

BORROW SITE NOTES

1. THE LIMITS OF GRADING FOR THE BORROW SITES AS SHOWN ON BS-02, BS-03, BS-04, BS-05, BS-06, BS-07 AND BS-08 SHALL BE CONSIDERED THE MAXIMUM LIMITS OF FINAL GRADING FOR THE BORROW SITES. SHOULD LESS BORROW MATERIAL BE REQUIRED, THE SITES SHALL BE EXCAVATED TO A SHALLOWER ELEVATION OR THE LIMITS OF GRADING SHALL BE REDUCED. SHOULD ADDITIONAL BORROW MATERIAL BE REQUIRED, OVEREXCAVATION IS PERMITTED UNDER THE FOLLOWING RESTRICTIONS. OVEREXCAVATION SHALL BE BACKFILLED TO THE FINAL GRADING DESIGN ELEVATIONS SHOWN ON THE PLANS WITH TOPSOIL, AGRICULTURAL SOIL, ROOTMAT, OR UNSUITABLE SOILS. OVEREXCAVATION BELOW THE FINAL GRADES TO OBTAIN ADDITIONAL MATERIALS REQUIRED FOR THE PROJECT AT A BORROW SITE SHALL NOT BE PERMITTED UNTIL MATERIALS FROM ALL OF THE BORROW SITES HAVE BEEN EXCAVATED TO THE FINAL GRADING DESIGN ELEVATIONS SHOWN ON THE PLANS UNLESS OTHERWISE APPROVED BY THE ENGINEER. UNSUITABLE SOIL IS DEFINED AS A-4, A-5, A-6, OR A-7 SOILS, AASHTO CLASSIFICATION. AGRICULTURAL SOIL, ROOTMAT AND UNSUITABLE SOILS MAY BE IMPORTED TO THE BORROW SITE FROM WITHIN THE CONTRACT LIMITS. UNSUITABLE SOILS AND ROOTMAT SHALL BE BURIED A MINIMUM OF 18 INCHES BELOW FINAL GRADE WITH THE 18 INCHES CONSISTING OF TOPSOIL OR AGRICULTURAL SOILS. TOPOGRAPHIC SURVEY ON THE FINAL OVEREXCAVATED SITE FOR MEASUREMENT OF FINAL EXCAVATED QUANTITIES SHALL BE PERFORMED BEFORE PLACING ANY UNSUITABLE MATERIALS OR ROOTMAT. TOPOGRAPHIC SURVEY ON THE FINAL SLOPES OF THE UNSUITABLE MATERIALS OR ROOTMAT PLACED SHALL BE PERFORMED PRIOR TO PLACING ANY TOPSOIL OR AGRICULTURAL SOIL TO ENSURE THAT THESE MATERIALS ARE BURIED A MINIMUM OF 18\* BELOW FINAL GRADES. THE CONTRACTOR SHALL SUBMIT A REVISED FINAL GRADING PLAN TO THE ENGINEER FOR APPROVAL
2. EXISTING BORROW SITE TOPSOIL AND AGRICULTURAL SOIL SHALL BE STRIPPED, STOCKPILED, AND QUARANTINED FOR RE-USE ON THE BORROW SITE. AGRICULTURAL SOIL IS DEFINED AS THE TOP 9-INCHES OF SOIL OBTAINED FROM AN ACTIVE FARM FIELD OR RECENTLY ABANDONED FARM FIELD (LESS THAN 2 YEARS FALLOW OR ABANDONED). AGRICULTURAL SOILS SHALL BE TREATED AS TOPSOIL AS DESCRIBED IN SECTION 202. THE SOURCE OF THE AGRICULTURAL SOIL MUST HAVE BEEN IN CROP. NO TOPSOIL OR AGRICULTURAL SOIL REMOVED FROM THE BORROW SITE SHALL BE PLACED IN ANOTHER LOCATION. ALL OF THE TOPSOIL AND AGRICULTURAL SOIL SHALL BE RE-USED ON THE SITE.
