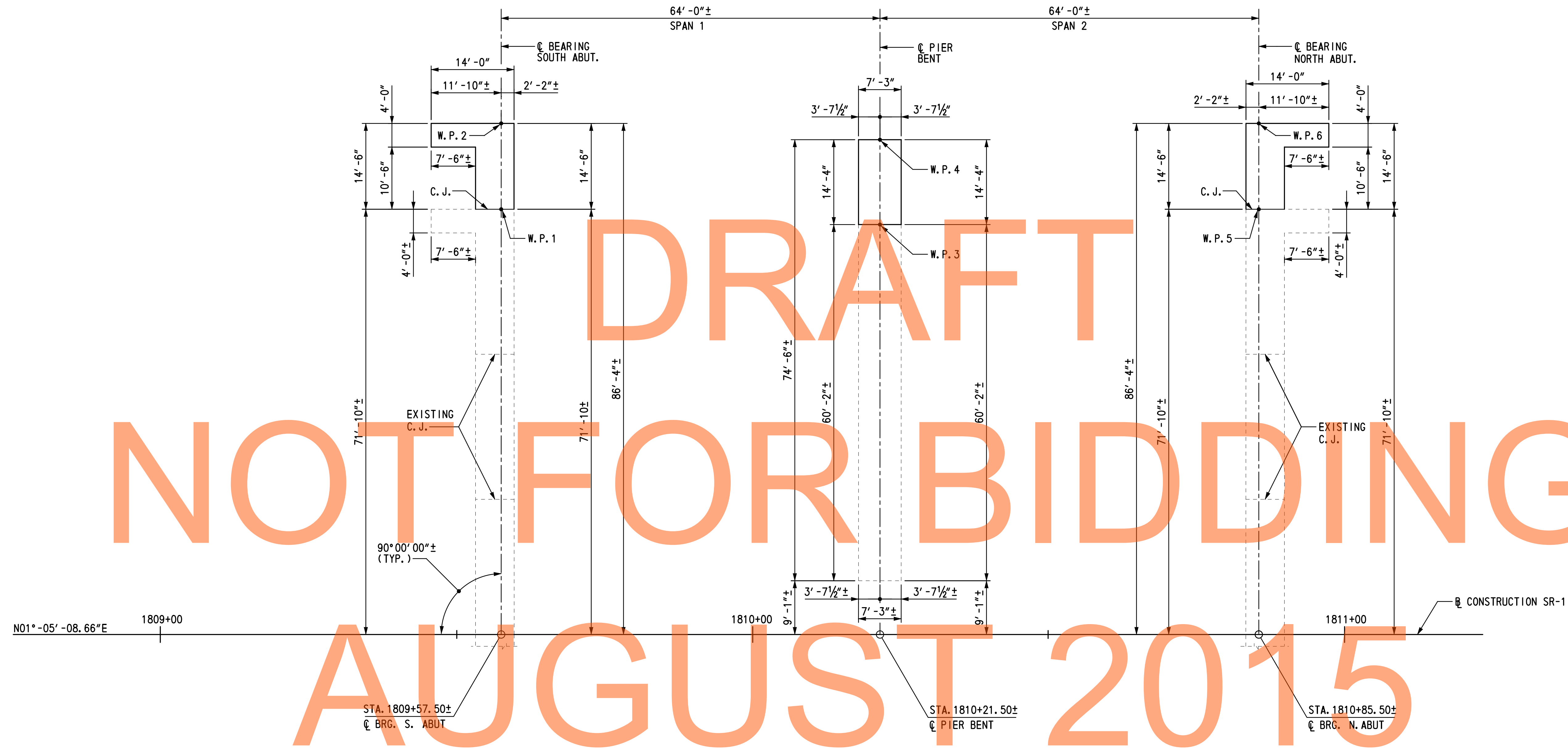
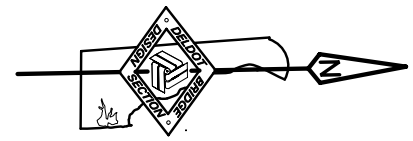
SCALE: AS NOTED

US 301 &
SR 1 INTERCHANGE

CONTRACT	BRIDGE NO.	1-903S
T200911302	DESIGNED BY:	MED
COUNTY	CHECKED BY:	RHM
NEW CASTLE		

SEQUENCE OF CONSTRUCTION - 5

BR1-1 CS-05
SHEET NO.
125
TOTAL SHTS.
491



DRAFT
NOT FOR BIDDING
AUGUST 2015

REFERENCES:

1. FOR PROJECT NOTES, SEE DWG. NO. PN-01.
2. FOR LEGEND, SEE DWG. NO. PE-01.
3. FOR SOUTH ABUTMENT PILE PLAN LAYOUT, SEE DWG. NO. PL-01.
4. FOR SOUTH ABUTMENT PLAN AND ELEVATION, SEE DWG. NO. AB-01.
5. FOR NORTH ABUTMENT PILE PLAN LAYOUT, SEE DWG. NO. PL-02.
6. FOR NORTH ABUTMENT PLAN AND ELEVATION, SEE DWG. NO. AB-02.
7. FOR PIER PILE PLAN LAYOUT, SEE DWG. NO. PL-03.
8. FOR PIER PIER BENT PLAN AND ELEVATION, SEE DWG. NO. PR-01.

PLAN
SCALE: 1"=10'-0"

WORKING POINT	☉ SR 1 STA.	OFFSET	NORTHING	EASTING
W. P. 1	1809+57.50±	71.83± FT LT	559327.07±	590403.90±
W. P. 2	1809+57.50±	86.33± FT LT	559327.34±	590389.40±
W. P. 3	1810+21.50±	69.25± FT LT	559391.00±	590407.69±
W. P. 4	1810+21.50±	83.58± FT LT	559391.27±	590393.36±
W. P. 5	1810+85.50±	71.83± FT LT	559455.05±	590406.32±
W. P. 6	1810+85.50±	86.33± FT LT	559455.32±	590391.82±

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ADDENDUMS / REVISIONS	

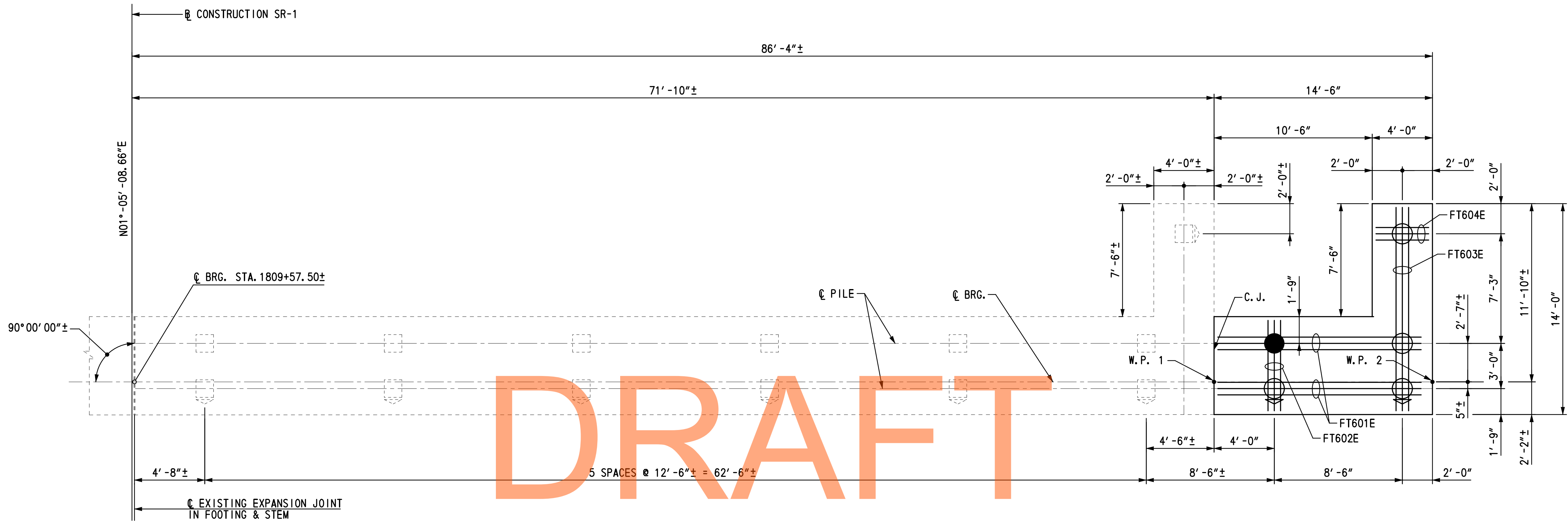
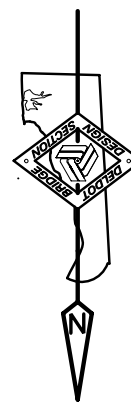
SCALE: AS NOTED

**US 301 &
SR 1 INTERCHANGE**

CONTRACT	BRIDGE NO.	1-903S
T200911302	DESIGNED BY:	KMG
COUNTY	CHECKED BY:	MED
NEW CASTLE		

**GEOMETRIC FOOTING
LAYOUT PLAN**

BR1-1 FT-01
SHEET NO.
126
TOTAL SHTS.
491



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

NOT FOR BIDDING

STEEL PIPE PILE NOTES:

1. THE FACTORED RESISTANCE OF THE 16 INCH DIAMETER STEEL PIPE (0.50 INCH WALL THICKNESS) PILES IS 120 TONS. PILES SHALL BE DRIVEN AND TESTED IN CONFORMANCE WITH THE SPECIAL PROVISIONS FOR DYNAMIC PILE TESTING TO A NOMINAL PILE DRIVING RESISTANCE OF 210 TONS.
2. PILES SHALL BE DRIVEN TO THE DRIVING CRITERIA DEVELOPED FROM DYNAMIC PILE TESTING AND AS SPECIFIED BY THE ENGINEER TO ACHIEVE A NOMINAL PILE DRIVING RESISTANCE OF 210 TONS AND TO THE SPECIFIED MINIMUM TIP ELEVATION. PILES MEETING THE AFOREMENTIONED CRITERIA WILL BE CONSIDERED SATISFACTORY.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING A WAVE EQUATION ANALYSIS AND ALL OTHER INCIDENTALS IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE WAVE EQUATION ANALYSIS AND DYNAMIC PILE TESTING MUST BE SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF DELAWARE IN ACCORDANCE WITH THE SPECIAL PROVISIONS. UPON COMPLETION OF THE DYNAMIC PILE TESTING, THE CONTRACTOR SHALL SUBMIT A SIGNAL MATCHING ANALYSIS TO THE ENGINEER FOR REVIEW AND APPROVAL IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
4. ALL TEST PILES SHALL BE 10 FEET LONGER THAN THE PILE LENGTH COMPUTED FROM THE PILE TIP DATA TABLE. PILE LENGTHS FOR ORDERING PURPOSES SHALL BE DETERMINED BY THE TEST PILES. DYNAMIC PILE TESTING AND SIGNAL MATCHING ANALYSIS SHALL BE COMPLETED BY THE CONTRACTOR IN ACCORDANCE WITH THE SPECIAL PROVISIONS. TEST AND PRODUCTION PILE RESTRIKES WILL BE PAID FOR AS FOLLOWS:
 - A. ALL TEST PILES WILL BE RESTRUCK AFTER A WAITING PERIOD OF AT LEAST 48 HOURS. TEST PILE RESTRIKES SHALL BE INCIDENTAL TO THE INITIAL INSTALLATION OF THE PILE PROVIDED THEY ARE REQUESTED WITHIN FIVE WORKING DAYS FROM THE COMPLETION OF THE INITIAL DRIVE. IF RESTRIKES ARE REQUESTED AFTER FIVE WORKING DAYS FROM THE COMPLETION OF THE INITIAL DRIVE, THEN THE TEST PILE RESTRIKE SHALL BE PAID FOR IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
 - B. IF DIRECTED BY THE ENGINEER TO RESTRIKE A PRODUCTION PILE, THE RESTRIKE OF THE PRODUCTION PILE SHALL BE PAID SEPARATELY UNDER ITEM NO. 619501 - PRODUCTION PILE RESTRIKE.
5. THE DEPARTMENT RESERVES THE RIGHT TO PERFORM DYNAMIC PILE TESTING OF RESTRIKES.
6. ALL PILES ARE TO BE DRIVEN OPEN ENDED.
7. PRIOR TO INSERTION OF THE STEEL REINFORCEMENT CAGE AND PLACEMENT OF THE FILL CONCRETE, ALL DIRT, WATER AND LOOSE MATERIAL SHALL BE REMOVED FROM THE INTERIOR SURFACE OF EACH PIPE PILE FROM THE TOP OF THE PILE TO THE BOTTOM OF CONCRETE FILL ELEVATION SHOWN ON THE PLANS, ALLOWING THE PILE FILL CONCRETE TO BE PLACED WITHOUT CONTAMINATION.
8. ALL DEWATERING, CLEANOUT, REINFORCEMENT AND CLASS A FILL CONCRETE REQUIRED TO CONSTRUCT THE STEEL PIPE PILES AS SHOWN ON THE PLANS AND AS SPECIFIED IN THE CONTRACT DOCUMENTS WILL BE INCIDENTAL TO ITEM 619XXX - INSTALLATION OF STEEL PIPE PILES, 16" AND ITEM 619XXX - INSTALLATION OF STEEL PIPE TEST PILES, 16".
9. CLASS A CONCRETE PILE FILL SHALL BE PLACED IN ONE POUR WITH ABUTMENT FOOTING CONCRETE.
10. FOR ADDITIONAL PIPE PILE CONCRETE FILL AND REINFORCEMENT DETAILS, SEE DWG. NO. PL-03.

PILE LEGEND:

- INDICATES EXISTING PLUMB PILES
- INDICATES EXISTING BATTERED PILES BATTERED 4:1 IN DIRECTION OF ARROW
- INDICATES PROPOSED PLUMB PILES
- INDICATES PROPOSED BATTERED PILES BATTERED 4:1 IN DIRECTION OF ARROW
- INDICATES TEST PILES

REFERENCES:

1. FOR PROJECT NOTES, SEE DWG. NO. PN-01.
2. FOR LEGEND, SEE DWG. NO. PE-01.
3. FOR GEOMETRIC FOOTING LAYOUT PLAN, SEE DWG. NO. FT-01.
4. FOR REINFORCEMENT DETAILS, SEE DWG. NO. AB-03.

PILE DRIVING INFORMATION	
PILE SIZE AND TYPE:	16" DIA. STEEL OPEN END
ACTUAL BEARING OBTAINED:	
HAMMER TYPE:	
PILE HAMMER ENERGY:	30,000 TO 70,000 FT-LBS
SPECIAL DRIVING CONDITIONS AND COMMENTS:	

PILE TIP DATA				
SUBSTRUCTURE UNIT	DESIGN DATA		ACTUAL FIELD DATA	
	MINIMUM TIP ELEVATION	ESTIMATED TIP ELEVATION	AVERAGE ACTUAL MINIMUM TIP ELEVATION	AVERAGE ACTUAL MAXIMUM TIP ELEVATION
SOUTH ABUT.	-35.00	-45.00		

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ADDENDUMS / REVISIONS	

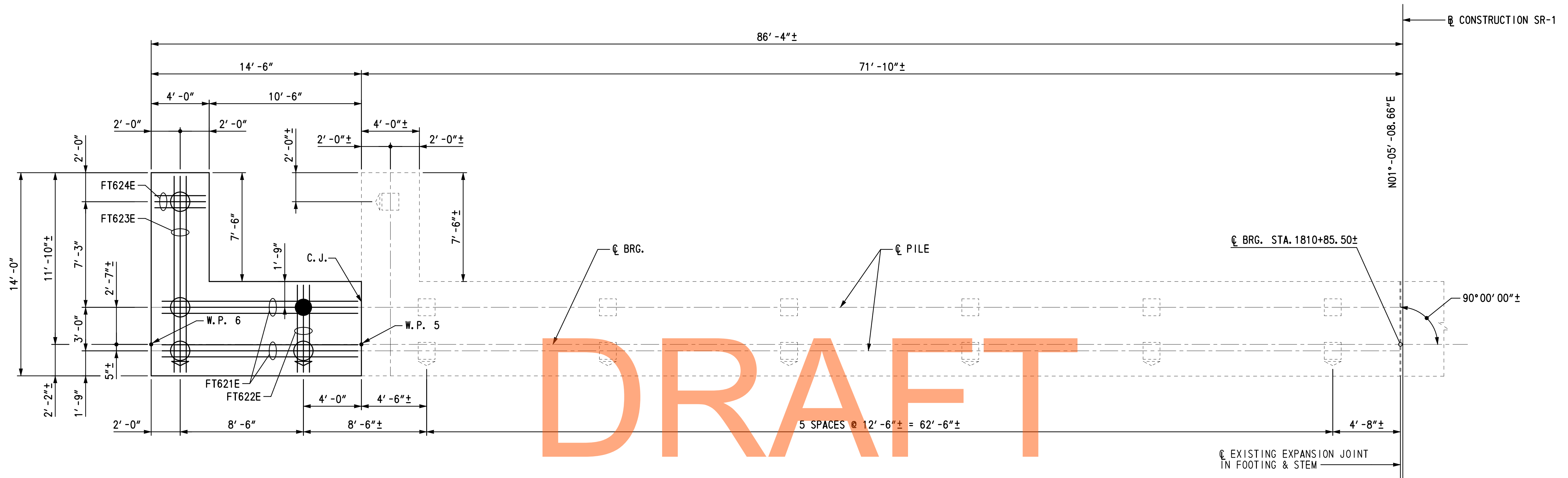
SCALE: AS NOTED

US 301 & SR 1 INTERCHANGE

CONTRACT	BRIDGE NO.	1-903S
T200911302	DESIGNED BY:	RTC
COUNTY	CHECKED BY:	FPH
NEW CASTLE		

SOUTH ABUTMENT
PILE PLAN LAYOUT

BR1-1 PL-01	SHEET NO.	127
	TOTAL SHTS.	491



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

NOT FOR BIDDING

STEEL PIPE PILE NOTES:

1. THE FACTORED RESISTANCE OF THE 16 INCH DIAMETER STEEL PIPE (0.50 INCH WALL THICKNESS) PILES IS 120 TONS. PILES SHALL BE DRIVEN AND TESTED IN CONFORMANCE WITH THE SPECIAL PROVISIONS FOR DYNAMIC PILE TESTING TO A NOMINAL PILE DRIVING RESISTANCE OF 210 TONS.
2. PILES SHALL BE DRIVEN TO THE DRIVING CRITERIA DEVELOPED FROM DYNAMIC PILE TESTING AND AS SPECIFIED BY THE ENGINEER TO ACHIEVE A NOMINAL PILE DRIVING RESISTANCE OF 210 TONS AND TO THE SPECIFIED MINIMUM TIP ELEVATION. PILES MEETING THE AFOREMENTIONED CRITERIA WILL BE CONSIDERED SATISFACTORY.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING A WAVE EQUATION ANALYSIS AND ALL OTHER INCIDENTALS IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE WAVE EQUATION ANALYSIS AND DYNAMIC PILE TESTING MUST BE SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF DELAWARE IN ACCORDANCE WITH THE SPECIAL PROVISIONS. UPON COMPLETION OF THE DYNAMIC PILE TESTING, THE CONTRACTOR SHALL SUBMIT A SIGNAL MATCHING ANALYSIS TO THE ENGINEER FOR REVIEW AND APPROVAL IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
4. ALL TEST PILES SHALL BE 10 FEET LONGER THAN THE PILE LENGTH COMPUTED FROM THE PILE TIP DATA TABLE. PILE LENGTHS FOR ORDERING PURPOSES SHALL BE DETERMINED BY THE TEST PILES. DYNAMIC PILE TESTING AND SIGNAL MATCHING ANALYSIS SHALL BE COMPLETED BY THE CONTRACTOR IN ACCORDANCE WITH THE SPECIAL PROVISIONS. TEST AND PRODUCTION PILE RESTRIKES WILL BE PAID FOR AS FOLLOWS:
 - A. ALL TEST PILES WILL BE RESTRIKED AFTER A WAITING PERIOD OF AT LEAST 48 HOURS. TEST PILE RESTRIKES SHALL BE INCIDENTAL TO THE INITIAL INSTALLATION OF THE PILE PROVIDED THEY ARE REQUESTED WITHIN FIVE WORKING DAYS FROM THE COMPLETION OF THE INITIAL DRIVE. IF RESTRIKES ARE REQUESTED AFTER FIVE WORKING DAYS FROM THE COMPLETION OF THE INITIAL DRIVE, THEN THE TEST PILE RESTRIKE SHALL BE PAID FOR IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
 - B. IF DIRECTED BY THE ENGINEER TO RESTRIKE A PRODUCTION PILE, THE RESTRIKE OF THE PRODUCTION PILE SHALL BE PAID SEPARATELY UNDER ITEM NO. 619501 - PRODUCTION PILE RESTRIKE.
5. THE DEPARTMENT RESERVES THE RIGHT TO PERFORM DYNAMIC PILE TESTING OF RESTRIKES.
6. ALL PILES ARE TO BE DRIVEN OPEN ENDED.
7. PRIOR TO INSERTION OF THE STEEL REINFORCEMENT CAGE AND PLACEMENT OF THE FILL CONCRETE, ALL DIRT, WATER AND LOOSE MATERIAL SHALL BE REMOVED FROM THE INTERIOR SURFACE OF EACH PIPE PILE FROM THE TOP OF THE PILE TO THE BOTTOM OF CONCRETE FILL ELEVATION SHOWN ON THE PLANS, ALLOWING THE PILE FILL CONCRETE TO BE PLACED WITHOUT CONTAMINATION.
8. ALL DEWATERING, CLEANOUT, REINFORCEMENT AND CLASS A FILL CONCRETE REQUIRED TO CONSTRUCT THE STEEL PIPE PILES AS SHOWN ON THE PLANS AND AS SPECIFIED IN THE CONTRACT DOCUMENTS WILL BE INCIDENTAL TO ITEM 619XXX - INSTALLATION OF STEEL PIPE PILES, 16" AND ITEM 619XXX - INSTALLATION OF STEEL PIPE TEST PILES, 16".
9. CLASS A CONCRETE PILE FILL SHALL BE PLACED IN ONE POUR WITH ABUTMENT FOOTING CONCRETE.
10. FOR ADDITIONAL PIPE PILE CONCRETE FILL AND REINFORCEMENT DETAILS, SEE DWG. NO. PL-03.

PILE LEGEND:

- INDICATES EXISTING PLUMB PILES
- INDICATES EXISTING BATTERED PILES BATTERED 4:1 IN DIRECTION OF ARROW
- INDICATES PROPOSED PLUMB PILES
- INDICATES PROPOSED BATTERED PILES BATTERED 4:1 IN DIRECTION OF ARROW
- INDICATES TEST PILES

REFERENCES:

1. FOR PROJECT NOTES, SEE DWG. NO. PN-01.
2. FOR LEGEND, SEE DWG. NO. PE-01.
3. FOR GEOMETRIC FOOTING LAYOUT PLAN, SEE DWG. NO. FT-01.
4. FOR REINFORCEMENT DETAILS, SEE DWG. NO. AB-03.

PILE DRIVING INFORMATION	
PILE SIZE AND TYPE:	16" DIA. STEEL OPEN END
ACTUAL BEARING OBTAINED:	
HAMMER TYPE:	
PILE HAMMER ENERGY:	30,000 TO 70,000 FT-LBS
SPECIAL DRIVING CONDITIONS AND COMMENTS:	

PILE TIP DATA				
SUBSTRUCTURE UNIT	DESIGN DATA		ACTUAL FIELD DATA	
	MINIMUM TIP ELEVATION	ESTIMATED TIP ELEVATION	AVERAGE ACTUAL MINIMUM TIP ELEVATION	AVERAGE ACTUAL MAXIMUM TIP ELEVATION
NORTH ABUT.	-35.00	-47.00		

ADDENDUMS / REVISIONS

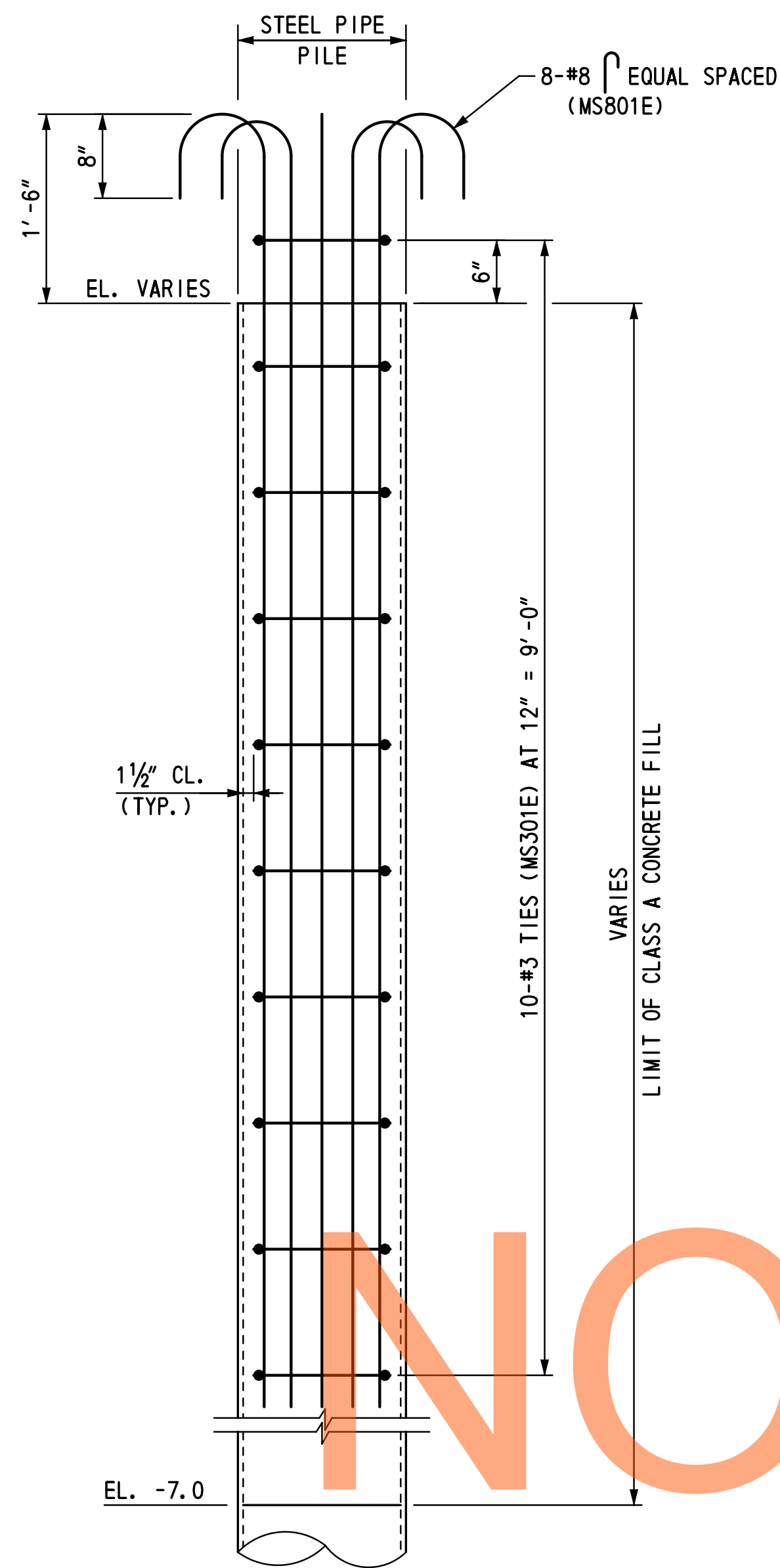
SCALE: AS NOTED

US 301 &
SR 1 INTERCHANGE

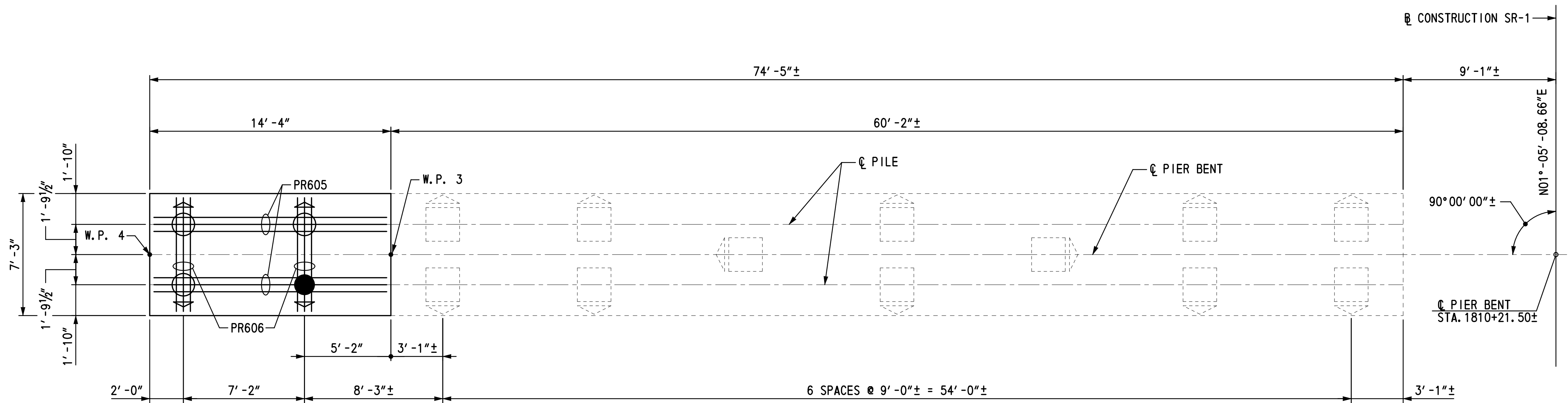
CONTRACT	BRIDGE NO.	1-903S
T200911302	DESIGNED BY:	RTC
COUNTY	CHECKED BY:	FPH
NEW CASTLE		

**NORTH ABUTMENT
PILE PLAN LAYOUT**

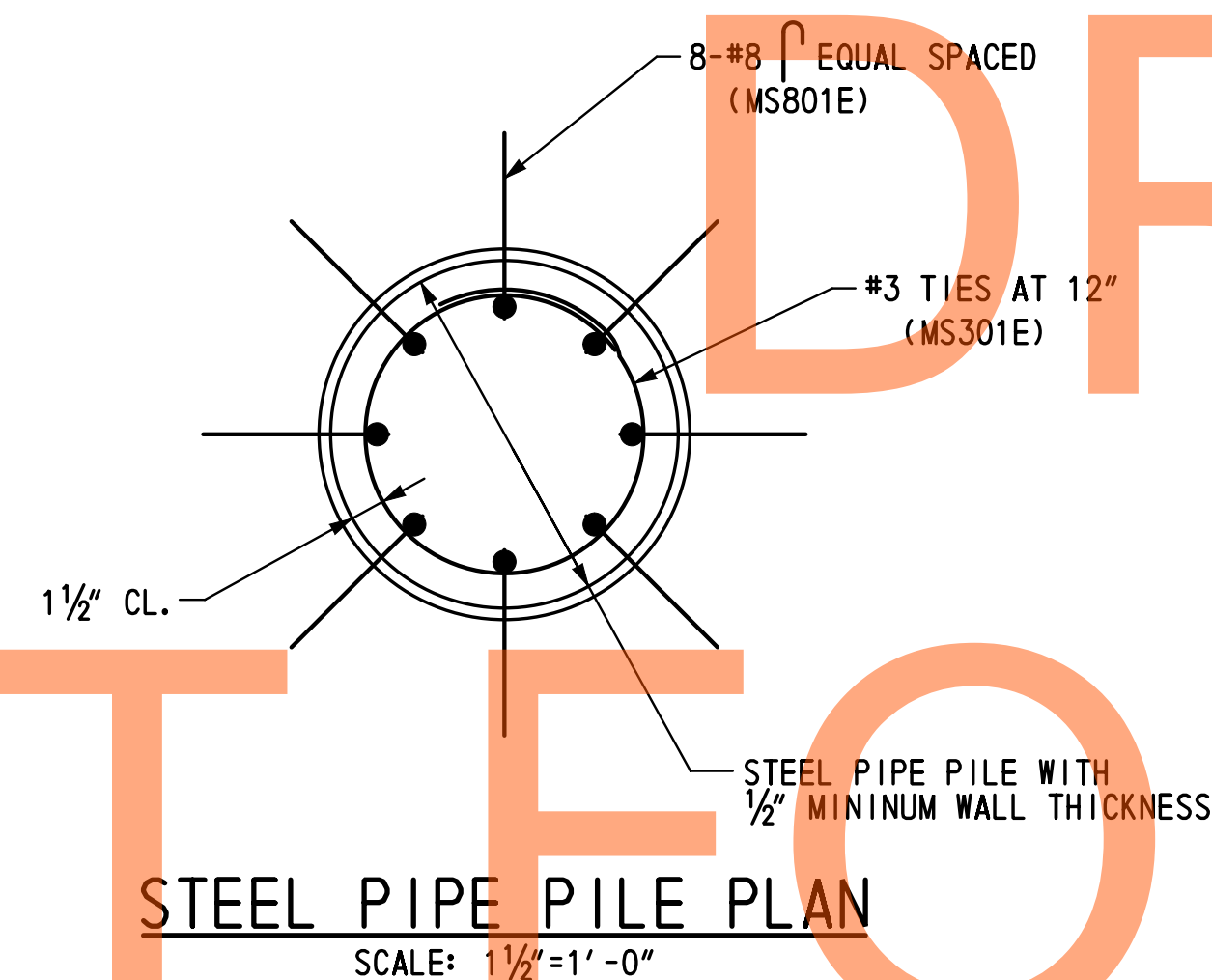
BR-1 PL-02
SHEET NO.
128
TOTAL SHTS.
491



STEEL PIPE PILE ELEVATION
SCALE: 1"=1'-0"



PILE LAYOUT PLAN
SCALE: 1/4"=1'-0"



STEEL PIPE PILE PLAN
SCALE: 1 1/2"=1'-0"

STEEL PIPE PILE NOTES:

1. THE FACTORED RESISTANCE OF THE 16 INCH DIAMETER STEEL PIPE (0.50 INCH WALL THICKNESS) PILES IS 120 TONS. PILES SHALL BE DRIVEN AND TESTED IN CONFORMANCE WITH THE SPECIAL PROVISIONS FOR DYNAMIC PILE TESTING TO A NOMINAL PILE DRIVING RESISTANCE OF 210 TONS.
2. PILES SHALL BE DRIVEN TO THE DRIVING CRITERIA DEVELOPED FROM DYNAMIC PILE TESTING AND AS SPECIFIED BY THE ENGINEER TO ACHIEVE A NOMINAL PILE DRIVING RESISTANCE OF 210 TONS AND TO THE SPECIFIED MINIMUM TIP ELEVATION. PILES MEETING THE AFOREMENTIONED CRITERIA WILL BE CONSIDERED SATISFACTORY.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING A WAVE EQUATION ANALYSIS AND ALL OTHER INCIDENTALS IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE WAVE EQUATION ANALYSIS AND DYNAMIC PILE TESTING MUST BE SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF DELAWARE IN ACCORDANCE WITH THE SPECIAL PROVISIONS. UPON COMPLETION OF THE DYNAMIC PILE TESTING, THE CONTRACTOR SHALL SUBMIT A SIGNAL MATCHING ANALYSIS TO THE ENGINEER FOR REVIEW AND APPROVAL IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
4. ALL TEST PILES SHALL BE 10 FEET LONGER THAN THE PILE LENGTH COMPUTED FROM THE PILE TIP DATA TABLE. PILE LENGTHS FOR ORDERING PURPOSES SHALL BE DETERMINED BY THE TEST PILES. DYNAMIC PILE TESTING AND SIGNAL MATCHING ANALYSIS SHALL BE COMPLETED BY THE CONTRACTOR IN ACCORDANCE WITH THE SPECIAL PROVISIONS. TEST AND PRODUCTION PILE RESTRIKES WILL BE PAID FOR AS FOLLOWS:
 - A. ALL TEST PILES WILL BE RESTRUCK AFTER A WAITING PERIOD OF AT LEAST 48 HOURS. TEST PILE RESTRIKES SHALL BE INCIDENTAL TO THE INITIAL INSTALLATION OF THE PILE PROVIDED THEY ARE REQUESTED WITHIN FIVE WORKING DAYS FROM THE COMPLETION OF THE INITIAL DRIVE. IF RESTRIKES ARE REQUESTED AFTER FIVE WORKING DAYS FROM THE COMPLETION OF THE INITIAL DRIVE, THEN THE TEST PILE RESTRIKE SHALL BE PAID FOR IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
 - B. IF DIRECTED BY THE ENGINEER TO RESTRIKE A PRODUCTION PILE, THE RESTRIKE OF THE PRODUCTION PILE SHALL BE PAID SEPARATELY UNDER ITEM NO. 619501 - PRODUCTION PILE RESTRIKE.
5. THE DEPARTMENT RESERVES THE RIGHT TO PERFORM DYNAMIC PILE TESTING OF RESTRIKES.
6. ALL PILES ARE TO BE DRIVEN OPEN ENDED.
7. PRIOR TO INSERTION OF THE STEEL REINFORCEMENT CAGE AND PLACEMENT OF THE FILL CONCRETE, ALL DIRT, WATER AND LOOSE MATERIAL SHALL BE REMOVED FROM THE INTERIOR SURFACE OF EACH PIPE PILE FROM THE TOP OF THE PILE TO THE BOTTOM OF CONCRETE FILL ELEVATION SHOWN ON THIS SHEET, ALLOWING THE PILE FILL CONCRETE TO BE PLACED WITHOUT CONTAMINATION.
8. ALL DEWATERING, CLEANOUT, REINFORCEMENT AND CLASS A FILL CONCRETE REQUIRED TO CONSTRUCT THE STEEL PIPE PILES AS SHOWN ON THE PLANS AND AS SPECIFIED IN THE CONTRACT DOCUMENTS WILL BE INCIDENTAL TO ITEM 619XXX - INSTALLATION OF STEEL PIPE PILES, 16" AND ITEM 619XXX - INSTALLATION OF STEEL PIPE TEST PILES, 16".
9. CLASS A CONCRETE PILE FILL SHALL BE PLACED IN ONE POUR WITH PIER BENT CAP CONCRETE.
10. ALL MILD STEEL REINFORCEMENT IN STEEL PIPE PILES SHALL BE EPOXY COATED, AND BAR MARKS ARE DENOTED WITH THE SUFFIX 'E'.
11. THE CONTRACTOR SHALL APPLY A PROTECTIVE COATING TO THE PIER BENT PILES CONSISTING OF COAL TAR EPOXY, AS SPECIFIED IN THE CONTRACT DOCUMENTS. THE PROTECTIVE COATING SHALL EXTEND FROM THE TOP OF EACH PILE CUT-OFF ELEVATION FOR A LENGTH OF NOT LESS THAN 20 FEET.

