

THE STATE OF DELAWARE DEPARTMENT OF TRANSPORTATION

U.S. CUSTOMARY
UNITS



CONSTRUCTION PLANS FOR: US 301 MARYLAND STATE LINE TO LEVELS ROAD

CONTRACT NUMBER: **T200811301**
 FEDERAL AID PROJECT NUMBER: **NH 2015(20)**
 COUNTY: **NEW CASTLE** M.R. #: **84**

GENERAL LOCATION OF CONTRACT

PREPARED BY
THE CONSULTING FIRM OF
JACOBS
1700 MARKET STREET, SUITE 1000
PHILADELPHIA, PA 19103
267-234-9500

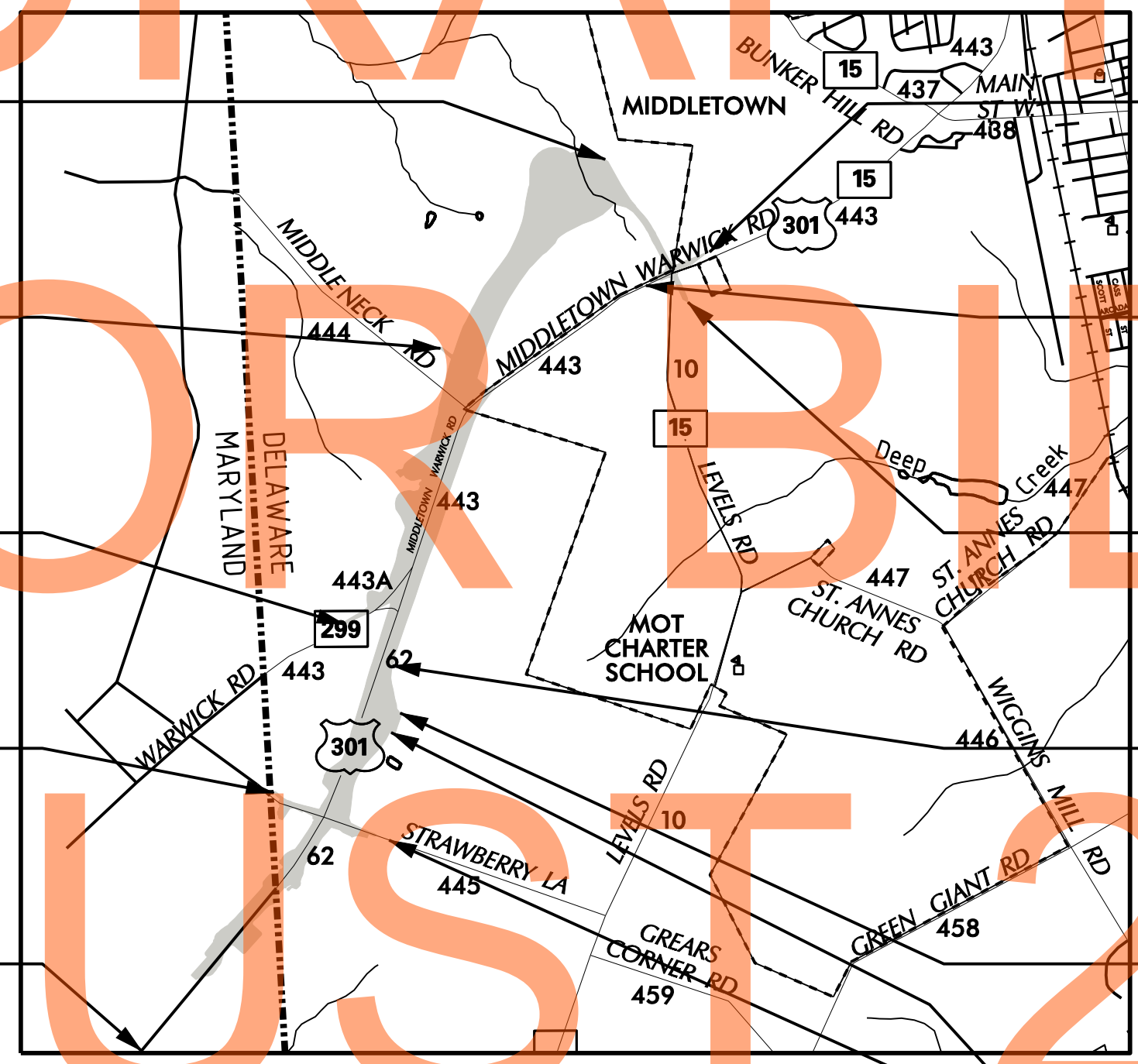
END
CONTRACT T200811301
STATION 258 + 00

LIMIT OF CONSTRUCTION
CONTRACT T200811301
STATION 32 + 00

LIMIT OF CONSTRUCTION
CONTRACT T200811301
STATION 1201 + 50

LIMIT OF CONSTRUCTION
CONTRACT T200811301
STATION 1001 + 00

BEGIN
CONTRACT T200811301
STATION 62 + 75



LIMIT OF CONSTRUCTION
CONTRACT T200811301
STATION 748 + 00

LIMIT OF CONSTRUCTION
CONTRACT T200811301
STATION 732 + 00

LIMIT OF CONSTRUCTION
CONTRACT T200811301
STATION 667 + 00

LIMIT OF CONSTRUCTION
CONTRACT T200811301
STATION 1131 + 45

LIMIT OF CONSTRUCTION
CONTRACT T200811301
STATION 601 + 53

LIMIT OF CONSTRUCTION
CONTRACT T200811301
STATION 511 + 58

LIMIT OF CONSTRUCTION
CONTRACT T200811301
STATION 1020 + 60

DESIGN DESIGNATION		
FUNCTIONAL CLASS: RURAL PRINCIPAL ARTERIAL	D.H.V. PROJECTED: 4,560	YEAR: 2030
TYPE OF CONSTRUCTION: NEW	DESIGN SPEED: 70 M.P.H.	
A.A.D.T. CURRENT: N/A	YEAR: N/A	TRUCKS: 20 %
A.A.D.T. PROJECTED: 57,000	YEAR: 2030	DIRECTION OF DISTRIBUTION: 57 %

INDEX OF SHEETS	
SHEET NO	TABLE OF CONTENTS
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104 - 158	PROFILES
159 - 160	MARYLAND DRAINAGE PROFILES
161 - 213	GRADES AND GEOMETRICS
214 - 239	CONSTRUCTION DETAILS
240 - 263	PAVEMENT JOINT LAYOUT DETAILS
264 - 291	BRIDGE 1-486 PLAN AND ELEVATION
292 - 327	BRIDGE 1-482 PLAN AND ELEVATION
328 - 337	SIGN STRUCTURE PLANS
338 - 438	STORMWATER MANAGEMENT PLANS
439 - 445	BORROW SITE GRADING PLANS
446 - 464	ENVIRONMENTAL COMPLIANCE PLANS
465 - 644	CONSTRUCTION PHASING, M.O.T. AND EROSION CONTROL PLANS
645 - 647	DETOUR PLANS
648 - 665	LANDSCAPING PLANS
666 - 690	LIGHTING PLANS
691 - 735	UTILITY RELOCATION PLANS
736 - 792	SIGNING, STRIPING AND CONDUIT PLANS
793 - 799	SIGNALIZATION PLANS
800 - 810	WIM AND CIVISN PLANS
811 - 850	TOLLING PLANS

TOTAL SHEETS: 850

APPROVED DESIGN EXCEPTIONS

DESIGN PARAMETER	REQUIRED	PROVIDED	DATE

ADDENDA & REVISIONS

DESCRIPTION	NAME & DATE

ASSOCIATED CONTRACTS

CONTRACT NO.	CONTRACT NAME
25-128-04	US 301 FROM N444, MIDDLENECK ROAD TO N58 PETERSON ROAD
23-500-38	US 301 WEIGH STATION AND INSPECTION FACILITY

LAST REVISED: 12/24/2012
J:\2008 PROJECTS\E3\34801\700CADD\750AET\ROADWAY\TC_301AET_001.DGN

RECOMMENDED	
SQUAD MANAGER, CONSTRUCTION	DATE
GROUP ENGINEER, CONSTRUCTION	DATE
ASSISTANT DIRECTOR, TRANSPORTATION SOLUTIONS (CONSTRUCTION)	DATE

PREPARED BY THE CONSULTING FIRM OF RUMMEL, KLEPPER & KAHL, LLP	
PLAN SHEETS 439 - 445 464 648 - 665	SEAL
RECOMMENDED	DATE
RECOMMENDED	DATE

