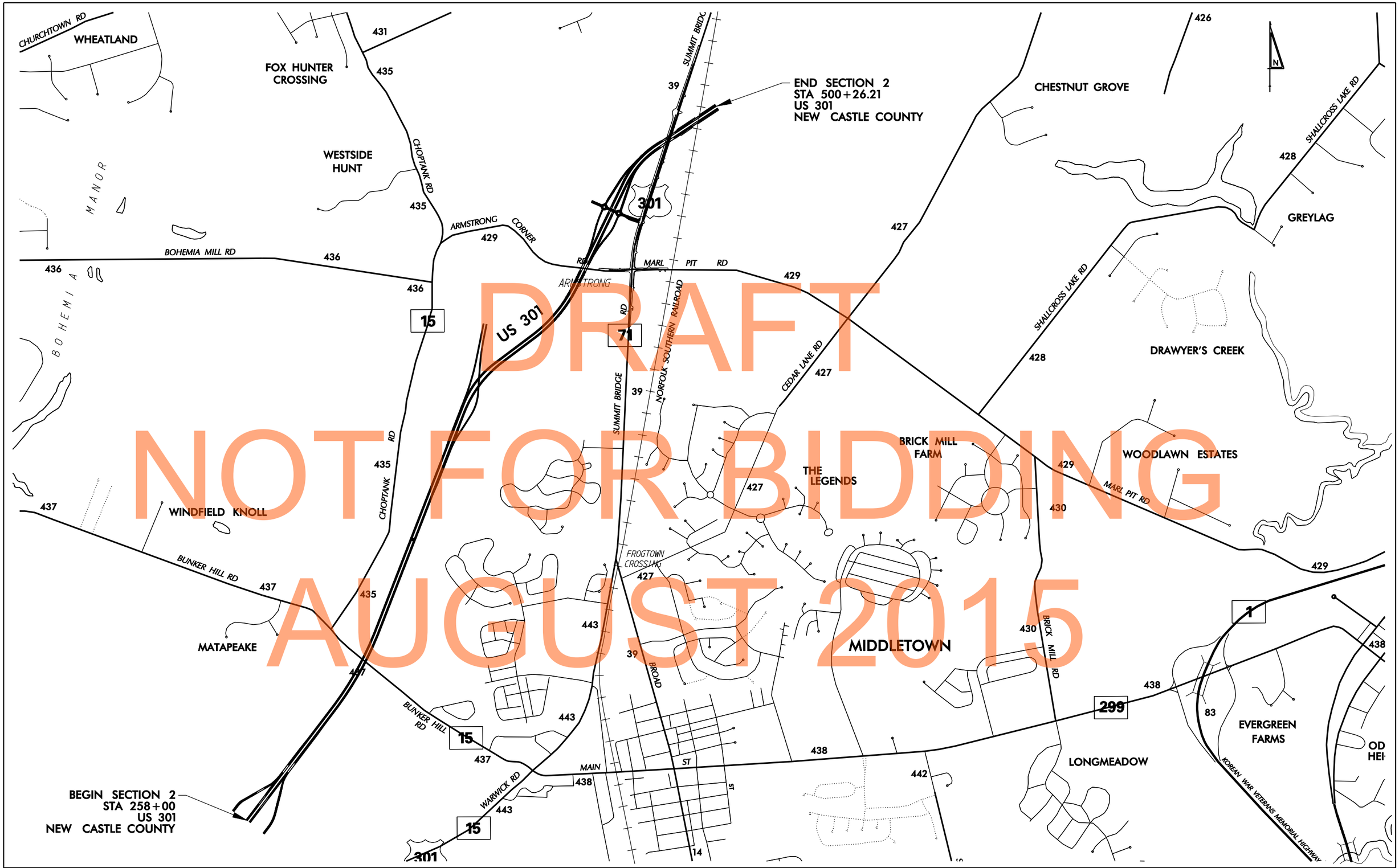
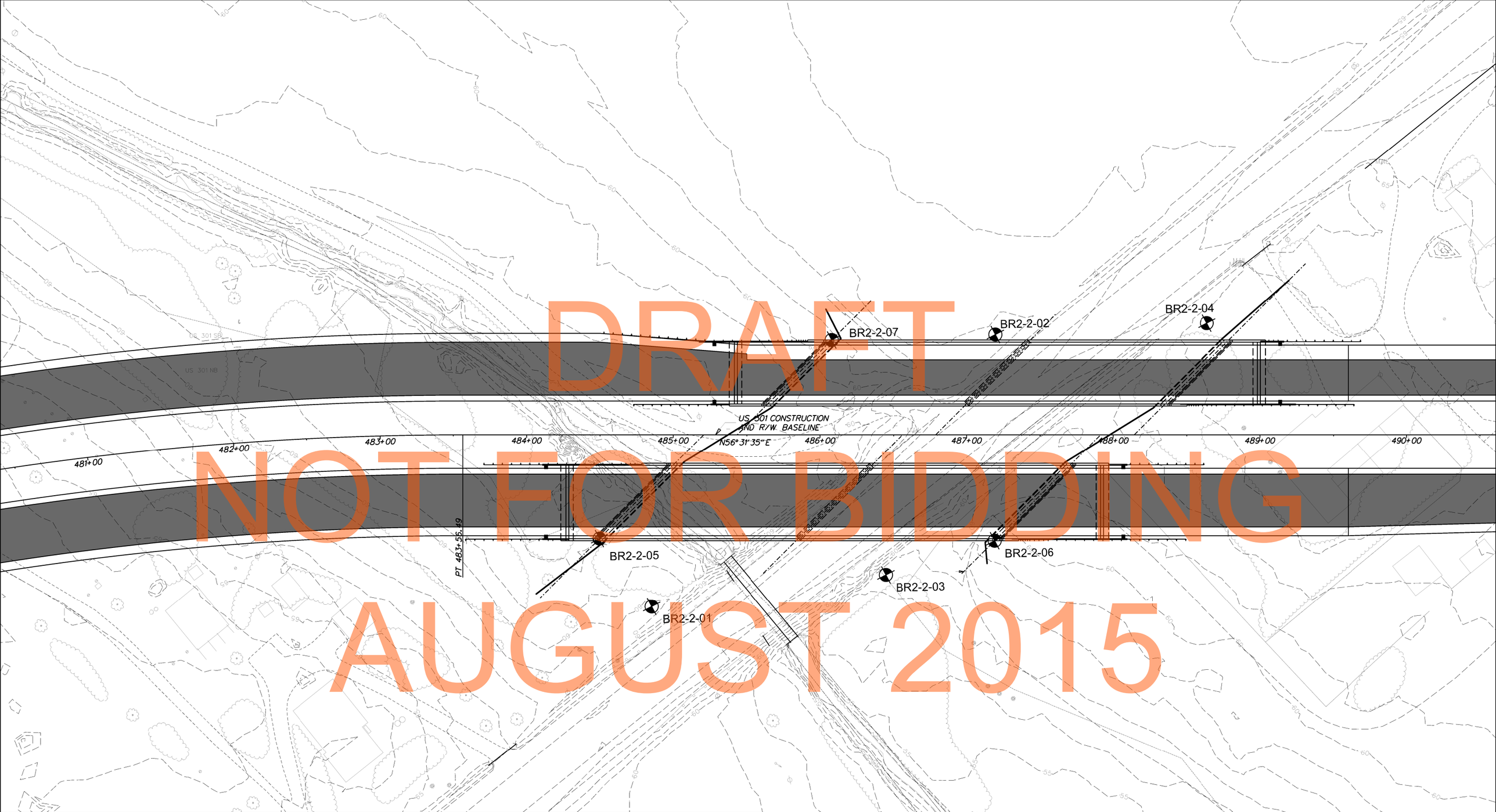


DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 1000 2000 3000 FEET	US 301 SECTION 2 LOCATION MAP	CONTRACT 29-113-04	BRIDGE NO.	SHEET NO.
				COUNTY NEW CASTLE	DESIGNED BY:	TOTAL SHTS.
					CHECKED BY:	



DRAFT
NOT FOR BIDDING
AUGUST 2015

- BORING LOCATION
- PROPOSED ROADWAY IMPROVEMENTS
- PAVEMENT ACCESS TO BE REMOVED
- LIMIT OF DISTURBANCE/ PROPOSED RIGHT OF WAY
- PROPOSED EARTH BERMS
- PROPERTY LINES
- PROPOSED DEVELOPMENT
- PROPOSED BRIDGES WITH PIER LOCATIONS
- TEST PIT LOCATION
- POTENTIAL STORM WATER MANAGEMENT FACILITY
- WETLANDS (GPS FIELD DELINEATED)
- TIDAL WETLANDS (DNREC)
- 100 YEAR FLOODPLAINS (FEMA)
- STREAMS AND DITCHES
- W-1 WETLAND NUMBER
- IMPACT AREA

DELAWARE DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

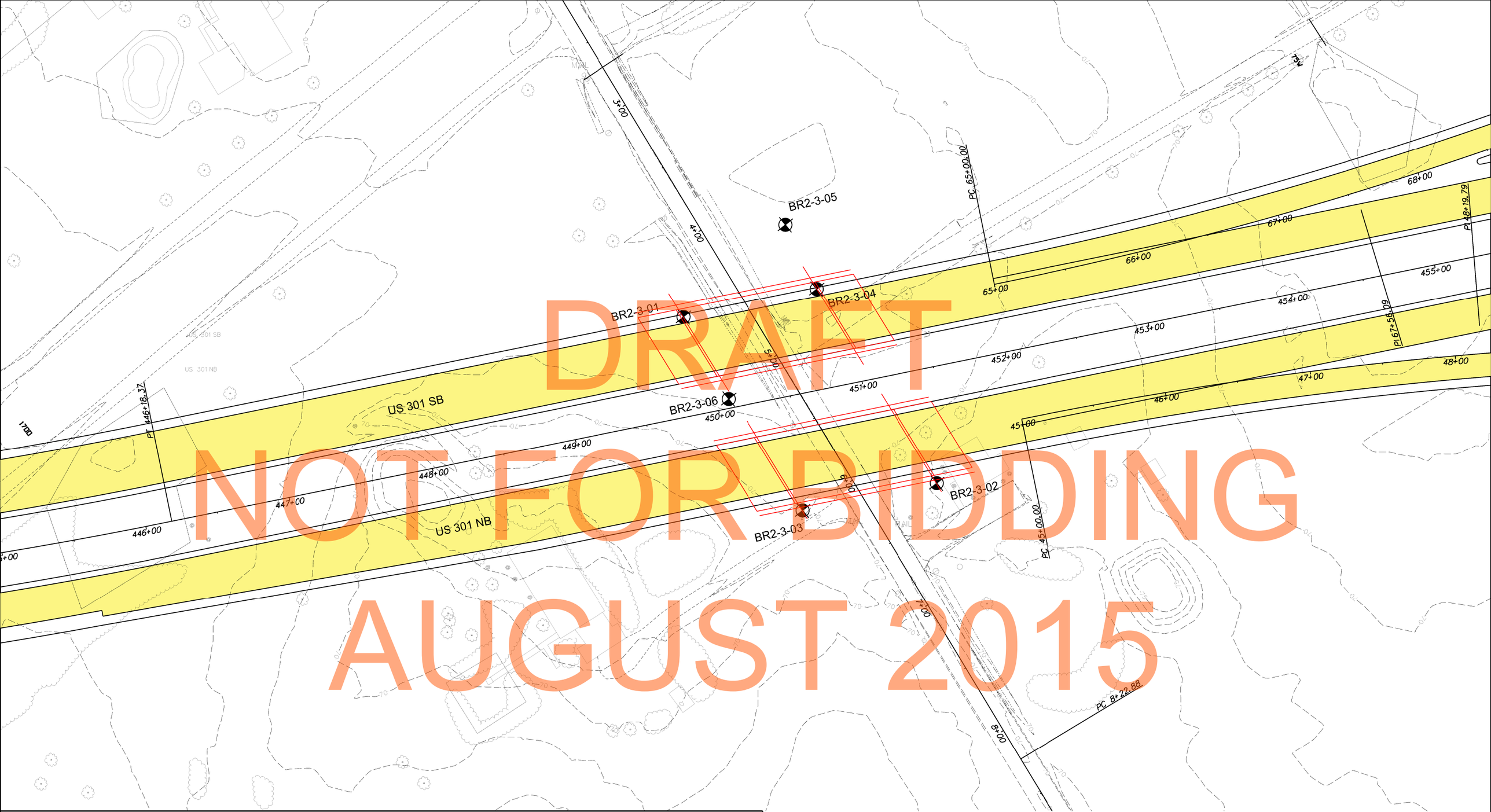
SCALE
0 30 60
FEET

US 301 STRUCTURE BR 2-2 EXPLORATION PLAN

BORING PLAN

MARCH 2010

FIGURE A-2



- BORING LOCATION
- PROPOSED ROADWAY IMPROVEMENTS
- PAVEMENT ACCESS TO BE REMOVED
- LIMIT OF DISTURBANCE/ PROPOSED RIGHT OF WAY
- PROPOSED EARTH BERMS
- PROPERTY LINES
- PROPOSED DEVELOPMENT
- PROPOSED BRIDGES WITH PIER LOCATIONS
- TEST PIT LOCATION
- POTENTIAL STORM WATER MANAGEMENT FACILITY
- WETLANDS (GPS FIELD DELINEATED)
- TIDAL WETLANDS (DNREC)
- 100 YEAR FLOODPLAINS (FEMA)
- STREAMS AND DITCHES
- W-1 WETLAND NUMBER
- IMPACT AREA

DELAWARE DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

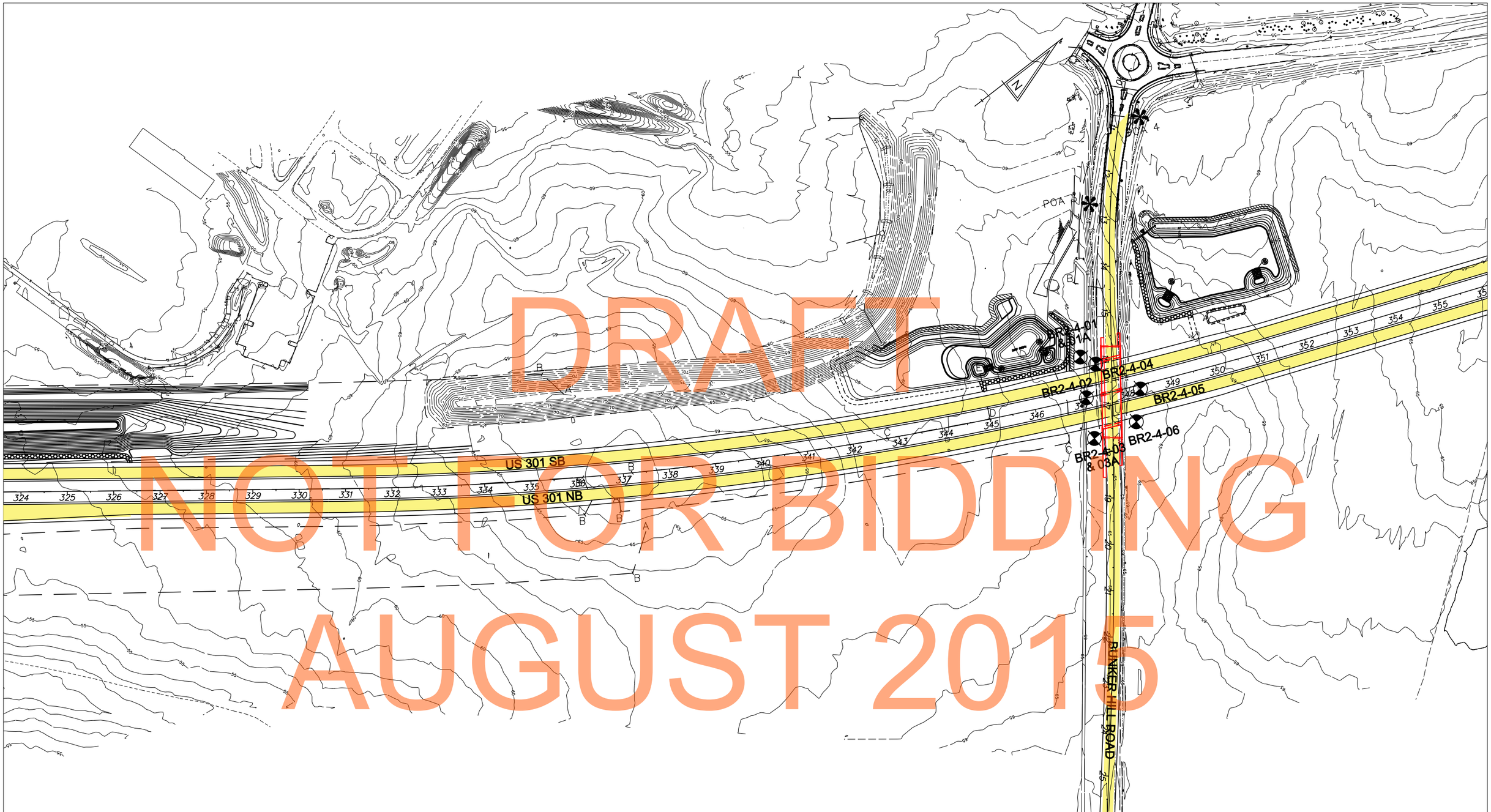
SCALE
0 30 60
FEET

US 301 STRUCTURE BR 2-3 EXPLORATION PLAN

BORING PLAN

DECEMBER 2009

FIGURE A-2



- BORING LOCATION
- PROPOSED ROADWAY IMPROVEMENTS
- PAVEMENT ACCESS TO BE REMOVED
- LIMIT OF DISTURBANCE/ PROPOSED RIGHT OF WAY
- PROPOSED EARTH BERMS
- PROPERTY LINES
- PROPOSED DEVELOPMENT
- PROPOSED BRIDGES WITH PIER LOCATIONS
- TEST PIT LOCATION
- POTENTIAL STORM WATER MANAGEMENT FACILITY
- WETLANDS (GPS FIELD DELINEATED)
- TIDAL WETLANDS (DNREC)
- 100 YEAR FLOODPLAINS (FEMA)
- STREAMS AND DITCHES
- W-1 WETLAND NUMBER
- IMPACT AREA

DELAWARE DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

SCALE
0 100 200
FEET

US 301 STRUCTURE BR2-4 EXPLORATION PLAN

BORING PLAN

FEBRUARY 2011

- BORING LOCATION
- PROPOSED ROADWAY IMPROVEMENTS
- PAVEMENT ACCESS TO BE REMOVED
- LIMIT OF DISTURBANCE/ PROPOSED RIGHT OF WAY
- PROPOSED EARTH BERMS
- PROPERTY LINES
- PROPOSED DEVELOPMENT
- PROPOSED BRIDGES WITH PIER LOCATIONS
- TEST PIT LOCATION
- POTENTIAL STORM WATER MANAGEMENT FACILITY
- WETLANDS (GPS FIELD DELINEATED)
- TIDAL WETLANDS (DNREC)
- 100 YEAR FLOODPLAINS (FEMA)
- STREAMS AND DITCHES
- W-1 WETLAND NUMBER
- IMPACT AREA