PILE LEGEND:

- INDICATES EXISTING BATTERED PILES BATTERED 4:1 IN DIRECTION OF ARROW
- INDICATES PROPOSED PLUMB PILES
- INDICATES PROPOSED BATTERED PILES BATTERED 4:1 IN DIRECTION OF ARROW
- INDICATES TEST PILES

SPECIFICATIONS				BENDING DIMENSIONS (FEET-INCHES)			
QTY.	SIZE	LENGTH	MARK	TYPE	A / C	B	G / O / J
10	4	10'-5"	MS301E	T3	9'-5"	--	12" 1'-0"
8	8	11'-2"	MS801E	1	0'-11"	10'-3"	-- 0'-8"

BAR BENDS		
A	B	G
C = CIRCUM.		

* EA. PILE
NOTE: ALL BAR DIMENSIONS ARE MEASURED OUT TO OUT

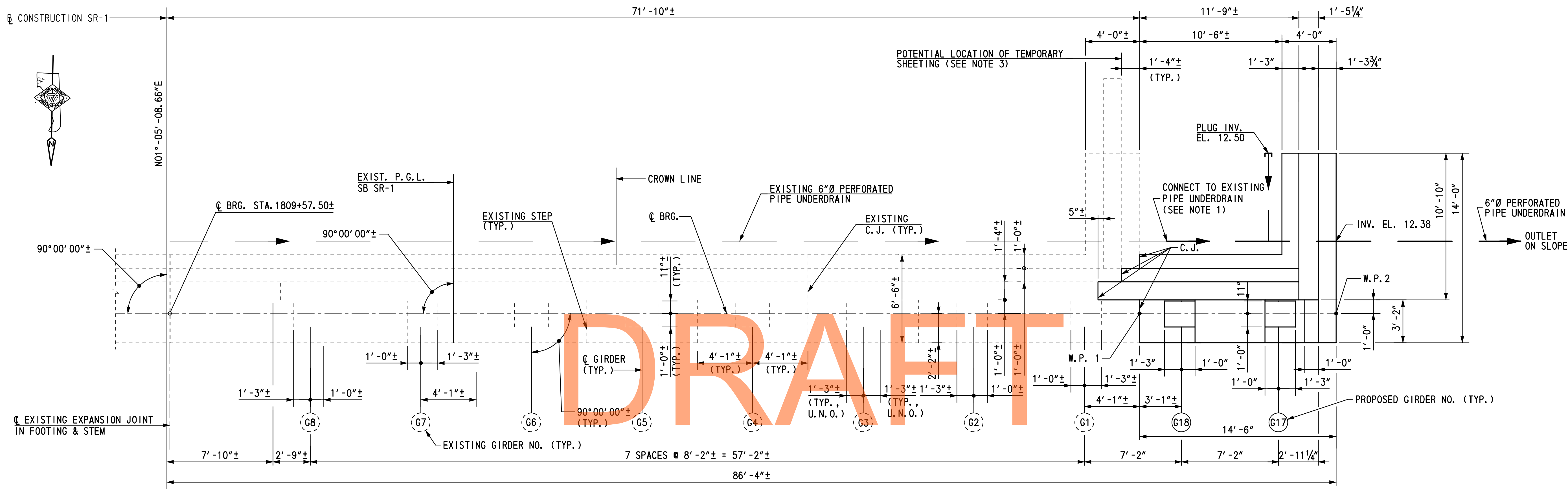
PILE TIP DATA				
SUBSTRUCTURE UNIT	DESIGN DATA		ACTUAL FIELD DATA	
	MINIMUM TIP ELEVATION	ESTIMATED TIP ELEVATION	AVERAGE ACTUAL MINIMUM TIP ELEVATION	AVERAGE ACTUAL MAXIMUM TIP ELEVATION
PIER	-35.00	-57.00		

PILE DRIVING INFORMATION	
PILE SIZE AND TYPE:	16" DIA. STEEL OPEN END
ACTUAL BEARING OBTAINED:	
HAMMER TYPE:	
PILE HAMMER ENERGY:	30,000 TO 70,000 FT-LBS
SPECIAL DRIVING CONDITIONS AND COMMENTS:	

REFERENCES:

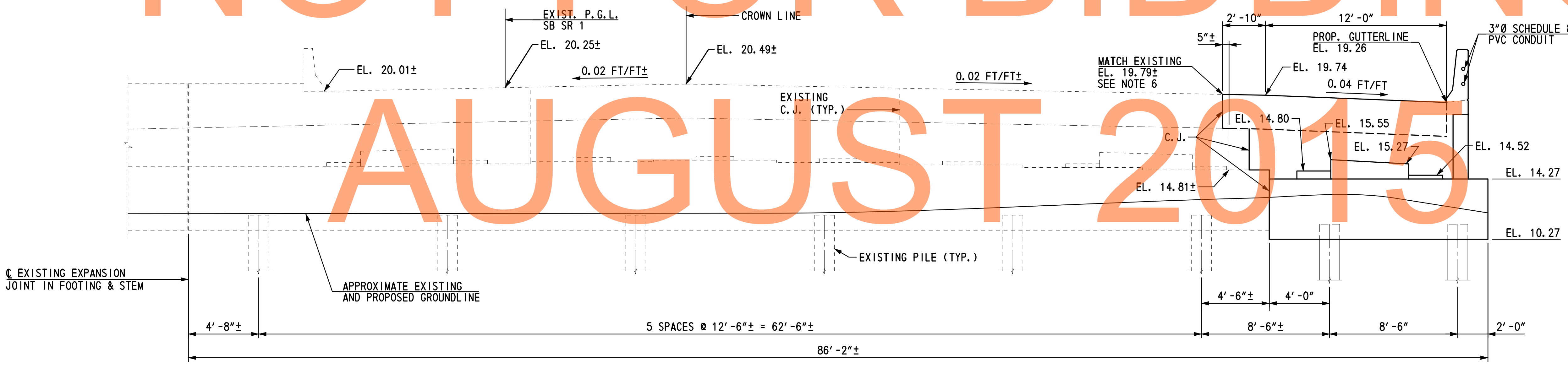
1. FOR PROJECT NOTES, SEE DWG. NO. PN-01.
2. FOR LEGEND, SEE DWG. NO. PE-01.
3. FOR GEOMETRIC FOOTING LAYOUT PLAN, SEE DWG. NO. FT-01.
4. FOR REINFORCEMENT DETAILS, SEE DWG. NO. PR-02.

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NOT FOR BIDDING

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



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

NOTES:

1. 6"Ø PERFORATED UNDERDRAIN TO BE SLOPED 1/8"/FT (TYP.).
2. PAYMENT FOR 6"Ø PERFORATED UNDERDRAIN IS INCIDENTAL TO ITEM 602003 - PORTLAND CEMENT CONCRETE MASONRY, ABUTMENT FOOTING, CLASS A.
3. CONTRACTOR SHALL USE CARE WHEN EXCAVATING AROUND WINGWALL NOT TO DAMAGE LENGTH OF EXISTING 6"Ø PIPE UNDERDRAIN TO MAKE CONNECTION WITH THE NEW PIPE UNDERDRAIN. ELEVATION OF INVERT MAY BE ADJUSTED TO MAINTAIN 1/8"/FT SLOPE.
4. IF SHEETING IS REQUIRED REFER TO PROJECT NOTE 13 ON BR1-1 DWG. NO. PN-01.
5. SHEAR BLOCK TO BE POURED AFTER PRESTRESSED BEAMS HAVE BEEN PLACED.
6. EXISTING ELEVATION SHOWN AT LONGITUDINAL CONSTRUCTION JOINT (SAWCUT LINE) IS BASED ON LIMITED SURVEY DATA. CONTRACTOR SHALL VERIFY AND ADJUST PROPOSED CONSTRUCTION AS REQUIRED, SEE PROJECT NOTE 10 ON BR1-1 DWG. NO. PN-01.

REFERENCES:

1. FOR PROJECT NOTES, SEE DWG. NO. PN-01.
2. FOR LEGEND, SEE DWG. NO. PE-01.
3. FOR GEOMETRIC FOOTING LAYOUT PLAN, SEE DWG. NO. FT-01.
4. FOR REINFORCEMENT DETAILS, SEE DWG. NO. AB-03.

\p\del\AS\Projects\2008\PEI-ED0836 (delDOT US 301_1445)\7. Transportation\1. Bridges\Drawings\Final_P&E\BR1-1\AB01-br1-1.dgn
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ADDENDUMS / REVISIONS	

SCALE: AS NOTED

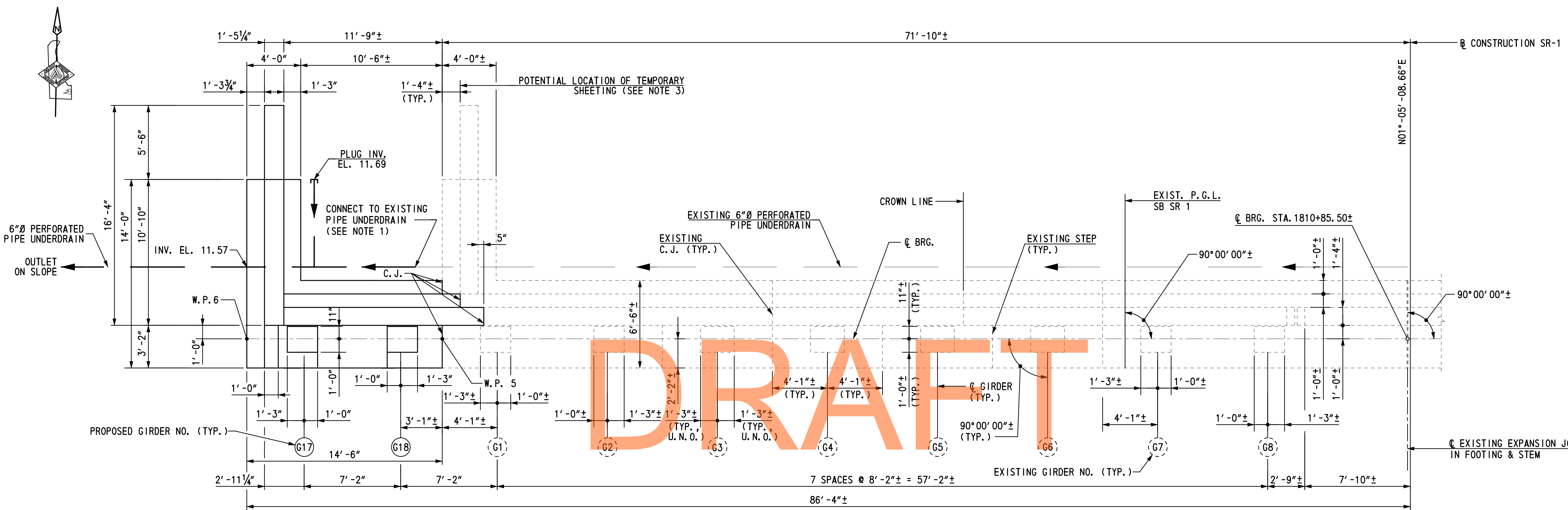
US 301 &
SR 1 INTERCHANGE

CONTRACT T200911302	BRIDGE NO. 1-903S
COUNTY NEW CASTLE	DESIGNED BY: RTC
	CHECKED BY: FPH

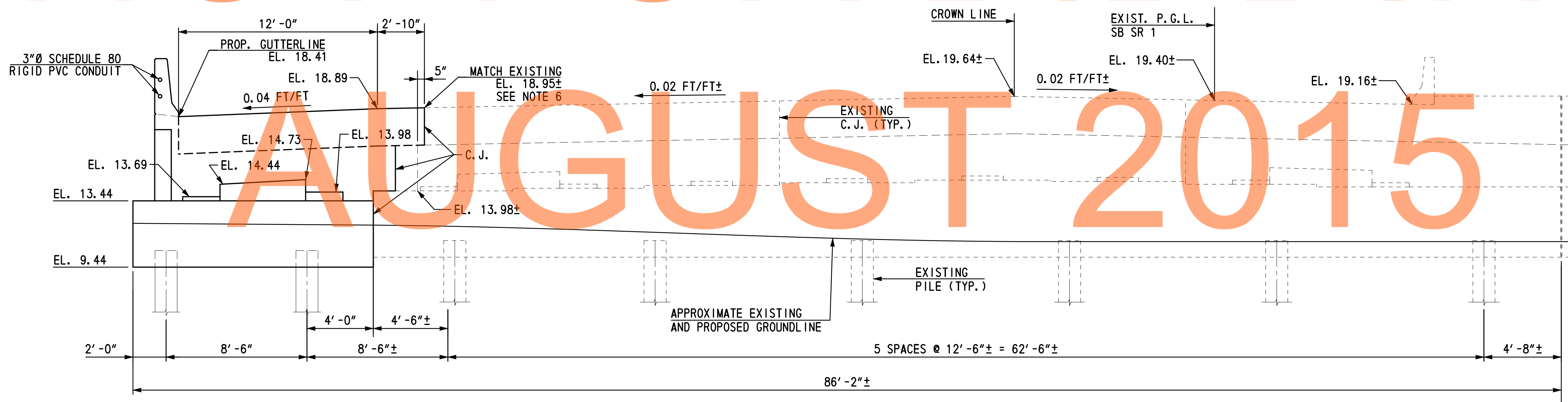
**SOUTH ABUTMENT
PLAN AND ELEVATION**

BR1-1 AB-01
SHEET NO. 130
TOTAL SHTS. 491

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NOT FOR BIDDING



- NOTES:**
- 6"Ø PERFORATED UNDERDRAIN TO BE SLOPED 1/8" / FT (TYP.).
 - PAYMENT FOR 6"Ø PERFORATED UNDERDRAIN IS INCIDENTAL TO ITEM 602003 - PORTLAND CEMENT CONCRETE MASONRY, ABUTMENT FOOTING, CLASS A.
 - CONTRACTOR SHALL USE CARE WHEN EXCAVATING AROUND WINGWALL NOT TO DAMAGE LENGTH OF EXISTING 6"Ø PIPE UNDERDRAIN TO MAKE CONNECTION WITH THE NEW PIPE UNDERDRAIN. ELEVATION OF INVERT MAY BE ADJUSTED TO MAINTAIN 1/8" / FT SLOPE.
 - IF SHEETING IS REQUIRED REFER TO PROJECT NOTE 13 ON DWG. NO. PN-01.
 - SHEAR BLOCK TO BE POURED AFTER PRESTRESSED BEAMS HAVE BEEN PLACED.
 - EXISTING ELEVATION SHOWN AT LONGITUDINAL CONSTRUCTION JOINT (SAWCUT LINE) IS BASED ON LIMITED SURVEY DATA. CONTRACTOR SHALL VERIFY AND ADJUST PROPOSED CONSTRUCTION AS REQUIRED, SEE PROJECT NOTE 10 ON BR1-1 DWG. NO. PN-01.

- REFERENCES:**
- FOR PROJECT NOTES, SEE DWG. NO. PN-01.
 - FOR LEGEND, SEE DWG. NO. PE-01.
 - FOR GEOMETRIC FOOTING LAYOUT PLAN, SEE DWG. NO. FT-01.
 - FOR REINFORCEMENT DETAILS, SEE DWG. NO. AB-03.



ADDENDUMS / REVISIONS

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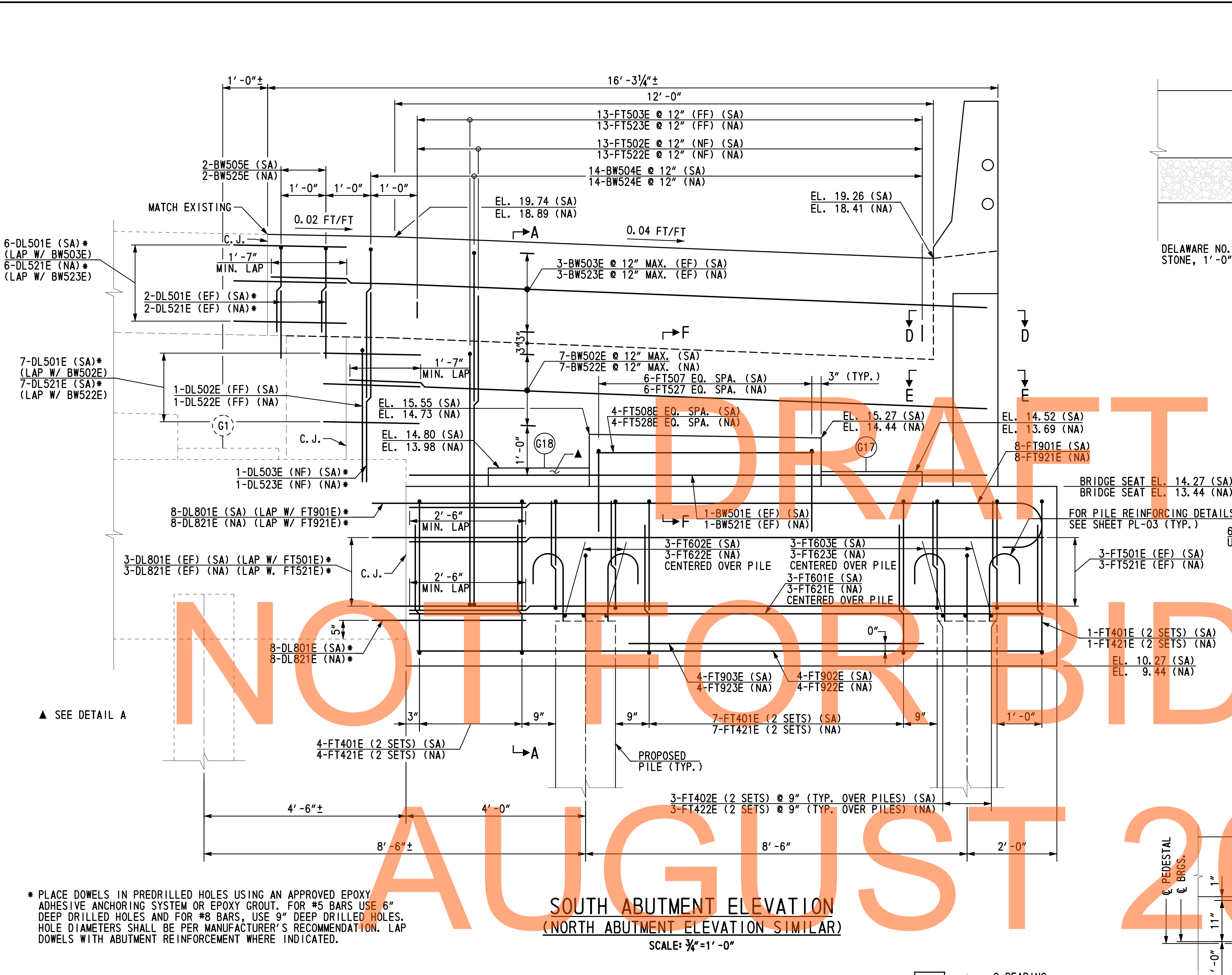
US 301 & SR 1 INTERCHANGE

CONTRACT T200911302	BRIDGE NO. 1-903S
COUNTY NEW CASTLE	DESIGNED BY: RTC
	CHECKED BY: FPH

**NORTH ABUTMENT
PLAN AND ELEVATION**

BR1-1 AB-02
SHEET NO. 131
TOTAL SHTS. 491

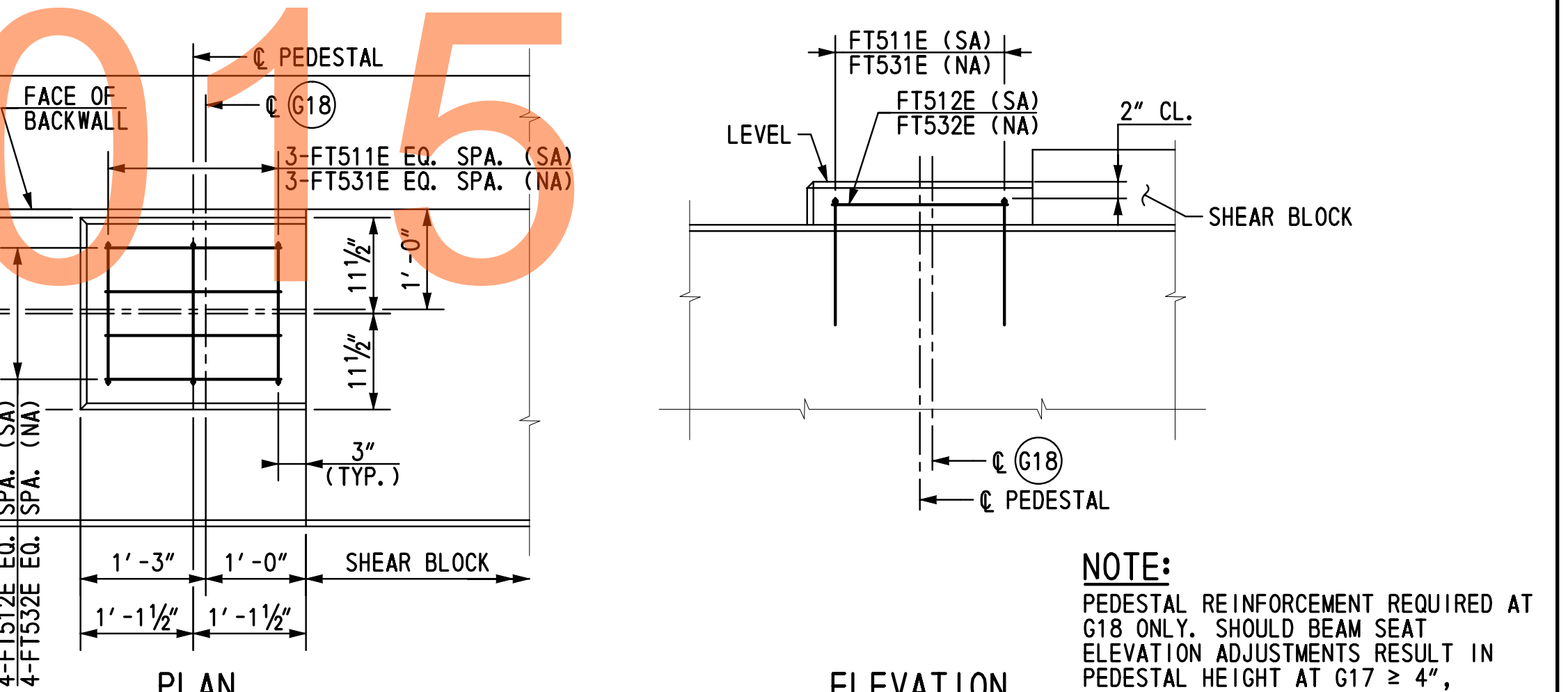
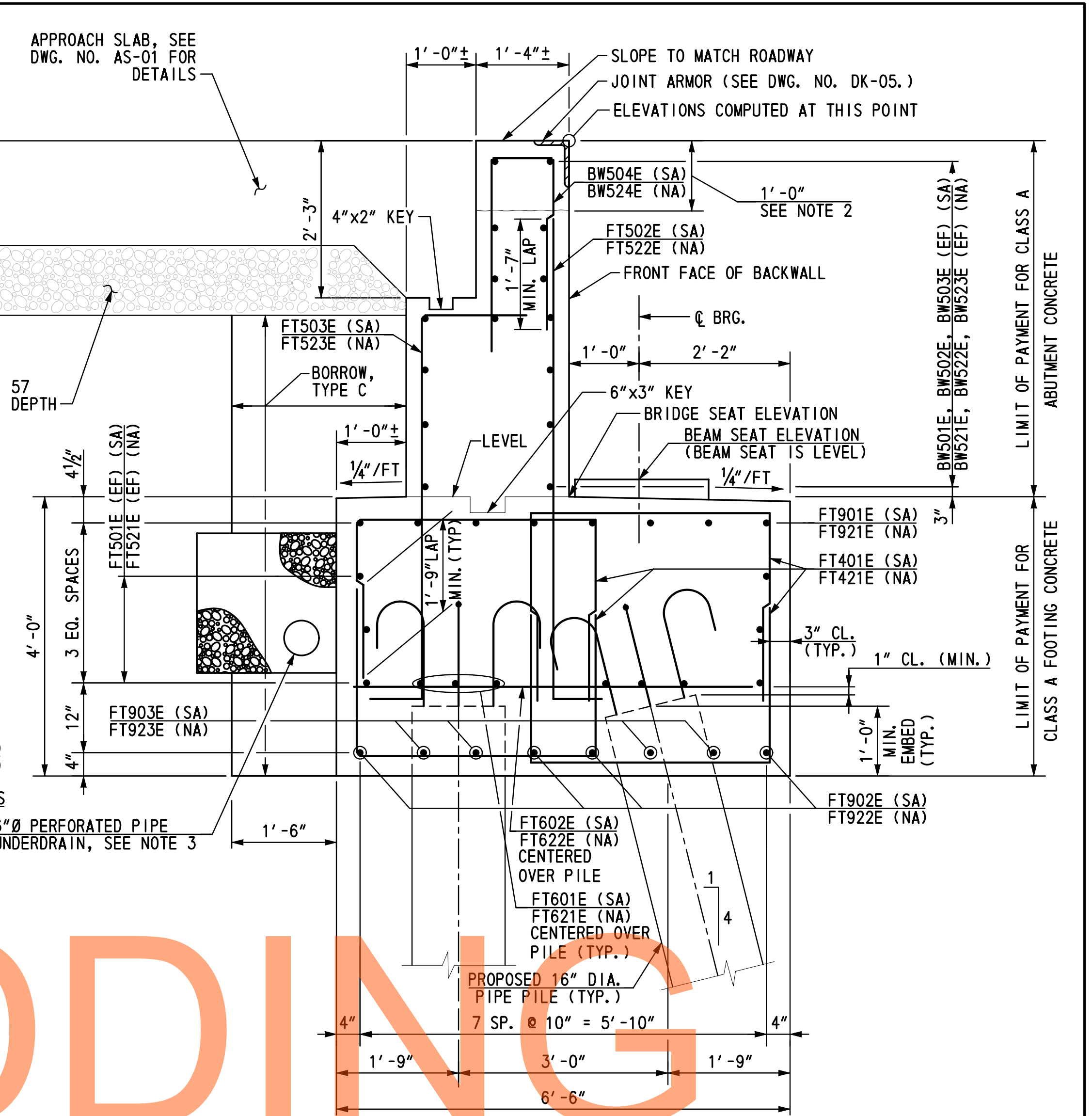
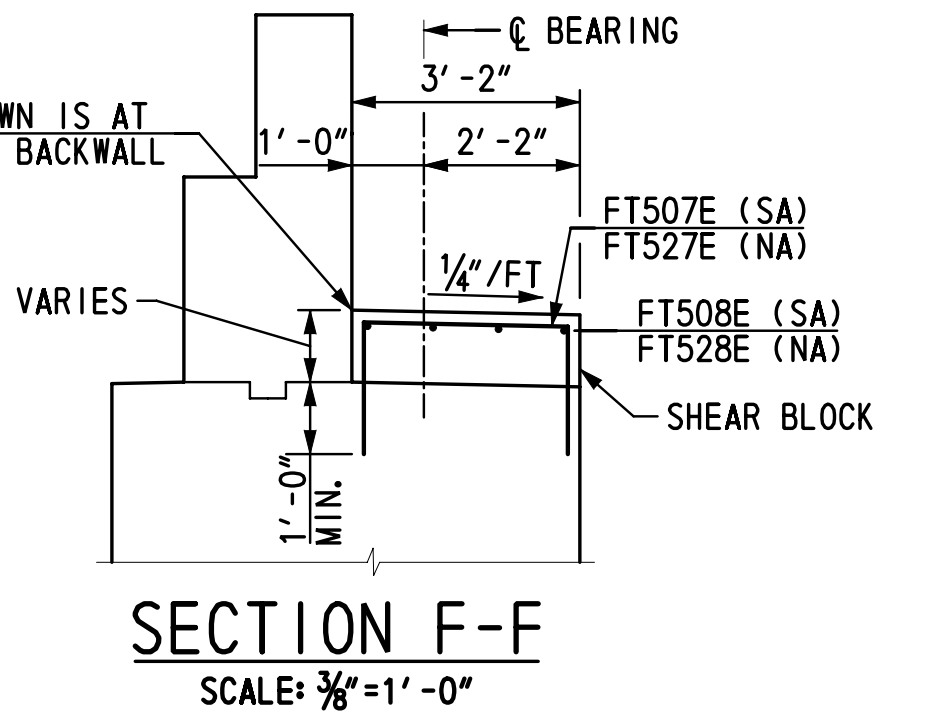
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* PLACE DOWELS IN PREDRILLED HOLES USING AN APPROVED EPOXY ADHESIVE ANCHORING SYSTEM OR EPOXY GROUT. FOR #5 BARS USE 6" DEEP DRILLED HOLES AND FOR #8 BARS, USE 9" DEEP DRILLED HOLES. HOLE DIAMETERS SHALL BE PER MANUFACTURER'S RECOMMENDATION. LAP DOWELS WITH ABUTMENT REINFORCEMENT WHERE INDICATED.

- REFERENCES:**
- FOR PROJECT NOTES, SEE DWG. NO. PN-01.
 - FOR LAYOUT OF WORKING POINTS, SEE DWG. NO. FT-01.
 - FOR ABUTMENT PLAN & ELEVATION, SEE DWG. NOS. AB-01 & AB-02.
 - FOR SECTION D-D, SEE DWG. NO. WW-01.
 - FOR SECTION E-E, SEE DWG. NO. WW-01.
 - FOR DECK JOINT DETAILS, SEE DWG. NOS. DK-04 & DK-05.
 - FOR REINFORCEMENT BAR LIST, SEE DWG. NO. BR-01.
 - FOR LEGEND, SEE DWG. NO. PE-01.

- NOTES:**
- BORROW, TYPE C SHALL BE OBTAINED FROM BORROW SOURCES AND PAID UNDER ITEM 202000 - EXCAVATION AND EMBANKMENT.
 - TOP PORTION OF BACK WALL SHALL NOT BE PLACED UNTIL ENTIRE BRIDGE DECK SLAB IS COMPLETELY IN PLACE.
 - COST OF PVC PIPE UNDERDRAIN, DELAWARE NO. 57 STONE, GEOTEXTILE FILTER FABRIC WILL BE INCIDENTAL TO ITEM 602003 - PORTLAND CEMENT CONCRETE MASONRY, ABUTMENT FOOTING, CLASS A.
 - 2' x 2' BLOCK OF DELAWARE NO. 57 STONE SHALL HAVE GEOTEXTILE FILTER FABRIC ALL AROUND. FABRIC SHALL CONFORM TO AASHTO M 288, CLASS 2.
 - PERFORATED AND NON-PERFORATED PVC PIPE UNDERDRAIN SHALL CONFORM TO ASTM F758, TYPE PS 28.



NOTE:
 PEDESTAL REINFORCEMENT REQUIRED AT G18 ONLY. SHOULD BEAM SEAT ELEVATION ADJUSTMENTS RESULT IN PEDESTAL HEIGHT AT G17 ≥ 4", PROVIDE PEDESTAL REINFORCEMENT AT G17 SIMILAR TO G18.

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

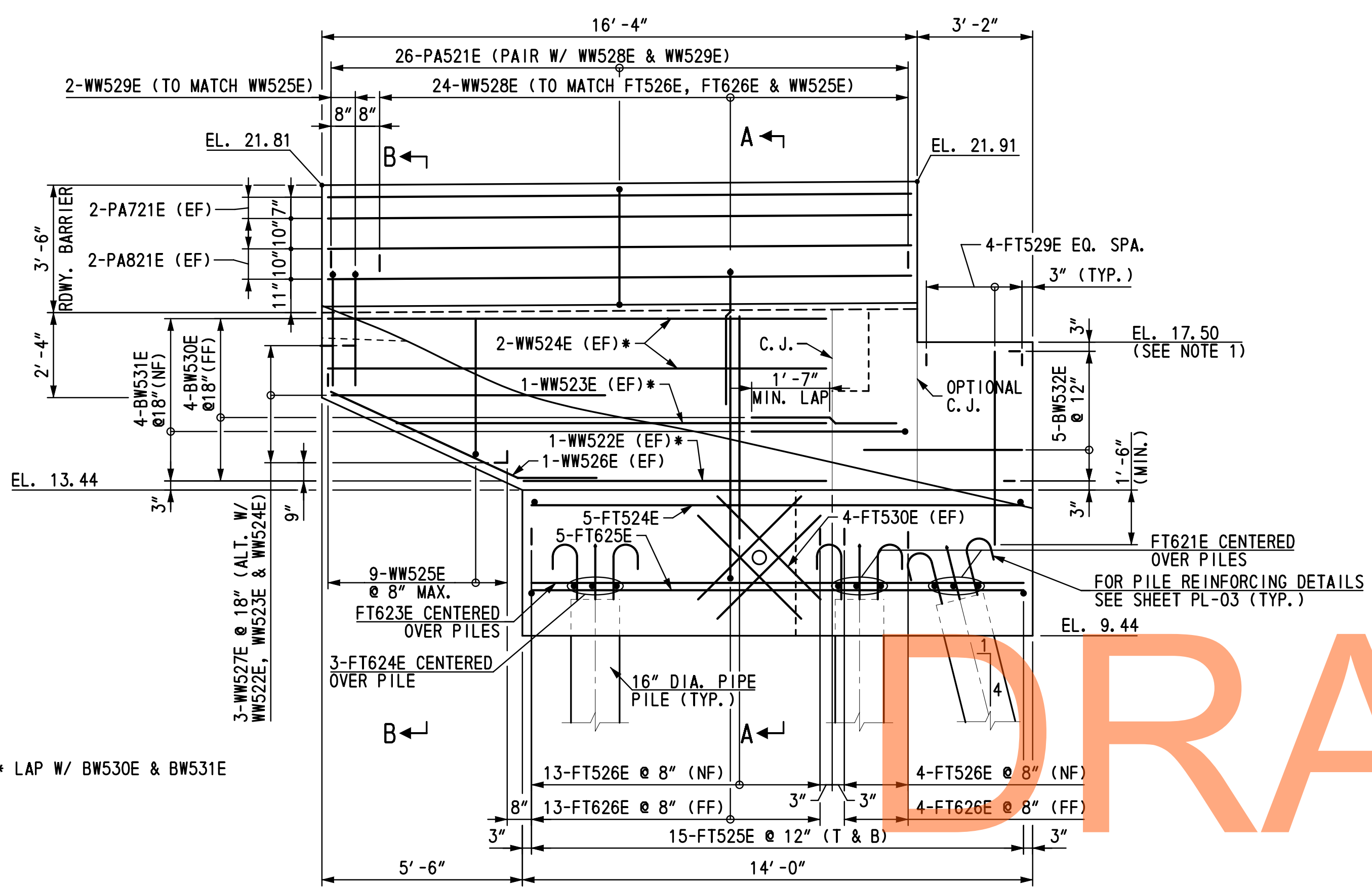
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US 301 & SR 1 INTERCHANGE

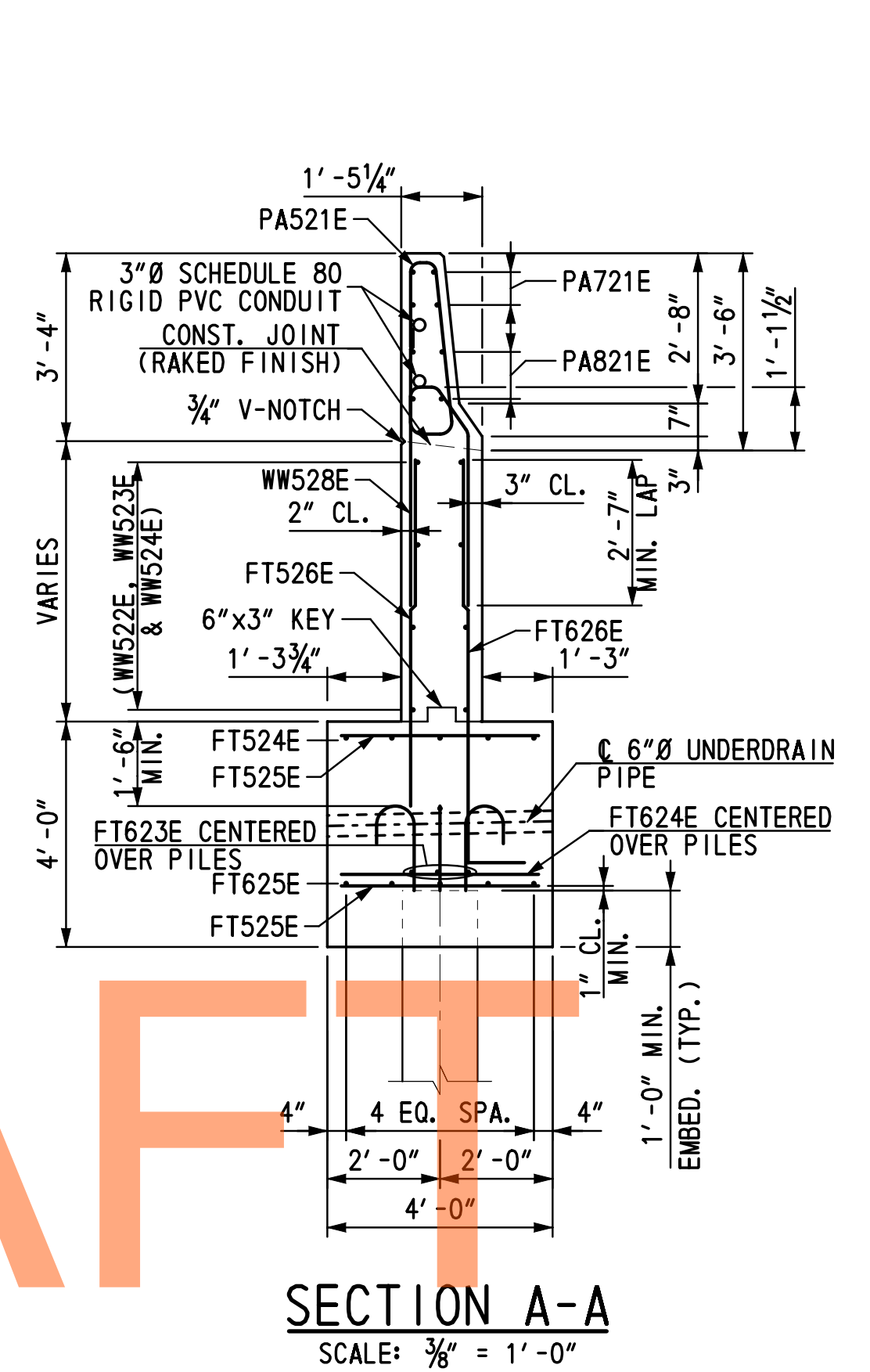
CONTRACT	T200911302	BRIDGE NO.	1-903S
COUNTY	NEW CASTLE	DESIGNED BY:	RTC
		CHECKED BY:	FPH

