

**BEGIN
CONTRACT T200911301
STATION 493 + 00.00**

STA 496+50.00 US 301 (CONTRACT 200911304) BK =
STA 595+96.65 US 301 (CONTRACT 200911301) AH

STATE OF DELAWARE,
(DEPARTMENT OF TRANSPORTATION)
T.M.#13-012.00-132
INS.#20090625-0041078
M.F.#4492

PLEASANTON SOUTH
BORROW SITE
(SEE BORROW SITE
GRADING PLANS FOR
MORE INFORMATION)

STATE OF DELAWARE,
(DEPARTMENT OF TRANSPORTATION)
T.M.#13-012.00-121
INS.#20100412-0017459
M.F.#4492

MATCH LINE STA. 599 + 00

DRAINAGE PIPE SCHEDULE

NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INT. EL.	DIS. EL.
101	15" RCP	IV	231.00	0.010	87.31	85.00
102	15" RCP	IV	298.00	0.010	84.66	81.68
106	15" RCP	IV	292.00	0.009	88.63	86.00
107	15" RCP	IV	298.00	0.010	85.70	82.72

GUARDRAIL SCHEDULE

NO.	ITEM DESCRIPTION / TYPE	BEGIN STA.	OFFSET	LENGTH
1	GUARDRAIL TO BARRIER CONNECTION, EXIT TYPE 31	494+88.66	62.92	*
2	GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31	494+88.66	62.92	1187.50
3	GUARDRAIL TO BARRIER CONNECTION, APPROACH TYPE 1-31	495+71.03	-21.00	*
4	GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31	495+71.03	-21.00	312.50
5	GUARDRAIL END TREATMENT ATTENUATOR, TYPE 1-31	498+83.53	-21.00	*
6	GUARDRAIL TO BARRIER CONNECTION, APPROACH TYPE 1-31	496+05.30	-62.92	*
7	GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31	496+05.30	-62.92	1437.50
31	GUARDRAIL TO BARRIER CONNECTION, EXIT TYPE 31	495+17.22	21.00	*
32	GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31	495+17.22	21.00	37.50
33	END ANCHORAGE 31	495+54.72	21.00	*

* LENGTH AS DETAILED IN STANDARD CONSTRUCTION DETAILS

CURB SCHEDULE

NO.	ITEM DESCRIPTION / TYPE	LENGTH
100	INTEGRAL PCC CURB AND GUTTER, TYPE 1-4	476'
101	INTEGRAL PCC CURB AND GUTTER, TYPE 1-4	368'

DRAINAGE INLET SCHEDULE

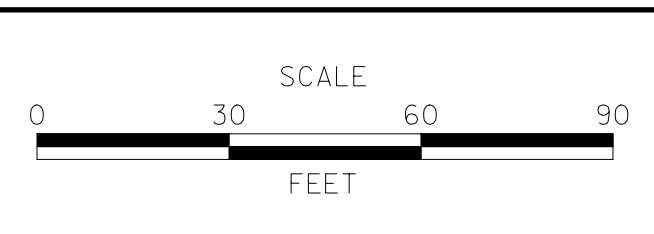
NO.	STATION	OFFSET	BOX SIZE	GRATE	T.G. EL.	INV. EL.
101	595+35.00	-62.92	48" x 30"	2	94.84	87.31
102	597+68.00	-62.92	48" x 30"	2	92.07	84.66
106	594+26.00	62.92	48" x 30"	2	95.48	88.63
107	597+20.00	62.92	48" x 30"	2	92.80	85.70

NOTE: OFFSET AND T.G. ELEVATION DATA APPLIED TO THE FLOW LINE

\$FILES



ADDENDUMS / REVISIONS	



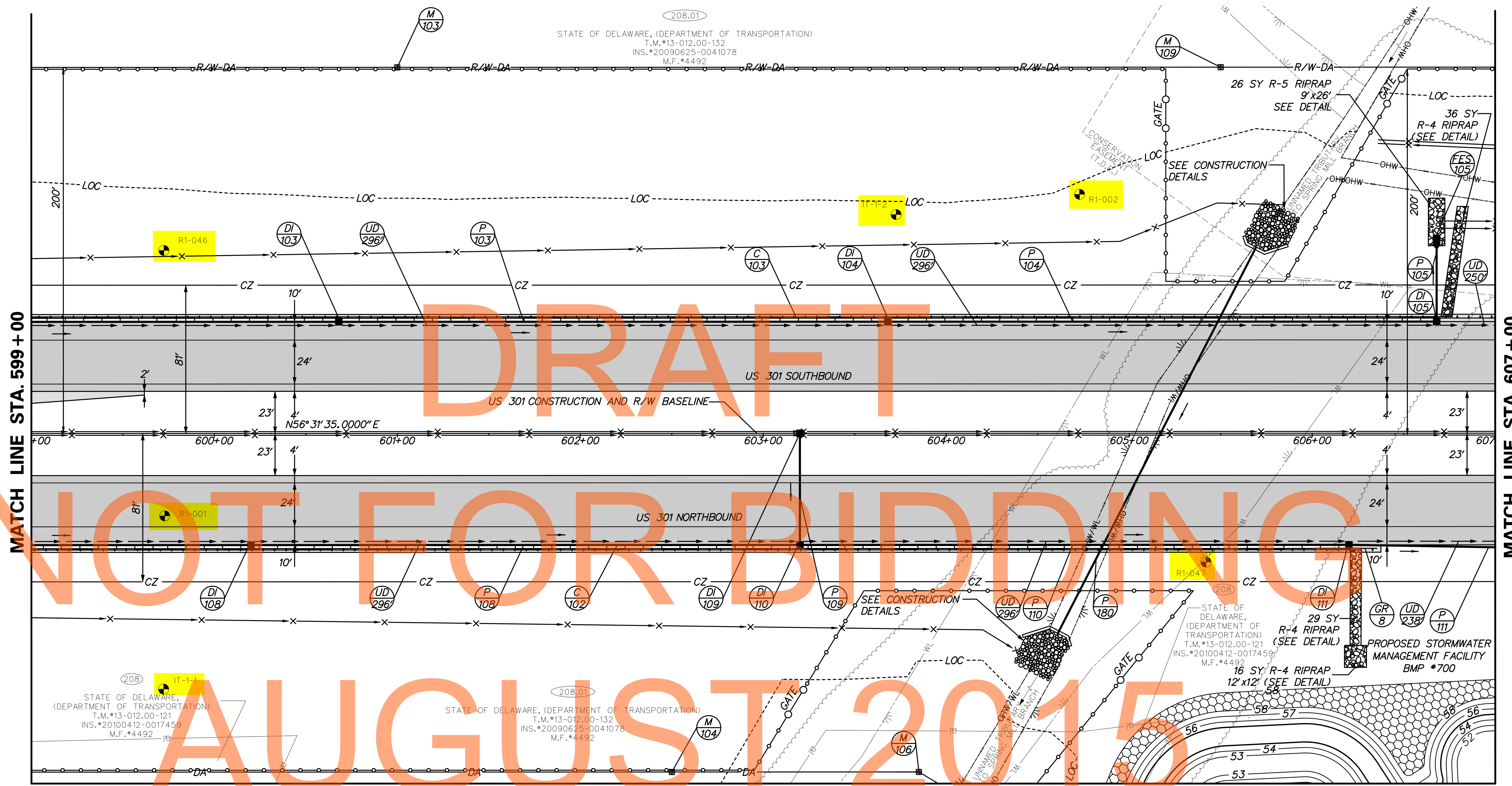
**US 301,
NORFOLK SOUTHERN RR TO SR 896**

CONTRACT T200911301	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: WJD
	CHECKED BY: MAA

BORING LOCATION PLAN
Sheet 1 of 21

CP-01
SHEET NO. 19
TOTAL SHTS. 240

208.01
 STATE OF DELAWARE, (DEPARTMENT OF TRANSPORTATION)
 T.M.#13-012.00-132
 INS.#20090625-0041078
 M.F.#4492



MATCH LINE STA. 599+00

MATCH LINE STA. 607+00

MATCH LINE SHEET CP-03

DRAFT
 NOT FOR BIDDING
 AUGUST 2015

FLARED END SECTION SCHEDULE			
NO.	SIZE / TYPE	SLOPE	SAFETY GRATE
105	15" RCFE	0.015	NO

DRAINAGE PIPE SCHEDULE						
NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INT. EL.	DIS. EL.
103	15" RCP	IV	298.00	0.010	79.25	76.27
104	15" RCP	IV	298.00	0.010	71.90	68.92
105	15" RCP	IV	40.00	0.015	63.36	62.76
108	15" RCP	IV	298.00	0.010	79.24	76.27
109	18" RCP	IV	60.00	0.005	75.44	75.14
110	15" RCP	IV	298.00	0.010	72.79	69.82
111	18" RCP	IV	237.00	0.010	66.83	64.46
180*	48"x76" RCEP	IV	237.00	0.008	52.80	50.80

* SEE CONSTRUCTION DETAILS FOR MORE INFORMATION

DRAINAGE INLET SCHEDULE						
NO.	STATION	OFFSET	BOX SIZE	GRATE	T.G. EL.	INV. EL.
103	600+68.00	-62.92	48" x 30"	2	86.06	79.25
104	603+68.00	-62.92	48" x 30"	2	79.61	71.90
105	606+68.00	-62.92	48" x 30"	2	73.32	63.36
108	600+20.00	62.92	48" x 30"	2	87.09	79.24
109	603+20.00	0.00	34" x 24"	2	78.84	75.44
110	603+20.00	62.92	48" x 30"	2	80.64	72.79
111	606+20.00	62.92	48" x 30"	2	74.20	66.83

NOTE: OFFSET AND T.G. ELEVATION DATA APPLIED TO FLOW LINE

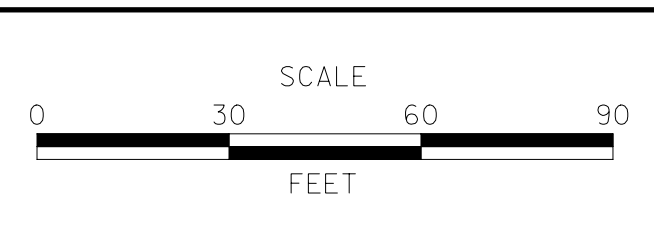
GUARDRAIL SCHEDULE				
NO.	ITEM DESCRIPTION / TYPE	BEG IN STA.	OFFSET	LENGTH
8	END ANCHORAGE 31	606+22.82	62.92	*

* LENGTH AS DETAILED IN STANDARD CONSTRUCTION DETAILS

CURB SCHEDULE		
NO.	ITEM DESCRIPTION / TYPE	LENGTH
102	INTEGRAL PCC CURB AND GUTTER, TYPE 1-4	721'
103	INTEGRAL PCC CURB AND GUTTER, TYPE 1-4	770'



ADDENDUMS / REVISIONS	

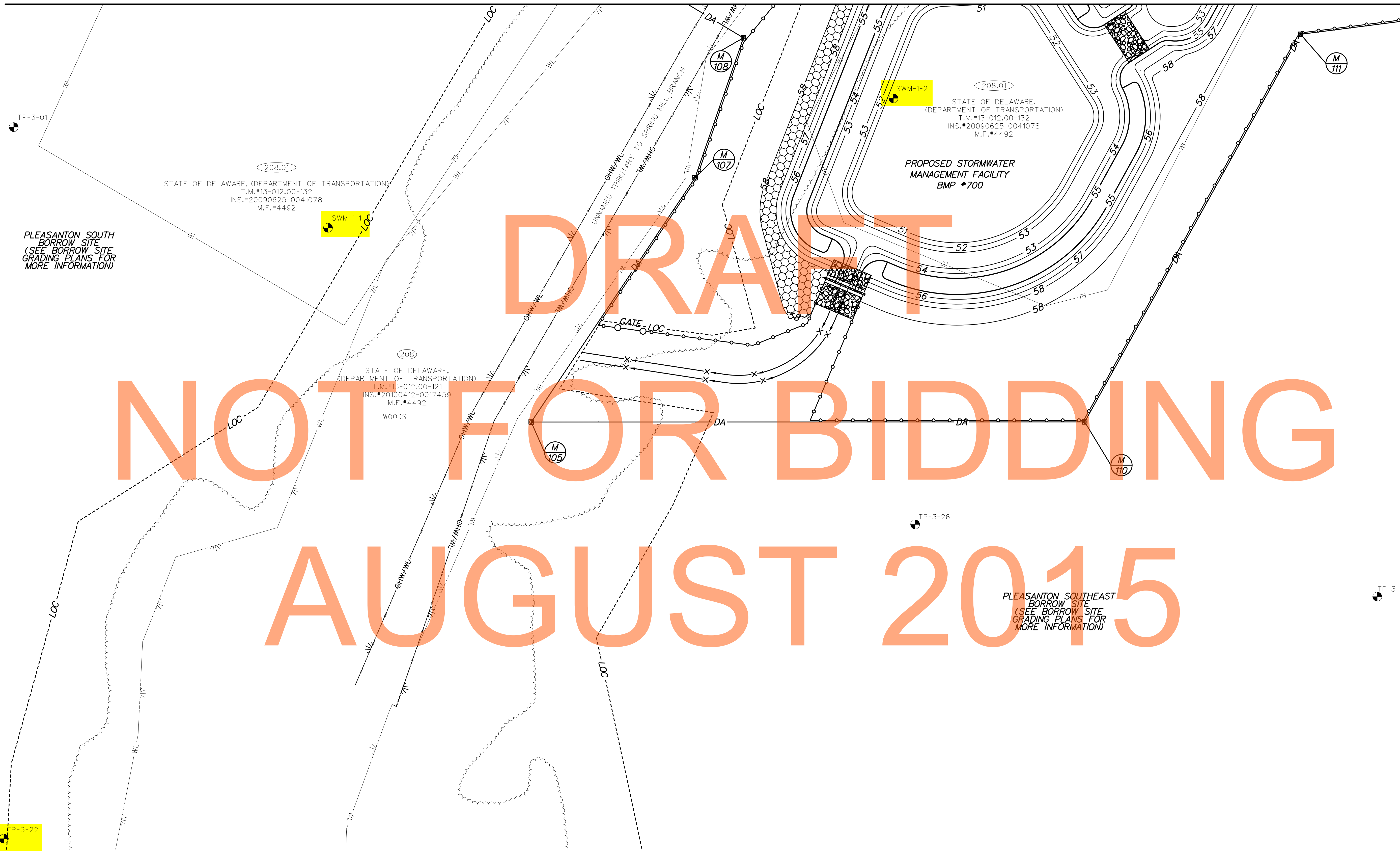
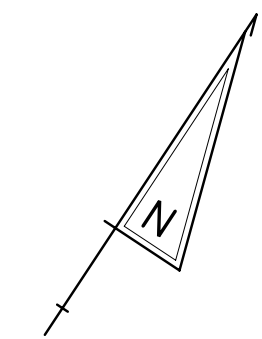