3. FINAL INTERNAL BORROW SITE SIDE SLOPE GRADES SHALL BE A MAXIMUM OF 5:1. WITH THE APPROVAL OF THE ENGINEER, SLOPES MAY BE OVEREXCAVATED TO 3:1 AND BACKFILLED WITH TOPSOIL, AGRICULTURAL SOIL, ROOTMAT, OR UNSUITABLE SOILS TO CREATE A FINAL SLOPE OF 5:1. OVEREXCAVATED SLOPES SHALL ALSO INCLUDE A BENCH AS APPROVED BY THE ENGINEER TO PREVENT SLIPPAGE OF MATERIALS SUBSEQUENTLY PLACED. UNSUITABLE SOIL IS DEFINED AS A-4, A-5, A-6, OR A-7 SOILS, AASHTO CLASSIFICATION. AGRICULTURAL SOIL, ROOTMAT AND UNSUITABLE SOILS MAY BE IMPORTED TO THE BORROW SITE FROM WITHIN THE CONTRACT LIMITS AND PLACED IN THE OVEREXCAVATED AREAS. UNSUITABLE SOILS AND ROOTMAT SHALL BE BURIED A MINIMUM OF 18 INCHES BELOW FINAL GRADE WITH THE 18 INCHES CONSISTING OF TOPSOIL OR AGRICULTURAL SOILS. UNSUITABLE SOILS AND ROOTMAT SHALL BE PLACED SUCH THAT INTERNAL SLOPES AND GRADING WITHIN THE BORROW SITES SHALL BE CONTINUOUS SMOOTH LINES AND GRADES REPRESENTING A NATURALIZED CONDITION AND SHALL NOT APPEAR DISTURBED, MOUNDED, OR PILED, AS SOLELY DETERMINED BY THE ENGINEER. MATERIALS PLACED IN THESE OVER-EXCAVATED AREAS SHALL BE APPROVED BY THE ENGINEER AND COMPACTED AS DIRECTED BY THE ENGINEER. TOPOGRAPHIC SURVEY ON THE FINAL OVEREXCAVATED SLOPES FOR MEASUREMENT OF FINAL EXCAVATED QUANTITIES SHALL BE PERFORMED BEFORE PLACING ANY UNSUITABLE MATERIALS OR ROOTMAT. TOPOGRAPHIC SURVEY ON THE FINAL SLOPES OF THE UNSUITABLE MATERIALS OR ROOTMAT PLACED SHALL BE PERFORMED PRIOR TO PLACING ANY TOPSOIL OR AGRICULTURAL SOIL TO ENSURE THAT THESE MATERIALS ARE BURIED A MINIMUM OF 18\* BELOW FINAL GRADES. THE CONTRACTOR SHALL SUBMIT A REVISED GRADING PLAN TO THE ENGINEER FOR APPROVAL.
4. TRASH, CONSTRUCTION DEBRIS, PILE CUTOFFS, ASPHALT MILLINGS, ROCKS AND STONES AND OTHER CONSTRUCTION WASTE GENERATED ON THE CONTRACT SHALL NOT BE BURIED IN THE BORROW SITE OR THE SIDE SLOPES OF THE BORROW SITE. WITH PERMISSION AND UNDER THE DIRECTION OF THE ENGINEER, TREE STUMPS AND LARGE SECTIONS OF TREE TRUNKS CAN BE PLACED ON THE FINAL SOIL SURFACE. THE MINIMUM DISTANCE BETWEEN THE PLACED STUMPS/TRUNKS SHALL BE 35 FEET. STUMPS AND TRUNKS SHALL NOT BE PLACED IN PILES. TREE STUMP PLACEMENT IS OPTIONAL AND NOT MANDATORY.
5. UNDER FINAL CONDITIONS THE BORROW SITES SHALL BE GRADED TO DRAIN. WATER SHOULD NOT STAND ON THE SITES FOLLOWING RAIN EVENTS BUT SHALL BE CONVEYED VIA STABLE CHANNELS, SWALES, OR STABLE OVERLAND FLOW TO ADJACENT WETLANDS AND FORESTED AREAS. THE CONTRACTOR SHALL NOT CHANGE THE BORROW SITE OUTFALL LOCATIONS AS SHOWN ON BS-02 THROUGH BS-08.
6. FOLLOWING EXTRACTION OF BORROW, AND PRIOR TO SECTION 733 - TOPSOILING, SUBSOILS SHALL BE TILLED AS SPECIFIED IN SPECIAL PROVISION 202555 - SUBSOIL TILLAGE. SUBSOILS SHALL BE TILLED THROUGH THE EXTENT OF THE BORROW SITES, EXCEPT THAT NO SUBSOIL TILLAGE SHOULD BE PERFORMED:
  - A. WITHIN STORMWATER MANAGEMENT PONDS,
  - B. WITHIN 15\* OF THE TOE OF SLOPE OF STORMWATER MANAGEMENT POND EMBANKMENTS, OR
  - C. WITHIN 10\* OF UNDERGROUND UTILITIES.