ABUTMENT TYPICAL SECTION & REINFORCEMENT DETAILS

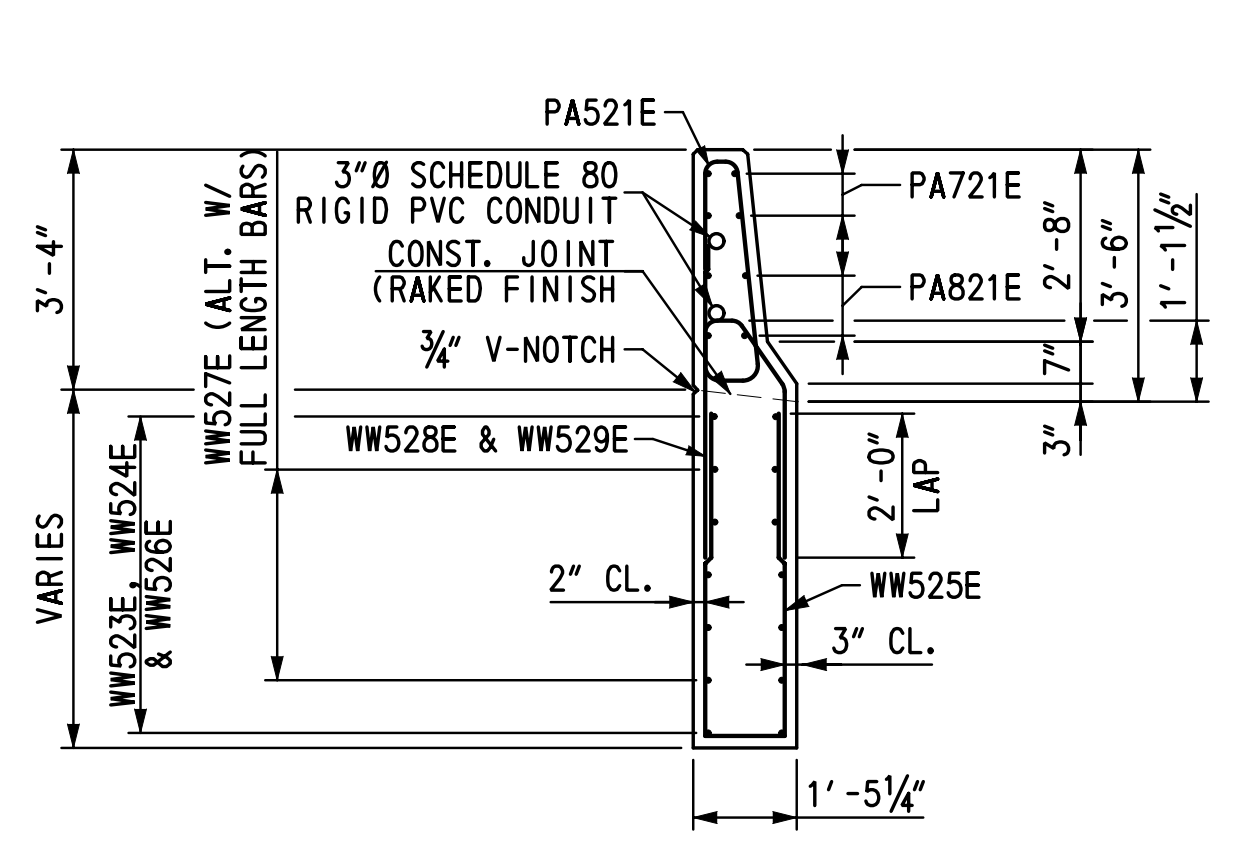
BR1-1 AB-03	
SHEET NO.	132
TOTAL SHTS.	491



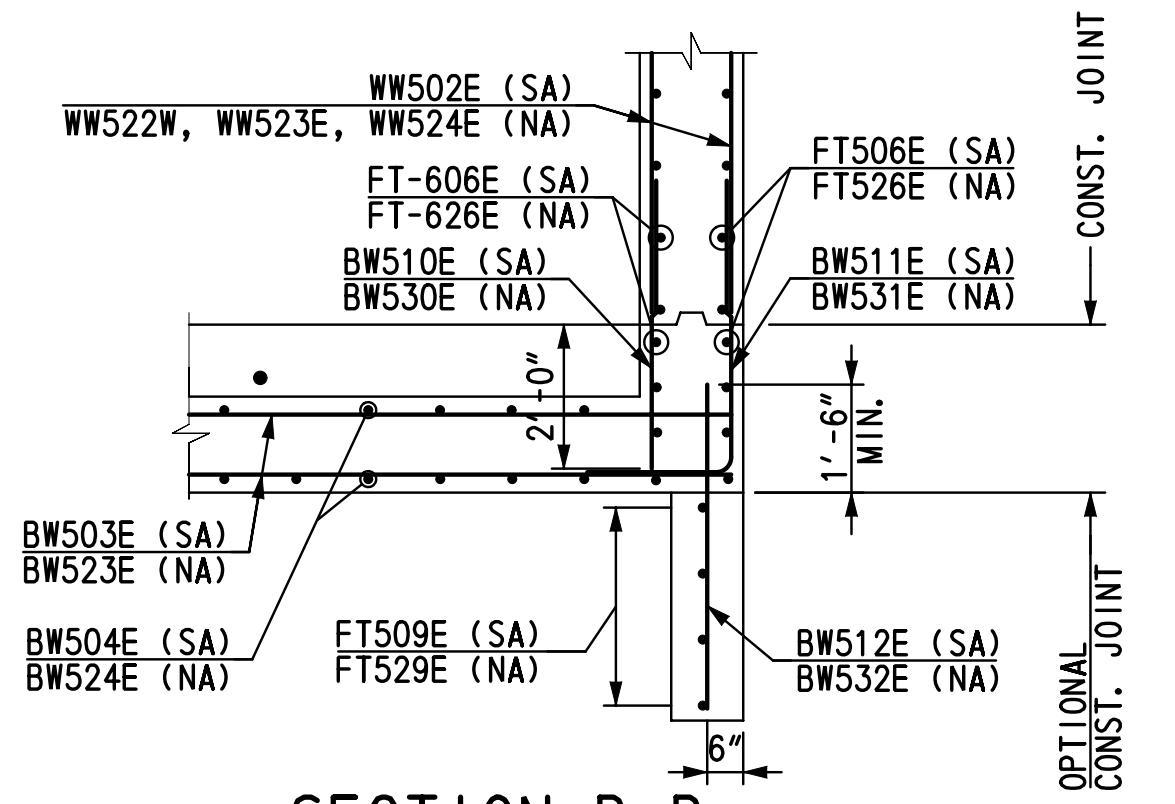
NORTHWEST WINGWALL ELEVATION
SCALE: 3/8" = 1'-0"



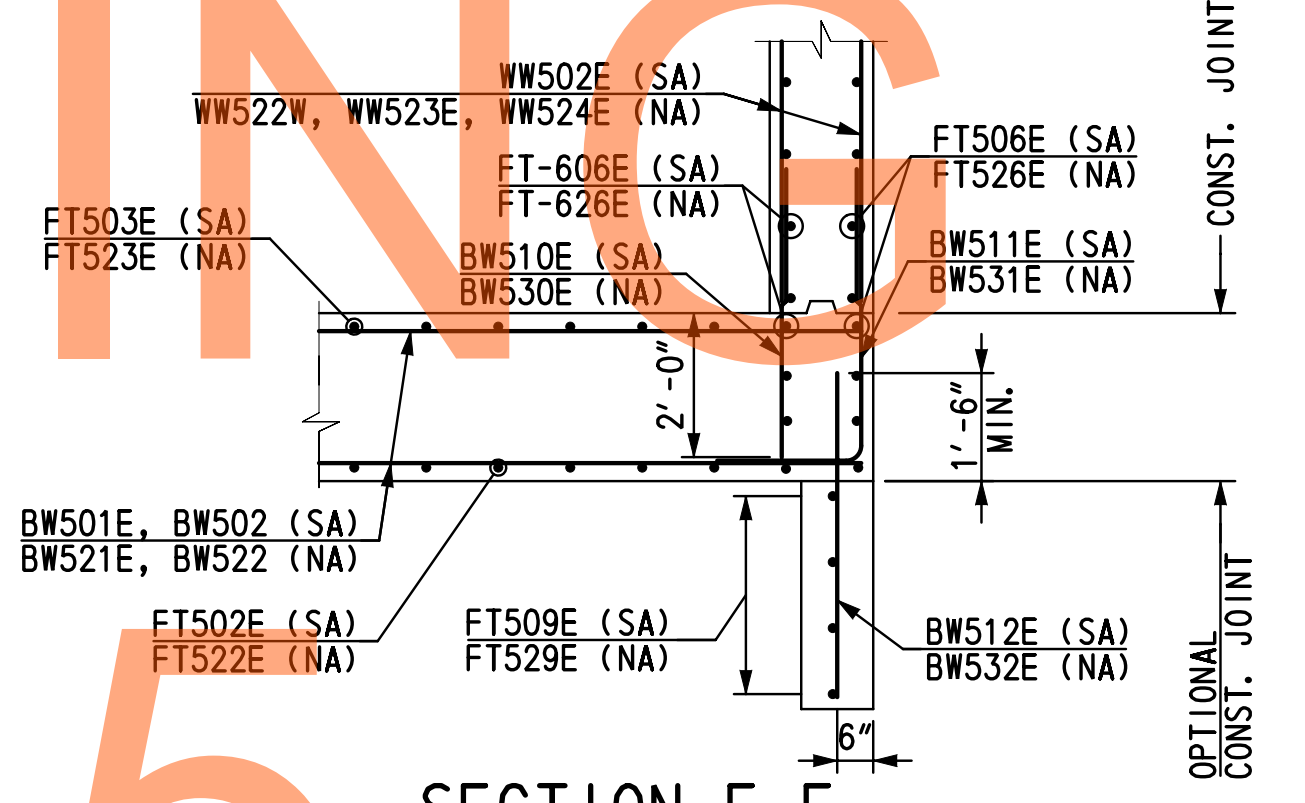
SECTION A-A
SCALE: 3/8" = 1'-0"



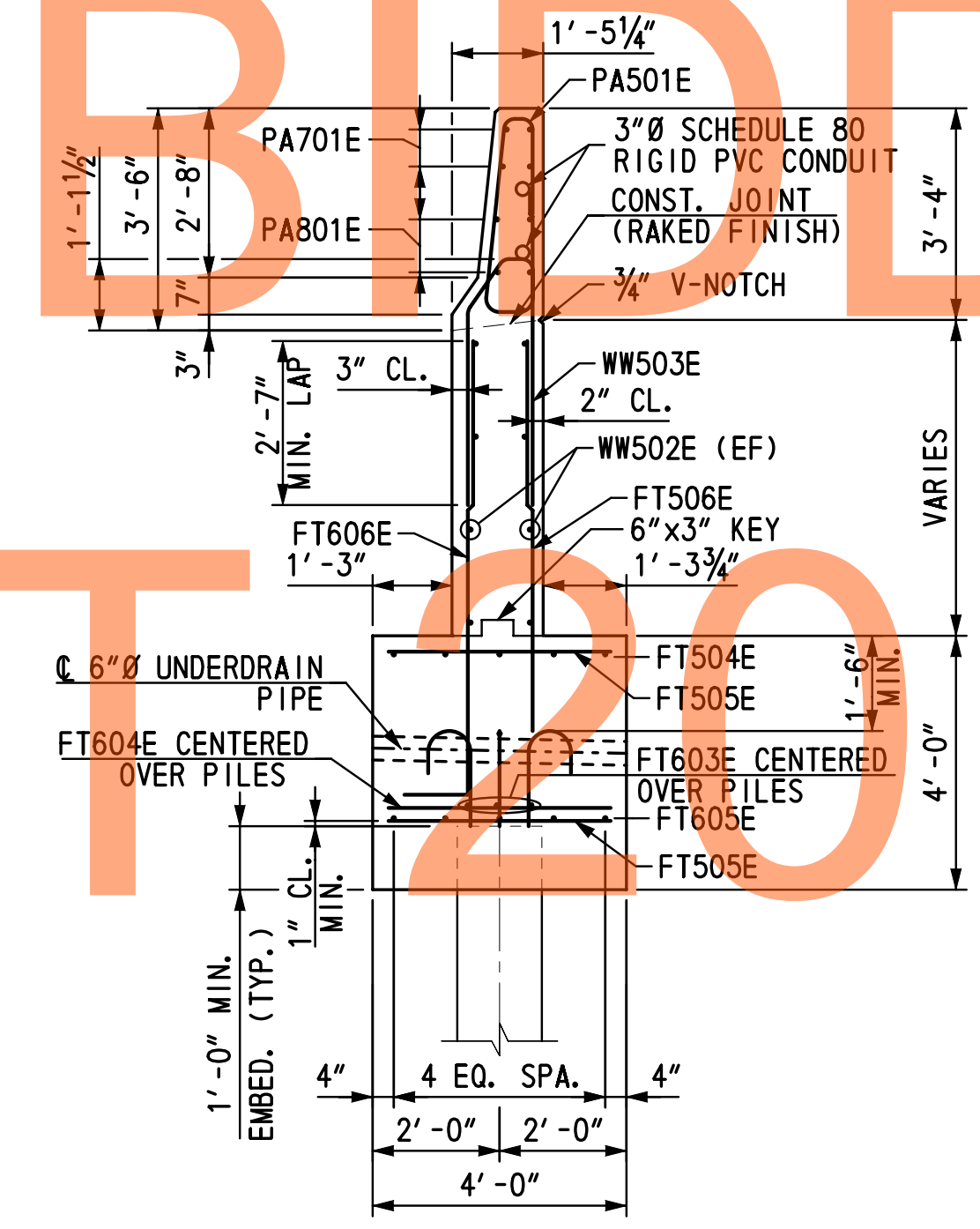
SECTION B-B
SCALE: 3/8" = 1'-0"



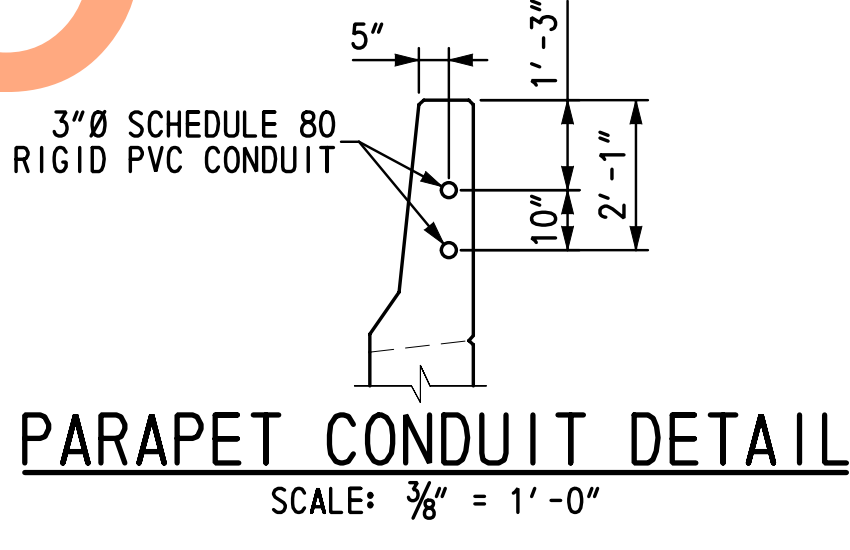
SECTION D-D
SCALE: 3/8" = 1'-0"



SECTION E-E
SCALE: 3/8" = 1'-0"

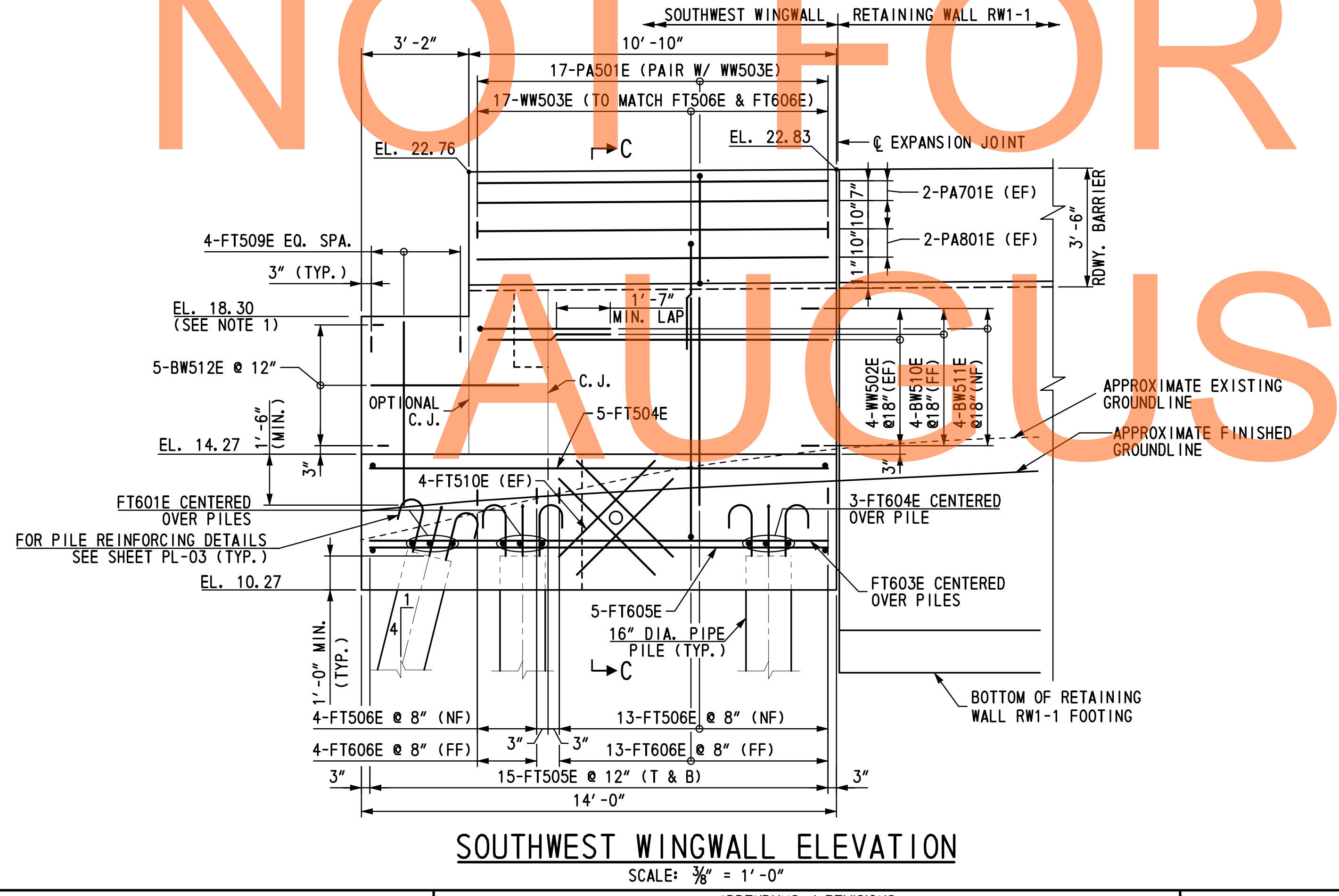


SECTION C-C
SCALE: 3/8" = 1'-0"



PARAPET CONDUIT DETAIL
SCALE: 3/8" = 1'-0"

NOT FOR BIDDING
AUTOCAD 2015



SOUTHWEST WINGWALL ELEVATION
SCALE: 3/8" = 1'-0"

NOTES:

1. TOP OF CHEEKWALL ELEVATION TO BE SET TO PROVIDE 1" NOMINAL CLEAR BELOW BOTTOM OF DECK ELEVATION.

REFERENCES:

1. FOR PROJECT NOTES, SEE DWG. NO. PN-01.
2. FOR LOCATION OF SECTION D-D & E-E, SEE DWG. NO. AB-03.
3. FOR LEGEND, SEE DWG. NO. PE-01.
4. FOR WINGWALL TO APPROACH SLAB CONNECTION, SEE DWG. NO. AS-01.
5. FOR RETAINING WALL, SEE STRUCTURE NO. RW1-1, DWG. NO. PE-01.
6. FOR REINFORCEMENT BAR LIST, SEE DWG. BR-01.

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ADDENDUMS / REVISIONS	

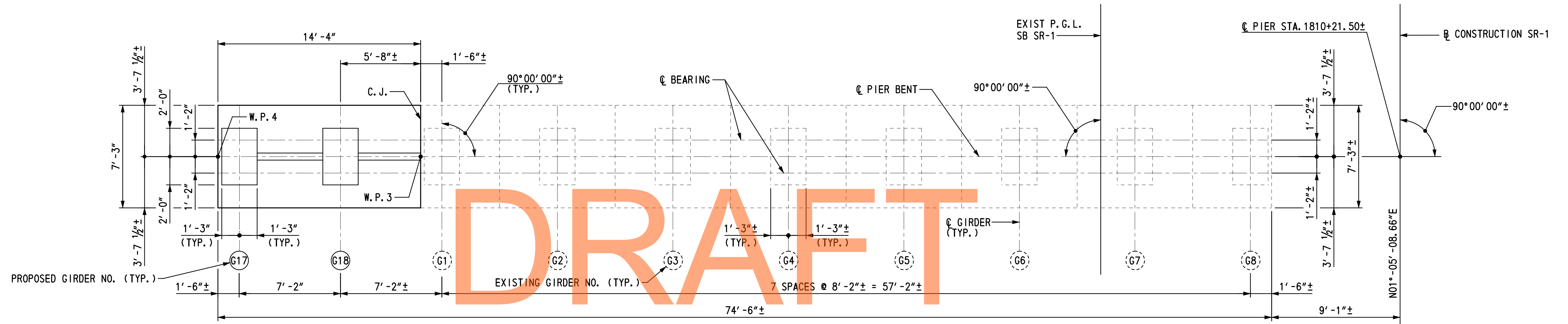
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US 301 & SR 1 INTERCHANGE

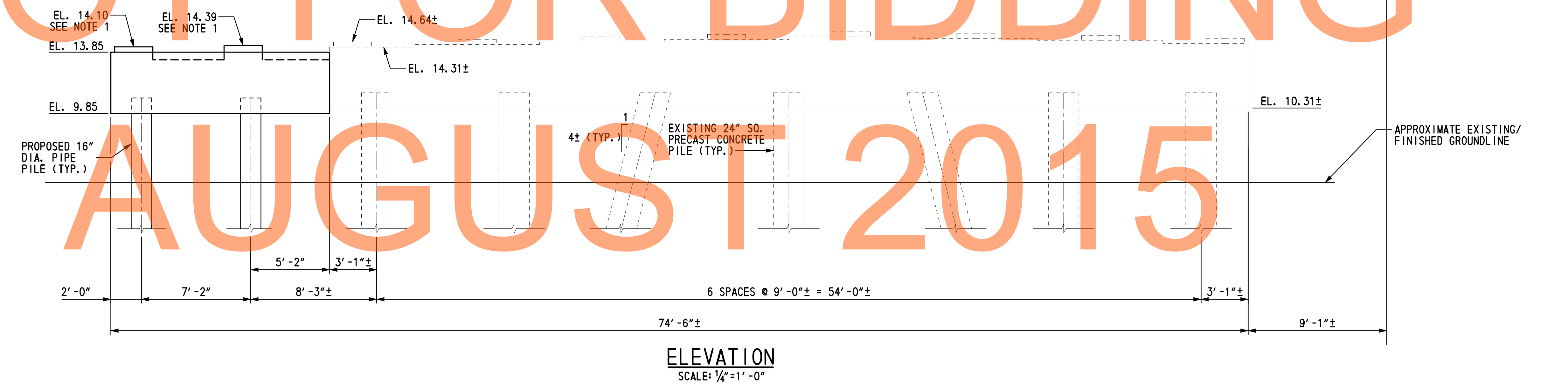
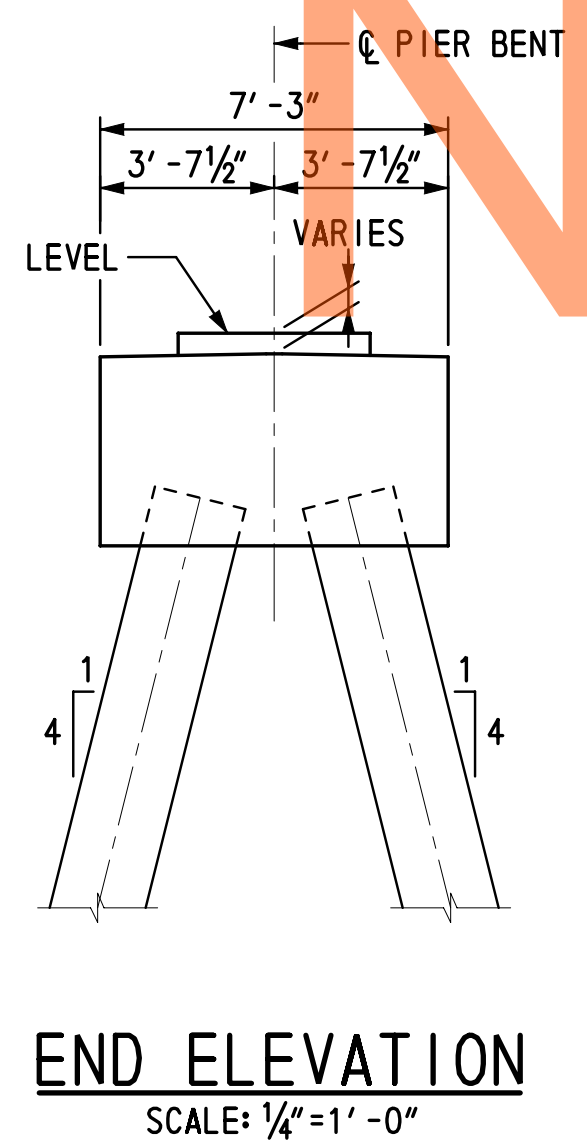
CONTRACT	BRIDGE NO.	1-903S
T200911302	DESIGNED BY:	RTC
COUNTY	CHECKED BY:	FPH
NEW CASTLE		

WING WALL ELEVATIONS & SECTIONS

BR-1	SHEET NO.
WW-01	133
	TOTAL SHTS.
	491



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



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

NOT FOR BIDDING
AUGUST 2015

NOTES:

- CONTRACTOR SHALL VERIFY EXISTING ELEVATIONS ALONG (SAW CUT LINE) LONGITUDINAL CONSTRUCTION JOINT AND ADJUST PROPOSED CONSTRUCTION ELEVATIONS AS REQUIRED. SEE FINISHED DECK ELEVATIONS ON DWG. NO. FD-01 AND PROJECT NOTE 10 ON BR1-1 DWG. NO. PN-01.

REFERENCES:

- FOR PROJECT NOTES, SEE DWG. NO. PN-01.
- FOR LEGEND, SEE DWG. NO. PE-01.
- USE THIS DWG. IN CONJUNCTION WITH DWG. NO. PR-02.
- FOR PIER PILE PLAN LAYOUT, SEE DWG. NO. PL-03.
- FOR PIER REINFORCEMENT, SEE DWG. NO. PR-02.

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ADDENDUMS / REVISIONS

SCALE: AS NOTED

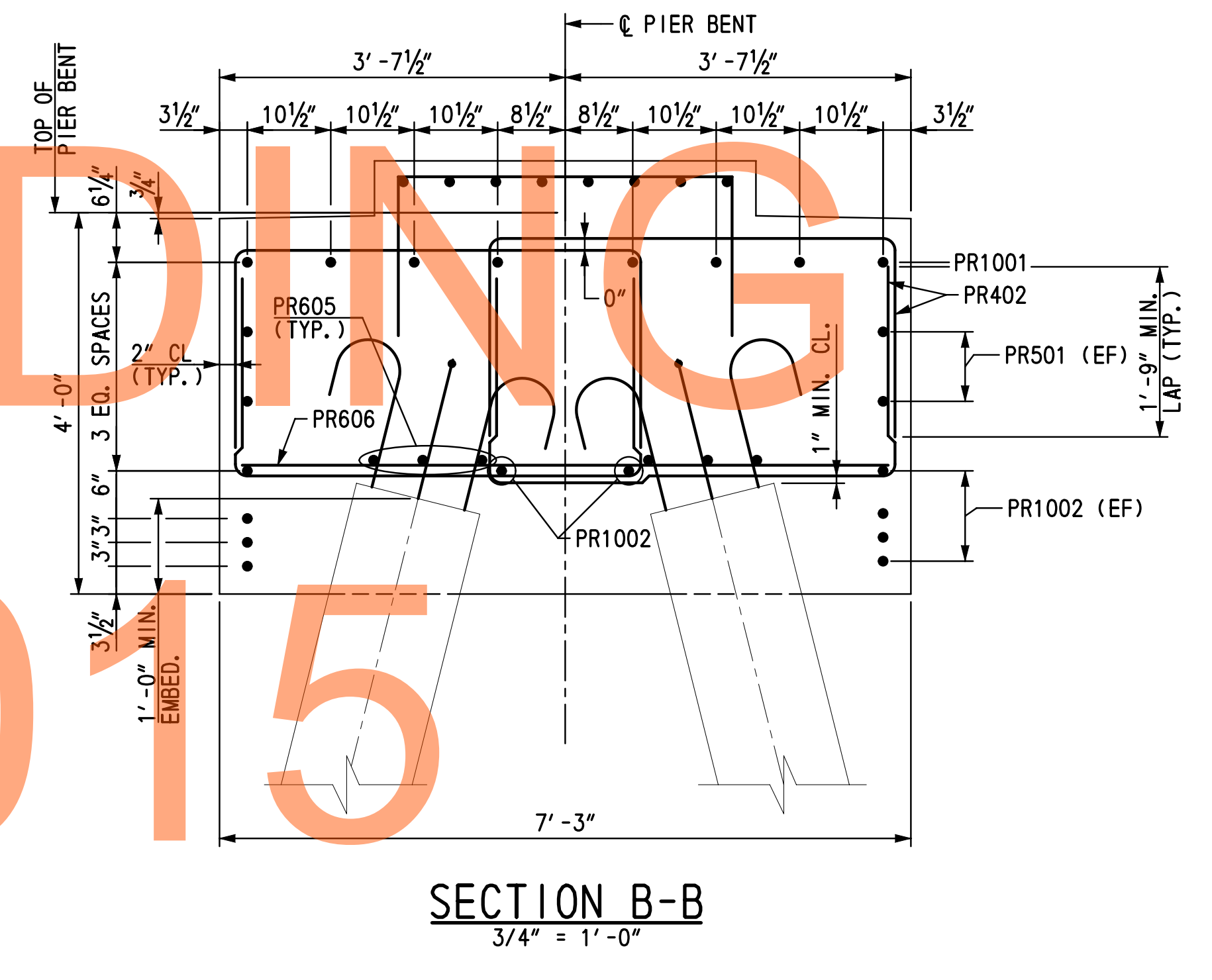
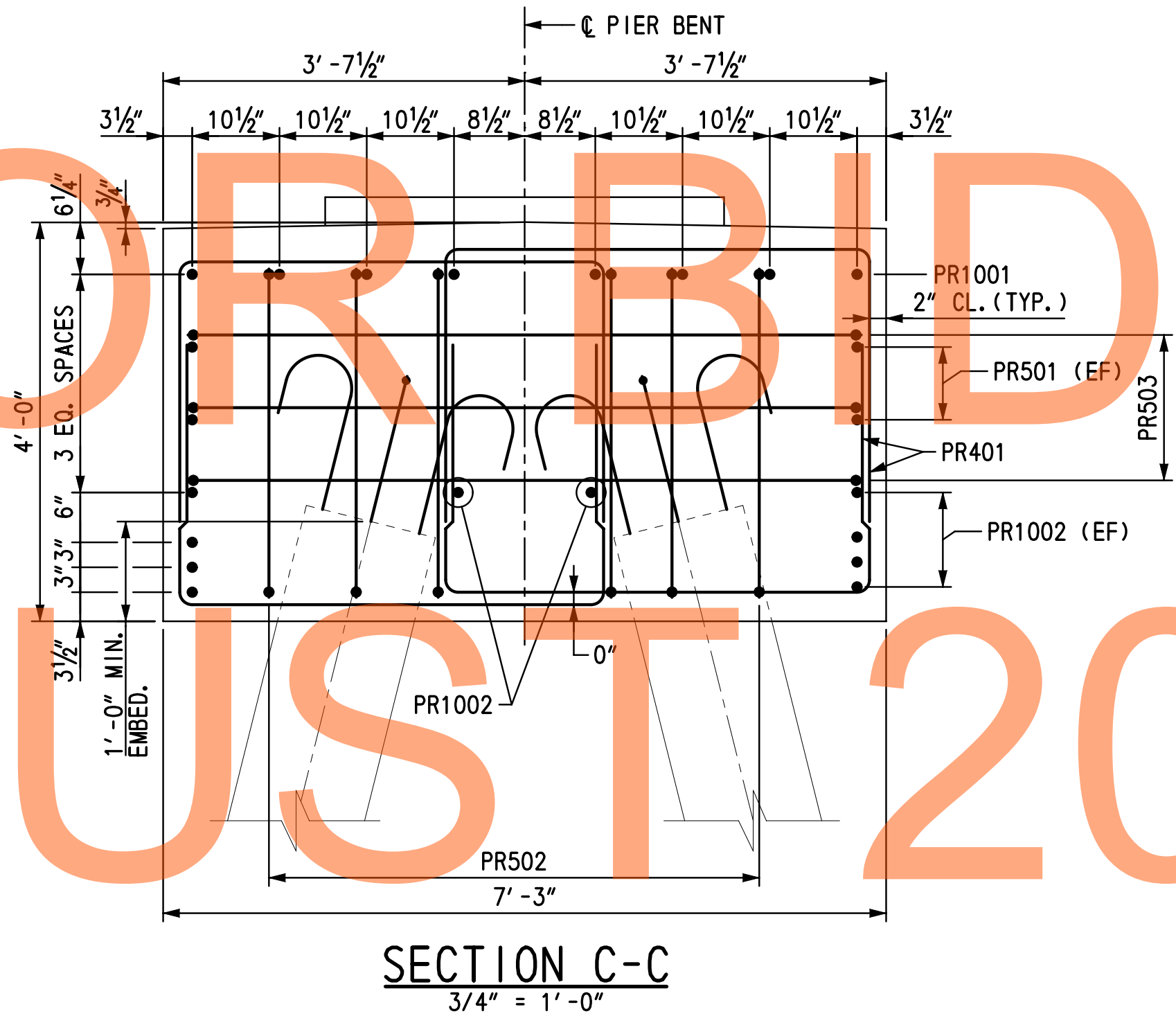
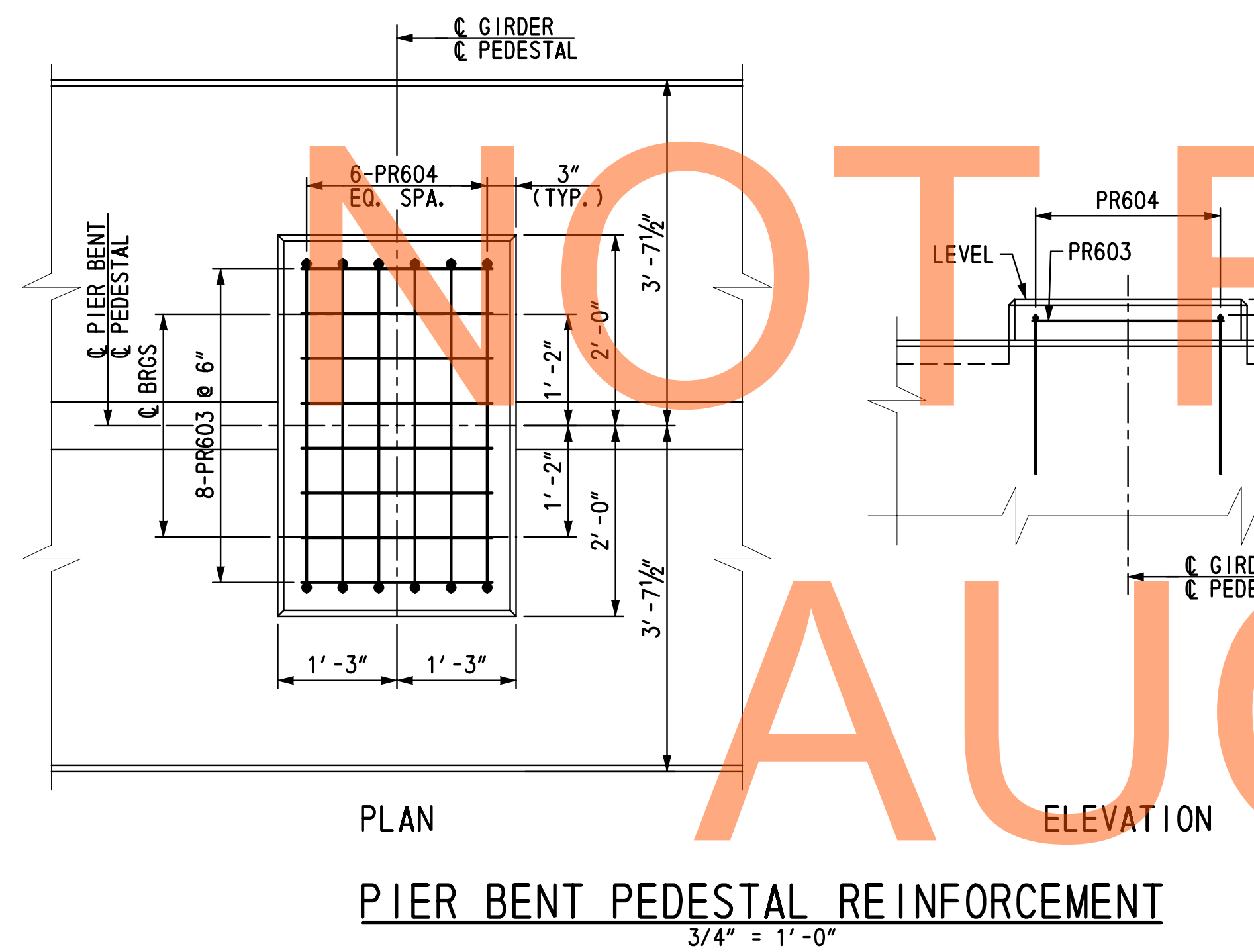
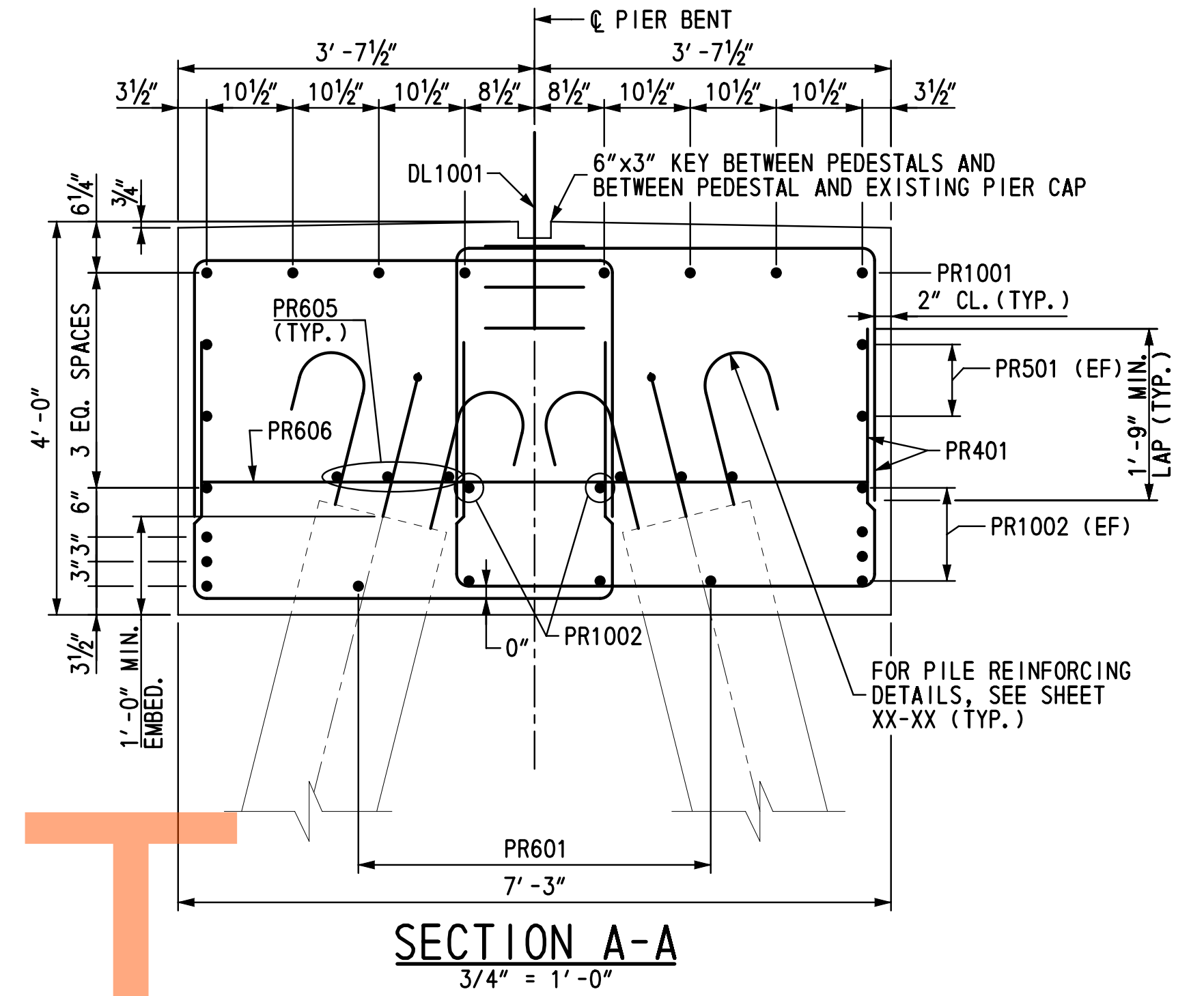
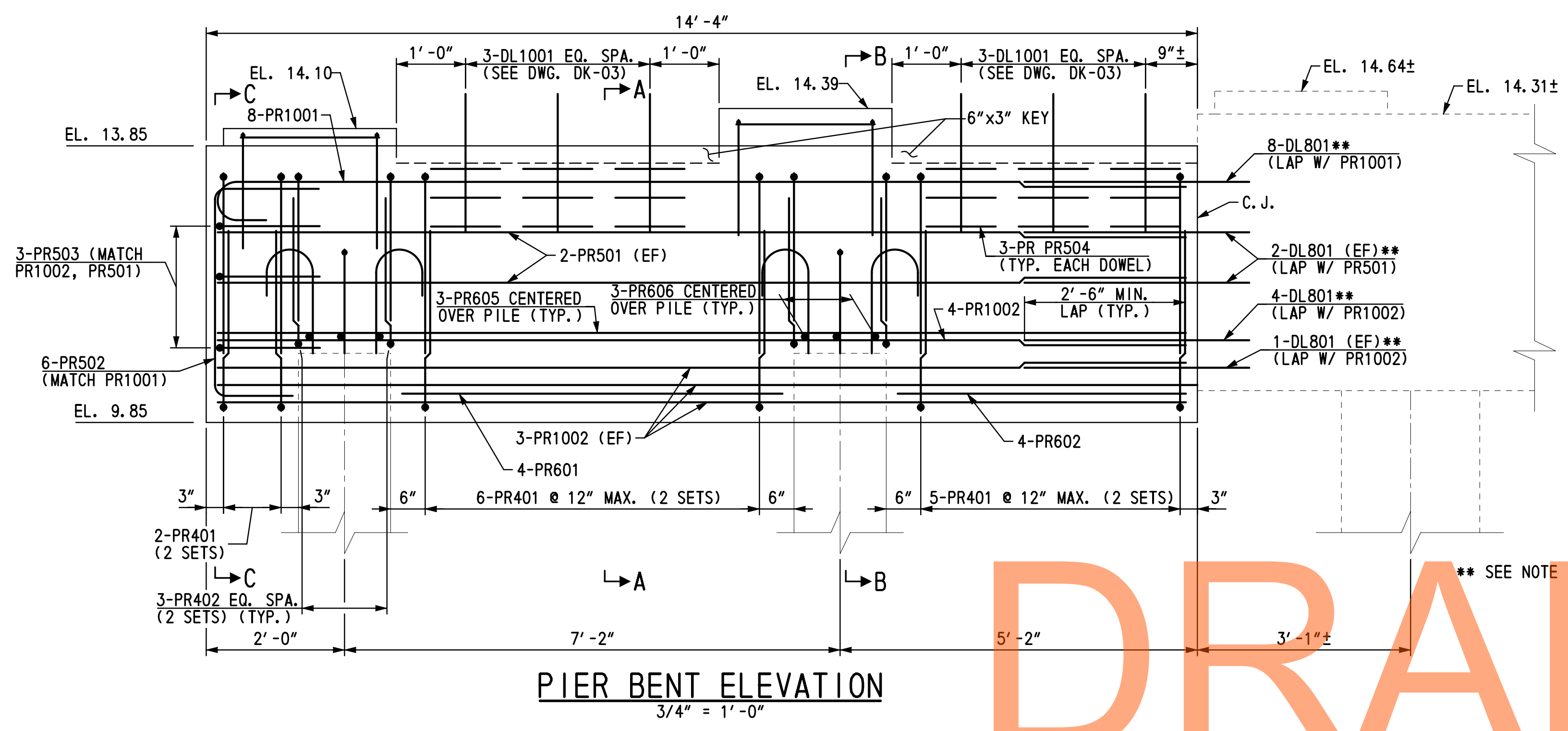
US 301 &
SR 1 INTERCHANGE