**US 301,
 NORFOLK SOUTHERN RR TO SR 896**

CONTRACT T200911301	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: WJD
	CHECKED BY: MAA

BORING LOCATION PLAN
 Sheet 2 of 21

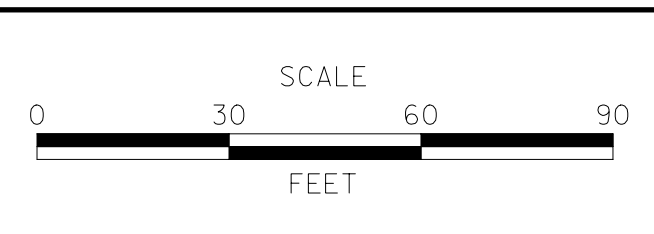
CP-02	
SHEET NO.	TOTAL SHTS.
20	240



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AUGUST 2015

\$FILES \$DATES

ADDENDUMS / REVISIONS	



CONTRACT T200911301	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: WJD
	CHECKED BY: MAA

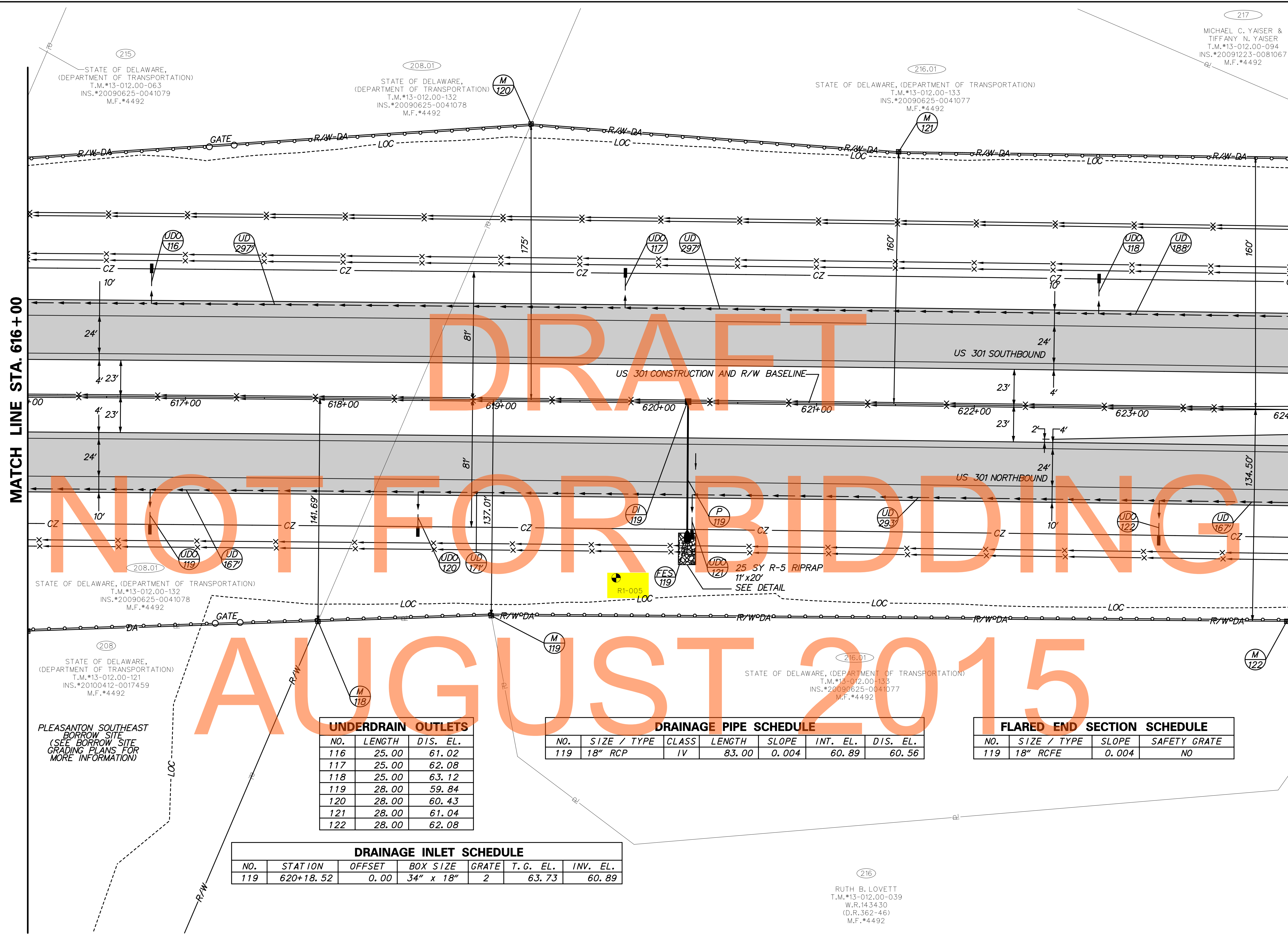
CP-03
SHEET NO. 21
TOTAL SHTS. 240

217
 MICHAEL C. YAISER &
 TIFFANY N. YAISER
 T.M.#13-012.00-094
 INS.#20091223-0081067
 M.F.#4492

215
 STATE OF DELAWARE,
 (DEPARTMENT OF TRANSPORTATION)
 T.M.#13-012.00-063
 INS.#20090625-0041079
 M.F.#4492

208.01
 STATE OF DELAWARE,
 (DEPARTMENT OF TRANSPORTATION)
 T.M.#13-012.00-132
 INS.#20090625-0041078
 M.F.#4492

216.01
 STATE OF DELAWARE, (DEPARTMENT OF TRANSPORTATION)
 T.M.#13-012.00-133
 INS.#20090625-0041077
 M.F.#4492



MATCH LINE STA. 616+00

MATCH LINE STA. 624+00

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 AUGUST 2015

STATE OF DELAWARE, (DEPARTMENT OF TRANSPORTATION)
 T.M.#13-012.00-132
 INS.#20090625-0041078
 M.F.#4492

208
 STATE OF DELAWARE,
 (DEPARTMENT OF TRANSPORTATION)
 T.M.#13-012.00-121
 INS.#20100412-0017459
 M.F.#4492

PLEASANTON SOUTHEAST
 BORROW SITE
 (SEE BORROW SITE
 GRADING PLANS FOR
 MORE INFORMATION)

216.01
 STATE OF DELAWARE, (DEPARTMENT OF TRANSPORTATION)
 T.M.#13-012.00-133
 INS.#20090625-0041077
 M.F.#4492

216
 RUTH B. LOVETT
 T.M.#13-012.00-039
 W.R.143430
 (D.R.362-46)
 M.F.#4492

UNDERDRAIN OUTLETS

NO.	LENGTH	DIS. EL.
116	25.00	61.02
117	25.00	62.08
118	25.00	63.12
119	28.00	59.84
120	28.00	60.43
121	28.00	61.04
122	28.00	62.08

DRAINAGE PIPE SCHEDULE

NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INT. EL.	DIS. EL.
119	18" RCP	IV	83.00	0.004	60.89	60.56

FLARED END SECTION SCHEDULE

NO.	SIZE / TYPE	SLOPE	SAFETY GRATE
119	18" RCFE	0.004	NO

DRAINAGE INLET SCHEDULE

NO.	STATION	OFFSET	BOX SIZE	GRATE	T.G. EL.	INV. EL.
119	620+18.52	0.00	34" x 18"	2	63.73	60.89



ADDENDUMS / REVISIONS

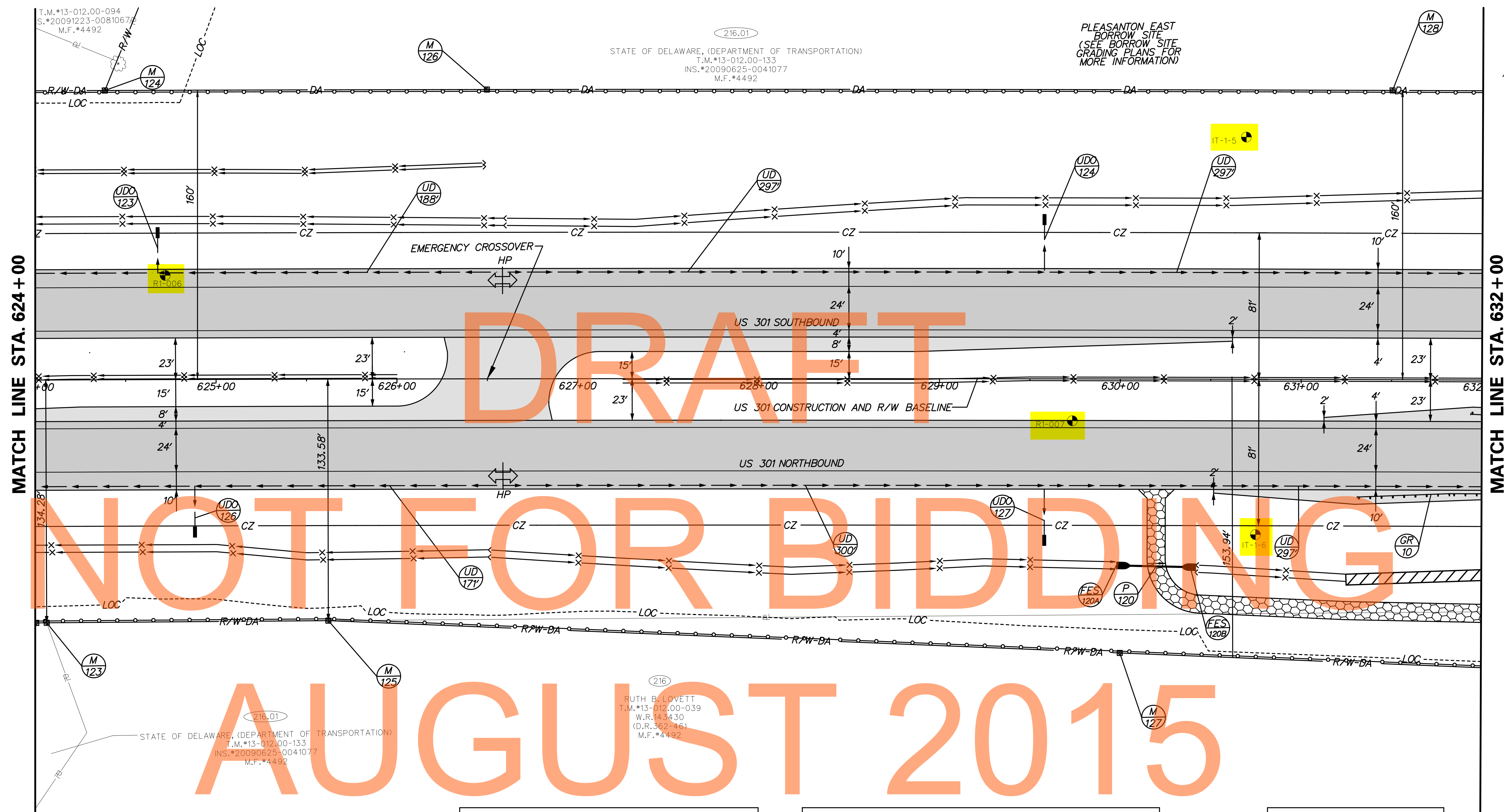


US 301,
 NORFOLK SOUTHERN RR TO SR 896

CONTRACT T200911301	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: WJD
	CHECKED BY: MAA

BORING LOCATION PLAN
 Sheet 4 of 21

CP-05
SHEET NO. 23
TOTAL SHTS. 240



FLARED END SECTION SCHEDULE

NO.	SIZE / TYPE	SLOPE	SAFETY GRATE
120A	18" RCFE	0.011	NO
120B	18" RCFE	0.011	NO

BMP SCHEDULE

NO.	TYPE	STATION FROM	STATION TO
703	INFILTRATION TRENCH	631+25 RT	632+25 RT

UNDERDRAIN OUTLETS

NO.	LENGTH	DIS. EL.
123	25.00	63.79
124	32.00	61.75
126	28.00	62.67
127	33.00	60.84

DRAINAGE PIPE SCHEDULE

NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INT. EL.	DIS. EL.
120	18" RCP	IV	32.00	0.011	58.33	57.98

GUARDRAIL SCHEDULE

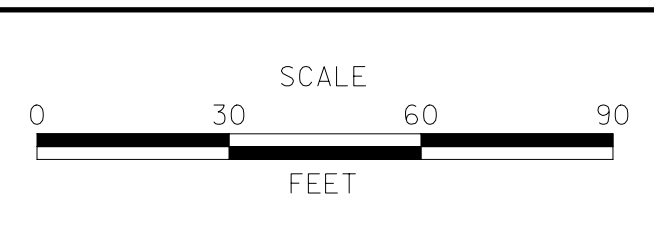
NO.	ITEM DESCRIPTION / TYPE	BEGIN STA.	OFFSET	LENGTH
10	GUARDRAIL END TREATMENT ATTENUATOR, TYPE 1-31	631+66.49	64.96	*