TOPOGRAPHIC SURVEY ON THE FINAL EXCAVATED SLOPES FOR MEASUREMENT OF FINAL EXCAVATED QUANTITIES SHALL BE PERFORMED BEFORE THE SUBSOILS ARE TILLED.

7. A MINIMUM OF 6 INCHES OF TOPSOIL SHALL BE PLACED OVER ALL EXCAVATED AND DISTURBED AREAS IN CONFORMANCE WITH SECTION 733 - TOPSOILING. LOCAL AGRICULTURAL SOILS GENERATED WITHIN THE CONTRACT LIMITS SHALL BE CONSIDERED ACCEPTABLE TOPSOIL MATERIAL. WITH THE PERMISSION OF THE ENGINEER, THE TOPSOILING DEPTH MAY EXCEED THE MINIMUM 6-INCH DEPTH, BUT THE FINAL ELEVATION AT ANY LOCATION SHALL NOT EXCEED THE ORIGINAL GROUND ELEVATION AT THE START OF THE PROJECT. FOLLOWING THE FINAL TOPSOILING, INTERNAL SLOPES AND GRADING WITHIN THE BORROW SITE SHALL BE CONTINUOUS SMOOTH LINES AND GRADES REPRESENTING A NATURALIZED CONDITION AND SHALL NOT APPEAR DISTURBED, MOUNDED, OR PILED, AS SOLELY DETERMINED BY THE ENGINEER. NO INTERNAL GRADE SHALL EXCEED 5:1.
8. AT THE CONCLUSION OF ALL GRADING AND TOPSOIL PLACEMENT OPERATIONS, ALL DISTURBED AREAS SHALL BE SEEDED WITH ITEM 734551 - NATIVE GRASS SEEDING - NO MOW MIX. TIMING FOR THE SEEDING OPERATIONS SHALL BE PER THE SPECIFICATION, SEPTEMBER 1ST TO NOVEMBER 15TH. SEED SHALL BE DISCED INTO THE SOIL A MINIMUM OF 6 INCHES DEEP IN THREE PASSES WITH EACH PASS 90 DEGREES TO THE PREVIOUS PASS. THE COST OF DISCING SHALL BE INCIDENTAL TO ITEM 734551 NATIVE GRASS SEEDING; NO MOW MIX.
9. AT THE CONCLUSION OF ALL GRADING AND TOPSOIL PLACEMENT OPERATIONS, ALL DISTURBED AREAS SHALL BE SEEDED WITH ITEM 734551 - NATIVE GRASS SEEDING - NO MOW MIX. TIMING FOR THE SEEDING OPERATIONS SHALL BE PER THE SPECIFICATION, SEPTEMBER 1ST TO NOVEMBER 15TH. SEED SHALL BE DISCED INTO THE SOIL A MINIMUM OF 6 INCHES DEEP IN THREE PASSES WITH EACH PASS 90 DEGREES TO THE PREVIOUS PASS. THE COST OF DISCING SHALL BE INCIDENTAL TO ITEM 734551 NATIVE GRASS SEEDING; NO MOW MIX.
10. SOILS MEETING GRADATION REQUIREMENTS FOR BORROW TYPES A, C, D, AND F ARE AVAILABLE IN THE BORROW SOURCES FOR THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING THE LOCATION OF QUALIFYING MATERIALS AND SORTING AND STOCKPILING THESE MATERIALS AS NEEDED TO COMPLETE THE WORK. NO COMPENSATION WILL BE PROVIDED FOR ACTIVITIES ASSOCIATED WITH ACQUISITION OF THESE MATERIALS FROM OFF-SITE DUE TO A FAILURE TO USE MATERIAL AVAILABLE ON-SITE. GEOTECHNICAL DATA WILL BE PROVIDED BY THE DEPARTMENT TO ASSIST IN THE LOCATION OF BORROW TYPES, BUT IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE GRADATION OF THE MATERIALS.
11. MEASUREMENT AND PAYMENT:
  - A. ALL EXCAVATION INCLUDING STRIPPING AND STOCKPILING OF TOPSOIL AND AGRICULTURAL SOILS SHALL BE CALCULATED AND PAID FOR UNDER ITEM 202000, EXCAVATION AND EMBANKMENT. DOUBLE HANDLING FOR STOCKPILING AND SORTING OF MATERIAL TYPES FOR USE ON THE PROJECT SHALL NOT BE MEASURED BUT SHALL BE INCIDENTAL TO ITEM 202000. MATERIALS OTHER THAN TOPSOIL, AGRICULTURAL SOILS OR UNSUITABLE MATERIALS EXCAVATED FROM THE BORROW SITES AND NOT USED ELSEWHERE FOR THE CONSTRUCTION OF THE PROJECT SHALL BE INCORPORATED BACK INTO THE BORROW SITE. STOCKPILES OF THE UNUSED MATERIALS SHALL BE MEASURED BY THE ENGINEER BEFORE THE CONTRACTOR MOVES THE MATERIAL BACK INTO THE BORROW SITE AND THE ENGINEER SHALL MEASURE THE FINAL GROUND AT THE STOCKPILE AFTER THE MATERIALS HAVE BEEN REMOVED. THE MEASURED QUANTITY OF THE STOCKPILES SHALL BE DEDUCTED FROM THE FINAL QUANTITY PAID UNDER ITEM 202000. THE UNUSED MATERIALS SHALL BE INCORPORATED INTO THE BORROW SITE IN ACCORDANCE WITH THESE PROJECT NOTES AND AS DIRECTED BY THE ENGINEER.
  - B. CLEARING AND GRUBBING OF THE BORROW SITE SHALL BE INCIDENTAL TO ITEM 201000. PLACEMENT OF STUMPS AND TREE TRUNKS, IF ELECTED AND APPROVED, SHALL BE INCIDENTAL TO ITEM 201000.
  - C. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PAID FOR UNDER ITEM 202572 - BORROW AREA EROSION AND SEDIMENT CONTROL AND DEWATERING.
  - D. PLACEMENT OF UNSUITABLE SOILS OR ROOTMAT SHALL BE INCIDENTAL TO THE ITEMS FOR THEIR REMOVAL.
  - E. SUBSOIL TILLAGE SHALL BE MEASURED AND PAID UNDER ITEM 202555.
  - F. TOPSOILING SHALL BE PAID UNDER ITEM 733002 UNDER SPECIFICATION SECTION 733. THE SURFACE OF THE FINAL TOPSOIL AREA SHALL BE MEASURED ONCE FOR PAYMENT AND PAID UNDER THE SPECIFIED ITEM REGARDLESS OF THE ACTUAL DEPTH PLACED. THE CONTRACTOR SHALL MEET ALL TOPSOILING REQUIREMENTS WITH TOPSOIL OR AGRICULTURAL SOILS REMOVED FROM THE BORROW SITE. TOPSOIL REMOVED FROM ELSEWHERE WITHIN THE CONTRACT LIMITS THAT IS IN EXCESS OF THE TOPSOILING NEEDED FOR THE PROJECT MAY BE DISPOSED OF AT THE BORROW SITE WITH THE PERMISSION OF THE ENGINEER. ANY OTHER TOPSOIL NEEDED AT THE BORROW SITE DUE TO THE CONTRACTOR'S OPERATIONS, SUCH AS BURYING UNSUITABLE MATERIALS, SHALL BE PROVIDED BY THE CONTRACTOR AT NO EXPENSE TO THE DEPARTMENT.
  - G. NATIVE GRASS SEEDING SHALL BE MEASURED AND PAID UNDER ITEM 734551.
12. MONITORING WELLS SHALL BE ABANDONED BY A WELL DRILLER LICENSED IN DELAWARE IN ACCORDANCE WITH THE PROVISIONS IN ITEM 211521 - ABANDONMENT OF WELLS. PHYSICAL REMOVAL AND DISPOSAL OF THE ABANDONED WELLS ENCOUNTERED DURING EXCAVATION SHALL BE INCIDENTAL TO ITEM 202000 - EXCAVATION AND EMBANKMENT.
13. SEDIMENT REMOVED FROM SEDIMENT CONTROL DEVICES SHALL BE TREATED PER NOTE 3 ABOVE.