CONTRACT	BRIDGE NO.	1-903S
T200911302	DESIGNED BY:	MED
COUNTY	CHECKED BY:	SSD
NEW CASTLE		

PIER BENT PLAN & ELEVATION

BR1-1 PR-01
SHEET NO.
134
TOTAL SHTS.
491

DRAFT



NOT FOR BIDDING

AUGUST 2015

REFERENCES:

- 1. FOR PROJECT NOTES, SEE DWG. NO. PN-01.
- 2. FOR LEGEND, SEE DWG. NO. PE-01.
- 3. USE THIS DWG IN CONJUNCTION WITH DWG. NO. PR-01.
- 4. FOR REINFORCEMENT BAR LIST, SEE DWG. BR-02.
- 5. FOR DWEL DETAIL SEE DWG. NO. DK-03.

NOTES:

- 1. PLACE EACH DL801 IN A 9" DEEP PREDRILLED HOLE USING AN APPROVED EPOXY ADHESIVE ANCHORING SYSTEM OR EPOXY GROUT. HOLE DIAMETER SHALL BE PER MANUFACTURER'S RECOMMENDATION.
- 2. PEDESTAL TO BE POURED MONOLITHIC WITH CAP.
- 3. FOR ADDITIONAL PIPE PILE CONCRETE FILL AND REINFORCEMENT DETAILS, SEE DWG. NO. PL-03.



ADDENDUMS / REVISIONS

SCALE: AS NOTED

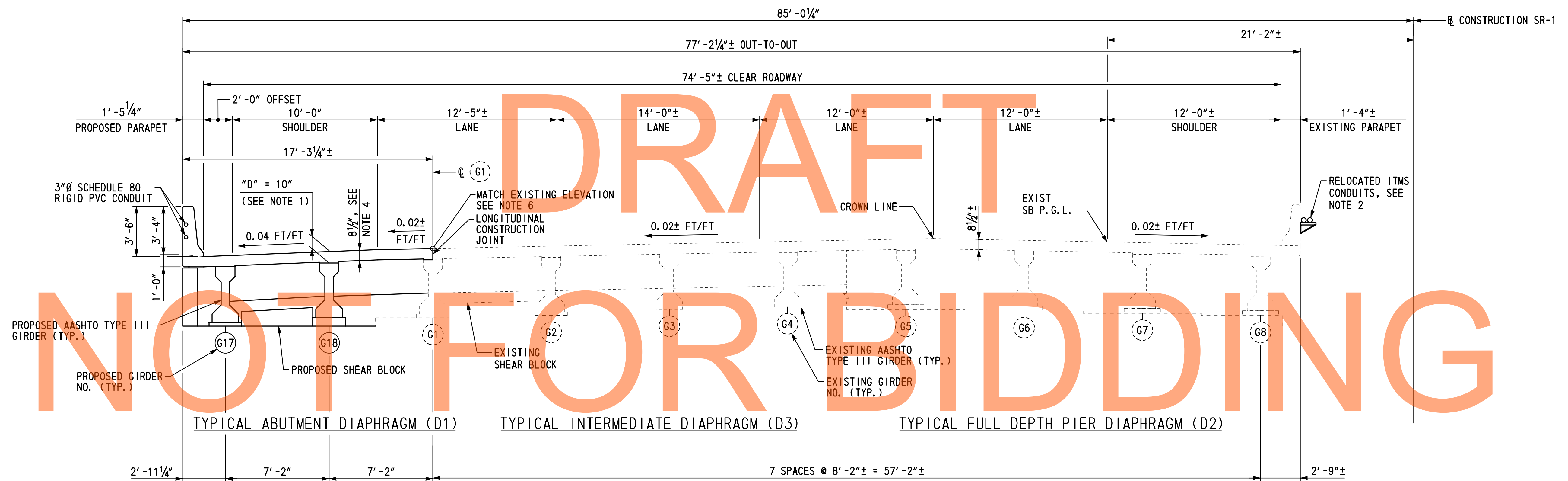
US 301 & SR 1 INTERCHANGE

CONTRACT	BRIDGE NO.	1-903S
T200911302	DESIGNED BY:	RTC
NEW CASTLE	CHECKED BY:	FPH

PIER BENT REINFORCEMENT DETAILS

BR-1 PR-02
SHEET NO.
135
TOTAL SHTS.
491

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AUGUST 2015

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

- NOTES:**
- "D" MEASURED FROM TOP OF DECK TO TOP OF BEAM AT CENTERLINE OF GIRDER AT CENTERLINE OF BEARING (TYP.).
 - FOR PROPOSED ITMS CONDUIT REQUIREMENTS, SEE ITMS PATHWAY RELOCATION PLANS ON DWG. NOS. SS-04 AND SS-05. COST FOR INSTALLATION OF CONDUIT SUPPORTS ON EXISTING BRIDGE PARAPET SHALL BE INCIDENTAL TO ITEM 745546 - INSTALLATION OF CONDUIT ON STRUCTURE.
 - EXISTING INTERMEDIATE AND PIER DIAPHRAGMS SHOWN. PROPOSED DIAPHRAGMS ARE SIMILAR.
 - DECK SLAB THICKNESS INCLUDES 1/2" INTEGRAL WEARING SURFACE.
 - PARAPET SHALL NOT BE SLIP FORMED.
 - FOR EXISTING TOP OF DECK ELEVATIONS ALONG CENTERLINE G1 LONGITUDINAL SAWCUT JOINT, SEE DWG. NO. FD-01.
 - REFLECTORS SHALL BE INSTALLED ALONG PARAPET (ROADWAY PAY ITEM). FOR DETAILS, SEE DWG. NO. DT-05.

- REFERENCES:**
- FOR PROJECT NOTES, SEE DWG. NO. PN-01.
 - FOR LEGEND, SEE DWG. NO. PE-01.
 - FOR FRAMING PLAN, SEE DWG. NO. FR-01.
 - FOR PRESTRESSED BEAM DETAILS, SEE DWG. NO. BM-01.
 - FOR DIAPHRAGM DETAILS, SEE DWG. NOS. DK-02 & DK-03.
 - FOR PARAPET CONDUIT DETAIL, SEE DWG. NO. WW-01.

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ADDENDUMS / REVISIONS

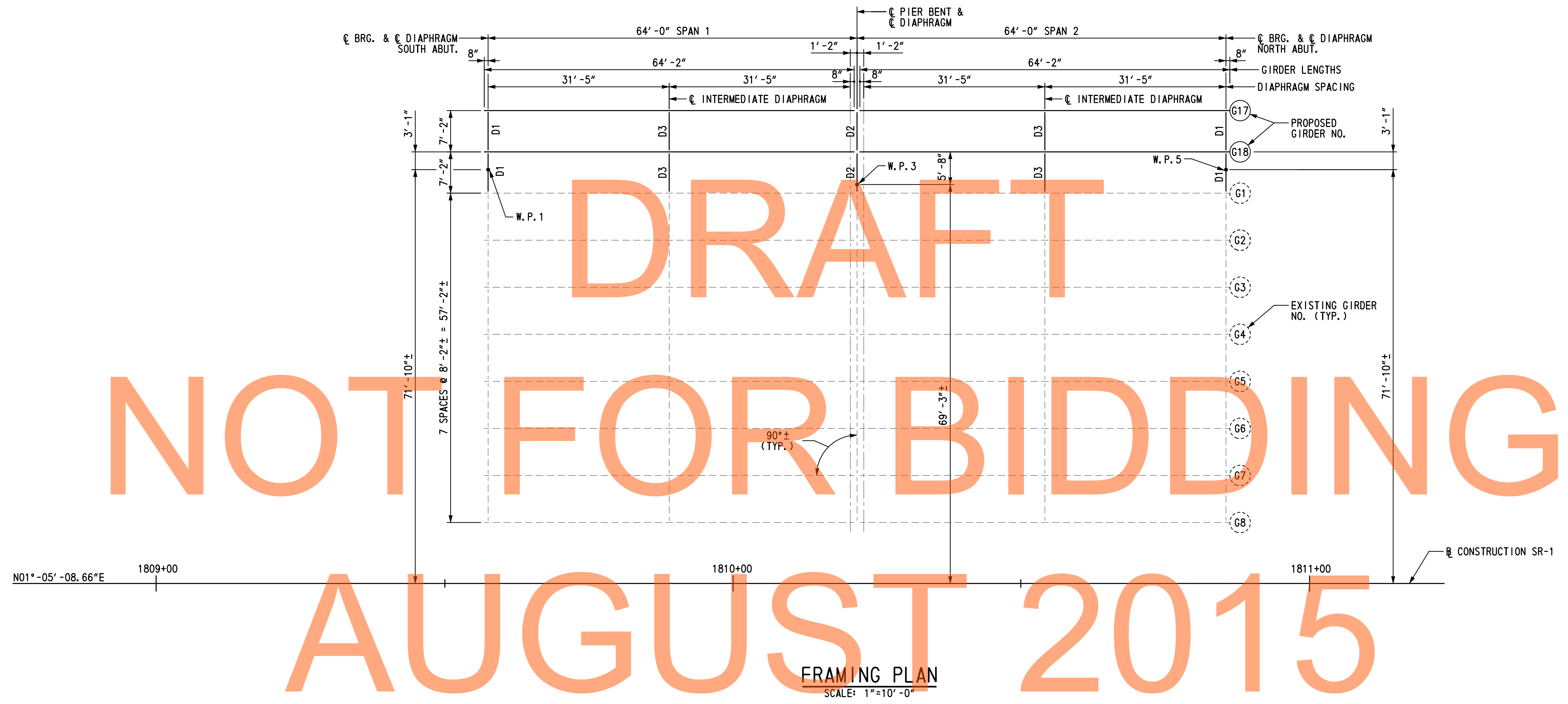
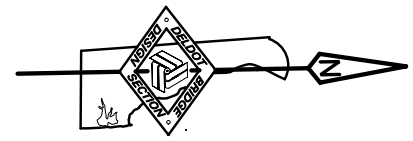
SCALE: AS NOTED

**US 301 &
SR 1 INTERCHANGE**

CONTRACT T200911302	BRIDGE NO. DESIGNED BY: MED	1-903S
COUNTY NEW CASTLE	CHECKED BY: SSD	

**SUPERSTRUCTURE
TYPICAL SECTION**

BR1-1 TS-01
SHEET NO. 138
TOTAL SHTS. 491



FRAMING PLAN
SCALE: 1"=10'-0"

REFERENCES:

1. FOR WORKING POINT LAYOUT, SEE DWG. NO. FT-01.
2. FOR DECK CROSS SECTION, SEE DWG. NO. TS-01.
3. FOR PRESTRESSED BEAM DETAILS, SEE DWG. NO. BM-01.
4. FOR DIAPHRAGM DETAILS, SEE DWG. NOS. DK-02 & DK-03.

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ADDENDUMS / REVISIONS	

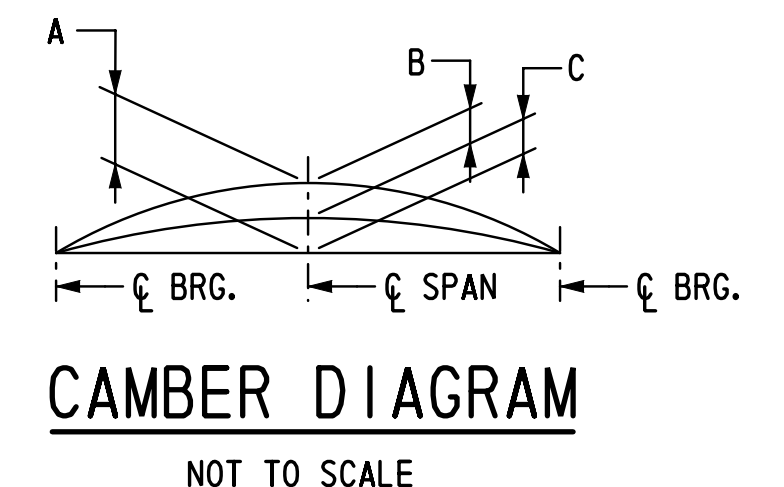
SCALE: AS NOTED

US 301 &
SR 1 INTERCHANGE

CONTRACT	BRIDGE NO.	1-903S
T200911302	DESIGNED BY:	RTC
COUNTY	CHECKED BY:	FPH
NEW CASTLE		

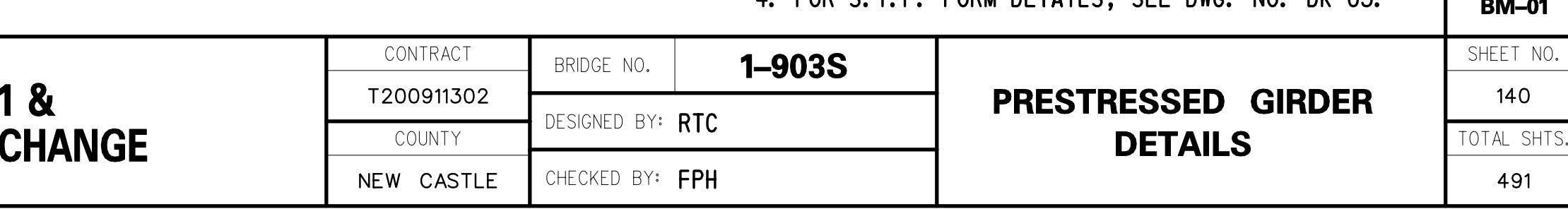
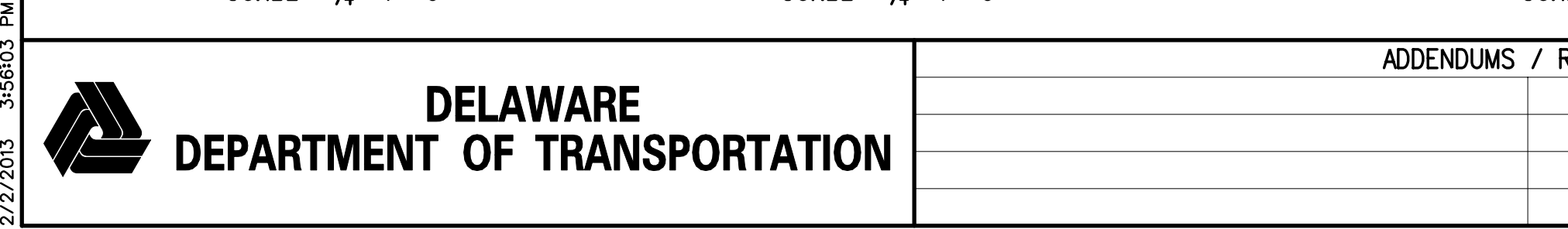
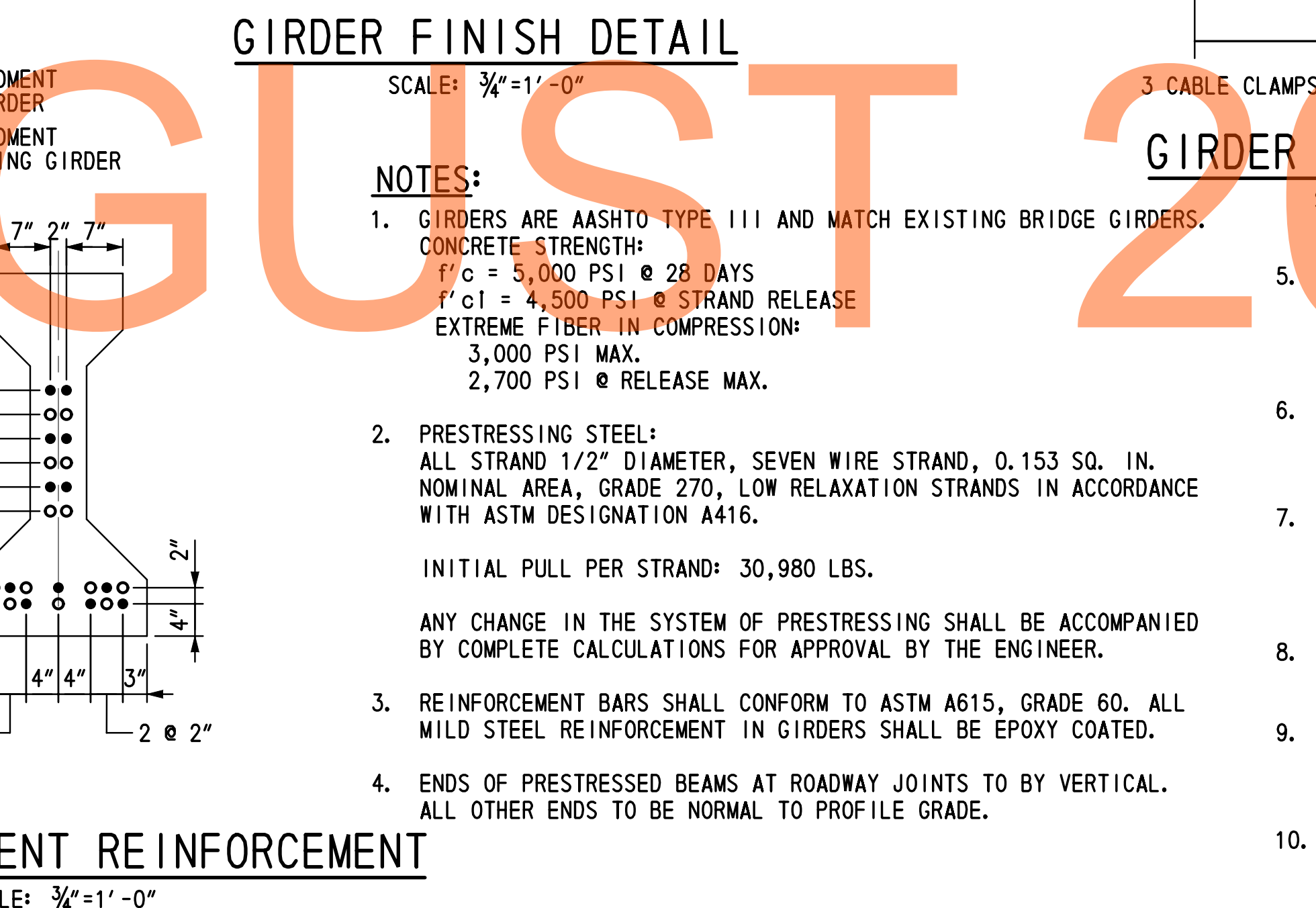
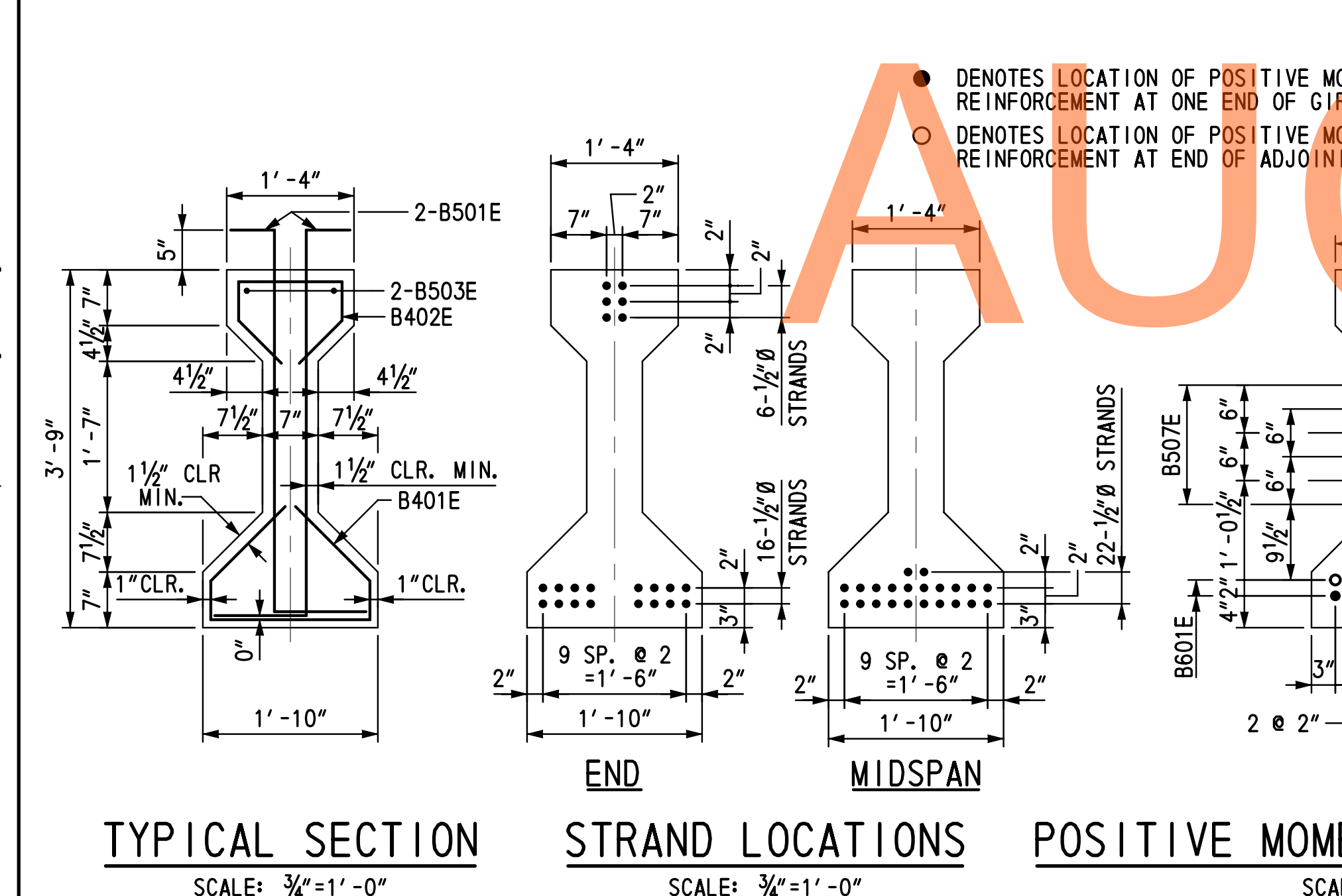
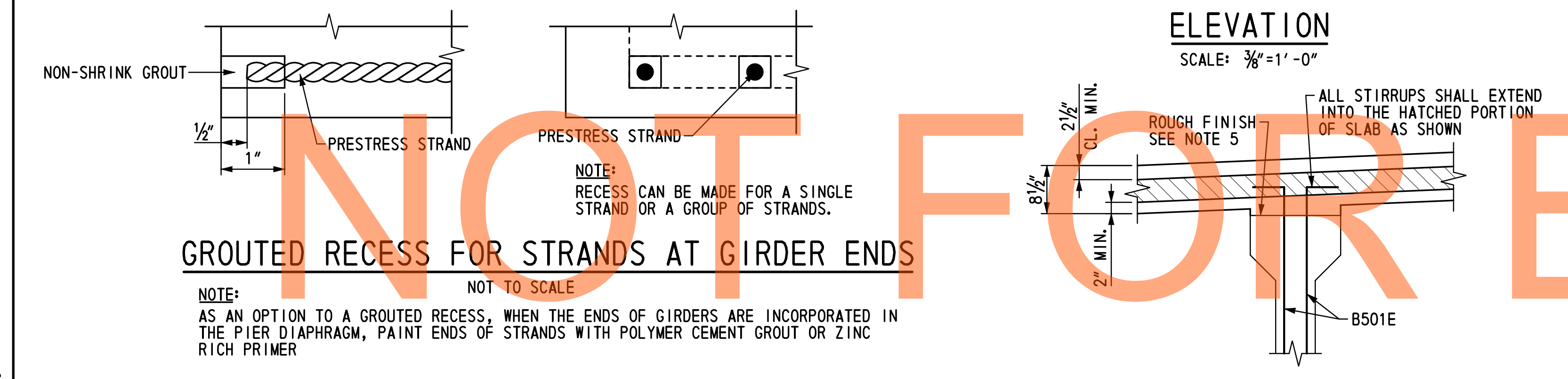
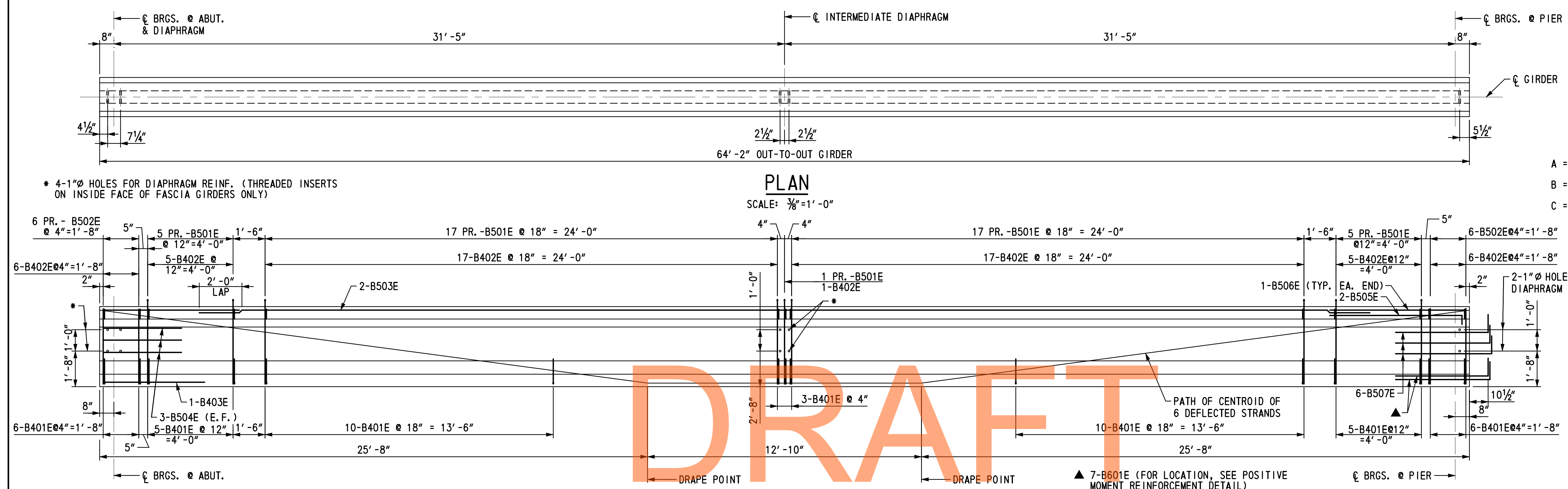
FRAMING PLAN	SHEET NO.	139
	TOTAL SHTS.	491

BR1-1
FR-01



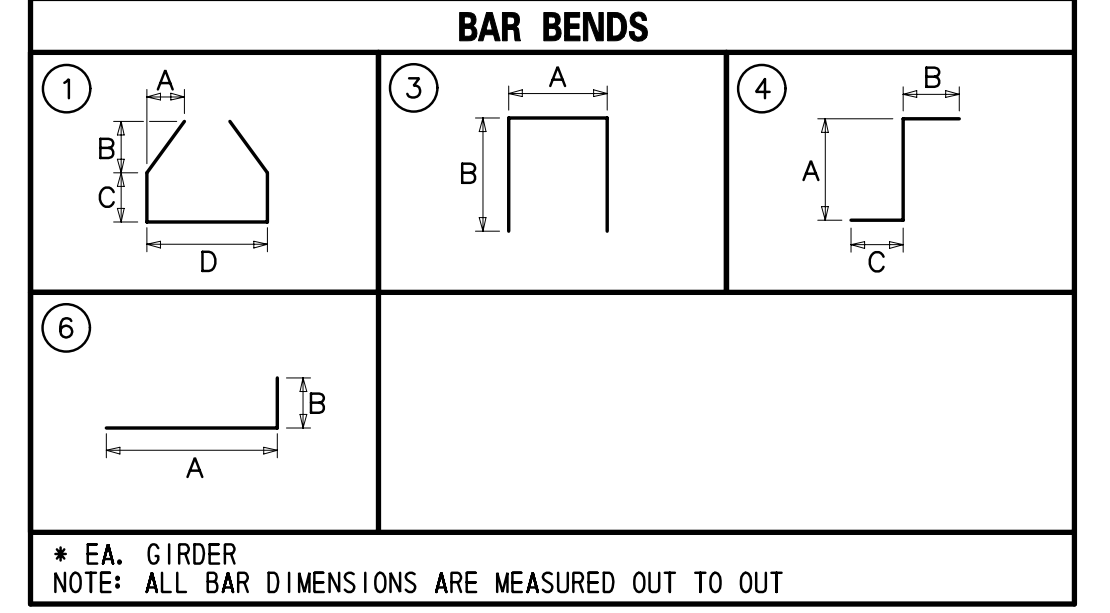
A = ESTIMATED PRESTRESS CAMBER LESS DEFLECTION DUE TO DEAD LOAD OF BEAM TIMES CREEP FACTOR.
B = DEFLECTION DUE TO DEAD LOAD OF SLAB, PARAPETS, SIP FORMS AND FUTURE PAVING ALLOWANCES.
C = A-B = FINAL CAMBER (NET)

CAMBER TABLE			
BEAMS	A	B	C
G17	1.49	0.54	0.95
G18	1.49	0.63	0.86



NOTE:
AT THE CONTRACTOR'S OPTION, ALTERNATE LIFTING DETAILS WILL BY CONSIDERED SUBJECT TO THE APPROVAL OF THE ENGINEER. NO ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR ALTERNATIVE LIFTING DEVICES.