* LENGTH AS DETAILED IN STANDARD CONSTRUCTION DETAILS

\$FILES \$DATES



ADDENDUMS / REVISIONS



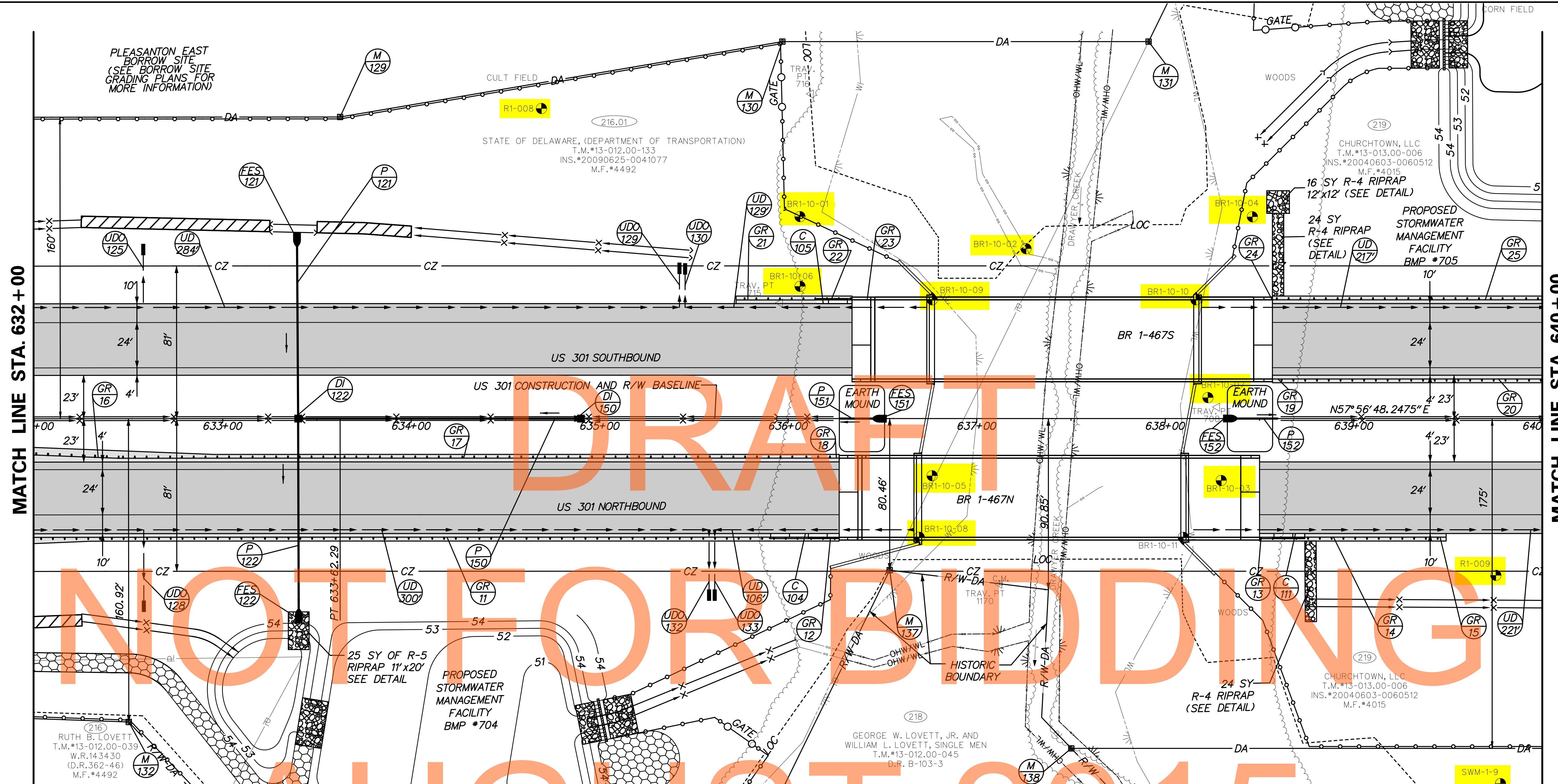
**US 301,
NORFOLK SOUTHERN RR TO SR 896**

CONTRACT T200911301	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: WJD
	CHECKED BY: MAA

BORING LOCATION PLAN
Sheet 5 of 21

CP-06

SHEET NO.	24
TOTAL SHTS.	240



MATCH LINE STA. 632+00

MATCH LINE STA. 640+00

MATCH LINE SHEET CP-08

BMP SCHEDULE

NO.	TYPE	STATION FROM	STATION TO
701	INFILTRATION TRENCH	632+25 LT	633+25 LT
702	INFILTRATION TRENCH	633+50 LT	634+00 LT
714	FILTER STRIP	632+25 RT	635+90 RT
715	FILTER STRIP	638+60 LT	643+50 LT

FLARED END SECTION SCHEDULE

NO.	SIZE / TYPE	SLOPE	SAFETY GRATE
121	18" RCFE	0.012	YES
122	18" RCFE	0.012	NO
151	18" RCFE	0.010	NO
152	18" RCFE	0.005	NO

GUARDRAIL SCHEDULE

NO.	ITEM DESCRIPTION / TYPE	BEGIN STA.	OFFSET	LENGTH
11	GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31	631+82.15	62.92	425.00
12	GUARDRAIL TO BARRIER CONNECTION APPROACH, TYPE 1-31	636+07.27	62.92	*
13	GUARDRAIL TO BARRIER CONNECTION, EXIT TYPE 31	638+61.51	62.92	*
14	GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31	638+61.51	62.92	75.00
15	END ANCHORAGE 31	639+36.51	62.92	*
16	GUARDRAIL END TREATMENT ATTENUATOR, TYPE 1-31	632+44.74	21.00	*
17	GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31	632+44.74	21.00	362.50
18	GUARDRAIL TO BARRIER CONNECTION APPROACH, TYPE 1-31	636+07.27	21.00	*
19	GUARDRAIL TO BARRIER CONNECTION APPROACH, TYPE 1-31	638+76.59	-21.00	*
20	GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31	638+76.59	-21.00	350.00
21	END ANCHORAGE 31	635+84.84	-62.92	*
22	GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31	635+84.84	-62.92	37.50
23	GUARDRAIL TO BARRIER CONNECTION, EXIT TYPE 31	636+22.34	-62.92	*
24	GUARDRAIL TO BARRIER CONNECTION APPROACH, TYPE 1-31	638+76.59	-62.92	*
25	GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31	638+76.59	-62.92	287.50

* LENGTH AS DETAILED IN STANDARD CONSTRUCTION DETAILS

DRAINAGE PIPE SCHEDULE

NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INT. EL.	DIS. EL.
121	18" RCP	IV	93.00	0.012	56.46	55.31
122	18" RCP	IV	102.00	0.012	55.31	54.08
150	18" RCP	IV	147.00	0.005	58.42	57.69
151	18" RCP	IV	20.00	0.010	62.84	62.64
152	18" RCP	IV	20.00	0.005	61.60	61.50

UNDERDRAIN OUTLETS

NO.	LENGTH	DIS. EL.
125	34.00	59.00
128	44.00	58.00
129	24.00	58.91
130	24.00	58.91
132	38.00	54.00
133	38.00	54.00

DRAINAGE INLET SCHEDULE

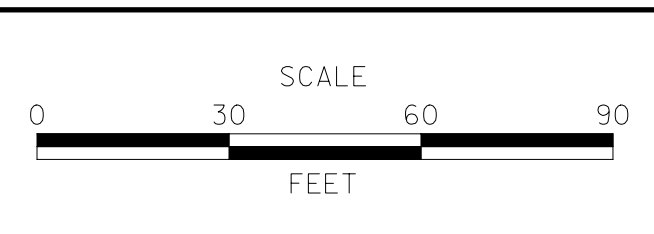
NO.	STATION	OFFSET	BOX SIZE	GRATE	T.G. EL.	INV. EL.
122	633+40.00	0.00	48" x 30"	2	62.59	55.31
150	634+90.00	0.00	48" x 30"	2	61.72	58.42

CURB SCHEDULE

NO.	ITEM DESCRIPTION / TYPE	LENGTH
104	INTEGRAL PCC CURB AND GUTTER, TYPE 1-4	37'
105	INTEGRAL PCC CURB AND GUTTER, TYPE 1-4	19'
111	INTEGRAL PCC CURB AND GUTTER, TYPE 1-4	24'



DELAWARE
DEPARTMENT OF TRANSPORTATION



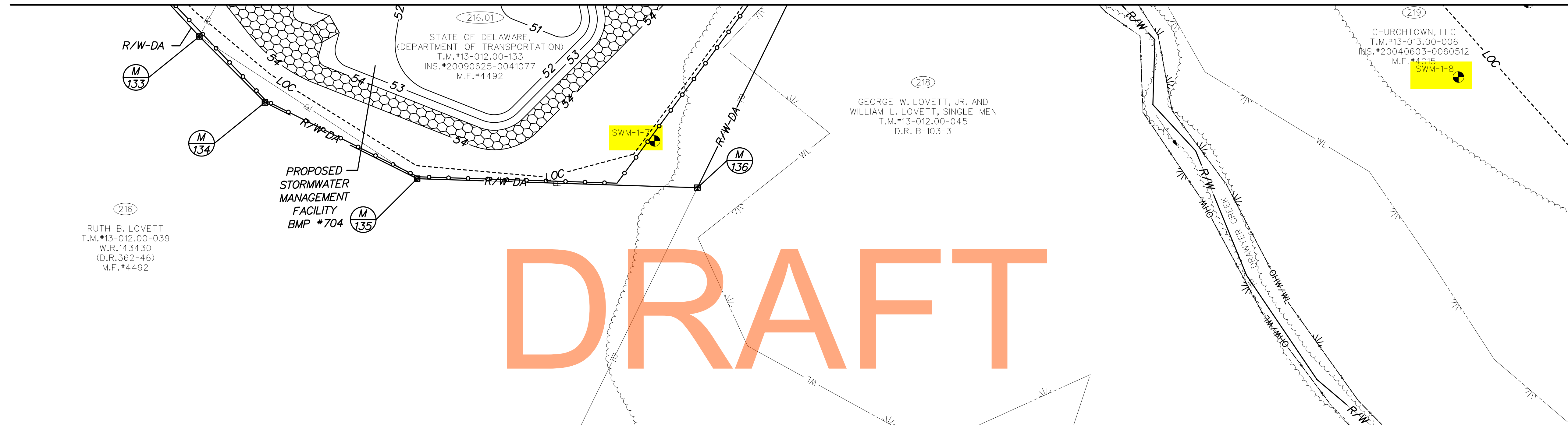
US 301,
NORFOLK SOUTHERN RR TO SR 896

CONTRACT T20091301	BRIDGE NO. 1-467 N&S
COUNTY NEW CASTLE	DESIGNED BY: WJD
	CHECKED BY: MAA

BORING LOCATION PLAN
Sheet 6 of 21

CP-07
SHEET NO. 25
TOTAL SHTS. 240

MATCH LINE SHEET CP-07



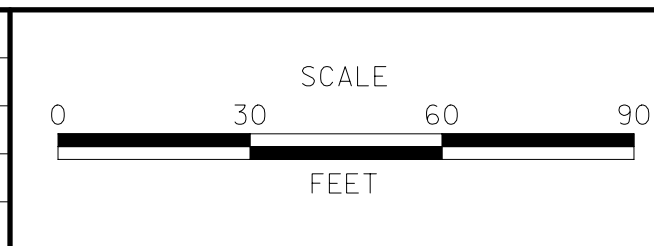
MATCH LINE SHEET CP-09

DRAFT
NOT FOR BIDDING
AUGUST 2015

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ADDENDUMS / REVISIONS	



**US 301,
 NORFOLK SOUTHERN RR TO SR 896**

CONTRACT T200911301	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: WJD
	CHECKED BY: MAA