DELAWARE DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

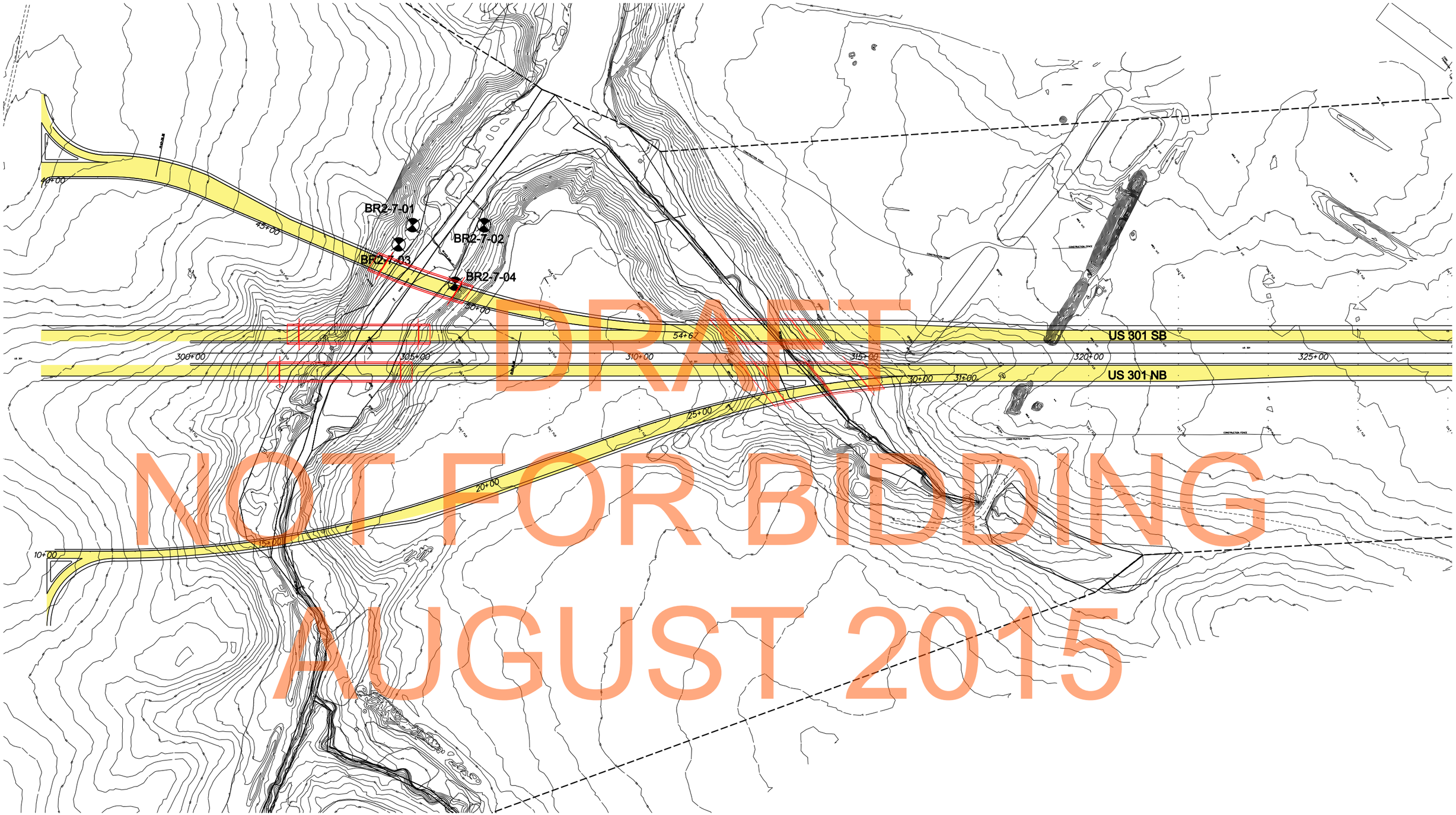
SCALE
0 100 200
FEET

US 301 STRUCTURE BR 2-5 EXPLORATION PLAN

BORING PLAN

JULY 2009

FIGURE A-2



- BORING LOCATION
- PROPOSED ROADWAY IMPROVEMENTS
- PAVEMENT ACCESS TO BE REMOVED
- LIMIT OF DISTURBANCE/ PROPOSED RIGHT OF WAY
- PROPOSED EARTH BERMS
- PROPERTY LINES
- PROPOSED DEVELOPMENT
- PROPOSED BRIDGES WITH PIER LOCATIONS
- TEST PIT LOCATION
- POTENTIAL STORM WATER MANAGEMENT FACILITY
- WETLANDS (GPS FIELD DELINEATED)
- TIDAL WETLANDS (DNREC)
- 100 YEAR FLOODPLAINS (FEMA)
- STREAMS AND DITCHES
- W-1 WETLAND NUMBER
- IMPACT AREA

DELAWARE DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

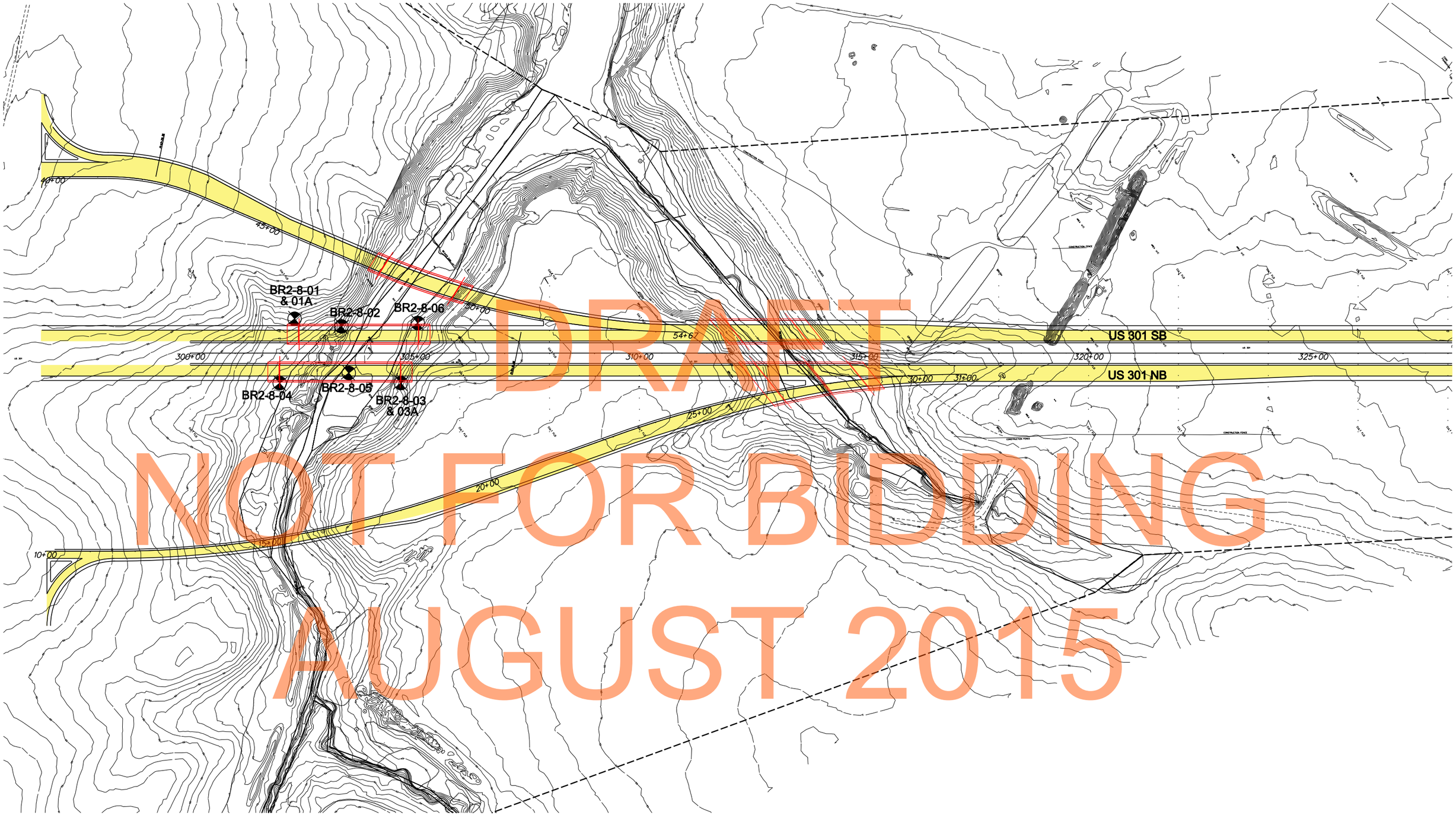
SCALE
0 100 200
FEET

US 301 STRUCTURE BR 2-7 EXPLORATION PLAN

BORING PLAN

JULY 2009

FIGURE A-2



- BORING LOCATION
- PROPOSED ROADWAY IMPROVEMENTS
- PAVEMENT ACCESS TO BE REMOVED
- LIMIT OF DISTURBANCE/ PROPOSED RIGHT OF WAY
- PROPOSED EARTH BERMS
- PROPERTY LINES
- PROPOSED DEVELOPMENT
- PROPOSED BRIDGES WITH PIER LOCATIONS
- TEST PIT LOCATION
- POTENTIAL STORM WATER MANAGEMENT FACILITY
- WETLANDS (GPS FIELD DELINEATED)
- TIDAL WETLANDS (DNREC)
- 100 YEAR FLOODPLAINS (FEMA)
- STREAMS AND DITCHES
- W-1 WETLAND NUMBER
- IMPACT AREA

DELAWARE DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

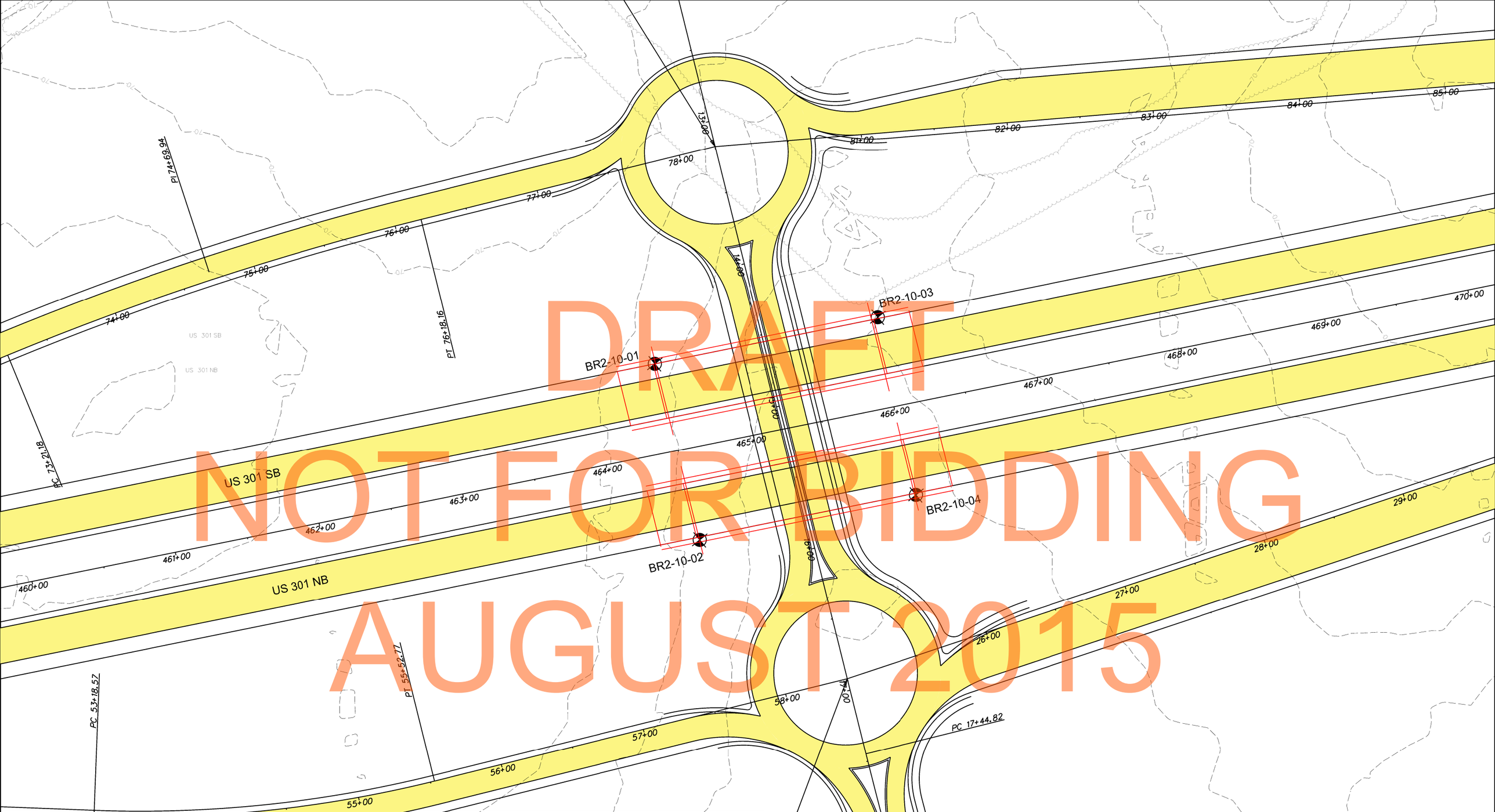
SCALE
0 100 200
FEET

US 301 STRUCTURE BR 2-8 EXPLORATION PLAN

BORING PLAN

JULY 2009

FIGURE A-2



BORING LOCATION
PROPOSED ROADWAY IMPROVEMENTS
PAVEMENT ACCESS TO BE REMOVED
LIMIT OF DISTURBANCE/ PROPOSED RIGHT OF WAY
PROPOSED EARTH BERMS
PROPERTY LINES
PROPOSED DEVELOPMENT
PROPOSED BRIDGES WITH PIER LOCATIONS
TEST PIT LOCATION
POTENTIAL STORM WATER MANAGEMENT FACILITY
WETLANDS (GPS FIELD DELINEATED)
TIDAL WETLANDS (DNREC)
100 YEAR FLOODPLAINS (FEMA)
STREAMS AND DITCHES
W-1 WETLAND NUMBER
IMPACT AREA

DELAWARE DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

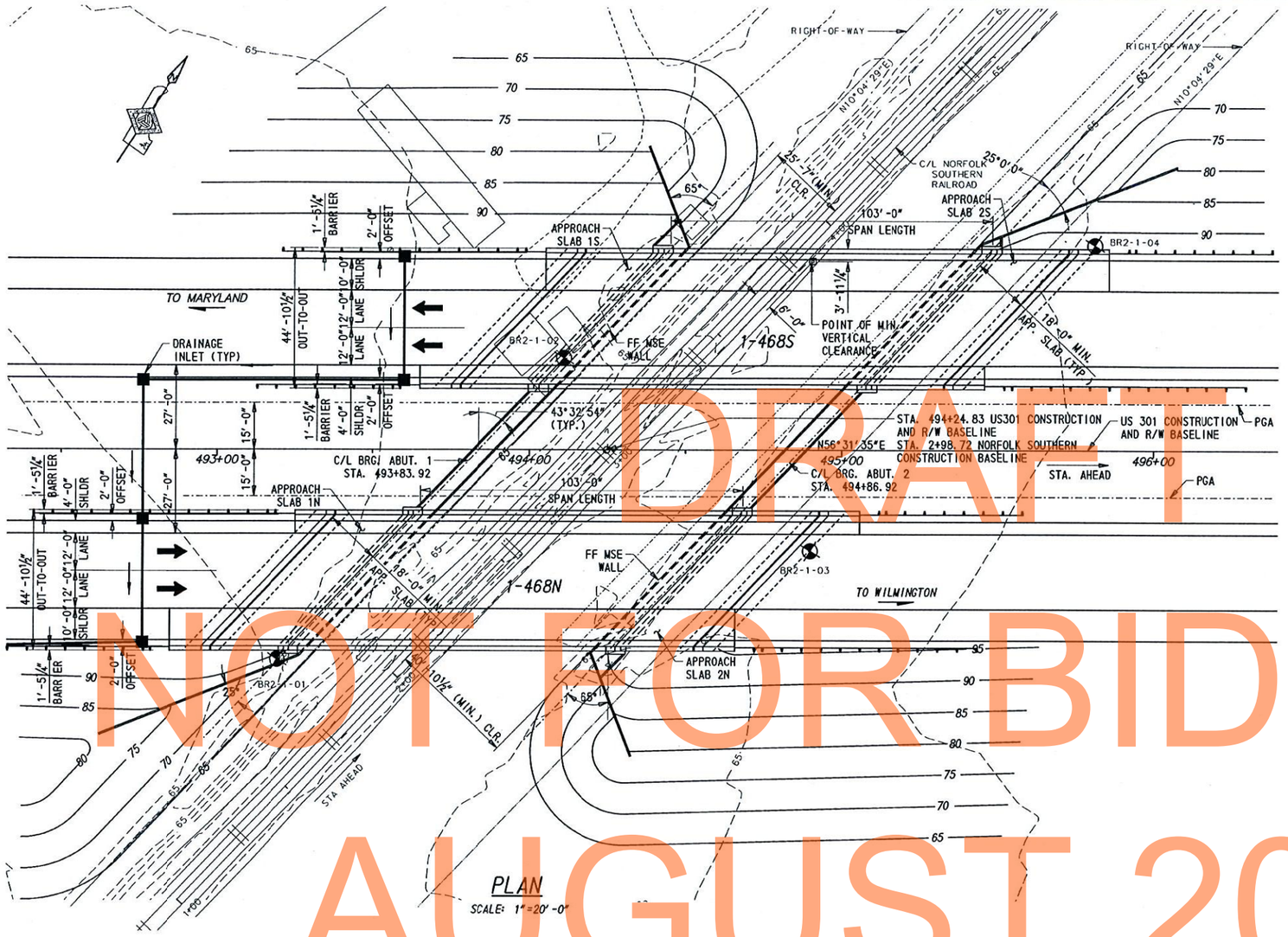
SCALE
0 30 60
FEET

US 301 STRUCTURE BR 2-10 EXPLORATION PLAN

BORING PLAN

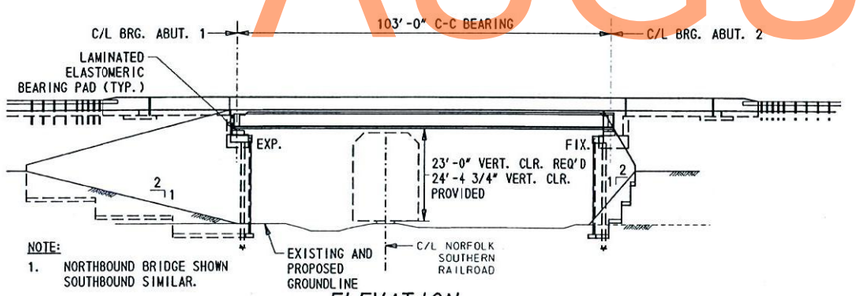
DECEMBER 2009

FIGURE A-2



PLAN

SCALE: 1"=20'-0"



NOTE:
1. NORTHBOUND BRIDGE SHOWN SOUTHBOUND SIMILAR.