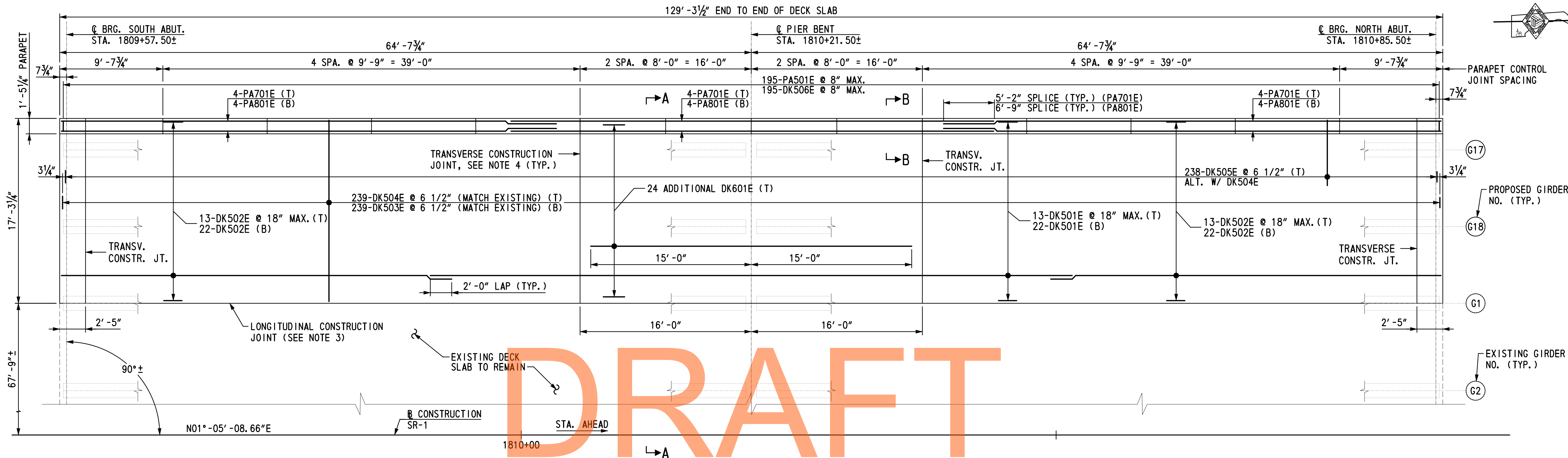
SPECIFICATIONS				BENDING DIMENSIONS (FEET-INCHES)			
QTY.	SIZE	LENGTH	MARK	TYPE	A	B	C
43	4	4'-6"	B401E	1	0'-9"	0'-9"	0'-4 3/8"
55	4	3'-2"	B402E	1	0'-5 3/8"	0'-5 3/8"	0'-4 7/8"
1	4	10'-11"	B403E	3	4'-9"	1'-5"	
92	5	5'-5"	B501E	4	4'-0 1/2"	0'-6"	0'-10 1/2"
18	5	4'-9"	B502E	4	3'-6"	0'-4 1/2"	0'-10 1/2"
2	5	55'-0"	B503E	STR.			
6	5	3'-8"	B504E	STR.			
2	5	7'-4"	B505E	6	6'-6"	0'-10"	
2	5	14'-0"	B506E	3	6'-6"	1'-0"	
6	5	5'-2"	B507E	6	4'-4"	0'-10"	
7	6	5'-4"	B601E	6	4'-4"	1'-0"	



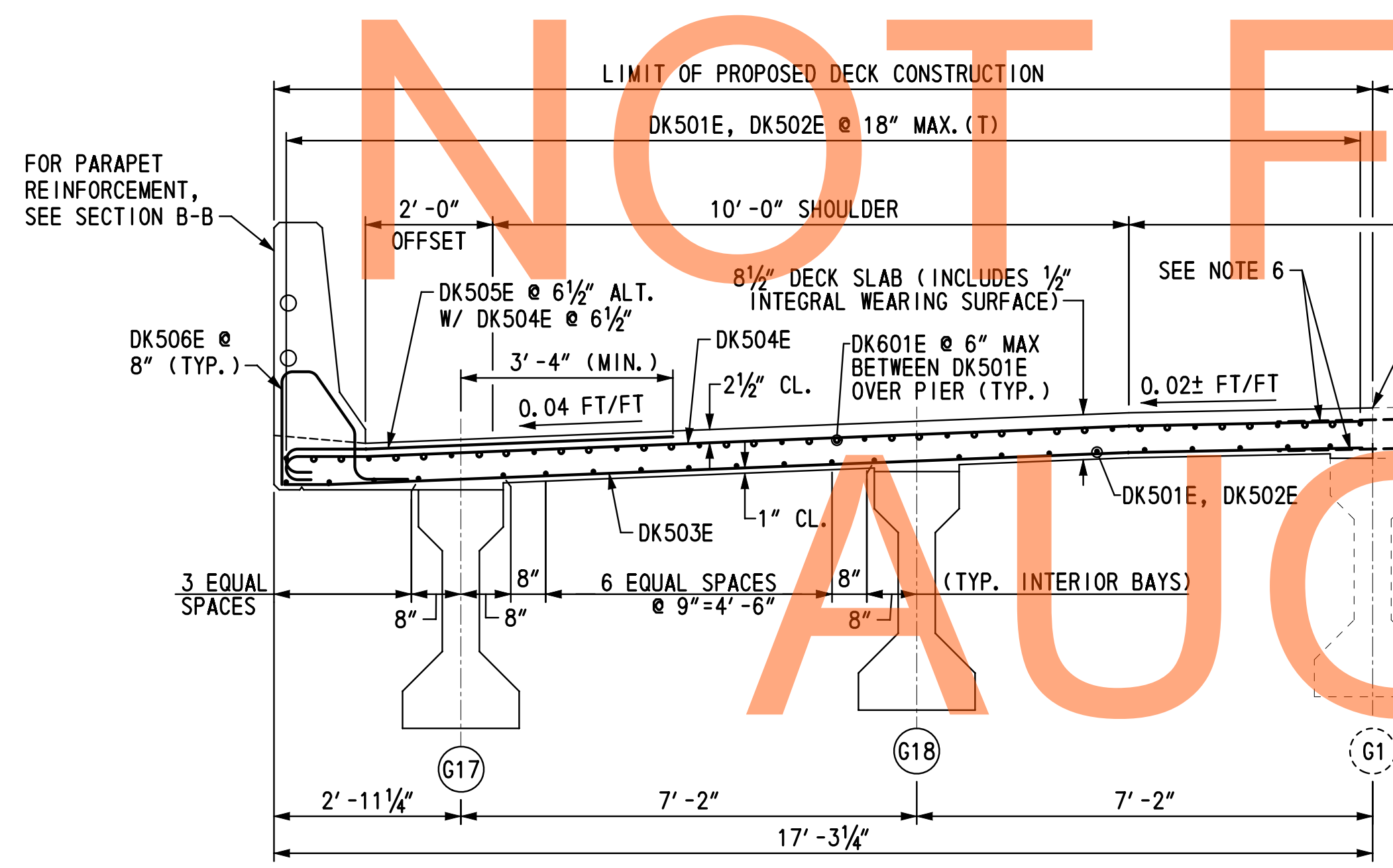
- NOTES:**
- GIRDERS ARE AASHTO TYPE III AND MATCH EXISTING BRIDGE GIRDERS.
CONCRETE STRENGTH:
f'c = 5,000 PSI @ 28 DAYS
f'cl = 4,500 PSI @ STRAND RELEASE
EXTREME FIBER IN COMPRESSION:
3,000 PSI MAX.
2,700 PSI @ RELEASE MAX.
 - PRESTRESSING STEEL:
ALL STRAND 1/2" DIAMETER, SEVEN WIRE STRAND, 0.153 SQ. IN. NOMINAL AREA, GRADE 270, LOW RELAXATION STRANDS IN ACCORDANCE WITH ASTM DESIGNATION A416.
INITIAL PULL PER STRAND: 30,980 LBS.
ANY CHANGE IN THE SYSTEM OF PRESTRESSING SHALL BE ACCOMPANIED BY COMPLETE CALCULATIONS FOR APPROVAL BY THE ENGINEER.
 - REINFORCEMENT BARS SHALL CONFORM TO ASTM A615, GRADE 60. ALL MILD STEEL REINFORCEMENT IN GIRDERS SHALL BE EPOXY COATED.
 - ENDS OF PRESTRESSED BEAMS AT ROADWAY JOINTS TO BE VERTICAL. ALL OTHER ENDS TO BE NORMAL TO PROFILE GRADE.
 - TOP SURFACE OF ALL BEAMS SHALL BE "ROUGH" FINISHED TO A FULL AMPLITUDE OF 1/4" AND SCRUBBED TRANSVERSELY WITH A COARSE WIRE BRUSH TO REMOVE ALL LAITANCE AND TO PRODUCE A ROUGHENED SURFACE FOR BONDING.
 - THREADED INSERTS SHALL HAVE A MINIMUM ULTIMATE PULLOUT CAPACITY OF 11,900 LBS EACH. BARS TO HAVE THREADS CUT TO MATCH THREADS OF INSERTS.
 - METAL INSERTS SHALL BE PROVIDED ALONG THE TOP FLANGE OF PRESTRESSED CONCRETE BEAMS TO SUPPORT S. I. P. FORMS. SIZE, SPACING AND LOCATION OF INSERTS AS REQUIRED BY S. I. P. FORMS MANUFACTURER.
 - ANY MARK NUMBER WITH SUFFIX 'E' DENOTES EPOXY COATED REINFORCING STEEL.
 - GIRDER LENGTH IN CASTING BED SHALL BE DETERMINED AND DEPICTED IN SHOP DRAWINGS TO COMPENSATE FOR GRADE AND SHORTENING DUE TO PRESTRESS EFFECT.
 - NO CLEAR COVER LESS THAN AS SHOWN ON THESE PLANS WILL BE ACCEPTED.

- REFERENCES:**
- FOR GENERAL NOTES, SEE DWG. NO. PN-01.
 - FOR FRAMING PLAN, SEE DWG. NO. FR-01.
 - FOR BEARING DETAILS, SEE DWG. NO. BB-01.
 - FOR S. I. P. FORM DETAILS, SEE DWG. NO. DK-05.

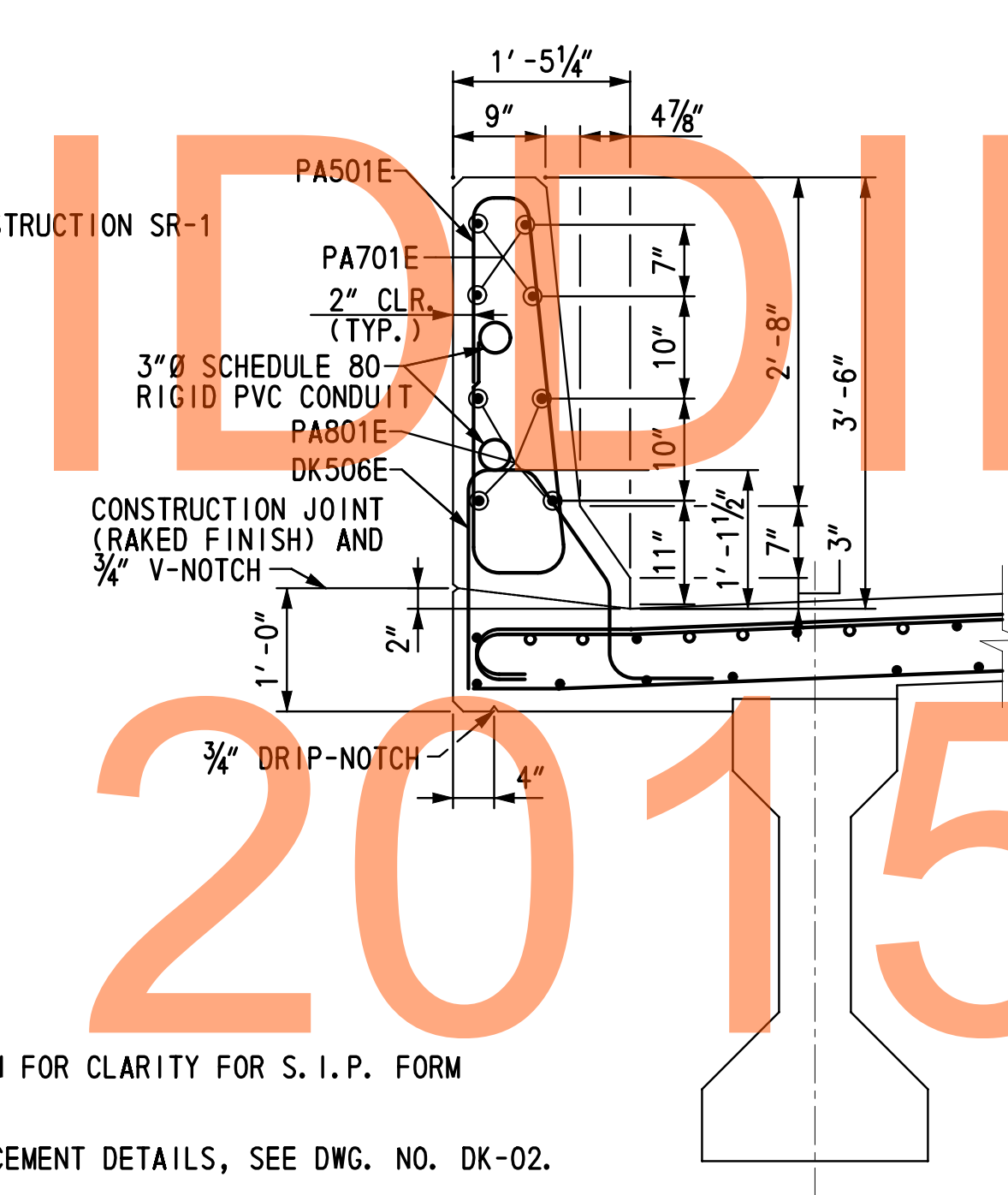
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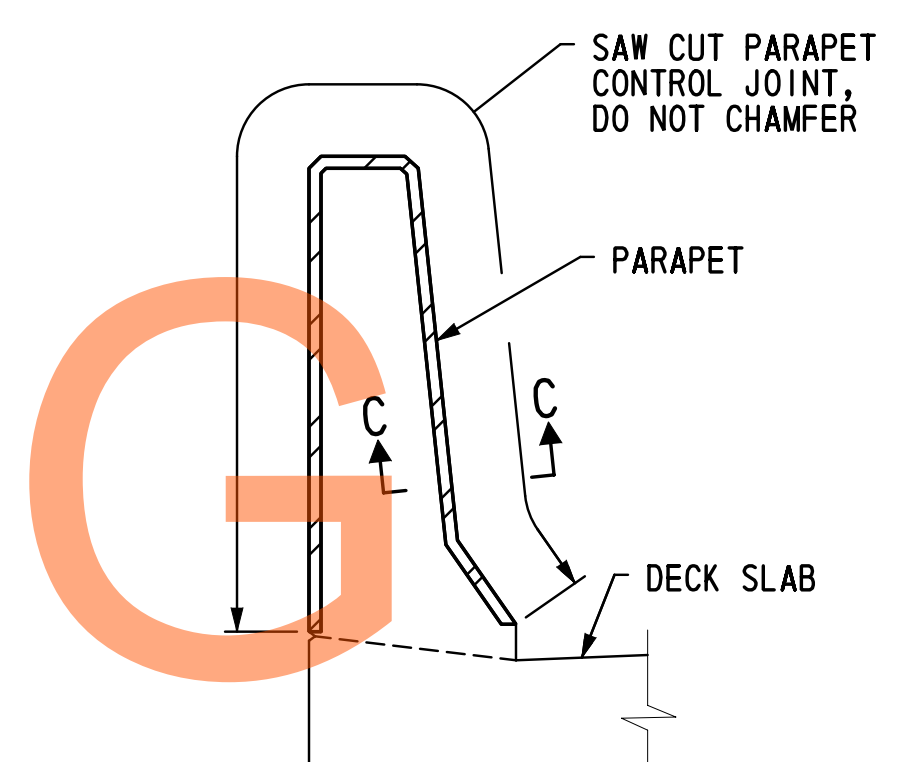
DECK PLAN
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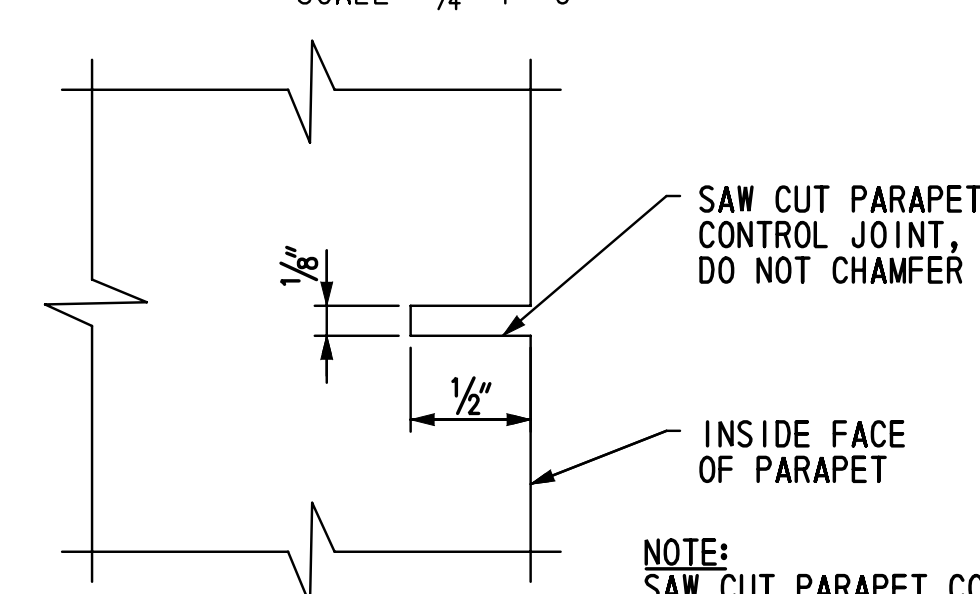
SECTION A-A
SCALE: 1/2"=1'-0"



SECTION B-B
SCALE: 3/4"=1'-0"



PARAPET CONTROL JOINT DETAIL
SCALE: 3/4"=1'-0"



SECTION C-C
NOT TO SCALE

NOTES:

1. STAY-IN-PLACE FORMS NOT SHOWN ON TYPICAL REINFORCEMENT SECTION FOR CLARITY FOR S. I. P. FORM SUPPORT AND PLACEMENT DETAILS, SEE DWG. NO. DK-05.
2. FOR ABUTMENT END DIAPHRAGM AND INTERMEDIATE DIAPHRAGM REINFORCEMENT DETAILS, SEE DWG. NO. DK-02.
3. FOR LONGITUDINAL CONSTRUCTION JOINT DETAIL, SEE DWG. NO. FD-01.
4. FOR TRANSVERSE CONSTRUCTION JOINT DETAIL, SEE DWG. NO. FD-01.
5. FOR PIER DIAPHRAGM REINFORCEMENT DETAILS, SEE DWG. NO. DK-03.
6. RETAIN EXISTING TRANSVERSE DECK REINFORCEMENT BARS. 12" MINIMUM FOR TOP MAT AND 6" MINIMUM FOR BOTTOM. ABRASIVE BLAST CLEAN EXISTING REINFORCEMENT TO A SSPC-SP6. PAINT ENDS OF EXISTING REINFORCEMENT BARS WITH AN APPROVED EPOXY PAINT. SPLICE NEW REINFORCEMENT (DK503E & DK504E) TO EXISTING USING AN APPROVED MECHANICAL SPLICE SYSTEM. MODIFY DK503E & DK504E LENGTHS AS REQUIRED TO ACCOMMODATE SPLICE. COST OF MECHANICAL SPLICES SHALL BE INCIDENTAL TO ITEM 604000 - BAR REINFORCEMENT, EPOXY COATED.
7. SHOULD EXISTING TRANSVERSE DECK REINFORCEMENT BARS BE DAMAGED OR CUT AND CAN NOT BE USED TO SPLICE WITH PROPOSED REINFORCEMENT BAR, CONTRACTOR SHALL DRILL AND EPOXY ADHESIVE AN EPOXY COATED DOWEL BAR INTO EXISTING DECK SLAB. WORK SHALL BE PERFORMED IN CONFORMANCE WITH ITEM 602579 - DRILLING HOLES AND INSTALLING DOWELS. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR DRILLING AND INSTALLING DOWEL BARS.

Project: US 301 & SR 1 Interchange, Bridge No. 1-903S, Stationing: 1810+00 to 1810+50
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 Date: 2/2/2015 3:57:20 PM
 Author: J. J. ...
 Checker: ...
 Title: ...



ADDENDUMS / REVISIONS	

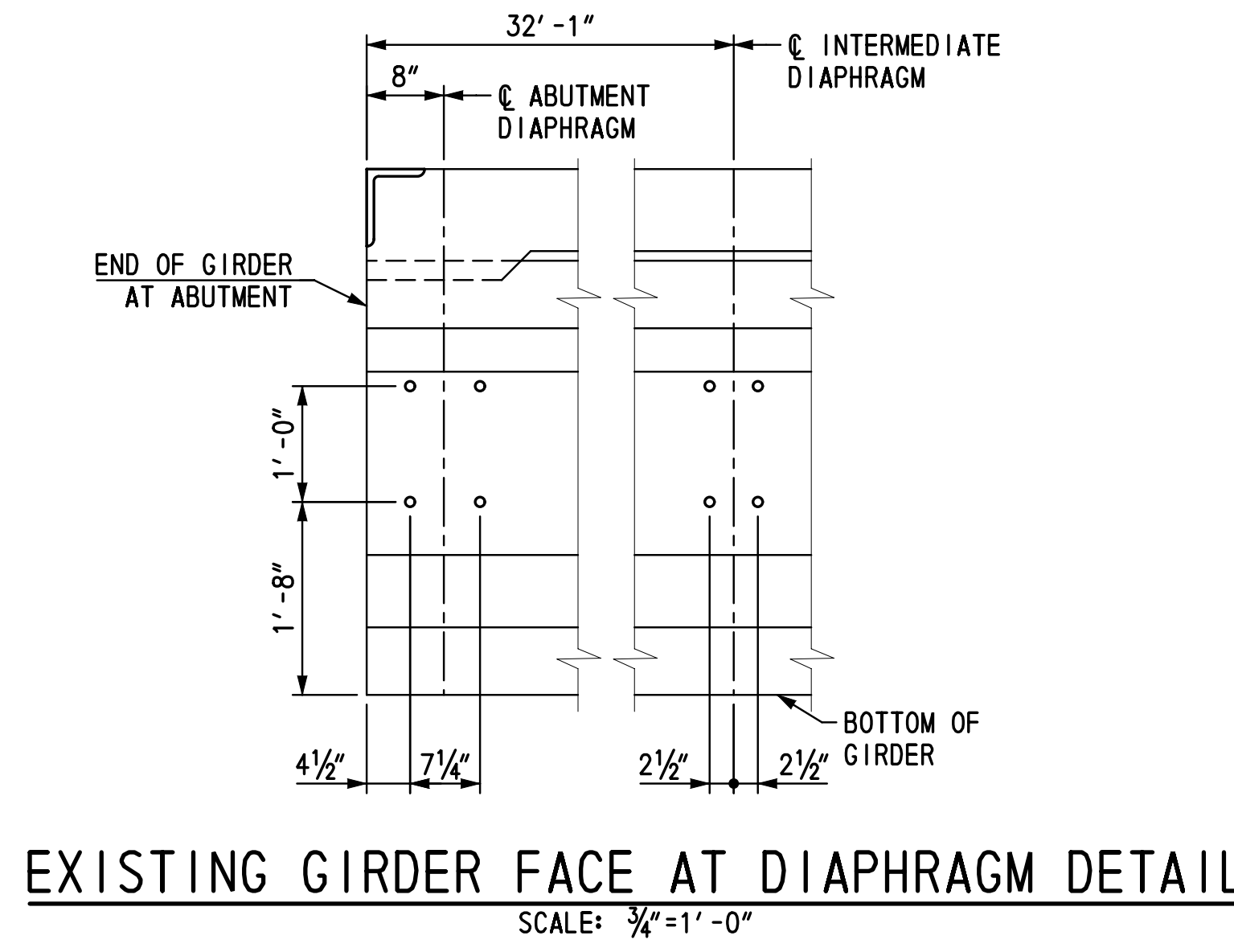
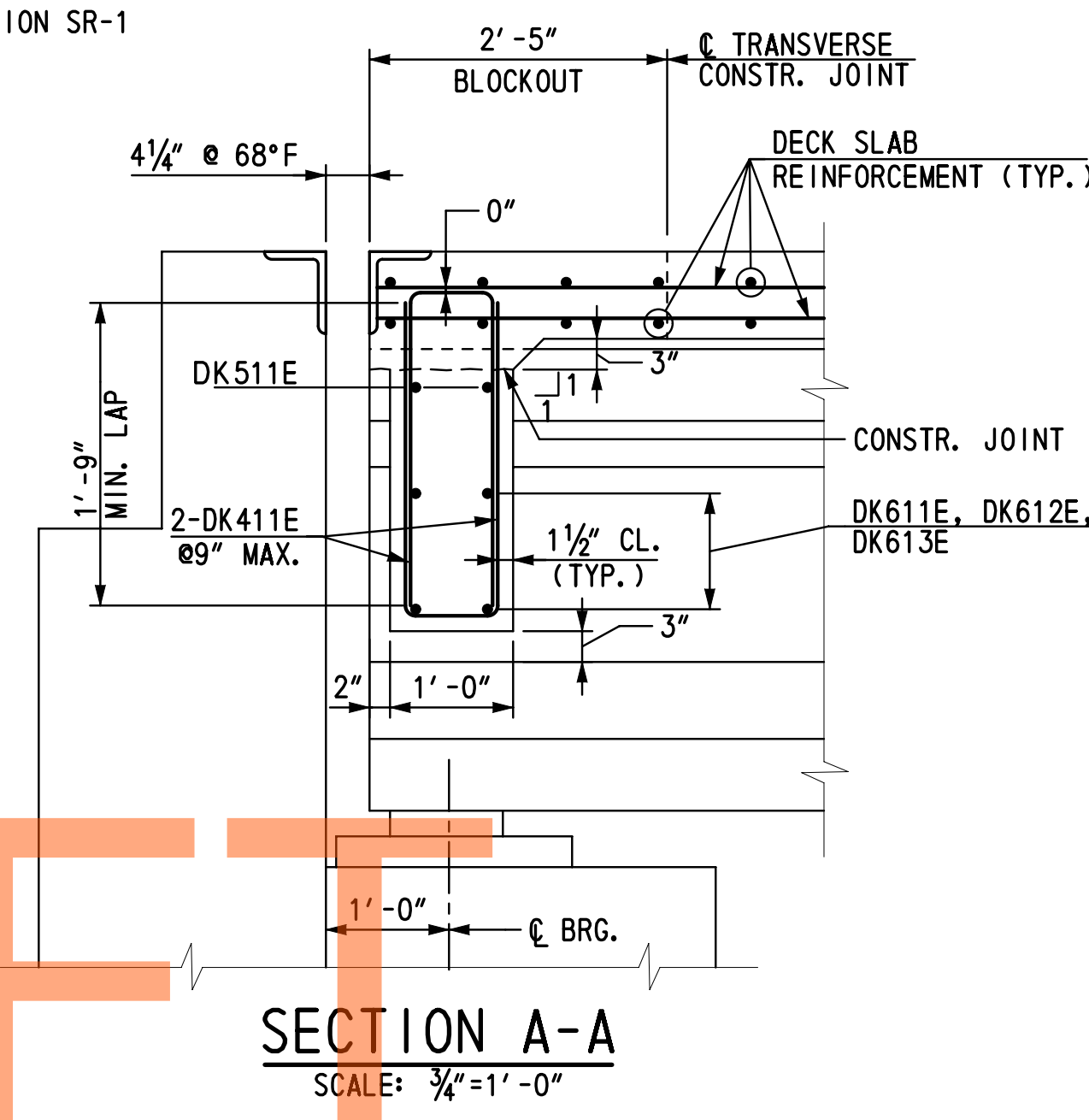
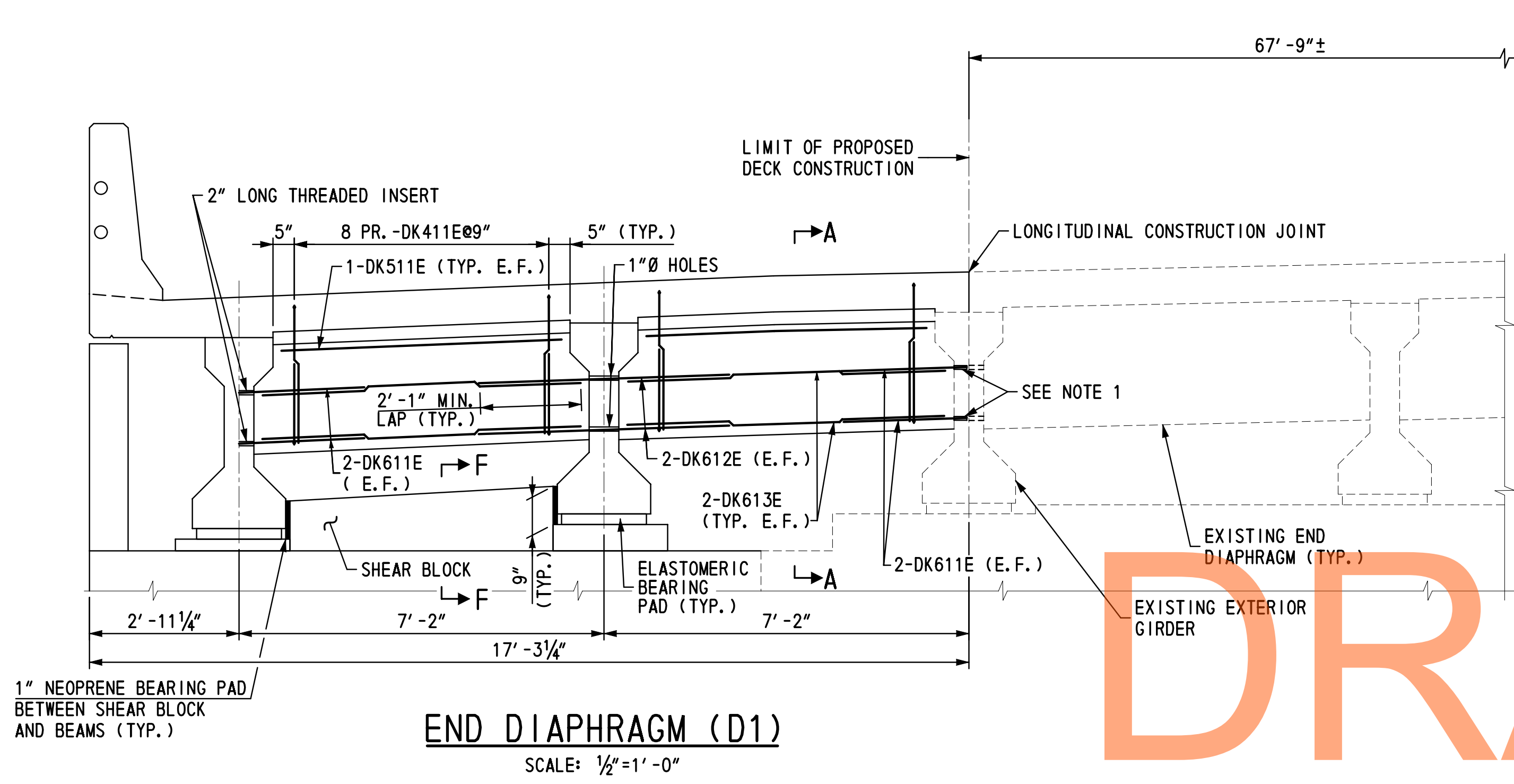
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US 301 & SR 1 INTERCHANGE

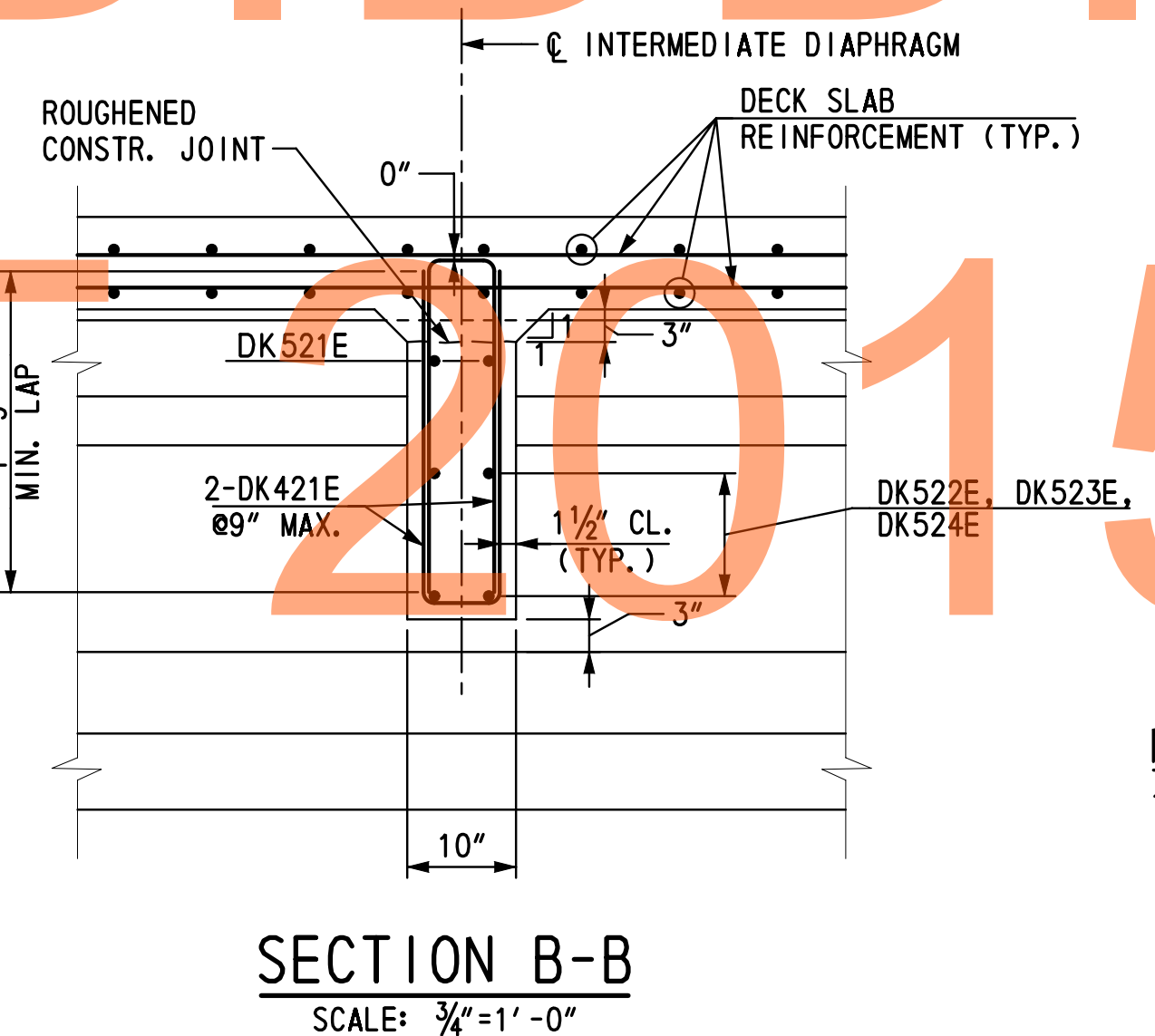
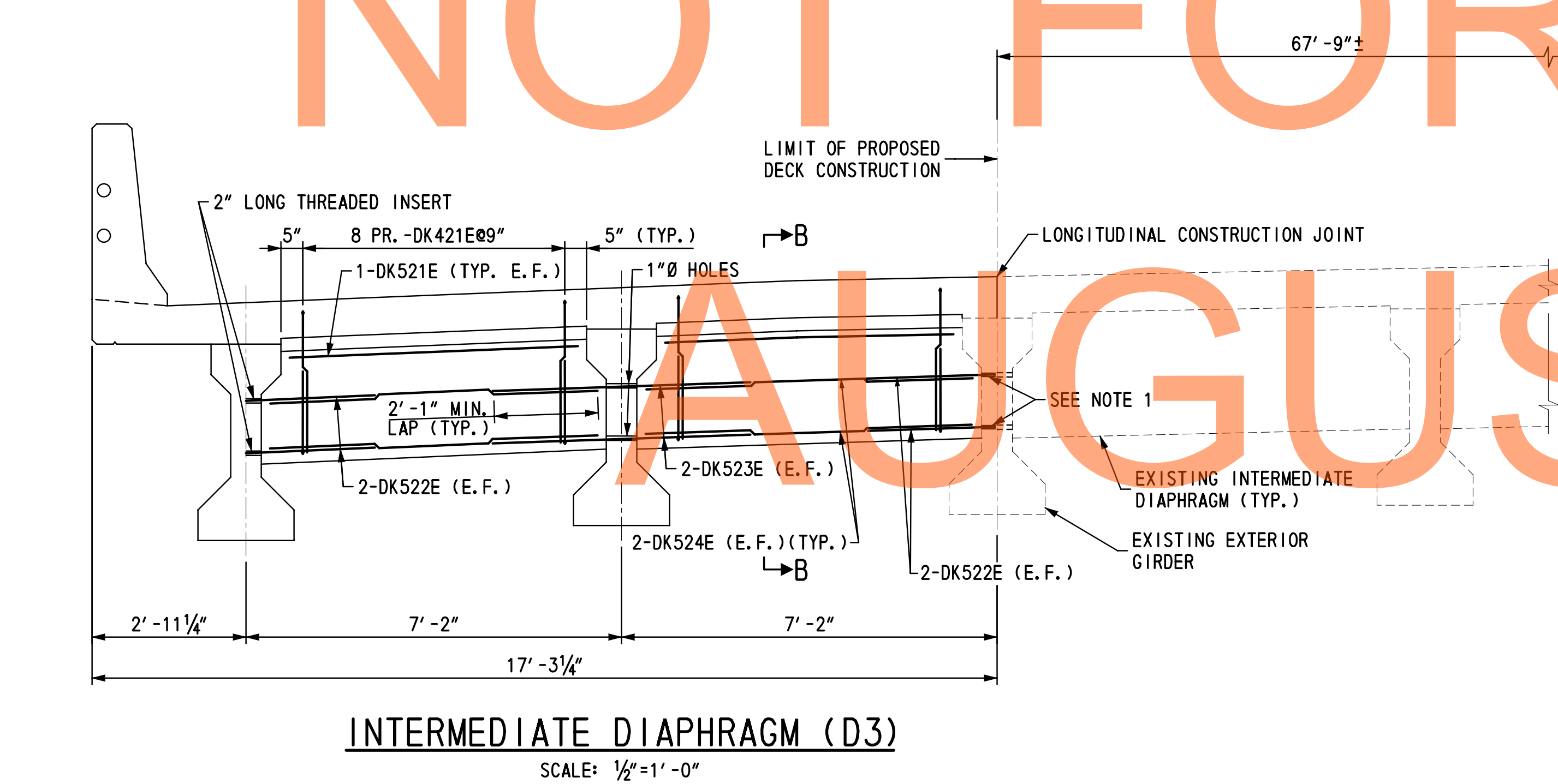
CONTRACT	BRIDGE NO.	1-903S
T200911302	DESIGNED BY:	RTC
COUNTY	CHECKED BY:	FPH
NEW CASTLE		

DECK SLAB PLAN & CROSS SECTION

BR-1 DK-01
SHEET NO.
141
TOTAL SHTS.
491



NOT FOR BIDDING



NOTES:

- PLACE EACH DK522E (D3) IN A 3/4"Øx3" DEEP DRILLED HOLE AND EACH DK611E (D1) IN A 7/8"Øx3" DEEP DRILLED HOLE INTO WEB OF EXISTING FASCIA GIRDER, (C), USING AN APPROVED EPOXY ADHESIVE ANCHORING SYSTEM. SEE EXISTING GIRDER FACE AT DIAPHRAGM DETAIL FOR DRILLED HOLE LOCATIONS. DRILLING HOLES AND INSTALLING REINFORCING BAR DOWELS WILL BE PAID UNDER ITEM 602579 - DRILLING HOLES AND INSTALLING DOWELS. DOWEL BARS WILL BE PAID UNDER ITEM 604000 - BAR REINFORCEMENT, EPOXY COATED.

REFERENCES:

- FOR PROJECT NOTES, SEE DWG. NO. PN-01.
- FOR LEGEND, SEE DWG. NO. PE-01.
- FOR FRAMING PLAN, SEE DWG. NO. FR-01.
- FOR PRESTRESSED BEAM DETAILS, SEE DWG. NO. BM-01.
- FOR SECTION F-F, SEE DWG. NO. AB-03.