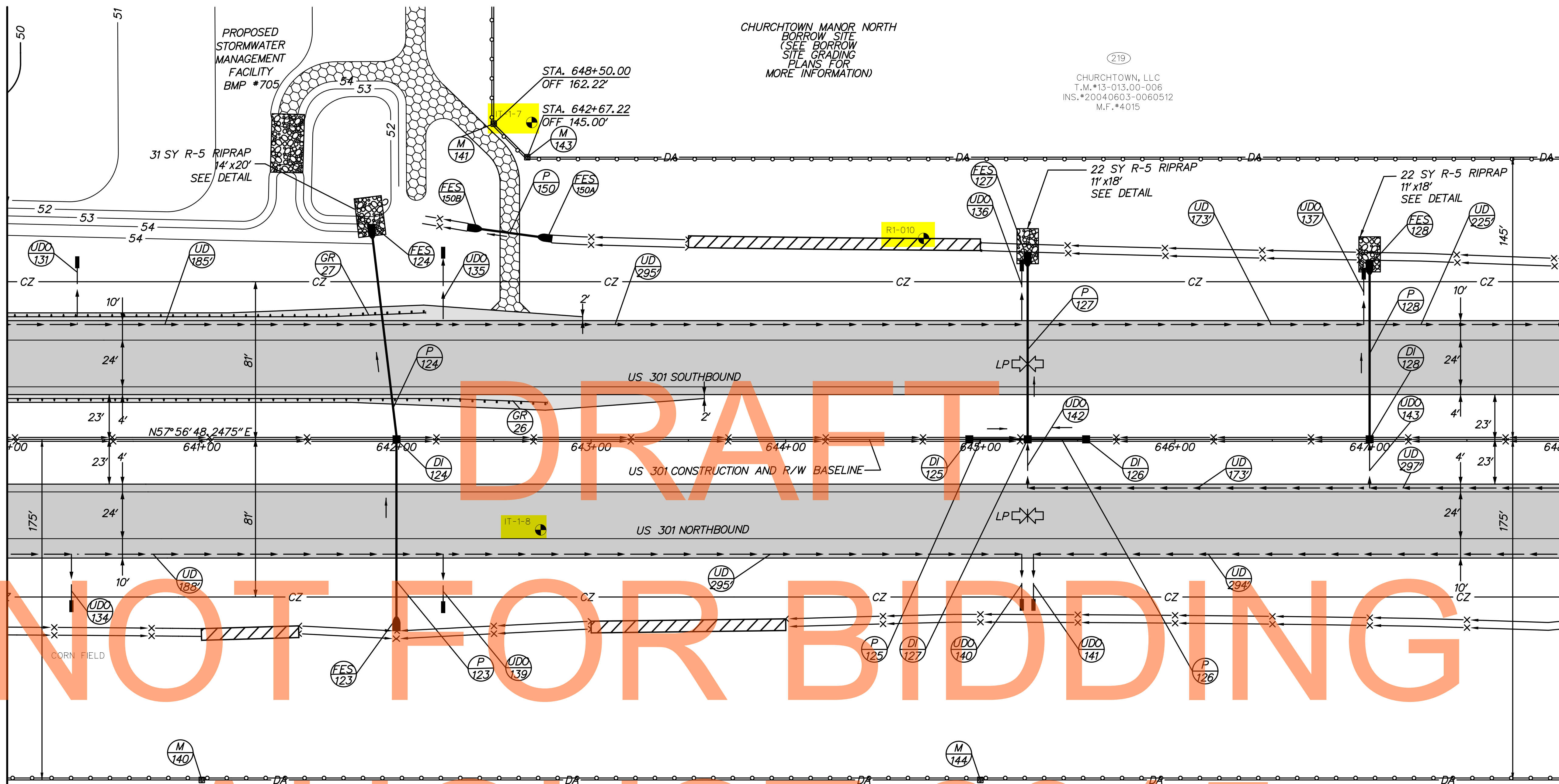
BORING LOCATION PLAN
 Sheet 7 of 21

CP-08
SHEET NO. 26
TOTAL SHTS. 240

MATCH LINE STA. 640+00

MATCH LINE STA. 648+00

MATCH LINE SHEET CP-08



UNDERDRAIN OUTLETS		
NO.	LENGTH	DIS. EL.
131	35.00	55.00
134	30.00	56.81
135	34.00	54.25
136	33.00	54.39
137	29.00	54.92
139	30.00	55.84
140	29.00	55.17
141	29.00	55.17
142	24.00	55.87
143	24.00	56.05

DRAINAGE PIPE SCHEDULE							
NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INT. EL.	DIS. EL.	
123	24" RCP	IV	92.00	0.005	53.69	53.23	
124	24" RCP	IV	105.00	0.005	53.23	52.70	
125	15" RCP	IV	28.00	0.004	53.98	53.88	
126	15" RCP	IV	28.00	0.004	53.98	53.88	
127	18" RCP	IV	90.00	0.005	53.88	53.43	
128	18" RCP	IV	86.00	0.005	54.38	53.95	
150	21" RCP	IV	32.00	0.004	53.10	52.99	

FLARED END SECTION SCHEDULE			
NO.	SIZE / TYPE	SLOPE	SAFETY GRATE
123	24" RCFE	0.005	YES
124	24" RCFE	0.005	NO
127	18" RCFE	0.005	NO
128	18" RCFE	0.005	NO
150A	21" RCFE	0.004	NO
150B	21" RCFE	0.004	NO

DRAINAGE INLET SCHEDULE						
NO.	STATION	OFFSET	BOX SIZE	GRATE	T.G. EL.	INV. EL.
124	642+00.00	0.00	48" x 30"	2	57.77	53.23
125	644+94.31	0.00	34" x 24"	2	57.17	53.98
126	645+54.31	0.00	34" x 24"	2	57.17	53.98
127	645+24.31	0.00	34" x 24"	2	57.16	53.88
128	647+00.00	0.00	34" x 18"	2	57.34	54.38

BMP SCHEDULE			
NO.	TYPE	STATION FROM	STATION TO
706	INFILTRATION TRENCH	643+50 LT	645+00 LT
708	INFILTRATION TRENCH	641+00 RT	641+50 RT
709	INFILTRATION TRENCH	643+00 RT	644+00 RT
715	FILTER STRIP	638+60 LT	643+50 LT

GUARDRAIL SCHEDULE				
NO.	ITEM DESCRIPTION / TYPE	BEGIN STA.	OFFSET	LENGTH
26	GUARDRAIL END TREATMENT ATTENUATOR, TYPE 1-31	642+26.59	-21.00	*
27	GUARDRAIL END TREATMENT ATTENUATOR, TYPE 1-31	641+64.09	-63.00	*

* LENGTH AS DETAILED IN STANDARD CONSTRUCTION DETAILS



ADDENDUMS / REVISIONS



US 301, NORFOLK SOUTHERN RR TO SR 896

CONTRACT	BRIDGE NO.	
T200911301	DESIGNED BY:	WJD
COUNTY	CHECKED BY:	MAA
NEW CASTLE		

BORING LOCATION PLAN Sheet 8 of 21

CP-09	SHEET NO.	27
	TOTAL SHTS.	240

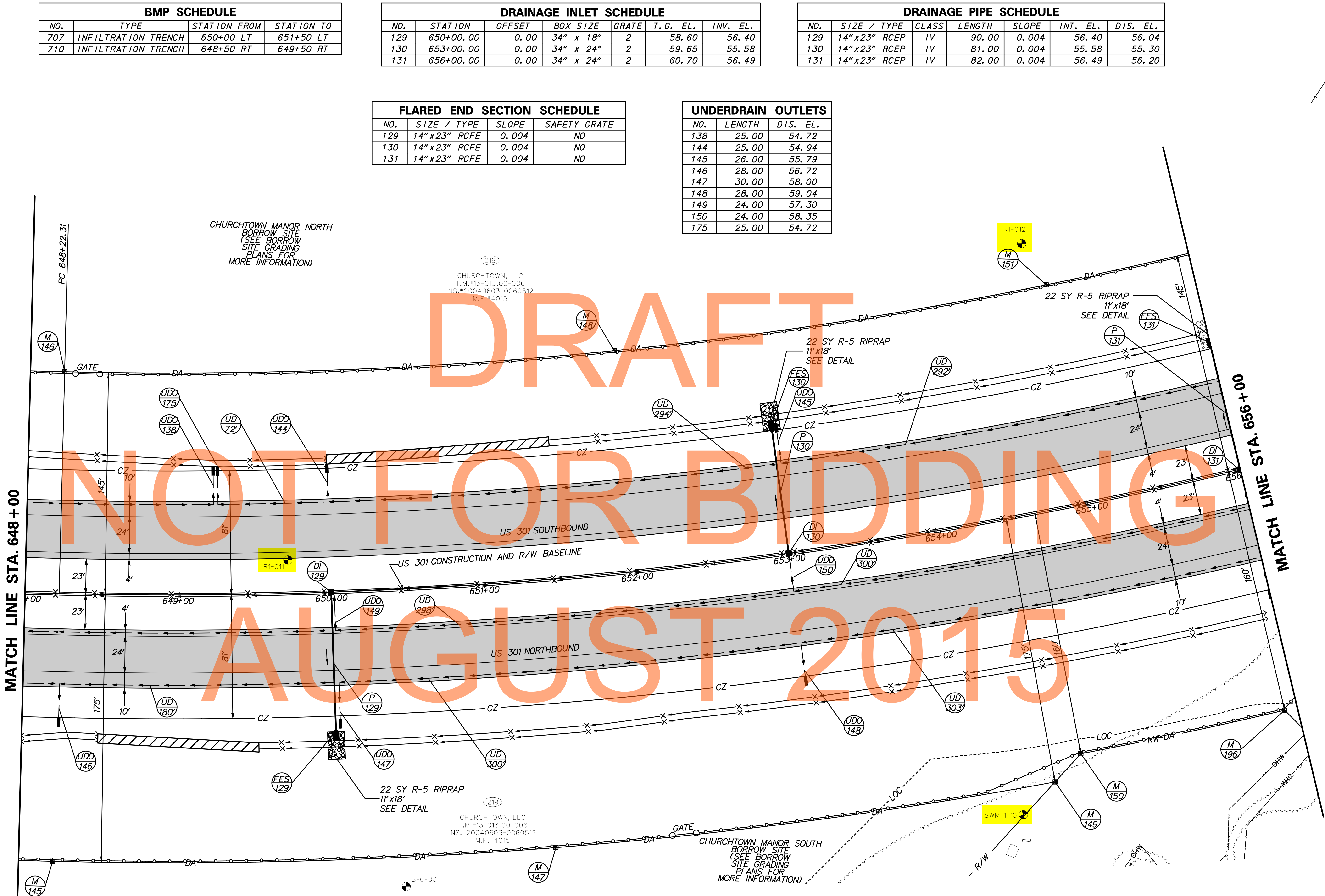
BMP SCHEDULE			
NO.	TYPE	STATION FROM	STATION TO
707	INFILTRATION TRENCH	650+00 LT	651+50 LT
710	INFILTRATION TRENCH	648+50 RT	649+50 RT

DRAINAGE INLET SCHEDULE						
NO.	STATION	OFFSET	BOX SIZE	GRATE	T.G. EL.	INV. EL.
129	650+00.00	0.00	34" x 18"	2	58.60	56.40
130	653+00.00	0.00	34" x 24"	2	59.65	55.58
131	656+00.00	0.00	34" x 24"	2	60.70	56.49

DRAINAGE PIPE SCHEDULE								
NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INT. EL.	DIS. EL.		
129	14" x 23" RCEP	IV	90.00	0.004	56.40	56.04		
130	14" x 23" RCEP	IV	81.00	0.004	55.58	55.30		
131	14" x 23" RCEP	IV	82.00	0.004	56.49	56.20		

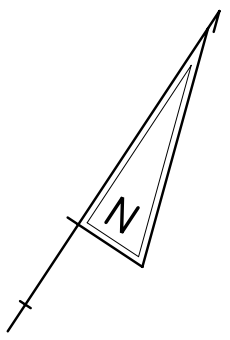
FLARED END SECTION SCHEDULE			
NO.	SIZE / TYPE	SLOPE	SAFETY GRATE
129	14" x 23" RCFE	0.004	NO
130	14" x 23" RCFE	0.004	NO
131	14" x 23" RCFE	0.004	NO

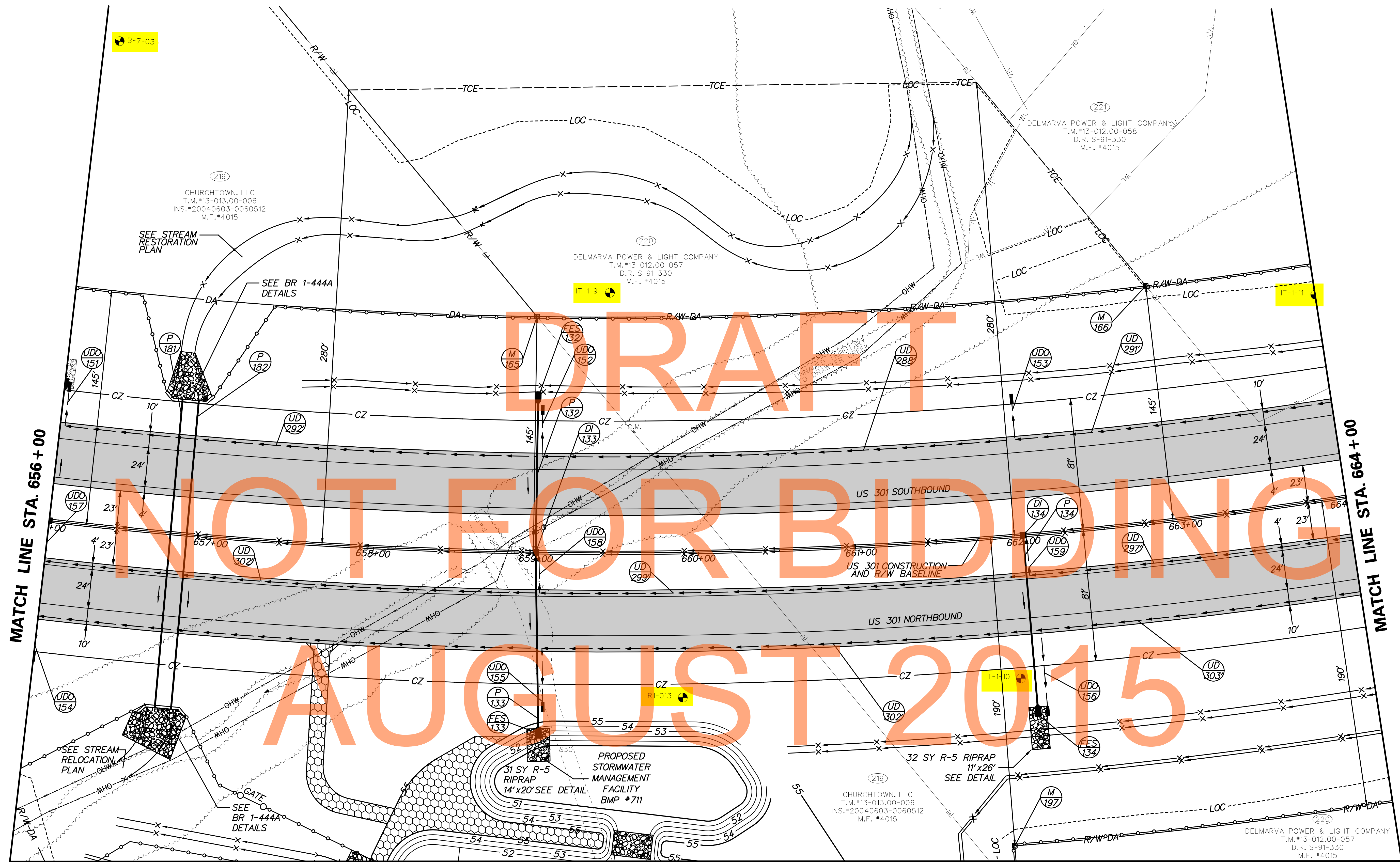
UNDERDRAIN OUTLETS		
NO.	LENGTH	DIS. EL.
138	25.00	54.72
144	25.00	54.94
145	26.00	55.79
146	28.00	56.72
147	30.00	58.00
148	28.00	59.04
149	24.00	57.30
150	24.00	58.35
175	25.00	54.72