ELEVATION

SCALE: 1"=20'-0"

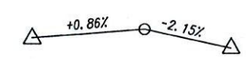
100.00
90.00
80.00
70.00
DATUM 60.00

BRIDGE LEGAL LOAD RATINGS (TONS) US 301 OVER NORFOLK SOUTHERN ROAD		
TRUCK TYPE	RATING FACTOR	SAFE LOAD CAPACITY
HS-20		
S220		
S327		
S335		
S437		
T330		
T435		
T540		

BRIDGE DESIGN LOAD RATING:
INVENTORY =
OPERATING =

US 301 GEOMETRY

VERTICAL DATA



PVI STA = 495+50.00
ELEV = 99.12
VC = 860.00
Ko = -3.2355
SSD = 785.31

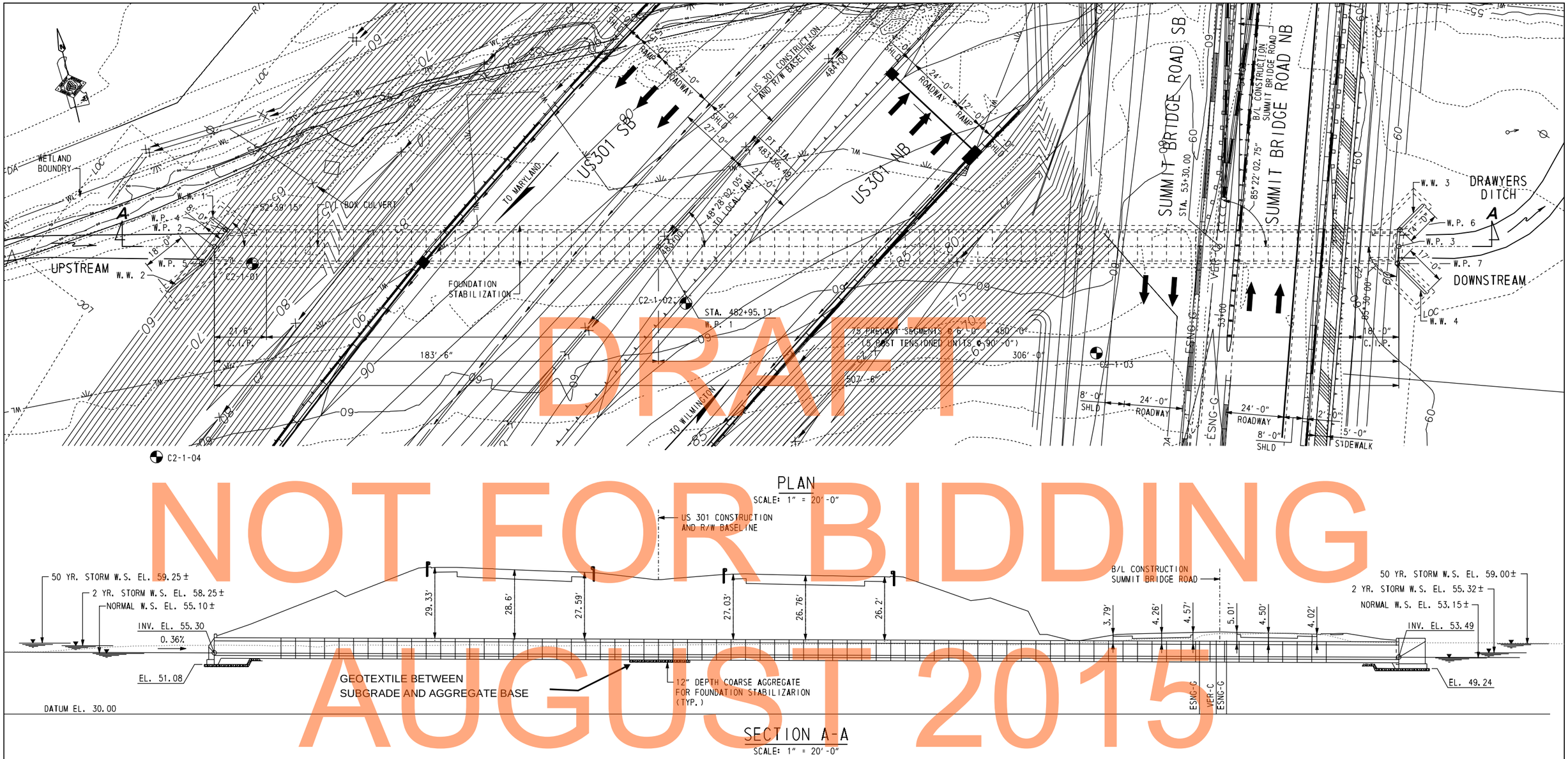
HORIZONTAL DATA
TANGENT

FIGURE A.2: PLAN AND ELEVATION US 301 NB AND SB OVER NORFOLK SOUTHERN RAILROAD

DRAFT
NOT FOR BIDDING
AUGUST 2015

G:\60049040 US301\STRUCTURE\PLANS\FINAL\B2-INS\PED1-B2-INS.DGN

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 20 40 60 FEET	US 301 BRIDGE OVER NORFOLK SOUTHERN RAILROAD	CONTRACT T200911304	BRIDGE NO. 1-468N&S	US 301 MAINLINE OVER NORFOLK SOUTHERN RAILROAD BRIDGE PLAN AND ELEVATION	1-468 PE-1 SHEET NO. XX TOTAL SHTS. XX
				COUNTY NEW CASTLE	DESIGNED BY: ADH CHECKED BY: DHG		

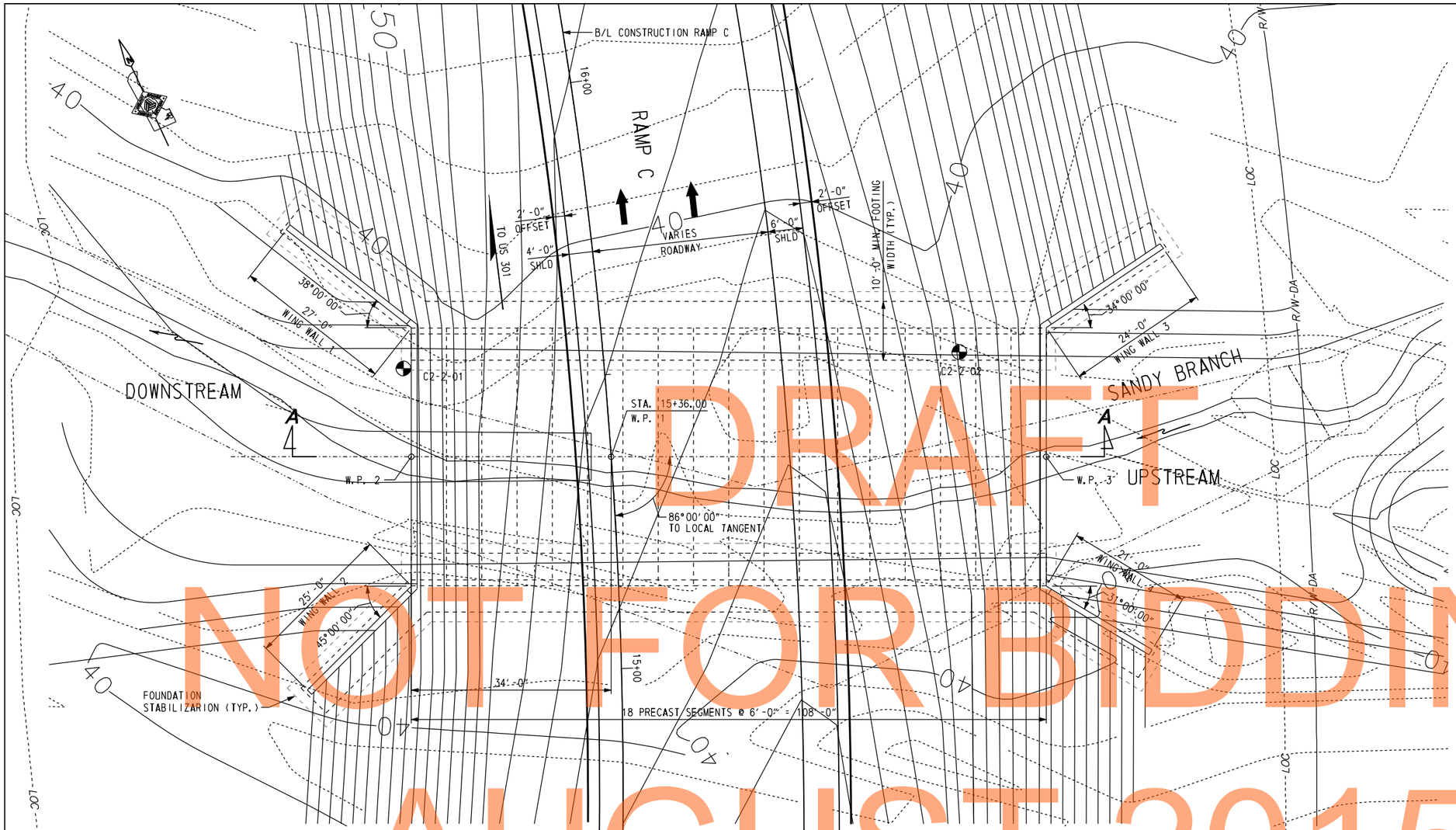


DRAFT
NOT FOR BIDDING
AUGUST 2015

Figure A-2
Culvert C2-1
Plan and Profile

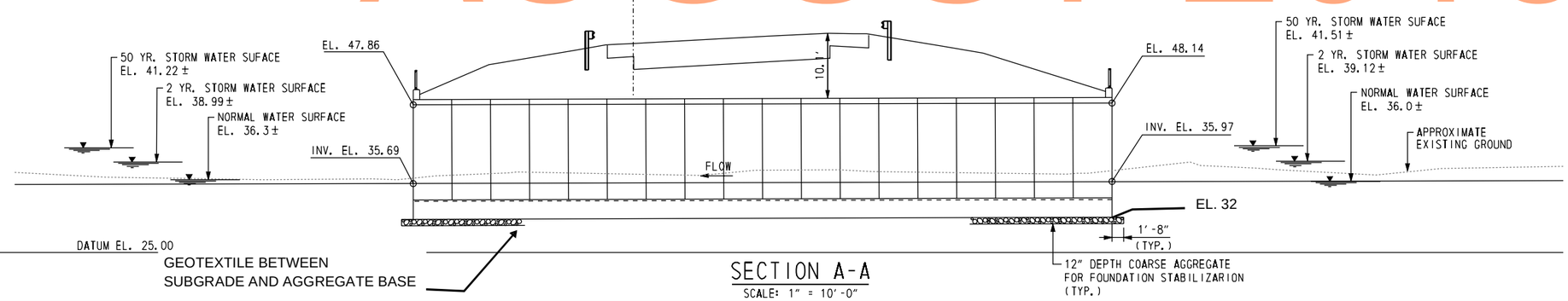
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 20 40 60 FEET	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303	BRIDGE NO. 1-508A	SEMI-FINAL PLANS	C2-1 CU-1
				COUNTY NEW CASTLE	DESIGNED BY: DDD	US 301 MAINLINE OVER DRAWYERS DITCH 12 FOOT X 6 FOOT BOX CULVERT PLAN AND ELEVATION	SHEET NO. 743
					CHECKED BY: TWF		TOTAL SHTS. 813

O:\T200911303\CADD\Bridge\C2-1\pw07_C2-1_US301.dgn
2/16/2011
Steve_Lambert



PRECAST ARCH CULVERT PLAN

SCALE: 1" = 10'-0"



SECTION A-A

SCALE: 1" = 10'-0"

GENERAL NOTES

SPECIFICATIONS:

DELDOT BRIDGE DESIGN MANUAL, MAY 2005, WITH JANUARY 2008 REVISIONS; DELDOT STANDARD SPECIFICATIONS, 2001, WITH 2009 REVISIONS; AASHTO, LRFD BRIDGE DESIGN SPECIFICATIONS, 4TH EDITION, WITH 2008 INTERIM; US 301 DESIGN MANUAL.

DESIGN:

LRFD DESIGN METHOD.

LOADING:

HL 93 TRUCK LOADING.

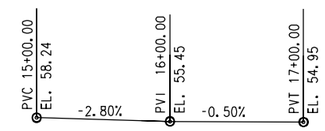
CONCRETE:

ALL CAST IN PLACE CONCRETE SHALL BE CLASS A (4,500 PSI). THE CONCRETE FOR WINGWALL FOOTINGS THAT ARE NOT EXPOSED SHALL BE CLASS B (3,000 PSI). FOOTINGS SHALL BE CAST IN PLACE. WINGWALLS AND HEADWALLS MAY BE CAST IN PLACE. ALL PRECAST CONCRETE SHALL BE f'c = 5000 psi.

REINFORCING STEEL:

REINFORCING STEEL SHALL BE AASHTO M31, GRADE 60 (60,000 PSI) UNLESS OTHERWISE NOTED AND SHALL BE PROTECTED WITH FUSION BONDED EPOXY CONFORMING TO AASHTO M284 WHEREINDICATED ON PLANS.

RAMP C VERTICAL DATA



RAMP C HORIZONTAL DATA

PC STA. 13+06.89
PI STA. 14+76.03
PT STA. 16+40.64
R = 833.00'
L = 333.75'

WORKING POINTS

W.P. NO.	STATION	OFFSET	COORDINATES	
			NORTHING	EASTING
1	15+36.00	0.00'	526,630.8788	562,169.0583
2	15+38.47	33.91' LT.	526,645.4989	562,138.3621
3	15+31.02	73.83' RT.	526,599.0585	562,235.8675

DRAFT
NOT FOR BIDDING
AUGUST 2015

Figure A-4
Culvert C2-2
Plan and Profile

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 10 20 30 FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	1-508B
T200511301	DESIGNED BY: TWF	
COUNTY		
NEW CASTLE	CHECKED BY: TWF	

SEMI-FINAL PLANS

RAMP C OVER SANDY BRANCH

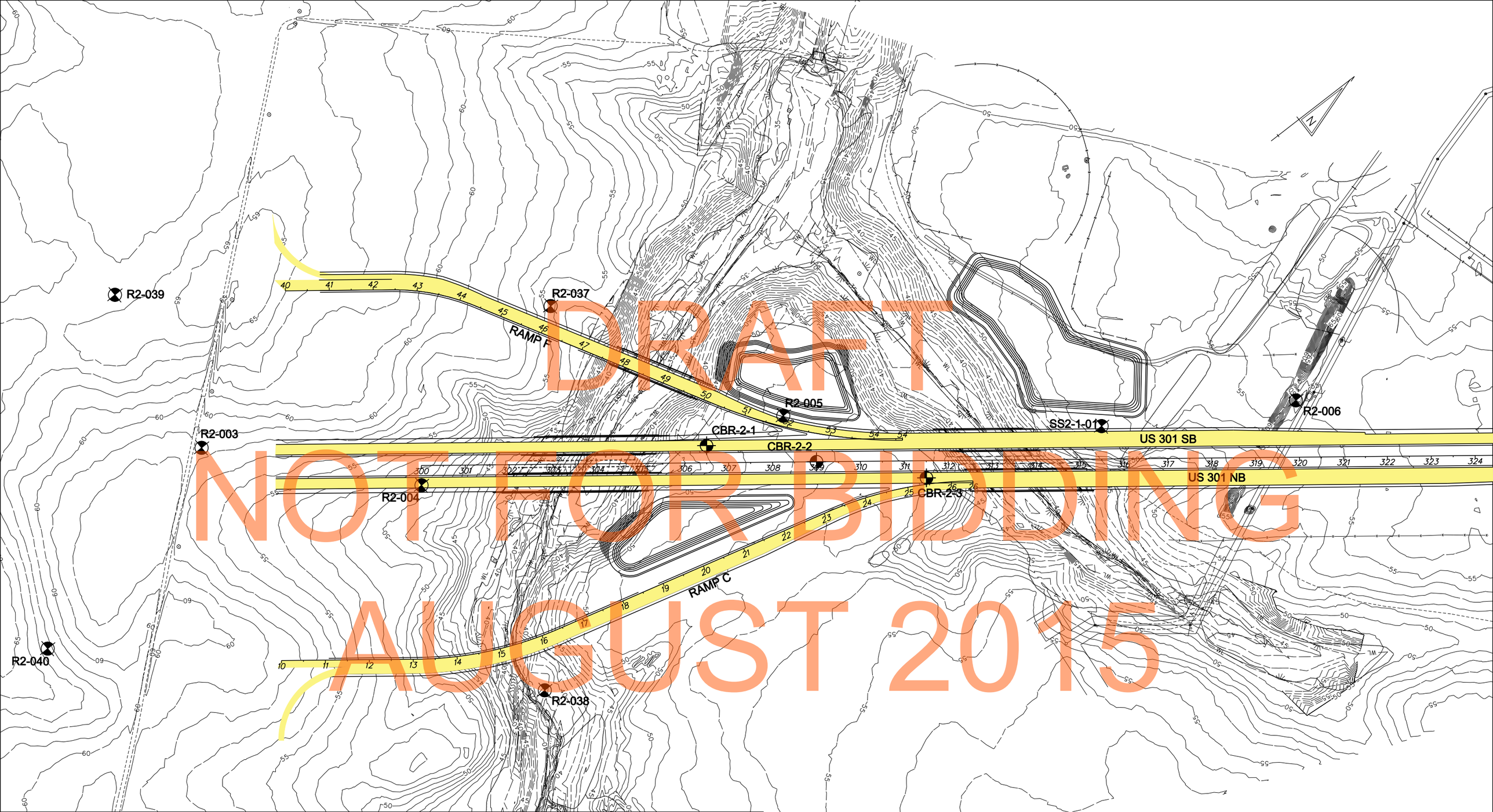
PRECAST ARCH CULVERT PLAN AND ELEVATION

C2-2 CU-1

SHEET NO. 755

TOTAL SHTS. 813

Steve_Lambert 2/16/2011 O:\T200511301\CAD\Bridge\C2-2\pr01_C2-2_US301.dgn



DRAFT
NOT FOR BIDDING
AUGUST 2015

BORING LOCATION
PROPOSED ROADWAY IMPROVEMENTS
PAVEMENT ACCESS TO BE REMOVED
LIMIT OF DISTURBANCE/ PROPOSED RIGHT OF WAY
PROPOSED EARTH BERMS
PROPERTY LINES
PROPOSED DEVELOPMENT
PROPOSED BRIDGES WITH PIER LOCATIONS
TEST PIT LOCATION
POTENTIAL STORM WATER MANAGEMENT FACILITY
WETLANDS (GPS FIELD DELINEATED)
TIDAL WETLANDS (DNREC)
100 YEAR FLOODPLAINS (FEMA)
STREAMS AND DITCHES
W-1 WETLAND NUMBER
IMPACT AREA