PREPARED BY THE CONSULTING FIRM OF GANNETT FLEMING, INC.	
PLAN SHEETS 811 - 850	SEAL
RECOMMENDED	DATE
RECOMMENDED	DATE

RECOMMENDED	
STORMWATER ENGINEER	DATE
	SEAL

RECOMMENDED	
SQUAD MANAGER, TRANSPORTATION SOLUTIONS (PROJECT DEVELOPMENT OR BRIDGE DESIGN)	DATE
	SEAL

RECOMMENDED	
BRIDGE DESIGN ENGINEER	DATE
	SEAL

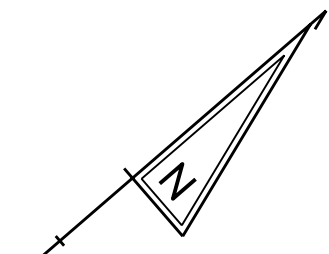
RECOMMENDED	
GROUP ENGINEER, PROJECT DEVELOPMENT	DATE
	SEAL

RECOMMENDED	
ASSISTANT DIRECTOR, TRANSPORTATION SOLUTIONS	DATE
	SEAL

APPROVED	
CHIEF ENGINEER	DATE
	SEAL

PLAN SHEET INDEX CROSS REFERENCE

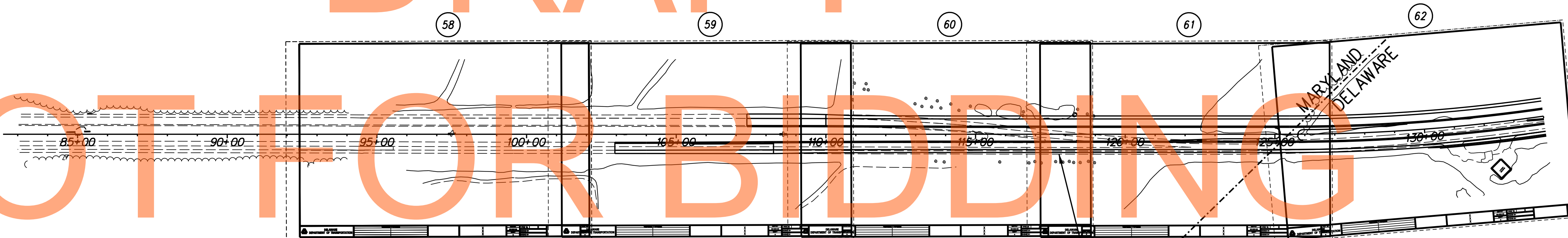
CONSTRUCTION PLANS	CP-	(58)	(59)	(60)	(61)	(62)
PROFILES	PF-	-	104	105	106	107
GRADES AND GEOMETRICS	GG-	-	161	162	163	164
PAVEMENT JOINT LAYOUT DETAILS	PJ-	-	240	241	242	243
STORMWATER MANAGEMENT PLANS	SW-	-	338	339, 346, 347	352, 359	364, 369
CONSTRUCTION PHASING, M. O. T. AND EROSION CONTROL PLANS	CS-	486, 487, 501, 510 511, 538, 539, 581 582, 593, 594, 595 611, 612, 634, 635	487, 488, 501, 502 510, 511, 512, 539 540, 582, 583, 595 612, 634, 635, 636	488, 502, 503, 512 540, 583, 613, 636	488, 489, 512, 513 540, 541, 583, 584 613, 614, 636, 637	489, 513, 541 584, 614, 637
LANDSCAPING PLANS	LS-	-	648	649	650	651
SIGNING, STRIPING, AND CONDUIT PLANS	SS-	737, 738	738, 739	740	741	742
WIM AND CVISN PLANS	WS-	800, 801	801, 802	802, 803	803, 804	804, 805



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NOT FOR BIDDING

AUGUST 2015



PLAN SHEETS PREPARED BY
SUBCONSULTANTS OF
RUMMEL, KLEPPER & KAHL, LLP

GANNETT FLEMING, INC.	PLAN SHEETS 811 - 850
STREETSCAPES, INC.	648 - 665

PLAN SHEETS PREPARED BY
SUBCONSULTANTS OF
JACOBS

PENNONI ASSOCIATES INC.	PLAN SHEETS 28 - 30 41 - 44 55 - 57 83 - 84 99 - 103 133 - 137 155 - 157 185 - 186 201 - 205 237 - 239 264 - 291 327 645 - 647 691 - 735 763 - 764 779 - 783 793 - 799
STRAUGHAN ENVIRONMENTAL, INC.	338 - 438

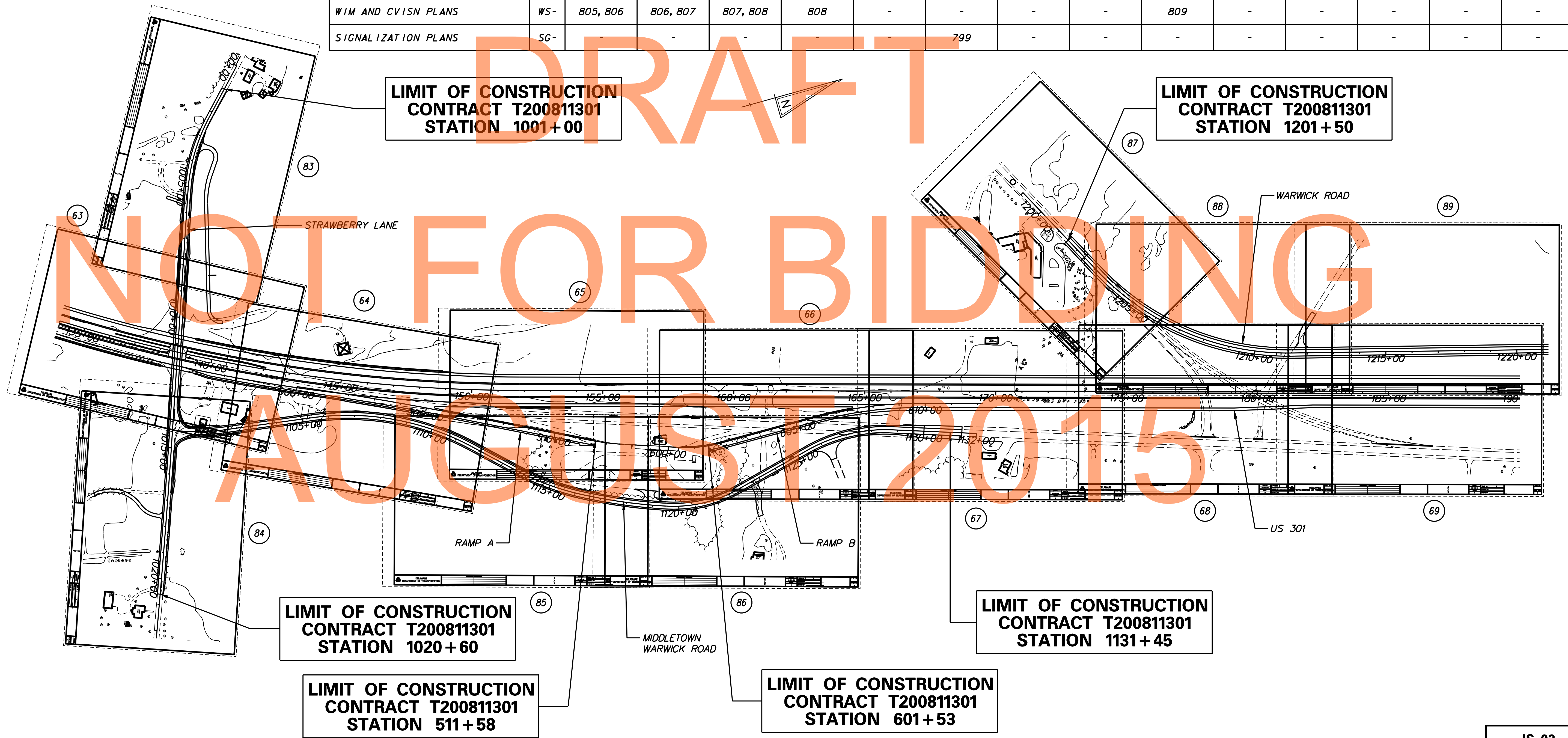
BEGIN
CONTRACT T200811301
STATION 62+75

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<p>DELAWARE DEPARTMENT OF TRANSPORTATION</p>	ADDENDUMS / REVISIONS	<p>SCALE</p> <p>FEET</p>	<p>US 301 MARYLAND STATE LINE TO LEVELS ROAD</p>	CONTRACT T200811301	BRIDGE NO.	<p>PLAN SHEET INDEX</p>	SHEET NO. 2
					NEW CASTLE		DESIGNED BY: RF

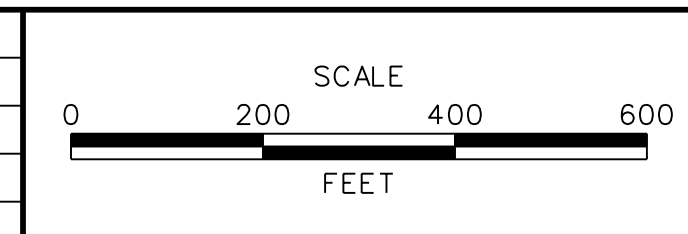
IS-01

CONSTRUCTION PLANS	CP-	63	64	65	66	67	68	69	83	84	85	86	87	88	89
PROFILES	PF-	108, 133 134, 135	109, 124 138, 139	110, 124 125, 126	111, 126 127, 141	112, 127 141	113	114	133, 136	134, 135 137, 138	139, 140	140, 141	142	143	144
GRADES AND GEOMETRICS	GG-	165	166	167	168	169	170	171	185	186	187	188	189	190	191
PAVEMENT JOINT LAYOUT DETAILS	PJ-	244	245	246	247	248	249	250	-	-	-	-	-	-	-
STORMWATER MANAGEMENT PLANS	SW-	377	377, 383 387	383, 405 420	405	-	-	398	373	377, 428	420	405	-	-	392
CONSTRUCTION PHASING, M. O. T. AND EROSION CONTROL PLANS	CS-	489, 490, 499 513, 514, 534 541, 542, 562 584, 585, 614 615, 631, 637 638	490, 514, 515 542, 543, 564 585, 586, 615 616, 638, 639	515, 543, 564 586, 616, 639	514, 515, 516 543, 544, 564 565, 586, 587 599, 616, 617 639, 640	516, 517, 544 545, 565, 566 587, 588, 617 618, 640, 641	517, 545, 566 588, 600, 601 618, 641	517, 518, 545 546, 566, 567 588, 589, 600 601, 602, 618 619, 641, 642	499, 534 562, 631	490, 500, 514 535, 563, 585 615, 632, 638	543, 564, 586 616, 639	543, 544, 564 565, 586, 587 616, 617, 639 640	498, 532, 533 560, 561, 578 579, 591	517, 533, 545 561, 565, 566 579, 588, 592 618, 630, 640 641	517, 519, 545 547, 566, 568 588, 618, 620 641
LANDSCAPING PLANS	LS-	-	652	653	654	655	656	657	-	664	-	-	-	-	-
LIGHTING PLANS	LI-	666	667	668	669	670	671	-	-	-	-	-	-	-	-
SIGNING, STRIPING, AND CONDUIT PLANS	SS-	743	744	745	746	747	748	749	763	764	765	766	767	768	769
WIM AND CVISN PLANS	WS-	805, 806	806, 807	807, 808	808	-	-	-	-	809	-	-	-	-	-
SIGNALIZATION PLANS	SG-	-	-	-	-	-	799	-	-	-	-	-	-	-	-