\$FILES \$DATES

DRAFT  
FOR PREPARING



ADDENDUMS / REVISIONS

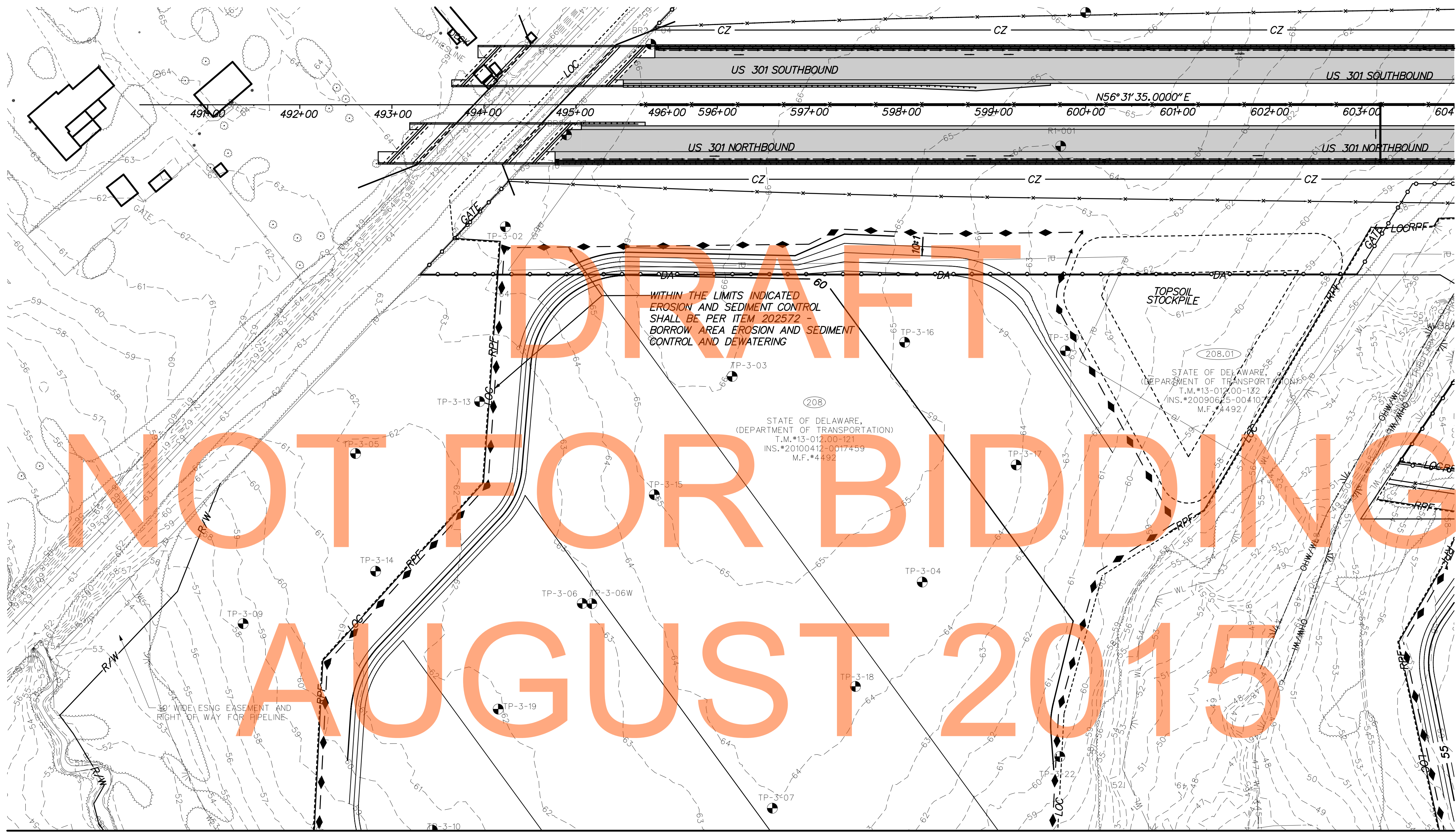
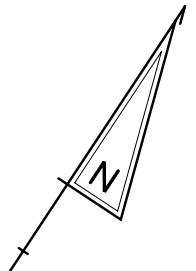
NOT TO SCALE

US 301,  
NORFOLK SOUTHERN RR TO SR 896

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

BORROW SITE GENERAL NOTES
SHEET NO. 58
TOTAL SHTS. 240

BS-01



**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

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

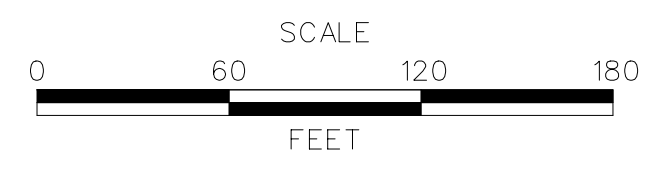
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(DEPARTMENT OF TRANSPORTATION)  
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INS.#20090625-00410  
M.F.#4492

MATCH LINE SHEET BS-03

\$DATES  
\$FILES



ADDENDUMS / REVISIONS	

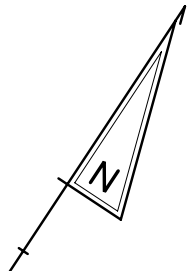


**US 301,  
NORFOLK SOUTHERN RR TO SR 896**

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

**BORROW SITE GRADING  
PLEASANTON SOUTH**



<b>BS-02</b>
SHEET NO. 59
TOTAL SHTS. 240



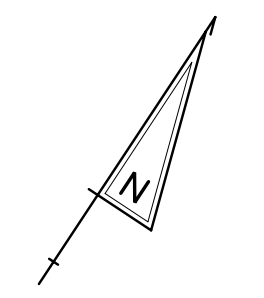
MATCH LINE SHEET BS-02



\$DATES \$FILES

 <b>DELAWARE</b> <b>DEPARTMENT OF TRANSPORTATION</b>	ADDENDUMS / REVISIONS	<p>SCALE</p>  <p>FEET</p>	<b>US 301,</b> <b>NORFOLK SOUTHERN RR TO SR 896</b>	CONTRACT	BRIDGE NO.	<b>BORROW SITE GRADING</b> <b>PLEASANTON SOUTH</b>	SHEET NO.
				T200911301			DESIGNED BY: WJD
				COUNTY	CHECKED BY: MAA		TOTAL SHTS.
				NEW CASTLE			240