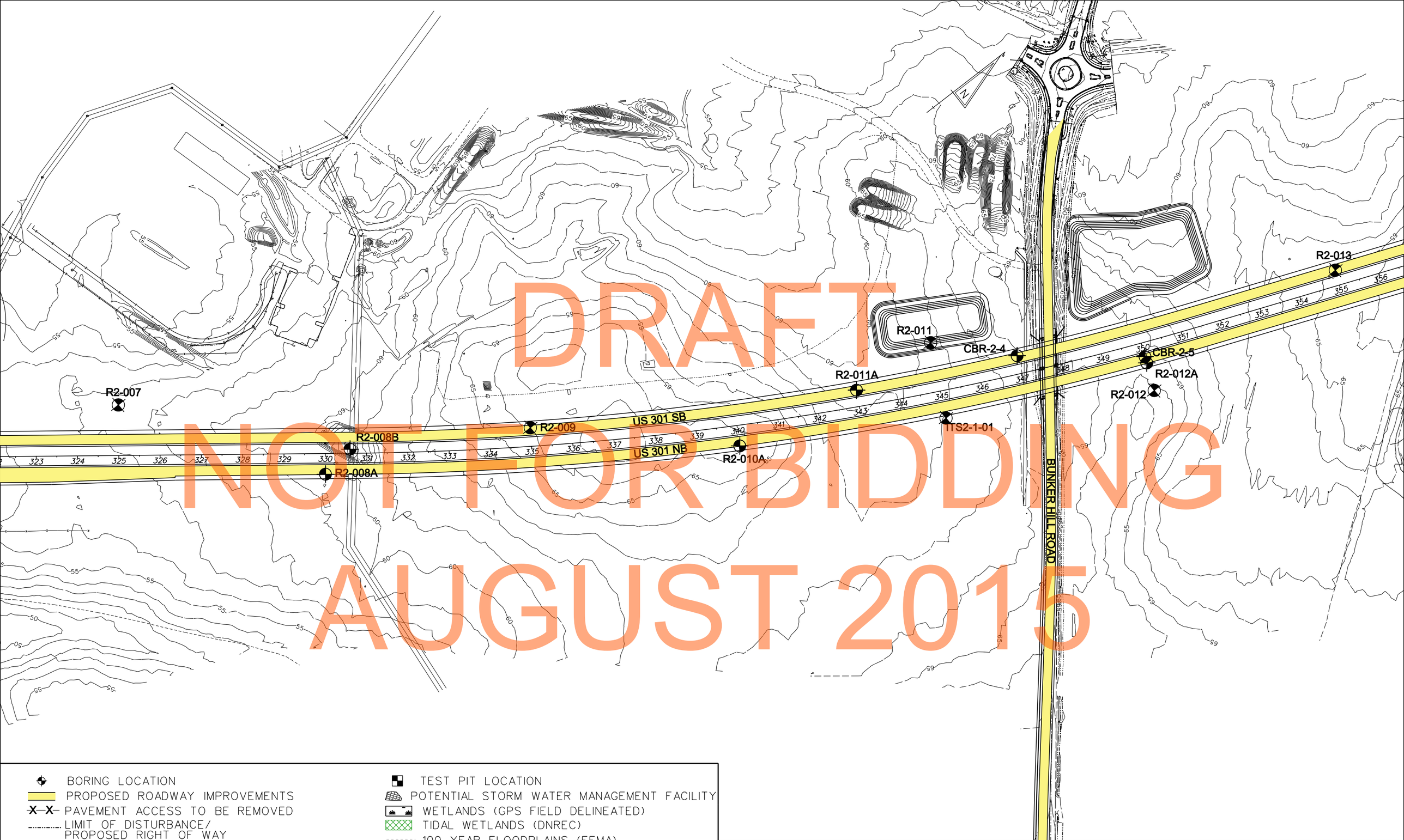
DELAWARE DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

SCALE
0 100 200
FEET

US 301 ROADWAY EXPLORATION PLAN

BORING PLAN

MARCH 2010 | FIGURE A-2



DRAFT
NOT FOR BIDDING
AUGUST 2015

BORING LOCATION
PROPOSED ROADWAY IMPROVEMENTS
PAVEMENT ACCESS TO BE REMOVED
LIMIT OF DISTURBANCE/ PROPOSED RIGHT OF WAY
PROPOSED EARTH BERMS
PROPERTY LINES
PROPOSED DEVELOPMENT
PROPOSED BRIDGES WITH PIER LOCATIONS
TEST PIT LOCATION
POTENTIAL STORM WATER MANAGEMENT FACILITY
WETLANDS (GPS FIELD DELINEATED)
TIDAL WETLANDS (DNREC)
100 YEAR FLOODPLAINS (FEMA)
STREAMS AND DITCHES
W-1 WETLAND NUMBER
IMPACT AREA

DELAWARE DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

SCALE
0 100 200
FEET

US 301 ROADWAY EXPLORATION PLAN

BORING PLAN

MARCH 2010 | FIGURE A-2

BORING LOCATION
PROPOSED ROADWAY IMPROVEMENTS
PAVEMENT ACCESS TO BE REMOVED
LIMIT OF DISTURBANCE/ PROPOSED RIGHT OF WAY
PROPOSED EARTH BERMS
PROPERTY LINES
PROPOSED DEVELOPMENT
PROPOSED BRIDGES WITH PIER LOCATIONS
TEST PIT LOCATION
POTENTIAL STORM WATER MANAGEMENT FACILITY
WETLANDS (GPS FIELD DELINEATED)
TIDAL WETLANDS (DNREC)
100 YEAR FLOODPLAINS (FEMA)
STREAMS AND DITCHES
W-1 WETLAND NUMBER
IMPACT AREA

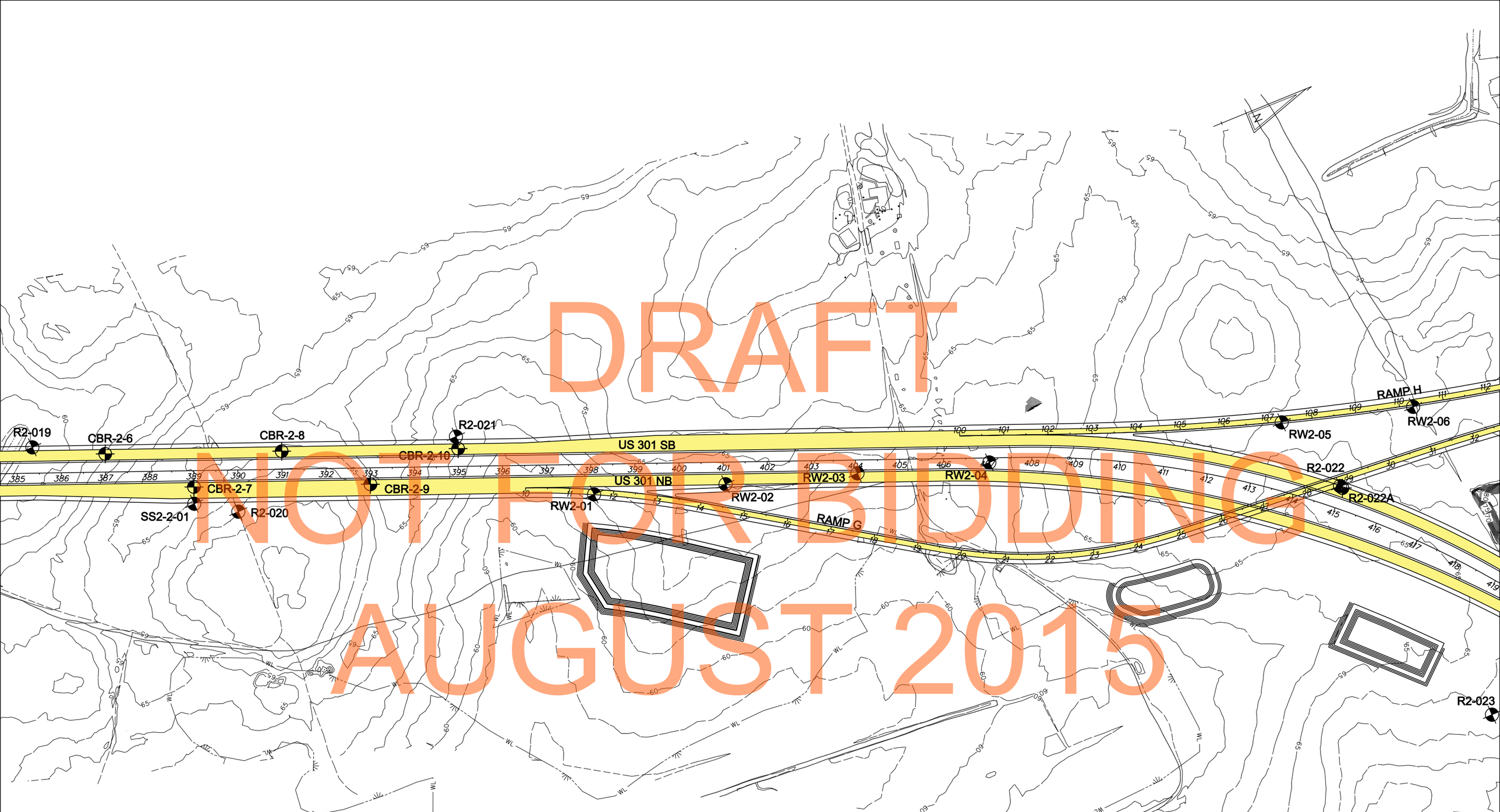
DELAWARE DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

SCALE
0 100 200
FEET

US 301 ROADWAY EXPLORATION PLAN

BORING PLAN

MARCH 2010 | FIGURE A-2



BORING LOCATION
PROPOSED ROADWAY IMPROVEMENTS
PAVEMENT ACCESS TO BE REMOVED
LIMIT OF DISTURBANCE/ PROPOSED RIGHT OF WAY
PROPOSED EARTH BERMS
PROPERTY LINES
PROPOSED DEVELOPMENT
PROPOSED BRIDGES WITH PIER LOCATIONS
TEST PIT LOCATION
POTENTIAL STORM WATER MANAGEMENT FACILITY
WETLANDS (GPS FIELD DELINEATED)
TIDAL WETLANDS (DNREC)
100 YEAR FLOODPLAINS (FEMA)
STREAMS AND DITCHES
W-1 WETLAND NUMBER
IMPACT AREA

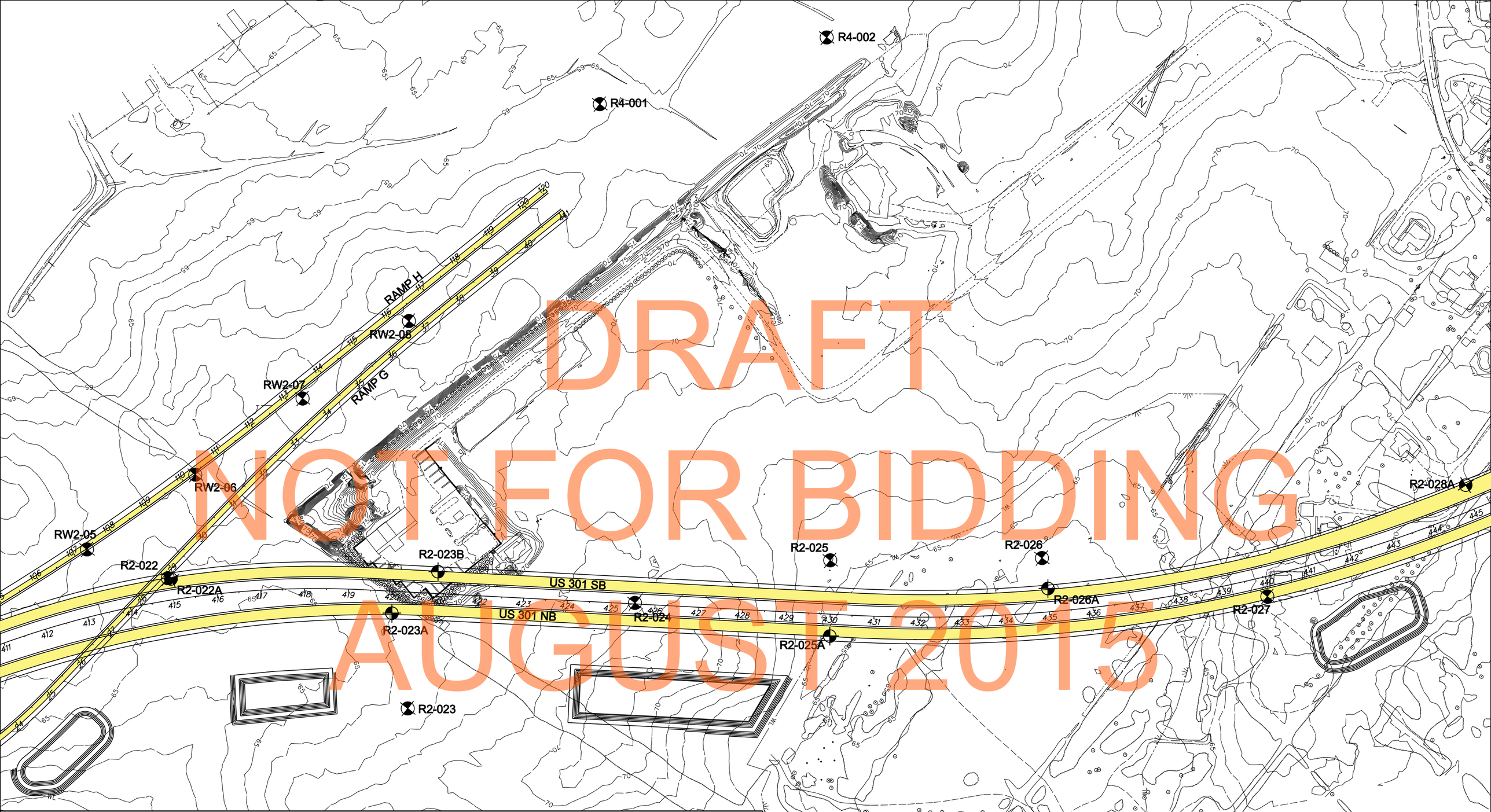
DELAWARE DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

SCALE
0 100 200
FEET

US 301 ROADWAY EXPLORATION PLAN

BORING PLAN

MARCH 2010 | FIGURE A-2



DRAFT
NOT FOR BIDDING
AUGUST 2015

BORING LOCATION
PROPOSED ROADWAY IMPROVEMENTS
PAVEMENT ACCESS TO BE REMOVED
LIMIT OF DISTURBANCE/ PROPOSED RIGHT OF WAY
PROPOSED EARTH BERMS
PROPERTY LINES
PROPOSED DEVELOPMENT
PROPOSED BRIDGES WITH PIER LOCATIONS
TEST PIT LOCATION
POTENTIAL STORM WATER MANAGEMENT FACILITY
WETLANDS (GPS FIELD DELINEATED)
TIDAL WETLANDS (DNREC)
100 YEAR FLOODPLAINS (FEMA)
STREAMS AND DITCHES
W-1 WETLAND NUMBER
IMPACT AREA

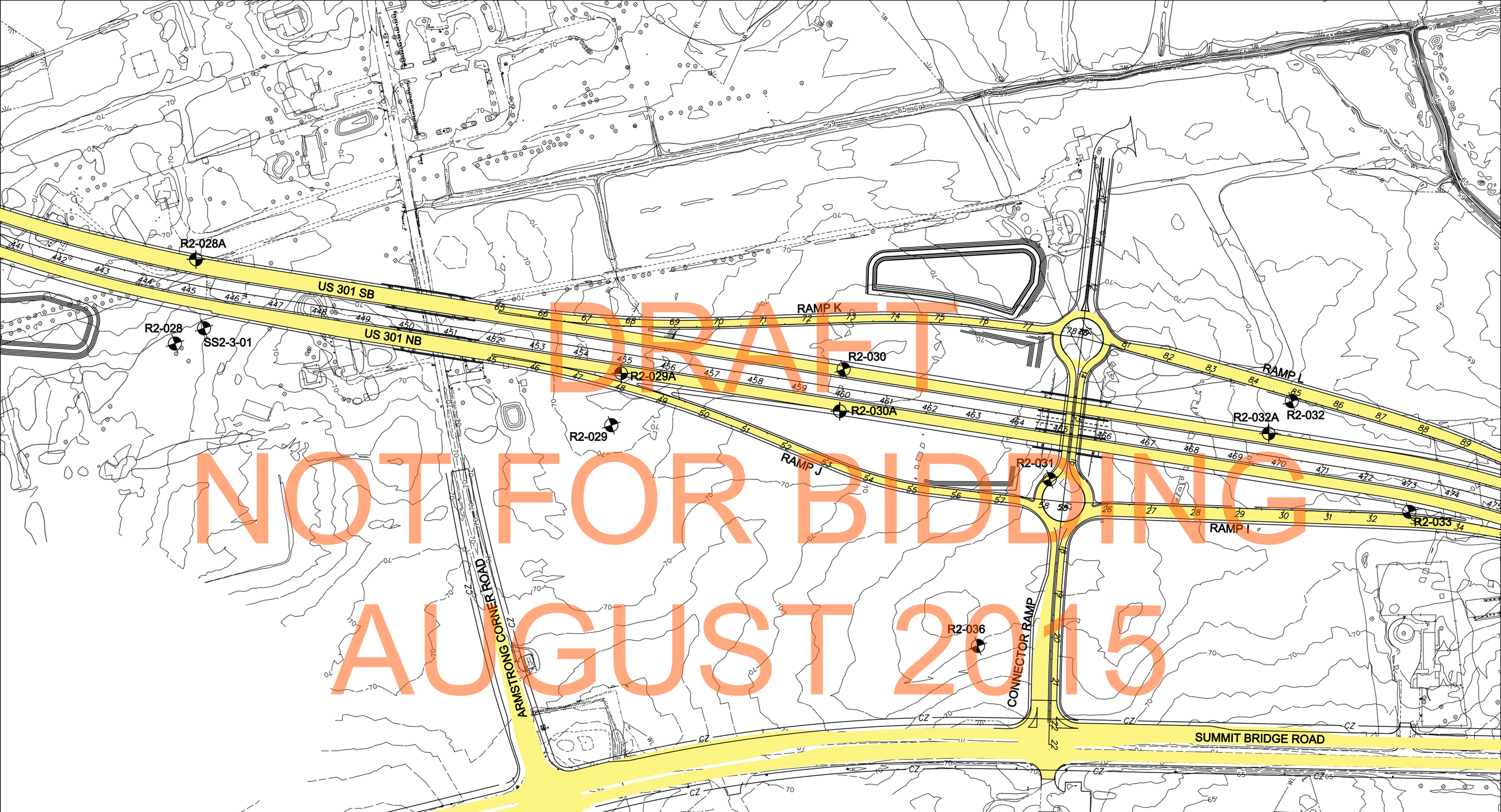
DELAWARE DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

SCALE
0 100 200
FEET

US 301 ROADWAY EXPLORATION PLAN

BORING PLAN

MARCH 2010 | FIGURE A-2



BORING LOCATION
PROPOSED ROADWAY IMPROVEMENTS
PAVEMENT ACCESS TO BE REMOVED
LIMIT OF DISTURBANCE/ PROPOSED RIGHT OF WAY
PROPOSED EARTH BERMS
PROPERTY LINES
PROPOSED DEVELOPMENT
PROPOSED BRIDGES WITH PIER LOCATIONS
TEST PIT LOCATION
POTENTIAL STORM WATER MANAGEMENT FACILITY
WETLANDS (GPS FIELD DELINEATED)
TIDAL WETLANDS (DNREC)
100 YEAR FLOODPLAINS (FEMA)
STREAMS AND DITCHES
W-1 WETLAND NUMBER
IMPACT AREA