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ADDENDUMS / REVISIONS



US 301 MARYLAND STATE LINE TO LEVELS ROAD

CONTRACT	BRIDGE NO.
T200811301	
COUNTY	DESIGNED BY: RF
NEW CASTLE	CHECKED BY: SKH

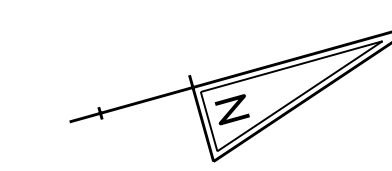
PLAN SHEET INDEX

SHEET NO.
3
TOTAL SHTS.
850

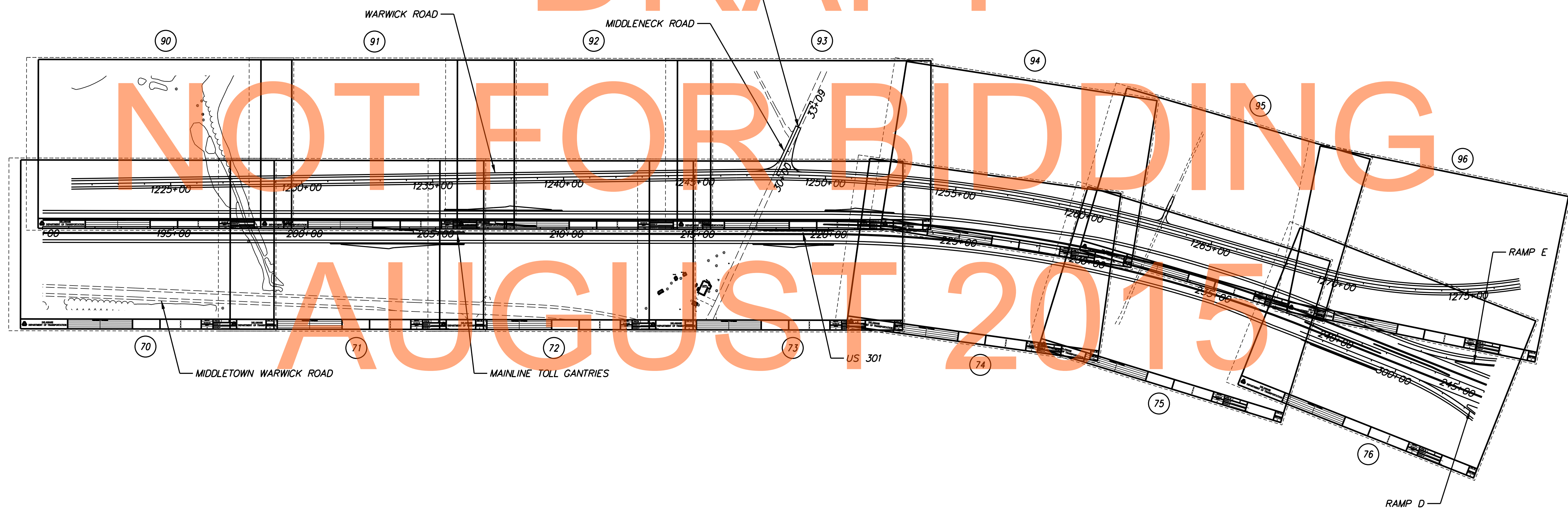
IS-02

PLAN SHEET INDEX CROSS REFERENCE

CONSTRUCTION PLANS	CP-	70	71	72	73	74	75	76	90	91	92	93	94	95	96
PROFILES	PF-	115	116	117	118	119	120	121, 128 131	145	146	147	148, 158	149	150	151
GRADES AND GEOMETRICS	GG-	172	173	174	175	176	177	178	192	193	194	195	196	197	198
PAVEMENT JOINT LAYOUT DETAILS	PJ-	251	252	253	254	255	256	257	-	-	-	-	-	-	-
STORMWATER MANAGEMENT PLANS	SW-	398	433	-	-	-	-	-	392	-	-	-	-	-	-
CONSTRUCTION PHASING, M. O. T. AND EROSION CONTROL PLANS	CS-	518, 546, 567 589, 602, 619 642	518, 520, 546 548, 567, 569 589, 590, 619 621, 642	520, 548, 569 590, 621	520, 522, 548 550, 571, 590 621, 623	522, 523, 550 551, 571, 572 623, 624	523, 551 572, 624	523, 524, 551 552, 572, 573 624, 625	519, 547 568, 620	519, 521, 547 549, 568, 570 620, 622	521, 549 570, 622	521, 522, 549 550, 570, 571 622, 623	522, 523, 550 551, 571, 572 623, 624	523, 551 572, 624	491, 523, 524 525, 551, 552 572, 573, 574 624, 625, 626
LANDSCAPING PLANS	LS-	658	659	-	660	661	662	663	-	-	-	-	-	-	-
LIGHTING PLANS	LI-	-	-	-	-	-	672	673	-	-	-	-	-	-	-
SIGNING, STRIPING, AND CONDUIT PLANS	SS-	750	751	752	753	754	755	756	770	771	772	773	774	775	776



**LIMIT OF CONSTRUCTION
CONTRACT T200811301
STATION 32+00**



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DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 200 400 600 FEET	US 301 MARYLAND STATE LINE TO LEVELS ROAD	CONTRACT T200811301	BRIDGE NO.	PLAN SHEET INDEX	SHEET NO. 4
					COUNTY NEW CASTLE		DESIGNED BY: RF

IS-03

MATCHLINE
SEE SHEET IS-05



END
CONTRACT T200811301
STATION 258+00

SEE
CONTRACT T200911303
STATION 258+00 AHEAD

LIMIT OF CONSTRUCTION
CONTRACT T200811301
STATION 748+00

LIMIT OF CONSTRUCTION
CONTRACT T200811301
STATION 732+00

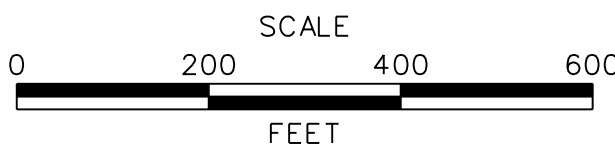
LIMIT OF CONSTRUCTION
CONTRACT T200811301
STATION 667+00

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NOT FOR BIDDING
AUGUST 2015

PLAN SHEET INDEX CROSS REFERENCE

	77	78	79	80	81	82	97	98	99	100	101	102	103
CONSTRUCTION PLANS													
PROFILES	122, 128 131	123, 154	130	130, 132 133	128, 129	129, 132 154	152	153	155	156, 157	157	-	-
GRADES AND GEOMETRICS	179	180	181	182	183	184	199, 200	200	201	202	203	204	205
PAVEMENT JOINT LAYOUT DETAILS	258	259	260	261	262	263	-	-	-	-	-	-	-
STORMWATER MANAGEMENT PLANS	412, 413	-	412, 413	412, 413	-	-	412, 413	412, 413	-	-	-	-	-
CONSTRUCTION PHASING, M. O. T. AND EROSION CONTROL PLANS	524, 526 552, 554 573, 575 625, 627	492, 526 554, 575 627, 643	524, 525 552, 553 573, 574 625, 626	491, 492 525, 526 553, 554 574, 575 626, 627 643	524, 527 552, 555 573, 576 625, 628	492, 493 526, 527 554, 555 575, 576 627, 628 643, 644	491, 525 553, 574 626	491, 525 553, 574 626	493, 494 527, 528 555, 556 576, 577 628, 629 644	494, 528 556, 577 629	495, 529 557, 577	496, 528 530, 556 558, 577 629	497, 528 531, 556 559, 577 629
LIGHTING PLANS	674	675	676	677	678	679	-	-	680	681	682	683	684
SIGNING, STRIPING, AND CONDUIT PLANS	757	758	759	760	761	762	777	778	779	780	781	782	783
SIGNALIZATION PLANS	-	-	-	798	-	797	-	-	-	793, 794 795, 796	-	-	-

ADDENDUMS / REVISIONS



US 301
MARYLAND STATE LINE
TO LEVEL ROAD

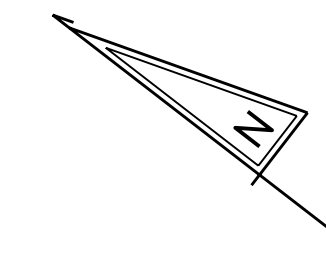
CONTRACT T200811301	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: RF
	CHECKED BY: SKH