DRAFT
NOT FOR BIDDING
AUGUST 2015

SFILES \$DATES





DRAFT

NOT FOR BIDDING

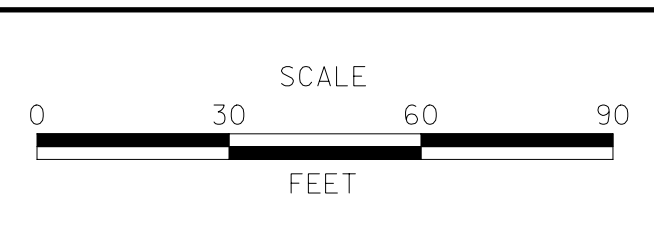
AUGUST 2015

MATCH LINE SHEET CP-12

\$FILES \$DATES



ADDENDUMS / REVISIONS	



**US 301,
NORFOLK SOUTHERN RR TO SR 896**

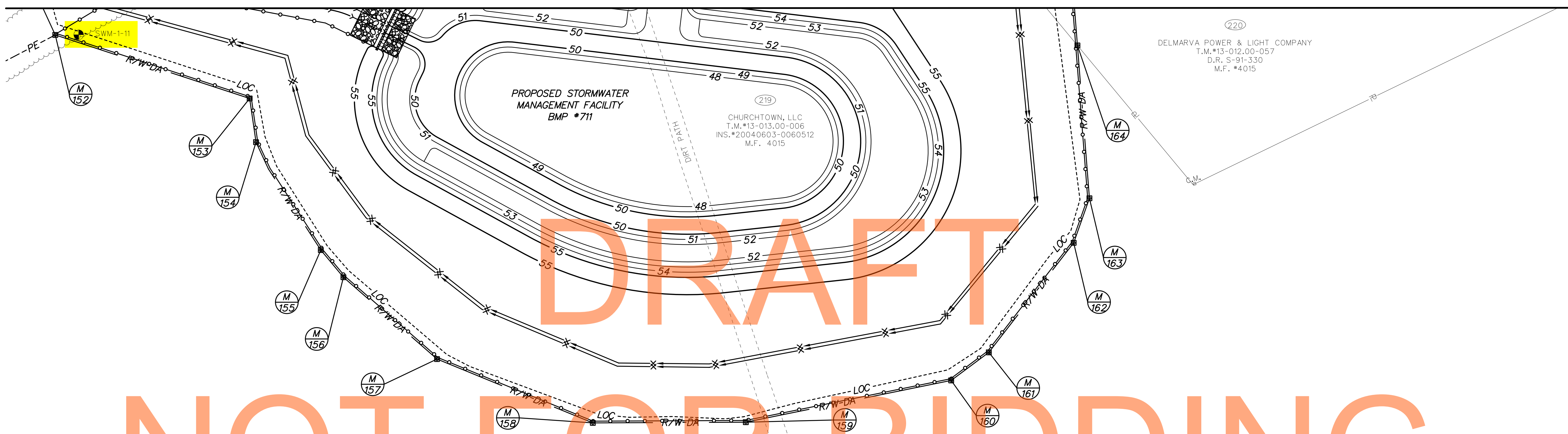
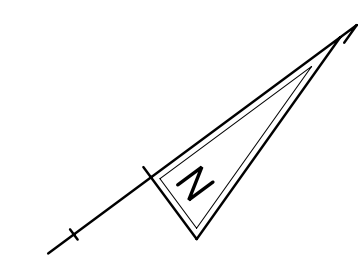
CONTRACT T200911301	BRIDGE NO. 1-444A
COUNTY NEW CASTLE	DESIGNED BY: WJD
	CHECKED BY: MAA

SEE NEXT SHEET FOR SCHEDULES

BORING LOCATION PLAN
Sheet 10 of 21

CP-11
SHEET NO. 29
TOTAL SHTS. 240

MATCH LINE SHEET CP-11



DRAFT

NOT FOR BIDDING

AUGUST 2015

220
 DELMARVA POWER & LIGHT COMPANY
 T.M.#13-012.00-057
 D.R. S-91-330
 M.F. #4015

219
 CHURCHTOWN, LLC
 T.M.#13-013.00-006
 INS.#20040603-0060512
 M.F. 4015

UNDERDRAIN OUTLETS		
NO.	LENGTH	DIS. EL.
151	27.00	56.66
152	32.00	56.02
153	28.00	57.94
154	28.00	60.07
155	40.00	57.00
156	53.00	55.98
157	24.00	59.40
158	24.00	60.45
159	24.00	61.50

FLARED END SECTION SCHEDULE			
NO.	SIZE / TYPE	SLOPE	SAFETY GRATE
132	24" RCFE	0.005	YES
133	24" RCFE	0.005	NO
134	18" RCFE	0.005	NO

DRAINAGE PIPE SCHEDULE						
NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INT. EL.	DIS. EL.
132	24" RCP	IV	91.00	0.005	53.97	53.52
133	24" RCP	IV	107.00	0.005	53.52	52.98
134	18" RCP	IV	105.00	0.005	56.52	55.99
181*	53" x 83" RCEP	IV	190.50	0.019	51.05	47.45
182	38" x 60" RCEP	IV	190.50	0.019	52.45	48.85

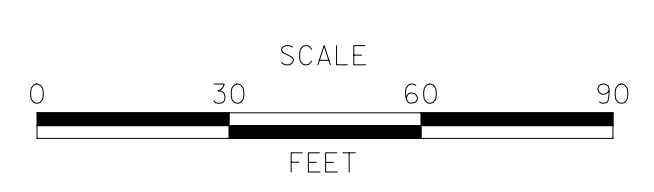
* SEE CONSTRUCTION DETAILS FOR MORE INFORMATION

DRAINAGE INLET SCHEDULE						
NO.	STATION	OFFSET	BOX SIZE	GRATE	T. G. EL.	INV. EL.
133	659+00.00	0.00	48" x 30"	2	61.75	53.52
134	662+00.00	0.00	34" x 24"	2	62.80	56.52

\$FILES \$DATES



ADDENDUMS / REVISIONS	

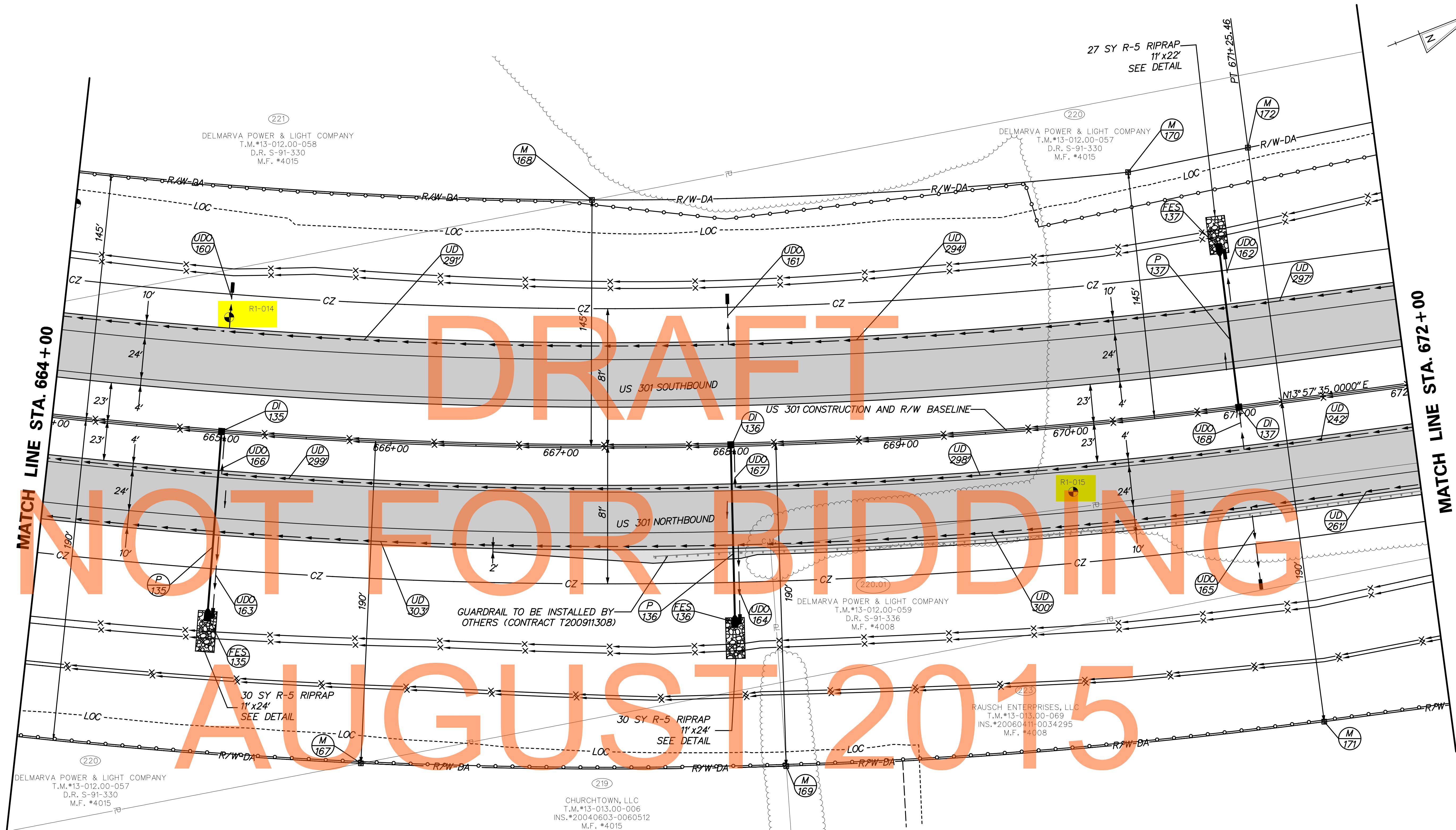


**US 301,
 NORFOLK SOUTHERN RR TO SR 896**

CONTRACT T200911301	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: WJD
	CHECKED BY: MAA

BORING LOCATION PLAN
 Sheet 11 of 21

CP-12
SHEET NO. 30
TOTAL SHTS. 240



MATCH LINE STA. 664+00

MATCH LINE STA. 672+00

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AUGUST 2015

DRAINAGE PIPE SCHEDULE						
NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INT. EL.	DIS. EL.
135	18" RCP	IV	105.00	0.005	57.56	57.04
136	18" RCP	IV	101.00	0.005	59.86	59.34
137	18" RCP	IV	90.00	0.005	63.24	62.79

FLARED END SECTION SCHEDULE			
NO.	SIZE / TYPE	SLOPE	SAFETY GRATE
135	18" RCFE	0.005	NO
136	18" RCFE	0.005	NO
137	18" RCFE	0.005	NO

DRAINAGE INLET SCHEDULE						
NO.	STATION	OFFSET	BOX SIZE	GRATE	T.G. EL.	INV. EL.
135	665+00.00	0.00	34" x 24"	2	63.85	57.56
136	668+00.00	0.00	34" x 24"	2	65.11	59.86
137	671+00.00	0.00	34" x 24"	2	69.33	63.24

UNDERDRAIN OUTLETS		
NO.	LENGTH	DIS. EL.
160	29.00	58.88
161	30.00	60.82
162	35.00	63.78
163	51.00	57.52
164	47.00	59.85
165	50.00	62.95
166	24.00	62.55
167	24.00	63.81
168	24.00	68.03