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ADDENDUMS / REVISIONS	

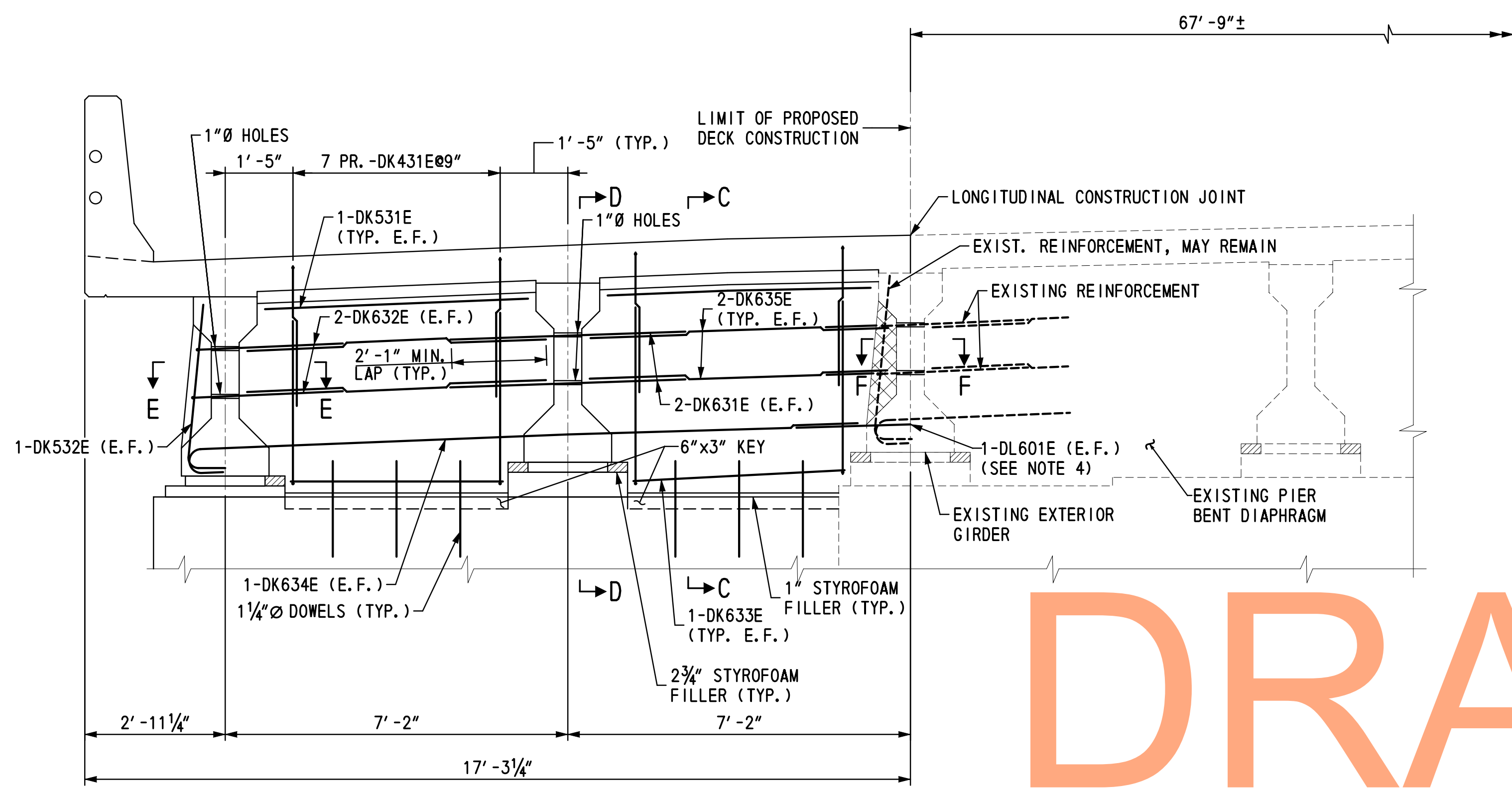
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US 301 & SR 1 INTERCHANGE

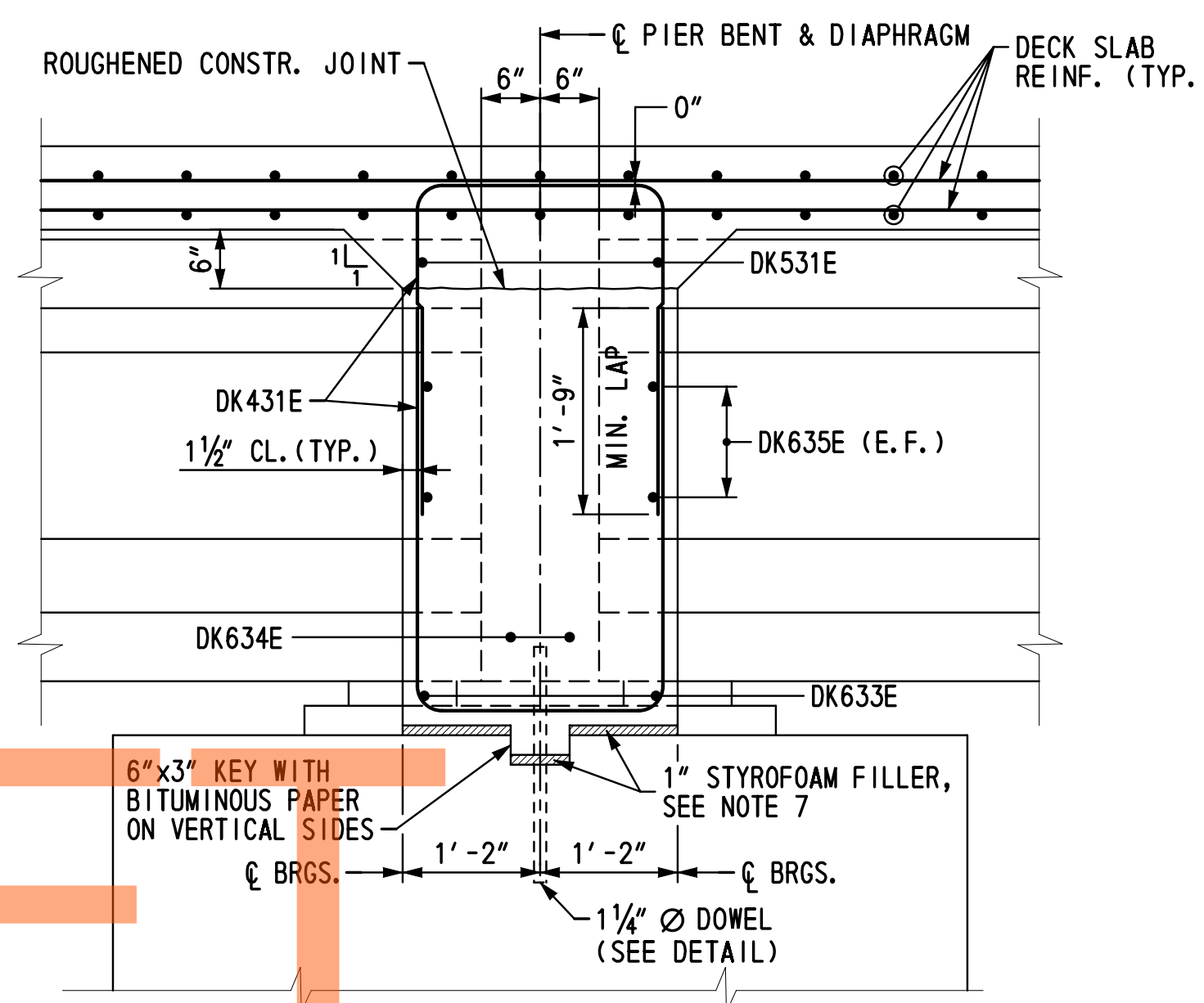
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T200911302	DESIGNED BY:	RTC
COUNTY	CHECKED BY:	FPH
NEW CASTLE		

DIAPHRAGM DETAILS - 1

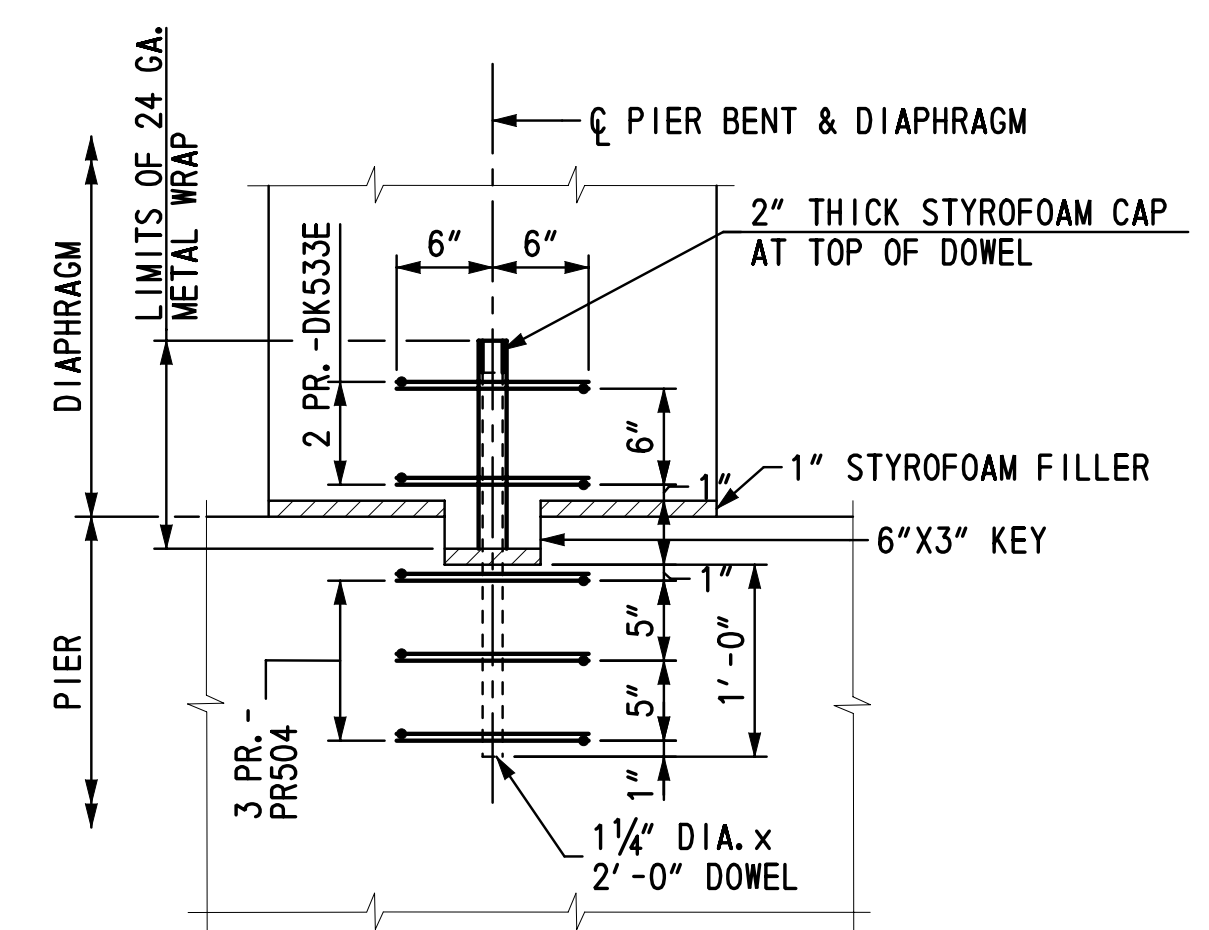
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SHEET NO.
142
TOTAL SHTS.
491



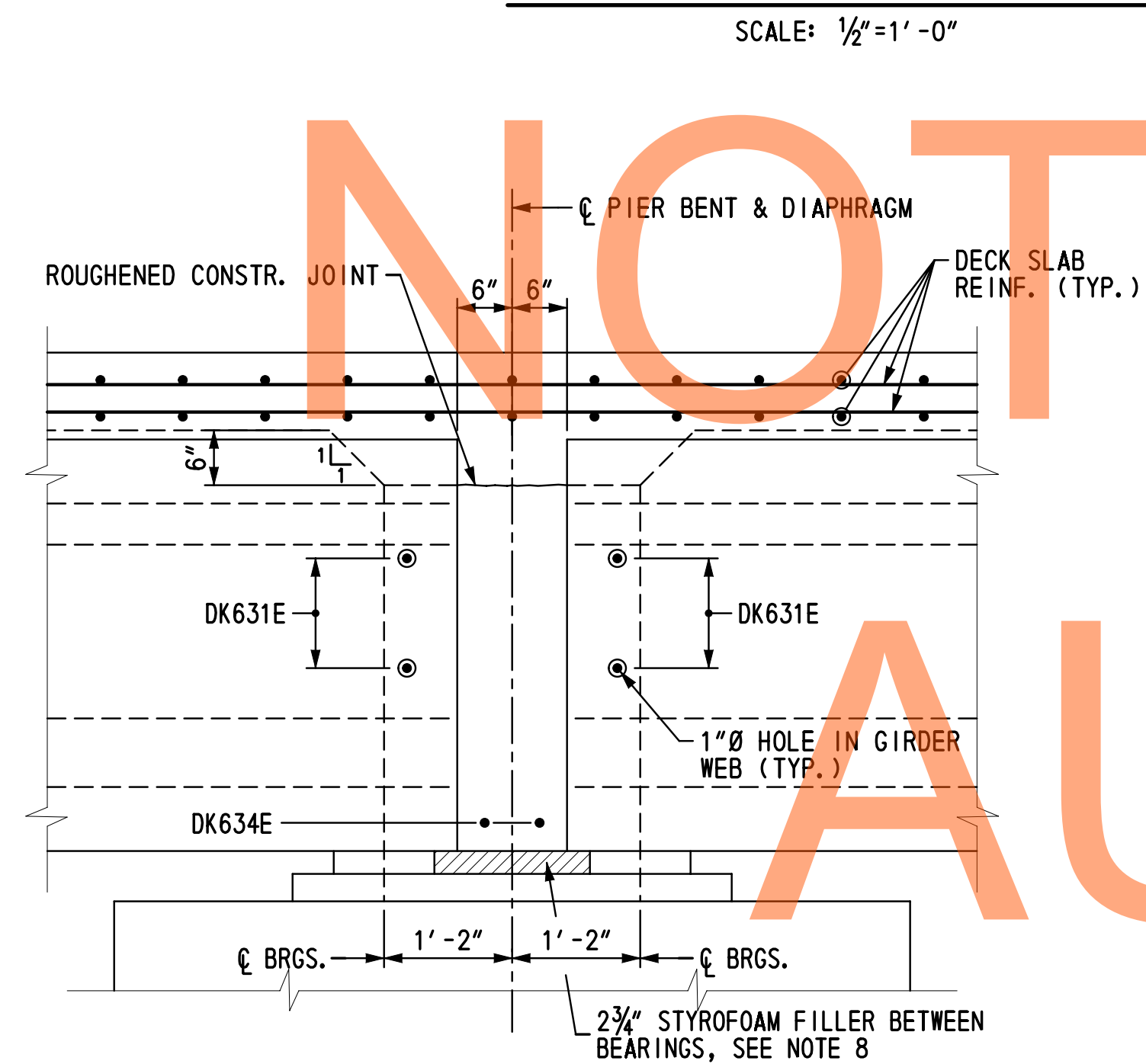
PIER BENT DIAPHRAGM (D2)
SCALE: 1/2"=1'-0"



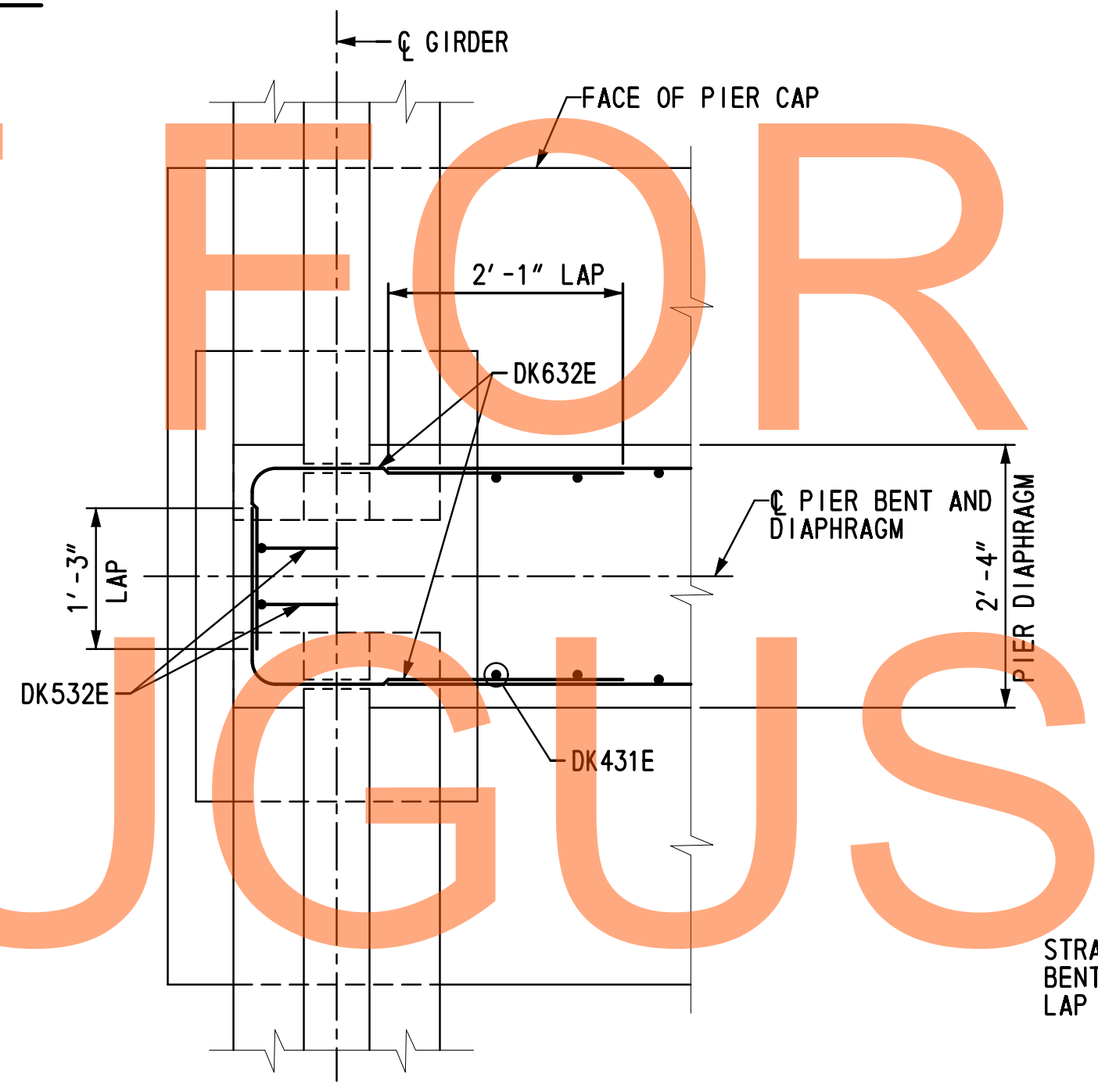
SECTION C-C
SCALE: 3/4"=1'-0"



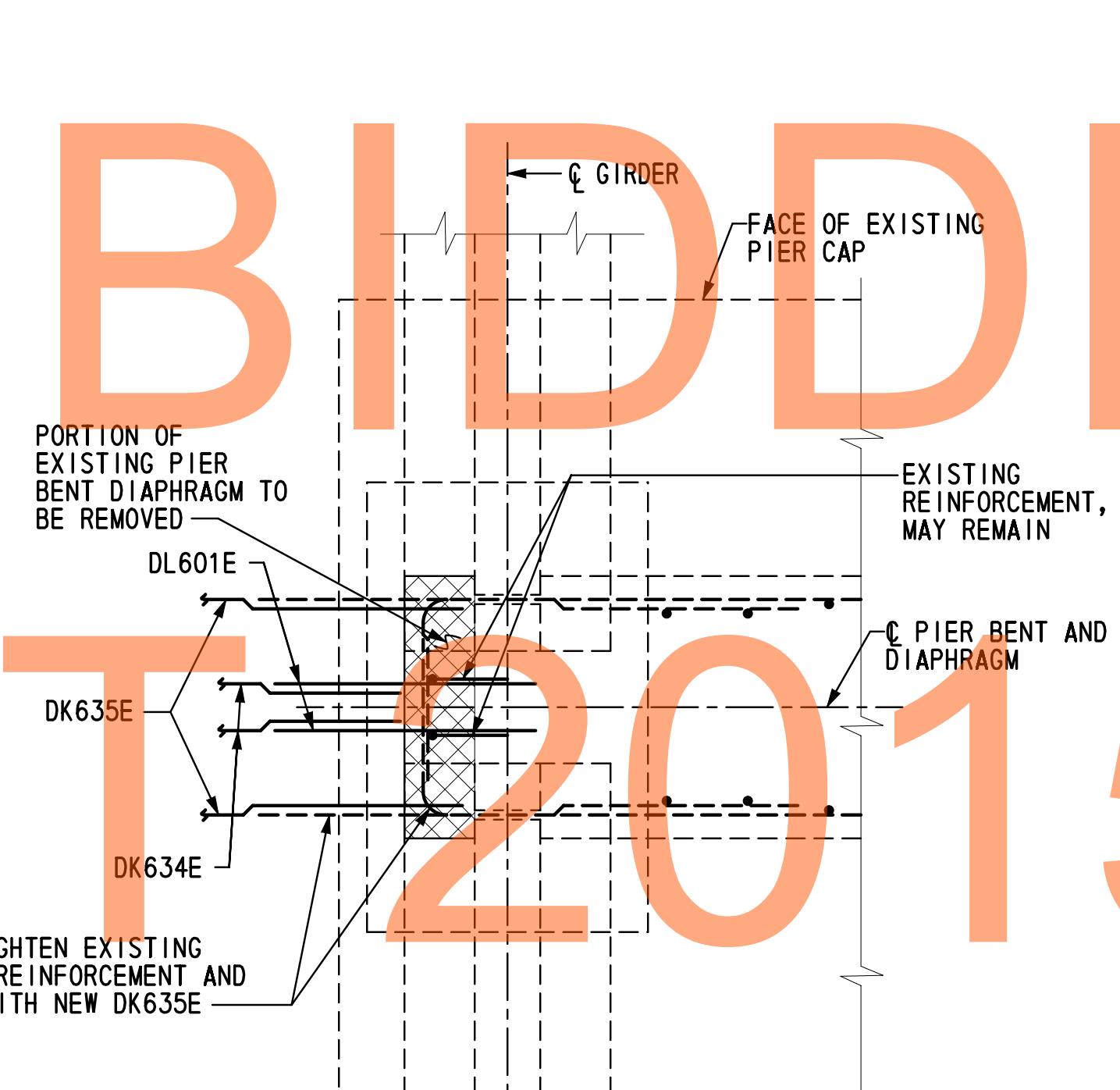
DOWEL DETAIL
SCALE: 1"=1'-0"



SECTION D-D
SCALE: 3/4"=1'-0"



SECTION E-E
SCALE: 3/4"=1'-0"



SECTION F-F
SCALE: 3/4"=1'-0"

NOTES:

- CAREFULLY REMOVE FASCIA PORTION OF THE EXISTING PIER BENT DIAPHRAGM TO THE APPROXIMATE LIMITS INDICATED.
- EXPOSE EXISTING REINFORCEMENT EXERCISING CAUTION NOT TO DAMAGE OR CUT BARS.
- CLEAN ALL EXISTING REINFORCEMENT BARS TO BE RETAINED WITH A WIRE BRUSH OR SAND BLAST, STRAIGHTEN WHERE INDICATED AND COAT WITH AN APPROVED EPOXY PAINT FOR EPOXY COATED EXISTING REINFORCEMENT OR NEAT CEMENT FOR NON-EPOXY COATED EXISTING REINFORCEMENT.
- PLACE EACH DL601E IN A 1"Ø x 1'-2" DEEP DRILLED HOLE AND FILL WITH AN APPROVED EPOXY ADHESIVE ANCHORING SYSTEM OR EPOXY GROUT. OFFSET HOLES TO AVOID EXISTING REINFORCEMENT. DRILLING HOLES AND INSTALLING REINFORCING BAR DOWELS WILL BE PAID UNDER ITEM 602579 - DRILLING HOLES AND INSTALLING DOWELS. DOWEL BARS WILL BE PAID UNDER ITEM 604000 - BAR REINFORCEMENT, EPOXY COATED.
- APPLY AN APPROVED EPOXY BONDING COMPOUND TO THE EXISTING CONCRETE SURFACES AGAINST WHICH NEW CONCRETE WILL BE CAST. COST SHALL BE INCIDENTAL TO ITEM 60219 - PORTLAND CEMENT CONCRETE MASONRY, SUPERSTRUCTURE, CLASS A.
- PRIOR TO APPLICATION OF BONDING COMPOUND, SANDBLAST OR WATERBLAST EXISTING CONCRETE SURFACES TO REMOVE ALL LAITANCE.
- STYROFOAM SHALL CONFORM TO ASTM C 578, EXCEPT THAT THE MAXIMUM ALLOWABLE WATER ABSORPTION SHALL BE 2%. COST SHALL BE INCIDENTAL TO ITEM 602019 - PORTLAND CEMENT CONCRETE MASONRY, SUPERSTRUCTURE, CLASS A.
- FOR ADDITIONAL DETAILS, SEE PIER DIAPHRAGM BEARING MATERIAL PLACEMENT DETAIL ON DWG. NO. DK-05.
- POSITIVE MOMENT REINFORCEMENT AT GIRDER ENDS NOT SHOWN FOR CLARITY.

REFERENCES:

- FOR PROJECT NOTES, SEE DWG. NO. PN-01.
- FOR LEGEND, SEE DWG. NO. PE-01.
- FOR FRAMING PLAN, SEE DWG. NO. FR-01.
- FOR PRESTRESSED BEAM DETAILS, SEE DWG. NO. BM-01.
- FOR DECK SLAB PLAN AND DETAILS, SEE DWG. NO. DK-01.
- FOR PIER BENT DETAILS, SEE DWG. NOS. PR-01 & PR-02.

ADDENDUMS / REVISIONS

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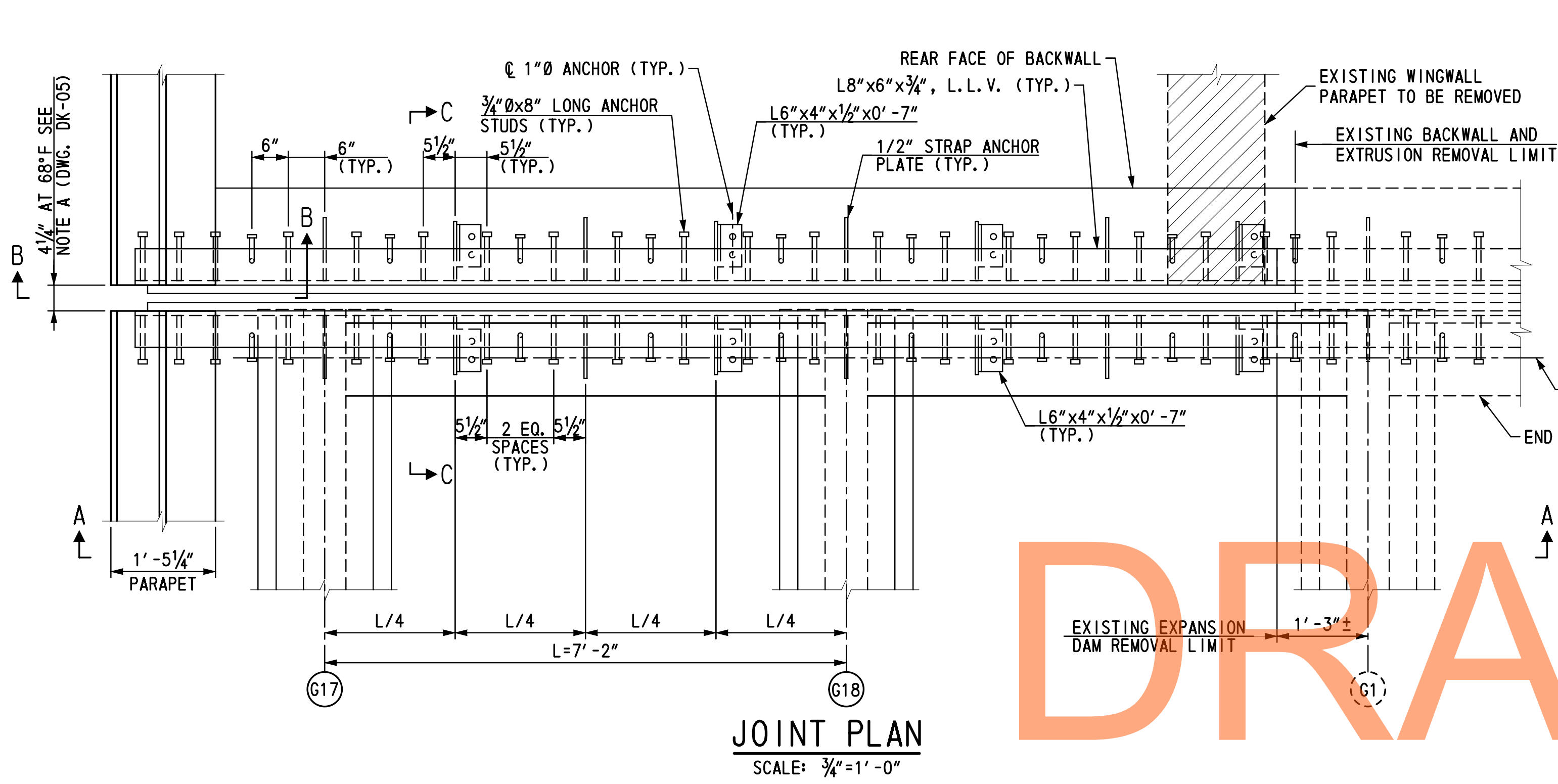
US 301 & SR 1 INTERCHANGE

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T200911302	DESIGNED BY:	RTC
COUNTY	CHECKED BY:	FPH
NEW CASTLE		

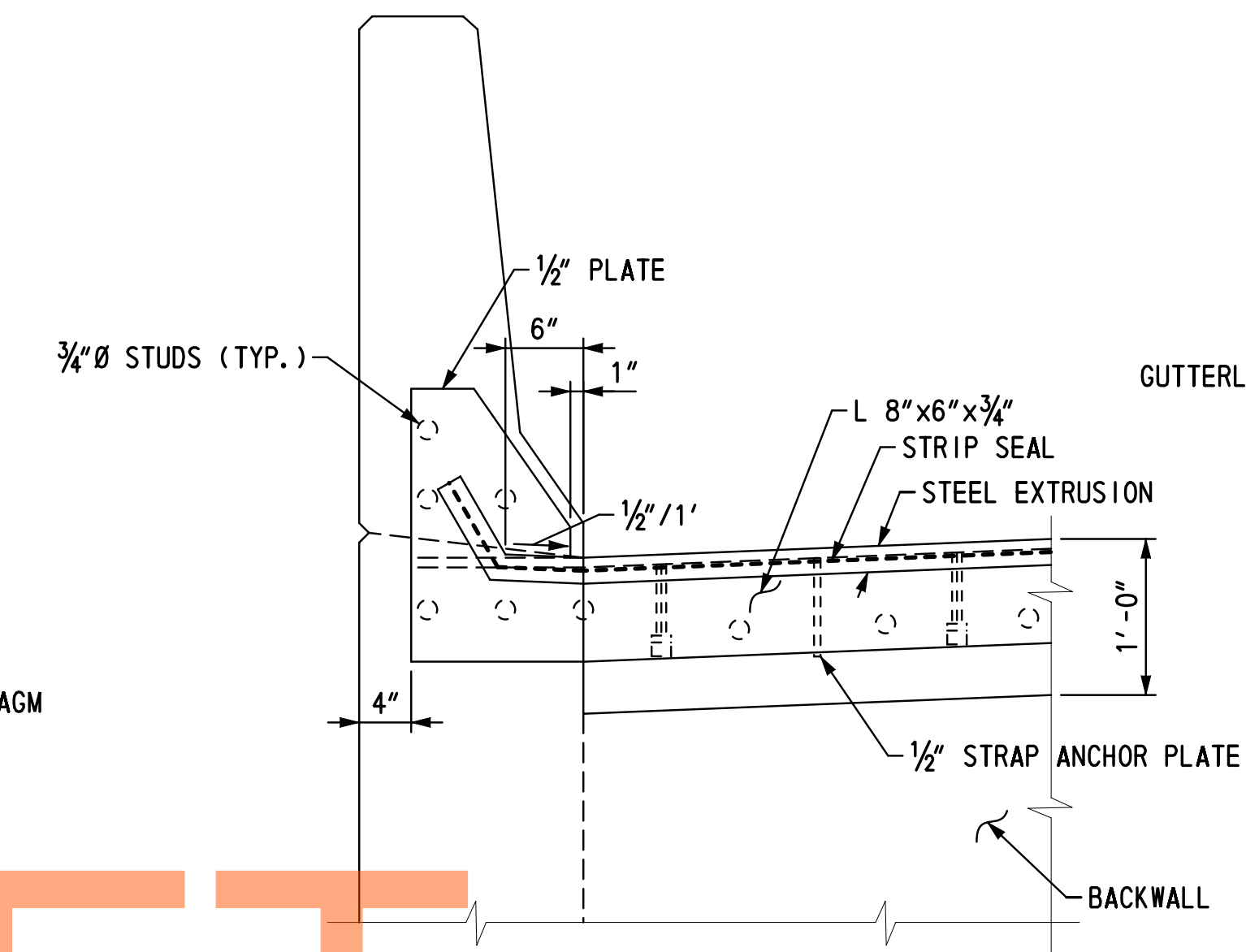
DIAPHRAGM DETAILS - 2

BR-1 DK-03
SHEET NO.
143
TOTAL SHTS.
491

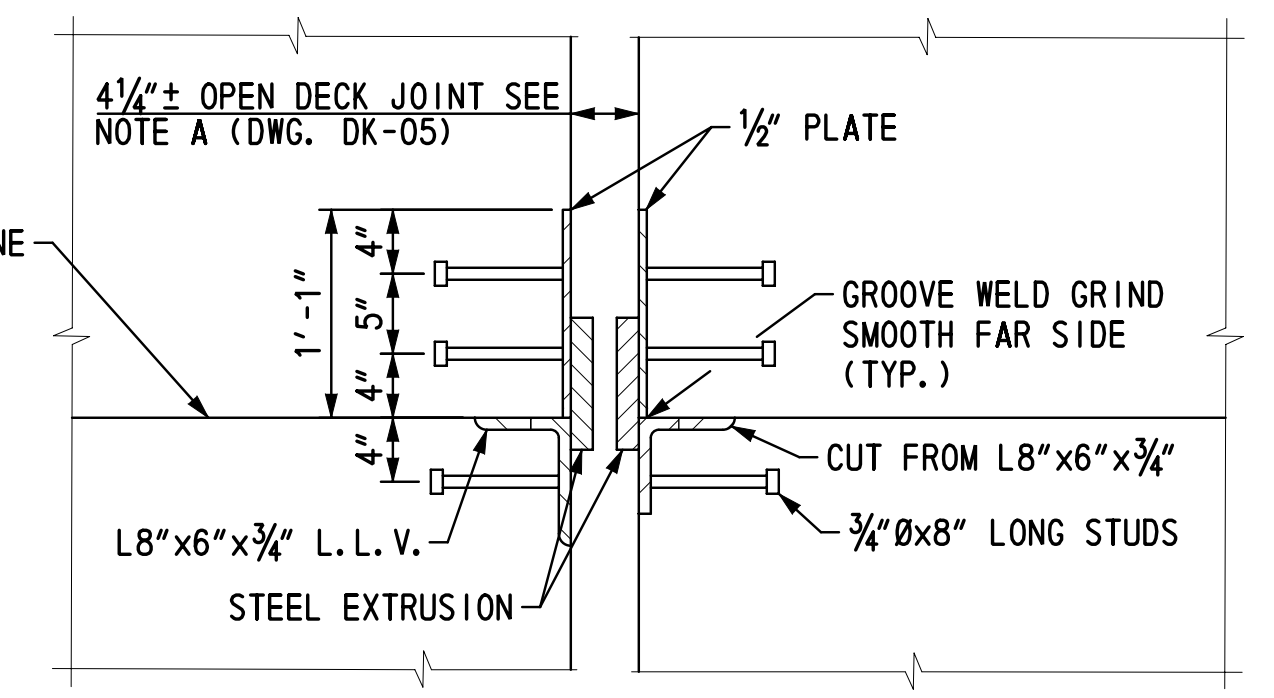
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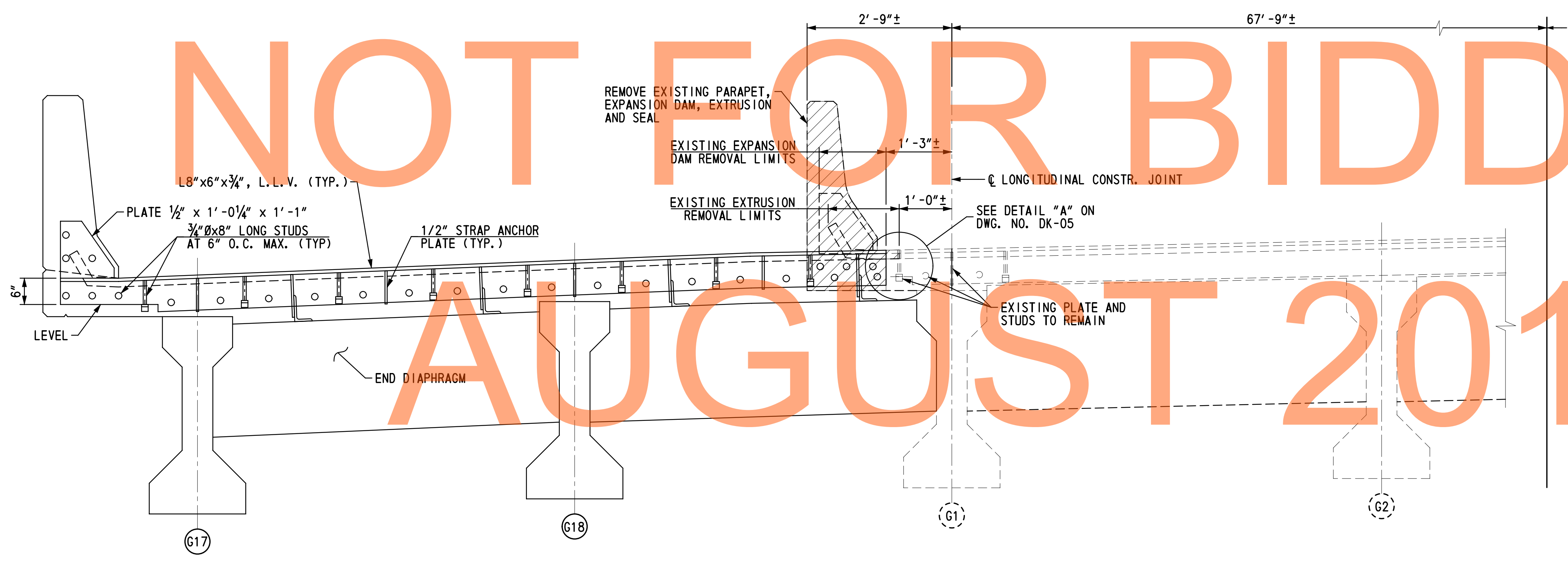
JOINT PLAN
SCALE: 3/4"=1'-0"



SECTION B-B
SCALE: 1"=1'-0"



SECTION THRU PARAPET
SCALE: 1"=1'-0"



SECTION A-A
SCALE: 3/4"=1'-0"

DRAFT

NOT FOR BIDDING

AUGUST 2015

EXPANSION JOINT NOTES:

1. STEEL FOR DECK JOINTS SHALL BE AASHTO M270, GR. 36 (ASTM A36).
2. STEEL EXTRUSIONS TO BE AASHTO M270, GR. 36 (ASTM A36).
3. NEOPRENE EXTRUSIONS TO MEET D-2628-81 MODIFIED. (RECOVERY TESTS EXCLUDED).
4. LUBRICANT-ADHESIVE FOR USE IN INSTALLING AND BONDING NEOPRENE SEAL ELEMENTS TO STEEL JOINT COMPONENTS SHALL BE A ONE-QUART MOISTURE-CURING POLYURETHANE AND HYDROCARBON SOLVENT MIXTURE HAVING THE FOLLOWING PHYSICAL PROPERTIES:

AVERAGE WEIGHT, POUNDS PER GALLON	8 ± 10%
SOLIDS CONTENT	65%
ADHESIVE SHALL REMAIN LIQUID FROM	5°F TO 120°F
FILM STRENGTH AS PER ASTM D-412	2000 psi
ELONGATION	250%
5. THE EXPANSION JOINT SHALL BE CAPABLE OF SEALING THE DECK TO PREVENT MOISTURE AND OTHER CONTAMINANTS FROM DESCENDING THROUGH THE JOINT.
6. THE ENTIRE EXPANSION DAM SHALL BE PAINTED WITH 3-COAT UREATHANE PAINT SYSTEM AFTER FABRICATION, IN ACCORDANCE WITH SPECIAL PROVISIONS.
7. HOLES SHALL BE PLACED IN THE RIB PLATES AND STRAP ANCHOR PLATES FOR BAR REINFORCEMENT. IF THIS IS DONE IN THE FIELD AN APPROVED EPOXY BONDED PAINT SHALL BE USED TO TOUCH UP THE HOLES.
8. REMOVE EXISTING EXPANSION JOINT ARMORING, CONNECTION PLATES AND EXTRUSION TO THE LIMITS SHOWN. TAKE CARE TO INSURE THAT THE PARTS OF THE STRUCTURE TO REMAIN ARE NOT DAMAGED. REPLACE ANY DAMAGED STRUCTURAL MEMBERS AT THE CONTRACTOR'S EXPENSE. CUT EDGES TO BE GROUND SMOOTH AND EXPOSED EDGES BEVELED FOR FIELD SPLICE WELD.
9. REMOVE ENTIRE EXISTING NEOPRENE STRIP SEAL AND REPLACE WITH NEW CONTINUOUS NEOPRENE STRIP SEAL IN THE FIELD FOR ENTIRE WIDTH OF WIDENED STRUCTURE. SPLICING OF STRIP SEAL IS NOT PERMITTED. THE NEW SEAL SHALL BE COMPATIBLE WITH THE EXISTING EXTRUSION.
10. THE JOINT OPENING WIDTH SHOWN IS BASED ON AN AMBIENT TEMPERATURE OF 68°F. INCLUDE A TABLE ON THE SHOP DRAWINGS SHOWING THE INSTALLATION OPENING WIDTH FOR A PRACTICAL RANGE OF INSTALLATION TEMPERATURES (10° INCREMENTS). ADJUST OPENING WIDTH TO MATCH EXISTING AT TIME OF INSTALLATION.
11. FIELD SPLICES IN EXTRUSIONS AND ANGLES SHALL BE FULL PENETRATION BUTT WELDS. AFTER SPLICING, GRIND SMOOTH ALL EXPOSED SURFACES, REMOVE ALL BURRS AND LAITANCE, AND COAT WITH AN APPROVED ZINC-RICH PAINT.
12. CONSTRUCT EXPANSION DAM TO MATCH ROADWAY GRADE AND CROSS SLOPE.
13. THE SEALS FURNISHED WITH THE RETAINERS MUST BE COMPATIBLE WITH THE RETAINER AND PROVIDE A WATERTIGHT JOINT.
14. GRIND ALL STEEL EDGES EXPOSED TO TRAFFIC OR PEDESTRIANS TO 3/16" MIN. RADIUS.