PLAN SHEET INDEX

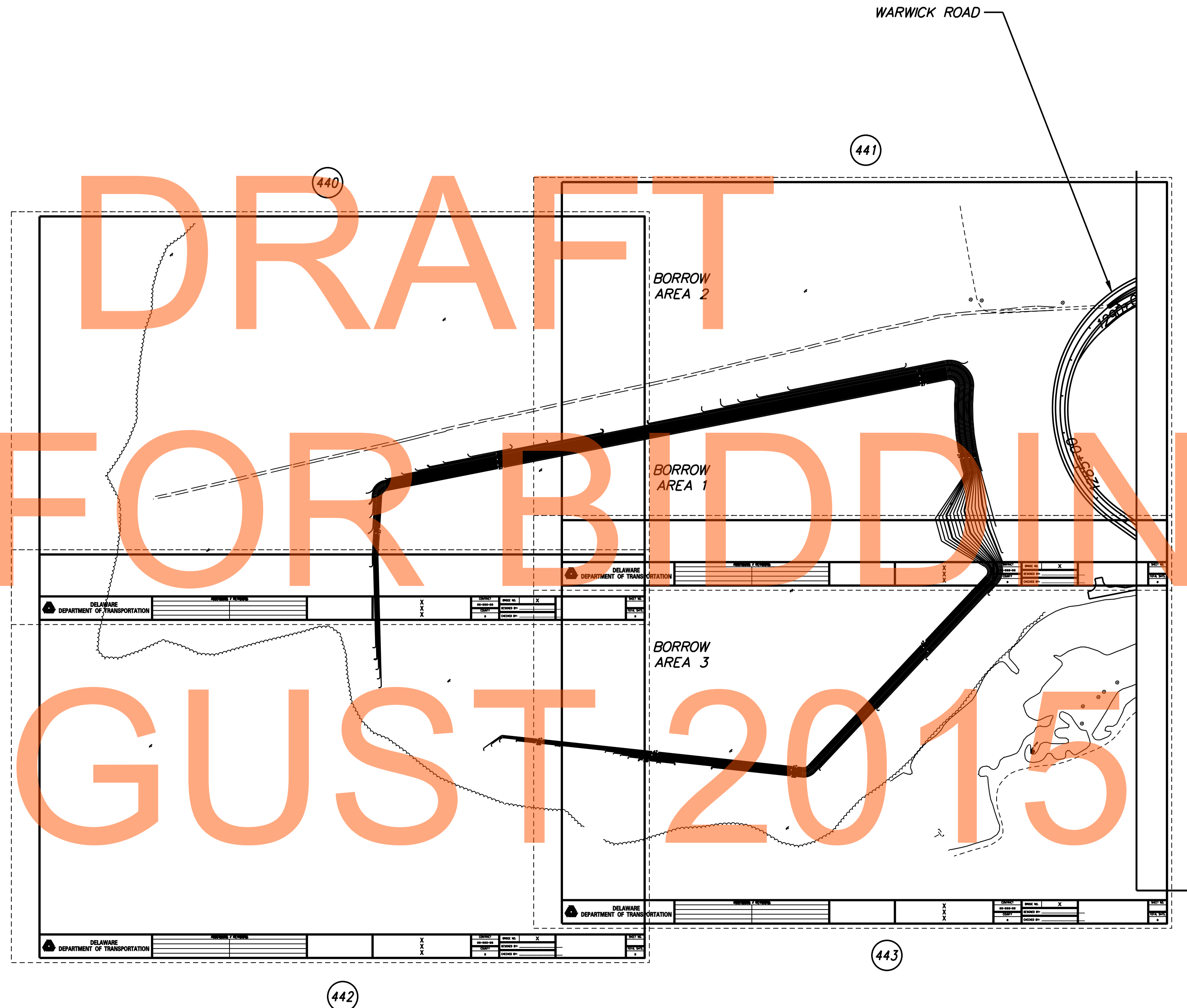
IS-04
SHEET NO. 5
TOTAL SHTS. 850

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AUGUST 2015

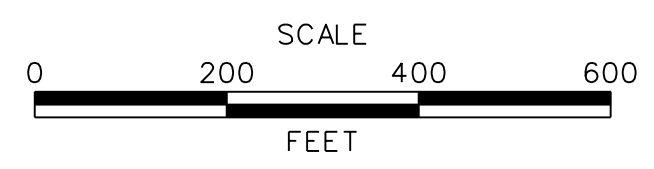


MATCHLINE
SEE SHEET IS-04

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ADDENDUMS / REVISIONS	



**US 301
MARYLAND STATE LINE
TO LEVELS ROAD**

CONTRACT T200811301	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: RF
	CHECKED BY: SKH

PLAN SHEET INDEX

IS-05
SHEET NO. 6
TOTAL SHTS. 850

EXISTING SYMBOLS

DRAINAGE	
	DITCH OR STREAM CENTERLINE
	DIRECTIONAL STREAM FLOW ARROW
	DRAINAGE INLET
	DRAINAGE JUNCTION BOX
	DRAINAGE MANHOLE
	DRAINAGE PIPE AND FLOW ARROW
	DRAINAGE PIPE HEADWALL
	RIPRAP - AREA FEATURE
	RIPRAP - LINEAR FEATURE

MANMADE ROADSIDE FEATURES	
	BOLLARD - STEEL POLE
	BOLLARD - WOOD POST
	CURB
	CURB AND GUTTER
	FENCE - CHAINLINK OR STRANDED
	FENCE - STOCKADE OR SPLIT RAIL
	FLAG POLE
	GUARDRAIL - STEEL BEAM
	GUARDRAIL - WIRE ROPE
	LAMP AND POST - RESIDENTIAL
	MAILBOX
	PARKING METER AND POST
	PAVEMENT - FLEXIBLE
	PAVEMENT - RIGID
	PILE - BRIDGE
	PILLAR OR MISCELLANEOUS POST
	TRAFFIC SIGN AND POST
	WALL - BRICK OR BLOCK
	WALL - STONE

NATURAL ROADSIDE FEATURES	
	GRASS LAWN
	HEDGEROW OR THICKET
	MARSH BOUNDARY LINE
	TREE - CONIFEROUS
	TREE - DECIDUOUS
	TREE STUMP
	SHRUBBERY
	DELINEATED WETLAND BOUNDARY LINE
	WOODS LINE BOUNDARY

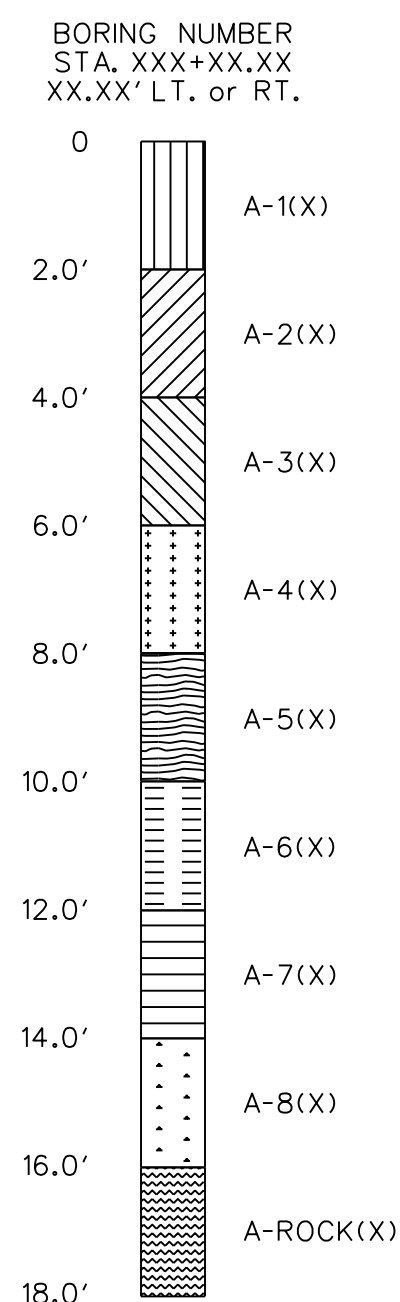
SURVEY CONTROL & MONUMENTATION	
	SURVEY BENCHMARK LOCATION
	SURVEY TIE POINT LOCATION
	SURVEY TRAVERSE POINT
	POINT OF CURVATURE OR TANGENCY
	POINT OF INTERSECTING TANGENTS

RIGHT-OF-WAY SYMBOLS	
	PROPERTY MARKER - CONCRETE MON.
	PROPERTY MARKER - IRON PIPE
	HISTORIC RIGHT-OF-WAY BASELINE
	HISTORIC PROPERTY BOUNDARY
	EXISTING RIGHT-OF-WAY
	EXISTING PROPERTY LINE
	EXISTING EASEMENT
	EXISTING DENIAL OF ACCESS
	EXISTING R/W & DENIAL OF ACCESS

UTILITY	
	SOIL BORING LOCATION
	UTILITY TEST HOLE LOCATION
	CABLE TV DISTRIBUTION BOX
	ELECTRIC MANHOLE
	ELECTRIC METER
	ELECTRIC TRANSFORMER
	LUMINAIRE - COBRA HEAD
	LUMINAIRE - OFFSET
	GAS MANHOLE
	GAS METER
	GAS VALVE
	GAS PUMP - SERVICE STATION
	RAILROAD TRACKS
	SANITARY SEWER MANHOLE
	SANITARY SEWER VALVE
	SANITARY SEWER VENT OR CLEANOUT
	SEPTIC DRAIN FIELD
	TELEPHONE BOOTH
	TELEPHONE MANHOLE
	TELEPHONE TEST POINT
	TRAFFIC - CONDUIT JUNCTION WELL
	TRAFFIC - LIGHT POLE AND BASE
	TRAFFIC - PEDESTRIAN POLE & BASE
	TRAFFIC - SIGNAL CABINET & BASE
	TRAFFIC - SIGNAL POLE AND BASE
	UTILITY BOX
	UTILITY POLE GUY WIRE ANCHOR
	UTILITY POLE
	WATER - FIRE HYDRANT
	WATER METER
	WATER VALVE
	WELL HEAD
	MANHOLE - UNDETERMINED OWNER