<b>BS-03</b>
SHEET NO.
60
TOTAL SHTS.
240

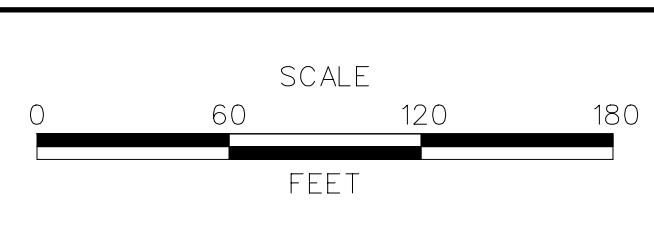


MATCH LINE SHEET BS-05

\$DATES  
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ADDENDUMS / REVISIONS	



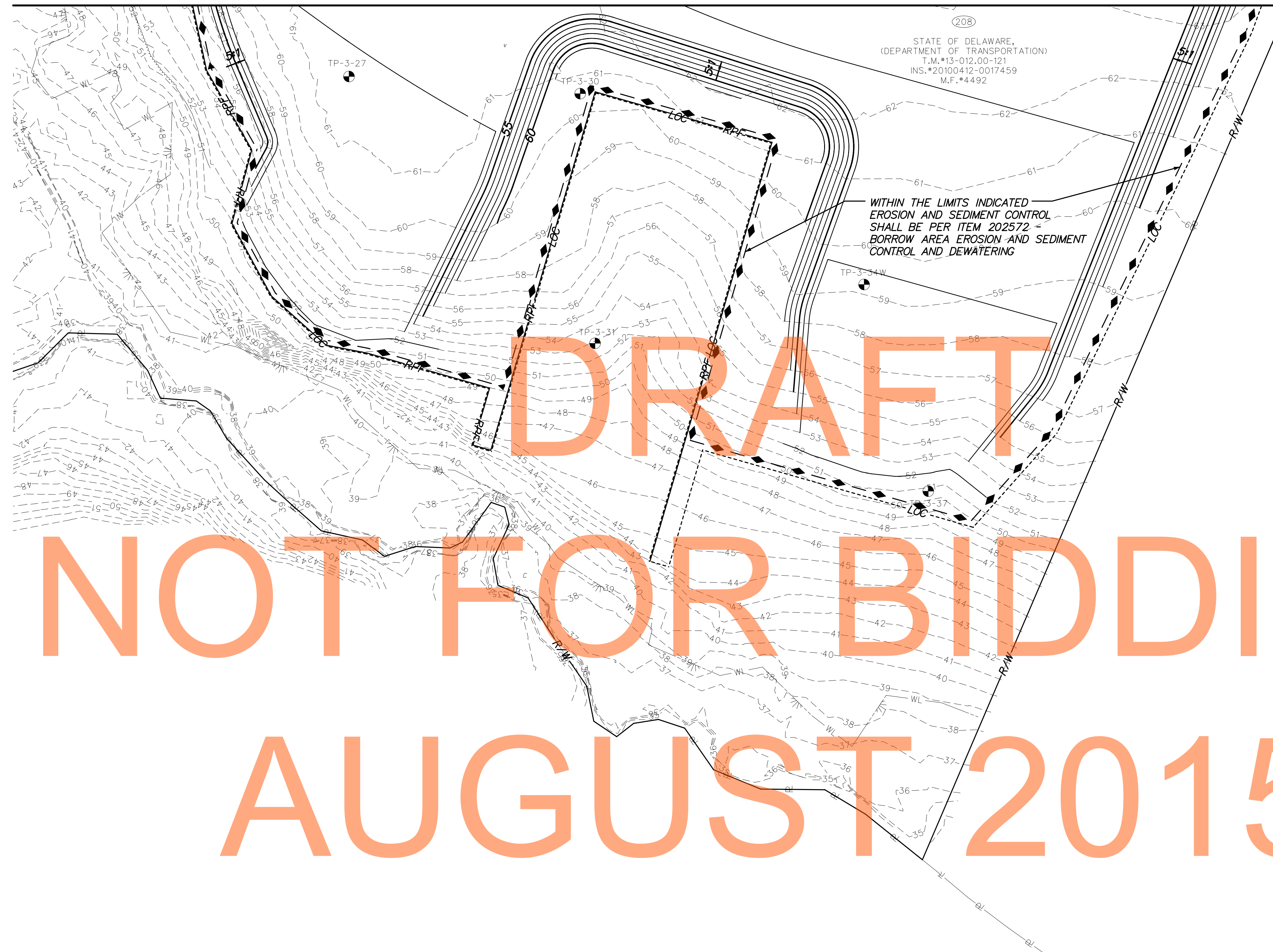
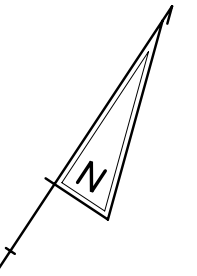
**US 301,**  
**NORFOLK SOUTHERN RR TO SR 896**