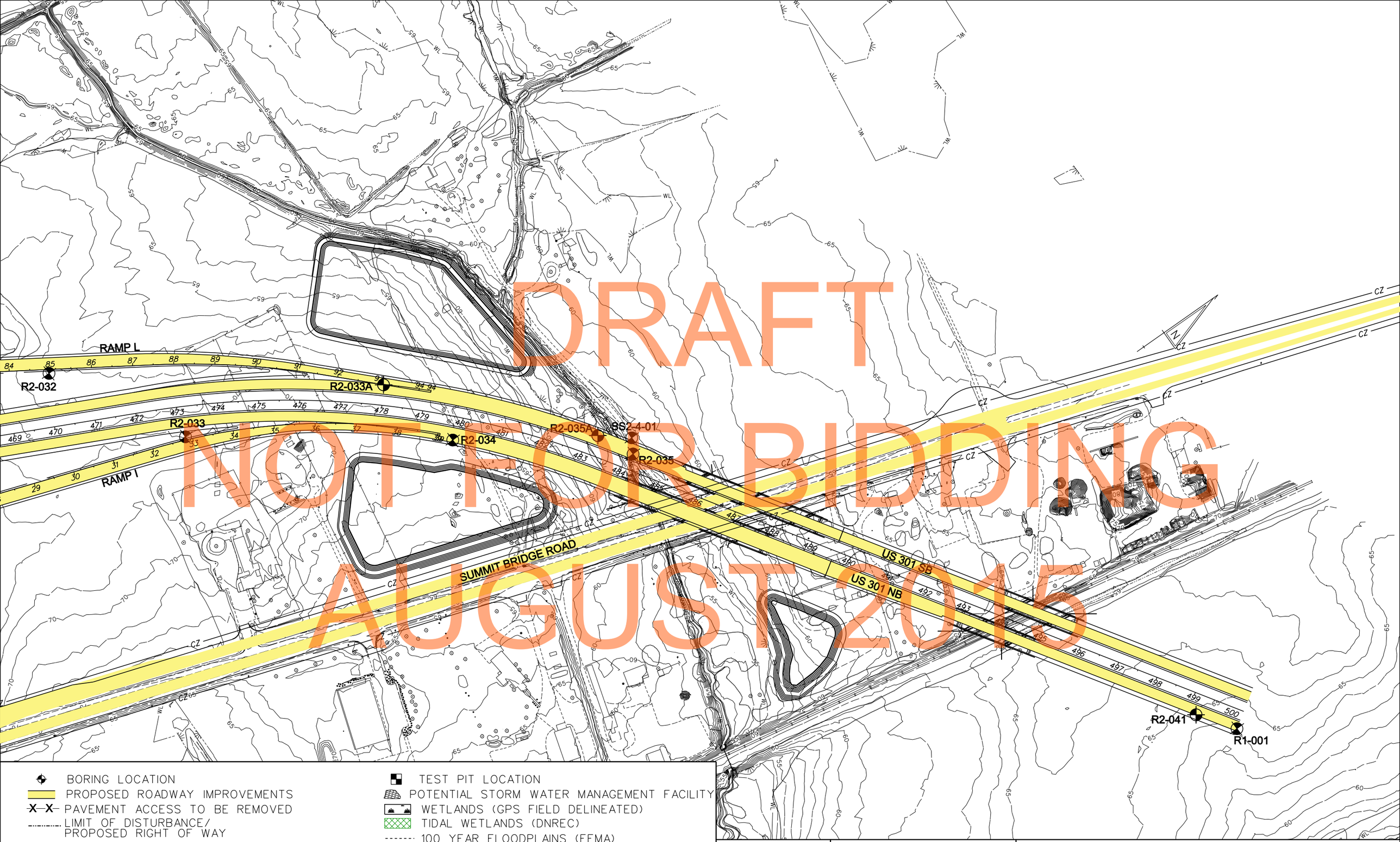
DELAWARE DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

SCALE
0 100 200
FEET

US 301 ROADWAY EXPLORATION PLAN

BORING PLAN

MARCH 2010 | FIGURE A-2



BORING LOCATION
PROPOSED ROADWAY IMPROVEMENTS
PAVEMENT ACCESS TO BE REMOVED
LIMIT OF DISTURBANCE/ PROPOSED RIGHT OF WAY
PROPOSED EARTH BERMS
PROPERTY LINES
PROPOSED DEVELOPMENT
PROPOSED BRIDGES WITH PIER LOCATIONS
TEST PIT LOCATION
POTENTIAL STORM WATER MANAGEMENT FACILITY
WETLANDS (GPS FIELD DELINEATED)
TIDAL WETLANDS (DNREC)
100 YEAR FLOODPLAINS (FEMA)
STREAMS AND DITCHES
W-1 WETLAND NUMBER
IMPACT AREA

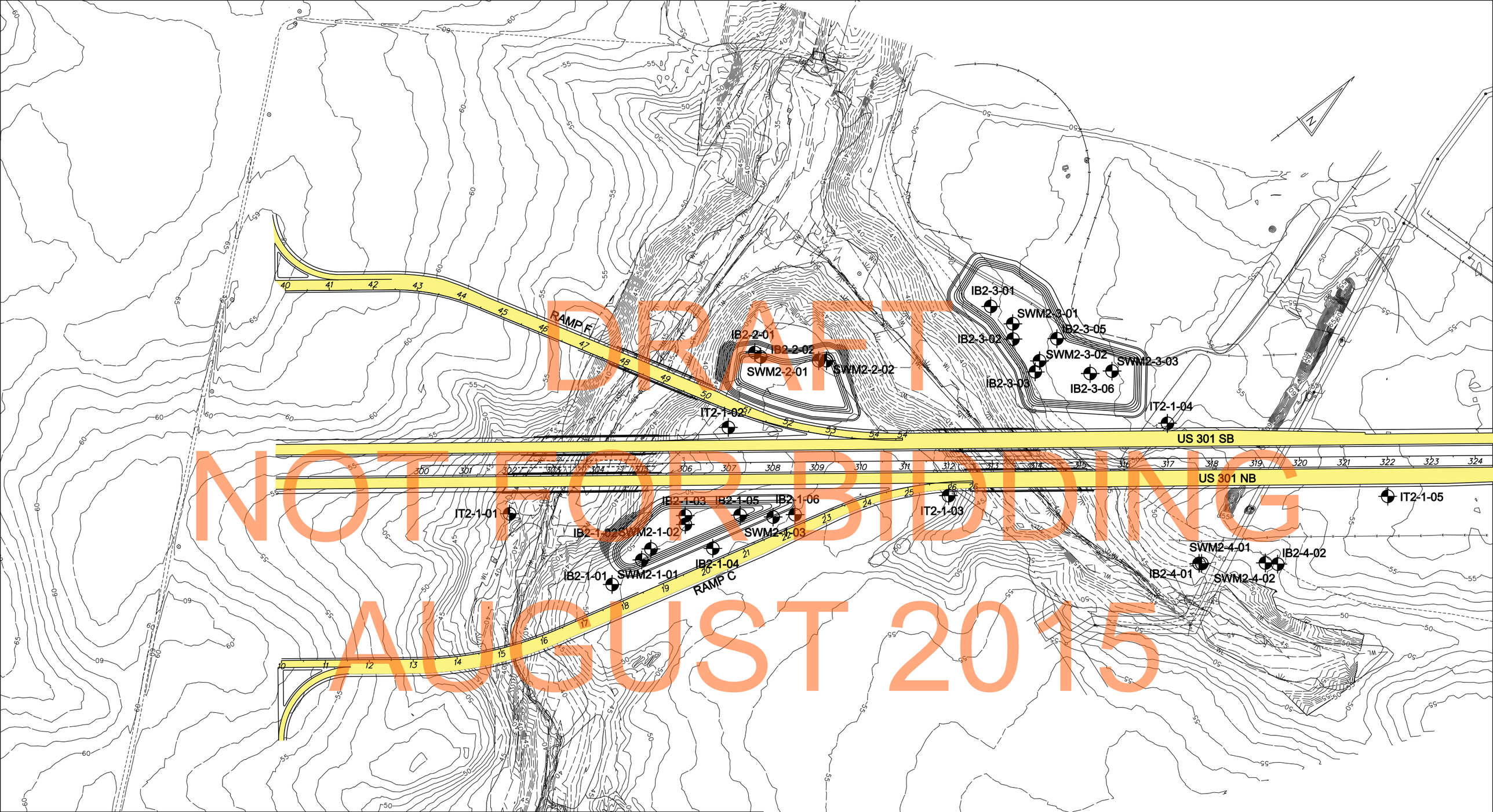
DELAWARE DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

SCALE
0 100 200
FEET

US 301 ROADWAY EXPLORATION PLAN

BORING PLAN

MARCH 2010 | FIGURE A-2



DRAFT
NOT FOR BIDDING
AUGUST 2015

- BORING LOCATION
- PROPOSED ROADWAY IMPROVEMENTS
- PAVEMENT ACCESS TO BE REMOVED
- LIMIT OF DISTURBANCE/ PROPOSED RIGHT OF WAY
- PROPOSED EARTH BERMS
- PROPERTY LINES
- PROPOSED DEVELOPMENT
- PROPOSED BRIDGES WITH PIER LOCATIONS
- TEST PIT LOCATION
- POTENTIAL STORM WATER MANAGEMENT FACILITY
- WETLANDS (GPS FIELD DELINEATED)
- TIDAL WETLANDS (DNREC)
- 100 YEAR FLOODPLAINS (FEMA)
- STREAMS AND DITCHES
- W-1 WETLAND NUMBER
- IMPACT AREA

DELAWARE DEPARTMENT OF TRANSPORTATION

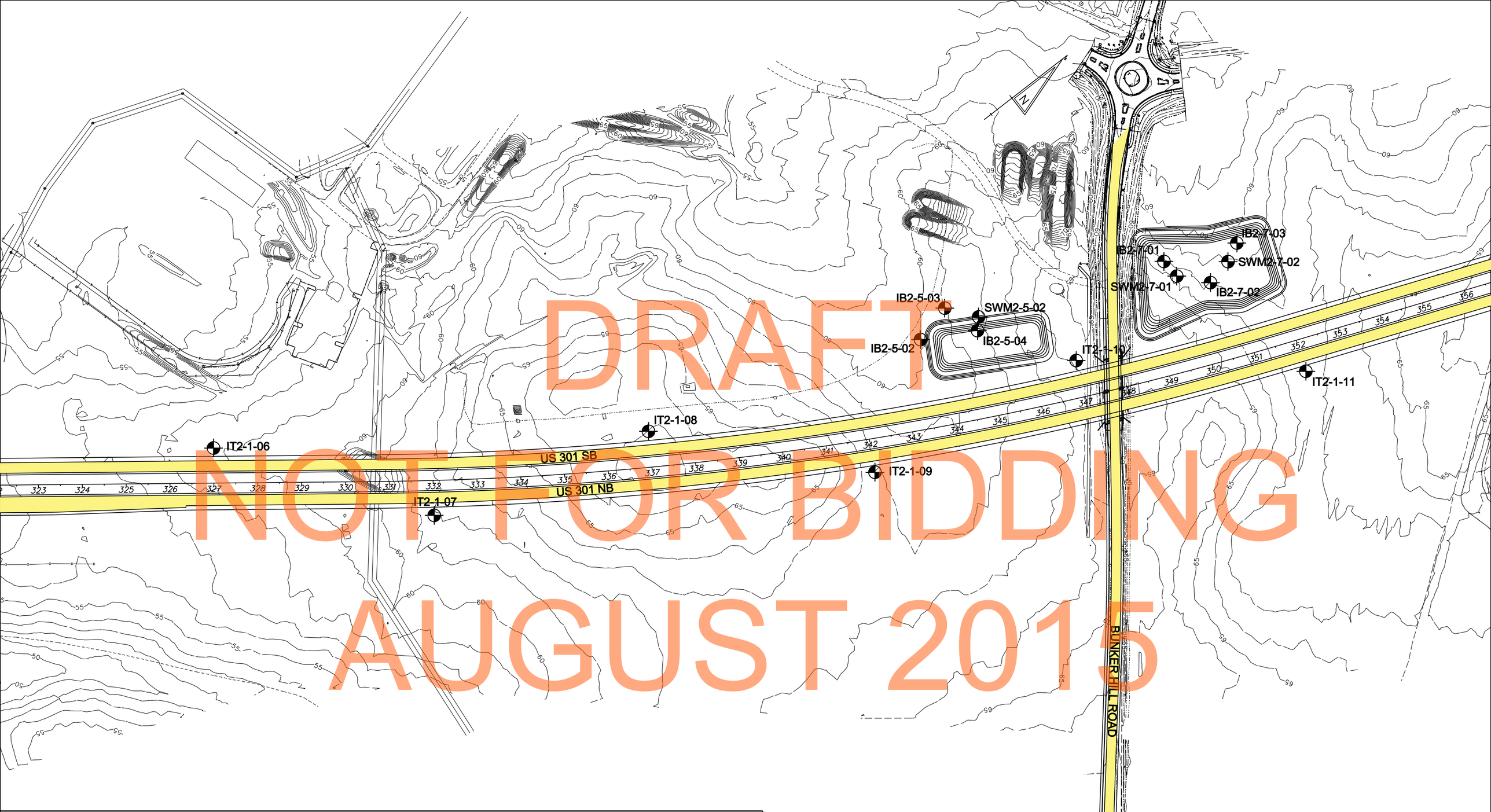
FEDERAL HIGHWAY ADMINISTRATION

SCALE
0 100 200
FEET

US 301 STORMWATER MANAGEMENT EXPLORATION PLAN

BORING PLAN

MARCH 2010	FIGURE A-2



DRAFT
NOT FOR BIDDING
AUGUST 2015

- BORING LOCATION
- PROPOSED ROADWAY IMPROVEMENTS
- PAVEMENT ACCESS TO BE REMOVED
- LIMIT OF DISTURBANCE/ PROPOSED RIGHT OF WAY
- PROPOSED EARTH BERMS
- PROPERTY LINES
- PROPOSED DEVELOPMENT
- PROPOSED BRIDGES WITH PIER LOCATIONS
- TEST PIT LOCATION
- POTENTIAL STORM WATER MANAGEMENT FACILITY
- WETLANDS (GPS FIELD DELINEATED)
- TIDAL WETLANDS (DNREC)
- 100 YEAR FLOODPLAINS (FEMA)
- STREAMS AND DITCHES
- W-1 WETLAND NUMBER
- IMPACT AREA

DELAWARE DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

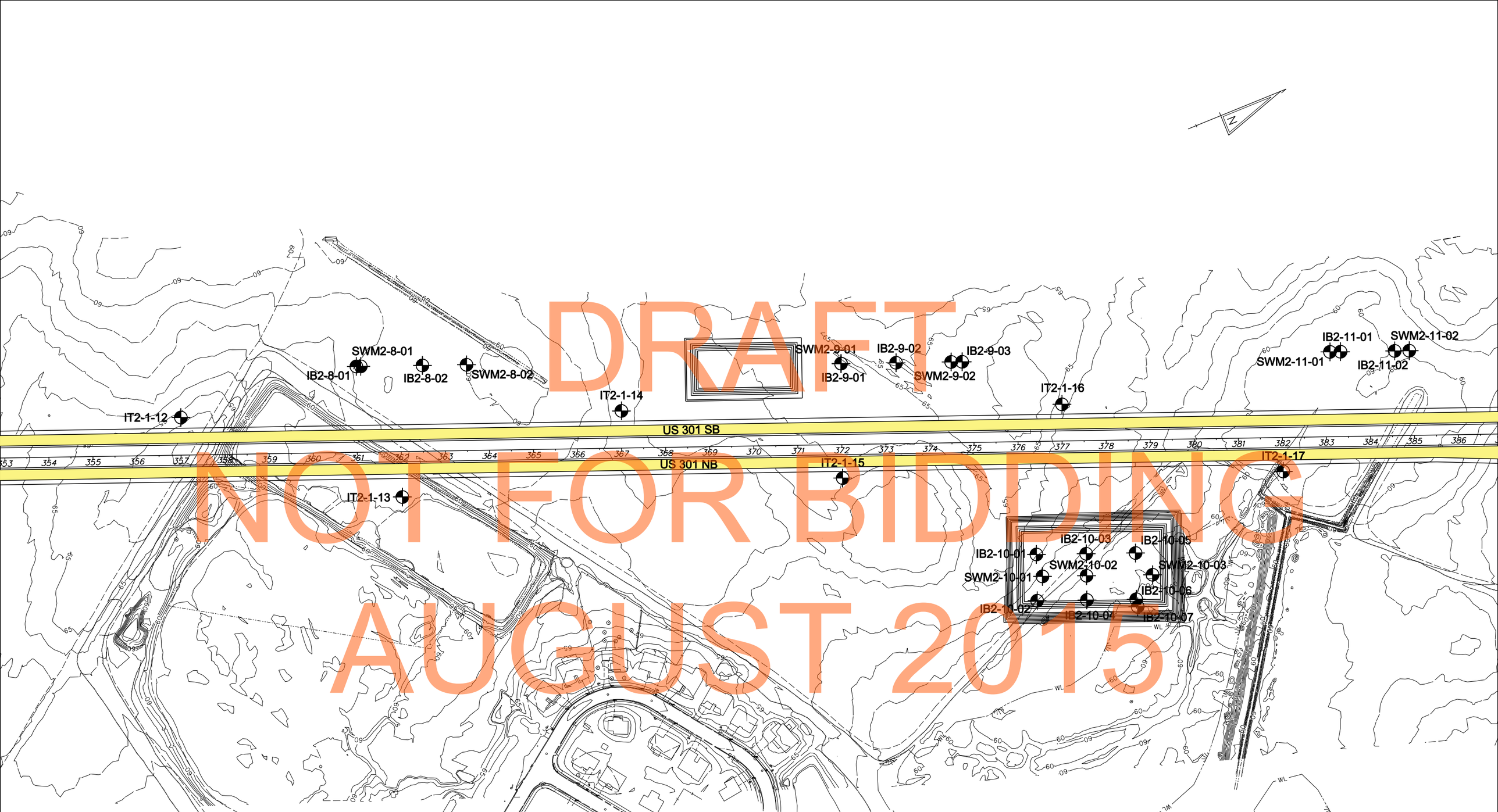
SCALE
0 100 200
FEET

US 301 STORMWATER MANAGEMENT EXPLORATION PLAN

BORING PLAN

MARCH 2010

FIGURE A-2



BORING LOCATION
PROPOSED ROADWAY IMPROVEMENTS
PAVEMENT ACCESS TO BE REMOVED
LIMIT OF DISTURBANCE/ PROPOSED RIGHT OF WAY
PROPOSED EARTH BERMS
PROPERTY LINES
PROPOSED DEVELOPMENT
PROPOSED BRIDGES WITH PIER LOCATIONS
TEST PIT LOCATION
POTENTIAL STORM WATER MANAGEMENT FACILITY
WETLANDS (GPS FIELD DELINEATED)
TIDAL WETLANDS (DNREC)
100 YEAR FLOODPLAINS (FEMA)
STREAMS AND DITCHES
W-1 WETLAND NUMBER
IMPACT AREA