ADDENDUMS / REVISIONS



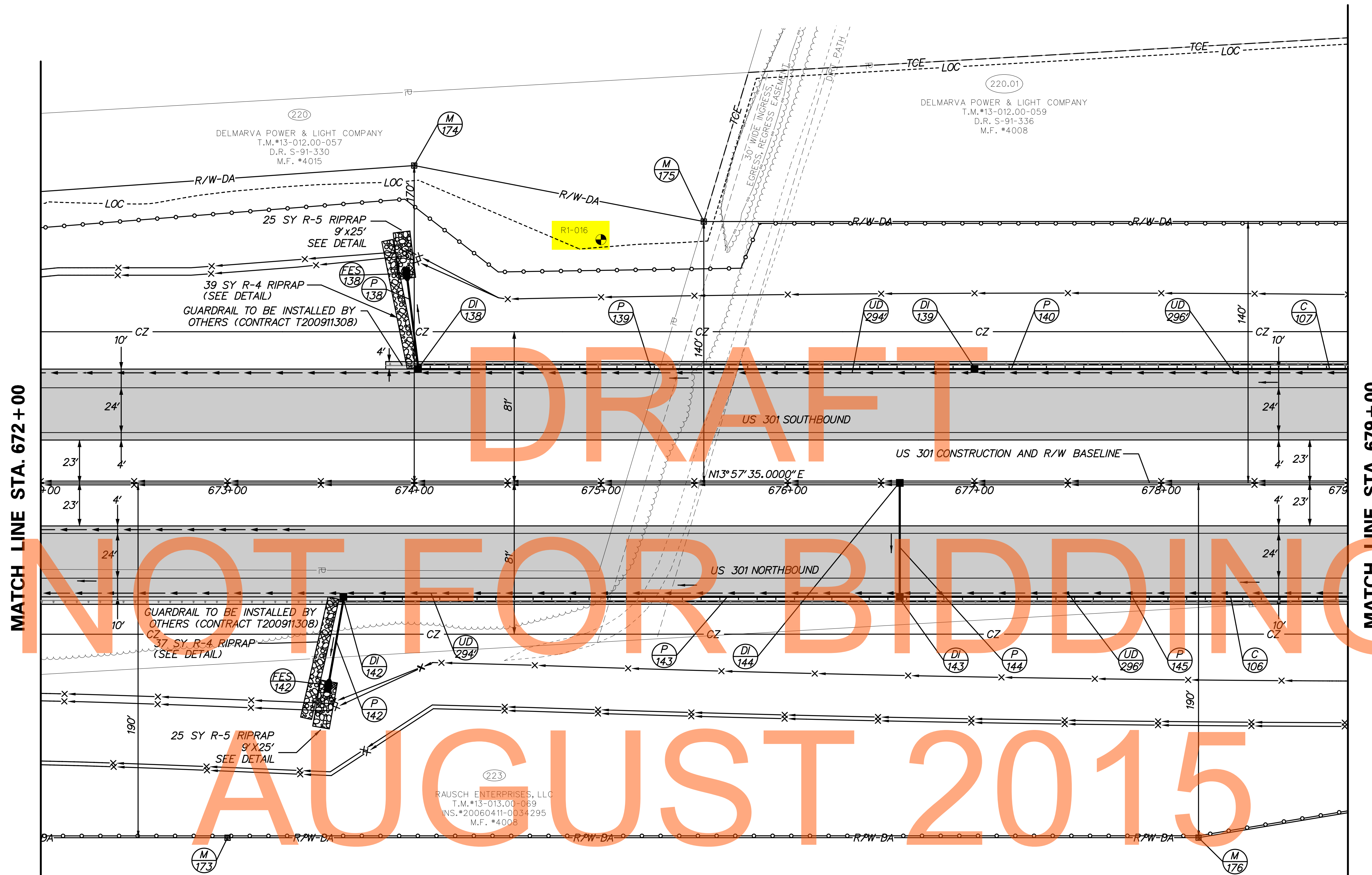
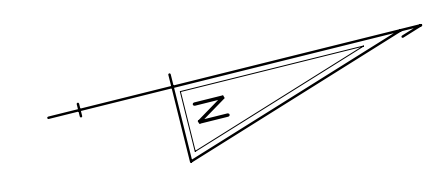
**US 301,
NORFOLK SOUTHERN RR TO SR 896**

CONTRACT T200911301	BRIDGE NO.	DESIGNED BY: WJD
COUNTY NEW CASTLE	CHECKED BY: MAA	

BORING LOCATION PLAN
Sheet 12 of 21



CP-13
SHEET NO. 31
TOTAL SHTS. 240



MATCH LINE STA. 672+00

MATCH LINE STA. 679+00

NOT FOR BIDDING

AUGUST 2015

CURB SCHEDULE		
NO.	ITEM DESCRIPTION / TYPE	LENGTH
106	INTEGRAL PCC CURB AND GUTTER, TYPE 1-4	540'
107	INTEGRAL PCC CURB AND GUTTER, TYPE 1-4	498'

DRAINAGE PIPE SCHEDULE						
NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INT. EL.	DIS. EL.
138	15" RCP	IV	48.00	0.062	69.07	66.09
139	15" RCP	IV	298.00	0.010	77.59	74.63
140	15" RCP	IV	298.00	0.010	85.70	82.72
142	15" RCP	IV	45.00	0.044	68.39	66.41
143	15" RCP	IV	296.00	0.010	76.91	73.95
144	18" RCP	IV	60.00	0.010	80.99	80.39
145	15" RCP	IV	298.00	0.010	84.65	81.67

DRAINAGE INLET SCHEDULE						
NO.	STATION	OFFSET	BOX SIZE	GRATE	T.G. EL.	INV. EL.
138	674+02.00	-62.92	48" x 30"	2	79.01	69.07
139	677+00.00	-62.92	48" x 30"	2	87.10	77.59
142	673+62.00	62.92	48" x 30"	2	78.33	68.39
143	676+60.00	62.92	48" x 30"	2	86.20	76.91
144	676+60.00	0.00	34" x 24"	2	84.39	80.99

NOTE: OFFSET AND T.G. ELEVATION DATA APPLIED TO FLOW LINE

FLARED END SECTION SCHEDULE			
NO.	SIZE / TYPE	SLOPE	SAFETY GRATE
138	15" RCFE	0.062	NO
142	15" RCFE	0.044	NO

ADDENDUMS / REVISIONS	



**US 301,
NORFOLK SOUTHERN RR TO SR 896**

CONTRACT T200911301	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: WJD
	CHECKED BY: MAA

BORING LOCATION PLAN
Sheet 13 of 21

CP-14
SHEET NO. 32
TOTAL SHTS. 240



DRAINAGE INLET SCHEDULE						
NO.	STATION	OFFSET	BOX SIZE	GRATE	T.G. EL.	INV. EL.
140	680+00.00	-62.92	48" x 30"	2	92.05	85.70
141	682+00.00	-62.92	48" x 30"	2	93.60	87.47
145	679+60.00	62.92	48" x 30"	2	91.57	84.65
146	682+00.00	62.92	48" x 30"	2	93.60	87.03

NOTE: OFFSET AND T.G. ELEVATION DATA APPLIED TO FLOW LINE

DRAINAGE PIPE SCHEDULE						
NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INT. EL.	D/S. EL.
141	15" RCP	IV	198.00	0.005	87.47	86.48
146	15" RCP	IV	238.00	0.010	87.03	84.65
230	18" RCP	IV	100.00	0.005	66.10	65.65

CURB SCHEDULE		
NO.	ITEM DESCRIPTION / TYPE	LENGTH
108	INTEGRAL PCC CURB AND GUTTER, TYPE 1-4	190'
109	INTEGRAL PCC CURB AND GUTTER, TYPE 1-4	290'
110	INTEGRAL PCC CURB AND GUTTER, TYPE 1-4	41'

FLARED END SECTION SCHEDULE			
NO.	SIZE / TYPE	SLOPE	SAFETY GRATE
203A	18" RCP	0.003	NO
203B	18" RCP	0.003	NO

MATCH LINE STA. 679+00

END CONTRACT T200911301 STATION 687+72.79

MATCH LINE THIS SHEET

MATCH LINE THIS SHEET



ADDENDUMS / REVISIONS	



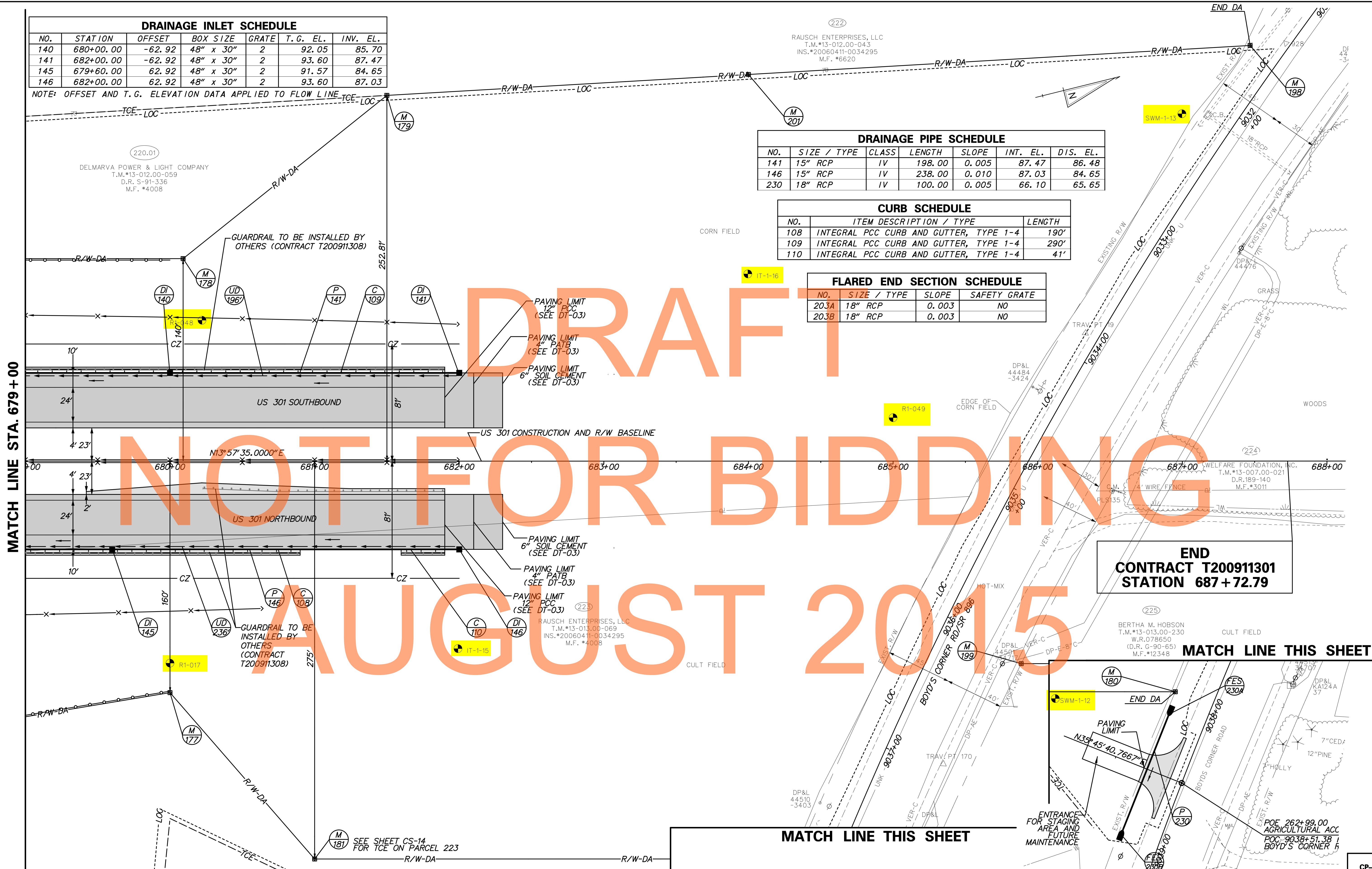
US 301, NORFOLK SOUTHERN RR TO SR 896

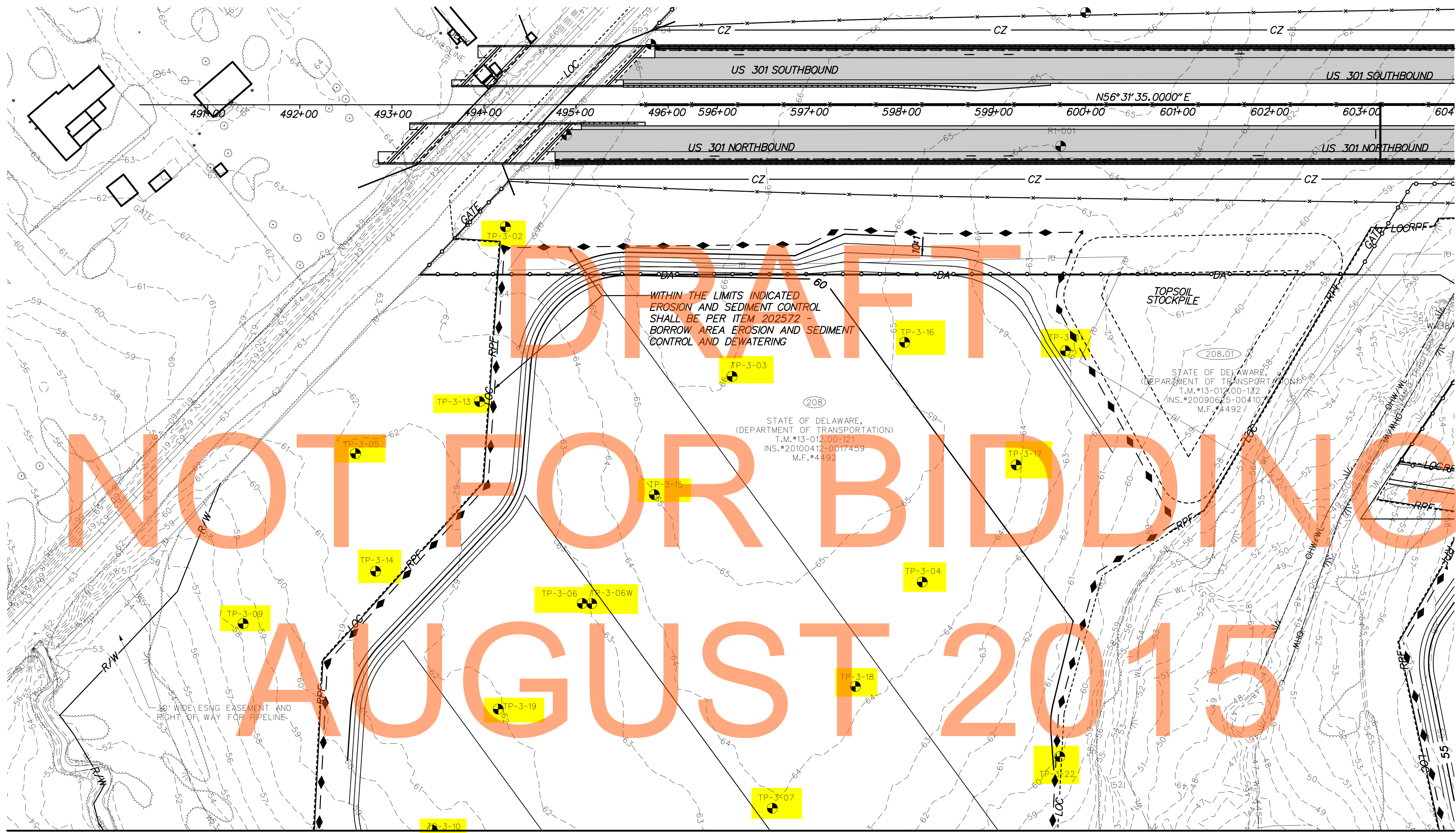
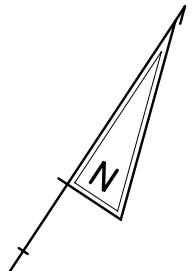
CONTRACT	T200911301	BRIDGE NO.	
COUNTY	NEW CASTLE	DESIGNED BY:	WJD
		CHECKED BY:	MAA