UTILITY COMPANY FACILITIES	
	ATLANTIC BROADBAND (UNDERGROUND)
	ARTESIAN WATER COMPANY
	CHESAPEAKE UTILITIES CORP. - GAS
	DEDOT MULTIDUCT CONDUIT
	DEDOT SIGNAL CONDUIT
	DELMARVA POWER - ELECTRIC
	DELMARVA POWER - ELECTRIC (OVERHEAD)
	TOWN OF MIDDLETOWN - ELECTRIC (OVERHEAD)
	TOWN OF MIDDLETOWN - SEWER
	VERIZON
	VERIZON (OVERHEAD)
	VERIZON FIBER-OPTIC (OVERHEAD)

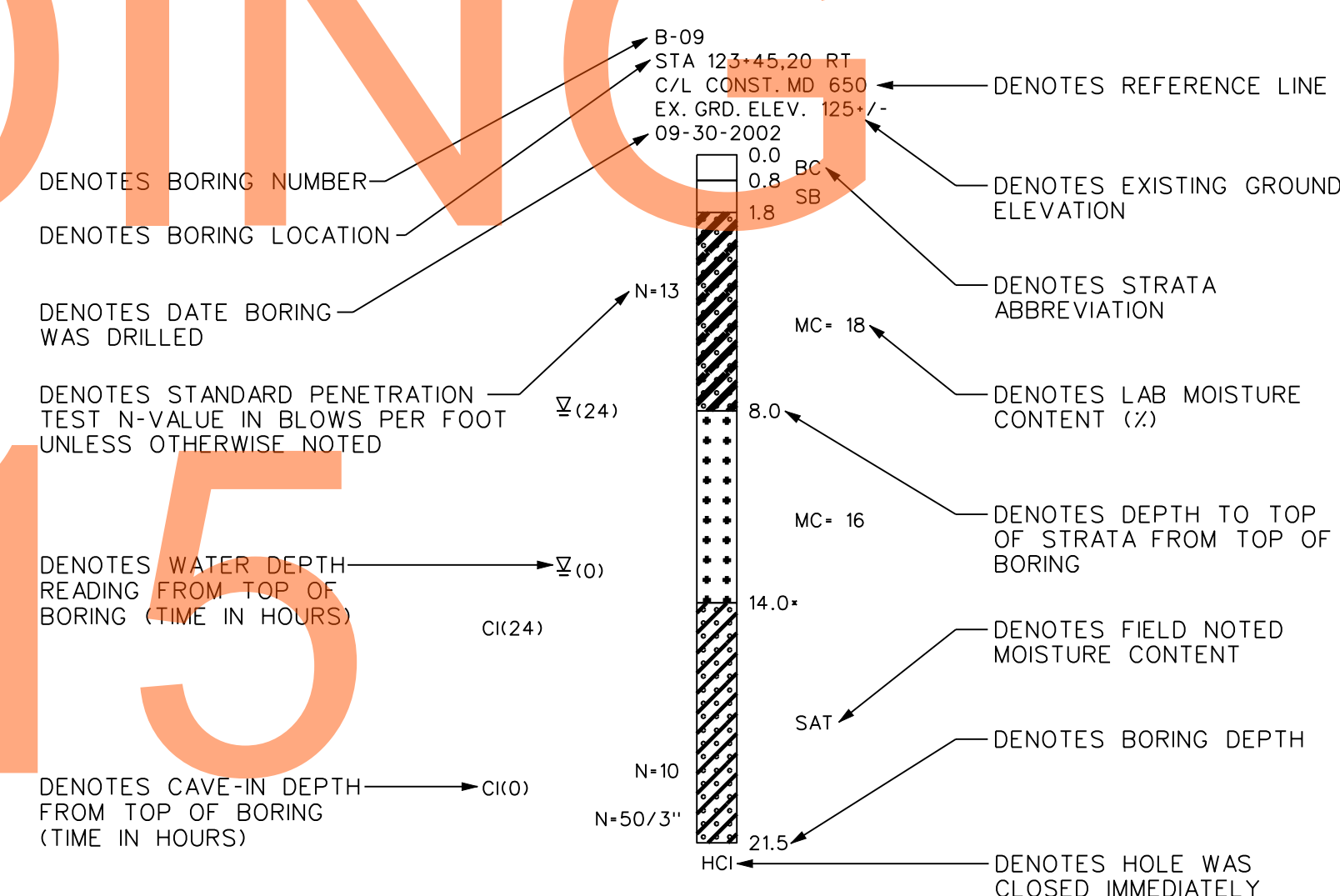
IDENTIFIERS	
	EXISTING CONDUIT RUN (X OF CONDUIT RUN)
	EXISTING CABINET BASE (TYPE OF CABINET BASE)
	EXISTING JUNCTION WELL (TYPE OF JUNCTION WELL)
	EXISTING POLE BASE (TYPE OF POLE BASE)
	EXISTING LIGHTING SERVICE
	EXISTING LIGHTING STANDARD



DELDOT BORING LEGEND



EXAMPLE SOIL BORING PROFILE



MDSA BORING LEGEND

LAST REVISED: 3/12/2008 J:\2008 PROJECTS\E3\34801\700CADD\750AET\ROADWAY\LG_301AET_001.DGN

PROPOSED SYMBOLS

CONSTRUCTION	
	CONCRETE SAFETY BARRIER - PERMANENT
	BIOFILTRATION SWALE
	BOLLARD - STEEL POLE
	BOLLARD - WOOD POST
	BRICK PATTERNED SURFACE
	BUTT JOINT
	CONSTRUCTION BASELINE
	CONSTRUCTION SAFETY FENCE
	CURB, TYPE 1 & TYPE 3
	CURB, TYPE 2
	CURB & GUTTER, TYPE 1
	CURB & GUTTER, TYPE 2
	CURB & GUTTER, TYPE 3
	CURB & GUTTER, TYPE 4
	CLEAR ZONE
	DRAINAGE INLET
	DITCH
	FENCE - METAL
	FENCE - WOOD
	FLARED END SECTION
	GUARDRAIL, TYPE 1-31 & 1-27
	GUARDRAIL, TYPE 2-31 & 2-27
	GUARDRAIL, TYPE 3-31 & 3-27
	GUARDRAIL END ANCHORAGE
	GUARDRAIL END TREATMENT, TYPE 1-31
	GUARDRAIL END TREATMENT, TYPE 2-31
	GUARDRAIL END TREATMENT, TYPE 3-31
	IMPACT ATTENUATOR
	HORIZONTAL CLEARANCE
	JUNCTION BOX - DRAINAGE
	LIMIT OF CONSTRUCTION
	MANHOLE
	PAVEMENT PATCH
	PAVEMENT REMOVAL - TOPSOILING & PERMANENT GRASS SEEDING
	PIPE & DIRECTIONAL FLOW ARROW
	RIPRAP
	P.C.C. SIDEWALK @ 4"
	P.C.C. SIDEWALK @ 6"
	UNDERDRAIN
	UNDERDRAIN OUTLET

LANDSCAPING	
	MAJOR DECIDUOUS TREE
	EVERGREEN TREES
	MINOR DECIDUOUS TREE
	SHRUBS

RIGHT-OF-WAY SYMBOLS	
	PROPOSED RIGHT-OF-WAY MONUMENT
	PROPOSED DENIAL OF ACCESS
	PROPOSED PERMANENT EASEMENT
	PROPOSED RIGHT-OF-WAY
	PROPOSED R/W & DENIAL OF ACCESS
	TEMPORARY CONSTRUCTION EASEMENT
	PROPOSED RIGHT-OF-WAY BASELINE

IDENTIFIERS	
	ADJUST BY CONTRACTOR
	ADJUST BY OTHERS
	CONCRETE SAFETY BARRIER
	CURB OR CURB & GUTTER
	CURB OPENING
	PROPOSED CABINET BASE (TYPE OF CABINET BASE)
	PROPOSED CONDUIT RUN
	CONVERT TO JUNCTION BOX
	CONVERT TO DRAINAGE MANHOLE
	CURB RAMP / TYPE
	CURB RAMP / TYPE - WITHOUT SIDEWALK SURFACE DETECTABLE WARNING SYSTEM
	CONSTRUCTION SAFETY FENCE
	DRAINAGE INLET
	DO NOT DISTURB
	ENERGY DISSIPATOR
	FENCE
	FLARED END SECTION
	FILL WITH FLOWABLE FILL
	FILTRATION STRUCTURE
	GUARDRAIL
	HEADWALL
	JUNCTION BOX
	PROPOSED JUNCTION WELL (TYPE OF JUNCTION WELL)
	LIGHTING SERVICE
	LIGHTING STANDARD
	MONUMENT - RIGHT-OF-WAY
	MANHOLE
	PIPE
	PROPOSED POLE BASE (TYPE OF POLE BASE)
	RELOCATE BY CONTRACTOR
	RELOCATE BY OTHERS
	REMOVE BY CONTRACTOR
	REMOVE BY OTHERS
	SILT FENCE
	SEDIMENT TRAP
	REINFORCED SILT FENCE
	UNDERDRAIN / LENGTH
	UNDERDRAIN OUTLET PIPE

PAVEMENT SECTION(S)	
	OVERLAY PAVEMENT - SEE TYPICAL SECTIONS FOR MATERIALS AND DEPTHS
	RECONSTRUCTED PAVEMENT - SEE TYPICAL SECTIONS FOR MATERIALS AND DEPTHS
	DRIVEWAY AND ENTRANCE PAVEMENT - SEE TYPICAL SECTIONS FOR MATERIALS AND DEPTHS

TRAFFIC	
	DELDOT - ELECTRIC
	ITMS CONDUIT
	WIM ELECTRICAL CONDUIT
	WIM COMMUNICATIONS CONDUIT
	SIGNAL CONDUIT
	CONDUIT JUNCTION WELL
	UTILITY POLE
	CABINET BASE
	POLE BASE
	SERVICE PEDESTAL
	LUMINAIRE - COBRA HEAD
	LUMINAIRE - MONGOOSE
	HIGH MAST LIGHT - 3 FIXTURE
	HIGH MAST LIGHT - 4 FIXTURE
	HIGH MAST LIGHT - 6 FIXTURE
	PAVEMENT MARKINGS
	PAVEMENT STRIPING
	TRAFFIC SIGN