DELAWARE DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

SCALE
0 100 200
FEET

US 301 STORMWATER MANAGEMENT EXPLORATION PLAN

BORING PLAN

MARCH 2010 | FIGURE A-2

BORING LOCATION
PROPOSED ROADWAY IMPROVEMENTS
PAVEMENT ACCESS TO BE REMOVED
LIMIT OF DISTURBANCE/ PROPOSED RIGHT OF WAY
PROPOSED EARTH BERMS
PROPERTY LINES
PROPOSED DEVELOPMENT
PROPOSED BRIDGES WITH PIER LOCATIONS
TEST PIT LOCATION
POTENTIAL STORM WATER MANAGEMENT FACILITY
WETLANDS (GPS FIELD DELINEATED)
TIDAL WETLANDS (DNREC)
100 YEAR FLOODPLAINS (FEMA)
STREAMS AND DITCHES
W-1 WETLAND NUMBER
IMPACT AREA

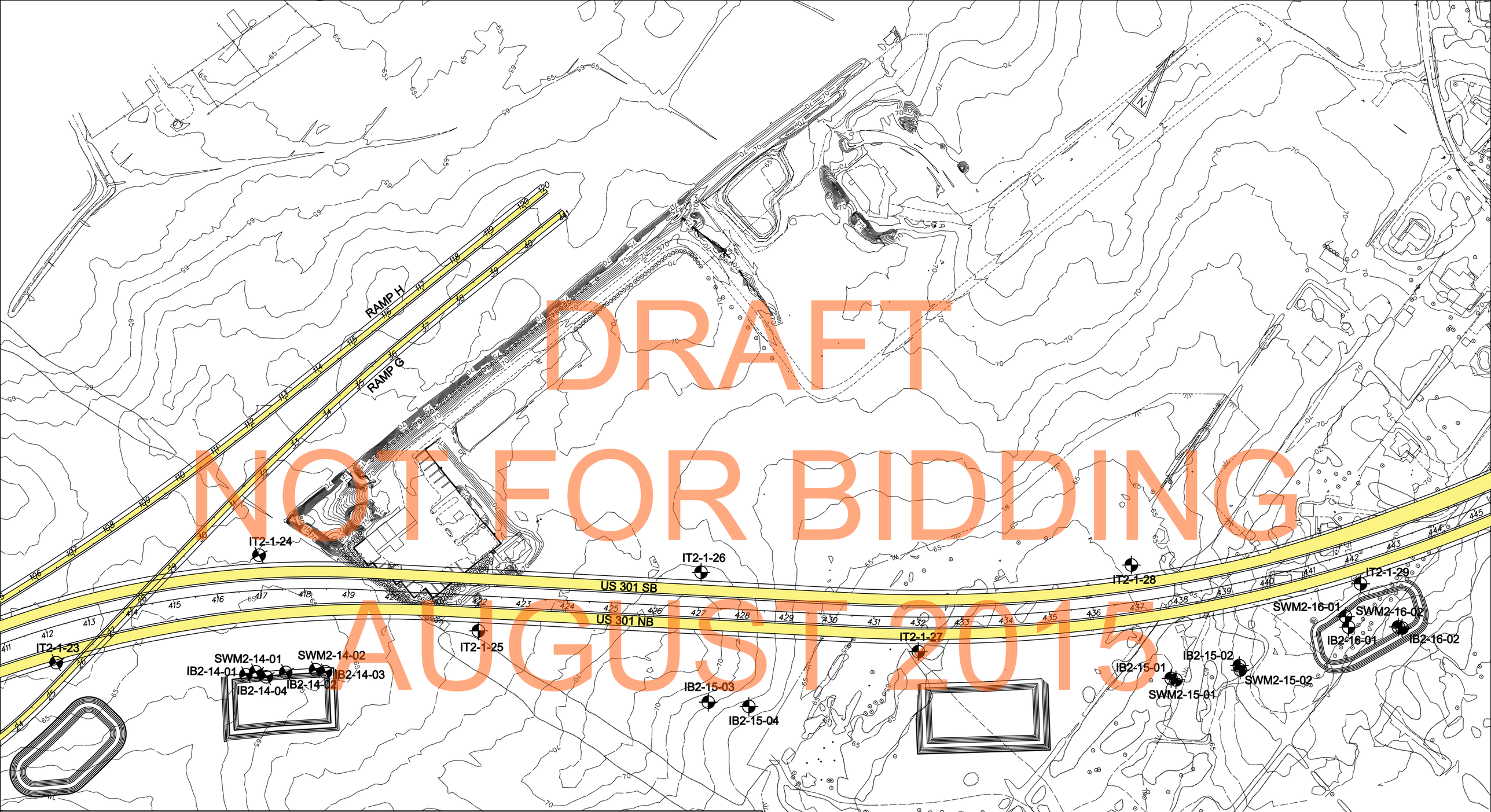
DELAWARE DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

SCALE
0 100 200
FEET

US 301 STORMWATER MANAGEMENT EXPLORATION PLAN

BORING PLAN

MARCH 2010 | FIGURE A-2



BORING LOCATION
PROPOSED ROADWAY IMPROVEMENTS
PAVEMENT ACCESS TO BE REMOVED
LIMIT OF DISTURBANCE/ PROPOSED RIGHT OF WAY
PROPOSED EARTH BERMS
PROPERTY LINES
PROPOSED DEVELOPMENT
PROPOSED BRIDGES WITH PIER LOCATIONS
TEST PIT LOCATION
POTENTIAL STORM WATER MANAGEMENT FACILITY
WETLANDS (GPS FIELD DELINEATED)
TIDAL WETLANDS (DNREC)
100 YEAR FLOODPLAINS (FEMA)
STREAMS AND DITCHES
W-1 WETLAND NUMBER
IMPACT AREA

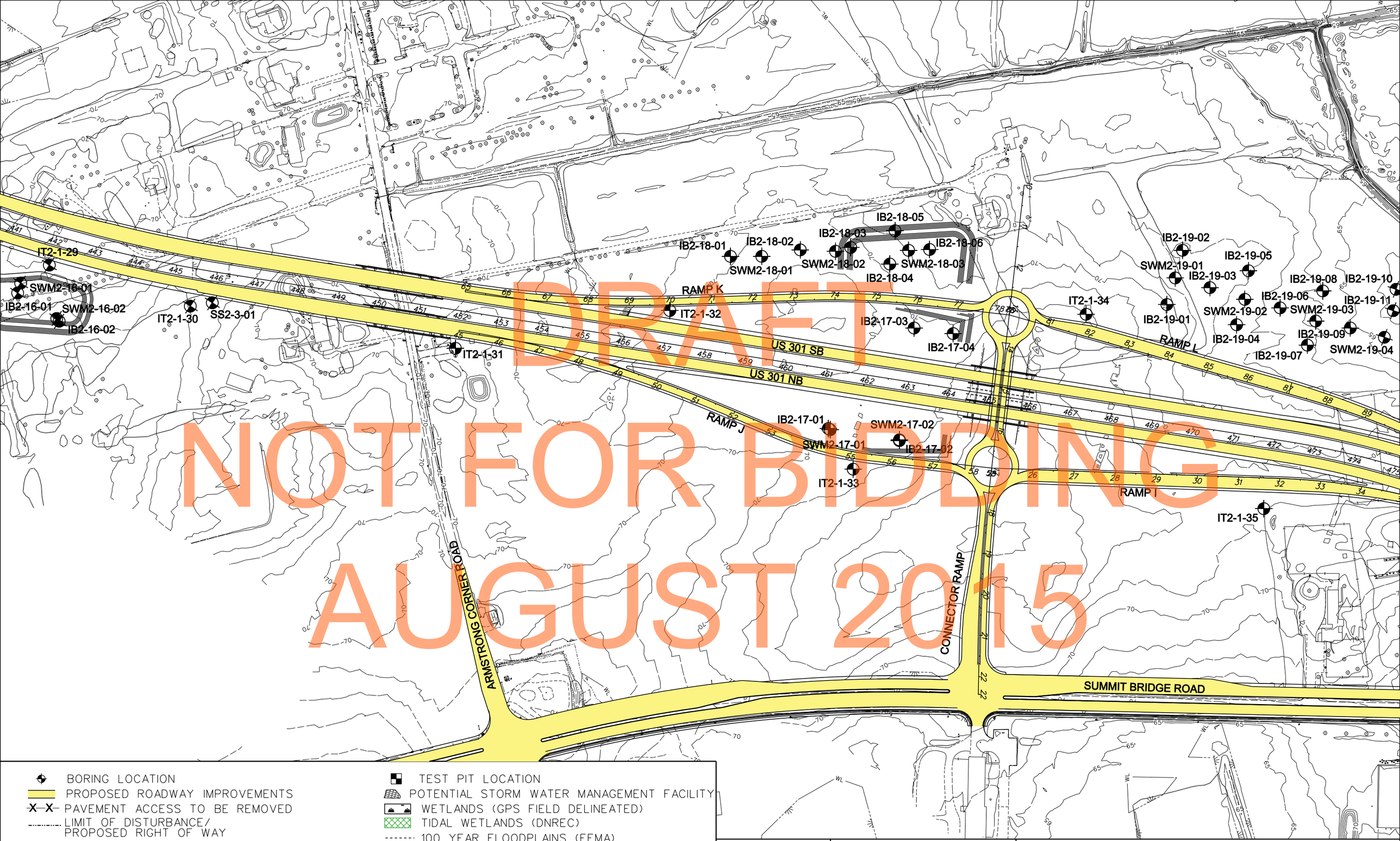
DELAWARE DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

SCALE
0 100 200
FEET

US 301 STORMWATER MANAGEMENT EXPLORATION PLAN

BORING PLAN

MARCH 2010 | FIGURE A-2



BORING LOCATION
PROPOSED ROADWAY IMPROVEMENTS
PAVEMENT ACCESS TO BE REMOVED
LIMIT OF DISTURBANCE/ PROPOSED RIGHT OF WAY
PROPOSED EARTH BERMS
PROPERTY LINES
PROPOSED DEVELOPMENT
PROPOSED BRIDGES WITH PIER LOCATIONS
TEST PIT LOCATION
POTENTIAL STORM WATER MANAGEMENT FACILITY
WETLANDS (GPS FIELD DELINEATED)
TIDAL WETLANDS (DNREC)
100 YEAR FLOODPLAINS (FEMA)
STREAMS AND DITCHES
W-1 WETLAND NUMBER
IMPACT AREA

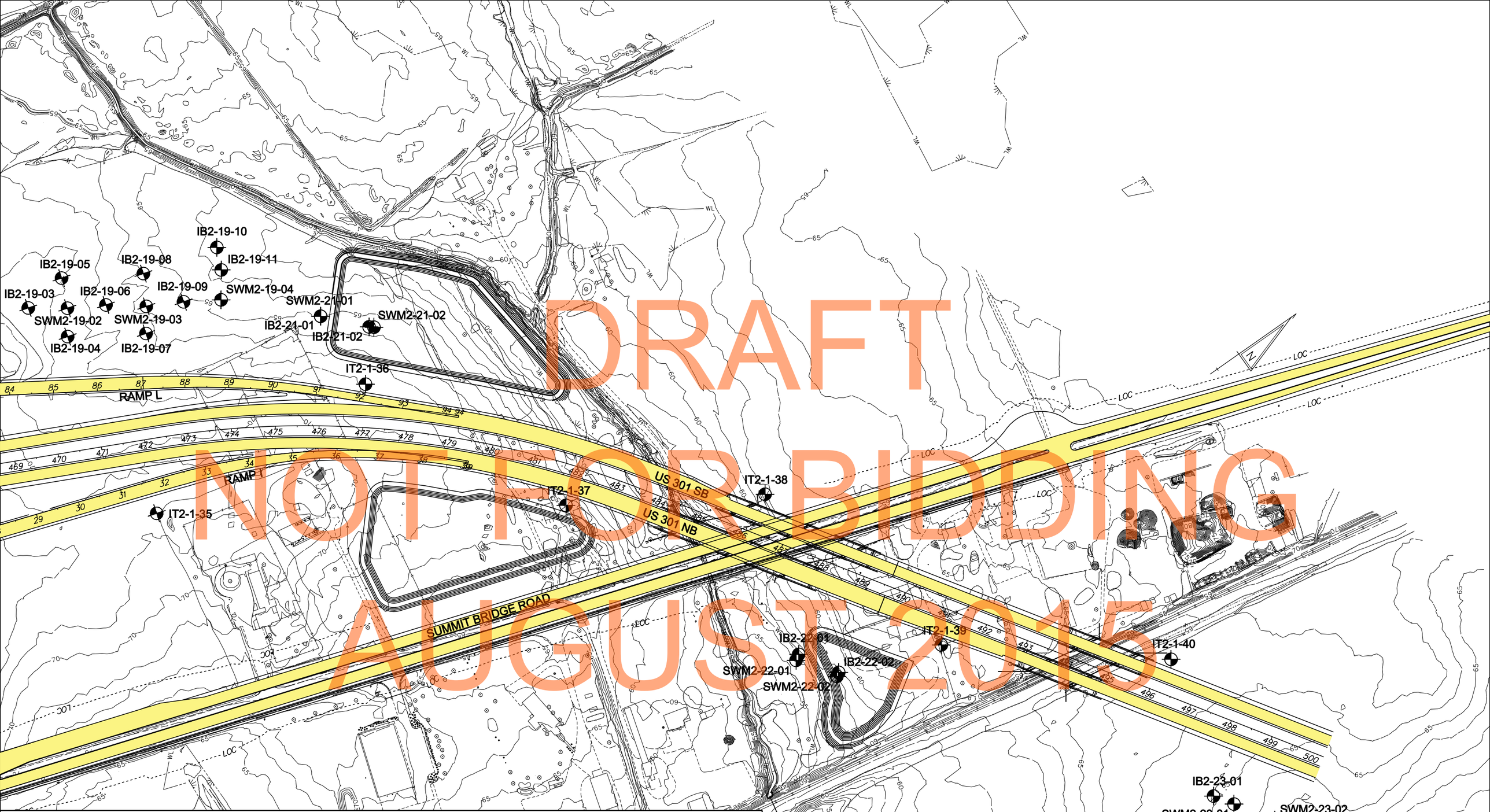
DELAWARE DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

SCALE
0 100 200
FEET

US 301 STORMWATER MANAGEMENT EXPLORATION PLAN

BORING PLAN

MARCH 2010 | FIGURE A-2



BORING LOCATION
PROPOSED ROADWAY IMPROVEMENTS
PAVEMENT ACCESS TO BE REMOVED
LIMIT OF DISTURBANCE/ PROPOSED RIGHT OF WAY
PROPOSED EARTH BERMS
PROPERTY LINES
PROPOSED DEVELOPMENT
PROPOSED BRIDGES WITH PIER LOCATIONS
TEST PIT LOCATION
POTENTIAL STORM WATER MANAGEMENT FACILITY
WETLANDS (GPS FIELD DELINEATED)
TIDAL WETLANDS (DNREC)
100 YEAR FLOODPLAINS (FEMA)
STREAMS AND DITCHES
W-1 WETLAND NUMBER
IMPACT AREA

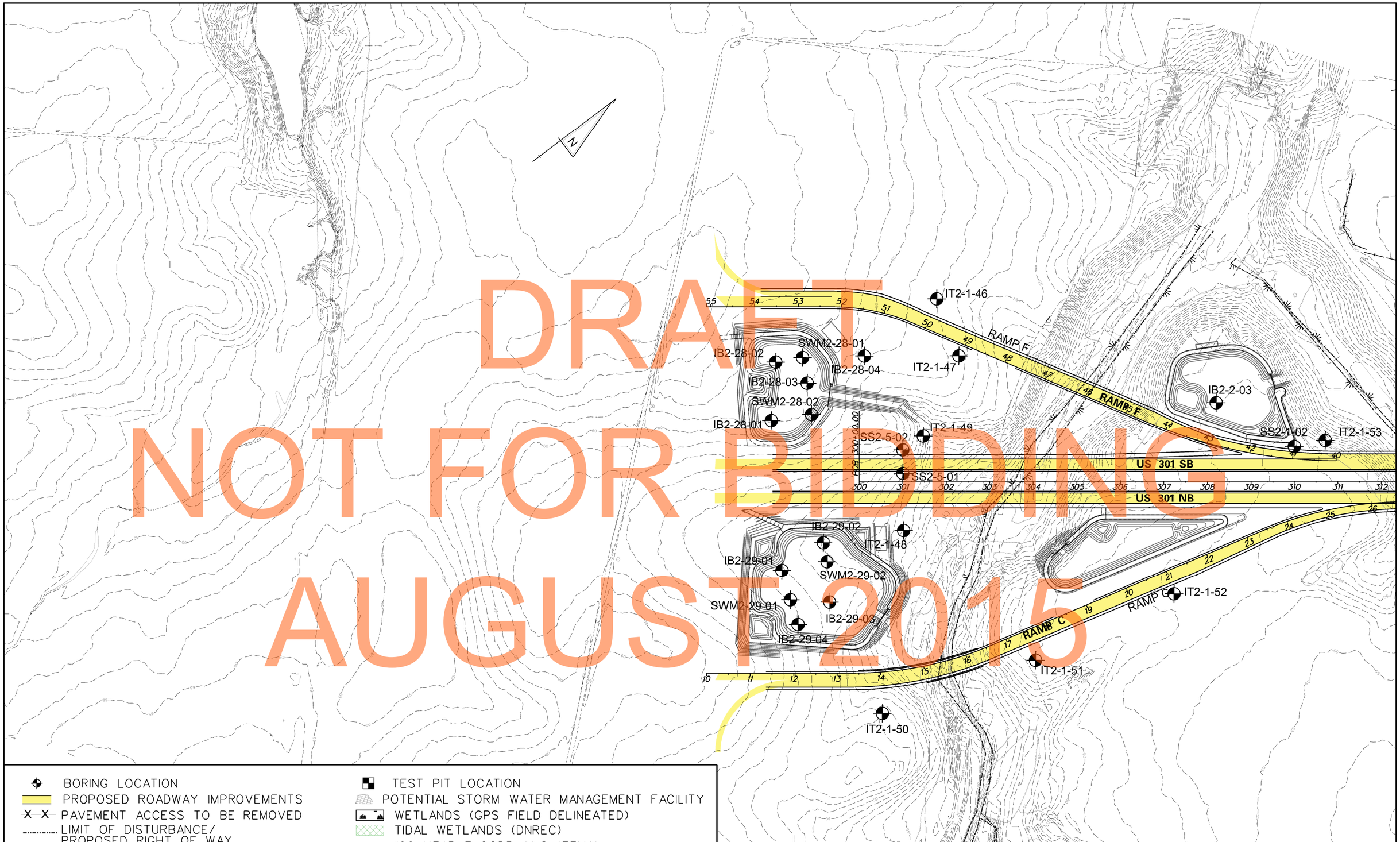
DELAWARE DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