REFERENCES:

1. FOR PROJECT NOTES, SEE DWG. NO. PN-01.
2. FOR LEGEND, SEE DWG. NO. PE-01.
3. FOR DECK SLAB PLAN AND DETAILS, SEE DWG. NO. DK-01.
4. FOR SECTION C-C, SEE DWG. NO. DK-05.
5. FOR DETAIL "A", SEE DWG. NO. DK-05.

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ADDENDUMS / REVISIONS	

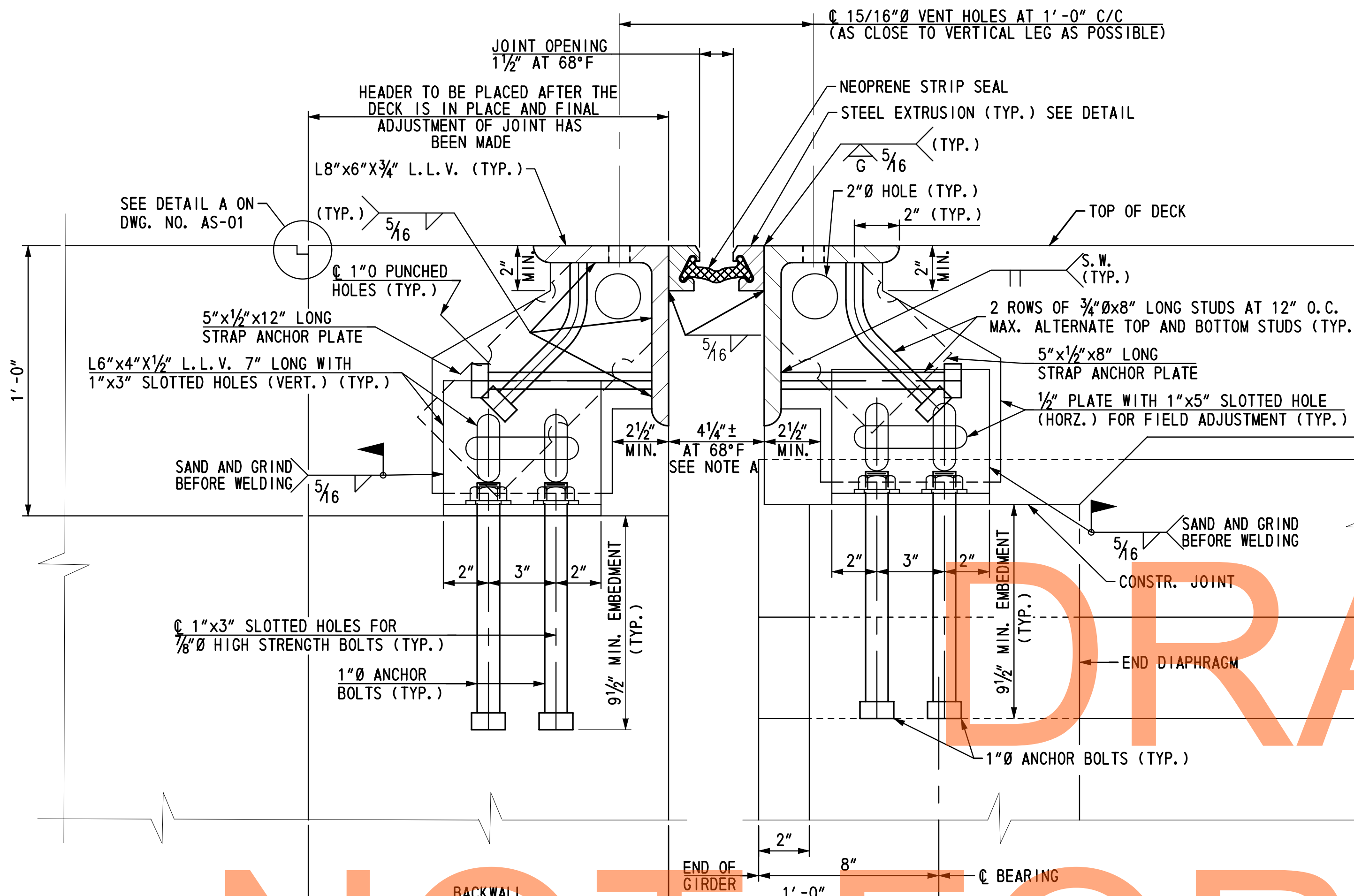
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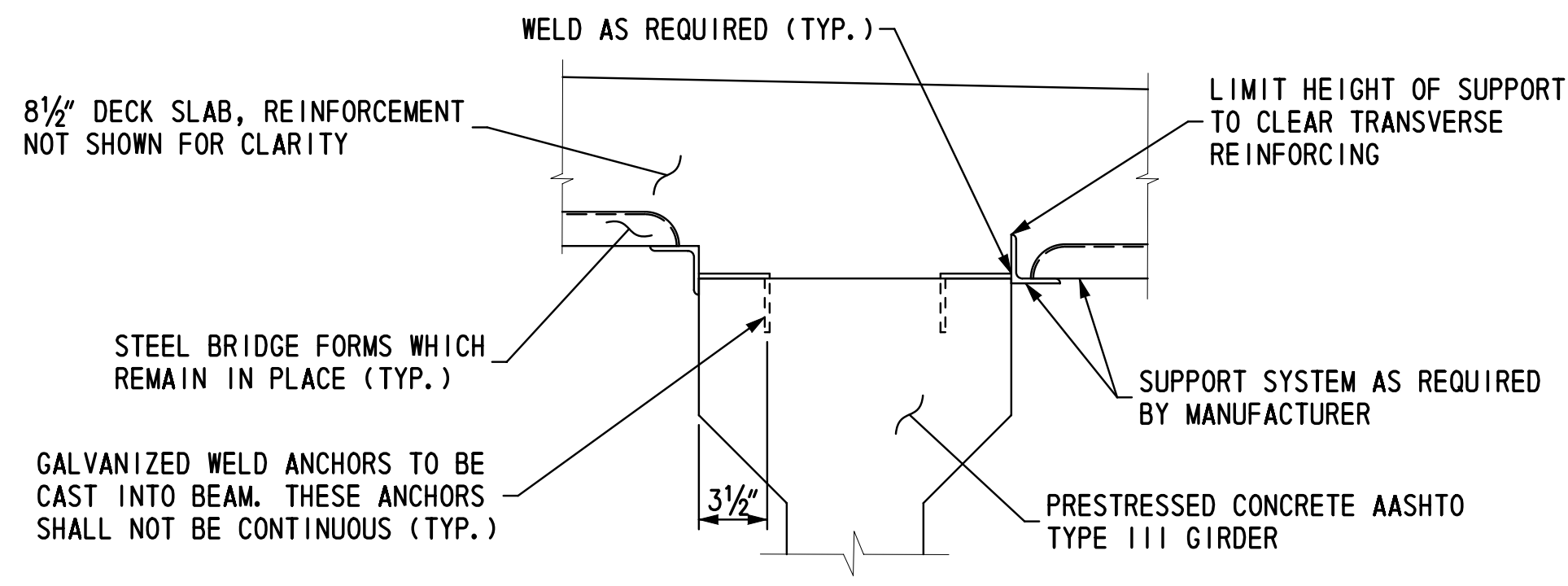
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T200911302	DESIGNED BY:	RTC
COUNTY	CHECKED BY:	FPH
NEW CASTLE		

DECK SLAB EXPANSION JOINT DETAILS - 1

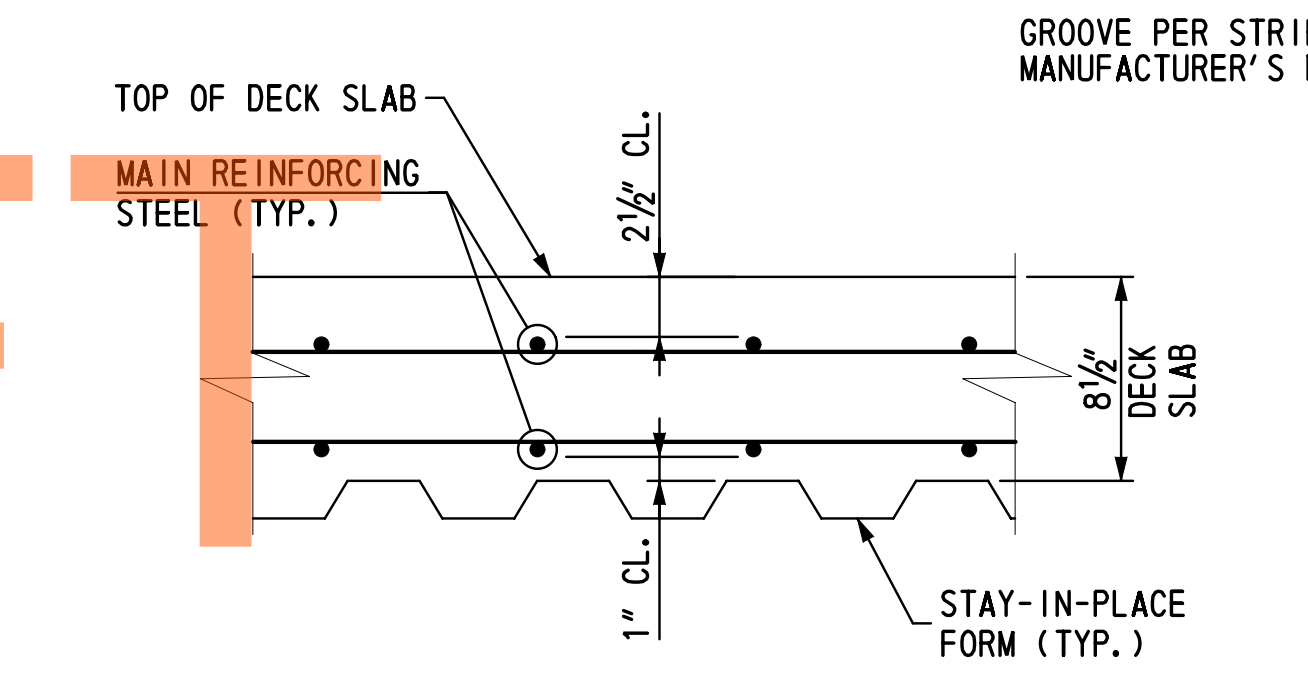
BR1-1 DK-04
SHEET NO.
144
TOTAL SHTS.
491



SECTION C-C
SCALE: 3"=1'-0"

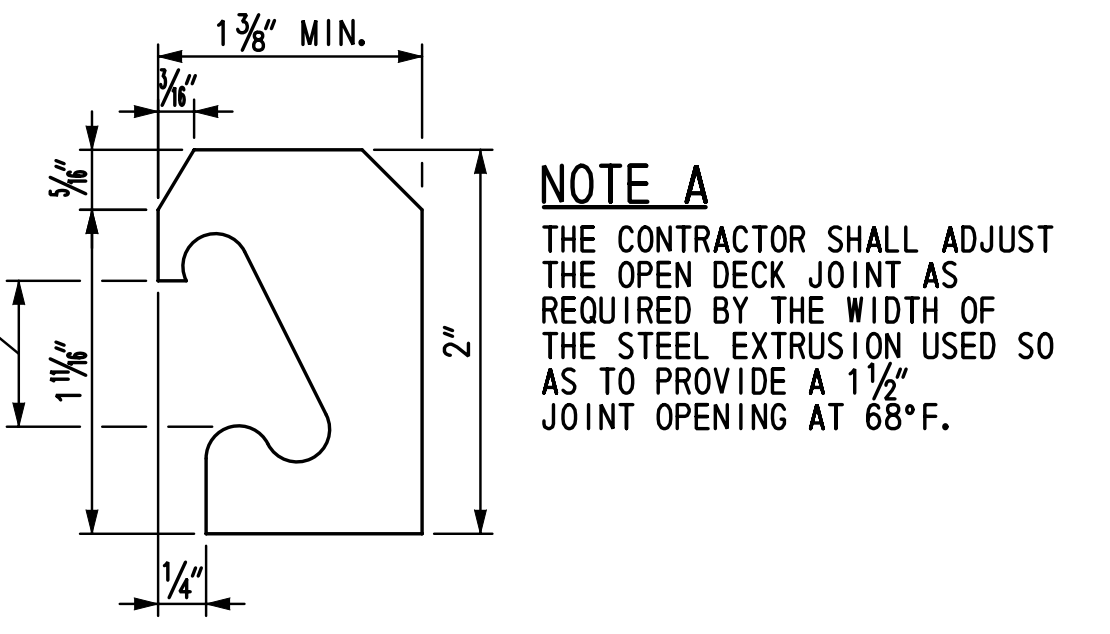


STAY-IN-PLACE FORM SUPPORT DETAIL
SCALE: 1 1/2"=1'-0"



STAY-IN-PLACE FORM PLACEMENT SECTION
SCALE: 1 1/2"=1'-0"

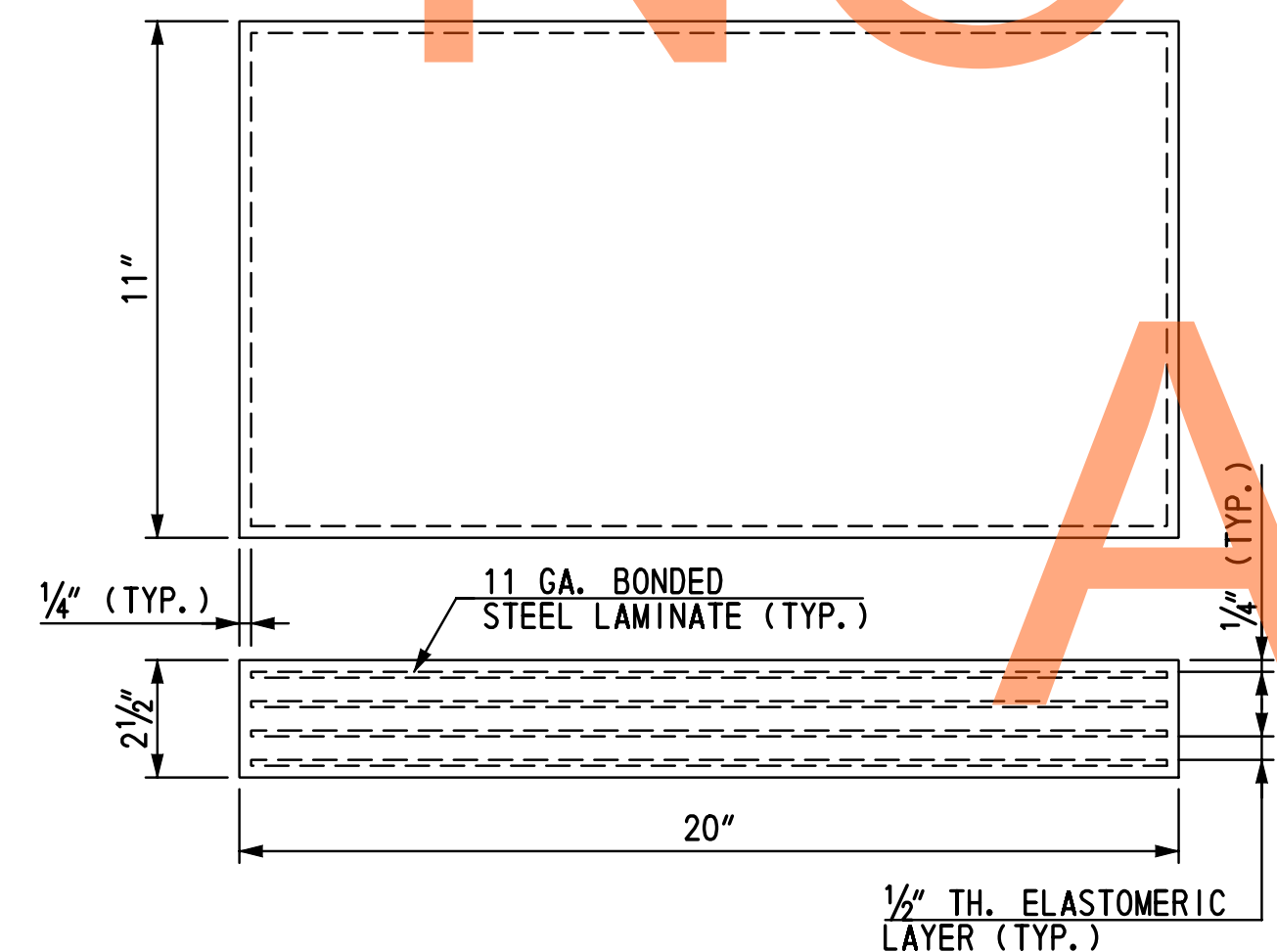
- STAY-IN-PLACE FORM NOTES:**
1. STAY-IN-PLACE FORMS SHALL CONFORM TO SECTION 602.03.
 2. STAY-IN-PLACE FORMS SHALL BE VERTICALLY ADJUSTED TO ATTAIN FINISHED LINES AND GRADES REQUIRED ON THE PLANS.
 3. ANY PERMANENTLY EXPOSED FORM METAL WHERE THE GALVANIZED COATING HAS BEEN DAMAGED SHALL BE THOROUGHLY CLEANED, WIRE BRUSHED, AND PAINTED WITH TWO COATS OF ZINC-OXIDE DUST PRIMER, FEDERAL SPECIFICATION TT-P-641D, TYPE 11, NO COLOR ADDED, TO THE SATISFACTION OF THE ENGINEER. MINOR HEAT DISCOLORATION IN AREAS OF WELDS NEED NOT BE TOUCHED UP.



STEEL EXTRUSION
NOT TO SCALE

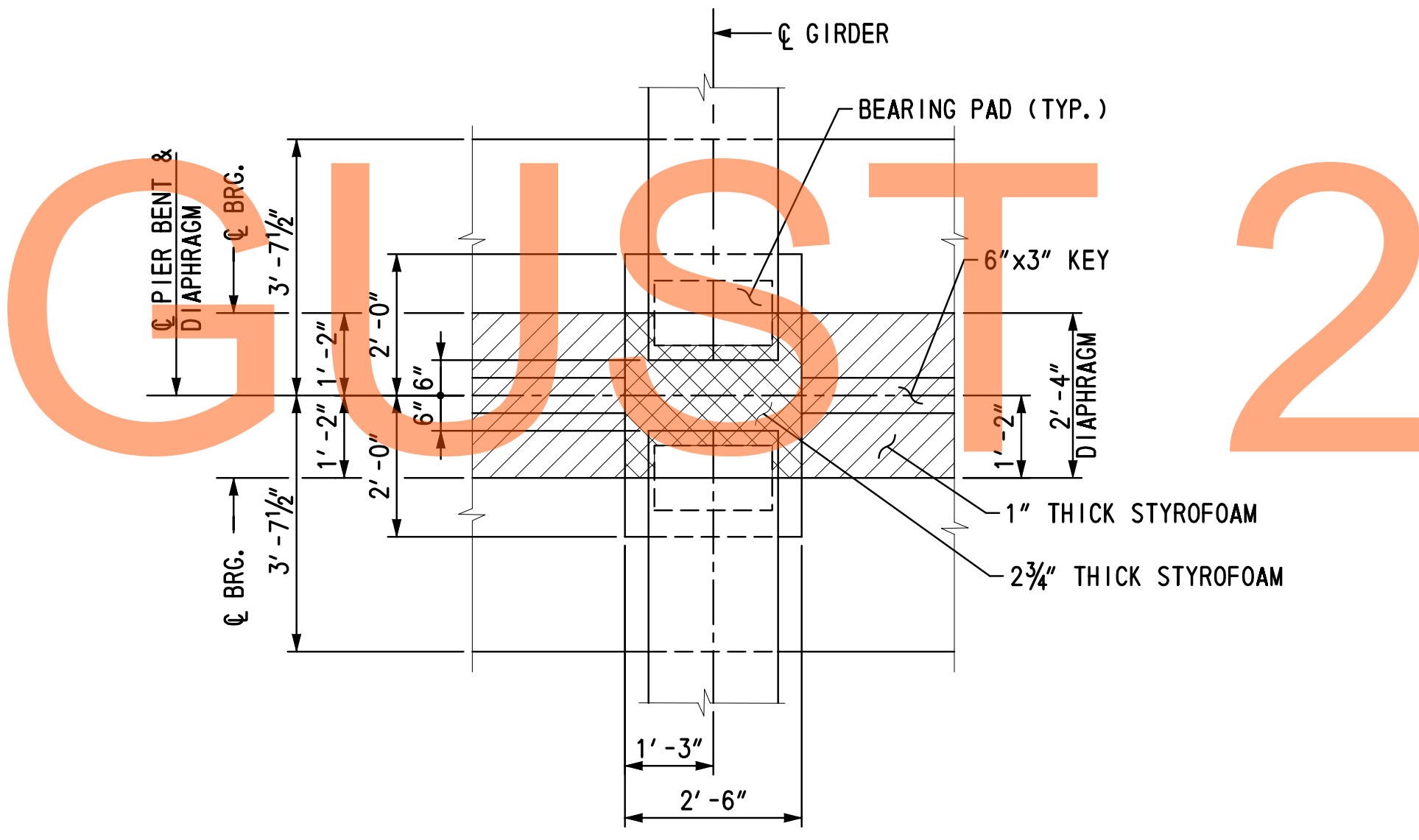
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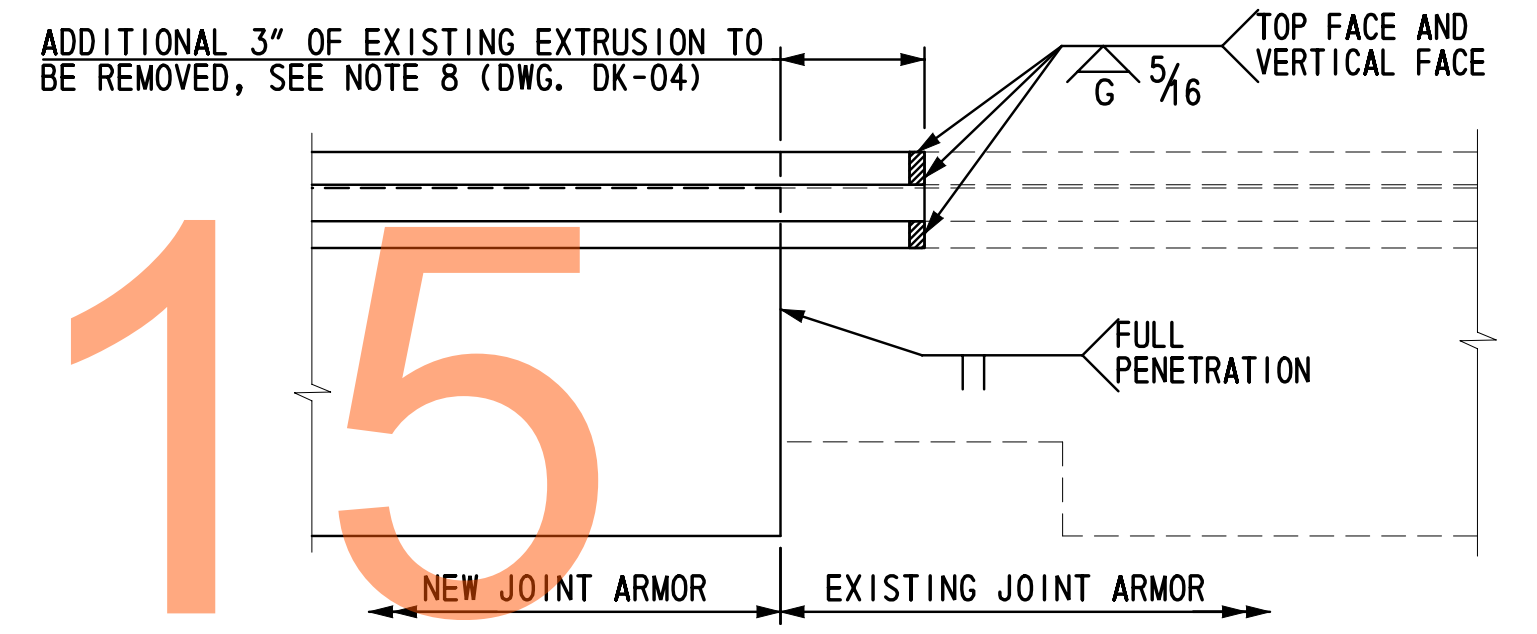


LAMINATED BEARING PADS
SCALE: 3"=1'-0"

- BEARING NOTES:**
1. ALL ELASTOMERIC BEARING PADS SHALL BE VIRGIN CHLOROPRENE IN ACCORDANCE WITH SECTION 623.06 OF THE STANDARD SPECIFICATIONS. (60 DUROMETER HARDNESS). SHIMS SHALL BE 11 GAGE MILD STEEL CONFORMING TO ASTM A36.
 2. ELASTOMERIC BEARING PADS SHALL BE ATTACHED TO THE BOTTOM OF THE BEAM AND TOP OF THE CONCRETE BEARING PEDESTAL WITH AN APPROVED EPOXY ADHESIVE.



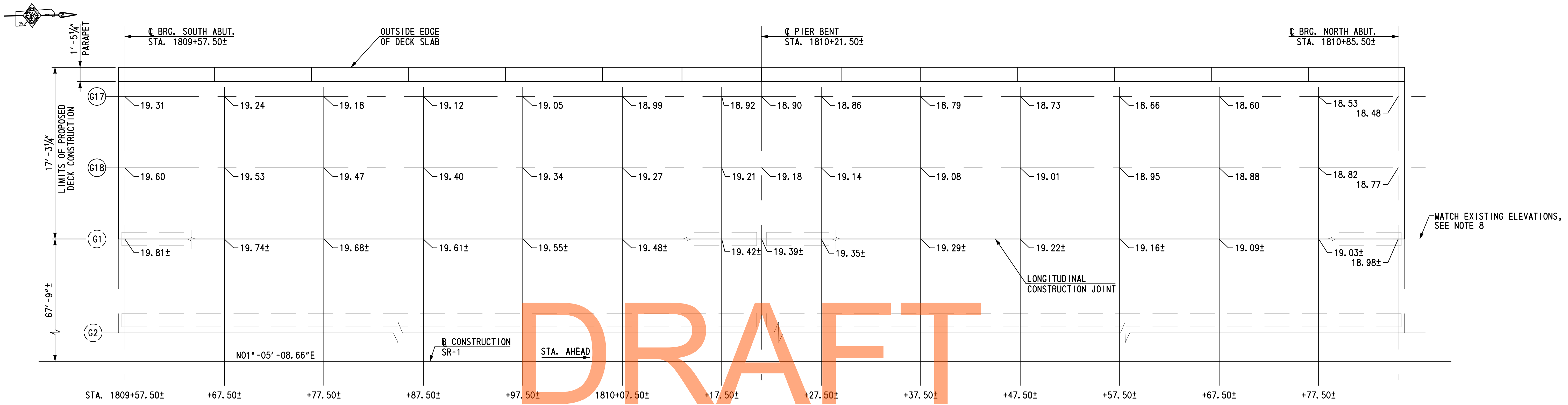
PIER DIAPHRAGM BEARING MATERIAL PLACEMENT AT PIER
SCALE: 1/2"=1'-0"



DETAIL "A"
SCALE: 3"=1'-0"

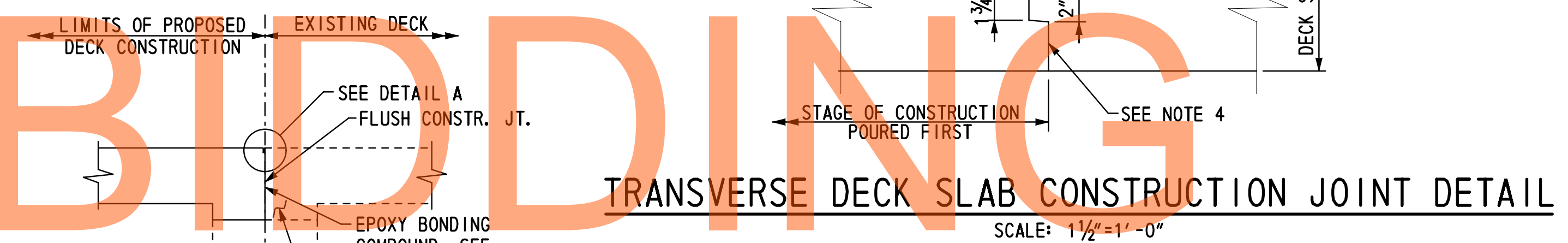
- REFERENCES:**
1. FOR PROJECT NOTES, SEE DWG. NO. PN-01.
 2. FOR LEGEND, SEE DWG. NO. PE-01.
 3. FOR DECK SLAB PLAN AND DETAILS, SEE DWG. NO. DK-01.
 4. FOR LOCATION OF SECTION C-C, SEE DWG. NO. DK-04.

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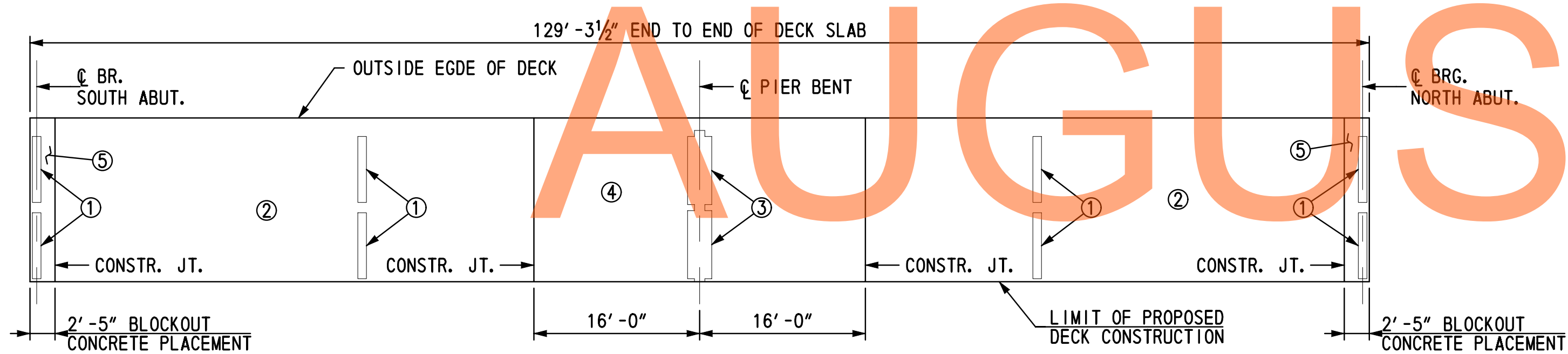


TOP OF DECK ELEVATIONS
SCALE: 1"=5'-0"

BRIDGE DECK FINISH NOTES
1. BRIDGE DECK SURFACES SHALL BE IN ACCORDANCE WITH SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AUG 2001, SECTION 602.20C.