UTILITY COMPANY FACILITIES	
	ARTESIAN WATER COMPANY
	DELMARVA POWER - ELECTRIC
	DELMARVA POWER - ELECTRIC (OVERHEAD)
	TOWN OF MIDDLETOWN -SEWER
	VERIZON
	VERIZON (OVERHEAD)

MISCELLANEOUS	
	POND MAINTENANCE ACCESS
	POND ACCESS ROAD, MARYLAND
	INFILTRATION TRENCH

DESIGN DESIGNATION - MIDDLETOWN WARWICK ROAD			
FUNCTIONAL CLASS: LOCAL	D.H.V. PROJECTED: 287	YEAR: 2030	
TYPE OF CONSTRUCTION: NEW	DESIGN SPEED: 40 M.P.H.		
A.A.D.T. CURRENT: 13,347	YEAR: 2009	TRUCKS: 2 %	
A.A.D.T. PROJECTED: 4,100	YEAR: 2030	DIRECTION OF DISTRIBUTION: 54 %	
* EXISTING US 301			

DESIGN DESIGNATION - STRAWBERRY LANE			
FUNCTIONAL CLASS: LOCAL	D.H.V. PROJECTED: 450	YEAR: 2030	
TYPE OF CONSTRUCTION: NEW	DESIGN SPEED: 40 M.P.H.		
A.A.D.T. CURRENT: 617	YEAR: 2009	TRUCKS: 10 %	
A.A.D.T. PROJECTED: 4,500	YEAR: 2030	DIRECTION OF DISTRIBUTION: 63 %	

DESIGN DESIGNATION - LEVELS / WARWICK ROAD			
FUNCTIONAL CLASS: MAJOR COLLECTOR	D.H.V. PROJECTED: 1,110	YEAR: 2030	
TYPE OF CONSTRUCTION: NEW	DESIGN SPEED: 40 M.P.H.		
A.A.D.T. CURRENT: 1,879	YEAR: 2009	TRUCKS: 13 %	
A.A.D.T. PROJECTED: 18,500	YEAR: 2030	DIRECTION OF DISTRIBUTION: 61 %	

LAST REVISED: 3/12/2008
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ADDENDUMS / REVISIONS	

NOT TO SCALE

**US 301
MARYLAND STATE LINE
TO LEVELS ROAD**

CONTRACT T200811301	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: RF
	CHECKED BY: SKH

LEGEND

LG-02	
SHEET NO.	8
TOTAL SHTS.	850

EARTHWORK SUMMARY

	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	TOTAL
EXCAVATION - SUBTOTAL ITEM 202000 FROM CROSS SECTIONS							
1 FROM CROSS SECTIONS							
A US 301 MAINLINE	957	58,772	0	12,062	7,768	0	79,559
B RAMP A	0	0	0	0	458	0	458
C RAMP B	0	0	0	0	590	0	590
D RAMP C	0	3,684	0	0	0	0	3,684
E RAMP D	0	3,902	0	0	0	0	3,902
F RAMP E	0	14,357	0	0	0	0	14,357
G RAMP F	0	31	0	0	0	0	31
H STRAWBERRY LANE	0	1,566	0	0	0	0	1,566
I STRAWBERRY ACCESS A	0	85	0	0	0	0	85
J STRAWBERRY ACCESS B	0	22	0	0	0	0	22
K MIDDLETOWN WARWICK ROAD	0	1,017	0	0	594	0	1,611
L WARWICK/LEVELS ROAD	0	88,617	2,161	0	0	0	90,778
M MIDDLENECK ROAD	0	151	0	0	0	0	151
N TEMPORARY CROSS OVERS & INTERSECTIONS	495	0	0	274	3,061	2,938	6,768
2 PLUS EXISTING TOPSOIL REMOVED UNDER FILL	823	66,401	219	3,721	4,835	0	75,999
3 PLUS PROPOSED TOPSOIL PLACED IN CUT (INCLUDED IN EXCAVATION FROM CROSS SECTIONS)	0	0	0	0	0	0	0
4 PLUS PAVEMENT REMOVED UNDER FILL	0	486	198	443	8,811	0	9,938
5 LESS ROOTMAT REMOVED IN CUT (NOT INCLUDED IN CROSS SECTIONS)	0	0	0	0	0	0	0
6 LESS REMOVAL OF PCC COVERED UNDER ITEM 758000	0	93	1,622	0	3,247	0	4,962
7 LESS ROCK EXCAVATION	0	0	0	0	0	0	0
8 SUBTOTAL ITEM 202000 - EXCAVATION AND EMBANKMENT FROM CROSS SECTIONS	2,275	238,998	956	16,500	22,870	2,938	284,537
STORMWATER MANAGEMENT POND (SEE POND EARTHWORK SUMMARY ON SHEETS PN-05 & PN-06)							
9 SUBTOTAL ITEM 202000 - EXCAVATION AND EMBANKMENT FROM SWM PONDS (LINE 9 ON PN-05 & PN-06)	7,347	144,715	0	0	17,117	0	169,179
SEDIMENT REMOVAL FROM TEMPORARY SEDIMENT BASINS							
10 SUBTOTAL ITEM 202000 - EXCAVATION AND EMBANKMENT FROM TEMPORARY SEDIMENT BASINS	1,331	28,429	0	0	0	0	29,760
EXCAVATION AVAILABLE FOR EMBANKMENT							
11 SUBTOTAL EXCAVATION AND EMBANKMENT QUANTITY FROM CROSS SECTIONS (ITEM 202000 - LINE 8)	2,275	238,998	956	16,500	22,870	2,938	284,537
12 PLUS STORMWATER MANAGEMENT POND EXCAVATION AVAILABLE FOR EMBANKMENT (LINE 17 ON PN-05 & PN-06)	6,506	125,785	0	0	17,633	0	149,924
13 PLUS SEDIMENT REMOVAL FROM TEMPORARY SEDIMENT BASINS (80%)	1,065	22,743	0	0	0	0	23,808
14 PLUS EXCAVATION AND BACKFILL FOR STRUCTURES (ITEM 207000)	0	551	0	0	0	0	551
15 PLUS MSE WALL EXCAVATION (INCIDENTAL TO ITEM 602772)	0	771	0	0	0	0	771
16 PLUS EXCAVATION AND BACKFILL FOR PIPE TRENCHES (ITEM 208000)	51	12,060	0	0	333	0	12,444
17 PLUS EXCAVATION FOR PIPES SMALLER THAN 24" (COVERED UNDER SECTION 612)	20	2,398	0	35	340	0	2,793
18 PLUS CHANNEL EXCAVATION (ITEM 203000)	0	110	0	0	0	0	110
19 PLUS EXCAVATION FROM LATERAL OR LONGITUDINAL DITCHES	0	0	0	0	0	0	0
20 PLUS EXCAVATION FROM INSTALLATION OF UNDERDRAINS	0	2,685	32	128	288	0	3,133
21 PLUS REMOVAL OF PCC COVERED UNDER ITEM 758000	0	93	1,622	0	3,247	0	4,962
22 LESS EXISTING TOPSOIL REMOVED IN CUT AND FILL COVERED UNDER 202000	1,257	113,123	930	7,313	6,305	0	128,928
23 LESS EXISTING PAVEMENT UNABLE TO BE PLACED IN EMBANKMENT	0	0	1,622	409	8,816	1,358	12,205
24 LESS UNSUITABLE EXCAVATION (0%)	0	0	0	0	0	0	0
25 TOTAL EXCAVATION AVAILABLE FOR EMBANKMENT	8,660	293,071	58	8,941	29,590	1,580	341,900
BORROW TYPE A							
26 BORROW, TYPE A FOR CAPPING	0	78,391	793	8,195	14,945	0	102,324
27 LESS TOPSOIL PLACED ON FILL SLOPES (NOT INCLUDED IN TYPE A AREAS)	0	0	0	0	0	0	0
28 SUBTOTAL BORROW, TYPE A CAPPING REQUIRED	0	78,391	793	8,195	14,945	0	102,324
29 PLUS CAPPING REQUIRED X ADJUSTMENT FACTOR (0.20%)	0	15,678	159	1,639	2,989	0	20,465
30 TOTAL ADJUSTED BORROW, TYPE A REQUIRED	0	94,069	952	9,834	17,934	0	122,789

PROJECT NOTES, SECTION 100 (CONTINUED FROM SHEET PN-01)