SCALE
0 100 200
FEET

US 301 STORMWATER MANAGEMENT EXPLORATION PLAN

BORING PLAN

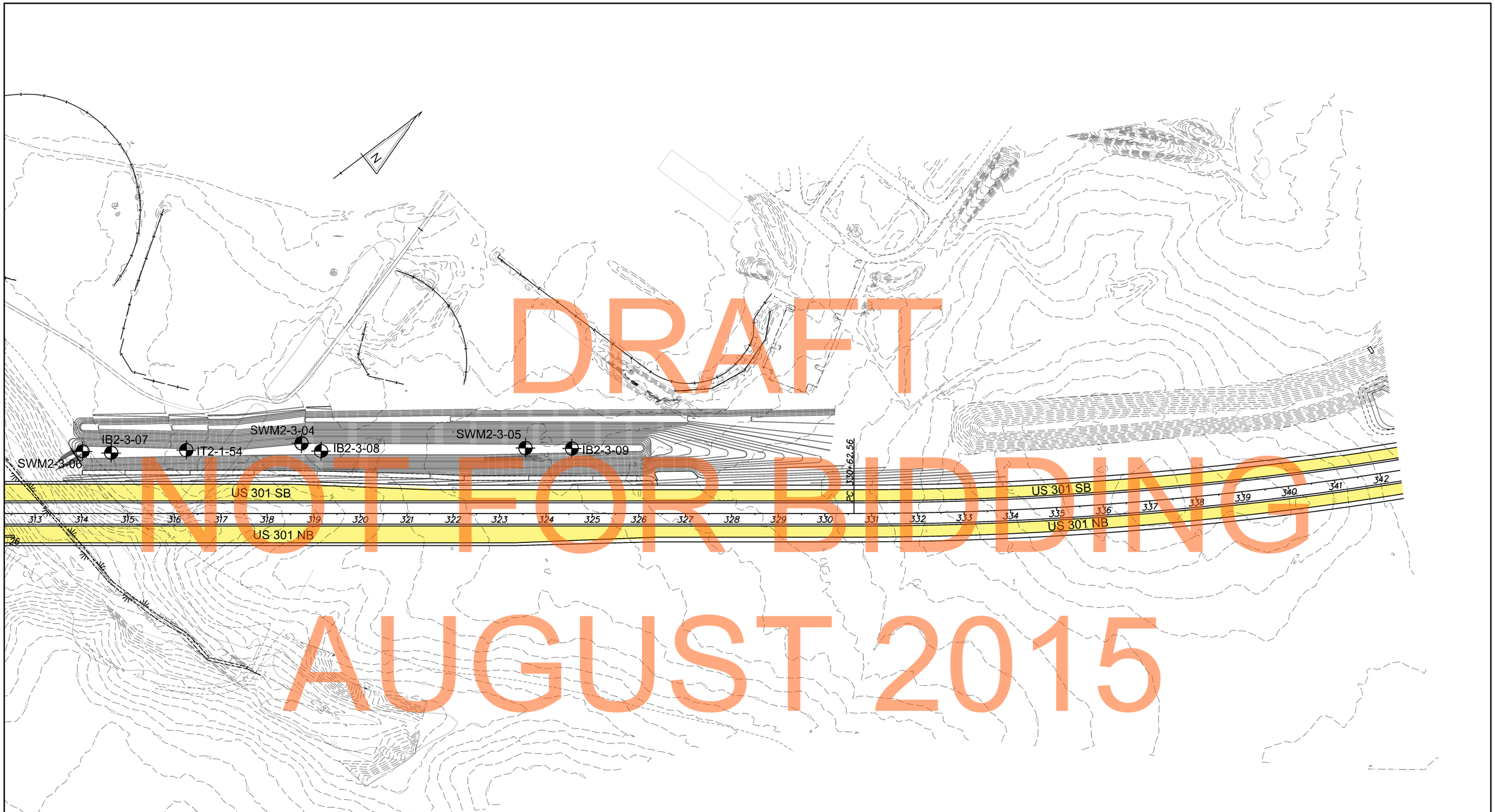
MARCH 2010 | FIGURE A-2



US 301 STORMWATER MANAGEMENT EXPLORATION PLAN

BORING PLAN

FEBRUARY 2011 | Figure A-2



DRAFT
NOT FOR BIDDING
AUGUST 2015

- BORING LOCATION
- PROPOSED ROADWAY IMPROVEMENTS
- PAVEMENT ACCESS TO BE REMOVED
- LIMIT OF DISTURBANCE/ PROPOSED RIGHT OF WAY
- PROPOSED EARTH BERMS
- PROPERTY LINES
- PROPOSED DEVELOPMENT
- PROPOSED BRIDGES WITH PIER LOCATIONS
- TEST PIT LOCATION
- POTENTIAL STORM WATER MANAGEMENT FACILITY
- WETLANDS (GPS FIELD DELINEATED)
- TIDAL WETLANDS (DNREC)
- 100 YEAR FLOODPLAINS (FEMA)
- STREAMS AND DITCHES
- W-1 WETLAND NUMBER
- IMPACT AREA

DELAWARE DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

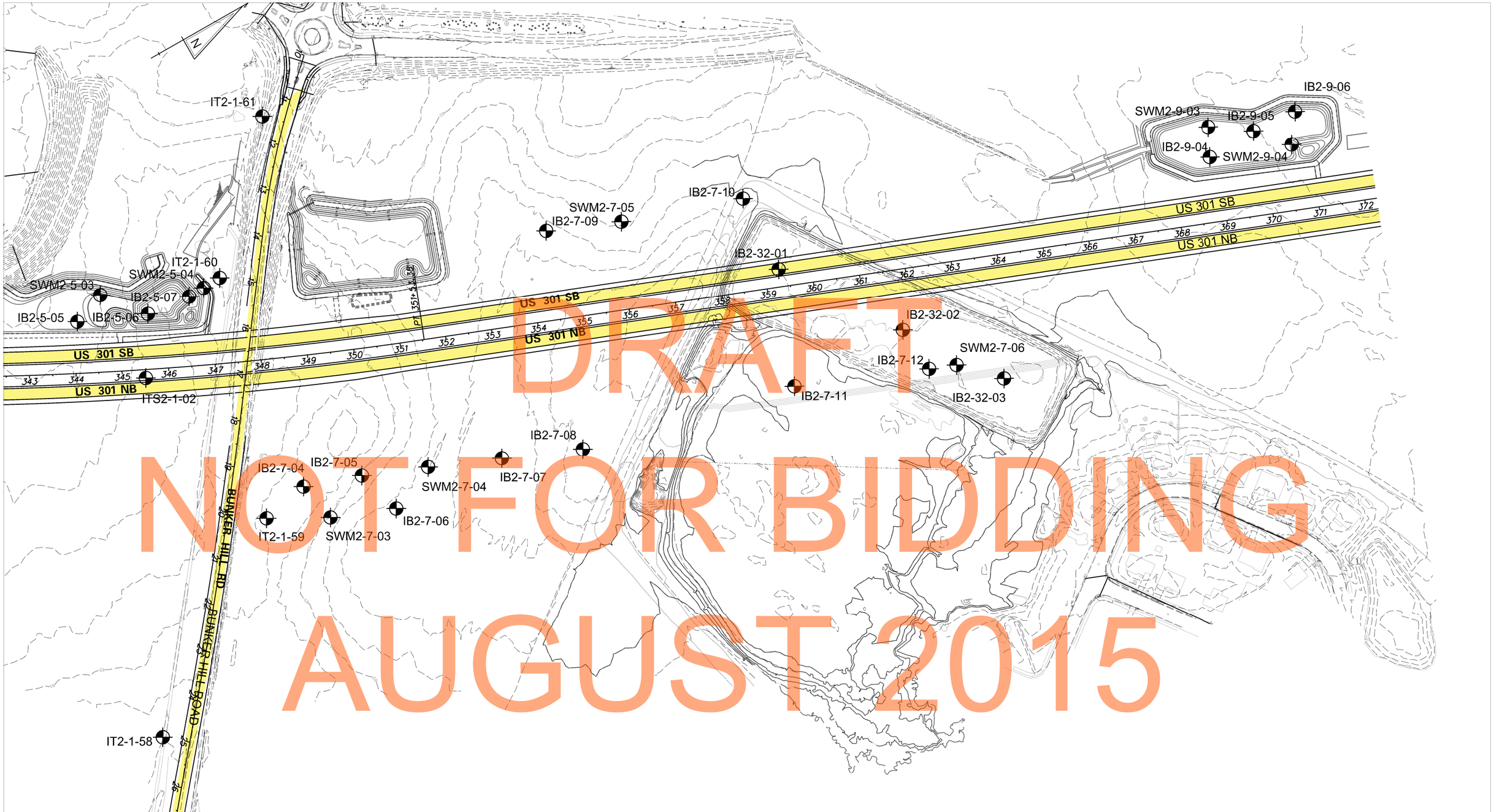
SCALE
0 100 200
FEET

US 301 STORMWATER MANAGEMENT EXPLORATION PLAN

BORING PLAN

FEBRUARY 2011

Figure A-2



BORING LOCATION
PROPOSED ROADWAY IMPROVEMENTS
PAVEMENT ACCESS TO BE REMOVED
LIMIT OF DISTURBANCE/ PROPOSED RIGHT OF WAY
PROPOSED EARTH BERMS
PROPERTY LINES
PROPOSED DEVELOPMENT
PROPOSED BRIDGES WITH PIER LOCATIONS
TEST PIT LOCATION
POTENTIAL STORM WATER MANAGEMENT FACILITY
WETLANDS (GPS FIELD DELINEATED)
TIDAL WETLANDS (DNREC)
100 YEAR FLOODPLAINS (FEMA)
STREAMS AND DITCHES
WETLAND NUMBER
IMPACT AREA

DELAWARE DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

SCALE
0 100 200
FEET

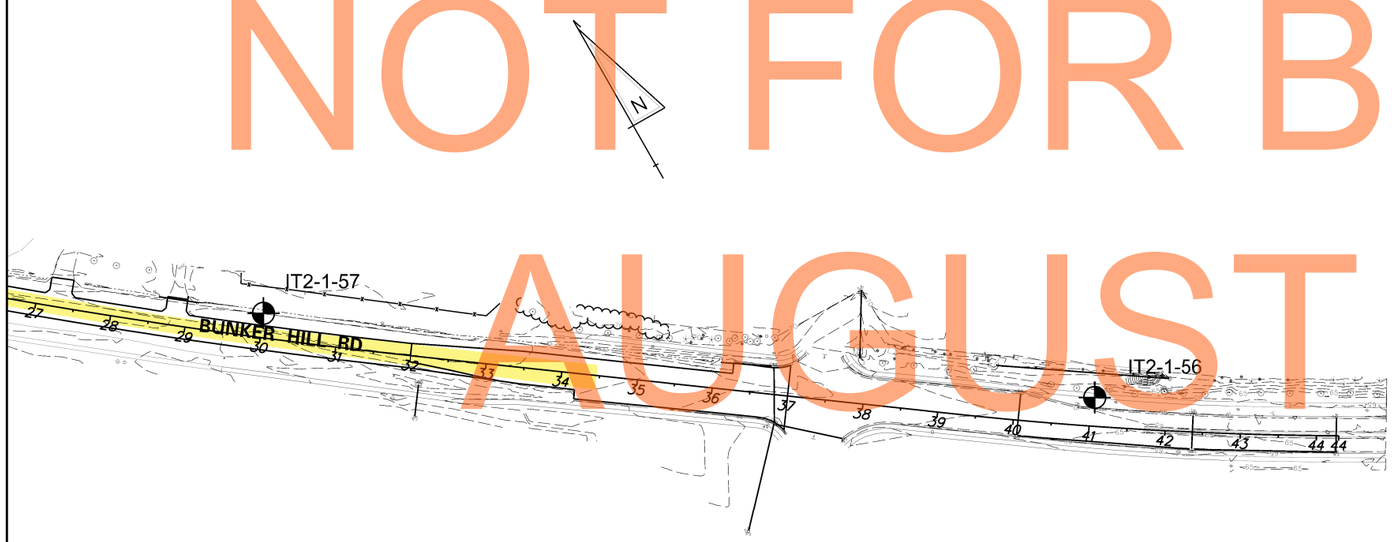
US 301 STORMWATER MANAGEMENT EXPLORATION PLAN

BORING PLAN

FEBRUARY 2011

Figure A-2

DRAFT
NOT FOR BIDDING
AUGUST 2015



- BORING LOCATION
- PROPOSED ROADWAY IMPROVEMENTS
- PAVEMENT ACCESS TO BE REMOVED
- LIMIT OF DISTURBANCE/ PROPOSED RIGHT OF WAY
- PROPOSED EARTH BERMS
- PROPERTY LINES
- PROPOSED DEVELOPMENT
- PROPOSED BRIDGES WITH PIER LOCATIONS
- TEST PIT LOCATION
- POTENTIAL STORM WATER MANAGEMENT FACILITY
- WETLANDS (GPS FIELD DELINEATED)
- TIDAL WETLANDS (DNREC)
- 100 YEAR FLOODPLAINS (FEMA)
- STREAMS AND DITCHES
- W-1 WETLAND NUMBER
- IMPACT AREA

DELAWARE DEPARTMENT OF TRANSPORTATION

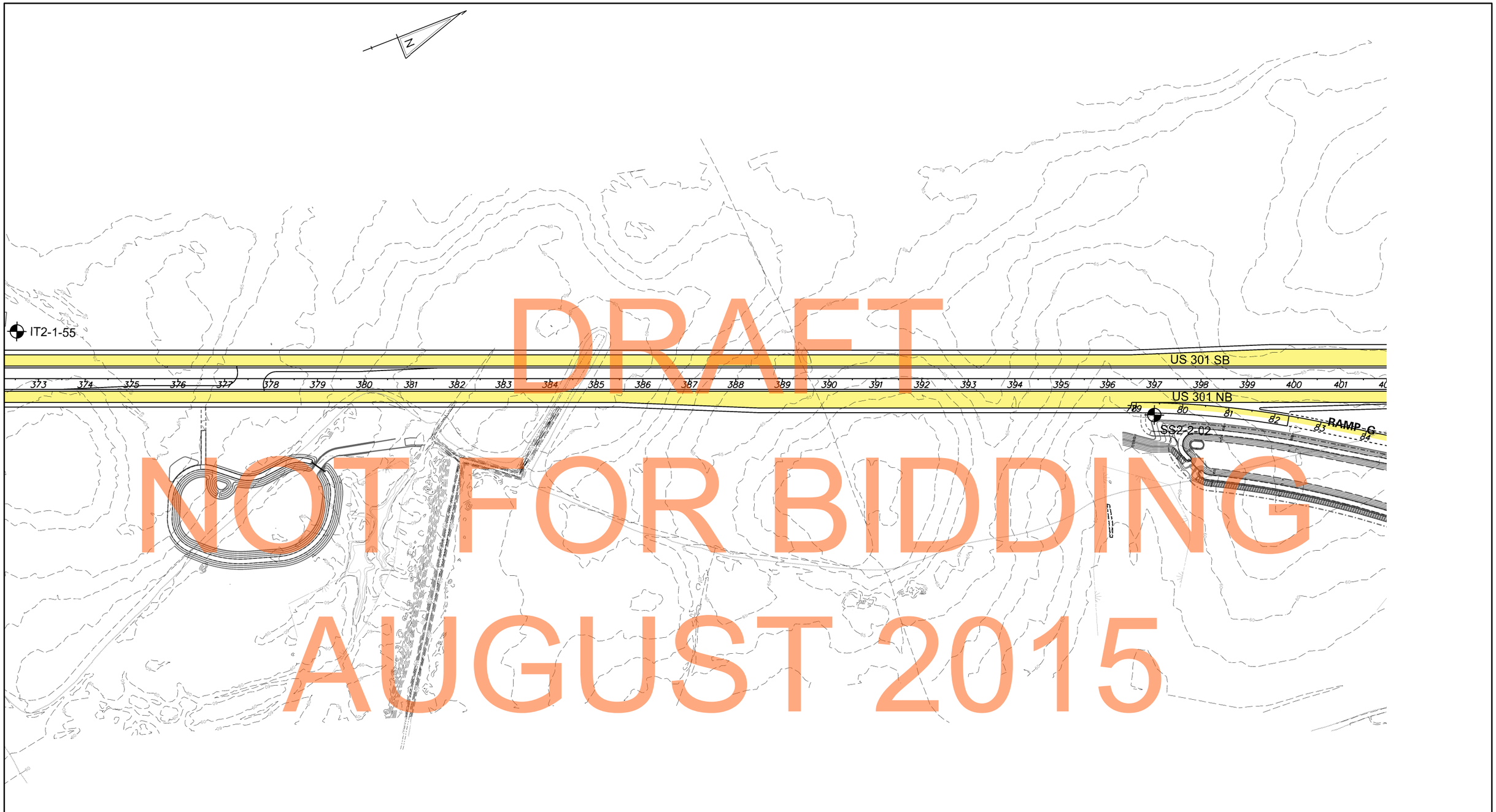
FEDERAL HIGHWAY ADMINISTRATION

SCALE
0 100 200
FEET

US 301 STORMWATER MANAGEMENT EXPLORATION PLAN

BORING PLAN

FEBRUARY 2011 | Figure A-2



BORING LOCATION
PROPOSED ROADWAY IMPROVEMENTS
PAVEMENT ACCESS TO BE REMOVED
LIMIT OF DISTURBANCE/ PROPOSED RIGHT OF WAY
PROPOSED EARTH BERMS
PROPERTY LINES
PROPOSED DEVELOPMENT
PROPOSED BRIDGES WITH PIER LOCATIONS
TEST PIT LOCATION
POTENTIAL STORM WATER MANAGEMENT FACILITY
WETLANDS (GPS FIELD DELINEATED)
TIDAL WETLANDS (DNREC)
100 YEAR FLOODPLAINS (FEMA)
STREAMS AND DITCHES
W-1 WETLAND NUMBER
IMPACT AREA