BORING LOCATION PLAN
Sheet 14 of 21

SHEET NO.	33
TOTAL SHTS.	240

DRAFT NOT FOR BIDDING AUGUST 2015



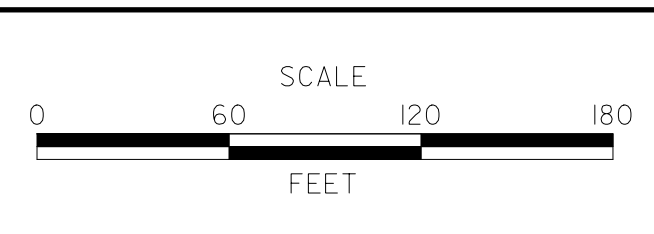


MATCH LINE SHEET BS-03

\$DATES
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ADDENDUMS / REVISIONS	

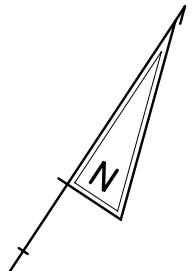


US 301,
NORFOLK SOUTHERN RR TO SR 896

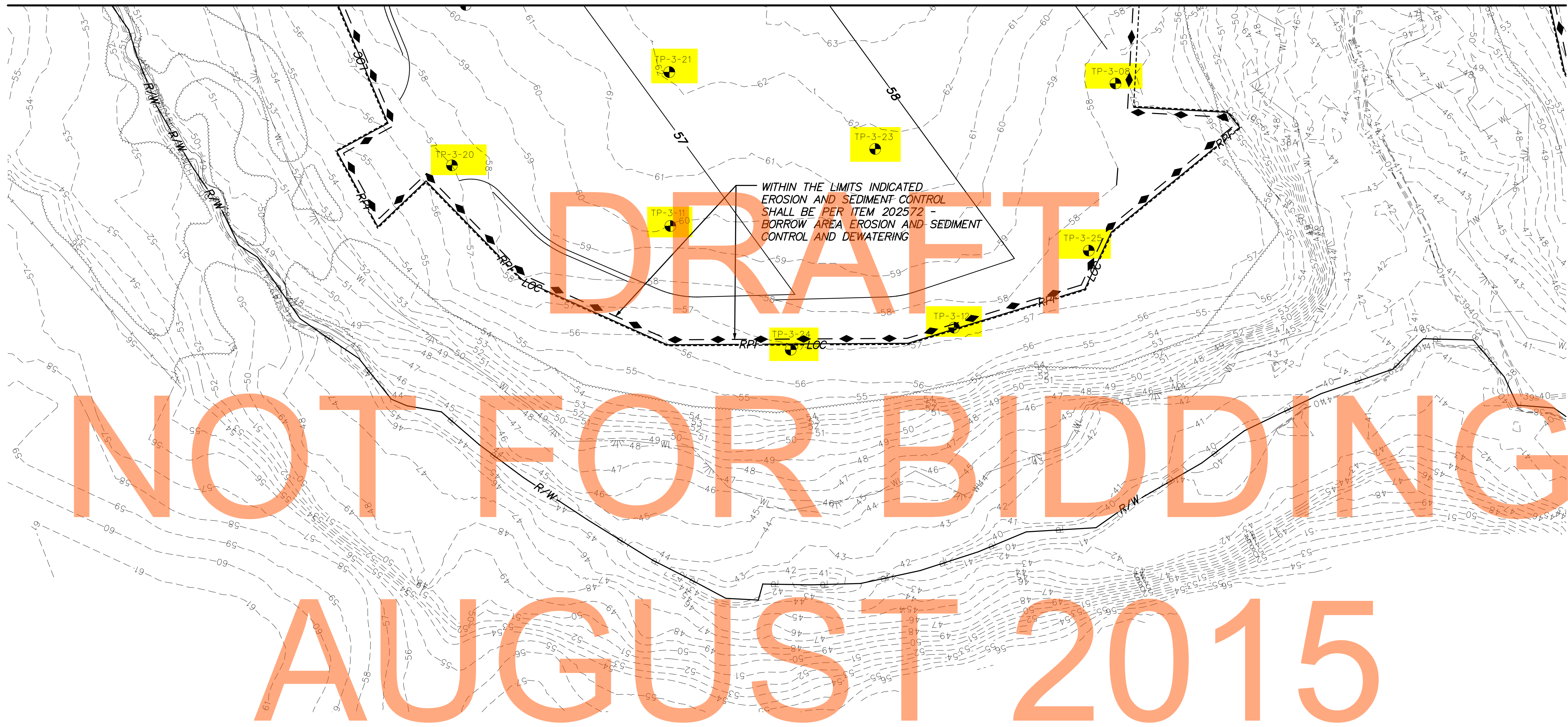
CONTRACT T200911301	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: WJD CHECKED BY: MAA

BORING LOCATION PLAN
Sheet 15 of 21

BS-02
SHEET NO. 59
TOTAL SHTS. 240



MATCH LINE SHEET BS-02



DRAFT

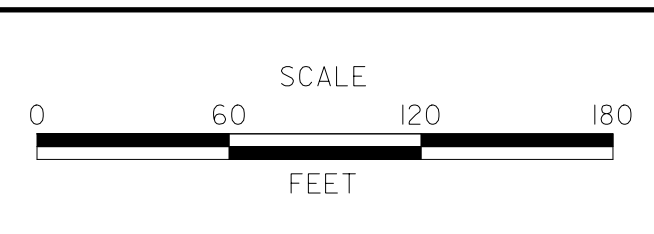
NOT FOR BIDDING

AUGUST 2015

\$DATES
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ADDENDUMS / REVISIONS	

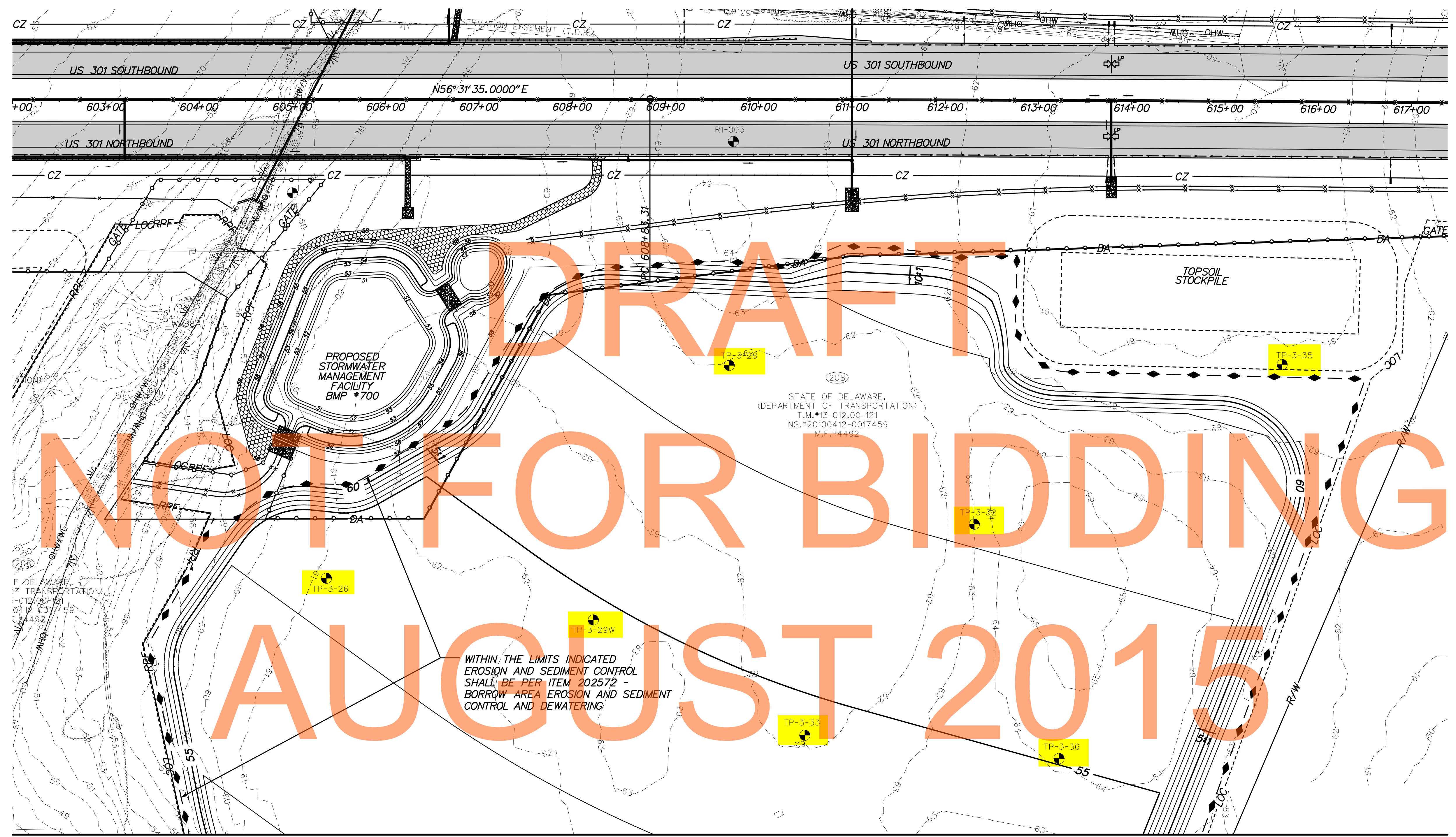
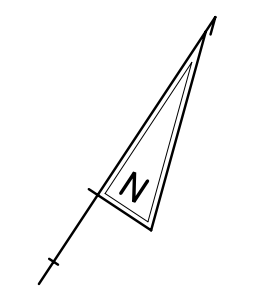


US 301,
NORFOLK SOUTHERN RR TO SR 896

CONTRACT T200911301	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: WJD CHECKED BY: MAA

BORING LOCATION PLAN
Sheet 16 of 21

BS-03
SHEET NO. 60
TOTAL SHTS. 240



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NOT FOR BIDDING
AUGUST 2015

WITHIN THE LIMITS INDICATED
EROSION AND SEDIMENT CONTROL
SHALL BE PER ITEM 202572 -
BORROW AREA EROSION AND SEDIMENT
CONTROL AND DEWATERING

STATE OF DELAWARE,
(DEPARTMENT OF TRANSPORTATION)
T.M.#13-012.00-121
INS.#20100412-0017459
M.F.#4492

MATCH LINE SHEET BS-05

\$FILES \$DATES



ADDENDUMS / REVISIONS	



**US 301,
NORFOLK SOUTHERN RR TO SR 896**

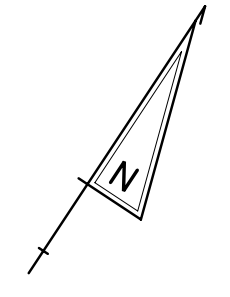
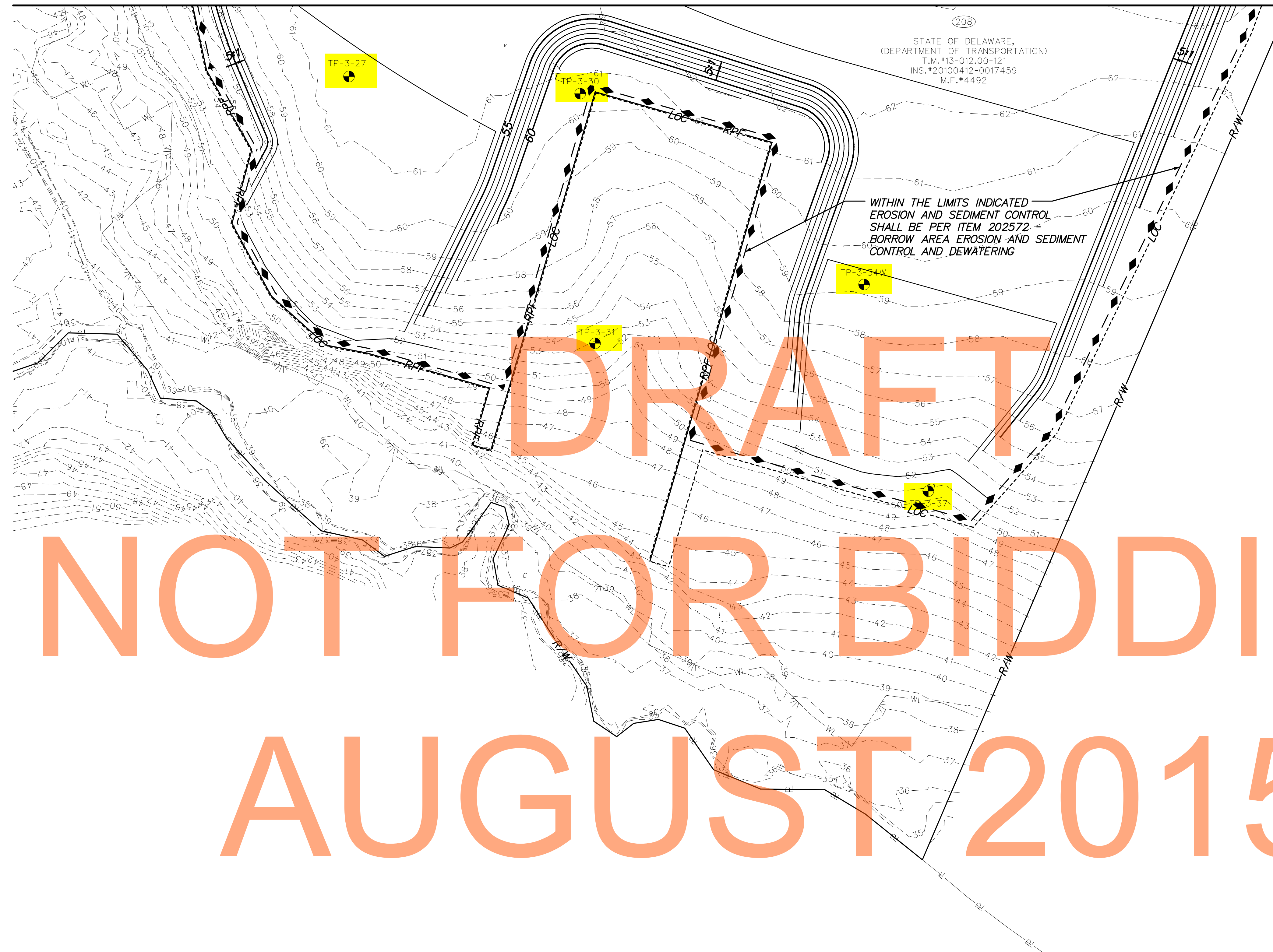
CONTRACT T200911301	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: WJD CHECKED BY: MAA