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

**BORROW SITE GRADING**  
**PLEASANTON SOUTHEAST**

<b>BS-04</b>
SHEET NO. 61
TOTAL SHTS. 240

MATCH LINE SHEET BS-04



DRAFT

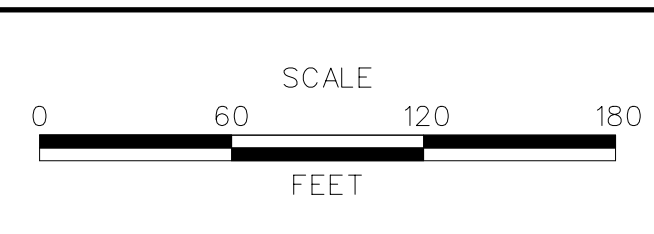
NOT FOR BIDDING

AUGUST 2015

\$DATES \$FILES



ADDENDUMS / REVISIONS	

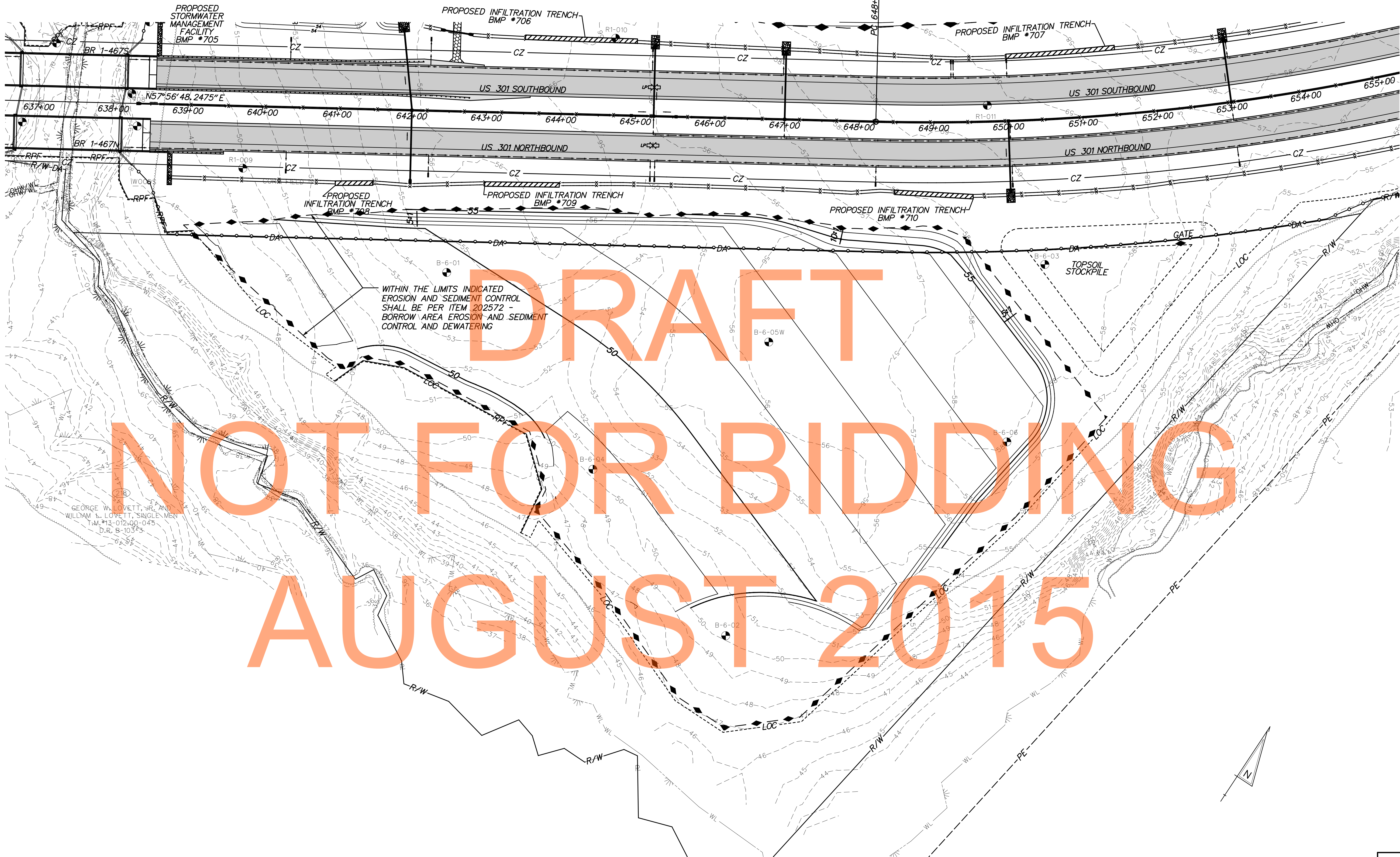


**US 301,  
NORFOLK SOUTHERN RR TO SR 896**

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

**BORROW SITE GRADING  
PLEASANTON SOUTHEAST**

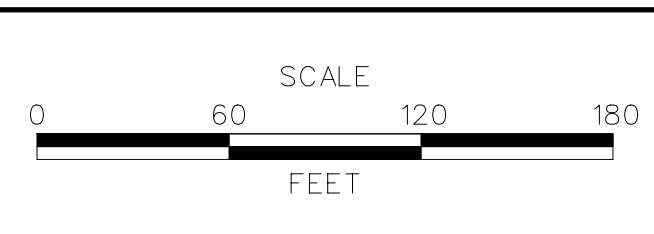
<b>BS-05</b>
SHEET NO. 62
TOTAL SHTS. 240