3. DELETE IN ITS ENTIRETY STANDARD SPECIFICATION SUBSECTION 104.10 "RIGHTS IN AND USE OF MATERIALS FOUND ON THE WORK" AND REPLACE WITH THE FOLLOWING: THE CONTRACTOR CAN EXPECT TO ENCOUNTER HORIZONTAL AND VERTICAL DEPOSITS OF MATERIAL IN THE ON-SITE BORROW SITES, ROADWAY EXCAVATIONS, OR EXCAVATION FROM OTHER WORK ITEMS THAT WILL MEET THE REQUIREMENTS FOR BORROW TYPES A, C, D, F AND/OR FURNISHING BORROW, TYPE C AS WELL AS UNSUITABLE MATERIALS. ALL REFERENCES TO THESE VARIOUS BORROW TYPES IN THE PLANS AND SPECIAL PROVISIONS SHALL BE INTERPRETED TO MEAN MATERIALS OBTAINED FROM ON-SITE EXCAVATIONS MEETING THE GRADATION REQUIREMENTS OF THE BORROW TYPE STATED IN THE PLANS OR SPECIAL PROVISIONS. THE CONTRACTOR SHALL PERFORM THE EXCAVATIONS IN A METHOD APPROVED BY THE ENGINEER SO THAT THESE DEPOSITS OF MATERIAL ARE MADE AVAILABLE TO MEET THE PROJECT NEEDS. EXCESSIVE OR INSUFFICIENT MOISTURE CONTENT SHALL NOT BE CRITERIA FOR CLASSIFYING MATERIAL AS UNSUITABLE FOR USE. PAYMENT FOR ALL OF THESE BORROW TYPES INCORPORATED INTO THE PROJECT WILL BE MADE USING THE BID ITEM UNDER WHICH THE MATERIAL WAS ORIGINALLY EXCAVATED ON SITE. UNLESS APPROVED OR SPECIFIED OTHERWISE, BORROW, TYPE B IS INTENDED TO BE FURNISHED FROM A SOURCE OUTSIDE OF THE PROJECT LIMITS AND PAID FOR UNDER ITEM 209002. PLACEMENT, HAULING, STORING, AND COMPACTING OF ALL BORROW MATERIAL EXCAVATED ON SITE TO BE USED AS THE STATED BORROW TYPES A, C, D, F, AND OR /FURNISHING BORROW, TYPE C AS NOTED IN THE PLANS OR SPECIAL PROVISIONS IS INCIDENTAL TO THE ITEM UNDER WHICH IT WAS EXCAVATED (FOR EXAMPLE, ITEMS 202000, 207000, 208000, OR OTHERS AS APPLICABLE). THE MATERIALS SHALL BE PLACED IN ACCORDANCE WITH THEIR INTENDED USE BUT NO PAYMENT WILL BE MADE UNDER THE ITEMS FOR WHICH THE EXCAVATED MATERIALS ARE USED. THE CONTRACTOR IS RESPONSIBLE FOR MANAGING THE ON-SITE EXCAVATIONS TO INCLUDE LOCATING THE TYPES OF BORROW REQUIRED TO MEET THE PLAN NEEDS, STOCKPILING, HAULING, WETTING OR DRYING THE MATERIAL TO MEET STANDARD SPECIFICATION 202.05(F), AND MULTIPLE HANDLING IF NEEDED, WITH ALL COSTS INCIDENTAL TO THE ITEM UNDER WHICH THE MATERIAL WAS INITIALLY EXCAVATED. ALL REQUIRED EROSION AND SEDIMENT CONTROL WILL BE PAID SEPARATELY USING THE APPLICABLE BID ITEMS.

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ADDENDUMS / REVISIONS

NOT TO SCALE

US 301
MARYLAND STATE LINE
TO LEVELS ROAD

CONTRACT	BRIDGE NO.
T200811301	
COUNTY	DESIGNED BY: MJB
NEW CASTLE	CHECKED BY: MFM

NOTES &
EARTHWORK SUMMARY

PN-03

SHEET NO.
11
TOTAL SHTS.
850

EARTHWORK SUMMARY

	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	TOTAL
BORROW TYPE B							
31 BACKFILL FOR ROOTMAT REMOVAL UNDER FILL	9	38,539	171	3,315	6,379	0	48,413
32 PLUS BACKFILL FOR UNSUITABLE SOIL UNDER PAVEMENT, STRUCTURES & FILL	0	1,608	0	0	270	0	1,878
33 SUBTOTAL BORROW, TYPE B	9	40,147	171	3,315	6,649	0	50,291
34 PLUS BACKFILL X ADJUSTMENT FACTOR (0.20 +/-)	2	8,029	34	663	1,330	0	10,058
35 PLUS ADJUSTED BORROW, TYPE B FROM SWM PONDS (LINE 21 ON PN-05 & PN-06)	2,546	17,846	0	0	2,846	0	23,238
36 TOTAL ADJUSTED BORROW, TYPE B REQUIRED	2,557	66,022	205	3,978	10,825	0	83,587
BORROW, TYPE C							
37 FOR PIPE TRENCH BACKFILL, AND STRUCTURE BACKFILL	50	6,971	0	26	500	0	7,547
38 PLUS UTILITY TRENCH BACKFILL	23	0	0	0	0	0	23
39 SUBTOTAL BORROW, TYPE C	73	6,971	0	26	500	0	7,570
40 PLUS BORROW, TYPE C REQUIRED X ADJUSTMENT FACTOR (0.20 +/-)	15	1,394	0	5	100	0	1,514
41 TOTAL ADJUSTED BORROW, TYPE C, REQUIRED	88	8,365	0	31	600	0	9,084
BORROW, TYPE D							
42 BORROW, TYPE D FOR 139,935 SY OF SOIL CEMENT BASE COURSE (0.1667)	0	16,694	0	2,248	4,380	0	23,322
43 PLUS BORROW, TYPE D REQUIRED X ADJUSTMENT FACTOR (0.20 +/-)	0	3,339	0	450	876	0	4,664
44 TOTAL ADJUSTED BORROW, TYPE D, REQUIRED	0	20,033	0	2,698	5,256	0	27,986
BORROW, TYPE F							
45 EMBANKMENT REQUIRED BELOW CAPPING	2,573	419,575	163	36,503	61,557	123	520,494
46 PLUS EXISTING TOPSOIL REMOVED UNDER FILL	823	66,401	219	3,721	4,835	0	75,999
47 PLUS PCC AND BITUMINOUS PAVEMENT REMOVED UNDER FILL	0	486	198	443	8,811	0	9,938
48 PLUS BACKFILL FOR PIPE TRENCHES (OUTSIDE LIMITS OF TYPE C)	0	3,814	0	0	0	0	3,814
49 PLUS BACKFILL FOR STRUCTURES OUTSIDE LIMITS OF CROSS SECTIONS	0	96	0	0	0	0	96
50 LESS PROPOSED TOPSOIL PLACED ON FILL SLOPES (NOT INCLUDED IN FILL AREAS)	0	0	0	0	0	0	0
51 LESS EXCESS TOPSOIL TO BE PLACED IN OUTER EMBANKMENTS	0	0	0	0	0	0	0
52 LESS MSE WALL BACKFILL (NOT INCLUDED IN EMBANKMENT QUANTITIES)	0	0	0	0	0	0	0
53 SUBTOTAL EMBANKMENT REQUIRED BELOW CAPPING	3,396	490,372	580	40,667	75,203	123	610,341
54 PLUS EMBANKMENT REQUIRED X ADJUSTMENT FACTOR (0.20 +/-)	679	98,074	116	8,133	15,041	25	122,068
55 PLUS ADJUSTED BORROW, TYPE F FROM SWM PONDS (LINE 32 ON PN-05 & PN-06)	1,568	24,979	0	0	6,092	0	32,639
56 TOTAL ADJUSTED BORROW, TYPE F, REQUIRED	5,643	613,425	696	48,800	96,336	148	765,048
EXCAVATION - TOTAL ITEM 202000 INCLUDING EARTHWORK REQUIRED FROM BORROW SOURCE							
57 TOTAL ADJUSTED BORROW, TYPE A, REQUIRED (LINE 30)	0	94,069	952	9,834	17,934	0	122,789
58 TOTAL ADJUSTED BORROW, TYPE C, REQUIRED (LINE 41)	88	8,365	0	31	600	0	9,084
59 TOTAL ADJUSTED BORROW, TYPE D, REQUIRED (LINE 44)	0	20,033	0	2,698	5,256	0	27,986
60 TOTAL ADJUSTED BORROW, TYPE F, REQUIRED (LINE 56)	5,643	613,425	696	48,800	96,336	148	765,048
61 TOTAL ADJUSTED BORROW REQUIRED	5,731	735,893	1,648	61,363	120,126	148	924,907
62 LESS EXCAVATION AVAILABLE FOR EMBANKMENT (LINE 25)	8,660	293,071	58	8,941	29,590	1,580	341,900
63 EARTHWORK REQUIRED FROM BORROW SOURCE	-2,929	439,892	1,590	52,422	90,536	-1,432	584,440
64 PLUS EXISTING TOPSOIL REMOVED FROM BORROW SOURCE	37,710	0	0	0	0	0	37,710
65 SUBTOTAL ITEM 202000 - EARTHWORK REQUIRED FROM BORROW SOURCE	37,710	439,892	1,590	52,422	90,536	-1,432	622,150
66 PLUS SUBTOTAL ITEM 202000 - EXCAVATION AND EMBANKMENT FROM CROSS SECTIONS (LINE 8)	2,275	238,998	956	16,500	22,870	2,938	284,537
67 PLUS SUBTOTAL ITEM 202000 - EXCAVATION AND EMBANKMENT FROM SWM PONDS (LINE 9)	7,347	144,715	0	0	17,117	0	169,179
68 PLUS SUBTOTAL ITEM 202000 - EXCAVATION AND EMBANKMENT FROM TEMPORARY SEDIMENT BASINS	1,331	28,429	0	0	0	0	29,760
69 TOTAL ITEM 202000 - EXCAVATION AND EMBANKMENT	48,663	852,034	2,546	68,922	130,523	2,938	1,105,626
70 STOCKPILE MATERIAL NEEDS FROM BORROW SOURCE	0	144,547	-1,590	-52,422	-90,536	0	0
71 TOTAL ITEM 202000 - EXCAVATION AND EMBANKMENT PER PHASE	48,663	996,582	956	16,500	39,987	2,938	1,105,626
TOPSOIL SUMMARY							
72 EXISTING TOPSOIL REMOVED IN CUT	434	46,722	711	3,592	1,470	0	52,929
73 PLUS EXISTING TOPSOIL REMOVED UNDER FILL	823	66,401	219	3,721	4,835	0	75,999
74 PLUS EXISTING TOPSOIL REMOVED IN CUT AND FILL FROM STORMWATER MANAGEMENT PONDS (LINE 44 ON PN-05 & PN-06)	841	19,227	0	0	1,076	0	21,144
75 SUBTOTAL TOPSOILING AVAILABLE FOR REUSE	2,098	132,350	930	7,313	7,381	0	150,072
76 LESS PROPOSED TOPSOILING REQUIRED ROADWAY	513	61,555	1,011	2,444	7,822	768	74,113
77 LESS PROPOSED TOPSOILING REQUIRED FOR SWM PONDS (LINE 45 ON PN-05 & PN-06)	0	4,169	0	0	14,056	0	18,225
78 SUBTOTAL EXCESS (+) TOPSOIL OR TOPSOIL NEEDED (-)	1,585	66,626	-81	4,869	-14,497	-768	57,734
79 LESS TOPSOIL PLACED IN OUTER EMBANKMENTS	0	0	0	0	0	0	0
80 TOTAL EXCESS (+) TOPSOIL OR TOPSOIL NEEDED (-)	1,585	66,626	-81	4,869	-14,497	-768	57,734

NOTE: EXCESS TOPSOIL SHALL BE DELIVERED TO THE MITIGATION SITE. COORDINATE THE EXACT LOCATION OF THE STOCKPILE WITH THE ENGINEER.