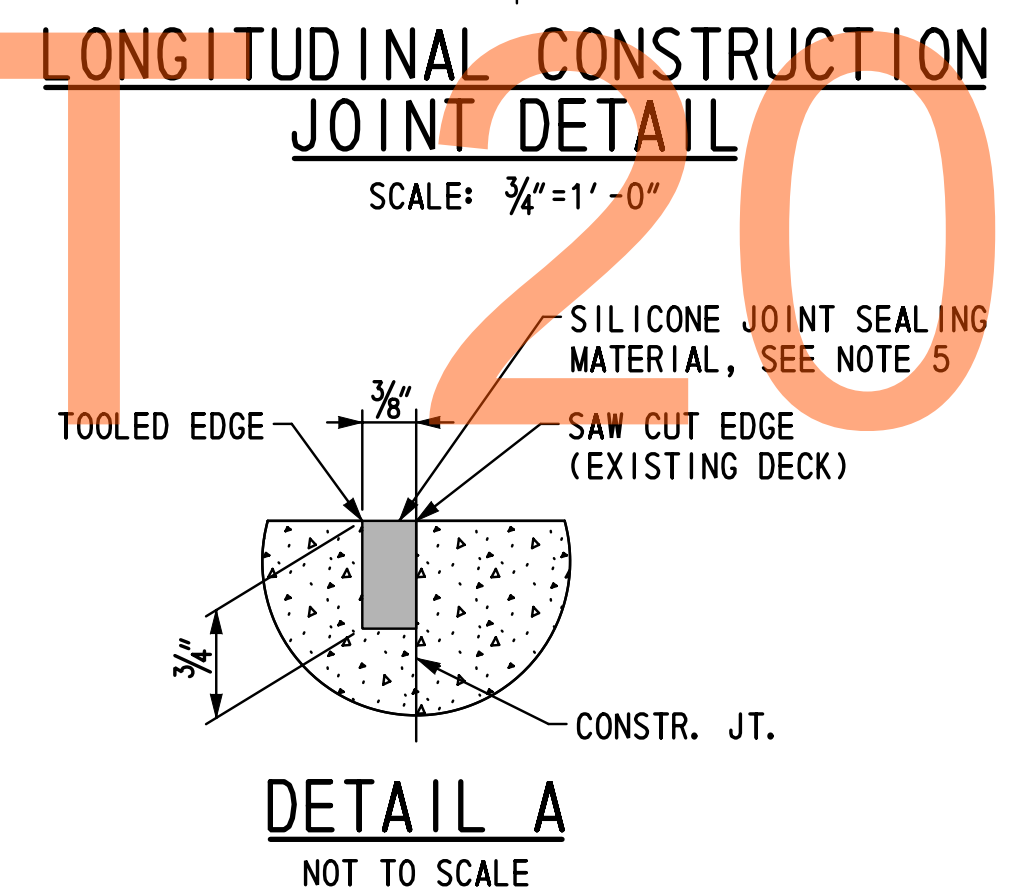


TRANSVERSE DECK SLAB CONSTRUCTION JOINT DETAIL
SCALE: 1 1/2"=1'-0"



DECK SLAB POURING SEQUENCE
SCALE: 1"=10'-0"

- ① INDICATES INTERMEDIATE OR ABUTMENT END DIAPHRAGM POUR
- ② INDICATES DECK SLAB POUR (POSITIVE MOMENT REGIONS)
- ③ INDICATES PIER CONTINUITY DIAPHRAGM POUR (SEE NOTE 3)
- ④ INDICATES DECK SLAB POUR AT PIER (NEGATIVE MOMENT REGION) (SEE NOTE 3)
- ⑤ INDICATES DECK SLAB CLOSURE POUR



LONGITUDINAL CONSTRUCTION JOINT DETAIL
SCALE: 3/4"=1'-0"

DETAIL A
NOT TO SCALE

NOTES:

1. THE CONTRACTOR SHALL FOLLOW THE POURING SEQUENCE SHOWN ON THESE PLANS. NO OTHER ALTERNATE POURING SEQUENCE WILL BE ALLOWED FOR THIS PROJECT.
2. POURING SEQUENCE THE CONTRACTOR MUST START BY PLACING THE SECTIONS INDICATED AS POUR 1. THE CONTRACTOR MAY PLACE A POUR 2 SECTION AS SOON AS ALL POUR 1 SECTIONS BENEATH IT HAVE BEEN IN PLACE A MINIMUM OF 40 HOURS. THE CONTRACTOR MAY PLACE THE POUR 3 SECTION AS SOON AS ALL POUR 2 SECTIONS HAVE BEEN IN PLACE A MINIMUM OF 40 HOURS. THE CONTRACTOR MAY PLACE THE POUR 4 SECTION AFTER THE POUR 3 SECTION HAS BEEN IN PLACE A MINIMUM OF 40 HOURS. THE CONTRACTOR MAY PLACE THE POUR 5 SECTIONS AS SOON AS THE POUR 4 SECTION HAS BEEN IN PLACE A MINIMUM OF 40 HOURS.
3. THE PIER DIAPHRAGM AND DECK SLAB POUR AT PIER SHALL NOT BE POURED UNTIL THE BEAMS ARE A MINIMUM OF 90 DAYS OLD FROM THE TIME OF RELEASE.
4. THE ENTIRE FACE OF CONSTRUCTION JOINT SHALL BE COATED WITH AN APPROVED EPOXY BONDING COMPOUND. COST SHALL BE INCIDENTAL TO ITEM 602013 - PORTLAND CEMENT CONCRETE MASONRY, SUPERSTRUCTURE, CLASS D.
5. SEAL GROOVE WITH AN APPROVED COLD-APPLIED SILICONE SEALER. GROOVE SHALL BE CLEAN, AIR-BLOWN AND FREE OF MOISTURE. COST SHALL BE INCIDENTAL TO ITEM 602013 - PORTLAND CEMENT CONCRETE MASONRY, SUPERSTRUCTURE, CLASS D.
6. FOR DECK SLAB REINFORCEMENT, SEE DWG. NO. DK-01.
7. FOR ADDITIONAL REINFORCEMENT IN THE DIAPHRAGMS, SEE DWG. NOS. DK-02 THRU DK-03.
8. EXISTING ELEVATIONS SHOWN ALONG LONGITUDINAL CONSTRUCTION JOINT (SAWCUT LINE) ARE BASED ON LIMITED SURVEY DATA. CONTRACTOR SHALL VERIFY AND ADJUST PROPOSED CONSTRUCTION AS REQUIRED, SEE PROJECT NOTE 10 ON DWG. NO. PN-01. FOR PROPOSED DECK CROSS SLOPES AND DECK SLAB DETAILS, SEE TYPICAL SECTION ON DWG. NO. TS-01.

REFERENCES:

1. FOR PROJECT NOTES, SEE DWG. NO. PN-01.
2. FOR LEGEND, SEE DWG. NO. PE-01.
3. FOR FRAMING PLAN, SEE DWG. NO. FR-01.
4. FOR PRESTRESSED BEAM DETAILS, SEE DWG. NO. BM-01.
5. FOR DECK SLAB PLAN AND DETAILS, SEE DWG. NO. DK-01.
6. FOR EXPANSION JOINT DETAILS, SEE DWG. NOS. DK-04 & DK-05.

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ADDENDUMS / REVISIONS	

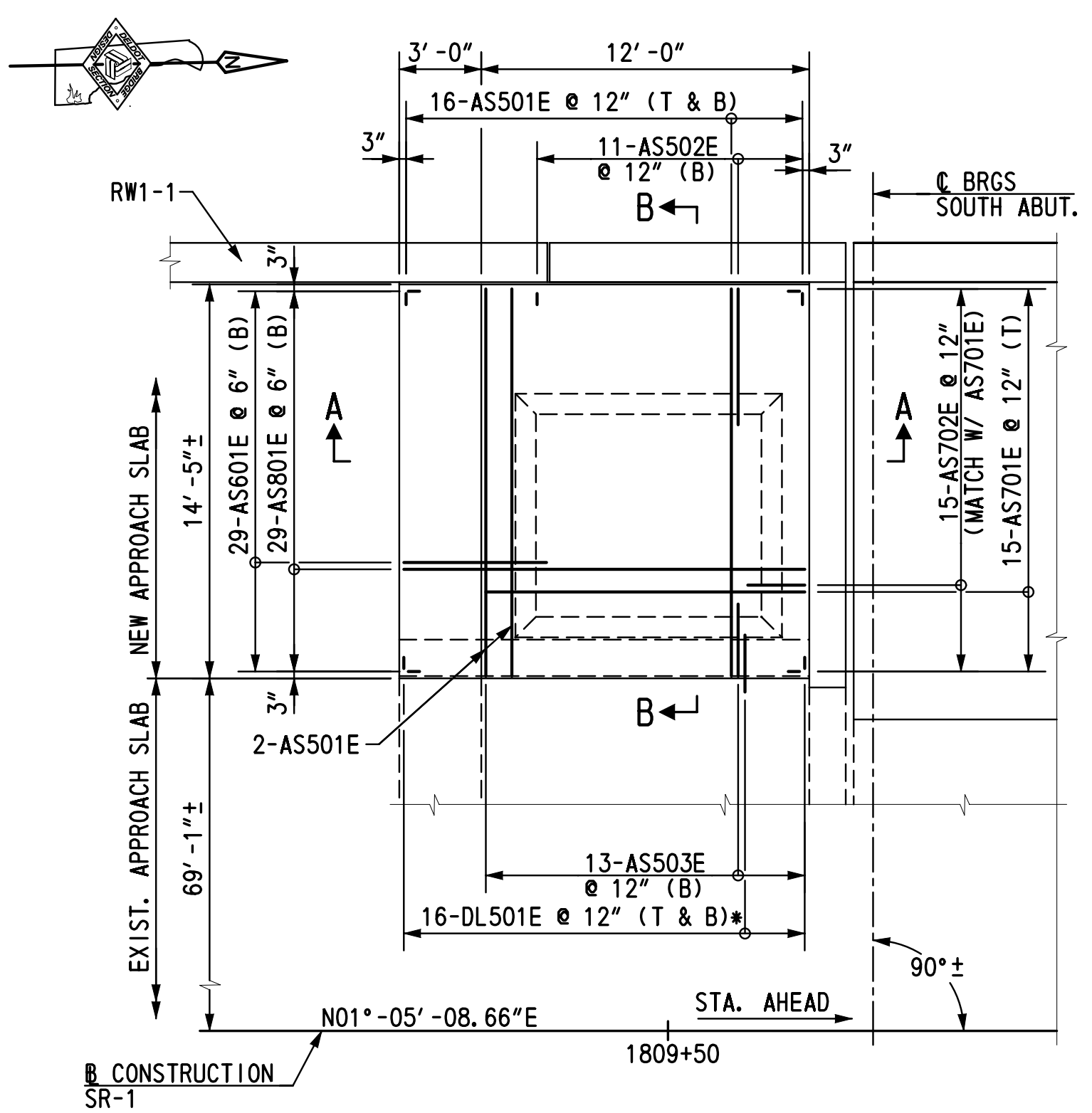
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US 301 &
SR 1 INTERCHANGE

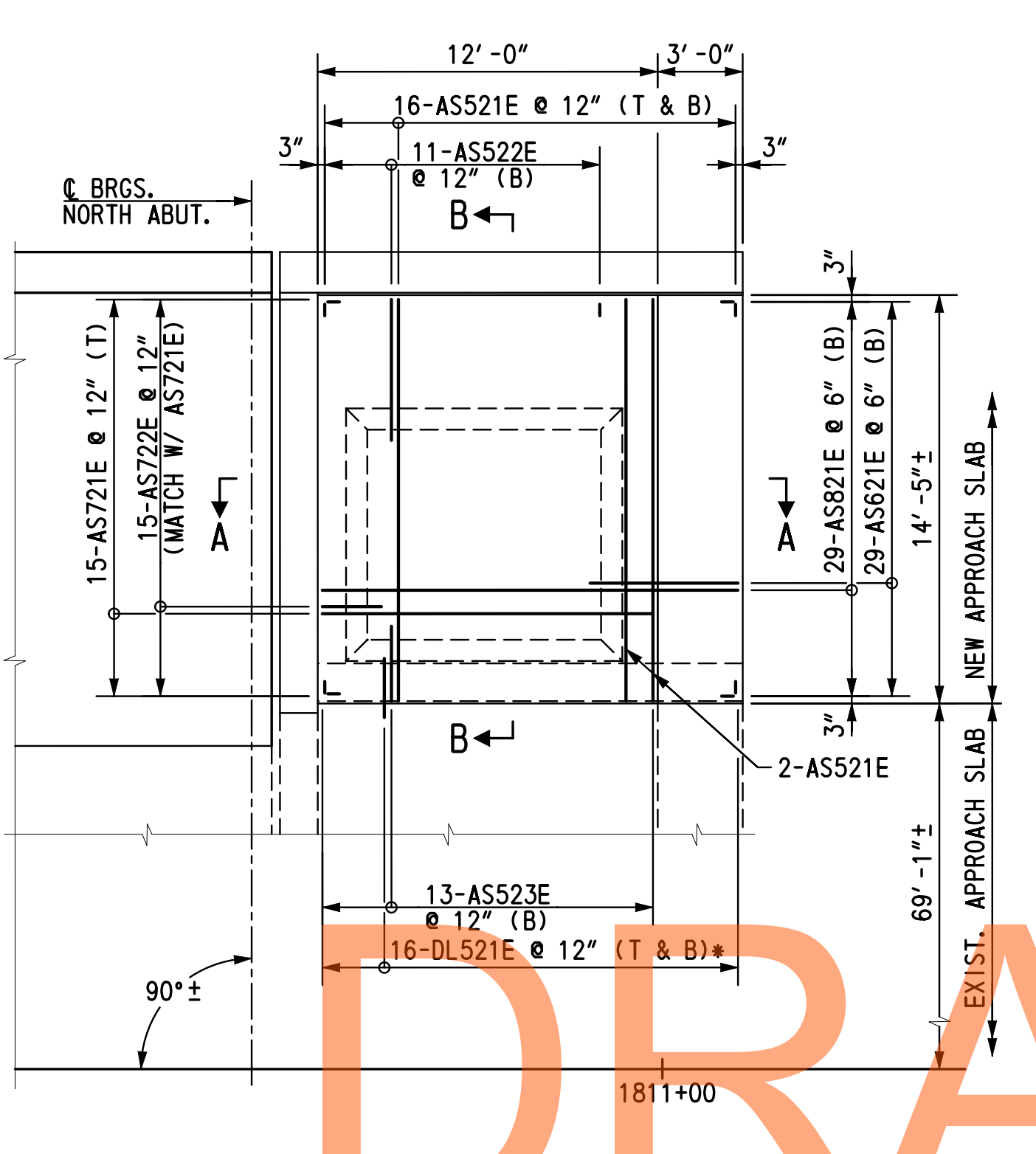
CONTRACT	BRIDGE NO.	1-903S
T200911302	DESIGNED BY:	RTC
COUNTY	CHECKED BY:	FPH
NEW CASTLE		

FINISHED BRIDGE DECK ELEVATIONS

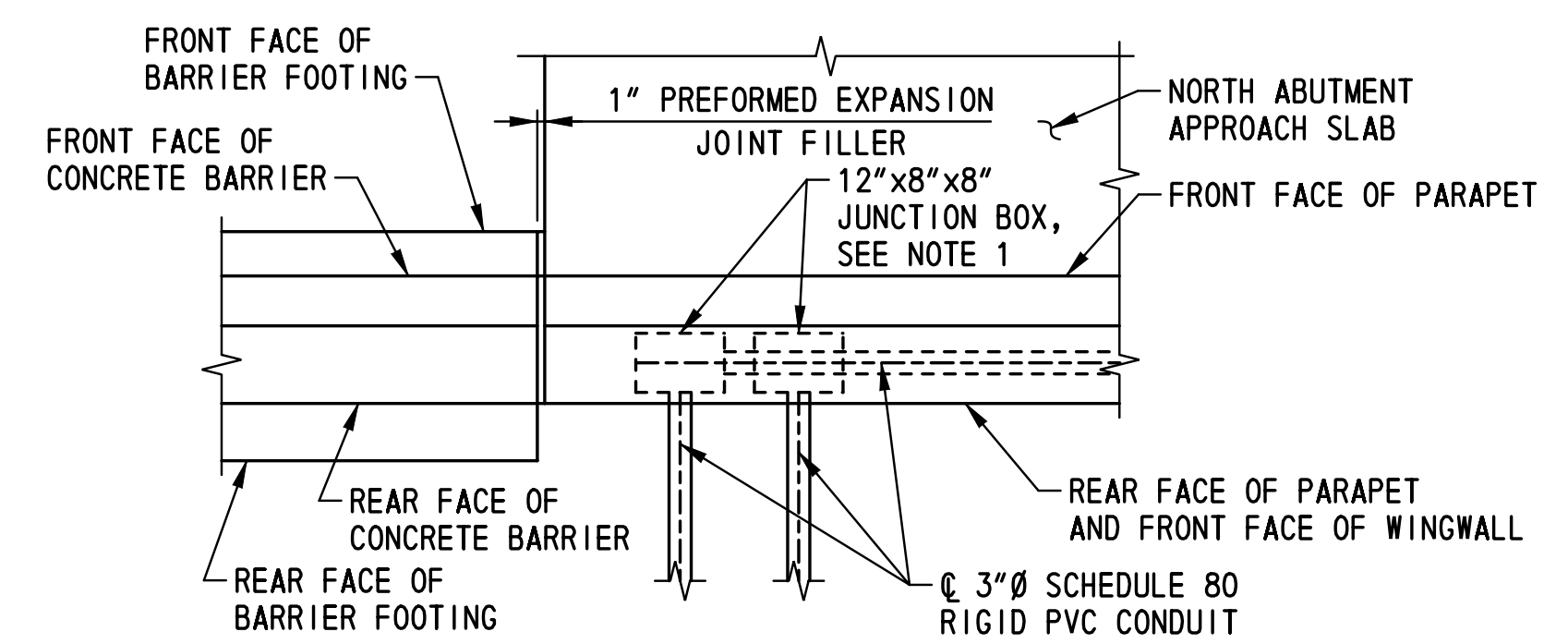
BR1-1 FD-01	SHEET NO.
	146
	TOTAL SHTS.
	491



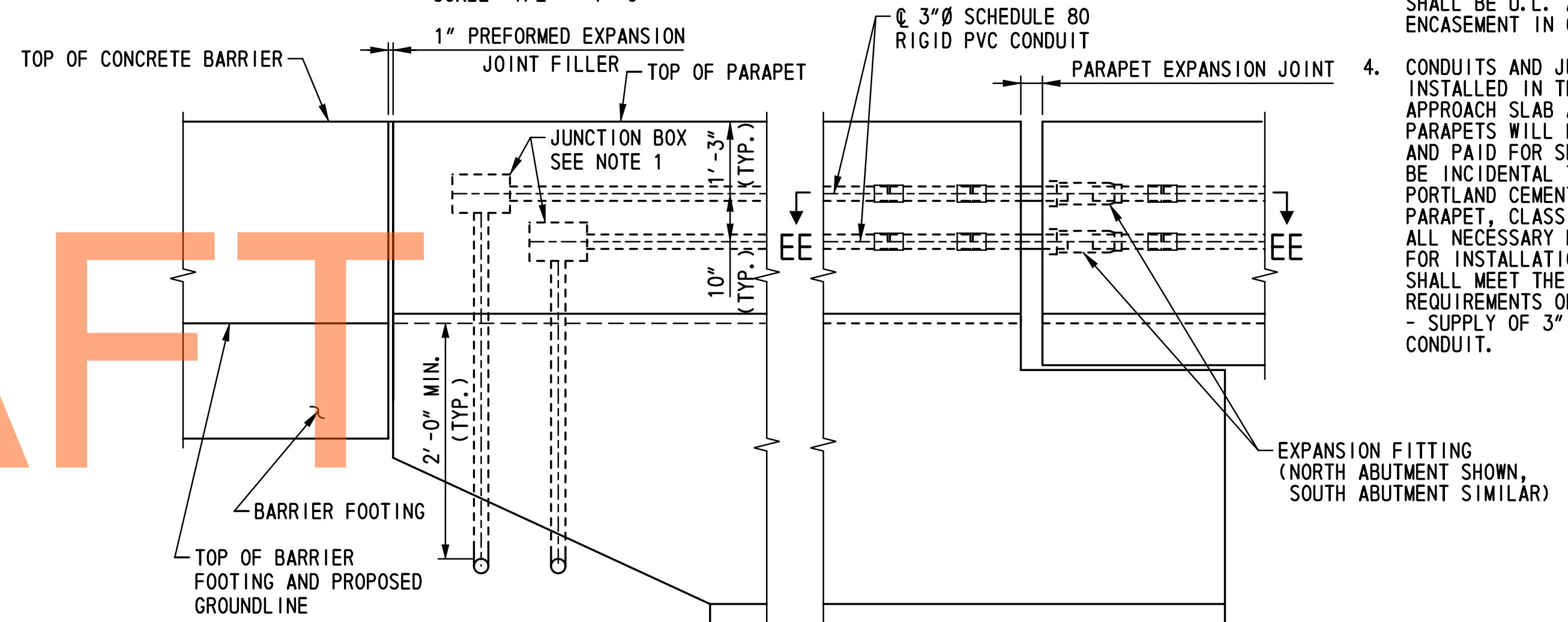
SOUTH ABUTMENT APPROACH SLAB PLAN
SCALE: 1" = 5'-0"



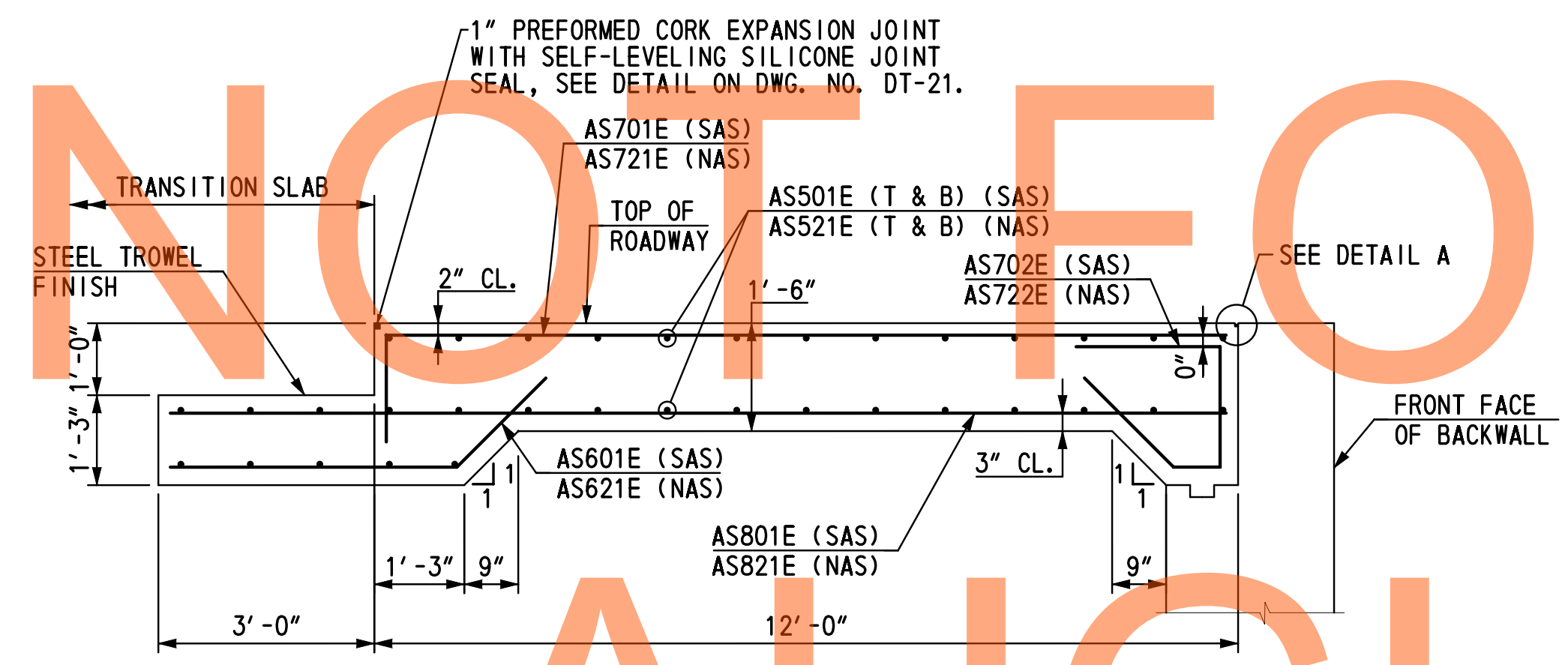
NORTH ABUTMENT APPROACH SLAB PLAN
SCALE: 1" = 5'-0"



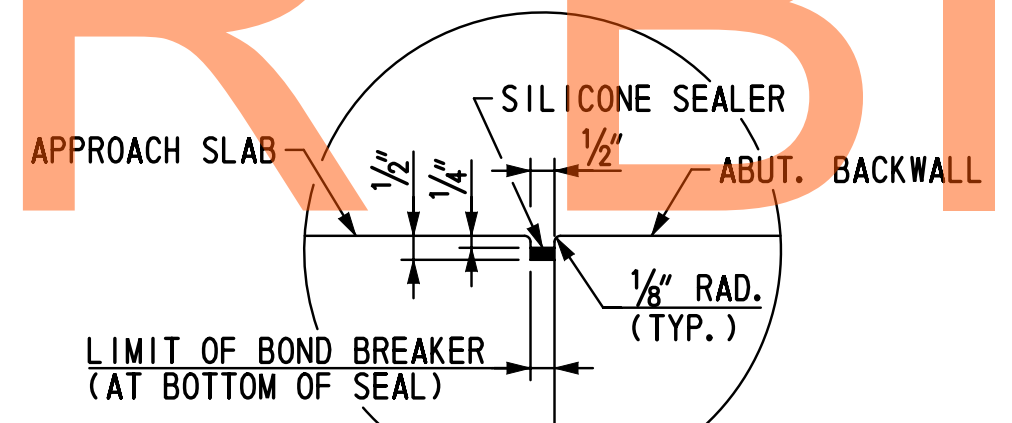
PLAN - WEST PARAPET AT NORTH WINGWALL
SCALE: 1/2" = 1'-0"



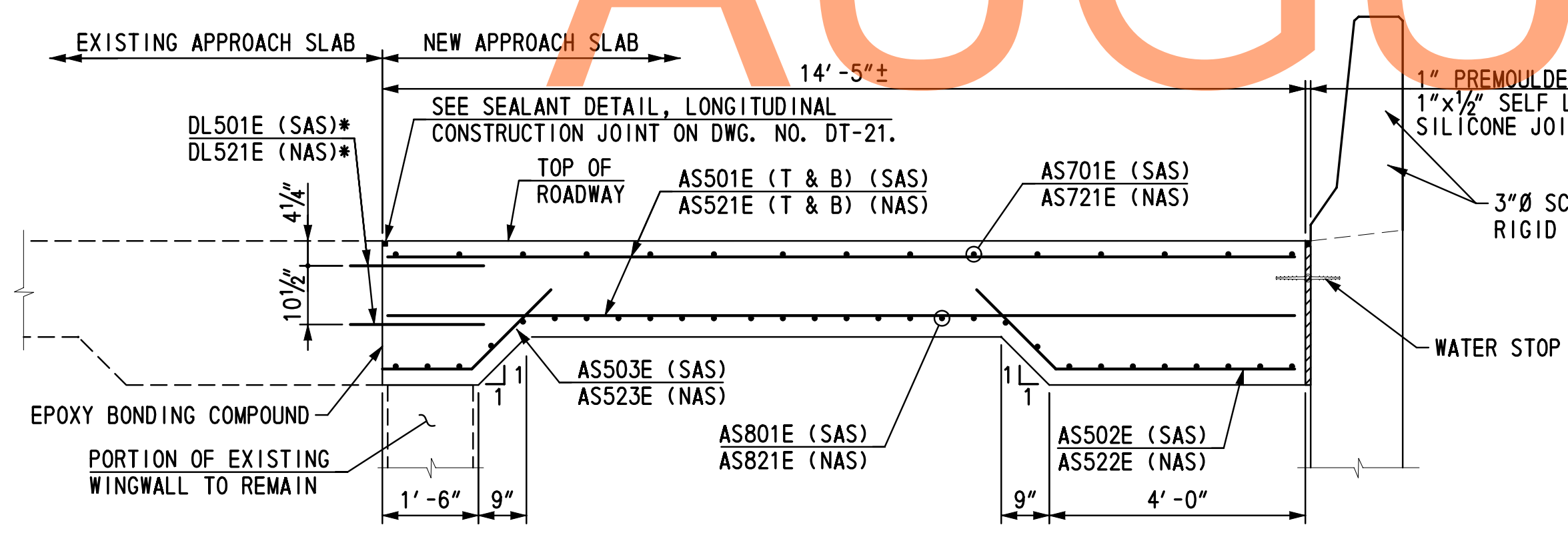
ELEVATION - WEST PARAPET AT NORTH WINGWALL
SCALE: 1/2" = 1'-0"



SECTION A-A
SCALE: 1/2" = 1'-0"

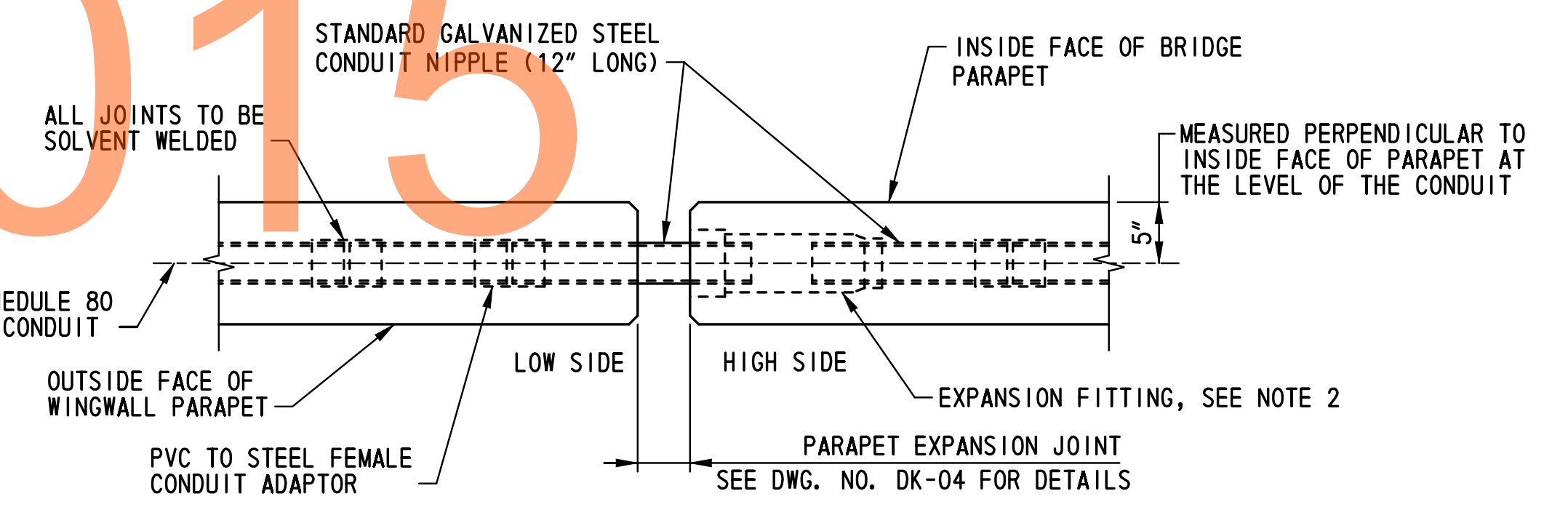


DETAIL A
SCALE: 3" = 1'-0"



SECTION B-B
SCALE: 1/2" = 1'-0"

NOTE:
ALL JOINTS THAT ARE TO BE SEALED SHALL BE FREE OF CRACKED AND SPALLED AREAS AND THEIR FACES SHALL BE FREE OF ALL FOREIGN MATTER, CURING COMPOUNDS, OILS, GREASES AND DIRT. ALL FACES MUST BE SANDBLASTED OR BRUSHED WITH A MECHANICAL ROTARY WIRE BRUSH. JUST PRIOR TO SEALING, THE JOINT SHALL BE BLOWN OUT WITH OIL-FREE COMPRESSED AIR.



SECTION EE-EE
SCALE: 1" = 1'-0"

- REFERENCES:**
- FOR PROJECT NOTES, SEE DWG. NO. PN-01.
 - FOR REINFORCEMENT BAR LIST, SEE DWG. NO. BR-03.
 - FOR LEGEND, SEE DWG. NO. PE-01.
 - FOR TRANSITION SLAB DETAILS, SEE DWG. NOS. DT-19 THRU DT-22.

- CONDUIT NOTES:**
- ALL JUNCTION BOXES SHALL BE 12" LONG x 8" HIGH x 8" DEEP NEMA 4X STAINLESS STEEL JUNCTION BOXES WITH COVERS MOUNTED IN THE FRONT FACE OF THE PARAPET.
 - EXPANSION FITTINGS FOR USE WITH RIGID GALVANIZED STEEL CONDUIT SHALL CONSIST OF A MALLEABLE IRON HEAD AND STEEL SLEEVE WHICH SHALL BE HOT-DIPPED GALVANIZED AND ASSEMBLED WITH A WATERTIGHT PACKING GLAND, AN INSULATED BUSHING, PRESSURE RING AND GASKET AND A TINNED-COPPER BOND TO ASSURE CONTINUITY OF GROUND. THE FITTING SHALL PROVIDE 3" OF MOVEMENT.
 - ALL PIPE AND EXPANSION FITTINGS SHALL BE U.L. APPROVED FOR ENCASEMENT IN CONCRETE.
 - CONDUITS AND JUNCTION BOXES INSTALLED IN THE BRIDGE, APPROACH SLAB AND MOMENT SLAB PARAPETS WILL NOT BE MEASURED AND PAID FOR SEPARATELY BUT WILL BE INCIDENTAL TO ITEM 602017 - PORTLAND CEMENT CONCRETE MASONRY, PARAPET, CLASS A. CONDUITS AND ALL NECESSARY FITTINGS SUPPLIED FOR INSTALLATION IN PARAPETS SHALL MEET THE MATERIAL REQUIREMENTS OF ITEM NO. 745522 - SUPPLY OF 3" SCHEDULE 80 PVC CONDUIT.

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ADDENDUMS / REVISIONS	

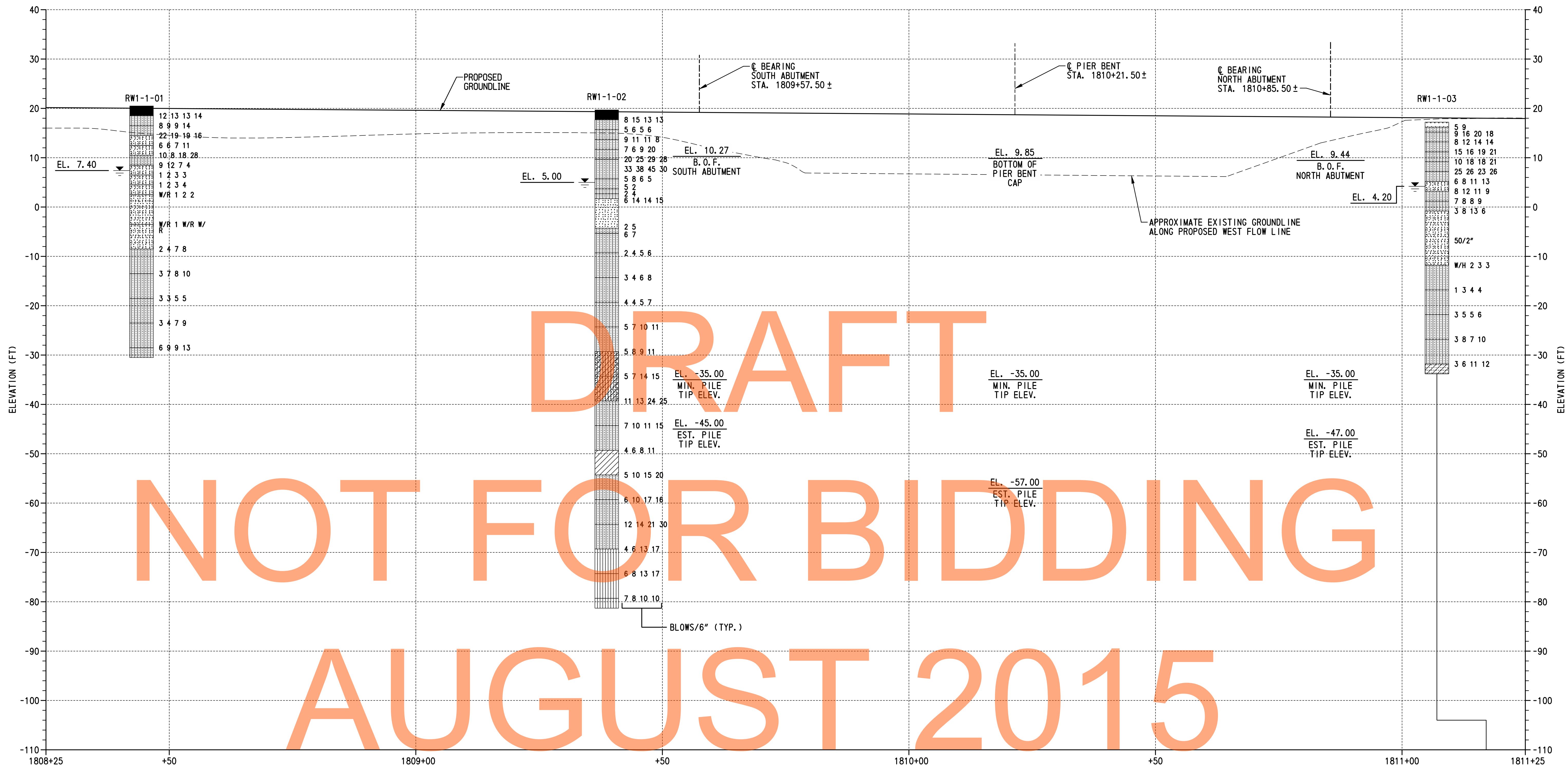
SCALE: AS NOTED

US 301 & SR 1 INTERCHANGE

CONTRACT	BRIDGE NO.	1-903S
T200911302	DESIGNED BY:	RTC
NEW CASTLE	CHECKED BY:	FPH

APPROACH SLAB AND PARAPET CONDUIT DETAILS

BR-1 AS-01	SHEET NO.	147
	TOTAL SHTS.	491



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NOT FOR BIDDING
AUGUST 2015

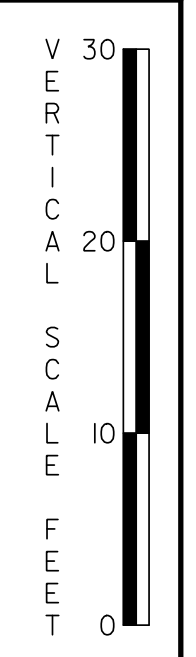
BORING PROFILE
SCALE: 1"=10'-0"

LEGEND:

	SILTY SAND		SILTY LOW PLASTICITY CLAY		POORLY GRADED CLAYEY SILTY SAND		TOP SOIL
	CLAYEY SAND		POORLY GRADED SAND		SILT		WATER TABLE AT BORING COMPLETION
	LOW PLASTICITY CLAY		POORLY GRADED SAND WITH SILT		PAVING		W/R = WEIGHT OF ROD
							W/H = WEIGHT OF HAMMER

TEST BORINGS				
BORING DESIGNATION	STATION	OFFSET	NORTHING	EASTING
RW1-1-01	1808+44.38	56.38' LT.	559213.6770	590417.1980
RW1-1-02	1809+38.72	63.43' LT.	559308.1330	590411.9460
RW1-1-03	1811+17.07	92.16' LT.	559487.0000	590386.6000

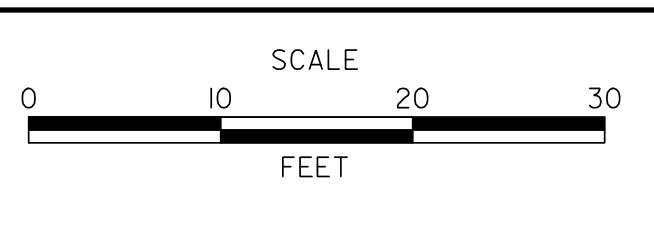
- NOTES:**
- FOR BORING LOCATIONS, SEE DWG. NO. PE-01.
 - BORING RW1-1-03 IS SHOWN OFFSET AS INDICATED FOR CLARITY.
 - RESULTS CONDUCTED ON SAMPLES RECOVERED ARE REPORTED ON THE BORING LOGS. LOGS AND LABORATORY TESTING ARE INCLUDED AS PART OF THE CONTRACT DOCUMENTS, SEE CD.



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ADDENDUMS / REVISIONS	



**US 301 &
SR 1 INTERCHANGE**

CONTRACT	BRIDGE NO.	1-903S
T200911302	DESIGNED BY:	W.R.A.
COUNTY	CHECKED BY:	P.S.D.
NEW CASTLE		

BORING PROFILE
SHEET NO.
149
TOTAL SHTS.
491

**BR1-1
BO-01**