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NOT FOR BIDDING  
AUGUST 2015

\$FILES \$DATES

ADDENDUMS / REVISIONS	



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

DRAFT

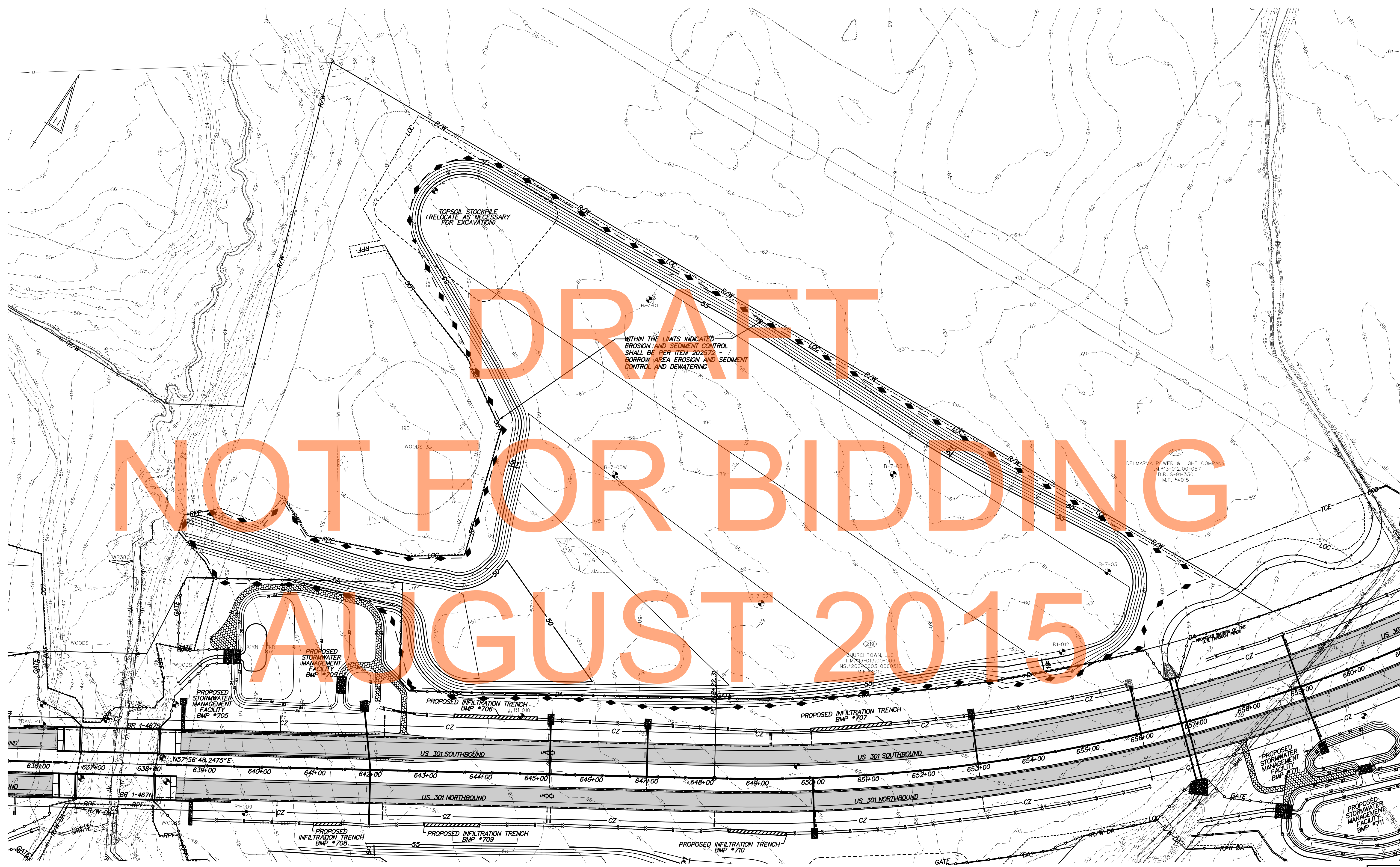
NOT FOR BIDDING

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. #2009603-0066892  
M.F. #4015



SDATES

SFILES

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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.#13-012.00-133  
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

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