DELAWARE DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

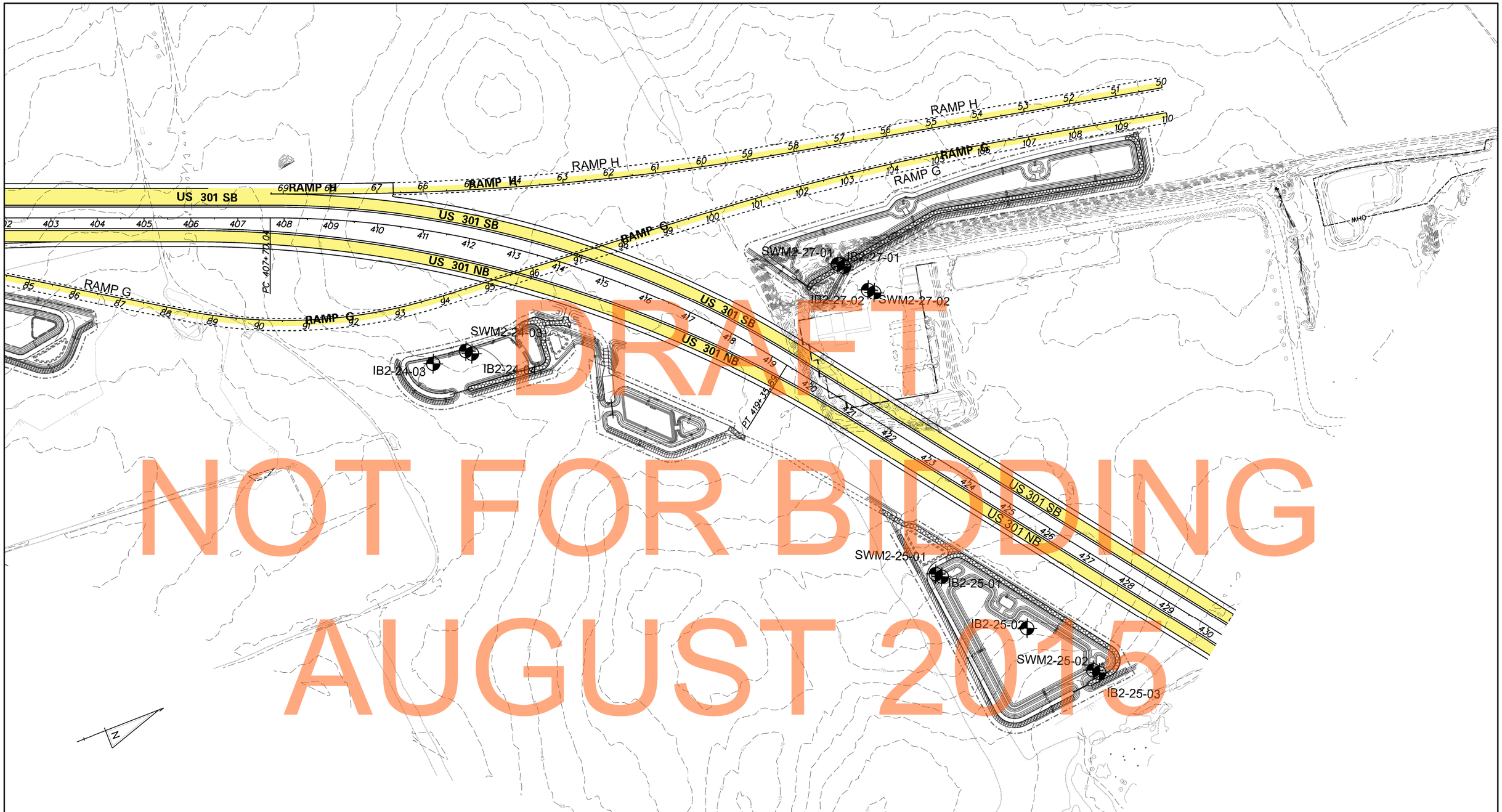
SCALE
0 100 200
FEET

US 301 STORMWATER MANAGEMENT EXPLORATION PLAN

BORING PLAN

FEBRUARY 2011

Figure A-2



DRAFT
NOT FOR BIDDING
AUGUST 2015

BORING LOCATION
PROPOSED ROADWAY IMPROVEMENTS
X X PAVEMENT ACCESS TO BE REMOVED
LIMIT OF DISTURBANCE/ PROPOSED RIGHT OF WAY
PROPOSED EARTH BERMS
PROPERTY LINES
PROPOSED DEVELOPMENT
PROPOSED BRIDGES WITH PIER LOCATIONS
TEST PIT LOCATION
POTENTIAL STORM WATER MANAGEMENT FACILITY
WETLANDS (GPS FIELD DELINEATED)
TIDAL WETLANDS (DNREC)
100 YEAR FLOODPLAINS (FEMA)
STREAMS AND DITCHES
W-1 WETLAND NUMBER
IMPACT AREA

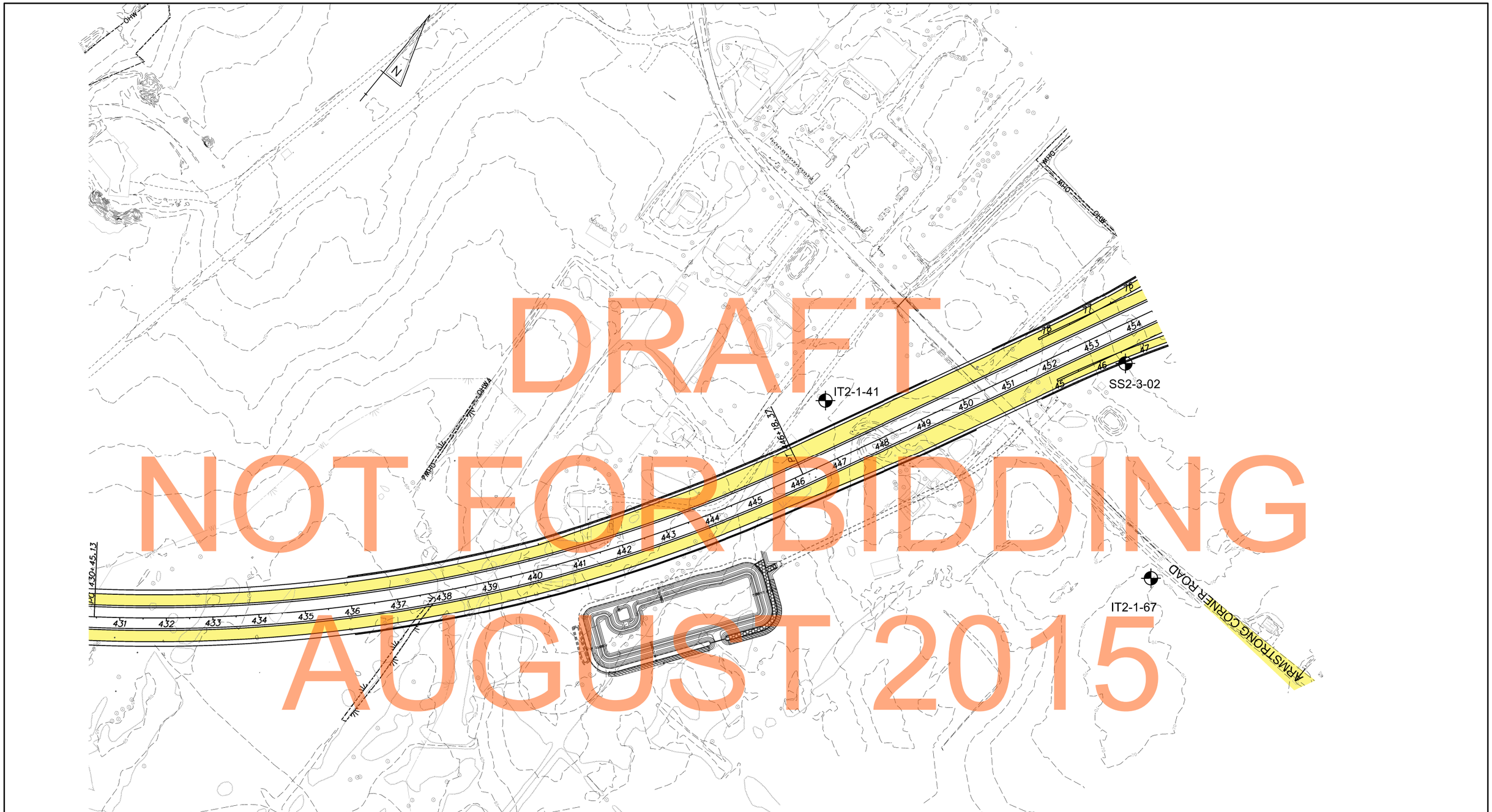
DELAWARE DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

SCALE
0 100 200
FEET

US 301 STORMWATER MANAGEMENT EXPLORATION PLAN

BORING PLAN

FEBRUARY 2011 | Figure A-2



DRAFT
NOT FOR BIDDING
AUGUST 2015

BORING LOCATION
PROPOSED ROADWAY IMPROVEMENTS
PAVEMENT ACCESS TO BE REMOVED
LIMIT OF DISTURBANCE/ PROPOSED RIGHT OF WAY
PROPOSED EARTH BERMS
PROPERTY LINES
PROPOSED DEVELOPMENT
PROPOSED BRIDGES WITH PIER LOCATIONS
TEST PIT LOCATION
POTENTIAL STORM WATER MANAGEMENT FACILITY
WETLANDS (GPS FIELD DELINEATED)
TIDAL WETLANDS (DNREC)
100 YEAR FLOODPLAINS (FEMA)
STREAMS AND DITCHES
W-1 WETLAND NUMBER
IMPACT AREA

DELAWARE DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

SCALE
0 100 200
FEET

US 301 STORMWATER MANAGEMENT EXPLORATION PLAN

BORING PLAN

FEBRUARY 2011 | Figure A-2

DRAFT
NOT FOR BIDDING
AUGUST 2015

BORING LOCATION
PROPOSED ROADWAY IMPROVEMENTS
X X PAVEMENT ACCESS TO BE REMOVED
LIMIT OF DISTURBANCE/ PROPOSED RIGHT OF WAY
PROPOSED EARTH BERMS
PROPERTY LINES
PROPOSED DEVELOPMENT
PROPOSED BRIDGES WITH PIER LOCATIONS
TEST PIT LOCATION
POTENTIAL STORM WATER MANAGEMENT FACILITY
WETLANDS (GPS FIELD DELINEATED)
TIDAL WETLANDS (DNREC)
100 YEAR FLOODPLAINS (FEMA)
STREAMS AND DITCHES
W-1 WETLAND NUMBER
IMPACT AREA

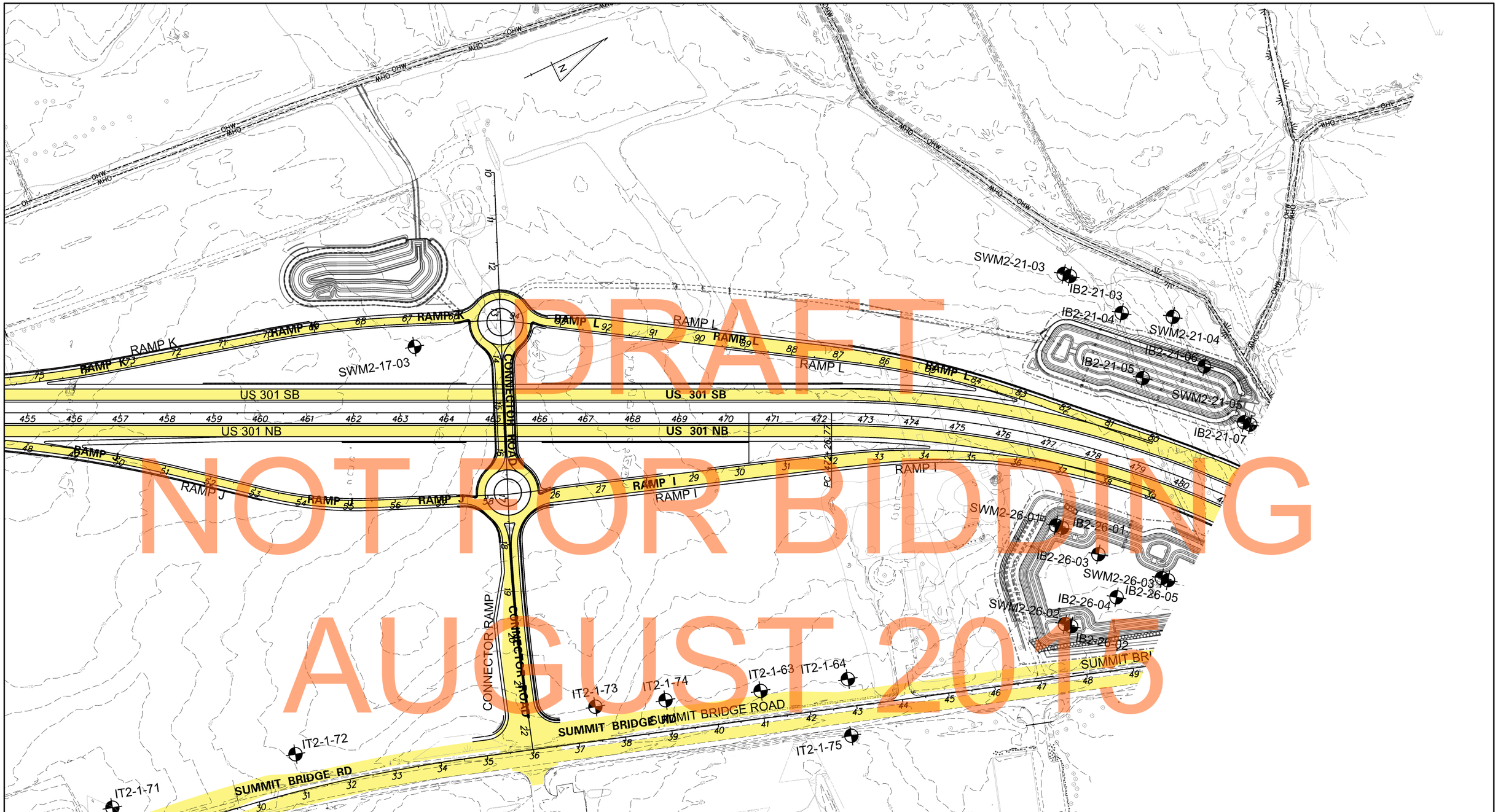
DELAWARE DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

SCALE
0 100 200
FEET

US 301 STORMWATER MANAGEMENT EXPLORATION PLAN

BORING PLAN

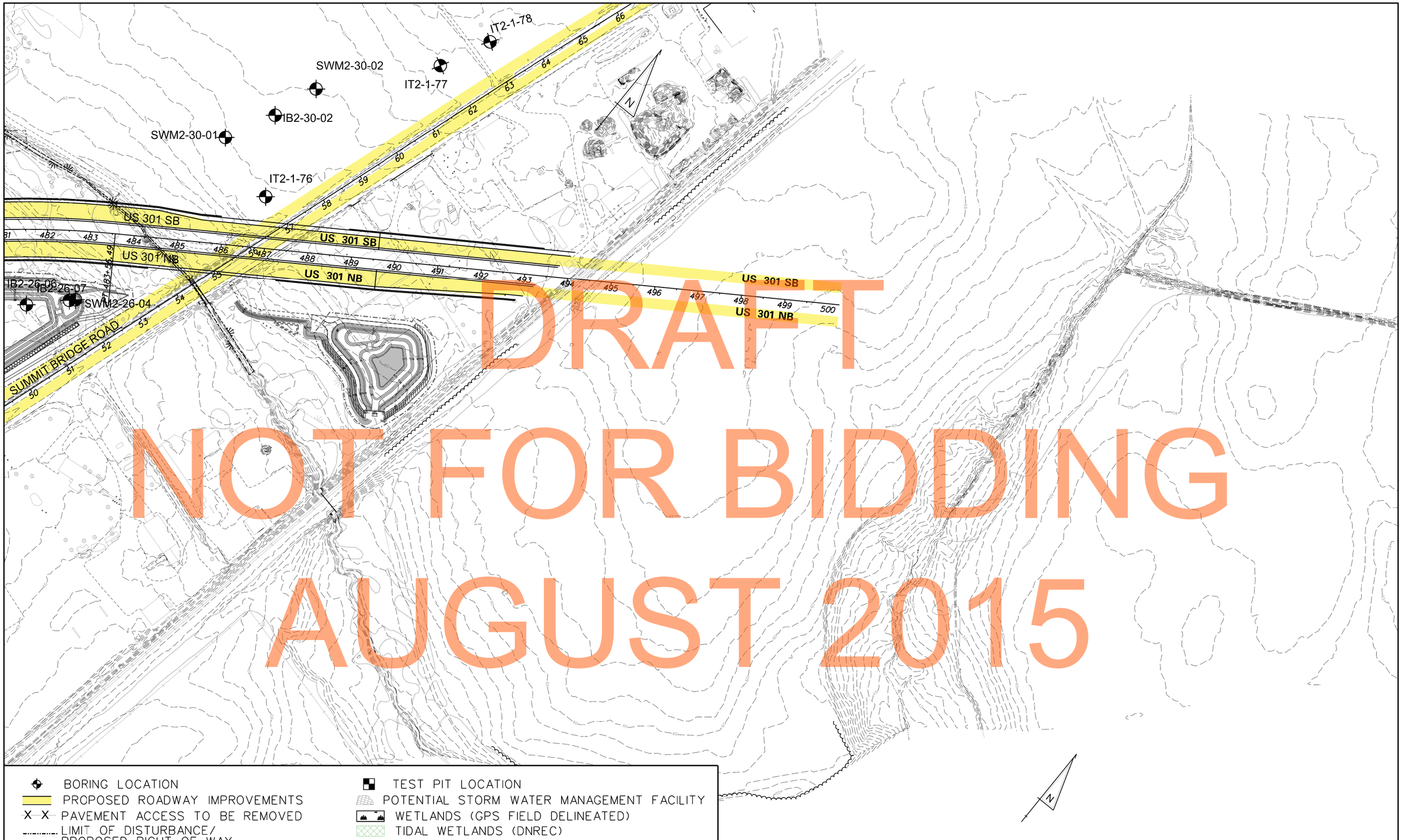
FEBRUARY 2011 | Figure A-2



US 301 STORMWATER MANAGEMENT EXPLORATION PLAN

BORING PLAN

FEBRUARY 2011 | Figure A-2



BORING LOCATION
PROPOSED ROADWAY IMPROVEMENTS
PAVEMENT ACCESS TO BE REMOVED
LIMIT OF DISTURBANCE/ PROPOSED RIGHT OF WAY
PROPOSED EARTH BERMS
PROPERTY LINES
PROPOSED DEVELOPMENT
PROPOSED BRIDGES WITH PIER LOCATIONS
TEST PIT LOCATION
POTENTIAL STORM WATER MANAGEMENT FACILITY
WETLANDS (GPS FIELD DELINEATED)
TIDAL WETLANDS (DNREC)
100 YEAR FLOODPLAINS (FEMA)
STREAMS AND DITCHES
W-1 WETLAND NUMBER
IMPACT AREA

DELAWARE DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

SCALE
0 100 200
FEET

US 301 STORMWATER MANAGEMENT EXPLORATION PLAN

BORING PLAN

FEBRUARY 2011

Figure A-2

DRAFT
NOT FOR BIDDING
AUGUST 2015

BORING LOCATION
PROPOSED ROADWAY IMPROVEMENTS
PAVEMENT ACCESS TO BE REMOVED
LIMIT OF DISTURBANCE/ PROPOSED RIGHT OF WAY
PROPOSED EARTH BERMS
PROPERTY LINES
PROPOSED DEVELOPMENT
PROPOSED BRIDGES WITH PIER LOCATIONS
TEST PIT LOCATION
POTENTIAL STORM WATER MANAGEMENT FACILITY
WETLANDS (GPS FIELD DELINEATED)
TIDAL WETLANDS (DNREC)
100 YEAR FLOODPLAINS (FEMA)
STREAMS AND DITCHES
W-1 WETLAND NUMBER
IMPACT AREA

DELAWARE DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

SCALE
0 100 200
FEET

US 301 STORMWATER MANAGEMENT EXPLORATION PLAN

BORING PLAN

FEBRUARY 2011

Figure A-2