BORING LOCATION PLAN
Sheet 17 of 21

BS-04
SHEET NO. 61
TOTAL SHTS. 240

STATE OF DELAWARE,
 (DEPARTMENT OF TRANSPORTATION)
 T.M.#13-012.00-121
 INS.#20100412-0017459
 M.F.#4492

WITHIN THE LIMITS INDICATED
 EROSION AND SEDIMENT CONTROL
 SHALL BE PER ITEM 202572 -
 BORROW AREA EROSION AND SEDIMENT
 CONTROL AND DEWATERING

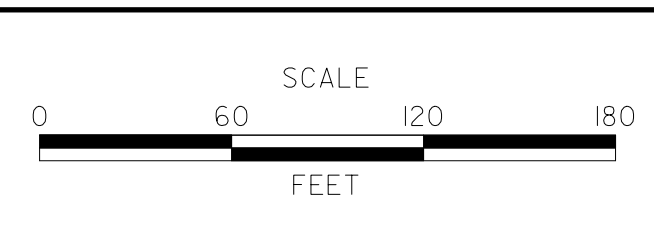


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NOT FOR BIDDING
AUGUST 2015

\$DATES \$FILES



ADDENDUMS / REVISIONS	

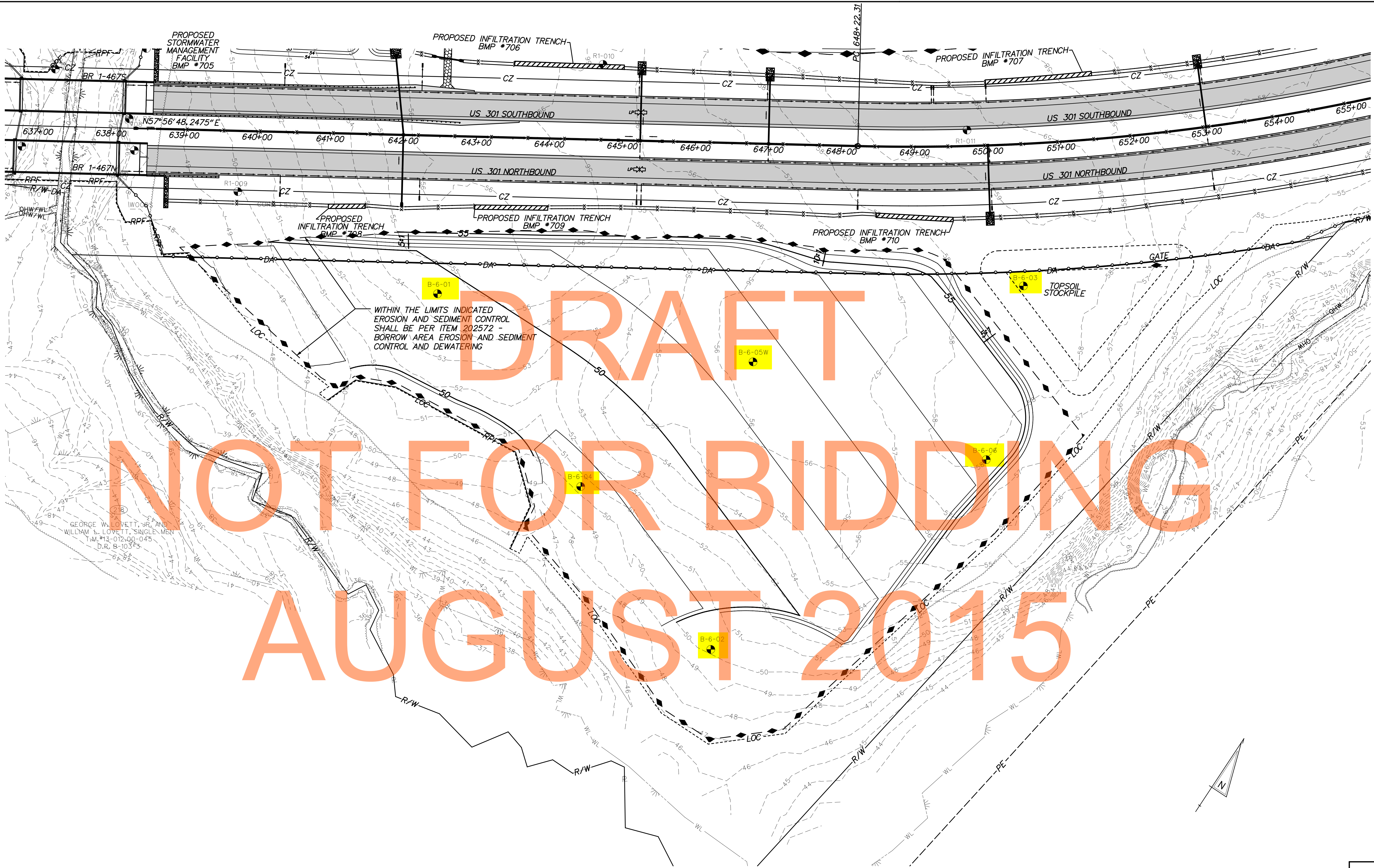


**US 301,
 NORFOLK SOUTHERN RR TO SR 896**

CONTRACT T200911301	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: WJD
	CHECKED BY: MAA

BORING LOCATION PLAN
 Sheet 18 of 21

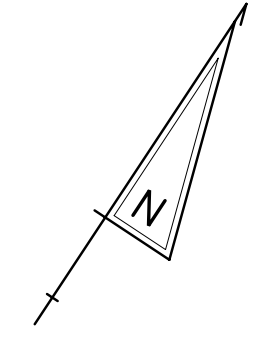
BS-05
SHEET NO. 62
TOTAL SHTS. 240



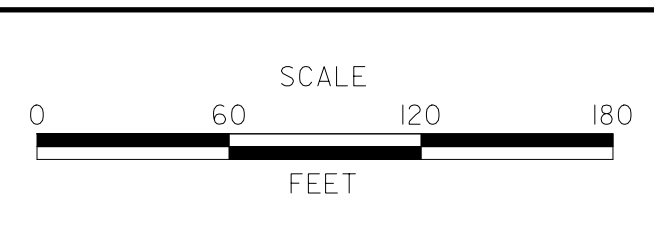
WITHIN THE LIMITS INDICATED
 EROSION AND SEDIMENT CONTROL
 SHALL BE PER ITEM 202572 -
 BORROW AREA EROSION AND SEDIMENT
 CONTROL AND DEWATERING

DRAFT
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 AUGUST 2015

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ADDENDUMS / REVISIONS	



CONTRACT T200911301	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: WJD
	CHECKED BY: MAA

BS-06
SHEET NO. 63
TOTAL SHTS. 240

DRAFT

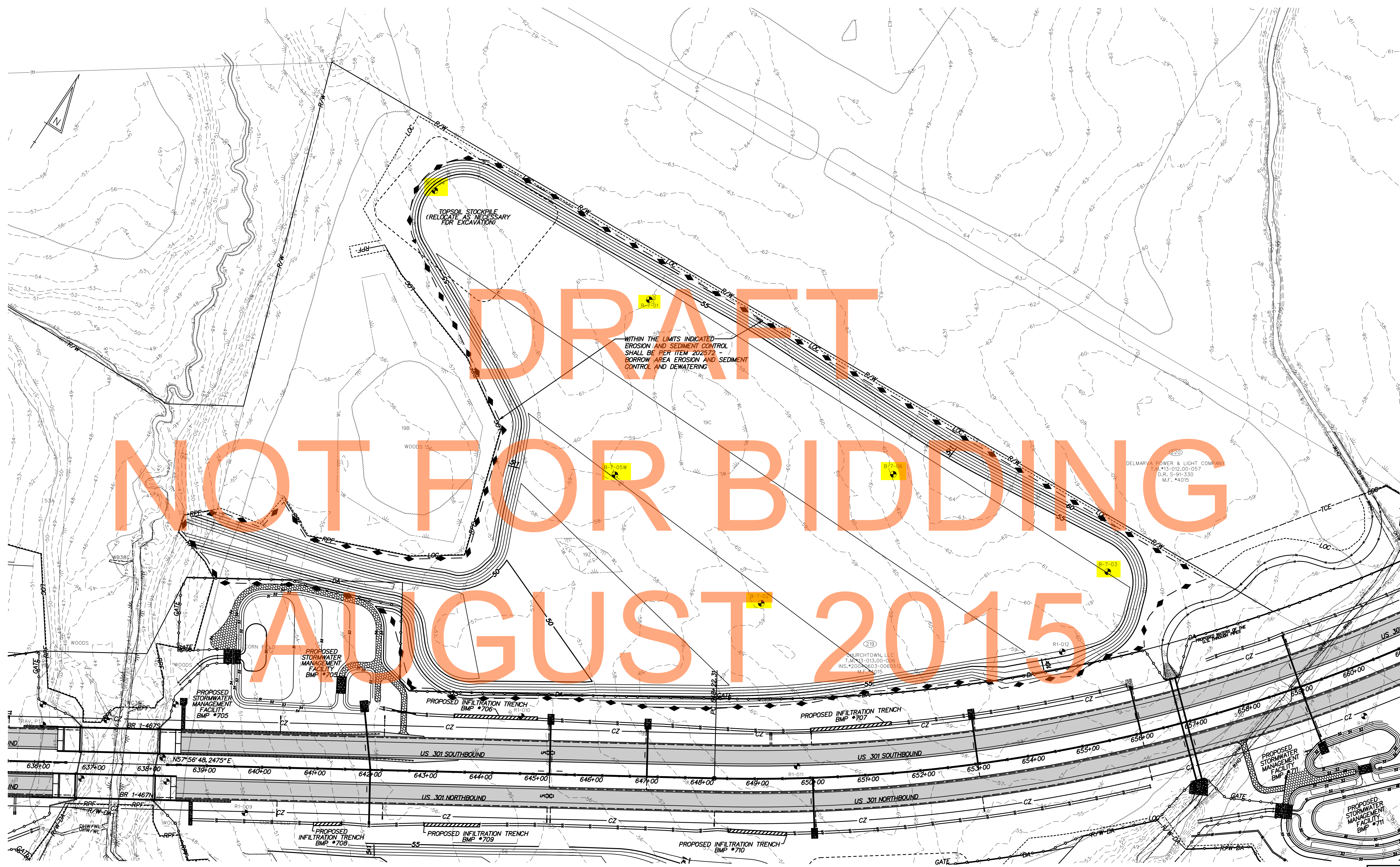
NOT FOR BIDDING

AUGUST 2015

WITHIN THE LIMITS INDICATED
EROSION AND SEDIMENT CONTROL
SHALL BE PER ITEM 202572 -
BORROW AREA EROSION AND SEDIMENT
CONTROL AND DEWATERING

DELMARVA POWER & LIGHT COMPANY
T.M. #13-012.00-057
D.R. 5-91-330
M.F. #4015

CHURCHTOWN, LLC
T.M. #13-013.00-008
INS. #20090603-0068912
M.F. #4015



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AUGUST 2015

WITHIN THE LIMITS INDICATED
EROSION AND SEDIMENT CONTROL
SHALL BE PER ITEM 202572 -
BORROW AREA EROSION AND SEDIMENT
CONTROL AND DEWATERING

STATE OF DELAWARE, (DEPARTMENT OF TRANSPORTATION)
T.M.#13-012.00-133
INS.#20090625-0041077
M.F.#4492

MICHAEL C. YAISER &
TIFFANY N. YAISER
T.M.#13-012.00-094
INS.#20091223-0081067
M.F.#4492

STATE OF DELAWARE,
(DEPARTMENT OF TRANSPORTATION)
T.M.#13-012.00-133
INS.#20090625-0041077
M.F.#4492

US 301 SOUTHBOUND

US 301 NORTHBOUND

+00 623+00 624+00 625+00 626+00 627+00 628+00 629+00 630+00 631+00 632+00 633+00 634+00 635+00 636+00 637+00 638+00 639+00

+00 623+00 624+00 625+00 626+00 627+00 628+00 629+00 630+00 631+00 632+00 633+00 634+00 635+00 636+00 637+00 638+00 639+00

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ADDENDUMS / REVISIONS	



**US 301,
NORFOLK SOUTHERN RR TO SR 896**

CONTRACT T200911301	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: WJD
	CHECKED BY: MAA

BORING LOCATION PLAN
Sheet 21 of 21

BS-08
SHEET NO. 65
TOTAL SHTS. 240



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 NOT FOR BIDDING
 AUGUST 2015



RUMMEL, KLEPPER & KAHL, LLP
 CONSULTING ENGINEERS
 BALTIMORE, MARYLAND

US 301: PLEASANTON MITIGATION SITE
 BORING LOCATION PLAN

FIGURE NO.

A-2

DRAWN BY
KDT

APPROVED BY
EMK

SCALE
1"=200'-0"

DATE
FEBRUARY 2009

COMMISSION NO.
108-013-02.01.C