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ADDENDUMS / REVISIONS

NOT TO SCALE

**US 301
MARYLAND STATE LINE
TO LEVELS ROAD**

CONTRACT	BRIDGE NO.
T200811301	
COUNTY	DESIGNED BY: MJB
NEW CASTLE	CHECKED BY: MFM

EARTHWORK SUMMARY

PN-04

SHEET NO.
12
TOTAL SHTS.
850

POND EARTHWORK SUMMARY

		CONSTRUCTION PHASE																TOTAL
		BMP NUMBER	070032	070033	070034	070035	604	606	607	PHASE 5								
STORMWATER MANAGEMENT POND EXCAVATION																		
1	FROM CROSS SECTIONS	0	48	352	0	0	0	0	0	5,753	0	4,851	228	1,963	0	2,317	15,512	157,691
2	PLUS EXISTING TOPSOIL REMOVED UNDER FILL	0	0	84	0	0	0	0	0	0	187	218	0	50	4	0	543	4,353
3	PLUS PROPOSED TOPSOIL PLACED IN CUT (INCLUDED IN EXCAVATION FROM SECTIONS)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	PLUS CLAY CORE OR CUT-OFF TRENCH BELOW EXISTING TOPSOIL	0	0	386	0	0	0	332	0	0	0	0	0	0	0	0	718	5,838
5	PLUS PAVEMENT REMOVED UNDER FILL	0	0	0	0	0	0	0	0	0	0	47	0	297	0	0	344	1,297
6	LESS ROOTMAT REMOVED IN CUT (NOT INCLUDED IN CROSS SECTIONS)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	LESS REMOVAL OF PCC COVERED UNDER ITEM 758000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	LESS ROCK EXCAVATION	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	TOTAL ITEM 202000 - EXCAVATION AND EMBANKMENT FROM SWM PONDS	0	48	822	0	0	0	332	0	5,753	187	5,116	228	2,310	4	2,317	17,117	169,179
EXCAVATION AVAILABLE FOR EMBANKMENT																		
10	TOTAL EXCAVATION AND EMBANKMENT FROM SWM PONDS (ITEM NO. 202000 - LINE 9)	0	48	822	0	0	0	332	0	5,753	187	5,116	228	2,310	4	2,317	17,117	169,179
11	LESS EXISTING TOPSOIL REMOVED IN CUT AND FILL	0	0	90	0	0	0	0	0	0	187	480	0	315	4	0	1,076	21,144
12	LESS EXISTING PAVEMENT UNABLE TO BE PLACED IN EMBANKMENT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	PLUS RIPRAP EXCAVATION IN CUT	42	44	32	70	45	38	0	41	60	65	20	23	38	0	44	562	746
14	PLUS STRUCTURAL EXCAVATION	76	70	70	88	67	59	5	35	49	63	13	6	5	8	45	659	767
15	PLUS MAINTENANCE ACCESS IN CUT	0	0	0	0	0	67	0	0	145	0	110	0	22	0	27	371	376
16	LESS UNSUITABLE EXCAVATION (0%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	TOTAL EXCAVATION AVAILABLE FOR EMBANKMENT	118	162	834	158	112	164	337	76	6,007	128	4,779	257	2,060	8	2,433	17,633	149,924
BORROW, TYPE B																		
18	BACKFILL FOR ROOTMAT REMOVAL	431	0	1,629	312	0	0	0	0	0	0	0	0	0	0	0	2,372	19,366
19	SUBTOTAL BORROW, TYPE B	431	0	1,629	312	0	0	0	0	0	0	0	0	0	0	0	2,372	19,366
20	PLUS BACKFILL X ADJUSTMENT FACTOR (0.20+/-)	86	0	326	62	0	0	0	0	0	0	0	0	0	0	0	474	3,873
21	TOTAL ADJUSTED BORROW, TYPE B, REQUIRED	517	0	1,955	374	0	0	0	0	0	0	0	0	0	0	0	2,846	23,239
BORROW, TYPE F																		
22	EMBANKMENT REQUIRED	127	483	872	716	0	0	1,296	0	691	175	472	0	209	342	0	5,383	24,385
23	PLUS TOPSOIL REMOVED UNDER FILL	0	0	84	0	0	0	0	0	0	187	218	0	50	4	0	543	4,353
24	PLUS PCC AND BITUMINOUS PAVEMENT REMOVED UNDER FILL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	PLUS BACKFILL FOR STRUCTURES	47	42	42	58	43	35	5	35	32	39	13	6	5	8	28	438	514
26	PLUS CLAY CORE BACKFILL IN CUT	0	0	27	0	0	0	0	0	0	0	0	0	0	0	0	27	860
27	LESS CLAY CORE IN FILL	0	0	59	0	0	0	250	0	0	0	0	0	0	0	0	309	1,611
28	LESS RIPRAP IN FILL	0	0	0	0	0	0	21	0	0	0	0	0	0	23	0	44	65
29	LESS MAINTENANCE ACCESS IN FILL	164	158	103	153	64	0	102	82	0	33	0	42	0	34	26	961	1,236
30	SUBTOTAL EMBANKMENT REQUIRED	10	367	863	621	-21	35	928	-47	723	368	703	-36	264	297	2	5,077	27,200
31	PLUS EMBANKMENT REQUIRED X ADJUSTMENT FACTOR (0.20+/-)	2	73	173	124	-4	7	186	-9	145	74	141	-7	53	59	0	1,015	5,440
32	TOTAL ADJUSTED BORROW, TYPE F, REQUIRED	12	440	1,036	745	-25	42	1,114	-56	868	442	844	-43	317	356	2	6,092	32,640
POND EARTHWORK SUMMARY																		
33	TOTAL EXCAVATION AVAILABLE FOR EMBANKMENT (LINE 17)	118	162	834	158	112	164	337	76	6,007	128	4,779	257	2,060	8	2,433	17,633	149,924
34	LESS TOTAL ADJUSTED BORROW, TYPE F, REQUIRED (LINE 32)	12	440	1,036	745	-25	42	1,114	-56	868	442	844	-43	317	356	2	6,092	32,640
35	EMBANKMENT AVAILABLE FOR ROADWAY	106	-278	-202	-587	137	122	-777	132	5,139	-314	3,935	300	1,743	-348	2,431	11,541	117,284
CLAY BORROW																		
36	CLAY CORE IN CUT	0	0	386	0	0	0	332	0	0	0	0	0	0	0	0	718	5,838
37	PLUS CLAY CORE IN FILL	0	0	59	0	0	0	250	0	0	0	0	0	0	0	0	309	1,611
38	LESS CLAY BACKFILL IN CUT	0	0	27	0	0	0	0	0	0	0	0	0	0	0	0	27	860
39	SUBTOTAL CLAY BORROW REQUIRED	0	0	418	0	0	0	582	0	0	0	0	0	0	0	0	1,000	6,589
40	PLUS CLAY BORROW REQUIRED X ADJUSTMENT FACTOR (0.20+/-)	0	0	84	0	0	0	116	0	0	0	0	0	0	0	0	200	1,318
41	TOTAL ITEM 274000 - ADJUSTED CLAY BORROW REQUIRED	0	0	502	0	0	0	698	0	0	0	0	0	0	0	0	1,200	7,907
TOPSOIL SUMMARY																		
42	EXISTING TOPSOIL REMOVED IN CUT	0	0	6	0	0	0	0	0	0	0	262	0	265	0	0	533	16,791
43	PLUS EXISTING TOPSOIL REMOVED UNDER FILL	0	0	84	0	0	0	0	0	0	187	218	0	50	4	0	543	4,353
44	SUBTOTAL TOPSOIL AVAILABLE FOR REUSE	0	0	90	0	0	0	0	0	0	187	480	0	315	4	0	1,076	21,144
45	LESS TOPSOIL REQUIRED	1,236	841	582	708	1,441	657	507	1,173	1,380	2,101	916	644	400	611	859	14,056	18,225
46	SUBTOTAL EXCESS (+) TOPSOIL OR TOPSOIL NEEDED (-)	-1,236	-841	-492	-708	-1,441	-657	-507	-1,173	-1,380	-1,914	-436	-644	-85	-607	-859	-12,980	2,919

DRAFT
NOT FOR BIDDING

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ADDENDUMS / REVISIONS	

NOT TO SCALE

**US 301
MARYLAND STATE LINE
TO LEVELS ROAD**

CONTRACT T200811301	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: MJJB
	CHECKED BY: MFM

EARTHWORK SUMMARY	SHEET NO. 14
	TOTAL SHTS. 850

PN-06